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NCBC DAVISVILLE
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# FINAL SUMMARY REPORT MAINTENANCE CLEANING OF THE QUONSET DEVELOPMENT CORPORTION OUTFALL 001 DRAIN LINE AND ASSOCIATED CATCH BASINS FORMER NCBC DAVISVILLE RI

03/20/2014

RESOLUTION CONSULTANTS

# SUMMARY REPORT
# MAINTENANCE CLEANING OF THE QDC OUTFALL 001 DRAIN LINE AND ASSOCIATED CATCH BASINS
# Former NCBC Davisville, North Kingstown, RI

## FINAL

**Prepared for:**

**Department of the Navy**
**Naval Facilities Engineering Command**
**BRAC Program Management Office, East**
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**Comprehensive Long-Term Environmental Action Navy**
**Contract Number N62470-11-D-8013**

**CTO WE23**

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# 1.0 PROJECT BACKGROUND

## 1.1 Introduction

Under the direction of the Naval Facilities Engineering Command, BRAC Program Management Office (PMO), East, Resolution Consultants (Resolution) is supporting the Navy with environmental activities at the Naval Construction Battalion Center (NCBC), North Kingstown, Rhode Island under Contract, N62470-11-D-8013, Contract Task Order (CTO) WE23 to provide services for the maintenance cleaning of the Quonset Development Corporation (QDC) Outfall 001 drainline and associated catch basins. Resolution has prepared this Summary Report in accordance with the Maintenance Cleaning of the QDC Outfall 001 Drain Line and Associated Catch Basins Work Plan (Resolution, 2013) to describe the completed work at the site.

## 1.2 Site Use and Prior Investigation Summary

QDC Outfall 001 is located in the central portion of the Former NCBC Davisville facility, to the west of Allen Harbor (Figure 1-1), near the intersection of Marine Road and Sanford Road. It is behind a chain-link fence that surrounds a parking area at the end of Marine Road for recreational users of Allen Harbor Landfill and Calf Pasture Point. Undeveloped wetlands are present to the east of the outfall.

QDC Outfall 001 is the discharge point for an underground drainline that originates from the former Building 224 in the Former Construction Equipment Department (CED) Area. The drainline and a network of nine catch basins run approximately 1,000 feet southwest from the Former CED Area to the outfall (Figure 1-2). Catch basin CB-01 was demolished during the demolition of Building 224, and as a result, catch basin CB-08 is separated from the drainline. Catch basins CB-06 and CB-07 are located on a separate leg of drainline that connects to the main drainline from the east at CB-02. Connections from two other drainage systems from the former leach field in Study Area (SA) 01 enter the QDC Outfall 001 drain line at catch basin CB-03 and CB-09.

The former Building 224 oil-water separator and vehicle wash pad are the presumed sources of contamination present in the drainage drainline, catch basins, and the outfall area. The building was used by the Navy as a vehicle-maintenance and truck-washing facility. Contaminants associated with materials used in these activities or in other historical activities conducted at the CED Area may have been disposed/released into the Building 224 drainage system, discharging at QDC Outfall 001.

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| | | |
|---|---|---|
| Drawn: | SB | 1/18/2013 |
| Approved: | BS | 1/18/2013 |
| Project #: | 60273164 | |

Map Location

QDC Outfall 001 Wetland

QDC Outfall 001*

*Approximate

N

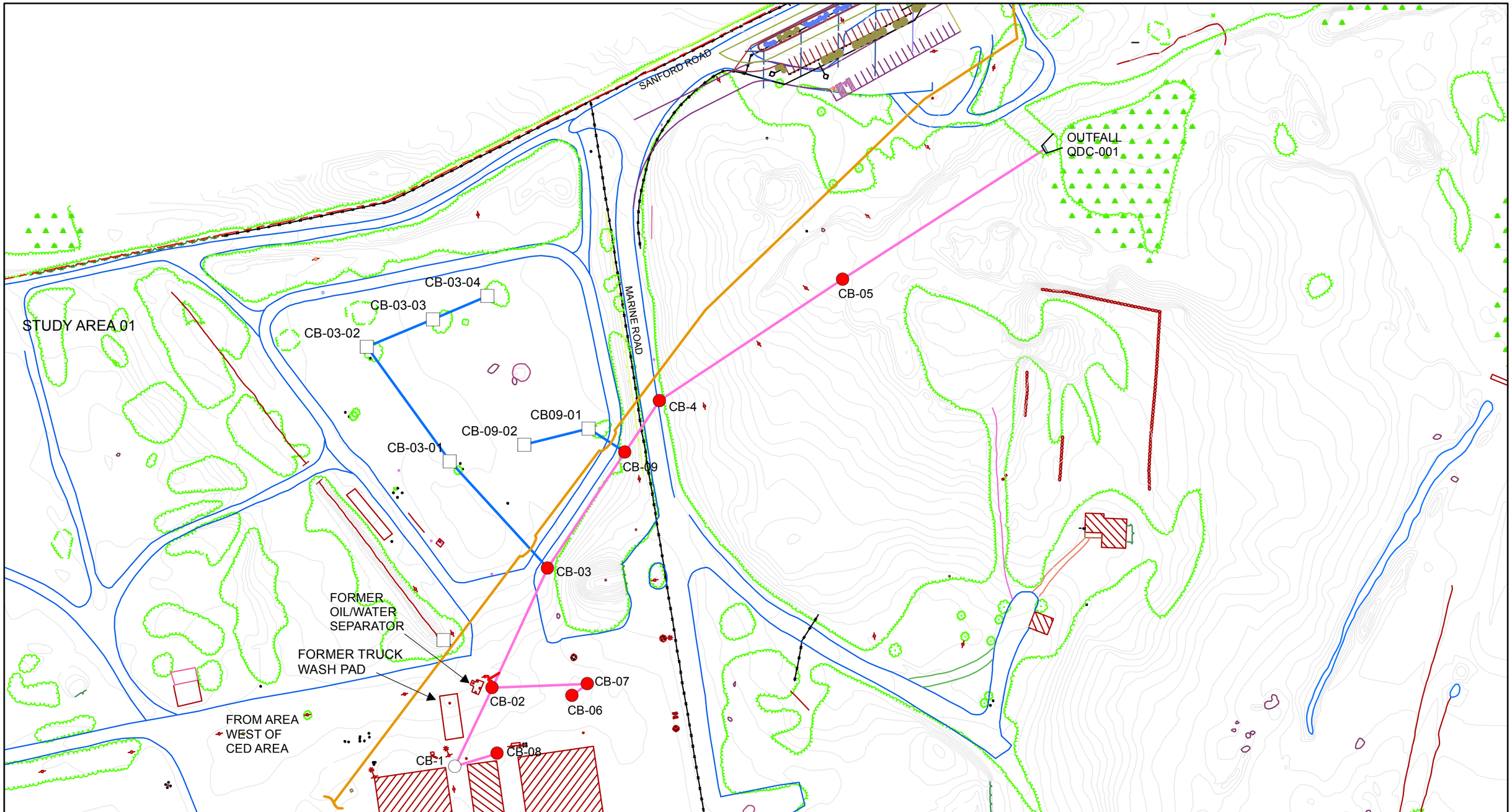
0 125 250 500

Feet

FIGURE 1-1
FORMER CED AREA AND
QDC OUTFALL 001

QDC OUTFALL 001 RI, NCBC DAVISVILLE
NORTH KINGSTOWN, RI

G:\Projects\Navy CLEAN AECOM-EnSafe JV\Davisville\GIS\QDC Outfall 001 Wetland SAP\10_2_CED_Outfall.mxd

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| Drawn: | SB | 1/18/2013 |
| Approved: | BS | 1/18/2013 |
| Project #: | 60273164 | |

Map Location

QDC-001 catch basin and storm sewer route

Location of plugged discharge line from former oil/water separator to CB-02

Catch basin and storm sewer route per historical drawings, but not field verified

Catch basin and storm sewer route per Figure 2-3 of 1994 Halliburton Report and QDC storm system drawing

Catch basin on QDC-001 storm sewer route

Catch basin not found

Catch basin from connecting drain line

N

0 25 50 100 150 200

Feet

FIGURE 1-2
DETAILS OF FORMER BUILDING 224
DRAIN LINE AND QDC OUTFALL LOCATION
QDC OUTFALL 001 RI, NCBC DAVISVILLE
NORTH KINGSTOWN, RI

\\uswtf1fp001\govt\Govt\Projects\Navy CLEAN AECOM-EnSafe JV\Davisville\GIS\QDC Outfall 001 Wetland SAP\Projects\Former_Building_224_Drain_Line_vSummaryReport.mxd

During the Drain Line Investigation conducted in Fall 2010 (Tetra Tech, 2012), five samples of residual material present within the catch basins and drain line were collected for laboratory analysis; four from the bottom of each of the four catch basins that were accessed during the investigation, and one from the drainline within 2 feet of QDC Outfall 001. Samples of residual material were also analyzed for volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), including polycyclic aromatic hydrocarbons (PAHs), gasoline range organics (GRO) (C5 – C12), extractable total petroleum hydrocarbons (ExTPH) (C9 – C40), polychlorinated biphenyls (PCBs), and target analyte list (TAL) metals. The highest concentrations of these parameters were detected in the residual material sample collected from catch basin CB-05, the furthest downstream catch basin. The sample collected from this catch basin contained elevated concentrations of the VOCs 1,2,4-trichlorobenzene, 1,2,4-trimethylbenzene, 1,4-dichlorobenzene, chlorobenzene, ethylbenzene, toluene, and total xylenes; for most of the detected PAHs; for PCB Aroclor-1254; and for four metals. The concentration of ExTPH detected in this sample was 18,000 mg/kg. Similar contaminants were detected in the other residual material samples, but were generally present at lower concentrations. One notable exception is the detection of the chlorinated solvents, cis-1,2-dichloroethene (DCE) and vinyl chloride, reported in two residual material samples collected from the two upstream catch basins CB-02 and CB-03. In general, the lowest concentrations of contaminants detected in residual material samples were from the sample collected from the drainline of accumulated material within 2 feet of the QDC Outfall 001.

## 2.0 SUMMARY OF FIELD ACTIVITIES

This section details the field activities that occurred between October 16, 2013 and January 15, 2014. Appendix A contains photographic log of the maintenance cleaning described below.

### 2.1 Pre-Mobilization Planning

Prior to mobilization, Resolution prepared and submitted the Maintenance Cleaning of the QDC Outfall 001 Drain Line and Associated Catch Basins Work Plan (Resolution, 2013) and commenced procurement activities to acquire the required services. A bid walk was held on October 23, 2013. Technical proposals from the prospective subcontractors were evaluated and the subcontract was awarded to Cyn Environmental Services Inc. (Cyn) on November 7, 2013. Cyn subcontracted Podgurski Corporation for the water jetting.

### 2.2 Waste Characterization Sampling and Analysis

On October 16, 2013, two 5-point composite waste characterization samples of the sediment within the catch basin and drainline were collected by Resolution, along with 5 discrete grab VOC samples. Composite sample 1 (COMP-1) was collected from catch basins CB-03, CB-02, and CB-08. Composite Sample 2 (COMP-2) was collected from catch basins CB-05, CB-09, and from material just within the outfall. Discrete VOC samples were collected from catch basins CB-08, CB-02, CB-03, CB-09, CB-05, and from material just within the outfall. Material from catch basin CB-04 was not included in Comp-2 and a discreet VOC sample was not collected from catch basin CB-04 since this catch basin was still underneath Marine Road at the time of sampling. The samples were submitted to GCAL Analytical Laboratories, LLC in Baton Rouge, Louisiana for analysis. The discrete VOC samples were submitted for analysis according to SW-846 8260. The composite samples were submitted for the following analyses:

- SVOCs – SW-846 8270
- TPH – SW-846 8015
- Pesticides – SW-846 8081
- Herbicides – SW-846 8151
- PCBs – SW-846 8082
- TAL metals – SW-846 6010/6020
- Mercury – SW-846 7470/7471
- TCLP – SW-846 1311

- Ignitability – SW-846 1030
- Reactivity – EPA Method 9014/9034
- Corrosivity – SW-846 1110

Based on the analytical results, sample COMP-1 underwent toxicity characterization leaching procedure (TCLP) according to SW-846 1311 and lead analysis according to SW-846 6010. The TCLP lead result for COMP-1 was above the Maximum Concentration of Contaminants for the Toxicity Characteristic for lead. Based on this result, the sediment within the drain line and associated catch basins was characterized as hazardous for disposal purposes. A summary of the detected results is presented as Table 2-1. The full laboratory report is included as Appendix B.

### 2.2.1 Data Usability Review

The sample data package was reviewed by the Project Chemist, and examination of the summary QC data indicated no apparent issues that would result in data qualification as unusable if formal validation were performed. Because no significant quality control issues were noted, the data is considered acceptable for its intended use.

## 2.3 Pre-Mobilization Meeting

A Pre-mobilization meeting was conducted at the site on November 20, 2013 to discuss the overall maintenance cleaning approach, health & safety, schedule, site security, site logistics, and lines of communication. Attendees included representatives from Resolution and Cyn. During the site meeting, it was decided that the access road that was included in the Work Plan would not be required. Instead, the outfall and catch basin CB-05 would be accessed from the fence gate at the bicycle path parking lot. The water jetting and vactor trucks would be staged in the cleared area inside the fence gate, and hoses run to the outfall and catch basin CB-05 for the water jetting and vactoring. Resolution also coordinated with Quonset Development Corporation (QDC) to arrange for water to be supplied from a nearby fire hydrant on Marine Road.

## 2.4 Site Preparation and Mobilization

### 2.4.1 Catch Basin CB-04

Prior to mobilization, QDC located catch basin CB-04 beneath Marine Road. The catch basin was uncovered and raised to the road surface. Once complete, the asphalt on Marine Road was repaired by QDC.

### 2.4.2 Secondary Containment Area at QDC Outfall 001

On December 6, 2013, Cyn constructed a secondary containment area at the outfall to prevent wash water from impacting the downgradient wetland. A double layer of 10 mil poly sheeting was placed in the grave of the 2008 excavation at the outfall and held in place with wooden stakes. A hole was cut in the poly sheeting around the outfall pipe to allow for the vacuum truck and water jetting hoses. The perimeter of the secondary containment area was also lined with 9 inch straw wattle.

Due to difficulties encountered during the maintenance cleaning on December 6, 2013 (see Section 2.5), the secondary containment area design was revised slightly when the maintenance cleaning of this section of drain line resumed on December 9, 2013. A mini-excavator was used to dig a sump below the bottom lip of the outfall pipe. A double layer of 10 mil poly sheeting was placed in the grave of the 2008 excavation and sump at the outfall and held in place with wooden stakes. A 55-gallon drum was cut down to 1/3 its size and placed in the poly sheeting-lined sump underneath the bottom lip of the outfall pipe. A hole was cut in the poly sheeting around the outfall to allow for the vacuum truck and water jetting hoses.

### 2.4.3 Additional Site Preparation and Mobilization Activities

The following site preparation and mobilization activities took place from December 2, 2013 through December 5, 2013:

- Delivery of a 30 yard roll-off container for sediment waste
- Delivery of a 21,000 gallon frac tank for waste water
- Installation of a temporary fence at the entrance of the QDC Outfall 001
- Installation of a water meter and temporary hay bale enclosure around the fire hydrant on Marine Road
- Grubbing and vegetation clearing near and around QDC Outfall 001

Daily details of the site preparation and mobilization activities can be found in the Daily Field Reports located in Appendix C.

## 2.5 Maintenance Cleaning

As mentioned is Section 2.2, the waste characterization sampling and analysis required that the sediment within the QDC Outfall 001 Drain Line and associated catch basins be disposed of as

hazardous waste. Therefore, the waste was not treated as a single aqueous waste stream as was specified in the Maintenance Cleaning of the QDC Outfall 001 Drain Line and Associated Catch Basins Work Plan (Resolution, 2013). Instead, the maintenance cleaning was performed in two stages. Initially, all catch basins were cleaned via a 3,000 gallon high vacuum truck to remove the sediment and standing water. Once the catch basins were all cleaned, the drain lines were cleaned using high pressure water jetting in conjunction with vactoring of the wash water. Further details on the maintenance cleaning are presented below.

### 2.5.1 Catch Basins

Cleaning of the catch basins took place on December 2 – 4, 2013. Prior to cleaning each catch basin, a visual inspection of the catch basin was done to determine the depth of the catch basin, construction of the catch basin, and the amount of sediment in each catch basin. After each catch basin was cleaned, an inspection was performed to determine the competency of the catch basin floor and the overall condition of the catch basin. Due to their depth, catch basins CB-08, CB-02, CB-03, CB-09, CB-04, and CB-05 required entry by Cyn personnel for adequate cleaning. The walls of these catch basins were also pressure washed as part of the cleaning.

Maintenance cleaning was performed on the following catch basins December 2, 2013:

- CB-03-01
- CB-03-02
- CB-03-03
- CB-03-04
- CB-09-01
- CB-09-02
- CB-06
- CB-07

Maintenance cleaning was performed on the following catch basins December 3, 2013:

- CB-02
- CB-08
- C B-09

- CB-03
- CB-04

Maintenance cleaning was performed on the following catch basins December 4, 2013:

- CB-05

Refer to Figure 1-2 for the location of the catch basins and Table 2-2 for the catch basin construction and sediment information. Daily details of the catch basin cleaning can be found in the Daily Field Reports located in Appendix C.

The walls of catch basins CB-08, CB-02, CB-03, CB-09, CB-04, and CB-05 were constructed of brick and mortar. The walls of catch basins CB-06, CB-07, CB-03-01, CB-03-02, CB-03-03, CB-03-04, CB-09-01, and CB-09-02 were constructed of concrete. In general, the catch basins appeared to be in good condition with no evidence of any significant cracks or breaks. The visual inspections confirmed that all the catch basins that were cleaned had competent concrete floors. The following observations were noted during the inspection:

- Catch basin CB-02: The bottom was uneven and appeared to be concrete poured on top of bricks and/or rocks. In addition, the bricks at the top of the catch basin appeared loose as compared to the bricks deeper within the catch basin, and a couple of these bricks had fallen into the bottom of the catch basin.
- Catch basin CB-09: The outlet channel at the bottom of the catch basin CB-09 has a seam that runs perpendicular to the flow of the outlet channel that may allow for leaching into the subsurface soil.
- Catch basin CB-06: The concrete walls of this shallow catch basin contain cracks on the northeast and northwest walls.

Based on the results of the inspection, soil borings will be advanced on the downgradient side of catch basins CB-02 and CB-09 to investigate potential impacts to subsurface soil and groundwater. A soil boring will be advanced on the downgradient side of catch basin CB-06 to investigate impacts to subsurface soil only since this catch basin is only four feet deep. Further details can be found in the Draft Final Sampling and Analysis Plan, QDC Outfall 001 Remedial Investigation (Resolution, 2014).

### 2.5.2 Drain Lines

Cleaning of the drain lines took place on December 5, 6, 9, and 19, 2013. A high pressure water jetting truck was used to clean the drain line. For the majority of the cleaning, each drain line was cleaned multiple times, upstream and downstream, while the 3,000 gallon high vacuum truck was used to collect the wash water as it entered the catch basin.

At the end of each day, the wash water was allowed to settle in the 3,000 gallon high vacuum truck in order to allow the solids in wash water to settle out. The aqueous water was then transferred to the 21,000 gallon on-site frac tank, and the settled solids were transferred to the onsite lined 30 yard roll-off container.

The following sections of drain line were cleaned on December 5, 2013:

- The drain line that runs from CB-03-04 to CB-03-03 to CB-03-02 to CB-03-01
- The drain line that runs from CB-09-02 to CB-09-01
- The drain line that runs from CB-06 to CB-07 to CB-02
- The drain line that runs from former catch basin CB-01 to CB-08
- The drain line that runs from former catch basin CB-01 to CB-02

Catch basins CB-02 and CB-08 have abandoned drain lines that lead to former catch basin CB-01. Since catch basin CB-01 no longer exists, the water jetting could only be performed from the end of the abandoned drain lines towards catch basins CB-02 and CB-08 (i.e., could not be performed in both directions).

The following sections of drain line were cleaned on December 6, 2013:

- The drain line that runs for CB-04 to CB-05
- The drain line that runs from CB-05 to QDC Outfall 001

Prior to cleaning the drain line from catch basin CB-05 to QDC Outfall 001, a secondary containment area was constructed as described in Section 2.4.2. Once the secondary containment area was in place, three passes of water jetting were made in the downstream direction and one pass was made in the upstream direction. However, the water jetting was not able to be operated at full pressure due to difficulties encountered by the vacuum truck keeping up with wash water in the secondary containment area. In addition, the sediment in the lower part (~100 feet) of this

drain section was very dense and caked onto the walls of the drain line. This in combination with the water jetting not being able to operate at full pressure resulted in the water jet head "skipping" over the sediment instead of breaking it apart and washing it out. Therefore, the maintenance cleaning of this section of drain line was temporarily stopped such that a revised approach could be developed.

The following sections of drain line were cleaned on December 9, 2013:

- The drain line that runs from CB-02 to CB-03
- The drain line that runs from CB-03-01 to CB-03
- The drain line that runs from CB-03 to CB-09
- The drain line that runs from CB-09-01 to CB-09
- The drain line that runs from CB-09 to CB-04

Due to weather conditions and scheduling conflicts, the maintenance cleaning was suspended from December 10 – 18, 2013. Maintenance cleaning resumed on December 19, 2013 for the final section of drain line to be cleaned, the section from CB-05 to QDC Outfall 001. The revised design secondary containment area at QDC Outfall was constructed as described in Section 2.4.2. Prior to water jetting, Cyn attached the high vacuum hose to a pole and inserted it into the drain line from the outfall in order to break up, loosen, and vacuum some of the caked on sediment within the drain line. The revised design of the secondary containment area, specifically the addition of the sump, allowed for the water jet to operate at full pressure. The combination of the initial breaking up, loosening, and vacuuming of the caked on sediment within the drain line along with the water jet operating at full pressure resulted in very effective cleaning of the drain pipe. The water jetting was conducted multiple times at full pressure in the downstream direction until the drain line was visibly clean.

## 3.0 Transportation and Waste Disposal

### 3.1 Aqueous Waste

A total of 10,162 gallons of water was used during the maintenance cleaning of the QDC Outfall 001 drain line and associated catch basins. The water used during the maintenance cleaning was temporarily stored onsite in a 21,000 gallon frac tank until disposal. Cyn collected samples of the frac tank water for waste characterization analysis, and the aqueous waste stream was characterized as non-hazardous.

In order to prevent freezing, the aqueous waste stream was periodically vactored out of the on-site frac tank and transported to the Cyn Oil Corporation disposal facility in Stoughton, Massachusetts. After each emptying of the on-site frac tank, the frac tank was cleaned to remove any residual sediment. The removed sediment was placed in the onsite lined 30 yard roll-off container. Transport and disposal of the aqueous waste stream occurred on December 13, 19, and 23, 2013. The aqueous waste stream was transported under Non-Hazardous Waste Manifest. Copies of the Non-Hazardous Waste Manifests are located in Appendix D.

### 3.2 Solid Waste

A total of 18 yards of sediment was removed during the maintenance cleaning of the QDC Outfall 001 drain line and associated catch basins. The sediment collected during the maintenance cleaning was emptied into the onsite lined 30 yard roll-off container daily, and covered until disposal. The sediment was accepted as hazardous waste at the Waste Management Hazardous Waste Facility in Youngstown, New York (Model City).

On December 31, 2013, the 30 yard roll-off container was transported to a local weighing station. The container weight was 69,900 pounds (lbs), which is 4,900 lbs above the acceptable over the road transportation weight limit in the State of New York. Cyn contacted the New York Department of Transportation (NY DOT) to obtain an overweight permit, but NY DOT would not issue the permit. Therefore, the roll-off container was returned to the site.

On January 2, 2014, Cyn delivered a second lined 30 yard roll-off container and excavator to the site. The sediment in the original 30 yard roll-off container was split between the two lined 30 yard roll-off containers. On January 7, 2014 the original 30 yard roll-off container was transported and delivered to Model City. The second 30 yard roll-off container was transported and delivered to Model City on January 15, 2014. Both roll-off containers were transported under Uniform

Hazardous Waste Manifests. Copies of the Uniform Hazardous Waste Manifests are located in Appendix D.

# 4.0 SITE RESTORATION AND DEMOBILIZATION

## 4.1 Site Restoration

As mentioned in Section 2.3.1, QDC located catch basin CB-04 and raised it to the level of Marine Road. QDC repaired the asphalt damage that occurred as part of this task. Since the temporary haul road was not needed, there were no other site restoration tasks required.

## 4.2 Demobilization

After the completion of the maintenance cleaning of the QDC Outfall 001 drain line and associated catch basins, Cyn demobilized the frac tank, temporary fencing, temporary hay bale enclosure, and equipment. Demobilization took place intermittently between December 23, 2013 and January 15, 2014.

## 5.0 REFERENCES

(Resolution, 2013). Resolution Consultants. 2013. Maintenance Cleaning of the QDC Outfall 001 Drain Line and Associated Catch Basins Work Plan, Naval Construction Battalion Center Davisville, North Kingstown, Rhode Island. June.

(Resolution, 2014). Resolution Consultants. 2014. Draft Final Tier II Sampling and Analysis Plan, QDC Outfall 001 Remedial Investigation, Naval Construction Battalion Center Davisville, North Kingstown, Rhode Island. February.

(Tetra Tech, 2012). Tetra Tech. 2012. Drain Line Investigation and Data Report for Former CED Area/QDC Outfall 001, Former Naval Construction Battalion Center Davisville, North Kingstown, Rhode Island. Revision 1. November

# Tables

Table 2-1
Catch Basin Waste Characterization
Summary of Detected Results

| Sample ID | RS-COMP1-101613 | RS-COMP2-101613 | RS-QDCI-101613 | RS-CB08-101613 |
|---|---|---|---|---|
| Sample Date | 10/16/2013 | 10/16/2013 | 10/16/2013 | 10/16/2013 |
| | | | | |
| **8260B (ug/kg)** | | | | |
| ACETONE | NA | NA | 12.6 J | 35.6 |
| **1311-6010 - TCLP (mg/l)** | | | | |
| LEAD | 5.95 | ND | NA | NA |
| **6010C (mg/kg)** | | | | |
| ALUMINUM | 4140 | 3650 | NA | NA |
| ANTIMONY | 1.71 J | 0.94 J | NA | NA |
| ARSENIC | 2.85 | 2.61 | NA | NA |
| BARIUM | 59.3 | 28.7 | NA | NA |
| BERYLLIUM | 0.17 J | 0.36 | NA | NA |
| CADMIUM | 2.50 | 1.07 | NA | NA |
| CALCIUM | 2910 | 1510 | NA | NA |
| CHROMIUM, TOTAL | 19.8 | 24.9 | NA | NA |
| COBALT | 3.86 | 3.86 | NA | NA |
| COPPER | 78.8 | 70.3 | NA | NA |
| IRON | 12300 | 286 | NA | NA |
| LEAD | 455 | 4.99 | NA | NA |
| MAGNESIUM | 2070 | 27.4 | NA | NA |
| MANGANESE | 121 | 118 | NA | NA |
| NICKEL | 15.0 | 25.1 | NA | NA |
| POTASSIUM | 707 | 607 | NA | NA |
| SELENIUM | 1.91 J | 1.50 J | NA | NA |
| SODIUM | 54.6 J | 78.6 J | NA | NA |
| THALLIUM | 0.79 J | 0.59 J | NA | NA |
| VANADIUM | 10.3 | 8.15 | NA | NA |
| ZINC | 907 | 508 | NA | NA |
| **7471B (mg/kg)** | | | | |
| MERCURY | 0.58 | 0.10 | NA | NA |
| **8015C_D (ug/kg)** | | | | |
| TPH-DIESEL RANGE | 599000 | 413000 | NA | NA |
| **8270D (ug/kg)** | | | | |
| 2,4-DIMETHYLPHENOL | 59.9 J | ND | NA | NA |
| 2-METHYLNAPHTHALENE | 61.7 J | 15.9 J | NA | NA |
| ACENAPHTHENE | 617 | 87.3 J | NA | NA |
| ACENAPHTHYLENE | ND | 123 J | NA | NA |
| ANTHRACENE | 903 | 393 | NA | NA |
| BENZO[A]ANTHRACENE | 3600 J | 1470 | NA | NA |
| BENZO[A]PYRENE | 2860 J | 1440 J | NA | NA |
| BENZO[B]FLUORANTHENE | 5000 J | 2470 J | NA | NA |
| BENZO[G,H,I]PERYLENE | 2190 J | 1540 J | NA | NA |
| BENZO[K]FLUORANTHENE | 1720 J | 552 J | NA | NA |
| BIS(2-ETHYLHEXYL)PHTHALATE | 768 J | 665 | NA | NA |
| CARBAZOLE | 794 | 275 J | NA | NA |
| CHRYSENE | 3890 J | 1600 | NA | NA |
| DIBENZ[A,H]ANTHRACENE | 542 J | 401 J | NA | NA |
| DIBENZOFURAN | 316 J | 51.6 J | NA | NA |
| FLUORANTHENE | 8690 J | 3300 | NA | NA |
| FLUORENE | 617 | 116 J | NA | NA |
| INDENO[1,2,3-CD]PYRENE | 2810 J | 1560 J | NA | NA |
| NAPHTHALENE | 74.6 J | ND | NA | NA |
| PHENANTHRENE | 5040 J | 1210 | NA | NA |
| PYRENE | 4840 J | 1450 | NA | NA |

Notes:
J = Estimated Value
NA = Not Applicable
ND = Not Detected

Table 2-2
Catch Basin Construction Information

| Catch Basin | Depth to Bottom | Wall Material | Floor Material | Amount of Sediment |
|---|---|---|---|---|
| CB-08 | 9’ | Brick | Concrete | 6” |
| CB-02 | 11’ | Brick | Concrete | 8” |
| CB-07 | 2’ | Concrete | Concrete | None, some debris |
| CB-06 | 2’ | Concrete | Concrete | None, some debris |
| CB-03 | 10’ | Brick | Concrete | 36” |
| CB-03-01 | 3’ | Concrete | Concrete | 4” |
| CB-03-02 | 3’ | Concrete | Concrete | 8” |
| CB-03-03 | 2’ | Concrete | Concrete | 3” |
| CB-03-04 | 3’ | Concrete | Concrete | 6” |
| CB-09 | 8.5’ | Brick | Concrete | 3” |
| CB-09-01 | 4’ | Concrete | Concrete | 6” |
| CB-09-02 | 3’ | Concrete | Concrete | 8” |
| CB-04 | 18’ | Brick/Concrete | Concrete | 60” |
| CB-05 | 9’ | Brick | Concrete | 28” |

# Appendix A

# Photograph Log

# Resolution Consultants

## PHOTOGRAPH LOG

| **Client Name:** Department of the Navy | **Site Location:** North Kingstown, RI | **Project No.** 60273164 |
|---|---|---|

**Photo No.**
**1**

**Description:**

Catch Basin CB-08 after cleaning.

**Photo No.**
**2**

**Description:**

Catch Basin CB-02 after cleaning.

# Resolution Consultants

## PHOTOGRAPH LOG

| Client Name: | Site Location: | Project No. |
|---|---|---|
| Department of the Navy | North Kingstown, RI | 60273164 |

**Photo No.**
**3**

**Description:**

Close up of the bottom of Catch Basin CB-02 after cleaning.

**Photo No.**
**4**

**Description:**

Catch Basin CB-03 after cleaning

# Resolution Consultants

## PHOTOGRAPH LOG

| Client Name: | Site Location: | Project No. |
|---|---|---|
| Department of the Navy | North Kingstown, RI | 60273164 |

**Photo No.**
**5**

**Description:**

Catch Basin CB-06 after cleaning

**Photo No.**
**6**

**Description:**

Catch Basin CB-07 after cleaning

# Resolution Consultants

## PHOTOGRAPH LOG

| Client Name: | Site Location: | Project No. |
|---|---|---|
| Department of the Navy | North Kingstown, RI | 60273164 |

**Photo No.**
**7**

**Description:**

Catch Basin CB-03-01 after cleaning

**Photo No.**
**8**

**Description:**

Catch Basin CB-03-02 after cleaning

# Resolution Consultants

## PHOTOGRAPH LOG

| Client Name: | Site Location: | Project No. |
|---|---|---|
| Department of the Navy | North Kingstown, RI | 60273164 |

**Photo No.**
**9**

**Description:**

Catch Basin CB-03-03 after cleaning

**Photo No.**
**10**

**Description:**

Catch Basin CB-03-04 after cleaning

# Resolution Consultants

## PHOTOGRAPH LOG

| Client Name: | Site Location: | Project No. |
|---|---|---|
| Department of the Navy | North Kingstown, RI | 60273164 |

**Photo No.**
**11**

**Description:**

Catch Basin CB-09 after cleaning.

**Photo No.**
**12**

**Description:**

Catch Basin CB-09-01 after cleaning.

# Resolution Consultants

## PHOTOGRAPH LOG

| Client Name: | Site Location: | Project No. |
|---|---|---|
| Department of the Navy | North Kingstown, RI | 60273164 |

**Photo No.**
**13**

**Description:**

Catch Basin CB-09-02 after cleaning.

**Photo No.**
**14**

**Description:**

Catch Basin CB-04 after cleaning.

# Resolution Consultants

## PHOTOGRAPH LOG

| **Client Name:** Department of the Navy | **Site Location:** North Kingstown, RI | **Project No.** 60273164 |
|---|---|---|

**Photo No.**
**15**

**Description:**

Close up of the bottom of Catch Basin CB-04 after cleaning.

.

**Photo No.**
**16**

**Description:**

Catch Basin CB-05 after cleaning.

# Resolution Consultants

## PHOTOGRAPHIC LOG

| Client Name: | Site Location: | Project No. |
|---|---|---|
| Department of the Navy | North Kingstown, RI | 60273164 |

**Photo No.**
**17**

**Description:**

View of QDC Outfall 001 looking up towards Catch Basin CB-05 after cleaning

**Photo No.**
**18**

**Description:**

Secondary containment basin at the outfall

# Resolution Consultants

## PHOTOGRAPHIC LOG

| **Client Name:** Department of the Navy | **Site Location:** North Kingstown, RI | **Project No.** 60273164 |
|---|---|---|

**Photo No.**
**19**

**Description:**

Using the sump at the outfall to collect wash water during the maintenance cleaning

**Photo No.**
**20**

**Description:**

View of QDC Outfall 001 at the completion of the maintenance cleaning

**Appendix B (CD)**

**Laboratory Report**

GCAL
ANALYTICAL LABORATORIES, LLC

*NELAP CERTIFICATE NUMBER 01955*
*DOD ELAP CERTIFICATE NUMBER L13-190*

# ANALYTICAL RESULTS

**PERFORMED BY**

**GULF COAST ANALYTICAL LABORATORIES, INC.**
**7979 GSRI Avenue**
**Baton Rouge, LA 70820**

**Report Date** 11/05/2013

**GCAL Report** 213101712

| | |
|---|---|
| ***Deliver To*** | AECOM<br>701 Edgewater Drive<br>Wakefield, MA 01880<br>781-224-6353 |
| ***Attn*** | Andrew Schkuta |

***Project*** Davisville 60273164

CASE NARRATIVE

**Client:** Resolution Consultants - AECOM **Report:** 213101712

Gulf Coast Analytical Laboratories received and analyzed the sample(s) listed on the sample cross-reference page of this report. Receipt of the sample(s) is documented by the attached chain of custody. This applies only to the sample(s) listed in this report. No sample integrity or quality control exceptions were identified unless noted below.

Q- non-compliant QC result (See Q Flag Application Form)

## VOLATILES MASS SPECTROMETRY

In the EPA 8260B analysis, the recovery for the surrogate 4-Bromofluorobenzene is above the upper control limit for sample 21310171205 (RS-CB02-101613) and 21310171213 (RS-QDC1-101613). No target analytes were detected in these samples.

In the EPA 8260B analysis, the recovery for the surrogate, Toluene d8 is above the upper control limit for sample 21310171209 (RS-CB03-101613). No target analytes were detected in the sample.

## SEMI-VOLATILES MASS SPECTROMETRY

In the EPA 8270D analysis, the area for the internal standard is outside the acceptance range for the lowest dilution performed for all samples. Analytes associated with this internal standard are reported at a higher dilution. Dilutions may have also been required to bracket the concentration of target analytes within the calibration range of the instrument and/or to eliminate background interference. Analytes flagged as outside control limits on the MS/MSD recovery form are flagged J, estimated on the Form 1 for the original sample. The dilutions are reflected in elevated detection limits. The recoveries for the surrogates are reported as D, diluted out for those analyses performed at a 10 or higher dilution.

In the EPA 8270D analysis for prep batch 518149, the MS/MSD exhibited recovery and RPD failures. The MS/MSD recoveries are not applicable for some analytes due to the high concentration in the original sample and the recoveries may also be affected by the dilution performed on the samples. The LCS/LCSD recoveries are acceptable. The MS/MSD spike and surrogate recoveries are not applicable because the spike was diluted out of the samples.

## VOLATILES GAS CHROMATOGRAPHY

In the EPA 8015C GRO analysis, all solid samples were analyzed at a 50 (Methanol extract) dilution. The reporting limit is below the required limit at this dilution.

## SEMI-VOLATILES GAS CHROMATOGRAPHY

In the EPA 8081B analysis, a dilution was required for all samples 21310171201 (RS-COMP1-101613) and 21310171203 (RS-COMP2-101613) to eliminate interference from non-target background. The dilutions are reflected in elevated detection limits. The recoveries for the surrogates are reported as D, diluted out.

In the EPA 8081B analysis for prep batch 518148, the MS/MSD exhibited recovery failures. Affected analytes are flagged J, estimated on the Form 1 for the original sample. The LCS/LCSD recoveries are above the upper control limit for 4,4'-DDE. This analyte was not detected in the associated samples.

In the EPA 8151A analysis for prep batch 518091, the LCS/LCSD RPDs are above the control limit for Dichloroprop, 2,4,5-T, 2,4,5-TP (Silvex), and 2,4-DB. These analytes were not detected in the associated samples.

In the EPA 8015C DRO analysis, all samples had to be diluted to bracket the concentration within the calibration range of the instrument. The recovery for the surrogate is reported as D, diluted out.

**METALS**

In the EPA 6010C analysis, sample 21310171201 (RS-COMP1-101613) had to be diluted in order to bracket the concentration of a target analyte within the linear dynamic range of the instrument.

In the EPA 1311/6010C analysis, sample 21310171202 (RS-COMP1-101613) was analyzed at a dilution. The reporting limits are at or below the regulatory limits at this dilution.

In the SW-846 6010C analysis for prep batch 517994, the MS and/or MSD recovery is outside the control limits for Antimony, Cadmium, Chromium, Cobalt, Lead, Nickel, Selenium, Thallium, Vanadium, and Zinc. The LCS recovery is within control limits. This indicates the analysis is in control and the sample is affected by matrix interference or the element is non-homogeneous in the sample. A post-digestion spike was performed on the QC sample for this batch with a recovery of 89% for Antimony, 74% for Cadmium, 81% for Chromium, 78% for Cobalt, 75% for Lead, 76% for Nickel, 88% for Selenium, 77% for Thallium, 85% for Vanadium, and 80% for Zinc. The MS/MSD recoveries and RPDs are not applicable for Aluminum, Barium, Calcium, Iron, Magnesium, and Manganese because the sample concentration is greater than four times the spike concentration. Multiple analytes are flagged E, estimated on the serial dilution form due to the fact that the % difference between the original result and the serial dilution result for the batch QC sample is greater than 10. The method blank required re-analysis for Copper and Manganese. The re-analyses were performed on ICP5, 10/29/13 at 1937 and 10/3013 at 1820. The data for these analytes is included on the same blank form as all other analytes because only one schedule can be entered in the data system for a method blank.

In the EPA 1311/6010C analysis for prep batch 519175, the MS and/or MSD recoveries are not applicable for Lead because the sample concentration is greater than four times the spike concentration. The LCS recovery is acceptable.

Q Flag Application

Lab Work Order ID: **213101712**

Lab Sample ID: **21310171201**

Analysis Date: **10/24/2013 1:05:00 PM**

| Compound Name | Compound Label | CCV OUL | LCS/LCSD OUL | SURROGATE OUL | ANALYTE NC | IS OUL |
|---|---|---|---|---|---|---|
| 2,4,5-T | 93-76-5 | | X | | | |
| 2,4,5-TP (Silvex) | 93-72-1 | | X | | | |
| 2,4-DB | 94-82-6 | | X | | | |
| Dichloroprop | 120-36-5 | | X | | | |

Analysis Date: **10/25/2013 10:52:00 AM**

| Compound Name | Compound Label | CCV OUL | LCS/LCSD OUL | SURROGATE OUL | ANALYTE NC | IS OUL |
|---|---|---|---|---|---|---|
| 4,4'-DDE | 72-55-9 | | X | | | |

Lab Sample ID: **21310171203**

Analysis Date: **10/24/2013 1:33:00 PM**

| Compound Name | Compound Label | CCV OUL | LCS/LCSD OUL | SURROGATE OUL | ANALYTE NC | IS OUL |
|---|---|---|---|---|---|---|
| 2,4,5-T | 93-76-5 | | X | | | |
| 2,4,5-TP (Silvex) | 93-72-1 | | X | | | |
| 2,4-DB | 94-82-6 | | X | | | |
| Dichloroprop | 120-36-5 | | X | | | |

Analysis Date: **10/25/2013 11:06:00 AM**

| Compound Name | Compound Label | CCV OUL | LCS/LCSD OUL | SURROGATE OUL | ANALYTE NC | IS OUL |
|---|---|---|---|---|---|---|
| 4,4'-DDE | 72-55-9 | | X | | | |

# Sample Test Summary Report: 213101712

| Lab Sample ID | Cust. Sample ID | Matrix | Proc. Desc. |
|---|---|---|---|
| 21310171201 | RS-COMP1-101613 | S | EPA 6010C |
| 21310171201 | RS-COMP1-101613 | S | SW-846 6010C Solid Prep |
| 21310171201 | RS-COMP1-101613 | S | Sec. 7.3.3.2 Reactivity Prep |
| 21310171201 | RS-COMP1-101613 | S | Sec. 7.3.4.2 Reactivity Prep |
| 21310171201 | RS-COMP1-101613 | S | EPA 7471B |
| 21310171201 | RS-COMP1-101613 | S | EPA 7471B |
| 21310171201 | RS-COMP1-101613 | S | SW-846 8081B Solid |
| 21310171201 | RS-COMP1-101613 | S | SW-846 8081B Prep Solid |
| 21310171201 | RS-COMP1-101613 | S | SW-846 8082A Solid |
| 21310171201 | RS-COMP1-101613 | S | SW-846 8082A Prep Solid |
| 21310171201 | RS-COMP1-101613 | S | SW-846 8151A Solid |
| 21310171201 | RS-COMP1-101613 | S | SW-846 8151A Prep Solid |
| 21310171201 | RS-COMP1-101613 | S | SW-846 3550C Prep Solid |
| 21310171201 | RS-COMP1-101613 | S | SW-846 8270D DOD Solid |
| 21310171201 | RS-COMP1-101613 | S | SW-846 9034 Sulfide |
| 21310171201 | RS-COMP1-101613 | S | SW-846 9045 pH |
| 21310171201 | RS-COMP1-101613 | S | SW-846 9012A Reactivity Cyanide Solid |
| 21310171201 | RS-COMP1-101613 | S | Dry Weight/Percent Moisture |
| 21310171201 | RS-COMP1-101613 | S | SW-846 1030 |
| 21310171201 | RS-COMP1-101613 | S | Total Hydrocarbons Diesel Solid |
| 21310171201 | RS-COMP1-101613 | S | Total Hydrocarbons Diesel Solid Prep |
| 21310171201 | RS-COMP1-101613 | S | SW-846 8015C Modified Solid |
| 21310171202 | RS-COMP1-101613 | S | SW-846 6010C TCLP |
| 21310171202 | RS-COMP1-101613 | S | SW-846 6010C TCLP Prep |
| 21310171202 | RS-COMP1-101613 | S | TCLP Procedure Soils |
| 21310171203 | RS-COMP2-101613 | S | EPA 6010C |
| 21310171203 | RS-COMP2-101613 | S | SW-846 6010C Solid Prep |
| 21310171203 | RS-COMP2-101613 | S | Sec. 7.3.3.2 Reactivity Prep |
| 21310171203 | RS-COMP2-101613 | S | Sec. 7.3.4.2 Reactivity Prep |
| 21310171203 | RS-COMP2-101613 | S | EPA 7471B |
| 21310171203 | RS-COMP2-101613 | S | EPA 7471B |
| 21310171203 | RS-COMP2-101613 | S | SW-846 8081B Solid |
| 21310171203 | RS-COMP2-101613 | S | SW-846 8081B Prep Solid |
| 21310171203 | RS-COMP2-101613 | S | SW-846 8082A Solid |
| 21310171203 | RS-COMP2-101613 | S | SW-846 8082A Prep Solid |
| 21310171203 | RS-COMP2-101613 | S | SW-846 8151A Solid |
| 21310171203 | RS-COMP2-101613 | S | SW-846 8151A Prep Solid |
| 21310171203 | RS-COMP2-101613 | S | SW-846 3550C Prep Solid |
| 21310171203 | RS-COMP2-101613 | S | SW-846 8270D DOD Solid |
| 21310171203 | RS-COMP2-101613 | S | SW-846 9034 Sulfide |
| 21310171203 | RS-COMP2-101613 | S | SW-846 9045 pH |
| 21310171203 | RS-COMP2-101613 | S | SW-846 9012A Reactivity Cyanide Solid |
| 21310171203 | RS-COMP2-101613 | S | Dry Weight/Percent Moisture |
| 21310171203 | RS-COMP2-101613 | S | SW-846 1030 |
| 21310171203 | RS-COMP2-101613 | S | Total Hydrocarbons Diesel Solid |
| 21310171203 | RS-COMP2-101613 | S | Total Hydrocarbons Diesel Solid Prep |
| 21310171203 | RS-COMP2-101613 | S | SW-846 8015C Modified Solid |
| 21310171205 | RS-CB02-101613 | S | SW-846 8260B |
| 21310171205 | RS-CB02-101613 | S | Dry Weight/Percent Moisture |
| 21310171207 | RS-CB05-101613 | S | SW-846 8260B |
| 21310171207 | RS-CB05-101613 | S | Dry Weight/Percent Moisture |
| 21310171209 | RS-CB03-101613 | S | SW-846 8260B |
| 21310171209 | RS-CB03-101613 | S | Dry Weight/Percent Moisture |
| 21310171211 | RS-CB08-101613 | S | SW-846 8260B |
| 21310171211 | RS-CB08-101613 | S | Dry Weight/Percent Moisture |

| | | | | |
|---|---|---|---|---|
| 21310171213 | RS-QDCI-101613 | S | SW-846 8260B | |
| 21310171213 | RS-QDCI-101613 | S | Dry Weight/Percent Moisture | |

# Manual Integrations: 213101712

| Lab Sample ID | Cust. Sample ID | Prod. Desc. | Compound | Comp. Name | |
|---|---|---|---|---|---|
| 21310171201 | RS-COMP1-101613 | EPA 8015C | 106-39-8 | Bromochlorobenzene | |
| 21310171201 | RS-COMP1-101613 | EPA 8015C | GCSV-00-4 | Diesel Range Organics | |
| 21310171201 | RS-COMP1-101613 | EPA 8081B | 72-43-5 | Methoxychlor | |
| 21310171201 | RS-COMP1-101613 | EPA 8270D | 205-99-2 | Benzo(b)fluoranthene | |
| 21310171201 | RS-COMP1-101613 | EPA 8270D | 207-08-9 | Benzo(k)fluoranthene | |
| 21310171201DL | RS-COMP1-101613DL | EPA 8270D | 205-99-2 | Benzo(b)fluoranthene | |
| 21310171201DL | RS-COMP1-101613DL | EPA 8270D | 207-08-9 | Benzo(k)fluoranthene | |
| 21310171203 | RS-COMP2-101613 | EPA 8015C | 106-39-8 | Bromochlorobenzene | |
| 21310171203 | RS-COMP2-101613 | EPA 8015C | GCSV-00-4 | Diesel Range Organics | |
| 21310171203 | RS-COMP2-101613 | EPA 8270D | 205-99-2 | Benzo(b)fluoranthene | |
| 21310171203 | RS-COMP2-101613 | EPA 8270D | 207-08-9 | Benzo(k)fluoranthene | |
| 21310171203DL | RS-COMP2-101613DL | EPA 8270D | 193-39-5 | Indeno(1,2,3-cd)pyrene | |
| 21310171203DL | RS-COMP2-101613DL | EPA 8270D | 207-08-9 | Benzo(k)fluoranthene | |

# Laboratory Endorsement

Sample analysis was performed in accordance with approved methodologies provided by the Environmental Protection Agency or other recognized agencies. The samples and their corresponding extracts will be maintained for a period of 30 days unless otherwise arranged. Following this retention period the samples will be disposed in accordance with GCAL's Standard Operating Procedures.

**Common Abbreviations Utilized in this Report**

| | |
|---|---|
| **ND** | Indicates the result was Not Detected at the specified RDL |
| **DO** | Indicates the result was Diluted Out |
| **MI** | Indicates the result was subject to Matrix Interference |
| **TNTC** | Indicates the result was Too Numerous To Count |
| **SUBC** | Indicates the analysis was Sub-Contracted |
| **FLD** | Indicates the analysis was performed in the Field |
| **PQL** | Practical Quantitation Limit |
| **MDL** | Method Detection Limit |
| **RDL** | Reporting Detection Limit |
| **00:00** | Reported as a time equivalent to 12:00 AM |

**Reporting Flags Utilized in this Report**

| | |
|---|---|
| **J** | Indicates the result is between the MDL and RDL |
| **U** | Indicates the compound was analyzed for but not detected |
| **B** | Indicates the analyte was detected in the associated Method Blank |

Sample receipt at GCAL is documented through the attached chain of custody. In accordance with NELAC, this report shall be reproduced only in full and with the written permission of GCAL. The results contained within this report relate only to the samples reported. The documented results are presented within this report.

This report pertains only to the samples listed in the Report Sample Summary and should be retained as a permanent record thereof. The results contained within this report are intended for the use of the client. Any unauthorized use of the information contained in this report is prohibited.

I certify that this data package is in compliance with the NELAC standard and terms and conditions of the contract and Statement of Work both technically and for completeness, for other than the conditions in the case narrative. Release of the data contained in this hardcopy data package and in the computer-readable data submitted has been authorized by the Quality Assurance Manager or his/her designee, as verified by the following signature.

Estimated uncertainty of measurement is available upon request. This report is in compliance with the DOD QSM as specified in the contract if applicable.

Robin Mugies

Authorized Signature
**GCAL REPORT** 213101712

THIS REPORT CONTAINS 1328 PAGES.

# Report Sample Summary

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21310171201 | RS-COMP1-101613 | Solid | 10/16/2013 16:00 | 10/17/2013 10:30 |
| 21310171202 | RS-COMP1-101613 | Solid | 10/16/2013 16:00 | 10/17/2013 10:30 |
| 21310171203 | RS-COMP2-101613 | Solid | 10/16/2013 17:00 | 10/17/2013 10:30 |
| 21310171205 | RS-CB02-101613 | Solid | 10/16/2013 15:10 | 10/17/2013 10:30 |
| 21310171207 | RS-CB05-101613 | Solid | 10/16/2013 16:10 | 10/17/2013 10:30 |
| 21310171209 | RS-CB03-101613 | Solid | 10/16/2013 15:05 | 10/17/2013 10:30 |
| 21310171211 | RS-CB08-101613 | Solid | 10/16/2013 15:35 | 10/17/2013 10:30 |
| 21310171213 | RS-QDCI-101613 | Solid | 10/16/2013 15:00 | 10/17/2013 10:30 |

2B
SOIL VOLATILE SYSTEM MONITORING COMPOUND RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Method: SW-846 8260B

| | SAMPLE NO. | SMC1 | # | SMC2 | # | SMC3 | # | SMC4 | # | TOT OUT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 . | RS-CB02-101613 | 93 | | 100 | | 116 | * | 94 | | 1 |
| 2 . | RS-CB05-101613 | 99 | | 117 | | 114 | | 115 | | 0 |
| 3 . | RS-CB03-101613 | 134 | * | 112 | | 105 | | 106 | | 1 |
| 4 . | RS-CB08-101613 | 90 | | 104 | | 108 | | 100 | | 0 |
| 5 . | RS-QDCI-101613 | 90 | | 105 | | 117 | * | 104 | | 1 |
| 6 . | LCS1248037 | 101 | | 99 | | 95 | | 98 | | 0 |
| 7 . | LCS1248095 | 102 | | 99 | | 93 | | 101 | | 0 |
| 8 . | LCSD1248038 | 103 | | 95 | | 96 | | 92 | | 0 |
| 9 . | LCSD1248096 | 101 | | 99 | | 92 | | 99 | | 0 |
| 10 . | MB1248036 | 99 | | 100 | | 111 | | 104 | | 0 |
| 11 . | MB1248094 | 95 | | 109 | | 112 | | 102 | | 0 |

| | | QC LIMITS |
|---|---|---|
| SMC 1 | 4-Bromofluorobenzene | 85 - 120 |
| SMC 2 | Dibromofluoromethane | 65 - 130 |
| SMC 3 | Toluene-d8 | 85 - 115 |
| SMC 4 | 1,2-Dichloroethane-d4 | 62 - 125 |

# Column to be used to flag recovery values

* Values outside of contract required QC limits

3B

SOIL VOLATILE LCS/LCSD RECOVERY

Lab Name: GCAL

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Contract: Method: SW-846 8260B

Analytical Batch: 518589

***SAMPLE NO : 1248037***

| COMPOUND | UNITS | SPIKE ADDED | SAMPLE CONCENTRATION | LCS CONCENTRATION | LCS % REC | # | QC. LIMITS |
|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ug/kg | 50 | 0 | 49.1 | 98 | | 70 - 135 |
| 1,1,2,2-Tetrachloroethane | ug/kg | 50 | 0 | 51.8 | 104 | | 55 - 130 |
| 1,1,2-Trichloroethane | ug/kg | 50 | 0 | 49.5 | 99 | | 60 - 125 |
| 1,1-Dichloroethane | ug/kg | 50 | 0 | 55.5 | 111 | | 75 - 125 |
| 1,1-Dichloroethene | ug/kg | 50 | 0 | 47.9 | 96 | | 65 - 135 |
| 1,2-Dichloroethane | ug/kg | 50 | 0 | 50.8 | 102 | | 70 - 135 |
| 1,2-Dichloropropane | ug/kg | 50 | 0 | 50.4 | 101 | | 70 - 120 |
| 2-Butanone | ug/kg | 50 | 0 | 54.6 | 109 | | 30 - 160 |
| 2-Hexanone | ug/kg | 50 | 0 | 50.6 | 101 | | 45 - 145 |
| 4-Methyl-2-pentanone | ug/kg | 50 | 0 | 47.6 | 95 | | 45 - 145 |
| Acetone | ug/kg | 50 | 0 | 53.9 | 108 | | 20 - 160 |
| Benzene | ug/kg | 50 | 0 | 51.1 | 102 | | 75 - 125 |
| Bromodichloromethane | ug/kg | 50 | 0 | 49.6 | 99 | | 70 - 130 |
| Bromoform | ug/kg | 50 | 0 | 50.4 | 101 | | 55 - 135 |
| Bromomethane | ug/kg | 50 | 0 | 48.5 | 97 | | 30 - 160 |
| Carbon disulfide | ug/kg | 50 | 0 | 47.6 | 95 | | 45 - 160 |
| Carbon tetrachloride | ug/kg | 50 | 0 | 45.9 | 92 | | 65 - 135 |
| Chlorobenzene | ug/kg | 50 | 0 | 50.2 | 100 | | 75 - 125 |
| Chloroethane | ug/kg | 50 | 0 | 47 | 94 | | 40 - 155 |
| Chloroform | ug/kg | 50 | 0 | 48 | 96 | | 70 - 125 |
| Chloromethane | ug/kg | 50 | 0 | 48.7 | 97 | | 50 - 130 |
| Dibromochloromethane | ug/kg | 50 | 0 | 49.1 | 98 | | 65 - 130 |
| Ethylbenzene | ug/kg | 50 | 0 | 52.9 | 106 | | 75 - 125 |
| Methylene chloride | ug/kg | 50 | 0 | 50.4 | 101 | | 55 - 140 |
| Styrene | ug/kg | 50 | 0 | 49.3 | 99 | | 75 - 125 |
| Tetrachloroethene | ug/kg | 50 | 0 | 45.6 | 91 | | 65 - 140 |
| Toluene | ug/kg | 50 | 0 | 47.1 | 94 | | 70 - 125 |
| Trichloroethene | ug/kg | 50 | 0 | 47.3 | 95 | | 75 - 125 |
| Vinyl chloride | ug/kg | 50 | 0 | 46.1 | 92 | | 60 - 125 |
| Xylene (total) | ug/kg | 150 | 0 | 143 | 95 | | 75 - 125 |
| cis-1,2-Dichloroethene | ug/kg | 50 | 0 | 62.7 | 125 | | 65 - 125 |
| cis-1,3-Dichloropropene | ug/kg | 50 | 0 | 46.2 | 92 | | 70 - 125 |
| trans-1,2-Dichloroethene | ug/kg | 50 | 0 | 49.1 | 98 | | 65 - 135 |
| trans-1,3-Dichloropropene | ug/kg | 50 | 0 | 47.5 | 95 | | 65 - 125 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD : 0 out of 34 outside limits

Spike Recovery: 0 out of 68 outside limits

FORM III VOA-2

3B

SOIL VOLATILE LCS/LCSD RECOVERY

Lab Name: GCAL

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Contract: Method: SW-846 8260B

Analytical Batch: 518589

***SAMPLE NO :*** ***1248038***

| COMPOUND | UNITS | SPIKE ADDED | LCSD CONC. | LCSD % REC | # | % RPD | # | QC. LIMITS REC | QC. LIMITS RPD |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ug/kg | 50 | 47 | 94 | | 4 | | 70 - 135 | 0 - 30 |
| 1,1,2,2-Tetrachloroethane | ug/kg | 50 | 51.8 | 104 | | 0 | | 55 - 130 | 0 - 30 |
| 1,1,2-Trichloroethane | ug/kg | 50 | 48.9 | 98 | | 1 | | 60 - 125 | 0 - 30 |
| 1,1-Dichloroethane | ug/kg | 50 | 46.8 | 94 | | 17 | | 75 - 125 | 0 - 30 |
| 1,1-Dichloroethene | ug/kg | 50 | 44.3 | 89 | | 8 | | 65 - 135 | 0 - 30 |
| 1,2-Dichloroethane | ug/kg | 50 | 50.4 | 101 | | .8 | | 70 - 135 | 0 - 30 |
| 1,2-Dichloropropane | ug/kg | 50 | 50.7 | 101 | | .6 | | 70 - 120 | 0 - 30 |
| 2-Butanone | ug/kg | 50 | 53.2 | 106 | | 3 | | 30 - 160 | 0 - 30 |
| 2-Hexanone | ug/kg | 50 | 48.5 | 97 | | 4 | | 45 - 145 | 0 - 30 |
| 4-Methyl-2-pentanone | ug/kg | 50 | 46.9 | 94 | | 1 | | 45 - 145 | 0 - 30 |
| Acetone | ug/kg | 50 | 50.3 | 101 | | 7 | | 20 - 160 | 0 - 30 |
| Benzene | ug/kg | 50 | 50.8 | 102 | | .6 | | 75 - 125 | 0 - 30 |
| Bromodichloromethane | ug/kg | 50 | 49.8 | 100 | | .4 | | 70 - 130 | 0 - 30 |
| Bromoform | ug/kg | 50 | 51.9 | 104 | | 3 | | 55 - 135 | 0 - 30 |
| Bromomethane | ug/kg | 50 | 47.1 | 94 | | 3 | | 30 - 160 | 0 - 30 |
| Carbon disulfide | ug/kg | 50 | 45 | 90 | | 6 | | 45 - 160 | 0 - 30 |
| Carbon tetrachloride | ug/kg | 50 | 45.4 | 91 | | 1 | | 65 - 135 | 0 - 30 |
| Chlorobenzene | ug/kg | 50 | 51.1 | 102 | | 2 | | 75 - 125 | 0 - 30 |
| Chloroethane | ug/kg | 50 | 46 | 92 | | 2 | | 40 - 155 | 0 - 30 |
| Chloroform | ug/kg | 50 | 48.3 | 97 | | .6 | | 70 - 125 | 0 - 30 |
| Chloromethane | ug/kg | 50 | 48.2 | 96 | | 1 | | 50 - 130 | 0 - 30 |
| Dibromochloromethane | ug/kg | 50 | 49.7 | 99 | | 1 | | 65 - 130 | 0 - 30 |
| Ethylbenzene | ug/kg | 50 | 54.5 | 109 | | 3 | | 75 - 125 | 0 - 30 |
| Methylene chloride | ug/kg | 50 | 50 | 100 | | .8 | | 55 - 140 | 0 - 30 |
| Styrene | ug/kg | 50 | 51.6 | 103 | | 5 | | 75 - 125 | 0 - 30 |
| Tetrachloroethene | ug/kg | 50 | 45.3 | 91 | | .7 | | 65 - 140 | 0 - 30 |
| Toluene | ug/kg | 50 | 48.7 | 97 | | 3 | | 70 - 125 | 0 - 30 |
| Trichloroethene | ug/kg | 50 | 47.5 | 95 | | .4 | | 75 - 125 | 0 - 30 |
| Vinyl chloride | ug/kg | 50 | 46.2 | 92 | | .2 | | 60 - 125 | 0 - 30 |
| Xylene (total) | ug/kg | 150 | 151 | 101 | | 5 | | 75 - 125 | 0 - 30 |
| cis-1,2-Dichloroethene | ug/kg | 50 | 51.6 | 103 | | 19 | | 65 - 125 | 0 - 30 |
| cis-1,3-Dichloropropene | ug/kg | 50 | 48 | 96 | | 4 | | 70 - 125 | 0 - 30 |
| trans-1,2-Dichloroethene | ug/kg | 50 | 46.8 | 94 | | 5 | | 65 - 135 | 0 - 30 |
| trans-1,3-Dichloropropene | ug/kg | 50 | 47.5 | 95 | | 0 | | 65 - 125 | 0 - 30 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD : 0 out of 34 outside limits

Spike Recovery: 0 out of 68 outside limits

FORM III VOA-2

3B

SOIL VOLATILE LCS/LCSD RECOVERY

Lab Name: GCAL

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Contract: Method: SW-846 8260B

Analytical Batch: 518604

***SAMPLE NO : 1248095***

| COMPOUND | UNITS | SPIKE ADDED | SAMPLE CONCENTRATION | LCS CONCENTRATION | LCS % REC | # | QC. LIMITS |
|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ug/kg | 50 | 0 | 53.6 | 107 | | 70 - 135 |
| 1,1,2,2-Tetrachloroethane | ug/kg | 50 | 0 | 53.4 | 107 | | 55 - 130 |
| 1,1,2-Trichloroethane | ug/kg | 50 | 0 | 51.8 | 104 | | 60 - 125 |
| 1,1-Dichloroethane | ug/kg | 50 | 0 | 49.1 | 98 | | 75 - 125 |
| 1,1-Dichloroethene | ug/kg | 50 | 0 | 54.1 | 108 | | 65 - 135 |
| 1,2-Dichloroethane | ug/kg | 50 | 0 | 53.2 | 106 | | 70 - 135 |
| 1,2-Dichloropropane | ug/kg | 50 | 0 | 51.3 | 103 | | 70 - 120 |
| 2-Butanone | ug/kg | 50 | 0 | 60 | 120 | | 30 - 160 |
| 2-Hexanone | ug/kg | 50 | 0 | 48.4 | 97 | | 45 - 145 |
| 4-Methyl-2-pentanone | ug/kg | 50 | 0 | 49.6 | 99 | | 45 - 145 |
| Acetone | ug/kg | 50 | 0 | 61.1 | 122 | | 20 - 160 |
| Benzene | ug/kg | 50 | 0 | 53.5 | 107 | | 75 - 125 |
| Bromodichloromethane | ug/kg | 50 | 0 | 51.9 | 104 | | 70 - 130 |
| Bromoform | ug/kg | 50 | 0 | 51.3 | 103 | | 55 - 135 |
| Bromomethane | ug/kg | 50 | 0 | 53.2 | 106 | | 30 - 160 |
| Carbon disulfide | ug/kg | 50 | 0 | 52.5 | 105 | | 45 - 160 |
| Carbon tetrachloride | ug/kg | 50 | 0 | 52.5 | 105 | | 65 - 135 |
| Chlorobenzene | ug/kg | 50 | 0 | 51.9 | 104 | | 75 - 125 |
| Chloroethane | ug/kg | 50 | 0 | 51.9 | 104 | | 40 - 155 |
| Chloroform | ug/kg | 50 | 0 | 50.6 | 101 | | 70 - 125 |
| Chloromethane | ug/kg | 50 | 0 | 51.9 | 104 | | 50 - 130 |
| Dibromochloromethane | ug/kg | 50 | 0 | 50.3 | 101 | | 65 - 130 |
| Ethylbenzene | ug/kg | 50 | 0 | 56.6 | 113 | | 75 - 125 |
| Methylene chloride | ug/kg | 50 | 0 | 54.9 | 110 | | 55 - 140 |
| Styrene | ug/kg | 50 | 0 | 50.4 | 101 | | 75 - 125 |
| Tetrachloroethene | ug/kg | 50 | 0 | 48.9 | 98 | | 65 - 140 |
| Toluene | ug/kg | 50 | 0 | 49.3 | 99 | | 70 - 125 |
| Trichloroethene | ug/kg | 50 | 0 | 51.3 | 103 | | 75 - 125 |
| Vinyl chloride | ug/kg | 50 | 0 | 54.9 | 110 | | 60 - 125 |
| Xylene (total) | ug/kg | 150 | 0 | 151 | 101 | | 75 - 125 |
| cis-1,2-Dichloroethene | ug/kg | 50 | 0 | 52.7 | 105 | | 65 - 125 |
| cis-1,3-Dichloropropene | ug/kg | 50 | 0 | 46.6 | 93 | | 70 - 125 |
| trans-1,2-Dichloroethene | ug/kg | 50 | 0 | 54.5 | 109 | | 65 - 135 |
| trans-1,3-Dichloropropene | ug/kg | 50 | 0 | 48.6 | 97 | | 65 - 125 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD : 0 out of 34 outside limits

Spike Recovery: 0 out of 68 outside limits

FORM III VOA-2

3B

SOIL VOLATILE LCS/LCSD RECOVERY

Lab Name: GCAL

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Contract: Method: SW-846 8260B

Analytical Batch: 518604

***SAMPLE NO :*** ***1248096***

| COMPOUND | UNITS | SPIKE ADDED | LCSD CONC. | LCSD % REC | # | % RPD | # | QC. LIMITS REC | QC. LIMITS RPD |
|---|---|---|---|---|---|---|---|---|---|
| 1,1,1-Trichloroethane | ug/kg | 50 | 51.1 | 102 | | 5 | | 70 - 135 | 0 - 30 |
| 1,1,2,2-Tetrachloroethane | ug/kg | 50 | 48.5 | 97 | | 10 | | 55 - 130 | 0 - 30 |
| 1,1,2-Trichloroethane | ug/kg | 50 | 47.7 | 95 | | 8 | | 60 - 125 | 0 - 30 |
| 1,1-Dichloroethane | ug/kg | 50 | 47.1 | 94 | | 4 | | 75 - 125 | 0 - 30 |
| 1,1-Dichloroethene | ug/kg | 50 | 49.4 | 99 | | 9 | | 65 - 135 | 0 - 30 |
| 1,2-Dichloroethane | ug/kg | 50 | 48.6 | 97 | | 9 | | 70 - 135 | 0 - 30 |
| 1,2-Dichloropropane | ug/kg | 50 | 49.4 | 99 | | 4 | | 70 - 120 | 0 - 30 |
| 2-Butanone | ug/kg | 50 | 53.9 | 108 | | 11 | | 30 - 160 | 0 - 30 |
| 2-Hexanone | ug/kg | 50 | 46.9 | 94 | | 3 | | 45 - 145 | 0 - 30 |
| 4-Methyl-2-pentanone | ug/kg | 50 | 42.8 | 86 | | 15 | | 45 - 145 | 0 - 30 |
| Acetone | ug/kg | 50 | 52.5 | 105 | | 15 | | 20 - 160 | 0 - 30 |
| Benzene | ug/kg | 50 | 50.5 | 101 | | 6 | | 75 - 125 | 0 - 30 |
| Bromodichloromethane | ug/kg | 50 | 50.1 | 100 | | 4 | | 70 - 130 | 0 - 30 |
| Bromoform | ug/kg | 50 | 47.5 | 95 | | 8 | | 55 - 135 | 0 - 30 |
| Bromomethane | ug/kg | 50 | 49.5 | 99 | | 7 | | 30 - 160 | 0 - 30 |
| Carbon disulfide | ug/kg | 50 | 49.4 | 99 | | 6 | | 45 - 160 | 0 - 30 |
| Carbon tetrachloride | ug/kg | 50 | 49.1 | 98 | | 7 | | 65 - 135 | 0 - 30 |
| Chlorobenzene | ug/kg | 50 | 47.8 | 96 | | 8 | | 75 - 125 | 0 - 30 |
| Chloroethane | ug/kg | 50 | 50.3 | 101 | | 3 | | 40 - 155 | 0 - 30 |
| Chloroform | ug/kg | 50 | 48.6 | 97 | | 4 | | 70 - 125 | 0 - 30 |
| Chloromethane | ug/kg | 50 | 48.9 | 98 | | 6 | | 50 - 130 | 0 - 30 |
| Dibromochloromethane | ug/kg | 50 | 47.2 | 94 | | 6 | | 65 - 130 | 0 - 30 |
| Ethylbenzene | ug/kg | 50 | 52.8 | 106 | | 7 | | 75 - 125 | 0 - 30 |
| Methylene chloride | ug/kg | 50 | 51.7 | 103 | | 6 | | 55 - 140 | 0 - 30 |
| Styrene | ug/kg | 50 | 48 | 96 | | 5 | | 75 - 125 | 0 - 30 |
| Tetrachloroethene | ug/kg | 50 | 46.8 | 94 | | 4 | | 65 - 140 | 0 - 30 |
| Toluene | ug/kg | 50 | 46.4 | 93 | | 6 | | 70 - 125 | 0 - 30 |
| Trichloroethene | ug/kg | 50 | 50.1 | 100 | | 2 | | 75 - 125 | 0 - 30 |
| Vinyl chloride | ug/kg | 50 | 50.4 | 101 | | 9 | | 60 - 125 | 0 - 30 |
| Xylene (total) | ug/kg | 150 | 141 | 94 | | 7 | | 75 - 125 | 0 - 30 |
| cis-1,2-Dichloroethene | ug/kg | 50 | 49.5 | 99 | | 6 | | 65 - 125 | 0 - 30 |
| cis-1,3-Dichloropropene | ug/kg | 50 | 46.2 | 92 | | .9 | | 70 - 125 | 0 - 30 |
| trans-1,2-Dichloroethene | ug/kg | 50 | 50.6 | 101 | | 7 | | 65 - 135 | 0 - 30 |
| trans-1,3-Dichloropropene | ug/kg | 50 | 46.4 | 93 | | 5 | | 65 - 125 | 0 - 30 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD : 0 out of 34 outside limits

Spike Recovery: 0 out of 68 outside limits

FORM III VOA-2

4A

VOLATILE METHOD BLANK SUMMARY

SAMPLE NO.

MB1248036

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Lab File ID: 2131025/f2898

Lab Sample ID: 1248036 Date Extracted:

GC Column: RTX-VMS-30 ID: .25 (mm)

Date Analyzed: 10/25/13 Time: 1735

Instrument ID: MSV7 Matrix: Solid

Heated Purge: Y

Level:

Prep Batch: Analytical Batch: 518589

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 1. | LCS1248037 | 1248037 | 2131025/f2895 | 10/25/13 | 1630 |
| 2. | LCSD1248038 | 1248038 | 2131025/f2896 | 10/25/13 | 1651 |
| 3. | RS-CB02-101613 | 21310171205 | 2131025/f2899 | 10/25/13 | 1804 |
| 4. | RS-CB08-101613 | 21310171211 | 2131025/f2902 | 10/25/13 | 1909 |
| 5. | RS-QDCI-101613 | 21310171213 | 2131025/f2903 | 10/25/13 | 1930 |
| 6. | RS-CB03-101613 | 21310171209 | 2131025/f2910 | 10/25/13 | 2202 |

FORM IV VOA

4A

VOLATILE METHOD BLANK SUMMARY

SAMPLE NO.

MB1248094

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Lab File ID: 2131026/f2923

Lab Sample ID: 1248094 Date Extracted:

GC Column: RTX-VMS-30 ID: .25 (mm)

Date Analyzed: 10/26/13 Time: 0950

Instrument ID: MSV7 Matrix: Solid

Heated Purge: Y

Level:

Prep Batch: Analytical Batch: 518604

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS AND MSD

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 1. | LCS1248095 | 1248095 | 2131026/f2919 | 10/26/13 | 0823 |
| 2. | LCSD1248096 | 1248096 | 2131026/f2920 | 10/26/13 | 0845 |
| 3. | RS-CB05-101613 | 21310171207 | 2131026/f2944 | 10/26/13 | 1734 |

FORM IV VOA

5A

VOLATILE ORGANICS INSTRUMENT PERFORMANCE CHECK

BROMOFLUOROBENZENE ( BFB )

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Lab File ID: 2131025/f2883d

BFB Injection Date: 10/25/13

Instrument ID: MSV7

BFB Injection Time: 1120

GC Column: RTX-VMS-30 ID: .25 (mm)

Analytical Batch: 518589

| m / e | ION ABUNDANCE CRITERIA | % Relative Abundance | | | |
|---|---|---|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 16.38 | ( | ) | |
| 75 | 30.0 - 60.0% of mass 95 | 46.4 | ( | ) | |
| 95 | Base Peak, 100% relative abundance | 100 | ( | ) | |
| 96 | 5.0 -9.0% of mass 95 | 7.29 | ( | ) | |
| 173 | Less than 2.0% of mass 174 | .74 | ( .76 | ) | 1 |
| 174 | 50.0 - 120.0% of mass 95 | 97.72 | ( | ) | |
| 175 | 5.0 - 9.0% of mass 174 | 8.03 | ( 8.22 | ) | 1 |
| 176 | 95.0 - 101.0% of mass 174 | 92.85 | ( 95.02 | ) | 1 |
| 177 | 5.0 - 9.0% of mass 176 | 6.53 | ( 7.04 | ) | 2 |

1- Value is % mass 174 2- Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 1 . | V7STD002 | 1201 | 2131025/f2885d | 10/25/13 | 1224 |
| 2 . | V7STD005 | 1202 | 2131025/f2886d | 10/25/13 | 1246 |
| 3 . | V7STD010 | 1203 | 2131025/f2887d | 10/25/13 | 1307 |
| 4 . | V7STD020 | 1204 | 2131025/f2888d | 10/25/13 | 1329 |
| 5 . | V7STD050 | 1205 | 2131025/f2889d | 10/25/13 | 1351 |
| 6 . | V7STD100 | 1206 | 2131025/f2890d | 10/25/13 | 1413 |
| 7 . | V7STD200 | 1207 | 2131025/f2891d | 10/25/13 | 1434 |
| 8 . | ICV050 | 1600 | 2131025/f2894d | 10/25/13 | 1608 |
| 9 . | LCS1248037 | 1248037 | 2131025/f2895 | 10/25/13 | 1630 |
| 10 . | LCSD1248038 | 1248038 | 2131025/f2896 | 10/25/13 | 1651 |
| 11 . | MB1248036 | 1248036 | 2131025/f2898 | 10/25/13 | 1735 |
| 12 . | RS-CB02-101613 | 21310171205 | 2131025/f2899 | 10/25/13 | 1804 |
| 13 . | RS-CB08-101613 | 21310171211 | 2131025/f2902 | 10/25/13 | 1909 |
| 14 . | RS-QDCI-101613 | 21310171213 | 2131025/f2903 | 10/25/13 | 1930 |
| 15 . | RS-CB03-101613 | 21310171209 | 2131025/f2910 | 10/25/13 | 2202 |

FORM V VOA

5A

VOLATILE ORGANICS INSTRUMENT PERFORMANCE CHECK

BROMOFLUOROBENZENE ( BFB )

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Lab File ID: 2131026/f2916

BFB Injection Date: 10/26/13

Instrument ID: MSV7

BFB Injection Time: 0652

GC Column: RTX-VMS-30 ID: .25 (mm)

Analytical Batch: 518604

| m / e | ION ABUNDANCE CRITERIA | % Relative Abundance | | | |
|---|---|---|---|---|---|
| 50 | 15.0 - 40.0% of mass 95 | 17.27 | ( | ) | |
| 75 | 30.0 - 60.0% of mass 95 | 43.71 | ( | ) | |
| 95 | Base Peak, 100% relative abundance | 100 | ( | ) | |
| 96 | 5.0 -9.0% of mass 95 | 6.3 | ( | ) | |
| 173 | Less than 2.0% of mass 174 | 1.19 | ( 1.26 | ) | 1 |
| 174 | 50.0 - 120.0% of mass 95 | 94.71 | ( | ) | |
| 175 | 5.0 - 9.0% of mass 174 | 6.81 | ( 7.2 | ) | 1 |
| 176 | 95.0 - 101.0% of mass 174 | 91.39 | ( 96.5 | ) | 1 |
| 177 | 5.0 - 9.0% of mass 176 | 6.08 | ( 6.66 | ) | 2 |

1- Value is % mass 174 2- Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 1. | V7STD050 | 1400 | 2131026/f2918 | 10/26/13 | 0802 |
| 2. | LCS1248095 | 1248095 | 2131026/f2919 | 10/26/13 | 0823 |
| 3. | LCSD1248096 | 1248096 | 2131026/f2920 | 10/26/13 | 0845 |
| 4. | MB1248094 | 1248094 | 2131026/f2923 | 10/26/13 | 0950 |
| 5. | RS-CB05-101613 | 21310171207 | 2131026/f2944 | 10/26/13 | 1734 |

FORM V VOA

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Lab File ID (Standard): 2131025/f2889d Date Analyzed: 10/25/13 Time: 1351

Instrument ID: MSV7 GC Column: RTX-VMS-30M ID: .25 (mm)

Analytical Batch: 518589 Heated Burge: (Y/N) Y

| | IS1 Area | RT | IS2 Area | RT | IS3 Area | RT |
|---|---|---|---|---|---|---|
| STANDARD | 242316 | 5.08 | 97078 | 8.27 | 95557 | 10.64 |

| EPA Sample No. | | # | | # | | # | | # | | # | | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LCS1248037 | 239734 | | 5.08 | | 95970 | | 8.27 | | 96137 | | 10.64 | |
| LCSD1248038 | 253470 | | 5.08 | | 98605 | | 8.28 | | 99553 | | 10.64 | |
| MB1248036 | 231060 | | 5.08 | | 74226 | | 8.27 | | 68213 | | 10.64 | |
| RS-CB02-101613 | 226255 | | 5.08 | | 70622 | | 8.27 | | 59348 | | 10.64 | |
| RS-CB08-101613 | 216717 | | 5.08 | | 71761 | | 8.28 | | 62817 | | 10.64 | |
| RS-QDCI-101613 | 210064 | | 5.08 | | 62986 | | 8.27 | | 52189 | | 10.64 | |
| RS-CB03-101613 | 196446 | | 5.09 | | 68628 | | 8.27 | | 83352 | | 10.64 | |

IS 1 ID: Fluorobenzene
IS 2 ID: Chlorobenzene d5
IS 3 ID: 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag internal standard values with an asterisk.
* Values outside of QC limits.

FORM VIII VOA

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Lab File ID (Standard): 2131025/f2889d Date Analyzed: 10/25/13 Time: 1351

Instrument ID: MSV7 GC Column: RTX-VMS-30M ID: .25 (mm)

Analytical Batch: 518604 Heated Burge: (Y/N) Y

| | IS1 | | IS2 | | IS3 | |
|---|---|---|---|---|---|---|
| | Area | RT | Area | RT | Area | RT |
| STANDARD | 242316 | 5.08 | 97078 | 8.27 | 95557 | 10.64 |

| EPA Sample No. | | # | | # | | # | | # | | # | | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| LCS1248095 | 218902 | | 5.09 | | 88588 | | 8.27 | | 91661 | | 10.64 | |
| LCSD1248096 | 240504 | | 5.08 | | 98635 | | 8.27 | | 100240 | | 10.64 | |
| MB1248094 | 195888 | | 5.08 | | 64169 | | 8.27 | | 58728 | | 10.64 | |
| RS-CB05-101613 | 187673 | | 5.08 | | 60266 | | 8.27 | | 55403 | | 10.63 | |

IS 1 ID: Fluorobenzene
IS 2 ID: Chlorobenzene d5
IS 3 ID: 1,4-Dichlorobenzene-d4

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag internal standard values with an asterisk.
* Values outside of QC limits.

FORM VIII VOA

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RS-CB02-101613

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Matrix: (soil/water) Solid

Sample wt/vol: 4.93 (g/ml) g

Lab Sample ID: 21310171205

Level: (low/med)

Lab File ID: 2131025/f2899

% Moisture: not dec. 25.7

Date Collected: 10/16/13 Time: 1510

GC Column: RTX-VMS-30 ID: .25 (mm)

Date Received: 10/17/13

Instrument ID: MSV7

Date Analyzed: 10/25/13 Time: 1804

Soil Extract Volume: ( µL )

Dilution Factor: 1 Analyst: CEK

Soil Aliquot Volume: ( µL )

Prep Batch: Analytical Batch: 518589

Analytical Method: SW-846 8260B

*CONCENTRATION UNITS: ug/kg*

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 0.682 | U | 0.221 | 0.682 | 6.82 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.682 | U | 0.238 | 0.682 | 6.82 |
| 79-00-5 | 1,1,2-Trichloroethane | 0.682 | U | 0.087 | 0.682 | 6.82 |
| 75-34-3 | 1,1-Dichloroethane | 0.682 | U | 0.132 | 0.682 | 6.82 |
| 75-35-4 | 1,1-Dichloroethene | 0.682 | U | 0.310 | 0.682 | 6.82 |
| 107-06-2 | 1,2-Dichloroethane | 0.682 | U | 0.270 | 0.682 | 6.82 |
| 78-87-5 | 1,2-Dichloropropane | 0.682 | U | 0.104 | 0.682 | 6.82 |
| 78-93-3 | 2-Butanone | 2.73 | U | 0.441 | 2.73 | 6.82 |
| 591-78-6 | 2-Hexanone | 2.73 | U | 0.403 | 2.73 | 6.82 |
| 108-10-1 | 4-Methyl-2-pentanone | 0.682 | U | 0.211 | 0.682 | 6.82 |
| 67-64-1 | Acetone | 2.73 | U | 0.404 | 2.73 | 34.1 |
| 71-43-2 | Benzene | 0.682 | U | 0.069 | 0.682 | 6.82 |
| 75-27-4 | Bromodichloromethane | 0.682 | U | 0.141 | 0.682 | 6.82 |
| 75-25-2 | Bromoform | 0.682 | U | 0.596 | 0.682 | 6.82 |
| 74-83-9 | Bromomethane | 2.73 | U | 0.663 | 2.73 | 6.82 |
| 75-15-0 | Carbon disulfide | 0.682 | U | 0.255 | 0.682 | 6.82 |
| 56-23-5 | Carbon tetrachloride | 0.682 | U | 0.257 | 0.682 | 6.82 |
| 108-90-7 | Chlorobenzene | 0.682 | U | 0.176 | 0.682 | 6.82 |
| 75-00-3 | Chloroethane | 0.682 | U | 0.275 | 0.682 | 6.82 |
| 67-66-3 | Chloroform | 0.682 | U | 0.235 | 0.682 | 6.82 |
| 74-87-3 | Chloromethane | 2.73 | U | 0.263 | 2.73 | 6.82 |
| 124-48-1 | Dibromochloromethane | 0.682 | U | 0.341 | 0.682 | 6.82 |
| 100-41-4 | Ethylbenzene | 0.682 | U | 0.250 | 0.682 | 6.82 |
| 75-09-2 | Methylene chloride | 1.36 | U | 0.698 | 1.36 | 13.6 |
| 100-42-5 | Styrene | 0.682 | U | 0.114 | 0.682 | 6.82 |
| 127-18-4 | Tetrachloroethene | 0.682 | U | 0.404 | 0.682 | 6.82 |
| 108-88-3 | Toluene | 0.682 | U | 0.146 | 0.682 | 6.82 |
| 79-01-6 | Trichloroethene | 0.682 | U | 0.173 | 0.682 | 6.82 |
| 75-01-4 | Vinyl chloride | 0.682 | U | 0.264 | 0.682 | 6.82 |
| 1330-20-7 | Xylene (total) | 2.05 | U | 0.337 | 2.05 | 20.5 |
| 156-59-2 | cis-1,2-Dichloroethene | 0.682 | U | 0.156 | 0.682 | 6.82 |

FORM I VOA

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RS-CB02-101613

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Matrix: (soil/water) Solid

Sample wt/vol: 4.93 (g/ml) g Lab Sample ID: 21310171205

Level: (low/med) Lab File ID: 2131025/f2899

% Moisture: not dec. 25.7 Date Collected: 10/16/13 Time: 1510

GC Column: RTX-VMS-30 ID: .25 (mm) Date Received: 10/17/13

Instrument ID: MSV7 Date Analyzed: 10/25/13 Time: 1804

Soil Extract Volume: ( µL ) Dilution Factor: 1 Analyst: CEK

Soil Aliquot Volume: ( µL ) Prep Batch: Analytical Batch: 518589

Analytical Method: SW-846 8260B

*CONCENTRATION UNITS: ug/kg*

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 10061-01-5 | cis-1,3-Dichloropropene | 0.682 | U | 0.176 | 0.682 | 6.82 |
| 156-60-5 | trans-1,2-Dichloroethene | 0.682 | U | 0.163 | 0.682 | 6.82 |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.682 | U | 0.112 | 0.682 | 6.82 |

FORM I VOA

GCAL, Inc.

Data file : /var/chem/msv7.i/2131025.s.b/f2899.d
Lab Smp Id: 21310171205 Client Smp ID: A
Inj Date : 25-OCT-2013 18:04
Operator : CEK Inst ID: msv7.i
Smp Info : 21310171205*A
Misc Info : MSV~28849~*1*CEK
Comment :
Method : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Meth Date : 25-Oct-2013 19:43 cek Quant Type: ISTD
Cal Date : 25-OCT-2013 14:34 Cal File: f2891d.d
Als bottle: 16
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * (Uf/Ws)/((100-M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 5.00000 | ng unit correction factor |
| Ws | 4.93000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture (not decanted) |
| Va | 100.00000 | Volume of aliquot extract added (uL) |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppb) | FINAL (ug/Kg) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|
| $ 42 Dibromofluoromethane | 111 | 4.534 | 4.542 | (0.892) | 56017 | 49.9647 | 50.7 | 7399 |
| $ 50 1,2-Dichloroethane-d4 | 67 | 4.902 | 4.906 | (0.965) | 21160 | 46.8309 | 47.5 | 9231 |
| * 54 FLUOROBENZENE | 96 | 5.082 | 5.086 | (1.000) | 226255 | 50.0000 | | 9249 |
| $ 74 Toluene-d8 | 98 | 6.341 | 6.341 | (0.767) | 207630 | 57.9616 | 58.8 | 9364(R) |
| * 90 Chlorobenzene-d5 | 82 | 8.272 | 8.279 | (1.000) | 70622 | 50.0000 | | 5850 |
| $ 103 Bromofluorobenzene | 174 | 9.633 | 9.633 | (1.165) | 45182 | 46.7786 | 47.4 | 9481 |
| * 118 1,4-DICHLOROBENZENE-D4 | 152 | 10.637 | 10.637 | (1.000) | 59348 | 50.0000 | | 7841 |

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /var/chem/msv7.i/2131025.s.b/f2899.d

Date : 25-OCT-2013 18:04

Client ID: A

Sample Info: 21310171205*A

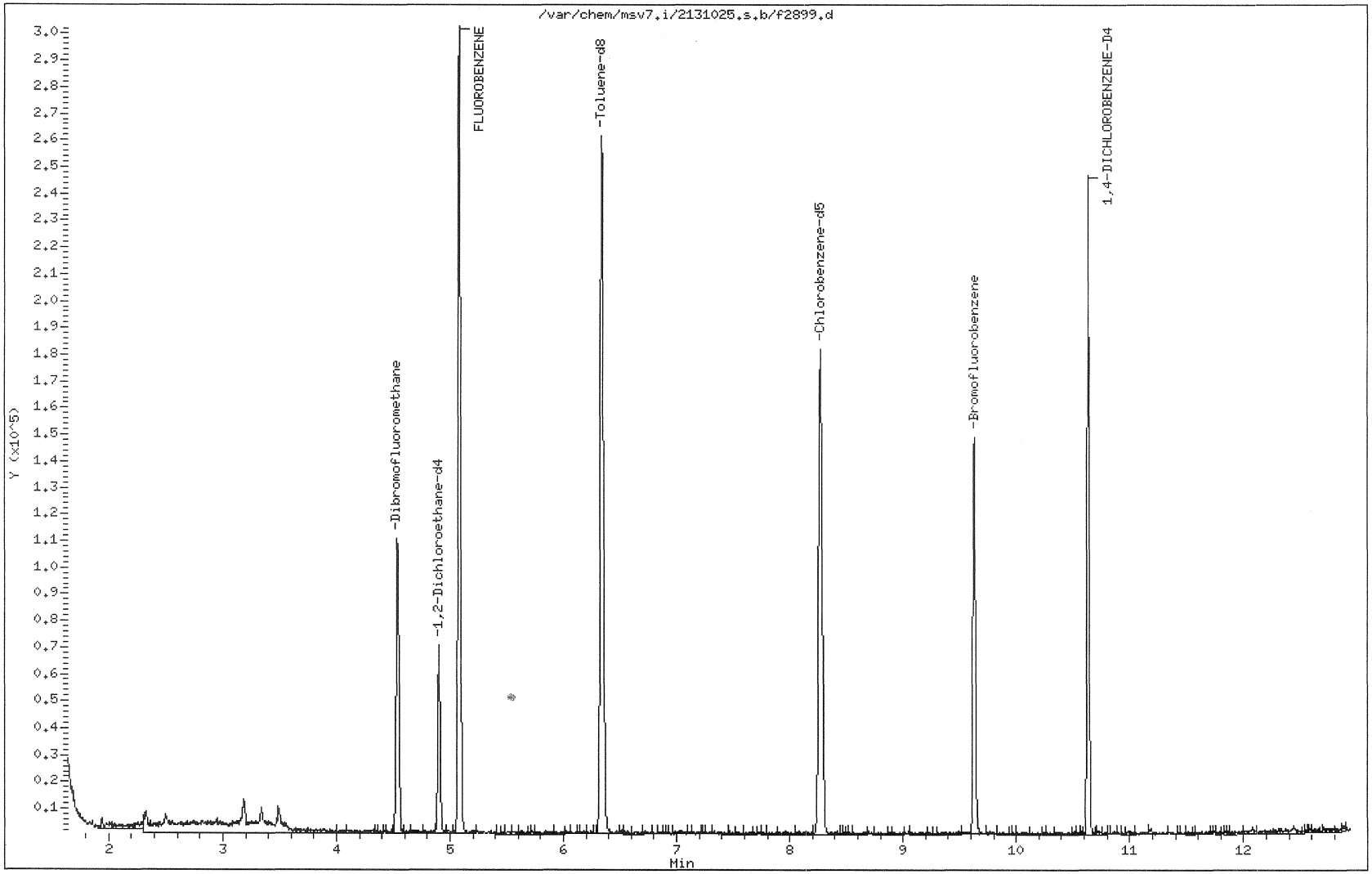
Column phase: RTX-VMS-30M

Instrument: msv7.i

Operator: CEK

Column diameter: 0.25



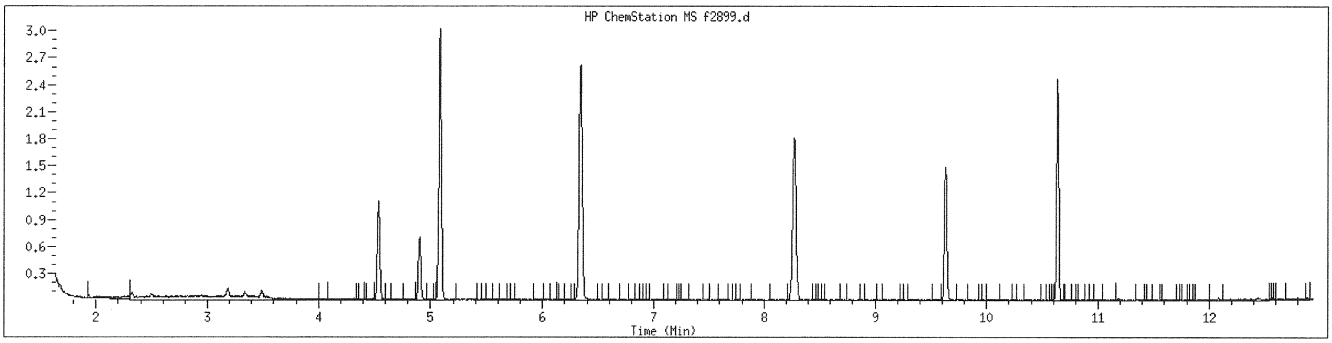



21310171 25

Data file : /var/chem/msv7.i/2131025.s.b/f2899.d Page: 1
Report Date: 10/25/2013 19:58

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 21310171205 SampleType : SAMPLE
Injection Date: 10/25/2013 18:04 Instrument : msv7.i
Operator : CEK
Sample Info : 21310171205*A
Misc Info : MSV~28849~*1*CEK
Method : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Dilution : 1.00
Matrix : SOIL
Integrator : HP RTE Compound Sublist: 8260b




NO MANUAL INTEGRATIONS

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RS-CB05-101613

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Matrix: (soil/water) Solid

Sample wt/vol: 5.04 (g/ml) g Lab Sample ID: 21310171207

Level: (low/med) Lab File ID: 2131026/f2944

% Moisture: not dec. 2.2 Date Collected: 10/16/13 Time: 1610

GC Column: RTX-VMS-30 ID: .25 (mm) Date Received: 10/17/13

Instrument ID: MSV7 Date Analyzed: 10/26/13 Time: 1734

Soil Extract Volume: ( µL ) Dilution Factor: 1 Analyst: CEK

Soil Aliquot Volume: ( µL ) Prep Batch: Analytical Batch: 518604

Analytical Method: SW-846 8260B

*CONCENTRATION UNITS: ug/kg*

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 0.507 | U | 0.164 | 0.507 | 5.07 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.507 | U | 0.177 | 0.507 | 5.07 |
| 79-00-5 | 1,1,2-Trichloroethane | 0.507 | U | 0.065 | 0.507 | 5.07 |
| 75-34-3 | 1,1-Dichloroethane | 0.507 | U | 0.098 | 0.507 | 5.07 |
| 75-35-4 | 1,1-Dichloroethene | 0.507 | U | 0.230 | 0.507 | 5.07 |
| 107-06-2 | 1,2-Dichloroethane | 0.507 | U | 0.201 | 0.507 | 5.07 |
| 78-87-5 | 1,2-Dichloropropane | 0.507 | U | 0.077 | 0.507 | 5.07 |
| 78-93-3 | 2-Butanone | 2.03 | U | 0.328 | 2.03 | 5.07 |
| 591-78-6 | 2-Hexanone | 2.03 | U | 0.300 | 2.03 | 5.07 |
| 108-10-1 | 4-Methyl-2-pentanone | 0.507 | U | 0.157 | 0.507 | 5.07 |
| 67-64-1 | Acetone | 2.03 | U | 0.300 | 2.03 | 25.4 |
| 71-43-2 | Benzene | 0.507 | U | 0.051 | 0.507 | 5.07 |
| 75-27-4 | Bromodichloromethane | 0.507 | U | 0.105 | 0.507 | 5.07 |
| 75-25-2 | Bromoform | 0.507 | U | 0.443 | 0.507 | 5.07 |
| 74-83-9 | Bromomethane | 2.03 | U | 0.493 | 2.03 | 5.07 |
| 75-15-0 | Carbon disulfide | 0.507 | U | 0.190 | 0.507 | 5.07 |
| 56-23-5 | Carbon tetrachloride | 0.507 | U | 0.191 | 0.507 | 5.07 |
| 108-90-7 | Chlorobenzene | 0.507 | U | 0.131 | 0.507 | 5.07 |
| 75-00-3 | Chloroethane | 0.507 | U | 0.204 | 0.507 | 5.07 |
| 67-66-3 | Chloroform | 0.507 | U | 0.175 | 0.507 | 5.07 |
| 74-87-3 | Chloromethane | 2.03 | U | 0.195 | 2.03 | 5.07 |
| 124-48-1 | Dibromochloromethane | 0.507 | U | 0.254 | 0.507 | 5.07 |
| 100-41-4 | Ethylbenzene | 0.507 | U | 0.186 | 0.507 | 5.07 |
| 75-09-2 | Methylene chloride | 1.01 | U | 0.519 | 1.01 | 10.1 |
| 100-42-5 | Styrene | 0.507 | U | 0.085 | 0.507 | 5.07 |
| 127-18-4 | Tetrachloroethene | 0.507 | U | 0.300 | 0.507 | 5.07 |
| 108-88-3 | Toluene | 0.507 | U | 0.109 | 0.507 | 5.07 |
| 79-01-6 | Trichloroethene | 0.507 | U | 0.129 | 0.507 | 5.07 |
| 75-01-4 | Vinyl chloride | 0.507 | U | 0.197 | 0.507 | 5.07 |
| 1330-20-7 | Xylene (total) | 1.52 | U | 0.251 | 1.52 | 15.2 |
| 156-59-2 | cis-1,2-Dichloroethene | 0.507 | U | 0.116 | 0.507 | 5.07 |

FORM I VOA

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RS-CB05-101613

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Matrix: (soil/water) Solid

Sample wt/vol: 5.04 (g/ml) g Lab Sample ID: 21310171207

Level: (low/med) Lab File ID: 2131026/f2944

% Moisture: not dec. 2.2 Date Collected: 10/16/13 Time: 1610

GC Column: RTX-VMS-30 ID: .25 (mm) Date Received: 10/17/13

Instrument ID: MSV7 Date Analyzed: 10/26/13 Time: 1734

Soil Extract Volume: ( µL ) Dilution Factor: 1 Analyst: CEK

Soil Aliquot Volume: ( µL ) Prep Batch: Analytical Batch: 518604

Analytical Method: SW-846 8260B

*CONCENTRATION UNITS: ug/kg*

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 10061-01-5 | cis-1,3-Dichloropropene | 0.507 | U | 0.131 | 0.507 | 5.07 |
| 156-60-5 | trans-1,2-Dichloroethene | 0.507 | U | 0.121 | 0.507 | 5.07 |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.507 | U | 0.083 | 0.507 | 5.07 |

FORM I VOA

GCAL, Inc.

Data file : /var/chem/msv7.i/2131026.s.b/f2944.d
Lab Smp Id: 21310171207 Client Smp ID: JAR
Inj Date : 26-OCT-2013 17:34
Operator : CEK Inst ID: msv7.i
Smp Info : 21310171207*JAR
Misc Info : MSV~28853~*1*LBH
Comment :
Method : /var/chem/msv7.i/2131026.s.b/8260DODs7.m
Meth Date : 26-Oct-2013 13:22 lbh Quant Type: ISTD
Cal Date : 25-OCT-2013 14:34 Cal File: f2891d.d
Als bottle: 65
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * (Uf/Ws)/((100-M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 5.00000 | ng unit correction factor |
| Ws | 5.04000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture (not decanted) |
| Va | 100.00000 | Volume of aliquot extract added (uL) |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppb) | FINAL (ug/Kg) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|
| $ 42 Dibromofluoromethane | 111 | 4.538 | 4.542 | (0.893) | 54562 | 58.6719 | 58.2 | 6669 |
| $ 50 1,2-Dichloroethane-d4 | 67 | 4.902 | 4.906 | (0.965) | 21448 | 57.2269 | 56.8 | 9178 |
| * 54 FLUOROBENZENE | 96 | 5.082 | 5.082 | (1.000) | 187673 | 50.0000 | | 9318 |
| $ 74 Toluene-d8 | 98 | 6.345 | 6.341 | (0.767) | 174754 | 57.1669 | 56.7 | 9351 |
| * 90 Chlorobenzene-d5 | 82 | 8.272 | 8.272 | (1.000) | 60266 | 50.0000 | | 6863 |
| $ 103 Bromofluorobenzene | 174 | 9.633 | 9.629 | (1.165) | 40687 | 49.3634 | 49.0 | 9053 |
| * 118 1,4-DICHLOROBENZENE-D4 | 152 | 10.634 | 10.637 | (1.000) | 55403 | 50.0000 | | 7156 |

Data File: /var/chem/msv7.i/2131026.s.b/f2944.d

Date : 26-OCT-2013 17:34

Client ID: JAR

Sample Info: 21310171207*JAR

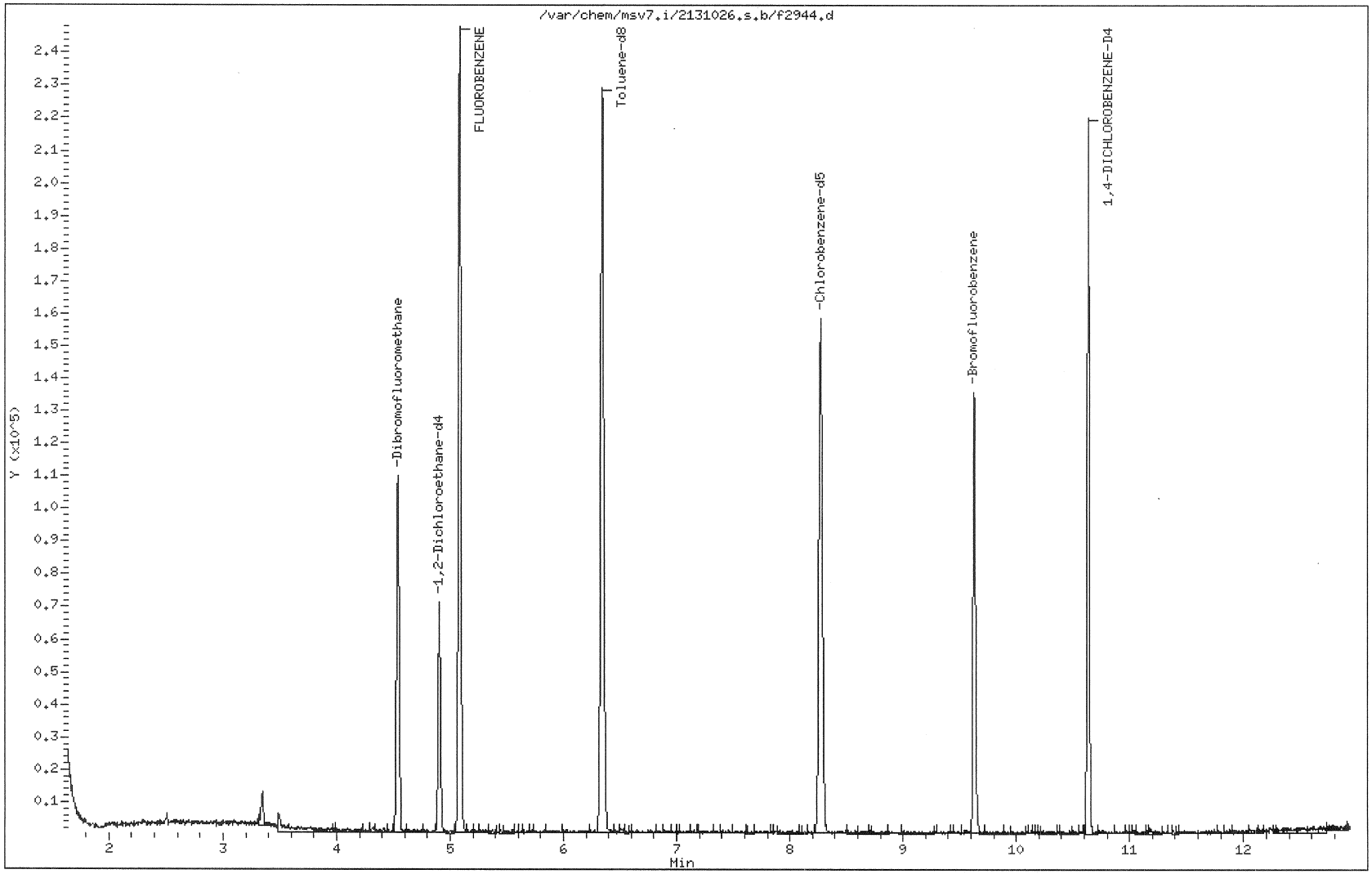
Column phase: RTX-VMS-30M

Instrument: msv7.i

Operator: CEK

Column diameter: 0.25



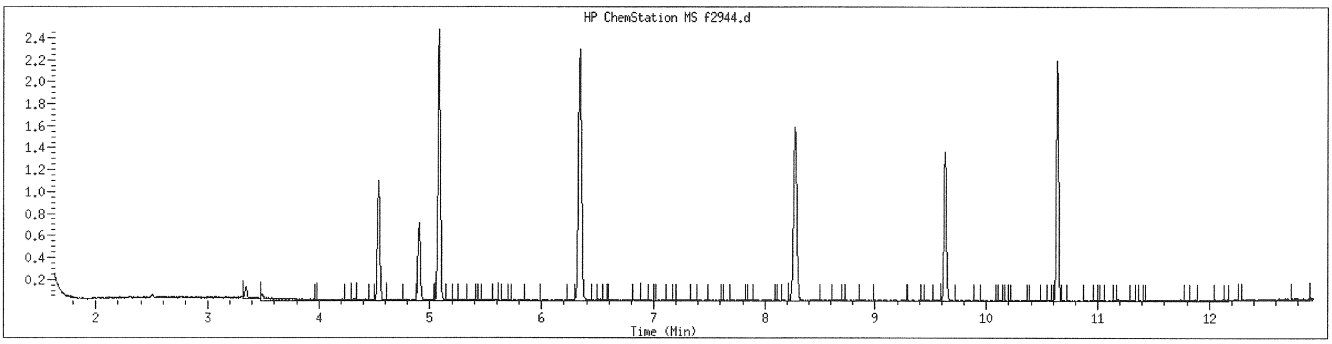



21310171 2 30

Data file : /var/chem/msv7.i/2131026.s.b/f2944.d Page: 1
Report Date: 10/26/2013 18:09

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 21310171207 SampleType : SAMPLE
Injection Date: 10/26/2013 17:34 Instrument : msv7.i
Operator : CEK
Sample Info : 21310171207*JAR
Misc Info : MSV~28853~*1*LBH
Method : /var/chem/msv7.i/2131026.s.b/8260DODs7.m
Dilution : 1.00
Matrix : SOIL
Integrator : HP RTE Compound Sublist: 8260b




NO MANUAL INTEGRATIONS

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RS-CB03-101613

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Matrix: (soil/water) Solid

Sample wt/vol: 5.1 (g/ml) g Lab Sample ID: 21310171209

Level: (low/med) Lab File ID: 2131025/f2910

% Moisture: not dec. 9.3 Date Collected: 10/16/13 Time: 1505

GC Column: RTX-VMS-30 ID: .25 (mm) Date Received: 10/17/13

Instrument ID: MSV7 Date Analyzed: 10/25/13 Time: 2202

Soil Extract Volume: ( µL ) Dilution Factor: 1 Analyst: CEK

Soil Aliquot Volume: ( µL ) Prep Batch: Analytical Batch: 518589

*CONCENTRATION UNITS: ug/kg* Analytical Method: SW-846 8260B

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 0.541 | U | 0.175 | 0.541 | 5.41 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.541 | U | 0.189 | 0.541 | 5.41 |
| 79-00-5 | 1,1,2-Trichloroethane | 0.541 | U | 0.069 | 0.541 | 5.41 |
| 75-34-3 | 1,1-Dichloroethane | 0.541 | U | 0.104 | 0.541 | 5.41 |
| 75-35-4 | 1,1-Dichloroethene | 0.541 | U | 0.245 | 0.541 | 5.41 |
| 107-06-2 | 1,2-Dichloroethane | 0.541 | U | 0.214 | 0.541 | 5.41 |
| 78-87-5 | 1,2-Dichloropropane | 0.541 | U | 0.082 | 0.541 | 5.41 |
| 78-93-3 | 2-Butanone | 2.16 | U | 0.349 | 2.16 | 5.41 |
| 591-78-6 | 2-Hexanone | 2.16 | U | 0.319 | 2.16 | 5.41 |
| 108-10-1 | 4-Methyl-2-pentanone | 0.541 | U | 0.167 | 0.541 | 5.41 |
| 67-64-1 | Acetone | 2.16 | U | 0.320 | 2.16 | 27.0 |
| 71-43-2 | Benzene | 0.541 | U | 0.055 | 0.541 | 5.41 |
| 75-27-4 | Bromodichloromethane | 0.541 | U | 0.112 | 0.541 | 5.41 |
| 75-25-2 | Bromoform | 0.541 | U | 0.472 | 0.541 | 5.41 |
| 74-83-9 | Bromomethane | 2.16 | U | 0.525 | 2.16 | 5.41 |
| 75-15-0 | Carbon disulfide | 0.541 | U | 0.202 | 0.541 | 5.41 |
| 56-23-5 | Carbon tetrachloride | 0.541 | U | 0.204 | 0.541 | 5.41 |
| 108-90-7 | Chlorobenzene | 0.541 | U | 0.140 | 0.541 | 5.41 |
| 75-00-3 | Chloroethane | 0.541 | U | 0.218 | 0.541 | 5.41 |
| 67-66-3 | Chloroform | 0.541 | U | 0.186 | 0.541 | 5.41 |
| 74-87-3 | Chloromethane | 2.16 | U | 0.208 | 2.16 | 5.41 |
| 124-48-1 | Dibromochloromethane | 0.541 | U | 0.270 | 0.541 | 5.41 |
| 100-41-4 | Ethylbenzene | 0.541 | U | 0.198 | 0.541 | 5.41 |
| 75-09-2 | Methylene chloride | 1.08 | U | 0.553 | 1.08 | 10.8 |
| 100-42-5 | Styrene | 0.541 | U | 0.090 | 0.541 | 5.41 |
| 127-18-4 | Tetrachloroethene | 0.541 | U | 0.320 | 0.541 | 5.41 |
| 108-88-3 | Toluene | 0.541 | U | 0.116 | 0.541 | 5.41 |
| 79-01-6 | Trichloroethene | 0.541 | U | 0.137 | 0.541 | 5.41 |
| 75-01-4 | Vinyl chloride | 0.541 | U | 0.209 | 0.541 | 5.41 |
| 1330-20-7 | Xylene (total) | 1.62 | U | 0.267 | 1.62 | 16.2 |
| 156-59-2 | cis-1,2-Dichloroethene | 0.541 | U | 0.123 | 0.541 | 5.41 |

FORM I VOA

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RS-CB03-101613

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Matrix: (soil/water) Solid

Sample wt/vol: 5.1 (g/ml) g Lab Sample ID: 21310171209

Level: (low/med) Lab File ID: 2131025/f2910

% Moisture: not dec. 9.3 Date Collected: 10/16/13 Time: 1505

GC Column: RTX-VMS-30 ID: .25 (mm) Date Received: 10/17/13

Instrument ID: MSV7 Date Analyzed: 10/25/13 Time: 2202

Soil Extract Volume: ( µL ) Dilution Factor: 1 Analyst: CEK

Soil Aliquot Volume: ( µL ) Prep Batch: Analytical Batch: 518589

Analytical Method: SW-846 8260B

*CONCENTRATION UNITS: ug/kg*

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 10061-01-5 | cis-1,3-Dichloropropene | 0.541 | U | 0.140 | 0.541 | 5.41 |
| 156-60-5 | trans-1,2-Dichloroethene | 0.541 | U | 0.129 | 0.541 | 5.41 |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.541 | U | 0.089 | 0.541 | 5.41 |

FORM I VOA

GCAL, Inc.

Data file : /var/chem/msv7.i/2131025.s.b/f2910.d
Lab Smp Id: 21310171209 Client Smp ID: B
Inj Date : 25-OCT-2013 22:02
Operator : CEK Inst ID: msv7.i
Smp Info : 21310171209*B
Misc Info : MSV~28849~*1*CEK
Comment :
Method : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Meth Date : 25-Oct-2013 19:43 cek Quant Type: ISTD
Cal Date : 25-OCT-2013 14:34 Cal File: f2891d.d
Als bottle: 27
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * (Uf/Ws)/((100-M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 5.00000 | ng unit correction factor |
| Ws | 5.10000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture (not decanted) |
| Va | 100.00000 | Volume of aliquot extract added (uL) |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppb) | FINAL (ug/Kg) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|
| $ 42 Dibromofluoromethane | 111 | 4.538 | 4.542 | (0.892) | 54505 | 55.9931 | 54.9 | 6669 |
| $ 50 1,2-Dichloroethane-d4 | 67 | 4.902 | 4.906 | (0.964) | 20773 | 52.9506 | 51.9 | 9145 |
| * 54 FLUOROBENZENE | 96 | 5.085 | 5.086 | (1.000) | 196446 | 50.0000 | | 9352 |
| $ 74 Toluene-d8 | 98 | 6.345 | 6.341 | (0.767) | 182472 | 52.4185 | 51.4 | 9463 |
| * 90 Chlorobenzene-d5 | 82 | 8.272 | 8.279 | (1.000) | 68628 | 50.0000 | | 6899 |
| $ 103 Bromofluorobenzene | 174 | 9.629 | 9.633 | (1.164) | 63002 | 67.1235 | 65.8 | 9232(R) |
| 117 1,3-Dichlorobenzene | 146 | 10.574 | 10.574 | (0.994) | 5548 | 1.85875 | 1.82 | |
| * 118 1,4-DICHLOROBENZENE-D4 | 152 | 10.637 | 10.637 | (1.000) | 83352 | 50.0000 | | 7343 |
| 119 1,4-Dichlorobenzene | 146 | 10.648 | 10.649 | (1.001) | 5838 | 1.95427 | 1.92 | |

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /var/chem/msv7.i/2131025.s.b/f2910.d

Date : 25-OCT-2013 22:02

Client ID: B

Sample Info: 21310171209*B

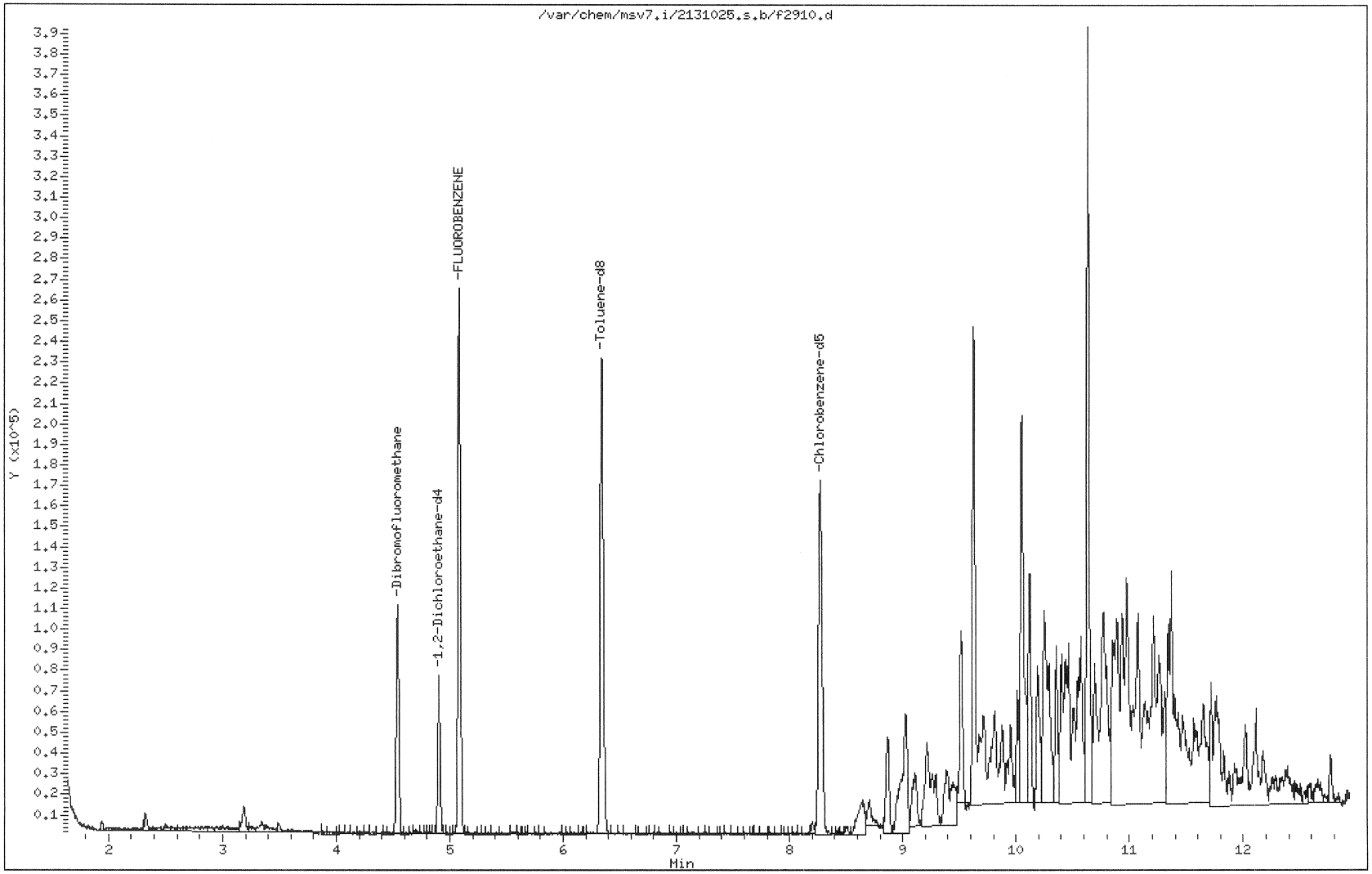
Column phase: RTX-VMS-30M

Instrument: msv7.i

Operator: CEK

Column diameter: 0.25






21310171 2 36

Data File: /var/chem/msv7.i/2131025.s.b/f2910.d



Date : 25-OCT-2013 22:02

Client ID: B

Instrument: msv7.i

Sample Info: 21310171209*B

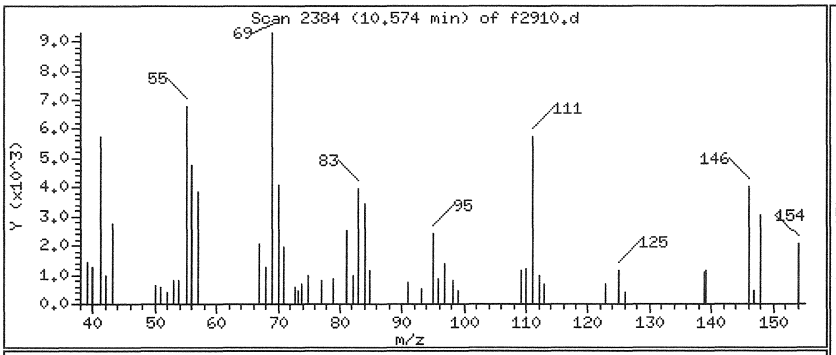
Operator: CEK

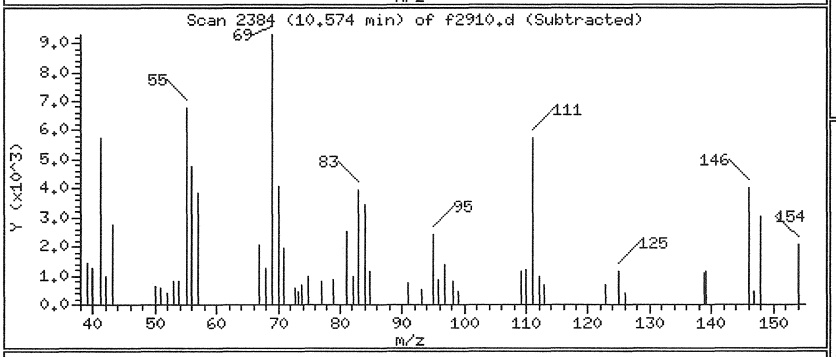
Column phase: RTX-VMS-30M

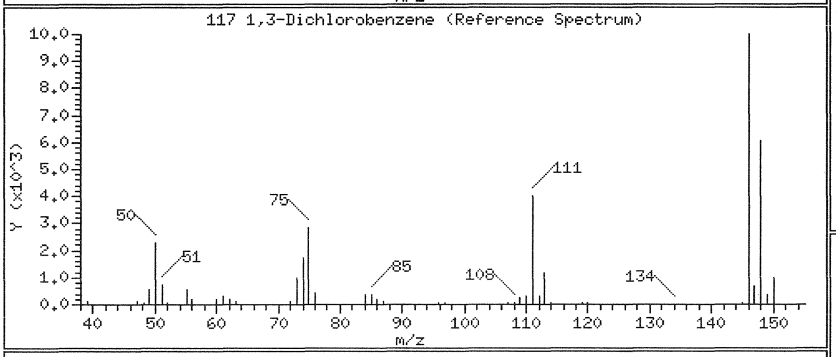
Column diameter: 0.25

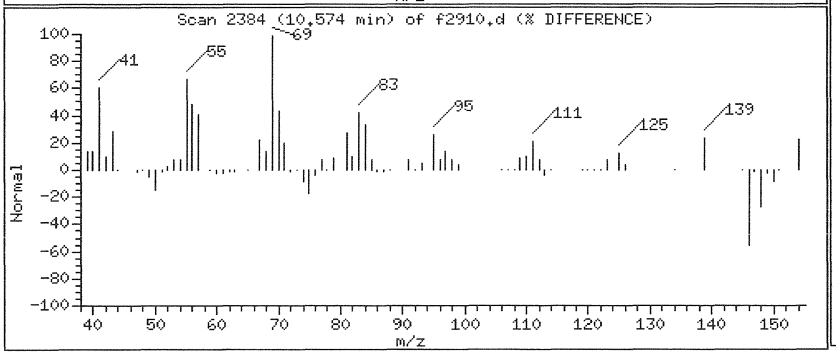
117 1,3-Dichlorobenzene

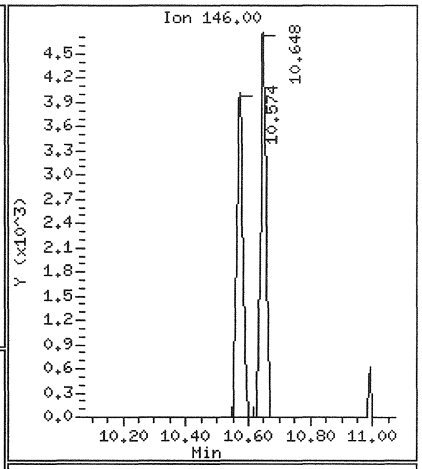
Concentration: 1.82 ug/Kg

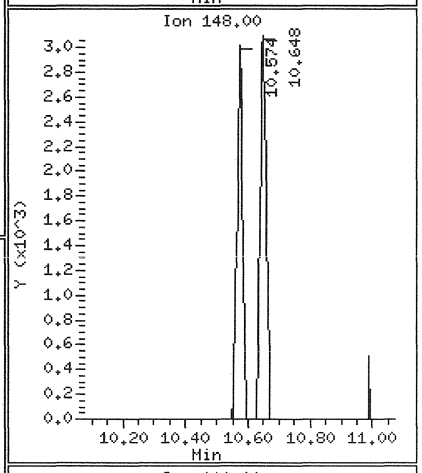


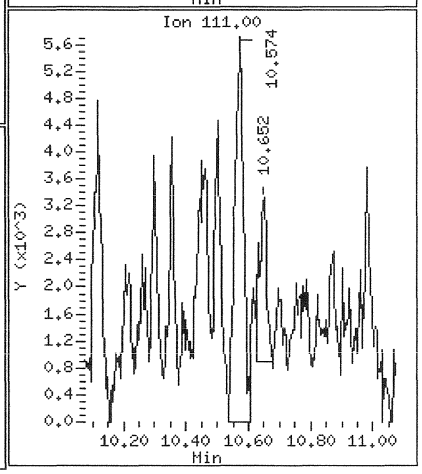



Data File: /var/chem/msv7.i/2131025.s.b/f2910.d



Date : 25-OCT-2013 22:02

Client ID: B

Instrument: msv7.i

Sample Info: 21310171209*B

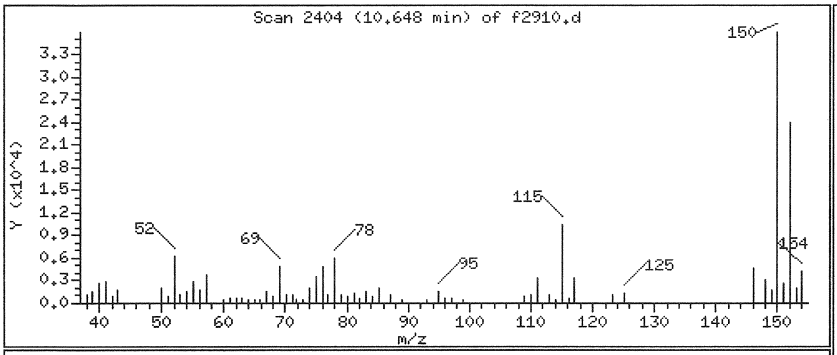
Operator: CEK

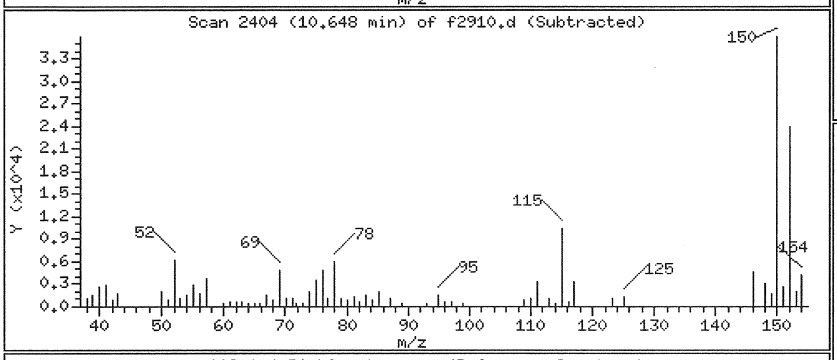
Column phase: RTX-VMS-30M

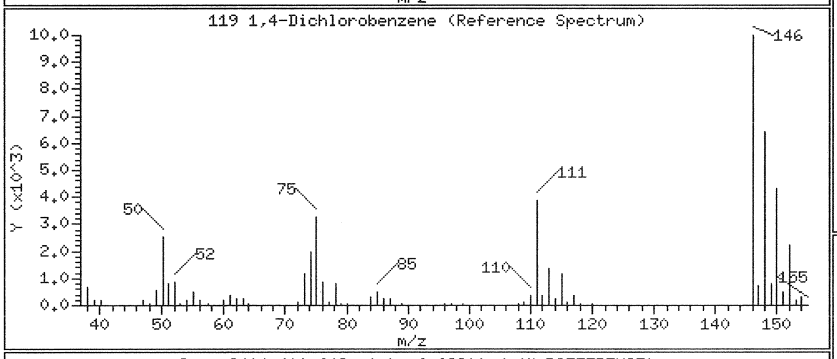
Column diameter: 0.25

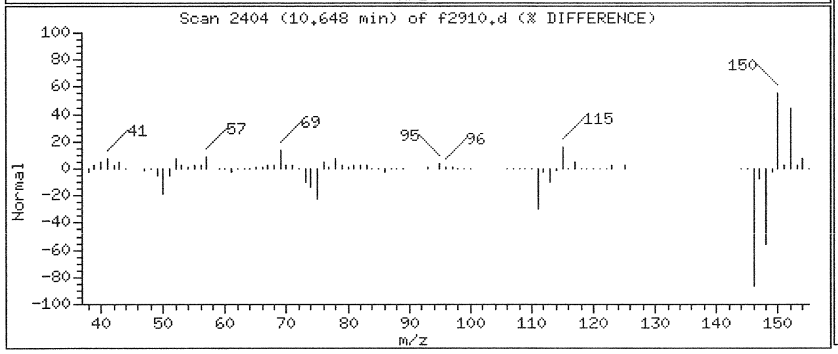
119 1,4-Dichlorobenzene

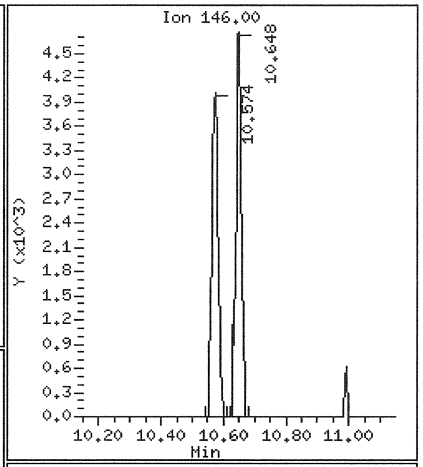
Concentration: 1.92 ug/Kg

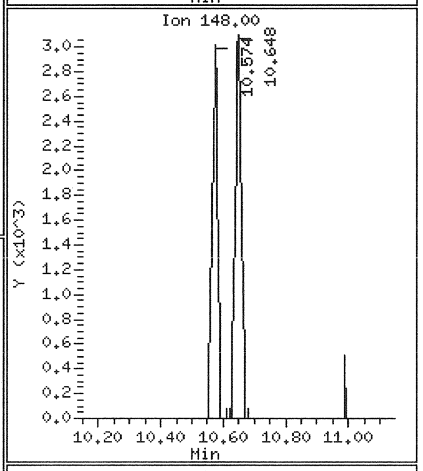


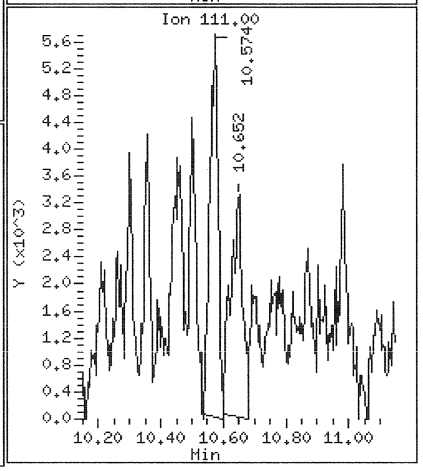



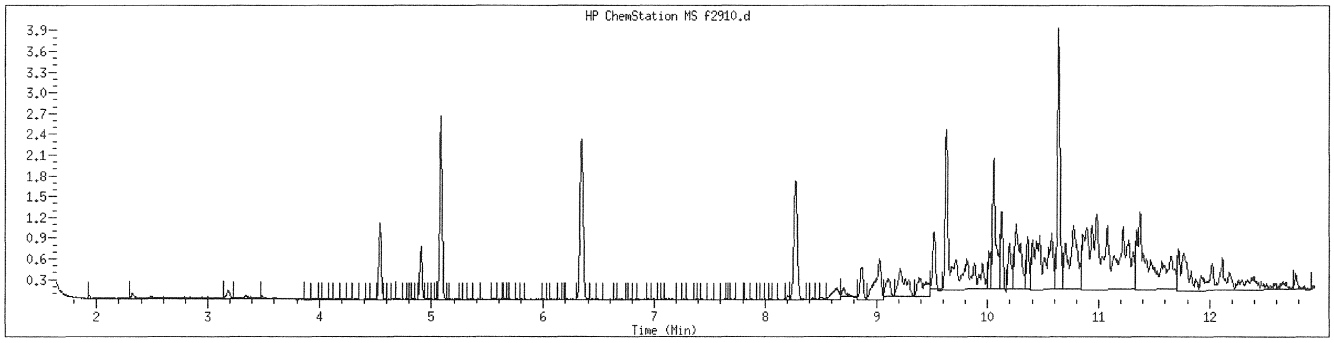



Data file : /var/chem/msv7.i/2131025.s.b/f2910.d Page: 1
Report Date: 10/25/2013 22:30

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 21310171209 SampleType : SAMPLE
Injection Date: 10/25/2013 22:02 Instrument : msv7.i
Operator : CEK
Sample Info : 21310171209*B
Misc Info : MSV~28849~*1*CEK
Method : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Dilution : 1.00
Matrix : SOIL
Integrator : HP RTE Compound Sublist: 8260b




NO MANUAL INTEGRATIONS

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RS-CB08-101613

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Matrix: (soil/water) Solid

Sample wt/vol: 5.85 (g/ml) g Lab Sample ID: 21310171211

Level: (low/med) Lab File ID: 2131025/f2902

% Moisture: not dec. 26.4 Date Collected: 10/16/13 Time: 1535

GC Column: RTX-VMS-30 ID: .25 (mm) Date Received: 10/17/13

Instrument ID: MSV7 Date Analyzed: 10/25/13 Time: 1909

Soil Extract Volume: ( µL ) Dilution Factor: 1 Analyst: CEK

Soil Aliquot Volume: ( µL ) Prep Batch: Analytical Batch: 518589

Analytical Method: SW-846 8260B

*CONCENTRATION UNITS: ug/kg*

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 0.581 | U | 0.188 | 0.581 | 5.81 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.581 | U | 0.203 | 0.581 | 5.81 |
| 79-00-5 | 1,1,2-Trichloroethane | 0.581 | U | 0.074 | 0.581 | 5.81 |
| 75-34-3 | 1,1-Dichloroethane | 0.581 | U | 0.112 | 0.581 | 5.81 |
| 75-35-4 | 1,1-Dichloroethene | 0.581 | U | 0.264 | 0.581 | 5.81 |
| 107-06-2 | 1,2-Dichloroethane | 0.581 | U | 0.230 | 0.581 | 5.81 |
| 78-87-5 | 1,2-Dichloropropane | 0.581 | U | 0.089 | 0.581 | 5.81 |
| 78-93-3 | 2-Butanone | 2.32 | U | 0.375 | 2.32 | 5.81 |
| 591-78-6 | 2-Hexanone | 2.32 | U | 0.343 | 2.32 | 5.81 |
| 108-10-1 | 4-Methyl-2-pentanone | 0.581 | U | 0.179 | 0.581 | 5.81 |
| 67-64-1 | Acetone | 35.6 | | 0.344 | 2.32 | 29.0 |
| 71-43-2 | Benzene | 0.581 | U | 0.059 | 0.581 | 5.81 |
| 75-27-4 | Bromodichloromethane | 0.581 | U | 0.120 | 0.581 | 5.81 |
| 75-25-2 | Bromoform | 0.581 | U | 0.507 | 0.581 | 5.81 |
| 74-83-9 | Bromomethane | 2.32 | U | 0.564 | 2.32 | 5.81 |
| 75-15-0 | Carbon disulfide | 0.581 | U | 0.217 | 0.581 | 5.81 |
| 56-23-5 | Carbon tetrachloride | 0.581 | U | 0.219 | 0.581 | 5.81 |
| 108-90-7 | Chlorobenzene | 0.581 | U | 0.150 | 0.581 | 5.81 |
| 75-00-3 | Chloroethane | 0.581 | U | 0.234 | 0.581 | 5.81 |
| 67-66-3 | Chloroform | 0.581 | U | 0.200 | 0.581 | 5.81 |
| 74-87-3 | Chloromethane | 2.32 | U | 0.224 | 2.32 | 5.81 |
| 124-48-1 | Dibromochloromethane | 0.581 | U | 0.290 | 0.581 | 5.81 |
| 100-41-4 | Ethylbenzene | 0.581 | U | 0.213 | 0.581 | 5.81 |
| 75-09-2 | Methylene chloride | 1.16 | U | 0.595 | 1.16 | 11.6 |
| 100-42-5 | Styrene | 0.581 | U | 0.097 | 0.581 | 5.81 |
| 127-18-4 | Tetrachloroethene | 0.581 | U | 0.344 | 0.581 | 5.81 |
| 108-88-3 | Toluene | 0.581 | U | 0.124 | 0.581 | 5.81 |
| 79-01-6 | Trichloroethene | 0.581 | U | 0.148 | 0.581 | 5.81 |
| 75-01-4 | Vinyl chloride | 0.581 | U | 0.225 | 0.581 | 5.81 |
| 1330-20-7 | Xylene (total) | 1.74 | U | 0.287 | 1.74 | 17.4 |
| 156-59-2 | cis-1,2-Dichloroethene | 0.581 | U | 0.133 | 0.581 | 5.81 |

FORM I VOA

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RS-CB08-101613

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Matrix: (soil/water) Solid

Sample wt/vol: 5.85 (g/ml) g Lab Sample ID: 21310171211

Level: (low/med) Lab File ID: 2131025/f2902

% Moisture: not dec. 26.4 Date Collected: 10/16/13 Time: 1535

GC Column: RTX-VMS-30 ID: .25 (mm) Date Received: 10/17/13

Instrument ID: MSV7 Date Analyzed: 10/25/13 Time: 1909

Soil Extract Volume: ( µL ) Dilution Factor: 1 Analyst: CEK

Soil Aliquot Volume: ( µL ) Prep Batch: Analytical Batch: 518589

Analytical Method: SW-846 8260B

*CONCENTRATION UNITS: ug/kg*

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 10061-01-5 | cis-1,3-Dichloropropene | 0.581 | U | 0.150 | 0.581 | 5.81 |
| 156-60-5 | trans-1,2-Dichloroethene | 0.581 | U | 0.138 | 0.581 | 5.81 |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.581 | U | 0.095 | 0.581 | 5.81 |

FORM I VOA

GCAL, Inc.

Data file : /var/chem/msv7.i/2131025.s.b/f2902.d
Lab Smp Id: 21310171211 Client Smp ID: A
Inj Date : 25-OCT-2013 19:09
Operator : CEK Inst ID: msv7.i
Smp Info : 21310171211*A
Misc Info : MSV~28849~*1*CEK
Comment :
Method : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Meth Date : 25-Oct-2013 19:43 cek Quant Type: ISTD
Cal Date : 25-OCT-2013 14:34 Cal File: f2891d.d
Als bottle: 19
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * (Uf/Ws)/((100-M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 5.00000 | ng unit correction factor |
| Ws | 5.85000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture (not decanted) |
| Va | 100.00000 | Volume of aliquot extract added (uL) |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppb) | FINAL (ug/Kg) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|
| 19 Acetone | 43 | 3.380 | 3.384 | (0.665) | 11215 | 30.6993 | 26.2 | 7401 |
| 23 Hexane | 57 | 3.492 | 3.496 | (0.687) | 6137 | 1.97110 | 1.68 | 8242 |
| $ 42 Dibromofluoromethane | 111 | 4.538 | 4.542 | (0.893) | 55748 | 51.9132 | 44.4 | 6669 |
| $ 50 1,2-Dichloroethane-d4 | 67 | 4.906 | 4.906 | (0.965) | 21554 | 49.8024 | 42.6 | 9344 |
| * 54 FLUOROBENZENE | 96 | 5.082 | 5.086 | (1.000) | 216717 | 50.0000 | | 9378 |
| $ 74 Toluene-d8 | 98 | 6.345 | 6.341 | (0.767) | 196978 | 54.1152 | 46.3 | 9421 |
| * 90 Chlorobenzene-d5 | 82 | 8.276 | 8.279 | (1.000) | 71761 | 50.0000 | | 6847 |
| $ 103 Bromofluorobenzene | 174 | 9.629 | 9.633 | (1.164) | 44087 | 44.9204 | 38.4 | 9195 |
| * 118 1,4-DICHLOROBENZENE-D4 | 152 | 10.637 | 10.637 | (1.000) | 62817 | 50.0000 | | 7119 |

Data File: /var/chem/msv7.i/2131025.s.b/f2902.d

Date : 25-OCT-2013 19:09

Client ID: A

Sample Info: 21310171211*A

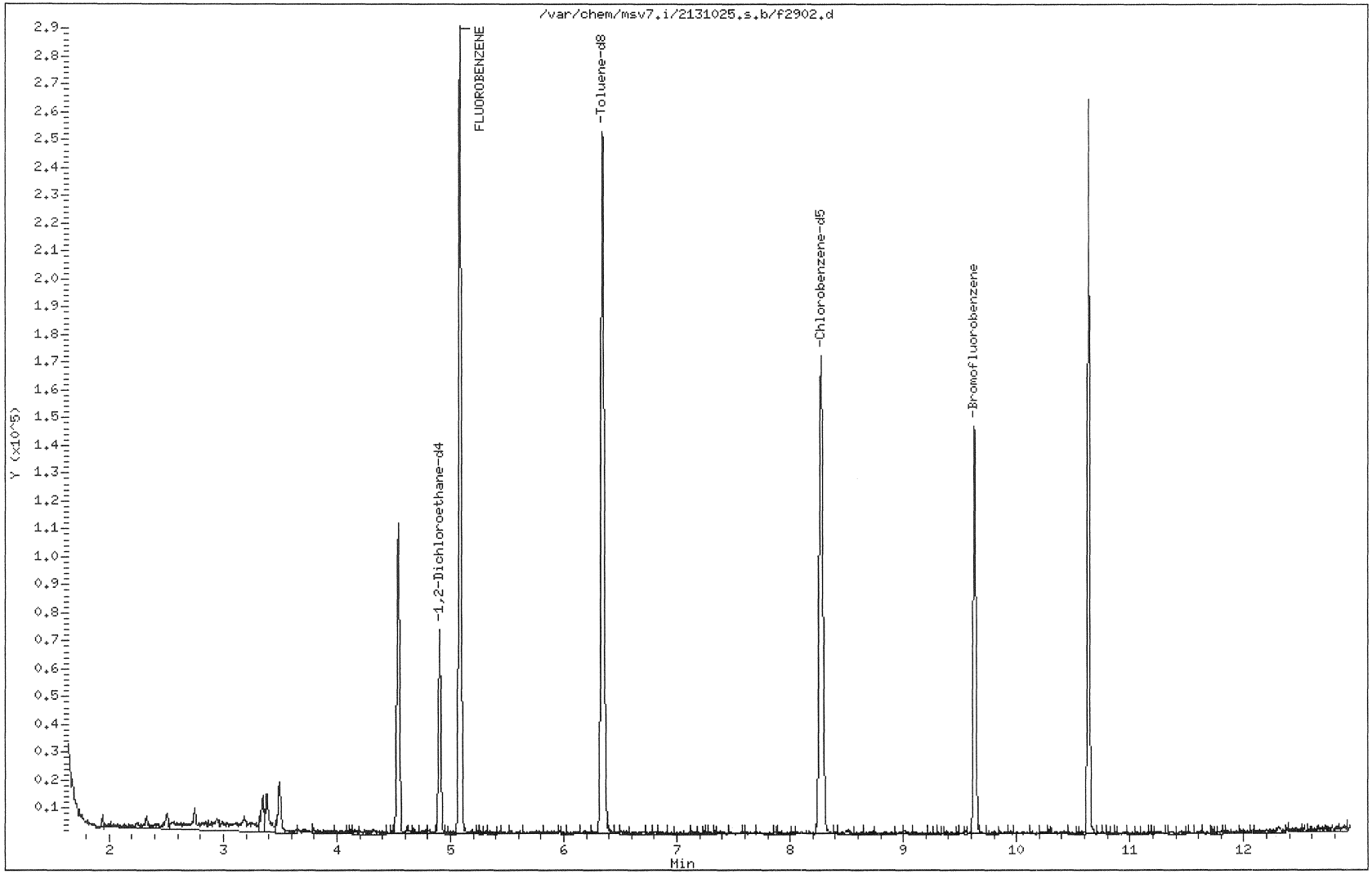
Column phase: RTX-VMS-30M

Instrument: msv7.i

Operator: CEK

Column diameter: 0.25






21310171211 43

Data File: /var/chem/msv7.i/2131025.s.b/f2902.d



Date : 25-OCT-2013 19:09

Client ID: A

Instrument: msv7.i

Sample Info: 21310171211*A

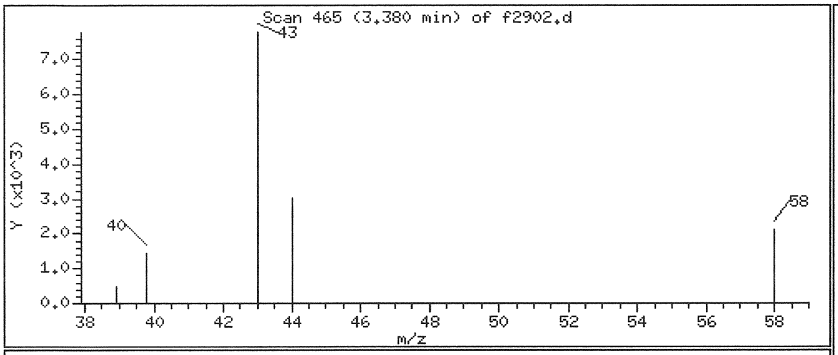
Operator: CEK

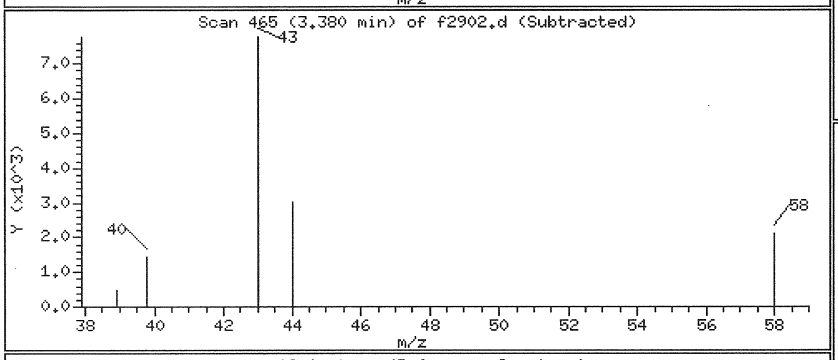
Column phase: RTX-VMS-30M

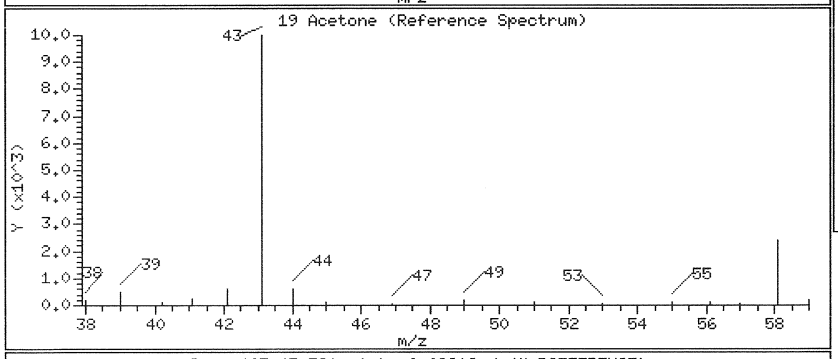
Column diameter: 0.25

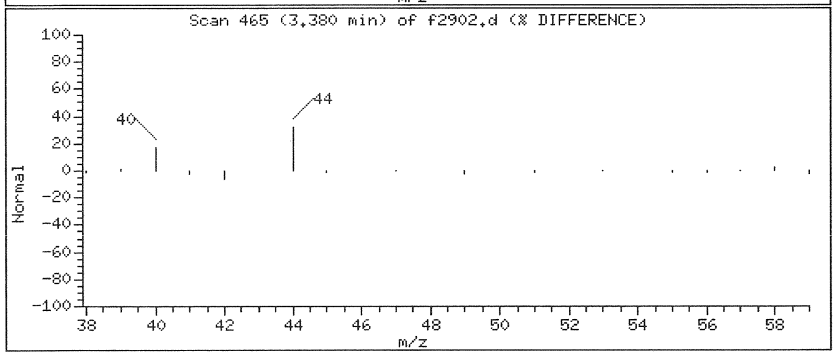
19 Acetone

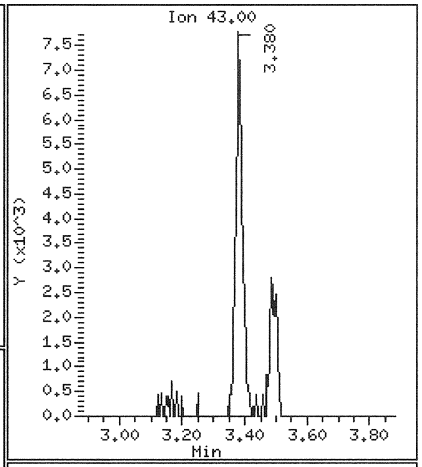
Concentration: 26.2 ug/Kg

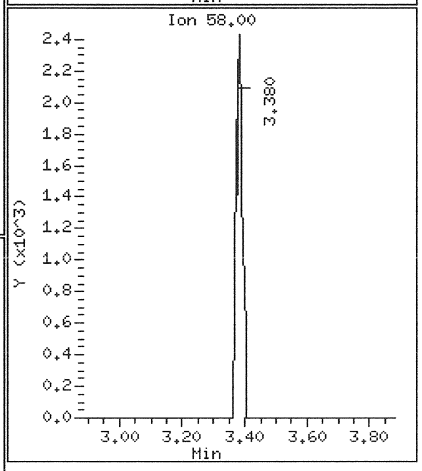


Data File: /var/chem/msv7.i/2131025.s.b/f2902.d



Date : 25-OCT-2013 19:09

Client ID: A

Instrument: msv7.i

Sample Info: 21310171211*A

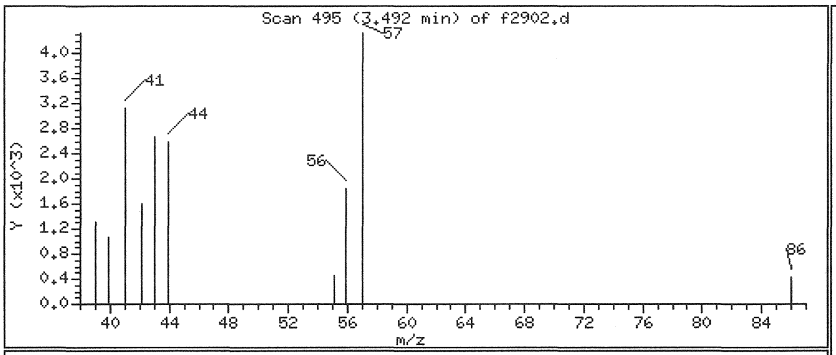
Operator: CEK

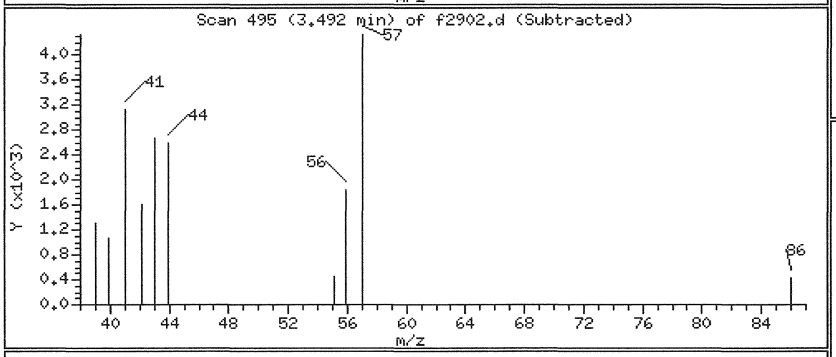
Column phase: RTX-VMS-30M

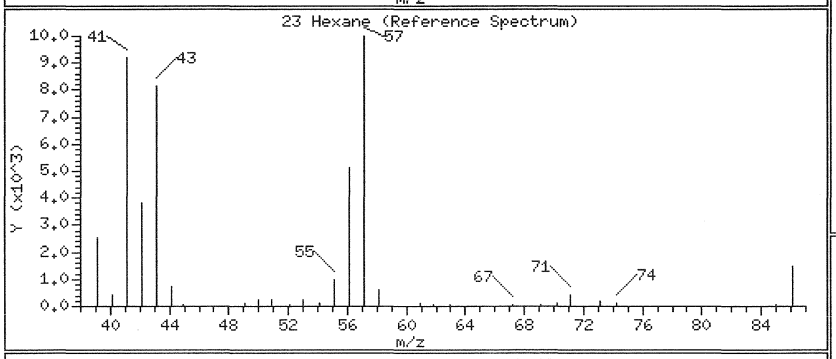
Column diameter: 0.25

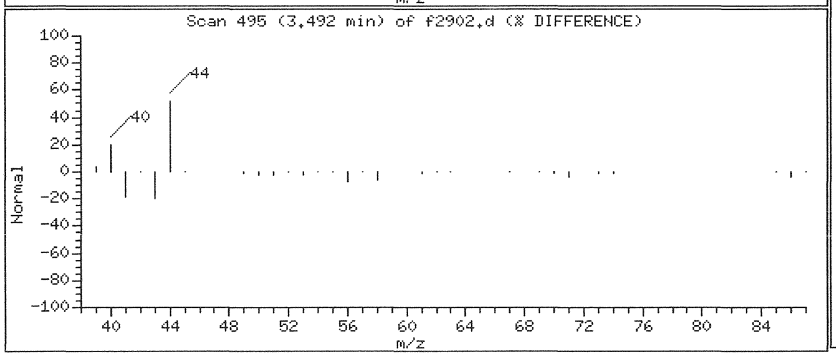
23 Hexane

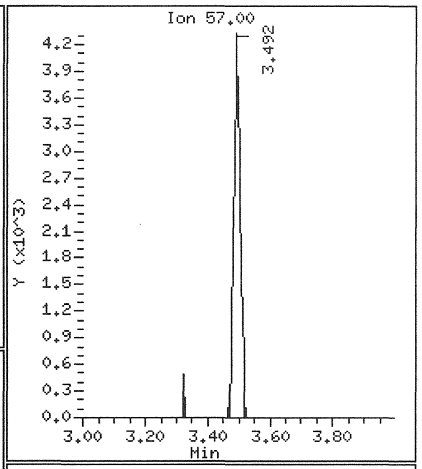
Concentration: 1.68 ug/Kg

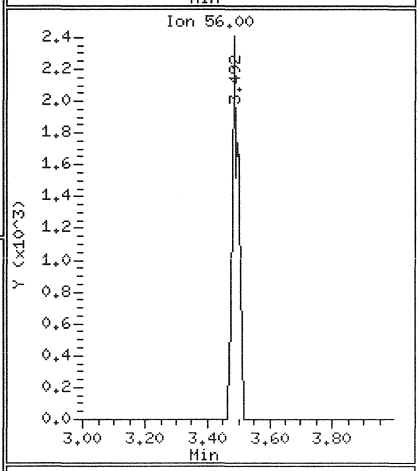


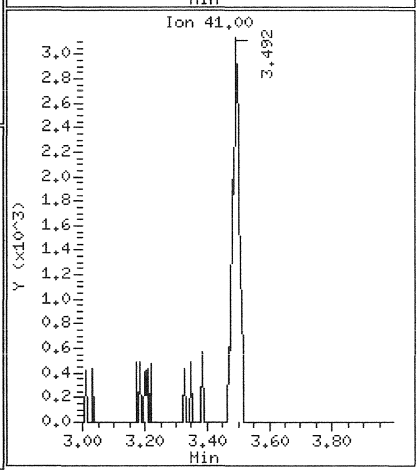



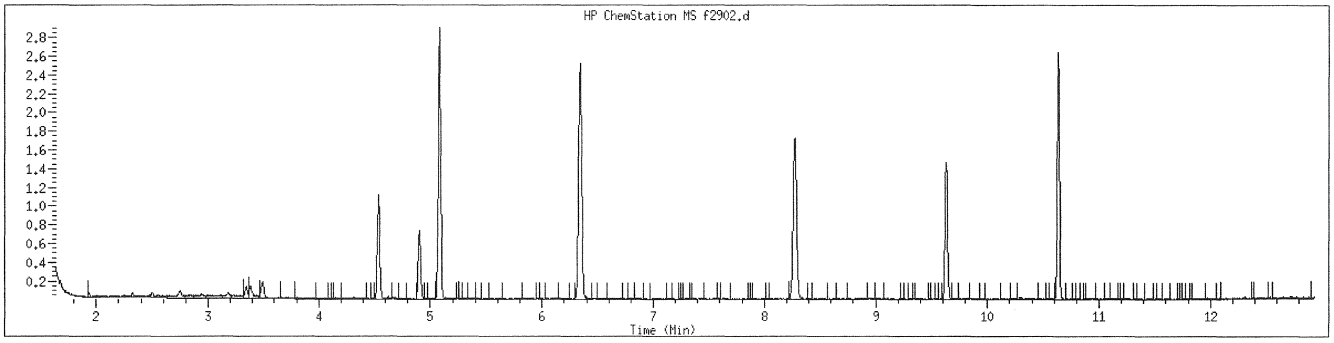



Data file : /var/chem/msv7.i/2131025.s.b/f2902.d Page: 1
Report Date: 10/25/2013 20:05

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 21310171211 SampleType : SAMPLE
Injection Date: 10/25/2013 19:09 Instrument : msv7.i
Operator : CEK
Sample Info : 21310171211*A
Misc Info : MSV~28849~*1*CEK
Method : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Dilution : 1.00
Matrix : SOIL
Integrator : HP RTE Compound Sublist: 8260b




NO MANUAL INTEGRATIONS

1A
VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.
RS-QDCI-101613

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Matrix: (soil/water) Solid

Sample wt/vol: 3.46 (g/ml) g Lab Sample ID: 21310171213

Level: (low/med) Lab File ID: 2131025/f2903

% Moisture: not dec. 35.1 Date Collected: 10/16/13 Time: 1500

GC Column: RTX-VMS-30 ID: .25 (mm) Date Received: 10/17/13

Instrument ID: MSV7 Date Analyzed: 10/25/13 Time: 1930

Soil Extract Volume: ( µL ) Dilution Factor: 1 Analyst: CEK

Soil Aliquot Volume: ( µL ) Prep Batch: Analytical Batch: 518589

Analytical Method: SW-846 8260B

*CONCENTRATION UNITS: ug/kg*

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 71-55-6 | 1,1,1-Trichloroethane | 1.11 | U | 0.361 | 1.11 | 11.1 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 1.11 | U | 0.389 | 1.11 | 11.1 |
| 79-00-5 | 1,1,2-Trichloroethane | 1.11 | U | 0.143 | 1.11 | 11.1 |
| 75-34-3 | 1,1-Dichloroethane | 1.11 | U | 0.215 | 1.11 | 11.1 |
| 75-35-4 | 1,1-Dichloroethene | 1.11 | U | 0.505 | 1.11 | 11.1 |
| 107-06-2 | 1,2-Dichloroethane | 1.11 | U | 0.441 | 1.11 | 11.1 |
| 78-87-5 | 1,2-Dichloropropane | 1.11 | U | 0.170 | 1.11 | 11.1 |
| 78-93-3 | 2-Butanone | 4.45 | U | 0.719 | 4.45 | 11.1 |
| 591-78-6 | 2-Hexanone | 4.45 | U | 0.658 | 4.45 | 11.1 |
| 108-10-1 | 4-Methyl-2-pentanone | 1.11 | U | 0.344 | 1.11 | 11.1 |
| 67-64-1 | Acetone | 12.6 | JJ | 0.659 | 4.45 | 55.7 |
| 71-43-2 | Benzene | 1.11 | U | 0.113 | 1.11 | 11.1 |
| 75-27-4 | Bromodichloromethane | 1.11 | U | 0.231 | 1.11 | 11.1 |
| 75-25-2 | Bromoform | 1.11 | U | 0.972 | 1.11 | 11.1 |
| 74-83-9 | Bromomethane | 4.45 | U | 1.08 | 4.45 | 11.1 |
| 75-15-0 | Carbon disulfide | 1.11 | U | 0.417 | 1.11 | 11.1 |
| 56-23-5 | Carbon tetrachloride | 1.11 | U | 0.420 | 1.11 | 11.1 |
| 108-90-7 | Chlorobenzene | 1.11 | U | 0.288 | 1.11 | 11.1 |
| 75-00-3 | Chloroethane | 1.11 | U | 0.449 | 1.11 | 11.1 |
| 67-66-3 | Chloroform | 1.11 | U | 0.384 | 1.11 | 11.1 |
| 74-87-3 | Chloromethane | 4.45 | U | 0.429 | 4.45 | 11.1 |
| 124-48-1 | Dibromochloromethane | 1.11 | U | 0.557 | 1.11 | 11.1 |
| 100-41-4 | Ethylbenzene | 1.11 | U | 0.408 | 1.11 | 11.1 |
| 75-09-2 | Methylene chloride | 2.23 | U | 1.14 | 2.23 | 22.3 |
| 100-42-5 | Styrene | 1.11 | U | 0.186 | 1.11 | 11.1 |
| 127-18-4 | Tetrachloroethene | 1.11 | U | 0.659 | 1.11 | 11.1 |
| 108-88-3 | Toluene | 1.11 | U | 0.238 | 1.11 | 11.1 |
| 79-01-6 | Trichloroethene | 1.11 | U | 0.283 | 1.11 | 11.1 |
| 75-01-4 | Vinyl chloride | 1.11 | U | 0.431 | 1.11 | 11.1 |
| 1330-20-7 | Xylene (total) | 3.34 | U | 0.550 | 3.34 | 33.4 |
| 156-59-2 | cis-1,2-Dichloroethene | 1.11 | U | 0.254 | 1.11 | 11.1 |

FORM I VOA

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

RS-QDCI-101613

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Matrix: (soil/water) Solid

Sample wt/vol: 3.46 (g/ml) g

Lab Sample ID: 21310171213

Level: (low/med)

Lab File ID: 2131025/f2903

% Moisture: not dec. 35.1

Date Collected: 10/16/13 Time: 1500

GC Column: RTX-VMS-30 ID: .25 (mm)

Date Received: 10/17/13

Instrument ID: MSV7

Date Analyzed: 10/25/13 Time: 1930

Soil Extract Volume: ( µL )

Dilution Factor: 1 Analyst: CEK

Soil Aliquot Volume: ( µL )

Prep Batch: Analytical Batch: 518589

Analytical Method: SW-846 8260B

*CONCENTRATION UNITS: ug/kg*

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 10061-01-5 | cis-1,3-Dichloropropene | 1.11 | U | 0.288 | 1.11 | 11.1 |
| 156-60-5 | trans-1,2-Dichloroethene | 1.11 | U | 0.265 | 1.11 | 11.1 |
| 10061-02-6 | trans-1,3-Dichloropropene | 1.11 | U | 0.183 | 1.11 | 11.1 |

FORM I VOA

GCAL, Inc.

Data file : /var/chem/msv7.i/2131025.s.b/f2903.d
Lab Smp Id: 21310171213 Client Smp ID: A
Inj Date : 25-OCT-2013 19:30
Operator : CEK Inst ID: msv7.i
Smp Info : 21310171213*A
Misc Info : MSV~28849~*1*CEK
Comment :
Method : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Meth Date : 25-Oct-2013 19:43 cek Quant Type: ISTD
Cal Date : 25-OCT-2013 14:34 Cal File: f2891d.d
Als bottle: 20
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * (Uf/Ws)/((100-M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 5.00000 | ng unit correction factor |
| Ws | 3.46000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture (not decanted) |
| Va | 100.00000 | Volume of aliquot extract added (uL) |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppb) | FINAL (ug/Kg) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|
| 9 Trichlorofluoromethane | 101 | 2.510 | 2.510 | (0.494) | 16047 | 6.14287 | 8.88 | 8589 |
| 19 Acetone | 43 | 3.380 | 3.384 | (0.665) | 3303 | 5.66547 | 8.19 | 4799 |
| $ 42 Dibromofluoromethane | 111 | 4.538 | 4.542 | (0.893) | 54826 | 52.6716 | 76.1 | 6669 |
| $ 50 1,2-Dichloroethane-d4 | 67 | 4.906 | 4.906 | (0.965) | 21876 | 52.1473 | 75.4 | 9272 |
| * 54 FLUOROBENZENE | 96 | 5.082 | 5.086 | (1.000) | 210064 | 50.0000 | | 9452 |
| $ 74 Toluene-d8 | 98 | 6.341 | 6.341 | (0.767) | 187311 | 58.6286 | 84.7 | 9382(R) |
| * 90 Chlorobenzene-d5 | 82 | 8.272 | 8.279 | (1.000) | 62986 | 50.0000 | | 6854 |
| $ 103 Bromofluorobenzene | 174 | 9.629 | 9.633 | (1.164) | 38803 | 45.0446 | 65.1 | 9092 |
| * 118 1,4-DICHLOROBENZENE-D4 | 152 | 10.637 | 10.637 | (1.000) | 52189 | 50.0000 | | 7134 |

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

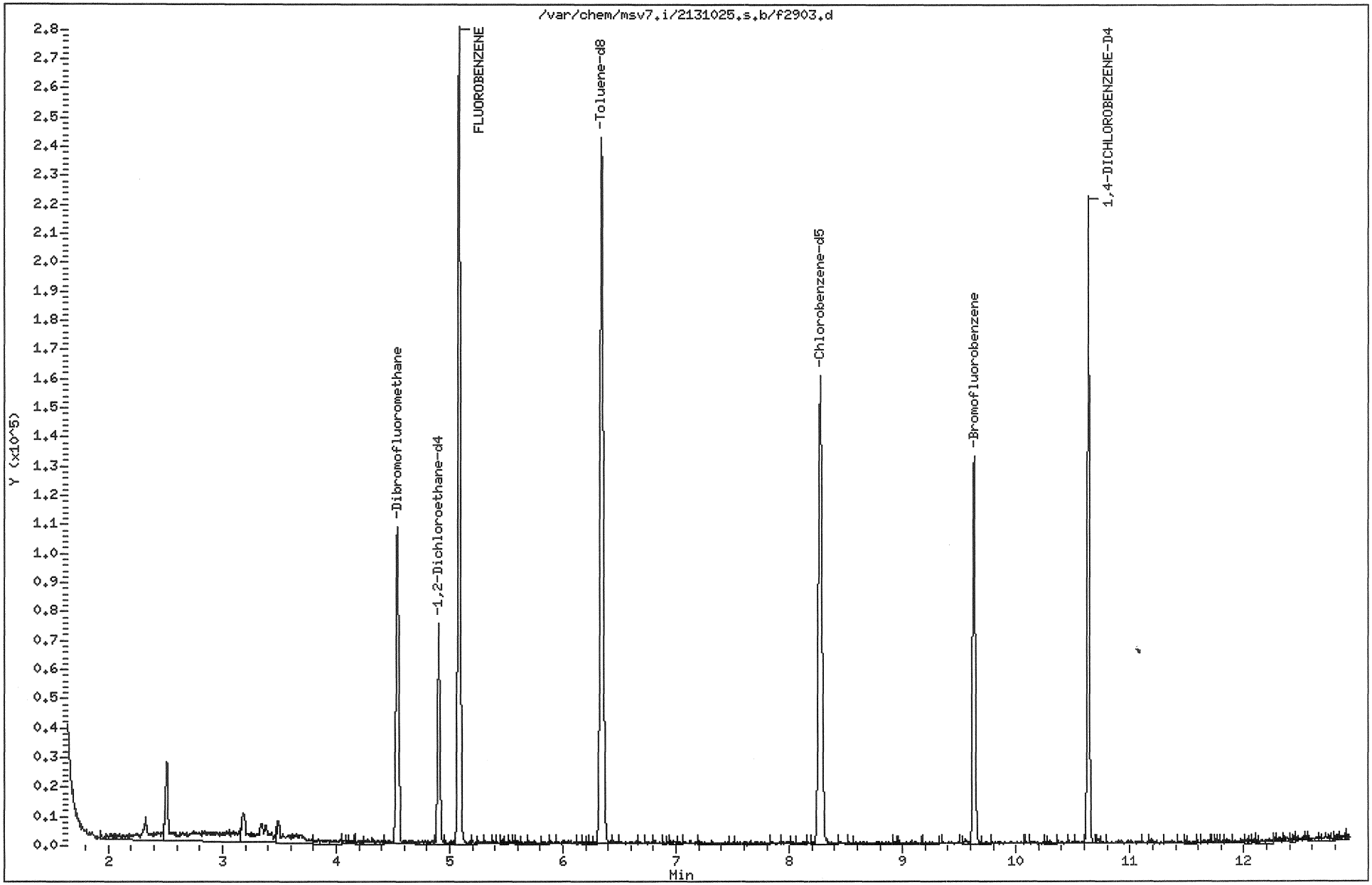
Data File: /var/chem/msv7.i/2131025.s.b/f2903.d
Date : 25-OCT-2013 19:30
Client ID: A
Sample Info: 21310171213*A

Column phase: RTX-VMS-30M

Instrument: msv7.i

Operator: CEK
Column diameter: 0.25






21310171213 51

Data File: /var/chem/msv7.i/2131025.s.b/f2903.d



Date : 25-OCT-2013 19:30

Client ID: A

Instrument: msv7.i

Sample Info: 21310171213*A

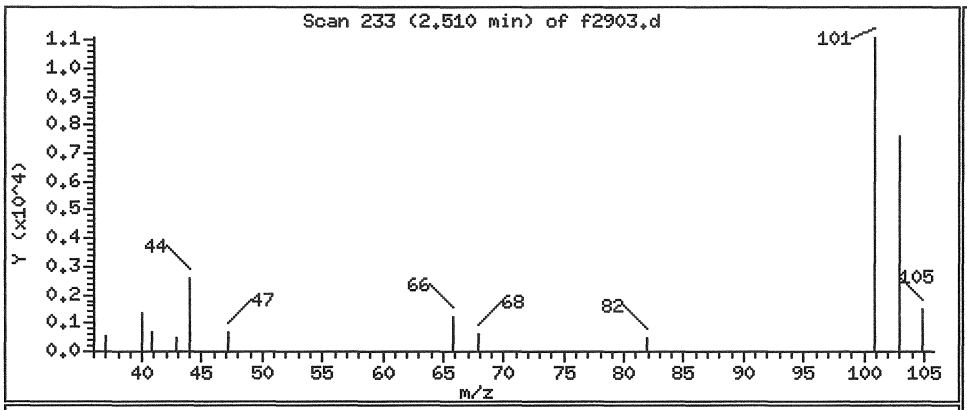
Operator: CEK

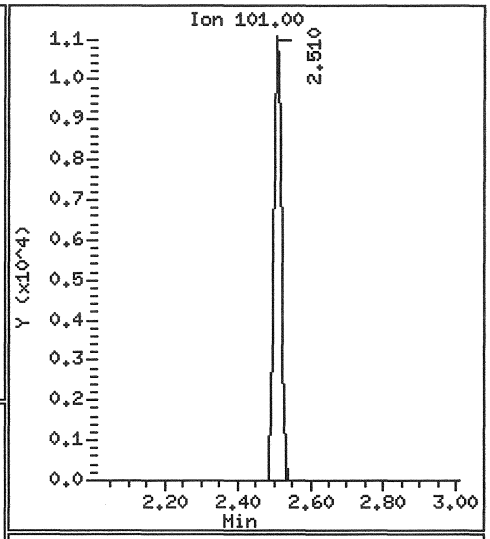
Column phase: RTX-VMS-30M

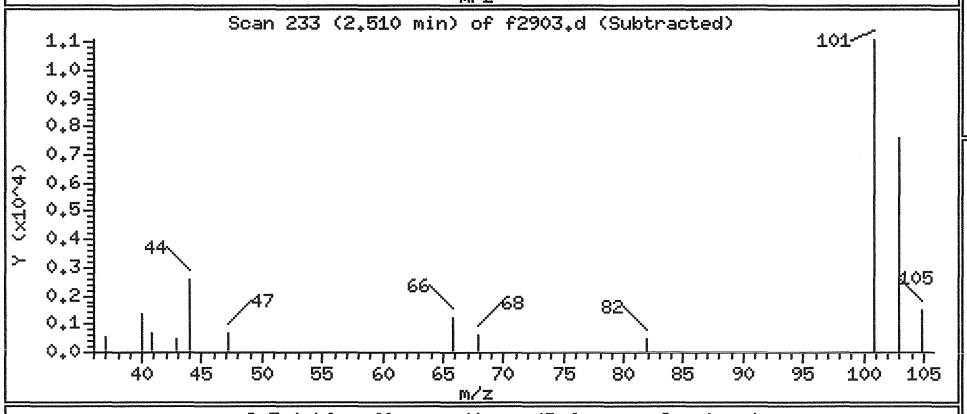
Column diameter: 0.25

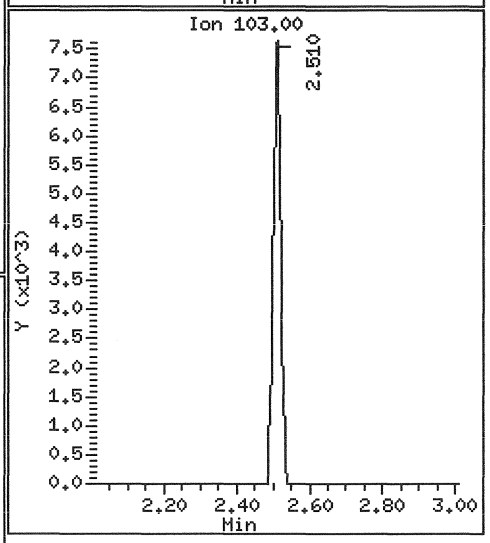
9 Trichlorofluoromethane

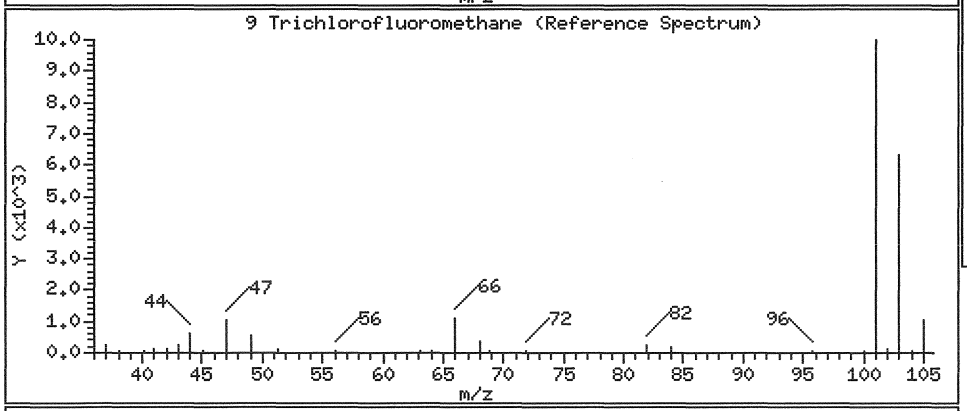
Concentration: 8.88 ug/Kg

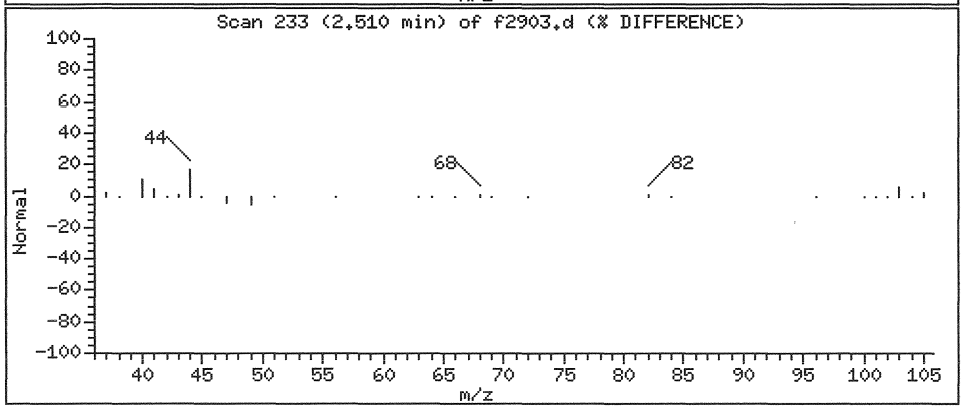


Data File: /var/chem/msv7.i/2131025.s.b/f2903.d



Date : 25-OCT-2013 19:30

Client ID: A

Instrument: msv7.i

Sample Info: 21310171213*A

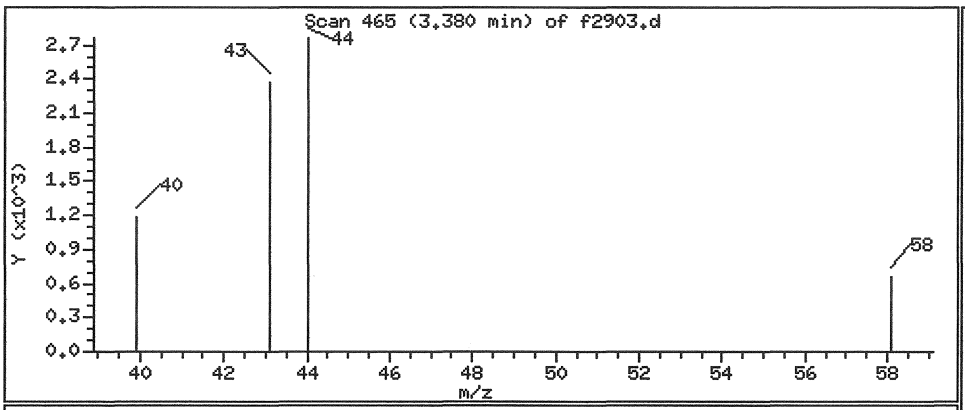
Operator: CEK

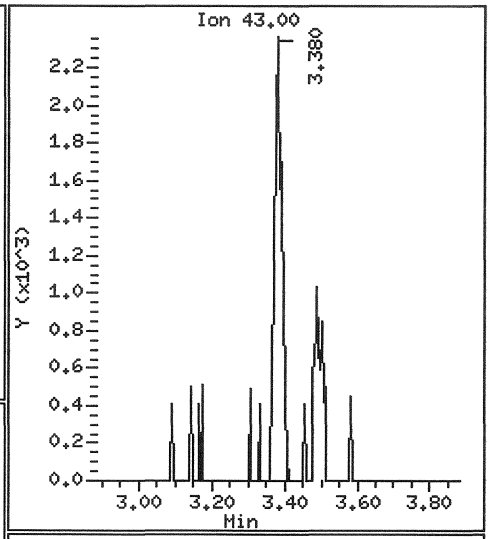
Column phase: RTX-VMS-30M

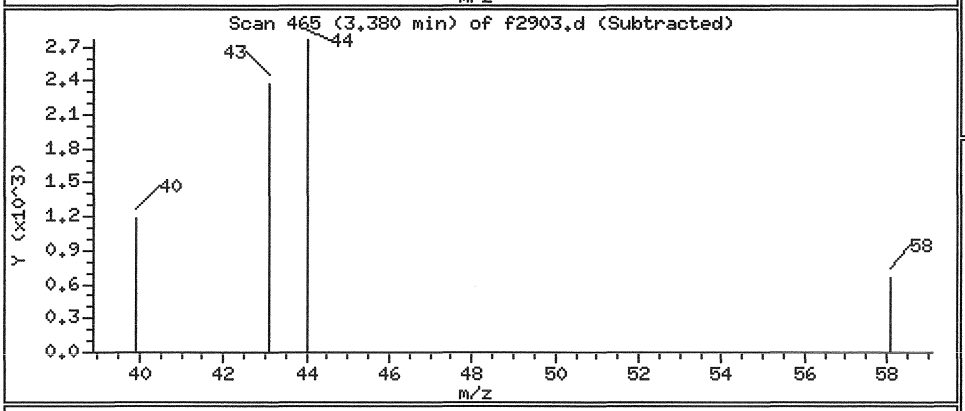
Column diameter: 0.25

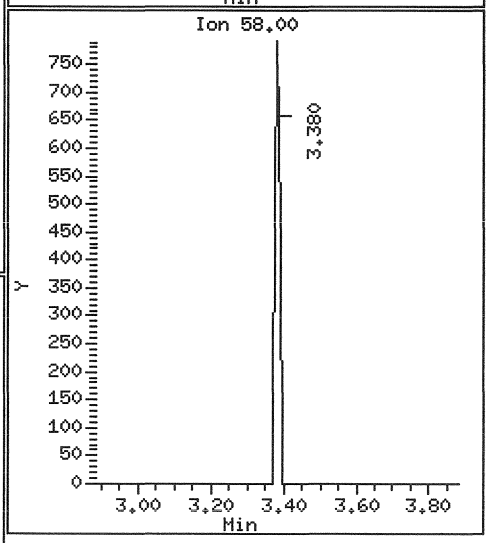
19 Acetone

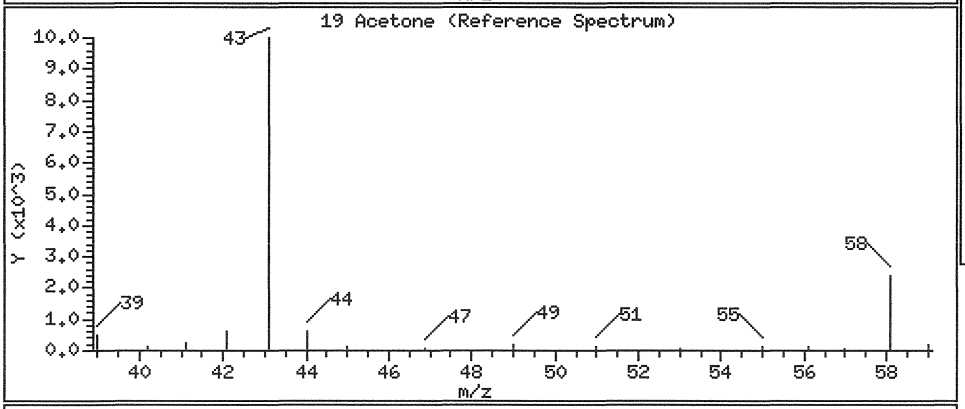
Concentration: 8.19 ug/Kg

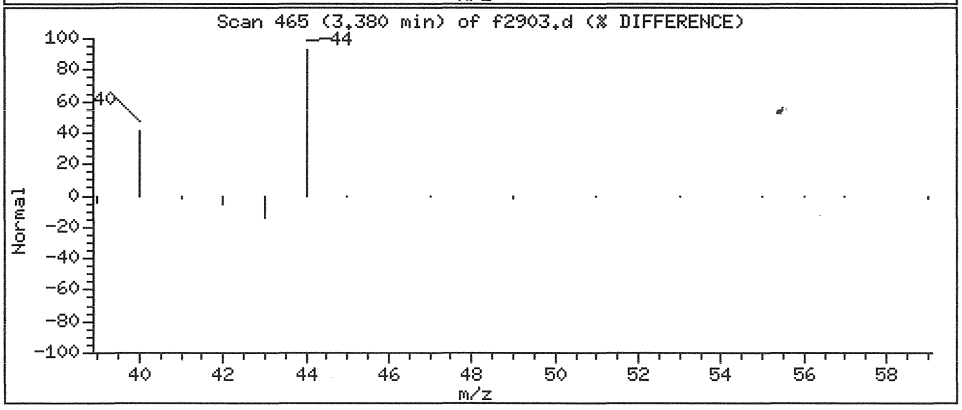


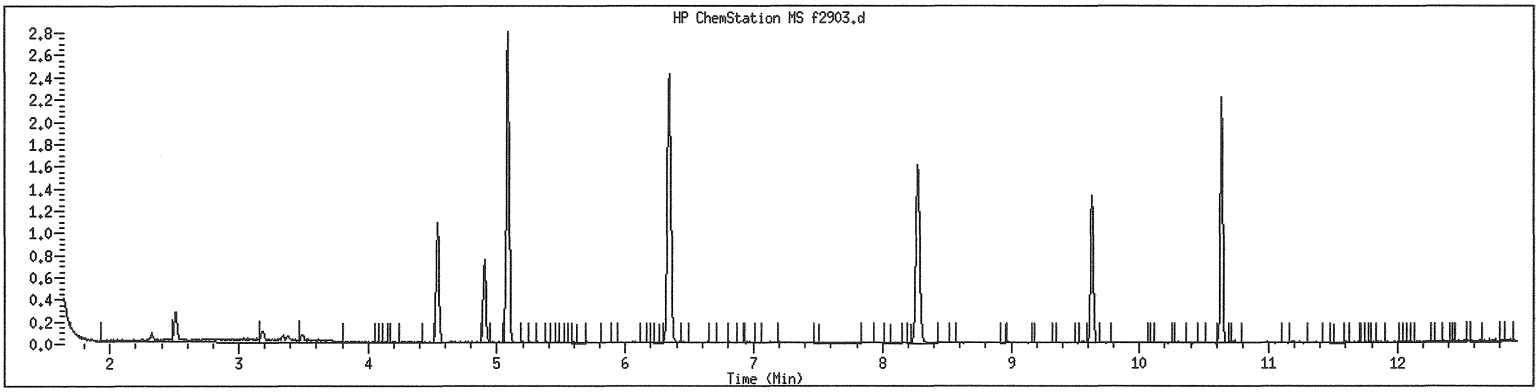



# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 21310171213 | SampleType | : SAMPLE |
| Injection Date | : 10/25/2013 19:30 | Instrument | : msv7.i |
| Operator | : CEK | | |
| Sample Info | : 21310171213*A | | |
| Misc Info | : MSV~28849~*1*CEK | | |
| Method | : /var/chem/msv7.i/2131025.s.b/8260DODs7.m | | |
| Dilution | : 1.00 | | |
| Matrix | : SOIL | | |
| Integrator | : HP RTE | Compound Sublist | : 8260b |




NO MANUAL INTEGRATIONS

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-OCT-2013 12:24
End Cal Date : 25-OCT-2013 14:34
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Cal Date : 25-Oct-2013 19:43 cek

Calibration File Names:
Level 1: /var/chem/msv7.i/2131025.s.b/f2885d.d
Level 2: /var/chem/msv7.i/2131025.s.b/f2886d.d
Level 3: /var/chem/msv7.i/2131025.s.b/f2887d.d
Level 4: /var/chem/msv7.i/2131025.s.b/f2888d.d
Level 5: /var/chem/msv7.i/2131025.s.b/f2889d.d
Level 6: /var/chem/msv7.i/2131025.s.b/f2890d.d
Level 7: /var/chem/msv7.i/2131025.s.b/f2891d.d

| Compound | 2 Level 1 / 200 Level 7 | 5 Level 2 | 10 Level 3 | 20 Level 4 | 50 Level 5 | 100 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 Dichlorodifluoromethane | 0.45405<br>0.40691 | 0.44816 | 0.44659 | 0.44472 | 0.38593 | 0.34927 | AVRG | | 0.41938 | | 9.53900 | |
| 2 Chloromethane ++ | 0.40580<br>0.39075 | 0.40659 | 0.38545 | 0.38794 | 0.36535 | 0.35170 | AVRG | | 0.38480 | | 5.23662 | |
| 3 Vinyl Chloride + | 0.59474<br>0.57990 | 0.61944 | 0.61371 | 0.60802 | 0.56225 | 0.52421 | AVRG | | 0.58604 | | 5.77237 | |
| 4 1,3 Butadiene | +++++<br>+++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |

21310114.12 55

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-OCT-2013 12:24
End Cal Date : 25-OCT-2013 14:34
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Cal Date : 25-Oct-2013 19:43 cek

| Compound | 2 Level 1 / 200 Level 7 | 5 Level 2 | 10 Level 3 | 20 Level 4 | 50 Level 5 | 100 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 Bromomethane | 0.27850<br>0.28374 | 0.29363 | 0.29615 | 0.28325 | 0.26112 | 0.24239 | AVRG | | 0.27697 | | 6.88228 |
| 8 Chloroethane | 0.32524<br>0.28986 | 0.32732 | 0.31651 | 0.32307 | 0.29554 | 0.26730 | AVRG | | 0.30641 | | 7.41045 |
| 9 Trichlorofluoromethane | 0.65880<br>0.60061 | 0.66480 | 0.65056 | 0.65620 | 0.59319 | 0.52834 | AVRG | | 0.62179 | | 8.10277 |
| 7 Ethyl Ether | +++++<br>+++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 <- |
| 12 1,1-Dichloroethene + | 0.40661<br>0.37071 | 0.41840 | 0.38886 | 0.38980 | 0.36145 | 0.33936 | AVRG | | 0.38217 | | 7.09135 |
| 15 1,1,2Trichlotrifluoroethane | 0.37580<br>0.39578 | 0.44527 | 0.41555 | 0.41668 | 0.38116 | 0.33949 | AVRG | | 0.39568 | | 8.66841 |
| 14 Carbon Disulfide | 1.57947<br>1.39174 | 1.47222 | 1.45834 | 1.47881 | 1.34481 | 1.27795 | AVRG | | 1.42905 | | 6.94760 |

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GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-OCT-2013 12:24
End Cal Date : 25-OCT-2013 14:34
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Cal Date : 25-Oct-2013 19:43 cek

| Compound | 2<br>Level 1<br>200<br>Level 7 | 5<br>Level 2 | 10<br>Level 3 | 20<br>Level 4 | 50<br>Level 5 | 100<br>Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 Methyl Iodide | 1880<br>381265 | 5847 | 13170 | 28865 | 84198 | 161910 | LINR | 0.07813 | 0.38444 | | 0.99375 | |
| 17 Acrolein | 0.00799<br>0.01045 | 0.01081 | 0.01124 | 0.01051 | 0.01023 | 0.00946 | AVRG | | 0.01010 | | 10.68709 | <- |
| 18 Methylene Chloride | 11109<br>394157 | 17054 | 22832 | 42260 | 104994 | 202907 | LINR | -0.08833 | 0.39066 | | 0.99987 | |
| 11 Allyl Chloride | +++++<br>+++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 19 Acetone | 2563<br>73656 | 3196 | 5176 | 8354 | 19352 | 35996 | LINR | -0.10522 | 0.07195 | | 0.99865 | |
| 13 trans-1,2-Dichloroethene | 0.57027<br>0.55744 | 0.55929 | 0.58169 | 0.59500 | 0.54630 | 0.51355 | AVRG | | 0.56050 | | 4.69297 | |
| 22 Methyl Acetate | 739<br>91090 | 3062 | 4543 | 10736 | 22111 | 41986 | LINR | -0.02453 | 0.09035 | | 0.99598 | |

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GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-OCT-2013 12:24
End Cal Date : 25-OCT-2013 14:34
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Cal Date : 25-Oct-2013 19:43 cek

| Compound | 2 Level 1 / 200 Level 7 | 5 Level 2 | 10 Level 3 | 20 Level 4 | 50 Level 5 | 100 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 23 Hexane | +++++ / 0.74862 | 0.79195 | 0.75610 | 0.79833 | 0.68206 | 0.53291 | AVRG | | 0.71833 | | 13.90159 | |
| 25 MTBE | 0.51464 / 0.53123 | 0.49732 | 0.52170 | 0.51651 | 0.47122 | 0.40350 | AVRG | | 0.49373 | | 8.98459 | |
| 10 tert-butyl alcohol | +++++ / +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 5 Acetonitrile | +++++ / +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 26 Isopropyl Ether | +++++ / +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 31 1,1-Dichloroethane ++ | 0.64518 / 0.55649 | 0.59156 | 0.68219 | 0.57463 | 0.54504 | 0.51892 | AVRG | | 0.58772 | | 9.80983 | |
| 33 Acrylonitrile | 0.02934 / 0.03674 | 0.03184 | 0.04313 | 0.03106 | 0.03189 | 0.03222 | AVRG | | 0.03375 | | 13.96025 | |

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GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-OCT-2013 12:24
End Cal Date : 25-OCT-2013 14:34
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Cal Date : 25-Oct-2013 19:43 cek

| Compound | 2 Level 1 / 200 Level 7 | 5 Level 2 | 10 Level 3 | 20 Level 4 | 50 Level 5 | 100 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 20 Chloroprene | +++++ +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 34 Vinyl Acetate | 0.07883 0.09930 | 0.09617 | 0.11332 | 0.08590 | 0.08090 | 0.08679 | AVRG | | 0.09160 | | 13.25949 | |
| 21 cis-1,2-Dichloroethene | 0.36137 0.39475 | 0.32787 | 0.36318 | 0.36194 | 0.35573 | 0.35435 | AVRG | | 0.35988 | | 5.44753 | |
| M 68 Total 1,2-Dichloroethene | 0.46582 0.47610 | 0.44358 | 0.47244 | 0.47847 | 0.45101 | 0.43395 | AVRG | | 0.46019 | | 3.78189 | |
| 35 2,2-Dichloropropane | 0.46674 0.46284 | 0.43566 | 0.46646 | 0.46291 | 0.43985 | 0.41770 | AVRG | | 0.45031 | | 4.28497 | |
| 38 Cyclohexane | 3602 587141 | 8930 | 17981 | 42135 | 118382 | 246160 | LINR | 0.09913 | 0.59341 | | 0.99242 | |
| 39 Bromochloromethane | 0.10249 0.13723 | 0.13068 | 0.13511 | 0.13997 | 0.13106 | 0.12809 | AVRG | | 0.12923 | | 9.66310 | |

2131025.s 59

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-OCT-2013 12:24
End Cal Date : 25-OCT-2013 14:34
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Cal Date : 25-Oct-2013 19:43 cek

| Compound | 2 Level 1 / 200 Level 7 | 5 Level 2 | 10 Level 3 | 20 Level 4 | 50 Level 5 | 100 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 40 Chloroform + | 0.60247<br>0.57489 | 0.60731 | 0.59643 | 0.59792 | 0.55185 | 0.53306 | AVRG | | 0.58056 | | 4.90295 | |
| 41 Carbon Tetrachloride | 0.45520<br>0.45474 | 0.46111 | 0.45891 | 0.45182 | 0.42920 | 0.39972 | AVRG | | 0.44438 | | 5.02862 | |
| 43 1,1,1-Trichloroethane | 0.49052<br>0.50043 | 0.49535 | 0.50928 | 0.50638 | 0.47839 | 0.46263 | AVRG | | 0.49185 | | 3.35826 | |
| 28 Ethyl Acetate | +++++<br>+++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 45 2-Butanone | +++++<br>0.06230 | 0.04422 | 0.05461 | 0.05360 | 0.05363 | 0.05320 | AVRG | | 0.05359 | | 10.71420 | |
| 32 Tetrahydrofuran | +++++<br>+++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 44 1,1-Dichloropropene | 0.36922<br>0.48305 | 0.36787 | 0.38053 | 0.39754 | 0.40233 | 0.41838 | AVRG | | 0.40270 | | 9.90886 | |

2131017L2 60

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-OCT-2013 12:24
End Cal Date : 25-OCT-2013 14:34
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Cal Date : 25-Oct-2013 19:43 cek

| Compound | 2 Level 1 / 200 Level 7 | 5 Level 2 | 10 Level 3 | 20 Level 4 | 50 Level 5 | 100 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 30 Isobutyl Alcohol | +++++ +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 46 2,2,4 trimethyl Pentane | +++++ +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 48 Benzene | 1.23692 1.38222 | 1.18060 | 1.19081 | 1.29970 | 1.24931 | 1.26696 | AVRG | | 1.25808 | | 5.45662 | |
| 29 Proprionitrile | +++++ +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 27 Methylacrylonitrile | +++++ +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 52 1,2-Dichloroethane | 0.22148 0.25969 | 0.26772 | 0.25737 | 0.25939 | 0.24631 | 0.24055 | AVRG | | 0.25036 | | 6.24291 | |
| 36 2-Chloropropene | +++++ +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |

2131025.T12 61

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-OCT-2013 12:24
End Cal Date : 25-OCT-2013 14:34
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Cal Date : 25-Oct-2013 19:43 cek

| Compound | 2 Level 1 / 200 Level 7 | 5 Level 2 | 10 Level 3 | 20 Level 4 | 50 Level 5 | 100 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 56 Methyl cyclohexane | 0.49652<br>0.70646 | 0.50395 | 0.50454 | 0.57018 | 0.58051 | 0.56743 | AVRG | | 0.56137 | | 13.06283 | |
| 57 Trichloroethene | 0.39149<br>0.42238 | 0.39154 | 0.40328 | 0.41171 | 0.38685 | 0.38495 | AVRG | | 0.39889 | | 3.52121 | |
| 37 N-Butyl Alcohol | +++++<br>+++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 62 Dibromomethane | +++++<br>0.12323 | 0.10706 | 0.11756 | 0.12024 | 0.11023 | 0.11244 | AVRG | | 0.11513 | | 5.40969 | |
| 63 1,2-Dichloropropane + | 0.27458<br>0.28208 | 0.23518 | 0.26134 | 0.26215 | 0.25500 | 0.25600 | AVRG | | 0.26090 | | 5.76584 | |
| 64 Bromodichloromethane | 0.33009<br>0.35724 | 0.33908 | 0.35024 | 0.34855 | 0.32628 | 0.32573 | AVRG | | 0.33960 | | 3.73416 | |
| 49 2,3-Dichloro-1-propene | +++++<br>+++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |

2131041712 — 62

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-OCT-2013 12:24
End Cal Date : 25-OCT-2013 14:34
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Cal Date : 25-Oct-2013 19:43 cek

| Compound | 2 Level 1 / 200 Level 7 | 5 Level 2 | 10 Level 3 | 20 Level 4 | 50 Level 5 | 100 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 70 2-Chloroethyl vinyl ether | +++++ +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 55 Methyl Methacrylate | +++++ +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 24 2-Butanol | +++++ +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 53 1,4-Dioxane | +++++ +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 47 Heptane | +++++ +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 69 1-Bromo-2-chloroethane | 0.22437 0.25606 | 0.23339 | 0.23642 | 0.23848 | 0.22758 | 0.22938 | AVRG | | 0.23510 | | 4.46017 | |
| 72 cis-1,3-Dichloropropene | 2435 376945 | 6114 | 12589 | 25866 | 73540 | 165432 | LINR | 0.09429 | 0.38210 | | 0.99454 | |

2131101.172 C3

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-OCT-2013 12:24
End Cal Date : 25-OCT-2013 14:34
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Cal Date : 25-Oct-2013 19:43 cek

| Compound | 2 Level 1 / 200 Level 7 | 5 Level 2 | 10 Level 3 | 20 Level 4 | 50 Level 5 | 100 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 77 Toluene + | 3.94135<br>3.64147 | 3.88229 | 3.77687 | 3.68301 | 3.35108 | 3.47583 | AVRG | | 3.67884 | | 5.76595 | |
| 58 1,3 Difluorobenzene | +++++<br>+++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 79 4-methyl-2-pentanone | +++++<br>0.24093 | 0.24043 | 0.23146 | 0.20399 | 0.17949 | 0.20758 | AVRG | | 0.21731 | | 11.26135 | <- |
| 78 Tetrachloroethene | 0.96383<br>0.80336 | 0.86855 | 0.89479 | 0.86775 | 0.73886 | 0.75376 | AVRG | | 0.84156 | | 9.56954 | |
| 51 2-Nitroprpoane | +++++<br>+++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 81 trans-1,3-Dichloropropene | 1557<br>309411 | 4362 | 10187 | 21336 | 60797 | 136507 | LINR | 0.09601 | 0.31409 | | 0.99509 | |
| M 71 1-3 Dichloropropene-Total | 3992<br>686356 | 10476 | 22776 | 47202 | 134337 | 301939 | LINR | 0.19013 | 0.34810 | | 0.99479 | |

2131017177 64

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-OCT-2013 12:24
End Cal Date : 25-OCT-2013 14:34
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Cal Date : 25-Oct-2013 19:43 cek

| Compound | 2 Level 1 / 200 Level 7 | 5 Level 2 | 10 Level 3 | 20 Level 4 | 50 Level 5 | 100 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 61 1,4 Difluorobenzene | +++++ +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 82 1,1,2-Trichloroethane | 0.37376 0.43978 | 0.46953 | 0.50883 | 0.46372 | 0.41991 | 0.42193 | AVRG | | 0.44249 | | 9.78434 | |
| 73 Ethyl Methacrylate | +++++ +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 85 Dibromochloromethane | 0.46185 0.54105 | 0.58294 | 0.59084 | 0.54256 | 0.49421 | 0.51114 | AVRG | | 0.53209 | | 8.75987 | |
| 86 1,3-Dichloropropane | 0.66999 0.74089 | 0.75433 | 0.74223 | 0.69509 | 0.62620 | 0.69527 | AVRG | | 0.70343 | | 6.54546 | |
| 88 1,2-Dibromoethane(EDB) | +++++ 0.39225 | 0.33625 | 0.39689 | 0.37597 | 0.34188 | 0.35570 | AVRG | | 0.36649 | | 7.02463 | |
| 65 1,2 Difluorobenzene | +++++ +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |

2131025.s/85

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-OCT-2013 12:24
End Cal Date : 25-OCT-2013 14:34
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Cal Date : 25-Oct-2013 19:43 cek

| Compound | 2 Level 1 / 200 Level 7 | 5 Level 2 | 10 Level 3 | 20 Level 4 | 50 Level 5 | 100 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M 59 Total Difluorobenzene(1) | +++++ +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| (2) | +++++ +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 66 Methyl disulfide | +++++ +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 60 1-Nitropropane | +++++ +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 67 2-Methoxyethanol | +++++ +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 80 2-Hexanone | +++++ 75700 | 461 | 1849 | 4573 | 13792 | 30551 | LINR | 0.15196 | 0.18816 | | 0.99252 | |
| 91 1-Chlorohexane | 2512 490799 | 6082 | 12456 | 28545 | 91348 | 211699 | LINR | 0.10104 | 1.20941 | | 0.99546 | |

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GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-OCT-2013 12:24
End Cal Date : 25-OCT-2013 14:34
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Cal Date : 25-Oct-2013 19:43 cek

| Compound | 2 Level 1 / 200 Level 7 | 5 Level 2 | 10 Level 3 | 20 Level 4 | 50 Level 5 | 100 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 75 Phenyl Isopropanol | +++++ +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 76 Mesityloxide | +++++ +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 92 Chlorobenzene ++ | 2.36298 2.24855 | 2.28313 | 2.31582 | 2.29010 | 2.15949 | 2.17401 | AVRG | | 2.26201 | | 3.26666 | |
| 93 Ethylbenzene + | 1.03151 1.33424 | 1.06593 | 1.16589 | 1.25799 | 1.23798 | 1.26736 | AVRG | | 1.19442 | | 9.34014 | |
| 95 1,1,1,2-Tetrachloroethane | 0.74447 0.68118 | 0.76979 | 0.76901 | 0.74092 | 0.65827 | 0.65038 | AVRG | | 0.71629 | | 7.20586 | |
| 96 p,m-Xylene | 7263 1345662 | 18662 | 39558 | 94946 | 287940 | 618052 | LINR | 0.10549 | 1.65442 | | 0.99894 | |
| 98 o-Xylene | 2953 594868 | 7810 | 16586 | 35060 | 113022 | 258807 | LINR | 0.09266 | 1.46437 | | 0.99600 | |

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GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-OCT-2013 12:24
End Cal Date : 25-OCT-2013 14:34
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Cal Date : 25-Oct-2013 19:43 cek

| Compound | 2 Level 1 / 200 Level 7 | 5 Level 2 | 10 Level 3 | 20 Level 4 | 50 Level 5 | 100 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 83 cis-1,2 Dibromoethylene | +++++ / +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 84 trans-1,2 Dibromoethylene | +++++ / +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 99 Styrene | 3526 / 925760 | 10709 | 23465 | 56487 | 186515 | 422709 | LINR | 0.08093 | 2.29028 | | 0.99840 | |
| 100 Bromoform ++ | +++++ / 0.33911 | 0.34891 | 0.32607 | 0.32678 | 0.30056 | 0.31473 | AVRG | | 0.32603 | | 5.26222 | |
| M 120 TOTAL XYLENE | 10216 / 1940530 | 26472 | 56144 | 130006 | 400962 | 876859 | LINR | 0.19430 | 1.59073 | | 0.99825 | |
| 102 Isopropylbenzene | 7548 / 1702542 | 19137 | 43805 | 105296 | 340324 | 759740 | LINR | 0.08395 | 4.20043 | | 0.99771 | |
| 101 1-5 Cyclooctadiene | +++++ / +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |

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GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-OCT-2013 12:24
End Cal Date : 25-OCT-2013 14:34
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Cal Date : 25-Oct-2013 19:43 cek

| Compound | 2 Level 1 / 200 Level 7 | 5 Level 2 | 10 Level 3 | 20 Level 4 | 50 Level 5 | 100 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 87 Methyl isobutenyl ketone | +++++ +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 104 Bromobenzene | 1.36238 1.43137 | 1.33280 | 1.34205 | 1.29333 | 1.29907 | 1.29707 | AVRG | | 1.33687 | | 3.68149 | |
| 106 n-Propylbenzene | 10823 2138594 | 28165 | 64617 | 144683 | 446556 | 958618 | LINR | 0.07442 | 5.30850 | | 0.99702 | |
| 89 alpha-methylstyrene | +++++ +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 107 1,1,2,2-Tetrachloroethane++ | 0.48866 0.51374 | 0.56748 | 0.54302 | 0.49665 | 0.48615 | 0.47889 | AVRG | | 0.51066 | | 6.48227 | |
| 108 2-Chlorotoluene | 2.28880 2.71821 | 2.02927 | 2.13754 | 2.27170 | 2.44520 | 2.46965 | AVRG | | 2.33720 | | 9.81439 | |
| 110 1,3,5-Trimethylbenzene | 6125 1424967 | 16616 | 39072 | 96568 | 307830 | 652615 | LINR | 0.07159 | 3.54876 | | 0.99813 | |

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GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-OCT-2013 12:24
End Cal Date : 25-OCT-2013 14:34
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Cal Date : 25-Oct-2013 19:43 cek

| Compound | 2 Level 1 / 200 Level 7 | 5 Level 2 | 10 Level 3 | 20 Level 4 | 50 Level 5 | 100 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 109 1,2,3-Trichloropropane | 0.36999<br>0.40420 | 0.39089 | 0.44795 | 0.39024 | 0.37713 | 0.35749 | AVRG | | 0.39113 | | 7.50835 | |
| 111 trans-1,4-Dichloro-2-Butene | +++++<br>35047 | 91.00000 | 1037 | 2546 | 7153 | 14913 | LINR | 0.11864 | 0.08771 | | 0.99452 | |
| 112 4-Chlorotoluene | 5325<br>1109478 | 15286 | 34951 | 79582 | 230894 | 509662 | LINR | 0.06528 | 2.75560 | | 0.99792 | |
| 94 Cumene Hydroperoxide | +++++<br>+++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 97 Cyclohexanone | +++++<br>+++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 113 tert-butylbenzene | 3284<br>794724 | 9525 | 22309 | 50982 | 162806 | 353389 | LINR | 0.08648 | 1.97687 | | 0.99666 | |
| 114 1,2,4-Trimethylbenzene | 5133<br>1389546 | 15805 | 38829 | 93120 | 294378 | 626527 | LINR | 0.07815 | 3.45787 | | 0.99750 | |

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GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-OCT-2013 12:24
End Cal Date : 25-OCT-2013 14:34
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Cal Date : 25-Oct-2013 19:43 cek

| Compound | 2 Level 1 / 200 Level 7 | 5 Level 2 | 10 Level 3 | 20 Level 4 | 50 Level 5 | 100 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 105 Pentachloroethane | +++++ +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 115 sec-Butylbenzene | 8695 2049959 | 25055 | 60937 | 140286 | 431336 | 909923 | LINR | 0.07689 | 5.08738 | | 0.99671 | |
| 116 p-Isopropyltoluene | 7172 1672012 | 19136 | 43638 | 104959 | 341426 | 741694 | LINR | 0.09108 | 4.16336 | | 0.99656 | |
| 117 1,3-Dichlorobenzene | 1.73703 1.91973 | 1.71928 | 1.77511 | 1.83955 | 1.80405 | 1.73860 | AVRG | | 1.79048 | | 3.95926 | |
| 119 1,4-Dichlorobenzene | 1.98477 1.84522 | 1.75429 | 1.79138 | 1.77038 | 1.71003 | 1.68778 | AVRG | | 1.79198 | | 5.55550 | |
| 121 n-Butylbenzene | 7477 1594071 | 21045 | 45325 | 101761 | 320495 | 695172 | LINR | 0.09025 | 3.95765 | | 0.99549 | |
| 122 1,2-Dichlorobenzene | 1.55921 1.61126 | 1.48539 | 1.45219 | 1.48860 | 1.48015 | 1.47500 | AVRG | | 1.50740 | | 3.74781 | |

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-OCT-2013 12:24
End Cal Date : 25-OCT-2013 14:34
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Cal Date : 25-Oct-2013 19:43 cek

| Compound | 2 Level 1 / 200 Level 7 | 5 Level 2 | 10 Level 3 | 20 Level 4 | 50 Level 5 | 100 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 125 1,2-Dibromo-3-Chloropropane | +++++ / 0.09361 | 0.06249 | 0.08570 | 0.07896 | 0.08217 | 0.07710 | AVRG | | 0.08000 | | 12.97225 | |
| 126 Hexachlorobutadiene | 0.74931 / 0.91236 | 0.81238 | 0.77231 | 0.78933 | 0.77620 | 0.75907 | AVRG | | 0.79585 | | 6.94876 | |
| 127 1,2,4-Trichlorobenzene | 2695 / 457807 | 6514 | 14175 | 28202 | 86264 | 193302 | LINR | 0.10166 | 1.13432 | | 0.99277 | |
| 128 Napthalene | 3136 / +++++ | 7532 | 16359 | 34877 | 108552 | 267308 | LINR | 0.05453 | 1.32104 | | 0.99536 | |
| 129 1,2,3-Trichlorobenzene | 2073 / 386594 | 5507 | 12504 | 24299 | 74250 | 165574 | LINR | 0.09461 | 0.95782 | | 0.99383 | |
| M 123 Total-1,2 Dibromoethylene | +++++ / +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 124 Benzal chloride | +++++ / +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |

2131025.12

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-OCT-2013 12:24
End Cal Date : 25-OCT-2013 14:34
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Cal Date : 25-Oct-2013 19:43 cek

| Compound | 2 Level 1 / 200 Level 7 | 5 Level 2 | 10 Level 3 | 20 Level 4 | 50 Level 5 | 100 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| $ 42 Dibromofluoromethane | 0.25409 | 0.25535 | 0.24953 | 0.25399 | 0.24411 | 0.23822 | | | | | |
| | 0.23901 | | | | | | AVRG | | 0.24776 | | 2.95086 |
| $ 50 1,2-Dichloroethane-d4 | 0.10577 | 0.10307 | 0.10176 | 0.10185 | 0.09577 | 0.09221 | | | | | |
| | 0.09852 | | | | | | AVRG | | 0.09985 | | 4.65976 |
| $ 74 Toluene-d8 | 2.71944 | 2.69385 | 2.64367 | 2.53269 | 2.36016 | 2.44059 | | | | | |
| | 2.36285 | | | | | | AVRG | | 2.53618 | | 6.02665 |
| $ 103 Bromofluorobenzene | 0.67095 | 0.68628 | 0.70785 | 0.69016 | 0.66555 | 0.68591 | | | | | |
| | 0.68011 | | | | | | AVRG | | 0.68383 | | 2.01700 |

Z4310112 73

GCAL
ANALYTICAL LABORATORIES, LLC

AVERAGE RRFs FOR THOSE ANALYTES WITH LINEAR OR QUADRATIC CURVE TYPES

| |
|---|
| INSTRUMENT: MSV7 |
| ICAL DATE: 10/25/13 |

| COMPOUND | AVERAGE RRF |
|---|---|
| Methylene chloride | 0.614 |
| Acetone | 0.126 |
| trans-1,3-Dichloropropene | 0.241 |
| 2-Hexanone | 0.134 |
| p,m-Xylene | 1.41 |
| o-Xylene | 1.16 |
| Styrene | 1.74 |
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Data File: /var/chem/msv7.i/2131025.s.b/f2883d.d



Date : 25-OCT-2013 11:20

Client ID: V7BFB

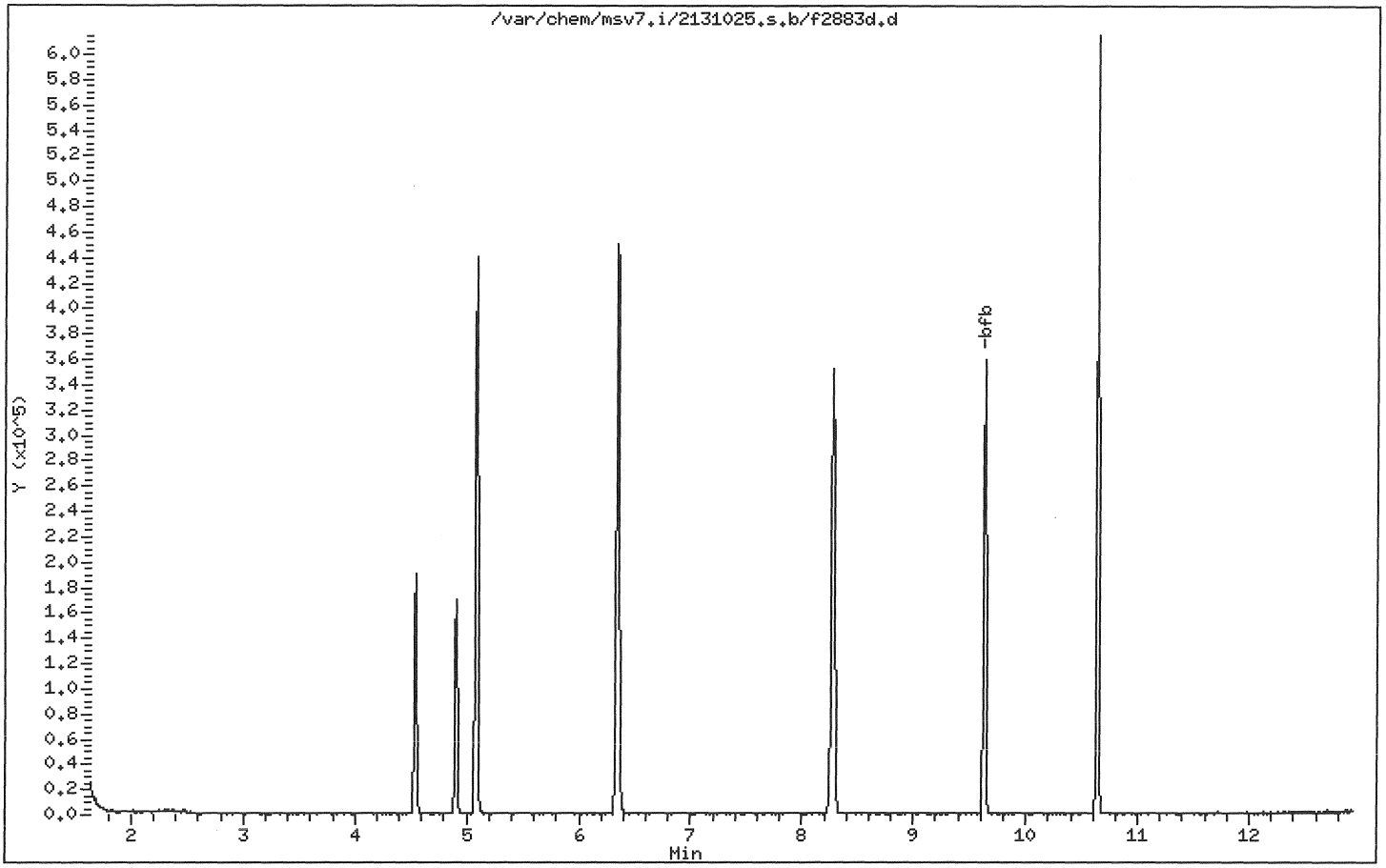
Instrument: msv7.i

Sample Info: 1000*V7BFB

Operator: CEK

Column phase: RTX-VMS-30M

Column diameter: 0.25



Data File: /var/chem/msv7.i/2131025.s.b/f2883d.d



Date : 25-OCT-2013 11:20

Client ID: V7BFB

Instrument: msv7.i

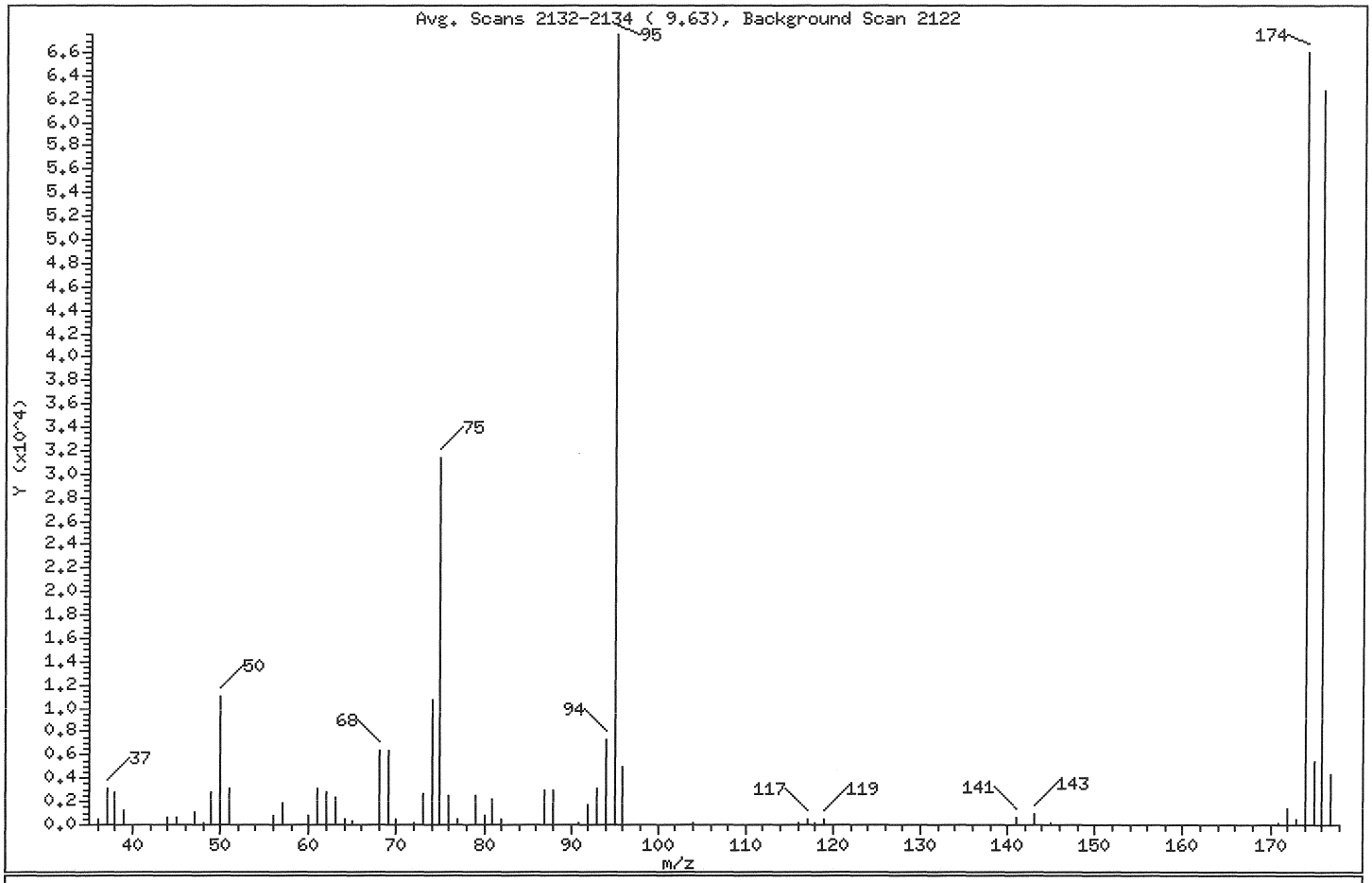
Sample Info: 1000*V7BFB

Operator: CEK

Column phase: RTX-VMS-30M

Column diameter: 0.25

1 bfb




| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 95 | Base Peak, 100% relative abundance | 100.00 |
| 50 | 15.00 - 40.00% of mass 95 | 16.38 |
| 75 | 30.00 - 60.00% of mass 95 | 46.40 |
| 96 | 5.00 - 9.00% of mass 95 | 7.29 |
| 173 | Less than 2.00% of mass 174 | 0.75 ( 0.76) |
| 174 | 50.00 - 120.00% of mass 95 | 97.72 |
| 175 | 5.00 - 9.00% of mass 174 | 8.03 ( 8.22) |
| 176 | 95.00 - 101.00% of mass 174 | 92.85 ( 95.02) |
| 177 | 5.00 - 9.00% of mass 176 | 6.53 ( 7.04) |

Data File: /var/chem/msv7.i/2131025.s.b/f2883d.d



Date : 25-OCT-2013 11:20

Client ID: V7BFB

Instrument: msv7.i

Sample Info: 1000*V7BFB

Operator: CEK

Column phase: RTX-VMS-30M

Column diameter: 0.25

Data File: f2883d.d

Spectrum: Avg. Scans 2132-2134 ( 9.63), Background Scan 2122

Location of Maximum: 95.00

Number of points: 55

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 36.00 | 504 | 61.00 | 3087 | 79.00 | 2407 | 117.00 | 426 |
| 37.00 | 3106 | 62.00 | 2769 | 80.00 | 850 | 118.00 | 148 |
| 38.00 | 2789 | 63.00 | 2406 | 81.00 | 2127 | 119.00 | 481 |
| 39.00 | 1182 | 64.00 | 405 | 82.00 | 428 | 141.00 | 654 |
| 44.00 | 580 | 65.00 | 290 | 87.00 | 2964 | 143.00 | 865 |
| 45.00 | 678 | 68.00 | 6367 | 88.00 | 3005 | 145.00 | 189 |
| 47.00 | 1097 | 69.00 | 6358 | 91.00 | 142 | 171.00 | 160 |
| 48.00 | 173 | 70.00 | 421 | 92.00 | 1781 | 172.00 | 1369 |
| 49.00 | 2742 | 72.00 | 145 | 93.00 | 3165 | 173.00 | 504 |
| 50.00 | 11064 | 73.00 | 2620 | 94.00 | 7319 | 174.00 | 66008 |
| 51.00 | 3121 | 74.00 | 10653 | 95.00 | 67544 | 175.00 | 5423 |
| 56.00 | 802 | 75.00 | 31344 | 96.00 | 4924 | 176.00 | 62720 |
| 57.00 | 1817 | 76.00 | 2550 | 104.00 | 151 | 177.00 | 4414 |
| 60.00 | 834 | 77.00 | 426 | 116.00 | 205 | | |

GCAL, Inc.

Data file : /var/chem/msv7.i/2131025.s.b/f2885d.d
Lab Smp Id: 1201 Client Smp ID: V7STD002
Inj Date : 25-OCT-2013 12:24
Operator : CEK Inst ID: msv7.i
Smp Info : 1201*V7STD002
Misc Info : MSV~28849~*1*CEK
Comment :
Method : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Meth Date : 25-Oct-2013 19:39 cek Quant Type: ISTD
Cal Date : 25-OCT-2013 12:24 Cal File: f2885d.d
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * (Uf/Ws)/((100-M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 5.00000 | ng unit correction factor |
| Ws | 5.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture (not decanted) |
| Va | 100.00000 | Volume of aliquot extract added (uL) |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppb) | AMOUNTS ON-COL ( ppb) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|
| 1 Dichlorodifluoromethane | 85 | 1.727 | 1.727 | (0.162) | 3934 | 2.00000 | 2.17 | 7546 |
| 2 Chloromethane ++ | 50 | 1.910 | 1.910 | (0.376) | 3516 | 2.00000 | 2.11 | 7349 |
| 3 Vinyl Chloride + | 62 | 1.989 | 1.989 | (0.391) | 5153 | 2.00000 | 2.03 | 7381 |
| 6 Bromomethane | 94 | 2.285 | 2.285 | (0.449) | 2413 | 2.00000 | 2.01 | 5836 |
| 8 Chloroethane | 64 | 2.394 | 2.394 | (0.471) | 2818 | 2.00000 | 2.12 | 4977 |
| 9 Trichlorofluoromethane | 101 | 2.510 | 2.510 | (0.494) | 5708 | 2.00000 | 2.12 | 6559 |
| 12 1,1-Dichloroethene + | 96 | 2.915 | 2.915 | (0.573) | 3523 | 2.00000 | 2.13 | 7260 |
| 15 1,1,2Trichlotrifluoroethane | 101 | 2.938 | 2.938 | (0.578) | 3256 | 2.00000 | 1.90 | 8370 |
| 14 Carbon Disulfide | 76 | 2.941 | 2.941 | (0.578) | 13685 | 2.00000 | 2.21 | 8780 |
| 16 Methyl Iodide | 142 | 3.027 | 3.027 | (0.595) | 1880 | 2.00000 | 5.04 | 3946 |
| 17 Acrolein | 56 | 3.174 | 3.174 | (0.624) | 346 | 10.0000 | 7.91 | 3133(M3) |
| 18 Methylene Chloride | 49 | 3.342 | 3.342 | (0.657) | 11109 | 2.00000 | 2.15 | 8463 |
| 19 Acetone | 43 | 3.380 | 3.380 | (0.665) | 2563 | 2.00000 | 2.96 | 4491(M3) |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppb) | AMOUNTS ON-COL ( ppb) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|---|
| | 13 trans-1,2-Dichloroethene | 61 | 3.455 | 3.455 | (0.679) | 4941 | 2.00000 | 2.03 | 7598 |
| | 22 Methyl Acetate | 43 | 3.455 | 3.455 | (0.679) | 739 | 2.00000 | 0.662 | 0(M1) |
| | 23 Hexane | 57 | 3.492 | 3.492 | (0.687) | 8468 | 2.00000 | 2.72 | 8586 |
| | 25 MTBE | 73 | 3.526 | 3.526 | (0.693) | 4459 | 2.00000 | 2.08 | 0(M1) |
| | 31 1,1-Dichloroethane ++ | 63 | 3.886 | 3.886 | (0.764) | 5590 | 2.00000 | 2.20 | 6972 |
| | 33 Acrylonitrile | 53 | 3.923 | 3.923 | (0.771) | 1271 | 10.0000 | 8.69 | 4969 |
| | 34 Vinyl Acetate | 43 | 4.032 | 4.032 | (0.793) | 683 | 2.00000 | 1.72 | |
| | 21 cis-1,2-Dichloroethene | 61 | 4.246 | 4.246 | (0.835) | 3131 | 2.00000 | 2.01 | 8071 |
| M | 68 Total 1,2-Dichloroethene | 61 | | | | 8072 | 4.00000 | 4.04 | 0 |
| | 35 2,2-Dichloropropane | 77 | 4.317 | 4.317 | (0.849) | 4044 | 2.00000 | 2.07 | 7354 |
| | 38 Cyclohexane | 56 | 4.377 | 4.377 | (0.861) | 3602 | 2.00000 | 6.36 | 7865 |
| | 39 Bromochloromethane | 128 | 4.377 | 4.377 | (0.861) | 888 | 2.00000 | 1.59 | 7839 |
| | 40 Chloroform + | 83 | 4.422 | 4.422 | (0.870) | 5220 | 2.00000 | 2.08 | 7171 |
| | 41 Carbon Tetrachloride | 117 | 4.519 | 4.519 | (0.889) | 3944 | 2.00000 | 2.05 | 4793 |
| $ | 42 Dibromofluoromethane | 111 | 4.542 | 4.542 | (0.893) | 55038 | 50.0000 | 51.3 | 7399 |
| | 43 1,1,1-Trichloroethane | 97 | 4.564 | 4.564 | (0.898) | 4250 | 2.00000 | 1.99 | 5892 |
| | 45 2-Butanone | 43 | 4.621 | 4.621 | (0.909) | 98 | 2.00000 | 0.422 | (M1) |
| | 44 1,1-Dichloropropene | 75 | 4.636 | 4.636 | (0.912) | 3199 | 2.00000 | 1.83 | 5672 |
| | 48 Benzene | 78 | 4.808 | 4.808 | (0.945) | 10717 | 2.00000 | 1.97 | 7612 |
| $ | 50 1,2-Dichloroethane-d4 | 67 | 4.902 | 4.902 | (0.964) | 22911 | 50.0000 | 53.0 | 9364 |
| | 52 1,2-Dichloroethane | 62 | 4.954 | 4.954 | (0.974) | 1919 | 2.00000 | 1.77 | 0(M1) |
| * | 54 FLUOROBENZENE | 96 | 5.085 | 5.085 | (1.000) | 216607 | 50.0000 | | 9167 |
| | 56 Methyl cyclohexane | 83 | 5.198 | 5.198 | (1.022) | 4302 | 2.00000 | 1.77 | 8593 |
| | 57 Trichloroethene | 130 | 5.198 | 5.198 | (1.022) | 3392 | 2.00000 | 1.96 | 8651 |
| | 62 Dibromomethane | 93 | 5.509 | 5.509 | (1.083) | 424 | 2.00000 | 0.850 | 5368(M2) |
| | 63 1,2-Dichloropropane + | 63 | 5.595 | 5.595 | (1.100) | 2379 | 2.00000 | 2.10 | 6820 |
| | 64 Bromodichloromethane | 83 | 5.633 | 5.633 | (1.108) | 2860 | 2.00000 | 1.94 | 5411 |
| | 69 1-Bromo-2-chloroethane | 63 | 6.049 | 6.049 | (1.189) | 1944 | 2.00000 | 1.91 | 0(M1) |
| | 72 cis-1,3-Dichloropropene | 75 | 6.169 | 6.169 | (1.213) | 2435 | 2.00000 | 6.19 | (M1) |
| $ | 74 Toluene-d8 | 98 | 6.341 | 6.341 | (0.766) | 199903 | 50.0000 | 53.6 | 9321 |
| | 77 Toluene + | 91 | 6.390 | 6.390 | (0.772) | 11589 | 2.00000 | 2.14 | 0(M1) |
| | 78 Tetrachloroethene | 164 | 6.802 | 6.802 | (0.822) | 2834 | 2.00000 | 2.29 | 6245 |
| | 81 trans-1,3-Dichloropropene | 75 | 6.817 | 6.817 | (1.341) | 1557 | 2.00000 | 5.95 | (M1) |
| M | 71 1-3 Dichloropropene-Total | 100 | | | | 3992 | 4.00000 | 12.1 | 0 |
| | 82 1,1,2-Trichloroethane | 97 | 7.020 | 7.020 | (0.848) | 1099 | 2.00000 | 1.69 | 0(M1) |
| | 85 Dibromochloromethane | 129 | 7.245 | 7.245 | (0.875) | 1358 | 2.00000 | 1.74 | 5032 |
| | 86 1,3-Dichloropropane | 76 | 7.368 | 7.368 | (0.890) | 1970 | 2.00000 | 1.90 | 0(M1) |
| | 88 1,2-Dibromoethane(EDB) | 107 | 7.563 | 7.563 | (0.914) | 319 | 2.00000 | 0.592 | 0(M1) |
| | 91 1-Chlorohexane | 91 | 8.253 | 8.253 | (0.997) | 2512 | 2.00000 | 6.46 | 4192 |
| * | 90 Chlorobenzene-d5 | 82 | 8.276 | 8.276 | (1.000) | 73509 | 50.0000 | | 6166 |
| | 92 Chlorobenzene ++ | 112 | 8.298 | 8.298 | (1.003) | 6948 | 2.00000 | 2.09 | 3647 |
| | 93 Ethylbenzene + | 106 | 8.332 | 8.332 | (1.007) | 3033 | 2.00000 | 1.73 | 6368(H) |
| | 95 1,1,1,2-Tetrachloroethane | 133 | 8.373 | 8.373 | (1.012) | 2189 | 2.00000 | 2.08 | 6297 |
| | 96 p,m-Xylene | 106 | 8.512 | 8.512 | (1.029) | 7263 | 4.00000 | 8.26 | 8571 |
| | 98 o-Xylene | 106 | 9.014 | 9.014 | (1.089) | 2953 | 2.00000 | 6.00 | |
| M | 120 TOTAL XYLENE | 106 | | | | 10216 | 6.00000 | 14.3 | 0 |
| | 99 Styrene | 104 | 9.074 | 9.074 | (1.096) | 3526 | 2.00000 | 5.09 | 7170 |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppb) | AMOUNTS ON-COL ( ppb) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|
| 100 Bromoform ++ | 173 | 9.104 | 9.104 | (1.100) | 553 | 2.00000 | 1.15 | 0(M1) |
| 102 Isopropylbenzene | 105 | 9.344 | 9.344 | (1.129) | 7548 | 2.00000 | 5.42 | 7537 |
| $ 103 Bromofluorobenzene | 174 | 9.633 | 9.633 | (1.164) | 49321 | 50.0000 | 49.1 | 9398 |
| 104 Bromobenzene | 77 | 9.730 | 9.730 | (0.915) | 3800 | 2.00000 | 2.04 | 7007 |
| 106 n-Propylbenzene | 91 | 9.760 | 9.760 | (0.918) | 10823 | 2.00000 | 1.79 | 8348 |
| 107 1,1,2,2-Tetrachloroethane++ | 83 | 9.831 | 9.831 | (0.924) | 1363 | 2.00000 | 1.91 | 0(M1) |
| 108 2-Chlorotoluene | 91 | 9.910 | 9.910 | (0.932) | 6384 | 2.00000 | 1.96 | 6337 |
| 110 1,3,5-Trimethylbenzene | 105 | 9.951 | 9.951 | (0.935) | 6125 | 2.00000 | 4.82 | |
| 109 1,2,3-Trichloropropane | 75 | 9.951 | 9.951 | (0.935) | 1032 | 2.00000 | 1.89 | 0(M1) |
| 112 4-Chlorotoluene | 91 | 10.060 | 10.060 | (0.946) | 5325 | 2.00000 | 1.67 | 6903 |
| 113 tert-butylbenzene | 91 | 10.236 | 10.236 | (0.962) | 3284 | 2.00000 | 5.52 | 7787 |
| 114 1,2,4-Trimethylbenzene | 105 | 10.300 | 10.300 | (0.968) | 5133 | 2.00000 | 4.97 | |
| 115 sec-Butylbenzene | 105 | 10.397 | 10.397 | (0.977) | 8695 | 2.00000 | 5.07 | |
| 116 p-Isopropyltoluene | 119 | 10.517 | 10.517 | (0.989) | 7172 | 2.00000 | 5.79 | 7985 |
| 117 1,3-Dichlorobenzene | 146 | 10.573 | 10.573 | (0.994) | 4845 | 2.00000 | 1.94 | |
| * 118 1,4-DICHLOROBENZENE-D4 | 152 | 10.637 | 10.637 | (1.000) | 69731 | 50.0000 | | 7942 |
| 119 1,4-Dichlorobenzene | 146 | 10.648 | 10.648 | (1.001) | 5536 | 2.00000 | 2.22 | |
| 121 n-Butylbenzene | 91 | 10.866 | 10.866 | (1.021) | 7477 | 2.00000 | 5.87 | 7494 |
| 122 1,2-Dichlorobenzene | 146 | 10.993 | 10.993 | (1.033) | 4349 | 2.00000 | 2.07 | |
| 126 Hexachlorobutadiene | 225 | 12.058 | 12.058 | (1.134) | 2090 | 2.00000 | 1.88 | 0(M1) |
| 127 1,2,4-Trichlorobenzene | 180 | 12.084 | 12.084 | (1.136) | 2695 | 2.00000 | 2.09 | |
| 128 Napthalene | 128 | 12.317 | 12.317 | (1.158) | 3136 | 2.00000 | 4.43 | 5636 |
| 129 1,2,3-Trichlorobenzene | 180 | 12.440 | 12.440 | (1.169) | 2073 | 2.00000 | 1.90 | (M1) |

## QC Flag Legend

M1- Compound response manually integrated because Target system did not integrate.
M2- Compound response manually integrated because Target system integrated incorrectly.
M3- Compound response manually integrated because Target system integrated incorrect peak.
H - Operator selected an alternate compound hit.

Data File: /var/chem/msv7.i/2131025.s.b/f2885d.d

Date : 25-OCT-2013 12:24

Client ID: V7STD002

Sample Info: 1201*V7STD002

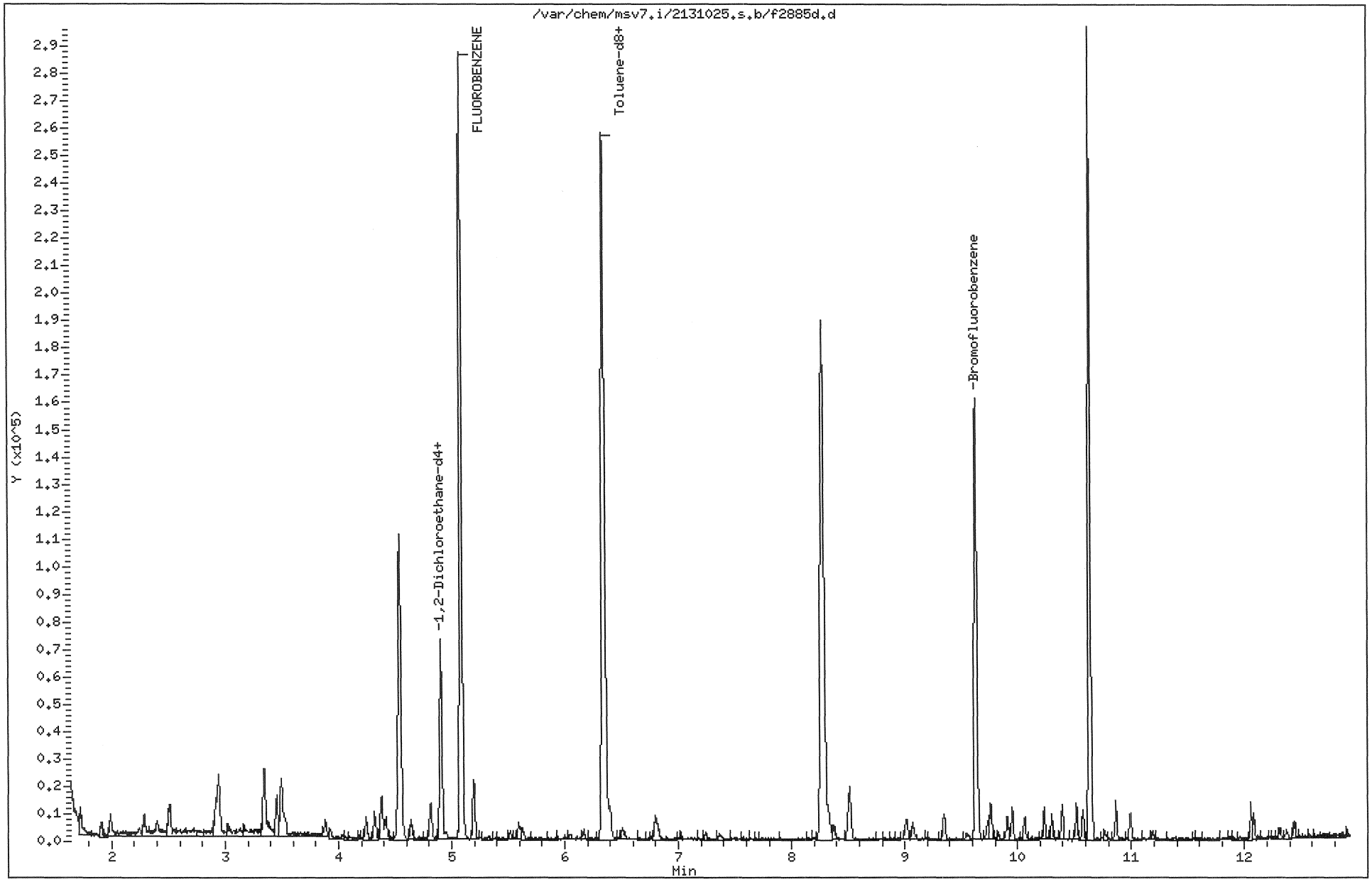
Column phase: RTX-VMS-30M

Instrument: msv7.i

Operator: CEK

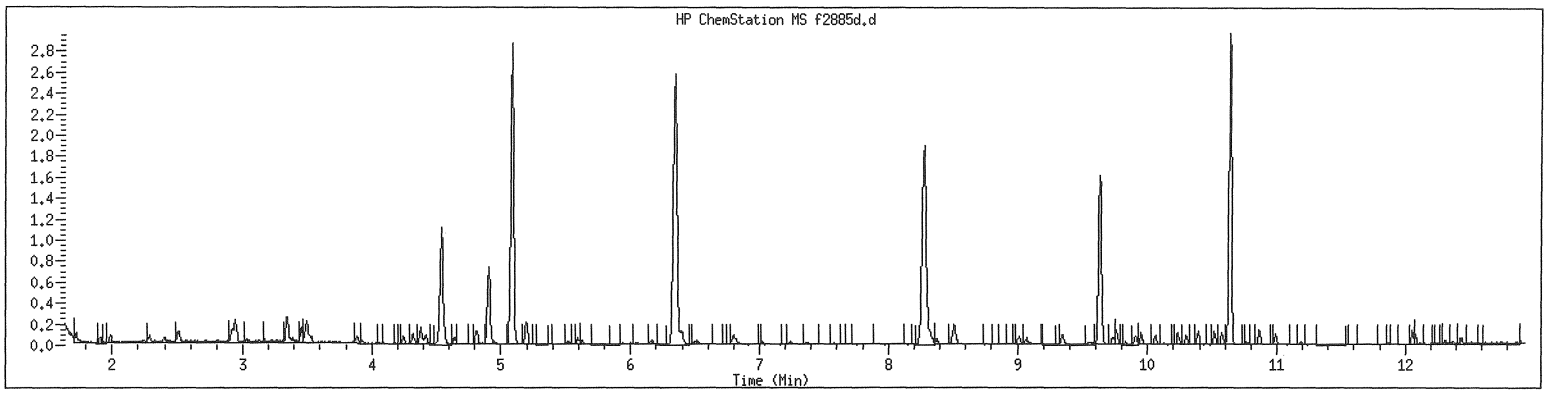
Column diameter: 0.25





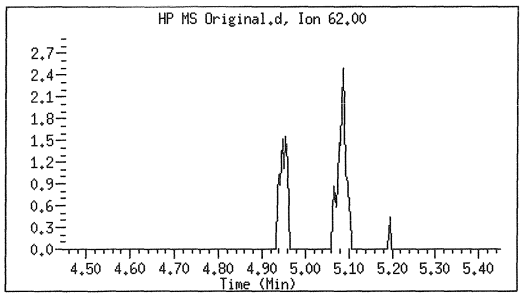
# MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 1201 SampleType : CALIB_1
Injection Date: 10/25/2013 12:24 Instrument : msv7.i
Operator : CEK
Sample Info : 1201*V7STD002
Misc Info : MSV~28849~*1*CEK
Method : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Dilution : 1.00
Matrix : SOIL
Integrator : HP RTE Compound Sublist: 8260b



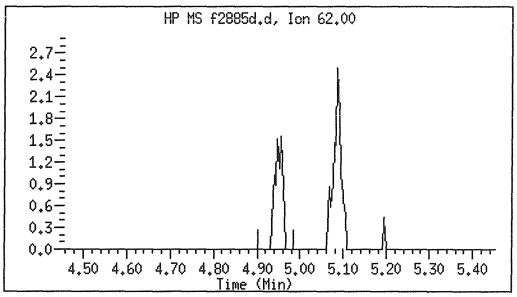

Original Final

52 1,2-Dichloroethane CAS#: 107-06-2 Reason: M1

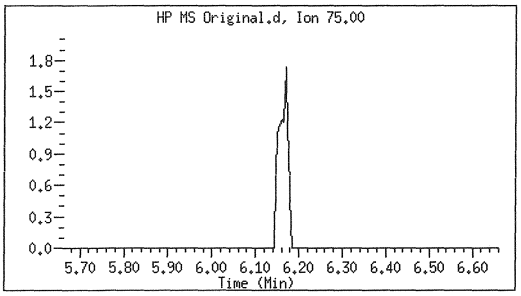



Electronic Signature Applied

User: cek
Date: 10/25/2013 14:19




72 cis-1,3-Dichloropropene CAS#: 10061-01-5 Reason: M1

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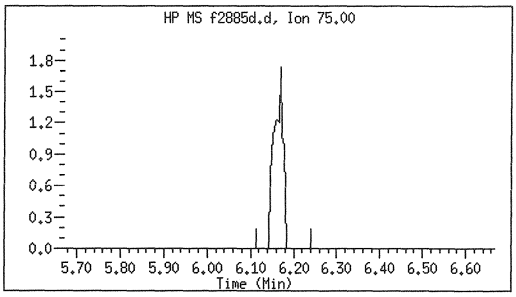
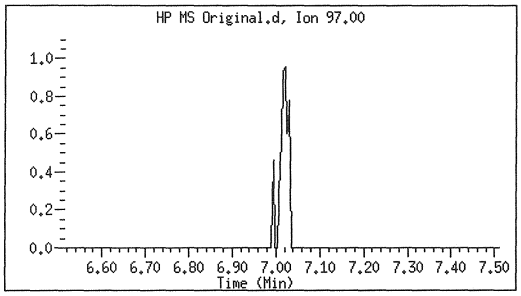
User: cek
Date: 10/25/2013 14:20



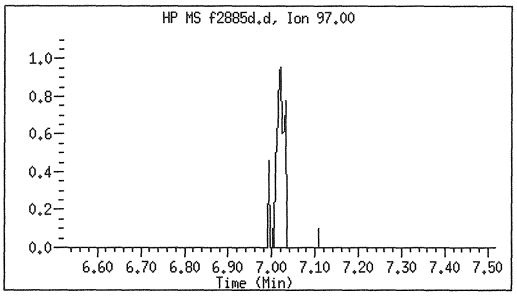
Original | Final

82 1,1,2-Trichloroethane CAS#: 79-00-5 Reason: M1

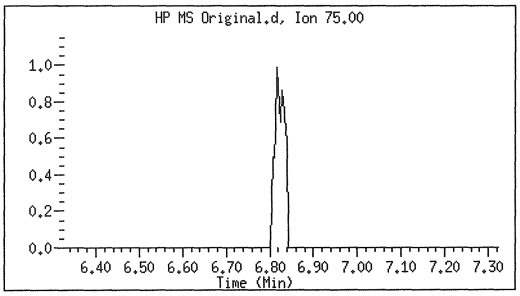



Electronic Signature Applied

User: cek
Date: 10/25/2013 14:20




81 trans-1,3-Dichloropropene CAS#: 10061-02-6 Reason: M1

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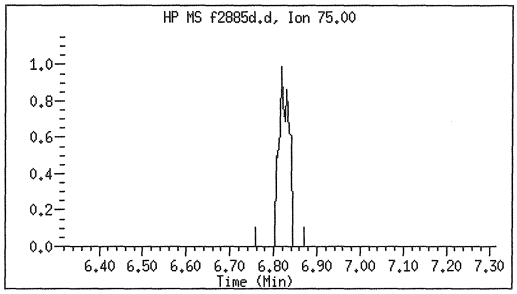
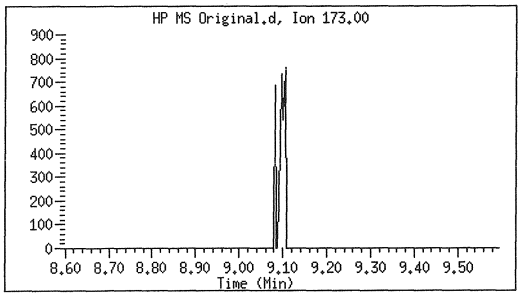
User: cek
Date: 10/25/2013 14:20

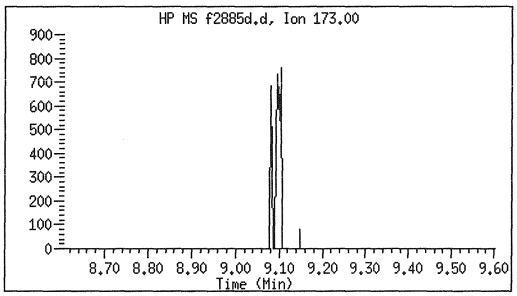



100 Bromoform ++ CAS#: 75-25-2 Reason: M1

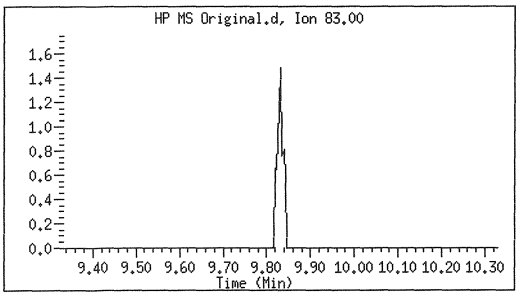



Electronic Signature Applied

User: cek
Date: 10/25/2013 14:20

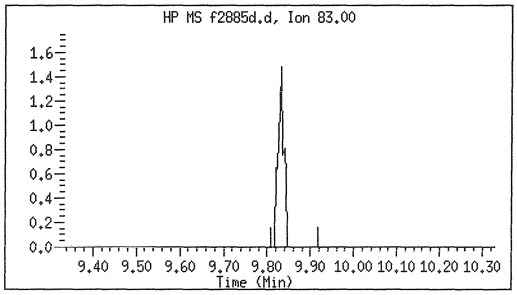



107 1,1,2,2-Tetrachloroethane++ CAS#: 79-34-5 Reason: M1



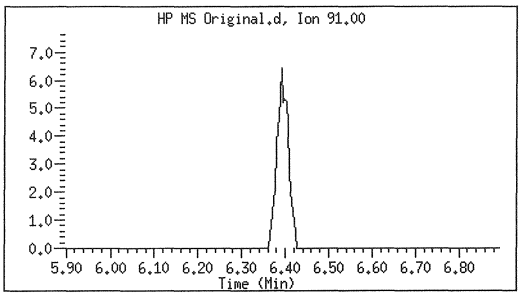

Electronic Signature Applied

User: cek
Date: 10/25/2013 14:20



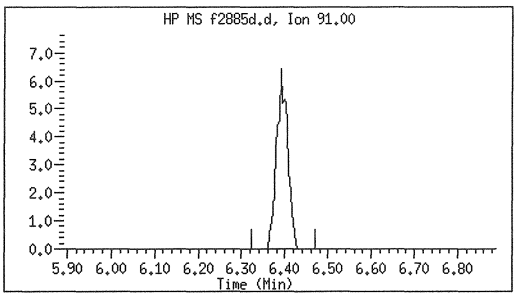
Original | Final

77 Toluene + CAS#: 108-88-3 Reason: M1

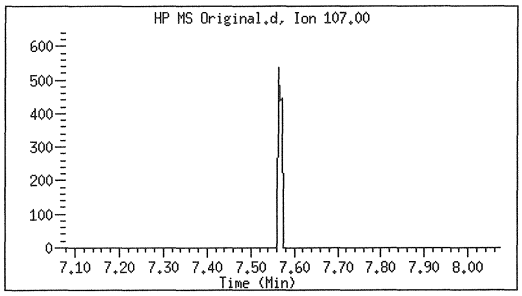



Electronic Signature Applied

User: cek
Date: 10/25/2013 14:20




88 1,2-Dibromoethane(EDB) CAS#: 106-93-4 Reason: M1

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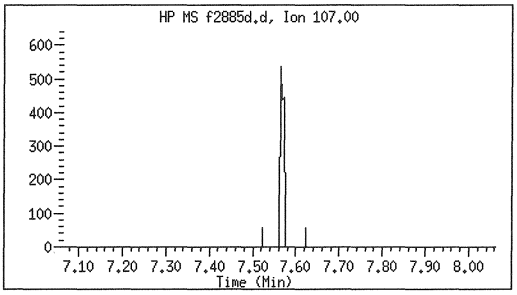
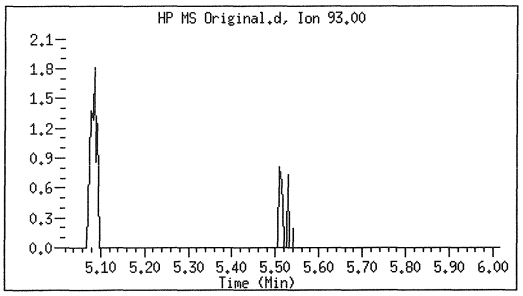
User: cek
Date: 10/25/2013 14:20




62 Dibromomethane CAS#: 74-95-3 Reason: M3

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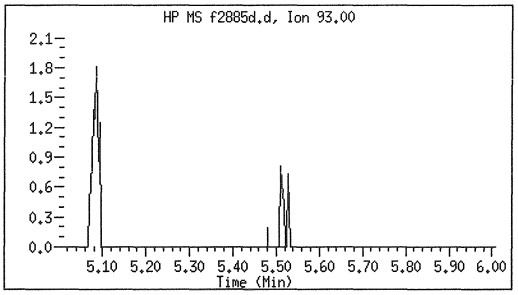
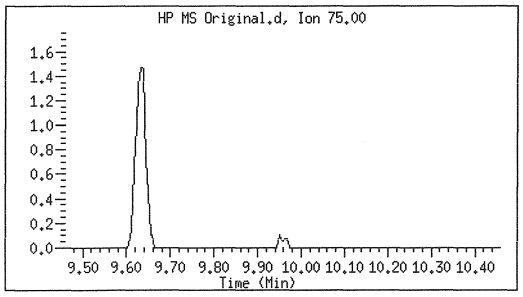
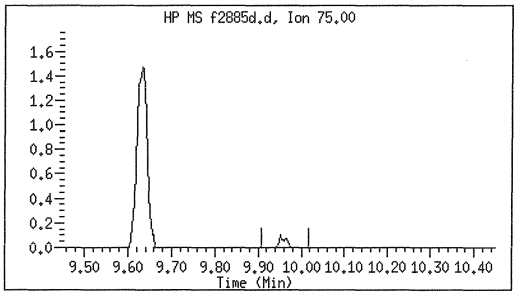



109 1,2,3-Trichloropropane CAS#: 96-18-4 Reason: M1



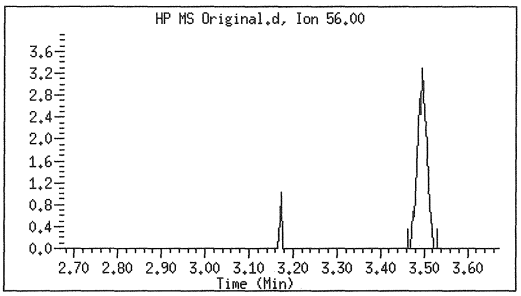

Electronic Signature Applied

User: cek
Date: 10/25/2013 14:20



Original | Final

17 Acrolein CAS#: 107-02-8 Reason: M3

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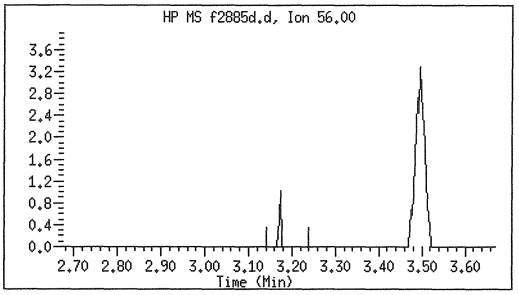
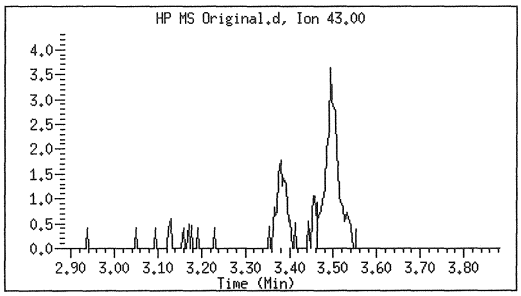
Date: 10/25/2013 14:19




19 Acetone CAS#: 67-64-1 Reason: M3

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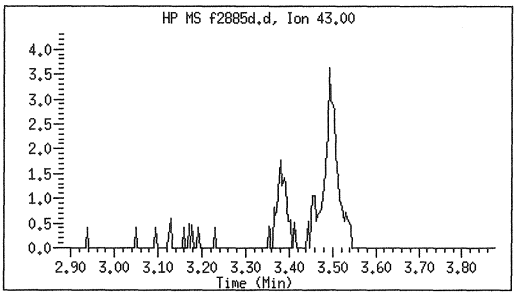
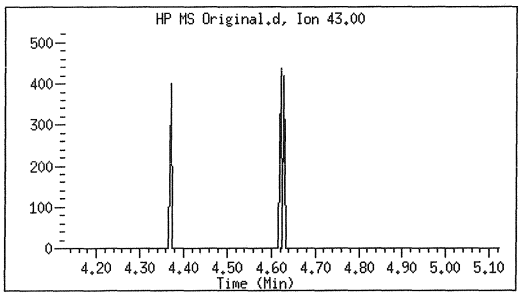
Date: 10/25/2013 14:19




45 2-Butanone CAS#: 78-93-3 Reason: M1

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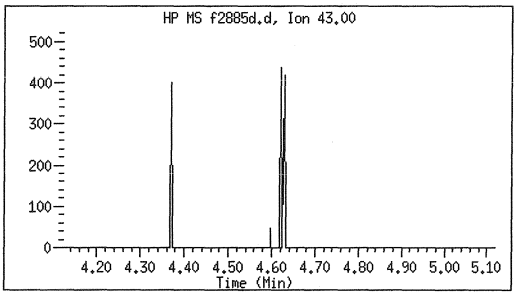
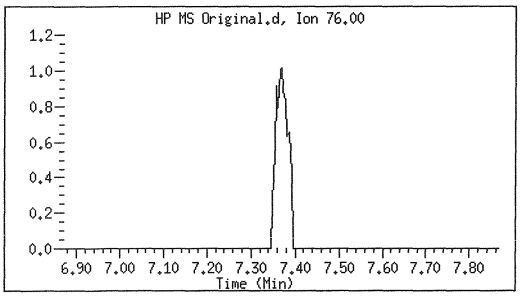
Date: 10/25/2013 14:19




86 1,3-Dichloropropane CAS#: 142-28-9 Reason: M1

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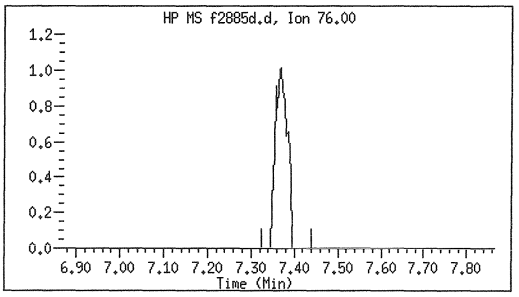
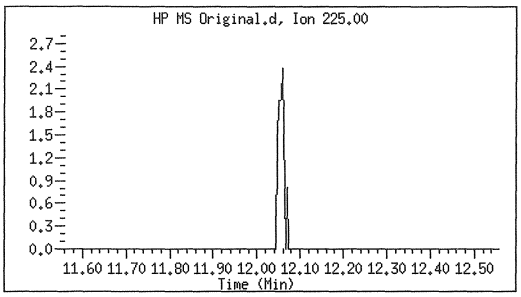
Date: 10/25/2013 14:20



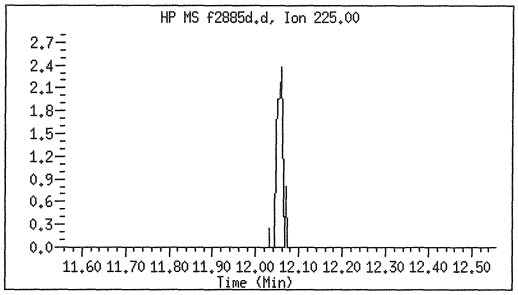
Original | Final

126 Hexachlorobutadiene CAS#: 87-68-3 Reason: M1

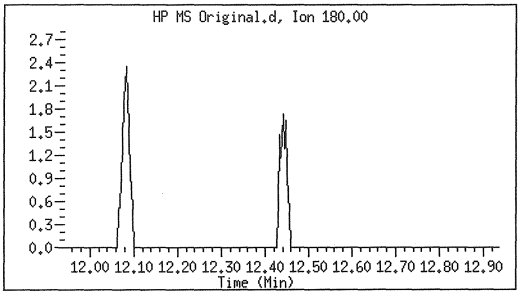



Electronic Signature Applied

User: cek
Date: 10/25/2013 14:20




129 1,2,3-Trichlorobenzene CAS#: 87-61-6 Reason: M1

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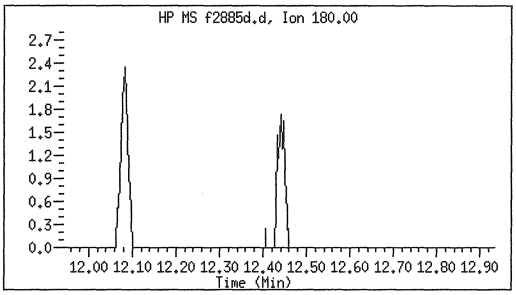
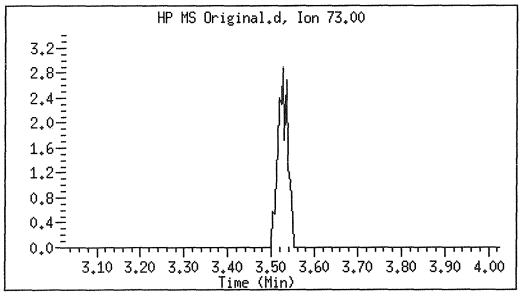



25 MTBE CAS#: 1634-04-4 Reason: M1

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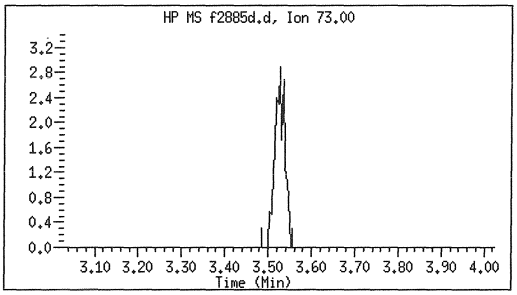
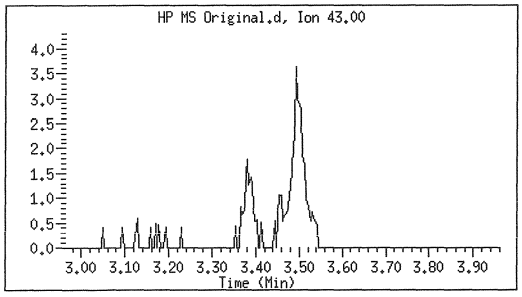



22 Methyl Acetate CAS#: 79-20-9 Reason: M1

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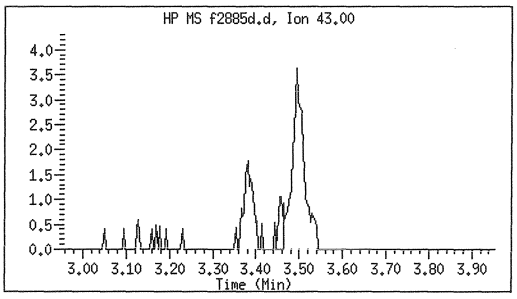
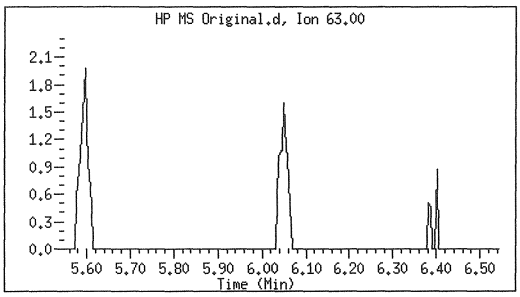
Date: 10/25/2013 14:19



Original Final

69 1-Bromo-2-chloroethane CAS#: 107-04-0 Reason: M1

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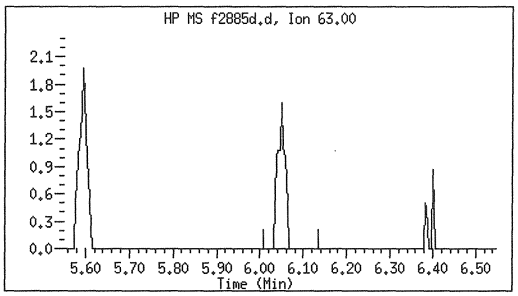



M2 - Target system integrated incorrectly
M3 - Target system integrated incorrect peak

GCAL, Inc.

Data file : /var/chem/msv7.i/2131025.s.b/f2886d.d
Lab Smp Id: 1202 Client Smp ID: V7STD005
Inj Date : 25-OCT-2013 12:46
Operator : CEK Inst ID: msv7.i
Smp Info : 1202*V7STD005
Misc Info : MSV~28849~*1*CEK
Comment :
Method : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Meth Date : 25-Oct-2013 19:39 cek Quant Type: ISTD
Cal Date : 25-OCT-2013 12:46 Cal File: f2886d.d
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * (Uf/Ws)/((100-M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 5.00000 | ng unit correction factor |
| Ws | 5.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture (not decanted) |
| Va | 100.00000 | Volume of aliquot extract added (uL) |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppb) | AMOUNTS ON-COL ( ppb) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|
| 1 Dichlorodifluoromethane | 85 | 1.730 | 1.730 | (0.163) | 9791 | 5.00000 | 5.34 | 8075 |
| 2 Chloromethane ++ | 50 | 1.910 | 1.910 | (0.376) | 8883 | 5.00000 | 5.28 | 8339 |
| 3 Vinyl Chloride + | 62 | 1.989 | 1.989 | (0.391) | 13533 | 5.00000 | 5.28 | 8375 |
| 6 Bromomethane | 94 | 2.285 | 2.285 | (0.450) | 6415 | 5.00000 | 5.30 | 8044 |
| 8 Chloroethane | 64 | 2.394 | 2.394 | (0.471) | 7151 | 5.00000 | 5.34 | 7499 |
| 9 Trichlorofluoromethane | 101 | 2.510 | 2.510 | (0.494) | 14524 | 5.00000 | 5.35 | 8246 |
| 12 1,1-Dichloroethene + | 96 | 2.915 | 2.915 | (0.574) | 9141 | 5.00000 | 5.47 | 8470 |
| 15 1,1,2Trichlotrifluoroethane | 101 | 2.937 | 2.937 | (0.578) | 9728 | 5.00000 | 5.63 | 8934 |
| 14 Carbon Disulfide | 76 | 2.945 | 2.945 | (0.580) | 32164 | 5.00000 | 5.15 | 9046 |
| 16 Methyl Iodide | 142 | 3.027 | 3.027 | (0.596) | 5847 | 5.00000 | 7.39 | 6417 |
| 17 Acrolein | 56 | 3.177 | 3.177 | (0.625) | 1181 | 25.0000 | 26.8 | 3710 |
| 18 Methylene Chloride | 49 | 3.342 | 3.342 | (0.658) | 17054 | 5.00000 | 5.57 | 8614 |
| 19 Acetone | 43 | 3.384 | 3.384 | (0.666) | 3196 | 5.00000 | 4.90 | 4263(H) |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppb) | AMOUNTS ON-COL ( ppb) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|---|
| | 13 trans-1,2-Dichloroethene | 61 | 3.451 | 3.451 | (0.679) | 12219 | 5.00000 | 4.99 | 8630 |
| | 22 Methyl Acetate | 43 | 3.459 | 3.459 | (0.681) | 3062 | 5.00000 | 6.53 | 0(M2) |
| | 23 Hexane | 57 | 3.492 | 3.492 | (0.687) | 17302 | 5.00000 | 5.51 | 8535 |
| | 25 MTBE | 73 | 3.522 | 3.522 | (0.693) | 10865 | 5.00000 | 5.04 | 7775 |
| | 31 1,1-Dichloroethane ++ | 63 | 3.886 | 3.886 | (0.765) | 12924 | 5.00000 | 5.03 | 8534 |
| | 33 Acrylonitrile | 53 | 3.931 | 3.931 | (0.774) | 3478 | 25.0000 | 23.6 | 8098 |
| | 34 Vinyl Acetate | 43 | 4.043 | 4.043 | (0.796) | 2101 | 5.00000 | 5.25 | |
| | 21 cis-1,2-Dichloroethene | 61 | 4.242 | 4.242 | (0.835) | 7163 | 5.00000 | 4.56 | 8241 |
| M | 68 Total 1,2-Dichloroethene | 61 | | | | 19382 | 10.0000 | 9.54 | 0 |
| | 35 2,2-Dichloropropane | 77 | 4.313 | 4.313 | (0.849) | 9518 | 5.00000 | 4.84 | 8437 |
| | 38 Cyclohexane | 56 | 4.384 | 4.384 | (0.863) | 8930 | 5.00000 | 8.40 | 8798 |
| | 39 Bromochloromethane | 128 | 4.377 | 4.377 | (0.861) | 2855 | 5.00000 | 5.06 | 8612 |
| | 40 Chloroform + | 83 | 4.418 | 4.418 | (0.869) | 13268 | 5.00000 | 5.23 | 8351 |
| | 41 Carbon Tetrachloride | 117 | 4.516 | 4.516 | (0.889) | 10074 | 5.00000 | 5.19 | 8037 |
| $ | 42 Dibromofluoromethane | 111 | 4.538 | 4.538 | (0.893) | 55788 | 50.0000 | 51.5 | 7654 |
| | 43 1,1,1-Trichloroethane | 97 | 4.564 | 4.564 | (0.898) | 10822 | 5.00000 | 5.04 | 7711 |
| | 45 2-Butanone | 43 | 4.628 | 4.628 | (0.911) | 966 | 5.00000 | 4.13 | |
| | 44 1,1-Dichloropropene | 75 | 4.643 | 4.643 | (0.914) | 8037 | 5.00000 | 4.57 | 8133 |
| | 48 Benzene | 78 | 4.812 | 4.812 | (0.947) | 25793 | 5.00000 | 4.69 | 8901 |
| $ | 50 1,2-Dichloroethane-d4 | 67 | 4.902 | 4.902 | (0.965) | 22519 | 50.0000 | 51.6 | 9410 |
| | 52 1,2-Dichloroethane | 62 | 4.947 | 4.947 | (0.973) | 5849 | 5.00000 | 5.35 | 1602(M3) |
| * | 54 FLUOROBENZENE | 96 | 5.082 | 5.082 | (1.000) | 218473 | 50.0000 | | 9293 |
| | 56 Methyl cyclohexane | 83 | 5.190 | 5.190 | (1.021) | 11010 | 5.00000 | 4.49 | 9204 |
| | 57 Trichloroethene | 130 | 5.194 | 5.194 | (1.022) | 8554 | 5.00000 | 4.91 | 8965 |
| | 62 Dibromomethane | 93 | 5.520 | 5.520 | (1.086) | 2339 | 5.00000 | 4.65 | 6517 |
| | 63 1,2-Dichloropropane + | 63 | 5.599 | 5.599 | (1.102) | 5138 | 5.00000 | 4.51 | 7728 |
| | 64 Bromodichloromethane | 83 | 5.625 | 5.625 | (1.107) | 7408 | 5.00000 | 4.99 | 8033 |
| | 69 1-Bromo-2-chloroethane | 63 | 6.049 | 6.049 | (1.190) | 5099 | 5.00000 | 4.96 | 6674 |
| | 72 cis-1,3-Dichloropropene | 75 | 6.158 | 6.158 | (1.212) | 6114 | 5.00000 | 8.38 | |
| $ | 74 Toluene-d8 | 98 | 6.341 | 6.341 | (0.767) | 202128 | 50.0000 | 53.1 | 9378 |
| | 77 Toluene + | 91 | 6.397 | 6.397 | (0.773) | 29130 | 5.00000 | 5.28 | 8948 |
| | 79 4-methyl-2-pentanone | 43 | 6.780 | 6.780 | (0.820) | 1804 | 5.00000 | 5.53 | (M1) |
| | 78 Tetrachloroethene | 164 | 6.802 | 6.802 | (0.822) | 6517 | 5.00000 | 5.16 | 7965 |
| | 81 trans-1,3-Dichloropropene | 75 | 6.829 | 6.829 | (1.344) | 4362 | 5.00000 | 7.98 | |
| M | 71 1-3 Dichloropropene-Total | 100 | | | | 10476 | 10.0000 | 16.4 | 0 |
| | 82 1,1,2-Trichloroethane | 97 | 7.016 | 7.016 | (0.848) | 3523 | 5.00000 | 5.31 | 7476 |
| | 85 Dibromochloromethane | 129 | 7.237 | 7.237 | (0.875) | 4374 | 5.00000 | 5.48 | 5752 |
| | 86 1,3-Dichloropropane | 76 | 7.368 | 7.368 | (0.891) | 5660 | 5.00000 | 5.36 | 6292 |
| | 88 1,2-Dibromoethane(EDB) | 107 | 7.571 | 7.571 | (0.915) | 2523 | 5.00000 | 4.59 | 6711 |
| | 80 2-Hexanone | 43 | 7.882 | 7.882 | (0.953) | 461 | 5.00000 | 9.23 | 0(M1) |
| | 91 1-Chlorohexane | 91 | 8.261 | 8.261 | (0.999) | 6082 | 5.00000 | 8.40 | 4601 |
| * | 90 Chlorobenzene-d5 | 82 | 8.272 | 8.272 | (1.000) | 75033 | 50.0000 | | 6395 |
| | 92 Chlorobenzene ++ | 112 | 8.298 | 8.298 | (1.003) | 17131 | 5.00000 | 5.05 | 5653 |
| | 93 Ethylbenzene + | 106 | 8.328 | 8.328 | (1.007) | 7998 | 5.00000 | 4.46 | 8791 |
| | 95 1,1,1,2-Tetrachloroethane | 133 | 8.381 | 8.381 | (1.013) | 5776 | 5.00000 | 5.37 | 7811 |
| | 96 p,m-Xylene | 106 | 8.515 | 8.515 | (1.029) | 18662 | 10.0000 | 12.8 | 9195 |
| | 98 o-Xylene | 106 | 9.014 | 9.014 | (1.090) | 7810 | 5.00000 | 8.19 | |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppb) | AMOUNTS ON-COL ( ppb) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|
| M 120 TOTAL XYLENE | 106 | | | | 26472 | 15.0000 | 21.0 | 0 |
| 99 Styrene | 104 | 9.070 | 9.070 | (1.097) | 10709 | 5.00000 | 7.16 | 7992 |
| 100 Bromoform ++ | 173 | 9.093 | 9.093 | (1.099) | 2618 | 5.00000 | 5.35 | 6262 |
| 102 Isopropylbenzene | 105 | 9.351 | 9.351 | (1.131) | 19137 | 5.00000 | 7.23 | 8985 |
| $ 103 Bromofluorobenzene | 174 | 9.633 | 9.633 | (1.165) | 51494 | 50.0000 | 50.2 | 9433 |
| 104 Bromobenzene | 77 | 9.730 | 9.730 | (0.915) | 10280 | 5.00000 | 4.98 | 8292 |
| 106 n-Propylbenzene | 91 | 9.764 | 9.764 | (0.918) | 28165 | 5.00000 | 4.21 | 9162 |
| 107 1,1,2,2-Tetrachloroethane++ | 83 | 9.827 | 9.827 | (0.924) | 4377 | 5.00000 | 5.56 | 0(M1) |
| 108 2-Chlorotoluene | 91 | 9.902 | 9.902 | (0.931) | 15652 | 5.00000 | 4.34 | 9067 |
| 110 1,3,5-Trimethylbenzene | 105 | 9.951 | 9.951 | (0.935) | 16616 | 5.00000 | 6.61 | |
| 109 1,2,3-Trichloropropane | 75 | 9.955 | 9.955 | (0.936) | 3015 | 5.00000 | 5.00 | 8790 |
| 111 trans-1,4-Dichloro-2-Butene | 53 | 10.007 | 10.007 | (0.941) | 91 | 5.00000 | 6.60 | 0(M1) |
| 112 4-Chlorotoluene | 91 | 10.064 | 10.064 | (0.946) | 15286 | 5.00000 | 4.33 | 8791 |
| 113 tert-butylbenzene | 91 | 10.236 | 10.236 | (0.962) | 9525 | 5.00000 | 7.45 | 9409 |
| 114 1,2,4-Trimethylbenzene | 105 | 10.300 | 10.300 | (0.968) | 15805 | 5.00000 | 6.87 | |
| 115 sec-Butylbenzene | 105 | 10.394 | 10.394 | (0.977) | 25055 | 5.00000 | 7.04 | |
| 116 p-Isopropyltoluene | 119 | 10.517 | 10.517 | (0.989) | 19136 | 5.00000 | 7.53 | 9360 |
| 117 1,3-Dichlorobenzene | 146 | 10.573 | 10.573 | (0.994) | 13261 | 5.00000 | 4.80 | |
| * 118 1,4-DICHLOROBENZENE-D4 | 152 | 10.637 | 10.637 | (1.000) | 77131 | 50.0000 | | 8191 |
| 119 1,4-Dichlorobenzene | 146 | 10.648 | 10.648 | (1.001) | 13531 | 5.00000 | 4.89 | |
| 121 n-Butylbenzene | 91 | 10.866 | 10.866 | (1.021) | 21045 | 5.00000 | 7.96 | 9341 |
| 122 1,2-Dichlorobenzene | 146 | 10.993 | 10.993 | (1.033) | 11457 | 5.00000 | 4.93 | |
| 125 1,2-Dibromo-3-Chloropropane | 157 | 11.604 | 11.604 | (1.091) | 482 | 5.00000 | 3.91 | 6159 |
| 126 Hexachlorobutadiene | 225 | 12.058 | 12.058 | (1.134) | 6266 | 5.00000 | 5.10 | 9288 |
| 127 1,2,4-Trichlorobenzene | 180 | 12.080 | 12.080 | (1.136) | 6514 | 5.00000 | 4.56 | |
| 128 Napthalene | 128 | 12.313 | 12.313 | (1.158) | 7532 | 5.00000 | 6.42 | 8028 |
| 129 1,2,3-Trichlorobenzene | 180 | 12.440 | 12.440 | (1.169) | 5507 | 5.00000 | 4.57 | |

QC Flag Legend

M1- Compound response manually integrated because Target system did not integrate.
M2- Compound response manually integrated because Target system integrated incorrectly.
M3- Compound response manually integrated because Target system integrated incorrect peak.
H - Operator selected an alternate compound hit.

Data File: /var/chem/msv7.i/2131025.s.b/f2886d.d

Date : 25-OCT-2013 12:46

Client ID: V7STD005

Sample Info: 1202*V7STD005

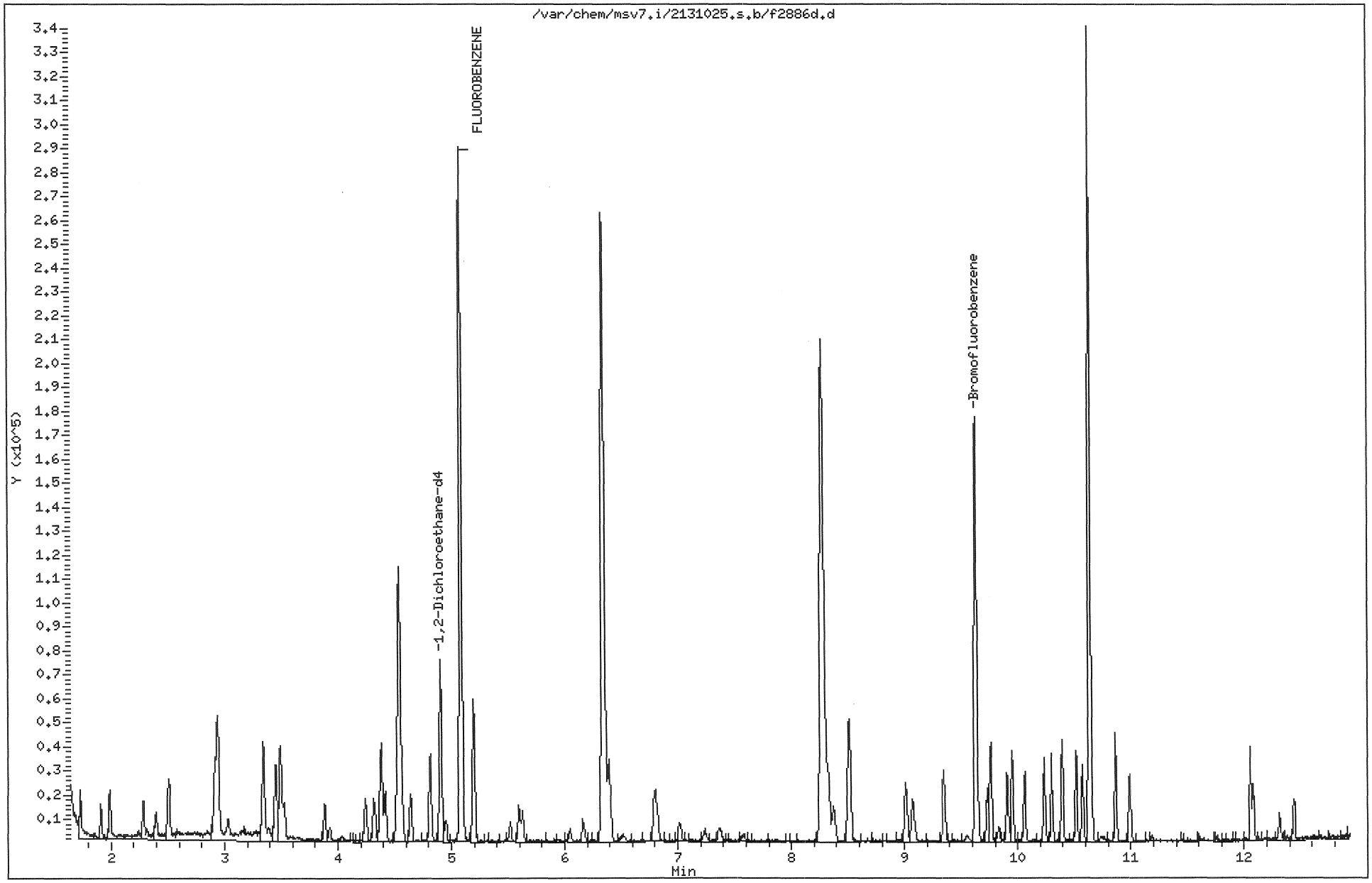
Column phase: RTX-VMS-30M

Instrument: msv7.i

Operator: CEK

Column diameter: 0.25



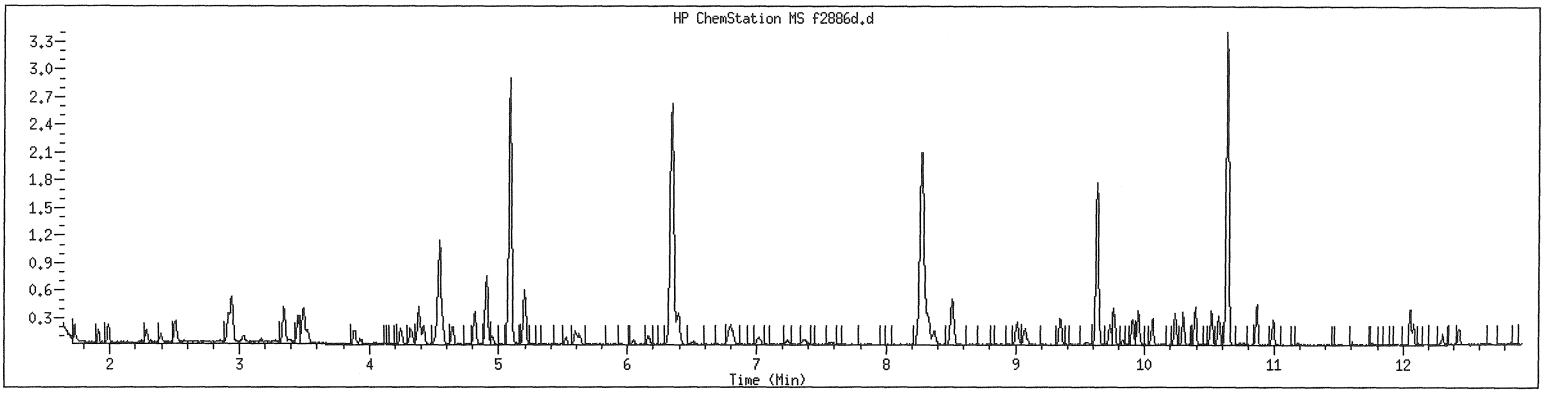



21310171291

# MANUAL INTEGRATION GRAPHIC REPORT

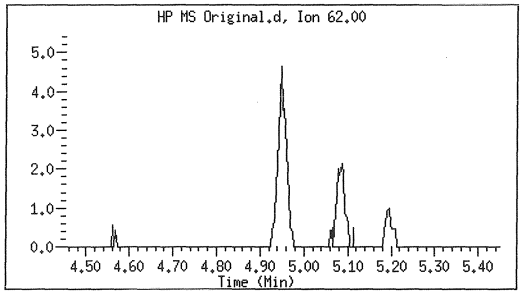
Lab ID : 1202
Injection Date: 10/25/2013 12:46
Operator : CEK
Sample Info : 1202*V7STD005
Misc Info : MSV~28849~*1*CEK
Method : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Dilution : 1.00
Matrix : SOIL
Integrator : HP RTE

SampleType : CALIB_2
Instrument : msv7.i
Compound Sublist: 8260b



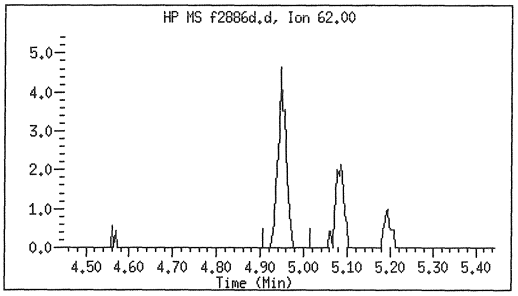

Original | Final

52 1,2-Dichloroethane CAS#: 107-06-2 Reason: M3

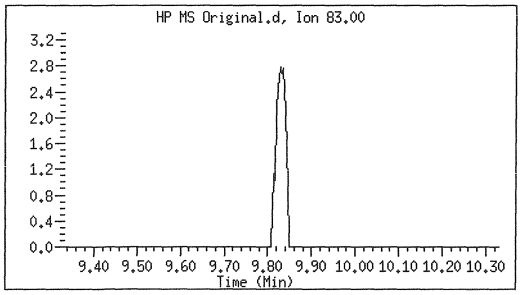



Electronic Signature Applied

User: cek
Date: 10/25/2013 14:22

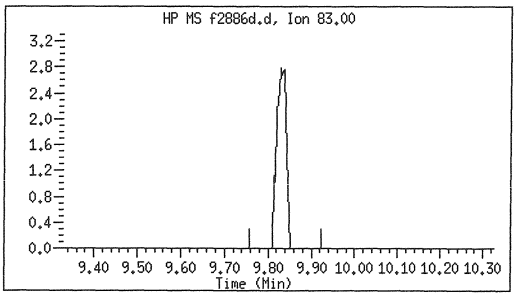



107 1,1,2,2-Tetrachloroethane++ CAS#: 79-34-5 Reason: M1



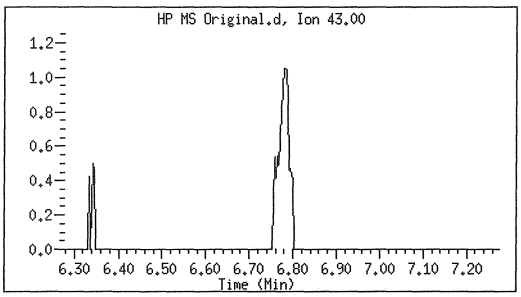

Electronic Signature Applied

User: cek
Date: 10/25/2013 14:23



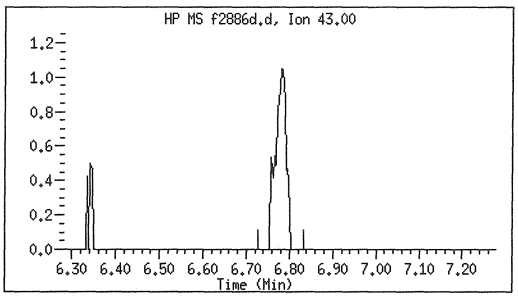
Original | Final

79 4-methyl-2-pentanone CAS#: 108-10-1 Reason: M1

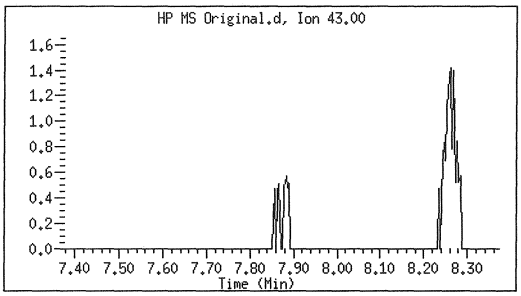



Electronic Signature Applied

User: cek
Date: 10/25/2013 14:22

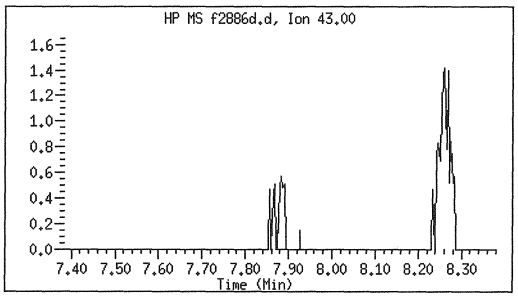



80 2-Hexanone CAS#: 591-78-6 Reason: M1

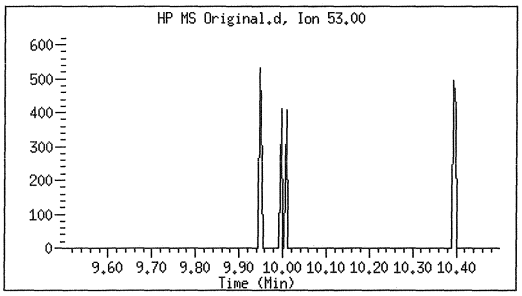



Electronic Signature Applied

User: cek
Date: 10/25/2013 14:22

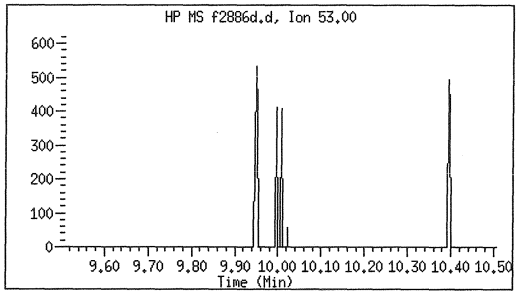



111 trans-1,4-Dichloro-2-Butene CAS#: 110-57-6 Reason: M1

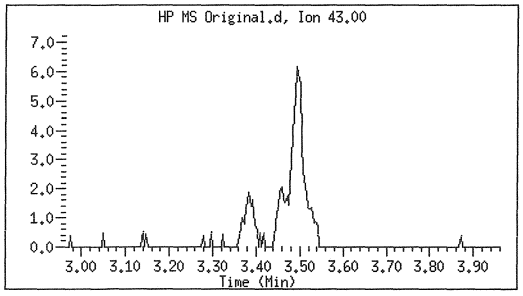



Electronic Signature Applied

User: cek
Date: 10/25/2013 14:23

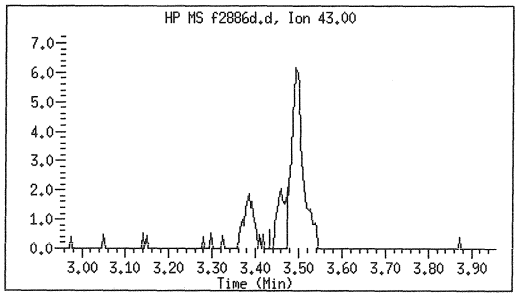



22 Methyl Acetate CAS#: 79-20-9 Reason: M3




Electronic Signature Applied

User: cek
Date: 10/25/2013 14:21



GCAL, Inc.

Data file : /var/chem/msv7.i/2131025.s.b/f2887d.d
Lab Smp Id: 1203 Client Smp ID: V7STD010
Inj Date : 25-OCT-2013 13:07
Operator : CEK Inst ID: msv7.i
Smp Info : 1203*V7STD010
Misc Info : MSV~28849~*1*CEK
Comment :
Method : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Meth Date : 25-Oct-2013 19:39 cek Quant Type: ISTD
Cal Date : 25-OCT-2013 13:07 Cal File: f2887d.d
Als bottle: 4 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * (Uf/Ws)/((100-M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 5.00000 | ng unit correction factor |
| Ws | 5.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture (not decanted) |
| Va | 100.00000 | Volume of aliquot extract added (uL) |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppb) | AMOUNTS ON-COL ( ppb) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|
| 1 Dichlorodifluoromethane | 85 | 1.727 | 1.727 | (0.162) | 19693 | 10.0000 | 10.6 | 9162 |
| 2 Chloromethane ++ | 50 | 1.910 | 1.910 | (0.376) | 16997 | 10.0000 | 10.0 | 8899 |
| 3 Vinyl Chloride + | 62 | 1.985 | 1.985 | (0.390) | 27062 | 10.0000 | 10.5 | 9185 |
| 6 Bromomethane | 94 | 2.282 | 2.282 | (0.449) | 13059 | 10.0000 | 10.7 | 8515 |
| 8 Chloroethane | 64 | 2.398 | 2.398 | (0.471) | 13957 | 10.0000 | 10.3 | 8008 |
| 9 Trichlorofluoromethane | 101 | 2.514 | 2.514 | (0.494) | 28687 | 10.0000 | 10.5 | 9173 |
| 12 1,1-Dichloroethene + | 96 | 2.915 | 2.915 | (0.573) | 17147 | 10.0000 | 10.2 | 9148 |
| 15 1,1,2Trichlotrifluoroethane | 101 | 2.934 | 2.934 | (0.577) | 18324 | 10.0000 | 10.5 | 9187 |
| 14 Carbon Disulfide | 76 | 2.945 | 2.945 | (0.579) | 64307 | 10.0000 | 10.2 | 9460 |
| 16 Methyl Iodide | 142 | 3.027 | 3.027 | (0.595) | 13170 | 10.0000 | 11.7 | 8235 |
| 17 Acrolein | 56 | 3.174 | 3.174 | (0.624) | 2478 | 50.0000 | 55.6 | 4522 |
| 18 Methylene Chloride | 49 | 3.346 | 3.346 | (0.658) | 22832 | 10.0000 | 8.84 | 8929 |
| 19 Acetone | 43 | 3.391 | 3.391 | (0.667) | 5176 | 10.0000 | 11.1 | 5688 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppb) | AMOUNTS ON-COL ( ppb) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|---|
| | 13 trans-1,2-Dichloroethene | 61 | 3.455 | 3.455 | (0.679) | 25650 | 10.0000 | 10.4 | 9062 |
| | 22 Methyl Acetate | 43 | 3.462 | 3.462 | (0.681) | 4543 | 10.0000 | 10.2 | 8625 |
| | 23 Hexane | 57 | 3.496 | 3.496 | (0.687) | 33341 | 10.0000 | 10.5 | 8936 |
| | 25 MTBE | 73 | 3.526 | 3.526 | (0.693) | 23005 | 10.0000 | 10.6 | 8605 |
| | 31 1,1-Dichloroethane ++ | 63 | 3.882 | 3.882 | (0.763) | 30082 | 10.0000 | 11.6 | 9084 |
| | 33 Acrylonitrile | 53 | 3.931 | 3.931 | (0.773) | 9510 | 50.0000 | 63.9 | 8175 |
| | 34 Vinyl Acetate | 43 | 4.032 | 4.032 | (0.793) | 4997 | 10.0000 | 12.4 | |
| | 21 cis-1,2-Dichloroethene | 61 | 4.246 | 4.246 | (0.835) | 16015 | 10.0000 | 10.1 | 9045 |
| M | 68 Total 1,2-Dichloroethene | 61 | | | | 41665 | 20.0000 | 20.5 | 0 |
| | 35 2,2-Dichloropropane | 77 | 4.321 | 4.321 | (0.850) | 20569 | 10.0000 | 10.4 | 8775 |
| | 38 Cyclohexane | 56 | 4.381 | 4.381 | (0.861) | 17981 | 10.0000 | 11.8 | 8581 |
| | 39 Bromochloromethane | 128 | 4.381 | 4.381 | (0.861) | 5958 | 10.0000 | 10.5 | 8559 |
| | 40 Chloroform + | 83 | 4.415 | 4.415 | (0.868) | 26300 | 10.0000 | 10.3 | 8817 |
| | 41 Carbon Tetrachloride | 117 | 4.516 | 4.516 | (0.888) | 20236 | 10.0000 | 10.3 | 8801 |
| $ | 42 Dibromofluoromethane | 111 | 4.538 | 4.538 | (0.892) | 55017 | 50.0000 | 50.4 | 8063 |
| | 43 1,1,1-Trichloroethane | 97 | 4.572 | 4.572 | (0.899) | 22457 | 10.0000 | 10.4 | 8912 |
| | 45 2-Butanone | 43 | 4.624 | 4.624 | (0.909) | 2408 | 10.0000 | 10.2 | |
| | 44 1,1-Dichloropropene | 75 | 4.643 | 4.643 | (0.913) | 16780 | 10.0000 | 9.45 | 8890 |
| | 48 Benzene | 78 | 4.816 | 4.816 | (0.947) | 52510 | 10.0000 | 9.47 | 9226 |
| $ | 50 1,2-Dichloroethane-d4 | 67 | 4.906 | 4.906 | (0.965) | 22435 | 50.0000 | 51.0 | 9276 |
| | 52 1,2-Dichloroethane | 62 | 4.951 | 4.951 | (0.973) | 11349 | 10.0000 | 10.3 | 8606 |
| * | 54 FLUOROBENZENE | 96 | 5.086 | 5.086 | (1.000) | 220480 | 50.0000 | | 9157 |
| | 56 Methyl cyclohexane | 83 | 5.194 | 5.194 | (1.021) | 22248 | 10.0000 | 8.99 | 9061 |
| | 57 Trichloroethene | 130 | 5.194 | 5.194 | (1.021) | 17783 | 10.0000 | 10.1 | 9085 |
| | 62 Dibromomethane | 93 | 5.520 | 5.520 | (1.085) | 5184 | 10.0000 | 10.2 | 8704 |
| | 63 1,2-Dichloropropane + | 63 | 5.595 | 5.595 | (1.100) | 11524 | 10.0000 | 10.0 | 8948 |
| | 64 Bromodichloromethane | 83 | 5.625 | 5.625 | (1.106) | 15444 | 10.0000 | 10.3 | 8967 |
| | 69 1-Bromo-2-chloroethane | 63 | 6.045 | 6.045 | (1.189) | 10425 | 10.0000 | 10.1 | 7574 |
| | 72 cis-1,3-Dichloropropene | 75 | 6.161 | 6.161 | (1.212) | 12589 | 10.0000 | 12.2 | |
| $ | 74 Toluene-d8 | 98 | 6.345 | 6.345 | (0.767) | 204393 | 50.0000 | 52.1 | 9288 |
| | 77 Toluene + | 91 | 6.394 | 6.394 | (0.773) | 58401 | 10.0000 | 10.3 | 9247 |
| | 79 4-methyl-2-pentanone | 43 | 6.791 | 6.791 | (0.821) | 3579 | 10.0000 | 10.7 | (M1) |
| | 78 Tetrachloroethene | 164 | 6.795 | 6.795 | (0.822) | 13836 | 10.0000 | 10.6 | 8491 |
| | 81 trans-1,3-Dichloropropene | 75 | 6.825 | 6.825 | (1.342) | 10187 | 10.0000 | 12.2 | |
| M | 71 1-3 Dichloropropene-Total | 100 | | | | 22776 | 20.0000 | 24.3 | 0 |
| | 82 1,1,2-Trichloroethane | 97 | 7.016 | 7.016 | (0.849) | 7868 | 10.0000 | 11.5 | 8645 |
| | 85 Dibromochloromethane | 129 | 7.245 | 7.245 | (0.876) | 9136 | 10.0000 | 11.1 | 6934 |
| | 86 1,3-Dichloropropane | 76 | 7.368 | 7.368 | (0.891) | 11477 | 10.0000 | 10.6 | 8409 |
| | 88 1,2-Dibromoethane(EDB) | 107 | 7.563 | 7.563 | (0.915) | 6137 | 10.0000 | 10.8 | 6999 |
| | 80 2-Hexanone | 43 | 7.882 | 7.882 | (0.953) | 1849 | 10.0000 | 14.0 | 4240(M1) |
| | 91 1-Chlorohexane | 91 | 8.257 | 8.257 | (0.999) | 12456 | 10.0000 | 11.7 | 5948 |
| * | 90 Chlorobenzene-d5 | 82 | 8.268 | 8.268 | (1.000) | 77314 | 50.0000 | | 7155 |
| | 92 Chlorobenzene ++ | 112 | 8.294 | 8.294 | (1.003) | 35809 | 10.0000 | 10.2 | 5837 |
| | 93 Ethylbenzene + | 106 | 8.324 | 8.324 | (1.007) | 18028 | 10.0000 | 9.76 | 9325 |
| | 95 1,1,1,2-Tetrachloroethane | 133 | 8.373 | 8.373 | (1.013) | 11891 | 10.0000 | 10.7 | 9120 |
| | 96 p,m-Xylene | 106 | 8.512 | 8.512 | (1.029) | 39558 | 20.0000 | 20.7 | 9480 |
| | 98 o-Xylene | 106 | 9.014 | 9.014 | (1.090) | 16586 | 10.0000 | 12.0 | |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppb) | AMOUNTS ON-COL ( ppb) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|
| M 120 TOTAL XYLENE | 106 | | | | 56144 | 30.0000 | 32.7 | 0 |
| 99 Styrene | 104 | 9.070 | 9.070 | (1.097) | 23465 | 10.0000 | 10.7 | 9110 |
| 100 Bromoform ++ | 173 | 9.093 | 9.093 | (1.100) | 5042 | 10.0000 | 10.0 | 8172 |
| 102 Isopropylbenzene | 105 | 9.348 | 9.348 | (1.131) | 43805 | 10.0000 | 10.9 | 9359 |
| $ 103 Bromofluorobenzene | 174 | 9.633 | 9.633 | (1.165) | 54727 | 50.0000 | 51.8 | 9413 |
| 104 Bromobenzene | 77 | 9.730 | 9.730 | (0.915) | 22347 | 10.0000 | 10.0 | 8722 |
| 106 n-Propylbenzene | 91 | 9.760 | 9.760 | (0.918) | 64617 | 10.0000 | 8.95 | 9476 |
| 107 1,1,2,2-Tetrachloroethane++ | 83 | 9.835 | 9.835 | (0.925) | 9042 | 10.0000 | 10.6 | 7587 |
| 108 2-Chlorotoluene | 91 | 9.906 | 9.906 | (0.931) | 35593 | 10.0000 | 9.15 | 9431 |
| 110 1,3,5-Trimethylbenzene | 105 | 9.951 | 9.951 | (0.935) | 39072 | 10.0000 | 10.2 | |
| 109 1,2,3-Trichloropropane | 75 | 9.959 | 9.959 | (0.936) | 7459 | 10.0000 | 11.5 | 9293 |
| 111 trans-1,4-Dichloro-2-Butene | 53 | 10.000 | 10.000 | (0.940) | 1037 | 10.0000 | 13.0 | 3624(M3) |
| 112 4-Chlorotoluene | 91 | 10.060 | 10.060 | (0.946) | 34951 | 10.0000 | 9.18 | 9508 |
| 113 tert-butylbenzene | 91 | 10.236 | 10.236 | (0.962) | 22309 | 10.0000 | 11.1 | 9554 |
| 114 1,2,4-Trimethylbenzene | 105 | 10.300 | 10.300 | (0.968) | 38829 | 10.0000 | 10.7 | |
| 115 sec-Butylbenzene | 105 | 10.394 | 10.394 | (0.977) | 60937 | 10.0000 | 11.0 | |
| 116 p-Isopropyltoluene | 119 | 10.517 | 10.517 | (0.989) | 43638 | 10.0000 | 10.8 | 9688 |
| 117 1,3-Dichlorobenzene | 146 | 10.574 | 10.574 | (0.994) | 29558 | 10.0000 | 9.91 | |
| * 118 1,4-DICHLOROBENZENE-D4 | 152 | 10.637 | 10.637 | (1.000) | 83257 | 50.0000 | | 8403 |
| 119 1,4-Dichlorobenzene | 146 | 10.648 | 10.648 | (1.001) | 29829 | 10.0000 | 10.0 | |
| 121 n-Butylbenzene | 91 | 10.866 | 10.866 | (1.021) | 45325 | 10.0000 | 11.4 | 9385 |
| 122 1,2-Dichlorobenzene | 146 | 10.990 | 10.990 | (1.033) | 24181 | 10.0000 | 9.63 | |
| 125 1,2-Dibromo-3-Chloropropane | 157 | 11.604 | 11.604 | (1.091) | 1427 | 10.0000 | 10.7 | 6131 |
| 126 Hexachlorobutadiene | 225 | 12.058 | 12.058 | (1.134) | 12860 | 10.0000 | 9.70 | 9529 |
| 127 1,2,4-Trichlorobenzene | 180 | 12.080 | 12.080 | (1.136) | 14175 | 10.0000 | 9.20 | |
| 128 Napthalene | 128 | 12.309 | 12.309 | (1.157) | 16359 | 10.0000 | 10.2 | 8578 |
| 129 1,2,3-Trichlorobenzene | 180 | 12.440 | 12.440 | (1.169) | 12504 | 10.0000 | 9.61 | |

QC Flag Legend

M1- Compound response manually integrated because Target system did not integrate.
M3- Compound response manually integrated because Target system integrated incorrect peak.

Data File: /var/chem/msv7.i/2131025.s.b/f2887d.d

Date : 25-OCT-2013 13:07

Client ID: V7STD010

Sample Info: 1203*V7STD010

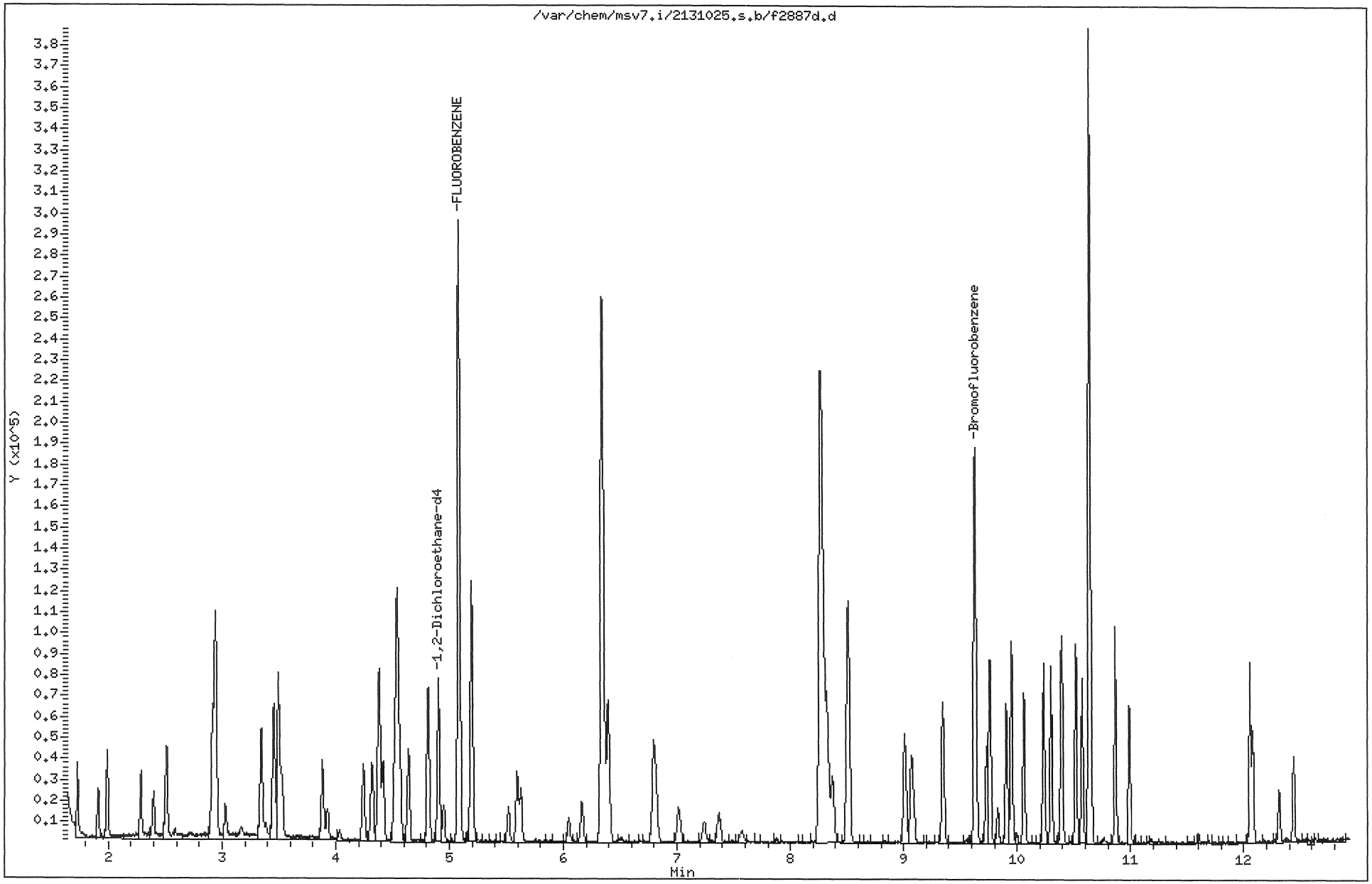
Column phase: RTX-VMS-30M

Instrument: msv7.i

Operator: CEK

Column diameter: 0.25

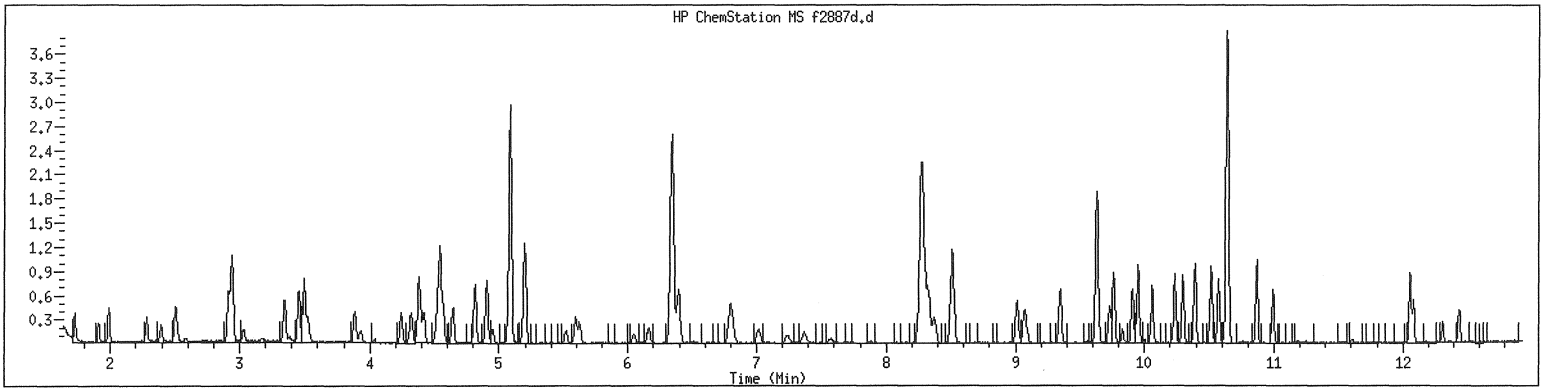





2131025 97

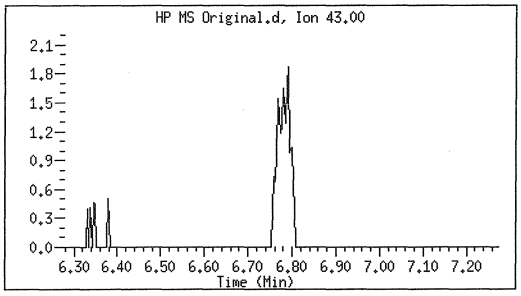
# MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 1203 SampleType : CALIB_3
Injection Date: 10/25/2013 13:07 Instrument : msv7.i
Operator : CEK
Sample Info : 1203*V7STD010
Misc Info : MSV~28849~*1*CEK
Method : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Dilution : 1.00
Matrix : SOIL
Integrator : HP RTE Compound Sublist: 8260b



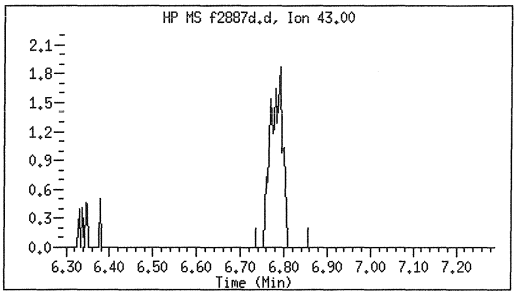

Original Final

79 4-methyl-2-pentanone CAS#: 108-10-1 Reason: M1

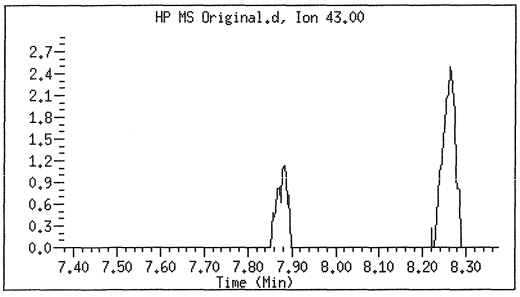



Electronic Signature Applied

User: cek
Date: 10/25/2013 14:25

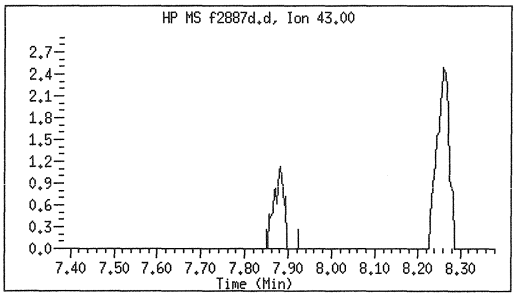



80 2-Hexanone CAS#: 591-78-6 Reason: M1



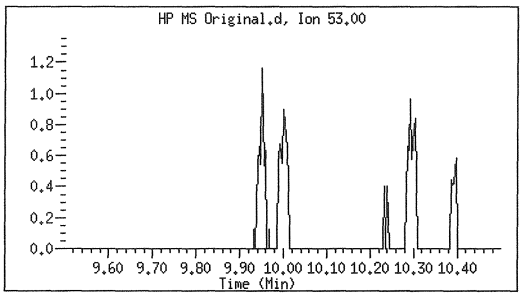

Electronic Signature Applied

User: cek
Date: 10/25/2013 14:25



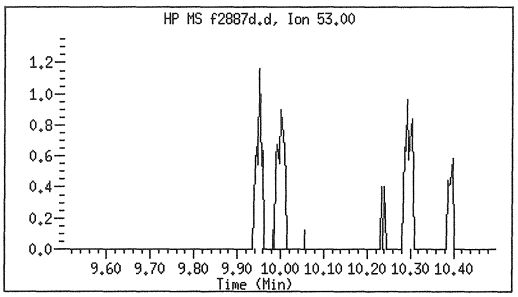
Original Final

111 trans-1,4-Dichloro-2-Butene CAS#: 110-57-6 Reason: M3




Electronic Signature Applied

User: cek
Date: 10/25/2013 14:25



GCAL, Inc.

Data file : /var/chem/msv7.i/2131025.s.b/f2888d.d
Lab Smp Id: 1204 Client Smp ID: V7STD020
Inj Date : 25-OCT-2013 13:29
Operator : CEK Inst ID: msv7.i
Smp Info : 1204*V7STD020
Misc Info : MSV~28849~*1*CEK
Comment :
Method : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Meth Date : 25-Oct-2013 19:39 cek Quant Type: ISTD
Cal Date : 25-OCT-2013 13:29 Cal File: f2888d.d
Als bottle: 5 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * (Uf/Ws)/((100-M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 5.00000 | ng unit correction factor |
| Ws | 5.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture (not decanted) |
| Va | 100.00000 | Volume of aliquot extract added (uL) |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppb) | ON-COL ( ppb) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|
| 1 Dichlorodifluoromethane | 85 | 1.727 | 1.727 | (0.162) | 39062 | 20.0000 | 21.2 | 9237 |
| 2 Chloromethane ++ | 50 | 1.911 | 1.911 | (0.376) | 34075 | 20.0000 | 20.2 | 9539 |
| 3 Vinyl Chloride + | 62 | 1.985 | 1.985 | (0.391) | 53406 | 20.0000 | 20.8 | 9428 |
| 6 Bromomethane | 94 | 2.282 | 2.282 | (0.449) | 24879 | 20.0000 | 20.5 | 9175 |
| 8 Chloroethane | 64 | 2.394 | 2.394 | (0.471) | 28377 | 20.0000 | 21.1 | 8772 |
| 9 Trichlorofluoromethane | 101 | 2.510 | 2.510 | (0.494) | 57638 | 20.0000 | 21.1 | 9161 |
| 12 1,1-Dichloroethene + | 96 | 2.915 | 2.915 | (0.574) | 34238 | 20.0000 | 20.4 | 9330 |
| 15 1,1,2Trichlotrifluoroethane | 101 | 2.934 | 2.934 | (0.577) | 36599 | 20.0000 | 21.1 | 9450 |
| 14 Carbon Disulfide | 76 | 2.941 | 2.941 | (0.579) | 129892 | 20.0000 | 20.7 | 9279 |
| 16 Methyl Iodide | 142 | 3.031 | 3.031 | (0.597) | 28865 | 20.0000 | 21.0 | 8922 |
| 17 Acrolein | 56 | 3.174 | 3.174 | (0.625) | 4616 | 100.000 | 104 | 6563 |
| 18 Methylene Chloride | 49 | 3.342 | 3.342 | (0.658) | 42260 | 20.0000 | 20.2 | 9105 |
| 19 Acetone | 43 | 3.384 | 3.384 | (0.666) | 8354 | 20.0000 | 21.2 | 6887 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppb) | AMOUNTS ON-COL ( ppb) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|---|
| | 13 trans-1,2-Dichloroethene | 61 | 3.451 | 3.451 | (0.679) | 52262 | 20.0000 | 21.2 | 9069 |
| | 22 Methyl Acetate | 43 | 3.459 | 3.459 | (0.681) | 10736 | 20.0000 | 25.8 | 8680(M2) |
| | 23 Hexane | 57 | 3.496 | 3.496 | (0.688) | 70122 | 20.0000 | 22.2 | 9142 |
| | 25 MTBE | 73 | 3.526 | 3.526 | (0.694) | 45368 | 20.0000 | 20.9 | 9096 |
| | 31 1,1-Dichloroethane ++ | 63 | 3.882 | 3.882 | (0.764) | 50473 | 20.0000 | 19.6 | 9422 |
| | 33 Acrylonitrile | 53 | 3.924 | 3.924 | (0.772) | 13640 | 100.000 | 92.0 | 8999 |
| | 34 Vinyl Acetate | 43 | 4.040 | 4.040 | (0.795) | 7545 | 20.0000 | 18.8 | |
| | 21 cis-1,2-Dichloroethene | 61 | 4.242 | 4.242 | (0.835) | 31791 | 20.0000 | 20.1 | 8967 |
| M | 68 Total 1,2-Dichloroethene | 61 | | | | 84053 | 40.0000 | 41.3 | 0 |
| | 35 2,2-Dichloropropane | 77 | 4.321 | 4.321 | (0.850) | 40660 | 20.0000 | 20.6 | 8796 |
| | 38 Cyclohexane | 56 | 4.381 | 4.381 | (0.862) | 42135 | 20.0000 | 21.1 | 9030 |
| | 39 Bromochloromethane | 128 | 4.381 | 4.381 | (0.862) | 12294 | 20.0000 | 21.7 | 9009 |
| | 40 Chloroform + | 83 | 4.415 | 4.415 | (0.869) | 52519 | 20.0000 | 20.6 | 8999 |
| | 41 Carbon Tetrachloride | 117 | 4.516 | 4.516 | (0.889) | 39686 | 20.0000 | 20.3 | 9187 |
| $ | 42 Dibromofluoromethane | 111 | 4.542 | 4.542 | (0.894) | 55774 | 50.0000 | 51.3 | 8231 |
| | 43 1,1,1-Trichloroethane | 97 | 4.565 | 4.565 | (0.898) | 44478 | 20.0000 | 20.6 | 9337 |
| | 45 2-Butanone | 43 | 4.625 | 4.625 | (0.910) | 4708 | 20.0000 | 20.0 | |
| | 44 1,1-Dichloropropene | 75 | 4.640 | 4.640 | (0.913) | 34918 | 20.0000 | 19.7 | 8936 |
| | 48 Benzene | 78 | 4.812 | 4.812 | (0.947) | 114160 | 20.0000 | 20.7 | 9137 |
| $ | 50 1,2-Dichloroethane-d4 | 67 | 4.906 | 4.906 | (0.965) | 22366 | 50.0000 | 51.0 | 9326 |
| | 52 1,2-Dichloroethane | 62 | 4.951 | 4.951 | (0.974) | 22784 | 20.0000 | 20.7 | 9138 |
| * | 54 FLUOROBENZENE | 96 | 5.082 | 5.082 | (1.000) | 219589 | 50.0000 | | 9275 |
| | 56 Methyl cyclohexane | 83 | 5.194 | 5.194 | (1.022) | 50082 | 20.0000 | 20.3 | 9086 |
| | 57 Trichloroethene | 130 | 5.194 | 5.194 | (1.022) | 36163 | 20.0000 | 20.6 | 9144 |
| | 62 Dibromomethane | 93 | 5.513 | 5.513 | (1.085) | 10561 | 20.0000 | 20.9 | 8977 |
| | 63 1,2-Dichloropropane + | 63 | 5.592 | 5.592 | (1.100) | 23026 | 20.0000 | 20.1 | 9040 |
| | 64 Bromodichloromethane | 83 | 5.622 | 5.622 | (1.106) | 30615 | 20.0000 | 20.5 | 9134 |
| | 69 1-Bromo-2-chloroethane | 63 | 6.045 | 6.045 | (1.190) | 20947 | 20.0000 | 20.3 | 8576 |
| | 72 cis-1,3-Dichloropropene | 75 | 6.161 | 6.161 | (1.212) | 25866 | 20.0000 | 20.1 | |
| $ | 74 Toluene-d8 | 98 | 6.338 | 6.338 | (0.766) | 206723 | 50.0000 | 49.9 | 9269 |
| | 77 Toluene + | 91 | 6.394 | 6.394 | (0.773) | 120246 | 20.0000 | 20.0 | 9328 |
| | 79 4-methyl-2-pentanone | 43 | 6.772 | 6.772 | (0.819) | 6660 | 20.0000 | 18.8 | |
| | 78 Tetrachloroethene | 164 | 6.795 | 6.795 | (0.821) | 28331 | 20.0000 | 20.6 | 8376 |
| | 81 trans-1,3-Dichloropropene | 75 | 6.825 | 6.825 | (1.343) | 21336 | 20.0000 | 20.3 | |
| M | 71 1-3 Dichloropropene-Total | 100 | | | | 47202 | 40.0000 | 40.4 | 0 |
| | 82 1,1,2-Trichloroethane | 97 | 7.012 | 7.012 | (0.848) | 15140 | 20.0000 | 21.0 | 8695 |
| | 85 Dibromochloromethane | 129 | 7.237 | 7.237 | (0.875) | 17714 | 20.0000 | 20.4 | 8664 |
| | 86 1,3-Dichloropropane | 76 | 7.369 | 7.369 | (0.891) | 22694 | 20.0000 | 19.8 | 8535 |
| | 88 1,2-Dibromoethane(EDB) | 107 | 7.575 | 7.575 | (0.916) | 12275 | 20.0000 | 20.5 | 7705 |
| | 80 2-Hexanone | 43 | 7.875 | 7.875 | (0.952) | 4573 | 20.0000 | 22.5 | 4283(M3) |
| | 91 1-Chlorohexane | 91 | 8.261 | 8.261 | (0.999) | 28545 | 20.0000 | 19.5 | 6929 |
| * | 90 Chlorobenzene-d5 | 82 | 8.272 | 8.272 | (1.000) | 81622 | 50.0000 | | 8044 |
| | 92 Chlorobenzene ++ | 112 | 8.298 | 8.298 | (1.003) | 74769 | 20.0000 | 20.2 | 8435 |
| | 93 Ethylbenzene + | 106 | 8.328 | 8.328 | (1.007) | 41072 | 20.0000 | 21.1 | 9150 |
| | 95 1,1,1,2-Tetrachloroethane | 133 | 8.373 | 8.373 | (1.012) | 24190 | 20.0000 | 20.7 | 9303 |
| | 96 p,m-Xylene | 106 | 8.512 | 8.512 | (1.029) | 94946 | 40.0000 | 40.4 | 9453 |
| | 98 o-Xylene | 106 | 9.014 | 9.014 | (1.090) | 35060 | 20.0000 | 19.3 | |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppb) | AMOUNTS ON-COL ( ppb) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|
| M 120 TOTAL XYLENE | 106 | | | | 130006 | 60.0000 | 59.7 | 0 |
| 99 Styrene | 104 | 9.070 | 9.070 | (1.097) | 56487 | 20.0000 | 19.2 | 9250 |
| 100 Bromoform ++ | 173 | 9.093 | 9.093 | (1.099) | 10669 | 20.0000 | 20.0 | 8966 |
| 102 Isopropylbenzene | 105 | 9.348 | 9.348 | (1.130) | 105296 | 20.0000 | 19.6 | 9611 |
| $ 103 Bromofluorobenzene | 174 | 9.629 | 9.629 | (1.164) | 56332 | 50.0000 | 50.5 | 9418 |
| 104 Bromobenzene | 77 | 9.730 | 9.730 | (0.915) | 44012 | 20.0000 | 19.3 | 9070 |
| 106 n-Propylbenzene | 91 | 9.760 | 9.760 | (0.918) | 144683 | 20.0000 | 19.6 | 9554 |
| 107 1,1,2,2-Tetrachloroethane++ | 83 | 9.831 | 9.831 | (0.924) | 16901 | 20.0000 | 19.5 | 8936 |
| 108 2-Chlorotoluene | 91 | 9.906 | 9.906 | (0.931) | 77306 | 20.0000 | 19.4 | 9418 |
| 110 1,3,5-Trimethylbenzene | 105 | 9.951 | 9.951 | (0.935) | 96568 | 20.0000 | 19.6 | |
| 109 1,2,3-Trichloropropane | 75 | 9.959 | 9.959 | (0.936) | 13280 | 20.0000 | 20.0 | 9215 |
| 111 trans-1,4-Dichloro-2-Butene | 53 | 10.004 | 10.004 | (0.940) | 2546 | 20.0000 | 23.0 | 8255 |
| 112 4-Chlorotoluene | 91 | 10.060 | 10.060 | (0.946) | 79582 | 20.0000 | 20.5 | 9344 |
| 113 tert-butylbenzene | 91 | 10.236 | 10.236 | (0.962) | 50982 | 20.0000 | 19.5 | 9420 |
| 114 1,2,4-Trimethylbenzene | 105 | 10.300 | 10.300 | (0.968) | 93120 | 20.0000 | 19.7 | |
| 115 sec-Butylbenzene | 105 | 10.394 | 10.394 | (0.977) | 140286 | 20.0000 | 20.1 | |
| 116 p-Isopropyltoluene | 119 | 10.517 | 10.517 | (0.989) | 104959 | 20.0000 | 19.4 | 9613 |
| 117 1,3-Dichlorobenzene | 146 | 10.574 | 10.574 | (0.994) | 62600 | 20.0000 | 20.5 | |
| * 118 1,4-DICHLOROBENZENE-D4 | 152 | 10.637 | 10.637 | (1.000) | 85075 | 50.0000 | | 8987 |
| 119 1,4-Dichlorobenzene | 146 | 10.652 | 10.652 | (1.001) | 60246 | 20.0000 | 19.8 | |
| 121 n-Butylbenzene | 91 | 10.866 | 10.866 | (1.021) | 101761 | 20.0000 | 19.6 | 9503 |
| 122 1,2-Dichlorobenzene | 146 | 10.993 | 10.993 | (1.033) | 50657 | 20.0000 | 19.8 | |
| 125 1,2-Dibromo-3-Chloropropane | 157 | 11.608 | 11.608 | (1.091) | 2687 | 20.0000 | 19.7 | 7330 |
| 126 Hexachlorobutadiene | 225 | 12.058 | 12.058 | (1.134) | 26861 | 20.0000 | 19.8 | 9445 |
| 127 1,2,4-Trichlorobenzene | 180 | 12.081 | 12.081 | (1.136) | 28202 | 20.0000 | 17.9 | |
| 128 Napthalene | 128 | 12.313 | 12.313 | (1.158) | 34877 | 20.0000 | 18.2 | 9283 |
| 129 1,2,3-Trichlorobenzene | 180 | 12.440 | 12.440 | (1.169) | 24299 | 20.0000 | 18.3 | |

QC Flag Legend

M2- Compound response manually integrated because Target system integrated incorrectly.
M3- Compound response manually integrated because Target system integrated incorrect peak.

Data File: /var/chem/msv7.i/2131025.s.b/f2888d.d
Date : 25-OCT-2013 13:29
Client ID: V7STD020
Sample Info: 1204*V7STD020

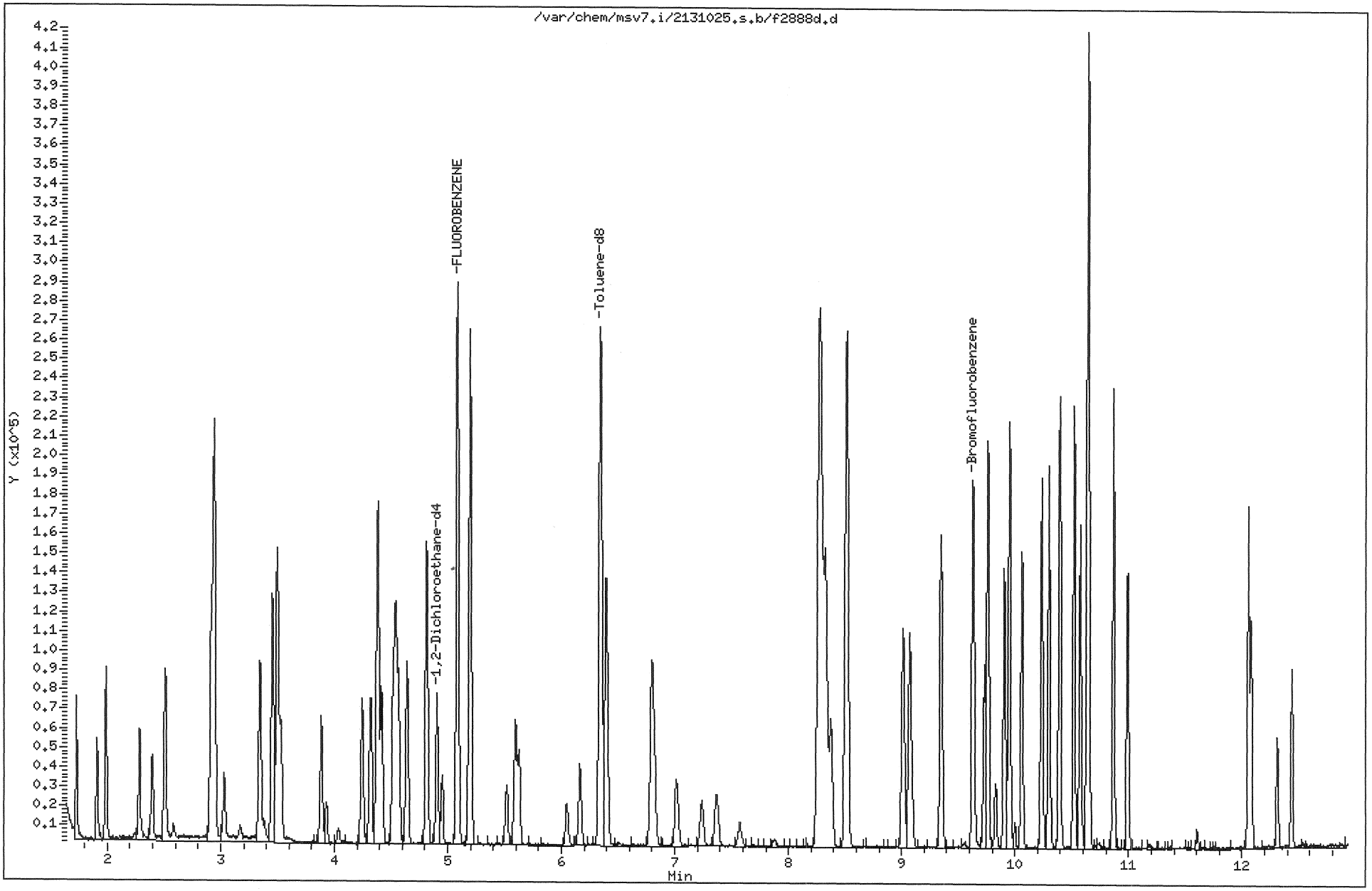
Column phase: RTX-VMS-30M

Instrument: msv7.i

Operator: CEK
Column diameter: 0.25

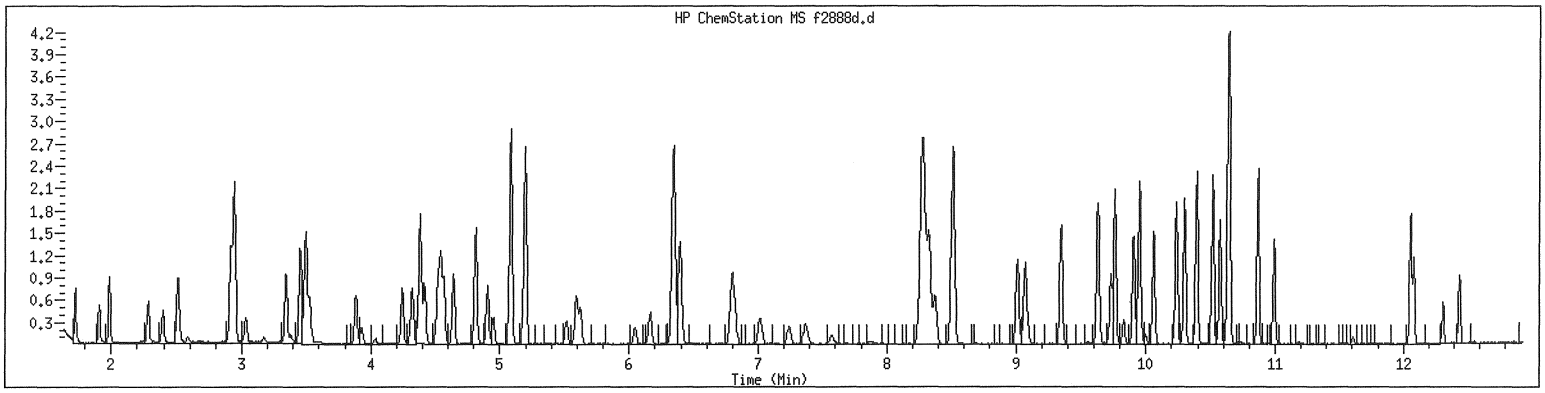


2131017 12 103



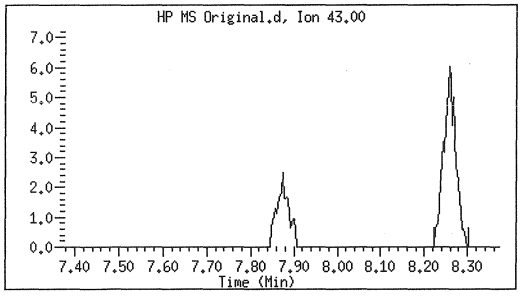
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1204 | SampleType | : CALIB_4 |
| Injection Date | : 10/25/2013 13:29 | Instrument | : msv7.i |
| Operator | : CEK | | |
| Sample Info | : 1204*V7STD020 | | |
| Misc Info | : MSV~28849~*1*CEK | | |
| Method | : /var/chem/msv7.i/2131025.s.b/8260DODs7.m | | |
| Dilution | : 1.00 | | |
| Matrix | : SOIL | | |
| Integrator | : HP RTE | Compound Sublist | : 8260b |



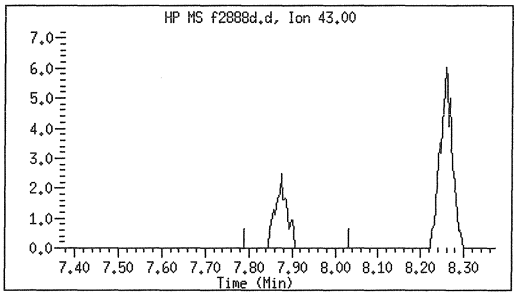

Original Final

80 2-Hexanone CAS#: 591-78-6 Reason: M3

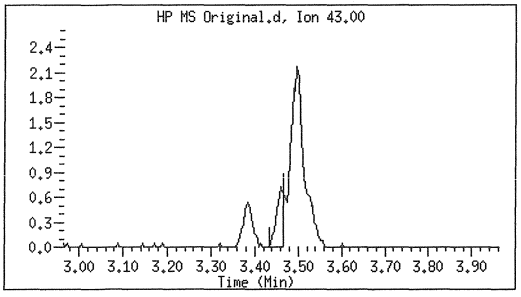



Electronic Signature Applied

User: cek
Date: 10/25/2013 14:26




22 Methyl Acetate CAS#: 79-20-9 Reason: M3




Electronic Signature Applied

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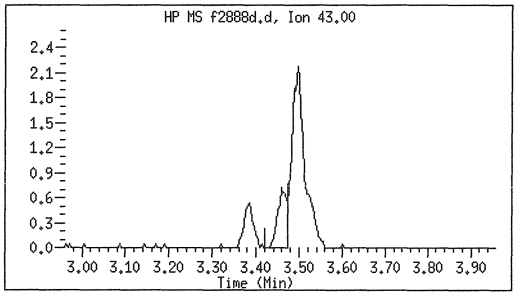
Date: 10/25/2013 14:25



GCAL, Inc.

Data file : /var/chem/msv7.i/2131025.s.b/f2889d.d
Lab Smp Id: 1205 Client Smp ID: V7STD050
Inj Date : 25-OCT-2013 13:51
Operator : CEK Inst ID: msv7.i
Smp Info : 1205*V7STD050
Misc Info : MSV~28849~*1*CEK
Comment :
Method : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Meth Date : 25-Oct-2013 19:39 cek Quant Type: ISTD
Cal Date : 25-OCT-2013 13:51 Cal File: f2889d.d
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * (Uf/Ws)/((100-M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 5.00000 | ng unit correction factor |
| Ws | 5.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture (not decanted) |
| Va | 100.00000 | Volume of aliquot extract added (uL) |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppb) | ON-COL ( ppb) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|
| 1 Dichlorodifluoromethane | 85 | 1.727 | 1.727 | (0.162) | 93516 | 50.0000 | 46.0 | 9402 |
| 2 Chloromethane ++ | 50 | 1.911 | 1.911 | (0.376) | 88529 | 50.0000 | 47.5 | 9774 |
| 3 Vinyl Chloride + | 62 | 1.985 | 1.985 | (0.391) | 136243 | 50.0000 | 48.0 | 9426 |
| 6 Bromomethane | 94 | 2.282 | 2.282 | (0.449) | 63273 | 50.0000 | 47.1 | 9374 |
| 8 Chloroethane | 64 | 2.394 | 2.394 | (0.471) | 71613 | 50.0000 | 48.2 | 9004 |
| 9 Trichlorofluoromethane | 101 | 2.510 | 2.510 | (0.494) | 143740 | 50.0000 | 47.7 | 9302 |
| 12 1,1-Dichloroethene + | 96 | 2.911 | 2.911 | (0.573) | 87584 | 50.0000 | 47.3 | 9178 |
| 15 1,1,2Trichlotrifluoroethane | 101 | 2.938 | 2.938 | (0.578) | 92362 | 50.0000 | 48.2 | 9028 |
| 14 Carbon Disulfide | 76 | 2.941 | 2.941 | (0.579) | 325870 | 50.0000 | 47.1 | 9486 |
| 16 Methyl Iodide | 142 | 3.031 | 3.031 | (0.597) | 84198 | 50.0000 | 49.1 | 9487 |
| 17 Acrolein | 56 | 3.174 | 3.174 | (0.625) | 12398 | 250.000 | 253 | 8200 |
| 18 Methylene Chloride | 49 | 3.342 | 3.342 | (0.658) | 104994 | 50.0000 | 51.0 | 9159 |
| 19 Acetone | 43 | 3.384 | 3.384 | (0.666) | 19352 | 50.0000 | 50.2 | 7969 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppb) | AMOUNTS ON-COL ( ppb) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|---|
| | 13 trans-1,2-Dichloroethene | 61 | 3.451 | 3.451 | (0.679) | 132377 | 50.0000 | 48.7 | 8983 |
| | 22 Methyl Acetate | 43 | 3.462 | 3.462 | (0.681) | 22111 | 50.0000 | 49.3 | 8826(M2) |
| | 23 Hexane | 57 | 3.496 | 3.496 | (0.688) | 165274 | 50.0000 | 47.5 | 9037 |
| | 25 MTBE | 73 | 3.526 | 3.526 | (0.694) | 114183 | 50.0000 | 47.7 | 9168 |
| | 31 1,1-Dichloroethane ++ | 63 | 3.882 | 3.882 | (0.764) | 132071 | 50.0000 | 46.4 | 9457 |
| | 33 Acrylonitrile | 53 | 3.927 | 3.927 | (0.773) | 38634 | 250.000 | 236 | 9330 |
| | 34 Vinyl Acetate | 43 | 4.036 | 4.036 | (0.794) | 19604 | 50.0000 | 44.2 | |
| | 21 cis-1,2-Dichloroethene | 61 | 4.242 | 4.242 | (0.835) | 86199 | 50.0000 | 49.4 | 9338 |
| M | 68 Total 1,2-Dichloroethene | 61 | | | | 218576 | 100.000 | 98.2 | 0 |
| | 35 2,2-Dichloropropane | 77 | 4.317 | 4.317 | (0.850) | 106583 | 50.0000 | 48.8 | 8996 |
| | 38 Cyclohexane | 56 | 4.377 | 4.377 | (0.861) | 118382 | 50.0000 | 46.1 | 9282 |
| | 39 Bromochloromethane | 128 | 4.381 | 4.381 | (0.862) | 31759 | 50.0000 | 50.7 | 8994 |
| | 40 Chloroform + | 83 | 4.418 | 4.418 | (0.869) | 133723 | 50.0000 | 47.5 | 9104 |
| | 41 Carbon Tetrachloride | 117 | 4.520 | 4.520 | (0.889) | 104001 | 50.0000 | 48.3 | 9107 |
| $ | 42 Dibromofluoromethane | 111 | 4.538 | 4.538 | (0.893) | 59152 | 50.0000 | 49.3 | 9361 |
| | 43 1,1,1-Trichloroethane | 97 | 4.565 | 4.565 | (0.898) | 115922 | 50.0000 | 48.6 | 9453 |
| | 45 2-Butanone | 43 | 4.625 | 4.625 | (0.910) | 12996 | 50.0000 | 50.0 | |
| | 44 1,1-Dichloropropene | 75 | 4.643 | 4.643 | (0.914) | 97490 | 50.0000 | 50.0 | 8796 |
| | 48 Benzene | 78 | 4.812 | 4.812 | (0.947) | 302728 | 50.0000 | 49.7 | 9300 |
| $ | 50 1,2-Dichloroethane-d4 | 67 | 4.906 | 4.906 | (0.965) | 23207 | 50.0000 | 48.0 | 9167 |
| | 52 1,2-Dichloroethane | 62 | 4.951 | 4.951 | (0.974) | 59685 | 50.0000 | 49.2 | 9419 |
| * | 54 FLUOROBENZENE | 96 | 5.082 | 5.082 | (1.000) | 242316 | 50.0000 | | 9369 |
| | 56 Methyl cyclohexane | 83 | 5.194 | 5.194 | (1.022) | 140667 | 50.0000 | 51.7 | 9202 |
| | 57 Trichloroethene | 130 | 5.194 | 5.194 | (1.022) | 93741 | 50.0000 | 48.5 | 9278 |
| | 62 Dibromomethane | 93 | 5.517 | 5.517 | (1.086) | 26711 | 50.0000 | 47.9 | 9337 |
| | 63 1,2-Dichloropropane + | 63 | 5.595 | 5.595 | (1.101) | 61790 | 50.0000 | 48.9 | 8967 |
| | 64 Bromodichloromethane | 83 | 5.625 | 5.625 | (1.107) | 79063 | 50.0000 | 48.0 | 9260 |
| | 69 1-Bromo-2-chloroethane | 63 | 6.045 | 6.045 | (1.190) | 55146 | 50.0000 | 48.4 | 9224 |
| | 72 cis-1,3-Dichloropropene | 75 | 6.161 | 6.161 | (1.212) | 73540 | 50.0000 | 44.4 | |
| $ | 74 Toluene-d8 | 98 | 6.341 | 6.341 | (0.767) | 229120 | 50.0000 | 46.5 | 9325 |
| | 77 Toluene + | 91 | 6.394 | 6.394 | (0.773) | 325316 | 50.0000 | 45.5 | 9180 |
| | 79 4-methyl-2-pentanone | 43 | 6.776 | 6.776 | (0.819) | 17425 | 50.0000 | 41.3 | |
| | 78 Tetrachloroethene | 164 | 6.799 | 6.799 | (0.822) | 71727 | 50.0000 | 43.9 | 8645 |
| | 81 trans-1,3-Dichloropropene | 75 | 6.825 | 6.825 | (1.343) | 60797 | 50.0000 | 44.7 | |
| M | 71 1-3 Dichloropropene-Total | 100 | | | | 134337 | 100.000 | 89.2 | 0 |
| | 82 1,1,2-Trichloroethane | 97 | 7.016 | 7.016 | (0.848) | 40764 | 50.0000 | 47.4 | 9117 |
| | 85 Dibromochloromethane | 129 | 7.237 | 7.237 | (0.875) | 47977 | 50.0000 | 46.4 | 8970 |
| | 86 1,3-Dichloropropane | 76 | 7.372 | 7.372 | (0.891) | 60790 | 50.0000 | 44.5 | 8909 |
| | 88 1,2-Dibromoethane(EDB) | 107 | 7.571 | 7.571 | (0.915) | 33189 | 50.0000 | 46.6 | 8703 |
| | 80 2-Hexanone | 43 | 7.875 | 7.875 | (0.952) | 13792 | 50.0000 | 45.4 | 8343 |
| | 91 1-Chlorohexane | 91 | 8.261 | 8.261 | (0.999) | 91348 | 50.0000 | 44.0 | 8853 |
| * | 90 Chlorobenzene-d5 | 82 | 8.272 | 8.272 | (1.000) | 97078 | 50.0000 | | 9300 |
| | 92 Chlorobenzene ++ | 112 | 8.294 | 8.294 | (1.003) | 209639 | 50.0000 | 47.7 | 8505 |
| | 93 Ethylbenzene + | 106 | 8.328 | 8.328 | (1.007) | 120181 | 50.0000 | 51.8 | 9020 |
| | 95 1,1,1,2-Tetrachloroethane | 133 | 8.377 | 8.377 | (1.013) | 63904 | 50.0000 | 46.0 | 9502 |
| | 96 p,m-Xylene | 106 | 8.512 | 8.512 | (1.029) | 287940 | 100.000 | 94.9 | 9398 |
| | 98 o-Xylene | 106 | 9.014 | 9.014 | (1.090) | 113022 | 50.0000 | 44.4 | |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppb) | AMOUNTS ON-COL ( ppb) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|
| M 120 TOTAL XYLENE | 106 | | | | 400962 | 150.000 | 139 | 0 |
| 99 Styrene | 104 | 9.070 | 9.070 | (1.097) | 186515 | 50.0000 | 46.0 | 9289 |
| 100 Bromoform ++ | 173 | 9.093 | 9.093 | (1.099) | 29178 | 50.0000 | 46.1 | 8708 |
| 102 Isopropylbenzene | 105 | 9.348 | 9.348 | (1.130) | 340324 | 50.0000 | 45.9 | 9485 |
| $ 103 Bromofluorobenzene | 174 | 9.633 | 9.633 | (1.165) | 64610 | 50.0000 | 48.7 | 9479 |
| 104 Bromobenzene | 77 | 9.730 | 9.730 | (0.915) | 124135 | 50.0000 | 48.6 | 8991 |
| 106 n-Propylbenzene | 91 | 9.760 | 9.760 | (0.918) | 446556 | 50.0000 | 53.9 | 9561 |
| 107 1,1,2,2-Tetrachloroethane++ | 83 | 9.831 | 9.831 | (0.924) | 46455 | 50.0000 | 47.6 | 9320 |
| 108 2-Chlorotoluene | 91 | 9.906 | 9.906 | (0.931) | 233656 | 50.0000 | 52.3 | 9475 |
| 110 1,3,5-Trimethylbenzene | 105 | 9.948 | 9.948 | (0.935) | 307830 | 50.0000 | 49.0 | |
| 109 1,2,3-Trichloropropane | 75 | 9.955 | 9.955 | (0.936) | 36037 | 50.0000 | 48.2 | 8578 |
| 111 trans-1,4-Dichloro-2-Butene | 53 | 10.000 | 10.000 | (0.940) | 7153 | 50.0000 | 48.6 | 9047 |
| 112 4-Chlorotoluene | 91 | 10.060 | 10.060 | (0.946) | 230894 | 50.0000 | 52.9 | 9347 |
| 113 tert-butylbenzene | 91 | 10.236 | 10.236 | (0.962) | 162806 | 50.0000 | 47.4 | 9440 |
| 114 1,2,4-Trimethylbenzene | 105 | 10.300 | 10.300 | (0.968) | 294378 | 50.0000 | 48.5 | |
| 115 sec-Butylbenzene | 105 | 10.390 | 10.390 | (0.977) | 431336 | 50.0000 | 48.2 | |
| 116 p-Isopropyltoluene | 119 | 10.517 | 10.517 | (0.989) | 341426 | 50.0000 | 47.5 | 9576 |
| 117 1,3-Dichlorobenzene | 146 | 10.574 | 10.574 | (0.994) | 172390 | 50.0000 | 50.4 | |
| * 118 1,4-DICHLOROBENZENE-D4 | 152 | 10.637 | 10.637 | (1.000) | 95557 | 50.0000 | | 9318 |
| 119 1,4-Dichlorobenzene | 146 | 10.649 | 10.649 | (1.001) | 163405 | 50.0000 | 47.7 | |
| 121 n-Butylbenzene | 91 | 10.866 | 10.866 | (1.021) | 320495 | 50.0000 | 46.9 | 9577 |
| 122 1,2-Dichlorobenzene | 146 | 10.993 | 10.993 | (1.033) | 141439 | 50.0000 | 49.1 | |
| 125 1,2-Dibromo-3-Chloropropane | 157 | 11.608 | 11.608 | (1.091) | 7852 | 50.0000 | 51.4 | 8240 |
| 126 Hexachlorobutadiene | 225 | 12.058 | 12.058 | (1.134) | 74171 | 50.0000 | 48.8 | 9591 |
| 127 1,2,4-Trichlorobenzene | 180 | 12.081 | 12.081 | (1.136) | 86264 | 50.0000 | 48.8 | |
| 128 Napthalene | 128 | 12.313 | 12.313 | (1.158) | 108552 | 50.0000 | 45.7 | 9479 |
| 129 1,2,3-Trichlorobenzene | 180 | 12.440 | 12.440 | (1.169) | 74250 | 50.0000 | 49.7 | |

QC Flag Legend

M2- Compound response manually integrated because
Target system integrated incorrectly.

Data File: /var/chem/msv7.i/2131025.s.b/f2889d.d

Date : 25-OCT-2013 13:51

Client ID: V7STD050

Sample Info: 1205*V7STD050

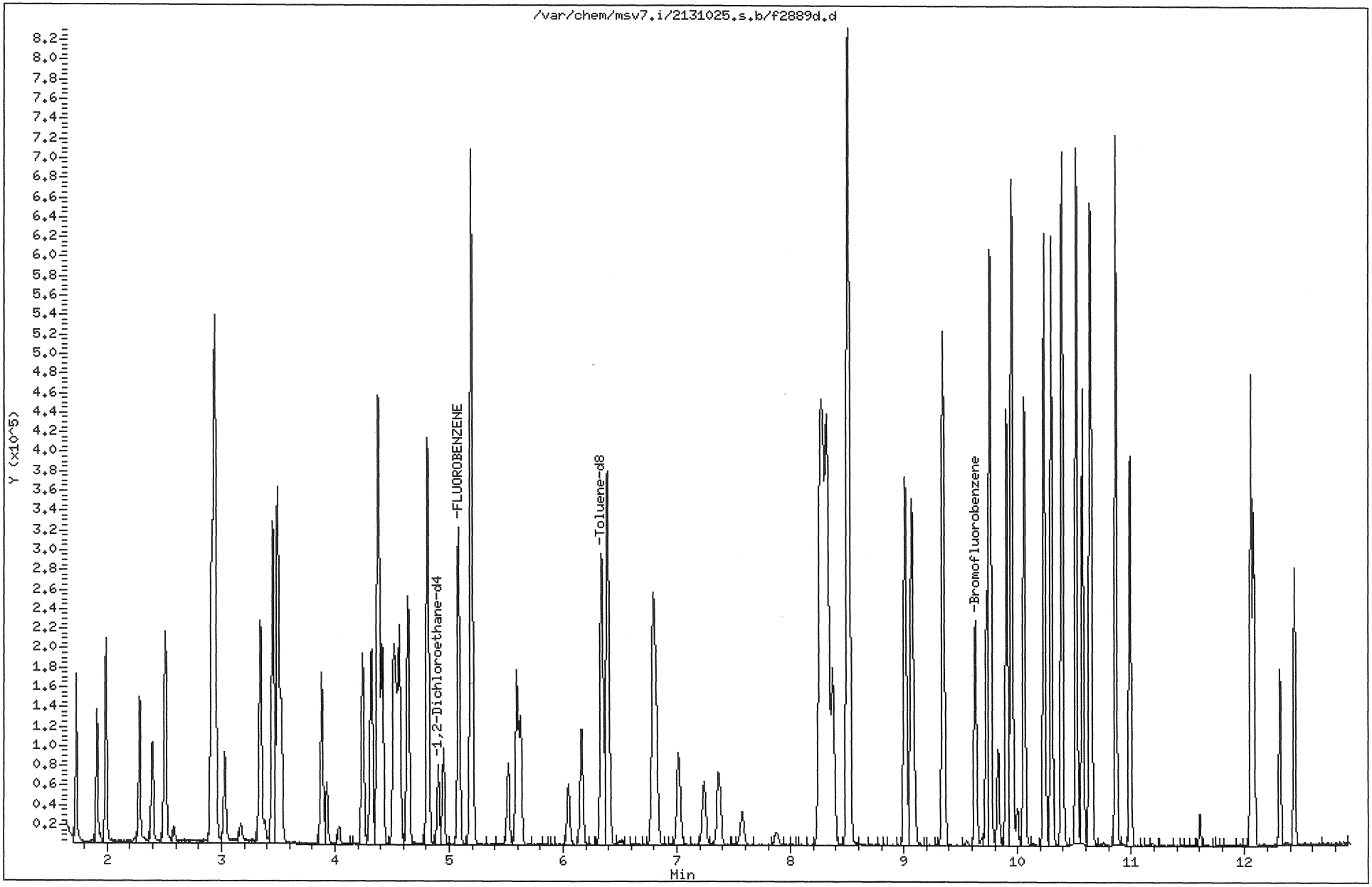
Column phase: RTX-VMS-30M

Instrument: msv7.i

Operator: CEK

Column diameter: 0.25

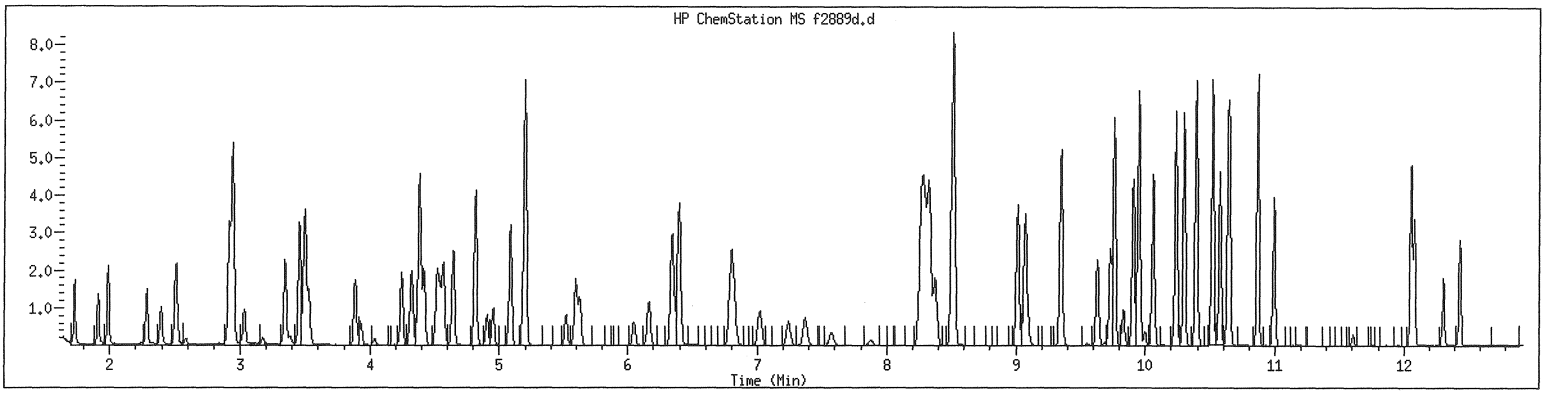





21310712 108

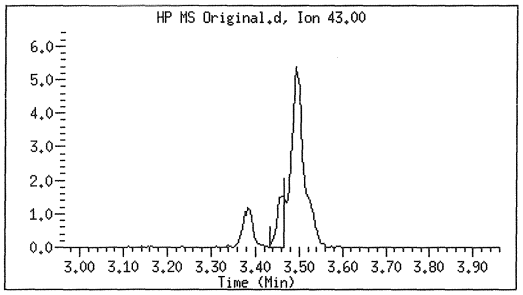
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1205 | SampleType | : CALIB_5 |
| Injection Date | : 10/25/2013 13:51 | Instrument | : msv7.i |
| Operator | : CEK | | |
| Sample Info | : 1205*V7STD050 | | |
| Misc Info | : MSV~28849~*1*CEK | | |
| Method | : /var/chem/msv7.i/2131025.s.b/8260DODs7.m | | |
| Dilution | : 1.00 | | |
| Matrix | : SOIL | | |
| Integrator | : HP RTE | Compound Sublist | : 8260b |



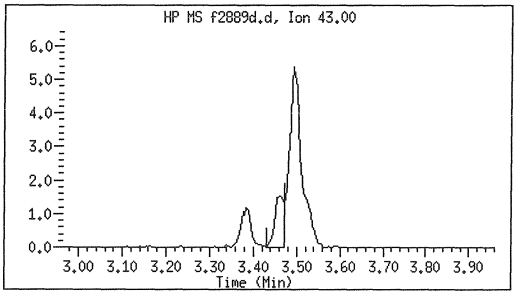

Original Final

22 Methyl Acetate CAS#: 79-20-9 Reason: M3




Electronic Signature Applied

User: cek
Date: 10/25/2013 14:26



GCAL, Inc.

Data file : /var/chem/msv7.i/2131025.s.b/f2890d.d
Lab Smp Id: 1206 Client Smp ID: V7STD100
Inj Date : 25-OCT-2013 14:13
Operator : CEK Inst ID: msv7.i
Smp Info : 1206*V7STD100
Misc Info : MSV~28849~*1*CEK
Comment :
Method : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Meth Date : 25-Oct-2013 19:39 cek Quant Type: ISTD
Cal Date : 25-OCT-2013 14:13 Cal File: f2890d.d
Als bottle: 7 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * (Uf/Ws)/((100-M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 5.00000 | ng unit correction factor |
| Ws | 5.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture (not decanted) |
| Va | 100.00000 | Volume of aliquot extract added (uL) |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppb) | AMOUNTS ON-COL ( ppb) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|
| 1 Dichlorodifluoromethane | 85 | 1.727 | 1.727 | (0.162) | 175605 | 100.000 | 83.3 | 9347 |
| 2 Chloromethane ++ | 50 | 1.911 | 1.911 | (0.376) | 176823 | 100.000 | 91.4 | 9762 |
| 3 Vinyl Chloride + | 62 | 1.989 | 1.989 | (0.391) | 263558 | 100.000 | 89.4 | 9474 |
| 6 Bromomethane | 94 | 2.285 | 2.285 | (0.449) | 121866 | 100.000 | 87.5 | 9242 |
| 8 Chloroethane | 64 | 2.394 | 2.394 | (0.471) | 134389 | 100.000 | 87.2 | 9152 |
| 9 Trichlorofluoromethane | 101 | 2.510 | 2.510 | (0.494) | 265635 | 100.000 | 85.0 | 9314 |
| 12 1,1-Dichloroethene + | 96 | 2.915 | 2.915 | (0.573) | 170620 | 100.000 | 88.8 | 9301 |
| 15 1,1,2Trichlotrifluoroethane | 101 | 2.938 | 2.938 | (0.578) | 170686 | 100.000 | 85.8 | 9060 |
| 14 Carbon Disulfide | 76 | 2.945 | 2.945 | (0.579) | 642515 | 100.000 | 89.4 | 9217 |
| 16 Methyl Iodide | 142 | 3.031 | 3.031 | (0.596) | 161910 | 100.000 | 87.7 | 9456 |
| 17 Acrolein | 56 | 3.170 | 3.170 | (0.623) | 23779 | 500.000 | 468 | 9103 |
| 18 Methylene Chloride | 49 | 3.342 | 3.342 | (0.657) | 202907 | 100.000 | 98.9 | 9136 |
| 19 Acetone | 43 | 3.384 | 3.384 | (0.665) | 35996 | 100.000 | 94.2 | 8930 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppb) | AMOUNTS ON-COL ( ppb) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|---|
| | 13 trans-1,2-Dichloroethene | 61 | 3.455 | 3.455 | (0.679) | 258197 | 100.000 | 91.6 | 9057 |
| | 22 Methyl Acetate | 43 | 3.462 | 3.462 | (0.681) | 41986 | 100.000 | 91.2 | 8814 |
| | 23 Hexane | 57 | 3.496 | 3.496 | (0.687) | 267934 | 100.000 | 74.2 | 9133 |
| | 25 MTBE | 73 | 3.526 | 3.526 | (0.693) | 202867 | 100.000 | 81.7 | 9052 |
| | 31 1,1-Dichloroethane ++ | 63 | 3.882 | 3.882 | (0.763) | 260896 | 100.000 | 88.3 | 9466 |
| | 33 Acrylonitrile | 53 | 3.927 | 3.927 | (0.772) | 81006 | 500.000 | 477 | 9308 |
| | 34 Vinyl Acetate | 43 | 4.040 | 4.040 | (0.794) | 43637 | 100.000 | 94.7 | |
| | 21 cis-1,2-Dichloroethene | 61 | 4.242 | 4.242 | (0.834) | 178159 | 100.000 | 98.5 | 9218 |
| M | 68 Total 1,2-Dichloroethene | 61 | | | | 436356 | 200.000 | 190 | 0 |
| | 35 2,2-Dichloropropane | 77 | 4.321 | 4.321 | (0.850) | 210008 | 100.000 | 92.8 | 8957 |
| | 38 Cyclohexane | 56 | 4.381 | 4.381 | (0.861) | 246160 | 100.000 | 87.5 | 9115 |
| | 39 Bromochloromethane | 128 | 4.381 | 4.381 | (0.861) | 64399 | 100.000 | 99.1 | 9036 |
| | 40 Chloroform + | 83 | 4.415 | 4.415 | (0.868) | 268007 | 100.000 | 91.8 | 9162 |
| | 41 Carbon Tetrachloride | 117 | 4.520 | 4.520 | (0.889) | 200966 | 100.000 | 89.9 | 8952 |
| $ | 42 Dibromofluoromethane | 111 | 4.542 | 4.542 | (0.893) | 59884 | 50.0000 | 48.1 | 8606 |
| | 43 1,1,1-Trichloroethane | 97 | 4.565 | 4.565 | (0.898) | 232599 | 100.000 | 94.1 | 9529 |
| | 45 2-Butanone | 43 | 4.625 | 4.625 | (0.909) | 26745 | 100.000 | 99.3 | |
| | 44 1,1-Dichloropropene | 75 | 4.643 | 4.643 | (0.913) | 210351 | 100.000 | 104 | 8939 |
| | 48 Benzene | 78 | 4.812 | 4.812 | (0.946) | 636994 | 100.000 | 101 | 9186 |
| $ | 50 1,2-Dichloroethane-d4 | 67 | 4.902 | 4.902 | (0.964) | 23180 | 50.0000 | 46.2 | 9422 |
| | 52 1,2-Dichloroethane | 62 | 4.951 | 4.951 | (0.973) | 120942 | 100.000 | 96.1 | 9585 |
| * | 54 FLUOROBENZENE | 96 | 5.086 | 5.086 | (1.000) | 251386 | 50.0000 | | 9237 |
| | 56 Methyl cyclohexane | 83 | 5.198 | 5.198 | (1.022) | 285286 | 100.000 | 101 | 9028 |
| | 57 Trichloroethene | 130 | 5.198 | 5.198 | (1.022) | 193540 | 100.000 | 96.5 | 9097 |
| | 62 Dibromomethane | 93 | 5.517 | 5.517 | (1.085) | 56534 | 100.000 | 97.7 | 9455 |
| | 63 1,2-Dichloropropane + | 63 | 5.592 | 5.592 | (1.099) | 128709 | 100.000 | 98.1 | 8924 |
| | 64 Bromodichloromethane | 83 | 5.625 | 5.625 | (1.106) | 163766 | 100.000 | 95.9 | 9264 |
| | 69 1-Bromo-2-chloroethane | 63 | 6.045 | 6.045 | (1.189) | 115328 | 100.000 | 97.6 | 9333 |
| | 72 cis-1,3-Dichloropropene | 75 | 6.165 | 6.165 | (1.212) | 165432 | 100.000 | 90.8 | |
| $ | 74 Toluene-d8 | 98 | 6.341 | 6.341 | (0.767) | 243825 | 50.0000 | 48.1 | 9455 |
| | 77 Toluene + | 91 | 6.394 | 6.394 | (0.773) | 694499 | 100.000 | 94.5 | 9272 |
| | 79 4-methyl-2-pentanone | 43 | 6.784 | 6.784 | (0.820) | 41476 | 100.000 | 95.5 | |
| | 78 Tetrachloroethene | 164 | 6.799 | 6.799 | (0.822) | 150607 | 100.000 | 89.6 | 8672 |
| | 81 trans-1,3-Dichloropropene | 75 | 6.825 | 6.825 | (1.342) | 136507 | 100.000 | 91.2 | |
| M | 71 1-3 Dichloropropene-Total | 100 | | | | 301939 | 200.000 | 182 | 0 |
| | 82 1,1,2-Trichloroethane | 97 | 7.012 | 7.012 | (0.848) | 84304 | 100.000 | 95.4 | 9243 |
| | 85 Dibromochloromethane | 129 | 7.241 | 7.241 | (0.875) | 102130 | 100.000 | 96.1 | 9000 |
| | 86 1,3-Dichloropropane | 76 | 7.369 | 7.369 | (0.891) | 138921 | 100.000 | 98.8 | 8900 |
| | 88 1,2-Dibromoethane(EDB) | 107 | 7.575 | 7.575 | (0.916) | 71071 | 100.000 | 97.1 | 9005 |
| | 80 2-Hexanone | 43 | 7.875 | 7.875 | (0.952) | 30551 | 100.000 | 88.9 | 8739 |
| | 91 1-Chlorohexane | 91 | 8.261 | 8.261 | (0.999) | 211699 | 100.000 | 92.7 | 8991 |
| * | 90 Chlorobenzene-d5 | 82 | 8.272 | 8.272 | (1.000) | 99904 | 50.0000 | | 8234 |
| | 92 Chlorobenzene ++ | 112 | 8.294 | 8.294 | (1.003) | 434384 | 100.000 | 96.1 | 8551 |
| | 93 Ethylbenzene + | 106 | 8.328 | 8.328 | (1.007) | 253229 | 100.000 | 106 | 9113 |
| | 95 1,1,1,2-Tetrachloroethane | 133 | 8.377 | 8.377 | (1.013) | 129951 | 100.000 | 90.8 | 9398 |
| | 96 p,m-Xylene | 106 | 8.512 | 8.512 | (1.029) | 618052 | 200.000 | 192 | 9432 |
| | 98 o-Xylene | 106 | 9.014 | 9.014 | (1.090) | 258807 | 100.000 | 93.1 | |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppb) | AMOUNTS ON-COL ( ppb) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|
| M 120 TOTAL XYLENE | 106 | | | | 876859 | 300.000 | 285 | 0 |
| 99 Styrene | 104 | 9.070 | 9.070 | (1.097) | 422709 | 100.000 | 96.4 | 9240 |
| 100 Bromoform ++ | 173 | 9.093 | 9.093 | (1.099) | 62885 | 100.000 | 96.5 | 8728 |
| 102 Isopropylbenzene | 105 | 9.348 | 9.348 | (1.130) | 759740 | 100.000 | 94.7 | 9430 |
| $ 103 Bromofluorobenzene | 174 | 9.633 | 9.633 | (1.165) | 68525 | 50.0000 | 50.2 | 9372 |
| 104 Bromobenzene | 77 | 9.730 | 9.730 | (0.915) | 264324 | 100.000 | 97.0 | 9042 |
| 106 n-Propylbenzene | 91 | 9.760 | 9.760 | (0.918) | 958618 | 100.000 | 108 | 9521 |
| 107 1,1,2,2-Tetrachloroethane++ | 83 | 9.831 | 9.831 | (0.924) | 97592 | 100.000 | 93.8 | 9125 |
| 108 2-Chlorotoluene | 91 | 9.906 | 9.906 | (0.931) | 503280 | 100.000 | 106 | 9396 |
| 110 1,3,5-Trimethylbenzene | 105 | 9.948 | 9.948 | (0.935) | 652615 | 100.000 | 93.8 | |
| 109 1,2,3-Trichloropropane | 75 | 9.959 | 9.959 | (0.936) | 72852 | 100.000 | 91.4 | 9009 |
| 111 trans-1,4-Dichloro-2-Butene | 53 | 9.996 | 9.996 | (0.940) | 14913 | 100.000 | 89.4 | 9140 |
| 112 4-Chlorotoluene | 91 | 10.060 | 10.060 | (0.946) | 509662 | 100.000 | 109 | 9369 |
| 113 tert-butylbenzene | 91 | 10.236 | 10.236 | (0.962) | 353389 | 100.000 | 92.0 | 9420 |
| 114 1,2,4-Trimethylbenzene | 105 | 10.300 | 10.300 | (0.968) | 626527 | 100.000 | 92.8 | |
| 115 sec-Butylbenzene | 105 | 10.394 | 10.394 | (0.977) | 909923 | 100.000 | 91.6 | |
| 116 p-Isopropyltoluene | 119 | 10.517 | 10.517 | (0.989) | 741694 | 100.000 | 92.0 | 9521 |
| 117 1,3-Dichlorobenzene | 146 | 10.574 | 10.574 | (0.994) | 354303 | 100.000 | 97.1 | |
| * 118 1,4-DICHLOROBENZENE-D4 | 152 | 10.637 | 10.637 | (1.000) | 101893 | 50.0000 | | 7975 |
| 119 1,4-Dichlorobenzene | 146 | 10.649 | 10.649 | (1.001) | 343945 | 100.000 | 94.2 | |
| 121 n-Butylbenzene | 91 | 10.866 | 10.866 | (1.021) | 695172 | 100.000 | 90.7 | 9507 |
| 122 1,2-Dichlorobenzene | 146 | 10.993 | 10.993 | (1.033) | 300584 | 100.000 | 97.9 | |
| 125 1,2-Dibromo-3-Chloropropane | 157 | 11.604 | 11.604 | (1.091) | 15711 | 100.000 | 96.4 | 8772 |
| 126 Hexachlorobutadiene | 225 | 12.058 | 12.058 | (1.134) | 154687 | 100.000 | 95.4 | 9569 |
| 127 1,2,4-Trichlorobenzene | 180 | 12.081 | 12.081 | (1.136) | 193302 | 100.000 | 102 | |
| 128 Napthalene | 128 | 12.313 | 12.313 | (1.158) | 267308 | 100.000 | 102 | 9373 |
| 129 1,2,3-Trichlorobenzene | 180 | 12.440 | 12.440 | (1.169) | 165574 | 100.000 | 104 | |

Data File: /var/chem/msv7.i/2131025.s.b/f2890d.d

Date : 25-OCT-2013 14:13

Client ID: V7STD100

Sample Info: 1206*V7STD100

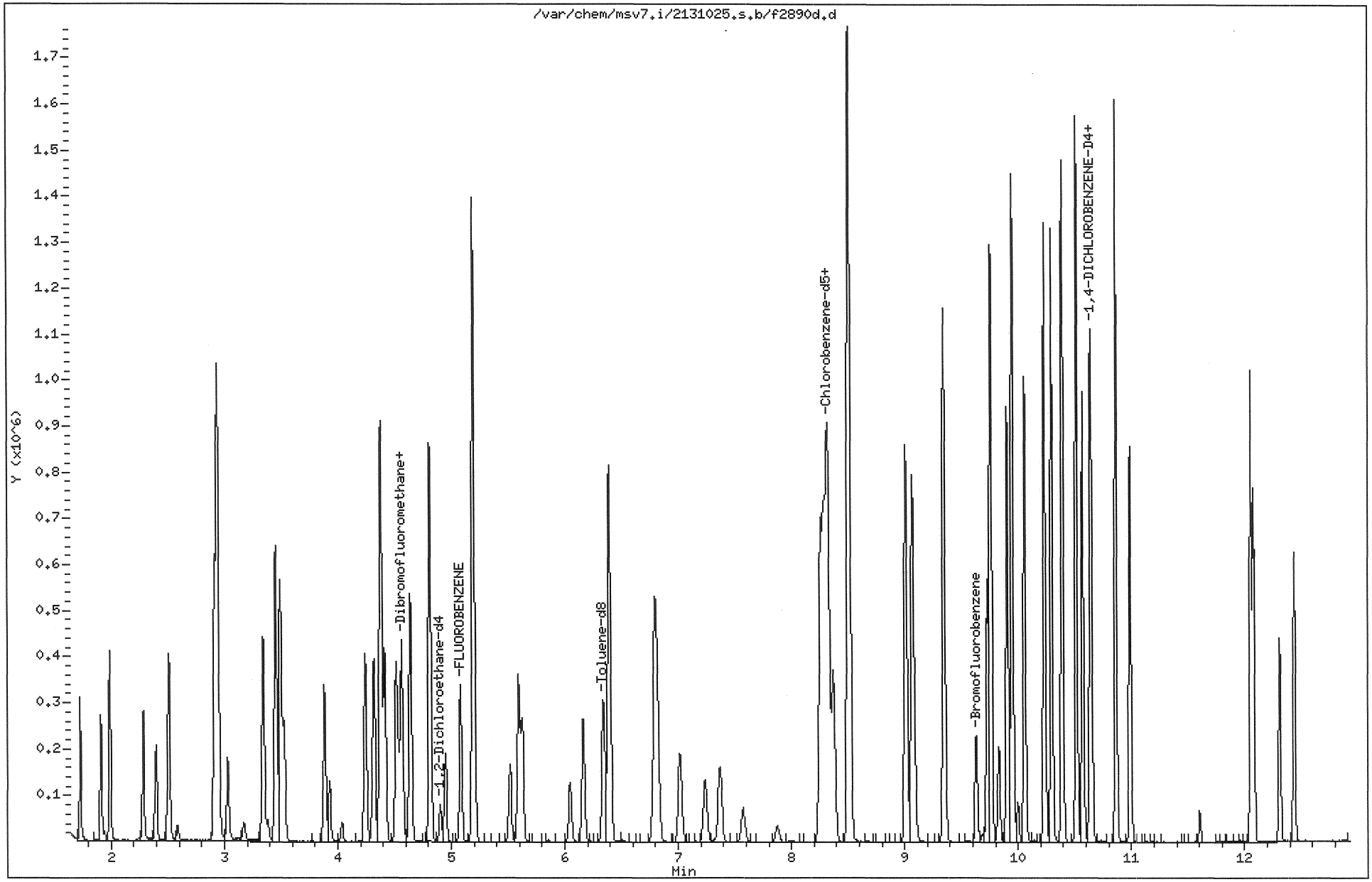
Column phase: RTX-VMS-30M

Instrument: msv7.i

Operator: CEK

Column diameter: 0.25

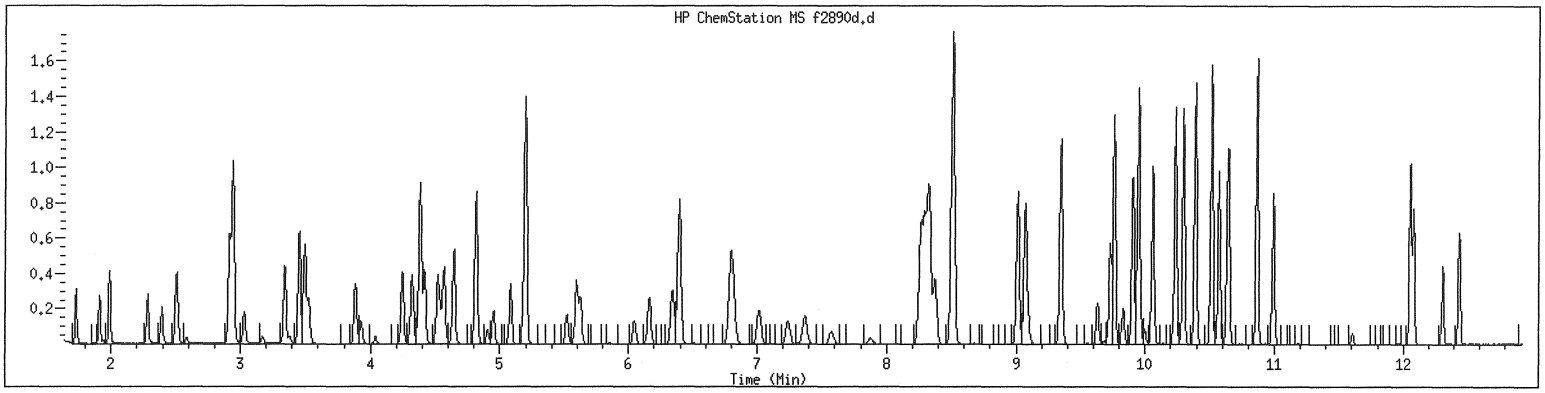





2131025.13

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1206 | SampleType | : CALIB_6 |
| Injection Date | : 10/25/2013 14:13 | Instrument | : msv7.i |
| Operator | : CEK | | |
| Sample Info | : 1206*V7STD100 | | |
| Misc Info | : MSV~28849~*1*CEK | | |
| Method | : /var/chem/msv7.i/2131025.s.b/8260DODs7.m | | |
| Dilution | : 1.00 | | |
| Matrix | : SOIL | | |
| Integrator | : HP RTE | Compound Sublist | : 8260b |




NO MANUAL INTEGRATIONS

GCAL, Inc.

Data file : /var/chem/msv7.i/2131025.s.b/f2891d.d
Lab Smp Id: 1207 Client Smp ID: V7STD200
Inj Date : 25-OCT-2013 14:34
Operator : CEK Inst ID: msv7.i
Smp Info : 1207*V7STD200
Misc Info : MSV~28849~*1*CEK
Comment :
Method : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Meth Date : 25-Oct-2013 19:39 cek Quant Type: ISTD
Cal Date : 25-OCT-2013 14:34 Cal File: f2891d.d
Als bottle: 8 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * (Uf/Ws)/((100-M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 5.00000 | ng unit correction factor |
| Ws | 5.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture (not decanted) |
| Va | 100.00000 | Volume of aliquot extract added (uL) |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppb) | AMOUNTS ON-COL ( ppb) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|
| 1 Dichlorodifluoromethane | 85 | 1.727 | 1.727 | (0.162) | 401112 | 200.000 | 194 | 9339 |
| 2 Chloromethane ++ | 50 | 1.911 | 1.911 | (0.376) | 385180 | 200.000 | 203 | 9723(A) |
| 3 Vinyl Chloride + | 62 | 1.986 | 1.986 | (0.390) | 571632 | 200.000 | 198 | 9458 |
| 6 Bromomethane | 94 | 2.285 | 2.285 | (0.449) | 279692 | 200.000 | 205 | 9111(A) |
| 8 Chloroethane | 64 | 2.394 | 2.394 | (0.471) | 285731 | 200.000 | 189 | 9055 |
| 9 Trichlorofluoromethane | 101 | 2.510 | 2.510 | (0.494) | 592049 | 200.000 | 193 | 9207 |
| 12 1,1-Dichloroethene + | 96 | 2.915 | 2.915 | (0.573) | 365428 | 200.000 | 194 | 9328 |
| 15 1,1,2Trichlotrifluoroethane | 101 | 2.938 | 2.938 | (0.578) | 390140 | 200.000 | 200 | 9131(A) |
| 14 Carbon Disulfide | 76 | 2.941 | 2.941 | (0.578) | 1371904 | 200.000 | 195 | 9387 |
| 16 Methyl Iodide | 142 | 3.031 | 3.031 | (0.596) | 381265 | 200.000 | 205 | 9257(A) |
| 17 Acrolein | 56 | 3.174 | 3.174 | (0.624) | 51505 | 1000.00 | 1030 | 9035(A) |
| 18 Methylene Chloride | 49 | 3.343 | 3.343 | (0.657) | 394157 | 200.000 | 200 | 9194(A) |
| 19 Acetone | 43 | 3.384 | 3.384 | (0.665) | 73656 | 200.000 | 202 | 8933(A) |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppb) | AMOUNTS ON-COL ( ppb) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|---|
| | 13 trans-1,2-Dichloroethene | 61 | 3.455 | 3.455 | (0.679) | 549495 | 200.000 | 199 | 9009 |
| | 22 Methyl Acetate | 43 | 3.462 | 3.462 | (0.681) | 91090 | 200.000 | 203 | 8787(A) |
| | 23 Hexane | 57 | 3.496 | 3.496 | (0.687) | 737947 | 200.000 | 208 | 9066(A) |
| | 25 MTBE | 73 | 3.526 | 3.526 | (0.693) | 523656 | 200.000 | 215 | 9026(A) |
| | 31 1,1-Dichloroethane ++ | 63 | 3.882 | 3.882 | (0.763) | 548560 | 200.000 | 189 | 9437 |
| | 33 Acrylonitrile | 53 | 3.927 | 3.927 | (0.772) | 181103 | 1000.00 | 1090 | 9280(A) |
| | 34 Vinyl Acetate | 43 | 4.036 | 4.036 | (0.794) | 97889 | 200.000 | 217 | (A) |
| | 21 cis-1,2-Dichloroethene | 61 | 4.242 | 4.242 | (0.834) | 389125 | 200.000 | 219 | 9263(A) |
| M | 68 Total 1,2-Dichloroethene | 61 | | | | 938620 | 400.000 | 418 | 0 |
| | 35 2,2-Dichloropropane | 77 | 4.317 | 4.317 | (0.849) | 456237 | 200.000 | 206 | 8902(A) |
| | 38 Cyclohexane | 56 | 4.381 | 4.381 | (0.861) | 587141 | 200.000 | 206 | 9129(A) |
| | 39 Bromochloromethane | 128 | 4.381 | 4.381 | (0.861) | 135273 | 200.000 | 212 | 9020(A) |
| | 40 Chloroform + | 83 | 4.415 | 4.415 | (0.868) | 566690 | 200.000 | 198 | 9162 |
| | 41 Carbon Tetrachloride | 117 | 4.516 | 4.516 | (0.888) | 448256 | 200.000 | 205 | 8751(A) |
| $ | 42 Dibromofluoromethane | 111 | 4.542 | 4.542 | (0.893) | 58901 | 50.0000 | 48.2 | 6675 |
| | 43 1,1,1-Trichloroethane | 97 | 4.565 | 4.565 | (0.898) | 493293 | 200.000 | 203 | 9499(A) |
| | 45 2-Butanone | 43 | 4.625 | 4.625 | (0.909) | 61407 | 200.000 | 232 | (A) |
| | 44 1,1-Dichloropropene | 75 | 4.643 | 4.643 | (0.913) | 476159 | 200.000 | 240 | 8945(A) |
| | 48 Benzene | 78 | 4.812 | 4.812 | (0.946) | 1362520 | 200.000 | 220 | 9195(A) |
| $ | 50 1,2-Dichloroethane-d4 | 67 | 4.906 | 4.906 | (0.965) | 24280 | 50.0000 | 49.3 | 9417 |
| | 52 1,2-Dichloroethane | 62 | 4.951 | 4.951 | (0.973) | 255991 | 200.000 | 207 | 9519(A) |
| * | 54 FLUOROBENZENE | 96 | 5.086 | 5.086 | (1.000) | 246436 | 50.0000 | | 9178 |
| | 56 Methyl cyclohexane | 83 | 5.194 | 5.194 | (1.021) | 696390 | 200.000 | 252 | 9273(A) |
| | 57 Trichloroethene | 130 | 5.198 | 5.198 | (1.022) | 416361 | 200.000 | 212 | 9193(A) |
| | 62 Dibromomethane | 93 | 5.517 | 5.517 | (1.085) | 121476 | 200.000 | 214 | 9340(A) |
| | 63 1,2-Dichloropropane + | 63 | 5.595 | 5.595 | (1.100) | 278057 | 200.000 | 216 | 8853(A) |
| | 64 Bromodichloromethane | 83 | 5.625 | 5.625 | (1.106) | 352145 | 200.000 | 210 | 9246(A) |
| | 69 1-Bromo-2-chloroethane | 63 | 6.045 | 6.045 | (1.189) | 252408 | 200.000 | 218 | 9324(A) |
| | 72 cis-1,3-Dichloropropene | 75 | 6.161 | 6.161 | (1.212) | 376945 | 200.000 | 205 | (A) |
| $ | 74 Toluene-d8 | 98 | 6.341 | 6.341 | (0.766) | 240628 | 50.0000 | 46.6 | 9291 |
| | 77 Toluene + | 91 | 6.394 | 6.394 | (0.772) | 1483361 | 200.000 | 198 | 9264 |
| | 79 4-methyl-2-pentanone | 43 | 6.776 | 6.776 | (0.818) | 98142 | 200.000 | 222 | (A) |
| | 78 Tetrachloroethene | 164 | 6.799 | 6.799 | (0.821) | 327249 | 200.000 | 191 | 8728 |
| | 81 trans-1,3-Dichloropropene | 75 | 6.825 | 6.825 | (1.342) | 309411 | 200.000 | 205 | (A) |
| M | 71 1-3 Dichloropropene-Total | 100 | | | | 686356 | 400.000 | 410 | 0 |
| | 82 1,1,2-Trichloroethane | 97 | 7.012 | 7.012 | (0.847) | 179144 | 200.000 | 199 | 9266 |
| | 85 Dibromochloromethane | 129 | 7.241 | 7.241 | (0.875) | 220399 | 200.000 | 203 | 9079(A) |
| | 86 1,3-Dichloropropane | 76 | 7.369 | 7.369 | (0.890) | 301803 | 200.000 | 211 | 9028(A) |
| | 88 1,2-Dibromoethane(EDB) | 107 | 7.575 | 7.575 | (0.915) | 159783 | 200.000 | 214 | 8930(A) |
| | 80 2-Hexanone | 43 | 7.875 | 7.875 | (0.951) | 75700 | 200.000 | 205 | 9184(A) |
| | 91 1-Chlorohexane | 91 | 8.261 | 8.261 | (0.998) | 490799 | 200.000 | 204 | 8108(A) |
| * | 90 Chlorobenzene-d5 | 82 | 8.279 | 8.279 | (1.000) | 101838 | 50.0000 | | 6563 |
| | 92 Chlorobenzene ++ | 112 | 8.294 | 8.294 | (1.002) | 915951 | 200.000 | 199 | 8300 |
| | 93 Ethylbenzene + | 106 | 8.328 | 8.328 | (1.006) | 543506 | 200.000 | 223 | 9091(A) |
| | 95 1,1,1,2-Tetrachloroethane | 133 | 8.377 | 8.377 | (1.012) | 277482 | 200.000 | 190 | 9360 |
| | 96 p,m-Xylene | 106 | 8.512 | 8.512 | (1.028) | 1345662 | 400.000 | 405 | 9437(A) |
| | 98 o-Xylene | 106 | 9.014 | 9.014 | (1.089) | 594868 | 200.000 | 204 | (A) |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppb) | AMOUNTS ON-COL ( ppb) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|
| M 120 TOTAL XYLENE | 106 | | | | 1940530 | 600.000 | 609 | 0 |
| 99 Styrene | 104 | 9.070 | 9.070 | (1.096) | 925760 | 200.000 | 203 | 9328(A) |
| 100 Bromoform ++ | 173 | 9.097 | 9.097 | (1.099) | 138138 | 200.000 | 208 | 9378(A) |
| 102 Isopropylbenzene | 105 | 9.348 | 9.348 | (1.129) | 1702542 | 200.000 | 203 | 9473(A) |
| $ 103 Bromofluorobenzene | 174 | 9.633 | 9.633 | (1.163) | 69261 | 50.0000 | 49.7 | 9436 |
| 104 Bromobenzene | 77 | 9.730 | 9.730 | (0.915) | 576373 | 200.000 | 214 | 9066(A) |
| 106 n-Propylbenzene | 91 | 9.760 | 9.760 | (0.918) | 2138594 | 200.000 | 245 | 9530(A) |
| 107 1,1,2,2-Tetrachloroethane++ | 83 | 9.831 | 9.831 | (0.924) | 206870 | 200.000 | 201 | 9157(A) |
| 108 2-Chlorotoluene | 91 | 9.906 | 9.906 | (0.931) | 1094549 | 200.000 | 233 | 9399(A) |
| 110 1,3,5-Trimethylbenzene | 105 | 9.948 | 9.948 | (0.935) | 1424967 | 200.000 | 203 | (A) |
| 109 1,2,3-Trichloropropane | 75 | 9.959 | 9.959 | (0.936) | 162761 | 200.000 | 207 | 8862(A) |
| 111 trans-1,4-Dichloro-2-Butene | 53 | 10.000 | 10.000 | (0.940) | 35047 | 200.000 | 204 | 9093(A) |
| 112 4-Chlorotoluene | 91 | 10.060 | 10.060 | (0.946) | 1109478 | 200.000 | 241 | 9396(A) |
| 113 tert-butylbenzene | 91 | 10.236 | 10.236 | (0.962) | 794724 | 200.000 | 204 | 9342(A) |
| 114 1,2,4-Trimethylbenzene | 105 | 10.300 | 10.300 | (0.968) | 1389546 | 200.000 | 203 | (A) |
| 115 sec-Butylbenzene | 105 | 10.394 | 10.394 | (0.977) | 2049959 | 200.000 | 204 | (A) |
| 116 p-Isopropyltoluene | 119 | 10.517 | 10.517 | (0.989) | 1672012 | 200.000 | 204 | 9546(A) |
| 117 1,3-Dichlorobenzene | 146 | 10.574 | 10.574 | (0.994) | 773023 | 200.000 | 214 | (A) |
| * 118 1,4-DICHLOROBENZENE-D4 | 152 | 10.637 | 10.637 | (1.000) | 100668 | 50.0000 | | 6685 |
| 119 1,4-Dichlorobenzene | 146 | 10.649 | 10.649 | (1.001) | 743019 | 200.000 | 206 | (A) |
| 121 n-Butylbenzene | 91 | 10.866 | 10.866 | (1.021) | 1594071 | 200.000 | 205 | 9482(A) |
| 122 1,2-Dichlorobenzene | 146 | 10.993 | 10.993 | (1.033) | 648811 | 200.000 | 214 | (A) |
| 125 1,2-Dibromo-3-Chloropropane | 157 | 11.608 | 11.608 | (1.091) | 37695 | 200.000 | 234 | 8684(A) |
| 126 Hexachlorobutadiene | 225 | 12.058 | 12.058 | (1.134) | 367381 | 200.000 | 229 | 9621(A) |
| 127 1,2,4-Trichlorobenzene | 180 | 12.081 | 12.081 | (1.136) | 457807 | 200.000 | 246 | (A) |
| 128 Napthalene | 128 | 12.313 | 12.313 | (1.158) | 668856 | 200.000 | 254 | 9388(A) |
| 129 1,2,3-Trichlorobenzene | 180 | 12.440 | 12.440 | (1.169) | 386594 | 200.000 | 246 | (A) |

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /var/chem/msv7.i/2131025.s.b/f2891d.d

Date : 25-OCT-2013 14:34

Client ID: V7STD200

Sample Info: 1207*V7STD200

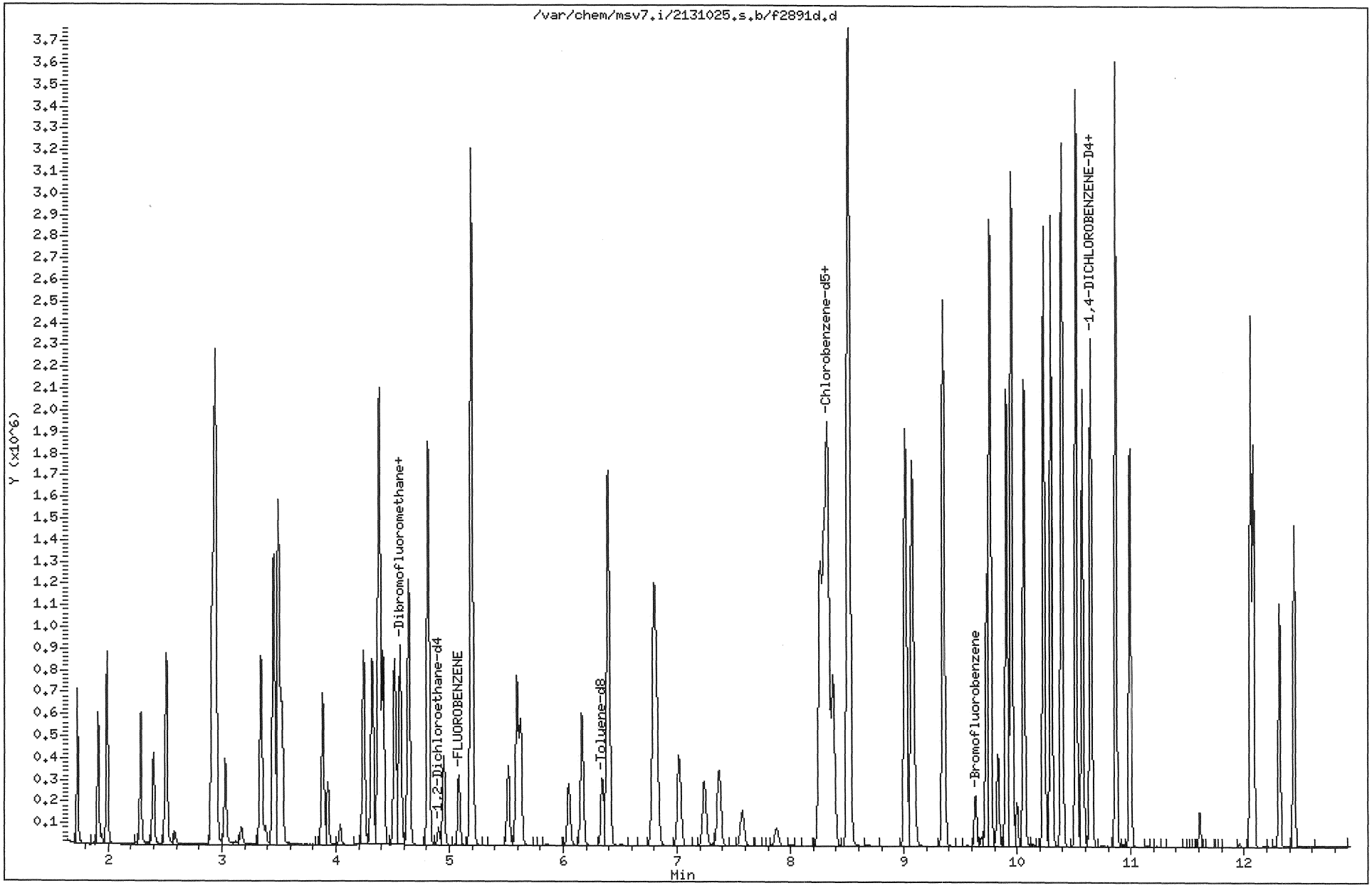
Column phase: RTX-VMS-30M

Instrument: msv7.i

Operator: CEK

Column diameter: 0.25

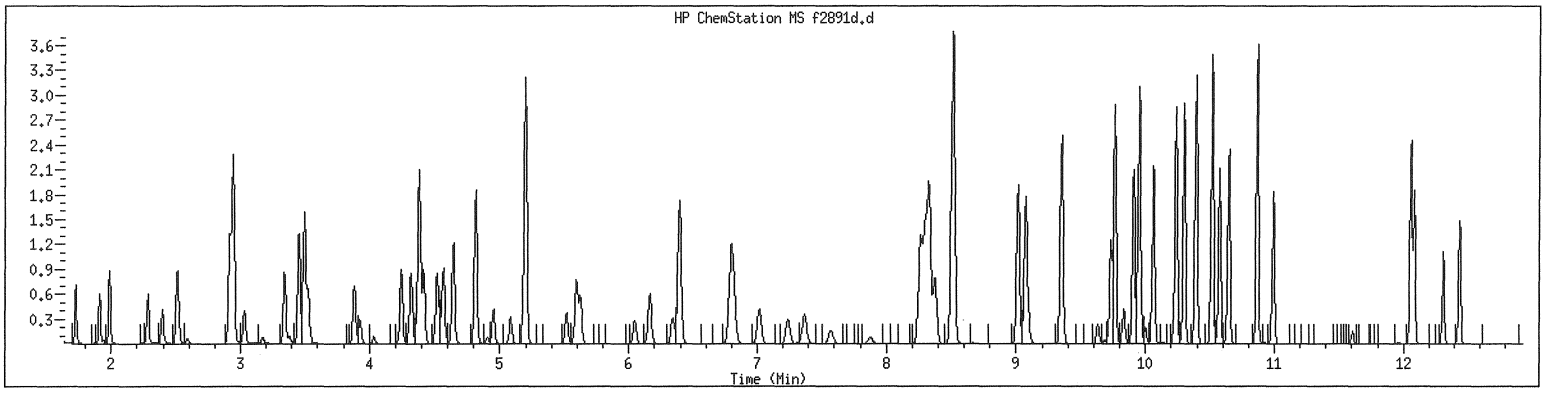





2131017.12 118

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1207 | SampleType | : CALIB_7 |
| Injection Date | : 10/25/2013 14:34 | Instrument | : msv7.i |
| Operator | : CEK | | |
| Sample Info | : 1207*V7STD200 | | |
| Misc Info | : MSV~28849~*1*CEK | | |
| Method | : /var/chem/msv7.i/2131025.s.b/8260DODs7.m | | |
| Dilution | : 1.00 | | |
| Matrix | : SOIL | | |
| Integrator | : HP RTE | Compound Sublist | : 8260b |




NO MANUAL INTEGRATIONS

Data File: /var/chem/msv7.i/2131025.s.b/f2894d.d
Report Date: 25-Oct-2013 19:54



GCAL, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: SOLID
Lab Smp Id: 1600
Level: LOW
Data Type: MS DATA
SpikeList File: ICV.spk
Sublist File: 8260b.sub
Method File: /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Misc Info: MSV~28849~*1*CEK

Client SDG: 2131025.s
Fraction: VOA
Client Smp ID: ICV050
Operator: CEK
SampleType: ICV
Quant Type: ISTD

| | SPIKE COMPOUND | CONC ADDED ug/Kg | CONC RECOVERED ug/Kg | % RECOVERED | LIMITS |
|---|---|---|---|---|---|
| | 1 Dichlorodifluoromethane | 50.0 | 57.2 | 114.47 | 80-120 |
| | 2 Chloromethane ++ | 50.0 | 57.3 | 114.67 | 80-120 |
| | 3 Vinyl Chloride + | 50.0 | 48.8 | 97.56 | 80-120 |
| | 6 Bromomethane | 50.0 | 51.1 | 102.19 | 80-120 |
| | 8 Chloroethane | 50.0 | 49.9 | 99.76 | 80-120 |
| | 9 Trichlorofluoromethane | 50.0 | 49.3 | 98.62 | 80-120 |
| | 12 1,1-Dichloroethene + | 50.0 | 46.8 | 93.65 | 80-120 |
| | 15 1,1,2Trichlotrifluoroethane | 50.0 | 46.8 | 93.63 | 80-120 |
| | 14 Carbon Disulfide | 50.0 | 48.6 | 97.18 | 80-120 |
| | 16 Methyl Iodide | 50.0 | 53.8 | 107.69 | 80-120 |
| | 17 Acrolein | 250 | 243 | 97.36 | 80-120 |
| | 18 Methylene Chloride | 50.0 | 52.4 | 104.78 | 80-120 |
| | 19 Acetone | 50.0 | 58.2 | 116.39 | 80-120 |
| | 13 trans-1,2-Dichloroethene | 50.0 | 48.7 | 97.49 | 80-120 |
| | 22 Methyl Acetate | 50.0 | 47.4 | 94.82 | 80-120 |
| | 23 Hexane | 50.0 | 49.3 | 98.66 | 80-120 |
| | 25 MTBE | 50.0 | 52.7 | 105.48 | 80-120 |
| | 31 1,1-Dichloroethane ++ | 50.0 | 49.7 | 99.33 | 80-120 |
| | 33 Acrylonitrile | 250 | 249 | 99.43 | 80-120 |
| | 34 Vinyl Acetate | 50.0 | 57.4 | 114.73 | 80-120 |
| | 21 cis-1,2-Dichloroethene | 50.0 | 53.7 | 107.44 | 80-120 |
| M | 68 Total 1,2-Dichloroethene | 100 | 102 | 102.46 | 80-120 |
| | 35 2,2-Dichloropropane | 50.0 | 48.9 | 97.88 | 80-120 |
| | 38 Cyclohexane | 50.0 | 47.1 | 94.23 | 80-120 |
| | 39 Bromochloromethane | 50.0 | 54.2 | 108.35 | 80-120 |
| | 40 Chloroform + | 50.0 | 51.6 | 103.25 | 80-120 |
| | 41 Carbon Tetrachloride | 50.0 | 48.5 | 96.92 | 80-120 |
| | 43 1,1,1-Trichloroethane | 50.0 | 50.7 | 101.41 | 80-120 |
| | 45 2-Butanone | 50.0 | 58.3 | 116.67 | 80-120 |
| | 44 1,1-Dichloropropene | 50.0 | 54.3 | 108.69 | 80-120 |
| | 48 Benzene | 50.0 | 53.6 | 107.16 | 80-120 |
| | 52 1,2-Dichloroethane | 50.0 | 52.3 | 104.63 | 80-120 |
| | 56 Methyl cyclohexane | 50.0 | 51.1 | 102.17 | 80-120 |

| SPIKE COMPOUND | CONC ADDED ug/Kg | CONC RECOVERED ug/Kg | % RECOVERED | LIMITS | |
|---|---|---|---|---|---|
| 57 Trichloroethene | 50.0 | 50.7 | 101.36 | 80-120 | |
| 62 Dibromomethane | 50.0 | 55.4 | 110.75 | 80-120 | |
| 63 1,2-Dichloropropane + | 50.0 | 53.2 | 106.43 | 80-120 | |
| 64 Bromodichloromethane | 50.0 | 54.9 | 109.71 | 80-120 | |
| 70 2-Chloroethyl vinyl ether | 50.0 | 0.00 | 0.00* | 80-120 | MT |
| 72 cis-1,3-Dichloropropene | 50.0 | 51.1 | 102.21 | 80-120 | |
| 77 Toluene + | 50.0 | 52.2 | 104.33 | 80-120 | |
| 79 4-methyl-2-pentanone | 50.0 | 49.1 | 98.18 | 80-120 | |
| 78 Tetrachloroethene | 50.0 | 51.1 | 102.11 | 80-120 | |
| 81 trans-1,3-Dichloropropene | 50.0 | 49.5 | 99.04 | 80-120 | |
| 82 1,1,2-Trichloroethane | 50.0 | 54.7 | 109.44 | 80-120 | |
| 85 Dibromochloromethane | 50.0 | 54.5 | 109.01 | 80-120 | |
| 86 1,3-Dichloropropane | 50.0 | 54.3 | 108.52 | 80-120 | |
| 88 1,2-Dibromoethane(EDB) | 50.0 | 56.5 | 113.06 | 80-120 | |
| 80 2-Hexanone | 50.0 | 53.1 | 106.23 | 80-120 | |
| 91 1-Chlorohexane | 50.0 | 50.8 | 101.51 | 80-120 | |
| 92 Chlorobenzene ++ | 50.0 | 56.5 | 113.00 | 80-120 | |
| 93 Ethylbenzene + | 50.0 | 58.8 | 117.58 | 80-120 | |
| 95 1,1,1,2-Tetrachloroethane | 50.0 | 51.4 | 102.73 | 80-120 | |
| 96 p,m-Xylene | 100 | 109 | 108.74 | 80-120 | |
| 98 o-Xylene | 50.0 | 52.4 | 104.90 | 80-120 | |
| 99 Styrene | 50.0 | 55.5 | 110.91 | 80-120 | |
| 100 Bromoform ++ | 50.0 | 52.5 | 104.92 | 80-120 | |
| 102 Isopropylbenzene | 50.0 | 51.6 | 103.10 | 80-120 | |
| 104 Bromobenzene | 50.0 | 57.9 | 115.90 | 80-120 | |
| 106 n-Propylbenzene | 50.0 | 53.1 | 106.20 | 80-120 | |
| 107 1,1,2,2-Tetrachloroethane++ | 50.0 | 56.2 | 112.34 | 80-120 | |
| 108 2-Chlorotoluene | 50.0 | 60.2 | 120.47* | 80-120 | MT |
| 110 1,3,5-Trimethylbenzene | 50.0 | 53.6 | 107.12 | 80-120 | |
| 109 1,2,3-Trichloropropane | 50.0 | 53.1 | 106.20 | 80-120 | |
| 111 trans-1,4-Dichloro-2-Butene | 50.0 | 61.5 | 122.93* | 80-120 | NT |
| 112 4-Chlorotoluene | 50.0 | 56.0 | 112.04 | 80-120 | |
| 113 tert-butylbenzene | 50.0 | 52.4 | 104.80 | 80-120 | |
| 114 1,2,4-Trimethylbenzene | 50.0 | 55.4 | 110.74 | 80-120 | |
| 115 sec-Butylbenzene | 50.0 | 53.4 | 106.78 | 80-120 | |
| 116 p-Isopropyltoluene | 50.0 | 53.6 | 107.28 | 80-120 | |
| 117 1,3-Dichlorobenzene | 50.0 | 60.0 | 120.00 | 80-120 | |
| 119 1,4-Dichlorobenzene | 50.0 | 57.4 | 114.88 | 80-120 | |
| 121 n-Butylbenzene | 50.0 | 54.4 | 108.80 | 80-120 | |
| 122 1,2-Dichlorobenzene | 50.0 | 57.9 | 115.81 | 80-120 | |
| 125 1,2-Dibromo-3-Chloropropane | 50.0 | 56.7 | 113.50 | 80-120 | |
| 126 Hexachlorobutadiene | 50.0 | 55.8 | 111.50 | 80-120 | |
| 127 1,2,4-Trichlorobenzene | 50.0 | 55.2 | 110.49 | 80-120 | |
| 128 Napthalene | 50.0 | 58.7 | 117.40 | 80-120 | |
| 129 1,2,3-Trichlorobenzene | 50.0 | 57.8 | 115.54 | 80-120 | |

GCAL, Inc.

Data file : /var/chem/msv7.i/2131025.s.b/f2894d.d
Lab Smp Id: 1600 Client Smp ID: ICV050
Inj Date : 25-OCT-2013 16:08
Operator : CEK Inst ID: msv7.i
Smp Info : 1600*ICV050
Misc Info : MSV~28849~*1*CEK
Comment :
Method : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Meth Date : 25-Oct-2013 19:43 cek Quant Type: ISTD
Cal Date : 25-OCT-2013 14:34 Cal File: f2891d.d
Als bottle: 11 QC Sample: ICV
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * (Uf/Ws)/((100-M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 5.00000 | ng unit correction factor |
| Ws | 5.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture (not decanted) |
| Va | 100.00000 | Volume of aliquot extract added (uL) |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppb) | FINAL (ug/Kg) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|
| 1 Dichlorodifluoromethane | 85 | 1.727 | 1.727 | (0.162) | 112828 | 57.2339 | 57.2 | 9378 |
| 2 Chloromethane ++ | 50 | 1.911 | 1.911 | (0.376) | 103707 | 57.3343 | 57.3 | 9761 |
| 3 Vinyl Chloride + | 62 | 1.986 | 1.986 | (0.391) | 134379 | 48.7803 | 48.8 | 9542 |
| 6 Bromomethane | 94 | 2.285 | 2.285 | (0.450) | 66523 | 51.0956 | 51.1 | 9271 |
| 8 Chloroethane | 64 | 2.394 | 2.394 | (0.471) | 71843 | 49.8801 | 49.9 | 9103 |
| 9 Trichlorofluoromethane | 101 | 2.510 | 2.510 | (0.494) | 144123 | 49.3097 | 49.3 | 9414 |
| 12 1,1-Dichloroethene + | 96 | 2.912 | 2.915 | (0.573) | 84117 | 46.8239 | 46.8 | 9096 |
| 15 1,1,2Trichlotrifluoroethane | 101 | 2.938 | 2.938 | (0.578) | 87073 | 46.8149 | 46.8 | 9054 |
| 14 Carbon Disulfide | 76 | 2.945 | 2.941 | (0.580) | 326404 | 48.5901 | 48.6 | 9094 |
| 16 Methyl Iodide | 142 | 3.031 | 3.031 | (0.597) | 90248 | 53.8470 | 53.8 | 9262 |
| 17 Acrolein | 56 | 3.170 | 3.174 | (0.624) | 11554 | 243.395 | 243 | 8028 |
| 18 Methylene Chloride | 49 | 3.346 | 3.343 | (0.658) | 104315 | 52.3891 | 52.4 | 9241 |
| 19 Acetone | 43 | 3.384 | 3.384 | (0.666) | 21463 | 58.1955 | 58.2 | 8494 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppb) | FINAL (ug/Kg) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|---|
| | 13 trans-1,2-Dichloroethene | 61 | 3.451 | 3.455 | (0.679) | 128433 | 48.7457 | 48.7 | 8982 |
| | 22 Methyl Acetate | 43 | 3.459 | 3.462 | (0.681) | 20656 | 47.4097 | 47.4 | 8693 |
| | 23 Hexane | 57 | 3.496 | 3.496 | (0.688) | 166574 | 49.3313 | 49.3 | 9136 |
| | 25 MTBE | 73 | 3.523 | 3.526 | (0.693) | 122401 | 52.7393 | 52.7 | 9118 |
| | 31 1,1-Dichloroethane ++ | 63 | 3.882 | 3.882 | (0.764) | 137204 | 49.6637 | 49.7 | 9449 |
| | 33 Acrylonitrile | 53 | 3.927 | 3.927 | (0.773) | 39430 | 248.564 | 249 | 9289 |
| | 34 Vinyl Acetate | 43 | 4.036 | 4.036 | (0.794) | 24701 | 57.3650 | 57.4 | |
| | 21 cis-1,2-Dichloroethene | 61 | 4.242 | 4.242 | (0.835) | 90875 | 53.7181 | 53.7 | 9190 |
| M | 68 Total 1,2-Dichloroethene | 61 | | | | 219308 | 102.464 | 102 | 0 |
| | 35 2,2-Dichloropropane | 77 | 4.321 | 4.317 | (0.850) | 103598 | 48.9418 | 48.9 | 9017 |
| | 38 Cyclohexane | 56 | 4.377 | 4.381 | (0.861) | 117595 | 47.1138 | 47.1 | 9138 |
| | 39 Bromochloromethane | 128 | 4.377 | 4.381 | (0.861) | 32909 | 54.1727 | 54.2 | 9050 |
| | 40 Chloroform + | 83 | 4.415 | 4.415 | (0.869) | 140893 | 51.6275 | 51.6 | 9111 |
| | 41 Carbon Tetrachloride | 117 | 4.516 | 4.516 | (0.889) | 101227 | 48.4593 | 48.5 | 9000 |
| $ | 42 Dibromofluoromethane | 111 | 4.538 | 4.542 | (0.893) | 56422 | 48.4462 | 48.4 | 9361 |
| | 43 1,1,1-Trichloroethane | 97 | 4.565 | 4.565 | (0.898) | 117232 | 50.7049 | 50.7 | 9528 |
| | 45 2-Butanone | 43 | 4.625 | 4.625 | (0.910) | 14696 | 58.3372 | 58.3 | |
| | 44 1,1-Dichloropropene | 75 | 4.640 | 4.643 | (0.913) | 102872 | 54.3441 | 54.3 | 8992 |
| | 48 Benzene | 78 | 4.812 | 4.812 | (0.947) | 316856 | 53.5790 | 53.6 | 9284 |
| $ | 50 1,2-Dichloroethane-d4 | 67 | 4.906 | 4.906 | (0.965) | 21948 | 46.7605 | 46.8 | 9381 |
| | 52 1,2-Dichloroethane | 62 | 4.951 | 4.951 | (0.974) | 61570 | 52.3170 | 52.3 | 9466 |
| * | 54 FLUOROBENZENE | 96 | 5.082 | 5.086 | (1.000) | 235034 | 50.0000 | | 9251 |
| | 56 Methyl cyclohexane | 83 | 5.194 | 5.194 | (1.022) | 134799 | 51.0831 | 51.1 | 9104 |
| | 57 Trichloroethene | 130 | 5.194 | 5.198 | (1.022) | 95023 | 50.6780 | 50.7 | 9168 |
| | 62 Dibromomethane | 93 | 5.513 | 5.517 | (1.085) | 29969 | 55.3771 | 55.4 | 9421 |
| | 63 1,2-Dichloropropane + | 63 | 5.592 | 5.595 | (1.100) | 65266 | 53.2168 | 53.2 | 8960 |
| | 64 Bromodichloromethane | 83 | 5.626 | 5.625 | (1.107) | 87571 | 54.8570 | 54.9 | 9171 |
| | 69 1-Bromo-2-chloroethane | 63 | 6.049 | 6.045 | (1.190) | 59161 | 53.5337 | 53.5 | 9376 |
| | 70 2-Chloroethyl vinyl ether | 63 | 5.592 | 5.595 | (1.100) | 65266 | | | 4793(R) |
| | 72 cis-1,3-Dichloropropene | 75 | 6.162 | 6.161 | (1.212) | 83323 | 51.1046 | 51.1 | |
| $ | 74 Toluene-d8 | 98 | 6.342 | 6.341 | (0.767) | 221013 | 48.5104 | 48.5 | 9410 |
| | 77 Toluene + | 91 | 6.394 | 6.394 | (0.773) | 344742 | 52.1651 | 52.2 | 9220 |
| | 79 4-methyl-2-pentanone | 43 | 6.780 | 6.776 | (0.820) | 19163 | 49.0880 | 49.1 | |
| | 78 Tetrachloroethene | 164 | 6.799 | 6.799 | (0.822) | 77184 | 51.0553 | 51.1 | 8770 |
| | 81 trans-1,3-Dichloropropene | 75 | 6.821 | 6.825 | (1.342) | 66027 | 49.5207 | 49.5 | |
| M | 71 1-3 Dichloropropene-Total | 100 | | | | 149350 | 100.625 | 101 | 0 |
| | 82 1,1,2-Trichloroethane | 97 | 7.016 | 7.012 | (0.848) | 43498 | 54.7216 | 54.7 | 9215 |
| | 85 Dibromochloromethane | 129 | 7.241 | 7.241 | (0.875) | 52097 | 54.5040 | 54.5 | 9025 |
| | 86 1,3-Dichloropropane | 76 | 7.372 | 7.369 | (0.891) | 68567 | 54.2614 | 54.3 | 9122 |
| | 88 1,2-Dibromoethane(EDB) | 107 | 7.575 | 7.575 | (0.916) | 37216 | 56.5282 | 56.5 | 8593 |
| | 80 2-Hexanone | 43 | 7.878 | 7.875 | (0.952) | 15386 | 53.1164 | 53.1 | 8842 |
| | 91 1-Chlorohexane | 91 | 8.261 | 8.261 | (0.999) | 99289 | 50.7527 | 50.8 | 8980 |
| * | 90 Chlorobenzene-d5 | 82 | 8.272 | 8.279 | (1.000) | 89820 | 50.0000 | | 9295 |
| | 92 Chlorobenzene ++ | 112 | 8.295 | 8.294 | (1.003) | 229595 | 56.5021 | 56.5 | 8599 |
| | 93 Ethylbenzene + | 106 | 8.325 | 8.328 | (1.006) | 126148 | 58.7925 | 58.8 | 9325 |
| | 95 1,1,1,2-Tetrachloroethane | 133 | 8.373 | 8.377 | (1.012) | 66094 | 51.3654 | 51.4 | 9277 |
| | 96 p,m-Xylene | 106 | 8.512 | 8.512 | (1.029) | 307486 | 108.736 | 109 | 9403 |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppb) | FINAL (ug/Kg) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|
| 98 o-Xylene | 106 | 9.014 | 9.014 | (1.090) | 125784 | 52.4486 | 52.4 | |
| M 120 TOTAL XYLENE | 106 | | | | 433270 | 161.184 | 161 | 0 |
| 99 Styrene | 104 | 9.074 | 9.070 | (1.097) | 211501 | 55.4536 | 55.5 | 9222 |
| 100 Bromoform ++ | 173 | 9.089 | 9.097 | (1.099) | 30724 | 52.4590 | 52.5 | 7171 |
| 102 Isopropylbenzene | 105 | 9.348 | 9.348 | (1.130) | 357308 | 51.5504 | 51.6 | 9483 |
| $ 103 Bromofluorobenzene | 174 | 9.633 | 9.633 | (1.164) | 62822 | 51.1400 | 51.1 | 9456 |
| 104 Bromobenzene | 77 | 9.730 | 9.730 | (0.915) | 138584 | 57.9481 | 57.9 | 8989 |
| 106 n-Propylbenzene | 91 | 9.760 | 9.760 | (0.918) | 468927 | 53.1005 | 53.1 | 9490 |
| 107 1,1,2,2-Tetrachloroethane++ | 83 | 9.832 | 9.831 | (0.924) | 51311 | 56.1689 | 56.2 | 9091 |
| 108 2-Chlorotoluene | 91 | 9.906 | 9.906 | (0.931) | 251835 | 60.2330 | 60.2 | 9363(R) |
| 110 1,3,5-Trimethylbenzene | 105 | 9.951 | 9.948 | (0.935) | 317312 | 53.5625 | 53.6 | |
| 109 1,2,3-Trichloropropane | 75 | 9.959 | 9.959 | (0.936) | 37155 | 53.1021 | 53.1 | 9031 |
| 111 trans-1,4-Dichloro-2-Butene | 53 | 10.000 | 10.000 | (0.940) | 8713 | 61.4635 | 61.5 | 9166(R) |
| 112 4-Chlorotoluene | 91 | 10.060 | 10.060 | (0.946) | 260066 | 56.0211 | 56.0 | 9439 |
| 113 tert-butylbenzene | 91 | 10.236 | 10.236 | (0.962) | 170012 | 52.3984 | 52.4 | 9417 |
| 114 1,2,4-Trimethylbenzene | 105 | 10.300 | 10.300 | (0.968) | 318324 | 55.3682 | 55.4 | |
| 115 sec-Butylbenzene | 105 | 10.394 | 10.394 | (0.977) | 450901 | 53.3897 | 53.4 | |
| 116 p-Isopropyltoluene | 119 | 10.518 | 10.517 | (0.989) | 365595 | 53.6412 | 53.6 | 9576 |
| 117 1,3-Dichlorobenzene | 146 | 10.574 | 10.574 | (0.994) | 192178 | 59.9995 | 60.0 | |
| * 118 1,4-DICHLOROBENZENE-D4 | 152 | 10.637 | 10.637 | (1.000) | 89445 | 50.0000 | | 9182 |
| 119 1,4-Dichlorobenzene | 146 | 10.649 | 10.649 | (1.001) | 184128 | 57.4383 | 57.4 | |
| 121 n-Butylbenzene | 91 | 10.866 | 10.866 | (1.021) | 353210 | 54.4019 | 54.4 | 9559 |
| 122 1,2-Dichlorobenzene | 146 | 10.994 | 10.993 | (1.033) | 156143 | 57.9039 | 57.9 | |
| 125 1,2-Dibromo-3-Chloropropane | 157 | 11.608 | 11.608 | (1.091) | 8122 | 56.7495 | 56.7 | 8626 |
| 126 Hexachlorobutadiene | 225 | 12.058 | 12.058 | (1.134) | 79374 | 55.7520 | 55.8 | 9536 |
| 127 1,2,4-Trichlorobenzene | 180 | 12.081 | 12.081 | (1.136) | 101789 | 55.2457 | 55.2 | |
| 128 Napthalene | 128 | 12.313 | 12.313 | (1.158) | 132273 | 58.6982 | 58.7 | 9529 |
| 129 1,2,3-Trichlorobenzene | 180 | 12.441 | 12.440 | (1.169) | 90880 | 57.7697 | 57.8 | |

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Data File: /var/chem/msv7.i/2131025.s.b/f2894d.d

Date : 25-OCT-2013 16:08

Client ID: ICV050

Sample Info: 1600*ICV050

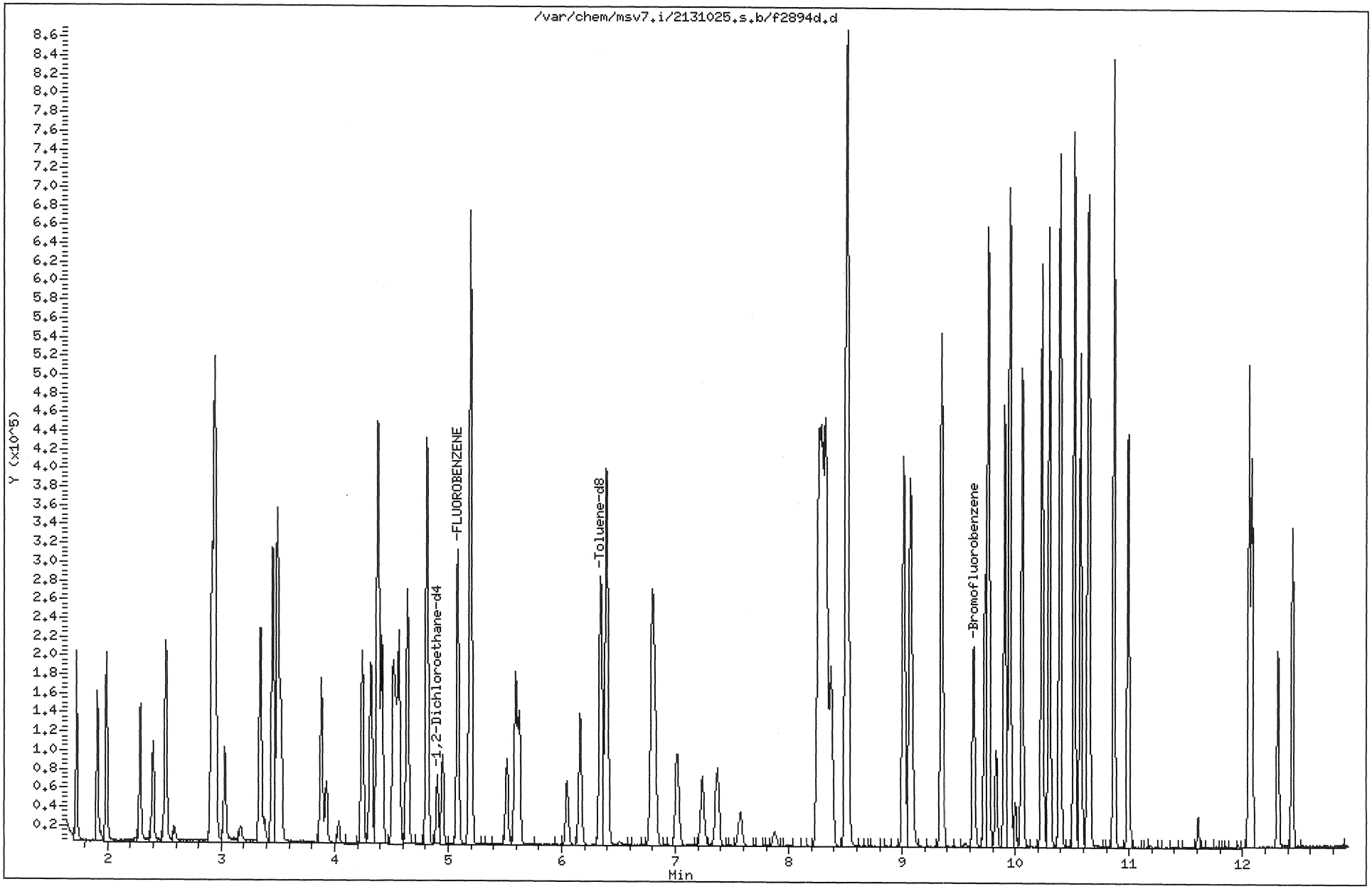
Column phase: RTX-VMS-30M

Instrument: msv7.i

Operator: CEK

Column diameter: 0.25

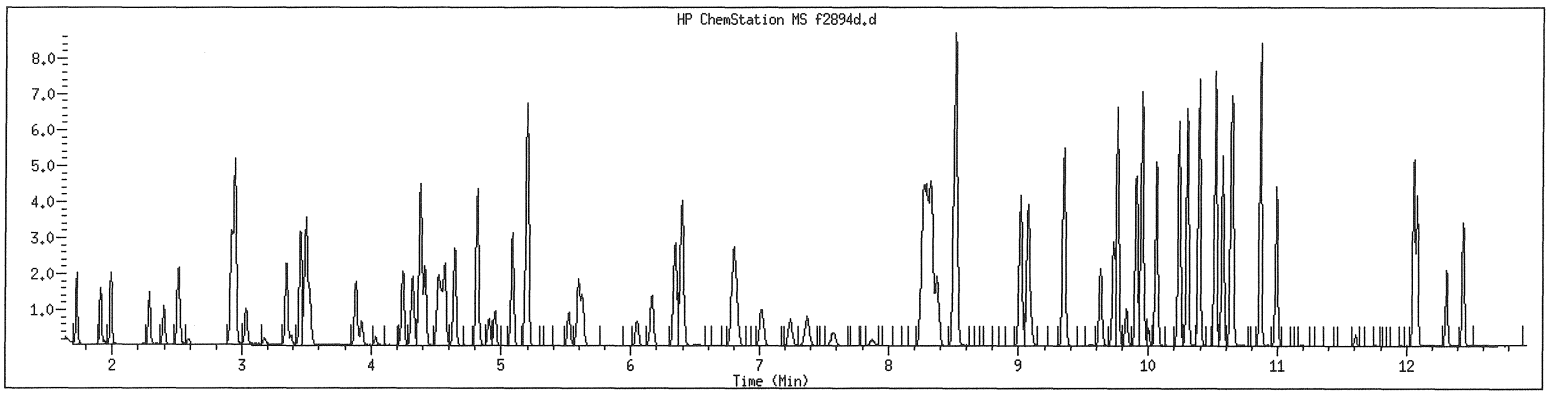





2131025 .125

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1600 | SampleType | : ICV |
| Injection Date | : 10/25/2013 16:08 | Instrument | : msv7.i |
| Operator | : CEK | | |
| Sample Info | : 1600*ICV050 | | |
| Misc Info | : MSV~28849~*1*CEK | | |
| Method | : /var/chem/msv7.i/2131025.s.b/8260DODs7.m | | |
| Dilution | : 1.00 | | |
| Matrix | : SOIL | | |
| Integrator | : HP RTE | Compound Sublist | : 8260b |




NO MANUAL INTEGRATIONS

Data File: /var/chem/msv7.i/2131026.s.b/f2918.d
Report Date: 26-Oct-2013 13:22



GCAL, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msv7.i
Lab File ID: f2918.d
Analysis Type: SOIL
Lab Sample ID: 1400
Method: /var/chem/msv7.i/2131026.s.b/8260DODs7.m

Injection Date: 26-OCT-2013 08:02
Init. Cal. Date(s): 25-OCT-2013 25-OCT-2013
Init. Cal. Times: 12:24 14:34
Quant Type: ISTD

| COMPOUND | RRF / AMOUNT | RF50 | CCAL RRF50 | MIN RRF | %D / %DRIFT | MAX %D / %DRIFT | CURVE TYPE | |
|---|---|---|---|---|---|---|---|---|
| 1 Dichlorodifluoromethane | 0.41938 | 0.39188 | 0.39188 | 0.010 | -6.55684 | 20.00000 | Averaged | |
| 2 Chloromethane ++ | 0.38480 | 0.34459 | 0.34459 | 0.100 | -10.44840 | 20.00000 | Averaged | |
| 3 Vinyl Chloride + | 0.58604 | 0.55637 | 0.55637 | 0.010 | -5.06245 | 20.00000 | Averaged | |
| 6 Bromomethane | 0.27697 | 0.27038 | 0.27038 | 0.010 | -2.37975 | 20.00000 | Averaged | |
| 8 Chloroethane | 0.30641 | 0.29596 | 0.29596 | 0.010 | -3.40917 | 20.00000 | Averaged | |
| 9 Trichlorofluoromethane | 0.62179 | 0.61966 | 0.61966 | 0.010 | -0.34234 | 20.00000 | Averaged | |
| 12 1,1-Dichloroethene + | 0.38217 | 0.37896 | 0.37896 | 0.010 | -0.83906 | 20.00000 | Averaged | |
| 15 1,1,2Trichlotrifluoroethane | 0.39568 | 0.40992 | 0.40992 | 0.010 | 3.59900 | 20.00000 | Averaged | |
| 14 Carbon Disulfide | 1.42905 | 1.39620 | 1.39620 | 0.010 | -2.29868 | 20.00000 | Averaged | |
| 16 Methyl Iodide | 48.20470 | 50.00000 | 0.34060 | 0.010 | -3.59061 | 20.00000 | Linear | |
| 17 Acrolein | 0.01010 | 0.00991 | 0.00991 | 0.010 | -1.89780 | 20.00000 | Averaged | <- |
| 18 Methylene Chloride | 49.46808 | 50.00000 | 0.42101 | 0.010 | -1.06384 | 20.00000 | Linear | |
| 19 Acetone | 48.23605 | 50.00000 | 0.07699 | 0.010 | -3.52791 | 20.00000 | Linear | |
| 13 trans-1,2-Dichloroethene | 0.56050 | 0.53504 | 0.53504 | 0.010 | -4.54321 | 20.00000 | Averaged | |
| 22 Methyl Acetate | 54.47647 | 50.00000 | 0.10065 | 0.010 | 8.95294 | 20.00000 | Linear | |
| 23 Hexane | 0.71833 | 0.69703 | 0.69703 | 0.010 | -2.96521 | 20.00000 | Averaged | |
| 25 MTBE | 0.49373 | 0.46567 | 0.46567 | 0.010 | -5.68366 | 20.00000 | Averaged | |
| 31 1,1-Dichloroethane ++ | 0.58772 | 0.52783 | 0.52783 | 0.100 | -10.18984 | 20.00000 | Averaged | |
| 33 Acrylonitrile | 0.03375 | 0.03280 | 0.03280 | 0.010 | -2.81769 | 20.00000 | Averaged | |
| 34 Vinyl Acetate | 0.09160 | 0.11325 | 0.11325 | 0.010 | 23.63398 | 20.00000 | Averaged | <-NT |
| 21 cis-1,2-Dichloroethene | 0.35988 | 0.33603 | 0.33603 | 0.010 | -6.62776 | 20.00000 | Averaged | |
| M 68 Total 1,2-Dichloroethene | 0.46019 | 0.43554 | 0.43554 | 0.010 | -5.35830 | 20.00000 | Averaged | |
| 35 2,2-Dichloropropane | 0.45031 | 0.42916 | 0.42916 | 0.010 | -4.69708 | 20.00000 | Averaged | |
| 38 Cyclohexane | 46.66923 | 50.00000 | 0.49506 | 0.010 | -6.66155 | 20.00000 | Linear | |
| 39 Bromochloromethane | 0.12923 | 0.12539 | 0.12539 | 0.010 | -2.97073 | 20.00000 | Averaged | |
| 40 Chloroform + | 0.58056 | 0.54691 | 0.54691 | 0.010 | -5.79587 | 20.00000 | Averaged | |
| 41 Carbon Tetrachloride | 0.44438 | 0.42751 | 0.42751 | 0.010 | -3.79790 | 20.00000 | Averaged | |
| $ 42 Dibromofluoromethane | 0.24776 | 0.24480 | 0.24480 | 0.010 | -1.19601 | 20.00000 | Averaged | |
| 43 1,1,1-Trichloroethane | 0.49185 | 0.49166 | 0.49166 | 0.010 | -0.03865 | 20.00000 | Averaged | |
| 45 2-Butanone | 0.05359 | 0.05362 | 0.05362 | 0.010 | 0.06044 | 20.00000 | Averaged | |
| 44 1,1-Dichloropropene | 0.40270 | 0.40165 | 0.40165 | 0.010 | -0.26241 | 20.00000 | Averaged | |
| 48 Benzene | 1.25808 | 1.23214 | 1.23214 | 0.010 | -2.06173 | 20.00000 | Averaged | |
| $ 50 1,2-Dichloroethane-d4 | 0.09985 | 0.09573 | 0.09573 | 0.010 | -4.12898 | 20.00000 | Averaged | |
| 52 1,2-Dichloroethane | 0.25036 | 0.23864 | 0.23864 | 0.010 | -4.68244 | 20.00000 | Averaged | |
| 56 Methyl cyclohexane | 0.56137 | 0.58371 | 0.58371 | 0.010 | 3.98024 | 20.00000 | Averaged | |

GCAL, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msv7.i
Lab File ID: f2918.d
Analysis Type: SOIL
Lab Sample ID: 1400
Method: /var/chem/msv7.i/2131026.s.b/8260DODs7.m

Injection Date: 26-OCT-2013 08:02
Init. Cal. Date(s): 25-OCT-2013 25-OCT-2013
Init. Cal. Times: 12:24 14:34
Quant Type: ISTD

| COMPOUND | RRF / AMOUNT | RF50 | CCAL RRF50 | MIN RRF | %D / %DRIFT | MAX %D / %DRIFT | CURVE TYPE | |
|---|---|---|---|---|---|---|---|---|
| 57 Trichloroethene | 0.39889 | 0.38126 | 0.38126 | 0.010 | -4.41864 | 20.00000 | Averaged | |
| 62 Dibromomethane | 0.11513 | 0.11249 | 0.11249 | 0.010 | -2.29048 | 20.00000 | Averaged | |
| 63 1,2-Dichloropropane + | 0.26090 | 0.24204 | 0.24204 | 0.010 | -7.22871 | 20.00000 | Averaged | |
| 64 Bromodichloromethane | 0.33960 | 0.31831 | 0.31831 | 0.010 | -6.26970 | 20.00000 | Averaged | |
| 69 1-Bromo-2-chloroethane | 0.23510 | 0.22238 | 0.22238 | 0.010 | -5.41000 | 20.00000 | Averaged | |
| 70 2-Chloroethyl vinyl ether | ++++ | 0.24204 | 0.24204 | 0.010 | ++++ | 20.00000 | Averaged | <- |
| 72 cis-1,3-Dichloropropene | 43.84368 | 50.00000 | 0.29903 | 0.010 | -12.31263 | 20.00000 | Linear | |
| $ 74 Toluene-d8 | 2.53618 | 2.38354 | 2.38354 | 0.010 | -6.01865 | 20.00000 | Averaged | |
| 77 Toluene + | 3.67884 | 3.32675 | 3.32675 | 0.010 | -9.57077 | 20.00000 | Averaged | |
| 79 4-methyl-2-pentanone | 0.21731 | 0.17522 | 0.17522 | 0.010 | -19.37020 | 20.00000 | Averaged | |
| 78 Tetrachloroethene | 0.84156 | 0.77778 | 0.77778 | 0.010 | -7.57801 | 20.00000 | Averaged | |
| 81 trans-1,3-Dichloropropene | 43.31950 | 50.00000 | 0.24197 | 0.010 | -13.36100 | 20.00000 | Linear | |
| M 71 1-3 Dichloropropene-Total | 87.16318 | 100 | 0.27050 | 0.010 | -12.83682 | 20.00000 | Linear | |
| 82 1,1,2-Trichloroethane | 0.44249 | 0.40706 | 0.40706 | 0.010 | -8.00776 | 20.00000 | Averaged | |
| 85 Dibromochloromethane | 0.53209 | 0.49611 | 0.49611 | 0.010 | -6.76088 | 20.00000 | Averaged | |
| 86 1,3-Dichloropropane | 0.70343 | 0.63216 | 0.63216 | 0.010 | -10.13170 | 20.00000 | Averaged | |
| 88 1,2-Dibromoethane(EDB) | 0.36649 | 0.34703 | 0.34703 | 0.010 | -5.31066 | 20.00000 | Averaged | |
| 80 2-Hexanone | 44.91792 | 50.00000 | 0.14045 | 0.010 | -10.16416 | 20.00000 | Linear | |
| 91 1-Chlorohexane | 45.25511 | 50.00000 | 0.97245 | 0.010 | -9.48978 | 20.00000 | Linear | |
| 92 Chlorobenzene ++ | 2.26201 | 2.16125 | 2.16125 | 0.300 | -4.45450 | 20.00000 | Averaged | |
| 93 Ethylbenzene + | 1.19442 | 1.22936 | 1.22936 | 0.010 | 2.92595 | 20.00000 | Averaged | |
| 95 1,1,1,2-Tetrachloroethane | 0.71629 | 0.64307 | 0.64307 | 0.010 | -10.22133 | 20.00000 | Averaged | |
| 96 p,m-Xylene | 95.48586 | 100 | 1.49247 | 0.010 | -4.51414 | 20.00000 | Linear | |
| 98 o-Xylene | 43.53483 | 50.00000 | 1.13934 | 0.010 | -12.93034 | 20.00000 | Linear | |
| M 120 TOTAL XYLENE | 139 | 150 | 1.37476 | 0.010 | -7.31954 | 20.00000 | Linear | |
| 99 Styrene | 44.98656 | 50.00000 | 1.87527 | 0.010 | -10.02688 | 20.00000 | Linear | |
| 100 Bromoform ++ | 0.32603 | 0.31432 | 0.31432 | 0.100 | -3.58999 | 20.00000 | Averaged | |
| 102 Isopropylbenzene | 45.73806 | 50.00000 | 3.48976 | 0.010 | -8.52387 | 20.00000 | Linear | |
| $ 103 Bromofluorobenzene | 0.68383 | 0.67880 | 0.67880 | 0.010 | -0.73521 | 20.00000 | Averaged | |
| 104 Bromobenzene | 1.33687 | 1.24108 | 1.24108 | 0.010 | -7.16481 | 20.00000 | Averaged | |
| 106 n-Propylbenzene | 46.72619 | 50.00000 | 4.56587 | 0.010 | -6.54762 | 20.00000 | Linear | |
| 107 1,1,2,2-Tetrachloroethane++ | 0.51066 | 0.48190 | 0.48190 | 0.300 | -5.63212 | 20.00000 | Averaged | |
| 108 2-Chlorotoluene | 2.33720 | 2.34577 | 2.34577 | 0.010 | 0.36684 | 20.00000 | Averaged | |
| 110 1,3,5-Trimethylbenzene | 47.36831 | 50.00000 | 3.10793 | 0.010 | -5.26337 | 20.00000 | Linear | |
| 109 1,2,3-Trichloropropane | 0.39113 | 0.35484 | 0.35484 | 0.010 | -9.27871 | 20.00000 | Averaged | |

GCAL, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: msv7.i Injection Date: 26-OCT-2013 08:02
Lab File ID: f2918.d Init. Cal. Date(s): 25-OCT-2013 25-OCT-2013
Analysis Type: SOIL Init. Cal. Times: 12:24 14:34
Lab Sample ID: 1400 Quant Type: ISTD
Method: /var/chem/msv7.i/2131026.s.b/8260DODs7.m

| COMPOUND | RRF / AMOUNT | RF50 | CCAL RRF50 | MIN RRF | %D / %DRIFT | MAX %D / %DRIFT | CURVE TYPE |
|---|---|---|---|---|---|---|---|
| 111 trans-1,4-Dichloro-2-Butene | 46.06148 | 50.00000 | 0.07039 | 0.010 | -7.87704 | 20.00000 | Linear |
| 112 4-Chlorotoluene | 47.10386 | 50.00000 | 2.41610 | 0.010 | -5.79228 | 20.00000 | Linear |
| 113 tert-butylbenzene | 44.97041 | 50.00000 | 1.60706 | 0.010 | -10.05918 | 20.00000 | Linear |
| 114 1,2,4-Trimethylbenzene | 46.82758 | 50.00000 | 2.96824 | 0.010 | -6.34484 | 20.00000 | Linear |
| 115 sec-Butylbenzene | 47.54988 | 50.00000 | 4.44691 | 0.010 | -4.90025 | 20.00000 | Linear |
| 116 p-Isopropyltoluene | 46.25237 | 50.00000 | 3.47212 | 0.010 | -7.49526 | 20.00000 | Linear |
| 117 1,3-Dichlorobenzene | 1.79048 | 1.78102 | 1.78102 | 0.010 | -0.52836 | 20.00000 | Averaged |
| 119 1,4-Dichlorobenzene | 1.79198 | 1.72345 | 1.72345 | 0.010 | -3.82393 | 20.00000 | Averaged |
| 121 n-Butylbenzene | 46.32325 | 50.00000 | 3.30946 | 0.010 | -7.35350 | 20.00000 | Linear |
| 122 1,2-Dichlorobenzene | 1.50740 | 1.43209 | 1.43209 | 0.010 | -4.99633 | 20.00000 | Averaged |
| 125 1,2-Dibromo-3-Chloropropane | 0.08000 | 0.07315 | 0.07315 | 0.010 | -8.56550 | 20.00000 | Averaged |
| 126 Hexachlorobutadiene | 0.79585 | 0.76705 | 0.76705 | 0.010 | -3.61846 | 20.00000 | Averaged |
| 127 1,2,4-Trichlorobenzene | 43.79661 | 50.00000 | 0.87827 | 0.010 | -12.40678 | 20.00000 | Linear |
| 128 Napthalene | 43.74587 | 50.00000 | 1.08377 | 0.010 | -12.50827 | 20.00000 | Linear |
| 129 1,2,3-Trichlorobenzene | 44.17638 | 50.00000 | 0.75564 | 0.010 | -11.64724 | 20.00000 | Linear |

Data File: /var/chem/msv7.i/2131026.s.b/f2916.d



Date : 26-OCT-2013 06:52

Client ID: V5BFB

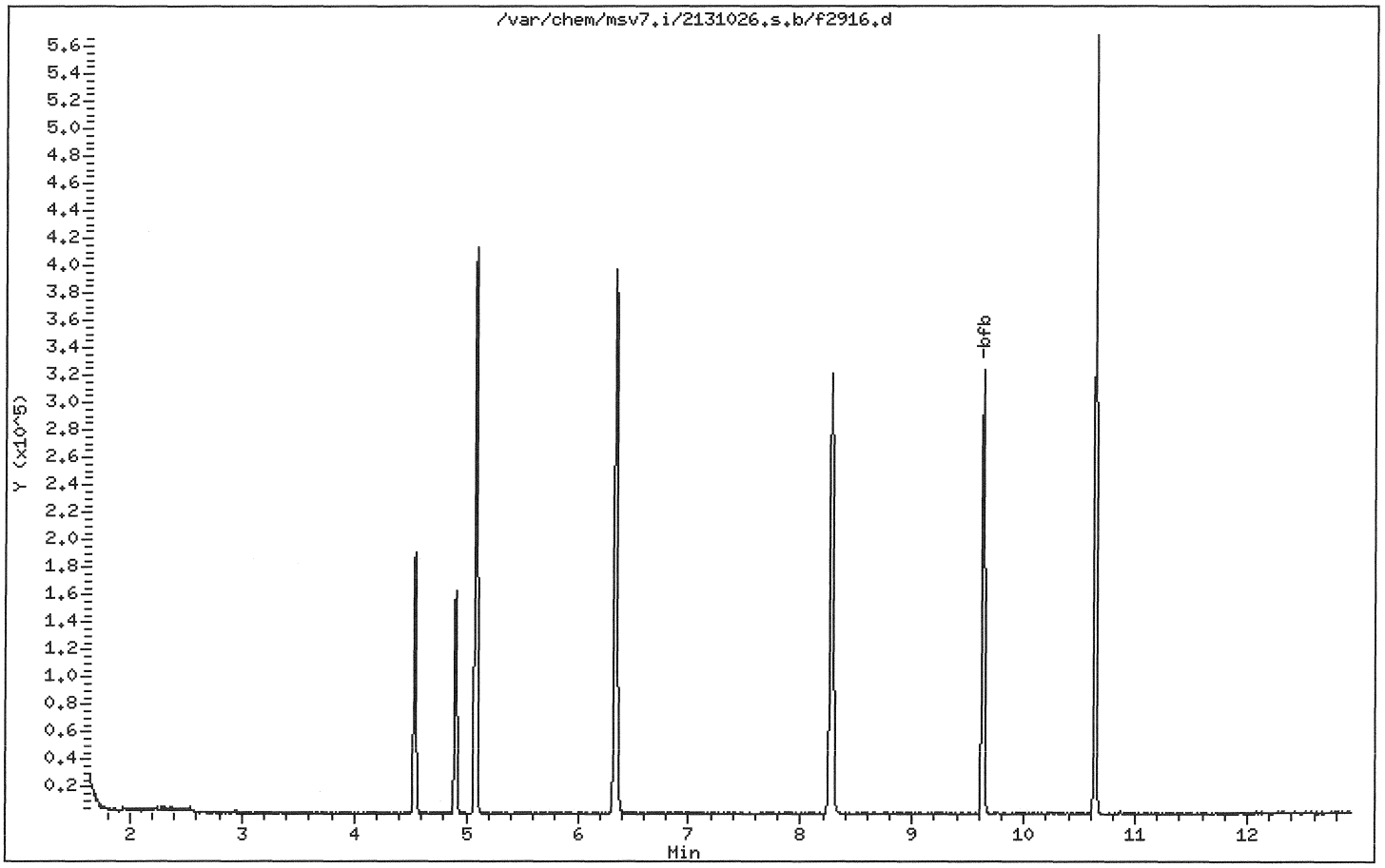
Instrument: msv7.i

Sample Info: 1000xV5BFB

Operator: LBH

Column phase: RTX-VMS-30M

Column diameter: 0.25



Data File: /var/chem/msv7.i/2131026.s.b/f2916.d



Date : 26-OCT-2013 06:52

Client ID: V5BFB

Instrument: msv7.i

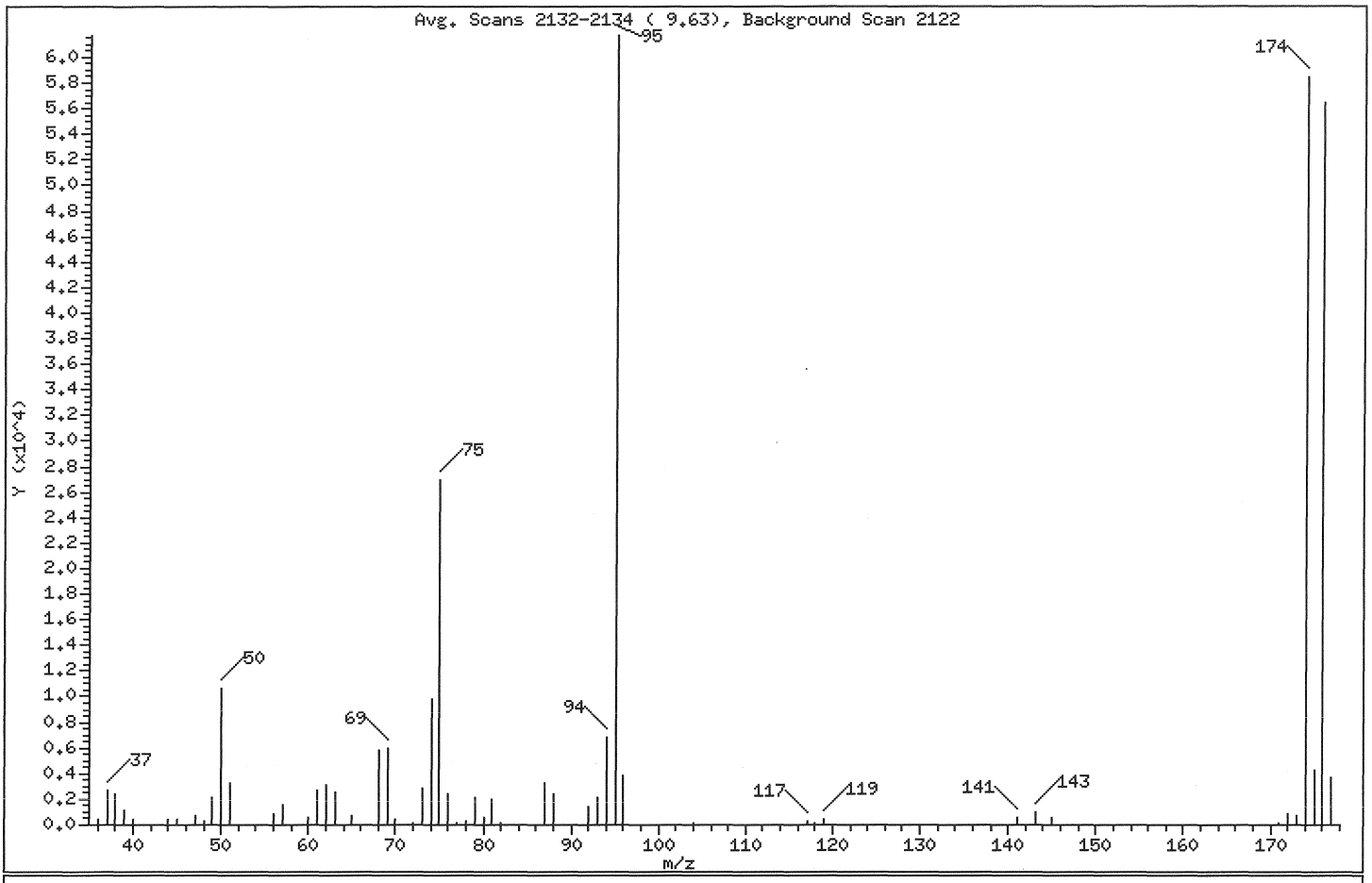
Sample Info: 1000*V5BFB

Operator: LBH

Column phase: RTX-VMS-30M

Column diameter: 0.25

1 bfb




| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 95 | Base Peak, 100% relative abundance | 100.00 |
| 50 | 15.00 - 40.00% of mass 95 | 17.27 |
| 75 | 30.00 - 60.00% of mass 95 | 43.71 |
| 96 | 5.00 - 9.00% of mass 95 | 6.30 |
| 173 | Less than 2.00% of mass 174 | 1.20 ( 1.26) |
| 174 | 50.00 - 120.00% of mass 95 | 94.71 |
| 175 | 5.00 - 9.00% of mass 174 | 6.82 ( 7.20) |
| 176 | 95.00 - 101.00% of mass 174 | 91.39 ( 96.50) |
| 177 | 5.00 - 9.00% of mass 176 | 6.09 ( 6.66) |

Data File: /var/chem/msv7.i/2131026.s.b/f2916.d

Date : 26-OCT-2013 06:52

Client ID: V5BFB

Instrument: msv7.i

Sample Info: 1000*V5BFB

Operator: LBH

Column phase: RTX-VMS-30M

Column diameter: 0.25

Data File: f2916.d

Spectrum: Avg. Scans 2132-2134 ( 9.63), Background Scan 2122

Location of Maximum: 95.00

Number of points: 54

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 36.00 | 367 | 60.00 | 636 | 78.00 | 346 | 118.00 | 145 |
| 37.00 | 2705 | 61.00 | 2699 | 79.00 | 2142 | 119.00 | 385 |
| 38.00 | 2407 | 62.00 | 3145 | 80.00 | 615 | 141.00 | 564 |
| 39.00 | 1192 | 63.00 | 2588 | 81.00 | 2008 | 143.00 | 987 |
| 40.00 | 364 | 65.00 | 652 | 82.00 | 182 | 145.00 | 523 |
| 44.00 | 428 | 68.00 | 5760 | 87.00 | 3272 | 171.00 | 177 |
| 45.00 | 363 | 69.00 | 5977 | 88.00 | 2450 | 172.00 | 844 |
| 47.00 | 774 | 70.00 | 358 | 92.00 | 1467 | 173.00 | 739 |
| 48.00 | 332 | 72.00 | 190 | 93.00 | 2198 | 174.00 | 58424 |
| 49.00 | 2126 | 73.00 | 2831 | 94.00 | 6796 | 175.00 | 4207 |
| 50.00 | 10656 | 74.00 | 9721 | 95.00 | 61688 | 176.00 | 56384 |
| 51.00 | 3266 | 75.00 | 26960 | 96.00 | 3888 | 177.00 | 3756 |
| 56.00 | 851 | 76.00 | 2472 | 104.00 | 167 | | |
| 57.00 | 1557 | 77.00 | 177 | 117.00 | 275 | | |

GCAL, Inc.

Data file : /var/chem/msv7.i/2131026.s.b/f2918.d
Lab Smp Id: 1400 Client Smp ID: V7STD050
Inj Date : 26-OCT-2013 08:02
Operator : LBH Inst ID: msv7.i
Smp Info : 1400*V7STD050
Misc Info : MSV~28853~*1*LBH
Comment :
Method : /var/chem/msv7.i/2131026.s.b/8260DODs7.m
Meth Date : 26-Oct-2013 13:22 lbh Quant Type: ISTD
Cal Date : 25-OCT-2013 14:34 Cal File: f2891d.d
Als bottle: 38 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * (Uf/Ws)/((100-M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 5.00000 | ng unit correction factor |
| Ws | 5.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture (not decanted) |
| Va | 100.00000 | Volume of aliquot extract added (uL) |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppb) | AMOUNTS ON-COL ( ppb) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|
| 1 Dichlorodifluoromethane | 85 | 1.727 | 1.727 | (0.340) | 97371 | 50.0000 | 46.7 | 0(M1) |
| 2 Chloromethane ++ | 50 | 1.911 | 1.911 | (0.376) | 85622 | 50.0000 | 44.8 | 8979 |
| 3 Vinyl Chloride + | 62 | 1.986 | 1.986 | (0.391) | 138243 | 50.0000 | 47.5 | 9408 |
| 6 Bromomethane | 94 | 2.285 | 2.285 | (0.450) | 67181 | 50.0000 | 48.8 | 8780 |
| 8 Chloroethane | 64 | 2.394 | 2.394 | (0.471) | 73538 | 50.0000 | 48.3 | 8128 |
| 9 Trichlorofluoromethane | 101 | 2.507 | 2.507 | (0.493) | 153968 | 50.0000 | 49.8 | 9155 |
| 12 1,1-Dichloroethene + | 96 | 2.915 | 2.915 | (0.574) | 94162 | 50.0000 | 49.6 | 8044 |
| 15 1,1,2Trichlotrifluoroethane | 101 | 2.938 | 2.938 | (0.578) | 101853 | 50.0000 | 51.8 | 7110 |
| 14 Carbon Disulfide | 76 | 2.941 | 2.941 | (0.579) | 346918 | 50.0000 | 48.9 | 7183 |
| 16 Methyl Iodide | 142 | 3.031 | 3.031 | (0.597) | 84629 | 50.0000 | 48.2 | 9163 |
| 17 Acrolein | 56 | 3.174 | 3.174 | (0.625) | 12308 | 250.000 | 245 | 8466 |
| 18 Methylene Chloride | 49 | 3.343 | 3.343 | (0.658) | 104609 | 50.0000 | 49.5 | 9256 |
| 19 Acetone | 43 | 3.380 | 3.380 | (0.665) | 19129 | 50.0000 | 48.2 | 7655 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppb) | AMOUNTS ON-COL ( ppb) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|---|
| | 13 trans-1,2-Dichloroethene | 61 | 3.451 | 3.451 | (0.679) | 132943 | 50.0000 | 47.7 | 6976 |
| | 22 Methyl Acetate | 43 | 3.459 | 3.459 | (0.681) | 25010 | 50.0000 | 54.5 | 1907(M1) |
| | 23 Hexane | 57 | 3.496 | 3.496 | (0.688) | 173193 | 50.0000 | 48.5 | 9014 |
| | 25 MTBE | 73 | 3.526 | 3.526 | (0.694) | 115706 | 50.0000 | 47.2 | 8724 |
| | 31 1,1-Dichloroethane ++ | 63 | 3.882 | 3.882 | (0.764) | 131151 | 50.0000 | 44.9 | 9387 |
| | 33 Acrylonitrile | 53 | 3.931 | 3.931 | (0.774) | 40744 | 250.000 | 243 | 9219 |
| | 34 Vinyl Acetate | 43 | 4.036 | 4.036 | (0.794) | 28140 | 50.0000 | 61.8 | |
| | 21 cis-1,2-Dichloroethene | 61 | 4.242 | 4.242 | (0.835) | 83495 | 50.0000 | 46.7 | 8709 |
| M | 68 Total 1,2-Dichloroethene | 61 | | | | 216438 | 100.000 | 94.4 | 0 |
| | 35 2,2-Dichloropropane | 77 | 4.321 | 4.321 | (0.850) | 106634 | 50.0000 | 47.7 | 8580 |
| | 38 Cyclohexane | 56 | 4.377 | 4.377 | (0.861) | 123008 | 50.0000 | 46.7 | 9092 |
| | 39 Bromochloromethane | 128 | 4.381 | 4.381 | (0.862) | 31157 | 50.0000 | 48.5 | 8406 |
| | 40 Chloroform + | 83 | 4.415 | 4.415 | (0.869) | 135893 | 50.0000 | 47.1 | 8819 |
| | 41 Carbon Tetrachloride | 117 | 4.520 | 4.520 | (0.889) | 106224 | 50.0000 | 48.1 | 9162 |
| $ | 42 Dibromofluoromethane | 111 | 4.542 | 4.542 | (0.894) | 60825 | 50.0000 | 49.4 | 8351 |
| | 43 1,1,1-Trichloroethane | 97 | 4.565 | 4.565 | (0.898) | 122165 | 50.0000 | 50.0 | 7046 |
| | 45 2-Butanone | 43 | 4.625 | 4.625 | (0.910) | 13324 | 50.0000 | 50.0 | |
| | 44 1,1-Dichloropropene | 75 | 4.643 | 4.643 | (0.914) | 99798 | 50.0000 | 49.9 | 7458 |
| | 48 Benzene | 78 | 4.812 | 4.812 | (0.947) | 306153 | 50.0000 | 49.0 | 9199 |
| $ | 50 1,2-Dichloroethane-d4 | 67 | 4.906 | 4.906 | (0.965) | 23786 | 50.0000 | 47.9 | 9262 |
| | 52 1,2-Dichloroethane | 62 | 4.947 | 4.947 | (0.973) | 59295 | 50.0000 | 47.7 | 9555 |
| * | 54 FLUOROBENZENE | 96 | 5.082 | 5.082 | (1.000) | 248473 | 50.0000 | | 9322 |
| | 56 Methyl cyclohexane | 83 | 5.194 | 5.194 | (1.022) | 145037 | 50.0000 | 52.0 | 7691 |
| | 57 Trichloroethene | 130 | 5.198 | 5.198 | (1.023) | 94733 | 50.0000 | 47.8 | 9257 |
| | 62 Dibromomethane | 93 | 5.517 | 5.517 | (1.086) | 27951 | 50.0000 | 48.9 | 9175 |
| | 63 1,2-Dichloropropane + | 63 | 5.588 | 5.588 | (1.100) | 60141 | 50.0000 | 46.4 | 9045 |
| | 64 Bromodichloromethane | 83 | 5.625 | 5.625 | (1.107) | 79091 | 50.0000 | 46.9 | 9308 |
| | 69 1-Bromo-2-chloroethane | 63 | 6.045 | 6.045 | (1.190) | 55255 | 50.0000 | 47.3 | 8636 |
| | 70 2-Chloroethyl vinyl ether | 63 | 5.588 | 5.588 | (1.100) | 60141 | 50.0000 | | 5103 |
| | 72 cis-1,3-Dichloropropene | 75 | 6.162 | 6.162 | (1.212) | 74300 | 50.0000 | 43.8 | |
| $ | 74 Toluene-d8 | 98 | 6.341 | 6.341 | (0.767) | 234764 | 50.0000 | 47.0 | 9357 |
| | 77 Toluene + | 91 | 6.394 | 6.394 | (0.773) | 327665 | 50.0000 | 45.2 | 9448 |
| | 79 4-methyl-2-pentanone | 43 | 6.776 | 6.776 | (0.819) | 17258 | 50.0000 | 40.3 | |
| | 78 Tetrachloroethene | 164 | 6.799 | 6.799 | (0.822) | 76607 | 50.0000 | 46.2 | 9351 |
| | 81 trans-1,3-Dichloropropene | 75 | 6.825 | 6.825 | (1.343) | 60123 | 50.0000 | 43.3 | |
| M | 71 1-3 Dichloropropene-Total | 100 | | | | 134423 | 100.000 | 87.2 | 0 |
| | 82 1,1,2-Trichloroethane | 97 | 7.016 | 7.016 | (0.848) | 40093 | 50.0000 | 46.0 | 9364 |
| | 85 Dibromochloromethane | 129 | 7.241 | 7.241 | (0.875) | 48864 | 50.0000 | 46.6 | 9153 |
| | 86 1,3-Dichloropropane | 76 | 7.369 | 7.369 | (0.891) | 62264 | 50.0000 | 44.9 | 8891 |
| | 88 1,2-Dibromoethane(EDB) | 107 | 7.571 | 7.571 | (0.915) | 34180 | 50.0000 | 47.3 | 8925 |
| | 80 2-Hexanone | 43 | 7.875 | 7.875 | (0.952) | 13833 | 50.0000 | 44.9 | 8396 |
| | 91 1-Chlorohexane | 91 | 8.265 | 8.265 | (0.999) | 95780 | 50.0000 | 45.3 | 6325 |
| * | 90 Chlorobenzene-d5 | 82 | 8.272 | 8.272 | (1.000) | 98494 | 50.0000 | | 8406 |
| | 92 Chlorobenzene ++ | 112 | 8.298 | 8.298 | (1.003) | 212870 | 50.0000 | 47.8 | 6578 |
| | 93 Ethylbenzene + | 106 | 8.328 | 8.328 | (1.007) | 121085 | 50.0000 | 51.5 | 9462 |
| | 95 1,1,1,2-Tetrachloroethane | 133 | 8.373 | 8.373 | (1.012) | 63339 | 50.0000 | 44.9 | 8450 |
| | 96 p,m-Xylene | 106 | 8.512 | 8.512 | (1.029) | 293999 | 100.000 | 95.5 | 9336 |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppb) | AMOUNTS ON-COL ( ppb) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|
| 98 o-Xylene | 106 | 9.014 | 9.014 | (1.090) | 112218 | 50.0000 | 43.5 | |
| M 120 TOTAL XYLENE | 106 | | | | 406217 | 150.000 | 139 | 0 |
| 99 Styrene | 104 | 9.070 | 9.070 | (1.097) | 184703 | 50.0000 | 45.0 | 9009 |
| 100 Bromoform ++ | 173 | 9.093 | 9.093 | (1.099) | 30959 | 50.0000 | 48.2 | 6760 |
| 102 Isopropylbenzene | 105 | 9.348 | 9.348 | (1.130) | 343720 | 50.0000 | 45.7 | 9524 |
| $ 103 Bromofluorobenzene | 174 | 9.629 | 9.629 | (1.164) | 66858 | 50.0000 | 49.6 | 9240 |
| 104 Bromobenzene | 77 | 9.730 | 9.730 | (0.915) | 125106 | 50.0000 | 46.4 | 9119 |
| 106 n-Propylbenzene | 91 | 9.760 | 9.760 | (0.918) | 460258 | 50.0000 | 46.7 | 9365 |
| 107 1,1,2,2-Tetrachloroethane++ | 83 | 9.828 | 9.828 | (0.924) | 48577 | 50.0000 | 47.2 | 9482 |
| 108 2-Chlorotoluene | 91 | 9.906 | 9.906 | (0.931) | 236463 | 50.0000 | 50.2 | 9491 |
| 110 1,3,5-Trimethylbenzene | 105 | 9.951 | 9.951 | (0.935) | 313292 | 50.0000 | 47.4 | |
| 109 1,2,3-Trichloropropane | 75 | 9.951 | 9.951 | (0.935) | 35769 | 50.0000 | 45.4 | 8226 |
| 111 trans-1,4-Dichloro-2-Butene | 53 | 10.000 | 10.000 | (0.940) | 7096 | 50.0000 | 46.1 | 8599 |
| 112 4-Chlorotoluene | 91 | 10.060 | 10.060 | (0.946) | 243553 | 50.0000 | 47.1 | 9581 |
| 113 tert-butylbenzene | 91 | 10.236 | 10.236 | (0.962) | 161998 | 50.0000 | 45.0 | 9366 |
| 114 1,2,4-Trimethylbenzene | 105 | 10.300 | 10.300 | (0.968) | 299210 | 50.0000 | 46.8 | |
| 115 sec-Butylbenzene | 105 | 10.390 | 10.390 | (0.977) | 448266 | 50.0000 | 47.5 | |
| 116 p-Isopropyltoluene | 119 | 10.517 | 10.517 | (0.989) | 350004 | 50.0000 | 46.3 | 9470 |
| 117 1,3-Dichlorobenzene | 146 | 10.574 | 10.574 | (0.994) | 179534 | 50.0000 | 49.7 | |
| * 118 1,4-DICHLOROBENZENE-D4 | 152 | 10.637 | 10.637 | (1.000) | 100804 | 50.0000 | | 9414 |
| 119 1,4-Dichlorobenzene | 146 | 10.649 | 10.649 | (1.001) | 173731 | 50.0000 | 48.1 | |
| 121 n-Butylbenzene | 91 | 10.866 | 10.866 | (1.021) | 333607 | 50.0000 | 46.3 | 9579 |
| 122 1,2-Dichlorobenzene | 146 | 10.994 | 10.994 | (1.033) | 144360 | 50.0000 | 47.5 | |
| 125 1,2-Dibromo-3-Chloropropane | 157 | 11.608 | 11.608 | (1.091) | 7374 | 50.0000 | 45.7 | 8758 |
| 126 Hexachlorobutadiene | 225 | 12.058 | 12.058 | (1.134) | 77322 | 50.0000 | 48.2 | 9406 |
| 127 1,2,4-Trichlorobenzene | 180 | 12.081 | 12.081 | (1.136) | 88533 | 50.0000 | 43.8 | |
| 128 Napthalene | 128 | 12.313 | 12.313 | (1.158) | 109248 | 50.0000 | 43.7 | 9181 |
| 129 1,2,3-Trichlorobenzene | 180 | 12.441 | 12.441 | (1.169) | 76172 | 50.0000 | 44.2 | |

QC Flag Legend

M1- Compound response manually integrated because
Target system did not integrate.

Data File: /var/chem/msv7.i/2131026.s.b/f2918.d

Date : 26-OCT-2013 08:02

Client ID: V7STD050

Sample Info: 1400*V7STD050

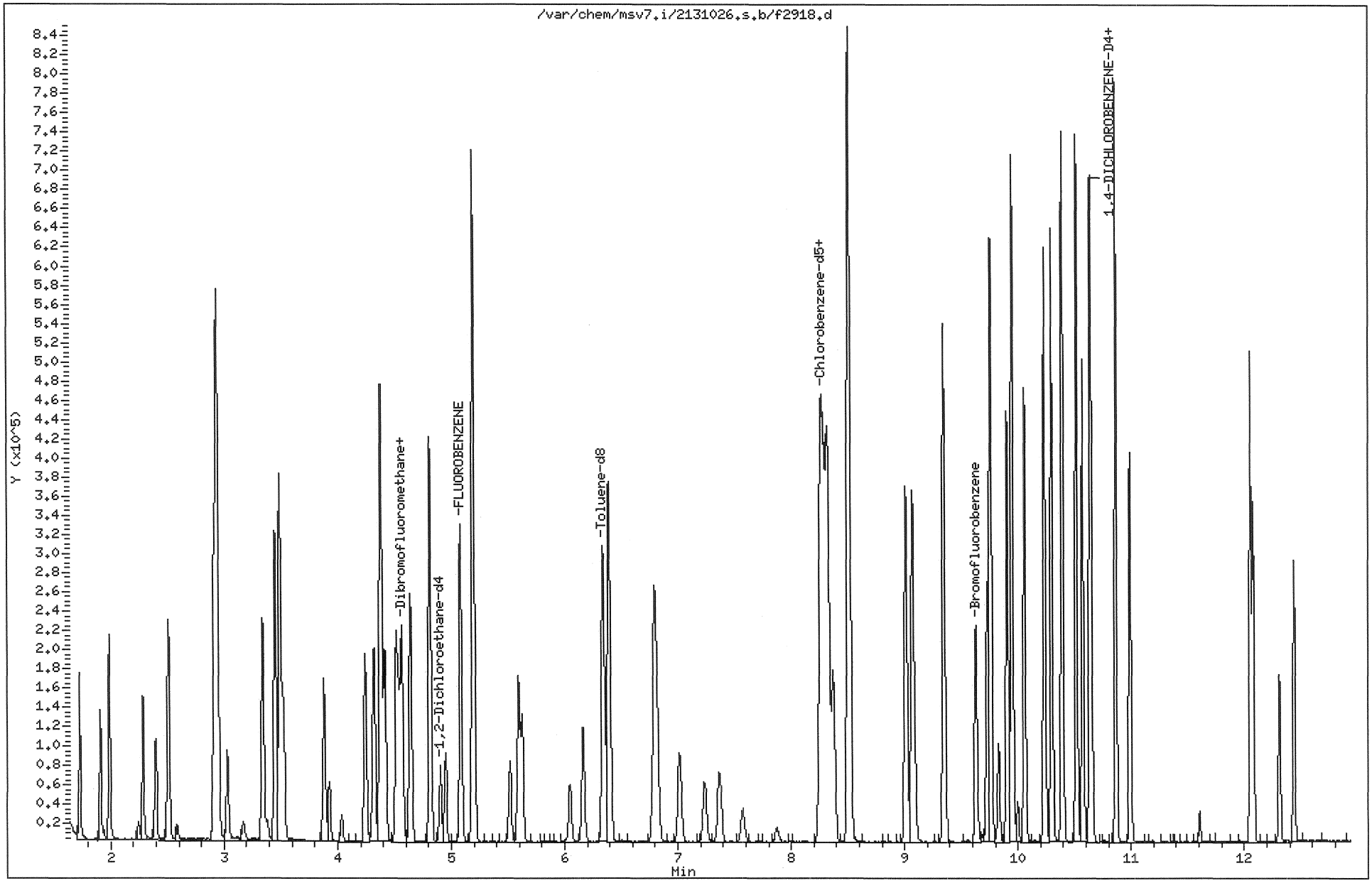
Column phase: RTX-VMS-30M

Instrument: msv7.i

Operator: LBH

Column diameter: 0.25

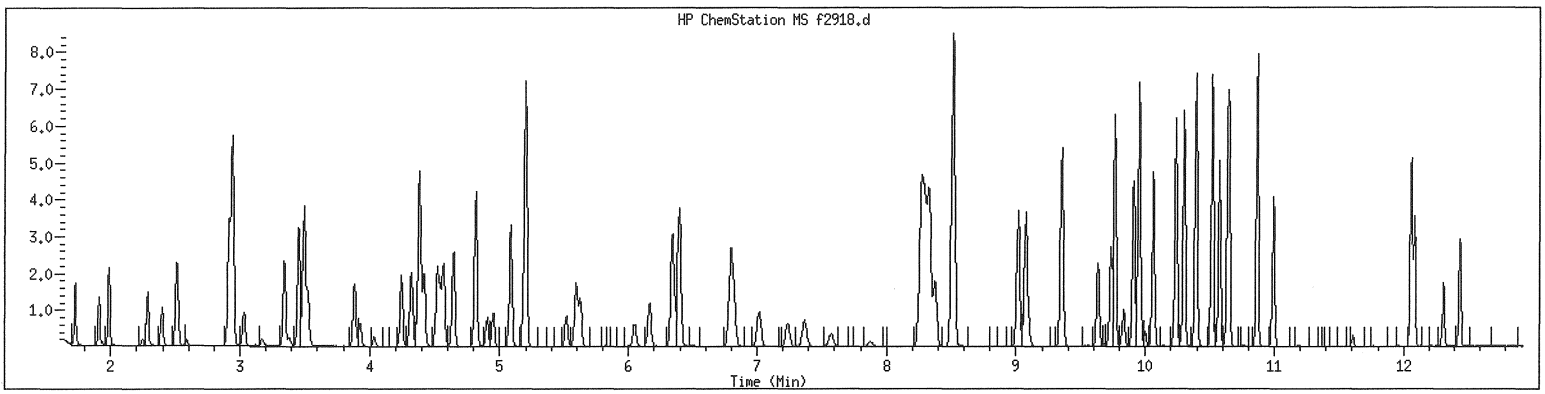





2131026172 136

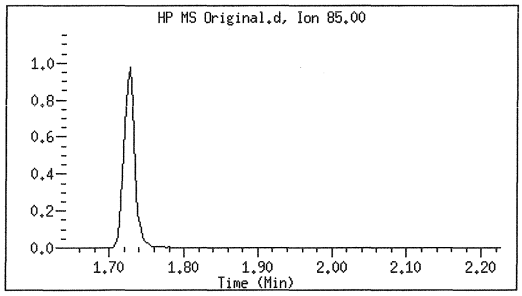
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1400 | SampleType | : CCALIB_5 |
| Injection Date | : 10/26/2013 08:02 | Instrument | : msv7.i |
| Operator | : LBH | | |
| Sample Info | : 1400*V7STD050 | | |
| Misc Info | : MSV~28853~*1*LBH | | |
| Method | : /var/chem/msv7.i/2131026.s.b/8260DODs7.m | | |
| Dilution | : 1.00 | | |
| Matrix | : SOIL | | |
| Integrator | : HP RTE | Compound Sublist | : 8260b |



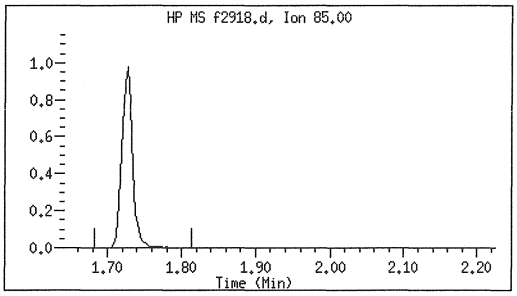

Original Final

1 Dichlorodifluoromethane CAS#: 75-71-8 Reason: M1

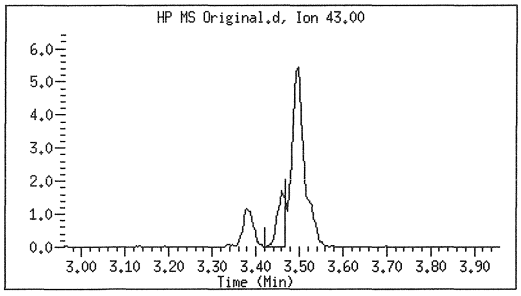



Electronic Signature Applied

User: lbh
Date: 10/26/2013 08:15

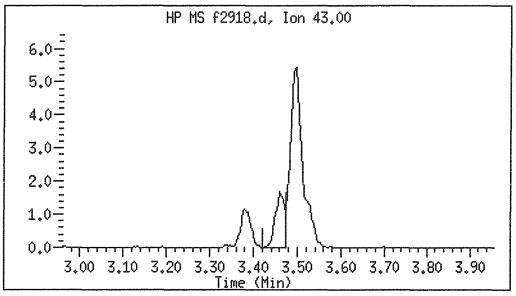



22 Methyl Acetate CAS#: 79-20-9 Reason: M1




Electronic Signature Applied

User: lbh
Date: 10/26/2013 08:15



1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MB1248036

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Matrix: (soil/water) Solid

Sample wt/vol: 5 (g/ml) g Lab Sample ID: 1248036

Level: (low/med) Lab File ID: 2131025/f2898

% Moisture: not dec. Date Collected: Time:

GC Column: RTX-VMS-30 ID: .25 (mm) Date Received:

Instrument ID: MSV7 Date Analyzed: 10/25/13 Time: 1735

Soil Extract Volume: ( µL ) Dilution Factor: 1 Analyst: CEK

Soil Aliquot Volume: ( µL ) Prep Batch: Analytical Batch: 518589

*CONCENTRATION UNITS: ug/kg* Analytical Method: SW-846 8260B

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 67-64-1 | Acetone | 2.00 | U | 0.296 | 2.00 | 25.0 |
| 75-27-4 | Bromodichloromethane | 0.500 | U | 0.104 | 0.500 | 5.00 |
| 75-25-2 | Bromoform | 0.500 | U | 0.437 | 0.500 | 5.00 |
| 74-83-9 | Bromomethane | 2.00 | U | 0.486 | 2.00 | 5.00 |
| 75-15-0 | Carbon disulfide | 0.500 | U | 0.187 | 0.500 | 5.00 |
| 56-23-5 | Carbon tetrachloride | 0.500 | U | 0.189 | 0.500 | 5.00 |
| 75-00-3 | Chloroethane | 0.500 | U | 0.202 | 0.500 | 5.00 |
| 67-66-3 | Chloroform | 0.500 | U | 0.172 | 0.500 | 5.00 |
| 74-87-3 | Chloromethane | 2.00 | U | 0.193 | 2.00 | 5.00 |
| 124-48-1 | Dibromochloromethane | 0.500 | U | 0.250 | 0.500 | 5.00 |
| 75-34-3 | 1,1-Dichloroethane | 0.500 | U | 0.096 | 0.500 | 5.00 |
| 107-06-2 | 1,2-Dichloroethane | 0.500 | U | 0.198 | 0.500 | 5.00 |
| 156-59-2 | cis-1,2-Dichloroethene | 0.500 | U | 0.114 | 0.500 | 5.00 |
| 156-60-5 | trans-1,2-Dichloroethene | 0.500 | U | 0.119 | 0.500 | 5.00 |
| 75-09-2 | Methylene chloride | 1.00 | U | 0.512 | 1.00 | 10.0 |
| 78-87-5 | 1,2-Dichloropropane | 0.500 | U | 0.076 | 0.500 | 5.00 |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.500 | U | 0.129 | 0.500 | 5.00 |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.500 | U | 0.082 | 0.500 | 5.00 |
| 100-41-4 | Ethylbenzene | 0.500 | U | 0.183 | 0.500 | 5.00 |
| 591-78-6 | 2-Hexanone | 2.00 | U | 0.295 | 2.00 | 5.00 |
| 78-93-3 | 2-Butanone | 2.00 | U | 0.323 | 2.00 | 5.00 |
| 108-10-1 | 4-Methyl-2-pentanone | 0.500 | U | 0.154 | 0.500 | 5.00 |
| 100-42-5 | Styrene | 0.500 | U | 0.083 | 0.500 | 5.00 |
| 127-18-4 | Tetrachloroethene | 0.500 | U | 0.296 | 0.500 | 5.00 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.500 | U | 0.175 | 0.500 | 5.00 |
| 71-55-6 | 1,1,1-Trichloroethane | 0.500 | U | 0.162 | 0.500 | 5.00 |
| 79-00-5 | 1,1,2-Trichloroethane | 0.500 | U | 0.064 | 0.500 | 5.00 |
| 75-01-4 | Vinyl chloride | 0.500 | U | 0.194 | 0.500 | 5.00 |
| 1330-20-7 | Xylene (total) | 1.50 | U | 0.247 | 1.50 | 15.0 |
| 75-35-4 | 1,1-Dichloroethene | 0.500 | U | 0.227 | 0.500 | 5.00 |
| 71-43-2 | Benzene | 0.500 | U | 0.051 | 0.500 | 5.00 |

FORM I VOA

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MB1248036

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Matrix: (soil/water) Solid

Sample wt/vol: 5 (g/ml) g Lab Sample ID: 1248036

Level: (low/med) Lab File ID: 2131025/f2898

% Moisture: not dec. Date Collected: Time:

GC Column: RTX-VMS-30 ID: .25 (mm) Date Received:

Instrument ID: MSV7 Date Analyzed: 10/25/13 Time: 1735

Soil Extract Volume: ( µL ) Dilution Factor: 1 Analyst: CEK

Soil Aliquot Volume: ( µL ) Prep Batch: Analytical Batch: 518589

*CONCENTRATION UNITS: ug/kg* Analytical Method: SW-846 8260B

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 79-01-6 | Trichloroethene | 0.500 | U | 0.127 | 0.500 | 5.00 |
| 108-88-3 | Toluene | 0.500 | U | 0.107 | 0.500 | 5.00 |
| 108-90-7 | Chlorobenzene | 0.500 | U | 0.129 | 0.500 | 5.00 |

FORM I VOA

GCAL, Inc.

Data file : /var/chem/msv7.i/2131025.s.b/f2898.d
Lab Smp Id: 1248036 Client Smp ID: MB
Inj Date : 25-OCT-2013 17:35
Operator : CEK Inst ID: msv7.i
Smp Info : 1248036*MB
Misc Info : MSV~28849~*1*CEK
Comment :
Method : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Meth Date : 25-Oct-2013 19:43 cek Quant Type: ISTD
Cal Date : 25-OCT-2013 14:34 Cal File: f2891d.d
Als bottle: 15 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * (Uf/Ws)/((100-M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 5.00000 | ng unit correction factor |
| Ws | 5.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture (not decanted) |
| Va | 100.00000 | Volume of aliquot extract added (uL) |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppb) | FINAL (ug/Kg) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|
| $ 42 Dibromofluoromethane | 111 | 4.538 | 4.542 | (0.893) | 57127 | 49.8951 | 49.9 | 7402 |
| $ 50 1,2-Dichloroethane-d4 | 67 | 4.906 | 4.906 | (0.965) | 24057 | 52.1353 | 52.1 | 9290 |
| * 54 FLUOROBENZENE | 96 | 5.082 | 5.086 | (1.000) | 231060 | 50.0000 | | 9304 |
| $ 74 Toluene-d8 | 98 | 6.341 | 6.341 | (0.767) | 209119 | 55.5428 | 55.5 | 9462 |
| * 90 Chlorobenzene-d5 | 82 | 8.272 | 8.279 | (1.000) | 74226 | 50.0000 | | 5904 |
| $ 103 Bromofluorobenzene | 174 | 9.633 | 9.633 | (1.165) | 50347 | 49.5951 | 49.6 | 9444 |
| * 118 1,4-DICHLOROBENZENE-D4 | 152 | 10.637 | 10.637 | (1.000) | 68213 | 50.0000 | | 7814 |

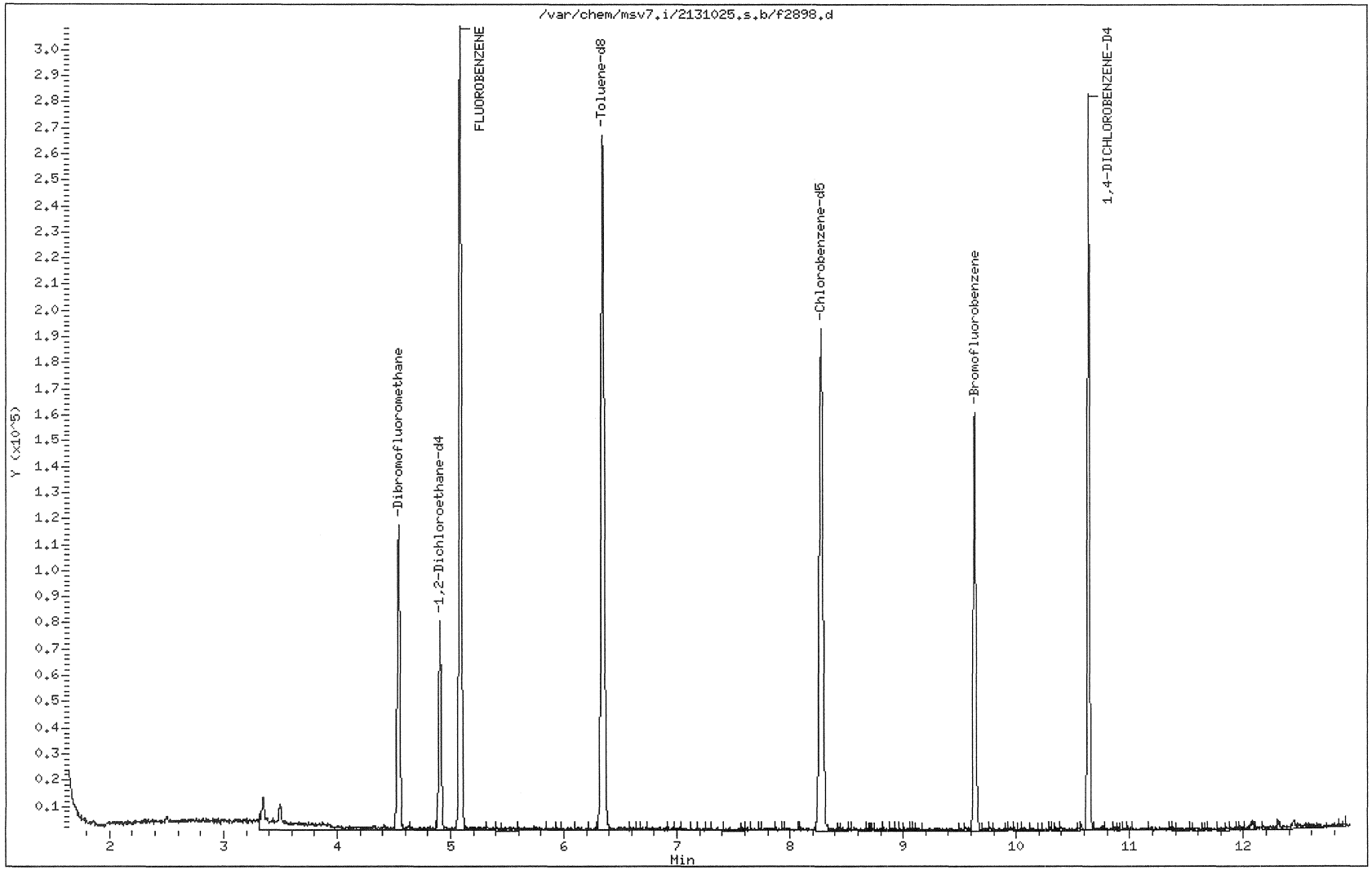
Data File: /var/chem/msv7.i/2131025.s.b/f2898.d
Date : 25-OCT-2013 17:35
Client ID: MB
Sample Info: 1248036*MB

Column phase: RTX-VMS-30M

Instrument: msv7.i

Operator: CEK
Column diameter: 0.25

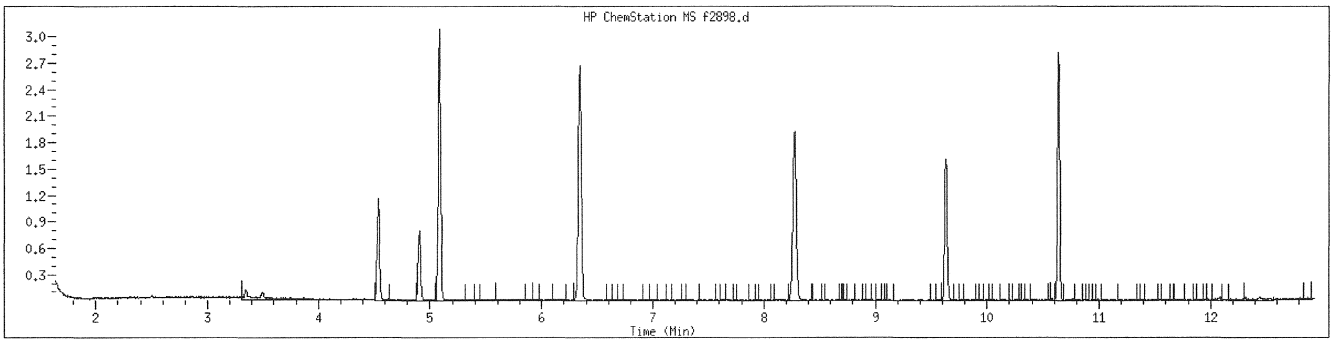




Data file : /var/chem/msv7.i/2131025.s.b/f2898.d Page: 1
Report Date: 10/25/2013 19:56

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 1248036 SampleType : BLANK
Injection Date: 10/25/2013 17:35 Instrument : msv7.i
Operator : CEK
Sample Info : 1248036*MB
Misc Info : MSV~28849~*1*CEK
Method : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Dilution : 1.00
Matrix : SOIL
Integrator : HP RTE Compound Sublist: 8260b




NO MANUAL INTEGRATIONS

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MB1248094

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Matrix: (soil/water) Solid

Sample wt/vol: 5 (g/ml) g Lab Sample ID: 1248094

Level: (low/med) Lab File ID: 2131026/f2923

% Moisture: not dec. Date Collected: Time:

GC Column: RTX-VMS-30 ID: .25 (mm) Date Received:

Instrument ID: MSV7 Date Analyzed: 10/26/13 Time: 0950

Soil Extract Volume: ( µL ) Dilution Factor: 1 Analyst: LBH

Soil Aliquot Volume: ( µL ) Prep Batch: Analytical Batch: 518604

*CONCENTRATION UNITS: ug/kg* Analytical Method: SW-846 8260B

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 67-64-1 | Acetone | 2.00 | U | 0.296 | 2.00 | 25.0 |
| 75-27-4 | Bromodichloromethane | 0.500 | U | 0.104 | 0.500 | 5.00 |
| 75-25-2 | Bromoform | 0.500 | U | 0.437 | 0.500 | 5.00 |
| 74-83-9 | Bromomethane | 2.00 | U | 0.486 | 2.00 | 5.00 |
| 75-15-0 | Carbon disulfide | 0.500 | U | 0.187 | 0.500 | 5.00 |
| 56-23-5 | Carbon tetrachloride | 0.500 | U | 0.189 | 0.500 | 5.00 |
| 75-00-3 | Chloroethane | 0.500 | U | 0.202 | 0.500 | 5.00 |
| 67-66-3 | Chloroform | 0.500 | U | 0.172 | 0.500 | 5.00 |
| 74-87-3 | Chloromethane | 2.00 | U | 0.193 | 2.00 | 5.00 |
| 124-48-1 | Dibromochloromethane | 0.500 | U | 0.250 | 0.500 | 5.00 |
| 75-34-3 | 1,1-Dichloroethane | 0.500 | U | 0.096 | 0.500 | 5.00 |
| 107-06-2 | 1,2-Dichloroethane | 0.500 | U | 0.198 | 0.500 | 5.00 |
| 156-59-2 | cis-1,2-Dichloroethene | 0.500 | U | 0.114 | 0.500 | 5.00 |
| 156-60-5 | trans-1,2-Dichloroethene | 0.500 | U | 0.119 | 0.500 | 5.00 |
| 75-09-2 | Methylene chloride | 1.00 | U | 0.512 | 1.00 | 10.0 |
| 78-87-5 | 1,2-Dichloropropane | 0.500 | U | 0.076 | 0.500 | 5.00 |
| 10061-01-5 | cis-1,3-Dichloropropene | 0.500 | U | 0.129 | 0.500 | 5.00 |
| 10061-02-6 | trans-1,3-Dichloropropene | 0.500 | U | 0.082 | 0.500 | 5.00 |
| 100-41-4 | Ethylbenzene | 0.500 | U | 0.183 | 0.500 | 5.00 |
| 591-78-6 | 2-Hexanone | 2.00 | U | 0.295 | 2.00 | 5.00 |
| 78-93-3 | 2-Butanone | 2.00 | U | 0.323 | 2.00 | 5.00 |
| 108-10-1 | 4-Methyl-2-pentanone | 0.500 | U | 0.154 | 0.500 | 5.00 |
| 100-42-5 | Styrene | 0.500 | U | 0.083 | 0.500 | 5.00 |
| 127-18-4 | Tetrachloroethene | 0.500 | U | 0.296 | 0.500 | 5.00 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 0.500 | U | 0.175 | 0.500 | 5.00 |
| 71-55-6 | 1,1,1-Trichloroethane | 0.500 | U | 0.162 | 0.500 | 5.00 |
| 79-00-5 | 1,1,2-Trichloroethane | 0.500 | U | 0.064 | 0.500 | 5.00 |
| 75-01-4 | Vinyl chloride | 0.500 | U | 0.194 | 0.500 | 5.00 |
| 1330-20-7 | Xylene (total) | 1.50 | U | 0.247 | 1.50 | 15.0 |
| 75-35-4 | 1,1-Dichloroethene | 0.500 | U | 0.227 | 0.500 | 5.00 |
| 71-43-2 | Benzene | 0.500 | U | 0.051 | 0.500 | 5.00 |

FORM I VOA

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

MB1248094

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Matrix: (soil/water) Solid

Sample wt/vol: 5 (g/ml) g Lab Sample ID: 1248094

Level: (low/med) Lab File ID: 2131026/f2923

% Moisture: not dec. Date Collected: Time:

GC Column: RTX-VMS-30 ID: .25 (mm) Date Received:

Instrument ID: MSV7 Date Analyzed: 10/26/13 Time: 0950

Soil Extract Volume: ( µL ) Dilution Factor: 1 Analyst: LBH

Soil Aliquot Volume: ( µL ) Prep Batch: Analytical Batch: 518604

*CONCENTRATION UNITS: ug/kg* Analytical Method: SW-846 8260B

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 79-01-6 | Trichloroethene | 0.500 | U | 0.127 | 0.500 | 5.00 |
| 108-88-3 | Toluene | 0.500 | U | 0.107 | 0.500 | 5.00 |
| 108-90-7 | Chlorobenzene | 0.500 | U | 0.129 | 0.500 | 5.00 |

FORM I VOA

GCAL, Inc.

Data file : /var/chem/msv7.i/2131026.s.b/f2923.d
Lab Smp Id: 1248094 Client Smp ID: MB
Inj Date : 26-OCT-2013 09:50
Operator : LBH Inst ID: msv7.i
Smp Info : 1248094*MB
Misc Info : MSV~28853~*1*LBH
Comment :
Method : /var/chem/msv7.i/2131026.s.b/8260DODs7.m
Meth Date : 26-Oct-2013 08:16 lbh Quant Type: ISTD
Cal Date : 25-OCT-2013 14:34 Cal File: f2891d.d
Als bottle: 43 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * (Uf/Ws)/((100-M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 5.00000 | ng unit correction factor |
| Ws | 5.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture (not decanted) |
| Va | 100.00000 | Volume of aliquot extract added (uL) |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppb) | FINAL (ug/Kg) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|
| $ 42 Dibromofluoromethane | 111 | 4.538 | 4.542 | (0.893) | 52767 | 54.3621 | 54.4 | 6669 |
| $ 50 1,2-Dichloroethane-d4 | 67 | 4.906 | 4.906 | (0.965) | 20004 | 51.1357 | 51.1 | 9196 |
| * 54 FLUOROBENZENE | 96 | 5.082 | 5.082 | (1.000) | 195888 | 50.0000 | | 9415 |
| $ 74 Toluene-d8 | 98 | 6.341 | 6.341 | (0.767) | 181634 | 55.8035 | 55.8 | 9441 |
| * 90 Chlorobenzene-d5 | 82 | 8.272 | 8.272 | (1.000) | 64169 | 50.0000 | | 6849 |
| $ 103 Bromofluorobenzene | 174 | 9.633 | 9.629 | (1.165) | 41499 | 47.2862 | 47.3 | 9017 |
| * 118 1,4-DICHLOROBENZENE-D4 | 152 | 10.637 | 10.637 | (1.000) | 58728 | 50.0000 | | 7168 |

Data File: /var/chem/msv7.i/2131026.s.b/f2923.d

Date : 26-OCT-2013 09:50

Client ID: MB

Sample Info: 1248094*MB

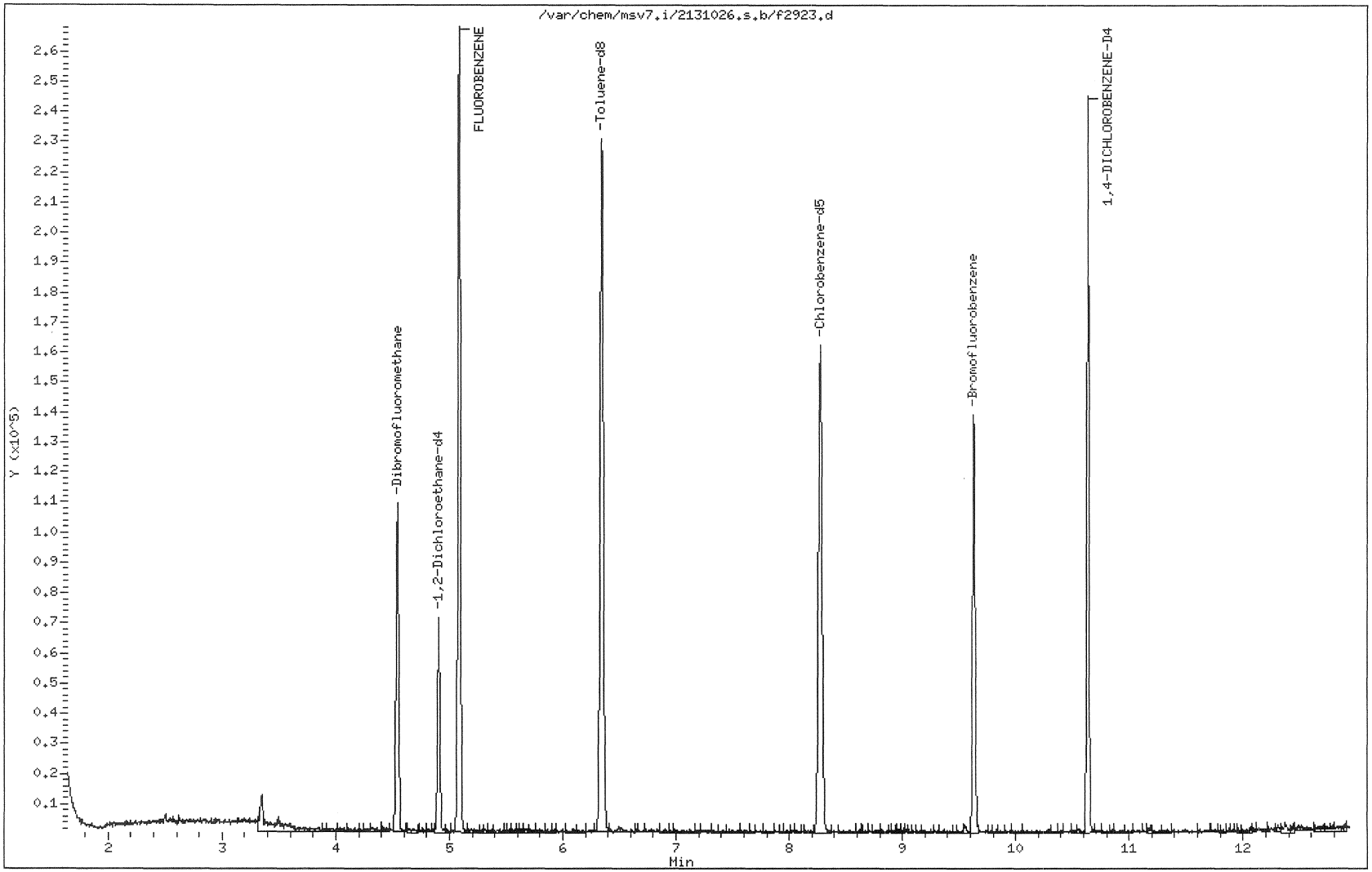
Column phase: RTX-VMS-30M

Instrument: msv7.i

Operator: LBH

Column diameter: 0.25

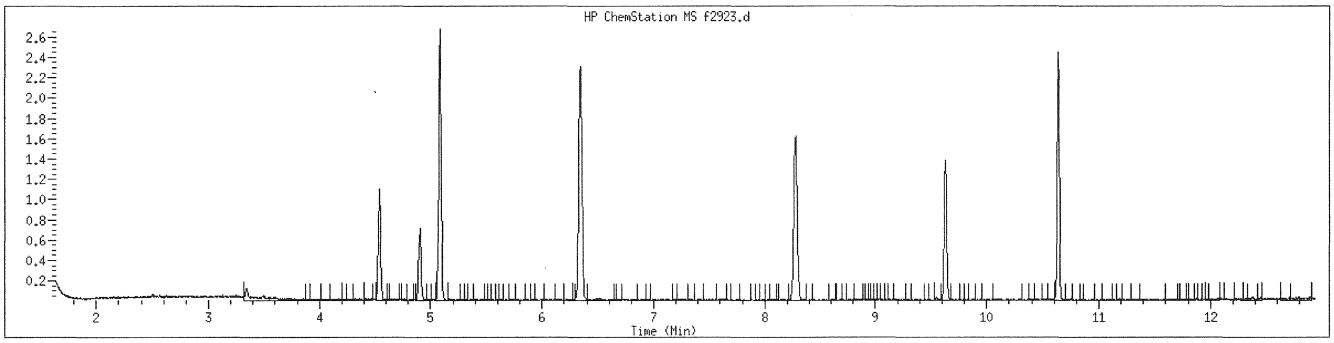




Data file : /var/chem/msv7.i/2131026.s.b/f2923.d Page: 1
Report Date: 10/26/2013 10:18

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 1248094 SampleType : BLANK
Injection Date: 10/26/2013 09:50 Instrument : msv7.i
Operator : LBH
Sample Info : 1248094*MB
Misc Info : MSV~28853~*1*LBH
Method : /var/chem/msv7.i/2131026.s.b/8260DODs7.m
Dilution : 1.00
Matrix : SOIL
Integrator : HP RTE Compound Sublist: 8260b




NO MANUAL INTEGRATIONS

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

LCS1248037

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Matrix: (soil/water) Solid

Sample wt/vol: 5 (g/ml) g Lab Sample ID: 1248037

Level: (low/med) Lab File ID: 2131025/f2895

% Moisture: not dec. Date Collected: Time:

GC Column: RTX-VMS-30 ID: .25 (mm) Date Received:

Instrument ID: MSV7 Date Analyzed: 10/25/13 Time: 1630

Soil Extract Volume: ( µL ) Dilution Factor: 1 Analyst: CEK

Soil Aliquot Volume: ( µL ) Prep Batch: Analytical Batch: 518589

*CONCENTRATION UNITS: ug/kg* Analytical Method: SW-846 8260B

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 67-64-1 | Acetone | 53.9 | | 0.296 | 2.00 | 25.0 |
| 75-27-4 | Bromodichloromethane | 49.6 | | 0.104 | 0.500 | 5.00 |
| 75-25-2 | Bromoform | 50.4 | | 0.437 | 0.500 | 5.00 |
| 74-83-9 | Bromomethane | 48.5 | | 0.486 | 2.00 | 5.00 |
| 75-15-0 | Carbon disulfide | 47.6 | | 0.187 | 0.500 | 5.00 |
| 56-23-5 | Carbon tetrachloride | 45.9 | | 0.189 | 0.500 | 5.00 |
| 75-00-3 | Chloroethane | 47.0 | | 0.202 | 0.500 | 5.00 |
| 67-66-3 | Chloroform | 48.0 | | 0.172 | 0.500 | 5.00 |
| 74-87-3 | Chloromethane | 48.7 | | 0.193 | 2.00 | 5.00 |
| 124-48-1 | Dibromochloromethane | 49.1 | | 0.250 | 0.500 | 5.00 |
| 75-34-3 | 1,1-Dichloroethane | 55.5 | | 0.096 | 0.500 | 5.00 |
| 107-06-2 | 1,2-Dichloroethane | 50.8 | | 0.198 | 0.500 | 5.00 |
| 156-59-2 | cis-1,2-Dichloroethene | 62.7 | | 0.114 | 0.500 | 5.00 |
| 156-60-5 | trans-1,2-Dichloroethene | 49.1 | | 0.119 | 0.500 | 5.00 |
| 75-09-2 | Methylene chloride | 50.4 | | 0.512 | 1.00 | 10.0 |
| 78-87-5 | 1,2-Dichloropropane | 50.4 | | 0.076 | 0.500 | 5.00 |
| 10061-01-5 | cis-1,3-Dichloropropene | 46.2 | | 0.129 | 0.500 | 5.00 |
| 10061-02-6 | trans-1,3-Dichloropropene | 47.5 | | 0.082 | 0.500 | 5.00 |
| 100-41-4 | Ethylbenzene | 52.9 | | 0.183 | 0.500 | 5.00 |
| 591-78-6 | 2-Hexanone | 50.6 | | 0.295 | 2.00 | 5.00 |
| 78-93-3 | 2-Butanone | 54.6 | | 0.323 | 2.00 | 5.00 |
| 108-10-1 | 4-Methyl-2-pentanone | 47.6 | | 0.154 | 0.500 | 5.00 |
| 100-42-5 | Styrene | 49.3 | | 0.083 | 0.500 | 5.00 |
| 127-18-4 | Tetrachloroethene | 45.6 | | 0.296 | 0.500 | 5.00 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 51.8 | | 0.175 | 0.500 | 5.00 |
| 71-55-6 | 1,1,1-Trichloroethane | 49.1 | | 0.162 | 0.500 | 5.00 |
| 79-00-5 | 1,1,2-Trichloroethane | 49.5 | | 0.064 | 0.500 | 5.00 |
| 75-01-4 | Vinyl chloride | 46.1 | | 0.194 | 0.500 | 5.00 |
| 1330-20-7 | Xylene (total) | 143 | | 0.247 | 1.50 | 15.0 |
| 75-35-4 | 1,1-Dichloroethene | 47.9 | | 0.227 | 0.500 | 5.00 |
| 71-43-2 | Benzene | 51.1 | | 0.051 | 0.500 | 5.00 |

FORM I VOA

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

LCS1248037

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Matrix: (soil/water) Solid

Sample wt/vol: 5 (g/ml) g Lab Sample ID: 1248037

Level: (low/med) Lab File ID: 2131025/f2895

% Moisture: not dec. Date Collected: Time:

GC Column: RTX-VMS-30 ID: .25 (mm) Date Received:

Instrument ID: MSV7 Date Analyzed: 10/25/13 Time: 1630

Soil Extract Volume: ( µL ) Dilution Factor: 1 Analyst: CEK

Soil Aliquot Volume: ( µL ) Prep Batch: Analytical Batch: 518589

*CONCENTRATION UNITS: ug/kg* Analytical Method: SW-846 8260B

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 79-01-6 | Trichloroethene | 47.3 | | 0.127 | 0.500 | 5.00 |
| 108-88-3 | Toluene | 47.1 | | 0.107 | 0.500 | 5.00 |
| 108-90-7 | Chlorobenzene | 50.2 | | 0.129 | 0.500 | 5.00 |

FORM I VOA

GCAL, Inc.

Data file : /var/chem/msv7.i/2131025.s.b/f2895.d
Lab Smp Id: 1248037 Client Smp ID: LCS
Inj Date : 25-OCT-2013 16:30
Operator : CEK Inst ID: msv7.i
Smp Info : 1248037*LCS
Misc Info : MSV~28849~*1*CEK
Comment :
Method : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Meth Date : 25-Oct-2013 19:43 cek Quant Type: ISTD
Cal Date : 25-OCT-2013 14:34 Cal File: f2891d.d
Als bottle: 12 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * (Uf/Ws)/((100-M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 5.00000 | ng unit correction factor |
| Ws | 5.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture (not decanted) |
| Va | 100.00000 | Volume of aliquot extract added (uL) |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppb) | FINAL (ug/Kg) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|
| 1 Dichlorodifluoromethane | 85 | 1.727 | 1.727 | (0.162) | 90486 | 45.0007 | 45.0 | 9388 |
| 2 Chloromethane ++ | 50 | 1.911 | 1.911 | (0.376) | 89852 | 48.7007 | 48.7 | 9685 |
| 3 Vinyl Chloride + | 62 | 1.989 | 1.986 | (0.391) | 129555 | 46.1072 | 46.1 | 9475 |
| 6 Bromomethane | 94 | 2.285 | 2.285 | (0.450) | 64463 | 48.5427 | 48.5 | 9198 |
| 8 Chloroethane | 64 | 2.398 | 2.394 | (0.472) | 68989 | 46.9595 | 47.0 | 9070 |
| 9 Trichlorofluoromethane | 101 | 2.510 | 2.510 | (0.494) | 134523 | 45.1228 | 45.1 | 9371 |
| 12 1,1-Dichloroethene + | 96 | 2.915 | 2.915 | (0.574) | 87818 | 47.9257 | 47.9 | 9263 |
| 15 1,1,2Trichlotrifluoroethane | 101 | 2.938 | 2.938 | (0.578) | 89224 | 47.0309 | 47.0 | 9363 |
| 14 Carbon Disulfide | 76 | 2.945 | 2.941 | (0.580) | 325810 | 47.5508 | 47.6 | 9250 |
| 16 Methyl Iodide | 142 | 3.031 | 3.031 | (0.597) | 87008 | 51.1101 | 51.1 | 9402 |
| 17 Acrolein | 56 | 3.174 | 3.174 | (0.625) | 12449 | 257.108 | 257 | 8338 |
| 18 Methylene Chloride | 49 | 3.343 | 3.343 | (0.658) | 102652 | 50.3875 | 50.4 | 9209 |
| 19 Acetone | 43 | 3.380 | 3.384 | (0.665) | 20414 | 53.9108 | 53.9 | 8323 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppb) | FINAL (ug/Kg) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|---|
| | 13 trans-1,2-Dichloroethene | 61 | 3.455 | 3.455 | (0.680) | 132072 | 49.1441 | 49.1 | 9007 |
| | 22 Methyl Acetate | 43 | 3.459 | 3.462 | (0.681) | 22055 | 49.6856 | 49.7 | 8549(M2) |
| | 23 Hexane | 57 | 3.496 | 3.496 | (0.688) | 168744 | 48.9942 | 49.0 | 9146 |
| | 25 MTBE | 73 | 3.526 | 3.526 | (0.694) | 123693 | 52.2511 | 52.3 | 9030 |
| | 31 1,1-Dichloroethane ++ | 63 | 3.882 | 3.882 | (0.764) | 156371 | 55.4919 | 55.5 | 9478 |
| | 33 Acrylonitrile | 53 | 3.924 | 3.927 | (0.772) | 49747 | 307.454 | 307 | 9276 |
| | 34 Vinyl Acetate | 43 | 4.040 | 4.036 | (0.795) | 31459 | 71.6272 | 71.6 | |
| | 21 cis-1,2-Dichloroethene | 61 | 4.242 | 4.242 | (0.835) | 108126 | 62.6624 | 62.7 | 9406(R) |
| M | 68 Total 1,2-Dichloroethene | 61 | | | | 240198 | 111.807 | 112 | 0 |
| | 35 2,2-Dichloropropane | 77 | 4.321 | 4.317 | (0.850) | 106940 | 49.5302 | 49.5 | 8891 |
| | 38 Cyclohexane | 56 | 4.377 | 4.381 | (0.861) | 117546 | 46.2701 | 46.3 | 9240 |
| | 39 Bromochloromethane | 128 | 4.381 | 4.381 | (0.862) | 30314 | 48.9226 | 48.9 | 9014 |
| | 40 Chloroform + | 83 | 4.415 | 4.415 | (0.869) | 133506 | 47.9616 | 48.0 | 9136 |
| | 41 Carbon Tetrachloride | 117 | 4.516 | 4.516 | (0.889) | 97803 | 45.9022 | 45.9 | 9056 |
| $ | 42 Dibromofluoromethane | 111 | 4.538 | 4.542 | (0.893) | 58684 | 49.4005 | 49.4 | 9235 |
| | 43 1,1,1-Trichloroethane | 97 | 4.565 | 4.565 | (0.898) | 115738 | 49.0773 | 49.1 | 9462 |
| | 45 2-Butanone | 43 | 4.625 | 4.625 | (0.910) | 14021 | 54.5665 | 54.6 | |
| | 44 1,1-Dichloropropene | 75 | 4.643 | 4.643 | (0.914) | 98640 | 51.0869 | 51.1 | 9029 |
| | 48 Benzene | 78 | 4.812 | 4.812 | (0.947) | 308128 | 51.0816 | 51.1 | 9254 |
| $ | 50 1,2-Dichloroethane-d4 | 67 | 4.902 | 4.906 | (0.965) | 23364 | 48.8014 | 48.8 | 9489 |
| | 52 1,2-Dichloroethane | 62 | 4.951 | 4.951 | (0.974) | 60936 | 50.7631 | 50.8 | 9530 |
| * | 54 FLUOROBENZENE | 96 | 5.082 | 5.086 | (1.000) | 239734 | 50.0000 | | 9397 |
| | 56 Methyl cyclohexane | 83 | 5.194 | 5.194 | (1.022) | 134108 | 49.8249 | 49.8 | 9107 |
| | 57 Trichloroethene | 130 | 5.198 | 5.198 | (1.023) | 90453 | 47.2949 | 47.3 | 9132 |
| | 62 Dibromomethane | 93 | 5.517 | 5.517 | (1.086) | 28365 | 51.3857 | 51.4 | 9249 |
| | 63 1,2-Dichloropropane + | 63 | 5.595 | 5.595 | (1.101) | 63086 | 50.4308 | 50.4 | 8851 |
| | 64 Bromodichloromethane | 83 | 5.625 | 5.625 | (1.107) | 80823 | 49.6372 | 49.6 | 9312 |
| | 69 1-Bromo-2-chloroethane | 63 | 6.045 | 6.045 | (1.190) | 57248 | 50.7871 | 50.8 | 9285 |
| | 72 cis-1,3-Dichloropropene | 75 | 6.162 | 6.161 | (1.212) | 75938 | 46.1641 | 46.2 | |
| $ | 74 Toluene-d8 | 98 | 6.341 | 6.341 | (0.767) | 232282 | 47.7167 | 47.7 | 9303 |
| | 77 Toluene + | 91 | 6.394 | 6.394 | (0.773) | 332387 | 47.0725 | 47.1 | 9275 |
| | 79 4-methyl-2-pentanone | 43 | 6.776 | 6.776 | (0.819) | 19866 | 47.6277 | 47.6 | |
| | 78 Tetrachloroethene | 164 | 6.799 | 6.799 | (0.822) | 73596 | 45.5623 | 45.6 | 8655 |
| | 81 trans-1,3-Dichloropropene | 75 | 6.825 | 6.825 | (1.343) | 64357 | 47.5351 | 47.5 | |
| M | 71 1-3 Dichloropropene-Total | 100 | | | | 140295 | 93.6992 | 93.7 | 0 |
| | 82 1,1,2-Trichloroethane | 97 | 7.016 | 7.012 | (0.848) | 42061 | 49.5230 | 49.5 | 9307 |
| | 85 Dibromochloromethane | 129 | 7.237 | 7.241 | (0.875) | 50113 | 49.0686 | 49.1 | 9078 |
| | 86 1,3-Dichloropropane | 76 | 7.369 | 7.369 | (0.891) | 66916 | 49.5614 | 49.6 | 8970 |
| | 88 1,2-Dibromoethane(EDB) | 107 | 7.575 | 7.575 | (0.916) | 34051 | 48.4064 | 48.4 | 8769 |
| | 80 2-Hexanone | 43 | 7.882 | 7.875 | (0.953) | 15536 | 50.6148 | 50.6 | 8554 |
| | 91 1-Chlorohexane | 91 | 8.257 | 8.261 | (0.998) | 92023 | 44.6940 | 44.7 | 9111 |
| * | 90 Chlorobenzene-d5 | 82 | 8.272 | 8.279 | (1.000) | 95970 | 50.0000 | | 9329 |
| | 92 Chlorobenzene ++ | 112 | 8.298 | 8.294 | (1.003) | 217869 | 50.1806 | 50.2 | 8751 |
| | 93 Ethylbenzene + | 106 | 8.328 | 8.328 | (1.007) | 121336 | 52.9259 | 52.9 | 9130 |
| | 95 1,1,1,2-Tetrachloroethane | 133 | 8.373 | 8.377 | (1.012) | 66391 | 48.2898 | 48.3 | 9392 |
| | 96 p,m-Xylene | 106 | 8.512 | 8.512 | (1.029) | 289778 | 96.5292 | 96.5 | 9464 |
| | 98 o-Xylene | 106 | 9.014 | 9.014 | (1.090) | 116559 | 46.1024 | 46.1 | |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppb) | FINAL (ug/Kg) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|
| M 120 TOTAL XYLENE | 106 | | | | 406337 | 142.632 | 143 | 0 |
| 99 Styrene | 104 | 9.070 | 9.070 | (1.097) | 198776 | 49.2646 | 49.3 | 9288 |
| 100 Bromoform ++ | 173 | 9.093 | 9.097 | (1.099) | 31539 | 50.3996 | 50.4 | 8609 |
| 102 Isopropylbenzene | 105 | 9.348 | 9.348 | (1.130) | 342303 | 46.6548 | 46.7 | 9490 |
| $ 103 Bromofluorobenzene | 174 | 9.633 | 9.633 | (1.165) | 66248 | 50.4730 | 50.5 | 9475 |
| 104 Bromobenzene | 77 | 9.730 | 9.730 | (0.915) | 130955 | 50.9464 | 50.9 | 8992 |
| 106 n-Propylbenzene | 91 | 9.760 | 9.760 | (0.918) | 445342 | 47.3525 | 47.4 | 9544 |
| 107 1,1,2,2-Tetrachloroethane++ | 83 | 9.831 | 9.831 | (0.924) | 50847 | 51.7864 | 51.8 | 9055 |
| 108 2-Chlorotoluene | 91 | 9.906 | 9.906 | (0.931) | 240728 | 53.5687 | 53.6 | 9362 |
| 110 1,3,5-Trimethylbenzene | 105 | 9.948 | 9.948 | (0.935) | 306210 | 48.4562 | 48.5 | |
| 109 1,2,3-Trichloropropane | 75 | 9.959 | 9.959 | (0.936) | 36720 | 48.8273 | 48.8 | 9023 |
| 111 trans-1,4-Dichloro-2-Butene | 53 | 10.000 | 10.000 | (0.940) | 7945 | 53.0440 | 53.0 | 8910 |
| 112 4-Chlorotoluene | 91 | 10.060 | 10.060 | (0.946) | 250073 | 50.4627 | 50.5 | 9400 |
| 113 tert-butylbenzene | 91 | 10.236 | 10.236 | (0.962) | 160978 | 46.6753 | 46.7 | 9317 |
| 114 1,2,4-Trimethylbenzene | 105 | 10.300 | 10.300 | (0.968) | 298478 | 48.8010 | 48.8 | |
| 115 sec-Butylbenzene | 105 | 10.390 | 10.394 | (0.977) | 428085 | 47.6084 | 47.6 | |
| 116 p-Isopropyltoluene | 119 | 10.517 | 10.517 | (0.989) | 341718 | 47.2415 | 47.2 | 9591 |
| 117 1,3-Dichlorobenzene | 146 | 10.574 | 10.574 | (0.994) | 181872 | 52.8294 | 52.8 | |
| * 118 1,4-DICHLOROBENZENE-D4 | 152 | 10.637 | 10.637 | (1.000) | 96137 | 50.0000 | | 9311 |
| 119 1,4-Dichlorobenzene | 146 | 10.649 | 10.649 | (1.001) | 176712 | 51.2877 | 51.3 | |
| 121 n-Butylbenzene | 91 | 10.866 | 10.866 | (1.021) | 323365 | 47.0070 | 47.0 | 9548 |
| 122 1,2-Dichlorobenzene | 146 | 10.993 | 10.993 | (1.033) | 149562 | 51.6026 | 51.6 | |
| 125 1,2-Dibromo-3-Chloropropane | 157 | 11.608 | 11.608 | (1.091) | 7610 | 49.4708 | 49.5 | 8963 |
| 126 Hexachlorobutadiene | 225 | 12.058 | 12.058 | (1.134) | 75740 | 49.4964 | 49.5 | 9653 |
| 127 1,2,4-Trichlorobenzene | 180 | 12.081 | 12.081 | (1.136) | 95752 | 48.9859 | 49.0 | |
| 128 Napthalene | 128 | 12.313 | 12.313 | (1.158) | 127734 | 53.0151 | 53.0 | 9446 |
| 129 1,2,3-Trichlorobenzene | 180 | 12.440 | 12.440 | (1.169) | 82882 | 49.7348 | 49.7 | |

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M2- Compound response manually integrated because
Target system integrated incorrectly.

Data File: /var/chem/msv7.i/2131025.s.b/f2895.d

Date : 25-OCT-2013 16:30

Client ID: LCS

Sample Info: 1248037*LCS

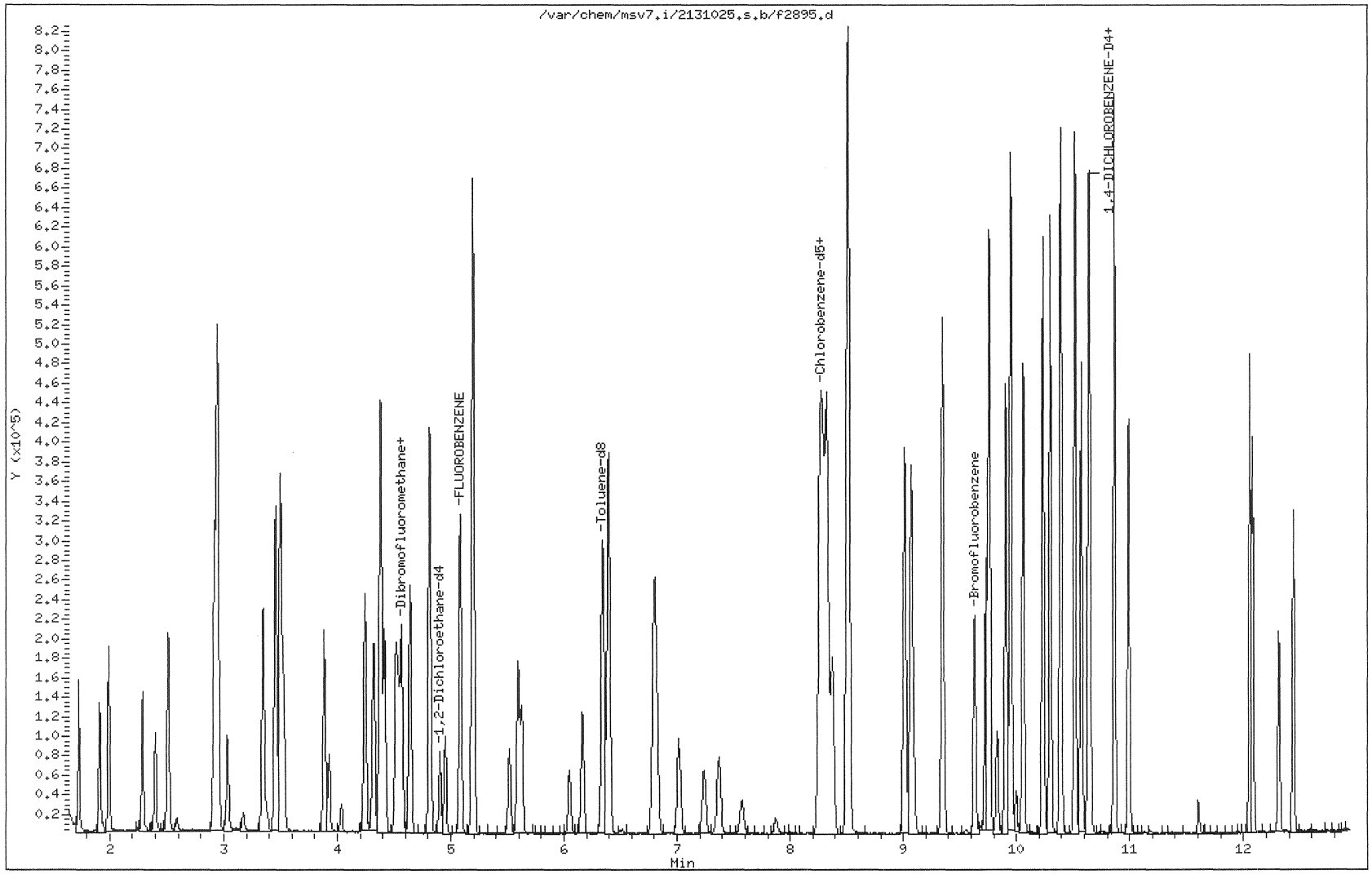
Column phase: RTX-VMS-30M

Instrument: msv7.i

Operator: CEK

Column diameter: 0.25



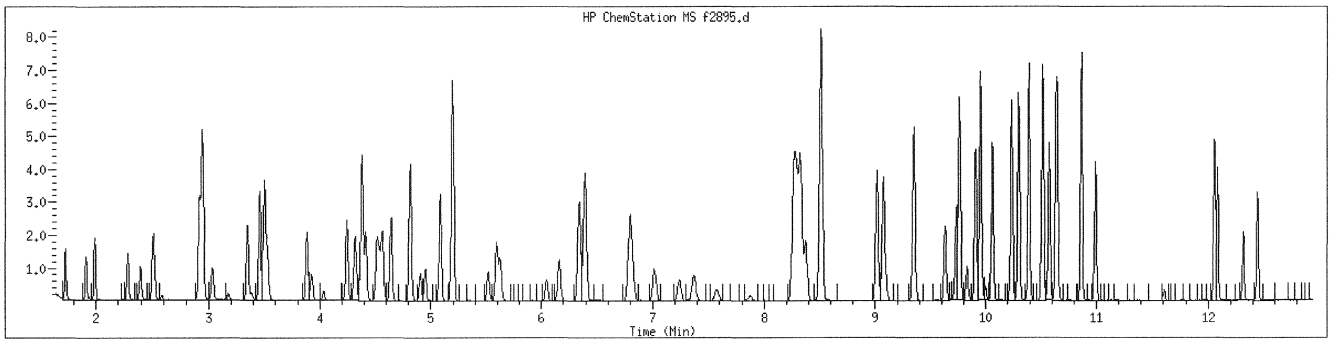



2131 1712 153

Data file : /var/chem/msv7.i/2131025.s.b/f2895.d Page: 1
Report Date: 10/25/2013 19:56

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 1248037 SampleType : LCS
Injection Date: 10/25/2013 16:30 Instrument : msv7.i
Operator : CEK
Sample Info : 1248037*LCS
Misc Info : MSV~28849~*1*CEK
Method : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Dilution : 1.00
Matrix : SOIL
Integrator : HP RTE Compound Sublist: 8260b




Original Final

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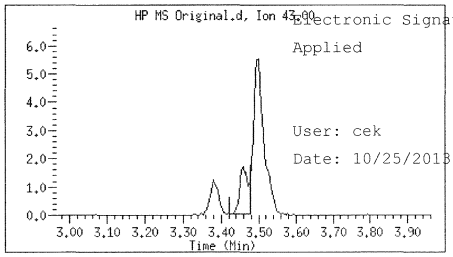
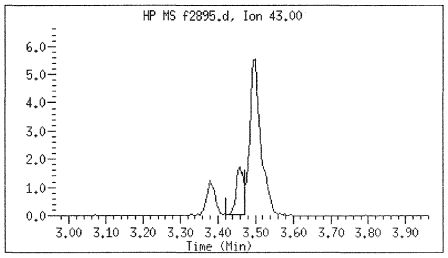
22 Methyl Acetate CAS#: 79-20-9 Reason: M3




Electronic Signature
Applied

User: cek
Date: 10/25/2013 16:49

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

LCS1248095

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Matrix: (soil/water) Solid

Sample wt/vol: 5 (g/ml) g Lab Sample ID: 1248095

Level: (low/med) Lab File ID: 2131026/f2919

% Moisture: not dec. Date Collected: Time:

GC Column: RTX-VMS-30 ID: .25 (mm) Date Received:

Instrument ID: MSV7 Date Analyzed: 10/26/13 Time: 0823

Soil Extract Volume: ( µL ) Dilution Factor: 1 Analyst: LBH

Soil Aliquot Volume: ( µL ) Prep Batch: Analytical Batch: 518604

Analytical Method: SW-846 8260B

*CONCENTRATION UNITS: ug/kg*

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 67-64-1 | Acetone | 61.1 | | 0.296 | 2.00 | 25.0 |
| 75-27-4 | Bromodichloromethane | 51.9 | | 0.104 | 0.500 | 5.00 |
| 75-25-2 | Bromoform | 51.3 | | 0.437 | 0.500 | 5.00 |
| 74-83-9 | Bromomethane | 53.2 | | 0.486 | 2.00 | 5.00 |
| 75-15-0 | Carbon disulfide | 52.5 | | 0.187 | 0.500 | 5.00 |
| 56-23-5 | Carbon tetrachloride | 52.5 | | 0.189 | 0.500 | 5.00 |
| 75-00-3 | Chloroethane | 51.9 | | 0.202 | 0.500 | 5.00 |
| 67-66-3 | Chloroform | 50.6 | | 0.172 | 0.500 | 5.00 |
| 74-87-3 | Chloromethane | 51.9 | | 0.193 | 2.00 | 5.00 |
| 124-48-1 | Dibromochloromethane | 50.3 | | 0.250 | 0.500 | 5.00 |
| 75-34-3 | 1,1-Dichloroethane | 49.1 | | 0.096 | 0.500 | 5.00 |
| 107-06-2 | 1,2-Dichloroethane | 53.2 | | 0.198 | 0.500 | 5.00 |
| 156-59-2 | cis-1,2-Dichloroethene | 52.7 | | 0.114 | 0.500 | 5.00 |
| 156-60-5 | trans-1,2-Dichloroethene | 54.5 | | 0.119 | 0.500 | 5.00 |
| 75-09-2 | Methylene chloride | 54.9 | | 0.512 | 1.00 | 10.0 |
| 78-87-5 | 1,2-Dichloropropane | 51.3 | | 0.076 | 0.500 | 5.00 |
| 10061-01-5 | cis-1,3-Dichloropropene | 46.6 | | 0.129 | 0.500 | 5.00 |
| 10061-02-6 | trans-1,3-Dichloropropene | 48.6 | | 0.082 | 0.500 | 5.00 |
| 100-41-4 | Ethylbenzene | 56.6 | | 0.183 | 0.500 | 5.00 |
| 591-78-6 | 2-Hexanone | 48.4 | | 0.295 | 2.00 | 5.00 |
| 78-93-3 | 2-Butanone | 60.0 | | 0.323 | 2.00 | 5.00 |
| 108-10-1 | 4-Methyl-2-pentanone | 49.6 | | 0.154 | 0.500 | 5.00 |
| 100-42-5 | Styrene | 50.4 | | 0.083 | 0.500 | 5.00 |
| 127-18-4 | Tetrachloroethene | 48.9 | | 0.296 | 0.500 | 5.00 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 53.4 | | 0.175 | 0.500 | 5.00 |
| 71-55-6 | 1,1,1-Trichloroethane | 53.6 | | 0.162 | 0.500 | 5.00 |
| 79-00-5 | 1,1,2-Trichloroethane | 51.8 | | 0.064 | 0.500 | 5.00 |
| 75-01-4 | Vinyl chloride | 54.9 | | 0.194 | 0.500 | 5.00 |
| 1330-20-7 | Xylene (total) | 151 | | 0.247 | 1.50 | 15.0 |
| 75-35-4 | 1,1-Dichloroethene | 54.1 | | 0.227 | 0.500 | 5.00 |
| 71-43-2 | Benzene | 53.5 | | 0.051 | 0.500 | 5.00 |

FORM I VOA

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

LCS1248095

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Matrix: (soil/water) Solid

Sample wt/vol: 5 (g/ml) g Lab Sample ID: 1248095

Level: (low/med) Lab File ID: 2131026/f2919

% Moisture: not dec. Date Collected: Time:

GC Column: RTX-VMS-30 ID: .25 (mm) Date Received:

Instrument ID: MSV7 Date Analyzed: 10/26/13 Time: 0823

Soil Extract Volume: ( µL ) Dilution Factor: 1 Analyst: LBH

Soil Aliquot Volume: ( µL ) Prep Batch: Analytical Batch: 518604

Analytical Method: SW-846 8260B

*CONCENTRATION UNITS: ug/kg*

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 79-01-6 | Trichloroethene | 51.3 | | 0.127 | 0.500 | 5.00 |
| 108-88-3 | Toluene | 49.3 | | 0.107 | 0.500 | 5.00 |
| 108-90-7 | Chlorobenzene | 51.9 | | 0.129 | 0.500 | 5.00 |

FORM I VOA

GCAL, Inc.

Data file : /var/chem/msv7.i/2131026.s.b/f2919.d
Lab Smp Id: 1248095 Client Smp ID: LCS
Inj Date : 26-OCT-2013 08:23
Operator : LBH Inst ID: msv7.i
Smp Info : 1248095*LCS
Misc Info : MSV~28853~*1*LBH
Comment :
Method : /var/chem/msv7.i/2131026.s.b/8260DODs7.m
Meth Date : 26-Oct-2013 13:22 lbh Quant Type: ISTD
Cal Date : 25-OCT-2013 14:34 Cal File: f2891d.d
Als bottle: 39 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * (Uf/Ws)/((100-M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 5.00000 | ng unit correction factor |
| Ws | 5.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture (not decanted) |
| Va | 100.00000 | Volume of aliquot extract added (uL) |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppb) | FINAL (ug/Kg) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|
| 1 Dichlorodifluoromethane | 85 | 1.727 | 1.727 | (0.340) | 94421 | 51.4264 | 51.4 | 0(M1) |
| 2 Chloromethane ++ | 50 | 1.910 | 1.911 | (0.376) | 87517 | 51.9493 | 51.9 | 8943(M1) |
| 3 Vinyl Chloride + | 62 | 1.985 | 1.986 | (0.390) | 140802 | 54.8786 | 54.9 | 9551 |
| 6 Bromomethane | 94 | 2.282 | 2.285 | (0.449) | 64515 | 53.2051 | 53.2 | 8773 |
| 8 Chloroethane | 64 | 2.394 | 2.394 | (0.471) | 69625 | 51.9026 | 51.9 | 8132 |
| 9 Trichlorofluoromethane | 101 | 2.506 | 2.507 | (0.493) | 144102 | 52.9358 | 52.9 | 9140 |
| 12 1,1-Dichloroethene + | 96 | 2.911 | 2.915 | (0.572) | 90532 | 54.1086 | 54.1 | 7955 |
| 15 1,1,2Trichlotrifluoroethane | 101 | 2.938 | 2.938 | (0.578) | 97574 | 56.3268 | 56.3 | 6995 |
| 14 Carbon Disulfide | 76 | 2.941 | 2.941 | (0.578) | 328742 | 52.5446 | 52.5 | 7185 |
| 16 Methyl Iodide | 142 | 3.031 | 3.031 | (0.596) | 82327 | 52.8211 | 52.8 | 9124 |
| 17 Acrolein | 56 | 3.170 | 3.174 | (0.623) | 12974 | 293.450 | 293 | 8146 |
| 18 Methylene Chloride | 49 | 3.342 | 3.343 | (0.657) | 101463 | 54.9078 | 54.9 | 9406 |
| 19 Acetone | 43 | 3.380 | 3.380 | (0.665) | 20900 | 61.0847 | 61.1 | 8070 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppb) | FINAL (ug/Kg) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|---|
| | 13 trans-1,2-Dichloroethene | 61 | 3.451 | 3.451 | (0.679) | 133668 | 54.4714 | 54.5 | 7002 |
| | 22 Methyl Acetate | 43 | 3.462 | 3.459 | (0.681) | 25304 | 62.7445 | 62.7 | 0(M1) |
| | 23 Hexane | 57 | 3.492 | 3.496 | (0.687) | 166297 | 52.8787 | 52.9 | 9095 |
| | 25 MTBE | 73 | 3.526 | 3.526 | (0.693) | 112735 | 52.1542 | 52.2 | 8876 |
| | 31 1,1-Dichloroethane ++ | 63 | 3.882 | 3.882 | (0.763) | 126220 | 49.0548 | 49.1 | 9432 |
| | 33 Acrylonitrile | 53 | 3.927 | 3.931 | (0.772) | 41404 | 280.243 | 280 | 9669 |
| | 34 Vinyl Acetate | 43 | 4.036 | 4.036 | (0.794) | 28180 | 70.2675 | 70.3 | |
| | 21 cis-1,2-Dichloroethene | 61 | 4.246 | 4.242 | (0.835) | 82955 | 52.6501 | 52.7 | 8712 |
| M | 68 Total 1,2-Dichloroethene | 61 | | | | 216623 | 107.121 | 107 | 0 |
| | 35 2,2-Dichloropropane | 77 | 4.321 | 4.321 | (0.850) | 103187 | 52.3401 | 52.3 | 8679 |
| | 38 Cyclohexane | 56 | 4.381 | 4.377 | (0.861) | 119037 | 50.7756 | 50.8 | 9046 |
| | 39 Bromochloromethane | 128 | 4.381 | 4.381 | (0.861) | 31102 | 54.9712 | 55.0 | 8474 |
| | 40 Chloroform + | 83 | 4.415 | 4.415 | (0.868) | 128509 | 50.5599 | 50.6 | 8846 |
| | 41 Carbon Tetrachloride | 117 | 4.516 | 4.520 | (0.888) | 102051 | 52.4540 | 52.5 | 9147 |
| $ | 42 Dibromofluoromethane | 111 | 4.538 | 4.542 | (0.892) | 53637 | 49.4489 | 49.4 | 7608 |
| | 43 1,1,1-Trichloroethane | 97 | 4.564 | 4.565 | (0.898) | 115445 | 53.6117 | 53.6 | 7077 |
| | 45 2-Butanone | 43 | 4.624 | 4.625 | (0.909) | 14066 | 59.9512 | 60.0 | |
| | 44 1,1-Dichloropropene | 75 | 4.643 | 4.643 | (0.913) | 97753 | 55.4455 | 55.4 | 7519 |
| | 48 Benzene | 78 | 4.812 | 4.812 | (0.946) | 294836 | 53.5296 | 53.5 | 9172 |
| $ | 50 1,2-Dichloroethane-d4 | 67 | 4.906 | 4.906 | (0.965) | 22160 | 50.6915 | 50.7 | 9204 |
| | 52 1,2-Dichloroethane | 62 | 4.951 | 4.947 | (0.973) | 58302 | 53.1910 | 53.2 | 9305 |
| * | 54 FLUOROBENZENE | 96 | 5.086 | 5.082 | (1.000) | 218902 | 50.0000 | | 9409 |
| | 56 Methyl cyclohexane | 83 | 5.194 | 5.194 | (1.021) | 141424 | 57.5433 | 57.5 | 7792 |
| | 57 Trichloroethene | 130 | 5.194 | 5.198 | (1.021) | 89635 | 51.3274 | 51.3 | 9081 |
| | 62 Dibromomethane | 93 | 5.517 | 5.517 | (1.085) | 27789 | 55.1330 | 55.1 | 9147 |
| | 63 1,2-Dichloropropane + | 63 | 5.592 | 5.588 | (1.099) | 58561 | 51.2685 | 51.3 | 9126 |
| | 64 Bromodichloromethane | 83 | 5.625 | 5.625 | (1.106) | 77180 | 51.9107 | 51.9 | 9451 |
| | 69 1-Bromo-2-chloroethane | 63 | 6.045 | 6.045 | (1.189) | 55327 | 53.7539 | 53.8 | 8848 |
| | 70 2-Chloroethyl vinyl ether | 63 | 5.592 | 5.588 | (1.099) | 58561 | | | 5028(R) |
| | 72 cis-1,3-Dichloropropene | 75 | 6.165 | 6.162 | (1.212) | 70077 | 46.6051 | 46.6 | |
| $ | 74 Toluene-d8 | 98 | 6.341 | 6.341 | (0.767) | 209671 | 46.6609 | 46.7 | 9477 |
| | 77 Toluene + | 91 | 6.394 | 6.394 | (0.773) | 321050 | 49.2557 | 49.3 | 9418 |
| | 79 4-methyl-2-pentanone | 43 | 6.780 | 6.776 | (0.820) | 19113 | 49.6408 | 49.6 | |
| | 78 Tetrachloroethene | 164 | 6.799 | 6.799 | (0.822) | 72983 | 48.9478 | 48.9 | 9354 |
| | 81 trans-1,3-Dichloropropene | 75 | 6.829 | 6.825 | (1.343) | 60265 | 48.6262 | 48.6 | |
| M | 71 1-3 Dichloropropene-Total | 100 | | | | 130342 | 95.2313 | 95.2 | 0 |
| | 82 1,1,2-Trichloroethane | 97 | 7.012 | 7.016 | (0.848) | 40617 | 51.8078 | 51.8 | 9479 |
| | 85 Dibromochloromethane | 129 | 7.241 | 7.241 | (0.875) | 47375 | 50.2531 | 50.3 | 9263 |
| | 86 1,3-Dichloropropane | 76 | 7.368 | 7.369 | (0.891) | 62736 | 50.3375 | 50.3 | 8859 |
| | 88 1,2-Dibromoethane(EDB) | 107 | 7.567 | 7.571 | (0.915) | 33672 | 51.8565 | 51.9 | 8904 |
| | 80 2-Hexanone | 43 | 7.875 | 7.875 | (0.952) | 13603 | 48.4012 | 48.4 | 8359 |
| | 91 1-Chlorohexane | 91 | 8.261 | 8.265 | (0.999) | 91024 | 47.5311 | 47.5 | 6125 |
| * | 90 Chlorobenzene-d5 | 82 | 8.272 | 8.272 | (1.000) | 88588 | 50.0000 | | 8394 |
| | 92 Chlorobenzene ++ | 112 | 8.294 | 8.298 | (1.003) | 208047 | 51.9113 | 51.9 | 6323 |
| | 93 Ethylbenzene + | 106 | 8.324 | 8.328 | (1.006) | 119766 | 56.5943 | 56.6 | 9431 |
| | 95 1,1,1,2-Tetrachloroethane | 133 | 8.369 | 8.373 | (1.012) | 60750 | 47.8689 | 47.9 | 8551 |
| | 96 p,m-Xylene | 106 | 8.508 | 8.512 | (1.029) | 286525 | 103.024 | 103 | 9354 |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppb) | FINAL (ug/Kg) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|
| 98 o-Xylene | 106 | 9.010 | 9.014 | (1.089) | 111665 | 47.6717 | 47.7 | |
| M 120 TOTAL XYLENE | 106 | | | | 398190 | 150.695 | 151 | 0 |
| 99 Styrene | 104 | 9.074 | 9.070 | (1.097) | 187979 | 50.3718 | 50.4 | 9152 |
| 100 Bromoform ++ | 173 | 9.093 | 9.093 | (1.099) | 29627 | 51.2894 | 51.3 | 6637 |
| 102 Isopropylbenzene | 105 | 9.348 | 9.348 | (1.130) | 339090 | 49.7610 | 49.8 | 9444 |
| $ 103 Bromofluorobenzene | 174 | 9.633 | 9.629 | (1.165) | 62027 | 51.1950 | 51.2 | 9324 |
| 104 Bromobenzene | 77 | 9.734 | 9.730 | (0.915) | 124374 | 50.7490 | 50.7 | 9171 |
| 106 n-Propylbenzene | 91 | 9.760 | 9.760 | (0.918) | 448210 | 49.7779 | 49.8 | 9431 |
| 107 1,1,2,2-Tetrachloroethane++ | 83 | 9.828 | 9.828 | (0.924) | 49973 | 53.3817 | 53.4 | 9596 |
| 108 2-Chlorotoluene | 91 | 9.906 | 9.906 | (0.931) | 232078 | 54.1657 | 54.2 | 9558 |
| 110 1,3,5-Trimethylbenzene | 105 | 9.947 | 9.951 | (0.935) | 303343 | 50.2069 | 50.2 | |
| 109 1,2,3-Trichloropropane | 75 | 9.955 | 9.951 | (0.936) | 37351 | 52.0916 | 52.1 | 8546(M1) |
| 111 trans-1,4-Dichloro-2-Butene | 53 | 10.000 | 10.000 | (0.940) | 7797 | 54.4241 | 54.4 | 9107 |
| 112 4-Chlorotoluene | 91 | 10.060 | 10.060 | (0.946) | 238594 | 50.4951 | 50.5 | 9538 |
| 113 tert-butylbenzene | 91 | 10.236 | 10.236 | (0.962) | 161575 | 48.9081 | 48.9 | 9344 |
| 114 1,2,4-Trimethylbenzene | 105 | 10.300 | 10.300 | (0.968) | 294755 | 50.4060 | 50.4 | |
| 115 sec-Butylbenzene | 105 | 10.390 | 10.390 | (0.977) | 441826 | 51.2189 | 51.2 | |
| 116 p-Isopropyltoluene | 119 | 10.517 | 10.517 | (0.989) | 349932 | 50.4023 | 50.4 | 9518 |
| 117 1,3-Dichlorobenzene | 146 | 10.574 | 10.574 | (0.994) | 179310 | 54.6286 | 54.6 | |
| * 118 1,4-DICHLOROBENZENE-D4 | 152 | 10.637 | 10.637 | (1.000) | 91661 | 50.0000 | | 9294 |
| 119 1,4-Dichlorobenzene | 146 | 10.649 | 10.649 | (1.001) | 173980 | 52.9605 | 53.0 | |
| 121 n-Butylbenzene | 91 | 10.866 | 10.866 | (1.021) | 329853 | 49.9764 | 50.0 | 9540 |
| 122 1,2-Dichlorobenzene | 146 | 10.993 | 10.994 | (1.033) | 146710 | 53.0904 | 53.1 | |
| 125 1,2-Dibromo-3-Chloropropane | 157 | 11.604 | 11.608 | (1.091) | 8410 | 57.3411 | 57.3 | 8592 |
| 126 Hexachlorobutadiene | 225 | 12.058 | 12.058 | (1.134) | 77277 | 52.9669 | 53.0 | 9396 |
| 127 1,2,4-Trichlorobenzene | 180 | 12.080 | 12.081 | (1.136) | 92026 | 49.3380 | 49.3 | |
| 128 Napthalene | 128 | 12.313 | 12.313 | (1.158) | 119622 | 52.1211 | 52.1 | 9102 |
| 129 1,2,3-Trichlorobenzene | 180 | 12.440 | 12.441 | (1.169) | 81043 | 50.8851 | 50.9 | |

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M1- Compound response manually integrated because
Target system did not integrate.

Data File: /var/chem/msv7.i/2131026.s.b/f2919.d

Date : 26-OCT-2013 08:23

Client ID: LCS

Sample Info: 1248095%LCS

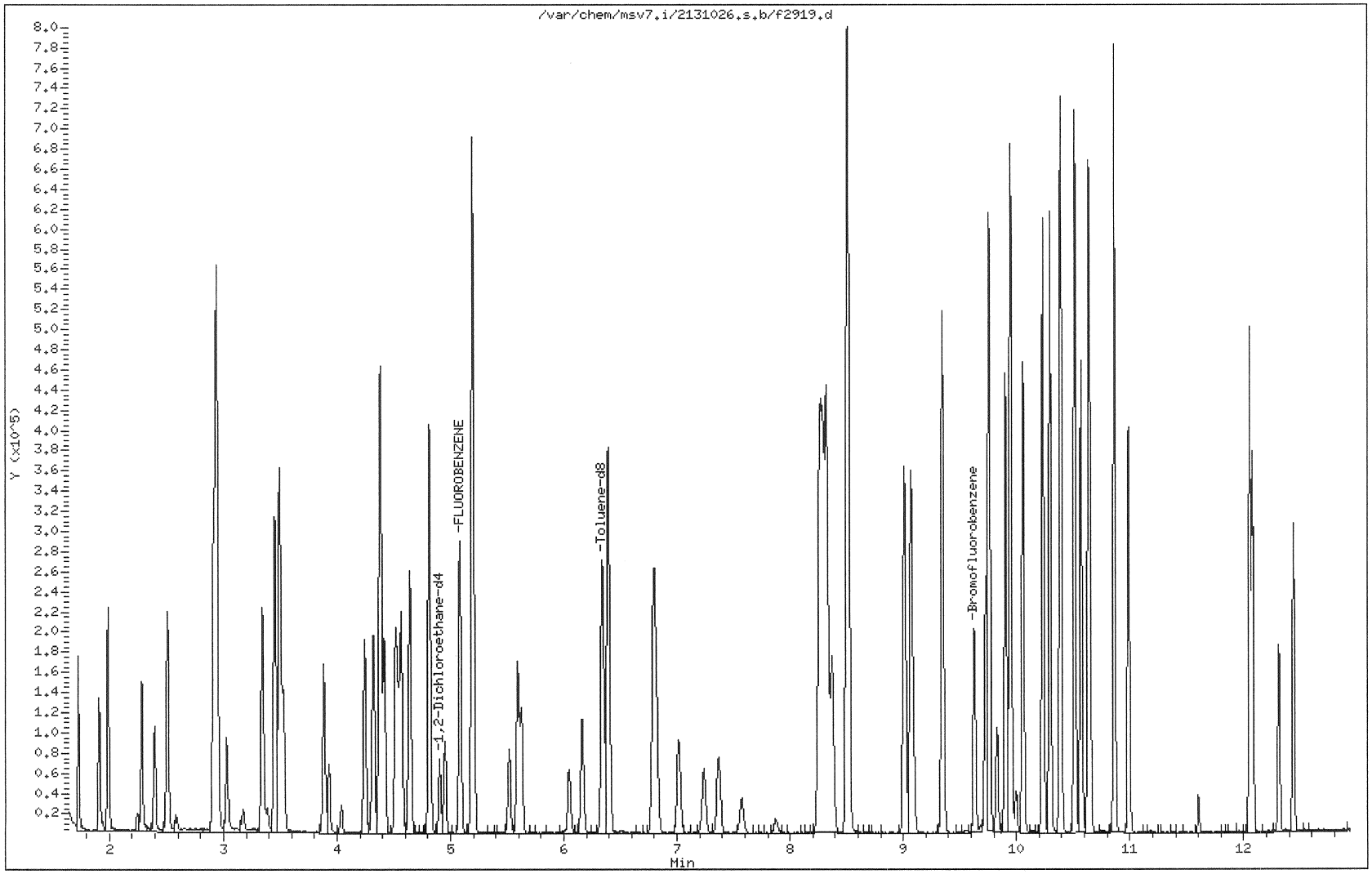
Column phase: RTX-VMS-30M

Instrument: msv7.i

Operator: LBH

Column diameter: 0.25



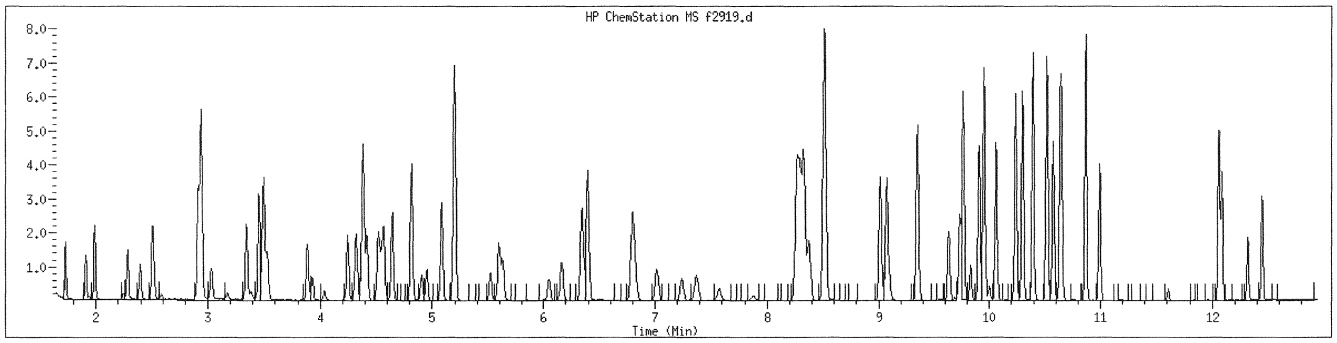



2131026 160

Data file : /var/chem/msv7.i/2131026.s.b/f2919.d Page: 1
Report Date: 10/26/2013 13:22

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 1248095 SampleType : LCS
Injection Date: 10/26/2013 08:23 Instrument : msv7.i
Operator : LBH
Sample Info : 1248095*LCS
Misc Info : MSV~28853~*1*LBH
Method : /var/chem/msv7.i/2131026.s.b/8260DODs7.m
Dilution : 1.00
Matrix : SOIL
Integrator : HP RTE Compound Sublist: 8260b




Original Final

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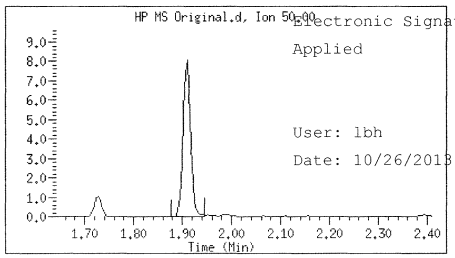
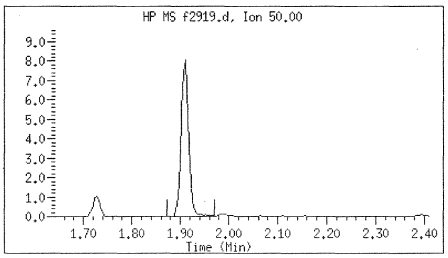
2 Chloromethane ++ CAS#: 74-87-3 Reason: M1

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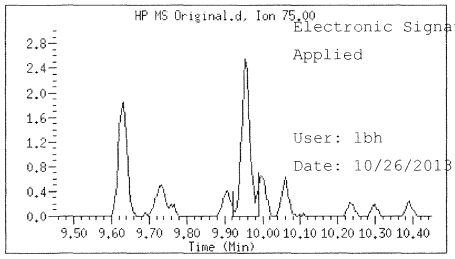
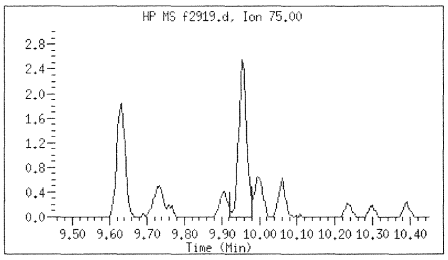
109 1,2,3-Trichloropropane CAS#: 96-18-4 Reason: M1

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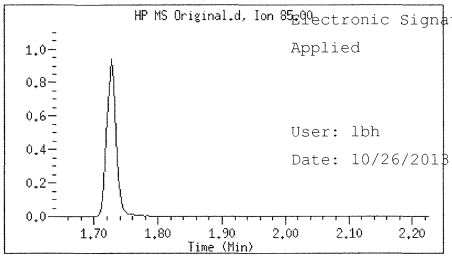
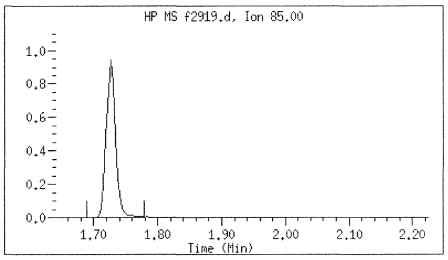
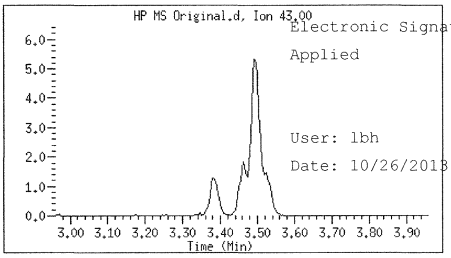
Original Final

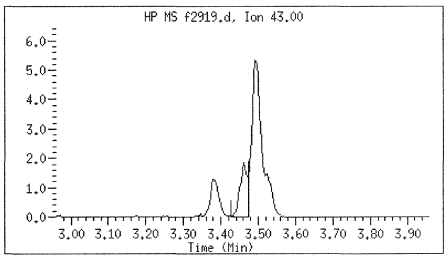
1 Dichlorodifluoromethane CAS#: 75-71-8 Reason: M1




22 Methyl Acetate CAS#: 79-20-9 Reason: M1



1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

LCSD1248038

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Matrix: (soil/water) Solid

Sample wt/vol: 5 (g/ml) g Lab Sample ID: 1248038

Level: (low/med) Lab File ID: 2131025/f2896

% Moisture: not dec. Date Collected: Time:

GC Column: RTX-VMS-30 ID: .25 (mm) Date Received:

Instrument ID: MSV7 Date Analyzed: 10/25/13 Time: 1651

Soil Extract Volume: ( µL ) Dilution Factor: 1 Analyst: CEK

Soil Aliquot Volume: ( µL ) Prep Batch: Analytical Batch: 518589

*CONCENTRATION UNITS: ug/kg* Analytical Method: SW-846 8260B

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 67-64-1 | Acetone | 50.3 | | 0.296 | 2.00 | 25.0 |
| 75-27-4 | Bromodichloromethane | 49.8 | | 0.104 | 0.500 | 5.00 |
| 75-25-2 | Bromoform | 51.9 | | 0.437 | 0.500 | 5.00 |
| 74-83-9 | Bromomethane | 47.1 | | 0.486 | 2.00 | 5.00 |
| 75-15-0 | Carbon disulfide | 45.0 | | 0.187 | 0.500 | 5.00 |
| 56-23-5 | Carbon tetrachloride | 45.4 | | 0.189 | 0.500 | 5.00 |
| 75-00-3 | Chloroethane | 46.0 | | 0.202 | 0.500 | 5.00 |
| 67-66-3 | Chloroform | 48.3 | | 0.172 | 0.500 | 5.00 |
| 74-87-3 | Chloromethane | 48.2 | | 0.193 | 2.00 | 5.00 |
| 124-48-1 | Dibromochloromethane | 49.7 | | 0.250 | 0.500 | 5.00 |
| 75-34-3 | 1,1-Dichloroethane | 46.8 | | 0.096 | 0.500 | 5.00 |
| 107-06-2 | 1,2-Dichloroethane | 50.4 | | 0.198 | 0.500 | 5.00 |
| 156-59-2 | cis-1,2-Dichloroethene | 51.6 | | 0.114 | 0.500 | 5.00 |
| 156-60-5 | trans-1,2-Dichloroethene | 46.8 | | 0.119 | 0.500 | 5.00 |
| 75-09-2 | Methylene chloride | 50.0 | | 0.512 | 1.00 | 10.0 |
| 78-87-5 | 1,2-Dichloropropane | 50.7 | | 0.076 | 0.500 | 5.00 |
| 10061-01-5 | cis-1,3-Dichloropropene | 48.0 | | 0.129 | 0.500 | 5.00 |
| 10061-02-6 | trans-1,3-Dichloropropene | 47.5 | | 0.082 | 0.500 | 5.00 |
| 100-41-4 | Ethylbenzene | 54.5 | | 0.183 | 0.500 | 5.00 |
| 591-78-6 | 2-Hexanone | 48.5 | | 0.295 | 2.00 | 5.00 |
| 78-93-3 | 2-Butanone | 53.2 | | 0.323 | 2.00 | 5.00 |
| 108-10-1 | 4-Methyl-2-pentanone | 46.9 | | 0.154 | 0.500 | 5.00 |
| 100-42-5 | Styrene | 51.6 | | 0.083 | 0.500 | 5.00 |
| 127-18-4 | Tetrachloroethene | 45.3 | | 0.296 | 0.500 | 5.00 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 51.8 | | 0.175 | 0.500 | 5.00 |
| 71-55-6 | 1,1,1-Trichloroethane | 47.0 | | 0.162 | 0.500 | 5.00 |
| 79-00-5 | 1,1,2-Trichloroethane | 48.9 | | 0.064 | 0.500 | 5.00 |
| 75-01-4 | Vinyl chloride | 46.2 | | 0.194 | 0.500 | 5.00 |
| 1330-20-7 | Xylene (total) | 151 | | 0.247 | 1.50 | 15.0 |
| 75-35-4 | 1,1-Dichloroethene | 44.3 | | 0.227 | 0.500 | 5.00 |
| 71-43-2 | Benzene | 50.8 | | 0.051 | 0.500 | 5.00 |

FORM I VOA

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

LCSD1248038

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Matrix: (soil/water) Solid

Sample wt/vol: 5 (g/ml) g Lab Sample ID: 1248038

Level: (low/med) Lab File ID: 2131025/f2896

% Moisture: not dec. Date Collected: Time:

GC Column: RTX-VMS-30 ID: .25 (mm) Date Received:

Instrument ID: MSV7 Date Analyzed: 10/25/13 Time: 1651

Soil Extract Volume: ( µL ) Dilution Factor: 1 Analyst: CEK

Soil Aliquot Volume: ( µL ) Prep Batch: Analytical Batch: 518589

*CONCENTRATION UNITS: ug/kg* Analytical Method: SW-846 8260B

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 79-01-6 | Trichloroethene | 47.5 | | 0.127 | 0.500 | 5.00 |
| 108-88-3 | Toluene | 48.7 | | 0.107 | 0.500 | 5.00 |
| 108-90-7 | Chlorobenzene | 51.1 | | 0.129 | 0.500 | 5.00 |

FORM I VOA

GCAL, Inc.

Data file : /var/chem/msv7.i/2131025.s.b/f2896.d
Lab Smp Id: 1248038 Client Smp ID: LCSD
Inj Date : 25-OCT-2013 16:51
Operator : CEK Inst ID: msv7.i
Smp Info : 1248038*LCSD
Misc Info : MSV~28849~*1*CEK
Comment :
Method : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Meth Date : 25-Oct-2013 19:43 cek Quant Type: ISTD
Cal Date : 25-OCT-2013 14:34 Cal File: f2891d.d
Als bottle: 13 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * (Uf/Ws)/((100-M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 5.00000 | ng unit correction factor |
| Ws | 5.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture (not decanted) |
| Va | 100.00000 | Volume of aliquot extract added (uL) |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppb) | FINAL (ug/Kg) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|
| 1 Dichlorodifluoromethane | 85 | 1.727 | 1.727 | (0.162) | 89669 | 42.1777 | 42.2 | 9401 |
| 2 Chloromethane ++ | 50 | 1.910 | 1.911 | (0.376) | 94083 | 48.2305 | 48.2 | 9788 |
| 3 Vinyl Chloride + | 62 | 1.985 | 1.986 | (0.391) | 137160 | 46.1684 | 46.2 | 9463 |
| 6 Bromomethane | 94 | 2.282 | 2.285 | (0.449) | 66082 | 47.0651 | 47.1 | 9243 |
| 8 Chloroethane | 64 | 2.394 | 2.394 | (0.471) | 71510 | 46.0377 | 46.0 | 9083 |
| 9 Trichlorofluoromethane | 101 | 2.510 | 2.510 | (0.494) | 139364 | 44.2134 | 44.2 | 9340 |
| 12 1,1-Dichloroethene + | 96 | 2.911 | 2.915 | (0.573) | 85819 | 44.2967 | 44.3 | 9212 |
| 15 1,1,2Trichlotrifluoroethane | 101 | 2.934 | 2.938 | (0.577) | 88727 | 44.2344 | 44.2 | 9381 |
| 14 Carbon Disulfide | 76 | 2.941 | 2.941 | (0.579) | 326356 | 45.0493 | 45.0 | 9315 |
| 16 Methyl Iodide | 142 | 3.028 | 3.031 | (0.596) | 88270 | 49.1997 | 49.2 | 9420 |
| 17 Acrolein | 56 | 3.174 | 3.174 | (0.625) | 13197 | 257.786 | 258 | 8449 |
| 18 Methylene Chloride | 49 | 3.339 | 3.343 | (0.657) | 107782 | 50.0080 | 50.0 | 9202 |
| 19 Acetone | 43 | 3.384 | 3.384 | (0.666) | 20259 | 50.2793 | 50.3 | 8568 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppb) | FINAL (ug/Kg) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|---|
| | 13 trans-1,2-Dichloroethene | 61 | 3.455 | 3.455 | (0.680) | 132875 | 46.7635 | 46.8 | 9005 |
| | 22 Methyl Acetate | 43 | 3.462 | 3.462 | (0.681) | 22588 | 48.0903 | 48.1 | 9050(M2) |
| | 23 Hexane | 57 | 3.492 | 3.496 | (0.687) | 167647 | 46.0379 | 46.0 | 8993 |
| | 25 MTBE | 73 | 3.526 | 3.526 | (0.694) | 127384 | 50.8942 | 50.9 | 9074 |
| | 31 1,1-Dichloroethane ++ | 63 | 3.882 | 3.882 | (0.764) | 139322 | 46.7623 | 46.8 | 9421 |
| | 33 Acrylonitrile | 53 | 3.927 | 3.927 | (0.773) | 41505 | 242.614 | 243 | 9360 |
| | 34 Vinyl Acetate | 43 | 4.036 | 4.036 | (0.794) | 22794 | 49.0859 | 49.1 | |
| | 21 cis-1,2-Dichloroethene | 61 | 4.246 | 4.242 | (0.836) | 94072 | 51.5633 | 51.6 | 9219 |
| M | 68 Total 1,2-Dichloroethene | 61 | | | | 226947 | 98.3268 | 98.3 | 0 |
| | 35 2,2-Dichloropropane | 77 | 4.317 | 4.317 | (0.850) | 108777 | 47.6508 | 47.7 | 9053 |
| | 38 Cyclohexane | 56 | 4.381 | 4.381 | (0.862) | 122592 | 45.7086 | 45.7 | 9120 |
| | 39 Bromochloromethane | 128 | 4.377 | 4.381 | (0.861) | 33967 | 51.8474 | 51.8 | 9050 |
| | 40 Chloroform + | 83 | 4.415 | 4.415 | (0.869) | 142051 | 48.2658 | 48.3 | 9198 |
| | 41 Carbon Tetrachloride | 117 | 4.516 | 4.516 | (0.889) | 102347 | 45.4318 | 45.4 | 8916 |
| $ | 42 Dibromofluoromethane | 111 | 4.538 | 4.542 | (0.893) | 59376 | 47.2744 | 47.3 | 9332 |
| | 43 1,1,1-Trichloroethane | 97 | 4.564 | 4.565 | (0.898) | 117087 | 46.9588 | 47.0 | 9593 |
| | 45 2-Butanone | 43 | 4.624 | 4.625 | (0.910) | 14461 | 53.2291 | 53.2 | |
| | 44 1,1-Dichloropropene | 75 | 4.643 | 4.643 | (0.914) | 103349 | 50.6251 | 50.6 | 8830 |
| | 48 Benzene | 78 | 4.812 | 4.812 | (0.947) | 323807 | 50.7718 | 50.8 | 9179 |
| $ | 50 1,2-Dichloroethane-d4 | 67 | 4.906 | 4.906 | (0.965) | 23308 | 46.0462 | 46.0 | 9275 |
| | 52 1,2-Dichloroethane | 62 | 4.951 | 4.951 | (0.974) | 63935 | 50.3751 | 50.4 | 9528 |
| * | 54 FLUOROBENZENE | 96 | 5.082 | 5.086 | (1.000) | 253470 | 50.0000 | | 9255 |
| | 56 Methyl cyclohexane | 83 | 5.194 | 5.194 | (1.022) | 140945 | 49.5273 | 49.5 | 9054 |
| | 57 Trichloroethene | 130 | 5.194 | 5.198 | (1.022) | 96147 | 47.5478 | 47.5 | 9137 |
| | 62 Dibromomethane | 93 | 5.513 | 5.517 | (1.085) | 29262 | 50.1379 | 50.1 | 9144 |
| | 63 1,2-Dichloropropane + | 63 | 5.592 | 5.595 | (1.100) | 67067 | 50.7078 | 50.7 | 8830 |
| | 64 Bromodichloromethane | 83 | 5.625 | 5.625 | (1.107) | 85669 | 49.7622 | 49.8 | 9267 |
| | 69 1-Bromo-2-chloroethane | 63 | 6.045 | 6.045 | (1.190) | 62031 | 52.0481 | 52.0 | 9196 |
| | 70 2-Chloroethyl vinyl ether | 63 | 5.592 | 5.595 | (1.100) | 67067 | | | 4841(R) |
| | 72 cis-1,3-Dichloropropene | 75 | 6.161 | 6.161 | (1.212) | 83821 | 47.9875 | 48.0 | |
| $ | 74 Toluene-d8 | 98 | 6.341 | 6.341 | (0.766) | 240655 | 48.1156 | 48.1 | 9370 |
| | 77 Toluene + | 91 | 6.394 | 6.394 | (0.773) | 353561 | 48.7331 | 48.7 | 9305 |
| | 79 4-methyl-2-pentanone | 43 | 6.776 | 6.776 | (0.819) | 20085 | 46.8660 | 46.9 | |
| | 78 Tetrachloroethene | 164 | 6.799 | 6.799 | (0.822) | 75142 | 45.2763 | 45.3 | 8769 |
| | 81 trans-1,3-Dichloropropene | 75 | 6.821 | 6.825 | (1.342) | 67974 | 47.4908 | 47.5 | |
| M | 71 1-3 Dichloropropene-Total | 100 | | | | 151795 | 95.4784 | 95.5 | 0 |
| | 82 1,1,2-Trichloroethane | 97 | 7.020 | 7.012 | (0.848) | 42633 | 48.8550 | 48.9 | 9096 |
| | 85 Dibromochloromethane | 129 | 7.241 | 7.241 | (0.875) | 52140 | 49.6891 | 49.7 | 8865 |
| | 86 1,3-Dichloropropane | 76 | 7.376 | 7.369 | (0.891) | 69496 | 50.0968 | 50.1 | 9003 |
| | 88 1,2-Dibromoethane(EDB) | 107 | 7.571 | 7.575 | (0.915) | 36945 | 51.1170 | 51.1 | 8768 |
| | 80 2-Hexanone | 43 | 7.875 | 7.875 | (0.952) | 15179 | 48.5032 | 48.5 | 8524 |
| | 91 1-Chlorohexane | 91 | 8.257 | 8.261 | (0.998) | 93373 | 44.2007 | 44.2 | 9040 |
| * | 90 Chlorobenzene-d5 | 82 | 8.276 | 8.279 | (1.000) | 98605 | 50.0000 | | 8998 |
| | 92 Chlorobenzene ++ | 112 | 8.294 | 8.294 | (1.002) | 227836 | 51.0739 | 51.1 | 8485 |
| | 93 Ethylbenzene + | 106 | 8.324 | 8.328 | (1.006) | 128329 | 54.4804 | 54.5 | 9331 |
| | 95 1,1,1,2-Tetrachloroethane | 133 | 8.373 | 8.377 | (1.012) | 68734 | 48.6580 | 48.7 | 9389 |
| | 96 p,m-Xylene | 106 | 8.508 | 8.512 | (1.028) | 313933 | 101.494 | 101 | 9496 |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppb) | FINAL (ug/Kg) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|
| 98 o-Xylene | 106 | 9.014 | 9.014 | (1.089) | 129762 | 49.5661 | 49.6 | |
| M 120 TOTAL XYLENE | 106 | | | | 443695 | 151.060 | 151 | 0 |
| 99 Styrene | 104 | 9.070 | 9.070 | (1.096) | 214821 | 51.6087 | 51.6 | 9256 |
| 100 Bromoform ++ | 173 | 9.093 | 9.097 | (1.099) | 33347 | 51.8648 | 51.9 | 8591 |
| 102 Isopropylbenzene | 105 | 9.348 | 9.348 | (1.130) | 372979 | 49.2234 | 49.2 | 9485 |
| $ 103 Bromofluorobenzene | 174 | 9.633 | 9.633 | (1.164) | 69266 | 51.3621 | 51.4 | 9319 |
| 104 Bromobenzene | 77 | 9.730 | 9.730 | (0.915) | 137238 | 51.5587 | 51.6 | 9032 |
| 106 n-Propylbenzene | 91 | 9.760 | 9.760 | (0.918) | 475683 | 48.7260 | 48.7 | 9582 |
| 107 1,1,2,2-Tetrachloroethane++ | 83 | 9.831 | 9.831 | (0.924) | 52705 | 51.8369 | 51.8 | 9198 |
| 108 2-Chlorotoluene | 91 | 9.906 | 9.906 | (0.931) | 259465 | 55.7570 | 55.8 | 9286 |
| 110 1,3,5-Trimethylbenzene | 105 | 9.948 | 9.948 | (0.935) | 328671 | 50.0951 | 50.1 | |
| 109 1,2,3-Trichloropropane | 75 | 9.955 | 9.959 | (0.936) | 39347 | 50.5251 | 50.5 | 8699 |
| 111 trans-1,4-Dichloro-2-Butene | 53 | 10.000 | 10.000 | (0.940) | 8339 | 53.6836 | 53.7 | 8819 |
| 112 4-Chlorotoluene | 91 | 10.060 | 10.060 | (0.946) | 264435 | 51.4608 | 51.5 | 9413 |
| 113 tert-butylbenzene | 91 | 10.236 | 10.236 | (0.962) | 173188 | 48.3241 | 48.3 | 9424 |
| 114 1,2,4-Trimethylbenzene | 105 | 10.300 | 10.300 | (0.968) | 321739 | 50.6392 | 50.6 | |
| 115 sec-Butylbenzene | 105 | 10.390 | 10.394 | (0.977) | 456245 | 48.8868 | 48.9 | |
| 116 p-Isopropyltoluene | 119 | 10.517 | 10.517 | (0.989) | 362524 | 48.2867 | 48.3 | 9554 |
| 117 1,3-Dichlorobenzene | 146 | 10.574 | 10.574 | (0.994) | 194643 | 54.5990 | 54.6 | |
| * 118 1,4-DICHLOROBENZENE-D4 | 152 | 10.637 | 10.637 | (1.000) | 99553 | 50.0000 | | 9162 |
| 119 1,4-Dichlorobenzene | 146 | 10.649 | 10.649 | (1.001) | 188025 | 52.6986 | 52.7 | |
| 121 n-Butylbenzene | 91 | 10.866 | 10.866 | (1.021) | 345184 | 48.3178 | 48.3 | 9567 |
| 122 1,2-Dichlorobenzene | 146 | 10.993 | 10.993 | (1.033) | 159862 | 53.2638 | 53.3 | |
| 125 1,2-Dibromo-3-Chloropropane | 157 | 11.604 | 11.608 | (1.091) | 8473 | 53.1909 | 53.2 | 8411 |
| 126 Hexachlorobutadiene | 225 | 12.058 | 12.058 | (1.134) | 79159 | 49.9556 | 50.0 | 9533 |
| 127 1,2,4-Trichlorobenzene | 180 | 12.080 | 12.081 | (1.136) | 106163 | 52.0892 | 52.1 | |
| 128 Napthalene | 128 | 12.313 | 12.313 | (1.158) | 132344 | 53.0422 | 53.0 | 9472 |
| 129 1,2,3-Trichlorobenzene | 180 | 12.440 | 12.440 | (1.169) | 91059 | 52.4782 | 52.5 | |

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M2- Compound response manually integrated because
Target system integrated incorrectly.

Data File: /var/chem/msv7.i/2131025.s.b/f2896.d

Date : 25-OCT-2013 16:51

Client ID: LCSD

Sample Info: 1248038*LCSD

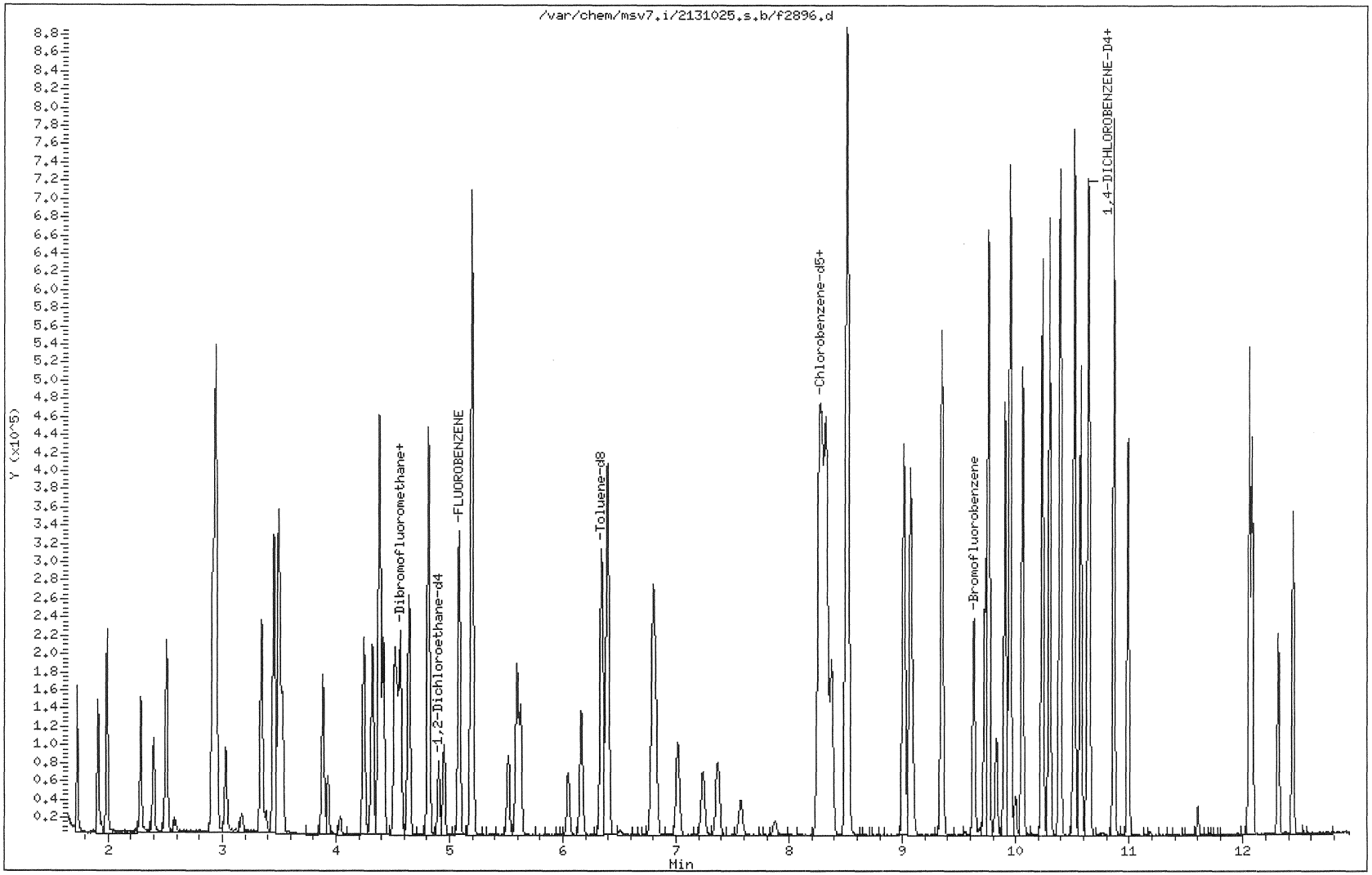
Column phase: RTX-VMS-30M

Instrument: msv7.i

Operator: CEK

Column diameter: 0.25

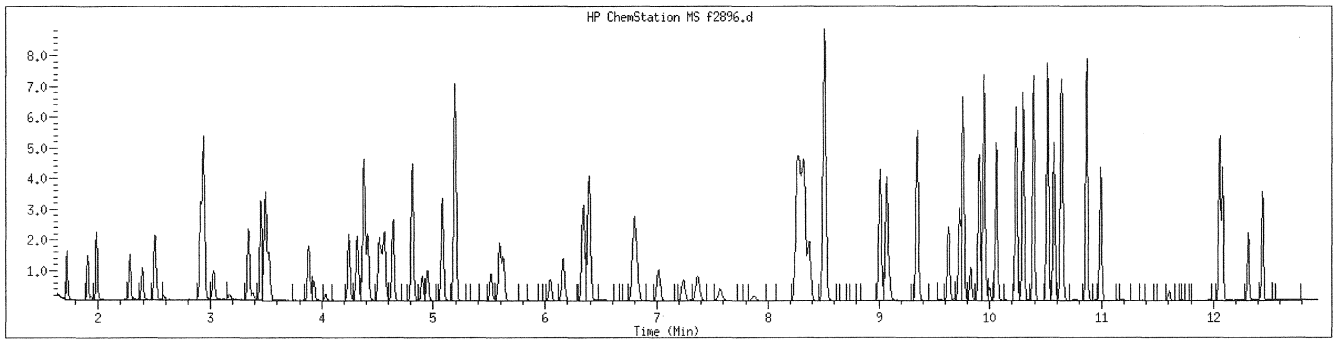




Data file : /var/chem/msv7.i/2131025.s.b/f2896.d Page: 1
Report Date: 10/25/2013 19:56

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 1248038 SampleType : LCSD
Injection Date: 10/25/2013 16:51 Instrument : msv7.i
Operator : CEK
Sample Info : 1248038*LCSD
Misc Info : MSV~28849~*1*CEK
Method : /var/chem/msv7.i/2131025.s.b/8260DODs7.m
Dilution : 1.00
Matrix : SOIL
Integrator : HP RTE Compound Sublist: 8260b




Original Final

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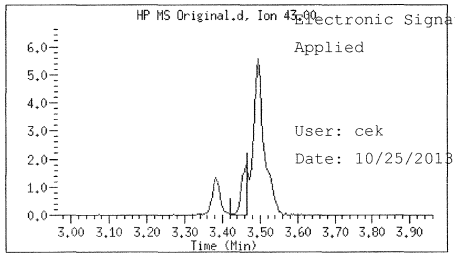
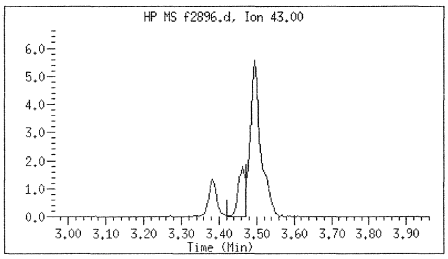
22 Methyl Acetate CAS#: 79-20-9 Reason: M3




Electronic Signature
Applied

User: cek
Date: 10/25/2013 18:29

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1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

LCSD1248096

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Matrix: (soil/water) Solid

Sample wt/vol: 5 (g/ml) g Lab Sample ID: 1248096

Level: (low/med) Lab File ID: 2131026/f2920

% Moisture: not dec. Date Collected: Time:

GC Column: RTX-VMS-30 ID: .25 (mm) Date Received:

Instrument ID: MSV7 Date Analyzed: 10/26/13 Time: 0845

Soil Extract Volume: ( µL ) Dilution Factor: 1 Analyst: LBH

Soil Aliquot Volume: ( µL ) Prep Batch: Analytical Batch: 518604

Analytical Method: SW-846 8260B

*CONCENTRATION UNITS: ug/kg*

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 67-64-1 | Acetone | 52.5 | | 0.296 | 2.00 | 25.0 |
| 75-27-4 | Bromodichloromethane | 50.1 | | 0.104 | 0.500 | 5.00 |
| 75-25-2 | Bromoform | 47.5 | | 0.437 | 0.500 | 5.00 |
| 74-83-9 | Bromomethane | 49.5 | | 0.486 | 2.00 | 5.00 |
| 75-15-0 | Carbon disulfide | 49.4 | | 0.187 | 0.500 | 5.00 |
| 56-23-5 | Carbon tetrachloride | 49.1 | | 0.189 | 0.500 | 5.00 |
| 75-00-3 | Chloroethane | 50.3 | | 0.202 | 0.500 | 5.00 |
| 67-66-3 | Chloroform | 48.6 | | 0.172 | 0.500 | 5.00 |
| 74-87-3 | Chloromethane | 48.9 | | 0.193 | 2.00 | 5.00 |
| 124-48-1 | Dibromochloromethane | 47.2 | | 0.250 | 0.500 | 5.00 |
| 75-34-3 | 1,1-Dichloroethane | 47.1 | | 0.096 | 0.500 | 5.00 |
| 107-06-2 | 1,2-Dichloroethane | 48.6 | | 0.198 | 0.500 | 5.00 |
| 156-59-2 | cis-1,2-Dichloroethene | 49.5 | | 0.114 | 0.500 | 5.00 |
| 156-60-5 | trans-1,2-Dichloroethene | 50.6 | | 0.119 | 0.500 | 5.00 |
| 75-09-2 | Methylene chloride | 51.7 | | 0.512 | 1.00 | 10.0 |
| 78-87-5 | 1,2-Dichloropropane | 49.4 | | 0.076 | 0.500 | 5.00 |
| 10061-01-5 | cis-1,3-Dichloropropene | 46.2 | | 0.129 | 0.500 | 5.00 |
| 10061-02-6 | trans-1,3-Dichloropropene | 46.4 | | 0.082 | 0.500 | 5.00 |
| 100-41-4 | Ethylbenzene | 52.8 | | 0.183 | 0.500 | 5.00 |
| 591-78-6 | 2-Hexanone | 46.9 | | 0.295 | 2.00 | 5.00 |
| 78-93-3 | 2-Butanone | 53.9 | | 0.323 | 2.00 | 5.00 |
| 108-10-1 | 4-Methyl-2-pentanone | 42.8 | | 0.154 | 0.500 | 5.00 |
| 100-42-5 | Styrene | 48.0 | | 0.083 | 0.500 | 5.00 |
| 127-18-4 | Tetrachloroethene | 46.8 | | 0.296 | 0.500 | 5.00 |
| 79-34-5 | 1,1,2,2-Tetrachloroethane | 48.5 | | 0.175 | 0.500 | 5.00 |
| 71-55-6 | 1,1,1-Trichloroethane | 51.1 | | 0.162 | 0.500 | 5.00 |
| 79-00-5 | 1,1,2-Trichloroethane | 47.7 | | 0.064 | 0.500 | 5.00 |
| 75-01-4 | Vinyl chloride | 50.4 | | 0.194 | 0.500 | 5.00 |
| 1330-20-7 | Xylene (total) | 141 | | 0.247 | 1.50 | 15.0 |
| 75-35-4 | 1,1-Dichloroethene | 49.4 | | 0.227 | 0.500 | 5.00 |
| 71-43-2 | Benzene | 50.5 | | 0.051 | 0.500 | 5.00 |

FORM I VOA

1A

VOLATILE ORGANICS ANALYSIS DATA SHEET

SAMPLE NO.

LCSD1248096

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Matrix: (soil/water) Solid

Sample wt/vol: 5 (g/ml) g Lab Sample ID: 1248096

Level: (low/med) Lab File ID: 2131026/f2920

% Moisture: not dec. Date Collected: Time:

GC Column: RTX-VMS-30 ID: .25 (mm) Date Received:

Instrument ID: MSV7 Date Analyzed: 10/26/13 Time: 0845

Soil Extract Volume: ( µL ) Dilution Factor: 1 Analyst: LBH

Soil Aliquot Volume: ( µL ) Prep Batch: Analytical Batch: 518604

*CONCENTRATION UNITS: ug/kg* Analytical Method: SW-846 8260B

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 79-01-6 | Trichloroethene | 50.1 | | 0.127 | 0.500 | 5.00 |
| 108-88-3 | Toluene | 46.4 | | 0.107 | 0.500 | 5.00 |
| 108-90-7 | Chlorobenzene | 47.8 | | 0.129 | 0.500 | 5.00 |

FORM I VOA

GCAL, Inc.

Data file : /var/chem/msv7.i/2131026.s.b/f2920.d
Lab Smp Id: 1248096 Client Smp ID: LCSD
Inj Date : 26-OCT-2013 08:45
Operator : LBH Inst ID: msv7.i
Smp Info : 1249096*LCSD
Misc Info : MSV~28853~*1*LBH
Comment :
Method : /var/chem/msv7.i/2131026.s.b/8260DODs7.m
Meth Date : 26-Oct-2013 13:22 lbh Quant Type: ISTD
Cal Date : 25-OCT-2013 14:34 Cal File: f2891d.d
Als bottle: 40 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8260b.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * (Uf/Ws)/((100-M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 5.00000 | ng unit correction factor |
| Ws | 5.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture (not decanted) |
| Va | 100.00000 | Volume of aliquot extract added (uL) |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppb) | FINAL (ug/Kg) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|
| 1 Dichlorodifluoromethane | 85 | 1.727 | 1.727 | (0.340) | 97476 | 48.3217 | 48.3 | 0(M1) |
| 2 Chloromethane ++ | 50 | 1.910 | 1.911 | (0.376) | 90595 | 48.9462 | 48.9 | 8953(M1) |
| 3 Vinyl Chloride + | 62 | 1.985 | 1.986 | (0.391) | 142011 | 50.3783 | 50.4 | 9507(M1) |
| 6 Bromomethane | 94 | 2.285 | 2.285 | (0.450) | 65918 | 49.4794 | 49.5 | 8812(M1) |
| 8 Chloroethane | 64 | 2.394 | 2.394 | (0.471) | 74144 | 50.3068 | 50.3 | 8001 |
| 9 Trichlorofluoromethane | 101 | 2.510 | 2.507 | (0.494) | 147985 | 49.4794 | 49.5 | 9165 |
| 12 1,1-Dichloroethene + | 96 | 2.915 | 2.915 | (0.574) | 90816 | 49.4031 | 49.4 | 7991 |
| 15 1,1,2Trichlotrifluoroethane | 101 | 2.938 | 2.938 | (0.578) | 96706 | 50.8115 | 50.8 | 7052 |
| 14 Carbon Disulfide | 76 | 2.941 | 2.941 | (0.579) | 339428 | 49.3797 | 49.4 | 7261 |
| 16 Methyl Iodide | 142 | 3.031 | 3.031 | (0.597) | 83424 | 49.0209 | 49.0 | 9089 |
| 17 Acrolein | 56 | 3.170 | 3.174 | (0.624) | 13025 | 268.143 | 268 | 8616 |
| 18 Methylene Chloride | 49 | 3.342 | 3.343 | (0.658) | 105519 | 51.7378 | 51.7 | 9347 |
| 19 Acetone | 43 | 3.380 | 3.380 | (0.665) | 19987 | 52.4877 | 52.5 | 7661 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppb) | FINAL (ug/Kg) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|---|
| | 13 trans-1,2-Dichloroethene | 61 | 3.451 | 3.451 | (0.679) | 136543 | 50.6451 | 50.6 | 6977 |
| | 22 Methyl Acetate | 43 | 3.459 | 3.459 | (0.681) | 25397 | 57.2127 | 57.2 | 1855(M1) |
| | 23 Hexane | 57 | 3.492 | 3.496 | (0.687) | 183403 | 53.0799 | 53.1 | 9222 |
| | 25 MTBE | 73 | 3.522 | 3.526 | (0.693) | 124315 | 52.3458 | 52.3 | 8851 |
| | 31 1,1-Dichloroethane ++ | 63 | 3.882 | 3.882 | (0.764) | 133031 | 47.0580 | 47.1 | 9404 |
| | 33 Acrylonitrile | 53 | 3.927 | 3.931 | (0.773) | 40731 | 250.926 | 251 | 9500 |
| | 34 Vinyl Acetate | 43 | 4.036 | 4.036 | (0.794) | 27347 | 62.0655 | 62.1 | |
| | 21 cis-1,2-Dichloroethene | 61 | 4.246 | 4.242 | (0.836) | 85704 | 49.5091 | 49.5 | 8735 |
| M | 68 Total 1,2-Dichloroethene | 61 | | | | 222247 | 100.154 | 100 | 0 |
| | 35 2,2-Dichloropropane | 77 | 4.317 | 4.321 | (0.850) | 107961 | 49.8430 | 49.8 | 8802 |
| | 38 Cyclohexane | 56 | 4.377 | 4.377 | (0.861) | 126001 | 49.0999 | 49.1 | 9017 |
| | 39 Bromochloromethane | 128 | 4.381 | 4.381 | (0.862) | 31969 | 51.4284 | 51.4 | 8369 |
| | 40 Chloroform + | 83 | 4.415 | 4.415 | (0.869) | 135749 | 48.6112 | 48.6 | 8834 |
| | 41 Carbon Tetrachloride | 117 | 4.516 | 4.520 | (0.889) | 104858 | 49.0558 | 49.1 | 9157 |
| $ | 42 Dibromofluoromethane | 111 | 4.542 | 4.542 | (0.894) | 59211 | 49.6846 | 49.7 | 8418 |
| | 43 1,1,1-Trichloroethane | 97 | 4.565 | 4.565 | (0.898) | 120919 | 51.1101 | 51.1 | 7000 |
| | 45 2-Butanone | 43 | 4.625 | 4.625 | (0.910) | 13882 | 53.8526 | 53.9 | (M1) |
| | 44 1,1-Dichloropropene | 75 | 4.639 | 4.643 | (0.913) | 103203 | 53.2790 | 53.3 | 7589 |
| | 48 Benzene | 78 | 4.816 | 4.812 | (0.948) | 305897 | 50.5494 | 50.5 | 9189 |
| $ | 50 1,2-Dichloroethane-d4 | 67 | 4.906 | 4.906 | (0.965) | 23709 | 49.3635 | 49.4 | 9384 |
| | 52 1,2-Dichloroethane | 62 | 4.951 | 4.947 | (0.974) | 58487 | 48.5670 | 48.6 | 9389 |
| * | 54 FLUOROBENZENE | 96 | 5.082 | 5.082 | (1.000) | 240504 | 50.0000 | | 9467 |
| | 56 Methyl cyclohexane | 83 | 5.198 | 5.194 | (1.023) | 148073 | 54.8371 | 54.8 | 7645 |
| | 57 Trichloroethene | 130 | 5.194 | 5.198 | (1.022) | 96170 | 50.1232 | 50.1 | 9188 |
| | 62 Dibromomethane | 93 | 5.513 | 5.517 | (1.085) | 27983 | 50.5313 | 50.5 | 9218(M1) |
| | 63 1,2-Dichloropropane + | 63 | 5.595 | 5.588 | (1.101) | 61956 | 49.3689 | 49.4 | 9097 |
| | 64 Bromodichloromethane | 83 | 5.629 | 5.625 | (1.108) | 81835 | 50.0978 | 50.1 | 9294 |
| | 69 1-Bromo-2-chloroethane | 63 | 6.049 | 6.045 | (1.190) | 57881 | 51.1843 | 51.2 | 8926 |
| | 70 2-Chloroethyl vinyl ether | 63 | 5.595 | 5.588 | (1.101) | 61956 | | | 5128(R) |
| | 72 cis-1,3-Dichloropropene | 75 | 6.158 | 6.162 | (1.212) | 76289 | 46.2224 | 46.2 | |
| $ | 74 Toluene-d8 | 98 | 6.341 | 6.341 | (0.767) | 229064 | 45.7842 | 45.8 | 9429 |
| | 77 Toluene + | 91 | 6.394 | 6.394 | (0.773) | 336674 | 46.3914 | 46.4 | 9449 |
| | 79 4-methyl-2-pentanone | 43 | 6.780 | 6.776 | (0.820) | 18346 | 42.7952 | 42.8 | |
| | 78 Tetrachloroethene | 164 | 6.795 | 6.799 | (0.821) | 77673 | 46.7871 | 46.8 | 9202 |
| | 81 trans-1,3-Dichloropropene | 75 | 6.821 | 6.825 | (1.342) | 62830 | 46.3876 | 46.4 | |
| M | 71 1-3 Dichloropropene-Total | 100 | | | | 139119 | 92.6099 | 92.6 | 0 |
| | 82 1,1,2-Trichloroethane | 97 | 7.020 | 7.016 | (0.849) | 41602 | 47.6591 | 47.7 | 9297 |
| | 85 Dibromochloromethane | 129 | 7.241 | 7.241 | (0.875) | 49554 | 47.2103 | 47.2 | 9206 |
| | 86 1,3-Dichloropropane | 76 | 7.365 | 7.369 | (0.890) | 64034 | 46.1454 | 46.1 | 8802 |
| | 88 1,2-Dibromoethane(EDB) | 107 | 7.575 | 7.571 | (0.916) | 34367 | 47.5356 | 47.5 | 8833 |
| | 80 2-Hexanone | 43 | 7.882 | 7.875 | (0.953) | 14574 | 46.8609 | 46.9 | 8208 |
| | 91 1-Chlorohexane | 91 | 8.261 | 8.265 | (0.999) | 98563 | 46.3641 | 46.4 | 6071 |
| * | 90 Chlorobenzene-d5 | 82 | 8.272 | 8.272 | (1.000) | 98635 | 50.0000 | | 8319 |
| | 92 Chlorobenzene ++ | 112 | 8.298 | 8.298 | (1.003) | 213365 | 47.8154 | 47.8 | 6582 |
| | 93 Ethylbenzene + | 106 | 8.324 | 8.328 | (1.006) | 124518 | 52.8464 | 52.8 | 9410 |
| | 95 1,1,1,2-Tetrachloroethane | 133 | 8.377 | 8.373 | (1.013) | 64045 | 45.3248 | 45.3 | 8254 |
| | 96 p,m-Xylene | 106 | 8.512 | 8.512 | (1.029) | 297663 | 96.4796 | 96.5 | 9422 |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppb) | FINAL (ug/Kg) | SIMILARITY |
|---|---|---|---|---|---|---|---|---|
| 98 o-Xylene | 106 | 9.014 | 9.014 | (1.090) | 115878 | 44.7462 | 44.7 | |
| M 120 TOTAL XYLENE | 106 | | | | 413541 | 141.226 | 141 | 0 |
| 99 Styrene | 104 | 9.074 | 9.070 | (1.097) | 198567 | 47.9966 | 48.0 | 9143 |
| 100 Bromoform ++ | 173 | 9.097 | 9.093 | (1.100) | 30543 | 47.4893 | 47.5 | 5455(M1) |
| 102 Isopropylbenzene | 105 | 9.348 | 9.348 | (1.130) | 353366 | 46.8428 | 46.8 | 9436 |
| $ 103 Bromofluorobenzene | 174 | 9.629 | 9.629 | (1.164) | 68283 | 50.6178 | 50.6 | 9252 |
| 104 Bromobenzene | 77 | 9.730 | 9.730 | (0.915) | 129670 | 48.3817 | 48.4 | 9066 |
| 106 n-Propylbenzene | 91 | 9.760 | 9.760 | (0.918) | 465156 | 47.4284 | 47.4 | 9336 |
| 107 1,1,2,2-Tetrachloroethane++ | 83 | 9.828 | 9.828 | (0.924) | 49682 | 48.5288 | 48.5 | 9414 |
| 108 2-Chlorotoluene | 91 | 9.906 | 9.906 | (0.931) | 238903 | 50.9865 | 51.0 | 9500(M1) |
| 110 1,3,5-Trimethylbenzene | 105 | 9.951 | 9.951 | (0.935) | 317360 | 48.1865 | 48.2 | |
| 109 1,2,3-Trichloropropane | 75 | 9.959 | 9.951 | (0.936) | 36347 | 46.3530 | 46.4 | 8823 |
| 111 trans-1,4-Dichloro-2-Butene | 53 | 9.996 | 10.000 | (0.940) | 7031 | 45.9176 | 45.9 | 8750 |
| 112 4-Chlorotoluene | 91 | 10.060 | 10.060 | (0.946) | 250773 | 48.6574 | 48.7 | 9554 |
| 113 tert-butylbenzene | 91 | 10.236 | 10.236 | (0.962) | 169461 | 47.0822 | 47.1 | 9386 |
| 114 1,2,4-Trimethylbenzene | 105 | 10.300 | 10.300 | (0.968) | 307899 | 48.3225 | 48.3 | |
| 115 sec-Butylbenzene | 105 | 10.394 | 10.390 | (0.977) | 453834 | 48.3417 | 48.3 | |
| 116 p-Isopropyltoluene | 119 | 10.517 | 10.517 | (0.989) | 358936 | 47.5571 | 47.6 | 9339 |
| 117 1,3-Dichlorobenzene | 146 | 10.574 | 10.574 | (0.994) | 183606 | 51.1501 | 51.2 | |
| * 118 1,4-DICHLOROBENZENE-D4 | 152 | 10.637 | 10.637 | (1.000) | 100240 | 50.0000 | | 9346 |
| 119 1,4-Dichlorobenzene | 146 | 10.649 | 10.649 | (1.001) | 177959 | 49.5355 | 49.5 | |
| 121 n-Butylbenzene | 91 | 10.866 | 10.866 | (1.021) | 345442 | 48.0501 | 48.1 | 9567 |
| 122 1,2-Dichlorobenzene | 146 | 10.990 | 10.994 | (1.033) | 146346 | 48.4263 | 48.4 | |
| 125 1,2-Dibromo-3-Chloropropane | 157 | 11.608 | 11.608 | (1.091) | 7624 | 47.5331 | 47.5 | 8883 |
| 126 Hexachlorobutadiene | 225 | 12.054 | 12.058 | (1.133) | 82397 | 51.6427 | 51.6 | 9501 |
| 127 1,2,4-Trichlorobenzene | 180 | 12.081 | 12.081 | (1.136) | 97387 | 47.9079 | 47.9 | |
| 128 Napthalene | 128 | 12.313 | 12.313 | (1.158) | 120742 | 48.3166 | 48.3 | 9109 |
| 129 1,2,3-Trichlorobenzene | 180 | 12.440 | 12.441 | (1.169) | 84515 | 48.7431 | 48.7 | |

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M1- Compound response manually integrated because
Target system did not integrate.

Data File: /var/chem/msv7.i/2131026.s.b/f2920.d

Date : 26-OCT-2013 08:45

Client ID: LCSD

Sample Info: 1249096*LCSD

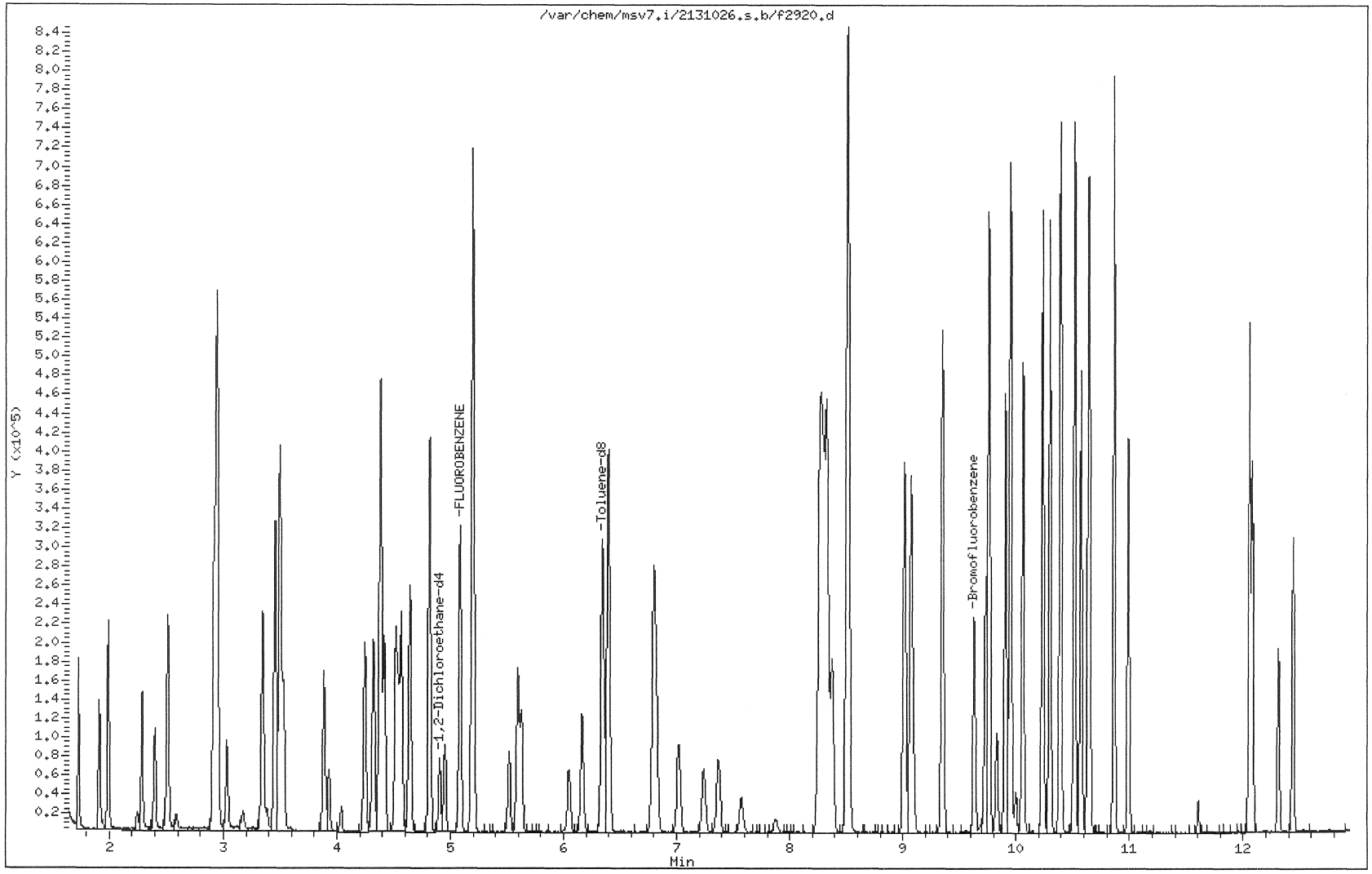
Column phase: RTX-VMS-30M

Instrument: msv7.i

Operator: LBH

Column diameter: 0.25



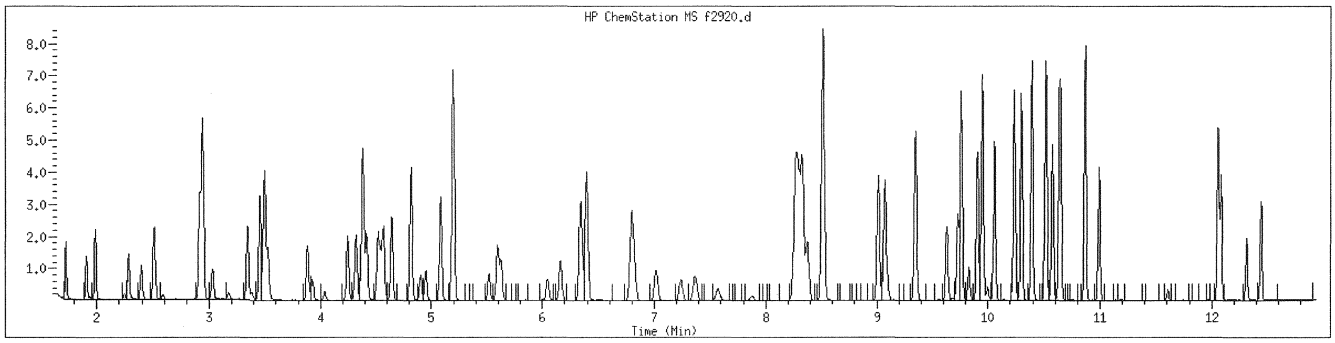



2131026 175

Data file : /var/chem/msv7.i/2131026.s.b/f2920.d Page: 1
Report Date: 10/26/2013 13:22

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 1248096 SampleType : LCSD
Injection Date: 10/26/2013 08:45 Instrument : msv7.i
Operator : LBH
Sample Info : 1249096*LCSD
Misc Info : MSV~28853~*1*LBH
Method : /var/chem/msv7.i/2131026.s.b/8260DODs7.m
Dilution : 1.00
Matrix : SOIL
Integrator : HP RTE Compound Sublist: 8260b




Original Final

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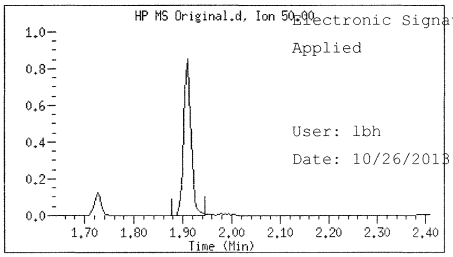
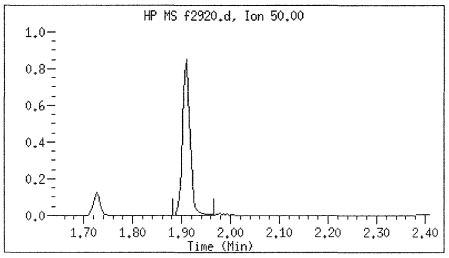
2 Chloromethane ++ CAS#: 74-87-3 Reason: M1

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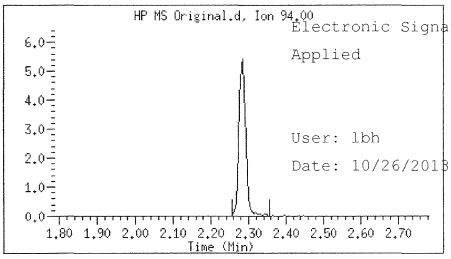
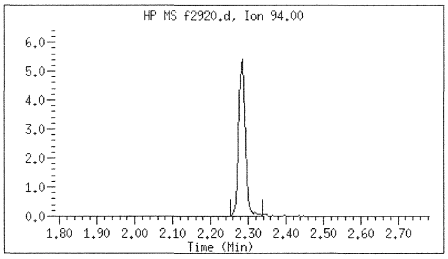
6 Bromomethane CAS#: 74-83-9 Reason: M1

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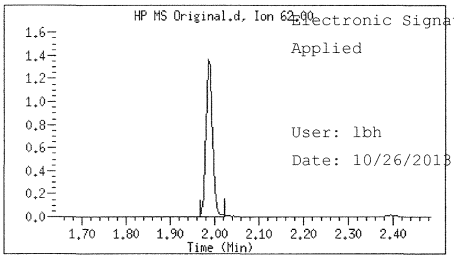
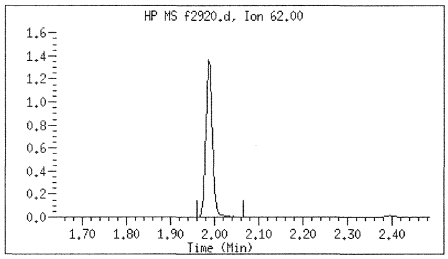
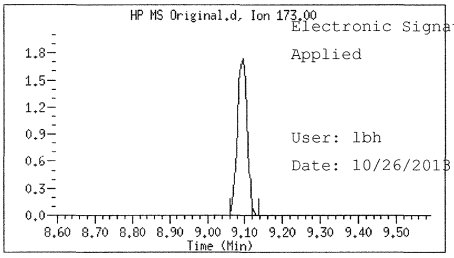
Original Final

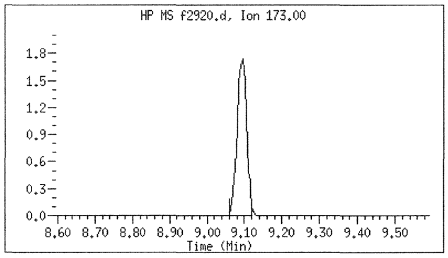
3 Vinyl Chloride + CAS#: 75-01-4 Reason: M1



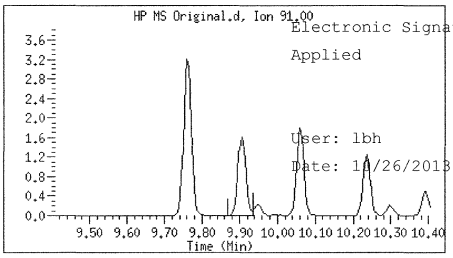



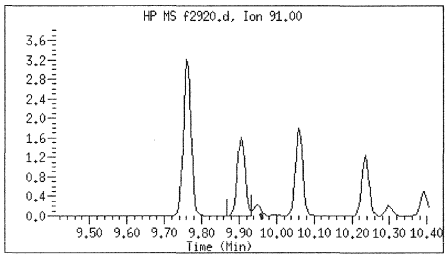

100 Bromoform ++ CAS#: 75-25-2 Reason: M1



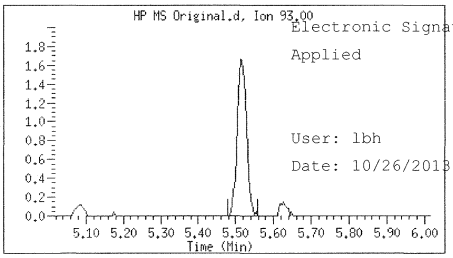



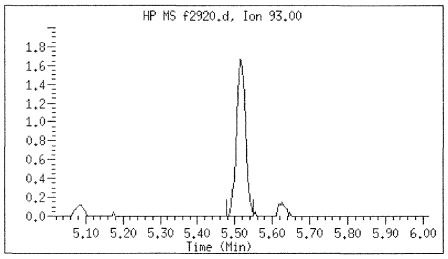

108 2-Chlorotoluene CAS#: 95-49-8 Reason: M1



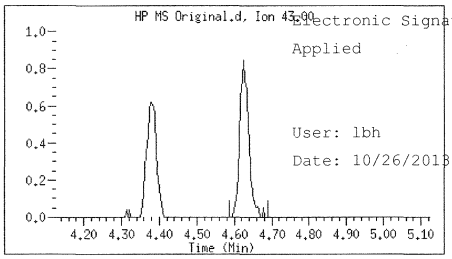

62 Dibromomethane CAS#: 74-95-3 Reason: M1

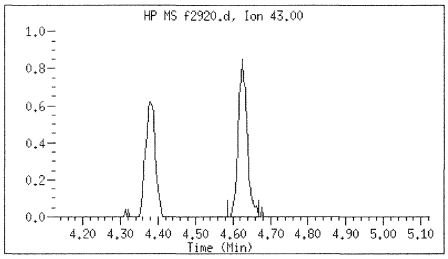


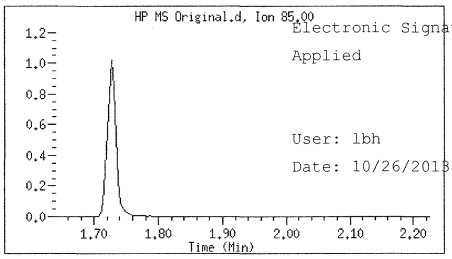
Original Final

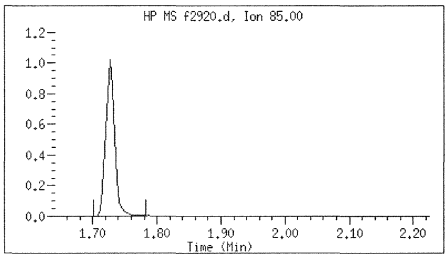
45 2-Butanone CAS#: 78-93-3 Reason: M1



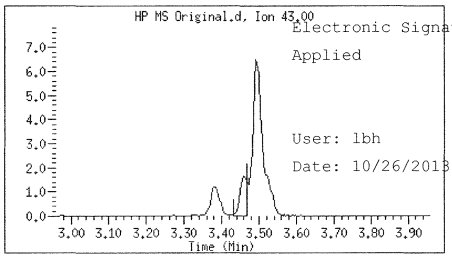



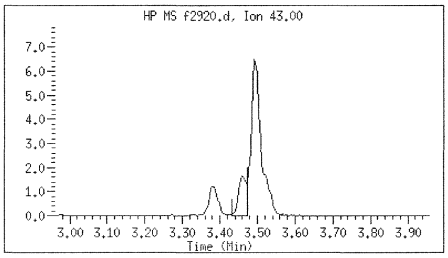

1 Dichlorodifluoromethane CAS#: 75-71-8 Reason: M1




22 Methyl Acetate CAS#: 79-20-9 Reason: M1



GCAL VOLATILES (SOLID SAMPLES)-STORAGE AND PRESERVATION

WORKORDer: 213101712

| Lab Sample # | Client ID | RELEASED BY: | RELEASED TO: | DATE | TIME | LOCATION | NOTES |
|---|---|---|---|---|---|---|---|
| 21310171205 1-4 | RS-CB02-101613 | FED-X | BPL | 10/17/2013 | 1030 | REC | |
| 21310171205 1-4 | RS-CB02-101613 | BPL | BPL | 10/17/2013 | 1255 | C4 | |
| 21310171205 1-4 | RS-CB02-101613 | BPL | CLH/AMD | 10/18/2013 | 1120 | C22 | STORAGE |
| 21310171205 1-4 | RS-CB02-101613 | CLH | CLH/AMD | 10/18/2013 | 1500 | VMS | WEIGH/PRESERVE |
| 21310171205 1-4 | RS-CB02-101613 | CLH | CLH/AMD | 10/18/2013 | 1540 | C22 | STORAGE |
| 21310171207 1-4 | RS-CB05-101613 | FED-X | BPL | 10/17/2013 | 1030 | REC | |
| 21310171207 1-4 | RS-CB05-101613 | BPL | BPL | 10/17/2013 | 1255 | C4 | |
| 21310171207 1-4 | RS-CB05-101613 | BPL | AMD | 10/18/2013 | 1120 | C22 | STORAGE |
| 21310171207 1-4 | RS-CB05-101613 | AMD | AMD | 10/18/2013 | 1500 | VMS | WEIGH/PRESERVE |
| 21310171207 1-4 | RS-CB05-101613 | AMD | AMD | 10/18/2013 | 1540 | C22 | STORAGE |
| 21310171209 1-4 | RS-CB03-101613 | AMD | AMD | 10/17/2013 | 1030 | REC | |
| 21310171209 1-4 | RS-CB03-101613 | AMD | AMD | 10/17/2013 | 1255 | C4 | |
| 21310171209 1-4 | RS-CB03-101613 | AMD | AMD | 10/18/2013 | 1120 | C22 | STORAGE |
| 21310171209 1-4 | RS-CB03-101613 | AMD | AMD | 10/18/2013 | 1500 | VMS | WEIGH/PRESERVE |
| 21310171209 1-4 | RS-CB03-101613 | AMD | AMD | 10/18/2013 | 1540 | C22 | STORAGE |
| 21310171211 1-4 | RS-CB08-101613 | AMD | AMD | 10/17/2013 | 1030 | REC | |
| 21310171211 1-4 | RS-CB08-101613 | AMD | AMD | 10/17/2013 | 1255 | C4 | |
| 21310171211 1-4 | RS-CB08-101613 | AMD | AMD | 10/18/2013 | 1120 | C22 | STORAGE |
| 21310171211 1-4 | RS-CB08-101613 | AMD | AMD | 10/18/2013 | 1500 | VMS | WEIGH/PRESERVE |
| 21310171211 1-4 | RS-CB08-101613 | AMD | AMD | 10/18/2013 | 1540 | C22 | STORAGE |
| 21310171213 1-4 | RS-QDCI-101613 | AMD | AMD | 10/17/2013 | 1030 | REC | |
| 21310171213 1-4 | RS-QDCI-101613 | AMD | AMD | 10/17/2013 | 1255 | C4 | |
| 21310171213 1-4 | RS-QDCI-101613 | AMD | AMD | 10/18/2013 | 1120 | C22 | STORAGE |
| 21310171213 1-4 | RS-QDCI-101613 | AMD | AMD | 10/18/2013 | 1500 | VMS | WEIGH/PRESERVE |
| 21310171213 1-4 | RS-QDCI-101613 | AMD | AMD | 10/18/2013 | 1540 | C22 | STORAGE |

C4-RECEIVING HOLDING COOLER

C22-VMS COOLER

213101712 179

Sample Weights - SDG/Fraction: MS Volatiles 213101712

| Dept | Container ID | Vial | Initial Wgt | Final Wgt | Sample Wgt | Analyst | Date | Preservative | Comments |
|---|---|---|---|---|---|---|---|---|---|
| MSV | 21310171205-1 | A | 34.76 | 40.81 | **6.05** | CLH | 10/18/13 15:20 | SODIUM BISULFATE | TERRACORE PRESERVED WITH WATER |
| MSV | 21310171205-2 | A | 34.94 | 39.87 | **4.93** | CLH | 10/18/13 15:21 | SODIUM BISULFATE | TERRACORE B-VIAL PRESERVED WITH WATER |
| MSV | 21310171205-3 | C | 33.16 | 37.50 | **4.34** | CLH | 10/18/13 15:21 | METHANOL | TERRACORE |
| MSV | 21310171205-4 | D | 33.06 | 38.03 | **4.97** | CLH | 10/18/13 15:22 | METHANOL | TERRACORE |
| MSV | 21310171207-1 | A | 34.83 | 39.02 | **4.19** | CLH | 10/18/13 15:24 | WATER | TERRACORE |
| MSV | 21310171207-2 | B | 34.34 | 39.13 | **4.79** | CLH | 10/18/13 15:24 | WATER | TERRACORE |
| MSV | 21310171207-3 | C | 33.38 | 37.32 | **3.94** | AMD | 10/18/13 15:27 | METHANOL | TERRACORE |
| MSV | 21310171207-4 | D | 33.05 | 37.14 | **4.09** | AMD | 10/18/13 15:35 | METHANOL | TERRACORE |
| MSV | 21310171207-5 | JAR | 0 | 5.04 | **5.04** | CEK | 10/26/13 16:34 | WATER | JAR |
| MSV | 21310171209-1 | A | 34.93 | 39.60 | **4.67** | AMD | 10/18/13 15:31 | WATER | TERRACORE |
| MSV | 21310171209-2 | B | 34.72 | 39.82 | **5.10** | AMD | 10/18/13 15:31 | WATER | TERRACORE |
| MSV | 21310171209-3 | C | 32.89 | 38.01 | **5.12** | AMD | 10/18/13 15:29 | METHANOL | TERRACORE |
| MSV | 21310171209-4 | D | 33.07 | 38.28 | **5.21** | AMD | 10/18/13 15:34 | METHANOL | TERRACORE |
| MSV | 21310171211-1 | B | 34.91 | 41.37 | **6.46** | AMD | 10/18/13 15:32 | WATER | TERRACORE |
| MSV | 21310171211-2 | A | 34.30 | 40.15 | **5.85** | AMD | 10/18/13 15:33 | WATER | TERRACORE |
| MSV | 21310171211-3 | C | 33.15 | 38.91 | **5.76** | AMD | 10/18/13 15:30 | METHANOL | TERRACORE |
| MSV | 21310171211-4 | D | 32.88 | 40.29 | **7.41** | AMD | 10/18/13 15:36 | METHANOL | TERRACORE |
| MSV | 21310171213-1 | A | 34.75 | 38.21 | **3.46** | JCK | 11/01/13 16:28 | WATER | TERRACORE-weighed 10/18/13 15:30; IW corr. 11/1 |
| MSV | 21310171213-2 | B | 34.83 | 40.15 | **5.32** | AMD | 10/18/13 15:34 | WATER | TERRACORE |
| MSV | 21310171213-3 | C | 33.28 | 37.73 | **4.45** | AMD | 10/18/13 15:30 | METHANOL | TERRACORE |
| MSV | 21310171213-4 | D | 33.10 | 37.85 | **4.75** | AMD | 10/18/13 15:36 | METHANOL | TERRACORE |

LABORATORY CHRONICLE: MSV DEPARTMENT

Date: 25-OCT-2013
Instrument: msv7.i
Analyst(s): CEK

| Standard | Conc | ID# | EXP |
|---|---|---|---|
| BFB IS/SS | 50 | 7-65-2 | 03/23/14 |
| 8260 IS/SS | 50 | 7-65-2 | 03/23/14 |
| 8260 | MC | 126-1-9 | 10/30/13 |
| AC/AC/VA | MC | 126-1-11 | 01/15/14 |
| 8260 ICV | MC | 7-57-8 | 12/15/13 |
| AC/AC ICV | MC | 126-1-12 | 01/15/14 |

| Sample ID | Comments | DataFile | Wgt/Vol | Injection Time | Dil | Anal | ALS |
|---|---|---|---|---|---|---|---|
| 1000 | RR | f2880.d | 0.00 ml | 25-OCT-2013 10:17 | 1.000 | LBH | 2 |
| 1000 | RR MINOR TUNE ADJUST | f2881.d | 0.00 ml | 25-OCT-2013 10:39 | 1.000 | LBH | 2 |
| 1000 | RR | f2882.d | 0.00 ml | 25-OCT-2013 11:00 | 1.000 | CEK | 2 |
| 1000 | | f2883.d | 0.00 ml | 25-OCT-2013 11:20 | 1.000 | CEK | 2 |
| 1000 | | f2883d.d | 0.00 ml | 25-OCT-2013 11:20 | 1.000 | CEK | 2 |
| BLANK | | f2884.d | 5.00 g | 25-OCT-2013 12:02 | 1.000 | CEK | 1 |
| 1201 | SOIL LOW ICAL | f2885.d | 5.00 g | 25-OCT-2013 12:24 | 1.000 | CEK | 2 |
| 1201 | | f2885d.d | 5.00 g | 25-OCT-2013 12:24 | 1.000 | CEK | 2 |
| 1202 | | f2886.d | 5.00 g | 25-OCT-2013 12:46 | 1.000 | CEK | 3 |
| 1202 | | f2886d.d | 5.00 g | 25-OCT-2013 12:46 | 1.000 | CEK | 3 |
| 1203 | | f2887.d | 5.00 g | 25-OCT-2013 13:07 | 1.000 | CEK | 4 |
| 1203 | | f2887d.d | 5.00 g | 25-OCT-2013 13:07 | 1.000 | CEK | 4 |
| 1204 | | f2888.d | 5.00 g | 25-OCT-2013 13:29 | 1.000 | CEK | 5 |
| 1204 | | f2888d.d | 5.00 g | 25-OCT-2013 13:29 | 1.000 | CEK | 5 |
| 1205 | | f2889.d | 5.00 g | 25-OCT-2013 13:51 | 1.000 | CEK | 6 |
| 1205 | | f2889d.d | 5.00 g | 25-OCT-2013 13:51 | 1.000 | CEK | 6 |
| 1206 | | f2890.d | 5.00 g | 25-OCT-2013 14:13 | 1.000 | CEK | 7 |
| 1206 | | f2890d.d | 5.00 g | 25-OCT-2013 14:13 | 1.000 | CEK | 7 |
| 1207 | | f2891.d | 5.00 g | 25-OCT-2013 14:34 | 1.000 | CEK | 8 |
| 1207 | | f2891d.d | 5.00 g | 25-OCT-2013 14:34 | 1.000 | CEK | 8 |
| BLANK | | f2892.d | 5.00 g | 25-OCT-2013 14:56 | 1.000 | CEK | 9 |
| 1600 | RR | f2893.d | 5.00 g | 25-OCT-2013 15:18 | 1.000 | CEK | 10 |
| 1600 | | f2894.d | 5.00 g | 25-OCT-2013 16:08 | 1.000 | CEK | 11 |
| 1600 | | f2894d.d | 5.00 g | 25-OCT-2013 16:08 | 1.000 | CEK | 11 |
| 1248037 | | f2895.d | 5.00 g | 25-OCT-2013 16:30 | 1.000 | CEK | 12 |
| 1248038 | | f2896.d | 5.00 g | 25-OCT-2013 16:51 | 1.000 | CEK | 13 |
| BLANK | | f2897.d | 5.00 g | 25-OCT-2013 17:13 | 1.000 | CEK | 14 |
| 1248036 | | f2898.d | 5.00 g | 25-OCT-2013 17:35 | 1.000 | CEK | 15 |
| 21310171205 | | f2899.d | 4.93 g | 25-OCT-2013 18:04 | 1.000 | CEK | 16 |
| 21310171207 | | f2900.d | 4.19 g | 25-OCT-2013 18:25 | 1.000 | CEK | 17 |
| 21310171209 | RR BAD PURGE | f2901.d | 4.67 g | 25-OCT-2013 18:47 | 1.000 | CEK | 18 |
| 21310171211 | | f2902.d | 5.85 g | 25-OCT-2013 19:09 | 1.000 | CEK | 19 |
| 21310171213 | | f2903.d | 5.00 g | 25-OCT-2013 19:30 | 1.000 | CEK | 20 |
| 21310170614 | | f2904.d | 4.06 g | 25-OCT-2013 19:52 | 1.000 | CEK | 21 |
| 21310170615 | | f2905.d | 4.73 g | 25-OCT-2013 20:14 | 1.000 | CEK | 22 |
| 21310170616 | | f2906.d | 4.14 g | 25-OCT-2013 20:35 | 1.000 | CEK | 23 |
| 21310170617 | | f2907.d | 4.38 g | 25-OCT-2013 20:57 | 1.000 | CEK | 24 |
| 21310170618 | | f2908.d | 5.00 g | 25-OCT-2013 21:19 | 1.000 | CEK | 25 |
| 21310170619 | | f2909.d | 4.06 g | 25-OCT-2013 21:41 | 1.000 | CEK | 26 |
| 21310171209 | | f2910.d | 5.10 g | 25-OCT-2013 22:02 | 1.000 | CEK | 27 |
| 21310170601 | | f2911.d | 4.59 g | 25-OCT-2013 22:24 | 1.000 | CEK | 28 |
| 21310170602 | (MANY LOW FAILURES -MATRIX) | f2912ms.d | 5.00 g | 25-OCT-2013 22:46 | 1.000 | CEK | 29 |
| 21310170603 | " " | f2913msd.d | 5.16 g | 25-OCT-2013 23:08 | 1.000 | CEK | 30 |
| BLANK | | f2914.d | 5.00 g | 25-OCT-2013 23:29 | 1.000 | CEK | 31 |
| BLANK | | f2915.d | 5.00 g | 25-OCT-2013 23:49 | 1.000 | CEK | 32 |

TUNE TIME: 23:20

LABORATORY CHRONICLE: MSV DEPARTMENT

Date: 26-OCT-2013
Instrument: msv7.i
Analyst(s): LBH
CEK

| Standard | Conc | ID# | EXP |
|---|---|---|---|
| BFB IS/SS | 50 | 7-65-2 | 03/23/14 |
| 8260 IS/SS | 50 | 7-65-2 | 03/23/14 |
| 8260 | MC | 126-1-9 | 10/30/13 |
| AC/AC/VA | MC | 126-1-11 | 01/15/14 |

| Sample ID | Comments | DataFile | Wgt/Vol | Injection Time | Dil | Anal | ALS |
|---|---|---|---|---|---|---|---|
| 1000 | | f2916.d | 0.00 ml | 26-OCT-2013 06:52 | 1.000 | LBH | 2 |
| BLANK | | f2917.d | 5.00 g | 26-OCT-2013 07:40 | 1.000 | LBH | 37 |
| 1400 | | f2918.d | 5.00 g | 26-OCT-2013 08:02 | 1.000 | LBH | 38 |
| 1248095 | | f2919.d | 5.00 g | 26-OCT-2013 08:23 | 1.000 | LBH | 39 |
| 1248096 | | f2920.d | 5.00 g | 26-OCT-2013 08:45 | 1.000 | LBH | 40 |
| BLANK | | f2921.d | 5.00 g | 26-OCT-2013 09:07 | 1.000 | LBH | 41 |
| BLANK | | f2922.d | 5.00 g | 26-OCT-2013 09:28 | 1.000 | LBH | 42 |
| 1248094 | | f2923.d | 5.00 g | 26-OCT-2013 09:50 | 1.000 | LBH | 43 |
| 21310190601 | | f2924p.d | 5.00 g | 26-OCT-2013 10:12 | 1.000 | LBH | 44 |
| 21310170622 | | f2925.d | 4.16 g | 26-OCT-2013 10:34 | 1.000 | LBH | 45 |
| 21310170623 | | f2926.d | 4.13 g | 26-OCT-2013 10:55 | 1.000 | LBH | 46 |
| 21310170624 | | f2927.d | 4.01 g | 26-OCT-2013 11:17 | 1.000 | LBH | 47 |
| 21310210501 | | f2928.d | 5.74 g | 26-OCT-2013 11:39 | 1.000 | LBH | 48 |
| 21310210502 | | f2929.d | 5.95 g | 26-OCT-2013 12:00 | 1.000 | LBH | 49 |
| 21310210506 | | f2930.d | 5.95 g | 26-OCT-2013 12:22 | 1.000 | LBH | 50 |
| 21310210507 | | f2931.d | 6.45 g | 26-OCT-2013 12:44 | 1.000 | LBH | 51 |
| 21310210508 | | f2932.d | 6.13 g | 26-OCT-2013 13:05 | 1.000 | LBH | 52 |
| 21310210509 | | f2933.d | 5.31 g | 26-OCT-2013 13:30 | 1.000 | LBH | 53 |
| 21310210510 | | f2934.d | 6.38 g | 26-OCT-2013 13:53 | 1.000 | LBH | 54 |
| 21310210511 | | f2935.d | 5.25 g | 26-OCT-2013 14:15 | 1.000 | LBH | 55 |
| 21310210512 | | f2936.d | 6.43 g | 26-OCT-2013 14:37 | 1.000 | CEK | 56 |
| 21310190604 | | f2937.d | 4.15 g | 26-OCT-2013 14:59 | 1.000 | CEK | 57 |
| 21310190605 | | f2938.d | 4.27 g | 26-OCT-2013 15:21 | 1.000 | CEK | 58 |
| 21310190606 | | f2939.d | 4.23 g | 26-OCT-2013 15:42 | 1.000 | CEK | 59 |
| 21310190607 | RR IS LOW | f2940.d | 4.40 g | 26-OCT-2013 16:04 | 1.000 | CEK | 60 |
| 21310190608 | | f2941.d | 4.23 g | 26-OCT-2013 16:26 | 1.000 | CEK | 61 |
| 21310170620 | | f2942.d | 4.55 g | 26-OCT-2013 16:50 | 1.000 | CEK | 63 |
| 21310170621 | | f2943.d | 4.55 g | 26-OCT-2013 17:12 | 1.000 | CEK | 64 |
| 21310171207 | | f2944.d | 5.04 g | 26-OCT-2013 17:34 | 1.000 | CEK | 65 |

TUNE TIME: 18:52

2F

ORGANICS SURROGATE RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

GC Column (1) : ID: ( mm) GC Cloumn (2) : ID: ( mm )

Method: SW846 8015C

| EPA SAMPLE NO. | SMC1 1-(1) | # | 1-(2) | # | SMC2 2-(1) | # | 2-(2) | # | TOT OUT |
|---|---|---|---|---|---|---|---|---|---|
| 1. RS-COMP1-101613 | 94 | | | | | | | | 0 |
| 2. RS-COMP2-101613 | 86 | | | | | | | | 0 |
| 3. MB1247163 | 85 | | | | | | | | 0 |
| 4. LCS1247164 | 90 | | | | | | | | 0 |

CONTROL LIMITS

SMC 1 : Bromochlorobenzene 47 164

SMC 2 :

# Column to be used to flag recovery limits

* Value outside of contract required limits

D Surrogate diluted out

FORM II ORG-2

3F

SOIL ORGANIC LCS/LCSD RECOVERY

Lab Name: GCAL

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Contract: Method: SW846 8015C

Prep Batch: Analytical Batch: 518467

***Spike HSN : 1247164***

| COMPOUND | UNITS | SPIKE ADDED | SAMPLE CONCENTRATION | LCS CONCENTRATION | LCS % REC | LCS % REC FLAG | QC. LIMITS |
|---|---|---|---|---|---|---|---|
| GRO | ug/kg | 25000 | 0 | 26000 | 104 | | 67 - 127 |

RPD : 0 out of 0 outside limits

Spike Recovery: 0 out of 1 outside limits

FORM III ORG-2

4C

ORGANIC METHOD BLANK SUMMARY

Lab Name: GCAL

Sample ID: MB1247163

Lab Code: LA024 Case No.:

Contract:

Lab Sample ID: 1247163

SAS No.: SDG No.: 213101712

Matrix: Solid Sulfur Cleanup: (Y/N) N

Date Extracted:

Date Analyzed (1): 10/25/13 Time (1): 2004

Date Analyzed (2): Time (2):

Instrument ID (1): GCV9A

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

Method: SW846 8015C

Prep Batch: Analytical Batch: 518467

Lab File ID: 2131025/v9004

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES

| | SAMPLE NO. | LAB SAMPLE ID | DATE ANALYZED | TIME ANALYZED | INSTRUMENT ID |
|---|---|---|---|---|---|
| 1. | LCS1247164 | 1247164 | 10/25/13 | 1944 | GCV9A |
| 2. | RS-COMP1-101613 | 21310171201 | 10/25/13 | 2246 | GCV9A |
| 3. | RS-COMP2-101613 | 21310171203 | 10/25/13 | 2306 | GCV9A |

FORM IV ORGANIC

1D
ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL
Lab Code: LA024 Case No.:
Matrix: Solid
Sample wt/vol: 5.15 Units: g
Level: (low/med) LOW
% Moisture: 18.4 decanted: (Y/N)
GC Column: ID: (mm)
Concentrated Extract Volume: 5000 ( µL )
Soil Aliquot Volume: ( µL )
Injection Volume: 1 ( µL )
GPC Cleanup: (Y/N) N pH:
Prep Batch: Analytical Batch: 518467

Sample ID: RS-COMP1-101613
Contract:
SAS No.: SDG No.: 213101712
Lab Sample ID: 21310171201
Date Collected: 10/16/13 Time: 1600
Date Received: 10/17/13
Date Extracted:
Date Analyzed: 10/25/13 Time: 2246
Dilution Factor: 50 Analyst: BMR
Prep Method: 8015C
Analytical Method: SW846 8015C
Sulfur Cleanup: (Y/N) N Instrument ID: GCV9A
Lab File ID: 2131025/v9012

*CONCENTRATION UNITS:* *ug/kg*

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 8006-61-9 | GRO | 2380 | U | 582 | 2380 | 5950 |

FORM I ORG-1

Data file : /var/chem/gcv9a.i/2131025.b/v9012.d
Report Date: 10/28/2013 16:27

GRO REPORT

Cal Marker file: /var/chem/gcv9a.i/2131025.b/v9001C.d
Batch Marker file: /var/chem/gcv9a.i/2131025.b/v9001.d
Data file : /var/chem/gcv9a.i/2131025.b/v9012.d
Lab Smp Id: 21310171201 Client Smp ID: 21310171201
Inj Date : 25-OCT-2013 22:46
Operator : BMR Inst ID: gcv9a.i
Smp Info : 21310171201
Misc Info : 6/18/15
Method : /var/chem/gcv9a.i/2131025.b/GASHBw.m
Meth Date : 28-Oct-2013 16:28 bmr Quant Type:
Cal Date : 25-JUL-2013 17:48 Cal File: v9007.d
Als bottle: 1
Integrator: Compound Sublistxxxx: all.sub
Target Version: 3.5

Cal GRO Marker

| Chromat Events | Values |
|---|---|
| Integrator ON | 2.680 |
| Integrator OFF | 5.100 |

Markers

| Low | High |
|---|---|
| 2.714 | 5.07 |

Batch GRO Marker

| Chromat Events | Values |
|---|---|
| Integrator ON | 2.680 |
| Integrator OFF | 5.100 |

Markers

| Low | High |
|---|---|
| 2.71 | 5.045 |

Area (includes areas 0.01 minutes outside of markers)

| | |
|---|---|
| Total | 1,151,330 |
| Fluorobenzene | -719,816 |
| Outside GRO Markers | -329,126 |
| Sample Area | 102,388 |

Dil Factor (DF): 50.00
Weight of sample (Ws): 5.15

GRO = ((Sample Area) / RRF) * DF * 5.00 / Ws

= ((102,388) / 13,766) * 50.00 * 5.00 / 5.15

= 361.1 ug/Kg

Avg RF = 13,766 %RSD = 5.02 %

GCAL, Inc.

Data file : /var/chem/gcv9a.i/2131025.b/v9012.d
Lab Smp Id: 21310171201 Client Smp ID: 21310171201
Inj Date : 25-OCT-2013 22:46
Operator : BMR Inst ID: gcv9a.i
Smp Info : 21310171201
Misc Info : 6/18/15
Comment :
Method : /var/chem/gcv9a.i/2131025.b/GASHBw.m
Meth Date : 28-Oct-2013 16:27 bmr Quant Type: ESTD
Cal Date : 25-JUL-2013 17:48 Cal File: v9007.d
Als bottle: 1
Dil Factor: 50.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 50.00000 | Dilution Factor |
| Uf | 5.00000 | ng unit correction factor |
| Vt | 1.00000 | Final Volume |
| Vi | 1.00000 | Volume Injected |
| Ws | 5.15000 | Weight of sample |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| | Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/L) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|---|
| S | 1 Total TPHG | | | | 17982 | 3.24365 | 157 |
| | 2 Fluorobenzene | 3.516 | 3.518 | -0.002 | 719815 | 24.2930 | 1180 |
| | 6 TPHG 4 | 4.626 | 4.613 | 0.013 | 7863 | 14.0486 | 682 |
| | 7 TPHG 5 | 4.868 | 4.879 | -0.011 | 10119 | 15.2740 | 741 |
| $ | 9 Bromochlorobenzene | 5.597 | 5.612 | -0.015 | 269733 | 28.1410 | 1370(M1) |

QC Flag Legend

M1- Compound response manually integrated because
Target system did not integrate.

GCAL, Inc.

Data file : /var/chem/gcv9a.i/2131025.b/v9012.d
Lab Smp Id: 21310171201 Client Smp ID: 21310171201
Inj Date : 25-OCT-2013 22:46
Operator : BMR Inst ID: gcv9a.i
Smp Info : 21310171201
Misc Info : 6/18/15
Comment :
Method : /var/chem/gcv9a.i/2131025.b/GASHBw.m
Meth Date : 28-Oct-2013 16:27 bmr Quant Type: AREA%
Cal Date : 25-JUL-2013 17:48 Cal File: v9007.d
Als bottle: 1
Dil Factor: 50.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 50.00000 | Dilution Factor |
| Uf | 5.00000 | ng unit correction factor |
| Vt | 1.00000 | Final Volume |
| Vi | 1.00000 | Volume Injected |
| Ws | 5.15000 | Weight of sample |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| RT | AREA | HEIGHT | HT/AREA | % AREA | | COMPOUNDS |
|---|---|---|---|---|---|---|
| 1.000 | 17982 | 18660 | 1.038 | 1.562 | S | 1 Total TPHG |
| 4.626 | 7863 | 9523 | 1.211 | | | 6 TPHG 4 |
| 4.868 | 10119 | 9137 | 0.903 | | | 7 TPHG 5 |
| 3.516 | 719816 | 848029 | 1.178 | 62.521 | | 2 Fluorobenzene |
| 4.571 | 6588 | 8280 | 1.257 | 0.572 | | |
| 4.681 | 16796 | 10851 | 0.646 | 1.459 | | |
| 4.820 | 10222 | 12924 | 1.264 | 0.888 | | |
| 4.936 | 40109 | 36159 | 0.902 | 3.484 | | |
| 4.995 | 10690 | 9760 | 0.913 | 0.928 | | |
| 5.089 | 51607 | 26724 | 0.518 | 4.482 | | |
| 5.597 | 269734 | 327500 | 1.214 | 23.428 | $ | 9 Bromochlorobenzene |
| 5.682 | 7785 | 8659 | 1.112 | 0.676 | | |
| | 1151330 | 1307546 | | 100.000 | | |

Data File: /var/chem/gcv9a.i/2131025.b/v9012.d

Page 1

Date : 25-OCT-2013 22:46

Client ID: 21310171201

Instrument: gcv9a.i

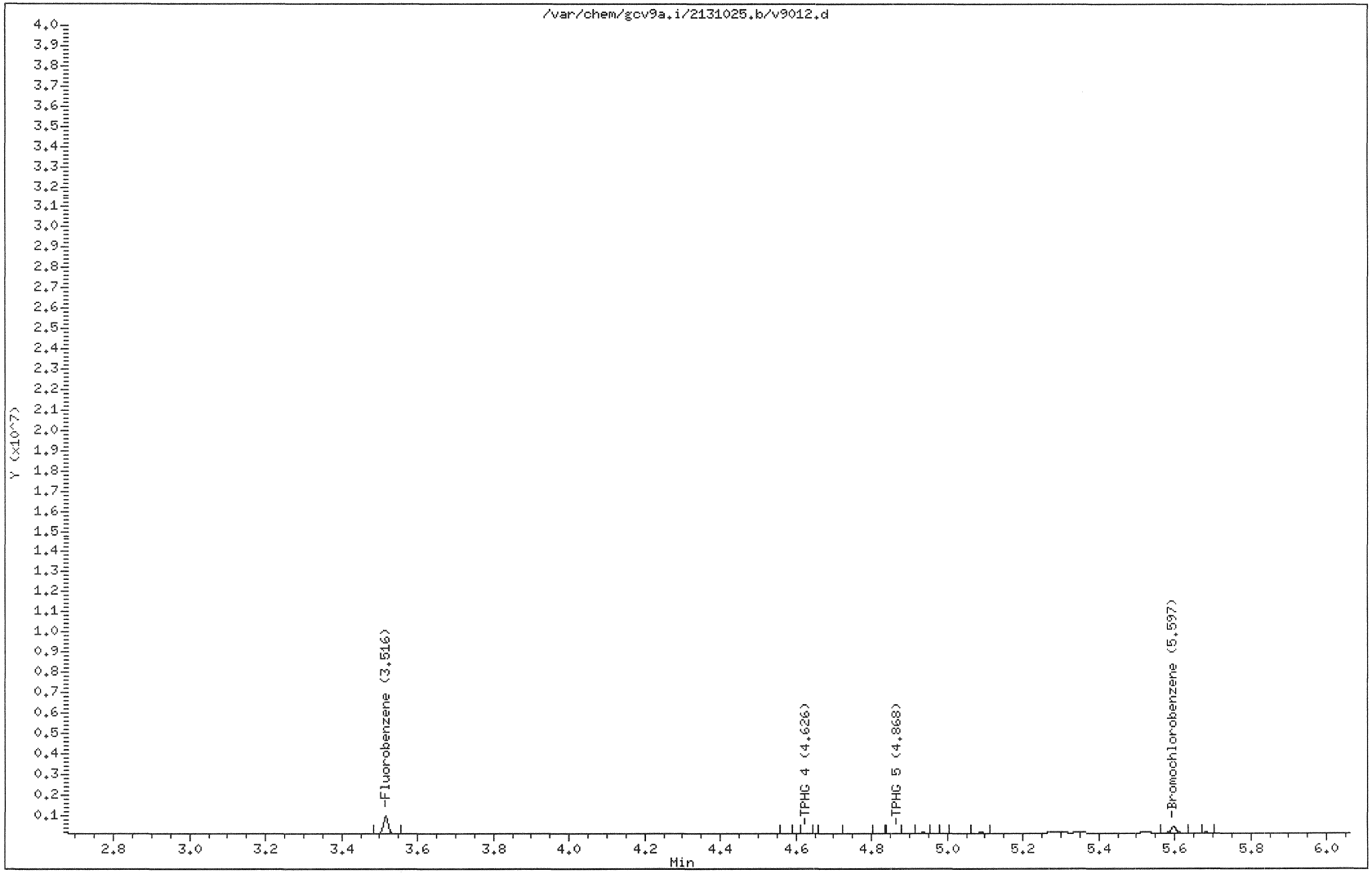
Sample Info: 21310171201

Volume Injected (uL): 1.0

Operator: BMR

Column phase: RTX-VMS

Column diameter: 0.25

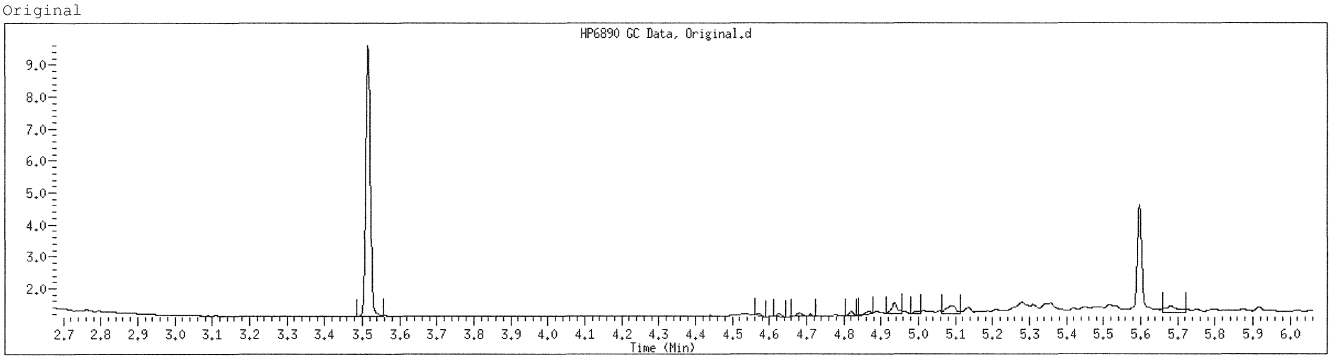


Data file : /var/chem/gcv9a.i/2131025.b/v9012.d Page: 1
Report Date: 10/28/2013 16:27

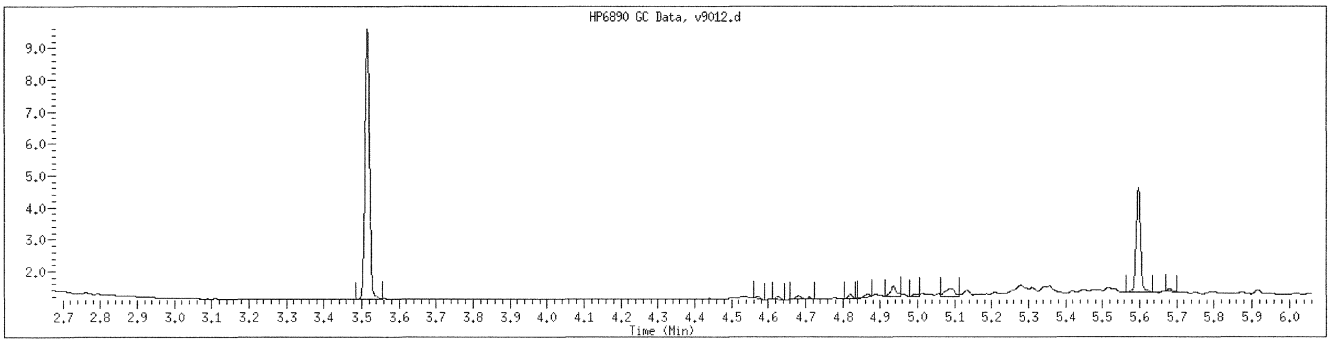
MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 21310171201 SampleType : SAMPLE
Injection Date: 10/25/2013 22:46 Instrument : gcv9a.i
Operator : BMR
Sample Info : 21310171201
Misc Info : 6/18/15
Method : /var/chem/gcv9a.i/2131025.b/GASHBw.m
Dilution : 50.0
Matrix : SOIL
Integrator : Falcon Compound Sublist: all

Original




Final



1D
ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL
Lab Code: LA024 Case No.:
Matrix: Solid
Sample wt/vol: 5.02 Units: g
Level: (low/med) LOW
% Moisture: 10.2 decanted: (Y/N)
GC Column: ID: (mm)
Concentrated Extract Volume: 5000 ( µL )
Soil Aliquot Volume: ( µL )
Injection Volume: 1 ( µL )
GPC Cleanup: (Y/N) N pH:
Prep Batch: Analytical Batch: 518467

Sample ID: RS-COMP2-101613
Contract:
SAS No.: SDG No.: 213101712
Lab Sample ID: 21310171203
Date Collected: 10/16/13 Time: 1700
Date Received: 10/17/13
Date Extracted:
Date Analyzed: 10/25/13 Time: 2306
Dilution Factor: 50 Analyst: BMR
Prep Method: 8015C
Analytical Method: SW846 8015C
Sulfur Cleanup: (Y/N) N Instrument ID: GCV9A
Lab File ID: 2131025/v9013

*CONCENTRATION UNITS: ug/kg*

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 8006-61-9 | GRO | 2220 | U | 543 | 2220 | 5550 |

FORM I ORG-1

Data file : /var/chem/gcv9a.i/2131025.b/v9013.d
Report Date: 10/28/2013 16:27

GRO REPORT

Cal Marker file: /var/chem/gcv9a.i/2131025.b/v9001C.d
Batch Marker file: /var/chem/gcv9a.i/2131025.b/v9001.d
Data file : /var/chem/gcv9a.i/2131025.b/v9013.d
Lab Smp Id: 21310171203 Client Smp ID: 21310171203
Inj Date : 25-OCT-2013 23:06
Operator : BMR Inst ID: gcv9a.i
Smp Info : 21310171203
Misc Info : 6/18/15
Method : /var/chem/gcv9a.i/2131025.b/GASHBw.m
Meth Date : 28-Oct-2013 16:28 bmr Quant Type:
Cal Date : 25-JUL-2013 17:48 Cal File: v9007.d
Als bottle: 1
Integrator: Compound Sublistxxxx: all.sub
Target Version: 3.5

| Cal GRO Marker | | Batch GRO Marker | |
|---|---|---|---|
| Chromat Events | Values | Chromat Events | Values |
| Integrator ON | 2.680 | Integrator ON | 2.680 |
| Integrator OFF | 5.100 | Integrator OFF | 5.100 |

| Markers | | Markers | |
|---|---|---|---|
| Low | High | Low | High |
| 2.714 | 5.07 | 2.71 | 5.045 |

Area (includes areas 0.01 minutes outside of markers)

| | |
|---|---|
| Total | 995,394 |
| Fluorobenzene | -741,095 |
| Outside GRO Markers | -247,212 |
| Sample Area | 7,087 |

Dil Factor (DF): 50.00
Weight of sample (Ws): 5.02

GRO = ((Sample Area) / RRF) * DF * 5.00 / Ws

= ((7,087) / 13,766) * 50.00 * 5.00 / 5.02

= 25.6 ug/Kg

Avg RF = 13,766 %RSD = 5.02 %

GCAL, Inc.

Data file : /var/chem/gcv9a.i/2131025.b/v9013.d
Lab Smp Id: 21310171203 Client Smp ID: 21310171203
Inj Date : 25-OCT-2013 23:06
Operator : BMR Inst ID: gcv9a.i
Smp Info : 21310171203
Misc Info : 6/18/15
Comment :
Method : /var/chem/gcv9a.i/2131025.b/GASHBw.m
Meth Date : 28-Oct-2013 16:27 bmr Quant Type: ESTD
Cal Date : 25-JUL-2013 17:48 Cal File: v9007.d
Als bottle: 1
Dil Factor: 50.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 50.00000 | Dilution Factor |
| Uf | 5.00000 | ng unit correction factor |
| Vt | 1.00000 | Final Volume |
| Vi | 1.00000 | Volume Injected |
| Ws | 5.02000 | Weight of sample |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/L) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|
| 2 Fluorobenzene | 3.517 | 3.518 | -0.001 | 741095 | 25.0112 | 1240 |
| $ 9 Bromochlorobenzene | 5.590 | 5.612 | -0.022 | 247211 | 25.7913 | 1280(M1) |

QC Flag Legend

M1- Compound response manually integrated because
Target system did not integrate.

GCAL, Inc.

Data file : /var/chem/gcv9a.i/2131025.b/v9013.d
Lab Smp Id: 21310171203 Client Smp ID: 21310171203
Inj Date : 25-OCT-2013 23:06
Operator : BMR Inst ID: gcv9a.i
Smp Info : 21310171203
Misc Info : 6/18/15
Comment :
Method : /var/chem/gcv9a.i/2131025.b/GASHBw.m
Meth Date : 28-Oct-2013 16:27 bmr Quant Type: AREA%
Cal Date : 25-JUL-2013 17:48 Cal File: v9007.d
Als bottle: 1
Dil Factor: 50.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 50.00000 | Dilution Factor |
| Uf | 5.00000 | ng unit correction factor |
| Vt | 1.00000 | Final Volume |
| Vi | 1.00000 | Volume Injected |
| Ws | 5.02000 | Weight of sample |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| RT | AREA | HEIGHT | HT/AREA | % AREA | COMPOUNDS |
|---|---|---|---|---|---|
| 3.517 | 741095 | 874081 | 1.179 | 74.452 | 2 Fluorobenzene |
| 4.709 | 7087 | 8463 | 1.194 | 0.712 | |
| 5.590 | 247212 | 320490 | 1.296 | 24.836 | $ 9 Bromochlorobenzene |
| | 995394 | 1203034 | | 100.000 | |

Total unknown % area = 0.71

Data File: /var/chem/gcv9a.i/2131025.b/v9013.d



Date : 25-OCT-2013 23:06

Client ID: 21310171203

Instrument: gcv9a.i

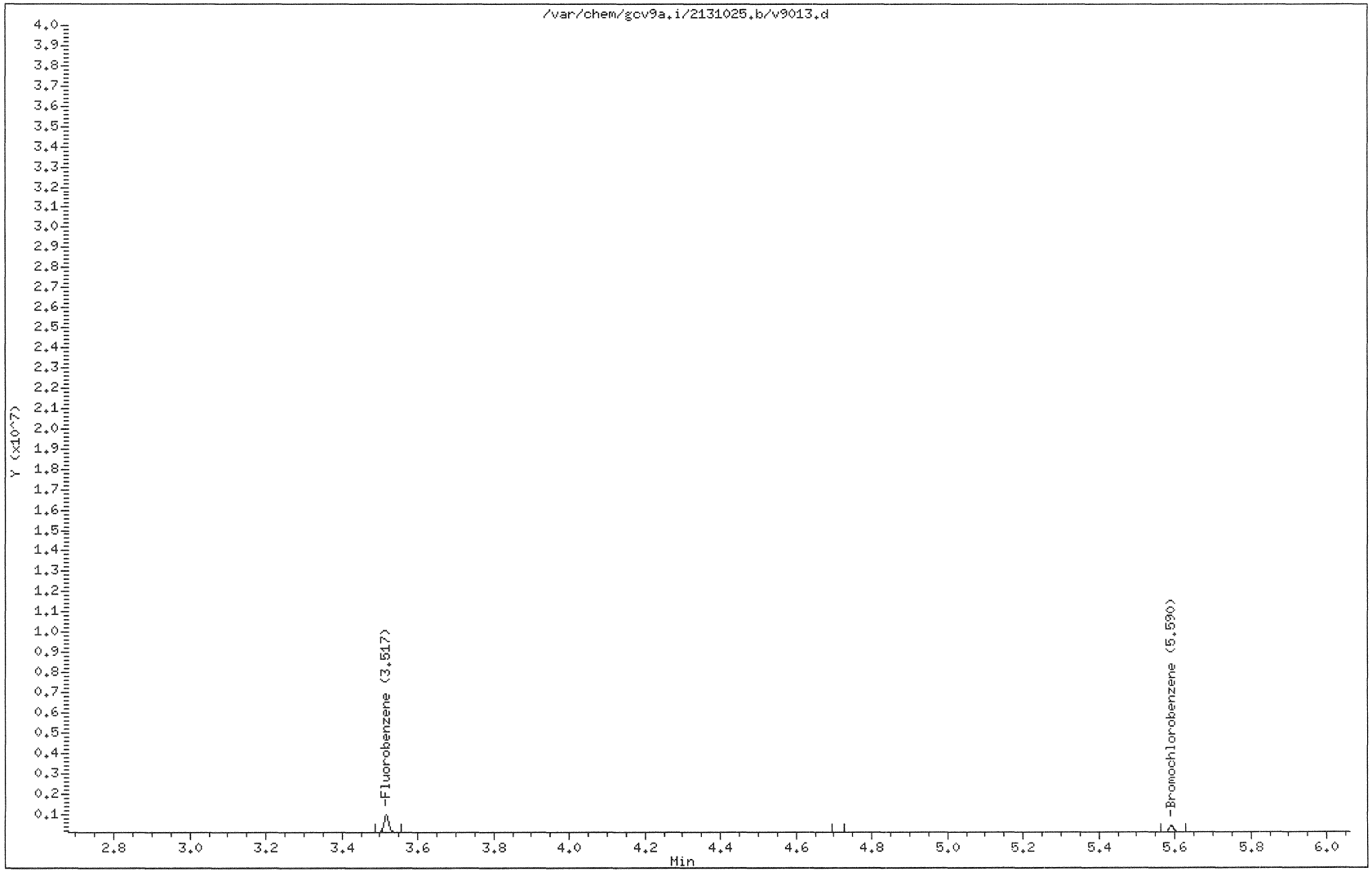
Sample Info: 21310171203

Volume Injected (uL): 1.0

Operator: BMR

Column phase: RTX-VMS

Column diameter: 0.25



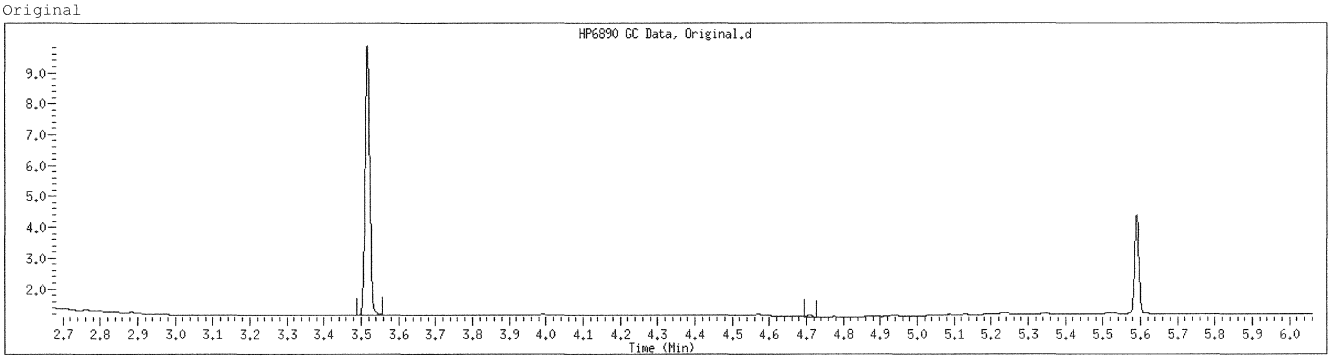

21310171203 197

Data file : /var/chem/gcv9a.i/2131025.b/v9013.d Page: 1
Report Date: 10/28/2013 16:27

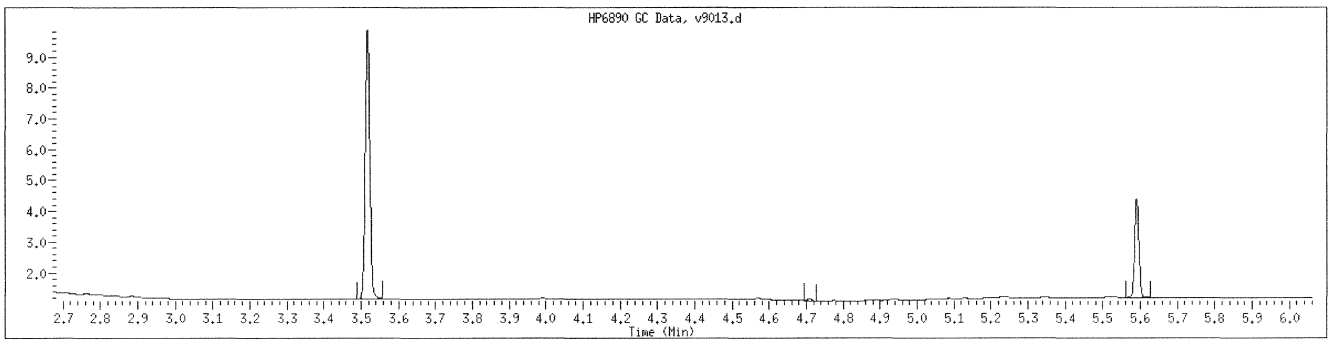
MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 21310171203 | SampleType | : SAMPLE |
| Injection Date | : 10/25/2013 23:06 | Instrument | : gcv9a.i |
| Operator | : BMR | | |
| Sample Info | : 21310171203 | | |
| Misc Info | : 6/18/15 | | |
| Method | : /var/chem/gcv9a.i/2131025.b/GASHBw.m | | |
| Dilution | : 50.0 | | |
| Matrix | : SOIL | | |
| Integrator | : Falcon | Compound Sublist | : all |

Original




Final



GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 25-JUL-2013 16:04
End Cal Date : 25-JUL-2013 17:48
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcv9a.i/2130725p.b/GASHBw.m
Cal Date : 25-Jul-2013 18:13 jar
Curve Type : Average

Calibration File Names:
Level 1: /var/chem/gcv9a.i/2130725p.b/v9002.d
Level 2: /var/chem/gcv9a.i/2130725p.b/v9007.d
Level 3: /var/chem/gcv9a.i/2130725p.b/v9004.d
Level 4: /var/chem/gcv9a.i/2130725p.b/v9005.d
Level 5: /var/chem/gcv9a.i/2130725p.b/v9006.d

| Compound | 100.000 Level 1 | 500.000 Level 2 | 800.000 Level 3 | 1000.000 Level 4 | 3000.000 Level 5 | ___ RRF | % RSD |
|---|---|---|---|---|---|---|---|
| S 1 Total TPHG | 5757 | 5126 | 5661 | 5679 | 5496 | 5544 | 4.552 |
| 2 Fluorobenzene | 24351 | 26777 | 28475 | 31123 | 37427 | 29631 | 16.906 |
| 3 TPHG 1 | 1868 | 1626 | 1807 | 1816 | 1772 | 1778 | 5.162 |
| 4 TPHG 2 | 338 | 319 | 356 | 354 | 342 | 342 | 4.315 |
| 5 TPHG 3 | 1415 | 1288 | 1441 | 1440 | 1397 | 1396 | 4.527 |
| 6 TPHG 4 | 578 | 516 | 573 | 575 | 556 | 560 | 4.582 |
| 7 TPHG 5 | 692 | 624 | 672 | 679 | 646 | 663 | 4.097 |
| 8 TPHG 6 | 865 | 752 | 812 | 816 | 783 | 806 | 5.225 |
| $ 9 Bromochlorobenzene | 9142 | 9297 | 9521 | 9834 | 10132 | 9585 | 4.189 |
| GRO | 13,270 | 12,818 | 14,018 | 14,396 | 14,320 | 13,766 | 5.02% |

Data file : /var/chem/gcv9a.i/2130725p.b/v9002.d
Report Date: 07/25/2013 18:12

GRO REPORT

Marker file: /var/chem/gcv9a.i/2130725p.b/v9001C.d
Data file : /var/chem/gcv9a.i/2130725p.b/v9002.d
Lab Smp Id: TPHG100/6/18/1 Client Smp ID: TPHG100/6/18/1
Inj Date : 25-JUL-2013 16:04
Operator : BMR Inst ID: gcv9a.i
Smp Info : TPHG100/6/18/1
Misc Info : 6/16/7
Method : /var/chem/gcv9a.i/2130725p.b/GASHBw.m
Meth Date : 25-Jul-2013 18:13 jar Quant Type:
Cal Date : 25-JUL-2013 16:04 Cal File: v9002.d
Als bottle: 1
Integrator: Compound Sublistxxxx: all.sub
Target Version: 3.5

GRO Marker
==========

| Chromat Events | Values |
|---|---|
| Integrator ON | 2.680 |
| Integrator OFF | 5.100 |

Markers

| Low | High |
|---|---|
| 2.714 | 5.07 |

Area (includes areas 0.01 minutes outside of markers)

| | |
|---|---|
| Total | 2,341,258 |
| Fluorobenzene | -730,525 |
| Outside GRO Markers | -283,135 |
| Sample Area | 1,327,598 |

RF = (Sample Area) / Conc

= (1,327,598) / 100

= 13,276

Avg RF = 13,766 %RSD = 5.02 %

213101712 200

GCAL, Inc.

Data file : /var/chem/gcv9a.i/2130725p.b/v9002.d
Lab Smp Id: TPHG100/6/18/1 Client Smp ID: TPHG100/6/18/1
Inj Date : 25-JUL-2013 16:04
Operator : BMR Inst ID: gcv9a.i
Smp Info : TPHG100/6/18/1
Misc Info : 6/16/7
Comment :
Method : /var/chem/gcv9a.i/2130725p.b/GASHBw.m
Meth Date : 25-Jul-2013 18:12 jar Quant Type: ESTD
Cal Date : 25-JUL-2013 16:04 Cal File: v9002.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( ug/L) | AMOUNTS ON-COL ( ug/L) |
|---|---|---|---|---|---|---|
| S 1 Total TPHG | | | | 575675 | 100.000 | 104 |
| 2 Fluorobenzene | 3.523 | 3.523 | 0.000 | 730524 | 30.0000 | 24.6 |
| 3 TPHG 1 | 4.002 | 4.002 | 0.000 | 186833 | 100.000 | 105 |
| 4 TPHG 2 | 4.460 | 4.460 | 0.000 | 33824 | 100.000 | 98.9 |
| 5 TPHG 3 | 4.494 | 4.494 | 0.000 | 141532 | 100.000 | 101 |
| 6 TPHG 4 | 4.632 | 4.632 | 0.000 | 57803 | 100.000 | 103 |
| 7 TPHG 5 | 4.905 | 4.905 | 0.000 | 69172 | 100.000 | 104 |
| 8 TPHG 6 | 5.072 | 5.072 | 0.000 | 86511 | 100.000 | 107 |
| $ 9 Bromochlorobenzene | 5.663 | 5.663 | 0.000 | 274246 | 30.0000 | 28.6 |

GCAL, Inc.

Data file : /var/chem/gcv9a.i/2130725p.b/v9002.d
Lab Smp Id: TPHG100/6/18/1 Client Smp ID: TPHG100/6/18/1
Inj Date : 25-JUL-2013 16:04
Operator : BMR Inst ID: gcv9a.i
Smp Info : TPHG100/6/18/1
Misc Info : 6/16/7
Comment :
Method : /var/chem/gcv9a.i/2130725p.b/GASHBw.m
Meth Date : 25-Jul-2013 18:12 jar Quant Type: AREA%
Cal Date : 25-JUL-2013 16:04 Cal File: v9002.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

| RT | AREA | HEIGHT | HT/AREA | % AREA | COMPOUNDS |
|---|---|---|---|---|---|
| 1.000 | 575675 | 695147 | 1.208 | 24.588 | S 1 Total TPHG |
| 4.002 | 186833 | 223754 | 1.198 | | 3 TPHG 1 |
| 4.460 | 33824 | 44093 | 1.304 | | 4 TPHG 2 |
| 4.494 | 141532 | 185003 | 1.307 | | 5 TPHG 3 |
| 4.632 | 57803 | 73435 | 1.270 | | 6 TPHG 4 |
| 4.905 | 69172 | 64078 | 0.926 | | 7 TPHG 5 |
| 5.072 | 86511 | 104784 | 1.211 | | 8 TPHG 6 |
| 2.711 | 132901 | 95180 | 0.716 | 5.676 | |
| 2.757 | 16780 | 14576 | 0.869 | 0.717 | |
| 2.806 | 67126 | 47137 | 0.702 | 2.867 | |
| 2.872 | 8643 | 10289 | 1.191 | 0.369 | |
| 2.892 | 40664 | 39309 | 0.967 | 1.737 | |
| 2.951 | 13326 | 9767 | 0.733 | 0.569 | |
| 3.051 | 22502 | 13356 | 0.594 | 0.961 | |
| 3.116 | 38104 | 38339 | 1.006 | 1.627 | |
| 3.272 | 33309 | 28931 | 0.869 | 1.423 | |
| 3.311 | 15964 | 16748 | 1.049 | 0.682 | |
| 3.331 | 39892 | 40093 | 1.005 | 1.704 | |
| 3.415 | 64278 | 55706 | 0.867 | 2.745 | |
| 3.446 | 71063 | 46620 | 0.656 | 3.035 | |
| 3.523 | 730525 | 840860 | 1.151 | 31.204 | 2 Fluorobenzene |
| 3.643 | 27003 | 10444 | 0.387 | 1.153 | |

| RT | AREA | HEIGHT | HT/AREA | % AREA | COMPOUNDS |
|---|---|---|---|---|---|
| 3.763 | 27595 | 25471 | 0.923 | 1.179 | |
| 3.806 | 50991 | 32672 | 0.641 | 2.178 | |
| 3.846 | 14422 | 12462 | 0.864 | 0.616 | |
| 4.741 | 4801 | 6383 | 1.330 | 0.205 | |
| 4.879 | 15432 | 18438 | 1.195 | 0.659 | |
| 4.933 | 26743 | 32544 | 1.217 | 1.142 | |
| 5.016 | 20380 | 22581 | 1.108 | 0.870 | |
| 5.634 | 8889 | 9979 | 1.123 | 0.380 | |
| 5.663 | 274246 | 341598 | 1.246 | 11.714 | $ 9 Bromochlorobenzene |
| | 2341258 | 2504630 | | 100.000 | |

Total unknown % area = 32.5

Data File: /var/chem/gcv9a.i/2130725p.b/v9002.d



Date : 25-JUL-2013 16:04

Client ID: TPHG100/6/18/1

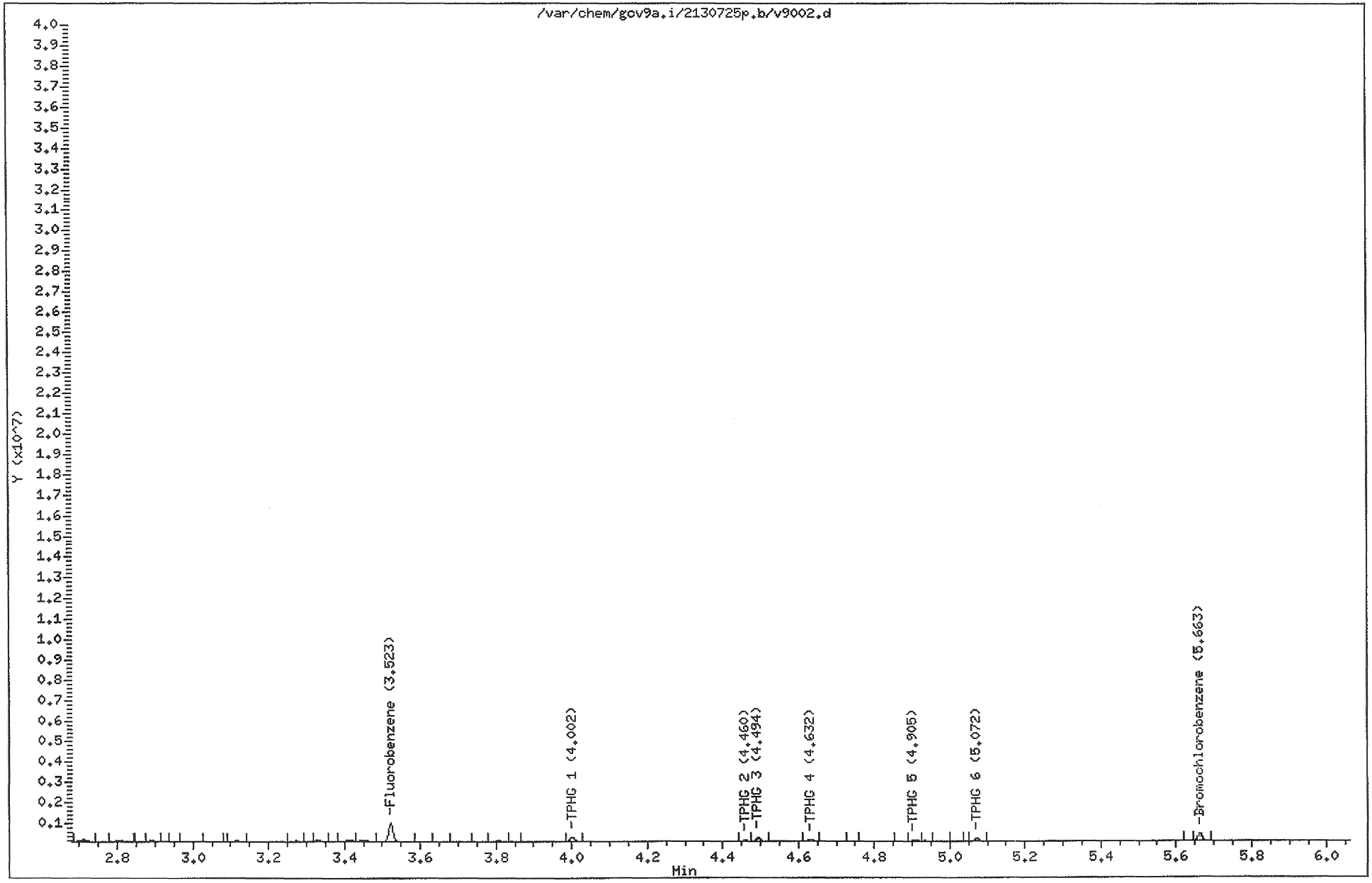
Instrument: gcv9a.i

Sample Info: TPHG100/6/18/1

Operator: BMR

Column phase: RTX-VMS

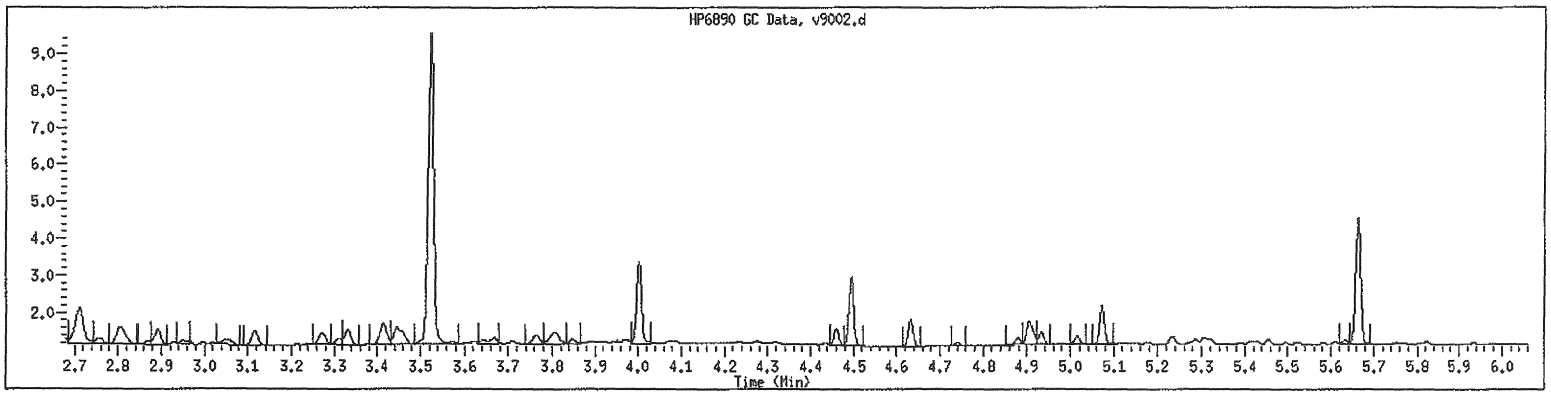
Column diameter: 0.25




2131701712 204

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : TPHG100/6/18/1 | SampleType | : CALIB_1 |
| Injection Date | : 07/25/2013 16:04 | Instrument | : gcv9a.i |
| Operator | : BMR | | |
| Sample Info | : TPHG100/6/18/1 | | |
| Misc Info | : 6/16/7 | | |
| Method | : /var/chem/gcv9a.i/2130725p.b/GASHBw.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : all |




NO MANUAL INTEGRATIONS

Data file : /var/chem/gcv9a.i/2130725p.b/v9007.d
Report Date: 07/25/2013 18:13

GRO REPORT

Marker file: /var/chem/gcv9a.i/2130725p.b/v9001C.d
Data file : /var/chem/gcv9a.i/2130725p.b/v9007.d
Lab Smp Id: TPHG500/6/18/1 Client Smp ID: TPHG500/6/18/1
Inj Date : 25-JUL-2013 17:48
Operator : BMR Inst ID: gcv9a.i
Smp Info : TPHG500/6/18/1
Misc Info : 6/16/7
Method : /var/chem/gcv9a.i/2130725p.b/GASHBw.m
Meth Date : 25-Jul-2013 18:13 jar Quant Type:
Cal Date : 25-JUL-2013 17:48 Cal File: v9007.d
Als bottle: 1
Integrator: Compound Sublistxxxx: all.sub
Target Version: 3.5

GRO Marker
==========

| Chromat Events | Values |
|---|---|
| Integrator ON | 2.680 |
| Integrator OFF | 5.100 |

Markers

| Low | High |
|---|---|
| 2.714 | 5.07 |

Area (includes areas 0.01 minutes outside of markers)

| | |
|---|---|
| Total | 7,530,144 |
| Fluorobenzene | -803,299 |
| Outside GRO Markers | -318,073 |
| Sample Area | 6,408,772 |

RF = (Sample Area) / Conc

= (6,408,772) / 500

= 12,818

Avg RF = 13,766 %RSD = 5.02 %

GCAL, Inc.

Data file : /var/chem/gcv9a.i/2130725p.b/v9007.d
Lab Smp Id: TPHG500/6/18/1 Client Smp ID: TPHG500/6/18/1
Inj Date : 25-JUL-2013 17:48
Operator : BMR Inst ID: gcv9a.i
Smp Info : TPHG500/6/18/1
Misc Info : 6/16/7
Comment :
Method : /var/chem/gcv9a.i/2130725p.b/GASHBw.m
Meth Date : 25-Jul-2013 18:13 jar Quant Type: ESTD
Cal Date : 25-JUL-2013 17:48 Cal File: v9007.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

| | Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( ug/L) | AMOUNTS ON-COL ( ug/L) |
|---|---|---|---|---|---|---|---|
| S | 1 Total TPHG | | | | 2562801 | 500.000 | 462 |
| | 2 Fluorobenzene | 3.519 | 3.519 | 0.000 | 803298 | 30.0000 | 27.1 |
| | 3 TPHG 1 | 3.997 | 3.997 | 0.000 | 812855 | 500.000 | 457 |
| | 4 TPHG 2 | 4.453 | 4.453 | 0.000 | 159675 | 500.000 | 467 |
| | 5 TPHG 3 | 4.487 | 4.487 | 0.000 | 644023 | 500.000 | 461 |
| | 6 TPHG 4 | 4.624 | 4.624 | 0.000 | 258209 | 500.000 | 461 |
| | 7 TPHG 5 | 4.895 | 4.895 | 0.000 | 312031 | 500.000 | 471 |
| | 8 TPHG 6 | 5.061 | 5.061 | 0.000 | 376008 | 500.000 | 467 |
| $ | 9 Bromochlorobenzene | 5.646 | 5.646 | 0.000 | 278905 | 30.0000 | 29.1 |

GCAL, Inc.

Data file : /var/chem/gcv9a.i/2130725p.b/v9007.d
Lab Smp Id: TPHG500/6/18/1 Client Smp ID: TPHG500/6/18/1
Inj Date : 25-JUL-2013 17:48
Operator : BMR Inst ID: gcv9a.i
Smp Info : TPHG500/6/18/1
Misc Info : 6/16/7
Comment :
Method : /var/chem/gcv9a.i/2130725p.b/GASHBw.m
Meth Date : 25-Jul-2013 18:13 jar Quant Type: AREA%
Cal Date : 25-JUL-2013 17:48 Cal File: v9007.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

| RT | AREA | HEIGHT | HT/AREA | % AREA | COMPOUNDS | |
|---|---|---|---|---|---|---|
| 1.000 | 2562801 | 3162212 | 1.234 | 34.034 | S | 1 Total TPHG |
| 3.997 | 812855 | 1008416 | 1.241 | | | 3 TPHG 1 |
| 4.453 | 159675 | 205728 | 1.288 | | | 4 TPHG 2 |
| 4.487 | 644023 | 837519 | 1.300 | | | 5 TPHG 3 |
| 4.624 | 258209 | 332852 | 1.289 | | | 6 TPHG 4 |
| 4.895 | 312031 | 297141 | 0.952 | | | 7 TPHG 5 |
| 5.061 | 376008 | 480556 | 1.278 | | | 8 TPHG 6 |
| 2.709 | 607437 | 449046 | 0.739 | 8.067 | | |
| 2.754 | 77138 | 69232 | 0.898 | 1.024 | | |
| 2.803 | 315372 | 221979 | 0.704 | 4.188 | | |
| 2.868 | 39248 | 47326 | 1.206 | 0.521 | | |
| 2.888 | 193603 | 189079 | 0.977 | 2.571 | | |
| 2.924 | 25347 | 28001 | 1.105 | 0.337 | | |
| 2.946 | 90769 | 54308 | 0.598 | 1.205 | | |
| 2.993 | 23261 | 25732 | 1.106 | 0.309 | | |
| 3.015 | 22140 | 24271 | 1.096 | 0.294 | | |
| 3.047 | 122345 | 66545 | 0.544 | 1.625 | | |
| 3.113 | 177689 | 178310 | 1.003 | 2.360 | | |
| 3.241 | 9879 | 12949 | 1.311 | 0.131 | | |
| 3.269 | 170010 | 139028 | 0.818 | 2.258 | | |
| 3.308 | 82555 | 81641 | 0.989 | 1.096 | | |
| 3.328 | 188046 | 188453 | 1.002 | 2.497 | | |

| RT | AREA | HEIGHT | HT/AREA | % AREA | COMPOUNDS |
|---|---|---|---|---|---|
| 3.411 | 296997 | 259585 | 0.874 | 3.944 | |
| 3.442 | 313107 | 213241 | 0.681 | 4.158 | |
| 3.519 | 803299 | 879615 | 1.095 | 10.668 | 2 Fluorobenzene |
| 3.569 | 22811 | 27273 | 1.196 | 0.303 | |
| 3.601 | 7002 | 10401 | 1.485 | 0.093 | |
| 3.618 | 22102 | 28012 | 1.267 | 0.294 | |
| 3.639 | 45881 | 44843 | 0.977 | 0.609 | |
| 3.663 | 69185 | 70218 | 1.015 | 0.919 | |
| 3.706 | 32199 | 26826 | 0.833 | 0.428 | |
| 3.758 | 113996 | 114918 | 1.008 | 1.514 | |
| 3.803 | 205224 | 142514 | 0.694 | 2.725 | |
| 3.842 | 42783 | 45913 | 1.073 | 0.568 | |
| 3.886 | 42563 | 25262 | 0.594 | 0.565 | |
| 3.946 | 25882 | 25674 | 0.992 | 0.344 | |
| 3.963 | 39540 | 34345 | 0.869 | 0.525 | |
| 4.076 | 30243 | 17636 | 0.583 | 0.402 | |
| 4.143 | 8271 | 8330 | 1.007 | 0.110 | |
| 4.228 | 16496 | 12465 | 0.756 | 0.219 | |
| 4.270 | 33315 | 29867 | 0.896 | 0.442 | |
| 4.310 | 21818 | 22683 | 1.040 | 0.290 | |
| 4.427 | 18949 | 22286 | 1.176 | 0.252 | |
| 4.731 | 30438 | 33804 | 1.111 | 0.404 | |
| 4.869 | 72325 | 84490 | 1.168 | 0.960 | |
| 4.923 | 114999 | 147388 | 1.282 | 1.527 | |
| 5.004 | 75007 | 94463 | 1.259 | 0.996 | |
| 5.617 | 39167 | 45858 | 1.171 | 0.520 | |
| 5.646 | 278906 | 346440 | 1.242 | 3.704 | $ 9 Bromochlorobenzene |
| | 7530144 | 7752462 | | 100.000 | |

Total unknown % area = 51.6

Data File: /var/chem/gcv9a.i/2130725p.b/v9007.d



Date : 25-JUL-2013 17:48

Client ID: TPHG500/6/18/1

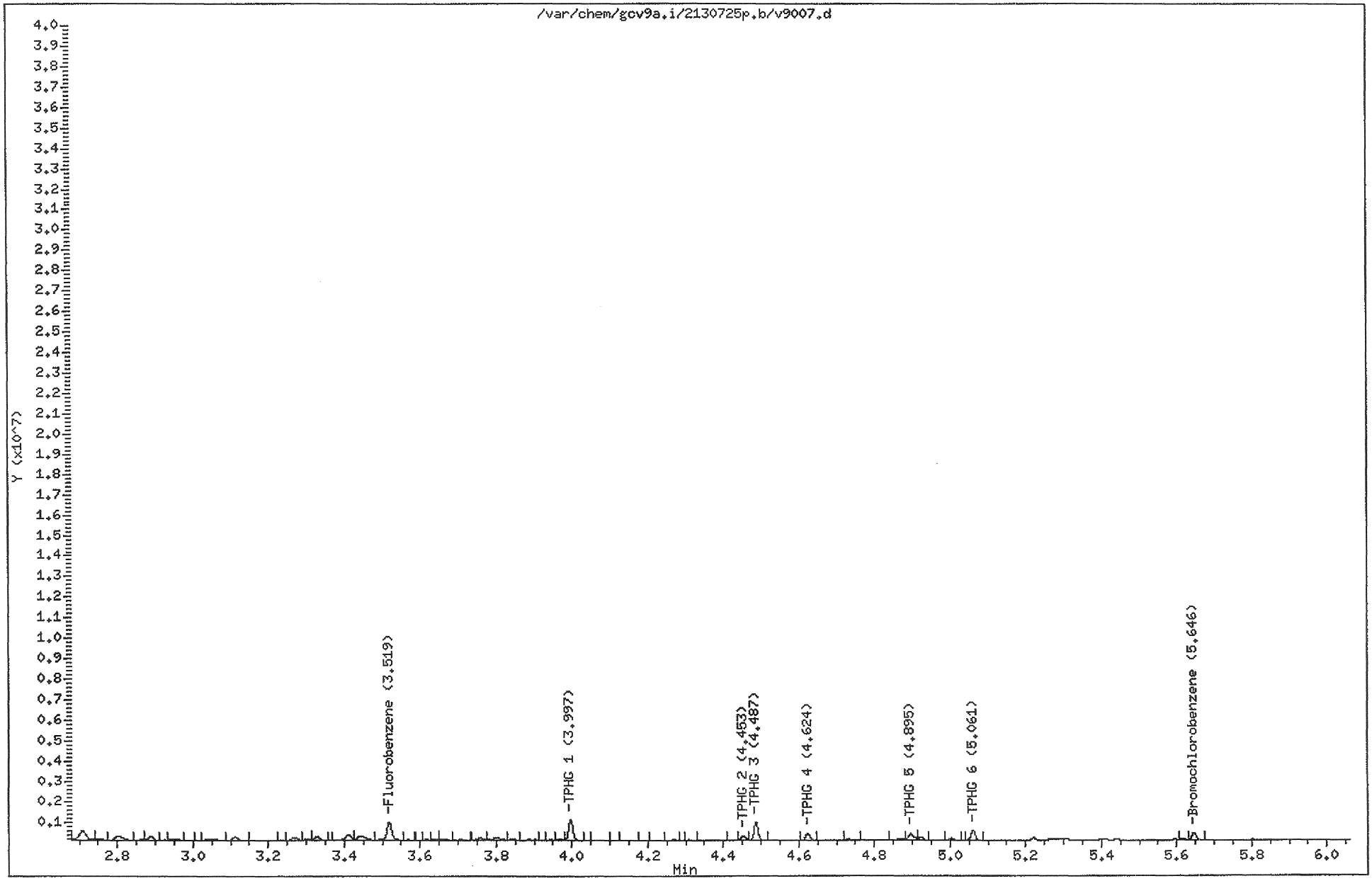
Instrument: gcv9a.i

Sample Info: TPHG500/6/18/1

Operator: BMR

Column phase: RTX-VMS

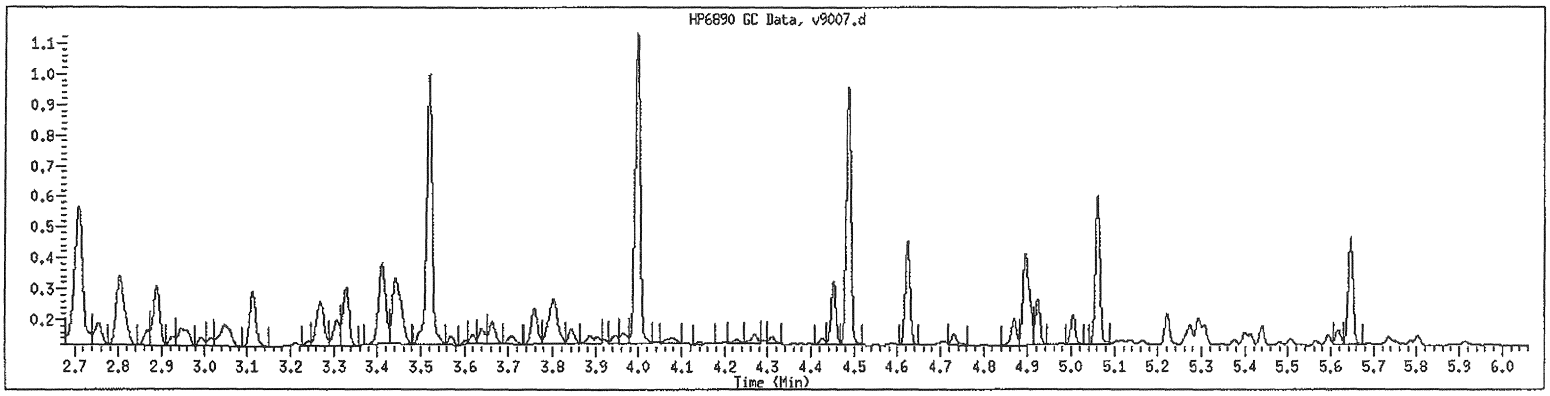
Column diameter: 0.25




21310712 210

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : TPHG500/6/18/1 | SampleType | : CALIB_2 |
| Injection Date | : 07/25/2013 17:48 | Instrument | : gcv9a.i |
| Operator | : BMR | | |
| Sample Info | : TPHG500/6/18/1 | | |
| Misc Info | : 6/16/7 | | |
| Method | : /var/chem/gcv9a.i/2130725p.b/GASHBw.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : all |




NO MANUAL INTEGRATIONS

Data file : /var/chem/gcv9a.i/2130725p.b/v9004.d
Report Date: 07/25/2013 18:13

GRO REPORT

Marker file: /var/chem/gcv9a.i/2130725p.b/v9001C.d
Data file : /var/chem/gcv9a.i/2130725p.b/v9004.d
Lab Smp Id: TPHG800/6/18/1 Client Smp ID: TPHG800/6/18/1
Inj Date : 25-JUL-2013 16:44
Operator : BMR Inst ID: gcv9a.i
Smp Info : TPHG800/6/18/1
Misc Info : 6/16/7
Method : /var/chem/gcv9a.i/2130725p.b/GASHBw.m
Meth Date : 25-Jul-2013 18:13 jar Quant Type:
Cal Date : 25-JUL-2013 16:44 Cal File: v9004.d
Als bottle: 1
Integrator: Compound Sublistxxxx: all.sub
Target Version: 3.5

GRO Marker
==========

| Chromat Events | Values |
|---|---|
| Integrator ON | 2.680 |
| Integrator OFF | 5.100 |

Markers

| Low | High |
|---|---|
| 2.714 | 5.07 |

Area (includes areas 0.01 minutes outside of markers)

| | |
|---|---|
| Total | 12,460,426 |
| Fluorobenzene | -854,265 |
| Outside GRO Markers | -391,500 |
| Sample Area | 11,214,661 |

RF = (Sample Area) / Conc

= (11,214,661) / 800

= 14,018

Avg RF = 13,766 %RSD = 5.02 %

GCAL, Inc.

Data file : /var/chem/gcv9a.i/2130725p.b/v9004.d
Lab Smp Id: TPHG800/6/18/1 Client Smp ID: TPHG800/6/18/1
Inj Date : 25-JUL-2013 16:44
Operator : BMR Inst ID: gcv9a.i
Smp Info : TPHG800/6/18/1
Misc Info : 6/16/7
Comment :
Method : /var/chem/gcv9a.i/2130725p.b/GASHBw.m
Meth Date : 25-Jul-2013 18:13 jar Quant Type: ESTD
Cal Date : 25-JUL-2013 16:44 Cal File: v9004.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

| | Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( ug/L) | AMOUNTS ON-COL ( ug/L) |
|---|---|---|---|---|---|---|---|
| S | 1 Total TPHG | | | | 4528973 | 800.000 | 817 |
| | 2 Fluorobenzene | 3.521 | 3.521 | 0.000 | 854264 | 30.0000 | 28.8 |
| | 3 TPHG 1 | 4.000 | 4.000 | 0.000 | 1445487 | 800.000 | 813 |
| | 4 TPHG 2 | 4.457 | 4.457 | 0.000 | 285014 | 800.000 | 833 |
| | 5 TPHG 3 | 4.492 | 4.492 | 0.000 | 1152479 | 800.000 | 825 |
| | 6 TPHG 4 | 4.630 | 4.630 | 0.000 | 458565 | 800.000 | 819 |
| | 7 TPHG 5 | 4.902 | 4.902 | 0.000 | 537581 | 800.000 | 811 |
| | 8 TPHG 6 | 5.071 | 5.071 | 0.000 | 649847 | 800.000 | 807 |
| $ | 9 Bromochlorobenzene | 5.662 | 5.662 | 0.000 | 285639 | 30.0000 | 29.8 |

GCAL, Inc.

Data file : /var/chem/gcv9a.i/2130725p.b/v9004.d
Lab Smp Id: TPHG800/6/18/1 Client Smp ID: TPHG800/6/18/1
Inj Date : 25-JUL-2013 16:44
Operator : BMR Inst ID: gcv9a.i
Smp Info : TPHG800/6/18/1
Misc Info : 6/16/7
Comment :
Method : /var/chem/gcv9a.i/2130725p.b/GASHBw.m
Meth Date : 25-Jul-2013 18:13 jar Quant Type: AREA%
Cal Date : 25-JUL-2013 16:44 Cal File: v9004.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

| RT | AREA | HEIGHT | HT/AREA | % AREA | COMPOUNDS |
|---|---|---|---|---|---|
| 1.000 | 4528973 | 5510292 | 1.217 | 36.347 | S 1 Total TPHG |
| 4.000 | 1445487 | 1777468 | 1.230 | | 3 TPHG 1 |
| 4.457 | 285014 | 355393 | 1.247 | | 4 TPHG 2 |
| 4.492 | 1152479 | 1453136 | 1.261 | | 5 TPHG 3 |
| 4.630 | 458565 | 587236 | 1.281 | | 6 TPHG 4 |
| 4.902 | 537581 | 502228 | 0.934 | | 7 TPHG 5 |
| 5.071 | 649847 | 834831 | 1.285 | | 8 TPHG 6 |
| 2.712 | 1032048 | 770717 | 0.747 | 8.283 | |
| 2.757 | 123528 | 115121 | 0.932 | 0.991 | |
| 2.805 | 543689 | 383752 | 0.706 | 4.363 | |
| 2.870 | 63734 | 75316 | 1.182 | 0.511 | |
| 2.891 | 318329 | 325155 | 1.021 | 2.555 | |
| 2.927 | 36152 | 43057 | 1.191 | 0.290 | |
| 2.948 | 117506 | 89829 | 0.764 | 0.943 | |
| 2.995 | 42263 | 46423 | 1.098 | 0.339 | |
| 3.017 | 39698 | 43336 | 1.092 | 0.319 | |
| 3.049 | 215705 | 116980 | 0.542 | 1.731 | |
| 3.115 | 314920 | 313117 | 0.994 | 2.527 | |
| 3.213 | 21467 | 17534 | 0.817 | 0.172 | |
| 3.242 | 24305 | 27195 | 1.119 | 0.195 | |
| 3.272 | 303879 | 243067 | 0.800 | 2.439 | |
| 3.310 | 146635 | 142923 | 0.975 | 1.177 | |

| RT | AREA | HEIGHT | HT/AREA | % AREA | COMPOUNDS |
|---|---|---|---|---|---|
| 3.331 | 325833 | 328338 | 1.008 | 2.615 | |
| 3.412 | 542581 | 453305 | 0.835 | 4.354 | |
| 3.443 | 559363 | 382002 | 0.683 | 4.489 | |
| 3.521 | 854265 | 868255 | 1.016 | 6.856 | 2 Fluorobenzene |
| 3.572 | 39955 | 47833 | 1.197 | 0.321 | |
| 3.602 | 14897 | 21341 | 1.433 | 0.120 | |
| 3.619 | 41733 | 49374 | 1.183 | 0.335 | |
| 3.641 | 80599 | 79004 | 0.980 | 0.647 | |
| 3.665 | 124233 | 124211 | 1.000 | 0.997 | |
| 3.708 | 55007 | 46813 | 0.851 | 0.441 | |
| 3.761 | 194627 | 196003 | 1.007 | 1.562 | |
| 3.805 | 356396 | 245454 | 0.689 | 2.860 | |
| 3.844 | 75930 | 78556 | 1.035 | 0.609 | |
| 3.888 | 77513 | 42201 | 0.544 | 0.622 | |
| 3.948 | 46956 | 45923 | 0.978 | 0.377 | |
| 3.967 | 69259 | 58536 | 0.845 | 0.556 | |
| 4.079 | 63560 | 32134 | 0.506 | 0.510 | |
| 4.146 | 14182 | 13123 | 0.925 | 0.114 | |
| 4.232 | 34016 | 22780 | 0.670 | 0.273 | |
| 4.273 | 52156 | 41982 | 0.805 | 0.419 | |
| 4.315 | 21889 | 25898 | 1.183 | 0.176 | |
| 4.366 | 4161 | 5458 | 1.312 | 0.033 | |
| 4.402 | 6046 | 9261 | 1.532 | 0.049 | |
| 4.432 | 27429 | 31068 | 1.133 | 0.220 | |
| 4.594 | 7433 | 7934 | 1.067 | 0.060 | |
| 4.738 | 48053 | 55228 | 1.149 | 0.386 | |
| 4.877 | 119784 | 146180 | 1.220 | 0.961 | |
| 4.932 | 199392 | 250551 | 1.257 | 1.600 | |
| 4.986 | 5349 | 7254 | 1.356 | 0.043 | |
| 5.013 | 133498 | 169646 | 1.271 | 1.071 | |
| 5.610 | 38693 | 49207 | 1.272 | 0.311 | |
| 5.633 | 67168 | 78557 | 1.170 | 0.539 | |
| 5.662 | 285639 | 341237 | 1.195 | 2.292 | $ 9 Bromochlorobenzene |
| | 12460426 | 12618461 | | 100.000 | |

Total unknown % area = 54.5

Data File: /var/chem/gcv9a.i/2130725p.b/v9004.d

Date : 25-JUL-2013 16:44

Client ID: TPHG800/6/18/1

Sample Info: TPHG800/6/18/1

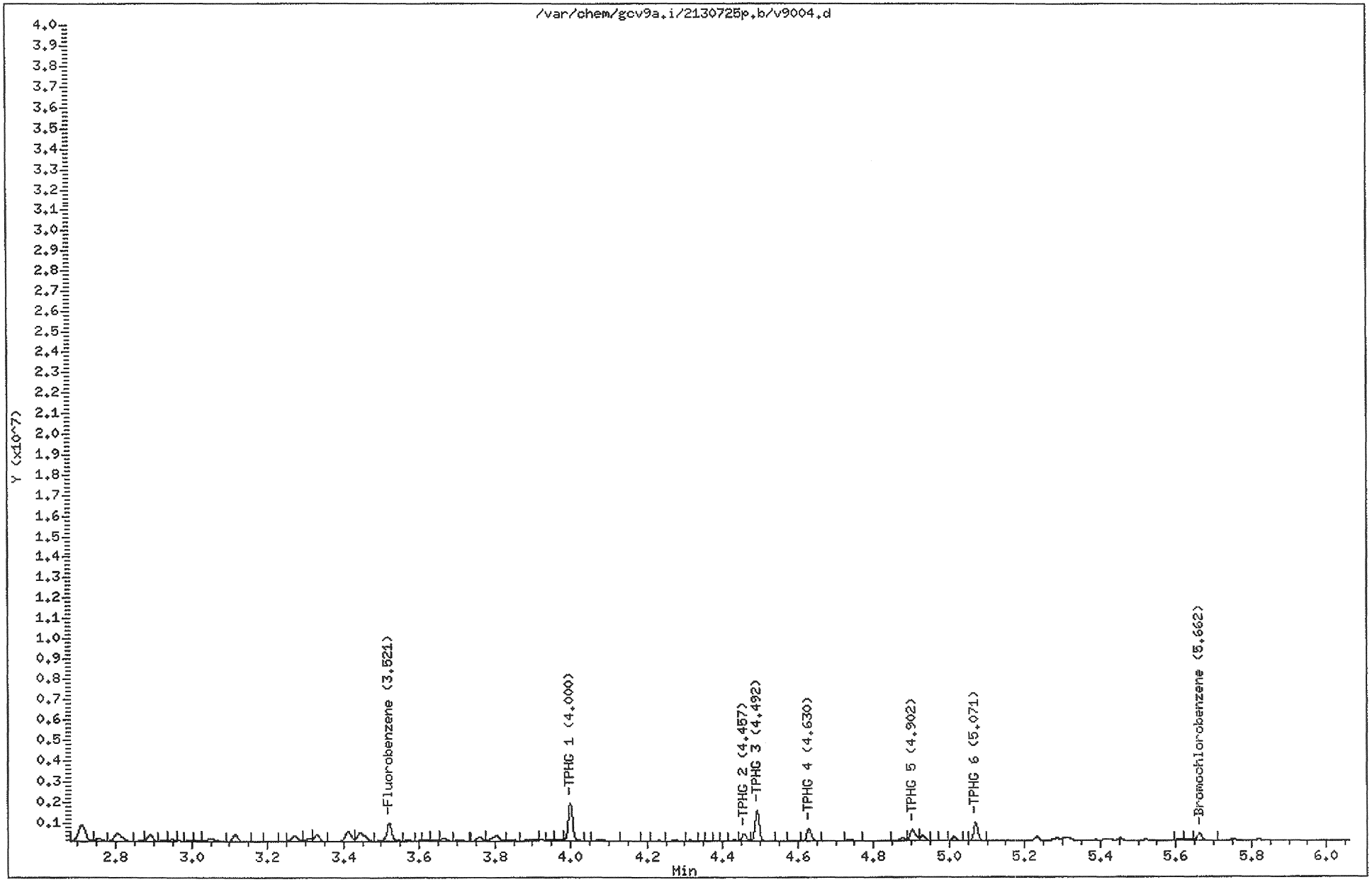
Column phase: RTX-VMS

Instrument: gcv9a.i

Operator: BMR

Column diameter: 0.25

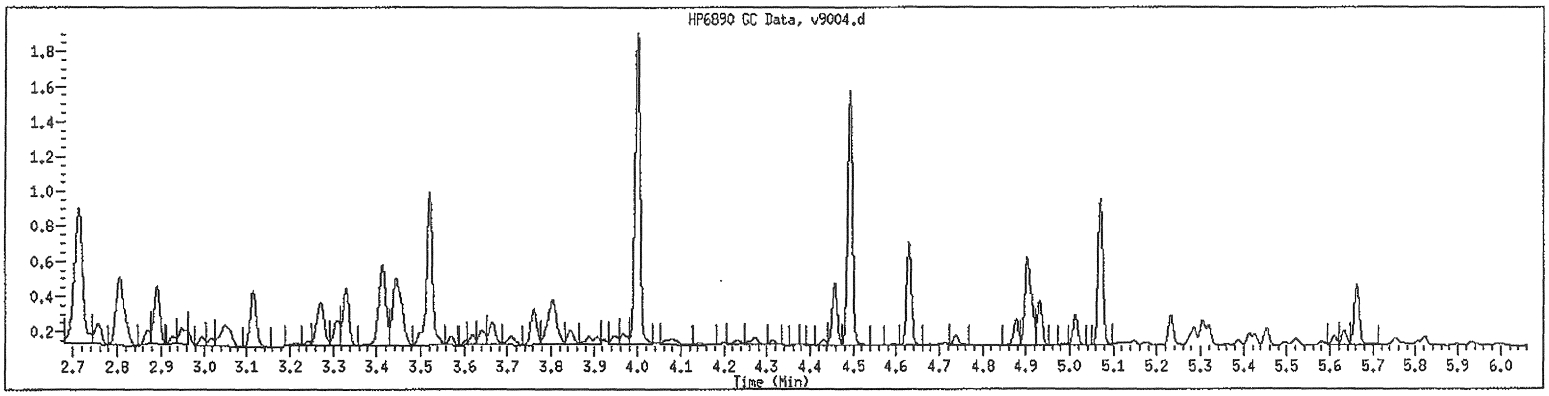





21310171 2 216

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : TPHG800/6/18/1 | SampleType | : CALIB_3 |
| Injection Date | : 07/25/2013 16:44 | Instrument | : gcv9a.i |
| Operator | : BMR | | |
| Sample Info | : TPHG800/6/18/1 | | |
| Misc Info | : 6/16/7 | | |
| Method | : /var/chem/gcv9a.i/2130725p.b/GASHBw.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist: | all |




NO MANUAL INTEGRATIONS

Data file : /var/chem/gcv9a.i/2130725p.b/v9005.d
Report Date: 07/25/2013 18:13

GRO REPORT

Marker file: /var/chem/gcv9a.i/2130725p.b/v9001C.d
Data file : /var/chem/gcv9a.i/2130725p.b/v9005.d
Lab Smp Id: TPHG1000/6/18/1 Client Smp ID: TPHG1000/6/18/1
Inj Date : 25-JUL-2013 17:08
Operator : BMR Inst ID: gcv9a.i
Smp Info : TPHG1000/6/18/1
Misc Info : 6/16/7
Method : /var/chem/gcv9a.i/2130725p.b/GASHBw.m
Meth Date : 25-Jul-2013 18:13 jar Quant Type:
Cal Date : 25-JUL-2013 17:08 Cal File: v9005.d
Als bottle: 1
Integrator: Compound Sublistxxxx: all.sub
Target Version: 3.5

GRO Marker
==========

| Chromat Events | Values |
|---|---|
| Integrator ON | 2.680 |
| Integrator OFF | 5.100 |

Markers

| Low | High |
|---|---|
| 2.714 | 5.07 |

Area (includes areas 0.01 minutes outside of markers)

| | |
|---|---|
| Total | 15,758,160 |
| Fluorobenzene | -933,679 |
| Outside GRO Markers | -428,500 |
| Sample Area | 14,395,981 |

RF = (Sample Area) / Conc

= (14,395,981) / 1,000

= 14,396

Avg RF = 13,766 %RSD = 5.02 %

GCAL, Inc.

Data file : /var/chem/gcv9a.i/2130725p.b/v9005.d
Lab Smp Id: TPHG1000/6/18/1 Client Smp ID: TPHG1000/6/18/1
Inj Date : 25-JUL-2013 17:08
Operator : BMR Inst ID: gcv9a.i
Smp Info : TPHG1000/6/18/1
Misc Info : 6/16/7
Comment :
Method : /var/chem/gcv9a.i/2130725p.b/GASHBw.m
Meth Date : 25-Jul-2013 18:13 jar Quant Type: ESTD
Cal Date : 25-JUL-2013 17:08 Cal File: v9005.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

| | Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( ug/L) | AMOUNTS ON-COL ( ug/L) |
|---|---|---|---|---|---|---|---|
| S | 1 Total TPHG | | | | 5679308 | 1000.00 | 1020 |
| | 2 Fluorobenzene | 3.519 | 3.519 | 0.000 | 933679 | 30.0000 | 31.5 |
| | 3 TPHG 1 | 3.998 | 3.998 | 0.000 | 1816193 | 1000.00 | 1020 |
| | 4 TPHG 2 | 4.457 | 4.457 | 0.000 | 353843 | 1000.00 | 1030 |
| | 5 TPHG 3 | 4.491 | 4.491 | 0.000 | 1440331 | 1000.00 | 1030 |
| | 6 TPHG 4 | 4.630 | 4.630 | 0.000 | 574746 | 1000.00 | 1030 |
| | 7 TPHG 5 | 4.903 | 4.903 | 0.000 | 678595 | 1000.00 | 1020 |
| | 8 TPHG 6 | 5.071 | 5.071 | 0.000 | 815600 | 1000.00 | 1010 |
| $ | 9 Bromochlorobenzene | 5.662 | 5.662 | 0.000 | 295006 | 30.0000 | 30.8 |

GCAL, Inc.

Data file : /var/chem/gcv9a.i/2130725p.b/v9005.d
Lab Smp Id: TPHG1000/6/18/1 Client Smp ID: TPHG1000/6/18/1
Inj Date : 25-JUL-2013 17:08
Operator : BMR Inst ID: gcv9a.i
Smp Info : TPHG1000/6/18/1
Misc Info : 6/16/7
Comment :
Method : /var/chem/gcv9a.i/2130725p.b/GASHBw.m
Meth Date : 25-Jul-2013 18:13 jar Quant Type: AREA%
Cal Date : 25-JUL-2013 17:08 Cal File: v9005.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

| RT | AREA | HEIGHT | HT/AREA | % AREA | COMPOUNDS |
|---|---|---|---|---|---|
| 1.000 | 5679308 | 6915220 | 1.218 | 36.042 | S 1 Total TPHG |
| 3.998 | 1816193 | 2230608 | 1.228 | | 3 TPHG 1 |
| 4.457 | 353843 | 448008 | 1.266 | | 4 TPHG 2 |
| 4.491 | 1440331 | 1825344 | 1.267 | | 5 TPHG 3 |
| 4.630 | 574746 | 734043 | 1.277 | | 6 TPHG 4 |
| 4.903 | 678595 | 637016 | 0.939 | | 7 TPHG 5 |
| 5.071 | 815600 | 1040201 | 1.275 | | 8 TPHG 6 |
| 2.710 | 1322276 | 970555 | 0.734 | 8.391 | |
| 2.755 | 179589 | 156475 | 0.871 | 1.140 | |
| 2.803 | 699247 | 487764 | 0.698 | 4.437 | |
| 2.868 | 96180 | 107663 | 1.119 | 0.610 | |
| 2.888 | 419252 | 410437 | 0.979 | 2.661 | |
| 2.926 | 61256 | 64724 | 1.057 | 0.389 | |
| 2.946 | 206337 | 123383 | 0.598 | 1.309 | |
| 2.992 | 55010 | 58677 | 1.067 | 0.349 | |
| 3.015 | 47898 | 54454 | 1.137 | 0.304 | |
| 3.047 | 270823 | 146431 | 0.541 | 1.719 | |
| 3.113 | 394268 | 396604 | 1.006 | 2.502 | |
| 3.211 | 33059 | 24122 | 0.730 | 0.210 | |
| 3.241 | 33176 | 35766 | 1.078 | 0.211 | |
| 3.269 | 380595 | 305249 | 0.802 | 2.415 | |
| 3.307 | 187517 | 179281 | 0.956 | 1.190 | |

| RT | AREA | HEIGHT | HT/AREA | % AREA | COMPOUNDS |
|---|---|---|---|---|---|
| 3.328 | 405048 | 413911 | 1.022 | 2.570 | |
| 3.411 | 686938 | 563112 | 0.820 | 4.359 | |
| 3.441 | 693422 | 484413 | 0.699 | 4.400 | |
| 3.519 | 933679 | 902380 | 0.966 | 5.925 | 2 Fluorobenzene |
| 3.569 | 56871 | 64164 | 1.128 | 0.361 | |
| 3.601 | 24626 | 33514 | 1.361 | 0.156 | |
| 3.618 | 64616 | 72222 | 1.118 | 0.410 | |
| 3.640 | 110669 | 105005 | 0.949 | 0.702 | |
| 3.663 | 167060 | 160861 | 0.963 | 1.060 | |
| 3.706 | 74728 | 60811 | 0.814 | 0.474 | |
| 3.759 | 249614 | 245461 | 0.983 | 1.584 | |
| 3.803 | 456473 | 310172 | 0.679 | 2.897 | |
| 3.843 | 102518 | 102778 | 1.003 | 0.651 | |
| 3.887 | 105595 | 56045 | 0.531 | 0.670 | |
| 3.947 | 61188 | 58833 | 0.962 | 0.388 | |
| 3.965 | 89429 | 75312 | 0.842 | 0.568 | |
| 4.077 | 82804 | 41168 | 0.497 | 0.525 | |
| 4.144 | 20141 | 17014 | 0.845 | 0.128 | |
| 4.231 | 45199 | 29774 | 0.659 | 0.287 | |
| 4.272 | 70654 | 54934 | 0.778 | 0.448 | |
| 4.314 | 38383 | 37373 | 0.974 | 0.244 | |
| 4.364 | 11356 | 8817 | 0.776 | 0.072 | |
| 4.401 | 7949 | 12005 | 1.510 | 0.050 | |
| 4.431 | 34322 | 39243 | 1.143 | 0.218 | |
| 4.593 | 9997 | 10627 | 1.063 | 0.063 | |
| 4.714 | 21073 | 17558 | 0.833 | 0.134 | |
| 4.738 | 66967 | 72785 | 1.087 | 0.425 | |
| 4.877 | 151193 | 178932 | 1.183 | 0.959 | |
| 4.931 | 244491 | 315164 | 1.289 | 1.552 | |
| 4.986 | 7396 | 10150 | 1.372 | 0.047 | |
| 5.013 | 169470 | 209056 | 1.234 | 1.075 | |
| 5.611 | 49287 | 63510 | 1.289 | 0.313 | |
| 5.633 | 84207 | 97321 | 1.156 | 0.534 | |
| 5.662 | 295006 | 349008 | 1.183 | 1.872 | $ 9 Bromochlorobenzene |
| | 15758160 | 15710238 | | 100.000 | |

Total unknown % area = 56.2

Data File: /var/chem/gcv9a.i/2130725p.b/v9005.d

Date : 25-JUL-2013 17:08

Client ID: TPHG1000/6/18/1

Sample Info: TPHG1000/6/18/1

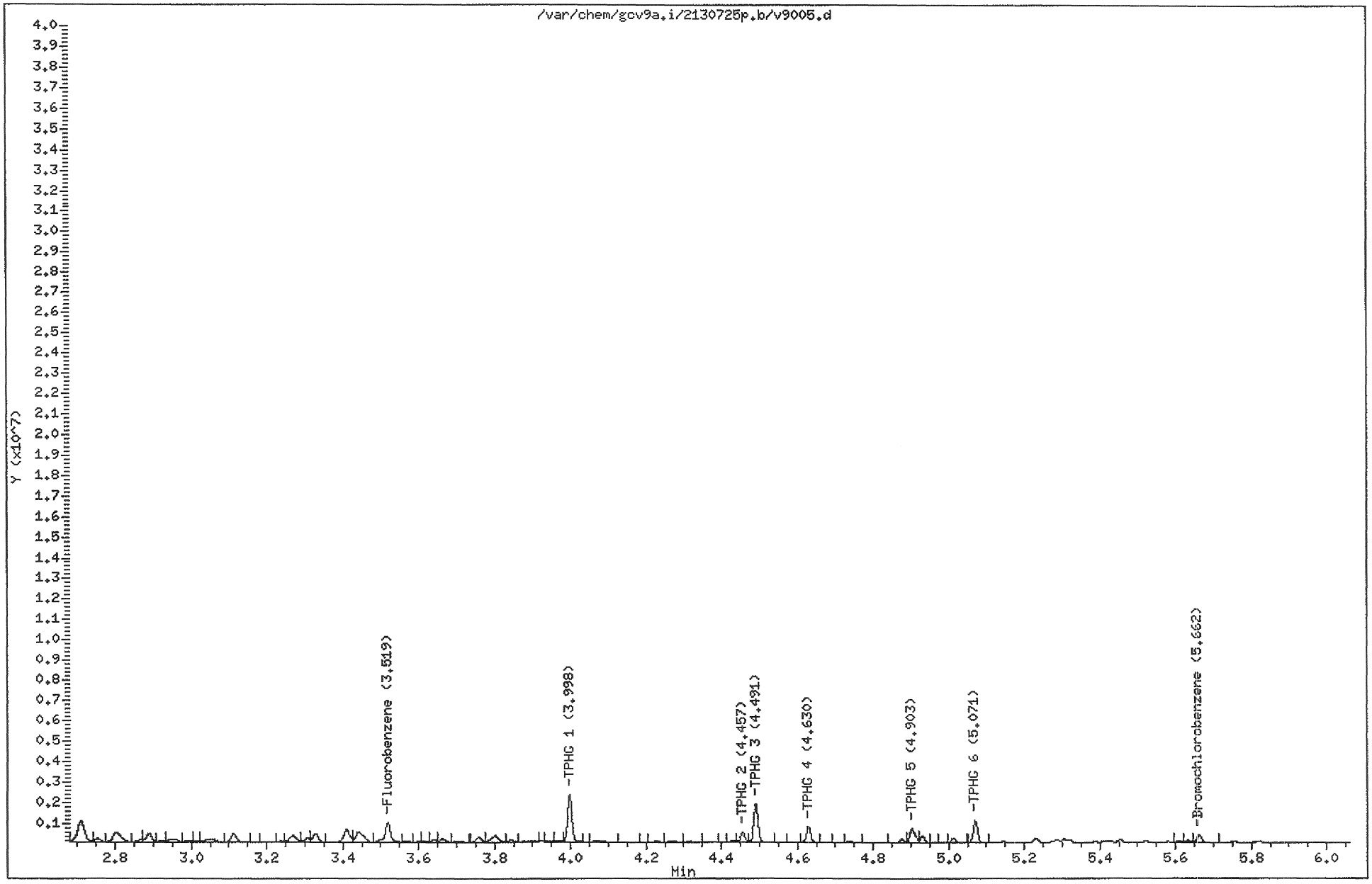
Column phase: RTX-VMS

Instrument: gcv9a.i

Operator: BMR

Column diameter: 0.25



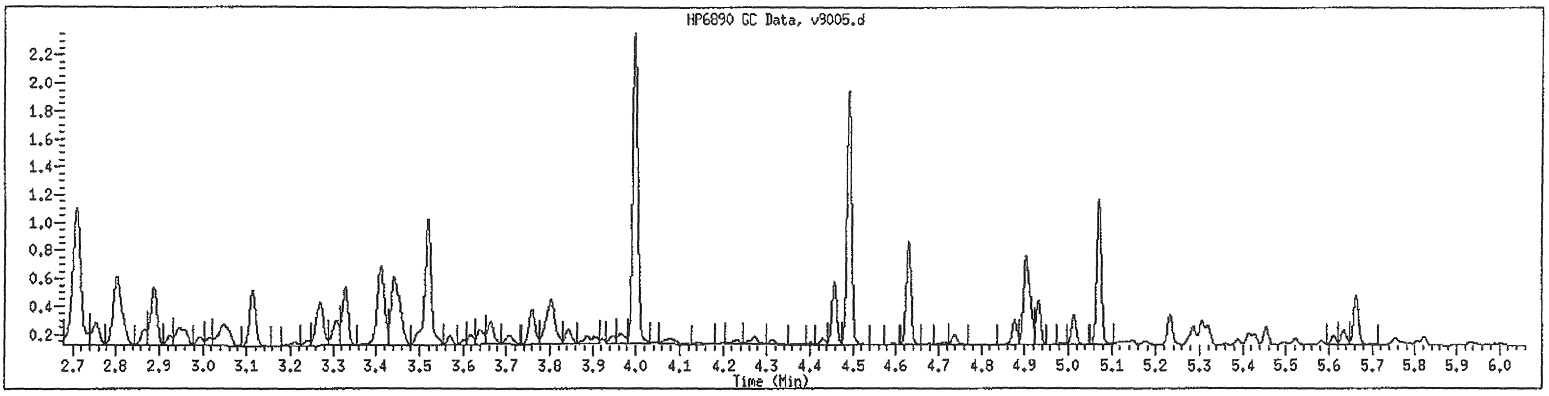



2131701712 222

Data file : /var/chem/gcv9a.i/2130725p.b/v9005.d 
Report Date: 07/25/2013 18:13

MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : TPHG1000/6/18/1 | SampleType | : CALIB_4 |
| Injection Date | : 07/25/2013 17:08 | Instrument | : gcv9a.i |
| Operator | : BMR | | |
| Sample Info | : TPHG1000/6/18/1 | | |
| Misc Info | : 6/16/7 | | |
| Method | : /var/chem/gcv9a.i/2130725p.b/GASHBw.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist: | all |




NO MANUAL INTEGRATIONS

Data file : /var/chem/gcv9a.i/2130725p.b/v9006.d
Report Date: 07/25/2013 18:13

GRO REPORT

Marker file: /var/chem/gcv9a.i/2130725p.b/v9001C.d
Data file : /var/chem/gcv9a.i/2130725p.b/v9006.d
Lab Smp Id: TPHG3000/6/18/1 Client Smp ID: TPHG3000/6/18/1
Inj Date : 25-JUL-2013 17:28
Operator : BMR Inst ID: gcv9a.i
Smp Info : TPHG3000/6/18/1
Misc Info : 6/16/7
Method : /var/chem/gcv9a.i/2130725p.b/GASHBw.m
Meth Date : 25-Jul-2013 18:13 jar Quant Type:
Cal Date : 25-JUL-2013 17:28 Cal File: v9006.d
Als bottle: 1
Integrator: Compound Sublistxxxx: all.sub
Target Version: 3.5

GRO Marker
==========

| Chromat Events | Values |
|---|---|
| Integrator ON | 2.680 |
| Integrator OFF | 5.100 |

Markers

| Low | High |
|---|---|
| 2.714 | 5.07 |

Area (includes areas 0.01 minutes outside of markers)

| | |
|---|---|
| Total | 44,800,276 |
| Fluorobenzene | -1,122,821 |
| Outside GRO Markers | -717,122 |
| Sample Area | 42,960,333 |

RF = (Sample Area) / Conc

= (42,960,333) / 3,000

= 14,320

Avg RF = 13,766 %RSD = 5.02 %

GCAL, Inc.

Data file : /var/chem/gcv9a.i/2130725p.b/v9006.d
Lab Smp Id: TPHG3000/6/18/1 Client Smp ID: TPHG3000/6/18/1
Inj Date : 25-JUL-2013 17:28
Operator : BMR Inst ID: gcv9a.i
Smp Info : TPHG3000/6/18/1
Misc Info : 6/16/7
Comment :
Method : /var/chem/gcv9a.i/2130725p.b/GASHBw.m
Meth Date : 25-Jul-2013 18:13 jar Quant Type: ESTD
Cal Date : 25-JUL-2013 17:28 Cal File: v9006.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

| | Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( ug/L) | AMOUNTS ON-COL ( ug/L) |
|---|---|---|---|---|---|---|---|
| S | 1 Total TPHG | | | | 16487703 | 3000.00 | 2970 |
| | 2 Fluorobenzene | 3.521 | 3.521 | 0.000 | 1122821 | 30.0000 | 37.9 |
| | 3 TPHG 1 | 4.000 | 4.000 | 0.000 | 5315204 | 3000.00 | 2990 |
| | 4 TPHG 2 | 4.456 | 4.456 | 0.000 | 1027376 | 3000.00 | 3000 |
| | 5 TPHG 3 | 4.490 | 4.490 | 0.000 | 4190495 | 3000.00 | 3000 |
| | 6 TPHG 4 | 4.627 | 4.627 | 0.000 | 1668293 | 3000.00 | 2980 |
| | 7 TPHG 5 | 4.900 | 4.900 | 0.000 | 1938443 | 3000.00 | 2920 |
| | 8 TPHG 6 | 5.066 | 5.066 | 0.000 | 2347892 | 3000.00 | 2910 |
| $ | 9 Bromochlorobenzene | 5.654 | 5.654 | 0.000 | 303964 | 30.0000 | 31.7 |

GCAL, Inc.

Data file : /var/chem/gcv9a.i/2130725p.b/v9006.d
Lab Smp Id: TPHG3000/6/18/1 Client Smp ID: TPHG3000/6/18/1
Inj Date : 25-JUL-2013 17:28
Operator : BMR Inst ID: gcv9a.i
Smp Info : TPHG3000/6/18/1
Misc Info : 6/16/7
Comment :
Method : /var/chem/gcv9a.i/2130725p.b/GASHBw.m
Meth Date : 25-Jul-2013 18:13 jar Quant Type: AREA%
Cal Date : 25-JUL-2013 17:28 Cal File: v9006.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

| RT | AREA | HEIGHT | HT/AREA | % AREA | COMPOUNDS |
|---|---|---|---|---|---|
| 1.000 | 16487703 | 20107325 | 1.220 | 36.803 | S 1 Total TPHG |
| 4.000 | 5315204 | 6450711 | 1.214 | | 3 TPHG 1 |
| 4.456 | 1027376 | 1304944 | 1.270 | | 4 TPHG 2 |
| 4.490 | 4190495 | 5353021 | 1.277 | | 5 TPHG 3 |
| 4.627 | 1668293 | 2132379 | 1.278 | | 6 TPHG 4 |
| 4.900 | 1938443 | 1864440 | 0.962 | | 7 TPHG 5 |
| 5.066 | 2347892 | 3001830 | 1.279 | | 8 TPHG 6 |
| 2.713 | 3900936 | 2931636 | 0.752 | 8.707 | |
| 2.758 | 520586 | 454438 | 0.873 | 1.162 | |
| 2.806 | 2042701 | 1419706 | 0.695 | 4.560 | |
| 2.871 | 276527 | 315965 | 1.143 | 0.617 | |
| 2.893 | 1262846 | 1260461 | 0.998 | 2.819 | |
| 2.929 | 187970 | 201105 | 1.070 | 0.420 | |
| 2.950 | 625650 | 376306 | 0.601 | 1.397 | |
| 2.996 | 173251 | 182543 | 1.054 | 0.387 | |
| 3.018 | 155369 | 170224 | 1.096 | 0.347 | |
| 3.051 | 806628 | 433296 | 0.537 | 1.800 | |
| 3.116 | 1156683 | 1163182 | 1.006 | 2.582 | |
| 3.214 | 117802 | 79199 | 0.672 | 0.263 | |
| 3.244 | 105527 | 111747 | 1.059 | 0.236 | |
| 3.272 | 1136304 | 925974 | 0.815 | 2.536 | |
| 3.311 | 544526 | 542846 | 0.997 | 1.215 | |

| RT | AREA | HEIGHT | HT/AREA | % AREA | COMPOUNDS |
|---|---|---|---|---|---|
| 3.331 | 1221933 | 1238123 | 1.013 | 2.728 | |
| 3.413 | 2041634 | 1678943 | 0.822 | 4.557 | |
| 3.445 | 2079380 | 1444936 | 0.695 | 4.641 | |
| 3.501 | 236690 | 280949 | 1.187 | 0.528 | |
| 3.521 | 1122821 | 988649 | 0.881 | 2.506 | 2 Fluorobenzene |
| 3.571 | 162905 | 187377 | 1.150 | 0.364 | |
| 3.603 | 69356 | 101431 | 1.462 | 0.155 | |
| 3.620 | 195213 | 218105 | 1.117 | 0.436 | |
| 3.641 | 347203 | 320901 | 0.924 | 0.775 | |
| 3.666 | 521243 | 484104 | 0.929 | 1.163 | |
| 3.709 | 247135 | 188215 | 0.762 | 0.552 | |
| 3.761 | 759486 | 734670 | 0.967 | 1.695 | |
| 3.805 | 1394498 | 924907 | 0.663 | 3.113 | |
| 3.845 | 329616 | 320551 | 0.972 | 0.736 | |
| 3.888 | 203549 | 179284 | 0.881 | 0.454 | |
| 3.906 | 236198 | 162768 | 0.689 | 0.527 | |
| 3.948 | 193311 | 185394 | 0.959 | 0.431 | |
| 3.966 | 277274 | 234164 | 0.845 | 0.619 | |
| 4.078 | 226692 | 122536 | 0.541 | 0.506 | |
| 4.145 | 68056 | 53552 | 0.787 | 0.152 | |
| 4.203 | 46200 | 42000 | 0.909 | 0.103 | |
| 4.231 | 132003 | 91003 | 0.689 | 0.295 | |
| 4.272 | 217437 | 166024 | 0.764 | 0.485 | |
| 4.313 | 104972 | 106237 | 1.012 | 0.234 | |
| 4.364 | 34481 | 26274 | 0.762 | 0.077 | |
| 4.401 | 24353 | 36354 | 1.493 | 0.054 | |
| 4.430 | 102014 | 114719 | 1.125 | 0.228 | |
| 4.552 | 18117 | 17579 | 0.970 | 0.040 | |
| 4.591 | 33002 | 34842 | 1.056 | 0.074 | |
| 4.676 | 7969 | 11630 | 1.459 | 0.018 | |
| 4.712 | 61199 | 53035 | 0.867 | 0.137 | |
| 4.735 | 197081 | 219958 | 1.116 | 0.440 | |
| 4.804 | 21419 | 18139 | 0.847 | 0.048 | |
| 4.874 | 427351 | 518618 | 1.214 | 0.954 | |
| 4.927 | 703701 | 910103 | 1.293 | 1.571 | |
| 4.964 | 5504 | 4647 | 0.844 | 0.012 | |
| 4.982 | 25966 | 37964 | 1.462 | 0.058 | |
| 5.009 | 485177 | 603560 | 1.244 | 1.083 | |
| 5.601 | 136381 | 183537 | 1.346 | 0.304 | |
| 5.624 | 239524 | 277474 | 1.158 | 0.535 | |
| 5.654 | 303964 | 350148 | 1.152 | 0.678 | $ 9 Bromochlorobenzene |
| 5.696 | 37253 | 31251 | 0.839 | 0.083 | |
| | 44800276 | 44580608 | | 100.000 | |

Total unknown % area = 60.0

Data File: /var/chem/gcv9a.i/2130725p.b/v9006.d

Date : 25-JUL-2013 17:28

Client ID: TPHG3000/6/18/1

Sample Info: TPHG3000/6/18/1

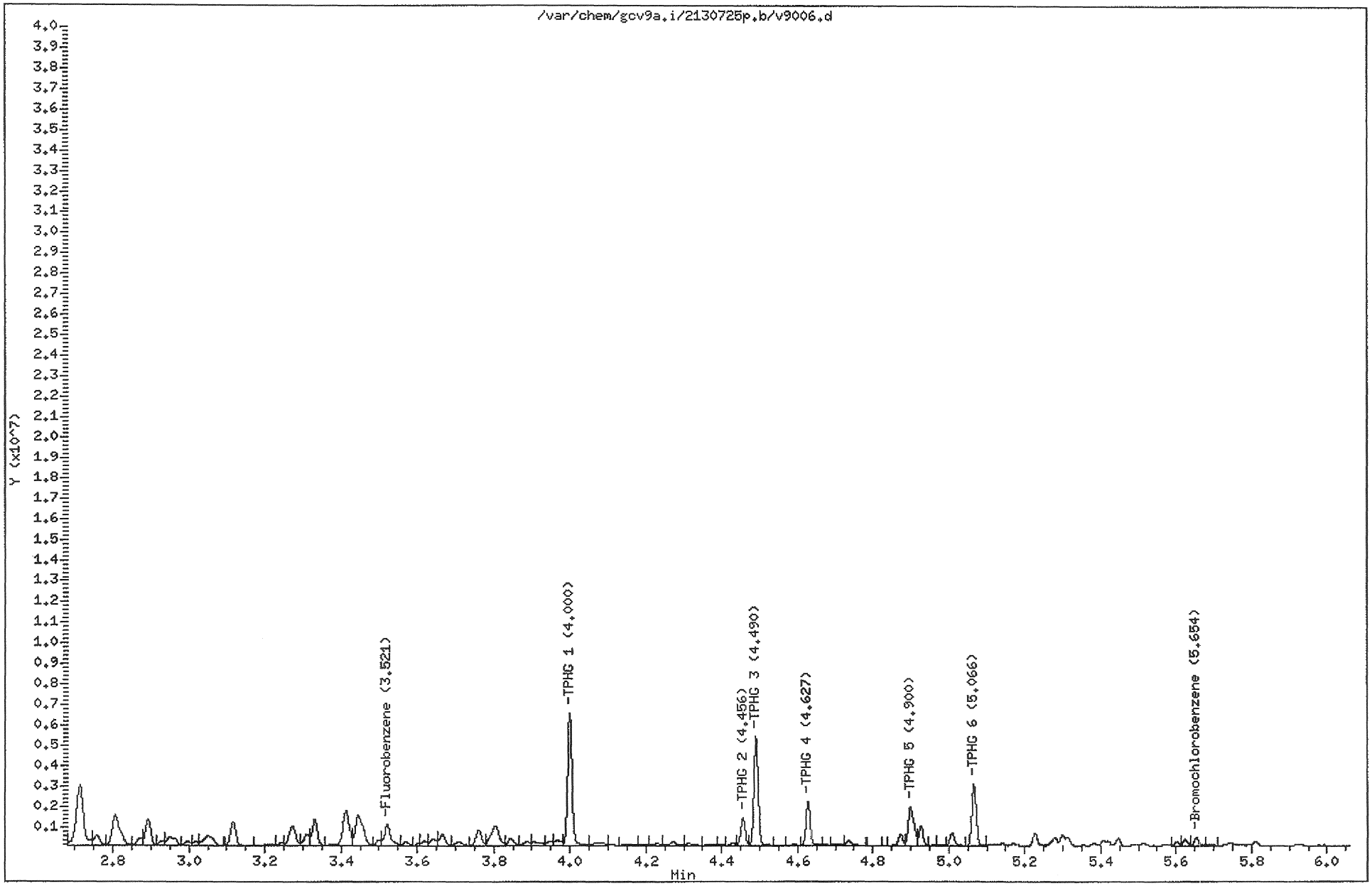
Column phase: RTX-VMS

Instrument: gcv9a.i

Operator: BMR

Column diameter: 0.25

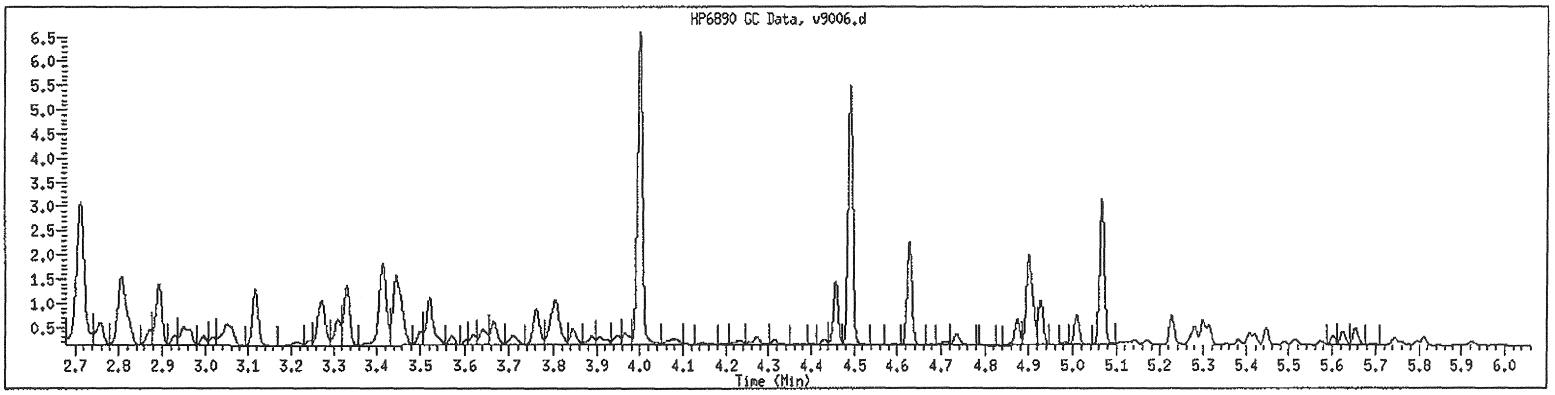





2131017 12 228

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : TPHG3000/6/18/1 | SampleType | : CALIB_5 |
| Injection Date | : 07/25/2013 17:28 | Instrument | : gcv9a.i |
| Operator | : BMR | | |
| Sample Info | : TPHG3000/6/18/1 | | |
| Misc Info | : 6/16/7 | | |
| Method | : /var/chem/gcv9a.i/2130725p.b/GASHBw.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist: | all |




NO MANUAL INTEGRATIONS

Data file : /var/chem/gcv9a.i/2130725p.b/v9008.d
Report Date: 09/19/2013 18:17

GRO REPORT

Marker file: /var/chem/gcv9a.i/2130725p.b/v9001C.d
Data file : /var/chem/gcv9a.i/2130725p.b/v9008.d
Lab Smp Id: ICV6/18/2 Client Smp ID:
Inj Date : 25-JUL-2013 18:26
Operator : BMR Inst ID: gcv9a.i
Smp Info : ICV6/18/2
Misc Info : 6/16/7
Method : /var/chem/gcv9a.i/2130917.b/GASHBw.m
Meth Date : 24-Sep-2013 16:45 jar Quant Type:
Cal Date : 25-JUL-2013 17:48 Cal File: v9007.d
Als bottle: 1 QC Sample: LCS
Integrator: Compound Sublistxxxx: all.sub
Target Version: 3.5

GRO Marker
==========

| Chromat Events | Values |
|---|---|
| Integrator ON | 2.680 |
| Integrator OFF | 5.100 |

Markers

| Low | High |
|---|---|
| 2.714 | 5.07 |

Area (includes areas 0.01 minutes outside of markers)

| | |
|---|---|
| Total | 8,623,922 |
| Fluorobenzene | -770,379 |
| Outside GRO Markers | -303,432 |
| Sample Area | 7,550,111 |

Dil Factor (DF): 1.00

GRO = ((Sample Area) / RRF) * DF

= ((7,550,111) / 13,766) * 1.00

= 548.5 ug/L

$\frac{548.5}{500} \times 100 = 109.7\%$

Avg RF = 13,766 %RSD = 5.02 %

213101712 230

GCAL, Inc.

Data file : /var/chem/gcv9a.i/2130725p.b/v9008.d
Lab Smp Id: ICV6/18/2
Inj Date : 25-JUL-2013 18:26
Operator : BMR Inst ID: gcv9a.i
Smp Info : ICV6/18/2
Misc Info : 6/16/7
Comment :
Method : /var/chem/gcv9a.i/2130917.b/GASHBw.m
Meth Date : 18-Sep-2013 14:43 bmr Quant Type: ESTD
Cal Date : 25-JUL-2013 17:48 Cal File: v9007.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

| | Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/L) | FINAL ( ug/L) |
|---|---|---|---|---|---|---|---|
| S | 1 Total TPHG | | | | 2947063 | 531.600 | 532 |
| | 2 Fluorobenzene | 3.520 | 3.517 | 0.003 | 770379 | 25.9995 | 26.0 |
| | 3 TPHG 1 | 3.998 | 3.993 | 0.005 | 922871 | 519.119 | 519 |
| | 4 TPHG 2 | 4.454 | 4.444 | 0.010 | 181865 | 531.720 | 532 |
| | 5 TPHG 3 | 4.488 | 4.477 | 0.011 | 744617 | 533.307 | 533 |
| | 6 TPHG 4 | 4.626 | 4.613 | 0.013 | 297650 | 531.803 | 532 |
| | 7 TPHG 5 | 4.897 | 4.906 | -0.009 | 367539 | 554.776 | 555 |
| | 8 TPHG 6 | 5.063 | 5.042 | 0.021 | 432521 | 536.938 | 537 |
| $ | 9 Bromochlorobenzene | 5.649 | 5.612 | 0.037 | 261111 | 27.2414 | 27.2 |

GCAL, Inc.

Data file : /var/chem/gcv9a.i/2130725p.b/v9008.d
Lab Smp Id: ICV6/18/2
Inj Date : 25-JUL-2013 18:26
Operator : BMR Inst ID: gcv9a.i
Smp Info : ICV6/18/2
Misc Info : 6/16/7
Comment :
Method : /var/chem/gcv9a.i/2130917.b/GASHBw.m
Meth Date : 18-Sep-2013 14:43 bmr Quant Type: AREA%
Cal Date : 25-JUL-2013 17:48 Cal File: v9007.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

| RT | AREA | HEIGHT | HT/AREA | % AREA | COMPOUNDS |
|---|---|---|---|---|---|
| 1.000 | 2947063 | 3624329 | 1.230 | 34.174 | S 1 Total TPHG |
| 3.998 | 922871 | 1138975 | 1.234 | | 3 TPHG 1 |
| 4.454 | 181865 | 229161 | 1.260 | | 4 TPHG 2 |
| 4.488 | 744617 | 976540 | 1.311 | | 5 TPHG 3 |
| 4.626 | 297650 | 380360 | 1.278 | | 6 TPHG 4 |
| 4.897 | 367539 | 348602 | 0.948 | | 7 TPHG 5 |
| 5.063 | 432521 | 550691 | 1.273 | | 8 TPHG 6 |
| 2.709 | 697512 | 527373 | 0.756 | 8.088 | |
| 2.754 | 75330 | 71575 | 0.950 | 0.873 | |
| 2.803 | 368336 | 264144 | 0.717 | 4.271 | |
| 2.869 | 37901 | 45111 | 1.190 | 0.439 | |
| 2.890 | 220050 | 223231 | 1.014 | 2.552 | |
| 2.927 | 21631 | 25022 | 1.157 | 0.251 | |
| 2.948 | 70023 | 55615 | 0.794 | 0.812 | |
| 2.994 | 28043 | 30461 | 1.086 | 0.325 | |
| 3.016 | 25747 | 29275 | 1.137 | 0.299 | |
| 3.048 | 148898 | 78672 | 0.528 | 1.727 | |
| 3.113 | 209631 | 210066 | 1.002 | 2.431 | |
| 3.213 | 13159 | 11103 | 0.844 | 0.153 | |
| 3.242 | 14949 | 17257 | 1.154 | 0.173 | |
| 3.270 | 206347 | 171786 | 0.833 | 2.393 | |
| 3.309 | 101674 | 99554 | 0.979 | 1.179 | |

| RT | AREA | HEIGHT | HT/AREA | % AREA | COMPOUNDS |
|---|---|---|---|---|---|
| 3.329 | 225375 | 230986 | 1.025 | 2.613 | |
| 3.373 | 3689 | 4493 | 1.218 | 0.043 | |
| 3.412 | 383940 | 330110 | 0.860 | 4.452 | |
| 3.443 | 370092 | 250392 | 0.677 | 4.291 | |
| 3.520 | 770379 | 814848 | 1.058 | 8.933 | 2 Fluorobenzene |
| 3.570 | 29022 | 34656 | 1.194 | 0.337 | |
| 3.602 | 9948 | 14984 | 1.506 | 0.115 | |
| 3.619 | 33911 | 39070 | 1.152 | 0.393 | |
| 3.640 | 62101 | 61072 | 0.983 | 0.720 | |
| 3.664 | 91133 | 88838 | 0.975 | 1.057 | |
| 3.708 | 42313 | 34295 | 0.811 | 0.491 | |
| 3.760 | 145496 | 144227 | 0.991 | 1.687 | |
| 3.803 | 262782 | 179857 | 0.684 | 3.047 | |
| 3.843 | 58710 | 60527 | 1.031 | 0.681 | |
| 3.888 | 58485 | 32933 | 0.563 | 0.678 | |
| 3.948 | 33698 | 33414 | 0.992 | 0.391 | |
| 3.965 | 53358 | 44912 | 0.842 | 0.619 | |
| 4.077 | 40220 | 21574 | 0.536 | 0.466 | |
| 4.143 | 7264 | 9495 | 1.307 | 0.084 | |
| 4.230 | 23659 | 16590 | 0.701 | 0.274 | |
| 4.271 | 40643 | 35289 | 0.868 | 0.471 | |
| 4.312 | 18971 | 23765 | 1.253 | 0.220 | |
| 4.399 | 4512 | 7083 | 1.570 | 0.052 | |
| 4.428 | 24435 | 29126 | 1.192 | 0.283 | |
| 4.733 | 34407 | 38325 | 1.114 | 0.399 | |
| 4.872 | 83230 | 98318 | 1.181 | 0.965 | |
| 4.925 | 132478 | 172674 | 1.303 | 1.536 | |
| 5.006 | 89942 | 113565 | 1.263 | 1.043 | |
| 5.619 | 42321 | 52696 | 1.245 | 0.491 | |
| 5.649 | 261111 | 331340 | 1.269 | 3.028 | $ 9 Bromochlorobenzene |
| | 8623922 | 8834028 | | 100.000 | |

Total unknown % area = 53.9

Data File: /var/chem/gcv9a.i/2130725p.b/v9008.d

Date : 25-JUL-2013 18:26

Client ID:

Sample Info: ICV6/18/2

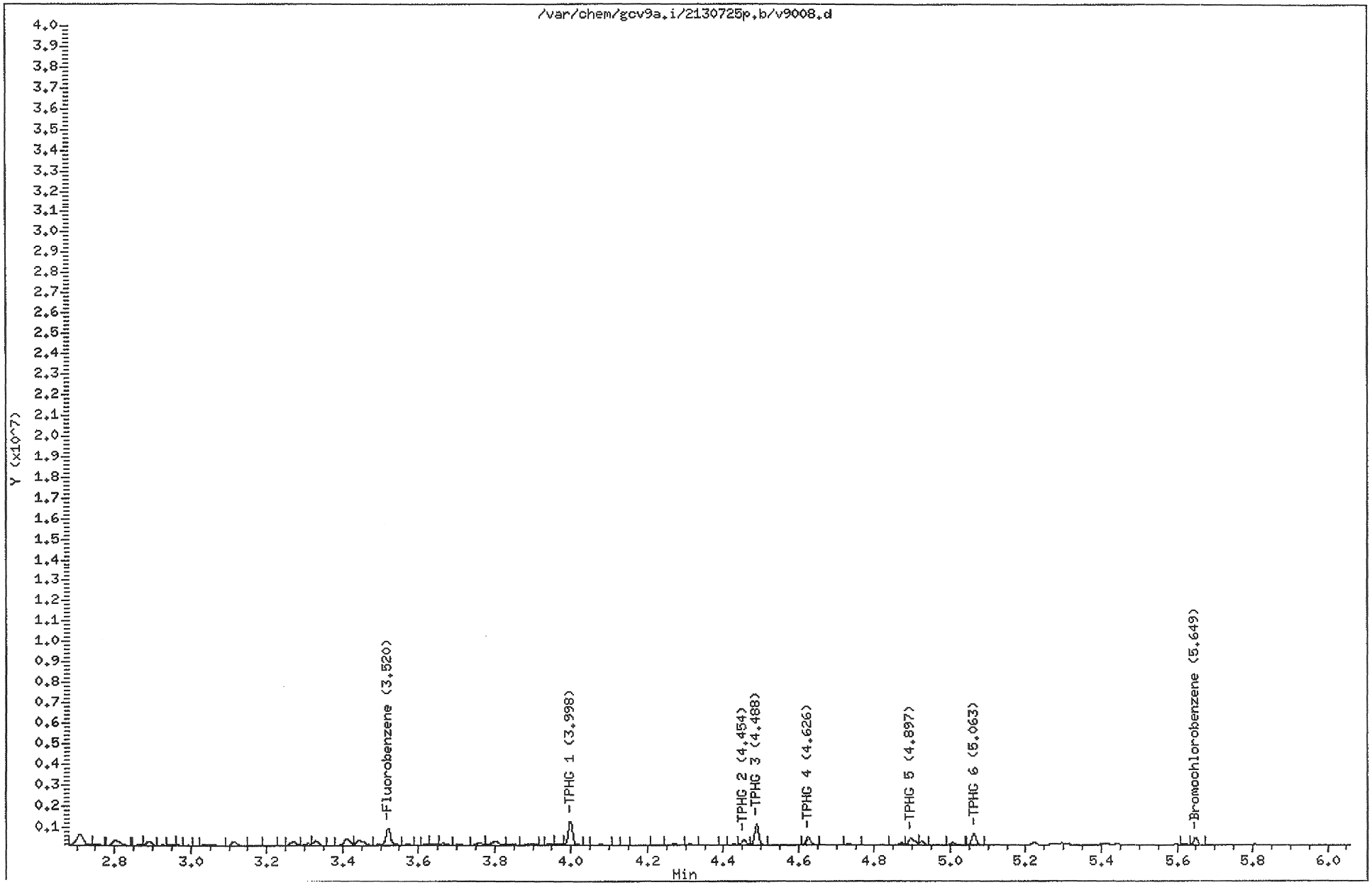
Column phase: RTX-VMS

Instrument: gcv9a.i

Operator: BMR

Column diameter: 0.25





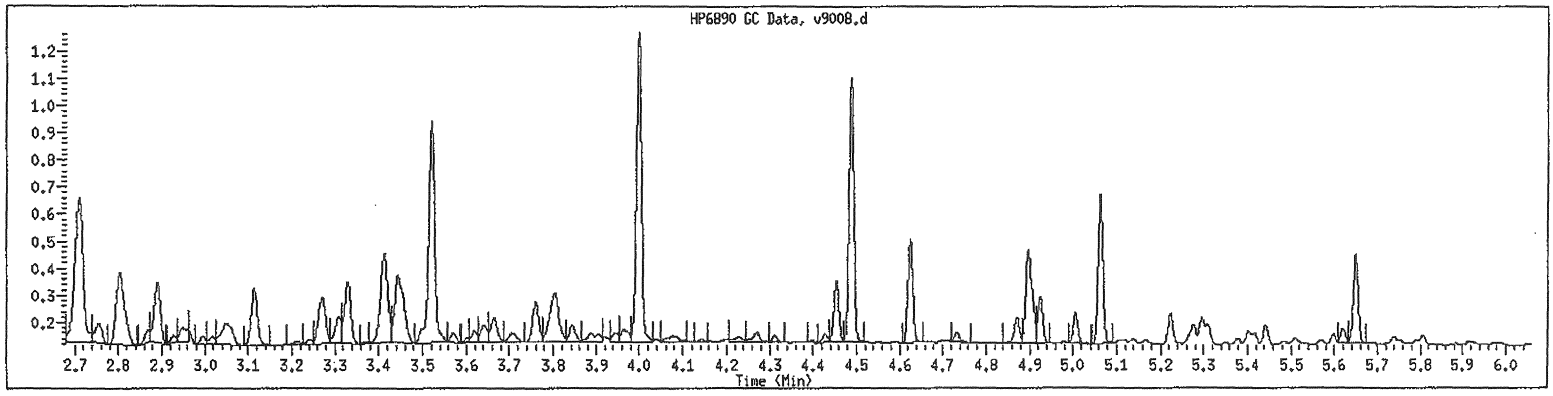

21310171 2 234

Data file : /var/chem/gcv9a.i/2130725p.b/v9008.d
Report Date: 09/19/2013 18:17



# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : ICV6/18/2 | SampleType | : LCS |
| Injection Date | : 07/25/2013 18:26 | Instrument | : gcv9a.i |
| Operator | : BMR | | |
| Sample Info | : ICV6/18/2 | | |
| Misc Info | : 6/16/7 | | |
| Method | : /var/chem/gcv9a.i/2130917.b/GASHBw.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist: | all |




NO MANUAL INTEGRATIONS

GCAL, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcv9a.i
Lab File ID: v9002.d
Analysis Type: SOIL
Lab Sample ID: 1400
Method: /var/chem/gcv9a.i/2131025.b/GASHBw.m

Injection Date: 25-OCT-2013 19:24
Init. Cal. Date(s): 25-JUL-2013 25-JUL-2013
Init. Cal. Times: 16:04 17:48
Quant Type: ESTD

| COMPOUND | RRF / AMOUNT | RF500 | MIN RRF | %D / %DRIFT | MAX %D / %DRIFT | CURVE TYPE |
|---|---|---|---|---|---|---|
| S 1 Total TPHG | 5544 | 5887 | 0.010 | -6.18802 | 20.00000 | Averaged |
| 2 Fluorobenzene | 29631 | 27416 | 0.010 | 7.47372 | 20.00000 | Averaged |
| 3 TPHG 1 | 1778 | 1872 | 0.010 | -5.29939 | 20.00000 | Averaged |
| 4 TPHG 2 | 342 | 367 | 0.010 | -7.19470 | 20.00000 | Averaged |
| 5 TPHG 3 | 1396 | 1486 | 0.010 | -6.42364 | 20.00000 | Averaged |
| 6 TPHG 4 | 560 | 598 | 0.010 | -6.90092 | 20.00000 | Averaged |
| 7 TPHG 5 | 663 | 703 | 0.010 | -6.14186 | 20.00000 | Averaged |
| 8 TPHG 6 | 806 | 861 | 0.010 | -6.85595 | 20.00000 | Averaged |
| $ 9 Bromochlorobenzene | 9585 | 8871 | 0.010 | 7.44978 | 30.00000 | Averaged |

Average %D / Drift Results.

Calculated Average %D/Drift = 6.65866
Maximun Average %D/Drift = 15.00000
* Passed Average %D/Drift Test.

Data file : /var/chem/gcv9a.i/2131025.b/v9002.d
Report Date: 10/28/2013 16:27

GRO REPORT

Cal Marker file: /var/chem/gcv9a.i/2131025.b/v9001C.d
Batch Marker file: /var/chem/gcv9a.i/2131025.b/v9001.d
Data file : /var/chem/gcv9a.i/2131025.b/v9002.d
Lab Smp Id: 1400 Client Smp ID: TPHG6/18/14
Inj Date : 25-OCT-2013 19:24
Operator : BMR Inst ID: gcv9a.i
Smp Info : 1400*TPHG6/18/14
Misc Info : 6/18/15
Method : /var/chem/gcv9a.i/2131025.b/GASHBw.m
Meth Date : 28-Oct-2013 16:28 bmr Quant Type:
Cal Date : 25-JUL-2013 17:48 Cal File: v9007.d
Als bottle: 1
Integrator: Compound Sublistxxxx: all.sub
Target Version: 3.5

Cal GRO Marker

| Chromat Events | Values |
|---|---|
| Integrator ON | 2.680 |
| Integrator OFF | 5.100 |

Markers

| Low | High |
|---|---|
| 2.714 | 5.07 |

Batch GRO Marker

| Chromat Events | Values |
|---|---|
| Integrator ON | 2.680 |
| Integrator OFF | 5.100 |

Markers

| Low | High |
|---|---|
| 2.71 | 5.045 |

Area (includes areas 0.01 minutes outside of markers)

| | |
|---|---|
| Total | 8,232,793 |
| Fluorobenzene | -822,483 |
| Outside GRO Markers | -311,711 |
| Sample Area | 7,098,599 |

CCV RF = (Sample Area) / Conc

= (7,098,599) / 500

= 14,197

%Difference = ((CCV RF) - RRF) / RRF * 100

= ((14,197) - 13,766) / 13,766 * 100

= 3.13 %

Avg RF = 13,766 %RSD = 5.02 %

GCAL, Inc.

Data file : /var/chem/gcv9a.i/2131025.b/v9002.d
Lab Smp Id: 1400 Client Smp ID: TPHG6/18/14
Inj Date : 25-OCT-2013 19:24
Operator : BMR Inst ID: gcv9a.i
Smp Info : 1400*TPHG6/18/14
Misc Info : 6/18/15
Comment :
Method : /var/chem/gcv9a.i/2131025.b/GASHBw.m
Meth Date : 28-Oct-2013 16:27 bmr Quant Type: ESTD
Cal Date : 25-JUL-2013 17:48 Cal File: v9007.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 5.00000 | ng unit correction factor |
| Vt | 1.00000 | Final Volume |
| Vi | 1.00000 | Volume Injected |
| Ws | 5.00000 | Weight of sample |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( ug/L) | AMOUNTS ON-COL ( ug/L) |
|---|---|---|---|---|---|---|
| S 1 Total TPHG | | | | 2943402 | 500.000 | 531 |
| 2 Fluorobenzene | 3.518 | 3.518 | 0.000 | 822482 | 30.0000 | 27.8 |
| 3 TPHG 1 | 3.994 | 3.994 | 0.000 | 935988 | 500.000 | 526 |
| 4 TPHG 2 | 4.445 | 4.445 | 0.000 | 183320 | 500.000 | 536 |
| 5 TPHG 3 | 4.478 | 4.478 | 0.000 | 742957 | 500.000 | 532 |
| 6 TPHG 4 | 4.613 | 4.613 | 0.000 | 299162 | 500.000 | 534 |
| 7 TPHG 5 | 4.879 | 4.879 | 0.000 | 351595 | 500.000 | 531 |
| 8 TPHG 6 | 5.042 | 5.042 | 0.000 | 430380 | 500.000 | 534 |
| $ 9 Bromochlorobenzene | 5.612 | 5.612 | 0.000 | 266130 | 30.0000 | 27.8 |

GCAL, Inc.

Data file : /var/chem/gcv9a.i/2131025.b/v9002.d
Lab Smp Id: 1400 Client Smp ID: TPHG6/18/14
Inj Date : 25-OCT-2013 19:24
Operator : BMR Inst ID: gcv9a.i
Smp Info : 1400*TPHG6/18/14
Misc Info : 6/18/15
Comment :
Method : /var/chem/gcv9a.i/2131025.b/GASHBw.m
Meth Date : 28-Oct-2013 16:27 bmr Quant Type: AREA%
Cal Date : 25-JUL-2013 17:48 Cal File: v9007.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 5.00000 | ng unit correction factor |
| Vt | 1.00000 | Final Volume |
| Vi | 1.00000 | Volume Injected |
| Ws | 5.00000 | Weight of sample |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| RT | AREA | HEIGHT | HT/AREA | % AREA | COMPOUNDS |
|---|---|---|---|---|---|
| 1.000 | 2943402 | 3688652 | 1.253 | 35.752 | S 1 Total TPHG |
| 3.994 | 935988 | 1193603 | 1.275 | | 3 TPHG 1 |
| 4.445 | 183320 | 235621 | 1.285 | | 4 TPHG 2 |
| 4.478 | 742957 | 970126 | 1.306 | | 5 TPHG 3 |
| 4.613 | 299162 | 388851 | 1.300 | | 6 TPHG 4 |
| 4.879 | 351595 | 337644 | 0.960 | | 7 TPHG 5 |
| 5.042 | 430380 | 562807 | 1.308 | | 8 TPHG 6 |
| 2.710 | 630356 | 491019 | 0.779 | 7.657 | |
| 2.753 | 98913 | 74646 | 0.755 | 1.201 | |
| 2.802 | 344278 | 243416 | 0.707 | 4.182 | |
| 2.868 | 45543 | 53294 | 1.170 | 0.553 | |
| 2.889 | 211064 | 212408 | 1.006 | 2.564 | |
| 2.925 | 30814 | 32918 | 1.068 | 0.374 | |

| RT | AREA | HEIGHT | HT/AREA | % AREA | COMPOUNDS |
|---|---|---|---|---|---|
| 2.946 | 105244 | 63469 | 0.603 | 1.278 | |
| 2.992 | 29058 | 31012 | 1.067 | 0.353 | |
| 3.014 | 26460 | 28948 | 1.094 | 0.321 | |
| 3.047 | 138027 | 74622 | 0.541 | 1.677 | |
| 3.112 | 198810 | 201956 | 1.016 | 2.415 | |
| 3.211 | 12422 | 10472 | 0.843 | 0.151 | |
| 3.241 | 15780 | 17595 | 1.115 | 0.192 | |
| 3.270 | 191926 | 154439 | 0.805 | 2.331 | |
| 3.307 | 91774 | 91068 | 0.992 | 1.115 | |
| 3.328 | 208455 | 210266 | 1.009 | 2.532 | |
| 3.410 | 321132 | 275164 | 0.857 | 3.901 | |
| 3.441 | 352067 | 250046 | 0.710 | 4.276 | |
| 3.518 | 822483 | 886535 | 1.078 | 9.990 | 2 Fluorobenzene |
| 3.568 | 25275 | 30479 | 1.206 | 0.307 | |
| 3.600 | 9751 | 13928 | 1.428 | 0.118 | |
| 3.617 | 26196 | 31119 | 1.188 | 0.318 | |
| 3.638 | 50286 | 50617 | 1.007 | 0.611 | |
| 3.662 | 83530 | 82428 | 0.987 | 1.015 | |
| 3.705 | 35533 | 30056 | 0.846 | 0.432 | |
| 3.757 | 120715 | 121568 | 1.007 | 1.466 | |
| 3.802 | 220095 | 154917 | 0.704 | 2.673 | |
| 3.841 | 44521 | 48809 | 1.096 | 0.541 | |
| 3.884 | 42773 | 24325 | 0.569 | 0.520 | |
| 3.943 | 27199 | 27962 | 1.028 | 0.330 | |
| 4.072 | 28587 | 17685 | 0.619 | 0.347 | |
| 4.138 | 8369 | 8026 | 0.959 | 0.102 | |
| 4.223 | 15354 | 12693 | 0.827 | 0.187 | |
| 4.264 | 24360 | 22389 | 0.919 | 0.296 | |
| 4.304 | 4548 | 13960 | 3.069 | 0.055 | |
| 4.419 | 15304 | 17498 | 1.143 | 0.186 | |
| 4.719 | 28802 | 35256 | 1.224 | 0.350 | |
| 4.854 | 76275 | 93223 | 1.222 | 0.926 | |
| 4.907 | 129111 | 169361 | 1.312 | 1.568 | |
| 4.987 | 86483 | 112410 | 1.300 | 1.050 | |
| 5.085 | 12112 | 8976 | 0.741 | 0.147 | |
| 5.612 | 266130 | 325599 | 1.223 | 3.233 | $ 9 Bromochlorobenzene |
| 5.699 | 33469 | 26872 | 0.803 | 0.407 | |
| | 8232793 | 8572101 | | 100.000 | |

Total unknown % area = 51.0

Data File: /var/chem/gcv9a.i/2131025.b/v9002.d



Date : 25-OCT-2013 19:24

Client ID: TPHG6/18/14

Instrument: gcv9a.i

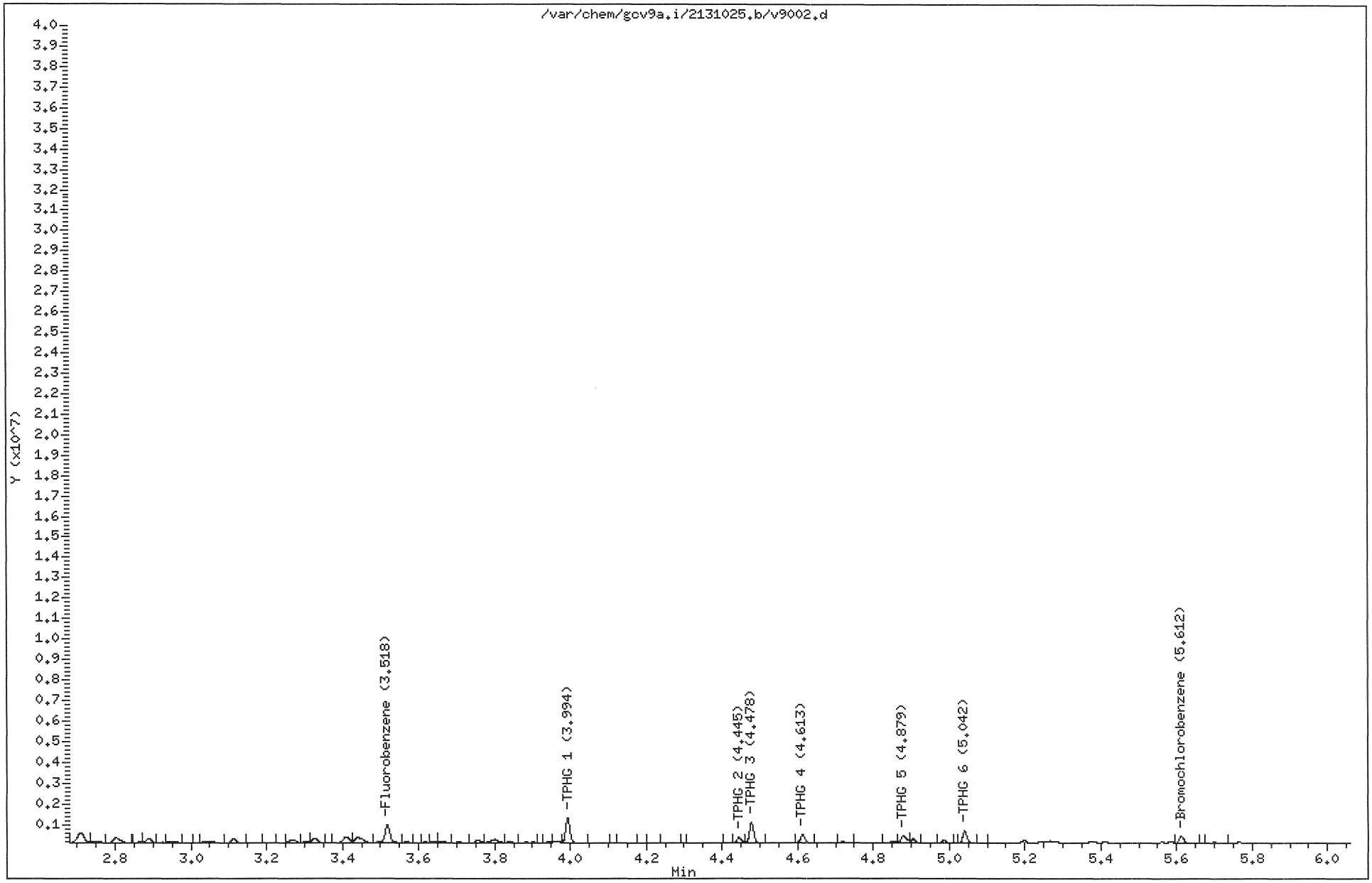
Sample Info: 1400*TPHG6/18/14

Volume Injected (uL): 1.0

Operator: BMR

Column phase: RTX-VMS

Column diameter: 0.25

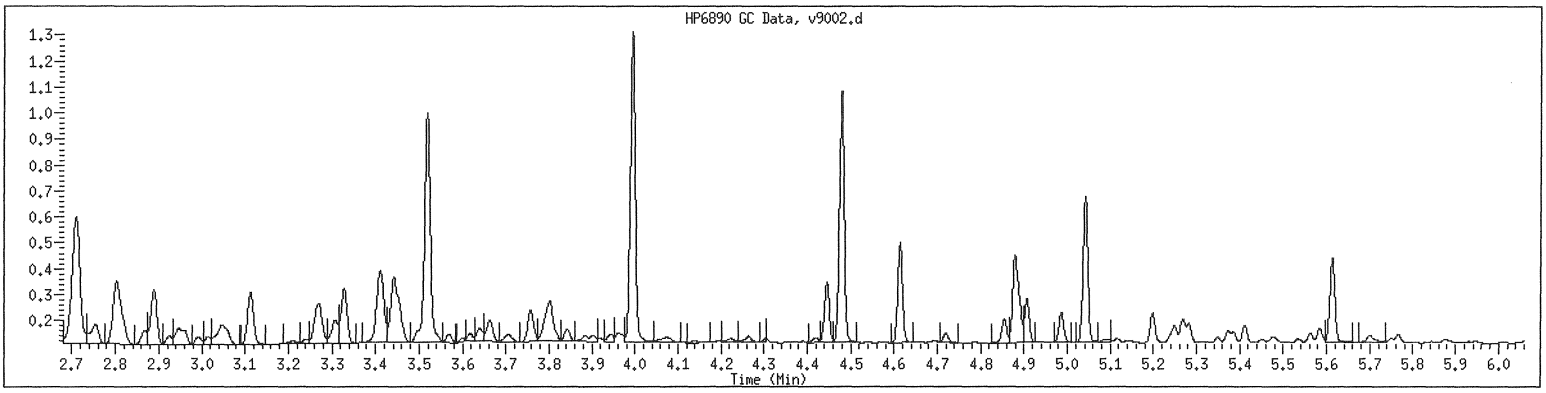



2131017 12 241

Report Date: 10/28/2013 16:27

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1400 | SampleType | : CCALIB_2 |
| Injection Date | : 10/25/2013 19:24 | Instrument | : gcv9a.i |
| Operator | : BMR | | |
| Sample Info | : 1400*TPHG6/18/14 | | |
| Misc Info | : 6/18/15 | | |
| Method | : /var/chem/gcv9a.i/2131025.b/GASHBw.m | | |
| Dilution | : 1.0 | | |
| Matrix | : SOIL | | |
| Integrator | : Falcon | Compound Sublist | : all |




NO MANUAL INTEGRATIONS

GCAL, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcv9a.i Injection Date: 25-OCT-2013 23:26
Lab File ID: v9014.d Init. Cal. Date(s): 25-JUL-2013 25-JUL-2013
Analysis Type: SOIL Init. Cal. Times: 16:04 17:48
Lab Sample ID: 1400 Quant Type: ESTD
Method: /var/chem/gcv9a.i/2131025.b/GASHBw.m

| COMPOUND | RRF / AMOUNT | RF500 | MIN RRF | %D / %DRIFT | MAX %D / %DRIFT | CURVE TYPE |
|---|---|---|---|---|---|---|
| S 1 Total TPHG | 5544 | 5916 | 0.010 | -6.72094 | 20.00000 | Averaged |
| 2 Fluorobenzene | 29631 | 27535 | 0.010 | 7.07132 | 20.00000 | Averaged |
| 3 TPHG 1 | 1778 | 1883 | 0.010 | -5.89429 | 20.00000 | Averaged |
| 4 TPHG 2 | 342 | 369 | 0.010 | -7.84318 | 20.00000 | Averaged |
| 5 TPHG 3 | 1396 | 1495 | 0.010 | -7.09373 | 20.00000 | Averaged |
| 6 TPHG 4 | 560 | 601 | 0.010 | -7.37868 | 20.00000 | Averaged |
| 7 TPHG 5 | 663 | 705 | 0.010 | -6.39091 | 20.00000 | Averaged |
| 8 TPHG 6 | 806 | 864 | 0.010 | -7.23706 | 20.00000 | Averaged |
| $ 9 Bromochlorobenzene | 9585 | 8211 | 0.010 | 14.33202 | 30.00000 | Averaged |

Average %D / Drift Results.

Calculated Average %D/Drift = 7.77357
Maximun Average %D/Drift = 15.00000
* Passed Average %D/Drift Test.

Data file : /var/chem/gcv9a.i/2131025.b/v9014.d
Report Date: 10/28/2013 16:27

GRO REPORT

Cal Marker file: /var/chem/gcv9a.i/2131025.b/v9001C.d
Batch Marker file: /var/chem/gcv9a.i/2131025.b/v9001.d
Data file : /var/chem/gcv9a.i/2131025.b/v9014.d
Lab Smp Id: 1400 Client Smp ID: TPHG6/18/14
Inj Date : 25-OCT-2013 23:26
Operator : BMR Inst ID: gcv9a.i
Smp Info : 1400*TPHG6/18/14
Misc Info : 6/18/15
Method : /var/chem/gcv9a.i/2131025.b/GASHBw.m
Meth Date : 28-Oct-2013 16:28 bmr Quant Type:
Cal Date : 25-JUL-2013 17:48 Cal File: v9007.d
Als bottle: 1
Integrator: Compound Sublistxxxx: all.sub
Target Version: 3.5

Cal GRO Marker

| Chromat Events | Values |
|---|---|
| Integrator ON | 2.680 |
| Integrator OFF | 5.100 |

Markers

| Low | High |
|---|---|
| 2.714 | 5.07 |

Batch GRO Marker

| Chromat Events | Values |
|---|---|
| Integrator ON | 2.680 |
| Integrator OFF | 5.100 |

Markers

| Low | High |
|---|---|
| 2.71 | 5.045 |

Area (includes areas 0.01 minutes outside of markers)

| | |
|---|---|
| Total | 8,087,318 |
| Fluorobenzene | -826,059 |
| Outside GRO Markers | -294,173 |
| Sample Area | 6,967,086 |

CCV RF = (Sample Area) / Conc

= (6,967,086) / 500

= 13,934

%Difference = ((CCV RF) - RRF) / RRF * 100

= ((13,934) - 13,766) / 13,766 * 100

= 1.22 %

Avg RF = 13,766 %RSD = 5.02 %

GCAL, Inc.

Data file : /var/chem/gcv9a.i/2131025.b/v9014.d
Lab Smp Id: 1400 Client Smp ID: TPHG6/18/14
Inj Date : 25-OCT-2013 23:26
Operator : BMR Inst ID: gcv9a.i
Smp Info : 1400*TPHG6/18/14
Misc Info : 6/18/15
Comment :
Method : /var/chem/gcv9a.i/2131025.b/GASHBw.m
Meth Date : 28-Oct-2013 16:27 bmr Quant Type: ESTD
Cal Date : 25-JUL-2013 17:48 Cal File: v9007.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 5.00000 | ng unit correction factor |
| Vt | 1.00000 | Final Volume |
| Vi | 1.00000 | Volume Injected |
| Ws | 5.00000 | Weight of sample |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( ug/L) | AMOUNTS ON-COL ( ug/L) |
|---|---|---|---|---|---|---|
| S 1 Total TPHG | | | | 2958174 | 500.000 | 534 |
| 2 Fluorobenzene | 3.517 | 3.517 | 0.000 | 826059 | 30.0000 | 27.9 |
| 3 TPHG 1 | 3.992 | 3.992 | 0.000 | 941276 | 500.000 | 529 |
| 4 TPHG 2 | 4.440 | 4.440 | 0.000 | 184429 | 500.000 | 539 |
| 5 TPHG 3 | 4.473 | 4.473 | 0.000 | 747635 | 500.000 | 535 |
| 6 TPHG 4 | 4.606 | 4.606 | 0.000 | 300499 | 500.000 | 537 |
| 7 TPHG 5 | 4.869 | 4.869 | 0.000 | 352420 | 500.000 | 532 |
| 8 TPHG 6 | 5.029 | 5.029 | 0.000 | 431915 | 500.000 | 536 |
| $ 9 Bromochlorobenzene | 5.590 | 5.590 | 0.000 | 246340 | 30.0000 | 25.7(M1) |

QC Flag Legend

M1- Compound response manually integrated because
Target system did not integrate.

GCAL, Inc.

Data file : /var/chem/gcv9a.i/2131025.b/v9014.d
Lab Smp Id: 1400 Client Smp ID: TPHG6/18/14
Inj Date : 25-OCT-2013 23:26
Operator : BMR Inst ID: gcv9a.i
Smp Info : 1400*TPHG6/18/14
Misc Info : 6/18/15
Comment :
Method : /var/chem/gcv9a.i/2131025.b/GASHBw.m
Meth Date : 28-Oct-2013 16:27 bmr Quant Type: AREA%
Cal Date : 25-JUL-2013 17:48 Cal File: v9007.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 5.00000 | ng unit correction factor |
| Vt | 1.00000 | Final Volume |
| Vi | 1.00000 | Volume Injected |
| Ws | 5.00000 | Weight of sample |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| RT | AREA | HEIGHT | HT/AREA | % AREA | COMPOUNDS |
|---|---|---|---|---|---|
| 1.000 | 2958174 | 3720553 | 1.258 | 36.577 | S 1 Total TPHG |
| 3.992 | 941276 | 1200323 | 1.275 | | 3 TPHG 1 |
| 4.440 | 184429 | 239386 | 1.298 | | 4 TPHG 2 |
| 4.473 | 747635 | 977035 | 1.307 | | 5 TPHG 3 |
| 4.606 | 300499 | 388868 | 1.294 | | 6 TPHG 4 |
| 4.869 | 352420 | 343402 | 0.974 | | 7 TPHG 5 |
| 5.029 | 431915 | 571539 | 1.323 | | 8 TPHG 6 |
| 2.707 | 567232 | 450087 | 0.793 | 7.014 | |
| 2.751 | 88555 | 69344 | 0.783 | 1.095 | |
| 2.801 | 330145 | 231675 | 0.702 | 4.082 | |
| 2.866 | 40200 | 46027 | 1.145 | 0.497 | |
| 2.887 | 184781 | 189591 | 1.026 | 2.285 | |
| 2.924 | 23013 | 27133 | 1.179 | 0.285 | |

| RT | AREA | HEIGHT | HT/AREA | % AREA | COMPOUNDS |
|---|---|---|---|---|---|
| 2.945 | 74247 | 55834 | 0.752 | 0.918 | |
| 2.991 | 26795 | 29182 | 1.089 | 0.331 | |
| 3.012 | 23902 | 27138 | 1.135 | 0.296 | |
| 3.045 | 130302 | 71648 | 0.550 | 1.611 | |
| 3.111 | 192495 | 192870 | 1.002 | 2.380 | |
| 3.240 | 10531 | 13326 | 1.265 | 0.130 | |
| 3.267 | 175958 | 143060 | 0.813 | 2.176 | |
| 3.306 | 82140 | 83453 | 1.016 | 1.016 | |
| 3.326 | 195217 | 199365 | 1.021 | 2.414 | |
| 3.370 | 5232 | 5693 | 1.088 | 0.065 | |
| 3.409 | 314256 | 268655 | 0.855 | 3.886 | |
| 3.440 | 350016 | 248383 | 0.710 | 4.328 | |
| 3.517 | 826059 | 882766 | 1.069 | 10.214 | 2 Fluorobenzene |
| 3.567 | 28947 | 32050 | 1.107 | 0.358 | |
| 3.598 | 12794 | 17257 | 1.349 | 0.158 | |
| 3.616 | 29041 | 33600 | 1.157 | 0.359 | |
| 3.637 | 53112 | 50858 | 0.958 | 0.657 | |
| 3.661 | 80716 | 79347 | 0.983 | 0.998 | |
| 3.704 | 34710 | 29331 | 0.845 | 0.429 | |
| 3.756 | 117705 | 118906 | 1.010 | 1.455 | |
| 3.799 | 214462 | 151555 | 0.707 | 2.652 | |
| 3.839 | 44447 | 46931 | 1.056 | 0.550 | |
| 3.882 | 44773 | 23953 | 0.535 | 0.554 | |
| 3.941 | 28125 | 28121 | 1.000 | 0.348 | |
| 3.959 | 40254 | 33567 | 0.834 | 0.498 | |
| 4.070 | 32977 | 19122 | 0.580 | 0.408 | |
| 4.135 | 7867 | 7567 | 0.962 | 0.097 | |
| 4.219 | 18496 | 13234 | 0.716 | 0.229 | |
| 4.261 | 27105 | 22710 | 0.838 | 0.335 | |
| 4.301 | 11367 | 14300 | 1.258 | 0.141 | |
| 4.386 | 3918 | 5927 | 1.513 | 0.048 | |
| 4.414 | 14935 | 17304 | 1.159 | 0.185 | |
| 4.711 | 28172 | 35154 | 1.248 | 0.348 | |
| 4.845 | 75083 | 94847 | 1.263 | 0.928 | |
| 4.896 | 128620 | 172848 | 1.344 | 1.590 | |
| 4.974 | 87336 | 114023 | 1.306 | 1.080 | |
| 5.071 | 28931 | 10113 | 0.350 | 0.358 | |
| 5.590 | 246340 | 318228 | 1.292 | 3.046 | $ 9 Bromochlorobenzene |
| 5.674 | 47833 | 31081 | 0.650 | 0.591 | |
| | 8087318 | 8477717 | | 100.000 | |

Total unknown % area = 50.2

Data File: /var/chem/gcv9a.i/2131025.b/v9014.d



Date : 25-OCT-2013 23:26

Client ID: TPHG6/18/14

Instrument: gcv9a.i

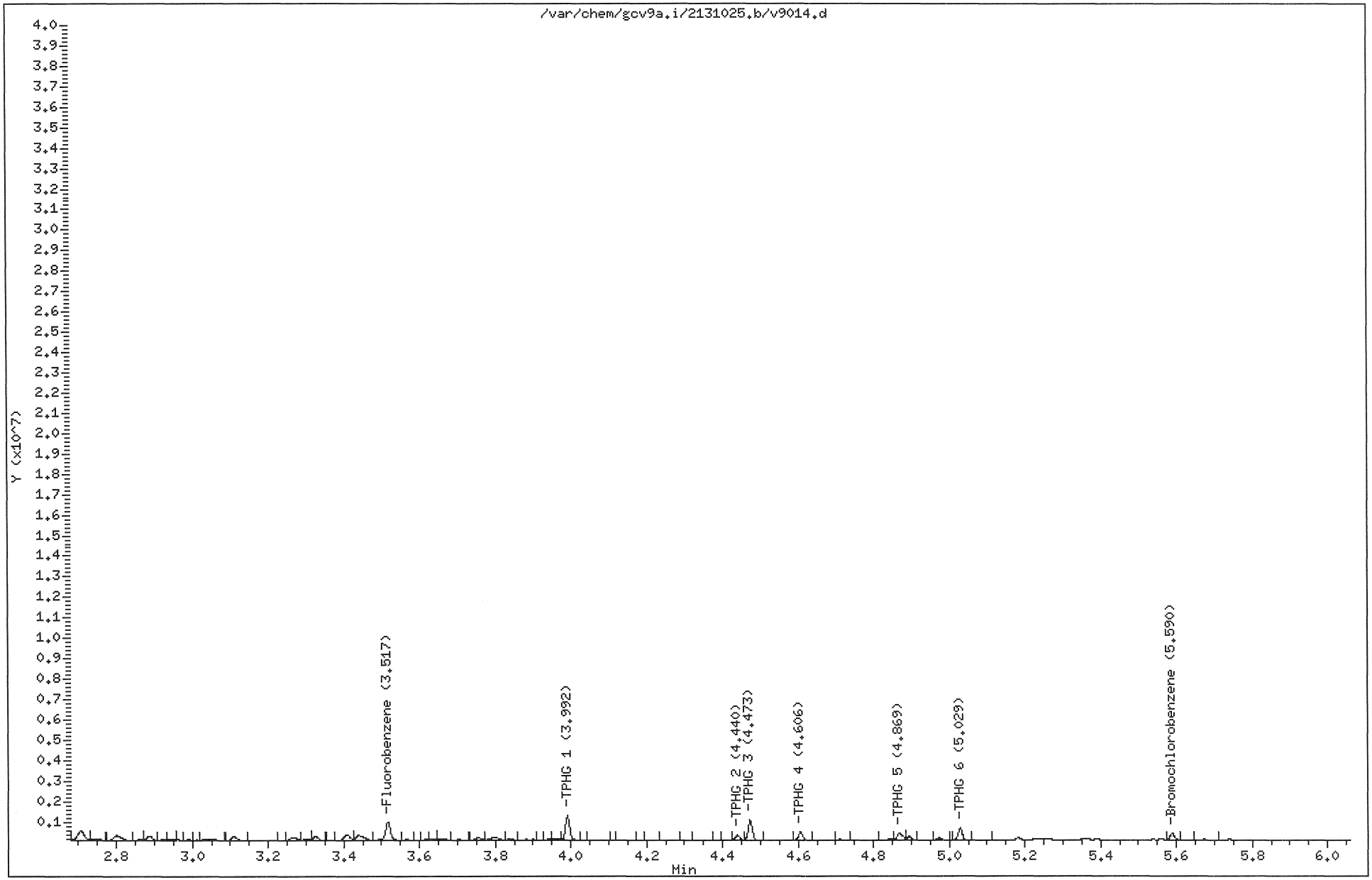
Sample Info: 1400*TPHG6/18/14

Volume Injected (uL): 1.0

Operator: BMR

Column phase: RTX-VMS

Column diameter: 0.25

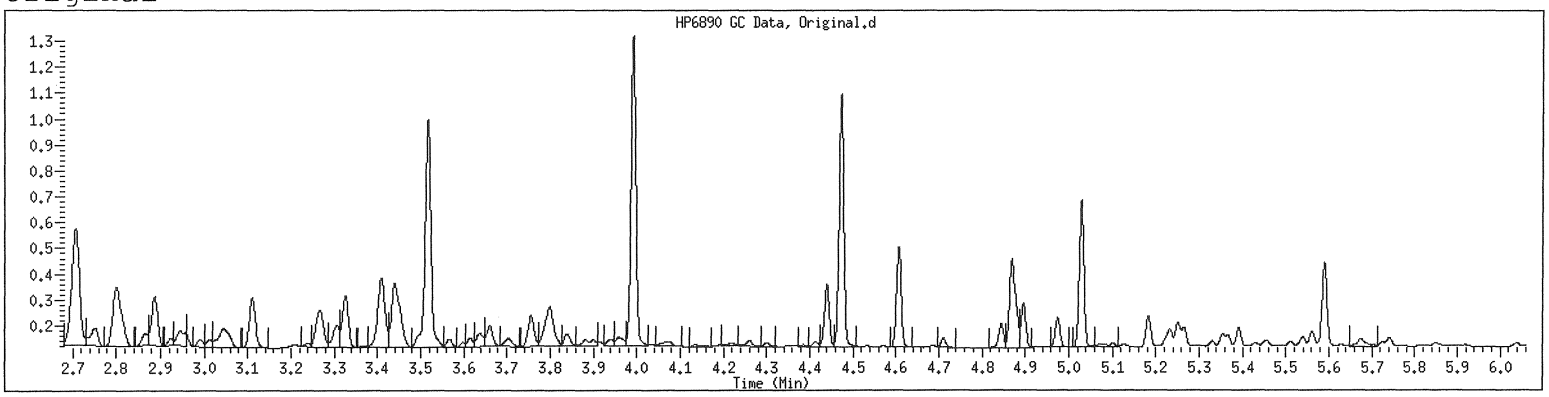



2131017 12 249

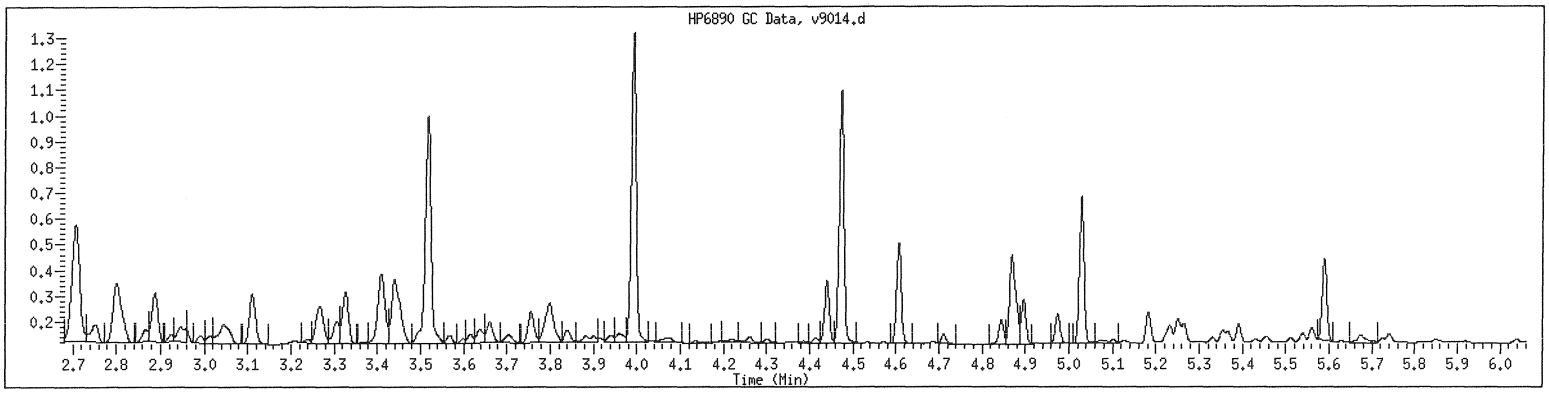
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1400 | SampleType | : CCALIB_2 |
| Injection Date | : 10/25/2013 23:26 | Instrument | : gcv9a.i |
| Operator | : BMR | | |
| Sample Info | : 1400*TPHG6/18/14 | | |
| Misc Info | : 6/18/15 | | |
| Method | : /var/chem/gcv9a.i/2131025.b/GASHBw.m | | |
| Dilution | : 1.0 | | |
| Matrix | : SOIL | | |
| Integrator | : Falcon | Compound Sublist | : all |

Original




Final



1D
ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL
Lab Code: LA024 Case No.:
Matrix: Solid
Sample wt/vol: 5 Units: g
Level: (low/med) LOW
% Moisture: decanted: (Y/N)
GC Column: ID: (mm)
Concentrated Extract Volume: 5000 ( µL )
Soil Aliquot Volume: ( µL )
Injection Volume: 1 ( µL )
GPC Cleanup: (Y/N) N pH:
Prep Batch: Analytical Batch: 518467

Sample ID: MB1247163
Contract:
SAS No.: SDG No.: 213101712
Lab Sample ID: 1247163
Date Collected: Time:
Date Received:
Date Extracted:
Date Analyzed: 10/25/13 Time: 2004
Dilution Factor: 50 Analyst: BMR
Prep Method: 8015C
Analytical Method: SW846 8015C
Sulfur Cleanup: (Y/N) N Instrument ID: GCV9A
Lab File ID: 2131025/v9004

*CONCENTRATION UNITS: ug/kg*

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 8006-61-9 | GRO | 2000 | U | 490 | 2000 | 5000 |

FORM I ORG-1

Data file : /var/chem/gcv9a.i/2131025.b/v9004.d
Report Date: 10/28/2013 16:27

GRO REPORT

Cal Marker file: /var/chem/gcv9a.i/2131025.b/v9001C.d
Batch Marker file: /var/chem/gcv9a.i/2131025.b/v9001.d
Data file : /var/chem/gcv9a.i/2131025.b/v9004.d
Lab Smp Id: 1247163 Client Smp ID: 1247163
Inj Date : 25-OCT-2013 20:04
Operator : BMR Inst ID: gcv9a.i
Smp Info : 1247163
Misc Info : 6/18/15
Method : /var/chem/gcv9a.i/2131025.b/GASHBw.m
Meth Date : 28-Oct-2013 16:28 bmr Quant Type:
Cal Date : 25-JUL-2013 17:48 Cal File: v9007.d
Als bottle: 1 QC Sample: BLANK
Integrator: Compound Sublistxxxx: all.sub
Target Version: 3.5

Cal GRO Marker

| Chromat Events | Values |
|---|---|
| Integrator ON | 2.680 |
| Integrator OFF | 5.100 |

Batch GRO Marker

| Chromat Events | Values |
|---|---|
| Integrator ON | 2.680 |
| Integrator OFF | 5.100 |

Markers

| Low | High |
|---|---|
| 2.714 | 5.07 |

Markers

| Low | High |
|---|---|
| 2.71 | 5.045 |

Area (includes areas 0.01 minutes outside of markers)

| | |
|---|---|
| Total | 966,265 |
| Fluorobenzene | -722,618 |
| Outside GRO Markers | -243,647 |
| Sample Area | 0 |

Dil Factor (DF): 50.00
Weight of sample (Ws): 5.00

GRO = ((Sample Area) / RRF) * DF * 5.00 / Ws

= ((0) / 13,766) * 50.00 * 5.00 / 5.00

= 0.0 ug/Kg

Avg RF = 13,766 %RSD = 5.02 %

GCAL, Inc.

Data file : /var/chem/gcv9a.i/2131025.b/v9004.d
Lab Smp Id: 1247163 Client Smp ID: 1247163
Inj Date : 25-OCT-2013 20:04
Operator : BMR Inst ID: gcv9a.i
Smp Info : 1247163
Misc Info : 6/18/15
Comment :
Method : /var/chem/gcv9a.i/2131025.b/GASHBw.m
Meth Date : 28-Oct-2013 16:27 bmr Quant Type: ESTD
Cal Date : 25-JUL-2013 17:48 Cal File: v9007.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 50.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 50.00000 | Dilution Factor |
| Uf | 5.00000 | ng unit correction factor |
| Vt | 1.00000 | Final Volume |
| Vi | 1.00000 | Volume Injected |
| Ws | 5.00000 | Weight of sample |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/L) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|
| 2 Fluorobenzene | 3.515 | 3.518 | -0.003 | 722618 | 24.3876 | 1220 |
| $ 9 Bromochlorobenzene | 5.613 | 5.612 | 0.001 | 243647 | 25.4194 | 1270 |

GCAL, Inc.

Data file : /var/chem/gcv9a.i/2131025.b/v9004.d
Lab Smp Id: 1247163 Client Smp ID: 1247163
Inj Date : 25-OCT-2013 20:04
Operator : BMR Inst ID: gcv9a.i
Smp Info : 1247163
Misc Info : 6/18/15
Comment :
Method : /var/chem/gcv9a.i/2131025.b/GASHBw.m
Meth Date : 28-Oct-2013 16:27 bmr Quant Type: AREA%
Cal Date : 25-JUL-2013 17:48 Cal File: v9007.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 50.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 50.00000 | Dilution Factor |
| Uf | 5.00000 | ng unit correction factor |
| Vt | 1.00000 | Final Volume |
| Vi | 1.00000 | Volume Injected |
| Ws | 5.00000 | Weight of sample |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| RT | AREA | HEIGHT | HT/AREA | % AREA | COMPOUNDS |
|---|---|---|---|---|---|
| 3.515 | 722618 | 853276 | 1.181 | 74.785 | 2 Fluorobenzene |
| 5.613 | 243647 | 307785 | 1.263 | 25.215 | $ 9 Bromochlorobenzene |
| | 966265 | 1161061 | | 100.000 | |

Total unknown % area = 0.0

Data File: /var/chem/gcv9a.i/2131025.b/v9004.d

Page 1

Date : 25-OCT-2013 20:04

Client ID: 1247163

Instrument: gcv9a.i

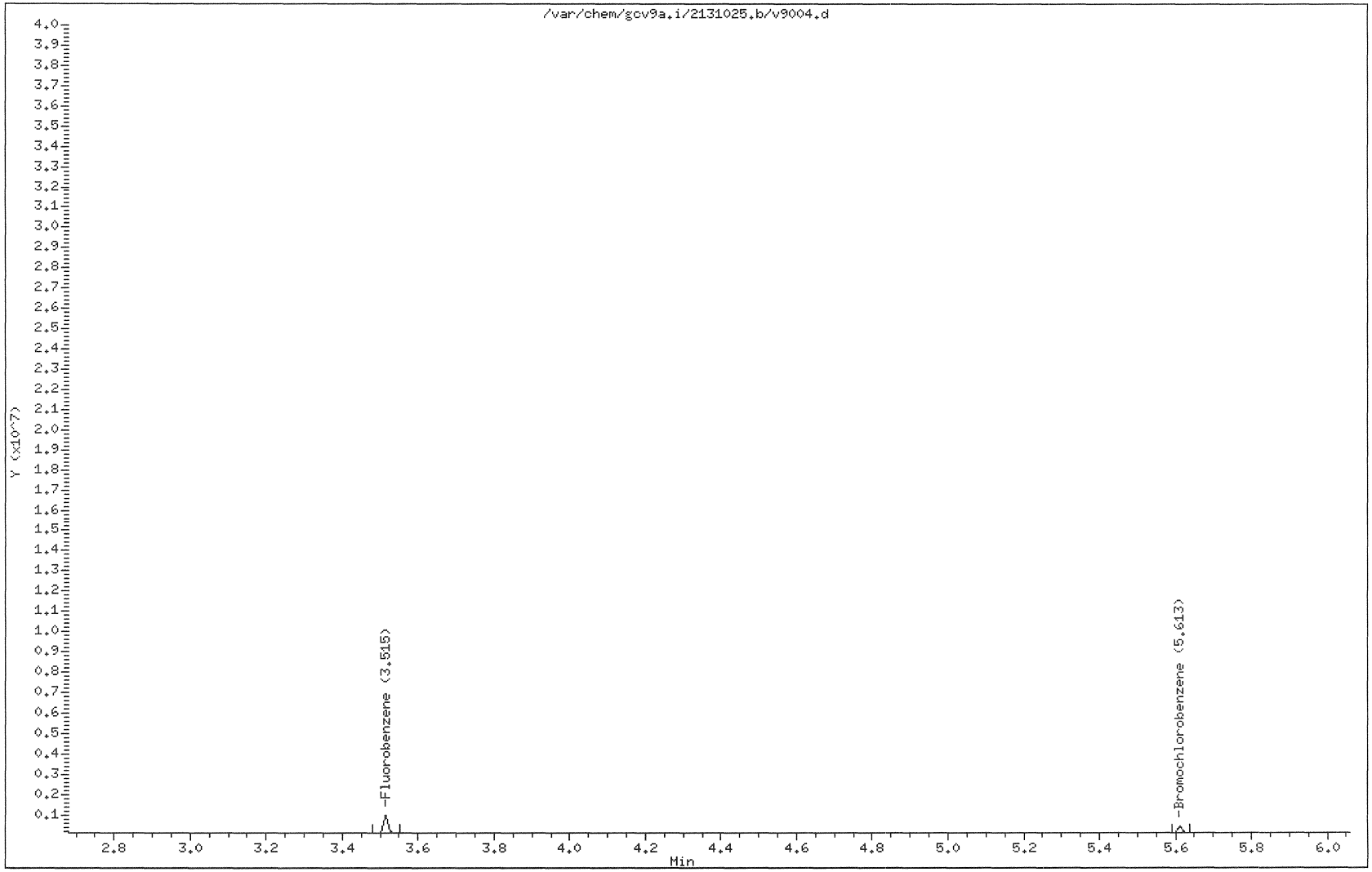
Sample Info: 1247163

Volume Injected (uL): 1.0

Operator: BMR

Column phase: RTX-VMS

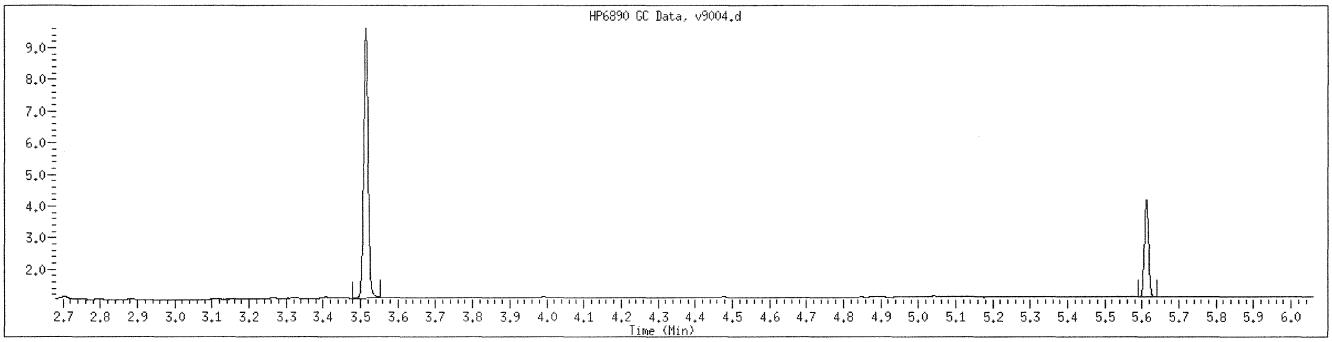
Column diameter: 0.25



Data file : /var/chem/gcv9a.i/2131025.b/v9004.d Page: 1
Report Date: 10/28/2013 16:27

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 1247163 SampleType : BLANK
Injection Date: 10/25/2013 20:04 Instrument : gcv9a.i
Operator : BMR
Sample Info : 1247163
Misc Info : 6/18/15
Method : /var/chem/gcv9a.i/2131025.b/GASHBw.m
Dilution : 50.0
Matrix : SOIL
Integrator : Falcon Compound Sublist: all




NO MANUAL INTEGRATIONS

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Solid

Sample wt/vol: 5 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: ID: (mm)

Concentrated Extract Volume: 5000 ( µL )

Soil Aliquot Volume: ( µL )

Injection Volume: 1 ( µL )

GPC Cleanup: (Y/N) N pH:

Prep Batch: Analytical Batch: 518467

Sample ID: LCS1247164

Contract:

SAS No.: SDG No.: 213101712

Lab Sample ID: 1247164

Date Collected: Time:

Date Received:

Date Extracted:

Date Analyzed: 10/25/13 Time: 1944

Dilution Factor: 50 Analyst: BMR

Prep Method: 8015C

Analytical Method: SW846 8015C

Sulfur Cleanup: (Y/N) N Instrument ID: GCV9A

Lab File ID: 2131025/v9003

*CONCENTRATION UNITS: ug/kg*

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 8006-61-9 | GRO | 26000 | | 490 | 2000 | 5000 |

FORM I ORG-1

Data file : /var/chem/gcv9a.i/2131025.b/v9003.d
Report Date: 10/28/2013 16:27

GRO REPORT

Cal Marker file: /var/chem/gcv9a.i/2131025.b/v9001C.d
Batch Marker file: /var/chem/gcv9a.i/2131025.b/v9001.d
Data file : /var/chem/gcv9a.i/2131025.b/v9003.d
Lab Smp Id: 1247164 Client Smp ID: 1247164
Inj Date : 25-OCT-2013 19:44
Operator : BMR Inst ID: gcv9a.i
Smp Info : 1247164
Misc Info : 6/18/15 LCS6/18/14
Method : /var/chem/gcv9a.i/2131025.b/GASHBw.m
Meth Date : 28-Oct-2013 16:28 bmr Quant Type:
Cal Date : 25-JUL-2013 17:48 Cal File: v9007.d
Als bottle: 1 QC Sample: LCS
Integrator: Compound Sublistxxxx: all.sub
Target Version: 3.5

Cal GRO Marker

| Chromat Events | Values |
|---|---|
| Integrator ON | 2.680 |
| Integrator OFF | 5.100 |

Batch GRO Marker

| Chromat Events | Values |
|---|---|
| Integrator ON | 2.680 |
| Integrator OFF | 5.100 |

Markers

| Low | High |
|---|---|
| 2.714 | 5.07 |

Markers

| Low | High |
|---|---|
| 2.71 | 5.045 |

Area (includes areas 0.01 minutes outside of markers)

| | |
|---|---|
| Total | 8,301,447 |
| Fluorobenzene | -817,899 |
| Outside GRO Markers | -324,429 |
| Sample Area | 7,159,119 |

Dil Factor (DF): 50.00
Weight of sample (Ws): 5.00

GRO = ((Sample Area) / RRF) * DF * 5.00 / Ws

= ((7,159,119) / 13,766) * 50.00 * 5.00 / 5.00

= 26,002.9 ug/Kg

Avg RF = 13,766 %RSD = 5.02 %

GCAL, Inc.

Data file : /var/chem/gcv9a.i/2131025.b/v9003.d
Lab Smp Id: 1247164 Client Smp ID: 1247164
Inj Date : 25-OCT-2013 19:44
Operator : BMR Inst ID: gcv9a.i
Smp Info : 1247164
Misc Info : 6/18/15 LCS6/18/14
Comment :
Method : /var/chem/gcv9a.i/2131025.b/GASHBw.m
Meth Date : 28-Oct-2013 16:27 bmr Quant Type: ESTD
Cal Date : 25-JUL-2013 17:48 Cal File: v9007.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 50.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 50.00000 | Dilution Factor |
| Uf | 5.00000 | ng unit correction factor |
| Vt | 1.00000 | Final Volume |
| Vi | 1.00000 | Volume Injected |
| Ws | 5.00000 | Weight of sample |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ug/L) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|
| S 1 Total TPHG | | | | 2988519 | 539.078 | 27000 |
| 2 Fluorobenzene | 3.516 | 3.518 | -0.002 | 817899 | 27.6032 | 1380 |
| 3 TPHG 1 | 3.992 | 3.994 | -0.002 | 944834 | 531.473 | 26600 |
| 4 TPHG 2 | 4.443 | 4.445 | -0.002 | 188615 | 551.455 | 27600 |
| 5 TPHG 3 | 4.476 | 4.478 | -0.002 | 759935 | 544.278 | 27200 |
| 6 TPHG 4 | 4.611 | 4.613 | -0.002 | 302007 | 539.588 | 27000 |
| 7 TPHG 5 | 4.877 | 4.879 | -0.002 | 357719 | 539.953 | 27000 |
| 8 TPHG 6 | 5.040 | 5.042 | -0.002 | 435409 | 540.523 | 27000 |
| $ 9 Bromochlorobenzene | 5.610 | 5.612 | -0.002 | 259324 | 27.0550 | 1350 |

GCAL, Inc.

Data file : /var/chem/gcv9a.i/2131025.b/v9003.d
Lab Smp Id: 1247164 Client Smp ID: 1247164
Inj Date : 25-OCT-2013 19:44
Operator : BMR Inst ID: gcv9a.i
Smp Info : 1247164
Misc Info : 6/18/15 LCS6/18/14
Comment :
Method : /var/chem/gcv9a.i/2131025.b/GASHBw.m
Meth Date : 28-Oct-2013 16:27 bmr Quant Type: AREA%
Cal Date : 25-JUL-2013 17:48 Cal File: v9007.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 50.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100-M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 50.00000 | Dilution Factor |
| Uf | 5.00000 | ng unit correction factor |
| Vt | 1.00000 | Final Volume |
| Vi | 1.00000 | Volume Injected |
| Ws | 5.00000 | Weight of sample |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| RT | AREA | HEIGHT | HT/AREA | % AREA | | COMPOUNDS |
|---|---|---|---|---|---|---|
| 1.000 | 2988519 | 3712030 | 1.242 | 36.002 | S | 1 Total TPHG |
| 3.992 | 944834 | 1191117 | 1.261 | | | 3 TPHG 1 |
| 4.443 | 188615 | 243142 | 1.289 | | | 4 TPHG 2 |
| 4.476 | 759935 | 965382 | 1.270 | | | 5 TPHG 3 |
| 4.611 | 302007 | 393323 | 1.302 | | | 6 TPHG 4 |
| 4.877 | 357719 | 345908 | 0.967 | | | 7 TPHG 5 |
| 5.040 | 435409 | 573158 | 1.316 | | | 8 TPHG 6 |
| 2.708 | 628131 | 496353 | 0.790 | 7.567 | | |
| 2.751 | 98489 | 74984 | 0.761 | 1.186 | | |
| 2.800 | 346183 | 249153 | 0.720 | 4.170 | | |
| 2.865 | 47759 | 53845 | 1.127 | 0.575 | | |
| 2.886 | 211169 | 211436 | 1.001 | 2.544 | | |
| 2.923 | 31306 | 32765 | 1.047 | 0.377 | | |

| RT | AREA | HEIGHT | HT/AREA | % AREA | COMPOUNDS |
|---|---|---|---|---|---|
| 2.945 | 105662 | 63351 | 0.600 | 1.273 | |
| 2.990 | 29340 | 31026 | 1.057 | 0.353 | |
| 3.012 | 26692 | 29090 | 1.090 | 0.322 | |
| 3.045 | 138653 | 75178 | 0.542 | 1.670 | |
| 3.110 | 200872 | 203486 | 1.013 | 2.420 | |
| 3.239 | 11254 | 14553 | 1.293 | 0.136 | |
| 3.267 | 189602 | 153514 | 0.810 | 2.284 | |
| 3.305 | 91188 | 89820 | 0.985 | 1.098 | |
| 3.326 | 209121 | 211331 | 1.011 | 2.519 | |
| 3.409 | 326114 | 283937 | 0.871 | 3.928 | |
| 3.439 | 354423 | 248966 | 0.702 | 4.269 | |
| 3.516 | 817899 | 881225 | 1.077 | 9.852 | 2 Fluorobenzene |
| 3.566 | 25323 | 30604 | 1.209 | 0.305 | |
| 3.598 | 9518 | 13631 | 1.432 | 0.115 | |
| 3.615 | 25390 | 31643 | 1.246 | 0.306 | |
| 3.636 | 51055 | 50584 | 0.991 | 0.615 | |
| 3.660 | 83226 | 82504 | 0.991 | 1.003 | |
| 3.703 | 36060 | 30585 | 0.848 | 0.434 | |
| 3.755 | 123498 | 124057 | 1.005 | 1.488 | |
| 3.799 | 222166 | 156771 | 0.706 | 2.676 | |
| 3.839 | 44826 | 49356 | 1.101 | 0.540 | |
| 3.883 | 42955 | 24468 | 0.570 | 0.517 | |
| 3.941 | 28058 | 27775 | 0.990 | 0.338 | |
| 4.070 | 27959 | 17533 | 0.627 | 0.337 | |
| 4.135 | 8603 | 8503 | 0.988 | 0.104 | |
| 4.221 | 16518 | 13003 | 0.787 | 0.199 | |
| 4.262 | 25846 | 23861 | 0.923 | 0.311 | |
| 4.302 | 4904 | 15422 | 3.145 | 0.059 | |
| 4.388 | 3854 | 5976 | 1.551 | 0.046 | |
| 4.418 | 16592 | 19031 | 1.147 | 0.200 | |
| 4.717 | 30918 | 36267 | 1.173 | 0.372 | |
| 4.852 | 78124 | 95133 | 1.218 | 0.941 | |
| 4.905 | 130139 | 169127 | 1.300 | 1.568 | |
| 4.984 | 89108 | 112101 | 1.258 | 1.073 | |
| 5.083 | 28873 | 10367 | 0.359 | 0.348 | |
| 5.610 | 259324 | 321911 | 1.241 | 3.124 | $ 9 Bromochlorobenzene |
| 5.696 | 36232 | 27990 | 0.773 | 0.436 | |
| | 8301447 | 8614246 | | 100.000 | |

Total unknown % area = 51.0

Data File: /var/chem/gcv9a.i/2131025.b/v9003.d

Date : 25-OCT-2013 19:44

Client ID: 1247164

Sample Info: 1247164

Volume Injected (uL): 1.0

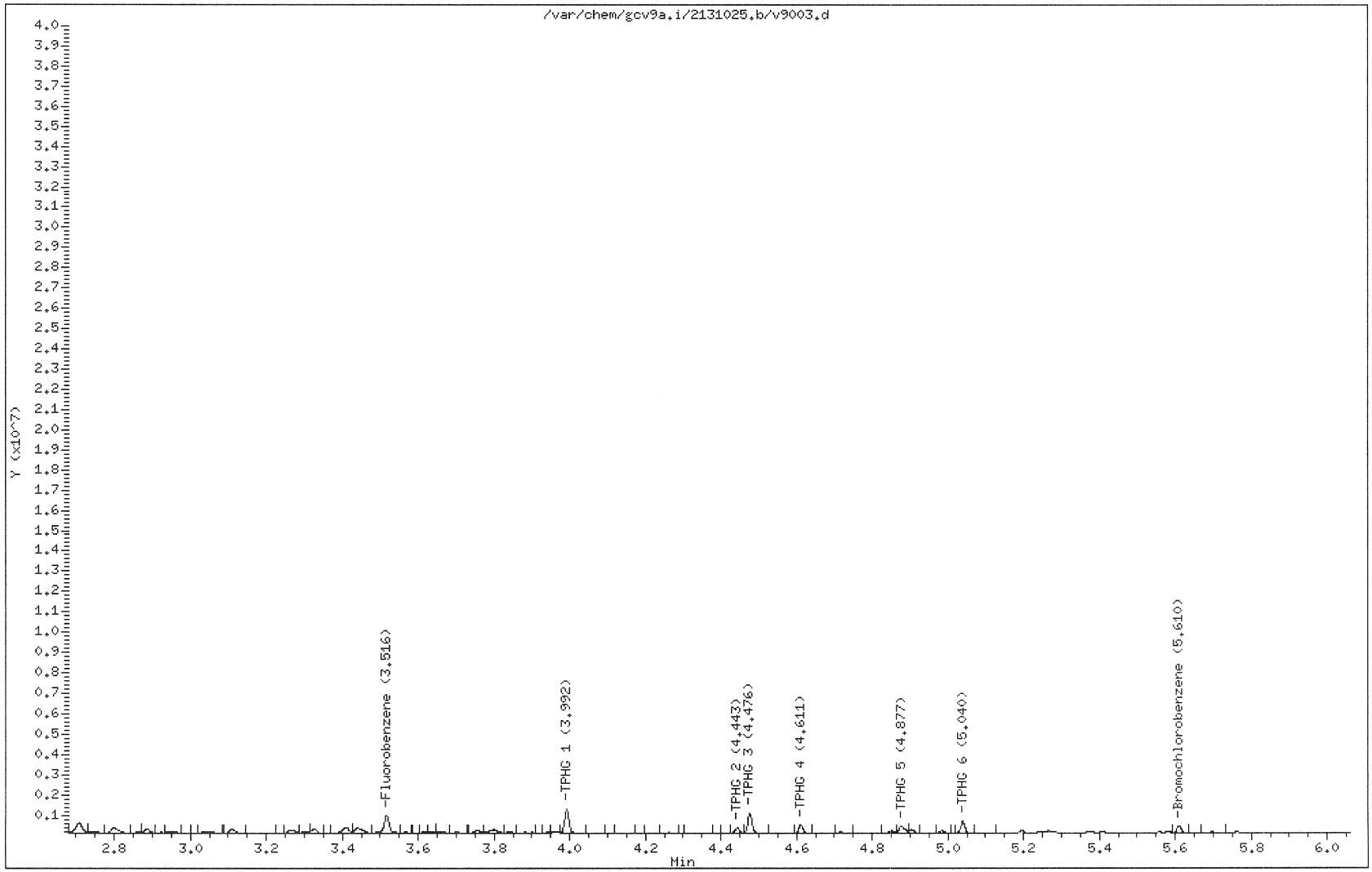
Column phase: RTX-VMS

Instrument: gcv9a.i

Operator: BMR

Column diameter: 0.25



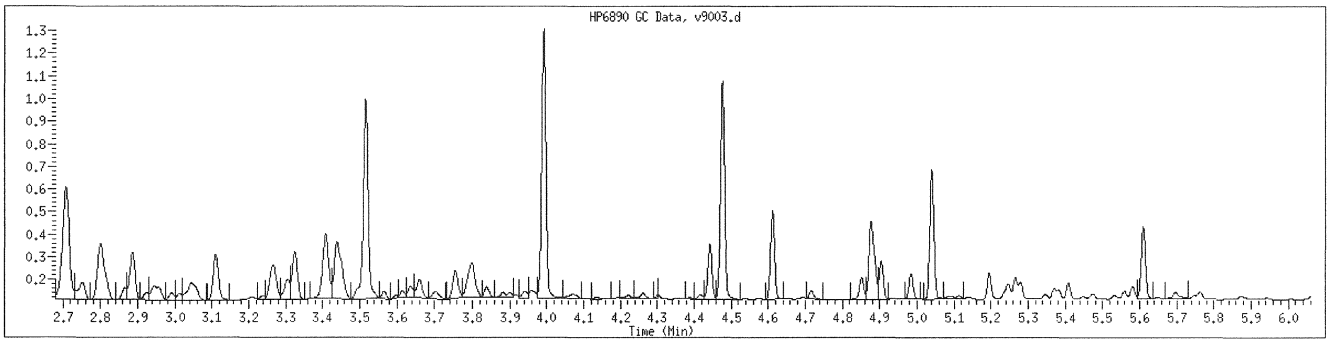



21310712 252

Data file : /var/chem/gcv9a.i/2131025.b/v9003.d Page: 1
Report Date: 10/28/2013 16:27

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 1247164 SampleType : LCS
Injection Date: 10/25/2013 19:44 Instrument : gcv9a.i
Operator : BMR
Sample Info : 1247164
Misc Info : 6/18/15 LCS6/18/14
Method : /var/chem/gcv9a.i/2131025.b/GASHBw.m
Dilution : 50.0
Matrix : SOIL
Integrator : Falcon Compound Sublist: all




NO MANUAL INTEGRATIONS

Sample Weights - SDG/Fraction: GC Volatiles 213101712

| Dept | Container ID | Vial | Initial Wgt | Final Wgt | Sample Wgt | Analyst | Date | Preservative | Comments |
|---|---|---|---|---|---|---|---|---|---|
| GCV | 21310171201-3 | 3 | 0 | 5.15 | **5.15** | JAR | 10/25/13 17:50 | METHANOL | JAR MEOH 125253 |
| GCV | 21310171203-3 | 3 | 0 | 5.02 | **5.02** | JAR | 10/25/13 17:51 | METHANOL | JAR MEOH 125253 |

LABORATORY CHRONICLE: GCV DEPARTMENT

Date: 09/19/2013
Instrument: gcv9a.i
Method File: /var/chem/gcv9a.i/2130725p.b/GASHBw.m
Batch: /var/chem/gcv9a.i/2130725p.b
Column-Detector: RTX-VMS

| Sample ID | ClientName | DataFile | Wgt/Vol | Injection Time | Dil | Anal | ALS | Comments |
|---|---|---|---|---|---|---|---|---|
| GROMARKER | | v9001C.d | 5.00 g | 25-JUL-2013 12:14 | 50.000 | JAR | 1 | all |
| TPHG100/6/18/1 | | v9002.d | 0.00 ml | 25-JUL-2013 16:04 | 1.000 | BMR | 1 | all |
| TPHG500/6/18/1 | | v9003.d | 0.00 ml | 25-JUL-2013 16:24 | 1.000 | BMR | 1 | all |
| TPHG800/6/18/1 | | v9004.d | 0.00 ml | 25-JUL-2013 16:44 | 1.000 | BMR | 1 | all |
| TPHG1000/6/18/ | | v9005.d | 0.00 ml | 25-JUL-2013 17:08 | 1.000 | BMR | 1 | all |
| TPHG3000/6/18/ | | v9006.d | 0.00 ml | 25-JUL-2013 17:28 | 1.000 | BMR | 1 | all |
| TPHG500/6/18/1 | | v9007.d | 0.00 ml | 25-JUL-2013 17:48 | 1.000 | BMR | 1 | all |
| ICV6/18/2 | | v9008.d | 0.00 ml | 25-JUL-2013 18:26 | 1.000 | BMR | 1 | all |

LABORATORY CHRONICLE: GCV DEPARTMENT

Date: 10/28/2013
Instrument: gcv9a.i
Method File: /var/chem/gcv9a.i/2130725p.b/GASHBw.m
Batch: /var/chem/gcv9a.i/2131025.b
Column-Detector: RTX-VMS

| Sample ID | ClientName | DataFile | Wgt/Vol | Injection Time | Dil | Anal | ALS | Comments |
|---|---|---|---|---|---|---|---|---|
| GROMARKER | | v9001C.d | 5.00 g | 25-JUL-2013 12:14 | 50.000 | JAR | 1 | all |
| GROMARKER | | v9001.d | 5.00 g | 25-OCT-2013 19:04 | 50.000 | BMR | 1 | all |
| 1400 | | v9002.d | 5.00 g | 25-OCT-2013 19:24 | 1.000 | BMR | 1 | all |
| LCS6/18/14 | | v9003.d | 5.00 g | 25-OCT-2013 19:44 | 50.000 | BMR | 1 | all |
| BLK | | v9004.d | 5.00 g | 25-OCT-2013 20:04 | 50.000 | BMR | 1 | all |
| 21310170620 | | v9005.d | 5.00 g | 25-OCT-2013 20:23 | 50.000 | BMR | 1 | all |
| 1247165 | | v9006.d | 5.00 g | 25-OCT-2013 20:44 | 50.000 | BMR | 1 | all |
| 1247166 | | v9007.d | 5.00 g | 25-OCT-2013 21:04 | 50.000 | BMR | 1 | all |
| 21310170621 | | v9008.d | 5.00 g | 25-OCT-2013 21:24 | 50.000 | BMR | 1 | all |
| 21310170622 | | v9009.d | 5.00 g | 25-OCT-2013 21:46 | 50.000 | BMR | 1 | all |
| 21310170623 | | v9010.d | 5.00 g | 25-OCT-2013 22:06 | 50.000 | BMR | 1 | all |
| 21310170624 | | v9011.d | 5.00 g | 25-OCT-2013 22:26 | 50.000 | BMR | 1 | all |
| 21310171201 | | v9012.d | 5.00 g | 25-OCT-2013 22:46 | 50.000 | BMR | 1 | all |
| 21310171203 | | v9013.d | 5.00 g | 25-OCT-2013 23:06 | 50.000 | BMR | 1 | all |
| 1400 | | v9014.d | 5.00 g | 25-OCT-2013 23:26 | 1.000 | BMR | 1 | all |
| 21310233801 | | v9015.d | 5.00 g | 26-OCT-2013 00:08 | 500.000 | BMR | 1 | all |
| 21310233802 | | v9016.d | 5.00 g | 26-OCT-2013 00:27 | 50.000 | BMR | 1 | all |
| 21310233803 | | v9017.d | 5.00 g | 26-OCT-2013 00:48 | 50.000 | BMR | 1 | all |
| 21310233804 | | v9018.d | 5.00 g | 26-OCT-2013 01:08 | 50.000 | BMR | 1 | all |
| 21310233807 | | v9019.d | 5.00 g | 26-OCT-2013 01:28 | 500.000 | BMR | 1 | all |
| 21310233808 | | v9020.d | 5.00 g | 26-OCT-2013 01:48 | 50.000 | BMR | 1 | all |
| 21310233809 | | v9021.d | 5.00 g | 26-OCT-2013 02:08 | 50.000 | BMR | 1 | all |
| 1400 | | v9022.d | 5.00 g | 26-OCT-2013 02:28 | 1.000 | BMR | 1 | all |

2D
SOIL SEMIVOLATILE SURROGATE RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Method: SW-846 8270D Level: ( low/med ) LOW

| | EPA SAMPLE NO. | SMC1 | # | SMC2 | # | SMC3 | # | SMC4 | # | SMC5 | # | SMC6 | # | TOT OUT |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | RS-COMP1-101613 | 92 | | 100 | | 75 | | 90 | | 86 | | 93 | | 0 |
| 2. | RS-COMP1-101613DL | 0 | D | 0 | D | 0 | D | 0 | D | 0 | D | 0 | D | 0 |
| 3. | RS-COMP2-101613 | 89 | | 91 | | 59 | | 84 | | 82 | | 100 | | 0 |
| 4. | RS-COMP2-101613DL | 0 | D | 0 | D | 0 | D | 0 | D | 0 | D | 0 | D | 0 |
| 5. | MB1245518 | 97 | | 100 | | 119 | | 99 | | 98 | | 98 | | 0 |
| 6. | LCS1245519 | 88 | | 92 | | 106 | | 88 | | 85 | | 93 | | 0 |
| 7. | LCSD1245520 | 90 | | 100 | | 103 | | 90 | | 89 | | 93 | | 0 |
| 8. | RS-COMP1-101613MS | 89 | | 90 | | 67 | | 92 | | 92 | | 102 | | 0 |
| 9. | RS-COMP1-101613MSD | 88 | | 94 | | 63 | | 88 | | 85 | | 98 | | 0 |
| 10. | RS-COMP1-101613MSDL | 0 | D | 0 | D | 0 | D | 0 | D | 0 | D | 0 | D | 0 |
| 11. | RS-COMP1-101613MSDDL | 0 | D | 0 | D | 0 | D | 0 | D | 0 | D | 0 | D | 0 |

| | | CONTROL LIMITS | |
|---|---|---|---|
| SMC 1 | Nitrobenzene-d5 | 35 | 100 |
| SMC 2 | 2-Fluorobiphenyl | 45 | 105 |
| SMC 3 | Terphenyl-d14 | 30 | 125 |
| SMC 4 | Phenol-d5 | 40 | 100 |
| SMC 5 | 2-Fluorophenol | 51 | 119 |
| SMC 6 | 2,4,6-Tribromophenol | 35 | 125 |

# Column to be used to flag recovery limits

* Value outside of contract required limits

D Surrogate diluted out

3D
SOIL SEMIVOLATILE MS/MSD RECOVERY

Lab Name: GCAL Sample ID RS-COMP1-101613

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Contract: Analytical Method: SW-846 8270D

Prep Batch: 518149 Analytical Batch.: 518302

***Spike HSN : 1245521***

| COMPOUND | UNITS | SPIKE ADDED | SAMPLE CONCENTRATION | MS CONCENTRATION | MS % REC | MS % REC FLAG | QC. LIMITS |
|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ug/kg | 2050 | 0 | 1720 | 84 | | 45 - 110 |
| 1,2-Dichlorobenzene | ug/kg | 2050 | 0 | 1680 | 82 | | 45 - 100 |
| 1,3-Dichlorobenzene | ug/kg | 2050 | 0 | 1630 | 80 | | 40 - 100 |
| 1,4-Dichlorobenzene | ug/kg | 2050 | 0 | 1680 | 82 | | 35 - 105 |
| 2,4,5-Trichlorophenol | ug/kg | 2050 | 0 | 1900 | 93 | | 50 - 110 |
| 2,4,6-Trichlorophenol | ug/kg | 2050 | 0 | 1850 | 91 | | 45 - 110 |
| 2,4-Dichlorophenol | ug/kg | 2050 | 0 | 1880 | 92 | | 45 - 110 |
| 2,4-Dimethylphenol | ug/kg | 2050 | 59.9 | 1960 | 93 | | 30 - 105 |
| 2,4-Dinitrophenol | ug/kg | 2050 | 0 | 765 | 37 | | 15 - 130 |
| 2,4-Dinitrotoluene | ug/kg | 2050 | 0 | 1810 | 89 | | 50 - 115 |
| 2,6-Dinitrotoluene | ug/kg | 2050 | 0 | 1860 | 91 | | 50 - 110 |
| 2-Chloronaphthalene | ug/kg | 2050 | 0 | 1700 | 83 | | 45 - 105 |
| 2-Chlorophenol | ug/kg | 2050 | 0 | 1830 | 89 | | 45 - 105 |
| 2-Methyl-4,6-dinitrophenol | ug/kg | 2050 | 0 | 892 | 44 | | 30 - 135 |
| 2-Methylnaphthalene | ug/kg | 2050 | 61.7 | 1760 | 83 | | 45 - 105 |
| 2-Nitroaniline | ug/kg | 2050 | 0 | 1890 | 92 | | 45 - 120 |
| 2-Nitrophenol | ug/kg | 2050 | 0 | 1790 | 88 | | 40 - 110 |
| 3,3'-Dichlorobenzidine | ug/kg | 2050 | 0 | 0 | 0 | * | 24 - 127 |
| 3-Nitroaniline | ug/kg | 2050 | 0 | 744 | 36 | | 25 - 110 |
| 4-Bromophenyl-phenylether | ug/kg | 2050 | 0 | 1750 | 86 | | 45 - 115 |
| 4-Chloro-3-methylphenol | ug/kg | 2050 | 0 | 1920 | 94 | | 45 - 115 |
| 4-Chloroaniline | ug/kg | 2050 | 0 | 783 | 38 | | 20 - 120 |
| 4-Chlorophenyl-phenylether | ug/kg | 2050 | 0 | 1800 | 88 | | 45 - 110 |
| 4-Nitroaniline | ug/kg | 2050 | 0 | 879 | 43 | | 35 - 115 |
| 4-Nitrophenol | ug/kg | 2050 | 0 | 2010 | 98 | | 15 - 140 |
| Acenaphthene | ug/kg | 2050 | 617 | 2110 | 73 | | 45 - 110 |
| Acenaphthylene | ug/kg | 2050 | 0 | 1890 | 92 | | 45 - 105 |
| Anthracene | ug/kg | 2050 | 903 | 2720 | 89 | | 55 - 105 |
| Benzo(a)anthracene | ug/kg | 2050 | 3600 | 5290 | 83 | | 50 - 110 |
| Bis(2-Chloroethoxy)methane | ug/kg | 2050 | 0 | 1850 | 91 | | 45 - 110 |
| Bis(2-Chloroethyl)ether | ug/kg | 2050 | 0 | 2070 | 101 | | 40 - 105 |
| Butylbenzylphthalate | ug/kg | 2050 | 0 | 1500 | 73 | | 50 - 125 |
| Carbazole | ug/kg | 2050 | 794 | 3090 | 112 | | 45 - 115 |
| Chrysene | ug/kg | 2050 | 3890 | 5750 | 91 | | 55 - 110 |
| Di-n-butylphthalate | ug/kg | 2050 | 0 | 2080 | 102 | | 55 - 110 |
| Di-n-octylphthalate | ug/kg | 2050 | 0 | 2240 | 110 | | 40 - 130 |

RPD : 7 out of 58 outside limits

Spike Recovery: 12 out of 116 outside limits

3D
SOIL SEMIVOLATILE MS/MSD RECOVERY

Lab Name: GCAL Sample ID RS-COMP1-101613

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Contract: Analytical Method: SW-846 8270D

Prep Batch: 518149 Analytical Batch.: 518302

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Dibenzofuran | ug/kg | 2050 | 316 | 2010 | 83 | | 50 - 105 |
| Diethylphthalate | ug/kg | 2050 | 0 | 1910 | 94 | | 50 - 115 |
| Dimethyl-phthalate | ug/kg | 2050 | 0 | 1840 | 90 | | 50 - 110 |
| Fluorene | ug/kg | 2050 | 617 | 2230 | 79 | | 50 - 110 |
| Hexachlorobenzene | ug/kg | 2050 | 0 | 1610 | 79 | | 45 - 120 |
| Hexachlorobutadiene | ug/kg | 2050 | 0 | 1650 | 81 | | 40 - 115 |
| Hexachlorocyclopentadiene | ug/kg | 2050 | 0 | 697 | 34 | * | 48 - 116 |
| Hexachloroethane | ug/kg | 2050 | 0 | 1520 | 74 | | 35 - 110 |
| Isophorone | ug/kg | 2050 | 0 | 1860 | 91 | | 45 - 110 |
| N-Nitroso-di-n-propylamine | ug/kg | 2050 | 0 | 1880 | 92 | | 40 - 115 |
| N-Nitrosodimethylamine | ug/kg | 2050 | 0 | 1650 | 81 | | 20 - 115 |
| N-Nitrosodiphenylamine | ug/kg | 2050 | 0 | 1790 | 88 | | 50 - 115 |
| Naphthalene | ug/kg | 2050 | 74.6 | 1730 | 81 | | 40 - 105 |
| Nitrobenzene | ug/kg | 2050 | 0 | 1700 | 83 | | 40 - 115 |
| Pentachlorophenol | ug/kg | 2050 | 0 | 2140 | 105 | | 25 - 120 |
| Phenanthrene | ug/kg | 2050 | 5040 | 7010 | 97 | | 50 - 110 |
| Phenol | ug/kg | 2050 | 0 | 1760 | 86 | | 40 - 100 |
| Pyrene | ug/kg | 2050 | 4840 | 5420 | 28 | * | 45 - 125 |
| Pyridine | ug/kg | 2050 | 0 | 1130 | 55 | | 11 - 92 |
| bis(2-ethylhexyl)phthalate | ug/kg | 2050 | 768 | 6020 | 257 | * | 45 - 125 |
| m,p-Cresol | ug/kg | 2050 | 0 | 2210 | 108 | * | 40 - 105 |
| o-Cresol | ug/kg | 2050 | 0 | 1510 | 74 | | 40 - 105 |

RPD : 7 out of 58 outside limits

Spike Recovery: 12 out of 116 outside limits

FORM III SV-2

3D
SOIL SEMIVOLATILE MS/MSD RECOVERY

Lab Name: GCAL Sample ID RS-COMP1-101613

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Contract: Analytical Method: SW-846 8270D

Prep Batch: 518149 Analytical Batch.: 518302

***Spike Dupe HSN : 1245522***

| COMPOUND | UNITS | SPIKE ADDED | MSD CONC. | MSD % REC | REC FLAG | % RPD | RPD FLAG | QC. LIMITS REC | QC. LIMITS RPD |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ug/kg | 2050 | 1670 | 82 | | 3 | | 45 - 110 | 0 - 30 |
| 1,2-Dichlorobenzene | ug/kg | 2050 | 1570 | 77 | | 7 | | 45 - 100 | 0 - 30 |
| 1,3-Dichlorobenzene | ug/kg | 2050 | 1540 | 76 | | 5 | | 40 - 100 | 0 - 30 |
| 1,4-Dichlorobenzene | ug/kg | 2050 | 1580 | 77 | | 6 | | 35 - 105 | 0 - 30 |
| 2,4,5-Trichlorophenol | ug/kg | 2050 | 1910 | 94 | | .6 | | 50 - 110 | 0 - 30 |
| 2,4,6-Trichlorophenol | ug/kg | 2050 | 1950 | 95 | | 5 | | 45 - 110 | 0 - 30 |
| 2,4-Dichlorophenol | ug/kg | 2050 | 1780 | 87 | | 5 | | 45 - 110 | 0 - 30 |
| 2,4-Dimethylphenol | ug/kg | 2050 | 1880 | 89 | | 4 | | 30 - 105 | 0 - 30 |
| 2,4-Dinitrophenol | ug/kg | 2050 | 583 | 29 | | 27 | | 15 - 130 | 0 - 30 |
| 2,4-Dinitrotoluene | ug/kg | 2050 | 1840 | 90 | | 1 | | 50 - 115 | 0 - 30 |
| 2,6-Dinitrotoluene | ug/kg | 2050 | 1900 | 93 | | 2 | | 50 - 110 | 0 - 30 |
| 2-Chloronaphthalene | ug/kg | 2050 | 1750 | 86 | | 3 | | 45 - 105 | 0 - 30 |
| 2-Chlorophenol | ug/kg | 2050 | 1680 | 82 | | 8 | | 45 - 105 | 0 - 30 |
| 2-Methyl-4,6-dinitrophenol | ug/kg | 2050 | 598 | 29 | * | 39 | * | 30 - 135 | 0 - 30 |
| 2-Methylnaphthalene | ug/kg | 2050 | 1700 | 80 | | 4 | | 45 - 105 | 0 - 30 |
| 2-Nitroaniline | ug/kg | 2050 | 2030 | 100 | | 8 | | 45 - 120 | 0 - 30 |
| 2-Nitrophenol | ug/kg | 2050 | 1700 | 83 | | 5 | | 40 - 110 | 0 - 30 |
| 3,3'-Dichlorobenzidine | ug/kg | 2050 | 0 | 0 | * | 0 | | 24 - 127 | 0 - 30 |
| 3-Nitroaniline | ug/kg | 2050 | 1270 | 62 | | 53 | * | 25 - 110 | 0 - 30 |
| 4-Bromophenyl-phenylether | ug/kg | 2050 | 1810 | 89 | | 3 | | 45 - 115 | 0 - 30 |
| 4-Chloro-3-methylphenol | ug/kg | 2050 | 1810 | 89 | | 6 | | 45 - 115 | 0 - 30 |
| 4-Chloroaniline | ug/kg | 2050 | 1170 | 57 | | 39 | * | 20 - 120 | 0 - 30 |
| 4-Chlorophenyl-phenylether | ug/kg | 2050 | 1890 | 92 | | 5 | | 45 - 110 | 0 - 30 |
| 4-Nitroaniline | ug/kg | 2050 | 1500 | 73 | | 52 | * | 35 - 115 | 0 - 30 |
| 4-Nitrophenol | ug/kg | 2050 | 2070 | 101 | | 3 | | 15 - 140 | 0 - 30 |
| Acenaphthene | ug/kg | 2050 | 2020 | 69 | | 4 | | 45 - 110 | 0 - 30 |
| Acenaphthylene | ug/kg | 2050 | 1950 | 95 | | 3 | | 45 - 105 | 0 - 30 |
| Anthracene | ug/kg | 2050 | 2640 | 85 | | 3 | | 55 - 105 | 0 - 30 |
| Benzo(a)anthracene | ug/kg | 2050 | 4070 | 23 | * | 26 | | 50 - 110 | 0 - 30 |
| Bis(2-Chloroethoxy)methane | ug/kg | 2050 | 1810 | 89 | | 2 | | 45 - 110 | 0 - 30 |
| Bis(2-Chloroethyl)ether | ug/kg | 2050 | 2060 | 101 | | .6 | | 40 - 105 | 0 - 30 |
| Butylbenzylphthalate | ug/kg | 2050 | 1380 | 68 | | 8 | | 50 - 125 | 0 - 30 |
| Carbazole | ug/kg | 2050 | 2640 | 90 | | 16 | | 45 - 115 | 0 - 30 |
| Chrysene | ug/kg | 2050 | 4290 | 20 | * | 29 | | 55 - 110 | 0 - 30 |
| Di-n-butylphthalate | ug/kg | 2050 | 2000 | 98 | | 4 | | 55 - 110 | 0 - 30 |
| Di-n-octylphthalate | ug/kg | 2050 | 2210 | 108 | | 2 | | 40 - 130 | 0 - 30 |

RPD : 7 out of 58 outside limits

Spike Recovery: 12 out of 116 outside limits

3D
SOIL SEMIVOLATILE MS/MSD RECOVERY

Lab Name: GCAL Sample ID RS-COMP1-101613

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Contract: Analytical Method: SW-846 8270D

Prep Batch: 518149 Analytical Batch.: 518302

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Dibenzofuran | ug/kg | 2050 | 1900 | 78 | | 6 | | 50 - 105 | 0 - 30 |
| Diethylphthalate | ug/kg | 2050 | 1960 | 96 | | 3 | | 50 - 115 | 0 - 30 |
| Dimethyl-phthalate | ug/kg | 2050 | 1880 | 92 | | 2 | | 50 - 110 | 0 - 30 |
| Fluorene | ug/kg | 2050 | 2140 | 75 | | 4 | | 50 - 110 | 0 - 30 |
| Hexachlorobenzene | ug/kg | 2050 | 1690 | 83 | | 5 | | 45 - 120 | 0 - 30 |
| Hexachlorobutadiene | ug/kg | 2050 | 1610 | 79 | | 3 | | 40 - 115 | 0 - 30 |
| Hexachlorocyclopentadiene | ug/kg | 2050 | 601 | 29 | * | 15 | | 48 - 116 | 0 - 30 |
| Hexachloroethane | ug/kg | 2050 | 1500 | 73 | | 2 | | 35 - 110 | 0 - 30 |
| Isophorone | ug/kg | 2050 | 1810 | 89 | | 3 | | 45 - 110 | 0 - 30 |
| N-Nitroso-di-n-propylamine | ug/kg | 2050 | 1720 | 84 | | 9 | | 40 - 115 | 0 - 30 |
| N-Nitrosodimethylamine | ug/kg | 2050 | 2130 | 104 | | 25 | | 20 - 115 | 0 - 30 |
| N-Nitrosodiphenylamine | ug/kg | 2050 | 1940 | 95 | | 8 | | 50 - 115 | 0 - 30 |
| Naphthalene | ug/kg | 2050 | 1700 | 80 | | 1 | | 40 - 105 | 0 - 30 |
| Nitrobenzene | ug/kg | 2050 | 1690 | 83 | | .7 | | 40 - 115 | 0 - 30 |
| Pentachlorophenol | ug/kg | 2050 | 2110 | 103 | | 2 | | 25 - 120 | 0 - 30 |
| Phenanthrene | ug/kg | 2050 | 4880 | -8 | * | 36 | * | 50 - 110 | 0 - 30 |
| Phenol | ug/kg | 2050 | 1610 | 79 | | 9 | | 40 - 100 | 0 - 30 |
| Pyrene | ug/kg | 2050 | 3730 | -55 | * | 37 | * | 45 - 125 | 0 - 30 |
| Pyridine | ug/kg | 2050 | 1200 | 59 | | 7 | | 11 - 92 | 0 - 30 |
| bis(2-ethylhexyl)phthalate | ug/kg | 2050 | 2430 | 81 | | 85 | * | 45 - 125 | 0 - 30 |
| m,p-Cresol | ug/kg | 2050 | 2100 | 103 | | 5 | | 40 - 105 | 0 - 30 |
| o-Cresol | ug/kg | 2050 | 1430 | 70 | | 5 | | 40 - 105 | 0 - 30 |

RPD : 7 out of 58 outside limits

Spike Recovery: 12 out of 116 outside limits

3D
SOIL SEMIVOLATILE MS/MSD RECOVERY

Lab Name: GCAL Sample ID RS-COMP1-101613DL

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Contract: Analytical Method: SW-846 8270D

Prep Batch: 518149 Analytical Batch.: 518409

***Spike HSN : 1245521***

| COMPOUND | UNITS | SPIKE ADDED | SAMPLE CONCENTRATION | MS CONCENTRATION | MS % REC | MS % REC FLAG | QC. LIMITS |
|---|---|---|---|---|---|---|---|
| Benzo(a)pyrene | ug/kg | 2050 | 2860 | 4290 | 70 | | 50 - 110 |
| Benzo(b)fluoranthene | ug/kg | 2050 | 5000 | 6450 | 71 | | 45 - 115 |
| Benzo(g,h,i)perylene | ug/kg | 2050 | 2190 | 4400 | 108 | | 40 - 125 |
| Benzo(k)fluoranthene | ug/kg | 2050 | 1720 | 2880 | 57 | | 45 - 125 |
| Dibenz(a,h)anthracene | ug/kg | 2050 | 542 | 2950 | 118 | | 40 - 125 |
| Fluoranthene | ug/kg | 2050 | 8690 | 11200 | 122 | * | 55 - 115 |
| Indeno(1,2,3-cd)pyrene | ug/kg | 2050 | 2810 | 5150 | 115 | | 40 - 120 |

***Spike Dupe HSN : 1245522***

| COMPOUND | UNITS | SPIKE ADDED | MSD CONC. | MSD % REC | REC FLAG | % RPD | RPD FLAG | QC. LIMITS REC | QC. LIMITS RPD |
|---|---|---|---|---|---|---|---|---|---|
| Benzo(a)pyrene | ug/kg | 2050 | 3460 | 29 | * | 22 | | 50 - 110 | 0 - 30 |
| Benzo(b)fluoranthene | ug/kg | 2050 | 4110 | -44 | * | 44 | * | 45 - 115 | 0 - 30 |
| Benzo(g,h,i)perylene | ug/kg | 2050 | 3980 | 88 | | 10 | | 40 - 125 | 0 - 30 |
| Benzo(k)fluoranthene | ug/kg | 2050 | 2700 | 48 | | 7 | | 45 - 125 | 0 - 30 |
| Dibenz(a,h)anthracene | ug/kg | 2050 | 2700 | 105 | | 9 | | 40 - 125 | 0 - 30 |
| Fluoranthene | ug/kg | 2050 | 6900 | -88 | * | 47 | * | 55 - 115 | 0 - 30 |
| Indeno(1,2,3-cd)pyrene | ug/kg | 2050 | 4560 | 86 | | 12 | | 40 - 120 | 0 - 30 |

RPD : 2 out of 7 outside limits

Spike Recovery: 4 out of 14 outside limits

3D
SOIL SEMIVOLATILE LCS/LCSD RECOVERY

Lab Name: GCAL

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Contract: Analytical Method: SW-846 8270D

Prep Batch: 518149 Analytical Batch.: 518302

***Spike HSN : 1245519***

| *COMPOUND* | *UNITS* | *SPIKE ADDED* | *SAMPLE CONCENTRATION* | *LCS CONCENTRATION* | *LCS % REC* | *LCS % REC FLAG* | *QC. LIMITS* |
|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ug/kg | 1670 | 0 | 1490 | 89 | | 45 - 110 |
| 1,2-Dichlorobenzene | ug/kg | 1670 | 0 | 1400 | 84 | | 45 - 100 |
| 1,3-Dichlorobenzene | ug/kg | 1670 | 0 | 1420 | 85 | | 40 - 100 |
| 1,4-Dichlorobenzene | ug/kg | 1670 | 0 | 1460 | 88 | | 35 - 105 |
| 2,4,5-Trichlorophenol | ug/kg | 1670 | 0 | 1500 | 90 | | 50 - 110 |
| 2,4,6-Trichlorophenol | ug/kg | 1670 | 0 | 1500 | 90 | | 45 - 110 |
| 2,4-Dichlorophenol | ug/kg | 1670 | 0 | 1500 | 90 | | 45 - 110 |
| 2,4-Dimethylphenol | ug/kg | 1670 | 0 | 1460 | 88 | | 30 - 105 |
| 2,4-Dinitrophenol | ug/kg | 1670 | 0 | 1220 | 73 | | 15 - 130 |
| 2,4-Dinitrotoluene | ug/kg | 1670 | 0 | 1430 | 86 | | 50 - 115 |
| 2,6-Dinitrotoluene | ug/kg | 1670 | 0 | 1500 | 90 | | 50 - 110 |
| 2-Chloronaphthalene | ug/kg | 1670 | 0 | 1500 | 90 | | 45 - 105 |
| 2-Chlorophenol | ug/kg | 1670 | 0 | 1460 | 88 | | 45 - 105 |
| 2-Methyl-4,6-dinitrophenol | ug/kg | 1670 | 0 | 1530 | 92 | | 30 - 135 |
| 2-Methylnaphthalene | ug/kg | 1670 | 0 | 1520 | 91 | | 45 - 105 |
| 2-Nitroaniline | ug/kg | 1670 | 0 | 1600 | 96 | | 45 - 120 |
| 2-Nitrophenol | ug/kg | 1670 | 0 | 1530 | 92 | | 40 - 110 |
| 3,3'-Dichlorobenzidine | ug/kg | 1670 | 0 | 1110 | 67 | | 24 - 127 |
| 3-Nitroaniline | ug/kg | 1670 | 0 | 1140 | 68 | | 25 - 110 |
| 4-Bromophenyl-phenylether | ug/kg | 1670 | 0 | 1570 | 94 | | 45 - 115 |
| 4-Chloro-3-methylphenol | ug/kg | 1670 | 0 | 1520 | 91 | | 45 - 115 |
| 4-Chloroaniline | ug/kg | 1670 | 0 | 872 | 52 | | 20 - 120 |
| 4-Chlorophenyl-phenylether | ug/kg | 1670 | 0 | 1550 | 93 | | 45 - 110 |
| 4-Nitroaniline | ug/kg | 1670 | 0 | 1400 | 84 | | 35 - 115 |
| 4-Nitrophenol | ug/kg | 1670 | 0 | 1460 | 88 | | 15 - 140 |
| Acenaphthene | ug/kg | 1670 | 0 | 1490 | 89 | | 45 - 110 |
| Acenaphthylene | ug/kg | 1670 | 0 | 1550 | 93 | | 45 - 105 |
| Anthracene | ug/kg | 1670 | 0 | 1500 | 90 | | 55 - 105 |
| Benzo(a)anthracene | ug/kg | 1670 | 0 | 1530 | 92 | | 50 - 110 |
| Benzo(a)pyrene | ug/kg | 1670 | 0 | 1470 | 88 | | 50 - 110 |
| Benzo(b)fluoranthene | ug/kg | 1670 | 0 | 1640 | 98 | | 45 - 115 |
| Benzo(g,h,i)perylene | ug/kg | 1670 | 0 | 1280 | 77 | | 40 - 125 |
| Benzo(k)fluoranthene | ug/kg | 1670 | 0 | 1470 | 88 | | 45 - 125 |
| Bis(2-Chloroethoxy)methane | ug/kg | 1670 | 0 | 1480 | 89 | | 45 - 110 |
| Bis(2-Chloroethyl)ether | ug/kg | 1670 | 0 | 1490 | 89 | | 40 - 105 |
| Butylbenzylphthalate | ug/kg | 1670 | 0 | 1610 | 97 | | 50 - 125 |

RPD : 0 out of 65 outside limits

Spike Recovery: 0 out of 130 outside limits

FORM III SV-2

3D
SOIL SEMIVOLATILE LCS/LCSD RECOVERY

Lab Name: GCAL

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Contract: Analytical Method: SW-846 8270D

Prep Batch: 518149 Analytical Batch.: 518302

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Carbazole | ug/kg | 1670 | 0 | 1610 | 97 | | 45 - 115 |
| Chrysene | ug/kg | 1670 | 0 | 1550 | 93 | | 55 - 110 |
| Di-n-butylphthalate | ug/kg | 1670 | 0 | 1480 | 89 | | 55 - 110 |
| Di-n-octylphthalate | ug/kg | 1670 | 0 | 1420 | 85 | | 40 - 130 |
| Dibenz(a,h)anthracene | ug/kg | 1670 | 0 | 1320 | 79 | | 40 - 125 |
| Dibenzofuran | ug/kg | 1670 | 0 | 1500 | 90 | | 50 - 105 |
| Diethylphthalate | ug/kg | 1670 | 0 | 1490 | 89 | | 50 - 115 |
| Dimethyl-phthalate | ug/kg | 1670 | 0 | 1480 | 89 | | 50 - 110 |
| Fluoranthene | ug/kg | 1670 | 0 | 1420 | 85 | | 55 - 115 |
| Fluorene | ug/kg | 1670 | 0 | 1510 | 91 | | 50 - 110 |
| Hexachlorobenzene | ug/kg | 1670 | 0 | 1620 | 97 | | 45 - 120 |
| Hexachlorobutadiene | ug/kg | 1670 | 0 | 1480 | 89 | | 40 - 115 |
| Hexachlorocyclopentadiene | ug/kg | 1670 | 0 | 1380 | 83 | | 48 - 116 |
| Hexachloroethane | ug/kg | 1670 | 0 | 1430 | 86 | | 35 - 110 |
| Indeno(1,2,3-cd)pyrene | ug/kg | 1670 | 0 | 1250 | 75 | | 40 - 120 |
| Isophorone | ug/kg | 1670 | 0 | 1520 | 91 | | 45 - 110 |
| N-Nitroso-di-n-propylamine | ug/kg | 1670 | 0 | 1510 | 91 | | 40 - 115 |
| N-Nitrosodimethylamine | ug/kg | 1670 | 0 | 1580 | 95 | | 20 - 115 |
| N-Nitrosodiphenylamine | ug/kg | 1670 | 0 | 1560 | 94 | | 50 - 115 |
| Naphthalene | ug/kg | 1670 | 0 | 1460 | 88 | | 40 - 105 |
| Nitrobenzene | ug/kg | 1670 | 0 | 1490 | 89 | | 40 - 115 |
| Pentachlorophenol | ug/kg | 1670 | 0 | 1660 | 100 | | 25 - 120 |
| Phenanthrene | ug/kg | 1670 | 0 | 1540 | 92 | | 50 - 110 |
| Phenol | ug/kg | 1670 | 0 | 1460 | 88 | | 40 - 100 |
| Pyrene | ug/kg | 1670 | 0 | 1830 | 110 | | 45 - 125 |
| Pyridine | ug/kg | 1670 | 0 | 1270 | 76 | | 11 - 92 |
| bis(2-ethylhexyl)phthalate | ug/kg | 1670 | 0 | 1620 | 97 | | 45 - 125 |
| m,p-Cresol | ug/kg | 1670 | 0 | 1720 | 103 | | 40 - 105 |
| o-Cresol | ug/kg | 1670 | 0 | 1240 | 74 | | 40 - 105 |

RPD : 0 out of 65 outside limits

Spike Recovery: 0 out of 130 outside limits

3D
SOIL SEMIVOLATILE LCS/LCSD RECOVERY

Lab Name: GCAL

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Contract: Analytical Method: SW-846 8270D

Prep Batch: 518149 Analytical Batch.: 518302

***Spike Dupe HSN : 1245520***

| COMPOUND | UNITS | SPIKE ADDED | LCSD CONC. | LCSD % REC | REC FLAG | % RPD | RPD FLAG | QC. LIMITS REC | QC. LIMITS RPD |
|---|---|---|---|---|---|---|---|---|---|
| 1,2,4-Trichlorobenzene | ug/kg | 1670 | 1470 | 88 | | 1 | | 45 - 110 | 0 - 30 |
| 1,2-Dichlorobenzene | ug/kg | 1670 | 1380 | 83 | | 1 | | 45 - 100 | 0 - 30 |
| 1,3-Dichlorobenzene | ug/kg | 1670 | 1340 | 80 | | 6 | | 40 - 100 | 0 - 30 |
| 1,4-Dichlorobenzene | ug/kg | 1670 | 1380 | 83 | | 6 | | 35 - 105 | 0 - 30 |
| 2,4,5-Trichlorophenol | ug/kg | 1670 | 1530 | 92 | | 2 | | 50 - 110 | 0 - 30 |
| 2,4,6-Trichlorophenol | ug/kg | 1670 | 1540 | 92 | | 3 | | 45 - 110 | 0 - 30 |
| 2,4-Dichlorophenol | ug/kg | 1670 | 1460 | 88 | | 3 | | 45 - 110 | 0 - 30 |
| 2,4-Dimethylphenol | ug/kg | 1670 | 1410 | 85 | | 3 | | 30 - 105 | 0 - 30 |
| 2,4-Dinitrophenol | ug/kg | 1670 | 1170 | 70 | | 4 | | 15 - 130 | 0 - 30 |
| 2,4-Dinitrotoluene | ug/kg | 1670 | 1420 | 85 | | .7 | | 50 - 115 | 0 - 30 |
| 2,6-Dinitrotoluene | ug/kg | 1670 | 1450 | 87 | | 3 | | 50 - 110 | 0 - 30 |
| 2-Chloronaphthalene | ug/kg | 1670 | 1510 | 91 | | .7 | | 45 - 105 | 0 - 30 |
| 2-Chlorophenol | ug/kg | 1670 | 1470 | 88 | | .7 | | 45 - 105 | 0 - 30 |
| 2-Methyl-4,6-dinitrophenol | ug/kg | 1670 | 1490 | 89 | | 3 | | 30 - 135 | 0 - 30 |
| 2-Methylnaphthalene | ug/kg | 1670 | 1470 | 88 | | 3 | | 45 - 105 | 0 - 30 |
| 2-Nitroaniline | ug/kg | 1670 | 1560 | 94 | | 3 | | 45 - 120 | 0 - 30 |
| 2-Nitrophenol | ug/kg | 1670 | 1490 | 89 | | 3 | | 40 - 110 | 0 - 30 |
| 3,3'-Dichlorobenzidine | ug/kg | 1670 | 960 | 58 | | 14 | | 24 - 127 | 0 - 30 |
| 3-Nitroaniline | ug/kg | 1670 | 1020 | 61 | | 11 | | 25 - 110 | 0 - 30 |
| 4-Bromophenyl-phenylether | ug/kg | 1670 | 1690 | 101 | | 7 | | 45 - 115 | 0 - 30 |
| 4-Chloro-3-methylphenol | ug/kg | 1670 | 1420 | 85 | | 7 | | 45 - 115 | 0 - 30 |
| 4-Chloroaniline | ug/kg | 1670 | 745 | 45 | | 16 | | 20 - 120 | 0 - 30 |
| 4-Chlorophenyl-phenylether | ug/kg | 1670 | 1550 | 93 | | 0 | | 45 - 110 | 0 - 30 |
| 4-Nitroaniline | ug/kg | 1670 | 1230 | 74 | | 13 | | 35 - 115 | 0 - 30 |
| 4-Nitrophenol | ug/kg | 1670 | 1440 | 86 | | 1 | | 15 - 140 | 0 - 30 |
| Acenaphthene | ug/kg | 1670 | 1510 | 91 | | 1 | | 45 - 110 | 0 - 30 |
| Acenaphthylene | ug/kg | 1670 | 1600 | 96 | | 3 | | 45 - 105 | 0 - 30 |
| Anthracene | ug/kg | 1670 | 1530 | 92 | | 2 | | 55 - 105 | 0 - 30 |
| Benzo(a)anthracene | ug/kg | 1670 | 1550 | 93 | | 1 | | 50 - 110 | 0 - 30 |
| Benzo(a)pyrene | ug/kg | 1670 | 1460 | 88 | | .7 | | 50 - 110 | 0 - 30 |
| Benzo(b)fluoranthene | ug/kg | 1670 | 1760 | 106 | | 7 | | 45 - 115 | 0 - 30 |
| Benzo(g,h,i)perylene | ug/kg | 1670 | 1330 | 80 | | 4 | | 40 - 125 | 0 - 30 |
| Benzo(k)fluoranthene | ug/kg | 1670 | 1590 | 95 | | 8 | | 45 - 125 | 0 - 30 |
| Bis(2-Chloroethoxy)methane | ug/kg | 1670 | 1410 | 85 | | 5 | | 45 - 110 | 0 - 30 |
| Bis(2-Chloroethyl)ether | ug/kg | 1670 | 1440 | 86 | | 3 | | 40 - 105 | 0 - 30 |
| Butylbenzylphthalate | ug/kg | 1670 | 1560 | 94 | | 3 | | 50 - 125 | 0 - 30 |

RPD : 0 out of 65 outside limits

Spike Recovery: 0 out of 130 outside limits

3D
SOIL SEMIVOLATILE LCS/LCSD RECOVERY

Lab Name: GCAL

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Contract: Analytical Method: SW-846 8270D

Prep Batch: 518149 Analytical Batch.: 518302

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Carbazole | ug/kg | 1670 | 1600 | 96 | | .6 | | 45 - 115 | 0 - 30 |
| Chrysene | ug/kg | 1670 | 1570 | 94 | | 1 | | 55 - 110 | 0 - 30 |
| Di-n-butylphthalate | ug/kg | 1670 | 1440 | 86 | | 3 | | 55 - 110 | 0 - 30 |
| Di-n-octylphthalate | ug/kg | 1670 | 1460 | 88 | | 3 | | 40 - 130 | 0 - 30 |
| Dibenz(a,h)anthracene | ug/kg | 1670 | 1330 | 80 | | .8 | | 40 - 125 | 0 - 30 |
| Dibenzofuran | ug/kg | 1670 | 1520 | 91 | | 1 | | 50 - 105 | 0 - 30 |
| Diethylphthalate | ug/kg | 1670 | 1440 | 86 | | 3 | | 50 - 115 | 0 - 30 |
| Dimethyl-phthalate | ug/kg | 1670 | 1480 | 89 | | 0 | | 50 - 110 | 0 - 30 |
| Fluoranthene | ug/kg | 1670 | 1380 | 83 | | 3 | | 55 - 115 | 0 - 30 |
| Fluorene | ug/kg | 1670 | 1510 | 91 | | 0 | | 50 - 110 | 0 - 30 |
| Hexachlorobenzene | ug/kg | 1670 | 1670 | 100 | | 3 | | 45 - 120 | 0 - 30 |
| Hexachlorobutadiene | ug/kg | 1670 | 1450 | 87 | | 2 | | 40 - 115 | 0 - 30 |
| Hexachlorocyclopentadiene | ug/kg | 1670 | 1400 | 84 | | 1 | | 48 - 116 | 0 - 30 |
| Hexachloroethane | ug/kg | 1670 | 1350 | 81 | | 6 | | 35 - 110 | 0 - 30 |
| Indeno(1,2,3-cd)pyrene | ug/kg | 1670 | 1250 | 75 | | 0 | | 40 - 120 | 0 - 30 |
| Isophorone | ug/kg | 1670 | 1460 | 88 | | 4 | | 45 - 110 | 0 - 30 |
| N-Nitroso-di-n-propylamine | ug/kg | 1670 | 1440 | 86 | | 5 | | 40 - 115 | 0 - 30 |
| N-Nitrosodimethylamine | ug/kg | 1670 | 1190 | 71 | | 28 | | 20 - 115 | 0 - 30 |
| N-Nitrosodiphenylamine | ug/kg | 1670 | 1620 | 97 | | 4 | | 50 - 115 | 0 - 30 |
| Naphthalene | ug/kg | 1670 | 1450 | 87 | | .7 | | 40 - 105 | 0 - 30 |
| Nitrobenzene | ug/kg | 1670 | 1460 | 88 | | 2 | | 40 - 115 | 0 - 30 |
| Pentachlorophenol | ug/kg | 1670 | 1700 | 102 | | 2 | | 25 - 120 | 0 - 30 |
| Phenanthrene | ug/kg | 1670 | 1550 | 93 | | .6 | | 50 - 110 | 0 - 30 |
| Phenol | ug/kg | 1670 | 1420 | 85 | | 3 | | 40 - 100 | 0 - 30 |
| Pyrene | ug/kg | 1670 | 1660 | 100 | | 10 | | 45 - 125 | 0 - 30 |
| Pyridine | ug/kg | 1670 | 941 | 56 | | 30 | | 11 - 92 | 0 - 30 |
| bis(2-ethylhexyl)phthalate | ug/kg | 1670 | 1540 | 92 | | 5 | | 45 - 125 | 0 - 30 |
| m,p-Cresol | ug/kg | 1670 | 1730 | 104 | | .6 | | 40 - 105 | 0 - 30 |
| o-Cresol | ug/kg | 1670 | 1220 | 73 | | 2 | | 40 - 105 | 0 - 30 |

RPD : 0 out of 65 outside limits

Spike Recovery: 0 out of 130 outside limits

4B

SEMIVOLATILE METHOD BLANK SUMMARY

Lab Name: GCAL

Sample ID: MB1245518

Lab Code: LA024 Case No.:

Contract:

Lab File ID: 2131022/h5733

SAS No.: SDG No.: 213101712

GC Column: RTX-5MS-30 ID: .25 (mm)

Lab Sample ID: 1245518 Date Extracted: 10/22/13

Instrument ID: MSSV4 Matrix: Solid

Date Analyzed: 10/22/13 Time: 1532

Level: LOW

Method: SW-846 8270D

Prep Batch: 518149 Analytical Batch: 518302

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES

| | SAMPLE NO. | LAB SAMPLE ID | LAB FILE ID | DATE ANALYZED | TIME ANALYZED |
|---|---|---|---|---|---|
| 1. | LCS1245519 | 1245519 | 2131022/h5734 | 10/22/13 | 1551 |
| 2. | LCSD1245520 | 1245520 | 2131022/h5735 | 10/22/13 | 1611 |
| 3. | RS-COMP1-101613 | 21310171201 | 2131022/h5736 | 10/22/13 | 1631 |
| 4. | RS-COMP1-101613MS | 1245521 | 2131022/h5737 | 10/22/13 | 1651 |
| 5. | RS-COMP1-101613MSD | 1245522 | 2131022/h5738 | 10/22/13 | 1711 |
| 6. | RS-COMP2-101613 | 21310171203 | 2131022/h5739 | 10/22/13 | 1731 |
| 7. | RS-COMP1-101613DL | 21310171201DL | 2131023/h5755 | 10/23/13 | 1228 |
| 8. | RS-COMP1-101613MSDL | 1245521DL | 2131023/h5756 | 10/23/13 | 1248 |
| 9. | RS-COMP1-101613MSDDL | 1245522DL | 2131023/h5757 | 10/23/13 | 1308 |
| 10. | RS-COMP2-101613DL | 21310171203DL | 2131023/h5758 | 10/23/13 | 1328 |

FORM IV SV

5B

SEMIVOLATILE ORGANICS INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE ( DFTPP )

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Lab File ID: 2130830/h4414 DFTPP Injection Date: 08/30/13 Time: 1107

GC Column: RTX-5MS-30 ID: .25 (mm) Analytical Batch: 514937

Instrument ID: MSSV4

| *m / e* | *ION ABUNDANCE CRITERIA* | *% Relative Abundance* |
|---|---|---|
| 51 | 30.0-60.0% of mass 198 | 31.36 ( ) ( ) |
| 68 | Less than 2% of mass 69 | .16 ( .46 ) ( 1 ) |
| 69 | Mass 69 relative abundance | 35.02 ( ) ( ) |
| 70 | Less than 2.0% of mass 69 | .2 ( .59 ) ( 1 ) |
| 127 | 40.0-60.0% of mass 198 | 49.01 ( ) ( ) |
| 197 | Less than 1.0% of mass 198 | 0 ( ) ( ) |
| 198 | Base Peak, 100% relative abundance | 100 ( ) ( ) |
| 199 | 5.0-9.0% of mass 198 | 7.05 ( ) ( ) |
| 275 | 10.0-30.0% of mass 198 | 28.01 ( ) ( ) |
| 365 | Greater than 1.0% of mass 198 | 3.69 ( ) ( ) |
| 441 | Present, but less than mass 443 | 19.42 ( ) ( ) |
| 442 | Greater than 40.00% of mass 198 | 138.3 ( ) ( ) |
| 443 | 17.0-23.0% of mass 442 | 28.49 ( 20.6 ) ( 2 ) |

(1)-Value is % mass 69 (2)-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| | *SAMPLE NO.* | *LAB SAMPLE ID* | *LAB FILE ID* | *DATE ANALYZED* | *TIME ANALYZED* |
|---|---|---|---|---|---|
| 1. | STD050 | 1205 | 2130830/h4416 | 08/30/13 | 1147 |
| 2. | STD080 | 1206 | 2130830/h4417 | 08/30/13 | 1206 |
| 3. | STD120 | 1207 | 2130830/h4418 | 08/30/13 | 1226 |
| 4. | STD160 | 1208 | 2130830/h4419 | 08/30/13 | 1246 |
| 5. | STD010 | 1204 | 2130830/h4420 | 08/30/13 | 1306 |
| 6. | STD200 | 1209 | 2130830/h4421 | 08/30/13 | 1326 |
| 7. | STD002 | 1203 | 2130830/h4422 | 08/30/13 | 1346 |
| 8. | STD001 | 1202 | 2130830/h4423 | 08/30/13 | 1406 |
| 9. | STD0.2 | 1201 | 2130830/h4424 | 08/30/13 | 1425 |
| 10. | STDICV | 1600 | 2130830/h4425 | 08/30/13 | 1530 |

FORM V SV

5B

SEMIVOLATILE ORGANICS INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE ( DFTPP )

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Lab File ID: 2131022/h5714x DFTPP Injection Date: 10/22/13 Time: 0916

GC Column: RTX-5MS-30 ID: .25 (mm) Analytical Batch: 518302

Instrument ID: MSSV4

| *m / e* | *ION ABUNDANCE CRITERIA* | *% Relative Abundance* |
|---|---|---|
| 51 | 30.0-60.0% of mass 198 | 34.69 ( ) ( ) |
| 68 | Less than 2% of mass 69 | .49 ( 1.33 ) ( 1 ) |
| 69 | Mass 69 relative abundance | 37.01 ( ) ( ) |
| 70 | Less than 2.0% of mass 69 | 0 ( 0 ) ( 1 ) |
| 127 | 40.0-60.0% of mass 198 | 53.06 ( ) ( ) |
| 197 | Less than 1.0% of mass 198 | 0 ( ) ( ) |
| 198 | Base Peak, 100% relative abundance | 100 ( ) ( ) |
| 199 | 5.0-9.0% of mass 198 | 7.12 ( ) ( ) |
| 275 | 10.0-30.0% of mass 198 | 28.88 ( ) ( ) |
| 365 | Greater than 1.0% of mass 198 | 4.32 ( ) ( ) |
| 441 | Present, but less than mass 443 | 22.25 ( ) ( ) |
| 442 | Greater than 40.00% of mass 198 | 149.2 ( ) ( ) |
| 443 | 17.0-23.0% of mass 442 | 30.39 ( 20.37 ) ( 2 ) |

(1)-Value is % mass 69 (2)-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| | *SAMPLE NO.* | *LAB SAMPLE ID* | *LAB FILE ID* | *DATE ANALYZED* | *TIME ANALYZED* |
|---|---|---|---|---|---|
| 1. | STD050 | 1400 | 2131022/h5715x | 10/22/13 | 0936 |
| 2. | MB1245518 | 1245518 | 2131022/h5733 | 10/22/13 | 1532 |
| 3. | LCS1245519 | 1245519 | 2131022/h5734 | 10/22/13 | 1551 |
| 4. | LCSD1245520 | 1245520 | 2131022/h5735 | 10/22/13 | 1611 |
| 5. | RS-COMP1-101613 | 21310171201 | 2131022/h5736 | 10/22/13 | 1631 |
| 6. | RS-COMP1-101613MS | 1245521 | 2131022/h5737 | 10/22/13 | 1651 |
| 7. | RS-COMP1-101613MSD | 1245522 | 2131022/h5738 | 10/22/13 | 1711 |
| 8. | RS-COMP2-101613 | 21310171203 | 2131022/h5739 | 10/22/13 | 1731 |

FORM V SV

5B

SEMIVOLATILE ORGANICS INSTRUMENT PERFORMANCE CHECK

DECAFLUOROTRIPHENYLPHOSPHINE ( DFTPP )

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Lab File ID: 2131023/h5752x DFTPP Injection Date: 10/23/13 Time: 1129

GC Column: RTX-5MS-30 ID: .25 (mm) Analytical Batch: 518409

Instrument ID: MSSV4

| *m / e* | *ION ABUNDANCE CRITERIA* | *% Relative Abundance* |
|---|---|---|
| 51 | 30.0-60.0% of mass 198 | 34.95 ( ) ( ) |
| 68 | Less than 2% of mass 69 | 0 ( 0 ) ( 1 ) |
| 69 | Mass 69 relative abundance | 38.33 ( ) ( ) |
| 70 | Less than 2.0% of mass 69 | 0 ( 0 ) ( 1 ) |
| 127 | 40.0-60.0% of mass 198 | 52.89 ( ) ( ) |
| 197 | Less than 1.0% of mass 198 | 0 ( ) ( ) |
| 198 | Base Peak, 100% relative abundance | 100 ( ) ( ) |
| 199 | 5.0-9.0% of mass 198 | 6.81 ( ) ( ) |
| 275 | 10.0-30.0% of mass 198 | 29.85 ( ) ( ) |
| 365 | Greater than 1.0% of mass 198 | 3.8 ( ) ( ) |
| 441 | Present, but less than mass 443 | 21.25 ( ) ( ) |
| 442 | Greater than 40.00% of mass 198 | 133.5 ( ) ( ) |
| 443 | 17.0-23.0% of mass 442 | 28.22 ( 21.13 ) ( 2 ) |

(1)-Value is % mass 69 (2)-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

| | *SAMPLE NO.* | *LAB SAMPLE ID* | *LAB FILE ID* | *DATE ANALYZED* | *TIME ANALYZED* |
|---|---|---|---|---|---|
| 1. | STD050 | 1400 | 2131023/h5753x | 10/23/13 | 1149 |
| 2. | RS-COMP1-101613DL | 21310171201DL | 2131023/h5755 | 10/23/13 | 1228 |
| 3. | RS-COMP1-101613MSDL | 1245521DL | 2131023/h5756 | 10/23/13 | 1248 |
| 4. | RS-COMP1-101613MSDDL | 1245522DL | 2131023/h5757 | 10/23/13 | 1308 |
| 5. | RS-COMP2-101613DL | 21310171203DL | 2131023/h5758 | 10/23/13 | 1328 |

FORM V SV

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Lab File ID (Standard): 2131022/h5715xd Date Analyzed: 10/22/13 Time: 0936

Instrument ID: MSSV4 GC Column: RTX-5MS-30M ID: .25 (mm)

Analytical Batch: 518302 Method: EPA 8270D

| | IS1 Area | RT | IS2 Area | RT | IS3 Area | RT |
|---|---|---|---|---|---|---|
| STANDARD | 92749 | 2.51 | 333461 | 3.24 | 172012 | 4.30 |
| **EPA Sample No.** | # | # | # | # | # | # |
| MB1245518 | 65141 | 2.51 | 241558 | 3.24 | 133201 | 4.30 |
| LCS1245519 | 71450 | 2.51 | 257443 | 3.24 | 138873 | 4.30 |
| LCSD1245520 | 88549 | 2.51 | 317811 | 3.24 | 160319 | 4.30 |
| RS-COMP1-101613 | 67335 | 2.51 | 225714 | 3.24 | 109925 | 4.30 |
| RS-COMP1-101613(1244551MS) | 53029 | 2.51 | 187924 | 3.24 | 104325 | 4.30 |
| RS-COMP1-101613(1244551MSD) | 59096 | 2.51 | 205515 | 3.24 | 107229 | 4.30 |
| RS-COMP2-101613 | 57180 | 2.51 | 192932 | 3.24 | 102808 | 4.30 |

IS 1 ID: 1,4-Dichlorobenzene-d4
IS 2 ID: Naphthalene-d8
IS 3 ID: Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag internal standard values with an asterisk.
* Values outside of QC limits.

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Lab File ID (Standard): 2131022/h5715xd Date Analyzed: 10/22/13 Time: 0936

Instrument ID: MSSV4 GC Column: RTX-5MS-30M ID: .25 (mm)

Analytical Batch: 518302 Method: EPA 8270D

| | IS4 Area | RT | IS5 Area | RT | IS6 Area | RT |
|---|---|---|---|---|---|---|
| STANDARD | 240752 | 5.21 | 204712 | 7.53 | 189734 | 10.07 |

| EPA Sample No. | | # | | # | | # | | # | | # | | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MB1245518 | 192310 | | 5.21 | | 151856 | | 7.53 | | 130857 | | 10.07 | |
| LCS1245519 | 204770 | | 5.21 | | 156116 | | 7.53 | | 150767 | | 10.07 | |
| LCSD1245520 | 219958 | | 5.21 | | 182424 | | 7.53 | | 156081 | | 10.07 | |
| RS-COMP1-101613 | 162078 | | 5.21 | | 211423 | | 7.55 | | 401314 | * | 10.12 | |
| RS-COMP1-101613(1244551MS) | 169802 | | 5.21 | | 298233 | | 7.57 | | 569852 | * | 10.15 | |
| RS-COMP1-101613(1244551MSD) | 171832 | | 5.21 | | 318904 | | 7.56 | | 606254 | * | 10.15 | |
| RS-COMP2-101613 | 174886 | | 5.21 | | 335962 | | 7.56 | | 592116 | * | 10.14 | |

IS 4 ID: Phenanthrene-d10
IS 5 ID: Chrysene-d12
IS 6 ID: Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag internal standard values with an asterisk.
* Values outside of QC limits.

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Lab File ID (Standard): 2131023/h5753xd Date Analyzed: 10/23/13 Time: 1149

Instrument ID: MSSV4 GC Column: RTX-5MS-30M ID: .25 (mm)

Analytical Batch: 518409 Method: EPA 8270D

| | IS1 Area | RT | IS2 Area | RT | IS3 Area | RT |
|---|---|---|---|---|---|---|
| STANDARD | 91115 | 2.50 | 328881 | 3.23 | 175829 | 4.29 |

| EPA Sample No. | IS1 Area | # | RT | # | IS2 Area | # | RT | # | IS3 Area | # | RT | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RS-COMP1-101613DL | 57210 | | 2.50 | | 206787 | | 3.23 | | 111478 | | 4.29 | |
| RS-COMP1-101613(1244551MS)DL | 50797 | | 2.50 | | 183314 | | 3.23 | | 98423 | | 4.29 | |
| RS-COMP1-101613(1244551MSD)DL | 58454 | | 2.50 | | 204361 | | 3.23 | | 104406 | | 4.29 | |
| RS-COMP2-101613DL | 51687 | | 2.50 | | 186679 | | 3.23 | | 98724 | | 4.29 | |

IS 1 ID: 1,4-Dichlorobenzene-d4
IS 2 ID: Naphthalene-d8
IS 3 ID: Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag internal standard values with an asterisk.
* Values outside of QC limits.

8B
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Lab File ID (Standard): 2131023/h5753xd Date Analyzed: 10/23/13 Time: 1149

Instrument ID: MSSV4 GC Column: RTX-5MS-30M ID: .25 (mm)

Analytical Batch: 518409 Method: EPA 8270D

| | IS4 Area | RT | IS5 Area | RT | IS6 Area | RT |
|---|---|---|---|---|---|---|
| STANDARD | 270682 | 5.20 | 253049 | 7.52 | 268496 | 10.06 |

| EPA Sample No. | IS4 Area | # | RT | # | IS5 Area | # | RT | # | IS6 Area | # | RT | # |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RS-COMP1-101613DL | 163369 | | 5.20 | | 167515 | | 7.52 | | 211115 | | 10.06 | |
| RS-COMP1-101613(1244551MS)DL | 163013 | | 5.20 | | 191812 | | 7.52 | | 256256 | | 10.07 | |
| RS-COMP1-101613(1244551MSD)DL | 161591 | | 5.20 | | 199519 | | 7.52 | | 287027 | | 10.06 | |
| RS-COMP2-101613DL | 160852 | | 5.19 | | 197829 | | 7.52 | | 276554 | | 10.06 | |

IS 4 ID: Phenanthrene-d10
IS 5 ID: Chrysene-d12
IS 6 ID: Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

# Column used to flag internal standard values with an asterisk.
* Values outside of QC limits.

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: 18.4 decanted: (Y/N)

GC Column: RTX-5MS-30 ID: .25 (mm)

Concentrated Extract Volume: 1000 ( µL )

Injection Volume: 1.0 ( µL )

GPC Cleanup: (Y/N) N pH:

*CONCENTRATION UNITS: ug/kg*

Sample ID: RS-COMP1-101613DL

Contract:

Lab File ID: 2131023/h5755

Lab Sample ID: 21310171201DL

Date Collected: 10/16/13 Time: 1600

Date Received: 10/17/13

Date Extracted: 10/22/13

Date Analyzed: 10/23/13 Time: 1228

Dilution Factor: 10 Analyst: HCP

Prep Method: 3550B

Analytical Method: SW-846 8270D

Instrument ID: MSSV4

Prep Batch: 518149 Analytical Batch: 518409

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 50-32-8 | Benzo(a)pyrene | 2860 | JJ | 50.7 | 408 | 4040 |
| 205-99-2 | Benzo(b)fluoranthene | 5000 | J | 79.9 | 818 | 4040 |
| 191-24-2 | Benzo(g,h,i)perylene | 2190 | J | 61.2 | 205 | 4040 |
| 207-08-9 | Benzo(k)fluoranthene | 1720 | J | 62.5 | 408 | 4040 |
| 53-70-3 | Dibenz(a,h)anthracene | 542 | J | 58.1 | 205 | 4040 |
| 206-44-0 | Fluoranthene | 8690 | J | 65.8 | 205 | 4040 |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 2810 | J | 97.4 | 408 | 4040 |

FORM I SV-1

GCAL, Inc.

BNA QUANT AND RATIO REPORT

Data file : /var/chem/MSSV4.i/2131023.s.b/h5755.d
Lab Smp Id: 21310171201 Client Smp ID: 21310171201
Inj Date : 23-OCT-2013 12:28
Operator : hcp Inst ID: MSSV4.i
Smp Info : 21310171201*4847*
Misc Info : 21310171201*MSSV~10023~*101712*30.0-1X10*518149*
Comment :
Method : /var/chem/MSSV4.i/2131023.s.b/8270D_04.m
Meth Date : 23-Oct-2013 12:08 hcp Quant Type: ISTD
Cal Date : 09-JUL-2013 00:02 Cal File: h2759x.d
Als bottle: 4
Dil Factor: 10.00000
Integrator: HP RTE Compound Sublist: SA8270.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula:
Amt * DF * (Uf * Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 10.00000 | Dilution Factor |
| Uf | 1.00000 | ng unit correction factor |
| Vt | 1000.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppm) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|---|
| * 10 1,4-Dichlorobenzene-d4 | 152 | 2.500 | 2.499 | (1.000) | 57210 | 40.0000 | |
| * 28 Naphthalene-d8 | 136 | 3.229 | 3.229 | (1.000) | 206787 | 40.0000 | |
| 29 Naphthalene | 128 | 3.241 | 3.240 | (1.004) | 1341 | 0.24973 | 83.2 |
| 145 1-Methylnapthalene | 142 | 3.717 | 3.717 | (1.151) | 664 | 0.21036 | 70.1 |
| * 44 Acenaphthene-d10 | 164 | 4.288 | 4.287 | (1.000) | 111478 | 40.0000 | |
| 45 Acenaphthene + | 153 | 4.305 | 4.311 | (1.004) | 5280 | 1.66755 | 556 |
| 47 Dibenzofuran | 168 | 4.417 | 4.417 | (1.030) | 3615 | 0.83164 | 277 |
| 51 Fluorene | 166 | 4.623 | 4.623 | (1.078) | 5312 | 1.53437 | 511 |
| * 61 Phenanthrene-d10 | 188 | 5.199 | 5.199 | (1.000) | 163369 | 40.0000 | |
| 62 Phenanthrene | 178 | 5.211 | 5.211 | (1.002) | 59859 | 13.3590 | 4450 |
| 63 Anthracene | 178 | 5.241 | 5.246 | (1.008) | 8900 | 1.99270 | 664 |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppm) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|---|
| 64 Carbazole | 167 | 5.352 | 5.352 | (1.029) | 8808 | 2.13418 | 711 |
| 67 Fluoranthene + | 202 | 5.988 | 5.987 | (1.152) | 102345 | 21.2726 | 7090 |
| 69 Pyrene | 202 | 6.164 | 6.170 | (0.820) | 78103 | 15.3123 | 5100 |
| 72 Benzo(a)anthracene | 228 | 7.499 | 7.511 | (0.998) | 44626 | 9.94871 | 3320 |
| * 74 Chrysene-d12 | 240 | 7.517 | 7.523 | (1.000) | 167515 | 40.0000 | |
| 76 bis(2-Ethylhexyl)phthalate | 149 | 7.676 | 7.681 | (1.021) | 6950 | 2.52252 | 841 |
| 75 Chrysene | 228 | 7.552 | 7.558 | (1.005) | 45294 | 9.91446 | 3300 |
| 78 Benzo(b)fluoranthene | 252 | 9.399 | 9.405 | (0.934) | 64026 | 12.2329 | 4080(M1) |
| 79 Benzo(k)fluoranthene | 252 | 9.452 | 9.458 | (0.939) | 25925 | 4.19835 | 1400(M1) |
| 80 Benzo(a)pyrene + | 252 | 9.970 | 9.975 | (0.991) | 36574 | 6.98891 | 2330 |
| * 81 Perylene-d12 | 264 | 10.064 | 10.064 | (1.000) | 211115 | 40.0000 | |
| 82 Indeno(1,2,3-cd)pyrene | 276 | 11.164 | 11.164 | (1.109) | 32988 | 6.88077 | 2290 |
| 83 Dibenzo(a,h)anthracene | 278 | 11.181 | 11.187 | (1.111) | 7547 | 1.32684 | 442 |
| 84 Benzo(g,h,i)perylene | 276 | 11.375 | 11.375 | (1.130) | 33648 | 5.38060 | 1790 |

QC Flag Legend

M1- Compound response manually integrated because
Target system did not integrate.

Data File: /var/chem/MSSV4.i/2131023.s.b/h5755.d

Page 1

Date : 23-OCT-2013 12:28

Client ID: 21310171201

Instrument: MSSV4.i

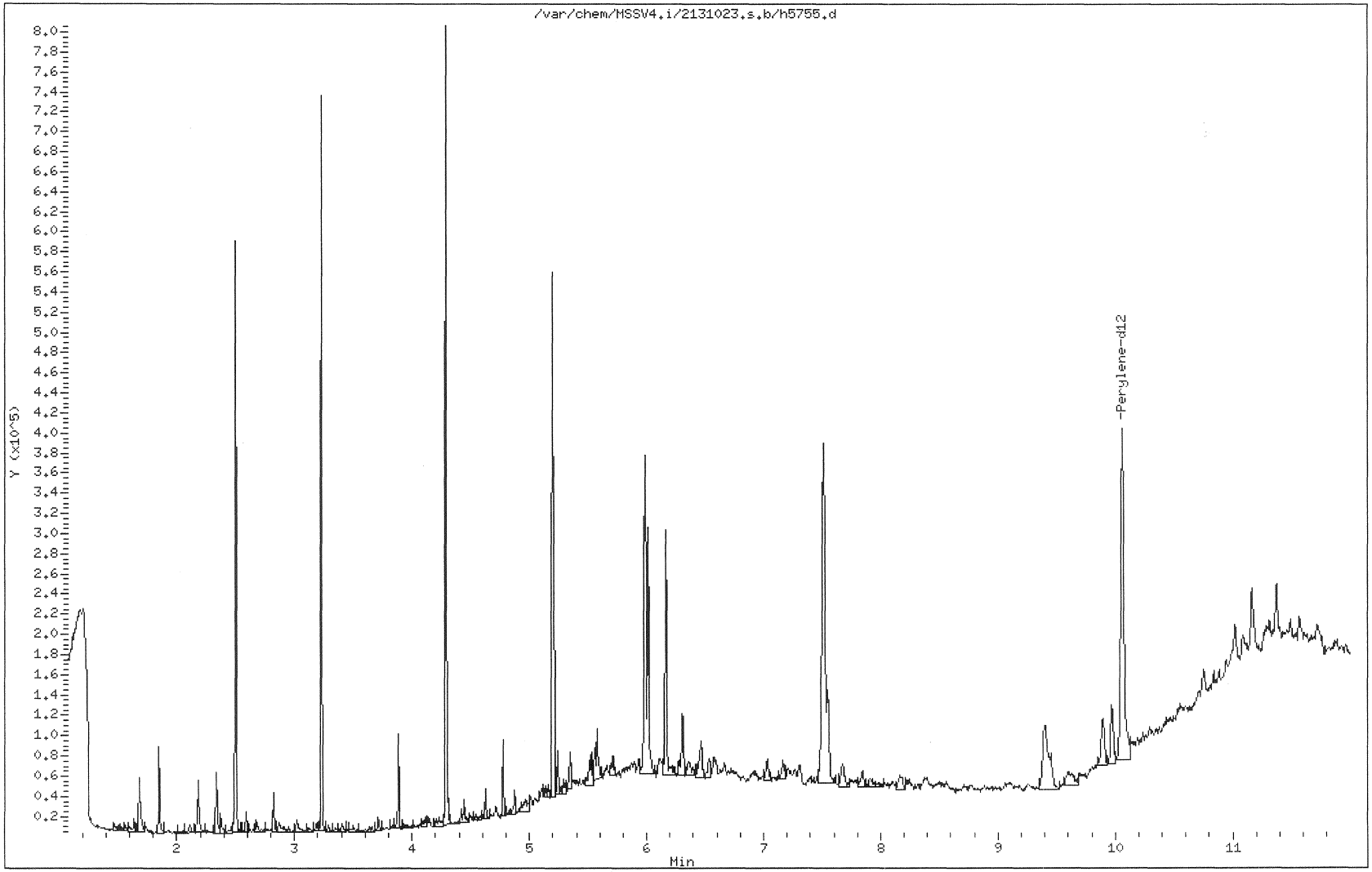
Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

Operator: hcp

Column phase: RTX-5MS-30M

Column diameter: 0.25




21310171712 288

Data File: /var/chem/MSSV4.i/2131023.s.b/h5755.d



Date : 23-OCT-2013 12:28

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

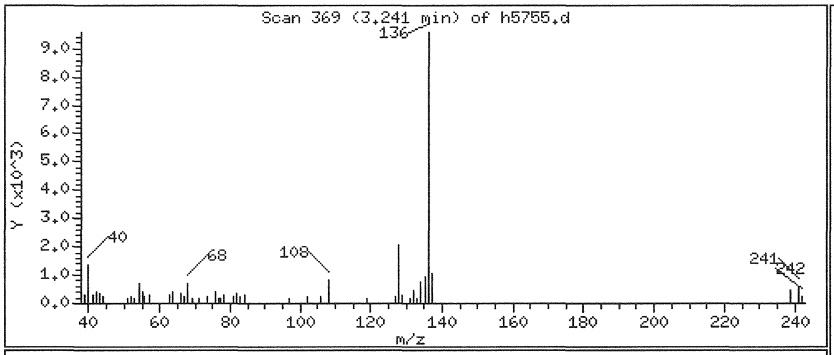
Operator: hcp

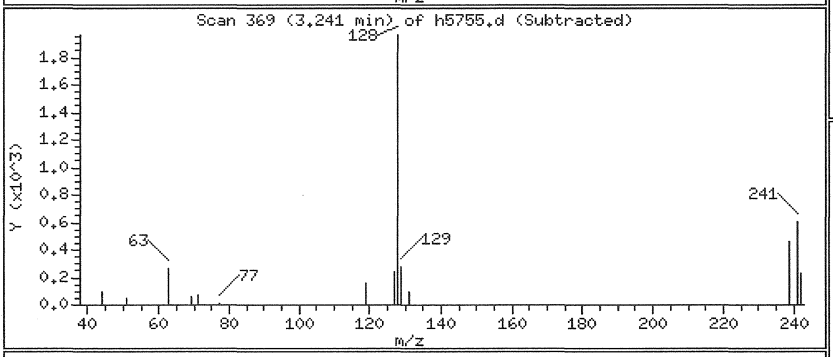
Column phase: RTX-5MS-30M

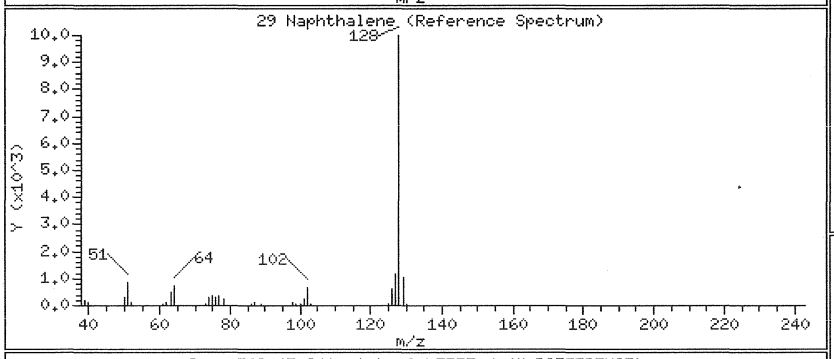
Column diameter: 0.25

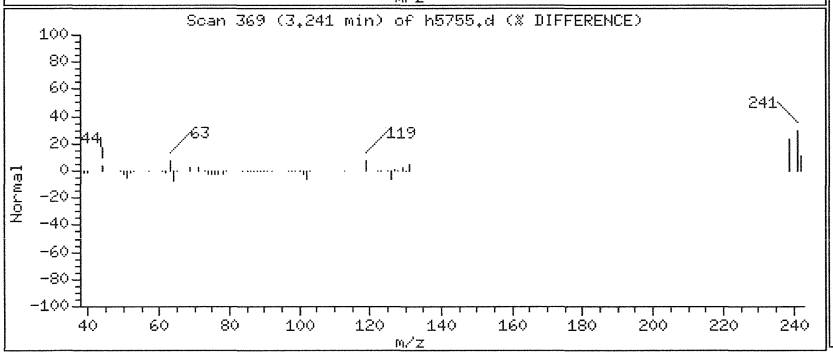
29 Naphthalene

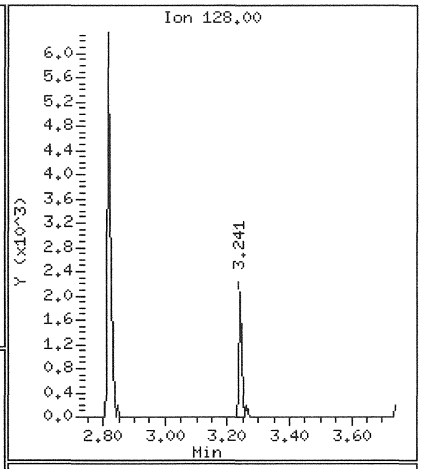
Concentration: 83.2 ug/Kg

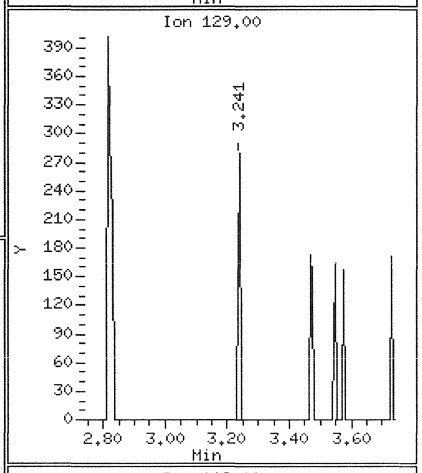


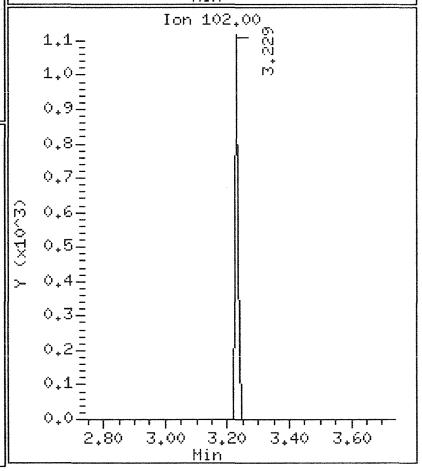



Data File: /var/chem/MSSV4.i/2131023.s.b/h5755.d



Date : 23-OCT-2013 12:28

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

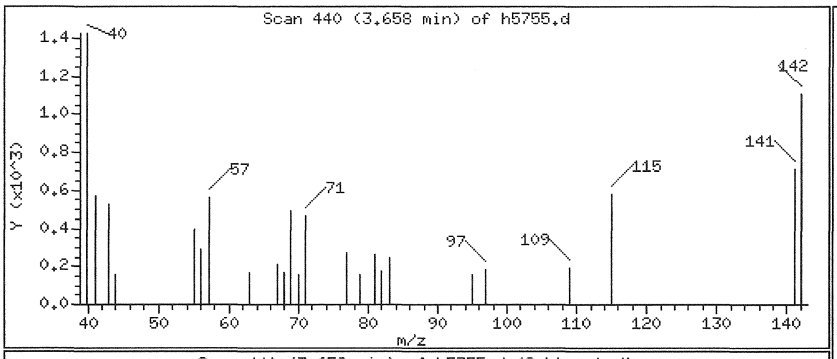
Operator: hcp

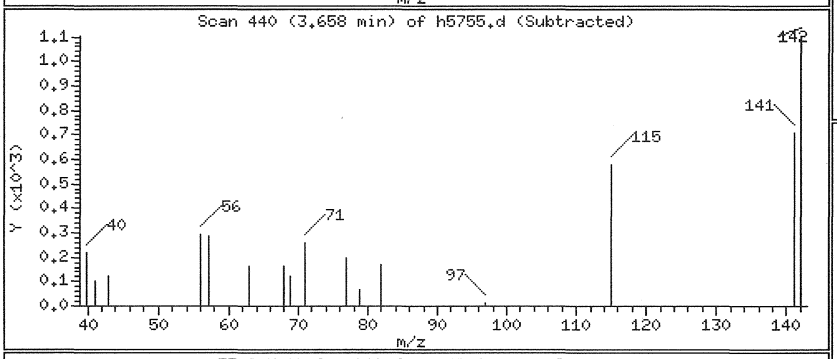
Column phase: RTX-5MS-30M

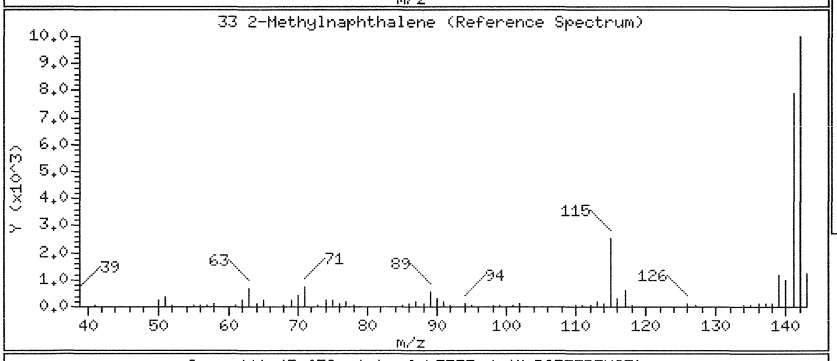
Column diameter: 0.25

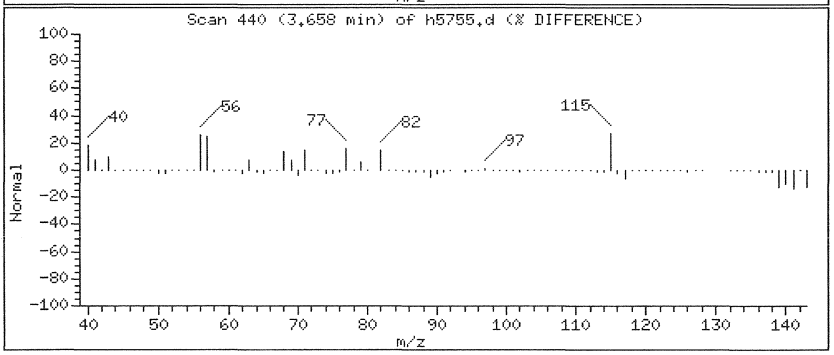
33 2-Methylnaphthalene

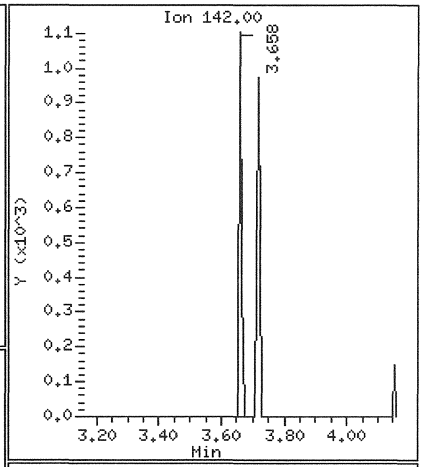
Concentration: 59.9 ug/Kg

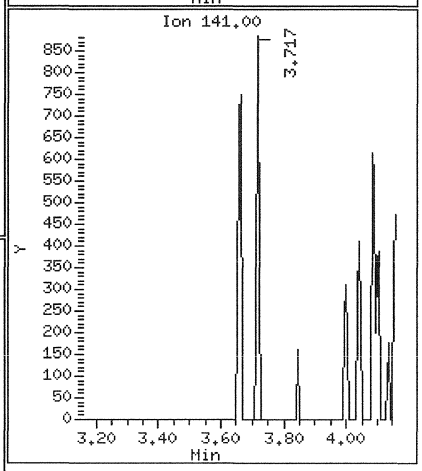


Data File: /var/chem/MSSV4.i/2131023.s.b/h5755.d



Date : 23-OCT-2013 12:28

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

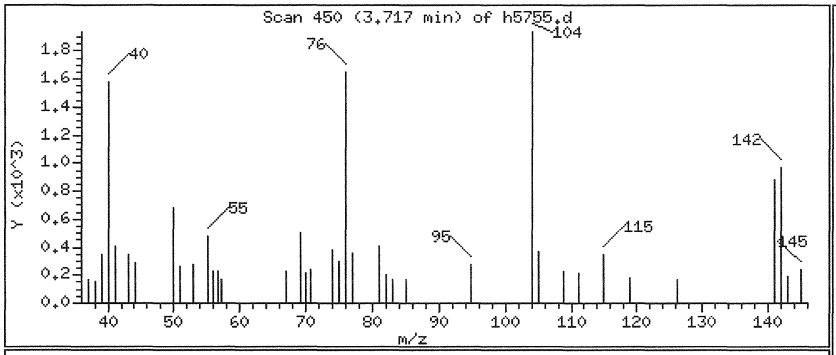
Operator: hcp

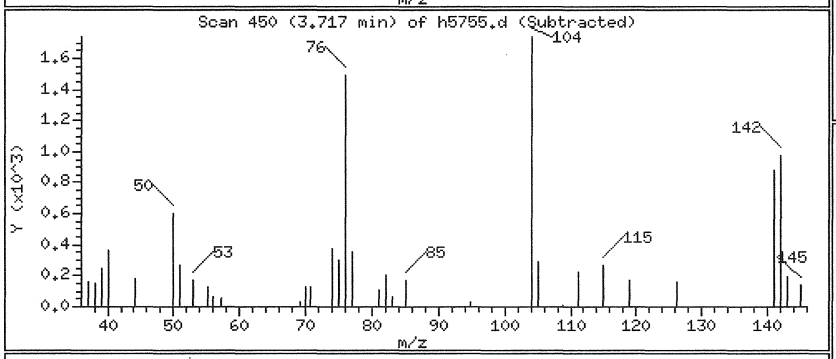
Column phase: RTX-5MS-30M

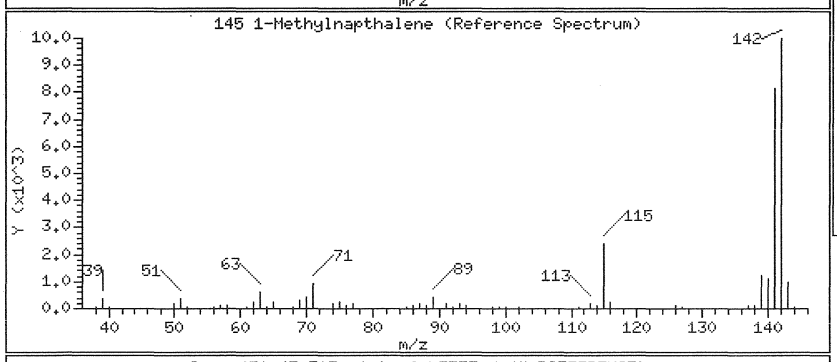
Column diameter: 0.25

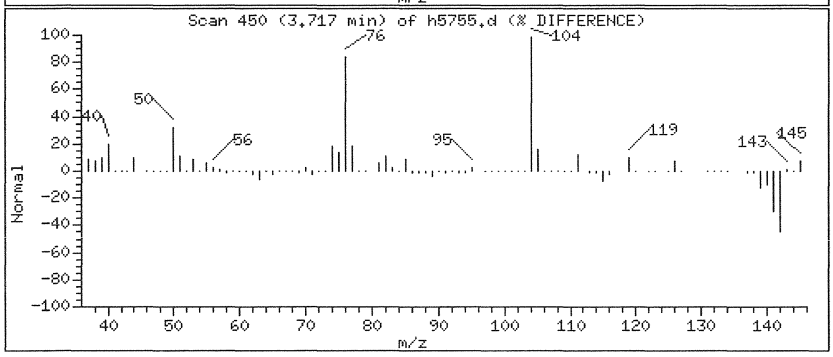
145 1-Methylnapthalene

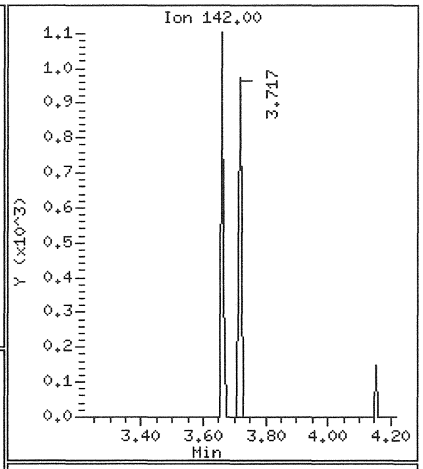
Concentration: 70.1 ug/Kg

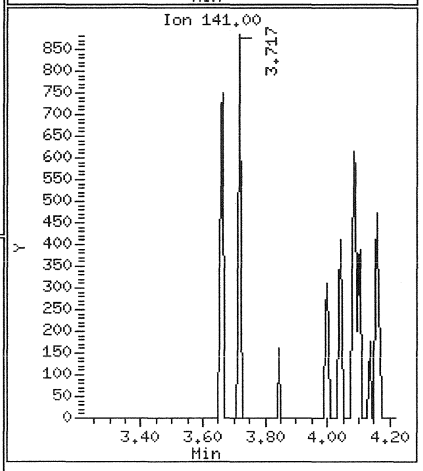


Data File: /var/chem/MSSV4.i/2131023.s.b/h5755.d



Date : 23-OCT-2013 12:28

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

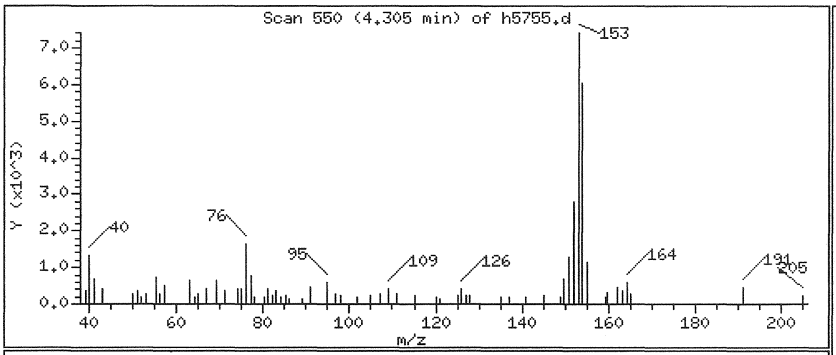
Operator: hcp

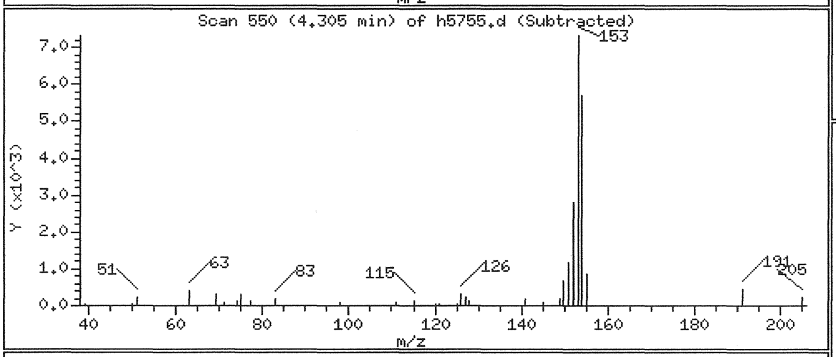
Column phase: RTX-5MS-30M

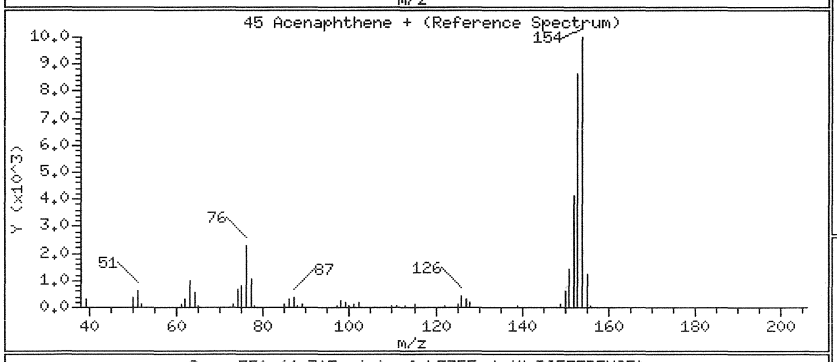
Column diameter: 0.25

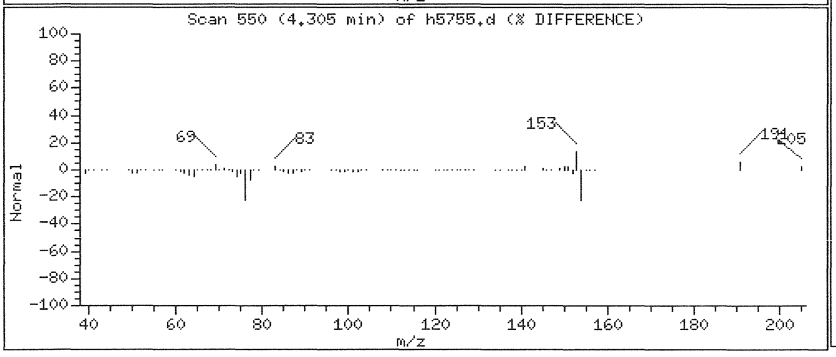
45 Acenaphthene +

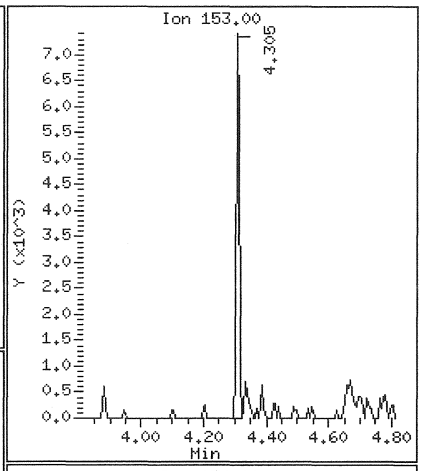
Concentration: 556 ug/Kg

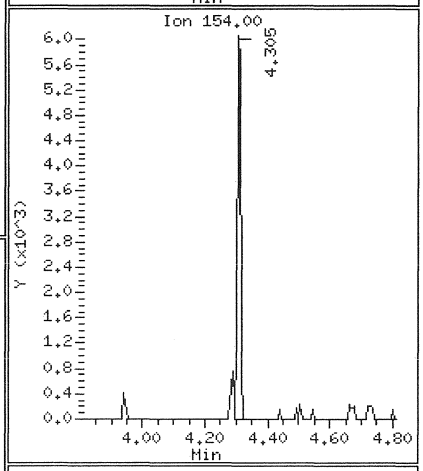


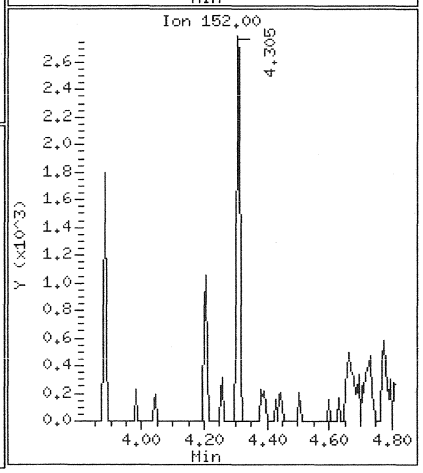



Data File: /var/chem/MSSV4.i/2131023.s.b/h5755.d



Date : 23-OCT-2013 12:28

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

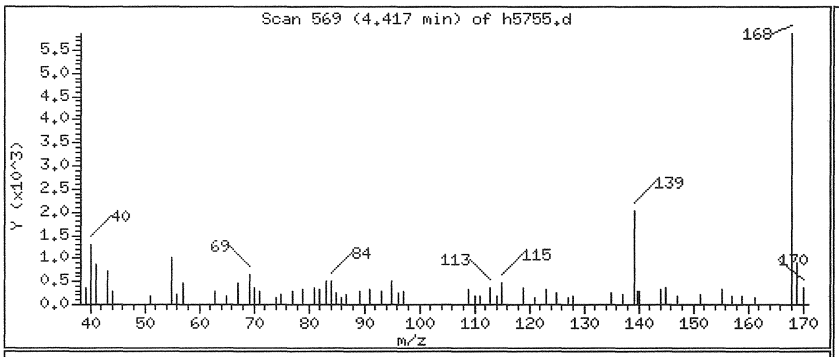
Operator: hcp

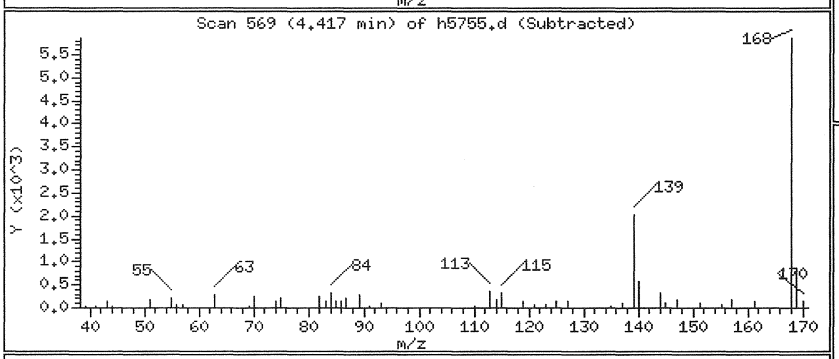
Column phase: RTX-5MS-30M

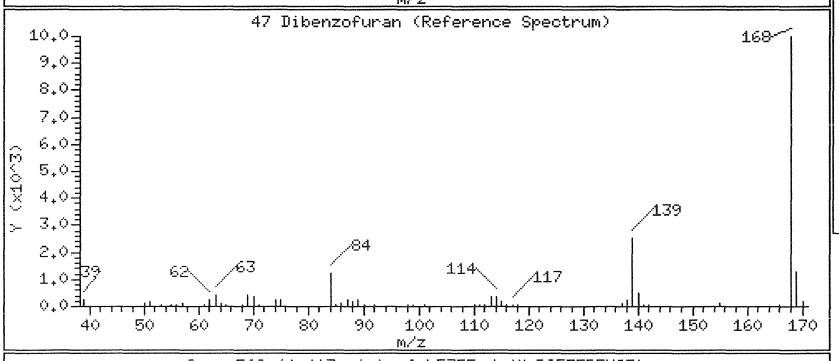
Column diameter: 0.25

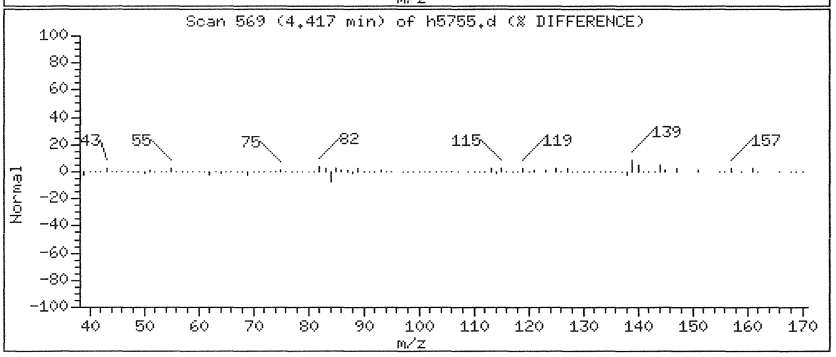
47 Dibenzofuran

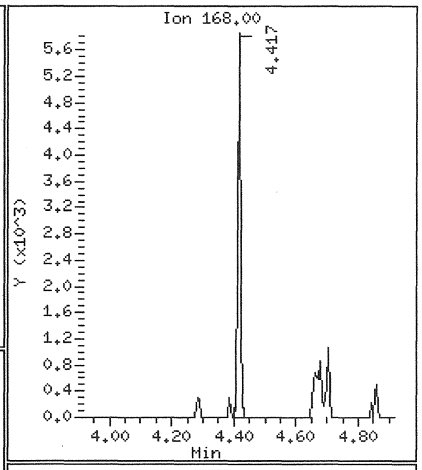
Concentration: 277 ug/Kg

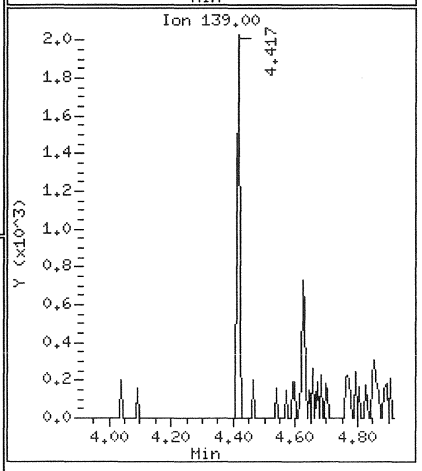


Data File: /var/chem/MSSV4.i/2131023.s.b/h5755.d

Date : 23-OCT-2013 12:28

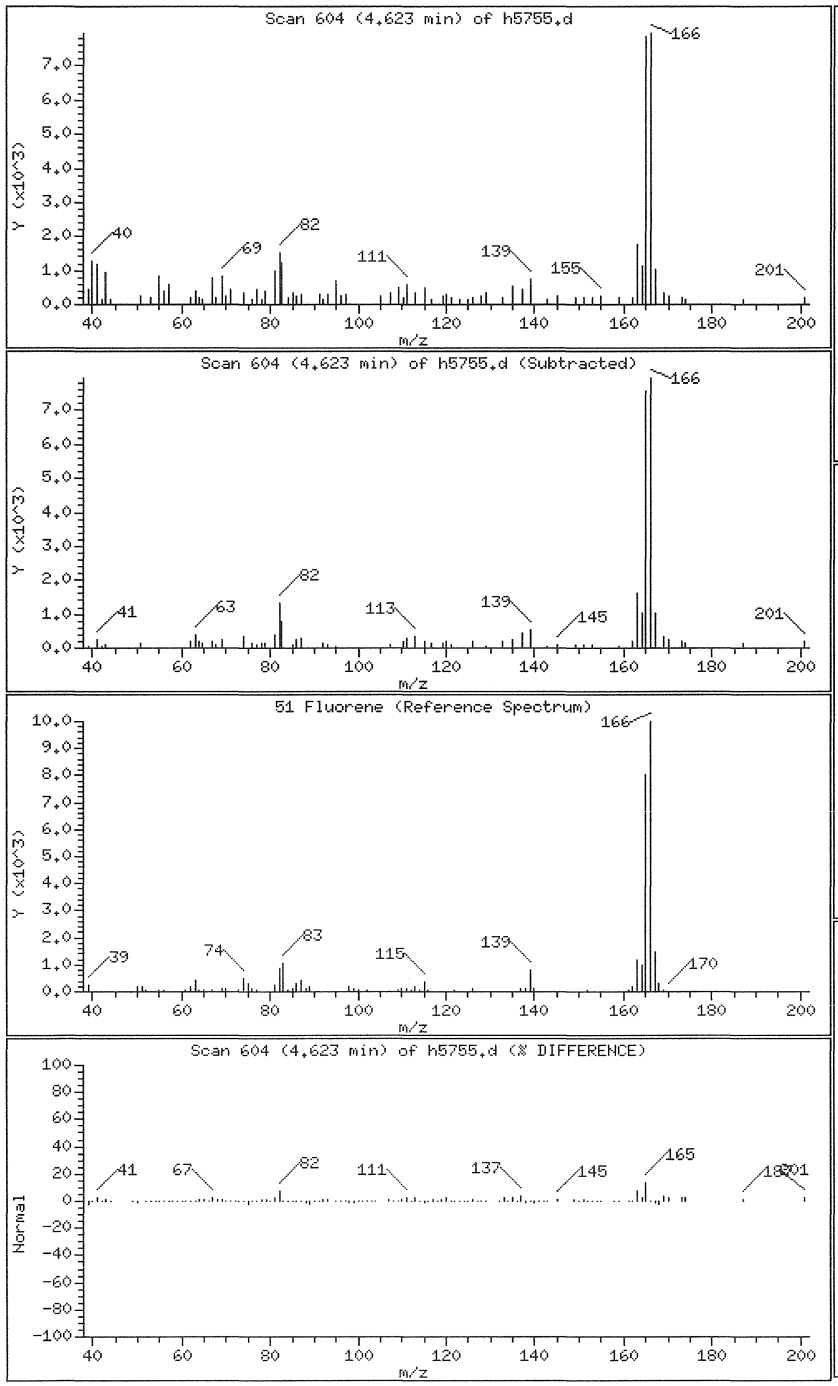
Client ID: 21310171201 Instrument: MSSV4.i

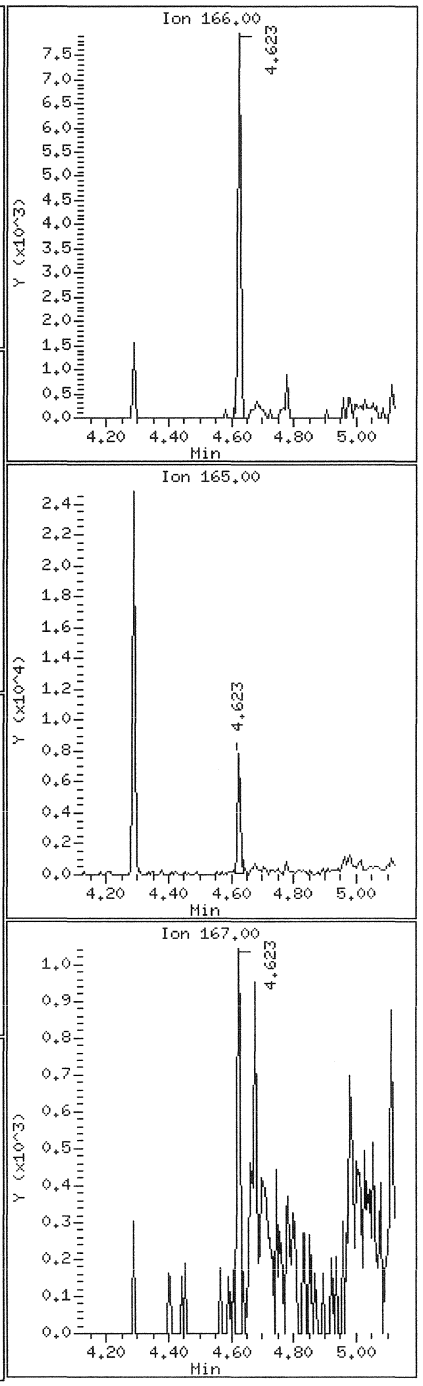
Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0 Operator: hcp

Column phase: RTX-5MS-30M Column diameter: 0.25

51 Fluorene Concentration: 511 ug/Kg



Data File: /var/chem/MSSV4.i/2131023.s.b/h5755.d



Date : 23-OCT-2013 12:28

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

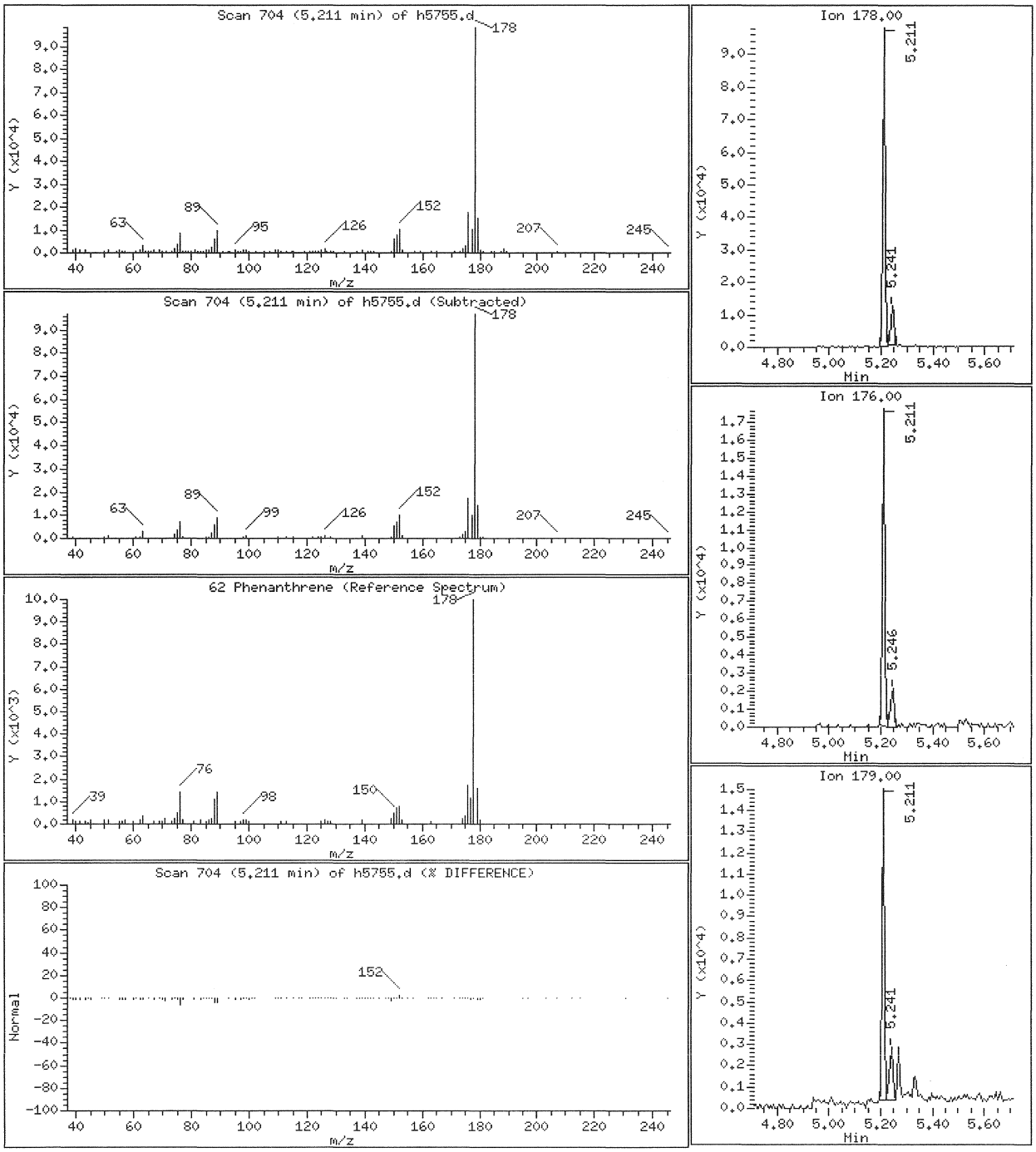
Operator: hcp

Column phase: RTX-5MS-30M

Column diameter: 0.25

62 Phenanthrene

Concentration: 4450 ug/Kg



Data File: /var/chem/MSSV4.i/2131023.s.b/h5755.d



Date : 23-OCT-2013 12:28

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

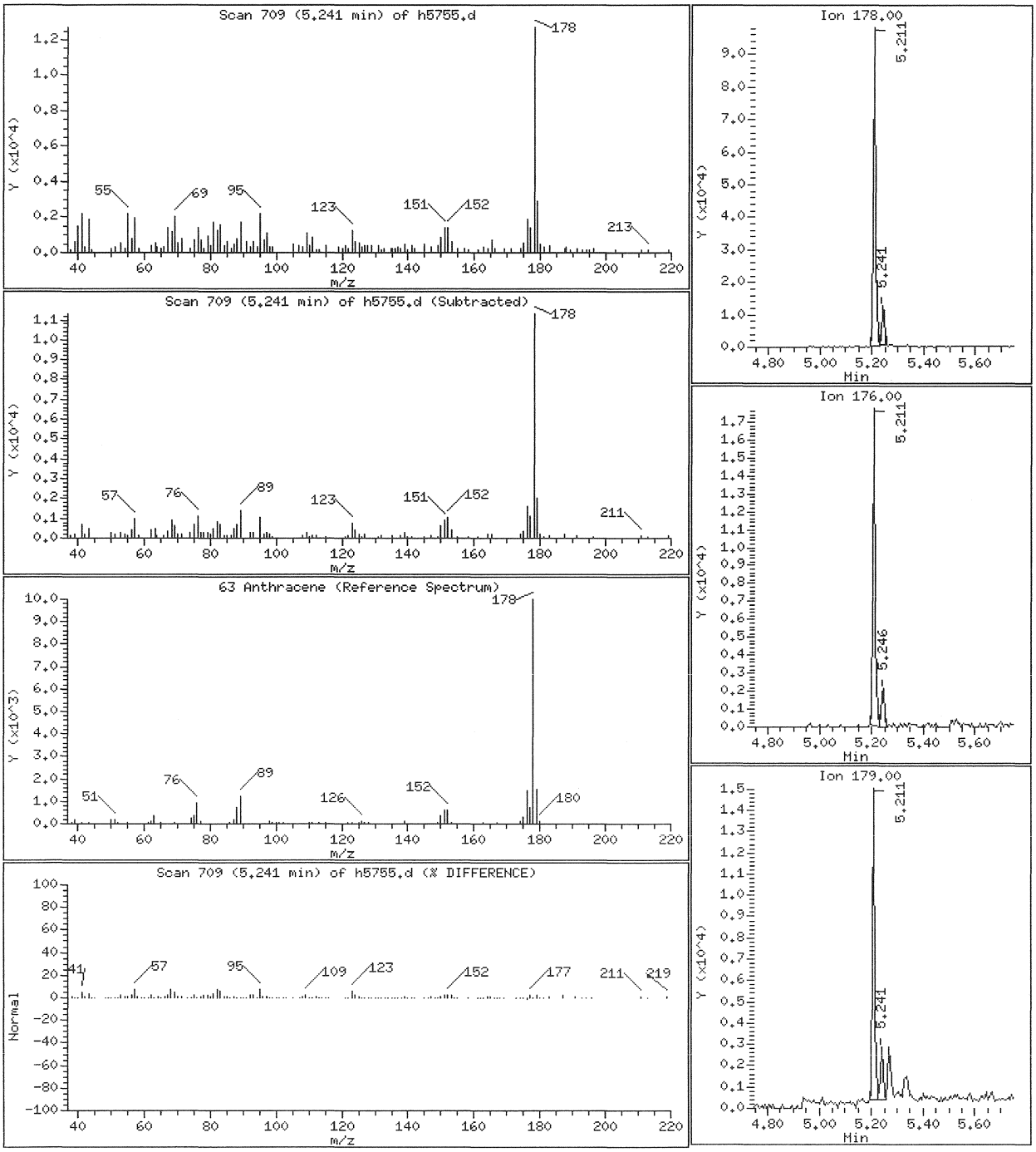
Operator: hcp

Column phase: RTX-5MS-30M

Column diameter: 0.25

63 Anthracene

Concentration: 664 ug/Kg



Data File: /var/chem/MSSV4.i/2131023.s.b/h5755.d



Date : 23-OCT-2013 12:28

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

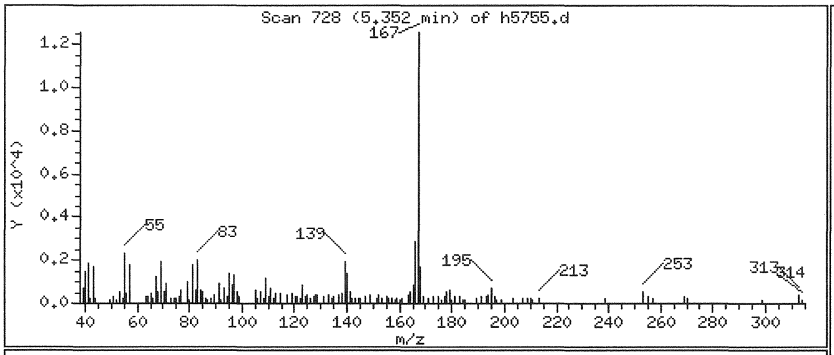
Operator: hcp

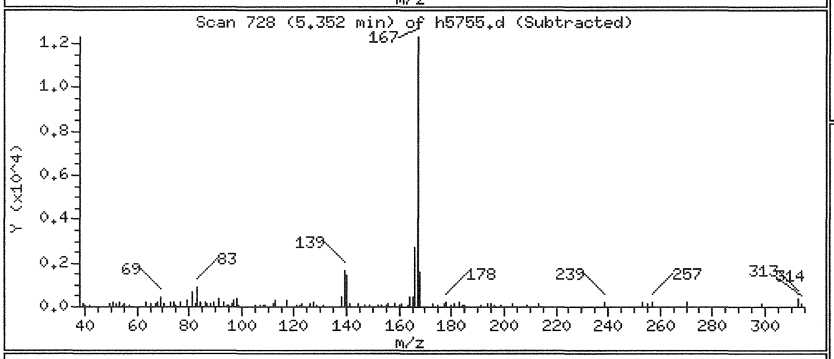
Column phase: RTX-5MS-30M

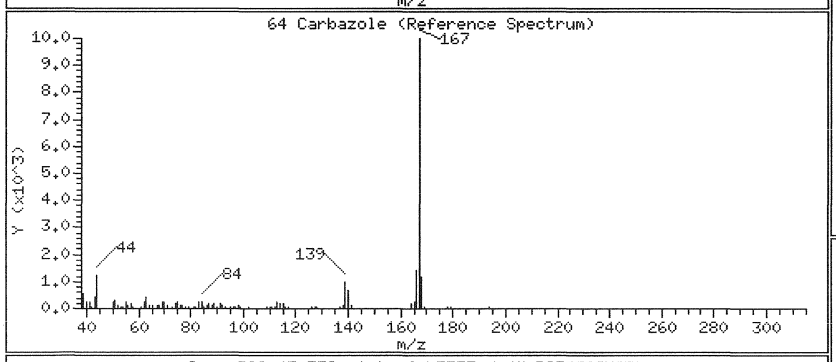
Column diameter: 0.25

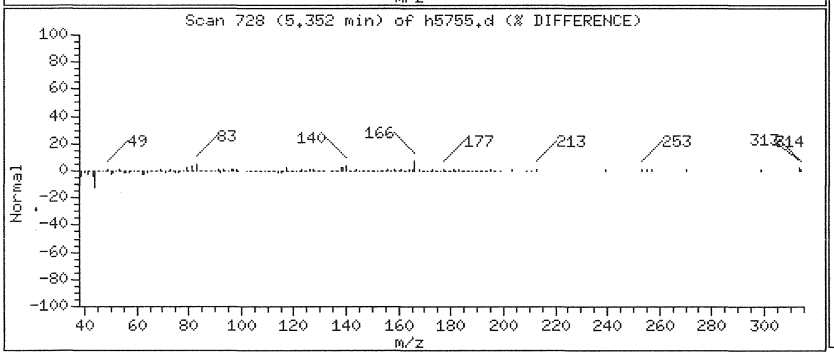
64 Carbazole

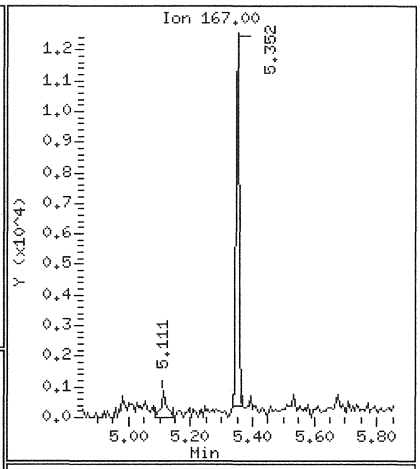
Concentration: 711 ug/Kg

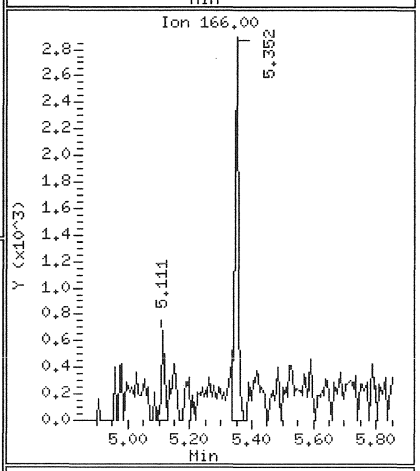


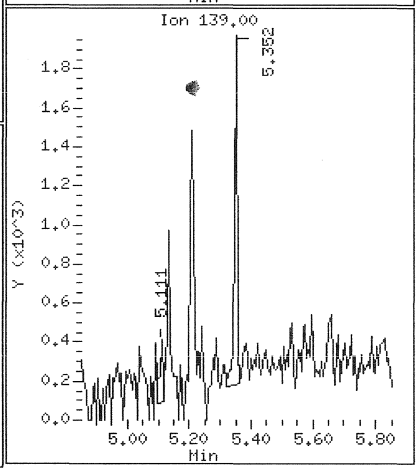



Data File: /var/chem/MSSV4.i/2131023.s.b/h5755.d



Date : 23-OCT-2013 12:28

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

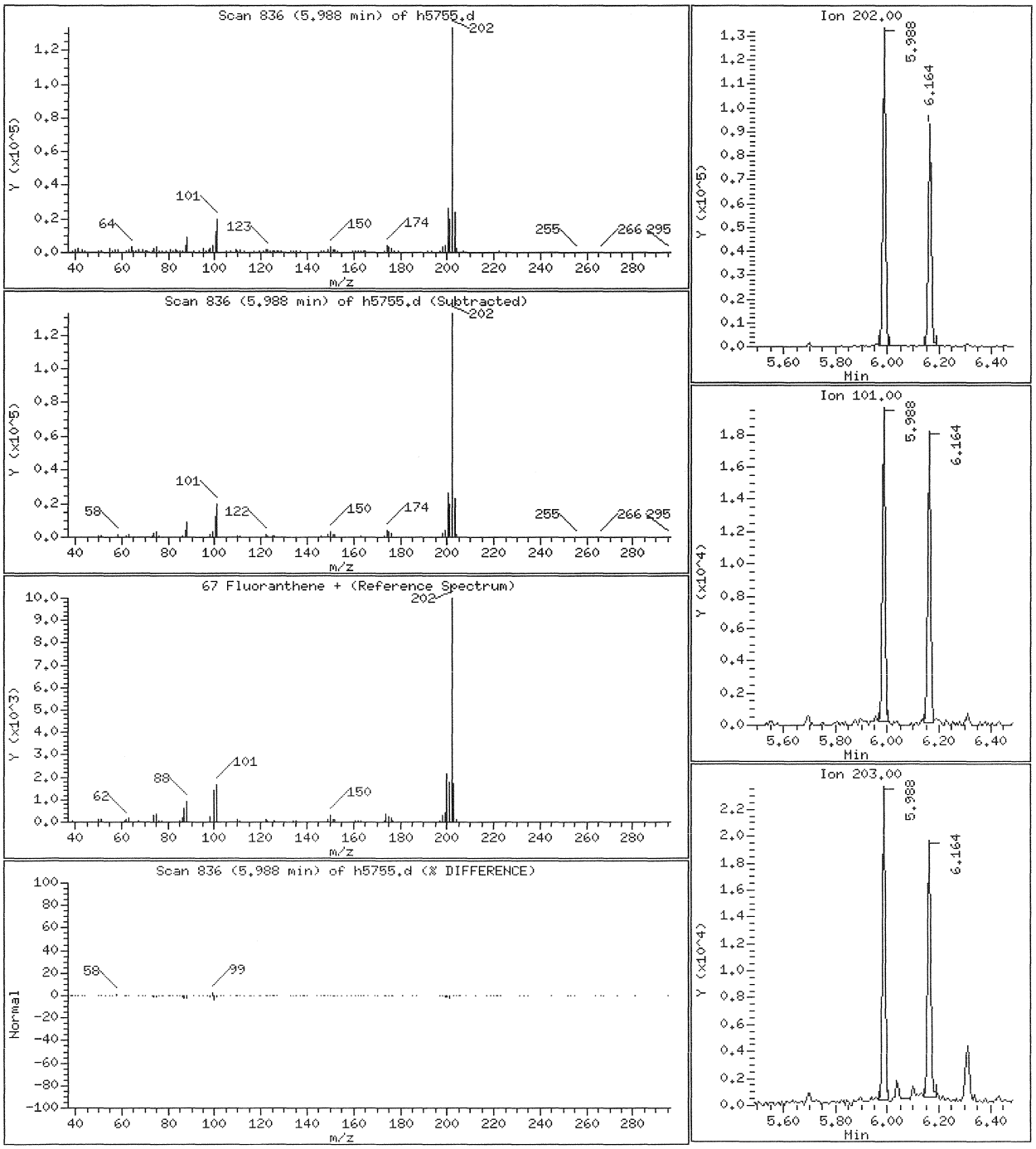
Operator: hcp

Column phase: RTX-5MS-30M

Column diameter: 0.25

67 Fluoranthene +

Concentration: 7090 ug/Kg



Data File: /var/chem/MSSV4.i/2131023.s.b/h5755.d



Date : 23-OCT-2013 12:28

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

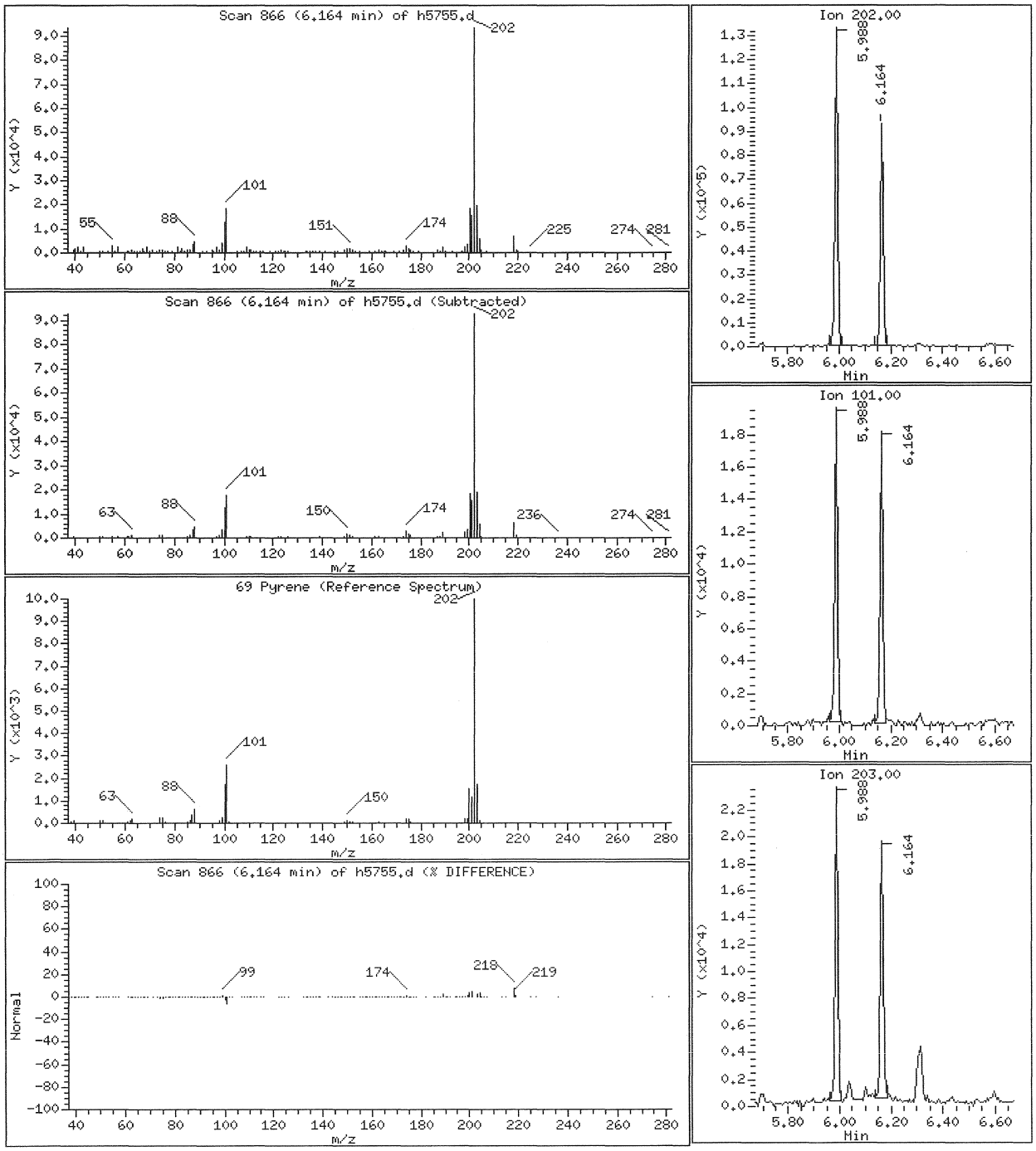
Operator: hcp

Column phase: RTX-5MS-30M

Column diameter: 0.25

69 Pyrene

Concentration: 5100 ug/Kg



Data File: /var/chem/MSSV4.i/2131023.s.b/h5755.d



Date : 23-OCT-2013 12:28

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

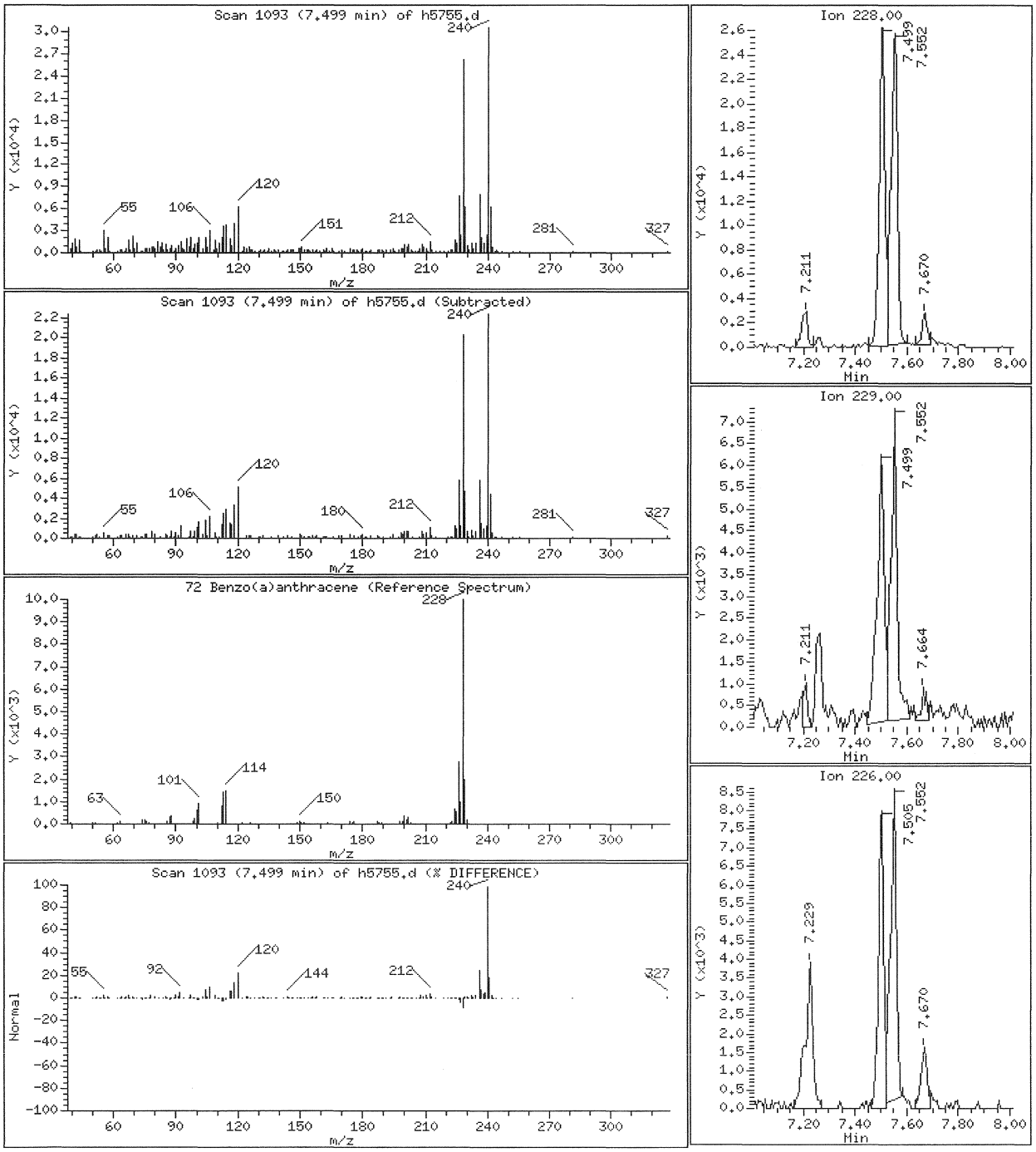
Operator: hcp

Column phase: RTX-5MS-30M

Column diameter: 0.25

72 Benzo(a)anthracene

Concentration: 3320 ug/Kg



Data File: /var/chem/MSSV4.i/2131023.s.b/h5755.d



Date : 23-OCT-2013 12:28

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

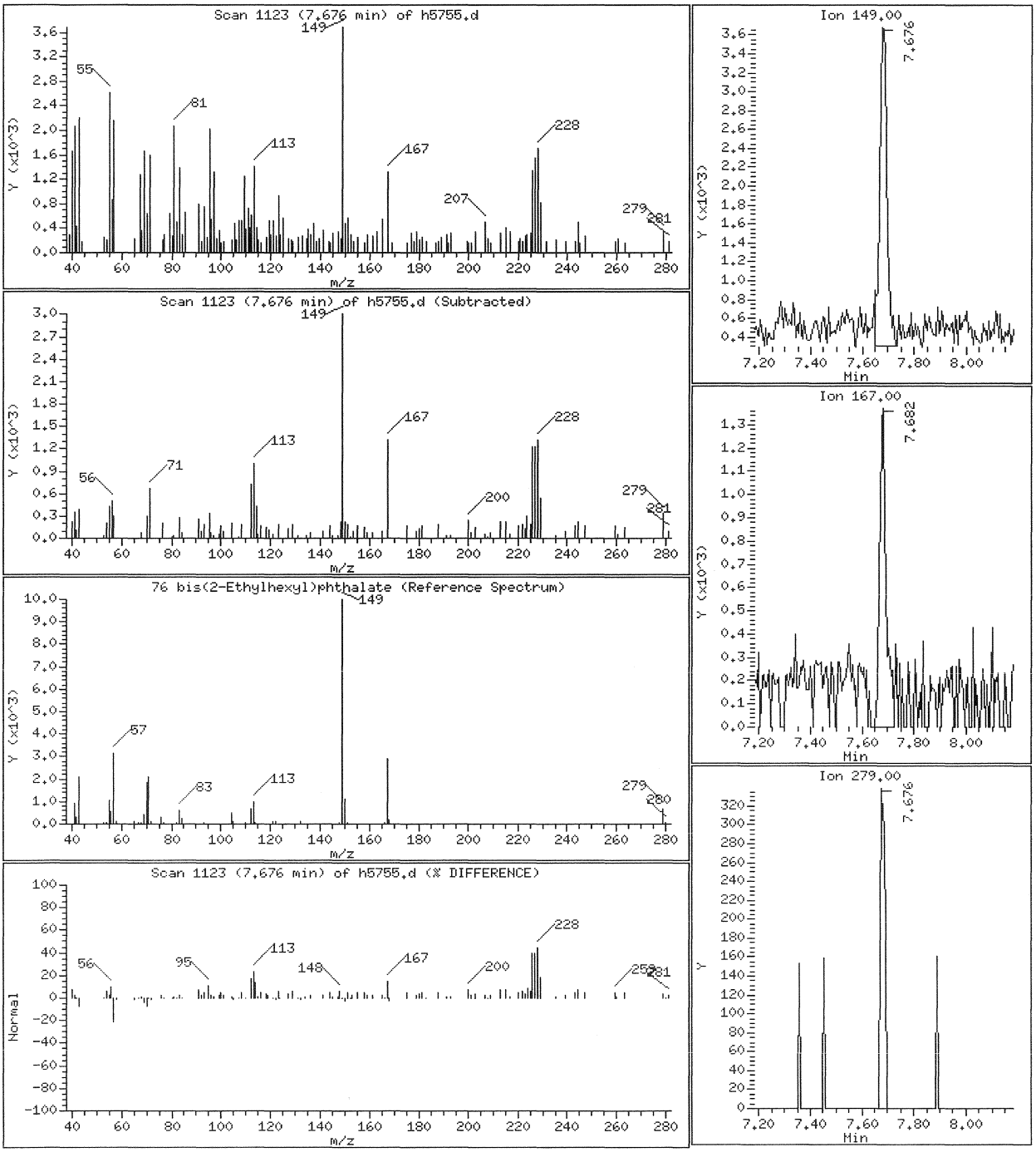
Operator: hcp

Column phase: RTX-5MS-30M

Column diameter: 0.25

76 bis(2-Ethylhexyl)phthalate

Concentration: 841 ug/Kg



Data File: /var/chem/MSSV4.i/2131023.s.b/h5755.d



Date : 23-OCT-2013 12:28

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

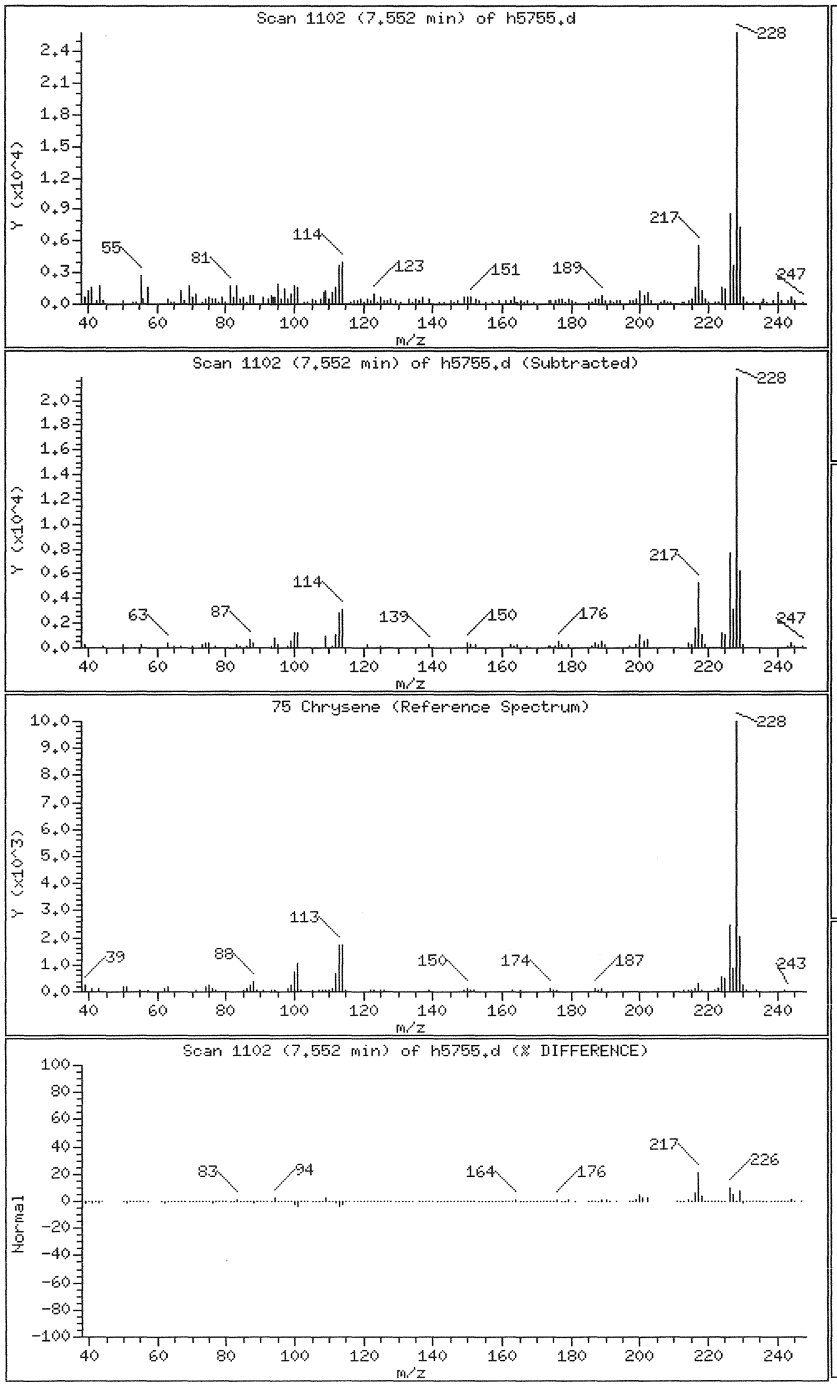
Operator: hcp

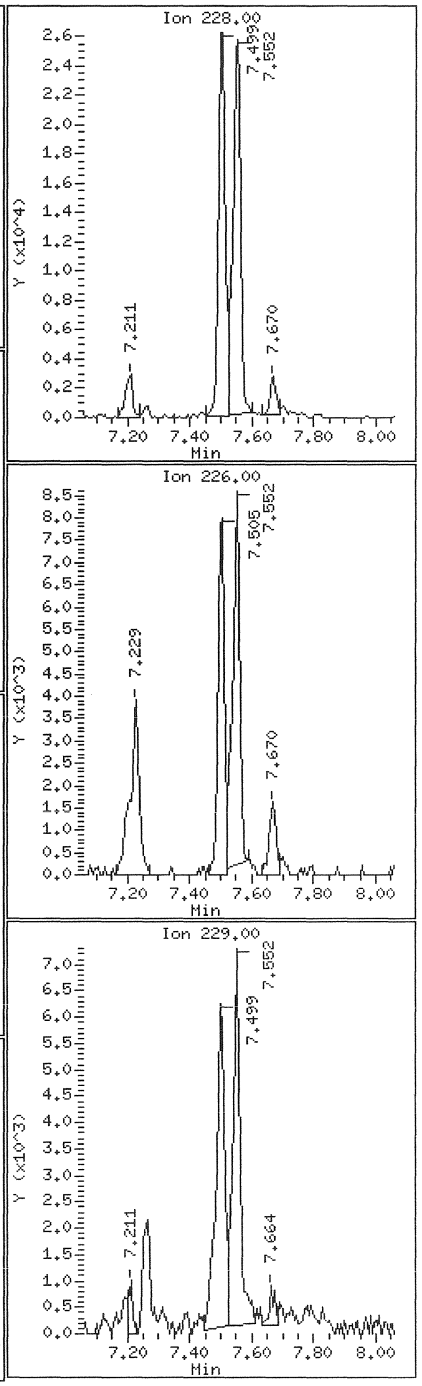
Column phase: RTX-5MS-30M

Column diameter: 0.25

75 Chrysene

Concentration: 3300 ug/Kg



Data File: /var/chem/MSSV4.i/2131023.s.b/h5755.d



Date : 23-OCT-2013 12:28

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

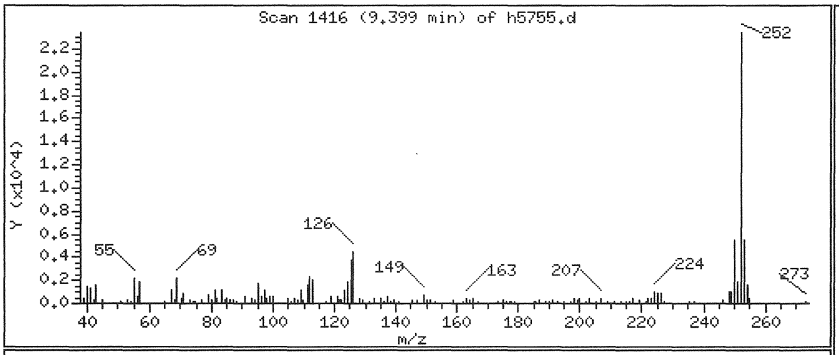
Operator: hcp

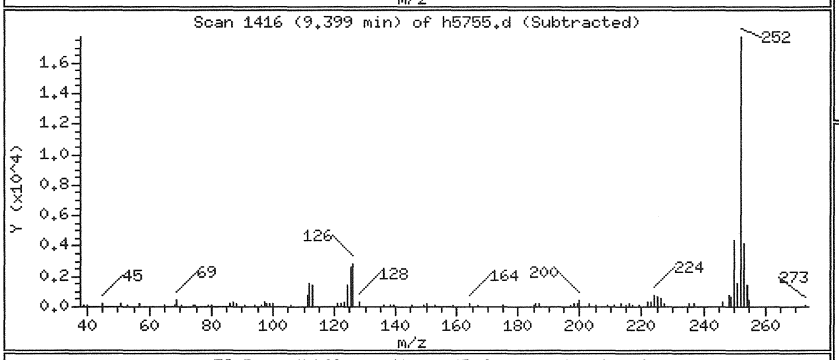
Column phase: RTX-5MS-30M

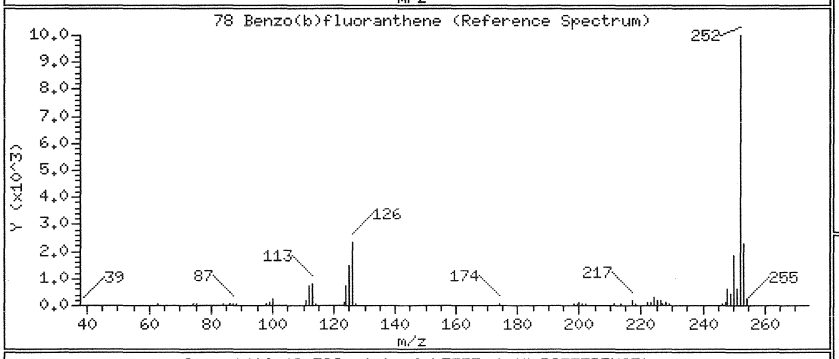
Column diameter: 0.25

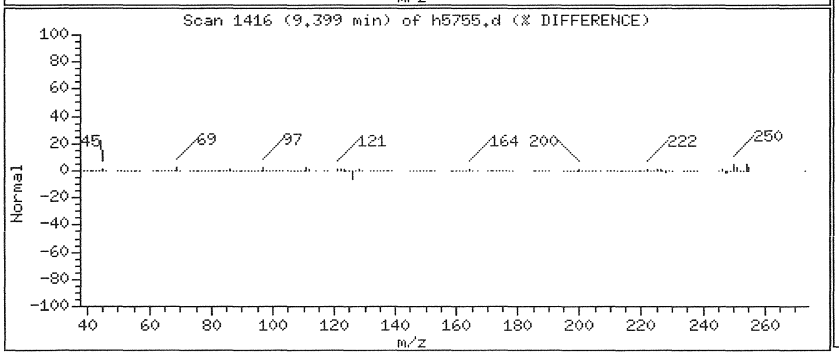
78 Benzo(b)fluoranthene

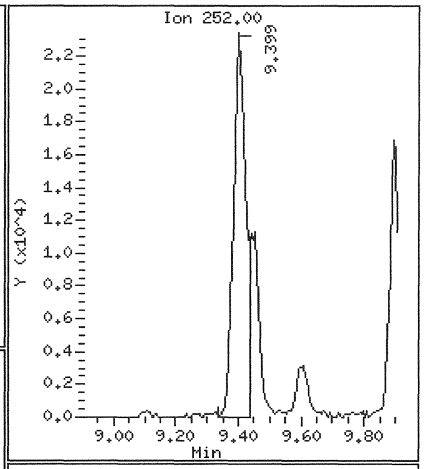
Concentration: 4080 ug/Kg

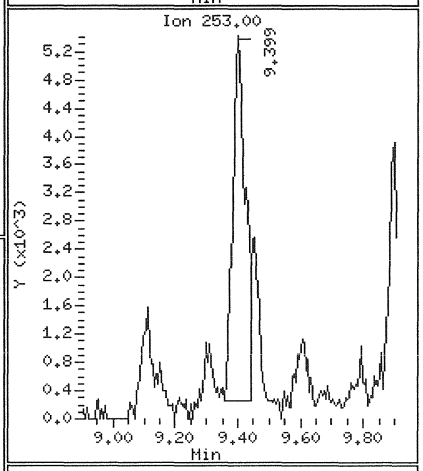


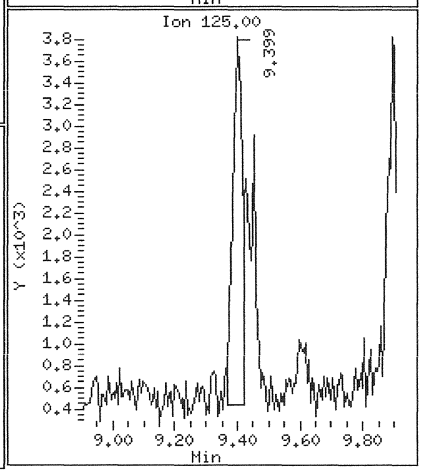



Data File: /var/chem/MSSV4.i/2131023.s.b/h5755.d



Date : 23-OCT-2013 12:28

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

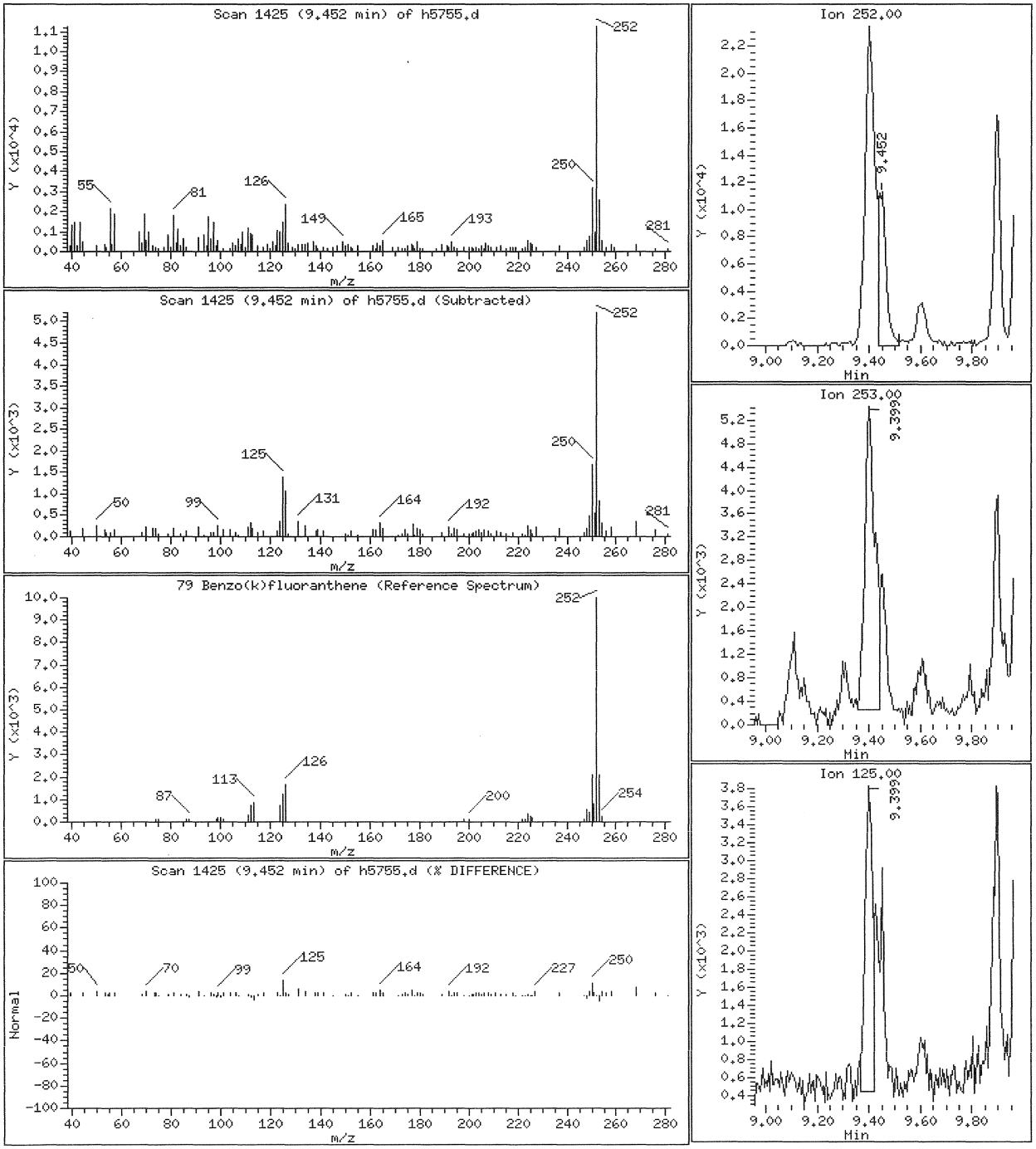
Operator: hcp

Column phase: RTX-5MS-30M

Column diameter: 0.25

79 Benzo(k)fluoranthene

Concentration: 1400 ug/Kg



Data File: /var/chem/MSSW4.i/2131023.s.b/h5755.d



Date : 23-OCT-2013 12:28

Client ID: 21310171201

Instrument: MSSW4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

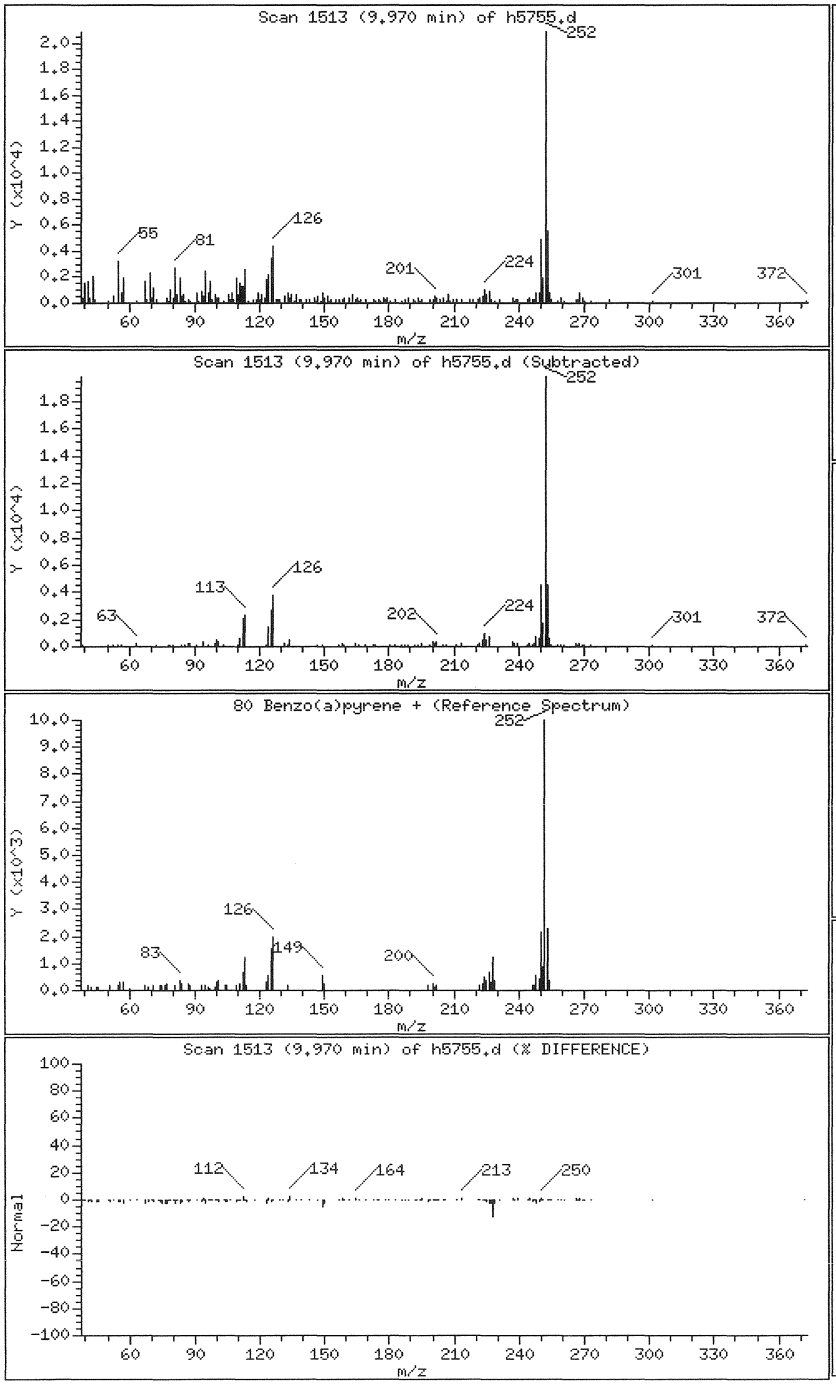
Operator: hop

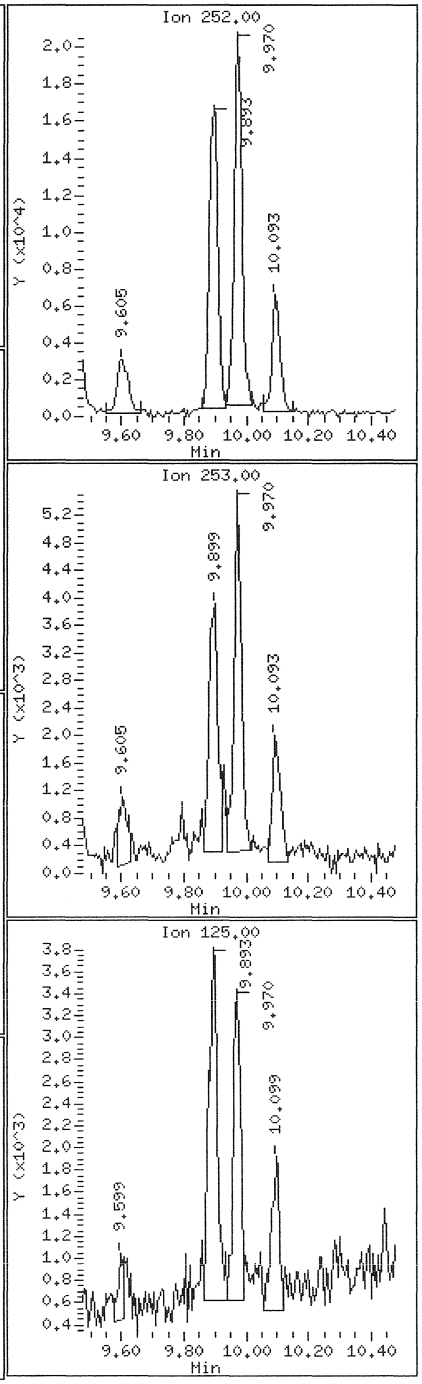
Column phase: RTX-5MS-30M

Column diameter: 0.25

80 Benzo(a)pyrene +

Concentration: 2330 ug/Kg



Data File: /var/chem/MSSV4.i/2131023.s.b/h5755.d

Date : 23-OCT-2013 12:28

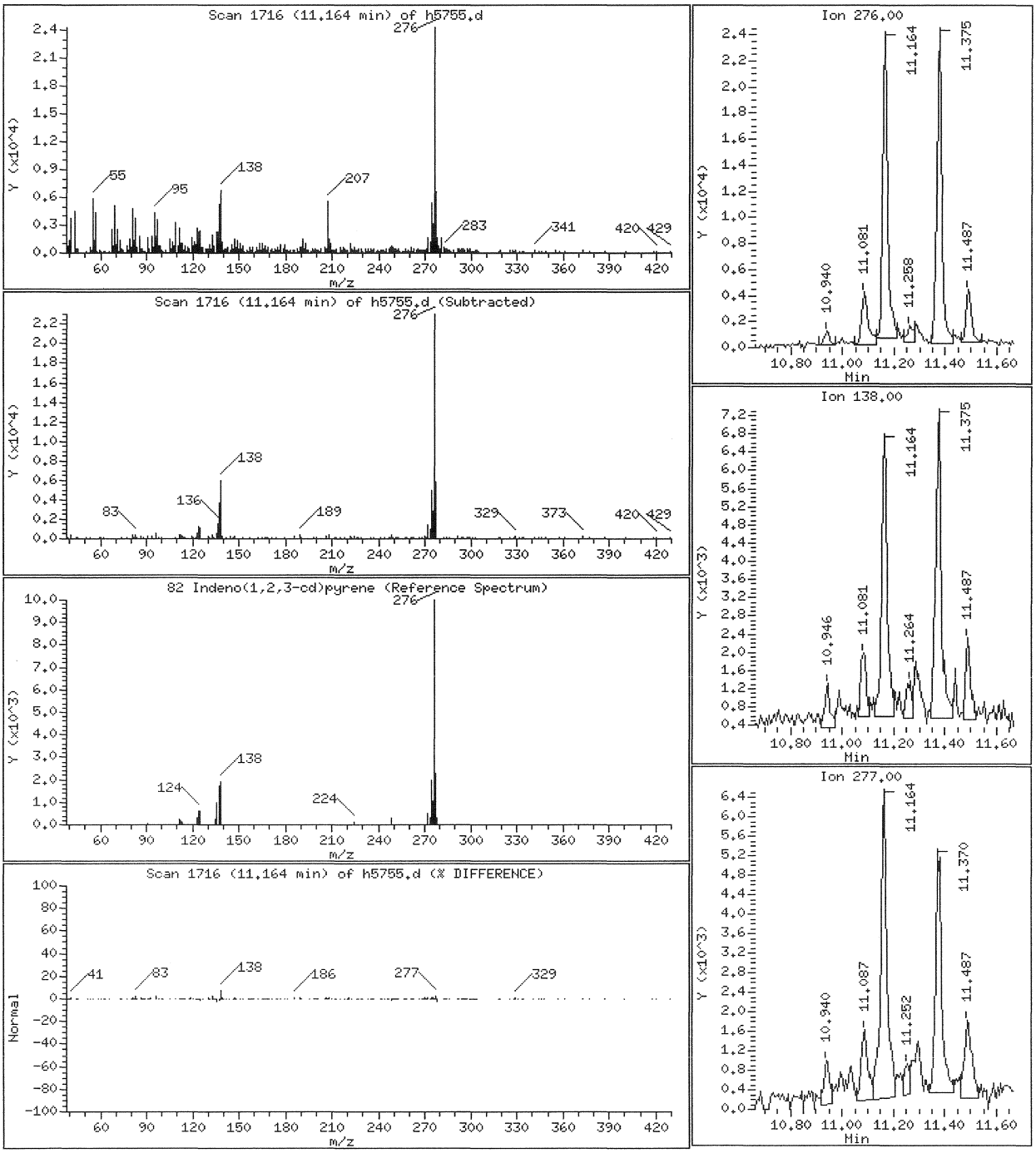
Client ID: 21310171201 Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0 Operator: hcp

Column phase: RTX-5MS-30M Column diameter: 0.25

82 Indeno(1,2,3-cd)pyrene Concentration: 2290 ug/Kg



Data File: /var/chem/MSSV4.i/2131023.s.b/h5755.d



Date : 23-OCT-2013 12:28

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

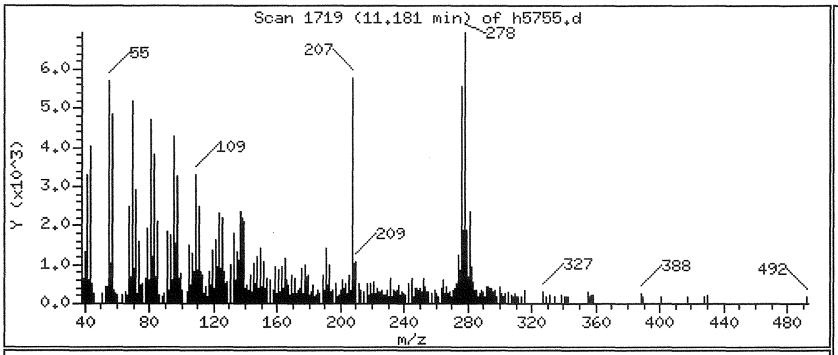
Operator: hcp

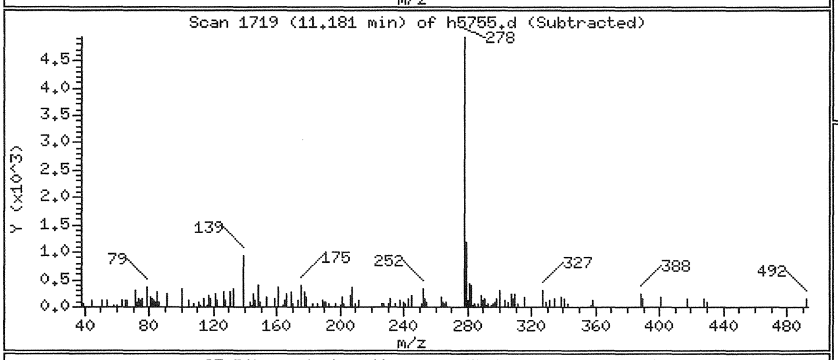
Column phase: RTX-5MS-30M

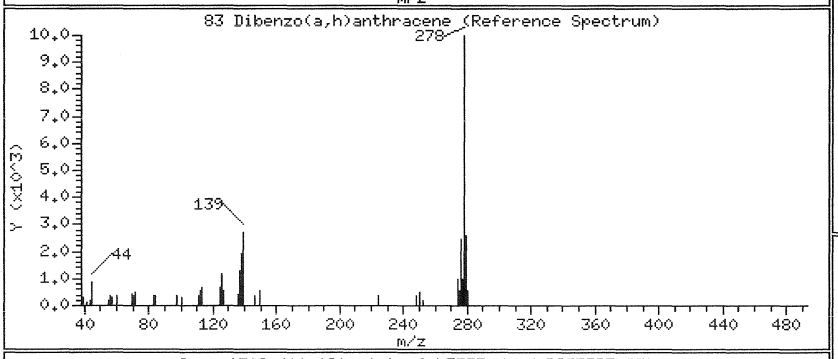
Column diameter: 0.25

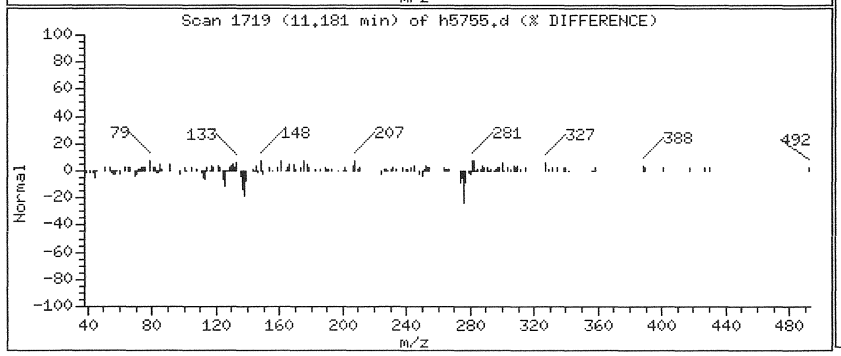
83 Dibenzo(a,h)anthracene

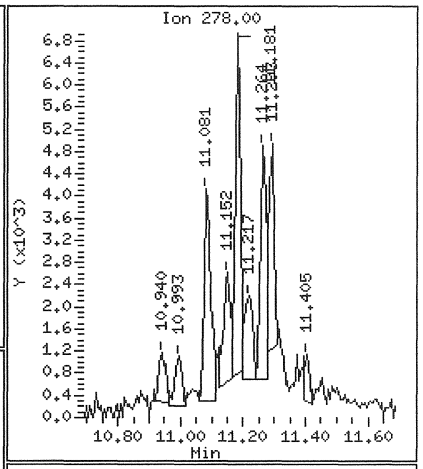
Concentration: 442 ug/Kg

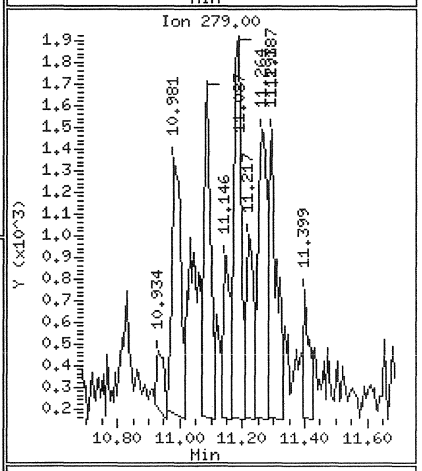


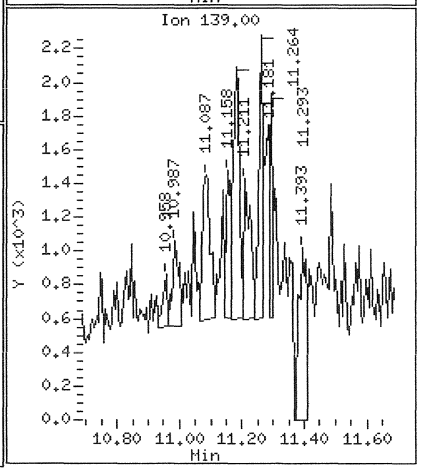



Data File: /var/chem/MSSV4.i/2131023.s.b/h5755.d



Date : 23-OCT-2013 12:28

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

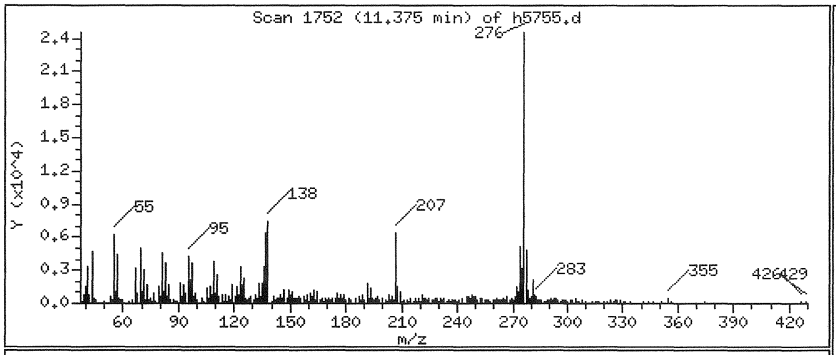
Operator: hcp

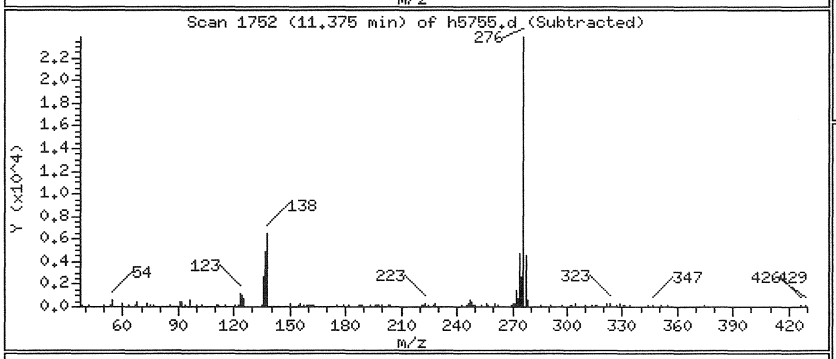
Column phase: RTX-5MS-30M

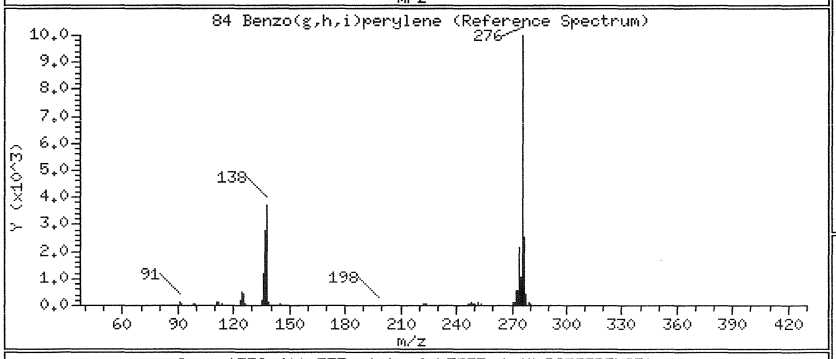
Column diameter: 0.25

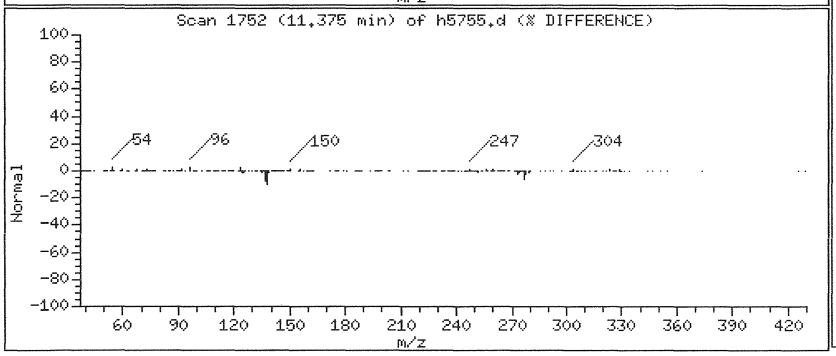
84 Benzo(g,h,i)perylene

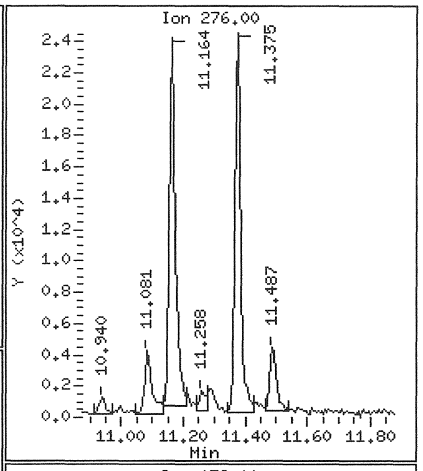
Concentration: 1790 ug/Kg

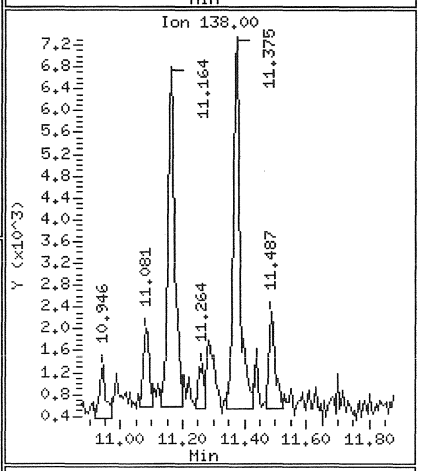


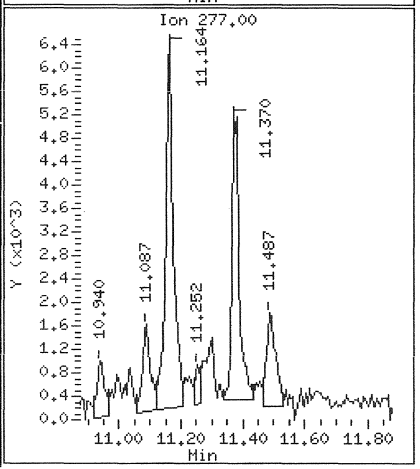



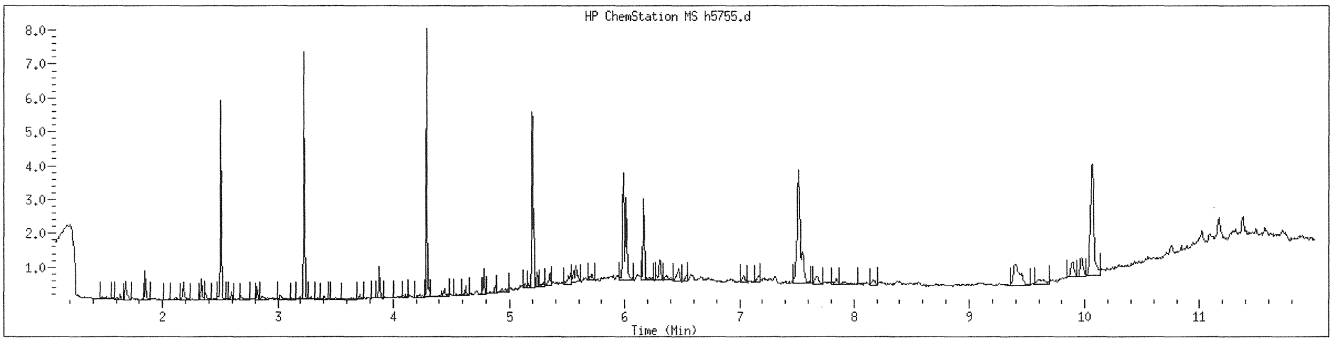



Data file : /var/chem/MSSV4.i/2131023.s.b/h5755.d Page: 1
Report Date: 10/24/2013 11:15

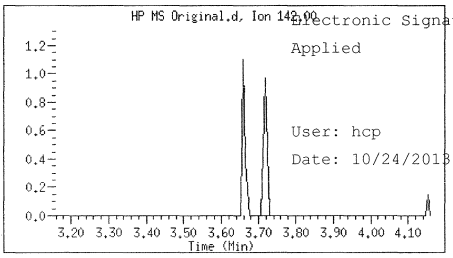
MANUAL INTEGRATION GRAPHIC REPORT

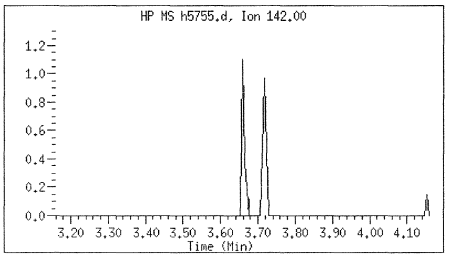
Lab ID : 21310171201 SampleType : SAMPLE
Injection Date: 10/23/2013 12:28 Instrument : MSSV4.i
Operator : hcp
Sample Info : 21310171201*4847*
Misc Info : 21310171201*MSSV~10023~*101712*30.0-1X10*518149*
Method : /var/chem/MSSV4.i/2131023.s.b/8270D_04.m
Dilution : 10.0
Matrix : SOIL
Integrator : HP RTE Compound Sublist: SA8270



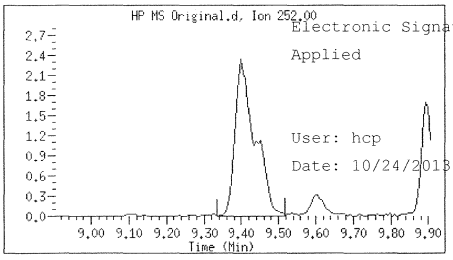

Original Final

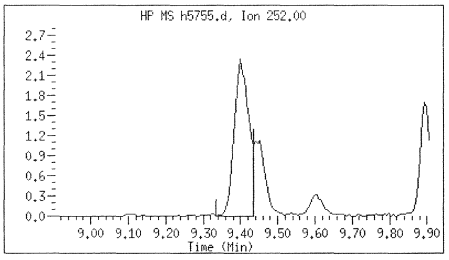
33 2-Methylnaphthalene CAS#: 91-57-6 Reason: M3



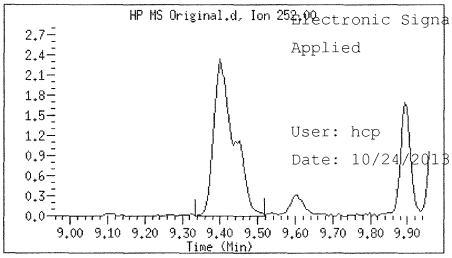

78 Benzo(b)fluoranthene CAS#: 205-99-2 Reason: M1

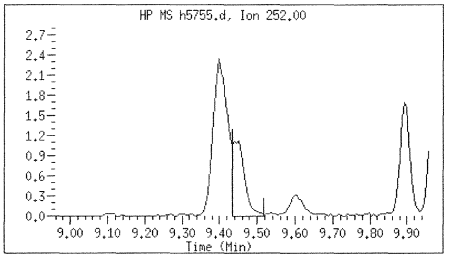


Original Final

79 Benzo(k)fluoranthene CAS#: 207-08-9 Reason: M1



1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: 18.4 decanted: (Y/N)

GC Column: RTX-5MS-30 ID: .25 (mm)

Concentrated Extract Volume: 1000 ( µL )

Injection Volume: 1.0 ( µL )

GPC Cleanup: (Y/N) N pH:

*CONCENTRATION UNITS: ug/kg*

Sample ID: RS-COMP1-101613

Contract:

Lab File ID: 2131022/h5736

Lab Sample ID: 21310171201

Date Collected: 10/16/13 Time: 1600

Date Received: 10/17/13

Date Extracted: 10/22/13

Date Analyzed: 10/22/13 Time: 1631

Dilution Factor: 1 Analyst: HCP

Prep Method: 3550B

Analytical Method: SW-846 8270D

Instrument ID: MSSV4

Prep Batch: 518149 Analytical Batch: 518302

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 120-82-1 | 1,2,4-Trichlorobenzene | 40.8 | U | 12.9 | 40.8 | 404 |
| 95-50-1 | 1,2-Dichlorobenzene | 40.8 | U | 8.40 | 40.8 | 404 |
| 541-73-1 | 1,3-Dichlorobenzene | 40.8 | U | 16.4 | 40.8 | 404 |
| 106-46-7 | 1,4-Dichlorobenzene | 40.8 | U | 10.8 | 40.8 | 404 |
| 95-95-4 | 2,4,5-Trichlorophenol | 81.8 | U | 12.7 | 81.8 | 404 |
| 88-06-2 | 2,4,6-Trichlorophenol | 205 | U | 14.2 | 205 | 404 |
| 120-83-2 | 2,4-Dichlorophenol | 81.8 | U | 11.6 | 81.8 | 404 |
| 105-67-9 | 2,4-Dimethylphenol | 59.9 | J | 7.99 | 404 | 404 |
| 51-28-5 | 2,4-Dinitrophenol | 404 | U | 27.6 | 404 | 2020 |
| 121-14-2 | 2,4-Dinitrotoluene | 81.8 | U | 8.24 | 81.8 | 404 |
| 606-20-2 | 2,6-Dinitrotoluene | 40.8 | U | 15.1 | 40.8 | 404 |
| 91-58-7 | 2-Chloronaphthalene | 40.8 | U | 12.9 | 40.8 | 404 |
| 95-57-8 | 2-Chlorophenol | 40.8 | U | 8.87 | 40.8 | 404 |
| 91-57-6 | 2-Methylnaphthalene | 61.7 | J | 5.83 | 40.8 | 404 |
| 88-74-4 | 2-Nitroaniline | 81.8 | U | 5.14 | 81.8 | 2020 |
| 88-75-5 | 2-Nitrophenol | 40.8 | U | 14.5 | 40.8 | 404 |
| 91-94-1 | 3,3'-Dichlorobenzidine | 408 | UJ | 38.7 | 408 | 809 |
| 99-09-2 | 3-Nitroaniline | 81.8 | UJ | 5.50 | 81.8 | 2020 |
| 534-52-1 | 2-Methyl-4,6-dinitrophenol | 404 | U | 21.8 | 404 | 2020 |
| 101-55-3 | 4-Bromophenyl-phenylether | 40.8 | U | 12.9 | 40.8 | 404 |
| 59-50-7 | 4-Chloro-3-methylphenol | 81.8 | U | 9.09 | 81.8 | 404 |
| 106-47-8 | 4-Chloroaniline | 40.8 | UJ | 7.77 | 40.8 | 404 |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 40.8 | U | 9.00 | 40.8 | 404 |
| 100-01-6 | 4-Nitroaniline | 408 | UJ | 5.21 | 408 | 2020 |
| 100-02-7 | 4-Nitrophenol | 404 | U | 25.7 | 404 | 2020 |
| 83-32-9 | Acenaphthene | 617 | | 12.4 | 40.8 | 404 |
| 208-96-8 | Acenaphthylene | 40.8 | U | 8.27 | 40.8 | 404 |
| 120-12-7 | Anthracene | 903 | | 8.32 | 40.8 | 404 |
| 56-55-3 | Benzo(a)anthracene | 3600 | J | 7.55 | 40.8 | 404 |

FORM I SV-1

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: 18.4 decanted: (Y/N)

GC Column: RTX-5MS-30 ID: .25 (mm)

Concentrated Extract Volume: 1000 ( µL )

Injection Volume: 1.0 ( µL )

GPC Cleanup: (Y/N) N pH:

*CONCENTRATION UNITS: ug/kg*

Sample ID: RS-COMP1-101613

Contract:

Lab File ID: 2131022/h5736

Lab Sample ID: 21310171201

Date Collected: 10/16/13 Time: 1600

Date Received: 10/17/13

Date Extracted: 10/22/13

Date Analyzed: 10/22/13 Time: 1631

Dilution Factor: 1 Analyst: HCP

Prep Method: 3550B

Analytical Method: SW-846 8270D

Instrument ID: MSSV4

Prep Batch: 518149 Analytical Batch: 518302

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 111-91-1 | Bis(2-Chloroethoxy)methane | 40.8 | U | 7.06 | 40.8 | 404 |
| 111-44-4 | Bis(2-Chloroethyl)ether | 40.8 | U | 15.7 | 40.8 | 404 |
| 117-81-7 | bis(2-ethylhexyl)phthalate | 768 | J | 5.74 | 40.8 | 404 |
| 85-68-7 | Butylbenzylphthalate | 20.5 | U | 8.08 | 20.5 | 404 |
| 86-74-8 | Carbazole | 794 | | 7.82 | 40.8 | 404 |
| 218-01-9 | Chrysene | 3890 | J | 8.76 | 40.8 | 404 |
| 84-74-2 | Di-n-butylphthalate | 20.5 | U | 7.82 | 20.5 | 404 |
| 117-84-0 | Di-n-octylphthalate | 20.5 | U | 5.36 | 20.5 | 404 |
| 132-64-9 | Dibenzofuran | 316 | J | 7.70 | 40.8 | 404 |
| 84-66-2 | Diethylphthalate | 40.8 | U | 15.0 | 40.8 | 404 |
| 131-11-3 | Dimethyl-phthalate | 20.5 | U | 6.30 | 20.5 | 404 |
| 86-73-7 | Fluorene | 617 | | 7.29 | 40.8 | 404 |
| 118-74-1 | Hexachlorobenzene | 81.8 | U | 15.7 | 81.8 | 404 |
| 87-68-3 | Hexachlorobutadiene | 40.8 | U | 10.7 | 40.8 | 404 |
| 77-47-4 | Hexachlorocyclopentadiene | 205 | UJ | 85.8 | 205 | 404 |
| 67-72-1 | Hexachloroethane | 40.8 | U | 19.2 | 40.8 | 404 |
| 78-59-1 | Isophorone | 40.8 | U | 7.19 | 40.8 | 404 |
| 91-20-3 | Naphthalene | 74.6 | J | 12.6 | 40.8 | 404 |
| 98-95-3 | Nitrobenzene | 40.8 | U | 21.1 | 40.8 | 404 |
| 87-86-5 | Pentachlorophenol | 408 | U | 9.06 | 408 | 2020 |
| 85-01-8 | Phenanthrene | 5040 | | 9.29 | 40.8 | 404 |
| 108-95-2 | Phenol | 40.8 | U | 11.2 | 40.8 | 404 |
| 129-00-0 | Pyrene | 4840 | J | 5.67 | 40.8 | 404 |
| 110-86-1 | Pyridine | 205 | U | 28.6 | 205 | 404 |
| 1319-77-3M | m,p-Cresol | 205 | UJ | 15.2 | 205 | 404 |
| 621-64-7 | N-Nitroso-di-n-propylamine | 40.8 | U | 17.6 | 40.8 | 404 |
| 62-75-9 | N-Nitrosodimethylamine | 81.8 | U | 14.2 | 81.8 | 404 |
| 86-30-6 | N-Nitrosodiphenylamine | 40.8 | U | 8.56 | 40.8 | 404 |
| 95-48-7 | o-Cresol | 40.8 | U | 12.5 | 40.8 | 404 |

GCAL, Inc.

BNA QUANT AND RATIO REPORT

Data file : /var/chem/MSSV4.i/2131022.s.b/h5736.d
Lab Smp Id: 21310171201 Client Smp ID: 21310171201
Inj Date : 22-OCT-2013 16:31
Operator : hcp Inst ID: MSSV4.i
Smp Info : 21310171201*4847*
Misc Info : 21310171201*MSSV~10019~*101712*30.0-1*518149*
Comment :
Method : /var/chem/MSSV4.i/2131022.s.b/8270D_04.m
Meth Date : 22-Oct-2013 14:01 kcb Quant Type: ISTD
Cal Date : 09-JUL-2013 00:02 Cal File: h2759x.d
Als bottle: 24
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SA8270.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula:
Amt * DF * (Uf * Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | ng unit correction factor |
| Vt | 1000.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppm) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|---|
| $ 3 2-Fluorophenol | 112 | 1.858 | 1.852 | (0.740) | 188557 | 86.5297 | 2880 |
| $ 4 Phenol-d5 | 99 | 2.341 | 2.335 | (0.932) | 211785 | 89.9952 | 3000 |
| * 10 1,4-Dichlorobenzene-d4 | 152 | 2.511 | 2.511 | (1.000) | 67335 | 40.0000 | |
| $ 19 Nitrobenzene-d5 | 82 | 2.823 | 2.823 | (0.871) | 86492 | 46.1882 | 1540 |
| 23 2,4-Dimethyphenol | 107 | 3.076 | 3.058 | (0.949) | 2799 | 1.46788 | 48.9 |
| 25 Benzoic Acid | 122 | 3.129 | 3.146 | (0.966) | 7315 | 6.54507 | 218 |
| * 28 Naphthalene-d8 | 136 | 3.241 | 3.241 | (1.000) | 225714 | 40.0000 | |
| 29 Naphthalene | 128 | 3.253 | 3.252 | (1.004) | 10700 | 1.82552 | 60.9 |
| 33 2-Methylnaphthalene | 142 | 3.670 | 3.664 | (1.132) | 5412 | 1.50781 | 50.3 |
| 145 1-Methylnapthalene | 142 | 3.729 | 3.723 | (1.151) | 5942 | 1.72464 | 57.5 |
| $ 37 2-Fluorobiphenyl | 172 | 3.888 | 3.888 | (0.904) | 183566 | 49.7522 | 1660 |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppm) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|---|
| * 44 Acenaphthene-d10 | 164 | 4.300 | 4.299 | (1.000) | 109925 | 40.0000 | |
| 45 Acenaphthene + | 153 | 4.317 | 4.317 | (1.004) | 47078 | 15.0784 | 503 |
| 47 Dibenzofuran | 168 | 4.423 | 4.423 | (1.029) | 33189 | 7.74307 | 258 |
| 51 Fluorene | 166 | 4.635 | 4.635 | (1.078) | 51536 | 15.0964 | 503 |
| $ 57 2,4,6-Tribromophenol | 332 | 4.788 | 4.782 | (1.114) | 53724 | 93.3017 | 3110 |
| * 61 Phenanthrene-d10 | 188 | 5.205 | 5.205 | (1.000) | 162078 | 40.0000 | |
| 62 Phenanthrene | 178 | 5.223 | 5.217 | (1.003) | 548270 | 123.334 | 4110 |
| 63 Anthracene | 178 | 5.252 | 5.252 | (1.009) | 97951 | 22.1058 | 737 |
| 64 Carbazole | 167 | 5.358 | 5.358 | (1.029) | 79612 | 19.4436 | 648 |
| 67 Fluoranthene + | 202 | 6.005 | 5.993 | (1.154) | 990396 | 207.496 | 6920(A) |
| 69 Pyrene | 202 | 6.182 | 6.176 | (0.819) | 762718 | 118.478 | 3950 |
| $ 70 Terphenyl-d14 | 244 | 6.323 | 6.317 | (0.838) | 159090 | 37.6293 | 1250 |
| 72 Benzo(a)anthracene | 228 | 7.535 | 7.517 | (0.998) | 499120 | 88.1628 | 2940 |
| * 74 Chrysene-d12 | 240 | 7.546 | 7.529 | (1.000) | 211423 | 40.0000 | |
| 76 bis(2-Ethylhexyl)phthalate | 149 | 7.711 | 7.693 | (1.022) | 65419 | 18.8129 | 627 |
| 75 Chrysene | 228 | 7.582 | 7.564 | (1.005) | 547932 | 95.0291 | 3170 |
| 78 Benzo(b)fluoranthene | 252 | 9.482 | 9.411 | (0.937) | 1052005 | 105.736 | 3520(M2H) |
| 79 Benzo(k)fluoranthene | 252 | 9.511 | 9.464 | (0.940) | 343940 | 29.3007 | 977(M2) |
| 80 Benzo(a)pyrene + | 252 | 9.952 | 9.981 | (0.984) | 495801 | 49.8401 | 1660(H) |
| * 81 Perylene-d12 | 264 | 10.117 | 10.070 | (1.000) | 401314 | 40.0000 | (H) |
| 82 Indeno(1,2,3-cd)pyrene | 276 | 11.217 | 11.169 | (1.109) | 723218 | 79.3570 | 2650(H) |
| 84 Benzo(g,h,i)perylene | 276 | 11.434 | 11.381 | (1.130) | 663178 | 55.7874 | 1860(H) |

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M2- Compound response manually integrated because Target system integrated incorrectly.
H - Operator selected an alternate compound hit.

Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d

Date : 22-OCT-2013 16:31

Client ID: 21310171201

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

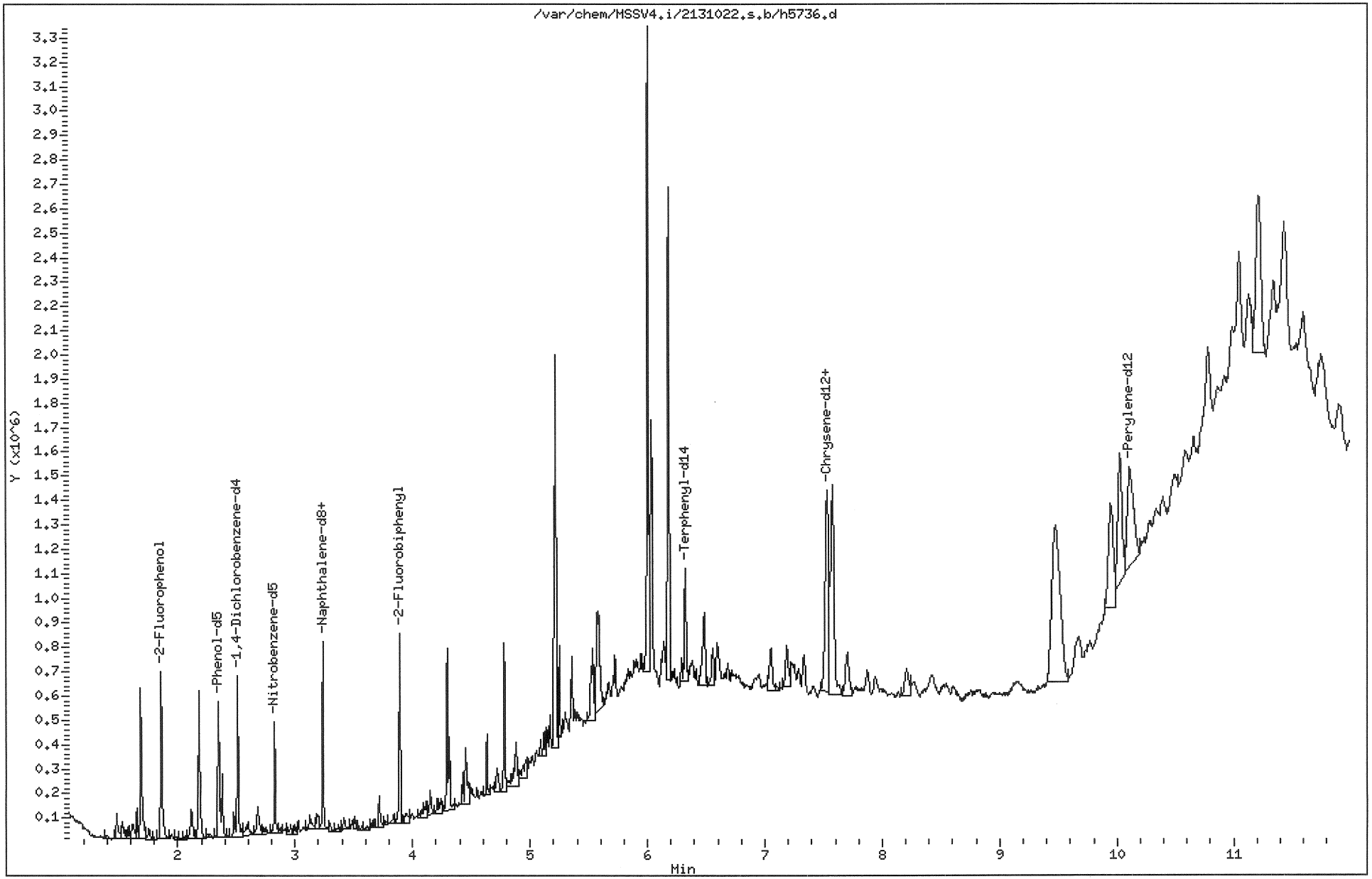
Column phase: RTX-5MS-30M

Instrument: MSSV4.i

Operator: hcp

Column diameter: 0.25






21310171215

Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d



Date : 22-OCT-2013 16:31

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

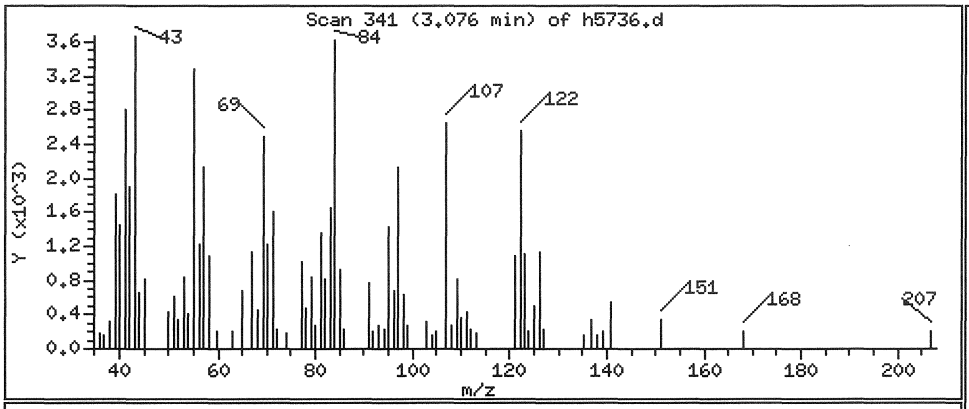
Operator: hcp

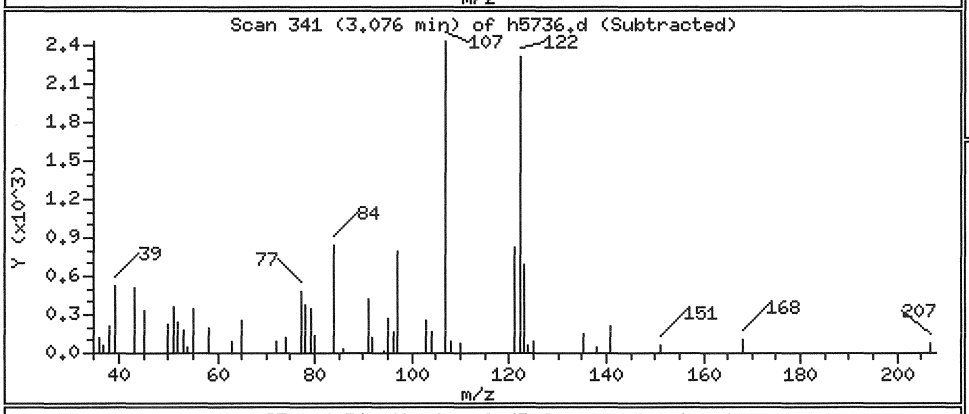
Column phase: RTX-5MS-30M

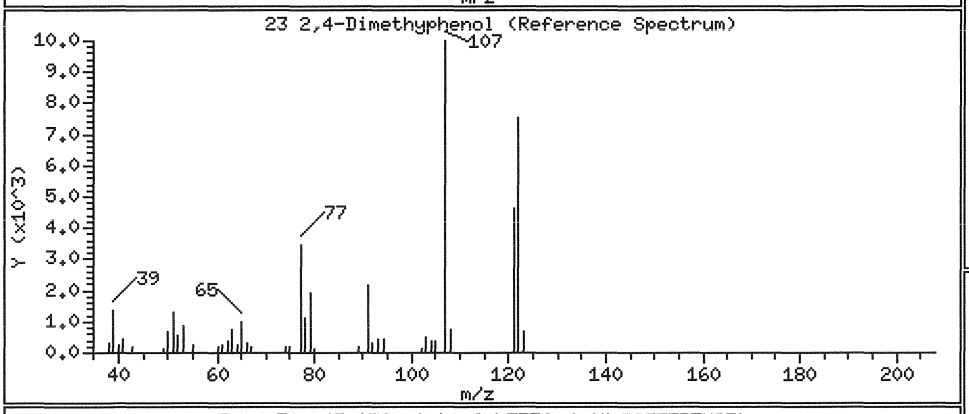
Column diameter: 0.25

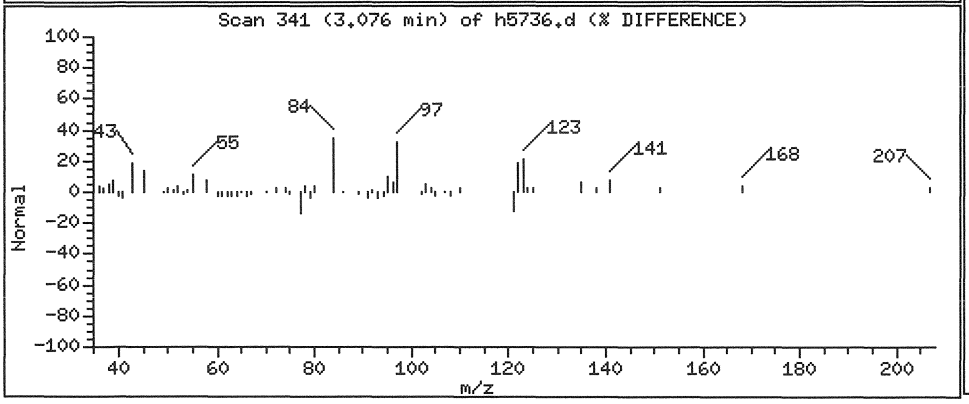
23 2,4-Dimethyphenol

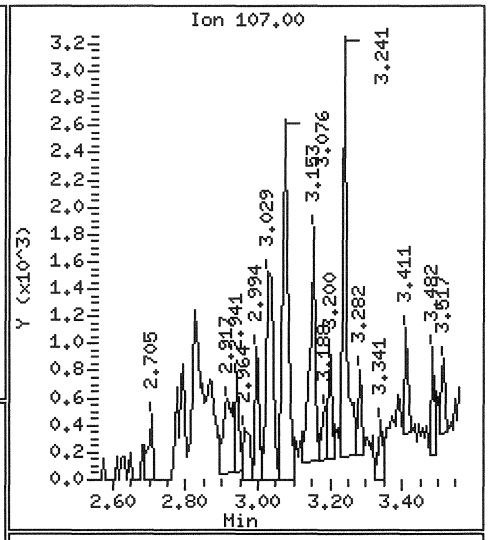
Concentration: 48.9 ug/Kg

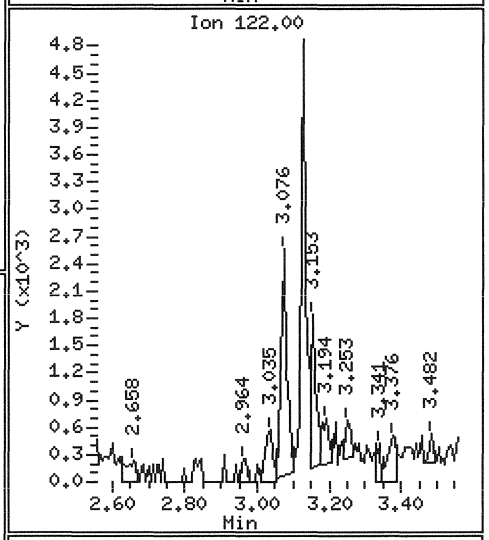


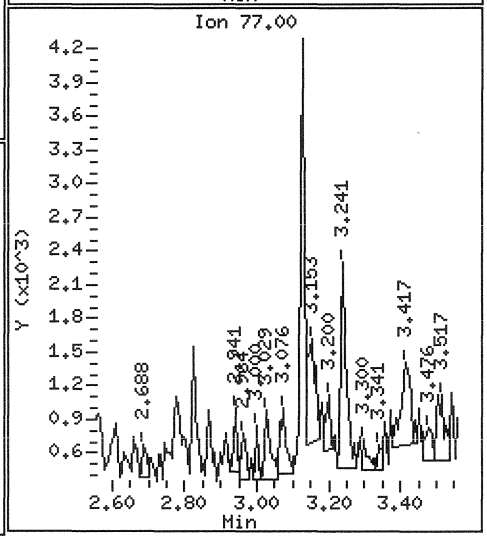



Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d



Date : 22-OCT-2013 16:31

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

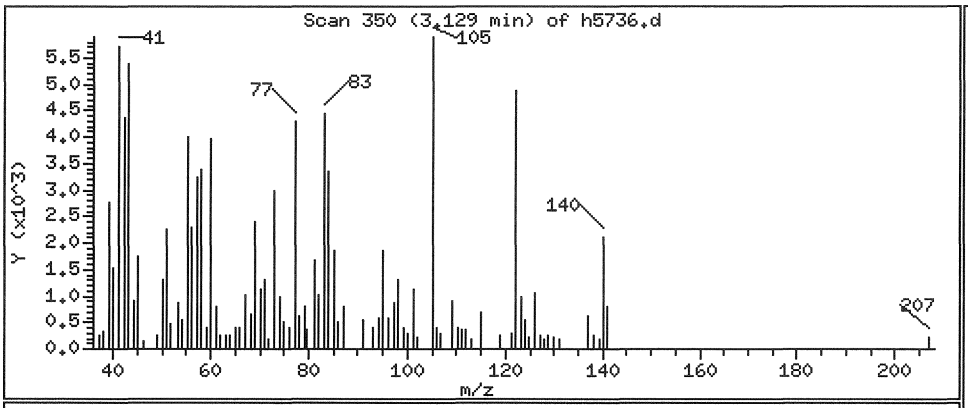
Operator: hcp

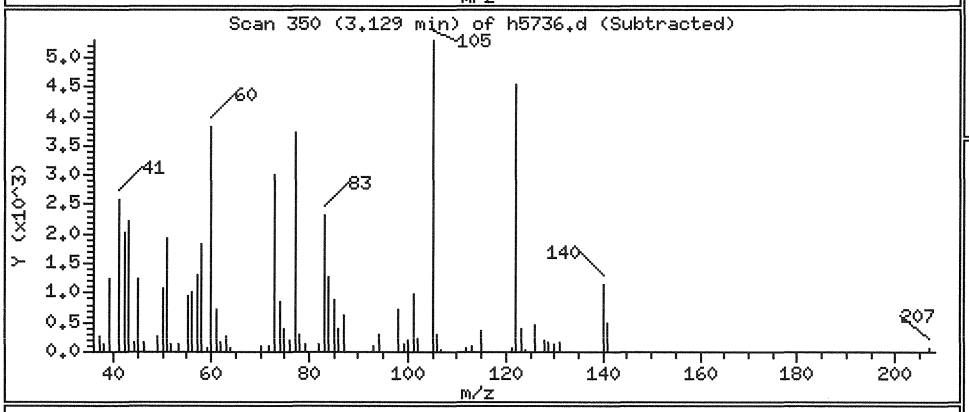
Column phase: RTX-5MS-30M

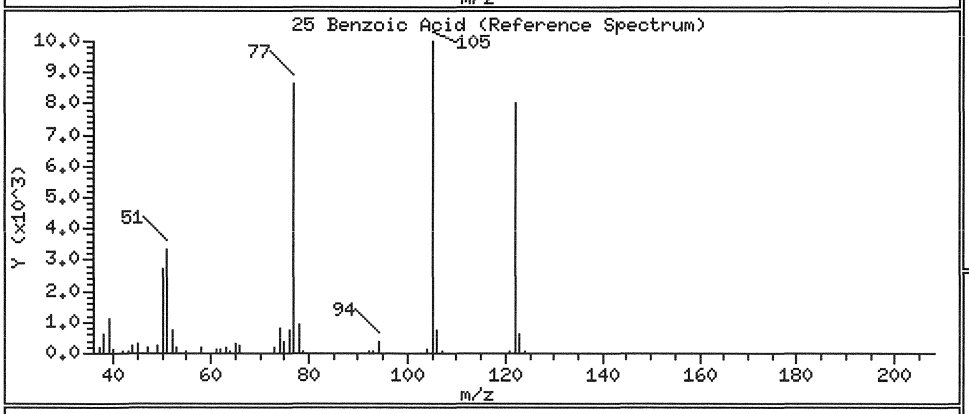
Column diameter: 0.25

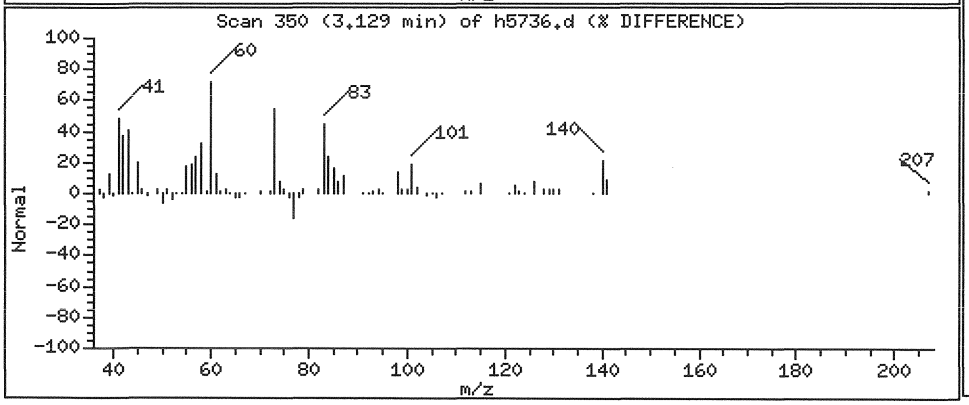
25 Benzoic Acid

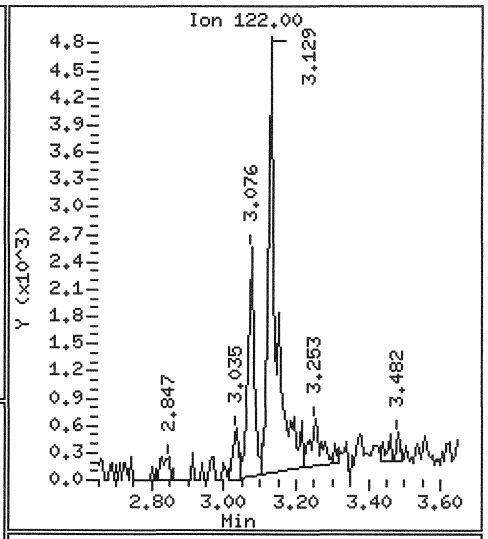
Concentration: 218 ug/Kg

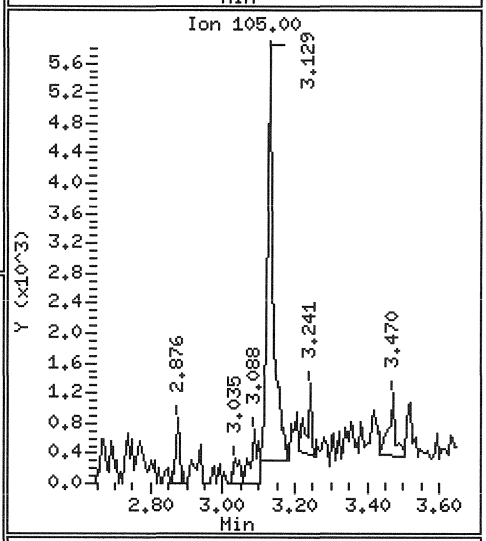


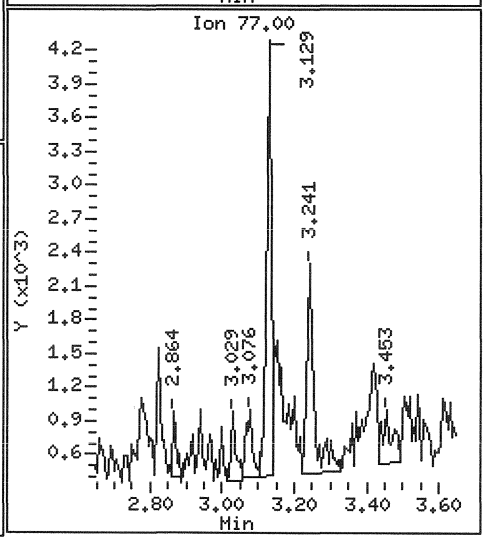



Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d

Date : 22-OCT-2013 16:31

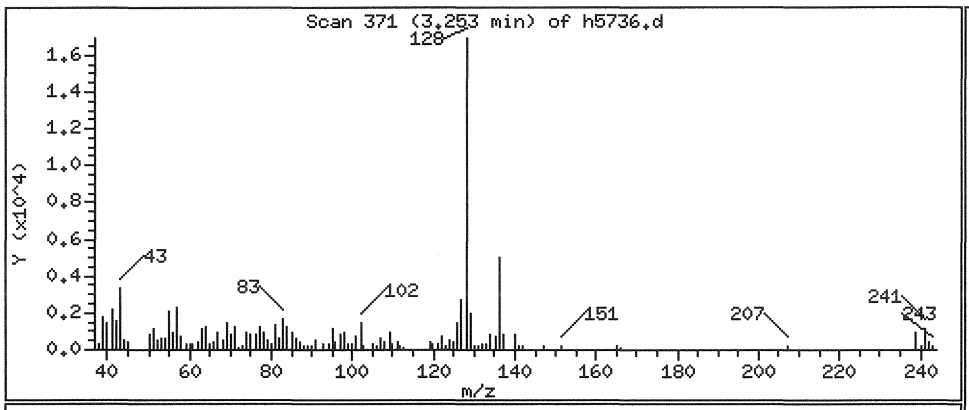
Client ID: 21310171201 Instrument: MSSV4.i

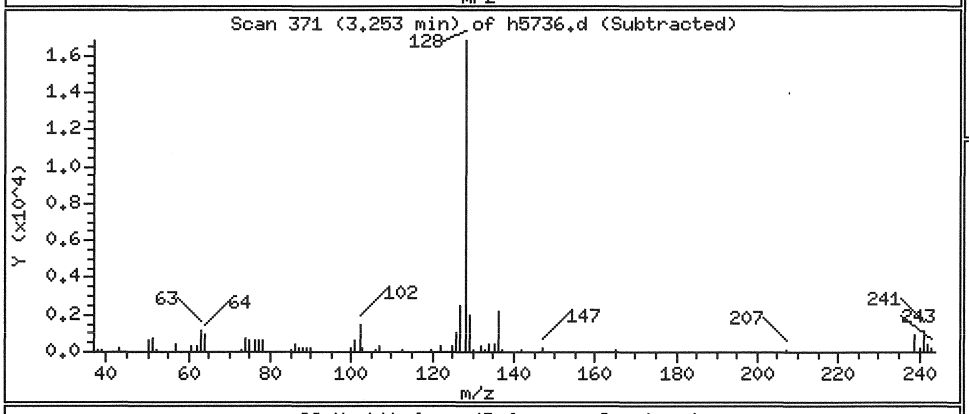
Sample Info: 21310171201*4847*

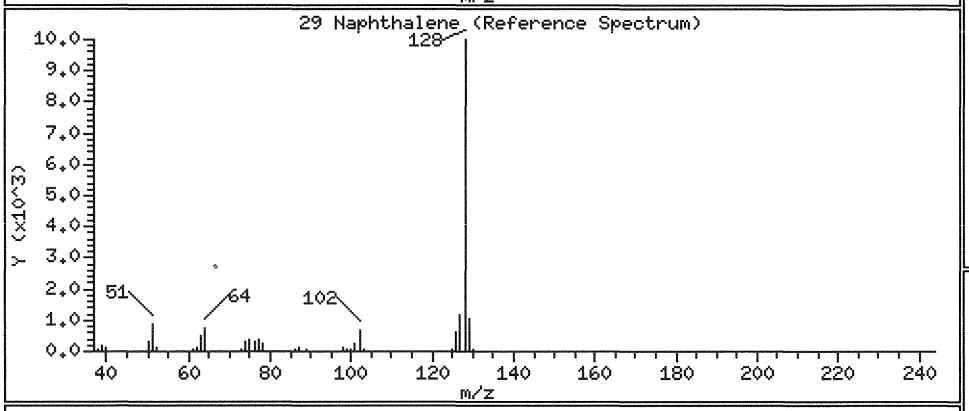
Volume Injected (uL): 1.0 Operator: hcp

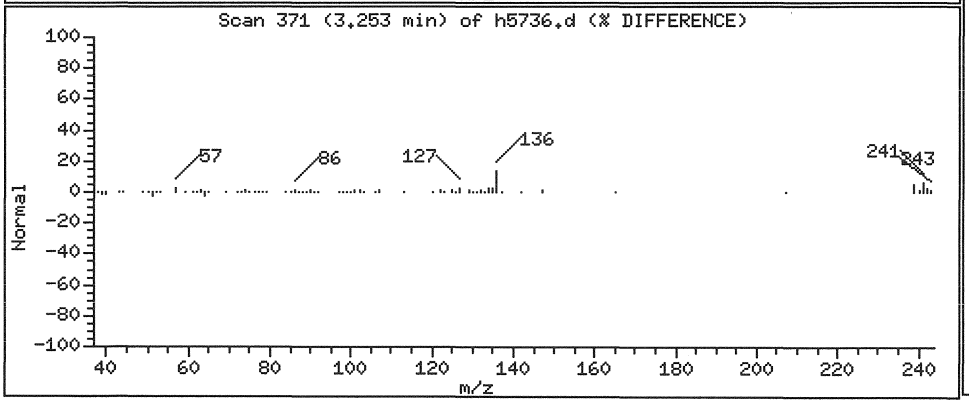
Column phase: RTX-5MS-30M Column diameter: 0.25

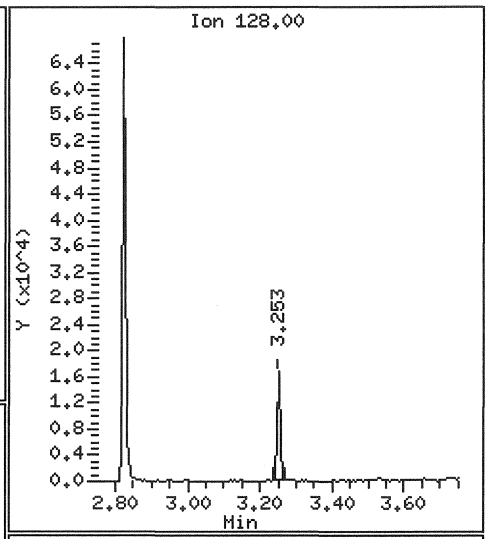
29 Naphthalene Concentration: 60.9 ug/Kg

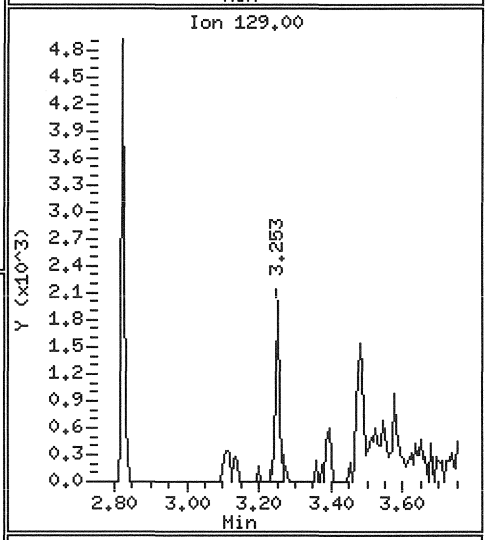


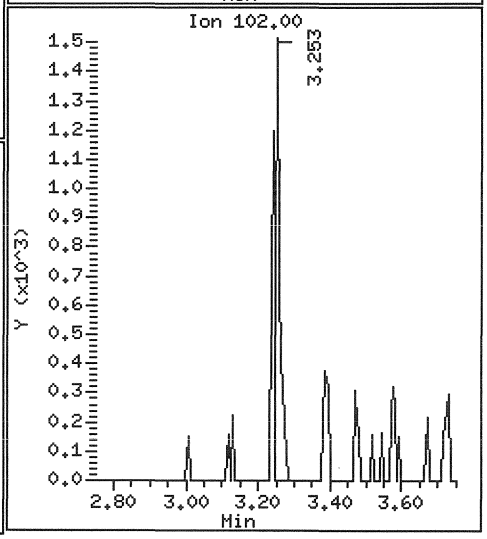



Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d



Date : 22-OCT-2013 16:31

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

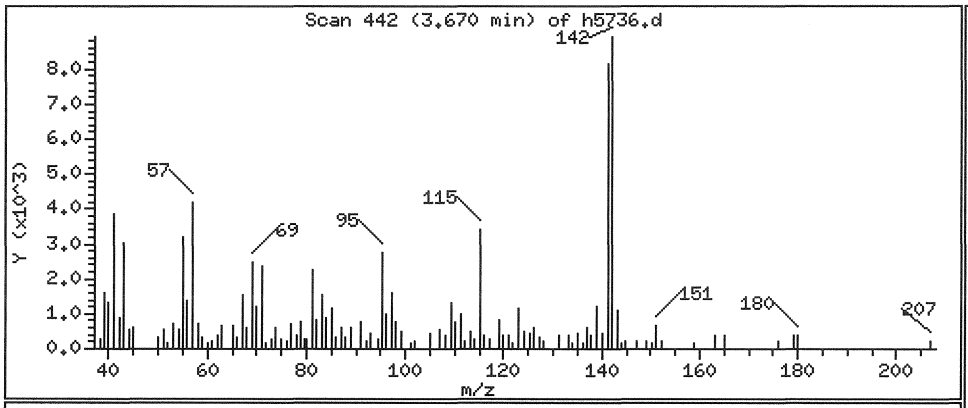
Operator: hcp

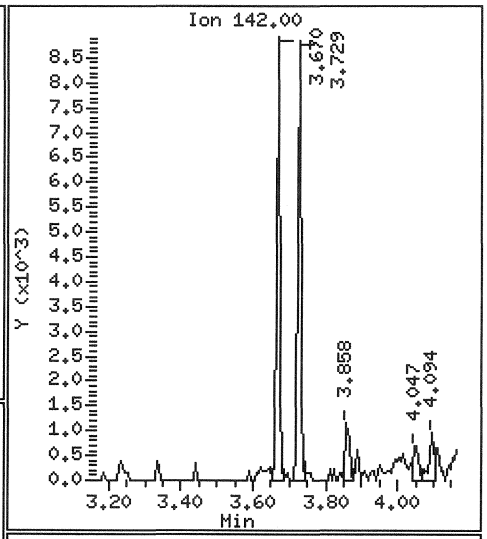
Column phase: RTX-5MS-30M

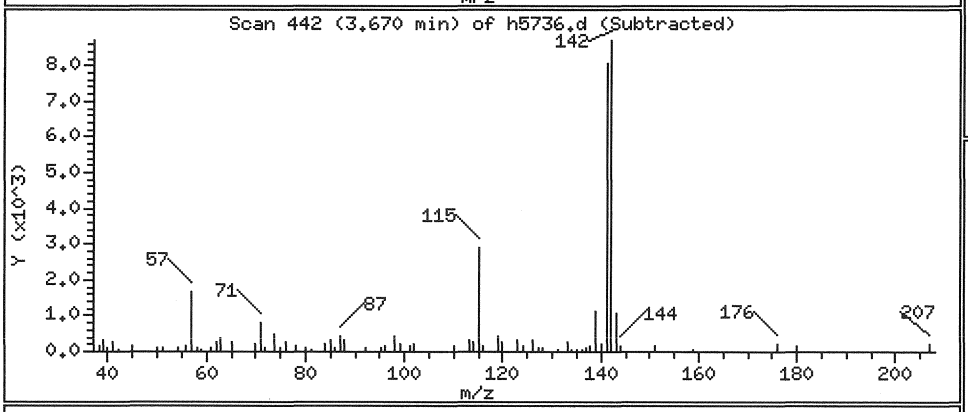
Column diameter: 0.25

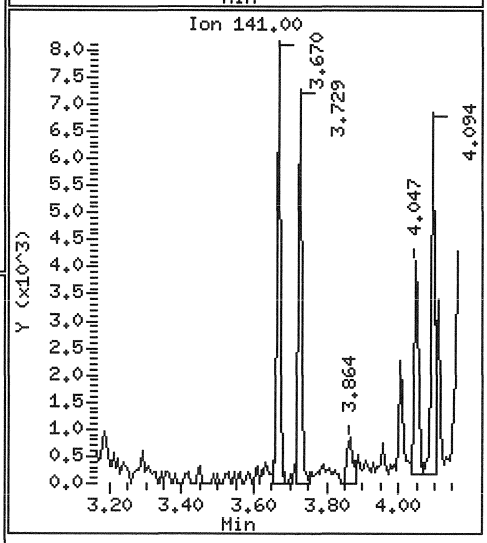
33 2-Methylnaphthalene

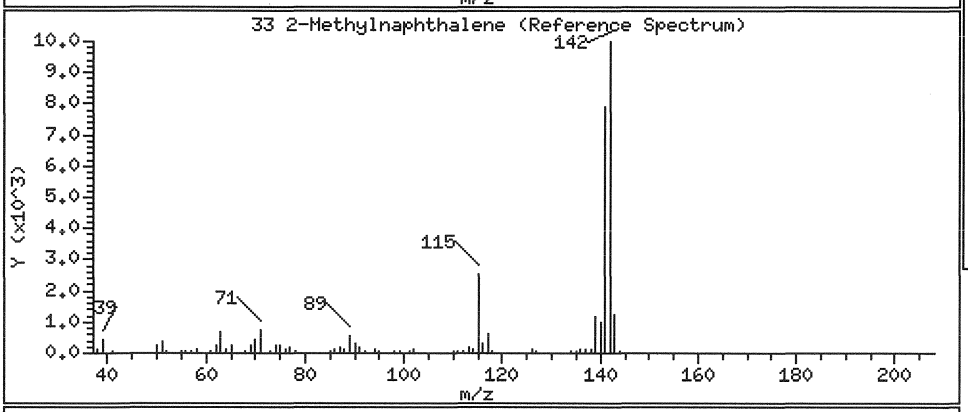
Concentration: 50.3 ug/Kg

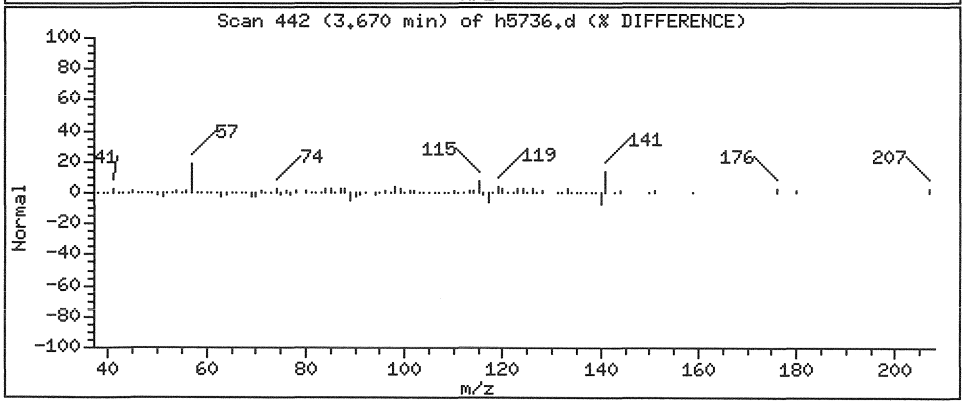


Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d



Date : 22-OCT-2013 16:31

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

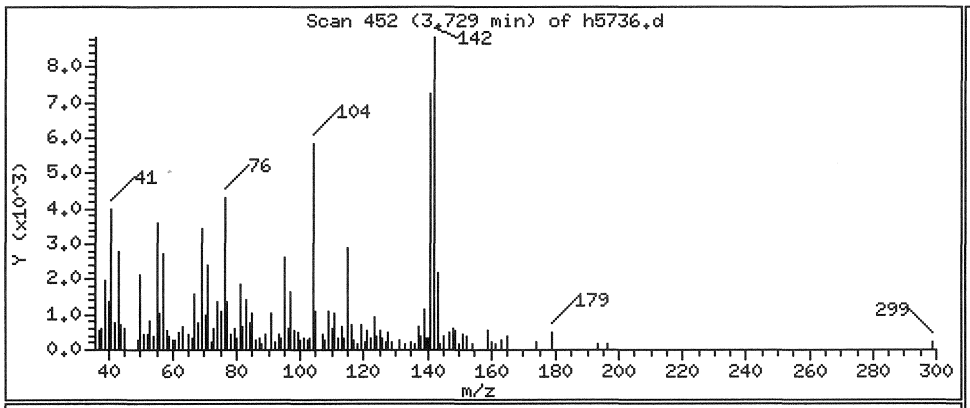
Operator: hcp

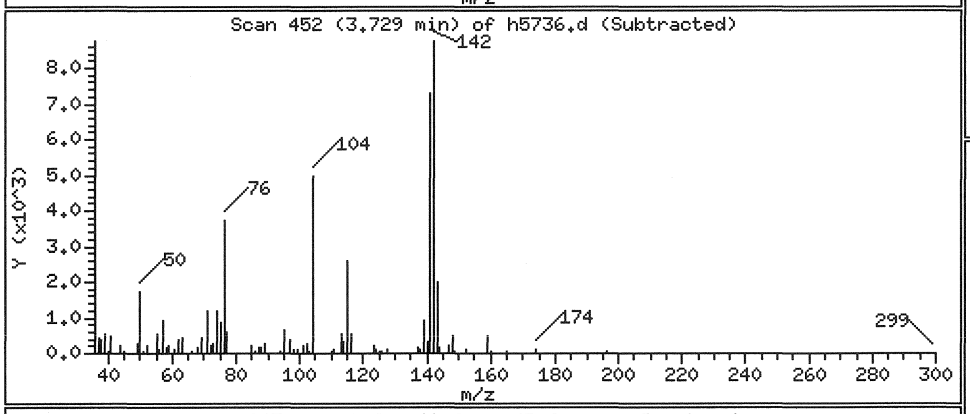
Column phase: RTX-5MS-30M

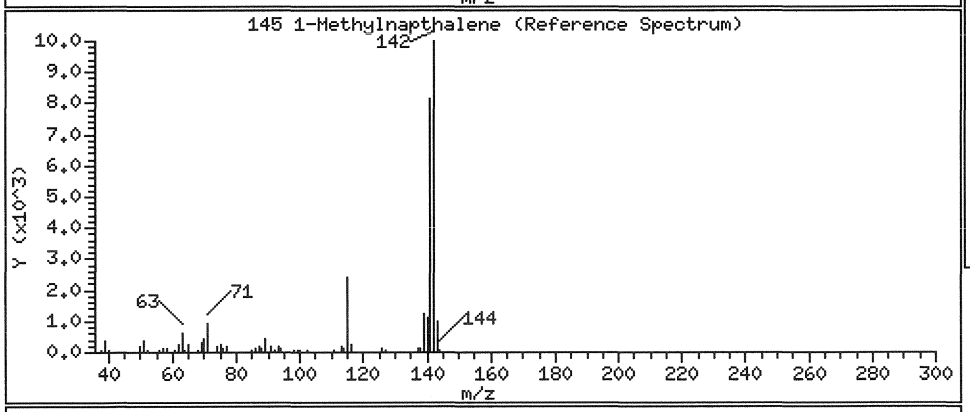
Column diameter: 0.25

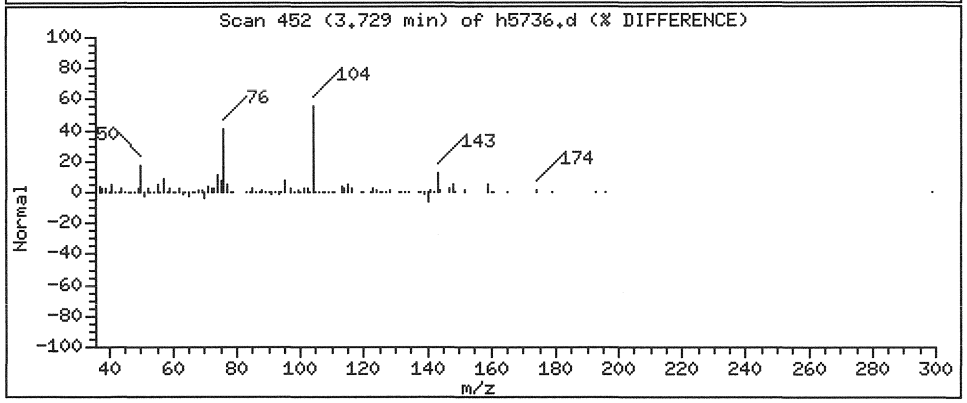
145 1-Methylnapthalene

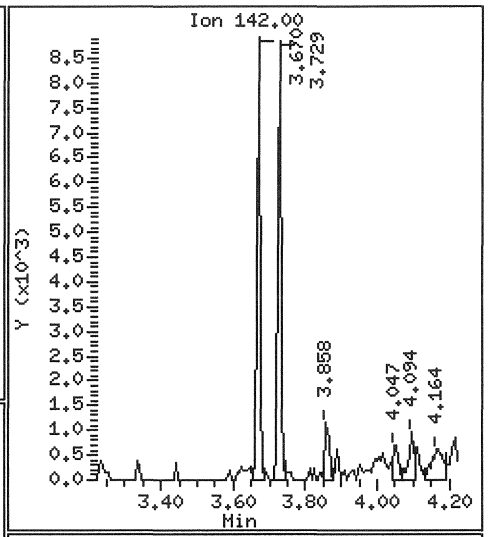
Concentration: 57.5 ug/Kg

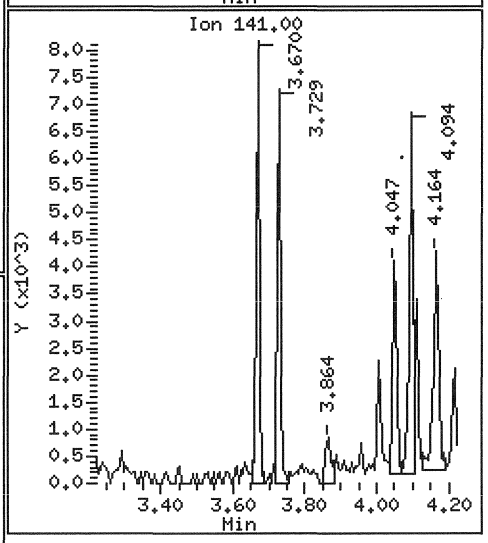


Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d



Date : 22-OCT-2013 16:31

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

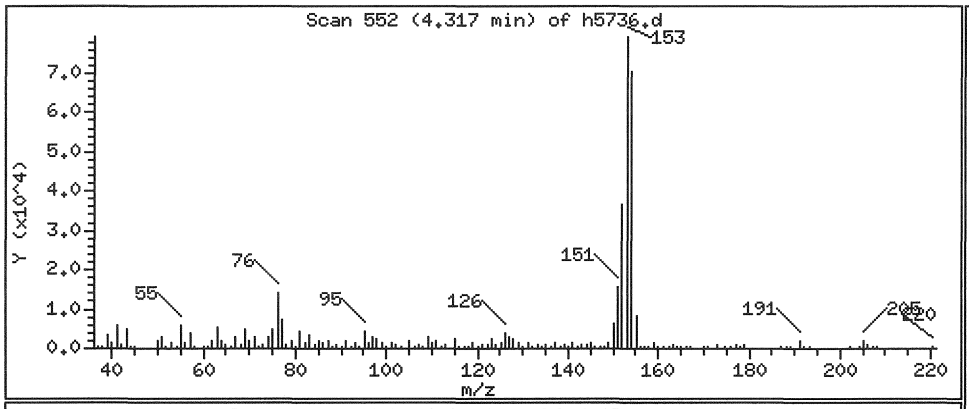
Operator: hcp

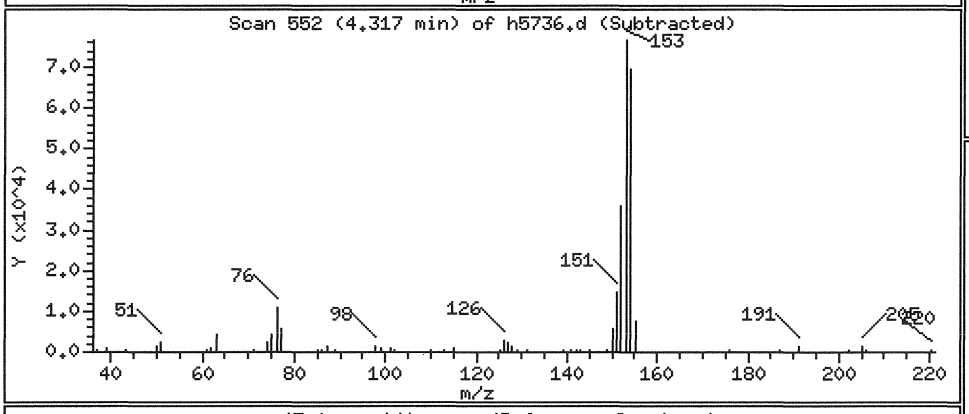
Column phase: RTX-5MS-30M

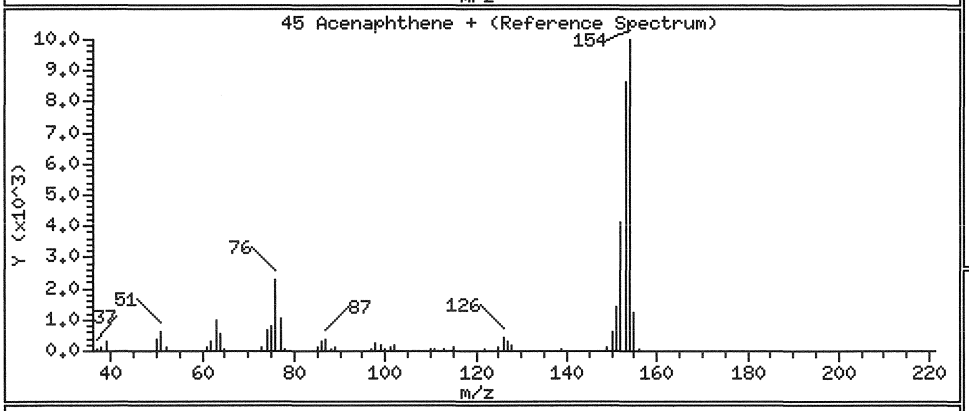
Column diameter: 0.25

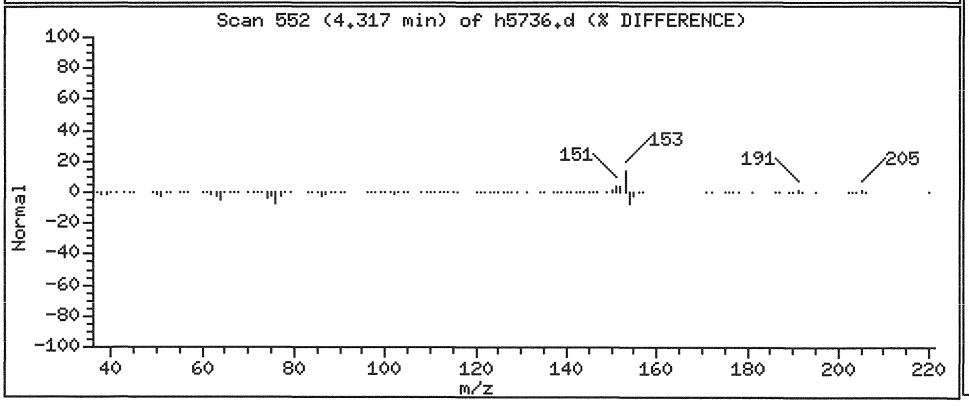
45 Acenaphthene +

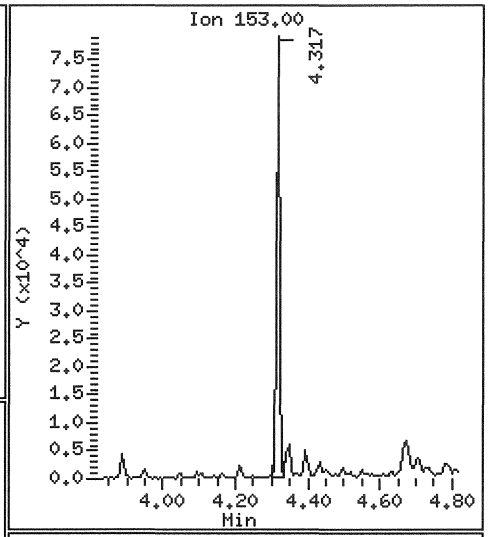
Concentration: 503 ug/Kg

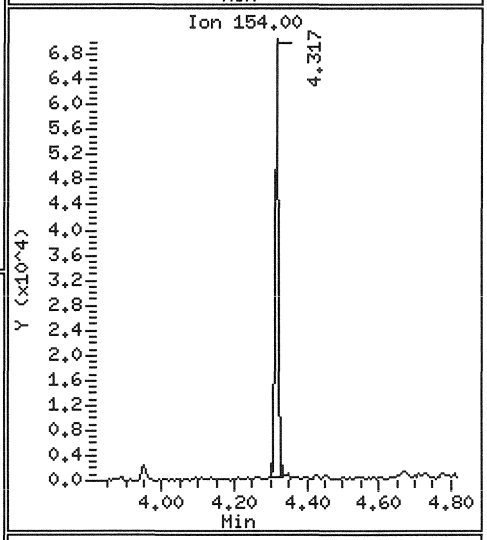


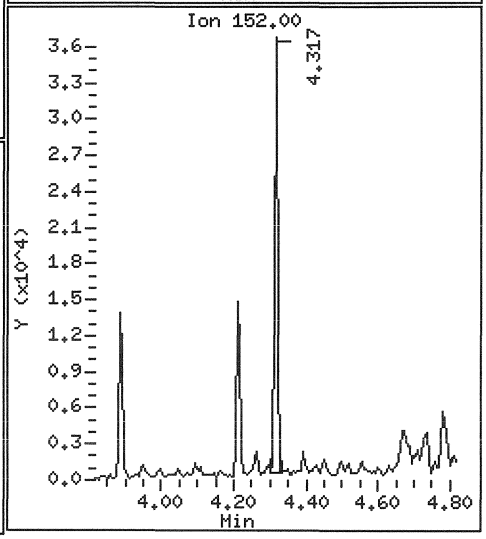



Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d



Date : 22-OCT-2013 16:31

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

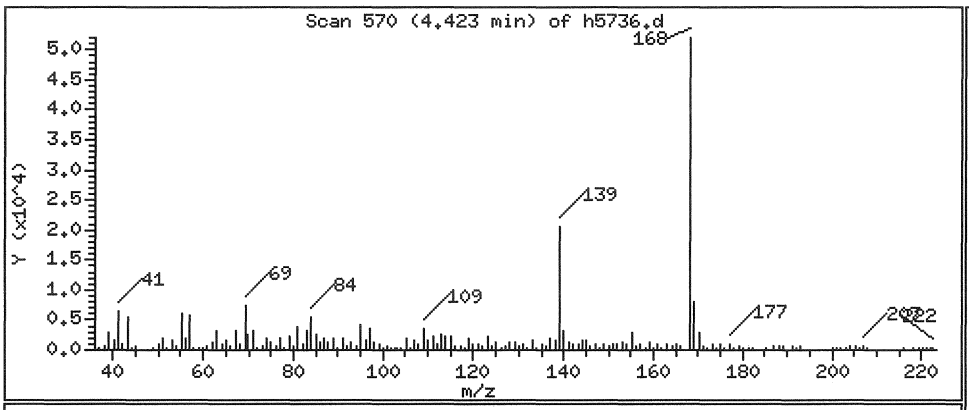
Operator: hcp

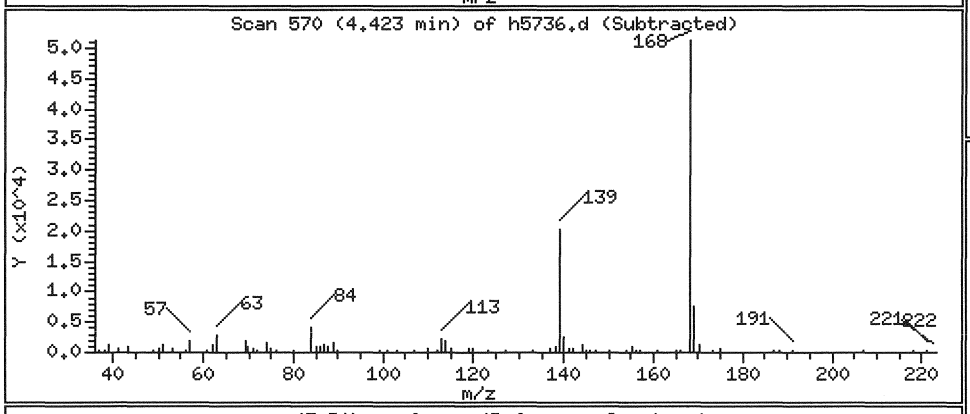
Column phase: RTX-5MS-30M

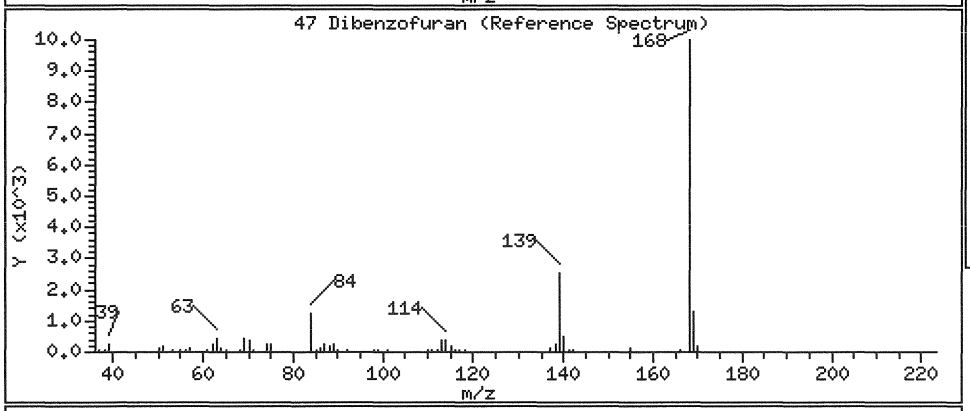
Column diameter: 0.25

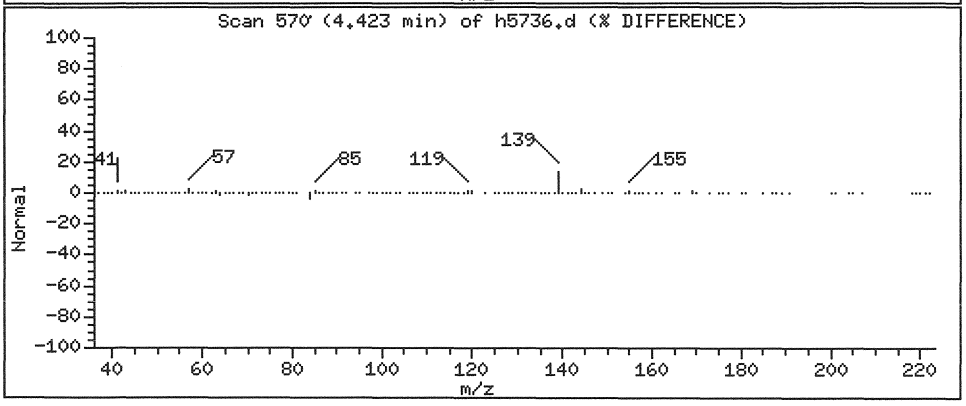
47 Dibenzofuran

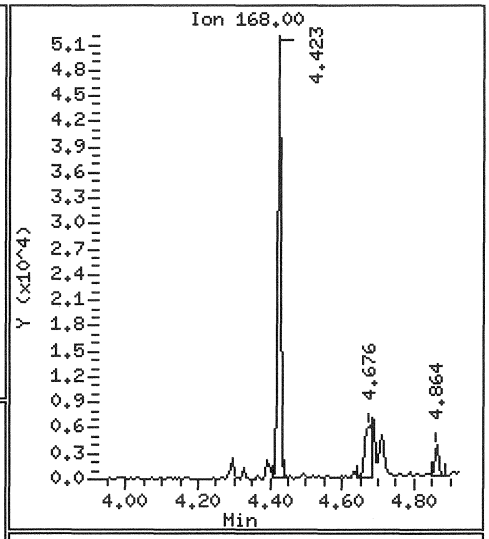
Concentration: 258 ug/Kg

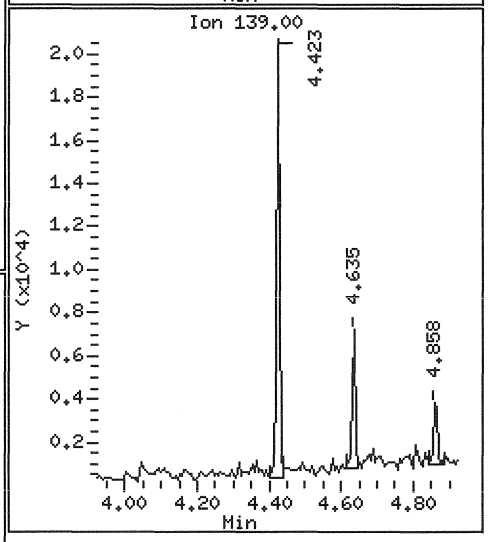


Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d

Date : 22-OCT-2013 16:31

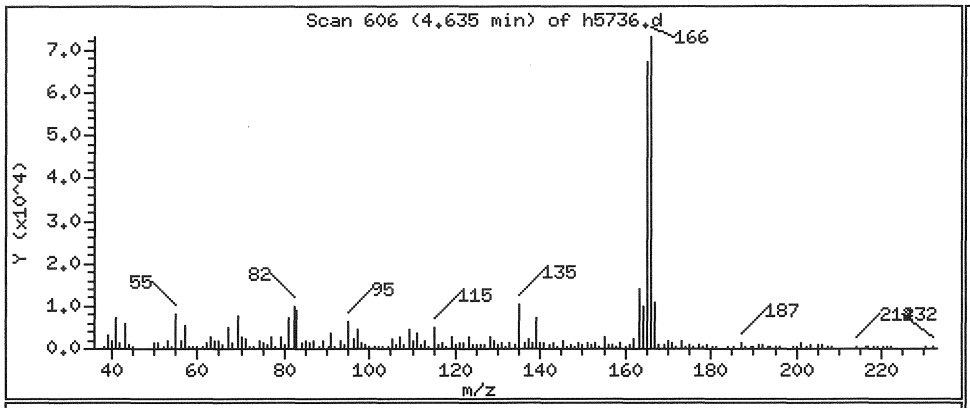
Client ID: 21310171201 | Instrument: MSSV4.i

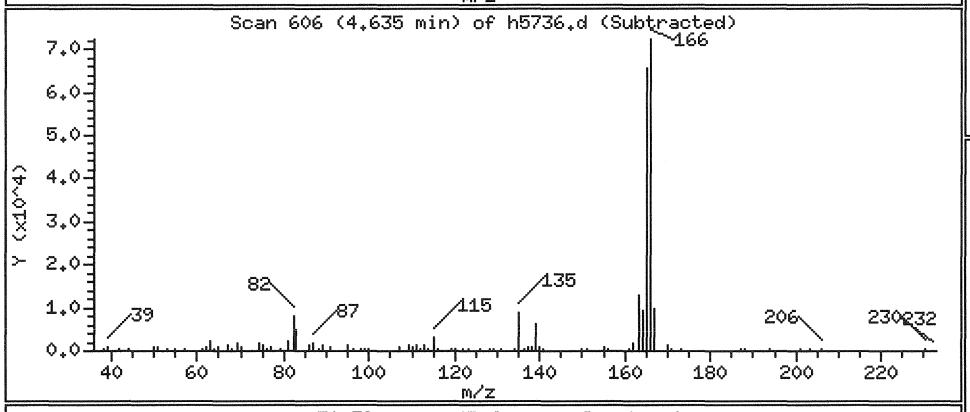
Sample Info: 21310171201*4847*

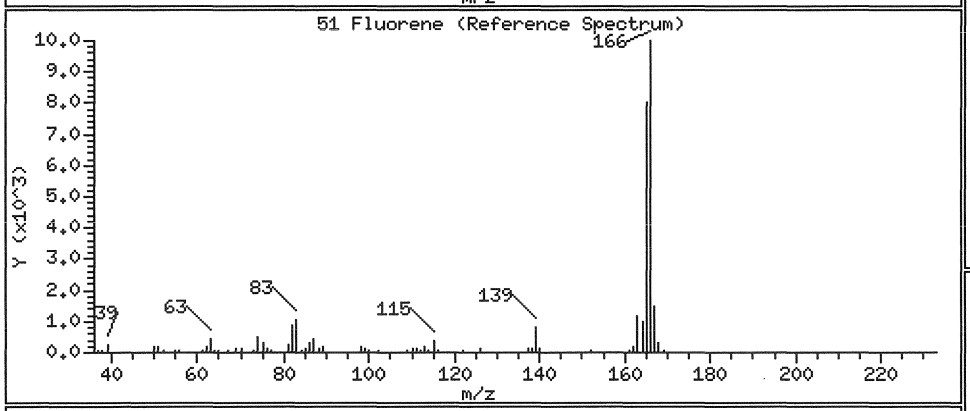
Volume Injected (uL): 1.0 | Operator: hcp

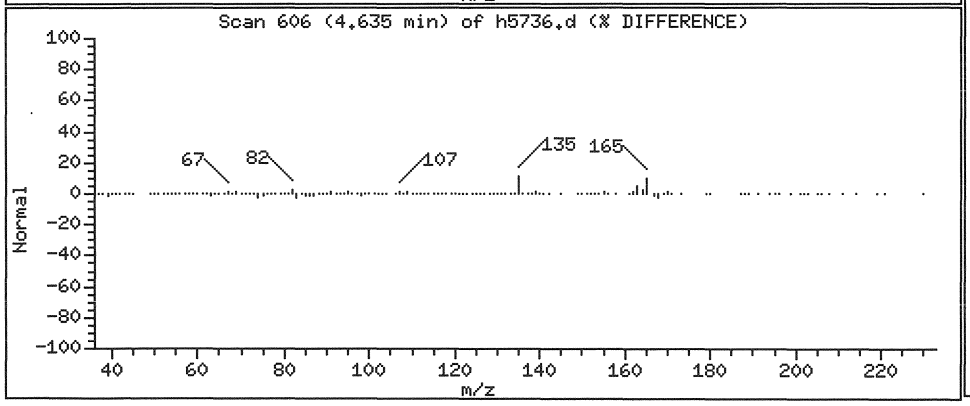
Column phase: RTX-5MS-30M | Column diameter: 0.25

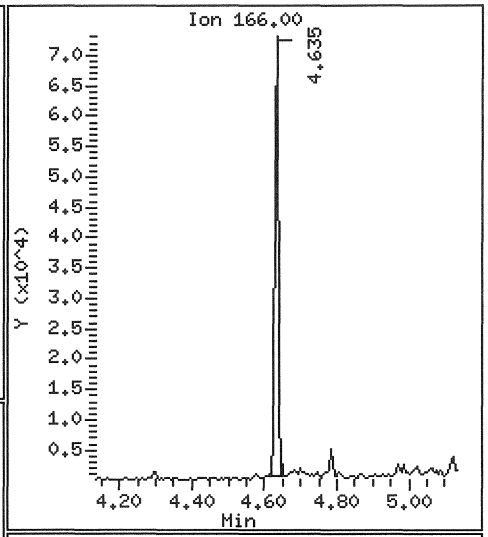
51 Fluorene | Concentration: 503 ug/Kg

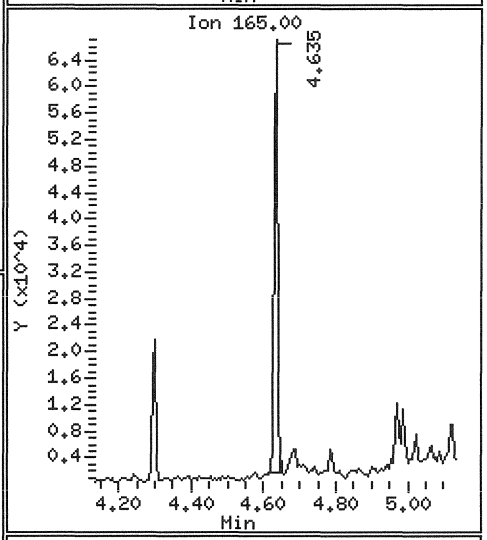


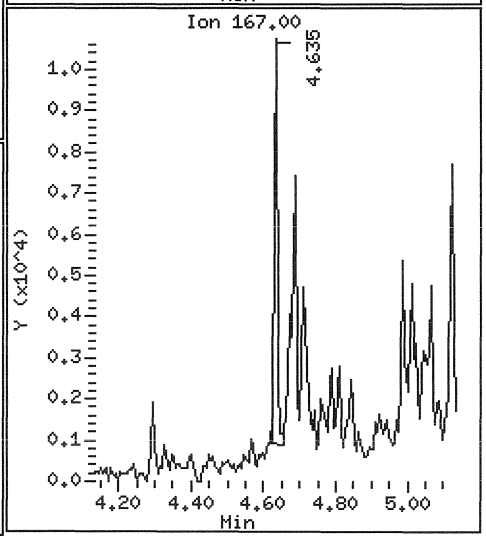



Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d



Date : 22-OCT-2013 16:31

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

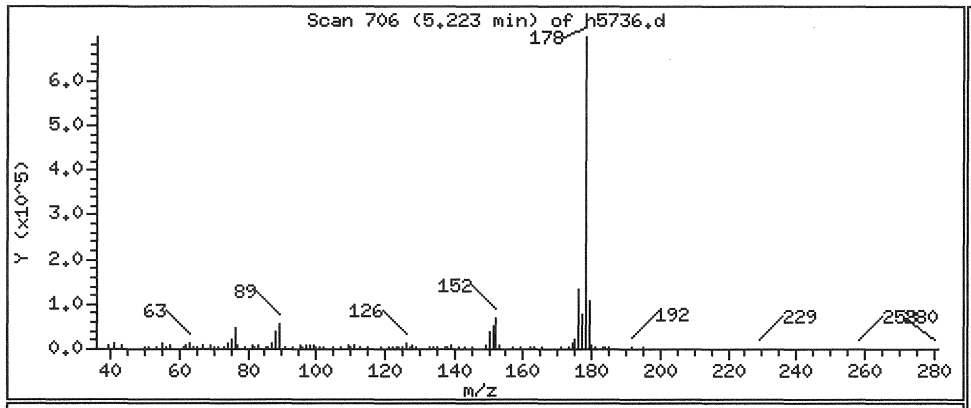
Operator: hcp

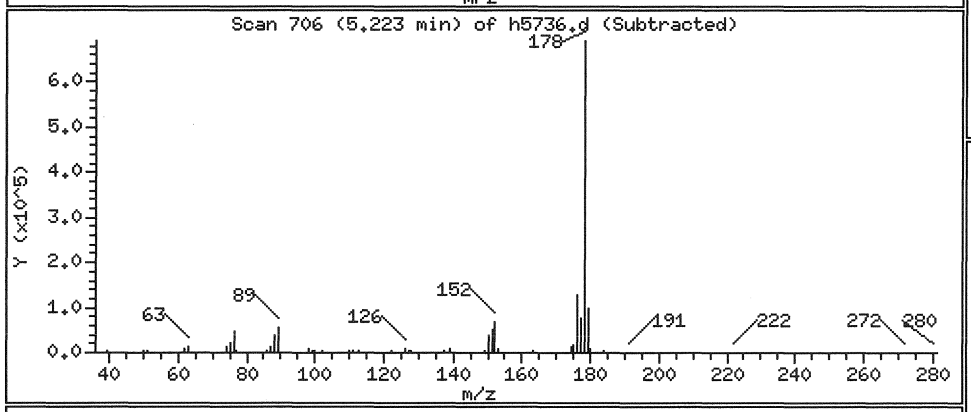
Column phase: RTX-5MS-30M

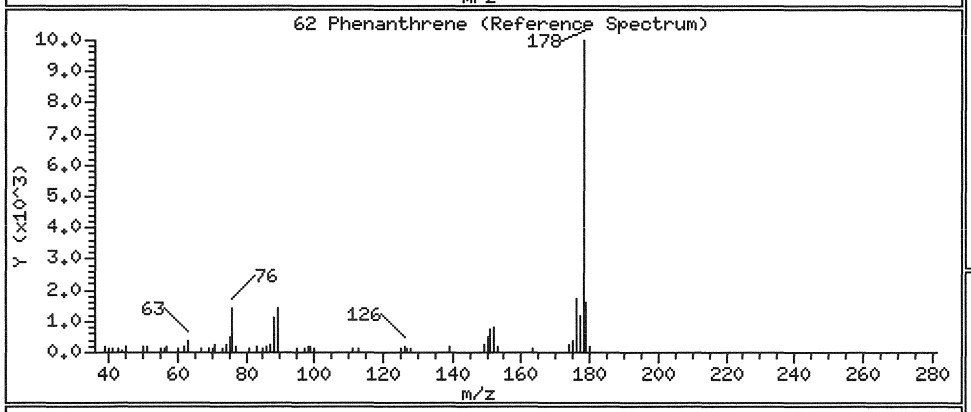
Column diameter: 0.25

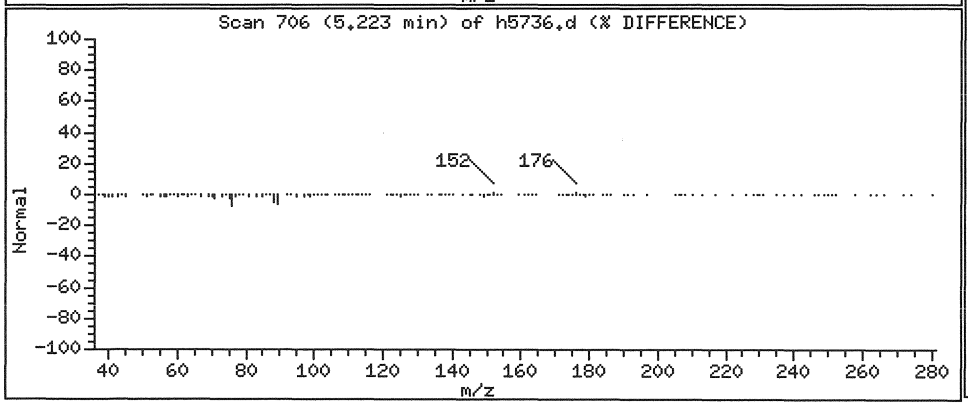
62 Phenanthrene

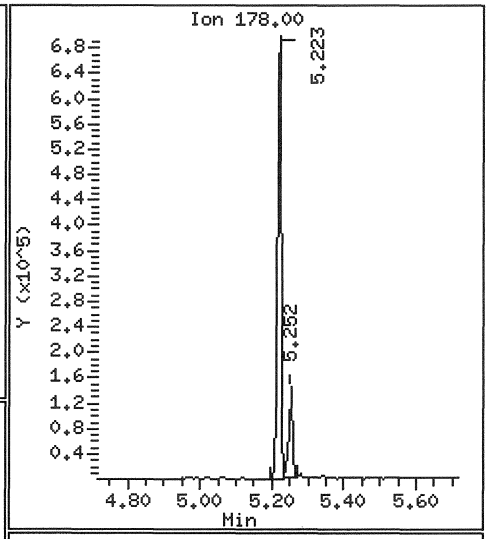
Concentration: 4110 ug/Kg

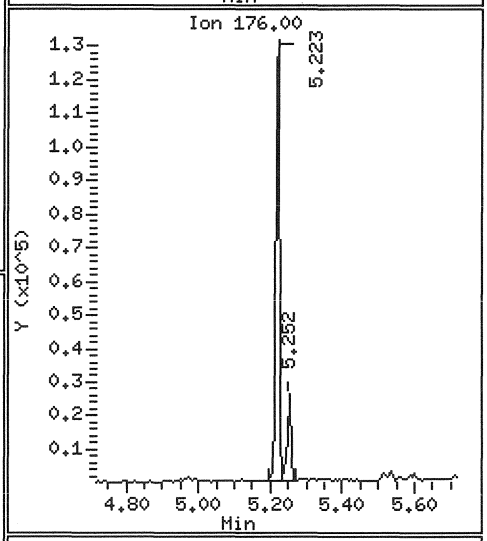


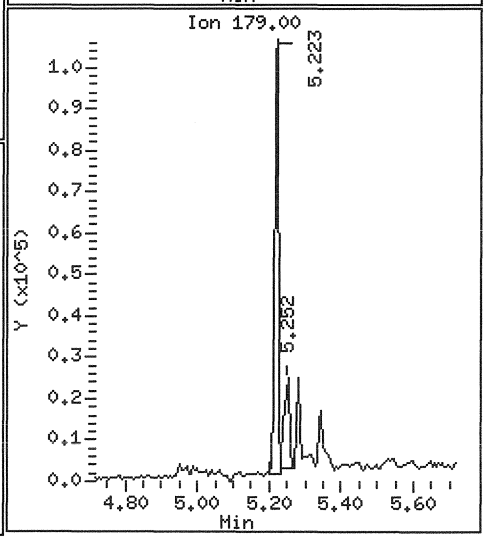



Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d



Date : 22-OCT-2013 16:31

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

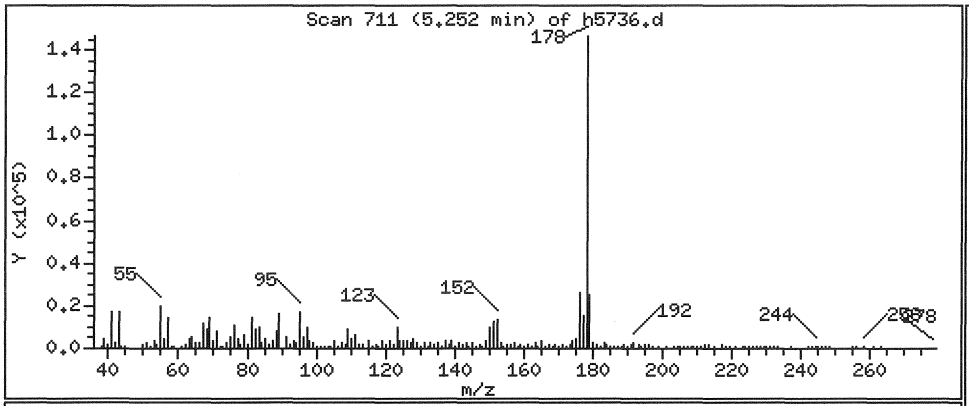
Operator: hcp

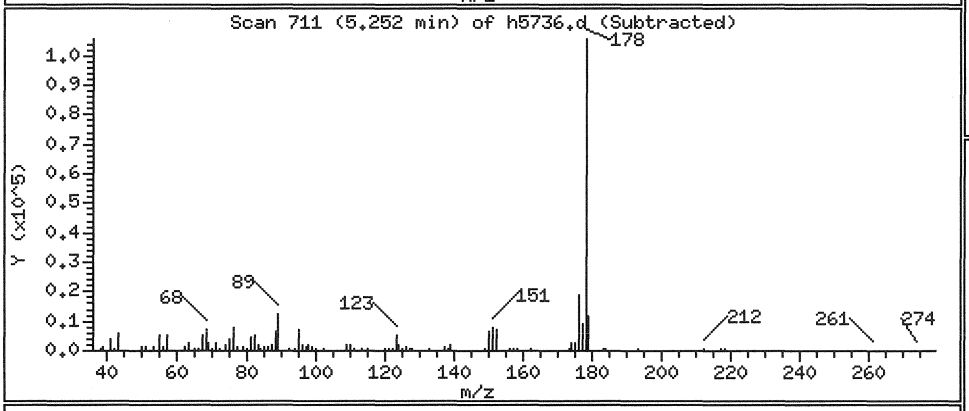
Column phase: RTX-5MS-30M

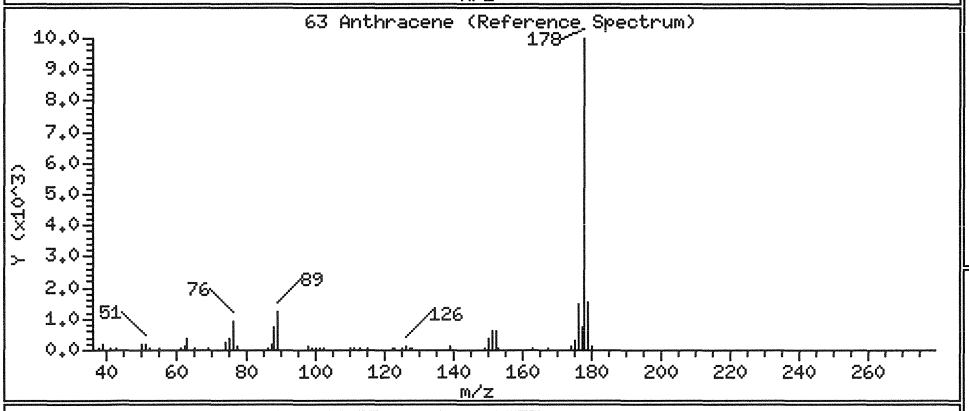
Column diameter: 0.25

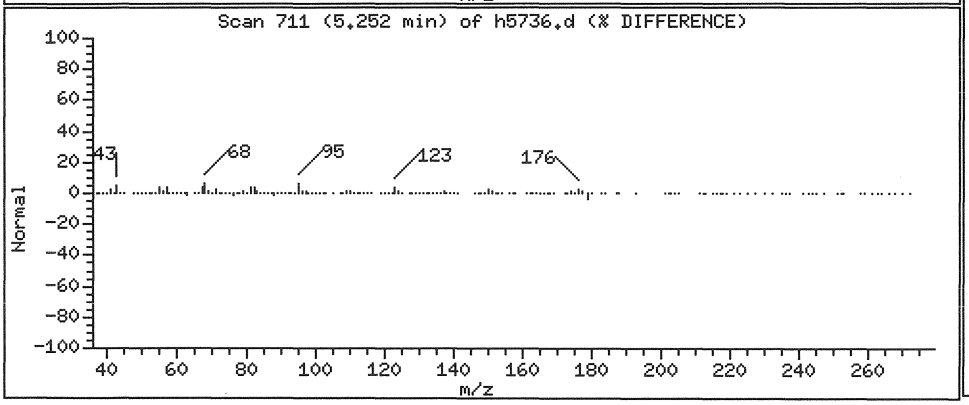
63 Anthracene

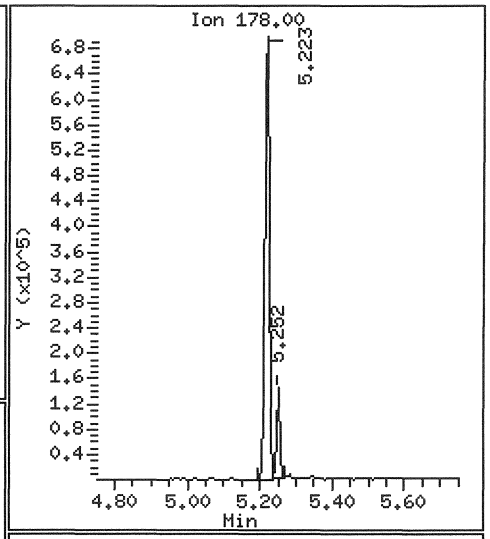
Concentration: 737 ug/Kg

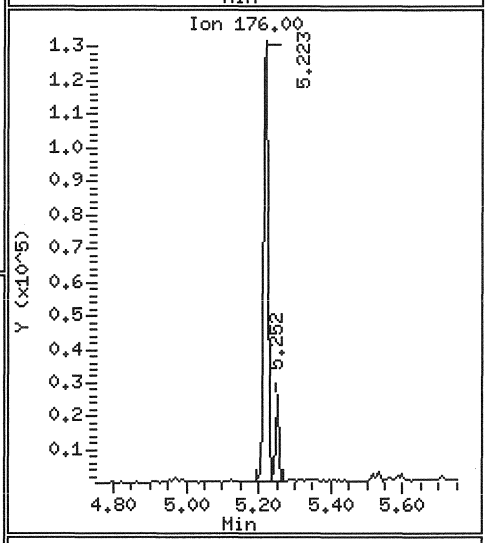


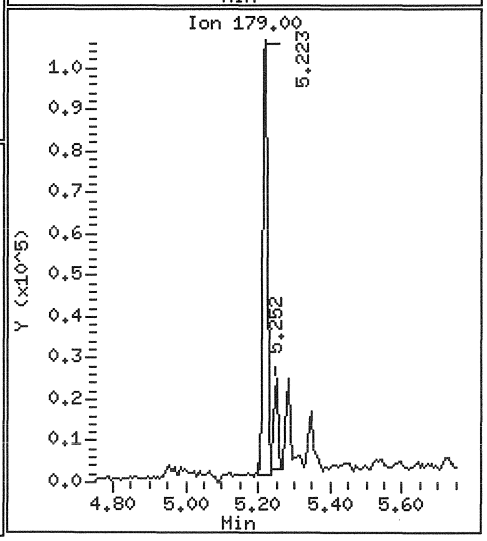



Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d



Date : 22-OCT-2013 16:31

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

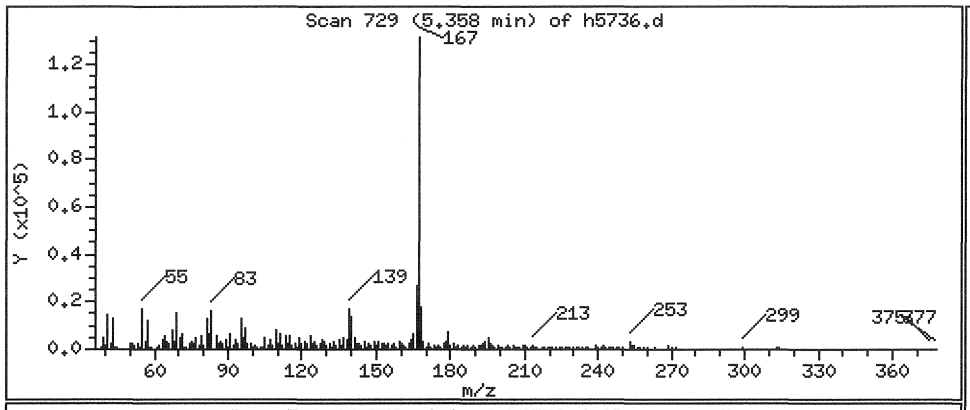
Operator: hcp

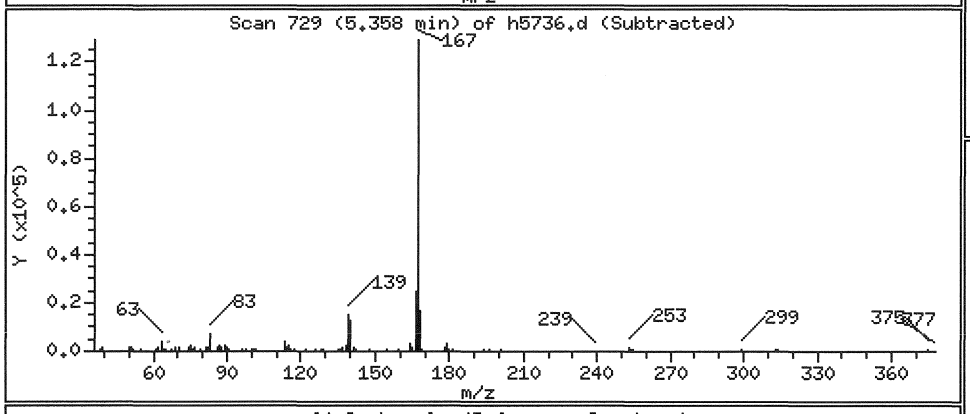
Column phase: RTX-5MS-30M

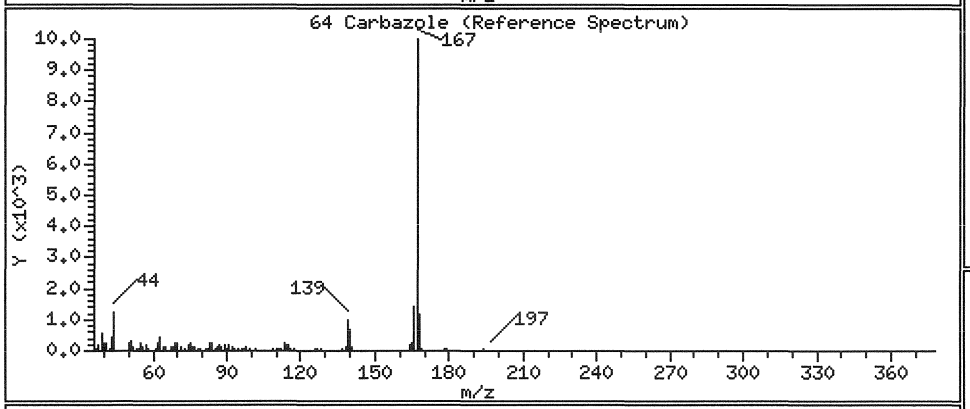
Column diameter: 0.25

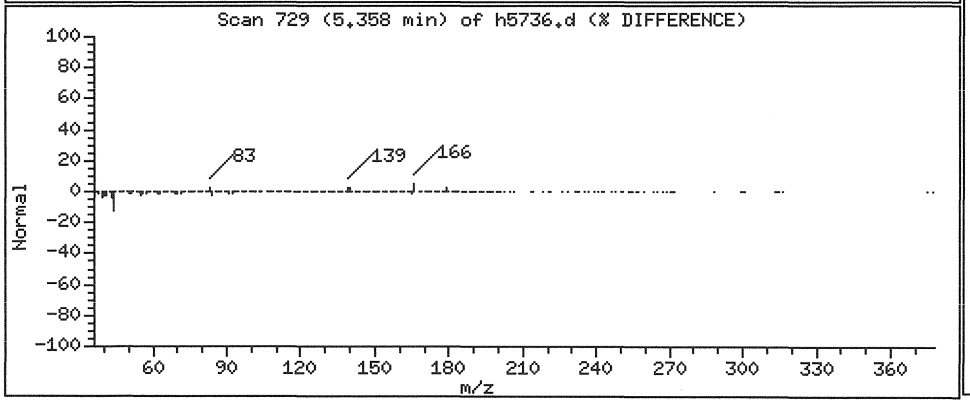
64 Carbazole

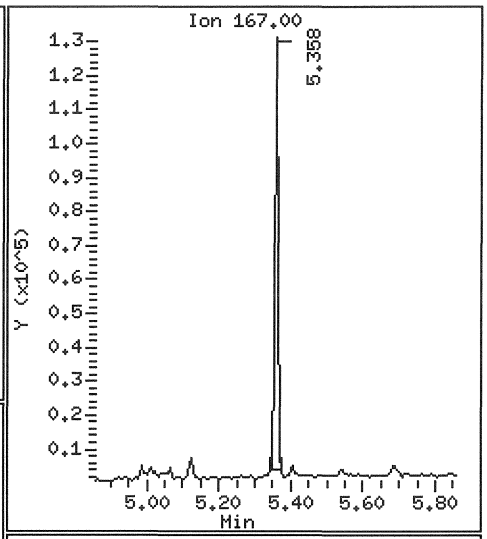
Concentration: 648 ug/Kg

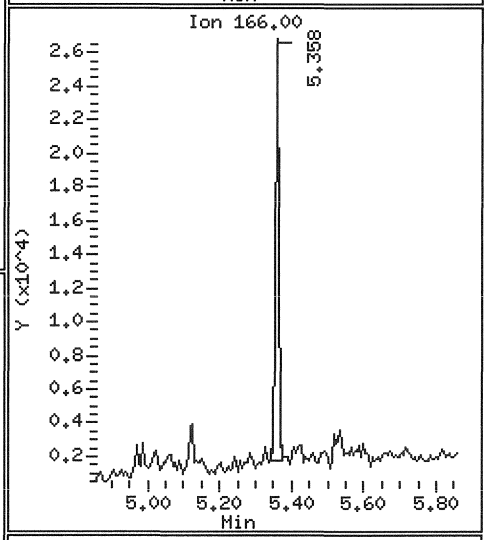


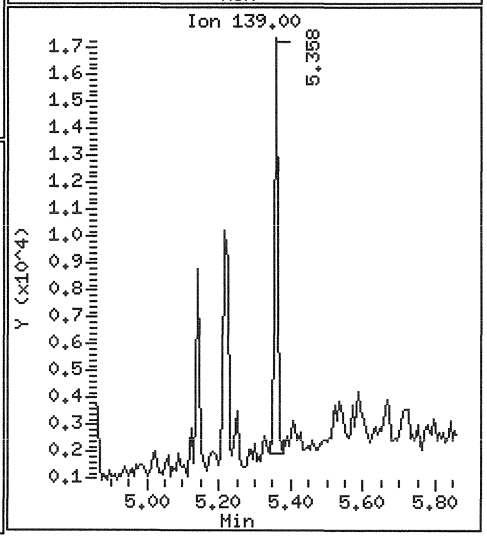



Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d

Date : 22-OCT-2013 16:31

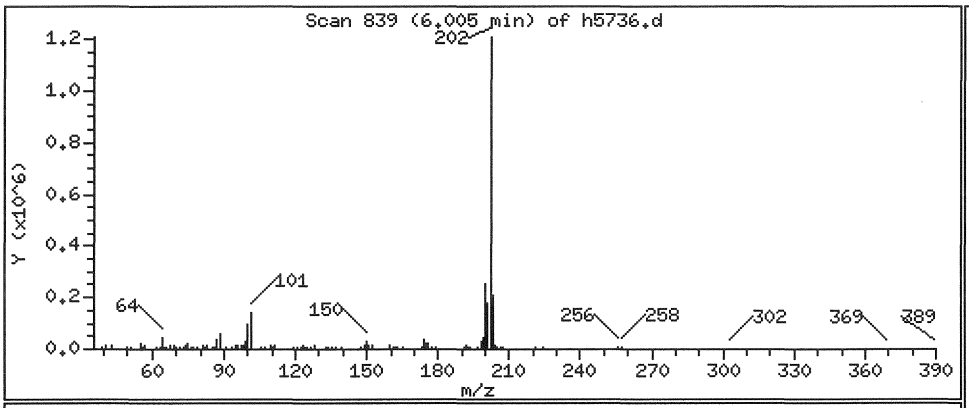
Client ID: 21310171201 Instrument: MSSV4.i

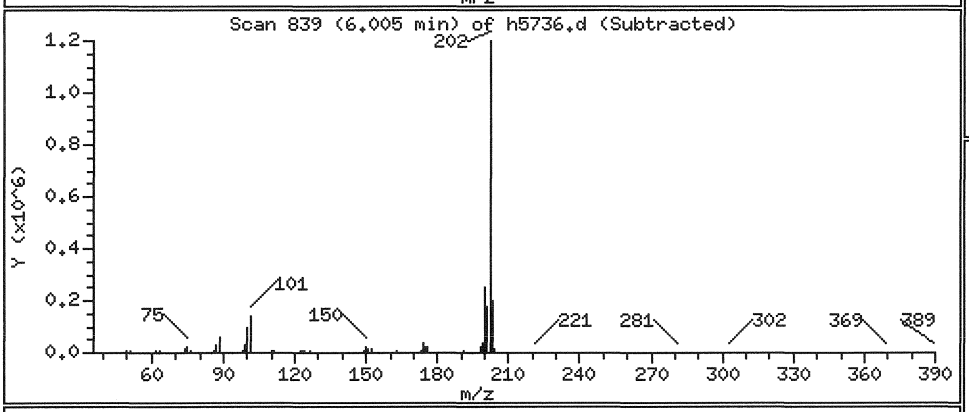
Sample Info: 21310171201*4847*

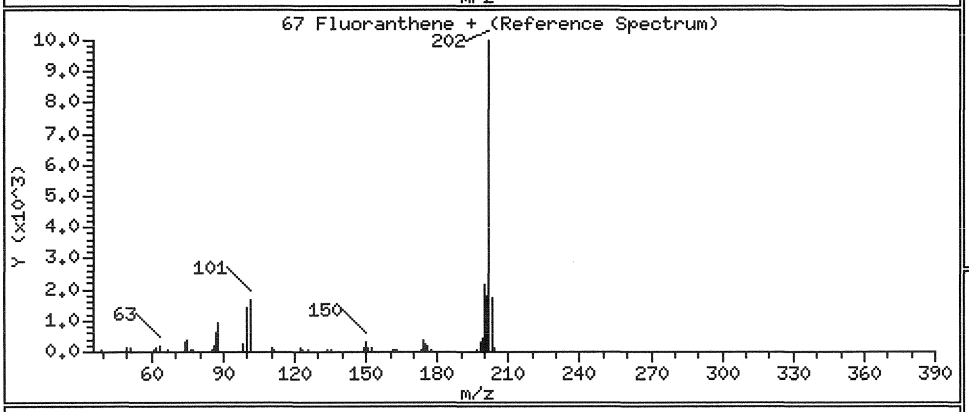
Volume Injected (uL): 1.0 Operator: hcp

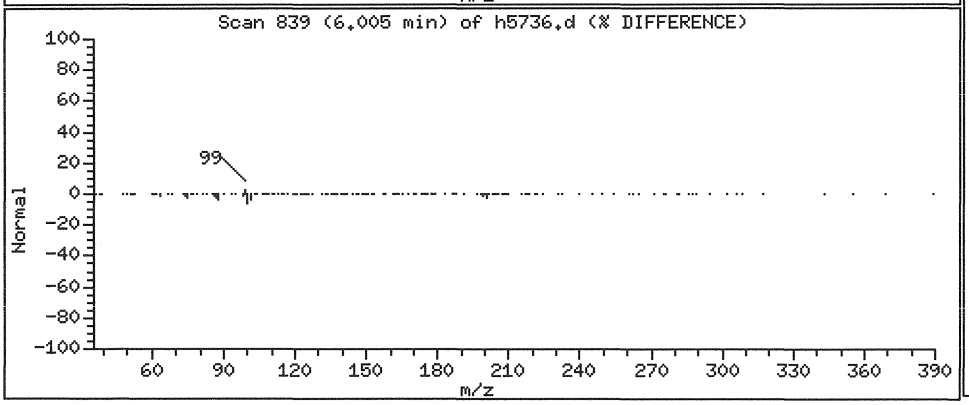
Column phase: RTX-5MS-30M Column diameter: 0.25

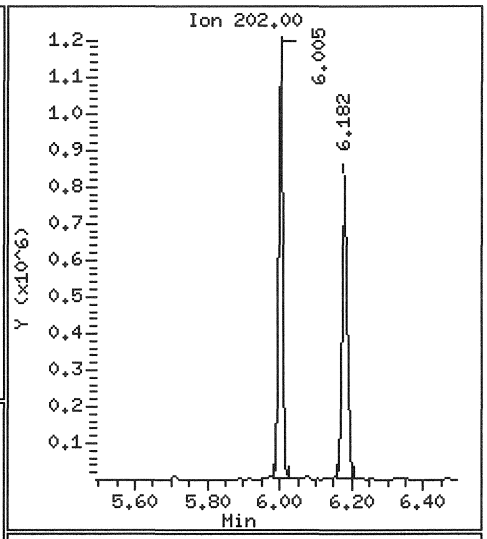
67 Fluoranthene + Concentration: 6920 ug/Kg

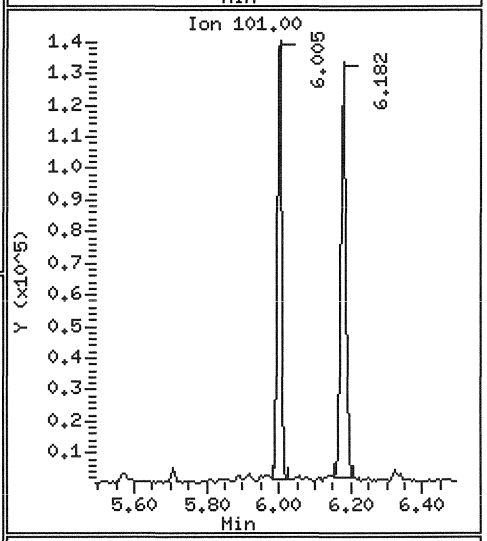


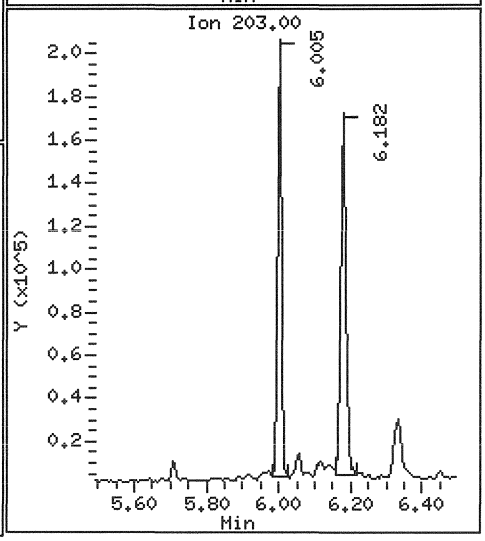



Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d



Date : 22-OCT-2013 16:31

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

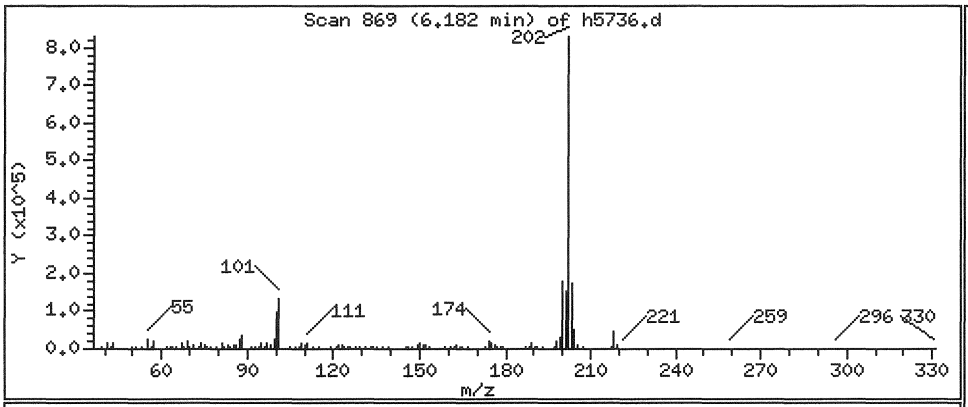
Operator: hcp

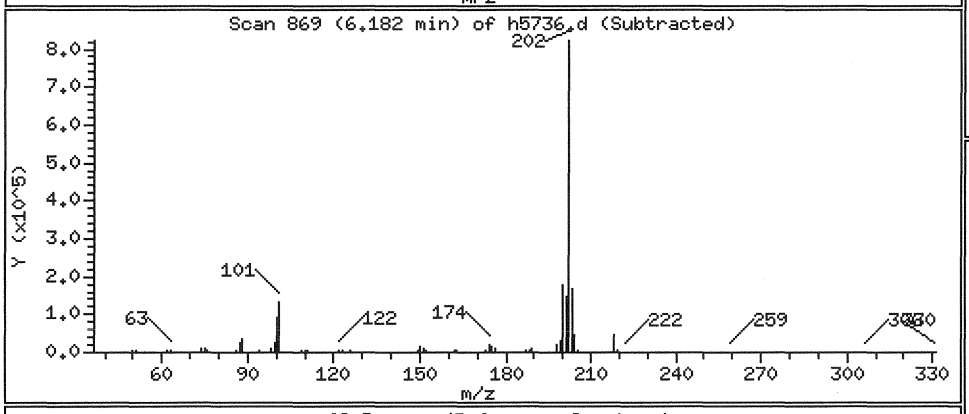
Column phase: RTX-5MS-30M

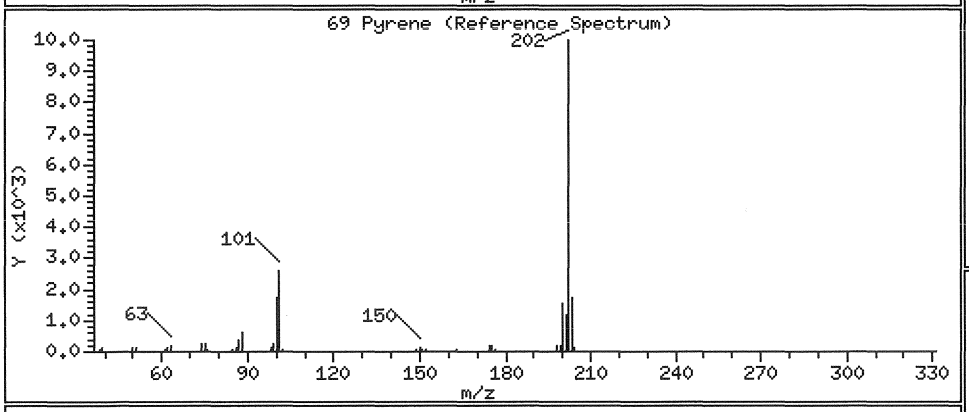
Column diameter: 0.25

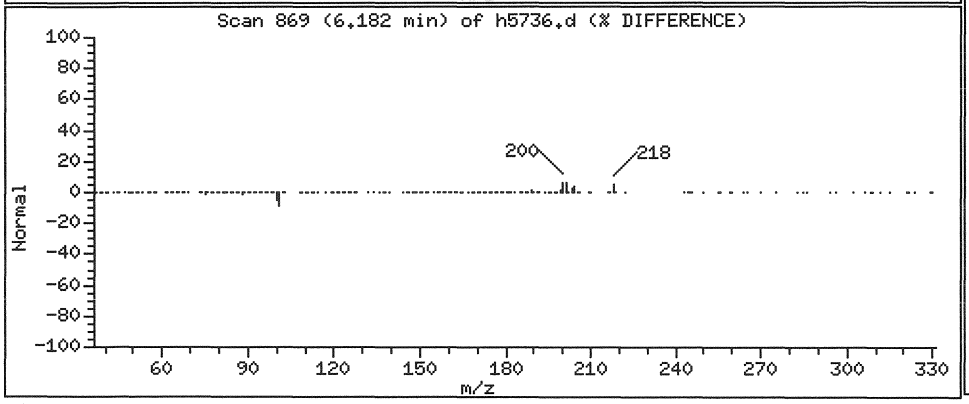
69 Pyrene

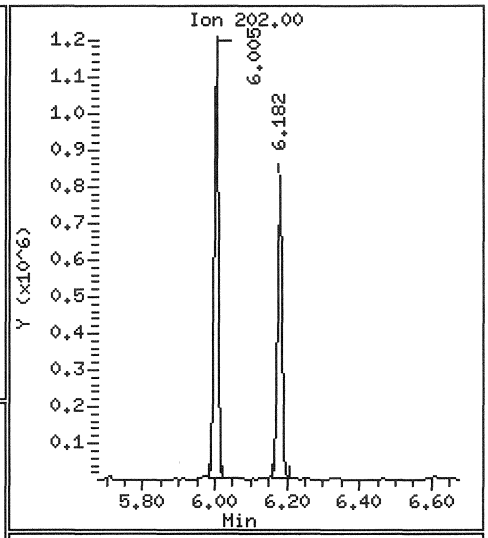
Concentration: 3950 ug/Kg

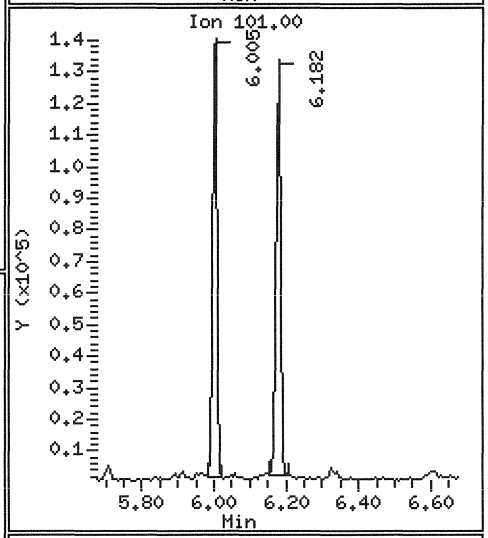


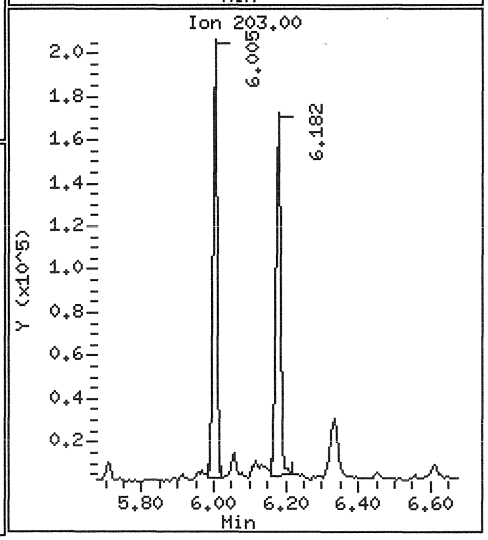



213101712 330

Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d



Date : 22-OCT-2013 16:31

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

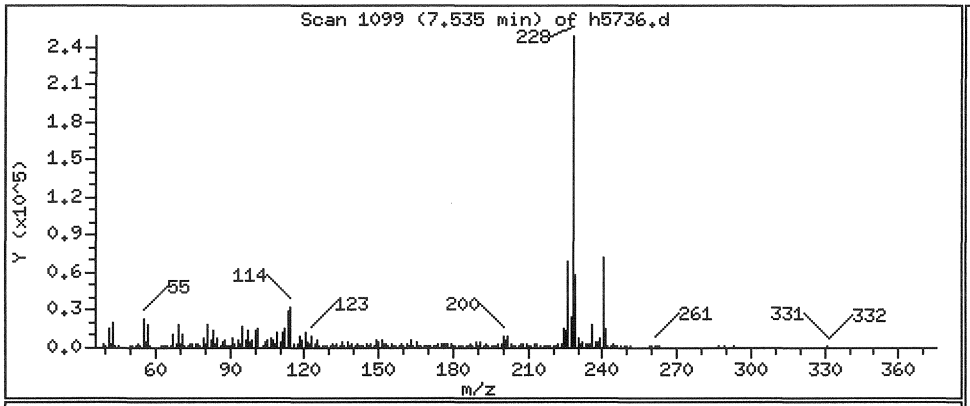
Operator: hcp

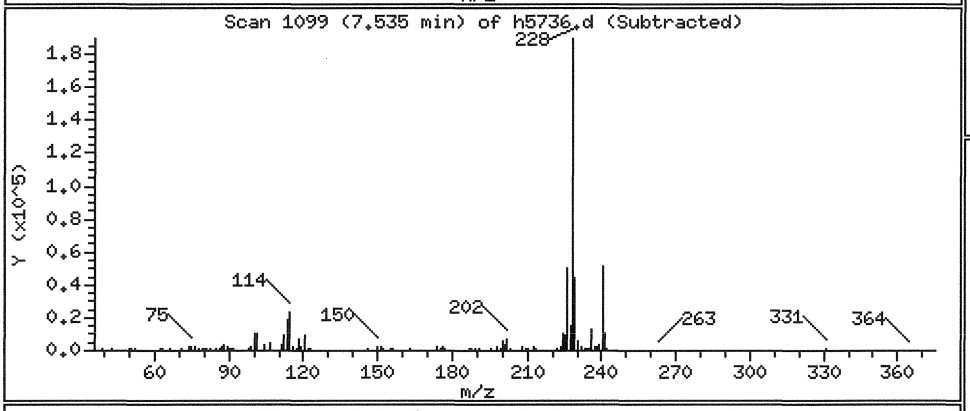
Column phase: RTX-5MS-30M

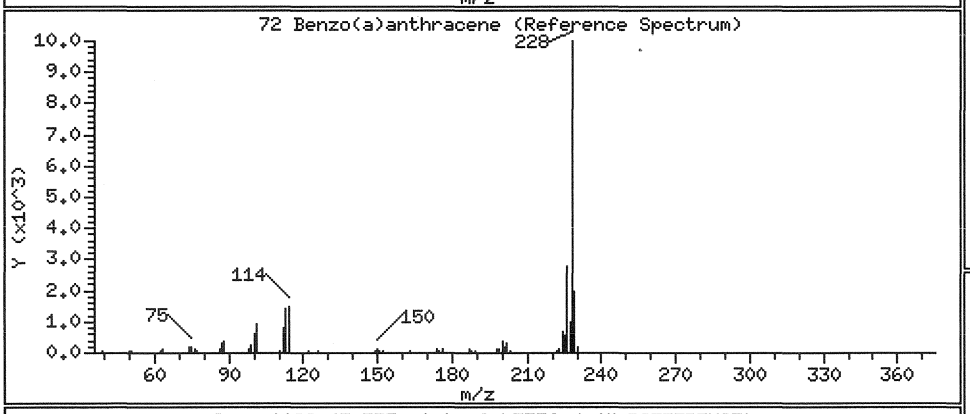
Column diameter: 0.25

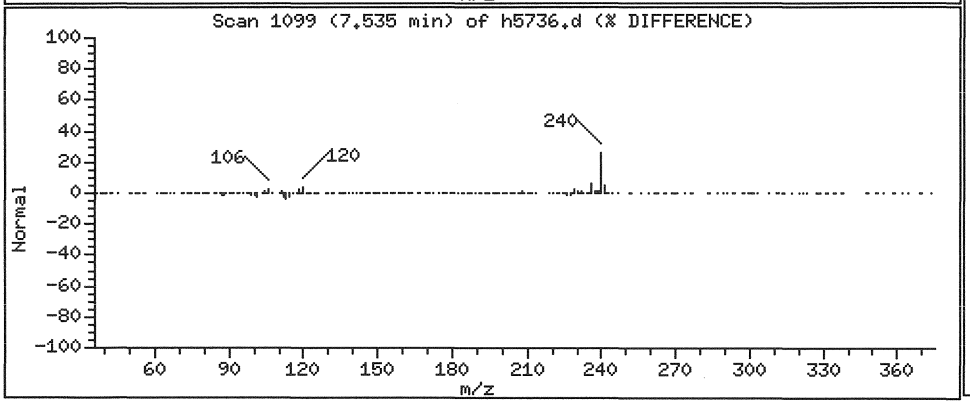
72 Benzo(a)anthracene

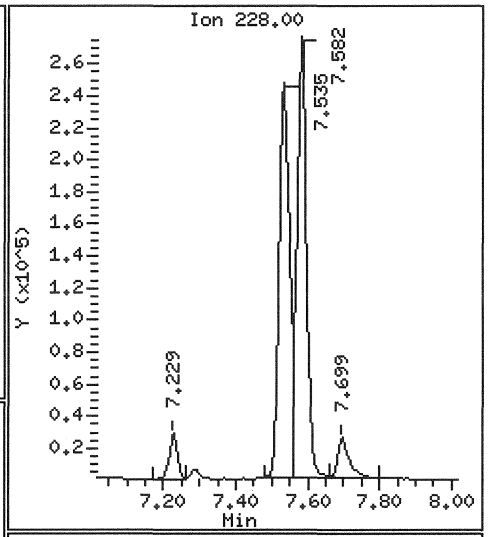
Concentration: 2940 ug/Kg

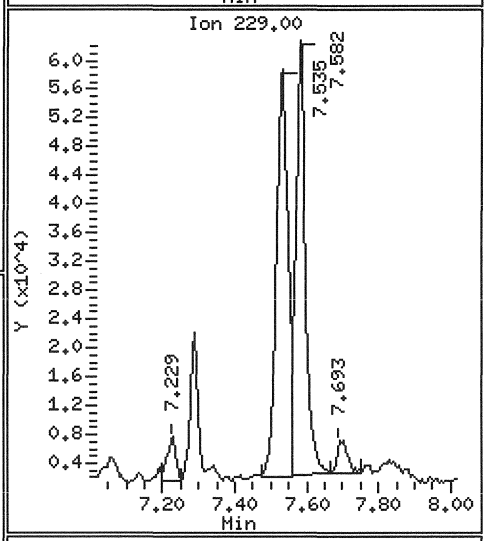


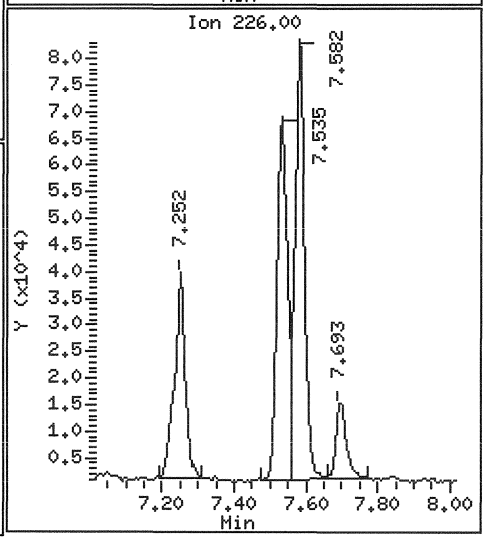



Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d



Date : 22-OCT-2013 16:31

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

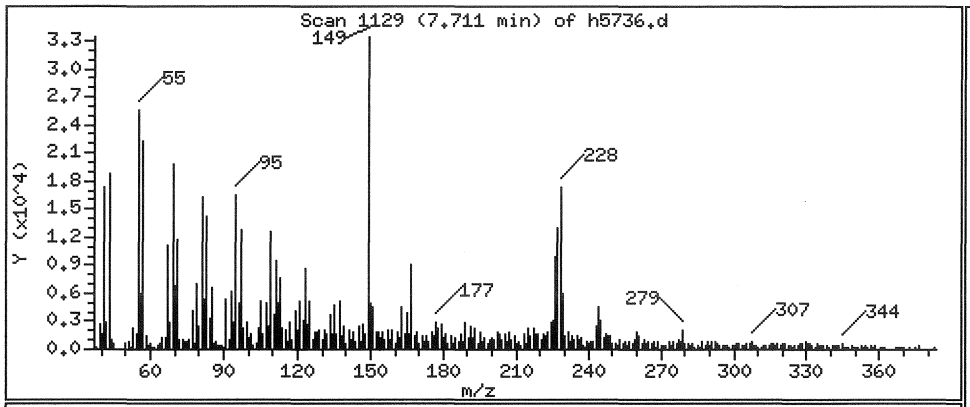
Operator: hcp

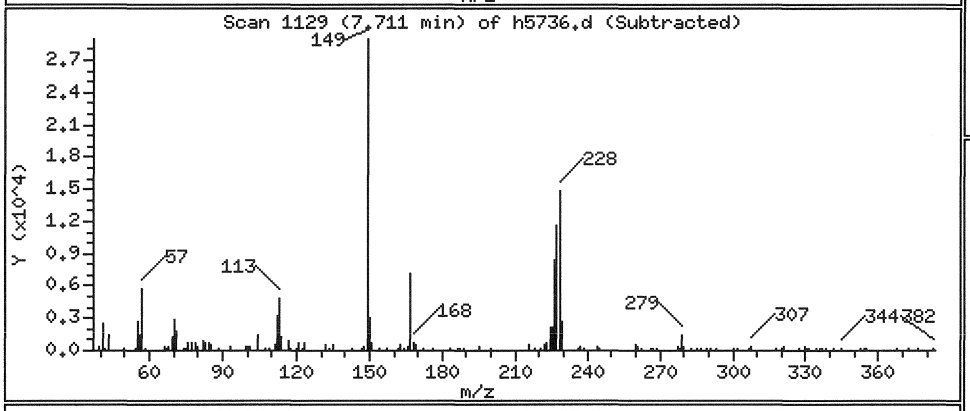
Column phase: RTX-5MS-30M

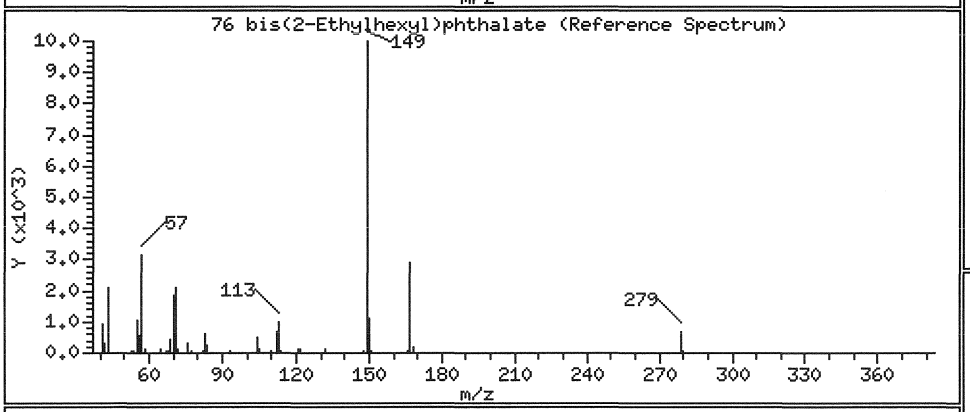
Column diameter: 0.25

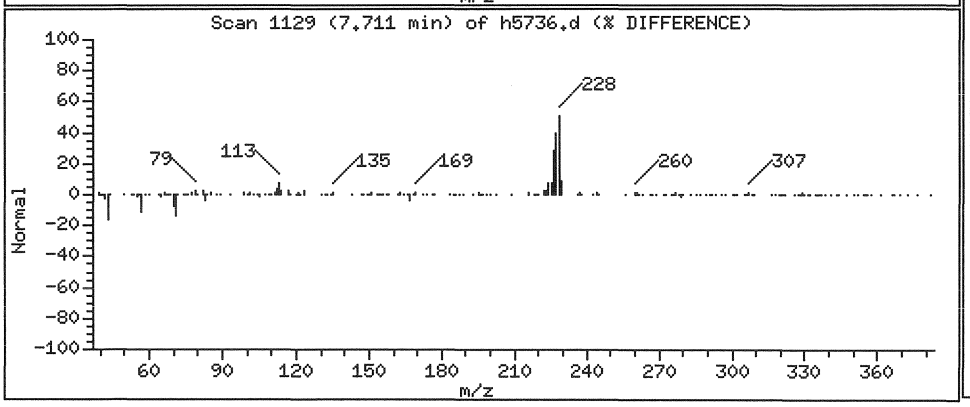
76 bis(2-Ethylhexyl)phthalate

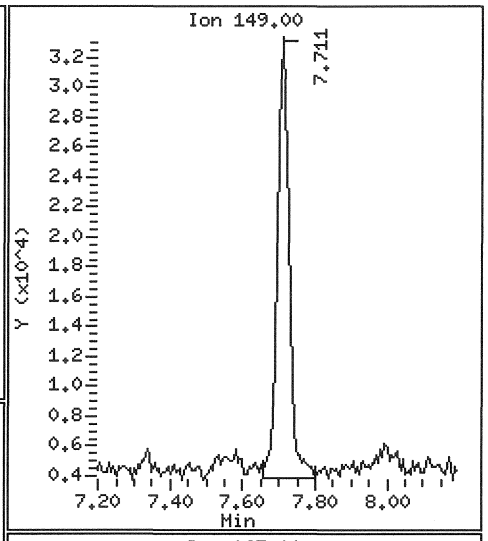
Concentration: 627 ug/Kg

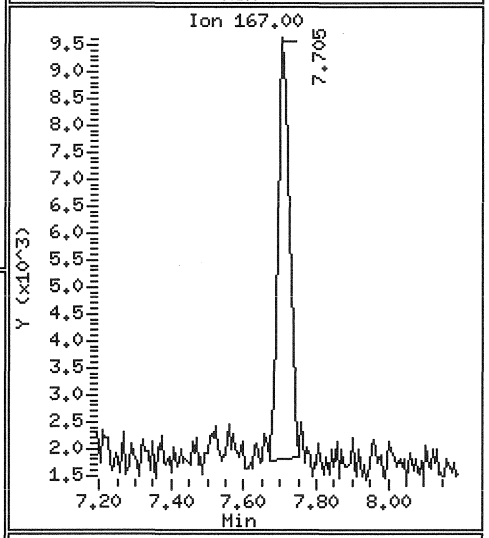


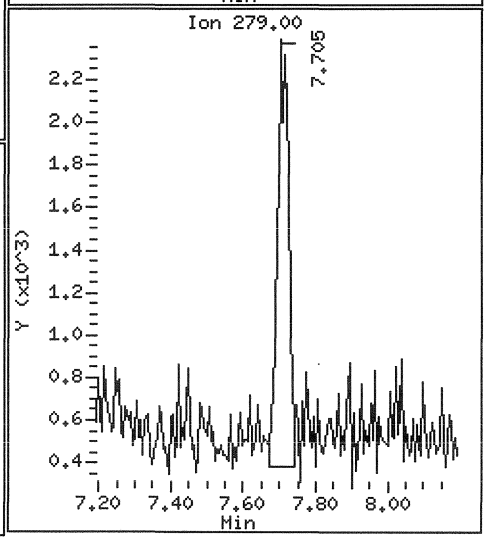



Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d



Date : 22-OCT-2013 16:31

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

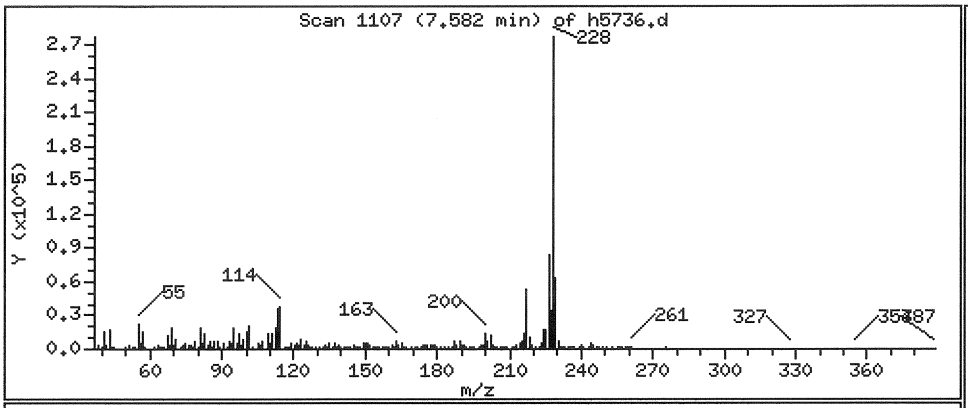
Operator: hcp

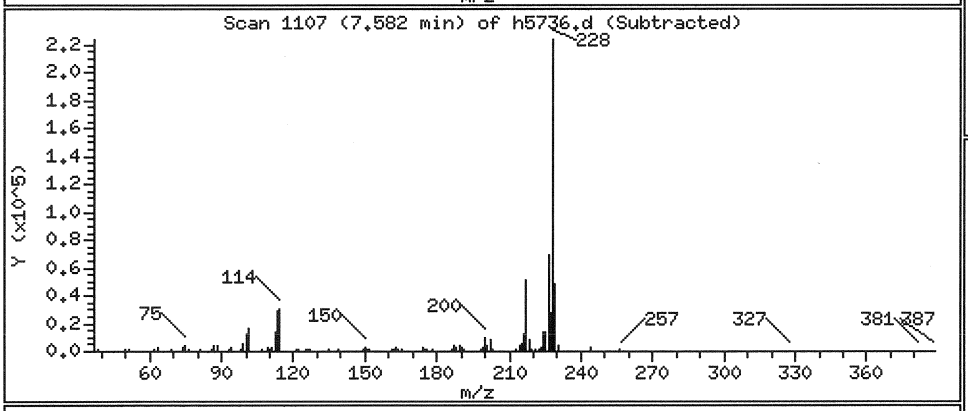
Column phase: RTX-5MS-30M

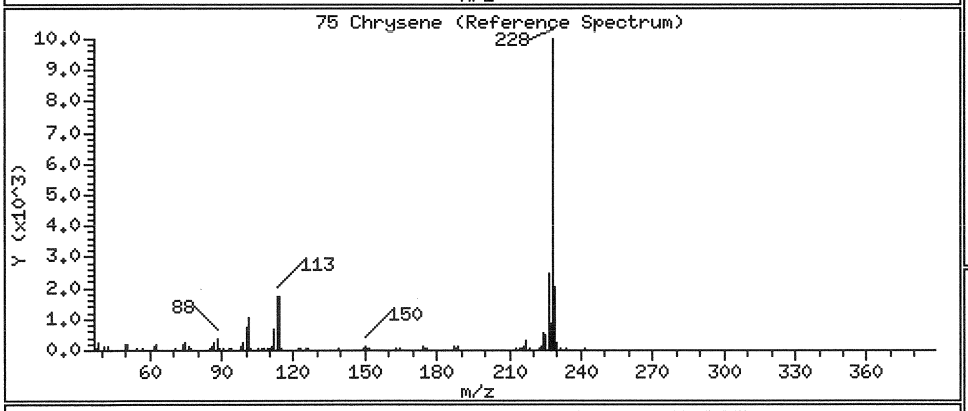
Column diameter: 0.25

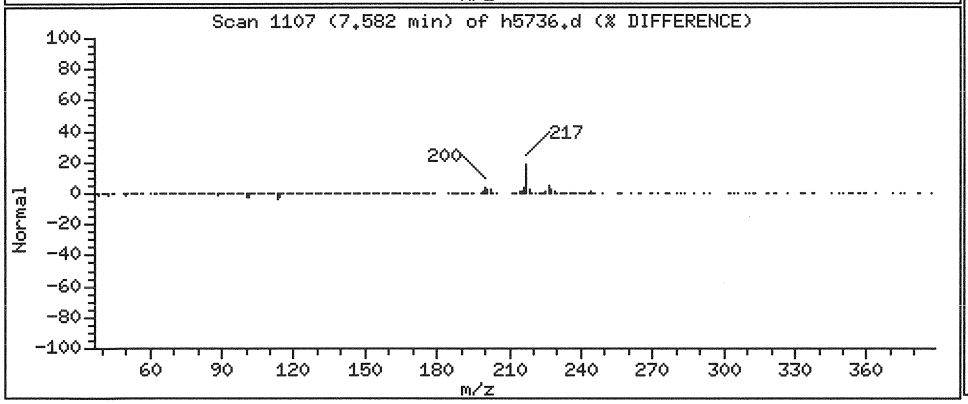
75 Chrysene

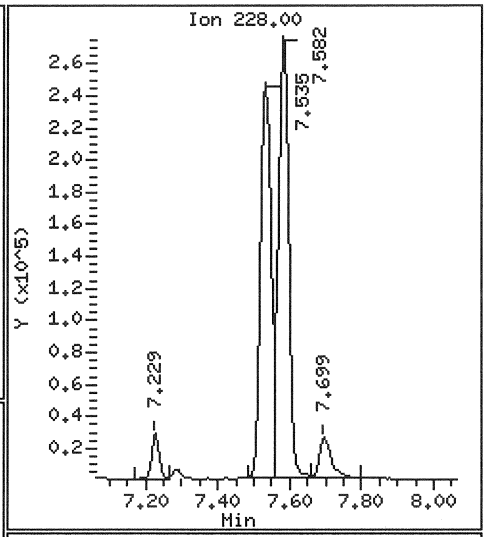
Concentration: 3170 ug/Kg

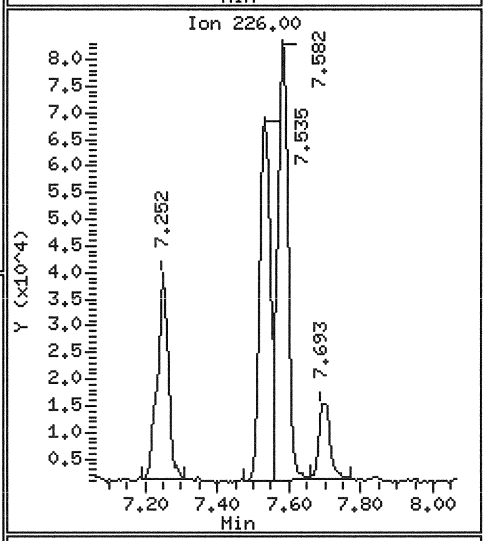


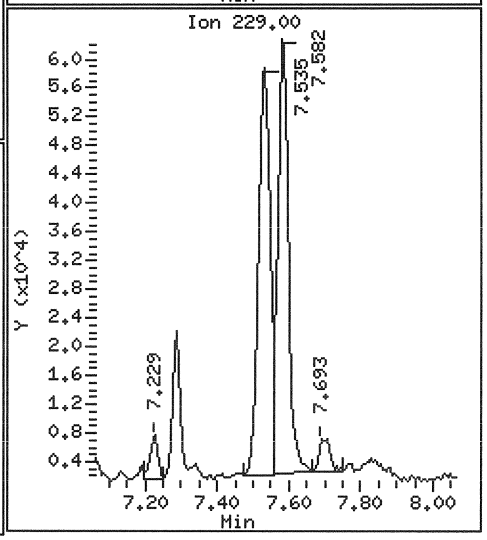



Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d



Date : 22-OCT-2013 16:31

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

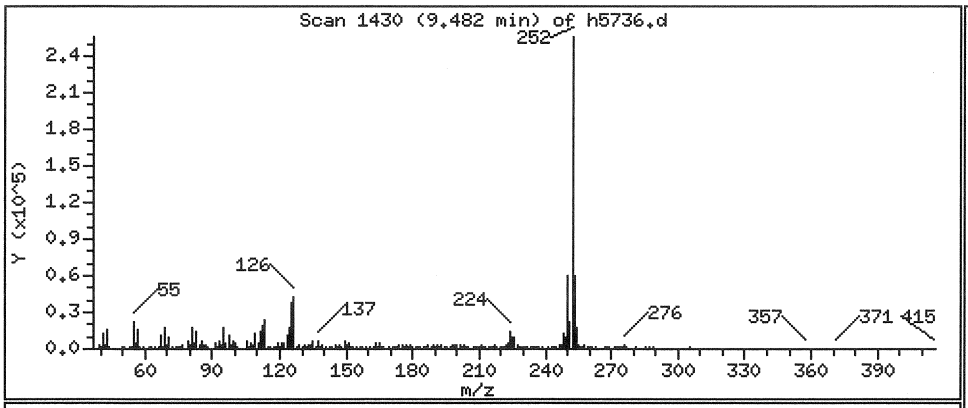
Operator: hcp

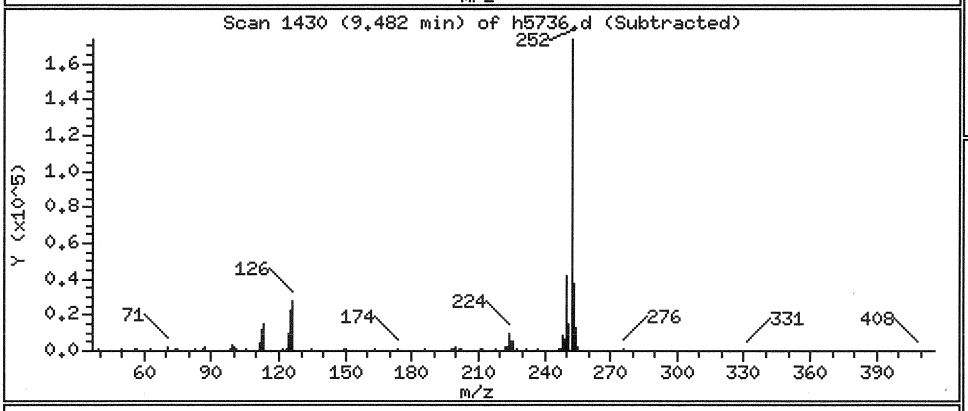
Column phase: RTX-5MS-30M

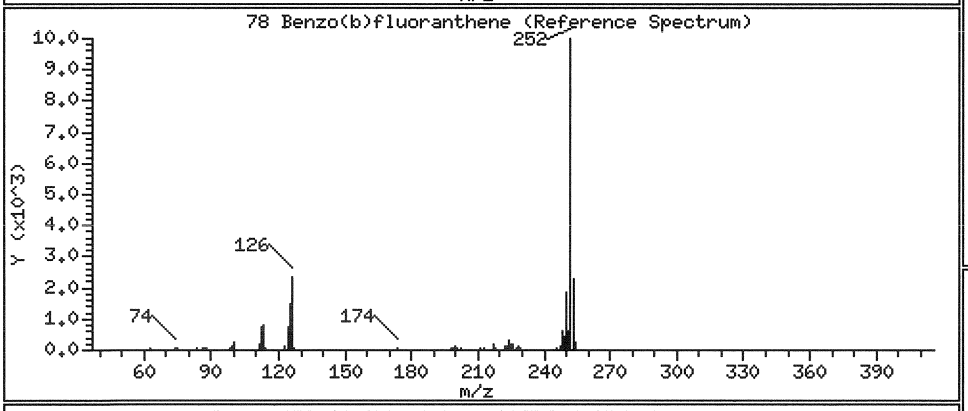
Column diameter: 0.25

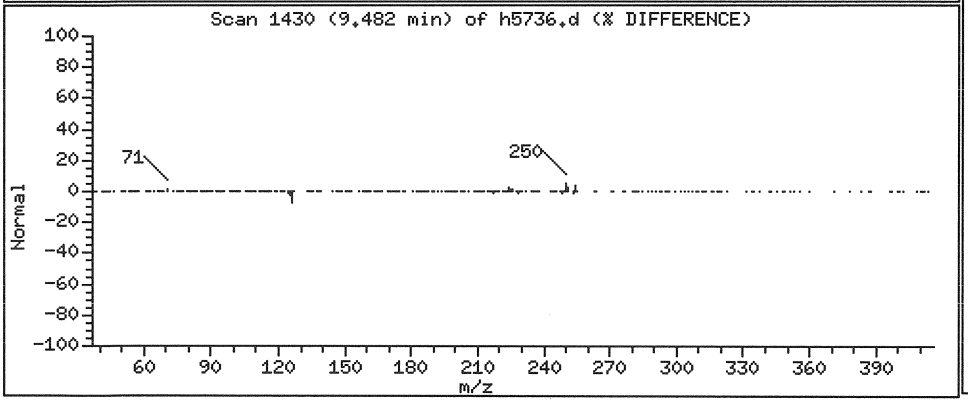
78 Benzo(b)fluoranthene

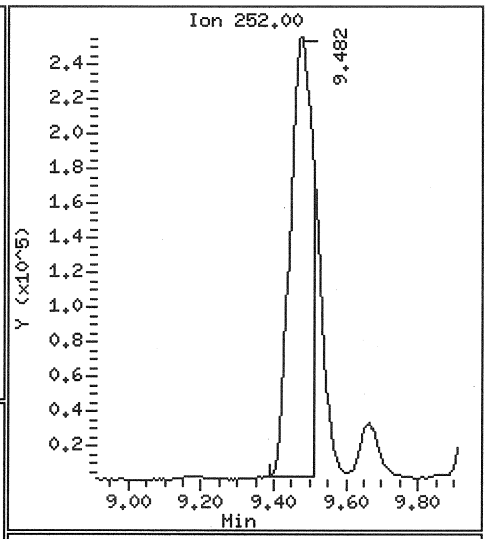
Concentration: 3520 ug/Kg

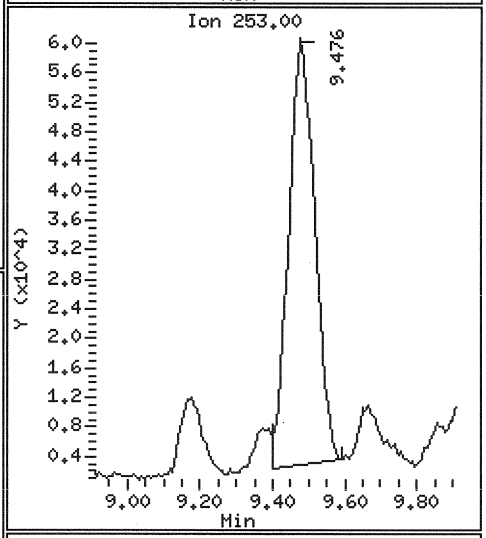


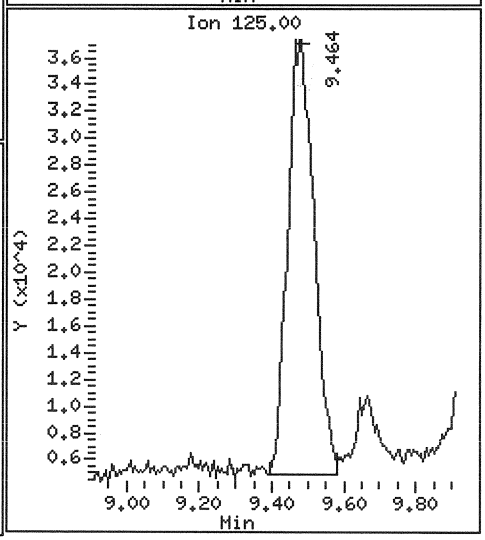



Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d



Date : 22-OCT-2013 16:31

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

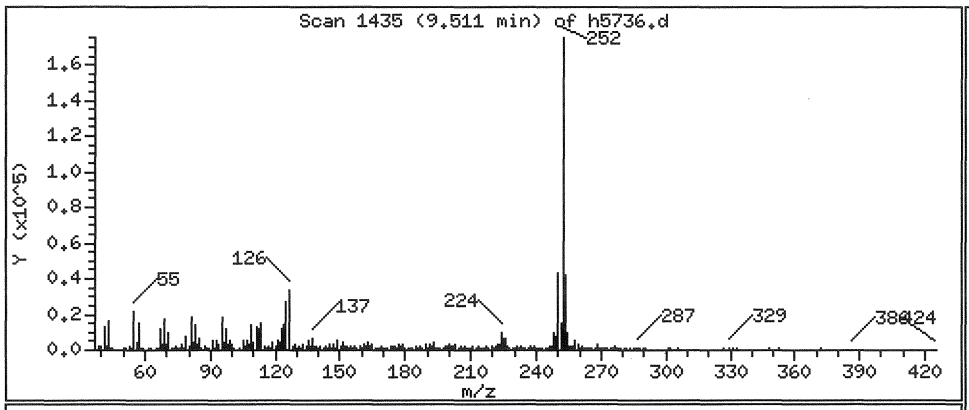
Operator: hcp

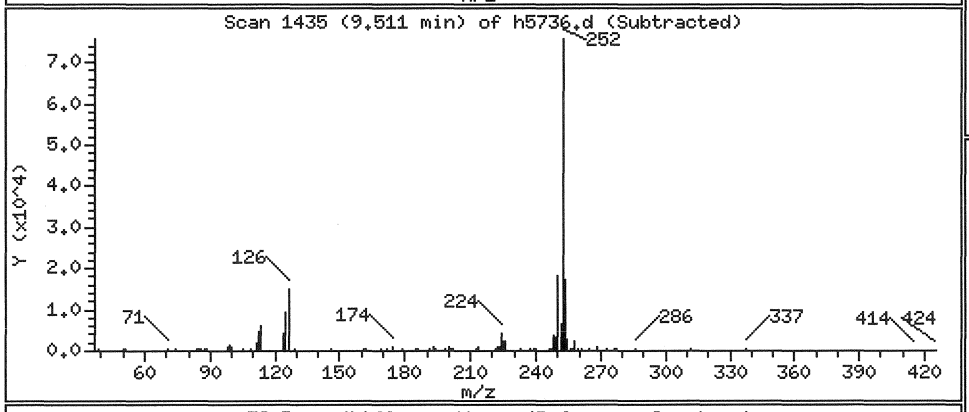
Column phase: RTX-5MS-30M

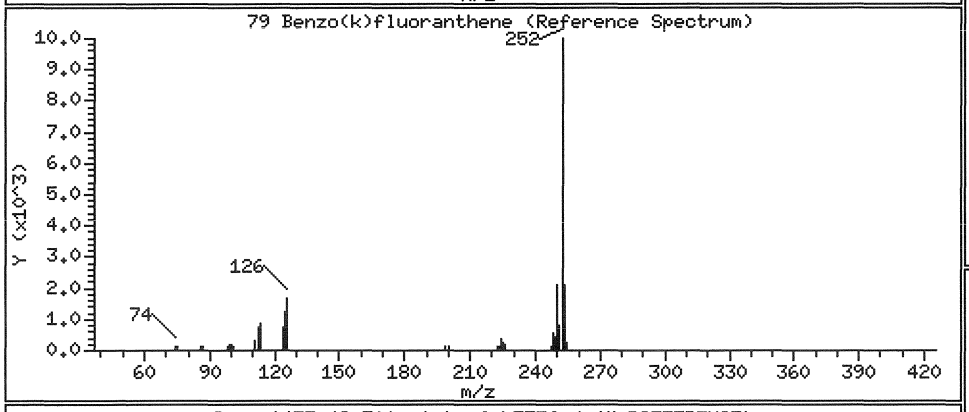
Column diameter: 0.25

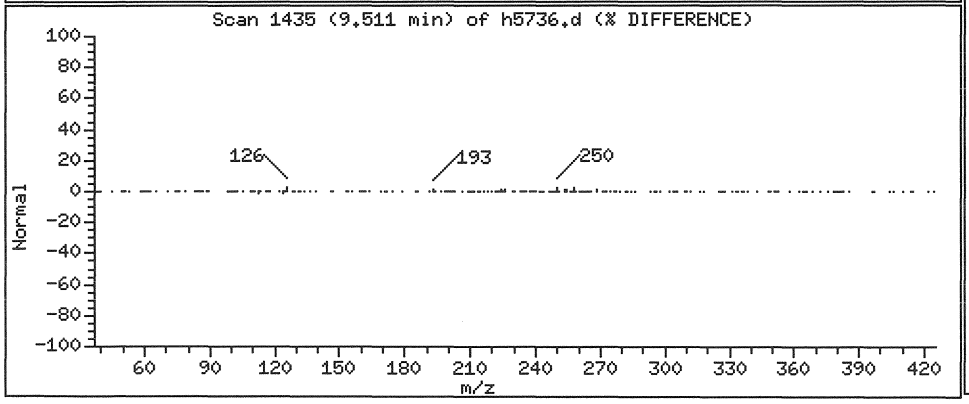
79 Benzo(k)fluoranthene

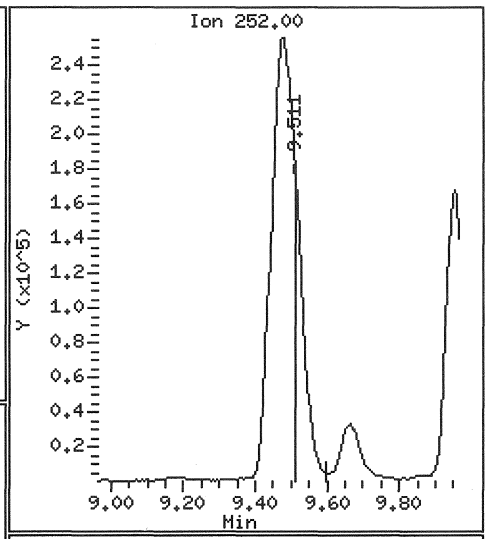
Concentration: 977 ug/Kg

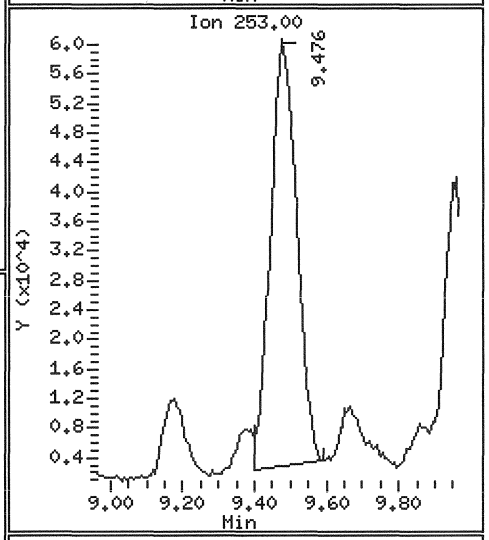


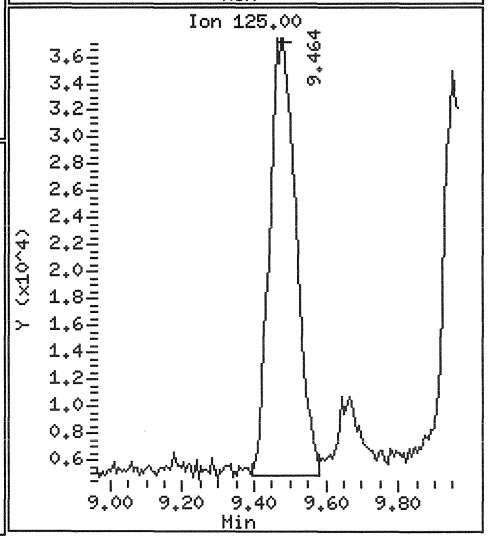



Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d



Date : 22-OCT-2013 16:31

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

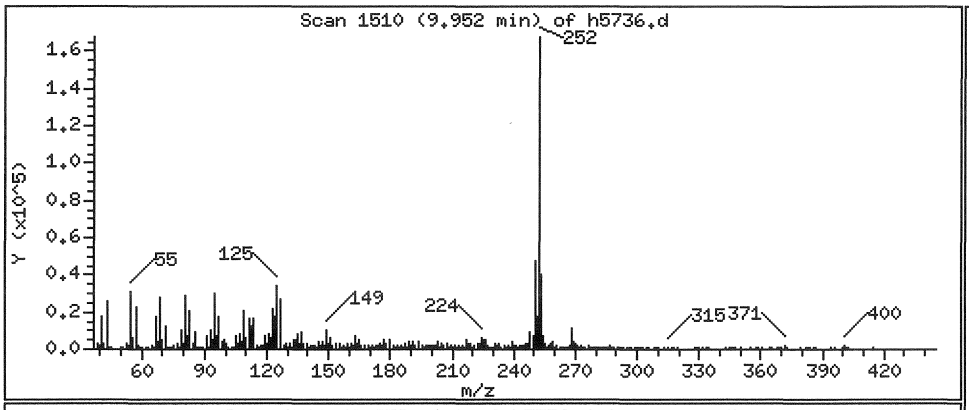
Operator: hcp

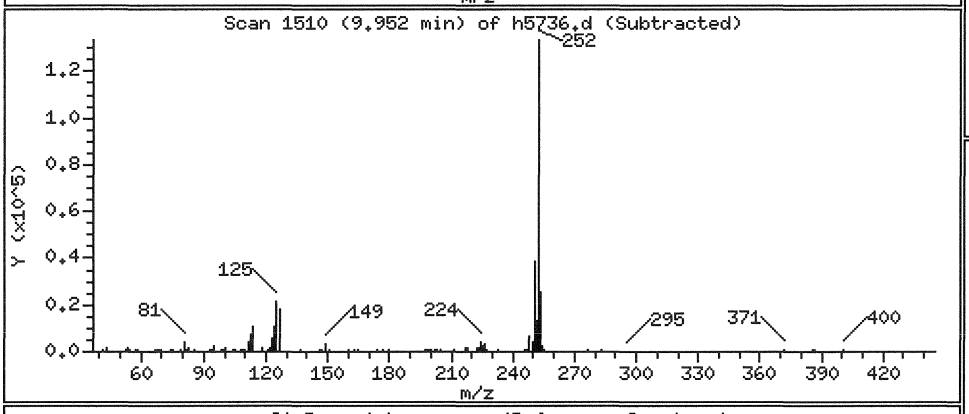
Column phase: RTX-5MS-30M

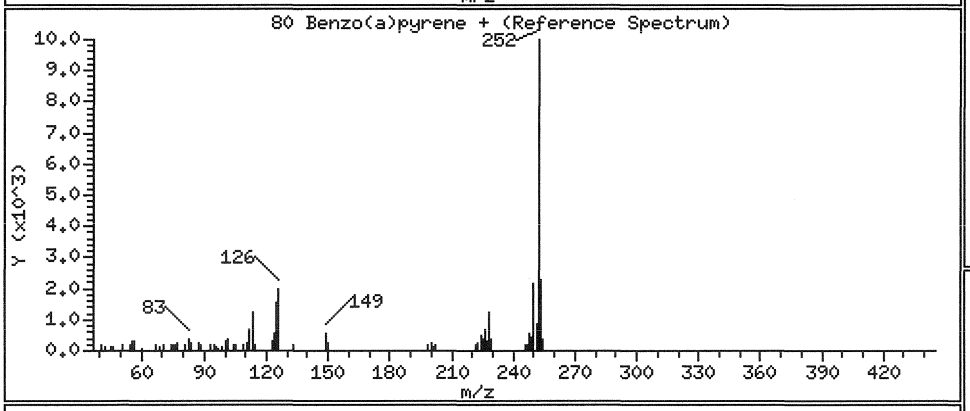
Column diameter: 0.25

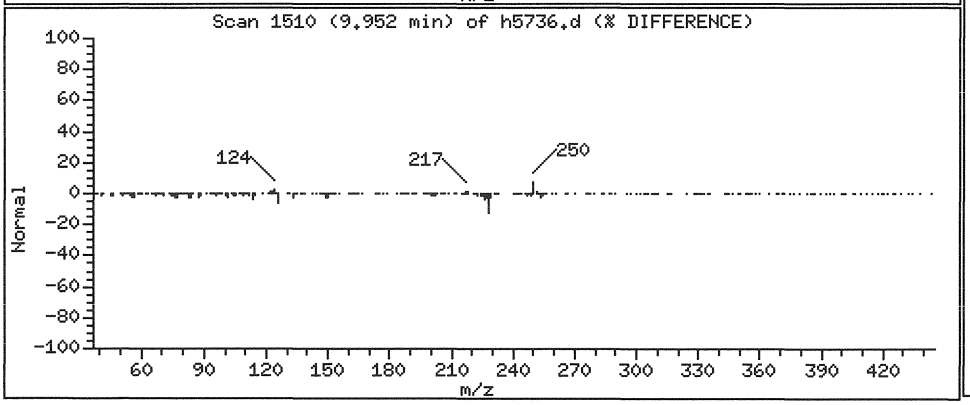
80 Benzo(a)pyrene +

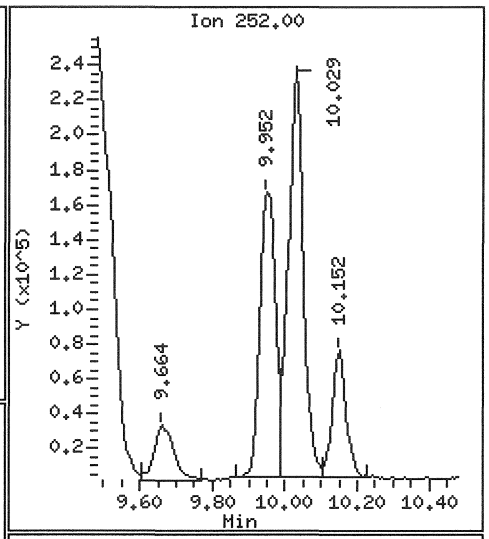
Concentration: 1660 ug/Kg

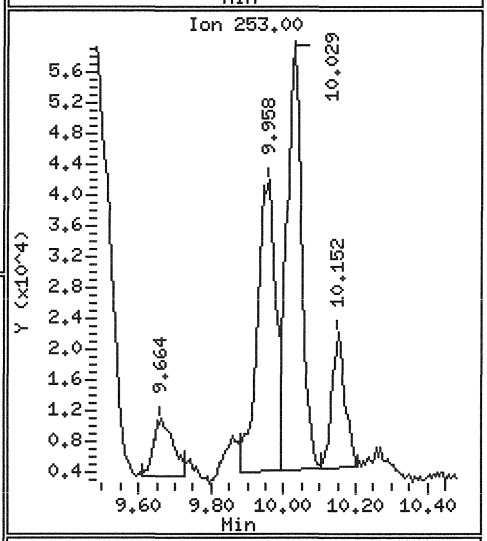


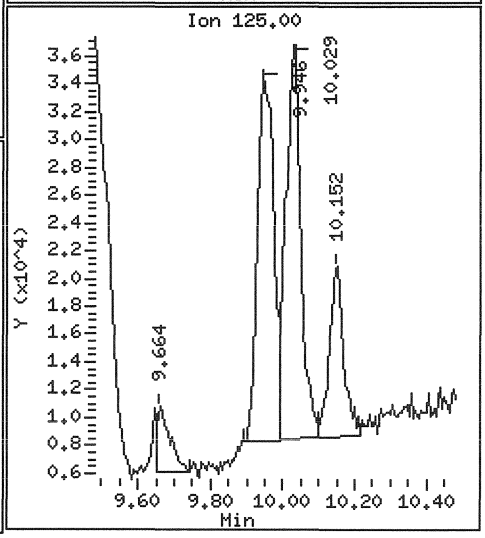



Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d

Date : 22-OCT-2013 16:31

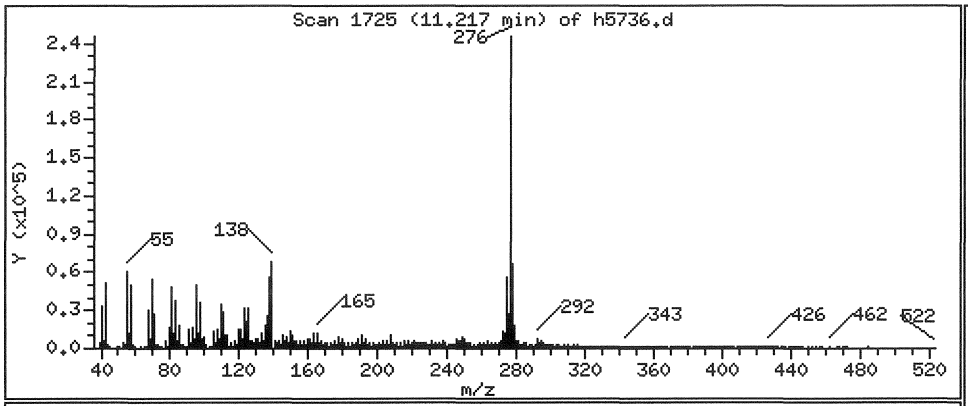
Client ID: 21310171201 Instrument: MSSV4.i

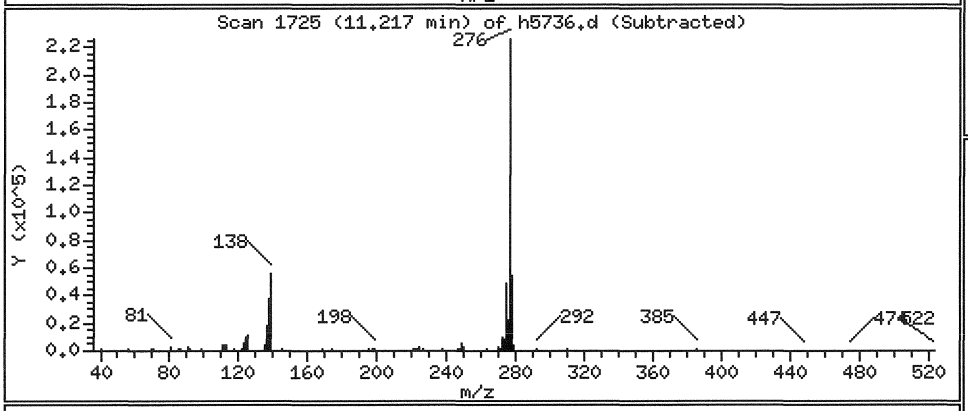
Sample Info: 21310171201*4847*

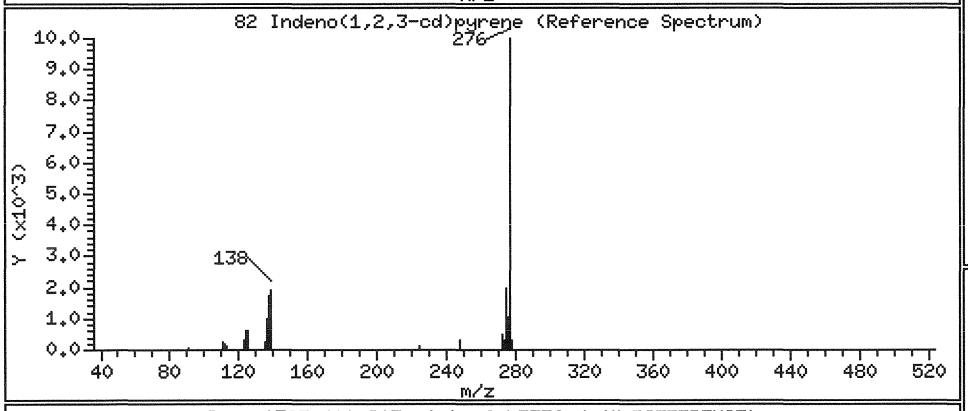
Volume Injected (uL): 1.0 Operator: hcp

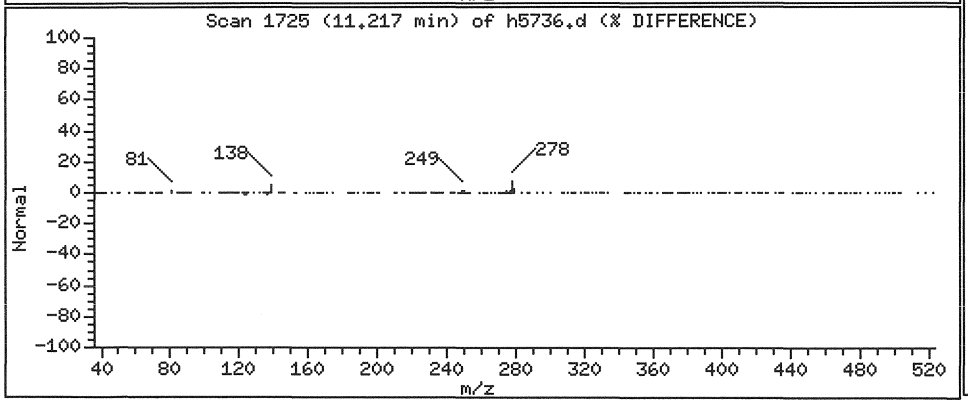
Column phase: RTX-5MS-30M Column diameter: 0.25

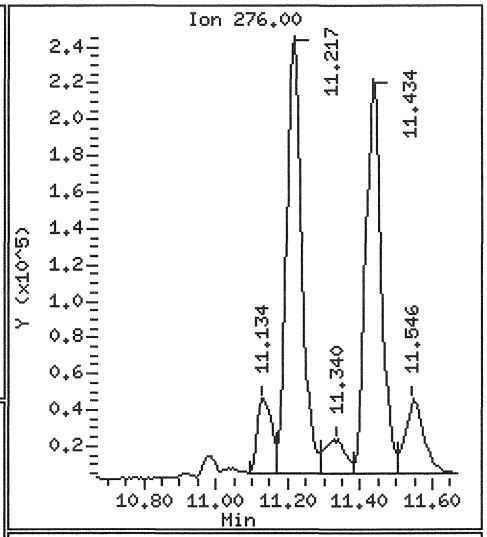
82 Indeno(1,2,3-cd)pyrene Concentration: 2650 ug/Kg

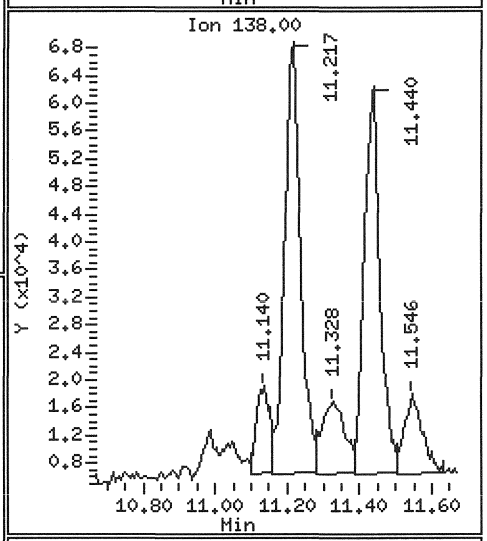


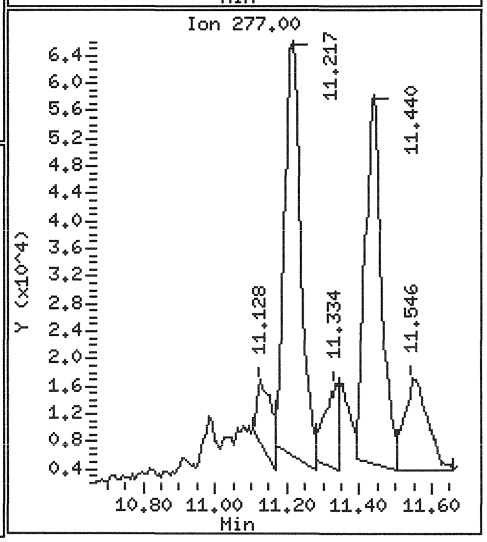



Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d

Date : 22-OCT-2013 16:31

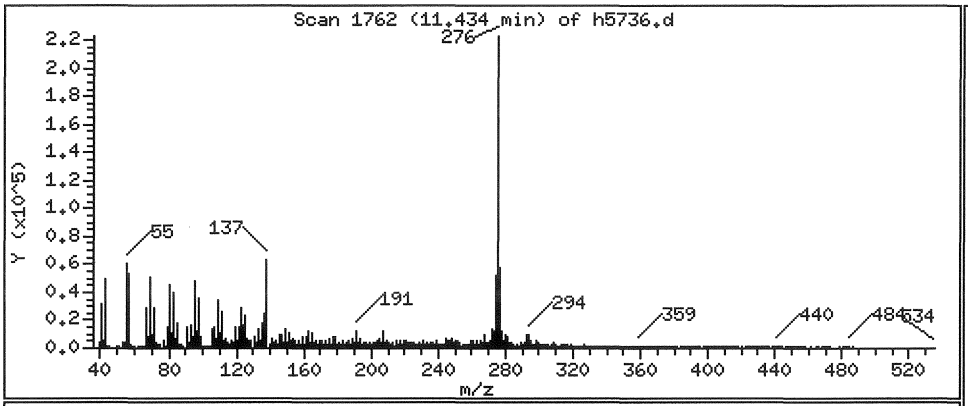
Client ID: 21310171201 Instrument: MSSV4.i

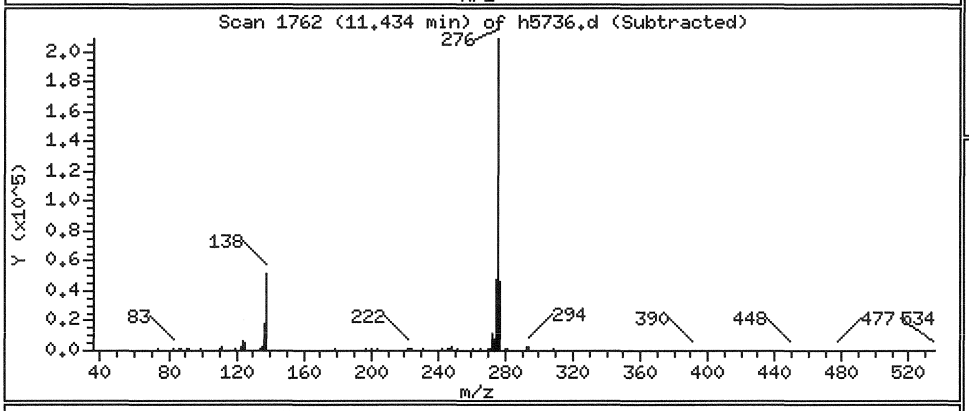
Sample Info: 21310171201*4847*

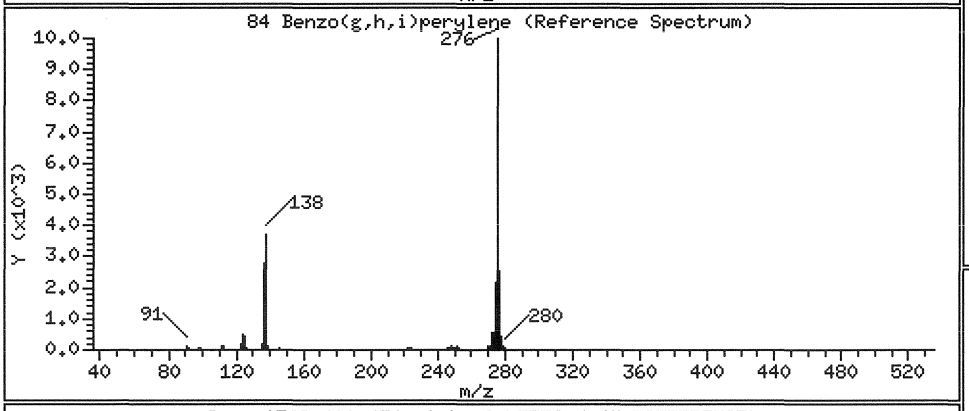
Volume Injected (uL): 1.0 Operator: hcp

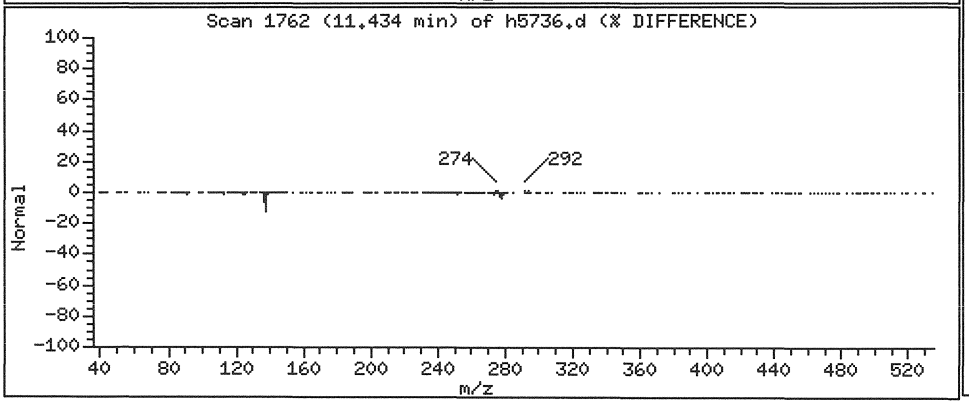
Column phase: RTX-5MS-30M Column diameter: 0.25

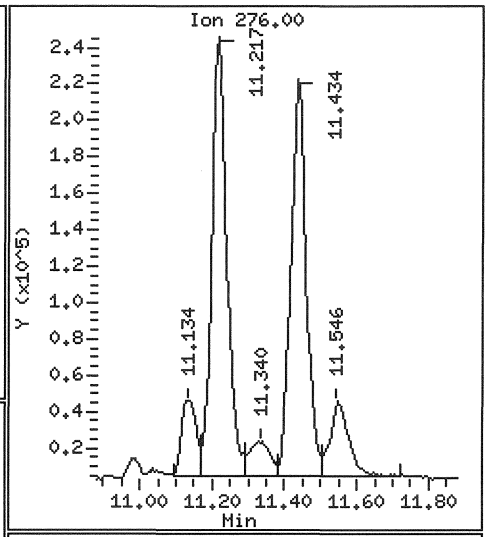
84 Benzo(g,h,i)perylene Concentration: 1860 ug/Kg

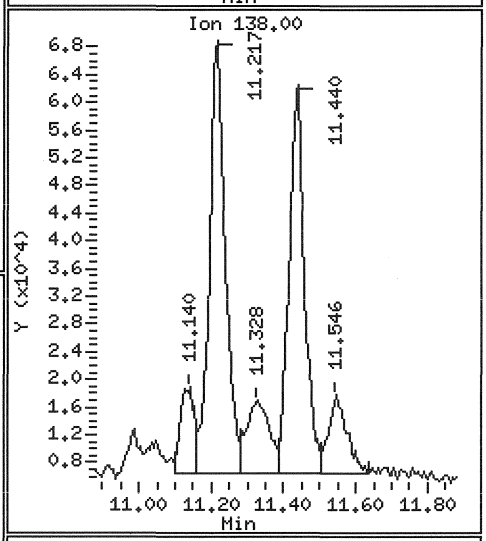


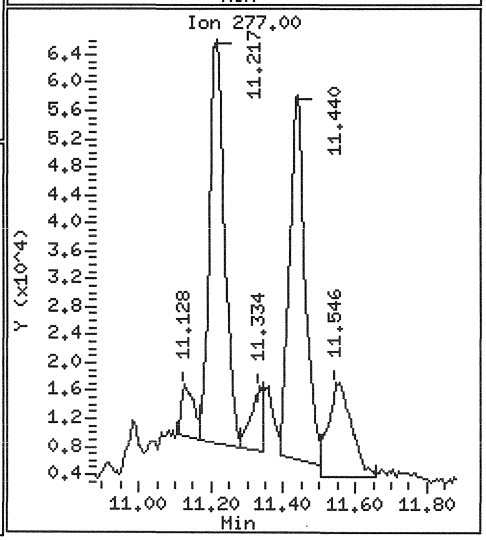



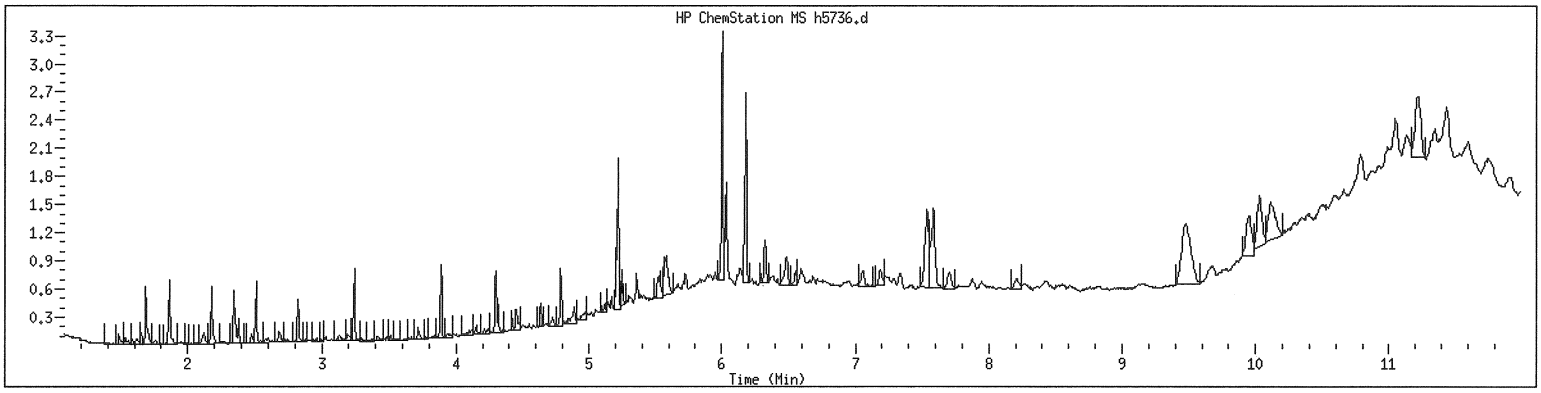



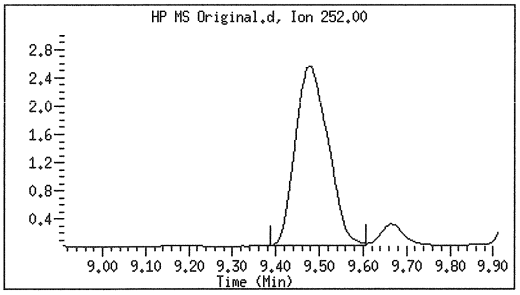
# MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 21310171201 SampleType : SAMPLE
Injection Date: 10/22/2013 16:31 Instrument : MSSV4.i
Operator : hcp
Sample Info : 21310171201*4847*
Misc Info : 21310171201*MSSV~10019~*101712*30.0-1*518149*
Method : /var/chem/MSSV4.i/2131022.s.b/8270D_04.m
Dilution : 1.00
Matrix : SOIL
Integrator : HP RTE Compound Sublist: SA8270



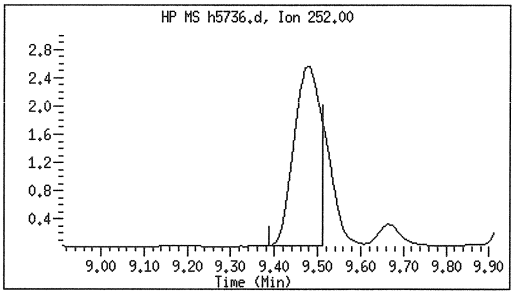

Original Final

78 Benzo(b)fluoranthene CAS#: 205-99-2 Reason: M3

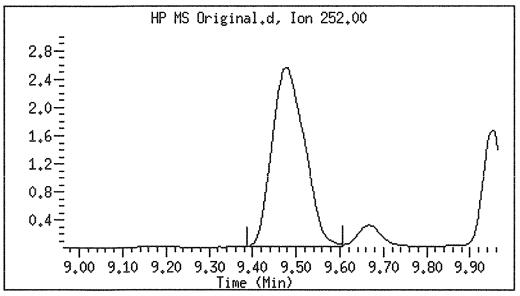



Electronic Signature Applied

User: kcb
Date: 10/24/2013 09:51

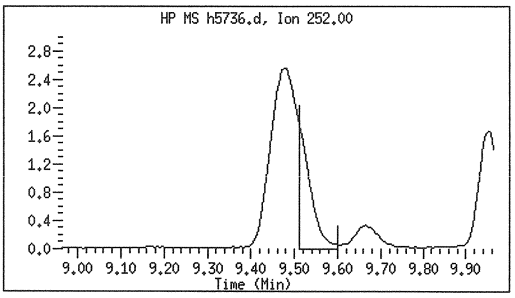



79 Benzo(k)fluoranthene CAS#: 207-08-9 Reason: M3




Electronic Signature Applied

User: kcb
Date: 10/24/2013 09:52



GCAL, Inc.

BNA QUANT AND RATIO REPORT

Data file : /var/chem/MSSV4.i/2131022.s.b/h5736.d
Lab Smp Id: 21310171201 Client Smp ID: 21310171201
Inj Date : 22-OCT-2013 16:31
Operator : hcp Inst ID: MSSV4.i
Smp Info : 21310171201*4847*
Misc Info : 21310171201*MSSV~10019~*101712*30.0-1*518149*
Comment :
Method : /var/chem/MSSV4.i/2131022.s.b/8270D_04.m
Meth Date : 22-Oct-2013 14:01 kcb Quant Type: ISTD
Cal Date : 09-JUL-2013 00:02 Cal File: h2759x.d
Als bottle: 24
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SA8270.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula:
Amt * DF * (Uf * Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | ng unit correction factor |
| Vt | 1000.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppm) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|---|
| $ 3 2-Fluorophenol | 112 | 1.858 | 1.852 | (0.740) | 188557 | 86.5297 | 2880 |
| $ 4 Phenol-d5 | 99 | 2.341 | 2.335 | (0.932) | 211785 | 89.9952 | 3000 |
| * 10 1,4-Dichlorobenzene-d4 | 152 | 2.511 | 2.511 | (1.000) | 67335 | 40.0000 | |
| $ 19 Nitrobenzene-d5 | 82 | 2.823 | 2.823 | (0.871) | 86492 | 46.1882 | 1540 |
| 23 2,4-Dimethyphenol | 107 | 3.076 | 3.058 | (0.949) | 2799 | 1.46788 | 48.9 |
| 25 Benzoic Acid | 122 | 3.129 | 3.146 | (0.966) | 7315 | 6.54507 | 218 |
| * 28 Naphthalene-d8 | 136 | 3.241 | 3.241 | (1.000) | 225714 | 40.0000 | |
| 29 Naphthalene | 128 | 3.253 | 3.252 | (1.004) | 10700 | 1.82552 | 60.9 |
| 33 2-Methylnaphthalene | 142 | 3.670 | 3.664 | (1.132) | 5412 | 1.50781 | 50.3 |
| 145 1-Methylnapthalene | 142 | 3.729 | 3.723 | (1.151) | 5942 | 1.72464 | 57.5 |
| $ 37 2-Fluorobiphenyl | 172 | 3.888 | 3.888 | (0.904) | 183566 | 49.7522 | 1660 |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppm) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|---|
| * 44 Acenaphthene-d10 | 164 | 4.300 | 4.299 | (1.000) | 109925 | 40.0000 | |
| 45 Acenaphthene + | 153 | 4.317 | 4.317 | (1.004) | 47078 | 15.0784 | 503 |
| 47 Dibenzofuran | 168 | 4.423 | 4.423 | (1.029) | 33189 | 7.74307 | 258 |
| 51 Fluorene | 166 | 4.635 | 4.635 | (1.078) | 51536 | 15.0964 | 503 |
| $ 57 2,4,6-Tribromophenol | 332 | 4.788 | 4.782 | (1.114) | 53724 | 93.3017 | 3110 |
| * 61 Phenanthrene-d10 | 188 | 5.205 | 5.205 | (1.000) | 162078 | 40.0000 | |
| 62 Phenanthrene | 178 | 5.223 | 5.217 | (1.003) | 548270 | 123.334 | 4110 |
| 63 Anthracene | 178 | 5.252 | 5.252 | (1.009) | 97951 | 22.1058 | 737 |
| 64 Carbazole | 167 | 5.358 | 5.358 | (1.029) | 79612 | 19.4436 | 648 |
| 67 Fluoranthene + | 202 | 6.005 | 5.993 | (1.154) | 990396 | 207.496 | 6920(A) |
| 69 Pyrene | 202 | 6.182 | 6.176 | (0.819) | 762718 | 118.478 | 3950 |
| $ 70 Terphenyl-d14 | 244 | 6.323 | 6.317 | (0.838) | 159090 | 37.6293 | 1250 |
| 72 Benzo(a)anthracene | 228 | 7.535 | 7.517 | (0.998) | 499120 | 88.1628 | 2940 |
| * 74 Chrysene-d12 | 240 | 7.546 | 7.529 | (1.000) | 211423 | 40.0000 | |
| 76 bis(2-Ethylhexyl)phthalate | 149 | 7.711 | 7.693 | (1.022) | 65419 | 18.8129 | 627 |
| 75 Chrysene | 228 | 7.582 | 7.564 | (1.005) | 547932 | 95.0291 | 3170 |
| 78 Benzo(b)fluoranthene | 252 | 9.482 | 9.411 | (0.937) | 1052005 | 105.736 | 3520(M2H) |
| 79 Benzo(k)fluoranthene | 252 | 9.511 | 9.464 | (0.940) | 343940 | 29.3007 | 977(M2) |
| 80 Benzo(a)pyrene + | 252 | 9.952 | 9.981 | (0.984) | 495801 | 49.8401 | 1660(H) |
| * 81 Perylene-d12 | 264 | 10.117 | 10.070 | (1.000) | 401314 | 40.0000 | (H) |
| 82 Indeno(1,2,3-cd)pyrene | 276 | 11.217 | 11.169 | (1.109) | 723218 | 79.3570 | 2650(H) |
| 84 Benzo(g,h,i)perylene | 276 | 11.434 | 11.381 | (1.130) | 663178 | 55.7874 | 1860(H) |

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M2- Compound response manually integrated because Target system integrated incorrectly.
H - Operator selected an alternate compound hit.

Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d

Date : 22-OCT-2013 16:31

Client ID: 21310171201

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

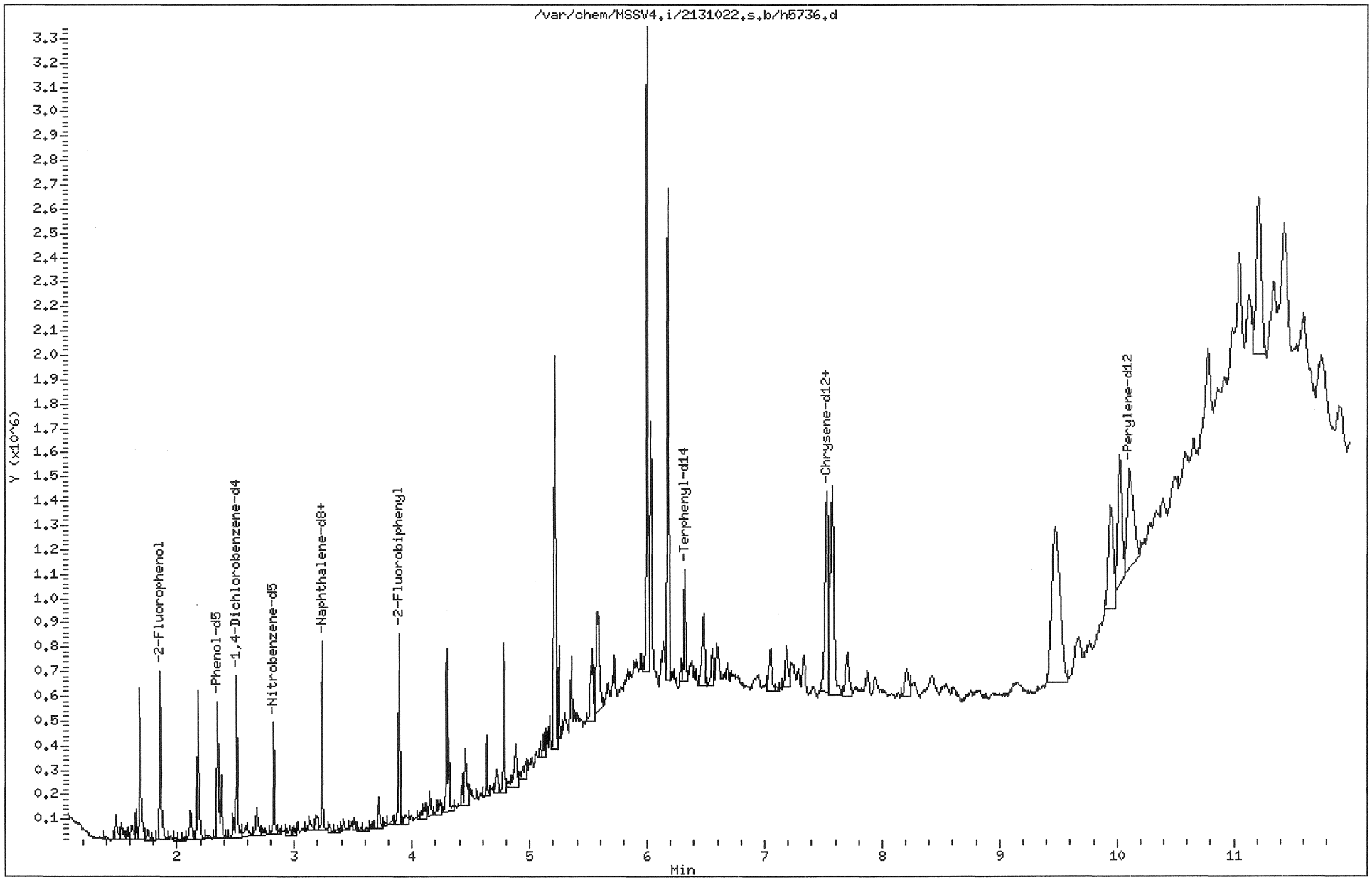
Column phase: RTX-5MS-30M

Instrument: MSSV4.i

Operator: hcp

Column diameter: 0.25






21310171 2 343

Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d



Date : 22-OCT-2013 16:31

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

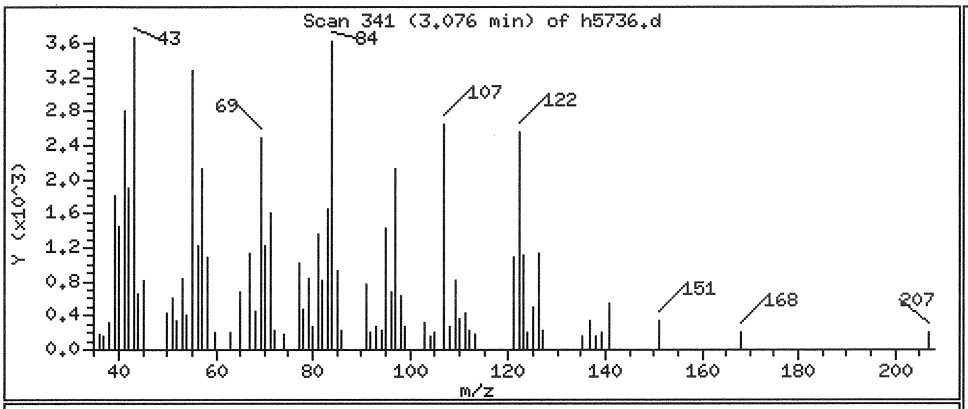
Operator: hcp

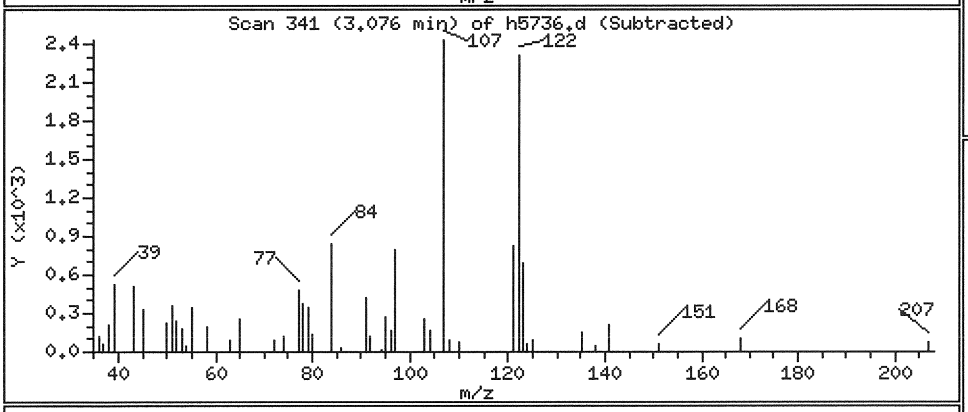
Column phase: RTX-5MS-30M

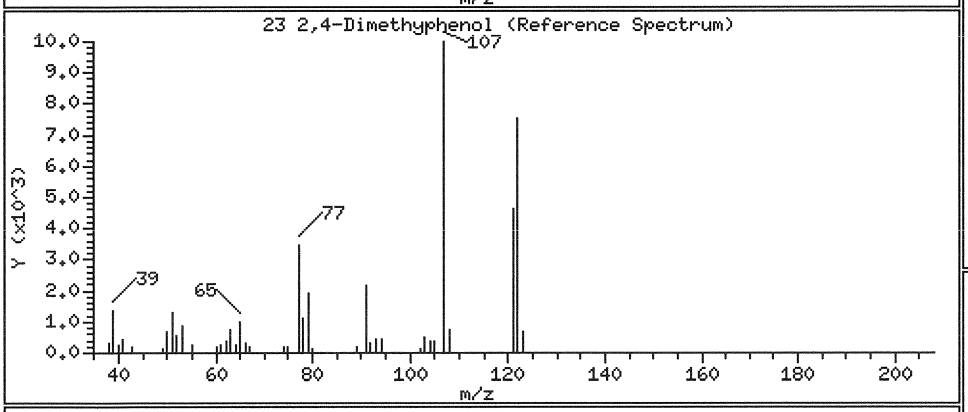
Column diameter: 0.25

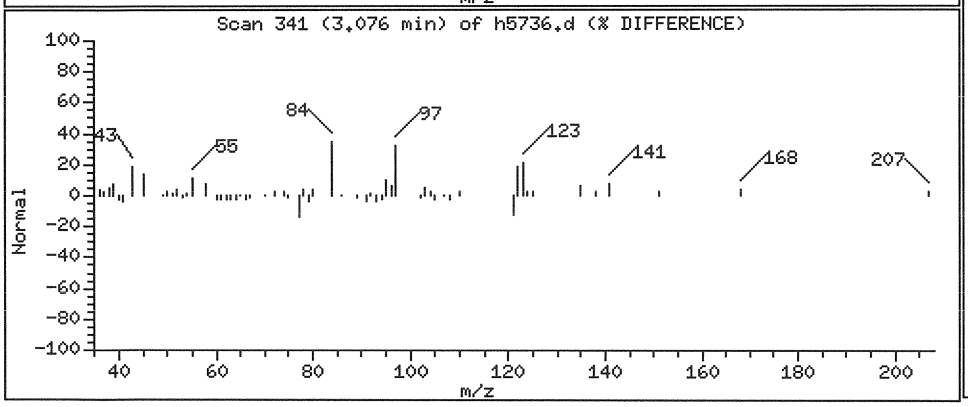
23 2,4-Dimethyphenol

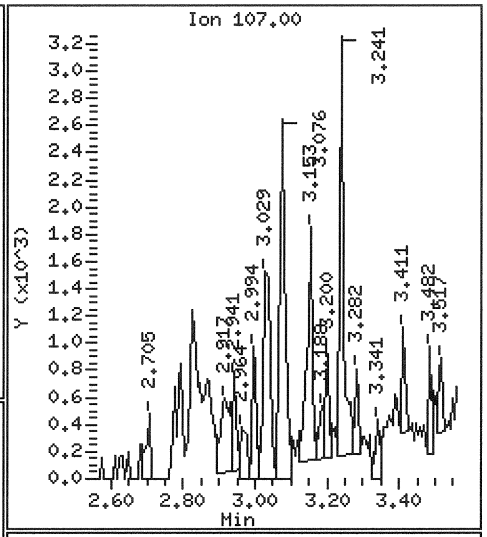
Concentration: 48.9 ug/Kg

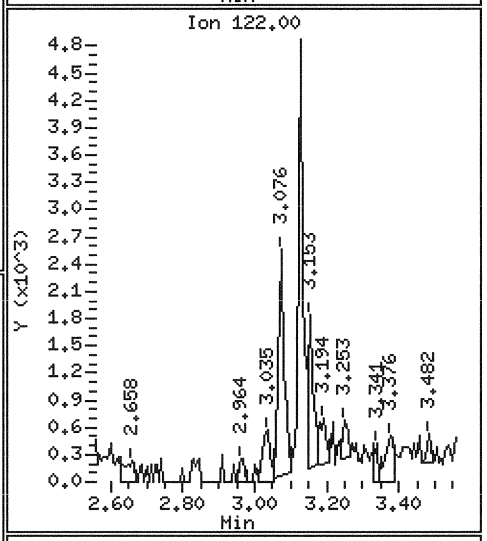


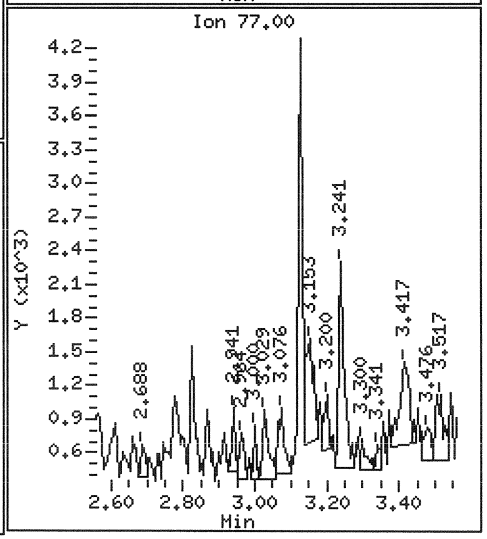



Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d



Date : 22-OCT-2013 16:31

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

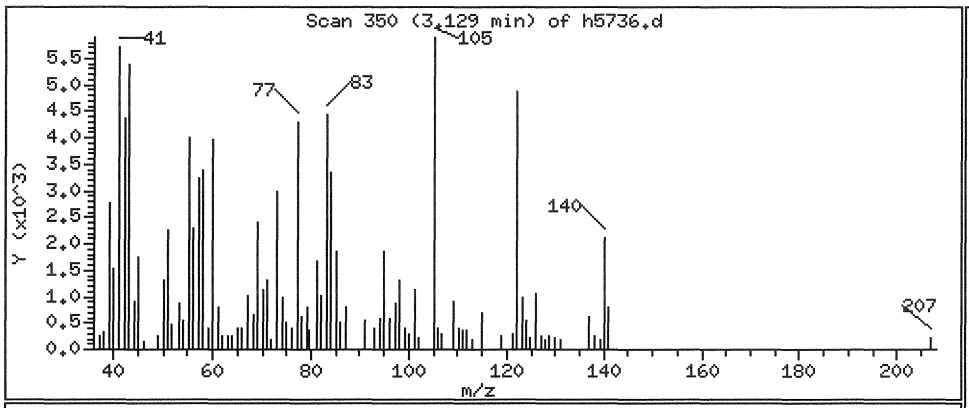
Operator: hcp

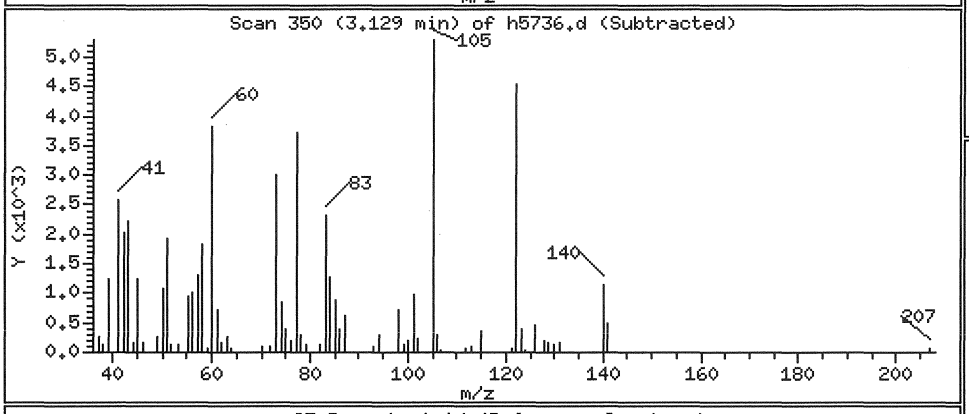
Column phase: RTX-5MS-30M

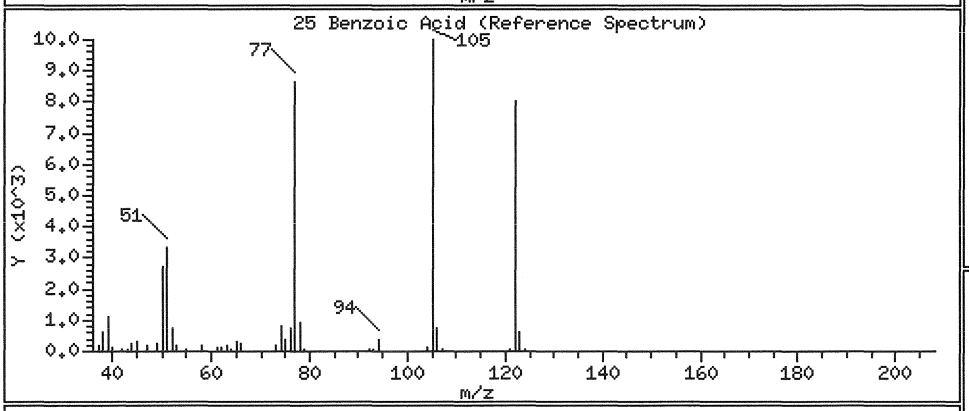
Column diameter: 0.25

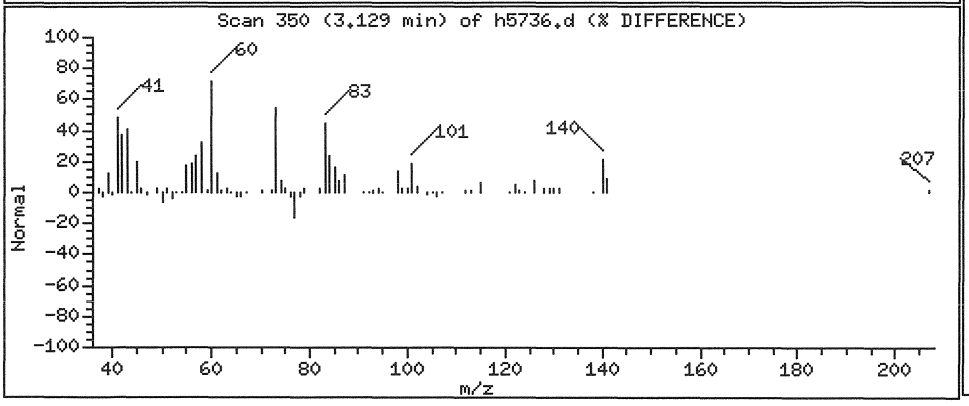
25 Benzoic Acid

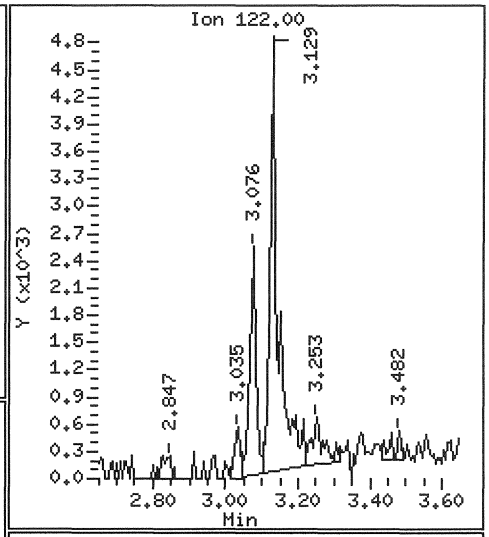
Concentration: 218 ug/Kg

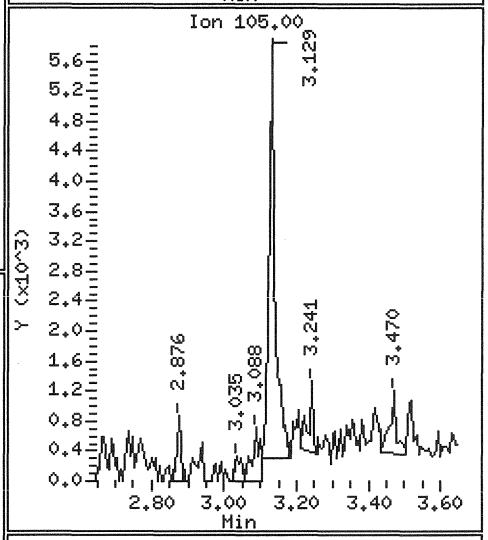


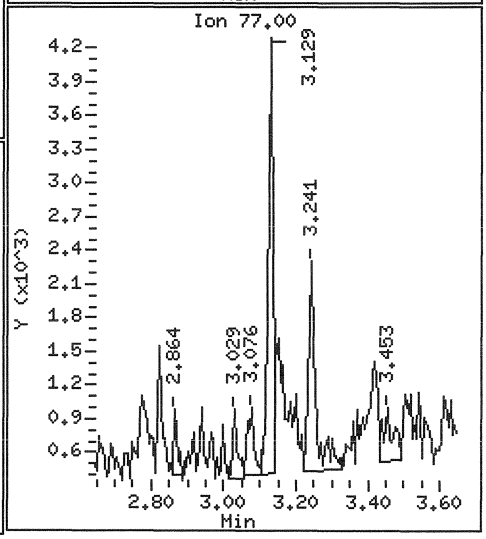



Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d



Date : 22-OCT-2013 16:31

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

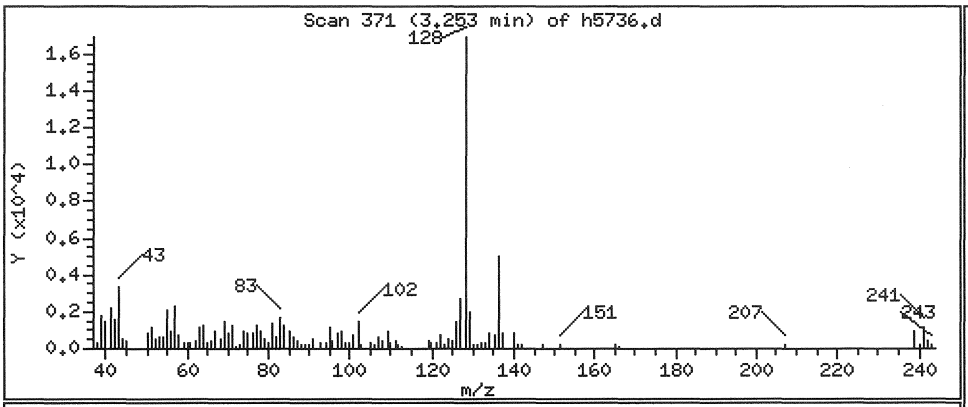
Operator: hcp

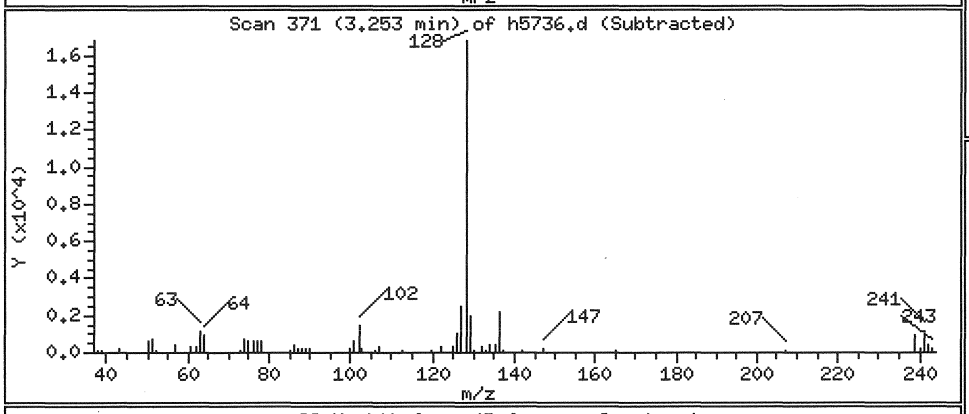
Column phase: RTX-5MS-30M

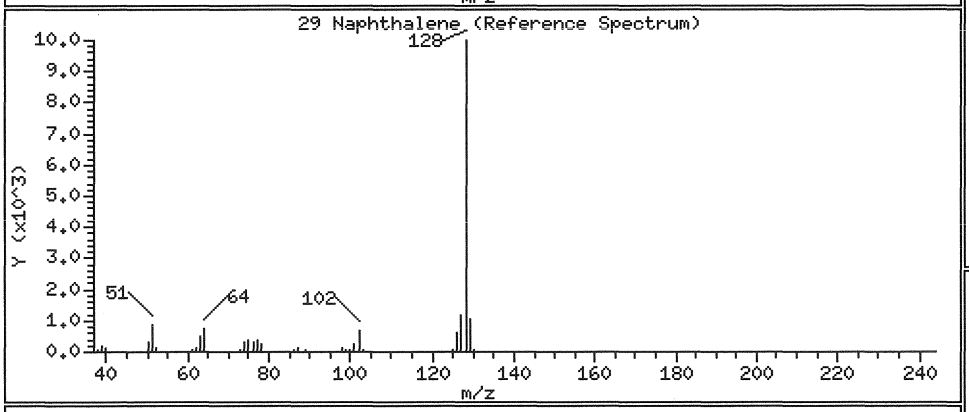
Column diameter: 0.25

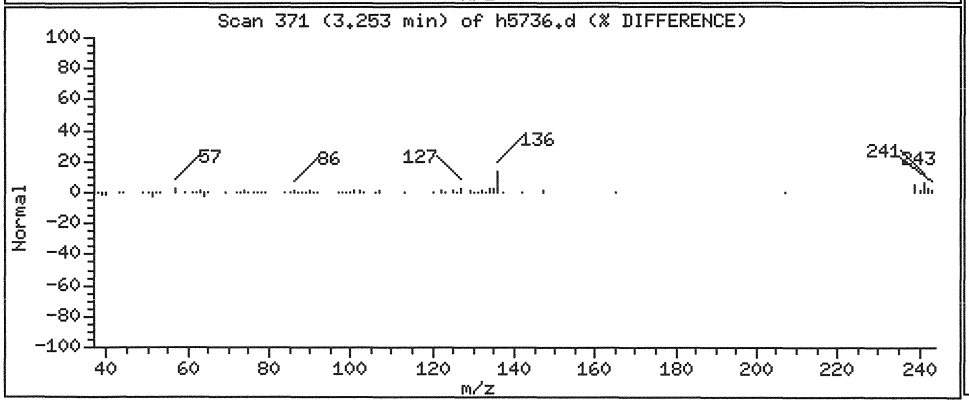
29 Naphthalene

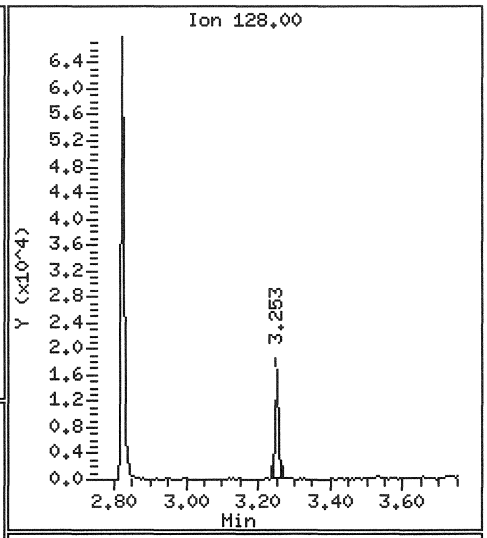
Concentration: 60.9 ug/Kg

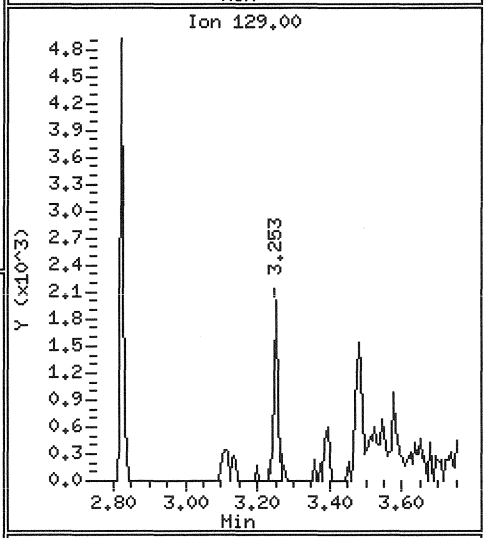


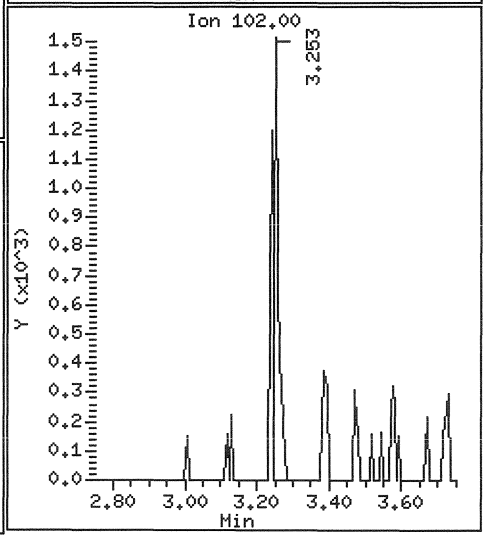



Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d



Date : 22-OCT-2013 16:31

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

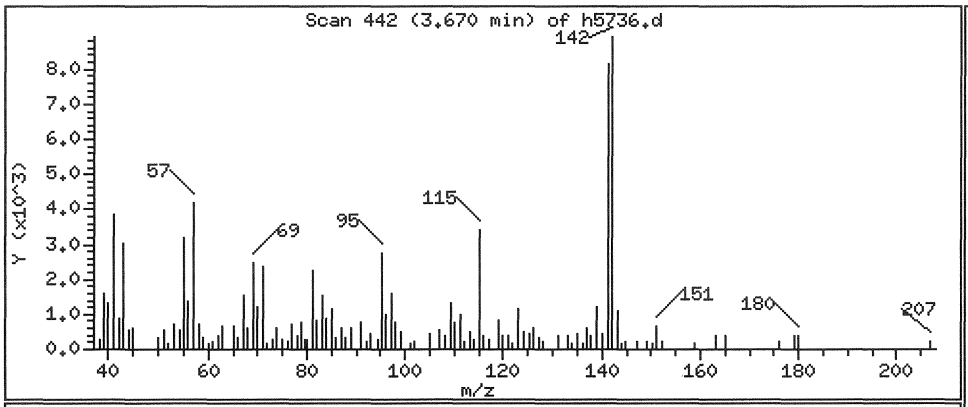
Operator: hcp

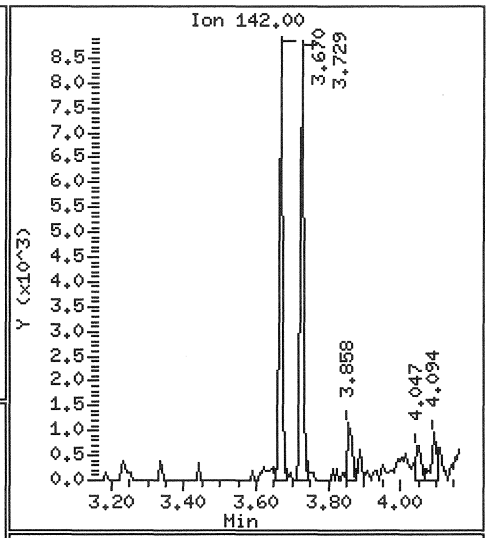
Column phase: RTX-5MS-30M

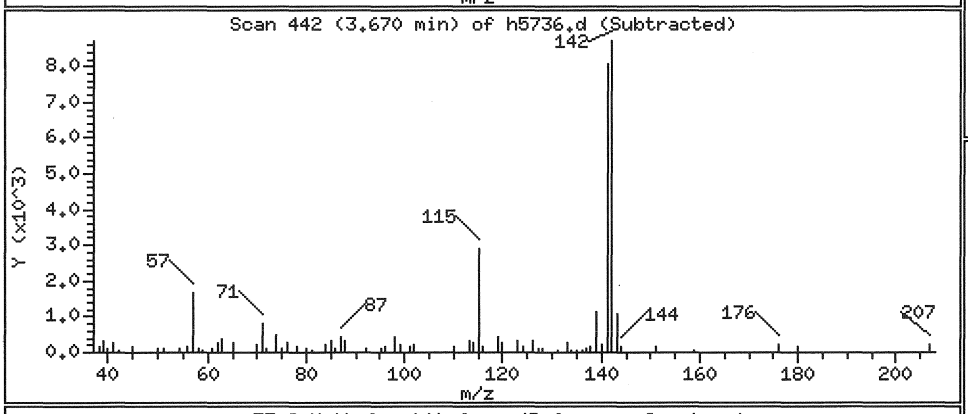
Column diameter: 0.25

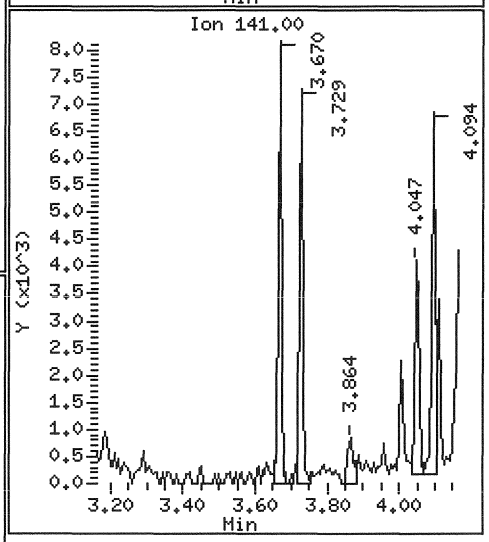
33 2-Methylnaphthalene

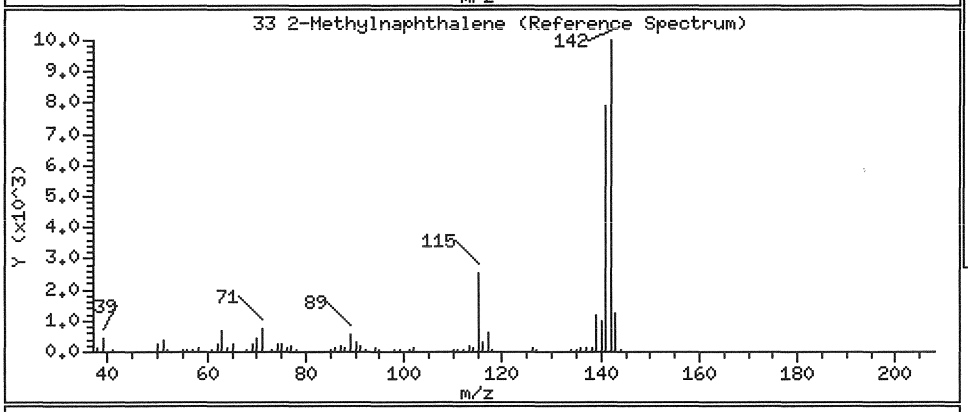
Concentration: 50.3 ug/Kg

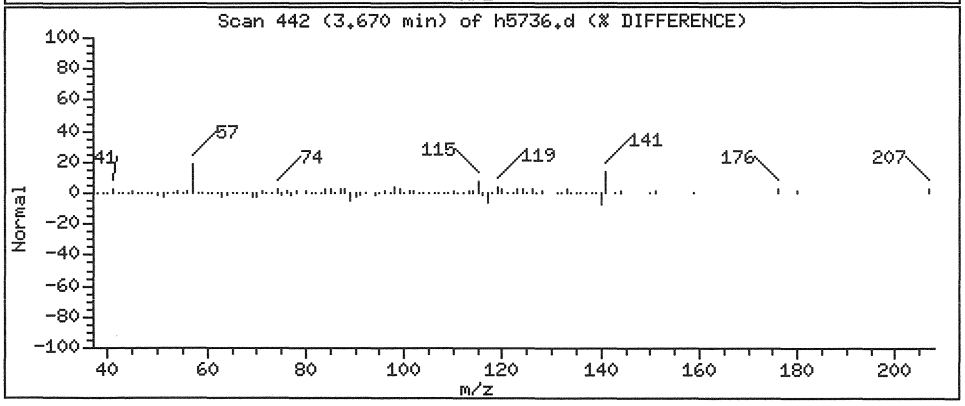


Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d



Date : 22-OCT-2013 16:31

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

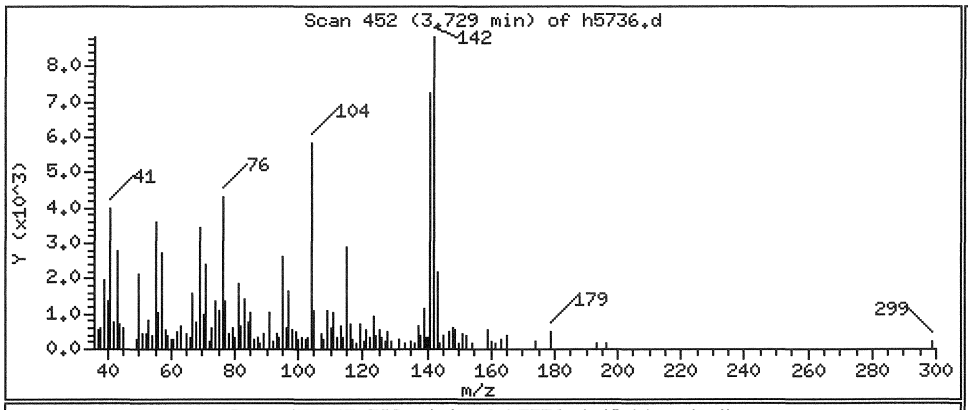
Operator: hcp

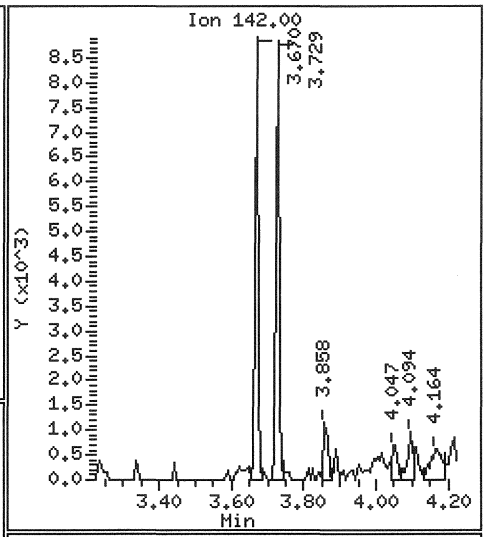
Column phase: RTX-5MS-30M

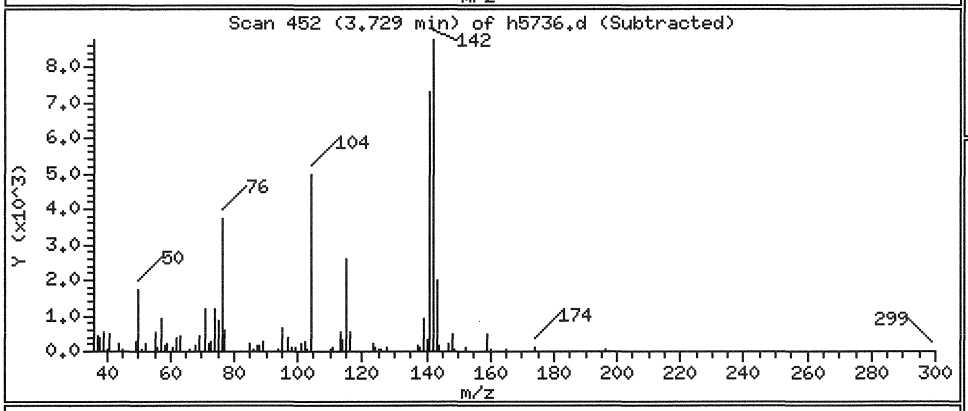
Column diameter: 0.25

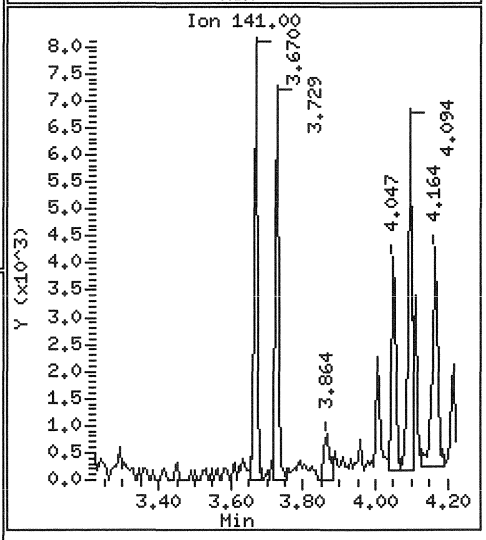
145 1-Methylnapthalene

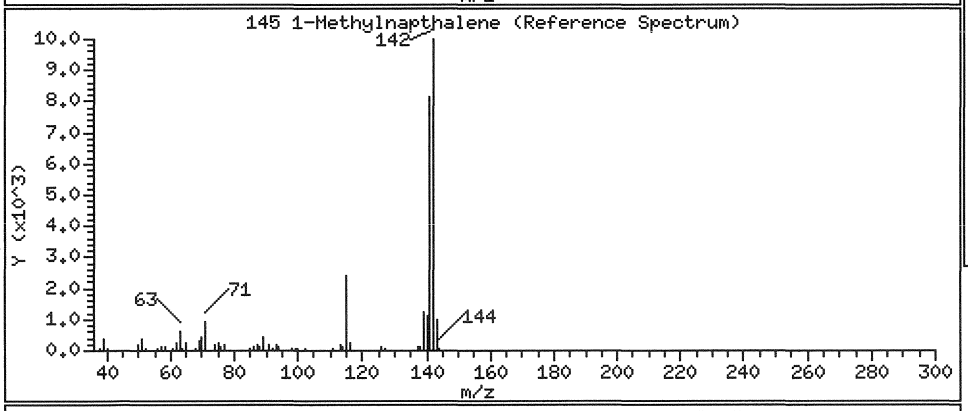
Concentration: 57.5 ug/Kg

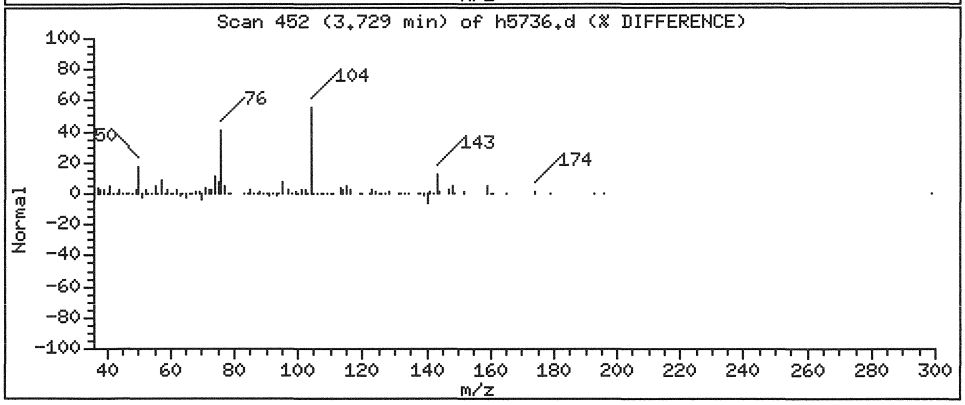


Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d



Date : 22-OCT-2013 16:31

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

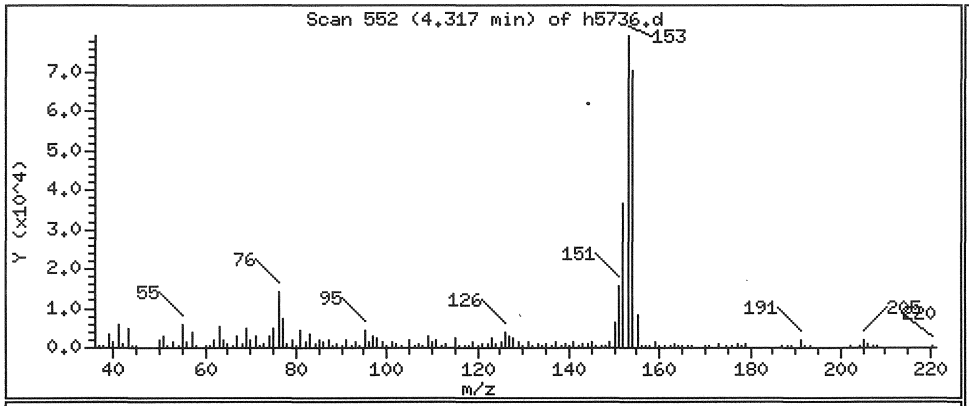
Operator: hcp

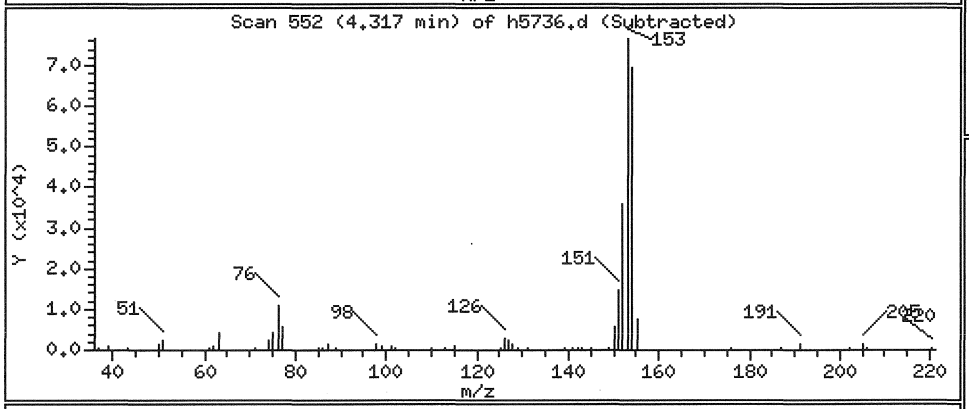
Column phase: RTX-5MS-30M

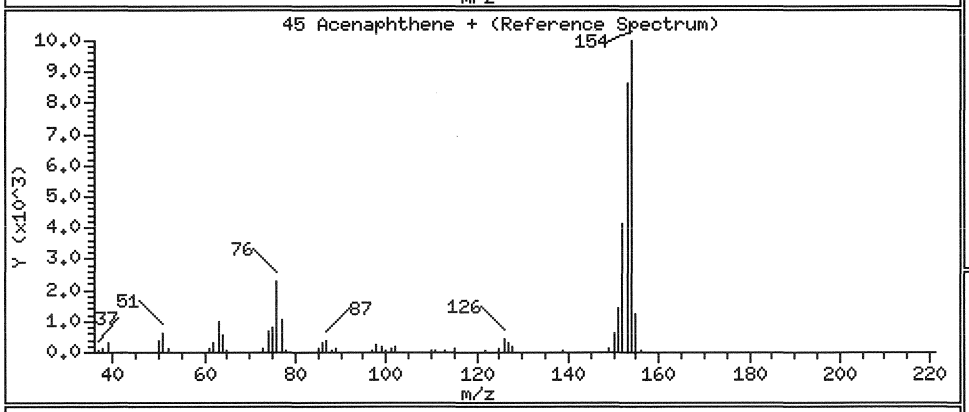
Column diameter: 0.25

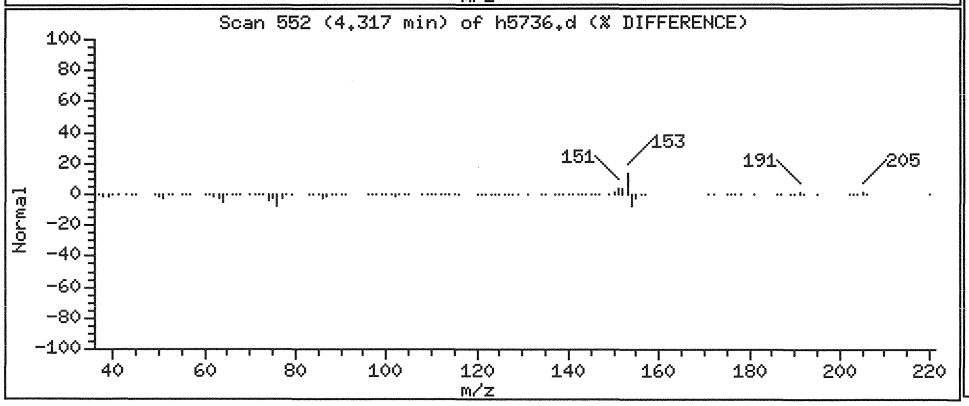
45 Acenaphthene +

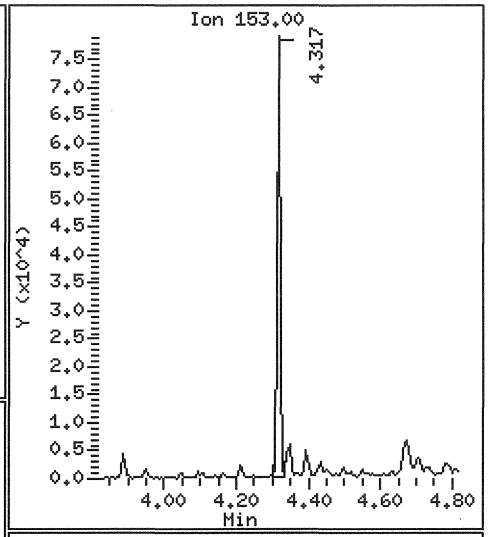
Concentration: 503 ug/Kg

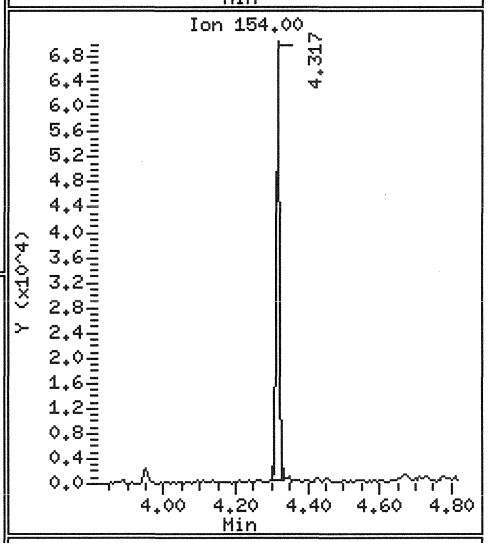


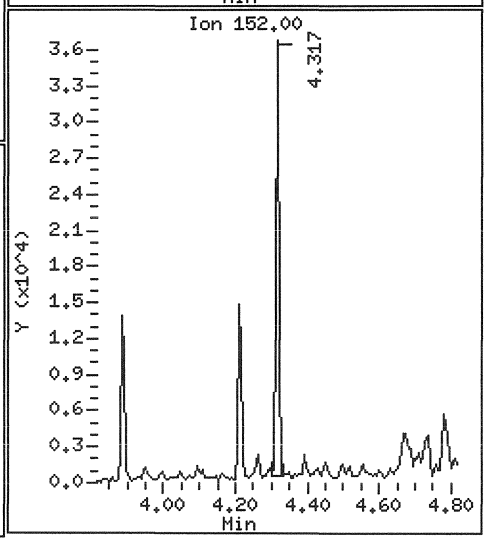



Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d

Date : 22-OCT-2013 16:31

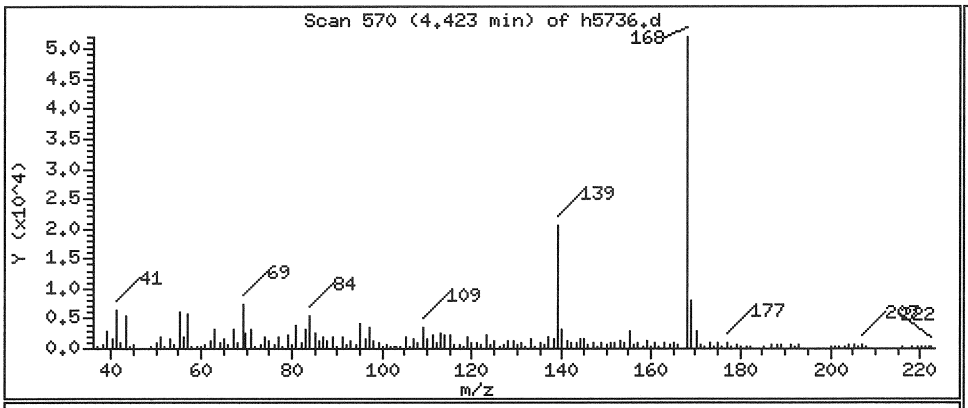
Client ID: 21310171201 Instrument: MSSV4.i

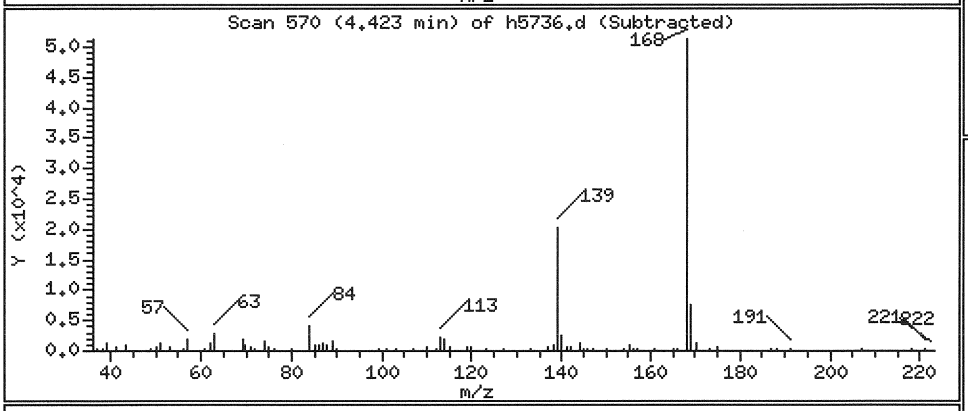
Sample Info: 21310171201*4847*

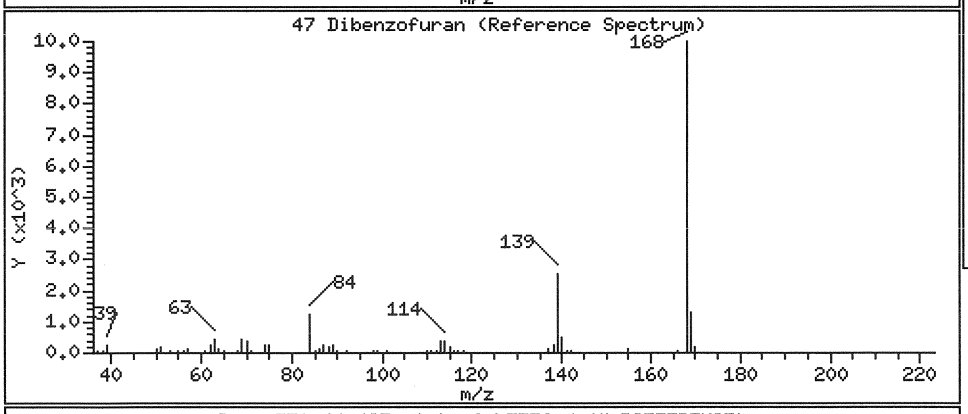
Volume Injected (uL): 1.0 Operator: hcp

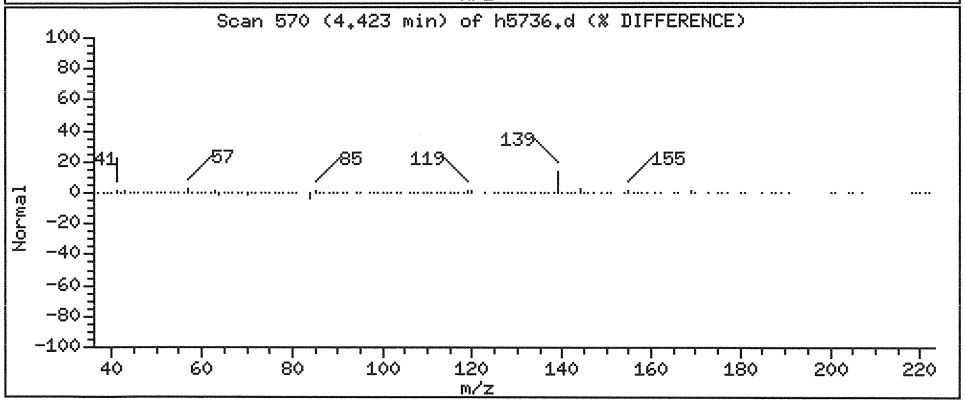
Column phase: RTX-5MS-30M Column diameter: 0.25

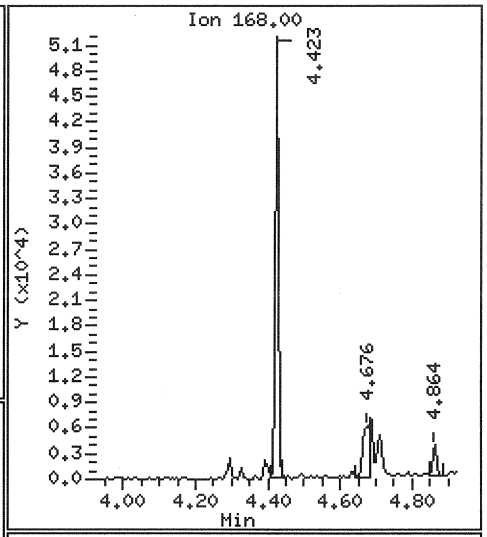
47 Dibenzofuran Concentration: 258 ug/Kg

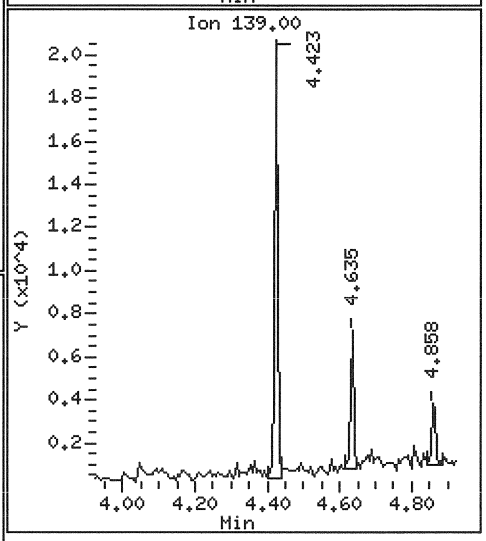


Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d

Date : 22-OCT-2013 16:31

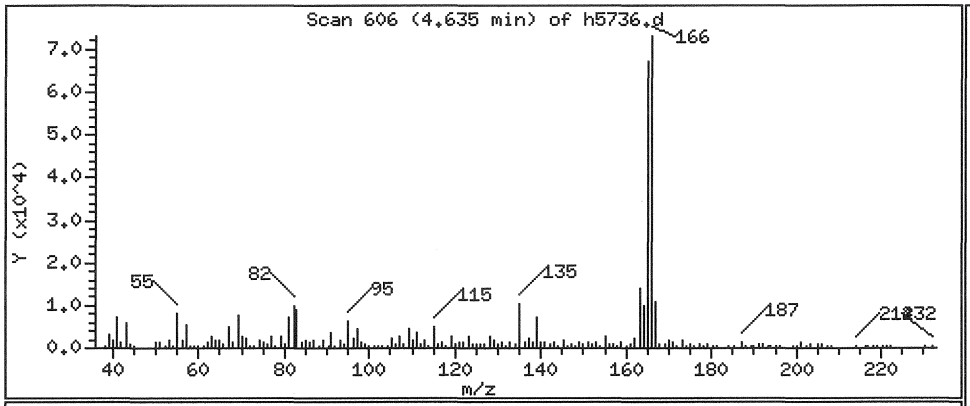
Client ID: 21310171201 Instrument: MSSV4.i

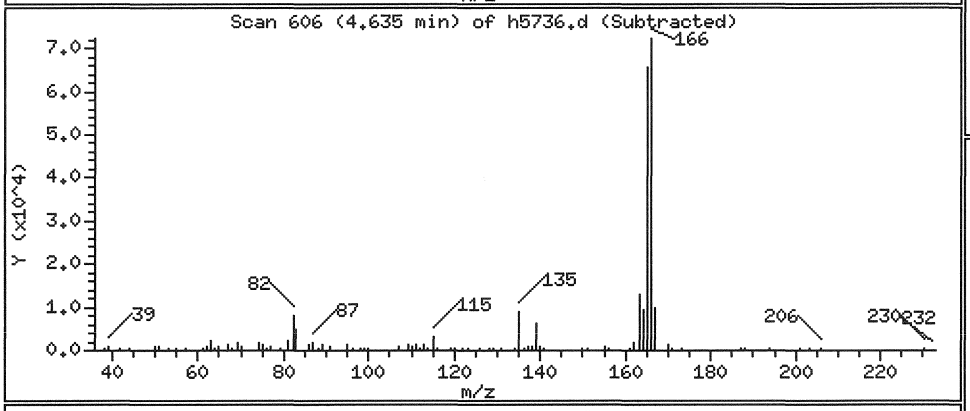
Sample Info: 21310171201*4847*

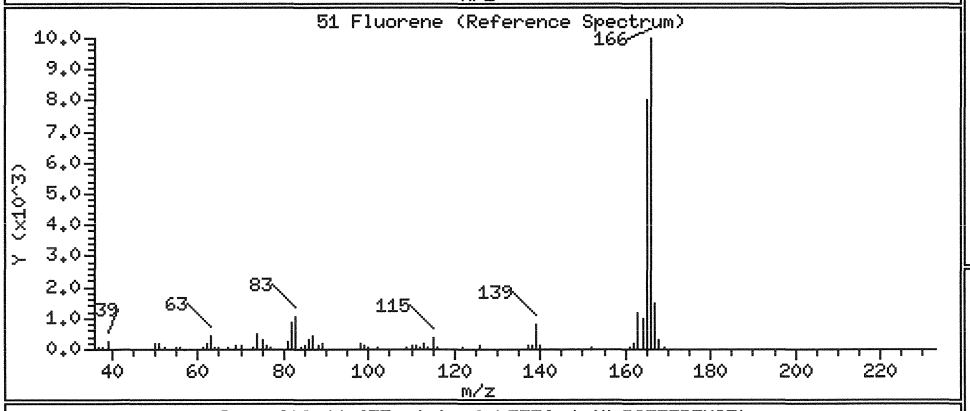
Volume Injected (uL): 1.0 Operator: hcp

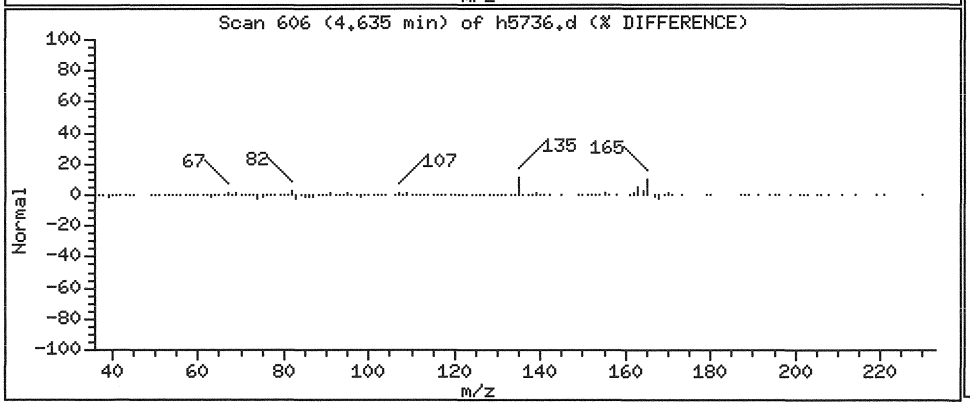
Column phase: RTX-5MS-30M Column diameter: 0.25

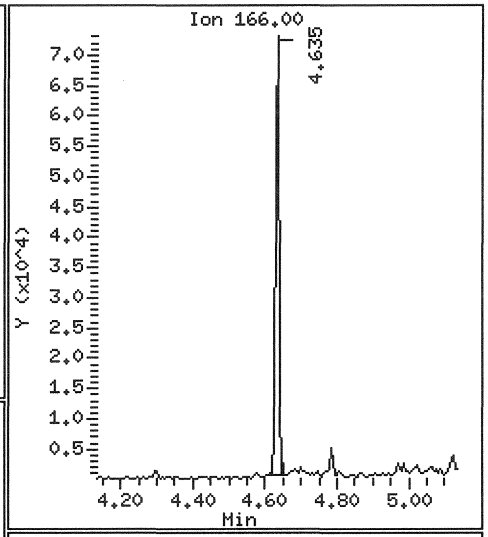
51 Fluorene Concentration: 503 ug/Kg

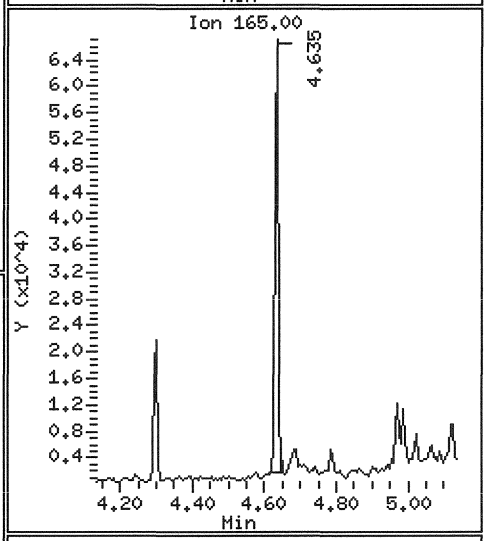


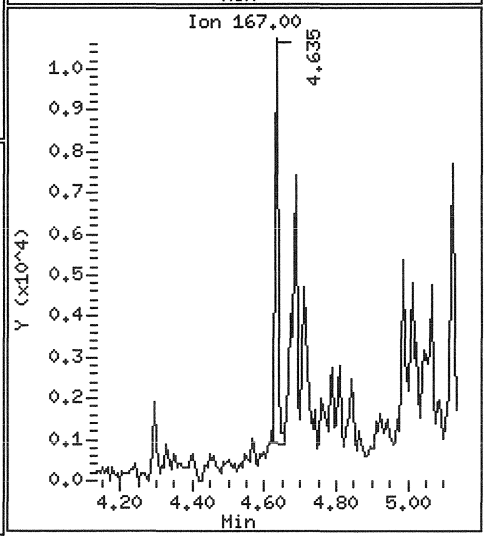



Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d



Date : 22-OCT-2013 16:31

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

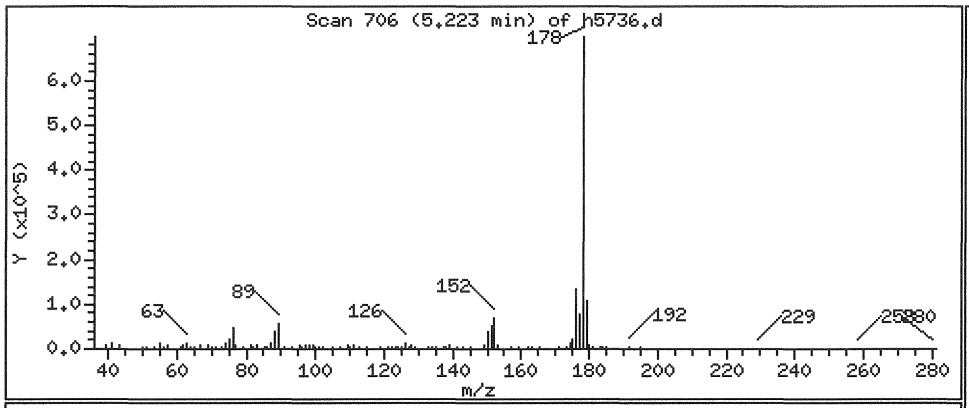
Operator: hcp

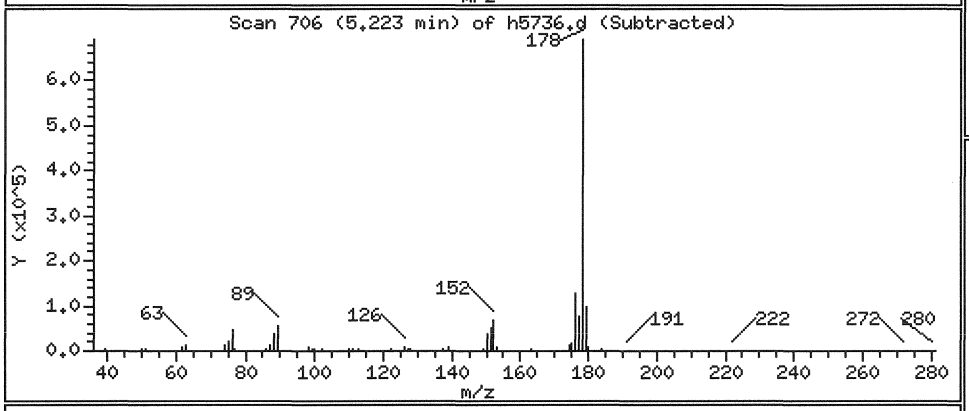
Column phase: RTX-5MS-30M

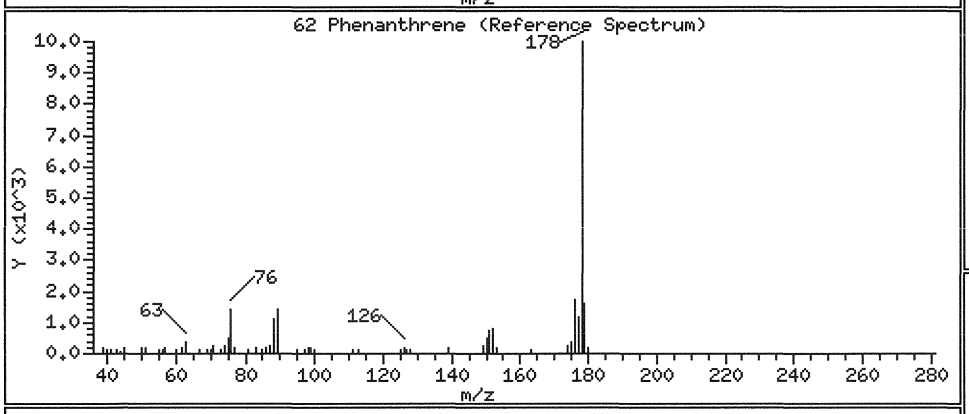
Column diameter: 0.25

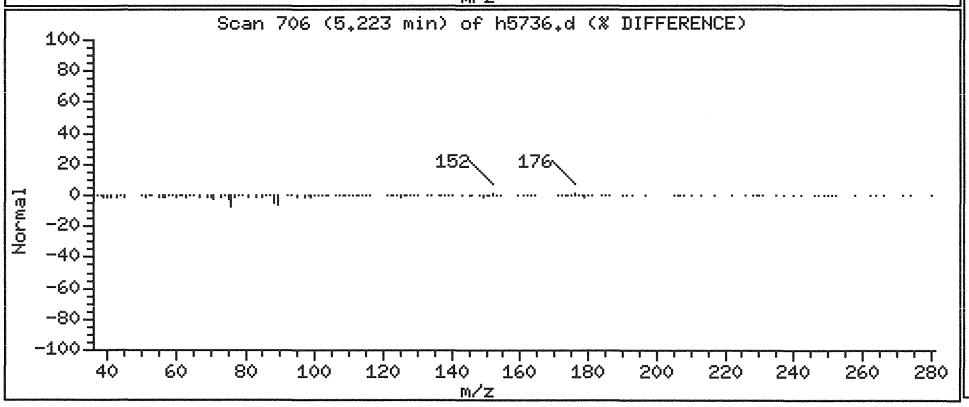
62 Phenanthrene

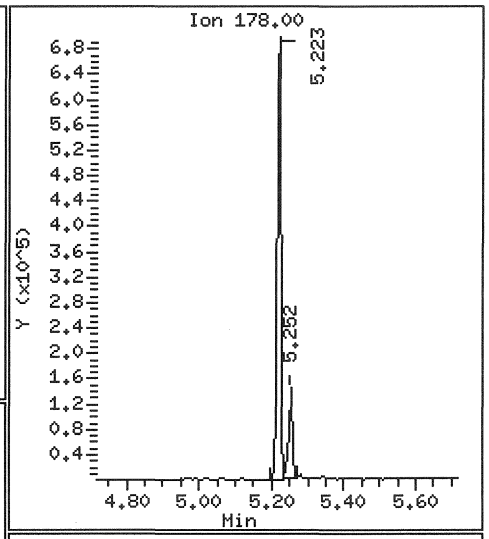
Concentration: 4110 ug/Kg

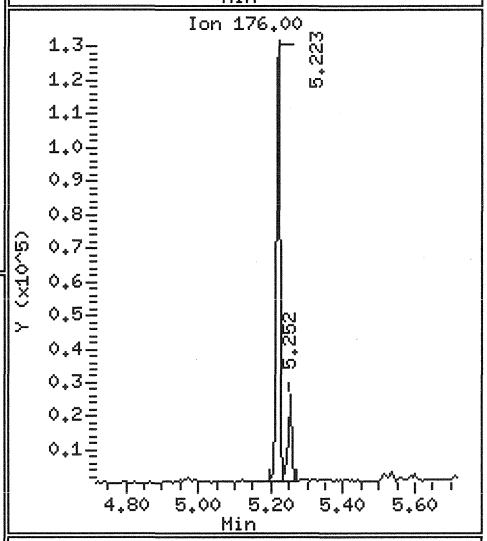


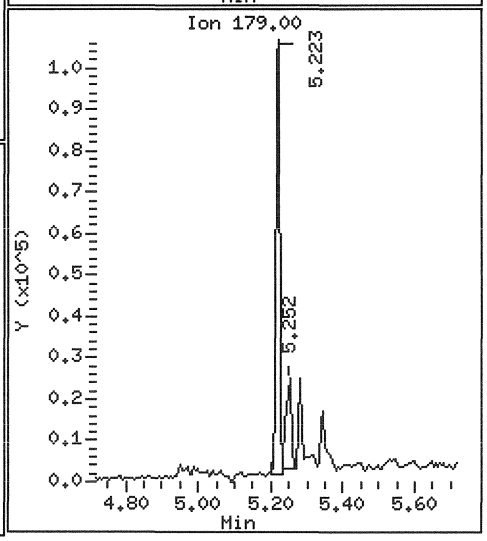



Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d



Date : 22-OCT-2013 16:31

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

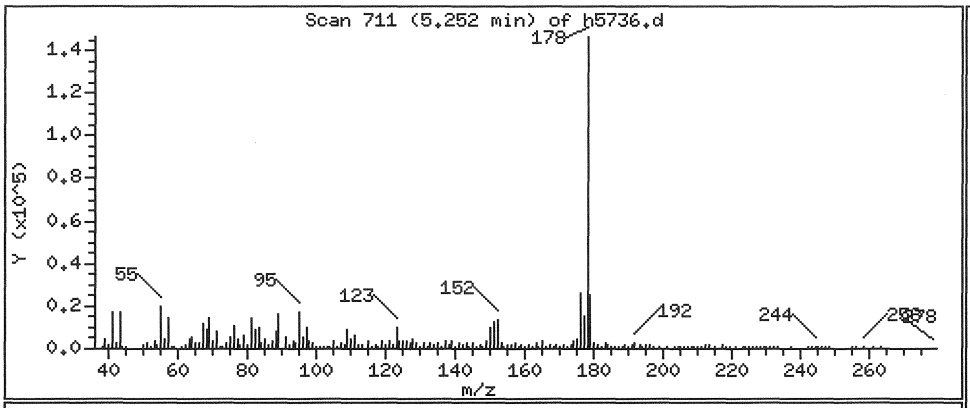
Operator: hcp

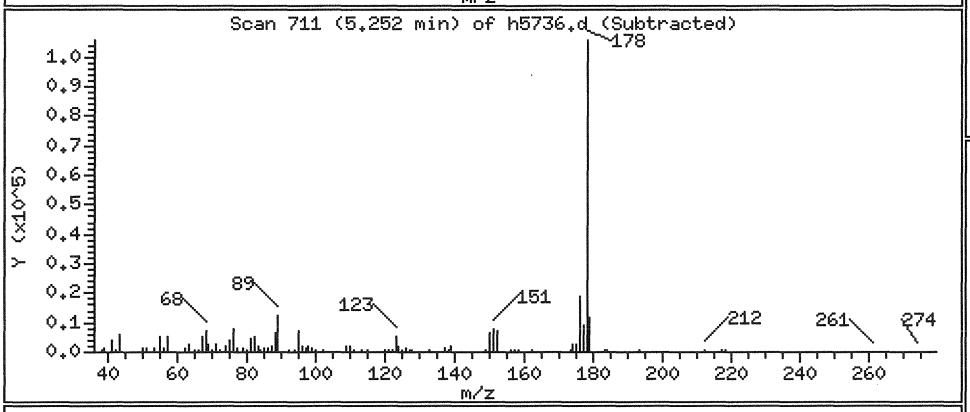
Column phase: RTX-5MS-30M

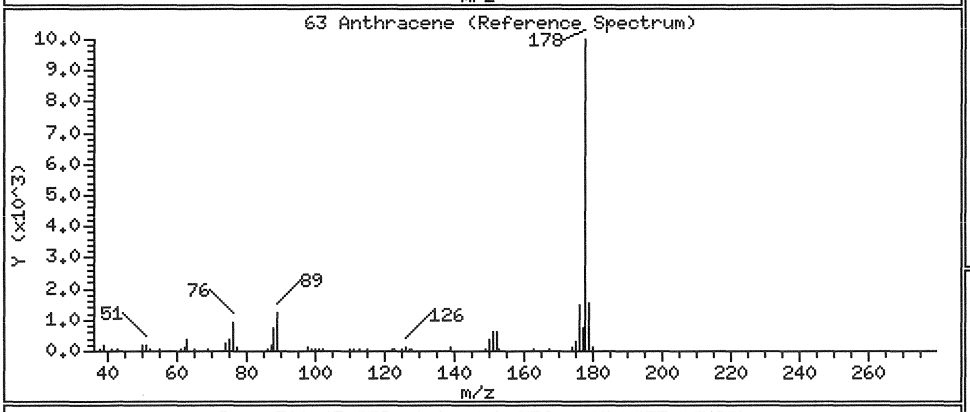
Column diameter: 0.25

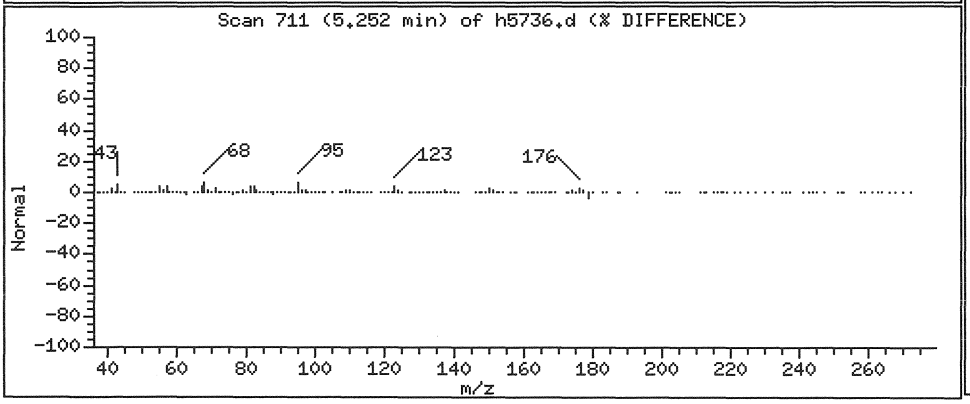
63 Anthracene

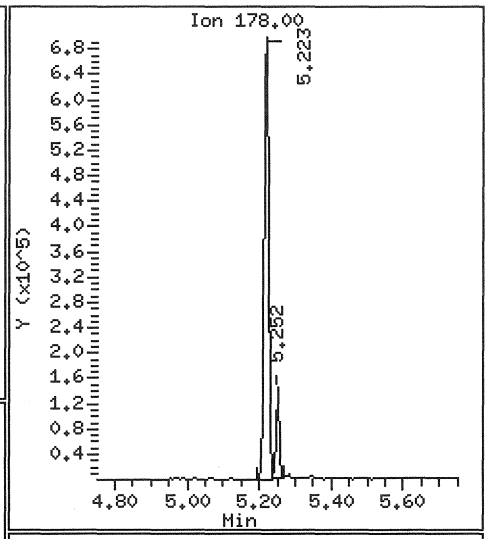
Concentration: 737 ug/Kg

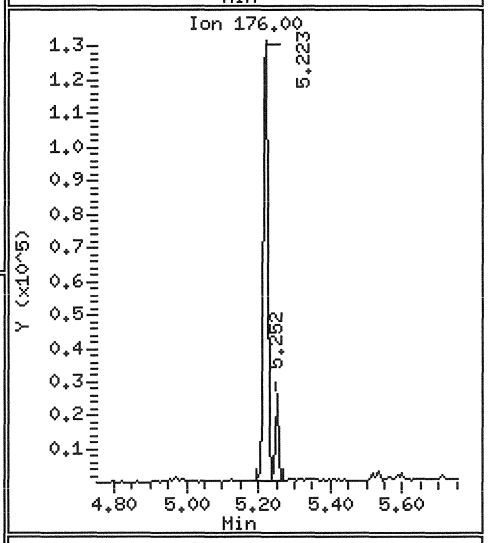


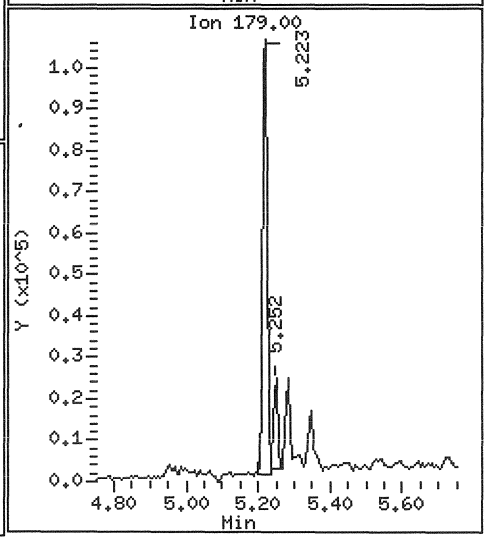



Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d



Date : 22-OCT-2013 16:31

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

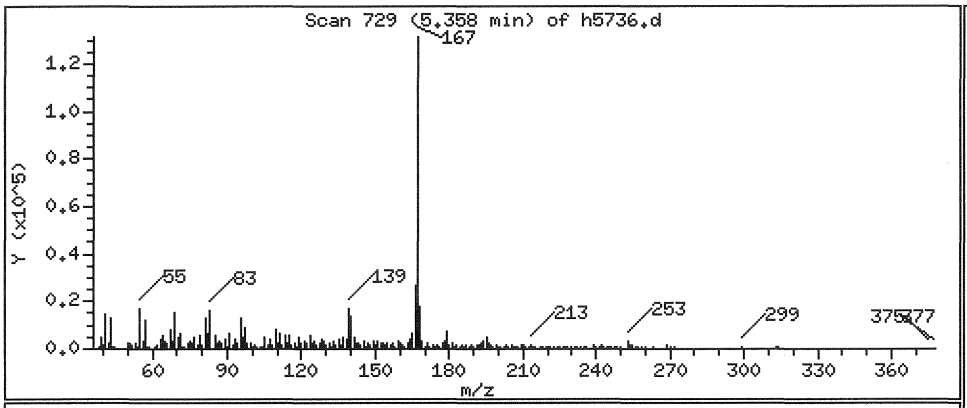
Operator: hcp

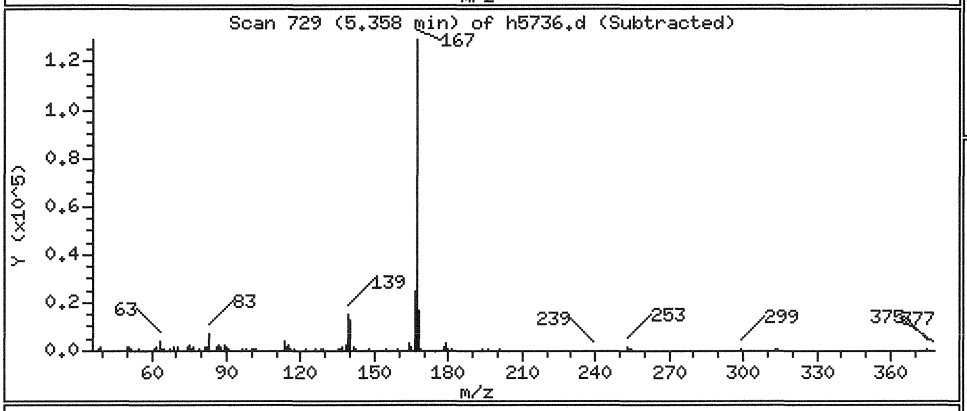
Column phase: RTX-5MS-30M

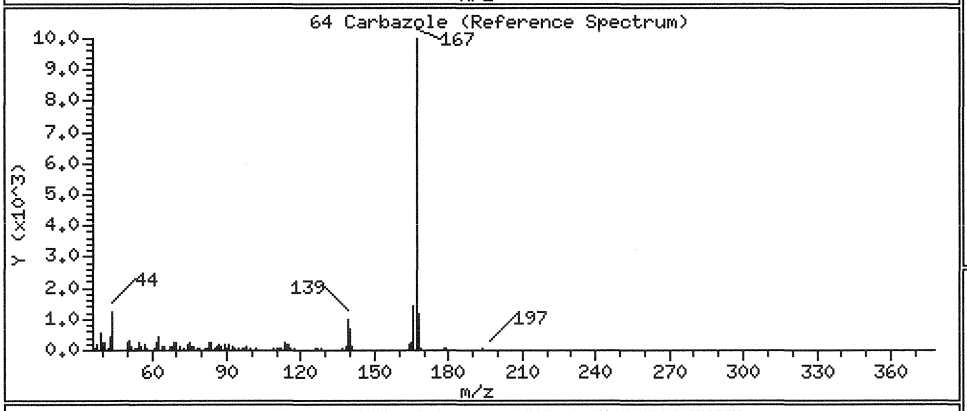
Column diameter: 0.25

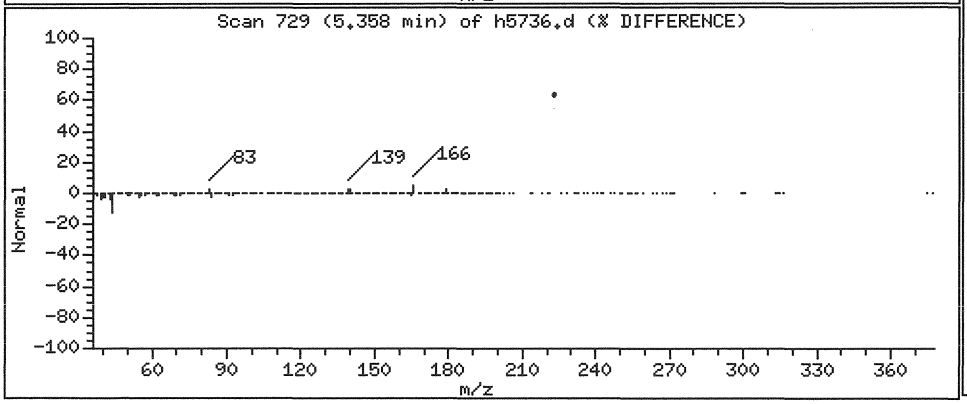
64 Carbazole

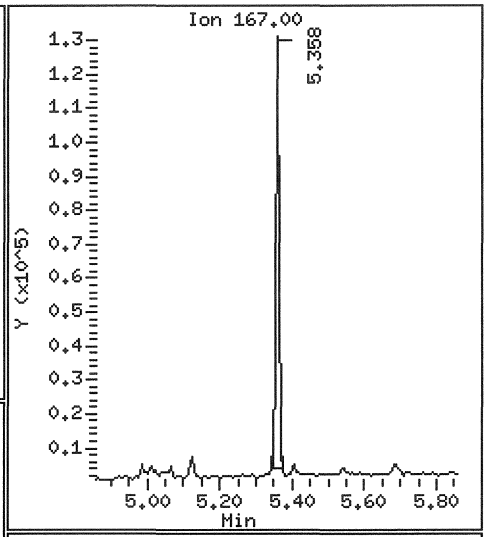
Concentration: 648 ug/Kg

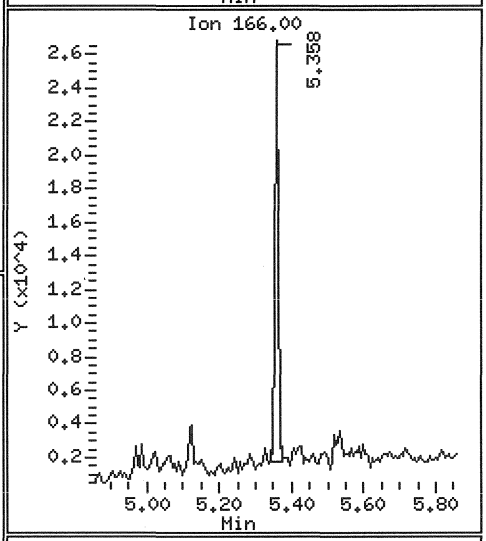


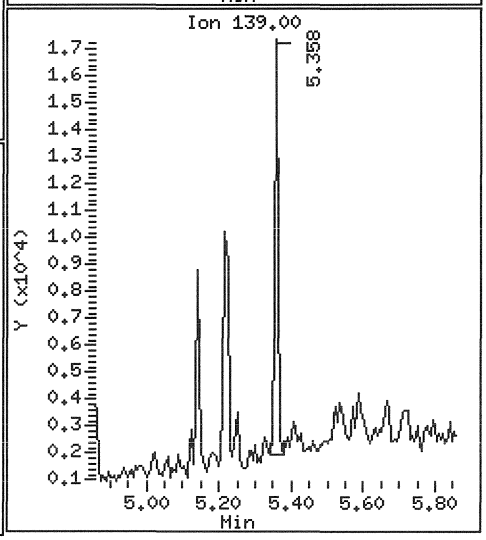



Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d



Date : 22-OCT-2013 16:31

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

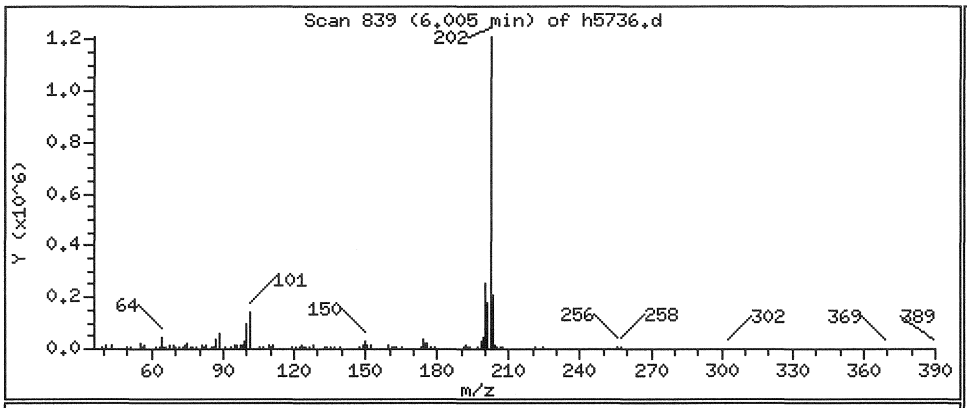
Operator: hcp

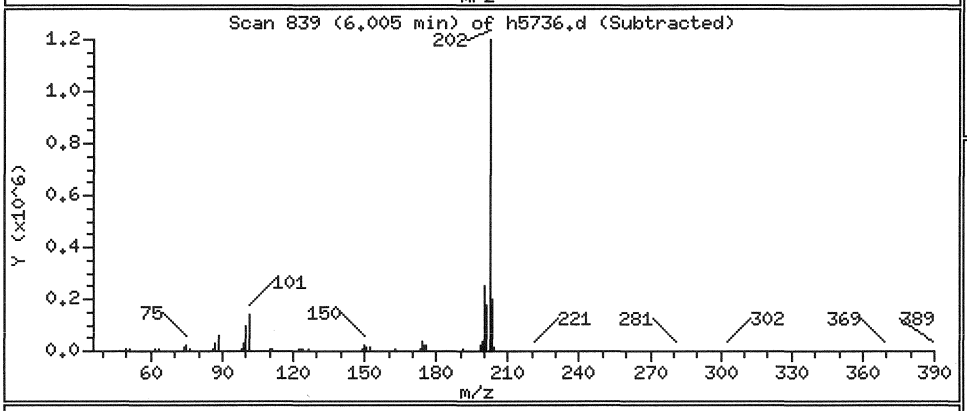
Column phase: RTX-5MS-30M

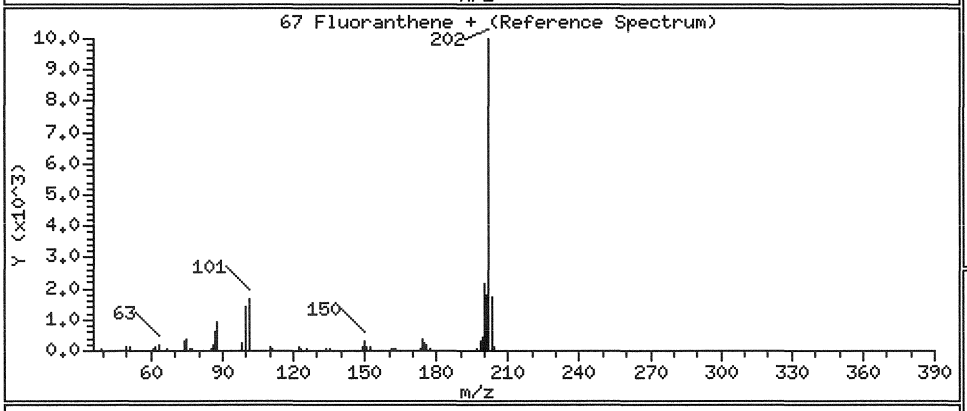
Column diameter: 0.25

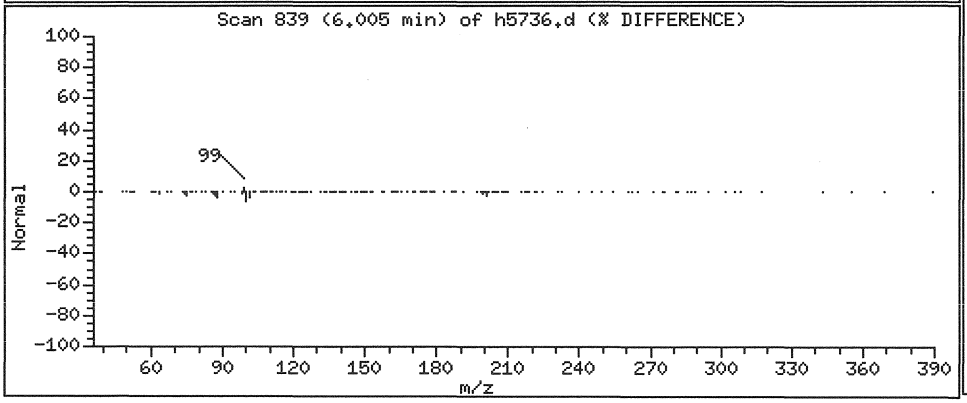
67 Fluoranthene +

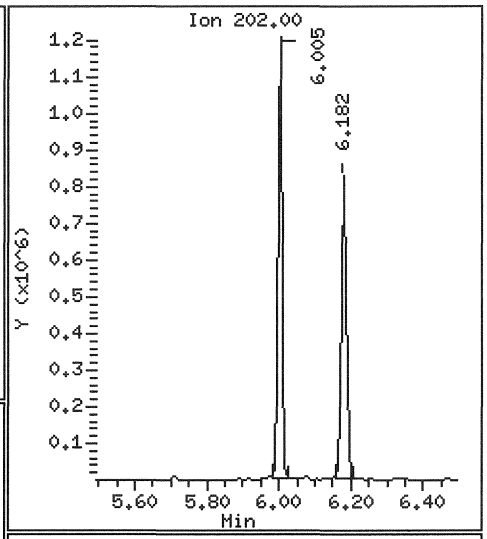
Concentration: 6920 ug/Kg

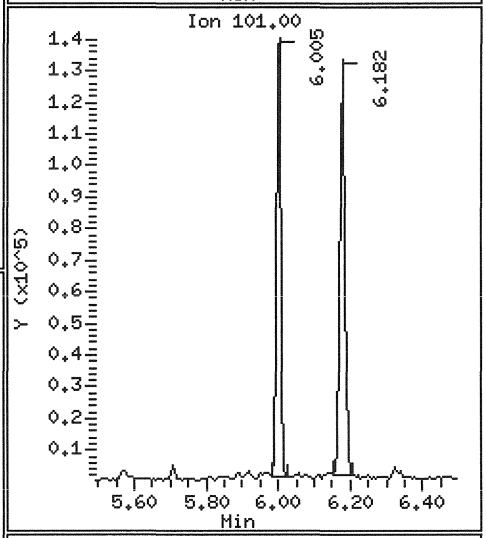


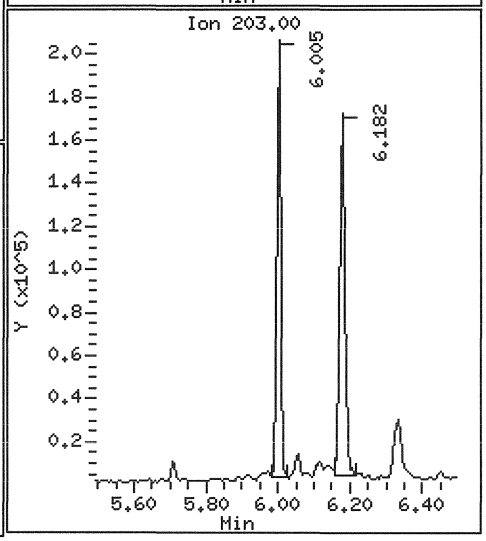



Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d



Date : 22-OCT-2013 16:31

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

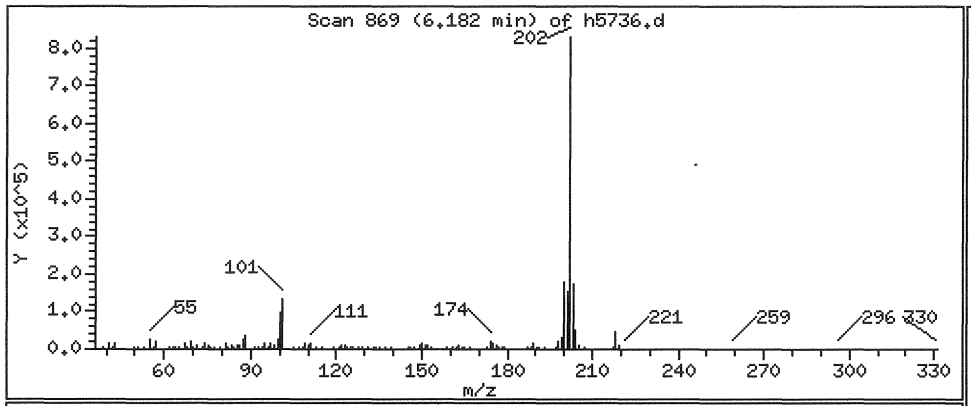
Operator: hcp

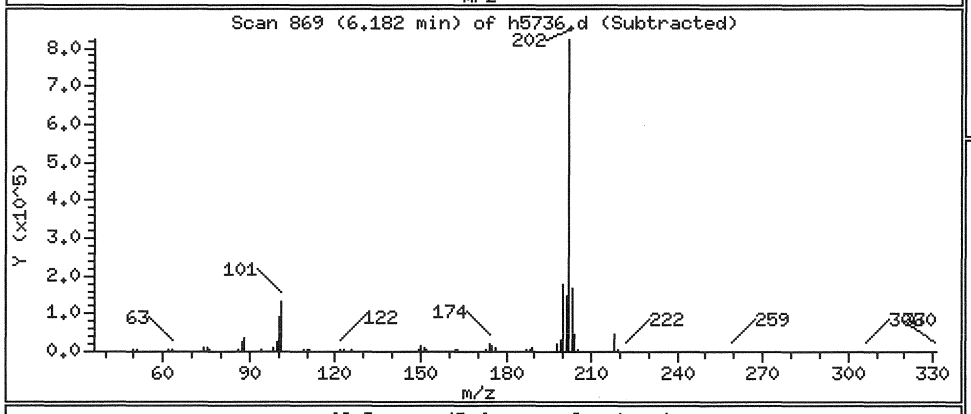
Column phase: RTX-5MS-30M

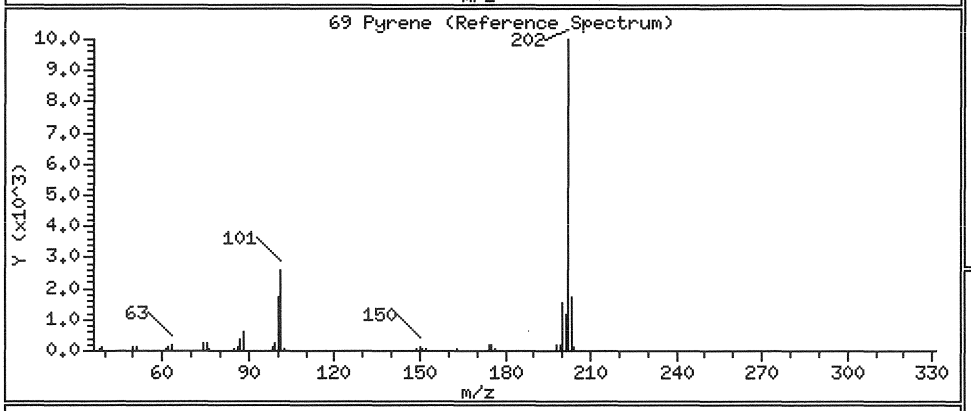
Column diameter: 0.25

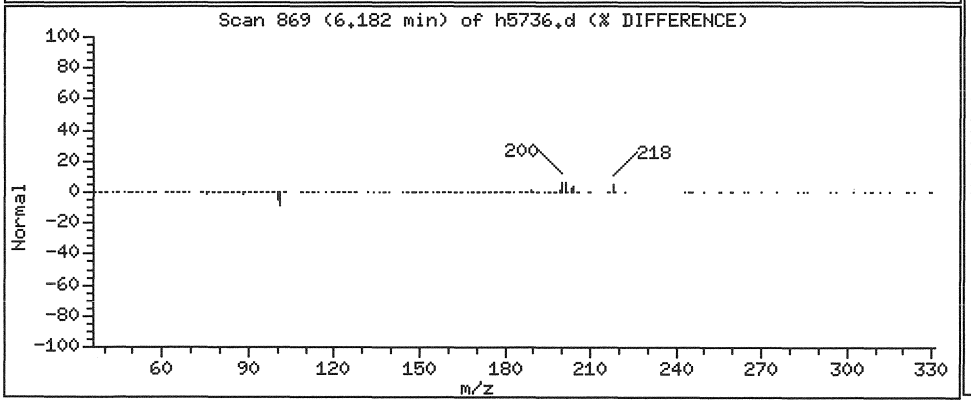
69 Pyrene

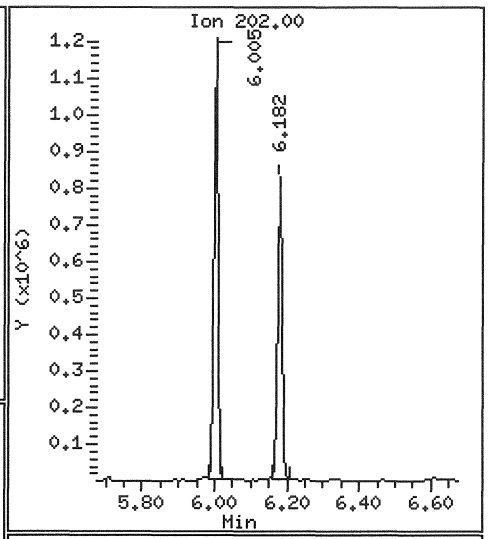
Concentration: 3950 ug/Kg

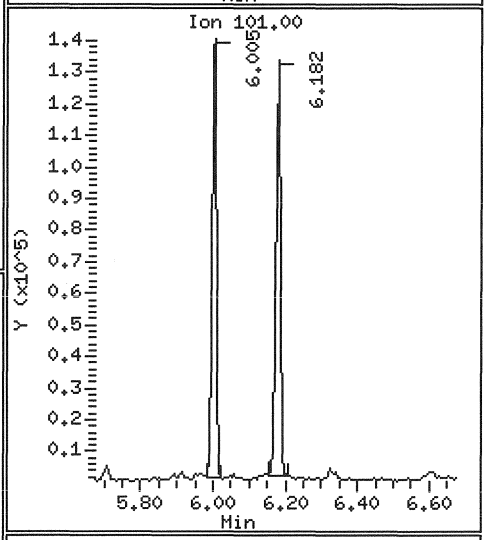


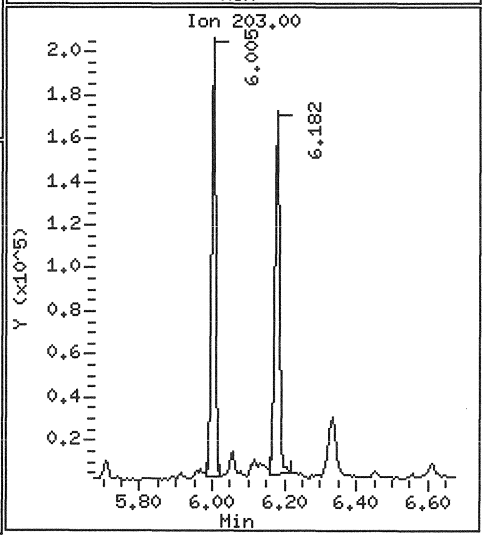



Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d



Date : 22-OCT-2013 16:31

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

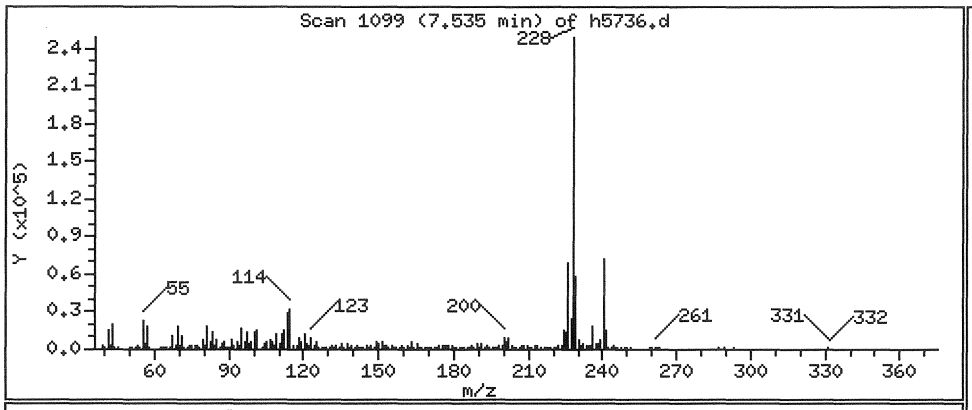
Operator: hcp

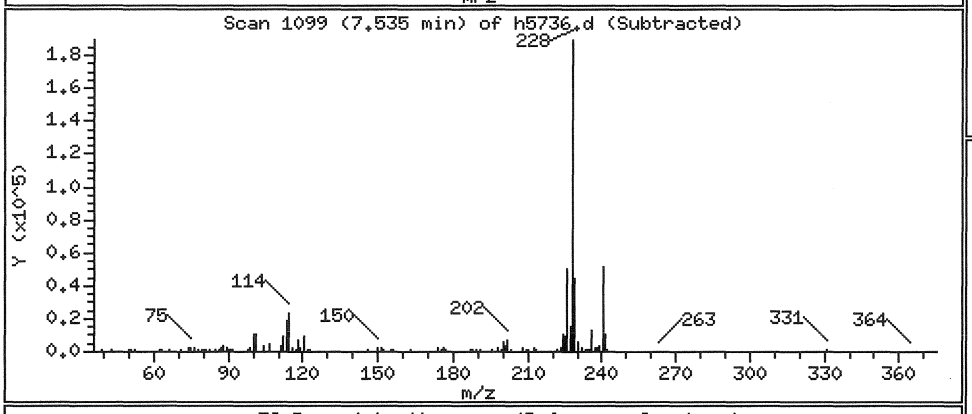
Column phase: RTX-5MS-30M

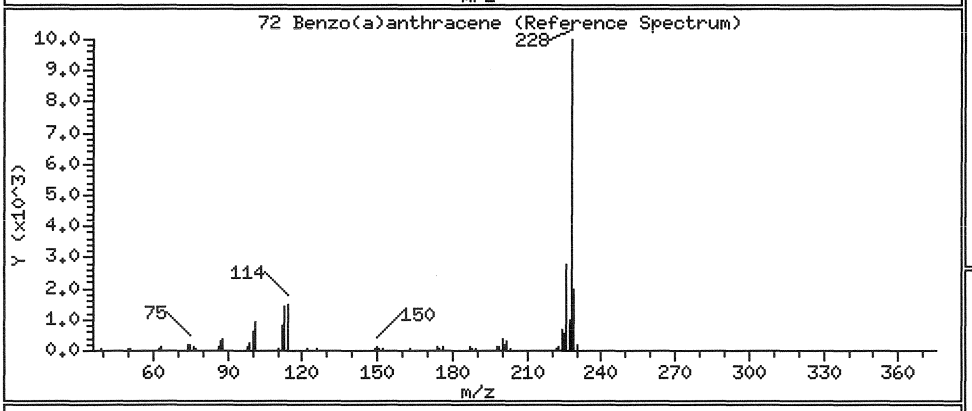
Column diameter: 0.25

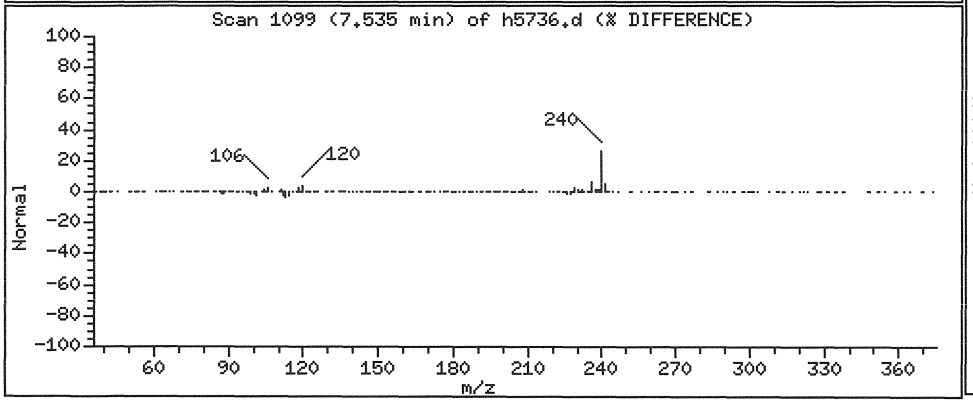
72 Benzo(a)anthracene

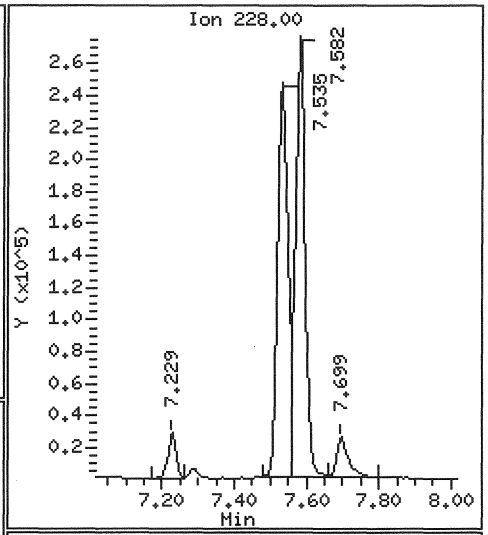
Concentration: 2940 ug/Kg

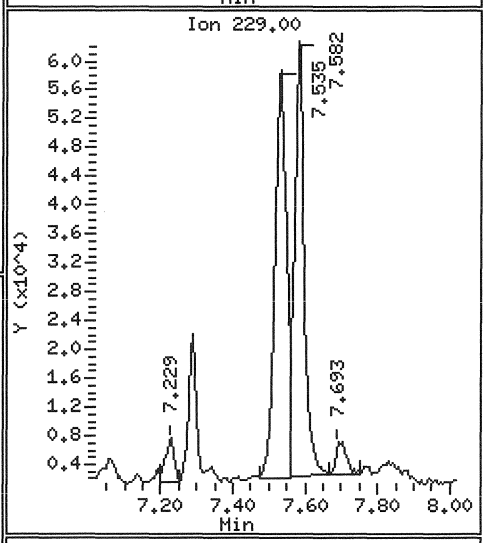


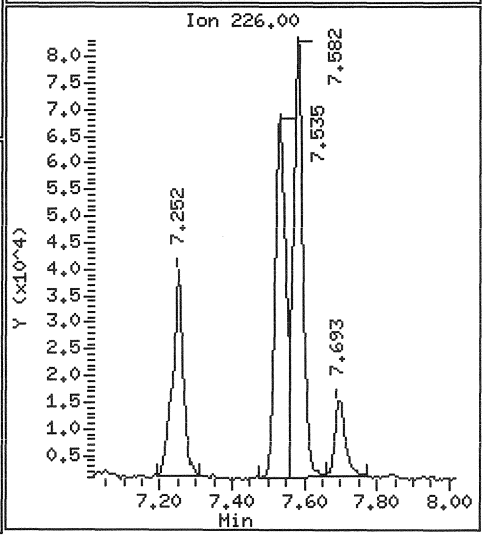



Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d



Date : 22-OCT-2013 16:31

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

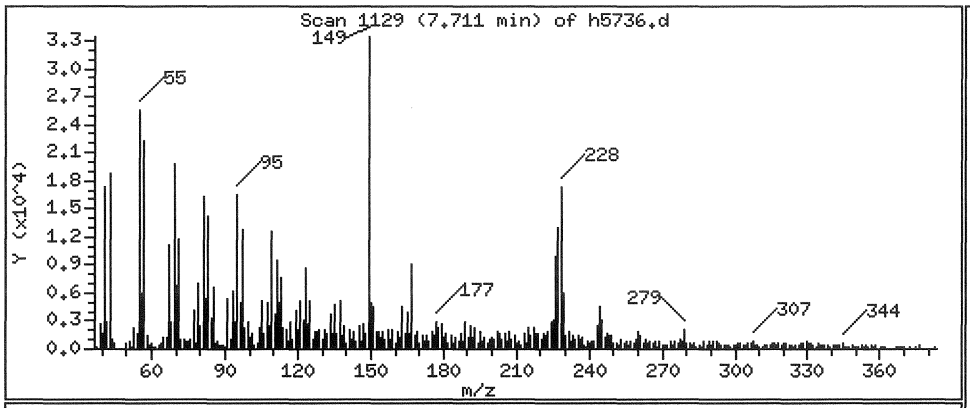
Operator: hcp

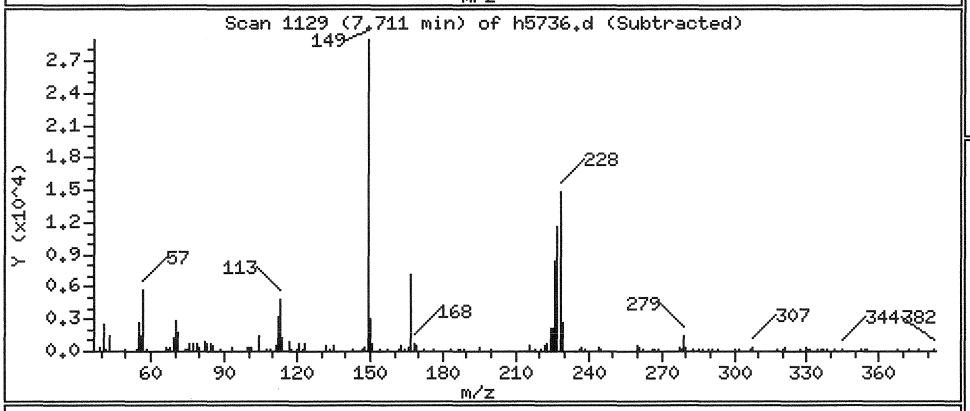
Column phase: RTX-5MS-30M

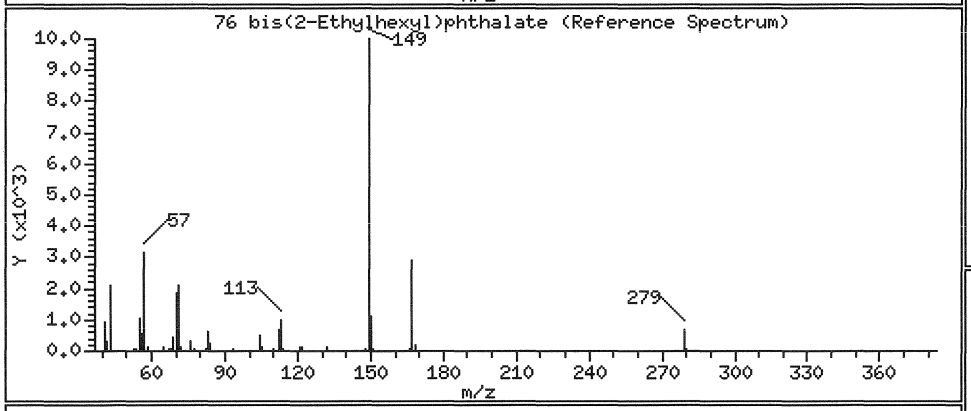
Column diameter: 0.25

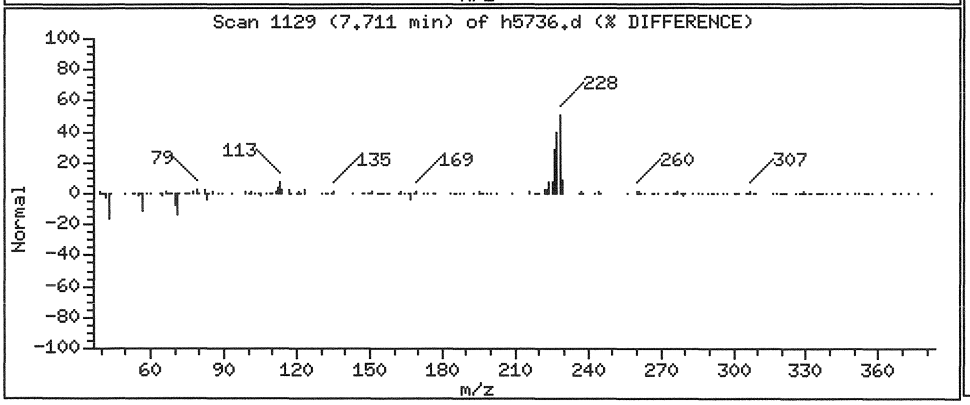
76 bis(2-Ethylhexyl)phthalate

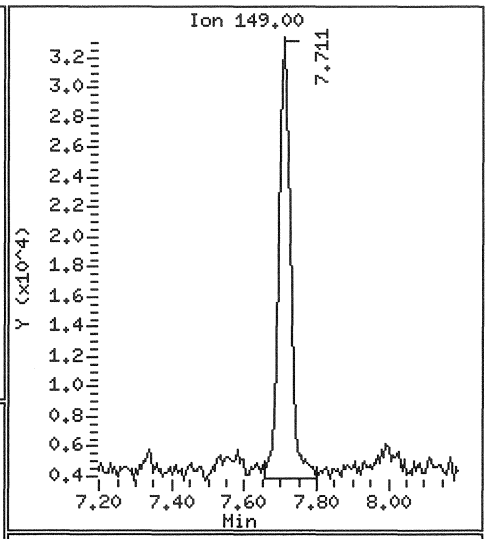
Concentration: 627 ug/Kg

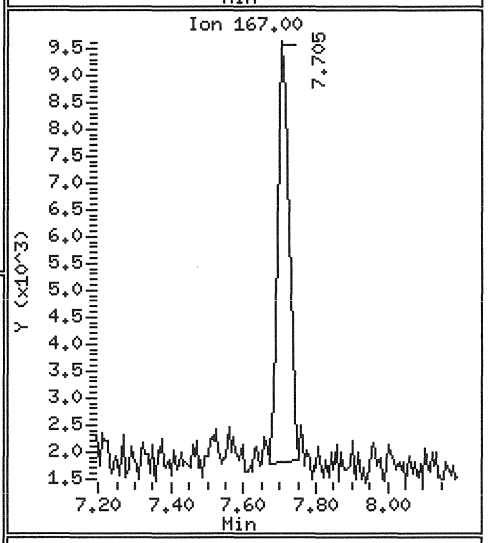


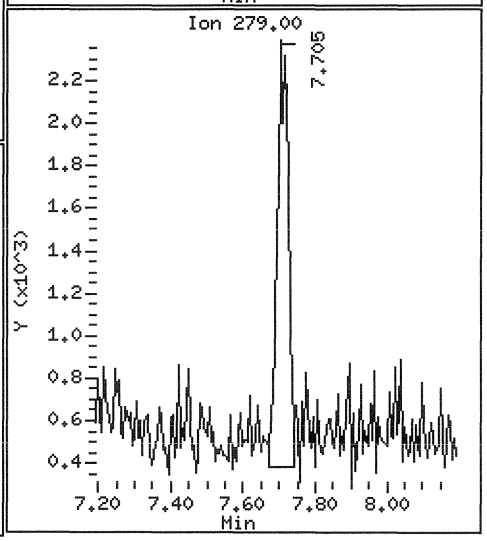



Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d



Date : 22-OCT-2013 16:31

Client ID: 21310171201

Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0

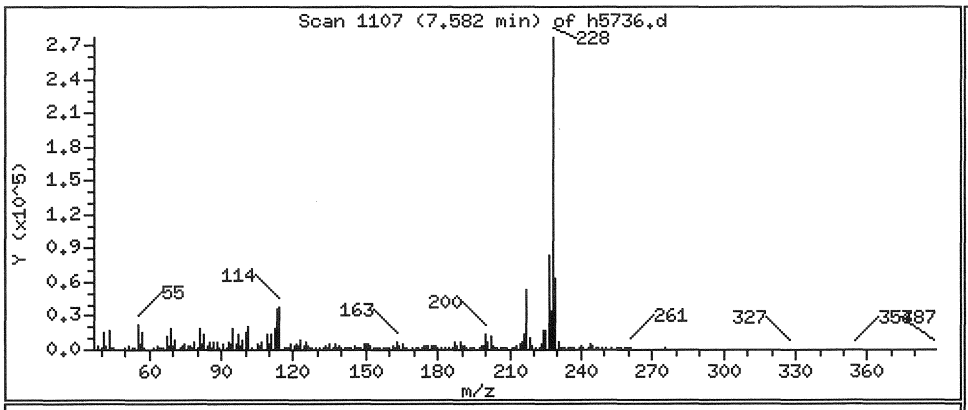
Operator: hcp

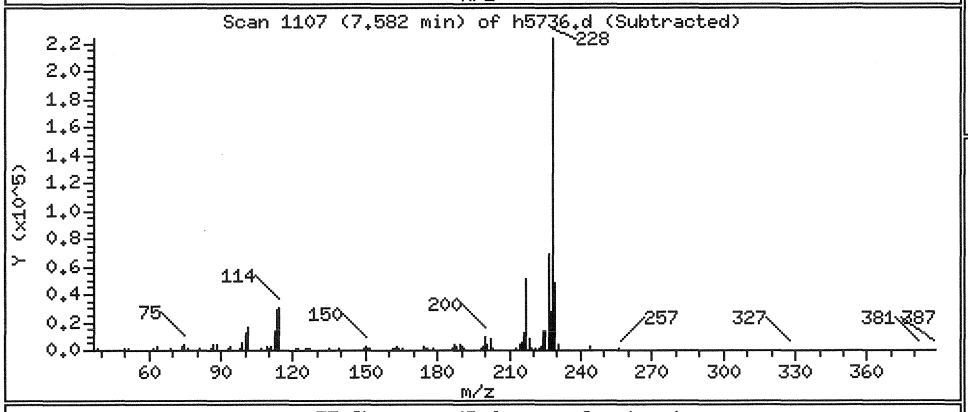
Column phase: RTX-5MS-30M

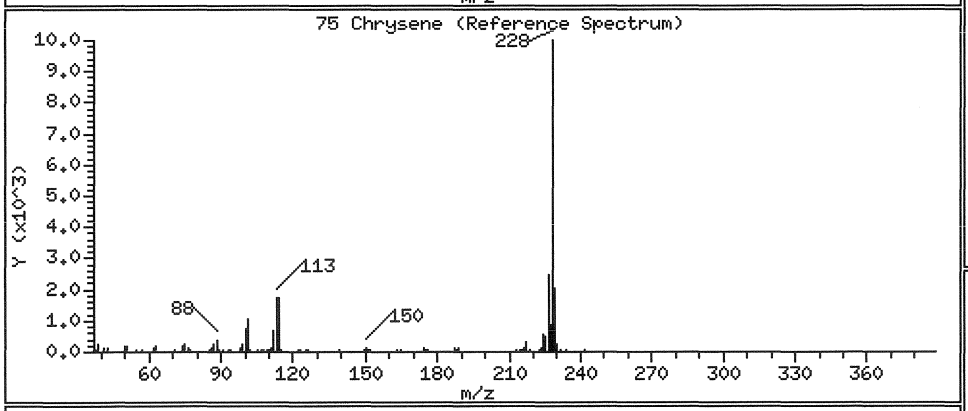
Column diameter: 0.25

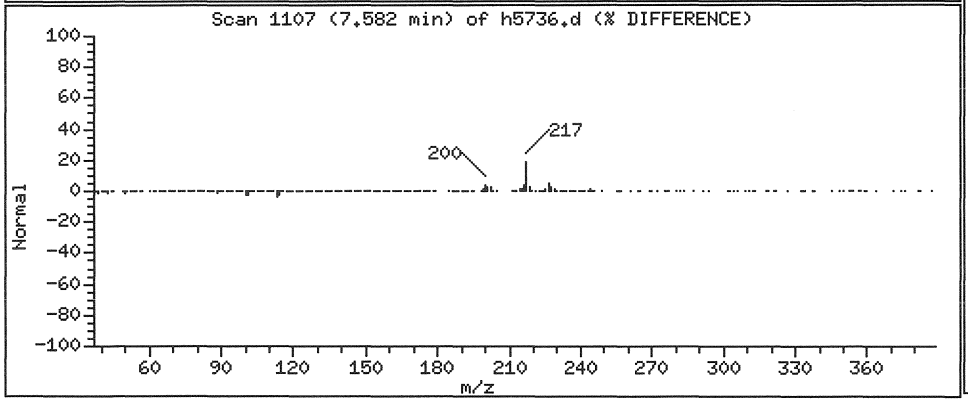
75 Chrysene

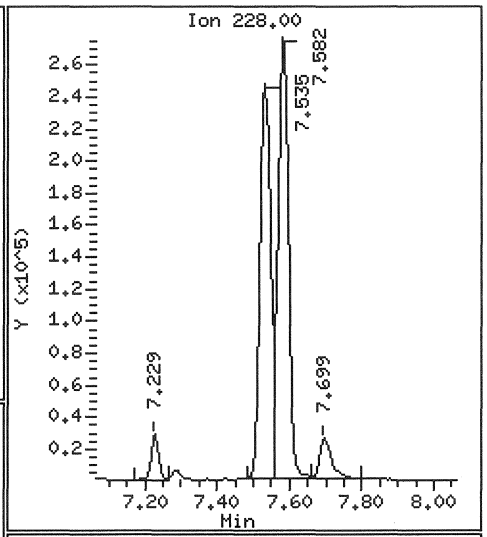
Concentration: 3170 ug/Kg

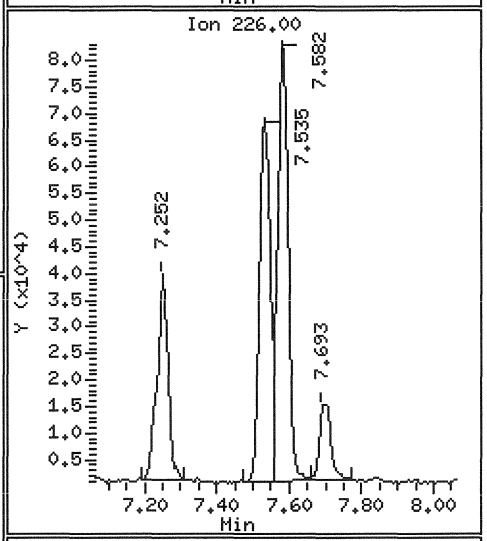


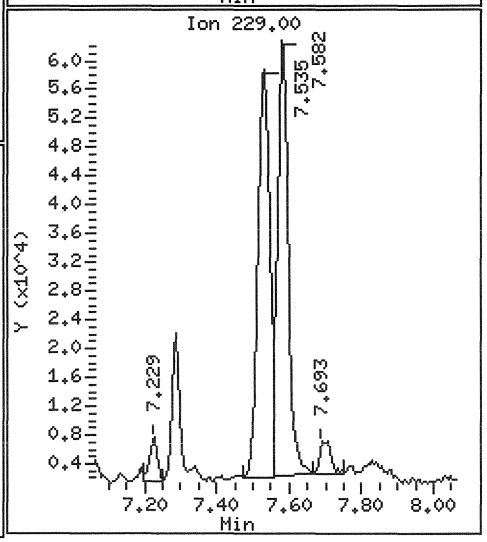



Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d

Date : 22-OCT-2013 16:31

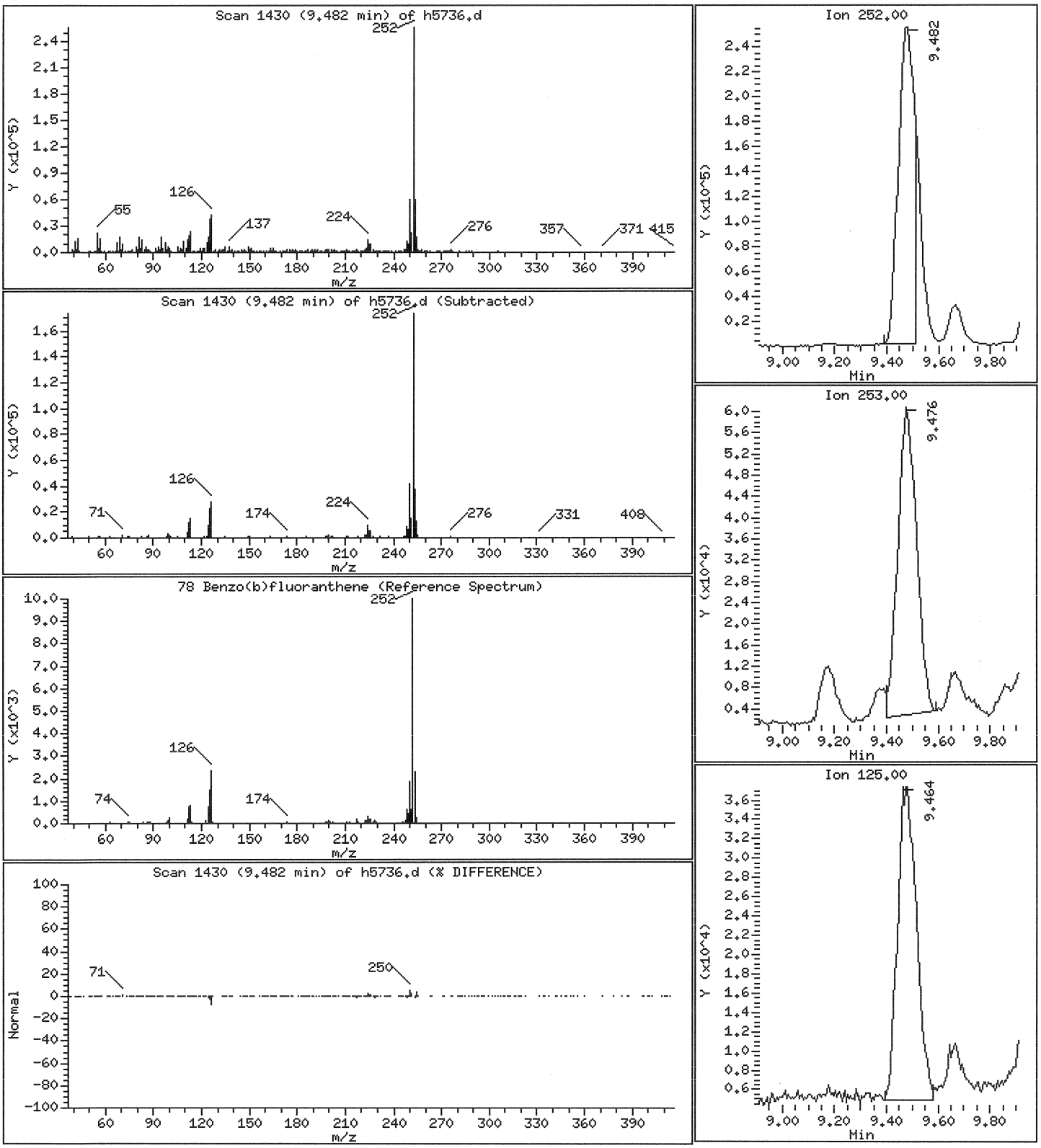
Client ID: 21310171201 Instrument: MSSV4.i

Sample Info: 21310171201*4847*

Volume Injected (uL): 1.0 Operator: hcp

Column phase: RTX-5MS-30M Column diameter: 0.25

78 Benzo(b)fluoranthene Concentration: 3520 ug/Kg



Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d

Date : 22-OCT-2013 16:31

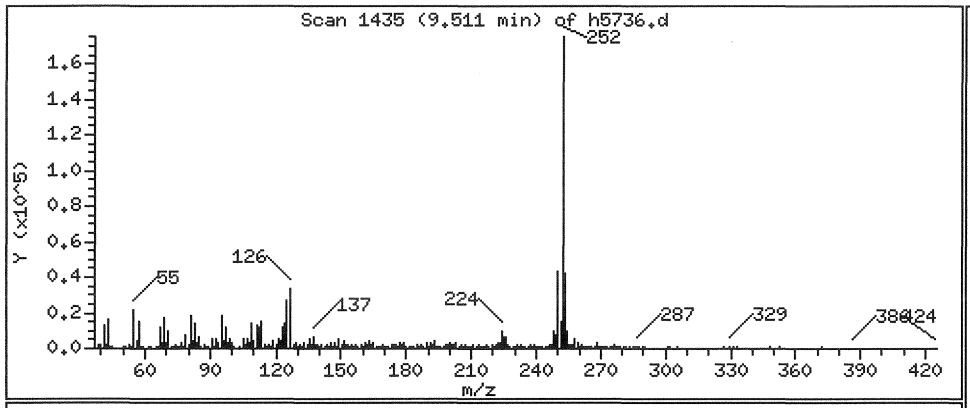
Client ID: 21310171201 Instrument: MSSV4.i

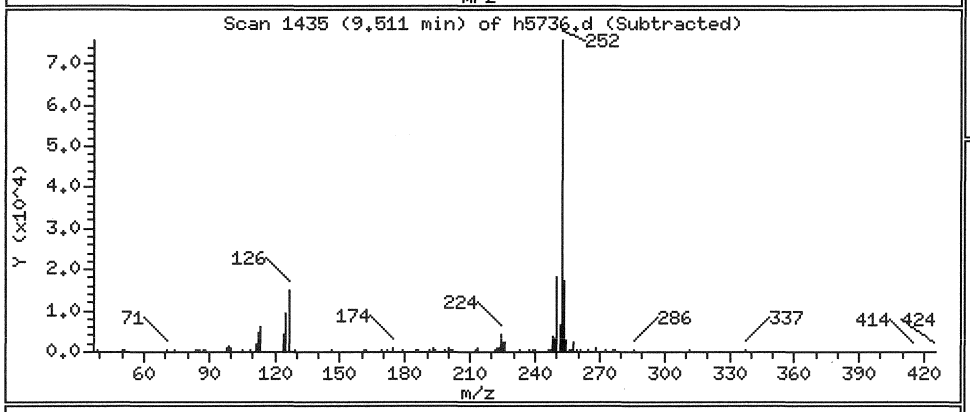
Sample Info: 21310171201*4847*

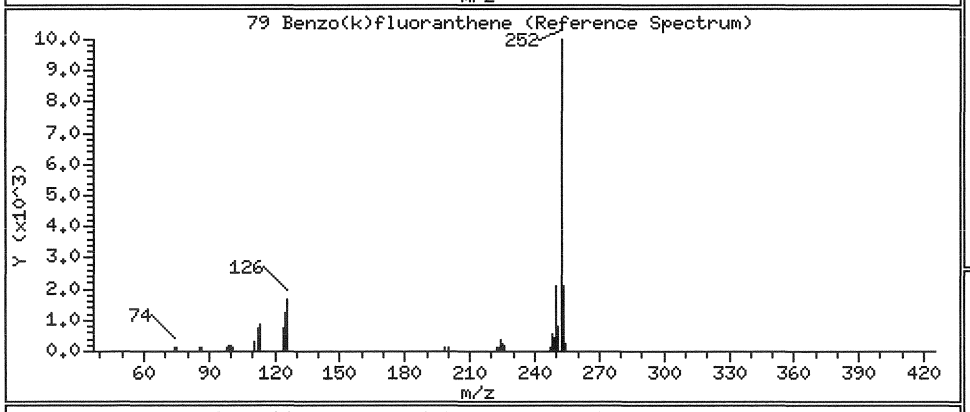
Volume Injected (uL): 1.0 Operator: hcp

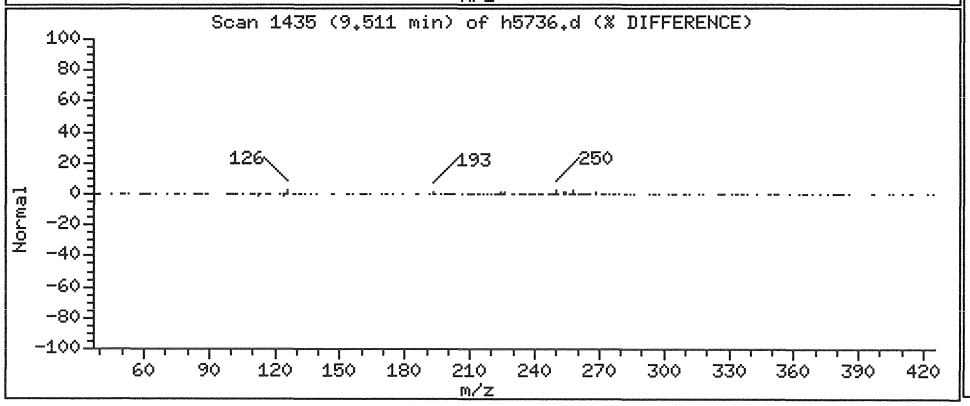
Column phase: RTX-5MS-30M Column diameter: 0.25

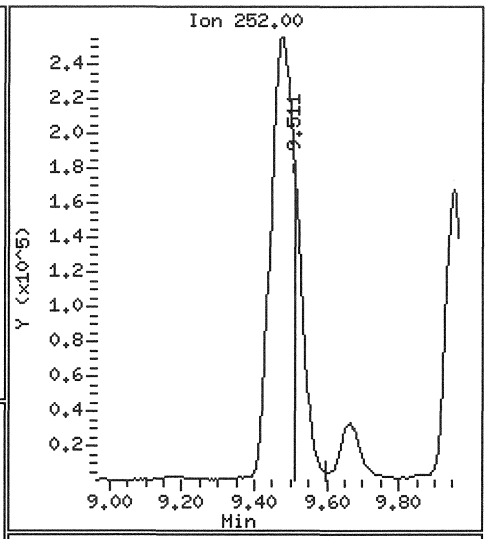
79 Benzo(k)fluoranthene Concentration: 977 ug/Kg

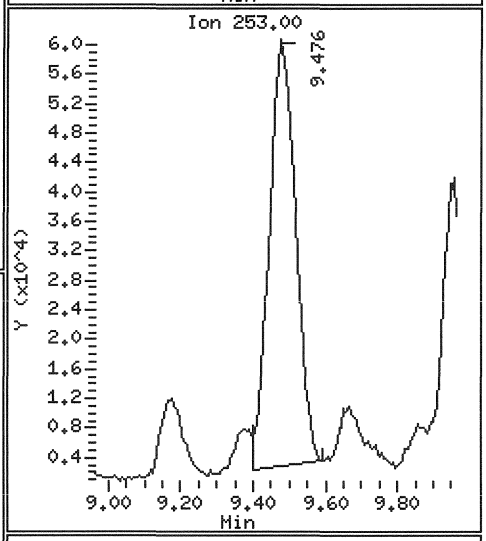


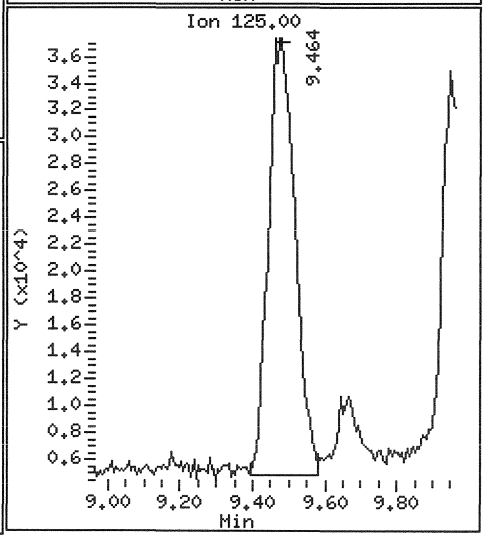



Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d

Date : 22-OCT-2013 16:31

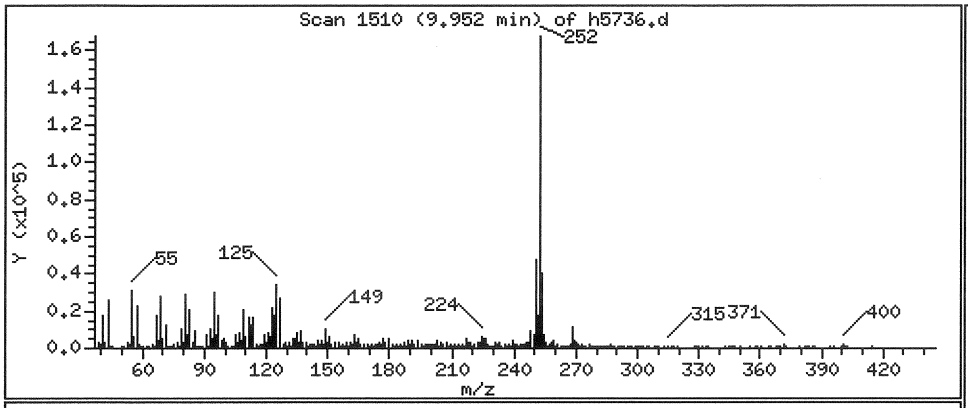
Client ID: 21310171201 Instrument: MSSV4.i

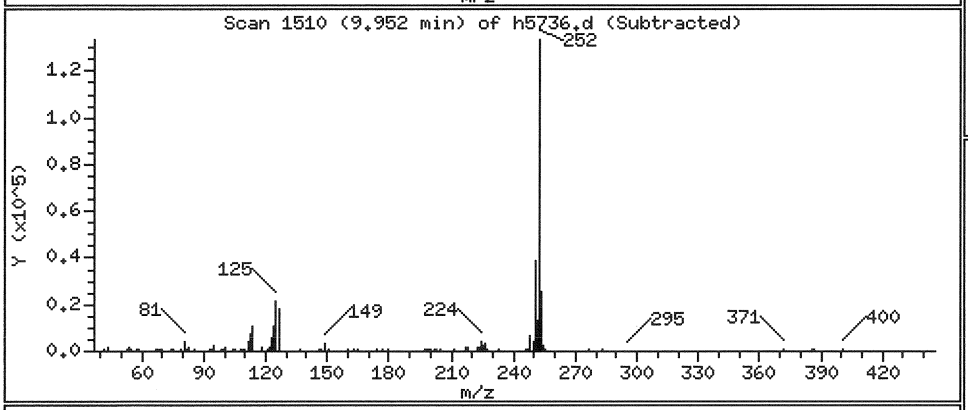
Sample Info: 21310171201*4847*

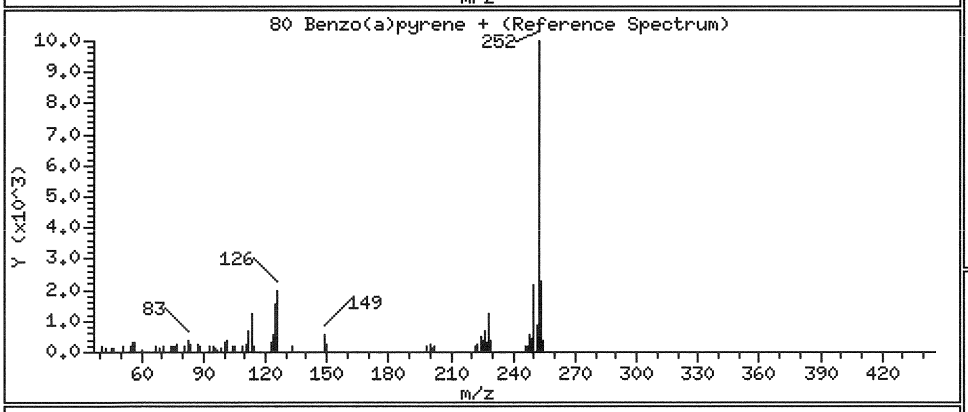
Volume Injected (uL): 1.0 Operator: hcp

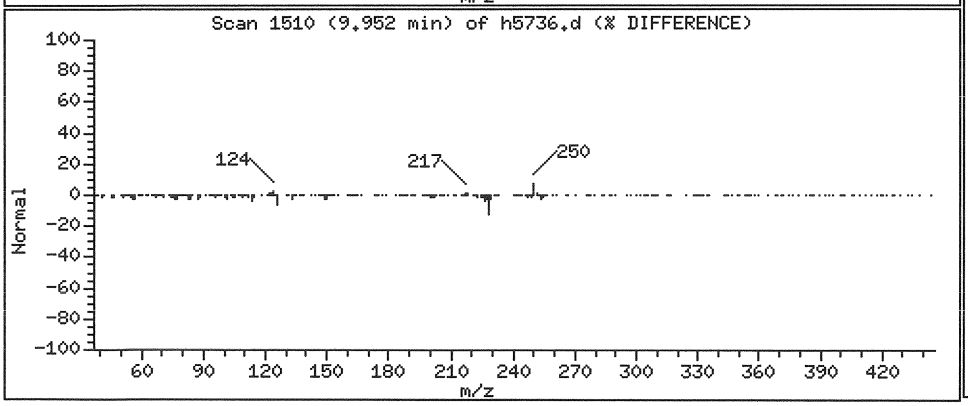
Column phase: RTX-5MS-30M Column diameter: 0.25

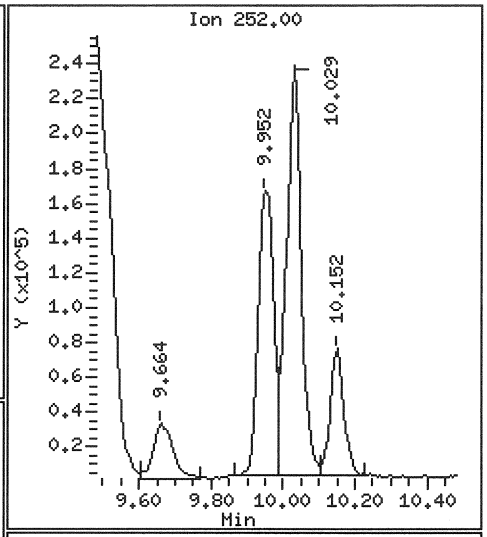
80 Benzo(a)pyrene + Concentration: 1660 ug/Kg

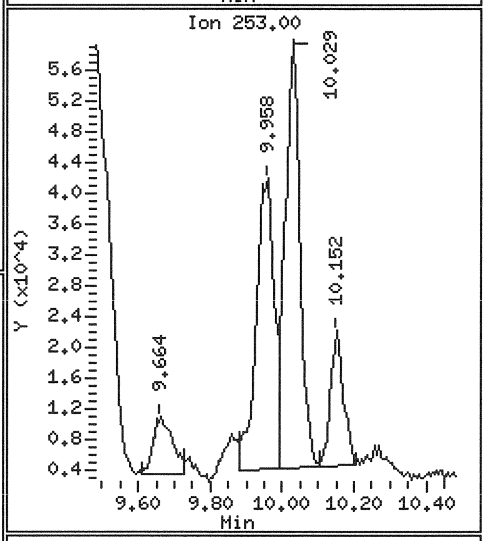


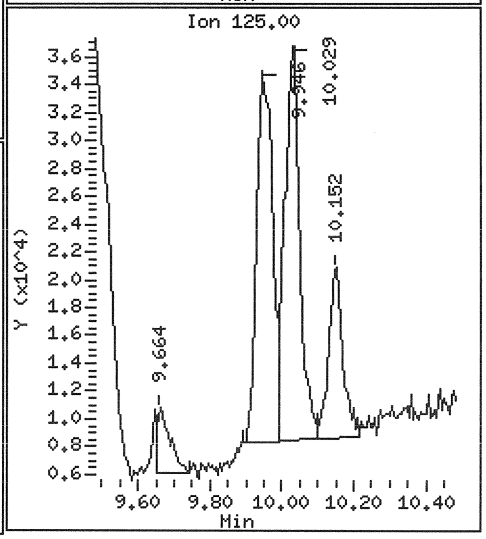



Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d

Date : 22-OCT-2013 16:31

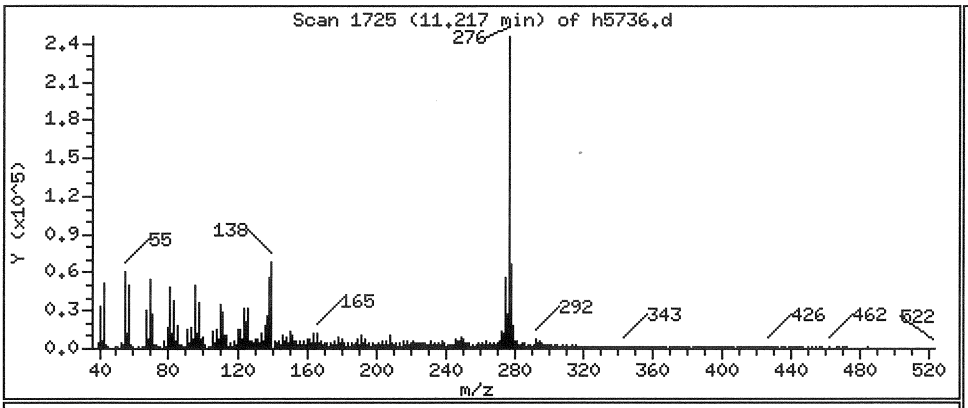
Client ID: 21310171201 Instrument: MSSV4.i

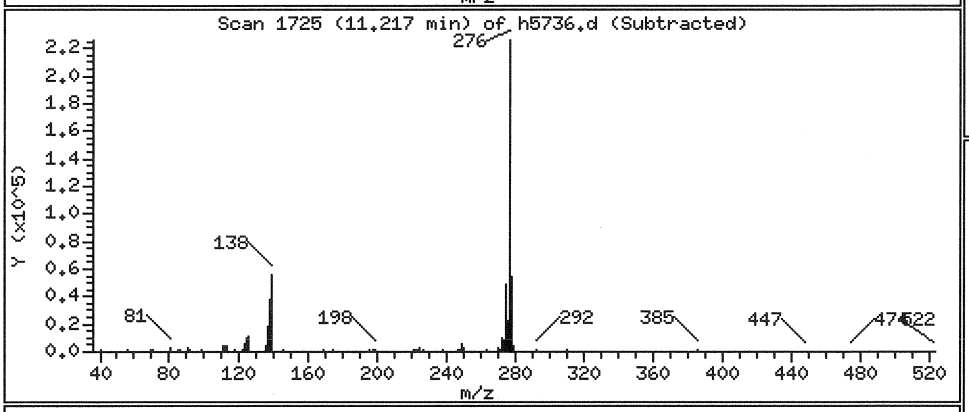
Sample Info: 21310171201*4847*

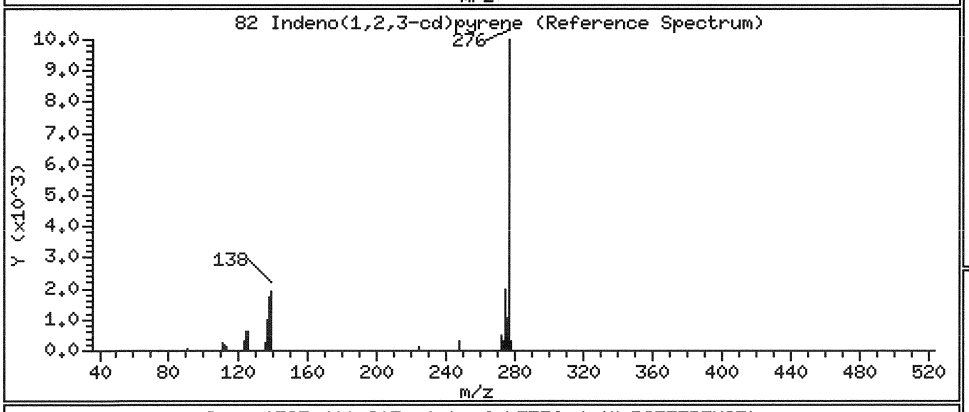
Volume Injected (uL): 1.0 Operator: hcp

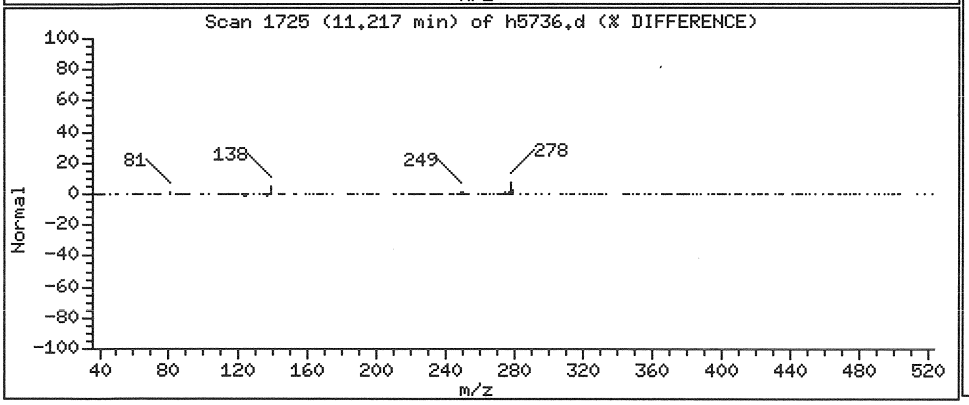
Column phase: RTX-5MS-30M Column diameter: 0.25

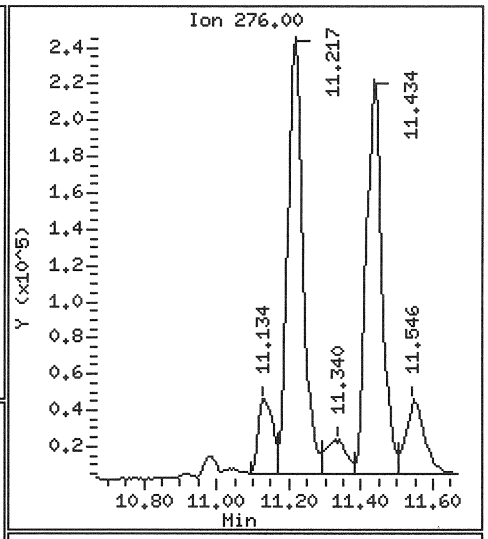
82 Indeno(1,2,3-cd)pyrene Concentration: 2650 ug/Kg

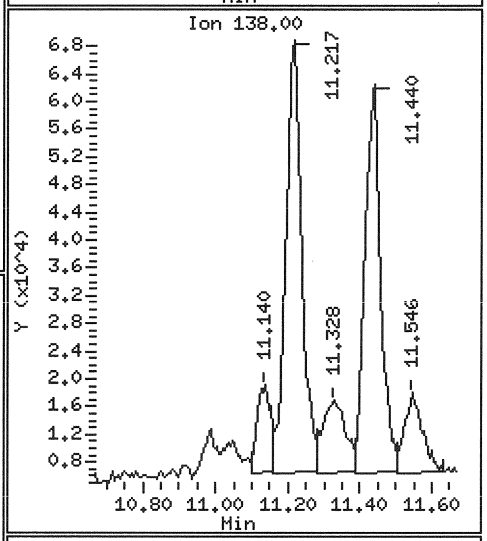


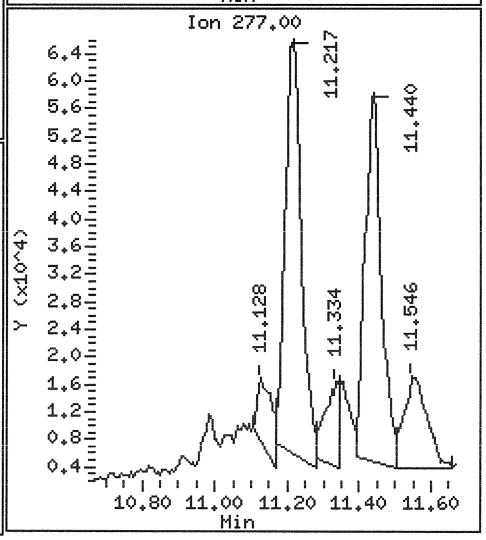



Data File: /var/chem/MSSV4.i/2131022.s.b/h5736.d

Date : 22-OCT-2013 16:31

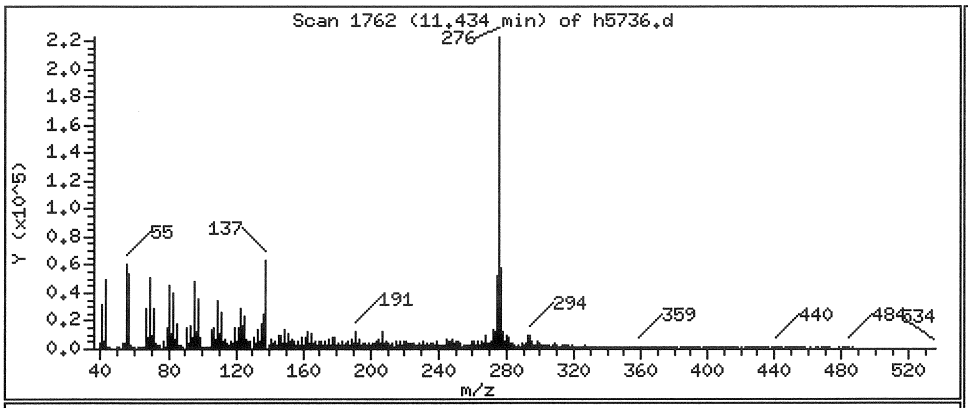
Client ID: 21310171201 | Instrument: MSSV4.i

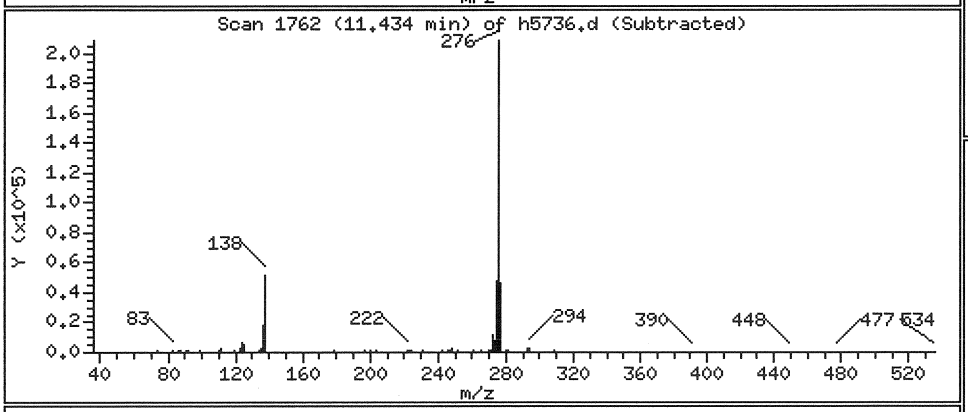
Sample Info: 21310171201*4847*

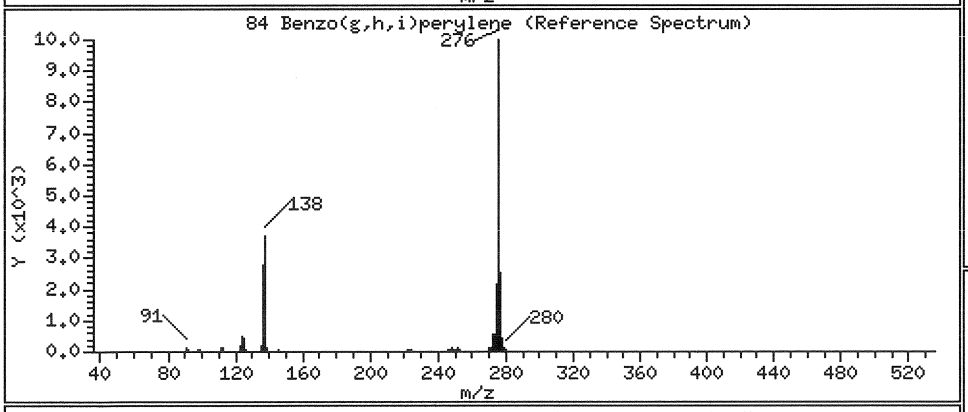
Volume Injected (uL): 1.0 | Operator: hcp

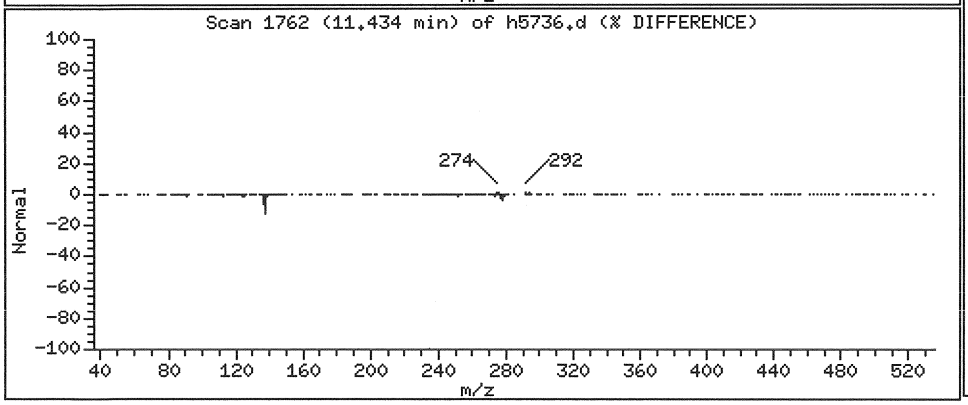
Column phase: RTX-5MS-30M | Column diameter: 0.25

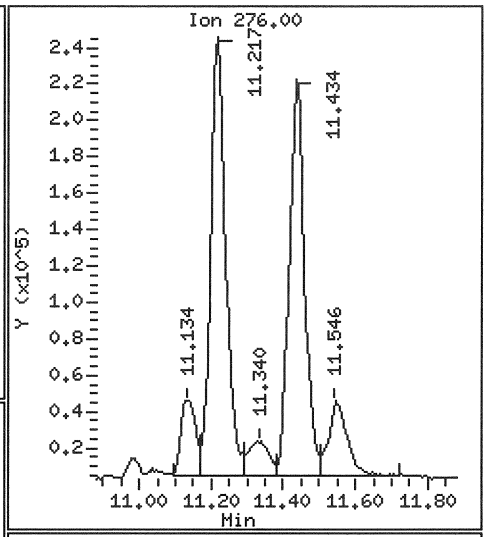
84 Benzo(g,h,i)perylene | Concentration: 1860 ug/Kg

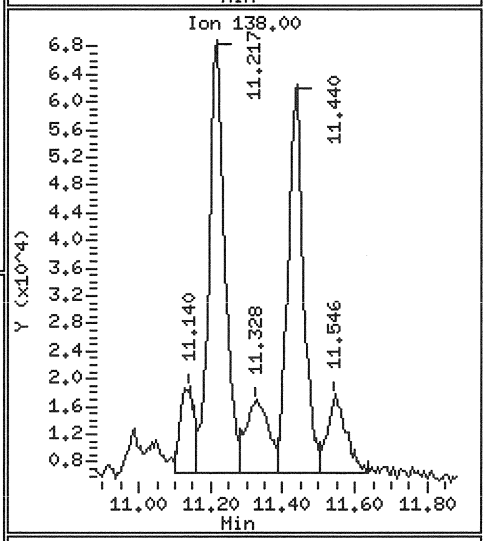


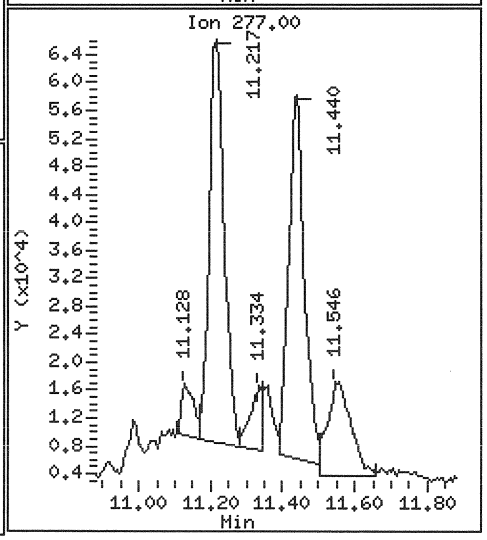



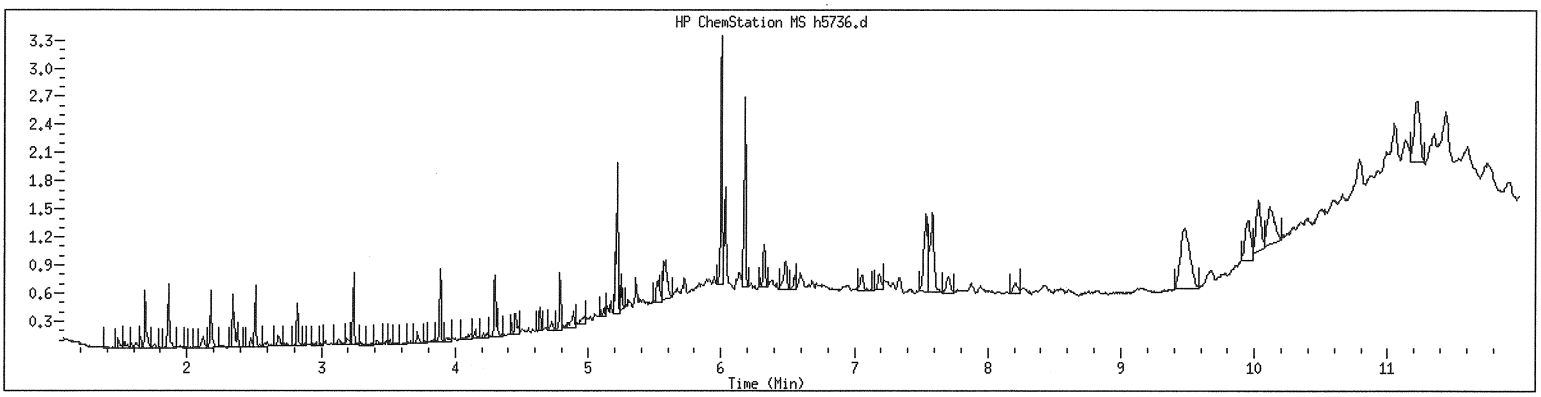



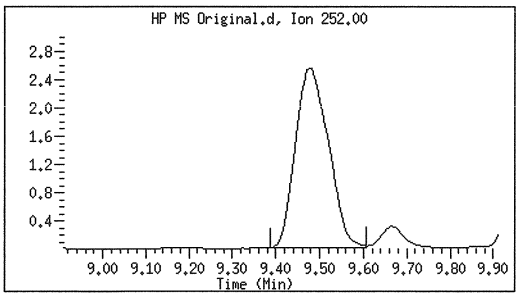
# MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 21310171201 SampleType : SAMPLE
Injection Date: 10/22/2013 16:31 Instrument : MSSV4.i
Operator : hcp
Sample Info : 21310171201*4847*
Misc Info : 21310171201*MSSV~10019~*101712*30.0-1*518149*
Method : /var/chem/MSSV4.i/2131022.s.b/8270D_04.m
Dilution : 1.00
Matrix : SOIL
Integrator : HP RTE Compound Sublist: SA8270



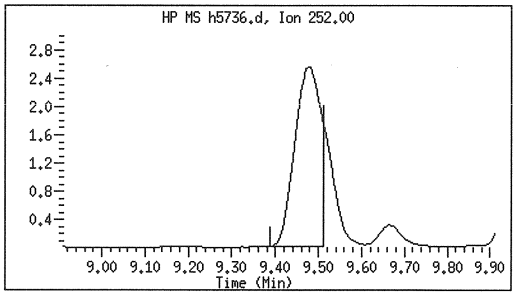

Original Final

78 Benzo(b)fluoranthene CAS#: 205-99-2 Reason: M3

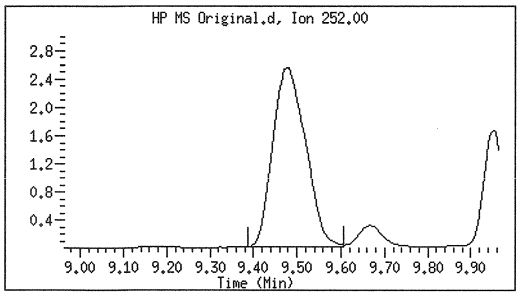



Electronic Signature Applied

User: kcb
Date: 10/24/2013 09:51




79 Benzo(k)fluoranthene CAS#: 207-08-9 Reason: M3




Electronic Signature Applied

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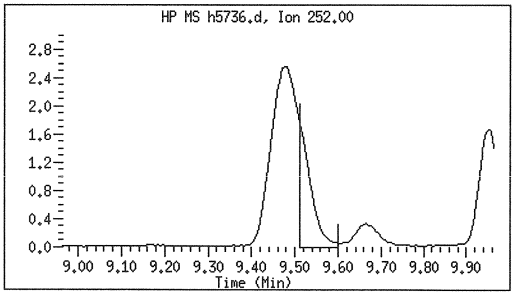
Date: 10/24/2013 09:52



1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: 10.2 decanted: (Y/N)

GC Column: RTX-5MS-30 ID: .25 (mm)

Concentrated Extract Volume: 1000 ( µL )

Injection Volume: 1.0 ( µL )

GPC Cleanup: (Y/N) N pH:

*CONCENTRATION UNITS: ug/kg*

Sample ID: RS-COMP2-101613DL

Contract:

Lab File ID: 2131023/h5758

Lab Sample ID: 21310171203DL

Date Collected: 10/16/13 Time: 1700

Date Received: 10/17/13

Date Extracted: 10/22/13

Date Analyzed: 10/23/13 Time: 1328

Dilution Factor: 10 Analyst: HCP

Prep Method: 3550B

Analytical Method: SW-846 8270D

Instrument ID: MSSV4

Prep Batch: 518149 Analytical Batch: 518409

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 50-32-8 | Benzo(a)pyrene | 1440 | J | 46.1 | 371 | 3680 |
| 205-99-2 | Benzo(b)fluoranthene | 2470 | J | 72.6 | 743 | 3680 |
| 191-24-2 | Benzo(g,h,i)perylene | 1540 | J | 55.6 | 186 | 3680 |
| 207-08-9 | Benzo(k)fluoranthene | 552 | J | 56.8 | 371 | 3680 |
| 53-70-3 | Dibenz(a,h)anthracene | 401 | J | 52.8 | 186 | 3680 |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 1560 | J | 88.6 | 371 | 3680 |

GCAL, Inc.

BNA QUANT AND RATIO REPORT

Data file : /var/chem/MSSV4.i/2131023.s.b/h5758.d
Lab Smp Id: 21310171203 Client Smp ID: 21310171203
Inj Date : 23-OCT-2013 13:28
Operator : hcp Inst ID: MSSV4.i
Smp Info : 21310171203*4847*
Misc Info : 21310171203*MSSV~10023~*101712*30.0-1X10*518149*
Comment :
Method : /var/chem/MSSV4.i/2131023.s.b/8270D_04.m
Meth Date : 23-Oct-2013 12:08 hcp Quant Type: ISTD
Cal Date : 09-JUL-2013 00:02 Cal File: h2759x.d
Als bottle: 7
Dil Factor: 10.00000
Integrator: HP RTE Compound Sublist: SA8270.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula:
Amt * DF * (Uf * Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 10.00000 | Dilution Factor |
| Uf | 1.00000 | ng unit correction factor |
| Vt | 1000.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppm) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|---|
| * 10 1,4-Dichlorobenzene-d4 | 152 | 2.500 | 2.499 | (1.000) | 51687 | 40.0000 | |
| * 28 Naphthalene-d8 | 136 | 3.229 | 3.229 | (1.000) | 186679 | 40.0000 | |
| 42 Acenaphthylene | 152 | 4.205 | 4.205 | (0.981) | 1288 | 0.29808 | 99.4 |
| * 44 Acenaphthene-d10 | 164 | 4.288 | 4.287 | (1.000) | 98724 | 40.0000 | |
| 45 Acenaphthene + | 153 | 4.305 | 4.311 | (1.004) | 669 | 0.23858 | 79.5 |
| 51 Fluorene | 166 | 4.623 | 4.623 | (1.078) | 1006 | 0.32812 | 109 |
| * 61 Phenanthrene-d10 | 188 | 5.194 | 5.199 | (1.000) | 160852 | 40.0000 | |
| 62 Phenanthrene | 178 | 5.211 | 5.211 | (1.003) | 13862 | 3.14205 | 1050 |
| 63 Anthracene | 178 | 5.241 | 5.246 | (1.009) | 4006 | 0.91097 | 304 |
| 64 Carbazole | 167 | 5.352 | 5.352 | (1.031) | 3136 | 0.77174 | 257 |
| 67 Fluoranthene + | 202 | 5.988 | 5.987 | (1.153) | 36856 | 7.78048 | 2590 |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppm) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|---|
| 69 Pyrene | 202 | 6.164 | 6.170 | (0.820) | 31447 | 5.22053 | 1740 |
| 72 Benzo(a)anthracene | 228 | 7.499 | 7.511 | (0.998) | 21309 | 4.02259 | 1340 |
| * 74 Chrysene-d12 | 240 | 7.517 | 7.523 | (1.000) | 197829 | 40.0000 | |
| 76 bis(2-Ethylhexyl)phthalate | 149 | 7.682 | 7.681 | (1.022) | 7811 | 2.40061 | 800 |
| 75 Chrysene | 228 | 7.552 | 7.558 | (1.005) | 25025 | 4.63838 | 1550 |
| 78 Benzo(b)fluoranthene | 252 | 9.399 | 9.405 | (0.934) | 45630 | 6.65520 | 2220 |
| 79 Benzo(k)fluoranthene | 252 | 9.452 | 9.458 | (0.939) | 12034 | 1.48775 | 496(M2) |
| 80 Benzo(a)pyrene + | 252 | 9.970 | 9.975 | (0.991) | 26450 | 3.85835 | 1290 |
| * 81 Perylene-d12 | 264 | 10.064 | 10.064 | (1.000) | 276554 | 40.0000 | |
| 82 Indeno(1,2,3-cd)pyrene | 276 | 11.164 | 11.164 | (1.109) | 26418 | 4.20664 | 1400(M2) |
| 83 Dibenzo(a,h)anthracene | 278 | 11.187 | 11.187 | (1.112) | 8039 | 1.07891 | 360 |
| 84 Benzo(g,h,i)perylene | 276 | 11.375 | 11.375 | (1.130) | 33800 | 4.12598 | 1380 |

QC Flag Legend

M2- Compound response manually integrated because
Target system integrated incorrectly.

Data File: /var/chem/MSSV4.i/2131023.s.b/h5758.d

Date : 23-OCT-2013 13:28

Client ID: 21310171203

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0

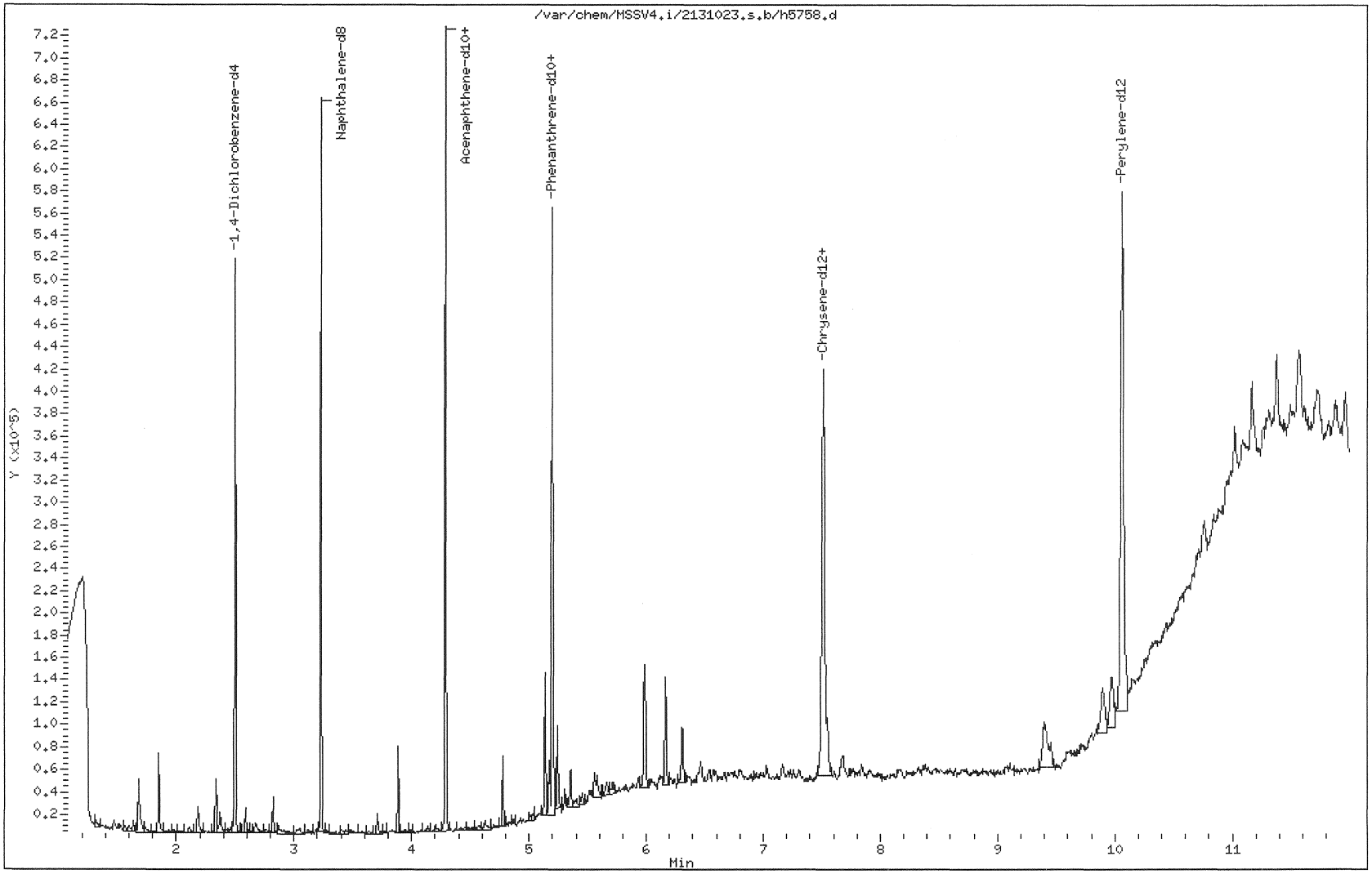
Column phase: RTX-5MS-30M

Instrument: MSSV4.i

Operator: hcp

Column diameter: 0.25






21310171203 399

Data File: /var/chem/MSSV4.i/2131023.s.b/h5758.d



Date : 23-OCT-2013 13:28

Client ID: 21310171203

Instrument: MSSV4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0

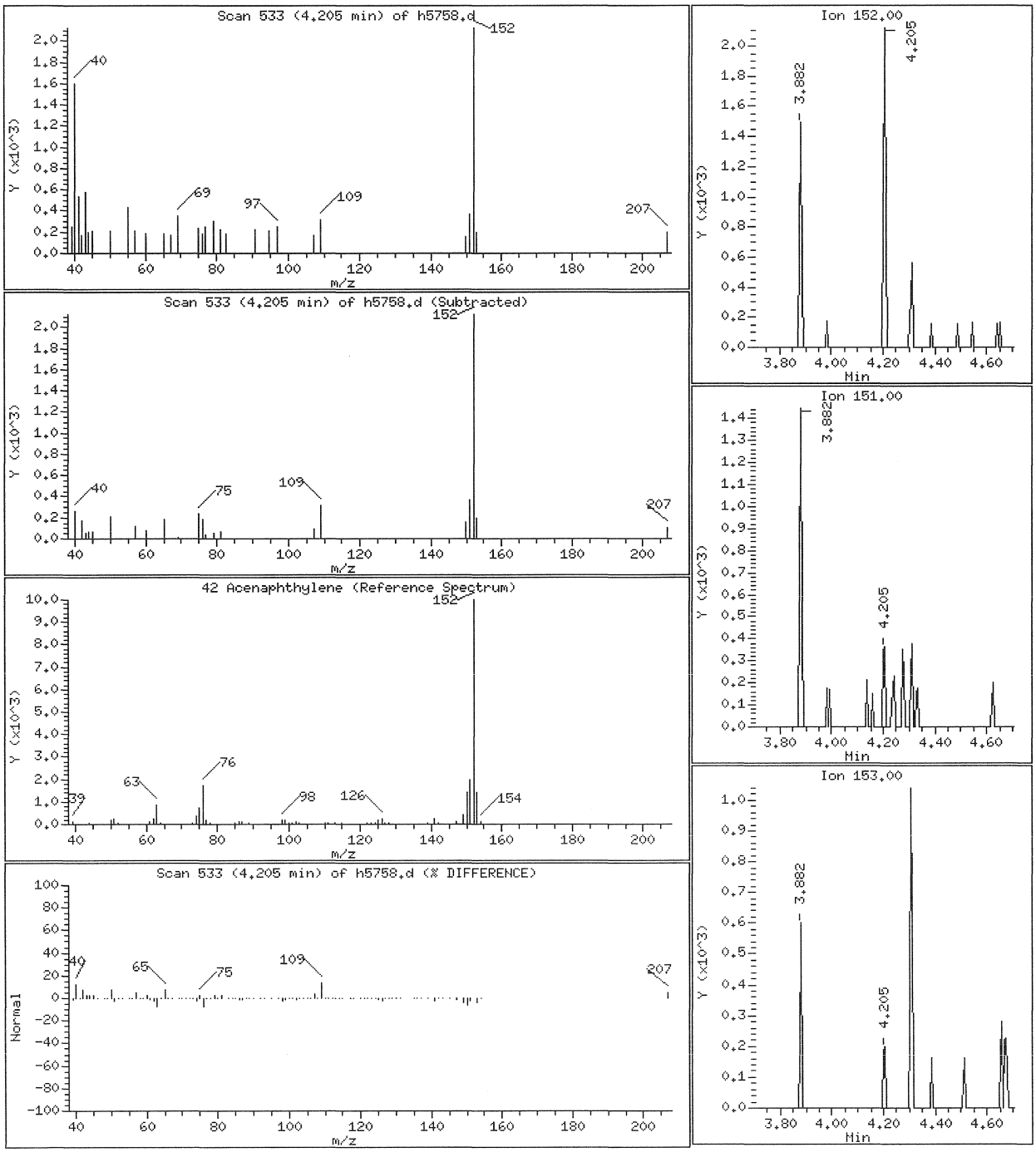
Operator: hcp

Column phase: RTX-5MS-30M

Column diameter: 0.25

42 Acenaphthylene

Concentration: 99.4 ug/Kg



Data File: /var/chem/MSSV4.i/2131023.s.b/h5758.d



Date : 23-OCT-2013 13:28

Client ID: 21310171203

Instrument: MSSV4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0

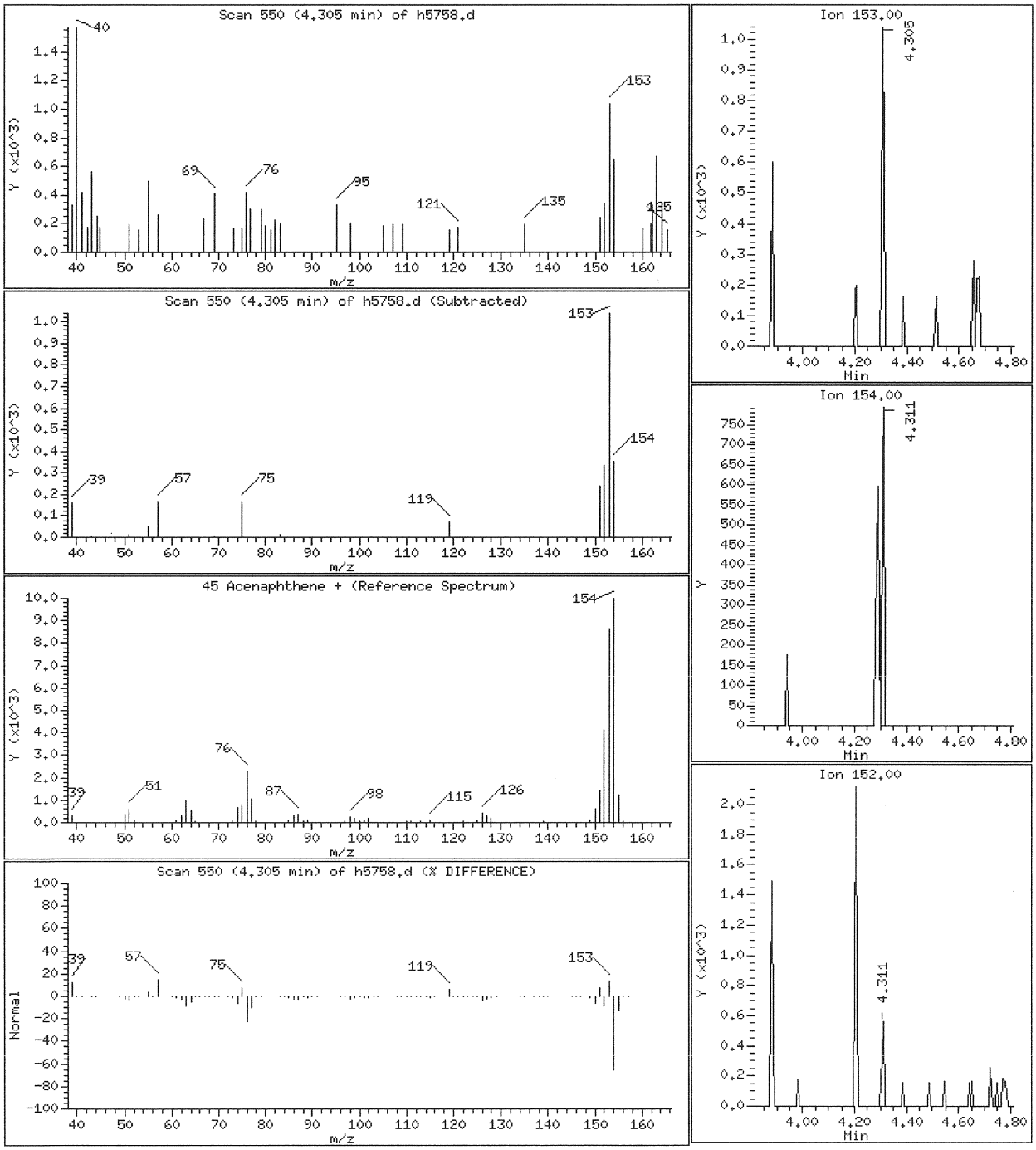
Operator: hcp

Column phase: RTX-5MS-30M

Column diameter: 0.25

45 Acenaphthene +

Concentration: 79.5 ug/Kg



Data File: /var/chem/MSSV4.i/2131023.s.b/h5758.d

Date : 23-OCT-2013 13:28

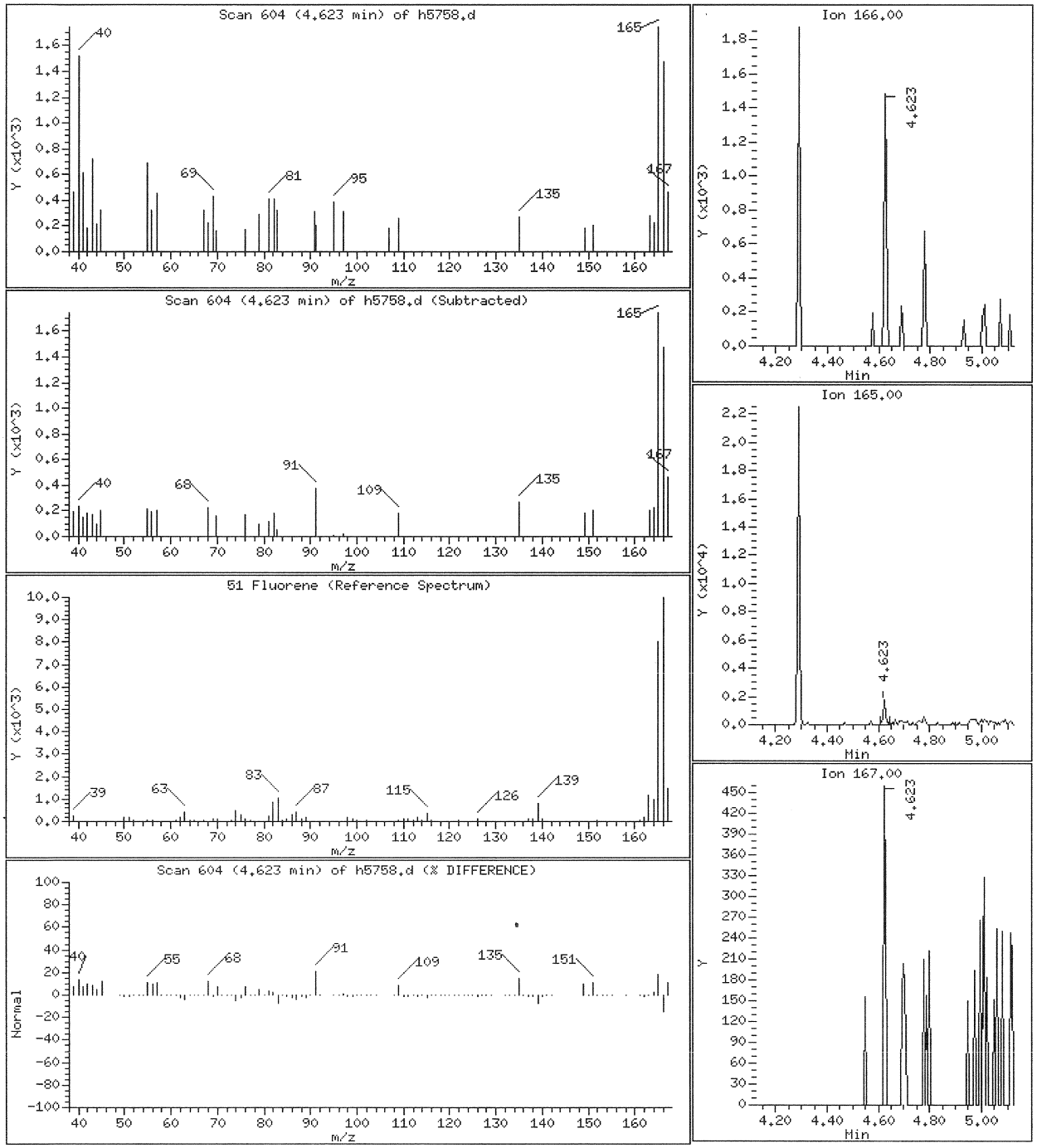
Client ID: 21310171203 Instrument: MSSV4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0 Operator: hcp

Column phase: RTX-5MS-30M Column diameter: 0.25

51 Fluorene Concentration: 109 ug/Kg



Data File: /var/chem/MSSV4.i/2131023.s.b/h5758.d



Date : 23-OCT-2013 13:28

Client ID: 21310171203

Instrument: MSSV4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0

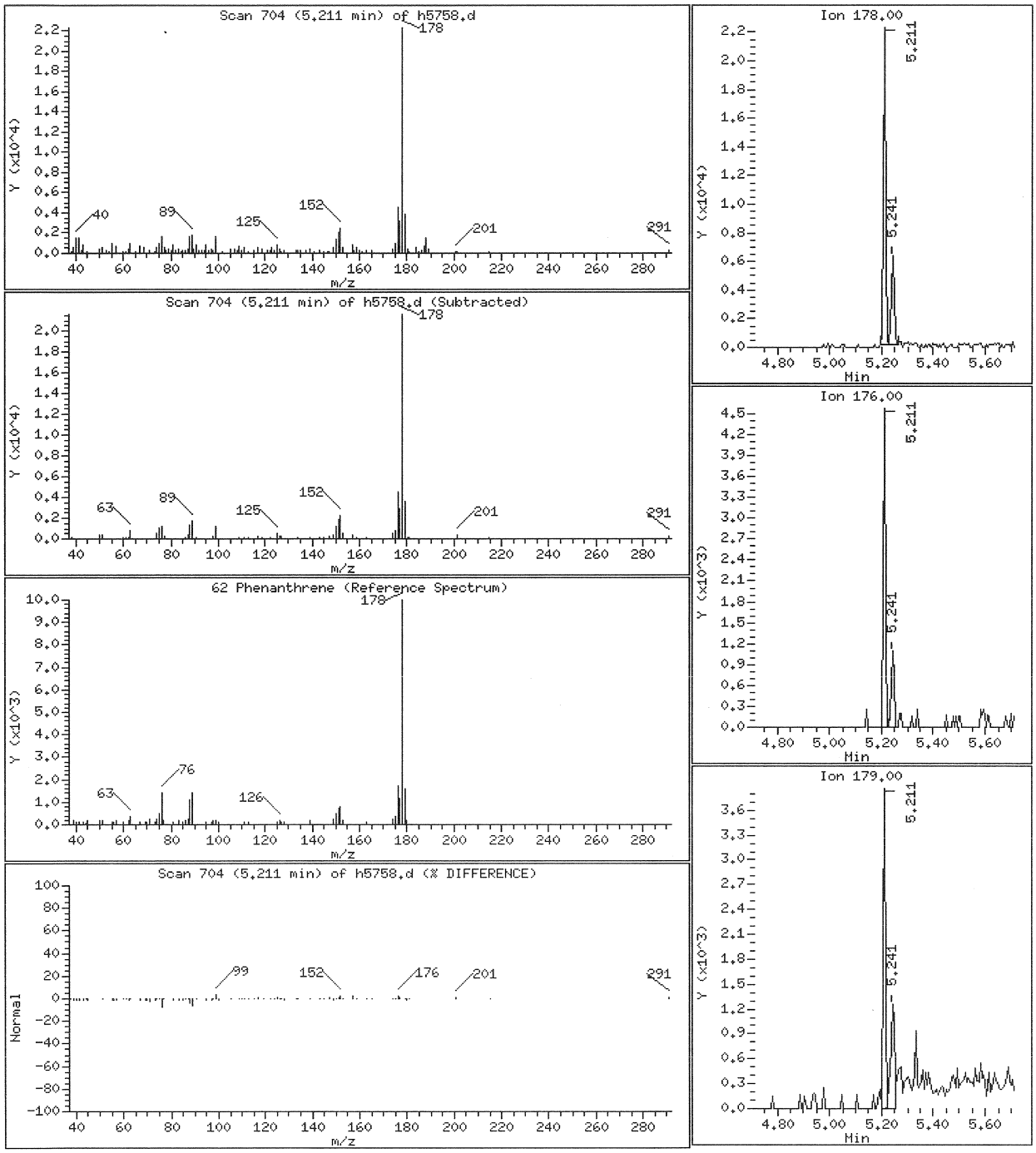
Operator: hcp

Column phase: RTX-5MS-30M

Column diameter: 0.25

62 Phenanthrene

Concentration: 1050 ug/Kg



Data File: /var/chem/MSSV4.i/2131023.s.b/h5758.d



Date : 23-OCT-2013 13:28

Client ID: 21310171203

Instrument: MSSV4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0

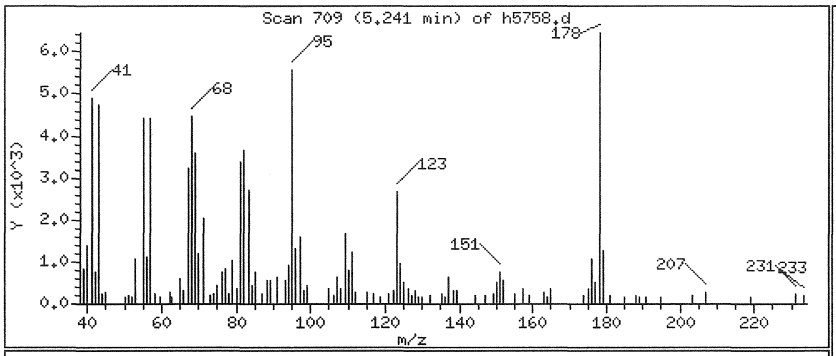
Operator: hcp

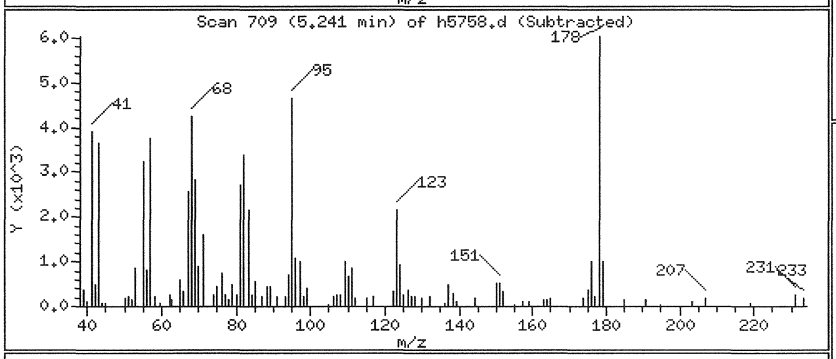
Column phase: RTX-5MS-30M

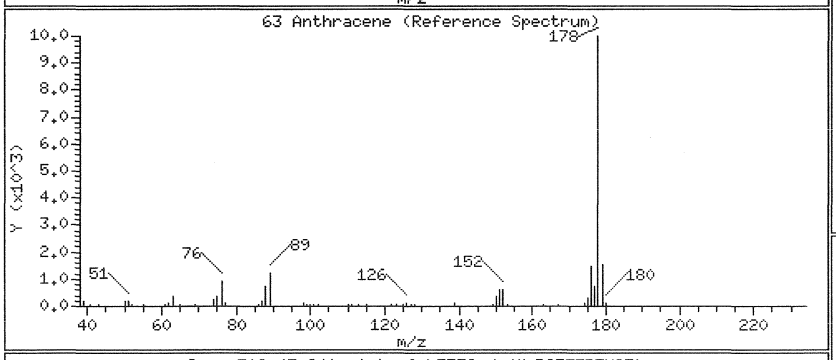
Column diameter: 0.25

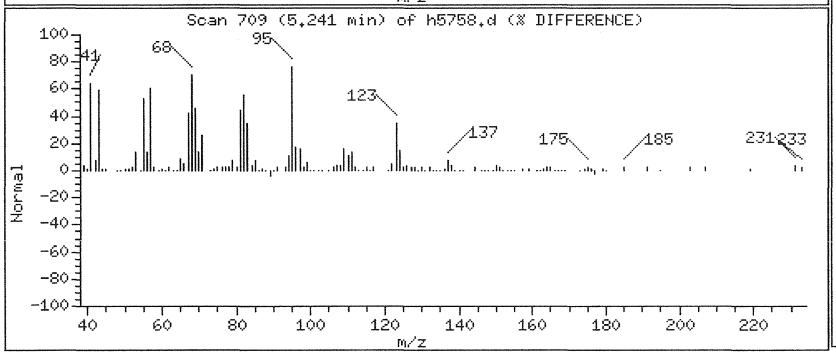
63 Anthracene

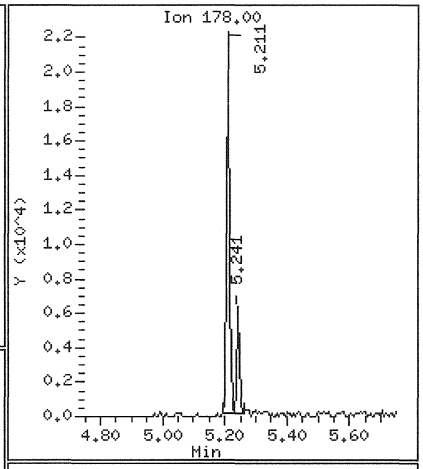
Concentration: 304 ug/Kg

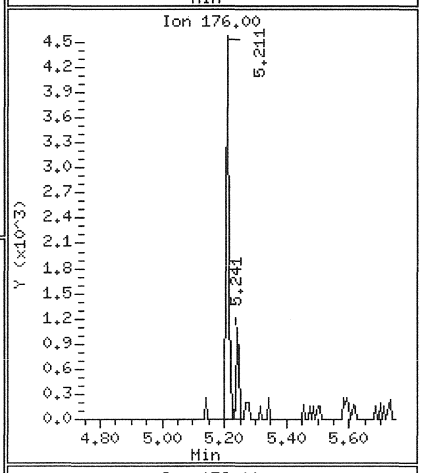


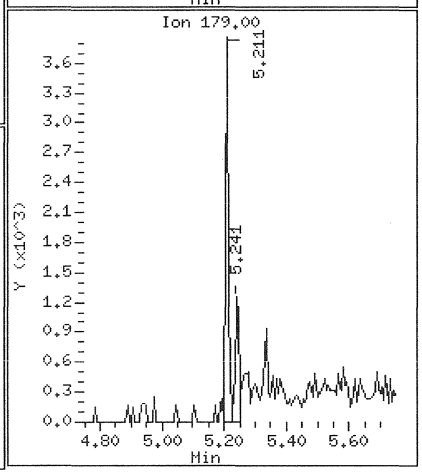



Data File: /var/chem/MSSV4.i/2131023.s.b/h5758.d



Date : 23-OCT-2013 13:28

Client ID: 21310171203

Instrument: MSSV4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0

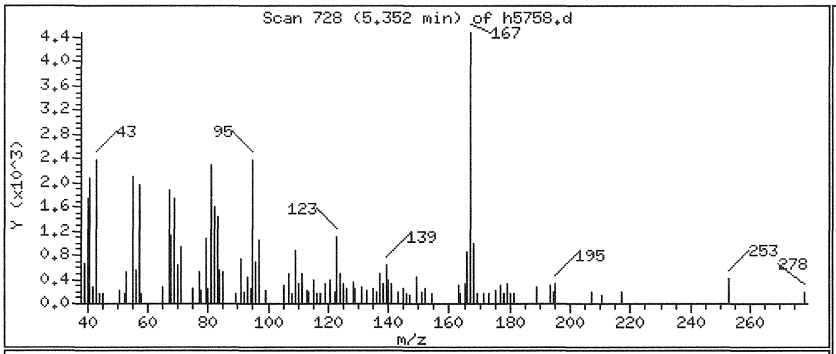
Operator: hcp

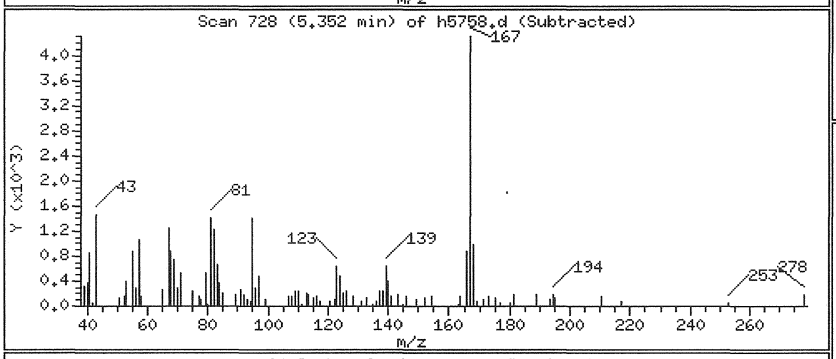
Column phase: RTX-5MS-30M

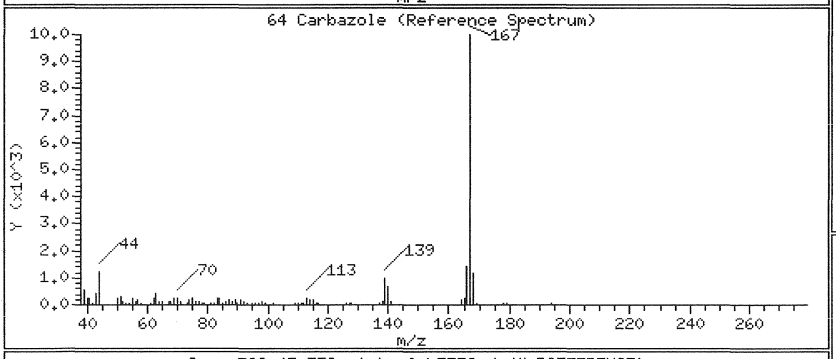
Column diameter: 0.25

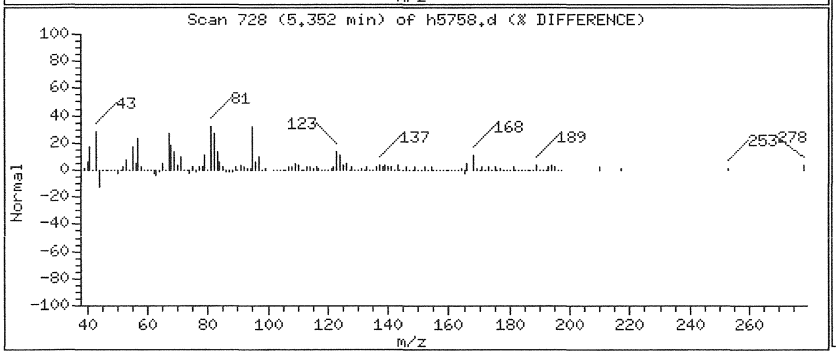
64 Carbazole

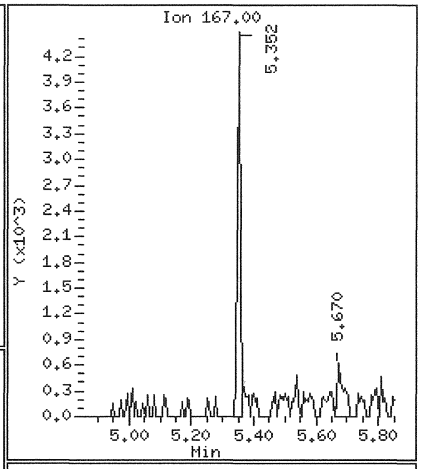
Concentration: 257 ug/Kg

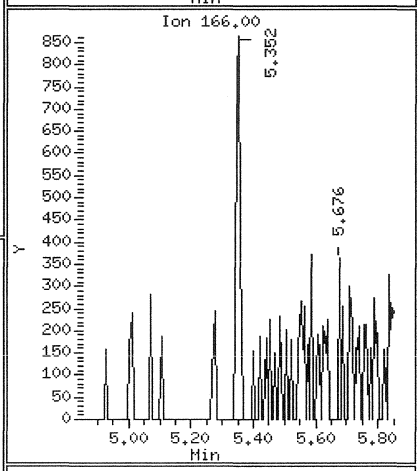


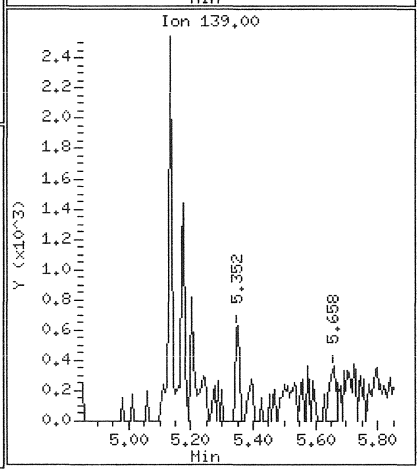



Data File: /var/chem/MSSV4.i/2131023.s.b/h5758.d



Date : 23-OCT-2013 13:28

Client ID: 21310171203

Instrument: MSSV4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0

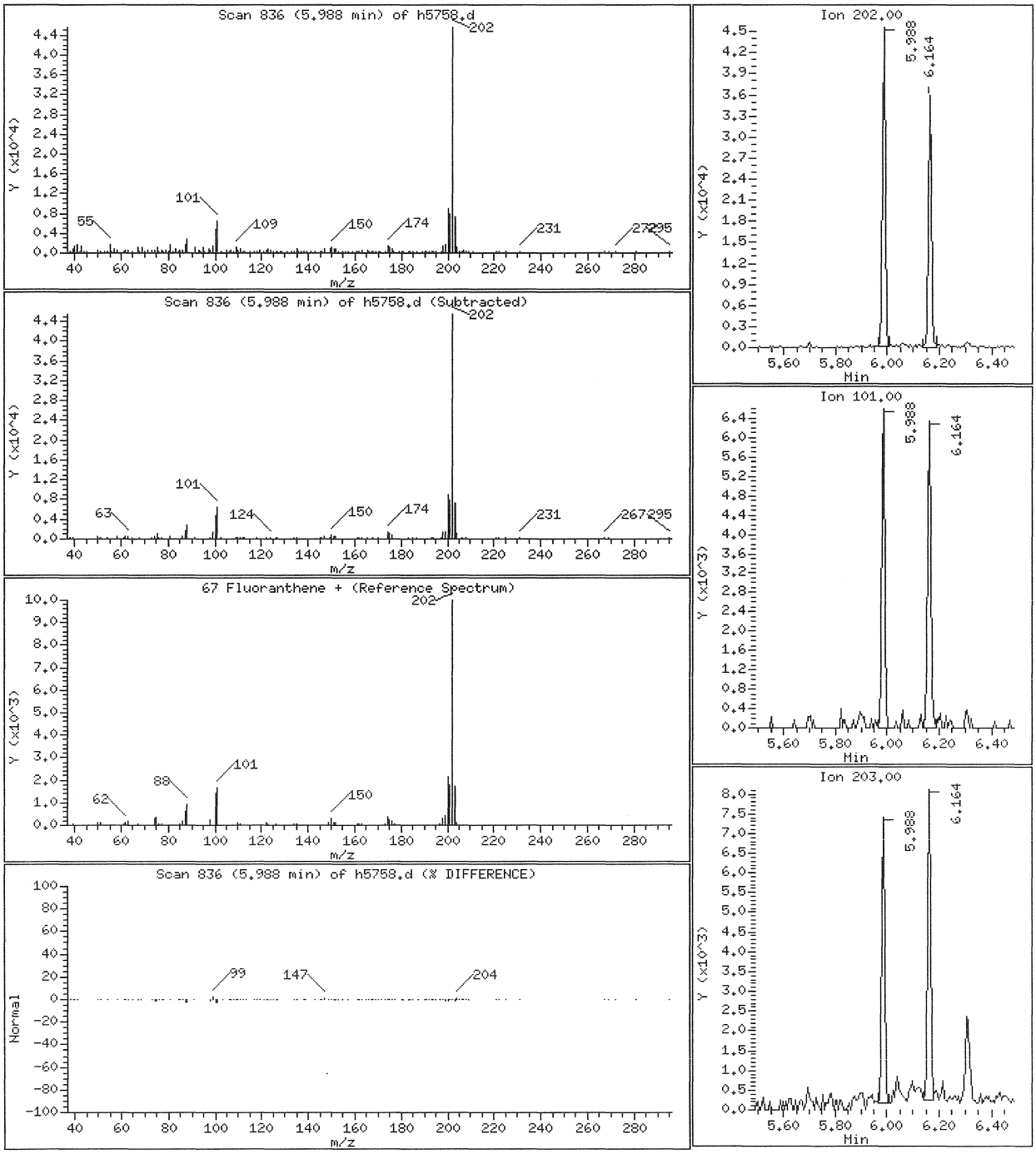
Operator: hcp

Column phase: RTX-5MS-30M

Column diameter: 0.25

67 Fluoranthene +

Concentration: 2590 ug/Kg



Data File: /var/chem/MSSV4.i/2131023.s.b/h5758.d



Date : 23-OCT-2013 13:28

Client ID: 21310171203

Instrument: MSSV4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0

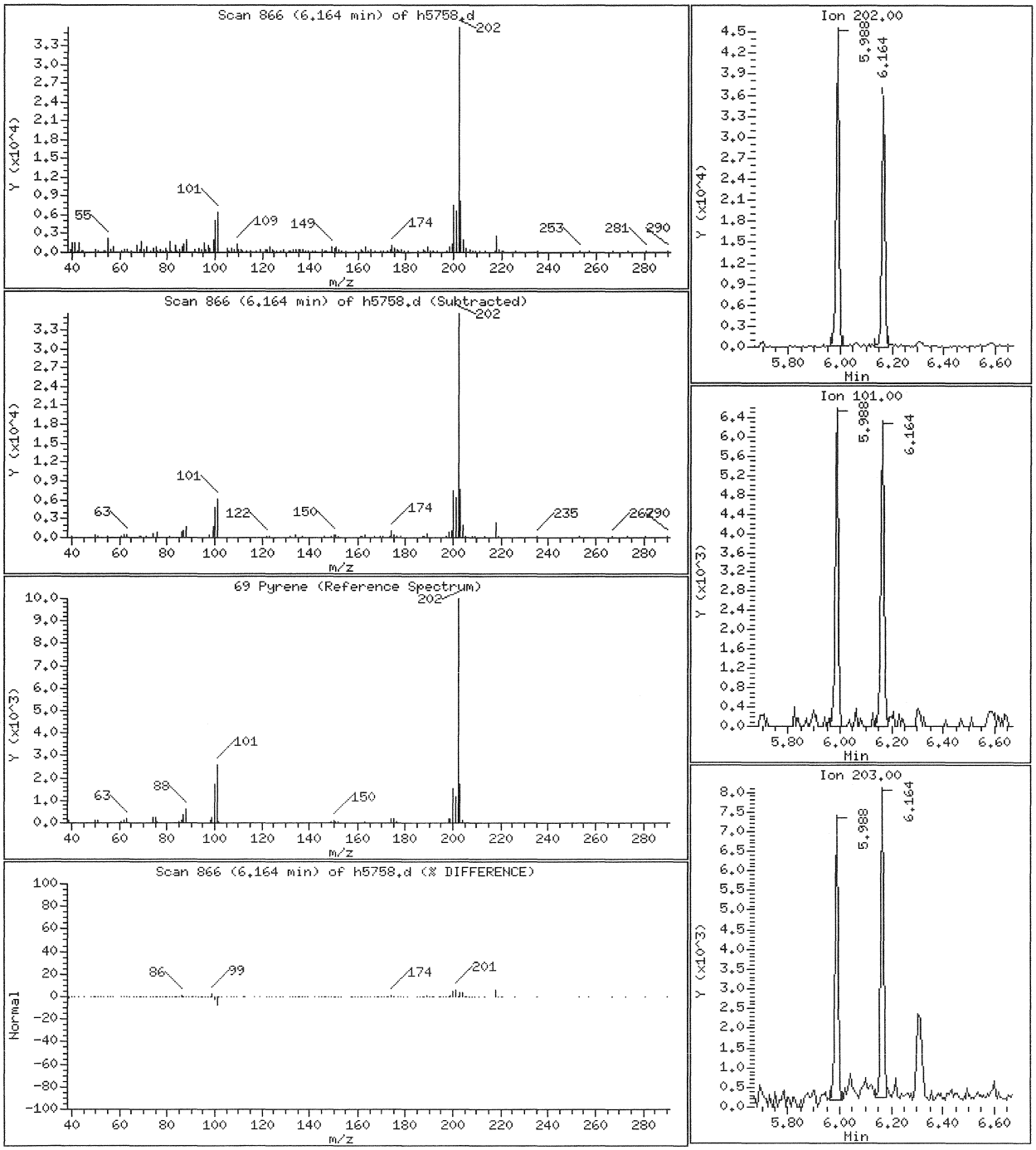
Operator: hcp

Column phase: RTX-5MS-30M

Column diameter: 0.25

69 Pyrene

Concentration: 1740 ug/Kg



Data File: /var/chem/MSSV4.i/2131023.s.b/h5758.d



Date : 23-OCT-2013 13:28

Client ID: 21310171203

Instrument: MSSV4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0

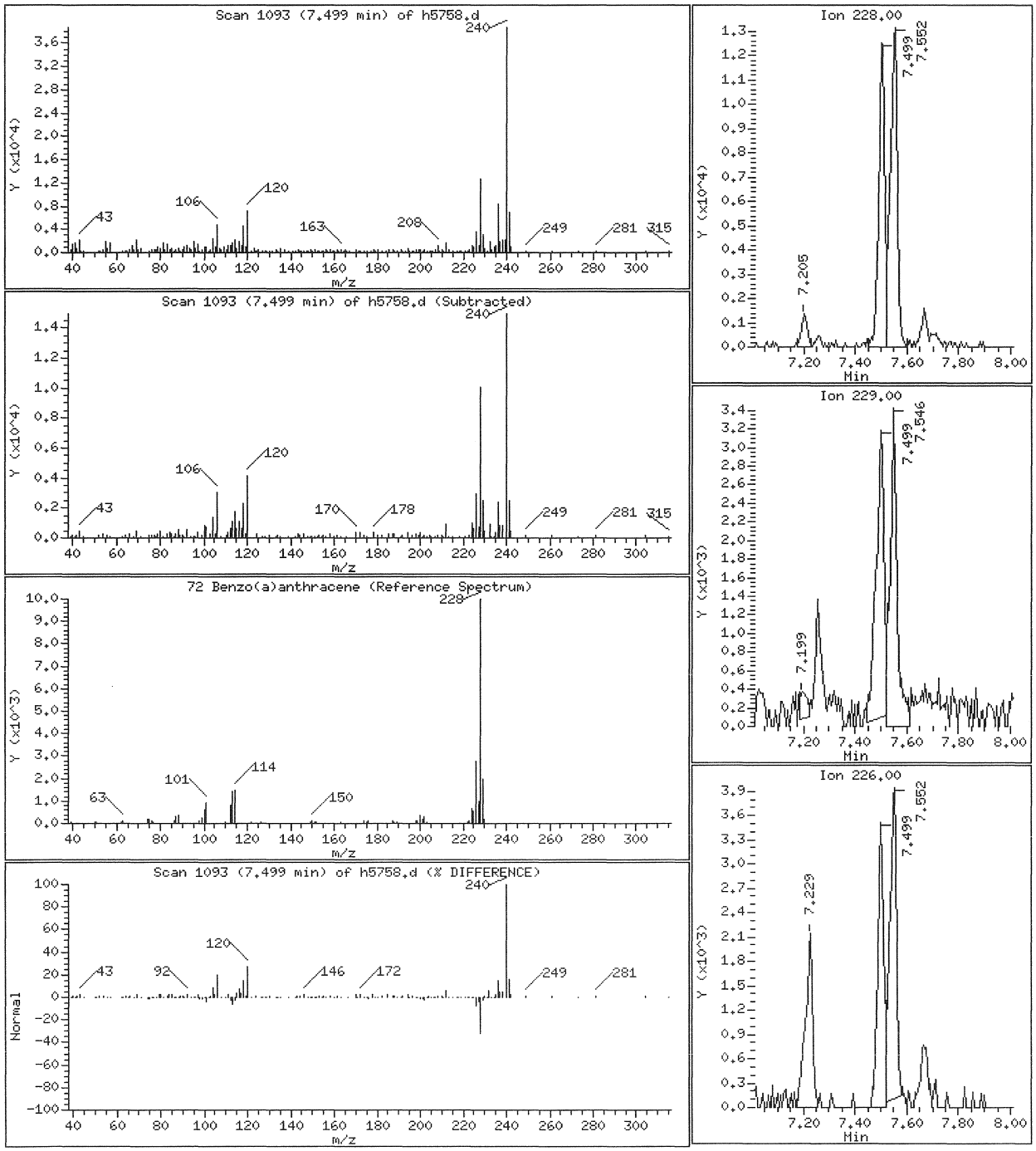
Operator: hcp

Column phase: RTX-5MS-30M

Column diameter: 0.25

72 Benzo(a)anthracene

Concentration: 1340 ug/Kg



Data File: /var/chem/MSSV4.i/2131023.s.b/h5758.d



Date : 23-OCT-2013 13:28

Client ID: 21310171203

Instrument: MSSV4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0

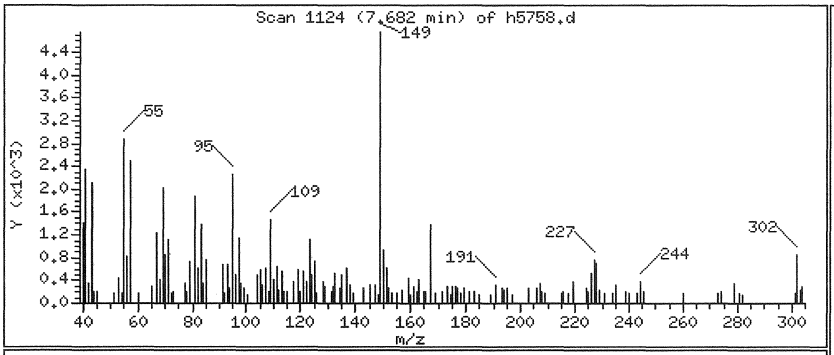
Operator: hcp

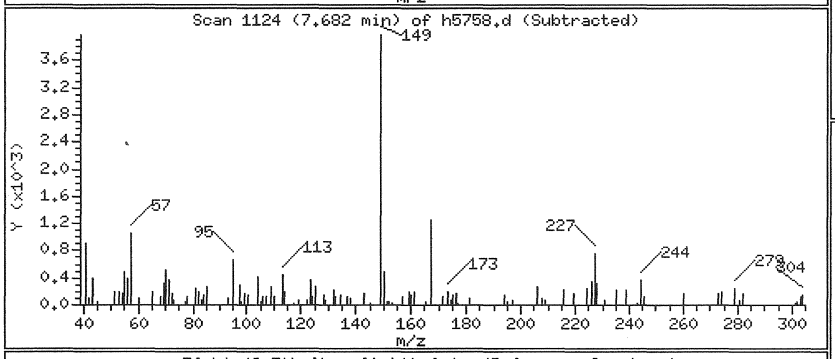
Column phase: RTX-5MS-30M

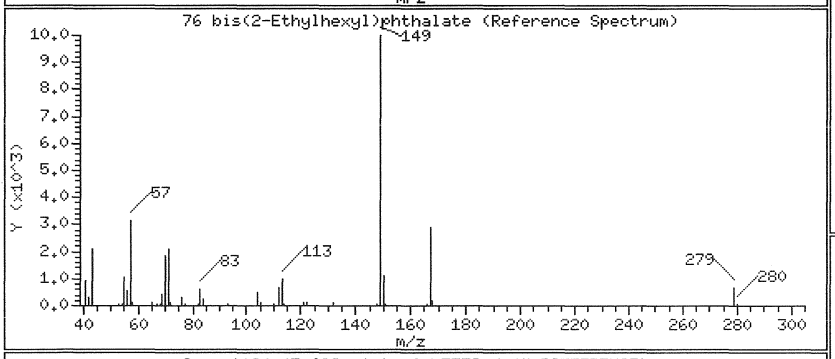
Column diameter: 0.25

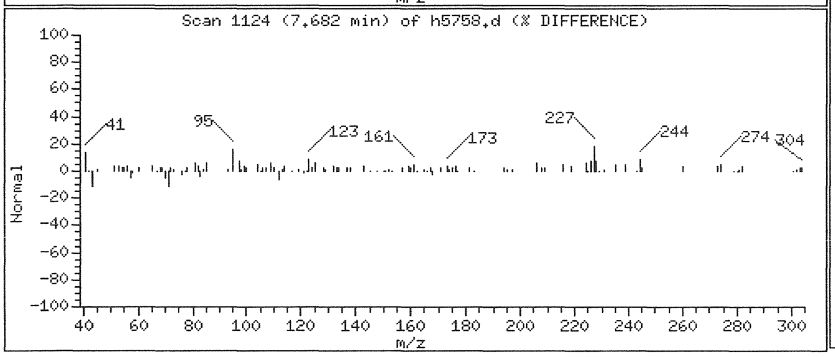
76 bis(2-Ethylhexyl)phthalate

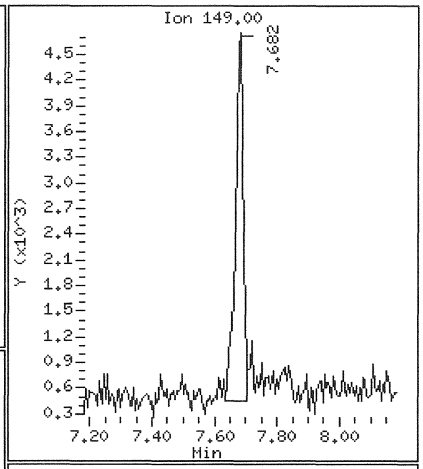
Concentration: 800 ug/Kg

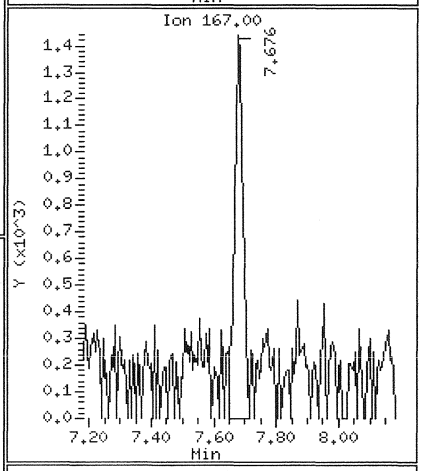


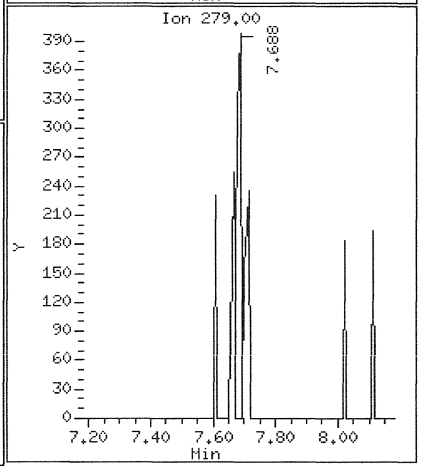



Data File: /var/chem/MSSV4.i/2131023.s.b/h5758.d



Date : 23-OCT-2013 13:28

Client ID: 21310171203

Instrument: MSSV4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0

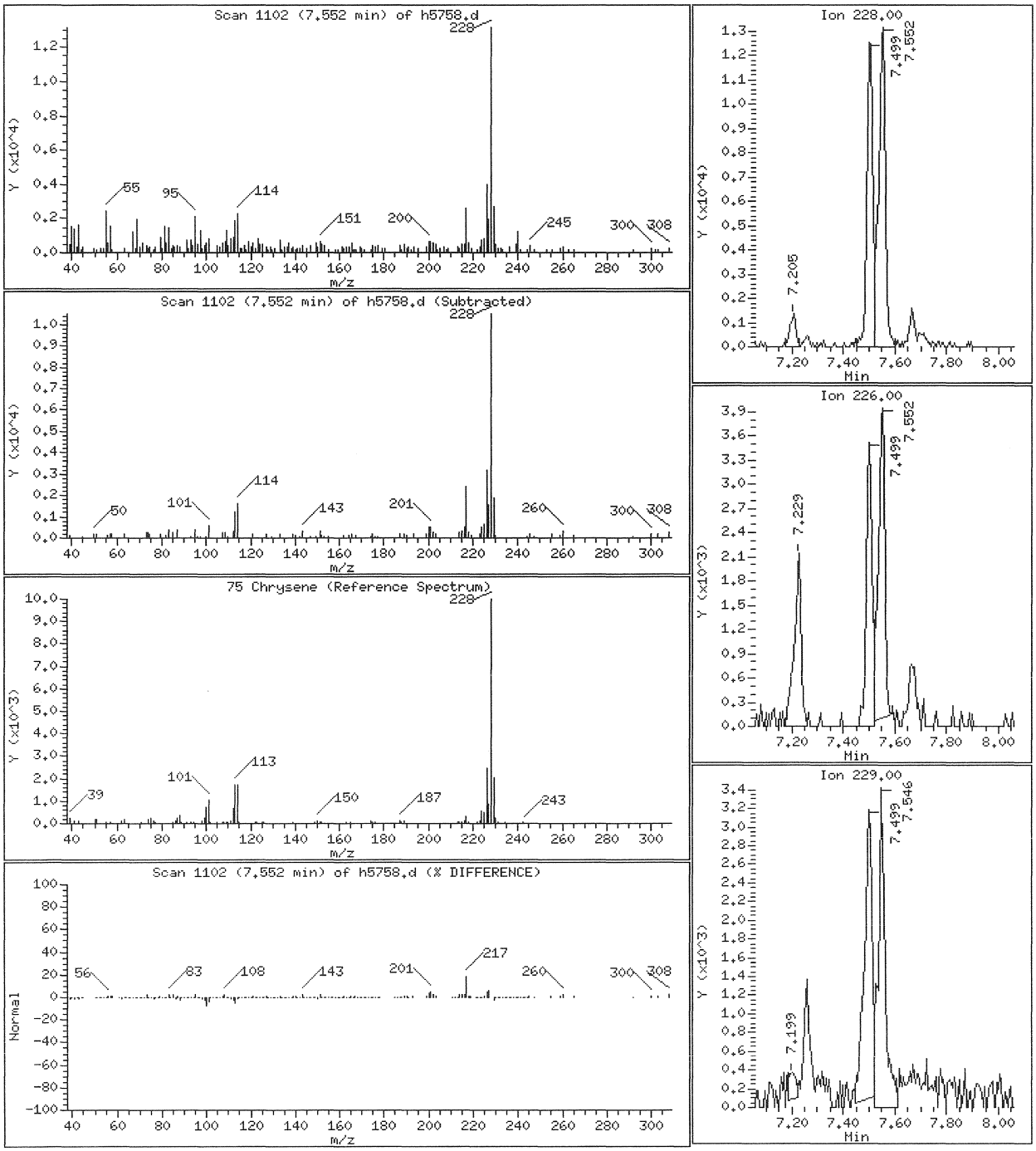
Operator: hcp

Column phase: RTX-5MS-30M

Column diameter: 0.25

75 Chrysene

Concentration: 1550 ug/Kg



Data File: /var/chem/MSSV4.i/2131023.s.b/h5758.d



Date : 23-OCT-2013 13:28

Client ID: 21310171203

Instrument: MSSV4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0

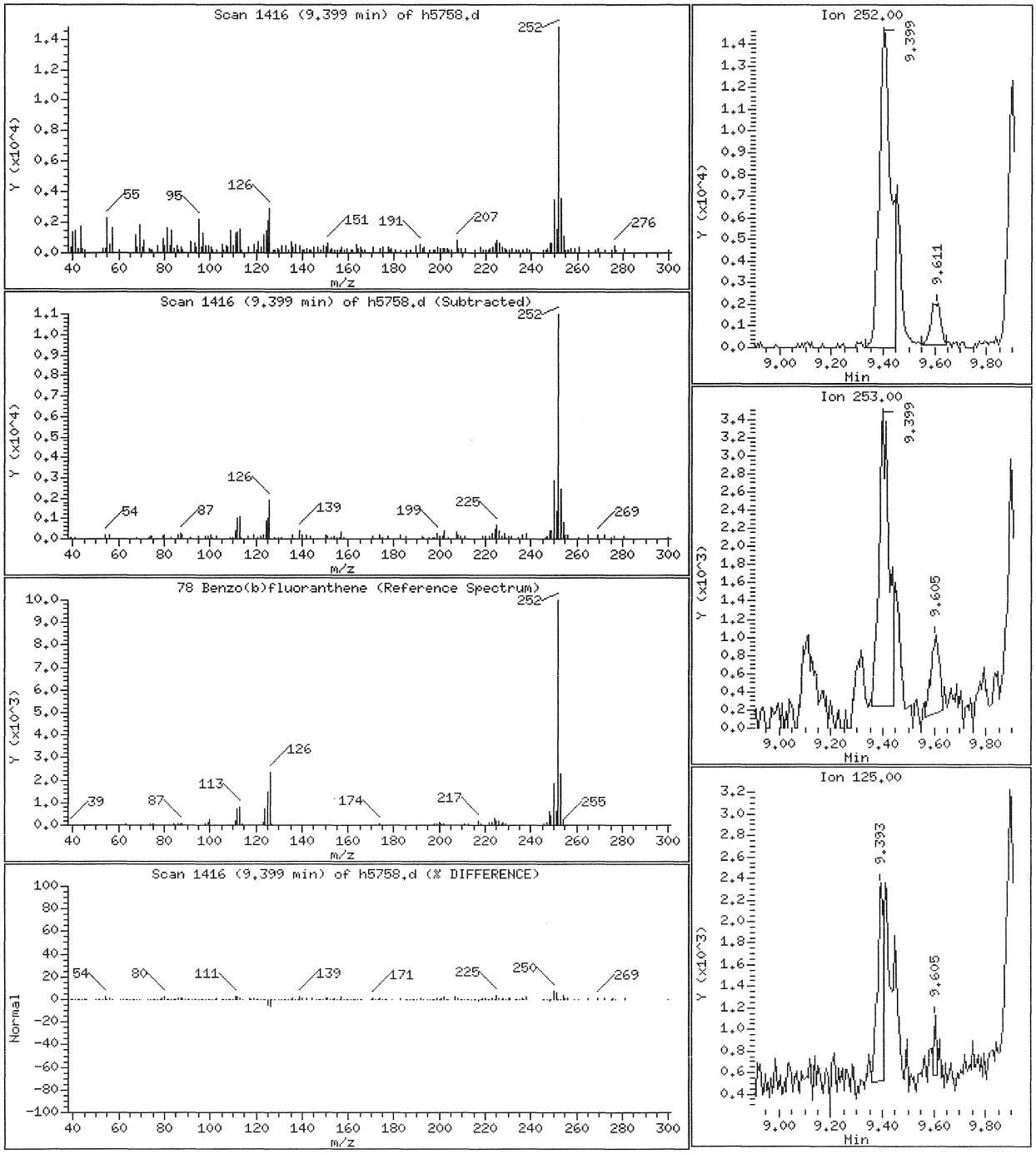
Operator: hcp

Column phase: RTX-5MS-30M

Column diameter: 0.25

78 Benzo(b)fluoranthene

Concentration: 2220 ug/Kg



Data File: /var/chem/MSSV4.i/2131023.s.b/h5758.d

Date : 23-OCT-2013 13:28

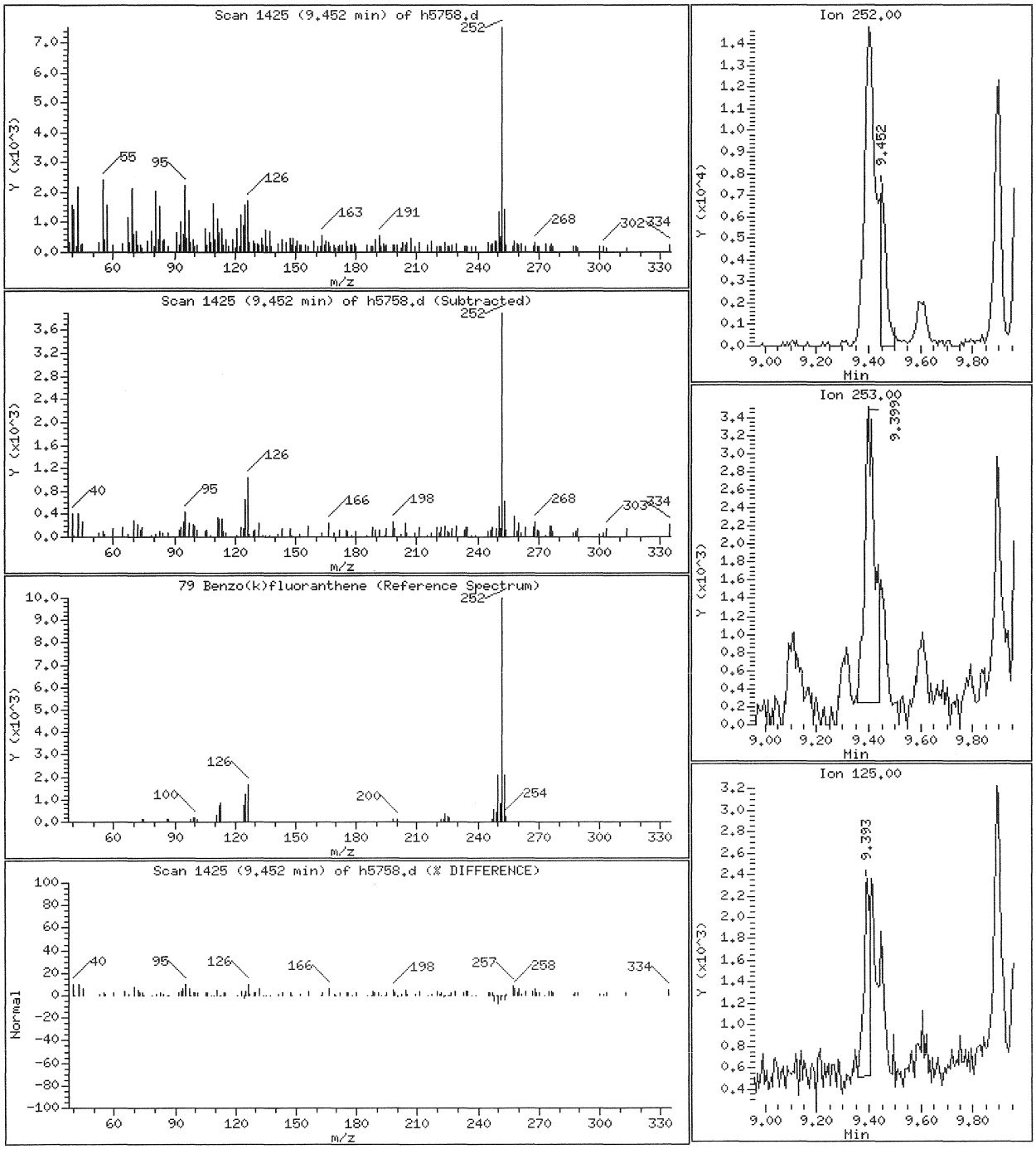
Client ID: 21310171203 Instrument: MSSV4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0 Operator: hcp

Column phase: RTX-5MS-30M Column diameter: 0.25

79 Benzo(k)fluoranthene Concentration: 496 ug/Kg



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Date : 23-OCT-2013 13:28

Client ID: 21310171203

Instrument: MSSV4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0

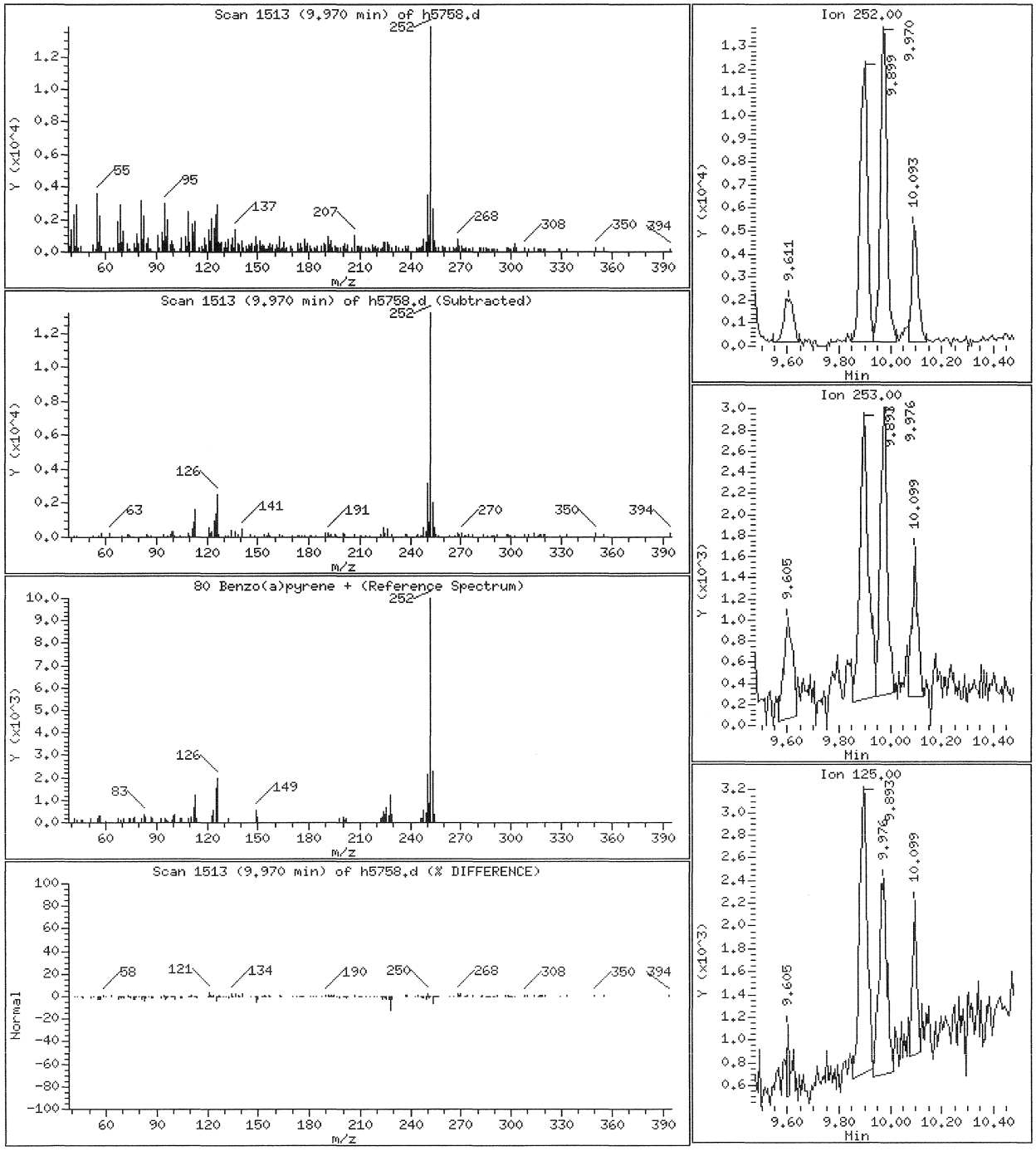
Operator: hcp

Column phase: RTX-5MS-30M

Column diameter: 0.25

80 Benzo(a)pyrene +

Concentration: 1290 ug/Kg



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Date : 23-OCT-2013 13:28

Client ID: 21310171203

Instrument: MSSW4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0

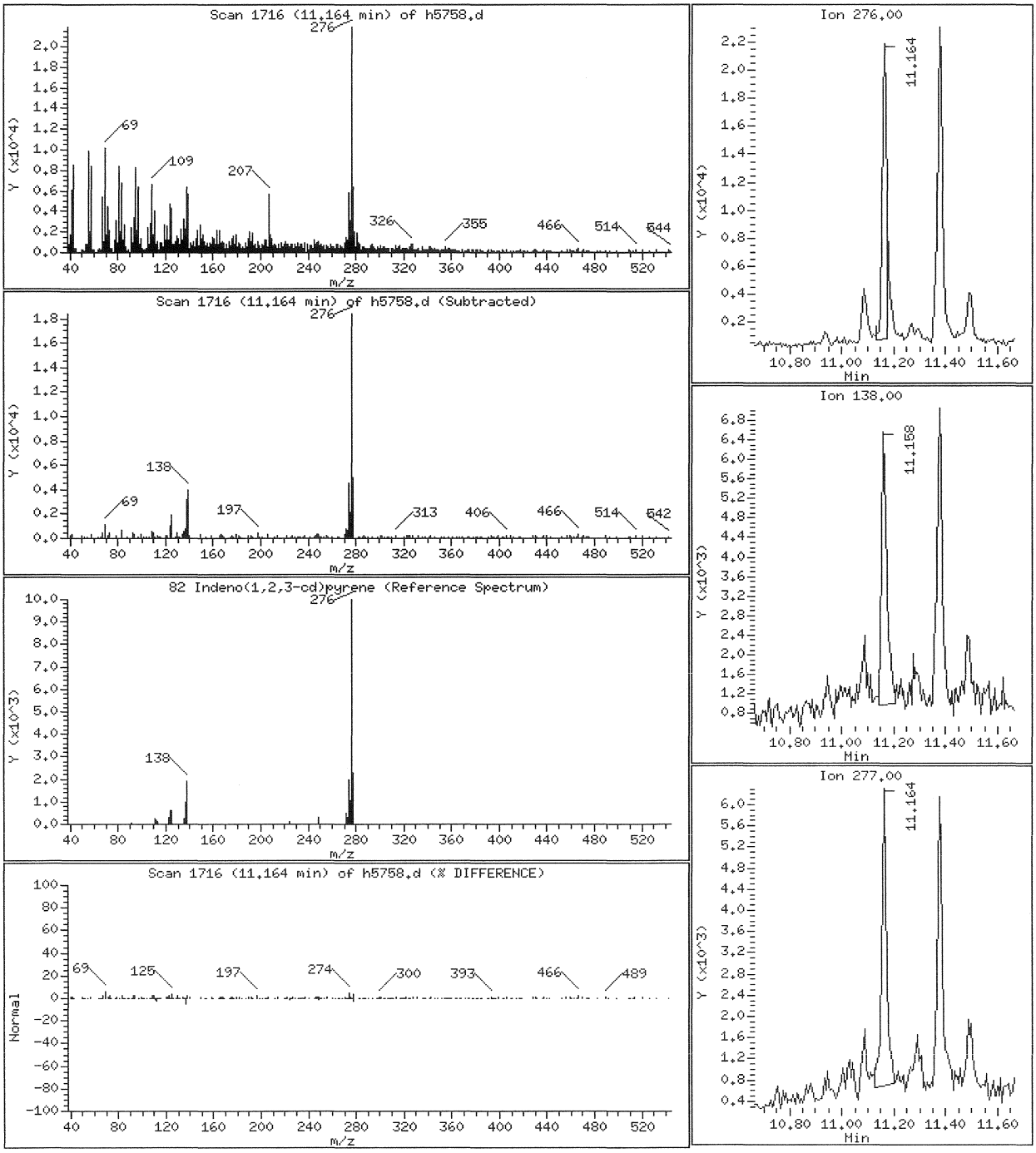
Operator: hcp

Column phase: RTX-5MS-30M

Column diameter: 0.25

82 Indeno(1,2,3-cd)pyrene

Concentration: 1400 ug/Kg



Data File: /var/chem/MSSV4.i/2131023.s.b/h5758.d

Date : 23-OCT-2013 13:28

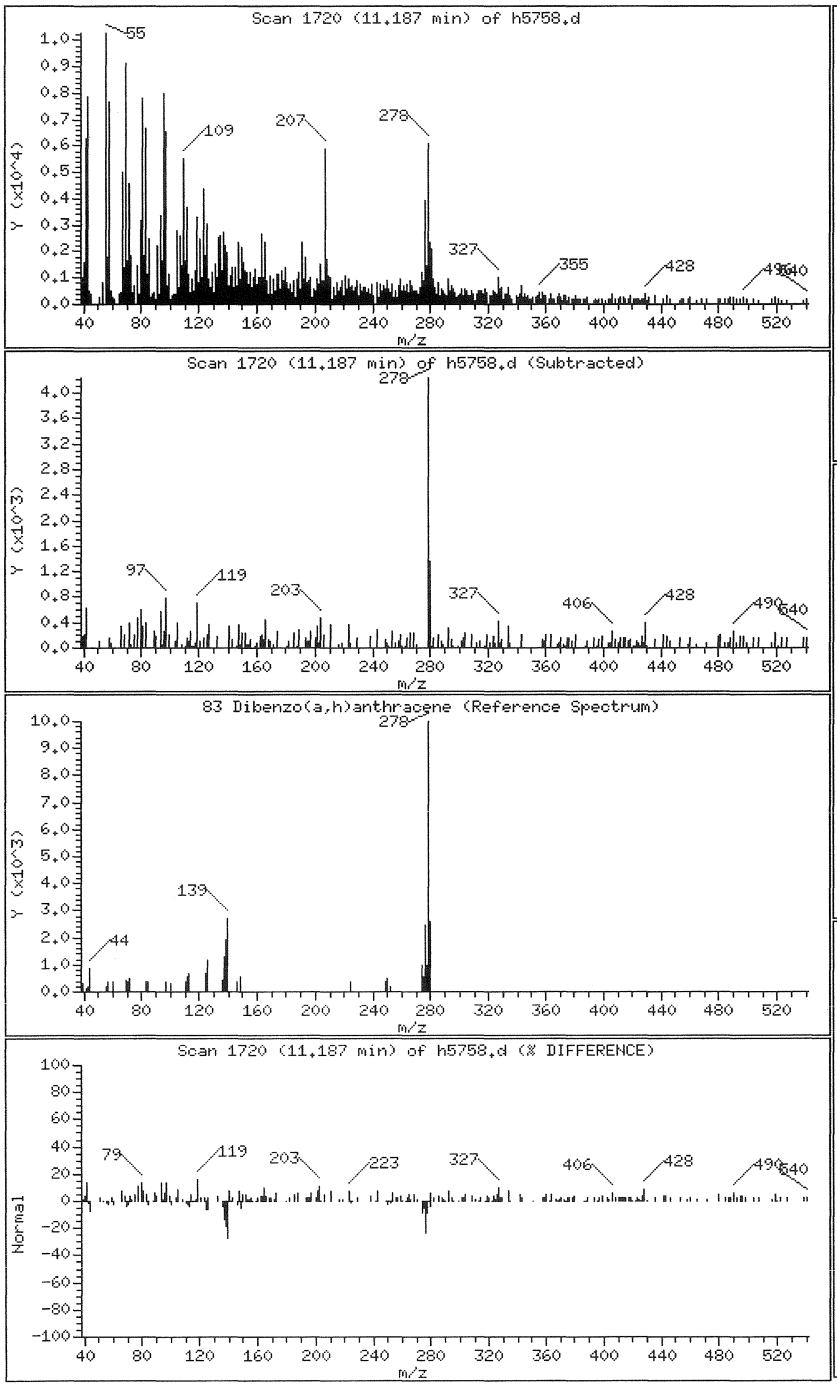
Client ID: 21310171203 Instrument: MSSV4.i

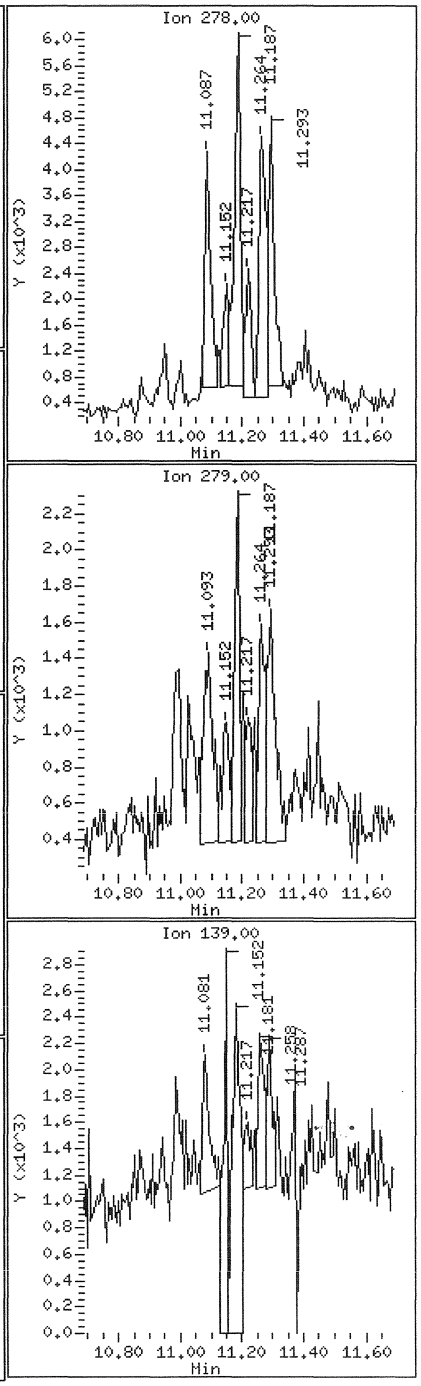
Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0 Operator: hcp

Column phase: RTX-5MS-30M Column diameter: 0.25

83 Dibenzo(a,h)anthracene Concentration: 360 ug/Kg



Data File: /var/chem/MSSV4.i/2131023.s.b/h5758.d



Date : 23-OCT-2013 13:28

Client ID: 21310171203

Instrument: MSSV4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0

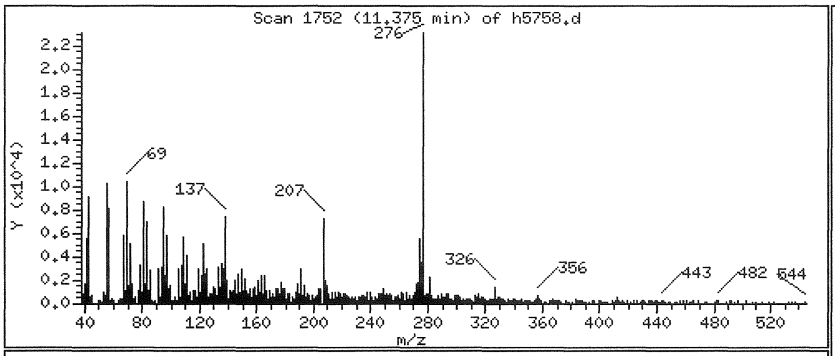
Operator: hcp

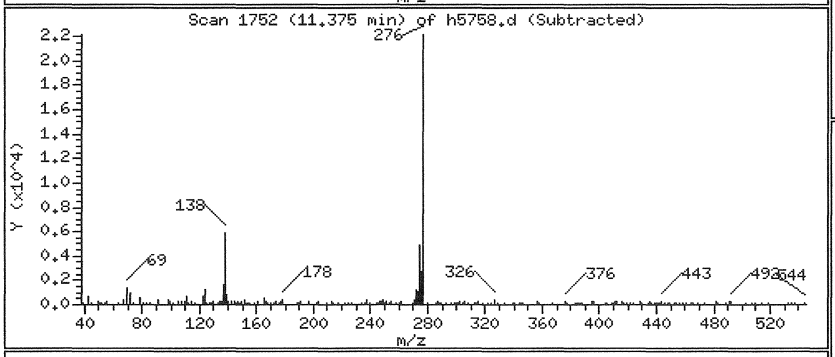
Column phase: RTX-5MS-30M

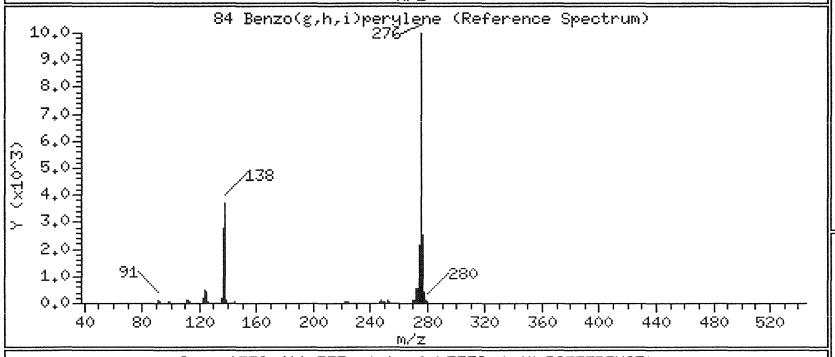
Column diameter: 0.25

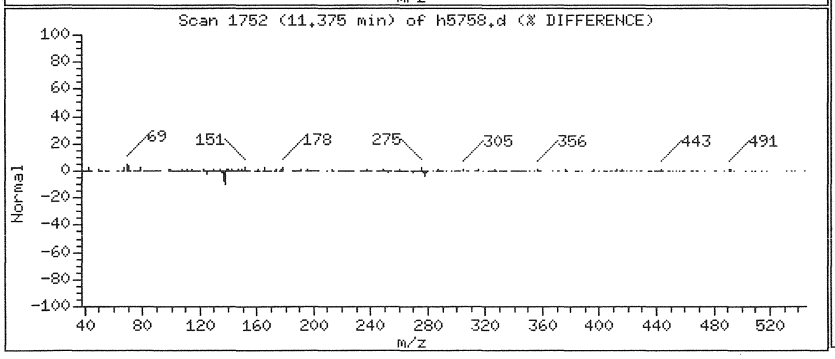
84 Benzo(g,h,i)perylene

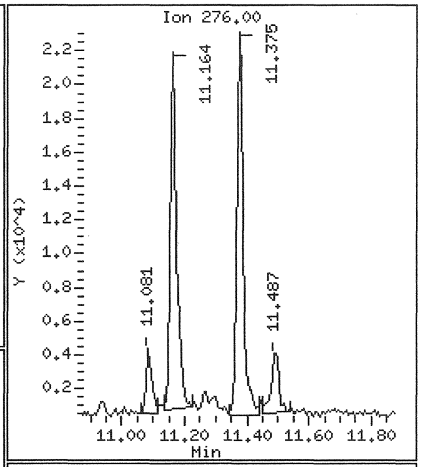
Concentration: 1380 ug/Kg

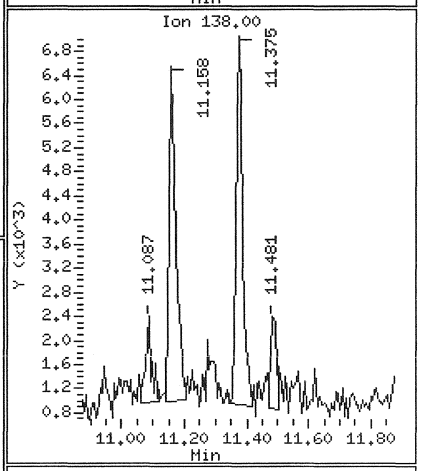


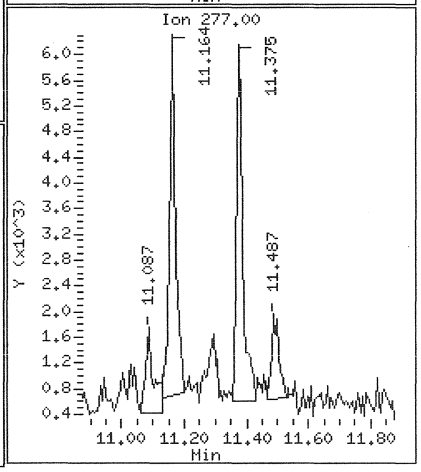



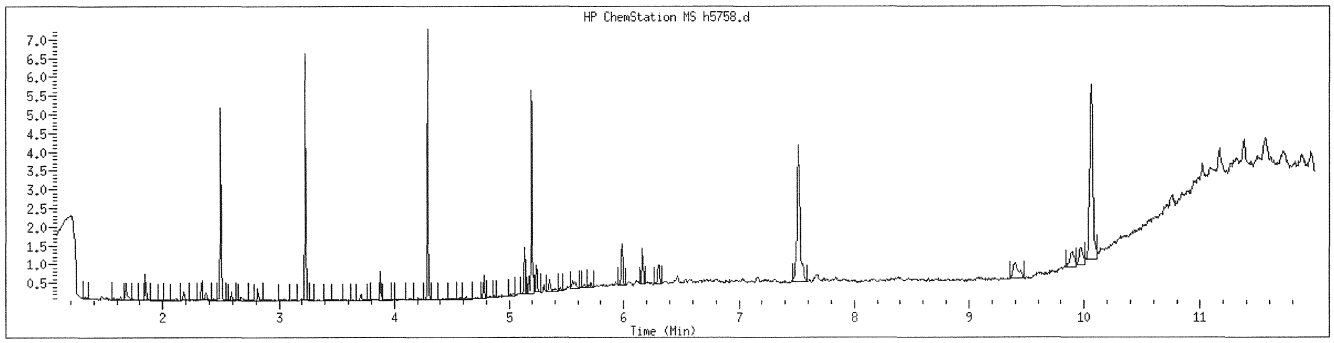



Data file : /var/chem/MSSV4.i/2131023.s.b/h5758.d Page: 1
Report Date: 10/24/2013 08:29

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 21310171203 SampleType : SAMPLE
Injection Date: 10/23/2013 13:28 Instrument : MSSV4.i
Operator : hcp
Sample Info : 21310171203*4847*
Misc Info : 21310171203*MSSV~10023~*101712*30.0-1X10*518149*
Method : /var/chem/MSSV4.i/2131023.s.b/8270D_04.m
Dilution : 10.0
Matrix : SOIL
Integrator : HP RTE Compound Sublist: SA8270




Original Final

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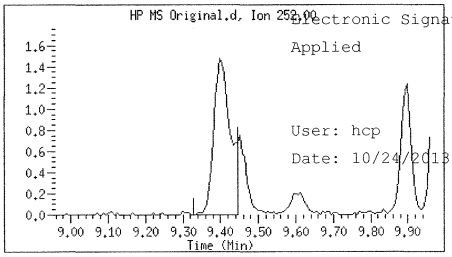
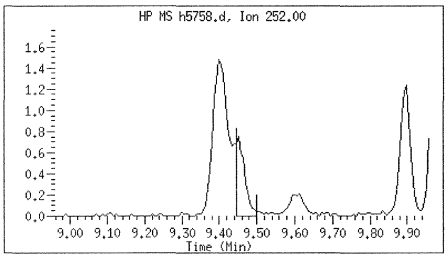
79 Benzo(k)fluoranthene CAS#: 207-08-9 Reason: M3

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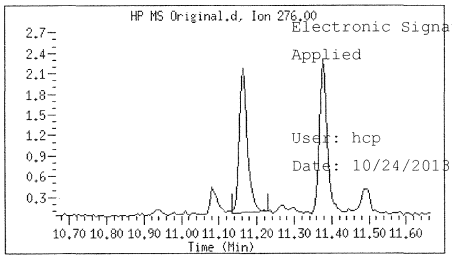
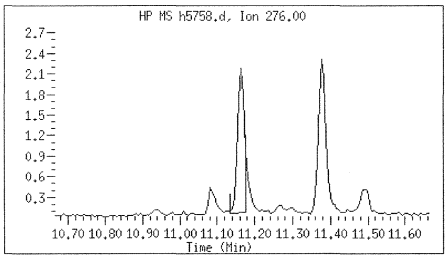
82 Indeno(1,2,3-cd)pyrene CAS#: 193-39-5 Reason: M3

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1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: 10.2 decanted: (Y/N)

GC Column: RTX-5MS-30 ID: .25 (mm)

Concentrated Extract Volume: 1000 ( µL )

Injection Volume: 1.0 ( µL )

GPC Cleanup: (Y/N) N pH:

*CONCENTRATION UNITS: ug/kg*

Sample ID: RS-COMP2-101613

Contract:

Lab File ID: 2131022/h5739

Lab Sample ID: 21310171203

Date Collected: 10/16/13 Time: 1700

Date Received: 10/17/13

Date Extracted: 10/22/13

Date Analyzed: 10/22/13 Time: 1731

Dilution Factor: 1 Analyst: HCP

Prep Method: 3550B

Analytical Method: SW-846 8270D

Instrument ID: MSSV4

Prep Batch: 518149 Analytical Batch: 518302

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 120-82-1 | 1,2,4-Trichlorobenzene | 37.1 | U | 11.7 | 37.1 | 368 |
| 95-50-1 | 1,2-Dichlorobenzene | 37.1 | U | 7.63 | 37.1 | 368 |
| 541-73-1 | 1,3-Dichlorobenzene | 37.1 | U | 14.9 | 37.1 | 368 |
| 106-46-7 | 1,4-Dichlorobenzene | 37.1 | U | 9.82 | 37.1 | 368 |
| 95-95-4 | 2,4,5-Trichlorophenol | 74.3 | U | 11.6 | 74.3 | 368 |
| 88-06-2 | 2,4,6-Trichlorophenol | 186 | U | 12.9 | 186 | 368 |
| 120-83-2 | 2,4-Dichlorophenol | 74.3 | U | 10.6 | 74.3 | 368 |
| 105-67-9 | 2,4-Dimethylphenol | 368 | U | 7.26 | 368 | 368 |
| 51-28-5 | 2,4-Dinitrophenol | 368 | U | 25.1 | 368 | 1840 |
| 121-14-2 | 2,4-Dinitrotoluene | 74.3 | U | 7.49 | 74.3 | 368 |
| 606-20-2 | 2,6-Dinitrotoluene | 37.1 | U | 13.7 | 37.1 | 368 |
| 91-58-7 | 2-Chloronaphthalene | 37.1 | U | 11.7 | 37.1 | 368 |
| 95-57-8 | 2-Chlorophenol | 37.1 | U | 8.06 | 37.1 | 368 |
| 91-57-6 | 2-Methylnaphthalene | 15.9 | J | 5.30 | 37.1 | 368 |
| 88-74-4 | 2-Nitroaniline | 74.3 | U | 4.67 | 74.3 | 1840 |
| 88-75-5 | 2-Nitrophenol | 37.1 | U | 13.1 | 37.1 | 368 |
| 91-94-1 | 3,3'-Dichlorobenzidine | 371 | U | 35.2 | 371 | 735 |
| 99-09-2 | 3-Nitroaniline | 74.3 | U | 5.00 | 74.3 | 1840 |
| 534-52-1 | 2-Methyl-4,6-dinitrophenol | 368 | U | 19.8 | 368 | 1840 |
| 101-55-3 | 4-Bromophenyl-phenylether | 37.1 | U | 11.7 | 37.1 | 368 |
| 59-50-7 | 4-Chloro-3-methylphenol | 74.3 | U | 8.27 | 74.3 | 368 |
| 106-47-8 | 4-Chloroaniline | 37.1 | U | 7.06 | 37.1 | 368 |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 37.1 | U | 8.18 | 37.1 | 368 |
| 100-01-6 | 4-Nitroaniline | 371 | U | 4.73 | 371 | 1840 |
| 100-02-7 | 4-Nitrophenol | 368 | U | 23.4 | 368 | 1840 |
| 83-32-9 | Acenaphthene | 87.3 | J | 11.3 | 37.1 | 368 |
| 208-96-8 | Acenaphthylene | 123 | J | 7.52 | 37.1 | 368 |
| 120-12-7 | Anthracene | 393 | | 7.56 | 37.1 | 368 |
| 56-55-3 | Benzo(a)anthracene | 1470 | | 6.86 | 37.1 | 368 |

FORM I SV-1

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: 10.2 decanted: (Y/N)

GC Column: RTX-5MS-30 ID: .25 (mm)

Concentrated Extract Volume: 1000 ( µL )

Injection Volume: 1.0 ( µL )

GPC Cleanup: (Y/N) N pH:

*CONCENTRATION UNITS: ug/kg*

Sample ID: RS-COMP2-101613

Contract:

Lab File ID: 2131022/h5739

Lab Sample ID: 21310171203

Date Collected: 10/16/13 Time: 1700

Date Received: 10/17/13

Date Extracted: 10/22/13

Date Analyzed: 10/22/13 Time: 1731

Dilution Factor: 1 Analyst: HCP

Prep Method: 3550B

Analytical Method: SW-846 8270D

Instrument ID: MSSV4

Prep Batch: 518149 Analytical Batch: 518302

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 111-91-1 | Bis(2-Chloroethoxy)methane | 37.1 | U | 6.42 | 37.1 | 368 |
| 111-44-4 | Bis(2-Chloroethyl)ether | 37.1 | U | 14.3 | 37.1 | 368 |
| 117-81-7 | bis(2-ethylhexyl)phthalate | 665 | | 5.21 | 37.1 | 368 |
| 85-68-7 | Butylbenzylphthalate | 18.6 | U | 7.34 | 18.6 | 368 |
| 86-74-8 | Carbazole | 275 | J | 7.11 | 37.1 | 368 |
| 218-01-9 | Chrysene | 1600 | | 7.96 | 37.1 | 368 |
| 84-74-2 | Di-n-butylphthalate | 18.6 | U | 7.11 | 18.6 | 368 |
| 117-84-0 | Di-n-octylphthalate | 18.6 | U | 4.87 | 18.6 | 368 |
| 132-64-9 | Dibenzofuran | 51.6 | J | 7.00 | 37.1 | 368 |
| 84-66-2 | Diethylphthalate | 37.1 | U | 13.6 | 37.1 | 368 |
| 131-11-3 | Dimethyl-phthalate | 18.6 | U | 5.73 | 18.6 | 368 |
| 206-44-0 | Fluoranthene | 3300 | | 5.98 | 18.6 | 368 |
| 86-73-7 | Fluorene | 116 | J | 6.63 | 37.1 | 368 |
| 118-74-1 | Hexachlorobenzene | 74.3 | U | 14.3 | 74.3 | 368 |
| 87-68-3 | Hexachlorobutadiene | 37.1 | U | 9.74 | 37.1 | 368 |
| 77-47-4 | Hexachlorocyclopentadiene | 186 | U | 78.0 | 186 | 368 |
| 67-72-1 | Hexachloroethane | 37.1 | U | 17.5 | 37.1 | 368 |
| 78-59-1 | Isophorone | 37.1 | U | 6.54 | 37.1 | 368 |
| 91-20-3 | Naphthalene | 37.1 | U | 11.5 | 37.1 | 368 |
| 98-95-3 | Nitrobenzene | 37.1 | U | 19.2 | 37.1 | 368 |
| 87-86-5 | Pentachlorophenol | 371 | U | 8.23 | 371 | 1840 |
| 85-01-8 | Phenanthrene | 1210 | | 8.44 | 37.1 | 368 |
| 108-95-2 | Phenol | 37.1 | U | 10.1 | 37.1 | 368 |
| 129-00-0 | Pyrene | 1450 | | 5.16 | 37.1 | 368 |
| 110-86-1 | Pyridine | 186 | U | 26.0 | 186 | 368 |
| 1319-77-3M | m,p-Cresol | 186 | U | 13.8 | 186 | 368 |
| 621-64-7 | N-Nitroso-di-n-propylamine | 37.1 | U | 16.0 | 37.1 | 368 |
| 62-75-9 | N-Nitrosodimethylamine | 74.3 | U | 12.9 | 74.3 | 368 |
| 86-30-6 | N-Nitrosodiphenylamine | 37.1 | U | 7.77 | 37.1 | 368 |

FORM I SV-1

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: 10.2 decanted: (Y/N)

GC Column: RTX-5MS-30 ID: .25 (mm)

Concentrated Extract Volume: 1000 ( µL )

Injection Volume: 1.0 ( µL )

GPC Cleanup: (Y/N) N pH:

*CONCENTRATION UNITS: ug/kg*

Sample ID: RS-COMP2-101613

Contract:

Lab File ID: 2131022/h5739

Lab Sample ID: 21310171203

Date Collected: 10/16/13 Time: 1700

Date Received: 10/17/13

Date Extracted: 10/22/13

Date Analyzed: 10/22/13 Time: 1731

Dilution Factor: 1 Analyst: HCP

Prep Method: 3550B

Analytical Method: SW-846 8270D

Instrument ID: MSSV4

Prep Batch: 518149 Analytical Batch: 518302

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 95-48-7 | o-Cresol | 37.1 | U | 11.4 | 37.1 | 368 |

FORM I SV-1

GCAL, Inc.

BNA QUANT AND RATIO REPORT

Data file : /var/chem/MSSV4.i/2131022.s.b/h5739.d
Lab Smp Id: 21310171203 Client Smp ID: 21310171203
Inj Date : 22-OCT-2013 17:31
Operator : hcp Inst ID: MSSV4.i
Smp Info : 21310171203*4847*
Misc Info : 21310171203*MSSV~10019~*101712*30.0-1*518149*
Comment :
Method : /var/chem/MSSV4.i/2131022.s.b/8270D_04.m
Meth Date : 22-Oct-2013 14:01 kcb Quant Type: ISTD
Cal Date : 09-JUL-2013 00:02 Cal File: h2759x.d
Als bottle: 27
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SA8270.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula:
Amt * DF * (Uf * Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | ng unit correction factor |
| Vt | 1000.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppm) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|---|
| $ 3 2-Fluorophenol | 112 | 1.858 | 1.852 | (0.740) | 152337 | 82.3236 | 2740 |
| $ 4 Phenol-d5 | 99 | 2.347 | 2.335 | (0.934) | 167745 | 83.9403 | 2800 |
| * 10 1,4-Dichlorobenzene-d4 | 152 | 2.511 | 2.511 | (1.000) | 57180 | 40.0000 | |
| $ 19 Nitrobenzene-d5 | 82 | 2.823 | 2.823 | (0.871) | 70930 | 44.3138 | 1480 |
| 25 Benzoic Acid | 122 | 3.141 | 3.146 | (0.969) | 5032 | 5.26738 | 176 |
| * 28 Naphthalene-d8 | 136 | 3.241 | 3.241 | (1.000) | 192932 | 40.0000 | |
| 33 2-Methylnaphthalene | 142 | 3.670 | 3.664 | (1.132) | 1314 | 0.42829 | 14.3 |
| 145 1-Methylnapthalene | 142 | 3.729 | 3.723 | (1.151) | 1173 | 0.39831 | 13.3 |
| $ 37 2-Fluorobiphenyl | 172 | 3.894 | 3.888 | (0.906) | 156974 | 45.4902 | 1520 |
| 42 Acenaphthylene | 152 | 4.217 | 4.211 | (0.981) | 14854 | 3.30113 | 110 |
| * 44 Acenaphthene-d10 | 164 | 4.299 | 4.299 | (1.000) | 102808 | 40.0000 | |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppm) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|---|---|
| | 45 Acenaphthene + | 153 | 4.323 | 4.317 | (1.005) | 6869 | 2.35234 | 78.4 |
| | 47 Dibenzofuran | 168 | 4.429 | 4.423 | (1.030) | 5568 | 1.38895 | 46.3 |
| | 51 Fluorene | 166 | 4.635 | 4.635 | (1.078) | 9944 | 3.11455 | 104 |
| $ | 57 2,4,6-Tribromophenol | 332 | 4.794 | 4.782 | (1.115) | 53766 | 99.8386 | 3330 |
| * | 61 Phenanthrene-d10 | 188 | 5.211 | 5.205 | (1.000) | 174886 | 40.0000 | |
| | 62 Phenanthrene | 178 | 5.223 | 5.217 | (1.002) | 156520 | 32.6308 | 1090 |
| | 63 Anthracene | 178 | 5.258 | 5.252 | (1.009) | 50703 | 10.6047 | 353 |
| | 64 Carbazole | 167 | 5.364 | 5.358 | (1.029) | 32715 | 7.40483 | 247 |
| | 67 Fluoranthene + | 202 | 6.005 | 5.993 | (1.152) | 456778 | 88.6900 | 2960 |
| | 69 Pyrene | 202 | 6.188 | 6.176 | (0.818) | 398884 | 38.9926 | 1300 |
| $ | 70 Terphenyl-d14 | 244 | 6.329 | 6.317 | (0.837) | 196598 | 29.2633 | 975 |
| | 72 Benzo(a)anthracene | 228 | 7.552 | 7.517 | (0.998) | 356152 | 39.5893 | 1320(H) |
| * | 74 Chrysene-d12 | 240 | 7.564 | 7.529 | (1.000) | 335962 | 40.0000 | (H) |
| | 76 bis(2-Ethylhexyl)phthalate | 149 | 7.723 | 7.693 | (1.021) | 98892 | 17.8968 | 597(H) |
| | 75 Chrysene | 228 | 7.599 | 7.564 | (1.005) | 396957 | 43.3247 | 1440(H) |
| | 78 Benzo(b)fluoranthene | 252 | 9.511 | 9.411 | (0.938) | 778187 | 53.0112 | 1770(M2H) |
| | 79 Benzo(k)fluoranthene | 252 | 9.534 | 9.464 | (0.940) | 397958 | 22.9779 | 766(M2H) |
| | 80 Benzo(a)pyrene + | 252 | 9.981 | 9.981 | (0.984) | 452563 | 30.8339 | 1030(H) |
| * | 81 Perylene-d12 | 264 | 10.140 | 10.070 | (1.000) | 592116 | 40.0000 | (H) |
| | 82 Indeno(1,2,3-cd)pyrene | 276 | 11.234 | 11.169 | (1.108) | 452045 | 33.6182 | 1120(H) |
| | 84 Benzo(g,h,i)perylene | 276 | 11.464 | 11.381 | (1.131) | 380534 | 21.6959 | 723(H) |

QC Flag Legend

M2- Compound response manually integrated because
Target system integrated incorrectly.
H - Operator selected an alternate compound hit.

Data File: /var/chem/MSSV4.i/2131022.s.b/h5739.d

Page 1

Date : 22-OCT-2013 17:31

Client ID: 21310171203

Instrument: MSSV4.i

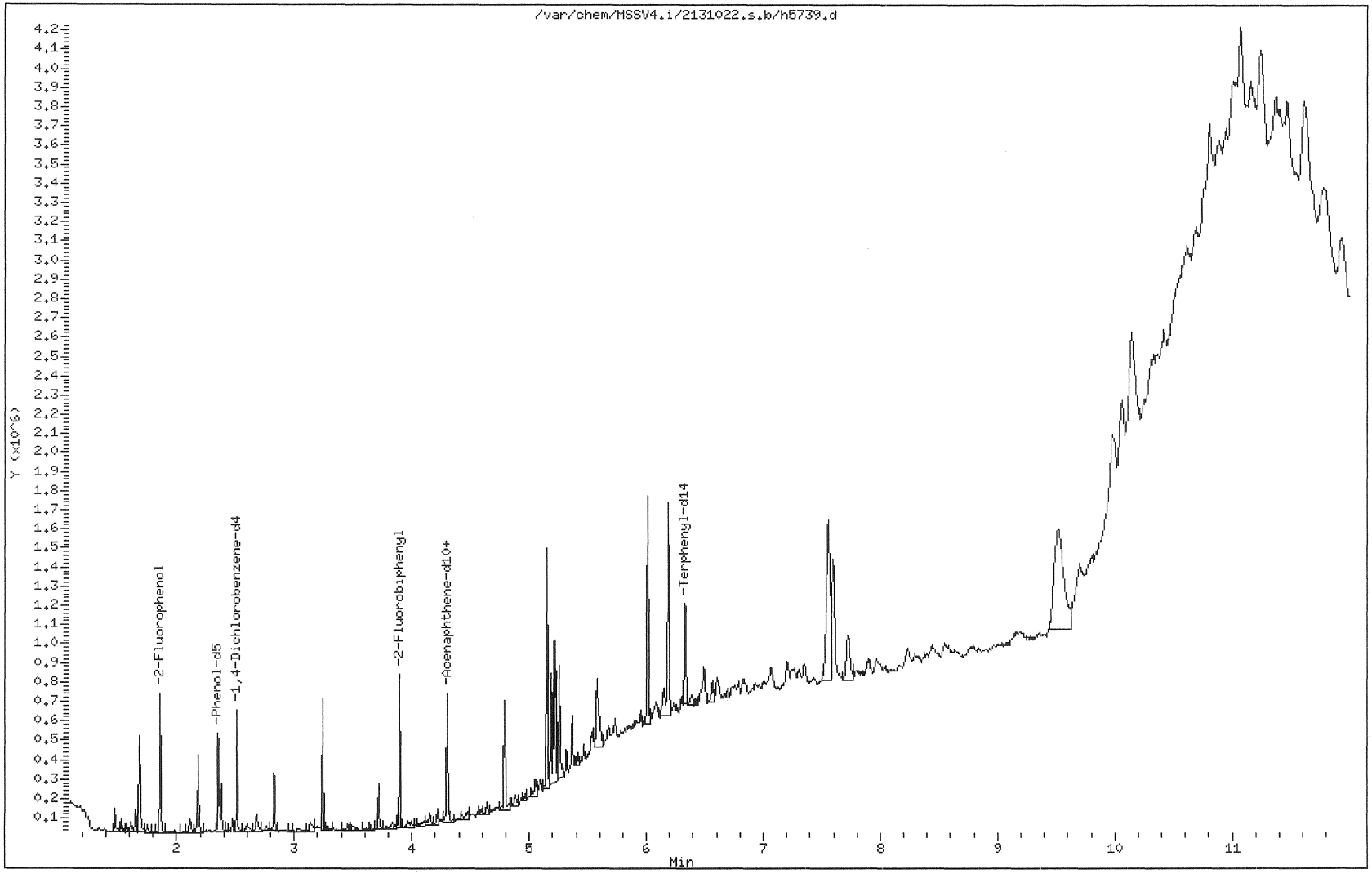
Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0

Operator: hcp

Column phase: RTX-5MS-30M

Column diameter: 0.25




21310171 2 363

Data File: /var/chem/MSSV4.i/2131022.s.b/h5739.d



Date : 22-OCT-2013 17:31

Client ID: 21310171203

Instrument: MSSV4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0

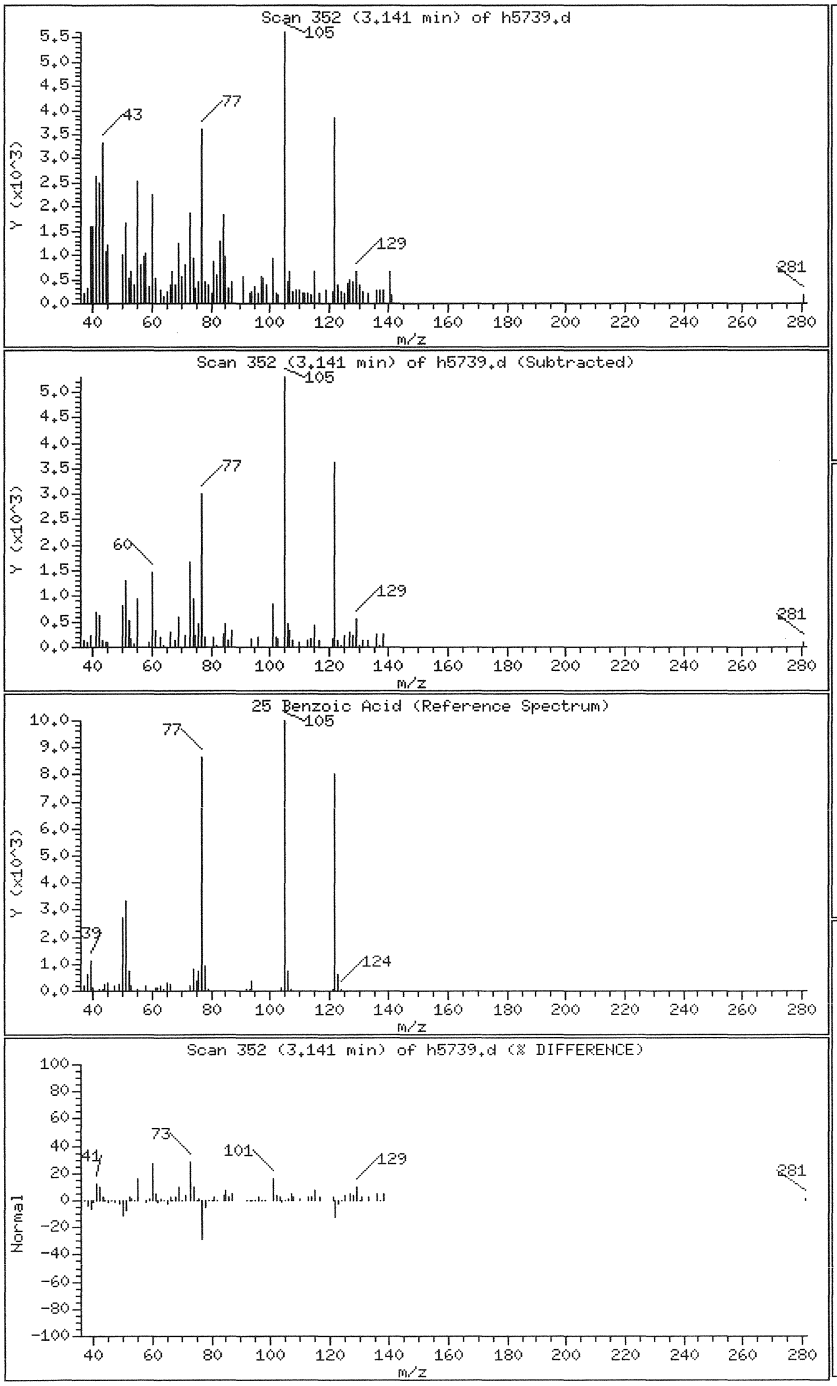
Operator: hcp

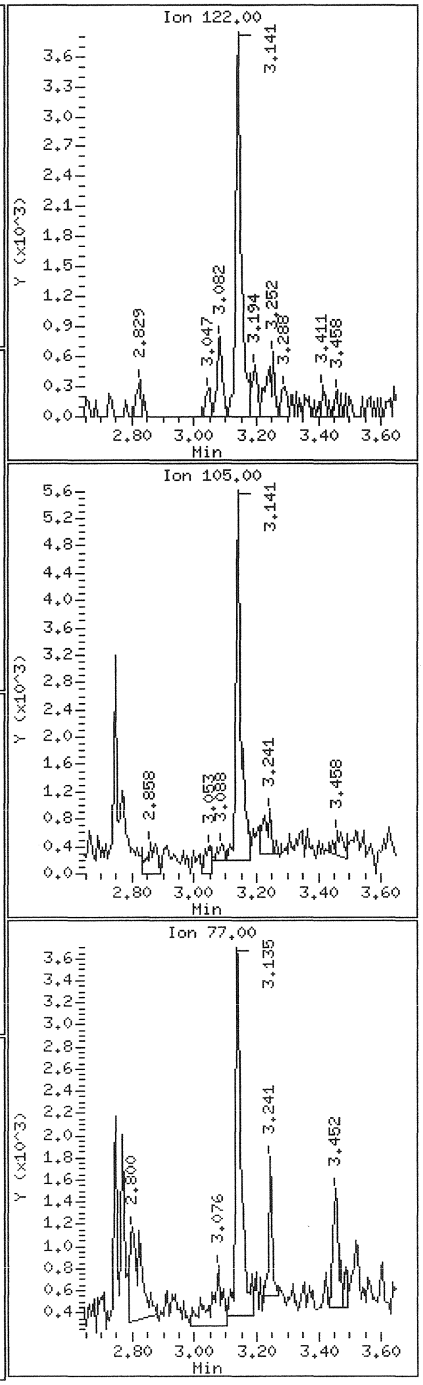
Column phase: RTX-5MS-30M

Column diameter: 0.25

25 Benzoic Acid

Concentration: 176 ug/Kg



Data File: /var/chem/MSSV4.i/2131022.s.b/h5739.d



Date : 22-OCT-2013 17:31

Client ID: 21310171203

Instrument: MSSV4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0

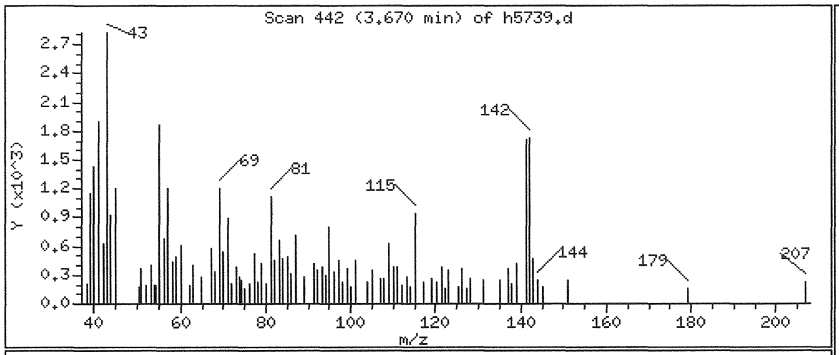
Operator: hcp

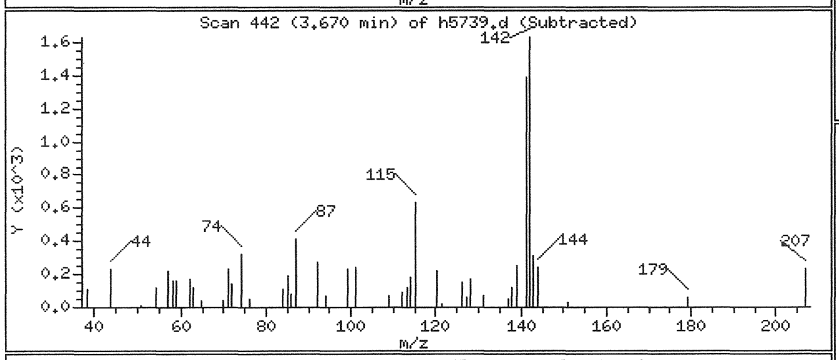
Column phase: RTX-5MS-30M

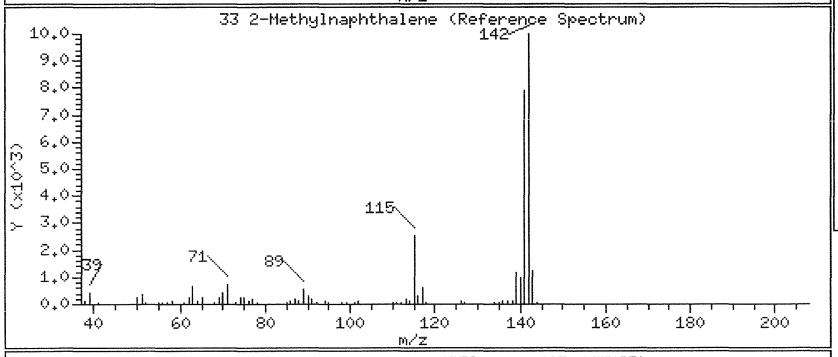
Column diameter: 0.25

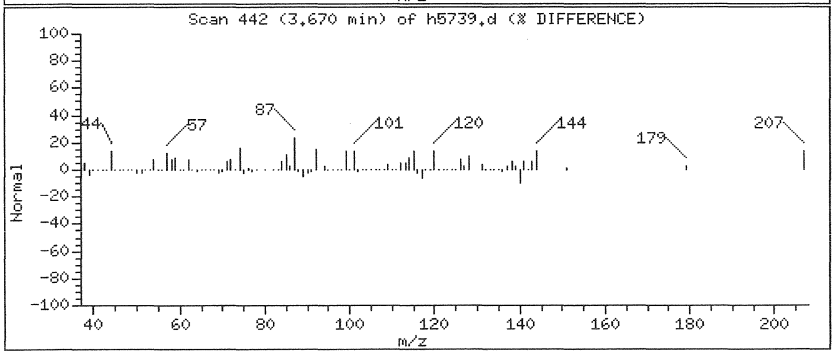
33 2-Methylnaphthalene

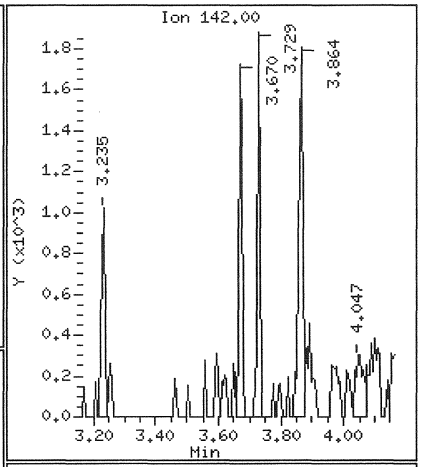
Concentration: 14.3 ug/Kg

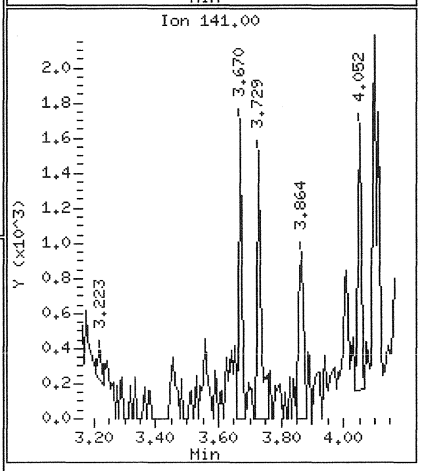


Data File: /var/chem/MSSV4.i/2131022.s.b/h5739.d



Date : 22-OCT-2013 17:31

Client ID: 21310171203

Instrument: MSSV4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0

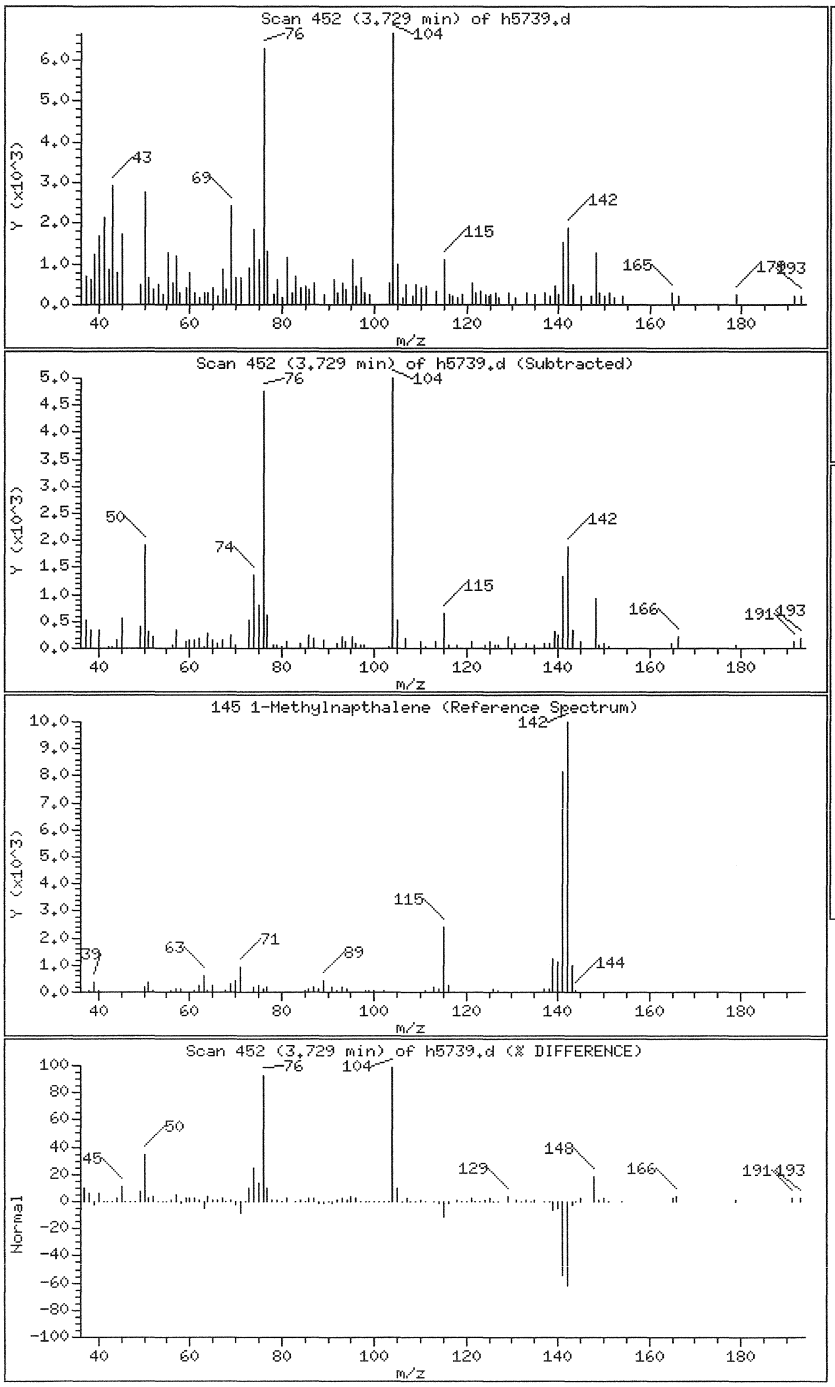
Operator: hcp

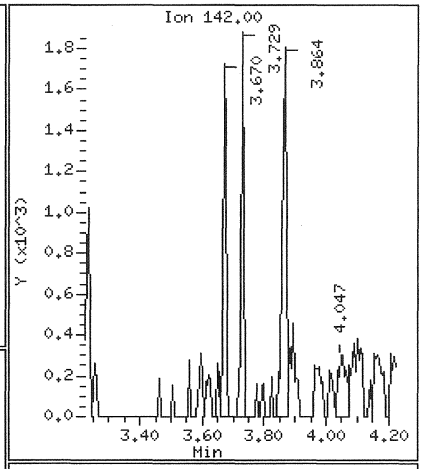
Column phase: RTX-5MS-30M

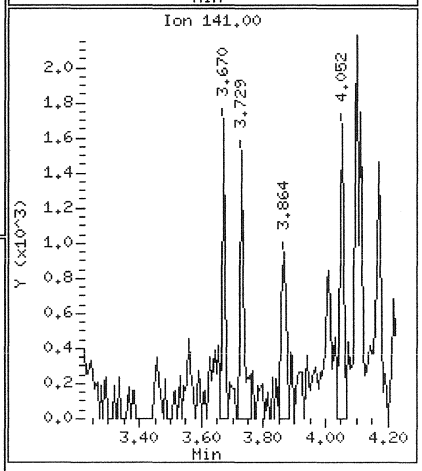
Column diameter: 0.25

145 1-Methylnapthalene

Concentration: 13.3 ug/Kg



Data File: /var/chem/MSSV4.i/2131022.s.b/h5739.d



Date : 22-OCT-2013 17:31

Client ID: 21310171203

Instrument: MSSV4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0

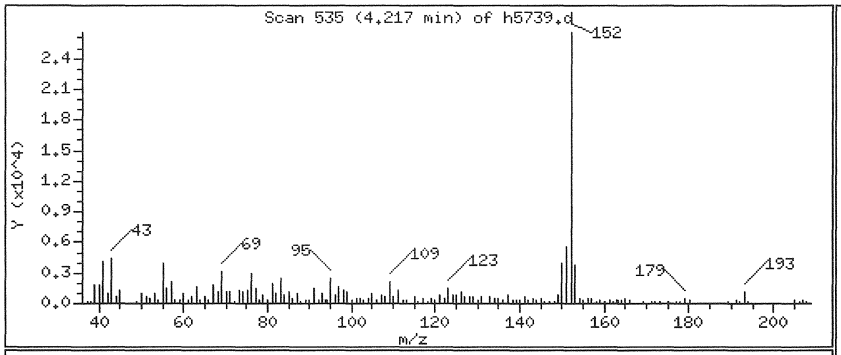
Operator: hcp

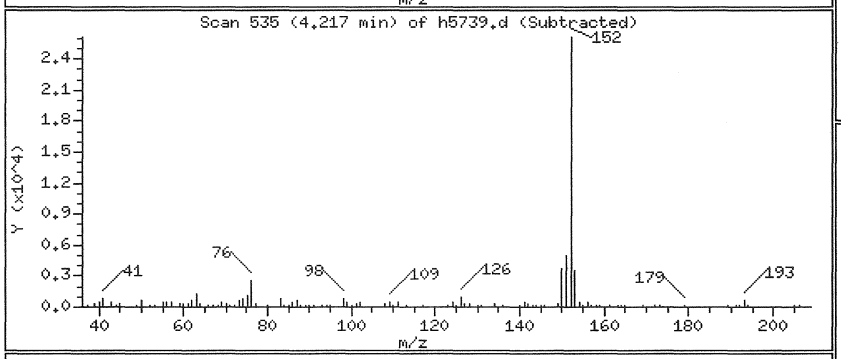
Column phase: RTX-5MS-30M

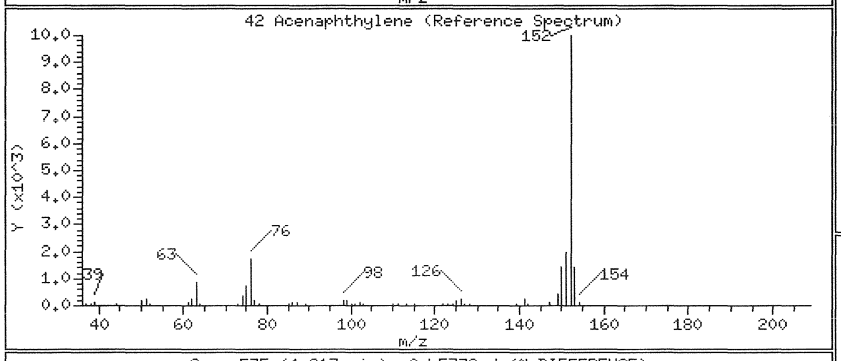
Column diameter: 0.25

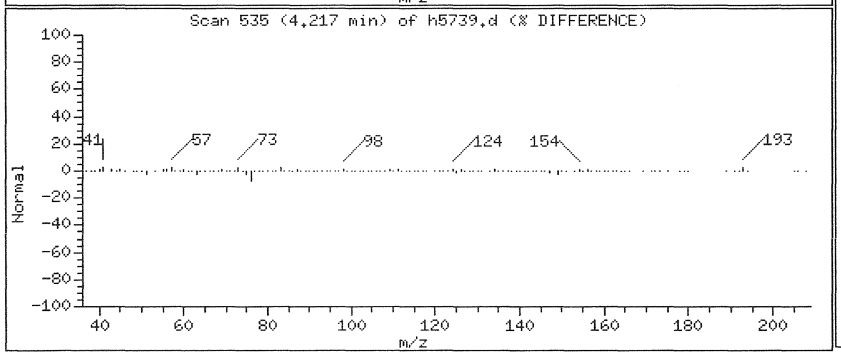
42 Acenaphthylene

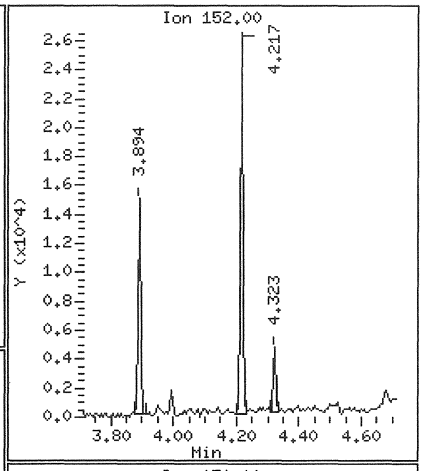
Concentration: 110 ug/Kg

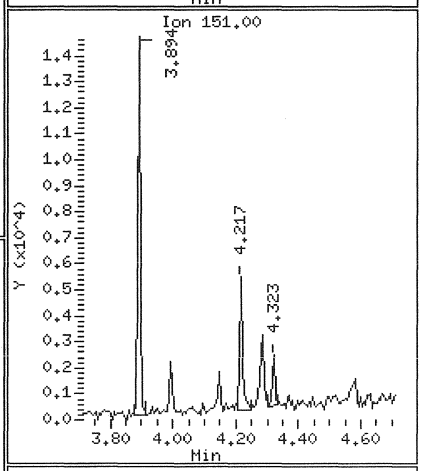


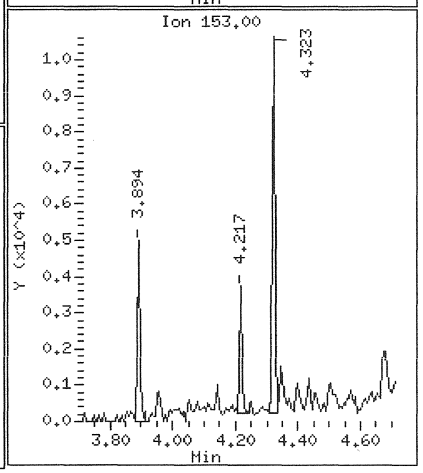



Data File: /var/chem/MSSV4.i/2131022.s.b/h5739.d



Date : 22-OCT-2013 17:31

Client ID: 21310171203

Instrument: MSSV4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0

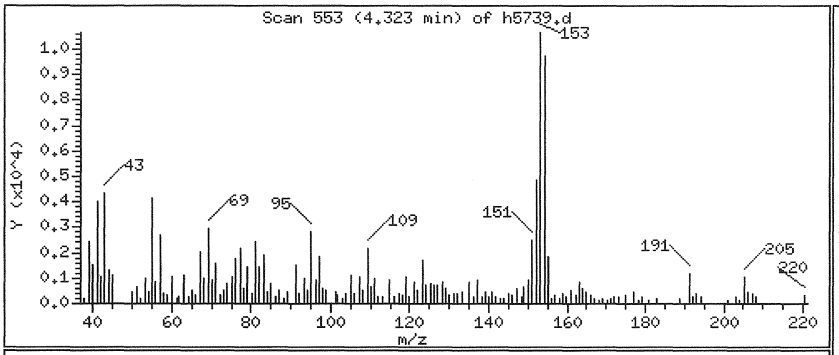
Operator: hcp

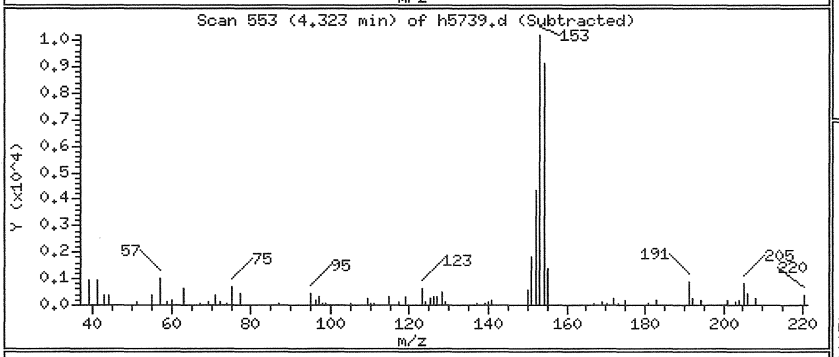
Column phase: RTX-5MS-30M

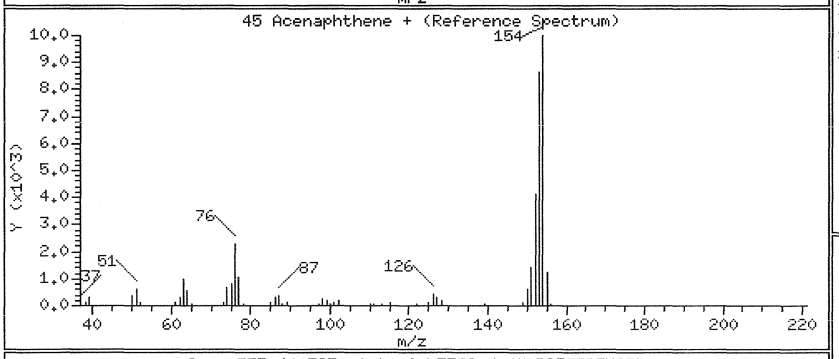
Column diameter: 0.25

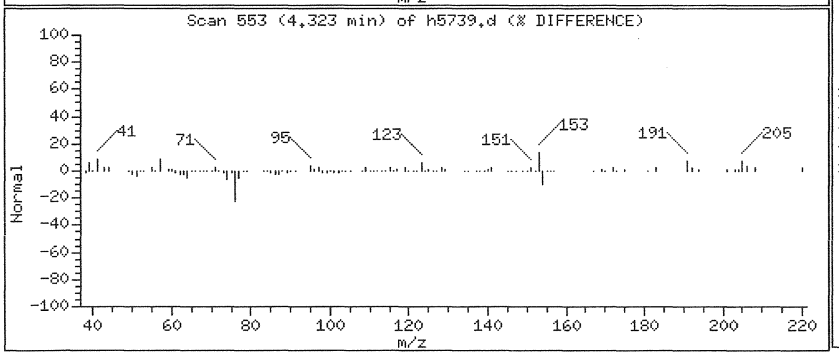
45 Acenaphthene +

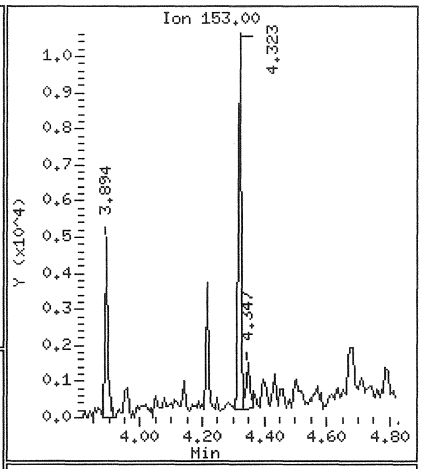
Concentration: 78.4 ug/Kg

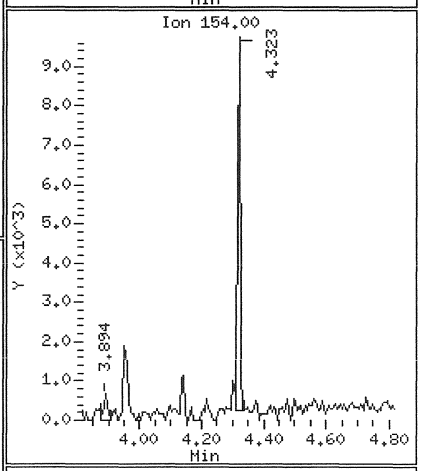


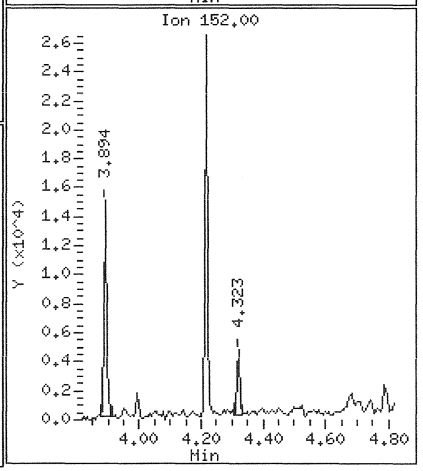



Data File: /var/chem/MSSV4.i/2131022.s.b/h5739.d

Date : 22-OCT-2013 17:31

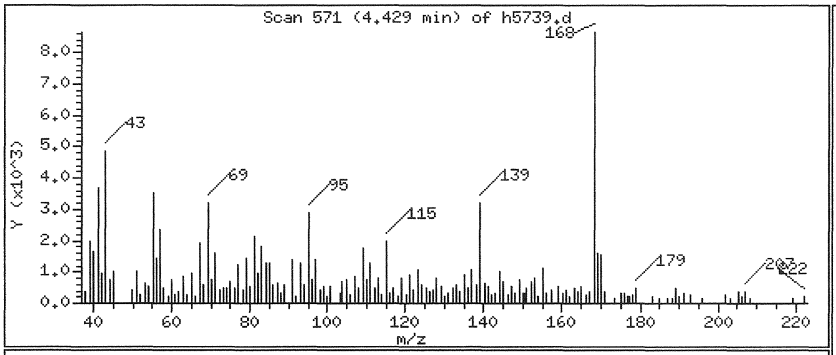
Client ID: 21310171203 Instrument: MSSV4.i

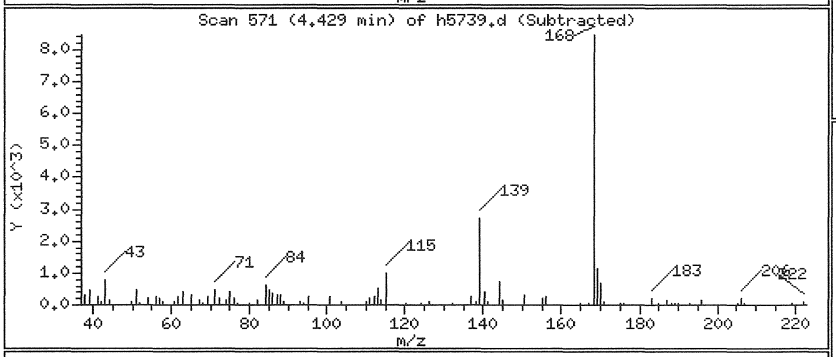
Sample Info: 21310171203*4847*

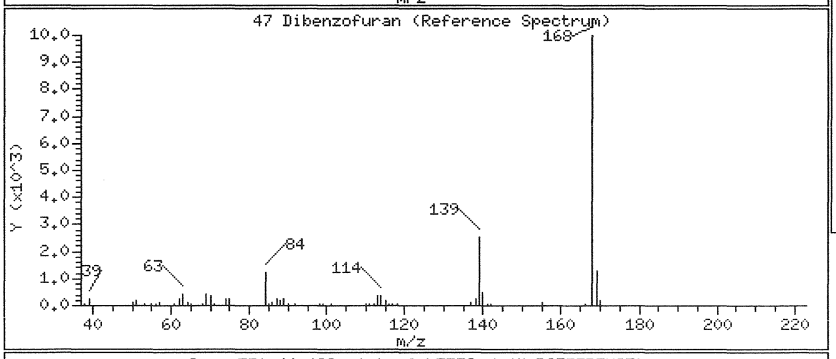
Volume Injected (uL): 1.0 Operator: hcp

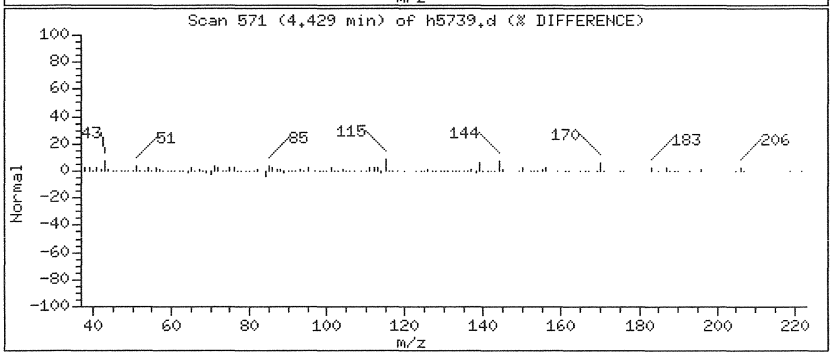
Column phase: RTX-5MS-30M Column diameter: 0.25

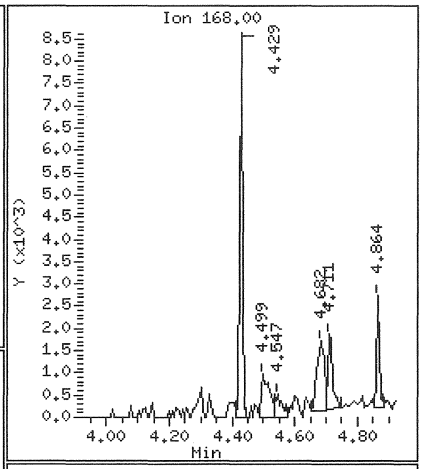
47 Dibenzofuran Concentration: 46.3 ug/Kg

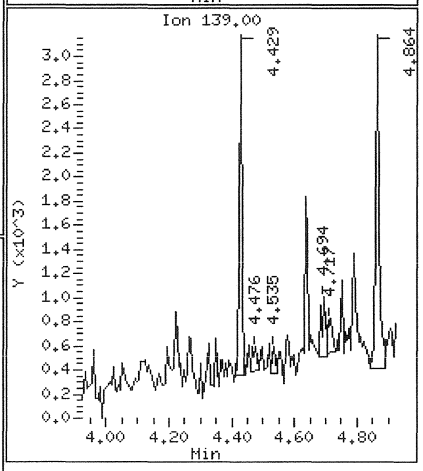


Data File: /var/chem/MSSV4.i/2131022.s.b/h5739.d



Date : 22-OCT-2013 17:31

Client ID: 21310171203

Instrument: MSSV4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0

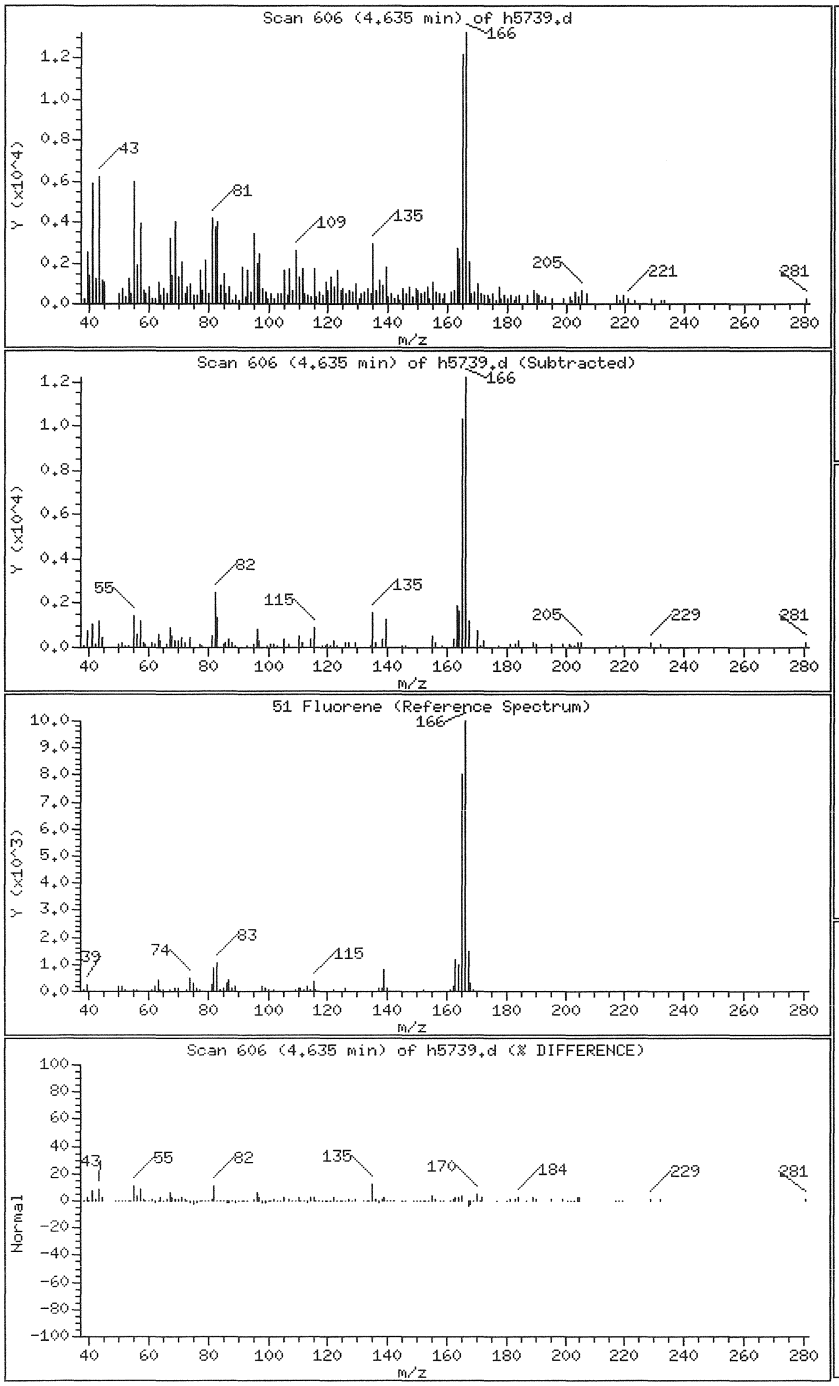
Operator: hcp

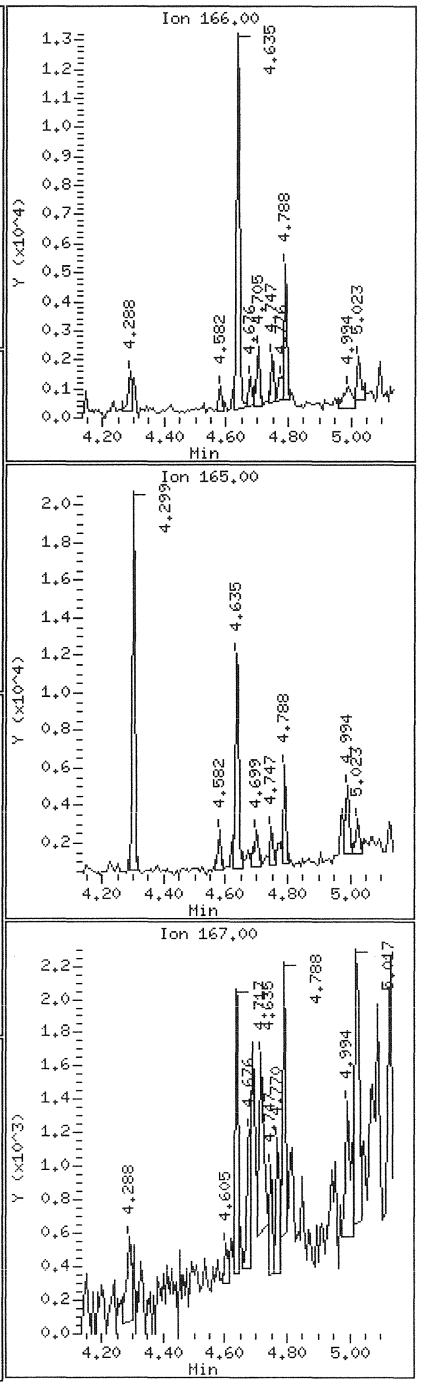
Column phase: RTX-5MS-30M

Column diameter: 0.25

51 Fluorene

Concentration: 104 ug/Kg



Data File: /var/chem/MSSV4.i/2131022.s.b/h5739.d

Date : 22-OCT-2013 17:31

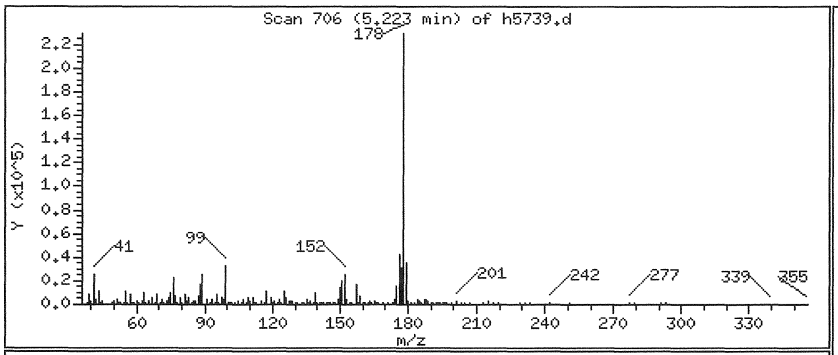
Client ID: 21310171203 Instrument: MSSV4.i

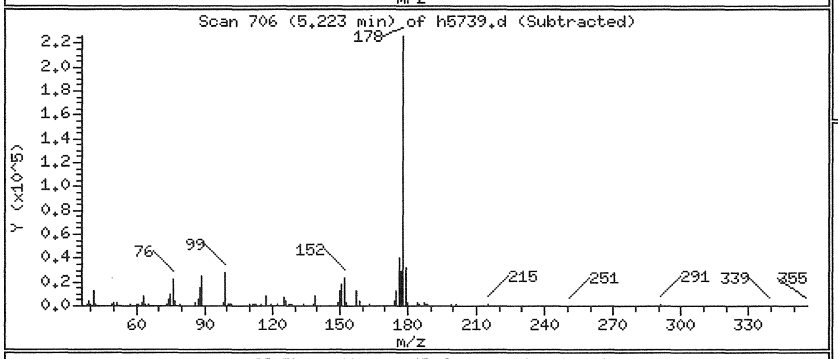
Sample Info: 21310171203*4847*

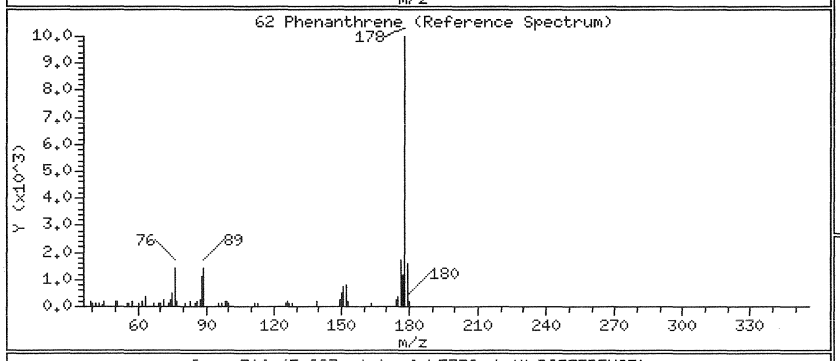
Volume Injected (uL): 1.0 Operator: hcp

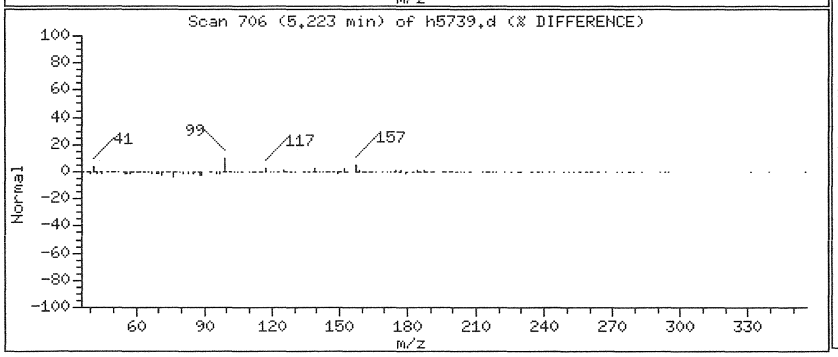
Column phase: RTX-5MS-30M Column diameter: 0.25

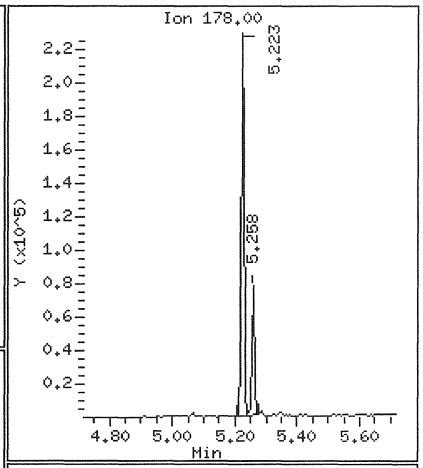
62 Phenanthrene Concentration: 1090 ug/Kg

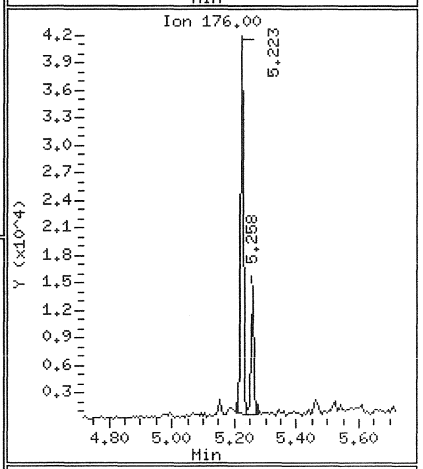


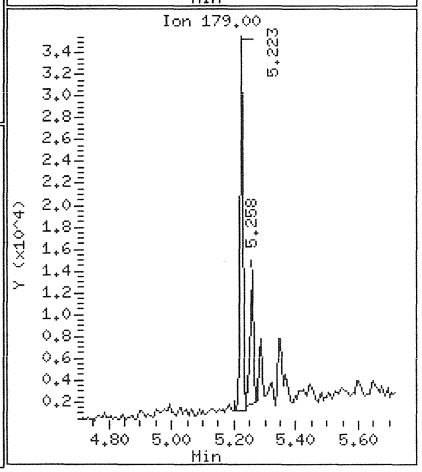



Data File: /var/chem/MSSV4.i/2131022.s.b/h5739.d



Date : 22-OCT-2013 17:31

Client ID: 21310171203

Instrument: MSSV4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0

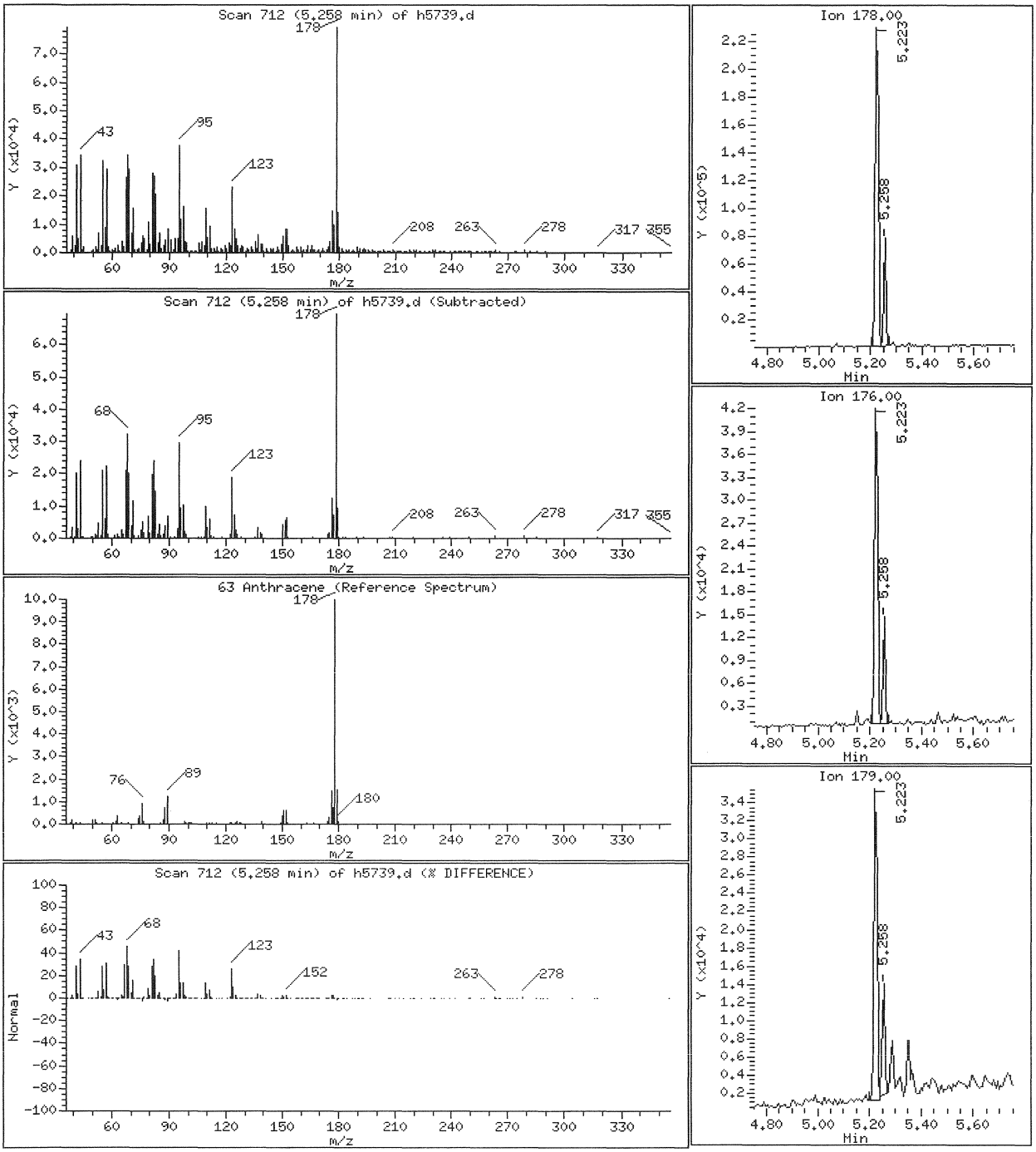
Operator: hcp

Column phase: RTX-5MS-30M

Column diameter: 0.25

63 Anthracene

Concentration: 353 ug/Kg



Data File: /var/chem/MSSV4.i/2131022.s.b/h5739.d



Date : 22-OCT-2013 17:31

Client ID: 21310171203

Instrument: MSSV4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0

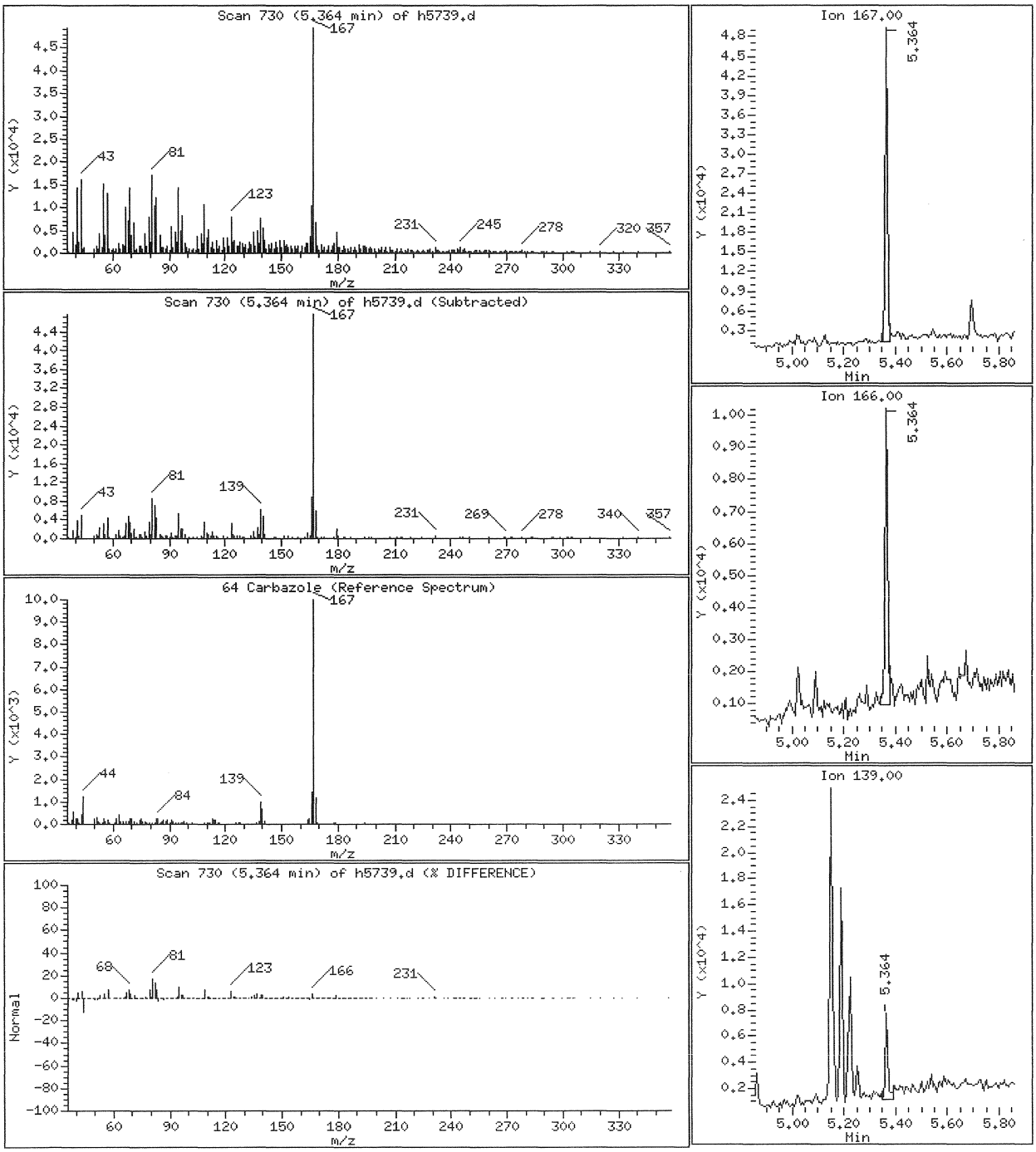
Operator: hcp

Column phase: RTX-5MS-30M

Column diameter: 0.25

64 Carbazole

Concentration: 247 ug/Kg



Data File: /var/chem/MSSV4.i/2131022.s.b/h5739.d



Date : 22-OCT-2013 17:31

Client ID: 21310171203

Instrument: MSSV4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0

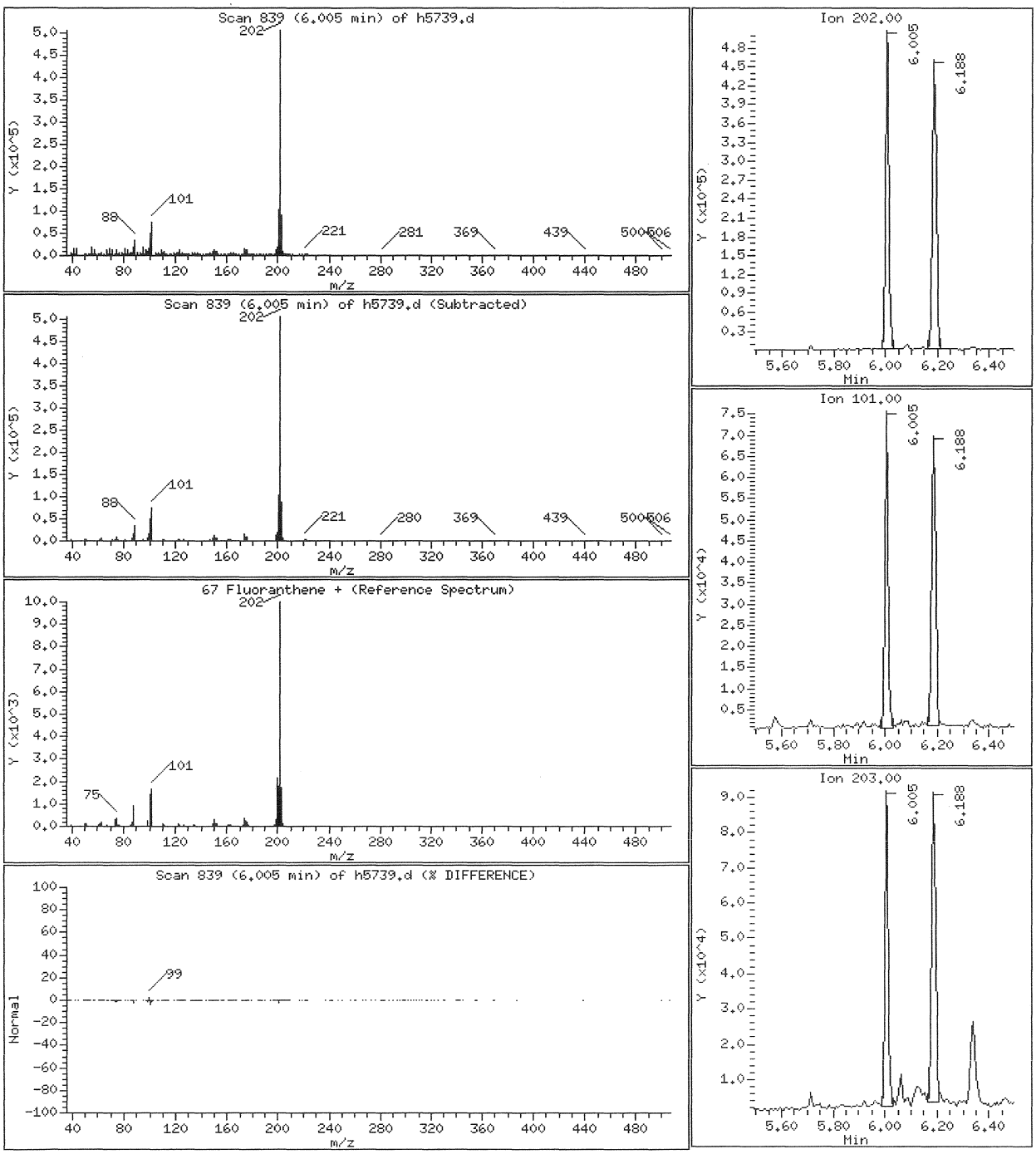
Operator: hcp

Column phase: RTX-5MS-30M

Column diameter: 0.25

67 Fluoranthene +

Concentration: 2960 ug/Kg



Data File: /var/chem/MSSV4.i/2131022.s.b/h5739.d



Date : 22-OCT-2013 17:31

Client ID: 21310171203

Instrument: MSSV4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0

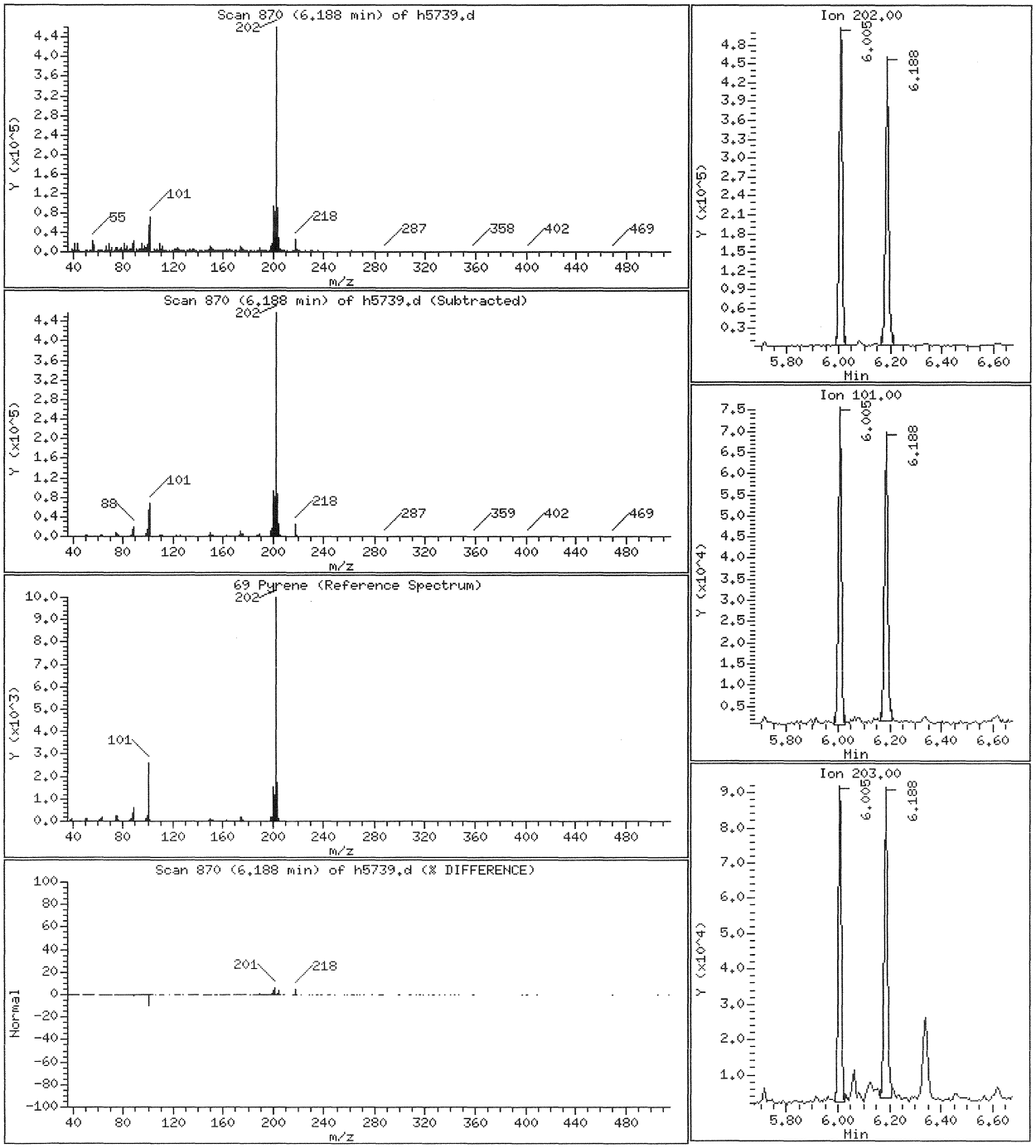
Operator: hcp

Column phase: RTX-5MS-30M

Column diameter: 0.25

69 Pyrene

Concentration: 1300 ug/Kg



Data File: /var/chem/MSSV4.i/2131022.s.b/h5739.d



Date : 22-OCT-2013 17:31

Client ID: 21310171203

Instrument: MSSV4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0

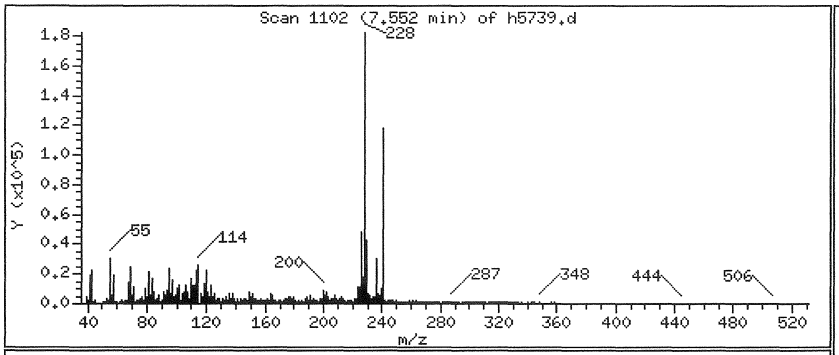
Operator: hcp

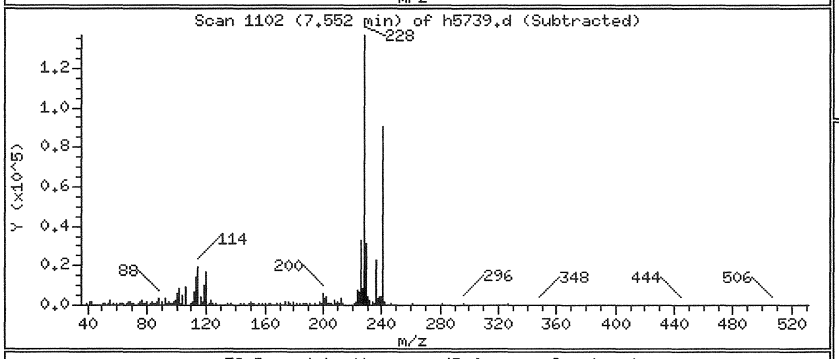
Column phase: RTX-5MS-30M

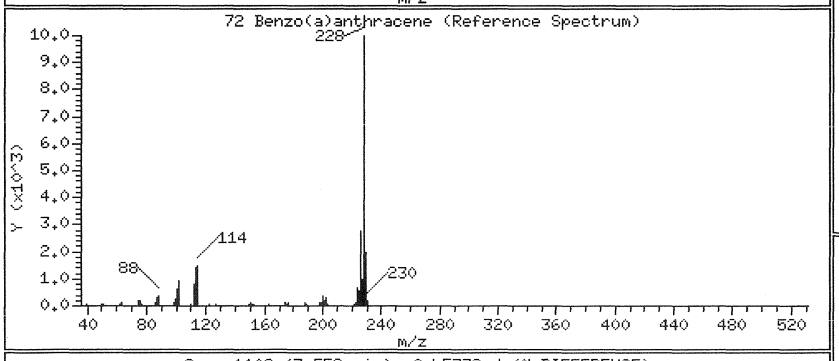
Column diameter: 0.25

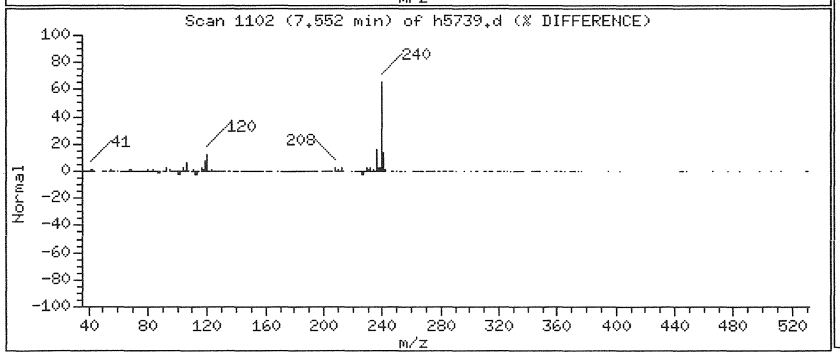
72 Benzo(a)anthracene

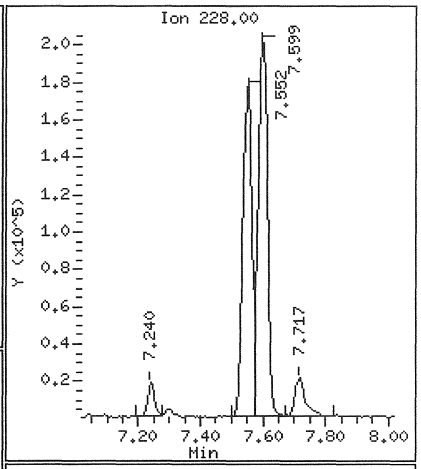
Concentration: 1320 ug/Kg

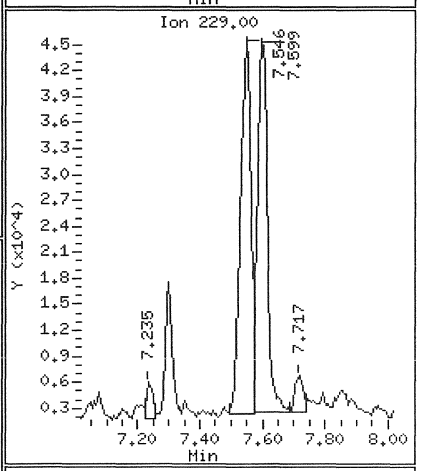


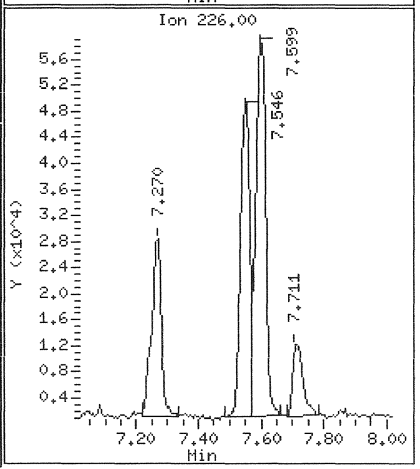



Data File: /var/chem/MSSV4.i/2131022.s.b/h5739.d



Date : 22-OCT-2013 17:31

Client ID: 21310171203

Instrument: MSSV4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0

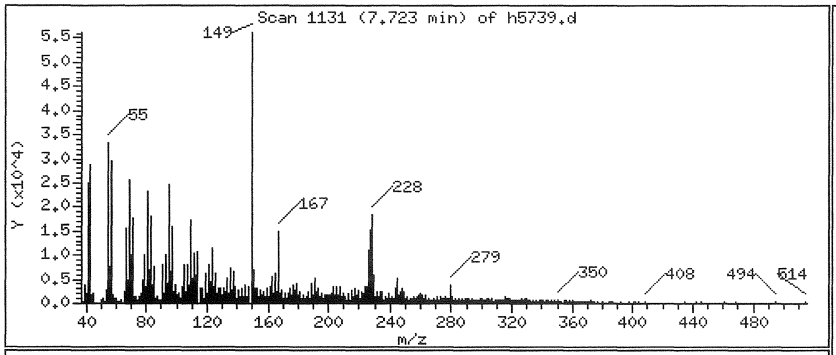
Operator: hcp

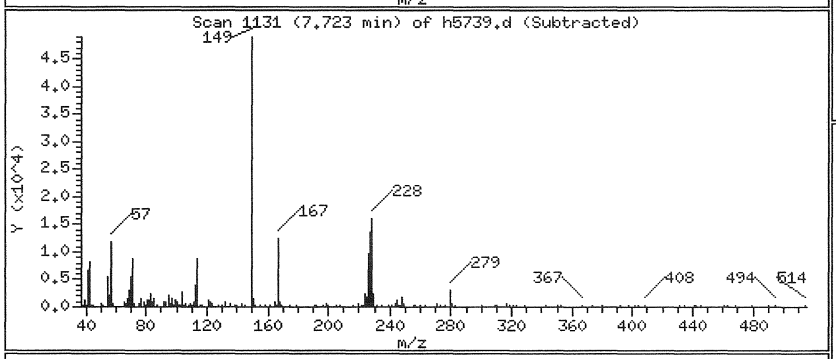
Column phase: RTX-5MS-30M

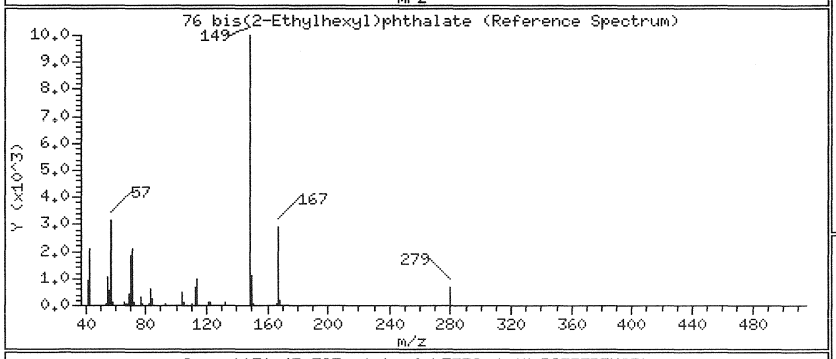
Column diameter: 0.25

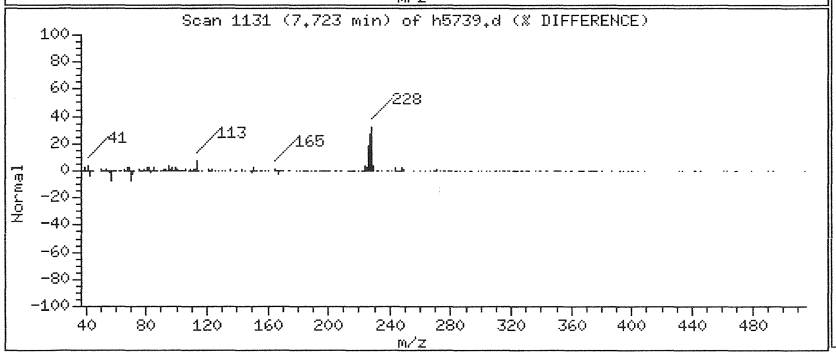
76 bis(2-Ethylhexyl)phthalate

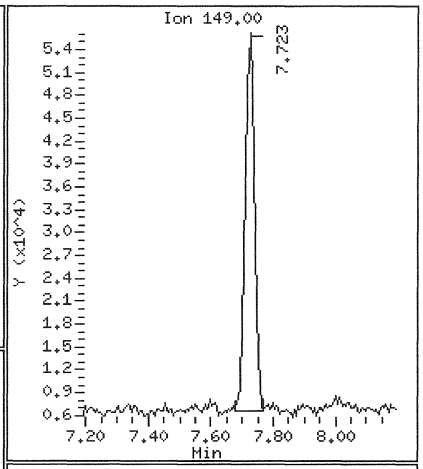
Concentration: 597 ug/Kg

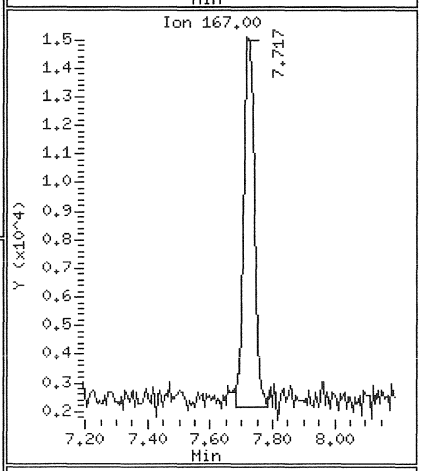


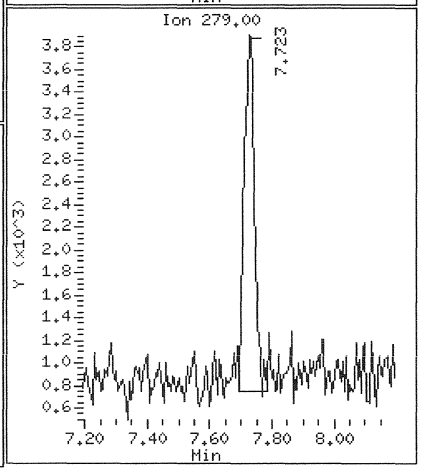



Data File: /var/chem/MSSV4.i/2131022.s.b/h5739.d



Date : 22-OCT-2013 17:31

Client ID: 21310171203

Instrument: MSSV4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0

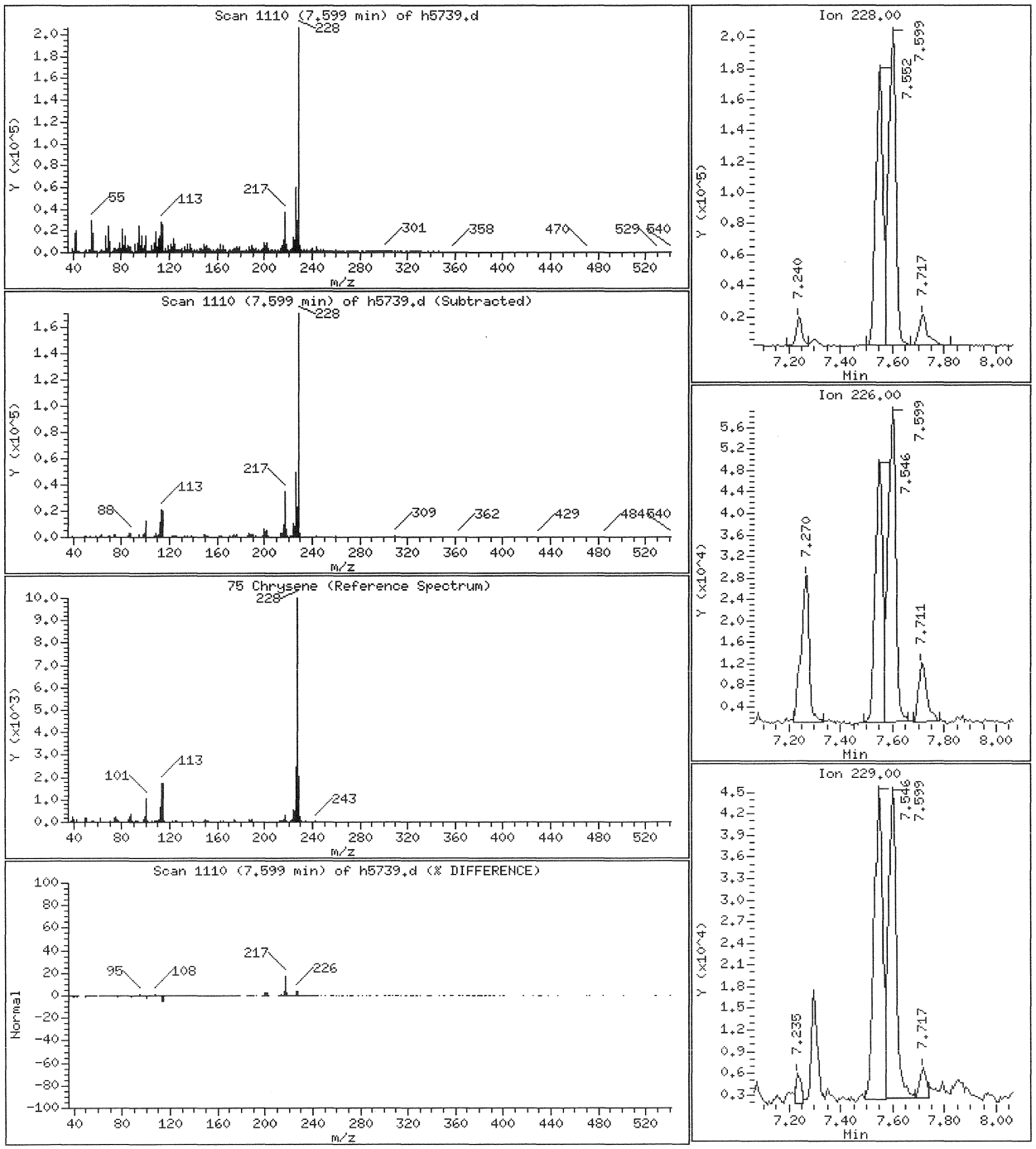
Operator: hcp

Column phase: RTX-5MS-30M

Column diameter: 0.25

75 Chrysene

Concentration: 1440 ug/Kg



Data File: /var/chem/MSSV4.i/2131022.s.b/h5739.d

Date : 22-OCT-2013 17:31

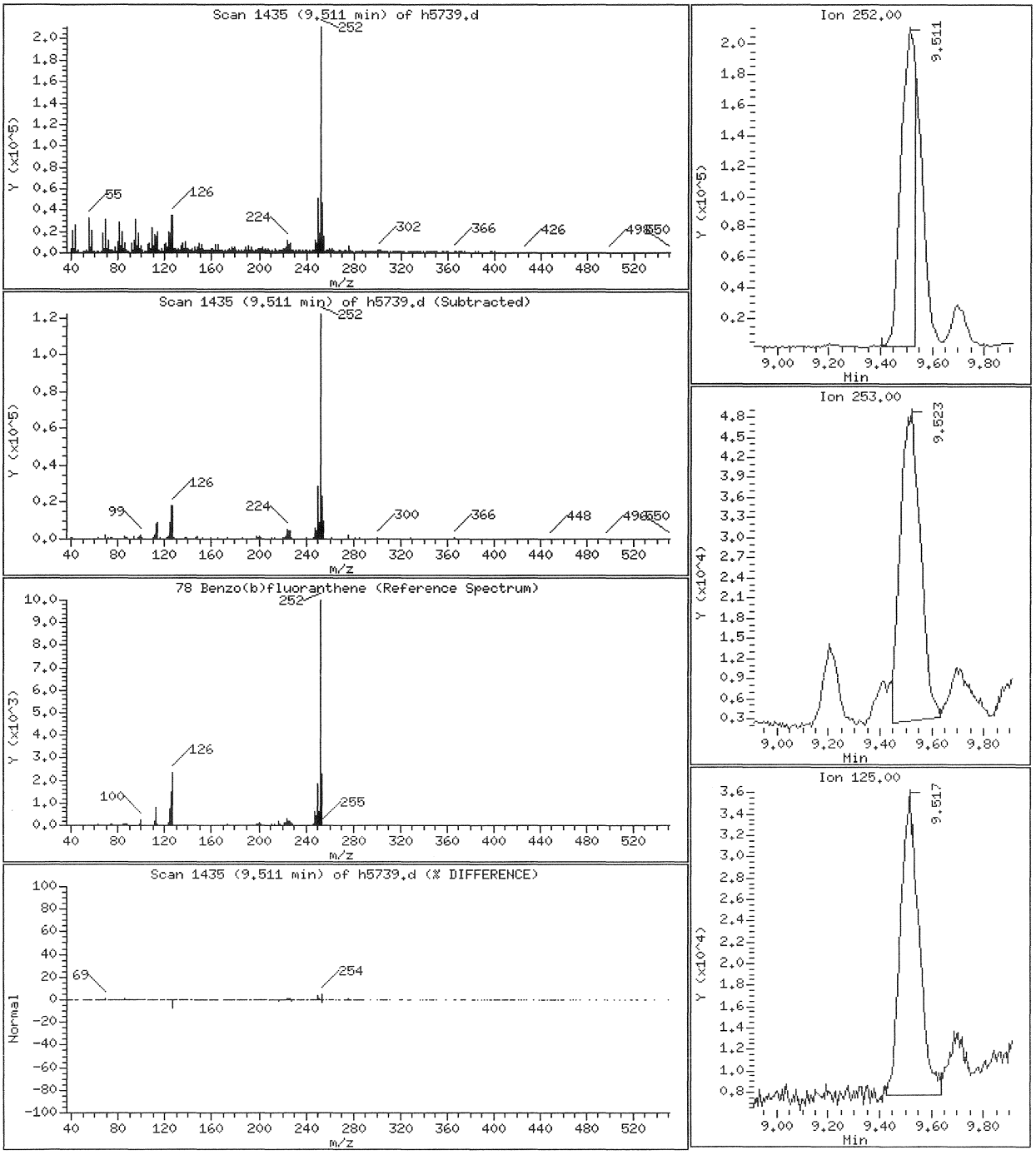
Client ID: 21310171203 Instrument: MSSV4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0 Operator: hcp

Column phase: RTX-5MS-30M Column diameter: 0.25

78 Benzo(b)fluoranthene Concentration: 1770 ug/Kg



Data File: /var/chem/MSSV4.i/2131022.s.b/h5739.d



Date : 22-OCT-2013 17:31

Client ID: 21310171203

Instrument: MSSV4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0

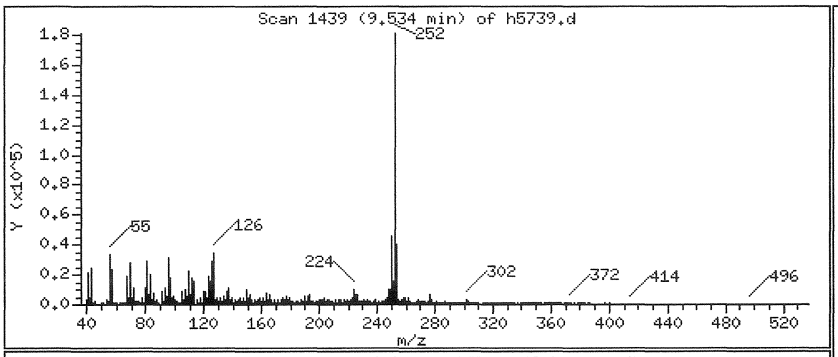
Operator: hcp

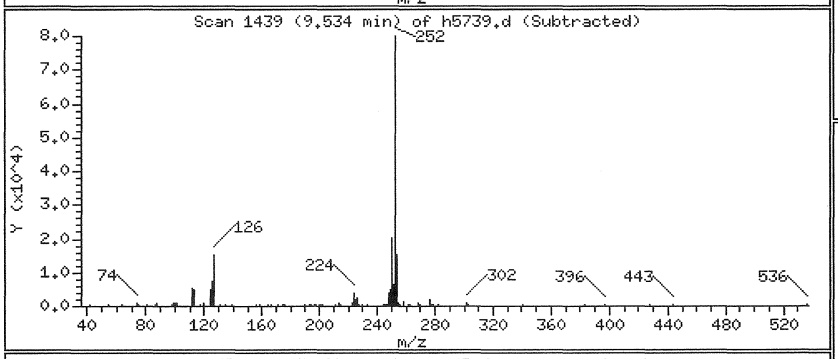
Column phase: RTX-5MS-30M

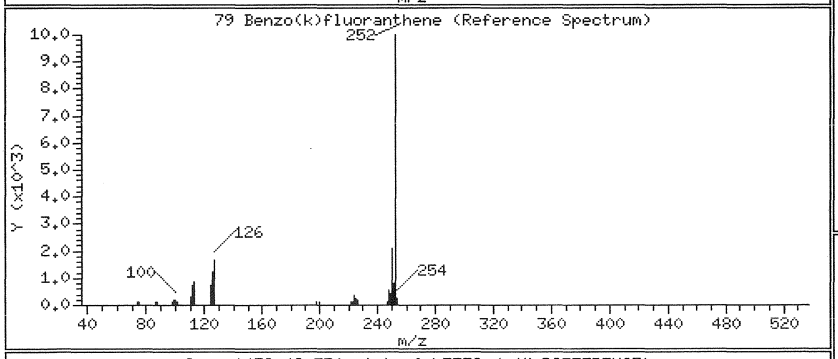
Column diameter: 0.25

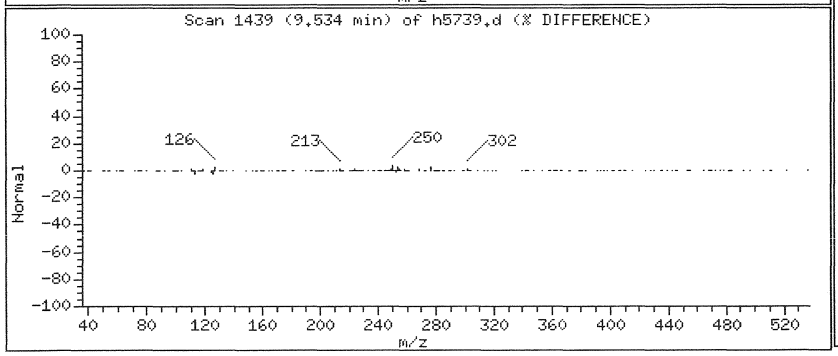
79 Benzo(k)fluoranthene

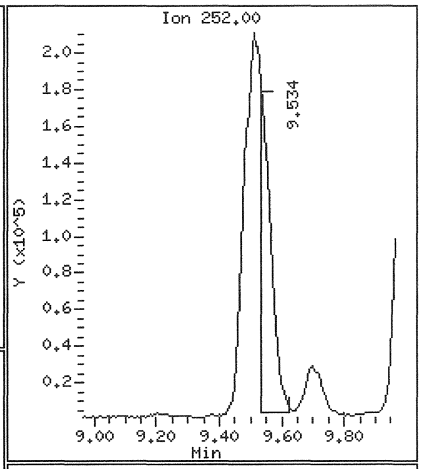
Concentration: 766 ug/Kg

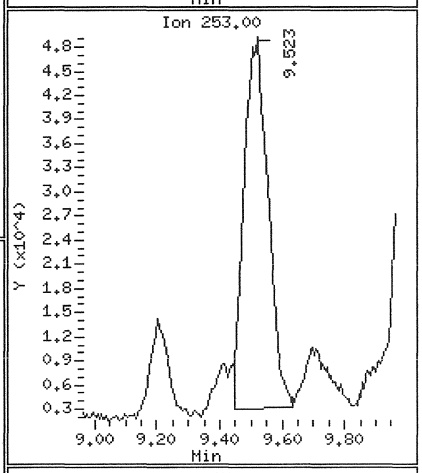


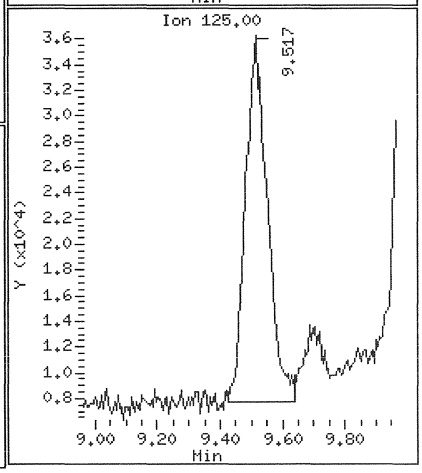



Data File: /var/chem/MSSV4.i/2131022.s.b/h5739.d



Date : 22-OCT-2013 17:31

Client ID: 21310171203

Instrument: MSSV4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0

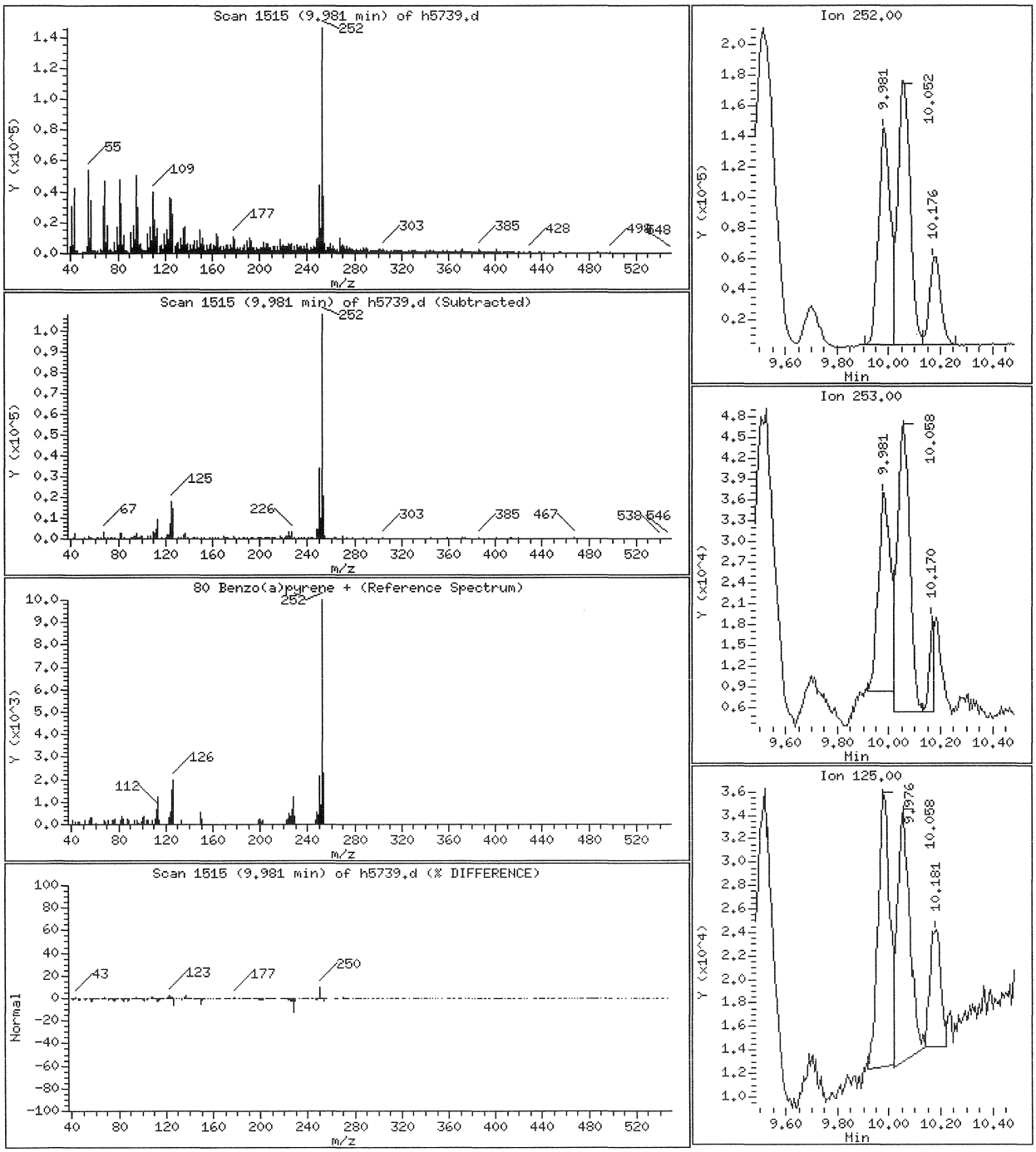
Operator: hcp

Column phase: RTX-5MS-30M

Column diameter: 0.25

80 Benzo(a)pyrene +

Concentration: 1030 ug/Kg



Data File: /var/chem/MSSV4.i/2131022.s.b/h5739.d



Date : 22-OCT-2013 17:31

Client ID: 21310171203

Instrument: MSSV4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0

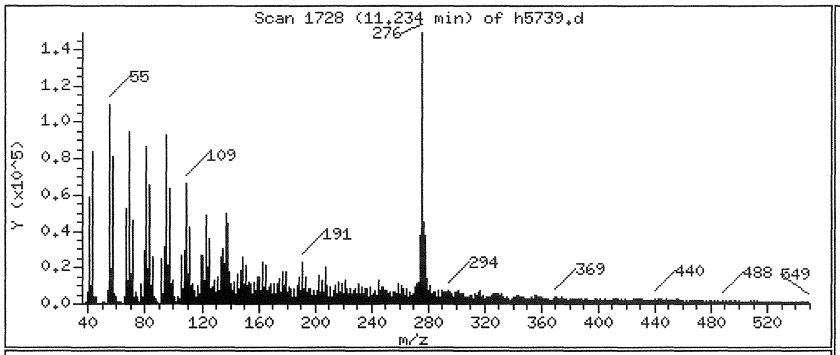
Operator: hop

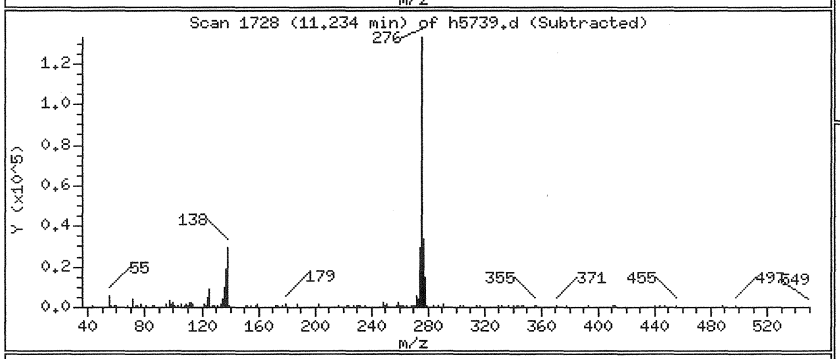
Column phase: RTX-5MS-30M

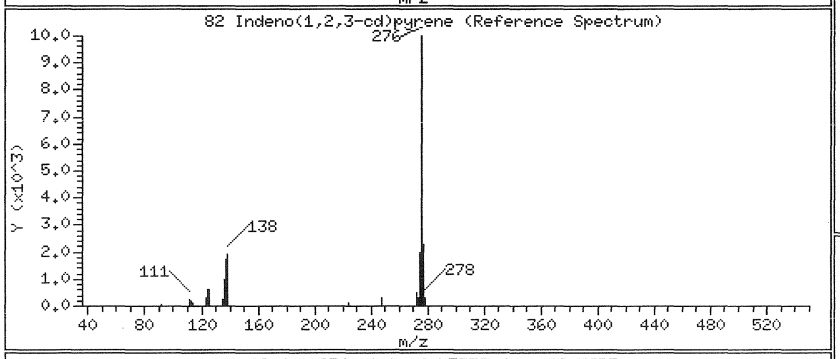
Column diameter: 0.25

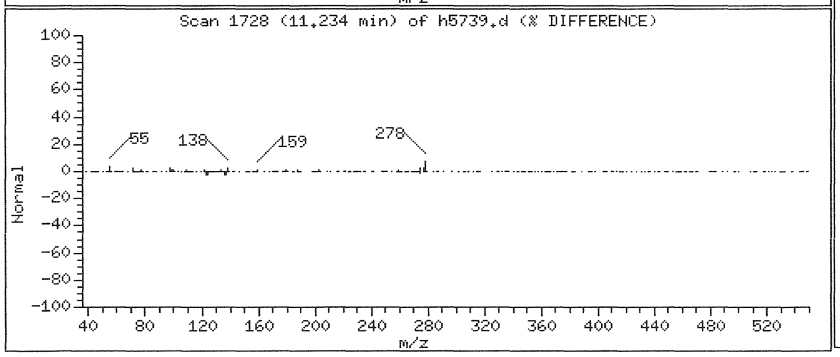
82 Indeno(1,2,3-cd)pyrene

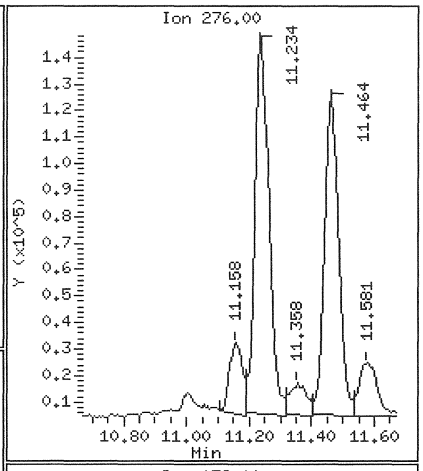
Concentration: 1120 ug/Kg

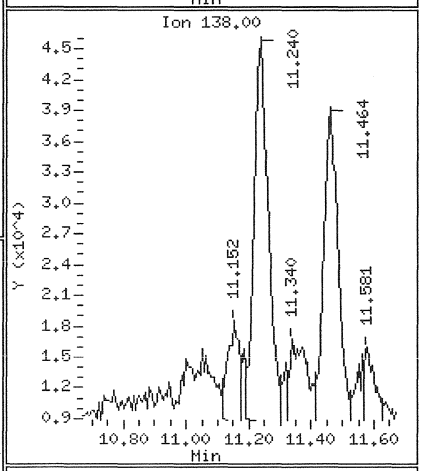


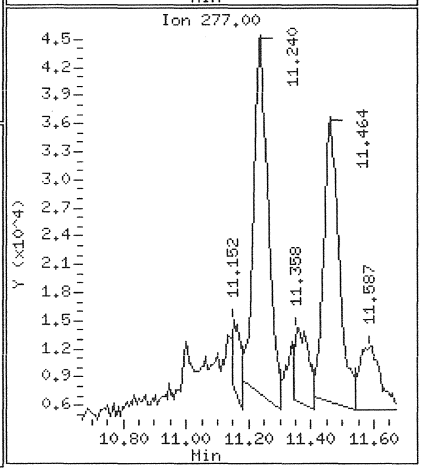



Data File: /var/chem/MSSV4.i/2131022.s.b/h5739.d



Date : 22-OCT-2013 17:31

Client ID: 21310171203

Instrument: MSSV4.i

Sample Info: 21310171203*4847*

Volume Injected (uL): 1.0

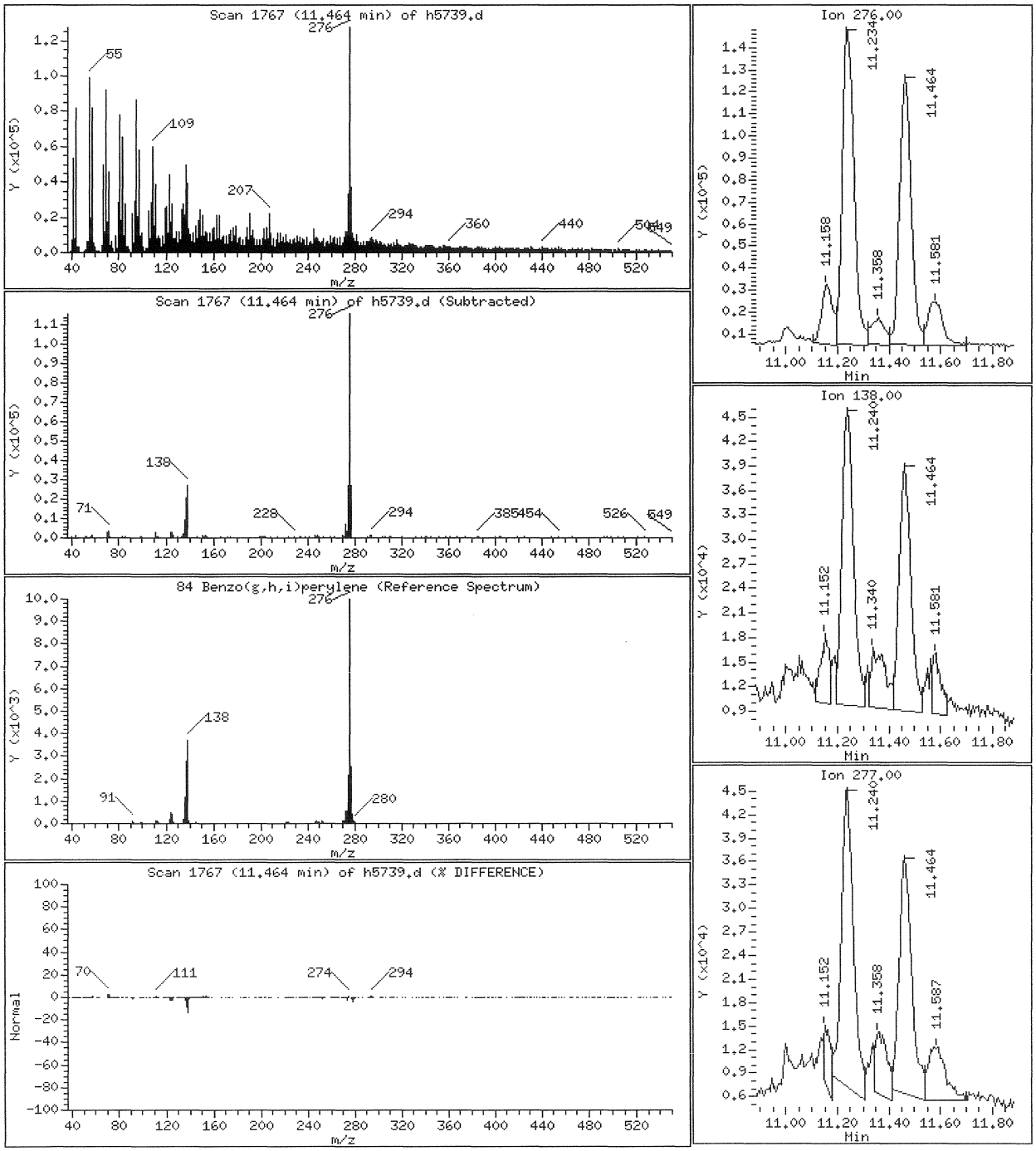
Operator: hcp

Column phase: RTX-5MS-30M

Column diameter: 0.25

84 Benzo(g,h,i)perylene

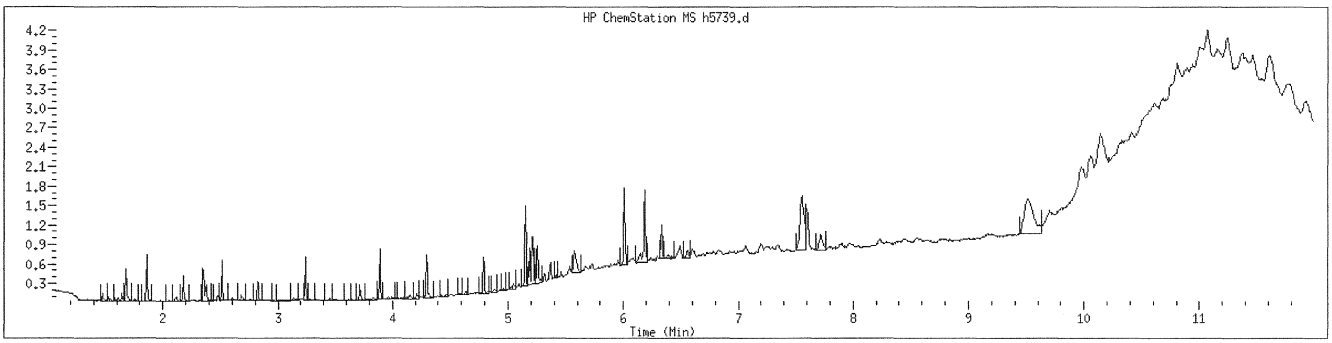
Concentration: 723 ug/Kg



Data file : /var/chem/MSSV4.i/2131022.s.b/h5739.d Page: 1
Report Date: 10/24/2013 10:00

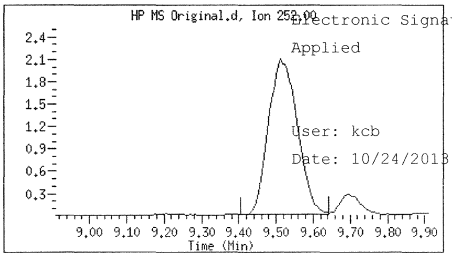
MANUAL INTEGRATION GRAPHIC REPORT

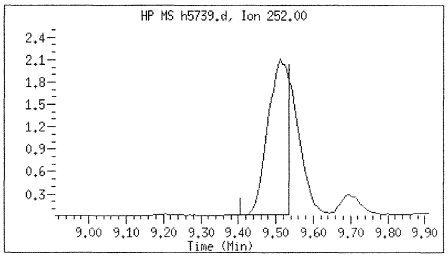
Lab ID : 21310171203 SampleType : SAMPLE
Injection Date: 10/22/2013 17:31 Instrument : MSSV4.i
Operator : hcp
Sample Info : 21310171203*4847*
Misc Info : 21310171203*MSSV~10019~*101712*30.0-1*518149*
Method : /var/chem/MSSV4.i/2131022.s.b/8270D_04.m
Dilution : 1.00
Matrix : SOIL
Integrator : HP RTE Compound Sublist: SA8270



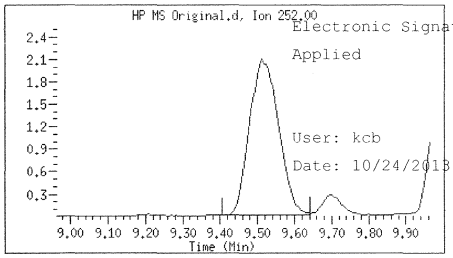

Original Final

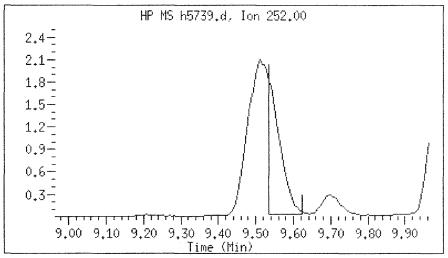
78 Benzo(b)fluoranthene CAS#: 205-99-2 Reason: M3




79 Benzo(k)fluoranthene CAS#: 207-08-9 Reason: M3



GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUL-2013 10:47
End Cal Date : 30-AUG-2013 13:26
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/MSSV4.i/2130830.s.b/8270D_04.m
Cal Date : 21-Oct-2013 12:29 kcb

Calibration File Names:
Level 4: /var/chem/MSSV4.i/2130708p.s.b/h2760x.d
Level 5: /var/chem/MSSV4.i/2130708p.s.b/h2759x.d
Level 6: /var/chem/MSSV4.i/2130708p.s.b/h2761x.d
Level 7: /var/chem/MSSV4.i/2130708p.s.b/h2762x.d
Level 8: /var/chem/MSSV4.i/2130708p.s.b/h2763x.d
Level 9: /var/chem/MSSV4.i/2130708p.s.b/h2764x.d

| Compound | 10 Level 4 | 50 Level 5 | 80 Level 6 | 120 Level 7 | 160 Level 8 | 200 Level 9 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 n-Nitrosodimethylamine | 0.66295 | 0.58687 | 0.56156 | 0.52603 | 0.54822 | 0.51189 | AVRG | | 0.56625 | | 9.57408 | |
| 2 Pyridine | 1.56951 | 1.42146 | 1.25843 | 1.33977 | 1.12907 | 1.25303 | AVRG | | 1.32854 | | 11.52559 | |
| 5 Aniline | 33074 | 140861 | 186721 | 243571 | 303667 | 366671 | QUAD | -0.14176 | 0.63688 | 0.06060 | 0.99564 | |
| 6 Phenol + | 2.03410 | 1.70533 | 1.55669 | 1.49130 | 1.40059 | 1.30858 | AVRG | | 1.58276 | | 16.38164 | |
| 7 bis(-2-Chloroethyl)Ether | 0.89654 | 0.81928 | 0.74255 | 0.75309 | 0.71089 | 0.69674 | AVRG | | 0.76985 | | 9.77963 | <- |
| 8 2-Chlorophenol | 1.66200 | 1.38243 | 1.29656 | 1.27999 | 1.20585 | 1.17723 | AVRG | | 1.33401 | | 13.20897 | |
| 9 1,3-Dichlorobenzene | 1.86357 | 1.53095 | 1.46491 | 1.43746 | 1.39517 | 1.34322 | AVRG | | 1.50588 | | 12.37537 | |
| 11 1,4-Dichlorobenzene + | 1.85405 | 1.57383 | 1.48043 | 1.45279 | 1.43763 | 1.35544 | AVRG | | 1.52570 | | 11.51187 | |
| 12 Benzyl alcohol | 0.90594 | 0.72118 | 0.72738 | 0.69345 | 0.66600 | 0.59852 | AVRG | | 0.71875 | | 14.32431 | |
| 13 1,2-Dichlorobenzene | 1.79055 | 1.49237 | 1.35450 | 1.41217 | 1.32498 | 1.29240 | AVRG | | 1.44449 | | 12.71267 | |
| 14 Bis(2-chloroisopropyl)ether | 1.51126 | 1.27822 | 1.20557 | 1.18205 | 1.14812 | 1.09624 | AVRG | | 1.23691 | | 11.91711 | |
| 15 2-Methylphenol | 1.45592 | 1.17831 | 1.11490 | 1.06116 | 1.02483 | 0.94558 | AVRG | | 1.13012 | | 15.75945 | |
| 16 N-Nitroso-di-n-propylamine++ | 1.03900 | 0.83502 | 0.79384 | 0.76733 | 0.73014 | 0.69029 | AVRG | | 0.80927 | | 15.21978 | |
| 17 3- & 4-Methylphenol | 1.44609 | 1.16184 | 1.15154 | 1.13214 | 1.05466 | 1.01523 | AVRG | | 1.16025 | | 13.05718 | |

21310112 415

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUL-2013 10:47
End Cal Date : 30-AUG-2013 13:26
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/MSSV4.i/2130830.s.b/8270D_04.m
Cal Date : 21-Oct-2013 12:29 kcb

| Compound | 10 Level 4 | 50 Level 5 | 80 Level 6 | 120 Level 7 | 160 Level 8 | 200 Level 9 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 18 Hexachloroethane | 0.72020 | 0.55842 | 0.52446 | 0.52822 | 0.51145 | 0.49304 | AVRG | | 0.55597 | | 14.98053 |
| 20 Nitrobenzene | 0.39016 | 0.33061 | 0.30332 | 0.30473 | 0.30677 | 0.29973 | AVRG | | 0.32255 | | 10.82254 |
| 21 Isophorone | 0.61562 | 0.53053 | 0.49140 | 0.49320 | 0.47300 | 0.46227 | AVRG | | 0.51100 | | 11.01686 |
| 22 2-Nitrophenol + | 0.22957 | 0.20098 | 0.18440 | 0.18576 | 0.18317 | 0.18188 | AVRG | | 0.19429 | | 9.59615 |
| 23 2,4-Dimethyphenol | 0.40548 | 0.35387 | 0.32699 | 0.32388 | 0.31138 | 0.30592 | AVRG | | 0.33792 | | 10.96397 |
| 24 bis(-2-Chloroethoxy)methane | 0.43051 | 0.36844 | 0.33962 | 0.34258 | 0.33539 | 0.33071 | AVRG | | 0.35788 | | 10.60236 |
| 25 Benzoic Acid | 0.19161 | 0.20063 | 0.19055 | 0.20146 | 0.20140 | 0.20272 | AVRG | | 0.19806 | | 2.75698 |
| 26 2,4-Dichlorophenol + | 0.33896 | 0.29836 | 0.28182 | 0.27889 | 0.27311 | 0.26973 | AVRG | | 0.29014 | | 8.92572 |
| 27 1,2,4-Trichlorobenzene | 0.38893 | 0.33223 | 0.30631 | 0.30977 | 0.30837 | 0.30265 | AVRG | | 0.32471 | | 10.21003 |
| 29 Naphthalene | 1.27127 | 1.07997 | 0.97279 | 1.00473 | 0.96067 | 0.94289 | AVRG | | 1.03872 | | 11.91267 |
| 30 4-Chloroaniline | 0.44669 | 0.35144 | 0.32919 | 0.31660 | 0.29925 | 0.28365 | AVRG | | 0.33780 | | 17.25352 |
| 31 Hexachlorobutadiene + | 0.24979 | 0.21115 | 0.19852 | 0.20050 | 0.20203 | 0.20276 | AVRG | | 0.21079 | | 9.29467 |
| 32 4-Chloro-3-Methylphenol + | 0.31411 | 0.26945 | 0.25735 | 0.25862 | 0.24168 | 0.24228 | AVRG | | 0.26391 | | 10.14349 |
| 33 2-Methylnaphthalene | 0.76086 | 0.66472 | 0.61268 | 0.60968 | 0.59365 | 0.57491 | AVRG | | 0.63608 | | 10.70361 |
| 34 Hexachlorocyclopentadiene ++ | 0.45293 | 0.43364 | 0.40387 | 0.40085 | 0.42111 | 0.42405 | AVRG | | 0.42274 | | 4.57467 |
| 35 2,4,6-Trichlorophenol + | 0.45337 | 0.38818 | 0.35427 | 0.35712 | 0.35914 | 0.36810 | AVRG | | 0.38003 | | 9.99395 |
| 36 2,4,5-Trichlorphenol | 0.47404 | 0.39598 | 0.37567 | 0.37273 | 0.36386 | 0.36912 | AVRG | | 0.39190 | | 10.64365 |
| 38 2-Chloronaphthalene | 1.35365 | 1.14495 | 1.07054 | 1.06579 | 1.09072 | 1.07102 | AVRG | | 1.13278 | | 9.89966 |
| 39 2-Nitroaniline | 0.40674 | 0.37405 | 0.35257 | 0.35707 | 0.35701 | 0.35055 | AVRG | | 0.36633 | | 5.85855 |
| 40 Dimethylphthalate | 1.47861 | 1.25540 | 1.17431 | 1.17545 | 1.17412 | 1.15751 | AVRG | | 1.23590 | | 10.02132 |
| 41 2,6-Dinitrotoluene | 0.31469 | 0.27778 | 0.26091 | 0.26203 | 0.26322 | 0.25634 | AVRG | | 0.27249 | | 8.03799 |
| 42 Acenaphthylene | 2.14583 | 1.76280 | 1.61358 | 1.65026 | 1.65061 | 1.68116 | AVRG | | 1.75071 | | 11.42453 |

21310172 416

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUL-2013 10:47
End Cal Date : 30-AUG-2013 13:26
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/MSSV4.i/2130830.s.b/8270D_04.m
Cal Date : 21-Oct-2013 12:29 kcb

| Compound | 10 Level 4 | 50 Level 5 | 80 Level 6 | 120 Level 7 | 160 Level 8 | 200 Level 9 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 43 3-Nitroaniline | 0.31111 | 0.28702 | 0.26989 | 0.26733 | 0.25060 | 0.25619 | AVRG | | 0.27369 | | 8.12497 |
| 45 Acenaphthene + | 1.39490 | 1.17260 | 1.05840 | 1.07058 | 1.06736 | 1.05292 | AVRG | | 1.13613 | | 11.82749 |
| 46 2,4-Dinitrophenol ++ | 0.18818 | 0.19132 | 0.20038 | 0.20900 | 0.20992 | 0.20754 | AVRG | | 0.20106 | | 4.69163 |
| 47 Dibenzofuran | 1.87859 | 1.59141 | 1.47102 | 1.45946 | 1.47666 | 1.48113 | AVRG | | 1.55971 | | 10.48315 |
| 48 2,4-Dinitrotoluene | 0.41385 | 0.36000 | 0.34975 | 0.34622 | 0.33394 | 0.33042 | AVRG | | 0.35570 | | 8.56238 |
| 49 4-Nitrophenol ++ | 0.17159 | 0.16358 | 0.15055 | 0.16105 | 0.15567 | 0.15334 | AVRG | | 0.15930 | | 4.84460 |
| 50 Diethylphthalate | 1.40115 | 1.15279 | 1.09951 | 1.10042 | 1.08661 | 1.08670 | AVRG | | 1.15453 | | 10.67819 |
| 51 Fluorene | 1.53615 | 1.26663 | 1.17793 | 1.19490 | 1.14281 | 1.13491 | AVRG | | 1.24222 | | 12.19566 |
| 52 4-Chlorophenyl-phenylether | 0.70990 | 0.63964 | 0.58122 | 0.57546 | 0.57211 | 0.56416 | AVRG | | 0.60708 | | 9.42381 |
| 53 4-Nitroaniline | 0.29080 | 0.26427 | 0.26000 | 0.26602 | 0.25321 | 0.24326 | AVRG | | 0.26293 | | 6.08062 |
| 54 4,6-Dinitro-o-cresol | 0.15048 | 0.15778 | 0.15613 | 0.16249 | 0.15888 | 0.15501 | AVRG | | 0.15680 | | 2.57013 |
| 55 N-nitrosodiphenylamine (1)+ | 0.68893 | 0.58327 | 0.55425 | 0.57502 | 0.55123 | 0.55500 | AVRG | | 0.58462 | | 9.01524 |
| 56 Azobenzene | 0.79178 | 0.68025 | 0.63536 | 0.64246 | 0.62765 | 0.61746 | AVRG | | 0.66583 | | 9.81265 |
| 58 4-Bromophenyl-phenylether | 0.28086 | 0.24372 | 0.22985 | 0.23667 | 0.23302 | 0.22759 | AVRG | | 0.24195 | | 8.21916 |
| 59 Hexachlorobenzene | 0.32083 | 0.26126 | 0.25908 | 0.26536 | 0.25829 | 0.25517 | AVRG | | 0.27000 | | 9.30798 |
| 60 Pentachlorophenol + | 0.17080 | 0.17962 | 0.17630 | 0.17623 | 0.17459 | 0.17095 | AVRG | | 0.17475 | | 1.95601 |
| 62 Phenanthrene | 1.32006 | 1.10863 | 1.08050 | 1.03930 | 1.03732 | 0.99679 | AVRG | | 1.09710 | | 10.55883 |
| 63 Anthracene | 1.30387 | 1.07673 | 1.06659 | 1.06061 | 1.05274 | 1.00076 | AVRG | | 1.09355 | | 9.72972 |
| 64 Carbazole | 1.21465 | 0.98959 | 0.97664 | 0.99960 | 0.94839 | 0.93414 | AVRG | | 1.01050 | | 10.19513 |
| 65 Di-n-butylphthalate | 1.44550 | 1.16178 | 1.15618 | 1.18018 | 1.12652 | 1.10692 | AVRG | | 1.19618 | | 10.44299 |
| M 66 Total Methylphenol | 1.45101 | 1.17007 | 1.13322 | 1.09665 | 1.03974 | 0.98040 | AVRG | | 1.14518 | | 14.34408 |
| 67 Fluoranthene + | 1.40096 | 1.15300 | 1.16133 | 1.15455 | 1.10491 | 1.09309 | AVRG | | 1.17797 | | 9.58306 |

21310131 4L7

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUL-2013 10:47
End Cal Date : 30-AUG-2013 13:26
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/MSSV4.i/2130830.s.b/8270D_04.m
Cal Date : 21-Oct-2013 12:29 kcb

| Compound | 10 Level 4 | 50 Level 5 | 80 Level 6 | 120 Level 7 | 160 Level 8 | 200 Level 9 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 68 Benzidine | +++++ | 0.15253 | 0.11425 | 0.09711 | 0.08405 | 0.07951 | AVRG | | 0.10549 | | 28.02076 | <- |
| 69 Pyrene | 1.47904 | 1.26258 | 1.15677 | 1.11028 | 1.18722 | 1.11190 | AVRG | | 1.21796 | | 11.47615 | |
| 71 Butylbenzylphthalate | 0.59515 | 0.52393 | 0.49816 | 0.51602 | 0.49917 | 0.49811 | AVRG | | 0.52176 | | 7.19709 | |
| 72 Benzo(a)anthracene | 1.24468 | 1.09463 | 1.03733 | 1.04593 | 1.01176 | 0.99223 | AVRG | | 1.07109 | | 8.57721 | |
| 73 3,3'-Dichlorobenzidine | 0.34446 | 0.33899 | 0.31742 | 0.33120 | 0.30581 | 0.29921 | AVRG | | 0.32285 | | 5.67040 | |
| 75 Chrysene | 1.28883 | 1.10789 | 1.05593 | 1.06542 | 1.02014 | 1.00708 | AVRG | | 1.09088 | | 9.47055 | |
| 76 bis(2-Ethylhexyl)phthalate | 0.68270 | 0.65663 | 0.65140 | 0.67723 | 0.63852 | 0.64090 | AVRG | | 0.65789 | | 2.80055 | |
| 77 Di-n-octylphthalate + | 0.92012 | 0.99411 | 1.03514 | 1.10507 | 1.01019 | 1.04751 | AVRG | | 1.01869 | | 6.04426 | |
| 78 Benzo(b)fluoranthene | 1.01052 | 0.99867 | 0.93611 | 0.99952 | 1.02489 | 0.98035 | AVRG | | 0.99168 | | 3.11927 | |
| 79 Benzo(k)fluoranthene | 1.29721 | 1.20860 | 1.14657 | 1.13497 | 1.14291 | 1.08967 | AVRG | | 1.16999 | | 6.23824 | |
| 80 Benzo(a)pyrene + | 1.00929 | 1.01157 | 0.95717 | 0.99766 | 1.00279 | 0.97067 | AVRG | | 0.99153 | | 2.25388 | |
| 82 Indeno(1,2,3-cd)pyrene | 0.72120 | 0.91518 | 0.89775 | 1.02885 | 0.93385 | 0.95335 | AVRG | | 0.90836 | | 11.26774 | |
| 83 Dibenzo(a,h)anthracene | 1.03711 | 1.05465 | 1.04379 | 1.13745 | 1.10331 | 1.08987 | AVRG | | 1.07770 | | 3.64184 | |
| 84 Benzo(g,h,i)perylene | 1.20418 | 1.14012 | 1.13161 | 1.22457 | 1.22382 | 1.18491 | AVRG | | 1.18487 | | 3.43969 | |
| 85 2-Picoline | 1.19466 | 1.25653 | 1.23563 | 1.21159 | 1.16066 | 1.13721 | AVRG | | 1.19938 | | 3.75022 | |
| 86 N-Nitrosomethylethylamine | 0.53277 | 0.44600 | 0.48482 | 0.59046 | 0.49891 | 0.49266 | AVRG | | 0.50760 | | 9.69611 | |
| 87 Methyl methanesulfonate | 0.67276 | 0.63659 | 0.68773 | 0.61679 | 0.62706 | 0.65208 | AVRG | | 0.64884 | | 4.21912 | |
| 88 N-Nitrosodiethylamine | 0.58103 | 0.59607 | 0.57693 | 0.59054 | 0.57527 | 0.57974 | AVRG | | 0.58326 | | 1.41021 | |
| 89 Ethyl methanesulfonate | 0.85312 | 0.82722 | 0.79594 | 0.81108 | 0.77911 | 0.78668 | AVRG | | 0.80886 | | 3.42796 | |
| 90 Pentachloroethane | 0.57683 | 0.58001 | 0.56834 | 0.57023 | 0.56213 | 0.53398 | AVRG | | 0.56526 | | 2.93256 | |
| 91 Acetophenone | 1.91718 | 1.53449 | 1.48076 | 1.41462 | 1.35499 | 1.27344 | AVRG | | 1.49591 | | 15.10092 | |
| 92 O-Toluidine | 1.98155 | 1.83103 | 1.81227 | 1.60802 | 1.37131 | 1.27932 | AVRG | | 1.64725 | | 16.86328 | |

C130811Z_4B

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUL-2013 10:47
End Cal Date : 30-AUG-2013 13:26
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/MSSV4.i/2130830.s.b/8270D_04.m
Cal Date : 21-Oct-2013 12:29 kcb

| Compound | 10 Level 4 | 50 Level 5 | 80 Level 6 | 120 Level 7 | 160 Level 8 | 200 Level 9 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 93 N-Nitrosomorpholine | 0.62203 | 0.56032 | 0.56638 | 0.50967 | 0.55662 | 0.58759 | AVRG | | 0.56710 | | 6.54640 | |
| 94 N-Nitrosopiperidine | 0.17398 | 0.17332 | 0.17573 | 0.17110 | 0.16932 | 0.16009 | AVRG | | 0.17059 | | 3.29091 | |
| 95 O,O,O-Triethylphosphorothioat | 0.17515 | 0.17337 | 0.17427 | 0.17260 | 0.17196 | 0.16664 | AVRG | | 0.17233 | | 1.74685 | |
| 96 Alpha,Alpha-Dimethylphenethyl | +++++ | 0.13887 | 0.11705 | 0.07843 | 0.11752 | 0.11211 | AVRG | | 0.11279 | | 19.33225 | |
| 97 Hexachloropropene | 0.19057 | 0.20008 | 0.20791 | 0.21240 | 0.20402 | 0.19879 | AVRG | | 0.20230 | | 3.77332 | |
| 98 2,6-Dichlorophenol | 0.25587 | 0.26978 | 0.27139 | 0.26532 | 0.27202 | 0.25997 | AVRG | | 0.26572 | | 2.48912 | |
| 99 N-Nitrosodi-n-butylamine | 0.19629 | 0.19700 | 0.19906 | 0.19534 | 0.19698 | 0.18689 | AVRG | | 0.19526 | | 2.19253 | |
| 100 p-Phenylenediamine | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | |
| 101 Isosafrole | 0.15475 | 0.15321 | 0.15267 | 0.14606 | 0.15059 | 0.14231 | AVRG | | 0.14993 | | 3.19895 | |
| 102 1,2,4,5-Tetrachlorobenzene | 0.63900 | 0.63836 | 0.64736 | 0.66310 | 0.58951 | 0.58555 | AVRG | | 0.62715 | | 5.09932 | |
| 103 Safrole | 0.55801 | 0.58785 | 0.58608 | 0.58626 | 0.53230 | 0.51980 | AVRG | | 0.56172 | | 5.34975 | |
| 104 1,4-Naphthoquinone | 0.24800 | 0.22177 | 0.17229 | 0.11509 | 0.07984 | 0.04647 | AVRG | | 0.14724 | | 54.38627 | <- |
| 105 m-Dinitrobenzene | 0.13445 | 0.17808 | 0.17714 | 0.17539 | 0.18835 | 0.18846 | AVRG | | 0.17365 | | 11.53708 | |
| 106 Pentachlorobenzene | 0.50576 | 0.52593 | 0.52886 | 0.52354 | 0.50214 | 0.49477 | AVRG | | 0.51350 | | 2.79681 | |
| 107 2-Napthylamine | 1.01047 | 0.96359 | 0.91111 | 0.84651 | 0.75914 | 0.65720 | AVRG | | 0.85800 | | 15.41291 | |
| 108 2,3,4,6-Tetrachlorophenol | 0.16205 | 0.23061 | 0.25618 | 0.25665 | 0.27642 | 0.27464 | AVRG | | 0.24276 | | 17.65488 | |
| 109 1-Naphthylamine | 1.04737 | 1.03624 | 0.92887 | 0.86170 | 0.80775 | 0.72680 | AVRG | | 0.90146 | | 14.12601 | |
| 110 Thionazin | 0.15798 | 0.16275 | 0.16189 | 0.15901 | 0.16805 | 0.16221 | AVRG | | 0.16198 | | 2.18023 | |
| 111 5-Nitro-o-toluidine | 0.28568 | 0.29494 | 0.28637 | 0.27725 | 0.27733 | 0.25922 | AVRG | | 0.28013 | | 4.34953 | |
| 112 Tetraethyldithiopyrophosphate | 0.18595 | 0.19704 | 0.21219 | 0.19894 | 0.22742 | 0.22133 | AVRG | | 0.20714 | | 7.65240 | |
| 113 Diallate | 0.23209 | 0.23981 | 0.23223 | 0.22307 | 0.20902 | 0.19500 | AVRG | | 0.22187 | | 7.60059 | |
| 114 Phorate | 0.35808 | 0.37622 | 0.37176 | 0.34710 | 0.37079 | 0.33429 | AVRG | | 0.35971 | | 4.56611 | |

215101112 419

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUL-2013 10:47
End Cal Date : 30-AUG-2013 13:26
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/MSSV4.i/2130830.s.b/8270D_04.m
Cal Date : 21-Oct-2013 12:29 kcb

| Compound | 10 Level 4 | 50 Level 5 | 80 Level 6 | 120 Level 7 | 160 Level 8 | 200 Level 9 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 115 sym-Trinitrobenzene | 0.05630 | 0.06884 | 0.06730 | 0.07182 | 0.06013 | 0.06236 | AVRG | | 0.06446 | | 9.07614 | |
| 116 Phenacetin | 0.28374 | 0.30621 | 0.32530 | 0.33460 | 0.34916 | 0.32464 | AVRG | | 0.32061 | | 7.13471 | |
| 117 Dimethoate | 0.21873 | 0.21976 | 0.21683 | 0.21093 | 0.22940 | 0.19155 | AVRG | | 0.21453 | | 5.94252 | |
| 118 Pentachloronitrobenzene | 0.08525 | 0.09755 | 0.10133 | 0.10109 | 0.10061 | 0.10447 | AVRG | | 0.09838 | | 6.90975 | |
| 119 4-Aminobiphenyl | 0.68601 | 0.72973 | 0.74257 | 0.71523 | 0.69619 | 0.70806 | AVRG | | 0.71296 | | 2.93885 | |
| 120 Pronamide | 0.30041 | 0.31658 | 0.32907 | 0.32327 | 0.33269 | 0.32696 | AVRG | | 0.32150 | | 3.63888 | |
| 121 Dinoseb | 4849 | 43941 | 106225 | 153734 | 157705 | 325435 | QUAD | 0.15357 | 5.67614 | -0.81856 | 0.99903 | |
| 122 Disulfoton | 0.31532 | 0.30060 | 0.29129 | 0.27834 | 0.28732 | 0.27038 | AVRG | | 0.29054 | | 5.51045 | |
| 123 Methyl parathion | 0.16543 | 0.19980 | 0.19879 | 0.19686 | 0.21498 | 0.18226 | AVRG | | 0.19302 | | 8.83254 | |
| 124 4-Nitroquinoline-1-oxide | +++++ | 0.06395 | 0.07163 | 0.07647 | 0.08983 | 0.07146 | AVRG | | 0.07467 | | 12.83854 | |
| 125 Parathion | 0.10205 | 0.12477 | 0.12998 | 0.13468 | 0.14029 | 0.12839 | AVRG | | 0.12669 | | 10.43065 | |
| 126 Metapyrilene | 0.27340 | 0.27865 | 0.25963 | 0.17257 | 0.33361 | 0.21589 | AVRG | | 0.25563 | | 21.72541 | <- |
| 127 Isodrin | 0.12625 | 0.12442 | 0.12896 | 0.12728 | 0.12921 | 0.12672 | AVRG | | 0.12714 | | 1.40409 | |
| 128 Aramite | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | |
| 129 p-(Dimethylamino)azobenzene | 0.25950 | 0.34232 | 0.34625 | 0.33493 | 0.30026 | 0.33962 | AVRG | | 0.32048 | | 10.66708 | |
| 130 Chlorobenzilate | 0.25649 | 0.33866 | 0.35417 | 0.35247 | 0.31955 | 0.38201 | AVRG | | 0.33389 | | 12.91129 | |
| 131 Famphur | 0.26168 | 0.21117 | 0.15948 | 0.11849 | 0.08970 | +++++ | AVRG | | 0.16810 | | 41.31550 | <- |
| 132 3,3'-Dimethyl benzidine | 0.39286 | 0.46951 | 0.46397 | 0.47409 | 0.38184 | 0.35303 | AVRG | | 0.42255 | | 12.50052 | |
| 133 2-Acetylaminofluorene | +++++ | 0.33561 | 0.36277 | 0.44764 | 0.46990 | 0.42025 | AVRG | | 0.40723 | | 13.90989 | |
| 134 7,12-Dimethylbenz(a)anthracen | 0.38025 | 0.51901 | 0.56266 | 0.51265 | 0.53076 | 0.55180 | AVRG | | 0.50952 | | 12.98103 | |
| 135 Hexachlorophene | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | |
| 136 3-Methyl cholanthrene | 0.36691 | 0.51664 | 0.58259 | 0.61964 | 0.62507 | 0.62396 | AVRG | | 0.55580 | | 18.25076 | |

Z131011Z 420

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUL-2013 10:47
End Cal Date : 30-AUG-2013 13:26
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/MSSV4.i/2130830.s.b/8270D_04.m
Cal Date : 21-Oct-2013 12:29 kcb

| | Compound | 10 Level 4 | 50 Level 5 | 80 Level 6 | 120 Level 7 | 160 Level 8 | 200 Level 9 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 137 Acrylamide | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| | 138 N-Nitrosopyrrolidine | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| | 139 Pthalic Acid & Anhydride | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| | 140 1,4-Dinitrobenzene | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| | 141 Kepone | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| | 142 4,4Methylenebis2chloroanaline | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| | 143 Tris2,3Dibromopropylphosphate | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| | 144 Maleic Anhydride | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | |
| | 145 1-Methylnapthalene | 0.75438 | 0.62376 | 0.58393 | 0.58514 | 0.56215 | 0.55405 | AVRG | | 0.61057 | | 12.20132 | |
| M | 146 Total Methylnapthalene | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| | 147 N-methyldiethanolamine | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| | 148 A-Terpineol | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| | 149 3/4-Chlorophenol | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| | 151 2,3-Dichlorophenol | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| | 152 2,5-Dichlorophenol | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| | 153 3,4-Dichlorophenol | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| | 154 Dimethyl Benzyl Alcohol | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| | 155 Benzaldehyde | +++++ | 0.38622 | 0.26899 | 0.20225 | 0.17368 | 0.11539 | AVRG | | 0.22931 | | 45.21697 | <- |
| | 156 Caprolactam | 0.09232 | 0.07759 | 0.07685 | 0.07463 | 0.06708 | 0.06471 | AVRG | | 0.07553 | | 12.93319 | |
| | 157 Biphenyl | 0.96064 | 0.78355 | 0.73019 | 0.74812 | 0.70068 | 0.69369 | AVRG | | 0.76948 | | 12.89364 | |
| | 158 Atrazine | 0.21208 | 0.15952 | 0.15383 | 0.15780 | 0.15614 | 0.14867 | AVRG | | 0.16467 | | 14.28882 | |
| | 159 Dicyclopentadiene | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |

Z131017112 T21

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUL-2013 10:47
End Cal Date : 30-AUG-2013 13:26
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/MSSV4.i/2130830.s.b/8270D_04.m
Cal Date : 21-Oct-2013 12:29 kcb

| Compound | 10 Level 4 | 50 Level 5 | 80 Level 6 | 120 Level 7 | 160 Level 8 | 200 Level 9 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 169 Benzenethiol | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 170 Indene | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 171 Quinoline | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 172 Methyl Chrysene | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 173 Dibenz(a,h)acridine | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 174 1,4-Dioxane | 0.64359 | 0.55860 | 0.51824 | 0.46389 | 0.51106 | 0.48559 | AVRG | | 0.53016 | | 12.09554 | |
| 175 2,4and/or2,6-Diaminotoluene | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 185 2,3and/or3,4 Diaminotoluene | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 176 4-t-Butyl Phenol | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 177 1,2,3,4-Tetrachlorobenzene | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 178 2-Phenyl Phenol | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 179 Ronnel | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 180 Hexabromobenzene | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 181 Tolylene 2,6-Diisocyanate | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 182 Tolylene 2,4-Diisocyanate | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 183 Tolylene 2,5-diisocyanate | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| M 184 Tolylene Diisocyanate | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 186 Benzothiazole | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 187 2-3H Benzothiazolone | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 188 2-3H Benzothiazolethione | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 189 2-tet-Butyl-4-methylphenol | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 190 Methylbenzothiazole | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |

Z131017Z 422

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUL-2013 10:47
End Cal Date : 30-AUG-2013 13:26
Quant Method : ISTD
Target Version : 3.50
Integrator : HP RTE
Method file : /var/chem/MSSV4.i/2130830.s.b/8270D_04.m
Cal Date : 21-Oct-2013 12:29 kcb

| Compound | 10 Level 4 | 50 Level 5 | 80 Level 6 | 120 Level 7 | 160 Level 8 | 200 Level 9 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 191 2,3,4-Trichlorophenol | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 192 2,3,5,6-Tetrachlorophenol | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 193 3,4,5-Trichlorophenol | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 194 Diphenyl Ether | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 195 2,5/2,4-Dichlorophenol | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 196 2,3,4,5-Tetrachlorophenol | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 197 Dimethylformamide | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 198 4,4-Isopropylidene | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 199 1,2,3,4-tetrahyrdronapthalene | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| 200 Decane | 0.90740 | 0.81595 | 0.85111 | 0.82208 | 0.79245 | 0.77638 | AVRG | | 0.82756 | | 5.65360 | |
| 201 Octadecane | 0.74423 | 0.80985 | 0.79873 | 0.88735 | 0.76813 | 0.73858 | AVRG | | 0.79115 | | 6.95940 | |
| 202 1,2-Dinitrobenzene | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| M 203 TOTAL PAHS | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 | <- |
| $ 3 2-Fluorophenol | 1.58632 | 1.34397 | 1.25919 | 1.23678 | 1.20534 | 1.13530 | AVRG | | 1.29448 | | 12.23781 | |
| $ 4 Phenol-d5 | 1.74962 | 1.46885 | 1.40315 | 1.30862 | 1.25446 | 1.20306 | AVRG | | 1.39796 | | 14.13659 | |
| $ 19 Nitrobenzene-d5 | 0.39201 | 0.33869 | 0.31454 | 0.32607 | 0.31561 | 0.30420 | AVRG | | 0.33185 | | 9.55434 | |
| $ 37 2-Fluorobiphenyl | 1.62069 | 1.39857 | 1.27319 | 1.23505 | 1.25909 | 1.26895 | AVRG | | 1.34259 | | 11.01001 | |
| $ 57 2,4,6-Tribromophenol | 0.22966 | 0.21270 | 0.20059 | 0.20687 | 0.20569 | 0.20166 | AVRG | | 0.20953 | | 5.13661 | |
| $ 70 Terphenyl-d14 | 0.96871 | 0.82547 | 0.75905 | 0.74717 | 0.76178 | 0.73710 | AVRG | | 0.79988 | | 11.04072 | |

423

Data File: /var/chem/MSSV4.i/2130830.s.b/h4414x.d



Date : 30-AUG-2013 11:07

Client ID: DFTPP

Instrument: MSSV4.i

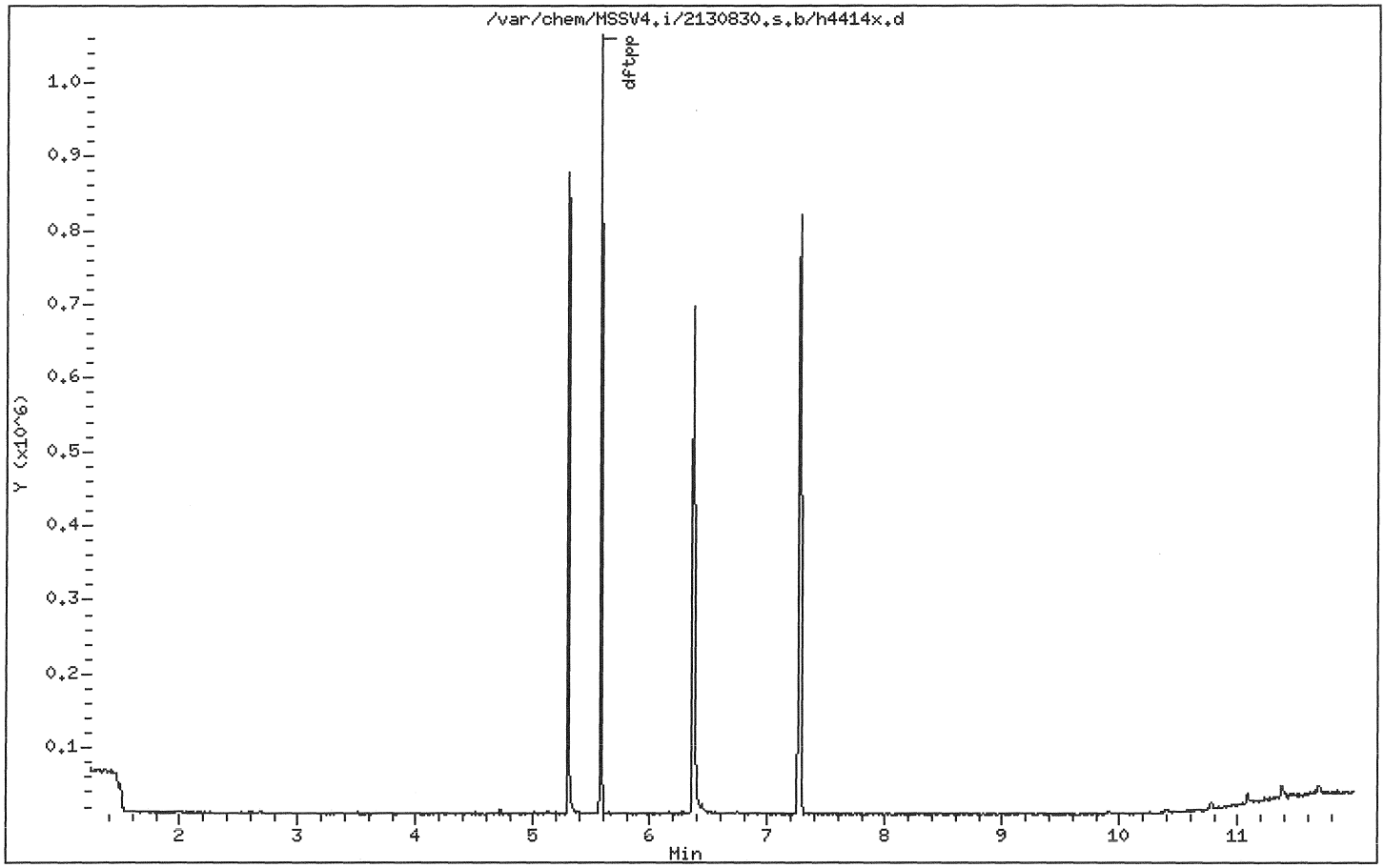
Sample Info: 1100*48-13-13

Volume Injected (uL): 1.0

Operator: dlb

Column phase: RTX-5MS-30M

Column diameter: 2.00



Data File: /var/chem/MSSV4.i/2130830.s.b/h4414x.d



Date : 30-AUG-2013 11:07

Client ID: DFTPP

Instrument: MSSV4.i

Sample Info: 1100ng48-13-13

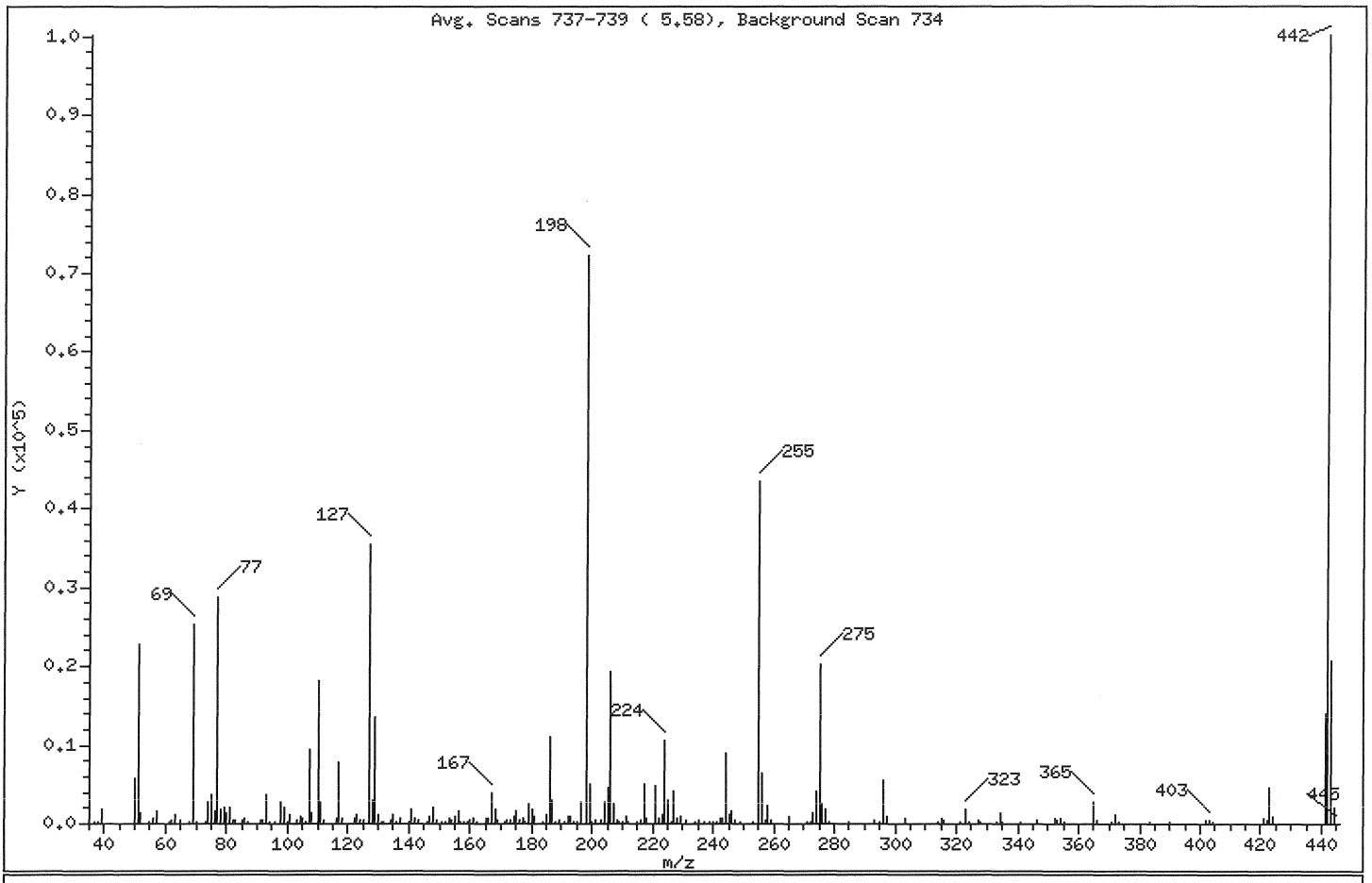
Volume Injected (uL): 1.0

Operator: dlb

Column phase: RTX-5MS-30M

Column diameter: 2.00

1 dftpp




| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 198 | Base Peak, 100% relative abundance | 100.00 |
| 51 | 30.00 - 60.00% of mass 198 | 31.36 |
| 68 | Less than 2.00% of mass 69 | 0.16 ( 0.46) |
| 69 | Mass 69 relative abundance | 35.02 |
| 70 | Less than 2.00% of mass 69 | 0.21 ( 0.59) |
| 127 | 40.00 - 60.00% of mass 198 | 49.01 |
| 197 | Less than 1.00% of mass 198 | 0.00 |
| 199 | 5.00 - 9.00% of mass 198 | 7.05 |
| 275 | 10.00 - 30.00% of mass 198 | 28.01 |
| 365 | Greater than 1.00% of mass 198 | 3.69 |
| 441 | Present, but less than mass 443 | 19.43 |
| 442 | Greater than 40.00% of mass 198 | 138.34 |
| 443 | 17.00 - 23.00% of mass 442 | 28.50 ( 20.60) |

Data File: /var/chem/MSSV4.i/2130830.s.b/h4414x.d

Date : 30-AUG-2013 11:07

Client ID: DFTPP

Instrument: MSSV4.i

Sample Info: 1100*48-13-13

Volume Injected (uL): 1.0

Operator: dlb

Column phase: RTX-5MS-30M

Column diameter: 2.00

Data File: h4414x.d
Spectrum: Avg. Scans 737-739 ( 5.58), Background Scan 734
Location of Maximum: 442.00
Number of points: 245

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 36.00 | 58 | 124.00 | 366 | 191.00 | 332 | 273.00 | 1477 |
| 37.00 | 126 | 125.00 | 443 | 192.00 | 856 | 274.00 | 4101 |
| 38.00 | 323 | 127.00 | 35480 | 193.00 | 871 | 275.00 | 20272 |
| 39.00 | 1857 | 128.00 | 3061 | 194.00 | 194 | 276.00 | 2475 |
| 43.00 | 72 | 129.00 | 13530 | 195.00 | 171 | 277.00 | 1851 |
| 44.00 | 39 | 130.00 | 1138 | 196.00 | 2720 | 278.00 | 236 |
| 50.00 | 5797 | 131.00 | 251 | 198.00 | 72392 | 283.00 | 51 |
| 51.00 | 22704 | 132.00 | 157 | 199.00 | 5103 | 284.00 | 80 |
| 52.00 | 1326 | 134.00 | 414 | 200.00 | 337 | 285.00 | 255 |
| 55.00 | 227 | 135.00 | 1232 | 201.00 | 531 | 286.00 | 53 |
| 56.00 | 740 | 136.00 | 328 | 203.00 | 519 | 293.00 | 415 |
| 57.00 | 1507 | 137.00 | 664 | 204.00 | 2864 | 295.00 | 181 |
| 61.00 | 340 | 139.00 | 68 | 205.00 | 4629 | 296.00 | 5522 |
| 62.00 | 439 | 140.00 | 117 | 206.00 | 19280 | 297.00 | 843 |
| 63.00 | 1086 | 141.00 | 1742 | 207.00 | 2516 | 303.00 | 617 |
| 65.00 | 512 | 142.00 | 695 | 208.00 | 555 | 304.00 | 82 |
| 68.00 | 116 | 143.00 | 447 | 209.00 | 201 | 314.00 | 315 |
| 69.00 | 25344 | 144.00 | 50 | 210.00 | 219 | 315.00 | 648 |
| 70.00 | 150 | 145.00 | 87 | 211.00 | 808 | 316.00 | 427 |
| 73.00 | 204 | 146.00 | 336 | 212.00 | 130 | 317.00 | 51 |
| 74.00 | 2786 | 147.00 | 861 | 215.00 | 159 | 321.00 | 230 |
| 75.00 | 3735 | 148.00 | 2053 | 216.00 | 472 | 322.00 | 82 |
| 76.00 | 1578 | 149.00 | 429 | 217.00 | 5018 | 323.00 | 1887 |
| 77.00 | 28856 | 150.00 | 71 | 218.00 | 759 | 324.00 | 332 |
| 78.00 | 1804 | 151.00 | 338 | 220.00 | 71 | 327.00 | 429 |
| 79.00 | 2054 | 152.00 | 175 | 221.00 | 4824 | 328.00 | 150 |
| 80.00 | 1288 | 153.00 | 594 | 222.00 | 609 | 332.00 | 104 |
| 81.00 | 2183 | 154.00 | 428 | 223.00 | 1100 | 333.00 | 170 |
| 82.00 | 549 | 155.00 | 896 | 224.00 | 10650 | 334.00 | 1294 |
| 83.00 | 458 | 156.00 | 1721 | 225.00 | 2930 | 335.00 | 325 |
| 85.00 | 446 | 157.00 | 270 | 226.00 | 335 | 341.00 | 292 |
| 86.00 | 658 | 158.00 | 327 | 227.00 | 4154 | 346.00 | 438 |
| 87.00 | 291 | 159.00 | 208 | 228.00 | 637 | 352.00 | 662 |
| 89.00 | 57 | 160.00 | 567 | 229.00 | 889 | 353.00 | 545 |
| 91.00 | 514 | 161.00 | 722 | 230.00 | 79 | 354.00 | 599 |

Data File: /var/chem/MSSV4.i/2130830.s.b/h4414x.d

Date : 30-AUG-2013 11:07

Client ID: DFTPP

Instrument: MSSV4.i

Sample Info: 1100*48-13-13

Volume Injected (uL): 1.0

Operator: dlb

Column phase: RTX-5MS-30M

Column diameter: 2.00

Data File: h4414x.d
Spectrum: Avg. Scans 737-739 ( 5.58), Background Scan 734
Location of Maximum: 442.00
Number of points: 245

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 92.00 | 560 | 162.00 | 176 | 231.00 | 454 | 355.00 | 149 |
| 93.00 | 3616 | 163.00 | 57 | 234.00 | 281 | 365.00 | 2669 |
| 94.00 | 160 | 164.00 | 114 | 235.00 | 369 | 366.00 | 381 |
| 96.00 | 208 | 165.00 | 717 | 236.00 | 114 | 371.00 | 148 |
| 97.00 | 76 | 166.00 | 715 | 237.00 | 325 | 372.00 | 1199 |
| 98.00 | 2769 | 167.00 | 3814 | 239.00 | 169 | 373.00 | 305 |
| 99.00 | 1992 | 168.00 | 1760 | 240.00 | 119 | 383.00 | 288 |
| 100.00 | 183 | 169.00 | 347 | 241.00 | 276 | 384.00 | 56 |
| 101.00 | 1055 | 171.00 | 135 | 242.00 | 620 | 390.00 | 180 |
| 103.00 | 427 | 172.00 | 413 | 243.00 | 694 | 402.00 | 467 |
| 104.00 | 850 | 173.00 | 469 | 244.00 | 8898 | 403.00 | 516 |
| 105.00 | 734 | 174.00 | 828 | 245.00 | 1197 | 404.00 | 188 |
| 106.00 | 256 | 175.00 | 1511 | 246.00 | 1672 | 421.00 | 612 |
| 107.00 | 9456 | 176.00 | 422 | 247.00 | 411 | 422.00 | 561 |
| 108.00 | 1368 | 177.00 | 683 | 248.00 | 56 | 423.00 | 4522 |
| 109.00 | 92 | 178.00 | 251 | 249.00 | 328 | 424.00 | 863 |
| 110.00 | 18288 | 179.00 | 2458 | 253.00 | 246 | 425.00 | 67 |
| 111.00 | 2766 | 180.00 | 1819 | 255.00 | 43568 | 438.00 | 52 |
| 112.00 | 412 | 181.00 | 964 | 256.00 | 6457 | 440.00 | 105 |
| 113.00 | 74 | 182.00 | 70 | 257.00 | 493 | 441.00 | 14068 |
| 115.00 | 60 | 184.00 | 279 | 258.00 | 2353 | 442.00 | 100144 |
| 116.00 | 612 | 185.00 | 1229 | 259.00 | 429 | 443.00 | 20632 |
| 117.00 | 7835 | 186.00 | 11009 | 264.00 | 88 | 444.00 | 2187 |
| 118.00 | 652 | 187.00 | 2991 | 265.00 | 974 | 445.00 | 55 |
| 119.00 | 52 | 188.00 | 175 | 266.00 | 20 | | |
| 122.00 | 774 | 189.00 | 522 | 271.00 | 160 | | |
| 123.00 | 1135 | 190.00 | 64 | 272.00 | 181 | | |

GCAL, Inc.

BNA QUANT AND RATIO REPORT

Data file : /var/chem/MSSV4.i/2130830.s.b/h4416x.d
Lab Smp Id: 1205 Client Smp ID: STD050
Inj Date : 30-AUG-2013 11:47
Operator : dlb Inst ID: MSSV4.i
Smp Info : 1205*48-28-1
Misc Info : STD050*MSSV~9886~*
Comment :
Method : /var/chem/MSSV4.i/2130830.s.b/8270D_04.m
Meth Date : 21-Oct-2013 12:29 kcb Quant Type: ISTD
Cal Date : 09-JUL-2013 00:02 Cal File: h2759x.d
Als bottle: 2 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270c.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | ng unit correction factor |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppm) | AMOUNTS ON-COL ( ppm) |
|---|---|---|---|---|---|---|---|
| 2 Pyridine | 79 | 1.419 | 1.419 | (0.531) | 129241 | 50.0000 | 53.5 |
| 1 n-Nitrosodimethylamine | 42 | 1.396 | 1.396 | (0.522) | 53359 | 50.0000 | 51.8 |
| $ 3 2-Fluorophenol | 112 | 2.025 | 2.025 | (0.758) | 122195 | 50.0000 | 51.9 |
| $ 4 Phenol-d5 | 99 | 2.496 | 2.496 | (0.934) | 133550 | 50.0000 | 52.5 |
| 5 Aniline | 93 | 2.502 | 2.502 | (0.936) | 140861 | 50.0000 | 52.8 |
| 6 Phenol + | 94 | 2.507 | 2.507 | (0.938) | 155051 | 50.0000 | 53.9 |
| 7 bis(-2-Chloroethyl)Ether | 63 | 2.531 | 2.531 | (0.947) | 74490 | 50.0000 | 53.2 |
| 8 2-Chlorophenol | 128 | 2.578 | 2.578 | (0.965) | 125692 | 50.0000 | 51.8 |
| 9 1,3-Dichlorobenzene | 146 | 2.643 | 2.643 | (0.989) | 139196 | 50.0000 | 50.8 |
| * 10 1,4-Dichlorobenzene-d4 | 152 | 2.672 | 2.672 | (1.000) | 72737 | 40.0000 | |
| 11 1,4-Dichlorobenzene + | 146 | 2.684 | 2.684 | (1.004) | 143095 | 50.0000 | 51.6 |
| 12 Benzyl alcohol | 108 | 2.760 | 2.760 | (1.033) | 65571 | 50.0000 | 50.2 |
| 13 1,2-Dichlorobenzene | 146 | 2.772 | 2.772 | (1.037) | 135688 | 50.0000 | 51.7 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppm) | AMOUNTS ON-COL ( ppm) |
|---|---|---|---|---|---|---|---|---|
| | 15 2-Methylphenol | 107 | 2.837 | 2.837 | (1.062) | 107133 | 50.0000 | 52.1 |
| | 14 Bis(2-chloroisopropyl)ether | 45 | 2.825 | 2.825 | (1.057) | 116217 | 50.0000 | 51.7 |
| | 17 3- & 4-Methylphenol | 107 | 2.931 | 2.931 | (1.097) | 105636 | 50.0000 | 50.1 |
| | 16 N-Nitroso-di-n-propylamine++ | 70 | 2.907 | 2.907 | (1.088) | 75921 | 50.0000 | 51.6 |
| | 18 Hexachloroethane | 117 | 2.960 | 2.960 | (1.108) | 50772 | 50.0000 | 50.2 |
| $ | 19 Nitrobenzene-d5 | 82 | 2.990 | 2.990 | (0.877) | 110846 | 50.0000 | 51.0 |
| | 20 Nitrobenzene | 77 | 3.001 | 3.001 | (0.881) | 108202 | 50.0000 | 51.2 |
| | 21 Isophorone | 82 | 3.149 | 3.149 | (0.924) | 173631 | 50.0000 | 51.9 |
| | 22 2-Nitrophenol + | 139 | 3.190 | 3.190 | (0.936) | 65777 | 50.0000 | 51.7 |
| | 23 2,4-Dimethyphenol | 107 | 3.231 | 3.231 | (0.948) | 115813 | 50.0000 | 52.4 |
| | 24 bis(-2-Chloroethoxy)methane | 93 | 3.266 | 3.266 | (0.959) | 120583 | 50.0000 | 51.5 |
| | 25 Benzoic Acid | 122 | 3.313 | 3.313 | (0.972) | 65661 | 50.0000 | 50.6 |
| | 26 2,4-Dichlorophenol + | 162 | 3.354 | 3.354 | (0.984) | 97648 | 50.0000 | 51.4 |
| | 27 1,2,4-Trichlorobenzene | 180 | 3.378 | 3.378 | (0.991) | 108733 | 50.0000 | 51.2 |
| * | 28 Naphthalene-d8 | 136 | 3.407 | 3.407 | (1.000) | 261823 | 40.0000 | |
| | 29 Naphthalene | 128 | 3.419 | 3.419 | (1.003) | 353450 | 50.0000 | 52.0 |
| | 30 4-Chloroaniline | 127 | 3.472 | 3.472 | (1.019) | 115020 | 50.0000 | 52.0 |
| | 31 Hexachlorobutadiene + | 225 | 3.496 | 3.496 | (1.026) | 69106 | 50.0000 | 50.1 |
| | 32 4-Chloro-3-Methylphenol + | 107 | 3.784 | 3.784 | (1.110) | 88184 | 50.0000 | 51.0 |
| | 33 2-Methylnaphthalene | 142 | 3.843 | 3.843 | (1.128) | 217549 | 50.0000 | 52.3 |
| | 145 1-Methylnapthalene | 142 | 3.901 | 3.901 | (1.145) | 204145 | 50.0000 | 51.1 |
| | 34 Hexachlorocyclopentadiene ++ | 237 | 3.937 | 3.937 | (0.879) | 76808 | 50.0000 | 51.3 |
| | 35 2,4,6-Trichlorophenol + | 196 | 4.031 | 4.031 | (0.900) | 68755 | 50.0000 | 51.1 |
| | 36 2,4,5-Trichlorphenol | 196 | 4.066 | 4.066 | (0.908) | 70137 | 50.0000 | 50.5 |
| $ | 37 2-Fluorobiphenyl | 172 | 4.066 | 4.066 | (0.908) | 247719 | 50.0000 | 52.1 |
| | 38 2-Chloronaphthalene | 162 | 4.137 | 4.137 | (0.924) | 202796 | 50.0000 | 50.5 |
| | 39 2-Nitroaniline | 138 | 4.213 | 4.213 | (0.941) | 66252 | 50.0000 | 51.1 |
| | 40 Dimethylphthalate | 163 | 4.319 | 4.319 | (0.965) | 222360 | 50.0000 | 50.8 |
| | 41 2,6-Dinitrotoluene | 165 | 4.354 | 4.354 | (0.972) | 49201 | 50.0000 | 51.0 |
| | 42 Acenaphthylene | 152 | 4.390 | 4.390 | (0.980) | 312232 | 50.0000 | 50.3 |
| | 43 3-Nitroaniline | 138 | 4.466 | 4.466 | (0.997) | 50838 | 50.0000 | 52.4 |
| * | 44 Acenaphthene-d10 | 164 | 4.478 | 4.478 | (1.000) | 141698 | 40.0000 | |
| | 45 Acenaphthene + | 153 | 4.495 | 4.495 | (1.004) | 207693 | 50.0000 | 51.6 |
| | 46 2,4-Dinitrophenol ++ | 184 | 4.537 | 4.537 | (1.013) | 33887 | 50.0000 | 47.6 |
| | 49 4-Nitrophenol ++ | 109 | 4.613 | 4.613 | (1.030) | 28973 | 50.0000 | 51.3 |
| | 47 Dibenzofuran | 168 | 4.601 | 4.601 | (1.028) | 281874 | 50.0000 | 51.0 |
| | 48 2,4-Dinitrotoluene | 165 | 4.607 | 4.607 | (1.029) | 63764 | 50.0000 | 50.6 |
| | 50 Diethylphthalate | 149 | 4.748 | 4.748 | (1.060) | 204185 | 50.0000 | 49.9 |
| | 52 4-Chlorophenyl-phenylether | 204 | 4.813 | 4.813 | (1.075) | 113295 | 50.0000 | 52.7 |
| | 51 Fluorene | 166 | 4.813 | 4.813 | (1.075) | 224349 | 50.0000 | 51.0 |
| | 53 4-Nitroaniline | 138 | 4.854 | 4.854 | (1.084) | 46809 | 50.0000 | 50.3 |
| | 54 4,6-Dinitro-o-cresol | 198 | 4.866 | 4.866 | (0.903) | 43928 | 50.0000 | 50.3 |
| | 55 N-nitrosodiphenylamine (1)+ | 169 | 4.890 | 4.890 | (0.907) | 162393 | 50.0000 | 49.9 |
| | 56 Azobenzene | 77 | 4.907 | 4.907 | (0.910) | 189395 | 50.0000 | 51.1(M1) |
| $ | 57 2,4,6-Tribromophenol | 332 | 4.972 | 4.972 | (1.110) | 37674 | 50.0000 | 50.8 |
| | 58 4-Bromophenyl-phenylether | 248 | 5.113 | 5.113 | (0.949) | 67856 | 50.0000 | 50.4 |
| | 59 Hexachlorobenzene | 284 | 5.160 | 5.160 | (0.957) | 72740 | 50.0000 | 48.4 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppm) | AMOUNTS ON-COL ( ppm) |
|---|---|---|---|---|---|---|---|---|
| | 60 Pentachlorophenol + | 266 | 5.295 | 5.295 | (0.983) | 50010 | 50.0000 | 51.4 |
| * | 61 Phenanthrene-d10 | 188 | 5.390 | 5.390 | (1.000) | 222735 | 40.0000 | |
| | 62 Phenanthrene | 178 | 5.407 | 5.407 | (1.003) | 308663 | 50.0000 | 50.5 |
| | 63 Anthracene | 178 | 5.437 | 5.437 | (1.009) | 299781 | 50.0000 | 49.2 |
| | 64 Carbazole | 167 | 5.548 | 5.548 | (1.029) | 275520 | 50.0000 | 49.0 |
| | 65 Di-n-butylphthalate | 149 | 5.766 | 5.766 | (1.070) | 323460 | 50.0000 | 48.6 |
| | 67 Fluoranthene + | 202 | 6.242 | 6.242 | (1.158) | 321018 | 50.0000 | 48.9 |
| | 68 Benzidine | 184 | 6.372 | 6.372 | (0.803) | 39952 | 50.0000 | 72.3 |
| | 69 Pyrene | 202 | 6.442 | 6.442 | (0.812) | 330697 | 50.0000 | 51.8 |
| $ | 70 Terphenyl-d14 | 244 | 6.589 | 6.589 | (0.831) | 216210 | 50.0000 | 51.6 |
| | 71 Butylbenzylphthalate | 149 | 7.166 | 7.166 | (0.904) | 137229 | 50.0000 | 50.2 |
| | 73 3,3'-Dichlorobenzidine | 252 | 7.919 | 7.919 | (0.999) | 88789 | 50.0000 | 52.5 |
| | 72 Benzo(a)anthracene | 228 | 7.913 | 7.913 | (0.998) | 286709 | 50.0000 | 51.1 |
| * | 74 Chrysene-d12 | 240 | 7.931 | 7.931 | (1.000) | 209538 | 40.0000 | |
| | 76 bis(2-Ethylhexyl)phthalate | 149 | 8.095 | 8.095 | (1.021) | 171985 | 50.0000 | 49.9 |
| | 75 Chrysene | 228 | 7.972 | 7.972 | (1.005) | 290182 | 50.0000 | 50.8 |
| | 77 Di-n-octylphthalate + | 149 | 9.413 | 9.413 | (1.187) | 260379 | 50.0000 | 48.8 |
| | 78 Benzo(b)fluoranthene | 252 | 9.901 | 9.901 | (0.949) | 260346 | 50.0000 | 50.4 |
| | 79 Benzo(k)fluoranthene | 252 | 9.948 | 9.948 | (0.953) | 315074 | 50.0000 | 51.7 |
| | 80 Benzo(a)pyrene + | 252 | 10.360 | 10.360 | (0.993) | 263711 | 50.0000 | 51.0 |
| * | 81 Perylene-d12 | 264 | 10.436 | 10.436 | (1.000) | 208555 | 40.0000 | |
| | 82 Indeno(1,2,3-cd)pyrene | 276 | 11.460 | 11.460 | (1.098) | 238583 | 50.0000 | 50.4(M2) |
| | 83 Dibenzo(a,h)anthracene | 278 | 11.483 | 11.483 | (1.100) | 274940 | 50.0000 | 48.9 |
| | 84 Benzo(g,h,i)perylene | 276 | 11.695 | 11.695 | (1.121) | 297223 | 50.0000 | 48.1 |
| M | 66 Total Methylphenol | 108 | | | | 212769 | 100.000 | 102 |
| | 91 Acetophenone | 105 | 2.901 | 2.901 | (1.086) | 139518 | 50.0000 | 51.3 |
| | 155 Benzaldehyde | 77 | 2.449 | 2.449 | (0.916) | 35116 | 50.0000 | 84.2(M2) |
| | 156 Caprolactam | 113 | 3.690 | 3.690 | (1.083) | 25392 | 50.0000 | 51.4 |
| | 157 Biphenyl | 154 | 4.125 | 4.125 | (1.211) | 256440 | 50.0000 | 50.9 |
| | 158 Atrazine | 200 | 5.225 | 5.225 | (0.969) | 44413 | 50.0000 | 48.4 |
| | 174 1,4-Dioxane | 88 | 1.272 | 1.272 | (0.476) | 50789 | 50.0000 | 52.7 |

## QC Flag Legend

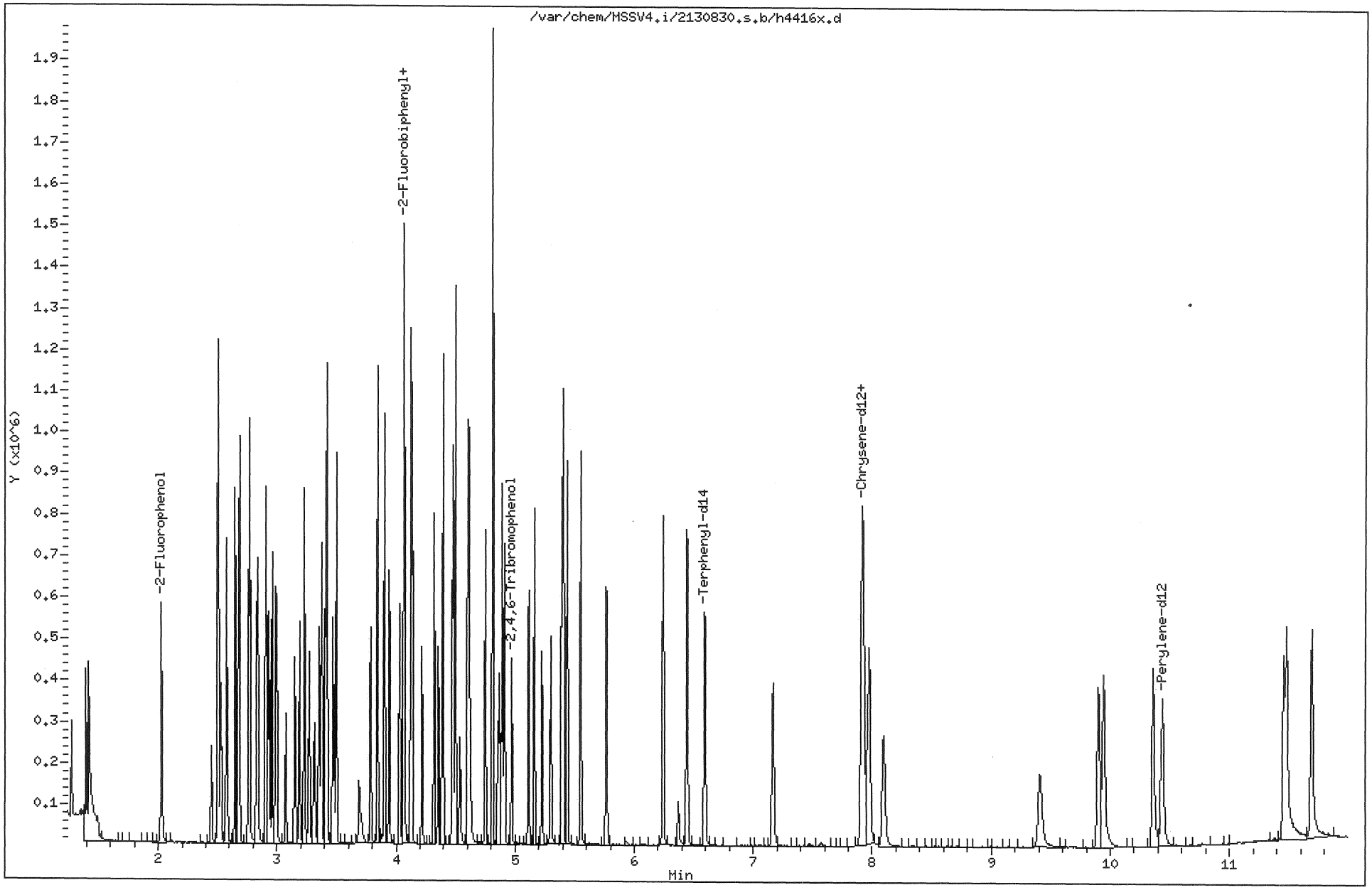
M1- Compound response manually integrated because Target system did not integrate.
M2- Compound response manually integrated because Target system integrated incorrectly.

Data File: /var/chem/MSSV4.i/2130830.s.b/h4416x.d
Date : 30-AUG-2013 11:47
Client ID: STD050
Sample Info: 1205x48-28-1
Volume Injected (uL): 1.0
Column phase: RTX-5MS-30M

Instrument: MSSV4.i

Operator: dlb
Column diameter: 0.25

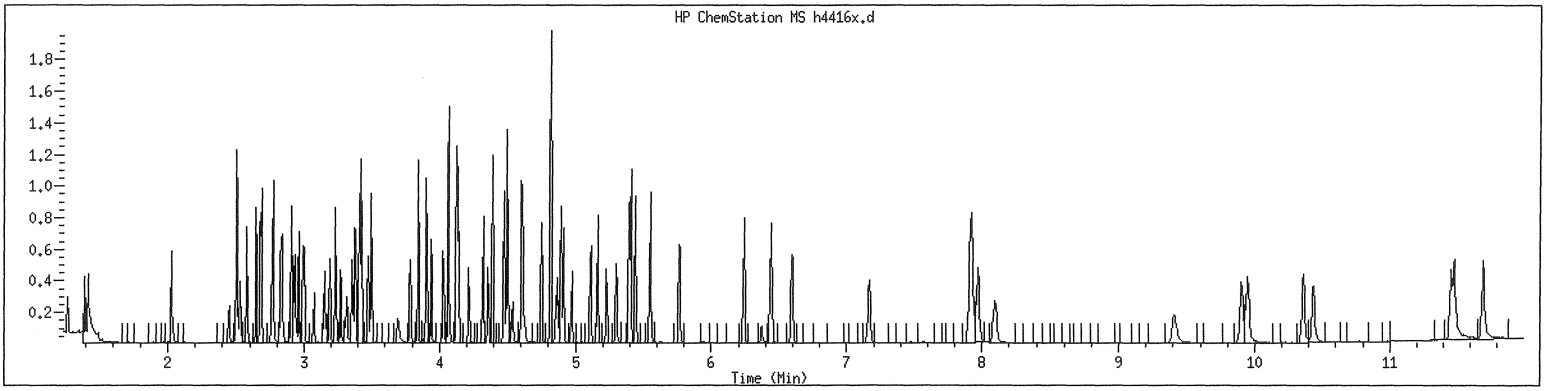





2131071 2 431

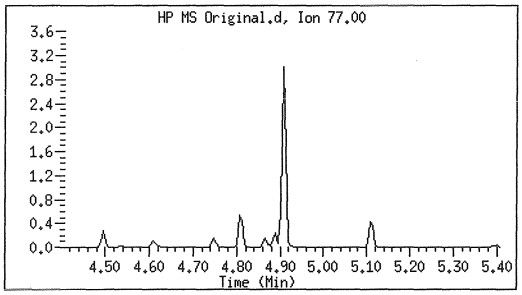
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1205 | SampleType | : CALIB_5 |
| Injection Date | : 08/30/2013 11:47 | Instrument | : MSSV4.i |
| Operator | : dlb | | |
| Sample Info | : 1205*48-28-1 | | |
| Misc Info | : STD050*MSSV~9886~* | | |
| Method | : /var/chem/MSSV4.i/2130830.s.b/8270D_04.m | | |
| Dilution | : 1.00 | | |
| Matrix | : WATER | | |
| Integrator | : HP RTE | Compound Sublist | : 8270c |



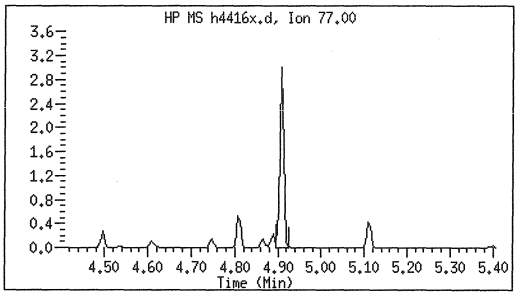

Original Final

56 Azobenzene CAS#: 122-66-7 Reason: M1

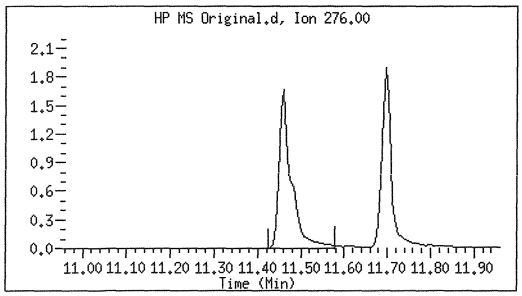



Electronic Signature Applied

User: dlb
Date: 08/30/2013 13:49

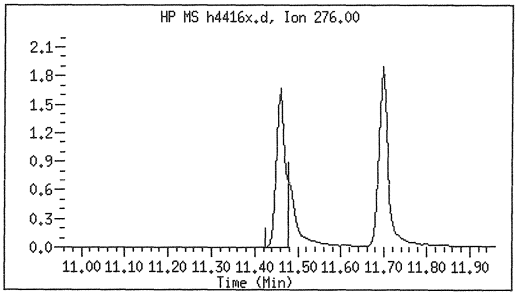



82 Indeno(1,2,3-cd)pyrene CAS#: 193-39-5 Reason: M3



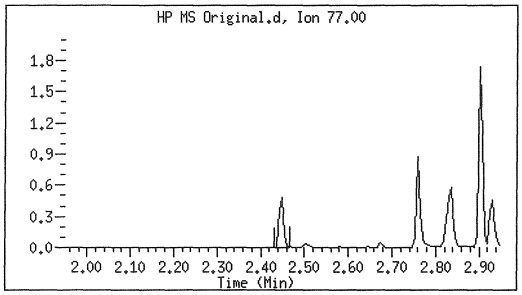

Electronic Signature Applied

User: dlb
Date: 08/30/2013 13:51



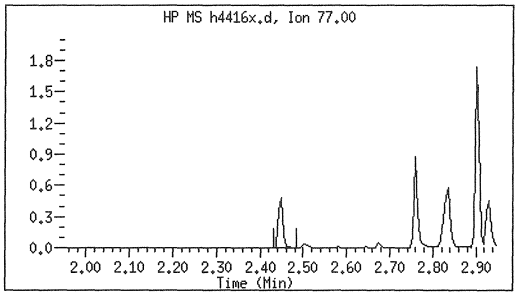
Original | Final

155 Benzaldehyde CAS#: 100-52-7 Reason: M3




Electronic Signature Applied

User: dlb
Date: 09/03/2013 07:29




M2 - Target system integrated incorrectly

GCAL, Inc.

BNA QUANT AND RATIO REPORT

Data file : /var/chem/MSSV4.i/2130830.s.b/h4417x.d
Lab Smp Id: 1206 Client Smp ID: STD080
Inj Date : 30-AUG-2013 12:06
Operator : dlb Inst ID: MSSV4.i
Smp Info : 1206*48-28-3
Misc Info : STD080*MSSV~9886~*
Comment :
Method : /var/chem/MSSV4.i/2130830.s.b/8270D_04.m
Meth Date : 04-Sep-2013 07:29 dlb Quant Type: ISTD
Cal Date : 09-JUL-2013 00:41 Cal File: h2761x.d
Als bottle: 4 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270c.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | ng unit correction factor |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppm) | AMOUNTS ON-COL ( ppm) |
|---|---|---|---|---|---|---|---|
| 2 Pyridine | 79 | 1.419 | 1.419 | (0.531) | 169543 | 80.0000 | 75.8 |
| 1 n-Nitrosodimethylamine | 42 | 1.396 | 1.396 | (0.522) | 75657 | 80.0000 | 79.3 |
| $ 3 2-Fluorophenol | 112 | 2.025 | 2.025 | (0.758) | 169646 | 80.0000 | 77.8 |
| $ 4 Phenol-d5 | 99 | 2.496 | 2.496 | (0.934) | 189041 | 80.0000 | 80.3 |
| 5 Aniline | 93 | 2.501 | 2.501 | (0.936) | 186721 | 80.0000 | 83.6 |
| 6 Phenol + | 94 | 2.501 | 2.501 | (0.936) | 209726 | 80.0000 | 78.7 |
| 7 bis(-2-Chloroethyl)Ether | 63 | 2.525 | 2.525 | (0.945) | 100041 | 80.0000 | 77.2 |
| 8 2-Chlorophenol | 128 | 2.578 | 2.578 | (0.965) | 174680 | 80.0000 | 77.8 |
| 9 1,3-Dichlorobenzene | 146 | 2.643 | 2.643 | (0.989) | 197361 | 80.0000 | 77.8 |
| * 10 1,4-Dichlorobenzene-d4 | 152 | 2.672 | 2.672 | (1.000) | 67363 | 40.0000 | |
| 11 1,4-Dichlorobenzene + | 146 | 2.684 | 2.684 | (1.004) | 199452 | 80.0000 | 77.6 |
| 12 Benzyl alcohol | 108 | 2.760 | 2.760 | (1.033) | 97997 | 80.0000 | 81.0 |
| 13 1,2-Dichlorobenzene | 146 | 2.772 | 2.772 | (1.037) | 182486 | 80.0000 | 75.0 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppm) | AMOUNTS ON-COL ( ppm) |
|---|---|---|---|---|---|---|---|---|
| | 15 2-Methylphenol | 107 | 2.837 | 2.837 | (1.062) | 150206 | 80.0000 | 78.9 |
| | 14 Bis(2-chloroisopropyl)ether | 45 | 2.825 | 2.825 | (1.057) | 162421 | 80.0000 | 78.0 |
| | 17 3- & 4-Methylphenol | 107 | 2.925 | 2.925 | (1.095) | 155143 | 80.0000 | 79.4 |
| | 16 N-Nitroso-di-n-propylamine++ | 70 | 2.907 | 2.907 | (1.088) | 106951 | 80.0000 | 78.5 |
| | 18 Hexachloroethane | 117 | 2.960 | 2.960 | (1.108) | 70659 | 80.0000 | 75.5 |
| $ | 19 Nitrobenzene-d5 | 82 | 2.990 | 2.990 | (0.877) | 159054 | 80.0000 | 75.8 |
| | 20 Nitrobenzene | 77 | 3.001 | 3.001 | (0.881) | 153379 | 80.0000 | 75.2 |
| | 21 Isophorone | 82 | 3.143 | 3.143 | (0.922) | 248487 | 80.0000 | 76.9 |
| | 22 2-Nitrophenol + | 139 | 3.190 | 3.190 | (0.936) | 93244 | 80.0000 | 75.9 |
| | 23 2,4-Dimethyphenol | 107 | 3.231 | 3.231 | (0.948) | 165351 | 80.0000 | 77.4 |
| | 24 bis(-2-Chloroethoxy)methane | 93 | 3.266 | 3.266 | (0.959) | 171736 | 80.0000 | 75.9 |
| | 25 Benzoic Acid | 122 | 3.319 | 3.319 | (0.974) | 96357 | 80.0000 | 77.0 |
| | 26 2,4-Dichlorophenol + | 162 | 3.348 | 3.348 | (0.983) | 142509 | 80.0000 | 77.7 |
| | 27 1,2,4-Trichlorobenzene | 180 | 3.372 | 3.372 | (0.990) | 154893 | 80.0000 | 75.5 |
| * | 28 Naphthalene-d8 | 136 | 3.407 | 3.407 | (1.000) | 252836 | 40.0000 | |
| | 29 Naphthalene | 128 | 3.419 | 3.419 | (1.003) | 491914 | 80.0000 | 74.9 |
| | 30 4-Chloroaniline | 127 | 3.472 | 3.472 | (1.019) | 166463 | 80.0000 | 78.0 |
| | 31 Hexachlorobutadiene + | 225 | 3.495 | 3.495 | (1.026) | 100385 | 80.0000 | 75.3 |
| | 32 4-Chloro-3-Methylphenol + | 107 | 3.778 | 3.778 | (1.109) | 130134 | 80.0000 | 78.0 |
| | 33 2-Methylnaphthalene | 142 | 3.843 | 3.843 | (1.128) | 309816 | 80.0000 | 77.1 |
| | 145 1-Methylnapthalene | 142 | 3.901 | 3.901 | (1.145) | 295275 | 80.0000 | 76.5 |
| | 34 Hexachlorocyclopentadiene ++ | 237 | 3.937 | 3.937 | (0.879) | 113134 | 80.0000 | 76.4 |
| | 35 2,4,6-Trichlorophenol + | 196 | 4.025 | 4.025 | (0.899) | 99241 | 80.0000 | 74.6 |
| | 36 2,4,5-Trichlorphenol | 196 | 4.066 | 4.066 | (0.908) | 105235 | 80.0000 | 76.7 |
| $ | 37 2-Fluorobiphenyl | 172 | 4.060 | 4.060 | (0.907) | 356656 | 80.0000 | 75.9 |
| | 38 2-Chloronaphthalene | 162 | 4.137 | 4.137 | (0.924) | 299887 | 80.0000 | 75.6 |
| | 39 2-Nitroaniline | 138 | 4.213 | 4.213 | (0.941) | 98764 | 80.0000 | 77.0 |
| | 40 Dimethylphthalate | 163 | 4.319 | 4.319 | (0.965) | 328957 | 80.0000 | 76.0 |
| | 41 2,6-Dinitrotoluene | 165 | 4.354 | 4.354 | (0.972) | 73087 | 80.0000 | 76.6 |
| | 42 Acenaphthylene | 152 | 4.390 | 4.390 | (0.980) | 452009 | 80.0000 | 73.7 |
| | 43 3-Nitroaniline | 138 | 4.466 | 4.466 | (0.997) | 75603 | 80.0000 | 78.9 |
| * | 44 Acenaphthene-d10 | 164 | 4.478 | 4.478 | (1.000) | 140064 | 40.0000 | |
| | 45 Acenaphthene + | 153 | 4.495 | 4.495 | (1.004) | 296487 | 80.0000 | 74.5 |
| | 46 2,4-Dinitrophenol ++ | 184 | 4.537 | 4.537 | (1.013) | 56131 | 80.0000 | 79.7 |
| | 49 4-Nitrophenol ++ | 109 | 4.613 | 4.613 | (1.030) | 42173 | 80.0000 | 75.6 |
| | 47 Dibenzofuran | 168 | 4.601 | 4.601 | (1.028) | 412075 | 80.0000 | 75.5 |
| | 48 2,4-Dinitrotoluene | 165 | 4.607 | 4.607 | (1.029) | 97975 | 80.0000 | 78.7 |
| | 50 Diethylphthalate | 149 | 4.748 | 4.748 | (1.060) | 308004 | 80.0000 | 76.2 |
| | 52 4-Chlorophenyl-phenylether | 204 | 4.813 | 4.813 | (1.075) | 162817 | 80.0000 | 76.6 |
| | 51 Fluorene | 166 | 4.813 | 4.813 | (1.075) | 329972 | 80.0000 | 75.9 |
| | 53 4-Nitroaniline | 138 | 4.854 | 4.854 | (1.084) | 72832 | 80.0000 | 79.1 |
| | 54 4,6-Dinitro-o-cresol | 198 | 4.866 | 4.866 | (0.903) | 68420 | 80.0000 | 79.7 |
| | 55 N-nitrosodiphenylamine (1)+ | 169 | 4.890 | 4.890 | (0.907) | 242879 | 80.0000 | 75.8 |
| | 56 Azobenzene | 77 | 4.907 | 4.907 | (0.910) | 278424 | 80.0000 | 76.3(M1) |
| $ | 57 2,4,6-Tribromophenol | 332 | 4.972 | 4.972 | (1.110) | 56191 | 80.0000 | 76.6 |
| | 58 4-Bromophenyl-phenylether | 248 | 5.107 | 5.107 | (0.948) | 100722 | 80.0000 | 76.0 |
| | 59 Hexachlorobenzene | 284 | 5.160 | 5.160 | (0.957) | 113530 | 80.0000 | 76.8 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppm) | AMOUNTS ON-COL ( ppm) |
|---|---|---|---|---|---|---|---|---|
| | 60 Pentachlorophenol + | 266 | 5.295 | 5.295 | (0.983) | 77257 | 80.0000 | 80.7 |
| * | 61 Phenanthrene-d10 | 188 | 5.389 | 5.389 | (1.000) | 219106 | 40.0000 | |
| | 62 Phenanthrene | 178 | 5.407 | 5.407 | (1.003) | 473488 | 80.0000 | 78.8 |
| | 63 Anthracene | 178 | 5.437 | 5.437 | (1.009) | 467394 | 80.0000 | 78.0 |
| | 64 Carbazole | 167 | 5.548 | 5.548 | (1.029) | 427977 | 80.0000 | 77.3 |
| | 65 Di-n-butylphthalate | 149 | 5.760 | 5.760 | (1.069) | 506650 | 80.0000 | 77.3 |
| | 67 Fluoranthene + | 202 | 6.236 | 6.236 | (1.157) | 508908 | 80.0000 | 78.9 |
| | 68 Benzidine | 184 | 6.372 | 6.372 | (0.803) | 52315 | 80.0000 | 86.6 |
| | 69 Pyrene | 202 | 6.436 | 6.436 | (0.812) | 529671 | 80.0000 | 76.0 |
| $ | 70 Terphenyl-d14 | 244 | 6.595 | 6.595 | (0.832) | 347559 | 80.0000 | 75.9 |
| | 71 Butylbenzylphthalate | 149 | 7.166 | 7.166 | (0.904) | 228102 | 80.0000 | 76.4 |
| | 73 3,3'-Dichlorobenzidine | 252 | 7.919 | 7.919 | (0.999) | 145344 | 80.0000 | 78.7 |
| | 72 Benzo(a)anthracene | 228 | 7.913 | 7.913 | (0.998) | 474980 | 80.0000 | 77.5 |
| * | 74 Chrysene-d12 | 240 | 7.930 | 7.930 | (1.000) | 228943 | 40.0000 | |
| | 76 bis(2-Ethylhexyl)phthalate | 149 | 8.095 | 8.095 | (1.021) | 298265 | 80.0000 | 79.2 |
| | 75 Chrysene | 228 | 7.972 | 7.972 | (1.005) | 483496 | 80.0000 | 77.4 |
| | 77 Di-n-octylphthalate + | 149 | 9.413 | 9.413 | (1.187) | 473977 | 80.0000 | 81.3 |
| | 78 Benzo(b)fluoranthene | 252 | 9.907 | 9.907 | (0.950) | 451107 | 80.0000 | 75.5 |
| | 79 Benzo(k)fluoranthene | 252 | 9.948 | 9.948 | (0.954) | 552523 | 80.0000 | 78.4 |
| | 80 Benzo(a)pyrene + | 252 | 10.360 | 10.360 | (0.993) | 461254 | 80.0000 | 77.2 |
| * | 81 Perylene-d12 | 264 | 10.430 | 10.430 | (1.000) | 240947 | 40.0000 | |
| | 82 Indeno(1,2,3-cd)pyrene | 276 | 11.460 | 11.460 | (1.099) | 432622 | 80.0000 | 79.1(M2) |
| | 83 Dibenzo(a,h)anthracene | 278 | 11.483 | 11.483 | (1.101) | 502998 | 80.0000 | 77.5 |
| | 84 Benzo(g,h,i)perylene | 276 | 11.695 | 11.695 | (1.121) | 545314 | 80.0000 | 76.4 |
| M | 66 Total Methylphenol | 108 | | | | 305349 | 160.000 | 158 |
| | 91 Acetophenone | 105 | 2.901 | 2.901 | (1.086) | 199497 | 80.0000 | 79.2 |
| | 155 Benzaldehyde | 77 | 2.443 | 2.443 | (0.914) | 36240 | 80.0000 | 93.8(M2) |
| | 156 Caprolactam | 113 | 3.690 | 3.690 | (1.083) | 38861 | 80.0000 | 81.4 |
| | 157 Biphenyl | 154 | 4.125 | 4.125 | (1.211) | 369237 | 80.0000 | 75.9 |
| | 158 Atrazine | 200 | 5.225 | 5.225 | (0.969) | 67408 | 80.0000 | 74.7 |
| | 174 1,4-Dioxane | 88 | 1.272 | 1.272 | (0.476) | 69821 | 80.0000 | 78.2 |

QC Flag Legend

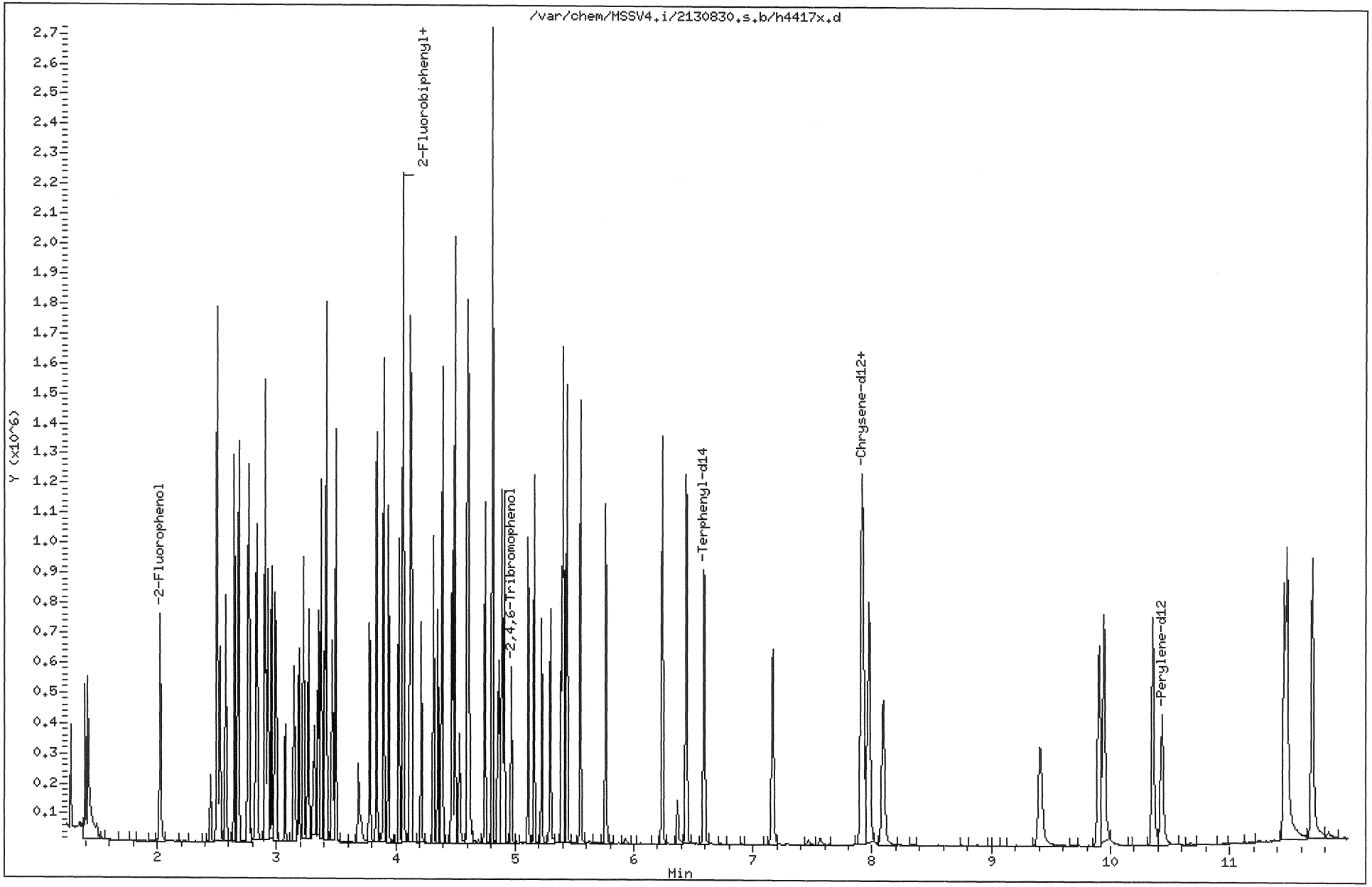
M1- Compound response manually integrated because Target system did not integrate.
M2- Compound response manually integrated because Target system integrated incorrectly.

Data File: /var/chem/MSSV4.i/2130830.s.b/h4417x.d
Date : 30-AUG-2013 12:06
Client ID: STD080
Sample Info: 1206*48-28-3
Volume Injected (uL): 1.0
Column phase: RTX-5MS-30M

Instrument: MSSV4.i

Operator: dlb
Column diameter: 0.25

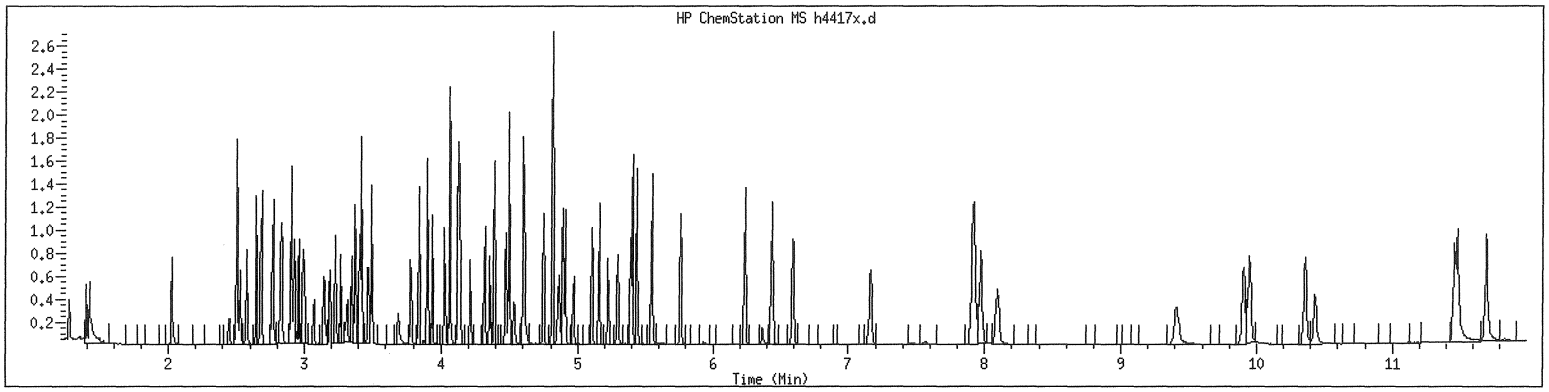





2130712 437

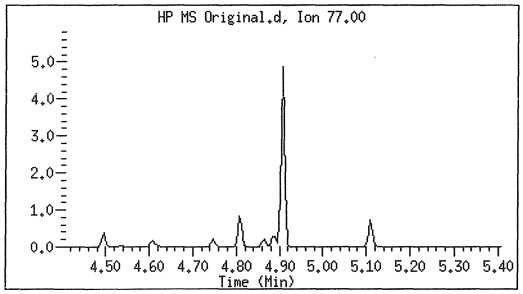
# MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 1206 SampleType : CALIB_6
Injection Date: 08/30/2013 12:06 Instrument : MSSV4.i
Operator : dlb
Sample Info : 1206*48-28-3
Misc Info : STD080*MSSV~9886~*
Method : /var/chem/MSSV4.i/2130830.s.b/8270D_04.m
Dilution : 1.00
Matrix : WATER
Integrator : HP RTE Compound Sublist: 8270c



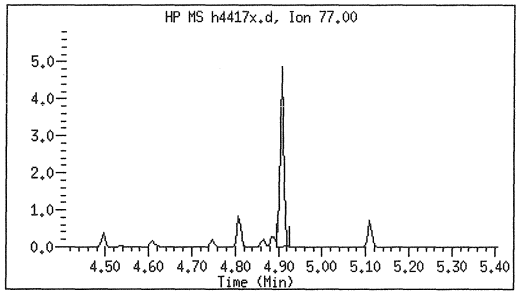

Original Final

56 Azobenzene CAS#: 122-66-7 Reason: M1

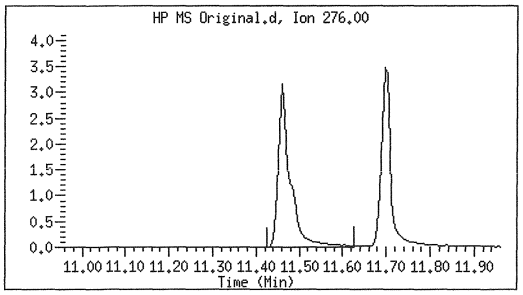



Electronic Signature Applied

User: dlb
Date: 08/30/2013 13:52

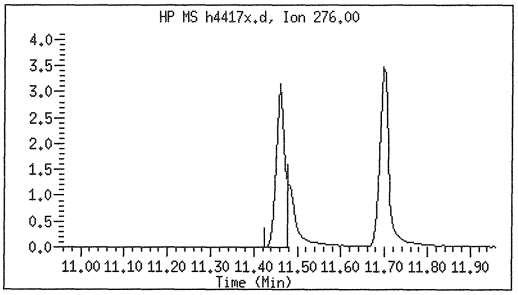



82 Indeno(1,2,3-cd)pyrene CAS#: 193-39-5 Reason: M3

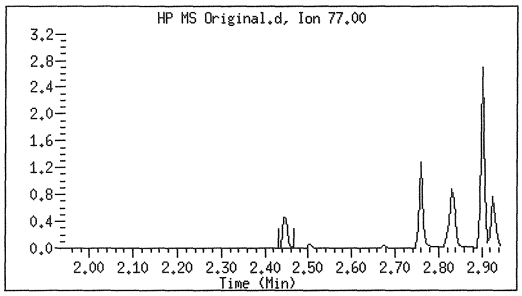



Electronic Signature Applied

User: dlb
Date: 08/30/2013 13:51

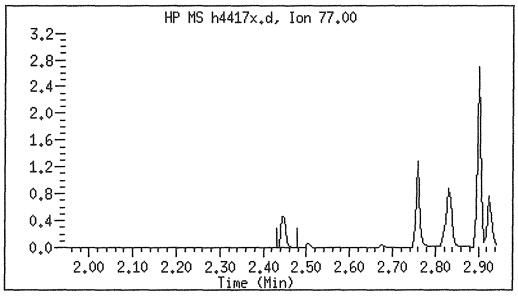


| Original | | Final |
|---|---|---|
| 155 Benzaldehyde | CAS#: 100-52-7 | Reason: M3 |




Electronic Signature Applied

User: dlb
Date: 09/03/2013 07:29




M2 - Target system integrated incorrectly

GCAL, Inc.

BNA QUANT AND RATIO REPORT

Data file : /var/chem/MSSV4.i/2130830.s.b/h4418x.d
Lab Smp Id: 1207 Client Smp ID: STD120
Inj Date : 30-AUG-2013 12:26
Operator : dlb Inst ID: MSSV4.i
Smp Info : 1207*48-28-4
Misc Info : STD120*MSSV~9886~*
Comment :
Method : /var/chem/MSSV4.i/2130830.s.b/8270D_04.m
Meth Date : 04-Sep-2013 07:29 dlb Quant Type: ISTD
Cal Date : 09-JUL-2013 01:01 Cal File: h2762x.d
Als bottle: 5 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270c.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | ng unit correction factor |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppm) | ON-COL ( ppm) |
|---|---|---|---|---|---|---|---|
| 2 Pyridine | 79 | 1.419 | 1.419 | (0.531) | 268043 | 120.000 | 121 |
| 1 n-Nitrosodimethylamine | 42 | 1.401 | 1.401 | (0.524) | 105242 | 120.000 | 111 |
| $ 3 2-Fluorophenol | 112 | 2.025 | 2.025 | (0.758) | 247438 | 120.000 | 115 |
| $ 4 Phenol-d5 | 99 | 2.495 | 2.495 | (0.934) | 261812 | 120.000 | 112 |
| 5 Aniline | 93 | 2.501 | 2.501 | (0.936) | 243571 | 120.000 | 120 |
| 6 Phenol + | 94 | 2.501 | 2.501 | (0.936) | 298359 | 120.000 | 113 |
| 7 bis(-2-Chloroethyl)Ether | 63 | 2.525 | 2.525 | (0.945) | 150668 | 120.000 | 117 |
| 8 2-Chlorophenol | 128 | 2.572 | 2.572 | (0.963) | 256083 | 120.000 | 115 |
| 9 1,3-Dichlorobenzene | 146 | 2.643 | 2.643 | (0.989) | 287589 | 120.000 | 115 |
| * 10 1,4-Dichlorobenzene-d4 | 152 | 2.672 | 2.672 | (1.000) | 66689 | 40.0000 | |
| 11 1,4-Dichlorobenzene + | 146 | 2.684 | 2.684 | (1.004) | 290655 | 120.000 | 114 |
| 12 Benzyl alcohol | 108 | 2.760 | 2.760 | (1.033) | 138737 | 120.000 | 116 |
| 13 1,2-Dichlorobenzene | 146 | 2.772 | 2.772 | (1.037) | 282528 | 120.000 | 117 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppm) | AMOUNTS ON-COL ( ppm) |
|---|---|---|---|---|---|---|---|---|
| | 15 2-Methylphenol | 107 | 2.831 | 2.831 | (1.059) | 212304 | 120.000 | 113 |
| | 14 Bis(2-chloroisopropyl)ether | 45 | 2.825 | 2.825 | (1.057) | 236489 | 120.000 | 115 |
| | 17 3- & 4-Methylphenol | 107 | 2.925 | 2.925 | (1.095) | 226503 | 120.000 | 117 |
| | 16 N-Nitroso-di-n-propylamine++ | 70 | 2.907 | 2.907 | (1.088) | 153517 | 120.000 | 114 |
| | 18 Hexachloroethane | 117 | 2.954 | 2.954 | (1.106) | 105679 | 120.000 | 114 |
| $ | 19 Nitrobenzene-d5 | 82 | 2.990 | 2.990 | (0.877) | 237765 | 120.000 | 118 |
| | 20 Nitrobenzene | 77 | 3.001 | 3.001 | (0.881) | 222202 | 120.000 | 113 |
| | 21 Isophorone | 82 | 3.143 | 3.143 | (0.922) | 359631 | 120.000 | 116 |
| | 22 2-Nitrophenol + | 139 | 3.184 | 3.184 | (0.934) | 135451 | 120.000 | 115 |
| | 23 2,4-Dimethyphenol | 107 | 3.225 | 3.225 | (0.946) | 236164 | 120.000 | 115 |
| | 24 bis(-2-Chloroethoxy)methane | 93 | 3.260 | 3.260 | (0.957) | 249804 | 120.000 | 115 |
| | 25 Benzoic Acid | 122 | 3.325 | 3.325 | (0.976) | 146900 | 120.000 | 122 |
| | 26 2,4-Dichlorophenol + | 162 | 3.348 | 3.348 | (0.983) | 203359 | 120.000 | 115 |
| | 27 1,2,4-Trichlorobenzene | 180 | 3.372 | 3.372 | (0.990) | 225880 | 120.000 | 114 |
| * | 28 Naphthalene-d8 | 136 | 3.407 | 3.407 | (1.000) | 243059 | 40.0000 | |
| | 29 Naphthalene | 128 | 3.419 | 3.419 | (1.003) | 732629 | 120.000 | 116 |
| | 30 4-Chloroaniline | 127 | 3.466 | 3.466 | (1.017) | 230858 | 120.000 | 112 |
| | 31 Hexachlorobutadiene + | 225 | 3.495 | 3.495 | (1.026) | 146200 | 120.000 | 114 |
| | 32 4-Chloro-3-Methylphenol + | 107 | 3.778 | 3.778 | (1.109) | 188577 | 120.000 | 118 |
| | 33 2-Methylnaphthalene | 142 | 3.837 | 3.837 | (1.126) | 444564 | 120.000 | 115 |
| | 145 1-Methylnapthalene | 142 | 3.901 | 3.901 | (1.145) | 426672 | 120.000 | 115 |
| | 34 Hexachlorocyclopentadiene ++ | 237 | 3.937 | 3.937 | (0.880) | 162766 | 120.000 | 114 |
| | 35 2,4,6-Trichlorophenol + | 196 | 4.025 | 4.025 | (0.900) | 145012 | 120.000 | 113 |
| | 36 2,4,5-Trichlorphenol | 196 | 4.060 | 4.060 | (0.908) | 151350 | 120.000 | 114 |
| $ | 37 2-Fluorobiphenyl | 172 | 4.060 | 4.060 | (0.908) | 501498 | 120.000 | 110 |
| | 38 2-Chloronaphthalene | 162 | 4.137 | 4.137 | (0.925) | 432771 | 120.000 | 113 |
| | 39 2-Nitroaniline | 138 | 4.213 | 4.213 | (0.942) | 144992 | 120.000 | 117 |
| | 40 Dimethylphthalate | 163 | 4.319 | 4.319 | (0.966) | 477298 | 120.000 | 114 |
| | 41 2,6-Dinitrotoluene | 165 | 4.354 | 4.354 | (0.974) | 106398 | 120.000 | 115 |
| | 42 Acenaphthylene | 152 | 4.389 | 4.389 | (0.982) | 670100 | 120.000 | 113 |
| | 43 3-Nitroaniline | 138 | 4.466 | 4.466 | (0.999) | 108550 | 120.000 | 117 |
| * | 44 Acenaphthene-d10 | 164 | 4.472 | 4.472 | (1.000) | 135352 | 40.0000 | |
| | 45 Acenaphthene + | 153 | 4.495 | 4.495 | (1.005) | 434717 | 120.000 | 113 |
| | 46 2,4-Dinitrophenol ++ | 184 | 4.537 | 4.537 | (1.014) | 84866 | 120.000 | 125 |
| | 49 4-Nitrophenol ++ | 109 | 4.613 | 4.613 | (1.032) | 65395 | 120.000 | 121 |
| | 47 Dibenzofuran | 168 | 4.601 | 4.601 | (1.029) | 592623 | 120.000 | 112 |
| | 48 2,4-Dinitrotoluene | 165 | 4.607 | 4.607 | (1.030) | 140586 | 120.000 | 117 |
| | 50 Diethylphthalate | 149 | 4.748 | 4.748 | (1.062) | 446833 | 120.000 | 114 |
| | 52 4-Chlorophenyl-phenylether | 204 | 4.813 | 4.813 | (1.076) | 233671 | 120.000 | 114 |
| | 51 Fluorene | 166 | 4.813 | 4.813 | (1.076) | 485198 | 120.000 | 115 |
| | 53 4-Nitroaniline | 138 | 4.854 | 4.854 | (1.085) | 108018 | 120.000 | 121 |
| | 54 4,6-Dinitro-o-cresol | 198 | 4.866 | 4.866 | (0.903) | 102934 | 120.000 | 124 |
| | 55 N-nitrosodiphenylamine (1)+ | 169 | 4.889 | 4.889 | (0.907) | 364264 | 120.000 | 118 |
| | 56 Azobenzene | 77 | 4.907 | 4.907 | (0.910) | 406982 | 120.000 | 116(M1) |
| $ | 57 2,4,6-Tribromophenol | 332 | 4.972 | 4.972 | (1.112) | 84000 | 120.000 | 118 |
| | 58 4-Bromophenyl-phenylether | 248 | 5.107 | 5.107 | (0.948) | 149928 | 120.000 | 117 |
| | 59 Hexachlorobenzene | 284 | 5.160 | 5.160 | (0.957) | 168097 | 120.000 | 118 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppm) | AMOUNTS ON-COL ( ppm) |
|---|---|---|---|---|---|---|---|---|
| | 60 Pentachlorophenol + | 266 | 5.295 | 5.295 | (0.983) | 111639 | 120.000 | 121 |
| * | 61 Phenanthrene-d10 | 188 | 5.389 | 5.389 | (1.000) | 211159 | 40.0000 | |
| | 62 Phenanthrene | 178 | 5.407 | 5.407 | (1.003) | 658374 | 120.000 | 114 |
| | 63 Anthracene | 178 | 5.436 | 5.436 | (1.009) | 671873 | 120.000 | 116 |
| | 64 Carbazole | 167 | 5.548 | 5.548 | (1.029) | 633221 | 120.000 | 119 |
| | 65 Di-n-butylphthalate | 149 | 5.760 | 5.760 | (1.069) | 747616 | 120.000 | 118 |
| | 67 Fluoranthene + | 202 | 6.236 | 6.236 | (1.157) | 731384 | 120.000 | 118 |
| | 68 Benzidine | 184 | 6.366 | 6.366 | (0.803) | 66006 | 120.000 | 110 |
| | 69 Pyrene | 202 | 6.436 | 6.436 | (0.812) | 754646 | 120.000 | 109 |
| $ | 70 Terphenyl-d14 | 244 | 6.589 | 6.589 | (0.831) | 507848 | 120.000 | 112 |
| | 71 Butylbenzylphthalate | 149 | 7.166 | 7.166 | (0.904) | 350737 | 120.000 | 119 |
| | 73 3,3'-Dichlorobenzidine | 252 | 7.919 | 7.919 | (0.999) | 225114 | 120.000 | 123 |
| | 72 Benzo(a)anthracene | 228 | 7.913 | 7.913 | (0.998) | 710913 | 120.000 | 117 |
| * | 74 Chrysene-d12 | 240 | 7.930 | 7.930 | (1.000) | 226564 | 40.0000 | |
| | 76 bis(2-Ethylhexyl)phthalate | 149 | 8.095 | 8.095 | (1.021) | 460309 | 120.000 | 124 |
| | 75 Chrysene | 228 | 7.972 | 7.972 | (1.005) | 724157 | 120.000 | 117 |
| | 77 Di-n-octylphthalate + | 149 | 9.413 | 9.413 | (1.187) | 751107 | 120.000 | 130 |
| | 78 Benzo(b)fluoranthene | 252 | 9.907 | 9.907 | (0.949) | 731065 | 120.000 | 121 |
| | 79 Benzo(k)fluoranthene | 252 | 9.954 | 9.954 | (0.954) | 830136 | 120.000 | 116 |
| | 80 Benzo(a)pyrene + | 252 | 10.360 | 10.360 | (0.993) | 729703 | 120.000 | 121 |
| * | 81 Perylene-d12 | 264 | 10.436 | 10.436 | (1.000) | 243806 | 40.0000 | |
| | 82 Indeno(1,2,3-cd)pyrene | 276 | 11.466 | 11.466 | (1.099) | 752517 | 120.000 | 136(M1) |
| | 83 Dibenzo(a,h)anthracene | 278 | 11.489 | 11.489 | (1.101) | 831949 | 120.000 | 127 |
| | 84 Benzo(g,h,i)perylene | 276 | 11.701 | 11.701 | (1.121) | 895669 | 120.000 | 124 |
| M | 66 Total Methylphenol | 108 | | | | 438807 | 240.000 | 230(A) |
| | 91 Acetophenone | 105 | 2.901 | 2.901 | (1.086) | 283019 | 120.000 | 113 |
| | 155 Benzaldehyde | 77 | 2.443 | 2.443 | (0.914) | 40463 | 120.000 | 106 |
| | 156 Caprolactam | 113 | 3.690 | 3.690 | (1.083) | 54419 | 120.000 | 119 |
| | 157 Biphenyl | 154 | 4.125 | 4.125 | (1.211) | 545515 | 120.000 | 117 |
| | 158 Atrazine | 200 | 5.225 | 5.225 | (0.969) | 99960 | 120.000 | 115 |
| | 174 1,4-Dioxane | 88 | 1.278 | 1.278 | (0.478) | 92810 | 120.000 | 105 |

QC Flag Legend

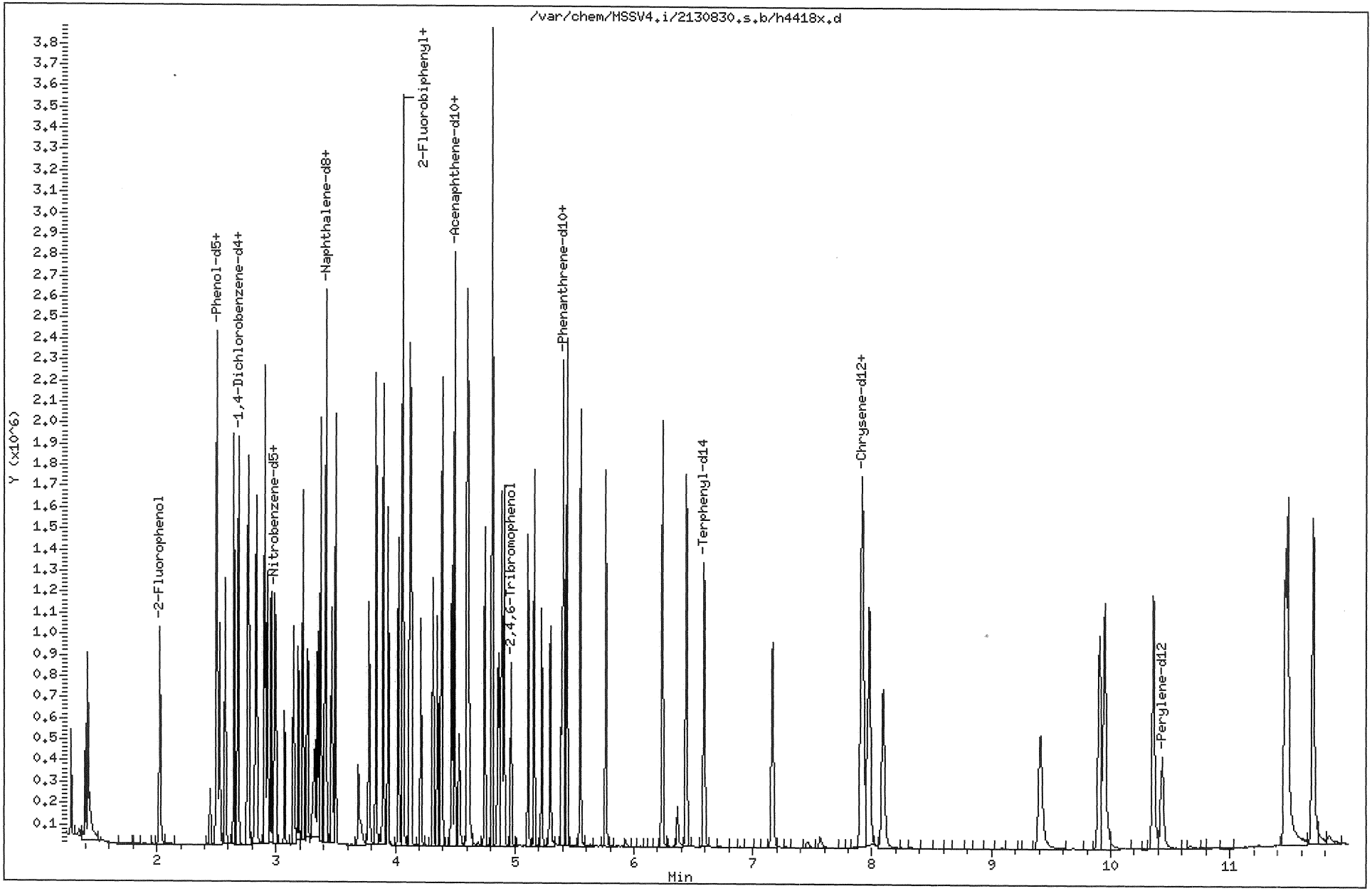
A - Target compound detected but, quantitated amount exceeded maximum amount.
M1- Compound response manually integrated because Target system did not integrate.

Data File: /var/chem/MSSV4.i/2130830.s.b/h4418x.d
Date : 30-AUG-2013 12:26
Client ID: STD120
Sample Info: 1207*48-28-4
Volume Injected (uL): 1.0
Column phase: RTX-5MS-30M

Instrument: MSSV4.i

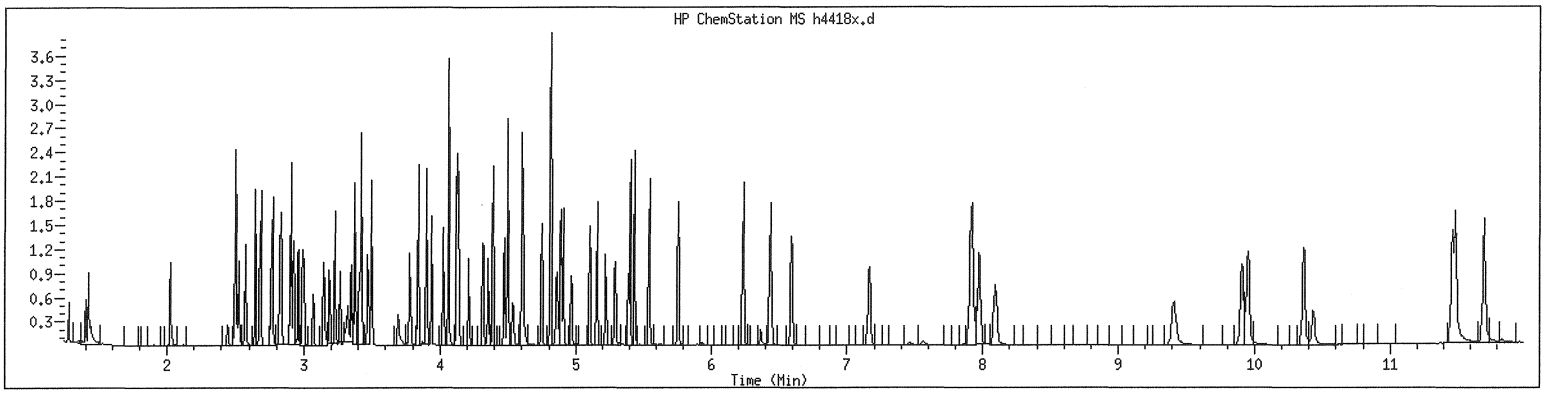
Operator: dlb
Column diameter: 0.25





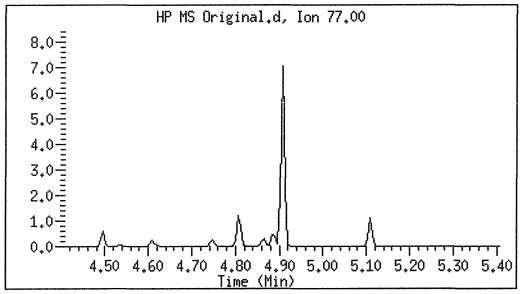
# MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 1207 SampleType : CALIB_7
Injection Date: 08/30/2013 12:26 Instrument : MSSV4.i
Operator : dlb
Sample Info : 1207*48-28-4
Misc Info : STD120*MSSV~9886~*
Method : /var/chem/MSSV4.i/2130830.s.b/8270D_04.m
Dilution : 1.00
Matrix : WATER
Integrator : HP RTE Compound Sublist: 8270c



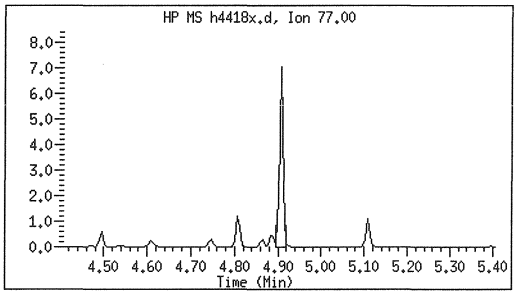

Original Final

56 Azobenzene CAS#: 122-66-7 Reason: M1

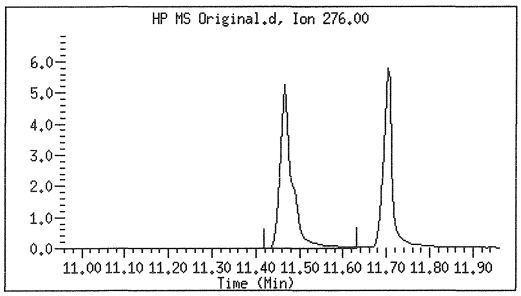



Electronic Signature Applied

User: dlb
Date: 08/30/2013 13:52

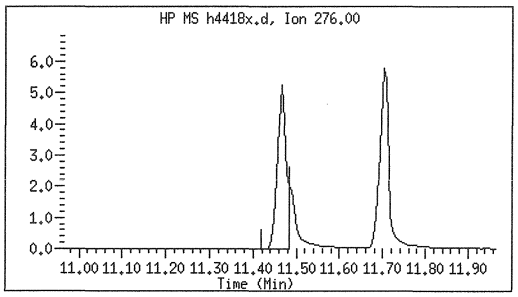



82 Indeno(1,2,3-cd)pyrene CAS#: 193-39-5 Reason: M1




Electronic Signature Applied

User: dlb
Date: 08/30/2013 13:52



GCAL, Inc.

BNA QUANT AND RATIO REPORT

Data file : /var/chem/MSSV4.i/2130830.s.b/h4419x.d
Lab Smp Id: 1208 Client Smp ID: STD160
Inj Date : 30-AUG-2013 12:46
Operator : dlb Inst ID: MSSV4.i
Smp Info : 1208*48-28-5
Misc Info : STD160*MSSV~9886~*
Comment :
Method : /var/chem/MSSV4.i/2130830.s.b/8270D_04.m
Meth Date : 04-Sep-2013 07:29 dlb Quant Type: ISTD
Cal Date : 09-JUL-2013 01:20 Cal File: h2763x.d
Als bottle: 6 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270c.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | ng unit correction factor |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppm) | AMOUNTS ON-COL ( ppm) |
|---|---|---|---|---|---|---|---|
| 2 Pyridine | 79 | 1.425 | 1.425 | (0.533) | 314043 | 160.000 | 136 |
| 1 n-Nitrosodimethylamine | 42 | 1.402 | 1.402 | (0.525) | 152483 | 160.000 | 155 |
| $ 3 2-Fluorophenol | 112 | 2.025 | 2.025 | (0.758) | 335259 | 160.000 | 149 |
| $ 4 Phenol-d5 | 99 | 2.496 | 2.496 | (0.934) | 348921 | 160.000 | 144 |
| 5 Aniline | 93 | 2.502 | 2.502 | (0.936) | 303667 | 160.000 | 152 |
| 6 Phenol + | 94 | 2.502 | 2.502 | (0.936) | 389566 | 160.000 | 142 |
| 7 bis(-2-Chloroethyl)Ether | 63 | 2.525 | 2.525 | (0.945) | 197729 | 160.000 | 148 |
| 8 2-Chlorophenol | 128 | 2.572 | 2.572 | (0.963) | 335401 | 160.000 | 145 |
| 9 1,3-Dichlorobenzene | 146 | 2.643 | 2.643 | (0.989) | 388058 | 160.000 | 148 |
| * 10 1,4-Dichlorobenzene-d4 | 152 | 2.672 | 2.672 | (1.000) | 69536 | 40.0000 | |
| 11 1,4-Dichlorobenzene + | 146 | 2.684 | 2.684 | (1.004) | 399868 | 160.000 | 151 |
| 12 Benzyl alcohol | 108 | 2.760 | 2.760 | (1.033) | 185243 | 160.000 | 148 |
| 13 1,2-Dichlorobenzene | 146 | 2.772 | 2.772 | (1.037) | 368536 | 160.000 | 147 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppm) | AMOUNTS ON-COL ( ppm) |
|---|---|---|---|---|---|---|---|---|
| | 15 2-Methylphenol | 107 | 2.831 | 2.831 | (1.059) | 285049 | 160.000 | 145 |
| | 14 Bis(2-chloroisopropyl)ether | 45 | 2.825 | 2.825 | (1.057) | 319343 | 160.000 | 149 |
| | 17 3- & 4-Methylphenol | 107 | 2.919 | 2.919 | (1.092) | 293346 | 160.000 | 145 |
| | 16 N-Nitroso-di-n-propylamine++ | 70 | 2.907 | 2.907 | (1.088) | 203083 | 160.000 | 144 |
| | 18 Hexachloroethane | 117 | 2.954 | 2.954 | (1.106) | 142257 | 160.000 | 147 |
| $ | 19 Nitrobenzene-d5 | 82 | 2.990 | 2.990 | (0.877) | 310220 | 160.000 | 152 |
| | 20 Nitrobenzene | 77 | 3.001 | 3.001 | (0.881) | 301528 | 160.000 | 152 |
| | 21 Isophorone | 82 | 3.143 | 3.143 | (0.922) | 464918 | 160.000 | 148 |
| | 22 2-Nitrophenol + | 139 | 3.184 | 3.184 | (0.934) | 180037 | 160.000 | 151 |
| | 23 2,4-Dimethyphenol | 107 | 3.225 | 3.225 | (0.946) | 306062 | 160.000 | 147 |
| | 24 bis(-2-Chloroethoxy)methane | 93 | 3.260 | 3.260 | (0.957) | 329662 | 160.000 | 150 |
| | 25 Benzoic Acid | 122 | 3.331 | 3.331 | (0.978) | 197965 | 160.000 | 163 |
| | 26 2,4-Dichlorophenol + | 162 | 3.343 | 3.343 | (0.981) | 268445 | 160.000 | 151 |
| | 27 1,2,4-Trichlorobenzene | 180 | 3.372 | 3.372 | (0.990) | 303105 | 160.000 | 152 |
| * | 28 Naphthalene-d8 | 136 | 3.407 | 3.407 | (1.000) | 245730 | 40.0000 | |
| | 29 Naphthalene | 128 | 3.419 | 3.419 | (1.003) | 944264 | 160.000 | 148 |
| | 30 4-Chloroaniline | 127 | 3.466 | 3.466 | (1.017) | 294140 | 160.000 | 142 |
| | 31 Hexachlorobutadiene + | 225 | 3.496 | 3.496 | (1.026) | 198576 | 160.000 | 153 |
| | 32 4-Chloro-3-Methylphenol + | 107 | 3.778 | 3.778 | (1.109) | 237554 | 160.000 | 147 |
| | 33 2-Methylnaphthalene | 142 | 3.837 | 3.837 | (1.126) | 583511 | 160.000 | 149 |
| | 145 1-Methylnapthalene | 142 | 3.896 | 3.896 | (1.143) | 552551 | 160.000 | 147 |
| | 34 Hexachlorocyclopentadiene ++ | 237 | 3.937 | 3.937 | (0.880) | 214242 | 160.000 | 159 |
| | 35 2,4,6-Trichlorophenol + | 196 | 4.025 | 4.025 | (0.900) | 182714 | 160.000 | 151 |
| | 36 2,4,5-Trichlorphenol | 196 | 4.060 | 4.060 | (0.908) | 185116 | 160.000 | 149 |
| $ | 37 2-Fluorobiphenyl | 172 | 4.060 | 4.060 | (0.908) | 640564 | 160.000 | 150 |
| | 38 2-Chloronaphthalene | 162 | 4.137 | 4.137 | (0.925) | 554906 | 160.000 | 154 |
| | 39 2-Nitroaniline | 138 | 4.213 | 4.213 | (0.942) | 181632 | 160.000 | 156 |
| | 40 Dimethylphthalate | 163 | 4.313 | 4.313 | (0.964) | 597335 | 160.000 | 152 |
| | 41 2,6-Dinitrotoluene | 165 | 4.354 | 4.354 | (0.974) | 133914 | 160.000 | 155 |
| | 42 Acenaphthylene | 152 | 4.390 | 4.390 | (0.982) | 839749 | 160.000 | 151 |
| | 43 3-Nitroaniline | 138 | 4.466 | 4.466 | (0.999) | 127492 | 160.000 | 146 |
| * | 44 Acenaphthene-d10 | 164 | 4.472 | 4.472 | (1.000) | 127188 | 40.0000 | |
| | 45 Acenaphthene + | 153 | 4.495 | 4.495 | (1.005) | 543019 | 160.000 | 150 |
| | 46 2,4-Dinitrophenol ++ | 184 | 4.531 | 4.531 | (1.013) | 106799 | 160.000 | 167 |
| | 49 4-Nitrophenol ++ | 109 | 4.613 | 4.613 | (1.032) | 79196 | 160.000 | 156 |
| | 47 Dibenzofuran | 168 | 4.601 | 4.601 | (1.029) | 751256 | 160.000 | 151 |
| | 48 2,4-Dinitrotoluene | 165 | 4.607 | 4.607 | (1.030) | 169894 | 160.000 | 150 |
| | 50 Diethylphthalate | 149 | 4.748 | 4.748 | (1.062) | 552817 | 160.000 | 151 |
| | 52 4-Chlorophenyl-phenylether | 204 | 4.807 | 4.807 | (1.075) | 291061 | 160.000 | 151 |
| | 51 Fluorene | 166 | 4.813 | 4.813 | (1.076) | 581408 | 160.000 | 147 |
| | 53 4-Nitroaniline | 138 | 4.854 | 4.854 | (1.085) | 128822 | 160.000 | 154 |
| | 54 4,6-Dinitro-o-cresol | 198 | 4.866 | 4.866 | (0.903) | 124355 | 160.000 | 162 |
| | 55 N-nitrosodiphenylamine (1)+ | 169 | 4.884 | 4.884 | (0.906) | 431452 | 160.000 | 151 |
| | 56 Azobenzene | 77 | 4.907 | 4.907 | (0.910) | 491268 | 160.000 | 151 |
| $ | 57 2,4,6-Tribromophenol | 332 | 4.966 | 4.966 | (1.110) | 104645 | 160.000 | 157 |
| | 58 4-Bromophenyl-phenylether | 248 | 5.107 | 5.107 | (0.948) | 182384 | 160.000 | 154 |
| | 59 Hexachlorobenzene | 284 | 5.160 | 5.160 | (0.957) | 202164 | 160.000 | 153 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppm) | AMOUNTS ON-COL ( ppm) |
|---|---|---|---|---|---|---|---|---|
| | 60 Pentachlorophenol + | 266 | 5.290 | 5.290 | (0.981) | 136652 | 160.000 | 160 |
| * | 61 Phenanthrene-d10 | 188 | 5.390 | 5.390 | (1.000) | 195678 | 40.0000 | |
| | 62 Phenanthrene | 178 | 5.407 | 5.407 | (1.003) | 811922 | 160.000 | 151 |
| | 63 Anthracene | 178 | 5.437 | 5.437 | (1.009) | 823992 | 160.000 | 154 |
| | 64 Carbazole | 167 | 5.548 | 5.548 | (1.029) | 742319 | 160.000 | 150 |
| | 65 Di-n-butylphthalate | 149 | 5.760 | 5.760 | (1.069) | 881743 | 160.000 | 151 |
| | 67 Fluoranthene + | 202 | 6.237 | 6.237 | (1.157) | 864824 | 160.000 | 150 |
| | 68 Benzidine | 184 | 6.366 | 6.366 | (0.803) | 63429 | 160.000 | 127 |
| | 69 Pyrene | 202 | 6.437 | 6.437 | (0.812) | 895979 | 160.000 | 156 |
| $ | 70 Terphenyl-d14 | 244 | 6.589 | 6.589 | (0.831) | 574907 | 160.000 | 152 |
| | 71 Butylbenzylphthalate | 149 | 7.160 | 7.160 | (0.903) | 376721 | 160.000 | 153 |
| | 73 3,3'-Dichlorobenzidine | 252 | 7.919 | 7.919 | (0.999) | 230791 | 160.000 | 152 |
| | 72 Benzo(a)anthracene | 228 | 7.913 | 7.913 | (0.998) | 763560 | 160.000 | 151 |
| * | 74 Chrysene-d12 | 240 | 7.931 | 7.931 | (1.000) | 188672 | 40.0000 | |
| | 76 bis(2-Ethylhexyl)phthalate | 149 | 8.089 | 8.089 | (1.020) | 481881 | 160.000 | 155 |
| | 75 Chrysene | 228 | 7.972 | 7.972 | (1.005) | 769886 | 160.000 | 150 |
| | 77 Di-n-octylphthalate + | 149 | 9.407 | 9.407 | (1.186) | 762380 | 160.000 | 159 |
| | 78 Benzo(b)fluoranthene | 252 | 9.907 | 9.907 | (0.950) | 766292 | 160.000 | 165 |
| | 79 Benzo(k)fluoranthene | 252 | 9.954 | 9.954 | (0.954) | 854538 | 160.000 | 156 |
| | 80 Benzo(a)pyrene + | 252 | 10.360 | 10.360 | (0.993) | 749771 | 160.000 | 162 |
| * | 81 Perylene-d12 | 264 | 10.430 | 10.430 | (1.000) | 186921 | 40.0000 | |
| | 82 Indeno(1,2,3-cd)pyrene | 276 | 11.466 | 11.466 | (1.099) | 698222 | 160.000 | 164(M2) |
| | 83 Dibenzo(a,h)anthracene | 278 | 11.489 | 11.489 | (1.101) | 824926 | 160.000 | 164 |
| | 84 Benzo(g,h,i)perylene | 276 | 11.701 | 11.701 | (1.122) | 915032 | 160.000 | 165 |
| M | 66 Total Methylphenol | 108 | | | | 578395 | 320.000 | 291(A) |
| | 91 Acetophenone | 105 | 2.901 | 2.901 | (1.086) | 376881 | 160.000 | 145 |
| | 155 Benzaldehyde | 77 | 2.443 | 2.443 | (0.914) | 48308 | 160.000 | 121 |
| | 156 Caprolactam | 113 | 3.696 | 3.696 | (1.085) | 65939 | 160.000 | 142 |
| | 157 Biphenyl | 154 | 4.119 | 4.119 | (1.209) | 688708 | 160.000 | 146 |
| | 158 Atrazine | 200 | 5.225 | 5.225 | (0.969) | 122210 | 160.000 | 152 |
| | 174 1,4-Dioxane | 88 | 1.278 | 1.278 | (0.478) | 142148 | 160.000 | 154 |

QC Flag Legend

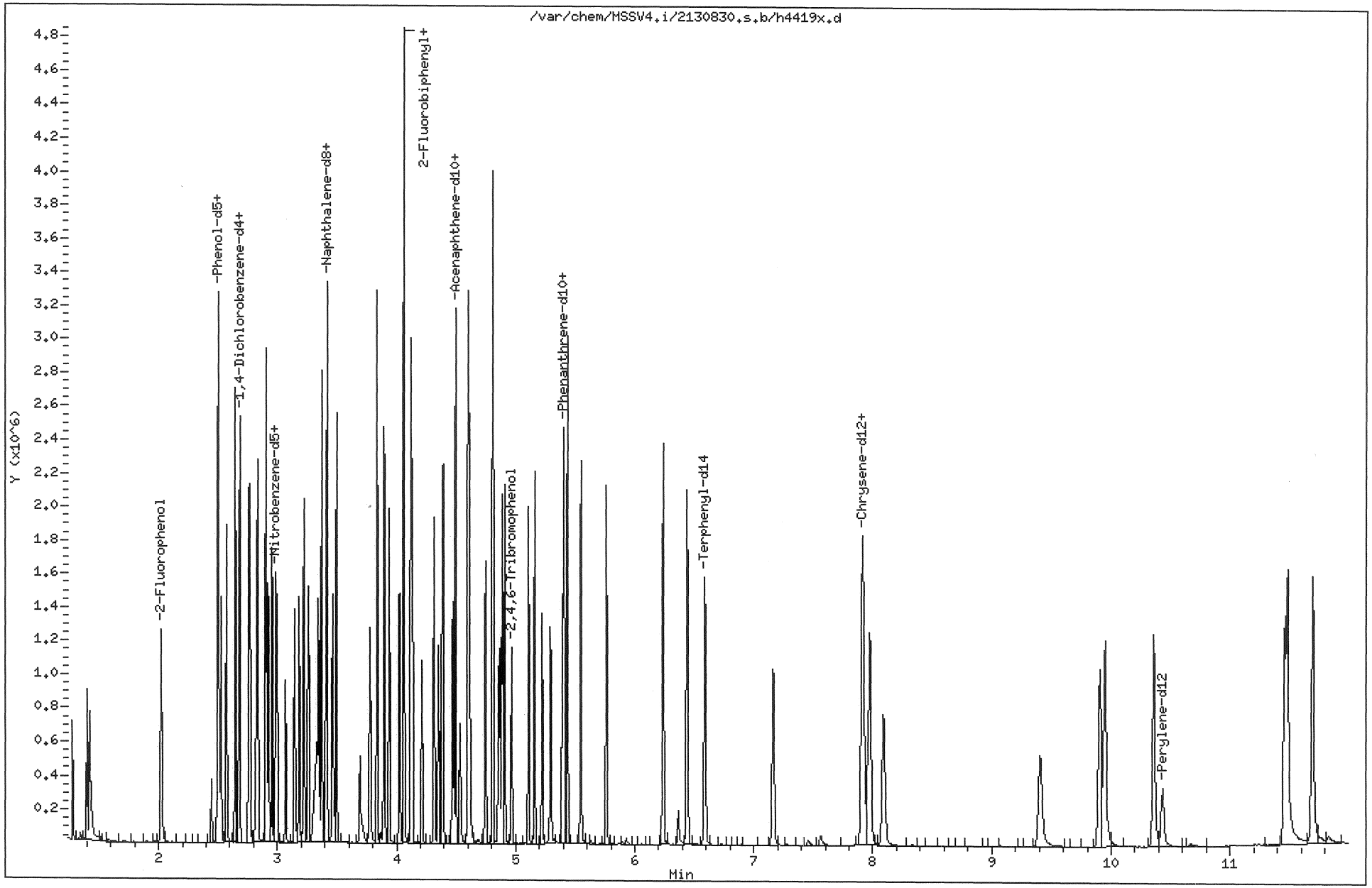
A - Target compound detected but, quantitated amount exceeded maximum amount.
M2- Compound response manually integrated because Target system integrated incorrectly.

Data File: /var/chem/MSSV4.i/2130830.s.b/h4419x.d
Date : 30-AUG-2013 12:46
Client ID: STD160
Sample Info: 1208x48-28-5
Volume Injected (uL): 1.0
Column phase: RTX-5MS-30M



Instrument: MSSV4.i

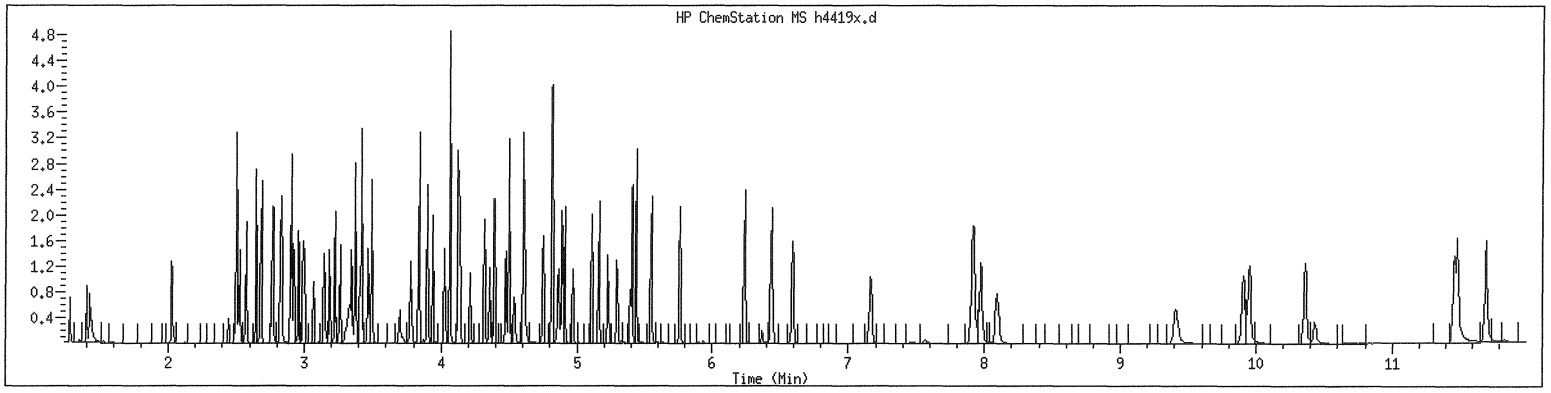
Operator: dlb
Column diameter: 0.25




2131071 449

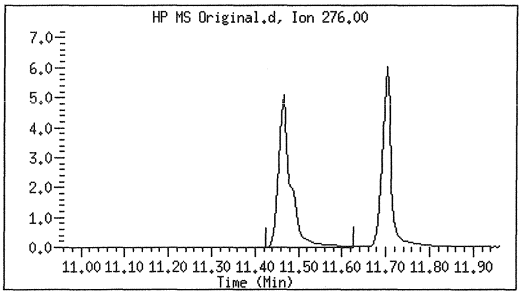
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1208 | SampleType | : CALIB_8 |
| Injection Date | : 08/30/2013 12:46 | Instrument | : MSSV4.i |
| Operator | : dlb | | |
| Sample Info | : 1208*48-28-5 | | |
| Misc Info | : STD160*MSSV~9886~* | | |
| Method | : /var/chem/MSSV4.i/2130830.s.b/8270D_04.m | | |
| Dilution | : 1.00 | | |
| Matrix | : WATER | | |
| Integrator | : HP RTE | Compound Sublist | : 8270c |



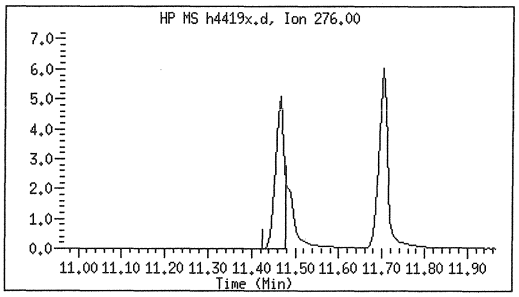

Original Final

82 Indeno(1,2,3-cd)pyrene CAS#: 193-39-5 Reason: M3




Electronic Signature Applied

User: dlb
Date: 08/30/2013 13:53



GCAL, Inc.

BNA QUANT AND RATIO REPORT

Data file : /var/chem/MSSV4.i/2130830.s.b/h4420x.d
Lab Smp Id: 1204 Client Smp ID: STD010
Inj Date : 30-AUG-2013 13:06
Operator : dlb Inst ID: MSSV4.i
Smp Info : 1204*48-28-2
Misc Info : STD010*MSSV~9886~*
Comment :
Method : /var/chem/MSSV4.i/2130830.s.b/8270D_04.m
Meth Date : 04-Sep-2013 07:29 dlb Quant Type: ISTD
Cal Date : 09-JUL-2013 00:21 Cal File: h2760x.d
Als bottle: 3 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270c.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | ng unit correction factor |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppm) | AMOUNTS ON-COL ( ppm) |
|---|---|---|---|---|---|---|---|
| 2 Pyridine | 79 | 1.437 | 1.437 | (0.537) | 25384 | 10.0000 | 11.8 |
| 1 n-Nitrosodimethylamine | 42 | 1.401 | 1.401 | (0.523) | 10722 | 10.0000 | 11.7 |
| $ 3 2-Fluorophenol | 112 | 2.037 | 2.037 | (0.761) | 25656 | 10.0000 | 12.3 |
| $ 4 Phenol-d5 | 99 | 2.513 | 2.513 | (0.939) | 28297 | 10.0000 | 12.5 |
| 5 Aniline | 93 | 2.513 | 2.513 | (0.939) | 33074 | 10.0000 | 7.99(a) |
| 6 Phenol + | 94 | 2.519 | 2.519 | (0.941) | 32898 | 10.0000 | 12.9 |
| 7 bis(-2-Chloroethyl)Ether | 63 | 2.543 | 2.543 | (0.949) | 14500 | 10.0000 | 11.6 |
| 8 2-Chlorophenol | 128 | 2.590 | 2.590 | (0.967) | 26880 | 10.0000 | 12.5 |
| 9 1,3-Dichlorobenzene | 146 | 2.648 | 2.648 | (0.989) | 30140 | 10.0000 | 12.4 |
| * 10 1,4-Dichlorobenzene-d4 | 152 | 2.678 | 2.678 | (1.000) | 64693 | 40.0000 | |
| 11 1,4-Dichlorobenzene + | 146 | 2.690 | 2.690 | (1.004) | 29986 | 10.0000 | 12.2 |
| 12 Benzyl alcohol | 108 | 2.778 | 2.778 | (1.037) | 14652 | 10.0000 | 12.6 |
| 13 1,2-Dichlorobenzene | 146 | 2.778 | 2.778 | (1.037) | 28959 | 10.0000 | 12.4 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppm) | AMOUNTS ON-COL ( ppm) |
|---|---|---|---|---|---|---|---|---|
| | 15 2-Methylphenol | 107 | 2.848 | 2.848 | (1.064) | 23547 | 10.0000 | 12.9 |
| | 14 Bis(2-chloroisopropyl)ether | 45 | 2.837 | 2.837 | (1.059) | 24442 | 10.0000 | 12.2 |
| | 17 3- & 4-Methylphenol | 107 | 2.948 | 2.948 | (1.101) | 23388 | 10.0000 | 12.5 |
| | 16 N-Nitroso-di-n-propylamine++ | 70 | 2.925 | 2.925 | (1.092) | 16804 | 10.0000 | 12.8 |
| | 18 Hexachloroethane | 117 | 2.966 | 2.966 | (1.108) | 11648 | 10.0000 | 13.0 |
| $ | 19 Nitrobenzene-d5 | 82 | 3.001 | 3.001 | (0.879) | 23943 | 10.0000 | 11.8 |
| | 20 Nitrobenzene | 77 | 3.013 | 3.013 | (0.883) | 23830 | 10.0000 | 12.1 |
| | 21 Isophorone | 82 | 3.172 | 3.172 | (0.929) | 37601 | 10.0000 | 12.0 |
| | 22 2-Nitrophenol + | 139 | 3.201 | 3.201 | (0.938) | 14022 | 10.0000 | 11.8 |
| | 23 2,4-Dimethyphenol | 107 | 3.248 | 3.248 | (0.952) | 24766 | 10.0000 | 12.0 |
| | 24 bis(-2-Chloroethoxy)methane | 93 | 3.284 | 3.284 | (0.962) | 26295 | 10.0000 | 12.0 |
| | 25 Benzoic Acid | 122 | 3.313 | 3.313 | (0.971) | 11703 | 10.0000 | 9.67(a) |
| | 26 2,4-Dichlorophenol + | 162 | 3.372 | 3.372 | (0.988) | 20703 | 10.0000 | 11.7 |
| | 27 1,2,4-Trichlorobenzene | 180 | 3.384 | 3.384 | (0.991) | 23755 | 10.0000 | 12.0 |
| * | 28 Naphthalene-d8 | 136 | 3.413 | 3.413 | (1.000) | 244313 | 40.0000 | |
| | 29 Naphthalene | 128 | 3.431 | 3.431 | (1.005) | 77647 | 10.0000 | 12.2 |
| | 30 4-Chloroaniline | 127 | 3.484 | 3.484 | (1.021) | 27283 | 10.0000 | 13.2 |
| | 31 Hexachlorobutadiene + | 225 | 3.501 | 3.501 | (1.026) | 15257 | 10.0000 | 11.9 |
| | 32 4-Chloro-3-Methylphenol + | 107 | 3.795 | 3.795 | (1.112) | 19185 | 10.0000 | 11.9 |
| | 33 2-Methylnaphthalene | 142 | 3.854 | 3.854 | (1.129) | 46472 | 10.0000 | 12.0 |
| | 145 1-Methylnapthalene | 142 | 3.913 | 3.913 | (1.146) | 46076 | 10.0000 | 12.4 |
| | 34 Hexachlorocyclopentadiene ++ | 237 | 3.948 | 3.948 | (0.882) | 15209 | 10.0000 | 10.7 |
| | 35 2,4,6-Trichlorophenol + | 196 | 4.037 | 4.037 | (0.901) | 15224 | 10.0000 | 11.9 |
| | 36 2,4,5-Trichlorphenol | 196 | 4.078 | 4.078 | (0.911) | 15918 | 10.0000 | 12.1 |
| $ | 37 2-Fluorobiphenyl | 172 | 4.072 | 4.072 | (0.909) | 54422 | 10.0000 | 12.1 |
| | 38 2-Chloronaphthalene | 162 | 4.143 | 4.143 | (0.925) | 45455 | 10.0000 | 11.9 |
| | 39 2-Nitroaniline | 138 | 4.225 | 4.225 | (0.944) | 13658 | 10.0000 | 11.1 |
| | 40 Dimethylphthalate | 163 | 4.331 | 4.331 | (0.967) | 49651 | 10.0000 | 12.0(M1) |
| | 41 2,6-Dinitrotoluene | 165 | 4.366 | 4.366 | (0.975) | 10567 | 10.0000 | 11.5 |
| | 42 Acenaphthylene | 152 | 4.395 | 4.395 | (0.982) | 72056 | 10.0000 | 12.3 |
| | 43 3-Nitroaniline | 138 | 4.478 | 4.478 | (1.000) | 10447 | 10.0000 | 11.4 |
| * | 44 Acenaphthene-d10 | 164 | 4.478 | 4.478 | (1.000) | 134318 | 40.0000 | |
| | 45 Acenaphthene + | 153 | 4.501 | 4.501 | (1.005) | 46840 | 10.0000 | 12.3 |
| | 46 2,4-Dinitrophenol ++ | 184 | 4.548 | 4.548 | (1.016) | 6319 | 10.0000 | 9.36(a) |
| | 49 4-Nitrophenol ++ | 109 | 4.631 | 4.631 | (1.034) | 5762 | 10.0000 | 10.8 |
| | 47 Dibenzofuran | 168 | 4.613 | 4.613 | (1.030) | 63082 | 10.0000 | 12.0 |
| | 48 2,4-Dinitrotoluene | 165 | 4.619 | 4.619 | (1.032) | 13897 | 10.0000 | 11.6 |
| | 50 Diethylphthalate | 149 | 4.754 | 4.754 | (1.062) | 47050 | 10.0000 | 12.1 |
| | 52 4-Chlorophenyl-phenylether | 204 | 4.813 | 4.813 | (1.075) | 23838 | 10.0000 | 11.7 |
| | 51 Fluorene | 166 | 4.819 | 4.819 | (1.076) | 51583 | 10.0000 | 12.4 |
| | 53 4-Nitroaniline | 138 | 4.860 | 4.860 | (1.085) | 9765 | 10.0000 | 11.1 |
| | 54 4,6-Dinitro-o-cresol | 198 | 4.872 | 4.872 | (0.903) | 7993 | 10.0000 | 9.60(a) |
| | 55 N-nitrosodiphenylamine (1)+ | 169 | 4.895 | 4.895 | (0.907) | 36593 | 10.0000 | 11.8 |
| | 56 Azobenzene | 77 | 4.913 | 4.913 | (0.911) | 42056 | 10.0000 | 11.9(M1) |
| $ | 57 2,4,6-Tribromophenol | 332 | 4.978 | 4.978 | (1.112) | 7712 | 10.0000 | 11.0 |
| | 58 4-Bromophenyl-phenylether | 248 | 5.113 | 5.113 | (0.948) | 14918 | 10.0000 | 11.6 |
| | 59 Hexachlorobenzene | 284 | 5.166 | 5.166 | (0.957) | 17041 | 10.0000 | 11.9 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppm) | AMOUNTS ON-COL ( ppm) |
|---|---|---|---|---|---|---|---|---|
| | 60 Pentachlorophenol + | 266 | 5.307 | 5.307 | (0.984) | 9072 | 10.0000 | 9.77(a) |
| * | 61 Phenanthrene-d10 | 188 | 5.395 | 5.395 | (1.000) | 212463 | 40.0000 | |
| | 62 Phenanthrene | 178 | 5.407 | 5.407 | (1.002) | 70116 | 10.0000 | 12.0 |
| | 63 Anthracene | 178 | 5.442 | 5.442 | (1.009) | 69256 | 10.0000 | 11.9 |
| | 64 Carbazole | 167 | 5.554 | 5.554 | (1.029) | 64517 | 10.0000 | 12.0 |
| | 65 Di-n-butylphthalate | 149 | 5.772 | 5.772 | (1.070) | 76779 | 10.0000 | 12.1 |
| | 67 Fluoranthene + | 202 | 6.242 | 6.242 | (1.157) | 74413 | 10.0000 | 11.9 |
| | 68 Benzidine | 184 | 6.378 | 6.378 | (0.804) | 10722 | 10.0000 | 19.5 |
| | 69 Pyrene | 202 | 6.442 | 6.442 | (0.812) | 77228 | 10.0000 | 12.1 |
| $ | 70 Terphenyl-d14 | 244 | 6.595 | 6.595 | (0.832) | 50581 | 10.0000 | 12.1 |
| | 71 Butylbenzylphthalate | 149 | 7.166 | 7.166 | (0.904) | 31076 | 10.0000 | 11.4 |
| | 73 3,3'-Dichlorobenzidine | 252 | 7.925 | 7.925 | (0.999) | 17986 | 10.0000 | 10.7 |
| | 72 Benzo(a)anthracene | 228 | 7.913 | 7.913 | (0.998) | 64991 | 10.0000 | 11.6 |
| * | 74 Chrysene-d12 | 240 | 7.930 | 7.930 | (1.000) | 208860 | 40.0000 | |
| | 76 bis(2-Ethylhexyl)phthalate | 149 | 8.101 | 8.101 | (1.022) | 35647 | 10.0000 | 10.4 |
| | 75 Chrysene | 228 | 7.972 | 7.972 | (1.005) | 67296 | 10.0000 | 11.8 |
| | 77 Di-n-octylphthalate + | 149 | 9.413 | 9.413 | (1.187) | 48044 | 10.0000 | 9.03(a) |
| | 78 Benzo(b)fluoranthene | 252 | 9.901 | 9.901 | (0.949) | 53246 | 10.0000 | 10.2 |
| | 79 Benzo(k)fluoranthene | 252 | 9.948 | 9.948 | (0.954) | 68352 | 10.0000 | 11.1 |
| | 80 Benzo(a)pyrene + | 252 | 10.354 | 10.354 | (0.993) | 53181 | 10.0000 | 10.2 |
| * | 81 Perylene-d12 | 264 | 10.430 | 10.430 | (1.000) | 210766 | 40.0000 | |
| | 82 Indeno(1,2,3-cd)pyrene | 276 | 11.460 | 11.460 | (1.099) | 38001 | 10.0000 | 7.94(aM1) |
| | 83 Dibenzo(a,h)anthracene | 278 | 11.483 | 11.483 | (1.101) | 54647 | 10.0000 | 9.62(a) |
| | 84 Benzo(g,h,i)perylene | 276 | 11.701 | 11.701 | (1.122) | 63450 | 10.0000 | 10.2 |
| M | 66 Total Methylphenol | 108 | | | | 46935 | 20.0000 | 25.3 |
| | 91 Acetophenone | 105 | 2.919 | 2.919 | (1.090) | 31007 | 10.0000 | 12.8 |
| | 155 Benzaldehyde | 77 | 2.454 | 2.454 | (0.917) | 10961 | 10.0000 | 29.6 |
| | 156 Caprolactam | 113 | 3.713 | 3.713 | (1.088) | 5639 | 10.0000 | 12.2 |
| | 157 Biphenyl | 154 | 4.131 | 4.131 | (1.210) | 58674 | 10.0000 | 12.5 |
| | 158 Atrazine | 200 | 5.237 | 5.237 | (0.971) | 11265 | 10.0000 | 12.9 |
| | 174 1,4-Dioxane | 88 | 1.272 | 1.272 | (0.475) | 10409 | 10.0000 | 12.1 |

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
M1- Compound response manually integrated because Target system did not integrate.

Data File: /var/chem/MSSV4.i/2130830.s.b/h4420x.d

Date : 30-AUG-2013 13:06

Client ID: STD010

Sample Info: 1204*48-28-2

Volume Injected (uL): 1.0

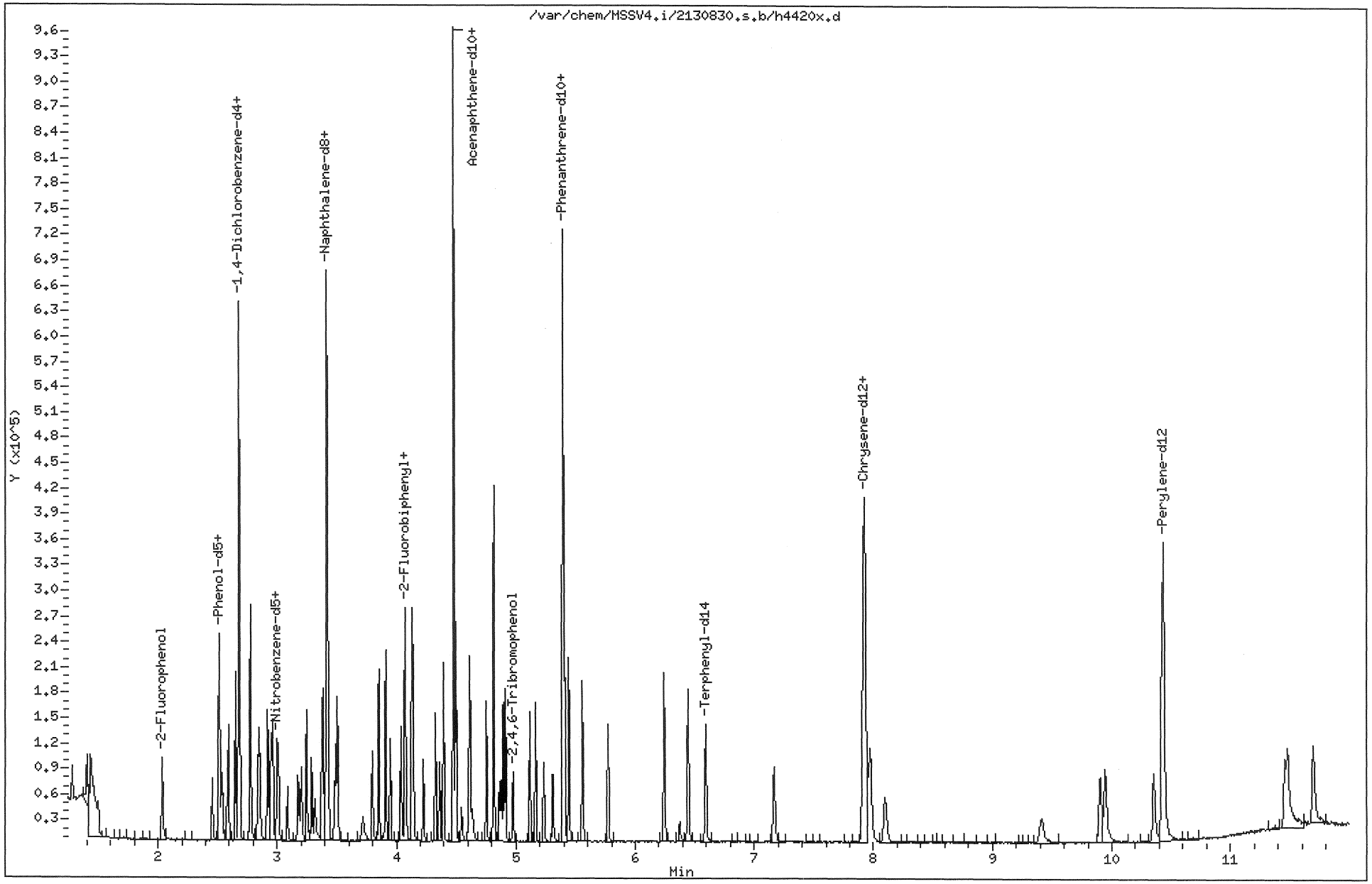
Column phase: RTX-5MS-30M



Instrument: MSSV4.i

Operator: dlb

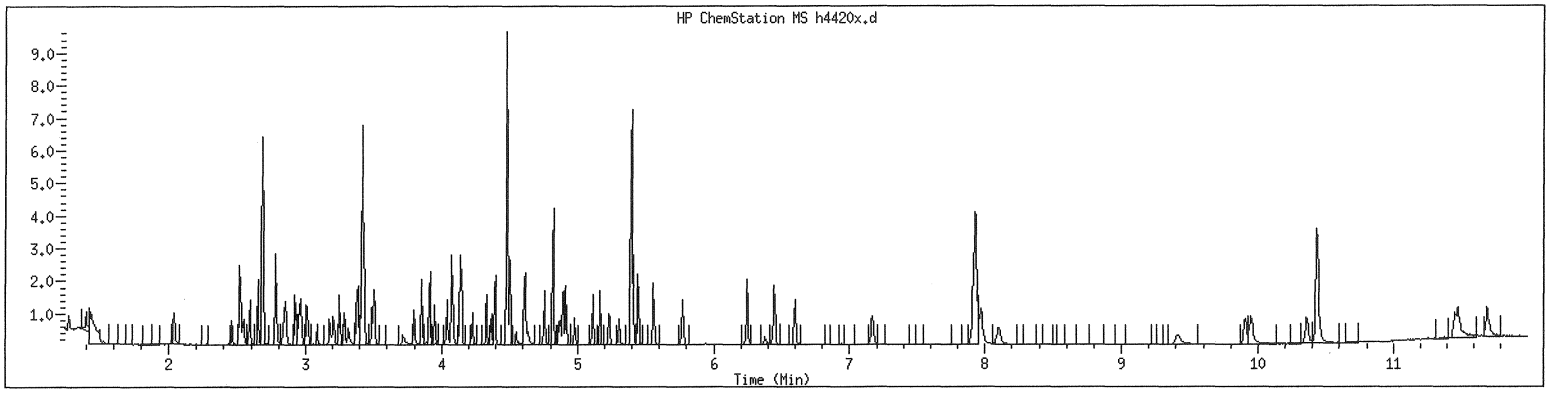
Column diameter: 0.25




2131701712 453

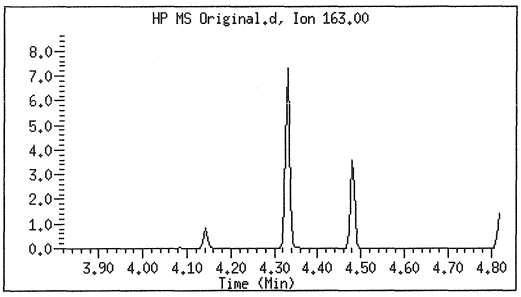
# MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 1204 SampleType : CALIB_4
Injection Date: 08/30/2013 13:06 Instrument : MSSV4.i
Operator : dlb
Sample Info : 1204*48-28-2
Misc Info : STD010*MSSV~9886~*
Method : /var/chem/MSSV4.i/2130830.s.b/8270D_04.m
Dilution : 1.00
Matrix : WATER
Integrator : HP RTE Compound Sublist: 8270c



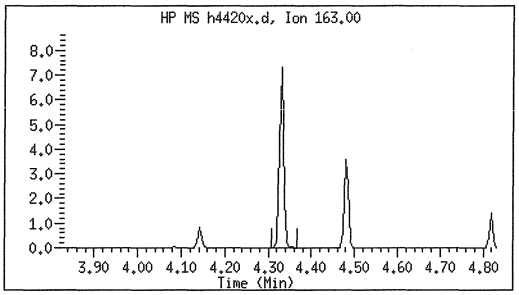

Original Final

40 Dimethylphthalate CAS#: 131-11-3 Reason: M1

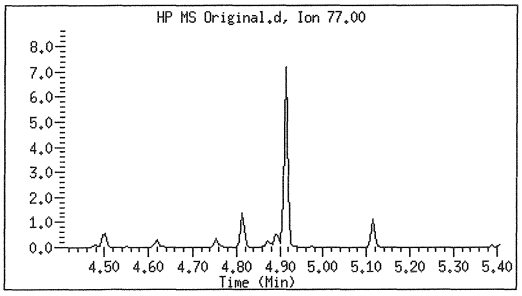



Electronic Signature Applied

User: dlb
Date: 08/30/2013 13:54

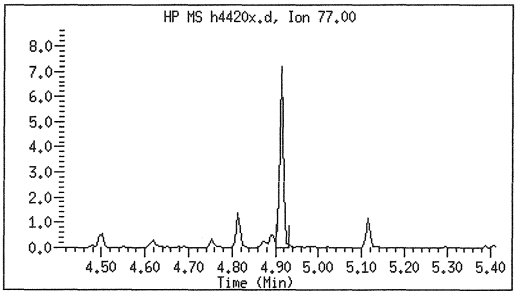



56 Azobenzene CAS#: 122-66-7 Reason: M1

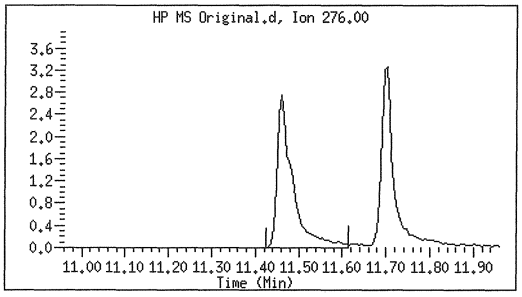



Electronic Signature Applied

User: dlb
Date: 08/30/2013 13:54

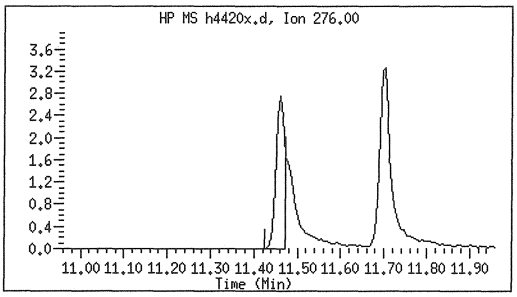


| Original | | Final |
|---|---|---|
| 82 Indeno(1,2,3-cd)pyrene | CAS#: 193-39-5 | Reason: M1 |




Electronic Signature Applied

User: dlb
Date: 08/30/2013 13:55



GCAL, Inc.

BNA QUANT AND RATIO REPORT

Data file : /var/chem/MSSV4.i/2130830.s.b/h4421x.d
Lab Smp Id: 1209 Client Smp ID: STD200
Inj Date : 30-AUG-2013 13:26
Operator : dlb Inst ID: MSSV4.i
Smp Info : 1209*48-28-6
Misc Info : STD200*MSSV~9886~*
Comment :
Method : /var/chem/MSSV4.i/2130830.s.b/8270D_04.m
Meth Date : 04-Sep-2013 07:29 dlb Quant Type: ISTD
Cal Date : 09-JUL-2013 01:40 Cal File: h2764x.d
Als bottle: 7 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270c.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | ng unit correction factor |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppm) | AMOUNTS ON-COL ( ppm) |
|---|---|---|---|---|---|---|---|
| 2 Pyridine | 79 | 1.425 | 1.425 | (0.533) | 423028 | 200.000 | 189 |
| 1 n-Nitrosodimethylamine | 42 | 1.407 | 1.407 | (0.527) | 172815 | 200.000 | 181 |
| $ 3 2-Fluorophenol | 112 | 2.025 | 2.025 | (0.758) | 383284 | 200.000 | 175(A) |
| $ 4 Phenol-d5 | 99 | 2.496 | 2.496 | (0.934) | 406158 | 200.000 | 172(A) |
| 5 Aniline | 93 | 2.507 | 2.507 | (0.938) | 366671 | 200.000 | 204(A) |
| 6 Phenol + | 94 | 2.507 | 2.507 | (0.938) | 441783 | 200.000 | 165 |
| 7 bis(-2-Chloroethyl)Ether | 63 | 2.525 | 2.525 | (0.945) | 235224 | 200.000 | 181 |
| 8 2-Chlorophenol | 128 | 2.572 | 2.572 | (0.963) | 397440 | 200.000 | 176 |
| 9 1,3-Dichlorobenzene | 146 | 2.643 | 2.643 | (0.989) | 453477 | 200.000 | 178 |
| * 10 1,4-Dichlorobenzene-d4 | 152 | 2.672 | 2.672 | (1.000) | 67521 | 40.0000 | |
| 11 1,4-Dichlorobenzene + | 146 | 2.684 | 2.684 | (1.004) | 457604 | 200.000 | 178 |
| 12 Benzyl alcohol | 108 | 2.760 | 2.760 | (1.033) | 202063 | 200.000 | 167 |
| 13 1,2-Dichlorobenzene | 146 | 2.772 | 2.772 | (1.037) | 436320 | 200.000 | 179 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppm) | AMOUNTS ON-COL ( ppm) |
|---|---|---|---|---|---|---|---|---|
| | 15 2-Methylphenol | 107 | 2.831 | 2.831 | (1.059) | 319232 | 200.000 | 167 |
| | 14 Bis(2-chloroisopropyl)ether | 45 | 2.825 | 2.825 | (1.057) | 370095 | 200.000 | 177 |
| | 17 3- & 4-Methylphenol | 107 | 2.925 | 2.925 | (1.095) | 342747 | 200.000 | 175 |
| | 16 N-Nitroso-di-n-propylamine++ | 70 | 2.907 | 2.907 | (1.088) | 233047 | 200.000 | 171 |
| | 18 Hexachloroethane | 117 | 2.960 | 2.960 | (1.108) | 166452 | 200.000 | 177 |
| $ | 19 Nitrobenzene-d5 | 82 | 2.990 | 2.990 | (0.877) | 356679 | 200.000 | 183(A) |
| | 20 Nitrobenzene | 77 | 3.001 | 3.001 | (0.881) | 351429 | 200.000 | 186 |
| | 21 Isophorone | 82 | 3.143 | 3.143 | (0.922) | 542013 | 200.000 | 181 |
| | 22 2-Nitrophenol + | 139 | 3.184 | 3.184 | (0.934) | 213258 | 200.000 | 187 |
| | 23 2,4-Dimethyphenol | 107 | 3.225 | 3.225 | (0.946) | 358696 | 200.000 | 181 |
| | 24 bis(-2-Chloroethoxy)methane | 93 | 3.260 | 3.260 | (0.957) | 387759 | 200.000 | 185 |
| | 25 Benzoic Acid | 122 | 3.337 | 3.337 | (0.979) | 237692 | 200.000 | 205(A) |
| | 26 2,4-Dichlorophenol + | 162 | 3.343 | 3.343 | (0.981) | 316255 | 200.000 | 186 |
| | 27 1,2,4-Trichlorobenzene | 180 | 3.372 | 3.372 | (0.990) | 354857 | 200.000 | 186 |
| * | 28 Naphthalene-d8 | 136 | 3.407 | 3.407 | (1.000) | 234500 | 40.0000 | |
| | 29 Naphthalene | 128 | 3.419 | 3.419 | (1.003) | 1105540 | 200.000 | 182 |
| | 30 4-Chloroaniline | 127 | 3.466 | 3.466 | (1.017) | 332581 | 200.000 | 168 |
| | 31 Hexachlorobutadiene + | 225 | 3.495 | 3.495 | (1.026) | 237731 | 200.000 | 192 |
| | 32 4-Chloro-3-Methylphenol + | 107 | 3.778 | 3.778 | (1.109) | 284075 | 200.000 | 184 |
| | 33 2-Methylnaphthalene | 142 | 3.837 | 3.837 | (1.126) | 674080 | 200.000 | 181 |
| | 145 1-Methylnapthalene | 142 | 3.901 | 3.901 | (1.145) | 649627 | 200.000 | 181 |
| | 34 Hexachlorocyclopentadiene ++ | 237 | 3.937 | 3.937 | (0.880) | 253212 | 200.000 | 201(A) |
| | 35 2,4,6-Trichlorophenol + | 196 | 4.025 | 4.025 | (0.900) | 219800 | 200.000 | 194 |
| | 36 2,4,5-Trichlorphenol | 196 | 4.060 | 4.060 | (0.908) | 220408 | 200.000 | 188 |
| $ | 37 2-Fluorobiphenyl | 172 | 4.060 | 4.060 | (0.908) | 757719 | 200.000 | 189(A) |
| | 38 2-Chloronaphthalene | 162 | 4.137 | 4.137 | (0.925) | 639533 | 200.000 | 189 |
| | 39 2-Nitroaniline | 138 | 4.213 | 4.213 | (0.942) | 209323 | 200.000 | 191 |
| | 40 Dimethylphthalate | 163 | 4.313 | 4.313 | (0.964) | 691178 | 200.000 | 187 |
| | 41 2,6-Dinitrotoluene | 165 | 4.354 | 4.354 | (0.974) | 153070 | 200.000 | 188 |
| | 42 Acenaphthylene | 152 | 4.390 | 4.390 | (0.982) | 1003863 | 200.000 | 192 |
| | 43 3-Nitroaniline | 138 | 4.472 | 4.472 | (1.000) | 152980 | 200.000 | 187 |
| * | 44 Acenaphthene-d10 | 164 | 4.472 | 4.472 | (1.000) | 119425 | 40.0000 | |
| | 45 Acenaphthene + | 153 | 4.495 | 4.495 | (1.005) | 628725 | 200.000 | 185 |
| | 46 2,4-Dinitrophenol ++ | 184 | 4.537 | 4.537 | (1.014) | 123930 | 200.000 | 206(A) |
| | 49 4-Nitrophenol ++ | 109 | 4.613 | 4.613 | (1.032) | 91562 | 200.000 | 193 |
| | 47 Dibenzofuran | 168 | 4.601 | 4.601 | (1.029) | 884422 | 200.000 | 190 |
| | 48 2,4-Dinitrotoluene | 165 | 4.607 | 4.607 | (1.030) | 197303 | 200.000 | 186 |
| | 50 Diethylphthalate | 149 | 4.748 | 4.748 | (1.062) | 648897 | 200.000 | 188 |
| | 52 4-Chlorophenyl-phenylether | 204 | 4.813 | 4.813 | (1.076) | 336873 | 200.000 | 186 |
| | 51 Fluorene | 166 | 4.813 | 4.813 | (1.076) | 677683 | 200.000 | 183 |
| | 53 4-Nitroaniline | 138 | 4.860 | 4.860 | (1.087) | 145259 | 200.000 | 185 |
| | 54 4,6-Dinitro-o-cresol | 198 | 4.866 | 4.866 | (0.903) | 142356 | 200.000 | 198 |
| | 55 N-nitrosodiphenylamine (1)+ | 169 | 4.890 | 4.890 | (0.907) | 509691 | 200.000 | 190 |
| | 56 Azobenzene | 77 | 4.907 | 4.907 | (0.910) | 567047 | 200.000 | 185 |
| $ | 57 2,4,6-Tribromophenol | 332 | 4.972 | 4.972 | (1.112) | 120414 | 200.000 | 192(A) |
| | 58 4-Bromophenyl-phenylether | 248 | 5.113 | 5.113 | (0.949) | 209008 | 200.000 | 188 |
| | 59 Hexachlorobenzene | 284 | 5.160 | 5.160 | (0.957) | 234336 | 200.000 | 189 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppm) | AMOUNTS ON-COL ( ppm) |
|---|---|---|---|---|---|---|---|---|
| | 60 Pentachlorophenol + | 266 | 5.295 | 5.295 | (0.983) | 156994 | 200.000 | 196 |
| * | 61 Phenanthrene-d10 | 188 | 5.389 | 5.389 | (1.000) | 183671 | 40.0000 | |
| | 62 Phenanthrene | 178 | 5.407 | 5.407 | (1.003) | 915410 | 200.000 | 182 |
| | 63 Anthracene | 178 | 5.437 | 5.437 | (1.009) | 919054 | 200.000 | 183 |
| | 64 Carbazole | 167 | 5.548 | 5.548 | (1.029) | 857871 | 200.000 | 185 |
| | 65 Di-n-butylphthalate | 149 | 5.760 | 5.760 | (1.069) | 1016548 | 200.000 | 185 |
| | 67 Fluoranthene + | 202 | 6.236 | 6.236 | (1.157) | 1003841 | 200.000 | 186 |
| | 68 Benzidine | 184 | 6.372 | 6.372 | (0.803) | 74057 | 200.000 | 151 |
| | 69 Pyrene | 202 | 6.436 | 6.436 | (0.811) | 1035674 | 200.000 | 183 |
| $ | 70 Terphenyl-d14 | 244 | 6.595 | 6.595 | (0.831) | 686565 | 200.000 | 184(A) |
| | 71 Butylbenzylphthalate | 149 | 7.166 | 7.166 | (0.903) | 463963 | 200.000 | 191 |
| | 73 3,3'-Dichlorobenzidine | 252 | 7.919 | 7.919 | (0.998) | 278701 | 200.000 | 185 |
| | 72 Benzo(a)anthracene | 228 | 7.919 | 7.919 | (0.998) | 924204 | 200.000 | 185 |
| * | 74 Chrysene-d12 | 240 | 7.936 | 7.936 | (1.000) | 186289 | 40.0000 | |
| | 76 bis(2-Ethylhexyl)phthalate | 149 | 8.095 | 8.095 | (1.020) | 596960 | 200.000 | 195 |
| | 75 Chrysene | 228 | 7.978 | 7.978 | (1.005) | 938044 | 200.000 | 185 |
| | 77 Di-n-octylphthalate + | 149 | 9.413 | 9.413 | (1.186) | 975702 | 200.000 | 206(A) |
| | 78 Benzo(b)fluoranthene | 252 | 9.913 | 9.913 | (0.950) | 950023 | 200.000 | 198 |
| | 79 Benzo(k)fluoranthene | 252 | 9.960 | 9.960 | (0.955) | 1055968 | 200.000 | 186 |
| | 80 Benzo(a)pyrene + | 252 | 10.366 | 10.366 | (0.994) | 940652 | 200.000 | 196 |
| * | 81 Perylene-d12 | 264 | 10.430 | 10.430 | (1.000) | 193814 | 40.0000 | |
| | 82 Indeno(1,2,3-cd)pyrene | 276 | 11.471 | 11.471 | (1.100) | 923866 | 200.000 | 210(AM2) |
| | 83 Dibenzo(a,h)anthracene | 278 | 11.495 | 11.495 | (1.102) | 1056162 | 200.000 | 202(A) |
| | 84 Benzo(g,h,i)perylene | 276 | 11.707 | 11.707 | (1.122) | 1148257 | 200.000 | 200(A) |
| M | 66 Total Methylphenol | 108 | | | | 661979 | 400.000 | 342(A) |
| | 91 Acetophenone | 105 | 2.901 | 2.901 | (1.086) | 429919 | 200.000 | 170 |
| | 155 Benzaldehyde | 77 | 2.449 | 2.449 | (0.916) | 38955 | 200.000 | 101 |
| | 156 Caprolactam | 113 | 3.701 | 3.701 | (1.086) | 75877 | 200.000 | 171 |
| | 157 Biphenyl | 154 | 4.125 | 4.125 | (1.211) | 813351 | 200.000 | 180 |
| | 158 Atrazine | 200 | 5.231 | 5.231 | (0.971) | 136534 | 200.000 | 181 |
| | 174 1,4-Dioxane | 88 | 1.284 | 1.284 | (0.480) | 163937 | 200.000 | 183 |

QC Flag Legend

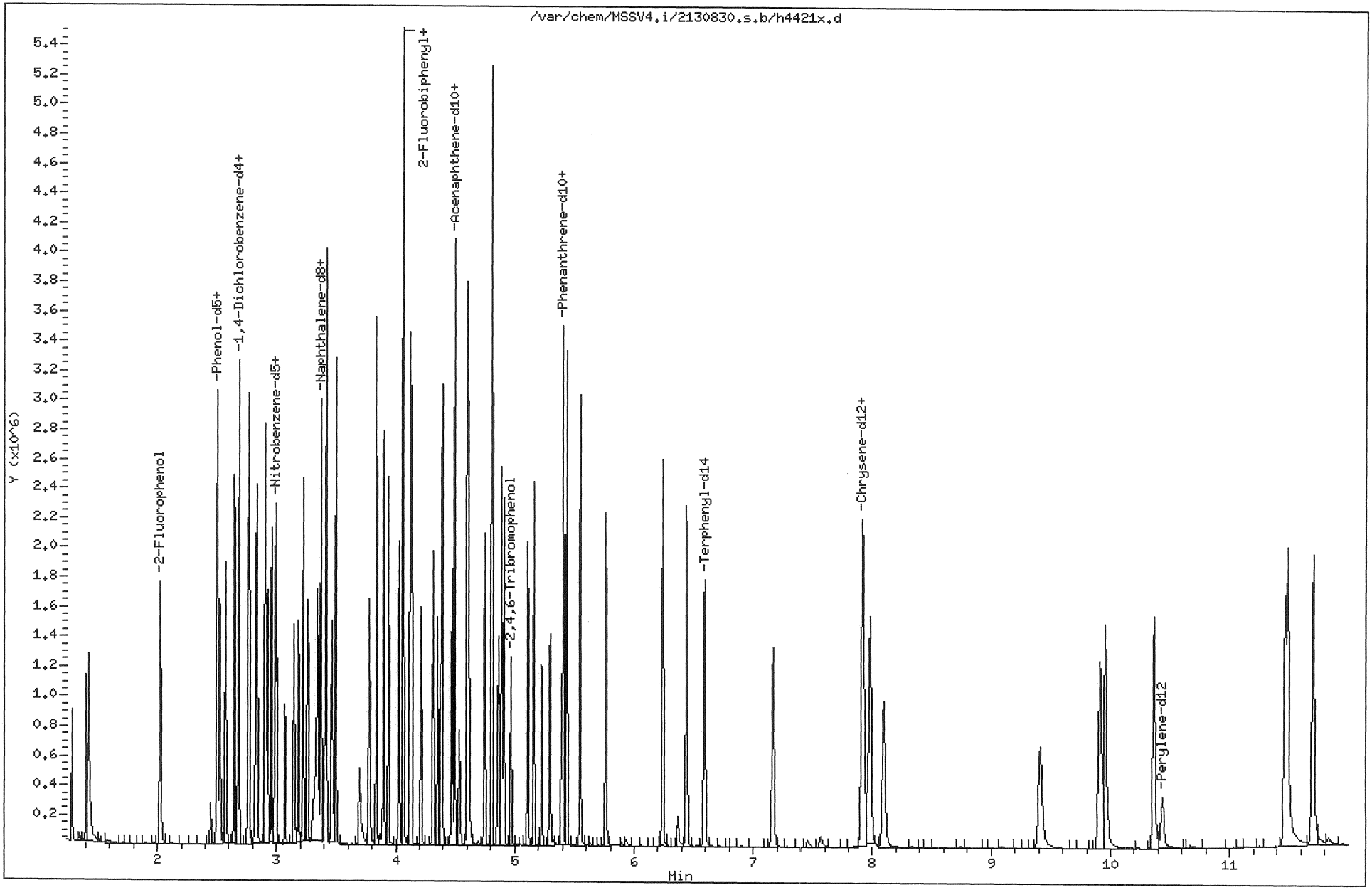
A - Target compound detected but, quantitated amount exceeded maximum amount.
M2- Compound response manually integrated because Target system integrated incorrectly.

Data File: /var/chem/MSSV4.i/2130830.s.b/h4421x.d
Date : 30-AUG-2013 13:26
Client ID: STD200
Sample Info: 1209*48-28-6
Volume Injected (uL): 1.0
Column phase: RTX-5MS-30M

Instrument: MSSV4.i

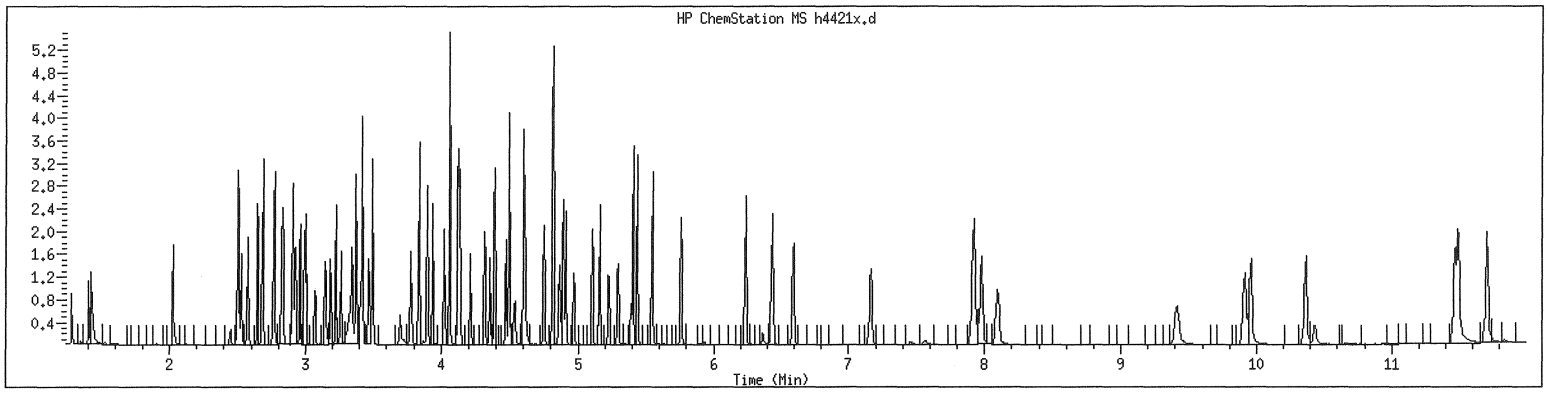
Operator: dlb
Column diameter: 0.25





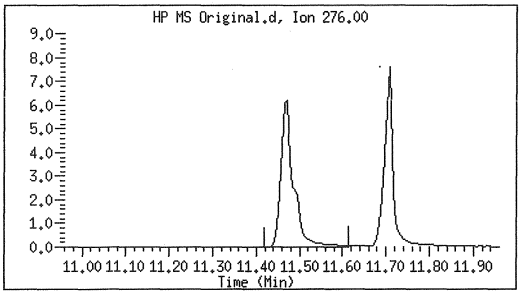
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1209 | SampleType | : CALIB_9 |
| Injection Date | : 08/30/2013 13:26 | Instrument | : MSSV4.i |
| Operator | : dlb | | |
| Sample Info | : 1209*48-28-6 | | |
| Misc Info | : STD200*MSSV~9886~* | | |
| Method | : /var/chem/MSSV4.i/2130830.s.b/8270D_04.m | | |
| Dilution | : 1.00 | | |
| Matrix | : WATER | | |
| Integrator | : HP RTE | Compound Sublist | : 8270c |



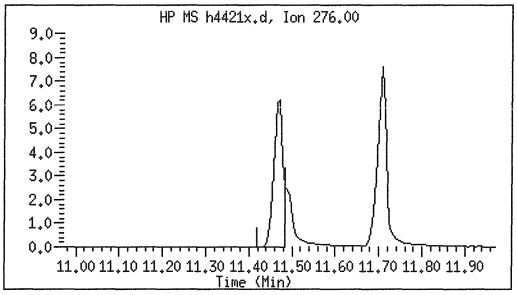

Original Final

82 Indeno(1,2,3-cd)pyrene CAS#: 193-39-5 Reason: M3




Electronic Signature Applied

User: dlb
Date: 08/30/2013 13:55



GCAL, Inc.

BNA QUANT AND RATIO REPORT

Data file : /var/chem/MSSV4.i/2130830.s.b/h4422x.d
Lab Smp Id: 1203 Client Smp ID: STD002
Inj Date : 30-AUG-2013 13:46
Operator : dlb Inst ID: MSSV4.i
Smp Info : 1203*48-28-7
Misc Info : STD002*MSSV~9874~*
Comment :
Method : /var/chem/MSSV4.i/2130830.s.b/8270DC_04.m
Meth Date : 08-Oct-2013 14:31 dlb Quant Type: ISTD
Cal Date : 30-AUG-2013 13:46 Cal File: h4422x.d
Als bottle: 8 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270c.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | ng unit correction factor |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppm) | AMOUNTS ON-COL ( ppm) |
|---|---|---|---|---|---|---|---|
| 2 Pyridine | 79 | 1.460 | 1.460 | (0.545) | 4902 | 2.00000 | 1.83(aM2) |
| 1 n-Nitrosodimethylamine | 42 | 1.407 | 1.407 | (0.526) | 2446 | 2.00000 | 2.14(aM2) |
| $ 3 2-Fluorophenol | 112 | 2.043 | 2.043 | (0.763) | 4009 | 2.00000 | 1.54(a) |
| $ 4 Phenol-d5 | 99 | 2.537 | 2.537 | (0.947) | 5431 | 2.00000 | 1.93(a) |
| 6 Phenol + | 94 | 2.543 | 2.543 | (0.949) | 6556 | 2.00000 | 2.05(a) |
| 7 bis(-2-Chloroethyl)Ether | 63 | 2.554 | 2.554 | (0.954) | 3285 | 2.00000 | 2.12(a) |
| 8 2-Chlorophenol | 128 | 2.613 | 2.613 | (0.976) | 5053 | 2.00000 | 1.88(a) |
| 9 1,3-Dichlorobenzene | 146 | 2.654 | 2.654 | (0.991) | 5901 | 2.00000 | 1.94(a) |
| * 10 1,4-Dichlorobenzene-d4 | 152 | 2.678 | 2.678 | (1.000) | 80638 | 40.0000 | |
| 11 1,4-Dichlorobenzene + | 146 | 2.690 | 2.690 | (1.004) | 6031 | 2.00000 | 1.96(a) |
| 12 Benzyl alcohol | 108 | 2.678 | 2.678 | (1.000) | 349 | 2.00000 | 0.241(aH) |
| 13 1,2-Dichlorobenzene | 146 | 2.790 | 2.790 | (1.042) | 5419 | 2.00000 | 1.86(a) |
| 15 2-Methylphenol | 107 | 2.872 | 2.872 | (1.072) | 4477 | 2.00000 | 1.97(aH) |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppm) | AMOUNTS ON-COL ( ppm) |
|---|---|---|---|---|---|---|---|---|
| | 14 Bis(2-chloroisopropyl)ether | 45 | 2.860 | 2.860 | (1.068) | 4499 | 2.00000 | 1.80(a) |
| | 17 3- & 4-Methylphenol | 107 | 2.978 | 2.978 | (1.112) | 4034 | 2.00000 | 1.72(a) |
| | 16 N-Nitroso-di-n-propylamine++ | 70 | 2.984 | 2.984 | (1.114) | 1907 | 2.00000 | 1.17(aH) |
| | 18 Hexachloroethane | 117 | 2.972 | 2.972 | (1.110) | 2048 | 2.00000 | 1.83(a) |
| $ | 19 Nitrobenzene-d5 | 82 | 3.013 | 3.013 | (0.881) | 4350 | 2.00000 | 1.78(a) |
| | 20 Nitrobenzene | 77 | 3.025 | 3.025 | (0.885) | 4878 | 2.00000 | 2.06(a) |
| | 21 Isophorone | 82 | 3.213 | 3.213 | (0.940) | 6941 | 2.00000 | 1.85(a) |
| | 22 2-Nitrophenol + | 139 | 3.219 | 3.219 | (0.942) | 2755 | 2.00000 | 1.93(a) |
| | 23 2,4-Dimethyphenol | 107 | 3.272 | 3.272 | (0.957) | 4219 | 2.00000 | 1.70(a) |
| | 24 bis(-2-Chloroethoxy)methane | 93 | 3.313 | 3.313 | (0.969) | 4624 | 2.00000 | 1.76(a) |
| | 25 Benzoic Acid | 122 | 3.349 | 3.349 | (0.979) | 1443 | 2.00000 | 0.992(a) |
| | 26 2,4-Dichlorophenol + | 162 | 3.396 | 3.396 | (0.993) | 3767 | 2.00000 | 1.77(a) |
| | 27 1,2,4-Trichlorobenzene | 180 | 3.396 | 3.396 | (0.993) | 4551 | 2.00000 | 1.91(a) |
| * | 28 Naphthalene-d8 | 136 | 3.419 | 3.419 | (1.000) | 293784 | 40.0000 | |
| | 29 Naphthalene | 128 | 3.437 | 3.437 | (1.005) | 15251 | 2.00000 | 2.00(a) |
| | 30 4-Chloroaniline | 127 | 3.507 | 3.507 | (1.026) | 4203 | 2.00000 | 1.69(a) |
| | 31 Hexachlorobutadiene + | 225 | 3.513 | 3.513 | (1.028) | 2685 | 2.00000 | 1.73(a) |
| | 32 4-Chloro-3-Methylphenol + | 107 | 3.813 | 3.813 | (1.115) | 3277 | 2.00000 | 1.69(a) |
| | 33 2-Methylnaphthalene | 142 | 3.866 | 3.866 | (1.131) | 9460 | 2.00000 | 2.02(a) |
| | 145 1-Methylnapthalene | 142 | 3.925 | 3.925 | (1.148) | 8337 | 2.00000 | 1.86(a) |
| | 34 Hexachlorocyclopentadiene ++ | 237 | 3.960 | 3.960 | (0.883) | 2838 | 2.00000 | 1.69(a) |
| | 35 2,4,6-Trichlorophenol + | 196 | 4.054 | 4.054 | (0.904) | 2450 | 2.00000 | 1.62(a) |
| | 36 2,4,5-Trichlorphenol | 196 | 4.101 | 4.101 | (0.915) | 2644 | 2.00000 | 1.70(aH) |
| $ | 37 2-Fluorobiphenyl | 172 | 4.078 | 4.078 | (0.909) | 10022 | 2.00000 | 1.88(a) |
| | 38 2-Chloronaphthalene | 162 | 4.154 | 4.154 | (0.927) | 8111 | 2.00000 | 1.80(aM1) |
| | 39 2-Nitroaniline | 138 | 4.243 | 4.243 | (0.946) | 2275 | 2.00000 | 1.56(a) |
| | 40 Dimethylphthalate | 163 | 4.348 | 4.348 | (0.970) | 9445 | 2.00000 | 1.93(aM1) |
| | 41 2,6-Dinitrotoluene | 165 | 4.378 | 4.378 | (0.976) | 1734 | 2.00000 | 1.60(a) |
| | 42 Acenaphthylene | 152 | 4.401 | 4.401 | (0.982) | 13896 | 2.00000 | 2.00(a) |
| | 43 3-Nitroaniline | 138 | 4.496 | 4.496 | (1.003) | 1373 | 2.00000 | 1.26(a) |
| * | 44 Acenaphthene-d10 | 164 | 4.484 | 4.484 | (1.000) | 158782 | 40.0000 | |
| | 45 Acenaphthene + | 153 | 4.507 | 4.507 | (1.005) | 8399 | 2.00000 | 1.86(a) |
| | 46 2,4-Dinitrophenol ++ | 184 | 4.566 | 4.566 | (1.018) | 482 | 2.00000 | 0.604(aM2) |
| | 49 4-Nitrophenol ++ | 109 | 4.672 | 4.672 | (1.042) | 627 | 2.00000 | 0.992(a) |
| | 47 Dibenzofuran | 168 | 4.625 | 4.625 | (1.031) | 12365 | 2.00000 | 2.00(a) |
| | 48 2,4-Dinitrotoluene | 165 | 4.637 | 4.637 | (1.034) | 2008 | 2.00000 | 1.42(a) |
| | 50 Diethylphthalate | 149 | 4.766 | 4.766 | (1.063) | 8366 | 2.00000 | 1.83(a) |
| | 52 4-Chlorophenyl-phenylether | 204 | 4.825 | 4.825 | (1.076) | 4380 | 2.00000 | 1.82(a) |
| | 51 Fluorene | 166 | 4.831 | 4.831 | (1.077) | 9504 | 2.00000 | 1.93(a) |
| | 53 4-Nitroaniline | 138 | 4.878 | 4.878 | (1.088) | 1169 | 2.00000 | 1.12(a) |
| | 54 4,6-Dinitro-o-cresol | 198 | 4.895 | 4.895 | (0.906) | 1081 | 2.00000 | 1.13(a) |
| | 55 N-nitrosodiphenylamine (1)+ | 169 | 4.901 | 4.901 | (0.907) | 6402 | 2.00000 | 1.80(a) |
| | 56 Azobenzene | 77 | 4.925 | 4.925 | (0.912) | 7874 | 2.00000 | 1.94(aM1) |
| $ | 57 2,4,6-Tribromophenol | 332 | 4.984 | 4.984 | (1.111) | 1084 | 2.00000 | 1.30(a) |
| | 58 4-Bromophenyl-phenylether | 248 | 5.125 | 5.125 | (0.949) | 2843 | 2.00000 | 1.93(a) |
| | 59 Hexachlorobenzene | 284 | 5.172 | 5.172 | (0.958) | 3033 | 2.00000 | 1.85(a) |
| | 60 Pentachlorophenol + | 266 | 5.319 | 5.319 | (0.985) | 1119 | 2.00000 | 1.05(a) |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppm) | AMOUNTS ON-COL ( ppm) |
|---|---|---|---|---|---|---|---|
| * 61 Phenanthrene-d10 | 188 | 5.401 | 5.401 | (1.000) | 243313 | 40.0000 | |
| 62 Phenanthrene | 178 | 5.413 | 5.413 | (1.002) | 12422 | 2.00000 | 1.86(a) |
| 63 Anthracene | 178 | 5.454 | 5.454 | (1.010) | 12064 | 2.00000 | 1.81(a) |
| 64 Carbazole | 167 | 5.566 | 5.566 | (1.030) | 10506 | 2.00000 | 1.71(a) |
| 65 Di-n-butylphthalate | 149 | 5.778 | 5.778 | (1.070) | 12166 | 2.00000 | 1.67(a) |
| 67 Fluoranthene + | 202 | 6.254 | 6.254 | (1.158) | 12063 | 2.00000 | 1.68(a) |
| 69 Pyrene | 202 | 6.454 | 6.454 | (0.813) | 12848 | 2.00000 | 2.12(a) |
| $ 70 Terphenyl-d14 | 244 | 6.607 | 6.607 | (0.833) | 7919 | 2.00000 | 1.99(a) |
| 71 Butylbenzylphthalate | 149 | 7.178 | 7.178 | (0.904) | 3440 | 2.00000 | 1.33(a) |
| 73 3,3'-Dichlorobenzidine | 252 | 7.936 | 7.936 | (1.000) | 1291 | 2.00000 | 0.804(a) |
| 72 Benzo(a)anthracene | 228 | 7.925 | 7.925 | (0.999) | 10062 | 2.00000 | 1.89(a) |
| * 74 Chrysene-d12 | 240 | 7.936 | 7.936 | (1.000) | 198952 | 40.0000 | |
| 76 bis(2-Ethylhexyl)phthalate | 149 | 8.113 | 8.113 | (1.022) | 3724 | 2.00000 | 1.14(aM1) |
| 75 Chrysene | 228 | 7.978 | 7.978 | (1.005) | 10127 | 2.00000 | 1.87(a) |
| 77 Di-n-octylphthalate + | 149 | 9.419 | 9.419 | (1.187) | 3815 | 2.00000 | 0.753(aM2) |
| 78 Benzo(b)fluoranthene | 252 | 9.919 | 9.919 | (0.950) | 5704 | 2.00000 | 1.25(a) |
| 79 Benzo(k)fluoranthene | 252 | 9.966 | 9.966 | (0.955) | 8506 | 2.00000 | 1.59(a) |
| 80 Benzo(a)pyrene + | 252 | 10.360 | 10.360 | (0.993) | 5206 | 2.00000 | 1.14(a) |
| * 81 Perylene-d12 | 264 | 10.436 | 10.436 | (1.000) | 183436 | 40.0000 | |
| 82 Indeno(1,2,3-cd)pyrene | 276 | 11.472 | 11.472 | (1.099) | 3412 | 2.00000 | 0.819(aM2) |
| 83 Dibenzo(a,h)anthracene | 278 | 11.495 | 11.495 | (1.101) | 4713 | 2.00000 | 0.954(a) |
| 84 Benzo(g,h,i)perylene | 276 | 11.713 | 11.713 | (1.122) | 7776 | 2.00000 | 1.43(a) |
| M 66 Total Methylphenol | 108 | | | | 8511 | 4.00000 | 3.69(a) |
| 91 Acetophenone | 105 | 2.943 | 2.943 | (1.099) | 4909 | 2.00000 | 1.63(a) |
| 155 Benzaldehyde | 77 | 2.478 | 2.478 | (0.925) | 268 | 2.00000 | 0.580(a) |
| 156 Caprolactam | 113 | 3.766 | 3.766 | (1.101) | 612 | 2.00000 | 1.10(a) |
| 157 Biphenyl | 154 | 4.143 | 4.143 | (1.212) | 10281 | 2.00000 | 1.82(a) |
| 158 Atrazine | 200 | 5.248 | 5.248 | (0.972) | 1669 | 2.00000 | 1.67(a) |
| 174 1,4-Dioxane | 88 | 1.278 | 1.278 | (0.477) | 2235 | 2.00000 | 2.09(a) |

QC Flag Legend

a - Target compound detected but, quantitated amount Below Limit Of Quantitation(BLOQ).
M1- Compound response manually integrated because Target system did not integrate.
M2- Compound response manually integrated because Target system integrated incorrectly.
H - Operator selected an alternate compound hit.

Data File: /var/chem/MSSV4.i/2130830.s.b/h4422x.d



Date : 30-AUG-2013 13:46

Client ID: STD002

Instrument: MSSV4.i

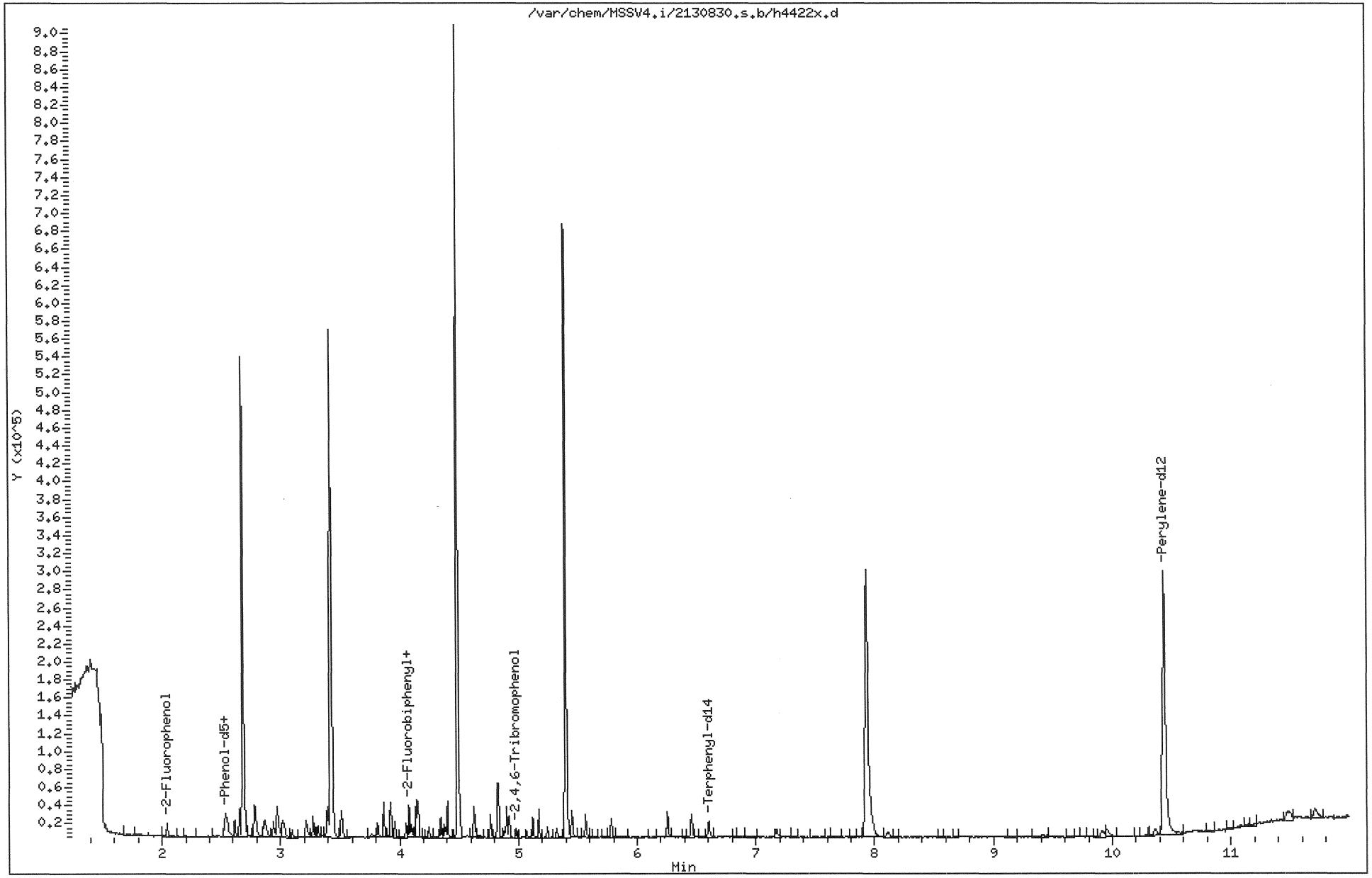
Sample Info: 1203*48-28-7

Volume Injected (uL): 1.0

Operator: dlb

Column phase: RTX-5MS-30M

Column diameter: 0.25

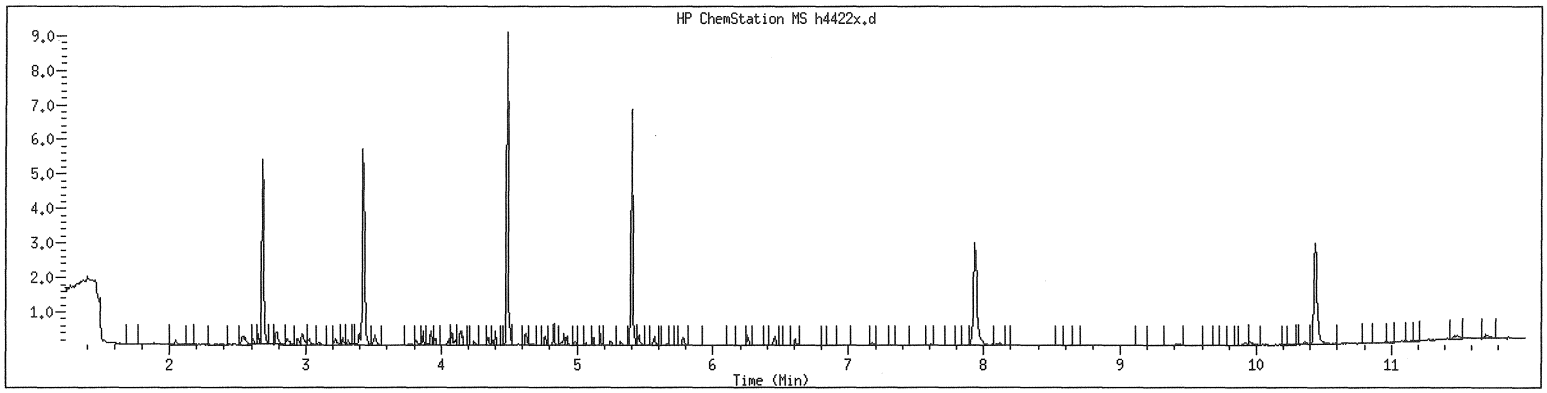



21301712 464

# MANUAL INTEGRATION GRAPHIC REPORT

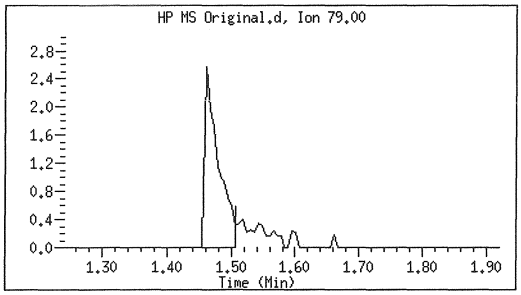
Lab ID : 1203
Injection Date: 08/30/2013 13:46
Operator : dlb
Sample Info : 1203*48-28-7
Misc Info : STD002*MSSV~9874~*
Method : /var/chem/MSSV4.i/2130830.s.b/8270DC_04.m
Dilution : 1.00
Matrix : WATER
Integrator : HP RTE

SampleType : CALIB_3
Instrument : MSSV4.i
Compound Sublist: 8270c



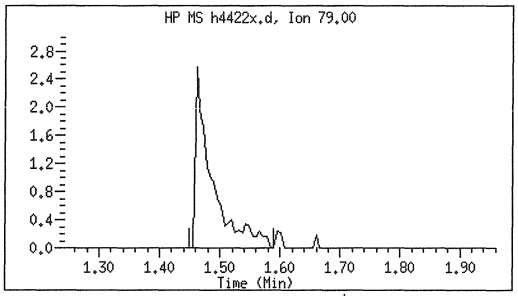

Original | Final

2 Pyridine CAS#: 110-86-1 Reason: M3

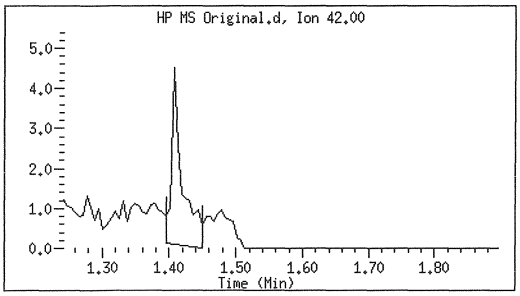



Electronic Signature Applied

User: dlb
Date: 08/30/2013 15:29

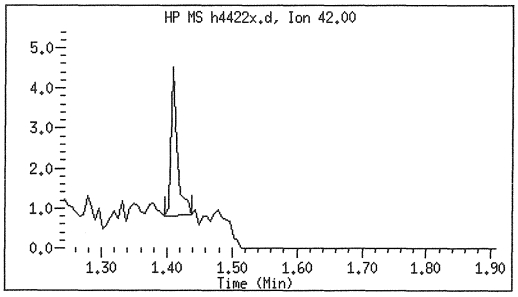



1 n-Nitrosodimethylamine CAS#: 62-75-9 Reason: M3



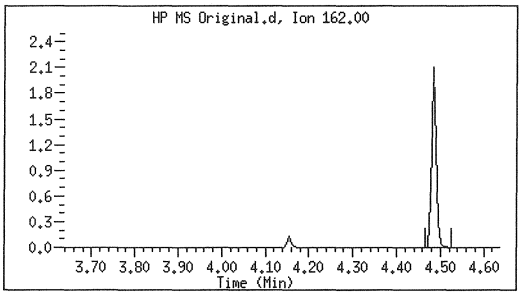

Electronic Signature Applied

User: dlb
Date: 08/30/2013 15:17



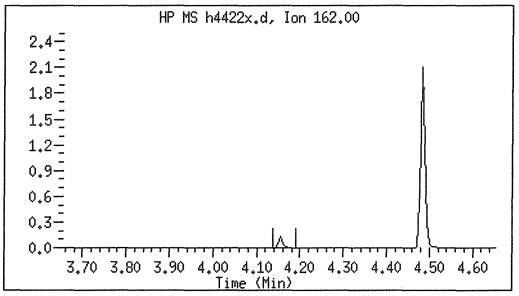
Original | Final

38 2-Chloronaphthalene CAS#: 91-58-7 Reason: M1

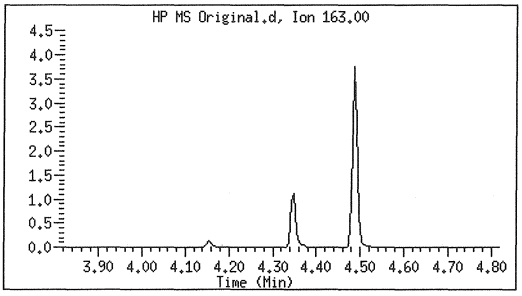



Electronic Signature Applied

User: dlb
Date: 08/30/2013 14:20

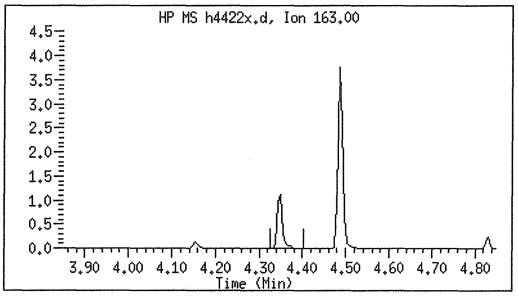



40 Dimethylphthalate CAS#: 131-11-3 Reason: M1

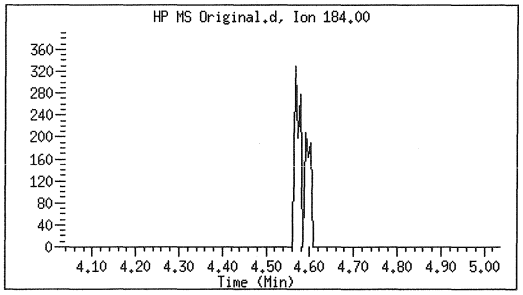



Electronic Signature Applied

User: dlb
Date: 08/30/2013 14:20

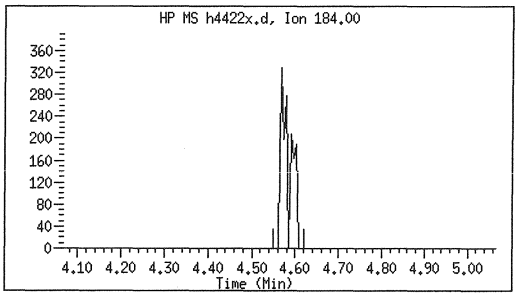



46 2,4-Dinitrophenol ++ CAS#: 51-28-5 Reason: M3

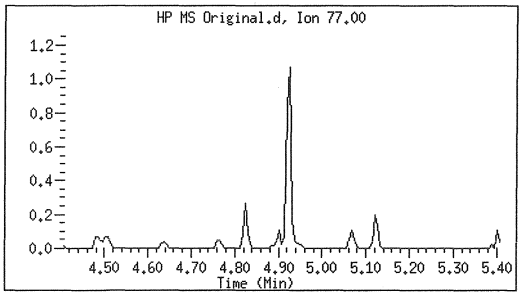



Electronic Signature Applied

User: dlb
Date: 08/30/2013 15:18

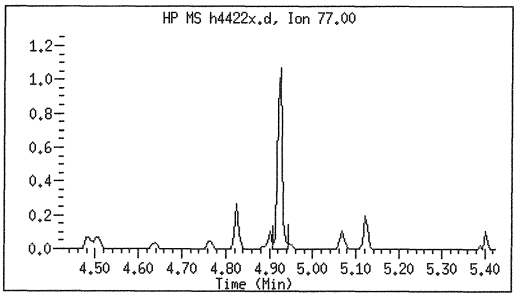



56 Azobenzene CAS#: 122-66-7 Reason: M1



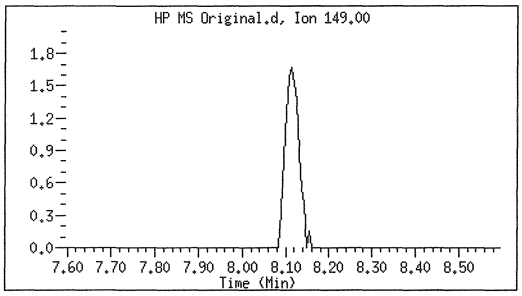

Electronic Signature Applied

User: dlb
Date: 08/30/2013 14:20



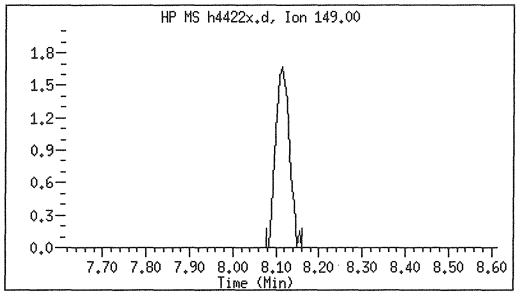
Original | Final

76 bis(2-Ethylhexyl)phthalate CAS#: 117-81-7 Reason: M1

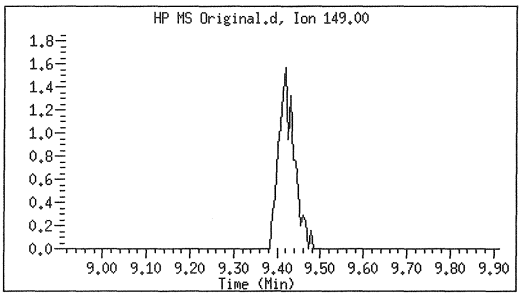



Electronic Signature Applied

User: dlb
Date: 08/30/2013 14:21

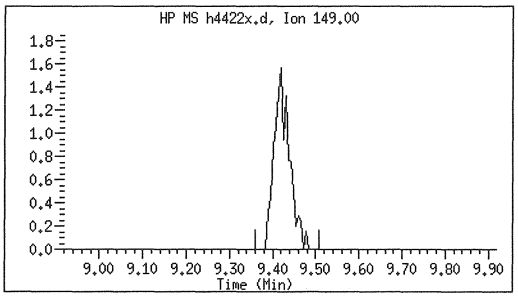



77 Di-n-octylphthalate + CAS#: 117-84-0 Reason: M3

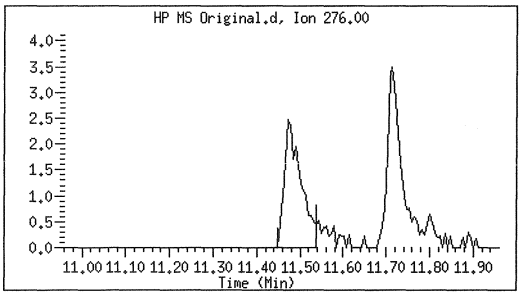



Electronic Signature Applied

User: dlb
Date: 08/30/2013 15:20

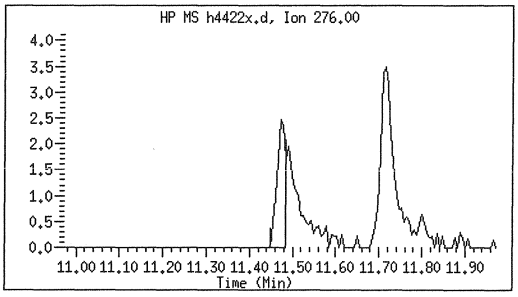



82 Indeno(1,2,3-cd)pyrene CAS#: 193-39-5 Reason: M3




Electronic Signature Applied

User: dlb
Date: 08/30/2013 15:20




M2 - Target system integrated incorrectly

GCAL, Inc.

RECOVERY REPORT

Client Name: 48-28-11
Sample Matrix: LIQUID
Lab Smp Id: 1600
Level: LOW
Data Type: MS DATA
SpikeList File: icv70.spk
Sublist File: 8270c.sub
Method File: /var/chem/MSSV4.i/2130830.s.b/8270D_04.m
Misc Info: STDICV*MSSV~9886~*

Client SDG: 2130830.s
Fraction: SV
Client Smp ID: STDICV
Operator: dlb
SampleType: LCS
Quant Type: ISTD

| SPIKE COMPOUND | CONC ADDED ug/L | CONC RECOVERED ug/L | % RECOVERED | LIMITS |
|---|---|---|---|---|
| 1 n-Nitrosodimethylamine | 50.0 | 51.8 | 103.55 | 70-130 |
| 2 Pyridine | 50.0 | 48.1 | 96.30 | 70-130 |
| 6 Phenol + | 50.0 | 50.3 | 100.57 | 70-130 |
| 5 Aniline | 50.0 | 47.6 | 95.22 | 70-130 |
| 7 bis(-2-Chloroethyl)Ether | 50.0 | 49.2 | 98.48 | 70-130 |
| 8 2-Chlorophenol | 50.0 | 49.6 | 99.12 | 70-130 |
| 9 1,3-Dichlorobenzene | 50.0 | 49.0 | 98.09 | 70-130 |
| 11 1,4-Dichlorobenzene + | 50.0 | 50.0 | 99.98 | 70-130 |
| 13 1,2-Dichlorobenzene | 50.0 | 49.8 | 99.52 | 70-130 |
| 12 Benzyl alcohol | 50.0 | 49.2 | 98.47 | 70-130 |
| 15 2-Methylphenol | 50.0 | 48.8 | 97.66 | 70-130 |
| 14 Bis(2-chloroisopropyl)ether | 50.0 | 47.3 | 94.56 | 70-130 |
| 17 3- & 4-Methylphenol | 50.0 | 49.9 | 99.73 | 70-130 |
| 16 N-Nitroso-di-n-propylamine++ | 50.0 | 49.5 | 98.93 | 70-130 |
| 18 Hexachloroethane | 50.0 | 50.1 | 100.26 | 70-130 |
| 20 Nitrobenzene | 50.0 | 50.4 | 100.87 | 70-130 |
| 21 Isophorone | 50.0 | 52.5 | 104.97 | 70-130 |
| 22 2-Nitrophenol + | 50.0 | 50.6 | 101.17 | 70-130 |
| 23 2,4-Dimethyphenol | 50.0 | 51.5 | 102.93 | 70-130 |
| 25 Benzoic Acid | 50.0 | 48.6 | 97.30 | 70-130 |
| 24 bis(-2-Chloroethoxy)methane | 50.0 | 49.6 | 99.15 | 70-130 |
| 26 2,4-Dichlorophenol + | 50.0 | 50.3 | 100.63 | 70-130 |
| 27 1,2,4-Trichlorobenzene | 50.0 | 49.8 | 99.60 | 70-130 |
| 29 Naphthalene | 50.0 | 49.1 | 98.26 | 70-130 |
| 30 4-Chloroaniline | 50.0 | 55.2 | 110.48 | 70-130 |
| 31 Hexachlorobutadiene + | 50.0 | 50.1 | 100.24 | 70-130 |
| 32 4-Chloro-3-Methylphenol + | 50.0 | 52.7 | 105.44 | 70-130 |
| 33 2-Methylnaphthalene | 50.0 | 51.9 | 103.72 | 70-130 |
| 145 1-Methylnapthalene | 50.0 | 51.5 | 102.93 | 70-130 |
| 34 Hexachlorocyclopentadiene ++ | 50.0 | 49.5 | 98.92 | 70-130 |
| 35 2,4,6-Trichlorophenol + | 50.0 | 49.9 | 99.74 | 70-130 |
| 36 2,4,5-Trichlorphenol | 50.0 | 51.3 | 102.67 | 70-130 |
| 38 2-Chloronaphthalene | 50.0 | 50.9 | 101.78 | 70-130 |

| SPIKE | COMPOUND | CONC ADDED ug/L | CONC RECOVERED ug/L | % RECOVERED | LIMITS |
|---|---|---|---|---|---|
| 39 | 2-Nitroaniline | 50.0 | 54.1 | 108.29 | 70-130 |
| 40 | Dimethylphthalate | 50.0 | 51.3 | 102.65 | 70-130 |
| 41 | 2,6-Dinitrotoluene | 50.0 | 51.3 | 102.65 | 70-130 |
| 42 | Acenaphthylene | 50.0 | 48.5 | 97.05 | 70-130 |
| 43 | 3-Nitroaniline | 50.0 | 57.2 | 114.46 | 70-130 |
| 45 | Acenaphthene + | 50.0 | 49.2 | 98.33 | 70-130 |
| 46 | 2,4-Dinitrophenol ++ | 50.0 | 43.8 | 87.51 | 70-130 |
| 49 | 4-Nitrophenol ++ | 50.0 | 55.2 | 110.46 | 70-130 |
| 48 | 2,4-Dinitrotoluene | 50.0 | 52.3 | 104.68 | 70-130 |
| 47 | Dibenzofuran | 50.0 | 51.4 | 102.74 | 70-130 |
| 50 | Diethylphthalate | 50.0 | 51.4 | 102.74 | 70-130 |
| 51 | Fluorene | 50.0 | 50.7 | 101.41 | 70-130 |
| 52 | 4-Chlorophenyl-phenylether | 50.0 | 52.8 | 105.62 | 70-130 |
| 55 | N-nitrosodiphenylamine (1)+ | 50.0 | 50.7 | 101.32 | 70-130 |
| 53 | 4-Nitroaniline | 50.0 | 57.3 | 114.59 | 70-130 |
| 54 | 4,6-Dinitro-o-cresol | 50.0 | 50.5 | 100.93 | 70-130 |
| 56 | Azobenzene | 50.0 | 55.5 | 111.05 | 70-130 |
| 58 | 4-Bromophenyl-phenylether | 50.0 | 49.1 | 98.18 | 70-130 |
| 59 | Hexachlorobenzene | 50.0 | 48.6 | 97.24 | 70-130 |
| 60 | Pentachlorophenol + | 50.0 | 48.1 | 96.19 | 70-130 |
| 62 | Phenanthrene | 50.0 | 49.3 | 98.60 | 70-130 |
| 63 | Anthracene | 50.0 | 48.9 | 97.71 | 70-130 |
| 64 | Carbazole | 50.0 | 54.7 | 109.39 | 70-130 |
| 65 | Di-n-butylphthalate | 50.0 | 50.2 | 100.37 | 70-130 |
| 67 | Fluoranthene + | 50.0 | 50.9 | 101.82 | 70-130 |
| 69 | Pyrene | 50.0 | 51.0 | 101.99 | 70-130 |
| 71 | Butylbenzylphthalate | 50.0 | 48.5 | 97.02 | 70-130 |
| 73 | 3,3'-Dichlorobenzidine | 50.0 | 49.7 | 99.36 | 70-130 |
| 72 | Benzo(a)anthracene | 50.0 | 49.6 | 99.24 | 70-130 |
| 75 | Chrysene | 50.0 | 49.4 | 98.80 | 70-130 |
| 76 | bis(2-Ethylhexyl)phthalate | 50.0 | 47.9 | 95.78 | 70-130 |
| 77 | Di-n-octylphthalate + | 50.0 | 45.1 | 90.21 | 70-130 |
| 78 | Benzo(b)fluoranthene | 50.0 | 49.8 | 99.62 | 70-130 |
| 79 | Benzo(k)fluoranthene | 50.0 | 51.5 | 102.97 | 70-130 |
| 80 | Benzo(a)pyrene + | 50.0 | 47.4 | 94.82 | 70-130 |
| 82 | Indeno(1,2,3-cd)pyrene | 50.0 | 47.0 | 94.00 | 70-130 |
| 83 | Dibenzo(a,h)anthracene | 50.0 | 46.7 | 93.38 | 70-130 |
| 84 | Benzo(g,h,i)perylene | 50.0 | 49.6 | 99.20 | 70-130 |
| 155 | Benzaldehyde | 50.0 | 86.5 | 172.96* | 70-130 |
| 156 | Caprolactam | 50.0 | 51.4 | 102.72 | 70-130 |
| 157 | Biphenyl | 50.0 | 51.5 | 102.98 | 70-130 |
| 158 | Atrazine | 50.0 | 47.3 | 94.57 | 70-130 |
| 174 | 1,4-Dioxane | 50.0 | 51.9 | 103.80 | 70-130 |

GCAL, Inc.

BNA QUANT AND RATIO REPORT

Data file : /var/chem/MSSV4.i/2130830.s.b/h4425x.d
Lab Smp Id: 1600 Client Smp ID: STDICV
Inj Date : 30-AUG-2013 15:30
Operator : dlb Inst ID: MSSV4.i
Smp Info : 1600*48-28-11
Misc Info : STDICV*MSSV~9886~*
Comment :
Method : /var/chem/MSSV4.i/2130830.s.b/8270D_04.m
Meth Date : 13-Sep-2013 13:58 rbm Quant Type: ISTD
Cal Date : 09-JUL-2013 01:40 Cal File: h2764x.d
Als bottle: 11 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270c.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | ng unit correction factor |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppm) | FINAL ( ug/L) |
|---|---|---|---|---|---|---|---|---|
| | 2 Pyridine | 79 | 1.425 | 1.425 | (0.532) | 114159 | 48.1477 | 48.1 |
| | 1 n-Nitrosodimethylamine | 42 | 1.396 | 1.407 | (0.521) | 52325 | 51.7774 | 51.8 |
| $ | 3 2-Fluorophenol | 112 | 2.025 | 2.025 | (0.756) | 118973 | 51.4983 | 51.5 |
| $ | 4 Phenol-d5 | 99 | 2.501 | 2.496 | (0.934) | 120519 | 48.3060 | 48.3 |
| | 5 Aniline | 93 | 2.507 | 2.507 | (0.936) | 127596 | 47.6085 | 47.6(H) |
| | 6 Phenol + | 94 | 2.507 | 2.507 | (0.936) | 142042 | 50.2854 | 50.3 |
| | 7 bis(-2-Chloroethyl)Ether | 63 | 2.531 | 2.525 | (0.945) | 67653 | 49.2405 | 49.2(H) |
| | 8 2-Chlorophenol | 128 | 2.578 | 2.572 | (0.963) | 117987 | 49.5582 | 49.6 |
| | 9 1,3-Dichlorobenzene | 146 | 2.648 | 2.643 | (0.989) | 131806 | 49.0440 | 49.0 |
| * | 10 1,4-Dichlorobenzene-d4 | 152 | 2.678 | 2.672 | (1.000) | 71387 | 40.0000 | |
| | 11 1,4-Dichlorobenzene + | 146 | 2.684 | 2.684 | (1.002) | 136115 | 49.9895 | 50.0 |
| | 12 Benzyl alcohol | 108 | 2.766 | 2.760 | (1.033) | 63156 | 49.2357 | 49.2 |
| | 13 1,2-Dichlorobenzene | 146 | 2.772 | 2.772 | (1.035) | 128282 | 49.7612 | 49.8 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppm) | FINAL ( ug/L) |
|---|---|---|---|---|---|---|---|---|
| | 15 2-Methylphenol | 107 | 2.837 | 2.831 | (1.059) | 98482 | 48.8286 | 48.8 |
| | 14 Bis(2-chloroisopropyl)ether | 45 | 2.831 | 2.825 | (1.057) | 104366 | 47.2784 | 47.3 |
| | 17 3- & 4-Methylphenol | 107 | 2.931 | 2.925 | (1.094) | 103257 | 49.8665 | 49.9 |
| | 16 N-Nitroso-di-n-propylamine++ | 70 | 2.907 | 2.907 | (1.086) | 71445 | 49.4674 | 49.5 |
| | 18 Hexachloroethane | 117 | 2.960 | 2.960 | (1.105) | 49740 | 50.1302 | 50.1 |
| $ | 19 Nitrobenzene-d5 | 82 | 2.990 | 2.990 | (0.876) | 108562 | 52.3484 | 52.3 |
| | 20 Nitrobenzene | 77 | 3.001 | 3.001 | (0.879) | 101663 | 50.4355 | 50.4 |
| | 21 Isophorone | 82 | 3.154 | 3.143 | (0.924) | 167599 | 52.4832 | 52.5 |
| | 22 2-Nitrophenol + | 139 | 3.190 | 3.184 | (0.934) | 61420 | 50.5853 | 50.6 |
| | 23 2,4-Dimethyphenol | 107 | 3.231 | 3.225 | (0.947) | 108684 | 51.4664 | 51.5 |
| | 24 bis(-2-Chloroethoxy)methane | 93 | 3.272 | 3.260 | (0.959) | 110875 | 49.5761 | 49.6 |
| | 25 Benzoic Acid | 122 | 3.319 | 3.337 | (0.972) | 60213 | 48.6475 | 48.6 |
| | 26 2,4-Dichlorophenol + | 162 | 3.354 | 3.343 | (0.983) | 91231 | 50.3153 | 50.3 |
| | 27 1,2,4-Trichlorobenzene | 180 | 3.378 | 3.372 | (0.990) | 101056 | 49.8009 | 49.8 |
| * | 28 Naphthalene-d8 | 136 | 3.413 | 3.407 | (1.000) | 249970 | 40.0000 | |
| | 29 Naphthalene | 128 | 3.425 | 3.419 | (1.003) | 318899 | 49.1277 | 49.1 |
| | 30 4-Chloroaniline | 127 | 3.472 | 3.466 | (1.017) | 116608 | 55.2376 | 55.2 |
| | 31 Hexachlorobutadiene + | 225 | 3.501 | 3.495 | (1.026) | 66022 | 50.1197 | 50.1 |
| | 32 4-Chloro-3-Methylphenol + | 107 | 3.784 | 3.778 | (1.109) | 86953 | 52.7224 | 52.7 |
| | 33 2-Methylnaphthalene | 142 | 3.843 | 3.837 | (1.126) | 206149 | 51.8608 | 51.9 |
| | 145 1-Methylnapthalene | 142 | 3.907 | 3.901 | (1.145) | 196367 | 51.4643 | 51.5 |
| | 34 Hexachlorocyclopentadiene ++ | 237 | 3.943 | 3.937 | (0.880) | 71014 | 49.4596 | 49.5 |
| | 35 2,4,6-Trichlorophenol + | 196 | 4.031 | 4.025 | (0.900) | 64369 | 49.8700 | 49.9 |
| | 36 2,4,5-Trichlorphenol | 196 | 4.072 | 4.060 | (0.909) | 68327 | 51.3333 | 51.3 |
| $ | 37 2-Fluorobiphenyl | 172 | 4.066 | 4.060 | (0.908) | 241274 | 52.9113 | 52.9 |
| | 38 2-Chloronaphthalene | 162 | 4.137 | 4.137 | (0.924) | 195791 | 50.8896 | 50.9 |
| | 39 2-Nitroaniline | 138 | 4.219 | 4.213 | (0.942) | 67366 | 54.1436 | 54.1 |
| | 40 Dimethylphthalate | 163 | 4.325 | 4.313 | (0.966) | 215447 | 51.3261 | 51.3 |
| | 41 2,6-Dinitrotoluene | 165 | 4.360 | 4.354 | (0.974) | 47503 | 51.3269 | 51.3 |
| | 42 Acenaphthylene | 152 | 4.390 | 4.390 | (0.980) | 288537 | 48.5254 | 48.5 |
| | 43 3-Nitroaniline | 138 | 4.472 | 4.472 | (0.999) | 53200 | 57.2313 | 57.2 |
| * | 44 Acenaphthene-d10 | 164 | 4.478 | 4.472 | (1.000) | 135856 | 40.0000 | |
| | 45 Acenaphthene + | 153 | 4.495 | 4.495 | (1.004) | 189710 | 49.1638 | 49.2 |
| | 46 2,4-Dinitrophenol ++ | 184 | 4.537 | 4.537 | (1.013) | 29879 | 43.7549 | 43.8 |
| | 49 4-Nitrophenol ++ | 109 | 4.619 | 4.613 | (1.032) | 29880 | 55.2279 | 55.2 |
| | 47 Dibenzofuran | 168 | 4.607 | 4.601 | (1.029) | 272116 | 51.3678 | 51.4 |
| | 48 2,4-Dinitrotoluene | 165 | 4.613 | 4.607 | (1.030) | 63231 | 52.3394 | 52.3 |
| | 50 Diethylphthalate | 149 | 4.754 | 4.748 | (1.062) | 201441 | 51.3716 | 51.4 |
| | 52 4-Chlorophenyl-phenylether | 204 | 4.813 | 4.813 | (1.075) | 108884 | 52.8077 | 52.8 |
| | 51 Fluorene | 166 | 4.819 | 4.813 | (1.076) | 213922 | 50.7034 | 50.7 |
| | 53 4-Nitroaniline | 138 | 4.854 | 4.860 | (1.084) | 51167 | 57.2974 | 57.3 |
| | 54 4,6-Dinitro-o-cresol | 198 | 4.872 | 4.866 | (0.903) | 42986 | 50.4670 | 50.5 |
| | 55 N-nitrosodiphenylamine (1)+ | 169 | 4.890 | 4.890 | (0.906) | 160892 | 50.6614 | 50.7 |
| | 56 Azobenzene | 77 | 4.913 | 4.907 | (0.911) | 200829 | 55.5238 | 55.5(M1) |
| $ | 57 2,4,6-Tribromophenol | 332 | 4.978 | 4.972 | (1.112) | 36191 | 50.8557 | 50.9(R) |
| | 58 4-Bromophenyl-phenylether | 248 | 5.113 | 5.113 | (0.948) | 64522 | 49.0902 | 49.1 |
| | 59 Hexachlorobenzene | 284 | 5.166 | 5.160 | (0.957) | 71310 | 48.6191 | 48.6 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppm) | FINAL ( ug/L) |
|---|---|---|---|---|---|---|---|---|
| | 60 Pentachlorophenol + | 266 | 5.301 | 5.295 | (0.983) | 45655 | 48.0938 | 48.1 |
| * | 61 Phenanthrene-d10 | 188 | 5.395 | 5.389 | (1.000) | 217293 | 40.0000 | |
| | 62 Phenanthrene | 178 | 5.407 | 5.407 | (1.002) | 293821 | 49.3004 | 49.3 |
| | 63 Anthracene | 178 | 5.442 | 5.437 | (1.009) | 290233 | 48.8565 | 48.9 |
| | 64 Carbazole | 167 | 5.554 | 5.548 | (1.029) | 300246 | 54.6959 | 54.7 |
| | 65 Di-n-butylphthalate | 149 | 5.766 | 5.760 | (1.069) | 326105 | 50.1852 | 50.2 |
| | 67 Fluoranthene + | 202 | 6.242 | 6.236 | (1.157) | 325768 | 50.9081 | 50.9 |
| | 68 Benzidine | 184 | 6.378 | 6.372 | (0.804) | 34238 | 60.0078 | 60.0 |
| | 69 Pyrene | 202 | 6.442 | 6.436 | (0.812) | 335926 | 50.9944 | 51.0 |
| $ | 70 Terphenyl-d14 | 244 | 6.601 | 6.595 | (0.832) | 226971 | 52.4636 | 52.5 |
| | 71 Butylbenzylphthalate | 149 | 7.172 | 7.166 | (0.904) | 136898 | 48.5110 | 48.5 |
| | 73 3,3'-Dichlorobenzidine | 252 | 7.931 | 7.919 | (0.999) | 86751 | 49.6807 | 49.7 |
| | 72 Benzo(a)anthracene | 228 | 7.919 | 7.919 | (0.998) | 287469 | 49.6223 | 49.6 |
| * | 74 Chrysene-d12 | 240 | 7.936 | 7.936 | (1.000) | 216345 | 40.0000 | |
| | 76 bis(2-Ethylhexyl)phthalate | 149 | 8.107 | 8.095 | (1.021) | 170406 | 47.8897 | 47.9 |
| | 75 Chrysene | 228 | 7.978 | 7.978 | (1.005) | 291461 | 49.3987 | 49.4 |
| | 77 Di-n-octylphthalate + | 149 | 9.425 | 9.413 | (1.188) | 248504 | 45.1029 | 45.1 |
| | 78 Benzo(b)fluoranthene | 252 | 9.913 | 9.913 | (0.949) | 262167 | 49.8107 | 49.8 |
| | 79 Benzo(k)fluoranthene | 252 | 9.960 | 9.960 | (0.954) | 319717 | 51.4871 | 51.5 |
| | 80 Benzo(a)pyrene + | 252 | 10.366 | 10.366 | (0.993) | 249505 | 47.4121 | 47.4 |
| * | 81 Perylene-d12 | 264 | 10.442 | 10.430 | (1.000) | 212298 | 40.0000 | |
| | 82 Indeno(1,2,3-cd)pyrene | 276 | 11.466 | 11.471 | (1.098) | 226581 | 46.9978 | 47.0(M2) |
| | 83 Dibenzo(a,h)anthracene | 278 | 11.489 | 11.495 | (1.100) | 267069 | 46.6918 | 46.7 |
| | 84 Benzo(g,h,i)perylene | 276 | 11.701 | 11.707 | (1.121) | 311906 | 49.5985 | 49.6 |
| M | 66 Total Methylphenol | 108 | | | | 201739 | 98.7088 | 98.7 |
| | 91 Acetophenone | 105 | 2.907 | 2.901 | (1.086) | 135898 | 50.9035 | 50.9 |
| | 155 Benzaldehyde | 77 | 2.449 | 2.449 | (0.914) | 35390 | 86.4782 | 86.5(R) |
| | 156 Caprolactam | 113 | 3.695 | 3.701 | (1.083) | 24242 | 51.3585 | 51.4 |
| | 157 Biphenyl | 154 | 4.125 | 4.125 | (1.209) | 247600 | 51.4904 | 51.5 |
| | 158 Atrazine | 200 | 5.231 | 5.231 | (0.969) | 42300 | 47.2862 | 47.3 |
| | 174 1,4-Dioxane | 88 | 1.272 | 1.284 | (0.475) | 49104 | 51.8976 | 51.9 |

QC Flag Legend

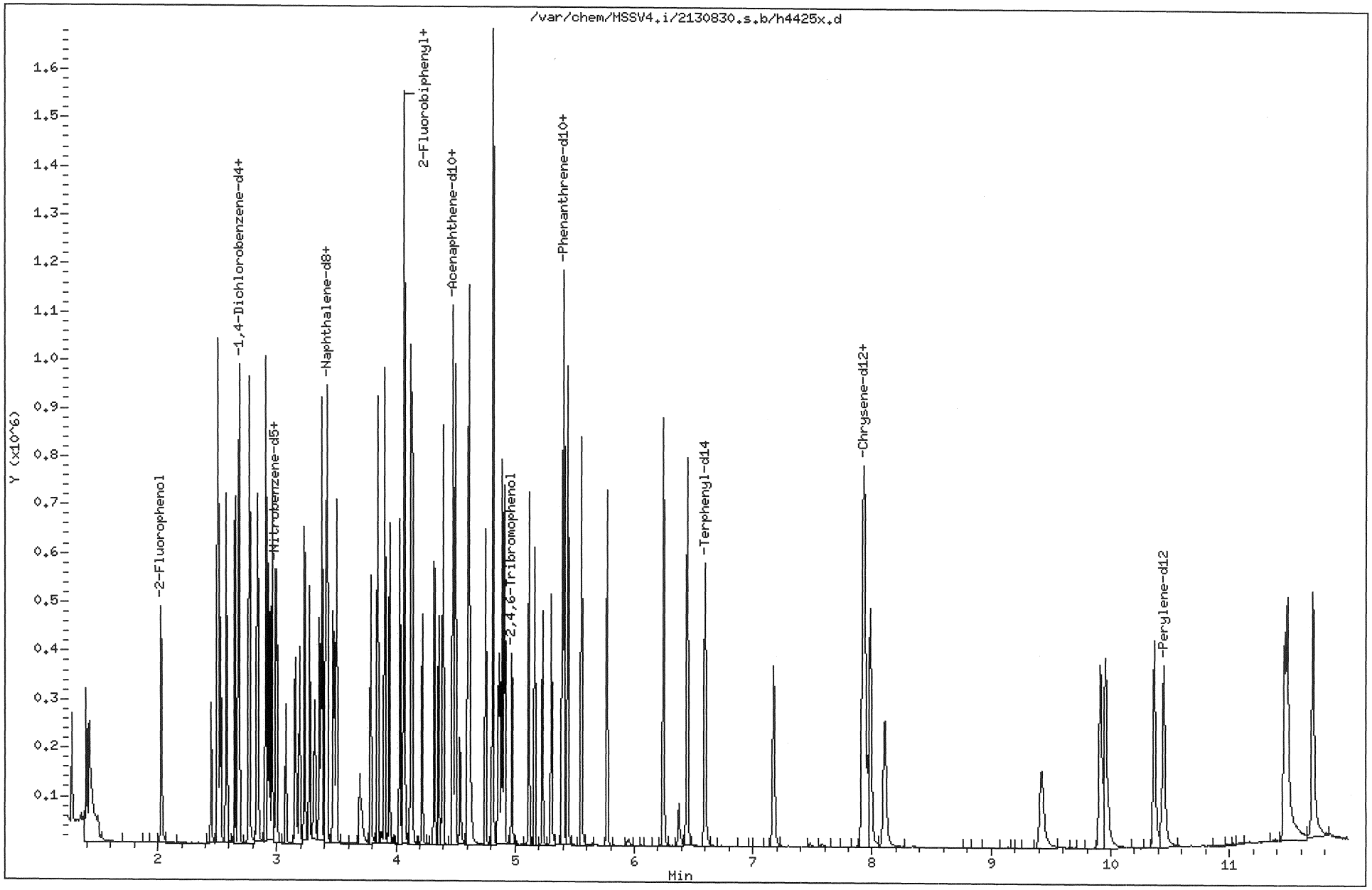
R - Spike/Surrogate failed recovery limits.
M1- Compound response manually integrated because Target system did not integrate.
M2- Compound response manually integrated because Target system integrated incorrectly.
H - Operator selected an alternate compound hit.

Data File: /var/chem/MSSV4.i/2130830.s.b/h4425x.d
Date : 30-AUG-2013 15:30
Client ID: STDICV
Sample Info: 1600*48-28-11
Volume Injected (uL): 1.0
Column phase: RTX-5MS-30M

Instrument: MSSV4.i

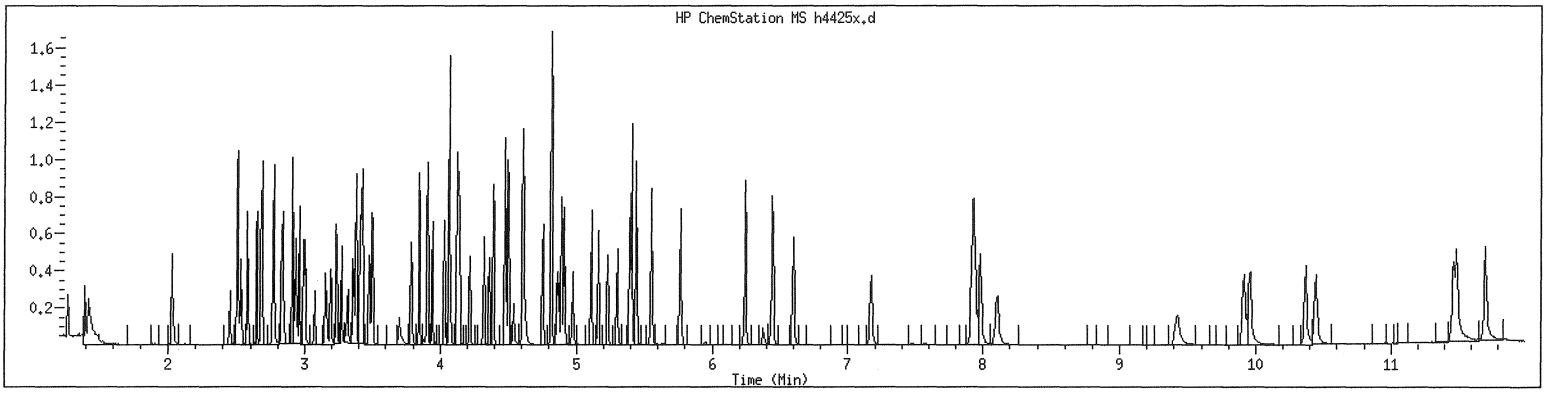
Operator: dlb
Column diameter: 0.25





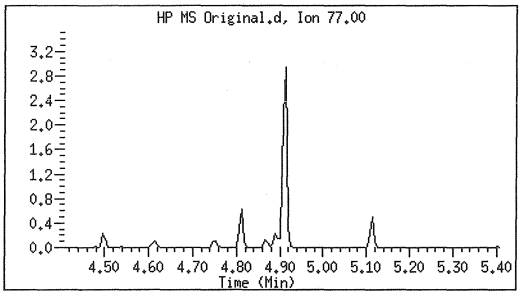
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1600 | SampleType | : LCS |
| Injection Date | : 08/30/2013 15:30 | Instrument | : MSSV4.i |
| Operator | : dlb | | |
| Sample Info | : 1600*48-28-11 | | |
| Misc Info | : STDICV*MSSV~9886~* | | |
| Method | : /var/chem/MSSV4.i/2130830.s.b/8270D_04.m | | |
| Dilution | : 1.00 | | |
| Matrix | : WATER | | |
| Integrator | : HP RTE | Compound Sublist | : 8270c |



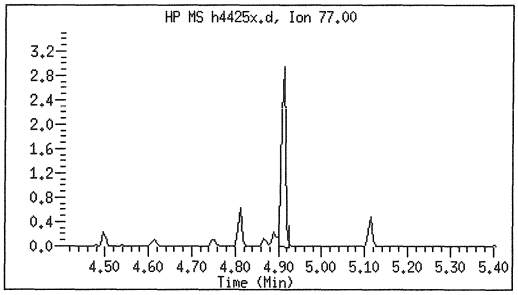

Original Final

56 Azobenzene CAS#: 122-66-7 Reason: M1

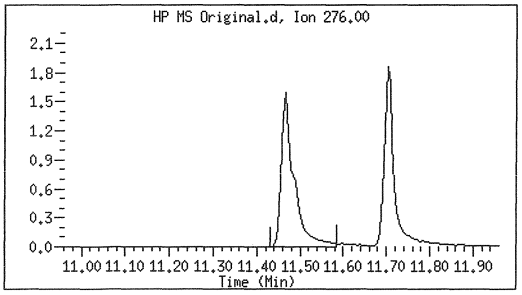



Electronic Signature Applied

User: dlb
Date: 08/30/2013 16:00

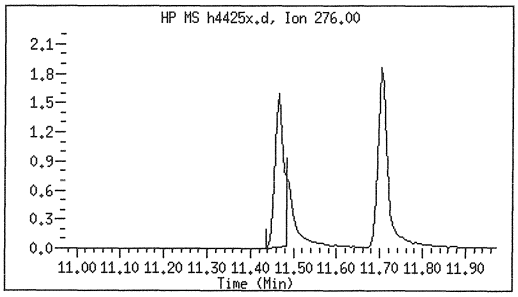



82 Indeno(1,2,3-cd)pyrene CAS#: 193-39-5 Reason: M3




Electronic Signature Applied

User: dlb
Date: 08/30/2013 15:47



Data File: /var/chem/MSSV4.i/2131022.s.b/h5715x.d
Report Date: 22-Oct-2013 14:00



GCAL, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSSV4.i
Lab File ID: h5715x.d
Analysis Type: WATER
Lab Sample ID: 1400
Method: /var/chem/MSSV4.i/2131022.s.b/8270D_04.m

Injection Date: 22-OCT-2013 09:36
Init. Cal. Date(s): 08-JUL-2013 30-AUG-2013
Init. Cal. Times: 10:47 13:26
Quant Type: ISTD

| COMPOUND | RRF / AMOUNT | RF50 | CCAL RRF50 | MIN RRF | %D / %DRIFT | MAX %D / %DRIFT | CURVE TYPE |
|---|---|---|---|---|---|---|---|
| 2 Pyridine | 1.32854 | 1.07414 | 1.07414 | 0.050 | -19.14882 | 20.00000 | Averaged |
| 1 n-Nitrosodimethylamine | 0.56625 | 0.65044 | 0.65044 | 0.050 | 14.86664 | 20.00000 | Averaged |
| $ 3 2-Fluorophenol | 1.29448 | 1.20188 | 1.20188 | 0.050 | -7.15403 | 20.00000 | Averaged |
| $ 4 Phenol-d5 | 1.39796 | 1.31006 | 1.31006 | 0.050 | -6.28804 | 20.00000 | Averaged |
| 5 Aniline | 34.17445 | 50.00000 | 1.10580 | 0.050 | -31.65111 | 20.00000 | Quadratic <-NT |
| 6 Phenol + | 1.58276 | 1.48528 | 1.48528 | 0.800 | -6.15899 | 20.00000 | Averaged |
| 7 bis(-2-Chloroethyl)Ether | 0.76985 | 0.74847 | 0.74847 | 0.700 | -2.77678 | 20.00000 | Averaged |
| 8 2-Chlorophenol | 1.33401 | 1.28646 | 1.28646 | 0.800 | -3.56469 | 20.00000 | Averaged |
| 9 1,3-Dichlorobenzene | 1.50588 | 1.42444 | 1.42444 | 0.050 | -5.40826 | 20.00000 | Averaged |
| 11 1,4-Dichlorobenzene + | 1.52570 | 1.47389 | 1.47389 | 0.050 | -3.39566 | 20.00000 | Averaged |
| 12 Benzyl alcohol | 0.71875 | 0.65546 | 0.65546 | 0.050 | -8.80569 | 20.00000 | Averaged |
| 13 1,2-Dichlorobenzene | 1.44449 | 1.36495 | 1.36495 | 0.050 | -5.50680 | 20.00000 | Averaged |
| 15 2-Methylphenol | 1.13012 | 1.04140 | 1.04140 | 0.700 | -7.85018 | 20.00000 | Averaged |
| 14 Bis(2-chloroisopropyl)ether | 1.23691 | 1.18295 | 1.18295 | 0.050 | -4.36220 | 20.00000 | Averaged |
| 17 3- & 4-Methylphenol | 1.16025 | 1.08411 | 1.08411 | 0.600 | -6.56210 | 20.00000 | Averaged |
| 16 N-Nitroso-di-n-propylamine+ | 0.80927 | 0.75427 | 0.75427 | 0.500 | -6.79647 | 20.00000 | Averaged |
| 18 Hexachloroethane | 0.55597 | 0.53886 | 0.53886 | 0.300 | -3.07727 | 20.00000 | Averaged |
| $ 19 Nitrobenzene-d5 | 0.33185 | 0.31544 | 0.31544 | 0.050 | -4.94513 | 20.00000 | Averaged |
| 20 Nitrobenzene | 0.32255 | 0.29596 | 0.29596 | 0.200 | -8.24544 | 20.00000 | Averaged |
| 21 Isophorone | 0.51100 | 0.46386 | 0.46386 | 0.400 | -9.22466 | 20.00000 | Averaged |
| 22 2-Nitrophenol + | 0.19429 | 0.18096 | 0.18096 | 0.100 | -6.86229 | 20.00000 | Averaged |
| 23 2,4-Dimethyphenol | 0.33792 | 0.32051 | 0.32051 | 0.200 | -5.15143 | 20.00000 | Averaged |
| 24 bis(-2-Chloroethoxy)methane | 0.35788 | 0.34168 | 0.34168 | 0.300 | -4.52653 | 20.00000 | Averaged |
| 25 Benzoic Acid | 0.19806 | 0.17687 | 0.17687 | 0.050 | -10.70229 | 20.00000 | Averaged |
| 26 2,4-Dichlorophenol + | 0.29014 | 0.28029 | 0.28029 | 0.200 | -3.39584 | 20.00000 | Averaged |
| 27 1,2,4-Trichlorobenzene | 0.32471 | 0.31394 | 0.31394 | 0.050 | -3.31752 | 20.00000 | Averaged |
| 29 Naphthalene | 1.03872 | 0.98900 | 0.98900 | 0.700 | -4.78704 | 20.00000 | Averaged |
| 30 4-Chloroaniline | 0.33780 | 0.27634 | 0.27634 | 0.010 | -18.19586 | 20.00000 | Averaged |
| 31 Hexachlorobutadiene + | 0.21079 | 0.20378 | 0.20378 | 0.010 | -3.32830 | 20.00000 | Averaged |
| 32 4-Chloro-3-Methylphenol + | 0.26391 | 0.24081 | 0.24081 | 0.200 | -8.75587 | 20.00000 | Averaged |
| 33 2-Methylnaphthalene | 0.63608 | 0.59532 | 0.59532 | 0.400 | -6.40926 | 20.00000 | Averaged |
| 145 1-Methylnapthalene | 0.61057 | 0.55963 | 0.55963 | 0.050 | -8.34308 | 20.00000 | Averaged |
| 34 Hexachlorocyclopentadiene + | 0.42274 | 0.41110 | 0.41110 | 0.050 | -2.75438 | 20.00000 | Averaged |
| 35 2,4,6-Trichlorophenol + | 0.38003 | 0.37779 | 0.37779 | 0.200 | -0.59013 | 20.00000 | Averaged |
| 36 2,4,5-Trichlorphenol | 0.39190 | 0.39396 | 0.39396 | 0.200 | 0.52659 | 20.00000 | Averaged |
| $ 37 2-Fluorobiphenyl | 1.34259 | 1.35805 | 1.35805 | 0.050 | 1.15152 | 20.00000 | Averaged |

GCAL, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSSV4.i
Lab File ID: h5715x.d
Analysis Type: WATER
Lab Sample ID: 1400
Method: /var/chem/MSSV4.i/2131022.s.b/8270D_04.m

Injection Date: 22-OCT-2013 09:36
Init. Cal. Date(s): 08-JUL-2013 30-AUG-2013
Init. Cal. Times: 10:47 13:26
Quant Type: ISTD

| COMPOUND | RRF / AMOUNT | RF50 | CCAL RRF50 | MIN RRF | %D / %DRIFT | MAX %D / %DRIFT | CURVE TYPE |
|---|---|---|---|---|---|---|---|
| 38 2-Chloronaphthalene | 1.13278 | 1.08152 | 1.08152 | 0.800 | -4.52541 | 20.00000 | Averaged |
| 39 2-Nitroaniline | 0.36633 | 0.33773 | 0.33773 | 0.010 | -7.80634 | 20.00000 | Averaged |
| 40 Dimethylphthalate | 1.23590 | 1.12167 | 1.12167 | 0.010 | -9.24260 | 20.00000 | Averaged |
| 41 2,6-Dinitrotoluene | 0.27249 | 0.24383 | 0.24383 | 0.200 | -10.51935 | 20.00000 | Averaged |
| 42 Acenaphthylene | 1.75071 | 1.61805 | 1.61805 | 0.900 | -7.57766 | 20.00000 | Averaged |
| 43 3-Nitroaniline | 0.27369 | 0.23124 | 0.23124 | 0.010 | -15.51211 | 20.00000 | Averaged |
| 45 Acenaphthene + | 1.13613 | 1.06785 | 1.06785 | 0.900 | -6.00979 | 20.00000 | Averaged |
| 46 2,4-Dinitrophenol ++ | 0.20106 | 0.16991 | 0.16991 | 0.010 | -15.48997 | 20.00000 | Averaged |
| 49 4-Nitrophenol ++ | 0.15930 | 0.13975 | 0.13975 | 0.010 | -12.26800 | 20.00000 | Averaged |
| 47 Dibenzofuran | 1.55971 | 1.47020 | 1.47020 | 0.800 | -5.73908 | 20.00000 | Averaged |
| 48 2,4-Dinitrotoluene | 0.35570 | 0.30063 | 0.30063 | 0.200 | -15.48045 | 20.00000 | Averaged |
| 50 Diethylphthalate | 1.15453 | 1.00839 | 1.00839 | 0.010 | -12.65811 | 20.00000 | Averaged |
| 52 4-Chlorophenyl-phenylether | 0.60708 | 0.57703 | 0.57703 | 0.400 | -4.95037 | 20.00000 | Averaged |
| 51 Fluorene | 1.24222 | 1.15181 | 1.15181 | 0.900 | -7.27809 | 20.00000 | Averaged |
| 53 4-Nitroaniline | 0.26293 | 0.22551 | 0.22551 | 0.010 | -14.22944 | 20.00000 | Averaged |
| 54 4,6-Dinitro-o-cresol | 0.15680 | 0.14354 | 0.14354 | 0.010 | -8.45601 | 20.00000 | Averaged |
| 55 N-nitrosodiphenylamine (1)+ | 0.58462 | 0.57847 | 0.57847 | 0.010 | -1.05191 | 20.00000 | Averaged |
| 56 Azobenzene | 0.66583 | 0.66747 | 0.66747 | 0.050 | 0.24706 | 20.00000 | Averaged |
| $ 57 2,4,6-Tribromophenol | 0.20953 | 0.19414 | 0.19414 | 0.050 | -7.34419 | 20.00000 | Averaged |
| 58 4-Bromophenyl-phenylether | 0.24195 | 0.24415 | 0.24415 | 0.100 | 0.90825 | 20.00000 | Averaged |
| 59 Hexachlorobenzene | 0.27000 | 0.26955 | 0.26955 | 0.100 | -0.16567 | 20.00000 | Averaged |
| 60 Pentachlorophenol + | 0.17475 | 0.17164 | 0.17164 | 0.050 | -1.78131 | 20.00000 | Averaged |
| 62 Phenanthrene | 1.09710 | 1.01628 | 1.01628 | 0.700 | -7.36653 | 20.00000 | Averaged |
| 63 Anthracene | 1.09355 | 1.02381 | 1.02381 | 0.700 | -6.37784 | 20.00000 | Averaged |
| 64 Carbazole | 1.01050 | 0.85922 | 0.85922 | 0.010 | -14.97050 | 20.00000 | Averaged |
| 65 Di-n-butylphthalate | 1.19618 | 1.03798 | 1.03798 | 0.010 | -13.22533 | 20.00000 | Averaged |
| 67 Fluoranthene + | 1.17797 | 0.96095 | 0.96095 | 0.600 | -18.42325 | 20.00000 | Averaged |
| 68 Benzidine | 0.10549 | 0.03365 | 0.03365 | 0.050 | -68.10030 | 20.00000 | Averaged <-NT |
| 69 Pyrene | 1.21796 | 1.17929 | 1.17929 | 0.600 | -3.17546 | 20.00000 | Averaged |
| $ 70 Terphenyl-d14 | 0.79988 | 0.76168 | 0.76168 | 0.050 | -4.77591 | 20.00000 | Averaged |
| 71 Butylbenzylphthalate | 0.52176 | 0.48537 | 0.48537 | 0.010 | -6.97462 | 20.00000 | Averaged |
| 73 3,3'-Dichlorobenzidine | 0.32285 | 0.32308 | 0.32308 | 0.010 | 0.07266 | 20.00000 | Averaged |
| 72 Benzo(a)anthracene | 1.07109 | 0.99389 | 0.99389 | 0.800 | -7.20775 | 20.00000 | Averaged |
| 76 bis(2-Ethylhexyl)phthalate | 0.65789 | 0.61374 | 0.61374 | 0.010 | -6.71076 | 20.00000 | Averaged |
| 75 Chrysene | 1.09088 | 1.02030 | 1.02030 | 0.700 | -6.47000 | 20.00000 | Averaged |

GCAL, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSSV4.i Injection Date: 22-OCT-2013 09:36
Lab File ID: h5715x.d Init. Cal. Date(s): 08-JUL-2013 30-AUG-2013
Analysis Type: WATER Init. Cal. Times: 10:47 13:26
Lab Sample ID: 1400 Quant Type: ISTD
Method: /var/chem/MSSV4.i/2131022.s.b/8270D_04.m

| COMPOUND | RRF / AMOUNT | RF50 | CCAL RRF50 | MIN RRF | %D / %DRIFT | MAX %D / %DRIFT | CURVE TYPE |
|---|---|---|---|---|---|---|---|
| 77 Di-n-octylphthalate + | 1.01869 | 0.88972 | 0.88972 | 0.010 | -12.66022 | 20.00000 | Averaged |
| 78 Benzo(b)fluoranthene | 0.99168 | 0.90741 | 0.90741 | 0.700 | -8.49734 | 20.00000 | Averaged |
| 79 Benzo(k)fluoranthene | 1.16999 | 1.12873 | 1.12873 | 0.700 | -3.52638 | 20.00000 | Averaged |
| 80 Benzo(a)pyrene + | 0.99153 | 0.87491 | 0.87491 | 0.700 | -11.76133 | 20.00000 | Averaged |
| 82 Indeno(1,2,3-cd)pyrene | 0.90836 | 0.78931 | 0.78931 | 0.500 | -13.10625 | 20.00000 | Averaged |
| 83 Dibenzo(a,h)anthracene | 1.07770 | 0.97329 | 0.97329 | 0.400 | -9.68786 | 20.00000 | Averaged |
| 84 Benzo(g,h,i)perylene | 1.18487 | 1.07848 | 1.07848 | 0.500 | -8.97895 | 20.00000 | Averaged |
| M 66 Total Methylphenol | 1.14518 | 1.06276 | 1.06276 | 0.050 | -7.19766 | 20.00000 | Averaged |
| 91 Acetophenone | 1.49591 | 1.37051 | 1.37051 | 0.010 | -8.38290 | 20.00000 | Averaged |
| 155 Benzaldehyde | 0.22931 | 0.28373 | 0.28373 | 0.010 | 23.73596 | 20.00000 | Averaged <- NT |
| 156 Caprolactam | 0.07553 | 0.06579 | 0.06579 | 0.010 | -12.89727 | 20.00000 | Averaged |
| 157 Biphenyl | 0.76948 | 0.71535 | 0.71535 | 0.010 | -7.03398 | 20.00000 | Averaged |
| 158 Atrazine | 0.16467 | 0.14118 | 0.14118 | 0.010 | -14.26539 | 20.00000 | Averaged |
| 174 1,4-Dioxane | 0.53016 | 0.34880 | 0.34880 | 0.050 | -34.20996 | 20.00000 | Averaged <- NT |

Average %D / Drift Results.

Calculated Average %D/Drift = 8.98377
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

Data File: /var/chem/MSSV4.i/2131022.s.b/h5714x.d



Date : 22-OCT-2013 09:16

Client ID: DFTPP

Instrument: MSSV4.i

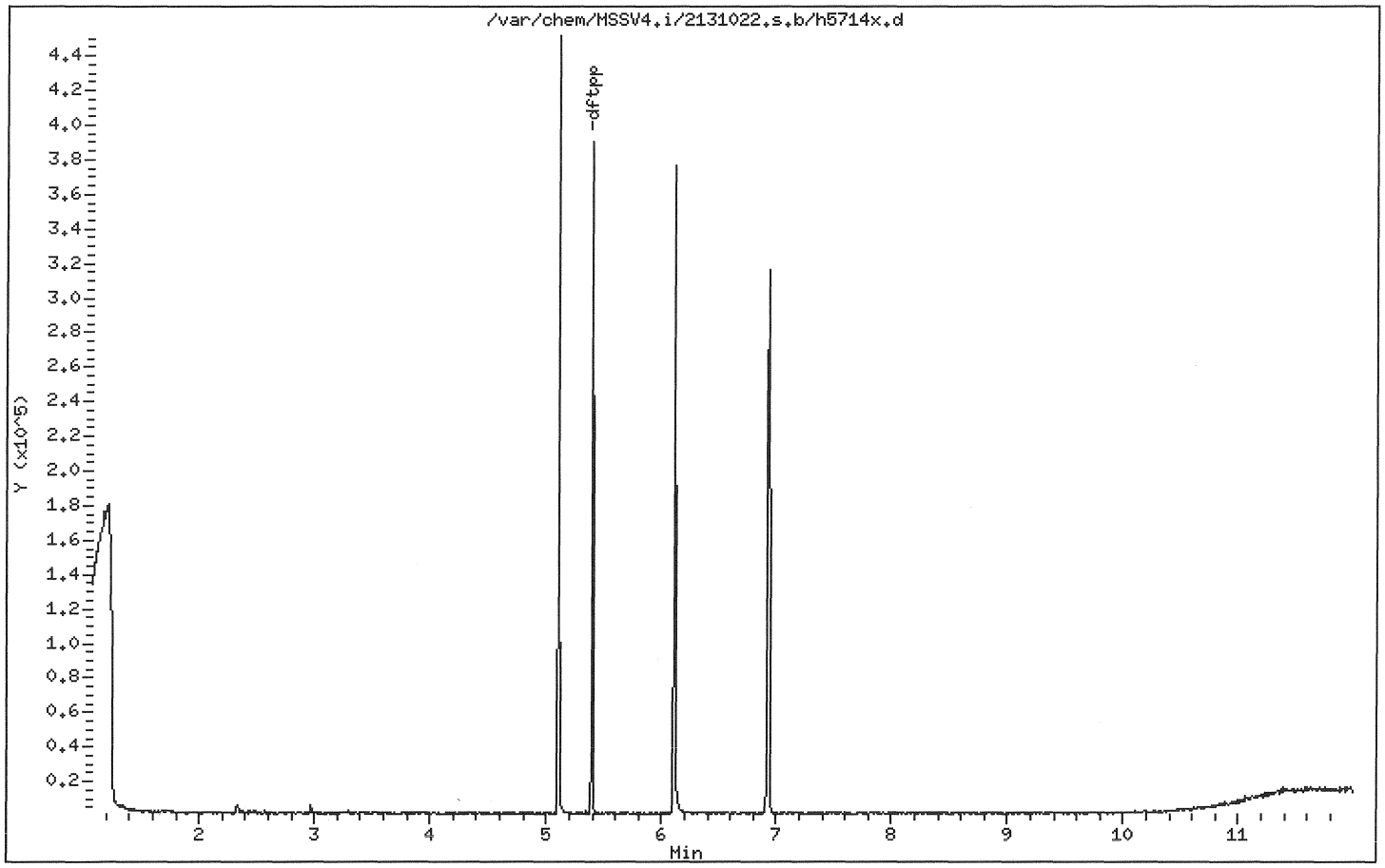
Sample Info: 1100*53-3-1

Volume Injected (uL): 1.0

Operator: HCP

Column phase: RTX-5MS-30M

Column diameter: 2.00



Data File: /var/chem/MSSV4.i/2131022.s.b/h5714x.d



Date : 22-OCT-2013 09:16

Client ID: DFTPP

Instrument: MSSV4.i

Sample Info: 1100*53-3-1

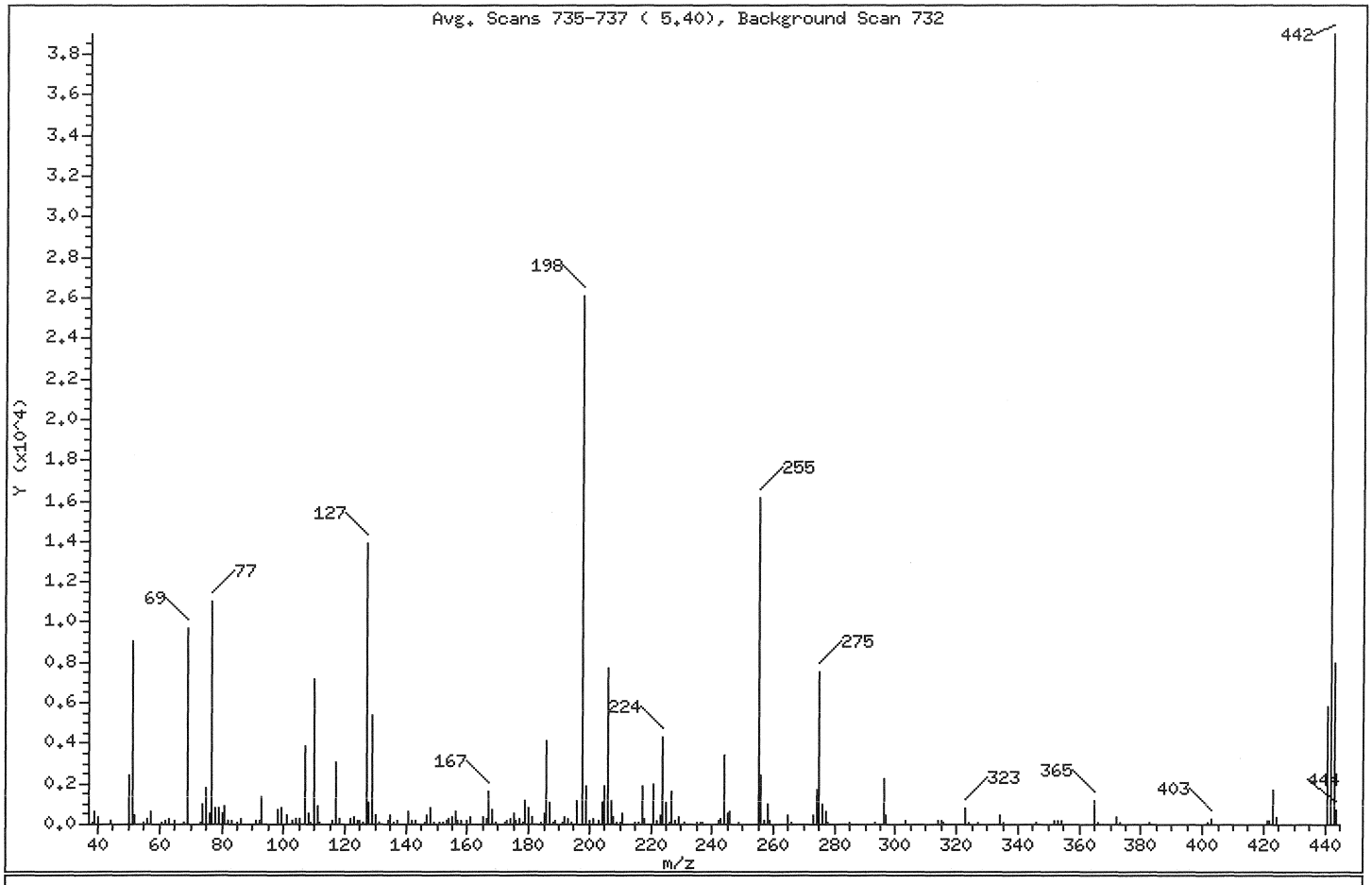
Volume Injected (uL): 1.0

Operator: HCP

Column phase: RTX-5MS-30M

Column diameter: 2.00

1 dftpp




| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 198 | Base Peak, 100% relative abundance | 100.00 |
| 51 | 30.00 - 60.00% of mass 198 | 34.69 |
| 68 | Less than 2.00% of mass 69 | 0.49 ( 1.33) |
| 69 | Mass 69 relative abundance | 37.01 |
| 70 | Less than 2.00% of mass 69 | 0.00 ( 0.00) |
| 127 | 40.00 - 60.00% of mass 198 | 53.06 |
| 197 | Less than 1.00% of mass 198 | 0.00 |
| 199 | 5.00 - 9.00% of mass 198 | 7.12 |
| 275 | 10.00 - 30.00% of mass 198 | 28.88 |
| 365 | Greater than 1.00% of mass 198 | 4.32 |
| 441 | Present, but less than mass 443 | 22.25 |
| 442 | Greater than 40.00% of mass 198 | 149.23 |
| 443 | 17.00 - 23.00% of mass 442 | 30.39 ( 20.37) |

Data File: /var/chem/MSSV4.i/2131022.s.b/h5714x.d

Date : 22-OCT-2013 09:16

Client ID: DFTPP

Instrument: MSSV4.i

Sample Info: 1100*53-3-1

Volume Injected (uL): 1.0

Operator: HCP

Column phase: RTX-5MS-30M

Column diameter: 2.00

Data File: h5714x.d
Spectrum: Avg. Scans 735-737 ( 5.40), Background Scan 732
Location of Maximum: 442.00
Number of points: 185

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 38.00 | 95 | 122.00 | 251 | 185.00 | 495 | 256.00 | 2406 |
| 39.00 | 598 | 123.00 | 341 | 186.00 | 4122 | 257.00 | 190 |
| 40.00 | 377 | 124.00 | 191 | 187.00 | 1058 | 258.00 | 969 |
| 44.00 | 161 | 125.00 | 192 | 188.00 | 124 | 259.00 | 142 |
| 50.00 | 2456 | 126.00 | 60 | 189.00 | 182 | 265.00 | 420 |
| 51.00 | 9064 | 127.00 | 13864 | 191.00 | 58 | 266.00 | 52 |
| 52.00 | 448 | 128.00 | 1099 | 192.00 | 322 | 273.00 | 447 |
| 55.00 | 53 | 129.00 | 5358 | 193.00 | 308 | 274.00 | 1679 |
| 56.00 | 246 | 130.00 | 427 | 194.00 | 56 | 275.00 | 7546 |
| 57.00 | 590 | 131.00 | 50 | 196.00 | 1150 | 276.00 | 1026 |
| 61.00 | 71 | 134.00 | 175 | 198.00 | 26128 | 277.00 | 639 |
| 62.00 | 158 | 135.00 | 431 | 199.00 | 1861 | 278.00 | 67 |
| 63.00 | 264 | 136.00 | 71 | 200.00 | 180 | 285.00 | 101 |
| 65.00 | 190 | 137.00 | 156 | 201.00 | 249 | 293.00 | 73 |
| 68.00 | 129 | 141.00 | 653 | 203.00 | 201 | 296.00 | 2229 |
| 69.00 | 9672 | 142.00 | 177 | 204.00 | 1071 | 297.00 | 405 |
| 73.00 | 72 | 143.00 | 171 | 205.00 | 1898 | 303.00 | 190 |
| 74.00 | 996 | 146.00 | 56 | 206.00 | 7743 | 314.00 | 161 |
| 75.00 | 1767 | 147.00 | 404 | 207.00 | 1121 | 315.00 | 205 |
| 76.00 | 513 | 148.00 | 842 | 208.00 | 335 | 316.00 | 52 |
| 77.00 | 11058 | 149.00 | 103 | 209.00 | 58 | 323.00 | 841 |
| 78.00 | 766 | 151.00 | 85 | 210.00 | 73 | 324.00 | 117 |
| 79.00 | 799 | 152.00 | 51 | 211.00 | 549 | 327.00 | 127 |
| 80.00 | 512 | 153.00 | 200 | 215.00 | 55 | 334.00 | 439 |
| 81.00 | 908 | 154.00 | 280 | 216.00 | 132 | 335.00 | 71 |
| 82.00 | 137 | 155.00 | 392 | 217.00 | 1882 | 346.00 | 131 |
| 83.00 | 188 | 156.00 | 621 | 218.00 | 252 | 352.00 | 191 |
| 85.00 | 60 | 157.00 | 171 | 221.00 | 1995 | 353.00 | 218 |
| 86.00 | 283 | 158.00 | 140 | 222.00 | 135 | 354.00 | 207 |
| 91.00 | 191 | 160.00 | 200 | 223.00 | 451 | 365.00 | 1130 |
| 92.00 | 202 | 161.00 | 386 | 224.00 | 4286 | 366.00 | 63 |
| 93.00 | 1357 | 165.00 | 322 | 225.00 | 1066 | 372.00 | 396 |
| 98.00 | 751 | 166.00 | 225 | 226.00 | 126 | 373.00 | 76 |
| 99.00 | 844 | 167.00 | 1590 | 227.00 | 1645 | 383.00 | 77 |
| 101.00 | 408 | 168.00 | 746 | 228.00 | 204 | 402.00 | 82 |

Data File: /var/chem/MSSV4.i/2131022.s.b/h5714x.d

Date : 22-OCT-2013 09:16

Client ID: DFTPP

Instrument: MSSV4.i

Sample Info: 1100*53-3-1

Volume Injected (uL): 1.0

Operator: HCP

Column phase: RTX-5MS-30M

Column diameter: 2.00

Data File: h5714x.d
Spectrum: Avg. Scans 735-737 ( 5.40), Background Scan 732
Location of Maximum: 442.00
Number of points: 185

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 103.00 | 198 | 169.00 | 109 | 229.00 | 347 | 403.00 | 238 |
| 104.00 | 255 | 172.00 | 131 | 231.00 | 69 | 421.00 | 219 |
| 105.00 | 270 | 173.00 | 167 | 235.00 | 132 | 422.00 | 196 |
| 107.00 | 3839 | 174.00 | 234 | 236.00 | 53 | 423.00 | 1744 |
| 108.00 | 562 | 175.00 | 569 | 237.00 | 101 | 424.00 | 347 |
| 109.00 | 62 | 176.00 | 206 | 242.00 | 201 | 441.00 | 5815 |
| 110.00 | 7172 | 177.00 | 245 | 243.00 | 311 | 442.00 | 38992 |
| 111.00 | 892 | 178.00 | 105 | 244.00 | 3375 | 443.00 | 7942 |
| 112.00 | 106 | 179.00 | 1124 | 245.00 | 538 | 444.00 | 691 |
| 116.00 | 174 | 180.00 | 765 | 246.00 | 611 | | |
| 117.00 | 3087 | 181.00 | 349 | 249.00 | 52 | | |
| 118.00 | 275 | 184.00 | 127 | 255.00 | 16155 | | |

GCAL, Inc.

BNA QUANT AND RATIO REPORT

Data file : /var/chem/MSSV4.i/2131022.s.b/h5715x.d
Lab Smp Id: 1400 Client Smp ID: STD050
Inj Date : 22-OCT-2013 09:36
Operator : HCP Inst ID: MSSV4.i
Smp Info : 1400*48-34-12
Misc Info : STD050*MSSV~10018~*
Comment :
Method : /var/chem/MSSV4.i/2131022.s.b/8270D_04.m
Meth Date : 22-Oct-2013 14:00 kcb Quant Type: ISTD
Cal Date : 09-JUL-2013 00:02 Cal File: h2759x.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270c.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | ng unit correction factor |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppm) | AMOUNTS ON-COL ( ppm) |
|---|---|---|---|---|---|---|---|
| 2 Pyridine | 79 | 1.229 | 1.229 | (0.489) | 124532 | 50.0000 | 40.4 |
| 1 n-Nitrosodimethylamine | 42 | 1.200 | 1.200 | (0.478) | 75409 | 50.0000 | 57.4 |
| $ 3 2-Fluorophenol | 112 | 1.852 | 1.852 | (0.738) | 139341 | 50.0000 | 46.4 |
| $ 4 Phenol-d5 | 99 | 2.335 | 2.335 | (0.930) | 151883 | 50.0000 | 46.9 |
| 5 Aniline | 93 | 2.335 | 2.335 | (0.930) | 128202 | 50.0000 | 34.2 |
| 6 Phenol + | 94 | 2.341 | 2.341 | (0.932) | 172198 | 50.0000 | 46.9 |
| 7 bis(-2-Chloroethyl)Ether | 63 | 2.364 | 2.364 | (0.941) | 86775 | 50.0000 | 48.6 |
| 8 2-Chlorophenol | 128 | 2.405 | 2.405 | (0.958) | 149147 | 50.0000 | 48.2 |
| 9 1,3-Dichlorobenzene | 146 | 2.482 | 2.482 | (0.988) | 165144 | 50.0000 | 47.3 |
| * 10 1,4-Dichlorobenzene-d4 | 152 | 2.511 | 2.511 | (1.000) | 92749 | 40.0000 | |
| 11 1,4-Dichlorobenzene + | 146 | 2.517 | 2.517 | (1.002) | 170877 | 50.0000 | 48.3 |
| 12 Benzyl alcohol | 108 | 2.599 | 2.599 | (1.035) | 75991 | 50.0000 | 45.6 |
| 13 1,2-Dichlorobenzene | 146 | 2.605 | 2.605 | (1.037) | 158247 | 50.0000 | 47.2 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppm) | AMOUNTS ON-COL ( ppm) |
|---|---|---|---|---|---|---|---|---|
| | 15 2-Methylphenol | 107 | 2.670 | 2.670 | (1.063) | 120736 | 50.0000 | 46.1 |
| | 14 Bis(2-chloroisopropyl)ether | 45 | 2.664 | 2.664 | (1.061) | 137147 | 50.0000 | 47.8 |
| | 17 3- & 4-Methylphenol | 107 | 2.758 | 2.758 | (1.098) | 125688 | 50.0000 | 46.7 |
| | 16 N-Nitroso-di-n-propylamine++ | 70 | 2.741 | 2.741 | (1.091) | 87447 | 50.0000 | 46.6 |
| | 18 Hexachloroethane | 117 | 2.794 | 2.794 | (1.112) | 62473 | 50.0000 | 48.5 |
| $ | 19 Nitrobenzene-d5 | 82 | 2.823 | 2.823 | (0.871) | 131485 | 50.0000 | 47.5 |
| | 20 Nitrobenzene | 77 | 2.835 | 2.835 | (0.875) | 123362 | 50.0000 | 45.9 |
| | 21 Isophorone | 82 | 2.976 | 2.976 | (0.918) | 193351 | 50.0000 | 45.4 |
| | 22 2-Nitrophenol + | 139 | 3.023 | 3.023 | (0.933) | 75429 | 50.0000 | 46.6 |
| | 23 2,4-Dimethyphenol | 107 | 3.058 | 3.058 | (0.944) | 133598 | 50.0000 | 47.4 |
| | 24 bis(-2-Chloroethoxy)methane | 93 | 3.099 | 3.099 | (0.956) | 142420 | 50.0000 | 47.7 |
| | 25 Benzoic Acid | 122 | 3.146 | 3.146 | (0.971) | 73722 | 50.0000 | 44.6 |
| | 26 2,4-Dichlorophenol + | 162 | 3.176 | 3.176 | (0.980) | 116833 | 50.0000 | 48.3 |
| | 27 1,2,4-Trichlorobenzene | 180 | 3.205 | 3.205 | (0.989) | 130858 | 50.0000 | 48.3 |
| * | 28 Naphthalene-d8 | 136 | 3.241 | 3.241 | (1.000) | 333461 | 40.0000 | |
| | 29 Naphthalene | 128 | 3.252 | 3.252 | (1.004) | 412240 | 50.0000 | 47.6 |
| | 30 4-Chloroaniline | 127 | 3.293 | 3.293 | (1.016) | 115185 | 50.0000 | 40.9 |
| | 31 Hexachlorobutadiene + | 225 | 3.329 | 3.329 | (1.027) | 84939 | 50.0000 | 48.3 |
| | 32 4-Chloro-3-Methylphenol + | 107 | 3.605 | 3.605 | (1.113) | 100374 | 50.0000 | 45.6 |
| | 33 2-Methylnaphthalene | 142 | 3.664 | 3.664 | (1.131) | 248143 | 50.0000 | 46.8 |
| | 145 1-Methylnapthalene | 142 | 3.723 | 3.723 | (1.149) | 233268 | 50.0000 | 45.8 |
| | 34 Hexachlorocyclopentadiene ++ | 237 | 3.770 | 3.770 | (0.877) | 88392 | 50.0000 | 48.6 |
| | 35 2,4,6-Trichlorophenol + | 196 | 3.852 | 3.852 | (0.896) | 81230 | 50.0000 | 49.7 |
| | 36 2,4,5-Trichlorphenol | 196 | 3.882 | 3.882 | (0.903) | 84708 | 50.0000 | 50.3 |
| $ | 37 2-Fluorobiphenyl | 172 | 3.888 | 3.888 | (0.904) | 292001 | 50.0000 | 50.6 |
| | 38 2-Chloronaphthalene | 162 | 3.958 | 3.958 | (0.921) | 232542 | 50.0000 | 47.7 |
| | 39 2-Nitroaniline | 138 | 4.035 | 4.035 | (0.938) | 72618 | 50.0000 | 46.1 |
| | 40 Dimethylphthalate | 163 | 4.141 | 4.141 | (0.963) | 241176 | 50.0000 | 45.4 |
| | 41 2,6-Dinitrotoluene | 165 | 4.176 | 4.176 | (0.971) | 52427 | 50.0000 | 44.7 |
| | 42 Acenaphthylene | 152 | 4.211 | 4.211 | (0.979) | 347904 | 50.0000 | 46.2 |
| | 43 3-Nitroaniline | 138 | 4.282 | 4.282 | (0.996) | 49719 | 50.0000 | 42.2 |
| * | 44 Acenaphthene-d10 | 164 | 4.299 | 4.299 | (1.000) | 172012 | 40.0000 | |
| | 45 Acenaphthene + | 153 | 4.317 | 4.317 | (1.004) | 229603 | 50.0000 | 47.0 |
| | 46 2,4-Dinitrophenol ++ | 184 | 4.352 | 4.352 | (1.012) | 36534 | 50.0000 | 42.3 |
| | 49 4-Nitrophenol ++ | 109 | 4.423 | 4.423 | (1.029) | 30049 | 50.0000 | 43.9 |
| | 47 Dibenzofuran | 168 | 4.423 | 4.423 | (1.029) | 316115 | 50.0000 | 47.1 |
| | 48 2,4-Dinitrotoluene | 165 | 4.429 | 4.429 | (1.030) | 64641 | 50.0000 | 42.3 |
| | 50 Diethylphthalate | 149 | 4.570 | 4.570 | (1.063) | 216819 | 50.0000 | 43.7 |
| | 52 4-Chlorophenyl-phenylether | 204 | 4.635 | 4.635 | (1.078) | 124070 | 50.0000 | 47.5 |
| | 51 Fluorene | 166 | 4.635 | 4.635 | (1.078) | 247657 | 50.0000 | 46.4 |
| | 53 4-Nitroaniline | 138 | 4.658 | 4.658 | (1.083) | 48489 | 50.0000 | 42.9(M2) |
| | 54 4,6-Dinitro-o-cresol | 198 | 4.682 | 4.682 | (0.899) | 43196 | 50.0000 | 45.8 |
| | 55 N-nitrosodiphenylamine (1)+ | 169 | 4.705 | 4.705 | (0.904) | 174084 | 50.0000 | 49.5 |
| | 56 Azobenzene | 77 | 4.729 | 4.729 | (0.908) | 200869 | 50.0000 | 50.1(M1) |
| $ | 57 2,4,6-Tribromophenol | 332 | 4.782 | 4.782 | (1.112) | 41743 | 50.0000 | 46.3 |
| | 58 4-Bromophenyl-phenylether | 248 | 4.929 | 4.929 | (0.947) | 73474 | 50.0000 | 50.5 |
| | 59 Hexachlorobenzene | 284 | 4.976 | 4.976 | (0.956) | 81118 | 50.0000 | 49.9 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppm) | AMOUNTS ON-COL ( ppm) |
|---|---|---|---|---|---|---|---|---|
| | 60 Pentachlorophenol + | 266 | 5.105 | 5.105 | (0.981) | 51652 | 50.0000 | 49.1 |
| * | 61 Phenanthrene-d10 | 188 | 5.205 | 5.205 | (1.000) | 240752 | 40.0000 | |
| | 62 Phenanthrene | 178 | 5.217 | 5.217 | (1.002) | 305840 | 50.0000 | 46.3 |
| | 63 Anthracene | 178 | 5.252 | 5.252 | (1.009) | 308104 | 50.0000 | 46.8 |
| | 64 Carbazole | 167 | 5.358 | 5.358 | (1.029) | 258575 | 50.0000 | 42.5 |
| | 65 Di-n-butylphthalate | 149 | 5.570 | 5.570 | (1.070) | 312370 | 50.0000 | 43.4 |
| | 67 Fluoranthene + | 202 | 5.993 | 5.993 | (1.151) | 289189 | 50.0000 | 40.8 |
| | 68 Benzidine | 184 | 6.117 | 6.117 | (0.812) | 8611 | 50.0000 | 15.9 |
| | 69 Pyrene | 202 | 6.176 | 6.176 | (0.820) | 301768 | 50.0000 | 48.4 |
| $ | 70 Terphenyl-d14 | 244 | 6.317 | 6.317 | (0.839) | 194906 | 50.0000 | 47.6 |
| | 71 Butylbenzylphthalate | 149 | 6.840 | 6.840 | (0.909) | 124201 | 50.0000 | 46.5 |
| | 73 3,3'-Dichlorobenzidine | 252 | 7.517 | 7.517 | (0.998) | 82674 | 50.0000 | 50.0 |
| | 72 Benzo(a)anthracene | 228 | 7.517 | 7.517 | (0.998) | 254327 | 50.0000 | 46.4 |
| * | 74 Chrysene-d12 | 240 | 7.529 | 7.529 | (1.000) | 204712 | 40.0000 | |
| | 76 bis(2-Ethylhexyl)phthalate | 149 | 7.693 | 7.693 | (1.022) | 157051 | 50.0000 | 46.6 |
| | 75 Chrysene | 228 | 7.564 | 7.564 | (1.005) | 261085 | 50.0000 | 46.8 |
| | 77 Di-n-octylphthalate + | 149 | 8.911 | 8.911 | (1.184) | 227671 | 50.0000 | 43.7 |
| | 78 Benzo(b)fluoranthene | 252 | 9.411 | 9.411 | (0.935) | 215208 | 50.0000 | 45.8 |
| | 79 Benzo(k)fluoranthene | 252 | 9.464 | 9.464 | (0.940) | 267698 | 50.0000 | 48.2 |
| | 80 Benzo(a)pyrene + | 252 | 9.981 | 9.981 | (0.991) | 207500 | 50.0000 | 44.1 |
| * | 81 Perylene-d12 | 264 | 10.070 | 10.070 | (1.000) | 189734 | 40.0000 | |
| | 82 Indeno(1,2,3-cd)pyrene | 276 | 11.169 | 11.169 | (1.109) | 187199 | 50.0000 | 43.4(M2) |
| | 83 Dibenzo(a,h)anthracene | 278 | 11.187 | 11.187 | (1.111) | 230833 | 50.0000 | 45.2 |
| | 84 Benzo(g,h,i)perylene | 276 | 11.381 | 11.381 | (1.130) | 255780 | 50.0000 | 45.5 |
| M | 66 Total Methylphenol | 108 | | | | 246424 | 100.000 | 92.8 |
| | 91 Acetophenone | 105 | 2.741 | 2.741 | (1.091) | 158892 | 50.0000 | 45.8 |
| | 155 Benzaldehyde | 77 | 2.282 | 2.282 | (0.909) | 32895 | 50.0000 | 61.9 |
| | 156 Caprolactam | 113 | 3.505 | 3.505 | (1.082) | 27423 | 50.0000 | 43.6 |
| | 157 Biphenyl | 154 | 3.946 | 3.946 | (1.218) | 298178 | 50.0000 | 46.5 |
| | 158 Atrazine | 200 | 5.040 | 5.040 | (0.968) | 42487 | 50.0000 | 42.9 |
| | 174 1,4-Dioxane | 88 | 1.076 | 1.076 | (0.428) | 40438 | 50.0000 | 32.9(M1) |

QC Flag Legend

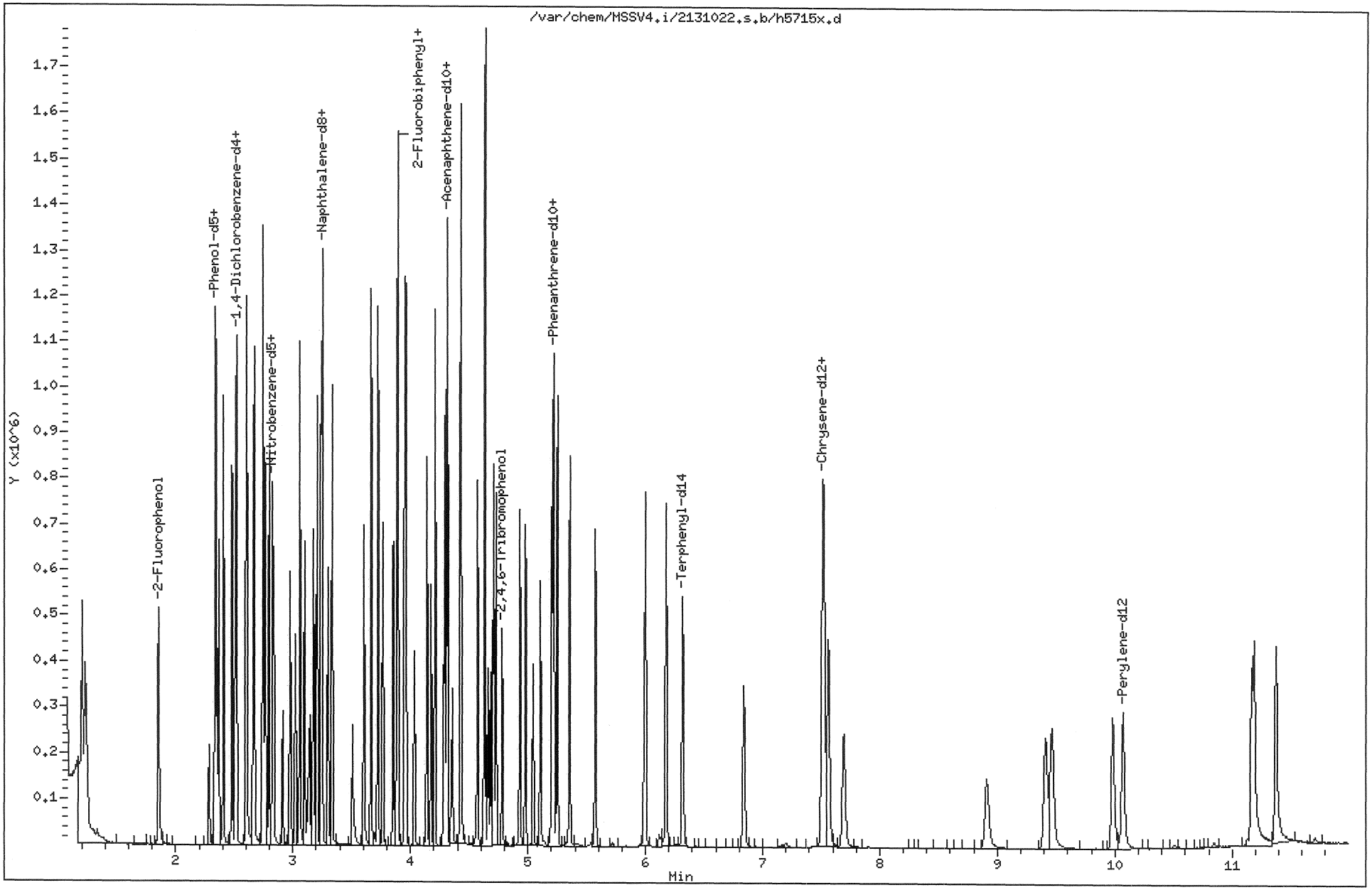
M1- Compound response manually integrated because Target system did not integrate.
M2- Compound response manually integrated because Target system integrated incorrectly.

Data File: /var/chem/MSSV4.i/2131022.s.b/h5715x.d
Date : 22-OCT-2013 09:36
Client ID: STD050
Sample Info: 1400*48-34-12
Volume Injected (uL): 1.0
Column phase: RTX-5MS-30M



Instrument: MSSV4.i

Operator: HCP
Column diameter: 0.25

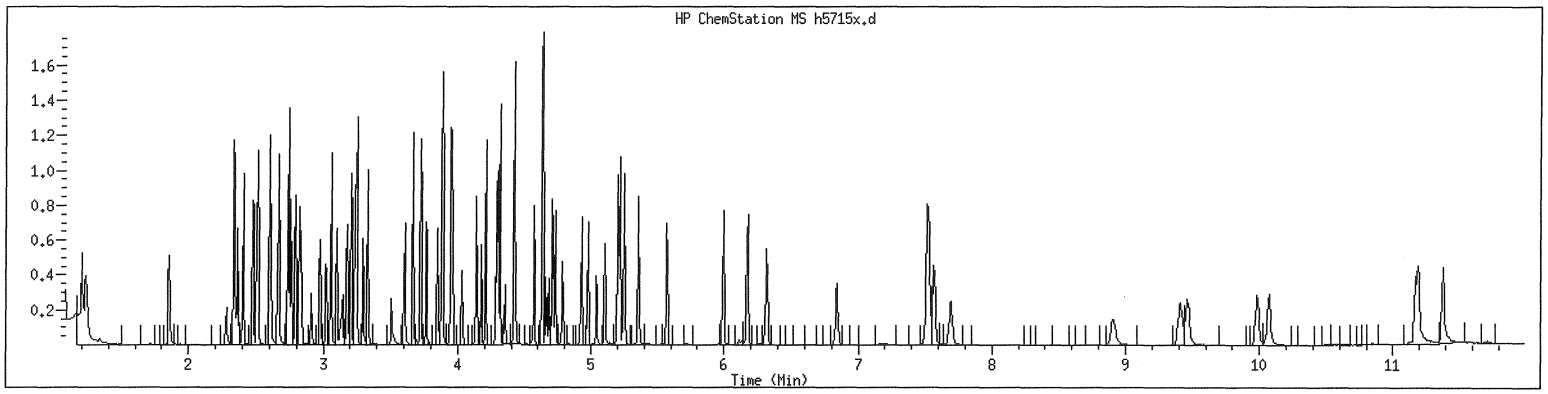



2131022 485

# MANUAL INTEGRATION GRAPHIC REPORT

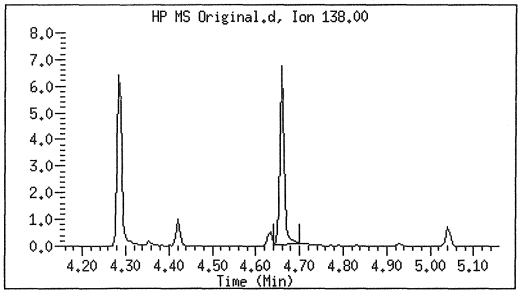
Lab ID : 1400
Injection Date: 10/22/2013 09:36
Operator : HCP
Sample Info : 1400*48-34-12
Misc Info : STD050*MSSV~10018~*
Method : /var/chem/MSSV4.i/2131022.s.b/8270D_04.m
Dilution : 1.00
Matrix : WATER
Integrator : HP RTE

SampleType : CCALIB_5
Instrument : MSSV4.i
Compound Sublist: 8270c



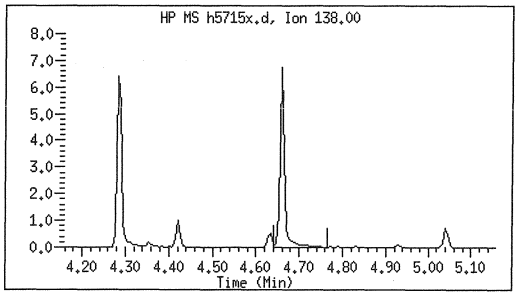

Original | Final

53 4-Nitroaniline CAS#: 100-01-6 Reason: M3

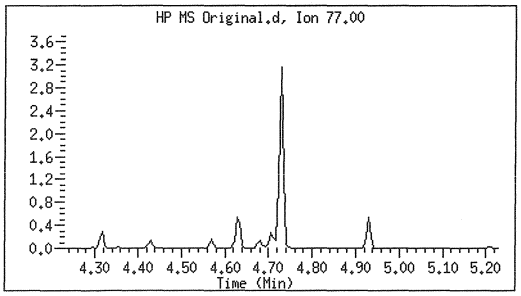



Electronic Signature Applied

User: kcb
Date: 10/22/2013 13:54

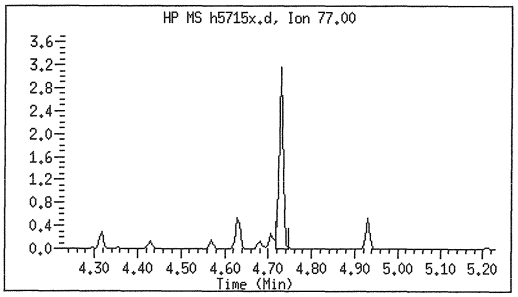



56 Azobenzene CAS#: 122-66-7 Reason: M1



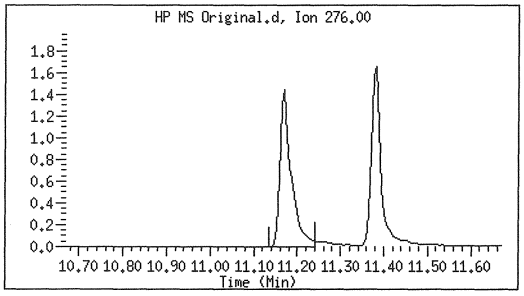

Electronic Signature Applied

User: hcp
Date: 10/22/2013 09:49



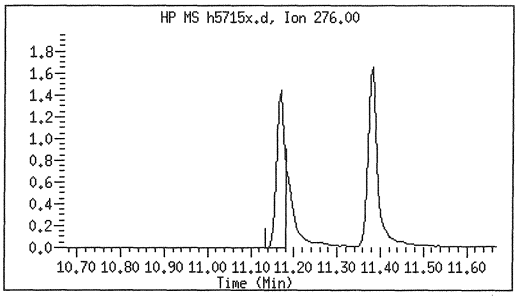
Original | Final

82 Indeno(1,2,3-cd)pyrene CAS#: 193-39-5 Reason: M3

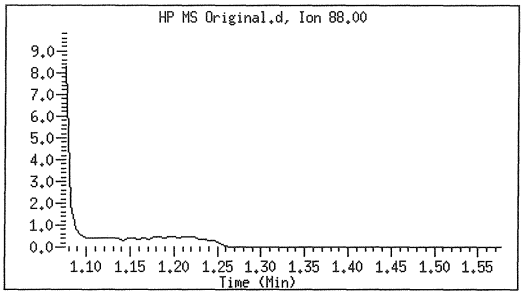



Electronic Signature Applied

User: hcp
Date: 10/22/2013 09:50

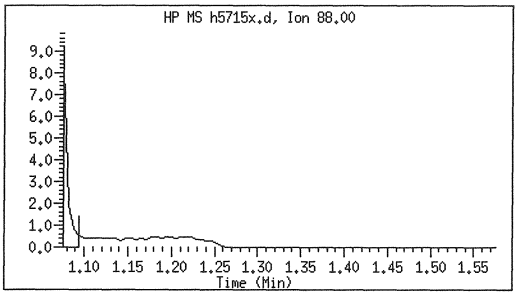



174 1,4-Dioxane CAS#: 123-91-1 Reason: M1




Electronic Signature Applied

User: hcp
Date: 10/22/2013 09:50




M2 - Target system integrated incorrectly

Data File: /var/chem/MSSV4.i/2131023.s.b/h5753xd.d 
Report Date: 23-Oct-2013 12:08

GCAL, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSSV4.i
Lab File ID: h5753xd.d
Analysis Type: WATER
Lab Sample ID: 1400
Method: /var/chem/MSSV4.i/2131023.s.b/8270D_04.m

Injection Date: 23-OCT-2013 11:49
Init. Cal. Date(s): 08-JUL-2013 30-AUG-2013
Init. Cal. Times: 10:47 13:26
Quant Type: ISTD

| COMPOUND | RRF / AMOUNT | RF50 | CCAL RRF50 | MIN RRF | %D / %DRIFT | MAX %D / %DRIFT | CURVE TYPE |
|---|---|---|---|---|---|---|---|
| 2 Pyridine | 1.32854 | 1.20712 | 1.20712 | 0.050 | -9.13979 | 20.00000 | Averaged |
| 1 n-Nitrosodimethylamine | 0.56625 | 0.51375 | 0.51375 | 0.050 | -9.27176 | 20.00000 | Averaged |
| $ 3 2-Fluorophenol | 1.29448 | 1.26740 | 1.26740 | 0.050 | -2.09221 | 20.00000 | Averaged |
| $ 4 Phenol-d5 | 1.39796 | 1.32063 | 1.32063 | 0.050 | -5.53198 | 20.00000 | Averaged |
| 5 Aniline | 38.30506 | 50.00000 | 1.20752 | 0.050 | -23.38988 | 20.00000 | Quadratic <-rf |
| 6 Phenol + | 1.58276 | 1.50047 | 1.50047 | 0.800 | -5.19947 | 20.00000 | Averaged |
| 7 bis(-2-Chloroethyl)Ether | 0.76985 | 0.77267 | 0.77267 | 0.700 | 0.36615 | 20.00000 | Averaged |
| 8 2-Chlorophenol | 1.33401 | 1.27672 | 1.27672 | 0.800 | -4.29488 | 20.00000 | Averaged |
| 9 1,3-Dichlorobenzene | 1.50588 | 1.41414 | 1.41414 | 0.050 | -6.09194 | 20.00000 | Averaged |
| 11 1,4-Dichlorobenzene + | 1.52570 | 1.47392 | 1.47392 | 0.050 | -3.39370 | 20.00000 | Averaged |
| 12 Benzyl alcohol | 0.71875 | 0.68150 | 0.68150 | 0.050 | -5.18152 | 20.00000 | Averaged |
| 13 1,2-Dichlorobenzene | 1.44449 | 1.37930 | 1.37930 | 0.050 | -4.51305 | 20.00000 | Averaged |
| 15 2-Methylphenol | 1.13012 | 1.08232 | 1.08232 | 0.700 | -4.22968 | 20.00000 | Averaged |
| 14 Bis(2-chloroisopropyl)ether | 1.23691 | 1.24267 | 1.24267 | 0.050 | 0.46558 | 20.00000 | Averaged |
| 17 3- & 4-Methylphenol | 1.16025 | 1.10456 | 1.10456 | 0.600 | -4.79941 | 20.00000 | Averaged |
| 16 N-Nitroso-di-n-propylamine+ | 0.80927 | 0.77848 | 0.77848 | 0.500 | -3.80465 | 20.00000 | Averaged |
| 18 Hexachloroethane | 0.55597 | 0.54365 | 0.54365 | 0.300 | -2.21560 | 20.00000 | Averaged |
| $ 19 Nitrobenzene-d5 | 0.33185 | 0.31574 | 0.31574 | 0.050 | -4.85650 | 20.00000 | Averaged |
| 20 Nitrobenzene | 0.32255 | 0.30501 | 0.30501 | 0.200 | -5.43902 | 20.00000 | Averaged |
| 21 Isophorone | 0.51100 | 0.48307 | 0.48307 | 0.400 | -5.46569 | 20.00000 | Averaged |
| 22 2-Nitrophenol + | 0.19429 | 0.18549 | 0.18549 | 0.100 | -4.52987 | 20.00000 | Averaged |
| 23 2,4-Dimethyphenol | 0.33792 | 0.32757 | 0.32757 | 0.200 | -3.06249 | 20.00000 | Averaged |
| 24 bis(-2-Chloroethoxy)methane | 0.35788 | 0.34749 | 0.34749 | 0.300 | -2.90198 | 20.00000 | Averaged |
| 25 Benzoic Acid | 0.19806 | 0.19661 | 0.19661 | 0.050 | -0.73522 | 20.00000 | Averaged |
| 26 2,4-Dichlorophenol + | 0.29014 | 0.28003 | 0.28003 | 0.200 | -3.48666 | 20.00000 | Averaged |
| 27 1,2,4-Trichlorobenzene | 0.32471 | 0.30890 | 0.30890 | 0.050 | -4.86798 | 20.00000 | Averaged |
| 29 Naphthalene | 1.03872 | 0.97359 | 0.97359 | 0.700 | -6.26988 | 20.00000 | Averaged |
| 30 4-Chloroaniline | 0.33780 | 0.30837 | 0.30837 | 0.010 | -8.71443 | 20.00000 | Averaged |
| 31 Hexachlorobutadiene + | 0.21079 | 0.19594 | 0.19594 | 0.010 | -7.04456 | 20.00000 | Averaged |
| 32 4-Chloro-3-Methylphenol + | 0.26391 | 0.24842 | 0.24842 | 0.200 | -5.87131 | 20.00000 | Averaged |
| 33 2-Methylnaphthalene | 0.63608 | 0.60494 | 0.60494 | 0.400 | -4.89597 | 20.00000 | Averaged |
| 145 1-Methylnapthalene | 0.61057 | 0.56252 | 0.56252 | 0.050 | -7.86904 | 20.00000 | Averaged |
| 34 Hexachlorocyclopentadiene + | 0.42274 | 0.38035 | 0.38035 | 0.050 | -10.02729 | 20.00000 | Averaged |
| 35 2,4,6-Trichlorophenol + | 0.38003 | 0.36241 | 0.36241 | 0.200 | -4.63622 | 20.00000 | Averaged |
| 36 2,4,5-Trichlorphenol | 0.39190 | 0.38579 | 0.38579 | 0.200 | -1.55818 | 20.00000 | Averaged |
| $ 37 2-Fluorobiphenyl | 1.34259 | 1.26920 | 1.26920 | 0.050 | -5.46649 | 20.00000 | Averaged |

GCAL, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSSV4.i
Lab File ID: h5753xd.d
Analysis Type: WATER
Lab Sample ID: 1400
Method: /var/chem/MSSV4.i/2131023.s.b/8270D_04.m

Injection Date: 23-OCT-2013 11:49
Init. Cal. Date(s): 08-JUL-2013 30-AUG-2013
Init. Cal. Times: 10:47 13:26
Quant Type: ISTD

| COMPOUND | RRF / AMOUNT | RF50 | CCAL RRF50 | MIN RRF | %D / %DRIFT | MAX %D / %DRIFT | CURVE TYPE |
|---|---|---|---|---|---|---|---|
| 38 2-Chloronaphthalene | 1.13278 | 1.04992 | 1.04992 | 0.800 | -7.31418 | 20.00000 | Averaged |
| 39 2-Nitroaniline | 0.36633 | 0.34896 | 0.34896 | 0.010 | -4.74282 | 20.00000 | Averaged |
| 40 Dimethylphthalate | 1.23590 | 1.17949 | 1.17949 | 0.010 | -4.56453 | 20.00000 | Averaged |
| 41 2,6-Dinitrotoluene | 0.27249 | 0.24782 | 0.24782 | 0.200 | -9.05564 | 20.00000 | Averaged |
| 42 Acenaphthylene | 1.75071 | 1.59712 | 1.59712 | 0.900 | -8.77264 | 20.00000 | Averaged |
| 43 3-Nitroaniline | 0.27369 | 0.26427 | 0.26427 | 0.010 | -3.44176 | 20.00000 | Averaged |
| 45 Acenaphthene + | 1.13613 | 1.07645 | 1.07645 | 0.900 | -5.25208 | 20.00000 | Averaged |
| 46 2,4-Dinitrophenol ++ | 0.20106 | 0.19924 | 0.19924 | 0.010 | -0.90217 | 20.00000 | Averaged |
| 49 4-Nitrophenol ++ | 0.15930 | 0.15337 | 0.15337 | 0.010 | -3.71866 | 20.00000 | Averaged |
| 47 Dibenzofuran | 1.55971 | 1.44243 | 1.44243 | 0.800 | -7.51960 | 20.00000 | Averaged |
| 48 2,4-Dinitrotoluene | 0.35570 | 0.32175 | 0.32175 | 0.200 | -9.54448 | 20.00000 | Averaged |
| 50 Diethylphthalate | 1.15453 | 1.09574 | 1.09574 | 0.010 | -5.09212 | 20.00000 | Averaged |
| 52 4-Chlorophenyl-phenylether | 0.60708 | 0.57176 | 0.57176 | 0.400 | -5.81762 | 20.00000 | Averaged |
| 51 Fluorene | 1.24222 | 1.17990 | 1.17990 | 0.900 | -5.01733 | 20.00000 | Averaged |
| 53 4-Nitroaniline | 0.26293 | 0.25375 | 0.25375 | 0.010 | -3.49187 | 20.00000 | Averaged |
| 54 4,6-Dinitro-o-cresol | 0.15680 | 0.15254 | 0.15254 | 0.010 | -2.71464 | 20.00000 | Averaged |
| 55 N-nitrosodiphenylamine (1)+ | 0.58462 | 0.57280 | 0.57280 | 0.010 | -2.02100 | 20.00000 | Averaged |
| 56 Azobenzene | 0.66583 | 0.66267 | 0.66267 | 0.050 | -0.47416 | 20.00000 | Averaged |
| $ 57 2,4,6-Tribromophenol | 0.20953 | 0.20399 | 0.20399 | 0.050 | -2.64138 | 20.00000 | Averaged |
| 58 4-Bromophenyl-phenylether | 0.24195 | 0.22426 | 0.22426 | 0.100 | -7.31288 | 20.00000 | Averaged |
| 59 Hexachlorobenzene | 0.27000 | 0.25134 | 0.25134 | 0.100 | -6.91141 | 20.00000 | Averaged |
| 60 Pentachlorophenol + | 0.17475 | 0.17307 | 0.17307 | 0.050 | -0.95988 | 20.00000 | Averaged |
| 62 Phenanthrene | 1.09710 | 1.02633 | 1.02633 | 0.700 | -6.45024 | 20.00000 | Averaged |
| 63 Anthracene | 1.09355 | 1.01155 | 1.01155 | 0.700 | -7.49813 | 20.00000 | Averaged |
| 64 Carbazole | 1.01050 | 0.92534 | 0.92534 | 0.010 | -8.42739 | 20.00000 | Averaged |
| 65 Di-n-butylphthalate | 1.19618 | 1.11632 | 1.11632 | 0.010 | -6.67664 | 20.00000 | Averaged |
| 67 Fluoranthene + | 1.17797 | 1.06376 | 1.06376 | 0.600 | -9.69571 | 20.00000 | Averaged |
| 68 Benzidine | 0.10549 | 0.09352 | 0.09352 | 0.050 | -11.35182 | 20.00000 | Averaged |
| 69 Pyrene | 1.21796 | 1.14901 | 1.14901 | 0.600 | -5.66110 | 20.00000 | Averaged |
| $ 70 Terphenyl-d14 | 0.79988 | 0.75138 | 0.75138 | 0.050 | -6.06383 | 20.00000 | Averaged |
| 71 Butylbenzylphthalate | 0.52176 | 0.52731 | 0.52731 | 0.010 | 1.06437 | 20.00000 | Averaged |
| 73 3,3'-Dichlorobenzidine | 0.32285 | 0.37110 | 0.37110 | 0.010 | 14.94605 | 20.00000 | Averaged |
| 72 Benzo(a)anthracene | 1.07109 | 1.04457 | 1.04457 | 0.800 | -2.47609 | 20.00000 | Averaged |
| 76 bis(2-Ethylhexyl)phthalate | 0.65789 | 0.69900 | 0.69900 | 0.010 | 6.24835 | 20.00000 | Averaged |
| 75 Chrysene | 1.09088 | 1.01070 | 1.01070 | 0.700 | -7.34983 | 20.00000 | Averaged |

GCAL, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: MSSV4.i
Lab File ID: h5753xd.d
Analysis Type: WATER
Lab Sample ID: 1400
Method: /var/chem/MSSV4.i/2131023.s.b/8270D_04.m

Injection Date: 23-OCT-2013 11:49
Init. Cal. Date(s): 08-JUL-2013 30-AUG-2013
Init. Cal. Times: 10:47 13:26
Quant Type: ISTD

| COMPOUND | RRF / AMOUNT | RF50 | CCAL RRF50 | MIN RRF | %D / %DRIFT | MAX %D / %DRIFT | CURVE TYPE |
|---|---|---|---|---|---|---|---|
| 77 Di-n-octylphthalate + | 1.01869 | 1.10593 | 1.10593 | 0.010 | 8.56415 | 20.00000 | Averaged |
| 78 Benzo(b)fluoranthene | 0.99168 | 0.94087 | 0.94087 | 0.700 | -5.12282 | 20.00000 | Averaged |
| 79 Benzo(k)fluoranthene | 1.16999 | 0.99107 | 0.99107 | 0.700 | -15.29252 | 20.00000 | Averaged |
| 80 Benzo(a)pyrene + | 0.99153 | 0.88947 | 0.88947 | 0.700 | -10.29277 | 20.00000 | Averaged |
| 82 Indeno(1,2,3-cd)pyrene | 0.90836 | 0.87063 | 0.87063 | 0.500 | -4.15399 | 20.00000 | Averaged |
| 83 Dibenzo(a,h)anthracene | 1.07770 | 0.97748 | 0.97748 | 0.400 | -9.29939 | 20.00000 | Averaged |
| 84 Benzo(g,h,i)perylene | 1.18487 | 1.00556 | 1.00556 | 0.500 | -15.13334 | 20.00000 | Averaged |
| M 66 Total Methylphenol | 1.14518 | 1.09344 | 1.09344 | 0.050 | -4.51829 | 20.00000 | Averaged |
| 91 Acetophenone | 1.49591 | 1.39813 | 1.39813 | 0.010 | -6.53681 | 20.00000 | Averaged |
| 155 Benzaldehyde | 0.22931 | 0.34128 | 0.34128 | 0.010 | 48.83324 | 20.00000 | Averaged <- |
| 156 Caprolactam | 0.07553 | 0.07313 | 0.07313 | 0.010 | -3.18538 | 20.00000 | Averaged |
| 157 Biphenyl | 0.76948 | 0.70884 | 0.70884 | 0.010 | -7.88043 | 20.00000 | Averaged |
| 158 Atrazine | 0.16467 | 0.13698 | 0.13698 | 0.010 | -16.81565 | 20.00000 | Averaged |
| 174 1,4-Dioxane | 0.53016 | 0.38966 | 0.38966 | 0.050 | -26.50172 | 20.00000 | Averaged <- |

Average %D / Drift Results.

Calculated Average %D/Drift = 6.76474
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

Data File: /var/chem/MSSV4.i/2131023.s.b/h5752xd.d



Date : 23-OCT-2013 11:29

Client ID: DFTPP

Instrument: MSSV4.i

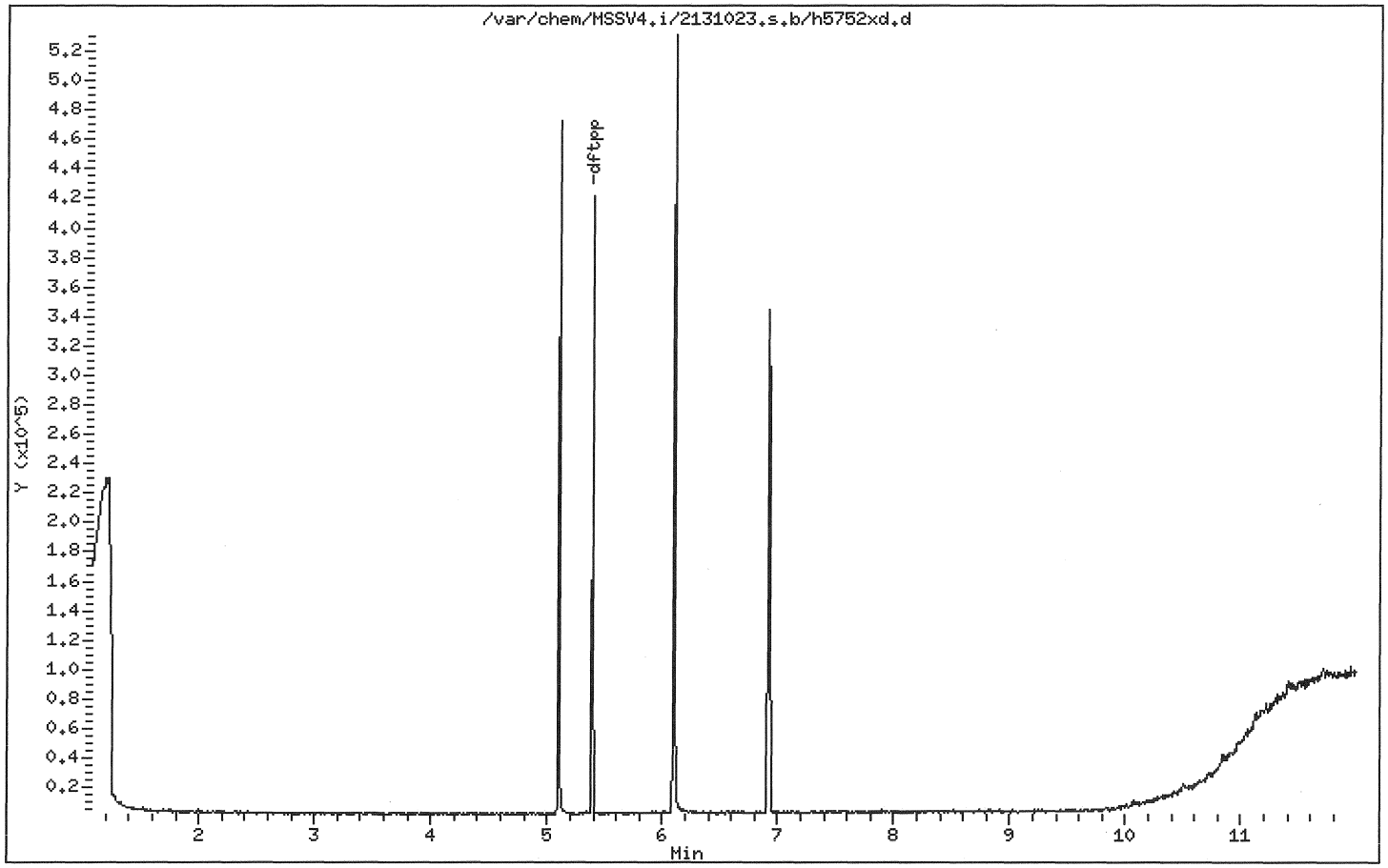
Sample Info: 1100*53-3-1

Volume Injected (uL): 1.0

Operator: HCP

Column phase: RTX-5MS-30M

Column diameter: 2.00



Data File: /var/chem/MSSV4.i/2131023.s.b/h5752xd.d



Date : 23-OCT-2013 11:29

Client ID: DFTPP

Instrument: MSSV4.i

Sample Info: 1100ng53-3-1

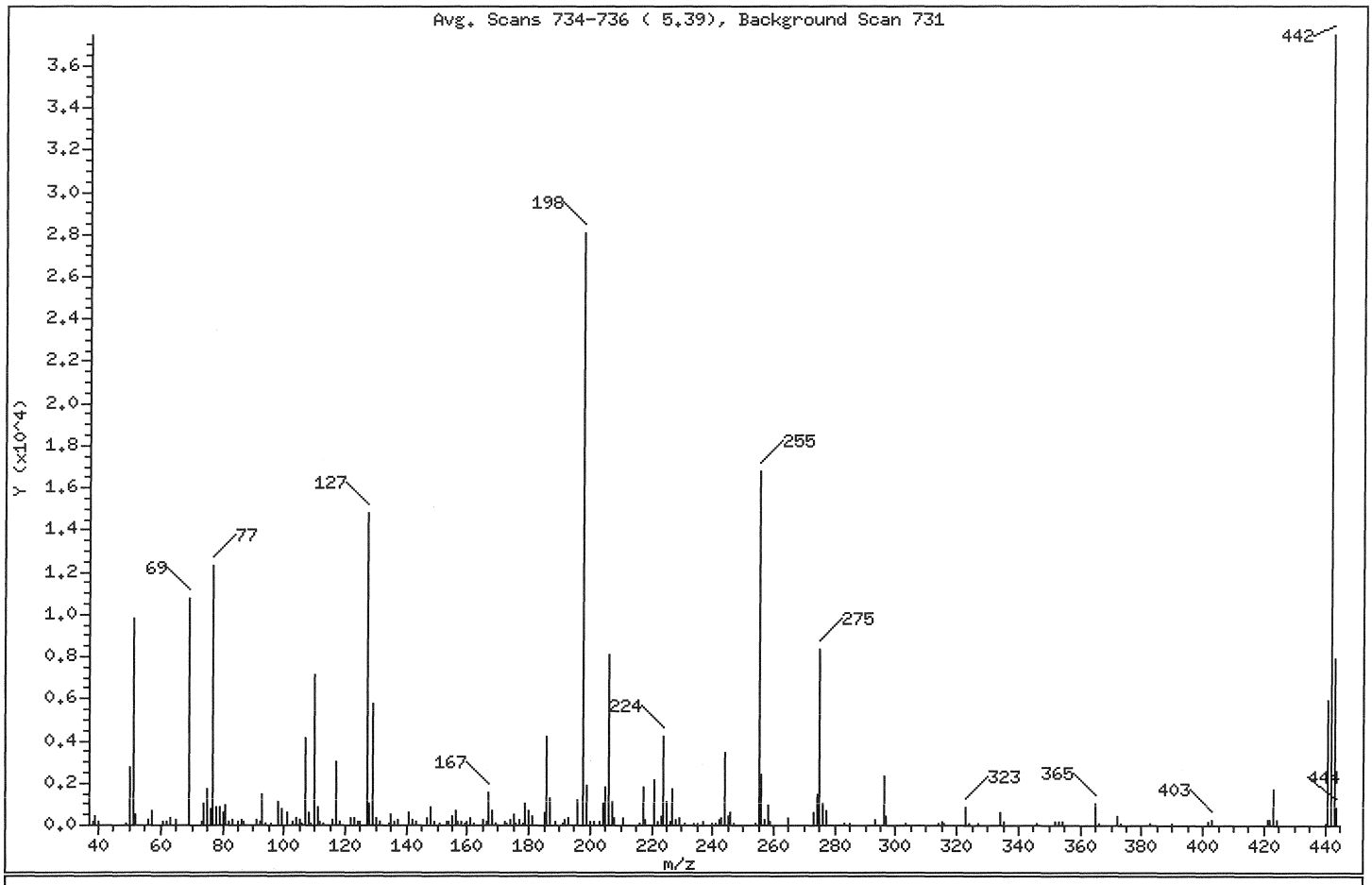
Volume Injected (uL): 1.0

Operator: HCP

Column phase: RTX-5MS-30M

Column diameter: 2.00

1 dftpp




| m/e | ION ABUNDANCE CRITERIA | % RELATIVE ABUNDANCE |
|---|---|---|
| 198 | Base Peak, 100% relative abundance | 100.00 |
| 51 | 30.00 - 60.00% of mass 198 | 34.95 |
| 68 | Less than 2.00% of mass 69 | 0.00 ( 0.00) |
| 69 | Mass 69 relative abundance | 38.33 |
| 70 | Less than 2.00% of mass 69 | 0.00 ( 0.00) |
| 127 | 40.00 - 60.00% of mass 198 | 52.89 |
| 197 | Less than 1.00% of mass 198 | 0.00 |
| 199 | 5.00 - 9.00% of mass 198 | 6.81 |
| 275 | 10.00 - 30.00% of mass 198 | 29.85 |
| 365 | Greater than 1.00% of mass 198 | 3.80 |
| 441 | Present, but less than mass 443 | 21.27 |
| 442 | Greater than 40.00% of mass 198 | 133.58 |
| 443 | 17.00 - 23.00% of mass 442 | 28.23 ( 21.13) |

Data File: /var/chem/MSSV4.i/2131023.s.b/h5752xd.d

Date : 23-OCT-2013 11:29

Client ID: DFTPP

Instrument: MSSV4.i

Sample Info: 1100*53-3-1

Volume Injected (uL): 1.0

Operator: HCP

Column phase: RTX-5MS-30M

Column diameter: 2.00

Data File: h5752xd.d
Spectrum: Avg. Scans 734-736 ( 5.39), Background Scan 731
Location of Maximum: 442.00
Number of points: 186

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 38.00 | 204 | 113.00 | 61 | 180.00 | 671 | 256.00 | 2423 |
| 39.00 | 448 | 116.00 | 267 | 181.00 | 430 | 257.00 | 269 |
| 40.00 | 144 | 117.00 | 3055 | 185.00 | 620 | 258.00 | 985 |
| 41.00 | 7 | 118.00 | 181 | 186.00 | 4241 | 259.00 | 140 |
| 49.00 | 67 | 122.00 | 315 | 187.00 | 1253 | 265.00 | 326 |
| 50.00 | 2756 | 123.00 | 347 | 189.00 | 214 | 273.00 | 604 |
| 51.00 | 9798 | 124.00 | 187 | 191.00 | 62 | 274.00 | 1499 |
| 52.00 | 530 | 125.00 | 172 | 192.00 | 274 | 275.00 | 8368 |
| 56.00 | 266 | 127.00 | 14829 | 193.00 | 352 | 276.00 | 1030 |
| 57.00 | 672 | 128.00 | 1064 | 196.00 | 1222 | 277.00 | 730 |
| 61.00 | 180 | 129.00 | 5737 | 198.00 | 28032 | 283.00 | 72 |
| 62.00 | 211 | 130.00 | 364 | 199.00 | 1910 | 285.00 | 61 |
| 63.00 | 305 | 131.00 | 144 | 200.00 | 154 | 293.00 | 230 |
| 65.00 | 229 | 134.00 | 121 | 201.00 | 183 | 296.00 | 2310 |
| 69.00 | 10745 | 135.00 | 496 | 203.00 | 151 | 297.00 | 439 |
| 73.00 | 135 | 136.00 | 149 | 204.00 | 1037 | 303.00 | 119 |
| 74.00 | 1064 | 137.00 | 253 | 205.00 | 1806 | 314.00 | 128 |
| 75.00 | 1734 | 141.00 | 603 | 206.00 | 8127 | 315.00 | 202 |
| 76.00 | 753 | 142.00 | 283 | 207.00 | 1147 | 316.00 | 104 |
| 77.00 | 12310 | 143.00 | 197 | 208.00 | 349 | 323.00 | 856 |
| 78.00 | 819 | 147.00 | 310 | 211.00 | 378 | 324.00 | 116 |
| 79.00 | 897 | 148.00 | 863 | 216.00 | 96 | 327.00 | 50 |
| 80.00 | 623 | 149.00 | 184 | 217.00 | 1818 | 334.00 | 610 |
| 81.00 | 915 | 151.00 | 58 | 218.00 | 233 | 335.00 | 142 |
| 82.00 | 179 | 153.00 | 173 | 221.00 | 2158 | 346.00 | 123 |
| 83.00 | 245 | 154.00 | 185 | 222.00 | 196 | 352.00 | 195 |
| 85.00 | 164 | 155.00 | 407 | 223.00 | 413 | 353.00 | 130 |
| 86.00 | 285 | 156.00 | 719 | 224.00 | 4224 | 354.00 | 209 |
| 87.00 | 139 | 157.00 | 135 | 225.00 | 1129 | 365.00 | 1065 |
| 91.00 | 276 | 158.00 | 137 | 226.00 | 131 | 366.00 | 86 |
| 92.00 | 212 | 159.00 | 91 | 227.00 | 1680 | 372.00 | 422 |
| 93.00 | 1462 | 160.00 | 184 | 228.00 | 238 | 373.00 | 68 |
| 94.00 | 70 | 161.00 | 369 | 229.00 | 339 | 383.00 | 83 |
| 96.00 | 102 | 162.00 | 73 | 231.00 | 122 | 390.00 | 53 |
| 98.00 | 1151 | 165.00 | 257 | 234.00 | 125 | 402.00 | 150 |

Data File: /var/chem/MSSV4.i/2131023.s.b/h5752xd.d

Date : 23-OCT-2013 11:29

Client ID: DFTPP

Instrument: MSSV4.i

Sample Info: 1100*53-3-1

Volume Injected (uL): 1.0

Operator: HCP

Column phase: RTX-5MS-30M

Column diameter: 2.00

Data File: h5752xd.d
Spectrum: Avg. Scans 734-736 ( 5.39), Background Scan 731
Location of Maximum: 442.00
Number of points: 186

| m/z | Y | m/z | Y | m/z | Y | m/z | Y |
|---|---|---|---|---|---|---|---|
| 99.00 | 760 | 166.00 | 213 | 235.00 | 50 | 403.00 | 235 |
| 101.00 | 602 | 167.00 | 1512 | 237.00 | 152 | 421.00 | 222 |
| 103.00 | 168 | 168.00 | 693 | 240.00 | 73 | 422.00 | 221 |
| 104.00 | 330 | 169.00 | 63 | 241.00 | 50 | 423.00 | 1711 |
| 105.00 | 297 | 172.00 | 161 | 242.00 | 222 | 424.00 | 294 |
| 106.00 | 59 | 173.00 | 58 | 243.00 | 386 | 440.00 | 102 |
| 107.00 | 4092 | 174.00 | 273 | 244.00 | 3429 | 441.00 | 5962 |
| 108.00 | 564 | 175.00 | 543 | 245.00 | 472 | 442.00 | 37448 |
| 109.00 | 129 | 176.00 | 114 | 246.00 | 627 | 443.00 | 7915 |
| 110.00 | 7149 | 177.00 | 247 | 247.00 | 57 | 444.00 | 863 |
| 111.00 | 898 | 178.00 | 126 | 254.00 | 53 | | |
| 112.00 | 136 | 179.00 | 1045 | 255.00 | 16816 | | |

GCAL, Inc.

BNA QUANT AND RATIO REPORT

Data file : /var/chem/MSSV4.i/2131023.s.b/h5753xd.d
Lab Smp Id: 1400 Client Smp ID: STD050
Inj Date : 23-OCT-2013 11:49
Operator : HCP Inst ID: MSSV4.i
Smp Info : 1400*48-34-12
Misc Info : STD050*MSSV~10023~*
Comment :
Method : /var/chem/MSSV4.i/2131023.s.b/8270D_04.m
Meth Date : 23-Oct-2013 12:08 hcp Quant Type: ISTD
Cal Date : 09-JUL-2013 00:02 Cal File: h2759x.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: 8270c.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | ng unit correction factor |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppm) | AMOUNTS ON-COL ( ppm) |
|---|---|---|---|---|---|---|---|
| 2 Pyridine | 79 | 1.217 | 1.217 | (0.487) | 137483 | 50.0000 | 45.4 |
| 1 n-Nitrosodimethylamine | 42 | 1.194 | 1.194 | (0.478) | 58513 | 50.0000 | 45.4 |
| $ 3 2-Fluorophenol | 112 | 1.841 | 1.841 | (0.736) | 144349 | 50.0000 | 49.0 |
| $ 4 Phenol-d5 | 99 | 2.329 | 2.329 | (0.932) | 150411 | 50.0000 | 47.2 |
| 5 Aniline | 93 | 2.329 | 2.329 | (0.932) | 137529 | 50.0000 | 38.3 |
| 6 Phenol + | 94 | 2.335 | 2.335 | (0.934) | 170894 | 50.0000 | 47.4 |
| 7 bis(-2-Chloroethyl)Ether | 63 | 2.352 | 2.352 | (0.941) | 88002 | 50.0000 | 50.2 |
| 8 2-Chlorophenol | 128 | 2.399 | 2.399 | (0.960) | 145410 | 50.0000 | 47.9 |
| 9 1,3-Dichlorobenzene | 146 | 2.470 | 2.470 | (0.988) | 161062 | 50.0000 | 47.0 |
| * 10 1,4-Dichlorobenzene-d4 | 152 | 2.499 | 2.499 | (1.000) | 91115 | 40.0000 | |
| 11 1,4-Dichlorobenzene + | 146 | 2.511 | 2.511 | (1.005) | 167870 | 50.0000 | 48.3 |
| 12 Benzyl alcohol | 108 | 2.588 | 2.588 | (1.035) | 77619 | 50.0000 | 47.4 |
| 13 1,2-Dichlorobenzene | 146 | 2.593 | 2.593 | (1.038) | 157094 | 50.0000 | 47.7 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppm) | AMOUNTS ON-COL ( ppm) |
|---|---|---|---|---|---|---|---|---|
| | 15 2-Methylphenol | 107 | 2.664 | 2.664 | (1.066) | 123269 | 50.0000 | 47.9 |
| | 14 Bis(2-chloroisopropyl)ether | 45 | 2.652 | 2.652 | (1.061) | 141532 | 50.0000 | 50.2 |
| | 17 3- & 4-Methylphenol | 107 | 2.752 | 2.752 | (1.101) | 125803 | 50.0000 | 47.6 |
| | 16 N-Nitroso-di-n-propylamine++ | 70 | 2.729 | 2.729 | (1.092) | 88664 | 50.0000 | 48.1 |
| | 18 Hexachloroethane | 117 | 2.782 | 2.782 | (1.113) | 61918 | 50.0000 | 48.9 |
| $ | 19 Nitrobenzene-d5 | 82 | 2.811 | 2.811 | (0.871) | 129800 | 50.0000 | 47.6 |
| | 20 Nitrobenzene | 77 | 2.823 | 2.823 | (0.874) | 125389 | 50.0000 | 47.3 |
| | 21 Isophorone | 82 | 2.964 | 2.964 | (0.918) | 198592 | 50.0000 | 47.3 |
| | 22 2-Nitrophenol + | 139 | 3.011 | 3.011 | (0.933) | 76256 | 50.0000 | 47.7 |
| | 23 2,4-Dimethyphenol | 107 | 3.052 | 3.052 | (0.945) | 134665 | 50.0000 | 48.5 |
| | 24 bis(-2-Chloroethoxy)methane | 93 | 3.088 | 3.088 | (0.956) | 142854 | 50.0000 | 48.5 |
| | 25 Benzoic Acid | 122 | 3.135 | 3.135 | (0.971) | 80825 | 50.0000 | 49.6 |
| | 26 2,4-Dichlorophenol + | 162 | 3.170 | 3.170 | (0.982) | 115120 | 50.0000 | 48.3 |
| | 27 1,2,4-Trichlorobenzene | 180 | 3.199 | 3.199 | (0.991) | 126991 | 50.0000 | 47.6 |
| * | 28 Naphthalene-d8 | 136 | 3.229 | 3.229 | (1.000) | 328881 | 40.0000 | |
| | 29 Naphthalene | 128 | 3.240 | 3.240 | (1.004) | 400246 | 50.0000 | 46.9 |
| | 30 4-Chloroaniline | 127 | 3.282 | 3.282 | (1.016) | 126770 | 50.0000 | 45.6 |
| | 31 Hexachlorobutadiene + | 225 | 3.323 | 3.323 | (1.029) | 80552 | 50.0000 | 46.5 |
| | 32 4-Chloro-3-Methylphenol + | 107 | 3.599 | 3.599 | (1.115) | 102125 | 50.0000 | 47.1 |
| | 33 2-Methylnaphthalene | 142 | 3.658 | 3.658 | (1.133) | 248692 | 50.0000 | 47.6 |
| | 145 1-Methylnapthalene | 142 | 3.717 | 3.717 | (1.151) | 231254 | 50.0000 | 46.1 |
| | 34 Hexachlorocyclopentadiene ++ | 237 | 3.758 | 3.758 | (0.877) | 83596 | 50.0000 | 45.0 |
| | 35 2,4,6-Trichlorophenol + | 196 | 3.840 | 3.840 | (0.896) | 79653 | 50.0000 | 47.7 |
| | 36 2,4,5-Trichlorphenol | 196 | 3.876 | 3.876 | (0.904) | 84792 | 50.0000 | 49.2 |
| $ | 37 2-Fluorobiphenyl | 172 | 3.882 | 3.882 | (0.905) | 278952 | 50.0000 | 47.3 |
| | 38 2-Chloronaphthalene | 162 | 3.952 | 3.952 | (0.922) | 230759 | 50.0000 | 46.3 |
| | 39 2-Nitroaniline | 138 | 4.023 | 4.023 | (0.938) | 76696 | 50.0000 | 47.6 |
| | 40 Dimethylphthalate | 163 | 4.135 | 4.135 | (0.964) | 259235 | 50.0000 | 47.7 |
| | 41 2,6-Dinitrotoluene | 165 | 4.170 | 4.170 | (0.973) | 54467 | 50.0000 | 45.5 |
| | 42 Acenaphthylene | 152 | 4.205 | 4.205 | (0.981) | 351026 | 50.0000 | 45.6 |
| | 43 3-Nitroaniline | 138 | 4.276 | 4.276 | (0.997) | 58083 | 50.0000 | 48.3 |
| * | 44 Acenaphthene-d10 | 164 | 4.287 | 4.287 | (1.000) | 175829 | 40.0000 | |
| | 45 Acenaphthene + | 153 | 4.311 | 4.311 | (1.005) | 236590 | 50.0000 | 47.4 |
| | 46 2,4-Dinitrophenol ++ | 184 | 4.346 | 4.346 | (1.014) | 43791 | 50.0000 | 49.5 |
| | 49 4-Nitrophenol ++ | 109 | 4.423 | 4.423 | (1.032) | 33709 | 50.0000 | 48.1 |
| | 47 Dibenzofuran | 168 | 4.417 | 4.417 | (1.030) | 317026 | 50.0000 | 46.2 |
| | 48 2,4-Dinitrotoluene | 165 | 4.423 | 4.423 | (1.032) | 70716 | 50.0000 | 45.2 |
| | 50 Diethylphthalate | 149 | 4.564 | 4.564 | (1.064) | 240829 | 50.0000 | 47.5 |
| | 52 4-Chlorophenyl-phenylether | 204 | 4.629 | 4.629 | (1.080) | 125666 | 50.0000 | 47.1 |
| | 51 Fluorene | 166 | 4.623 | 4.623 | (1.078) | 259325 | 50.0000 | 47.5 |
| | 53 4-Nitroaniline | 138 | 4.652 | 4.652 | (1.085) | 55770 | 50.0000 | 48.3 |
| | 54 4,6-Dinitro-o-cresol | 198 | 4.676 | 4.676 | (0.899) | 51612 | 50.0000 | 48.6 |
| | 55 N-nitrosodiphenylamine (1)+ | 169 | 4.699 | 4.699 | (0.904) | 193809 | 50.0000 | 49.0 |
| | 56 Azobenzene | 77 | 4.723 | 4.723 | (0.908) | 224216 | 50.0000 | 49.8(M1) |
| $ | 57 2,4,6-Tribromophenol | 332 | 4.776 | 4.776 | (1.114) | 44835 | 50.0000 | 48.7 |
| | 58 4-Bromophenyl-phenylether | 248 | 4.923 | 4.923 | (0.947) | 75878 | 50.0000 | 46.3 |
| | 59 Hexachlorobenzene | 284 | 4.970 | 4.970 | (0.956) | 85040 | 50.0000 | 46.5 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | AMOUNTS CAL-AMT ( ppm) | AMOUNTS ON-COL ( ppm) |
|---|---|---|---|---|---|---|---|---|
| | 60 Pentachlorophenol + | 266 | 5.099 | 5.099 | (0.981) | 58559 | 50.0000 | 49.5 |
| * | 61 Phenanthrene-d10 | 188 | 5.199 | 5.199 | (1.000) | 270682 | 40.0000 | |
| | 62 Phenanthrene | 178 | 5.211 | 5.211 | (1.002) | 347263 | 50.0000 | 46.8 |
| | 63 Anthracene | 178 | 5.246 | 5.246 | (1.009) | 342262 | 50.0000 | 46.3 |
| | 64 Carbazole | 167 | 5.352 | 5.352 | (1.029) | 313092 | 50.0000 | 45.8 |
| | 65 Di-n-butylphthalate | 149 | 5.564 | 5.564 | (1.070) | 377708 | 50.0000 | 46.7 |
| | 67 Fluoranthene + | 202 | 5.987 | 5.987 | (1.152) | 359926 | 50.0000 | 45.2 |
| | 68 Benzidine | 184 | 6.105 | 6.105 | (0.812) | 29580 | 50.0000 | 44.3 |
| | 69 Pyrene | 202 | 6.170 | 6.170 | (0.820) | 363446 | 50.0000 | 47.2 |
| $ | 70 Terphenyl-d14 | 244 | 6.311 | 6.311 | (0.839) | 237669 | 50.0000 | 47.0 |
| | 71 Butylbenzylphthalate | 149 | 6.829 | 6.829 | (0.908) | 166795 | 50.0000 | 50.5 |
| | 73 3,3'-Dichlorobenzidine | 252 | 7.505 | 7.505 | (0.998) | 117384 | 50.0000 | 57.5 |
| | 72 Benzo(a)anthracene | 228 | 7.511 | 7.511 | (0.998) | 330410 | 50.0000 | 48.8 |
| * | 74 Chrysene-d12 | 240 | 7.523 | 7.523 | (1.000) | 253049 | 40.0000 | |
| | 76 bis(2-Ethylhexyl)phthalate | 149 | 7.681 | 7.681 | (1.021) | 221102 | 50.0000 | 53.1 |
| | 75 Chrysene | 228 | 7.558 | 7.558 | (1.005) | 319697 | 50.0000 | 46.3 |
| | 77 Di-n-octylphthalate + | 149 | 8.899 | 8.899 | (1.183) | 349819 | 50.0000 | 54.3 |
| | 78 Benzo(b)fluoranthene | 252 | 9.405 | 9.405 | (0.935) | 315776 | 50.0000 | 47.4 |
| | 79 Benzo(k)fluoranthene | 252 | 9.458 | 9.458 | (0.940) | 332622 | 50.0000 | 42.4 |
| | 80 Benzo(a)pyrene + | 252 | 9.975 | 9.975 | (0.991) | 298524 | 50.0000 | 44.9 |
| * | 81 Perylene-d12 | 264 | 10.064 | 10.064 | (1.000) | 268496 | 40.0000 | |
| | 82 Indeno(1,2,3-cd)pyrene | 276 | 11.164 | 11.164 | (1.109) | 292201 | 50.0000 | 47.9(M2) |
| | 83 Dibenzo(a,h)anthracene | 278 | 11.187 | 11.187 | (1.112) | 328061 | 50.0000 | 45.4 |
| | 84 Benzo(g,h,i)perylene | 276 | 11.375 | 11.375 | (1.130) | 337485 | 50.0000 | 42.4 |
| M | 66 Total Methylphenol | 108 | | | | 249072 | 100.000 | 95.5 |
| | 91 Acetophenone | 105 | 2.729 | 2.729 | (1.092) | 159238 | 50.0000 | 46.7 |
| | 155 Benzaldehyde | 77 | 2.270 | 2.270 | (0.908) | 38870 | 50.0000 | 74.4 |
| | 156 Caprolactam | 113 | 3.499 | 3.499 | (1.084) | 30062 | 50.0000 | 48.4 |
| | 157 Biphenyl | 154 | 3.940 | 3.940 | (1.220) | 291405 | 50.0000 | 46.1 |
| | 158 Atrazine | 200 | 5.035 | 5.035 | (0.968) | 46348 | 50.0000 | 41.6 |
| | 174 1,4-Dioxane | 88 | 1.076 | 1.076 | (0.430) | 44380 | 50.0000 | 36.7(M1) |

QC Flag Legend

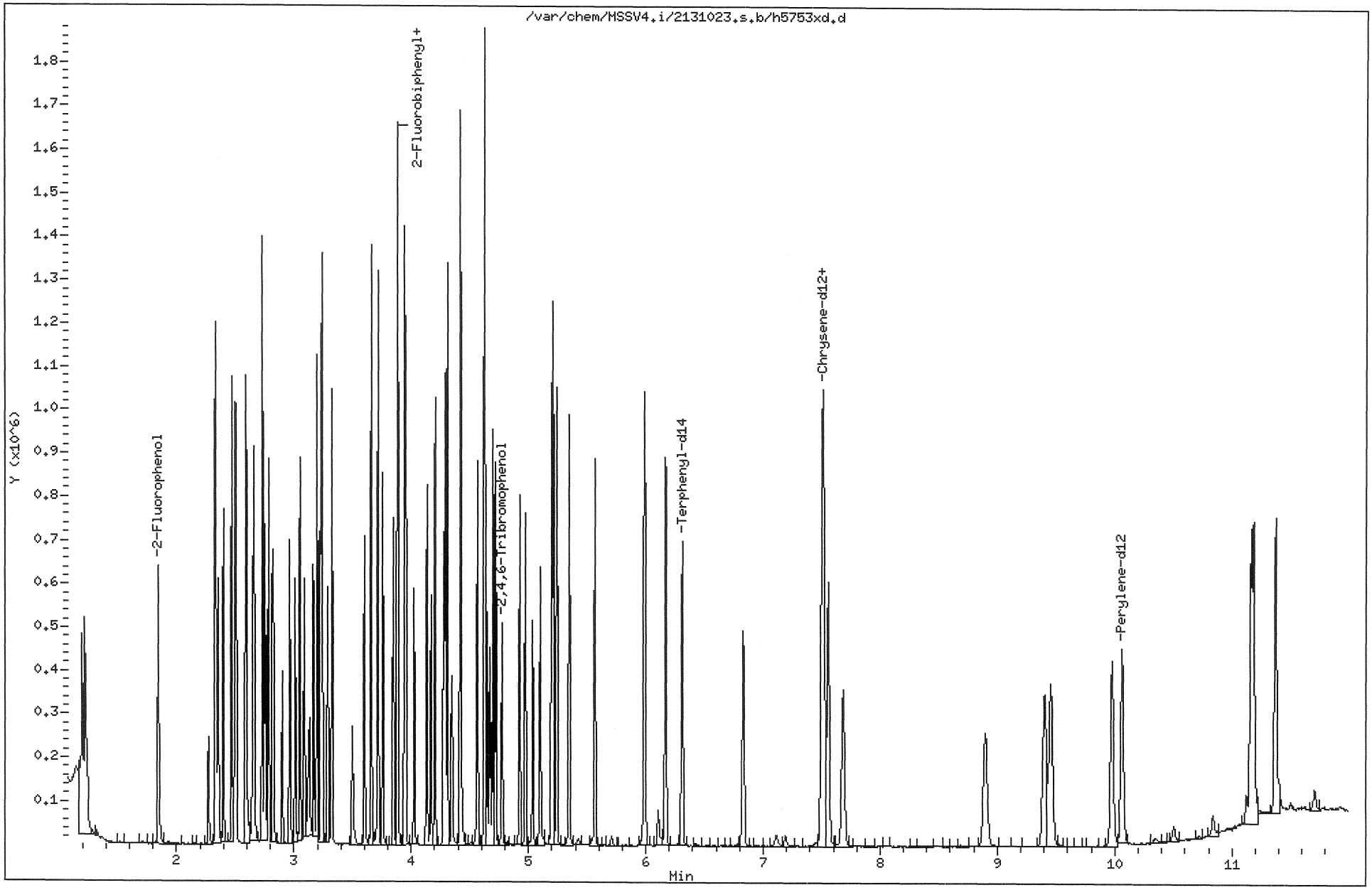
M1- Compound response manually integrated because Target system did not integrate.
M2- Compound response manually integrated because Target system integrated incorrectly.

Data File: /var/chem/MSSV4.i/2131023.s.b/h5753xd.d
Date : 23-OCT-2013 11:49
Client ID: STD050
Sample Info: 1400*48-34-12
Volume Injected (uL): 1.0
Column phase: RTX-5MS-30M



Instrument: MSSV4.i

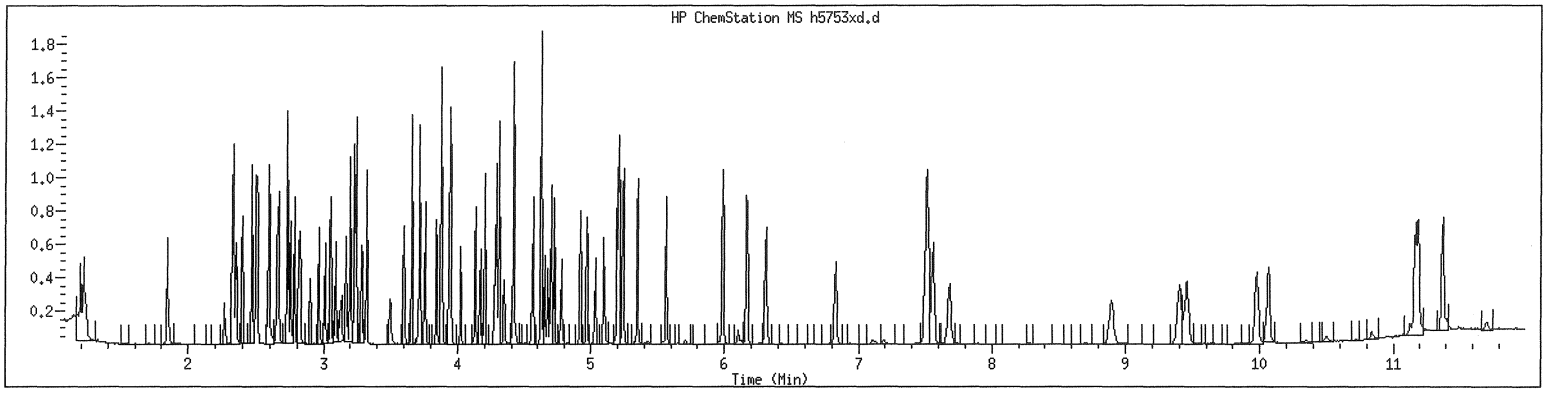
Operator: HCP
Column diameter: 0.25




2131017 12 498

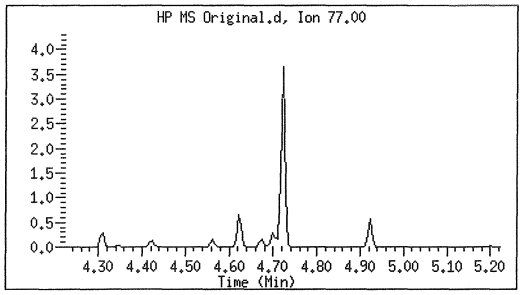
# MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 1400 SampleType : CCALIB_5
Injection Date: 10/23/2013 11:49 Instrument : MSSV4.i
Operator : HCP
Sample Info : 1400*48-34-12
Misc Info : STD050*MSSV~10023~*
Method : /var/chem/MSSV4.i/2131023.s.b/8270D_04.m
Dilution : 1.00
Matrix : WATER
Integrator : HP RTE Compound Sublist: 8270c



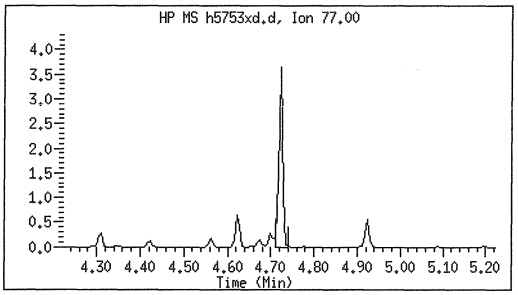

Original Final

56 Azobenzene CAS#: 122-66-7 Reason: M1

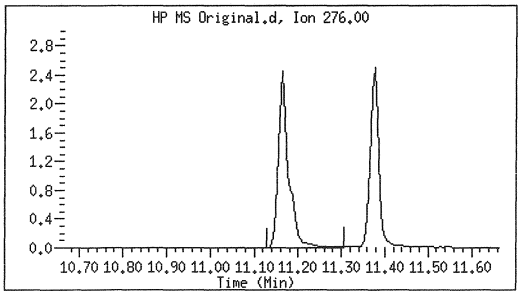



Electronic Signature Applied

User: hcp
Date: 10/23/2013 12:02

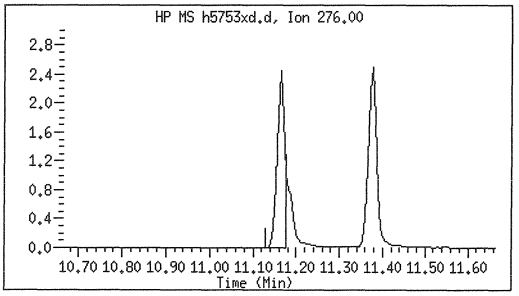



82 Indeno(1,2,3-cd)pyrene CAS#: 193-39-5 Reason: M3

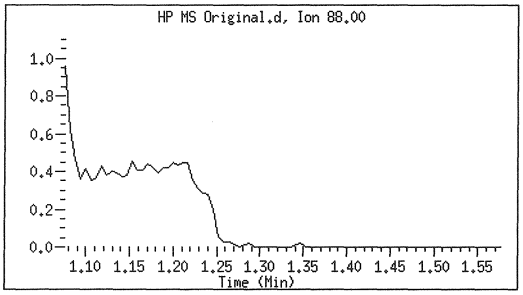



Electronic Signature Applied

User: hcp
Date: 10/23/2013 12:02

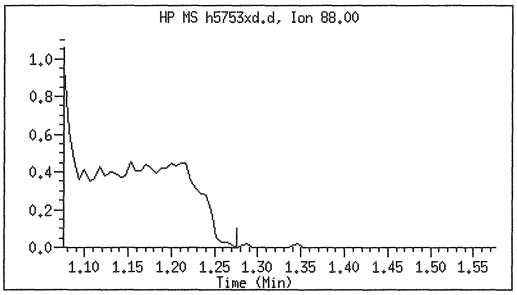


| Original | | Final |
|---|---|---|
| 174 1,4-Dioxane | CAS#: 123-91-1 | Reason: M1 |




Electronic Signature Applied

User: hcp
Date: 10/23/2013 12:03




M2 - Target system integrated incorrectly

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: RTX-5MS-30 ID: .25 (mm)

Concentrated Extract Volume: 1000 ( µL )

Injection Volume: 1.0 ( µL )

GPC Cleanup: (Y/N) N pH:

*CONCENTRATION UNITS: ug/kg*

Sample ID: MB1245518

Contract:

Lab File ID: 2131022/h5733

Lab Sample ID: 1245518

Date Collected: Time:

Date Received:

Date Extracted: 10/22/13

Date Analyzed: 10/22/13 Time: 1532

Dilution Factor: 1 Analyst: HCP

Prep Method: 3550B

Analytical Method: SW-846 8270D

Instrument ID: MSSV4

Prep Batch: 518149 Analytical Batch: 518302

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 208-96-8 | Acenaphthylene | 33.3 | U | 6.75 | 33.3 | 330 |
| 120-12-7 | Anthracene | 33.3 | U | 6.79 | 33.3 | 330 |
| 56-55-3 | Benzo(a)anthracene | 33.3 | U | 6.16 | 33.3 | 330 |
| 205-99-2 | Benzo(b)fluoranthene | 66.7 | U | 6.52 | 66.7 | 330 |
| 207-08-9 | Benzo(k)fluoranthene | 33.3 | U | 5.10 | 33.3 | 330 |
| 191-24-2 | Benzo(g,h,i)perylene | 16.7 | U | 4.99 | 16.7 | 330 |
| 50-32-8 | Benzo(a)pyrene | 33.3 | U | 4.14 | 33.3 | 330 |
| 85-68-7 | Butylbenzylphthalate | 16.7 | U | 6.59 | 16.7 | 330 |
| 111-91-1 | Bis(2-Chloroethoxy)methane | 33.3 | U | 5.76 | 33.3 | 330 |
| 111-44-4 | Bis(2-Chloroethyl)ether | 33.3 | U | 12.8 | 33.3 | 330 |
| 117-81-7 | bis(2-ethylhexyl)phthalate | 33.3 | U | 4.68 | 33.3 | 330 |
| 101-55-3 | 4-Bromophenyl-phenylether | 33.3 | U | 10.5 | 33.3 | 330 |
| 86-74-8 | Carbazole | 33.3 | U | 6.38 | 33.3 | 330 |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 33.3 | U | 7.34 | 33.3 | 330 |
| 218-01-9 | Chrysene | 33.3 | U | 7.15 | 33.3 | 330 |
| 53-70-3 | Dibenz(a,h)anthracene | 16.7 | U | 4.74 | 16.7 | 330 |
| 132-64-9 | Dibenzofuran | 33.3 | U | 6.28 | 33.3 | 330 |
| 95-50-1 | 1,2-Dichlorobenzene | 33.3 | U | 6.85 | 33.3 | 330 |
| 541-73-1 | 1,3-Dichlorobenzene | 33.3 | U | 13.4 | 33.3 | 330 |
| 91-94-1 | 3,3'-Dichlorobenzidine | 333 | U | 31.6 | 333 | 660 |
| 120-83-2 | 2,4-Dichlorophenol | 66.7 | U | 9.48 | 66.7 | 330 |
| 84-66-2 | Diethylphthalate | 33.3 | U | 12.2 | 33.3 | 330 |
| 105-67-9 | 2,4-Dimethylphenol | 330 | U | 6.52 | 330 | 330 |
| 131-11-3 | Dimethyl-phthalate | 16.7 | U | 5.14 | 16.7 | 330 |
| 117-84-0 | Di-n-octylphthalate | 16.7 | U | 4.37 | 16.7 | 330 |
| 51-28-5 | 2,4-Dinitrophenol | 330 | U | 22.5 | 330 | 1650 |
| 606-20-2 | 2,6-Dinitrotoluene | 33.3 | U | 12.3 | 33.3 | 330 |
| 206-44-0 | Fluoranthene | 16.7 | U | 5.37 | 16.7 | 330 |
| 86-73-7 | Fluorene | 33.3 | U | 5.95 | 33.3 | 330 |

FORM I SV-1

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: RTX-5MS-30 ID: .25 (mm)

Concentrated Extract Volume: 1000 ( µL )

Injection Volume: 1.0 ( µL )

GPC Cleanup: (Y/N) N pH:

*CONCENTRATION UNITS: ug/kg*

Sample ID: MB1245518

Contract:

Lab File ID: 2131022/h5733

Lab Sample ID: 1245518

Date Collected: Time:

Date Received:

Date Extracted: 10/22/13

Date Analyzed: 10/22/13 Time: 1532

Dilution Factor: 1 Analyst: HCP

Prep Method: 3550B

Analytical Method: SW-846 8270D

Instrument ID: MSSV4

Prep Batch: 518149 Analytical Batch: 518302

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 118-74-1 | Hexachlorobenzene | 66.7 | U | 12.8 | 66.7 | 330 |
| 87-68-3 | Hexachlorobutadiene | 33.3 | U | 8.74 | 33.3 | 330 |
| 77-47-4 | Hexachlorocyclopentadiene | 167 | U | 70.0 | 167 | 330 |
| 67-72-1 | Hexachloroethane | 33.3 | U | 15.7 | 33.3 | 330 |
| 78-59-1 | Isophorone | 33.3 | U | 5.87 | 33.3 | 330 |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 33.3 | U | 7.95 | 33.3 | 330 |
| 91-57-6 | 2-Methylnaphthalene | 33.3 | U | 4.76 | 33.3 | 330 |
| 95-48-7 | o-Cresol | 33.3 | U | 10.2 | 33.3 | 330 |
| 91-20-3 | Naphthalene | 33.3 | U | 10.3 | 33.3 | 330 |
| 98-95-3 | Nitrobenzene | 33.3 | U | 17.2 | 33.3 | 330 |
| 88-75-5 | 2-Nitrophenol | 33.3 | U | 11.8 | 33.3 | 330 |
| 62-75-9 | N-Nitrosodimethylamine | 66.7 | U | 11.6 | 66.7 | 330 |
| 86-30-6 | N-Nitrosodiphenylamine | 33.3 | U | 6.98 | 33.3 | 330 |
| 85-01-8 | Phenanthrene | 33.3 | U | 7.58 | 33.3 | 330 |
| 95-95-4 | 2,4,5-Trichlorophenol | 66.7 | U | 10.4 | 66.7 | 330 |
| 88-06-2 | 2,4,6-Trichlorophenol | 167 | U | 11.6 | 167 | 330 |
| 110-86-1 | Pyridine | 167 | U | 23.3 | 167 | 330 |
| 99-09-2 | 3-Nitroaniline | 66.7 | U | 4.49 | 66.7 | 1650 |
| 100-01-6 | 4-Nitroaniline | 333 | U | 4.25 | 333 | 1650 |
| 84-74-2 | Di-n-butylphthalate | 16.7 | U | 6.38 | 16.7 | 330 |
| 88-74-4 | 2-Nitroaniline | 66.7 | U | 4.19 | 66.7 | 1650 |
| 91-58-7 | 2-Chloronaphthalene | 33.3 | U | 10.5 | 33.3 | 330 |
| 106-47-8 | 4-Chloroaniline | 33.3 | U | 6.34 | 33.3 | 330 |
| 1319-77-3M | m,p-Cresol | 167 | U | 12.4 | 167 | 330 |
| 534-52-1 | 2-Methyl-4,6-dinitrophenol | 330 | U | 17.8 | 330 | 1650 |
| 108-95-2 | Phenol | 33.3 | U | 9.10 | 33.3 | 330 |
| 95-57-8 | 2-Chlorophenol | 33.3 | U | 7.24 | 33.3 | 330 |
| 106-46-7 | 1,4-Dichlorobenzene | 33.3 | U | 8.82 | 33.3 | 330 |
| 621-64-7 | N-Nitroso-di-n-propylamine | 33.3 | U | 14.4 | 33.3 | 330 |

FORM I SV-1

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: RTX-5MS-30 ID: .25 (mm)

Concentrated Extract Volume: 1000 ( µL )

Injection Volume: 1.0 ( µL )

GPC Cleanup: (Y/N) N pH:

*CONCENTRATION UNITS: ug/kg*

Sample ID: MB1245518

Contract:

Lab File ID: 2131022/h5733

Lab Sample ID: 1245518

Date Collected: Time:

Date Received:

Date Extracted: 10/22/13

Date Analyzed: 10/22/13 Time: 1532

Dilution Factor: 1 Analyst: HCP

Prep Method: 3550B

Analytical Method: SW-846 8270D

Instrument ID: MSSV4

Prep Batch: 518149 Analytical Batch: 518302

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 120-82-1 | 1,2,4-Trichlorobenzene | 33.3 | U | 10.5 | 33.3 | 330 |
| 59-50-7 | 4-Chloro-3-methylphenol | 66.7 | U | 7.42 | 66.7 | 330 |
| 83-32-9 | Acenaphthene | 33.3 | U | 10.1 | 33.3 | 330 |
| 100-02-7 | 4-Nitrophenol | 330 | U | 21.0 | 330 | 1650 |
| 121-14-2 | 2,4-Dinitrotoluene | 66.7 | U | 6.72 | 66.7 | 330 |
| 87-86-5 | Pentachlorophenol | 333 | U | 7.39 | 333 | 1650 |
| 129-00-0 | Pyrene | 33.3 | U | 4.63 | 33.3 | 330 |

GCAL, Inc.

BNA QUANT AND RATIO REPORT

Data file : /var/chem/MSSV4.i/2131022.s.b/h5733.d
Lab Smp Id: 1245518 Client Smp ID: 1022BLK
Inj Date : 22-OCT-2013 15:32
Operator : hcp Inst ID: MSSV4.i
Smp Info : 1245518*BLK
Misc Info : 1022BLK*MSSV~10019~*BLK*30.0-1*518149*
Comment :
Method : /var/chem/MSSV4.i/2131022.s.b/8270D_04.m
Meth Date : 22-Oct-2013 14:01 kcb Quant Type: ISTD
Cal Date : 09-JUL-2013 00:02 Cal File: h2759x.d
Als bottle: 21 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SA8270.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula:
Amt * DF * (Uf * Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | ng unit correction factor |
| Vt | 1000.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppm) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|---|
| $ 3 2-Fluorophenol | 112 | 1.853 | 1.852 | (0.738) | 206019 | 97.7274 | 3260 |
| $ 4 Phenol-d5 | 99 | 2.335 | 2.335 | (0.930) | 225262 | 98.9461 | 3300 |
| * 10 1,4-Dichlorobenzene-d4 | 152 | 2.511 | 2.511 | (1.000) | 65141 | 40.0000 | |
| $ 19 Nitrobenzene-d5 | 82 | 2.823 | 2.823 | (0.871) | 97562 | 48.6825 | 1620 |
| * 28 Naphthalene-d8 | 136 | 3.241 | 3.241 | (1.000) | 241558 | 40.0000 | |
| $ 37 2-Fluorobiphenyl | 172 | 3.894 | 3.888 | (0.906) | 222673 | 49.8055 | 1660 |
| * 44 Acenaphthene-d10 | 164 | 4.299 | 4.299 | (1.000) | 133201 | 40.0000 | |
| $ 57 2,4,6-Tribromophenol | 332 | 4.788 | 4.782 | (1.114) | 68542 | 98.2352 | 3270 |
| * 61 Phenanthrene-d10 | 188 | 5.205 | 5.205 | (1.000) | 192310 | 40.0000 | |
| $ 70 Terphenyl-d14 | 244 | 6.317 | 6.317 | (0.839) | 179967 | 59.2647 | 1980 |
| * 74 Chrysene-d12 | 240 | 7.529 | 7.529 | (1.000) | 151856 | 40.0000 | |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppm) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|---|
| * 81 Perylene-d12 | 264 | 10.070 | 10.070 | (1.000) | 130857 | 40.0000 | |

Data File: /var/chem/MSSV4.i/2131022.s.b/h5733.d

Date : 22-OCT-2013 15:32

Client ID: 1022BLK

Sample Info: 1245518*BLK

Volume Injected (uL): 1.0

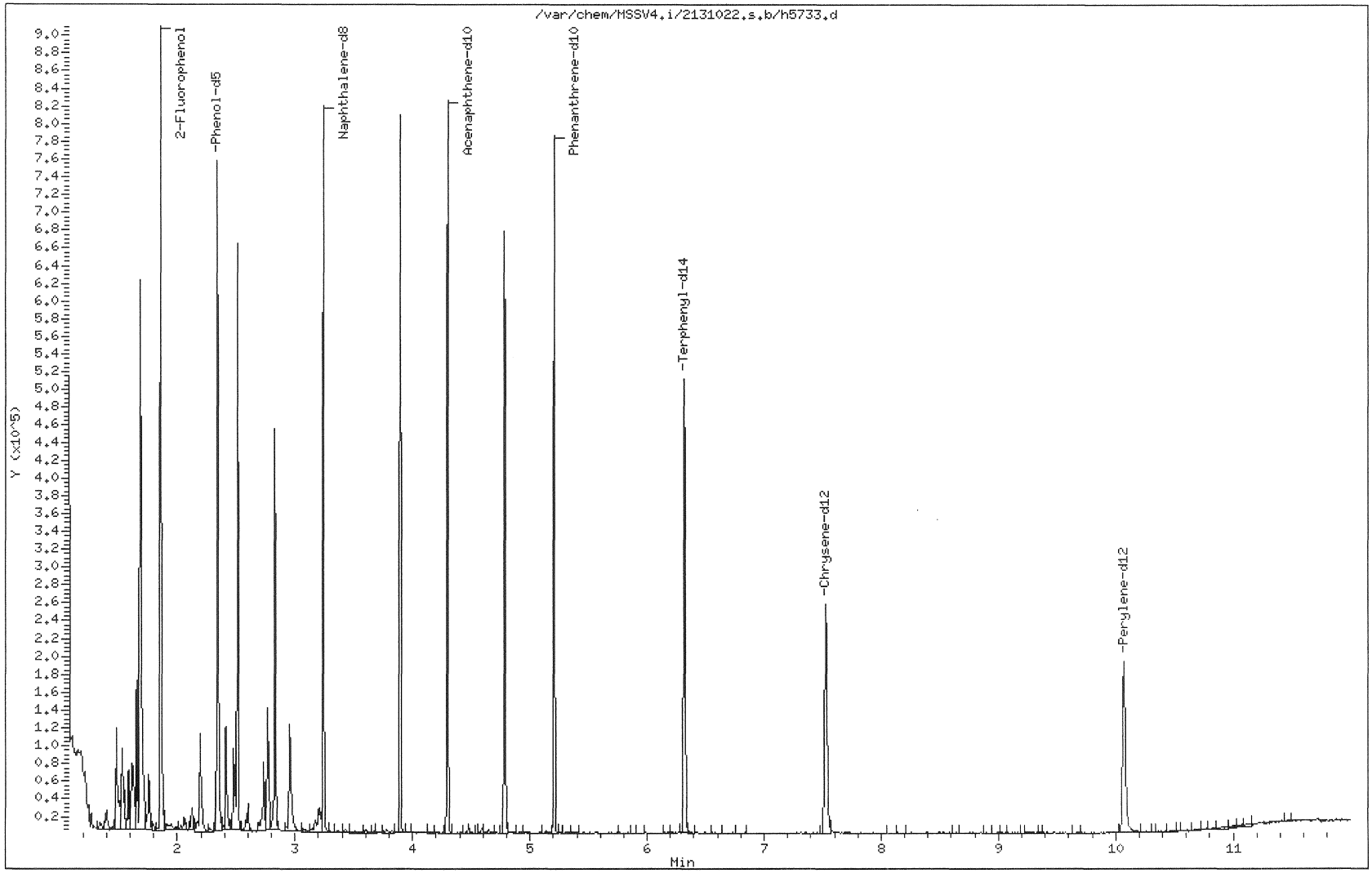
Column phase: RTX-5MS-30M

Instrument: MSSV4.i

Operator: hcp

Column diameter: 0.25



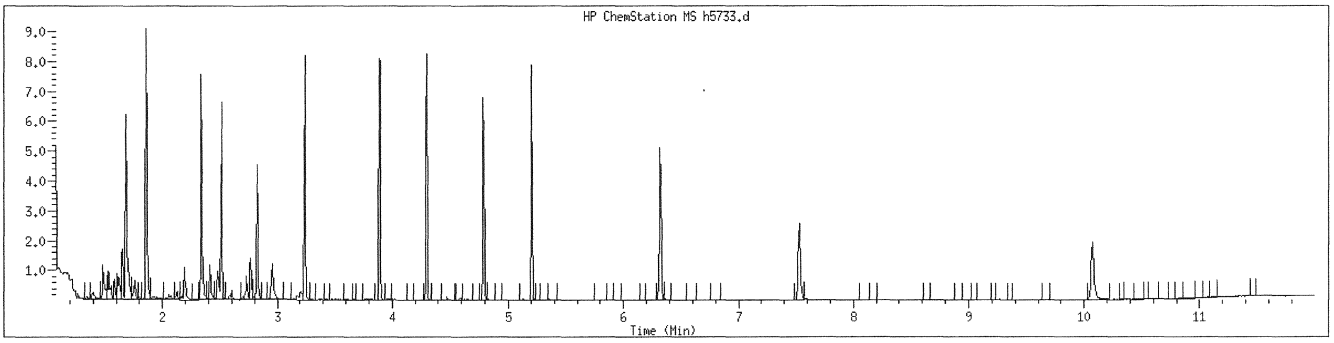



2131017 12 506

Data file : /var/chem/MSSV4.i/2131022.s.b/h5733.d Page: 1
Report Date: 10/22/2013 15:49

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 1245518 SampleType : BLANK
Injection Date: 10/22/2013 15:32 Instrument : MSSV4.i
Operator : hcp
Sample Info : 1245518*BLK
Misc Info : 1022BLK*MSSV~10019~*BLK*30.0-1*518149*
Method : /var/chem/MSSV4.i/2131022.s.b/8270D_04.m
Dilution : 1.00
Matrix : SOIL
Integrator : HP RTE Compound Sublist: SA8270




NO MANUAL INTEGRATIONS

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: RTX-5MS-30 ID: .25 (mm)

Concentrated Extract Volume: 1000 ( µL )

Injection Volume: 1.0 ( µL )

GPC Cleanup: (Y/N) N pH:

*CONCENTRATION UNITS: ug/kg*

Sample ID: LCS1245519

Contract:

Lab File ID: 2131022/h5734

Lab Sample ID: 1245519

Date Collected: Time:

Date Received:

Date Extracted: 10/22/13

Date Analyzed: 10/22/13 Time: 1551

Dilution Factor: 1 Analyst: HCP

Prep Method: 3550B

Analytical Method: SW-846 8270D

Instrument ID: MSSV4

Prep Batch: 518149 Analytical Batch: 518302

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 208-96-8 | Acenaphthylene | 1550 | | 6.75 | 33.3 | 330 |
| 120-12-7 | Anthracene | 1500 | | 6.79 | 33.3 | 330 |
| 56-55-3 | Benzo(a)anthracene | 1530 | | 6.16 | 33.3 | 330 |
| 205-99-2 | Benzo(b)fluoranthene | 1640 | | 6.52 | 66.7 | 330 |
| 207-08-9 | Benzo(k)fluoranthene | 1470 | | 5.10 | 33.3 | 330 |
| 191-24-2 | Benzo(g,h,i)perylene | 1280 | | 4.99 | 16.7 | 330 |
| 50-32-8 | Benzo(a)pyrene | 1470 | | 4.14 | 33.3 | 330 |
| 85-68-7 | Butylbenzylphthalate | 1610 | | 6.59 | 16.7 | 330 |
| 111-91-1 | Bis(2-Chloroethoxy)methane | 1480 | | 5.76 | 33.3 | 330 |
| 111-44-4 | Bis(2-Chloroethyl)ether | 1490 | | 12.8 | 33.3 | 330 |
| 117-81-7 | bis(2-ethylhexyl)phthalate | 1620 | | 4.68 | 33.3 | 330 |
| 101-55-3 | 4-Bromophenyl-phenylether | 1570 | | 10.5 | 33.3 | 330 |
| 86-74-8 | Carbazole | 1610 | | 6.38 | 33.3 | 330 |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 1550 | | 7.34 | 33.3 | 330 |
| 218-01-9 | Chrysene | 1550 | | 7.15 | 33.3 | 330 |
| 53-70-3 | Dibenz(a,h)anthracene | 1320 | | 4.74 | 16.7 | 330 |
| 132-64-9 | Dibenzofuran | 1500 | | 6.28 | 33.3 | 330 |
| 95-50-1 | 1,2-Dichlorobenzene | 1400 | | 6.85 | 33.3 | 330 |
| 541-73-1 | 1,3-Dichlorobenzene | 1420 | | 13.4 | 33.3 | 330 |
| 91-94-1 | 3,3'-Dichlorobenzidine | 1110 | | 31.6 | 333 | 660 |
| 120-83-2 | 2,4-Dichlorophenol | 1500 | | 9.48 | 66.7 | 330 |
| 84-66-2 | Diethylphthalate | 1490 | | 12.2 | 33.3 | 330 |
| 105-67-9 | 2,4-Dimethylphenol | 1460 | | 6.52 | 330 | 330 |
| 131-11-3 | Dimethyl-phthalate | 1480 | | 5.14 | 16.7 | 330 |
| 117-84-0 | Di-n-octylphthalate | 1420 | | 4.37 | 16.7 | 330 |
| 51-28-5 | 2,4-Dinitrophenol | 1220 | J | 22.5 | 330 | 1650 |
| 606-20-2 | 2,6-Dinitrotoluene | 1500 | | 12.3 | 33.3 | 330 |
| 206-44-0 | Fluoranthene | 1420 | | 5.37 | 16.7 | 330 |
| 86-73-7 | Fluorene | 1510 | | 5.95 | 33.3 | 330 |

FORM I SV-1

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: RTX-5MS-30 ID: .25 (mm)

Concentrated Extract Volume: 1000 ( µL )

Injection Volume: 1.0 ( µL )

GPC Cleanup: (Y/N) N pH:

*CONCENTRATION UNITS: ug/kg*

Sample ID: LCS1245519

Contract:

Lab File ID: 2131022/h5734

Lab Sample ID: 1245519

Date Collected: Time:

Date Received:

Date Extracted: 10/22/13

Date Analyzed: 10/22/13 Time: 1551

Dilution Factor: 1 Analyst: HCP

Prep Method: 3550B

Analytical Method: SW-846 8270D

Instrument ID: MSSV4

Prep Batch: 518149 Analytical Batch: 518302

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 118-74-1 | Hexachlorobenzene | 1620 | | 12.8 | 66.7 | 330 |
| 87-68-3 | Hexachlorobutadiene | 1480 | | 8.74 | 33.3 | 330 |
| 77-47-4 | Hexachlorocyclopentadiene | 1380 | | 70.0 | 167 | 330 |
| 67-72-1 | Hexachloroethane | 1430 | | 15.7 | 33.3 | 330 |
| 78-59-1 | Isophorone | 1520 | | 5.87 | 33.3 | 330 |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 1250 | | 7.95 | 33.3 | 330 |
| 91-57-6 | 2-Methylnaphthalene | 1520 | | 4.76 | 33.3 | 330 |
| 95-48-7 | o-Cresol | 1240 | | 10.2 | 33.3 | 330 |
| 91-20-3 | Naphthalene | 1460 | | 10.3 | 33.3 | 330 |
| 98-95-3 | Nitrobenzene | 1490 | | 17.2 | 33.3 | 330 |
| 88-75-5 | 2-Nitrophenol | 1530 | | 11.8 | 33.3 | 330 |
| 62-75-9 | N-Nitrosodimethylamine | 1580 | | 11.6 | 66.7 | 330 |
| 86-30-6 | N-Nitrosodiphenylamine | 1560 | | 6.98 | 33.3 | 330 |
| 85-01-8 | Phenanthrene | 1540 | | 7.58 | 33.3 | 330 |
| 95-95-4 | 2,4,5-Trichlorophenol | 1500 | | 10.4 | 66.7 | 330 |
| 88-06-2 | 2,4,6-Trichlorophenol | 1500 | | 11.6 | 167 | 330 |
| 110-86-1 | Pyridine | 1270 | | 23.3 | 167 | 330 |
| 99-09-2 | 3-Nitroaniline | 1140 | J | 4.49 | 66.7 | 1650 |
| 100-01-6 | 4-Nitroaniline | 1400 | J | 4.25 | 333 | 1650 |
| 84-74-2 | Di-n-butylphthalate | 1480 | | 6.38 | 16.7 | 330 |
| 88-74-4 | 2-Nitroaniline | 1600 | J | 4.19 | 66.7 | 1650 |
| 91-58-7 | 2-Chloronaphthalene | 1500 | | 10.5 | 33.3 | 330 |
| 106-47-8 | 4-Chloroaniline | 872 | | 6.34 | 33.3 | 330 |
| 1319-77-3M | m,p-Cresol | 1720 | | 12.4 | 167 | 330 |
| 534-52-1 | 2-Methyl-4,6-dinitrophenol | 1530 | J | 17.8 | 330 | 1650 |
| 108-95-2 | Phenol | 1460 | | 9.10 | 33.3 | 330 |
| 95-57-8 | 2-Chlorophenol | 1460 | | 7.24 | 33.3 | 330 |
| 106-46-7 | 1,4-Dichlorobenzene | 1460 | | 8.82 | 33.3 | 330 |
| 621-64-7 | N-Nitroso-di-n-propylamine | 1510 | | 14.4 | 33.3 | 330 |

FORM I SV-1

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: RTX-5MS-30 ID: .25 (mm)

Concentrated Extract Volume: 1000 ( µL )

Injection Volume: 1.0 ( µL )

GPC Cleanup: (Y/N) N pH:

*CONCENTRATION UNITS: ug/kg*

Sample ID: LCS1245519

Contract:

Lab File ID: 2131022/h5734

Lab Sample ID: 1245519

Date Collected: Time:

Date Received:

Date Extracted: 10/22/13

Date Analyzed: 10/22/13 Time: 1551

Dilution Factor: 1 Analyst: HCP

Prep Method: 3550B

Analytical Method: SW-846 8270D

Instrument ID: MSSV4

Prep Batch: 518149 Analytical Batch: 518302

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 120-82-1 | 1,2,4-Trichlorobenzene | 1490 | | 10.5 | 33.3 | 330 |
| 59-50-7 | 4-Chloro-3-methylphenol | 1520 | | 7.42 | 66.7 | 330 |
| 83-32-9 | Acenaphthene | 1490 | | 10.1 | 33.3 | 330 |
| 100-02-7 | 4-Nitrophenol | 1460 | J | 21.0 | 330 | 1650 |
| 121-14-2 | 2,4-Dinitrotoluene | 1430 | | 6.72 | 66.7 | 330 |
| 87-86-5 | Pentachlorophenol | 1660 | | 7.39 | 333 | 1650 |
| 129-00-0 | Pyrene | 1830 | | 4.63 | 33.3 | 330 |

GCAL, Inc.

BNA QUANT AND RATIO REPORT

Data file : /var/chem/MSSV4.i/2131022.s.b/h5734.d
Lab Smp Id: 1245519 Client Smp ID: 1022LCS
Inj Date : 22-OCT-2013 15:51
Operator : hcp Inst ID: MSSV4.i
Smp Info : 1245519*LCS
Misc Info : 1022LCS*MSSV~10019~*LCS*30.0-1*518149*
Comment :
Method : /var/chem/MSSV4.i/2131022.s.b/8270D_04.m
Meth Date : 22-Oct-2013 14:01 kcb Quant Type: ISTD
Cal Date : 09-JUL-2013 00:02 Cal File: h2759x.d
Als bottle: 22 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SA8270.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula:
Amt * DF * (Uf * Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | ng unit correction factor |
| Vt | 1000.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppm) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|---|
| 2 Pyridine | 79 | 1.235 | 1.229 | (0.492) | 90062 | 37.9511 | 1270 |
| 1 n-Nitrosodimethylamine | 42 | 1.211 | 1.200 | (0.482) | 47934 | 47.3905 | 1580 |
| $ 3 2-Fluorophenol | 112 | 1.853 | 1.852 | (0.738) | 196819 | 85.1193 | 2840 |
| $ 4 Phenol-d5 | 99 | 2.335 | 2.335 | (0.930) | 219422 | 87.8705 | 2930 |
| 5 Aniline | 93 | 2.341 | 2.335 | (0.932) | 78224 | 25.1258 | 838 |
| 6 Phenol + | 94 | 2.341 | 2.341 | (0.932) | 123641 | 43.7325 | 1460 |
| 7 bis(-2-Chloroethyl)Ether | 63 | 2.364 | 2.364 | (0.941) | 61469 | 44.7001 | 1490 |
| 8 2-Chlorophenol | 128 | 2.405 | 2.405 | (0.958) | 104483 | 43.8474 | 1460 |
| 9 1,3-Dichlorobenzene | 146 | 2.482 | 2.482 | (0.988) | 114571 | 42.5934 | 1420 |
| * 10 1,4-Dichlorobenzene-d4 | 152 | 2.511 | 2.511 | (1.000) | 71450 | 40.0000 | |
| 11 1,4-Dichlorobenzene + | 146 | 2.517 | 2.517 | (1.002) | 119497 | 43.8477 | 1460 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppm) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|---|---|
| | 12 Benzyl alcohol | 108 | 2.600 | 2.599 | (1.035) | 57642 | 44.8974 | 1500 |
| | 13 1,2-Dichlorobenzene | 146 | 2.606 | 2.605 | (1.037) | 108208 | 41.9374 | 1400 |
| | 15 2-Methylphenol | 107 | 2.670 | 2.670 | (1.063) | 75283 | 37.2934 | 1240 |
| | 14 Bis(2-chloroisopropyl)ether | 45 | 2.664 | 2.664 | (1.061) | 96561 | 43.7041 | 1460 |
| | 17 3- & 4-Methylphenol | 107 | 2.758 | 2.758 | (1.098) | 106664 | 51.4665 | 1720(M2) |
| | 16 N-Nitroso-di-n-propylamine++ | 70 | 2.741 | 2.741 | (1.091) | 65500 | 45.3112 | 1510 |
| | 18 Hexachloroethane | 117 | 2.794 | 2.794 | (1.112) | 42628 | 42.9245 | 1430 |
| $ | 19 Nitrobenzene-d5 | 82 | 2.823 | 2.823 | (0.871) | 94017 | 44.0188 | 1470 |
| | 20 Nitrobenzene | 77 | 2.835 | 2.835 | (0.875) | 92838 | 44.7204 | 1490 |
| | 21 Isophorone | 82 | 2.976 | 2.976 | (0.918) | 150381 | 45.7244 | 1520 |
| | 22 2-Nitrophenol + | 139 | 3.023 | 3.023 | (0.933) | 57469 | 45.9573 | 1530 |
| | 23 2,4-Dimethyphenol | 107 | 3.058 | 3.058 | (0.944) | 95184 | 43.7652 | 1460 |
| | 24 bis(-2-Chloroethoxy)methane | 93 | 3.100 | 3.099 | (0.956) | 102256 | 44.3950 | 1480 |
| | 25 Benzoic Acid | 122 | 3.135 | 3.146 | (0.967) | 35984 | 28.2284 | 941 |
| | 26 2,4-Dichlorophenol + | 162 | 3.176 | 3.176 | (0.980) | 84296 | 45.1410 | 1500 |
| | 27 1,2,4-Trichlorobenzene | 180 | 3.211 | 3.205 | (0.991) | 93147 | 44.5708 | 1490 |
| * | 28 Naphthalene-d8 | 136 | 3.241 | 3.241 | (1.000) | 257443 | 40.0000 | |
| | 29 Naphthalene | 128 | 3.253 | 3.252 | (1.004) | 292912 | 43.8144 | 1460 |
| | 30 4-Chloroaniline | 127 | 3.294 | 3.293 | (1.016) | 56874 | 26.1594 | 872 |
| | 31 Hexachlorobutadiene + | 225 | 3.335 | 3.329 | (1.029) | 60209 | 44.3800 | 1480 |
| | 32 4-Chloro-3-Methylphenol + | 107 | 3.605 | 3.605 | (1.113) | 77298 | 45.5078 | 1520 |
| | 33 2-Methylnaphthalene | 142 | 3.670 | 3.664 | (1.132) | 186988 | 45.6750 | 1520 |
| | 145 1-Methylnapthalene | 142 | 3.729 | 3.723 | (1.151) | 156029 | 39.7054 | 1320 |
| | 34 Hexachlorocyclopentadiene ++ | 237 | 3.770 | 3.770 | (0.877) | 60957 | 41.5328 | 1380 |
| | 35 2,4,6-Trichlorophenol + | 196 | 3.852 | 3.852 | (0.896) | 59482 | 45.0827 | 1500 |
| | 36 2,4,5-Trichlorphenol | 196 | 3.882 | 3.882 | (0.903) | 61362 | 45.0990 | 1500 |
| $ | 37 2-Fluorobiphenyl | 172 | 3.888 | 3.888 | (0.904) | 215545 | 46.2420 | 1540 |
| | 38 2-Chloronaphthalene | 162 | 3.958 | 3.958 | (0.921) | 177554 | 45.1469 | 1500 |
| | 39 2-Nitroaniline | 138 | 4.035 | 4.035 | (0.938) | 60933 | 47.9094 | 1600 |
| | 40 Dimethylphthalate | 163 | 4.141 | 4.141 | (0.963) | 190742 | 44.4534 | 1480 |
| | 41 2,6-Dinitrotoluene | 165 | 4.176 | 4.176 | (0.971) | 42660 | 45.0927 | 1500 |
| | 42 Acenaphthylene | 152 | 4.211 | 4.211 | (0.979) | 282847 | 46.5350 | 1550 |
| | 43 3-Nitroaniline | 138 | 4.288 | 4.282 | (0.997) | 32402 | 34.1000 | 1140 |
| * | 44 Acenaphthene-d10 | 164 | 4.300 | 4.299 | (1.000) | 138873 | 40.0000 | |
| | 45 Acenaphthene + | 153 | 4.317 | 4.317 | (1.004) | 176542 | 44.7573 | 1490 |
| | 46 2,4-Dinitrophenol ++ | 184 | 4.352 | 4.352 | (1.012) | 25552 | 36.6055 | 1220 |
| | 49 4-Nitrophenol ++ | 109 | 4.423 | 4.423 | (1.029) | 24187 | 43.7342 | 1460 |
| | 47 Dibenzofuran | 168 | 4.423 | 4.423 | (1.029) | 244350 | 45.1242 | 1500 |
| | 48 2,4-Dinitrotoluene | 165 | 4.429 | 4.429 | (1.030) | 52878 | 42.8189 | 1430 |
| | 50 Diethylphthalate | 149 | 4.570 | 4.570 | (1.063) | 179687 | 44.8284 | 1490 |
| | 52 4-Chlorophenyl-phenylether | 204 | 4.635 | 4.635 | (1.078) | 98166 | 46.5753 | 1550 |
| | 51 Fluorene | 166 | 4.635 | 4.635 | (1.078) | 194785 | 45.1646 | 1510 |
| | 53 4-Nitroaniline | 138 | 4.658 | 4.658 | (1.083) | 38404 | 42.0710 | 1400 |
| | 54 4,6-Dinitro-o-cresol | 198 | 4.682 | 4.682 | (0.899) | 36905 | 45.9775 | 1530 |
| | 55 N-nitrosodiphenylamine (1)+ | 169 | 4.711 | 4.705 | (0.905) | 139708 | 46.6813 | 1560 |
| | 56 Azobenzene | 77 | 4.729 | 4.729 | (0.908) | 168235 | 49.3570 | 1650 |
| $ | 57 2,4,6-Tribromophenol | 332 | 4.782 | 4.782 | (1.112) | 67809 | 93.2153 | 3110 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppm) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|---|---|
| | 58 4-Bromophenyl-phenylether | 248 | 4.929 | 4.929 | (0.947) | 58189 | 46.9794 | 1570 |
| | 59 Hexachlorobenzene | 284 | 4.982 | 4.976 | (0.957) | 67338 | 48.7188 | 1620 |
| | 60 Pentachlorophenol + | 266 | 5.105 | 5.105 | (0.981) | 44456 | 49.6948 | 1660 |
| * | 61 Phenanthrene-d10 | 188 | 5.205 | 5.205 | (1.000) | 204770 | 40.0000 | |
| | 62 Phenanthrene | 178 | 5.217 | 5.217 | (1.002) | 260116 | 46.3142 | 1540 |
| | 63 Anthracene | 178 | 5.252 | 5.252 | (1.009) | 252410 | 45.0880 | 1500 |
| | 64 Carbazole | 167 | 5.358 | 5.358 | (1.029) | 249348 | 48.2017 | 1610 |
| | 65 Di-n-butylphthalate | 149 | 5.570 | 5.570 | (1.070) | 271504 | 44.3377 | 1480 |
| | 67 Fluoranthene + | 202 | 5.999 | 5.993 | (1.153) | 257236 | 42.6570 | 1420 |
| | 68 Benzidine | 184 | 6.129 | 6.117 | (0.814) | 1804 | 4.38163 | 146(M3) |
| | 69 Pyrene | 202 | 6.176 | 6.176 | (0.820) | 260856 | 54.8756 | 1830 |
| $ | 70 Terphenyl-d14 | 244 | 6.317 | 6.317 | (0.839) | 164973 | 52.8446 | 1760 |
| | 71 Butylbenzylphthalate | 149 | 6.841 | 6.840 | (0.909) | 98389 | 48.3158 | 1610 |
| | 73 3,3'-Dichlorobenzidine | 252 | 7.517 | 7.517 | (0.998) | 42135 | 33.4392 | 1110 |
| | 72 Benzo(a)anthracene | 228 | 7.517 | 7.517 | (0.998) | 191709 | 45.8593 | 1530 |
| * | 74 Chrysene-d12 | 240 | 7.529 | 7.529 | (1.000) | 156116 | 40.0000 | |
| | 76 bis(2-Ethylhexyl)phthalate | 149 | 7.693 | 7.693 | (1.022) | 125126 | 48.7309 | 1620 |
| | 75 Chrysene | 228 | 7.564 | 7.564 | (1.005) | 197498 | 46.3871 | 1550 |
| | 77 Di-n-octylphthalate + | 149 | 8.911 | 8.911 | (1.184) | 169115 | 42.5356 | 1420 |
| | 78 Benzo(b)fluoranthene | 252 | 9.411 | 9.411 | (0.935) | 183469 | 49.0848 | 1640 |
| | 79 Benzo(k)fluoranthene | 252 | 9.464 | 9.464 | (0.940) | 193995 | 43.9909 | 1470 |
| | 80 Benzo(a)pyrene + | 252 | 9.981 | 9.981 | (0.991) | 164345 | 43.9750 | 1470 |
| * | 81 Perylene-d12 | 264 | 10.070 | 10.070 | (1.000) | 150767 | 40.0000 | |
| | 82 Indeno(1,2,3-cd)pyrene | 276 | 11.170 | 11.169 | (1.109) | 128553 | 37.5471 | 1250(M2) |
| | 83 Dibenzo(a,h)anthracene | 278 | 11.193 | 11.187 | (1.112) | 161138 | 39.6694 | 1320 |
| | 84 Benzo(g,h,i)perylene | 276 | 11.381 | 11.381 | (1.130) | 172039 | 38.5222 | 1280 |
| M | 66 Total Methylphenol | 108 | | | | 181947 | 88.9464 | 2960 |
| | 91 Acetophenone | 105 | 2.741 | 2.741 | (1.091) | 120439 | 45.0732 | 1500 |
| | 155 Benzaldehyde | 77 | 2.282 | 2.282 | (0.909) | 9218 | 22.5050 | 750(M1) |
| | 156 Caprolactam | 113 | 3.505 | 3.505 | (1.082) | 21544 | 44.3177 | 1480 |
| | 157 Biphenyl | 154 | 3.952 | 3.946 | (1.220) | 227951 | 46.0282 | 1530 |
| | 158 Atrazine | 200 | 5.041 | 5.040 | (0.968) | 44021 | 52.2196 | 1740 |
| | 174 1,4-Dioxane | 88 | 1.088 | 1.076 | (0.433) | 21111 | 22.2924 | 743(M1) |

QC Flag Legend

M1- Compound response manually integrated because Target system did not integrate.
M2- Compound response manually integrated because Target system integrated incorrectly.
M3- Compound response manually integrated because Target system integrated incorrect peak.

Data File: /var/chem/MSSV4.i/2131022.s.b/h5734.d

Date : 22-OCT-2013 15:51

Client ID: 1022LCS

Sample Info: 1245519%LCS

Volume Injected (uL): 1.0

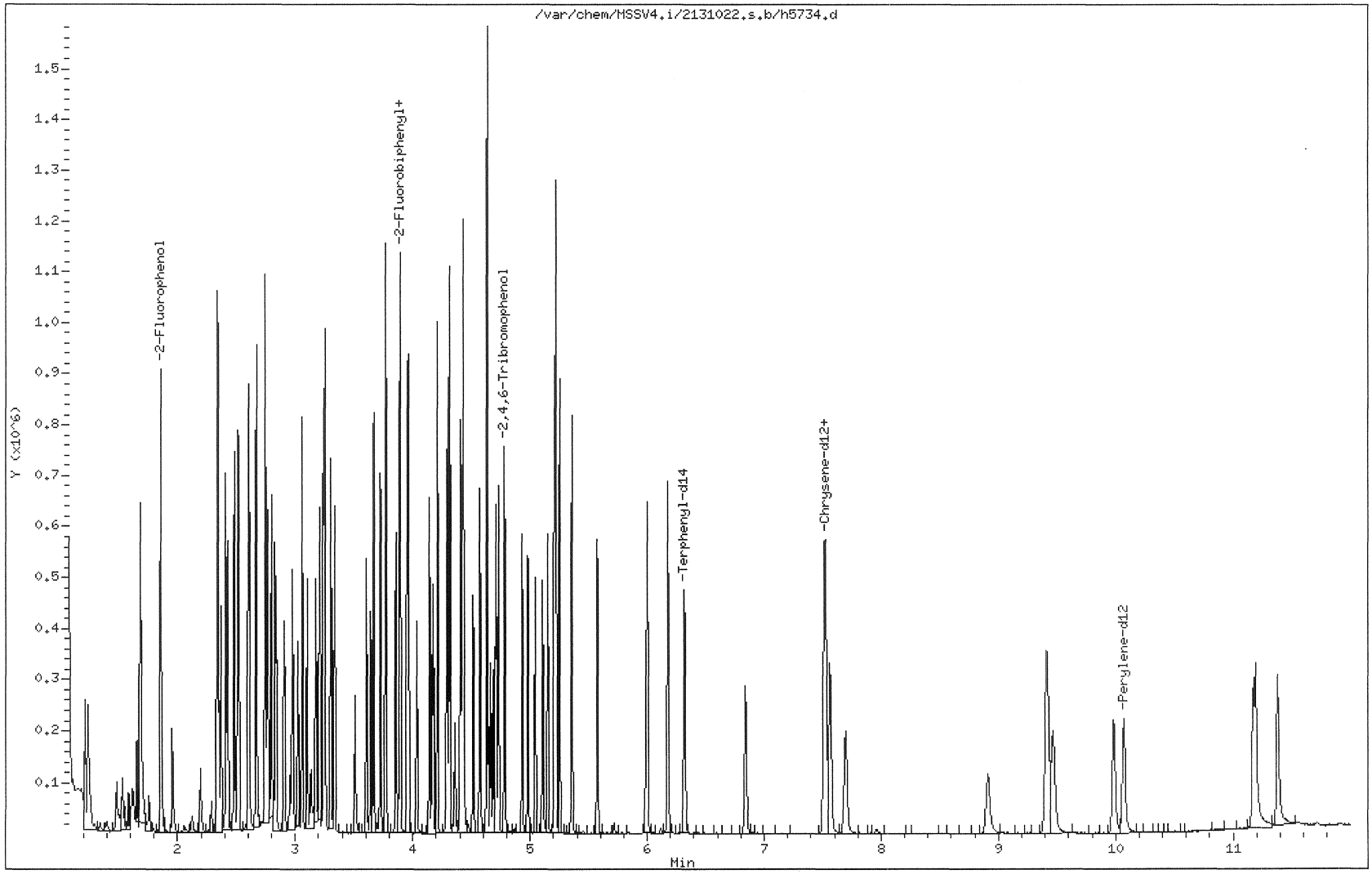
Column phase: RTX-5MS-30M

Instrument: MSSV4.i

Operator: hcp

Column diameter: 0.25



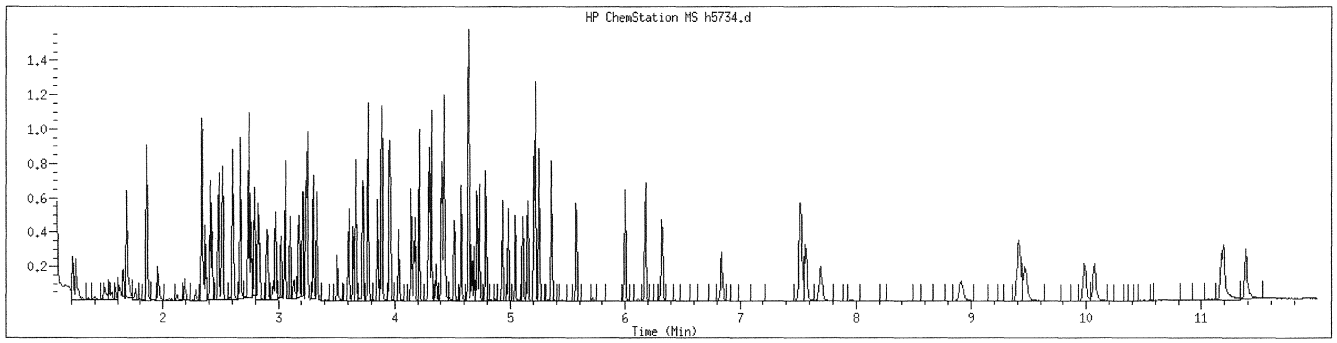



2131022 514

Data file : /var/chem/MSSV4.i/2131022.s.b/h5734.d Page: 1
Report Date: 10/24/2013 10:26

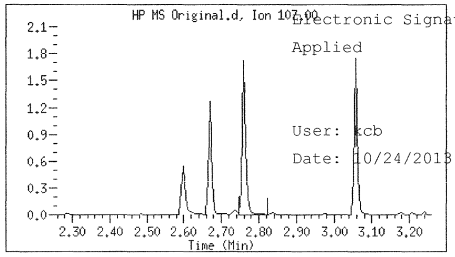
MANUAL INTEGRATION GRAPHIC REPORT

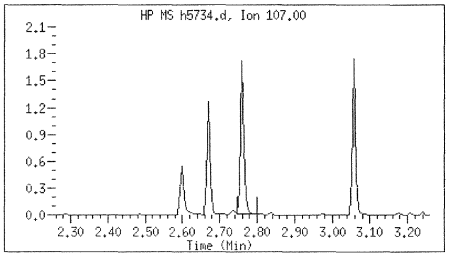
Lab ID : 1245519 SampleType : LCS
Injection Date: 10/22/2013 15:51 Instrument : MSSV4.i
Operator : hcp
Sample Info : 1245519*LCS
Misc Info : 1022LCS*MSSV~10019~*LCS*30.0-1*518149*
Method : /var/chem/MSSV4.i/2131022.s.b/8270D_04.m
Dilution : 1.00
Matrix : SOIL
Integrator : HP RTE Compound Sublist: SA8270



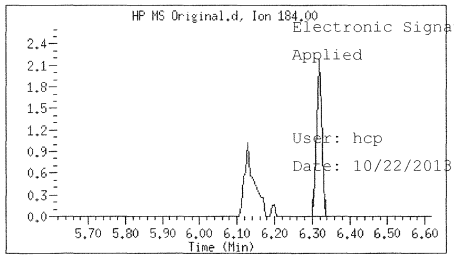

Original Final

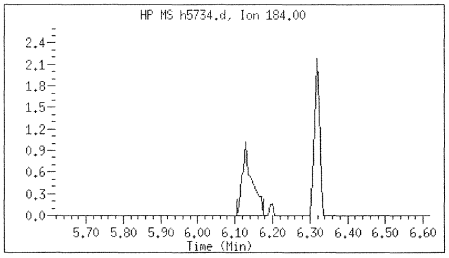
17 3- & 4-Methylphenol CAS#: 1319-77-3MP Reason: M3



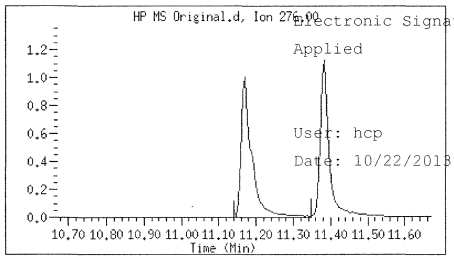

68 Benzidine CAS#: 92-87-5 Reason: M3

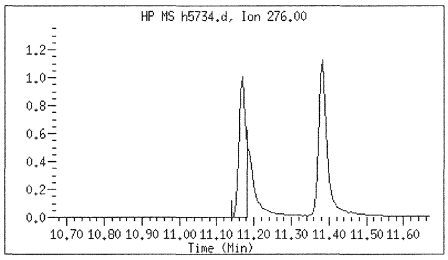


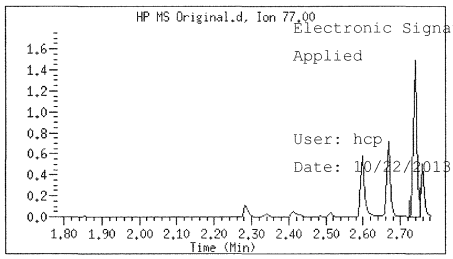
Original Final

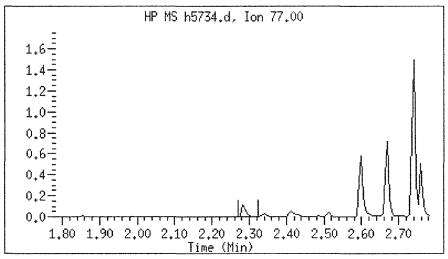
82 Indeno(1,2,3-cd)pyrene CAS#: 193-39-5 Reason: M3



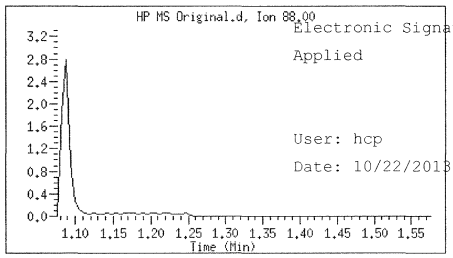



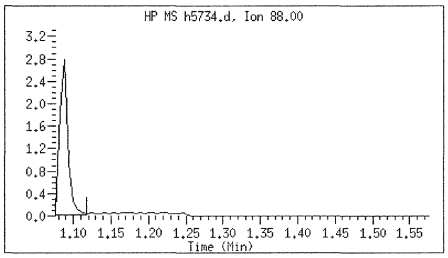

155 Benzaldehyde CAS#: 100-52-7 Reason: M1




174 1,4-Dioxane CAS#: 123-91-1 Reason: M1




M2 - Target system integrated incorrectly

M3 - Target system integrated incorrect peak

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: RTX-5MS-30 ID: .25 (mm)

Concentrated Extract Volume: 1000 ( µL )

Injection Volume: 1.0 ( µL )

GPC Cleanup: (Y/N) N pH:

*CONCENTRATION UNITS: ug/kg*

Sample ID: LCSD1245520

Contract:

Lab File ID: 2131022/h5735

Lab Sample ID: 1245520

Date Collected: Time:

Date Received:

Date Extracted: 10/22/13

Date Analyzed: 10/22/13 Time: 1611

Dilution Factor: 1 Analyst: HCP

Prep Method: 3550B

Analytical Method: SW-846 8270D

Instrument ID: MSSV4

Prep Batch: 518149 Analytical Batch: 518302

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 208-96-8 | Acenaphthylene | 1600 | | 6.75 | 33.3 | 330 |
| 120-12-7 | Anthracene | 1530 | | 6.79 | 33.3 | 330 |
| 56-55-3 | Benzo(a)anthracene | 1550 | | 6.16 | 33.3 | 330 |
| 205-99-2 | Benzo(b)fluoranthene | 1760 | | 6.52 | 66.7 | 330 |
| 207-08-9 | Benzo(k)fluoranthene | 1590 | | 5.10 | 33.3 | 330 |
| 191-24-2 | Benzo(g,h,i)perylene | 1330 | | 4.99 | 16.7 | 330 |
| 50-32-8 | Benzo(a)pyrene | 1460 | | 4.14 | 33.3 | 330 |
| 85-68-7 | Butylbenzylphthalate | 1560 | | 6.59 | 16.7 | 330 |
| 111-91-1 | Bis(2-Chloroethoxy)methane | 1410 | | 5.76 | 33.3 | 330 |
| 111-44-4 | Bis(2-Chloroethyl)ether | 1440 | | 12.8 | 33.3 | 330 |
| 117-81-7 | bis(2-ethylhexyl)phthalate | 1540 | | 4.68 | 33.3 | 330 |
| 101-55-3 | 4-Bromophenyl-phenylether | 1690 | | 10.5 | 33.3 | 330 |
| 86-74-8 | Carbazole | 1600 | | 6.38 | 33.3 | 330 |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 1550 | | 7.34 | 33.3 | 330 |
| 218-01-9 | Chrysene | 1570 | | 7.15 | 33.3 | 330 |
| 53-70-3 | Dibenz(a,h)anthracene | 1330 | | 4.74 | 16.7 | 330 |
| 132-64-9 | Dibenzofuran | 1520 | | 6.28 | 33.3 | 330 |
| 95-50-1 | 1,2-Dichlorobenzene | 1380 | | 6.85 | 33.3 | 330 |
| 541-73-1 | 1,3-Dichlorobenzene | 1340 | | 13.4 | 33.3 | 330 |
| 91-94-1 | 3,3'-Dichlorobenzidine | 960 | | 31.6 | 333 | 660 |
| 120-83-2 | 2,4-Dichlorophenol | 1460 | | 9.48 | 66.7 | 330 |
| 84-66-2 | Diethylphthalate | 1440 | | 12.2 | 33.3 | 330 |
| 105-67-9 | 2,4-Dimethylphenol | 1410 | | 6.52 | 330 | 330 |
| 131-11-3 | Dimethyl-phthalate | 1480 | | 5.14 | 16.7 | 330 |
| 117-84-0 | Di-n-octylphthalate | 1460 | | 4.37 | 16.7 | 330 |
| 51-28-5 | 2,4-Dinitrophenol | 1170 | J | 22.5 | 330 | 1650 |
| 606-20-2 | 2,6-Dinitrotoluene | 1450 | | 12.3 | 33.3 | 330 |
| 206-44-0 | Fluoranthene | 1380 | | 5.37 | 16.7 | 330 |
| 86-73-7 | Fluorene | 1510 | | 5.95 | 33.3 | 330 |

FORM I SV-1

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: RTX-5MS-30 ID: .25 (mm)

Concentrated Extract Volume: 1000 ( µL )

Injection Volume: 1.0 ( µL )

GPC Cleanup: (Y/N) N pH:

*CONCENTRATION UNITS: ug/kg*

Sample ID: LCSD1245520

Contract:

Lab File ID: 2131022/h5735

Lab Sample ID: 1245520

Date Collected: Time:

Date Received:

Date Extracted: 10/22/13

Date Analyzed: 10/22/13 Time: 1611

Dilution Factor: 1 Analyst: HCP

Prep Method: 3550B

Analytical Method: SW-846 8270D

Instrument ID: MSSV4

Prep Batch: 518149 Analytical Batch: 518302

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 118-74-1 | Hexachlorobenzene | 1670 | | 12.8 | 66.7 | 330 |
| 87-68-3 | Hexachlorobutadiene | 1450 | | 8.74 | 33.3 | 330 |
| 77-47-4 | Hexachlorocyclopentadiene | 1400 | | 70.0 | 167 | 330 |
| 67-72-1 | Hexachloroethane | 1350 | | 15.7 | 33.3 | 330 |
| 78-59-1 | Isophorone | 1460 | | 5.87 | 33.3 | 330 |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 1250 | | 7.95 | 33.3 | 330 |
| 91-57-6 | 2-Methylnaphthalene | 1470 | | 4.76 | 33.3 | 330 |
| 95-48-7 | o-Cresol | 1220 | | 10.2 | 33.3 | 330 |
| 91-20-3 | Naphthalene | 1450 | | 10.3 | 33.3 | 330 |
| 98-95-3 | Nitrobenzene | 1460 | | 17.2 | 33.3 | 330 |
| 88-75-5 | 2-Nitrophenol | 1490 | | 11.8 | 33.3 | 330 |
| 62-75-9 | N-Nitrosodimethylamine | 1190 | | 11.6 | 66.7 | 330 |
| 86-30-6 | N-Nitrosodiphenylamine | 1620 | | 6.98 | 33.3 | 330 |
| 85-01-8 | Phenanthrene | 1550 | | 7.58 | 33.3 | 330 |
| 95-95-4 | 2,4,5-Trichlorophenol | 1530 | | 10.4 | 66.7 | 330 |
| 88-06-2 | 2,4,6-Trichlorophenol | 1540 | | 11.6 | 167 | 330 |
| 110-86-1 | Pyridine | 941 | | 23.3 | 167 | 330 |
| 99-09-2 | 3-Nitroaniline | 1020 | J | 4.49 | 66.7 | 1650 |
| 100-01-6 | 4-Nitroaniline | 1230 | J | 4.25 | 333 | 1650 |
| 84-74-2 | Di-n-butylphthalate | 1440 | | 6.38 | 16.7 | 330 |
| 88-74-4 | 2-Nitroaniline | 1560 | J | 4.19 | 66.7 | 1650 |
| 91-58-7 | 2-Chloronaphthalene | 1510 | | 10.5 | 33.3 | 330 |
| 106-47-8 | 4-Chloroaniline | 745 | | 6.34 | 33.3 | 330 |
| 1319-77-3M | m,p-Cresol | 1730 | | 12.4 | 167 | 330 |
| 534-52-1 | 2-Methyl-4,6-dinitrophenol | 1490 | J | 17.8 | 330 | 1650 |
| 108-95-2 | Phenol | 1420 | | 9.10 | 33.3 | 330 |
| 95-57-8 | 2-Chlorophenol | 1470 | | 7.24 | 33.3 | 330 |
| 106-46-7 | 1,4-Dichlorobenzene | 1380 | | 8.82 | 33.3 | 330 |
| 621-64-7 | N-Nitroso-di-n-propylamine | 1440 | | 14.4 | 33.3 | 330 |

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: RTX-5MS-30 ID: .25 (mm)

Concentrated Extract Volume: 1000 ( µL )

Injection Volume: 1.0 ( µL )

GPC Cleanup: (Y/N) N pH:

*CONCENTRATION UNITS: ug/kg*

Sample ID: LCSD1245520

Contract:

Lab File ID: 2131022/h5735

Lab Sample ID: 1245520

Date Collected: Time:

Date Received:

Date Extracted: 10/22/13

Date Analyzed: 10/22/13 Time: 1611

Dilution Factor: 1 Analyst: HCP

Prep Method: 3550B

Analytical Method: SW-846 8270D

Instrument ID: MSSV4

Prep Batch: 518149 Analytical Batch: 518302

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 120-82-1 | 1,2,4-Trichlorobenzene | 1470 | | 10.5 | 33.3 | 330 |
| 59-50-7 | 4-Chloro-3-methylphenol | 1420 | | 7.42 | 66.7 | 330 |
| 83-32-9 | Acenaphthene | 1510 | | 10.1 | 33.3 | 330 |
| 100-02-7 | 4-Nitrophenol | 1440 | J | 21.0 | 330 | 1650 |
| 121-14-2 | 2,4-Dinitrotoluene | 1420 | | 6.72 | 66.7 | 330 |
| 87-86-5 | Pentachlorophenol | 1700 | | 7.39 | 333 | 1650 |
| 129-00-0 | Pyrene | 1660 | | 4.63 | 33.3 | 330 |

FORM I SV-1

GCAL, Inc.

BNA QUANT AND RATIO REPORT

Data file : /var/chem/MSSV4.i/2131022.s.b/h5735.d
Lab Smp Id: 1245520 Client Smp ID: 1022LCSD
Inj Date : 22-OCT-2013 16:11
Operator : hcp Inst ID: MSSV4.i
Smp Info : 1245520*LCSD
Misc Info : 1022LCSD*MSSV~10019~*LCSD*30.0-1*518149*
Comment :
Method : /var/chem/MSSV4.i/2131022.s.b/8270D_04.m
Meth Date : 22-Oct-2013 14:01 kcb Quant Type: ISTD
Cal Date : 09-JUL-2013 00:02 Cal File: h2759x.d
Als bottle: 23 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SA8270.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula:
Amt * DF * (Uf * Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | ng unit correction factor |
| Vt | 1000.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppm) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|---|
| 2 Pyridine | 79 | 1.241 | 1.229 | (0.494) | 82985 | 28.2163 | 941 |
| 1 n-Nitrosodimethylamine | 42 | 1.217 | 1.200 | (0.485) | 44934 | 35.8461 | 1190 |
| $ 3 2-Fluorophenol | 112 | 1.852 | 1.852 | (0.738) | 255852 | 89.2829 | 2980 |
| $ 4 Phenol-d5 | 99 | 2.335 | 2.335 | (0.930) | 279630 | 90.3577 | 3010 |
| 5 Aniline | 93 | 2.341 | 2.335 | (0.932) | 80233 | 19.4027 | 647 |
| 6 Phenol + | 94 | 2.341 | 2.341 | (0.932) | 149458 | 42.6559 | 1420 |
| 7 bis(-2-Chloroethyl)Ether | 63 | 2.364 | 2.364 | (0.941) | 73486 | 43.1197 | 1440 |
| 8 2-Chlorophenol | 128 | 2.405 | 2.405 | (0.958) | 129891 | 43.9841 | 1470 |
| 9 1,3-Dichlorobenzene | 146 | 2.482 | 2.482 | (0.988) | 133667 | 40.0968 | 1340 |
| * 10 1,4-Dichlorobenzene-d4 | 152 | 2.511 | 2.511 | (1.000) | 88549 | 40.0000 | |
| 11 1,4-Dichlorobenzene + | 146 | 2.517 | 2.517 | (1.002) | 139884 | 41.4168 | 1380 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppm) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|---|---|
| | 12 Benzyl alcohol | 108 | 2.599 | 2.599 | (1.035) | 68825 | 43.2561 | 1440 |
| | 13 1,2-Dichlorobenzene | 146 | 2.605 | 2.605 | (1.037) | 132770 | 41.5203 | 1380 |
| | 15 2-Methylphenol | 107 | 2.670 | 2.670 | (1.063) | 91663 | 36.6393 | 1220 |
| | 14 Bis(2-chloroisopropyl)ether | 45 | 2.664 | 2.664 | (1.061) | 118020 | 43.1017 | 1440 |
| | 17 3- & 4-Methylphenol | 107 | 2.758 | 2.758 | (1.098) | 133004 | 51.7833 | 1730 |
| | 16 N-Nitroso-di-n-propylamine++ | 70 | 2.741 | 2.741 | (1.091) | 77183 | 43.0829 | 1440 |
| | 18 Hexachloroethane | 117 | 2.794 | 2.794 | (1.112) | 49955 | 40.5890 | 1350 |
| $ | 19 Nitrobenzene-d5 | 82 | 2.823 | 2.823 | (0.871) | 118861 | 45.0800 | 1500 |
| | 20 Nitrobenzene | 77 | 2.835 | 2.835 | (0.875) | 111916 | 43.6701 | 1460 |
| | 21 Isophorone | 82 | 2.976 | 2.976 | (0.918) | 177580 | 43.7383 | 1460 |
| | 22 2-Nitrophenol + | 139 | 3.023 | 3.023 | (0.933) | 68899 | 44.6320 | 1490 |
| | 23 2,4-Dimethyphenol | 107 | 3.058 | 3.058 | (0.944) | 113587 | 42.3064 | 1410 |
| | 24 bis(-2-Chloroethoxy)methane | 93 | 3.099 | 3.099 | (0.956) | 119997 | 42.2015 | 1410 |
| | 25 Benzoic Acid | 122 | 3.135 | 3.146 | (0.967) | 40384 | 25.6625 | 855 |
| | 26 2,4-Dichlorophenol + | 162 | 3.176 | 3.176 | (0.980) | 100701 | 43.6828 | 1460 |
| | 27 1,2,4-Trichlorobenzene | 180 | 3.211 | 3.205 | (0.991) | 113588 | 44.0277 | 1470 |
| * | 28 Naphthalene-d8 | 136 | 3.241 | 3.241 | (1.000) | 317811 | 40.0000 | |
| | 29 Naphthalene | 128 | 3.252 | 3.252 | (1.004) | 359504 | 43.5608 | 1450 |
| | 30 4-Chloroaniline | 127 | 3.294 | 3.293 | (1.016) | 60017 | 22.3614 | 745 |
| | 31 Hexachlorobutadiene + | 225 | 3.335 | 3.329 | (1.029) | 72987 | 43.5797 | 1450 |
| | 32 4-Chloro-3-Methylphenol + | 107 | 3.605 | 3.605 | (1.113) | 89146 | 42.5140 | 1420 |
| | 33 2-Methylnaphthalene | 142 | 3.670 | 3.664 | (1.133) | 222837 | 44.0925 | 1470 |
| | 145 1-Methylnapthalene | 142 | 3.729 | 3.723 | (1.151) | 179635 | 37.0294 | 1230 |
| | 34 Hexachlorocyclopentadiene ++ | 237 | 3.770 | 3.770 | (0.877) | 71050 | 41.9339 | 1400 |
| | 35 2,4,6-Trichlorophenol + | 196 | 3.852 | 3.852 | (0.896) | 70437 | 46.2442 | 1540 |
| | 36 2,4,5-Trichlorphenol | 196 | 3.882 | 3.882 | (0.903) | 72092 | 45.8973 | 1530 |
| $ | 37 2-Fluorobiphenyl | 172 | 3.888 | 3.888 | (0.904) | 268780 | 49.9492 | 1660 |
| | 38 2-Chloronaphthalene | 162 | 3.958 | 3.958 | (0.921) | 205850 | 45.3400 | 1510 |
| | 39 2-Nitroaniline | 138 | 4.035 | 4.035 | (0.938) | 68905 | 46.9301 | 1560 |
| | 40 Dimethylphthalate | 163 | 4.141 | 4.141 | (0.963) | 220415 | 44.4972 | 1480 |
| | 41 2,6-Dinitrotoluene | 165 | 4.176 | 4.176 | (0.971) | 47585 | 43.5700 | 1450 |
| | 42 Acenaphthylene | 152 | 4.211 | 4.211 | (0.979) | 335793 | 47.8556 | 1600 |
| | 43 3-Nitroaniline | 138 | 4.288 | 4.282 | (0.997) | 33487 | 30.5276 | 1020 |
| * | 44 Acenaphthene-d10 | 164 | 4.299 | 4.299 | (1.000) | 160319 | 40.0000 | |
| | 45 Acenaphthene + | 153 | 4.317 | 4.317 | (1.004) | 205947 | 45.2277 | 1510 |
| | 46 2,4-Dinitrophenol ++ | 184 | 4.352 | 4.352 | (1.012) | 28368 | 35.2033 | 1170 |
| | 49 4-Nitrophenol ++ | 109 | 4.429 | 4.423 | (1.030) | 27560 | 43.1669 | 1440 |
| | 47 Dibenzofuran | 168 | 4.423 | 4.423 | (1.029) | 285737 | 45.7085 | 1520 |
| | 48 2,4-Dinitrotoluene | 165 | 4.429 | 4.429 | (1.030) | 60848 | 42.6815 | 1420 |
| | 50 Diethylphthalate | 149 | 4.570 | 4.570 | (1.063) | 200399 | 43.3076 | 1440 |
| | 52 4-Chlorophenyl-phenylether | 204 | 4.635 | 4.635 | (1.078) | 113335 | 46.5791 | 1550 |
| | 51 Fluorene | 166 | 4.635 | 4.635 | (1.078) | 226184 | 45.4294 | 1510 |
| | 53 4-Nitroaniline | 138 | 4.658 | 4.658 | (1.083) | 38981 | 36.9906 | 1230 |
| | 54 4,6-Dinitro-o-cresol | 198 | 4.682 | 4.682 | (0.899) | 38464 | 44.6109 | 1490 |
| | 55 N-nitrosodiphenylamine (1)+ | 169 | 4.711 | 4.705 | (0.905) | 156507 | 48.6836 | 1620 |
| | 56 Azobenzene | 77 | 4.729 | 4.729 | (0.908) | 193025 | 52.7196 | 1760 |
| $ | 57 2,4,6-Tribromophenol | 332 | 4.788 | 4.782 | (1.114) | 78053 | 92.9442 | 3100 |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppm) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|---|
| 58 4-Bromophenyl-phenylether | 248 | 4.929 | 4.929 | (0.947) | 67571 | 50.7871 | 1690 |
| 59 Hexachlorobenzene | 284 | 4.982 | 4.976 | (0.957) | 74383 | 50.0999 | 1670 |
| 60 Pentachlorophenol + | 266 | 5.105 | 5.105 | (0.981) | 48870 | 50.8569 | 1700 |
| * 61 Phenanthrene-d10 | 188 | 5.205 | 5.205 | (1.000) | 219958 | 40.0000 | |
| 62 Phenanthrene | 178 | 5.217 | 5.217 | (1.002) | 280149 | 46.4369 | 1550 |
| 63 Anthracene | 178 | 5.252 | 5.252 | (1.009) | 276549 | 45.9890 | 1530 |
| 64 Carbazole | 167 | 5.358 | 5.358 | (1.029) | 267068 | 48.0624 | 1600 |
| 65 Di-n-butylphthalate | 149 | 5.570 | 5.570 | (1.070) | 285054 | 43.3362 | 1440 |
| 67 Fluoranthene + | 202 | 5.999 | 5.993 | (1.153) | 268279 | 41.4163 | 1380 |
| 68 Benzidine | 184 | 6.129 | 6.117 | (0.814) | 1422 | 2.95706 | 98.6(M2) |
| 69 Pyrene | 202 | 6.176 | 6.176 | (0.820) | 276437 | 49.7668 | 1660 |
| $ 70 Terphenyl-d14 | 244 | 6.317 | 6.317 | (0.839) | 187242 | 51.3282 | 1710 |
| 71 Butylbenzylphthalate | 149 | 6.840 | 6.840 | (0.909) | 111285 | 46.7675 | 1560 |
| 73 3,3'-Dichlorobenzidine | 252 | 7.517 | 7.517 | (0.998) | 42421 | 28.8110 | 960 |
| 72 Benzo(a)anthracene | 228 | 7.517 | 7.517 | (0.998) | 227039 | 46.4784 | 1550 |
| * 74 Chrysene-d12 | 240 | 7.529 | 7.529 | (1.000) | 182424 | 40.0000 | |
| 76 bis(2-Ethylhexyl)phthalate | 149 | 7.693 | 7.693 | (1.022) | 138383 | 46.1217 | 1540 |
| 75 Chrysene | 228 | 7.564 | 7.564 | (1.005) | 233607 | 46.9555 | 1570 |
| 77 Di-n-octylphthalate + | 149 | 8.911 | 8.911 | (1.184) | 203271 | 43.7533 | 1460 |
| 78 Benzo(b)fluoranthene | 252 | 9.417 | 9.411 | (0.935) | 203977 | 52.7135 | 1760 |
| 79 Benzo(k)fluoranthene | 252 | 9.464 | 9.464 | (0.940) | 217519 | 47.6459 | 1590 |
| 80 Benzo(a)pyrene + | 252 | 9.981 | 9.981 | (0.991) | 169308 | 43.7606 | 1460 |
| * 81 Perylene-d12 | 264 | 10.070 | 10.070 | (1.000) | 156081 | 40.0000 | |
| 82 Indeno(1,2,3-cd)pyrene | 276 | 11.170 | 11.169 | (1.109) | 132558 | 37.3988 | 1250(M2) |
| 83 Dibenzo(a,h)anthracene | 278 | 11.193 | 11.187 | (1.112) | 167188 | 39.7574 | 1330 |
| 84 Benzo(g,h,i)perylene | 276 | 11.381 | 11.381 | (1.130) | 185125 | 40.0411 | 1330 |
| M 66 Total Methylphenol | 108 | | | | 224667 | 88.6218 | 2950 |
| 91 Acetophenone | 105 | 2.741 | 2.741 | (1.091) | 145706 | 43.9995 | 1470 |
| 155 Benzaldehyde | 77 | 2.282 | 2.282 | (0.909) | 9425 | 18.5671 | 619(M1) |
| 156 Caprolactam | 113 | 3.511 | 3.505 | (1.083) | 25611 | 42.6766 | 1420 |
| 157 Biphenyl | 154 | 3.952 | 3.946 | (1.220) | 259080 | 42.3768 | 1410 |
| 158 Atrazine | 200 | 5.040 | 5.040 | (0.968) | 48917 | 54.0207 | 1800 |
| 174 1,4-Dioxane | 88 | 1.088 | 1.076 | (0.433) | 23803 | 20.2819 | 676(M1) |

QC Flag Legend

M1- Compound response manually integrated because Target system did not integrate.

M2- Compound response manually integrated because Target system integrated incorrectly.

Data File: /var/chem/MSSV4.i/2131022.s.b/h5735.d

Date : 22-OCT-2013 16:11

Client ID: 1022LCSD

Sample Info: 1245520*LCSD

Volume Injected (uL): 1.0

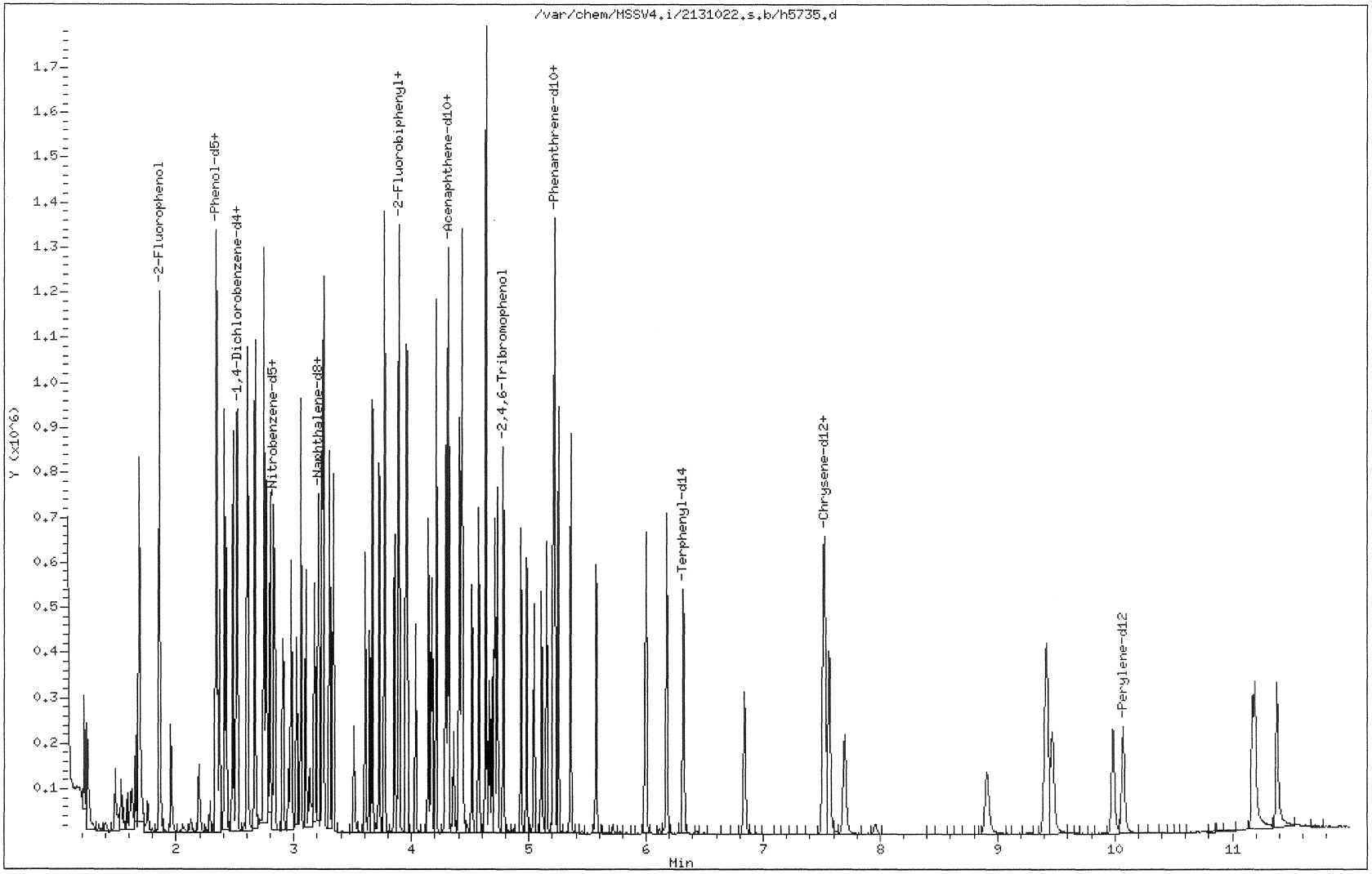
Column phase: RTX-5MS-30M

Instrument: MSSV4.i

Operator: hcp

Column diameter: 0.25



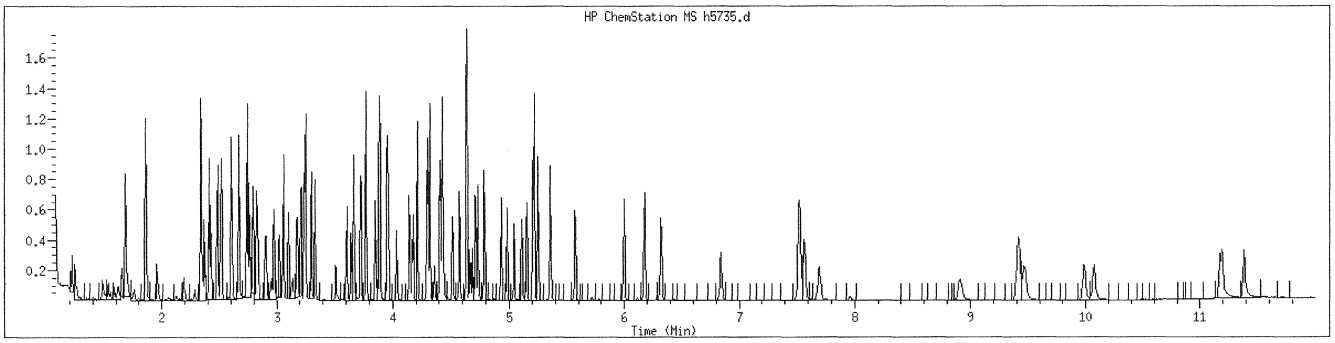



2131022 S23

Data file : /var/chem/MSSV4.i/2131022.s.b/h5735.d Page: 1
Report Date: 10/22/2013 16:31

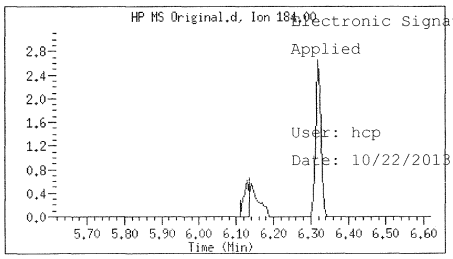
MANUAL INTEGRATION GRAPHIC REPORT

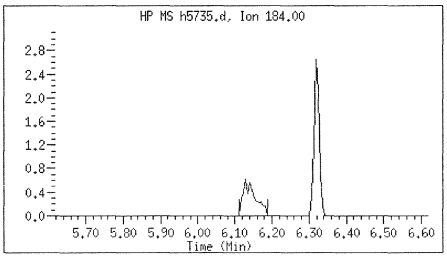
Lab ID : 1245520 SampleType : LCSD
Injection Date: 10/22/2013 16:11 Instrument : MSSV4.i
Operator : hcp
Sample Info : 1245520*LCSD
Misc Info : 1022LCSD*MSSV~10019~*LCSD*30.0-1*518149*
Method : /var/chem/MSSV4.i/2131022.s.b/8270D_04.m
Dilution : 1.00
Matrix : SOIL
Integrator : HP RTE Compound Sublist: SA8270



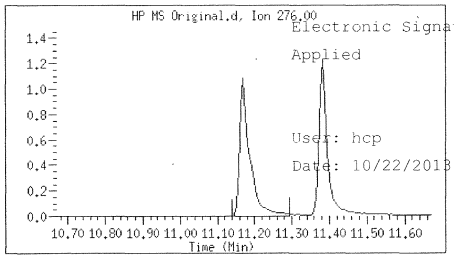

Original Final

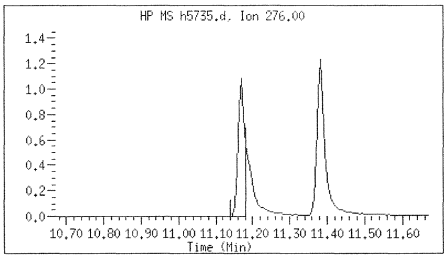
68 Benzidine CAS#: 92-87-5 Reason: M3



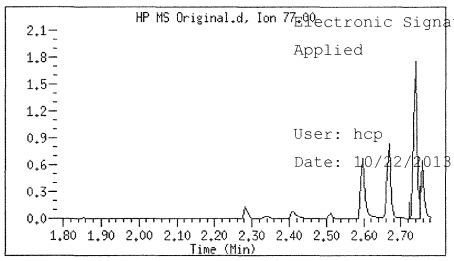

82 Indeno(1,2,3-cd)pyrene CAS#: 193-39-5 Reason: M3

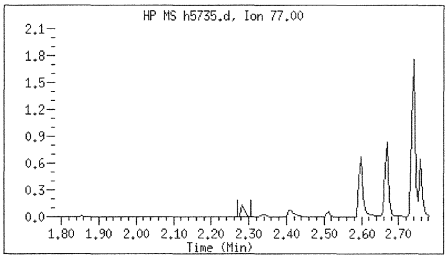


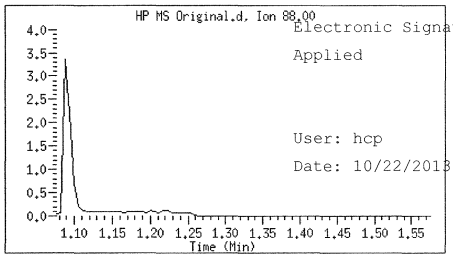
Original Final

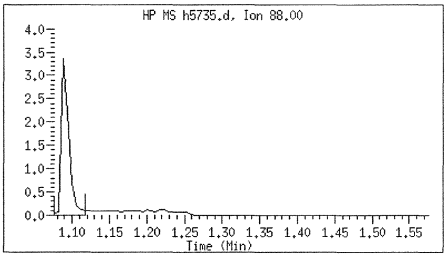
155 Benzaldehyde CAS#: 100-52-7 Reason: M1




174 1,4-Dioxane CAS#: 123-91-1 Reason: M1




M2 - Target system integrated incorrectly

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: RTX-5MS-30 ID: .25 (mm)

Concentrated Extract Volume: 1000 ( µL )

Injection Volume: 1.0 ( µL )

GPC Cleanup: (Y/N) N pH:

*CONCENTRATION UNITS: ug/kg*

Sample ID: RS-COMP1-101613MSDL

Contract:

Lab File ID: 2131023/h5756

Lab Sample ID: 1245521DL

Date Collected: 10/16/13 Time: 1600

Date Received: 10/17/13

Date Extracted: 10/22/13

Date Analyzed: 10/23/13 Time: 1248

Dilution Factor: 10 Analyst: HCP

Prep Method: 3550B

Analytical Method: SW-846 8270D

Instrument ID: MSSV4

Prep Batch: 518149 Analytical Batch: 518409

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 205-99-2 | Benzo(b)fluoranthene | 6450 | | 79.9 | 818 | 4040 |
| 207-08-9 | Benzo(k)fluoranthene | 2880 | J | 62.5 | 408 | 4040 |
| 191-24-2 | Benzo(g,h,i)perylene | 4400 | | 61.2 | 205 | 4040 |
| 50-32-8 | Benzo(a)pyrene | 4290 | | 50.7 | 408 | 4040 |
| 53-70-3 | Dibenz(a,h)anthracene | 2950 | J | 58.1 | 205 | 4040 |
| 206-44-0 | Fluoranthene | 11200 | | 65.8 | 205 | 4040 |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 5150 | | 97.4 | 408 | 4040 |

FORM I SV-1

GCAL, Inc.

BNA QUANT AND RATIO REPORT

Data file : /var/chem/MSSV4.i/2131023.s.b/h5756.d
Lab Smp Id: 1245521 Client Smp ID: 21310171201
Inj Date : 23-OCT-2013 12:48
Operator : hcp Inst ID: MSSV4.i
Smp Info : 1245521*MS
Misc Info : 21310171201*MSSV~10023~*101712*30.0-1X10*518149*
Comment :
Method : /var/chem/MSSV4.i/2131023.s.b/8270D_04.m
Meth Date : 23-Oct-2013 12:08 hcp Quant Type: ISTD
Cal Date : 09-JUL-2013 00:02 Cal File: h2759x.d
Als bottle: 5 QC Sample: MS
Dil Factor: 10.00000
Integrator: HP RTE Compound Sublist: SA8270.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula:
Amt * DF * (Uf * Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 10.00000 | Dilution Factor |
| Uf | 1.00000 | ng unit correction factor |
| Vt | 1000.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppm) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|---|
| 2 Pyridine | 79 | 1.258 | 1.217 | (0.503) | 3350 | 1.98560 | 662 |
| 1 n-Nitrosodimethylamine | 42 | 1.206 | 1.194 | (0.482) | 6532 | 9.08360 | 3030(R) |
| $ 3 2-Fluorophenol | 112 | 1.847 | 1.841 | (0.739) | 15134 | 9.20617 | 3070 |
| $ 4 Phenol-d5 | 99 | 2.341 | 2.329 | (0.936) | 16346 | 9.20743 | 3070 |
| 6 Phenol + | 94 | 2.347 | 2.335 | (0.939) | 9293 | 4.62340 | 1540 |
| 7 bis(-2-Chloroethyl)Ether | 63 | 2.358 | 2.352 | (0.944) | 5337 | 5.45901 | 1820 |
| 8 2-Chlorophenol | 128 | 2.405 | 2.399 | (0.962) | 7210 | 4.25596 | 1420 |
| 9 1,3-Dichlorobenzene | 146 | 2.470 | 2.470 | (0.988) | 7571 | 3.95899 | 1320 |
| * 10 1,4-Dichlorobenzene-d4 | 152 | 2.500 | 2.499 | (1.000) | 50797 | 40.0000 | |
| 11 1,4-Dichlorobenzene + | 146 | 2.511 | 2.511 | (1.005) | 8001 | 4.12951 | 1380 |
| 12 Benzyl alcohol | 108 | 2.594 | 2.588 | (1.038) | 3666 | 4.01642 | 1340 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppm) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|---|---|
| | 13 1,2-Dichlorobenzene | 146 | 2.600 | 2.593 | (1.040) | 7782 | 4.24226 | 1410 |
| | 15 2-Methylphenol | 107 | 2.670 | 2.664 | (1.068) | 5423 | 3.77867 | 1260 |
| | 14 Bis(2-chloroisopropyl)ether | 45 | 2.658 | 2.652 | (1.064) | 7003 | 4.45829 | 1490 |
| | 17 3- & 4-Methylphenol | 107 | 2.758 | 2.752 | (1.104) | 8431 | 5.72202 | 1910 |
| | 16 N-Nitroso-di-n-propylamine++ | 70 | 2.735 | 2.729 | (1.094) | 4849 | 4.71825 | 1570 |
| | 18 Hexachloroethane | 117 | 2.782 | 2.782 | (1.113) | 2834 | 4.01397 | 1340 |
| $ | 19 Nitrobenzene-d5 | 82 | 2.817 | 2.811 | (0.872) | 7280 | 4.78684 | 1600 |
| | 20 Nitrobenzene | 77 | 2.829 | 2.823 | (0.876) | 6274 | 4.24434 | 1410 |
| | 21 Isophorone | 82 | 2.970 | 2.964 | (0.920) | 10203 | 4.35681 | 1450 |
| | 22 2-Nitrophenol + | 139 | 3.017 | 3.011 | (0.934) | 3864 | 4.33954 | 1450 |
| | 23 2,4-Dimethyphenol | 107 | 3.052 | 3.052 | (0.945) | 7347 | 4.74417 | 1580 |
| | 24 bis(-2-Chloroethoxy)methane | 93 | 3.094 | 3.088 | (0.958) | 7297 | 4.44913 | 1480 |
| | 25 Benzoic Acid | 122 | 3.111 | 3.135 | (0.964) | 3764 | 4.14679 | 1380 |
| | 26 2,4-Dichlorophenol + | 162 | 3.176 | 3.170 | (0.984) | 6018 | 4.52587 | 1510 |
| | 27 1,2,4-Trichlorobenzene | 180 | 3.200 | 3.199 | (0.991) | 6124 | 4.11531 | 1370 |
| * | 28 Naphthalene-d8 | 136 | 3.229 | 3.229 | (1.000) | 183314 | 40.0000 | |
| | 29 Naphthalene | 128 | 3.241 | 3.240 | (1.004) | 20473 | 4.30078 | 1430 |
| | 30 4-Chloroaniline | 127 | 3.288 | 3.282 | (1.018) | 5126 | 3.31114 | 1100 |
| | 31 Hexachlorobutadiene + | 225 | 3.323 | 3.323 | (1.029) | 4073 | 4.21625 | 1410 |
| | 32 4-Chloro-3-Methylphenol + | 107 | 3.599 | 3.599 | (1.115) | 6124 | 5.06335 | 1690 |
| | 33 2-Methylnaphthalene | 142 | 3.658 | 3.658 | (1.133) | 13652 | 4.68324 | 1560 |
| | 145 1-Methylnapthalene | 142 | 3.717 | 3.717 | (1.151) | 11395 | 4.07234 | 1360 |
| | 34 Hexachlorocyclopentadiene ++ | 237 | 3.758 | 3.758 | (0.877) | 1725 | 1.65836 | 553 |
| | 35 2,4,6-Trichlorophenol + | 196 | 3.847 | 3.840 | (0.897) | 4911 | 5.25188 | 1750 |
| | 36 2,4,5-Trichlorphenol | 196 | 3.882 | 3.876 | (0.905) | 4429 | 4.59298 | 1530 |
| $ | 37 2-Fluorobiphenyl | 172 | 3.882 | 3.882 | (0.905) | 15968 | 4.83360 | 1610 |
| | 38 2-Chloronaphthalene | 162 | 3.952 | 3.952 | (0.922) | 12631 | 4.53166 | 1510(M1) |
| | 39 2-Nitroaniline | 138 | 4.029 | 4.023 | (0.940) | 4673 | 5.18424 | 1730 |
| | 40 Dimethylphthalate | 163 | 4.135 | 4.135 | (0.964) | 15536 | 5.10885 | 1700(M1) |
| | 41 2,6-Dinitrotoluene | 165 | 4.170 | 4.170 | (0.973) | 3413 | 5.09029 | 1700 |
| | 42 Acenaphthylene | 152 | 4.205 | 4.205 | (0.981) | 22640 | 5.25565 | 1750 |
| | 43 3-Nitroaniline | 138 | 4.282 | 4.276 | (0.999) | 2762 | 4.10136 | 1370 |
| * | 44 Acenaphthene-d10 | 164 | 4.288 | 4.287 | (1.000) | 98423 | 40.0000 | |
| | 45 Acenaphthene + | 153 | 4.311 | 4.311 | (1.005) | 16416 | 5.87225 | 1960 |
| | 46 2,4-Dinitrophenol ++ | 184 | 4.352 | 4.346 | (1.015) | 1291 | 2.60957 | 870 |
| | 49 4-Nitrophenol ++ | 109 | 4.435 | 4.423 | (1.034) | 1722 | 4.39332 | 1460 |
| | 47 Dibenzofuran | 168 | 4.417 | 4.417 | (1.030) | 20110 | 5.23999 | 1750 |
| | 48 2,4-Dinitrotoluene | 165 | 4.423 | 4.423 | (1.032) | 4147 | 4.73822 | 1580 |
| | 50 Diethylphthalate | 149 | 4.564 | 4.564 | (1.064) | 14680 | 5.16754 | 1720 |
| | 52 4-Chlorophenyl-phenylether | 204 | 4.623 | 4.629 | (1.078) | 7513 | 5.02955 | 1680 |
| | 51 Fluorene | 166 | 4.623 | 4.623 | (1.078) | 18659 | 6.10453 | 2030(R) |
| | 53 4-Nitroaniline | 138 | 4.652 | 4.652 | (1.085) | 3444 | 5.32341 | 1770 |
| | 54 4,6-Dinitro-o-cresol | 198 | 4.676 | 4.676 | (0.899) | 1972 | 3.08611 | 1030 |
| | 55 N-nitrosodiphenylamine (1)+ | 169 | 4.699 | 4.699 | (0.904) | 11769 | 4.93976 | 1650 |
| | 56 Azobenzene | 77 | 4.723 | 4.723 | (0.908) | 13333 | 4.91365 | 1640 |
| $ | 57 2,4,6-Tribromophenol | 332 | 4.776 | 4.776 | (1.114) | 5182 | 10.0512 | 3350 |
| | 58 4-Bromophenyl-phenylether | 248 | 4.923 | 4.923 | (0.947) | 4078 | 4.13578 | 1380 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppm) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|---|---|
| | 59 Hexachlorobenzene | 284 | 4.970 | 4.970 | (0.956) | 4929 | 4.47960 | 1490 |
| | 60 Pentachlorophenol + | 266 | 5.099 | 5.099 | (0.981) | 3244 | 4.55518 | 1520 |
| * | 61 Phenanthrene-d10 | 188 | 5.199 | 5.199 | (1.000) | 163013 | 40.0000 | |
| | 62 Phenanthrene | 178 | 5.211 | 5.211 | (1.002) | 82155 | 18.3749 | 6120(R) |
| | 63 Anthracene | 178 | 5.241 | 5.246 | (1.008) | 28855 | 6.47471 | 2160(R) |
| | 64 Carbazole | 167 | 5.352 | 5.352 | (1.029) | 30144 | 7.31984 | 2440(R) |
| | 65 Di-n-butylphthalate | 149 | 5.564 | 5.564 | (1.070) | 23585 | 4.83813 | 1610 |
| | 67 Fluoranthene + | 202 | 5.988 | 5.987 | (1.152) | 131547 | 27.4021 | 9130(R) |
| | 68 Benzidine | 184 | 6.105 | 6.105 | (0.812) | 210 | 0.41514 | 138 |
| | 69 Pyrene | 202 | 6.164 | 6.170 | (0.819) | 103033 | 17.6411 | 5880(R) |
| $ | 70 Terphenyl-d14 | 244 | 6.311 | 6.311 | (0.839) | 17654 | 4.60259 | 1530 |
| | 71 Butylbenzylphthalate | 149 | 6.829 | 6.829 | (0.908) | 12778 | 5.10713 | 1700 |
| | 73 3,3'-Dichlorobenzidine | 252 | 7.511 | 7.505 | (0.998) | 1261 | 0.81474 | 272(RM1) |
| | 72 Benzo(a)anthracene | 228 | 7.505 | 7.511 | (0.998) | 65744 | 12.8001 | 4270(R) |
| * | 74 Chrysene-d12 | 240 | 7.523 | 7.523 | (1.000) | 191812 | 40.0000 | |
| | 76 bis(2-Ethylhexyl)phthalate | 149 | 7.682 | 7.681 | (1.021) | 51163 | 16.2175 | 5410(R) |
| | 75 Chrysene | 228 | 7.552 | 7.558 | (1.004) | 73421 | 14.0355 | 4680(R) |
| | 77 Di-n-octylphthalate + | 149 | 8.899 | 8.899 | (1.183) | 27205 | 5.56917 | 1860 |
| | 78 Benzo(b)fluoranthene | 252 | 9.411 | 9.405 | (0.935) | 100253 | 15.7802 | 5260(R) |
| | 79 Benzo(k)fluoranthene | 252 | 9.452 | 9.458 | (0.939) | 52740 | 7.03631 | 2350(R) |
| | 80 Benzo(a)pyrene + | 252 | 9.976 | 9.975 | (0.991) | 66667 | 10.4953 | 3500(R) |
| * | 81 Perylene-d12 | 264 | 10.070 | 10.064 | (1.000) | 256256 | 40.0000 | |
| | 82 Indeno(1,2,3-cd)pyrene | 276 | 11.164 | 11.164 | (1.109) | 73312 | 12.5980 | 4200(RM2) |
| | 83 Dibenzo(a,h)anthracene | 278 | 11.187 | 11.187 | (1.111) | 49992 | 7.24086 | 2410(R) |
| | 84 Benzo(g,h,i)perylene | 276 | 11.375 | 11.375 | (1.130) | 81681 | 10.7606 | 3590(R) |
| M | 66 Total Methylphenol | 108 | | | | 13854 | 9.52626 | 3180 |
| | 91 Acetophenone | 105 | 2.735 | 2.729 | (1.094) | 8903 | 4.68654 | 1560 |
| | 155 Benzaldehyde | 77 | 2.270 | 2.270 | (0.908) | 2856 | 9.80965 | 3270(RM2) |
| | 156 Caprolactam | 113 | 3.494 | 3.499 | (1.082) | 1883 | 5.43985 | 1810 |
| | 157 Biphenyl | 154 | 3.941 | 3.940 | (1.220) | 15500 | 4.39541 | 1470 |
| | 158 Atrazine | 200 | 5.035 | 5.035 | (0.968) | 3408 | 5.07829 | 1690 |
| | 174 1,4-Dioxane | 88 | 1.129 | 1.076 | (0.452) | 4697 | 6.97641 | 2330 |

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M1- Compound response manually integrated because Target system did not integrate.
M2- Compound response manually integrated because Target system integrated incorrectly.

Data File: /var/chem/MSSV4.i/2131023.s.b/h5756.d

Page 1

Date : 23-OCT-2013 12:48

Client ID: 21310171201

Instrument: MSSV4.i

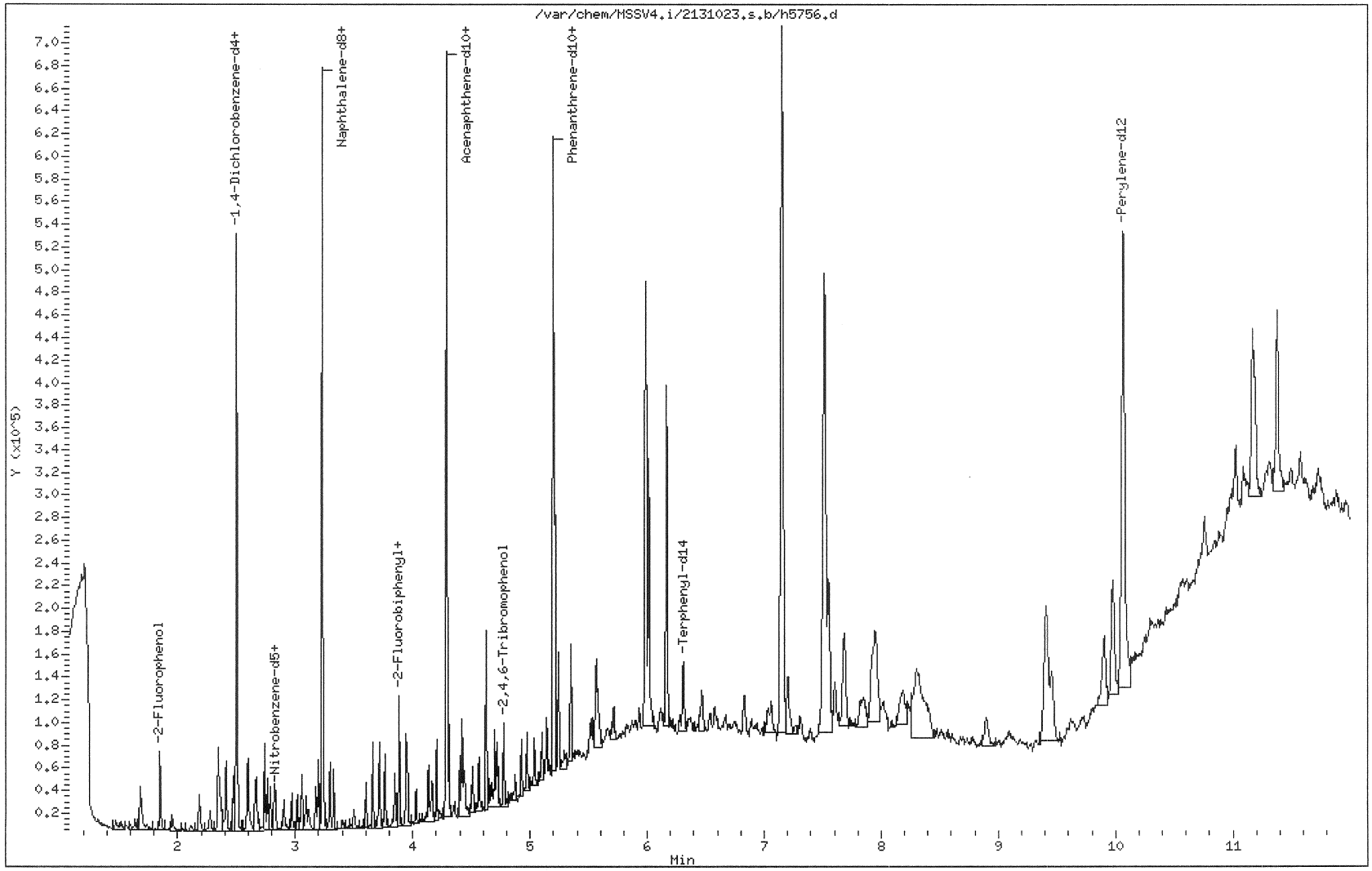
Sample Info: 1245521*MS

Volume Injected (uL): 1.0

Operator: hcp

Column phase: RTX-5MS-30M

Column diameter: 0.25

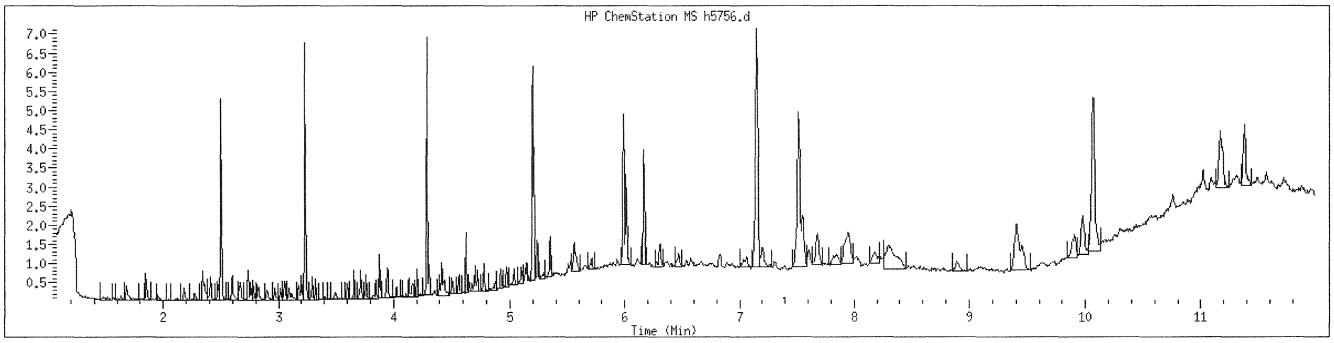



2131017 2 530

Data file : /var/chem/MSSV4.i/2131023.s.b/h5756.d Page: 1
Report Date: 10/24/2013 11:23

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 1245521 SampleType : MS
Injection Date: 10/23/2013 12:48 Instrument : MSSV4.i
Operator : hcp
Sample Info : 1245521*MS
Misc Info : 21310171201*MSSV~10023~*101712*30.0-1X10*518149*
Method : /var/chem/MSSV4.i/2131023.s.b/8270D_04.m
Dilution : 10.0
Matrix : SOIL
Integrator : HP RTE Compound Sublist: SA8270




Original Final

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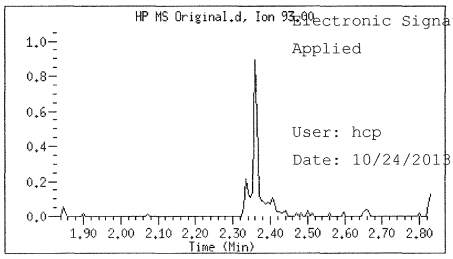
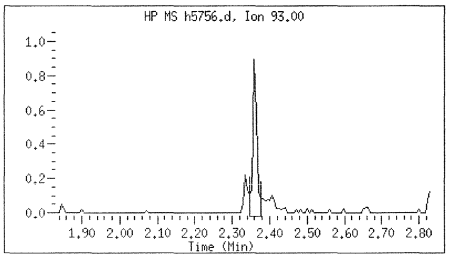
5 Aniline CAS#: 62-53-3 Reason: M1

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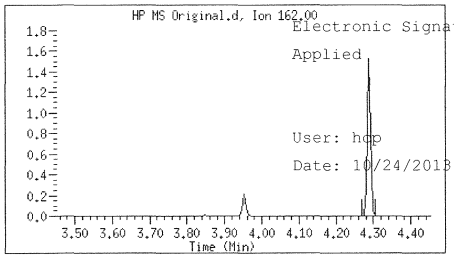
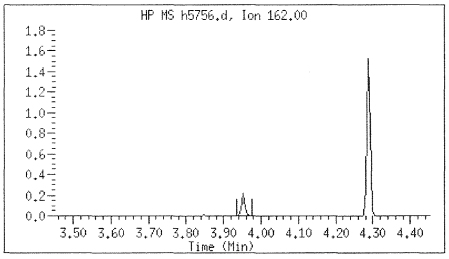
38 2-Chloronaphthalene CAS#: 91-58-7 Reason: M1

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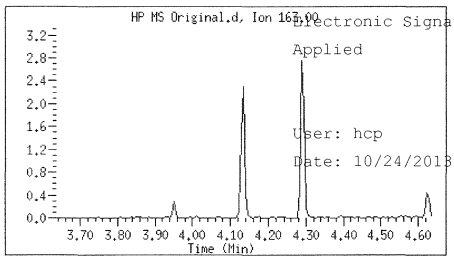
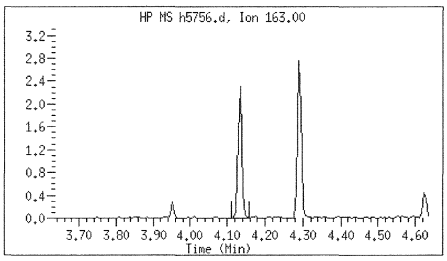
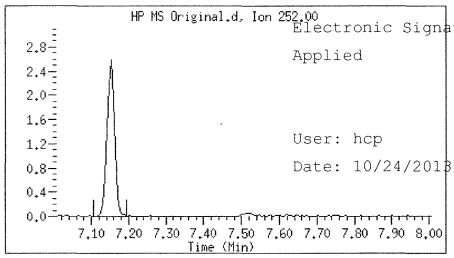
Original Final

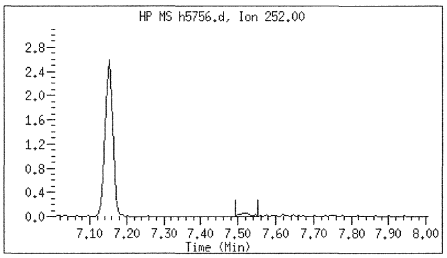
40 Dimethylphthalate CAS#: 131-11-3 Reason: M1



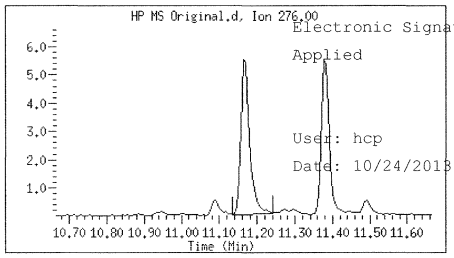



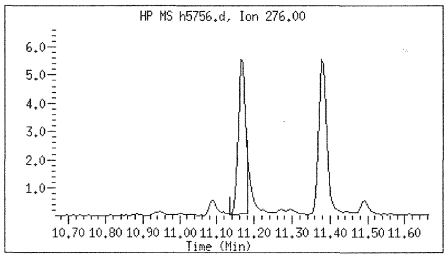

73 3,3'-Dichlorobenzidine CAS#: 91-94-1 Reason: M1



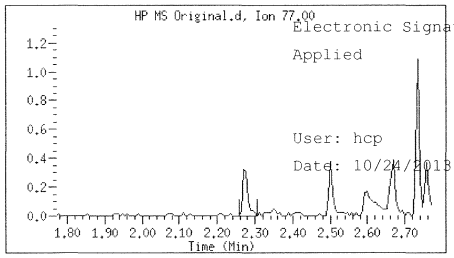



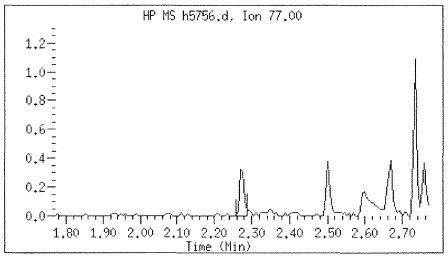

82 Indeno(1,2,3-cd)pyrene CAS#: 193-39-5 Reason: M3




155 Benzaldehyde CAS#: 100-52-7 Reason: M3



1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: RTX-5MS-30 ID: .25 (mm)

Concentrated Extract Volume: 1000 ( µL )

Injection Volume: 1.0 ( µL )

GPC Cleanup: (Y/N) N pH:

*CONCENTRATION UNITS: ug/kg*

Sample ID: RS-COMP1-101613MS

Contract:

Lab File ID: 2131022/h5737

Lab Sample ID: 1245521

Date Collected: 10/16/13 Time: 1600

Date Received: 10/17/13

Date Extracted: 10/22/13

Date Analyzed: 10/22/13 Time: 1651

Dilution Factor: 1 Analyst: HCP

Prep Method: 3550B

Analytical Method: SW-846 8270D

Instrument ID: MSSV4

Prep Batch: 518149 Analytical Batch: 518302

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 208-96-8 | Acenaphthylene | 1890 | | 8.27 | 40.8 | 404 |
| 120-12-7 | Anthracene | 2720 | | 8.32 | 40.8 | 404 |
| 56-55-3 | Benzo(a)anthracene | 5290 | | 7.55 | 40.8 | 404 |
| 85-68-7 | Butylbenzylphthalate | 1500 | | 8.08 | 20.5 | 404 |
| 111-91-1 | Bis(2-Chloroethoxy)methane | 1850 | | 7.06 | 40.8 | 404 |
| 111-44-4 | Bis(2-Chloroethyl)ether | 2070 | | 15.7 | 40.8 | 404 |
| 117-81-7 | bis(2-ethylhexyl)phthalate | 6020 | | 5.74 | 40.8 | 404 |
| 101-55-3 | 4-Bromophenyl-phenylether | 1750 | | 12.9 | 40.8 | 404 |
| 86-74-8 | Carbazole | 3090 | | 7.82 | 40.8 | 404 |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 1800 | | 9.00 | 40.8 | 404 |
| 218-01-9 | Chrysene | 5750 | | 8.76 | 40.8 | 404 |
| 132-64-9 | Dibenzofuran | 2010 | | 7.70 | 40.8 | 404 |
| 95-50-1 | 1,2-Dichlorobenzene | 1680 | | 8.40 | 40.8 | 404 |
| 541-73-1 | 1,3-Dichlorobenzene | 1630 | | 16.4 | 40.8 | 404 |
| 91-94-1 | 3,3'-Dichlorobenzidine | 408 | U | 38.7 | 408 | 809 |
| 120-83-2 | 2,4-Dichlorophenol | 1880 | | 11.6 | 81.8 | 404 |
| 84-66-2 | Diethylphthalate | 1910 | | 15.0 | 40.8 | 404 |
| 105-67-9 | 2,4-Dimethylphenol | 1960 | | 7.99 | 404 | 404 |
| 131-11-3 | Dimethyl-phthalate | 1840 | | 6.30 | 20.5 | 404 |
| 117-84-0 | Di-n-octylphthalate | 2240 | | 5.36 | 20.5 | 404 |
| 51-28-5 | 2,4-Dinitrophenol | 765 | J | 27.6 | 404 | 2020 |
| 606-20-2 | 2,6-Dinitrotoluene | 1860 | | 15.1 | 40.8 | 404 |
| 86-73-7 | Fluorene | 2230 | | 7.29 | 40.8 | 404 |
| 118-74-1 | Hexachlorobenzene | 1610 | | 15.7 | 81.8 | 404 |
| 87-68-3 | Hexachlorobutadiene | 1650 | | 10.7 | 40.8 | 404 |
| 77-47-4 | Hexachlorocyclopentadiene | 697 | | 85.8 | 205 | 404 |
| 67-72-1 | Hexachloroethane | 1520 | | 19.2 | 40.8 | 404 |
| 78-59-1 | Isophorone | 1860 | | 7.19 | 40.8 | 404 |
| 91-57-6 | 2-Methylnaphthalene | 1760 | | 5.83 | 40.8 | 404 |

FORM I SV-1

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: RTX-5MS-30 ID: .25 (mm)

Concentrated Extract Volume: 1000 ( µL )

Injection Volume: 1.0 ( µL )

GPC Cleanup: (Y/N) N pH:

*CONCENTRATION UNITS: ug/kg*

Sample ID: RS-COMP1-101613MS

Contract:

Lab File ID: 2131022/h5737

Lab Sample ID: 1245521

Date Collected: 10/16/13 Time: 1600

Date Received: 10/17/13

Date Extracted: 10/22/13

Date Analyzed: 10/22/13 Time: 1651

Dilution Factor: 1 Analyst: HCP

Prep Method: 3550B

Analytical Method: SW-846 8270D

Instrument ID: MSSV4

Prep Batch: 518149 Analytical Batch: 518302

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 95-48-7 | o-Cresol | 1510 | | 12.5 | 40.8 | 404 |
| 91-20-3 | Naphthalene | 1730 | | 12.6 | 40.8 | 404 |
| 98-95-3 | Nitrobenzene | 1700 | | 21.1 | 40.8 | 404 |
| 88-75-5 | 2-Nitrophenol | 1790 | | 14.5 | 40.8 | 404 |
| 62-75-9 | N-Nitrosodimethylamine | 1650 | | 14.2 | 81.8 | 404 |
| 86-30-6 | N-Nitrosodiphenylamine | 1790 | | 8.56 | 40.8 | 404 |
| 85-01-8 | Phenanthrene | 7010 | | 9.29 | 40.8 | 404 |
| 95-95-4 | 2,4,5-Trichlorophenol | 1900 | | 12.7 | 81.8 | 404 |
| 88-06-2 | 2,4,6-Trichlorophenol | 1850 | | 14.2 | 205 | 404 |
| 110-86-1 | Pyridine | 1130 | | 28.6 | 205 | 404 |
| 99-09-2 | 3-Nitroaniline | 744 | J | 5.50 | 81.8 | 2020 |
| 100-01-6 | 4-Nitroaniline | 879 | J | 5.21 | 408 | 2020 |
| 84-74-2 | Di-n-butylphthalate | 2080 | | 7.82 | 20.5 | 404 |
| 88-74-4 | 2-Nitroaniline | 1890 | J | 5.14 | 81.8 | 2020 |
| 91-58-7 | 2-Chloronaphthalene | 1700 | | 12.9 | 40.8 | 404 |
| 106-47-8 | 4-Chloroaniline | 783 | | 7.77 | 40.8 | 404 |
| 1319-77-3M | m,p-Cresol | 2210 | | 15.2 | 205 | 404 |
| 534-52-1 | 2-Methyl-4,6-dinitrophenol | 892 | J | 21.8 | 404 | 2020 |
| 108-95-2 | Phenol | 1760 | | 11.2 | 40.8 | 404 |
| 95-57-8 | 2-Chlorophenol | 1830 | | 8.87 | 40.8 | 404 |
| 106-46-7 | 1,4-Dichlorobenzene | 1680 | | 10.8 | 40.8 | 404 |
| 621-64-7 | N-Nitroso-di-n-propylamine | 1880 | | 17.6 | 40.8 | 404 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1720 | | 12.9 | 40.8 | 404 |
| 59-50-7 | 4-Chloro-3-methylphenol | 1920 | | 9.09 | 81.8 | 404 |
| 83-32-9 | Acenaphthene | 2110 | | 12.4 | 40.8 | 404 |
| 100-02-7 | 4-Nitrophenol | 2010 | J | 25.7 | 404 | 2020 |
| 121-14-2 | 2,4-Dinitrotoluene | 1810 | | 8.24 | 81.8 | 404 |
| 87-86-5 | Pentachlorophenol | 2140 | | 9.06 | 408 | 2020 |
| 129-00-0 | Pyrene | 5420 | | 5.67 | 40.8 | 404 |

GCAL, Inc.

BNA QUANT AND RATIO REPORT

Data file : /var/chem/MSSV4.i/2131022.s.b/h5737.d
Lab Smp Id: 1245521 Client Smp ID: 21310171201
Inj Date : 22-OCT-2013 16:51
Operator : hcp Inst ID: MSSV4.i
Smp Info : 1245521*MS
Misc Info : 21310171201*MSSV~10019~*101712*30.0-1*518149*
Comment :
Method : /var/chem/MSSV4.i/2131022.s.b/8270CE_04.m
Meth Date : 22-Oct-2013 10:36 hcp Quant Type: ISTD
Cal Date : 09-JUL-2013 00:02 Cal File: h2759x.d
Als bottle: 25 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SA8270.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * (Uf * Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | ng unit correction factor |
| Vt | 1000.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppm) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|---|
| 2 Pyridine | 79 | 1.241 | 1.229 | (0.494) | 48014 | 27.5954 | 920(H) |
| 1 n-Nitrosodimethylamine | 42 | 1.211 | 1.200 | (0.482) | 30687 | 40.4656 | 1350(H) |
| $ 3 2-Fluorophenol | 112 | 1.858 | 1.852 | (0.740) | 157332 | 91.6784 | 3060 |
| $ 4 Phenol-d5 | 99 | 2.347 | 2.335 | (0.934) | 170461 | 91.9765 | 3070 |
| 5 Aniline | 93 | 2.364 | 2.335 | (0.941) | 85012 | 42.3390 | 1410(H) |
| 6 Phenol + | 94 | 2.353 | 2.341 | (0.937) | 91240 | 43.3135 | 1440(H) |
| 7 bis(-2-Chloroethyl)Ether | 63 | 2.364 | 2.364 | (0.941) | 52076 | 50.6029 | 1690 |
| 8 2-Chlorophenol | 128 | 2.411 | 2.405 | (0.960) | 78135 | 44.5661 | 1490 |
| 9 1,3-Dichlorobenzene | 146 | 2.482 | 2.482 | (0.988) | 79398 | 39.9312 | 1330 |
| * 10 1,4-Dichlorobenzene-d4 | 152 | 2.511 | 2.511 | (1.000) | 53029 | 40.0000 | |
| 11 1,4-Dichlorobenzene + | 146 | 2.517 | 2.517 | (1.002) | 83055 | 41.1776 | 1370 |
| 12 Benzyl alcohol | 108 | 2.600 | 2.599 | (1.035) | 42715 | 44.8283 | 1490 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppm) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|---|---|
| | 13 1,2-Dichlorobenzene | 146 | 2.606 | 2.605 | (1.037) | 77858 | 40.9692 | 1370 |
| | 15 2-Methylphenol | 108 | 2.676 | 2.670 | (1.066) | 54956 | 36.7725 | 1230 |
| | 14 Bis(2-chloroisopropyl)ether | 45 | 2.664 | 2.664 | (1.061) | 71295 | 43.5478 | 1450 |
| | 17 3- & 4-Methylphenol | 108 | 2.764 | 2.758 | (1.101) | 81375 | 53.9650 | 1800 |
| | 16 N-Nitroso-di-n-propylamine++ | 70 | 2.741 | 2.741 | (1.091) | 48100 | 46.0027 | 1530 |
| | 18 Hexachloroethane | 117 | 2.794 | 2.794 | (1.112) | 27111 | 37.2670 | 1240 |
| $ | 19 Nitrobenzene-d5 | 82 | 2.823 | 2.823 | (0.871) | 69485 | 44.5679 | 1490 |
| | 20 Nitrobenzene | 77 | 2.835 | 2.835 | (0.875) | 62842 | 41.7410 | 1390 |
| | 21 Isophorone | 82 | 2.976 | 2.976 | (0.918) | 108935 | 45.6574 | 1520 |
| | 22 2-Nitrophenol + | 139 | 3.023 | 3.023 | (0.933) | 39718 | 43.7286 | 1460 |
| | 23 2,4-Dimethyphenol | 107 | 3.058 | 3.058 | (0.944) | 74618 | 48.0305 | 1600 |
| | 24 bis(-2-Chloroethoxy)methane | 93 | 3.100 | 3.099 | (0.956) | 74862 | 45.3044 | 1510 |
| | 25 Benzoic Acid | 122 | 3.141 | 3.146 | (0.969) | 40648 | 43.6833 | 1460 |
| | 26 2,4-Dichlorophenol + | 162 | 3.182 | 3.176 | (0.982) | 61384 | 45.7914 | 1530 |
| | 27 1,2,4-Trichlorobenzene | 180 | 3.211 | 3.205 | (0.991) | 64232 | 42.0452 | 1400 |
| * | 28 Naphthalene-d8 | 136 | 3.241 | 3.241 | (1.000) | 187924 | 40.0000 | |
| | 29 Naphthalene | 128 | 3.253 | 3.252 | (1.004) | 206563 | 42.2467 | 1410 |
| | 30 4-Chloroaniline | 127 | 3.300 | 3.293 | (1.018) | 35056 | 19.1749 | 639 |
| | 31 Hexachlorobutadiene + | 225 | 3.329 | 3.329 | (1.027) | 41067 | 40.3623 | 1350 |
| | 32 4-Chloro-3-Methylphenol + | 107 | 3.605 | 3.605 | (1.113) | 57148 | 47.1327 | 1570 |
| | 33 2-Methylnaphthalene | 142 | 3.664 | 3.664 | (1.131) | 134514 | 43.1614 | 1440 |
| | 145 1-Methylnapthalene | 142 | 3.729 | 3.723 | (1.151) | 109457 | 38.0323 | 1270 |
| | 34 Hexachlorocyclopentadiene ++ | 237 | 3.770 | 3.770 | (0.877) | 17787 | 17.0834 | 569 |
| | 35 2,4,6-Trichlorophenol + | 196 | 3.852 | 3.852 | (0.896) | 43679 | 45.2842 | 1510 |
| | 36 2,4,5-Trichlorphenol | 196 | 3.888 | 3.882 | (0.904) | 46397 | 46.3882 | 1550 |
| $ | 37 2-Fluorobiphenyl | 172 | 3.888 | 3.888 | (0.904) | 157706 | 45.0377 | 1500 |
| | 38 2-Chloronaphthalene | 162 | 3.958 | 3.958 | (0.921) | 123072 | 41.6827 | 1390 |
| | 39 2-Nitroaniline | 138 | 4.035 | 4.035 | (0.938) | 44260 | 46.3243 | 1540 |
| | 40 Dimethylphthalate | 163 | 4.141 | 4.141 | (0.963) | 143986 | 44.9092 | 1500 |
| | 41 2,6-Dinitrotoluene | 165 | 4.176 | 4.176 | (0.971) | 31391 | 45.4581 | 1520 |
| | 42 Acenaphthylene | 152 | 4.211 | 4.211 | (0.979) | 214278 | 46.0598 | 1540 |
| | 43 3-Nitroaniline | 138 | 4.288 | 4.282 | (0.997) | 14019 | 18.2067 | 607 |
| * | 44 Acenaphthene-d10 | 164 | 4.300 | 4.299 | (1.000) | 104325 | 40.0000 | |
| | 45 Acenaphthene + | 153 | 4.317 | 4.317 | (1.004) | 154421 | 51.7488 | 1720 |
| | 46 2,4-Dinitrophenol ++ | 184 | 4.358 | 4.352 | (1.014) | 9037 | 18.7342 | 624 |
| | 49 4-Nitrophenol ++ | 109 | 4.435 | 4.423 | (1.031) | 20407 | 49.1188 | 1640 |
| | 47 Dibenzofuran | 168 | 4.423 | 4.423 | (1.029) | 200061 | 49.1902 | 1640 |
| | 48 2,4-Dinitrotoluene | 165 | 4.429 | 4.429 | (1.030) | 40205 | 44.5482 | 1480 |
| | 50 Diethylphthalate | 149 | 4.570 | 4.570 | (1.063) | 139496 | 46.7796 | 1560 |
| | 52 4-Chlorophenyl-phenylether | 204 | 4.635 | 4.635 | (1.078) | 69536 | 44.2005 | 1470 |
| | 51 Fluorene | 166 | 4.635 | 4.635 | (1.078) | 178426 | 54.6295 | 1820 |
| | 53 4-Nitroaniline | 138 | 4.664 | 4.658 | (1.085) | 14748 | 21.5064 | 717 |
| | 54 4,6-Dinitro-o-cresol | 198 | 4.682 | 4.682 | (0.898) | 14612 | 21.8541 | 728 |
| | 55 N-nitrosodiphenylamine (1)+ | 169 | 4.711 | 4.705 | (0.904) | 106869 | 43.6855 | 1460 |
| | 56 Azobenzene | 77 | 4.729 | 4.729 | (0.907) | 127981 | 45.4608 | 1520 |
| $ | 57 2,4,6-Tribromophenol | 332 | 4.788 | 4.782 | (1.114) | 55527 | 101.609 | 3390 |
| | 58 4-Bromophenyl-phenylether | 248 | 4.935 | 4.929 | (0.947) | 43832 | 42.8849 | 1430 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppm) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|---|---|
| | 59 Hexachlorobenzene | 284 | 4.982 | 4.976 | (0.956) | 47246 | 39.1831 | 1310 |
| | 60 Pentachlorophenol + | 266 | 5.111 | 5.105 | (0.981) | 39107 | 52.6467 | 1750 |
| * | 61 Phenanthrene-d10 | 188 | 5.211 | 5.205 | (1.000) | 169802 | 40.0000 | |
| | 62 Phenanthrene | 178 | 5.223 | 5.217 | (1.002) | 804919 | 171.661 | 5720(R) |
| | 63 Anthracene | 178 | 5.252 | 5.252 | (1.008) | 303920 | 66.5014 | 2220(R) |
| | 64 Carbazole | 167 | 5.364 | 5.358 | (1.029) | 318012 | 75.7076 | 2520(R) |
| | 65 Di-n-butylphthalate | 149 | 5.576 | 5.570 | (1.070) | 253539 | 51.1282 | 1700 |
| | 67 Fluoranthene + | 202 | 6.011 | 5.993 | (1.153) | 1472707 | 301.722 | 10100(AR) |
| | 69 Pyrene | 202 | 6.188 | 6.176 | (0.817) | 1230417 | 132.684 | 4420(R) |
| $ | 70 Terphenyl-d14 | 244 | 6.329 | 6.317 | (0.836) | 200700 | 33.6532 | 1120 |
| | 71 Butylbenzylphthalate | 149 | 6.858 | 6.840 | (0.906) | 139013 | 36.4843 | 1220 |
| | 72 Benzo(a)anthracene | 228 | 7.558 | 7.517 | (0.998) | 1030836 | 129.466 | 4320(R) |
| * | 74 Chrysene-d12 | 240 | 7.570 | 7.529 | (1.000) | 298233 | 40.0000 | |
| | 76 bis(2-Ethylhexyl)phthalate | 149 | 7.729 | 7.693 | (1.021) | 711074 | 147.280 | 4910(R) |
| | 75 Chrysene | 228 | 7.605 | 7.564 | (1.005) | 1136456 | 140.788 | 4690(RH) |
| | 77 Di-n-octylphthalate + | 149 | 8.970 | 8.911 | (1.185) | 422665 | 55.0401 | 1830(H) |
| | 78 Benzo(b)fluoranthene | 252 | 9.546 | 9.411 | (0.940) | 2215628 | 156.358 | 5210(RM2H) |
| | 79 Benzo(k)fluoranthene | 252 | 9.564 | 9.464 | (0.942) | 968478 | 60.6607 | 2020(M2H) |
| | 80 Benzo(a)pyrene + | 252 | 9.993 | 9.981 | (0.984) | 602005 | 42.9588 | 1430(H) |
| * | 81 Perylene-d12 | 264 | 10.152 | 10.070 | (1.000) | 569852 | 40.0000 | (H) |
| | 82 Indeno(1,2,3-cd)pyrene | 276 | 11.246 | 11.169 | (1.108) | 1536764 | 113.175 | 3770(RH) |
| | 83 Dibenzo(a,h)anthracene | 278 | 11.264 | 11.187 | (1.109) | 973254 | 62.8960 | 2100(H) |
| | 84 Benzo(g,h,i)perylene | 276 | 11.464 | 11.381 | (1.129) | 1283074 | 81.4867 | 2720(RH) |
| M | 66 Total Methylphenol | 108 | | | | 136331 | 90.8144 | 3030 |
| | 91 Acetophenone | 105 | 2.741 | 2.741 | (1.091) | 87212 | 41.1888 | 1370 |
| | 155 Benzaldehyde | 77 | 2.276 | 2.282 | (0.906) | 27265 | 60.1747 | 2010 |
| | 156 Caprolactam | 113 | 3.511 | 3.505 | (1.083) | 18681 | 52.6441 | 1750 |
| | 157 Biphenyl | 154 | 3.952 | 3.946 | (1.220) | 159634 | 44.6533 | 1490 |
| | 158 Atrazine | 200 | 5.052 | 5.040 | (0.970) | 33245 | 49.3183 | 1640 |

QC Flag Legend

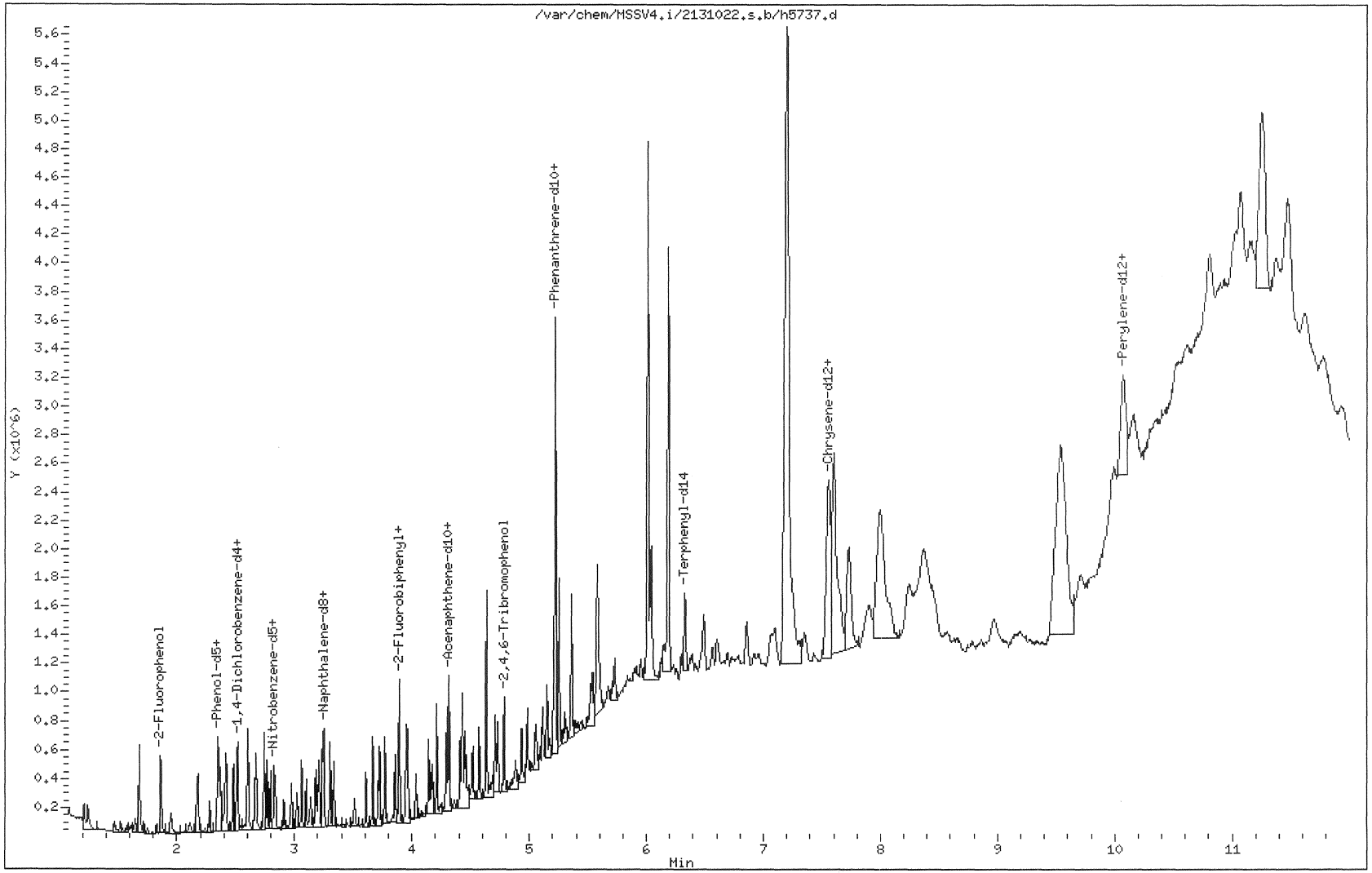
A - Target compound detected but, quantitated amount exceeded maximum amount.
R - Spike/Surrogate failed recovery limits.
M2- Compound response manually integrated because Target system integrated incorrectly.
H - Operator selected an alternate compound hit.

Data File: /var/chem/MSSV4.i/2131022.s.b/h5737.d
Date : 22-OCT-2013 16:51
Client ID: 21310171201
Sample Info: 1245521*MS
Volume Injected (uL): 1.0
Column phase: RTX-5MS-30M

Instrument: MSSV4.i

Operator: hcp
Column diameter: 0.25



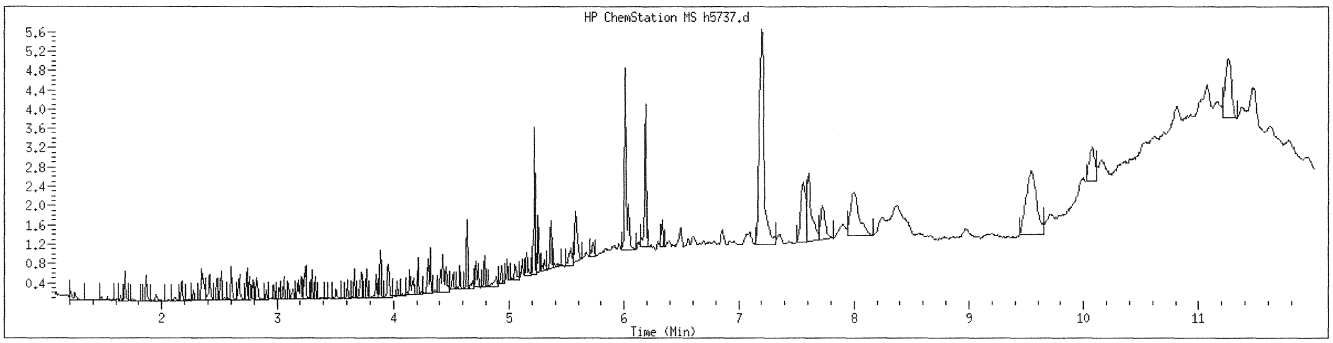



21310171 2 538

Data file : /var/chem/MSSV4.i/2131022.s.b/h5737.d Page: 1
Report Date: 10/24/2013 09:56

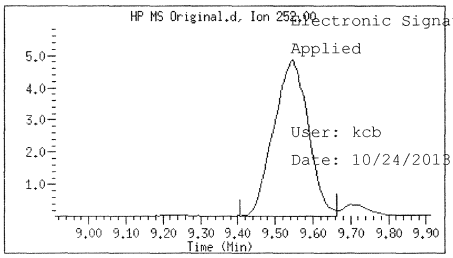
MANUAL INTEGRATION GRAPHIC REPORT

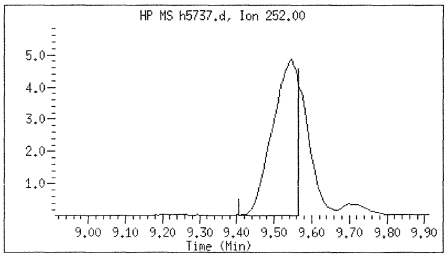
Lab ID : 1245521 SampleType : MS
Injection Date: 10/22/2013 16:51 Instrument : MSSV4.i
Operator : hcp
Sample Info : 1245521*MS
Misc Info : 21310171201*MSSV~10019~*101712*30.0-1*518149*
Method : /var/chem/MSSV4.i/2131022.s.b/8270CE_04.m
Dilution : 1.00
Matrix : SOIL
Integrator : HP RTE Compound Sublist: SA8270



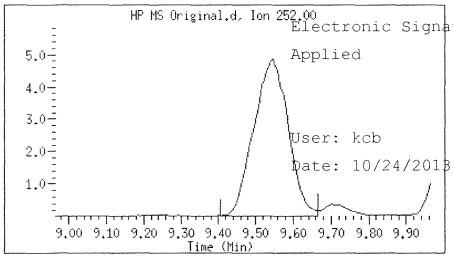

Original Final

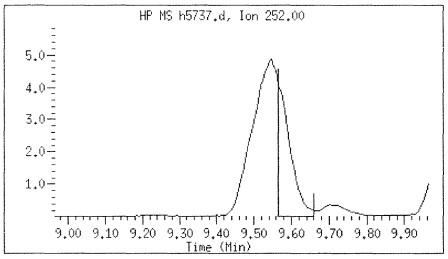
78 Benzo(b)fluoranthene CAS#: 205-99-2 Reason: M3




79 Benzo(k)fluoranthene CAS#: 207-08-9 Reason: M3



1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: RTX-5MS-30 ID: .25 (mm)

Concentrated Extract Volume: 1000 ( µL )

Injection Volume: 1.0 ( µL )

GPC Cleanup: (Y/N) N pH:

*CONCENTRATION UNITS: ug/kg*

Sample ID: RS-COMP1-101613MSDDL

Contract:

Lab File ID: 2131023/h5757

Lab Sample ID: 1245522DL

Date Collected: 10/16/13 Time: 1600

Date Received: 10/17/13

Date Extracted: 10/22/13

Date Analyzed: 10/23/13 Time: 1308

Dilution Factor: 10 Analyst: HCP

Prep Method: 3550B

Analytical Method: SW-846 8270D

Instrument ID: MSSV4

Prep Batch: 518149 Analytical Batch: 518409

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 205-99-2 | Benzo(b)fluoranthene | 4110 | | 79.9 | 818 | 4040 |
| 207-08-9 | Benzo(k)fluoranthene | 2700 | J | 62.5 | 408 | 4040 |
| 191-24-2 | Benzo(g,h,i)perylene | 3980 | J | 61.2 | 205 | 4040 |
| 50-32-8 | Benzo(a)pyrene | 3460 | J | 50.7 | 408 | 4040 |
| 53-70-3 | Dibenz(a,h)anthracene | 2700 | J | 58.1 | 205 | 4040 |
| 206-44-0 | Fluoranthene | 6900 | | 65.8 | 205 | 4040 |
| 193-39-5 | Indeno(1,2,3-cd)pyrene | 4560 | | 97.4 | 408 | 4040 |

GCAL, Inc.

BNA QUANT AND RATIO REPORT

Data file : /var/chem/MSSV4.i/2131023.s.b/h5757.d
Lab Smp Id: 1245522 Client Smp ID: 21310171201
Inj Date : 23-OCT-2013 13:08
Operator : hcp Inst ID: MSSV4.i
Smp Info : 1245522*MSD
Misc Info : 21310171201*MSSV~10023~*101712*30.0-1X10*518149*
Comment :
Method : /var/chem/MSSV4.i/2131023.s.b/8270D_04.m
Meth Date : 23-Oct-2013 12:08 hcp Quant Type: ISTD
Cal Date : 09-JUL-2013 00:02 Cal File: h2759x.d
Als bottle: 6 QC Sample: MSD
Dil Factor: 10.00000
Integrator: HP RTE Compound Sublist: SA8270.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula:
Amt * DF * (Uf * Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 10.00000 | Dilution Factor |
| Uf | 1.00000 | ng unit correction factor |
| Vt | 1000.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppm) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|---|
| 2 Pyridine | 79 | 1.253 | 1.217 | (0.501) | 6387 | 3.28978 | 1100 |
| 1 n-Nitrosodimethylamine | 42 | 1.206 | 1.194 | (0.482) | 7444 | 8.99585 | 3000(R) |
| $ 3 2-Fluorophenol | 112 | 1.847 | 1.841 | (0.739) | 17569 | 9.28744 | 3100 |
| $ 4 Phenol-d5 | 99 | 2.335 | 2.329 | (0.934) | 19243 | 9.41941 | 3140 |
| 6 Phenol + | 94 | 2.341 | 2.335 | (0.936) | 9775 | 4.22616 | 1410 |
| 7 bis(-2-Chloroethyl)Ether | 63 | 2.358 | 2.352 | (0.944) | 5337 | 4.74392 | 1580 |
| 8 2-Chlorophenol | 128 | 2.405 | 2.399 | (0.962) | 8589 | 4.40584 | 1470 |
| 9 1,3-Dichlorobenzene | 146 | 2.470 | 2.470 | (0.988) | 8901 | 4.04477 | 1350 |
| * 10 1,4-Dichlorobenzene-d4 | 152 | 2.500 | 2.499 | (1.000) | 58454 | 40.0000 | |
| 11 1,4-Dichlorobenzene + | 146 | 2.511 | 2.511 | (1.005) | 9071 | 4.06849 | 1360 |
| 12 Benzyl alcohol | 108 | 2.594 | 2.588 | (1.038) | 4381 | 4.17104 | 1390 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppm) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|---|---|
| | 13 1,2-Dichlorobenzene | 146 | 2.600 | 2.593 | (1.040) | 8464 | 4.00964 | 1340 |
| | 15 2-Methylphenol | 107 | 2.670 | 2.664 | (1.068) | 6545 | 3.96308 | 1320 |
| | 14 Bis(2-chloroisopropyl)ether | 45 | 2.658 | 2.652 | (1.064) | 8095 | 4.47842 | 1490 |
| | 17 3- & 4-Methylphenol | 107 | 2.758 | 2.752 | (1.104) | 9387 | 5.53632 | 1850 |
| | 16 N-Nitroso-di-n-propylamine++ | 70 | 2.735 | 2.729 | (1.094) | 5260 | 4.44773 | 1480 |
| | 18 Hexachloroethane | 117 | 2.782 | 2.782 | (1.113) | 3294 | 4.05436 | 1350 |
| $ | 19 Nitrobenzene-d5 | 82 | 2.817 | 2.811 | (0.872) | 7713 | 4.54924 | 1520 |
| | 20 Nitrobenzene | 77 | 2.829 | 2.823 | (0.876) | 6478 | 3.93101 | 1310 |
| | 21 Isophorone | 82 | 2.970 | 2.964 | (0.920) | 11889 | 4.55390 | 1520 |
| | 22 2-Nitrophenol + | 139 | 3.017 | 3.011 | (0.934) | 4433 | 4.46583 | 1490 |
| | 23 2,4-Dimethyphenol | 107 | 3.053 | 3.052 | (0.945) | 7752 | 4.49016 | 1500 |
| | 24 bis(-2-Chloroethoxy)methane | 93 | 3.094 | 3.088 | (0.958) | 8227 | 4.49956 | 1500 |
| | 25 Benzoic Acid | 122 | 3.111 | 3.135 | (0.964) | 3878 | 3.83238 | 1280 |
| | 26 2,4-Dichlorophenol + | 162 | 3.176 | 3.170 | (0.984) | 6618 | 4.46451 | 1490 |
| | 27 1,2,4-Trichlorobenzene | 180 | 3.200 | 3.199 | (0.991) | 7262 | 4.37745 | 1460 |
| * | 28 Naphthalene-d8 | 136 | 3.229 | 3.229 | (1.000) | 204361 | 40.0000 | |
| | 29 Naphthalene | 128 | 3.241 | 3.240 | (1.004) | 23861 | 4.49626 | 1500 |
| | 30 4-Chloroaniline | 127 | 3.288 | 3.282 | (1.018) | 6600 | 3.82420 | 1270 |
| | 31 Hexachlorobutadiene + | 225 | 3.323 | 3.323 | (1.029) | 4025 | 3.73745 | 1250 |
| | 32 4-Chloro-3-Methylphenol + | 107 | 3.600 | 3.599 | (1.115) | 5993 | 4.44473 | 1480 |
| | 33 2-Methylnaphthalene | 142 | 3.658 | 3.658 | (1.133) | 14877 | 4.57787 | 1530 |
| | 145 1-Methylnapthalene | 142 | 3.717 | 3.717 | (1.151) | 11819 | 3.78885 | 1260 |
| | 34 Hexachlorocyclopentadiene ++ | 237 | 3.758 | 3.758 | (0.877) | 2190 | 1.98474 | 662 |
| | 35 2,4,6-Trichlorophenol + | 196 | 3.847 | 3.840 | (0.897) | 4685 | 4.72309 | 1570 |
| | 36 2,4,5-Trichlorphenol | 196 | 3.882 | 3.876 | (0.905) | 4205 | 4.11079 | 1370 |
| $ | 37 2-Fluorobiphenyl | 172 | 3.882 | 3.882 | (0.905) | 16709 | 4.76806 | 1590 |
| | 38 2-Chloronaphthalene | 162 | 3.952 | 3.952 | (0.922) | 12979 | 4.38966 | 1460(M1) |
| | 39 2-Nitroaniline | 138 | 4.029 | 4.023 | (0.940) | 4845 | 5.06703 | 1690 |
| | 40 Dimethylphthalate | 163 | 4.135 | 4.135 | (0.964) | 14526 | 4.50295 | 1500(M1) |
| | 41 2,6-Dinitrotoluene | 165 | 4.170 | 4.170 | (0.973) | 3474 | 4.88435 | 1630 |
| | 42 Acenaphthylene | 152 | 4.205 | 4.205 | (0.981) | 22471 | 4.91749 | 1640 |
| | 43 3-Nitroaniline | 138 | 4.282 | 4.276 | (0.999) | 3244 | 4.54105 | 1510 |
| * | 44 Acenaphthene-d10 | 164 | 4.288 | 4.287 | (1.000) | 104406 | 40.0000 | |
| | 45 Acenaphthene + | 153 | 4.311 | 4.311 | (1.005) | 14777 | 4.98304 | 1660 |
| | 46 2,4-Dinitrophenol ++ | 184 | 4.352 | 4.346 | (1.015) | 1058 | 2.01604 | 672 |
| | 49 4-Nitrophenol ++ | 109 | 4.429 | 4.423 | (1.033) | 2240 | 5.38740 | 1800 |
| | 47 Dibenzofuran | 168 | 4.417 | 4.417 | (1.030) | 20073 | 4.93063 | 1640 |
| | 48 2,4-Dinitrotoluene | 165 | 4.423 | 4.423 | (1.032) | 4369 | 4.70581 | 1570 |
| | 50 Diethylphthalate | 149 | 4.564 | 4.564 | (1.064) | 14049 | 4.66202 | 1550 |
| | 52 4-Chlorophenyl-phenylether | 204 | 4.623 | 4.629 | (1.078) | 7409 | 4.67570 | 1560 |
| | 51 Fluorene | 166 | 4.623 | 4.623 | (1.078) | 17975 | 5.54375 | 1850 |
| | 53 4-Nitroaniline | 138 | 4.652 | 4.652 | (1.085) | 3538 | 5.15533 | 1720 |
| | 54 4,6-Dinitro-o-cresol | 198 | 4.676 | 4.676 | (0.899) | 1760 | 2.77857 | 926 |
| | 55 N-nitrosodiphenylamine (1)+ | 169 | 4.699 | 4.699 | (0.904) | 11914 | 5.04462 | 1680 |
| | 56 Azobenzene | 77 | 4.723 | 4.723 | (0.908) | 11935 | 4.43715 | 1480 |
| $ | 57 2,4,6-Tribromophenol | 332 | 4.776 | 4.776 | (1.114) | 5179 | 9.46974 | 3160 |
| | 58 4-Bromophenyl-phenylether | 248 | 4.923 | 4.923 | (0.947) | 4055 | 4.14865 | 1380 |

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppm) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|---|
| 59 Hexachlorobenzene | 284 | 4.970 | 4.970 | (0.956) | 5133 | 4.70605 | 1570 |
| 60 Pentachlorophenol + | 266 | 5.099 | 5.099 | (0.981) | 3088 | 4.37428 | 1460 |
| * 61 Phenanthrene-d10 | 188 | 5.199 | 5.199 | (1.000) | 161591 | 40.0000 | |
| 62 Phenanthrene | 178 | 5.211 | 5.211 | (1.002) | 55233 | 12.4622 | 4150(R) |
| 63 Anthracene | 178 | 5.241 | 5.246 | (1.008) | 26019 | 5.88972 | 1960 |
| 64 Carbazole | 167 | 5.352 | 5.352 | (1.029) | 25006 | 6.12562 | 2040(R) |
| 65 Di-n-butylphthalate | 149 | 5.564 | 5.564 | (1.070) | 22314 | 4.61768 | 1540 |
| 67 Fluoranthene + | 202 | 5.988 | 5.987 | (1.152) | 80341 | 16.8828 | 5630(R) |
| 68 Benzidine | 184 | 6.135 | 6.105 | (0.816) | 128 | 0.24326 | 81.1 |
| 69 Pyrene | 202 | 6.164 | 6.170 | (0.820) | 71551 | 11.7776 | 3930(R) |
| $ 70 Terphenyl-d14 | 244 | 6.311 | 6.311 | (0.840) | 15878 | 3.97966 | 1330 |
| 71 Butylbenzylphthalate | 149 | 6.829 | 6.829 | (0.908) | 11379 | 4.37230 | 1460 |
| 73 3,3'-Dichlorobenzidine | 252 | 7.511 | 7.505 | (0.999) | 2165 | 1.34442 | 448(R) |
| 72 Benzo(a)anthracene | 228 | 7.505 | 7.511 | (0.998) | 51975 | 9.72843 | 3240(R) |
| * 74 Chrysene-d12 | 240 | 7.517 | 7.523 | (1.000) | 199519 | 40.0000 | |
| 76 bis(2-Ethylhexyl)phthalate | 149 | 7.682 | 7.681 | (1.022) | 22548 | 6.87113 | 2290(R) |
| 75 Chrysene | 228 | 7.552 | 7.558 | (1.005) | 55866 | 10.2670 | 3420(R) |
| 77 Di-n-octylphthalate + | 149 | 8.899 | 8.899 | (1.184) | 27841 | 5.47921 | 1830 |
| 78 Benzo(b)fluoranthene | 252 | 9.405 | 9.405 | (0.935) | 71447 | 10.0404 | 3350(R) |
| 79 Benzo(k)fluoranthene | 252 | 9.452 | 9.458 | (0.939) | 55458 | 6.60572 | 2200(R) |
| 80 Benzo(a)pyrene + | 252 | 9.976 | 9.975 | (0.991) | 60240 | 8.46678 | 2820(R) |
| * 81 Perylene-d12 | 264 | 10.064 | 10.064 | (1.000) | 287027 | 40.0000 | |
| 82 Indeno(1,2,3-cd)pyrene | 276 | 11.164 | 11.164 | (1.109) | 72798 | 11.1686 | 3720(RM2) |
| 83 Dibenzo(a,h)anthracene | 278 | 11.187 | 11.187 | (1.112) | 51065 | 6.60341 | 2200(RM2) |
| 84 Benzo(g,h,i)perylene | 276 | 11.375 | 11.375 | (1.130) | 82964 | 9.75792 | 3250(R) |
| M 66 Total Methylphenol | 108 | | | | 15932 | 9.52009 | 3170 |
| 91 Acetophenone | 105 | 2.735 | 2.729 | (1.094) | 9561 | 4.37364 | 1460 |
| 155 Benzaldehyde | 77 | 2.270 | 2.270 | (0.908) | 3407 | 10.1672 | 3390(R) |
| 156 Caprolactam | 113 | 3.494 | 3.499 | (1.082) | 2026 | 5.25017 | 1750 |
| 157 Biphenyl | 154 | 3.941 | 3.940 | (1.220) | 17017 | 4.32861 | 1440 |
| 158 Atrazine | 200 | 5.035 | 5.035 | (0.968) | 3717 | 5.58747 | 1860 |
| 174 1,4-Dioxane | 88 | 1.100 | 1.076 | (0.440) | 497 | 0.64149 | 214 |

QC Flag Legend

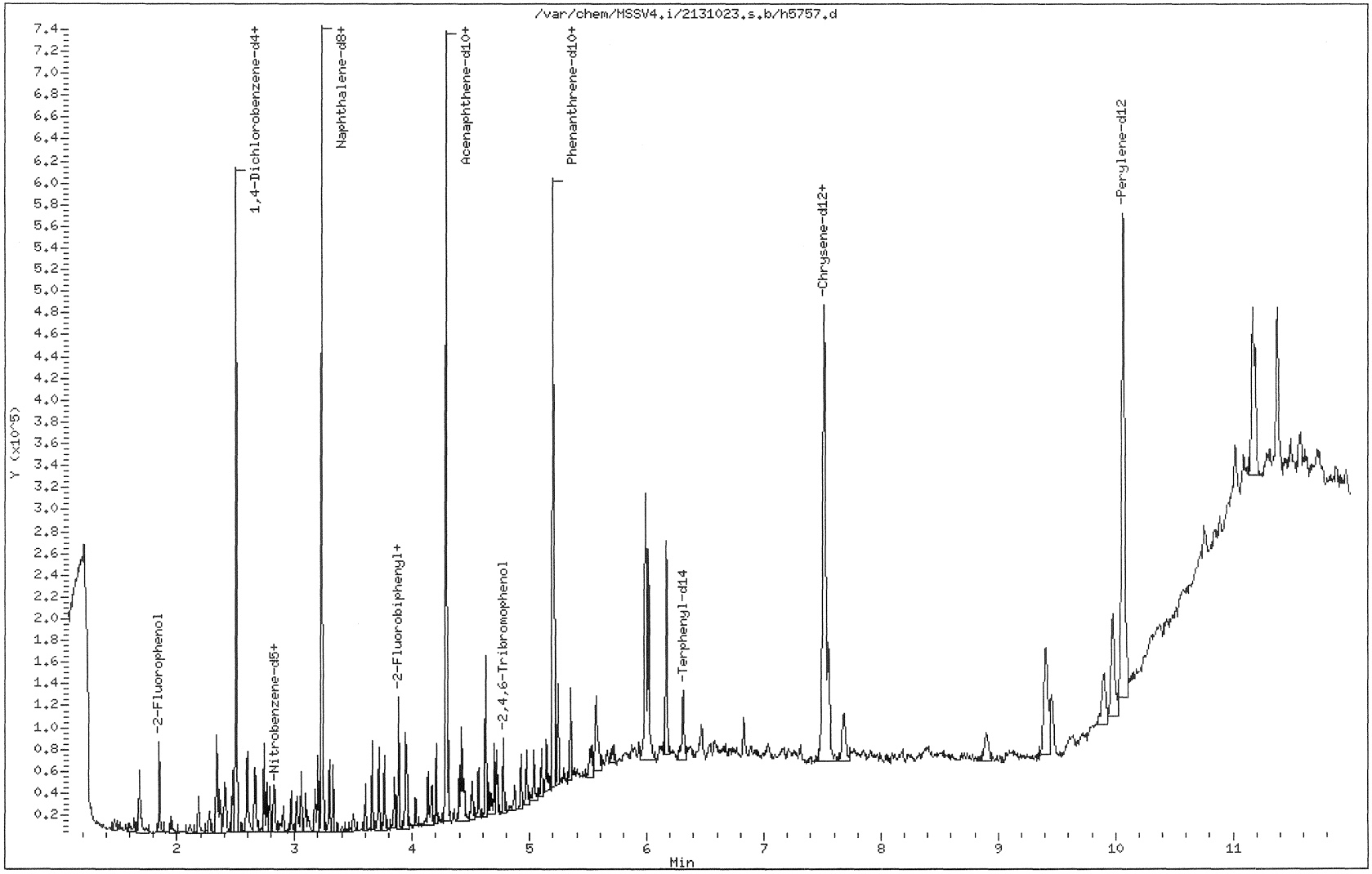
R - Spike/Surrogate failed recovery limits.
M1- Compound response manually integrated because Target system did not integrate.
M2- Compound response manually integrated because Target system integrated incorrectly.

Data File: /var/chem/MSSV4.i/2131023.s.b/h5757.d
Date : 23-OCT-2013 13:08
Client ID: 21310171201
Sample Info: 1245522*MSD
Volume Injected (uL): 1.0
Column phase: RTX-5MS-30M

Instrument: MSSV4.i

Operator: hcp
Column diameter: 0.25

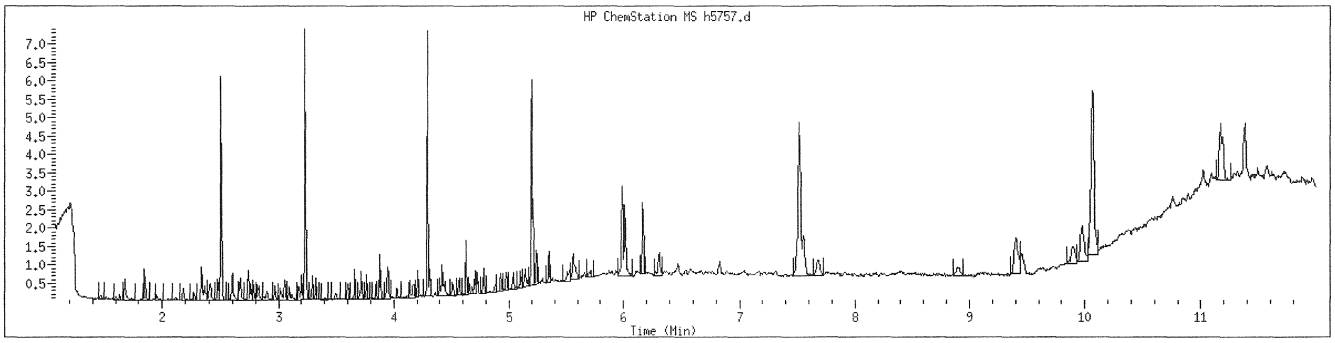




Data file : /var/chem/MSSV4.i/2131023.s.b/h5757.d Page: 1
Report Date: 10/24/2013 11:33

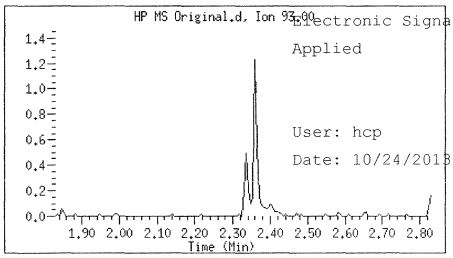
MANUAL INTEGRATION GRAPHIC REPORT

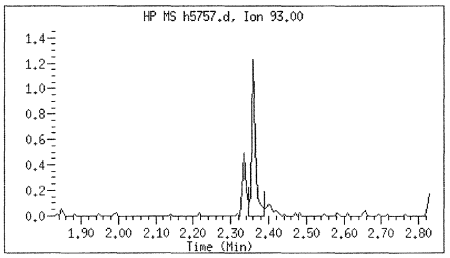
Lab ID : 1245522 SampleType : MSD
Injection Date: 10/23/2013 13:08 Instrument : MSSV4.i
Operator : hcp
Sample Info : 1245522*MSD
Misc Info : 21310171201*MSSV~10023~*101712*30.0-1X10*518149*
Method : /var/chem/MSSV4.i/2131023.s.b/8270D_04.m
Dilution : 10.0
Matrix : SOIL
Integrator : HP RTE Compound Sublist: SA8270



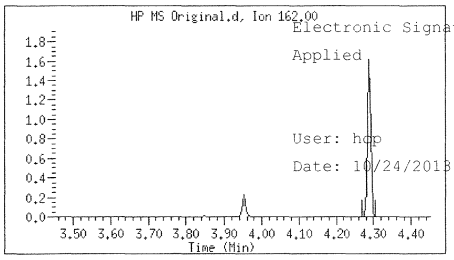

Original Final

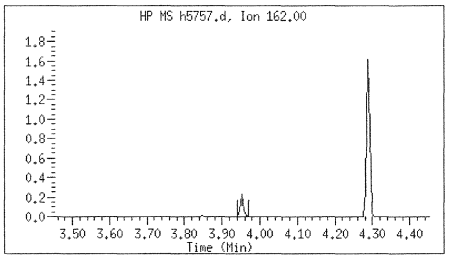
5 Aniline CAS#: 62-53-3 Reason: M1



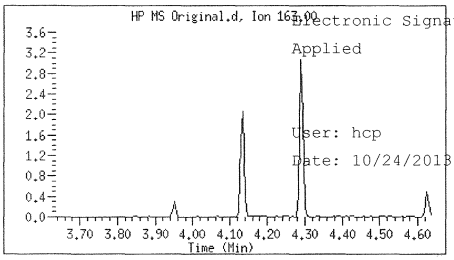

38 2-Chloronaphthalene CAS#: 91-58-7 Reason: M1

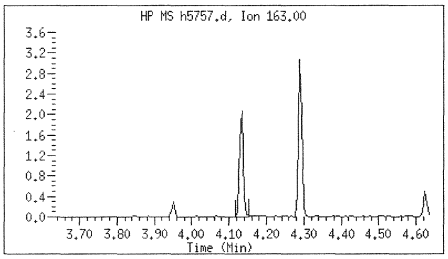


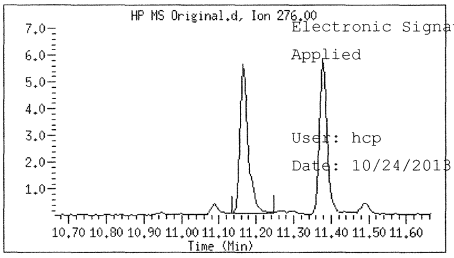
Original Final

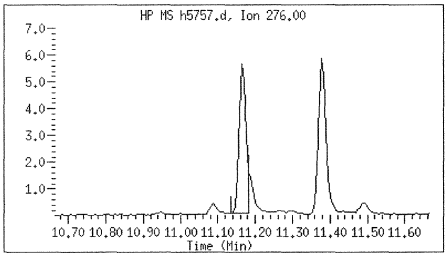
40 Dimethylphthalate CAS#: 131-11-3 Reason: M1



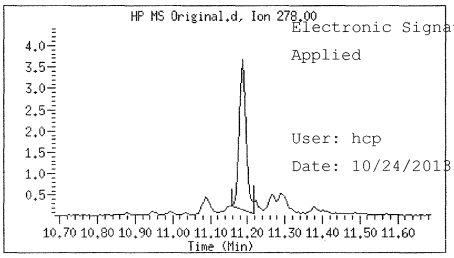



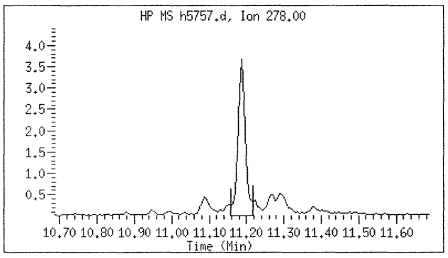

82 Indeno(1,2,3-cd)pyrene CAS#: 193-39-5 Reason: M3




83 Dibenzo(a,h)anthracene CAS#: 53-70-3 Reason: M3




M2 - Target system integrated incorrectly

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: RTX-5MS-30 ID: .25 (mm)

Concentrated Extract Volume: 1000 ( µL )

Injection Volume: 1.0 ( µL )

GPC Cleanup: (Y/N) N pH:

*CONCENTRATION UNITS: ug/kg*

Sample ID: RS-COMP1-101613MSD

Contract:

Lab File ID: 2131022/h5738

Lab Sample ID: 1245522

Date Collected: 10/16/13 Time: 1600

Date Received: 10/17/13

Date Extracted: 10/22/13

Date Analyzed: 10/22/13 Time: 1711

Dilution Factor: 1 Analyst: HCP

Prep Method: 3550B

Analytical Method: SW-846 8270D

Instrument ID: MSSV4

Prep Batch: 518149 Analytical Batch: 518302

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 208-96-8 | Acenaphthylene | 1950 | | 8.27 | 40.8 | 404 |
| 120-12-7 | Anthracene | 2640 | | 8.32 | 40.8 | 404 |
| 56-55-3 | Benzo(a)anthracene | 4070 | | 7.55 | 40.8 | 404 |
| 85-68-7 | Butylbenzylphthalate | 1380 | | 8.08 | 20.5 | 404 |
| 111-91-1 | Bis(2-Chloroethoxy)methane | 1810 | | 7.06 | 40.8 | 404 |
| 111-44-4 | Bis(2-Chloroethyl)ether | 2060 | | 15.7 | 40.8 | 404 |
| 117-81-7 | bis(2-ethylhexyl)phthalate | 2430 | | 5.74 | 40.8 | 404 |
| 101-55-3 | 4-Bromophenyl-phenylether | 1810 | | 12.9 | 40.8 | 404 |
| 86-74-8 | Carbazole | 2640 | | 7.82 | 40.8 | 404 |
| 7005-72-3 | 4-Chlorophenyl-phenylether | 1890 | | 9.00 | 40.8 | 404 |
| 218-01-9 | Chrysene | 4290 | | 8.76 | 40.8 | 404 |
| 132-64-9 | Dibenzofuran | 1900 | | 7.70 | 40.8 | 404 |
| 95-50-1 | 1,2-Dichlorobenzene | 1570 | | 8.40 | 40.8 | 404 |
| 541-73-1 | 1,3-Dichlorobenzene | 1540 | | 16.4 | 40.8 | 404 |
| 91-94-1 | 3,3'-Dichlorobenzidine | 408 | U | 38.7 | 408 | 809 |
| 120-83-2 | 2,4-Dichlorophenol | 1780 | | 11.6 | 81.8 | 404 |
| 84-66-2 | Diethylphthalate | 1960 | | 15.0 | 40.8 | 404 |
| 105-67-9 | 2,4-Dimethylphenol | 1880 | | 7.99 | 404 | 404 |
| 131-11-3 | Dimethyl-phthalate | 1880 | | 6.30 | 20.5 | 404 |
| 117-84-0 | Di-n-octylphthalate | 2210 | | 5.36 | 20.5 | 404 |
| 51-28-5 | 2,4-Dinitrophenol | 583 | J | 27.6 | 404 | 2020 |
| 606-20-2 | 2,6-Dinitrotoluene | 1900 | | 15.1 | 40.8 | 404 |
| 86-73-7 | Fluorene | 2140 | | 7.29 | 40.8 | 404 |
| 118-74-1 | Hexachlorobenzene | 1690 | | 15.7 | 81.8 | 404 |
| 87-68-3 | Hexachlorobutadiene | 1610 | | 10.7 | 40.8 | 404 |
| 77-47-4 | Hexachlorocyclopentadiene | 601 | | 85.8 | 205 | 404 |
| 67-72-1 | Hexachloroethane | 1500 | | 19.2 | 40.8 | 404 |
| 78-59-1 | Isophorone | 1810 | | 7.19 | 40.8 | 404 |
| 91-57-6 | 2-Methylnaphthalene | 1700 | | 5.83 | 40.8 | 404 |

FORM I SV-1

1B

SEMIVOLATILE ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: RTX-5MS-30 ID: .25 (mm)

Concentrated Extract Volume: 1000 ( µL )

Injection Volume: 1.0 ( µL )

GPC Cleanup: (Y/N) N pH:

*CONCENTRATION UNITS: ug/kg*

Sample ID: RS-COMP1-101613MSD

Contract:

Lab File ID: 2131022/h5738

Lab Sample ID: 1245522

Date Collected: 10/16/13 Time: 1600

Date Received: 10/17/13

Date Extracted: 10/22/13

Date Analyzed: 10/22/13 Time: 1711

Dilution Factor: 1 Analyst: HCP

Prep Method: 3550B

Analytical Method: SW-846 8270D

Instrument ID: MSSV4

Prep Batch: 518149 Analytical Batch: 518302

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 95-48-7 | o-Cresol | 1430 | | 12.5 | 40.8 | 404 |
| 91-20-3 | Naphthalene | 1700 | | 12.6 | 40.8 | 404 |
| 98-95-3 | Nitrobenzene | 1690 | | 21.1 | 40.8 | 404 |
| 88-75-5 | 2-Nitrophenol | 1700 | | 14.5 | 40.8 | 404 |
| 62-75-9 | N-Nitrosodimethylamine | 2130 | | 14.2 | 81.8 | 404 |
| 86-30-6 | N-Nitrosodiphenylamine | 1940 | | 8.56 | 40.8 | 404 |
| 85-01-8 | Phenanthrene | 4880 | | 9.29 | 40.8 | 404 |
| 95-95-4 | 2,4,5-Trichlorophenol | 1910 | | 12.7 | 81.8 | 404 |
| 88-06-2 | 2,4,6-Trichlorophenol | 1950 | | 14.2 | 205 | 404 |
| 110-86-1 | Pyridine | 1200 | | 28.6 | 205 | 404 |
| 99-09-2 | 3-Nitroaniline | 1270 | J | 5.50 | 81.8 | 2020 |
| 100-01-6 | 4-Nitroaniline | 1500 | J | 5.21 | 408 | 2020 |
| 84-74-2 | Di-n-butylphthalate | 2000 | | 7.82 | 20.5 | 404 |
| 88-74-4 | 2-Nitroaniline | 2030 | | 5.14 | 81.8 | 2020 |
| 91-58-7 | 2-Chloronaphthalene | 1750 | | 12.9 | 40.8 | 404 |
| 106-47-8 | 4-Chloroaniline | 1170 | | 7.77 | 40.8 | 404 |
| 1319-77-3M | m,p-Cresol | 2100 | | 15.2 | 205 | 404 |
| 534-52-1 | 2-Methyl-4,6-dinitrophenol | 598 | J | 21.8 | 404 | 2020 |
| 108-95-2 | Phenol | 1610 | | 11.2 | 40.8 | 404 |
| 95-57-8 | 2-Chlorophenol | 1680 | | 8.87 | 40.8 | 404 |
| 106-46-7 | 1,4-Dichlorobenzene | 1580 | | 10.8 | 40.8 | 404 |
| 621-64-7 | N-Nitroso-di-n-propylamine | 1720 | | 17.6 | 40.8 | 404 |
| 120-82-1 | 1,2,4-Trichlorobenzene | 1670 | | 12.9 | 40.8 | 404 |
| 59-50-7 | 4-Chloro-3-methylphenol | 1810 | | 9.09 | 81.8 | 404 |
| 83-32-9 | Acenaphthene | 2020 | | 12.4 | 40.8 | 404 |
| 100-02-7 | 4-Nitrophenol | 2070 | | 25.7 | 404 | 2020 |
| 121-14-2 | 2,4-Dinitrotoluene | 1840 | | 8.24 | 81.8 | 404 |
| 87-86-5 | Pentachlorophenol | 2110 | | 9.06 | 408 | 2020 |
| 129-00-0 | Pyrene | 3730 | | 5.67 | 40.8 | 404 |

FORM I SV-1

GCAL, Inc.

BNA QUANT AND RATIO REPORT

Data file : /var/chem/MSSV4.i/2131022.s.b/h5738.d
Lab Smp Id: 1245522 Client Smp ID: 21310171201
Inj Date : 22-OCT-2013 17:11
Operator : hcp Inst ID: MSSV4.i
Smp Info : 1245522*MSD
Misc Info : 21310171201*MSSV~10019~*101712*30.0-1*518149*
Comment :
Method : /var/chem/MSSV4.i/2131022.s.b/8270CE_04.m
Meth Date : 22-Oct-2013 10:36 hcp Quant Type: ISTD
Cal Date : 09-JUL-2013 00:02 Cal File: h2759x.d
Als bottle: 26 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SA8270.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * (Uf * Vt/(Vi * Ws * (100 - M)/100)) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | ng unit correction factor |
| Vt | 1000.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppm) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|---|
| 2 Pyridine | 79 | 1.241 | 1.229 | (0.494) | 57144 | 29.4710 | 982(H) |
| 1 n-Nitrosodimethylamine | 42 | 1.211 | 1.200 | (0.482) | 44016 | 52.0832 | 1740(H) |
| $ 3 2-Fluorophenol | 112 | 1.858 | 1.852 | (0.740) | 162229 | 84.8269 | 2830 |
| $ 4 Phenol-d5 | 99 | 2.346 | 2.335 | (0.934) | 180938 | 87.6066 | 2920 |
| 5 Aniline | 93 | 2.346 | 2.335 | (0.934) | 36715 | 14.0949 | 470 |
| 6 Phenol + | 94 | 2.352 | 2.341 | (0.937) | 92353 | 39.3409 | 1310 |
| 7 bis(-2-Chloroethyl)Ether | 63 | 2.364 | 2.364 | (0.941) | 57743 | 50.3491 | 1680 |
| 8 2-Chlorophenol | 128 | 2.417 | 2.405 | (0.963) | 80257 | 41.0769 | 1370 |
| 9 1,3-Dichlorobenzene | 146 | 2.482 | 2.482 | (0.988) | 83937 | 37.8801 | 1260 |
| * 10 1,4-Dichlorobenzene-d4 | 152 | 2.511 | 2.511 | (1.000) | 59096 | 40.0000 | |
| 11 1,4-Dichlorobenzene + | 146 | 2.517 | 2.517 | (1.002) | 86965 | 38.6897 | 1290 |
| 12 Benzyl alcohol | 108 | 2.599 | 2.599 | (1.035) | 45932 | 43.2556 | 1440 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppm) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|---|---|
| | 13 1,2-Dichlorobenzene | 146 | 2.605 | 2.605 | (1.037) | 81602 | 38.5310 | 1280 |
| | 15 2-Methylphenol | 108 | 2.676 | 2.670 | (1.066) | 58618 | 35.1960 | 1170 |
| | 14 Bis(2-chloroisopropyl)ether | 45 | 2.664 | 2.664 | (1.061) | 81116 | 44.4600 | 1480 |
| | 17 3- & 4-Methylphenol | 108 | 2.764 | 2.758 | (1.101) | 86350 | 51.3853 | 1710 |
| | 16 N-Nitroso-di-n-propylamine++ | 70 | 2.741 | 2.741 | (1.091) | 49581 | 42.1060 | 1400 |
| | 18 Hexachloroethane | 117 | 2.794 | 2.794 | (1.112) | 29664 | 36.5901 | 1220 |
| $ | 19 Nitrobenzene-d5 | 82 | 2.823 | 2.823 | (0.871) | 75016 | 43.9971 | 1470 |
| | 20 Nitrobenzene | 77 | 2.835 | 2.835 | (0.875) | 68191 | 41.4170 | 1380 |
| | 21 Isophorone | 82 | 2.976 | 2.976 | (0.918) | 115460 | 44.2501 | 1480 |
| | 22 2-Nitrophenol + | 139 | 3.023 | 3.023 | (0.933) | 41393 | 41.6719 | 1390 |
| | 23 2,4-Dimethyphenol | 107 | 3.064 | 3.058 | (0.946) | 78069 | 45.9506 | 1530 |
| | 24 bis(-2-Chloroethoxy)methane | 93 | 3.099 | 3.099 | (0.956) | 80167 | 44.3623 | 1480 |
| | 25 Benzoic Acid | 122 | 3.141 | 3.146 | (0.969) | 42198 | 41.4674 | 1380 |
| | 26 2,4-Dichlorophenol + | 162 | 3.182 | 3.176 | (0.982) | 63943 | 43.6175 | 1450 |
| | 27 1,2,4-Trichlorobenzene | 180 | 3.211 | 3.205 | (0.991) | 67975 | 40.6868 | 1360 |
| * | 28 Naphthalene-d8 | 136 | 3.241 | 3.241 | (1.000) | 205515 | 40.0000 | |
| | 29 Naphthalene | 128 | 3.252 | 3.252 | (1.004) | 222921 | 41.6898 | 1390 |
| | 30 4-Chloroaniline | 127 | 3.293 | 3.293 | (1.016) | 52085 | 28.5431 | 951 |
| | 31 Hexachlorobutadiene + | 225 | 3.329 | 3.329 | (1.027) | 43788 | 39.3529 | 1310 |
| | 32 4-Chloro-3-Methylphenol + | 107 | 3.611 | 3.605 | (1.114) | 59056 | 44.5373 | 1480 |
| | 33 2-Methylnaphthalene | 142 | 3.670 | 3.664 | (1.133) | 141808 | 41.6071 | 1390 |
| | 145 1-Methylnapthalene | 142 | 3.729 | 3.723 | (1.151) | 116341 | 36.9641 | 1230 |
| | 34 Hexachlorocyclopentadiene ++ | 237 | 3.770 | 3.770 | (0.877) | 15730 | 14.6986 | 490 |
| | 35 2,4,6-Trichlorophenol + | 196 | 3.852 | 3.852 | (0.896) | 47280 | 47.6901 | 1590 |
| | 36 2,4,5-Trichlorphenol | 196 | 3.888 | 3.882 | (0.904) | 47997 | 46.6882 | 1560 |
| $ | 37 2-Fluorobiphenyl | 172 | 3.893 | 3.888 | (0.906) | 169641 | 47.1341 | 1570 |
| | 38 2-Chloronaphthalene | 162 | 3.964 | 3.958 | (0.922) | 129780 | 42.7642 | 1430 |
| | 39 2-Nitroaniline | 138 | 4.035 | 4.035 | (0.938) | 48910 | 49.8048 | 1660 |
| | 40 Dimethylphthalate | 163 | 4.141 | 4.141 | (0.963) | 151336 | 45.9233 | 1530 |
| | 41 2,6-Dinitrotoluene | 165 | 4.176 | 4.176 | (0.971) | 32953 | 46.4277 | 1550 |
| | 42 Acenaphthylene | 152 | 4.211 | 4.211 | (0.979) | 228341 | 47.7535 | 1590 |
| | 43 3-Nitroaniline | 138 | 4.288 | 4.282 | (0.997) | 23174 | 31.1231 | 1040 |
| * | 44 Acenaphthene-d10 | 164 | 4.299 | 4.299 | (1.000) | 107229 | 40.0000 | |
| | 45 Acenaphthene + | 153 | 4.317 | 4.317 | (1.004) | 151525 | 49.4031 | 1650 |
| | 46 2,4-Dinitrophenol ++ | 184 | 4.358 | 4.352 | (1.014) | 6777 | 14.2918 | 476 |
| | 49 4-Nitrophenol ++ | 109 | 4.440 | 4.423 | (1.033) | 21681 | 50.7719 | 1690(H) |
| | 47 Dibenzofuran | 168 | 4.429 | 4.423 | (1.030) | 194932 | 46.6310 | 1550 |
| | 48 2,4-Dinitrotoluene | 165 | 4.429 | 4.429 | (1.030) | 41715 | 44.9872 | 1500 |
| | 50 Diethylphthalate | 149 | 4.570 | 4.570 | (1.063) | 146663 | 47.8511 | 1600 |
| | 52 4-Chlorophenyl-phenylether | 204 | 4.635 | 4.635 | (1.078) | 74623 | 46.1495 | 1540 |
| | 51 Fluorene | 166 | 4.635 | 4.635 | (1.078) | 176270 | 52.5078 | 1750 |
| | 53 4-Nitroaniline | 138 | 4.664 | 4.658 | (1.085) | 25844 | 36.6666 | 1220 |
| | 54 4,6-Dinitro-o-cresol | 198 | 4.688 | 4.682 | (0.900) | 9900 | 14.6333 | 488 |
| | 55 N-nitrosodiphenylamine (1)+ | 169 | 4.711 | 4.705 | (0.904) | 117492 | 47.4606 | 1580 |
| | 56 Azobenzene | 77 | 4.735 | 4.729 | (0.909) | 132284 | 46.4342 | 1550 |
| $ | 57 2,4,6-Tribromophenol | 332 | 4.788 | 4.782 | (1.114) | 55081 | 98.0635 | 3270 |
| | 58 4-Bromophenyl-phenylether | 248 | 4.935 | 4.929 | (0.947) | 45961 | 44.4367 | 1480 |

| | Compounds | QUANT SIG MASS | RT | EXP RT | REL RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( ppm) | FINAL (ug/Kg) |
|---|---|---|---|---|---|---|---|---|
| | 59 Hexachlorobenzene | 284 | 4.982 | 4.976 | (0.956) | 50516 | 41.4001 | 1380 |
| | 60 Pentachlorophenol + | 266 | 5.111 | 5.105 | (0.981) | 38753 | 51.5391 | 1720 |
| * | 61 Phenanthrene-d10 | 188 | 5.211 | 5.205 | (1.000) | 171832 | 40.0000 | |
| | 62 Phenanthrene | 178 | 5.223 | 5.217 | (1.002) | 566663 | 119.422 | 3980(R) |
| | 63 Anthracene | 178 | 5.258 | 5.252 | (1.009) | 298087 | 64.4545 | 2150(R) |
| | 64 Carbazole | 167 | 5.364 | 5.358 | (1.029) | 274180 | 64.5016 | 2150(R) |
| | 65 Di-n-butylphthalate | 149 | 5.576 | 5.570 | (1.070) | 246044 | 49.0306 | 1630 |
| | 67 Fluoranthene + | 202 | 6.011 | 5.993 | (1.153) | 955590 | 193.464 | 6450(R) |
| | 69 Pyrene | 202 | 6.187 | 6.176 | (0.818) | 903025 | 91.0673 | 3040(R) |
| $ | 70 Terphenyl-d14 | 244 | 6.329 | 6.317 | (0.837) | 200511 | 31.4422 | 1050 |
| | 71 Butylbenzylphthalate | 149 | 6.858 | 6.840 | (0.907) | 138587 | 33.9565 | 1130 |
| | 72 Benzo(a)anthracene | 228 | 7.552 | 7.517 | (0.998) | 847081 | 99.4919 | 3320(RH) |
| * | 74 Chrysene-d12 | 240 | 7.564 | 7.529 | (1.000) | 318904 | 40.0000 | (H) |
| | 76 bis(2-Ethylhexyl)phthalate | 149 | 7.723 | 7.693 | (1.021) | 308518 | 59.4873 | 1980(H) |
| | 75 Chrysene | 228 | 7.605 | 7.564 | (1.005) | 905081 | 104.857 | 3500(RH) |
| | 77 Di-n-octylphthalate + | 149 | 8.964 | 8.911 | (1.185) | 444153 | 54.1106 | 1800(H) |
| | 78 Benzo(b)fluoranthene | 252 | 9.534 | 9.411 | (0.940) | 1612256 | 107.185 | 3570(RM2H) |
| | 79 Benzo(k)fluoranthene | 252 | 9.540 | 9.464 | (0.940) | 1030366 | 60.6620 | 2020(M2H) |
| | 80 Benzo(a)pyrene + | 252 | 9.987 | 9.981 | (0.984) | 467768 | 31.3942 | 1050(H) |
| * | 81 Perylene-d12 | 264 | 10.146 | 10.070 | (1.000) | 606254 | 40.0000 | (H) |
| | 82 Indeno(1,2,3-cd)pyrene | 276 | 11.240 | 11.169 | (1.108) | 1257590 | 87.4204 | 2910(RH) |
| | 83 Dibenzo(a,h)anthracene | 278 | 11.252 | 11.187 | (1.109) | 854318 | 52.0961 | 1740(H) |
| | 84 Benzo(g,h,i)perylene | 276 | 11.458 | 11.381 | (1.129) | 1060170 | 63.2875 | 2110(H) |
| M | 66 Total Methylphenol | 108 | | | | 144968 | 86.6538 | 2890 |
| | 91 Acetophenone | 105 | 2.741 | 2.741 | (1.091) | 91152 | 38.4340 | 1280 |
| | 155 Benzaldehyde | 77 | 2.276 | 2.282 | (0.906) | 27370 | 54.2049 | 1810 |
| | 156 Caprolactam | 113 | 3.511 | 3.505 | (1.083) | 19922 | 51.3359 | 1710 |
| | 157 Biphenyl | 154 | 3.952 | 3.946 | (1.220) | 171898 | 43.9681 | 1470 |
| | 158 Atrazine | 200 | 5.052 | 5.040 | (0.970) | 35338 | 51.8039 | 1730 |

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M2- Compound response manually integrated because
Target system integrated incorrectly.
H - Operator selected an alternate compound hit.

Data File: /var/chem/MSSV4.i/2131022.s.b/h5738.d

Page 1

Date : 22-OCT-2013 17:11

Client ID: 21310171201

Instrument: MSSV4.i

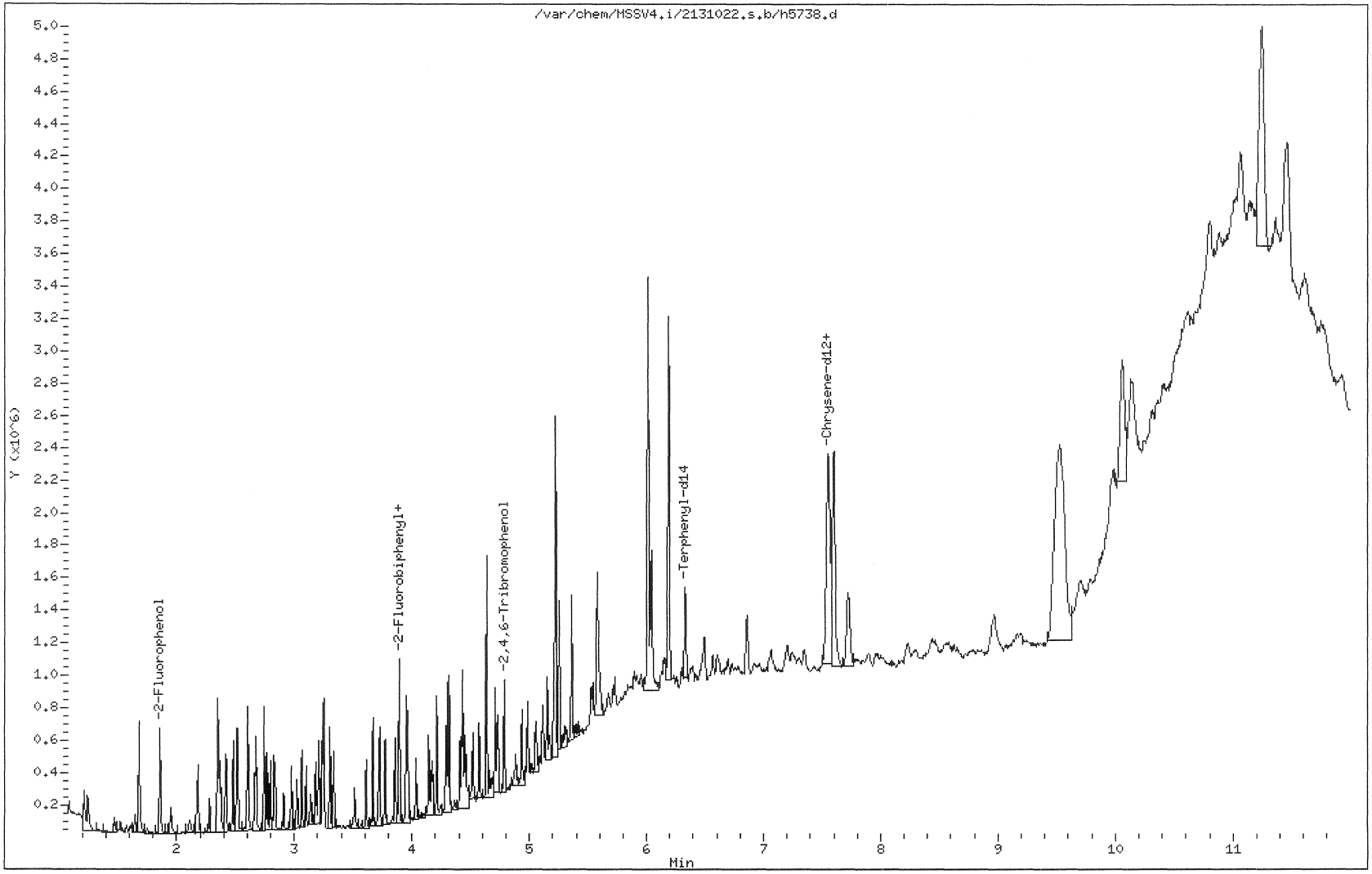
Sample Info: 1245522*MSD

Volume Injected (uL): 1.0

Operator: hcp

Column phase: RTX-5MS-30M

Column diameter: 0.25

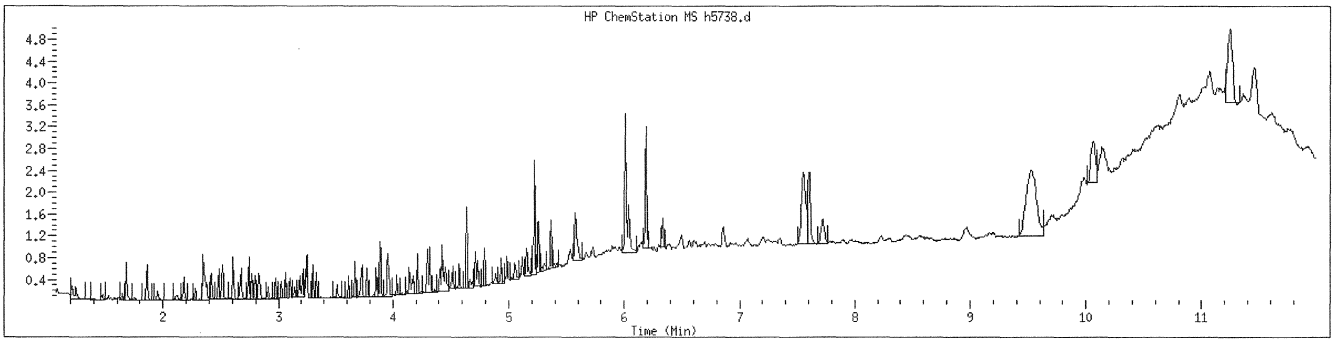



21310171 2 552

Data file : /var/chem/MSSV4.i/2131022.s.b/h5738.d Page: 1
Report Date: 10/24/2013 09:58

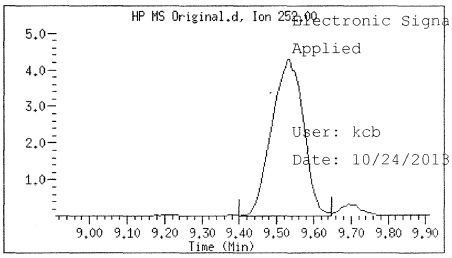
MANUAL INTEGRATION GRAPHIC REPORT

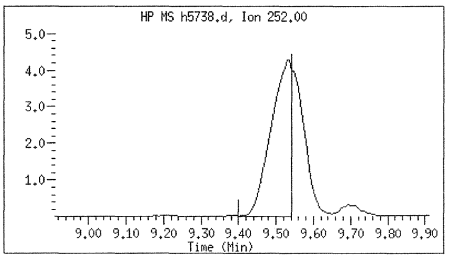
Lab ID : 1245522 SampleType : MSD
Injection Date: 10/22/2013 17:11 Instrument : MSSV4.i
Operator : hcp
Sample Info : 1245522*MSD
Misc Info : 21310171201*MSSV~10019~*101712*30.0-1*518149*
Method : /var/chem/MSSV4.i/2131022.s.b/8270CE_04.m
Dilution : 1.00
Matrix : SOIL
Integrator : HP RTE Compound Sublist: SA8270



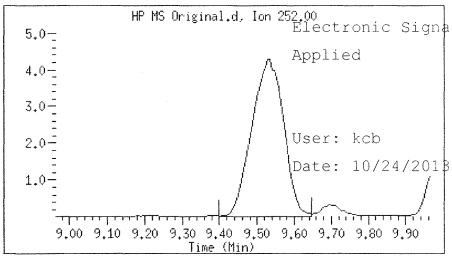

Original Final

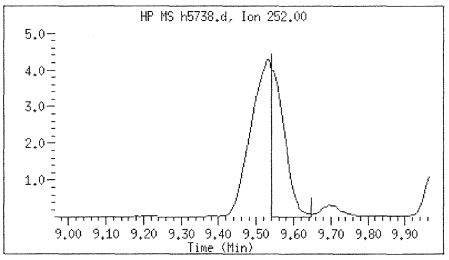
78 Benzo(b)fluoranthene CAS#: 205-99-2 Reason: M3




79 Benzo(k)fluoranthene CAS#: 207-08-9 Reason: M3



BASE NEUTRAL/ACID SAMPLE PREPARATION FORM

| | | | |
|---|---|---|---|
| EXTRACTION DATE/TIME: 10/22/13 | Start: 9:53 End: 12:55 | BATCH NO: | 518149 |
| MATRIX: | WATER ☐ SOIL ☑ OTHER ☐ | LEVEL: | LOW ☑ MEDIUM ☐ |

| | CLIENT | CLIENT ID | GCAL ID | INITIAL VOL/WT mL g | FINAL VOLUME (mL) | BN pH | Acid pH | SAMPLE TYPE | COMMENTS | METHOD |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | QC ACCOUNT | MB for HBN 518149 [EXTO/37071] | 1245518 | 30.0 | 1.0 | | | MB | - | LIQUID LIQUID/3520 |
| 2 | QC ACCOUNT | LCS for HBN 518149 [EXTO/37071 | 1245519 | 30.0 | 1.0 | | | LCS | - | |
| 3 | QC ACCOUNT | LCSD for HBN 518149 [EXTO/3707 | 1245520 | 30.0 | 1.0 | | | LCSD | - | SEPARATORY FUNNEL/3510 |
| 4 | 4380 | B&T SAND-SOURCE | 21310100605 | 30.0 | 1.0 | | | SAMPLE | - | |
| 5 | 4847 | RS-COMP1-101613 | 21310171201 | 30.0 | 1.0 | | | SAMPLE | - | SONICATOR/3550 ✓ |
| 6 | QC ACCOUNT | RS-COMP1-101613 (1244551MS) | 1245521 | 30.0 | 1.0 | | | MS | - | |
| 7 | QC ACCOUNT | RS-COMP1-101613 (1244551MSD) | 1245522 | 30.0 | 1.0 | | | MSD | - | SOXHLET/3540 |
| 8 | 4847 | RS-COMP2-101613 | 21310171203 | 30.0 | 1.0 | | | SAMPLE | - | |
| 9 | | | | | | | | | | GPC CLEANUP/3640 |
| 10 | | | | | | | | | | |
| 11 | | | | | | | | | | WASTE DILUTION/3580 |
| 12 | | | | | | | | | | |
| 13 | | | | | | | | | | TCLP EXTRACTION FLUID 1 |
| 14 | | | | | | | | | | |
| 15 | | | | | | | | | | TCLP EXTRACTION FLUID 2 |
| 16 | | | | | | | | | | |
| 17 | | | | | | | | | | MECL2/Acetone No: DH817 |
| 18 | | | | | | | | | | |
| 19 | | | | | | | | | | ACETONE LOT NO: |
| 20 | | | | | | | | | | |
| 21 | | | | | | | | | | MeCL2 Lot No: DJ158 |
| 22 | | | | | | | | | | |
| 23 | | | | | | | | | | Sodium Sulfate Lot No: 0000405109 |
| 24 | | | | | | | | | | |
| 25 | | | | | | | | | | |
| 26 | | | | | | | | | | |
| 27 | | | | | | | | | | |
| 28 | | | | | | | | | | |

COMMENTS: SAMPLE PREPARATION INCLUDE DETERMINATION OF SAMPLE VOLUME/WEIGHT, SOLVENT EXTRACTION AND EVAPORATION OF SOLVENT TO FINAL VOLUME

BALANCE ID: WB33557 TEMP: 100.8

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| SURROGATE ID | 583-1-8 | 8270 SPIKE ID | | 625 SPIKE ID | 576-5-3 | TECHNICIAN | DATE |
| VOLUME | 1.0 mL | VOLUME | | VOLUME | 1.0 mL | SAIC | 10/22/13 |
| CONCENTRATION | 50/100 ug/ml | CONCENTRATION | | CONCENTRATION | 50 ug/ml | | |
| NaOH | | ACID | | | | SUPERVISOR | DATE |
| SPIKE WITNESS | OLT | | | | | TES | 10/23/13 |

Revision 3, 10/04/2010

LABORATORY CHRONICLE: MSSV DEPARTMENT

Date: 30-AUG-2013
Instrument: MSSV4.i

| Standard | Conc ppm | Lot No. |
|---|---|---|
| DFTPP | 50 | |
| Int. Standard | 4000 | |

Inst. Conditions: _____

MISC: _____

| Sample ID | ClientName | DataFile | Wgt/Vol | Injection Time | Dil | Anal | ALS | Comments |
|---|---|---|---|---|---|---|---|---|
| 1100 | 48-13-13 | h4413.d | 0.00 ml | 30-AUG-2013 08:10 | 1.000 | dlb | 1 | all |
| 1100 | 48-13-13 | h4414c.d | 0.00 ml | 30-AUG-2013 11:07 | 1.000 | dlb | 1 | all |
| 1100 | 48-13-13 | h4414.d | 0.00 ml | 30-AUG-2013 11:07 | 1.000 | dlb | 1 | all |
| 1100 | 48-13-13 | h4414d.d | 0.00 ml | 30-AUG-2013 11:07 | 1.000 | dlb | 1 | all |
| 1100 | 48-13-13 | h4414x.d | 0.00 ml | 30-AUG-2013 11:07 | 1.000 | dlb | 1 | all |
| 1100 | 48-13-13 | h4414xd.d | 0.00 ml | 30-AUG-2013 11:07 | 1.000 | dlb | 1 | all |
| 1400 | 48-28-12 | h4415.d | 1000.00 ml | 30-AUG-2013 11:26 | 1.000 | dlb | 2 | 8270c |
| 1205 | 48-28-1 | h4416.d | 1000.00 ml | 30-AUG-2013 11:47 | 1.000 | dlb | 2 | 8270c |
| 1205 | 48-28-1 | h4416d.d | 1000.00 ml | 30-AUG-2013 11:47 | 1.000 | dlb | 2 | 8270c |
| 1205 | 48-28-1 | h4416x.d | 1000.00 ml | 30-AUG-2013 11:47 | 1.000 | dlb | 2 | 8270c |
| 1205 | 48-28-1 | h4416xd.d | 1000.00 ml | 30-AUG-2013 11:47 | 1.000 | dlb | 2 | 8270c |
| 1206 | 48-28-3 | h4417.d | 1000.00 ml | 30-AUG-2013 12:06 | 1.000 | dlb | 4 | 8270c |
| 1206 | 48-28-3 | h4417d.d | 1000.00 ml | 30-AUG-2013 12:06 | 1.000 | dlb | 4 | 8270c |
| 1206 | 48-28-3 | h4417x.d | 1000.00 ml | 30-AUG-2013 12:06 | 1.000 | dlb | 4 | 8270c |
| 1206 | 48-28-3 | h4417xd.d | 1000.00 ml | 30-AUG-2013 12:06 | 1.000 | dlb | 4 | 8270c |
| 1207 | 48-28-4 | h4418.d | 1000.00 ml | 30-AUG-2013 12:26 | 1.000 | dlb | 5 | 8270c |
| 1207 | 48-28-4 | h4418d.d | 1000.00 ml | 30-AUG-2013 12:26 | 1.000 | dlb | 5 | 8270c |
| 1207 | 48-28-4 | h4418x.d | 1000.00 ml | 30-AUG-2013 12:26 | 1.000 | dlb | 5 | 8270c |
| 1207 | 48-28-4 | h4418xd.d | 1000.00 ml | 30-AUG-2013 12:26 | 1.000 | dlb | 5 | 8270c |
| 1208 | 48-28-5 | h4419.d | 1000.00 ml | 30-AUG-2013 12:46 | 1.000 | dlb | 6 | 8270c |
| 1208 | 48-28-5 | h4419d.d | 1000.00 ml | 30-AUG-2013 12:46 | 1.000 | dlb | 6 | 8270c |
| 1208 | 48-28-5 | h4419x.d | 1000.00 ml | 30-AUG-2013 12:46 | 1.000 | dlb | 6 | 8270c |
| 1208 | 48-28-5 | h4419xd.d | 1000.00 ml | 30-AUG-2013 12:46 | 1.000 | dlb | 6 | 8270c |
| 1204 | 48-28-2 | h4420.d | 1000.00 ml | 30-AUG-2013 13:06 | 1.000 | dlb | 3 | 8270c |
| 1204 | 48-28-2 | h4420d.d | 1000.00 ml | 30-AUG-2013 13:06 | 1.000 | dlb | 3 | 8270c |
| 1204 | 48-28-2 | h4420x.d | 1000.00 ml | 30-AUG-2013 13:06 | 1.000 | dlb | 3 | 8270c |
| 1204 | 48-28-2 | h4420xd.d | 1000.00 ml | 30-AUG-2013 13:06 | 1.000 | dlb | 3 | 8270c |
| 1204 | 48-28-2 | h4420xdR.d | 1000.00 ml | 30-AUG-2013 13:06 | 1.000 | dlb | 3 | 8270c |
| 1209 | 48-28-6 | h4421.d | 1000.00 ml | 30-AUG-2013 13:26 | 1.000 | dlb | 7 | 8270c |
| 1209 | 48-28-6 | h4421d.d | 1000.00 ml | 30-AUG-2013 13:26 | 1.000 | dlb | 7 | 8270c |
| 1209 | 48-28-6 | h4421x.d | 1000.00 ml | 30-AUG-2013 13:26 | 1.000 | dlb | 7 | 8270c |
| 1209 | 48-28-6 | h4421xd.d | 1000.00 ml | 30-AUG-2013 13:26 | 1.000 | dlb | 7 | 8270c |
| 1203 | 48-28-7 | h4422.d | 1000.00 ml | 30-AUG-2013 13:46 | 1.000 | dlb | 8 | 8270c |
| 1202 | 48-28-8 | h4423.d | 1000.00 ml | 30-AUG-2013 14:06 | 1.000 | dlb | 9 | 8270c |
| 1201 | 48-28-9 | h4424.d | 1000.00 ml | 30-AUG-2013 14:25 | 1.000 | dlb | 10 | 8270c |
| 1600 | 48-28-11 | h4425.d | 1000.00 ml | 30-AUG-2013 15:30 | 1.000 | dlb | 11 | 8270c |

# LABORATORY CHRONICLE: MSSV DEPARTMENT

Date: 22-OCT-2013
Instrument: MSSV4.i

| Standard | Conc ppm | Lot No. |
|---|---|---|
| DFTPP | 50 | |
| Int. Standard | 4000 | |

Inst. Conditions: _____

MISC: _____

| Sample ID | ClientName | DataFile | Wgt/Vol | Injection Time | Dil | Anal | ALS | Comments |
|---|---|---|---|---|---|---|---|---|
| 1100 | 53-3-1 | h5714c.d | 0.00 ml | 22-OCT-2013 09:16 | 1.000 | HCP | 1 | all |
| 1100 | 53-3-1 | h5714.d | 0.00 ml | 22-OCT-2013 09:16 | 1.000 | HCP | 1 | all |
| 1100 | 53-3-1 | h5714x.d | 0.00 ml | 22-OCT-2013 09:16 | 1.000 | HCP | 1 | all |
| 1100 | 53-3-1 | h5714xd.d | 0.00 ml | 22-OCT-2013 09:16 | 1.000 | HCP | 1 | all |
| 1400 | 48-34-12 | h5715.d | 1000.00 ml | 22-OCT-2013 09:36 | 1.000 | HCP | 2 | 8270c |
| 1400 | 48-34-12 | h5715x.d | 1000.00 ml | 22-OCT-2013 09:36 | 1.000 | HCP | 2 | 8270c |
| 1400 | 48-34-12 | h5715xd.d | 1000.00 ml | 22-OCT-2013 09:36 | 1.000 | HCP | 2 | 8270c |
| 1400 | 48-33-1 | h5716.d | 1000.00 ml | 22-OCT-2013 09:56 | 1.000 | HCP | 3 | APP9 |
| 1245537 | BLK | h5717.d | 1000.00 ml | 22-OCT-2013 10:15 | 1.000 | HCP | 4 | tclpba+lcs |
| 1245538 | LCS | h5718.d | 1000.00 ml | 22-OCT-2013 10:35 | 1.000 | HCP | 5 | tclpba+lcs |
| 1245539 | LCSD | h5719.d | 1000.00 ml | 22-OCT-2013 10:55 | 1.000 | HCP | 6 | tclpba+lcs |
| 21310166106 | 0060 | h5720.d | 200.00 ml | 22-OCT-2013 11:15 | 1.000 | HCP | 7 | tclpba+lcs |
| 21310165001 | 0286 | h5721.d | 200.00 ml | 22-OCT-2013 11:35 | 1.000 | HCP | 8 | tclpba+lcs |
| 21310165002 | 0286 | h5722.d | 200.00 ml | 22-OCT-2013 11:55 | 1.000 | HCP | 9 | tclpba+lcs |
| 21310165003 | 0286 | h5723.d | 200.00 ml | 22-OCT-2013 12:15 | 1.000 | HCP | 10 | tclpba+lcs |
| 21310165401 | 0286 | h5724.d | 200.00 ml | 22-OCT-2013 12:34 | 1.000 | HCP | 11 | tclpba+lcs |
| 1245540 | MS | h5725.d | 200.00 ml | 22-OCT-2013 12:54 | 1.000 | HCP | 12 | tclpba+lcs |
| 1245541 | MSD | h5726.d | 200.00 ml | 22-OCT-2013 13:14 | 1.000 | HCP | 13 | tclpba+lcs |
| 21310173001 | 0176 | h5727.d | 200.00 ml | 22-OCT-2013 13:33 | 1.000 | HCP | 14 | tclpba+lcs |
| 21310165801 | 4329 | h5728.d | 200.00 ml | 22-OCT-2013 13:53 | 1.000 | HCP | 15 | tclpba+lcs |
| 21310166001 | 4329 | h5729.d | 200.00 ml | 22-OCT-2013 14:13 | 1.000 | HCP | 16 | tclpba+lcs |
| 21310181101 | 4565 | h5730.d | 200.00 ml | 22-OCT-2013 14:33 | 1.000 | HCP | 17 | tclpba+lcs |
| 21310164901 | 0286 | h5731.d | 200.00 ml | 22-OCT-2013 14:53 | 1.000 | HCP | 18 | tclpba+lcs |
| 21310181004 | 4565 | h5732.d | 1000.00 ml | 22-OCT-2013 15:12 | 2.000 | hcp | 20 | pah+lcs |
| 1245518 | BLK | h5733.d | 30.00 g | 22-OCT-2013 15:32 | 1.000 | hcp | 21 | SA8270 |
| 1245519 | LCS | h5734.d | 30.00 g | 22-OCT-2013 15:51 | 1.000 | hcp | 22 | SA8270 |
| 1245520 | LCSD | h5735.d | 30.00 g | 22-OCT-2013 16:11 | 1.000 | hcp | 23 | SA8270 |
| 21310171201 | 4847 | h5736.d | 30.00 g | 22-OCT-2013 16:31 | 1.000 | hcp | 24 | SA8270 |
| 1245521 | MS | h5737.d | 30.00 g | 22-OCT-2013 16:51 | 1.000 | hcp | 25 | SA8270 |
| 1245522 | MSD | h5738.d | 30.00 g | 22-OCT-2013 17:11 | 1.000 | hcp | 26 | SA8270 |
| 21310171203 | 4847 | h5739.d | 30.00 g | 22-OCT-2013 17:31 | 1.000 | hcp | 27 | SA8270 |
| 21310166001 | 4329 | h5740.d | 200.00 ml | 22-OCT-2013 17:50 | 10.000 | HCP | 16 | tclpba+lcs |
| 21310164901 | 0286 | h5741.d | 200.00 ml | 22-OCT-2013 18:10 | 1.000 | HCP | 18 | tclpba+lcs |
| TBLK | TBLK | h5742.d | 200.00 ml | 22-OCT-2013 18:29 | 1.000 | HCP | 19 | tclpba+lcs |
| SOLBLK | BLK | h5743.d | 1000.00 ml | 22-OCT-2013 18:49 | 1.000 | HCP | 99 | pah+lcs |
| SOLBLK | BLK | h5744.d | 1000.00 ml | 22-OCT-2013 19:09 | 1.000 | HCP | 99 | pah+lcs |

LABORATORY CHRONICLE: MSSV DEPARTMENT

Date: 23-OCT-2013
Instrument: MSSV4.i

| Standard | Conc ppm | Lot No. |
|---|---|---|
| DFTPP | 50 | |
| Int. Standard | 4000 | |

Inst. Conditions: _____

MISC: _____

| Sample ID | ClientName | DataFile | Wgt/Vol | Injection Time | Dil | Anal | ALS | Comments |
|---|---|---|---|---|---|---|---|---|
| 1100 | 53-3-1 | h5751.d | 0.00 ml | 23-OCT-2013 11:07 | 1.000 | HCP | 1 | all |
| 1100 | 53-3-1 | h5752c.d | 0.00 ml | 23-OCT-2013 11:29 | 1.000 | HCP | 1 | all |
| 1100 | 53-3-1 | h5752.d | 0.00 ml | 23-OCT-2013 11:29 | 1.000 | HCP | 1 | all |
| 1100 | 53-3-1 | h5752h.d | 0.00 ml | 23-OCT-2013 11:29 | 1.000 | HCP | 1 | all |
| 1100 | 53-3-1 | h5752xd.d | 0.00 ml | 23-OCT-2013 11:29 | 1.000 | HCP | 1 | all |
| 1400 | 48-34-12 | h5753.d | 1000.00 ml | 23-OCT-2013 11:49 | 1.000 | HCP | 2 | 8270c |
| 1400 | 48-34-12 | h5753xd.d | 1000.00 ml | 23-OCT-2013 11:49 | 1.000 | HCP | 2 | 8270c |
| 1400 | 48-33-1 | h5754.d | 1000.00 ml | 23-OCT-2013 12:08 | 1.000 | HCP | 3 | APP9 |
| 21310171201 | 4847 | h5755.d | 30.00 g | 23-OCT-2013 12:28 | 10.000 | hcp | 4 | SA8270 |
| 1245521 | MS | h5756.d | 30.00 g | 23-OCT-2013 12:48 | 10.000 | hcp | 5 | SA8270 |
| 1245522 | MSD | h5757.d | 30.00 g | 23-OCT-2013 13:08 | 10.000 | hcp | 6 | SA8270 |
| 21310171203 | 4847 | h5758.d | 30.00 g | 23-OCT-2013 13:28 | 10.000 | hcp | 7 | SA8270 |
| SOLBLK | BLK | h5759.d | 30.00 g | 23-OCT-2013 13:47 | 1.000 | hcp | 99 | SA8270 |
| SOLBLK | BLK | h5760.d | 30.00 g | 23-OCT-2013 14:07 | 1.000 | hcp | 99 | SA8270 |
| 1203 | 53-3-4 | h5761.d | 1000.00 ml | 23-OCT-2013 14:26 | 1.000 | KCB | 86 | all |
| 1201 | 53-3-5 | h5762.d | 1000.00 ml | 23-OCT-2013 14:42 | 1.000 | KCB | 87 | all |
| 1202 | 53-3-6 | h5763.d | 1000.00 ml | 23-OCT-2013 14:59 | 1.000 | KCB | 88 | all |
| 1204 | 53-3-7 | h5764.d | 1000.00 ml | 23-OCT-2013 15:16 | 1.000 | KCB | 89 | all |
| 1205 | 53-3-8 | h5765.d | 1000.00 ml | 23-OCT-2013 15:32 | 1.000 | KCB | 90 | all |
| 1600 | 53-3-9 | h5766.d | 1000.00 ml | 23-OCT-2013 15:49 | 1.000 | KCB | 91 | all |
| 1246242 | BLK | h5767.d | 1000.00 ml | 23-OCT-2013 16:05 | 1.000 | KCB | 8 | all |
| 1246243 | LCS | h5768.d | 1000.00 ml | 23-OCT-2013 16:22 | 1.000 | KCB | 9 | all |
| 1246244 | LCSD | h5769.d | 1000.00 ml | 23-OCT-2013 16:39 | 1.000 | KCB | 10 | all |
| 21310163901 | 5115 | h5770.d | 1000.00 ml | 23-OCT-2013 16:55 | 1.000 | KCB | 11 | all |
| 21310163903 | 5115 | h5771.d | 1000.00 ml | 23-OCT-2013 17:11 | 1.000 | KCB | 12 | all |

2F

ORGANICS SURROGATE RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

GC Column (1) RTX-35MS-3 ID: .25 ( mm) GC Cloumn (2) : ID: ( mm )

Method: SW-846 8081B

| EPA SAMPLE NO. | SMC1 1-(1) | # | 1-(2) | # | SMC2 2-(1) | # | 2-(2) | # | TOT OUT |
|---|---|---|---|---|---|---|---|---|---|
| 1. RS-COMP1-101613 | 0 | D | | | 0 | D | | | 0 |
| 2. RS-COMP2-101613 | 0 | D | | | 0 | D | | | 0 |
| 3. MB1245513 | 97 | | | | 85 | | | | 0 |
| 4. LCS1245514 | 110 | | | | 99 | | | | 0 |
| 5. LCSD1245515 | 111 | | | | 101 | | | | 0 |
| 6. RS-COMP2-101613MS | 0 | D | | | 0 | D | | | 0 |
| 7. RS-COMP2-101613MSD | 0 | D | | | 0 | D | | | 0 |

| | CONTROL LIMITS | |
|---|---|---|
| SMC 1 : Tetrachloro-m-xylene | 70 | 125 |
| SMC 2 : Decachlorobiphenyl | 55 | 130 |

# Column to be used to flag recovery limits

* Value outside of contract required limits

D Surrogate diluted out

3F

SOILORGANIC MS/MSD RECOVERY

Lab Name: GCAL Sample ID: RS-COMP2-101613

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Contract: Method: SW-846 8081B

Prep Batch: 518148 Analytical Batch: 518652

***Spike HSN : 1245516***

| COMPOUND | UNITS | SPIKE ADDED | SAMPLE CONCENTRATION | MS CONCENTRATION | MS % REC | MS % REC FLAG | QC. LIMITS |
|---|---|---|---|---|---|---|---|
| 4,4'-DDD | ug/kg | 18.6 | 0 | 21.8 | 118 | | 30 - 135 |
| 4,4'-DDE | ug/kg | 18.6 | 0 | 9.04 | 49 | * | 70 - 125 |
| 4,4'-DDT | ug/kg | 18.6 | 0 | 33.2 | 179 | * | 45 - 140 |
| Aldrin | ug/kg | 18.6 | 0 | 14.3 | 77 | | 45 - 140 |
| Dieldrin | ug/kg | 18.6 | 0 | 15.3 | 82 | | 65 - 125 |
| Endosulfan I | ug/kg | 18.6 | 0 | 17.3 | 93 | | 15 - 135 |
| Endosulfan II | ug/kg | 18.6 | 0 | 19 | 103 | | 35 - 140 |
| Endosulfan sulfate | ug/kg | 18.6 | 0 | 20.4 | 110 | | 60 - 135 |
| Endrin | ug/kg | 18.6 | 0 | 24.7 | 133 | | 60 - 135 |
| Endrin aldehyde | ug/kg | 18.6 | 0 | 25.7 | 139 | | 35 - 145 |
| Endrin ketone | ug/kg | 18.6 | 0 | 31.1 | 167 | * | 65 - 135 |
| Heptachlor | ug/kg | 18.6 | 0 | 13.8 | 74 | | 50 - 140 |
| Heptachlor epoxide | ug/kg | 18.6 | 0 | 38.9 | 209 | * | 65 - 130 |
| Methoxychlor | ug/kg | 18.6 | 0 | 11.8 | 64 | | 55 - 145 |
| alpha-BHC | ug/kg | 18.6 | 0 | 13.4 | 72 | | 60 - 125 |
| alpha-Chlordane | ug/kg | 18.6 | 0 | 24.4 | 131 | * | 65 - 120 |
| beta-BHC | ug/kg | 18.6 | 0 | 19.2 | 103 | | 60 - 125 |
| delta-BHC | ug/kg | 18.6 | 0 | 9.07 | 49 | * | 55 - 130 |
| gamma-BHC (Lindane) | ug/kg | 18.6 | 0 | 18.2 | 98 | | 60 - 125 |
| gamma-Chlordane | ug/kg | 18.6 | 0 | 31.2 | 168 | * | 65 - 125 |

RPD : 3 out of 20 outside limits

Spike Recovery: 13 out of 40 outside limits

FORM III ORG-2

3F

SOILORGANIC MS/MSD RECOVERY

Lab Name: GCAL Sample ID: RS-COMP2-101613

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Contract: Method: SW-846 8081B

Prep Batch: 518148 Analytical Batch: 518652

***Spike Dupe HSN : 1245517***

| COMPOUND | UNITS | SPIKE ADDED | MSD CONC. | MSD % REC | REC FLAG | % RPD | RPD FLAG | QC. LIMITS REC | QC. LIMITS RPD |
|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | ug/kg | 18.6 | 17.9 | 97 | | 20 | | 30 - 135 | 0 - 30 |
| 4,4'-DDE | ug/kg | 18.6 | 9.65 | 52 | * | 6 | | 70 - 125 | 0 - 30 |
| 4,4'-DDT | ug/kg | 18.6 | 23.3 | 125 | | 35 | * | 45 - 140 | 0 - 30 |
| Aldrin | ug/kg | 18.6 | 10.5 | 57 | | 30 | | 45 - 140 | 0 - 30 |
| Dieldrin | ug/kg | 18.6 | 14.8 | 80 | | 3 | | 65 - 125 | 0 - 30 |
| Endosulfan I | ug/kg | 18.6 | 21.8 | 118 | | 23 | | 15 - 135 | 0 - 30 |
| Endosulfan II | ug/kg | 18.6 | 19.7 | 106 | | 3 | | 35 - 140 | 0 - 30 |
| Endosulfan sulfate | ug/kg | 18.6 | 21.2 | 114 | | 4 | | 60 - 135 | 0 - 30 |
| Endrin | ug/kg | 18.6 | 19.7 | 106 | | 23 | | 60 - 135 | 0 - 30 |
| Endrin aldehyde | ug/kg | 18.6 | 23.4 | 126 | | 10 | | 35 - 145 | 0 - 30 |
| Endrin ketone | ug/kg | 18.6 | 21.1 | 113 | | 38 | * | 65 - 135 | 0 - 30 |
| Heptachlor | ug/kg | 18.6 | 11 | 59 | | 23 | | 50 - 140 | 0 - 30 |
| Heptachlor epoxide | ug/kg | 18.6 | 43.9 | 236 | * | 12 | | 65 - 130 | 0 - 30 |
| Methoxychlor | ug/kg | 18.6 | 8.14 | 44 | * | 37 | * | 55 - 145 | 0 - 30 |
| alpha-BHC | ug/kg | 18.6 | 10.8 | 58 | * | 21 | | 60 - 125 | 0 - 30 |
| alpha-Chlordane | ug/kg | 18.6 | 19 | 103 | | 25 | | 65 - 120 | 0 - 30 |
| beta-BHC | ug/kg | 18.6 | 16.7 | 90 | | 14 | | 60 - 125 | 0 - 30 |
| delta-BHC | ug/kg | 18.6 | 7.36 | 40 | * | 21 | | 55 - 130 | 0 - 30 |
| gamma-BHC (Lindane) | ug/kg | 18.6 | 15.4 | 83 | | 17 | | 60 - 125 | 0 - 30 |
| gamma-Chlordane | ug/kg | 18.6 | 24.1 | 130 | * | 26 | | 65 - 125 | 0 - 30 |

RPD : 3 out of 20 outside limits

Spike Recovery: 13 out of 40 outside limits

FORM III ORG-2

3F

SOIL ORGANIC LCS/LCSD RECOVERY

Lab Name: GCAL

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Contract: Method: SW-846 8081B

Prep Batch: 518148 Analytical Batch: 518386

***Spike HSN : 1245514***

| COMPOUND | UNITS | SPIKE ADDED | SAMPLE CONCENTRATION | LCS CONCENTRATION | LCS % REC | LCS % REC FLAG | QC. LIMITS |
|---|---|---|---|---|---|---|---|
| 4,4'-DDD | ug/kg | 16.7 | 0 | 20.3 | 122 | | 30 - 135 |
| 4,4'-DDE | ug/kg | 16.7 | 0 | 21 | 126 | * | 70 - 125 |
| 4,4'-DDT | ug/kg | 16.7 | 0 | 20.9 | 125 | | 45 - 140 |
| Aldrin | ug/kg | 16.7 | 0 | 20.4 | 122 | | 45 - 140 |
| Dieldrin | ug/kg | 16.7 | 0 | 20.7 | 124 | | 65 - 125 |
| Endosulfan I | ug/kg | 16.7 | 0 | 20.5 | 123 | | 15 - 135 |
| Endosulfan II | ug/kg | 16.7 | 0 | 20.4 | 122 | | 35 - 140 |
| Endosulfan sulfate | ug/kg | 16.7 | 0 | 18.6 | 112 | | 60 - 135 |
| Endrin | ug/kg | 16.7 | 0 | 20.8 | 125 | | 60 - 135 |
| Endrin aldehyde | ug/kg | 16.7 | 0 | 18.8 | 113 | | 35 - 145 |
| Endrin ketone | ug/kg | 16.7 | 0 | 18.8 | 113 | | 65 - 135 |
| Heptachlor | ug/kg | 16.7 | 0 | 19.7 | 118 | | 50 - 140 |
| Heptachlor epoxide | ug/kg | 16.7 | 0 | 20.1 | 121 | | 65 - 130 |
| Methoxychlor | ug/kg | 16.7 | 0 | 20 | 120 | | 55 - 145 |
| alpha-BHC | ug/kg | 16.7 | 0 | 18.2 | 109 | | 60 - 125 |
| alpha-Chlordane | ug/kg | 16.7 | 0 | 19.4 | 116 | | 65 - 120 |
| beta-BHC | ug/kg | 16.7 | 0 | 19.3 | 116 | | 60 - 125 |
| delta-BHC | ug/kg | 16.7 | 0 | 14.6 | 88 | | 55 - 130 |
| gamma-BHC (Lindane) | ug/kg | 16.7 | 0 | 19.7 | 118 | | 60 - 125 |
| gamma-Chlordane | ug/kg | 16.7 | 0 | 20.4 | 122 | | 65 - 125 |

RPD : 0 out of 20 outside limits

Spike Recovery: 2 out of 40 outside limits

FORM III ORG-2

3F

SOIL ORGANIC LCS/LCSD RECOVERY

Lab Name: GCAL

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Contract: Method: SW-846 8081B

Prep Batch: 518148 Analytical Batch: 518386

***Spike Dupe HSN : 1245515***

| COMPOUND | UNITS | SPIKE ADDED | LCSD CONC. | LCSD % REC | REC FLAG | % RPD | RPD FLAG | QC. LIMITS REC | QC. LIMITS RPD |
|---|---|---|---|---|---|---|---|---|---|
| 4,4'-DDD | ug/kg | 16.7 | 20.3 | 122 | | 0 | | 30 - 135 | 0 - 30 |
| 4,4'-DDE | ug/kg | 16.7 | 21 | 126 | * | 0 | | 70 - 125 | 0 - 30 |
| 4,4'-DDT | ug/kg | 16.7 | 21.1 | 127 | | 1 | | 45 - 140 | 0 - 30 |
| Aldrin | ug/kg | 16.7 | 20.6 | 124 | | 1 | | 45 - 140 | 0 - 30 |
| Dieldrin | ug/kg | 16.7 | 20.7 | 124 | | 0 | | 65 - 125 | 0 - 30 |
| Endosulfan I | ug/kg | 16.7 | 20.4 | 122 | | .5 | | 15 - 135 | 0 - 30 |
| Endosulfan II | ug/kg | 16.7 | 20.4 | 122 | | 0 | | 35 - 140 | 0 - 30 |
| Endosulfan sulfate | ug/kg | 16.7 | 18.3 | 110 | | 2 | | 60 - 135 | 0 - 30 |
| Endrin | ug/kg | 16.7 | 20.6 | 124 | | 1 | | 60 - 135 | 0 - 30 |
| Endrin aldehyde | ug/kg | 16.7 | 18.5 | 111 | | 2 | | 35 - 145 | 0 - 30 |
| Endrin ketone | ug/kg | 16.7 | 18.7 | 112 | | .5 | | 65 - 135 | 0 - 30 |
| Heptachlor | ug/kg | 16.7 | 19.9 | 119 | | 1 | | 50 - 140 | 0 - 30 |
| Heptachlor epoxide | ug/kg | 16.7 | 19.9 | 119 | | 1 | | 65 - 130 | 0 - 30 |
| Methoxychlor | ug/kg | 16.7 | 20.2 | 121 | | 1 | | 55 - 145 | 0 - 30 |
| alpha-BHC | ug/kg | 16.7 | 18.5 | 111 | | 2 | | 60 - 125 | 0 - 30 |
| alpha-Chlordane | ug/kg | 16.7 | 19.7 | 118 | | 2 | | 65 - 120 | 0 - 30 |
| beta-BHC | ug/kg | 16.7 | 19.4 | 116 | | .5 | | 60 - 125 | 0 - 30 |
| delta-BHC | ug/kg | 16.7 | 14.8 | 89 | | 1 | | 55 - 130 | 0 - 30 |
| gamma-BHC (Lindane) | ug/kg | 16.7 | 19.9 | 119 | | 1 | | 60 - 125 | 0 - 30 |
| gamma-Chlordane | ug/kg | 16.7 | 20.5 | 123 | | .5 | | 65 - 125 | 0 - 30 |

RPD : 0 out of 20 outside limits

Spike Recovery: 2 out of 40 outside limits

4C

ORGANIC METHOD BLANK SUMMARY

Lab Name: GCAL

Sample ID: MB1245513

Lab Code: LA024 Case No.:

Contract:

Lab Sample ID: 1245513

SAS No.: SDG No.: 213101712

Matrix: Solid Sulfur Cleanup: (Y/N) N

Date Extracted: 10/22/13

Date Analyzed (1): 10/22/13 Time (1): 1651

Date Analyzed (2): Time (2):

Instrument ID (1): GCS18A

Instrument ID (2):

GC Column (1): RTX-35MS-3 ID: .25 (mm)

GC Column (2): ID: (mm)

Method: SW-846 8081B

Prep Batch: 518148 Analytical Batch: 518386

Lab File ID: 2131022p/sv18a

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES

| | SAMPLE NO. | LAB SAMPLE ID | DATE ANALYZED | TIME ANALYZED | INSTRUMENT ID |
|---|---|---|---|---|---|
| 1. | LCS1245514 | 1245514 | 10/22/13 | 1705 | GCS18A |
| 2. | LCSD1245515 | 1245515 | 10/22/13 | 1720 | GCS18A |
| 3. | RS-COMP1-101613 | 21310171201 | 10/25/13 | 1052 | GCS16A |
| 4. | RS-COMP2-101613 | 21310171203 | 10/25/13 | 1106 | GCS16A |
| 5. | RS-COMP2-101613MS | 1245516 | 10/25/13 | 1121 | GCS16A |
| 6. | RS-COMP2-101613MSD | 1245517 | 10/25/13 | 1135 | GCS16A |

FORM IV ORGANIC

1D
ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL
Lab Code: LA024 Case No.:
Matrix: Solid
Sample wt/vol: 30 Units: g
Level: (low/med) LOW
% Moisture: 18.4 decanted: (Y/N)
GC Column: RTX-35MS-3 ID: .25 (mm)
Concentrated Extract Volume: 10000 ( µL )
Soil Aliquot Volume: ( µL )
Injection Volume: 1 ( µL )
GPC Cleanup: (Y/N) N pH:
Prep Batch: 518148 Analytical Batch: 518652

Sample ID RS-COMP1-101613
Contract:
SAS No.: SDG No.: 213101712
Lab Sample ID: 21310171201
Date Collected 10/16/13 Time: 1600
Date Received: 10/17/13
Date Extracted: 10/22/13
Date Analyzed: 10/25/13 Time: 1052
Dilution Factor: 10 Analyst: TLS
Prep Method: 3550B
Analytical Method: SW-846 8081B
Sulfur Cleanup: (Y/N) N Instrument ID: GCS16A
Lab File ID: 2131025/sv16a005

*CONCENTRATION UNITS: ug/kg*

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 72-54-8 | 4,4'-DDD | 12.3 | U | 10.2 | 12.3 | 40.8 |
| 72-55-9 | 4,4'-DDE | 12.3 | UQ | 10.2 | 12.3 | 40.8 |
| 50-29-3 | 4,4'-DDT | 12.3 | U | 10.2 | 12.3 | 40.8 |
| 309-00-2 | Aldrin | 12.3 | U | 10.2 | 12.3 | 20.5 |
| 60-57-1 | Dieldrin | 12.3 | U | 10.2 | 12.3 | 40.8 |
| 959-98-8 | Endosulfan I | 12.3 | U | 10.2 | 12.3 | 20.5 |
| 33213-65-9 | Endosulfan II | 12.3 | U | 10.2 | 12.3 | 40.8 |
| 1031-07-8 | Endosulfan sulfate | 12.3 | U | 10.2 | 12.3 | 40.8 |
| 72-20-8 | Endrin | 12.3 | U | 10.2 | 12.3 | 40.8 |
| 7421-93-4 | Endrin aldehyde | 12.3 | U | 10.2 | 12.3 | 40.8 |
| 53494-70-5 | Endrin ketone | 12.3 | U | 10.2 | 12.3 | 40.8 |
| 76-44-8 | Heptachlor | 12.3 | U | 10.2 | 12.3 | 20.5 |
| 1024-57-3 | Heptachlor epoxide | 12.3 | U | 10.2 | 12.3 | 20.5 |
| 72-43-5 | Methoxychlor | 12.3 | U | 10.2 | 12.3 | 20.5 |
| 8001-35-2 | Toxaphene | 61.3 | U | 51.1 | 61.3 | 102 |
| 319-84-6 | alpha-BHC | 12.3 | U | 10.2 | 12.3 | 20.5 |
| 5103-71-9 | alpha-Chlordane | 12.3 | U | 10.2 | 12.3 | 20.5 |
| 319-85-7 | beta-BHC | 12.3 | U | 10.2 | 12.3 | 20.5 |
| 319-86-8 | delta-BHC | 12.3 | U | 10.2 | 12.3 | 20.5 |
| 58-89-9 | gamma-BHC (Lindane) | 12.3 | U | 10.2 | 12.3 | 20.5 |
| 5103-74-2 | gamma-Chlordane | 12.3 | U | 10.2 | 12.3 | 20.5 |

Data File: /var/chem/gcsv16a.i/2131025.b/sv16a005.d
Report Date: 28-Oct-2013 09:43

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131025.b/sv16a005.d
Lab Smp Id: 21310171201
Inj Date : 25-OCT-2013 10:52
Operator : tls Inst ID: gcsv16a.i
Smp Info : 21310171201*10
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131025.b/pest35ms.m
Meth Date : 27-Oct-2013 14:17 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:37 Cal File: sv16a034.d
Als bottle: 5
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: pest.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

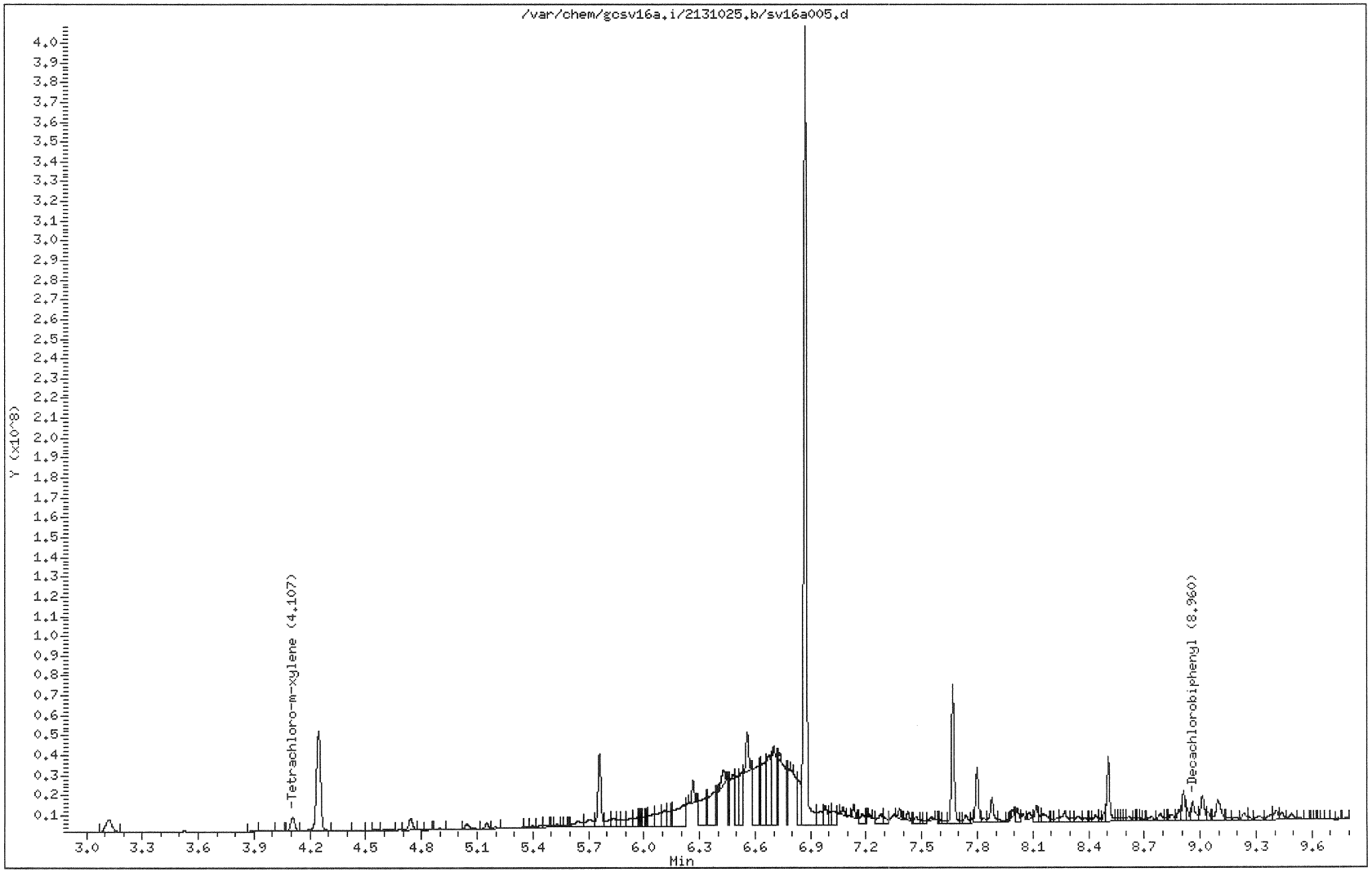
| Name | Value | Description |
|---|---|---|
| DF | 10.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | CONCENTRATIONS FINAL (UG/KG) |
|---|---|---|---|---|---|---|
| $ 1 Tetrachloro-m-xylene | 4.107 | 4.112 | -0.005 | 10279890 | 4.03819 | 13 |
| $ 22 Decachlorobiphenyl | 8.960 | 8.971 | -0.011 | 13748310 | 9.26366 | 31 |

Data File: /var/chem/gcsv16a.i/2131025.b/sv16a005.d
Date : 25-OCT-2013 10:52
Client ID:
Sample Info: 21310171201*10
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv16a.i
Operator: tls
Column diameter: 0.32

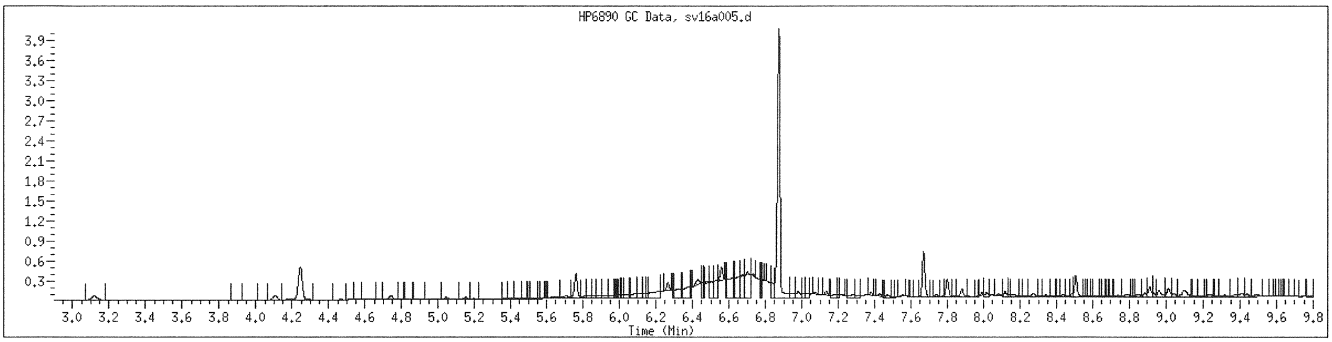



21310171 2 596

Data file : /var/chem/gcsv16a.i/2131025.b/sv16a005.d Page: 1
Report Date: 10/28/2013 09:43

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 21310171201 SampleType : SAMPLE
Injection Date: 10/25/2013 10:52 Instrument : gcsv16a.i
Operator : tls
Sample Info : 21310171201*10
Misc Info :
Method : /var/chem/gcsv16a.i/2131025.b/pest35ms.m
Dilution : 10
Matrix : SOIL
Integrator : Falcon Compound Sublist: pest




NO MANUAL INTEGRATIONS

1D
ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL
Lab Code: LA024 Case No.:
Matrix: Solid
Sample wt/vol: 30 Units: g
Level: (low/med) LOW
% Moisture: 10.2 decanted: (Y/N)
GC Column: RTX-35MS-3 ID: .25 (mm)
Concentrated Extract Volume: 10000 ( µL )
Soil Aliquot Volume: ( µL )
Injection Volume: 1 ( µL )
GPC Cleanup: (Y/N) N pH:
Prep Batch: 518148 Analytical Batch: 518652

Sample ID RS-COMP2-101613
Contract:
SAS No.: SDG No.: 213101712
Lab Sample ID: 21310171203
Date Collected 10/16/13 Time: 1700
Date Received: 10/17/13
Date Extracted: 10/22/13
Date Analyzed: 10/25/13 Time: 1106
Dilution Factor: 10 Analyst: TLS
Prep Method: 3550B
Analytical Method: SW-846 8081B
Sulfur Cleanup: (Y/N) N Instrument ID: GCS16A
Lab File ID: 2131025/sv16a006

*CONCENTRATION UNITS: ug/kg*

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 72-54-8 | 4,4'-DDD | 11.1 | U | 9.25 | 11.1 | 37.1 |
| 72-55-9 | 4,4'-DDE | 11.1 | UQ | 9.25 | 11.1 | 37.1 |
| 50-29-3 | 4,4'-DDT | 11.1 | U | 9.25 | 11.1 | 37.1 |
| 309-00-2 | Aldrin | 11.1 | U | 9.25 | 11.1 | 18.6 |
| 60-57-1 | Dieldrin | 11.1 | U | 9.25 | 11.1 | 37.1 |
| 959-98-8 | Endosulfan I | 11.1 | U | 9.25 | 11.1 | 18.6 |
| 33213-65-9 | Endosulfan II | 11.1 | U | 9.25 | 11.1 | 37.1 |
| 1031-07-8 | Endosulfan sulfate | 11.1 | U | 9.25 | 11.1 | 37.1 |
| 72-20-8 | Endrin | 11.1 | U | 9.25 | 11.1 | 37.1 |
| 7421-93-4 | Endrin aldehyde | 11.1 | U | 9.25 | 11.1 | 37.1 |
| 53494-70-5 | Endrin ketone | 11.1 | U | 9.25 | 11.1 | 37.1 |
| 76-44-8 | Heptachlor | 11.1 | U | 9.25 | 11.1 | 18.6 |
| 1024-57-3 | Heptachlor epoxide | 11.1 | U | 9.25 | 11.1 | 18.6 |
| 72-43-5 | Methoxychlor | 11.1 | U | 9.25 | 11.1 | 18.6 |
| 8001-35-2 | Toxaphene | 55.7 | U | 46.4 | 55.7 | 92.8 |
| 319-84-6 | alpha-BHC | 11.1 | U | 9.25 | 11.1 | 18.6 |
| 5103-71-9 | alpha-Chlordane | 11.1 | U | 9.25 | 11.1 | 18.6 |
| 319-85-7 | beta-BHC | 11.1 | U | 9.25 | 11.1 | 18.6 |
| 319-86-8 | delta-BHC | 11.1 | U | 9.25 | 11.1 | 18.6 |
| 58-89-9 | gamma-BHC (Lindane) | 11.1 | U | 9.25 | 11.1 | 18.6 |
| 5103-74-2 | gamma-Chlordane | 11.1 | U | 9.25 | 11.1 | 18.6 |

Data File: /var/chem/gcsv16a.i/2131025.b/sv16a006.d
Report Date: 28-Oct-2013 09:47

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131025.b/sv16a006.d
Lab Smp Id: 21310171203
Inj Date : 25-OCT-2013 11:06
Operator : tls Inst ID: gcsv16a.i
Smp Info : 21310171203*10
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131025.b/pest35ms.m
Meth Date : 27-Oct-2013 14:17 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:37 Cal File: sv16a034.d
Als bottle: 6
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: pest.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 10.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

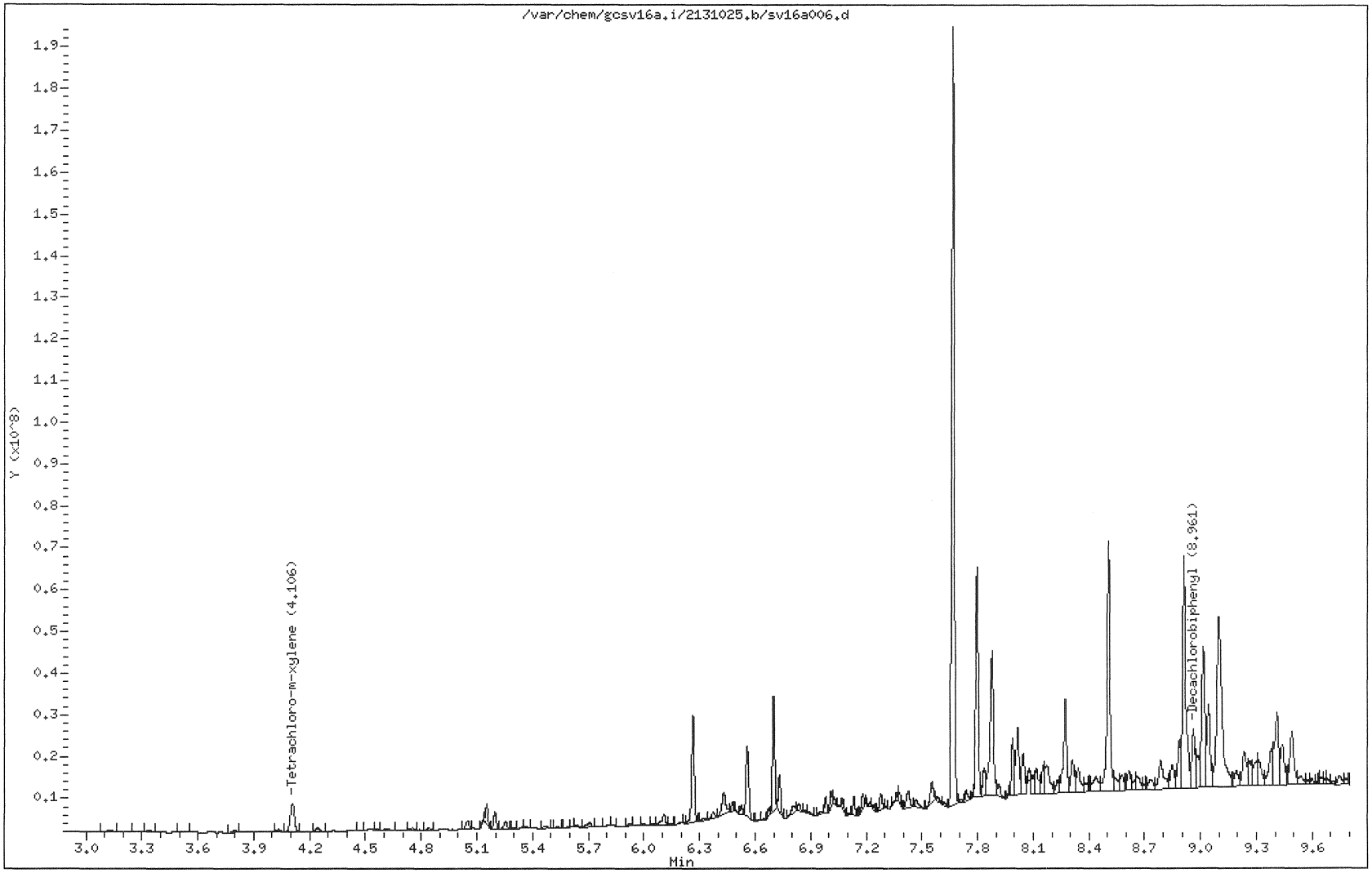
Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | CONCENTRATIONS FINAL (UG/KG) |
|---|---|---|---|---|---|---|
| $ 1 Tetrachloro-m-xylene | 4.106 | 4.112 | -0.006 | 10417004 | 4.09205 | 14 |
| $ 22 Decachlorobiphenyl | 8.961 | 8.971 | -0.010 | 18911562 | 12.7427 | 42 |

Data File: /var/chem/gcsv16a.i/2131025.b/sv16a006.d
Date : 25-OCT-2013 11:06
Client ID:
Sample Info: 21310171203*10
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv16a.i

Operator: tls
Column diameter: 0.32

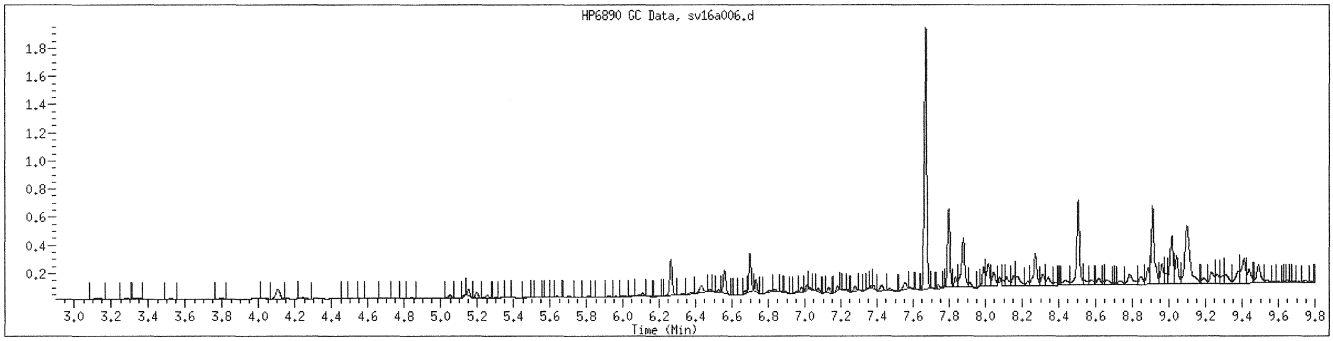



21310171 2 570

Data file : /var/chem/gcsv16a.i/2131025.b/sv16a006.d Page: 1
Report Date: 10/28/2013 09:47

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 21310171203 SampleType : SAMPLE
Injection Date: 10/25/2013 11:06 Instrument : gcsv16a.i
Operator : tls
Sample Info : 21310171203*10
Misc Info :
Method : /var/chem/gcsv16a.i/2131025.b/pest35ms.m
Dilution : 10
Matrix : SOIL
Integrator : Falcon Compound Sublist: pest




NO MANUAL INTEGRATIONS

Report Date : 05-Nov-2013 12:06

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 14:45
End Cal Date : 18-OCT-2013 22:14
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv18a.i/2131022p.b/pest35ms.m
Cal Date : 24-Oct-2013 11:07 tls

Calibration File Names:
Level 1: /var/chem/gcsv18a.i/2131018.b/sv18a029.d
Level 2: /var/chem/gcsv18a.i/2131018.b/sv18a030.d
Level 3: /var/chem/gcsv18a.i/2131018.b/sv18a032.d
Level 4: /var/chem/gcsv18a.i/2131018.b/sv18a033.d
Level 5: /var/chem/gcsv18a.i/2131018.b/sv18a034.d
Level 6: /var/chem/gcsv18a.i/2131018.b/sv18a031.d
Level 7: /var/chem/gcsv18a.i/2131018.b/sv18a021.d

| Compound | 5 Level 1 / 50 Level 7 | 20 Level 2 | 60 Level 3 | 80 Level 4 | 100 Level 5 | 2 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 alpha-BHC | 1077713 +++++ | 1029877 | 937703 | 920316 | 862594 | 1137807 | AVRG | | 994335 | | 10.53259 |
| 3 gamma-BHC (Lindane) | 922408 +++++ | 876404 | 798790 | 779056 | 732191 | +++++ | AVRG | | 821770 | | 9.32523 |
| 4 Heptachlor | 832784 +++++ | 763709 | 690786 | 665422 | 612535 | +++++ | AVRG | | 713047 | | 12.09877 |
| 5 Aldrin | 837471 +++++ | 798582 | 712424 | 684882 | 629423 | +++++ | AVRG | | 732556 | | 11.55914 |

2131041712 ST2

Report Date : 05-Nov-2013 12:06

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 14:45
End Cal Date : 18-OCT-2013 22:14
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv18a.i/2131022p.b/pest35ms.m
Cal Date : 24-Oct-2013 11:07 tls

| Compound | 5 Level 1 / 50 Level 7 | 20 Level 2 | 60 Level 3 | 80 Level 4 | 100 Level 5 | 2 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 beta-BHC | 455384 +++++ | 406964 | 366736 | 357336 | 331957 | +++++ | AVRG | | 383676 | | 12.59442 |
| 7 delta-BHC | 930875 +++++ | 870153 | 804545 | 785850 | 732713 | +++++ | AVRG | | 824827 | | 9.33530 |
| 8 Heptachlor epoxide | 753010 +++++ | 702664 | 617418 | 590124 | 536989 | +++++ | AVRG | | 640041 | | 13.59981 |
| 9 Endosulfan I | 695770 +++++ | 691254 | 609481 | 570874 | 539231 | +++++ | AVRG | | 621322 | | 11.33995 |
| 10 gamma-Chlordane | 765623 +++++ | 699929 | 635184 | 607961 | 552787 | +++++ | AVRG | | 652297 | | 12.65863 |
| 11 alpha-Chlordane | 711549 +++++ | 629544 | 551035 | 550951 | 473548 | +++++ | AVRG | | 583325 | | 15.50467 |
| 12 4,4'-DDE | 700826 +++++ | 684573 | 612058 | 588091 | 530617 | +++++ | AVRG | | 623233 | | 11.26634 |

215101112 515

Report Date : 05-Nov-2013 12:06

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 14:45
End Cal Date : 18-OCT-2013 22:14
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv18a.i/2131022p.b/pest35ms.m
Cal Date : 24-Oct-2013 11:07 tls

| Compound | 5 Level 1 / 50 Level 7 | 20 Level 2 | 60 Level 3 | 80 Level 4 | 100 Level 5 | 2 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 Dieldrin | 704138 +++++ | 677687 | 603924 | 581023 | 524202 | +++++ | AVRG | | 618195 | | 11.81677 |
| 14 Endrin | 632093 +++++ | 608911 | 539011 | 520689 | 468773 | +++++ | AVRG | | 553895 | | 12.01357 |
| 15 4,4'-DDD | 562808 +++++ | 548088 | 505271 | 486052 | 433211 | +++++ | AVRG | | 507086 | | 10.19446 |
| 16 Endosulfan II | 608931 +++++ | 580144 | 549547 | 517089 | 463023 | +++++ | AVRG | | 543747 | | 10.41744 |
| 17 4,4'-DDT | 424191 +++++ | 434600 | 404697 | 393645 | 350654 | +++++ | AVRG | | 401557 | | 8.13431 |
| 18 Endrin aldehyde | 513255 +++++ | 484012 | 440279 | 427348 | 375986 | +++++ | AVRG | | 448176 | | 11.82098 |
| 19 Methoxychlor | 209590 +++++ | 204400 | 185838 | 182002 | 159138 | 225613 | AVRG | | 194430 | | 12.11750 |

2131041112 514

Report Date : 05-Nov-2013 12:06

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 14:45
End Cal Date : 18-OCT-2013 22:14
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv18a.i/2131022p.b/pest35ms.m
Cal Date : 24-Oct-2013 11:07 tls

| | Compound | 5<br>Level 1<br>50<br>Level 7 | 20<br>Level 2 | 60<br>Level 3 | 80<br>Level 4 | 100<br>Level 5 | 2<br>Level 6 | Curve | Coefficients<br>b | m1 | m2 | %RSD<br>or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 20 Endosulfan sulfate | 575093<br>+++++ | 542414 | 498246 | 478627 | 428737 | +++++ | AVRG | | 504623 | | 11.24034 |
| | 21 Endrin ketone | 577964<br>+++++ | 558706 | 514212 | 504062 | 446713 | +++++ | AVRG | | 520332 | | 9.85401 |
| M | 23 AR 1016-AVG | 111361<br>+++++ | 105701 | 98017 | 89351 | 80209 | 124575 | AVRG | | 101536 | | 15.63680 |
| | 24 AR 1016-PEAK1 | 16756<br>+++++ | 15554 | 14259 | 12864 | 11463 | 18800 | AVRG | | 14949 | | 17.80830 |
| | 25 AR 1016-PEAK2 | 36814<br>+++++ | 34559 | 31926 | 28729 | 25355 | 40630 | AVRG | | 33002 | | 16.76364 |
| | 26 AR 1016-PEAK3 | 16716<br>+++++ | 16262 | 15241 | 14115 | 12832 | 18179 | AVRG | | 15558 | | 12.30363 |
| | 27 AR 1016-PEAK4 | 15948<br>+++++ | 15383 | 14211 | 13062 | 11519 | 17812 | AVRG | | 14656 | | 15.17693 |

SIS ZTIATSTZ

Report Date : 05-Nov-2013 12:06

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 14:45
End Cal Date : 18-OCT-2013 22:14
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv18a.i/2131022p.b/pest35ms.m
Cal Date : 24-Oct-2013 11:07 tls

| Compound | 5<br>Level 1<br>50<br>Level 7 | 20<br>Level 2 | 60<br>Level 3 | 80<br>Level 4 | 100<br>Level 5 | 2<br>Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 AR 1016-PEAK5 | 25127<br>+++++ | 23944 | 22380 | 20581 | 19040 | 29154 | AVRG | | 23371 | | 15.35382 |
| M 29 AR 1260-AVG | 201826<br>+++++ | 201844 | 192170 | 178340 | 169000 | 229858 | AVRG | | 195506 | | 10.89504 |
| 30 AR 1260-PEAK1 | 38799<br>+++++ | 38382 | 36495 | 33697 | 31609 | 44368 | AVRG | | 37225 | | 11.97468 |
| 31 AR 1260-PEAK2 | 44109<br>+++++ | 44120 | 41866 | 39000 | 36565 | 50492 | AVRG | | 42692 | | 11.31851 |
| 32 AR 1260-PEAK3 | 35334<br>+++++ | 35496 | 33857 | 31485 | 29793 | 40225 | AVRG | | 34365 | | 10.57307 |
| 33 AR 1260-PEAK4 | 35531<br>+++++ | 35272 | 33594 | 31091 | 29547 | 40484 | AVRG | | 34253 | | 11.23655 |
| 34 AR 1260-PEAK5 | 48053<br>+++++ | 48574 | 46359 | 43067 | 41486 | 54290 | AVRG | | 46972 | | 9.66349 |

2131041712 5.6

Report Date : 05-Nov-2013 12:06

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 14:45
End Cal Date : 18-OCT-2013 22:14
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv18a.i/2131022p.b/pest35ms.m
Cal Date : 24-Oct-2013 11:07 tls

| Compound | 5 Level 1 / 50 Level 7 | 20 Level 2 | 60 Level 3 | 80 Level 4 | 100 Level 5 | 2 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| M 35 AR 1221-AVG | +++++ +++++ | +++++ | 25186 | +++++ | +++++ | +++++ | AVRG | | 25186 | | 0.000e+00 |
| 36 AR 1221-PEAK1 | +++++ +++++ | +++++ | 452 | +++++ | +++++ | +++++ | AVRG | | 452 | | 0.000e+00 |
| 37 AR 1221-PEAK2 | +++++ +++++ | +++++ | 5904 | +++++ | +++++ | +++++ | AVRG | | 5904 | | 0.000e+00 |
| 38 AR 1221-PEAK3 | +++++ +++++ | +++++ | 8836 | +++++ | +++++ | +++++ | AVRG | | 8836 | | 0.000e+00 |
| 39 AR 1221-PEAK4 | +++++ +++++ | +++++ | 5574 | +++++ | +++++ | +++++ | AVRG | | 5574 | | 0.000e+00 |
| 40 AR 1221-PEAK5 | +++++ +++++ | +++++ | 4420 | +++++ | +++++ | +++++ | AVRG | | 4420 | | 0.000e+00 |
| M 41 AR 1232-AVG | +++++ +++++ | +++++ | 41904 | +++++ | +++++ | +++++ | AVRG | | 41904 | | 0.000e+00 |

2131022 STT

Report Date : 05-Nov-2013 12:06

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 14:45
End Cal Date : 18-OCT-2013 22:14
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv18a.i/2131022p.b/pest35ms.m
Cal Date : 24-Oct-2013 11:07 tls

| Compound | 5 Level 1 / 50 Level 7 | 20 Level 2 | 60 Level 3 | 80 Level 4 | 100 Level 5 | 2 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 42 AR 1232-PEAK1 | +++++ +++++ | +++++ | 3369 | +++++ | +++++ | +++++ | AVRG | | 3369 | | 0.000e+00 |
| 43 AR 1232-PEAK2 | +++++ +++++ | +++++ | 5392 | +++++ | +++++ | +++++ | AVRG | | 5392 | | 0.000e+00 |
| 44 AR 1232-PEAK3 | +++++ +++++ | +++++ | 13628 | +++++ | +++++ | +++++ | AVRG | | 13628 | | 0.000e+00 |
| 45 AR 1232-PEAK4 | +++++ +++++ | +++++ | 15145 | +++++ | +++++ | +++++ | AVRG | | 15145 | | 0.000e+00 |
| 46 AR 1232-PEAK5 | +++++ +++++ | +++++ | 4369 | +++++ | +++++ | +++++ | AVRG | | 4369 | | 0.000e+00 |
| M 47 AR 1242-AVG | +++++ +++++ | +++++ | 79781 | +++++ | +++++ | +++++ | AVRG | | 79781 | | 0.000e+00 |
| 48 AR 1242-PEAK1 | +++++ +++++ | +++++ | 21655 | +++++ | +++++ | +++++ | AVRG | | 21655 | | 0.000e+00 |

2131041T2 5 of 16

Report Date : 05-Nov-2013 12:06

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 14:45
End Cal Date : 18-OCT-2013 22:14
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv18a.i/2131022p.b/pest35ms.m
Cal Date : 24-Oct-2013 11:07 tls

| Compound | 5 Level 1 / 50 Level 7 | 20 Level 2 | 60 Level 3 | 80 Level 4 | 100 Level 5 | 2 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 49 AR 1242-PEAK2 | +++++ +++++ | +++++ | 14592 | +++++ | +++++ | +++++ | AVRG | | 14592 | | 0.000e+00 |
| 50 AR 1242-PEAK3 | +++++ +++++ | +++++ | 16215 | +++++ | +++++ | +++++ | AVRG | | 16215 | | 0.000e+00 |
| 51 AR 1242-PEAK4 | +++++ +++++ | +++++ | 15325 | +++++ | +++++ | +++++ | AVRG | | 15325 | | 0.000e+00 |
| 52 AR 1242-PEAK5 | +++++ +++++ | +++++ | 11994 | +++++ | +++++ | +++++ | AVRG | | 11994 | | 0.000e+00 |
| M 53 AR 1248-AVG | +++++ +++++ | +++++ | 99855 | +++++ | +++++ | +++++ | AVRG | | 99855 | | 0.000e+00 |
| 54 AR 1248-PEAK1 | +++++ +++++ | +++++ | 17565 | +++++ | +++++ | +++++ | AVRG | | 17565 | | 0.000e+00 |
| 55 AR 1248-PEAK2 | +++++ +++++ | +++++ | 17901 | +++++ | +++++ | +++++ | AVRG | | 17901 | | 0.000e+00 |

GCS 2131022 FS

Report Date : 05-Nov-2013 12:06

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 14:45
End Cal Date : 18-OCT-2013 22:14
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv18a.i/2131022p.b/pest35ms.m
Cal Date : 24-Oct-2013 11:07 tls

| | Compound | 5<br>Level 1<br>50<br>Level 7 | 20<br>Level 2 | 60<br>Level 3 | 80<br>Level 4 | 100<br>Level 5 | 2<br>Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 56 AR 1248-PEAK3 | +++++<br>+++++ | +++++ | 23214 | +++++ | +++++ | +++++ | AVRG | | 23214 | | 0.000e+00 |
| | 57 AR 1248-PEAK4 | +++++<br>+++++ | +++++ | 20642 | +++++ | +++++ | +++++ | AVRG | | 20642 | | 0.000e+00 |
| | 58 AR 1248-PEAK5 | +++++<br>+++++ | +++++ | 20532 | +++++ | +++++ | +++++ | AVRG | | 20532 | | 0.000e+00 |
| M | 59 AR 1254-AVG | +++++<br>+++++ | +++++ | 113348 | +++++ | +++++ | +++++ | AVRG | | 113348 | | 0.000e+00 |
| | 60 AR 1254-PEAK1 | +++++<br>+++++ | +++++ | 13329 | +++++ | +++++ | +++++ | AVRG | | 13329 | | 0.000e+00 |
| | 61 AR 1254-PEAK2 | +++++<br>+++++ | +++++ | 12202 | +++++ | +++++ | +++++ | AVRG | | 12202 | | 0.000e+00 |
| | 62 AR 1254-PEAK3 | +++++<br>+++++ | +++++ | 23433 | +++++ | +++++ | +++++ | AVRG | | 23433 | | 0.000e+00 |

SGS 2131022

Report Date : 05-Nov-2013 12:06

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 14:45
End Cal Date : 18-OCT-2013 22:14
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv18a.i/2131022p.b/pest35ms.m
Cal Date : 24-Oct-2013 11:07 tls

| Compound | 5 Level 1 / 50 Level 7 | 20 Level 2 | 60 Level 3 | 80 Level 4 | 100 Level 5 | 2 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 63 AR 1254-PEAK4 | +++++ +++++ | +++++ | 44145 | +++++ | +++++ | +++++ | AVRG | | 44145 | | 0.000e+00 |
| 64 AR 1254-PEAK5 | +++++ +++++ | +++++ | 20240 | +++++ | +++++ | +++++ | AVRG | | 20240 | | 0.000e+00 |
| M 65 TOXAPHENE-AVG | +++++ +++++ | +++++ | +++++ | +++++ | 54300 | +++++ | AVRG | | 54300 | | 0.000e+00 |
| 66 TOXAPHENE-PEAK1 | +++++ +++++ | +++++ | +++++ | +++++ | 14481 | +++++ | AVRG | | 14481 | | 0.000e+00 |
| 67 TOXAPHENE-PEAK2 | +++++ +++++ | +++++ | +++++ | +++++ | 11912 | +++++ | AVRG | | 11912 | | 0.000e+00 |
| 68 TOXAPHENE-PEAK3 | +++++ +++++ | +++++ | +++++ | +++++ | 15008 | +++++ | AVRG | | 15008 | | 0.000e+00 |
| 69 TOXAPHENE-PEAK4 | +++++ +++++ | +++++ | +++++ | +++++ | 12899 | +++++ | AVRG | | 12899 | | 0.000e+00 |

T85 211101512

Report Date : 05-Nov-2013 12:06

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 14:45
End Cal Date : 18-OCT-2013 22:14
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv18a.i/2131022p.b/pest35ms.m
Cal Date : 24-Oct-2013 11:07 tls

| Compound | 5 Level 1 / 50 Level 7 | 20 Level 2 | 60 Level 3 | 80 Level 4 | 100 Level 5 | 2 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 70 TOXAPHENE-PEAK5 | +++++ +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 |
| M 71 CHLORDANE-AVG | +++++ +++++ | +++++ | +++++ | +++++ | 90708 | +++++ | AVRG | | 90708 | | 0.000e+00 |
| 72 CHLORDANE-PEAK1 | +++++ +++++ | +++++ | +++++ | +++++ | 7360 | +++++ | AVRG | | 7360 | | 0.000e+00 |
| 73 CHLORDANE-PEAK2 | +++++ +++++ | +++++ | +++++ | +++++ | 34519 | +++++ | AVRG | | 34519 | | 0.000e+00 |
| 74 CHLORDANE-PEAK3 | +++++ +++++ | +++++ | +++++ | +++++ | 20190 | +++++ | AVRG | | 20190 | | 0.000e+00 |
| 75 CHLORDANE-PEAK4 | +++++ +++++ | +++++ | +++++ | +++++ | 28639 | +++++ | AVRG | | 28639 | | 0.000e+00 |
| 76 CHLORDANE-PEAK5 | +++++ +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 |

2131022p.b/pest35ms.m

Report Date : 05-Nov-2013 12:06

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 14:45
End Cal Date : 18-OCT-2013 22:14
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv18a.i/2131022p.b/pest35ms.m
Cal Date : 24-Oct-2013 11:07 tls

| Compound | 5<br>Level 1<br>50<br>Level 7 | 20<br>Level 2 | 60<br>Level 3 | 80<br>Level 4 | 100<br>Level 5 | 2<br>Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| M 77 AR 1268-AVG | +++++<br>+++++ | +++++ | 247844 | +++++ | +++++ | +++++ | AVRG | | 247844 | | 0.000e+00 |
| 78 AR 1268-PEAK1 | +++++<br>+++++ | +++++ | 15456 | +++++ | +++++ | +++++ | AVRG | | 15456 | | 0.000e+00 |
| 79 AR 1268-PEAK2 | +++++<br>+++++ | +++++ | 19429 | +++++ | +++++ | +++++ | AVRG | | 19429 | | 0.000e+00 |
| 80 AR 1268-PEAK3 | +++++<br>+++++ | +++++ | 79243 | +++++ | +++++ | +++++ | AVRG | | 79243 | | 0.000e+00 |
| 81 AR 1268 PEAK4 | +++++<br>+++++ | +++++ | 72926 | +++++ | +++++ | +++++ | AVRG | | 72926 | | 0.000e+00 |
| 82 AR 1268-PEAK5 | +++++<br>+++++ | +++++ | 60791 | +++++ | +++++ | +++++ | AVRG | | 60791 | | 0.000e+00 |
| M 83 AR 1262-AVG | +++++<br>+++++ | +++++ | 132952 | +++++ | +++++ | +++++ | AVRG | | 132952 | | 0.000e+00 |

2131011Z 583

Report Date : 05-Nov-2013 12:06

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 14:45
End Cal Date : 18-OCT-2013 22:14
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv18a.i/2131022p.b/pest35ms.m
Cal Date : 24-Oct-2013 11:07 tls

| Compound | 5 Level 1 / 50 Level 7 | 20 Level 2 | 60 Level 3 | 80 Level 4 | 100 Level 5 | 2 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 84 AR 1262-PEAK1 | +++++ +++++ | +++++ | 16620 | +++++ | +++++ | +++++ | AVRG | | 16620 | | 0.000e+00 |
| 85 AR 1262-PEAK2 | +++++ +++++ | +++++ | 23483 | +++++ | +++++ | +++++ | AVRG | | 23483 | | 0.000e+00 |
| 86 AR 1262-PEAK3 | +++++ +++++ | +++++ | 26233 | +++++ | +++++ | +++++ | AVRG | | 26233 | | 0.000e+00 |
| 87 AR 1262-PEAK4 | +++++ +++++ | +++++ | 35180 | +++++ | +++++ | +++++ | AVRG | | 35180 | | 0.000e+00 |
| 88 AR 1262-PEAK5 | +++++ +++++ | +++++ | 31436 | +++++ | +++++ | +++++ | AVRG | | 31436 | | 0.000e+00 |
| 89 Diallate | +++++ +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 |
| 90 Isodrin | +++++ +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 |

2131017112 584

Report Date : 05-Nov-2013 12:06

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 14:45
End Cal Date : 18-OCT-2013 22:14
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv18a.i/2131022p.b/pest35ms.m
Cal Date : 24-Oct-2013 11:07 tls

| Compound | 5<br>Level 1<br>50<br>Level 7 | 20<br>Level 2 | 60<br>Level 3 | 80<br>Level 4 | 100<br>Level 5 | 2<br>Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 91 Chlorobenzilate | +++++<br>+++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 |
| 92 Kepone | +++++<br>+++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 |
| 93 Mirex | +++++<br>+++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 |
| 94 Alachlor | 1450635<br>+++++ | 4516869 | 11554610 | 14471207 | 16981614 | 8468636 | LINR | -14.53366 | 82392 | | 0.99153 |
| $ 1 Tetrachloro-m-xylene | 862842<br>+++++ | 796836 | 720785 | 699282 | 654742 | +++++ | AVRG | | 746897 | | 11.07684 |
| $ 22 Decachlorobiphenyl | 526842<br>+++++ | 467489 | 419786 | 409887 | 353052 | +++++ | AVRG | | 435411 | | 15.00215 |

2131017112

585

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a002.d
Report Date: 21-Oct-2013 10:41

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131018.b/sv18a002.d
Lab Smp Id: deg
Inj Date : 18-OCT-2013 14:30
Operator : tls Inst ID: gcsv18a.i
Smp Info : deg*1 93-1-6
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131018.b/pest35ms.m
Meth Date : 21-Oct-2013 10:40 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:14 Cal File: sv18a034.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: deg.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | FINAL ( UG/L) |
|---|---|---|---|---|---|---|
| 12 4,4'-DDE | 6.563 | 6.566 | -0.003 | 436654 | 0.70139 | 0.0070 |
| 15 4,4'-DDD | 6.978 | 6.981 | -0.003 | 784261 | 1.54660 | 0.015 |
| 17 4,4'-DDT | 7.212 | 7.213 | -0.001 | 33761415 | 84.0762 | 0.84 |
| 18 Endrin aldehyde | 7.267 | 7.266 | 0.001 | 495007 | 1.10449 | 0.011 |
| 21 Endrin ketone | 7.908 | 7.910 | -0.002 | 1085473 | 2.08612 | 0.021 |
| 14 Endrin | 6.906 | 6.907 | -0.001 | 44926609 | 81.1103 | 0.81 |

Gulf Coast Analytical Laboratories, Inc.

Breakdown Calculation

DDT Breakdown: Formula

$$\frac{(\text{Area DDD}) + (\text{Area DDE})}{(\text{Area DDD}) + (\text{Area DDE}) + (\text{Area DDT})} \times 100$$

DDT Breakdown: Calculation

$$\frac{784261 + 436654}{784261 + 436654 + 33761415} \times 100 = 3.5\ \%$$

DDT Breakdown: Criteria

< 15%

==========

Endrin Breakdown: Formula

$$\frac{(\text{Area Endrin ketone}) + (\text{Area Endrin aldehyde})}{(\text{Area End ket}) + (\text{Area End ald}) + (\text{Area Endrin})} \times 100$$

Endrin Breakdown: Calculation

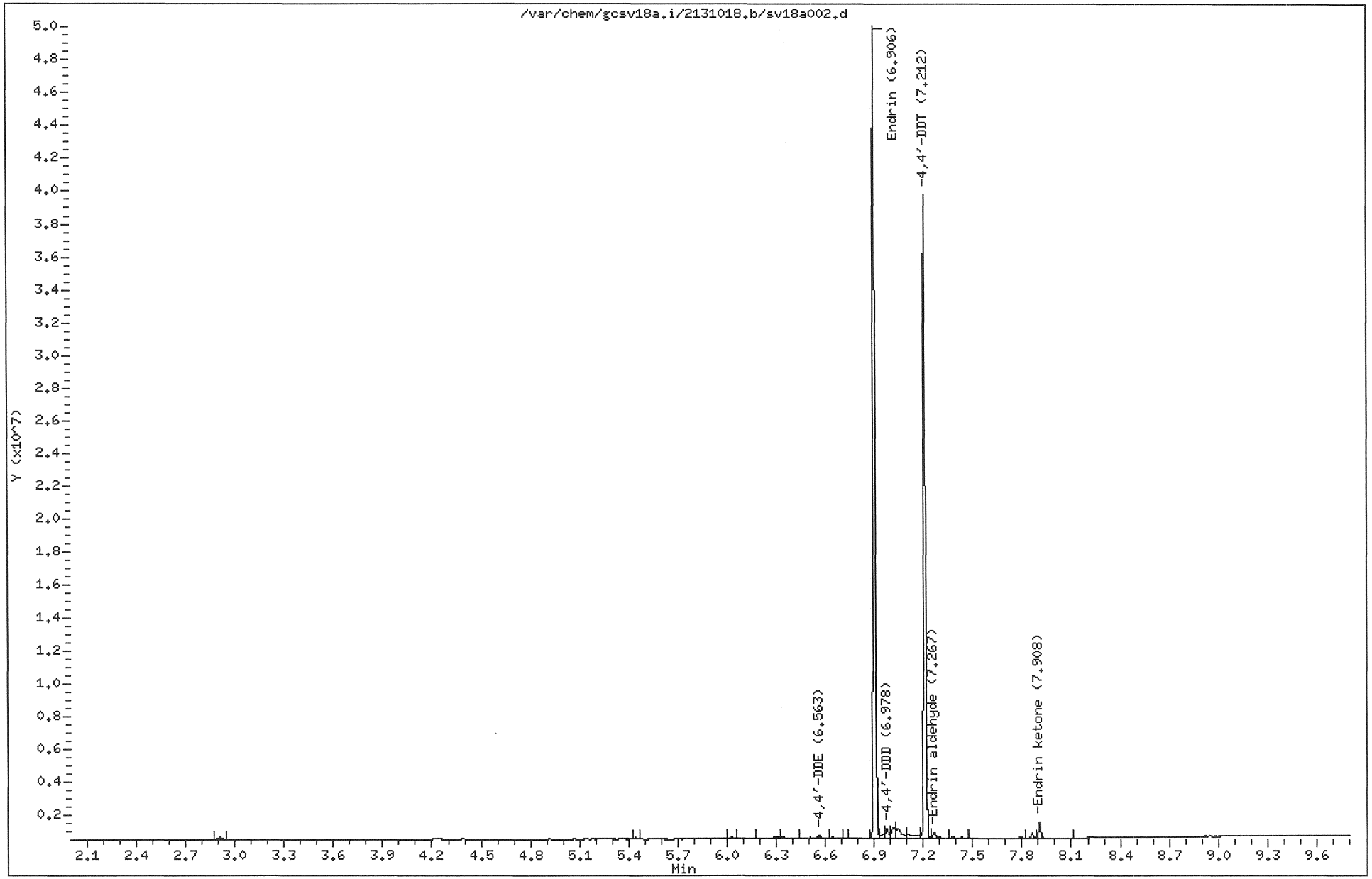
$$\frac{1085473 + 495007}{1085473 + 495007 + 44926609} \times 100 = 3.4\ \%$$

Endrin Breakdown: Criteria

< 15%

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a002.d
Date : 18-OCT-2013 14:30
Client ID:
Sample Info: deg*1 93-1-6
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv18a.i
Operator: tls
Column diameter: 0.32

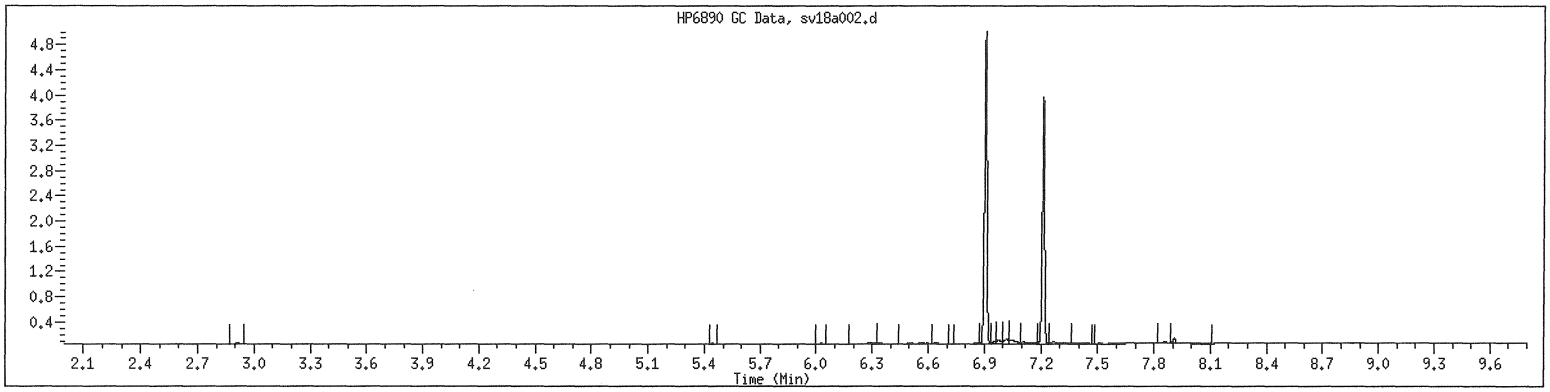



588

2131017.12

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : deg | SampleType | : SAMPLE |
| Injection Date | : 10/18/2013 14:30 | Instrument | : gcsv18a.i |
| Operator | : tls | | |
| Sample Info | : deg*1 93-1-6 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv18a.i/2131018.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : deg |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a005.d
Report Date: 22-Oct-2013 11:09

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131018.b/sv18a005.d
Lab Smp Id: 1201
Inj Date : 18-OCT-2013 15:14
Operator : tls Inst ID: gcsv18a.i
Smp Info : 1201*1 5
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131018.b/pest35ms.m
Meth Date : 22-Oct-2013 11:09 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 21:02 Cal File: sv18a029.d
Als bottle: 5 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8081.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| $ 1 Tetrachloro-m-xylene | 4.039 | 4.039 | 0.000 | 4314209 | 5.00000 | 5.8 |
| 2 alpha-BHC | 4.721 | 4.721 | 0.000 | 5388564 | 5.00000 | 5.4 |
| 3 gamma-BHC (Lindane) | 5.074 | 5.073 | 0.001 | 4612038 | 5.00000 | 5.6 |
| 6 beta-BHC | 5.145 | 5.145 | 0.000 | 2276920 | 5.00000 | 5.9 |
| 4 Heptachlor | 5.409 | 5.409 | 0.000 | 4163921 | 5.00000 | 5.8 |
| 7 delta-BHC | 5.450 | 5.450 | 0.000 | 4654374 | 5.00000 | 5.6 |
| 5 Aldrin | 5.687 | 5.687 | 0.000 | 4187353 | 5.00000 | 5.7 |
| 8 Heptachlor epoxide | 6.129 | 6.128 | 0.001 | 3765049 | 5.00000 | 5.9(M2) |
| 10 gamma-Chlordane | 6.279 | 6.280 | -0.001 | 3828117 | 5.00000 | 5.9(M2) |
| 11 alpha-Chlordane | 6.415 | 6.411 | 0.004 | 3557747 | 5.00000 | 6.1(M2) |
| 9 Endosulfan I | 6.399 | 6.404 | -0.005 | 3478848 | 5.00000 | 5.6(M2) |
| 12 4,4'-DDE | 6.565 | 6.566 | -0.001 | 7008258 | 10.0000 | 11(M2) |
| 13 Dieldrin | 6.646 | 6.646 | 0.000 | 7041378 | 10.0000 | 11(M2) |

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a005.d
Report Date: 22-Oct-2013 11:09

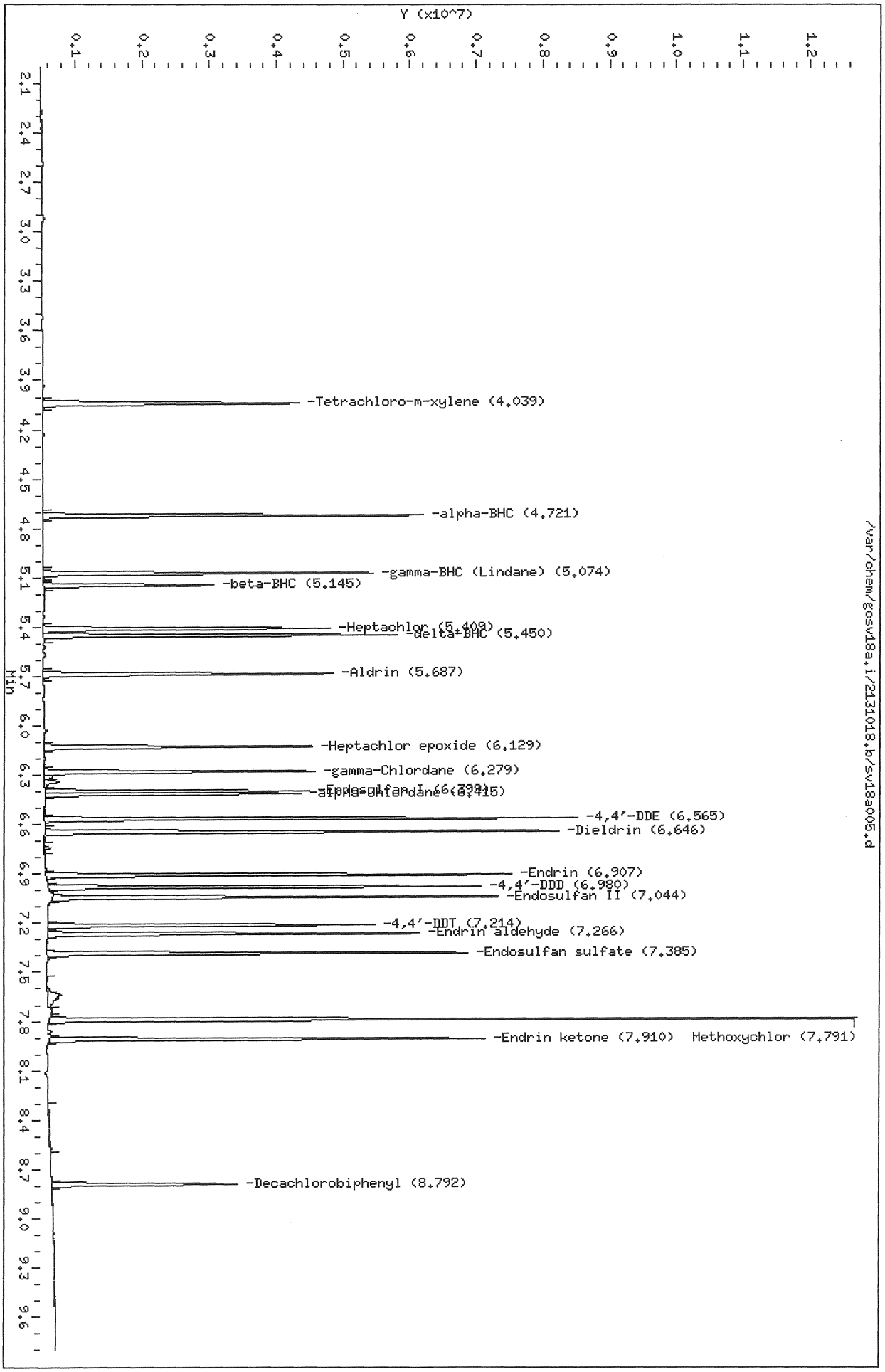
| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| 14 Endrin | 6.907 | 6.907 | 0.000 | 6320934 | 10.0000 | 11(M2) |
| 15 4,4'-DDD | 6.980 | 6.980 | 0.000 | 5628078 | 10.0000 | 11(M2) |
| 16 Endosulfan II | 7.044 | 7.042 | 0.002 | 6089307 | 10.0000 | 11(M2) |
| 17 4,4'-DDT | 7.214 | 7.213 | 0.001 | 4241912 | 10.0000 | 11(M2) |
| 18 Endrin aldehyde | 7.266 | 7.266 | 0.000 | 5132552 | 10.0000 | 11(M2) |
| 20 Endosulfan sulfate | 7.385 | 7.386 | -0.001 | 5750929 | 10.0000 | 11(M2) |
| 19 Methoxychlor | 7.791 | 7.791 | 0.000 | 10479478 | 50.0000 | 54(M2) |
| 21 Endrin ketone | 7.910 | 7.910 | 0.000 | 5779639 | 10.0000 | 11(M2) |
| $ 22 Decachlorobiphenyl | 8.792 | 8.791 | 0.001 | 2634212 | 5.00000 | 6.0(M2) |

QC Flag Legend

M2- Compound response manually integrated because Target system integrated incorrectly.

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a005.d
Date : 18-OCT-2013 15:14
Client ID:
Sample Info: 1201*1 5
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv18a.i
Operator: tls
Column diameter: 0.32

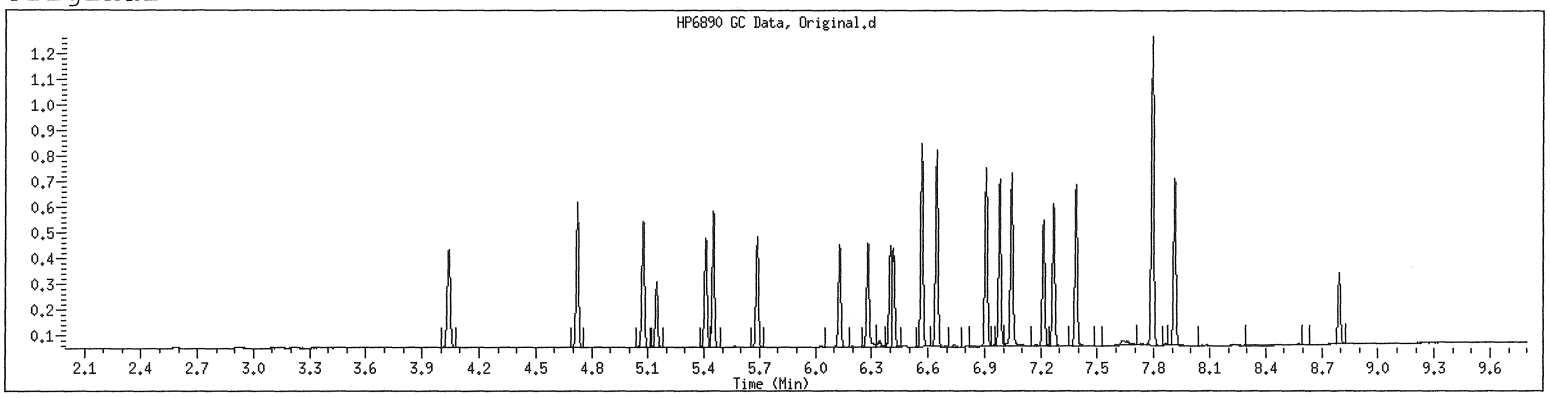


Report Date: 10/22/2013 11:09

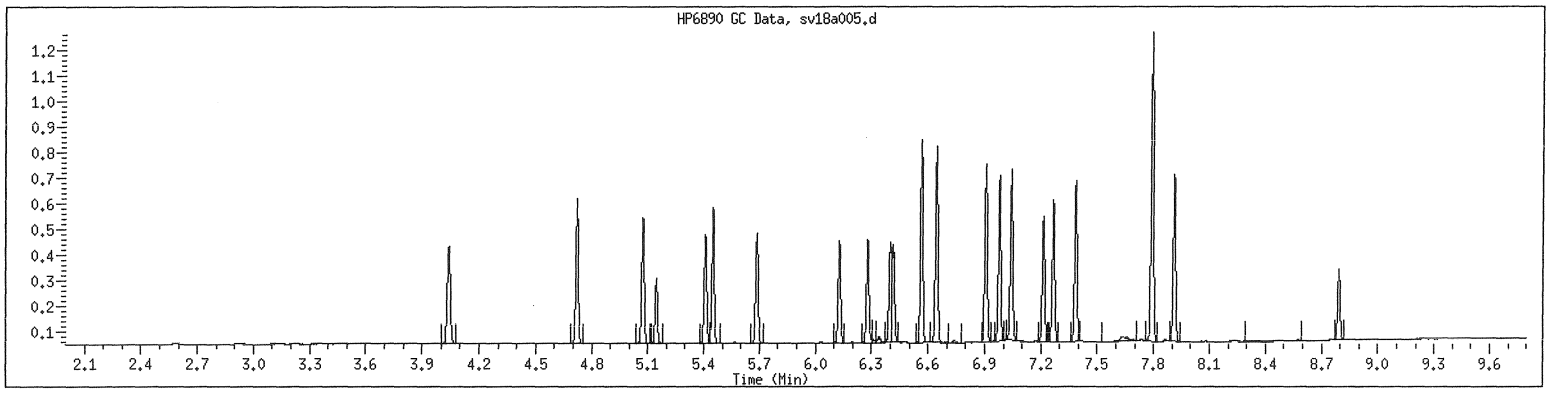
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1201 | SampleType | : CALIB_1 |
| Injection Date | : 10/18/2013 15:14 | Instrument | : gcsv18a.i |
| Operator | : tls | | |
| Sample Info | : 1201*1 5 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv18a.i/2131018.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : 8081 |

Original




Final



Data File: /var/chem/gcsv18a.i/2131018.b/sv18a006.d
Report Date: 22-Oct-2013 11:09

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131018.b/sv18a006.d
Lab Smp Id: 1202
Inj Date : 18-OCT-2013 15:28
Operator : tls Inst ID: gcsv18a.i
Smp Info : 1202*1 20
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131018.b/pest35ms.m
Meth Date : 22-Oct-2013 11:09 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 21:16 Cal File: sv18a030.d
Als bottle: 6 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8081.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| $ 1 Tetrachloro-m-xylene | 4.040 | 4.039 | 0.001 | 15936728 | 20.0000 | 21(M2) |
| 2 alpha-BHC | 4.722 | 4.721 | 0.001 | 20597541 | 20.0000 | 21 |
| 3 gamma-BHC (Lindane) | 5.074 | 5.073 | 0.001 | 17528083 | 20.0000 | 21 |
| 6 beta-BHC | 5.145 | 5.145 | 0.000 | 8139286 | 20.0000 | 21(M2) |
| 4 Heptachlor | 5.409 | 5.409 | 0.000 | 15274179 | 20.0000 | 21(M2) |
| 7 delta-BHC | 5.450 | 5.450 | 0.000 | 17403057 | 20.0000 | 21(M2) |
| 5 Aldrin | 5.687 | 5.687 | 0.000 | 15971632 | 20.0000 | 22 |
| 8 Heptachlor epoxide | 6.129 | 6.128 | 0.001 | 14053284 | 20.0000 | 22(M2) |
| 10 gamma-Chlordane | 6.280 | 6.280 | 0.000 | 13998578 | 20.0000 | 21(M2) |
| 11 alpha-Chlordane | 6.416 | 6.411 | 0.005 | 12590887 | 20.0000 | 22 |
| 9 Endosulfan I | 6.400 | 6.404 | -0.004 | 13825084 | 20.0000 | 22 |
| 12 4,4'-DDE | 6.566 | 6.566 | 0.000 | 27382935 | 40.0000 | 44(M2) |
| 13 Dieldrin | 6.646 | 6.646 | 0.000 | 27107468 | 40.0000 | 44(M2) |

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a006.d
Report Date: 22-Oct-2013 11:09

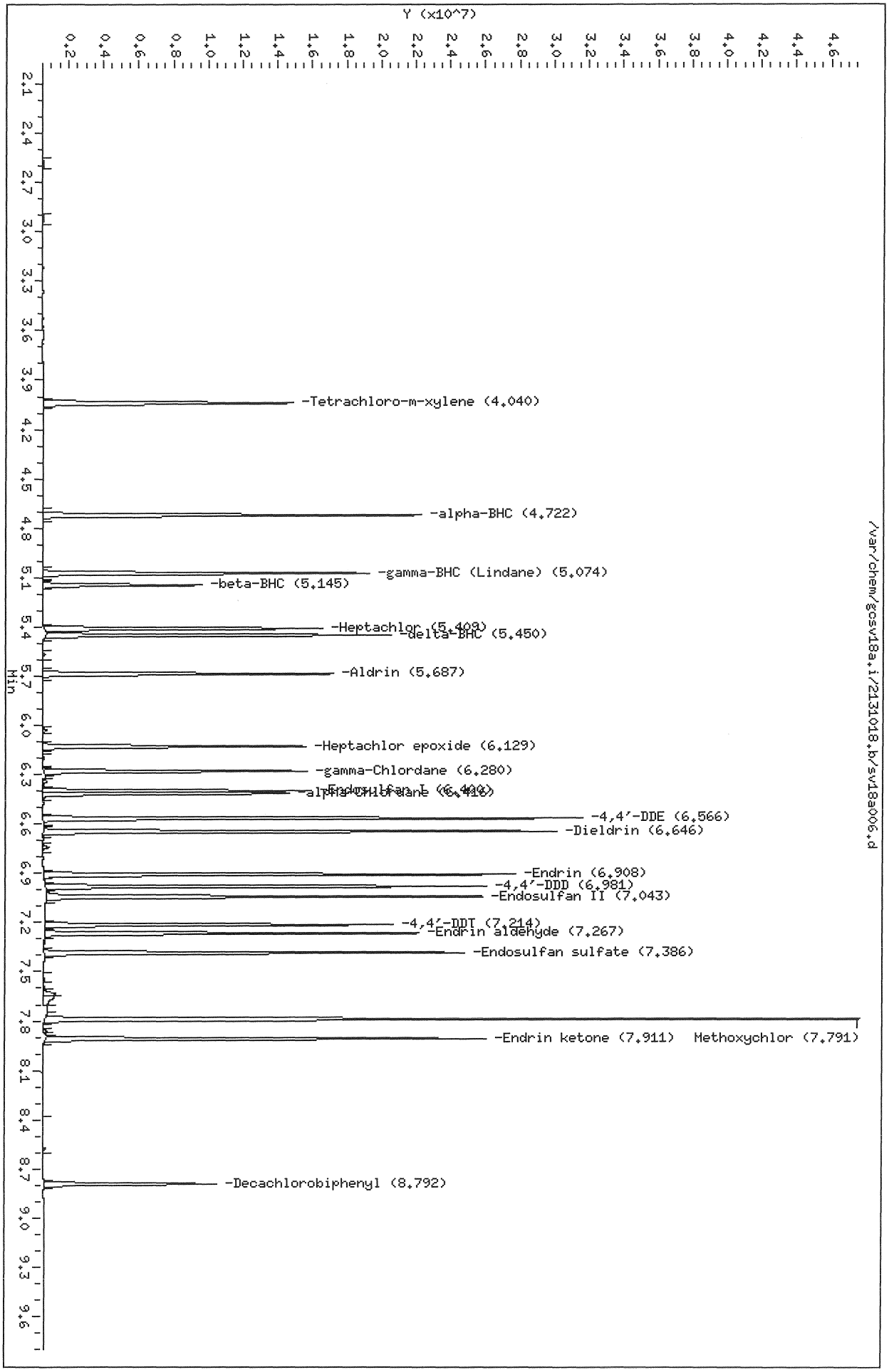
| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| 14 Endrin | 6.908 | 6.907 | 0.001 | 24356422 | 40.0000 | 44(M2) |
| 15 4,4'-DDD | 6.981 | 6.980 | 0.001 | 21923509 | 40.0000 | 43(M2) |
| 16 Endosulfan II | 7.043 | 7.042 | 0.001 | 23205760 | 40.0000 | 43(M2) |
| 17 4,4'-DDT | 7.214 | 7.213 | 0.001 | 17383990 | 40.0000 | 43(M2) |
| 18 Endrin aldehyde | 7.267 | 7.266 | 0.001 | 19360476 | 40.0000 | 43(M2) |
| 20 Endosulfan sulfate | 7.386 | 7.386 | 0.000 | 21696542 | 40.0000 | 43(M2) |
| 19 Methoxychlor | 7.791 | 7.791 | 0.000 | 40880052 | 200.000 | 210(M2) |
| 21 Endrin ketone | 7.911 | 7.910 | 0.001 | 22348256 | 40.0000 | 43(M2) |
| $ 22 Decachlorobiphenyl | 8.792 | 8.791 | 0.001 | 9349771 | 20.0000 | 21(M2) |

QC Flag Legend

M2- Compound response manually integrated because Target system integrated incorrectly.

Data File: /var/chem/gcsv18a.i/213101 8.b/sv18a006.d
Date : 18-OCT-2013 15:28
Client ID:
Sample Info: 1202x1 20
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv18a.i
Operator: tls
Column diameter: 0.32

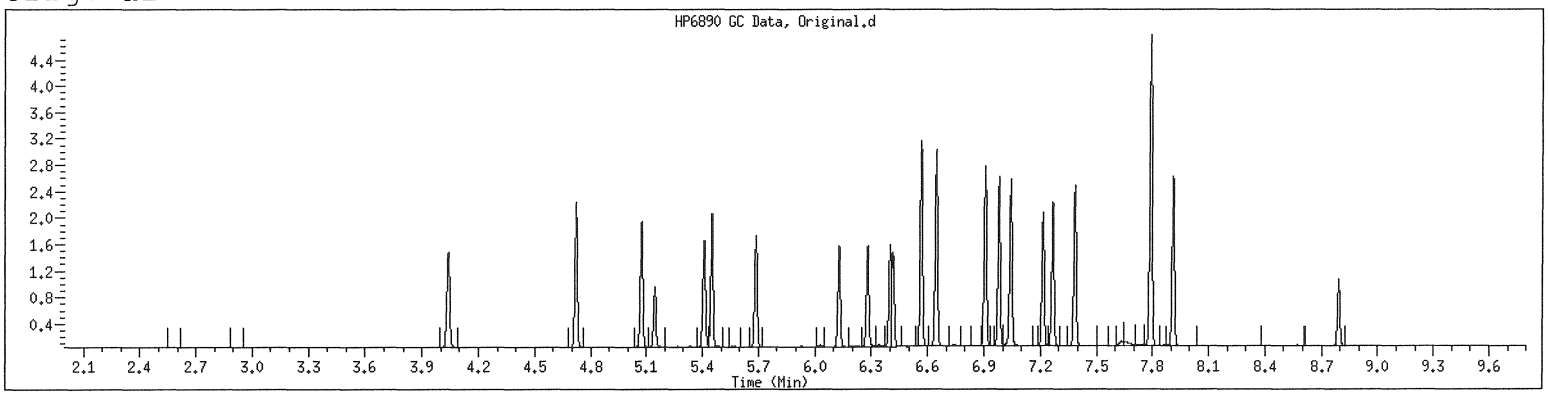


Report Date: 10/22/2013 11:09

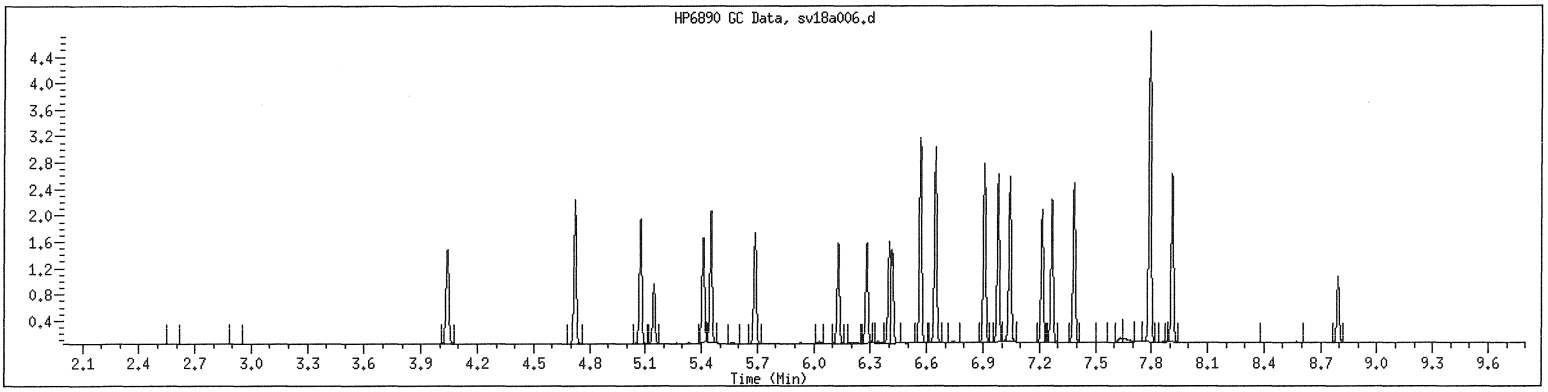
MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1202 | SampleType | : CALIB_2 |
| Injection Date | : 10/18/2013 15:28 | Instrument | : gcsv18a.i |
| Operator | : tls | | |
| Sample Info | : 1202*1 20 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv18a.i/2131018.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : 8081 |

Original




Final



Data File: /var/chem/gcsv18a.i/2131018.b/sv18a007.d
Report Date: 22-Oct-2013 11:09

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131018.b/sv18a007.d
Lab Smp Id: 1203
Inj Date : 18-OCT-2013 15:43
Operator : tls Inst ID: gcsv18a.i
Smp Info : 1203*1 60
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131018.b/pest35ms.m
Meth Date : 22-Oct-2013 11:09 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 21:45 Cal File: sv18a032.d
Als bottle: 7 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8081.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

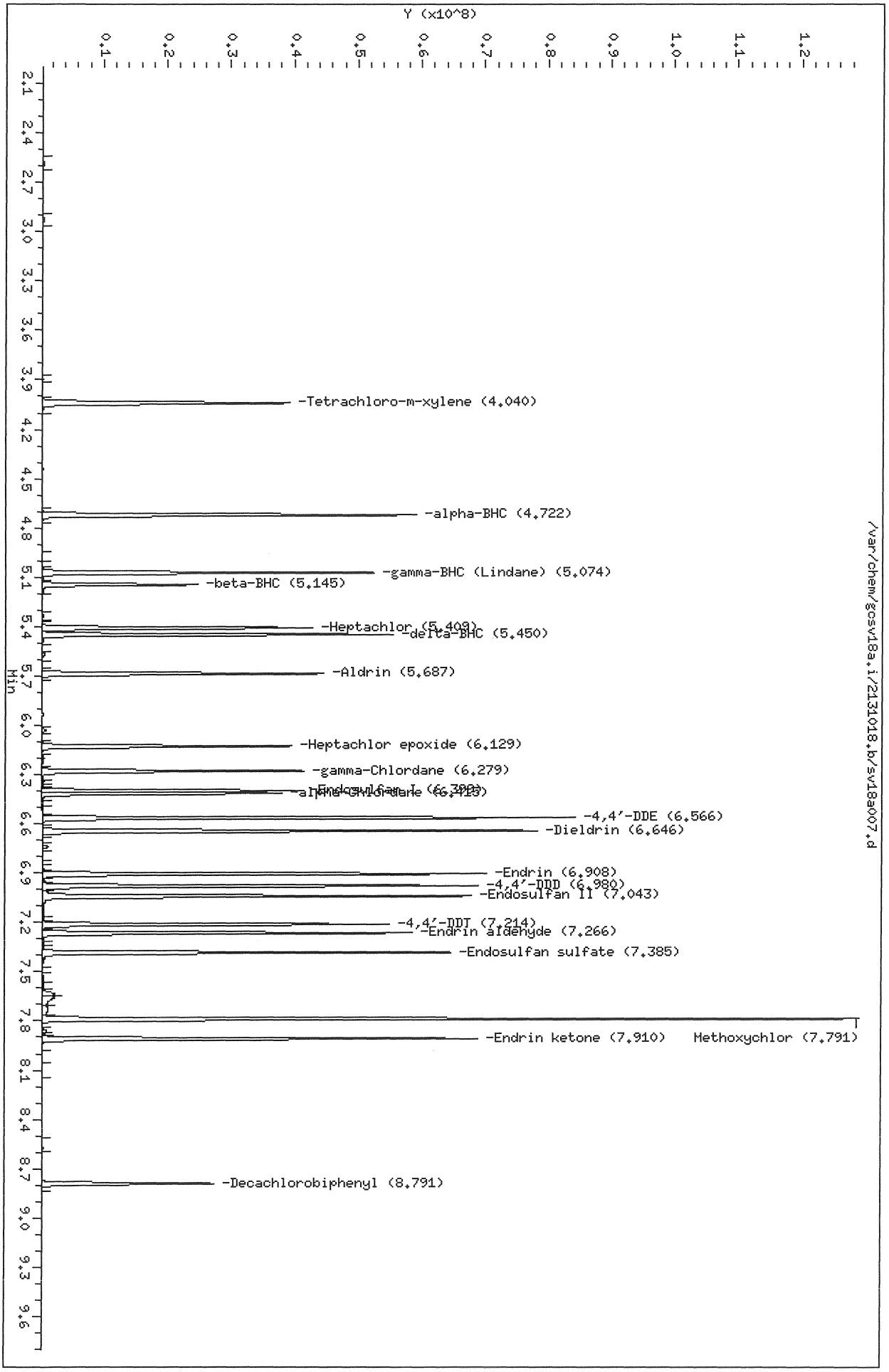
| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| $ 1 Tetrachloro-m-xylene | 4.040 | 4.039 | 0.001 | 43247082 | 60.0000 | 58 |
| 2 alpha-BHC | 4.722 | 4.721 | 0.001 | 56262191 | 60.0000 | 57 |
| 3 gamma-BHC (Lindane) | 5.074 | 5.073 | 0.001 | 47927372 | 60.0000 | 58 |
| 6 beta-BHC | 5.145 | 5.145 | 0.000 | 22004190 | 60.0000 | 57 |
| 4 Heptachlor | 5.409 | 5.409 | 0.000 | 41447178 | 60.0000 | 58 |
| 7 delta-BHC | 5.450 | 5.450 | 0.000 | 48272717 | 60.0000 | 59 |
| 5 Aldrin | 5.687 | 5.687 | 0.000 | 42745463 | 60.0000 | 58 |
| 8 Heptachlor epoxide | 6.129 | 6.128 | 0.001 | 37045101 | 60.0000 | 58 |
| 10 gamma-Chlordane | 6.279 | 6.280 | -0.001 | 38111060 | 60.0000 | 58 |
| 11 alpha-Chlordane | 6.415 | 6.411 | 0.004 | 33062086 | 60.0000 | 57 |
| 9 Endosulfan I | 6.399 | 6.404 | -0.005 | 36568831 | 60.0000 | 59 |
| 12 4,4'-DDE | 6.566 | 6.566 | 0.000 | 73446926 | 120.000 | 120 |
| 13 Dieldrin | 6.646 | 6.646 | 0.000 | 72470859 | 120.000 | 120 |

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a007.d
Report Date: 22-Oct-2013 11:09

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| 14 Endrin | 6.908 | 6.907 | 0.001 | 64681362 | 120.000 | 120 |
| 15 4,4'-DDD | 6.980 | 6.980 | 0.000 | 60632463 | 120.000 | 120 |
| 16 Endosulfan II | 7.043 | 7.042 | 0.001 | 65945638 | 120.000 | 120 |
| 17 4,4'-DDT | 7.214 | 7.213 | 0.001 | 48563695 | 120.000 | 120 |
| 18 Endrin aldehyde | 7.266 | 7.266 | 0.000 | 52833525 | 120.000 | 120 |
| 20 Endosulfan sulfate | 7.385 | 7.386 | -0.001 | 59789531 | 120.000 | 120 |
| 19 Methoxychlor | 7.791 | 7.791 | 0.000 | 111502643 | 600.000 | 570 |
| 21 Endrin ketone | 7.910 | 7.910 | 0.000 | 61705482 | 120.000 | 120 |
| $ 22 Decachlorobiphenyl | 8.791 | 8.791 | 0.000 | 25187155 | 60.0000 | 58 |

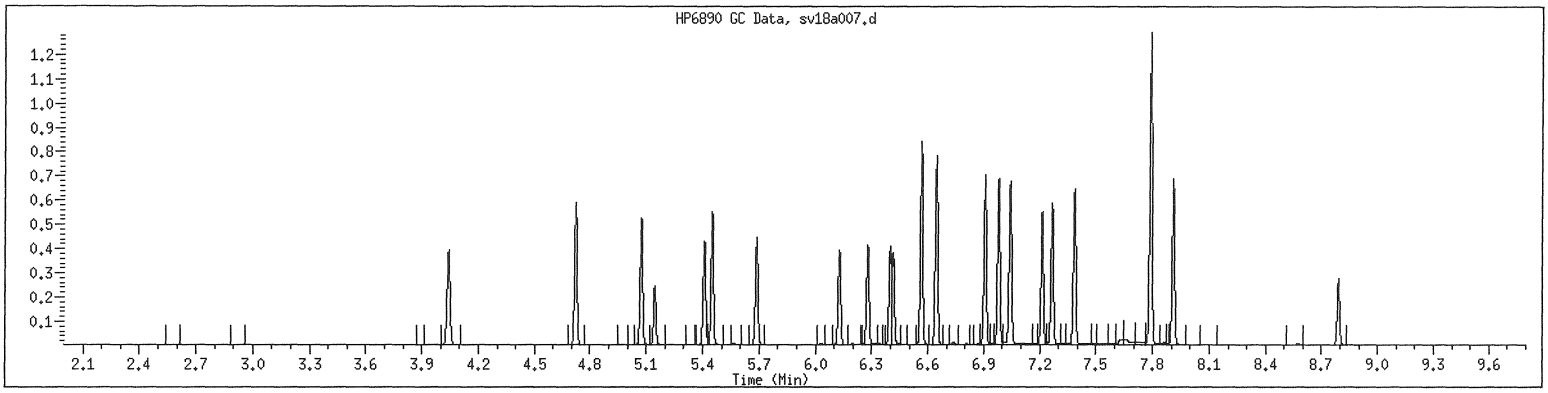
Data File: /var/chem/gcsv18a.i/2131018.b/sv18a007.d
Date : 18-OCT-2013 15:43
Client ID:
Sample Info: 1203*1 60
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv18a.i
Operator: tls
Column diameter: 0.32



# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1203 | SampleType | : CALIB_3 |
| Injection Date | : 10/18/2013 15:43 | Instrument | : gcsv18a.i |
| Operator | : tls | | |
| Sample Info | : 1203*1 60 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv18a.i/2131018.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : 8081 |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a008.d
Report Date: 22-Oct-2013 11:09

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131018.b/sv18a008.d
Lab Smp Id: 1204
Inj Date : 18-OCT-2013 15:57
Operator : tls Inst ID: gcsv18a.i
Smp Info : 1204*1 80
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131018.b/pest35ms.m
Meth Date : 22-Oct-2013 11:09 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 21:59 Cal File: sv18a033.d
Als bottle: 8 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8081.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

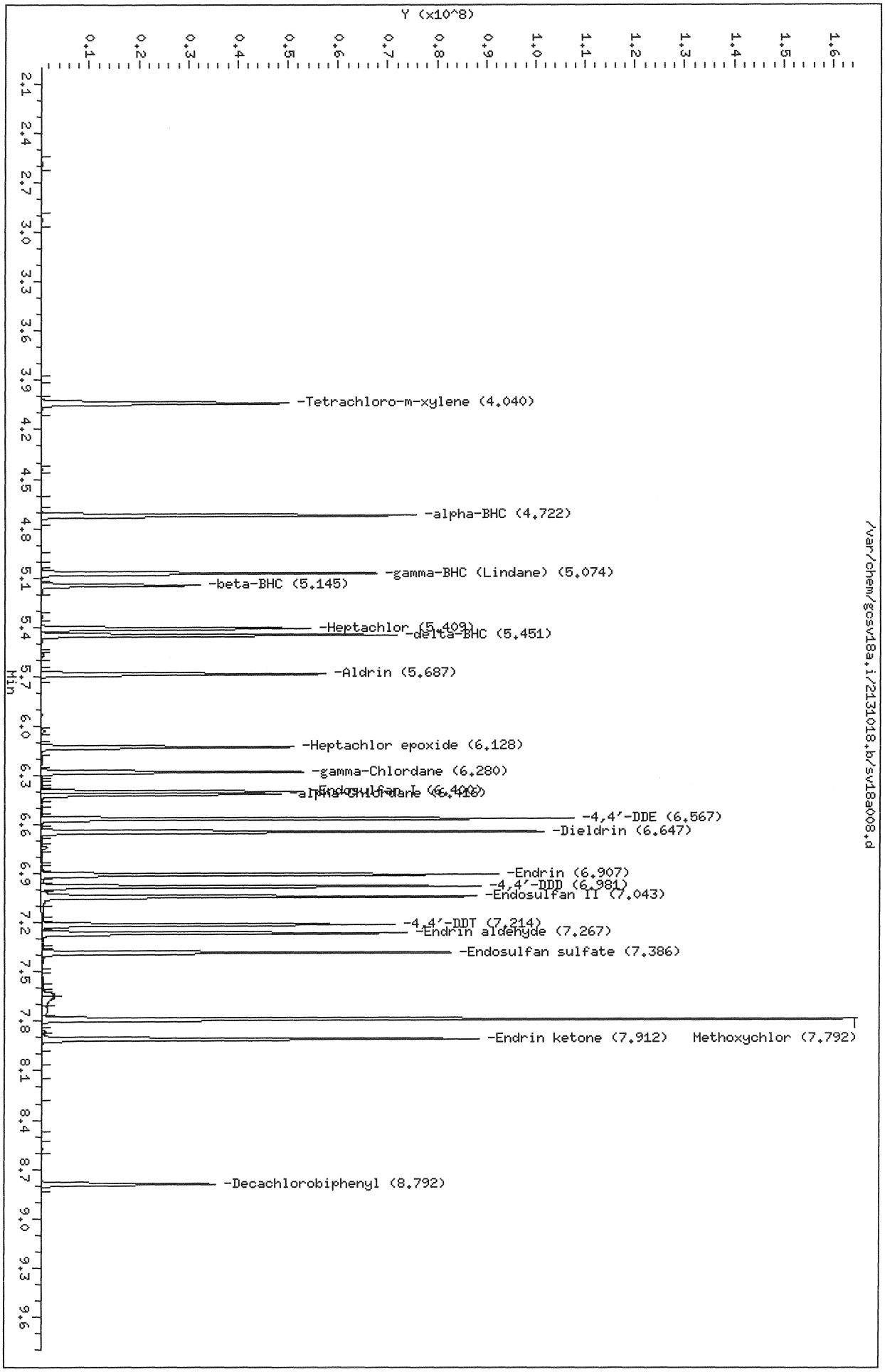
| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| $ 1 Tetrachloro-m-xylene | 4.040 | 4.039 | 0.001 | 55942592 | 80.0000 | 75 |
| 2 alpha-BHC | 4.722 | 4.721 | 0.001 | 73625262 | 80.0000 | 74 |
| 3 gamma-BHC (Lindane) | 5.074 | 5.073 | 0.001 | 62324443 | 80.0000 | 76 |
| 6 beta-BHC | 5.145 | 5.145 | 0.000 | 28586901 | 80.0000 | 75 |
| 4 Heptachlor | 5.409 | 5.409 | 0.000 | 53233750 | 80.0000 | 75 |
| 7 delta-BHC | 5.451 | 5.450 | 0.001 | 62868038 | 80.0000 | 76 |
| 5 Aldrin | 5.687 | 5.687 | 0.000 | 54790550 | 80.0000 | 75 |
| 8 Heptachlor epoxide | 6.128 | 6.128 | 0.000 | 47209892 | 80.0000 | 74 |
| 10 gamma-Chlordane | 6.280 | 6.280 | 0.000 | 48636869 | 80.0000 | 75 |
| 11 alpha-Chlordane | 6.416 | 6.411 | 0.005 | 44076088 | 80.0000 | 76 |
| 9 Endosulfan I | 6.400 | 6.404 | -0.004 | 45669919 | 80.0000 | 74 |
| 12 4,4'-DDE | 6.567 | 6.566 | 0.001 | 94094585 | 160.000 | 150 |
| 13 Dieldrin | 6.647 | 6.646 | 0.001 | 92963651 | 160.000 | 150 |

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a008.d
Report Date: 22-Oct-2013 11:09

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| 14 Endrin | 6.907 | 6.907 | 0.000 | 83310223 | 160.000 | 150 |
| 15 4,4'-DDD | 6.981 | 6.980 | 0.001 | 77768372 | 160.000 | 150 |
| 16 Endosulfan II | 7.043 | 7.042 | 0.001 | 82734190 | 160.000 | 150 |
| 17 4,4'-DDT | 7.214 | 7.213 | 0.001 | 62983157 | 160.000 | 160 |
| 18 Endrin aldehyde | 7.267 | 7.266 | 0.001 | 68375754 | 160.000 | 150 |
| 20 Endosulfan sulfate | 7.386 | 7.386 | 0.000 | 76580361 | 160.000 | 150 |
| 19 Methoxychlor | 7.792 | 7.791 | 0.001 | 145601439 | 800.000 | 750 |
| 21 Endrin ketone | 7.912 | 7.910 | 0.002 | 80649955 | 160.000 | 150 |
| $ 22 Decachlorobiphenyl | 8.792 | 8.791 | 0.001 | 32790923 | 80.0000 | 75 |

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a008.d
Date : 18-OCT-2013 15:57
Client ID:
Sample Info: 1204*1 80
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

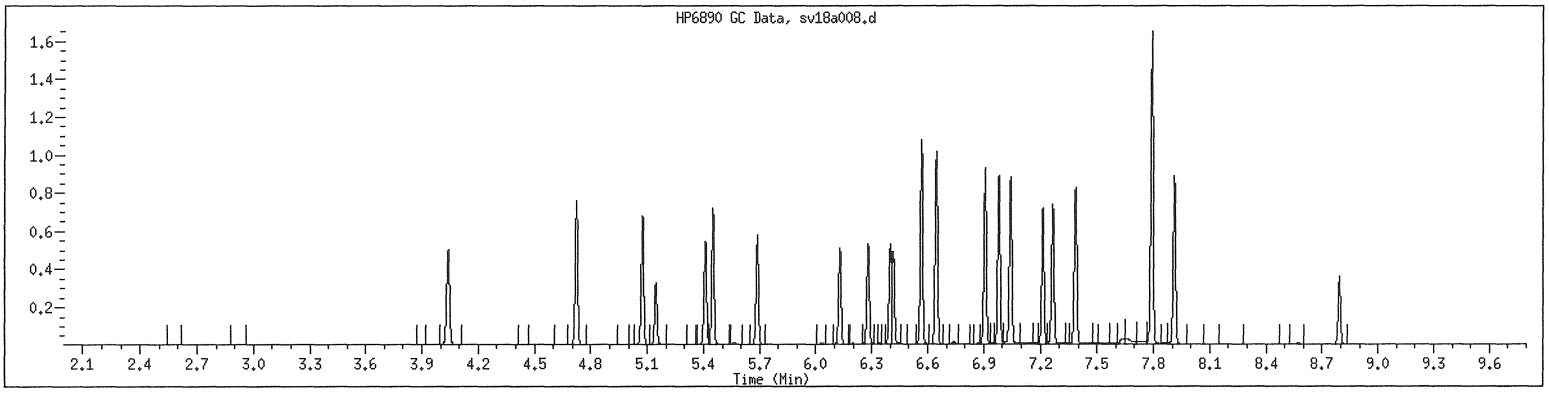
Instrument: gcsv18a.i
Operator: tls
Column diameter: 0.32



Report Date: 10/22/2013 11:09

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 1204 SampleType : CALIB_4
Injection Date: 10/18/2013 15:57 Instrument : gcsv18a.i
Operator : tls
Sample Info : 1204*1 80
Misc Info :
Method : /var/chem/gcsv18a.i/2131018.b/pest35ms.m
Dilution : 1.0
Matrix : WATER
Integrator : Falcon Compound Sublist: 8081




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a009.d
Report Date: 22-Oct-2013 11:09

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131018.b/sv18a009.d
Lab Smp Id: 1205
Inj Date : 18-OCT-2013 16:12
Operator : tls Inst ID: gcsv18a.i
Smp Info : 1205*1 93-1-11
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131018.b/pest35ms.m
Meth Date : 22-Oct-2013 11:09 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:14 Cal File: sv18a034.d
Als bottle: 9 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8081.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

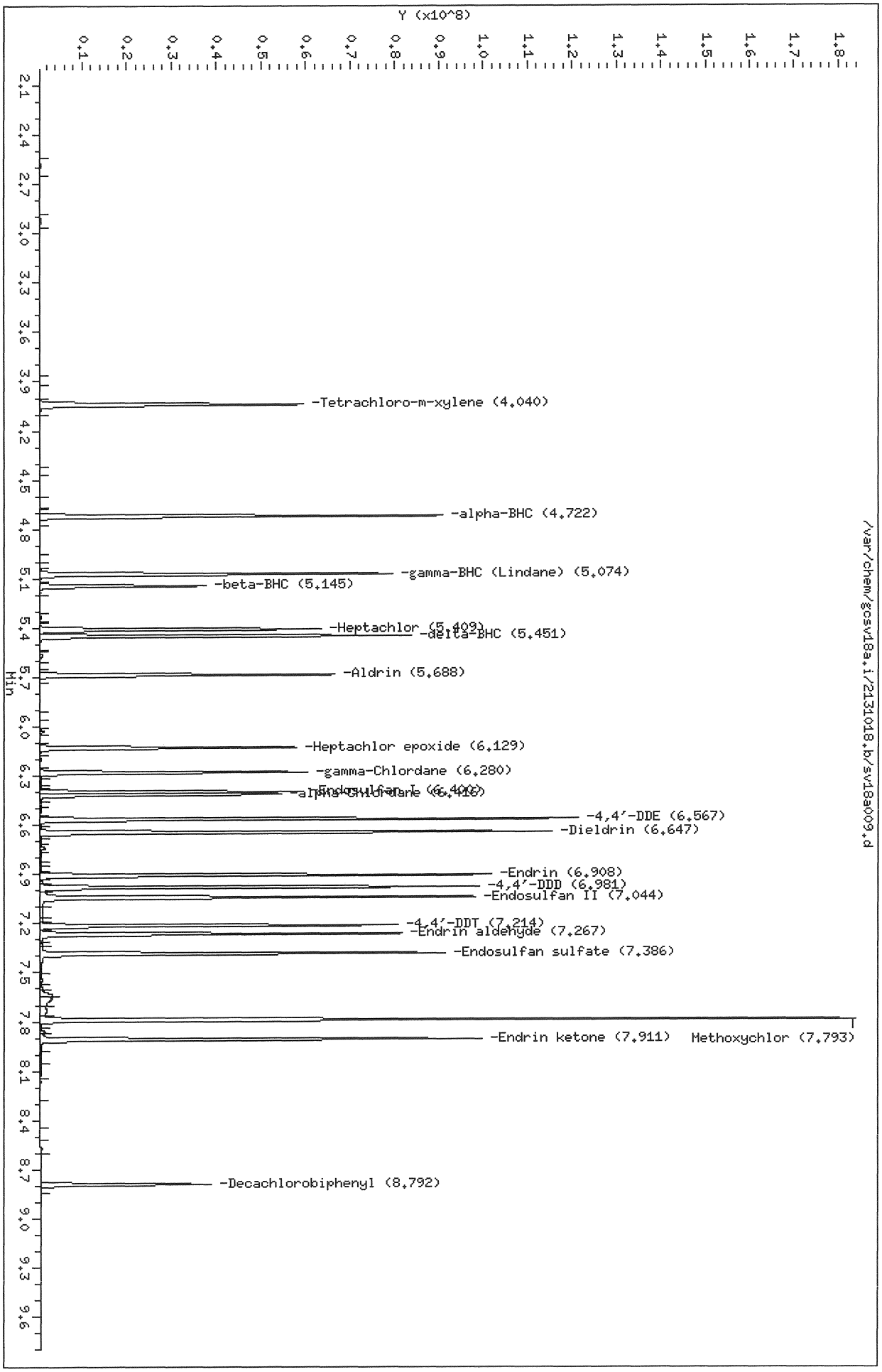
| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| $ 1 Tetrachloro-m-xylene | 4.040 | 4.039 | 0.001 | 65474171 | 100.000 | 88 |
| 2 alpha-BHC | 4.722 | 4.721 | 0.001 | 86259367 | 100.000 | 87 |
| 3 gamma-BHC (Lindane) | 5.074 | 5.073 | 0.001 | 73219121 | 100.000 | 89 |
| 6 beta-BHC | 5.145 | 5.145 | 0.000 | 33195704 | 100.000 | 87 |
| 4 Heptachlor | 5.409 | 5.409 | 0.000 | 61253480 | 100.000 | 86 |
| 7 delta-BHC | 5.451 | 5.450 | 0.001 | 73271305 | 100.000 | 89 |
| 5 Aldrin | 5.688 | 5.687 | 0.001 | 62942326 | 100.000 | 86 |
| 8 Heptachlor epoxide | 6.129 | 6.128 | 0.001 | 53698883 | 100.000 | 84 |
| 10 gamma-Chlordane | 6.280 | 6.280 | 0.000 | 55278712 | 100.000 | 85 |
| 11 alpha-Chlordane | 6.416 | 6.411 | 0.005 | 47354763 | 100.000 | 81 |
| 9 Endosulfan I | 6.400 | 6.404 | -0.004 | 53923106 | 100.000 | 87 |
| 12 4,4'-DDE | 6.567 | 6.566 | 0.001 | 106123353 | 200.000 | 170 |
| 13 Dieldrin | 6.647 | 6.646 | 0.001 | 104840350 | 200.000 | 170 |

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a009.d
Report Date: 22-Oct-2013 11:09

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| 14 Endrin | 6.908 | 6.907 | 0.001 | 93754526 | 200.000 | 170 |
| 15 4,4'-DDD | 6.981 | 6.980 | 0.001 | 86642126 | 200.000 | 170 |
| 16 Endosulfan II | 7.044 | 7.042 | 0.002 | 92604522 | 200.000 | 170 |
| 17 4,4'-DDT | 7.214 | 7.213 | 0.001 | 70130775 | 200.000 | 170 |
| 18 Endrin aldehyde | 7.267 | 7.266 | 0.001 | 75197232 | 200.000 | 170 |
| 20 Endosulfan sulfate | 7.386 | 7.386 | 0.000 | 85747405 | 200.000 | 170 |
| 19 Methoxychlor | 7.793 | 7.791 | 0.002 | 159138366 | 1000.00 | 820 |
| 21 Endrin ketone | 7.911 | 7.910 | 0.001 | 89342646 | 200.000 | 170 |
| $ 22 Decachlorobiphenyl | 8.792 | 8.791 | 0.001 | 35305183 | 100.000 | 81 |

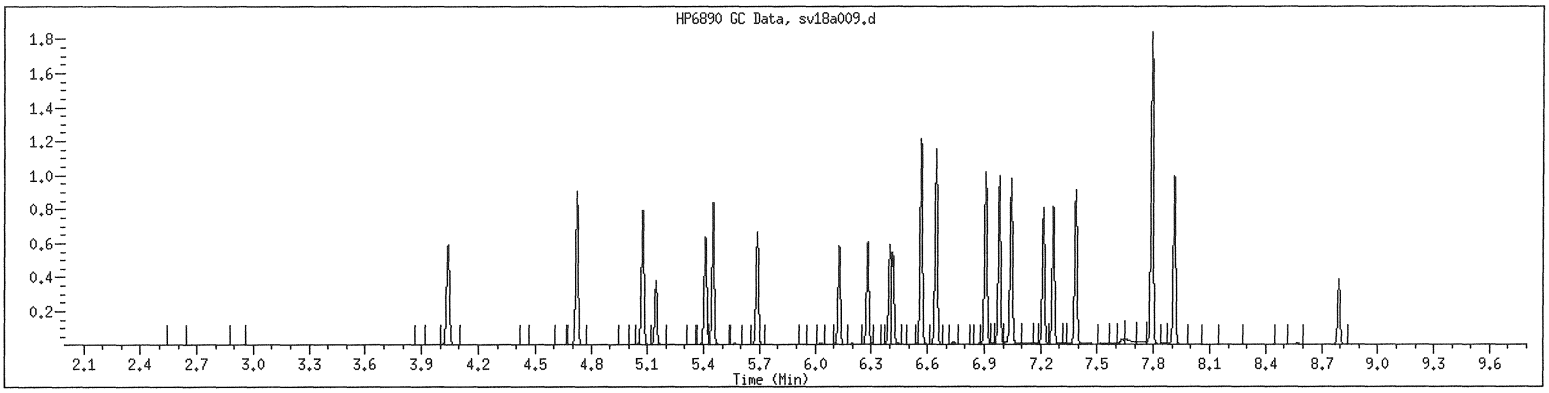
Data File: /var/chem/gcsv18a.i/2131018.b/sv18a009.d
Date : 18-OCT-2013 16:12
Client ID:
Sample Info: 1205x1 93-1-11
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv18a.i
Operator: tls
Column diameter: 0.32



# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1205 | SampleType | : CALIB_5 |
| Injection Date | : 10/18/2013 16:12 | Instrument | : gcsv18a.i |
| Operator | : tls | | |
| Sample Info | : 1205*1 93-1-11 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv18a.i/2131018.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : 8081 |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a011.d
Report Date: 22-Oct-2013 11:09

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131018.b/sv18a011.d
Lab Smp Id: 1205
Inj Date : 18-OCT-2013 16:41
Operator : tls Inst ID: gcsv18a.i
Smp Info : 1205*1 84-52-9
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131018.b/pest35ms.m
Meth Date : 22-Oct-2013 11:09 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:14 Cal File: sv18a034.d
Als bottle: 11 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: chlor.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

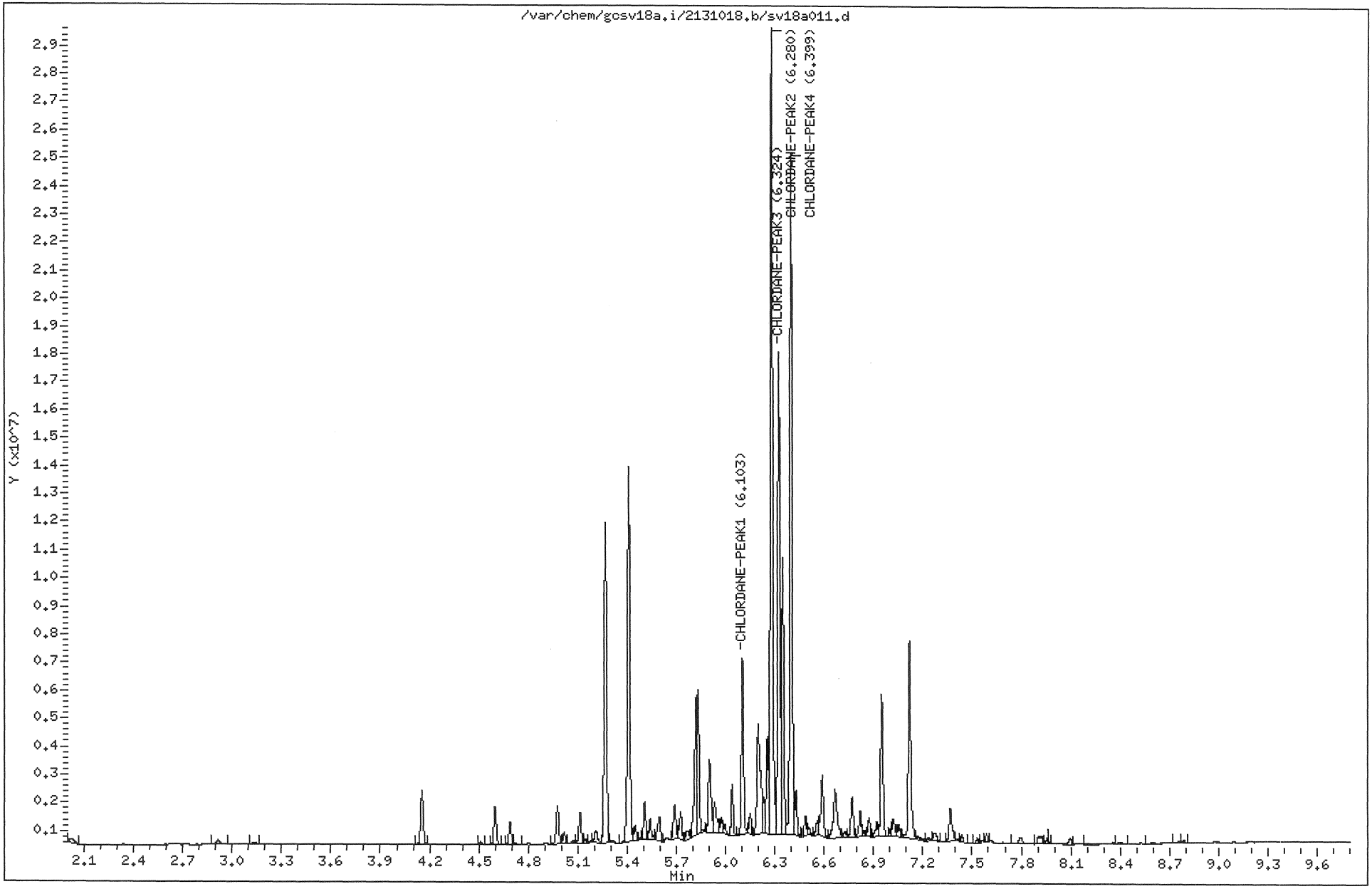
| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| M 71 CHLORDANE-AVG | | | | 72566626 | 800.000 | 800(A) |
| 72 CHLORDANE-PEAK1 | 6.103 | 6.102 | 0.001 | 5888036 | 800.000 | 800(A) |
| 73 CHLORDANE-PEAK2 | 6.280 | 6.280 | 0.000 | 27615361 | 800.000 | 800(A) |
| 74 CHLORDANE-PEAK3 | 6.324 | 6.323 | 0.001 | 16151651 | 800.000 | 800(A) |
| 75 CHLORDANE-PEAK4 | 6.399 | 6.400 | -0.001 | 22911578 | 800.000 | 800(A) |

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a011.d
Date : 18-OCT-2013 16:41
Client ID:
Sample Info: 1205x1 84-52-9
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

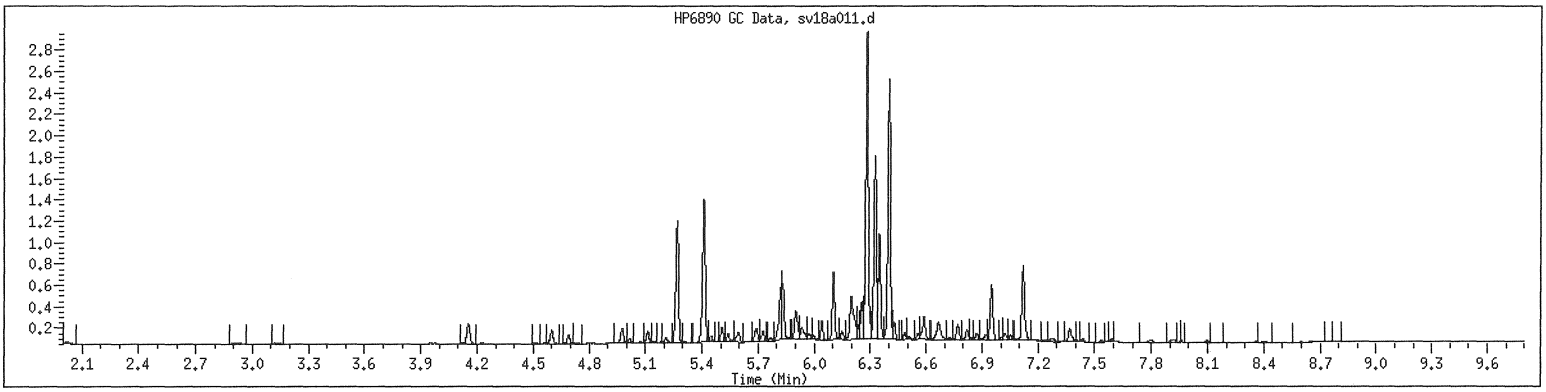
Instrument: gcsv18a.i
Operator: tls
Column diameter: 0.32




611
2131017 12

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1205 | SampleType | : CALIB_5 |
| Injection Date | : 10/18/2013 16:41 | Instrument | : gcsv18a.i |
| Operator | : tls | | |
| Sample Info | : 1205*1 84-52-9 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv18a.i/2131018.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : chlor |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a012.d
Report Date: 21-Oct-2013 10:14

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131018.b/sv18a012.d
Lab Smp Id: 1201
Inj Date : 18-OCT-2013 16:55
Operator : tls Inst ID: gcsv18a.i
Smp Info : 1201*1 84-54-9
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131018.b/pest35ms.m
Meth Date : 21-Oct-2013 10:14 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 16:55 Cal File: sv18a012.d
Als bottle: 12 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: tox.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) | |
|---|---|---|---|---|---|---|---|
| M 65 TOXAPHENE-AVG | | | | 15794727 | 250.000 | | (a) |
| 66 TOXAPHENE-PEAK1 | 7.164 | 7.162 | 0.002 | 4218184 | 250.000 | | (a) |
| 67 TOXAPHENE-PEAK2 | 7.267 | 7.269 | -0.002 | 3633067 | 250.000 | | (a) |
| 68 TOXAPHENE-PEAK3 | 7.293 | 7.292 | 0.001 | 4185127 | 250.000 | | (a) |
| 69 TOXAPHENE-PEAK4 | 7.685 | 7.682 | 0.003 | 3758349 | 250.000 | | (a) |

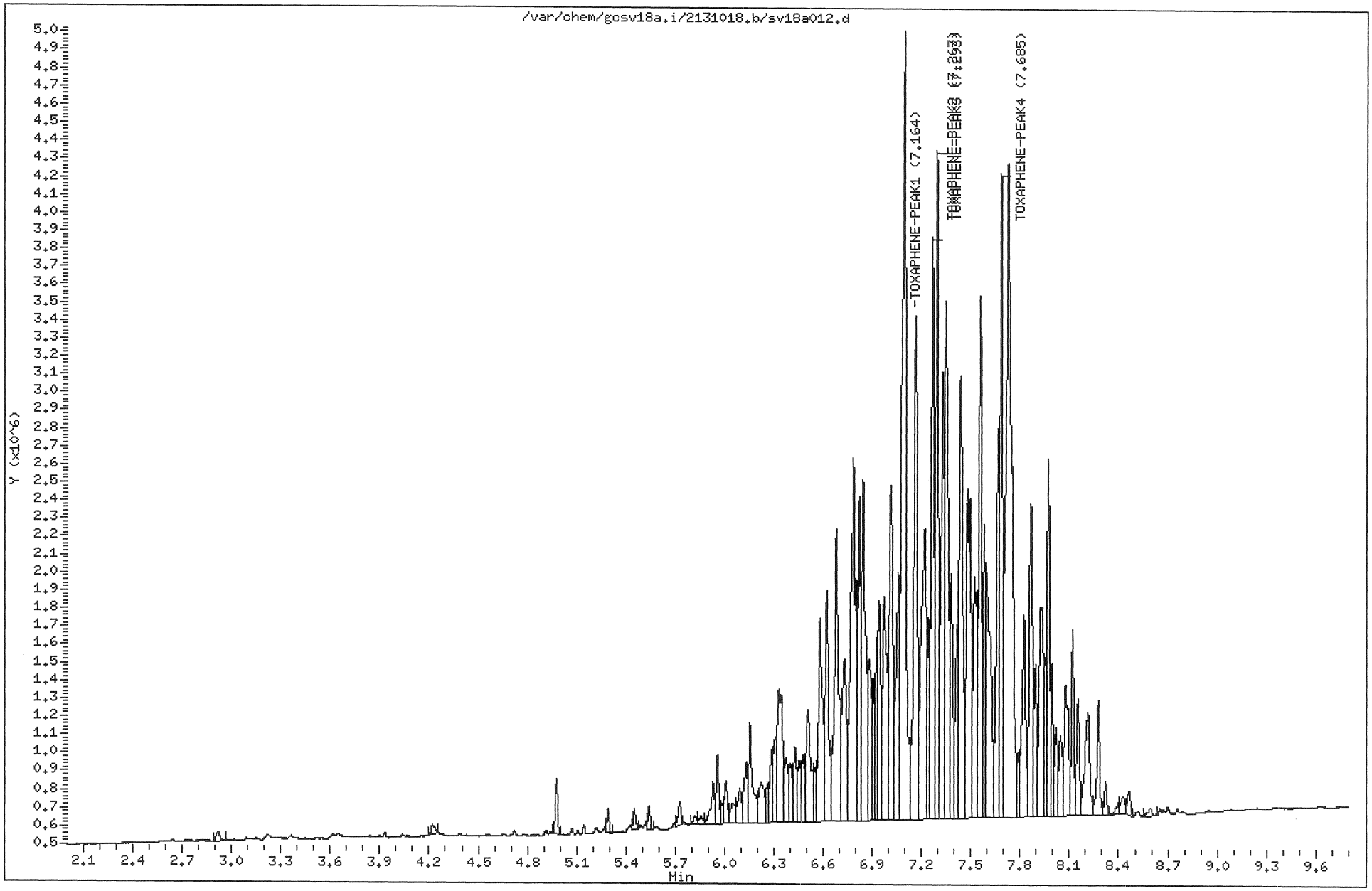
QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a012.d
Date : 18-OCT-2013 16:55
Client ID:
Sample Info: 1201x1 84-54-9
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv18a.i

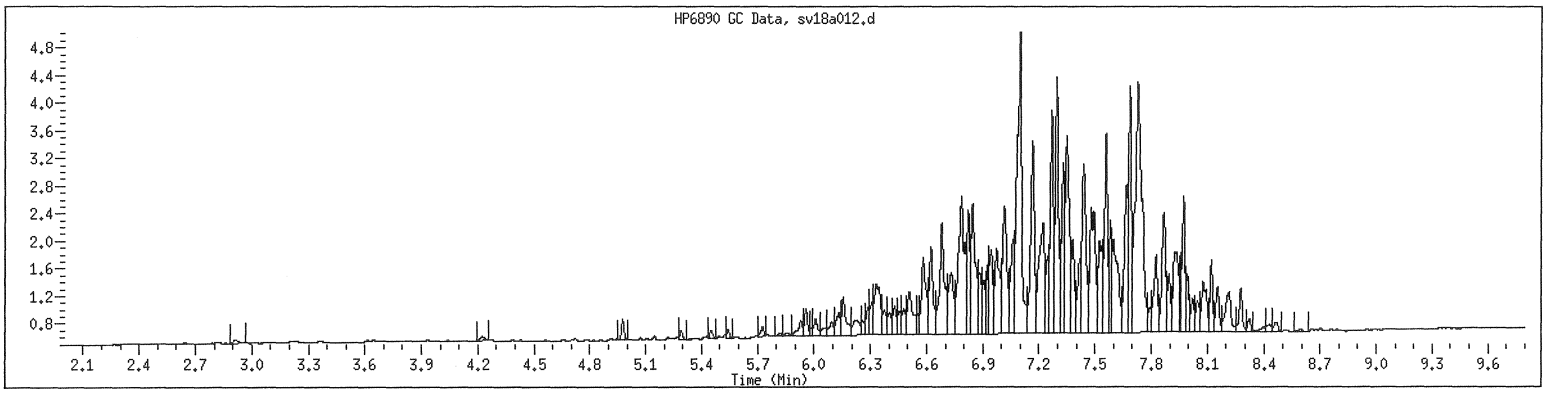
Operator: tls
Column diameter: 0.32




2131017 12 614

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1201 | SampleType | : CALIB_1 |
| Injection Date | : 10/18/2013 16:55 | Instrument | : gcsv18a.i |
| Operator | : tls | | |
| Sample Info | : 1201*1 84-54-9 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv18a.i/2131018.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : tox |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a013.d
Report Date: 22-Oct-2013 11:09

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131018.b/sv18a013.d
Lab Smp Id: 1205
Inj Date : 18-OCT-2013 17:10
Operator : tls Inst ID: gcsv18a.i
Smp Info : 1205*1 84-54-9
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131018.b/pest35ms.m
Meth Date : 22-Oct-2013 11:09 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:14 Cal File: sv18a034.d
Als bottle: 13 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: tox.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

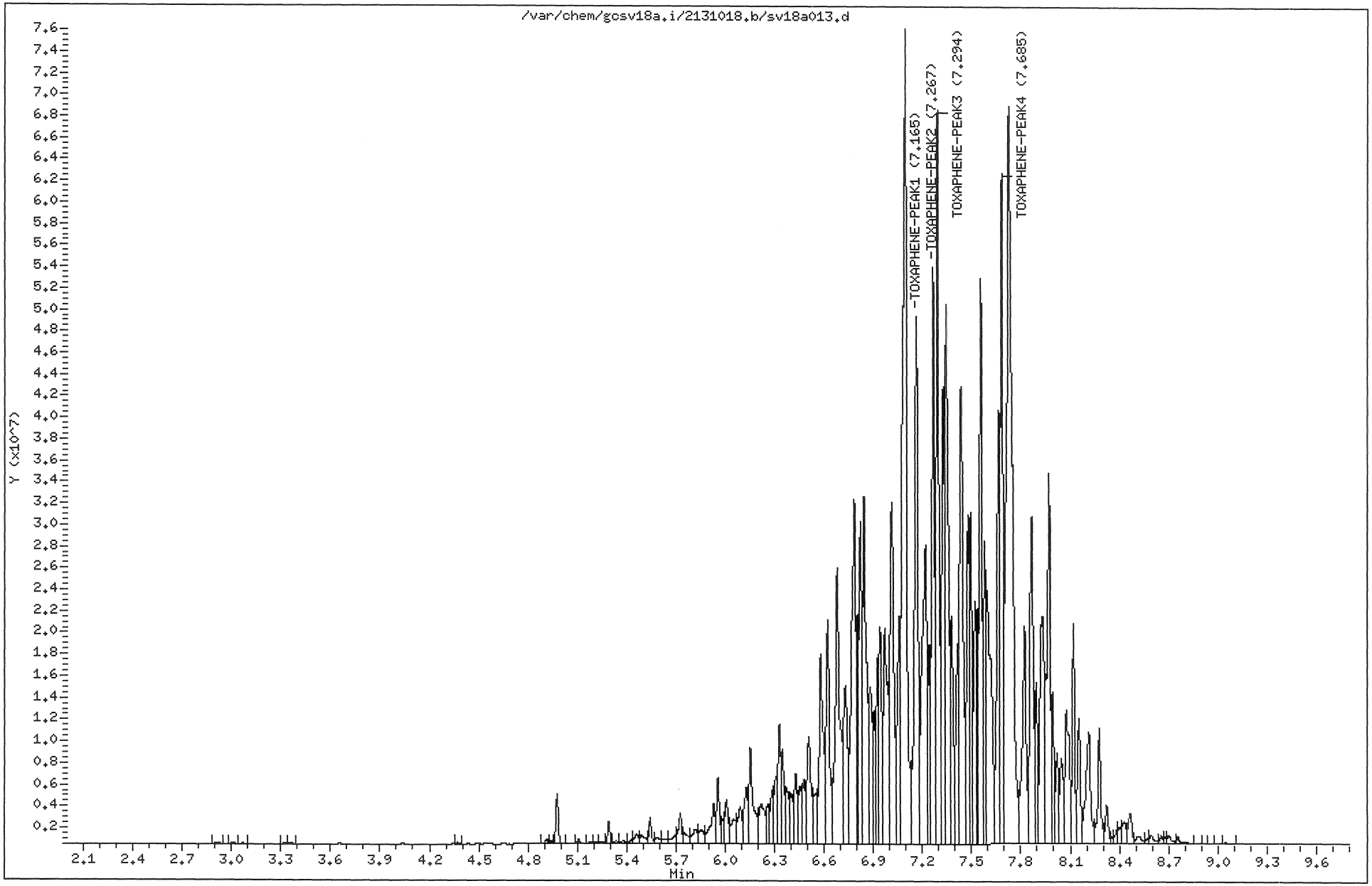
| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| M 65 TOXAPHENE-AVG | | | | 271497928 | 5000.00 | 5000 |
| 66 TOXAPHENE-PEAK1 | 7.165 | 7.163 | 0.002 | 72402854 | 5000.00 | 5000 |
| 67 TOXAPHENE-PEAK2 | 7.267 | 7.268 | -0.001 | 59560976 | 5000.00 | 5000 |
| 68 TOXAPHENE-PEAK3 | 7.294 | 7.292 | 0.002 | 75041485 | 5000.00 | 5000 |
| 69 TOXAPHENE-PEAK4 | 7.685 | 7.685 | 0.000 | 64492613 | 5000.00 | 5000 |

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a013.d
Date : 18-OCT-2013 17:10
Client ID:
Sample Info: 1205x1 84-54-9
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

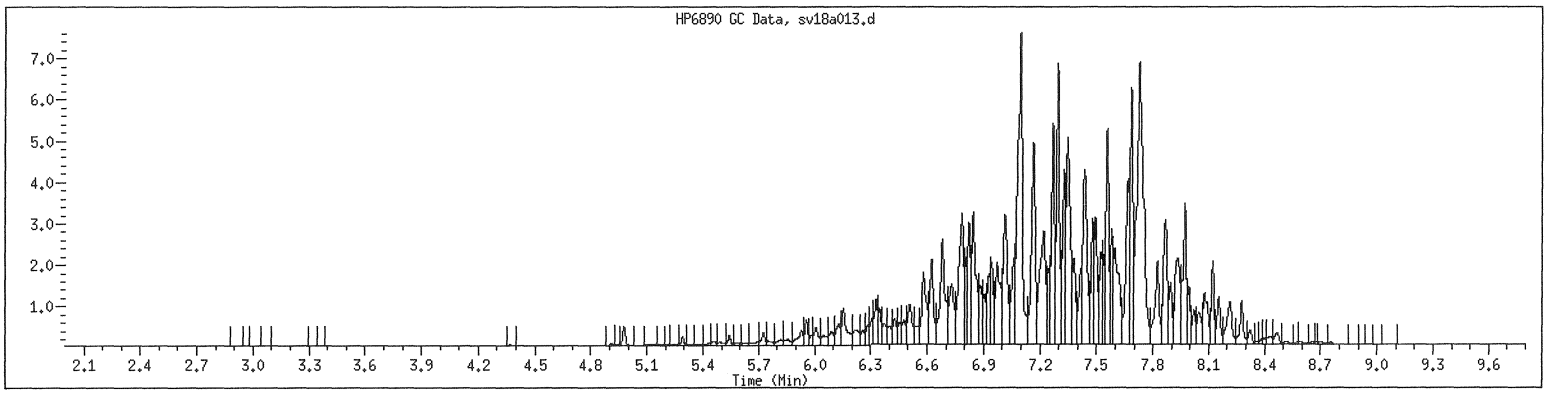
Instrument: gcsv18a.i
Operator: tls
Column diameter: 0.32




21310171 2 S17

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1205 | SampleType | : CALIB_5 |
| Injection Date | : 10/18/2013 17:10 | Instrument | : gcsv18a.i |
| Operator | : tls | | |
| Sample Info | : 1205*1 84-54-9 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv18a.i/2131018.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : tox |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a038.d
Report Date: 25-Oct-2013 12:44

GCAL, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 1600
Level: LOW
Data Type: GC MULTI COMP
SpikeList File: DODicv.spk
Sublist File: 8081.sub
Method File: /var/chem/gcsv18a.i/2131018.b/pest35ms.m
Misc Info:

Client SDG: 2131018
Fraction: SV

Operator: tls
SampleType: LCS
Quant Type: ESTD

| SPIKE COMPOUND | CONC ADDED UG/L | CONC RECOVERED UG/L | % RECOVERED | LIMITS |
|---|---|---|---|---|
| 2 alpha-BHC | 60 | 59 | 98.47 | 80-120 |
| 3 gamma-BHC (Lindane) | 60 | 61 | 102.35 | 80-120 |
| 6 beta-BHC | 60 | 61 | 101.80 | 80-120 |
| 4 Heptachlor | 60 | 58 | 97.02 | 80-120 |
| 7 delta-BHC | 60 | 62 | 104.12 | 80-120 |
| 5 Aldrin | 60 | 65 | 108.68 | 80-120 |
| 8 Heptachlor epoxide | 60 | 64 | 105.97 | 80-120 |
| 10 gamma-Chlordane | 60 | 65 | 108.90 | 80-120 |
| 11 alpha-Chlordane | 60 | 63 | 104.85 | 80-120 |
| 9 Endosulfan I | 60 | 66 | 110.58 | 80-120 |
| 12 4,4'-DDE | 60 | 69 | 114.97 | 80-120 |
| 13 Dieldrin | 60 | 69 | 114.26 | 80-120 |
| 14 Endrin | 60 | 68 | 112.85 | 80-120 |
| 15 4,4'-DDD | 60 | 67 | 111.71 | 80-120 |
| 16 Endosulfan II | 60 | 69 | 114.91 | 80-120 |
| 17 4,4'-DDT | 60 | 67 | 111.14 | 80-120 |
| 18 Endrin aldehyde | 60 | 62 | 103.83 | 80-120 |
| 20 Endosulfan sulfate | 60 | 67 | 111.36 | 80-120 |
| 19 Methoxychlor | 60 | 67 | 111.48 | 80-120 |
| 21 Endrin ketone | 60 | 65 | 108.45 | 80-120 |

| SURROGATE COMPOUND | CONC ADDED UG/L | CONC RECOVERED UG/L | % RECOVERED | LIMITS |
|---|---|---|---|---|
| $ 1 Tetrachloro-m-xylene | 500 | 0.0 | * | 48-137 |
| $ 22 Decachlorobiphenyl | 500 | 0.0 | * | 30-139 |

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a038.d
Report Date: 25-Oct-2013 12:44

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131018.b/sv18a038.d
Lab Smp Id: 1600
Inj Date : 21-OCT-2013 10:34
Operator : tls Inst ID: gcsv18a.i
Smp Info : 1600*1 84-51-8
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131018.b/pest35ms.m
Meth Date : 22-Oct-2013 11:10 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:14 Cal File: sv18a034.d
Als bottle: 38 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8081.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 1.00000 | Volume of final extract (mL) |
| Vo | 1.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | CONCENTRATIONS FINAL ( UG/L) |
|---|---|---|---|---|---|---|
| 2 alpha-BHC | 4.723 | 4.721 | 0.002 | 58745291 | 59.0800 | 59 |
| 3 gamma-BHC (Lindane) | 5.075 | 5.073 | 0.002 | 50467069 | 61.4127 | 61 |
| 6 beta-BHC | 5.147 | 5.145 | 0.002 | 23433775 | 61.0770 | 61 |
| 4 Heptachlor | 5.410 | 5.409 | 0.001 | 41505830 | 58.2091 | 58 |
| 7 delta-BHC | 5.452 | 5.450 | 0.002 | 51526422 | 62.4693 | 62 |
| 5 Aldrin | 5.688 | 5.687 | 0.001 | 47767290 | 65.2063 | 65 |
| 8 Heptachlor epoxide | 6.130 | 6.128 | 0.002 | 40695832 | 63.5832 | 64 |
| 10 gamma-Chlordane | 6.282 | 6.280 | 0.002 | 42620686 | 65.3394 | 65 |
| 11 alpha-Chlordane | 6.417 | 6.411 | 0.006 | 36697231 | 62.9104 | 63 |
| 9 Endosulfan I | 6.401 | 6.404 | -0.003 | 41221853 | 66.3454 | 66 |
| 12 4,4'-DDE | 6.567 | 6.566 | 0.001 | 42990201 | 68.9793 | 69(M2) |
| 13 Dieldrin | 6.647 | 6.646 | 0.001 | 42380507 | 68.5553 | 69(M2) |
| 14 Endrin | 6.908 | 6.907 | 0.001 | 37503745 | 67.7091 | 68 |

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a038.d
Report Date: 25-Oct-2013 12:44

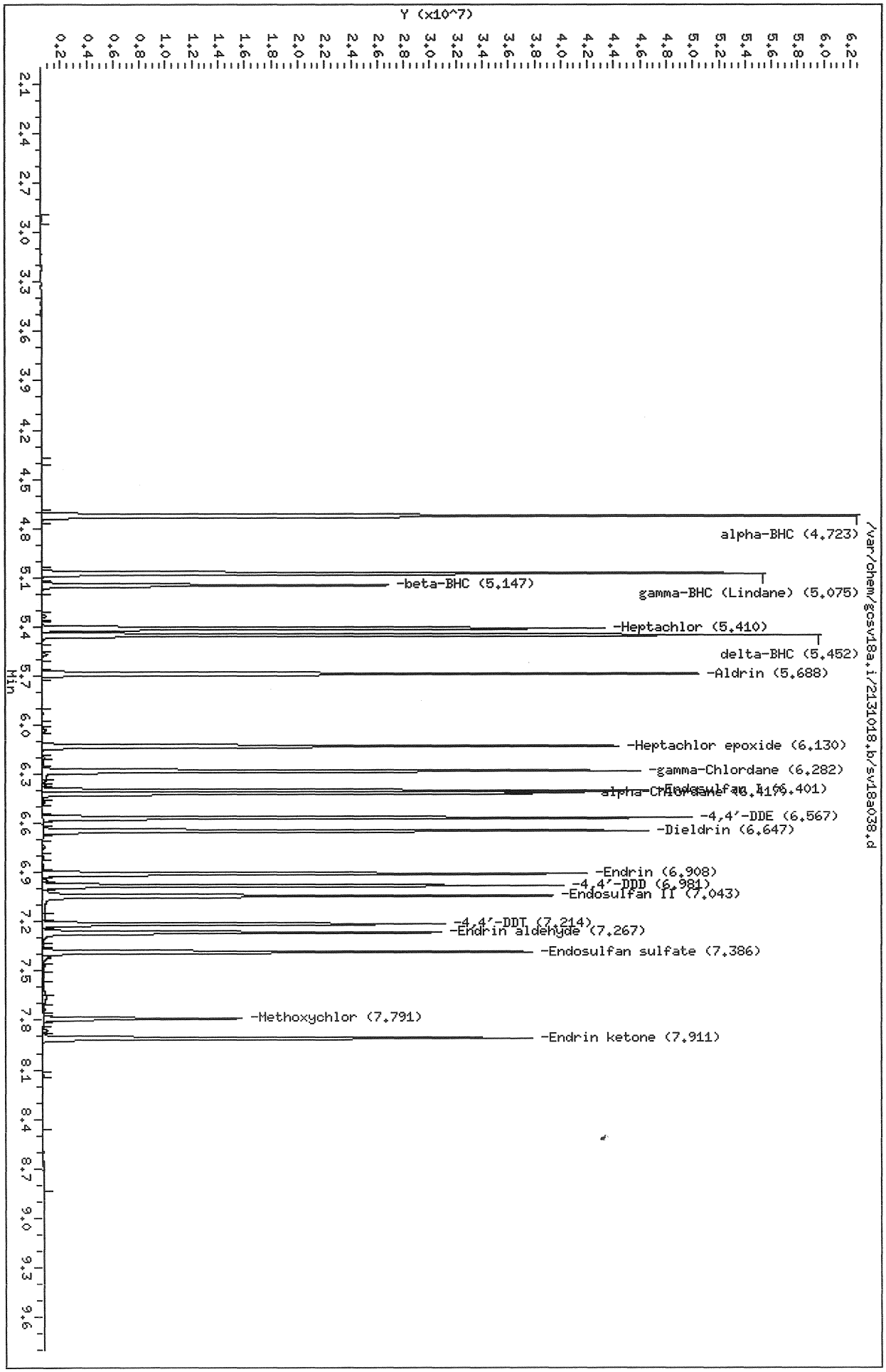
| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | FINAL ( UG/L) |
|---|---|---|---|---|---|---|
| 15 4,4'-DDD | 6.981 | 6.980 | 0.001 | 33986613 | 67.0234 | 67 |
| 16 Endosulfan II | 7.043 | 7.042 | 0.001 | 37488585 | 68.9450 | 69 |
| 17 4,4'-DDT | 7.214 | 7.213 | 0.001 | 26777916 | 66.6852 | 67 |
| 18 Endrin aldehyde | 7.267 | 7.266 | 0.001 | 27921462 | 62.3002 | 62 |
| 20 Endosulfan sulfate | 7.386 | 7.386 | 0.000 | 33716621 | 66.8154 | 67 |
| 19 Methoxychlor | 7.791 | 7.791 | 0.000 | 13005408 | 66.8899 | 67(M2) |
| 21 Endrin ketone | 7.911 | 7.910 | 0.001 | 33858737 | 65.0715 | 65 |

QC Flag Legend

M2- Compound response manually integrated because Target system integrated incorrectly.

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a038.d
Date : 21-OCT-2013 10:34
Client ID:
Sample Info: 1600x1 84-51-8
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

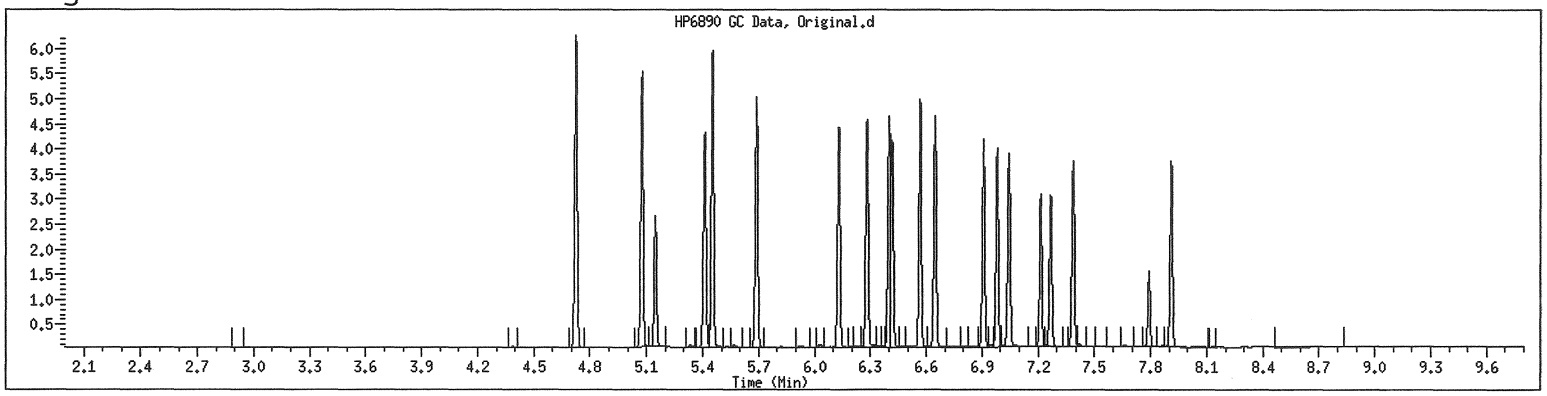
Instrument: gcsv18a.i
Operator: tls
Column diameter: 0.32



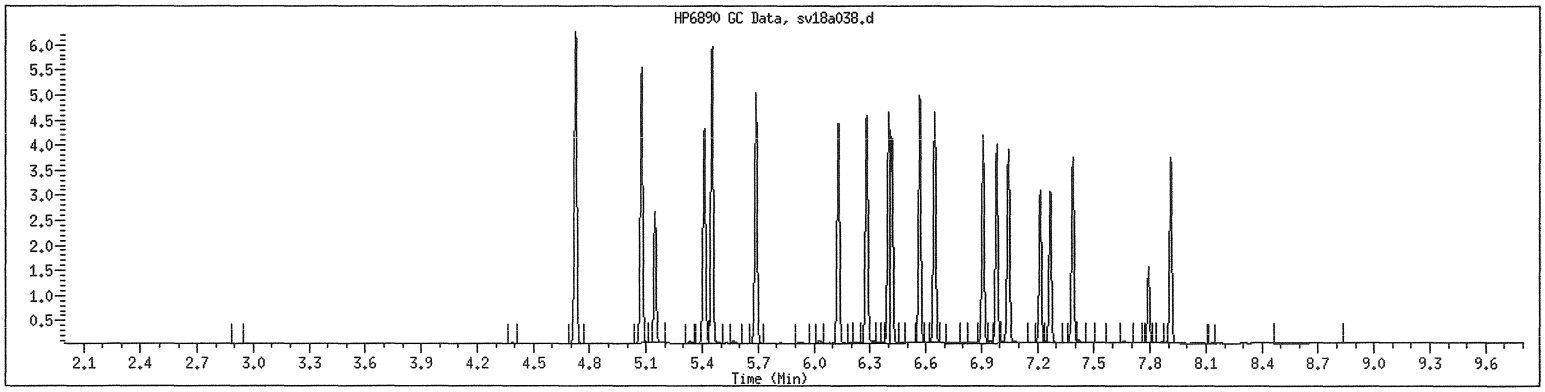
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1600 | SampleType | : LCS |
| Injection Date | : 10/21/2013 10:34 | Instrument | : gcsv18a.i |
| Operator | : tls | | |
| Sample Info | : 1600*1 84-51-8 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv18a.i/2131018.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : 8081 |

Original




Final



Data File: /var/chem/gcsv18a.i/2131022p.b/sv18a002.d
Report Date: 22-Oct-2013 14:55

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131022p.b/sv18a002.d
Lab Smp Id: deg
Inj Date : 22-OCT-2013 14:19
Operator : tls Inst ID: gcsv18a.i
Smp Info : deg*1 93-1-6
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131022p.b/pest35ms.m
Meth Date : 22-Oct-2013 14:54 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:14 Cal File: sv18a034.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: deg.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | FINAL ( UG/L) |
|---|---|---|---|---|---|---|
| 12 4,4'-DDE | 6.566 | 6.566 | 0.000 | 110409 | 0.17716 | 0.0018 |
| 15 4,4'-DDD | 6.980 | 6.980 | 0.000 | 727758 | 1.43518 | 0.014 |
| 17 4,4'-DDT | 7.215 | 7.213 | 0.002 | 35013258 | 87.1937 | 0.87 |
| 18 Endrin aldehyde | 7.268 | 7.266 | 0.002 | 632873 | 1.41211 | 0.014 |
| 21 Endrin ketone | 7.910 | 7.910 | 0.000 | 2212182 | 4.25149 | 0.043 |
| 14 Endrin | 6.909 | 6.907 | 0.002 | 43854584 | 79.1749 | 0.79 |

Gulf Coast Analytical Laboratories, Inc.

Breakdown Calculation

DDT Breakdown: Formula

$$\frac{(\text{Area DDD}) + (\text{Area DDE})}{(\text{Area DDD}) + (\text{Area DDE}) + (\text{Area DDT})} \times 100$$

DDT Breakdown: Calculation

$$\frac{727758 + 110409}{727758 + 110409 + 35013258} \times 100 = 2.3\ \%$$

DDT Breakdown: Criteria

< 15%

==========

Endrin Breakdown: Formula

$$\frac{(\text{Area Endrin ketone}) + (\text{Area Endrin aldehyde})}{(\text{Area End ket}) + (\text{Area End ald}) + (\text{Area Endrin})} \times 100$$

Endrin Breakdown: Calculation

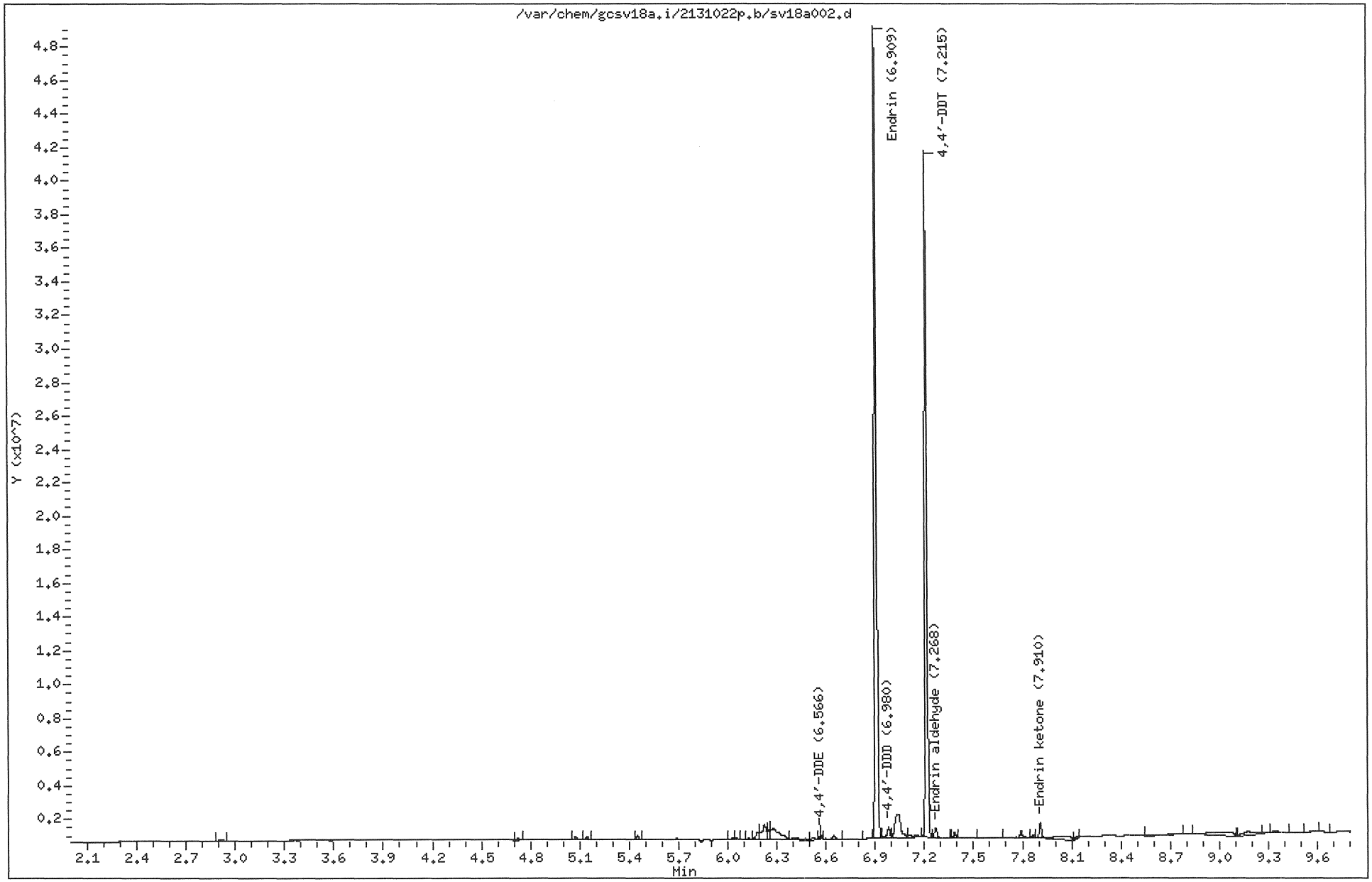
$$\frac{2212182 + 632873}{2212182 + 632873 + 43854584} \times 100 = 6.1\ \%$$

Endrin Breakdown: Criteria

< 15%

Data File: /var/chem/gcsv18a.i/2131022p.b/sv18a002.d
Date : 22-OCT-2013 14:19
Client ID:
Sample Info: deg*1 93-1-6
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

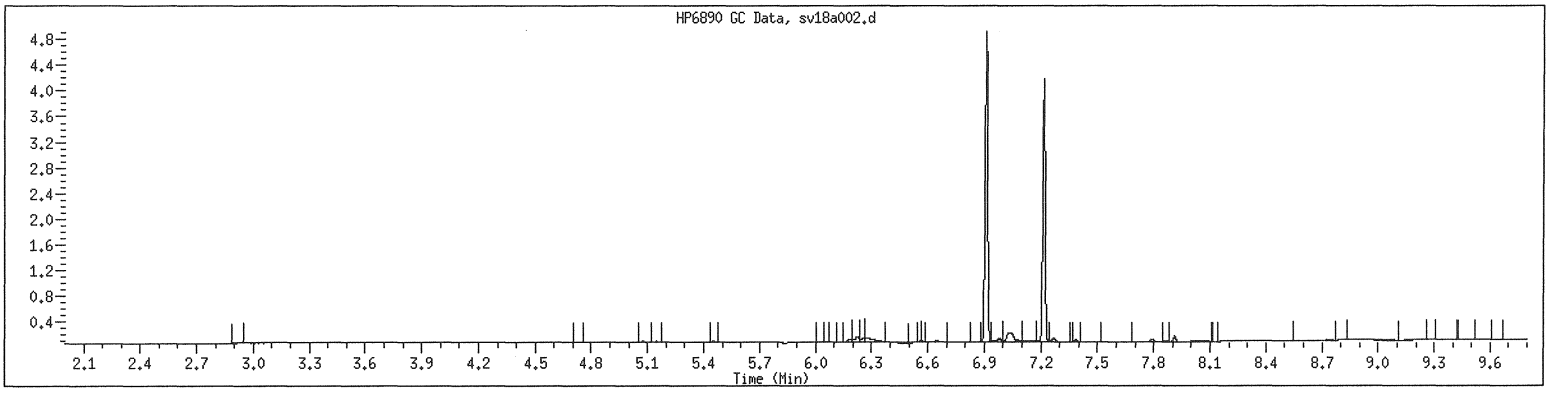
Instrument: gcsv18a.i
Operator: tls
Column diameter: 0.32




2131017 12 626

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : deg | SampleType | : SAMPLE |
| Injection Date | : 10/22/2013 14:19 | Instrument | : gcsv18a.i |
| Operator | : tls | | |
| Sample Info | : deg*1 93-1-6 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv18a.i/2131022p.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : deg |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv18a.i/2131022p.b/sv18a003.d
Report Date: 23-Oct-2013 16:38

GCAL, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcsv18a.i  Injection Date: 22-OCT-2013 14:34
Lab File ID: sv18a003.d  Init. Cal. Date(s): 18-OCT-2013  18-OCT-2013
Analysis Type: WATER  Init. Cal. Times: 14:45  22:14
Lab Sample ID: 1400  Quant Type: ESTD
Method: /var/chem/gcsv18a.i/2131022p.b/pest35ms.m

| COMPOUND | RRF / AMOUNT | RF60 | CCAL RRF60 | MIN RRF | %D / %DRIFT | MAX %D / %DRIFT | CURVE TYPE |
|---|---|---|---|---|---|---|---|
| $ 1 Tetrachloro-m-xylene | 746897 | 742036 | 742036 | 0.010 | 0.65088 | 20.00000 | Averaged |
| 2 alpha-BHC | 994335 | 958221 | 958221 | 0.010 | 3.63197 | 20.00000 | Averaged |
| 3 gamma-BHC (Lindane) | 821770 | 828024 | 828024 | 0.010 | -0.76110 | 20.00000 | Averaged |
| 6 beta-BHC | 383676 | 370420 | 370420 | 0.010 | 3.45502 | 20.00000 | Averaged |
| 4 Heptachlor | 713047 | 722696 | 722696 | 0.010 | -1.35318 | 20.00000 | Averaged |
| 7 delta-BHC | 824827 | 825393 | 825393 | 0.010 | -0.06859 | 20.00000 | Averaged |
| 5 Aldrin | 732556 | 746540 | 746540 | 0.010 | -1.90893 | 20.00000 | Averaged |
| 8 Heptachlor epoxide | 640041 | 651411 | 651411 | 0.010 | -1.77640 | 20.00000 | Averaged |
| 10 gamma-Chlordane | 652297 | 678085 | 678085 | 0.010 | -3.95342 | 20.00000 | Averaged |
| 11 alpha-Chlordane | 583325 | 598469 | 598469 | 0.010 | -2.59606 | 20.00000 | Averaged |
| 9 Endosulfan I | 621322 | 635860 | 635860 | 0.010 | -2.33988 | 20.00000 | Averaged |
| 12 4,4'-DDE | 623233 | 647116 | 647116 | 0.010 | -3.83206 | 20.00000 | Averaged |
| 13 Dieldrin | 618195 | 626878 | 626878 | 0.010 | -1.40465 | 20.00000 | Averaged |
| 14 Endrin | 553895 | 552699 | 552699 | 0.010 | 0.21601 | 20.00000 | Averaged |
| 15 4,4'-DDD | 507086 | 509214 | 509214 | 0.010 | -0.41977 | 20.00000 | Averaged |
| 16 Endosulfan II | 543747 | 533317 | 533317 | 0.010 | 1.91808 | 20.00000 | Averaged |
| 17 4,4'-DDT | 401557 | 438174 | 438174 | 0.010 | -9.11863 | 20.00000 | Averaged |
| 18 Endrin aldehyde | 448176 | 435722 | 435722 | 0.010 | 2.77892 | 20.00000 | Averaged |
| 20 Endosulfan sulfate | 504623 | 480644 | 480644 | 0.010 | 4.75189 | 20.00000 | Averaged |
| 19 Methoxychlor | 194430 | 198859 | 198859 | 0.010 | -2.27765 | 20.00000 | Averaged |
| 21 Endrin ketone | 520332 | 510850 | 510850 | 0.010 | 1.82216 | 20.00000 | Averaged |
| $ 22 Decachlorobiphenyl | 435411 | 389734 | 389734 | 0.010 | 10.49050 | 20.00000 | Averaged |

Average %D / Drift Results.

Calculated Average %D/Drift = 2.79662
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

Data File: /var/chem/gcsv18a.i/2131022p.b/sv18a003.d
Report Date: 23-Oct-2013 16:38

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131022p.b/sv18a003.d
Lab Smp Id: 1400
Inj Date : 22-OCT-2013 14:34
Operator : tls Inst ID: gcsv18a.i
Smp Info : 1400*1 93-1-11
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131022p.b/pest35ms.m
Meth Date : 23-Oct-2013 16:38 dlb Quant Type: ESTD
Cal Date : 18-OCT-2013 22:14 Cal File: sv18a034.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8081.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

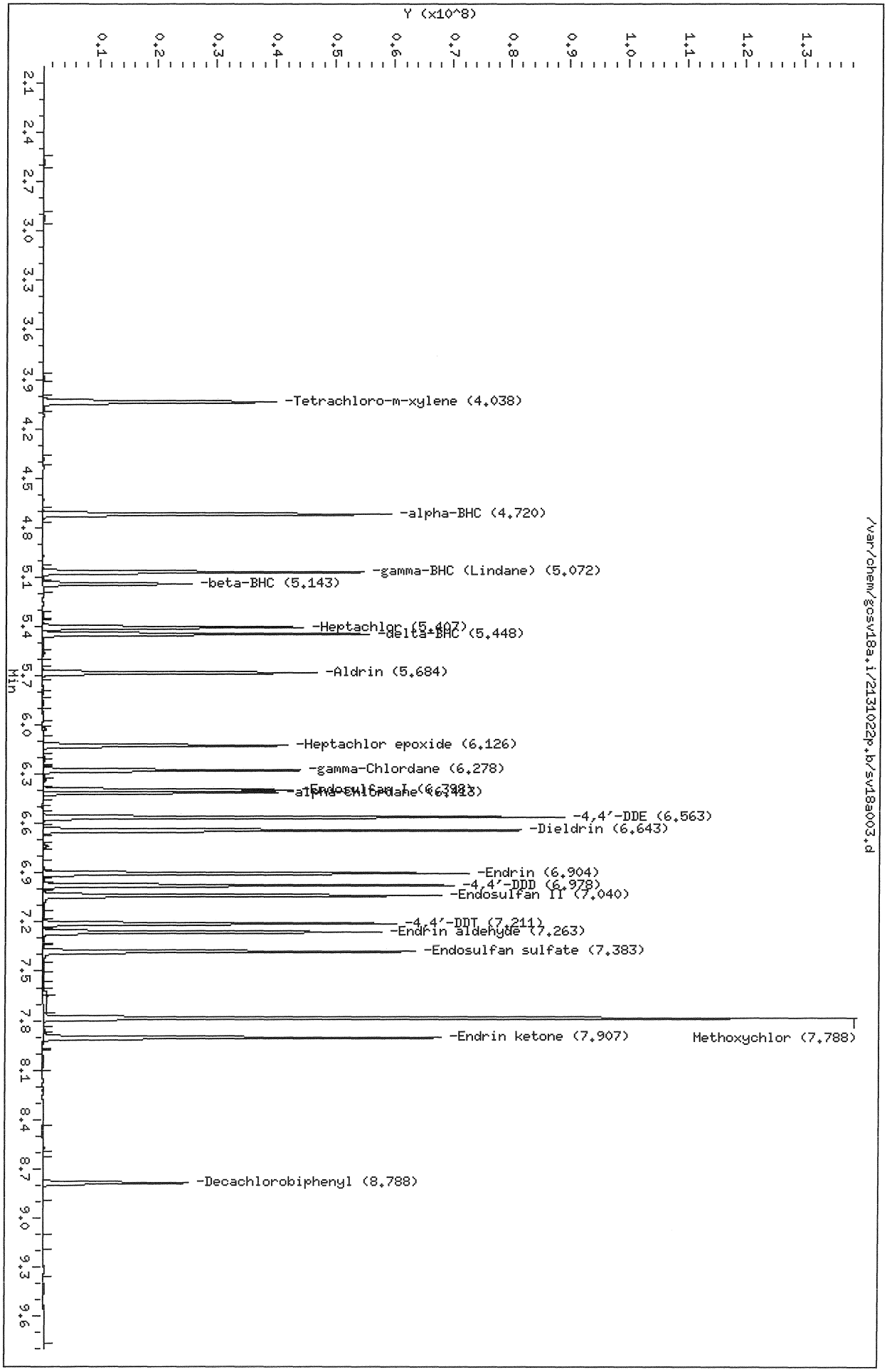
| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| $ 1 Tetrachloro-m-xylene | 4.038 | 4.039 | -0.001 | 44522162 | 60.0000 | 60 |
| 2 alpha-BHC | 4.720 | 4.721 | -0.001 | 57493255 | 60.0000 | 58 |
| 3 gamma-BHC (Lindane) | 5.072 | 5.073 | -0.001 | 49681448 | 60.0000 | 60 |
| 6 beta-BHC | 5.143 | 5.145 | -0.002 | 22225173 | 60.0000 | 58 |
| 4 Heptachlor | 5.407 | 5.409 | -0.002 | 43361762 | 60.0000 | 61 |
| 7 delta-BHC | 5.448 | 5.450 | -0.002 | 49523581 | 60.0000 | 60 |
| 5 Aldrin | 5.684 | 5.687 | -0.003 | 44792421 | 60.0000 | 61 |
| 8 Heptachlor epoxide | 6.126 | 6.128 | -0.002 | 39084638 | 60.0000 | 61 |
| 10 gamma-Chlordane | 6.278 | 6.280 | -0.002 | 40685096 | 60.0000 | 62 |
| 11 alpha-Chlordane | 6.413 | 6.411 | 0.002 | 35908137 | 60.0000 | 62 |
| 9 Endosulfan I | 6.398 | 6.404 | -0.006 | 38151602 | 60.0000 | 61 |
| 12 4,4'-DDE | 6.563 | 6.566 | -0.003 | 77653877 | 120.000 | 120 |
| 13 Dieldrin | 6.643 | 6.646 | -0.003 | 75225363 | 120.000 | 120 |

Data File: /var/chem/gcsv18a.i/2131022p.b/sv18a003.d
Report Date: 23-Oct-2013 16:38

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| 14 Endrin | 6.904 | 6.907 | -0.003 | 66323868 | 120.000 | 120 |
| 15 4,4'-DDD | 6.978 | 6.980 | -0.002 | 61105728 | 120.000 | 120 |
| 16 Endosulfan II | 7.040 | 7.042 | -0.002 | 63998055 | 120.000 | 120 |
| 17 4,4'-DDT | 7.211 | 7.213 | -0.002 | 52580872 | 120.000 | 130 |
| 18 Endrin aldehyde | 7.263 | 7.266 | -0.003 | 52286609 | 120.000 | 120 |
| 20 Endosulfan sulfate | 7.383 | 7.386 | -0.003 | 57677307 | 120.000 | 110 |
| 19 Methoxychlor | 7.788 | 7.791 | -0.003 | 119315138 | 600.000 | 610 |
| 21 Endrin ketone | 7.907 | 7.910 | -0.003 | 61302044 | 120.000 | 120 |
| $ 22 Decachlorobiphenyl | 8.788 | 8.791 | -0.003 | 23384055 | 60.0000 | 54 |

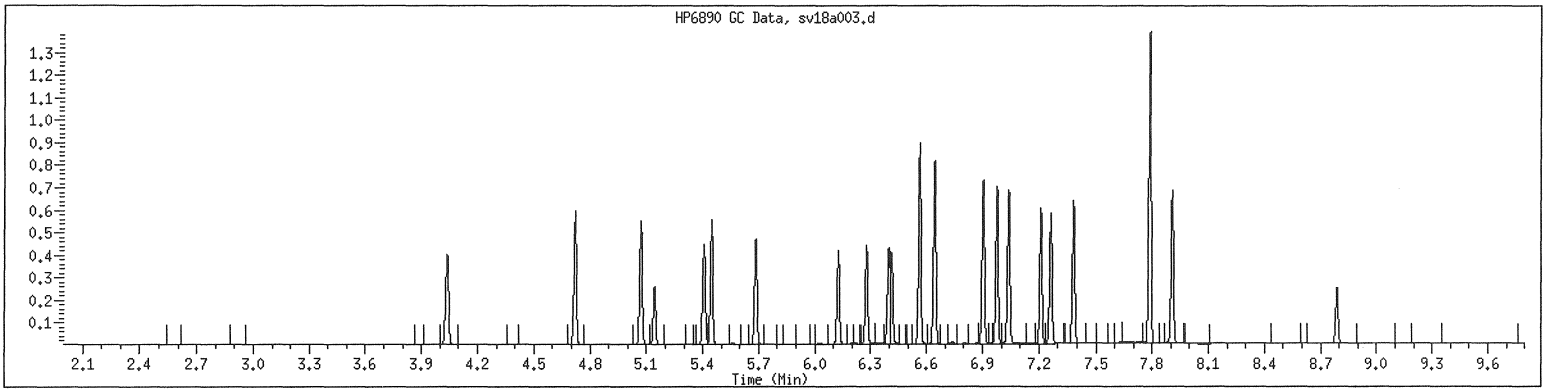
Data File: /var/chem/gcsv18a.i/2131022p.b/sv18a003.d
Date : 22-OCT-2013 14:34
Client ID:
Sample Info: 1400x1 93-1-11
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv18a.i
Operator: tls
Column diameter: 0.32



# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1400 | SampleType | : CCALIB_3 |
| Injection Date | : 10/22/2013 14:34 | Instrument | : gcsv18a.i |
| Operator | : tls | | |
| Sample Info | : 1400*1 93-1-11 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv18a.i/2131022p.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : 8081 |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv18a.i/2131022p.b/sv18a014.d
Report Date: 23-Oct-2013 16:38

GCAL, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcsv18a.i  Injection Date: 22-OCT-2013 18:03
Lab File ID: sv18a014.d  Init. Cal. Date(s): 18-OCT-2013  18-OCT-2013
Analysis Type: WATER  Init. Cal. Times: 14:45  22:14
Lab Sample ID: 1400  Quant Type: ESTD
Method: /var/chem/gcsv18a.i/2131022p.b/pest35ms.m

| COMPOUND | RRF / AMOUNT | RF60 | CCAL RRF60 | MIN RRF | %D / %DRIFT | MAX %D / %DRIFT | CURVE TYPE |
|---|---|---|---|---|---|---|---|
| $ 1 Tetrachloro-m-xylene | 746897 | 753929 | 753929 | 0.010 | -0.94141 | 20.00000 | Averaged |
| 2 alpha-BHC | 994335 | 985691 | 985691 | 0.010 | 0.86928 | 20.00000 | Averaged |
| 3 gamma-BHC (Lindane) | 821770 | 850510 | 850510 | 0.010 | -3.49739 | 20.00000 | Averaged |
| 6 beta-BHC | 383676 | 382031 | 382031 | 0.010 | 0.42860 | 20.00000 | Averaged |
| 4 Heptachlor | 713047 | 731849 | 731849 | 0.010 | -2.63680 | 20.00000 | Averaged |
| 7 delta-BHC | 824827 | 847552 | 847552 | 0.010 | -2.75512 | 20.00000 | Averaged |
| 5 Aldrin | 732556 | 759015 | 759015 | 0.010 | -3.61186 | 20.00000 | Averaged |
| 8 Heptachlor epoxide | 640041 | 655672 | 655672 | 0.010 | -2.44223 | 20.00000 | Averaged |
| 10 gamma-Chlordane | 652297 | 687502 | 687502 | 0.010 | -5.39709 | 20.00000 | Averaged |
| 11 alpha-Chlordane | 583325 | 607973 | 607973 | 0.010 | -4.22528 | 20.00000 | Averaged |
| 9 Endosulfan I | 621322 | 644149 | 644149 | 0.010 | -3.67391 | 20.00000 | Averaged |
| 12 4,4'-DDE | 623233 | 656152 | 656152 | 0.010 | -5.28196 | 20.00000 | Averaged |
| 13 Dieldrin | 618195 | 640305 | 640305 | 0.010 | -3.57661 | 20.00000 | Averaged |
| 14 Endrin | 553895 | 569882 | 569882 | 0.010 | -2.88616 | 20.00000 | Averaged |
| 15 4,4'-DDD | 507086 | 537801 | 537801 | 0.010 | -6.05729 | 20.00000 | Averaged |
| 16 Endosulfan II | 543747 | 561250 | 561250 | 0.010 | -3.21906 | 20.00000 | Averaged |
| 17 4,4'-DDT | 401557 | 461759 | 461759 | 0.010 | -14.99193 | 20.00000 | Averaged |
| 18 Endrin aldehyde | 448176 | 459090 | 459090 | 0.010 | -2.43519 | 20.00000 | Averaged |
| 20 Endosulfan sulfate | 504623 | 512989 | 512989 | 0.010 | -1.65780 | 20.00000 | Averaged |
| 19 Methoxychlor | 194430 | 209267 | 209267 | 0.010 | -7.63072 | 20.00000 | Averaged |
| 21 Endrin ketone | 520332 | 539469 | 539469 | 0.010 | -3.67801 | 20.00000 | Averaged |
| $ 22 Decachlorobiphenyl | 435411 | 455183 | 455183 | 0.010 | -4.54105 | 20.00000 | Averaged |

Average %D / Drift Results.

Calculated Average %D/Drift = 3.92885
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

Data File: /var/chem/gcsv18a.i/2131022p.b/sv18a014.d
Report Date: 23-Oct-2013 16:38

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131022p.b/sv18a014.d
Lab Smp Id: 1400
Inj Date : 22-OCT-2013 18:03
Operator : tls Inst ID: gcsv18a.i
Smp Info : 1400*1 93-1-11
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131022p.b/pest35ms.m
Meth Date : 23-Oct-2013 16:38 dlb Quant Type: ESTD
Cal Date : 18-OCT-2013 22:14 Cal File: sv18a034.d
Als bottle: 14 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8081.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

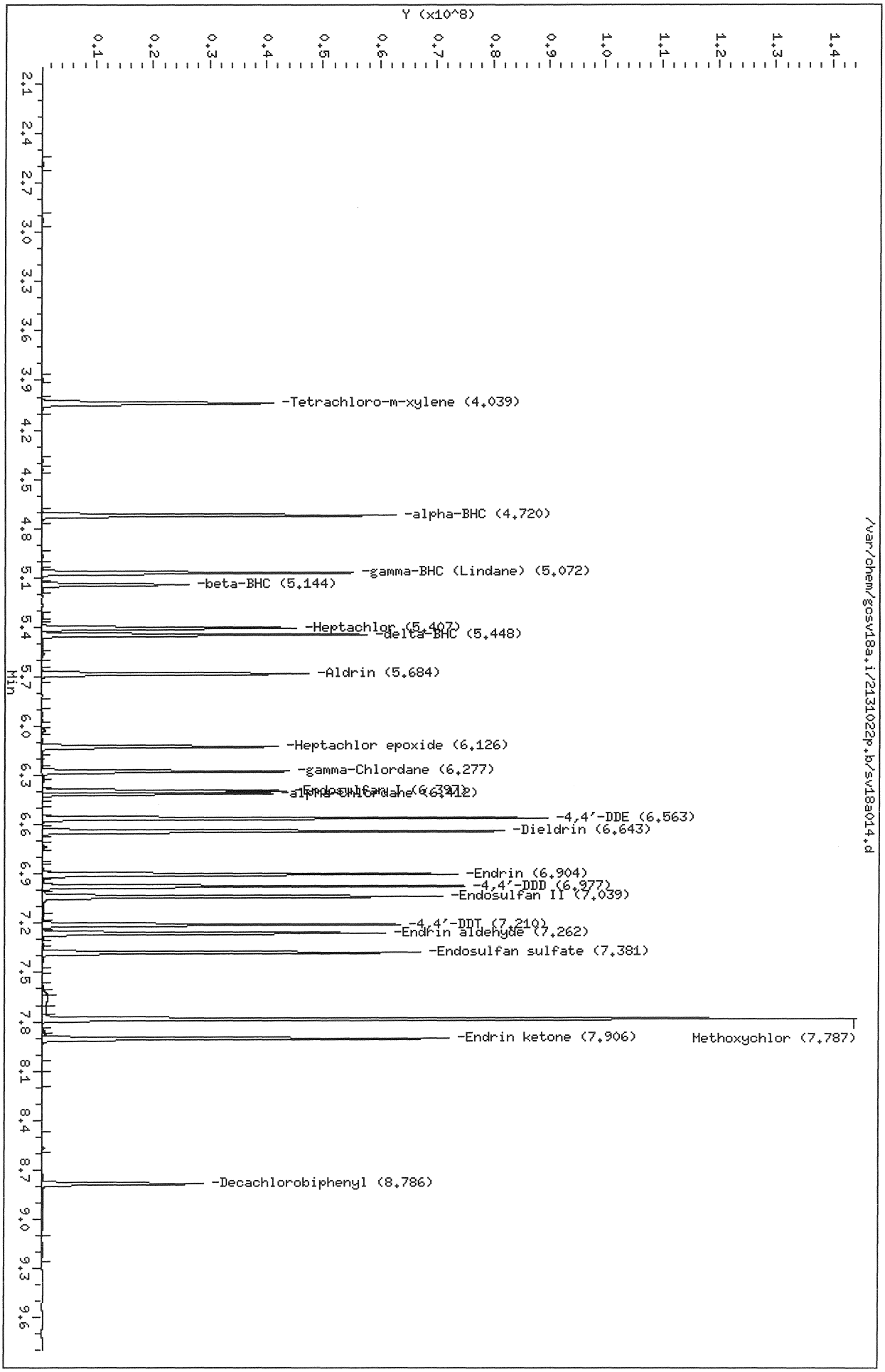
| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| $ 1 Tetrachloro-m-xylene | 4.039 | 4.039 | 0.000 | 45235727 | 60.0000 | 61 |
| 2 alpha-BHC | 4.720 | 4.721 | -0.001 | 59141480 | 60.0000 | 59 |
| 3 gamma-BHC (Lindane) | 5.072 | 5.073 | -0.001 | 51030605 | 60.0000 | 62 |
| 6 beta-BHC | 5.144 | 5.145 | -0.001 | 22921872 | 60.0000 | 60 |
| 4 Heptachlor | 5.407 | 5.409 | -0.002 | 43910931 | 60.0000 | 62 |
| 7 delta-BHC | 5.448 | 5.450 | -0.002 | 50853134 | 60.0000 | 62 |
| 5 Aldrin | 5.684 | 5.687 | -0.003 | 45540915 | 60.0000 | 62 |
| 8 Heptachlor epoxide | 6.126 | 6.128 | -0.002 | 39340333 | 60.0000 | 61 |
| 10 gamma-Chlordane | 6.277 | 6.280 | -0.003 | 41250119 | 60.0000 | 63 |
| 11 alpha-Chlordane | 6.412 | 6.411 | 0.001 | 36478354 | 60.0000 | 63 |
| 9 Endosulfan I | 6.397 | 6.404 | -0.007 | 38648919 | 60.0000 | 62 |
| 12 4,4'-DDE | 6.563 | 6.566 | -0.003 | 78738227 | 120.000 | 130 |
| 13 Dieldrin | 6.643 | 6.646 | -0.003 | 76836599 | 120.000 | 120 |

Data File: /var/chem/gcsv18a.i/2131022p.b/sv18a014.d
Report Date: 23-Oct-2013 16:38

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| 14 Endrin | 6.904 | 6.907 | -0.003 | 68385799 | 120.000 | 120 |
| 15 4,4'-DDD | 6.977 | 6.980 | -0.003 | 64536176 | 120.000 | 130 |
| 16 Endosulfan II | 7.039 | 7.042 | -0.003 | 67350017 | 120.000 | 120 |
| 17 4,4'-DDT | 7.210 | 7.213 | -0.003 | 55411033 | 120.000 | 140 |
| 18 Endrin aldehyde | 7.262 | 7.266 | -0.004 | 55090819 | 120.000 | 120 |
| 20 Endosulfan sulfate | 7.381 | 7.386 | -0.005 | 61558682 | 120.000 | 120 |
| 19 Methoxychlor | 7.787 | 7.791 | -0.004 | 125559931 | 600.000 | 650 |
| 21 Endrin ketone | 7.906 | 7.910 | -0.004 | 64736337 | 120.000 | 120 |
| $ 22 Decachlorobiphenyl | 8.786 | 8.791 | -0.005 | 27310998 | 60.0000 | 63 |

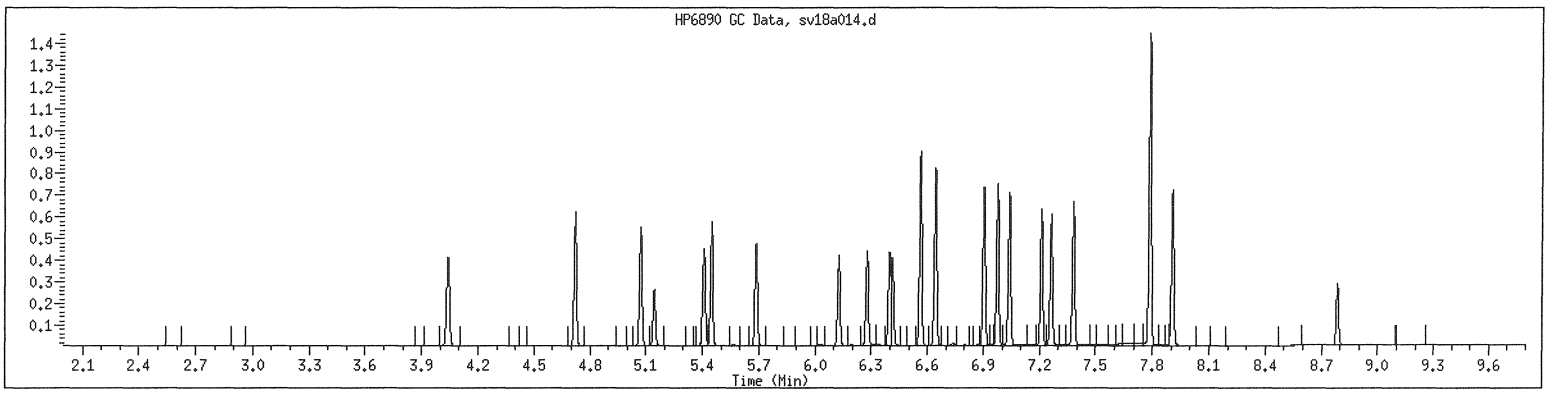
Data File: /var/chem/gcsv18a.i/2131022p.b/sv18a014.d
Date : 22-OCT-2013 18:03
Client ID:
Sample Info: 1400x1 93-1-11
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv18a.i
Operator: tls
Column diameter: 0.32



# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1400 | SampleType | : CCALIB_3 |
| Injection Date | : 10/22/2013 18:03 | Instrument | : gcsv18a.i |
| Operator | : tls | | |
| Sample Info | : 1400*1 93-1-11 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv18a.i/2131022p.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : 8081 |




NO MANUAL INTEGRATIONS

Report Date : 05-Nov-2013 12:49

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 15:09
End Cal Date : 18-OCT-2013 22:37
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m
Cal Date : 22-Oct-2013 10:56 tls
Curve Type : Average

Calibration File Names:
Level 1: /var/chem/gcsv16a.i/2131018p.b/sv16a029.d
Level 2: /var/chem/gcsv16a.i/2131018p.b/sv16a030.d
Level 3: /var/chem/gcsv16a.i/2131018p.b/sv16a032.d
Level 4: /var/chem/gcsv16a.i/2131018p.b/sv16a033.d
Level 5: /var/chem/gcsv16a.i/2131018p.b/sv16a034.d
Level 6: /var/chem/gcsv16a.i/2131018p.b/sv16a031.d
Level 7: /var/chem/gcsv16a.i/2131018p.b/sv16a021.d

| Compound | 5.000 Level 1 | 20.000 Level 2 | 60.000 Level 3 | 80.000 Level 4 | 100.000 Level 5 | 2.500 Level 6 | ___ RRF | % RSD |
|---|---|---|---|---|---|---|---|---|
| | 50.000 Level 7 | | | | | | | |
| 2 alpha-BHC | 3530798 | 3305808 | 3311834 | 3557289 | 3672890 | 3560168 | | |
| | +++++ | | | | | | 3489798 | 4.255 |
| 3 gamma-BHC (Lindane) | 3019265 | 2816162 | 2801271 | 2999912 | 3065420 | +++++ | | |
| | +++++ | | | | | | 2940406 | 4.172 |
| 4 Heptachlor | 2542782 | 2459686 | 2432978 | 2592477 | 2621997 | +++++ | | |
| | +++++ | | | | | | 2529984 | 3.241 |
| 5 Aldrin | 2567148 | 2408827 | 2390214 | 2545360 | 2552918 | +++++ | | |
| | +++++ | | | | | | 2492893 | 3.444 |
| 6 beta-BHC | 1344749 | 1224270 | 1175842 | 1228971 | 1220223 | +++++ | | |
| | +++++ | | | | | | 1238811 | 5.040 |
| 7 delta-BHC | 2831907 | 2789533 | 2824106 | 2999684 | 3098923 | +++++ | | |
| | +++++ | | | | | | 2908831 | 4.603 |

Report Date : 05-Nov-2013 12:07

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 15:09
End Cal Date : 18-OCT-2013 22:37
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv16a.i/2131025.b/pest35ms.m
Cal Date : 27-Oct-2013 14:17 tls
Curve Type : Average

| Compound | 5.000 Level 1 / 50.000 Level 7 | 20.000 Level 2 | 60.000 Level 3 | 80.000 Level 4 | 100.000 Level 5 | 2.500 Level 6 | ___ RRF | % RSD |
|---|---|---|---|---|---|---|---|---|
| 8 Heptachlor epoxide | 2347520 +++++ | 2162713 | 2093692 | 2201902 | 2207751 | +++++ | 2202716 | 4.215 |
| 9 Endosulfan I | 2015681 +++++ | 2022661 | 1875654 | 2009861 | 2006577 | +++++ | 1986087 | 3.124 |
| 10 gamma-Chlordane | 2560271 +++++ | 2279202 | 2208238 | 2350978 | 2372049 | +++++ | 2354148 | 5.608 |
| 11 alpha-Chlordane | 2010653 +++++ | 1961571 | 2140440 | 2296781 | 2342364 | +++++ | 2150362 | 7.836 |
| 12 4,4'-DDE | 2303267 +++++ | 2188160 | 2302932 | 2440375 | 2442220 | +++++ | 2335391 | 4.602 |
| 13 Dieldrin | 2310741 +++++ | 2166167 | 2202619 | 2347875 | 2354327 | +++++ | 2276346 | 3.802 |
| 14 Endrin | 2005362 +++++ | 1901244 | 1931016 | 2081213 | 2081583 | +++++ | 2000084 | 4.168 |
| 15 4,4'-DDD | 1865642 +++++ | 1782692 | 1854928 | 2008488 | 2014657 | +++++ | 1905281 | 5.362 |
| 16 Endosulfan II | 2020771 +++++ | 1839710 | 1859517 | 1996703 | 1997101 | +++++ | 1942760 | 4.420 |

Report Date : 05-Nov-2013 12:07

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 15:09
End Cal Date : 18-OCT-2013 22:37
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv16a.i/2131025.b/pest35ms.m
Cal Date : 27-Oct-2013 14:17 tls
Curve Type : Average

| Compound | 5.000 Level 1 | 20.000 Level 2 | 60.000 Level 3 | 80.000 Level 4 | 100.000 Level 5 | 2.500 Level 6 | RRF | % RSD |
|---|---|---|---|---|---|---|---|---|
| | 50.000 Level 7 | | | | | | | |
| 17 4,4'-DDT | 1719576 | 1662616 | 1757063 | 1915202 | 1945991 | +++++ | | |
| | +++++ | | | | | | 1800089 | 6.903 |
| 18 Endrin aldehyde | 1606706 | 1506776 | 1513742 | 1613992 | 1637428 | +++++ | | |
| | +++++ | | | | | | 1575729 | 3.864 |
| 19 Methoxychlor | 833864 | 824668 | 894777 | 921369 | 846511 | +++++ | | |
| | +++++ | | | | | | 864238 | 4.840 |
| 20 Endosulfan sulfate | 1889482 | 1765982 | 1783368 | 1901788 | 1884296 | +++++ | | |
| | +++++ | | | | | | 1844983 | 3.512 |
| 21 Endrin ketone | 1981787 | 1900848 | 1998107 | 2144766 | 2146285 | +++++ | | |
| | +++++ | | | | | | 2034359 | 5.307 |
| M 23 AR 1016-AVG | 302045 | 291717 | 279859 | 265304 | 252491 | 327080 | | |
| | +++++ | | | | | | 286416 | 9.323 |
| 24 AR 1016-PEAK1 | 48226 | 44906 | 41744 | 38659 | 36129 | 52451 | | |
| | +++++ | | | | | | 43686 | 13.927 |
| 25 AR 1016-PEAK2 | 107570 | 100887 | 93854 | 86586 | 81510 | 116414 | | |
| | +++++ | | | | | | 97804 | 13.395 |
| 26 AR 1016-PEAK3 | 46547 | 44739 | 43373 | 42293 | 40872 | 50015 | | |
| | +++++ | | | | | | 44640 | 7.352 |

Report Date : 05-Nov-2013 12:07

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 15:09
End Cal Date : 18-OCT-2013 22:37
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv16a.i/2131025.b/pest35ms.m
Cal Date : 27-Oct-2013 14:17 tls
Curve Type : Average

| Compound | 5.000 Level 1 / 50.000 Level 7 | 20.000 Level 2 | 60.000 Level 3 | 80.000 Level 4 | 100.000 Level 5 | 2.500 Level 6 | ___ RRF | % RSD |
|---|---|---|---|---|---|---|---|---|
| 27 AR 1016-PEAK4 | 36012 | 38508 | 38326 | 37418 | 35460 | 39471 | | |
| | +++++ | | | | | | 37533 | 4.121 |
| 28 AR 1016-PEAK5 | 63691 | 62677 | 62562 | 60349 | 58520 | 68729 | | |
| | +++++ | | | | | | 62754 | 5.535 |
| M 29 AR 1260-AVG | 576646 | 558523 | 544796 | 531810 | 537076 | 607968 | | |
| | +++++ | | | | | | 559470 | 5.137 |
| 30 AR 1260-PEAK1 | 113573 | 108941 | 104934 | 100626 | 100045 | 120478 | | |
| | +++++ | | | | | | 108099 | 7.338 |
| 31 AR 1260-PEAK2 | 128284 | 124230 | 120848 | 118983 | 120574 | 135646 | | |
| | +++++ | | | | | | 124761 | 5.036 |
| 32 AR 1260-PEAK3 | 93729 | 90521 | 87034 | 84636 | 84776 | 99648 | | |
| | +++++ | | | | | | 90057 | 6.515 |
| 33 AR 1260-PEAK4 | 105674 | 102582 | 99395 | 95955 | 96156 | 111167 | | |
| | +++++ | | | | | | 101821 | 5.813 |
| 34 AR 1260-PEAK5 | 135385 | 132248 | 132584 | 131610 | 135526 | 141030 | | |
| | +++++ | | | | | | 134731 | 2.598 |
| M 35 AR 1221-AVG | +++++ | +++++ | 78934 | +++++ | +++++ | +++++ | | |
| | +++++ | | | | | | 78934 | 0.000 |

Report Date : 05-Nov-2013 12:07

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 15:09
End Cal Date : 18-OCT-2013 22:37
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv16a.i/2131025.b/pest35ms.m
Cal Date : 27-Oct-2013 14:17 tls
Curve Type : Average

| Compound | 5.000 Level 1 / 50.000 Level 7 | 20.000 Level 2 | 60.000 Level 3 | 80.000 Level 4 | 100.000 Level 5 | 2.500 Level 6 | ___ RRF | % RSD |
|---|---|---|---|---|---|---|---|---|
| 36 AR 1221-PEAK1 | +++++ | +++++ | 17620 | +++++ | +++++ | +++++ | 17620 | 0.000 |
| 37 AR 1221-PEAK2 | +++++ | +++++ | 5915 | +++++ | +++++ | +++++ | 5915 | 0.000 |
| 38 AR 1221-PEAK3 | +++++ | +++++ | 26403 | +++++ | +++++ | +++++ | 26403 | 0.000 |
| 39 AR 1221-PEAK4 | +++++ | +++++ | 16215 | +++++ | +++++ | +++++ | 16215 | 0.000 |
| 40 AR 1221-PEAK5 | +++++ | +++++ | 12782 | +++++ | +++++ | +++++ | 12782 | 0.000 |
| M 41 AR 1232-AVG | +++++ | +++++ | 131772 | +++++ | +++++ | +++++ | 131772 | 0.000 |
| 42 AR 1232-PEAK1 | +++++ | +++++ | 10086 | +++++ | +++++ | +++++ | 10086 | 0.000 |
| 43 AR 1232-PEAK2 | +++++ | +++++ | 15973 | +++++ | +++++ | +++++ | 15973 | 0.000 |
| 44 AR 1232-PEAK3 | +++++ | +++++ | 40996 | +++++ | +++++ | +++++ | 40996 | 0.000 |

Report Date : 05-Nov-2013 12:07

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 15:09
End Cal Date : 18-OCT-2013 22:37
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv16a.i/2131025.b/pest35ms.m
Cal Date : 27-Oct-2013 14:17 tls
Curve Type : Average

| Compound | 5.000 Level 1 / 50.000 Level 7 | 20.000 Level 2 | 60.000 Level 3 | 80.000 Level 4 | 100.000 Level 5 | 2.500 Level 6 | RRF | % RSD |
|---|---|---|---|---|---|---|---|---|
| 45 AR 1232-PEAK4 | +++++ / +++++ | +++++ | 45250 | +++++ | +++++ | +++++ | 45250 | 0.000 |
| 46 AR 1232-PEAK5 | +++++ / +++++ | +++++ | 19467 | +++++ | +++++ | +++++ | 19467 | 0.000 |
| M 47 AR 1242-AVG | +++++ / +++++ | +++++ | 246569 | +++++ | +++++ | +++++ | 246569 | 0.000 |
| 48 AR 1242-PEAK1 | +++++ / +++++ | +++++ | 68261 | +++++ | +++++ | +++++ | 68261 | 0.000 |
| 49 AR 1242-PEAK2 | +++++ / +++++ | +++++ | 44846 | +++++ | +++++ | +++++ | 44846 | 0.000 |
| 50 AR 1242-PEAK3 | +++++ / +++++ | +++++ | 49148 | +++++ | +++++ | +++++ | 49148 | 0.000 |
| 51 AR 1242-PEAK4 | +++++ / +++++ | +++++ | 46852 | +++++ | +++++ | +++++ | 46852 | 0.000 |
| 52 AR 1242-PEAK5 | +++++ / +++++ | +++++ | 37463 | +++++ | +++++ | +++++ | 37463 | 0.000 |
| M 53 AR 1248-AVG | +++++ / +++++ | +++++ | 293669 | +++++ | +++++ | +++++ | 293669 | 0.000 |

Report Date : 05-Nov-2013 12:07

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 15:09
End Cal Date : 18-OCT-2013 22:37
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv16a.i/2131025.b/pest35ms.m
Cal Date : 27-Oct-2013 14:17 tls
Curve Type : Average

| Compound | 5.000 Level 1 / 50.000 Level 7 | 20.000 Level 2 | 60.000 Level 3 | 80.000 Level 4 | 100.000 Level 5 | 2.500 Level 6 | ___ RRF | % RSD |
|---|---|---|---|---|---|---|---|---|
| 54 AR 1248-PEAK1 | +++++ | +++++ | 51875 | +++++ | +++++ | +++++ | 51875 | 0.000 |
| 55 AR 1248-PEAK2 | +++++ | +++++ | 49455 | +++++ | +++++ | +++++ | 49455 | 0.000 |
| 56 AR 1248-PEAK3 | +++++ | +++++ | 69041 | +++++ | +++++ | +++++ | 69041 | 0.000 |
| 57 AR 1248-PEAK4 | +++++ | +++++ | 61990 | +++++ | +++++ | +++++ | 61990 | 0.000 |
| 58 AR 1248-PEAK5 | +++++ | +++++ | 61307 | +++++ | +++++ | +++++ | 61307 | 0.000 |
| M 59 AR 1254-AVG | +++++ | +++++ | 362182 | +++++ | +++++ | +++++ | 362182 | 0.000 |
| 60 AR 1254-PEAK1 | +++++ | +++++ | 35715 | +++++ | +++++ | +++++ | 35715 | 0.000 |
| 61 AR 1254-PEAK2 | +++++ | +++++ | 32820 | +++++ | +++++ | +++++ | 32820 | 0.000 |
| 62 AR 1254-PEAK3 | +++++ | +++++ | 67368 | +++++ | +++++ | +++++ | 67368 | 0.000 |

Report Date : 05-Nov-2013 12:07

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 15:09
End Cal Date : 18-OCT-2013 22:37
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv16a.i/2131025.b/pest35ms.m
Cal Date : 27-Oct-2013 14:17 tls
Curve Type : Average

| Compound | 5.000 Level 1 / 50.000 Level 7 | 20.000 Level 2 | 60.000 Level 3 | 80.000 Level 4 | 100.000 Level 5 | 2.500 Level 6 | ___ RRF | % RSD |
|---|---|---|---|---|---|---|---|---|
| 63 AR 1254-PEAK4 | +++++ / +++++ | +++++ | 131660 | +++++ | +++++ | +++++ | 131660 | 0.000 |
| 64 AR 1254-PEAK5 | +++++ / +++++ | +++++ | 94619 | +++++ | +++++ | +++++ | 94619 | 0.000 |
| M 65 TOXAPHENE-AVG | +++++ / +++++ | +++++ | +++++ | +++++ | 245420 | +++++ | 245420 | 0.000 |
| 66 TOXAPHENE-PEAK1 | +++++ / +++++ | +++++ | +++++ | +++++ | 53234 | +++++ | 53234 | 0.000 |
| 67 TOXAPHENE-PEAK2 | +++++ / +++++ | +++++ | +++++ | +++++ | 68477 | +++++ | 68477 | 0.000 |
| 68 TOXAPHENE-PEAK3 | +++++ / +++++ | +++++ | +++++ | +++++ | 56508 | +++++ | 56508 | 0.000 |
| 69 TOXAPHENE-PEAK4 | +++++ / +++++ | +++++ | +++++ | +++++ | 67201 | +++++ | 67201 | 0.000 |
| 70 TOXAPHENE-PEAK5 | +++++ / +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ |
| M 71 CHLORDANE-AVG | +++++ / +++++ | +++++ | +++++ | +++++ | 661018 | +++++ | 661018 | 0.000 |

Report Date : 05-Nov-2013 12:07

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 15:09
End Cal Date : 18-OCT-2013 22:37
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv16a.i/2131025.b/pest35ms.m
Cal Date : 27-Oct-2013 14:17 tls
Curve Type : Average

| Compound | 5.000 Level 1 / 50.000 Level 7 | 20.000 Level 2 | 60.000 Level 3 | 80.000 Level 4 | 100.000 Level 5 | 2.500 Level 6 | ___ RRF | % RSD |
|---|---|---|---|---|---|---|---|---|
| 72 CHLORDANE-PEAK1 | +++++ | +++++ | +++++ | +++++ | 51180 | +++++ | | |
| | +++++ | | | | | | 51180 | 0.000 |
| 73 CHLORDANE-PEAK2 | +++++ | +++++ | +++++ | +++++ | 257073 | +++++ | | |
| | +++++ | | | | | | 257073 | 0.000 |
| 74 CHLORDANE-PEAK3 | +++++ | +++++ | +++++ | +++++ | 147241 | +++++ | | |
| | +++++ | | | | | | 147241 | 0.000 |
| 75 CHLORDANE-PEAK4 | +++++ | +++++ | +++++ | +++++ | 205524 | +++++ | | |
| | +++++ | | | | | | 205524 | 0.000 |
| 76 CHLORDANE-PEAK5 | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | | |
| | +++++ | | | | | | +++++ | +++++ |
| M 77 AR 1268-AVG | +++++ | +++++ | 795304 | +++++ | +++++ | +++++ | | |
| | +++++ | | | | | | 795304 | 0.000 |
| 78 AR 1268-PEAK1 | +++++ | +++++ | 44667 | +++++ | +++++ | +++++ | | |
| | +++++ | | | | | | 44667 | 0.000 |
| 79 AR 1268-PEAK2 | +++++ | +++++ | 57604 | +++++ | +++++ | +++++ | | |
| | +++++ | | | | | | 57604 | 0.000 |
| 80 AR 1268-PEAK3 | +++++ | +++++ | 262397 | +++++ | +++++ | +++++ | | |
| | +++++ | | | | | | 262397 | 0.000 |

Report Date : 05-Nov-2013 12:07

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 15:09
End Cal Date : 18-OCT-2013 22:37
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv16a.i/2131025.b/pest35ms.m
Cal Date : 27-Oct-2013 14:17 tls
Curve Type : Average

| Compound | 5.000 Level 1<br>50.000 Level 7 | 20.000 Level 2 | 60.000 Level 3 | 80.000 Level 4 | 100.000 Level 5 | 2.500 Level 6 | ___ RRF | % RSD |
|---|---|---|---|---|---|---|---|---|
| 81 AR 1268 PEAK4 | +++++<br>+++++ | +++++ | 231564 | +++++ | +++++ | +++++ | 231564 | 0.000 |
| 82 AR 1268-PEAK5 | +++++<br>+++++ | +++++ | 199072 | +++++ | +++++ | +++++ | 199072 | 0.000 |
| M 83 AR 1262-AVG | +++++<br>+++++ | +++++ | 420633 | +++++ | +++++ | +++++ | 420633 | 0.000 |
| 84 AR 1262-PEAK1 | +++++<br>+++++ | +++++ | 48795 | +++++ | +++++ | +++++ | 48795 | 0.000 |
| 85 AR 1262-PEAK2 | +++++<br>+++++ | +++++ | 74342 | +++++ | +++++ | +++++ | 74342 | 0.000 |
| 86 AR 1262-PEAK3 | +++++<br>+++++ | +++++ | 83506 | +++++ | +++++ | +++++ | 83506 | 0.000 |
| 87 AR 1262-PEAK4 | +++++<br>+++++ | +++++ | 111179 | +++++ | +++++ | +++++ | 111179 | 0.000 |
| 88 AR 1262-PEAK5 | +++++<br>+++++ | +++++ | 102812 | +++++ | +++++ | +++++ | 102812 | 0.000 |
| 89 Diallate | +++++<br>+++++ | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ |

Report Date : 05-Nov-2013 12:07

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 15:09
End Cal Date : 18-OCT-2013 22:37
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv16a.i/2131025.b/pest35ms.m
Cal Date : 27-Oct-2013 14:17 tls
Curve Type : Average

| Compound | 5.000 Level 1 | 20.000 Level 2 | 60.000 Level 3 | 80.000 Level 4 | 100.000 Level 5 | 2.500 Level 6 | 50.000 Level 7 | RRF | % RSD |
|---|---|---|---|---|---|---|---|---|---|
| 90 Isodrin | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ |
| 91 Chlorobenzilate | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ |
| 92 Kepone | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ |
| 93 Mirex | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ |
| 94 Alachlor | 370652 | 314050 | 272471 | 265357 | 259051 | 294832 | +++++ | 296069 | 14.136 |
| $ 1 Tetrachloro-m-xylene | 2743479 | 2512724 | 2434975 | 2531935 | 2505234 | +++++ | +++++ | 2545669 | 4.576 |
| $ 22 Decachlorobiphenyl | 1531904 | 1435918 | 1454506 | 1509821 | 1488414 | +++++ | +++++ | 1484113 | 2.645 |

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a002.d
Report Date: 30-Oct-2013 15:55

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131018p.b/sv16a002.d
Lab Smp Id: deg
Inj Date : 18-OCT-2013 14:55
Operator : tls Inst ID: gcsv16a.i
Smp Info : deg*1 93-1-6
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m
Meth Date : 22-Oct-2013 10:56 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:37 Cal File: sv16a034.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: deg.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | CONCENTRATIONS FINAL ( UG/L) |
|---|---|---|---|---|---|---|
| 12 4,4'-DDE | 6.727 | 6.728 | -0.001 | 430411 | 0.18430 | 0.0018 |
| 15 4,4'-DDD | 7.144 | 7.144 | 0.000 | 2215647 | 1.16290 | 0.012 |
| 17 4,4'-DDT | 7.382 | 7.380 | 0.002 | 132745255 | 73.7437 | 0.74 |
| 18 Endrin aldehyde | 7.433 | 7.431 | 0.002 | 634136 | 0.40244 | 0.0040 |
| 21 Endrin ketone | 8.081 | 8.081 | 0.000 | 3062991 | 1.50563 | 0.015 |
| 14 Endrin | 7.075 | 7.073 | 0.002 | 146432437 | 73.2132 | 0.73 |

Gulf Coast Analytical Laboratories, Inc.

Breakdown Calculation

DDT Breakdown: Formula

$$\frac{(\text{Area DDD}) + (\text{Area DDE})}{(\text{Area DDD}) + (\text{Area DDE}) + (\text{Area DDT})} \times 100$$

DDT Breakdown: Calculation

$$\frac{2215647 + 430411}{2215647 + 430411 + 132745255} \times 100 = 2.0\ \%$$

DDT Breakdown: Criteria < 15%

==========

Endrin Breakdown: Formula

$$\frac{(\text{Area Endrin ketone}) + (\text{Area Endrin aldehyde})}{(\text{Area End ket}) + (\text{Area End ald}) + (\text{Area Endrin})} \times 100$$

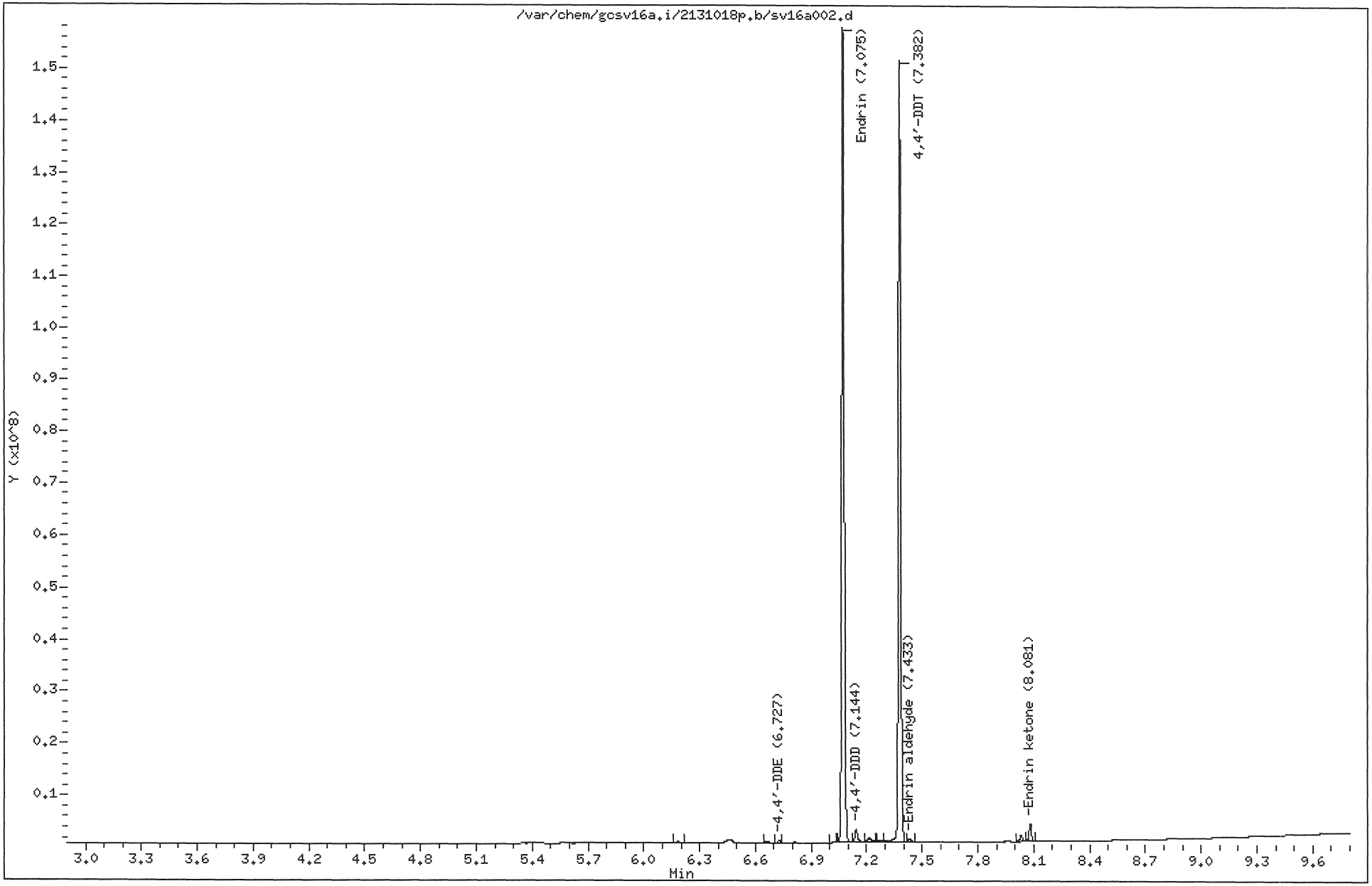
Endrin Breakdown: Calculation

$$\frac{3062991 + 634136}{3062991 + 634136 + 146432437} \times 100 = 2.5\ \%$$

Endrin Breakdown: Criteria < 15%

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a002.d
Date : 18-OCT-2013 14:55
Client ID:
Sample Info: deg*1 93-1-6
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

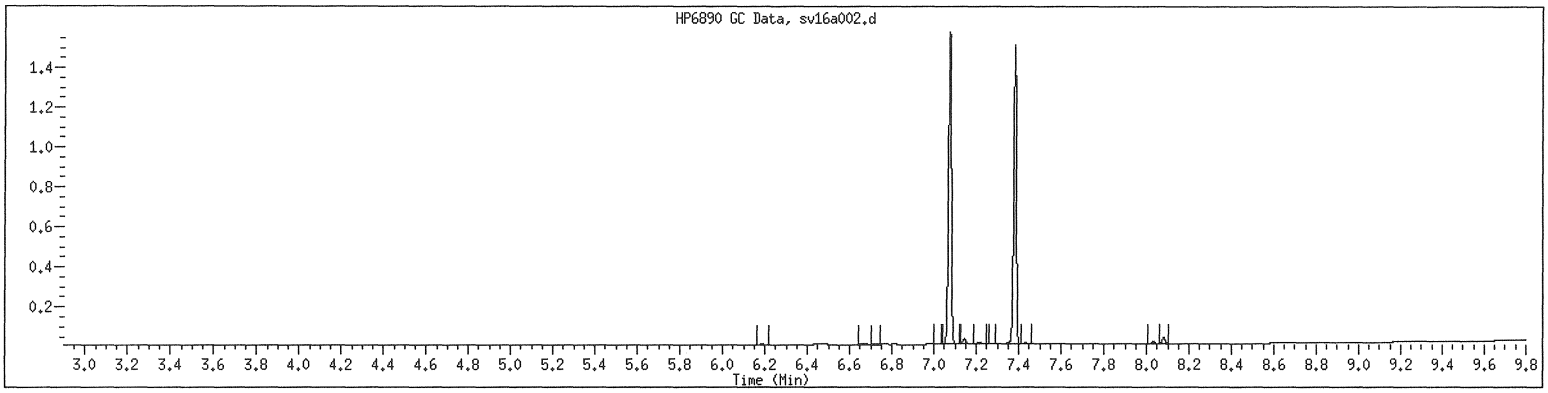
Instrument: gcsv16a.i
Operator: tls
Column diameter: 0.32




2131017 12 651

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : deg | SampleType | : SAMPLE |
| Injection Date | : 10/18/2013 14:55 | Instrument | : gcsv16a.i |
| Operator | : tls | | |
| Sample Info | : deg*1 93-1-6 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : deg |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a005.d
Report Date: 22-Oct-2013 10:54

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131018p.b/sv16a005.d
Lab Smp Id: 1201
Inj Date : 18-OCT-2013 15:38
Operator : tls Inst ID: gcsv16a.i
Smp Info : 1201*1
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m
Meth Date : 22-Oct-2013 10:54 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 21:25 Cal File: sv16a029.d
Als bottle: 5 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8081.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| $ 1 Tetrachloro-m-xylene | 4.112 | 4.112 | 0.000 | 13717394 | 5.00000 | 5.4 |
| 2 alpha-BHC | 4.839 | 4.840 | -0.001 | 17653990 | 5.00000 | 5.1 |
| 3 gamma-BHC (Lindane) | 5.203 | 5.203 | 0.000 | 15096327 | 5.00000 | 5.1 |
| 6 beta-BHC | 5.276 | 5.278 | -0.002 | 6723746 | 5.00000 | 5.4 |
| 4 Heptachlor | 5.553 | 5.553 | 0.000 | 12713912 | 5.00000 | 5.0 |
| 7 delta-BHC | 5.589 | 5.590 | -0.001 | 14159534 | 5.00000 | 4.9 |
| 5 Aldrin | 5.837 | 5.839 | -0.002 | 12835738 | 5.00000 | 5.1 |
| 8 Heptachlor epoxide | 6.285 | 6.288 | -0.003 | 11737601 | 5.00000 | 5.3 |
| 10 gamma-Chlordane | 6.440 | 6.440 | 0.000 | 12801357 | 5.00000 | 5.4 |
| 11 alpha-Chlordane | 6.560 | 6.564 | -0.004 | 10053263 | 5.00000 | 4.7 |
| 9 Endosulfan I | 6.576 | 6.576 | 0.000 | 10078403 | 5.00000 | 5.1 |
| 12 4,4'-DDE | 6.725 | 6.728 | -0.003 | 23032666 | 10.0000 | 9.9 |
| 13 Dieldrin | 6.810 | 6.810 | 0.000 | 23107409 | 10.0000 | 10 |

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a005.d
Report Date: 22-Oct-2013 10:54

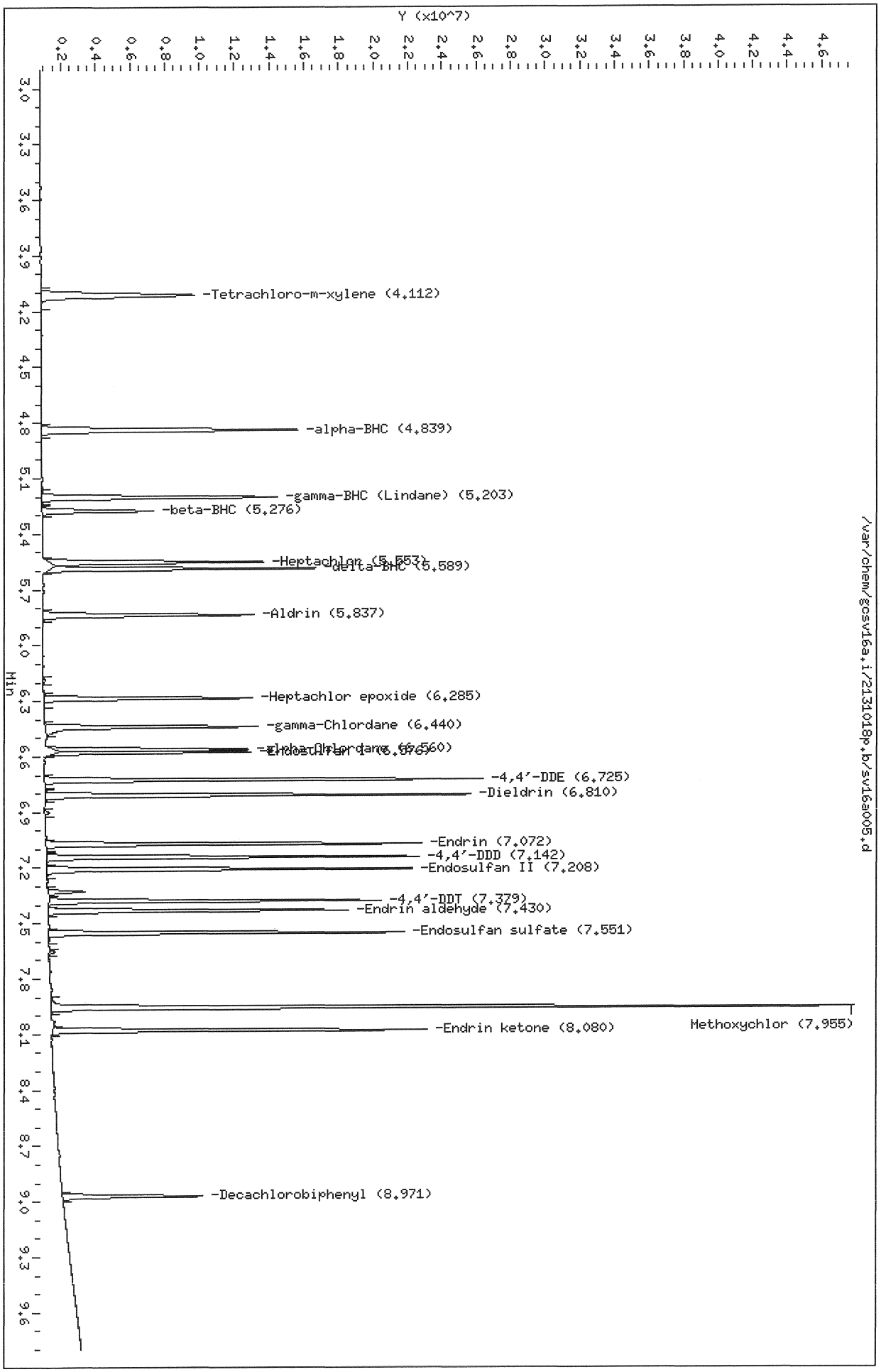
| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| 14 Endrin | 7.072 | 7.073 | -0.001 | 20053623 | 10.0000 | 10 |
| 15 4,4'-DDD | 7.142 | 7.144 | -0.002 | 18656415 | 10.0000 | 9.8 |
| 16 Endosulfan II | 7.208 | 7.209 | -0.001 | 20207707 | 10.0000 | 10 |
| 17 4,4'-DDT | 7.379 | 7.380 | -0.001 | 17195756 | 10.0000 | 9.6 |
| 18 Endrin aldehyde | 7.430 | 7.431 | -0.001 | 16067060 | 10.0000 | 10(M2) |
| 20 Endosulfan sulfate | 7.551 | 7.552 | -0.001 | 18894818 | 10.0000 | 10 |
| 19 Methoxychlor | 7.955 | 7.960 | -0.005 | 41693211 | 50.0000 | 48 |
| 21 Endrin ketone | 8.080 | 8.081 | -0.001 | 19817868 | 10.0000 | 9.7 |
| $ 22 Decachlorobiphenyl | 8.971 | 8.971 | 0.000 | 7659521 | 5.00000 | 5.2 |

QC Flag Legend

M2- Compound response manually integrated because Target system integrated incorrectly.

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a005.d
Date : 18-OCT-2013 15:38
Client ID:
Sample Info: 1201*1
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

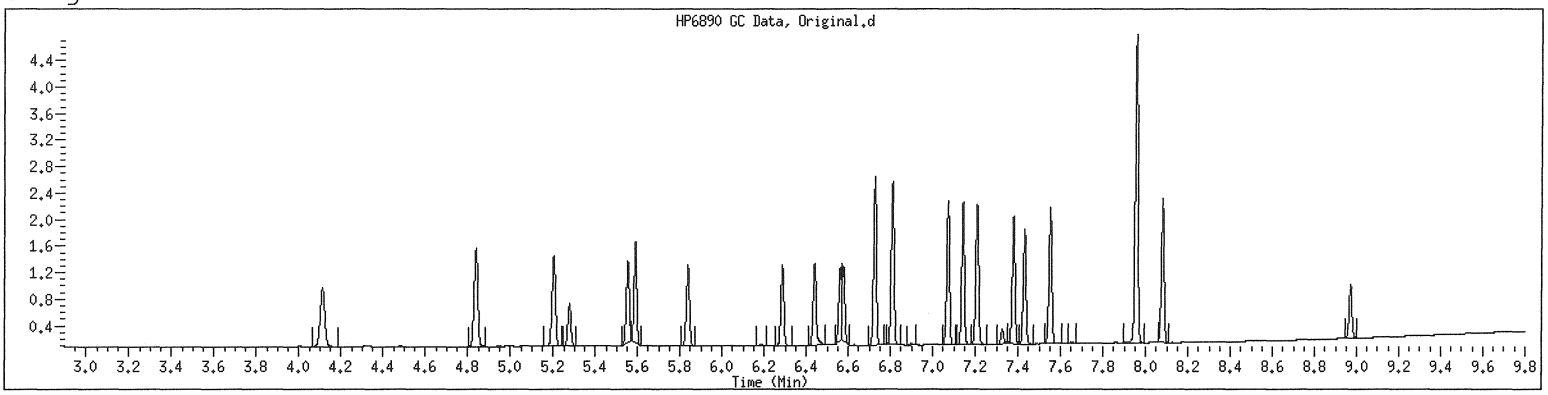
Instrument: gcsv16a.i
Operator: tls
Column diameter: 0.32



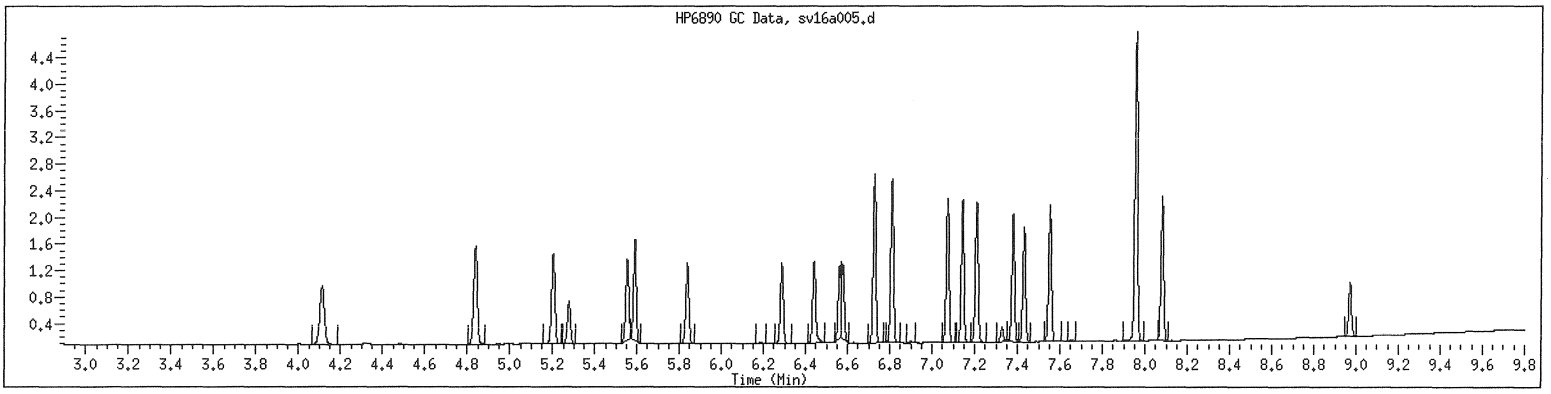
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1201 | SampleType | : CALIB_1 |
| Injection Date | : 10/18/2013 15:38 | Instrument | : gcsv16a.i |
| Operator | : tls | | |
| Sample Info | : 1201*1 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : 8081 |

Original




Final



Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a006.d
Report Date: 22-Oct-2013 10:54

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131018p.b/sv16a006.d
Lab Smp Id: 1202
Inj Date : 18-OCT-2013 15:53
Operator : tls Inst ID: gcsv16a.i
Smp Info : 1202*1
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m
Meth Date : 22-Oct-2013 10:54 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 21:39 Cal File: sv16a030.d
Als bottle: 6 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8081.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| $ 1 Tetrachloro-m-xylene | 4.114 | 4.112 | 0.002 | 50254472 | 20.0000 | 20 |
| 2 alpha-BHC | 4.840 | 4.840 | 0.000 | 66116151 | 20.0000 | 19 |
| 3 gamma-BHC (Lindane) | 5.203 | 5.203 | 0.000 | 56323241 | 20.0000 | 19 |
| 6 beta-BHC | 5.276 | 5.278 | -0.002 | 24485391 | 20.0000 | 20 |
| 4 Heptachlor | 5.553 | 5.553 | 0.000 | 49193713 | 20.0000 | 19 |
| 7 delta-BHC | 5.590 | 5.590 | 0.000 | 55790655 | 20.0000 | 19 |
| 5 Aldrin | 5.837 | 5.839 | -0.002 | 48176546 | 20.0000 | 19 |
| 8 Heptachlor epoxide | 6.286 | 6.288 | -0.002 | 43254256 | 20.0000 | 20 |
| 10 gamma-Chlordane | 6.440 | 6.440 | 0.000 | 45584045 | 20.0000 | 19 |
| 11 alpha-Chlordane | 6.561 | 6.564 | -0.003 | 39231415 | 20.0000 | 18 |
| 9 Endosulfan I | 6.577 | 6.576 | 0.001 | 40453221 | 20.0000 | 20 |
| 12 4,4'-DDE | 6.726 | 6.728 | -0.002 | 87526397 | 40.0000 | 37 |
| 13 Dieldrin | 6.810 | 6.810 | 0.000 | 86646699 | 40.0000 | 38 |

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a006.d
Report Date: 22-Oct-2013 10:54

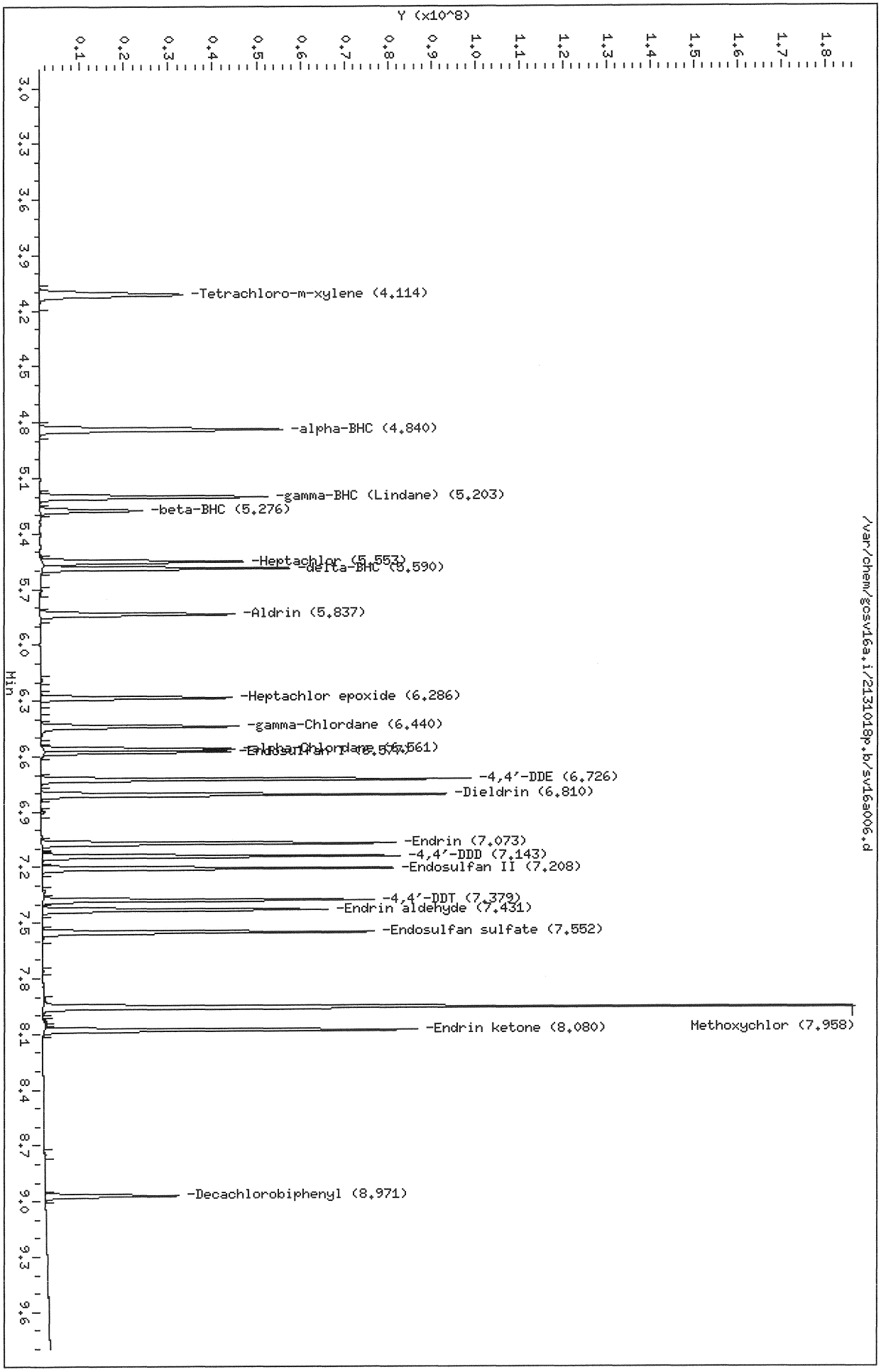
| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| 14 Endrin | 7.073 | 7.073 | 0.000 | 76049764 | 40.0000 | 38 |
| 15 4,4'-DDD | 7.143 | 7.144 | -0.001 | 71307692 | 40.0000 | 37 |
| 16 Endosulfan II | 7.208 | 7.209 | -0.001 | 73588400 | 40.0000 | 38 |
| 17 4,4'-DDT | 7.379 | 7.380 | -0.001 | 66504657 | 40.0000 | 37 |
| 18 Endrin aldehyde | 7.431 | 7.431 | 0.000 | 60271060 | 40.0000 | 38(M2) |
| 20 Endosulfan sulfate | 7.552 | 7.552 | 0.000 | 70639281 | 40.0000 | 38 |
| 19 Methoxychlor | 7.958 | 7.960 | -0.002 | 164933628 | 200.000 | 190 |
| 21 Endrin ketone | 8.080 | 8.081 | -0.001 | 76033932 | 40.0000 | 37 |
| $ 22 Decachlorobiphenyl | 8.971 | 8.971 | 0.000 | 28718356 | 20.0000 | 19 |

QC Flag Legend

M2- Compound response manually integrated because Target system integrated incorrectly.

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a006.d
Date : 18-OCT-2013 15:53
Client ID:
Sample Info: 1202*1
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

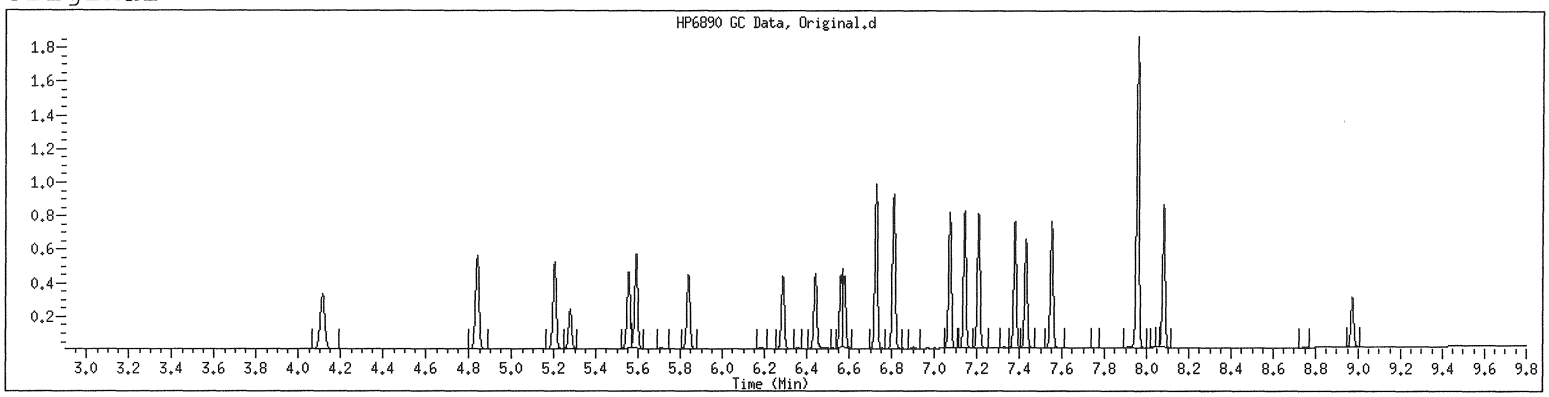
Instrument: gcsv16a.i
Operator: tls
Column diameter: 0.32



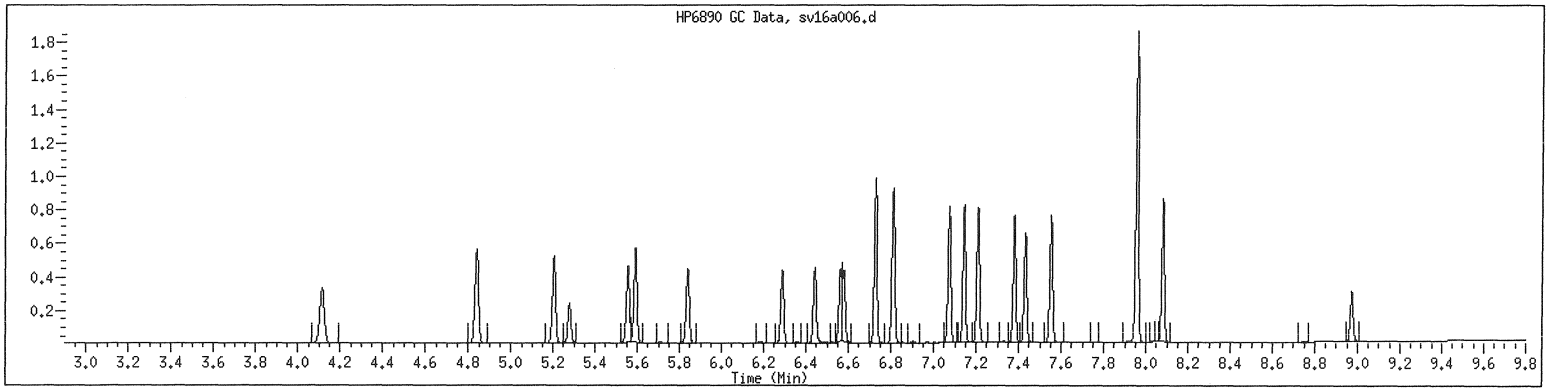
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1202 | SampleType | : CALIB_2 |
| Injection Date | : 10/18/2013 15:53 | Instrument | : gcsv16a.i |
| Operator | : tls | | |
| Sample Info | : 1202*1 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : 8081 |

Original




Final



Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a007.d
Report Date: 22-Oct-2013 10:54

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131018p.b/sv16a007.d
Lab Smp Id: 1203
Inj Date : 18-OCT-2013 16:07
Operator : tls  Inst ID: gcsv16a.i
Smp Info : 1203*1
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m
Meth Date : 22-Oct-2013 10:54 tls  Quant Type: ESTD
Cal Date : 18-OCT-2013 22:08  Cal File: sv16a032.d
Als bottle: 7  Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon  Compound Sublist: 8081.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable  Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| $ 1 Tetrachloro-m-xylene | 4.114 | 4.112 | 0.002 | 146098486 | 60.0000 | 57 |
| 2 alpha-BHC | 4.841 | 4.840 | 0.001 | 198710055 | 60.0000 | 57 |
| 3 gamma-BHC (Lindane) | 5.204 | 5.203 | 0.001 | 168076289 | 60.0000 | 57 |
| 6 beta-BHC | 5.277 | 5.278 | -0.001 | 70550546 | 60.0000 | 57 |
| 4 Heptachlor | 5.554 | 5.553 | 0.001 | 145978698 | 60.0000 | 58 |
| 7 delta-BHC | 5.592 | 5.590 | 0.002 | 169446390 | 60.0000 | 58 |
| 5 Aldrin | 5.839 | 5.839 | 0.000 | 143412843 | 60.0000 | 58 |
| 8 Heptachlor epoxide | 6.288 | 6.288 | 0.000 | 125621494 | 60.0000 | 57 |
| 10 gamma-Chlordane | 6.442 | 6.440 | 0.002 | 132494288 | 60.0000 | 56 |
| 11 alpha-Chlordane | 6.564 | 6.564 | 0.000 | 128426415 | 60.0000 | 60 |
| 9 Endosulfan I | 6.579 | 6.576 | 0.003 | 112539214 | 60.0000 | 57 |
| 12 4,4'-DDE | 6.729 | 6.728 | 0.001 | 276351818 | 120.000 | 120 |
| 13 Dieldrin | 6.813 | 6.810 | 0.003 | 264314291 | 120.000 | 120 |

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a007.d
Report Date: 22-Oct-2013 10:54

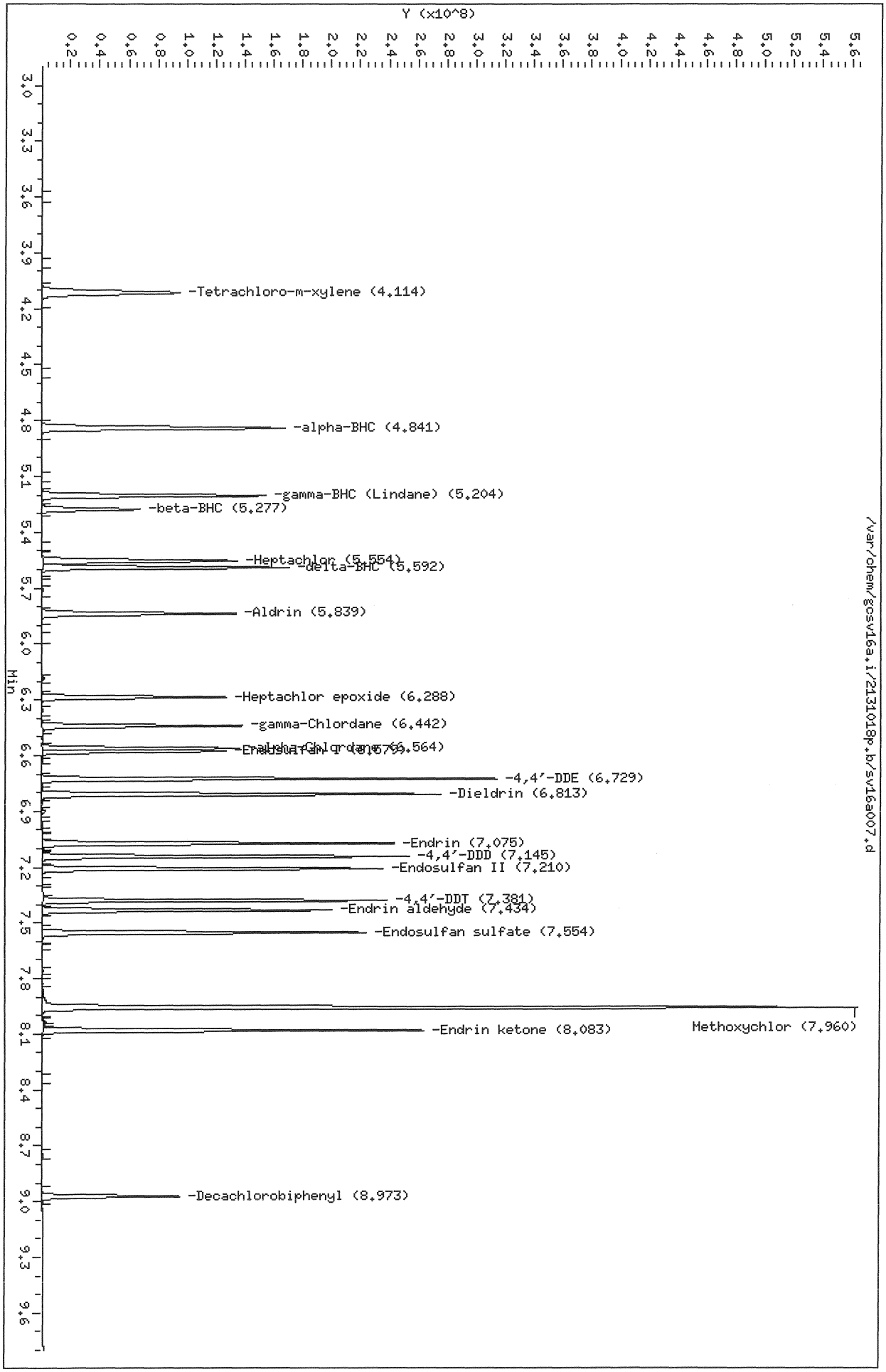
| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| 14 Endrin | 7.075 | 7.073 | 0.002 | 231721860 | 120.000 | 120 |
| 15 4,4'-DDD | 7.145 | 7.144 | 0.001 | 222591418 | 120.000 | 120 |
| 16 Endosulfan II | 7.210 | 7.209 | 0.001 | 223141981 | 120.000 | 110 |
| 17 4,4'-DDT | 7.381 | 7.380 | 0.001 | 210847535 | 120.000 | 120 |
| 18 Endrin aldehyde | 7.434 | 7.431 | 0.003 | 181649068 | 120.000 | 120(M2) |
| 20 Endosulfan sulfate | 7.554 | 7.552 | 0.002 | 214004199 | 120.000 | 120 |
| 19 Methoxychlor | 7.960 | 7.960 | 0.000 | 536866000 | 600.000 | 620 |
| 21 Endrin ketone | 8.083 | 8.081 | 0.002 | 239772813 | 120.000 | 120 |
| $ 22 Decachlorobiphenyl | 8.973 | 8.971 | 0.002 | 87270330 | 60.0000 | 59 |

QC Flag Legend

M2- Compound response manually integrated because Target system integrated incorrectly.

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a007.d
Date : 18-OCT-2013 16:07
Client ID:
Sample Info: 1203x1
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

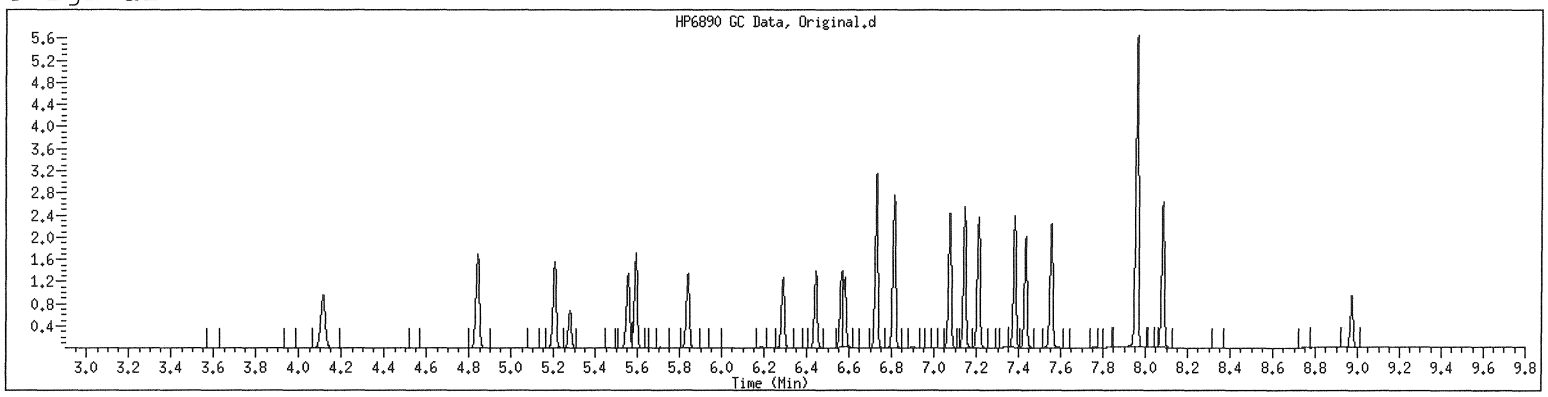
Instrument: gcsv16a.i
Operator: tls
Column diameter: 0.32



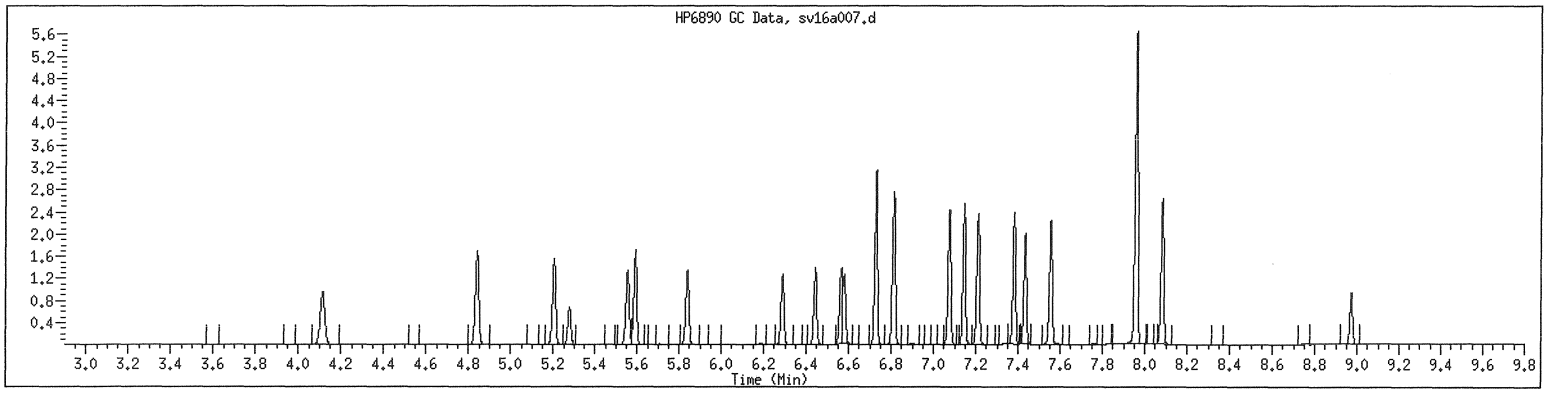
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1203 | SampleType | : CALIB_3 |
| Injection Date | : 10/18/2013 16:07 | Instrument | : gcsv16a.i |
| Operator | : tls | | |
| Sample Info | : 1203*1 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : 8081 |

Original




Final



Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a008.d
Report Date: 22-Oct-2013 10:55

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131018p.b/sv16a008.d
Lab Smp Id: 1204
Inj Date : 18-OCT-2013 16:22
Operator : tls  Inst ID: gcsv16a.i
Smp Info : 1204*1
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m
Meth Date : 22-Oct-2013 10:55 tls  Quant Type: ESTD
Cal Date : 18-OCT-2013 22:23  Cal File: sv16a033.d
Als bottle: 8  Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon  Compound Sublist: 8081.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable  Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| $ 1 Tetrachloro-m-xylene | 4.114 | 4.112 | 0.002 | 202554779 | 80.0000 | 80 |
| 2 alpha-BHC | 4.841 | 4.840 | 0.001 | 284583123 | 80.0000 | 82 |
| 3 gamma-BHC (Lindane) | 5.204 | 5.203 | 0.001 | 239992966 | 80.0000 | 82 |
| 6 beta-BHC | 5.277 | 5.278 | -0.001 | 98317711 | 80.0000 | 79 |
| 4 Heptachlor | 5.553 | 5.553 | 0.000 | 207398183 | 80.0000 | 82 |
| 7 delta-BHC | 5.591 | 5.590 | 0.001 | 239974753 | 80.0000 | 82 |
| 5 Aldrin | 5.838 | 5.839 | -0.001 | 203628781 | 80.0000 | 82 |
| 8 Heptachlor epoxide | 6.288 | 6.288 | 0.000 | 176152165 | 80.0000 | 80 |
| 10 gamma-Chlordane | 6.441 | 6.440 | 0.001 | 188078230 | 80.0000 | 80 |
| 11 alpha-Chlordane | 6.562 | 6.564 | -0.002 | 183742451 | 80.0000 | 85 |
| 9 Endosulfan I | 6.578 | 6.576 | 0.002 | 160788863 | 80.0000 | 81 |
| 12 4,4'-DDE | 6.728 | 6.728 | 0.000 | 390459929 | 160.000 | 170 |
| 13 Dieldrin | 6.812 | 6.810 | 0.002 | 375659925 | 160.000 | 170 |

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a008.d
Report Date: 22-Oct-2013 10:55

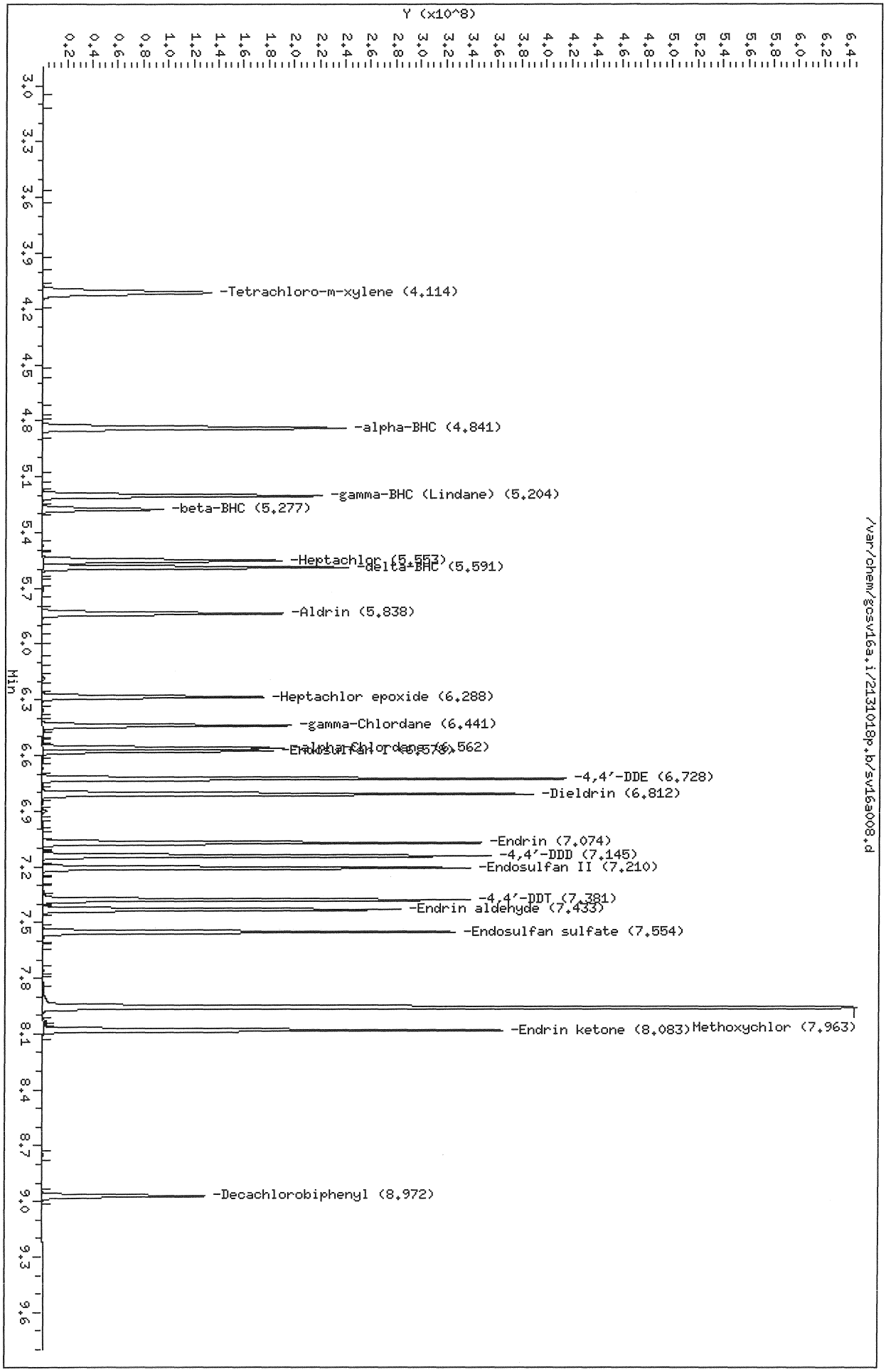
| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| 14 Endrin | 7.074 | 7.073 | 0.001 | 332994087 | 160.000 | 170 |
| 15 4,4'-DDD | 7.145 | 7.144 | 0.001 | 321358022 | 160.000 | 170 |
| 16 Endosulfan II | 7.210 | 7.209 | 0.001 | 319472465 | 160.000 | 160 |
| 17 4,4'-DDT | 7.381 | 7.380 | 0.001 | 306432297 | 160.000 | 170 |
| 18 Endrin aldehyde | 7.433 | 7.431 | 0.002 | 258238786 | 160.000 | 160(M2) |
| 20 Endosulfan sulfate | 7.554 | 7.552 | 0.002 | 304286095 | 160.000 | 160 |
| 19 Methoxychlor | 7.963 | 7.960 | 0.003 | 737095018 | 800.000 | 850 |
| 21 Endrin ketone | 8.083 | 8.081 | 0.002 | 343162503 | 160.000 | 170 |
| $ 22 Decachlorobiphenyl | 8.972 | 8.971 | 0.001 | 120785687 | 80.0000 | 81 |

QC Flag Legend

M2- Compound response manually integrated because
Target system integrated incorrectly.

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a008.d
Date : 18-OCT-2013 16:22
Client ID:
Sample Info: 1204*1
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

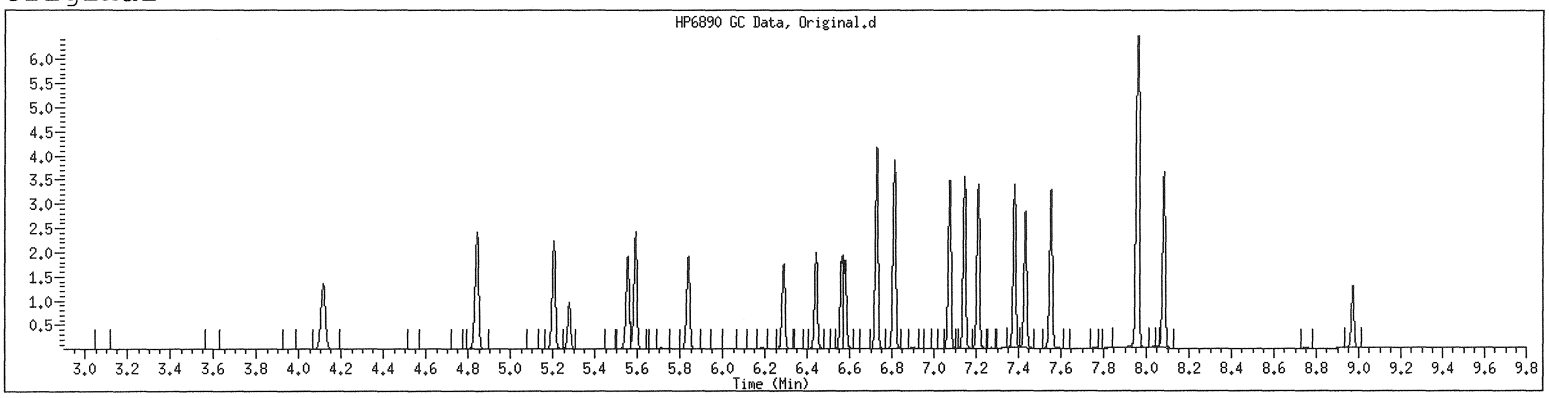
Instrument: gcsv16a.i
Operator: tls
Column diameter: 0.32



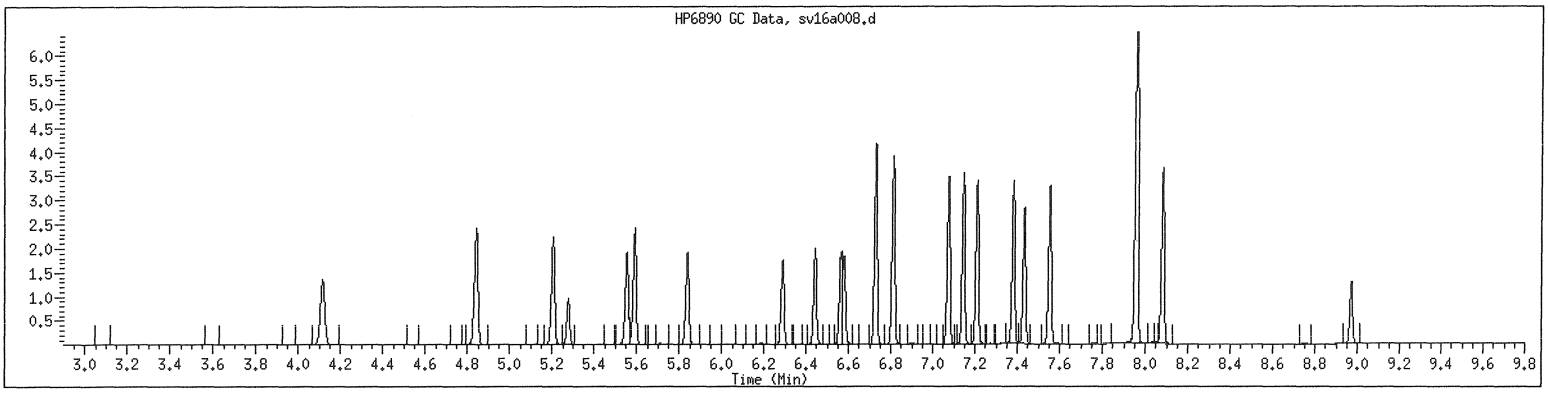
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1204 | SampleType | : CALIB_4 |
| Injection Date | : 10/18/2013 16:22 | Instrument | : gcsv16a.i |
| Operator | : tls | | |
| Sample Info | : 1204*1 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : 8081 |

Original




Final



Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a009.d
Report Date: 22-Oct-2013 10:55

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131018p.b/sv16a009.d
Lab Smp Id: 1205
Inj Date : 18-OCT-2013 16:36
Operator : tls Inst ID: gcsv16a.i
Smp Info : 1205*1 93-1-11
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m
Meth Date : 22-Oct-2013 10:55 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:37 Cal File: sv16a034.d
Als bottle: 9 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8081.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| $ 1 Tetrachloro-m-xylene | 4.114 | 4.112 | 0.002 | 250523439 | 100.000 | 98 |
| 2 alpha-BHC | 4.843 | 4.840 | 0.003 | 367288968 | 100.000 | 110(A) |
| 3 gamma-BHC (Lindane) | 5.205 | 5.203 | 0.002 | 306542002 | 100.000 | 100(A) |
| 6 beta-BHC | 5.278 | 5.278 | 0.000 | 122022334 | 100.000 | 98 |
| 4 Heptachlor | 5.555 | 5.553 | 0.002 | 262199654 | 100.000 | 100(A) |
| 7 delta-BHC | 5.593 | 5.590 | 0.003 | 309892343 | 100.000 | 110(A) |
| 5 Aldrin | 5.839 | 5.839 | 0.000 | 255291754 | 100.000 | 100(A) |
| 8 Heptachlor epoxide | 6.288 | 6.288 | 0.000 | 220775138 | 100.000 | 100(A) |
| 10 gamma-Chlordane | 6.442 | 6.441 | 0.001 | 237204916 | 100.000 | 100(A) |
| 11 alpha-Chlordane | 6.563 | 6.564 | -0.001 | 234236390 | 100.000 | 110(A) |
| 9 Endosulfan I | 6.578 | 6.576 | 0.002 | 200657734 | 100.000 | 100(A) |
| 12 4,4'-DDE | 6.729 | 6.728 | 0.001 | 488443981 | 200.000 | 210(A) |
| 13 Dieldrin | 6.813 | 6.810 | 0.003 | 470865450 | 200.000 | 210(A) |

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a009.d
Report Date: 22-Oct-2013 10:55

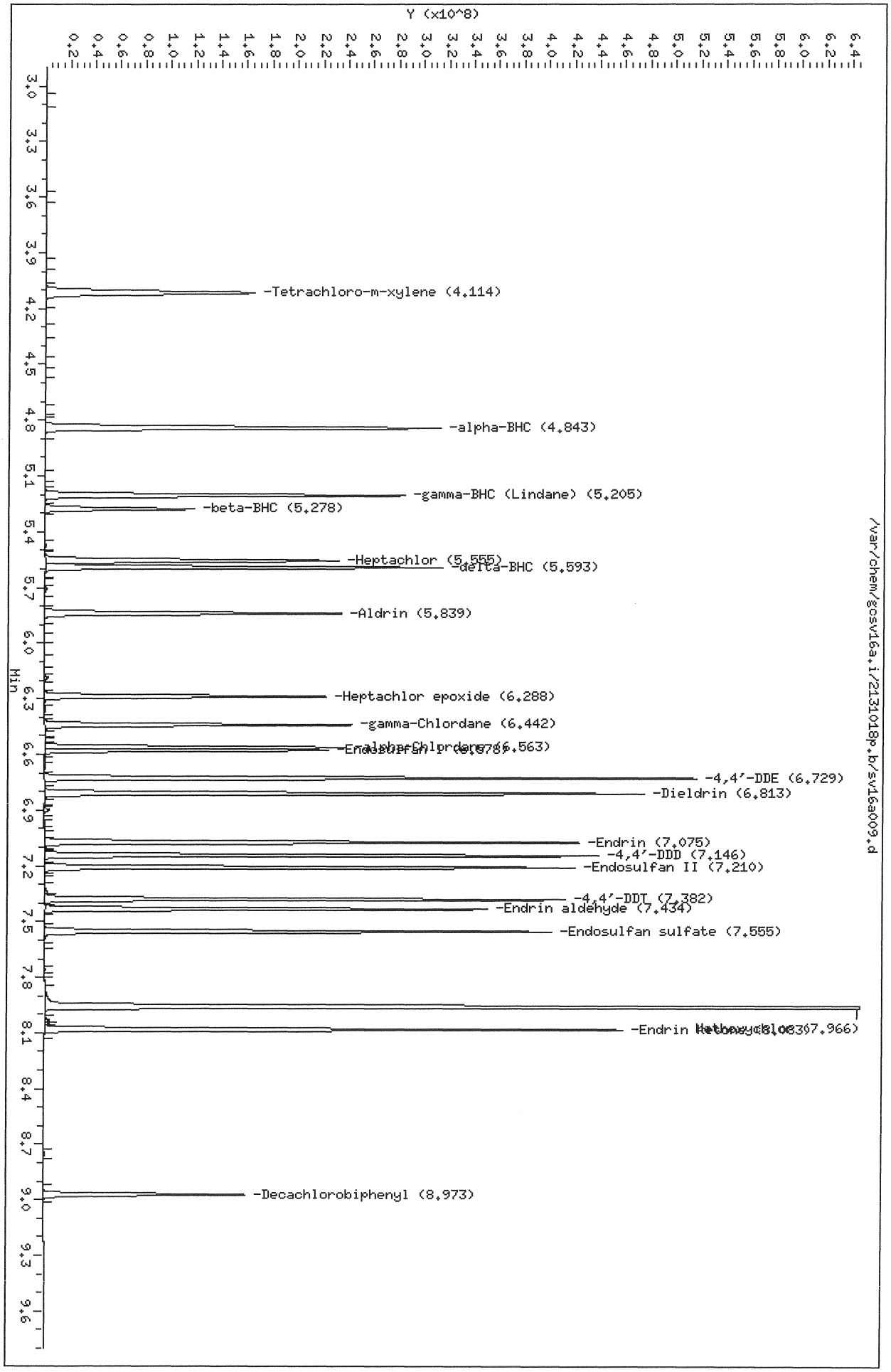
| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| 14 Endrin | 7.075 | 7.073 | 0.002 | 416316587 | 200.000 | 210(A) |
| 15 4,4'-DDD | 7.146 | 7.144 | 0.002 | 402931416 | 200.000 | 210(A) |
| 16 Endosulfan II | 7.210 | 7.209 | 0.001 | 399420205 | 200.000 | 210(A) |
| 17 4,4'-DDT | 7.382 | 7.380 | 0.002 | 389198106 | 200.000 | 220(A) |
| 18 Endrin aldehyde | 7.434 | 7.431 | 0.003 | 327485538 | 200.000 | 210(AM2) |
| 20 Endosulfan sulfate | 7.555 | 7.552 | 0.003 | 376859220 | 200.000 | 200(A) |
| 19 Methoxychlor | 7.966 | 7.960 | 0.006 | 846510617 | 1000.00 | 980 |
| 21 Endrin ketone | 8.083 | 8.081 | 0.002 | 429257048 | 200.000 | 210(A) |
| $ 22 Decachlorobiphenyl | 8.973 | 8.971 | 0.002 | 148841429 | 100.000 | 100(A) |

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M2- Compound response manually integrated because Target system integrated incorrectly.

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a009.d
Date : 18-OCT-2013 16:36
Client ID:
Sample Info: 1205x1 93-1-11
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

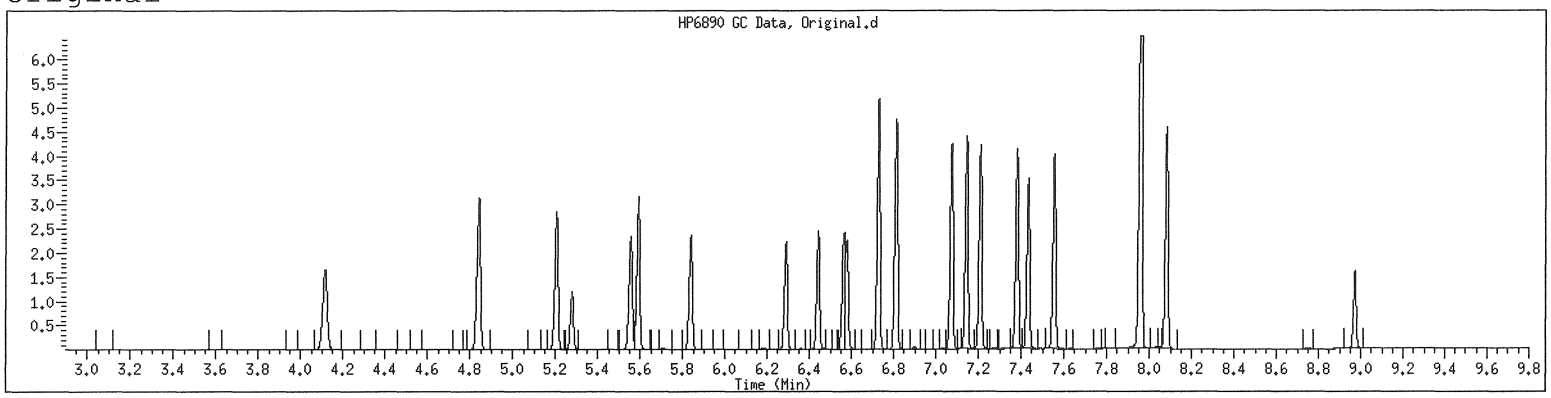
Instrument: gcsv16a.i
Operator: tls
Column diameter: 0.32



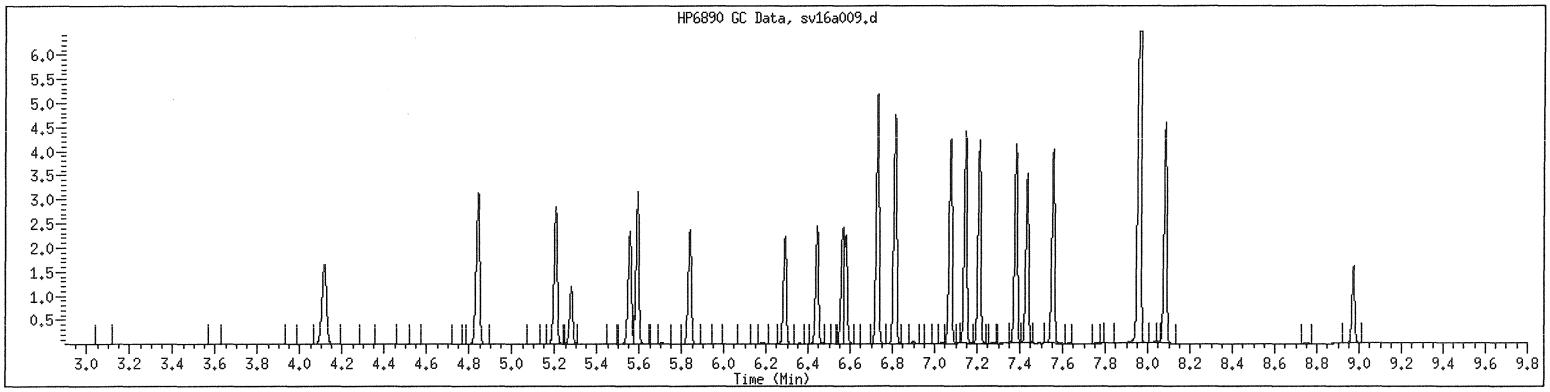
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1205 | SampleType | : CALIB_5 |
| Injection Date | : 10/18/2013 16:36 | Instrument | : gcsv16a.i |
| Operator | : tls | | |
| Sample Info | : 1205*1 93-1-11 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : 8081 |

Original




Final



Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a011.d
Report Date: 22-Oct-2013 10:55

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131018p.b/sv16a011.d
Lab Smp Id: 1205
Inj Date : 18-OCT-2013 17:05
Operator : tls Inst ID: gcsv16a.i
Smp Info : 1205*1 84-52-9
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m
Meth Date : 22-Oct-2013 10:55 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:37 Cal File: sv16a034.d
Als bottle: 11 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: chlor.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

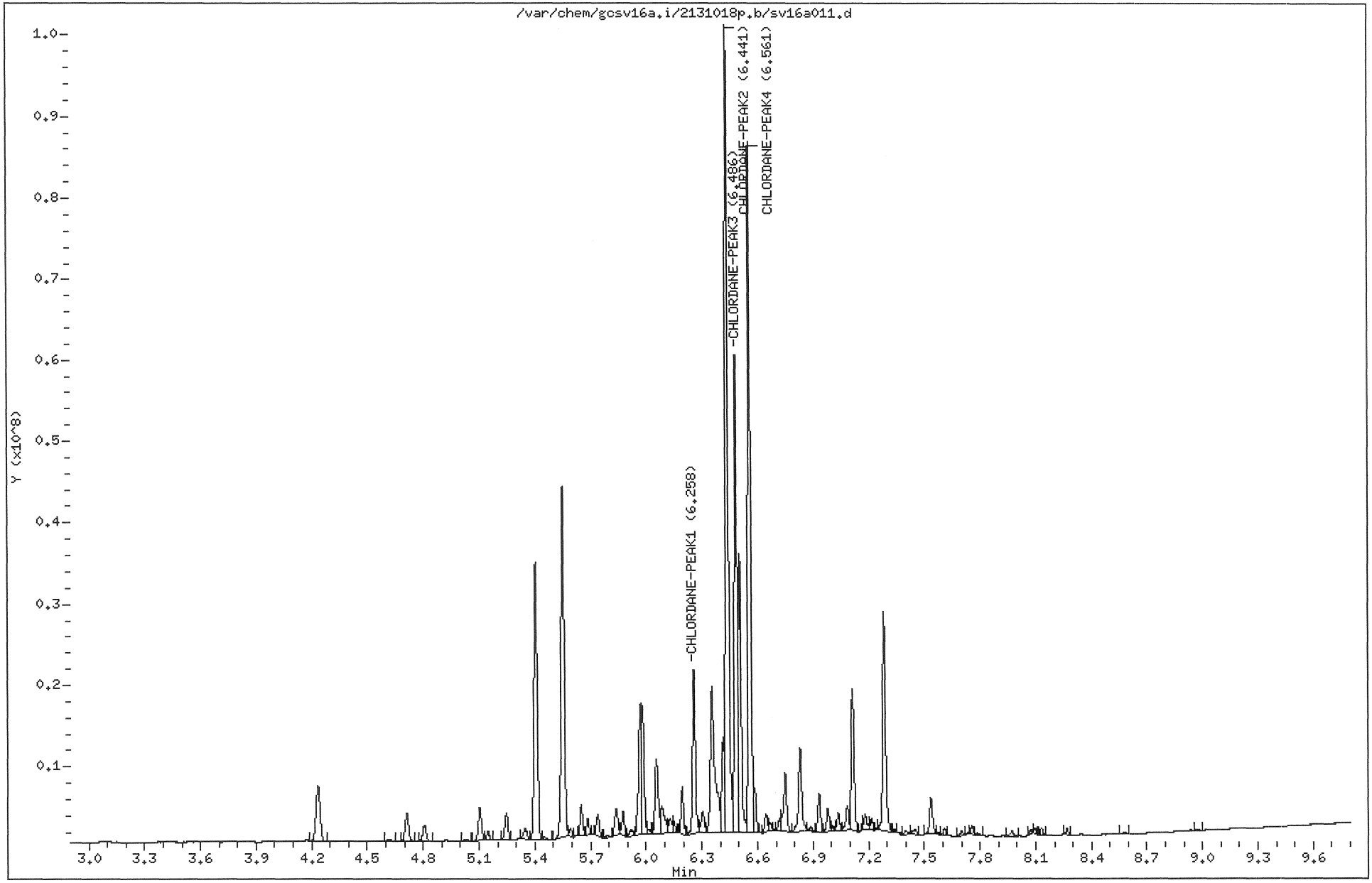
Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| M 71 CHLORDANE-AVG | | | | 264407308 | 400.000 | 400 |
| 72 CHLORDANE-PEAK1 | 6.258 | 6.259 | -0.001 | 20472082 | 400.000 | 400 |
| 73 CHLORDANE-PEAK2 | 6.441 | 6.440 | 0.001 | 102829328 | 400.000 | 400 |
| 74 CHLORDANE-PEAK3 | 6.486 | 6.488 | -0.002 | 58896234 | 400.000 | 400 |
| 75 CHLORDANE-PEAK4 | 6.561 | 6.560 | 0.001 | 82209664 | 400.000 | 400 |

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a011.d
Date : 18-OCT-2013 17:05
Client ID:
Sample Info: 1205x1 84-52-9
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv16a.i

Operator: tls
Column diameter: 0.32

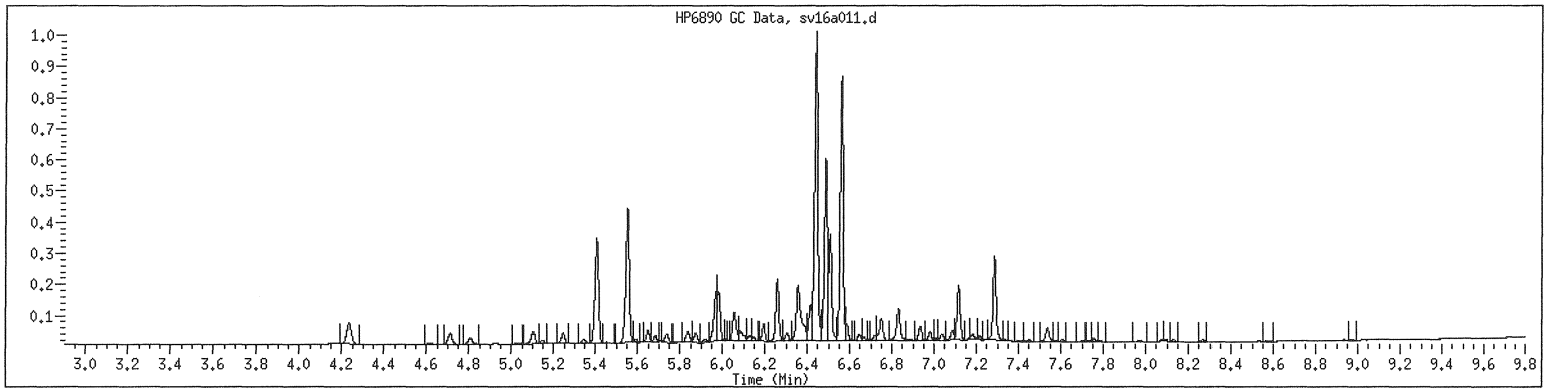



2131017 12 674

Report Date: 10/22/2013 10:55

MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1205 | SampleType | : CALIB_5 |
| Injection Date | : 10/18/2013 17:05 | Instrument | : gcsv16a.i |
| Operator | : tls | | |
| Sample Info | : 1205*1 84-52-9 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : chlor |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a012.d
Report Date: 21-Oct-2013 08:51

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131018p.b/sv16a012.d
Lab Smp Id: 1201
Inj Date : 18-OCT-2013 17:19
Operator : tls Inst ID: gcsv16a.i
Smp Info : 1201*1 84-54-9
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m
Meth Date : 21-Oct-2013 08:51 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 17:19 Cal File: sv16a012.d
Als bottle: 12 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: tox.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

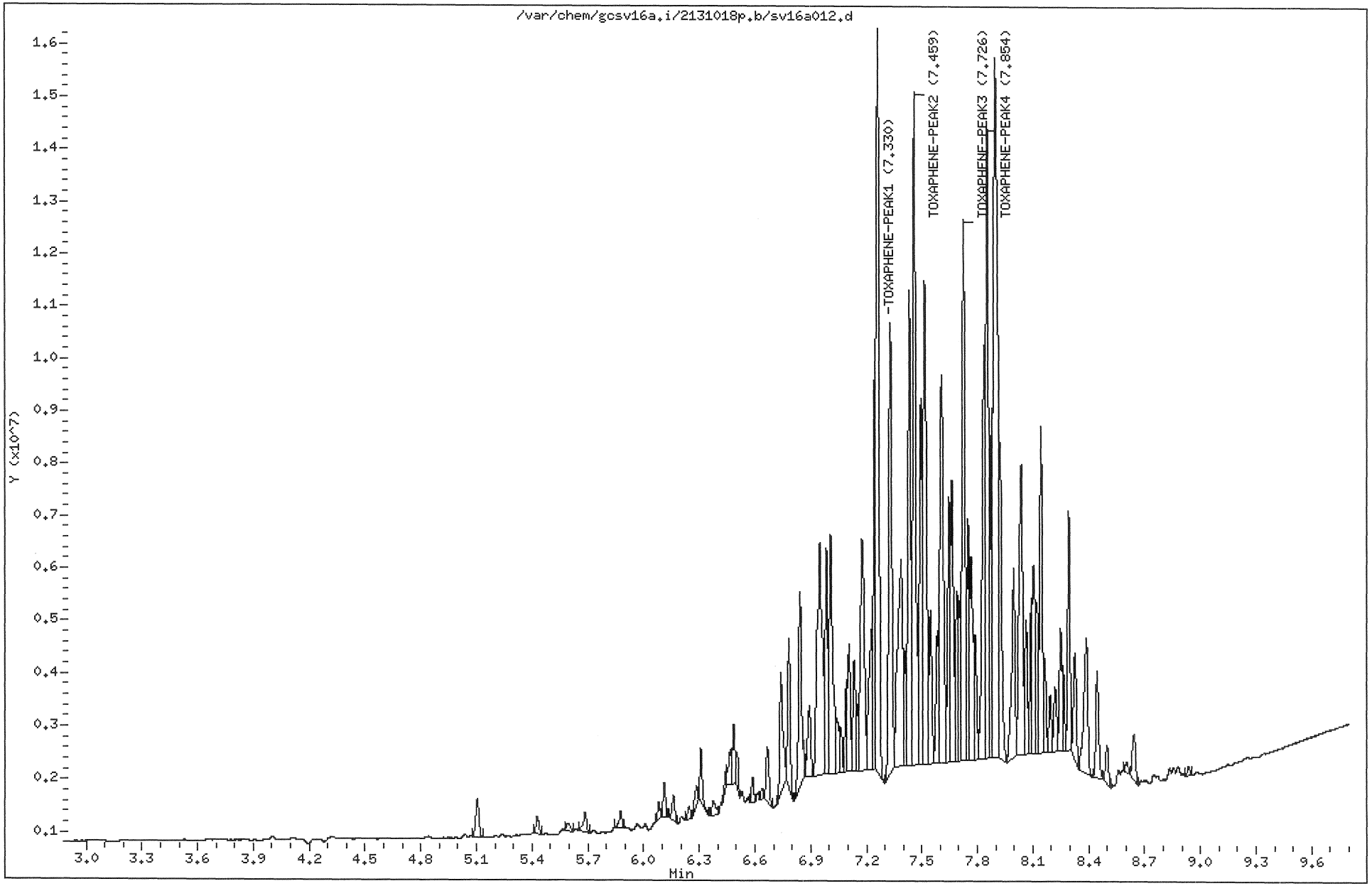
| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) | |
|---|---|---|---|---|---|---|---|
| M 65 TOXAPHENE-AVG | | | | 47705850 | 250.000 | | (a) |
| 66 TOXAPHENE-PEAK1 | 7.330 | 7.330 | 0.000 | 10118129 | 250.000 | | (a) |
| 67 TOXAPHENE-PEAK2 | 7.459 | 7.460 | -0.001 | 13661505 | 250.000 | | (a) |
| 68 TOXAPHENE-PEAK3 | 7.726 | 7.728 | -0.002 | 11051246 | 250.000 | | (a) |
| 69 TOXAPHENE-PEAK4 | 7.854 | 7.852 | 0.002 | 12874970 | 250.000 | | (a) |

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a012.d
Date : 18-OCT-2013 17:19
Client ID:
Sample Info: 1201x1 84-54-9
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

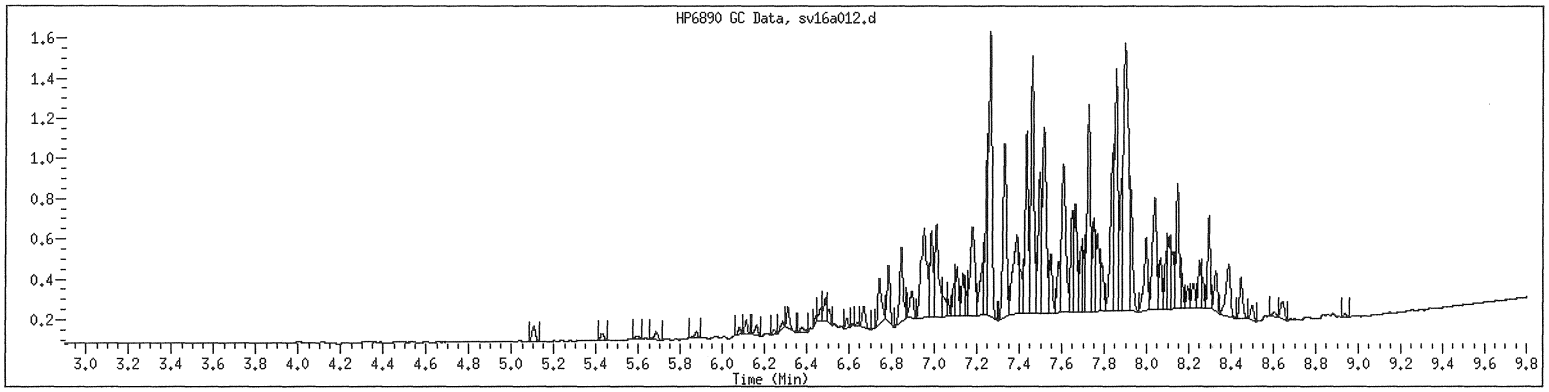
Instrument: gcsv16a.i
Operator: tls
Column diameter: 0.32




2131017 12 677

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1201 | SampleType | : CALIB_1 |
| Injection Date | : 10/18/2013 17:19 | Instrument | : gcsv16a.i |
| Operator | : tls | | |
| Sample Info | : 1201*1 84-54-9 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : tox |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a013.d
Report Date: 22-Oct-2013 10:55

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131018p.b/sv16a013.d
Lab Smp Id: 1205
Inj Date : 18-OCT-2013 17:34
Operator : tls Inst ID: gcsv16a.i
Smp Info : 1205*1 84-54-9
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m
Meth Date : 22-Oct-2013 10:55 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:37 Cal File: sv16a034.d
Als bottle: 13 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: tox.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

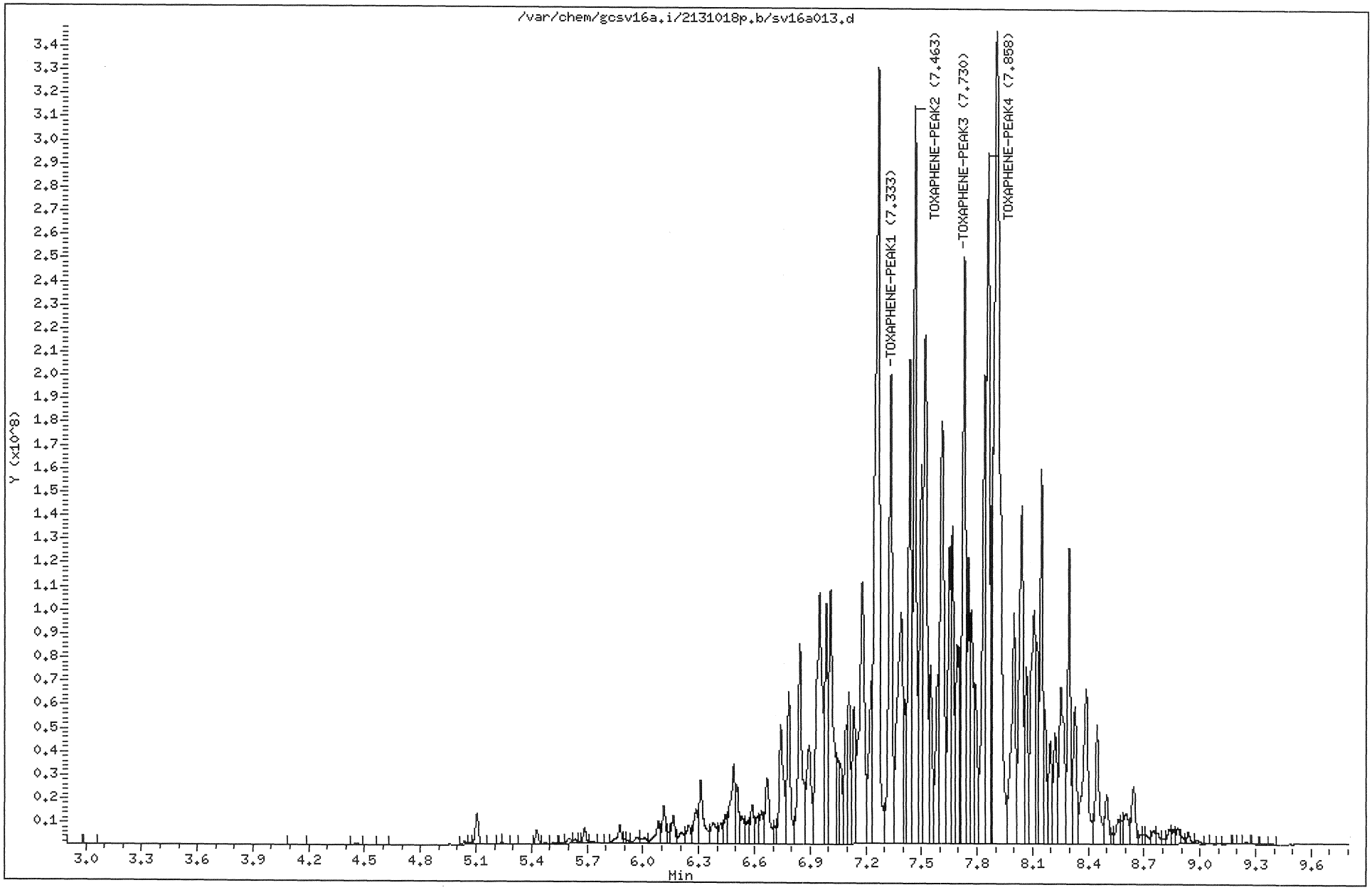
Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| M 65 TOXAPHENE-AVG | | | | 1227099763 | 5000.00 | 5000 |
| 66 TOXAPHENE-PEAK1 | 7.333 | 7.331 | 0.002 | 266169096 | 5000.00 | 5000 |
| 67 TOXAPHENE-PEAK2 | 7.463 | 7.461 | 0.002 | 342385839 | 5000.00 | 5000 |
| 68 TOXAPHENE-PEAK3 | 7.730 | 7.729 | 0.001 | 282542283 | 5000.00 | 5000 |
| 69 TOXAPHENE-PEAK4 | 7.858 | 7.855 | 0.003 | 336002545 | 5000.00 | 5000 |

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a013.d
Date : 18-OCT-2013 17:34
Client ID:
Sample Info: 1205x1 84-54-9
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv16a.i

Operator: tls
Column diameter: 0.32

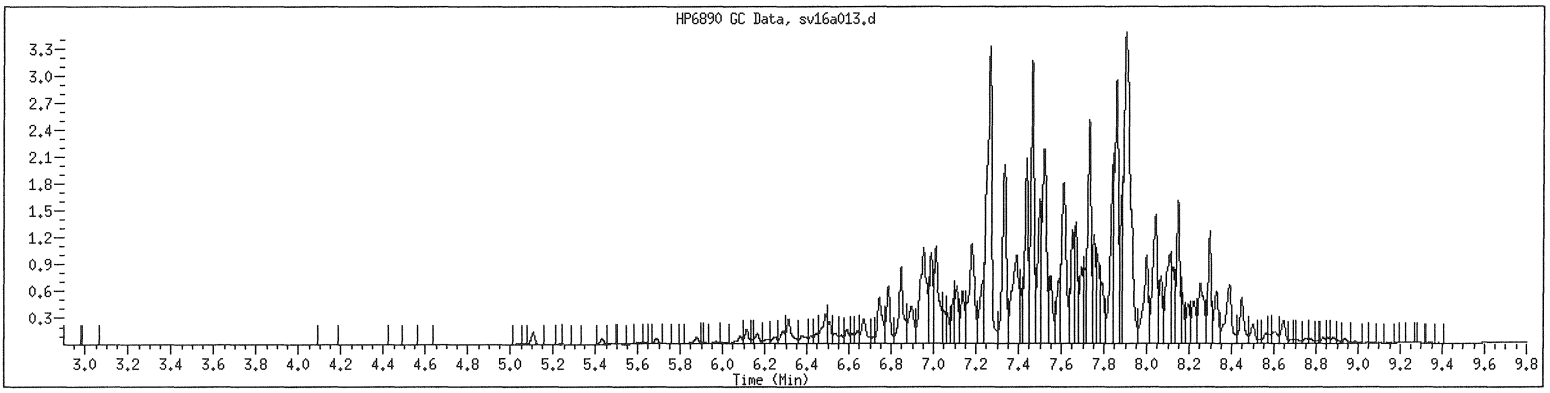



2131701712 680

Report Date: 10/22/2013 10:55

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 1205 SampleType : CALIB_5
Injection Date: 10/18/2013 17:34 Instrument : gcsv16a.i
Operator : tls
Sample Info : 1205*1 84-54-9
Misc Info :
Method : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m
Dilution : 1.0
Matrix : WATER
Integrator : Falcon Compound Sublist: tox




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a010.d
Report Date: 05-Nov-2013 13:39

GCAL, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 1600
Level: LOW
Data Type: GC MULTI COMP
SpikeList File: 8081DODicv.spk
Sublist File: 8081.sub
Method File: /var/chem/gcsv16a.i/2131018p.b/pest35ms.m
Misc Info:

Client SDG: 2131018p
Fraction: SV

Operator: tls
SampleType: LCS
Quant Type: ESTD

| SPIKE COMPOUND | CONC ADDED UG/L | CONC RECOVERED UG/L | % RECOVERED | LIMITS |
|---|---|---|---|---|
| 2 alpha-BHC | 60 | 56 | 93.54 | 80-120 |
| 3 gamma-BHC (Lindane) | 60 | 57 | 94.35 | 80-120 |
| 6 beta-BHC | 60 | 56 | 93.58 | 80-120 |
| 4 Heptachlor | 60 | 56 | 93.48 | 80-120 |
| 7 delta-BHC | 60 | 57 | 95.50 | 80-120 |
| 5 Aldrin | 60 | 58 | 96.28 | 80-120 |
| 8 Heptachlor epoxide | 60 | 56 | 93.29 | 80-120 |
| 10 gamma-Chlordane | 60 | 55 | 91.18 | 80-120 |
| 11 alpha-Chlordane | 60 | 59 | 98.44 | 80-120 |
| 9 Endosulfan I | 60 | 54 | 89.22 | 80-120 |
| 12 4,4'-DDE | 60 | 55 | 92.08 | 80-120 |
| 13 Dieldrin | 60 | 57 | 94.76 | 80-120 |
| 14 Endrin | 60 | 55 | 92.34 | 80-120 |
| 15 4,4'-DDD | 60 | 56 | 92.70 | 80-120 |
| 16 Endosulfan II | 60 | 54 | 90.65 | 80-120 |
| 17 4,4'-DDT | 60 | 54 | 90.74 | 80-120 |
| 18 Endrin aldehyde | 60 | 51 | 84.50 | 80-120 |
| 20 Endosulfan sulfate | 60 | 56 | 93.26 | 80-120 |
| 19 Methoxychlor | 60 | 54 | 90.77 | 80-120 |
| 21 Endrin ketone | 60 | 54 | 89.73 | 80-120 |

| SURROGATE COMPOUND | CONC ADDED UG/L | CONC RECOVERED UG/L | % RECOVERED | LIMITS |
|---|---|---|---|---|
| $ 1 Tetrachloro-m-xylene | 500 | 0.0 | * | 48-137 |
| $ 22 Decachlorobiphenyl | 500 | 0.0 | * | 30-139 |

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a010.d
Report Date: 22-Oct-2013 10:55

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131018p.b/sv16a010.d
Lab Smp Id: 1600
Inj Date : 18-OCT-2013 16:50
Operator : tls Inst ID: gcsv16a.i
Smp Info : 1600*1 84-51-8
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m
Meth Date : 22-Oct-2013 10:55 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:37 Cal File: sv16a034.d
Als bottle: 10 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8081.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 1.00000 | Volume of final extract (mL) |
| Vo | 1.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | FINAL ( UG/L) |
|---|---|---|---|---|---|---|
| 2 alpha-BHC | 4.840 | 4.840 | 0.000 | 195856158 | 56.1225 | 56 |
| 3 gamma-BHC (Lindane) | 5.204 | 5.203 | 0.001 | 166464192 | 56.6127 | 57 |
| 6 beta-BHC | 5.277 | 5.278 | -0.001 | 69558053 | 56.1490 | 56 |
| 4 Heptachlor | 5.554 | 5.553 | 0.001 | 141898456 | 56.0867 | 56 |
| 7 delta-BHC | 5.590 | 5.590 | 0.000 | 166682928 | 57.3024 | 57 |
| 5 Aldrin | 5.838 | 5.839 | -0.001 | 144016181 | 57.7707 | 58 |
| 8 Heptachlor epoxide | 6.287 | 6.288 | -0.001 | 123298702 | 55.9758 | 56 |
| 10 gamma-Chlordane | 6.441 | 6.441 | 0.000 | 128784845 | 54.7055 | 55 |
| 11 alpha-Chlordane | 6.562 | 6.564 | -0.002 | 127014434 | 59.0665 | 59 |
| 9 Endosulfan I | 6.578 | 6.576 | 0.002 | 106315246 | 53.5300 | 54 |
| 12 4,4'-DDE | 6.727 | 6.728 | -0.001 | 129023952 | 55.2473 | 55 |
| 13 Dieldrin | 6.810 | 6.810 | 0.000 | 129422429 | 56.8553 | 57 |
| 14 Endrin | 7.073 | 7.073 | 0.000 | 110816905 | 55.4061 | 55(M2) |

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a010.d
Report Date: 22-Oct-2013 10:55

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | FINAL ( UG/L) |
|---|---|---|---|---|---|---|
| 15 4,4'-DDD | 7.143 | 7.144 | -0.001 | 105976920 | 55.6227 | 56(M2) |
| 16 Endosulfan II | 7.208 | 7.209 | -0.001 | 105671573 | 54.3925 | 54(M2) |
| 17 4,4'-DDT | 7.379 | 7.380 | -0.001 | 98008647 | 54.4465 | 54(M2) |
| 18 Endrin aldehyde | 7.431 | 7.431 | 0.000 | 79891987 | 50.7016 | 51(M2) |
| 20 Endosulfan sulfate | 7.552 | 7.552 | 0.000 | 103235759 | 55.9548 | 56(M2) |
| 19 Methoxychlor | 7.955 | 7.960 | -0.005 | 47065557 | 54.4590 | 54 |
| 21 Endrin ketone | 8.080 | 8.081 | -0.001 | 109527345 | 53.8388 | 54 |

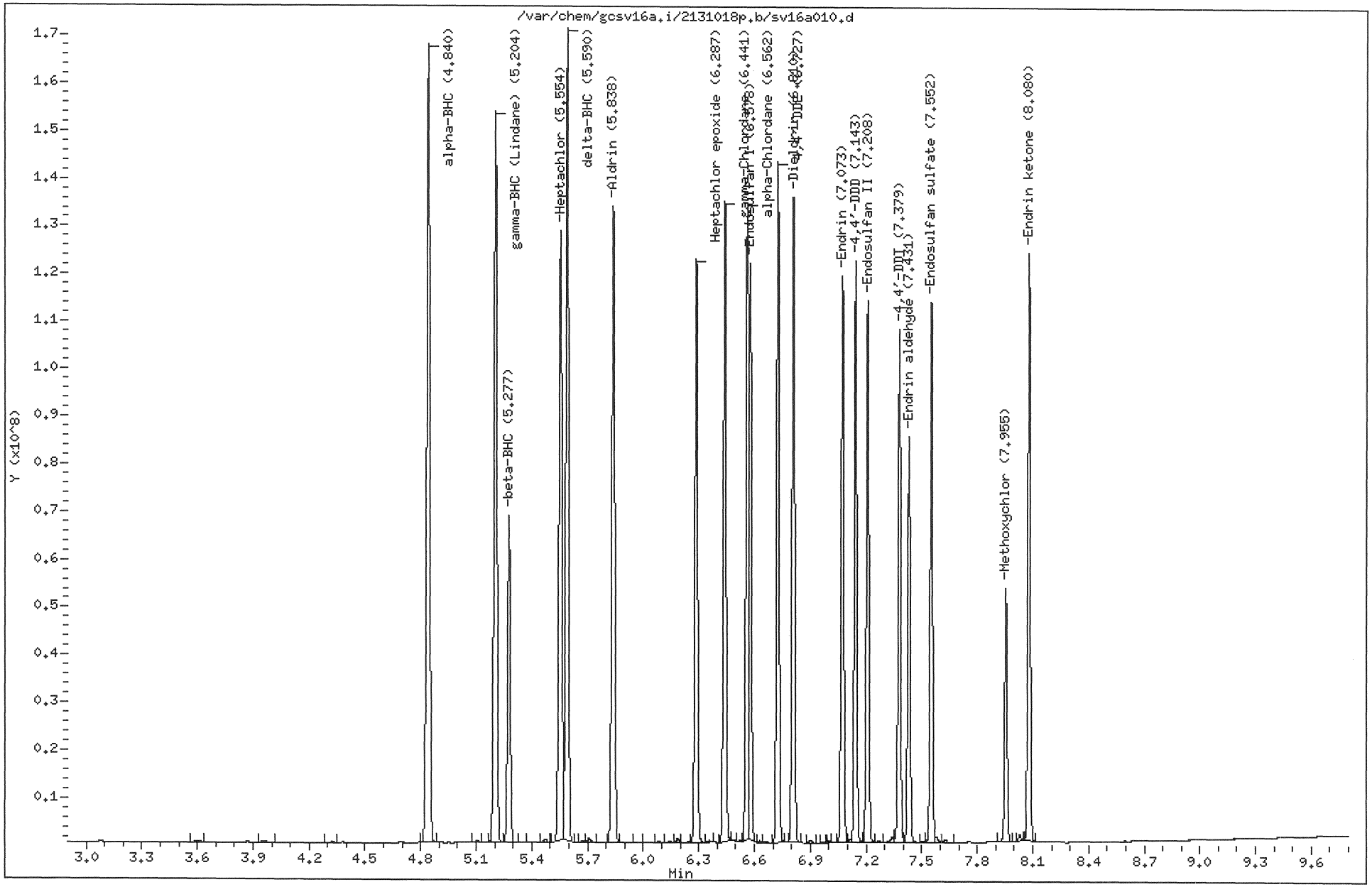
QC Flag Legend

M2- Compound response manually integrated because Target system integrated incorrectly.

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a010.d
Date : 18-OCT-2013 16:50
Client ID:
Sample Info: 1600*1 84-51-8
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv16a.i

Operator: tls
Column diameter: 0.32

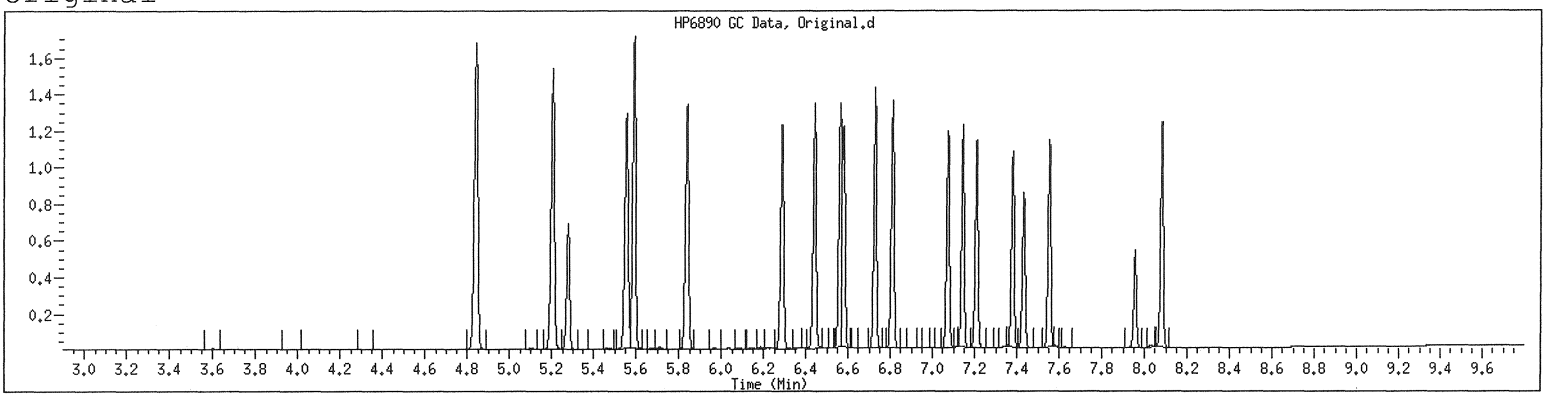



2131018 685

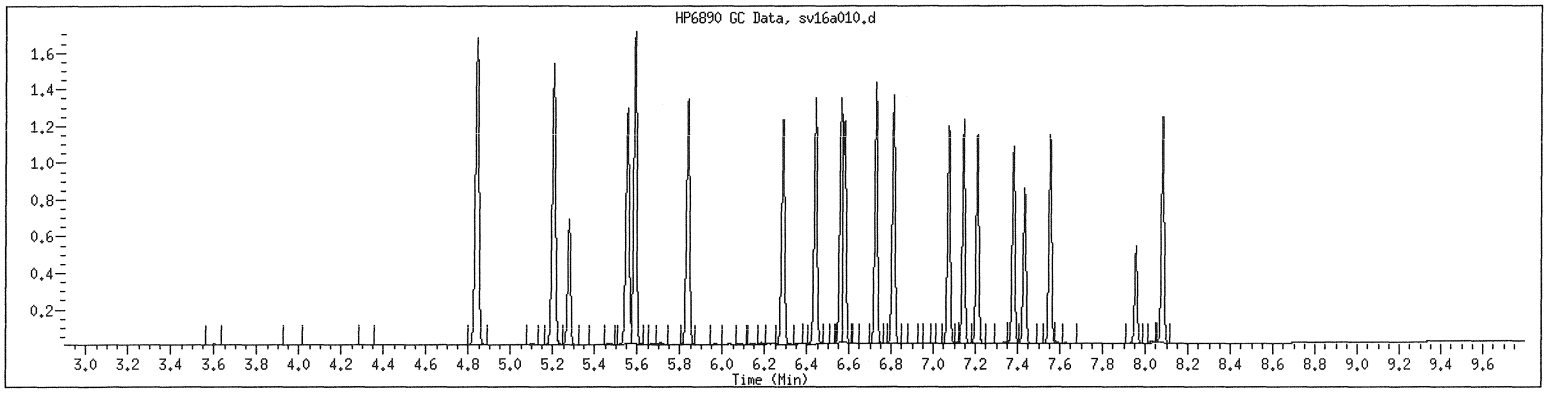
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1600 | SampleType | : LCS |
| Injection Date | : 10/18/2013 16:50 | Instrument | : gcsv16a.i |
| Operator | : tls | | |
| Sample Info | : 1600*1 84-51-8 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : 8081 |

Original




Final



Data File: /var/chem/gcsv16a.i/2131025.b/sv16a002.d
Report Date: 25-Oct-2013 10:24

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131025.b/sv16a002.d
Lab Smp Id: deg
Inj Date : 25-OCT-2013 09:33
Operator : tls Inst ID: gcsv16a.i
Smp Info : deg*1 93-1-6
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131025.b/pest35ms.m
Meth Date : 25-Oct-2013 10:23 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:37 Cal File: sv16a034.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: deg.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | FINAL ( UG/L) |
|---|---|---|---|---|---|---|
| 12 4,4'-DDE | 6.714 | 6.728 | -0.014 | 710684 | 0.30431 | 0.0030 |
| 15 4,4'-DDD | 7.131 | 7.144 | -0.013 | 1702678 | 0.89366 | 0.0089 |
| 17 4,4'-DDT | 7.368 | 7.380 | -0.012 | 140763328 | 78.1980 | 0.78 |
| 18 Endrin aldehyde | 7.422 | 7.431 | -0.009 | 999177 | 0.63410 | 0.0063 |
| 21 Endrin ketone | 8.066 | 8.081 | -0.015 | 2787345 | 1.37014 | 0.014 |
| 14 Endrin | 7.062 | 7.073 | -0.011 | 148783750 | 74.3888 | 0.74 |

Gulf Coast Analytical Laboratories, Inc.

Breakdown Calculation

DDT Breakdown: Formula

$$\frac{(\text{Area DDD}) + (\text{Area DDE})}{(\text{Area DDD}) + (\text{Area DDE}) + (\text{Area DDT})} \times 100$$

DDT Breakdown: Calculation

$$\frac{1702678 + 710684}{1702678 + 710684 + 140763328} \times 100 = 1.7\ \%$$

DDT Breakdown: Criteria

< 15%

==========

Endrin Breakdown: Formula

$$\frac{(\text{Area Endrin ketone}) + (\text{Area Endrin aldehyde})}{(\text{Area End ket}) + (\text{Area End ald}) + (\text{Area Endrin})} \times 100$$

Endrin Breakdown: Calculation

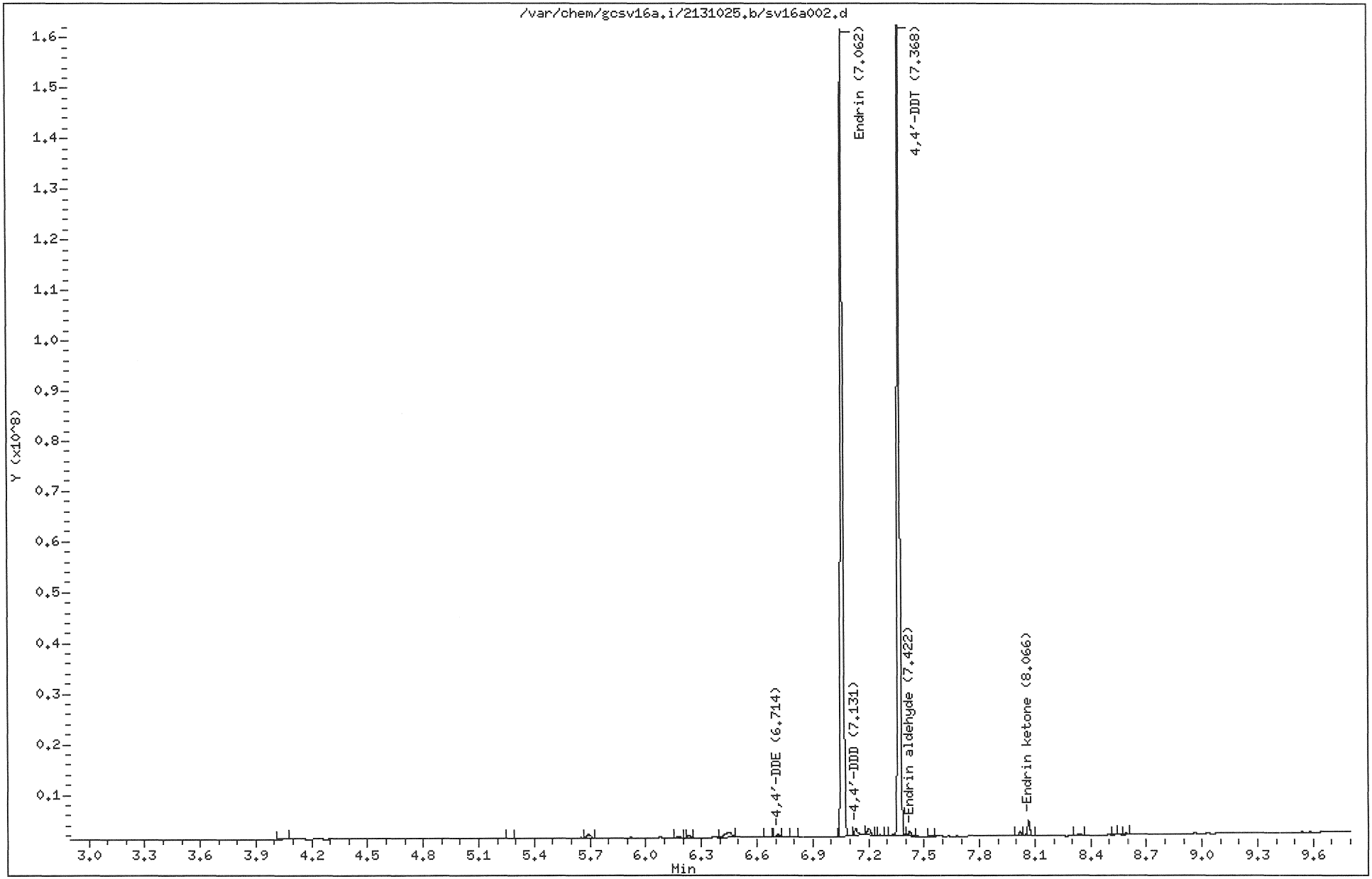
$$\frac{2787345 + 999177}{2787345 + 999177 + 148783750} \times 100 = 2.5\ \%$$

Endrin Breakdown: Criteria

< 15%

Data File: /var/chem/gcsv16a.i/2131025.b/sv16a002.d
Date : 25-OCT-2013 09:33
Client ID:
Sample Info: deg*1 93-1-6
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv16a.i
Operator: tls
Column diameter: 0.32

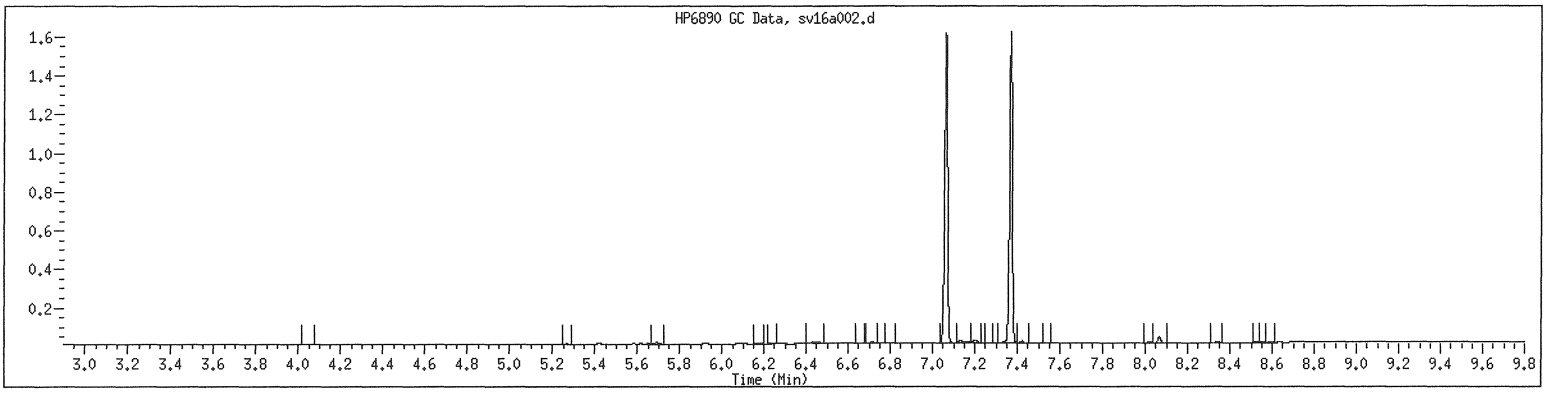



2131101712 689

Report Date: 10/25/2013 10:24

MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : deg | SampleType | : SAMPLE |
| Injection Date | : 10/25/2013 09:33 | Instrument | : gcsv16a.i |
| Operator | : tls | | |
| Sample Info | : deg*1 93-1-6 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv16a.i/2131025.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : deg |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv16a.i/2131025.b/sv16a003.d
Report Date: 27-Oct-2013 14:16

GCAL, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcsv16a.i  Injection Date: 25-OCT-2013 09:48
Lab File ID: sv16a003.d  Init. Cal. Date(s): 18-OCT-2013  18-OCT-2013
Analysis Type: WATER  Init. Cal. Times: 15:09  22:37
Lab Sample ID: 1400  Quant Type: ESTD
Method: /var/chem/gcsv16a.i/2131025.b/pest35ms.m

| COMPOUND | RRF / AMOUNT | RF60 | MIN RRF | %D / %DRIFT | MAX %D / %DRIFT | CURVE TYPE |
|---|---|---|---|---|---|---|
| $ 1 Tetrachloro-m-xylene | 2545669 | 2310098 | 0.010 | 9.25379 | 20.00000 | Averaged |
| 2 alpha-BHC | 3489798 | 3211842 | 0.010 | 7.96480 | 20.00000 | Averaged |
| 3 gamma-BHC (Lindane) | 2940406 | 2720124 | 0.010 | 7.49154 | 20.00000 | Averaged |
| 6 beta-BHC | 1238811 | 1105427 | 0.010 | 10.76708 | 20.00000 | Averaged |
| 4 Heptachlor | 2529984 | 2461751 | 0.010 | 2.69697 | 20.00000 | Averaged |
| 7 delta-BHC | 2908831 | 2701857 | 0.010 | 7.11537 | 20.00000 | Averaged |
| 5 Aldrin | 2492893 | 2297646 | 0.010 | 7.83216 | 20.00000 | Averaged |
| 8 Heptachlor epoxide | 2202716 | 2016907 | 0.010 | 8.43541 | 20.00000 | Averaged |
| 10 gamma-Chlordane | 2354148 | 2393259 | 0.010 | -1.66139 | 20.00000 | Averaged |
| 11 alpha-Chlordane | 2150362 | 1833717 | 0.010 | 14.72518 | 20.00000 | Averaged |
| 9 Endosulfan I | 1986087 | 2041965 | 0.010 | -2.81347 | 20.00000 | Averaged |
| 12 4,4'-DDE | 2335391 | 2180568 | 0.010 | 6.62943 | 20.00000 | Averaged |
| 13 Dieldrin | 2276346 | 2151547 | 0.010 | 5.48242 | 20.00000 | Averaged |
| 14 Endrin | 2000084 | 1862168 | 0.010 | 6.89548 | 20.00000 | Averaged |
| 15 4,4'-DDD | 1905281 | 1782133 | 0.010 | 6.46355 | 20.00000 | Averaged |
| 16 Endosulfan II | 1942760 | 1804017 | 0.010 | 7.14153 | 20.00000 | Averaged |
| 17 4,4'-DDT | 1800089 | 1750777 | 0.010 | 2.73947 | 20.00000 | Averaged |
| 18 Endrin aldehyde | 1575729 | 1473138 | 0.010 | 6.51067 | 20.00000 | Averaged |
| 20 Endosulfan sulfate | 1844983 | 1711891 | 0.010 | 7.21372 | 20.00000 | Averaged |
| 19 Methoxychlor | 864238 | 929195 | 0.010 | -7.51611 | 20.00000 | Averaged |
| 21 Endrin ketone | 2034359 | 1960410 | 0.010 | 3.63499 | 20.00000 | Averaged |
| $ 22 Decachlorobiphenyl | 1484113 | 1341609 | 0.010 | 9.60192 | 20.00000 | Averaged |

Average %D / Drift Results.

Calculated Average %D/Drift = 6.84484
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

Data File: /var/chem/gcsv16a.i/2131025.b/sv16a003.d
Report Date: 27-Oct-2013 14:16

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131025.b/sv16a003.d
Lab Smp Id: 1400
Inj Date : 25-OCT-2013 09:48
Operator : tls Inst ID: gcsv16a.i
Smp Info : 1400*1 93-1-11
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131025.b/pest35ms.m
Meth Date : 27-Oct-2013 14:16 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:37 Cal File: sv16a034.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8081.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

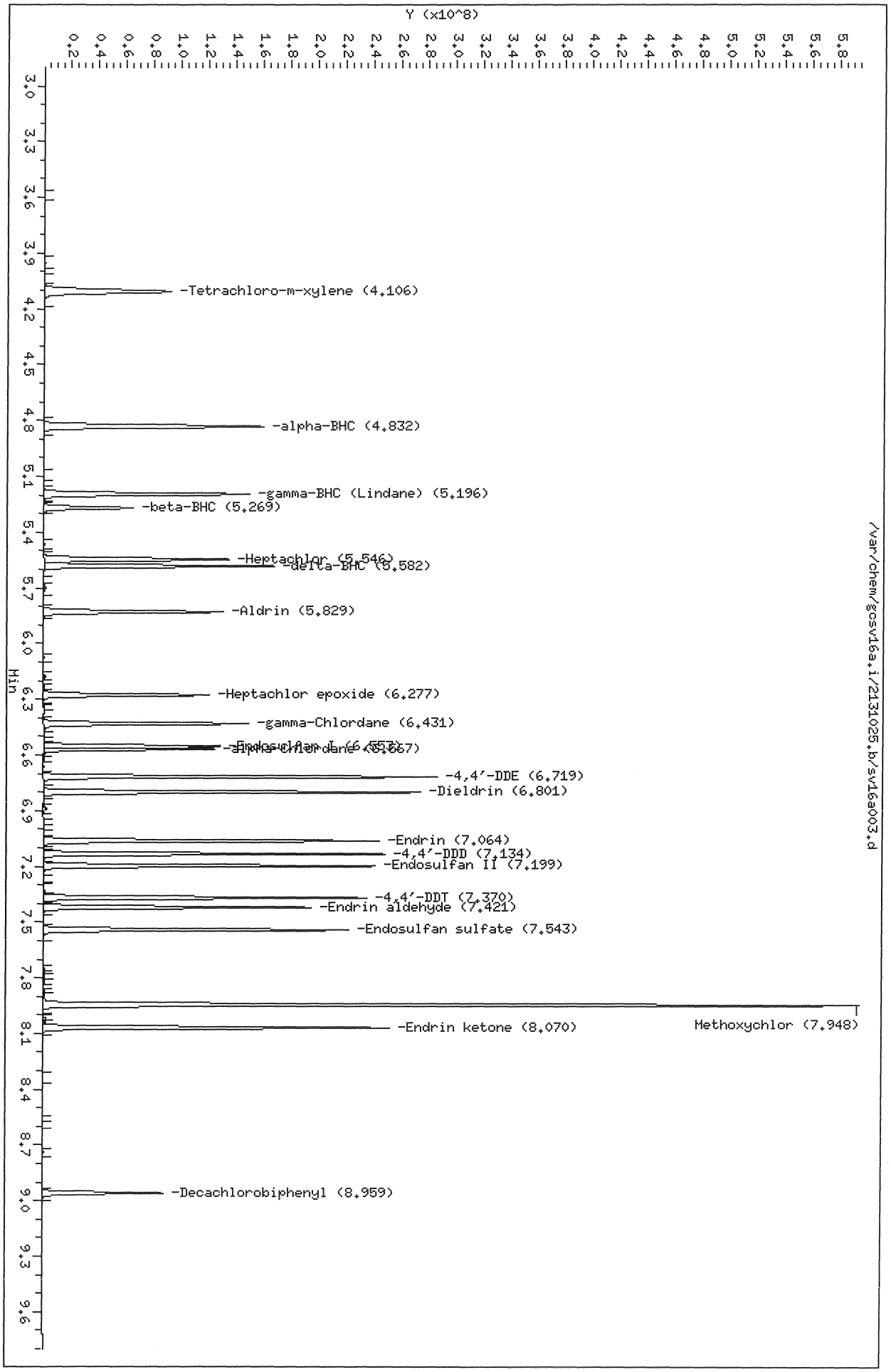
| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| $ 1 Tetrachloro-m-xylene | 4.106 | 4.112 | -0.006 | 138605902 | 60.0000 | 54 |
| 2 alpha-BHC | 4.832 | 4.840 | -0.008 | 192710541 | 60.0000 | 55 |
| 3 gamma-BHC (Lindane) | 5.196 | 5.203 | -0.007 | 163207467 | 60.0000 | 56 |
| 6 beta-BHC | 5.269 | 5.278 | -0.009 | 66325644 | 60.0000 | 54 |
| 4 Heptachlor | 5.546 | 5.553 | -0.007 | 147705060 | 60.0000 | 58 |
| 7 delta-BHC | 5.582 | 5.590 | -0.008 | 162111410 | 60.0000 | 56 |
| 5 Aldrin | 5.829 | 5.839 | -0.010 | 137858759 | 60.0000 | 55 |
| 8 Heptachlor epoxide | 6.277 | 6.288 | -0.011 | 121014448 | 60.0000 | 55 |
| 10 gamma-Chlordane | 6.431 | 6.441 | -0.010 | 143595562 | 60.0000 | 61 |
| 11 alpha-Chlordane | 6.567 | 6.564 | 0.003 | 110023014 | 60.0000 | 51 |
| 9 Endosulfan I | 6.553 | 6.576 | -0.023 | 122517875 | 60.0000 | 62 |
| 12 4,4'-DDE | 6.719 | 6.728 | -0.009 | 261668108 | 120.000 | 110 |
| 13 Dieldrin | 6.801 | 6.810 | -0.009 | 258185630 | 120.000 | 110 |

Data File: /var/chem/gcsv16a.i/2131025.b/sv16a003.d
Report Date: 27-Oct-2013 14:16

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| 14 Endrin | 7.064 | 7.073 | -0.009 | 223460197 | 120.000 | 110 |
| 15 4,4'-DDD | 7.134 | 7.144 | -0.010 | 213855911 | 120.000 | 110 |
| 16 Endosulfan II | 7.199 | 7.209 | -0.010 | 216482099 | 120.000 | 110 |
| 17 4,4'-DDT | 7.370 | 7.380 | -0.010 | 210093183 | 120.000 | 120 |
| 18 Endrin aldehyde | 7.421 | 7.431 | -0.010 | 176776615 | 120.000 | 110 |
| 20 Endosulfan sulfate | 7.543 | 7.552 | -0.009 | 205426957 | 120.000 | 110 |
| 19 Methoxychlor | 7.948 | 7.960 | -0.012 | 557516828 | 600.000 | 650 |
| 21 Endrin ketone | 8.070 | 8.081 | -0.011 | 235249185 | 120.000 | 120 |
| $ 22 Decachlorobiphenyl | 8.959 | 8.971 | -0.012 | 80496555 | 60.0000 | 54 |

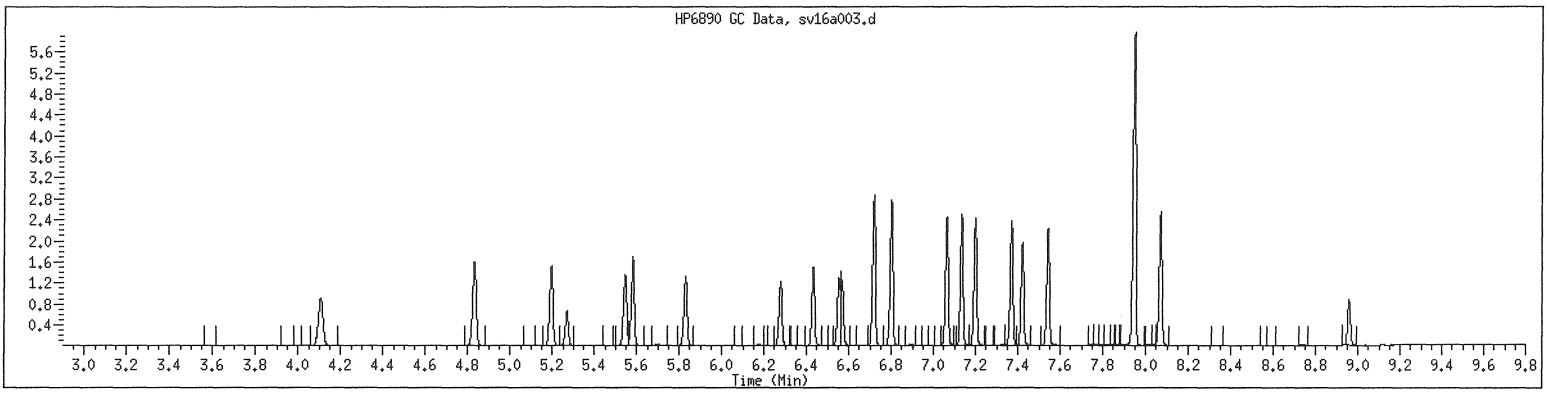
Data File: /var/chem/gcsv16a.i/2131025.b/sv16a003.d
Date : 25-OCT-2013 09:48
Client ID:
Sample Info: 1400x1 93-1-11
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv16a.i
Operator: tls
Column diameter: 0.32



# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1400 | SampleType | : CCALIB_3 |
| Injection Date | : 10/25/2013 09:48 | Instrument | : gcsv16a.i |
| Operator | : tls | | |
| Sample Info | : 1400*1 93-1-11 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv16a.i/2131025.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : 8081 |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv16a.i/2131025.b/sv16a010.d
Report Date: 27-Oct-2013 14:17

GCAL, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcsv16a.i  Injection Date: 25-OCT-2013 12:47
Lab File ID: sv16a010.d  Init. Cal. Date(s): 18-OCT-2013  18-OCT-2013
Analysis Type: WATER  Init. Cal. Times: 15:09  22:37
Lab Sample ID: 1400  Quant Type: ESTD
Method: /var/chem/gcsv16a.i/2131025.b/pest35ms.m

| COMPOUND | RRF / AMOUNT | RF60 | MIN RRF | %D / %DRIFT | MAX %D / %DRIFT | CURVE TYPE |
|---|---|---|---|---|---|---|
| $ 1 Tetrachloro-m-xylene | 2545669 | 2271859 | 0.010 | 10.75593 | 20.00000 | Averaged |
| 2 alpha-BHC | 3489798 | 3183726 | 0.010 | 8.77046 | 20.00000 | Averaged |
| 3 gamma-BHC (Lindane) | 2940406 | 2686288 | 0.010 | 8.64227 | 20.00000 | Averaged |
| 6 beta-BHC | 1238811 | 1087073 | 0.010 | 12.24872 | 20.00000 | Averaged |
| 4 Heptachlor | 2529984 | 2468206 | 0.010 | 2.44183 | 20.00000 | Averaged |
| 7 delta-BHC | 2908831 | 2685081 | 0.010 | 7.69207 | 20.00000 | Averaged |
| 5 Aldrin | 2492893 | 2262528 | 0.010 | 9.24089 | 20.00000 | Averaged |
| 8 Heptachlor epoxide | 2202716 | 1981215 | 0.010 | 10.05578 | 20.00000 | Averaged |
| 10 gamma-Chlordane | 2354148 | 2277029 | 0.010 | 3.27588 | 20.00000 | Averaged |
| 11 alpha-Chlordane | 2150362 | 1855094 | 0.010 | 13.73106 | 20.00000 | Averaged |
| 9 Endosulfan I | 1986087 | 1891230 | 0.010 | 4.77608 | 20.00000 | Averaged |
| 12 4,4'-DDE | 2335391 | 2115390 | 0.010 | 9.42029 | 20.00000 | Averaged |
| 13 Dieldrin | 2276346 | 2106234 | 0.010 | 7.47302 | 20.00000 | Averaged |
| 14 Endrin | 2000084 | 1875810 | 0.010 | 6.21342 | 20.00000 | Averaged |
| 15 4,4'-DDD | 1905281 | 1717359 | 0.010 | 9.86322 | 20.00000 | Averaged |
| 16 Endosulfan II | 1942760 | 1771495 | 0.010 | 8.81555 | 20.00000 | Averaged |
| 17 4,4'-DDT | 1800089 | 1752094 | 0.010 | 2.66627 | 20.00000 | Averaged |
| 18 Endrin aldehyde | 1575729 | 1431976 | 0.010 | 9.12293 | 20.00000 | Averaged |
| 20 Endosulfan sulfate | 1844983 | 1665658 | 0.010 | 9.71961 | 20.00000 | Averaged |
| 19 Methoxychlor | 864238 | 986225 | 0.010 | -14.11503 | 20.00000 | Averaged |
| 21 Endrin ketone | 2034359 | 1953282 | 0.010 | 3.98539 | 20.00000 | Averaged |
| $ 22 Decachlorobiphenyl | 1484113 | 1263207 | 0.010 | 14.88468 | 20.00000 | Averaged |

Average %D / Drift Results.

Calculated Average %D/Drift = 8.54138
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

Data File: /var/chem/gcsv16a.i/2131025.b/sv16a010.d
Report Date: 27-Oct-2013 14:17

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131025.b/sv16a010.d
Lab Smp Id: 1400
Inj Date : 25-OCT-2013 12:47
Operator : tls Inst ID: gcsv16a.i
Smp Info : 1400*1 93-1-11
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131025.b/pest35ms.m
Meth Date : 27-Oct-2013 14:17 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:37 Cal File: sv16a034.d
Als bottle: 10 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8081.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

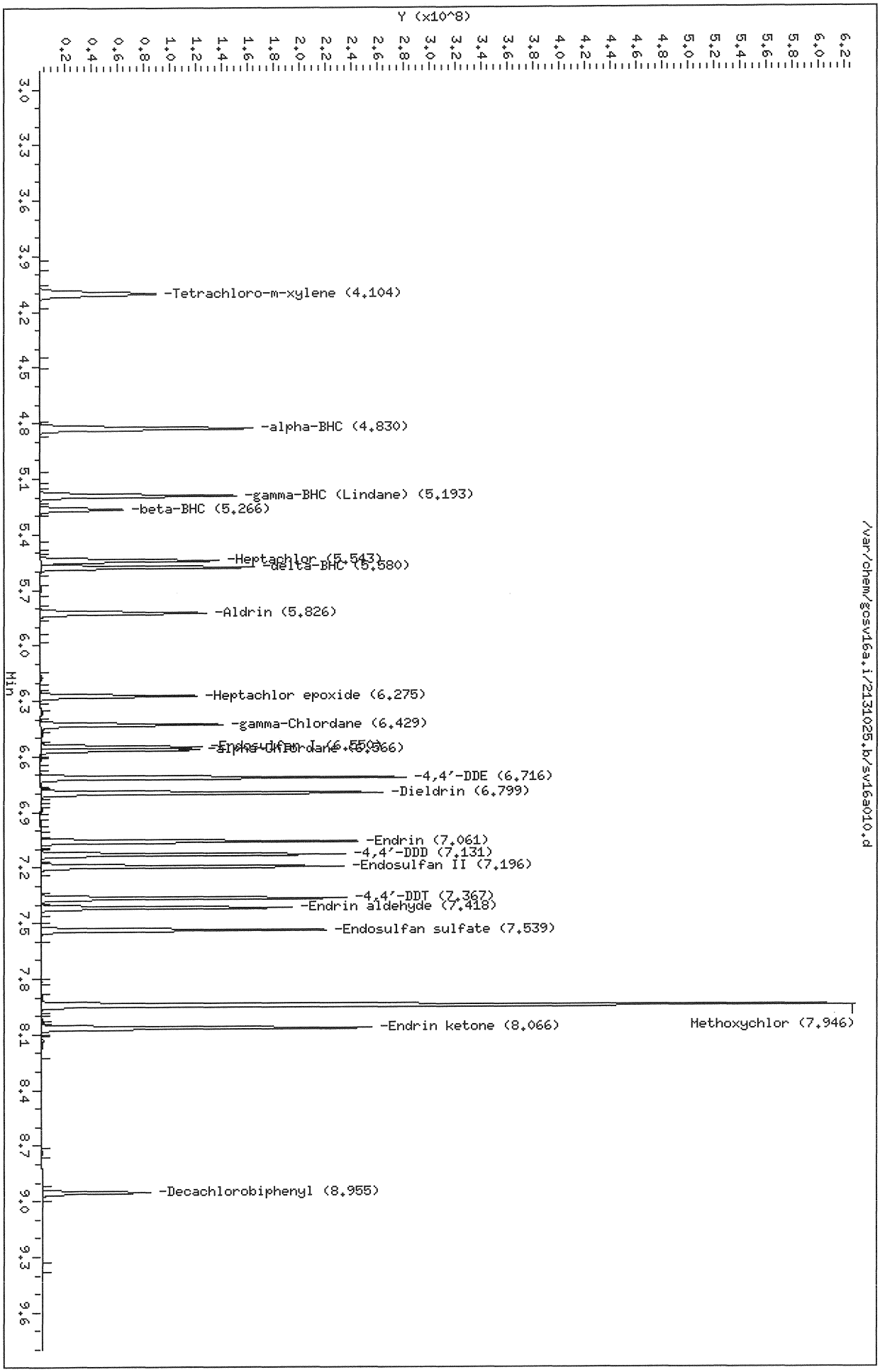
| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| $ 1 Tetrachloro-m-xylene | 4.104 | 4.112 | -0.008 | 136311524 | 60.0000 | 54 |
| 2 alpha-BHC | 4.830 | 4.840 | -0.010 | 191023576 | 60.0000 | 55 |
| 3 gamma-BHC (Lindane) | 5.193 | 5.203 | -0.010 | 161177299 | 60.0000 | 55 |
| 6 beta-BHC | 5.266 | 5.278 | -0.012 | 65224359 | 60.0000 | 53 |
| 4 Heptachlor | 5.543 | 5.553 | -0.010 | 148092372 | 60.0000 | 59 |
| 7 delta-BHC | 5.580 | 5.590 | -0.010 | 161104889 | 60.0000 | 55 |
| 5 Aldrin | 5.826 | 5.839 | -0.013 | 135751669 | 60.0000 | 54 |
| 8 Heptachlor epoxide | 6.275 | 6.288 | -0.013 | 118872921 | 60.0000 | 54 |
| 10 gamma-Chlordane | 6.429 | 6.441 | -0.012 | 136621724 | 60.0000 | 58 |
| 11 alpha-Chlordane | 6.566 | 6.564 | 0.002 | 111305653 | 60.0000 | 52 |
| 9 Endosulfan I | 6.550 | 6.576 | -0.026 | 113473773 | 60.0000 | 57 |
| 12 4,4'-DDE | 6.716 | 6.728 | -0.012 | 253846795 | 120.000 | 110 |
| 13 Dieldrin | 6.799 | 6.810 | -0.011 | 252748094 | 120.000 | 110 |

Data File: /var/chem/gcsv16a.i/2131025.b/sv16a010.d
Report Date: 27-Oct-2013 14:17

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| 14 Endrin | 7.061 | 7.073 | -0.012 | 225097191 | 120.000 | 110 |
| 15 4,4'-DDD | 7.131 | 7.144 | -0.013 | 206083127 | 120.000 | 110 |
| 16 Endosulfan II | 7.196 | 7.209 | -0.013 | 212579427 | 120.000 | 110 |
| 17 4,4'-DDT | 7.367 | 7.380 | -0.013 | 210251311 | 120.000 | 120 |
| 18 Endrin aldehyde | 7.418 | 7.431 | -0.013 | 171837149 | 120.000 | 110 |
| 20 Endosulfan sulfate | 7.539 | 7.552 | -0.013 | 199878976 | 120.000 | 110 |
| 19 Methoxychlor | 7.946 | 7.960 | -0.014 | 591735074 | 600.000 | 680 |
| 21 Endrin ketone | 8.066 | 8.081 | -0.015 | 234393783 | 120.000 | 120 |
| $ 22 Decachlorobiphenyl | 8.955 | 8.971 | -0.016 | 75792432 | 60.0000 | 51 |

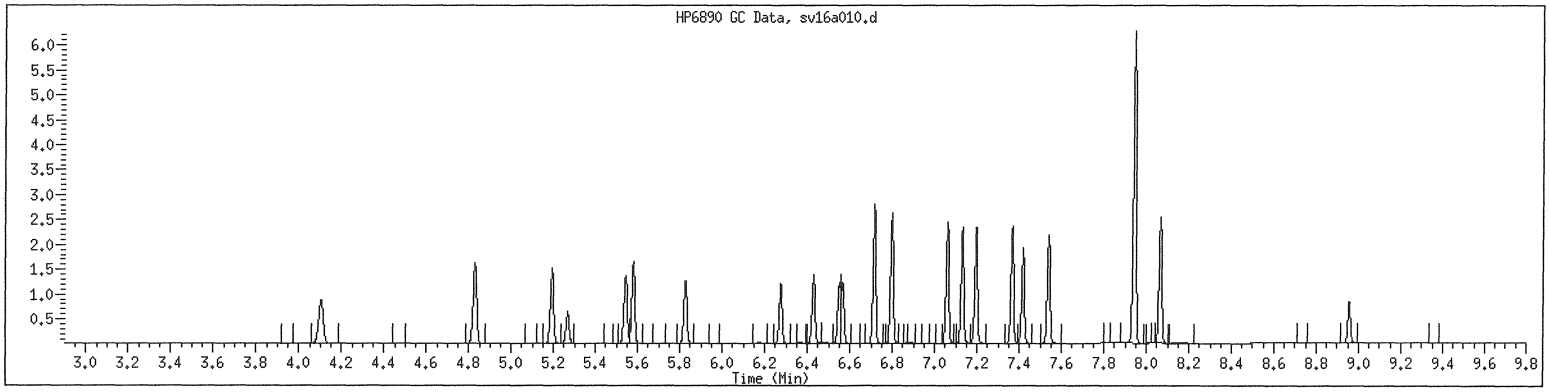
Data File: /var/chem/gcsv16a.i/2131025.b/sv16a010.d
Date : 25-OCT-2013 12:47
Client ID:
Sample Info: 1400x1 93-1-11
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv16a.i
Operator: tls
Column diameter: 0.32



# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1400 | SampleType | : CCALIB_3 |
| Injection Date | : 10/25/2013 12:47 | Instrument | : gcsv16a.i |
| Operator | : tls | | |
| Sample Info | : 1400*1 93-1-11 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv16a.i/2131025.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : 8081 |




NO MANUAL INTEGRATIONS

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: RTX-35MS-3 ID: .25 (mm)

Concentrated Extract Volume: 10000 ( µL )

Soil Aliquot Volume: ( µL )

Injection Volume: 1 ( µL )

GPC Cleanup: (Y/N) N pH:

Prep Batch: 518148 Analytical Batch: 518386

*CONCENTRATION UNITS: ug/kg*

Sample ID: MB1245513

Contract:

SAS No.: SDG No.: 213101712

Lab Sample ID: 1245513

Date Collected: Time:

Date Received:

Date Extracted: 10/22/13

Date Analyzed: 10/22/13 Time: 1651

Dilution Factor: 1 Analyst: TLS

Prep Method: 3550B

Analytical Method: SW-846 8081B

Sulfur Cleanup: (Y/N) N Instrument ID: GCS18A

Lab File ID: 2131022p/sv18a009

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 319-84-6 | alpha-BHC | 1.00 | U | 0.830 | 1.00 | 1.67 |
| 319-85-7 | beta-BHC | 1.00 | U | 0.830 | 1.00 | 1.67 |
| 319-86-8 | delta-BHC | 1.00 | U | 0.830 | 1.00 | 1.67 |
| 1024-57-3 | Heptachlor epoxide | 1.00 | U | 0.830 | 1.00 | 1.67 |
| 959-98-8 | Endosulfan I | 1.00 | U | 0.830 | 1.00 | 1.67 |
| 72-55-9 | 4,4'-DDE | 1.00 | U | 0.830 | 1.00 | 3.33 |
| 33213-65-9 | Endosulfan II | 1.00 | U | 0.830 | 1.00 | 3.33 |
| 72-54-8 | 4,4'-DDD | 1.00 | U | 0.830 | 1.00 | 3.33 |
| 1031-07-8 | Endosulfan sulfate | 1.00 | U | 0.830 | 1.00 | 3.33 |
| 72-43-5 | Methoxychlor | 1.00 | U | 0.830 | 1.00 | 1.67 |
| 53494-70-5 | Endrin ketone | 1.00 | U | 0.830 | 1.00 | 3.33 |
| 7421-93-4 | Endrin aldehyde | 1.00 | U | 0.830 | 1.00 | 3.33 |
| 5103-71-9 | alpha-Chlordane | 1.00 | U | 0.830 | 1.00 | 1.67 |
| 5103-74-2 | gamma-Chlordane | 1.00 | U | 0.830 | 1.00 | 1.67 |
| 8001-35-2 | Toxaphene | 5.00 | U | 4.17 | 5.00 | 8.33 |
| 58-89-9 | gamma-BHC (Lindane) | 1.00 | U | 0.830 | 1.00 | 1.67 |
| 76-44-8 | Heptachlor | 1.00 | U | 0.830 | 1.00 | 1.67 |
| 309-00-2 | Aldrin | 1.00 | U | 0.830 | 1.00 | 1.67 |
| 60-57-1 | Dieldrin | 1.00 | U | 0.830 | 1.00 | 3.33 |
| 72-20-8 | Endrin | 1.00 | U | 0.830 | 1.00 | 3.33 |
| 50-29-3 | 4,4'-DDT | 1.00 | U | 0.830 | 1.00 | 3.33 |

FORM I ORG-1

Data File: /var/chem/gcsv18a.i/2131022p.b/sv18a009.d
Report Date: 23-Oct-2013 16:38

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131022p.b/sv18a009.d
Lab Smp Id: 1245513
Inj Date : 22-OCT-2013 16:51
Operator : tls Inst ID: gcsv18a.i
Smp Info : 1245513*1 mb s
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131022p.b/pest35ms.m
Meth Date : 23-Oct-2013 16:38 dlb Quant Type: ESTD
Cal Date : 18-OCT-2013 22:14 Cal File: sv18a034.d
Als bottle: 9
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pest.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

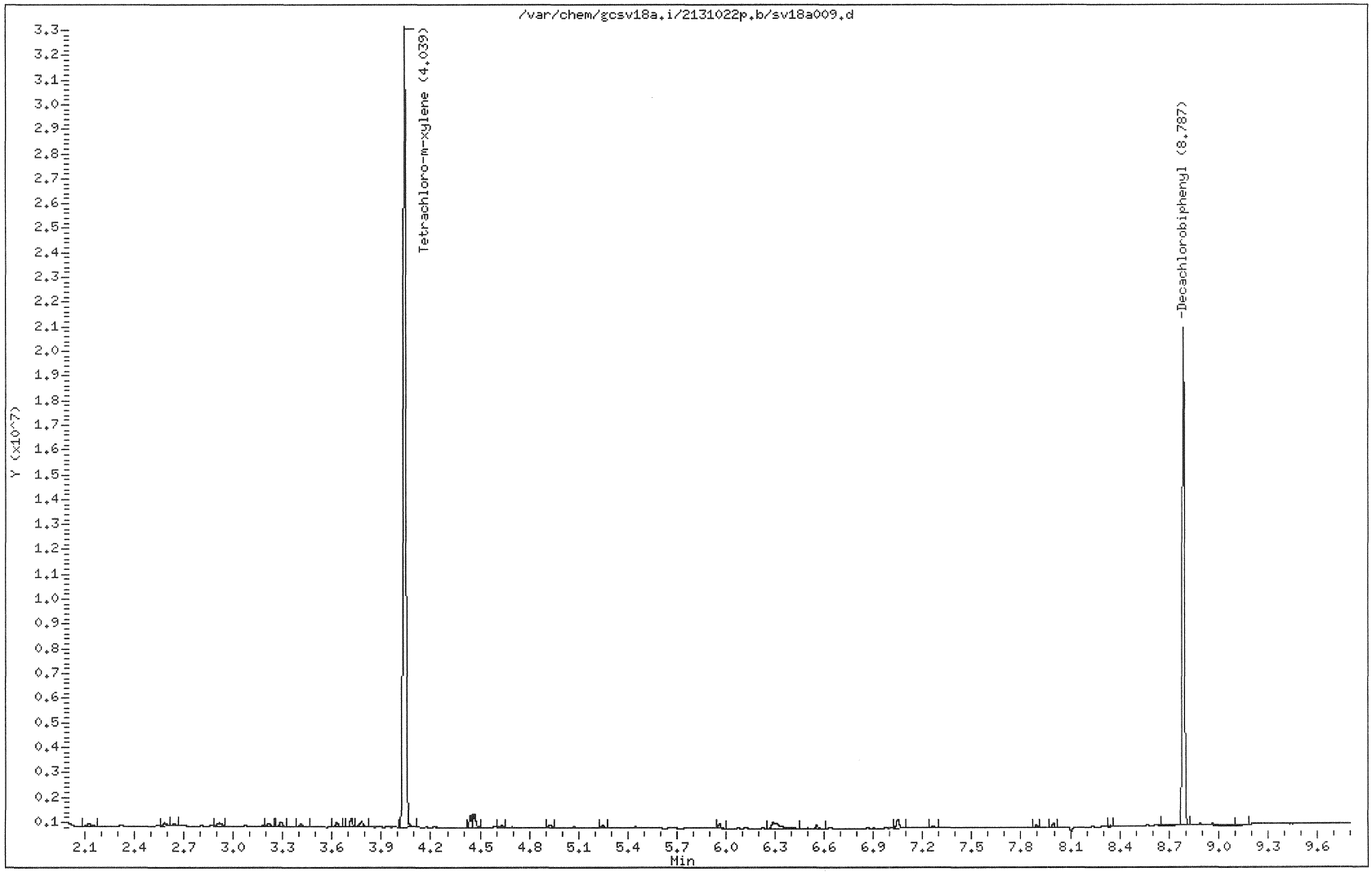
| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | FINAL (UG/KG) |
|---|---|---|---|---|---|---|
| $ 1 Tetrachloro-m-xylene | 4.039 | 4.039 | 0.000 | 36000492 | 48.2000 | 16 |
| $ 22 Decachlorobiphenyl | 8.787 | 8.791 | -0.004 | 18521679 | 42.5384 | 14 |

Data File: /var/chem/gcsv18a.i/2131022p.b/sv18a009.d
Date : 22-OCT-2013 16:51
Client ID:
Sample Info: 1245513*1 mb s
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv18a.i
Operator: tls
Column diameter: 0.32

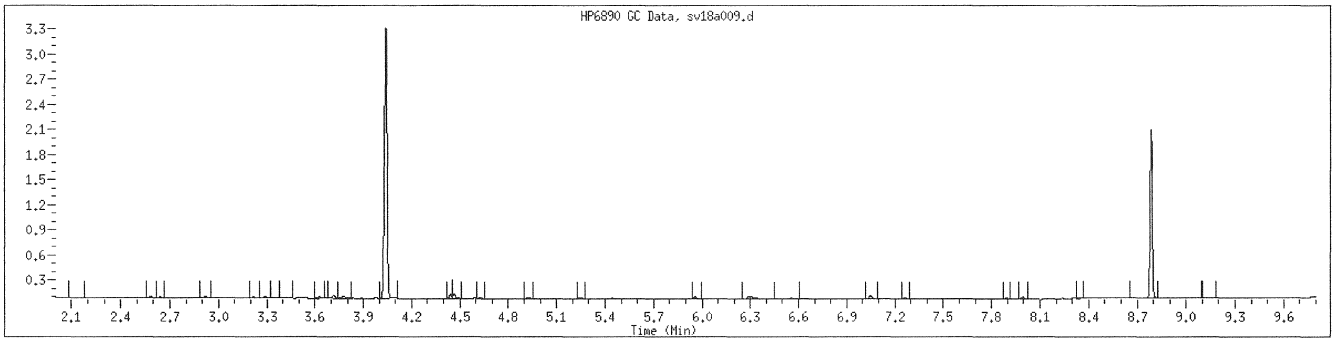



2131017172 703

Data file : /var/chem/gcsv18a.i/2131022p.b/sv18a009.d Page: 1
Report Date: 10/23/2013 16:38

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 1245513 SampleType : SAMPLE
Injection Date: 10/22/2013 16:51 Instrument : gcsv18a.i
Operator : tls
Sample Info : 1245513*1 mb s
Misc Info :
Method : /var/chem/gcsv18a.i/2131022p.b/pest35ms.m
Dilution : 1.0
Matrix : SOIL
Integrator : Falcon Compound Sublist: pest




NO MANUAL INTEGRATIONS

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: RTX-35MS-3 ID: .25 (mm)

Concentrated Extract Volume: 10000 ( µL )

Soil Aliquot Volume: ( µL )

Injection Volume: 1 ( µL )

GPC Cleanup: (Y/N) N pH:

Prep Batch: 518148 Analytical Batch: 518386

*CONCENTRATION UNITS: ug/kg*

Sample ID: LCS1245514

Contract:

SAS No.: SDG No.: 213101712

Lab Sample ID: 1245514

Date Collected: Time:

Date Received:

Date Extracted: 10/22/13

Date Analyzed: 10/22/13 Time: 1705

Dilution Factor: 1 Analyst: TLS

Prep Method: 3550B

Analytical Method: SW-846 8081B

Sulfur Cleanup: (Y/N) N Instrument ID: GCS18A

Lab File ID: 2131022p/sv18a010

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 319-84-6 | alpha-BHC | 18.2 | | 0.830 | 1.00 | 1.67 |
| 319-85-7 | beta-BHC | 19.3 | | 0.830 | 1.00 | 1.67 |
| 319-86-8 | delta-BHC | 14.6 | | 0.830 | 1.00 | 1.67 |
| 1024-57-3 | Heptachlor epoxide | 20.1 | | 0.830 | 1.00 | 1.67 |
| 959-98-8 | Endosulfan I | 20.5 | | 0.830 | 1.00 | 1.67 |
| 72-55-9 | 4,4'-DDE | 21.0 | | 0.830 | 1.00 | 3.33 |
| 33213-65-9 | Endosulfan II | 20.4 | | 0.830 | 1.00 | 3.33 |
| 72-54-8 | 4,4'-DDD | 20.3 | | 0.830 | 1.00 | 3.33 |
| 1031-07-8 | Endosulfan sulfate | 18.6 | | 0.830 | 1.00 | 3.33 |
| 72-43-5 | Methoxychlor | 20.0 | | 0.830 | 1.00 | 1.67 |
| 53494-70-5 | Endrin ketone | 18.8 | | 0.830 | 1.00 | 3.33 |
| 7421-93-4 | Endrin aldehyde | 18.8 | | 0.830 | 1.00 | 3.33 |
| 5103-71-9 | alpha-Chlordane | 19.4 | | 0.830 | 1.00 | 1.67 |
| 5103-74-2 | gamma-Chlordane | 20.4 | | 0.830 | 1.00 | 1.67 |
| 58-89-9 | gamma-BHC (Lindane) | 19.7 | | 0.830 | 1.00 | 1.67 |
| 76-44-8 | Heptachlor | 19.7 | | 0.830 | 1.00 | 1.67 |
| 309-00-2 | Aldrin | 20.4 | | 0.830 | 1.00 | 1.67 |
| 60-57-1 | Dieldrin | 20.7 | | 0.830 | 1.00 | 3.33 |
| 72-20-8 | Endrin | 20.8 | | 0.830 | 1.00 | 3.33 |
| 50-29-3 | 4,4'-DDT | 20.9 | | 0.830 | 1.00 | 3.33 |

Data File: /var/chem/gcsv18a.i/2131022p.b/sv18a010.d
Report Date: 23-Oct-2013 16:38

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131022p.b/sv18a010.d
Lab Smp Id: 1245514
Inj Date : 22-OCT-2013 17:05
Operator : tls Inst ID: gcsv18a.i
Smp Info : 1245514*1 lcs
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131022p.b/pest35ms.m
Meth Date : 23-Oct-2013 16:38 dlb Quant Type: ESTD
Cal Date : 18-OCT-2013 22:14 Cal File: sv18a034.d
Als bottle: 10 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8081.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

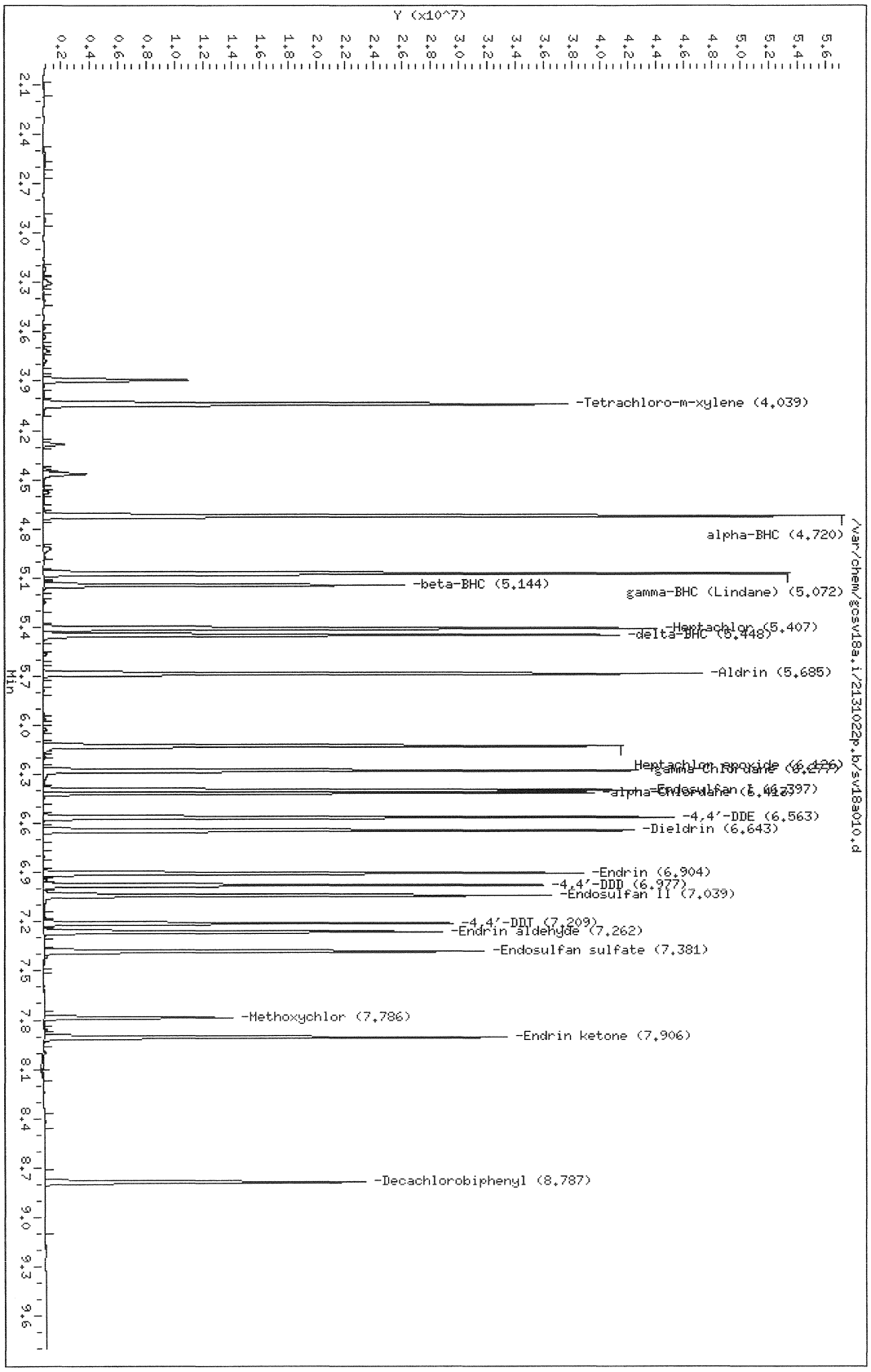
| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | FINAL (UG/KG) |
|---|---|---|---|---|---|---|
| $ 1 Tetrachloro-m-xylene | 4.039 | 4.039 | 0.000 | 40900641 | 54.7607 | 18 |
| 2 alpha-BHC | 4.720 | 4.721 | -0.001 | 54359698 | 54.6694 | 18 |
| 3 gamma-BHC (Lindane) | 5.072 | 5.073 | -0.001 | 48664894 | 59.2196 | 20 |
| 6 beta-BHC | 5.144 | 5.145 | -0.001 | 22248877 | 57.9888 | 19 |
| 4 Heptachlor | 5.407 | 5.409 | -0.002 | 42195212 | 59.1759 | 20 |
| 7 delta-BHC | 5.448 | 5.450 | -0.002 | 36149901 | 43.8272 | 15 |
| 5 Aldrin | 5.685 | 5.687 | -0.002 | 44876086 | 61.2596 | 20 |
| 8 Heptachlor epoxide | 6.126 | 6.128 | -0.002 | 38625070 | 60.3478 | 20 |
| 10 gamma-Chlordane | 6.277 | 6.280 | -0.003 | 39863036 | 61.1118 | 20 |
| 11 alpha-Chlordane | 6.413 | 6.411 | 0.002 | 34035379 | 58.3472 | 19 |
| 9 Endosulfan I | 6.397 | 6.404 | -0.007 | 38303322 | 61.6481 | 21 |
| 12 4,4'-DDE | 6.563 | 6.566 | -0.003 | 39264207 | 63.0009 | 21 |

Data File: /var/chem/gcsv18a.i/2131022p.b/sv18a010.d
Report Date: 23-Oct-2013 16:38

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | FINAL (UG/KG) |
|---|---|---|---|---|---|---|
| 13 Dieldrin | 6.643 | 6.646 | -0.003 | 38357835 | 62.0482 | 21 |
| 14 Endrin | 6.904 | 6.907 | -0.003 | 34481020 | 62.2519 | 21 |
| 15 4,4'-DDD | 6.977 | 6.980 | -0.003 | 30888226 | 60.9132 | 20 |
| 16 Endosulfan II | 7.039 | 7.042 | -0.003 | 33310591 | 61.2612 | 20 |
| 17 4,4'-DDT | 7.209 | 7.213 | -0.004 | 25203045 | 62.7632 | 21 |
| 18 Endrin aldehyde | 7.262 | 7.266 | -0.004 | 25332962 | 56.5246 | 19 |
| 20 Endosulfan sulfate | 7.381 | 7.386 | -0.005 | 28142901 | 55.7701 | 19 |
| 19 Methoxychlor | 7.786 | 7.791 | -0.005 | 11658395 | 59.9619 | 20 |
| 21 Endrin ketone | 7.906 | 7.910 | -0.004 | 29339329 | 56.3858 | 19 |
| $ 22 Decachlorobiphenyl | 8.787 | 8.791 | -0.004 | 21572371 | 49.5448 | 17 |

Data File: /var/chem/gcsv18a.i/2131022p.b/sv18a010.d
Date : 22-OCT-2013 17:05
Client ID:
Sample Info: 1245514x1 lcs
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

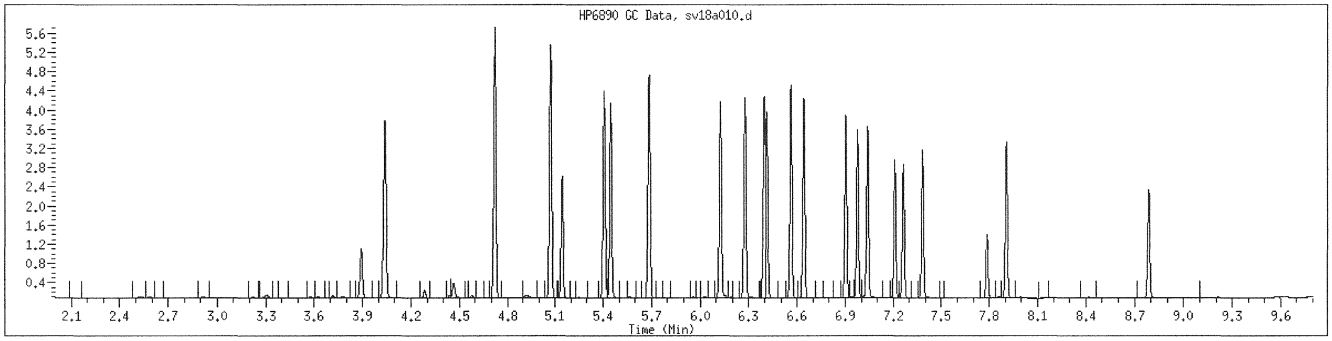
Instrument: gcsv18a.i
Operator: tls
Column diameter: 0.32



Data file : /var/chem/gcsv18a.i/2131022p.b/sv18a010.d Page: 1
Report Date: 10/23/2013 16:38

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 1245514 SampleType : LCS
Injection Date: 10/22/2013 17:05 Instrument : gcsv18a.i
Operator : tls
Sample Info : 1245514*1 lcs
Misc Info :
Method : /var/chem/gcsv18a.i/2131022p.b/pest35ms.m
Dilution : 1.0
Matrix : SOIL
Integrator : Falcon Compound Sublist: 8081




NO MANUAL INTEGRATIONS

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: RTX-35MS-3 ID: .25 (mm)

Concentrated Extract Volume: 10000 ( µL )

Soil Aliquot Volume: ( µL )

Injection Volume: 1 ( µL )

GPC Cleanup: (Y/N) N pH:

Prep Batch: 518148 Analytical Batch: 518386

*CONCENTRATION UNITS: ug/kg*

Sample ID: LCSD1245515

Contract:

SAS No.: SDG No.: 213101712

Lab Sample ID: 1245515

Date Collected: Time:

Date Received:

Date Extracted: 10/22/13

Date Analyzed: 10/22/13 Time: 1720

Dilution Factor: 1 Analyst: TLS

Prep Method: 3550B

Analytical Method: SW-846 8081B

Sulfur Cleanup: (Y/N) N Instrument ID: GCS18A

Lab File ID: 2131022p/sv18a011

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 319-84-6 | alpha-BHC | 18.5 | | 0.830 | 1.00 | 1.67 |
| 319-85-7 | beta-BHC | 19.4 | | 0.830 | 1.00 | 1.67 |
| 319-86-8 | delta-BHC | 14.8 | | 0.830 | 1.00 | 1.67 |
| 1024-57-3 | Heptachlor epoxide | 19.9 | | 0.830 | 1.00 | 1.67 |
| 959-98-8 | Endosulfan I | 20.4 | | 0.830 | 1.00 | 1.67 |
| 72-55-9 | 4,4'-DDE | 21.0 | | 0.830 | 1.00 | 3.33 |
| 33213-65-9 | Endosulfan II | 20.4 | | 0.830 | 1.00 | 3.33 |
| 72-54-8 | 4,4'-DDD | 20.3 | | 0.830 | 1.00 | 3.33 |
| 1031-07-8 | Endosulfan sulfate | 18.3 | | 0.830 | 1.00 | 3.33 |
| 72-43-5 | Methoxychlor | 20.2 | | 0.830 | 1.00 | 1.67 |
| 53494-70-5 | Endrin ketone | 18.7 | | 0.830 | 1.00 | 3.33 |
| 7421-93-4 | Endrin aldehyde | 18.5 | | 0.830 | 1.00 | 3.33 |
| 5103-71-9 | alpha-Chlordane | 19.7 | | 0.830 | 1.00 | 1.67 |
| 5103-74-2 | gamma-Chlordane | 20.5 | | 0.830 | 1.00 | 1.67 |
| 58-89-9 | gamma-BHC (Lindane) | 19.9 | | 0.830 | 1.00 | 1.67 |
| 76-44-8 | Heptachlor | 19.9 | | 0.830 | 1.00 | 1.67 |
| 309-00-2 | Aldrin | 20.6 | | 0.830 | 1.00 | 1.67 |
| 60-57-1 | Dieldrin | 20.7 | | 0.830 | 1.00 | 3.33 |
| 72-20-8 | Endrin | 20.6 | | 0.830 | 1.00 | 3.33 |
| 50-29-3 | 4,4'-DDT | 21.1 | | 0.830 | 1.00 | 3.33 |

FORM I ORG-1

Data File: /var/chem/gcsv18a.i/2131022p.b/sv18a011.d
Report Date: 23-Oct-2013 16:38

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131022p.b/sv18a011.d
Lab Smp Id: 1245515
Inj Date : 22-OCT-2013 17:20
Operator : tls Inst ID: gcsv18a.i
Smp Info : 1245515*1 lcsd
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131022p.b/pest35ms.m
Meth Date : 23-Oct-2013 16:38 dlb Quant Type: ESTD
Cal Date : 18-OCT-2013 22:14 Cal File: sv18a034.d
Als bottle: 11 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: 8081.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

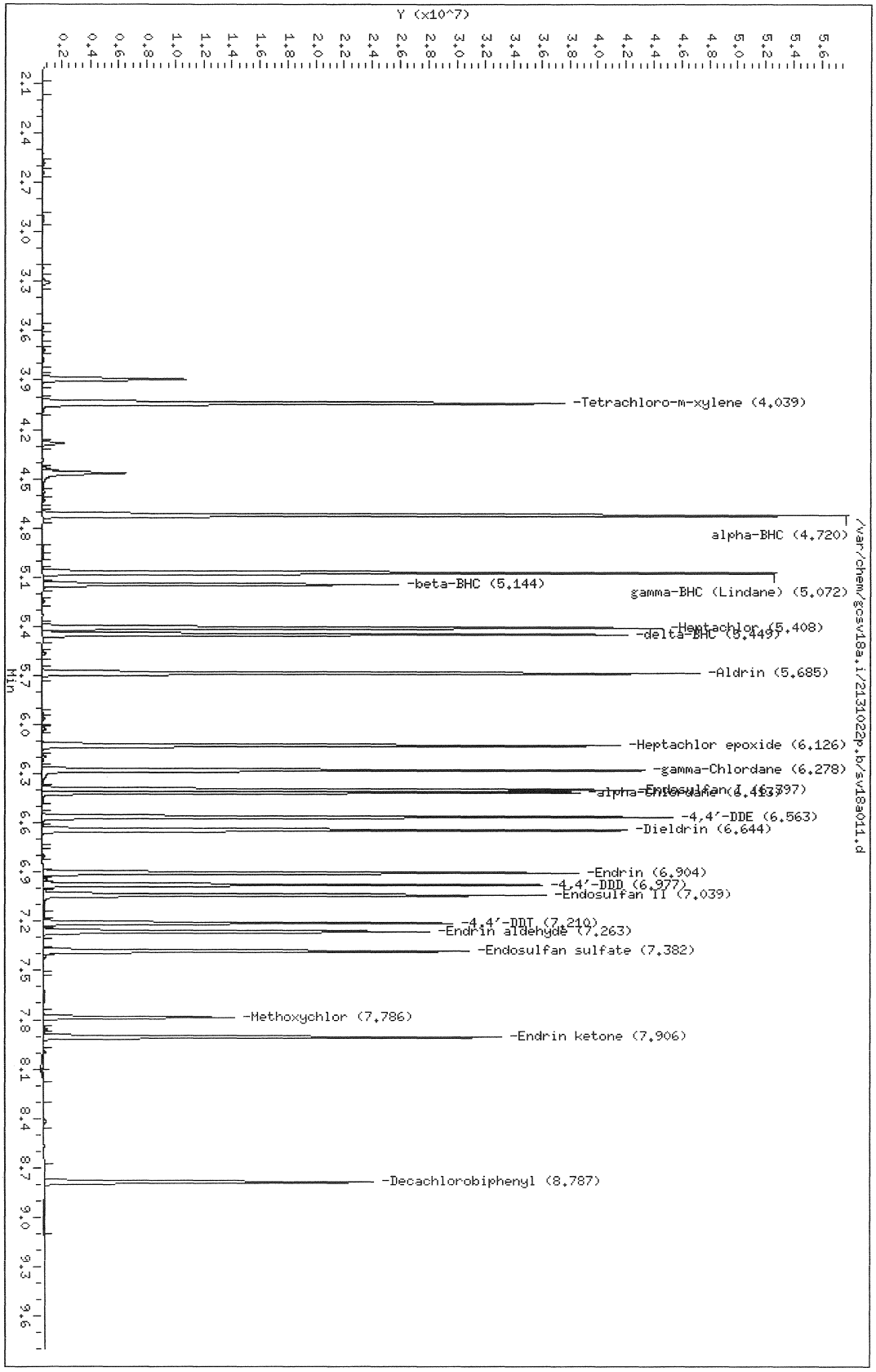
| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | FINAL (UG/KG) |
|---|---|---|---|---|---|---|
| $ 1 Tetrachloro-m-xylene | 4.039 | 4.039 | 0.000 | 41420674 | 55.4570 | 18 |
| 2 alpha-BHC | 4.720 | 4.721 | -0.001 | 55270893 | 55.5858 | 19 |
| 3 gamma-BHC (Lindane) | 5.072 | 5.073 | -0.001 | 49006035 | 59.6348 | 20 |
| 6 beta-BHC | 5.144 | 5.145 | -0.001 | 22319950 | 58.1740 | 19 |
| 4 Heptachlor | 5.408 | 5.409 | -0.001 | 42508365 | 59.6151 | 20 |
| 7 delta-BHC | 5.449 | 5.450 | -0.001 | 36501789 | 44.2539 | 15 |
| 5 Aldrin | 5.685 | 5.687 | -0.002 | 45345962 | 61.9010 | 21 |
| 8 Heptachlor epoxide | 6.126 | 6.128 | -0.002 | 38223799 | 59.7209 | 20 |
| 10 gamma-Chlordane | 6.278 | 6.280 | -0.002 | 40120449 | 61.5064 | 21 |
| 11 alpha-Chlordane | 6.413 | 6.411 | 0.002 | 34390309 | 58.9556 | 20 |
| 9 Endosulfan I | 6.397 | 6.404 | -0.007 | 37994055 | 61.1504 | 20 |
| 12 4,4'-DDE | 6.563 | 6.566 | -0.003 | 39174671 | 62.8572 | 21 |

Data File: /var/chem/gcsv18a.i/2131022p.b/sv18a011.d
Report Date: 23-Oct-2013 16:38

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | FINAL (UG/KG) |
|---|---|---|---|---|---|---|
| 13 Dieldrin | 6.644 | 6.646 | -0.002 | 38411456 | 62.1349 | 21 |
| 14 Endrin | 6.904 | 6.907 | -0.003 | 34300122 | 61.9253 | 21 |
| 15 4,4'-DDD | 6.977 | 6.980 | -0.003 | 30950041 | 61.0351 | 20 |
| 16 Endosulfan II | 7.039 | 7.042 | -0.003 | 33228125 | 61.1096 | 20 |
| 17 4,4'-DDT | 7.210 | 7.213 | -0.003 | 25391180 | 63.2318 | 21 |
| 18 Endrin aldehyde | 7.263 | 7.266 | -0.003 | 24853291 | 55.4543 | 18 |
| 20 Endosulfan sulfate | 7.382 | 7.386 | -0.004 | 27708543 | 54.9094 | 18 |
| 19 Methoxychlor | 7.786 | 7.791 | -0.005 | 11765236 | 60.5114 | 20 |
| 21 Endrin ketone | 7.906 | 7.910 | -0.004 | 29217089 | 56.1509 | 19 |
| $ 22 Decachlorobiphenyl | 8.787 | 8.791 | -0.004 | 22059061 | 50.6626 | 17 |

Data File: /var/chem/gcsv18a.i/2131022p.b/sv18a011.d
Date : 22-OCT-2013 17:20
Client ID:
Sample Info: 1245515x1 lcsd
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

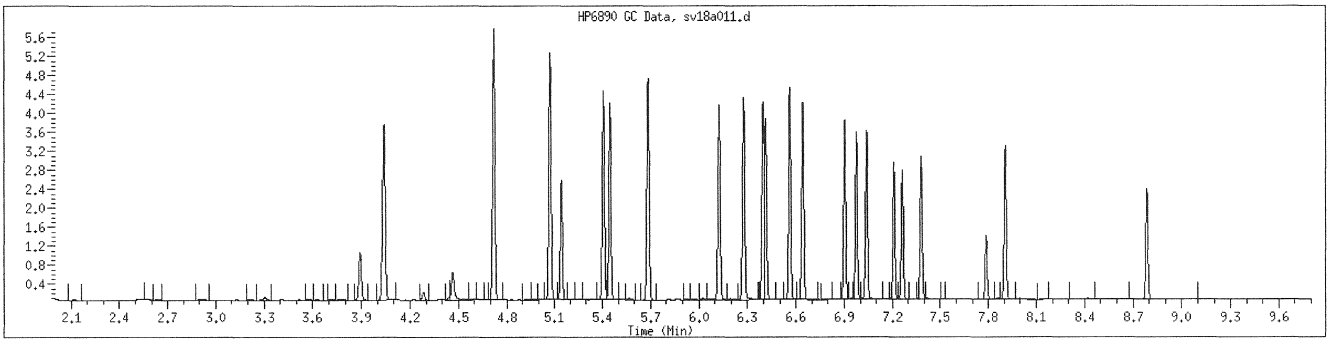
Instrument: gcsv18a.i
Operator: tls
Column diameter: 0.32



Data file : /var/chem/gcsv18a.i/2131022p.b/sv18a011.d Page: 1
Report Date: 10/23/2013 16:38

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 1245515 SampleType : LCS
Injection Date: 10/22/2013 17:20 Instrument : gcsv18a.i
Operator : tls
Sample Info : 1245515*1 lcsd
Misc Info :
Method : /var/chem/gcsv18a.i/2131022p.b/pest35ms.m
Dilution : 1.0
Matrix : SOIL
Integrator : Falcon Compound Sublist: 8081




NO MANUAL INTEGRATIONS

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: RTX-35MS-3 ID: .25 (mm)

Concentrated Extract Volume: 10000 ( µL )

Soil Aliquot Volume: ( µL )

Injection Volume: 1 ( µL )

GPC Cleanup: (Y/N) N pH:

Prep Batch: 518148 Analytical Batch: 518652

*CONCENTRATION UNITS:* *ug/kg*

Sample ID: RS-COMP2-101613MS

Contract:

SAS No.: SDG No.: 213101712

Lab Sample ID: 1245516

Date Collected: 10/16/13 Time: 1700

Date Received: 10/17/13

Date Extracted: 10/22/13

Date Analyzed: 10/25/13 Time: 1121

Dilution Factor: 10 Analyst: TLS

Prep Method: 3550B

Analytical Method: SW-846 8081B

Sulfur Cleanup: (Y/N) N Instrument ID: GCS16A

Lab File ID: 2131025/sv16a007

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 319-84-6 | alpha-BHC | 13.4 | J | 9.25 | 11.1 | 18.6 |
| 319-85-7 | beta-BHC | 19.2 | | 9.25 | 11.1 | 18.6 |
| 319-86-8 | delta-BHC | 11.1 | U | 9.25 | 11.1 | 18.6 |
| 1024-57-3 | Heptachlor epoxide | 38.9 | | 9.25 | 11.1 | 18.6 |
| 959-98-8 | Endosulfan I | 17.3 | J | 9.25 | 11.1 | 18.6 |
| 72-55-9 | 4,4'-DDE | 11.1 | U | 9.25 | 11.1 | 37.1 |
| 33213-65-9 | Endosulfan II | 19.0 | J | 9.25 | 11.1 | 37.1 |
| 72-54-8 | 4,4'-DDD | 21.8 | J | 9.25 | 11.1 | 37.1 |
| 1031-07-8 | Endosulfan sulfate | 20.4 | J | 9.25 | 11.1 | 37.1 |
| 72-43-5 | Methoxychlor | 11.8 | J | 9.25 | 11.1 | 18.6 |
| 53494-70-5 | Endrin ketone | 31.1 | J | 9.25 | 11.1 | 37.1 |
| 7421-93-4 | Endrin aldehyde | 25.7 | J | 9.25 | 11.1 | 37.1 |
| 5103-71-9 | alpha-Chlordane | 24.4 | | 9.25 | 11.1 | 18.6 |
| 5103-74-2 | gamma-Chlordane | 31.2 | | 9.25 | 11.1 | 18.6 |
| 58-89-9 | gamma-BHC (Lindane) | 18.2 | J | 9.25 | 11.1 | 18.6 |
| 76-44-8 | Heptachlor | 13.8 | J | 9.25 | 11.1 | 18.6 |
| 309-00-2 | Aldrin | 14.3 | J | 9.25 | 11.1 | 18.6 |
| 60-57-1 | Dieldrin | 15.3 | J | 9.25 | 11.1 | 37.1 |
| 72-20-8 | Endrin | 24.7 | J | 9.25 | 11.1 | 37.1 |
| 50-29-3 | 4,4'-DDT | 33.2 | J | 9.25 | 11.1 | 37.1 |

Data File: /var/chem/gcsv16a.i/2131025.b/sv16a007.d
Report Date: 28-Oct-2013 09:55

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131025.b/sv16a007.d
Lab Smp Id: 1245516
Inj Date : 25-OCT-2013 11:21
Operator : tls Inst ID: gcsv16a.i
Smp Info : 1245516*10 ms
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131025.b/pest35ms.m
Meth Date : 27-Oct-2013 14:17 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:37 Cal File: sv16a034.d
Als bottle: 7 QC Sample: MS
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: pest.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 10.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | FINAL (UG/KG) |
|---|---|---|---|---|---|---|
| $ 1 Tetrachloro-m-xylene | 4.107 | 4.112 | -0.005 | 10646957 | 4.18238 | 14 |
| 2 alpha-BHC | 4.832 | 4.840 | -0.008 | 12587038 | 3.60681 | 12 |
| 3 gamma-BHC (Lindane) | 5.196 | 5.203 | -0.007 | 14379843 | 4.89043 | 16 |
| 6 beta-BHC | 5.268 | 5.278 | -0.010 | 6376432 | 5.14722 | 17 |
| 4 Heptachlor | 5.545 | 5.553 | -0.008 | 9442434 | 3.73221 | 12 |
| 7 delta-BHC | 5.582 | 5.590 | -0.008 | 7099015 | 2.44050 | 8.1 |
| 5 Aldrin | 5.828 | 5.839 | -0.011 | 9576906 | 3.84168 | 13 |
| 8 Heptachlor epoxide | 6.268 | 6.288 | -0.020 | 23070917 | 10.4739 | 35(M1) |
| 10 gamma-Chlordane | 6.432 | 6.441 | -0.009 | 19804106 | 8.41243 | 28(M2) |
| 11 alpha-Chlordane | 6.554 | 6.564 | -0.010 | 14137454 | 6.57445 | 22(M2) |
| 9 Endosulfan I | 6.561 | 6.576 | -0.015 | 9230269 | 4.64747 | 15(M2) |
| 12 4,4'-DDE | 6.716 | 6.728 | -0.012 | 5688589 | 2.43582 | 8.1(M2) |

Data File: /var/chem/gcsv16a.i/2131025.b/sv16a007.d
Report Date: 28-Oct-2013 09:55

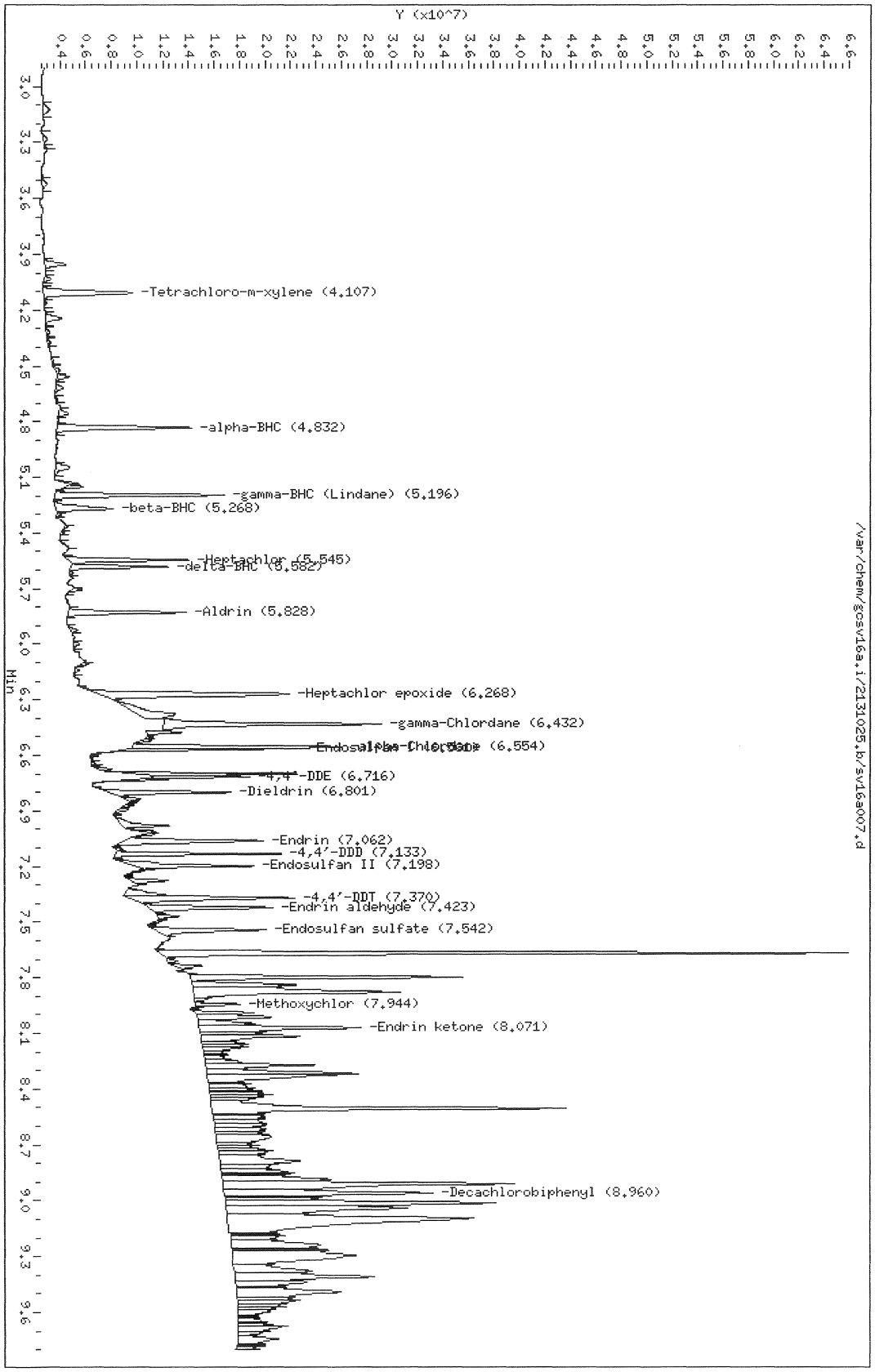
| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | FINAL (UG/KG) |
|---|---|---|---|---|---|---|
| 13 Dieldrin | 6.801 | 6.810 | -0.009 | 9322943 | 4.09557 | 14 |
| 14 Endrin | 7.062 | 7.073 | -0.011 | 13327287 | 6.66337 | 22 |
| 15 4,4'-DDD | 7.133 | 7.144 | -0.011 | 11182902 | 5.86942 | 20 |
| 16 Endosulfan II | 7.198 | 7.209 | -0.011 | 9958751 | 5.12608 | 17 |
| 17 4,4'-DDT | 7.370 | 7.380 | -0.010 | 16109173 | 8.94910 | 30(M2) |
| 18 Endrin aldehyde | 7.423 | 7.431 | -0.008 | 10927026 | 6.93458 | 23 |
| 20 Endosulfan sulfate | 7.542 | 7.552 | -0.010 | 10118069 | 5.48410 | 18 |
| 19 Methoxychlor | 7.944 | 7.960 | -0.016 | 2738289 | 3.16844 | 11(M2) |
| 21 Endrin ketone | 8.071 | 8.081 | -0.010 | 17029041 | 8.37072 | 28 |
| $ 22 Decachlorobiphenyl | 8.960 | 8.971 | -0.011 | 23826548 | 16.0544 | 54 |

QC Flag Legend

M1- Compound response manually integrated because
Target system did not integrate.
M2- Compound response manually integrated because
Target system integrated incorrectly.

Data File: /var/chem/gcsv16a.i/2131025.b/sv16a007.d
Date : 25-OCT-2013 11:21
Client ID:
Sample Info: 1245516w10 ms
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv16a.i
Operator: tls
Column diameter: 0.32

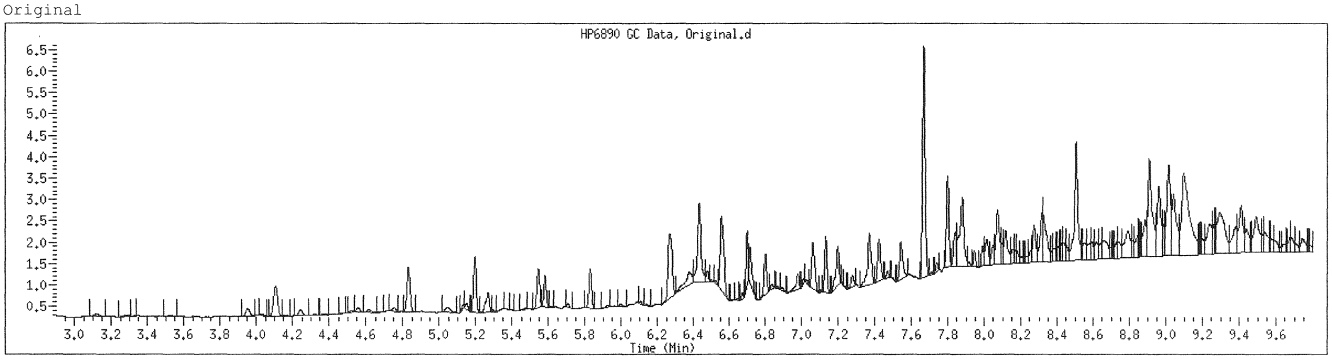


Data file : /var/chem/gcsv16a.i/2131025.b/sv16a007.d Page: 1
Report Date: 10/28/2013 09:55

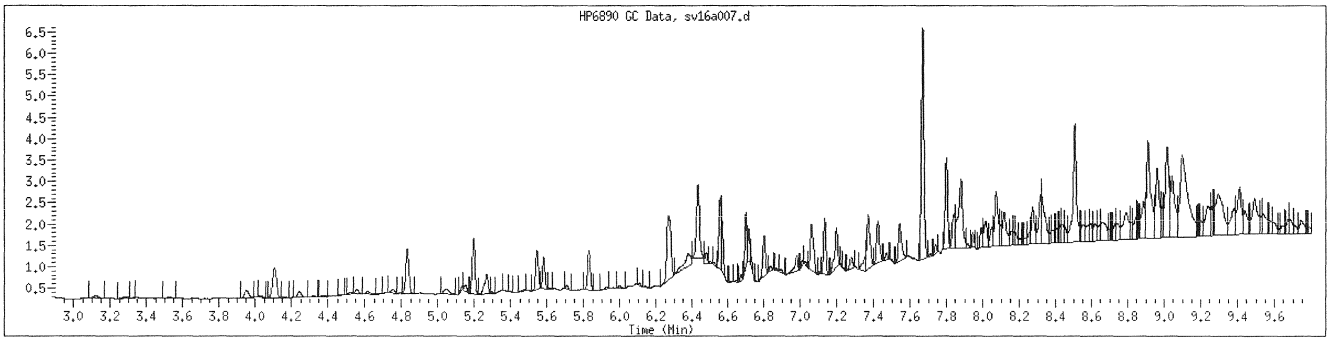
MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1245516 | SampleType | : MS |
| Injection Date | : 10/25/2013 11:21 | Instrument | : gcsv16a.i |
| Operator | : tls | | |
| Sample Info | : 1245516*10 ms | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv16a.i/2131025.b/pest35ms.m | | |
| Dilution | : 10 | | |
| Matrix | : SOIL | | |
| Integrator | : Falcon | Compound Sublist | : pest |

Original




Final



1D
ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL
Lab Code: LA024 Case No.:
Matrix: Solid
Sample wt/vol: 30 Units: g
Level: (low/med) LOW
% Moisture: decanted: (Y/N)
GC Column: RTX-35MS-3 ID: .25 (mm)
Concentrated Extract Volume: 10000 ( µL )
Soil Aliquot Volume: ( µL )
Injection Volume: 1 ( µL )
GPC Cleanup: (Y/N) N pH:
Prep Batch: 518148 Analytical Batch: 518652

Sample ID: RS-COMP2-101613MSD
Contract:
SAS No.: SDG No.: 213101712
Lab Sample ID: 1245517
Date Collected: 10/16/13 Time: 1700
Date Received: 10/17/13
Date Extracted: 10/22/13
Date Analyzed: 10/25/13 Time: 1135
Dilution Factor: 10 Analyst: TLS
Prep Method: 3550B
Analytical Method: SW-846 8081B
Sulfur Cleanup: (Y/N) N Instrument ID: GCS16A
Lab File ID: 2131025/sv16a008

*CONCENTRATION UNITS: ug/kg*

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 319-84-6 | alpha-BHC | 10.8 | J | 9.25 | 11.1 | 18.6 |
| 319-85-7 | beta-BHC | 16.7 | J | 9.25 | 11.1 | 18.6 |
| 319-86-8 | delta-BHC | 11.1 | U | 9.25 | 11.1 | 18.6 |
| 1024-57-3 | Heptachlor epoxide | 43.9 | | 9.25 | 11.1 | 18.6 |
| 959-98-8 | Endosulfan I | 21.8 | | 9.25 | 11.1 | 18.6 |
| 72-55-9 | 4,4'-DDE | 9.65 | J | 9.25 | 11.1 | 37.1 |
| 33213-65-9 | Endosulfan II | 19.7 | J | 9.25 | 11.1 | 37.1 |
| 72-54-8 | 4,4'-DDD | 17.9 | J | 9.25 | 11.1 | 37.1 |
| 1031-07-8 | Endosulfan sulfate | 21.2 | J | 9.25 | 11.1 | 37.1 |
| 72-43-5 | Methoxychlor | 11.1 | U | 9.25 | 11.1 | 18.6 |
| 53494-70-5 | Endrin ketone | 21.1 | J | 9.25 | 11.1 | 37.1 |
| 7421-93-4 | Endrin aldehyde | 23.4 | J | 9.25 | 11.1 | 37.1 |
| 5103-71-9 | alpha-Chlordane | 19.0 | | 9.25 | 11.1 | 18.6 |
| 5103-74-2 | gamma-Chlordane | 24.1 | | 9.25 | 11.1 | 18.6 |
| 58-89-9 | gamma-BHC (Lindane) | 15.4 | J | 9.25 | 11.1 | 18.6 |
| 76-44-8 | Heptachlor | 11.0 | J | 9.25 | 11.1 | 18.6 |
| 309-00-2 | Aldrin | 10.5 | J | 9.25 | 11.1 | 18.6 |
| 60-57-1 | Dieldrin | 14.8 | J | 9.25 | 11.1 | 37.1 |
| 72-20-8 | Endrin | 19.7 | J | 9.25 | 11.1 | 37.1 |
| 50-29-3 | 4,4'-DDT | 23.3 | J | 9.25 | 11.1 | 37.1 |

Data File: /var/chem/gcsv16a.i/2131025.b/sv16a008.d
Report Date: 28-Oct-2013 09:56

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131025.b/sv16a008.d
Lab Smp Id: 1245517
Inj Date : 25-OCT-2013 11:35
Operator : tls Inst ID: gcsv16a.i
Smp Info : 1245517*10 msd
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131025.b/pest35ms.m
Meth Date : 27-Oct-2013 14:17 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:37 Cal File: sv16a034.d
Als bottle: 8 QC Sample: MSD
Dil Factor: 10.00000
Integrator: Falcon Compound Sublist: pest.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 10.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | FINAL (UG/KG) |
|---|---|---|---|---|---|---|
| $ 1 Tetrachloro-m-xylene | 4.107 | 4.112 | -0.005 | 8025519 | 3.15262 | 11 |
| 2 alpha-BHC | 4.832 | 4.840 | -0.008 | 10162675 | 2.91211 | 9.7 |
| 3 gamma-BHC (Lindane) | 5.196 | 5.203 | -0.007 | 12201164 | 4.14948 | 14 |
| 6 beta-BHC | 5.268 | 5.278 | -0.010 | 5571301 | 4.49730 | 15 |
| 4 Heptachlor | 5.546 | 5.553 | -0.007 | 7493376 | 2.96183 | 9.9 |
| 7 delta-BHC | 5.582 | 5.590 | -0.008 | 5763855 | 1.98150 | 6.6 |
| 5 Aldrin | 5.828 | 5.839 | -0.011 | 7083346 | 2.84142 | 9.5 |
| 8 Heptachlor epoxide | 6.265 | 6.288 | -0.023 | 26012537 | 11.8093 | 39(M1) |
| 10 gamma-Chlordane | 6.431 | 6.441 | -0.010 | 15226256 | 6.46784 | 22(M1) |
| 11 alpha-Chlordane | 6.556 | 6.564 | -0.008 | 11028405 | 5.12863 | 17(M2) |
| 9 Endosulfan I | 6.558 | 6.576 | -0.018 | 11695253 | 5.88859 | 20(M2) |
| 12 4,4'-DDE | 6.713 | 6.728 | -0.015 | 6067286 | 2.59797 | 8.7(M2) |

Data File: /var/chem/gcsv16a.i/2131025.b/sv16a008.d
Report Date: 28-Oct-2013 09:56

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | FINAL (UG/KG) |
|---|---|---|---|---|---|---|
| 13 Dieldrin | 6.800 | 6.810 | -0.010 | 9092744 | 3.99445 | 13 |
| 14 Endrin | 7.062 | 7.073 | -0.011 | 10647861 | 5.32371 | 18 |
| 15 4,4'-DDD | 7.132 | 7.144 | -0.012 | 9227743 | 4.84324 | 16 |
| 16 Endosulfan II | 7.197 | 7.209 | -0.012 | 10339388 | 5.32201 | 18(M2) |
| 17 4,4'-DDT | 7.369 | 7.380 | -0.011 | 11310852 | 6.28349 | 21(M2) |
| 18 Endrin aldehyde | 7.422 | 7.431 | -0.009 | 9948277 | 6.31344 | 21 |
| 20 Endosulfan sulfate | 7.543 | 7.552 | -0.009 | 10511385 | 5.69728 | 19 |
| 19 Methoxychlor | 7.945 | 7.960 | -0.015 | 1894245 | 2.19181 | 7.3(M2) |
| 21 Endrin ketone | 8.071 | 8.081 | -0.010 | 11524320 | 5.66484 | 19 |
| $ 22 Decachlorobiphenyl | 8.960 | 8.971 | -0.011 | 20172382 | 13.5922 | 45 |

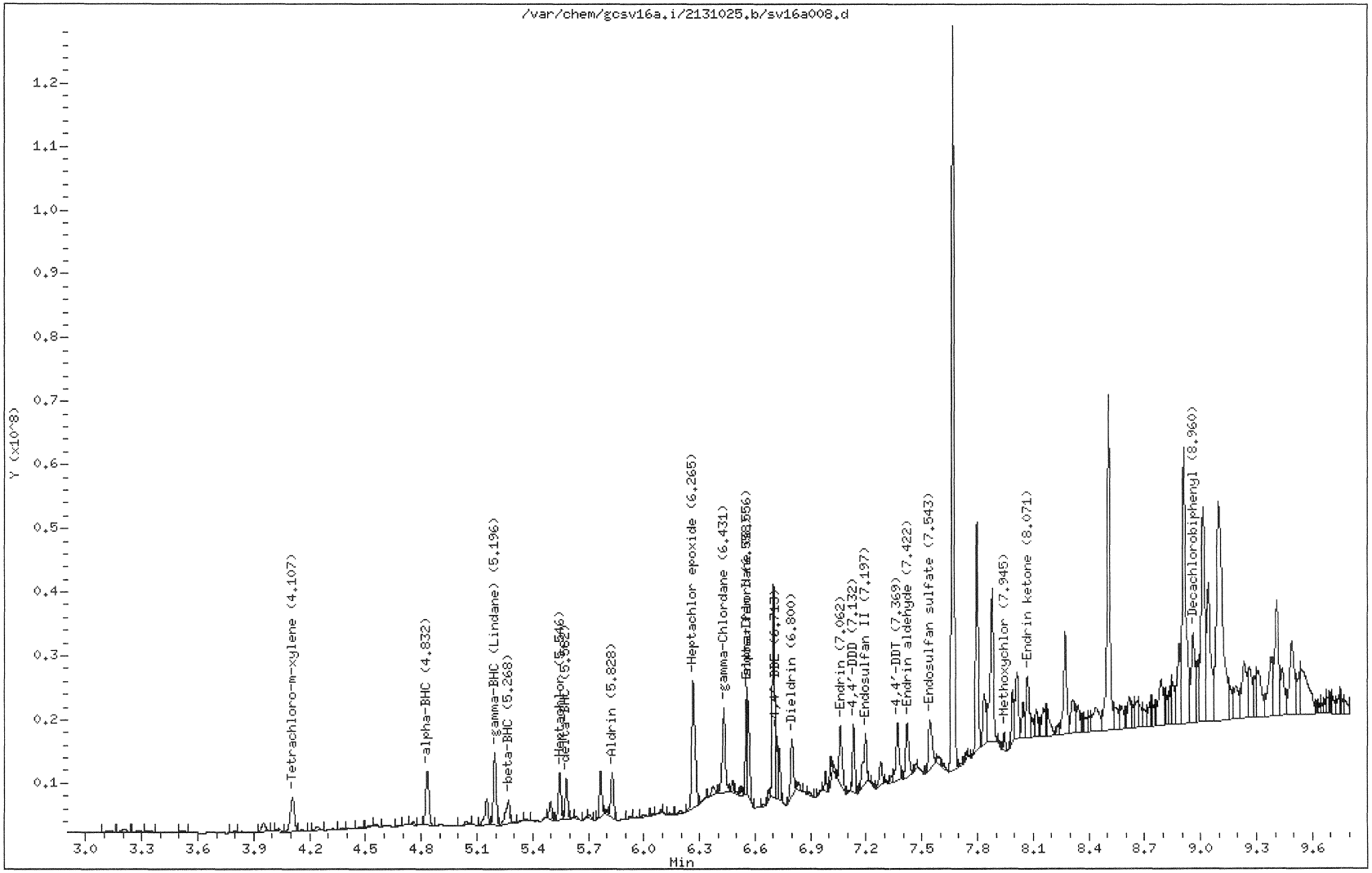
QC Flag Legend

M1- Compound response manually integrated because
Target system did not integrate.
M2- Compound response manually integrated because
Target system integrated incorrectly.

Data File: /var/chem/gcsv16a.i/2131025.b/sv16a008.d
Date : 25-OCT-2013 11:35
Client ID:
Sample Info: 1245517*10 msd
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv16a.i

Operator: tls
Column diameter: 0.32



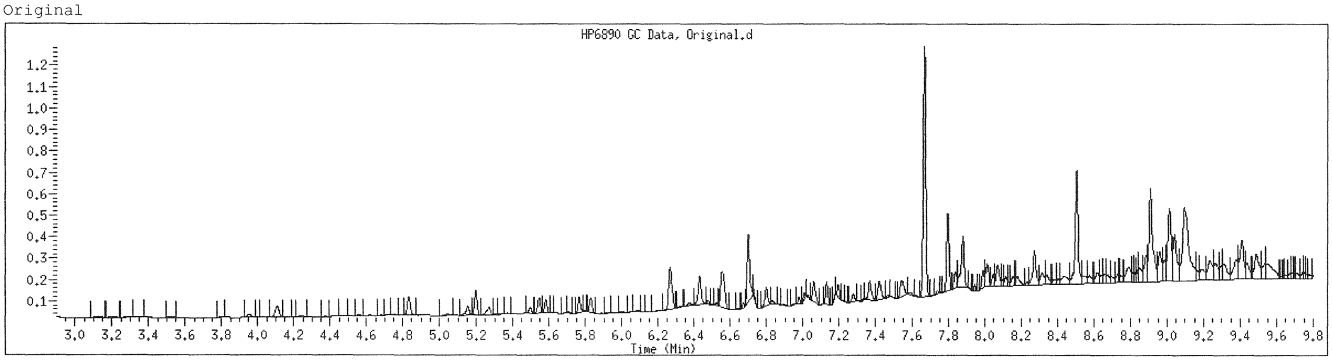

2131712 723

Data file : /var/chem/gcsv16a.i/2131025.b/sv16a008.d Page: 1
Report Date: 10/28/2013 09:56

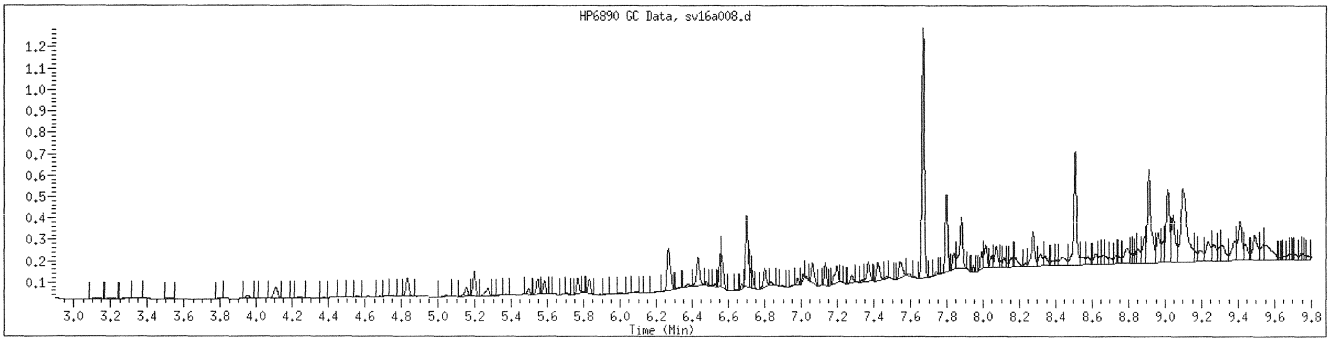
MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1245517 | SampleType | : MSD |
| Injection Date | : 10/25/2013 11:35 | Instrument | : gcsv16a.i |
| Operator | : tls | | |
| Sample Info | : 1245517*10 msd | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv16a.i/2131025.b/pest35ms.m | | |
| Dilution | : 10 | | |
| Matrix | : SOIL | | |
| Integrator | : Falcon | Compound Sublist | : pest |

Original




Final



# PESTICIDE SAMPLE PREPARATION FORM

| | | | |
|---|---|---|---|
| EXTRACTION DATE/TIME: 10/22/13 | Start: 9:17 End: 1:36 | BATCH NO: | 518148 8081 |
| MATRIX: | WATER ☐ SOIL ☑ OTHER ☐ | LEVEL: | LOW ☑ MEDIUM ☐ |

| | CLIENT | CLIENT ID | GCAL ID | INITIAL VOL/WT mL g | FINAL VOLUME (mL) | Init pH | SAMPLE TYPE | COMMENT | METHOD |
|---|---|---|---|---|---|---|---|---|---|
| 1 | QC ACCOUNT | MB for HBN 518148 [EXTO/37070] | 1245513 | 30.0 | 10.0 | | MB | | LIQUID LIQUID/3520 |
| 2 | QC ACCOUNT | LCS for HBN 518148 [EXTO/37070 | 1245514 | 30.0 | 10.0 | | LCS | | |
| 3 | QC ACCOUNT | LCSD for HBN 518148 [EXTO/3707 | 1245515 | 30.0 | 10.0 | | LCSD | | SEPARATORY FUNNEL/3510 |
| 4 | 4380 | B&T SAND-SOURCE | 21310100605 | 30.0 | 10.0 | | SAMPLE | | |
| 5 | 4847 | RS-COMP1-101613 | 21310171201 | 30.0 | 10.0 | | SAMPLE | | GPC CLEANUP/3640 |
| 6 | 4847 | RS-COMP2-101613 | 21310171203 | 30.0 | 10.0 | | SAMPLE | | |
| 7 | QC ACCOUNT | RS-COMP2-101613 (1244553MS) | 1245516 | 30.0 | 10.0 | | MS | | SONICATOR/3550 ✓ |
| 8 | QC ACCOUNT | RS-COMP2-101613 (1244553MSD) | 1245517 | 30.0 | 10.0 | | MSD | | |
| 9 | 4692 | SOIL 24101513 B | 21310172601 | 30.0 | 10.0 | | SAMPLE | | FLORISIL CLEANUP/3620 |
| 10 | 4692 | SOIL 24101513A | 21310172801 | 30.0 | 10.0 | | SAMPLE | | |
| 11 | 4692 | SOIL 24101513C | 21310173401 | 30.0 | 10.0 | | SAMPLE | | PCB H2So4/3665A CLEANUP |
| 12 | 4692 | VV101613 SOIL | 21310173601 | 30.0 | 10.0 | | SAMPLE | | |
| 13 | | | | | | | | | WASTE DILUTION/3580 |
| 14 | | | | | | | | | |
| 15 | | | | | | | | | TCLP EXTRACTION FLUID 1 |
| 16 | | | | | | | | | |
| 17 | | | | | | | | | TCLP EXTRACTION FLUID 2 |
| 18 | | | | | | | | | |
| 19 | | | | | | | | | MECL2/Acetone No: |
| 20 | | | | | | | | | |
| 21 | | | | | | | | | ACETONE LOT NO: 124105 |
| 22 | | | | | | | | | |
| 23 | | | | | | | | | MECL2 Lot No: DJ158 |
| 24 | | | | | | | | | |
| 25 | | | | | | | | | HEXANE Lot No: DJ2846 |
| 26 | | | | | | | | | |
| 27 | | | | | | | | | Sodium Sulfate Lot No: [illegible] |
| 28 | | | | | | | | | |

**COMMENTS: SAMPLE PREPARATION INCLUDE DETERMINATION OF SAMPLE VOLUME/WEIGHT, SOLVENT EXTRACTION AND EVAPORATION OF SOLVENT TO FINAL VOLUME**

BALANCE ID: M33557 TEMP: 98.1

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| SURROGATE ID | 576-4-10 | 8081 SPIKE ID | | 608 SPIKE ID | 507-97-2 | TECHNICIAN | DATE |
| VOLUME | 1.0ml | VOLUME | | VOLUME | 1.0ml | Sarah Kendrick | 10/22/13 |
| CONCENTRATION | .5ug/ml | CONCENTRATION | | CONCENTRATION | .5ug/ml | | |
| ACID | | | | | | SUPERVISOR | DATE |
| SPIKE WITNESS | OL | | | | | TES | 10/23/13 |

Revision 3, 10/04/2010

213101712 725

LABORATORY CHRONICLE: GCSV DEPARTMENT

Date: 10/22/2013
Instrument: gcsv18a.i
Method File: /var/chem/gcsv18a.i/2131018.b/pest35ms.m
Batch: /var/chem/gcsv18a.i/2131018.b
Column-Detector: RTX-35MS-30M

| Sample ID | Standard ID | DataFile | Wgt/Vol | Injection Time | Dil | Anal | ALS | Comments |
|---|---|---|---|---|---|---|---|---|
| hex lot #35341 | | sv18a001.d | 1000.00 ml | 18-OCT-2013 14:16 | 1.000 | tls | 1 | 8081 |
| deg | | sv18a002.d | 1000.00 ml | 18-OCT-2013 14:30 | 1.000 | tls | 2 | deg |
| 1207 | | sv18a003.d | 1000.00 ml | 18-OCT-2013 14:45 | 1.000 | tls | 3 | 8081 |
| 1206 | | sv18a004.d | 1000.00 ml | 18-OCT-2013 14:59 | 1.000 | tls | 4 | 8081 |
| 1201 | | sv18a005.d | 1000.00 ml | 18-OCT-2013 15:14 | 1.000 | tls | 5 | 8081 |
| 1202 | | sv18a006.d | 1000.00 ml | 18-OCT-2013 15:28 | 1.000 | tls | 6 | 8081 |
| 1203 | | sv18a007.d | 1000.00 ml | 18-OCT-2013 15:43 | 1.000 | tls | 7 | 8081 |
| 1204 | | sv18a008.d | 1000.00 ml | 18-OCT-2013 15:57 | 1.000 | tls | 8 | 8081 |
| 1205 | | sv18a009.d | 1000.00 ml | 18-OCT-2013 16:12 | 1.000 | tls | 9 | 8081 |
| 1600 | | sv18a010.d | 1.00 ml | 18-OCT-2013 16:26 | 1.000 | tls | 10 | 8081 |
| 1205 | | sv18a011.d | 1000.00 ml | 18-OCT-2013 16:41 | 1.000 | tls | 11 | chlor |
| 1201 | | sv18a012.d | 1000.00 ml | 18-OCT-2013 16:55 | 1.000 | tls | 12 | tox |
| 1205 | | sv18a013.d | 1000.00 ml | 18-OCT-2013 17:10 | 1.000 | tls | 13 | tox |
| 1203 | | sv18a014.d | 1000.00 ml | 18-OCT-2013 17:24 | 1.000 | tls | 14 | aro1221 |
| 1203 | | sv18a015.d | 1000.00 ml | 18-OCT-2013 17:39 | 1.000 | tls | 15 | aro1232 |
| 1203 | | sv18a016.d | 1000.00 ml | 18-OCT-2013 17:53 | 1.000 | tls | 16 | aro1242 |
| 1203 | | sv18a017.d | 1000.00 ml | 18-OCT-2013 18:08 | 1.000 | tls | 17 | aro1248 |
| 1203 | | sv18a018.d | 1000.00 ml | 18-OCT-2013 18:22 | 1.000 | tls | 18 | aro1254 |
| 1203 | | sv18a019.d | 1000.00 ml | 18-OCT-2013 18:37 | 1.000 | tls | 19 | ar1262 |
| 1203 | | sv18a020.d | 1000.00 ml | 18-OCT-2013 18:51 | 1.000 | tls | 20 | ar1268 |
| 1207 | | sv18a021.d | 1000.00 ml | 18-OCT-2013 19:06 | 1.000 | tls | 21 | aro1260 |
| 1206 | | sv18a022.d | 1000.00 ml | 18-OCT-2013 19:20 | 1.000 | tls | 22 | aro1260 |
| 1201 | | sv18a023.d | 1000.00 ml | 18-OCT-2013 19:35 | 1.000 | tls | 23 | aro1260 |
| 1202 | | sv18a024.d | 1000.00 ml | 18-OCT-2013 19:49 | 1.000 | tls | 24 | aro1260 |
| 1203 | | sv18a025.d | 1000.00 ml | 18-OCT-2013 20:04 | 1.000 | tls | 25 | aro1260 |
| 1204 | | sv18a026.d | 1000.00 ml | 18-OCT-2013 20:18 | 1.000 | tls | 26 | aro1260 |
| 1205 | | sv18a027.d | 1000.00 ml | 18-OCT-2013 20:33 | 1.000 | tls | 27 | aro1260 |
| 1600 | | sv18a028.d | 1.00 ml | 18-OCT-2013 20:47 | 1.000 | tls | 28 | aro1260 |
| 1201 | | sv18a029.d | 1000.00 ml | 18-OCT-2013 21:02 | 1.000 | tls | 29 | alachlor |
| 1202 | | sv18a030.d | 1000.00 ml | 18-OCT-2013 21:16 | 1.000 | tls | 30 | alachlor |
| 1206 | | sv18a031.d | 1000.00 ml | 18-OCT-2013 21:31 | 1.000 | tls | 31 | alachlor |
| 1203 | | sv18a032.d | 1000.00 ml | 18-OCT-2013 21:45 | 1.000 | tls | 32 | alachlor |
| 1204 | | sv18a033.d | 1000.00 ml | 18-OCT-2013 21:59 | 1.000 | tls | 33 | alachlor |
| 1205 | | sv18a034.d | 1000.00 ml | 18-OCT-2013 22:14 | 1.000 | tls | 34 | alachlor |
| 1600 | | sv18a035.d | 1.00 ml | 18-OCT-2013 22:28 | 1.000 | tls | 35 | alachlor |
| deg | | sv18a036.d | 1000.00 ml | 18-OCT-2013 22:43 | 1.000 | tls | 36 | deg |

LABORATORY CHRONICLE: GCSV DEPARTMENT

Date: 10/24/2013
Instrument: gcsv18a.i
Method File: /var/chem/gcsv18a.i/2131022p.b/pest35ms.m
Batch: /var/chem/gcsv18a.i/2131022p.b
Column-Detector: RTX-35MS-30M

| Sample ID | Standard ID | DataFile | Wgt/Vol | Injection Time | Dil | Anal | ALS | Comments |
|---|---|---|---|---|---|---|---|---|
| deg | | sv18a002.d | 1000.00 ml | 22-OCT-2013 14:19 | 1.000 | tls | 2 | deg |
| 1400 | | sv18a003.d | 1000.00 ml | 22-OCT-2013 14:34 | 1.000 | tls | 3 | 8081 |
| 1400 | | sv18a004.d | 1000.00 ml | 22-OCT-2013 14:49 | 1.000 | tls | 4 | alachlor |
| 1245616 | | sv18a006.d | 1.00 g | 22-OCT-2013 16:07 | 1.000 | tls | 6 | pest |
| 1245617 | | sv18a007.d | 1.00 g | 22-OCT-2013 16:22 | 1.000 | tls | 7 | 8081 |
| 1245618 | | sv18a008.d | 1.00 g | 22-OCT-2013 16:36 | 1.000 | tls | 8 | 8081 |
| 1245513 | | sv18a009.d | 30.00 g | 22-OCT-2013 16:51 | 1.000 | tls | 9 | pest |
| 1245514 | | sv18a010.d | 30.00 g | 22-OCT-2013 17:05 | 1.000 | tls | 10 | 8081 |
| 1245515 | | sv18a011.d | 30.00 g | 22-OCT-2013 17:20 | 1.000 | tls | 11 | 8081 |
| 21310100605 | | sv18a012.d | 30.00 g | 22-OCT-2013 17:34 | 1.000 | tls | 12 | pest |
| 1400 | | sv18a013.d | 1000.00 ml | 22-OCT-2013 17:49 | 1.000 | tls | 13 | alachlor |
| 1400 | | sv18a014.d | 1000.00 ml | 22-OCT-2013 18:03 | 1.000 | tls | 14 | 8081 |
| 1400 | | sv18a015.d | 1000.00 ml | 22-OCT-2013 18:18 | 1.000 | tls | 15 | alachlor |
| 1400 | | sv18a016.d | 1000.00 ml | 22-OCT-2013 18:32 | 1.000 | tls | 16 | 8081 |
| 21310154901 | | sv18a017.d | 1.00 g | 22-OCT-2013 18:47 | 1.000 | tls | 17 | tclp |
| 1245619 | | sv18a018.d | 1.00 g | 22-OCT-2013 19:01 | 1.000 | tls | 18 | pest |
| 1245620 | | sv18a019.d | 1.00 g | 22-OCT-2013 19:16 | 1.000 | tls | 19 | pest |
| 1400 | | sv18a020.d | 1000.00 ml | 22-OCT-2013 19:30 | 1.000 | tls | 20 | alachlor |
| 1400 | | sv18a021.d | 1000.00 ml | 22-OCT-2013 19:45 | 1.000 | tls | 21 | 8081 |
| 1400 | | sv18a022.d | 1000.00 ml | 22-OCT-2013 19:59 | 1.000 | tls | 22 | alachlor |
| 1400 | | sv18a023.d | 1000.00 ml | 22-OCT-2013 20:13 | 1.000 | tls | 23 | 8081 |

LABORATORY CHRONICLE: GCSV DEPARTMENT

Date: 10/22/2013
Instrument: gcsv16a.i
Method File: /var/chem/gcsv16a.i/2131018p.b/pest35ms.m
Batch: /var/chem/gcsv16a.i/2131018p.b
Column-Detector: RTX-35MS-30M

| Sample ID | Standard ID | DataFile | Wgt/Vol | Injection Time | Dil | Anal | ALS | Comments |
|---|---|---|---|---|---|---|---|---|
| hex lot # 3534 | | sv16a001.d | 1000.00 ml | 18-OCT-2013 14:40 | 1.000 | tls | 1 | 8081 |
| deg | | sv16a002.d | 1000.00 ml | 18-OCT-2013 14:55 | 1.000 | tls | 2 | deg |
| 1207 | | sv16a003.d | 1000.00 ml | 18-OCT-2013 15:09 | 1.000 | tls | 3 | 8081 |
| 1206 | | sv16a004.d | 1000.00 ml | 18-OCT-2013 15:24 | 1.000 | tls | 4 | 8081 |
| 1201 | | sv16a005.d | 1000.00 ml | 18-OCT-2013 15:38 | 1.000 | tls | 5 | 8081 |
| 1202 | | sv16a006.d | 1000.00 ml | 18-OCT-2013 15:53 | 1.000 | tls | 6 | 8081 |
| 1203 | | sv16a007.d | 1000.00 ml | 18-OCT-2013 16:07 | 1.000 | tls | 7 | 8081 |
| 1204 | | sv16a008.d | 1000.00 ml | 18-OCT-2013 16:22 | 1.000 | tls | 8 | 8081 |
| 1205 | | sv16a009.d | 1000.00 ml | 18-OCT-2013 16:36 | 1.000 | tls | 9 | 8081 |
| 1600 | | sv16a010a.d | 1.00 ml | 18-OCT-2013 16:50 | 1.000 | tls | 10 | 8081 |
| 1600 | | sv16a010.d | 1.00 ml | 18-OCT-2013 16:50 | 1.000 | tls | 10 | 8081 |
| 1205 | | sv16a011.d | 1000.00 ml | 18-OCT-2013 17:05 | 1.000 | tls | 11 | chlor |
| 1201 | | sv16a012.d | 1000.00 ml | 18-OCT-2013 17:19 | 1.000 | tls | 12 | tox |
| 1205 | | sv16a013.d | 1000.00 ml | 18-OCT-2013 17:34 | 1.000 | tls | 13 | tox |
| 1203 | | sv16a014.d | 1000.00 ml | 18-OCT-2013 17:48 | 1.000 | tls | 14 | aro1221 |
| 1203 | | sv16a015.d | 1000.00 ml | 18-OCT-2013 18:02 | 1.000 | tls | 15 | aro1232 |
| 1203 | | sv16a016.d | 1000.00 ml | 18-OCT-2013 18:17 | 1.000 | tls | 16 | aro1242 |
| 1203 | | sv16a017.d | 1000.00 ml | 18-OCT-2013 18:31 | 1.000 | tls | 17 | aro1248 |
| 1203 | | sv16a018.d | 1000.00 ml | 18-OCT-2013 18:46 | 1.000 | tls | 18 | aro1254 |
| 1203 | | sv16a019.d | 1000.00 ml | 18-OCT-2013 19:00 | 1.000 | tls | 19 | ar1262 |
| 1203 | | sv16a020.d | 1000.00 ml | 18-OCT-2013 19:15 | 1.000 | tls | 20 | ar1268 |
| 1207 | | sv16a021.d | 1000.00 ml | 18-OCT-2013 19:29 | 1.000 | tls | 21 | aro1260 |
| 1206 | | sv16a022.d | 1000.00 ml | 18-OCT-2013 19:44 | 1.000 | tls | 22 | aro1260 |
| 1201 | | sv16a023.d | 1000.00 ml | 18-OCT-2013 19:58 | 1.000 | tls | 23 | aro1260 |
| 1202 | | sv16a024.d | 1000.00 ml | 18-OCT-2013 20:12 | 1.000 | tls | 24 | aro1260 |
| 1203 | | sv16a025.d | 1000.00 ml | 18-OCT-2013 20:27 | 1.000 | tls | 25 | aro1260 |
| 1204 | | sv16a026.d | 1000.00 ml | 18-OCT-2013 20:41 | 1.000 | tls | 26 | aro1260 |
| 1205 | | sv16a027.d | 1000.00 ml | 18-OCT-2013 20:56 | 1.000 | tls | 27 | aro1260 |
| 1600 | | sv16a028a.d | 1.00 ml | 18-OCT-2013 21:11 | 1.000 | tls | 28 | aro1260 |
| 1600 | | sv16a028.d | 1.00 ml | 18-OCT-2013 21:11 | 1.000 | tls | 28 | aro1260 |
| 1201 | | sv16a029.d | 1000.00 ml | 18-OCT-2013 21:25 | 1.000 | tls | 29 | alachlor |
| 1202 | | sv16a030.d | 1000.00 ml | 18-OCT-2013 21:39 | 1.000 | tls | 30 | alachlor |
| 1206 | | sv16a031.d | 1000.00 ml | 18-OCT-2013 21:54 | 1.000 | tls | 31 | alachlor |
| 1203 | | sv16a032.d | 1000.00 ml | 18-OCT-2013 22:08 | 1.000 | tls | 32 | alachlor |
| 1204 | | sv16a033.d | 1000.00 ml | 18-OCT-2013 22:23 | 1.000 | tls | 33 | alachlor |
| 1205 | | sv16a034.d | 1000.00 ml | 18-OCT-2013 22:37 | 1.000 | tls | 34 | alachlor |

LABORATORY CHRONICLE: GCSV DEPARTMENT

Date: 10/25/2013
Instrument: gcsv16a.i
Method File: /var/chem/gcsv16a.i/2131025.b/pest35ms.m
Batch: /var/chem/gcsv16a.i/2131025.b
Column-Detector: RTX-35MS-30M

| Sample ID | Standard ID | DataFile | Wgt/Vol | Injection Time | Dil | Anal | ALS | Comments |
|---|---|---|---|---|---|---|---|---|
| hex lot # 3534 | | sv16a001.d | 1000.00 ml | 25-OCT-2013 09:19 | 1.000 | tls | 1 | pest |
| deg | | sv16a002.d | 1000.00 ml | 25-OCT-2013 09:33 | 1.000 | tls | 2 | deg |
| 1400 | | sv16a003.d | 1000.00 ml | 25-OCT-2013 09:48 | 1.000 | tls | 3 | 8081 |
| 1245513 | | sv16a004.d | 30.00 g | 25-OCT-2013 10:38 | 1.000 | tls | 4 | pest |
| 21310171201 | | sv16a005.d | 30.00 g | 25-OCT-2013 10:52 | 10.000 | tls | 5 | pest |
| 21310171203 | | sv16a006.d | 30.00 g | 25-OCT-2013 11:06 | 10.000 | tls | 6 | pest |
| 1245516 | | sv16a007.d | 30.00 g | 25-OCT-2013 11:21 | 10.000 | tls | 7 | pest |
| 1245517 | | sv16a008.d | 30.00 g | 25-OCT-2013 11:35 | 10.000 | tls | 8 | pest |
| 1400 | | sv16a009.d | 1000.00 ml | 25-OCT-2013 11:50 | 1.000 | tls | 9 | 8081 |
| 1400 | | sv16a010.d | 1000.00 ml | 25-OCT-2013 12:47 | 1.000 | tls | 10 | 8081 |

2F

ORGANICS SURROGATE RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

GC Column (1) RTX-35MS-3 ID: .25 ( mm) GC Cloumn (2) : ID: ( mm )

Method: SW-846 8082A

| EPA SAMPLE NO. | SMC1 1-(1) | # | 1-(2) | # | SMC2 2-(1) | # | 2-(2) | # | TOT OUT |
|---|---|---|---|---|---|---|---|---|---|
| 1. RS-COMP1-101613 | 115 | | | | | | | | 0 |
| 2. RS-COMP2-101613 | 90 | | | | | | | | 0 |
| 3. MB1245005 | 89 | | | | | | | | 0 |
| 4. LCS1245006 | 89 | | | | | | | | 0 |
| 5. LCSD1245007 | 94 | | | | | | | | 0 |

CONTROL LIMITS

SMC 1 : Decachlorobiphenyl 60 125

SMC 2 :

# Column to be used to flag recovery limits

* Value outside of contract required limits

D Surrogate diluted out

3F

SOIL ORGANIC LCS/LCSD RECOVERY

Lab Name: GCAL

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Contract: Method: SW-846 8082A

Prep Batch: 518045 Analytical Batch: 518215

***Spike HSN : 1245006***

| COMPOUND | UNITS | SPIKE ADDED | SAMPLE CONCENTRATION | LCS CONCENTRATION | LCS % REC | LCS % REC FLAG | QC. LIMITS |
|---|---|---|---|---|---|---|---|
| Aroclor-1016 | ug/kg | 133 | 0 | 114 | 86 | | 40 - 140 |
| Aroclor-1260 | ug/kg | 133 | 0 | 110 | 83 | | 60 - 130 |

***Spike Dupe HSN : 1245007***

| COMPOUND | UNITS | SPIKE ADDED | LCSD CONC. | LCSD % REC | REC FLAG | % RPD | RPD FLAG | QC. LIMITS REC | QC. LIMITS RPD |
|---|---|---|---|---|---|---|---|---|---|
| Aroclor-1016 | ug/kg | 133 | 118 | 89 | | 3 | | 40 - 140 | 0 - 30 |
| Aroclor-1260 | ug/kg | 133 | 112 | 84 | | 2 | | 60 - 130 | 0 - 30 |

RPD : 0 out of 2 outside limits

Spike Recovery: 0 out of 4 outside limits

FORM III ORG-2

4C

ORGANIC METHOD BLANK SUMMARY

Lab Name: GCAL

Sample ID: MB1245005

Lab Code: LA024 Case No.:

Contract:

Lab Sample ID: 1245005

SAS No.: SDG No.: 213101712

Matrix: Solid Sulfur Cleanup: (Y/N) N

Date Extracted: 10/18/13

Date Analyzed (1): 10/21/13 Time (1): 1434

Date Analyzed (2): Time (2):

Instrument ID (1): GCS16A

Instrument ID (2):

GC Column (1): RTX-35MS-3 ID: .25 (mm)

GC Column (2): ID: (mm)

Method: SW-846 8082A

Prep Batch: 518045 Analytical Batch: 518215

Lab File ID: 2131021p/sv16a

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES

| | SAMPLE NO. | LAB SAMPLE ID | DATE ANALYZED | TIME ANALYZED | INSTRUMENT ID |
|---|---|---|---|---|---|
| 1. | LCS1245006 | 1245006 | 10/21/13 | 1448 | GCS16A |
| 2. | LCSD1245007 | 1245007 | 10/21/13 | 1503 | GCS16A |
| 3. | RS-COMP1-101613 | 21310171201 | 10/25/13 | 1204 | GCS18A |
| 4. | RS-COMP2-101613 | 21310171203 | 10/27/13 | 1313 | GCS18A |

FORM IV ORGANIC

1D
ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL
Lab Code: LA024 Case No.:
Matrix: Solid
Sample wt/vol: 30 Units: g
Level: (low/med) LOW
% Moisture: 18.4 decanted: (Y/N)
GC Column: RTX-35MS-3 ID: .25 (mm)
Concentrated Extract Volume: 10000 ( µL )
Soil Aliquot Volume: ( µL )
Injection Volume: 1 ( µL )
GPC Cleanup: (Y/N) N pH:
Prep Batch: 518045 Analytical Batch: 518672

Sample ID: RS-COMP1-101613
Contract:
SAS No.: SDG No.: 213101712
Lab Sample ID: 21310171201
Date Collected: 10/16/13 Time: 1600
Date Received: 10/17/13
Date Extracted: 10/18/13
Date Analyzed: 10/25/13 Time: 1204
Dilution Factor: 1 Analyst: TLS
Prep Method: 3550B
Analytical Method: SW-846 8082A
Sulfur Cleanup: (Y/N) N Instrument ID: GCS18A
Lab File ID: 2131025/sv18a012

*CONCENTRATION UNITS: ug/kg*

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 20.5 | U | 16.3 | 20.5 | 40.8 |
| 11104-28-2 | Aroclor-1221 | 20.5 | U | 16.3 | 20.5 | 40.8 |
| 11141-16-5 | Aroclor-1232 | 20.5 | U | 16.3 | 20.5 | 40.8 |
| 53469-21-9 | Aroclor-1242 | 20.5 | U | 16.3 | 20.5 | 40.8 |
| 12672-29-6 | Aroclor-1248 | 20.5 | U | 16.3 | 20.5 | 40.8 |
| 11097-69-1 | Aroclor-1254 | 20.5 | U | 16.3 | 20.5 | 40.8 |
| 11096-82-5 | Aroclor-1260 | 20.5 | U | 16.3 | 20.5 | 40.8 |

Data File: /var/chem/gcsv18a.i/2131025.b/sv18a012.d
Report Date: 28-Oct-2013 08:22

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131025.b/sv18a012.d
Lab Smp Id: 21310171201
Inj Date : 25-OCT-2013 12:04
Operator : tls Inst ID: gcsv18a.i
Smp Info : 21310171201*1
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131025.b/pest35ms.m
Meth Date : 28-Oct-2013 08:21 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:14 Cal File: sv18a034.d
Als bottle: 12
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

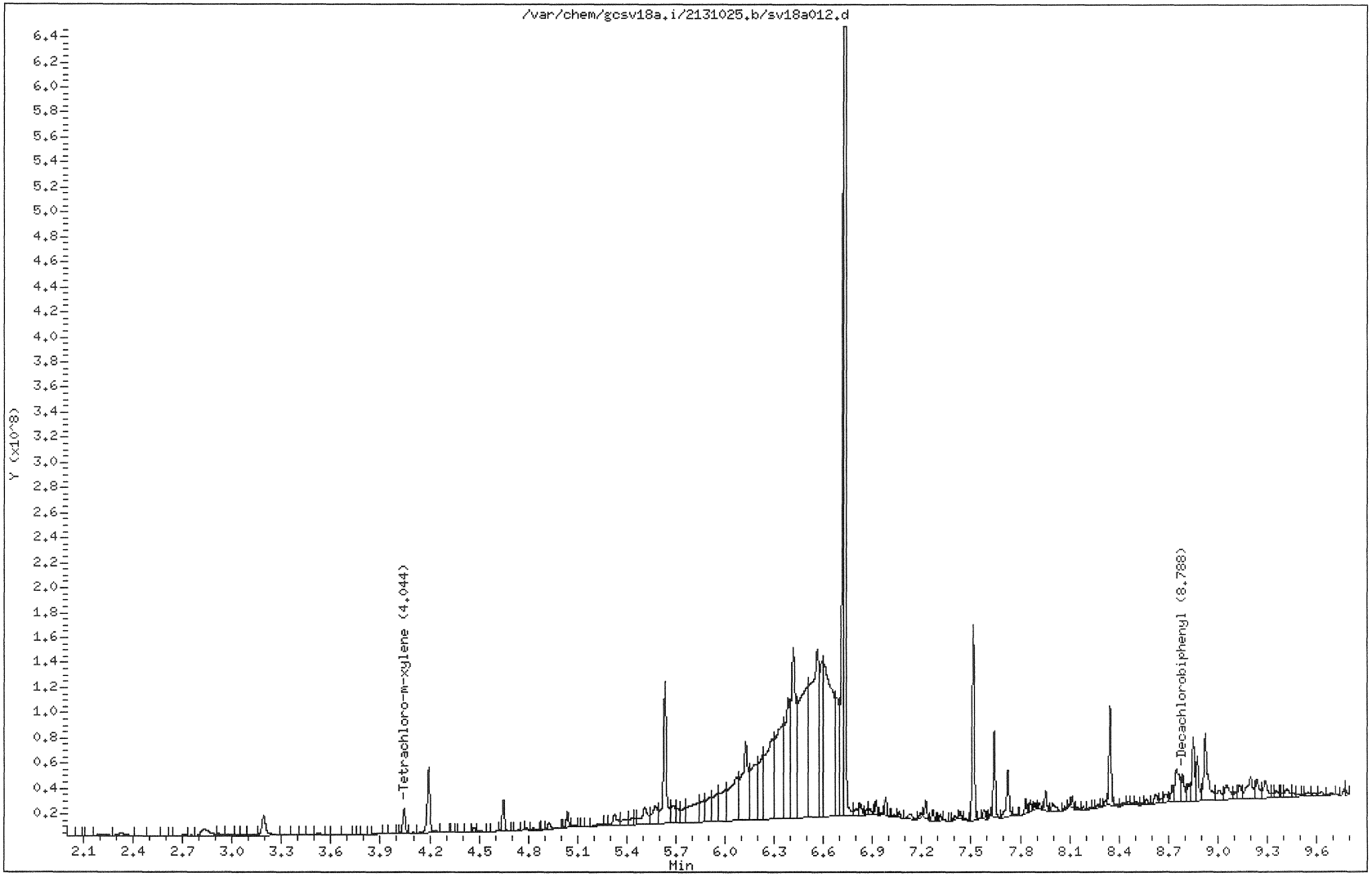
Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | CONCENTRATIONS FINAL (UG/KG) |
|---|---|---|---|---|---|---|
| $ 1 Tetrachloro-m-xylene | 4.044 | 4.039 | 0.005 | 22076723 | 29.5579 | 9.9 |
| $ 22 Decachlorobiphenyl | 8.788 | 8.791 | -0.003 | 24932534 | 57.2621 | 19 |

Data File: /var/chem/gcsv18a.i/2131025.b/sv18a012.d
Date : 25-OCT-2013 12:04
Client ID:
Sample Info: 21310171201*1
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv18a.i

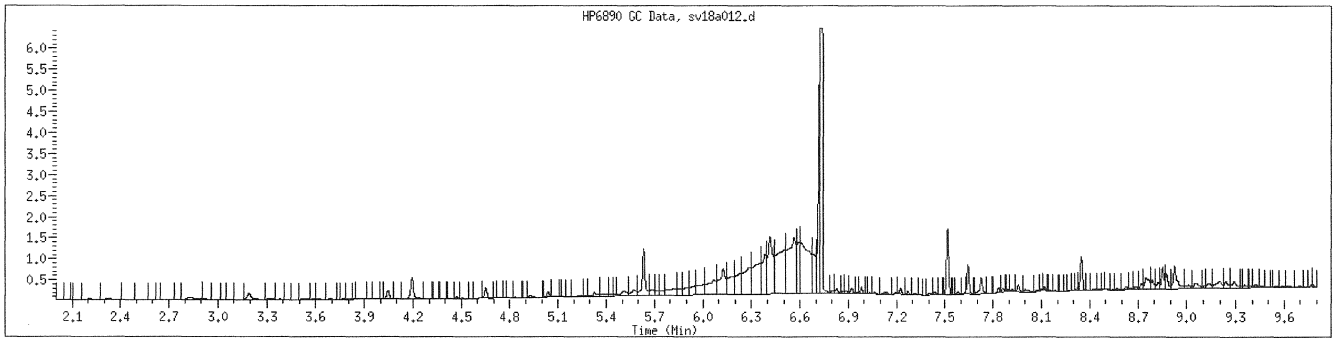
Operator: tls
Column diameter: 0.32



Data file : /var/chem/gcsv18a.i/2131025.b/sv18a012.d Page: 1
Report Date: 10/28/2013 08:22

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 21310171201 SampleType : SAMPLE
Injection Date: 10/25/2013 12:04 Instrument : gcsv18a.i
Operator : tls
Sample Info : 21310171201*1
Misc Info :
Method : /var/chem/gcsv18a.i/2131025.b/pest35ms.m
Dilution : 1.0
Matrix : SOIL
Integrator : Falcon Compound Sublist: pcb




NO MANUAL INTEGRATIONS

1D
ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL
Lab Code: LA024 Case No.:
Matrix: Solid
Sample wt/vol: 30 Units: g
Level: (low/med) LOW
% Moisture: 10.2 decanted: (Y/N)
GC Column: RTX-35MS-3 ID: .25 (mm)
Concentrated Extract Volume: 10000 ( µL )
Soil Aliquot Volume: ( µL )
Injection Volume: 1 ( µL )
GPC Cleanup: (Y/N) N pH:
Prep Batch: 518045 Analytical Batch: 518672

Sample ID: RS-COMP2-101613
Contract:
SAS No.: SDG No.: 213101712
Lab Sample ID: 21310171203
Date Collected: 10/16/13 Time: 1700
Date Received: 10/17/13
Date Extracted: 10/18/13
Date Analyzed: 10/27/13 Time: 1313
Dilution Factor: 1 Analyst: TLS
Prep Method: 3550B
Analytical Method: SW-846 8082A
Sulfur Cleanup: (Y/N) N Instrument ID: GCS18A
Lab File ID: 2131025/sv18a023

*CONCENTRATION UNITS: ug/kg*

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 18.6 | U | 14.8 | 18.6 | 37.1 |
| 11104-28-2 | Aroclor-1221 | 18.6 | U | 14.8 | 18.6 | 37.1 |
| 11141-16-5 | Aroclor-1232 | 18.6 | U | 14.8 | 18.6 | 37.1 |
| 53469-21-9 | Aroclor-1242 | 18.6 | U | 14.8 | 18.6 | 37.1 |
| 12672-29-6 | Aroclor-1248 | 18.6 | U | 14.8 | 18.6 | 37.1 |
| 11097-69-1 | Aroclor-1254 | 18.6 | U | 14.8 | 18.6 | 37.1 |
| 11096-82-5 | Aroclor-1260 | 18.6 | U | 14.8 | 18.6 | 37.1 |

FORM I ORG-1

Data File: /var/chem/gcsv18a.i/2131025.b/sv18a023.d
Report Date: 28-Oct-2013 08:22

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131025.b/sv18a023.d
Lab Smp Id: 21310171203
Inj Date : 27-OCT-2013 13:13
Operator : tls Inst ID: gcsv18a.i
Smp Info : 21310171203*1
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131025.b/pest35ms.m
Meth Date : 28-Oct-2013 08:22 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:14 Cal File: sv18a034.d
Als bottle: 23
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

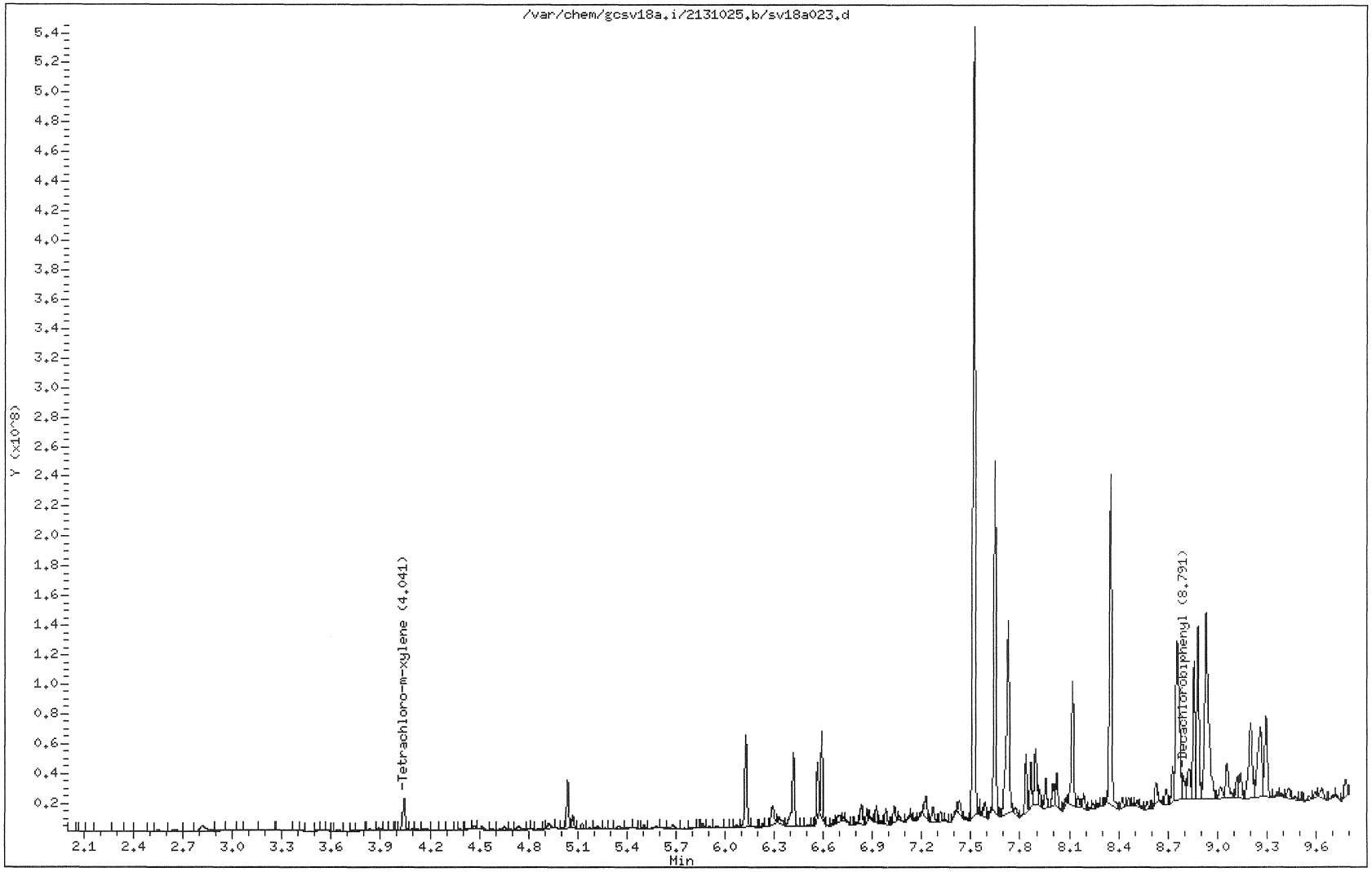
Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | FINAL (UG/KG) |
|---|---|---|---|---|---|---|
| $ 1 Tetrachloro-m-xylene | 4.041 | 4.039 | 0.002 | 23423438 | 31.3610 | 10 |
| $ 22 Decachlorobiphenyl | 8.791 | 8.791 | 0.000 | 19598513 | 45.0115 | 15 |

Data File: /var/chem/gcsv18a.i/2131025.b/sv18a023.d
Date : 27-OCT-2013 13:13
Client ID:
Sample Info: 21310171203*1
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv18a.i

Operator: tls
Column diameter: 0.32

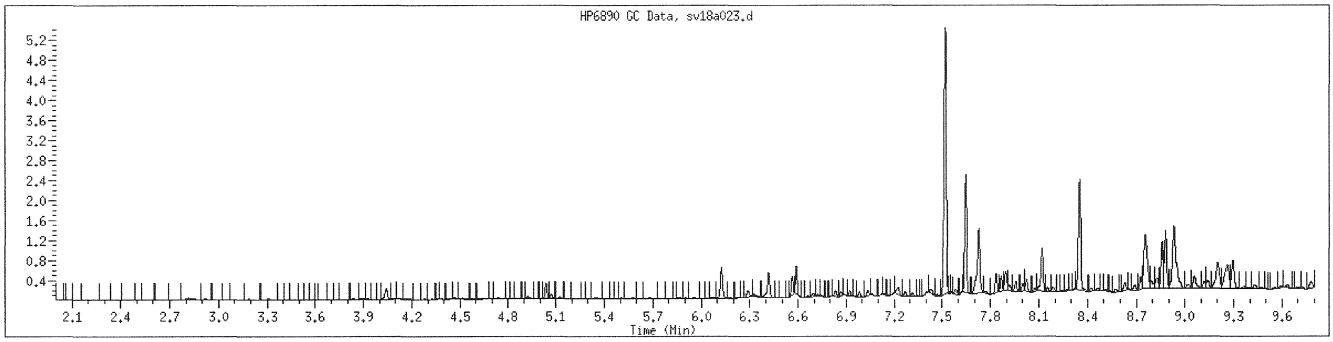



2131071 2 739

Data file : /var/chem/gcsv18a.i/2131025.b/sv18a023.d Page: 1
Report Date: 10/28/2013 08:22

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 21310171203 SampleType : SAMPLE
Injection Date: 10/27/2013 13:13 Instrument : gcsv18a.i
Operator : tls
Sample Info : 21310171203*1
Misc Info :
Method : /var/chem/gcsv18a.i/2131025.b/pest35ms.m
Dilution : 1.0
Matrix : SOIL
Integrator : Falcon Compound Sublist: pcb




NO MANUAL INTEGRATIONS

Report Date : 05-Nov-2013 11:38

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 15:09
End Cal Date : 18-OCT-2013 22:37
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv16a.i/2131021p.b/pest35ms.m
Cal Date : 21-Oct-2013 15:42 dlb
Curve Type : Average

Calibration File Names:
Level 1: /var/chem/gcsv16a.i/2131018p.b/sv16a029.d
Level 2: /var/chem/gcsv16a.i/2131018p.b/sv16a030.d
Level 3: /var/chem/gcsv16a.i/2131018p.b/sv16a032.d
Level 4: /var/chem/gcsv16a.i/2131018p.b/sv16a033.d
Level 5: /var/chem/gcsv16a.i/2131018p.b/sv16a034.d
Level 6: /var/chem/gcsv16a.i/2131018p.b/sv16a031.d
Level 7: /var/chem/gcsv16a.i/2131018p.b/sv16a021.d

| Compound | 5.000 Level 1 | 20.000 Level 2 | 60.000 Level 3 | 80.000 Level 4 | 100.000 Level 5 | 2.500 Level 6 | 50.000 Level 7 | RRF | % RSD |
|---|---|---|---|---|---|---|---|---|---|
| 2 alpha-BHC | 3530798 | 3305808 | 3311834 | 3557289 | 3672890 | 3560168 | +++++ | 3489798 | 4.255 |
| 3 gamma-BHC (Lindane) | 3019265 | 2816162 | 2801271 | 2999912 | 3065420 | +++++ | +++++ | 2940406 | 4.172 |
| 4 Heptachlor | 2542782 | 2459686 | 2432978 | 2592477 | 2621997 | +++++ | +++++ | 2529984 | 3.241 |
| 5 Aldrin | 2567148 | 2408827 | 2390214 | 2545360 | 2552918 | +++++ | +++++ | 2492893 | 3.444 |
| 6 beta-BHC | 1344749 | 1224270 | 1175842 | 1228971 | 1220223 | +++++ | +++++ | 1238811 | 5.080 |
| 7 delta-BHC | 2831907 | 2789533 | 2824106 | 2999684 | 3098923 | +++++ | +++++ | 2908831 | 4.603 |

Report Date : 05-Nov-2013 11:38

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 15:09
End Cal Date : 18-OCT-2013 22:37
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv16a.i/2131021p.b/pest35ms.m
Cal Date : 21-Oct-2013 15:42 dlb
Curve Type : Average

| Compound | 5.000 Level 1 | 20.000 Level 2 | 60.000 Level 3 | 80.000 Level 4 | 100.000 Level 5 | 2.500 Level 6 | RRF | % RSD |
|---|---|---|---|---|---|---|---|---|
| | 50.000 Level 7 | | | | | | | |
| 8 Heptachlor epoxide | 2347520 | 2162713 | 2093692 | 2201902 | 2207751 | +++++ | 2202716 | 4.215 |
| | +++++ | | | | | | | |
| 9 Endosulfan I | 2015681 | 2022661 | 1875654 | 2009861 | 2006577 | +++++ | 1986087 | 3.124 |
| | +++++ | | | | | | | |
| 10 gamma-Chlordane | 2560271 | 2279202 | 2208238 | 2350978 | 2372049 | +++++ | 2354148 | 5.608 |
| | +++++ | | | | | | | |
| 11 alpha-Chlordane | 2010653 | 1961571 | 2140440 | 2296781 | 2342364 | +++++ | 2150362 | 7.836 |
| | +++++ | | | | | | | |
| 12 4,4'-DDE | 2303267 | 2188160 | 2302932 | 2440375 | 2442220 | +++++ | 2335391 | 4.602 |
| | +++++ | | | | | | | |
| 13 Dieldrin | 2310741 | 2166167 | 2202619 | 2347875 | 2354327 | +++++ | 2276346 | 3.802 |
| | +++++ | | | | | | | |
| 14 Endrin | 2005362 | 1901244 | 1931016 | 2081213 | 2081583 | +++++ | 2000084 | 4.168 |
| | +++++ | | | | | | | |
| 15 4,4'-DDD | 1865642 | 1782692 | 1854928 | 2008488 | 2014657 | +++++ | 1905281 | 5.362 |
| | +++++ | | | | | | | |
| 16 Endosulfan II | 2020771 | 1839710 | 1859517 | 1996703 | 1997101 | +++++ | 1942760 | 4.420 |
| | +++++ | | | | | | | |

Report Date : 05-Nov-2013 11:38

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 15:09
End Cal Date : 18-OCT-2013 22:37
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv16a.i/2131021p.b/pest35ms.m
Cal Date : 21-Oct-2013 15:42 dlb
Curve Type : Average

| Compound | 5.000 Level 1 | 20.000 Level 2 | 60.000 Level 3 | 80.000 Level 4 | 100.000 Level 5 | 2.500 Level 6 | RRF | % RSD |
|---|---|---|---|---|---|---|---|---|
| | 50.000 Level 7 | | | | | | | |
| 17 4,4'-DDT | 1719576 | 1662616 | 1757063 | 1915202 | 1945991 | +++++ | | |
| | +++++ | | | | | | 1800089 | 6.903 |
| 18 Endrin aldehyde | 1606706 | 1506776 | 1513742 | 1613992 | 1637428 | +++++ | | |
| | +++++ | | | | | | 1575729 | 3.864 |
| 19 Methoxychlor | 833864 | 824668 | 894777 | 921369 | 846511 | +++++ | | |
| | +++++ | | | | | | 864238 | 4.840 |
| 20 Endosulfan sulfate | 1889482 | 1765982 | 1783368 | 1901788 | 1884296 | +++++ | | |
| | +++++ | | | | | | 1844983 | 3.512 |
| 21 Endrin ketone | 1981787 | 1900848 | 1998107 | 2144766 | 2146285 | +++++ | | |
| | +++++ | | | | | | 2034359 | 5.307 |
| M 23 AR 1016-AVG | 302045 | 291717 | 279859 | 265304 | 252491 | 327080 | | |
| | +++++ | | | | | | 286416 | 9.323 |
| 24 AR 1016-PEAK1 | 48226 | 44906 | 41744 | 38659 | 36129 | 52451 | | |
| | +++++ | | | | | | 43686 | 13.927 |
| 25 AR 1016-PEAK2 | 107570 | 100887 | 93854 | 86586 | 81510 | 116414 | | |
| | +++++ | | | | | | 97804 | 13.395 |
| 26 AR 1016-PEAK3 | 46547 | 44739 | 43373 | 42293 | 40872 | 50015 | | |
| | +++++ | | | | | | 44640 | 7.352 |

Report Date : 05-Nov-2013 11:38

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 15:09
End Cal Date : 18-OCT-2013 22:37
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv16a.i/2131021p.b/pest35ms.m
Cal Date : 21-Oct-2013 15:42 dlb
Curve Type : Average

| Compound | 5.000 Level 1 / 50.000 Level 7 | 20.000 Level 2 | 60.000 Level 3 | 80.000 Level 4 | 100.000 Level 5 | 2.500 Level 6 | ___ RRF | % RSD |
|---|---|---|---|---|---|---|---|---|
| 27 AR 1016-PEAK4 | 36012 | 38508 | 38326 | 37418 | 35460 | 39471 | | |
| | +++++ | | | | | | 37533 | 4.121 |
| 28 AR 1016-PEAK5 | 63691 | 62677 | 62562 | 60349 | 58520 | 68729 | | |
| | +++++ | | | | | | 62754 | 5.535 |
| M 29 AR 1260-AVG | 576646 | 558523 | 544796 | 531810 | 537076 | 607968 | | |
| | +++++ | | | | | | 559470 | 5.137 |
| 30 AR 1260-PEAK1 | 113573 | 108941 | 104934 | 100626 | 100045 | 120478 | | |
| | +++++ | | | | | | 108099 | 7.338 |
| 31 AR 1260-PEAK2 | 128284 | 124230 | 120848 | 118983 | 120574 | 135646 | | |
| | +++++ | | | | | | 124761 | 5.036 |
| 32 AR 1260-PEAK3 | 93729 | 90521 | 87034 | 84636 | 84776 | 99648 | | |
| | +++++ | | | | | | 90057 | 6.515 |
| 33 AR 1260-PEAK4 | 105674 | 102582 | 99395 | 95955 | 96156 | 111167 | | |
| | +++++ | | | | | | 101821 | 5.813 |
| 34 AR 1260-PEAK5 | 135385 | 132248 | 132584 | 131610 | 135526 | 141030 | | |
| | +++++ | | | | | | 134731 | 2.598 |
| M 35 AR 1221-AVG | +++++ | +++++ | 78934 | +++++ | +++++ | +++++ | | |
| | +++++ | | | | | | 78934 | 0.000 |

Report Date : 05-Nov-2013 11:38

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 15:09
End Cal Date : 18-OCT-2013 22:37
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv16a.i/2131021p.b/pest35ms.m
Cal Date : 21-Oct-2013 15:42 dlb
Curve Type : Average

| Compound | 5.000 Level 1 / 50.000 Level 7 | 20.000 Level 2 | 60.000 Level 3 | 80.000 Level 4 | 100.000 Level 5 | 2.500 Level 6 | RRF | % RSD |
|---|---|---|---|---|---|---|---|---|
| 36 AR 1221-PEAK1 | +++++ / +++++ | +++++ | 17620 | +++++ | +++++ | +++++ | 17620 | 0.000 |
| 37 AR 1221-PEAK2 | +++++ / +++++ | +++++ | 5915 | +++++ | +++++ | +++++ | 5915 | 0.000 |
| 38 AR 1221-PEAK3 | +++++ / +++++ | +++++ | 26403 | +++++ | +++++ | +++++ | 26403 | 0.000 |
| 39 AR 1221-PEAK4 | +++++ / +++++ | +++++ | 16215 | +++++ | +++++ | +++++ | 16215 | 0.000 |
| 40 AR 1221-PEAK5 | +++++ / +++++ | +++++ | 12782 | +++++ | +++++ | +++++ | 12782 | 0.000 |
| M 41 AR 1232-AVG | +++++ / +++++ | +++++ | 131772 | +++++ | +++++ | +++++ | 131772 | 0.000 |
| 42 AR 1232-PEAK1 | +++++ / +++++ | +++++ | 10086 | +++++ | +++++ | +++++ | 10086 | 0.000 |
| 43 AR 1232-PEAK2 | +++++ / +++++ | +++++ | 15973 | +++++ | +++++ | +++++ | 15973 | 0.000 |
| 44 AR 1232-PEAK3 | +++++ / +++++ | +++++ | 40996 | +++++ | +++++ | +++++ | 40996 | 0.000 |

Report Date : 05-Nov-2013 11:38

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 15:09
End Cal Date : 18-OCT-2013 22:37
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv16a.i/2131021p.b/pest35ms.m
Cal Date : 21-Oct-2013 15:42 dlb
Curve Type : Average

| Compound | 5.000 Level 1<br>50.000 Level 7 | 20.000 Level 2 | 60.000 Level 3 | 80.000 Level 4 | 100.000 Level 5 | 2.500 Level 6 | ___ RRF | % RSD |
|---|---|---|---|---|---|---|---|---|
| 45 AR 1232-PEAK4 | +++++<br>+++++ | +++++ | 45250 | +++++ | +++++ | +++++ | 45250 | 0.000 |
| 46 AR 1232-PEAK5 | +++++<br>+++++ | +++++ | 19467 | +++++ | +++++ | +++++ | 19467 | 0.000 |
| M 47 AR 1242-AVG | +++++<br>+++++ | +++++ | 246569 | +++++ | +++++ | +++++ | 246569 | 0.000 |
| 48 AR 1242-PEAK1 | +++++<br>+++++ | +++++ | 68261 | +++++ | +++++ | +++++ | 68261 | 0.000 |
| 49 AR 1242-PEAK2 | +++++<br>+++++ | +++++ | 44846 | +++++ | +++++ | +++++ | 44846 | 0.000 |
| 50 AR 1242-PEAK3 | +++++<br>+++++ | +++++ | 49148 | +++++ | +++++ | +++++ | 49148 | 0.000 |
| 51 AR 1242-PEAK4 | +++++<br>+++++ | +++++ | 46852 | +++++ | +++++ | +++++ | 46852 | 0.000 |
| 52 AR 1242-PEAK5 | +++++<br>+++++ | +++++ | 37463 | +++++ | +++++ | +++++ | 37463 | 0.000 |
| M 53 AR 1248-AVG | +++++<br>+++++ | +++++ | 293669 | +++++ | +++++ | +++++ | 293669 | 0.000 |

Report Date : 05-Nov-2013 11:38

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 15:09
End Cal Date : 18-OCT-2013 22:37
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv16a.i/2131021p.b/pest35ms.m
Cal Date : 21-Oct-2013 15:42 dlb
Curve Type : Average

| Compound | 5.000 Level 1 / 50.000 Level 7 | 20.000 Level 2 | 60.000 Level 3 | 80.000 Level 4 | 100.000 Level 5 | 2.500 Level 6 | RRF | % RSD |
|---|---|---|---|---|---|---|---|---|
| 54 AR 1248-PEAK1 | +++++ / +++++ | +++++ | 51875 | +++++ | +++++ | +++++ | 51875 | 0.000 |
| 55 AR 1248-PEAK2 | +++++ / +++++ | +++++ | 49455 | +++++ | +++++ | +++++ | 49455 | 0.000 |
| 56 AR 1248-PEAK3 | +++++ / +++++ | +++++ | 69041 | +++++ | +++++ | +++++ | 69041 | 0.000 |
| 57 AR 1248-PEAK4 | +++++ / +++++ | +++++ | 61990 | +++++ | +++++ | +++++ | 61990 | 0.000 |
| 58 AR 1248-PEAK5 | +++++ / +++++ | +++++ | 61307 | +++++ | +++++ | +++++ | 61307 | 0.000 |
| M 59 AR 1254-AVG | +++++ / +++++ | +++++ | 362182 | +++++ | +++++ | +++++ | 362182 | 0.000 |
| 60 AR 1254-PEAK1 | +++++ / +++++ | +++++ | 35715 | +++++ | +++++ | +++++ | 35715 | 0.000 |
| 61 AR 1254-PEAK2 | +++++ / +++++ | +++++ | 32820 | +++++ | +++++ | +++++ | 32820 | 0.000 |
| 62 AR 1254-PEAK3 | +++++ / +++++ | +++++ | 67368 | +++++ | +++++ | +++++ | 67368 | 0.000 |

Report Date : 05-Nov-2013 11:38

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 15:09
End Cal Date : 18-OCT-2013 22:37
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv16a.i/2131021p.b/pest35ms.m
Cal Date : 21-Oct-2013 15:42 dlb
Curve Type : Average

| | Compound | 5.000 Level 1 / 50.000 Level 7 | 20.000 Level 2 | 60.000 Level 3 | 80.000 Level 4 | 100.000 Level 5 | 2.500 Level 6 | ___ RRF | % RSD |
|---|---|---|---|---|---|---|---|---|---|
| | 63 AR 1254-PEAK4 | +++++ | +++++ | 131660 | +++++ | +++++ | +++++ | 131660 | 0.000 |
| | 64 AR 1254-PEAK5 | +++++ | +++++ | 94619 | +++++ | +++++ | +++++ | 94619 | 0.000 |
| M | 65 TOXAPHENE-AVG | +++++ | +++++ | +++++ | +++++ | 245420 | +++++ | 245420 | 0.000 |
| | 66 TOXAPHENE-PEAK1 | +++++ | +++++ | +++++ | +++++ | 53234 | +++++ | 53234 | 0.000 |
| | 67 TOXAPHENE-PEAK2 | +++++ | +++++ | +++++ | +++++ | 68477 | +++++ | 68477 | 0.000 |
| | 68 TOXAPHENE-PEAK3 | +++++ | +++++ | +++++ | +++++ | 56508 | +++++ | 56508 | 0.000 |
| | 69 TOXAPHENE-PEAK4 | +++++ | +++++ | +++++ | +++++ | 67201 | +++++ | 67201 | 0.000 |
| | 70 TOXAPHENE-PEAK5 | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ |
| M | 71 CHLORDANE-AVG | +++++ | +++++ | +++++ | +++++ | 661018 | +++++ | 661018 | 0.000 |

213101712 748

Report Date : 05-Nov-2013 11:38

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 15:09
End Cal Date : 18-OCT-2013 22:37
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv16a.i/2131021p.b/pest35ms.m
Cal Date : 21-Oct-2013 15:42 dlb
Curve Type : Average

| Compound | 5.000 Level 1 / 50.000 Level 7 | 20.000 Level 2 | 60.000 Level 3 | 80.000 Level 4 | 100.000 Level 5 | 2.500 Level 6 | RRF | % RSD |
|---|---|---|---|---|---|---|---|---|
| 72 CHLORDANE-PEAK1 | +++++ / +++++ | +++++ | +++++ | +++++ | 51180 | +++++ | 51180 | 0.000 |
| 73 CHLORDANE-PEAK2 | +++++ / +++++ | +++++ | +++++ | +++++ | 257073 | +++++ | 257073 | 0.000 |
| 74 CHLORDANE-PEAK3 | +++++ / +++++ | +++++ | +++++ | +++++ | 147241 | +++++ | 147241 | 0.000 |
| 75 CHLORDANE-PEAK4 | +++++ / +++++ | +++++ | +++++ | +++++ | 205524 | +++++ | 205524 | 0.000 |
| 76 CHLORDANE-PEAK5 | +++++ / +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ |
| M 77 AR 1268-AVG | +++++ / +++++ | +++++ | 795304 | +++++ | +++++ | +++++ | 795304 | 0.000 |
| 78 AR 1268-PEAK1 | +++++ / +++++ | +++++ | 44667 | +++++ | +++++ | +++++ | 44667 | 0.000 |
| 79 AR 1268-PEAK2 | +++++ / +++++ | +++++ | 57604 | +++++ | +++++ | +++++ | 57604 | 0.000 |
| 80 AR 1268-PEAK3 | +++++ / +++++ | +++++ | 262397 | +++++ | +++++ | +++++ | 262397 | 0.000 |

Report Date : 05-Nov-2013 11:38

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 15:09
End Cal Date : 18-OCT-2013 22:37
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv16a.i/2131021p.b/pest35ms.m
Cal Date : 21-Oct-2013 15:42 dlb
Curve Type : Average

| | Compound | 5.000 Level 1 / 50.000 Level 7 | 20.000 Level 2 | 60.000 Level 3 | 80.000 Level 4 | 100.000 Level 5 | 2.500 Level 6 | RRF | % RSD |
|---|---|---|---|---|---|---|---|---|---|
| | 81 AR 1268 PEAK4 | +++++ / +++++ | +++++ | 231564 | +++++ | +++++ | +++++ | 231564 | 0.000 |
| | 82 AR 1268-PEAK5 | +++++ / +++++ | +++++ | 199072 | +++++ | +++++ | +++++ | 199072 | 0.000 |
| M | 83 AR 1262-AVG | +++++ / +++++ | +++++ | 420633 | +++++ | +++++ | +++++ | 420633 | 0.000 |
| | 84 AR 1262-PEAK1 | +++++ / +++++ | +++++ | 48795 | +++++ | +++++ | +++++ | 48795 | 0.000 |
| | 85 AR 1262-PEAK2 | +++++ / +++++ | +++++ | 74342 | +++++ | +++++ | +++++ | 74342 | 0.000 |
| | 86 AR 1262-PEAK3 | +++++ / +++++ | +++++ | 83506 | +++++ | +++++ | +++++ | 83506 | 0.000 |
| | 87 AR 1262-PEAK4 | +++++ / +++++ | +++++ | 111179 | +++++ | +++++ | +++++ | 111179 | 0.000 |
| | 88 AR 1262-PEAK5 | +++++ / +++++ | +++++ | 102812 | +++++ | +++++ | +++++ | 102812 | 0.000 |
| | 89 Diallate | +++++ / +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ |

Report Date : 05-Nov-2013 11:38

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 15:09
End Cal Date : 18-OCT-2013 22:37
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv16a.i/2131021p.b/pest35ms.m
Cal Date : 21-Oct-2013 15:42 dlb
Curve Type : Average

| Compound | 5.000 Level 1<br>50.000 Level 7 | 20.000 Level 2 | 60.000 Level 3 | 80.000 Level 4 | 100.000 Level 5 | 2.500 Level 6 | ___ RRF | % RSD |
|---|---|---|---|---|---|---|---|---|
| 90 Isodrin | +++++<br>+++++ | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ |
| 91 Chlorobenzilate | +++++<br>+++++ | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ |
| 92 Kepone | +++++<br>+++++ | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ |
| 93 Mirex | +++++<br>+++++ | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | +++++ |
| 94 Alachlor | 370652<br>+++++ | 314050 | 272471 | 265357 | 259051 | 294832 | 296069 | 14.136 |
| $ 1 Tetrachloro-m-xylene | 2743479<br>+++++ | 2512724 | 2434975 | 2531935 | 2505234 | +++++ | 2545669 | 4.576 |
| $ 22 Decachlorobiphenyl | 1531904<br>+++++ | 1435918 | 1454506 | 1509821 | 1488414 | +++++ | 1484113 | 2.645 |

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a014.d
Report Date: 22-Oct-2013 10:55

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131018p.b/sv16a014.d
Lab Smp Id: 1203
Inj Date : 18-OCT-2013 17:48
Operator : tls Inst ID: gcsv16a.i
Smp Info : 1203*1 84-48-3
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m
Meth Date : 22-Oct-2013 10:55 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:08 Cal File: sv16a032.d
Als bottle: 14 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: aro1221.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

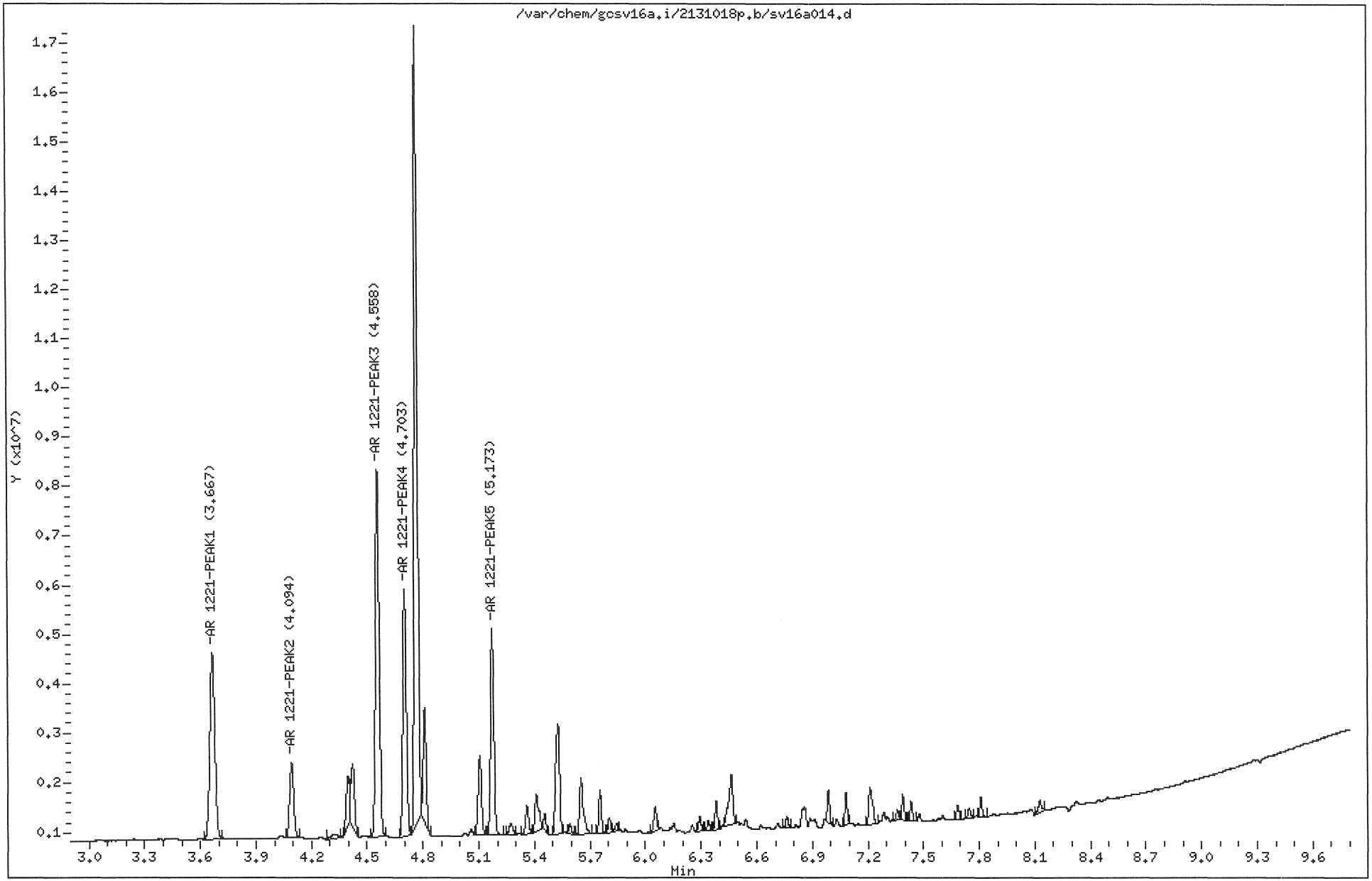
| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| M 35 AR 1221-AVG | | | | 31573781 | 400.000 | 400 |
| 36 AR 1221-PEAK1 | 3.667 | 3.668 | -0.001 | 7047809 | 400.000 | 400 |
| 37 AR 1221-PEAK2 | 4.094 | 4.093 | 0.001 | 2365919 | 400.000 | 400 |
| 38 AR 1221-PEAK3 | 4.558 | 4.558 | 0.000 | 10561240 | 400.000 | 400 |
| 39 AR 1221-PEAK4 | 4.703 | 4.702 | 0.001 | 6486047 | 400.000 | 400 |
| 40 AR 1221-PEAK5 | 5.173 | 5.172 | 0.001 | 5112766 | 400.000 | 400(M1) |

QC Flag Legend

M1- Compound response manually integrated because
Target system did not integrate.

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a014.d
Date : 18-OCT-2013 17:48
Client ID:
Sample Info: 1203*1 84-48-3
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv16a.i
Operator: tls
Column diameter: 0.32



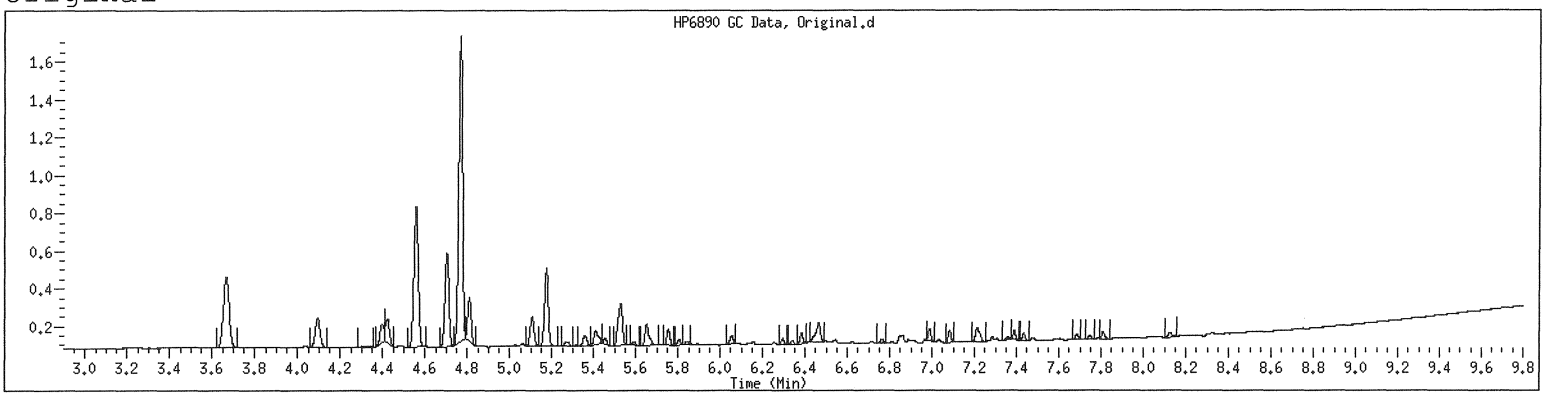

753
21310712

Report Date: 10/22/2013 10:55

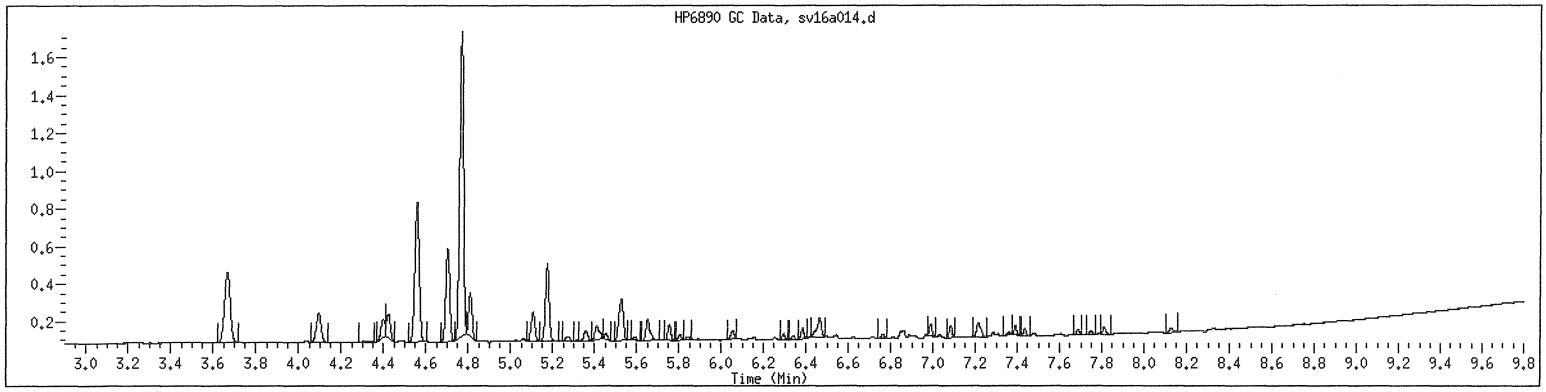
MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1203 | SampleType | : CALIB_3 |
| Injection Date | : 10/18/2013 17:48 | Instrument | : gcsv16a.i |
| Operator | : tls | | |
| Sample Info | : 1203*1 84-48-3 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : aro1221 |

Original




Final



Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a015.d
Report Date: 22-Oct-2013 10:55

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131018p.b/sv16a015.d
Lab Smp Id: 1203
Inj Date : 18-OCT-2013 18:02
Operator : tls Inst ID: gcsv16a.i
Smp Info : 1203*1 84-48-4
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m
Meth Date : 22-Oct-2013 10:55 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:08 Cal File: sv16a032.d
Als bottle: 15 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: aro1232.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| M 41 AR 1232-AVG | | | | 52708804 | 400.000 | 400 |
| 42 AR 1232-PEAK1 | 3.668 | 3.669 | -0.001 | 4034240 | 400.000 | 400 |
| 43 AR 1232-PEAK2 | 4.558 | 4.559 | -0.001 | 6389282 | 400.000 | 400 |
| 44 AR 1232-PEAK3 | 4.767 | 4.768 | -0.001 | 16398505 | 400.000 | 400 |
| 45 AR 1232-PEAK4 | 5.171 | 5.171 | 0.000 | 18099924 | 400.000 | 400 |
| 46 AR 1232-PEAK5 | 5.410 | 5.410 | 0.000 | 7786853 | 400.000 | 400(M1) |

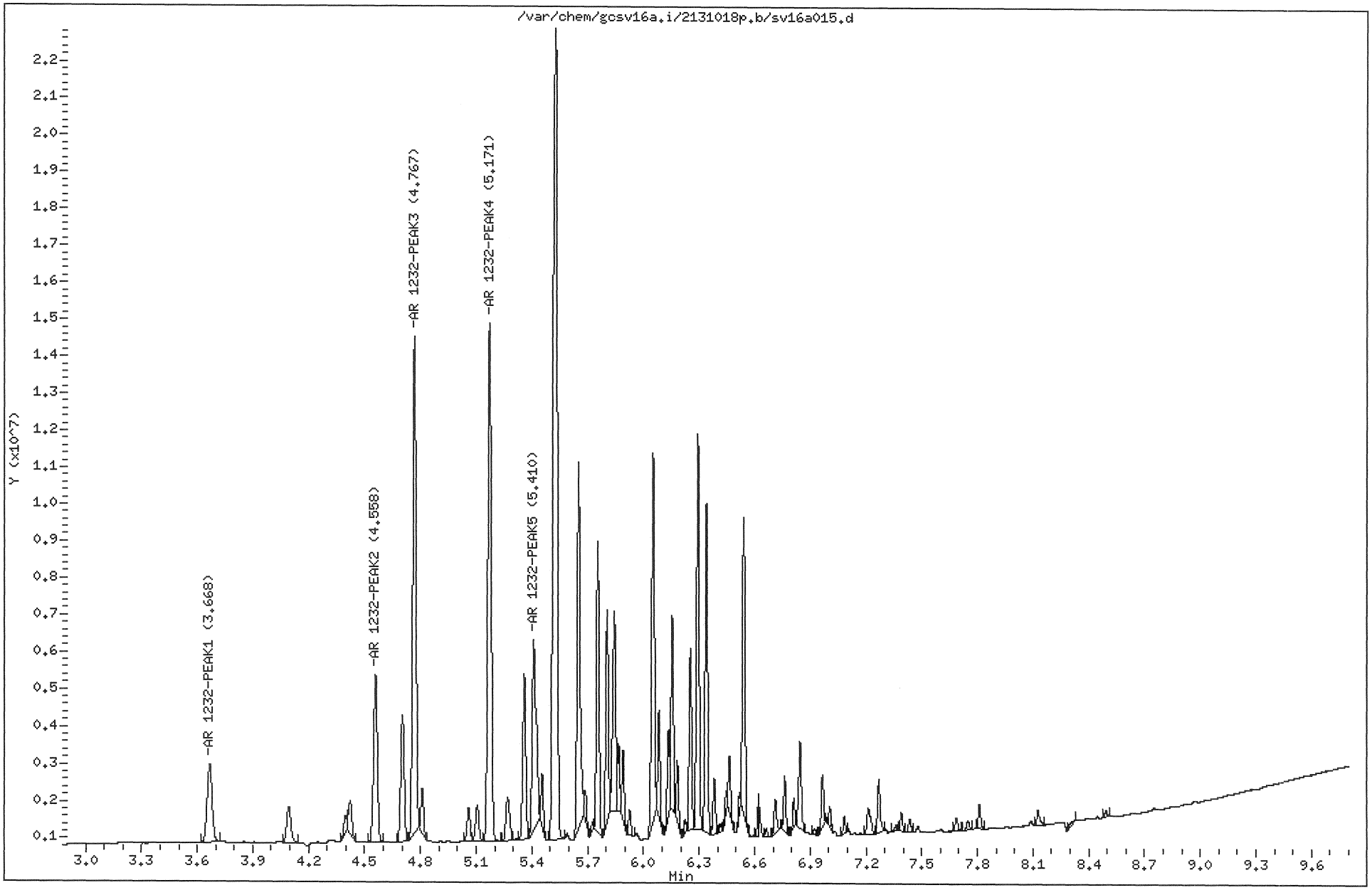
QC Flag Legend

M1- Compound response manually integrated because
Target system did not integrate.

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a015.d
Date : 18-OCT-2013 18:02
Client ID:
Sample Info: 1203x1 84-48-4
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv16a.i

Operator: tls
Column diameter: 0.32



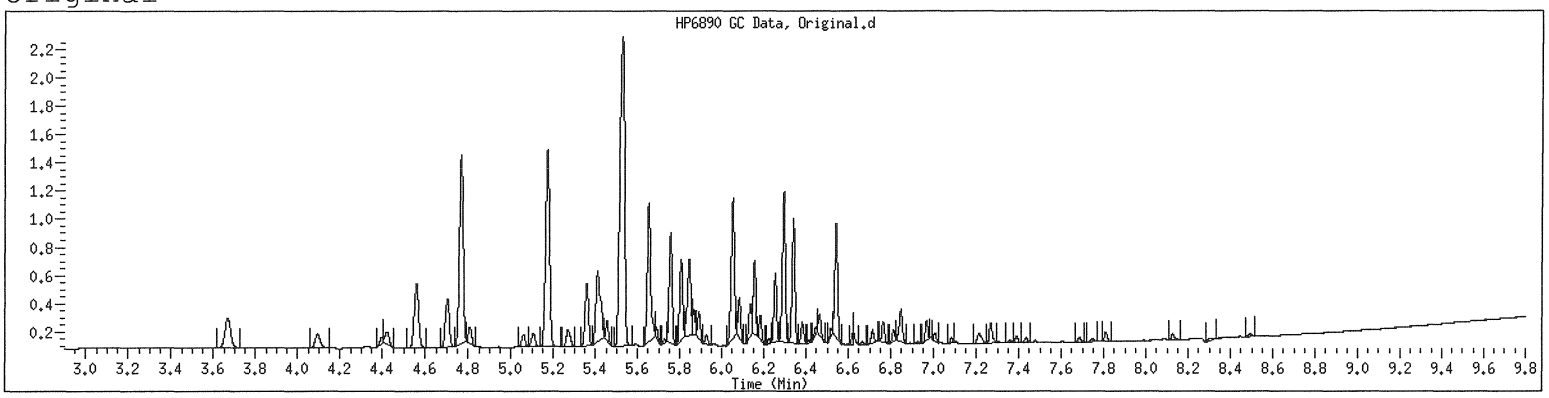

21310171 2 756

Report Date: 10/22/2013 10:55

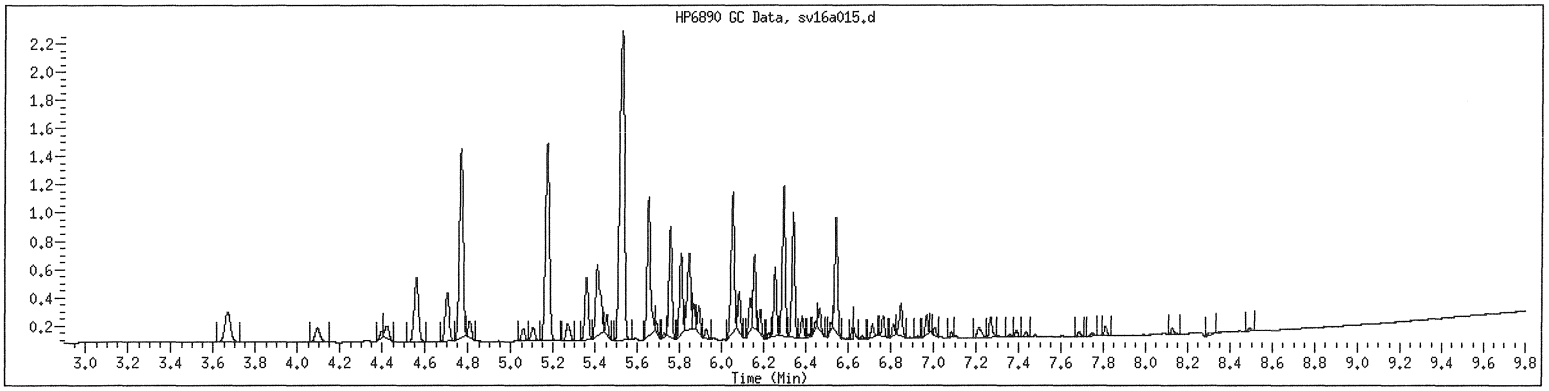
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1203 | SampleType | : CALIB_3 |
| Injection Date | : 10/18/2013 18:02 | Instrument | : gcsv16a.i |
| Operator | : tls | | |
| Sample Info | : 1203*1 84-48-4 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : aro1232 |

Original




Final



Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a016.d
Report Date: 22-Oct-2013 10:55

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131018p.b/sv16a016.d
Lab Smp Id: 1203
Inj Date : 18-OCT-2013 18:17
Operator : tls Inst ID: gcsv16a.i
Smp Info : 1203*1 84-48-5
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m
Meth Date : 22-Oct-2013 10:55 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:08 Cal File: sv16a032.d
Als bottle: 16 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: aro1242.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

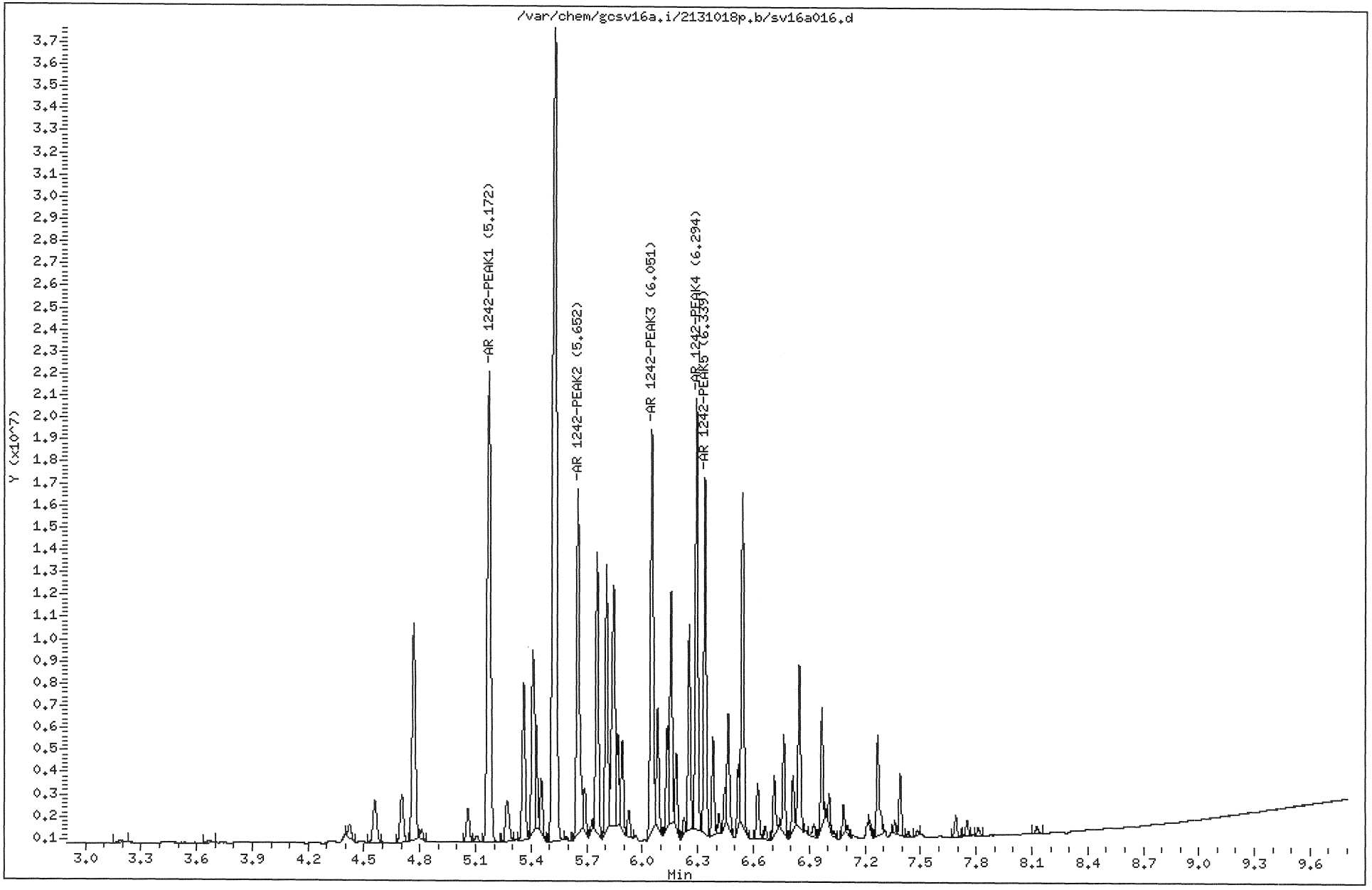
Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| M 47 AR 1242-AVG | | | | 98627658 | 400.000 | 400 |
| 48 AR 1242-PEAK1 | 5.172 | 5.171 | 0.001 | 27304580 | 400.000 | 400 |
| 49 AR 1242-PEAK2 | 5.652 | 5.651 | 0.001 | 17938214 | 400.000 | 400 |
| 50 AR 1242-PEAK3 | 6.051 | 6.051 | 0.000 | 19659053 | 400.000 | 400 |
| 51 AR 1242-PEAK4 | 6.294 | 6.292 | 0.002 | 18740711 | 400.000 | 400 |
| 52 AR 1242-PEAK5 | 6.339 | 6.339 | 0.000 | 14985100 | 400.000 | 400 |

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a016.d
Date : 18-OCT-2013 18:17
Client ID:
Sample Info: 1203x1 84-48-5
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv16a.i

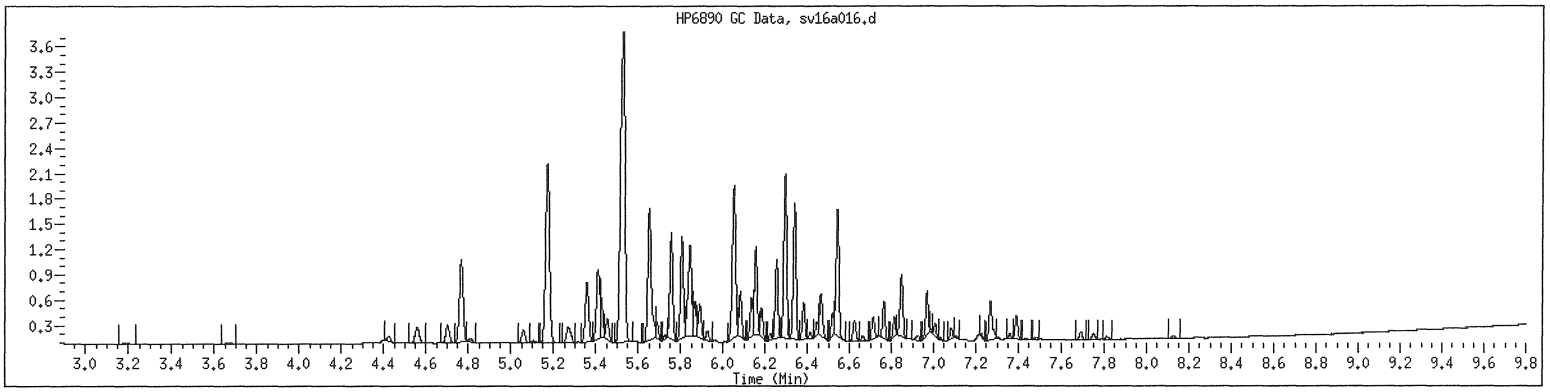
Operator: tls
Column diameter: 0.32




2131018 759

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1203 | SampleType | : CALIB_3 |
| Injection Date | : 10/18/2013 18:17 | Instrument | : gcsv16a.i |
| Operator | : tls | | |
| Sample Info | : 1203*1 84-48-5 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : aro1242 |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a017.d
Report Date: 22-Oct-2013 10:55

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131018p.b/sv16a017.d
Lab Smp Id: 1203
Inj Date : 18-OCT-2013 18:31
Operator : tls Inst ID: gcsv16a.i
Smp Info : 1203*1 84-48-6
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m
Meth Date : 22-Oct-2013 10:55 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:08 Cal File: sv16a032.d
Als bottle: 17 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: aro1248.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

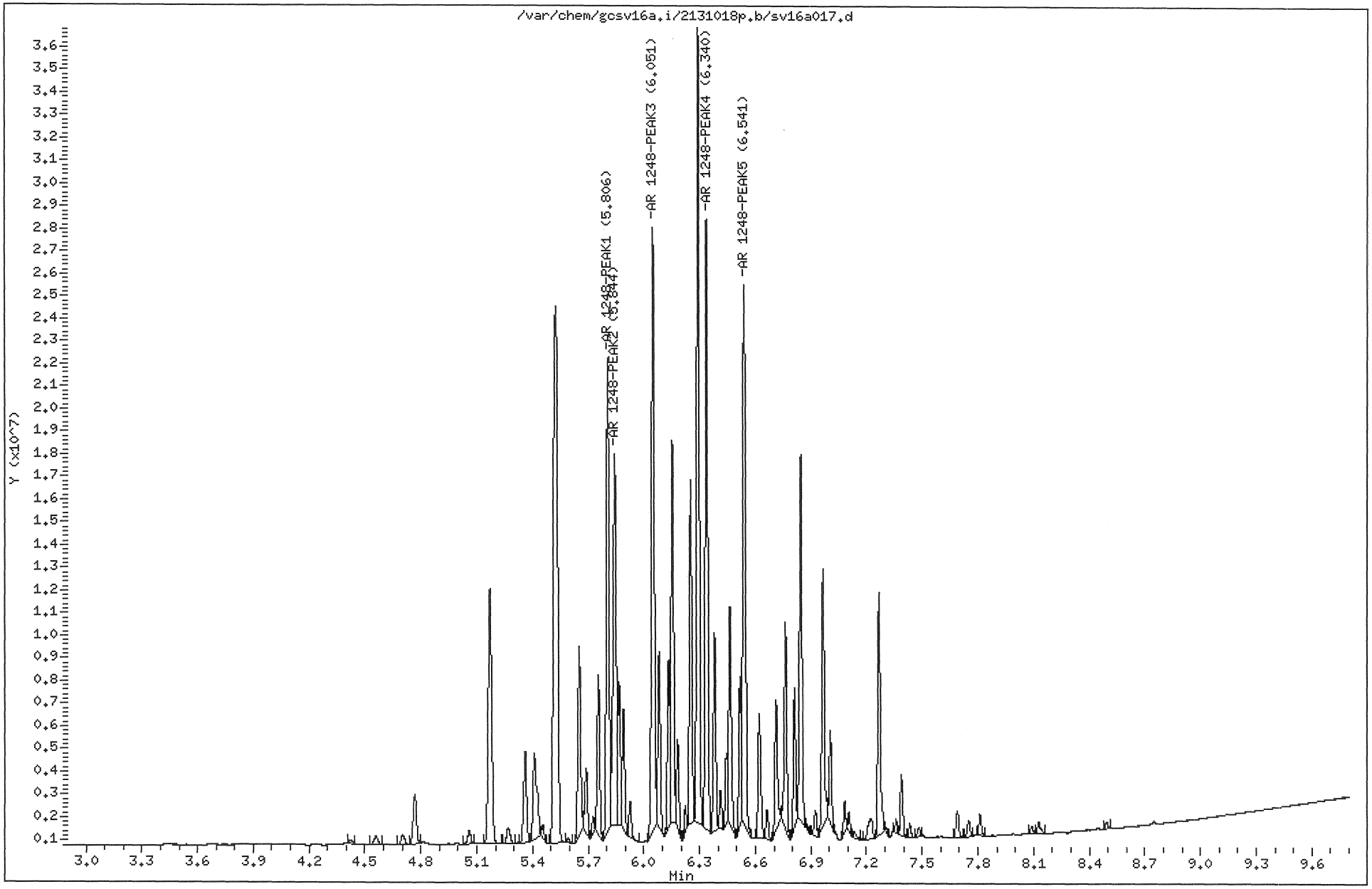
Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| M 53 AR 1248-AVG | | | | 117467537 | 400.000 | 400 |
| 54 AR 1248-PEAK1 | 5.806 | 5.807 | -0.001 | 20750141 | 400.000 | 400 |
| 55 AR 1248-PEAK2 | 5.844 | 5.842 | 0.002 | 19782090 | 400.000 | 400 |
| 56 AR 1248-PEAK3 | 6.051 | 6.051 | 0.000 | 27616300 | 400.000 | 400 |
| 57 AR 1248-PEAK4 | 6.340 | 6.340 | 0.000 | 24796176 | 400.000 | 400 |
| 58 AR 1248-PEAK5 | 6.541 | 6.541 | 0.000 | 24522830 | 400.000 | 400 |

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a017.d
Date : 18-OCT-2013 18:31
Client ID:
Sample Info: 1203x1 84-48-6
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv16a.i

Operator: tls
Column diameter: 0.32

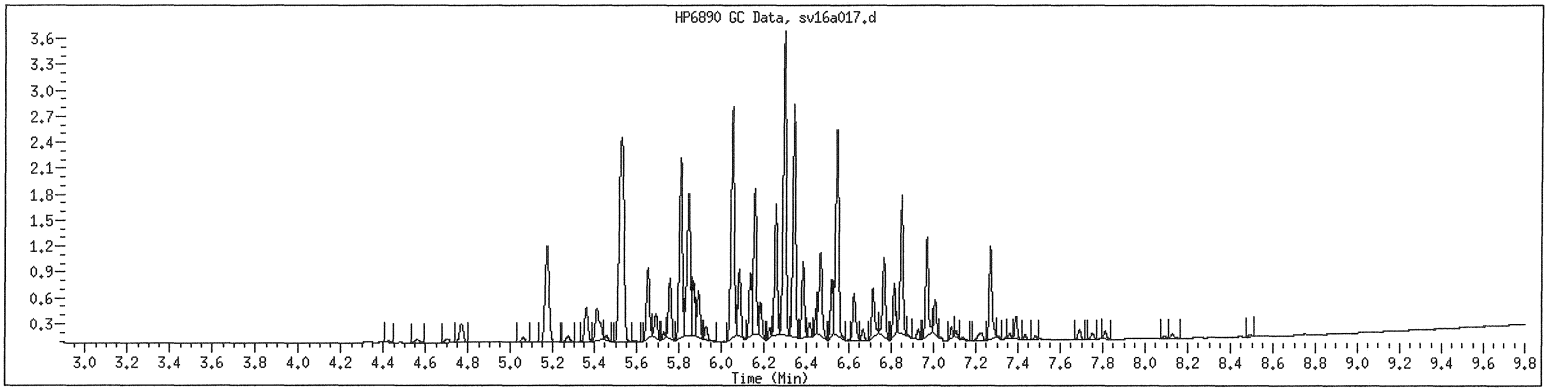



21310171 2 762

Report Date: 10/22/2013 10:55

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 1203 SampleType : CALIB_3
Injection Date: 10/18/2013 18:31 Instrument : gcsv16a.i
Operator : tls
Sample Info : 1203*1 84-48-6
Misc Info :
Method : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m
Dilution : 1.0
Matrix : WATER
Integrator : Falcon Compound Sublist: aro1248




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a018.d
Report Date: 22-Oct-2013 10:55

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131018p.b/sv16a018.d
Lab Smp Id: 1203
Inj Date : 18-OCT-2013 18:46
Operator : tls Inst ID: gcsv16a.i
Smp Info : 1203*1 84-48-7
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m
Meth Date : 22-Oct-2013 10:55 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:08 Cal File: sv16a032.d
Als bottle: 18 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: aro1254.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

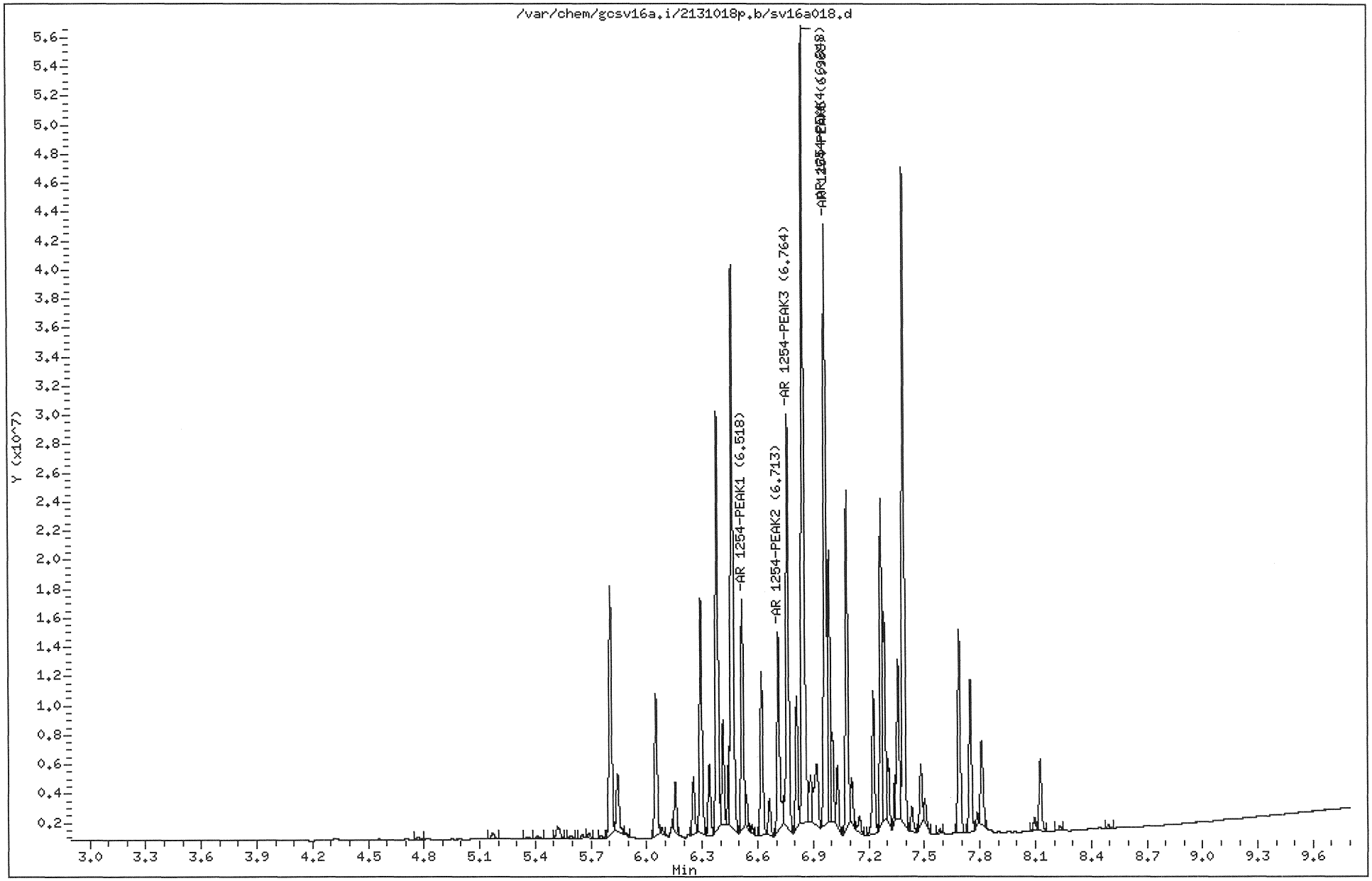
| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| M 59 AR 1254-AVG | | | | 144872955 | 400.000 | 400 |
| 60 AR 1254-PEAK1 | 6.518 | 6.519 | -0.001 | 14286173 | 400.000 | 400 |
| 61 AR 1254-PEAK2 | 6.713 | 6.712 | 0.001 | 13128121 | 400.000 | 400 |
| 62 AR 1254-PEAK3 | 6.764 | 6.763 | 0.001 | 26947347 | 400.000 | 400 |
| 63 AR 1254-PEAK4 | 6.848 | 6.848 | 0.000 | 52663835 | 400.000 | 400 |
| 64 AR 1254-PEAK5 | 6.968 | 6.968 | 0.000 | 37847479 | 400.000 | 400 |

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a018.d
Date : 18-OCT-2013 18:46
Client ID:
Sample Info: 1203*1 84-48-7
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv16a.i
Operator: tls
Column diameter: 0.32



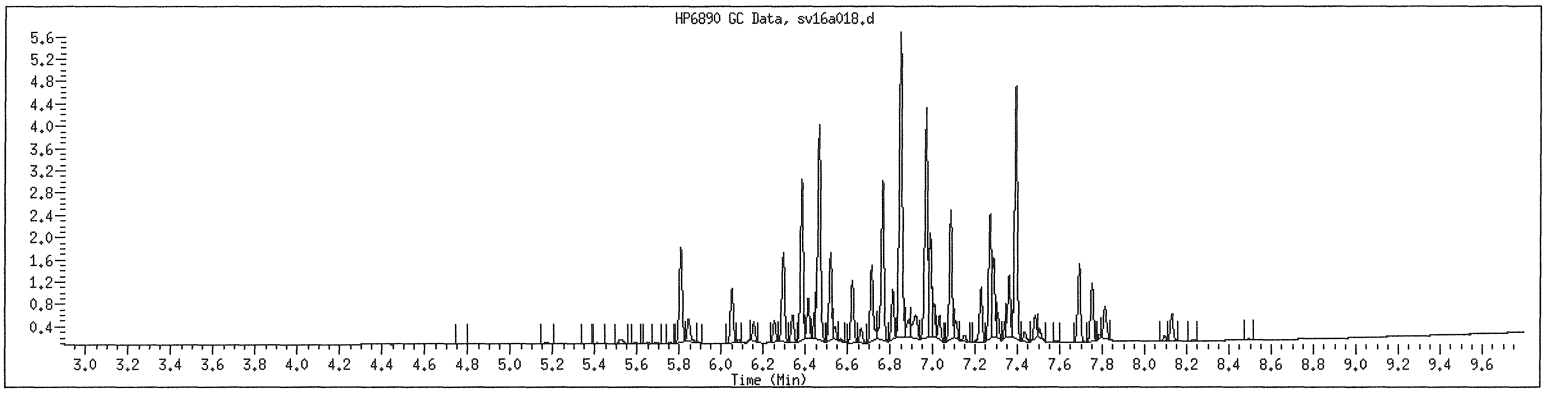

765

2131017 12

Report Date: 10/22/2013 10:55

MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1203 | SampleType | : CALIB_3 |
| Injection Date | : 10/18/2013 18:46 | Instrument | : gcsv16a.i |
| Operator | : tls | | |
| Sample Info | : 1203*1 84-48-7 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : aro1254 |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a021.d
Report Date: 22-Oct-2013 10:55

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131018p.b/sv16a021.d
Lab Smp Id: 1207
Inj Date : 18-OCT-2013 19:29
Operator : tls Inst ID: gcsv16a.i
Smp Info : 1207*1 20
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m
Meth Date : 22-Oct-2013 10:55 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 19:29 Cal File: sv16a021.d
Als bottle: 21 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: aro1260.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

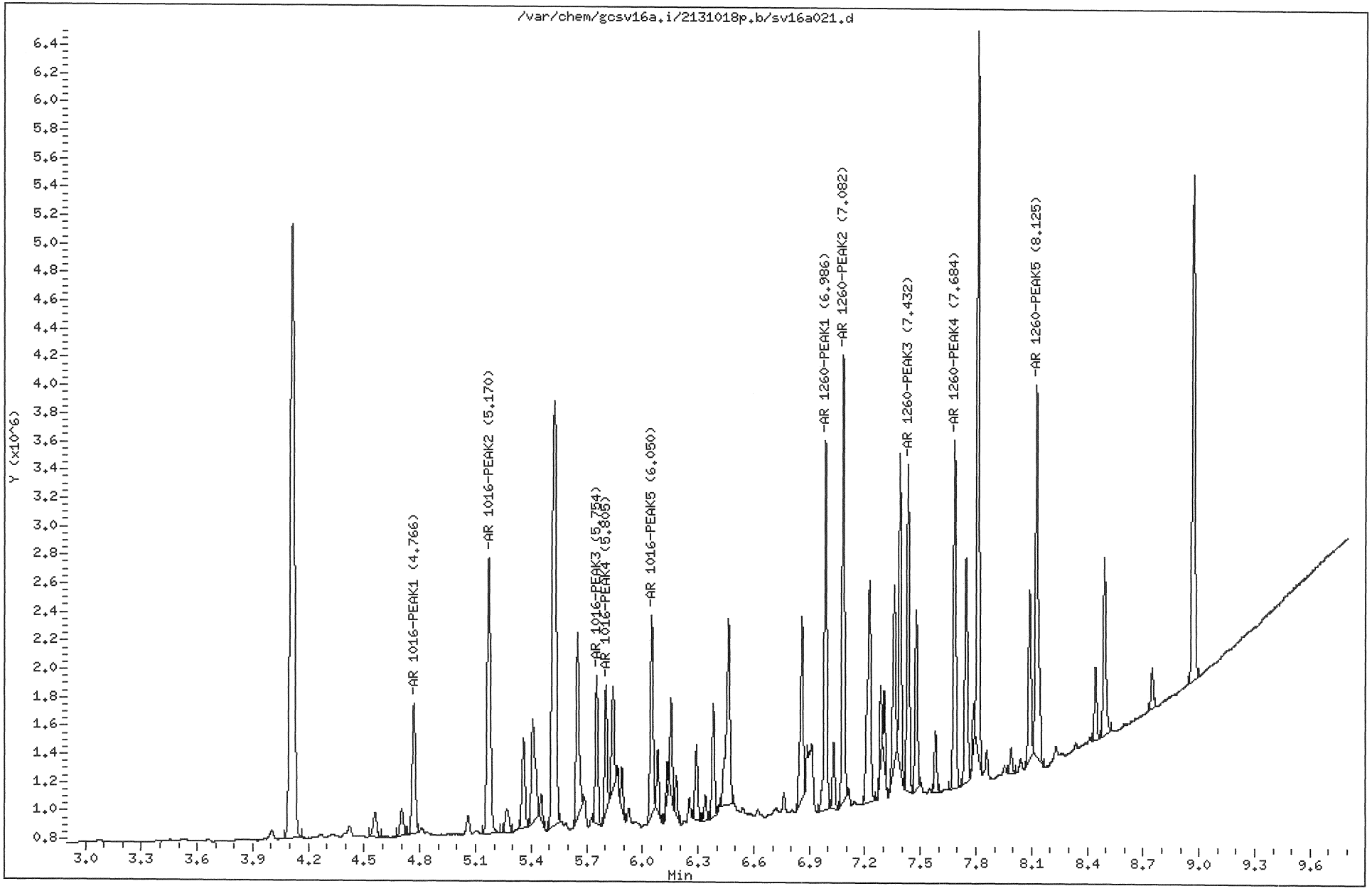
Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| M 23 AR 1016-AVG | | | | 7040678 | 20.0000 | 25 |
| 24 AR 1016-PEAK1 | 4.766 | 4.768 | -0.002 | 1119893 | 20.0000 | 26 |
| 25 AR 1016-PEAK2 | 5.170 | 5.171 | -0.001 | 2541703 | 20.0000 | 26 |
| 26 AR 1016-PEAK3 | 5.754 | 5.752 | 0.002 | 1054633 | 20.0000 | 24 |
| 27 AR 1016-PEAK4 | 5.805 | 5.807 | -0.002 | 853424 | 20.0000 | 23 |
| 28 AR 1016-PEAK5 | 6.050 | 6.050 | 0.000 | 1471025 | 20.0000 | 23 |
| M 29 AR 1260-AVG | | | | 12805758 | 20.0000 | 23 |
| 30 AR 1260-PEAK1 | 6.986 | 6.988 | -0.002 | 2563006 | 20.0000 | 24 |
| 31 AR 1260-PEAK2 | 7.082 | 7.081 | 0.001 | 2878755 | 20.0000 | 23 |
| 32 AR 1260-PEAK3 | 7.432 | 7.432 | 0.000 | 2125045 | 20.0000 | 24 |
| 33 AR 1260-PEAK4 | 7.684 | 7.683 | 0.001 | 2341962 | 20.0000 | 23 |
| 34 AR 1260-PEAK5 | 8.125 | 8.128 | -0.003 | 2896990 | 20.0000 | 22 |

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a021.d
Date : 18-OCT-2013 19:29
Client ID:
Sample Info: 1207x1 20
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv16a.i

Operator: tls
Column diameter: 0.32

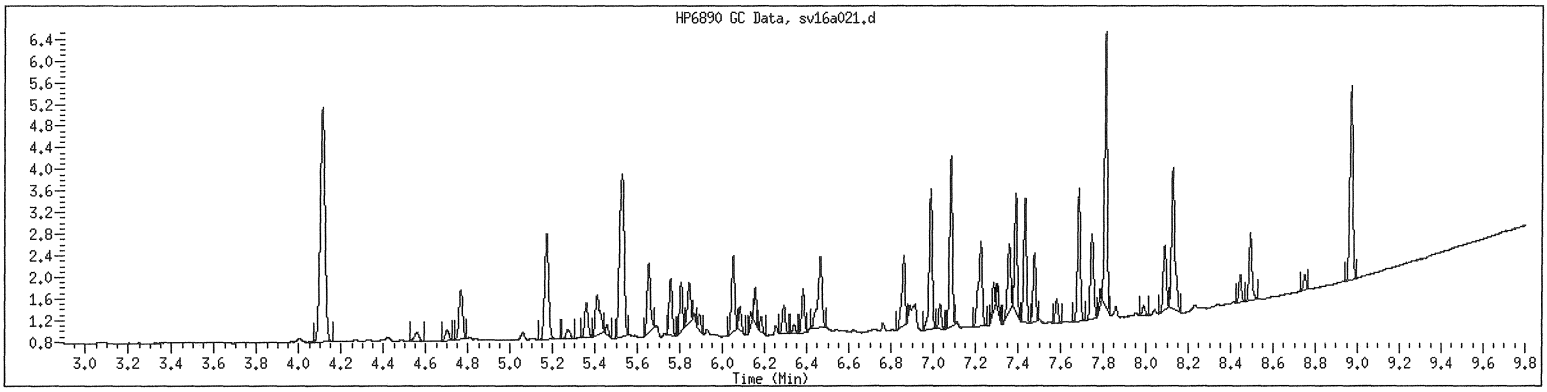



2131017 12 758

Report Date: 10/22/2013 10:55

MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1207 | SampleType | : CALIB_7 |
| Injection Date | : 10/18/2013 19:29 | Instrument | : gcsv16a.i |
| Operator | : tls | | |
| Sample Info | : 1207*1 20 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : aro1260 |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a022.d
Report Date: 22-Oct-2013 10:55

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131018p.b/sv16a022.d
Lab Smp Id: 1206
Inj Date : 18-OCT-2013 19:44
Operator : tls Inst ID: gcsv16a.i
Smp Info : 1206*1 50
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m
Meth Date : 22-Oct-2013 10:55 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 21:54 Cal File: sv16a031.d
Als bottle: 22 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: aro1260.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

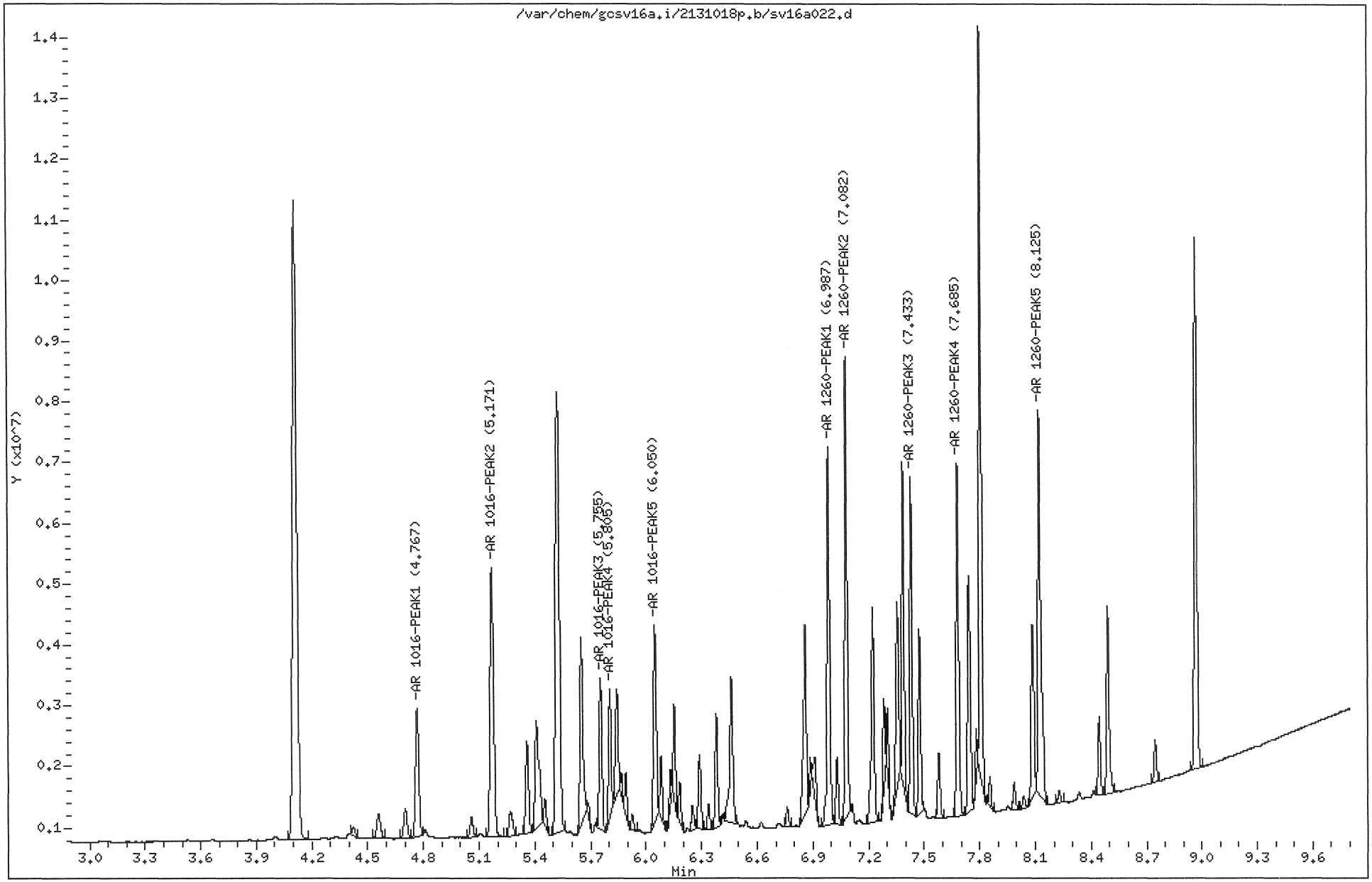
| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| M 23 AR 1016-AVG | | | | 16353992 | 50.0000 | 57 |
| 24 AR 1016-PEAK1 | 4.767 | 4.768 | -0.001 | 2622544 | 50.0000 | 60 |
| 25 AR 1016-PEAK2 | 5.171 | 5.171 | 0.000 | 5820701 | 50.0000 | 60 |
| 26 AR 1016-PEAK3 | 5.755 | 5.752 | 0.003 | 2500763 | 50.0000 | 56 |
| 27 AR 1016-PEAK4 | 5.805 | 5.807 | -0.002 | 1973558 | 50.0000 | 53 |
| 28 AR 1016-PEAK5 | 6.050 | 6.050 | 0.000 | 3436426 | 50.0000 | 55 |
| M 29 AR 1260-AVG | | | | 30398397 | 50.0000 | 54 |
| 30 AR 1260-PEAK1 | 6.987 | 6.988 | -0.001 | 6023883 | 50.0000 | 56 |
| 31 AR 1260-PEAK2 | 7.082 | 7.081 | 0.001 | 6782287 | 50.0000 | 54 |
| 32 AR 1260-PEAK3 | 7.433 | 7.432 | 0.001 | 4982411 | 50.0000 | 55 |
| 33 AR 1260-PEAK4 | 7.685 | 7.683 | 0.002 | 5558331 | 50.0000 | 55 |
| 34 AR 1260-PEAK5 | 8.125 | 8.128 | -0.003 | 7051485 | 50.0000 | 52 |

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a022.d
Date : 18-OCT-2013 19:44
Client ID:
Sample Info: 1206*1 50
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

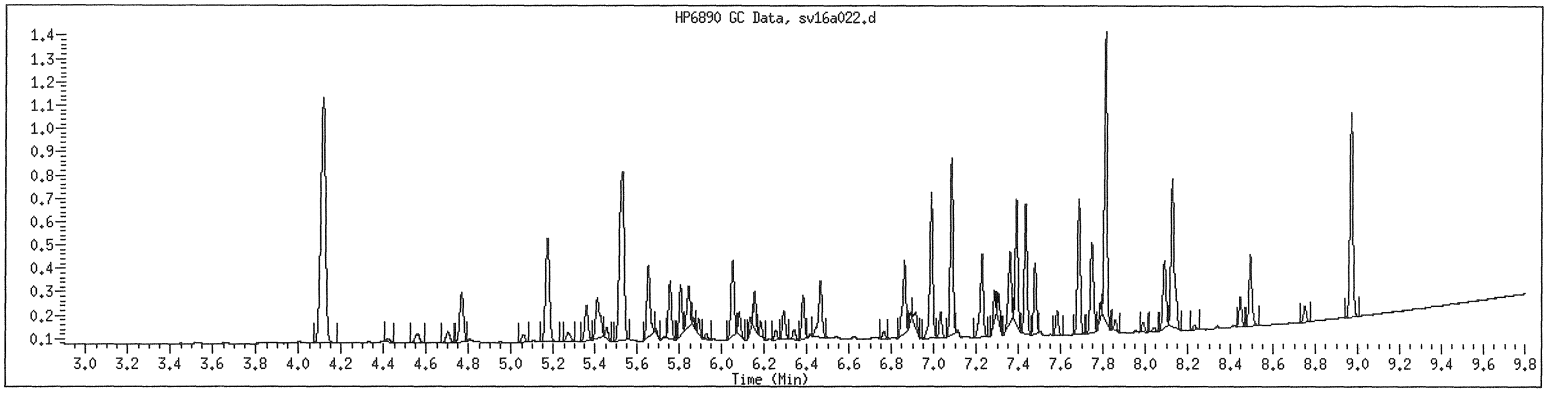
Instrument: gcsv16a.i
Operator: tls
Column diameter: 0.32




21310712 771

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1206 | SampleType | : CALIB_6 |
| Injection Date | : 10/18/2013 19:44 | Instrument | : gcsv16a.i |
| Operator | : tls | | |
| Sample Info | : 1206*1 50 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : aro1260 |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a023.d
Report Date: 22-Oct-2013 10:55

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131018p.b/sv16a023.d
Lab Smp Id: 1201
Inj Date : 18-OCT-2013 19:58
Operator : tls Inst ID: gcsv16a.i
Smp Info : 1201*1 100
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m
Meth Date : 22-Oct-2013 10:55 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 21:25 Cal File: sv16a029.d
Als bottle: 23 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: aro1260.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

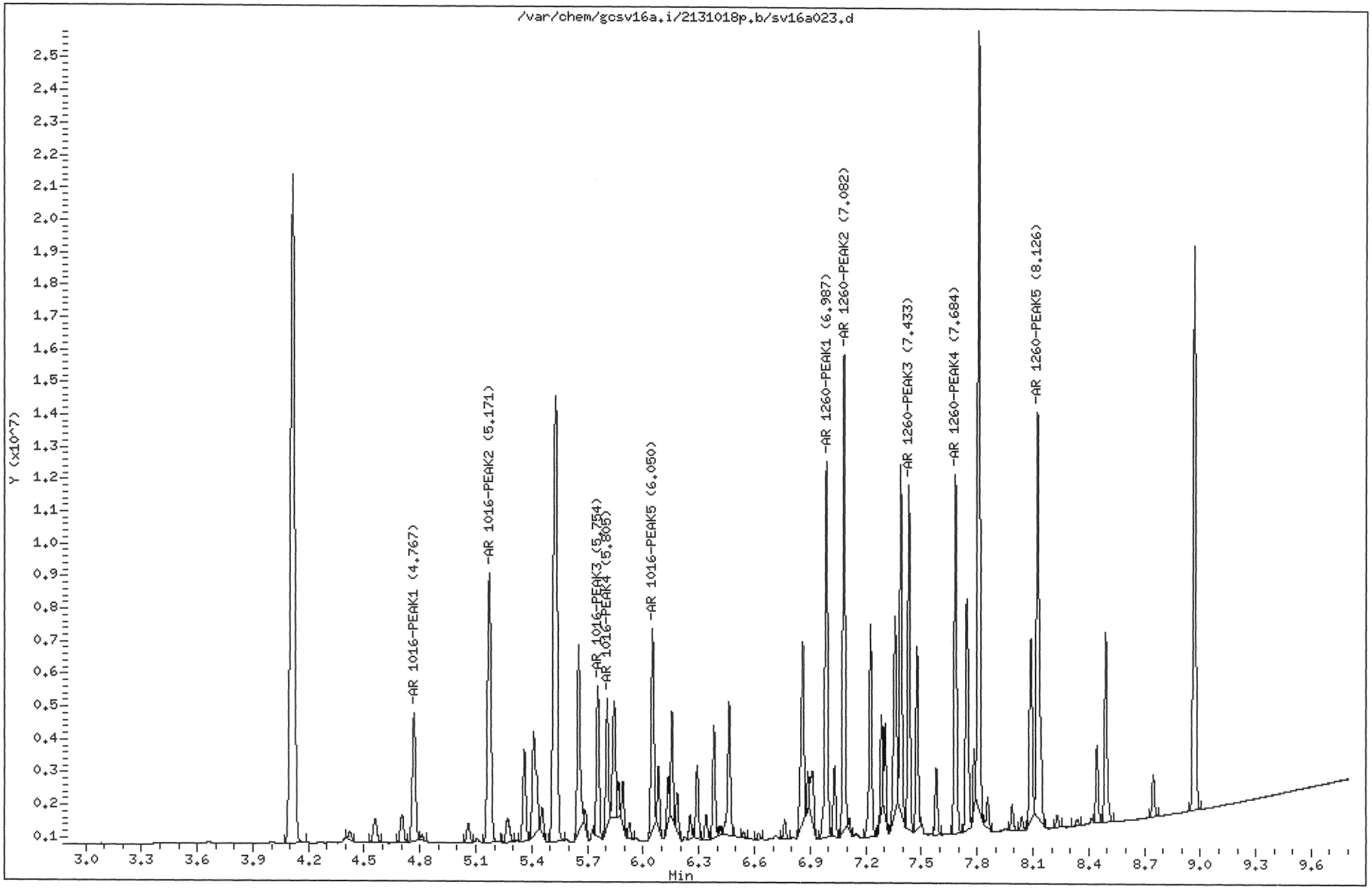
Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| M 23 AR 1016-AVG | | | | 30204540 | 100.000 | 110 |
| 24 AR 1016-PEAK1 | 4.767 | 4.768 | -0.001 | 4822645 | 100.000 | 110 |
| 25 AR 1016-PEAK2 | 5.171 | 5.171 | 0.000 | 10757004 | 100.000 | 110 |
| 26 AR 1016-PEAK3 | 5.754 | 5.753 | 0.001 | 4654664 | 100.000 | 100 |
| 27 AR 1016-PEAK4 | 5.805 | 5.807 | -0.002 | 3601153 | 100.000 | 96 |
| 28 AR 1016-PEAK5 | 6.050 | 6.050 | 0.000 | 6369074 | 100.000 | 100 |
| M 29 AR 1260-AVG | | | | 57664596 | 100.000 | 100 |
| 30 AR 1260-PEAK1 | 6.987 | 6.988 | -0.001 | 11357282 | 100.000 | 110 |
| 31 AR 1260-PEAK2 | 7.082 | 7.081 | 0.001 | 12828393 | 100.000 | 100 |
| 32 AR 1260-PEAK3 | 7.433 | 7.432 | 0.001 | 9372930 | 100.000 | 100 |
| 33 AR 1260-PEAK4 | 7.684 | 7.683 | 0.001 | 10567443 | 100.000 | 100 |
| 34 AR 1260-PEAK5 | 8.126 | 8.128 | -0.002 | 13538548 | 100.000 | 100 |

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a023.d
Date : 18-OCT-2013 19:58
Client ID:
Sample Info: 1201*1 100
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv16a.i

Operator: tls
Column diameter: 0.32

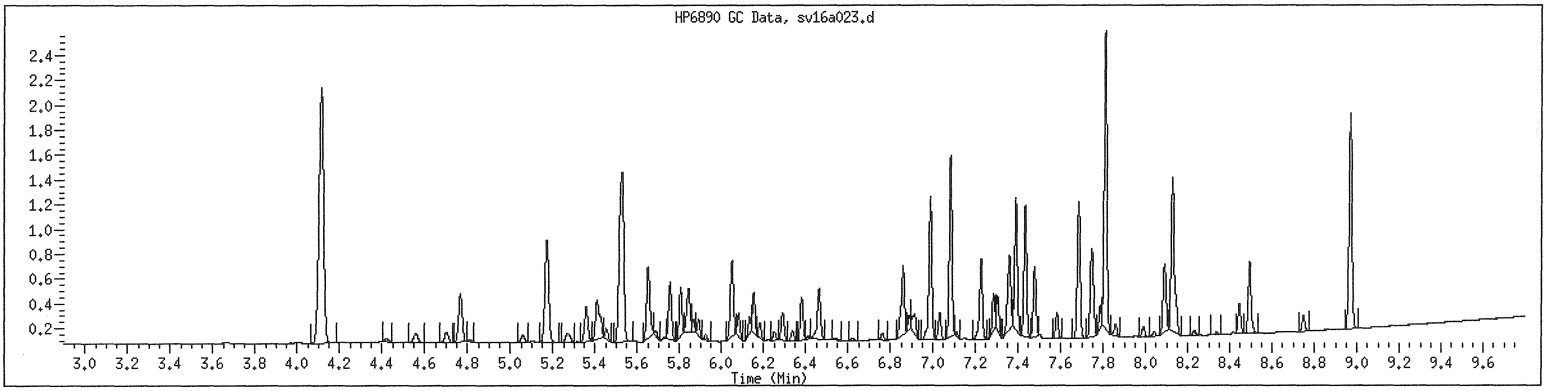



21310712 774

Report Date: 10/22/2013 10:55

MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1201 | SampleType | : CALIB_1 |
| Injection Date | : 10/18/2013 19:58 | Instrument | : gcsv16a.i |
| Operator | : tls | | |
| Sample Info | : 1201*1 100 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : aro1260 |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a024.d
Report Date: 22-Oct-2013 10:55

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131018p.b/sv16a024.d
Lab Smp Id: 1202
Inj Date : 18-OCT-2013 20:12
Operator : tls Inst ID: gcsv16a.i
Smp Info : 1202*1 200
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m
Meth Date : 22-Oct-2013 10:55 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 21:39 Cal File: sv16a030.d
Als bottle: 24 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: aro1260.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

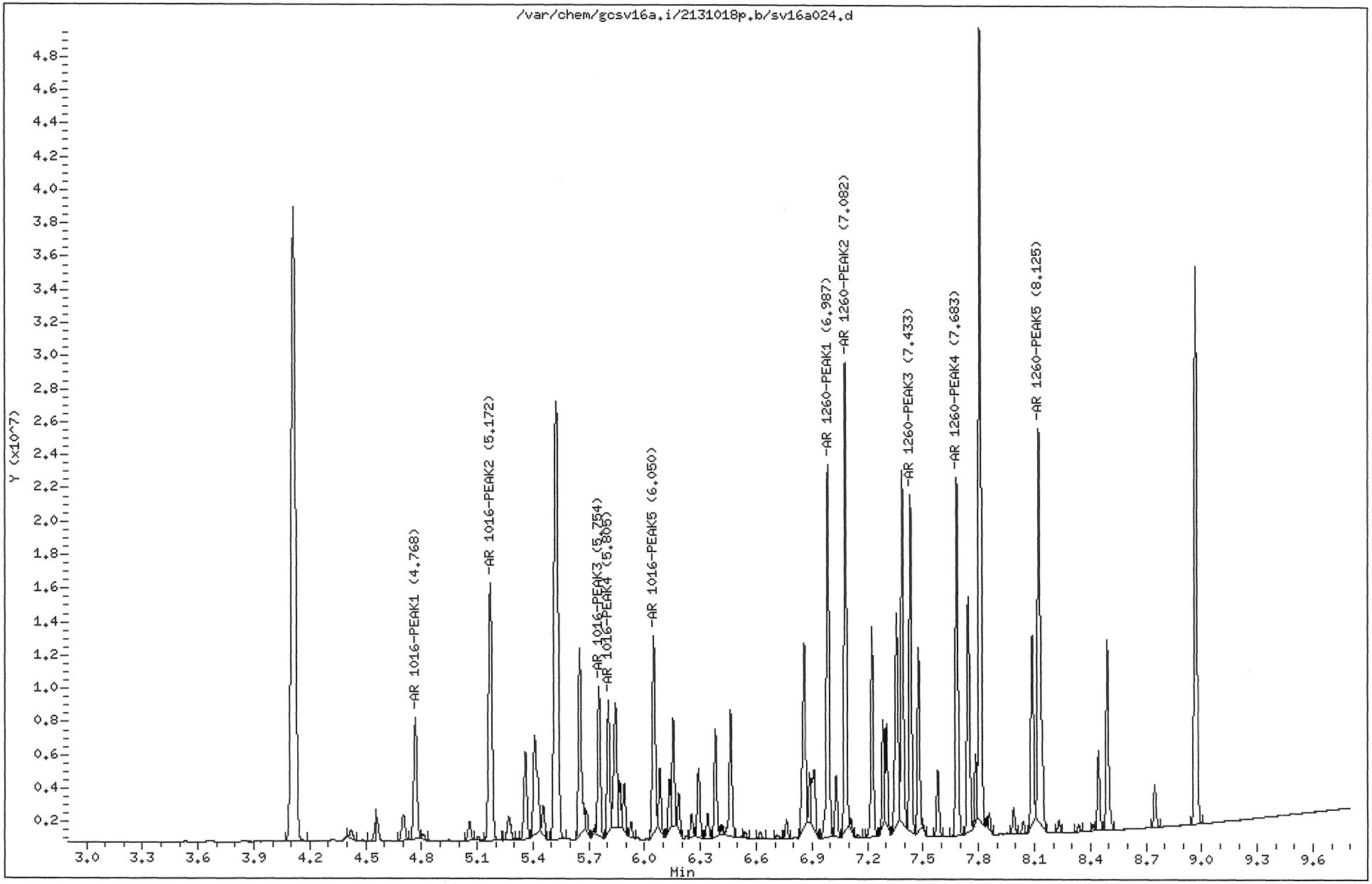
| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| M 23 AR 1016-AVG | | | | 58343376 | 200.000 | 200 |
| 24 AR 1016-PEAK1 | 4.768 | 4.768 | 0.000 | 8981215 | 200.000 | 210 |
| 25 AR 1016-PEAK2 | 5.172 | 5.171 | 0.001 | 20177439 | 200.000 | 210 |
| 26 AR 1016-PEAK3 | 5.754 | 5.753 | 0.001 | 8947728 | 200.000 | 200 |
| 27 AR 1016-PEAK4 | 5.805 | 5.807 | -0.002 | 7701672 | 200.000 | 210 |
| 28 AR 1016-PEAK5 | 6.050 | 6.050 | 0.000 | 12535322 | 200.000 | 200 |
| M 29 AR 1260-AVG | | | | 111704636 | 200.000 | 200 |
| 30 AR 1260-PEAK1 | 6.987 | 6.988 | -0.001 | 21788163 | 200.000 | 200 |
| 31 AR 1260-PEAK2 | 7.082 | 7.081 | 0.001 | 24846091 | 200.000 | 200 |
| 32 AR 1260-PEAK3 | 7.433 | 7.432 | 0.001 | 18104209 | 200.000 | 200 |
| 33 AR 1260-PEAK4 | 7.683 | 7.683 | 0.000 | 20516485 | 200.000 | 200 |
| 34 AR 1260-PEAK5 | 8.125 | 8.128 | -0.003 | 26449688 | 200.000 | 200 |

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a024.d
Date : 18-OCT-2013 20:12
Client ID:
Sample Info: 1202*1 200
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

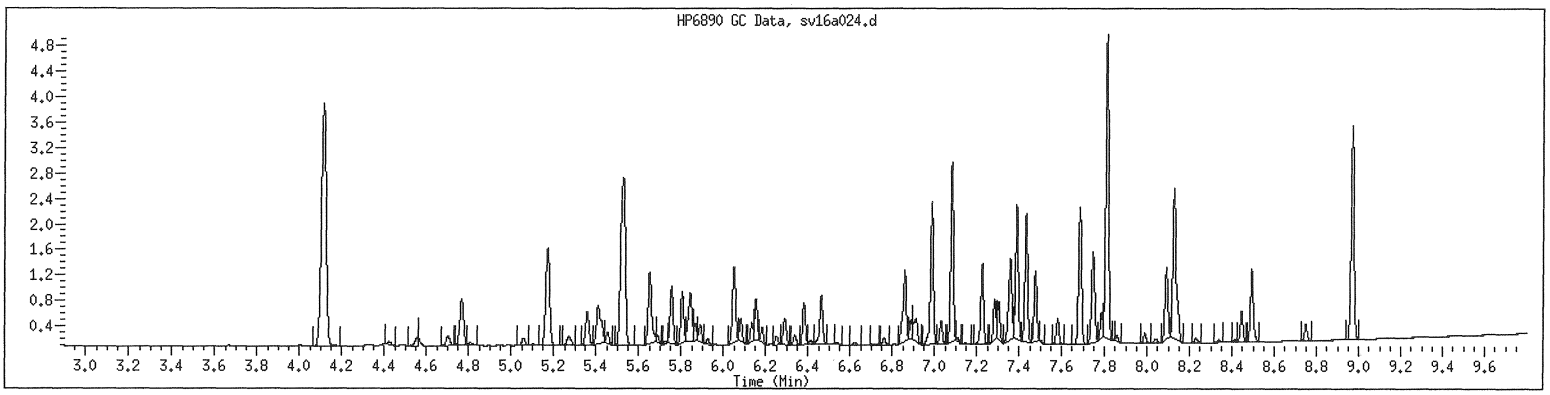
Instrument: gcsv16a.i
Operator: tls
Column diameter: 0.32




2131017 12 777

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1202 | SampleType | : CALIB_2 |
| Injection Date | : 10/18/2013 20:12 | Instrument | : gcsv16a.i |
| Operator | : tls | | |
| Sample Info | : 1202*1 200 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : aro1260 |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a025.d
Report Date: 22-Oct-2013 10:55

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131018p.b/sv16a025.d
Lab Smp Id: 1203
Inj Date : 18-OCT-2013 20:27
Operator : tls Inst ID: gcsv16a.i
Smp Info : 1203*1 400
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m
Meth Date : 22-Oct-2013 10:55 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:08 Cal File: sv16a032.d
Als bottle: 25 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: aro1260.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

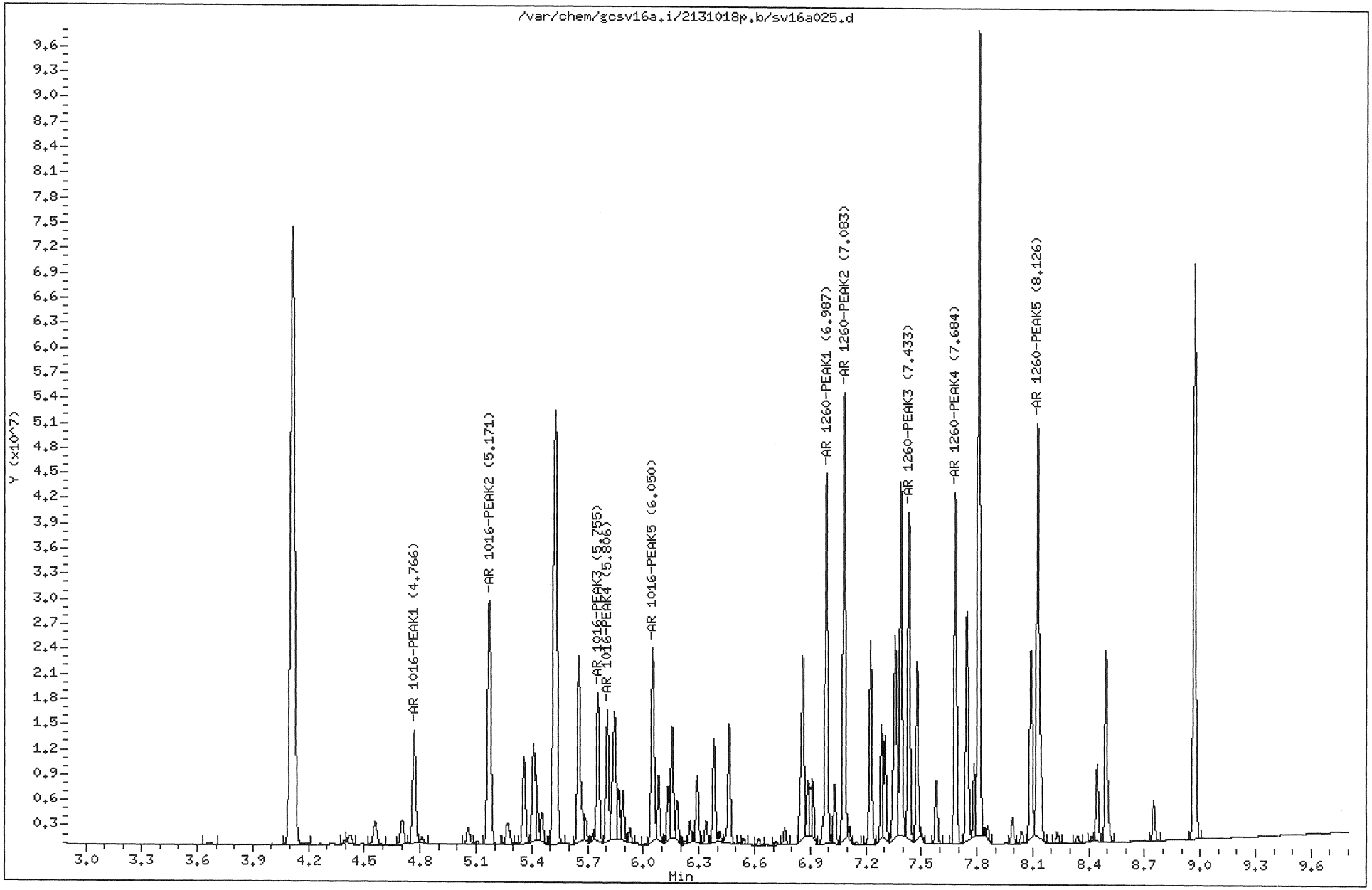
Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| M 23 AR 1016-AVG | | | | 111943507 | 400.000 | 390 |
| 24 AR 1016-PEAK1 | 4.766 | 4.768 | -0.002 | 16697526 | 400.000 | 380 |
| 25 AR 1016-PEAK2 | 5.171 | 5.171 | 0.000 | 37541524 | 400.000 | 380 |
| 26 AR 1016-PEAK3 | 5.755 | 5.753 | 0.002 | 17349100 | 400.000 | 390 |
| 27 AR 1016-PEAK4 | 5.806 | 5.807 | -0.001 | 15330588 | 400.000 | 410 |
| 28 AR 1016-PEAK5 | 6.050 | 6.050 | 0.000 | 25024769 | 400.000 | 400 |
| M 29 AR 1260-AVG | | | | 217918222 | 400.000 | 390 |
| 30 AR 1260-PEAK1 | 6.987 | 6.988 | -0.001 | 41973675 | 400.000 | 390 |
| 31 AR 1260-PEAK2 | 7.083 | 7.082 | 0.001 | 48339399 | 400.000 | 390 |
| 32 AR 1260-PEAK3 | 7.433 | 7.432 | 0.001 | 34813596 | 400.000 | 390 |
| 33 AR 1260-PEAK4 | 7.684 | 7.683 | 0.001 | 39758007 | 400.000 | 390 |
| 34 AR 1260-PEAK5 | 8.126 | 8.127 | -0.001 | 53033545 | 400.000 | 390 |

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a025.d
Date : 18-OCT-2013 20:27
Client ID:
Sample Info: 1203x1 400
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv16a.i

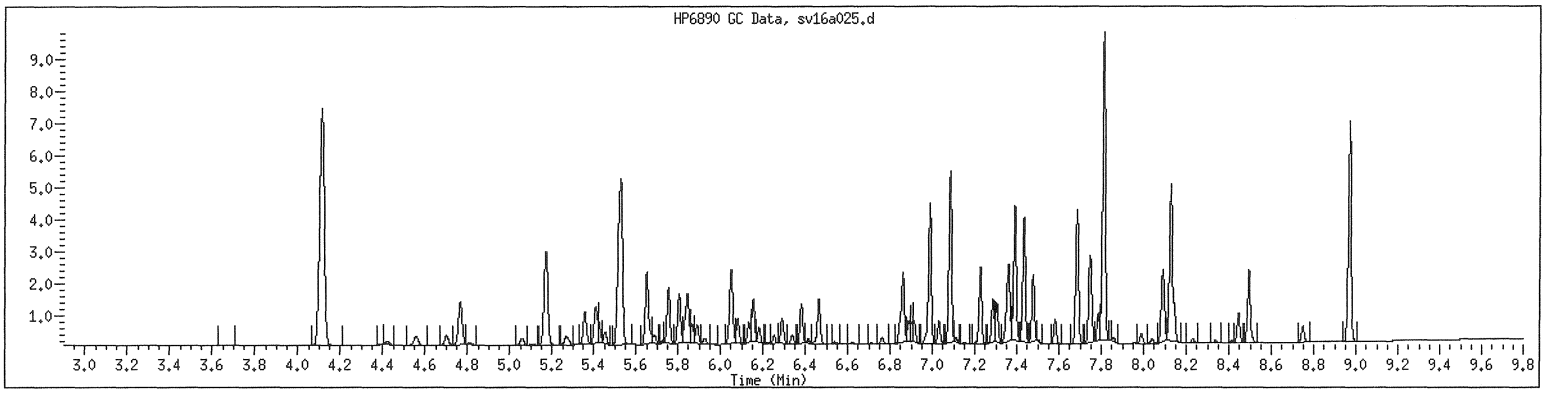
Operator: tls
Column diameter: 0.32




2131017 12 780

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1203 | SampleType | : CALIB_3 |
| Injection Date | : 10/18/2013 20:27 | Instrument | : gcsv16a.i |
| Operator | : tls | | |
| Sample Info | : 1203*1 400 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : aro1260 |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a026.d
Report Date: 22-Oct-2013 10:55

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131018p.b/sv16a026.d
Lab Smp Id: 1204
Inj Date : 18-OCT-2013 20:41
Operator : tls Inst ID: gcsv16a.i
Smp Info : 1204*1 800
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m
Meth Date : 22-Oct-2013 10:55 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:23 Cal File: sv16a033.d
Als bottle: 26 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: aro1260.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

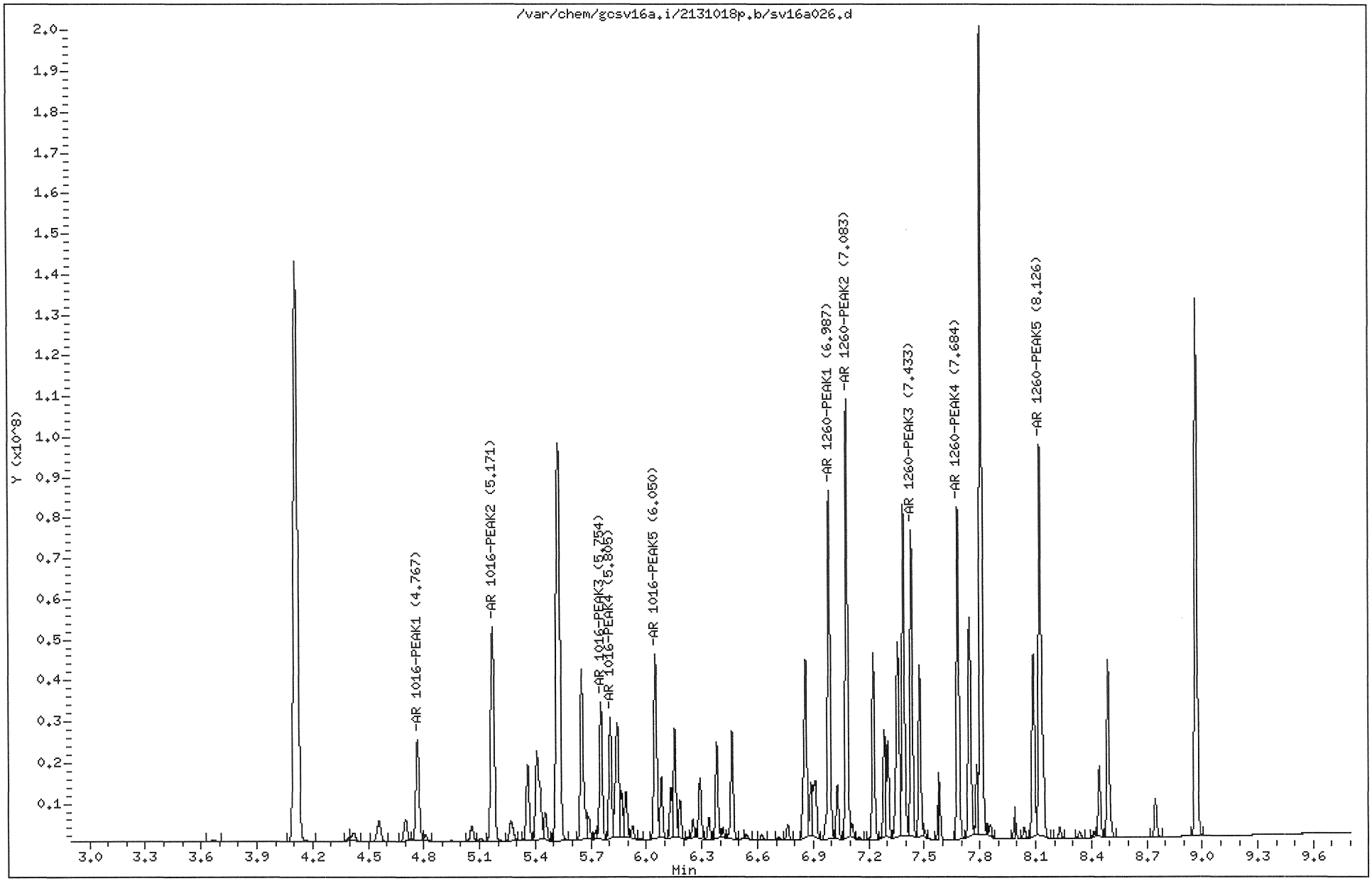
| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| M 23 AR 1016-AVG | | | | 212243396 | 800.000 | 740 |
| 24 AR 1016-PEAK1 | 4.767 | 4.768 | -0.001 | 30927548 | 800.000 | 710 |
| 25 AR 1016-PEAK2 | 5.171 | 5.171 | 0.000 | 69268552 | 800.000 | 710 |
| 26 AR 1016-PEAK3 | 5.754 | 5.753 | 0.001 | 33834135 | 800.000 | 760 |
| 27 AR 1016-PEAK4 | 5.805 | 5.806 | -0.001 | 29934121 | 800.000 | 800 |
| 28 AR 1016-PEAK5 | 6.050 | 6.050 | 0.000 | 48279040 | 800.000 | 770 |
| M 29 AR 1260-AVG | | | | 425447904 | 800.000 | 760 |
| 30 AR 1260-PEAK1 | 6.987 | 6.988 | -0.001 | 80500759 | 800.000 | 740 |
| 31 AR 1260-PEAK2 | 7.083 | 7.082 | 0.001 | 95186678 | 800.000 | 760 |
| 32 AR 1260-PEAK3 | 7.433 | 7.432 | 0.001 | 67708625 | 800.000 | 750 |
| 33 AR 1260-PEAK4 | 7.684 | 7.683 | 0.001 | 76763832 | 800.000 | 750 |
| 34 AR 1260-PEAK5 | 8.126 | 8.127 | -0.001 | 105288010 | 800.000 | 780 |

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a026.d
Date : 18-OCT-2013 20:41
Client ID:
Sample Info: 1204*1 800
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv16a.i
Operator: tls
Column diameter: 0.32

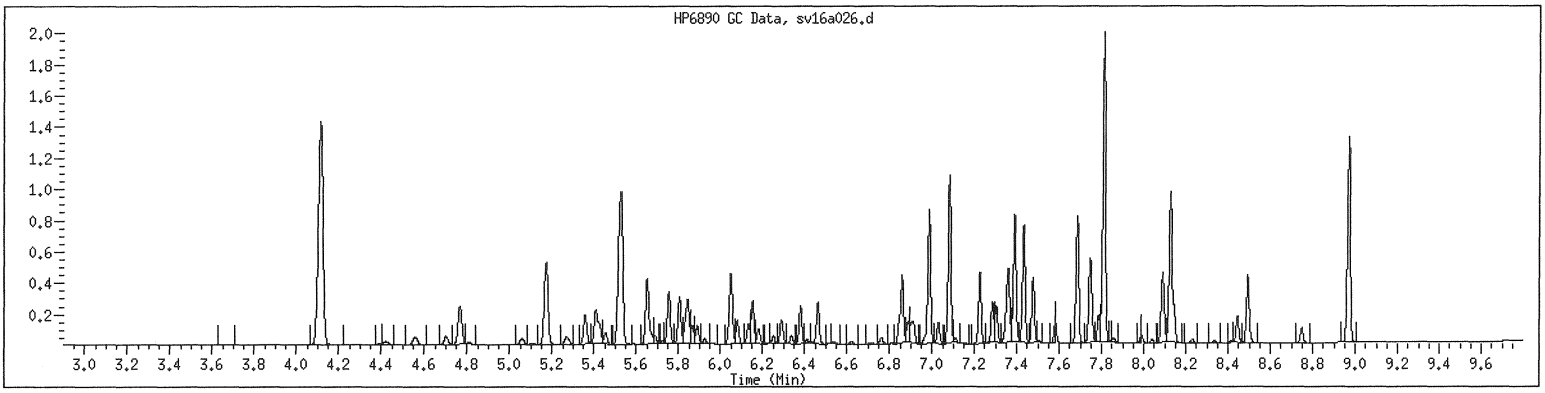



2131017 12 783

Report Date: 10/22/2013 10:55

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 1204 SampleType : CALIB_4
Injection Date: 10/18/2013 20:41 Instrument : gcsv16a.i
Operator : tls
Sample Info : 1204*1 800
Misc Info :
Method : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m
Dilution : 1.0
Matrix : WATER
Integrator : Falcon Compound Sublist: aro1260




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a027.d
Report Date: 22-Oct-2013 10:55

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131018p.b/sv16a027.d
Lab Smp Id: 1205
Inj Date : 18-OCT-2013 20:56
Operator : tls Inst ID: gcsv16a.i
Smp Info : 1205*1 84-57-9
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m
Meth Date : 22-Oct-2013 10:55 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:37 Cal File: sv16a034.d
Als bottle: 27 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: aro1260.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| M 23 AR 1016-AVG | | | | 403986178 | 1600.00 | 1400 |
| 24 AR 1016-PEAK1 | 4.767 | 4.768 | -0.001 | 57806260 | 1600.00 | 1300 |
| 25 AR 1016-PEAK2 | 5.172 | 5.171 | 0.001 | 130416713 | 1600.00 | 1300 |
| 26 AR 1016-PEAK3 | 5.755 | 5.753 | 0.002 | 65394744 | 1600.00 | 1500 |
| 27 AR 1016-PEAK4 | 5.807 | 5.806 | 0.001 | 56736171 | 1600.00 | 1500 |
| 28 AR 1016-PEAK5 | 6.052 | 6.050 | 0.002 | 93632290 | 1600.00 | 1500 |
| M 29 AR 1260-AVG | | | | 859321757 | 1600.00 | 1500 |
| 30 AR 1260-PEAK1 | 6.989 | 6.988 | 0.001 | 160072081 | 1600.00 | 1500 |
| 31 AR 1260-PEAK2 | 7.084 | 7.082 | 0.002 | 192918123 | 1600.00 | 1500 |
| 32 AR 1260-PEAK3 | 7.435 | 7.432 | 0.003 | 135640802 | 1600.00 | 1500 |
| 33 AR 1260-PEAK4 | 7.686 | 7.683 | 0.003 | 153848917 | 1600.00 | 1500 |
| 34 AR 1260-PEAK5 | 8.127 | 8.127 | 0.000 | 216841834 | 1600.00 | 1600(A) |

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a027.d
Report Date: 22-Oct-2013 10:55

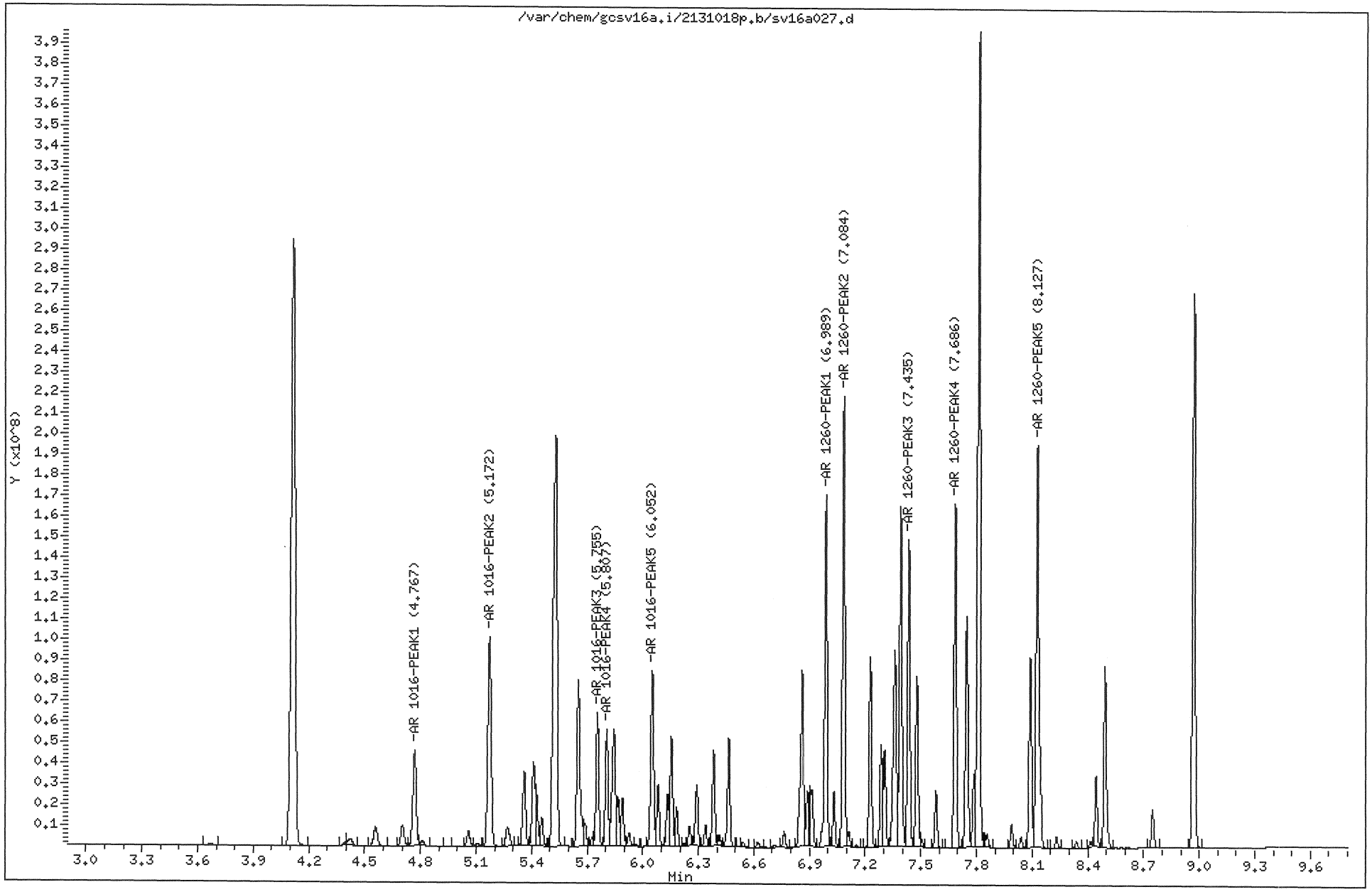
QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a027.d
Date : 18-OCT-2013 20:56
Client ID:
Sample Info: 1205x1 84-57-9
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv16a.i

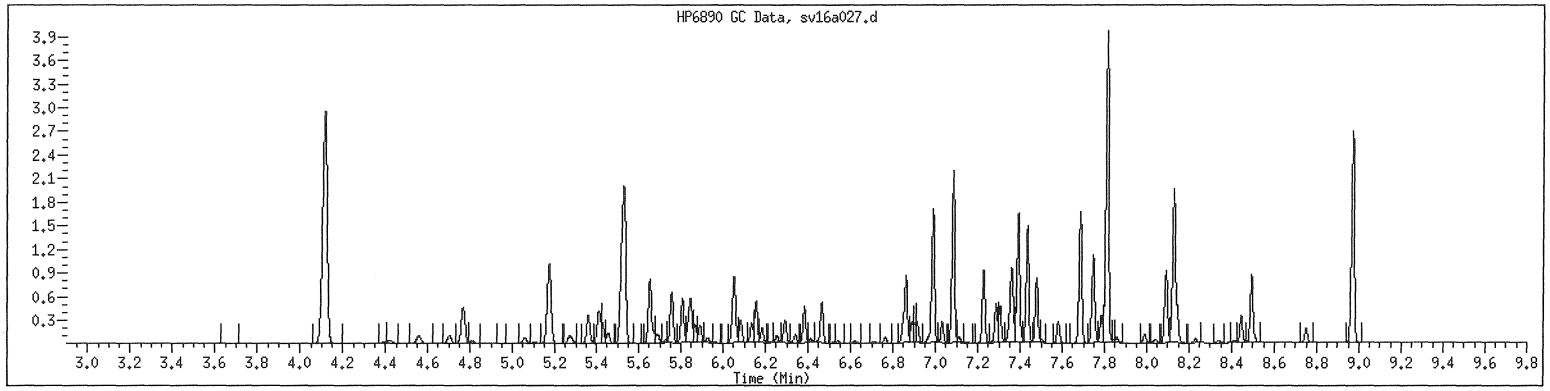
Operator: tls
Column diameter: 0.32




21310171 2 787

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1205 | SampleType | : CALIB_5 |
| Injection Date | : 10/18/2013 20:56 | Instrument | : gcsv16a.i |
| Operator | : tls | | |
| Sample Info | : 1205*1 84-57-9 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : aro1260 |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a028.d
Report Date: 22-Oct-2013 10:55

GCAL, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 1600
Level: LOW
Data Type: GC MULTI COMP
SpikeList File: pcbicv.spk
Sublist File: aro1260.sub
Method File: /var/chem/gcsv16a.i/2131018p.b/pest35ms.m
Misc Info:

Client SDG: 2131018p
Fraction: SV

Operator: tls
SampleType: LCS
Quant Type: ESTD

| SPIKE COMPOUND | CONC ADDED UG/L | CONC RECOVERED UG/L | % RECOVERED | LIMITS |
|---|---|---|---|---|
| M 23 AR 1016-AVG | 400 | 390 | 97.83 | 85-115 |
| M 29 AR 1260-AVG | 400 | 370 | 93.50 | 85-115 |

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a028.d
Report Date: 22-Oct-2013 10:55

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131018p.b/sv16a028.d
Lab Smp Id: 1600
Inj Date : 18-OCT-2013 21:11
Operator : tls Inst ID: gcsv16a.i
Smp Info : 1600*1 84-51-9
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m
Meth Date : 22-Oct-2013 10:55 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:37 Cal File: sv16a034.d
Als bottle: 28 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: aro1260.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 1.00000 | Volume of final extract (mL) |
| Vo | 1.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

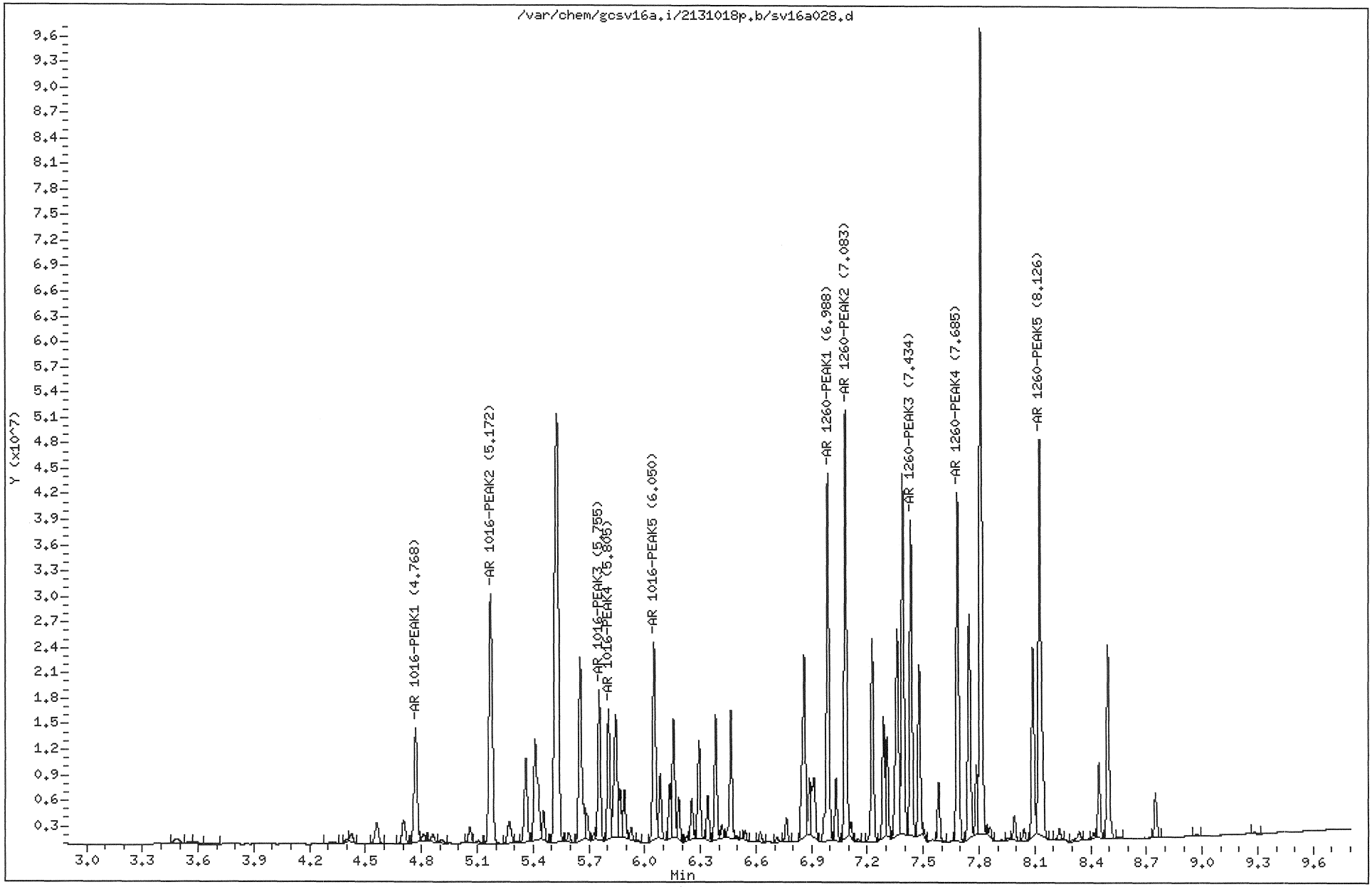
Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | FINAL ( UG/L) |
|---|---|---|---|---|---|---|
| M 23 AR 1016-AVG | | | | 112082894 | 391.329 | 390 |
| 24 AR 1016-PEAK1 | 4.768 | 4.768 | 0.000 | 16325536 | 373.702 | 370 |
| 25 AR 1016-PEAK2 | 5.172 | 5.171 | 0.001 | 37658947 | 385.047 | 390 |
| 26 AR 1016-PEAK3 | 5.755 | 5.753 | 0.002 | 17313250 | 387.845 | 390 |
| 27 AR 1016-PEAK4 | 5.805 | 5.806 | -0.001 | 15161634 | 403.960 | 400 |
| 28 AR 1016-PEAK5 | 6.050 | 6.050 | 0.000 | 25623527 | 408.314 | 410 |
| M 29 AR 1260-AVG | | | | 209236137 | 373.990 | 370 |
| 30 AR 1260-PEAK1 | 6.988 | 6.988 | 0.000 | 41531057 | 384.193 | 380 |
| 31 AR 1260-PEAK2 | 7.083 | 7.082 | 0.001 | 44580651 | 357.329 | 360 |
| 32 AR 1260-PEAK3 | 7.434 | 7.432 | 0.002 | 32763858 | 363.811 | 360 |
| 33 AR 1260-PEAK4 | 7.685 | 7.683 | 0.002 | 38464645 | 377.766 | 380 |
| 34 AR 1260-PEAK5 | 8.126 | 8.127 | -0.001 | 51895926 | 385.183 | 390 |

Data File: /var/chem/gcsv16a.i/2131018p.b/sv16a028.d
Date : 18-OCT-2013 21:11
Client ID:
Sample Info: 1600*1 84-51-9
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv16a.i

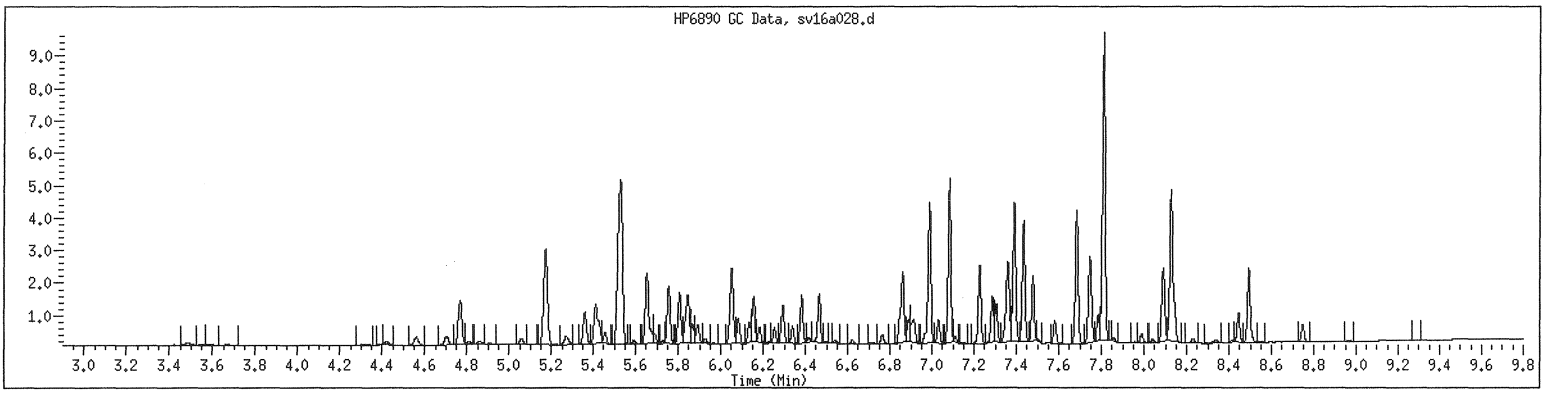
Operator: tls
Column diameter: 0.32




2131018 791

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1600 | SampleType | : LCS |
| Injection Date | : 10/18/2013 21:11 | Instrument | : gcsv16a.i |
| Operator | : tls | | |
| Sample Info | : 1600*1 84-51-9 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv16a.i/2131018p.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : aro1260 |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv16a.i/2131021p.b/sv16a004.d
Report Date: 21-Oct-2013 15:42

GCAL, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcsv16a.i  Injection Date: 21-OCT-2013 12:11
Lab File ID: sv16a004.d  Init. Cal. Date(s): 18-OCT-2013  18-OCT-2013
Analysis Type: WATER  Init. Cal. Times:  15:09  22:37
Lab Sample ID: 1400  Quant Type:  ESTD
Method: /var/chem/gcsv16a.i/2131021p.b/pest35ms.m

| COMPOUND | RRF / AMOUNT | RF60 | MIN RRF | %D / %DRIFT | MAX %D / %DRIFT | CURVE TYPE |
|---|---|---|---|---|---|---|
| M 23 AR 1016-AVG | 286416 | 286259 | 0.010 | 0.05500 | 20.00000 | Averaged |
| 24 AR 1016-PEAK1 | 43686 | 43359 | 0.010 | 0.74755 | 20.00000 | Averaged |
| 25 AR 1016-PEAK2 | 97804 | 97718 | 0.010 | 0.08707 | 20.00000 | Averaged |
| 26 AR 1016-PEAK3 | 44640 | 44921 | 0.010 | -0.63142 | 20.00000 | Averaged |
| 27 AR 1016-PEAK4 | 37533 | 38970 | 0.010 | -3.82899 | 20.00000 | Averaged |
| 28 AR 1016-PEAK5 | 62754 | 61290 | 0.010 | 2.33416 | 20.00000 | Averaged |
| M 29 AR 1260-AVG | 559470 | 563635 | 0.010 | -0.74443 | 20.00000 | Averaged |
| 30 AR 1260-PEAK1 | 108099 | 107028 | 0.010 | 0.99149 | 20.00000 | Averaged |
| 31 AR 1260-PEAK2 | 124761 | 123807 | 0.010 | 0.76432 | 20.00000 | Averaged |
| 32 AR 1260-PEAK3 | 90057 | 91742 | 0.010 | -1.87022 | 20.00000 | Averaged |
| 33 AR 1260-PEAK4 | 101821 | 100747 | 0.010 | 1.05551 | 20.00000 | Averaged |
| 34 AR 1260-PEAK5 | 134731 | 140311 | 0.010 | -4.14214 | 20.00000 | Averaged |

Average %D / Drift Results.

Calculated Average %D/Drift = 1.43769
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

Data File: /var/chem/gcsv16a.i/2131021p.b/sv16a004.d
Report Date: 21-Oct-2013 15:42

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131021p.b/sv16a004.d
Lab Smp Id: 1400
Inj Date : 21-OCT-2013 12:11
Operator : tls Inst ID: gcsv16a.i
Smp Info : 1400*1 84-57-9
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131021p.b/pest35ms.m
Meth Date : 21-Oct-2013 15:42 dlb Quant Type: ESTD
Cal Date : 18-OCT-2013 22:37 Cal File: sv16a034.d
Als bottle: 4 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: aro1260.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

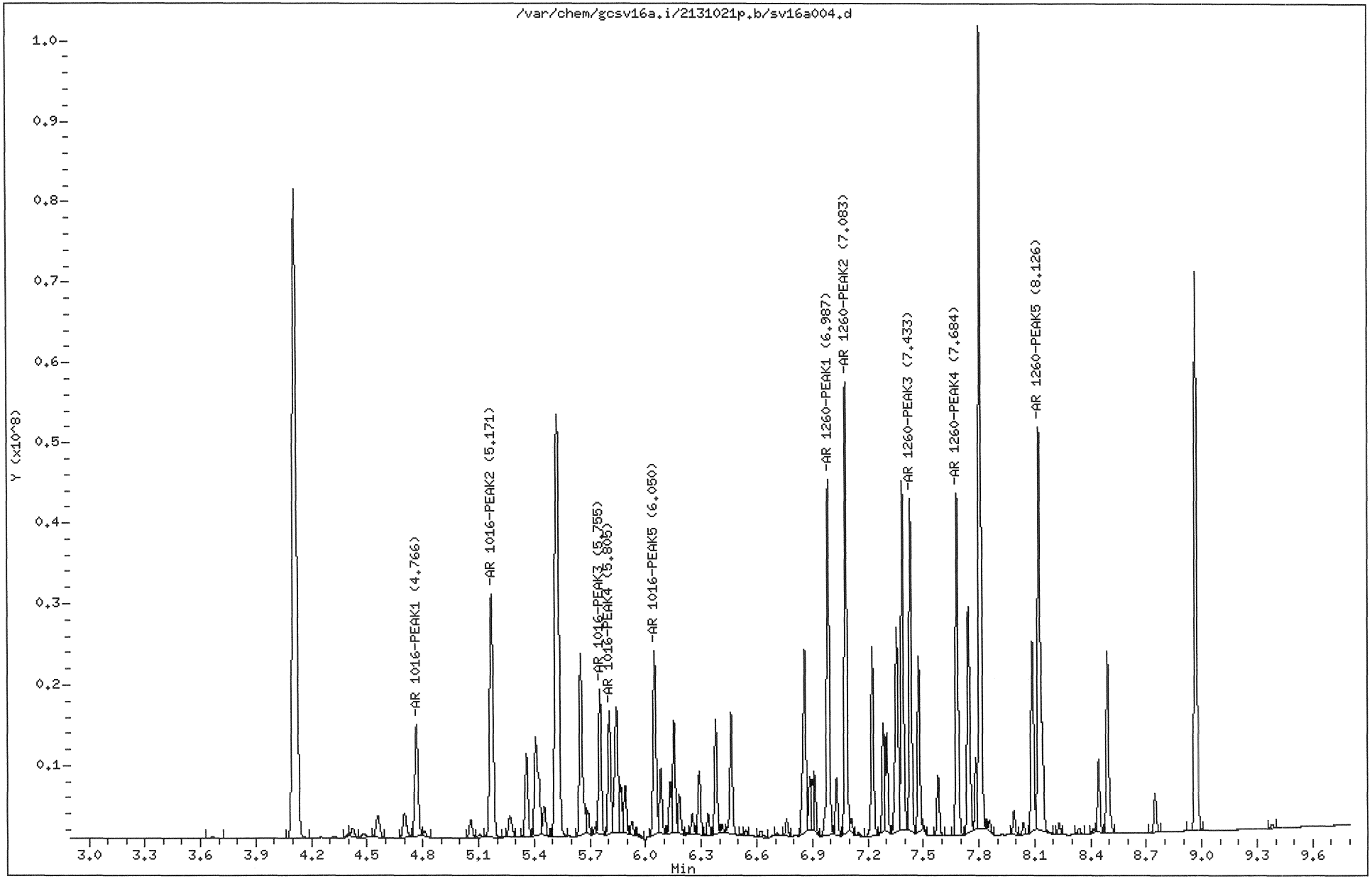
| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| M 23 AR 1016-AVG | | | | 114503419 | 400.000 | 400 |
| 24 AR 1016-PEAK1 | 4.766 | 4.768 | -0.002 | 17343741 | 400.000 | 400 |
| 25 AR 1016-PEAK2 | 5.171 | 5.171 | 0.000 | 39087352 | 400.000 | 400 |
| 26 AR 1016-PEAK3 | 5.755 | 5.752 | 0.003 | 17968591 | 400.000 | 400 |
| 27 AR 1016-PEAK4 | 5.805 | 5.807 | -0.002 | 15587865 | 400.000 | 420 |
| 28 AR 1016-PEAK5 | 6.050 | 6.050 | 0.000 | 24515870 | 400.000 | 390 |
| M 29 AR 1260-AVG | | | | 225453863 | 400.000 | 400 |
| 30 AR 1260-PEAK1 | 6.987 | 6.989 | -0.002 | 42811048 | 400.000 | 400 |
| 31 AR 1260-PEAK2 | 7.083 | 7.081 | 0.002 | 49522956 | 400.000 | 400 |
| 32 AR 1260-PEAK3 | 7.433 | 7.432 | 0.001 | 36696629 | 400.000 | 410 |
| 33 AR 1260-PEAK4 | 7.684 | 7.683 | 0.001 | 40298697 | 400.000 | 400 |
| 34 AR 1260-PEAK5 | 8.126 | 8.128 | -0.002 | 56124533 | 400.000 | 420 |

Data File: /var/chem/gcsv16a.i/2131021p.b/sv16a004.d
Date : 21-OCT-2013 12:11
Client ID:
Sample Info: 1400*1 84-57-9
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

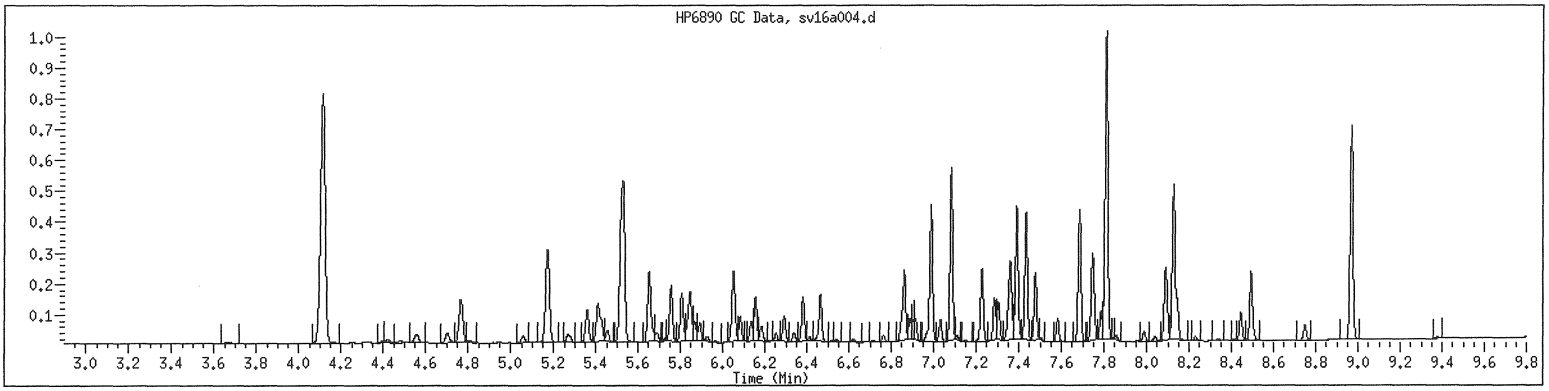
Instrument: gcsv16a.i
Operator: tls
Column diameter: 0.32



Report Date: 10/21/2013 15:42

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 1400 SampleType : CCALIB_3
Injection Date: 10/21/2013 12:11 Instrument : gcsv16a.i
Operator : tls
Sample Info : 1400*1 84-57-9
Misc Info :
Method : /var/chem/gcsv16a.i/2131021p.b/pest35ms.m
Dilution : 1.0
Matrix : WATER
Integrator : Falcon Compound Sublist: aro1260




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv16a.i/2131021p.b/sv16a011.d
Report Date: 21-Oct-2013 15:42

GCAL, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcsv16a.i  Injection Date: 21-OCT-2013 15:17
Lab File ID: sv16a011.d  Init. Cal. Date(s): 18-OCT-2013  18-OCT-2013
Analysis Type: WATER  Init. Cal. Times:  15:09  22:37
Lab Sample ID: 1400  Quant Type:  ESTD
Method: /var/chem/gcsv16a.i/2131021p.b/pest35ms.m

| COMPOUND | RRF / AMOUNT | RF60 | MIN RRF | %D / %DRIFT | MAX %D / %DRIFT | CURVE TYPE |
|---|---|---|---|---|---|---|
| M 23 AR 1016-AVG | 286416 | 259012 | 0.010 | 9.56788 | 20.00000 | Averaged |
| 24 AR 1016-PEAK1 | 43686 | 39695 | 0.010 | 9.13559 | 20.00000 | Averaged |
| 25 AR 1016-PEAK2 | 97804 | 91210 | 0.010 | 6.74142 | 20.00000 | Averaged |
| 26 AR 1016-PEAK3 | 44640 | 39339 | 0.010 | 11.87453 | 20.00000 | Averaged |
| 27 AR 1016-PEAK4 | 37533 | 34353 | 0.010 | 8.47079 | 20.00000 | Averaged |
| 28 AR 1016-PEAK5 | 62754 | 54415 | 0.010 | 13.28924 | 20.00000 | Averaged |
| M 29 AR 1260-AVG | 559470 | 492178 | 0.010 | 12.02773 | 20.00000 | Averaged |
| 30 AR 1260-PEAK1 | 108099 | 95741 | 0.010 | 11.43227 | 20.00000 | Averaged |
| 31 AR 1260-PEAK2 | 124761 | 109257 | 0.010 | 12.42731 | 20.00000 | Averaged |
| 32 AR 1260-PEAK3 | 90057 | 88762 | 0.010 | 1.43884 | 20.00000 | Averaged |
| 33 AR 1260-PEAK4 | 101821 | 89409 | 0.010 | 12.19044 | 20.00000 | Averaged |
| 34 AR 1260-PEAK5 | 134731 | 109010 | 0.010 | 19.09039 | 20.00000 | Averaged |

Average %D / Drift Results.

Calculated Average %D/Drift = 10.64054
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

Data File: /var/chem/gcsv16a.i/2131021p.b/sv16a011.d
Report Date: 21-Oct-2013 15:42

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131021p.b/sv16a011.d
Lab Smp Id: 1400
Inj Date : 21-OCT-2013 15:17
Operator : tls  Inst ID: gcsv16a.i
Smp Info : 1400*1 84-57-9
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131021p.b/pest35ms.m
Meth Date : 21-Oct-2013 15:42 dlb  Quant Type: ESTD
Cal Date : 18-OCT-2013 22:37  Cal File: sv16a034.d
Als bottle: 11  Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon  Compound Sublist: aro1260.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

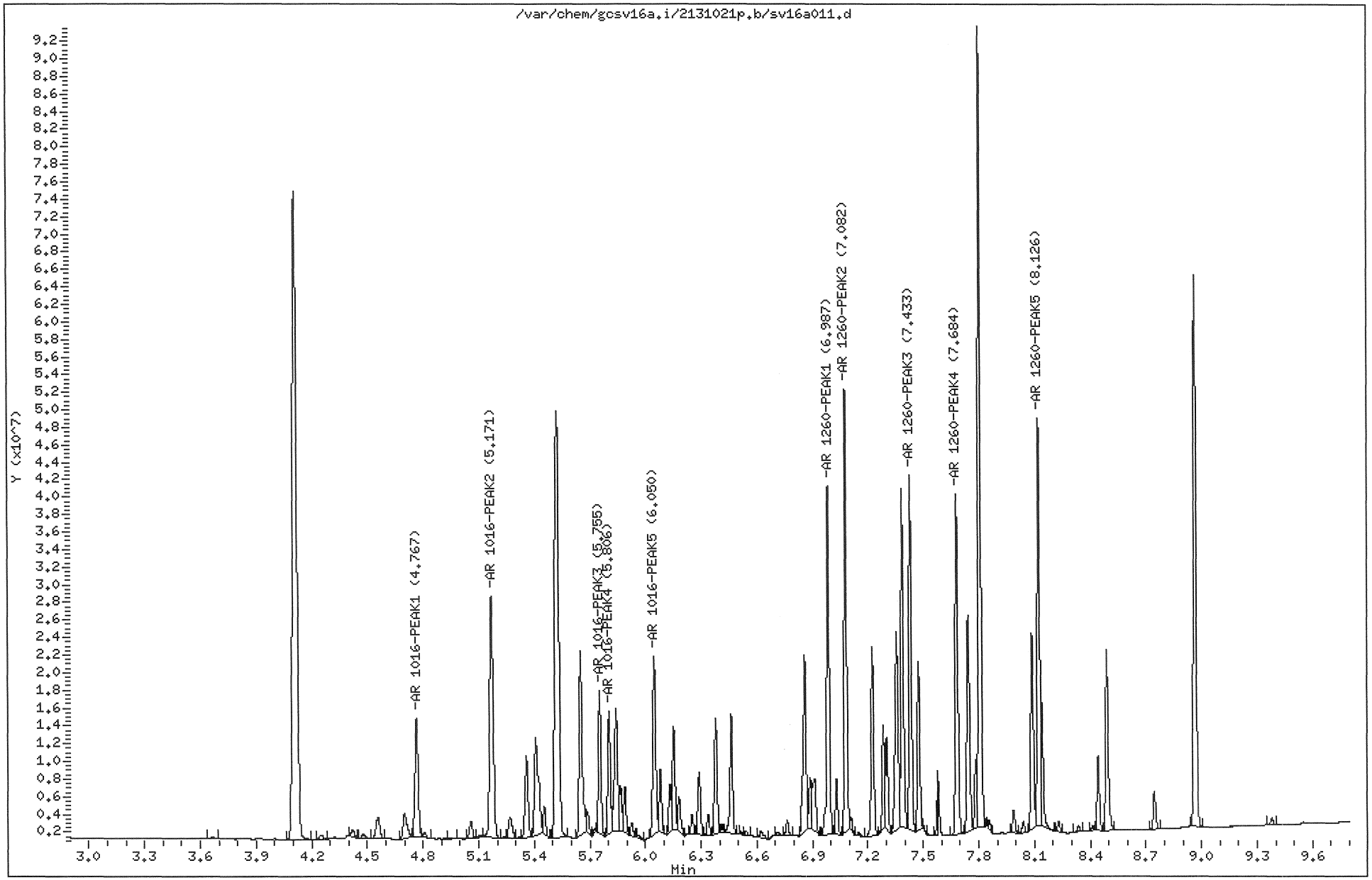
| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable  Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| M 23 AR 1016-AVG | | | | 103604852 | 400.000 | 360 |
| 24 AR 1016-PEAK1 | 4.767 | 4.768 | -0.001 | 15877984 | 400.000 | 360 |
| 25 AR 1016-PEAK2 | 5.171 | 5.171 | 0.000 | 36484075 | 400.000 | 370 |
| 26 AR 1016-PEAK3 | 5.755 | 5.752 | 0.003 | 15735547 | 400.000 | 350 |
| 27 AR 1016-PEAK4 | 5.806 | 5.807 | -0.001 | 13741298 | 400.000 | 370 |
| 28 AR 1016-PEAK5 | 6.050 | 6.050 | 0.000 | 21765948 | 400.000 | 350 |
| M 29 AR 1260-AVG | | | | 196871306 | 400.000 | 350 |
| 30 AR 1260-PEAK1 | 6.987 | 6.989 | -0.002 | 38296478 | 400.000 | 350 |
| 31 AR 1260-PEAK2 | 7.082 | 7.081 | 0.001 | 43702616 | 400.000 | 350 |
| 32 AR 1260-PEAK3 | 7.433 | 7.432 | 0.001 | 35504612 | 400.000 | 390 |
| 33 AR 1260-PEAK4 | 7.684 | 7.683 | 0.001 | 35763597 | 400.000 | 350 |
| 34 AR 1260-PEAK5 | 8.126 | 8.128 | -0.002 | 43604003 | 400.000 | 320 |

Data File: /var/chem/gcsv16a.i/2131021p.b/sv16a011.d
Date : 21-OCT-2013 15:17
Client ID:
Sample Info: 1400*1 84-57-9
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

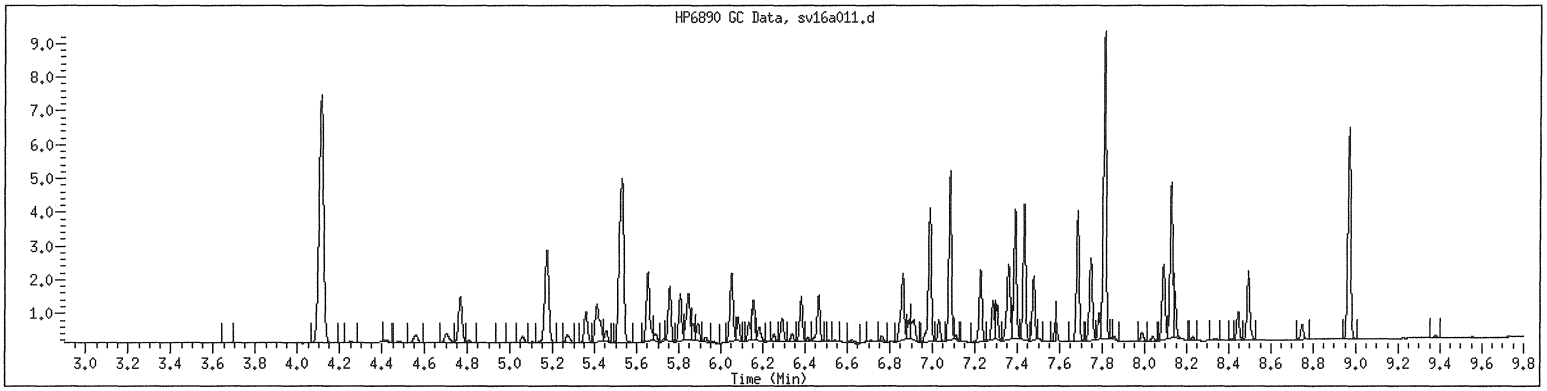
Instrument: gcsv16a.i
Operator: tls
Column diameter: 0.32



Report Date: 10/21/2013 15:42

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 1400 SampleType : CCALIB_3
Injection Date: 10/21/2013 15:17 Instrument : gcsv16a.i
Operator : tls
Sample Info : 1400*1 84-57-9
Misc Info :
Method : /var/chem/gcsv16a.i/2131021p.b/pest35ms.m
Dilution : 1.0
Matrix : WATER
Integrator : Falcon Compound Sublist: aro1260




NO MANUAL INTEGRATIONS

Report Date : 05-Nov-2013 11:39

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 14:45
End Cal Date : 18-OCT-2013 22:14
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv18a.i/2131025.b/pest35ms.m
Cal Date : 28-Oct-2013 08:22 tls

Calibration File Names:
Level 1: /var/chem/gcsv18a.i/2131018.b/sv18a029.d
Level 2: /var/chem/gcsv18a.i/2131018.b/sv18a030.d
Level 3: /var/chem/gcsv18a.i/2131018.b/sv18a032.d
Level 4: /var/chem/gcsv18a.i/2131018.b/sv18a033.d
Level 5: /var/chem/gcsv18a.i/2131018.b/sv18a034.d
Level 6: /var/chem/gcsv18a.i/2131018.b/sv18a031.d
Level 7: /var/chem/gcsv18a.i/2131018.b/sv18a021.d

| Compound | 5 Level 1 / 50 Level 7 | 20 Level 2 | 60 Level 3 | 80 Level 4 | 100 Level 5 | 2 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2 alpha-BHC | 1077713 ++++++ | 1029877 | 937703 | 920316 | 862594 | 1137807 | AVRG | | 994335 | | 10.53259 |
| 3 gamma-BHC (Lindane) | 922408 ++++++ | 876404 | 798790 | 779056 | 732191 | ++++++ | AVRG | | 821770 | | 9.32523 |
| 4 Heptachlor | 832784 ++++++ | 763709 | 690786 | 665422 | 612535 | ++++++ | AVRG | | 713047 | | 12.09877 |
| 5 Aldrin | 837471 ++++++ | 798582 | 712424 | 684882 | 629423 | ++++++ | AVRG | | 732556 | | 11.55914 |

Report Date : 05-Nov-2013 11:39

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 14:45
End Cal Date : 18-OCT-2013 22:14
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv18a.i/2131025.b/pest35ms.m
Cal Date : 28-Oct-2013 08:22 tls

| Compound | 5<br>Level 1<br>50<br>Level 7 | 20<br>Level 2 | 60<br>Level 3 | 80<br>Level 4 | 100<br>Level 5 | 2<br>Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 beta-BHC | 455384<br>+++++ | 406964 | 366736 | 357336 | 331957 | +++++ | AVRG | | 383676 | | 12.59442 |
| 7 delta-BHC | 930875<br>+++++ | 870153 | 804545 | 785850 | 732713 | +++++ | AVRG | | 824827 | | 9.33530 |
| 8 Heptachlor epoxide | 753010<br>+++++ | 702664 | 617418 | 590124 | 536989 | +++++ | AVRG | | 640041 | | 13.59981 |
| 9 Endosulfan I | 695770<br>+++++ | 691254 | 609481 | 570874 | 539231 | +++++ | AVRG | | 621322 | | 11.33995 |
| 10 gamma-Chlordane | 765623<br>+++++ | 699929 | 635184 | 607961 | 552787 | +++++ | AVRG | | 652297 | | 12.65863 |
| 11 alpha-Chlordane | 711549<br>+++++ | 629544 | 551035 | 550951 | 473548 | +++++ | AVRG | | 583325 | | 15.50467 |
| 12 4,4'-DDE | 700826<br>+++++ | 684573 | 612058 | 588091 | 530617 | +++++ | AVRG | | 623233 | | 11.26634 |

2131025 .002

Report Date : 05-Nov-2013 11:39

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 14:45
End Cal Date : 18-OCT-2013 22:14
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv18a.i/2131025.b/pest35ms.m
Cal Date : 28-Oct-2013 08:22 tls

| Compound | 5<br>Level 1<br>50<br>Level 7 | 20<br>Level 2 | 60<br>Level 3 | 80<br>Level 4 | 100<br>Level 5 | 2<br>Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 13 Dieldrin | 704138<br>+++++ | 677687 | 603924 | 581023 | 524202 | +++++ | AVRG | | 618195 | | 11.81677 |
| 14 Endrin | 632093<br>+++++ | 608911 | 539011 | 520689 | 468773 | +++++ | AVRG | | 553895 | | 12.01357 |
| 15 4,4'-DDD | 562808<br>+++++ | 548088 | 505271 | 486052 | 433211 | +++++ | AVRG | | 507086 | | 10.19446 |
| 16 Endosulfan II | 608931<br>+++++ | 580144 | 549547 | 517089 | 463023 | +++++ | AVRG | | 543747 | | 10.41744 |
| 17 4,4'-DDT | 424191<br>+++++ | 434600 | 404697 | 393645 | 350654 | +++++ | AVRG | | 401557 | | 8.13431 |
| 18 Endrin aldehyde | 513255<br>+++++ | 484012 | 440279 | 427348 | 375986 | +++++ | AVRG | | 448176 | | 11.82098 |
| 19 Methoxychlor | 209590<br>+++++ | 204400 | 185838 | 182002 | 159138 | 225613 | AVRG | | 194430 | | 12.11750 |

2131025.TIF 003

Report Date : 05-Nov-2013 11:39

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 14:45
End Cal Date : 18-OCT-2013 22:14
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv18a.i/2131025.b/pest35ms.m
Cal Date : 28-Oct-2013 08:22 tls

| | Compound | 5<br>Level 1<br>50<br>Level 7 | 20<br>Level 2 | 60<br>Level 3 | 80<br>Level 4 | 100<br>Level 5 | 2<br>Level 6 | Curve | Coefficients<br>b | m1 | m2 | %RSD<br>or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 20 Endosulfan sulfate | 575093<br>+++++ | 542414 | 498246 | 478627 | 428737 | +++++ | AVRG | | 504623 | | 11.24034 |
| | 21 Endrin ketone | 577964<br>+++++ | 558706 | 514212 | 504062 | 446713 | +++++ | AVRG | | 520332 | | 9.85401 |
| M | 23 AR 1016-AVG | 111361<br>+++++ | 105701 | 98017 | 89351 | 80209 | 124575 | AVRG | | 101536 | | 15.63680 |
| | 24 AR 1016-PEAK1 | 16756<br>+++++ | 15554 | 14259 | 12864 | 11463 | 18800 | AVRG | | 14949 | | 17.80830 |
| | 25 AR 1016-PEAK2 | 36814<br>+++++ | 34559 | 31926 | 28729 | 25355 | 40630 | AVRG | | 33002 | | 16.76364 |
| | 26 AR 1016-PEAK3 | 16716<br>+++++ | 16262 | 15241 | 14115 | 12832 | 18179 | AVRG | | 15558 | | 12.30363 |
| | 27 AR 1016-PEAK4 | 15948<br>+++++ | 15383 | 14211 | 13062 | 11519 | 17812 | AVRG | | 14656 | | 15.17693 |

Z131031Z 004

Report Date : 05-Nov-2013 11:39

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 14:45
End Cal Date : 18-OCT-2013 22:14
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv18a.i/2131025.b/pest35ms.m
Cal Date : 28-Oct-2013 08:22 tls

| Compound | 5 Level 1 / 50 Level 7 | 20 Level 2 | 60 Level 3 | 80 Level 4 | 100 Level 5 | 2 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 28 AR 1016-PEAK5 | 25127 +++++ | 23944 | 22380 | 20581 | 19040 | 29154 | AVRG | | 23371 | | 15.35382 |
| M 29 AR 1260-AVG | 201826 +++++ | 201844 | 192170 | 178340 | 169000 | 229858 | AVRG | | 195506 | | 10.89504 |
| 30 AR 1260-PEAK1 | 38799 +++++ | 38382 | 36495 | 33697 | 31609 | 44368 | AVRG | | 37225 | | 11.97468 |
| 31 AR 1260-PEAK2 | 44109 +++++ | 44120 | 41866 | 39000 | 36565 | 50492 | AVRG | | 42692 | | 11.31851 |
| 32 AR 1260-PEAK3 | 35334 +++++ | 35496 | 33857 | 31485 | 29793 | 40225 | AVRG | | 34365 | | 10.57307 |
| 33 AR 1260-PEAK4 | 35531 +++++ | 35272 | 33594 | 31091 | 29547 | 40484 | AVRG | | 34253 | | 11.23655 |
| 34 AR 1260-PEAK5 | 48053 +++++ | 48574 | 46359 | 43067 | 41486 | 54290 | AVRG | | 46972 | | 9.66349 |

2131017Z 805

Report Date : 05-Nov-2013 11:39

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 14:45
End Cal Date : 18-OCT-2013 22:14
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv18a.i/2131025.b/pest35ms.m
Cal Date : 28-Oct-2013 08:22 tls

| Compound | 5 Level 1 / 50 Level 7 | 20 Level 2 | 60 Level 3 | 80 Level 4 | 100 Level 5 | 2 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| M 35 AR 1221-AVG | +++++ +++++ | +++++ | 25186 | +++++ | +++++ | +++++ | AVRG | | 25186 | | 0.000e+00 |
| 36 AR 1221-PEAK1 | +++++ +++++ | +++++ | 452 | +++++ | +++++ | +++++ | AVRG | | 452 | | 0.000e+00 |
| 37 AR 1221-PEAK2 | +++++ +++++ | +++++ | 5904 | +++++ | +++++ | +++++ | AVRG | | 5904 | | 0.000e+00 |
| 38 AR 1221-PEAK3 | +++++ +++++ | +++++ | 8836 | +++++ | +++++ | +++++ | AVRG | | 8836 | | 0.000e+00 |
| 39 AR 1221-PEAK4 | +++++ +++++ | +++++ | 5574 | +++++ | +++++ | +++++ | AVRG | | 5574 | | 0.000e+00 |
| 40 AR 1221-PEAK5 | +++++ +++++ | +++++ | 4420 | +++++ | +++++ | +++++ | AVRG | | 4420 | | 0.000e+00 |
| M 41 AR 1232-AVG | +++++ +++++ | +++++ | 41904 | +++++ | +++++ | +++++ | AVRG | | 41904 | | 0.000e+00 |

2131017Z 006

Report Date : 05-Nov-2013 11:39

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 14:45
End Cal Date : 18-OCT-2013 22:14
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv18a.i/2131025.b/pest35ms.m
Cal Date : 28-Oct-2013 08:22 tls

| Compound | 5 Level 1 / 50 Level 7 | 20 Level 2 | 60 Level 3 | 80 Level 4 | 100 Level 5 | 2 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 42 AR 1232-PEAK1 | +++++ +++++ | +++++ | 3369 | +++++ | +++++ | +++++ | AVRG | | 3369 | | 0.000e+00 |
| 43 AR 1232-PEAK2 | +++++ +++++ | +++++ | 5392 | +++++ | +++++ | +++++ | AVRG | | 5392 | | 0.000e+00 |
| 44 AR 1232-PEAK3 | +++++ +++++ | +++++ | 13628 | +++++ | +++++ | +++++ | AVRG | | 13628 | | 0.000e+00 |
| 45 AR 1232-PEAK4 | +++++ +++++ | +++++ | 15145 | +++++ | +++++ | +++++ | AVRG | | 15145 | | 0.000e+00 |
| 46 AR 1232-PEAK5 | +++++ +++++ | +++++ | 4369 | +++++ | +++++ | +++++ | AVRG | | 4369 | | 0.000e+00 |
| M 47 AR 1242-AVG | +++++ +++++ | +++++ | 79781 | +++++ | +++++ | +++++ | AVRG | | 79781 | | 0.000e+00 |
| 48 AR 1242-PEAK1 | +++++ +++++ | +++++ | 21655 | +++++ | +++++ | +++++ | AVRG | | 21655 | | 0.000e+00 |

2131101.TIS 901

Report Date : 05-Nov-2013 11:39

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 14:45
End Cal Date : 18-OCT-2013 22:14
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv18a.i/2131025.b/pest35ms.m
Cal Date : 28-Oct-2013 08:22 tls

| Compound | 5 Level 1 / 50 Level 7 | 20 Level 2 | 60 Level 3 | 80 Level 4 | 100 Level 5 | 2 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 49 AR 1242-PEAK2 | +++++ +++++ | +++++ | 14592 | +++++ | +++++ | +++++ | AVRG | | 14592 | | 0.000e+00 |
| 50 AR 1242-PEAK3 | +++++ +++++ | +++++ | 16215 | +++++ | +++++ | +++++ | AVRG | | 16215 | | 0.000e+00 |
| 51 AR 1242-PEAK4 | +++++ +++++ | +++++ | 15325 | +++++ | +++++ | +++++ | AVRG | | 15325 | | 0.000e+00 |
| 52 AR 1242-PEAK5 | +++++ +++++ | +++++ | 11994 | +++++ | +++++ | +++++ | AVRG | | 11994 | | 0.000e+00 |
| M 53 AR 1248-AVG | +++++ +++++ | +++++ | 99855 | +++++ | +++++ | +++++ | AVRG | | 99855 | | 0.000e+00 |
| 54 AR 1248-PEAK1 | +++++ +++++ | +++++ | 17565 | +++++ | +++++ | +++++ | AVRG | | 17565 | | 0.000e+00 |
| 55 AR 1248-PEAK2 | +++++ +++++ | +++++ | 17901 | +++++ | +++++ | +++++ | AVRG | | 17901 | | 0.000e+00 |

2131017 12 808

Report Date : 05-Nov-2013 11:39

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 14:45
End Cal Date : 18-OCT-2013 22:14
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv18a.i/2131025.b/pest35ms.m
Cal Date : 28-Oct-2013 08:22 tls

| Compound | 5 Level 1 / 50 Level 7 | 20 Level 2 | 60 Level 3 | 80 Level 4 | 100 Level 5 | 2 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 56 AR 1248-PEAK3 | +++++ +++++ | +++++ | 23214 | +++++ | +++++ | +++++ | AVRG | | 23214 | | 0.000e+00 |
| 57 AR 1248-PEAK4 | +++++ +++++ | +++++ | 20642 | +++++ | +++++ | +++++ | AVRG | | 20642 | | 0.000e+00 |
| 58 AR 1248-PEAK5 | +++++ +++++ | +++++ | 20532 | +++++ | +++++ | +++++ | AVRG | | 20532 | | 0.000e+00 |
| M 59 AR 1254-AVG | +++++ +++++ | +++++ | 113348 | +++++ | +++++ | +++++ | AVRG | | 113348 | | 0.000e+00 |
| 60 AR 1254-PEAK1 | +++++ +++++ | +++++ | 13329 | +++++ | +++++ | +++++ | AVRG | | 13329 | | 0.000e+00 |
| 61 AR 1254-PEAK2 | +++++ +++++ | +++++ | 12202 | +++++ | +++++ | +++++ | AVRG | | 12202 | | 0.000e+00 |
| 62 AR 1254-PEAK3 | +++++ +++++ | +++++ | 23433 | +++++ | +++++ | +++++ | AVRG | | 23433 | | 0.000e+00 |

2131011Z 808

Report Date : 05-Nov-2013 11:39

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 14:45
End Cal Date : 18-OCT-2013 22:14
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv18a.i/2131025.b/pest35ms.m
Cal Date : 28-Oct-2013 08:22 tls

| | Compound | 5 Level 1 / 50 Level 7 | 20 Level 2 | 60 Level 3 | 80 Level 4 | 100 Level 5 | 2 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 63 AR 1254-PEAK4 | +++++ +++++ | +++++ | 44145 | +++++ | +++++ | +++++ | AVRG | | 44145 | | 0.000e+00 |
| | 64 AR 1254-PEAK5 | +++++ +++++ | +++++ | 20240 | +++++ | +++++ | +++++ | AVRG | | 20240 | | 0.000e+00 |
| M | 65 TOXAPHENE-AVG | +++++ +++++ | +++++ | +++++ | +++++ | 54300 | +++++ | AVRG | | 54300 | | 0.000e+00 |
| | 66 TOXAPHENE-PEAK1 | +++++ +++++ | +++++ | +++++ | +++++ | 14481 | +++++ | AVRG | | 14481 | | 0.000e+00 |
| | 67 TOXAPHENE-PEAK2 | +++++ +++++ | +++++ | +++++ | +++++ | 11912 | +++++ | AVRG | | 11912 | | 0.000e+00 |
| | 68 TOXAPHENE-PEAK3 | +++++ +++++ | +++++ | +++++ | +++++ | 15008 | +++++ | AVRG | | 15008 | | 0.000e+00 |
| | 69 TOXAPHENE-PEAK4 | +++++ +++++ | +++++ | +++++ | +++++ | 12899 | +++++ | AVRG | | 12899 | | 0.000e+00 |

2131025.B 8/10

Report Date : 05-Nov-2013 11:39

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 14:45
End Cal Date : 18-OCT-2013 22:14
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv18a.i/2131025.b/pest35ms.m
Cal Date : 28-Oct-2013 08:22 tls

| Compound | 5 Level 1 / 50 Level 7 | 20 Level 2 | 60 Level 3 | 80 Level 4 | 100 Level 5 | 2 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 70 TOXAPHENE-PEAK5 | +++++ +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 |
| M 71 CHLORDANE-AVG | +++++ +++++ | +++++ | +++++ | +++++ | 90708 | +++++ | AVRG | | 90708 | | 0.000e+00 |
| 72 CHLORDANE-PEAK1 | +++++ +++++ | +++++ | +++++ | +++++ | 7360 | +++++ | AVRG | | 7360 | | 0.000e+00 |
| 73 CHLORDANE-PEAK2 | +++++ +++++ | +++++ | +++++ | +++++ | 34519 | +++++ | AVRG | | 34519 | | 0.000e+00 |
| 74 CHLORDANE-PEAK3 | +++++ +++++ | +++++ | +++++ | +++++ | 20190 | +++++ | AVRG | | 20190 | | 0.000e+00 |
| 75 CHLORDANE-PEAK4 | +++++ +++++ | +++++ | +++++ | +++++ | 28639 | +++++ | AVRG | | 28639 | | 0.000e+00 |
| 76 CHLORDANE-PEAK5 | +++++ +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 |

2131101T12 016

Report Date : 05-Nov-2013 11:39

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 14:45
End Cal Date : 18-OCT-2013 22:14
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv18a.i/2131025.b/pest35ms.m
Cal Date : 28-Oct-2013 08:22 tls

| Compound | 5<br>Level 1<br>50<br>Level 7 | 20<br>Level 2 | 60<br>Level 3 | 80<br>Level 4 | 100<br>Level 5 | 2<br>Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| M 77 AR 1268-AVG | +++++<br>+++++ | +++++ | 247844 | +++++ | +++++ | +++++ | AVRG | | 247844 | | 0.000e+00 |
| 78 AR 1268-PEAK1 | +++++<br>+++++ | +++++ | 15456 | +++++ | +++++ | +++++ | AVRG | | 15456 | | 0.000e+00 |
| 79 AR 1268-PEAK2 | +++++<br>+++++ | +++++ | 19429 | +++++ | +++++ | +++++ | AVRG | | 19429 | | 0.000e+00 |
| 80 AR 1268-PEAK3 | +++++<br>+++++ | +++++ | 79243 | +++++ | +++++ | +++++ | AVRG | | 79243 | | 0.000e+00 |
| 81 AR 1268 PEAK4 | +++++<br>+++++ | +++++ | 72926 | +++++ | +++++ | +++++ | AVRG | | 72926 | | 0.000e+00 |
| 82 AR 1268-PEAK5 | +++++<br>+++++ | +++++ | 60791 | +++++ | +++++ | +++++ | AVRG | | 60791 | | 0.000e+00 |
| M 83 AR 1262-AVG | +++++<br>+++++ | +++++ | 132952 | +++++ | +++++ | +++++ | AVRG | | 132952 | | 0.000e+00 |

2131011Z 81Z

Report Date : 05-Nov-2013 11:39

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 14:45
End Cal Date : 18-OCT-2013 22:14
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv18a.i/2131025.b/pest35ms.m
Cal Date : 28-Oct-2013 08:22 tls

| Compound | 5 Level 1 / 50 Level 7 | 20 Level 2 | 60 Level 3 | 80 Level 4 | 100 Level 5 | 2 Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 84 AR 1262-PEAK1 | +++++ +++++ | +++++ | 16620 | +++++ | +++++ | +++++ | AVRG | | 16620 | | 0.000e+00 |
| 85 AR 1262-PEAK2 | +++++ +++++ | +++++ | 23483 | +++++ | +++++ | +++++ | AVRG | | 23483 | | 0.000e+00 |
| 86 AR 1262-PEAK3 | +++++ +++++ | +++++ | 26233 | +++++ | +++++ | +++++ | AVRG | | 26233 | | 0.000e+00 |
| 87 AR 1262-PEAK4 | +++++ +++++ | +++++ | 35180 | +++++ | +++++ | +++++ | AVRG | | 35180 | | 0.000e+00 |
| 88 AR 1262-PEAK5 | +++++ +++++ | +++++ | 31436 | +++++ | +++++ | +++++ | AVRG | | 31436 | | 0.000e+00 |
| 89 Diallate | +++++ +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 |
| 90 Isodrin | +++++ +++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 |

2131031T12 013

Report Date : 05-Nov-2013 11:39

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-OCT-2013 14:45
End Cal Date : 18-OCT-2013 22:14
Quant Method : ESTD
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv18a.i/2131025.b/pest35ms.m
Cal Date : 28-Oct-2013 08:22 tls

| Compound | 5<br>Level 1<br>50<br>Level 7 | 20<br>Level 2 | 60<br>Level 3 | 80<br>Level 4 | 100<br>Level 5 | 2<br>Level 6 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 91 Chlorobenzilate | +++++<br>+++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 |
| 92 Kepone | +++++<br>+++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 |
| 93 Mirex | +++++<br>+++++ | +++++ | +++++ | +++++ | +++++ | +++++ | AVRG | | 0.000e+00 | | 0.000e+00 |
| 94 Alachlor | 1450635<br>+++++ | 4516869 | 11554610 | 14471207 | 16981614 | 8468636 | LINR | -14.53366 | 82392 | | 0.99153 |
| $ 1 Tetrachloro-m-xylene | 862842<br>+++++ | 796836 | 720785 | 699282 | 654742 | +++++ | AVRG | | 746897 | | 11.07684 |
| $ 22 Decachlorobiphenyl | 526842<br>+++++ | 467489 | 419786 | 409887 | 353052 | +++++ | AVRG | | 435411 | | 15.00215 |

21310172 814

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a014.d
Report Date: 22-Oct-2013 11:09

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131018.b/sv18a014.d
Lab Smp Id: 1203
Inj Date : 18-OCT-2013 17:24
Operator : tls Inst ID: gcsv18a.i
Smp Info : 1203*1 84-48-3
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131018.b/pest35ms.m
Meth Date : 22-Oct-2013 11:09 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 21:45 Cal File: sv18a032.d
Als bottle: 14 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: aro1221.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

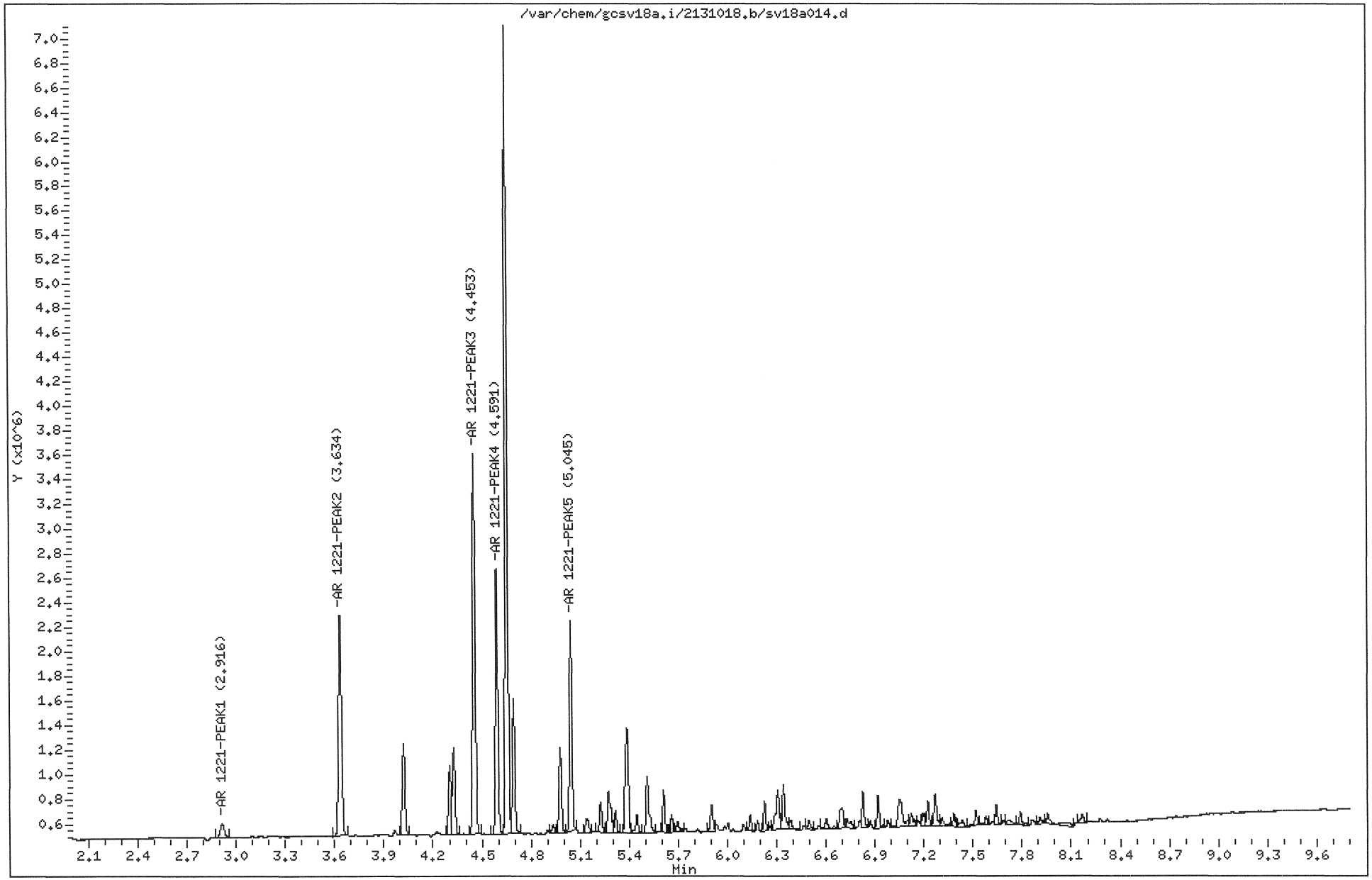
| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| M 35 AR 1221-AVG | | | | 10074533 | 400.000 | 400 |
| 36 AR 1221-PEAK1 | 2.916 | 2.917 | -0.001 | 180917 | 400.000 | 400 |
| 37 AR 1221-PEAK2 | 3.634 | 3.633 | 0.001 | 2361558 | 400.000 | 400 |
| 38 AR 1221-PEAK3 | 4.453 | 4.452 | 0.001 | 3534425 | 400.000 | 400 |
| 39 AR 1221-PEAK4 | 4.591 | 4.591 | 0.000 | 2229642 | 400.000 | 400 |
| 40 AR 1221-PEAK5 | 5.045 | 5.043 | 0.002 | 1767991 | 400.000 | 400 |

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a014.d
Date : 18-OCT-2013 17:24
Client ID:
Sample Info: 1203*1 84-48-3
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

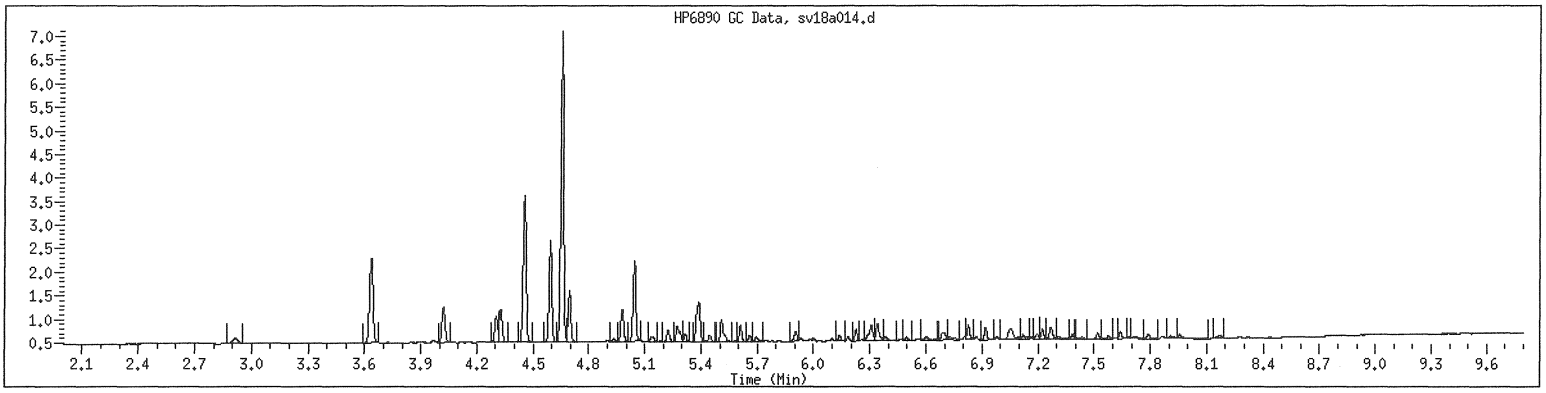
Instrument: gcsv18a.i
Operator: tls
Column diameter: 0.32




2131017 12 816

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1203 | SampleType | : CALIB_3 |
| Injection Date | : 10/18/2013 17:24 | Instrument | : gcsv18a.i |
| Operator | : tls | | |
| Sample Info | : 1203*1 84-48-3 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv18a.i/2131018.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : aro1221 |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a015.d
Report Date: 22-Oct-2013 11:09

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131018.b/sv18a015.d
Lab Smp Id: 1203
Inj Date : 18-OCT-2013 17:39
Operator : tls Inst ID: gcsv18a.i
Smp Info : 1203*1 84-48-4
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131018.b/pest35ms.m
Meth Date : 22-Oct-2013 11:09 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 21:45 Cal File: sv18a032.d
Als bottle: 15 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: aro1232.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

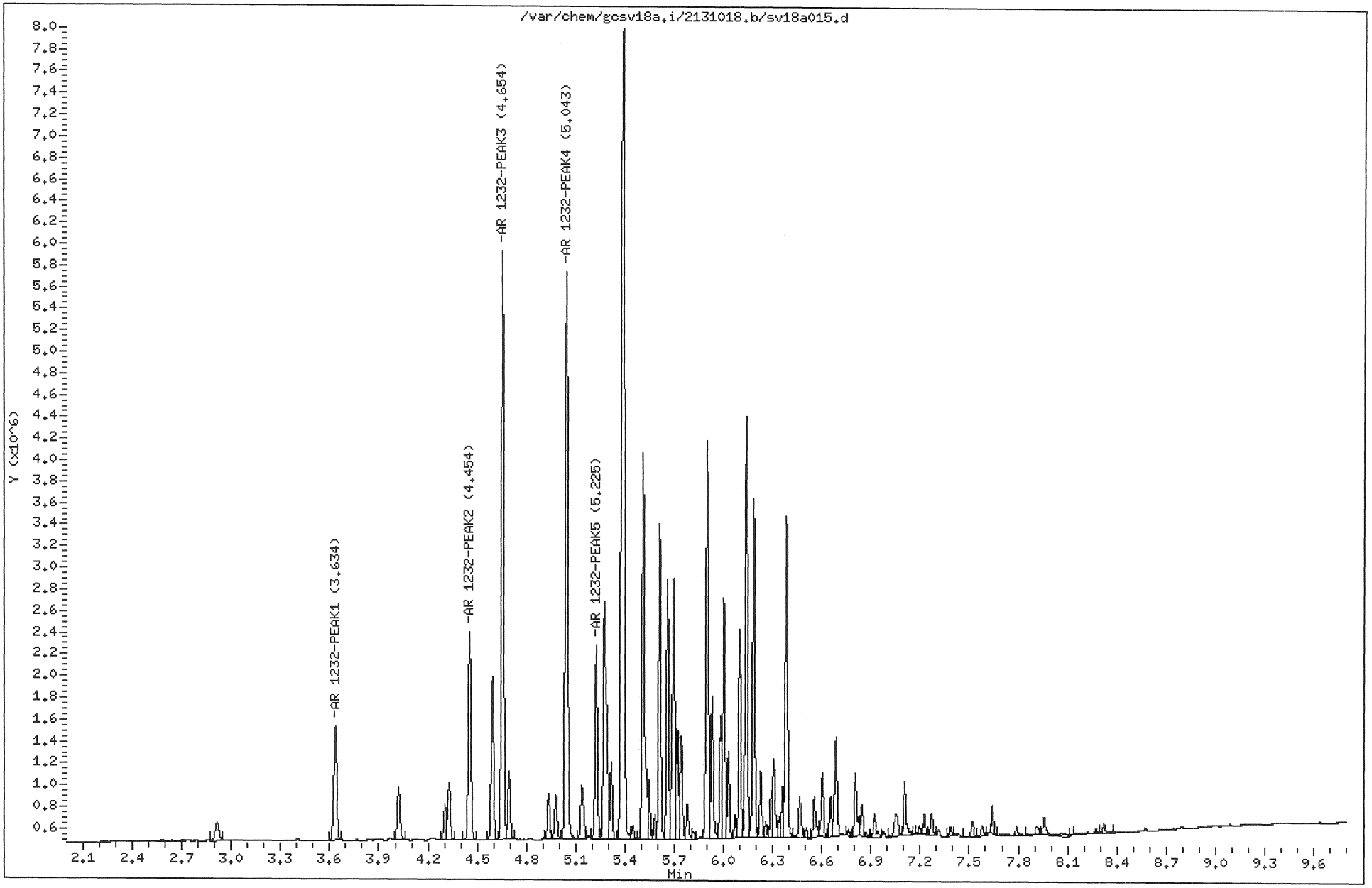
Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| M 41 AR 1232-AVG | | | | 16761615 | 400.000 | 400 |
| 42 AR 1232-PEAK1 | 3.634 | 3.633 | 0.001 | 1347703 | 400.000 | 400 |
| 43 AR 1232-PEAK2 | 4.454 | 4.452 | 0.002 | 2156888 | 400.000 | 400 |
| 44 AR 1232-PEAK3 | 4.654 | 4.652 | 0.002 | 5451325 | 400.000 | 400 |
| 45 AR 1232-PEAK4 | 5.043 | 5.042 | 0.001 | 6057994 | 400.000 | 400 |
| 46 AR 1232-PEAK5 | 5.225 | 5.227 | -0.002 | 1747705 | 400.000 | 400 |

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a015.d
Date : 18-OCT-2013 17:39
Client ID:
Sample Info: 1203x1 84-48-4
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv18a.i

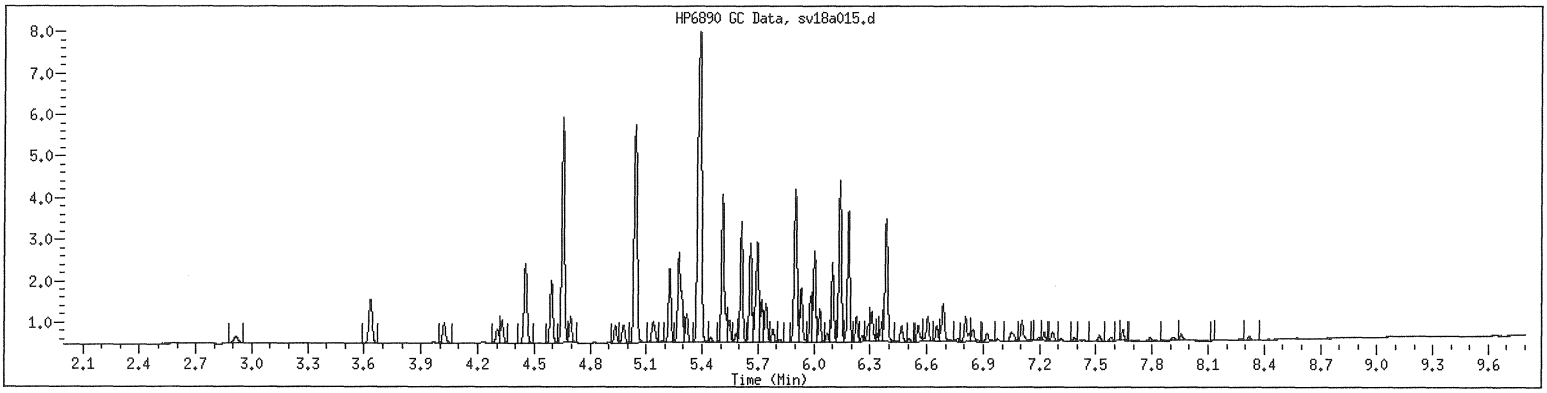
Operator: tls
Column diameter: 0.32




21310171 2 819

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1203 | SampleType | : CALIB_3 |
| Injection Date | : 10/18/2013 17:39 | Instrument | : gcsv18a.i |
| Operator | : tls | | |
| Sample Info | : 1203*1 84-48-4 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv18a.i/2131018.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : aro1232 |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a016.d
Report Date: 22-Oct-2013 11:09

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131018.b/sv18a016.d
Lab Smp Id: 1203
Inj Date : 18-OCT-2013 17:53
Operator : tls Inst ID: gcsv18a.i
Smp Info : 1203*1 84-48-5
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131018.b/pest35ms.m
Meth Date : 22-Oct-2013 11:09 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 21:45 Cal File: sv18a032.d
Als bottle: 16 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: aro1242.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

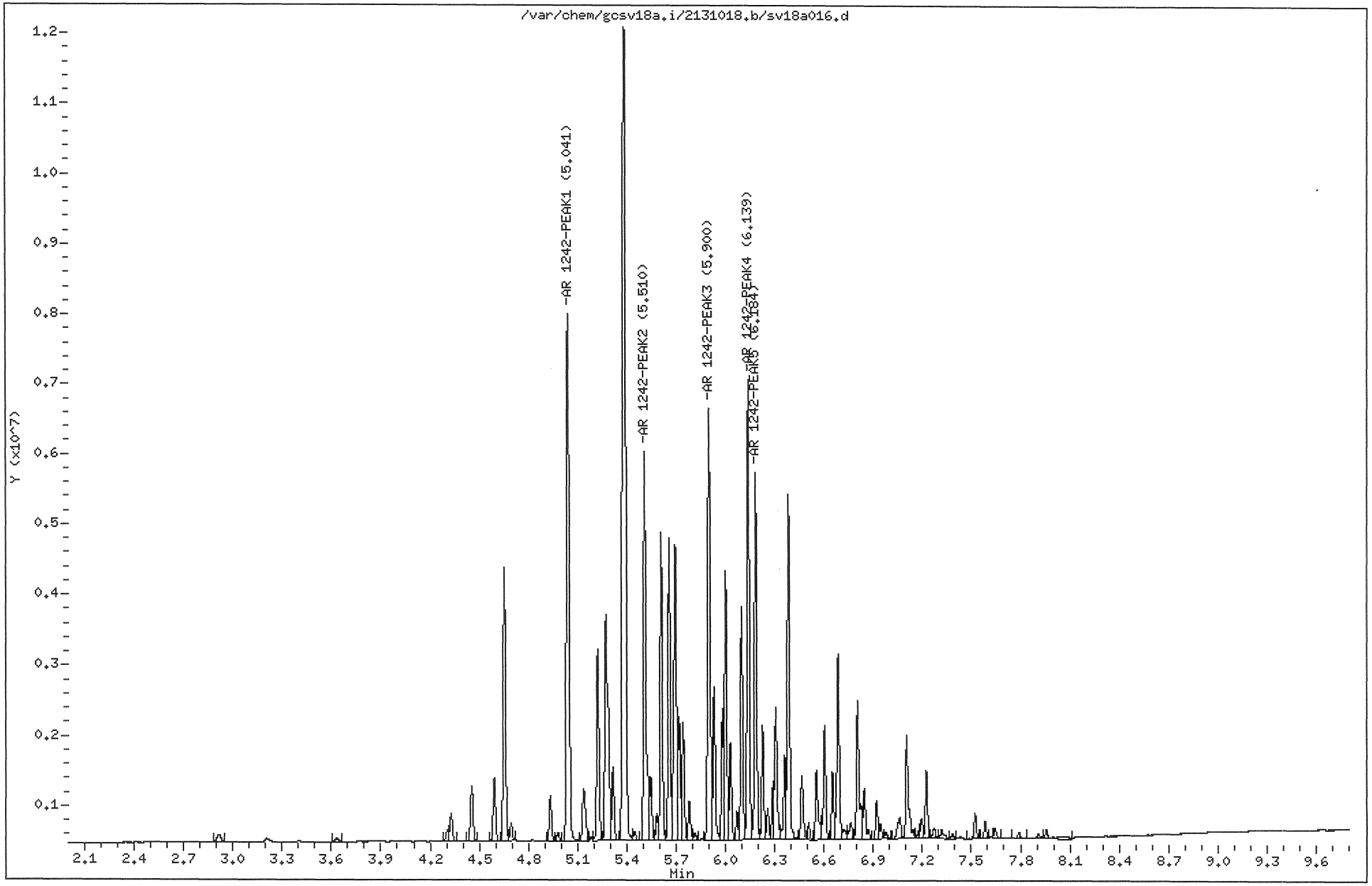
Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| M 47 AR 1242-AVG | | | | 31912598 | 400.000 | 400 |
| 48 AR 1242-PEAK1 | 5.041 | 5.041 | 0.000 | 8662190 | 400.000 | 400 |
| 49 AR 1242-PEAK2 | 5.510 | 5.510 | 0.000 | 5836860 | 400.000 | 400 |
| 50 AR 1242-PEAK3 | 5.900 | 5.900 | 0.000 | 6485959 | 400.000 | 400 |
| 51 AR 1242-PEAK4 | 6.139 | 6.139 | 0.000 | 6130160 | 400.000 | 400 |
| 52 AR 1242-PEAK5 | 6.184 | 6.182 | 0.002 | 4797429 | 400.000 | 400 |

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a016.d
Date : 18-OCT-2013 17:53
Client ID:
Sample Info: 1203*1 84-48-5
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv18a.i

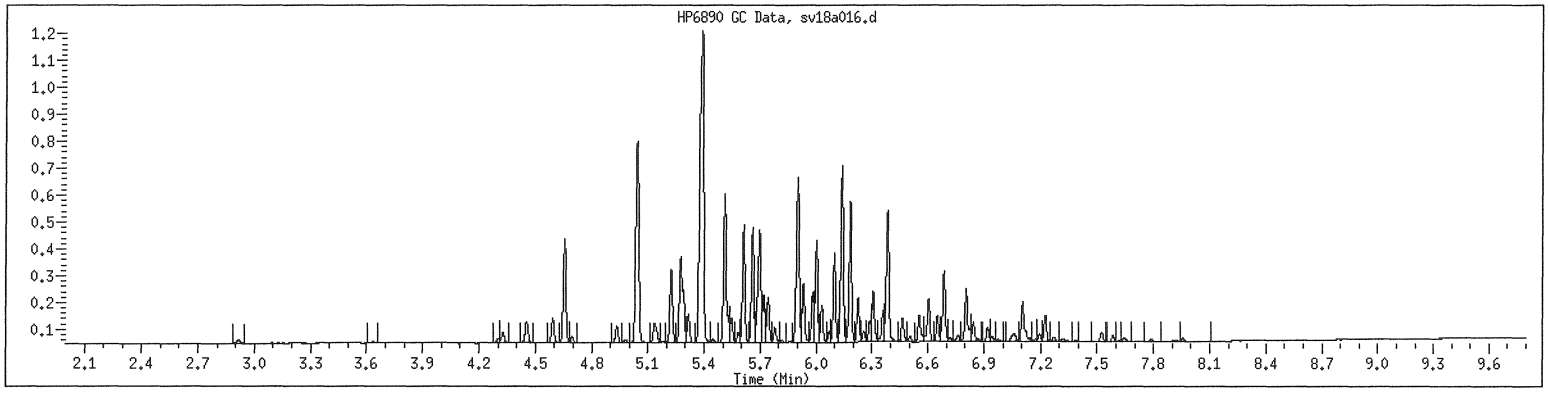
Operator: tls
Column diameter: 0.32




21310171 2 822

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1203 | SampleType | : CALIB_3 |
| Injection Date | : 10/18/2013 17:53 | Instrument | : gcsv18a.i |
| Operator | : tls | | |
| Sample Info | : 1203*1 84-48-5 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv18a.i/2131018.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : aro1242 |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a017.d
Report Date: 22-Oct-2013 11:09

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131018.b/sv18a017.d
Lab Smp Id: 1203
Inj Date : 18-OCT-2013 18:08
Operator : tls Inst ID: gcsv18a.i
Smp Info : 1203*1 84-48-6
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131018.b/pest35ms.m
Meth Date : 22-Oct-2013 11:09 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 21:45 Cal File: sv18a032.d
Als bottle: 17 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: aro1248.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

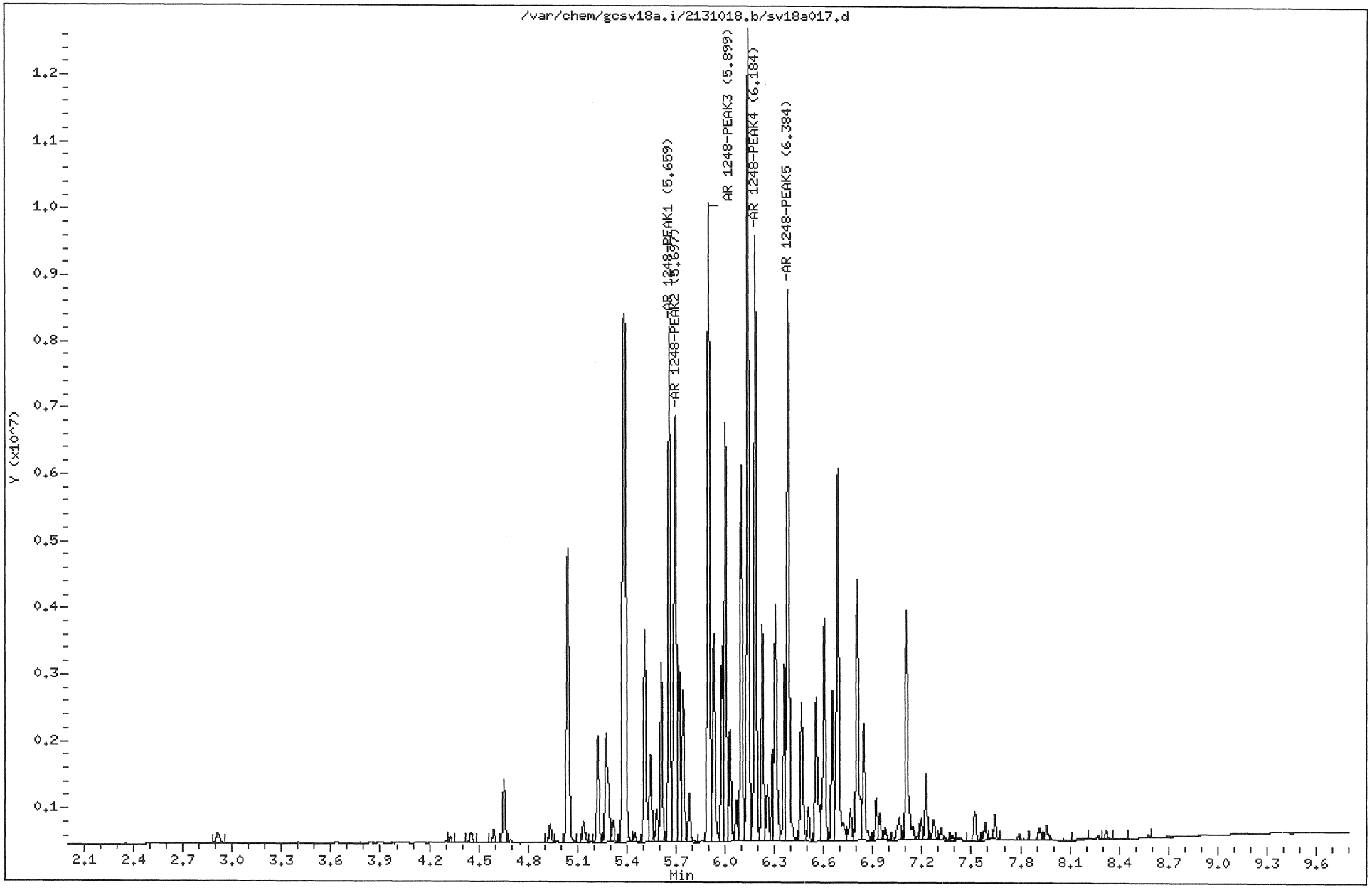
Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| M 53 AR 1248-AVG | | | | 39942033 | 400.000 | 400 |
| 54 AR 1248-PEAK1 | 5.659 | 5.660 | -0.001 | 7026173 | 400.000 | 400 |
| 55 AR 1248-PEAK2 | 5.697 | 5.698 | -0.001 | 7160334 | 400.000 | 400 |
| 56 AR 1248-PEAK3 | 5.899 | 5.900 | -0.001 | 9285767 | 400.000 | 400 |
| 57 AR 1248-PEAK4 | 6.184 | 6.182 | 0.002 | 8256988 | 400.000 | 400 |
| 58 AR 1248-PEAK5 | 6.384 | 6.383 | 0.001 | 8212771 | 400.000 | 400 |

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a017.d
Date : 18-OCT-2013 18:08
Client ID:
Sample Info: 1203*1 84-48-6
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv18a.i

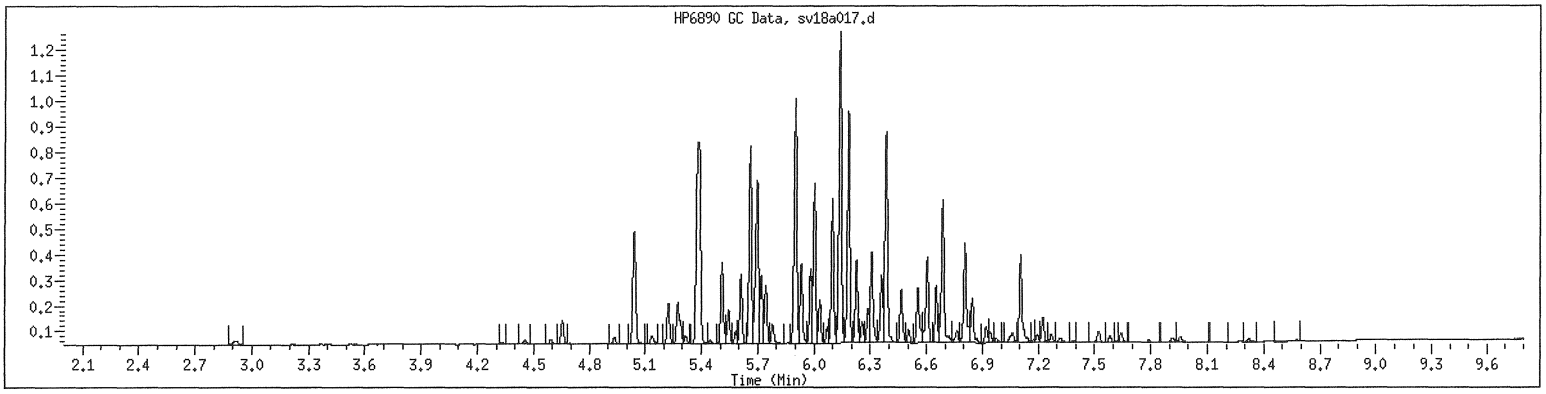
Operator: tls
Column diameter: 0.32




2131018 825

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1203 | SampleType | : CALIB_3 |
| Injection Date | : 10/18/2013 18:08 | Instrument | : gcsv18a.i |
| Operator | : tls | | |
| Sample Info | : 1203*1 84-48-6 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv18a.i/2131018.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : aro1248 |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a018.d
Report Date: 22-Oct-2013 11:09

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131018.b/sv18a018.d
Lab Smp Id: 1203
Inj Date : 18-OCT-2013 18:22
Operator : tls Inst ID: gcsv18a.i
Smp Info : 1203*1 84-48-7
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131018.b/pest35ms.m
Meth Date : 22-Oct-2013 11:09 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 21:45 Cal File: sv18a032.d
Als bottle: 18 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: aro1254.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

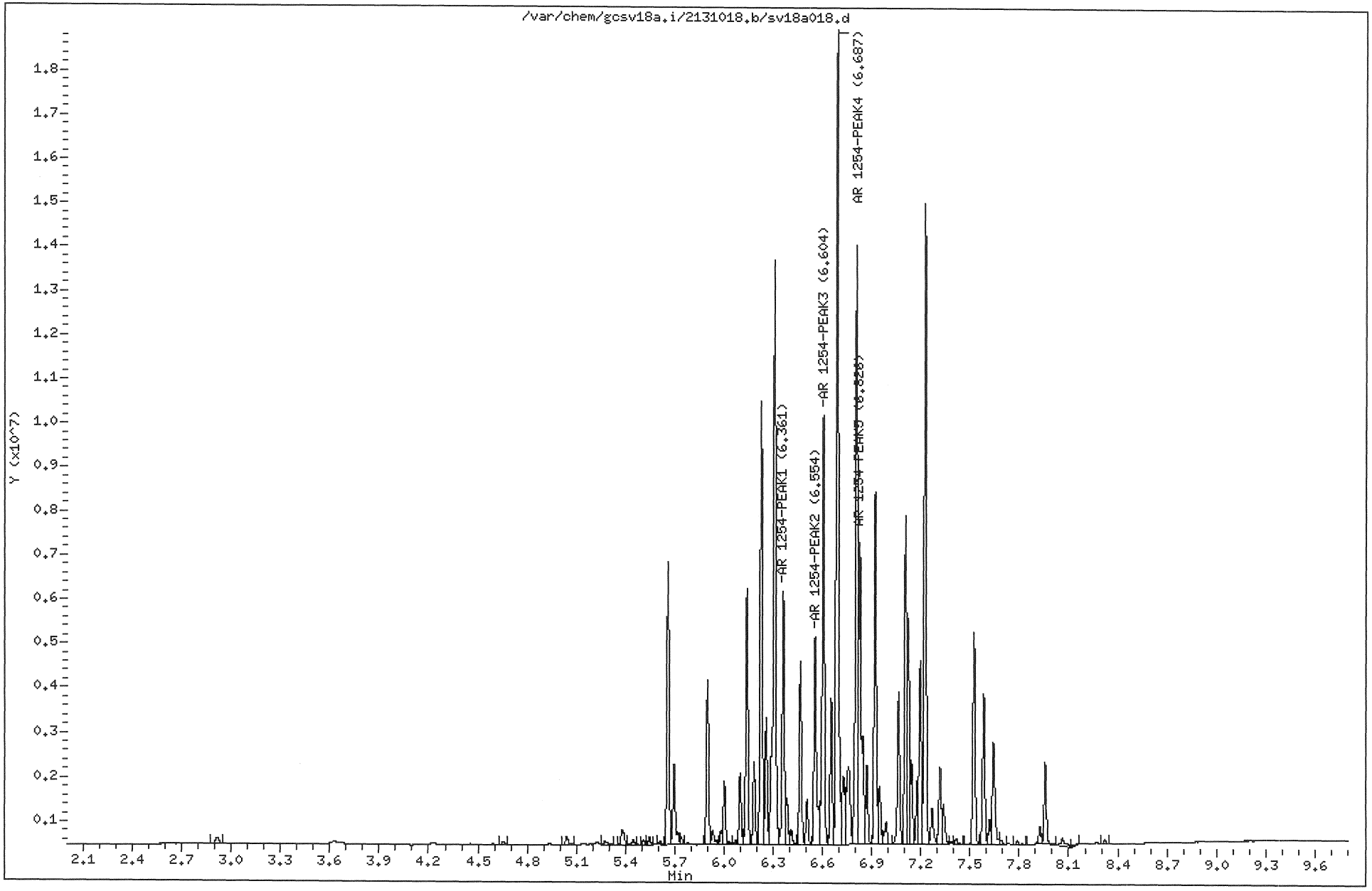
Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| M 59 AR 1254-AVG | | | | 45339110 | 400.000 | 400 |
| 60 AR 1254-PEAK1 | 6.361 | 6.360 | 0.001 | 5331722 | 400.000 | 400 |
| 61 AR 1254-PEAK2 | 6.554 | 6.553 | 0.001 | 4880667 | 400.000 | 400 |
| 62 AR 1254-PEAK3 | 6.604 | 6.603 | 0.001 | 9373068 | 400.000 | 400 |
| 63 AR 1254-PEAK4 | 6.687 | 6.688 | -0.001 | 17657822 | 400.000 | 400 |
| 64 AR 1254-PEAK5 | 6.826 | 6.827 | -0.001 | 8095831 | 400.000 | 400 |

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a018.d
Date : 18-OCT-2013 18:22
Client ID:
Sample Info: 1203x1 84-48-7
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv18a.i

Operator: tls
Column diameter: 0.32

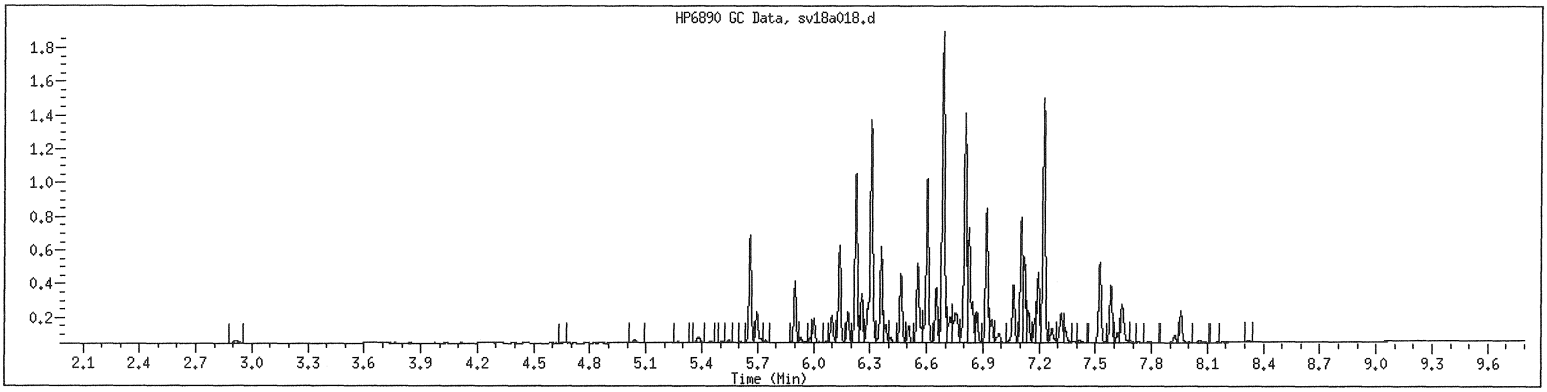



2131018 828

Report Date: 10/22/2013 11:09

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 1203 SampleType : CALIB_3
Injection Date: 10/18/2013 18:22 Instrument : gcsv18a.i
Operator : tls
Sample Info : 1203*1 84-48-7
Misc Info :
Method : /var/chem/gcsv18a.i/2131018.b/pest35ms.m
Dilution : 1.0
Matrix : WATER
Integrator : Falcon Compound Sublist: aro1254




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a021.d
Report Date: 22-Oct-2013 11:09

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131018.b/sv18a021.d
Lab Smp Id: 1207
Inj Date : 18-OCT-2013 19:06
Operator : tls Inst ID: gcsv18a.i
Smp Info : 1207*1 20
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131018.b/pest35ms.m
Meth Date : 22-Oct-2013 11:09 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 19:06 Cal File: sv18a021.d
Als bottle: 21 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: aro1260.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

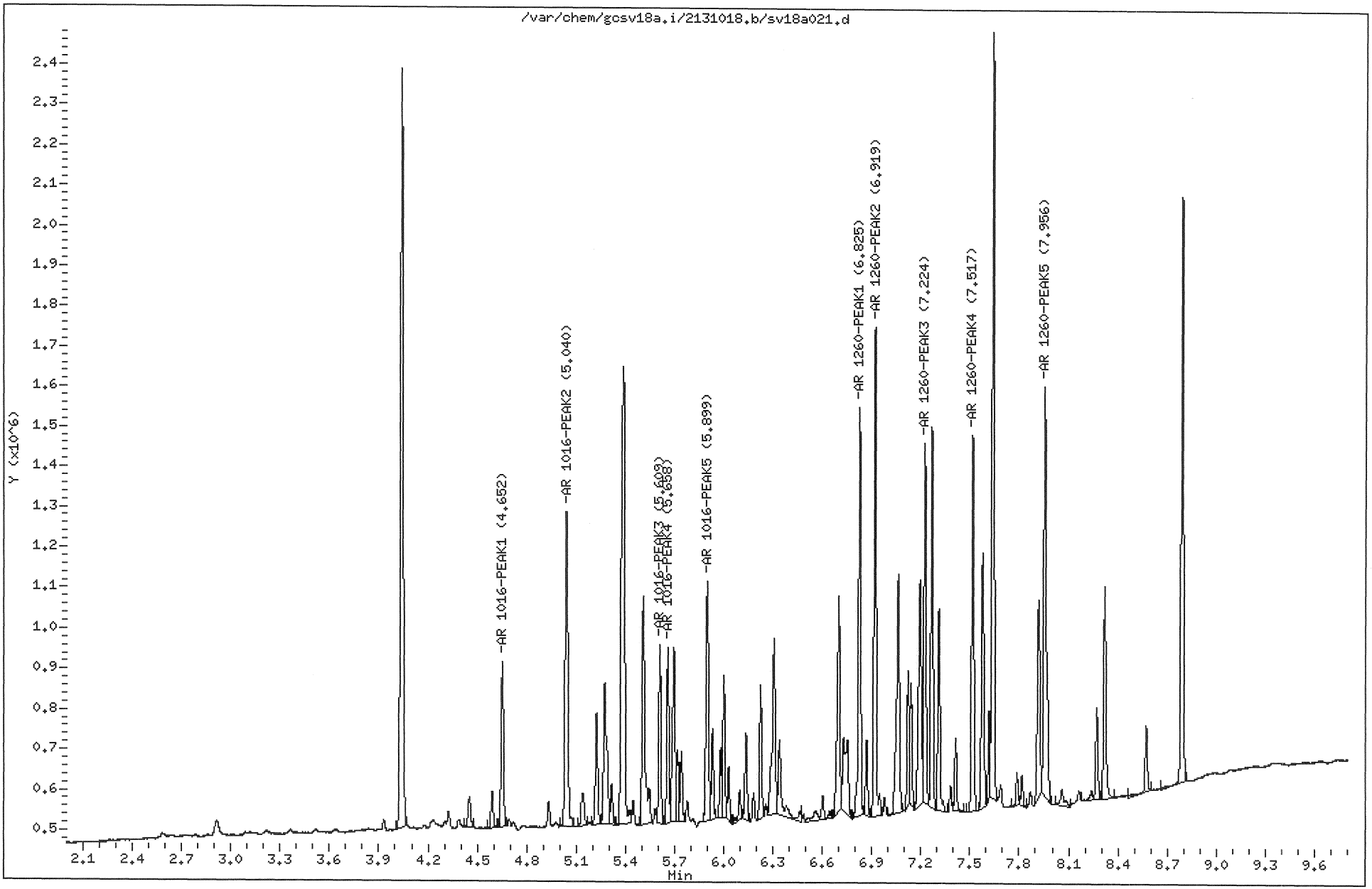
Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| M 23 AR 1016-AVG | | | | 2743448 | 20.0000 | 27 |
| 24 AR 1016-PEAK1 | 4.652 | 4.651 | 0.001 | 408464 | 20.0000 | 27 |
| 25 AR 1016-PEAK2 | 5.040 | 5.040 | 0.000 | 933128 | 20.0000 | 28 |
| 26 AR 1016-PEAK3 | 5.609 | 5.610 | -0.001 | 397512 | 20.0000 | 26 |
| 27 AR 1016-PEAK4 | 5.658 | 5.659 | -0.001 | 386396 | 20.0000 | 26 |
| 28 AR 1016-PEAK5 | 5.899 | 5.899 | 0.000 | 617948 | 20.0000 | 26 |
| M 29 AR 1260-AVG | | | | 5048824 | 20.0000 | 26 |
| 30 AR 1260-PEAK1 | 6.825 | 6.825 | 0.000 | 982808 | 20.0000 | 26 |
| 31 AR 1260-PEAK2 | 6.919 | 6.919 | 0.000 | 1164966 | 20.0000 | 27 |
| 32 AR 1260-PEAK3 | 7.224 | 7.223 | 0.001 | 845493 | 20.0000 | 25 |
| 33 AR 1260-PEAK4 | 7.517 | 7.517 | 0.000 | 894631 | 20.0000 | 26 |
| 34 AR 1260-PEAK5 | 7.956 | 7.955 | 0.001 | 1160926 | 20.0000 | 25 |

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a021.d
Date : 18-OCT-2013 19:06
Client ID:
Sample Info: 1207*1 20
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv18a.i

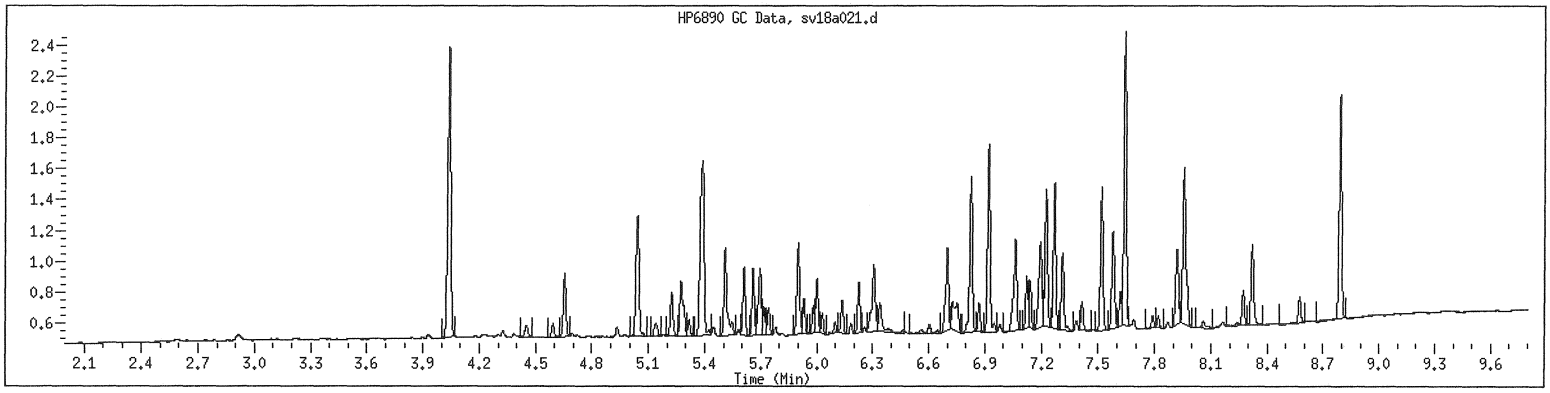
Operator: tls
Column diameter: 0.32




2131018.b/sv18a021.d

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1207 | SampleType | : CALIB_7 |
| Injection Date | : 10/18/2013 19:06 | Instrument | : gcsv18a.i |
| Operator | : tls | | |
| Sample Info | : 1207*1 20 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv18a.i/2131018.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : aro1260 |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a022.d
Report Date: 22-Oct-2013 11:09

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131018.b/sv18a022.d
Lab Smp Id: 1206
Inj Date : 18-OCT-2013 19:20
Operator : tls Inst ID: gcsv18a.i
Smp Info : 1206*1 50
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131018.b/pest35ms.m
Meth Date : 22-Oct-2013 11:09 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 21:31 Cal File: sv18a031.d
Als bottle: 22 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: aro1260.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| M 23 AR 1016-AVG | | | | 6228754 | 50.0000 | 61 |
| 24 AR 1016-PEAK1 | 4.652 | 4.651 | 0.001 | 939987 | 50.0000 | 63 |
| 25 AR 1016-PEAK2 | 5.039 | 5.040 | -0.001 | 2031500 | 50.0000 | 62 |
| 26 AR 1016-PEAK3 | 5.609 | 5.610 | -0.001 | 908962 | 50.0000 | 58 |
| 27 AR 1016-PEAK4 | 5.658 | 5.659 | -0.001 | 890608 | 50.0000 | 61(M2) |
| 28 AR 1016-PEAK5 | 5.899 | 5.899 | 0.000 | 1457697 | 50.0000 | 62 |
| M 29 AR 1260-AVG | | | | 11492905 | 50.0000 | 59 |
| 30 AR 1260-PEAK1 | 6.825 | 6.825 | 0.000 | 2218375 | 50.0000 | 60 |
| 31 AR 1260-PEAK2 | 6.919 | 6.919 | 0.000 | 2524607 | 50.0000 | 59 |
| 32 AR 1260-PEAK3 | 7.224 | 7.223 | 0.001 | 2011229 | 50.0000 | 59 |
| 33 AR 1260-PEAK4 | 7.516 | 7.517 | -0.001 | 2024177 | 50.0000 | 59 |
| 34 AR 1260-PEAK5 | 7.955 | 7.955 | 0.000 | 2714517 | 50.0000 | 58 |

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a022.d
Report Date: 22-Oct-2013 11:09

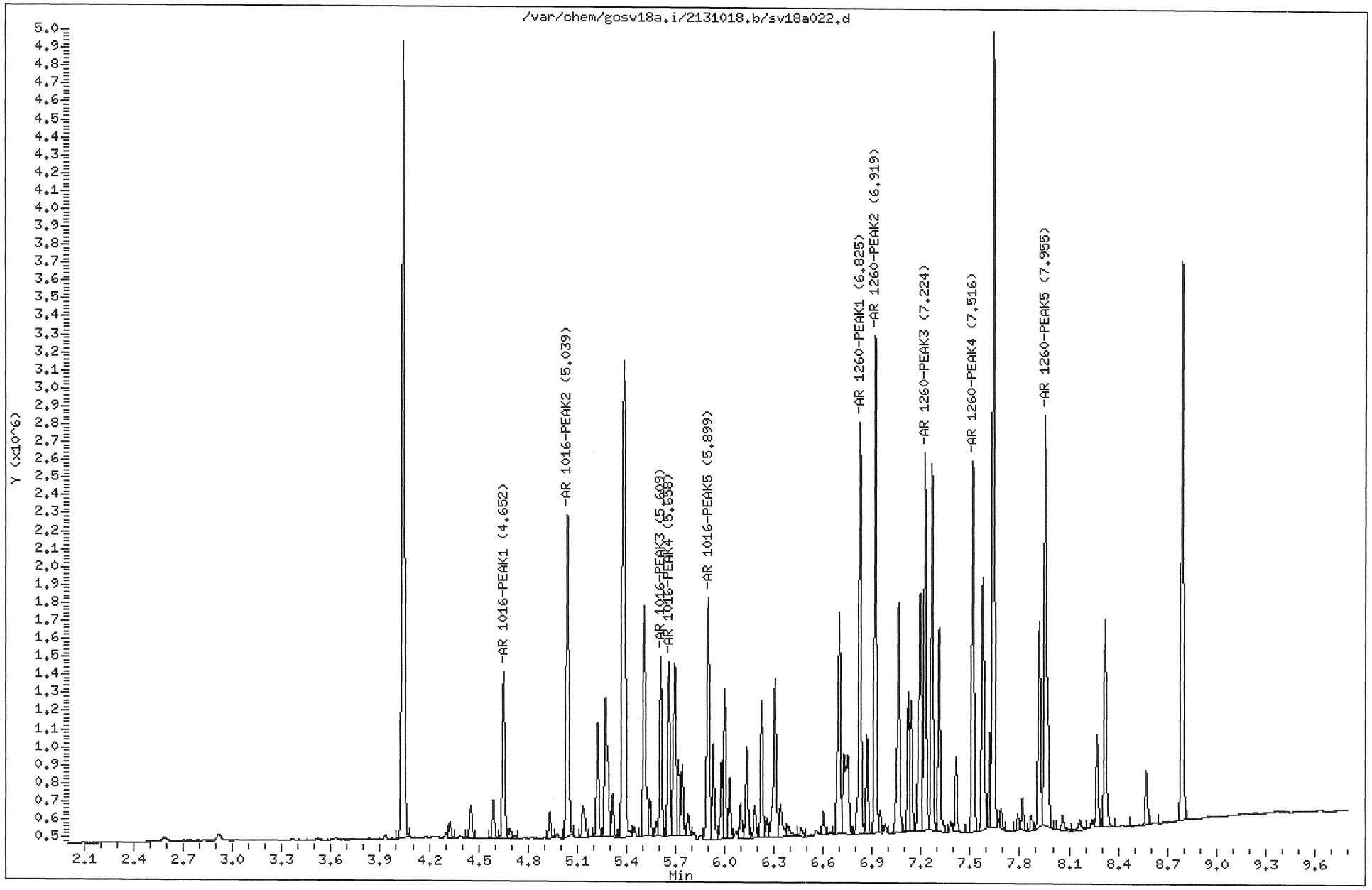
QC Flag Legend

M2- Compound response manually integrated because
Target system integrated incorrectly.

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a022.d
Date : 18-OCT-2013 19:20
Client ID:
Sample Info: 1206x1 50
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv18a.i

Operator: tls
Column diameter: 0.32

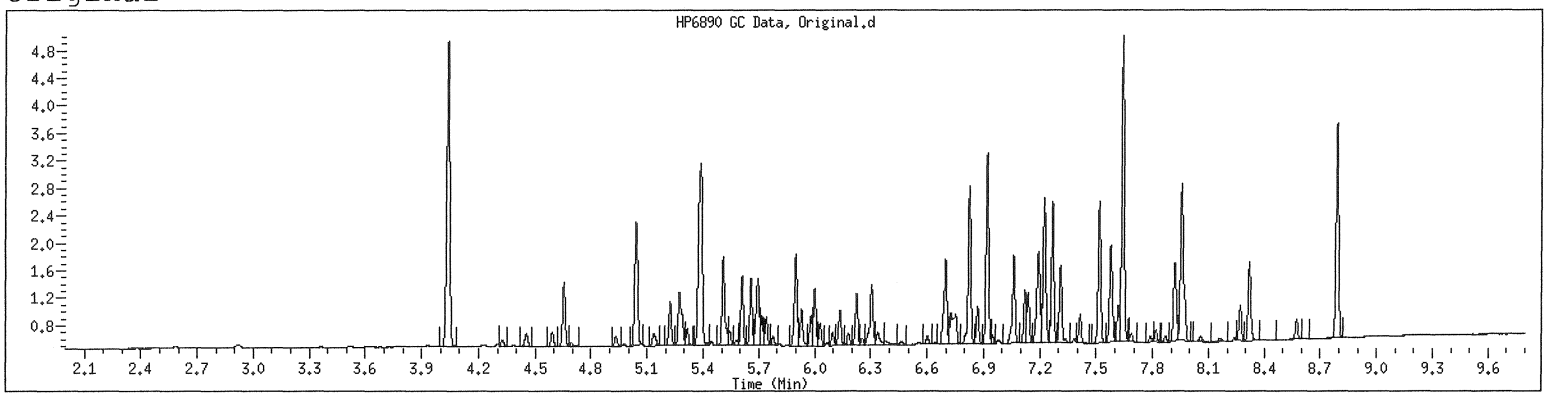



21310171 2 835

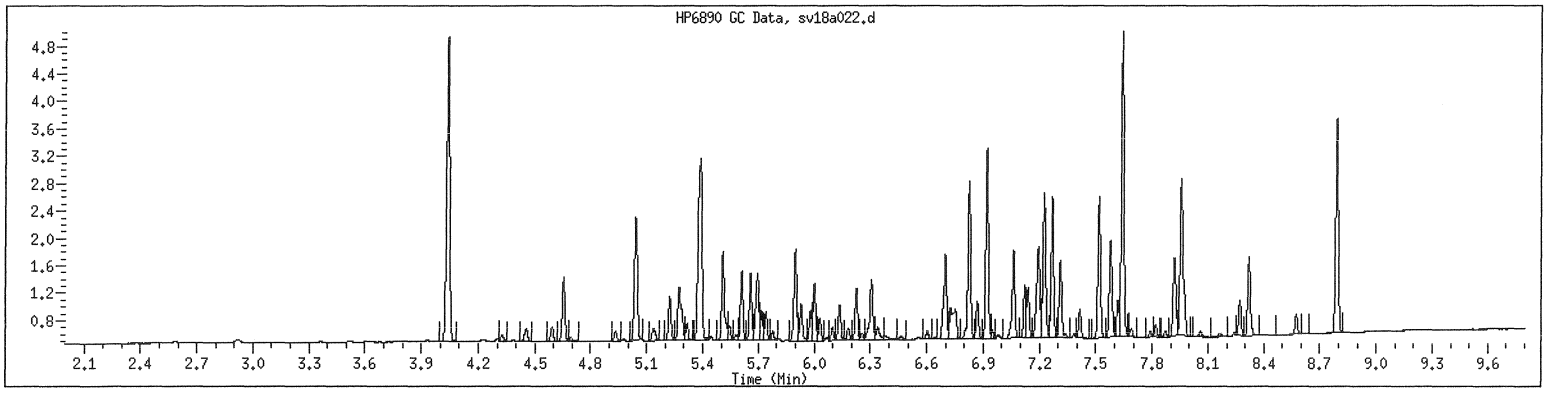
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1206 | SampleType | : CALIB_6 |
| Injection Date | : 10/18/2013 19:20 | Instrument | : gcsv18a.i |
| Operator | : tls | | |
| Sample Info | : 1206*1 50 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv18a.i/2131018.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : aro1260 |

Original




Final



Data File: /var/chem/gcsv18a.i/2131018.b/sv18a023.d
Report Date: 22-Oct-2013 11:09

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131018.b/sv18a023.d
Lab Smp Id: 1201
Inj Date : 18-OCT-2013 19:35
Operator : tls Inst ID: gcsv18a.i
Smp Info : 1201*1 100
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131018.b/pest35ms.m
Meth Date : 22-Oct-2013 11:09 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 21:02 Cal File: sv18a029.d
Als bottle: 23 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: aro1260.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

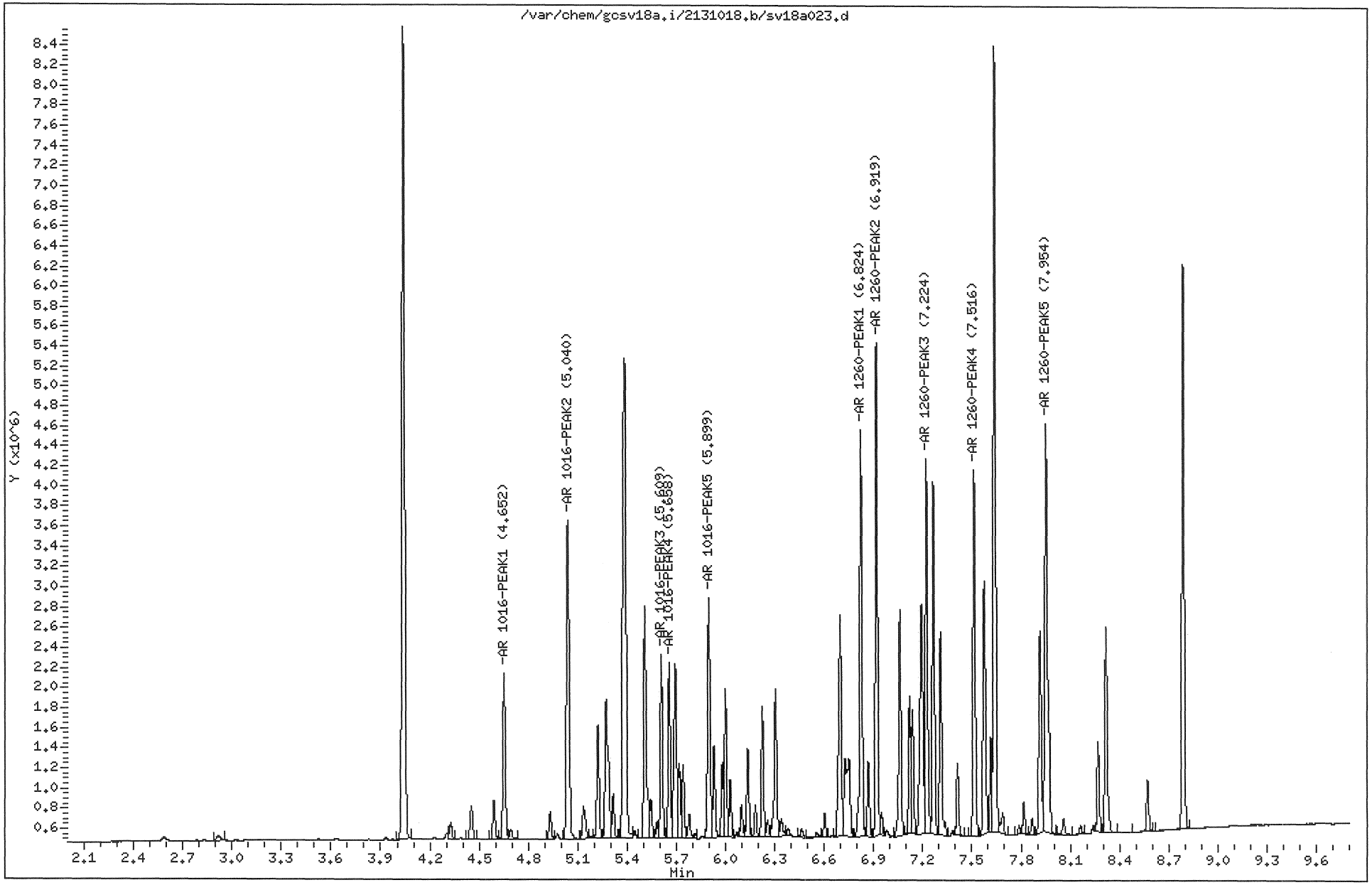
Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| M 23 AR 1016-AVG | | | | 11136079 | 100.000 | 110 |
| 24 AR 1016-PEAK1 | 4.652 | 4.651 | 0.001 | 1675561 | 100.000 | 110 |
| 25 AR 1016-PEAK2 | 5.040 | 5.040 | 0.000 | 3681428 | 100.000 | 110 |
| 26 AR 1016-PEAK3 | 5.609 | 5.610 | -0.001 | 1671632 | 100.000 | 110 |
| 27 AR 1016-PEAK4 | 5.658 | 5.659 | -0.001 | 1594789 | 100.000 | 110 |
| 28 AR 1016-PEAK5 | 5.899 | 5.899 | 0.000 | 2512669 | 100.000 | 110 |
| M 29 AR 1260-AVG | | | | 20182602 | 100.000 | 100 |
| 30 AR 1260-PEAK1 | 6.824 | 6.825 | -0.001 | 3879934 | 100.000 | 100 |
| 31 AR 1260-PEAK2 | 6.919 | 6.919 | 0.000 | 4410865 | 100.000 | 100 |
| 32 AR 1260-PEAK3 | 7.224 | 7.223 | 0.001 | 3533418 | 100.000 | 100 |
| 33 AR 1260-PEAK4 | 7.516 | 7.517 | -0.001 | 3553059 | 100.000 | 100 |
| 34 AR 1260-PEAK5 | 7.954 | 7.955 | -0.001 | 4805326 | 100.000 | 100 |

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a023.d
Date : 18-OCT-2013 19:35
Client ID:
Sample Info: 1201*1 100
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv18a.i

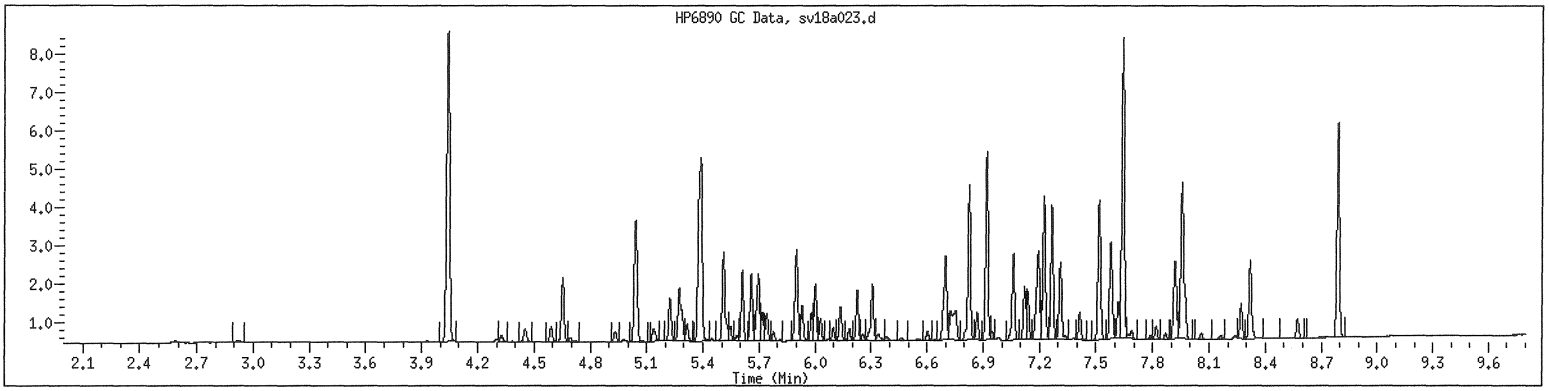
Operator: tls
Column diameter: 0.32




2131017 12 838

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1201 | SampleType | : CALIB_1 |
| Injection Date | : 10/18/2013 19:35 | Instrument | : gcsv18a.i |
| Operator | : tls | | |
| Sample Info | : 1201*1 100 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv18a.i/2131018.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : aro1260 |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a024.d
Report Date: 22-Oct-2013 11:09

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131018.b/sv18a024.d
Lab Smp Id: 1202
Inj Date : 18-OCT-2013 19:49
Operator : tls Inst ID: gcsv18a.i
Smp Info : 1202*1 200
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131018.b/pest35ms.m
Meth Date : 22-Oct-2013 11:09 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 21:16 Cal File: sv18a030.d
Als bottle: 24 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: aro1260.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

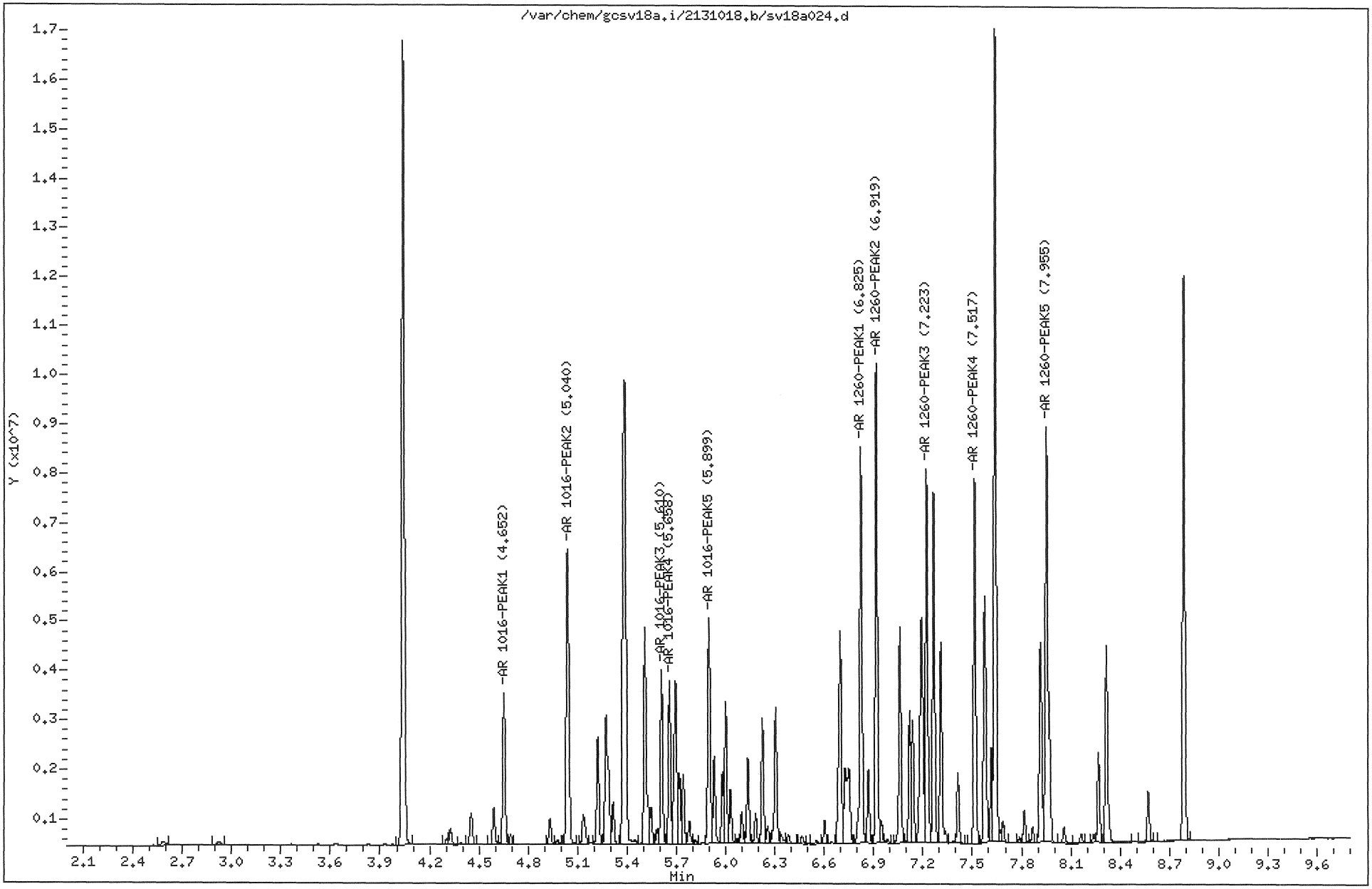
Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| M 23 AR 1016-AVG | | | | 21140223 | 200.000 | 210 |
| 24 AR 1016-PEAK1 | 4.652 | 4.651 | 0.001 | 3110884 | 200.000 | 210 |
| 25 AR 1016-PEAK2 | 5.040 | 5.040 | 0.000 | 6911702 | 200.000 | 210 |
| 26 AR 1016-PEAK3 | 5.610 | 5.610 | 0.000 | 3252366 | 200.000 | 210 |
| 27 AR 1016-PEAK4 | 5.658 | 5.659 | -0.001 | 3076562 | 200.000 | 210 |
| 28 AR 1016-PEAK5 | 5.899 | 5.899 | 0.000 | 4788709 | 200.000 | 200 |
| M 29 AR 1260-AVG | | | | 40368837 | 200.000 | 210 |
| 30 AR 1260-PEAK1 | 6.825 | 6.825 | 0.000 | 7676429 | 200.000 | 210 |
| 31 AR 1260-PEAK2 | 6.919 | 6.919 | 0.000 | 8824038 | 200.000 | 210 |
| 32 AR 1260-PEAK3 | 7.223 | 7.223 | 0.000 | 7099115 | 200.000 | 210 |
| 33 AR 1260-PEAK4 | 7.517 | 7.517 | 0.000 | 7054370 | 200.000 | 210 |
| 34 AR 1260-PEAK5 | 7.955 | 7.955 | 0.000 | 9714885 | 200.000 | 210 |

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a024.d
Date : 18-OCT-2013 19:49
Client ID:
Sample Info: 1202*1 200
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv18a.i

Operator: tls
Column diameter: 0.32

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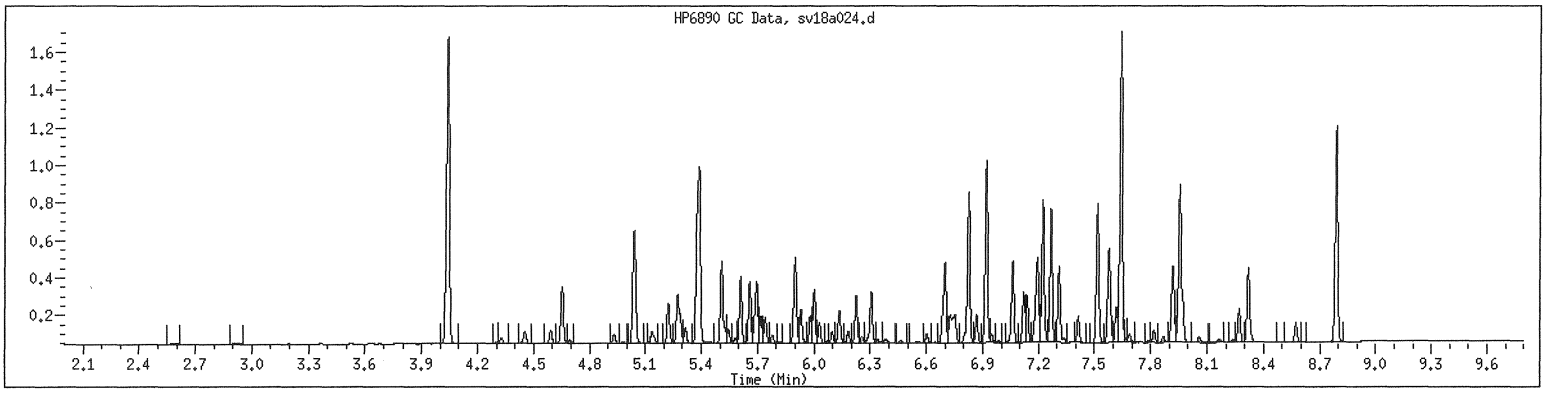
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1202 | SampleType | : CALIB_2 |
| Injection Date | : 10/18/2013 19:49 | Instrument | : gcsv18a.i |
| Operator | : tls | | |
| Sample Info | : 1202*1 200 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv18a.i/2131018.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : aro1260 |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a026.d
Report Date: 22-Oct-2013 11:09

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131018.b/sv18a026.d
Lab Smp Id: 1204
Inj Date : 18-OCT-2013 20:18
Operator : tls Inst ID: gcsv18a.i
Smp Info : 1204*1 800
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131018.b/pest35ms.m
Meth Date : 22-Oct-2013 11:09 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 21:59 Cal File: sv18a033.d
Als bottle: 26 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: aro1260.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

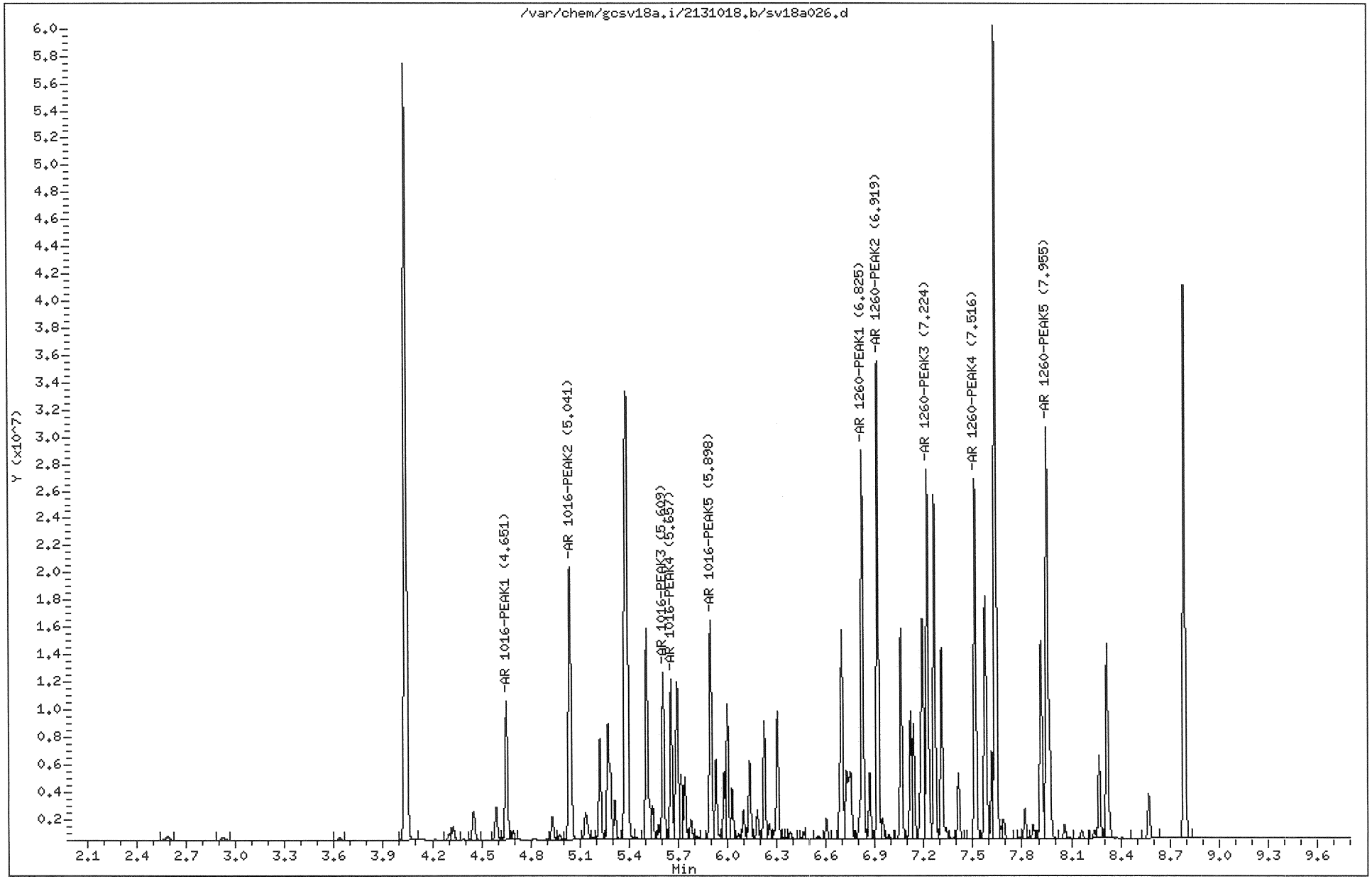
| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| M 23 AR 1016-AVG | | | | 71480591 | 800.000 | 700 |
| 24 AR 1016-PEAK1 | 4.651 | 4.652 | -0.001 | 10291078 | 800.000 | 690 |
| 25 AR 1016-PEAK2 | 5.041 | 5.040 | 0.001 | 22982822 | 800.000 | 700 |
| 26 AR 1016-PEAK3 | 5.609 | 5.610 | -0.001 | 11292139 | 800.000 | 730 |
| 27 AR 1016-PEAK4 | 5.657 | 5.658 | -0.001 | 10449902 | 800.000 | 710 |
| 28 AR 1016-PEAK5 | 5.898 | 5.899 | -0.001 | 16464650 | 800.000 | 700 |
| M 29 AR 1260-AVG | | | | 142671717 | 800.000 | 730 |
| 30 AR 1260-PEAK1 | 6.825 | 6.825 | 0.000 | 26957510 | 800.000 | 720 |
| 31 AR 1260-PEAK2 | 6.919 | 6.919 | 0.000 | 31200067 | 800.000 | 730 |
| 32 AR 1260-PEAK3 | 7.224 | 7.223 | 0.001 | 25187731 | 800.000 | 730 |
| 33 AR 1260-PEAK4 | 7.516 | 7.517 | -0.001 | 24872737 | 800.000 | 730 |
| 34 AR 1260-PEAK5 | 7.955 | 7.955 | 0.000 | 34453672 | 800.000 | 730 |

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a026.d
Date : 18-OCT-2013 20:18
Client ID:
Sample Info: 1204*1 800
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv18a.i
Operator: tls
Column diameter: 0.32




844

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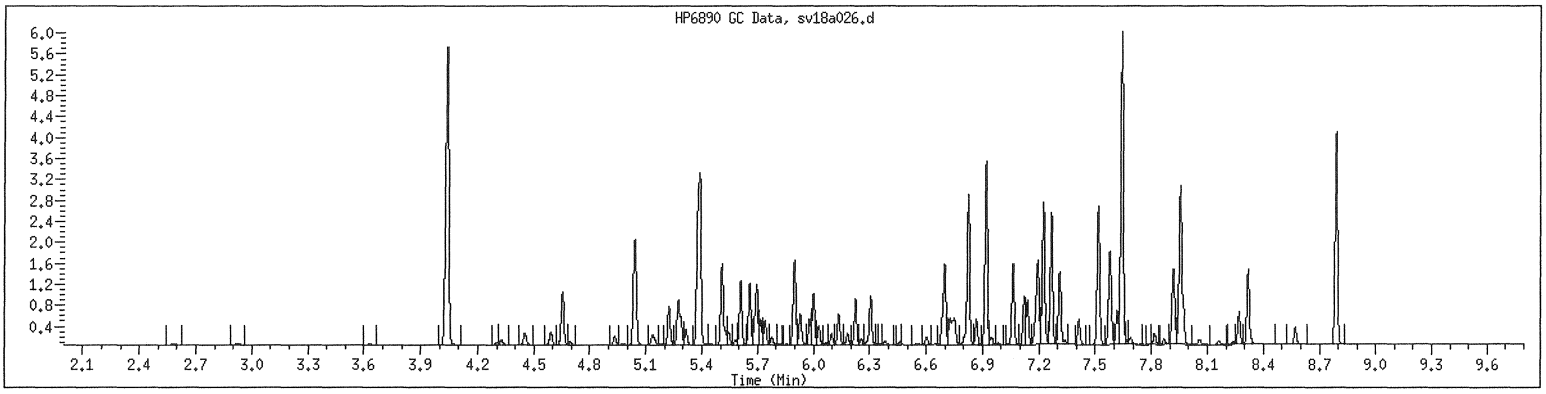
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1204 | SampleType | : CALIB_4 |
| Injection Date | : 10/18/2013 20:18 | Instrument | : gcsv18a.i |
| Operator | : tls | | |
| Sample Info | : 1204*1 800 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv18a.i/2131018.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : aro1260 |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a027.d
Report Date: 22-Oct-2013 11:10

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131018.b/sv18a027.d
Lab Smp Id: 1205
Inj Date : 18-OCT-2013 20:33
Operator : tls Inst ID: gcsv18a.i
Smp Info : 1205*1 84-57-9
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131018.b/pest35ms.m
Meth Date : 22-Oct-2013 11:09 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:14 Cal File: sv18a034.d
Als bottle: 27 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: aro1260.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

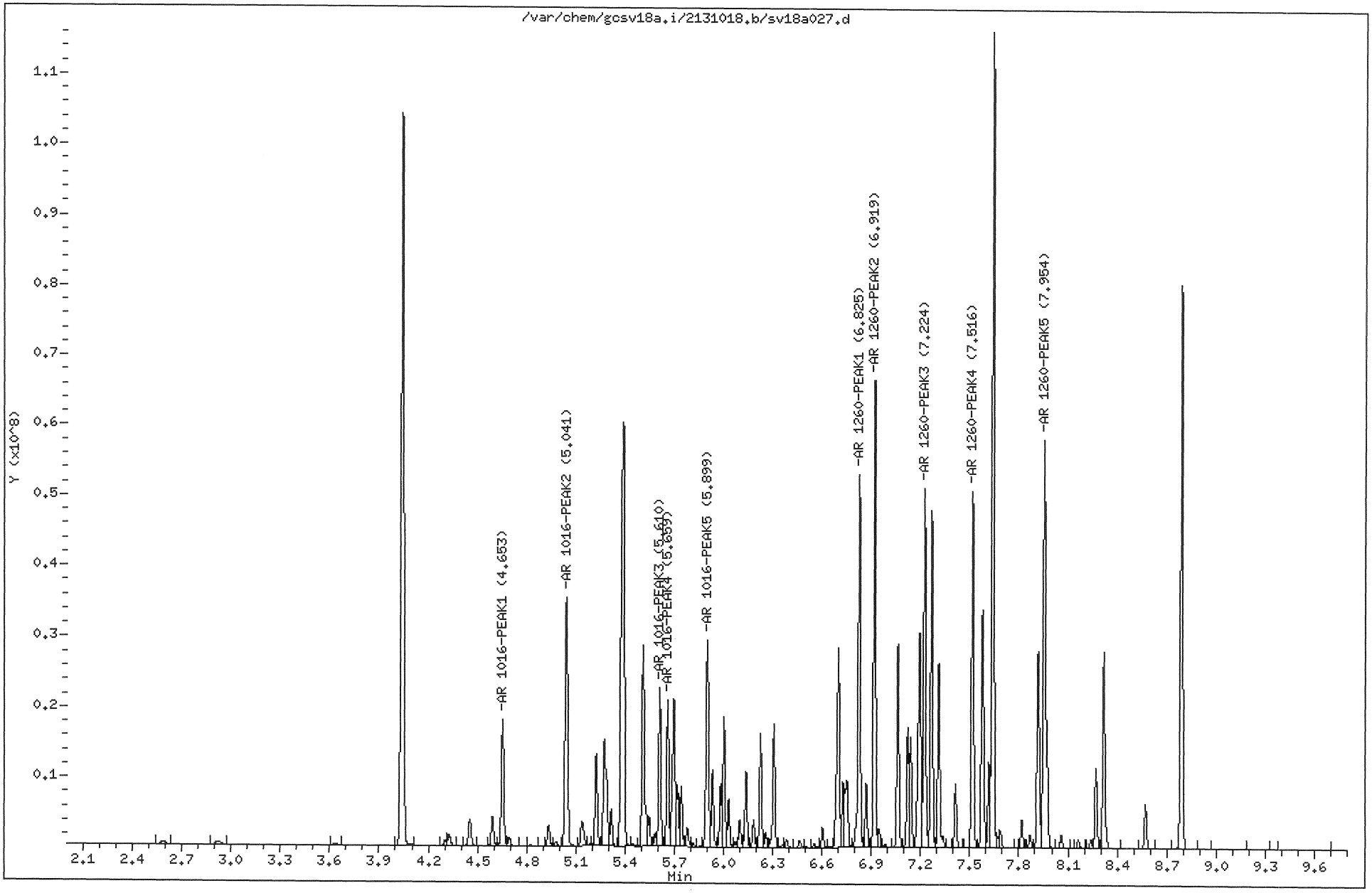
Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| M 23 AR 1016-AVG | | | | 128334339 | 1600.00 | 1300 |
| 24 AR 1016-PEAK1 | 4.653 | 4.652 | 0.001 | 18340524 | 1600.00 | 1200 |
| 25 AR 1016-PEAK2 | 5.041 | 5.040 | 0.001 | 40568519 | 1600.00 | 1200 |
| 26 AR 1016-PEAK3 | 5.610 | 5.610 | 0.000 | 20531552 | 1600.00 | 1300 |
| 27 AR 1016-PEAK4 | 5.659 | 5.658 | 0.001 | 18430089 | 1600.00 | 1300 |
| 28 AR 1016-PEAK5 | 5.899 | 5.899 | 0.000 | 30463655 | 1600.00 | 1300 |
| M 29 AR 1260-AVG | | | | 270400161 | 1600.00 | 1400 |
| 30 AR 1260-PEAK1 | 6.825 | 6.825 | 0.000 | 50574952 | 1600.00 | 1400 |
| 31 AR 1260-PEAK2 | 6.919 | 6.919 | 0.000 | 58503413 | 1600.00 | 1400 |
| 32 AR 1260-PEAK3 | 7.224 | 7.223 | 0.001 | 47668945 | 1600.00 | 1400 |
| 33 AR 1260-PEAK4 | 7.516 | 7.517 | -0.001 | 47275491 | 1600.00 | 1400 |
| 34 AR 1260-PEAK5 | 7.954 | 7.955 | -0.001 | 66377360 | 1600.00 | 1400 |

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a027.d
Date : 18-OCT-2013 20:33
Client ID:
Sample Info: 1205x1 84-57-9
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv18a.i

Operator: tls
Column diameter: 0.32

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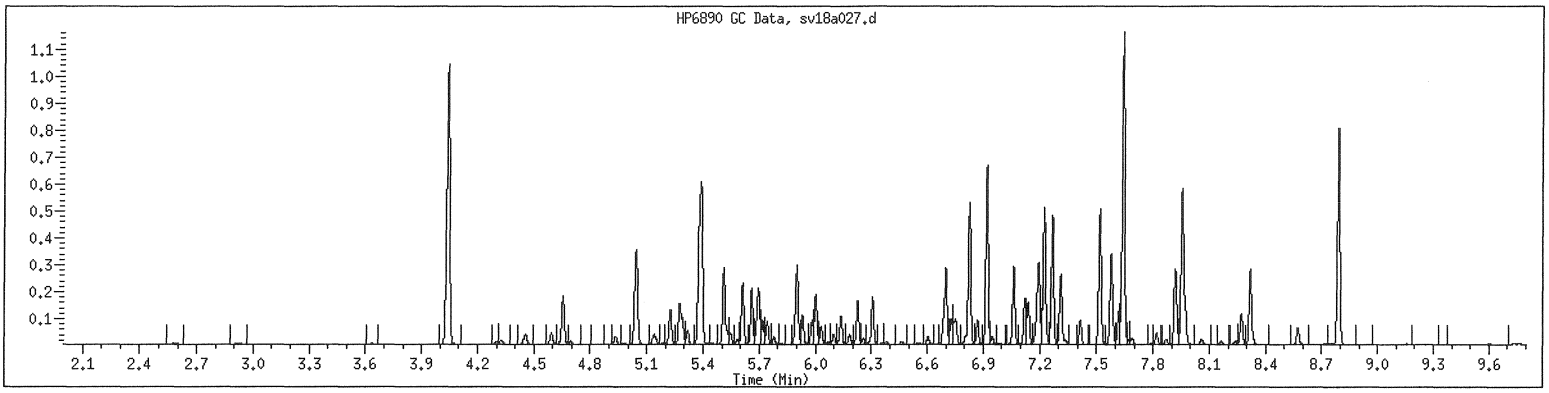
# MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 1205 SampleType : CALIB_5
Injection Date: 10/18/2013 20:33 Instrument : gcsv18a.i
Operator : tls
Sample Info : 1205*1 84-57-9
Misc Info :
Method : /var/chem/gcsv18a.i/2131018.b/pest35ms.m
Dilution : 1.0
Matrix : WATER
Integrator : Falcon Compound Sublist: aro1260




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a028.d
Report Date: 22-Oct-2013 11:10

GCAL, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 1600
Level: LOW
Data Type: GC MULTI COMP
SpikeList File: pcbicv.spk
Sublist File: aro1260.sub
Method File: /var/chem/gcsv18a.i/2131018.b/pest35ms.m
Misc Info:

Client SDG: 2131018
Fraction: SV

Operator: tls
SampleType: LCS
Quant Type: ESTD

| SPIKE COMPOUND | CONC ADDED UG/L | CONC RECOVERED UG/L | % RECOVERED | LIMITS |
|---|---|---|---|---|
| M 23 AR 1016-AVG | 400 | 390 | 96.78 | 85-115 |
| M 29 AR 1260-AVG | 400 | 400 | 99.59 | 85-115 |

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a028.d
Report Date: 22-Oct-2013 11:10

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131018.b/sv18a028.d
Lab Smp Id: 1600
Inj Date : 18-OCT-2013 20:47
Operator : tls Inst ID: gcsv18a.i
Smp Info : 1600*1 84-51-9
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131018.b/pest35ms.m
Meth Date : 22-Oct-2013 11:09 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:14 Cal File: sv18a034.d
Als bottle: 28 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: aro1260.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

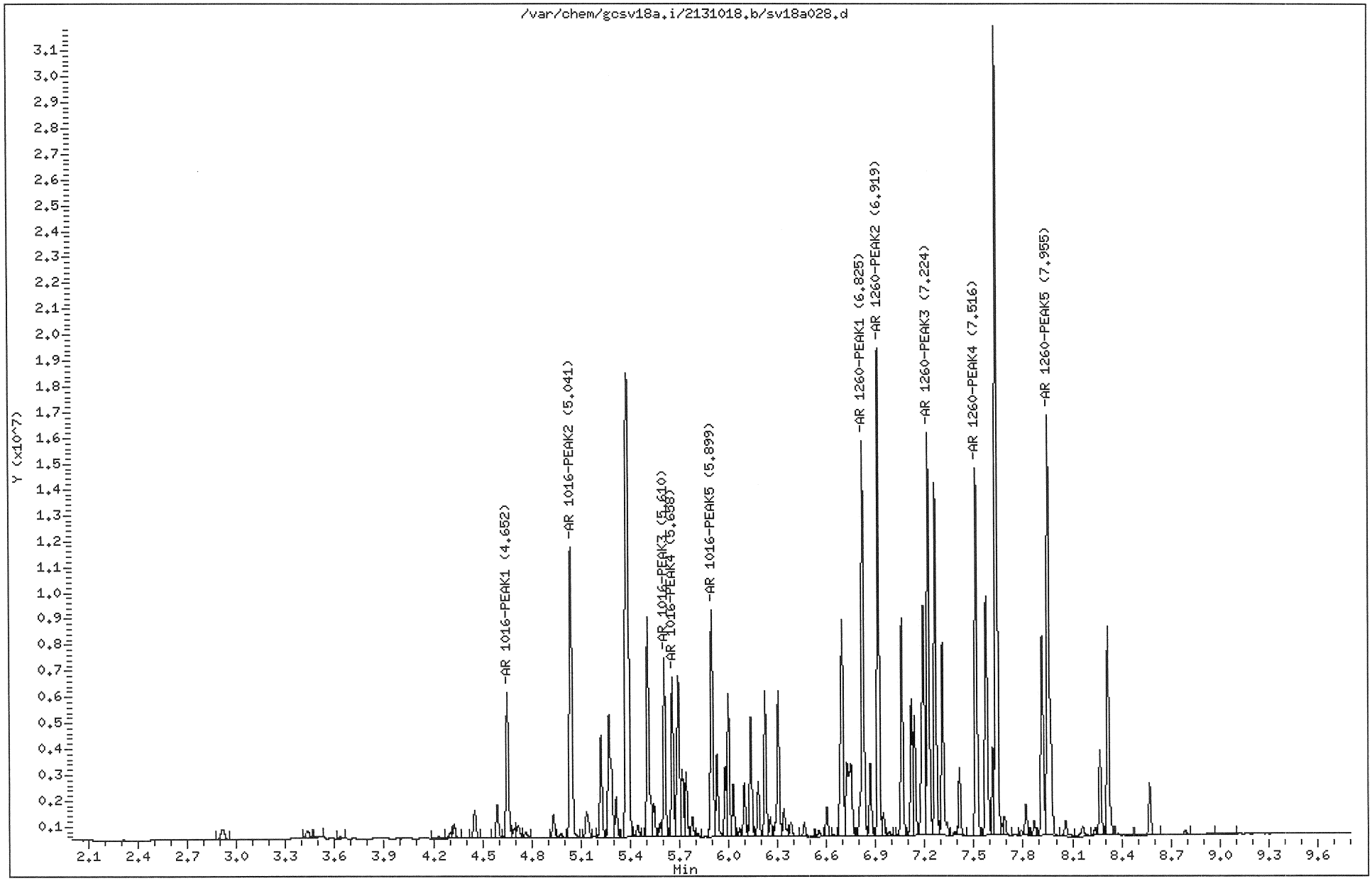
| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 1.00000 | Volume of final extract (mL) |
| Vo | 1.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | FINAL ( UG/L) |
|---|---|---|---|---|---|---|
| M 23 AR 1016-AVG | | | | 39306605 | 387.121 | 390 |
| 24 AR 1016-PEAK1 | 4.652 | 4.652 | 0.000 | 5840682 | 390.702 | 390 |
| 25 AR 1016-PEAK2 | 5.041 | 5.040 | 0.001 | 12657782 | 383.545 | 380 |
| 26 AR 1016-PEAK3 | 5.610 | 5.610 | 0.000 | 6062305 | 389.667 | 390 |
| 27 AR 1016-PEAK4 | 5.658 | 5.658 | 0.000 | 5539008 | 377.937 | 380 |
| 28 AR 1016-PEAK5 | 5.899 | 5.899 | 0.000 | 9206828 | 393.946 | 390 |
| M 29 AR 1260-AVG | | | | 77883025 | 398.366 | 400 |
| 30 AR 1260-PEAK1 | 6.825 | 6.825 | 0.000 | 14892430 | 400.066 | 400 |
| 31 AR 1260-PEAK2 | 6.919 | 6.919 | 0.000 | 16503100 | 386.562 | 390 |
| 32 AR 1260-PEAK3 | 7.224 | 7.223 | 0.001 | 14273641 | 415.356 | 420 |
| 33 AR 1260-PEAK4 | 7.516 | 7.517 | -0.001 | 13539827 | 395.289 | 400 |
| 34 AR 1260-PEAK5 | 7.955 | 7.955 | 0.000 | 18674027 | 397.560 | 400 |

Data File: /var/chem/gcsv18a.i/2131018.b/sv18a028.d
Date : 18-OCT-2013 20:47
Client ID:
Sample Info: 1600*1 84-51-9
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

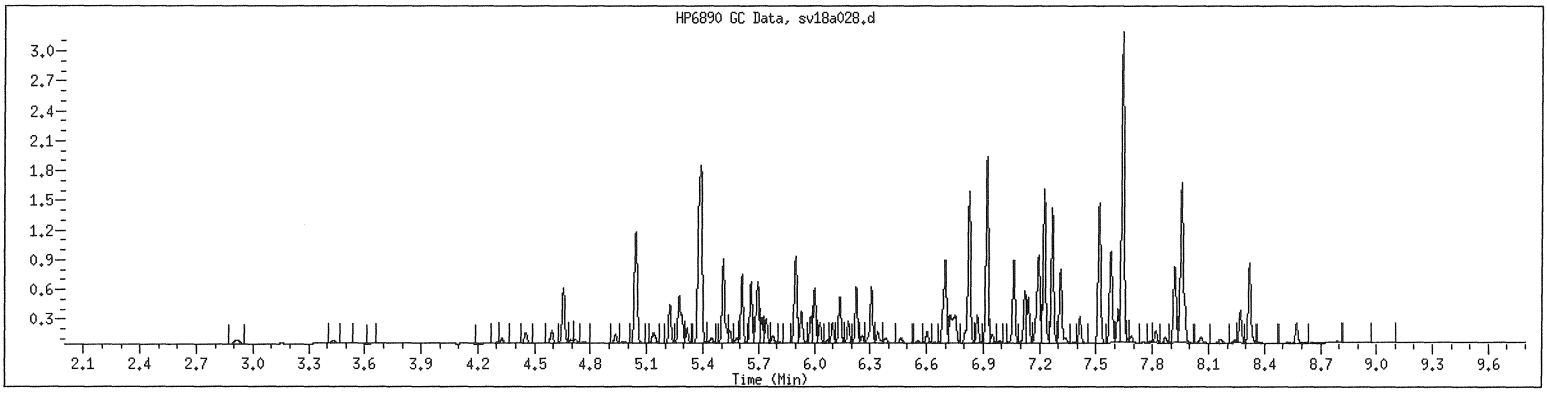
Instrument: gcsv18a.i
Operator: tls
Column diameter: 0.32




2131017 12 851

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1600 | SampleType | : LCS |
| Injection Date | : 10/18/2013 20:47 | Instrument | : gcsv18a.i |
| Operator | : tls | | |
| Sample Info | : 1600*1 84-51-9 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv18a.i/2131018.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : aro1260 |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv18a.i/2131025.b/sv18a002.d
Report Date: 28-Oct-2013 08:21

GCAL, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcsv18a.i  Injection Date: 25-OCT-2013 08:51
Lab File ID: sv18a002.d  Init. Cal. Date(s): 18-OCT-2013  18-OCT-2013
Analysis Type: WATER  Init. Cal. Times: 14:45  22:14
Lab Sample ID: 1400  Quant Type: ESTD
Method: /var/chem/gcsv18a.i/2131025.b/pest35ms.m

| COMPOUND | RRF / AMOUNT | RF60 | CCAL RRF60 | MIN RRF | %D / %DRIFT | MAX %D / %DRIFT | CURVE TYPE |
|---|---|---|---|---|---|---|---|
| M 23 AR 1016-AVG | 101536 | 119507 | 119507 | 0.010 | -17.69990 | 20.00000 | Averaged |
| 24 AR 1016-PEAK1 | 14949 | 17760 | 17760 | 0.010 | -18.80430 | 20.00000 | Averaged |
| 25 AR 1016-PEAK2 | 33002 | 39522 | 39522 | 0.010 | -19.75504 | 20.00000 | Averaged |
| 26 AR 1016-PEAK3 | 15558 | 18551 | 18551 | 0.010 | -19.23746 | 20.00000 | Averaged |
| 27 AR 1016-PEAK4 | 14656 | 16825 | 16825 | 0.010 | -14.79716 | 20.00000 | Averaged |
| 28 AR 1016-PEAK5 | 23371 | 26850 | 26850 | 0.010 | -14.88827 | 20.00000 | Averaged |
| M 29 AR 1260-AVG | 195506 | 214363 | 214363 | 0.010 | -9.64507 | 20.00000 | Averaged |
| 30 AR 1260-PEAK1 | 37225 | 40568 | 40568 | 0.010 | -8.98099 | 20.00000 | Averaged |
| 31 AR 1260-PEAK2 | 42692 | 47165 | 47165 | 0.010 | -10.47831 | 20.00000 | Averaged |
| 32 AR 1260-PEAK3 | 34365 | 38016 | 38016 | 0.010 | -10.62458 | 20.00000 | Averaged |
| 33 AR 1260-PEAK4 | 34253 | 37795 | 37795 | 0.010 | -10.33948 | 20.00000 | Averaged |
| 34 AR 1260-PEAK5 | 46972 | 50819 | 50819 | 0.010 | -8.19105 | 20.00000 | Averaged |

Average %D / Drift Results.

Calculated Average %D/Drift = 13.62014
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

Data File: /var/chem/gcsv18a.i/2131025.b/sv18a002.d
Report Date: 28-Oct-2013 08:21

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131025.b/sv18a002.d
Lab Smp Id: 1400
Inj Date : 25-OCT-2013 08:51
Operator : tls Inst ID: gcsv18a.i
Smp Info : 1400*1 84-57-9
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131025.b/pest35ms.m
Meth Date : 28-Oct-2013 08:21 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:14 Cal File: sv18a034.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: aro1260.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

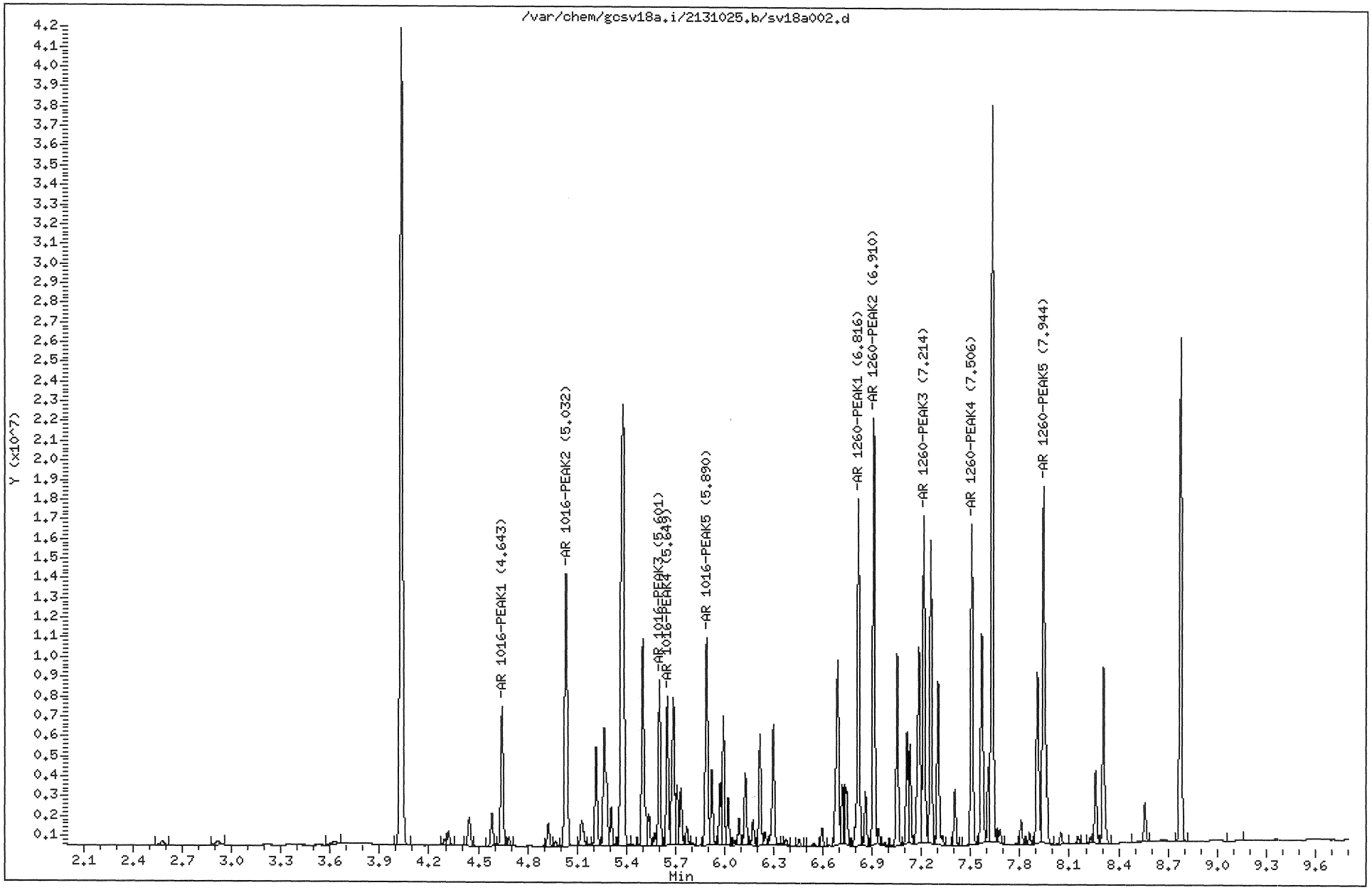
Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| M 23 AR 1016-AVG | | | | 47802934 | 400.000 | 470 |
| 24 AR 1016-PEAK1 | 4.643 | 4.651 | -0.008 | 7104108 | 400.000 | 480 |
| 25 AR 1016-PEAK2 | 5.032 | 5.040 | -0.008 | 15808672 | 400.000 | 480 |
| 26 AR 1016-PEAK3 | 5.601 | 5.610 | -0.009 | 7420223 | 400.000 | 480 |
| 27 AR 1016-PEAK4 | 5.649 | 5.659 | -0.010 | 6729823 | 400.000 | 460 |
| 28 AR 1016-PEAK5 | 5.890 | 5.899 | -0.009 | 10740108 | 400.000 | 460 |
| M 29 AR 1260-AVG | | | | 85745248 | 400.000 | 440 |
| 30 AR 1260-PEAK1 | 6.816 | 6.825 | -0.009 | 16227249 | 400.000 | 440 |
| 31 AR 1260-PEAK2 | 6.910 | 6.919 | -0.009 | 18866147 | 400.000 | 440 |
| 32 AR 1260-PEAK3 | 7.214 | 7.223 | -0.009 | 15206397 | 400.000 | 440 |
| 33 AR 1260-PEAK4 | 7.506 | 7.517 | -0.011 | 15117809 | 400.000 | 440 |
| 34 AR 1260-PEAK5 | 7.944 | 7.955 | -0.011 | 20327646 | 400.000 | 430 |

Data File: /var/chem/gcsv18a.i/2131025.b/sv18a002.d
Date : 25-OCT-2013 08:51
Client ID:
Sample Info: 1400x1 84-57-9
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv18a.i

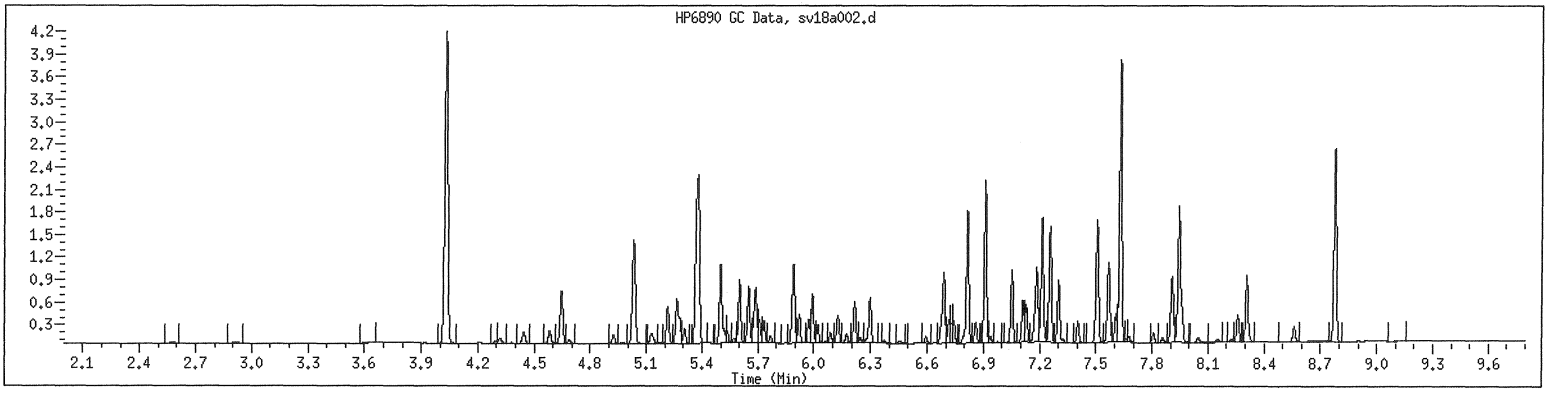
Operator: tls
Column diameter: 0.32




2131017 12 855

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1400 | SampleType | : CCALIB_3 |
| Injection Date | : 10/25/2013 08:51 | Instrument | : gcsv18a.i |
| Operator | : tls | | |
| Sample Info | : 1400*1 84-57-9 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv18a.i/2131025.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : aro1260 |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv18a.i/2131025.b/sv18a015.d
Report Date: 28-Oct-2013 08:22

GCAL, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcsv18a.i  Injection Date: 25-OCT-2013 15:12
Lab File ID: sv18a015.d  Init. Cal. Date(s): 18-OCT-2013  18-OCT-2013
Analysis Type: WATER  Init. Cal. Times:  14:45  22:14
Lab Sample ID: 1400  Quant Type:  ESTD
Method: /var/chem/gcsv18a.i/2131025.b/pest35ms.m

| COMPOUND | RRF / AMOUNT | RF60 | CCAL RRF60 | MIN RRF | %D / %DRIFT | MAX %D / %DRIFT | CURVE TYPE |
|---|---|---|---|---|---|---|---|
| M 23 AR 1016-AVG | 101536 | 90441 | 90441 | 0.010 | 10.92725 | 20.00000 | Averaged |
| 24 AR 1016-PEAK1 | 14949 | 12726 | 12726 | 0.010 | 14.87234 | 20.00000 | Averaged |
| 25 AR 1016-PEAK2 | 33002 | 29071 | 29071 | 0.010 | 11.91145 | 20.00000 | Averaged |
| 26 AR 1016-PEAK3 | 15558 | 14500 | 14500 | 0.010 | 6.79804 | 20.00000 | Averaged |
| 27 AR 1016-PEAK4 | 14656 | 13349 | 13349 | 0.010 | 8.91583 | 20.00000 | Averaged |
| 28 AR 1016-PEAK5 | 23371 | 20794 | 20794 | 0.010 | 11.02401 | 20.00000 | Averaged |
| M 29 AR 1260-AVG | 195506 | 166448 | 166448 | 0.010 | 14.86301 | 20.00000 | Averaged |
| 30 AR 1260-PEAK1 | 37225 | 32715 | 32715 | 0.010 | 12.11656 | 20.00000 | Averaged |
| 31 AR 1260-PEAK2 | 42692 | 37508 | 37508 | 0.010 | 12.14194 | 20.00000 | Averaged |
| 32 AR 1260-PEAK3 | 34365 | 29622 | 29622 | 0.010 | 13.80248 | 20.00000 | Averaged |
| 33 AR 1260-PEAK4 | 34253 | 29253 | 29253 | 0.010 | 14.59694 | 20.00000 | Averaged |
| 34 AR 1260-PEAK5 | 46972 | 37351 | 37351 | 0.010 | 20.48261 | 20.00000 | Averaged <- |

Average %D / Drift Results.

Calculated Average %D/Drift = 12.70437
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

Data File: /var/chem/gcsv18a.i/2131025.b/sv18a015.d
Report Date: 28-Oct-2013 08:22

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131025.b/sv18a015.d
Lab Smp Id: 1400
Inj Date : 25-OCT-2013 15:12
Operator : tls Inst ID: gcsv18a.i
Smp Info : 1400*1 84-57-9
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131025.b/pest35ms.m
Meth Date : 28-Oct-2013 08:22 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:14 Cal File: sv18a034.d
Als bottle: 15 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: aro1260.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

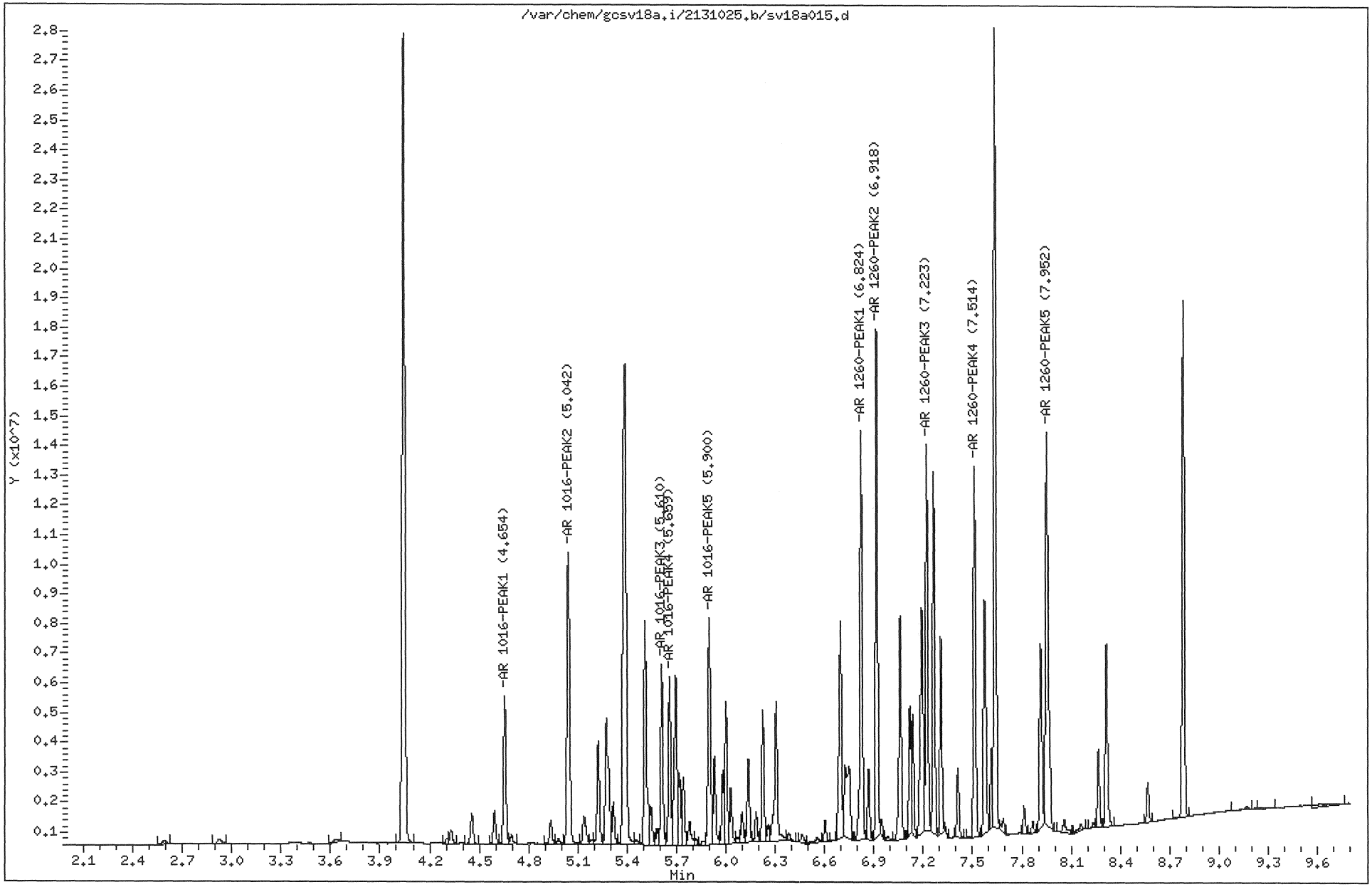
| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| M 23 AR 1016-AVG | | | | 36176232 | 400.000 | 360 |
| 24 AR 1016-PEAK1 | 4.654 | 4.651 | 0.003 | 5090355 | 400.000 | 340 |
| 25 AR 1016-PEAK2 | 5.042 | 5.040 | 0.002 | 11628430 | 400.000 | 350 |
| 26 AR 1016-PEAK3 | 5.610 | 5.610 | 0.000 | 5800017 | 400.000 | 370 |
| 27 AR 1016-PEAK4 | 5.659 | 5.659 | 0.000 | 5339682 | 400.000 | 360 |
| 28 AR 1016-PEAK5 | 5.900 | 5.899 | 0.001 | 8317748 | 400.000 | 360 |
| M 29 AR 1260-AVG | | | | 66579304 | 400.000 | 340 |
| 30 AR 1260-PEAK1 | 6.824 | 6.825 | -0.001 | 13085828 | 400.000 | 350 |
| 31 AR 1260-PEAK2 | 6.918 | 6.919 | -0.001 | 15003334 | 400.000 | 350 |
| 32 AR 1260-PEAK3 | 7.223 | 7.223 | 0.000 | 11848666 | 400.000 | 340 |
| 33 AR 1260-PEAK4 | 7.514 | 7.517 | -0.003 | 11701225 | 400.000 | 340 |
| 34 AR 1260-PEAK5 | 7.952 | 7.955 | -0.003 | 14940251 | 400.000 | 320 |

Data File: /var/chem/gcsv18a.i/2131025.b/sv18a015.d
Date : 25-OCT-2013 15:12
Client ID:
Sample Info: 1400x1 84-57-9
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv18a.i
Operator: tls
Column diameter: 0.32

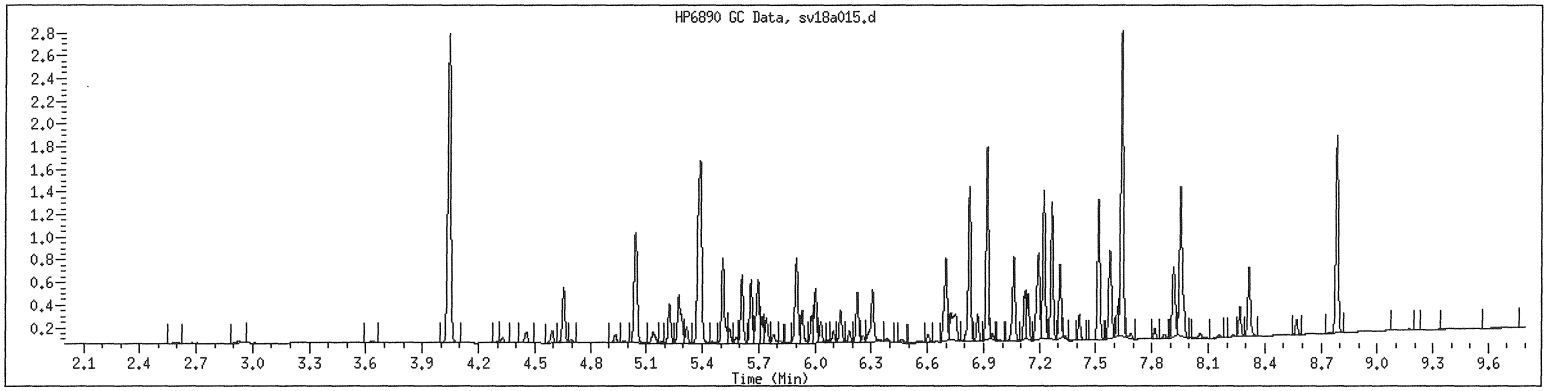



2131017 12 859

Report Date: 10/28/2013 08:22

MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1400 | SampleType | : CCALIB_3 |
| Injection Date | : 10/25/2013 15:12 | Instrument | : gcsv18a.i |
| Operator | : tls | | |
| Sample Info | : 1400*1 84-57-9 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv18a.i/2131025.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : aro1260 |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv18a.i/2131025.b/sv18a021.d
Report Date: 28-Oct-2013 08:22

GCAL, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcsv18a.i  Injection Date: 25-OCT-2013 17:10
Lab File ID: sv18a021.d  Init. Cal. Date(s): 18-OCT-2013  18-OCT-2013
Analysis Type: WATER  Init. Cal. Times:  14:45  22:14
Lab Sample ID: 1400  Quant Type:  ESTD
Method: /var/chem/gcsv18a.i/2131025.b/pest35ms.m

| COMPOUND | RRF / AMOUNT | RF60 | CCAL RRF60 | MIN RRF | %D / %DRIFT | MAX %D / %DRIFT | CURVE TYPE |
|---|---|---|---|---|---|---|---|
| M 23 AR 1016-AVG | 101536 | 91874 | 91874 | 0.010 | 9.51516 | 20.00000 | Averaged |
| 24 AR 1016-PEAK1 | 14949 | 13022 | 13022 | 0.010 | 12.89223 | 20.00000 | Averaged |
| 25 AR 1016-PEAK2 | 33002 | 29534 | 29534 | 0.010 | 10.50888 | 20.00000 | Averaged |
| 26 AR 1016-PEAK3 | 15558 | 14719 | 14719 | 0.010 | 5.38896 | 20.00000 | Averaged |
| 27 AR 1016-PEAK4 | 14656 | 13559 | 13559 | 0.010 | 7.48743 | 20.00000 | Averaged |
| 28 AR 1016-PEAK5 | 23371 | 21041 | 21041 | 0.010 | 9.97003 | 20.00000 | Averaged |
| M 29 AR 1260-AVG | 195506 | 173111 | 173111 | 0.010 | 11.45510 | 20.00000 | Averaged |
| 30 AR 1260-PEAK1 | 37225 | 33456 | 33456 | 0.010 | 10.12609 | 20.00000 | Averaged |
| 31 AR 1260-PEAK2 | 42692 | 38564 | 38564 | 0.010 | 9.66827 | 20.00000 | Averaged |
| 32 AR 1260-PEAK3 | 34365 | 30827 | 30827 | 0.010 | 10.29475 | 20.00000 | Averaged |
| 33 AR 1260-PEAK4 | 34253 | 30832 | 30832 | 0.010 | 9.98824 | 20.00000 | Averaged |
| 34 AR 1260-PEAK5 | 46972 | 39432 | 39432 | 0.010 | 16.05094 | 20.00000 | Averaged |

Average %D / Drift Results.

Calculated Average %D/Drift = 10.27884
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

Data File: /var/chem/gcsv18a.i/2131025.b/sv18a021.d
Report Date: 28-Oct-2013 08:22

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131025.b/sv18a021.d
Lab Smp Id: 1400
Inj Date : 25-OCT-2013 17:10
Operator : tls Inst ID: gcsv18a.i
Smp Info : 1400*1 84-57-9
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131025.b/pest35ms.m
Meth Date : 28-Oct-2013 08:22 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:14 Cal File: sv18a034.d
Als bottle: 21 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: aro1260.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

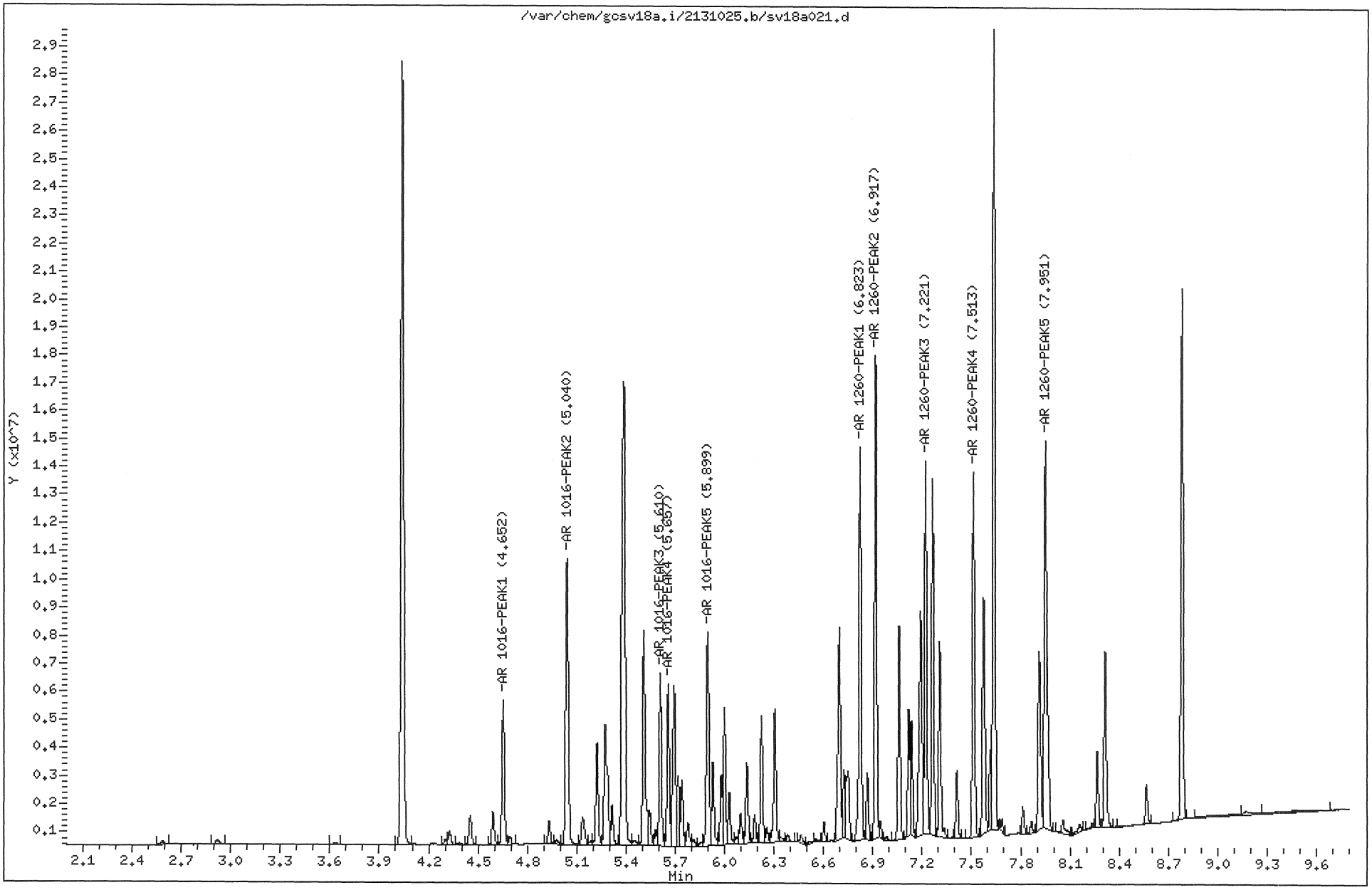
Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| M 23 AR 1016-AVG | | | | 36749742 | 400.000 | 360 |
| 24 AR 1016-PEAK1 | 4.652 | 4.651 | 0.001 | 5208759 | 400.000 | 350 |
| 25 AR 1016-PEAK2 | 5.040 | 5.040 | 0.000 | 11813580 | 400.000 | 360 |
| 26 AR 1016-PEAK3 | 5.610 | 5.610 | 0.000 | 5887705 | 400.000 | 380 |
| 27 AR 1016-PEAK4 | 5.657 | 5.659 | -0.002 | 5423420 | 400.000 | 370 |
| 28 AR 1016-PEAK5 | 5.899 | 5.899 | 0.000 | 8416278 | 400.000 | 360 |
| M 29 AR 1260-AVG | | | | 69244374 | 400.000 | 350 |
| 30 AR 1260-PEAK1 | 6.823 | 6.825 | -0.002 | 13382208 | 400.000 | 360 |
| 31 AR 1260-PEAK2 | 6.917 | 6.919 | -0.002 | 15425758 | 400.000 | 360 |
| 32 AR 1260-PEAK3 | 7.221 | 7.223 | -0.002 | 12330836 | 400.000 | 360 |
| 33 AR 1260-PEAK4 | 7.513 | 7.517 | -0.004 | 12332671 | 400.000 | 360 |
| 34 AR 1260-PEAK5 | 7.951 | 7.955 | -0.004 | 15772901 | 400.000 | 340 |

Data File: /var/chem/gcsv18a.i/2131025.b/sv18a021.d
Date : 25-OCT-2013 17:10
Client ID:
Sample Info: 1400x1 84-57-9
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv18a.i

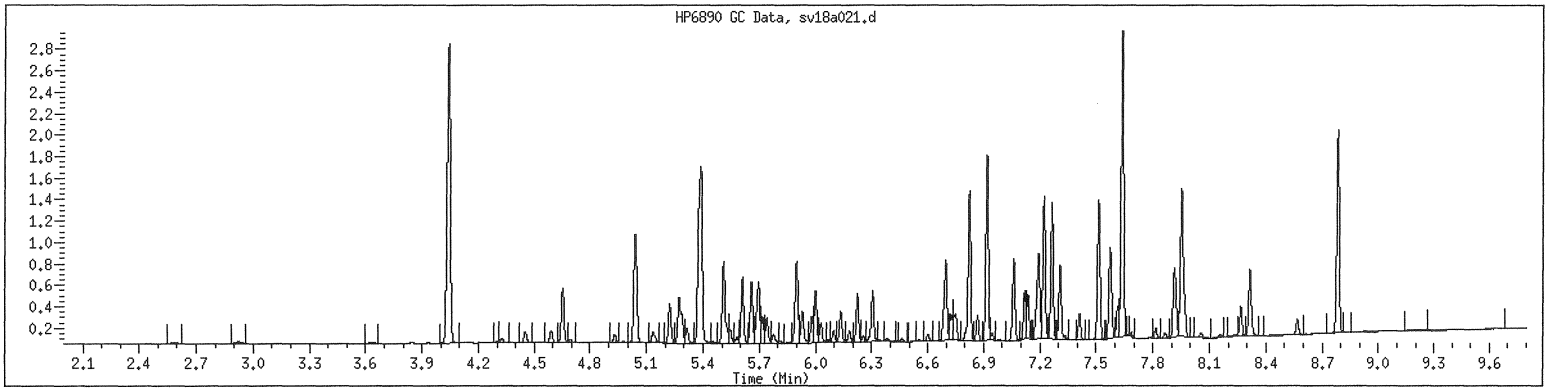
Operator: tls
Column diameter: 0.32




21310712 863

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1400 | SampleType | : CCALIB_3 |
| Injection Date | : 10/25/2013 17:10 | Instrument | : gcsv18a.i |
| Operator | : tls | | |
| Sample Info | : 1400*1 84-57-9 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv18a.i/2131025.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : aro1260 |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv18a.i/2131025.b/sv18a029.d
Report Date: 28-Oct-2013 08:22

GCAL, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcsv18a.i  Injection Date: 27-OCT-2013 16:03
Lab File ID: sv18a029.d  Init. Cal. Date(s): 18-OCT-2013  18-OCT-2013
Analysis Type: WATER  Init. Cal. Times: 14:45  22:14
Lab Sample ID: 1400  Quant Type: ESTD
Method: /var/chem/gcsv18a.i/2131025.b/pest35ms.m

| COMPOUND | RRF / AMOUNT | RF60 | CCAL RRF60 | MIN RRF | %D / %DRIFT | MAX %D / %DRIFT | CURVE TYPE |
|---|---|---|---|---|---|---|---|
| M 23 AR 1016-AVG | 101536 | 90009 | 90009 | 0.010 | 11.35242 | 20.00000 | Averaged |
| 24 AR 1016-PEAK1 | 14949 | 13515 | 13515 | 0.010 | 9.59326 | 20.00000 | Averaged |
| 25 AR 1016-PEAK2 | 33002 | 30404 | 30404 | 0.010 | 7.87320 | 20.00000 | Averaged |
| 26 AR 1016-PEAK3 | 15558 | 13814 | 13814 | 0.010 | 11.21008 | 20.00000 | Averaged |
| 27 AR 1016-PEAK4 | 14656 | 12573 | 12573 | 0.010 | 14.21452 | 20.00000 | Averaged |
| 28 AR 1016-PEAK5 | 23371 | 19704 | 19704 | 0.010 | 15.69058 | 20.00000 | Averaged |
| M 29 AR 1260-AVG | 195506 | 167627 | 167627 | 0.010 | 14.25985 | 20.00000 | Averaged |
| 30 AR 1260-PEAK1 | 37225 | 31169 | 31169 | 0.010 | 16.26937 | 20.00000 | Averaged |
| 31 AR 1260-PEAK2 | 42692 | 37412 | 37412 | 0.010 | 12.36782 | 20.00000 | Averaged |
| 32 AR 1260-PEAK3 | 34365 | 29063 | 29063 | 0.010 | 15.42706 | 20.00000 | Averaged |
| 33 AR 1260-PEAK4 | 34253 | 30458 | 30458 | 0.010 | 11.07819 | 20.00000 | Averaged |
| 34 AR 1260-PEAK5 | 46972 | 39525 | 39525 | 0.010 | 15.85316 | 20.00000 | Averaged |

Average %D / Drift Results.

Calculated Average %D/Drift = 12.93246
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

Data File: /var/chem/gcsv18a.i/2131025.b/sv18a029.d
Report Date: 28-Oct-2013 08:22

GCAL, Inc.

Data file : /var/chem/gcsv18a.i/2131025.b/sv18a029.d
Lab Smp Id: 1400
Inj Date : 27-OCT-2013 16:03
Operator : tls Inst ID: gcsv18a.i
Smp Info : 1400*1 84-57-9
Misc Info :
Comment :
Method : /var/chem/gcsv18a.i/2131025.b/pest35ms.m
Meth Date : 28-Oct-2013 08:22 tls Quant Type: ESTD
Cal Date : 18-OCT-2013 22:14 Cal File: sv18a034.d
Als bottle: 29 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: aro1260.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (mL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

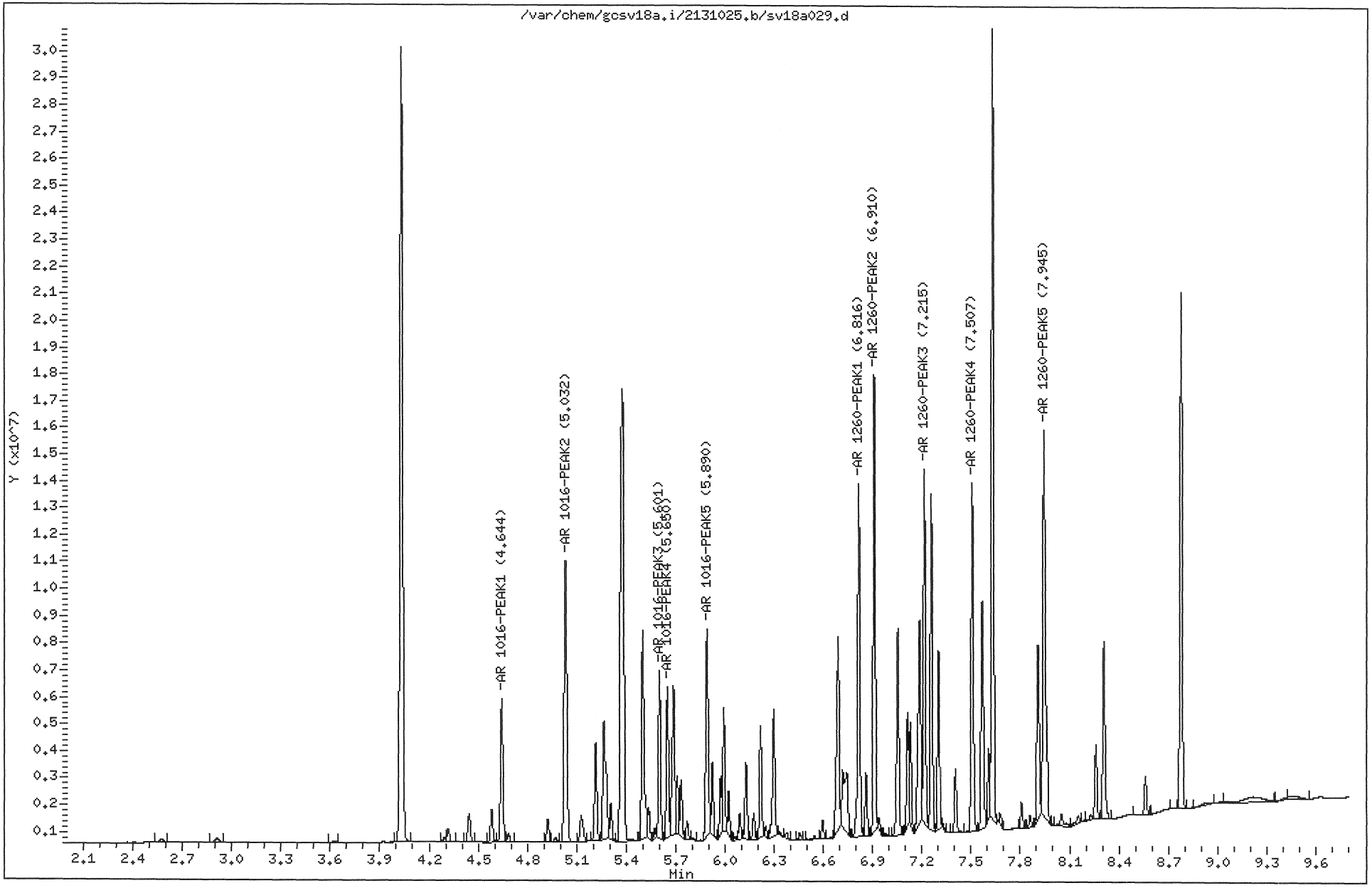
Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| M 23 AR 1016-AVG | | | | 36003549 | 400.000 | 350 |
| 24 AR 1016-PEAK1 | 4.644 | 4.651 | -0.007 | 5406027 | 400.000 | 360 |
| 25 AR 1016-PEAK2 | 5.032 | 5.040 | -0.008 | 12161512 | 400.000 | 370 |
| 26 AR 1016-PEAK3 | 5.601 | 5.610 | -0.009 | 5525453 | 400.000 | 360 |
| 27 AR 1016-PEAK4 | 5.650 | 5.659 | -0.009 | 5029054 | 400.000 | 340 |
| 28 AR 1016-PEAK5 | 5.890 | 5.899 | -0.009 | 7881503 | 400.000 | 340 |
| M 29 AR 1260-AVG | | | | 67050985 | 400.000 | 340 |
| 30 AR 1260-PEAK1 | 6.816 | 6.825 | -0.009 | 12467475 | 400.000 | 330 |
| 31 AR 1260-PEAK2 | 6.910 | 6.919 | -0.009 | 14964761 | 400.000 | 350 |
| 32 AR 1260-PEAK3 | 7.215 | 7.223 | -0.008 | 11625352 | 400.000 | 340 |
| 33 AR 1260-PEAK4 | 7.507 | 7.517 | -0.010 | 12183336 | 400.000 | 360 |
| 34 AR 1260-PEAK5 | 7.945 | 7.955 | -0.010 | 15810061 | 400.000 | 340 |

Data File: /var/chem/gcsv18a.i/2131025.b/sv18a029.d
Date : 27-OCT-2013 16:03
Client ID:
Sample Info: 1400x1 84-57-9
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv18a.i

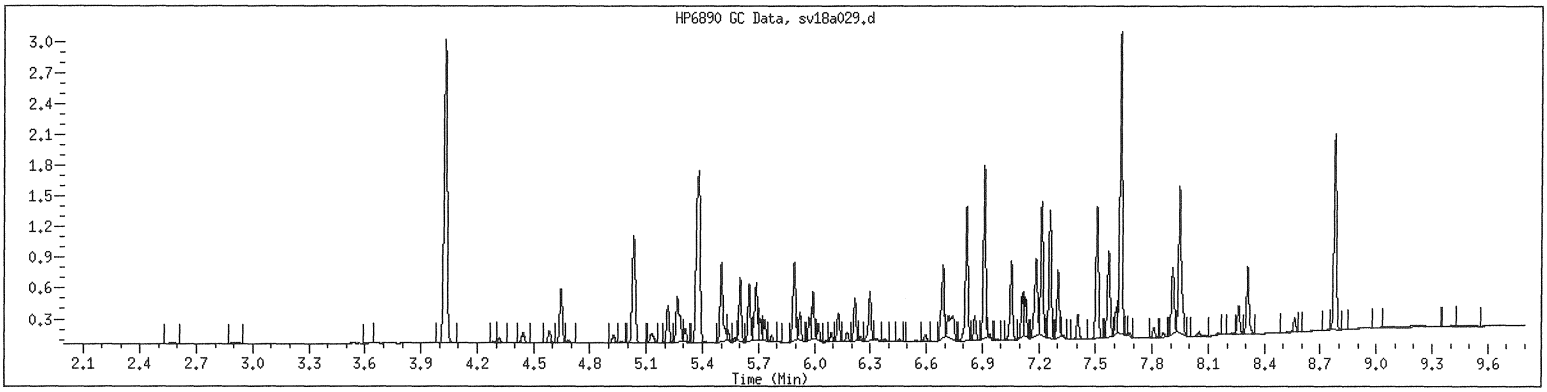
Operator: tls
Column diameter: 0.32




21310171 2 867

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1400 | SampleType | : CCALIB_3 |
| Injection Date | : 10/27/2013 16:03 | Instrument | : gcsv18a.i |
| Operator | : tls | | |
| Sample Info | : 1400*1 84-57-9 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv18a.i/2131025.b/pest35ms.m | | |
| Dilution | : 1.0 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : aro1260 |




NO MANUAL INTEGRATIONS

1D
ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL
Lab Code: LA024 Case No.:
Matrix: Solid
Sample wt/vol: 30 Units: g
Level: (low/med) LOW
% Moisture: decanted: (Y/N)
GC Column: RTX-35MS-3 ID: .25 (mm)
Concentrated Extract Volume: 10000 ( µL )
Soil Aliquot Volume: ( µL )
Injection Volume: 1 ( µL )
GPC Cleanup: (Y/N) N pH:
Prep Batch: 518045 Analytical Batch: 518215

Sample ID: MB1245005
Contract:
SAS No.: SDG No.: 213101712
Lab Sample ID: 1245005
Date Collected: Time:
Date Received:
Date Extracted: 10/18/13
Date Analyzed: 10/21/13 Time: 1434
Dilution Factor: 1 Analyst: TLS
Prep Method: 3550B
Analytical Method: SW-846 8082A
Sulfur Cleanup: (Y/N) N Instrument ID: GCS16A
Lab File ID: 2131021p/sv16a008

*CONCENTRATION UNITS: ug/kg*

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 11104-28-2 | Aroclor-1221 | 16.7 | U | 13.3 | 16.7 | 33.3 |
| 11141-16-5 | Aroclor-1232 | 16.7 | U | 13.3 | 16.7 | 33.3 |
| 53469-21-9 | Aroclor-1242 | 16.7 | U | 13.3 | 16.7 | 33.3 |
| 12672-29-6 | Aroclor-1248 | 16.7 | U | 13.3 | 16.7 | 33.3 |
| 11097-69-1 | Aroclor-1254 | 16.7 | U | 13.3 | 16.7 | 33.3 |
| 12674-11-2 | Aroclor-1016 | 16.7 | U | 13.3 | 16.7 | 33.3 |
| 11096-82-5 | Aroclor-1260 | 16.7 | U | 13.3 | 16.7 | 33.3 |

Data File: /var/chem/gcsv16a.i/2131021p.b/sv16a008.d
Report Date: 21-Oct-2013 15:47

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131021p.b/sv16a008.d
Lab Smp Id: 1245005
Inj Date : 21-OCT-2013 14:34
Operator : tls Inst ID: gcsv16a.i
Smp Info : 1245005*1 mb
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131021p.b/pest35ms.m
Meth Date : 21-Oct-2013 15:42 dlb Quant Type: ESTD
Cal Date : 18-OCT-2013 22:37 Cal File: sv16a034.d
Als bottle: 8
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: pcb.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

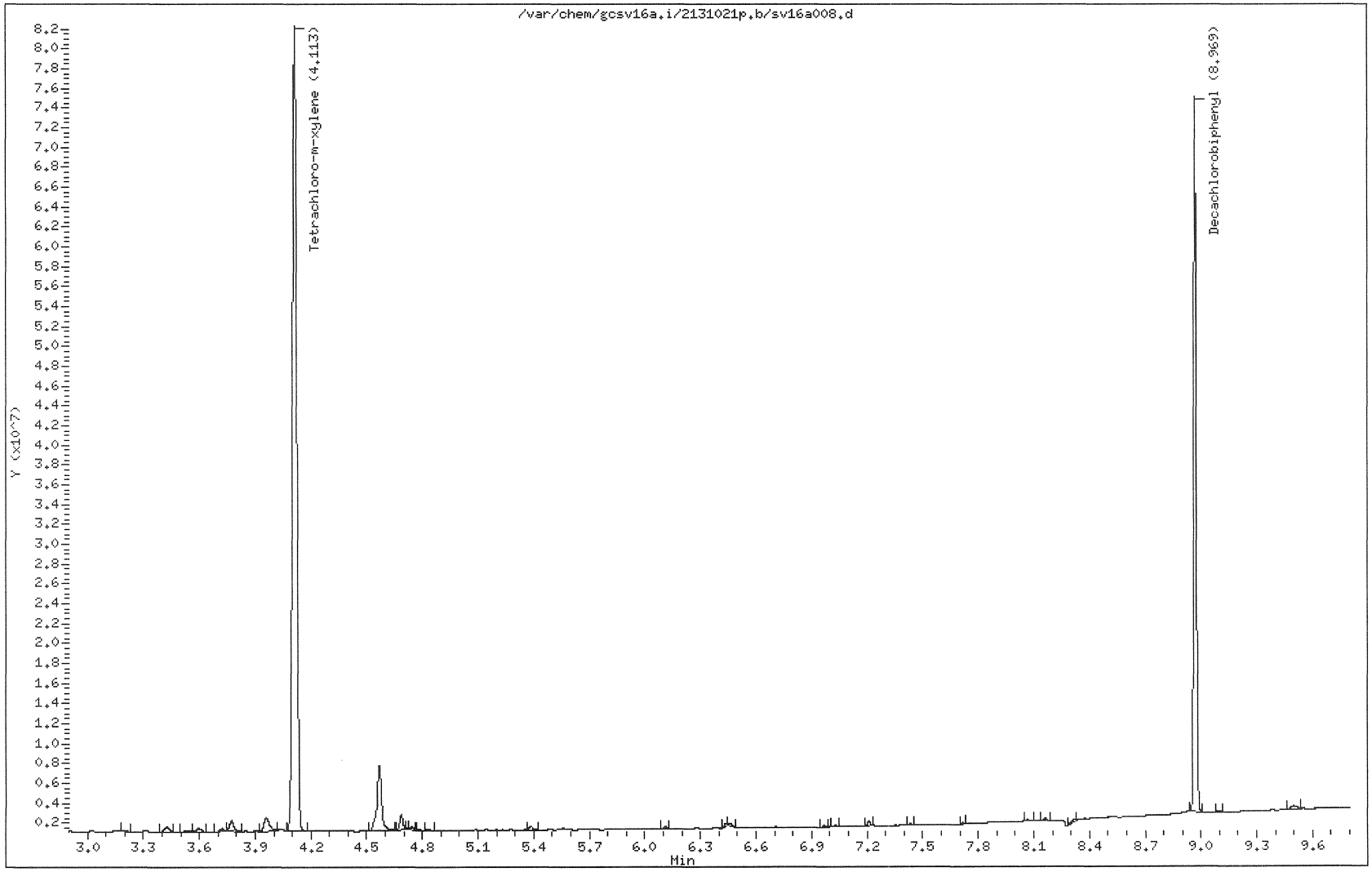
| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | FINAL (UG/KG) |
|---|---|---|---|---|---|---|
| $ 1 Tetrachloro-m-xylene | 4.113 | 4.112 | 0.001 | 124866265 | 49.0505 | 16 |
| $ 22 Decachlorobiphenyl | 8.969 | 8.971 | -0.002 | 66285811 | 44.6636 | 15 |

Data File: /var/chem/gcsv16a.i/2131021p.b/sv16a008.d
Date : 21-OCT-2013 14:34
Client ID:
Sample Info: 1245005*1 mb
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv16a.i
Operator: tls
Column diameter: 0.32

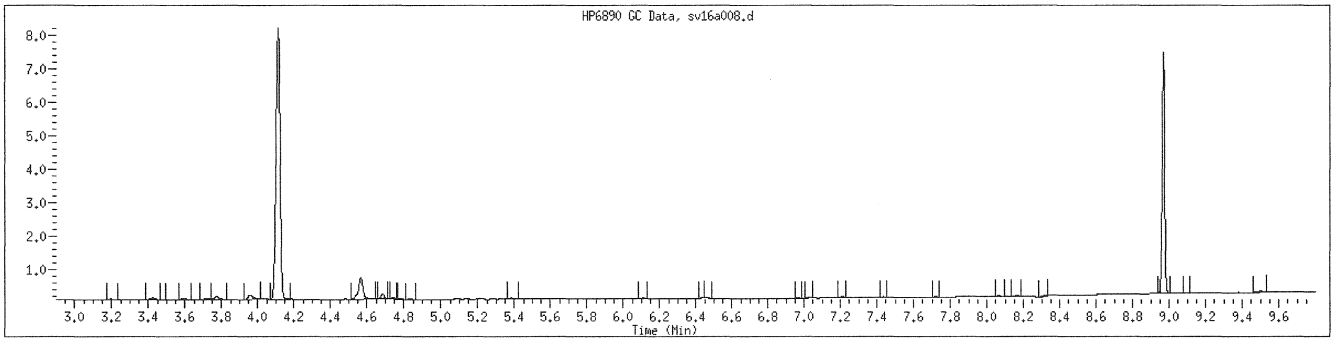



I18 21101712

Data file : /var/chem/gcsv16a.i/2131021p.b/sv16a008.d Page: 1
Report Date: 10/21/2013 15:47

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 1245005 SampleType : SAMPLE
Injection Date: 10/21/2013 14:34 Instrument : gcsv16a.i
Operator : tls
Sample Info : 1245005*1 mb
Misc Info :
Method : /var/chem/gcsv16a.i/2131021p.b/pest35ms.m
Dilution : 1.0
Matrix : SOIL
Integrator : Falcon Compound Sublist: pcb




NO MANUAL INTEGRATIONS

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: RTX-35MS-3 ID: .25 (mm)

Concentrated Extract Volume: 10000 ( µL )

Soil Aliquot Volume: ( µL )

Injection Volume: 1 ( µL )

GPC Cleanup: (Y/N) N pH:

Prep Batch: 518045 Analytical Batch: 518215

*CONCENTRATION UNITS: ug/kg*

Sample ID: LCS1245006

Contract:

SAS No.: SDG No.: 213101712

Lab Sample ID: 1245006

Date Collected: Time:

Date Received:

Date Extracted: 10/18/13

Date Analyzed: 10/21/13 Time: 1448

Dilution Factor: 1 Analyst: TLS

Prep Method: 3550B

Analytical Method: SW-846 8082A

Sulfur Cleanup: (Y/N) N Instrument ID: GCS16A

Lab File ID: 2131021p/sv16a009

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 114 | | 13.3 | 16.7 | 33.3 |
| 11096-82-5 | Aroclor-1260 | 110 | | 13.3 | 16.7 | 33.3 |

FORM I ORG-1

Data File: /var/chem/gcsv16a.i/2131021p.b/sv16a009.d
Report Date: 21-Oct-2013 15:42

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131021p.b/sv16a009.d
Lab Smp Id: 1245006
Inj Date : 21-OCT-2013 14:48
Operator : tls Inst ID: gcsv16a.i
Smp Info : 1245006*1 lcs
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131021p.b/pest35ms.m
Meth Date : 21-Oct-2013 15:42 dlb Quant Type: ESTD
Cal Date : 18-OCT-2013 22:37 Cal File: sv16a034.d
Als bottle: 9 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ar1260s.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

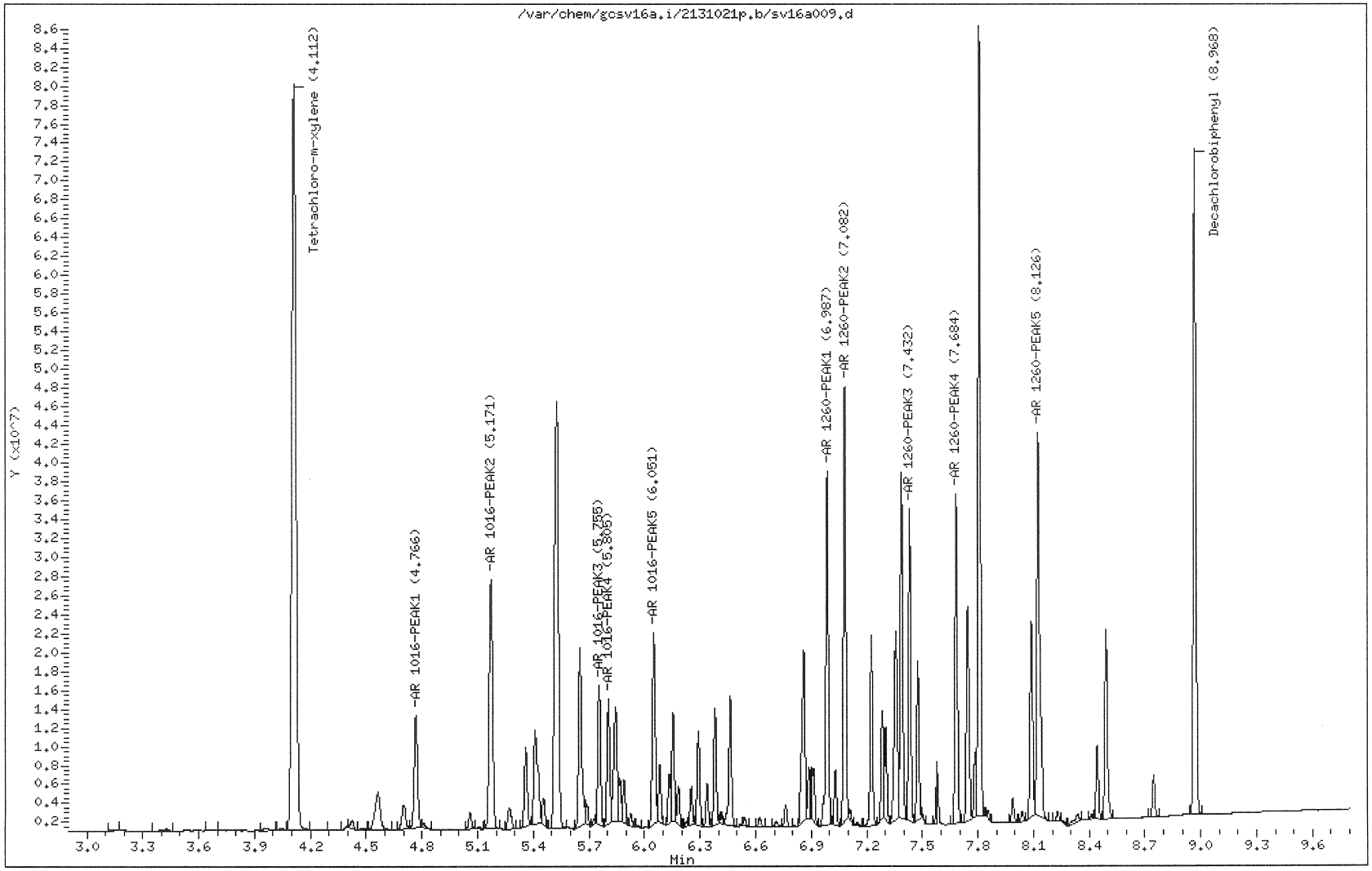
| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | FINAL (UG/KG) |
|---|---|---|---|---|---|---|
| $ 1 Tetrachloro-m-xylene | 4.112 | 4.112 | 0.000 | 121171387 | 47.5990 | 16 |
| $ 22 Decachlorobiphenyl | 8.968 | 8.971 | -0.003 | 66420963 | 44.7547 | 15 |
| M 23 AR 1016-AVG | | | | 97825836 | 341.551 | 110 |
| 24 AR 1016-PEAK1 | 4.766 | 4.768 | -0.002 | 14547962 | 333.013 | 110 |
| 25 AR 1016-PEAK2 | 5.171 | 5.171 | 0.000 | 33320065 | 340.684 | 110 |
| 26 AR 1016-PEAK3 | 5.755 | 5.752 | 0.003 | 14799815 | 331.540 | 110 |
| 27 AR 1016-PEAK4 | 5.805 | 5.807 | -0.002 | 13079513 | 348.485 | 120 |
| 28 AR 1016-PEAK5 | 6.051 | 6.050 | 0.001 | 22078481 | 351.823 | 120 |
| M 29 AR 1260-AVG | | | | 183840471 | 328.598 | 110 |
| 30 AR 1260-PEAK1 | 6.987 | 6.989 | -0.002 | 36024338 | 333.252 | 110 |
| 31 AR 1260-PEAK2 | 7.082 | 7.081 | 0.001 | 40262931 | 322.721 | 110 |
| 32 AR 1260-PEAK3 | 7.432 | 7.432 | 0.000 | 29164680 | 323.846 | 110 |

Data File: /var/chem/gcsv16a.i/2131021p.b/sv16a009.d
Report Date: 21-Oct-2013 15:42

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | FINAL (UG/KG) |
|---|---|---|---|---|---|---|
| 33 AR 1260-PEAK4 | 7.684 | 7.683 | 0.001 | 32622742 | 320.392 | 110 |
| 34 AR 1260-PEAK5 | 8.126 | 8.128 | -0.002 | 45765780 | 339.684 | 110 |

Data File: /var/chem/gcsv16a.i/2131021p.b/sv16a009.d
Date : 21-OCT-2013 14:48
Client ID:
Sample Info: 1245006*1 lcs
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv16a.i
Operator: tls
Column diameter: 0.32

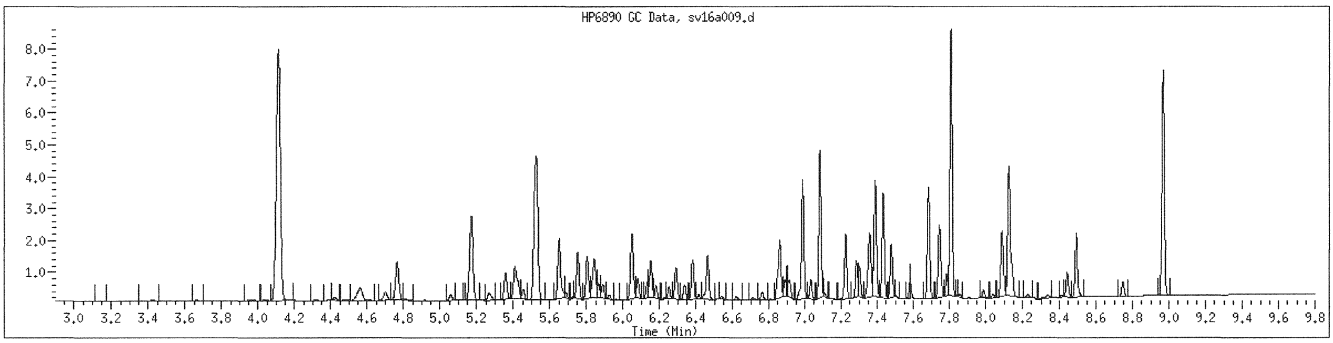



2131021712 876

Data file : /var/chem/gcsv16a.i/2131021p.b/sv16a009.d Page: 1
Report Date: 10/21/2013 15:42

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 1245006 SampleType : LCS
Injection Date: 10/21/2013 14:48 Instrument : gcsv16a.i
Operator : tls
Sample Info : 1245006*1 lcs
Misc Info :
Method : /var/chem/gcsv16a.i/2131021p.b/pest35ms.m
Dilution : 1.0
Matrix : SOIL
Integrator : Falcon Compound Sublist: arl260s




NO MANUAL INTEGRATIONS

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: RTX-35MS-3 ID: .25 (mm)

Concentrated Extract Volume: 10000 ( µL )

Soil Aliquot Volume: ( µL )

Injection Volume: 1 ( µL )

GPC Cleanup: (Y/N) N pH:

Prep Batch: 518045 Analytical Batch: 518215

*CONCENTRATION UNITS: ug/kg*

Sample ID: LCSD1245007

Contract:

SAS No.: SDG No.: 213101712

Lab Sample ID: 1245007

Date Collected: Time:

Date Received:

Date Extracted: 10/18/13

Date Analyzed: 10/21/13 Time: 1503

Dilution Factor: 1 Analyst: TLS

Prep Method: 3550B

Analytical Method: SW-846 8082A

Sulfur Cleanup: (Y/N) N Instrument ID: GCS16A

Lab File ID: 2131021p/sv16a010

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 12674-11-2 | Aroclor-1016 | 118 | | 13.3 | 16.7 | 33.3 |
| 11096-82-5 | Aroclor-1260 | 112 | | 13.3 | 16.7 | 33.3 |

FORM I ORG-1

Data File: /var/chem/gcsv16a.i/2131021p.b/sv16a010.d
Report Date: 21-Oct-2013 15:42

GCAL, Inc.

Data file : /var/chem/gcsv16a.i/2131021p.b/sv16a010.d
Lab Smp Id: 1245007
Inj Date : 21-OCT-2013 15:03
Operator : tls Inst ID: gcsv16a.i
Smp Info : 1245007*1 lcsd
Misc Info :
Comment :
Method : /var/chem/gcsv16a.i/2131021p.b/pest35ms.m
Meth Date : 21-Oct-2013 15:42 dlb Quant Type: ESTD
Cal Date : 18-OCT-2013 22:37 Cal File: sv16a034.d
Als bottle: 10 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: ar1260s.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | FINAL (UG/KG) |
|---|---|---|---|---|---|---|
| $ 1 Tetrachloro-m-xylene | 4.112 | 4.112 | 0.000 | 128888366 | 50.6304 | 17 |
| $ 22 Decachlorobiphenyl | 8.969 | 8.971 | -0.002 | 69292533 | 46.6895 | 16 |
| M 23 AR 1016-AVG | | | | 101020760 | 352.706 | 120 |
| 24 AR 1016-PEAK1 | 4.766 | 4.768 | -0.002 | 14515725 | 332.275 | 110 |
| 25 AR 1016-PEAK2 | 5.170 | 5.171 | -0.001 | 34590502 | 353.673 | 120 |
| 26 AR 1016-PEAK3 | 5.755 | 5.752 | 0.003 | 15347093 | 343.800 | 110 |
| 27 AR 1016-PEAK4 | 5.805 | 5.807 | -0.002 | 13491296 | 359.456 | 120 |
| 28 AR 1016-PEAK5 | 6.050 | 6.050 | 0.000 | 23076144 | 367.721 | 120 |
| M 29 AR 1260-AVG | | | | 187994660 | 336.023 | 110 |
| 30 AR 1260-PEAK1 | 6.988 | 6.989 | -0.001 | 34989848 | 323.682 | 110 |
| 31 AR 1260-PEAK2 | 7.082 | 7.081 | 0.001 | 42034063 | 336.917 | 110 |
| 32 AR 1260-PEAK3 | 7.433 | 7.432 | 0.001 | 30168604 | 334.993 | 110 |

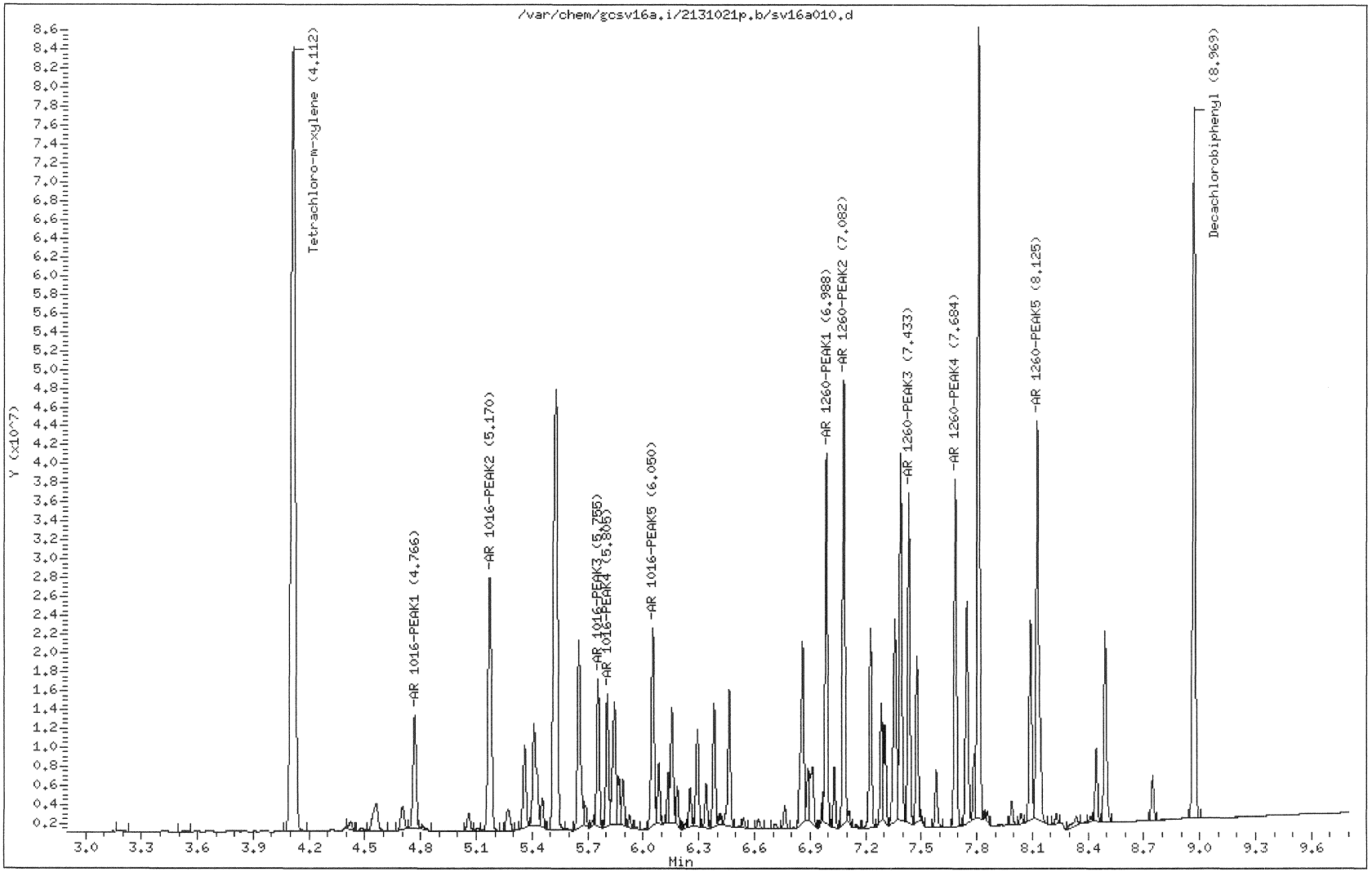
Data File: /var/chem/gcsv16a.i/2131021p.b/sv16a010.d
Report Date: 21-Oct-2013 15:42

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | FINAL (UG/KG) |
|---|---|---|---|---|---|---|
| 33 AR 1260-PEAK4 | 7.684 | 7.683 | 0.001 | 33926779 | 333.199 | 110 |
| 34 AR 1260-PEAK5 | 8.125 | 8.128 | -0.003 | 46875366 | 347.919 | 120 |

Data File: /var/chem/gcsv16a.i/2131021p.b/sv16a010.d
Date : 21-OCT-2013 15:03
Client ID:
Sample Info: 1245007*1 lcsd
Volume Injected (uL): 1.0
Column phase: RTX-35MS-30M

Instrument: gcsv16a.i

Operator: tls
Column diameter: 0.32

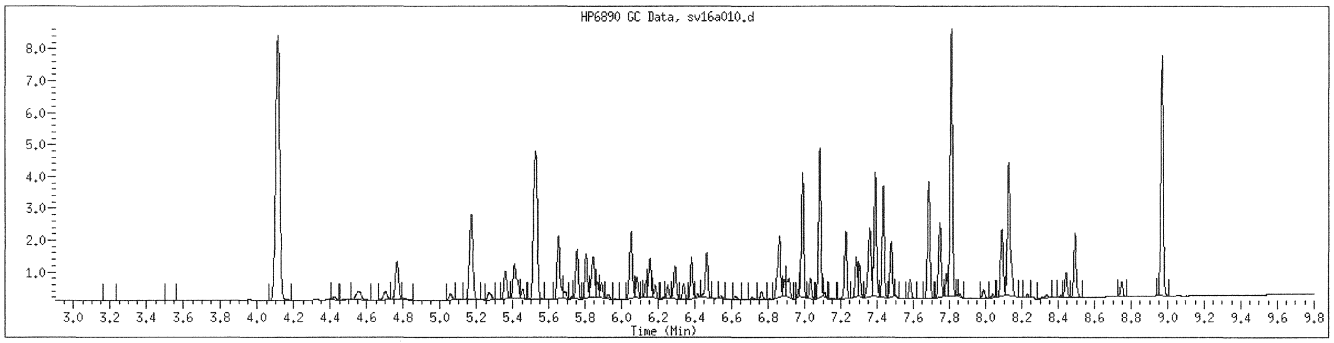



2131017 12 881

Data file : /var/chem/gcsv16a.i/2131021p.b/sv16a010.d Page: 1
Report Date: 10/21/2013 15:42

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 1245007 SampleType : LCSD
Injection Date: 10/21/2013 15:03 Instrument : gcsv16a.i
Operator : tls
Sample Info : 1245007*1 lcsd
Misc Info :
Method : /var/chem/gcsv16a.i/2131021p.b/pest35ms.m
Dilution : 1.0
Matrix : SOIL
Integrator : Falcon Compound Sublist: ar1260s




NO MANUAL INTEGRATIONS

# PESTICIDE SAMPLE PREPARATION FORM

| | | | |
|---|---|---|---|
| EXTRACTION DATE/TIME: 10/18/13 | Start: 14:20 End: 16:43 | BATCH NO: | 518045 |
| MATRIX: | WATER ☐ SOIL ☑ OTHER ☐ | LEVEL: | LOW ☑ MEDIUM ☐ |

| | CLIENT | CLIENT ID | GCAL ID | INITIAL VOL/WT mL g | FINAL VOLUME (mL) | Init pH | SAMPLE TYPE | COMMENT | METHOD |
|---|---|---|---|---|---|---|---|---|---|
| 1 | QC ACCOUNT | MB for HBN 518045 [EXTO/37047] | 1245005 | 30.0 | 10.0 | | MB | | LIQUID LIQUID/3520 |
| 2 | QC ACCOUNT | LCS for HBN 518045 [EXTO/37047 | 1245006 | 30.0 | 10.0 | | LCS | | |
| 3 | QC ACCOUNT | LCSD for HBN 518045 [EXTO/3704 | 1245007 | 30.0 | 10.0 | | LCSD | | SEPARATORY FUNNEL/3510 |
| 4 | 4565 | WASTE WATER SLUDGE | 21310181401 | 30.0 | 10.0 | | SAMPLE | | |
| 5 | QC ACCOUNT | WASTE WATER SLUDGE(1245002MS) | 1245008 | 30.0 | 10.0 | | MS | | GPC CLEANUP/3640 |
| 6 | QC ACCOUNT | WASTE WATER SLUDGE(1245002MSD) | 1245009 | 30.0 | 10.0 | | MSD | | |
| 7 | 4847 | RS-COMP1-101613 | 21310171201 | 30.0 | 10.0 | | SAMPLE | | SONICATOR/3550 |
| 8 | 4847 | RS-COMP2-101613 | 21310171203 | 30.0 | 10.0 | | SAMPLE | | ✓ |
| 9 | 4692 | SOIL 24101513 B | 21310172601 | 30.0 | 10.0 | | SAMPLE | | FLORISIL CLEANUP/3620 |
| 10 | 4692 | SOIL 24101513A | 21310172801 | 30.0 | 10.0 | | SAMPLE | | |
| 11 | 4692 | SOIL 24101513C | 21310173401 | 30.0 | 10.0 | | SAMPLE | | PCB H2So4/3665A CLEANUP |
| 12 | 4692 | VV101613 SOIL | 21310173601 | 30.0 | 10.0 | | SAMPLE | | |
| 13 | | | | | | | | | WASTE DILUTION/3580 |
| 14 | | | | | | | | | |
| 15 | | | | | | | | | TCLP EXTRACTION FLUID 1 |
| 16 | | | | | | | | | |
| 17 | | | | | | | | | TCLP EXTRACTION FLUID 2 |
| 18 | | | | | | | | | |
| 19 | | | | | | | | | MECL2/Acetone No: |
| 20 | | | | | | | | | |
| 21 | | | | | | | | | ACETONE LOT NO: B5499 |
| 22 | | | | | | | | | |
| 23 | | | | | | | | | MECL2 Lot No: |
| 24 | | | | | | | | | DJ158 |
| 25 | | | | | | | | | HEXANE Lot No: |
| 26 | | | | | | | | | DJ286 |
| 27 | | | | | | | | | Sodium Sulfate Lot No: |
| 28 | | | | | | | | | 0000040569 |

**COMMENTS: SAMPLE PREPARATION INCLUDE DETERMINATION OF SAMPLE VOLUME/WEIGHT, SOLVENT EXTRACTI AND EVAPORATION OF SOLVENT TO FINAL VOLUME**

BALANCE ID: M33557 TEMP: 100°C

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| | | | | PCB | | | |
| SURROGATE ID | 576-4-10 | 8081 SPIKE ID | | ~~608~~ SPIKE ID | 567-95-6 | TECHNICIAN | DATE |
| VOLUME | 1.0mL | VOLUME | | VOLUME | 1.0mL | SAK | 10/18/13 |
| CONCENTRATION | 0.5ug/ml | CONCENTRATION | | CONCENTRATION | 4.0ug/ml | | |
| ACID | | | | | | SUPERVISOR | DATE |
| SPIKE WITNESS | SDL | | | | | TES | 10/22/13 |

Revision 3, 10/04/2010

213101712 883

LABORATORY CHRONICLE: GCSV DEPARTMENT

Date: 10/22/2013
Instrument: gcsv16a.i
Method File: /var/chem/gcsv16a.i/2131018p.b/pest35ms.m
Batch: /var/chem/gcsv16a.i/2131018p.b
Column-Detector: RTX-35MS-30M

| Sample ID | Standard ID | DataFile | Wgt/Vol | Injection Time | Dil | Anal | ALS | Comments |
|---|---|---|---|---|---|---|---|---|
| hex lot # 3534 | | sv16a001.d | 1000.00 ml | 18-OCT-2013 14:40 | 1.000 | tls | 1 | 8081 |
| deg | | sv16a002.d | 1000.00 ml | 18-OCT-2013 14:55 | 1.000 | tls | 2 | deg |
| 1207 | | sv16a003.d | 1000.00 ml | 18-OCT-2013 15:09 | 1.000 | tls | 3 | 8081 |
| 1206 | | sv16a004.d | 1000.00 ml | 18-OCT-2013 15:24 | 1.000 | tls | 4 | 8081 |
| 1201 | | sv16a005.d | 1000.00 ml | 18-OCT-2013 15:38 | 1.000 | tls | 5 | 8081 |
| 1202 | | sv16a006.d | 1000.00 ml | 18-OCT-2013 15:53 | 1.000 | tls | 6 | 8081 |
| 1203 | | sv16a007.d | 1000.00 ml | 18-OCT-2013 16:07 | 1.000 | tls | 7 | 8081 |
| 1204 | | sv16a008.d | 1000.00 ml | 18-OCT-2013 16:22 | 1.000 | tls | 8 | 8081 |
| 1205 | | sv16a009.d | 1000.00 ml | 18-OCT-2013 16:36 | 1.000 | tls | 9 | 8081 |
| 1600 | | sv16a010a.d | 1.00 ml | 18-OCT-2013 16:50 | 1.000 | tls | 10 | 8081 |
| 1600 | | sv16a010.d | 1.00 ml | 18-OCT-2013 16:50 | 1.000 | tls | 10 | 8081 |
| 1205 | | sv16a011.d | 1000.00 ml | 18-OCT-2013 17:05 | 1.000 | tls | 11 | chlor |
| 1201 | | sv16a012.d | 1000.00 ml | 18-OCT-2013 17:19 | 1.000 | tls | 12 | tox |
| 1205 | | sv16a013.d | 1000.00 ml | 18-OCT-2013 17:34 | 1.000 | tls | 13 | tox |
| 1203 | | sv16a014.d | 1000.00 ml | 18-OCT-2013 17:48 | 1.000 | tls | 14 | aro1221 |
| 1203 | | sv16a015.d | 1000.00 ml | 18-OCT-2013 18:02 | 1.000 | tls | 15 | aro1232 |
| 1203 | | sv16a016.d | 1000.00 ml | 18-OCT-2013 18:17 | 1.000 | tls | 16 | aro1242 |
| 1203 | | sv16a017.d | 1000.00 ml | 18-OCT-2013 18:31 | 1.000 | tls | 17 | aro1248 |
| 1203 | | sv16a018.d | 1000.00 ml | 18-OCT-2013 18:46 | 1.000 | tls | 18 | aro1254 |
| 1203 | | sv16a019.d | 1000.00 ml | 18-OCT-2013 19:00 | 1.000 | tls | 19 | ar1262 |
| 1203 | | sv16a020.d | 1000.00 ml | 18-OCT-2013 19:15 | 1.000 | tls | 20 | ar1268 |
| 1207 | | sv16a021.d | 1000.00 ml | 18-OCT-2013 19:29 | 1.000 | tls | 21 | aro1260 |
| 1206 | | sv16a022.d | 1000.00 ml | 18-OCT-2013 19:44 | 1.000 | tls | 22 | aro1260 |
| 1201 | | sv16a023.d | 1000.00 ml | 18-OCT-2013 19:58 | 1.000 | tls | 23 | aro1260 |
| 1202 | | sv16a024.d | 1000.00 ml | 18-OCT-2013 20:12 | 1.000 | tls | 24 | aro1260 |
| 1203 | | sv16a025.d | 1000.00 ml | 18-OCT-2013 20:27 | 1.000 | tls | 25 | aro1260 |
| 1204 | | sv16a026.d | 1000.00 ml | 18-OCT-2013 20:41 | 1.000 | tls | 26 | aro1260 |
| 1205 | | sv16a027.d | 1000.00 ml | 18-OCT-2013 20:56 | 1.000 | tls | 27 | aro1260 |
| 1600 | | sv16a028a.d | 1.00 ml | 18-OCT-2013 21:11 | 1.000 | tls | 28 | aro1260 |
| 1600 | | sv16a028.d | 1.00 ml | 18-OCT-2013 21:11 | 1.000 | tls | 28 | aro1260 |
| 1201 | | sv16a029.d | 1000.00 ml | 18-OCT-2013 21:25 | 1.000 | tls | 29 | alachlor |
| 1202 | | sv16a030.d | 1000.00 ml | 18-OCT-2013 21:39 | 1.000 | tls | 30 | alachlor |
| 1206 | | sv16a031.d | 1000.00 ml | 18-OCT-2013 21:54 | 1.000 | tls | 31 | alachlor |
| 1203 | | sv16a032.d | 1000.00 ml | 18-OCT-2013 22:08 | 1.000 | tls | 32 | alachlor |
| 1204 | | sv16a033.d | 1000.00 ml | 18-OCT-2013 22:23 | 1.000 | tls | 33 | alachlor |
| 1205 | | sv16a034.d | 1000.00 ml | 18-OCT-2013 22:37 | 1.000 | tls | 34 | alachlor |

LABORATORY CHRONICLE: GCSV DEPARTMENT

Date: 10/22/2013
Instrument: gcsv16a.i
Method File: /var/chem/gcsv16a.i/2131018p.b/pest35ms.m
Batch: /var/chem/gcsv16a.i/2131018p.b
Column-Detector: RTX-35MS-30M

| Sample ID | Standard ID | DataFile | Wgt/Vol | Injection Time | Dil | Anal | ALS | Comments |
|---|---|---|---|---|---|---|---|---|
| 1600 | | sv16a035.d | 1.00 ml | 18-OCT-2013 22:51 | 1.000 | tls | 35 | alachlor |
| deg | | sv16a036.d | 1000.00 ml | 18-OCT-2013 23:06 | 1.000 | tls | 36 | deg |
| hex | | sv16a037.d | 1000.00 ml | 18-OCT-2013 23:20 | 1.000 | tls | 37 | all |

LABORATORY CHRONICLE: GCSV DEPARTMENT

Date: 10/21/2013
Instrument: gcsv16a.i
Method File: /var/chem/gcsv16a.i/2131021p.b/pest35ms.m
Batch: /var/chem/gcsv16a.i/2131021p.b
Column-Detector: RTX-35MS-30M

| Sample ID | Standard ID | DataFile | Wgt/Vol | Injection Time | Dil | Anal | ALS | Comments |
|---|---|---|---|---|---|---|---|---|
| 1400 | | sv16a004.d | 1000.00 ml | 21-OCT-2013 12:11 | 1.000 | tls | 4 | aro1260 |
| 21310181401 | | sv16a005.d | 30.00 g | 21-OCT-2013 13:23 | 10.000 | tls | 5 | pcb |
| 1245008 | | sv16a006.d | 30.00 g | 21-OCT-2013 14:05 | 10.000 | tls | 6 | pcb |
| 1245009 | | sv16a007.d | 30.00 g | 21-OCT-2013 14:20 | 10.000 | tls | 7 | pcb |
| 1245005 | | sv16a008.d | 30.00 g | 21-OCT-2013 14:34 | 1.000 | tls | 8 | pcb |
| 1245006 | | sv16a009.d | 30.00 g | 21-OCT-2013 14:48 | 1.000 | tls | 9 | ar1260s |
| 1245007 | | sv16a010.d | 30.00 g | 21-OCT-2013 15:03 | 1.000 | tls | 10 | ar1260s |
| 1400 | | sv16a011.d | 1000.00 ml | 21-OCT-2013 15:17 | 1.000 | tls | 11 | aro1260 |

# LABORATORY CHRONICLE: GCSV DEPARTMENT

Date: 10/22/2013
Instrument: gcsv18a.i
Method File: /var/chem/gcsv18a.i/2131018.b/pest35ms.m
Batch: /var/chem/gcsv18a.i/2131018.b
Column-Detector: RTX-35MS-30M

| Sample ID | Standard ID | DataFile | Wgt/Vol | Injection Time | Dil | Anal | ALS | Comments |
|---|---|---|---|---|---|---|---|---|
| hex lot #35341 | | sv18a001.d | 1000.00 ml | 18-OCT-2013 14:16 | 1.000 | tls | 1 | 8081 |
| deg | | sv18a002.d | 1000.00 ml | 18-OCT-2013 14:30 | 1.000 | tls | 2 | deg |
| 1207 | | sv18a003.d | 1000.00 ml | 18-OCT-2013 14:45 | 1.000 | tls | 3 | 8081 |
| 1206 | | sv18a004.d | 1000.00 ml | 18-OCT-2013 14:59 | 1.000 | tls | 4 | 8081 |
| 1201 | | sv18a005.d | 1000.00 ml | 18-OCT-2013 15:14 | 1.000 | tls | 5 | 8081 |
| 1202 | | sv18a006.d | 1000.00 ml | 18-OCT-2013 15:28 | 1.000 | tls | 6 | 8081 |
| 1203 | | sv18a007.d | 1000.00 ml | 18-OCT-2013 15:43 | 1.000 | tls | 7 | 8081 |
| 1204 | | sv18a008.d | 1000.00 ml | 18-OCT-2013 15:57 | 1.000 | tls | 8 | 8081 |
| 1205 | | sv18a009.d | 1000.00 ml | 18-OCT-2013 16:12 | 1.000 | tls | 9 | 8081 |
| 1600 | | sv18a010.d | 1.00 ml | 18-OCT-2013 16:26 | 1.000 | tls | 10 | 8081 |
| 1205 | | sv18a011.d | 1000.00 ml | 18-OCT-2013 16:41 | 1.000 | tls | 11 | chlor |
| 1201 | | sv18a012.d | 1000.00 ml | 18-OCT-2013 16:55 | 1.000 | tls | 12 | tox |
| 1205 | | sv18a013.d | 1000.00 ml | 18-OCT-2013 17:10 | 1.000 | tls | 13 | tox |
| 1203 | | sv18a014.d | 1000.00 ml | 18-OCT-2013 17:24 | 1.000 | tls | 14 | aro1221 |
| 1203 | | sv18a015.d | 1000.00 ml | 18-OCT-2013 17:39 | 1.000 | tls | 15 | aro1232 |
| 1203 | | sv18a016.d | 1000.00 ml | 18-OCT-2013 17:53 | 1.000 | tls | 16 | aro1242 |
| 1203 | | sv18a017.d | 1000.00 ml | 18-OCT-2013 18:08 | 1.000 | tls | 17 | aro1248 |
| 1203 | | sv18a018.d | 1000.00 ml | 18-OCT-2013 18:22 | 1.000 | tls | 18 | aro1254 |
| 1203 | | sv18a019.d | 1000.00 ml | 18-OCT-2013 18:37 | 1.000 | tls | 19 | ar1262 |
| 1203 | | sv18a020.d | 1000.00 ml | 18-OCT-2013 18:51 | 1.000 | tls | 20 | ar1268 |
| 1207 | | sv18a021.d | 1000.00 ml | 18-OCT-2013 19:06 | 1.000 | tls | 21 | aro1260 |
| 1206 | | sv18a022.d | 1000.00 ml | 18-OCT-2013 19:20 | 1.000 | tls | 22 | aro1260 |
| 1201 | | sv18a023.d | 1000.00 ml | 18-OCT-2013 19:35 | 1.000 | tls | 23 | aro1260 |
| 1202 | | sv18a024.d | 1000.00 ml | 18-OCT-2013 19:49 | 1.000 | tls | 24 | aro1260 |
| 1203 | | sv18a025.d | 1000.00 ml | 18-OCT-2013 20:04 | 1.000 | tls | 25 | aro1260 |
| 1204 | | sv18a026.d | 1000.00 ml | 18-OCT-2013 20:18 | 1.000 | tls | 26 | aro1260 |
| 1205 | | sv18a027.d | 1000.00 ml | 18-OCT-2013 20:33 | 1.000 | tls | 27 | aro1260 |
| 1600 | | sv18a028.d | 1.00 ml | 18-OCT-2013 20:47 | 1.000 | tls | 28 | aro1260 |
| 1201 | | sv18a029.d | 1000.00 ml | 18-OCT-2013 21:02 | 1.000 | tls | 29 | alachlor |
| 1202 | | sv18a030.d | 1000.00 ml | 18-OCT-2013 21:16 | 1.000 | tls | 30 | alachlor |
| 1206 | | sv18a031.d | 1000.00 ml | 18-OCT-2013 21:31 | 1.000 | tls | 31 | alachlor |
| 1203 | | sv18a032.d | 1000.00 ml | 18-OCT-2013 21:45 | 1.000 | tls | 32 | alachlor |
| 1204 | | sv18a033.d | 1000.00 ml | 18-OCT-2013 21:59 | 1.000 | tls | 33 | alachlor |
| 1205 | | sv18a034.d | 1000.00 ml | 18-OCT-2013 22:14 | 1.000 | tls | 34 | alachlor |
| 1600 | | sv18a035.d | 1.00 ml | 18-OCT-2013 22:28 | 1.000 | tls | 35 | alachlor |
| deg | | sv18a036.d | 1000.00 ml | 18-OCT-2013 22:43 | 1.000 | tls | 36 | deg |

LABORATORY CHRONICLE: GCSV DEPARTMENT

Date: 10/22/2013
Instrument: gcsv18a.i
Method File: /var/chem/gcsv18a.i/2131018.b/pest35ms.m
Batch: /var/chem/gcsv18a.i/2131018.b
Column-Detector: RTX-35MS-30M

| Sample ID | Standard ID | DataFile | Wgt/Vol | Injection Time | Dil | Anal | ALS | Comments |
|---|---|---|---|---|---|---|---|---|
| hex | | sv18a037.d | 1000.00 ml | 18-OCT-2013 22:57 | 1.000 | tls | 37 | 8081 |
| 1600 | | sv18a038.d | 1.00 ml | 21-OCT-2013 10:34 | 1.000 | tls | 38 | 8081 |

# LABORATORY CHRONICLE: GCSV DEPARTMENT

Date: 10/28/2013
Instrument: gcsv18a.i
Method File: /var/chem/gcsv18a.i/2131025.b/pest35ms.m
Batch: /var/chem/gcsv18a.i/2131025.b
Column-Detector: RTX-35MS-30M

| Sample ID | Standard ID | DataFile | Wgt/Vol | Injection Time | Dil | Anal | ALS | Comments |
|---|---|---|---|---|---|---|---|---|
| hex lot #35341 | | sv18a001.d | 1000.00 ml | 25-OCT-2013 08:37 | 1.000 | tls | 1 | all |
| 1400 | | sv18a002.d | 1000.00 ml | 25-OCT-2013 08:51 | 1.000 | tls | 2 | aro1260 |
| 21310230812 | | sv18a003.d | 30.00 g | 25-OCT-2013 09:53 | 1.000 | tls | 3 | pcb |
| 21310230815 | | sv18a004.d | 30.10 g | 25-OCT-2013 10:08 | 1.000 | tls | 4 | pcb |
| 21310230817 | | sv18a005.d | 30.00 g | 25-OCT-2013 10:22 | 1.000 | tls | 5 | pcb |
| 21310220401 | | sv18a006.d | 30.00 g | 25-OCT-2013 10:37 | 1.000 | tls | 6 | pcb |
| 21310230522 | | sv18a007.d | 30.00 g | 25-OCT-2013 10:51 | 1.000 | tls | 7 | pcb |
| 21310241001 | | sv18a008.d | 30.00 g | 25-OCT-2013 11:06 | 1.000 | tls | 8 | pcb |
| 21310181401 | | sv18a009.d | 30.00 g | 25-OCT-2013 11:20 | 1.000 | tls | 9 | pcb |
| 1245008 | | sv18a010.d | 30.00 g | 25-OCT-2013 11:35 | 1.000 | tls | 10 | pcb |
| 1245009 | | sv18a011.d | 30.00 g | 25-OCT-2013 11:49 | 1.000 | tls | 11 | pcb |
| 21310171201 | | sv18a012.d | 30.00 g | 25-OCT-2013 12:04 | 1.000 | tls | 12 | pcb |
| 1400 | | sv18a013.d | 1000.00 ml | 25-OCT-2013 12:18 | 1.000 | tls | 13 | aro1260 |
| 1400 | | sv18a014.d | 1000.00 ml | 25-OCT-2013 13:19 | 1.000 | tls | 14 | aro1260 |
| 1400 | | sv18a015.d | 1000.00 ml | 25-OCT-2013 15:12 | 1.000 | tls | 15 | aro1260 |
| 1246889 | | sv18a016.d | 30.00 g | 25-OCT-2013 15:58 | 1.000 | tls | 16 | pcb |
| 1246890 | | sv18a017.d | 30.00 g | 25-OCT-2013 16:12 | 1.000 | tls | 17 | ar1260s |
| 1246891 | | sv18a018.d | 30.00 g | 25-OCT-2013 16:27 | 1.000 | tls | 18 | ar1260s |
| 1245005 | | sv18a019.d | 30.00 g | 25-OCT-2013 16:41 | 1.000 | tls | 19 | pcb |
| 1400 | | sv18a020.d | 1000.00 ml | 25-OCT-2013 16:56 | 1.000 | tls | 20 | aro1260 |
| 1400 | | sv18a021.d | 1000.00 ml | 25-OCT-2013 17:10 | 1.000 | tls | 21 | aro1260 |
| 1400 | | sv18a022.d | 1000.00 ml | 27-OCT-2013 11:58 | 1.000 | tls | 22 | aro1260 |
| 21310171203 | | sv18a023.d | 30.00 g | 27-OCT-2013 13:13 | 1.000 | tls | 23 | pcb |
| 21310172601 | | sv18a024.d | 30.00 g | 27-OCT-2013 13:27 | 10.000 | tls | 24 | pcb |
| 21310172801 | | sv18a025.d | 30.00 g | 27-OCT-2013 13:42 | 10.000 | tls | 25 | pcb |
| 21310173401 | | sv18a026.d | 30.00 g | 27-OCT-2013 13:56 | 10.000 | tls | 26 | pcb |
| 21310173601 | | sv18a027.d | 30.00 g | 27-OCT-2013 14:10 | 10.000 | tls | 27 | pcb |
| 1400 | | sv18a028.d | 1000.00 ml | 27-OCT-2013 14:25 | 1.000 | tls | 28 | aro1260 |
| 1400 | | sv18a029.d | 1000.00 ml | 27-OCT-2013 16:03 | 1.000 | tls | 29 | aro1260 |
| 1400 | | sv18a041.d | 1000.00 ml | 27-OCT-2013 19:20 | 1.000 | tls | 28 | aro1260 |
| 1400 | | sv18a042.d | 1000.00 ml | 27-OCT-2013 19:34 | 1.000 | tls | 29 | aro1260 |

2F

ORGANICS SURROGATE RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

GC Column (1) : ID: ( mm) GC Cloumn (2) : ID: ( mm )

Method: SW-846 8151A

| | EPA SAMPLE NO. | SMC1 1-(1) | # | 1-(2) | # | SMC2 2-(1) | # | 2-(2) | # | TOT OUT |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. | RS-COMP1-101613 | 41 | | | | | | | | 0 |
| 2. | RS-COMP2-101613 | 20 | | | | | | | | 0 |
| 3. | MB1245269 | 66 | | | | | | | | 0 |
| 4. | LCS1245270 | 63 | | | | | | | | 0 |
| 5. | LCSD1245271 | 77 | | | | | | | | 0 |

CONTROL LIMITS

SMC 1 : DCAA 18 136

SMC 2 :

# Column to be used to flag recovery limits

* Value outside of contract required limits

D Surrogate diluted out

FORM II ORG-2

3F

SOIL ORGANIC LCS/LCSD RECOVERY

Lab Name: GCAL

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Contract: Method: SW-846 8151A

Prep Batch: 518091 Analytical Batch: 518528

***Spike HSN : 1245270***

| COMPOUND | UNITS | SPIKE ADDED | SAMPLE CONCENTRATION | LCS CONCENTRATION | LCS % REC | LCS % REC FLAG | QC. LIMITS |
|---|---|---|---|---|---|---|---|
| 2,4'-D | ug/kg | 33 | 0 | 18.4 | 56 | | 35 - 145 |
| 2,4,5-T | ug/kg | 33.3 | 0 | 21 | 63 | | 45 - 135 |
| 2,4,5-TP (SILVEX) | ug/kg | 33.3 | 0 | 20.6 | 62 | | 45 - 125 |
| 2,4-DB | ug/kg | 33.3 | 0 | 25.5 | 77 | | 50 - 155 |
| Dicamba | ug/kg | 32.7 | 0 | 19.2 | 59 | | 55 - 110 |
| Dichloroprop | ug/kg | 32.7 | 0 | 20 | 61 | * | 75 - 140 |

***Spike Dupe HSN : 1245271***

| COMPOUND | UNITS | SPIKE ADDED | LCSD CONC. | LCSD % REC | REC FLAG | % RPD | RPD FLAG | QC. LIMITS REC | QC. LIMITS RPD |
|---|---|---|---|---|---|---|---|---|---|
| 2,4'-D | ug/kg | 33 | 24.7 | 75 | | 29 | | 35 - 145 | 0 - 30 |
| 2,4,5-T | ug/kg | 33.3 | 29.1 | 87 | | 32 | * | 45 - 135 | 0 - 30 |
| 2,4,5-TP (SILVEX) | ug/kg | 33.3 | 28.3 | 85 | | 31 | * | 45 - 125 | 0 - 30 |
| 2,4-DB | ug/kg | 33.3 | 35.5 | 107 | | 33 | * | 50 - 155 | 0 - 30 |
| Dicamba | ug/kg | 32.7 | 25.7 | 79 | | 29 | | 55 - 110 | 0 - 30 |
| Dichloroprop | ug/kg | 32.7 | 26.8 | 82 | | 29 | | 75 - 140 | 0 - 30 |

RPD : 3 out of 6 outside limits

Spike Recovery: 1 out of 12 outside limits

FORM III ORG-2

4C

ORGANIC METHOD BLANK SUMMARY

Lab Name: GCAL

Sample ID: MB1245269

Lab Code: LA024 Case No.:

Contract:

Lab Sample ID: 1245269

SAS No.: SDG No.: 213101712

Matrix: Solid Sulfur Cleanup: (Y/N) N

Date Extracted: 10/22/13

Date Analyzed (1): 10/24/13 Time (1): 1114

Date Analyzed (2): Time (2):

Instrument ID (1): GCS17A

Instrument ID (2):

GC Column (1): ID: (mm)

GC Column (2): ID: (mm)

Method: SW-846 8151A

Prep Batch: 518091 Analytical Batch: 518528

Lab File ID: 2131024/sv17a0

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES

| | SAMPLE NO. | LAB SAMPLE ID | DATE ANALYZED | TIME ANALYZED | INSTRUMENT ID |
|---|---|---|---|---|---|
| 1. | LCS1245270 | 1245270 | 10/24/13 | 1142 | GCS17A |
| 2. | LCSD1245271 | 1245271 | 10/24/13 | 1209 | GCS17A |
| 3. | RS-COMP1-101613 | 21310171201 | 10/24/13 | 1305 | GCS17A |
| 4. | RS-COMP2-101613 | 21310171203 | 10/24/13 | 1333 | GCS17A |

1D
ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL
Lab Code: LA024 Case No.:
Matrix: Solid
Sample wt/vol: 30.2 Units: g
Level: (low/med) LOW
% Moisture: 18.4 decanted: (Y/N)
GC Column: ID: (mm)
Concentrated Extract Volume: 10000 ( µL )
Soil Aliquot Volume: ( µL )
Injection Volume: 1 ( µL )
GPC Cleanup: (Y/N) N pH:
Prep Batch: 518091 Analytical Batch: 518528

Sample ID RS-COMP1-101613
Contract:
SAS No.: SDG No.: 213101712
Lab Sample ID: 21310171201
Date Collected 10/16/13 Time: 1600
Date Received: 10/17/13
Date Extracted: 10/22/13
Date Analyzed: 10/24/13 Time: 1305
Dilution Factor: 1 Analyst: TLS
Prep Method: SW-846 8151A
Analytical Method: SW-846 8151A
Sulfur Cleanup: (Y/N) N Instrument ID: GCS17A
Lab File ID: 2131024/sv17a008

*CONCENTRATION UNITS: ug/kg*

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 94-75-7 | 2,4'-D | 10.1 | U | 5.11 | 10.1 | 20.3 |
| 93-76-5 | 2,4,5-T | 10.1 | UQ | 5.11 | 10.1 | 20.3 |
| 93-72-1 | 2,4,5-TP (SILVEX) | 10.1 | UQ | 5.11 | 10.1 | 20.3 |
| 94-82-6 | 2,4-DB | 10.1 | UQ | 5.11 | 10.1 | 20.3 |
| 1918-00-9 | Dicamba | 10.1 | U | 5.11 | 10.1 | 20.3 |
| 120-36-5 | Dichloroprop | 10.1 | UQ | 5.11 | 10.1 | 20.3 |

Data File: /var/chem/gcsv17a.i/2131024.b/sv17a008.d
Report Date: 25-Oct-2013 10:12

GCAL, Inc.

Data file : /var/chem/gcsv17a.i/2131024.b/sv17a008.d
Lab Smp Id: 21310171201
Inj Date : 24-OCT-2013 13:05
Operator : tls Inst ID: gcsv17a.i
Smp Info : 21310171201*1
Misc Info :
Comment :
Method : /var/chem/gcsv17a.i/2131024.b/FULL8151.m
Meth Date : 25-Oct-2013 09:00 tls Quant Type: ESTD
Cal Date : 26-SEP-2013 18:12 Cal File: sv17a007.d
Als bottle: 8
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AFCEEH.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.20000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

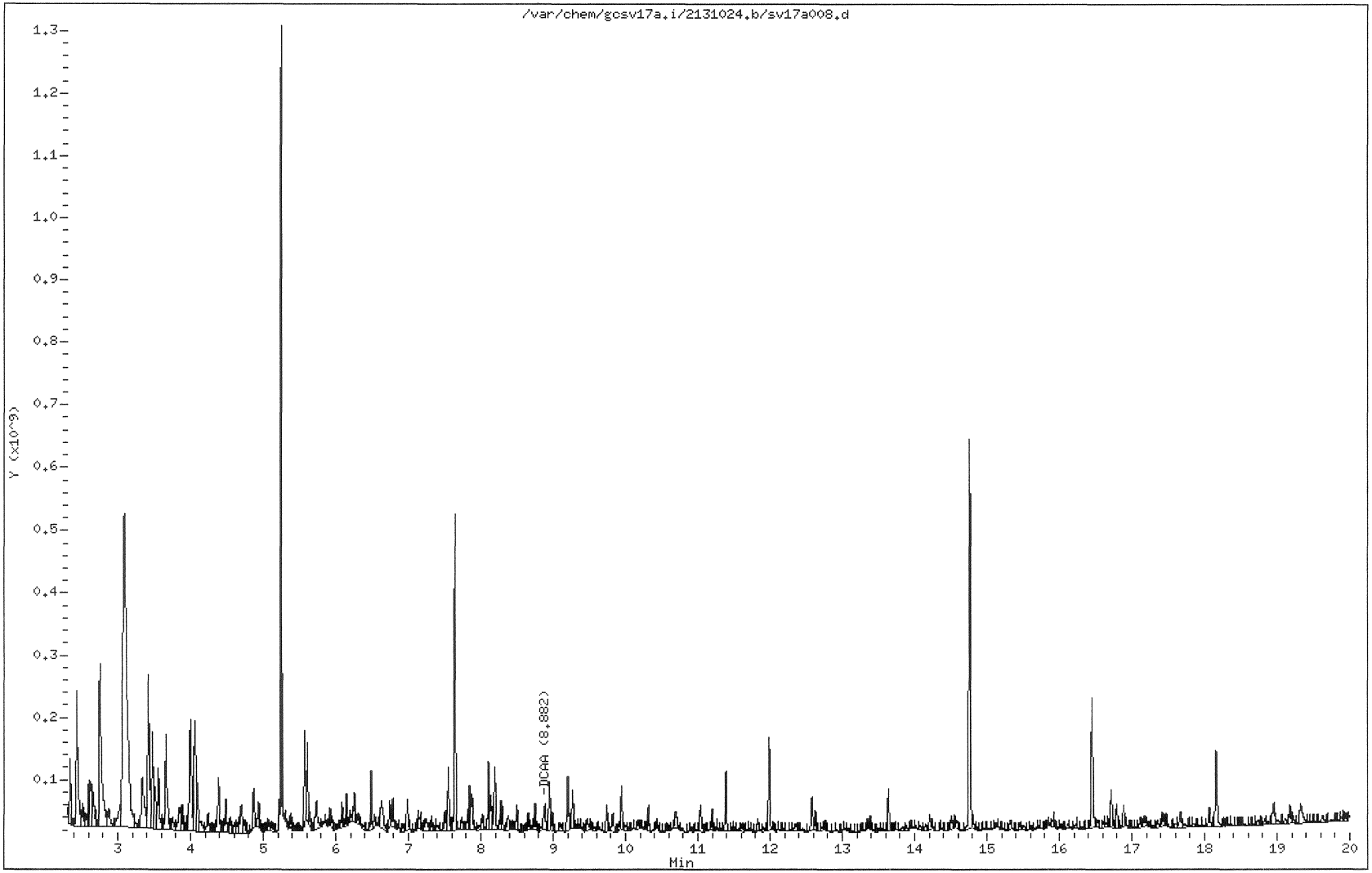
Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | CONCENTRATIONS FINAL (UG/KG) |
|---|---|---|---|---|---|---|
| $ 4 DCAA | 8.882 | 8.871 | 0.011 | 81721259 | 82.0453 | 27.2 |

Data File: /var/chem/gcsv17a.i/2131024.b/sv17a008.d
Date : 24-OCT-2013 13:05
Client ID:
Sample Info: 21310171201*1
Volume Injected (uL): 1.0
Column phase: RTX-35ms-30M

Instrument: gcsv17a.i

Operator: tls
Column diameter: 0.32

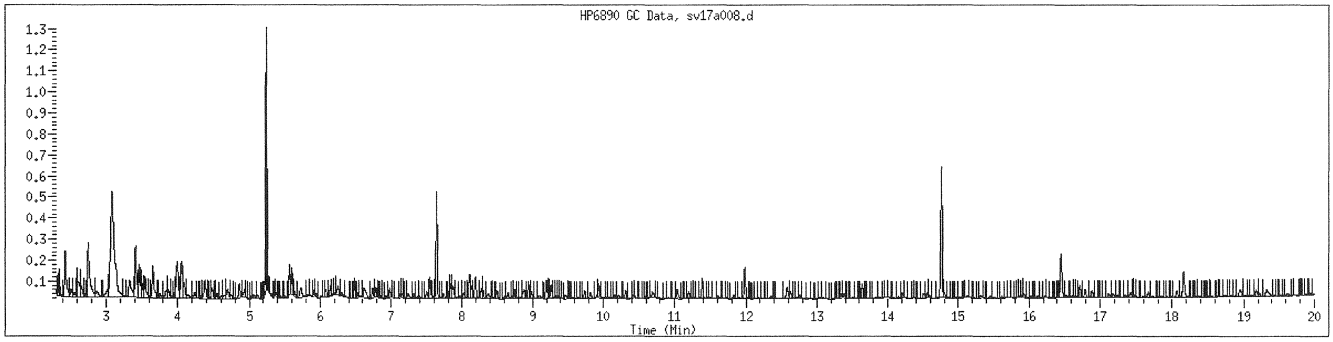



21310171 2 895

Data file : /var/chem/gcsv17a.i/2131024.b/sv17a008.d Page: 1
Report Date: 10/25/2013 10:12

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 21310171201 SampleType : SAMPLE
Injection Date: 10/24/2013 13:05 Instrument : gcsv17a.i
Operator : tls
Sample Info : 21310171201*1
Misc Info :
Method : /var/chem/gcsv17a.i/2131024.b/FULL8151.m
Dilution : 1.00
Matrix : SOIL
Integrator : Falcon Compound Sublist: AFCEEH




NO MANUAL INTEGRATIONS

1D
ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL
Lab Code: LA024 Case No.:
Matrix: Solid
Sample wt/vol: 30 Units: g
Level: (low/med) LOW
% Moisture: 10.2 decanted: (Y/N)
GC Column: ID: (mm)
Concentrated Extract Volume: 10000 ( µL )
Soil Aliquot Volume: ( µL )
Injection Volume: 1 ( µL )
GPC Cleanup: (Y/N) N pH:
Prep Batch: 518091 Analytical Batch: 518528

Sample ID RS-COMP2-101613
Contract:
SAS No.: SDG No.: 213101712
Lab Sample ID: 21310171203
Date Collected 10/16/13 Time: 1700
Date Received: 10/17/13
Date Extracted: 10/22/13
Date Analyzed: 10/24/13 Time: 1333
Dilution Factor: 1 Analyst: TLS
Prep Method: SW-846 8151A
Analytical Method: SW-846 8151A
Sulfur Cleanup: (Y/N) N Instrument ID: GCS17A
Lab File ID: 2131024/sv17a009

*CONCENTRATION UNITS: ug/kg*

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 94-75-7 | 2,4'-D | 9.25 | U | 4.68 | 9.25 | 18.6 |
| 93-76-5 | 2,4,5-T | 9.25 | UQ | 4.68 | 9.25 | 18.6 |
| 93-72-1 | 2,4,5-TP (SILVEX) | 9.25 | UQ | 4.68 | 9.25 | 18.6 |
| 94-82-6 | 2,4-DB | 9.25 | UQ | 4.68 | 9.25 | 18.6 |
| 1918-00-9 | Dicamba | 9.25 | U | 4.68 | 9.25 | 18.6 |
| 120-36-5 | Dichloroprop | 9.25 | UQ | 4.68 | 9.25 | 18.6 |

Data File: /var/chem/gcsv17a.i/2131024.b/sv17a009.d
Report Date: 25-Oct-2013 09:00

GCAL, Inc.

Data file : /var/chem/gcsv17a.i/2131024.b/sv17a009.d
Lab Smp Id: 21310171203
Inj Date : 24-OCT-2013 13:33
Operator : tls Inst ID: gcsv17a.i
Smp Info : 21310171203*1
Misc Info :
Comment :
Method : /var/chem/gcsv17a.i/2131024.b/FULL8151.m
Meth Date : 25-Oct-2013 09:00 tls Quant Type: ESTD
Cal Date : 26-SEP-2013 18:12 Cal File: sv17a007.d
Als bottle: 9
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AFCEEH.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

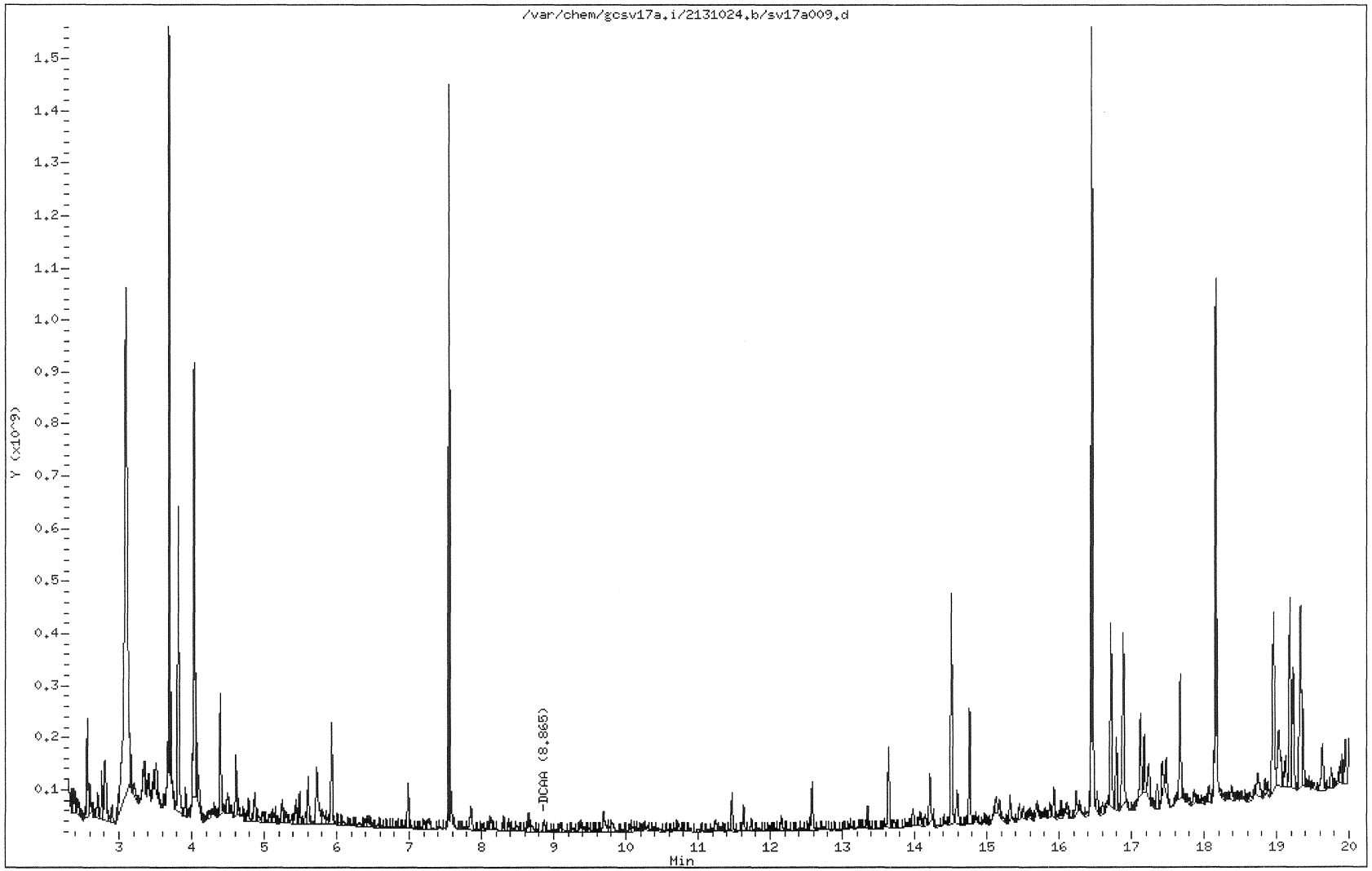
| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | FINAL (UG/KG) |
|---|---|---|---|---|---|---|
| $ 4 DCAA | 8.865 | 8.871 | -0.006 | 39175936 | 39.3313 | 13.1 |

213101712 898

Data File: /var/chem/gcsv17a.i/2131024.b/sv17a009.d
Date : 24-OCT-2013 13:33
Client ID:
Sample Info: 21310171203*1
Volume Injected (uL): 1.0
Column phase: RTX-35ms-30M

Instrument: gcsv17a.i

Operator: tls
Column diameter: 0.32

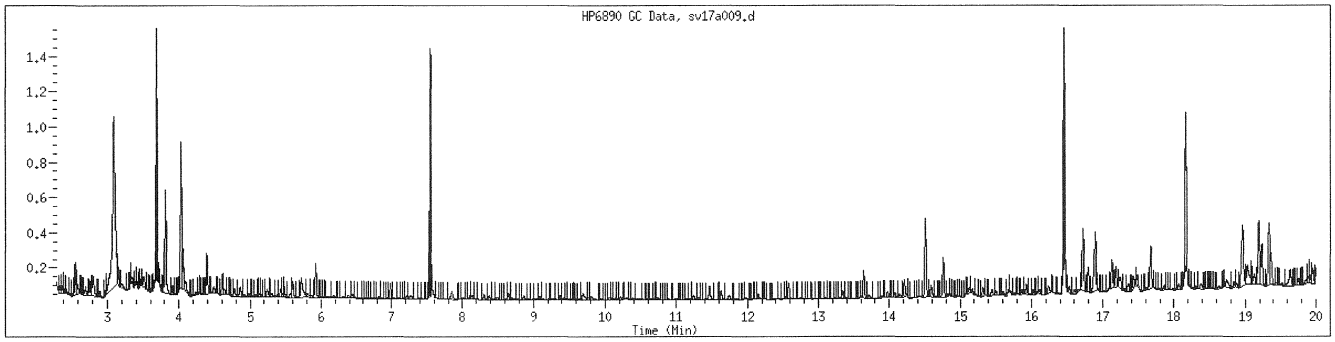



21310171Z 899

Data file : /var/chem/gcsv17a.i/2131024.b/sv17a009.d Page: 1
Report Date: 10/25/2013 09:00

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 21310171203 SampleType : SAMPLE
Injection Date: 10/24/2013 13:33 Instrument : gcsv17a.i
Operator : tls
Sample Info : 21310171203*1
Misc Info :
Method : /var/chem/gcsv17a.i/2131024.b/FULL8151.m
Dilution : 1.00
Matrix : SOIL
Integrator : Falcon Compound Sublist: AFCEEH




NO MANUAL INTEGRATIONS

Report Date : 05-Nov-2013 11:26

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-SEP-2013 15:52
End Cal Date : 26-SEP-2013 18:12
Quant Method : ESTD
Origin : Included
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv17a.i/2131024.b/FULL8151.m
Cal Date : 25-Oct-2013 09:00 tls

Calibration File Names:
Level 1: /var/chem/gcsv17a.i/2130926.b/sv17a002.d
Level 2: /var/chem/gcsv17a.i/2130926.b/sv17a003.d
Level 3: /var/chem/gcsv17a.i/2130926.b/sv17a004.d
Level 4: /var/chem/gcsv17a.i/2130926.b/sv17a006.d
Level 5: /var/chem/gcsv17a.i/2130926.b/sv17a007.d
Level 7: /var/chem/gcsv17a.i/2130926.b/sv17a005.d

| Compound | 12 Level 1 | 24 Level 2 | 47 Level 3 | 94 Level 4 | 189 Level 5 | 71 Level 7 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 DALAPON | 35538875 | 46790780 | 67592171 | 114829468 | 198159637 | 92940901 | QUAD | -5.42239 | 6.283e-07 | 1.810e-15 | 0.99496 |
| 2 3,5-Dichlorobenzoic acid | 1528631 | 1424958 | 1311599 | 1233167 | 1164617 | 1248026 | AVRG | | 1318500 | | 10.25796 |
| 3 4-NITROPHENOL | 585863 | 544542 | 491986 | 451990 | 413670 | 462491 | AVRG | | 491757 | | 12.91815 |
| 5 DICAMBA | 3505905 | 3318046 | 3117592 | 2988736 | 2898869 | 2997505 | AVRG | | 3137776 | | 7.36996 |
| 6 MCPP | 4823 | 4455 | 4053 | 3766 | 3488 | 3832 | AVRG | | 4069 | | 12.05440 |
| 7 MCPA | 7934 | 6971 | 6098 | 5478 | 4997 | 5634 | AVRG | | 6185 | | 17.56110 |
| 8 DICHLORPROP | 1048328 | 957935 | 878222 | 819264 | 756965 | 830404 | AVRG | | 881853 | | 11.96622 |
| 9 2,4-D | 1257704 | 1168798 | 1093823 | 1038459 | 984071 | 1042717 | AVRG | | 1097595 | | 9.12134 |
| 10 PENTACHLOROPHENOL | 11562847 | 11231104 | 10710245 | 10400633 | 10237313 | 10371785 | AVRG | | 10752321 | | 4.95923 |
| 11 2,4,5-TP | 4783286 | 4617678 | 4368981 | 4187928 | 4056580 | 4184384 | AVRG | | 4366473 | | 6.46067 |
| 12 CHLORAMBEN | 3655277 | 3535156 | 3330693 | 3213250 | 3129045 | 3193145 | AVRG | | 3342761 | | 6.27026 |
| 13 2,4,5-T | 4660069 | 4514027 | 4332500 | 4192844 | 4078305 | 4131458 | AVRG | | 4318201 | | 5.31686 |
| 14 2,4-DB | 761603 | 713595 | 660329 | 635633 | 603180 | 625661 | AVRG | | 666667 | | 8.98260 |
| 15 DINOSEB | 3009916 | 2819334 | 2655132 | 2424412 | 2329007 | 2460415 | AVRG | | 2616369 | | 9.98617 |

2131011/12 SOL

Report Date : 05-Nov-2013 11:26

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 26-SEP-2013 15:52
End Cal Date : 26-SEP-2013 18:12
Quant Method : ESTD
Origin : Included
Target Version : 3.50
Integrator : Falcon
Method file : /var/chem/gcsv17a.i/2131024.b/FULL8151.m
Cal Date : 25-Oct-2013 09:00 tls

| Compound | 12 Level 1 | 24 Level 2 | 47 Level 3 | 94 Level 4 | 189 Level 5 | 71 Level 7 | Curve | Coefficients b | m1 | m2 | %RSD or R^2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 16 BENTAZON | 533581 | 507379 | 467672 | 443519 | 416397 | 436283 | AVRG | | 467472 | | 9.62299 |
| 17 PICLORAM | 5777584 | 5653001 | 5466689 | 5350517 | 5324059 | 5273658 | AVRG | | 5474251 | | 3.67282 |
| 18 DCPA | 5745575 | 5582843 | 5305669 | 5079757 | 4938518 | 5071737 | AVRG | | 5287350 | | 6.03377 |
| 19 ACIFLUORFEN | 4390453 | 4320155 | 4185603 | 3816707 | 3764329 | 3897855 | AVRG | | 4062517 | | 6.65543 |
| $ 4 DCAA | 1161028 | 1080041 | 990358 | 928534 | 874343 | 942001 | AVRG | | 996051 | | 10.68145 |

2131017 12 902

Data File: /var/chem/gcsv17a.i/2130926.b/sv17a002.d
Report Date: 30-Sep-2013 14:26

GCAL, Inc.

Data file : /var/chem/gcsv17a.i/2130926.b/sv17a002.d
Lab Smp Id: 1201
Inj Date : 26-SEP-2013 15:52
Operator : smh Inst ID: gcsv17a.i
Smp Info : 1201*1 12.5
Misc Info :
Comment :
Method : /var/chem/gcsv17a.i/2130926.b/FULL8151.m
Meth Date : 30-Sep-2013 14:26 smh Quant Type: ESTD
Cal Date : 26-SEP-2013 15:52 Cal File: sv17a002.d
Als bottle: 2 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (uL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| | Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|---|
| | 1 DALAPON | 2.684 | 2.687 | -0.003 | 35538875 | 11.8000 | 19.2 |
| | 2 3,5-Dichlorobenzoic acid | 7.365 | 7.365 | 0.000 | 18037851 | 11.8000 | 13.7 |
| | 3 4-NITROPHENOL | 8.107 | 8.107 | 0.000 | 6913181 | 11.8000 | 14.0 |
| $ | 4 DCAA | 8.874 | 8.873 | 0.001 | 13700128 | 11.8000 | 13.8 |
| | 5 DICAMBA | 9.116 | 9.118 | -0.002 | 41369682 | 11.8000 | 13.2 |
| | 6 MCPP | 9.157 | 9.159 | -0.002 | 5690688 | 1180.00 | 1400 |
| | 7 MCPA | 9.519 | 9.519 | 0.000 | 9361986 | 1180.00 | 1510 |
| | 8 DICHLORPROP | 9.862 | 9.861 | 0.001 | 12370271 | 11.8000 | 14.0 |
| | 9 2,4-D | 10.292 | 10.291 | 0.001 | 14840909 | 11.8000 | 13.5 |
| | 10 PENTACHLOROPHENOL | 10.746 | 10.746 | 0.000 | 136441600 | 11.8000 | 12.7 |
| | 11 2,4,5-TP | 11.089 | 11.089 | 0.000 | 56442780 | 11.8000 | 12.9 |
| | 12 CHLORAMBEN | 11.808 | 11.808 | 0.000 | 43132271 | 11.8000 | 12.9 |
| | 13 2,4,5-T | 11.575 | 11.573 | 0.002 | 54988815 | 11.8000 | 12.7 |

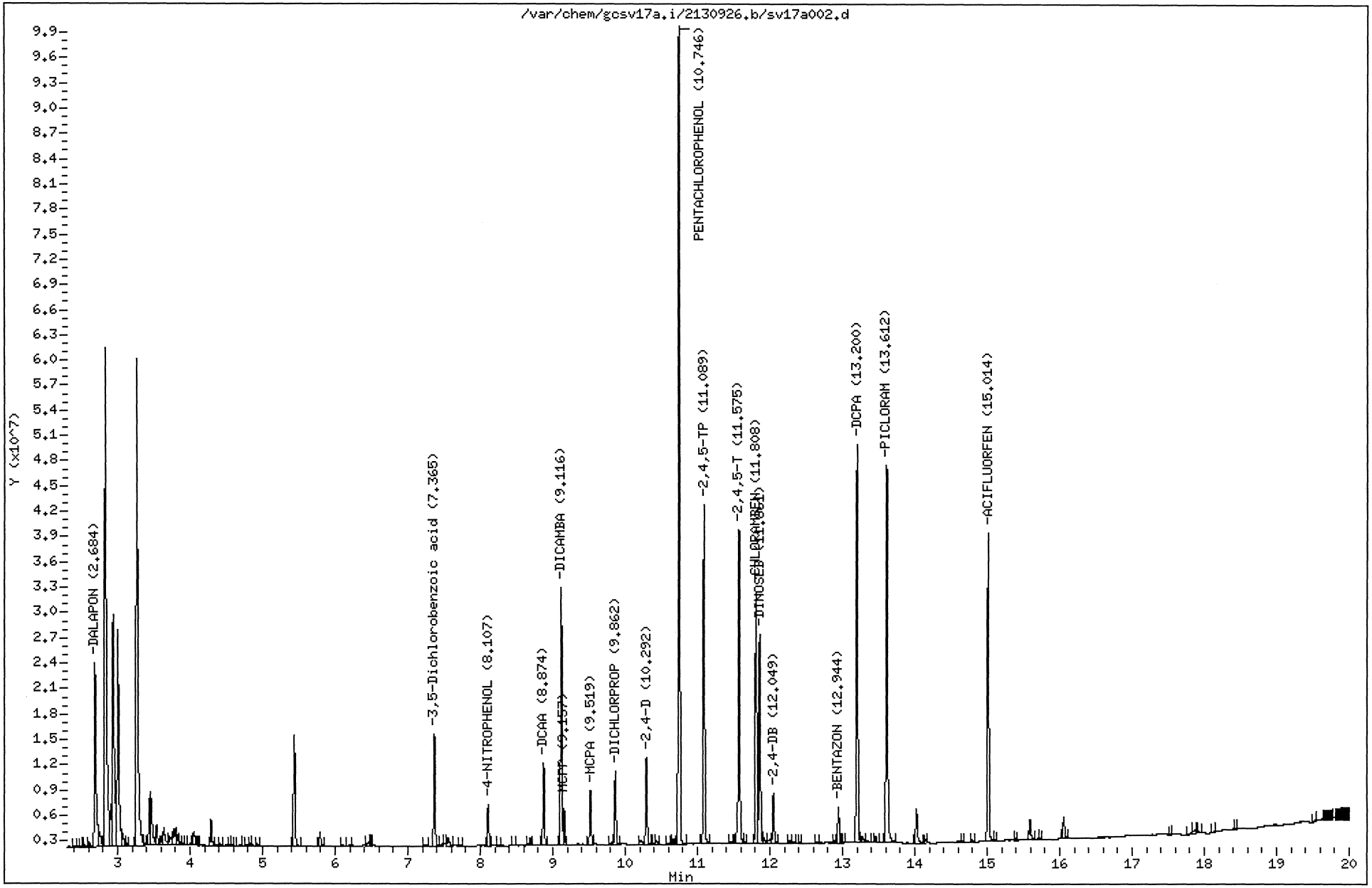
Data File: /var/chem/gcsv17a.i/2130926.b/sv17a002.d
Report Date: 30-Sep-2013 14:26

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| 14 2,4-DB | 12.049 | 12.048 | 0.001 | 8986921 | 11.8000 | 13.5 |
| 15 DINOSEB | 11.861 | 11.860 | 0.001 | 35517010 | 11.8000 | 13.6 |
| 16 BENTAZON | 12.944 | 12.942 | 0.002 | 6296256 | 11.8000 | 13.5 |
| 17 PICLORAM | 13.612 | 13.611 | 0.001 | 68175487 | 11.8000 | 12.4 |
| 18 DCPA | 13.200 | 13.200 | 0.000 | 67797787 | 11.8000 | 12.8 |
| 19 ACIFLUORFEN | 15.014 | 15.013 | 0.001 | 51807343 | 11.8000 | 12.8 |

Data File: /var/chem/gcsv17a.i/2130926.b/sv17a002.d
Date : 26-SEP-2013 15:52
Client ID:
Sample Info: 1201*1 12.5
Volume Injected (uL): 1.0
Column phase: RTX-35ms-30M

Instrument: gcsv17a.i

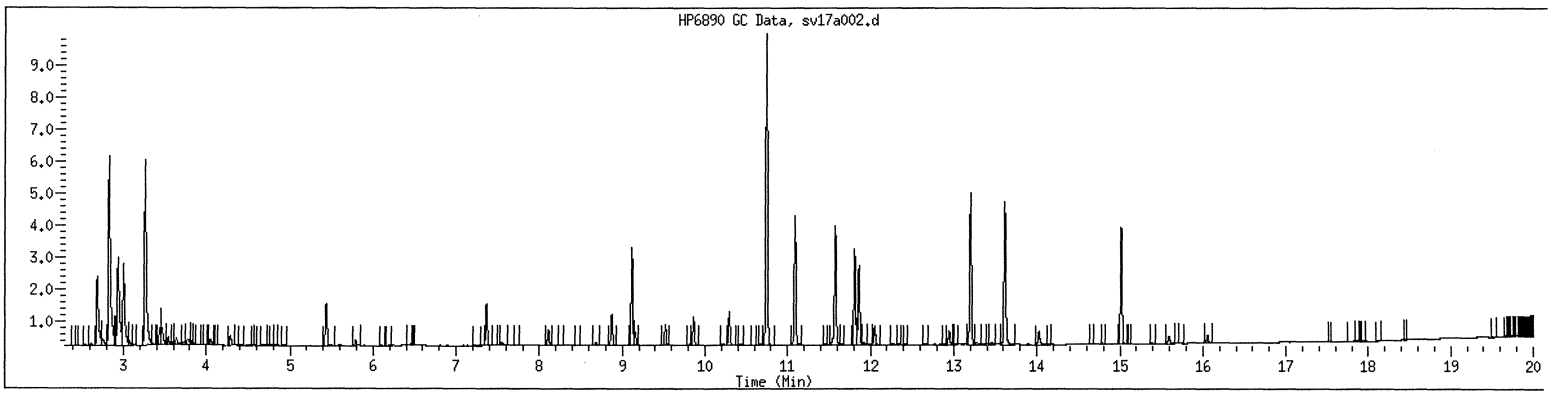
Operator: smh
Column diameter: 0.32




21310171 2 905

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1201 | SampleType | : CALIB_1 |
| Injection Date | : 09/26/2013 15:52 | Instrument | : gcsv17a.i |
| Operator | : smh | | |
| Sample Info | : 1201*1 12.5 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv17a.i/2130926.b/FULL8151.m | | |
| Dilution | : 1.00 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : all |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv17a.i/2130926.b/sv17a003.d
Report Date: 30-Sep-2013 14:26

GCAL, Inc.

Data file : /var/chem/gcsv17a.i/2130926.b/sv17a003.d
Lab Smp Id: 1202
Inj Date : 26-SEP-2013 16:20
Operator : smh Inst ID: gcsv17a.i
Smp Info : 1202*1 25
Misc Info :
Comment :
Method : /var/chem/gcsv17a.i/2130926.b/FULL8151.m
Meth Date : 30-Sep-2013 14:26 smh Quant Type: ESTD
Cal Date : 26-SEP-2013 16:20 Cal File: sv17a003.d
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (uL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| | Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|---|
| | 1 DALAPON | 2.685 | 2.687 | -0.002 | 46790780 | 23.6000 | 27.9 |
| | 2 3,5-Dichlorobenzoic acid | 7.365 | 7.365 | 0.000 | 33629013 | 23.6000 | 25.5 |
| | 3 4-NITROPHENOL | 8.105 | 8.107 | -0.002 | 12851191 | 23.6000 | 26.1 |
| $ | 4 DCAA | 8.873 | 8.873 | 0.000 | 25488958 | 23.6000 | 25.6 |
| | 5 DICAMBA | 9.116 | 9.118 | -0.002 | 78305891 | 23.6000 | 25.0 |
| | 6 MCPP | 9.157 | 9.159 | -0.002 | 10513469 | 2360.00 | 2580 |
| | 7 MCPA | 9.517 | 9.519 | -0.002 | 16452495 | 2360.00 | 2660 |
| | 8 DICHLORPROP | 9.861 | 9.861 | 0.000 | 22607261 | 23.6000 | 25.6 |
| | 9 2,4-D | 10.290 | 10.291 | -0.001 | 27583642 | 23.6000 | 25.1 |
| | 10 PENTACHLOROPHENOL | 10.745 | 10.747 | -0.002 | 265054065 | 23.6000 | 24.6 |
| | 11 2,4,5-TP | 11.088 | 11.089 | -0.001 | 108977201 | 23.6000 | 25.0 |
| | 12 CHLORAMBEN | 11.808 | 11.808 | 0.000 | 83429676 | 23.6000 | 25.0 |
| | 13 2,4,5-T | 11.574 | 11.573 | 0.001 | 106531045 | 23.6000 | 24.7 |

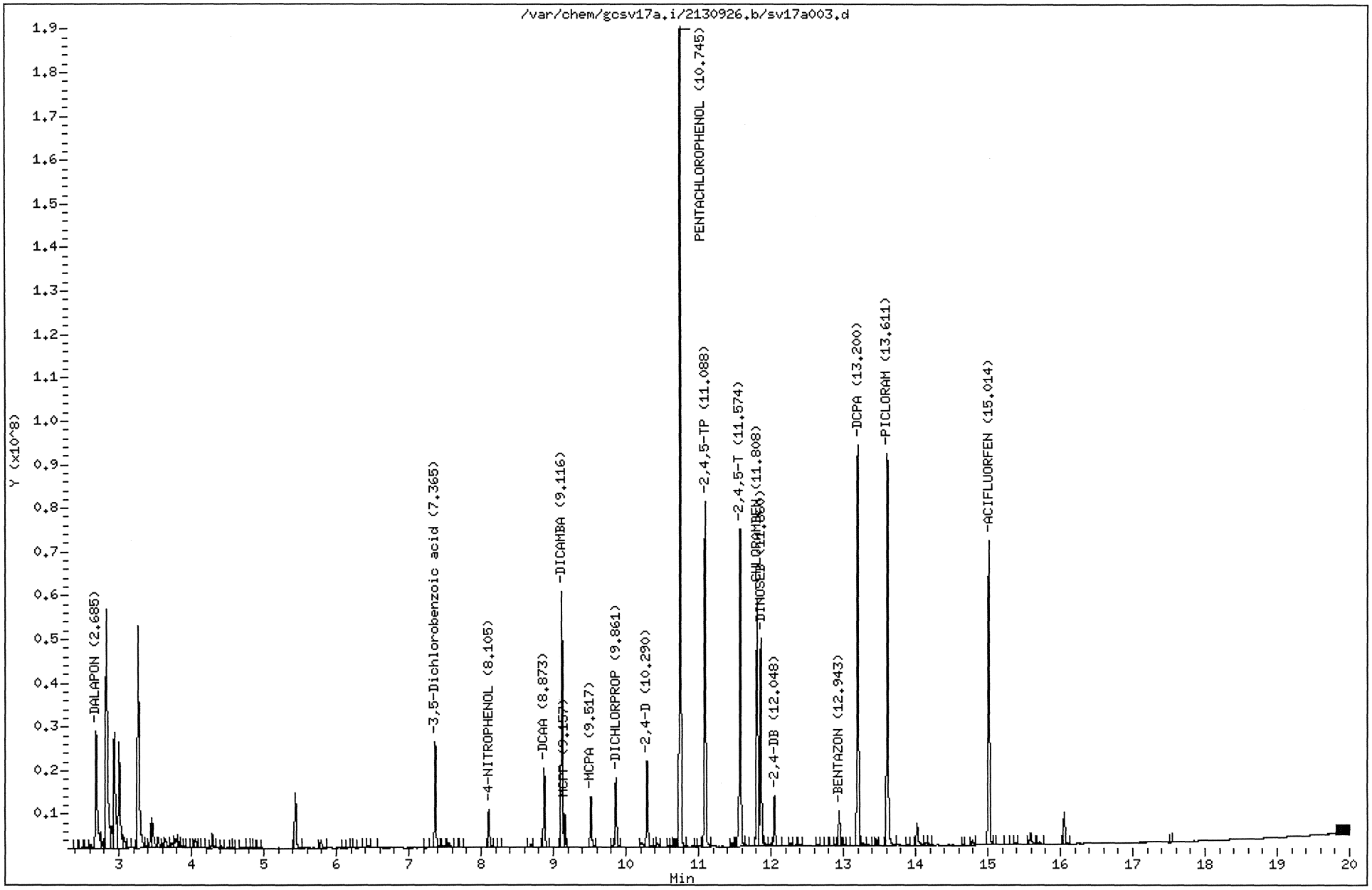
Data File: /var/chem/gcsv17a.i/2130926.b/sv17a003.d
Report Date: 30-Sep-2013 14:26

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| 14 2,4-DB | 12.048 | 12.048 | 0.000 | 16840848 | 23.6000 | 25.3 |
| 15 DINOSEB | 11.860 | 11.860 | 0.000 | 66536278 | 23.6000 | 25.4 |
| 16 BENTAZON | 12.943 | 12.942 | 0.001 | 11974139 | 23.6000 | 25.6 |
| 17 PICLORAM | 13.611 | 13.611 | 0.000 | 133410820 | 23.6000 | 24.4 |
| 18 DCPA | 13.200 | 13.200 | 0.000 | 131755106 | 23.6000 | 24.9 |
| 19 ACIFLUORFEN | 15.014 | 15.013 | 0.001 | 101955665 | 23.6000 | 25.1 |

Data File: /var/chem/gcsv17a.i/2130926.b/sv17a003.d
Date : 26-SEP-2013 16:20
Client ID:
Sample Info: 1202*1 25
Volume Injected (uL): 1.0
Column phase: RTX-35ms-30M

Instrument: gcsv17a.i

Operator: smh
Column diameter: 0.32

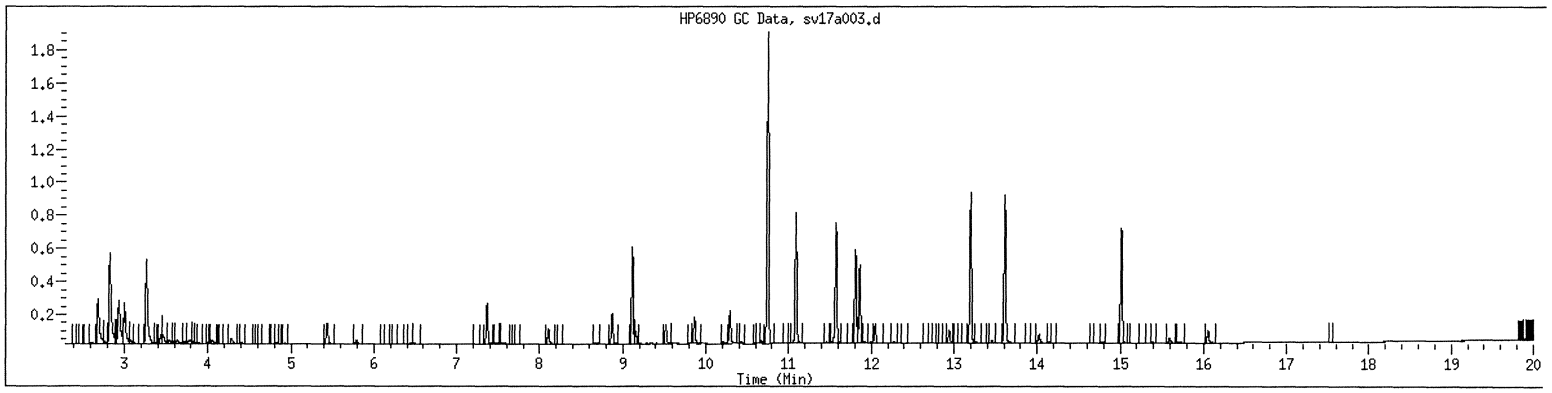



21310171 2 909

Report Date: 09/30/2013 14:26

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1202 | SampleType | : CALIB_2 |
| Injection Date | : 09/26/2013 16:20 | Instrument | : gcsv17a.i |
| Operator | : smh | | |
| Sample Info | : 1202*1 25 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv17a.i/2130926.b/FULL8151.m | | |
| Dilution | : 1.00 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : all |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv17a.i/2130926.b/sv17a004.d
Report Date: 30-Sep-2013 14:26

GCAL, Inc.

Data file : /var/chem/gcsv17a.i/2130926.b/sv17a004.d
Lab Smp Id: 1203
Inj Date : 26-SEP-2013 16:48
Operator : smh Inst ID: gcsv17a.i
Smp Info : 1203*1 50
Misc Info :
Comment :
Method : /var/chem/gcsv17a.i/2130926.b/FULL8151.m
Meth Date : 30-Sep-2013 14:26 smh Quant Type: ESTD
Cal Date : 26-SEP-2013 16:48 Cal File: sv17a004.d
Als bottle: 4 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (uL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

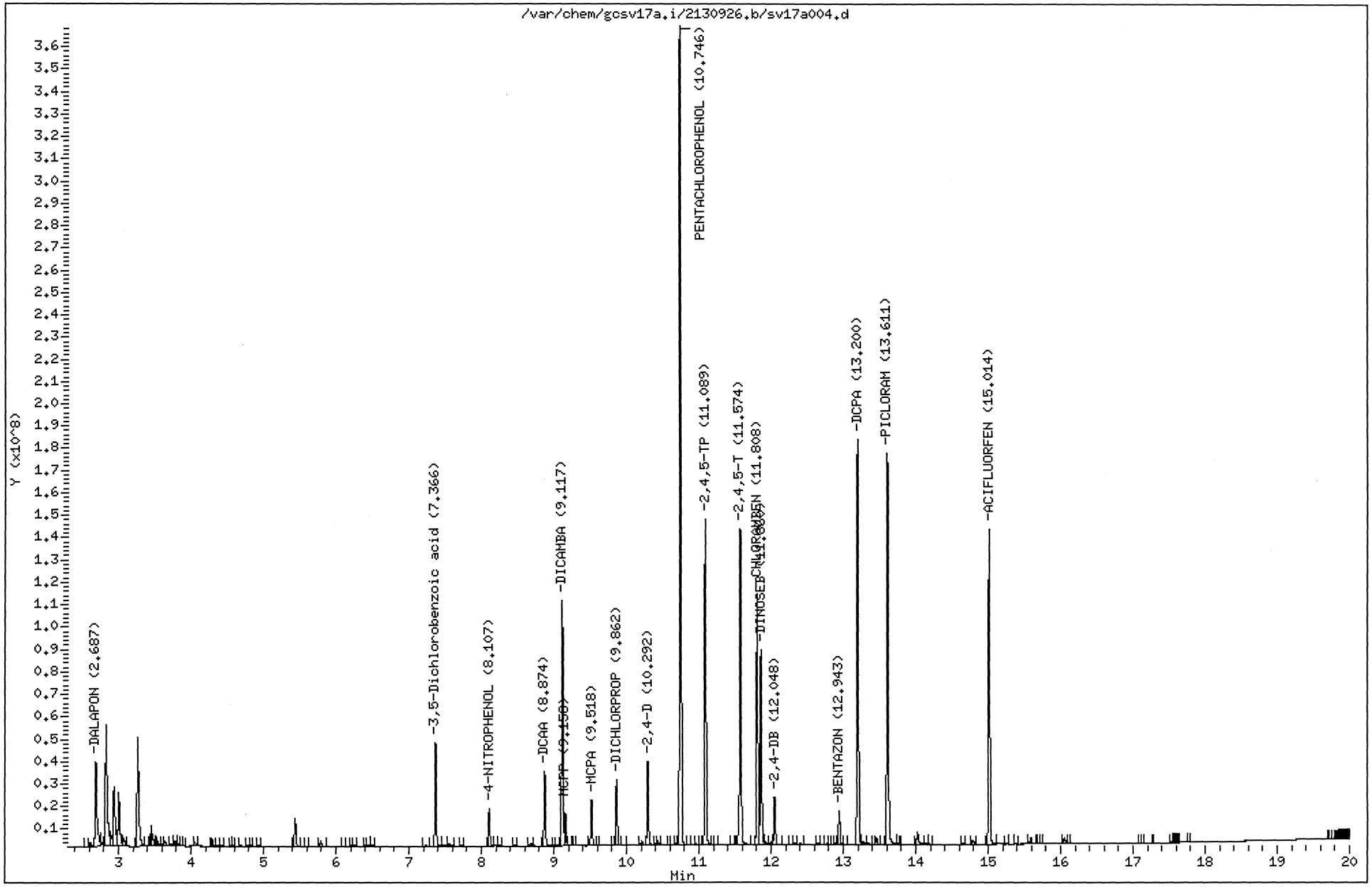
| | Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|---|
| | 1 DALAPON | 2.687 | 2.687 | 0.000 | 67592171 | 47.2000 | 45.3 |
| | 2 3,5-Dichlorobenzoic acid | 7.366 | 7.365 | 0.001 | 61907457 | 47.2000 | 47.0 |
| | 3 4-NITROPHENOL | 8.107 | 8.107 | 0.000 | 23221755 | 47.2000 | 47.2 |
| $ | 4 DCAA | 8.874 | 8.873 | 0.001 | 46744884 | 47.2000 | 46.9 |
| | 5 DICAMBA | 9.117 | 9.118 | -0.001 | 147150340 | 47.2000 | 46.9 |
| | 6 MCPP | 9.158 | 9.159 | -0.001 | 19128936 | 4720.00 | 4700 |
| | 7 MCPA | 9.518 | 9.519 | -0.001 | 28781294 | 4720.00 | 4650 |
| | 8 DICHLORPROP | 9.862 | 9.861 | 0.001 | 41452100 | 47.2000 | 47.0 |
| | 9 2,4-D | 10.292 | 10.291 | 0.001 | 51628463 | 47.2000 | 47.0 |
| | 10 PENTACHLOROPHENOL | 10.746 | 10.747 | -0.001 | 505523547 | 47.2000 | 47.0 |
| | 11 2,4,5-TP | 11.089 | 11.089 | 0.000 | 206215882 | 47.2000 | 47.2 |
| | 12 CHLORAMBEN | 11.808 | 11.808 | 0.000 | 157208713 | 47.2000 | 47.0 |
| | 13 2,4,5-T | 11.574 | 11.573 | 0.001 | 204494009 | 47.2000 | 47.4 |

Data File: /var/chem/gcsv17a.i/2130926.b/sv17a004.d
Report Date: 30-Sep-2013 14:26

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| 14 2,4-DB | 12.048 | 12.048 | 0.000 | 31167535 | 47.2000 | 46.8 |
| 15 DINOSEB | 11.860 | 11.860 | 0.000 | 125322222 | 47.2000 | 47.9 |
| 16 BENTAZON | 12.943 | 12.942 | 0.001 | 22074134 | 47.2000 | 47.2 |
| 17 PICLORAM | 13.611 | 13.611 | 0.000 | 258027700 | 47.2000 | 47.1 |
| 18 DCPA | 13.200 | 13.200 | 0.000 | 250427559 | 47.2000 | 47.4 |
| 19 ACIFLUORFEN | 15.014 | 15.013 | 0.001 | 197560462 | 47.2000 | 48.6 |

Data File: /var/chem/gcsv17a.i/2130926.b/sv17a004.d
Date : 26-SEP-2013 16:48
Client ID:
Sample Info: 1203*1 50
Volume Injected (uL): 1.0
Column phase: RTX-35ms-30M

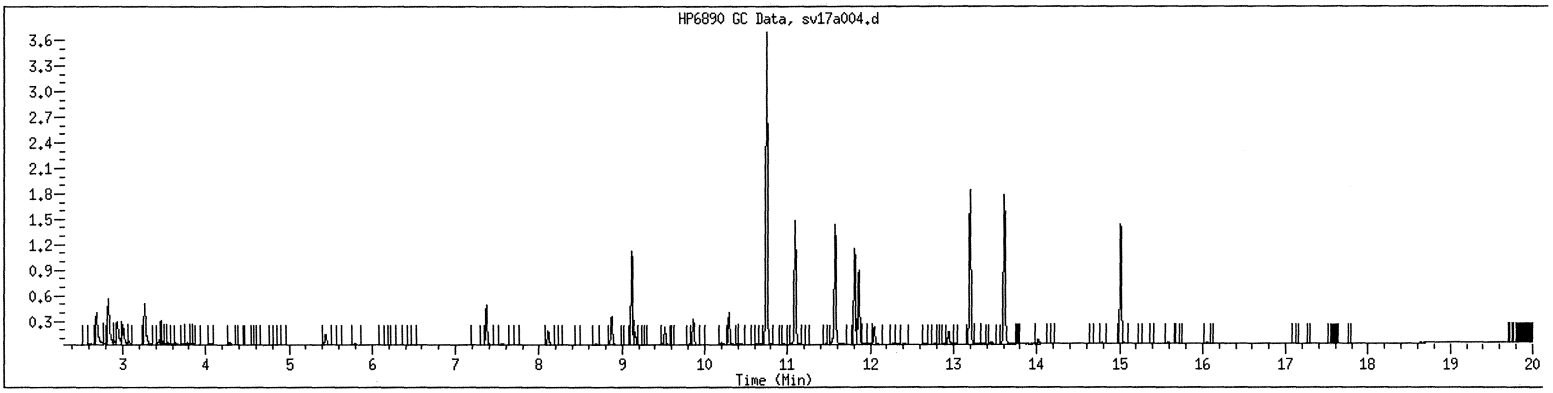
Instrument: gcsv17a.i
Operator: smh
Column diameter: 0.32




21310171 2 913

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1203 | SampleType | : CALIB_3 |
| Injection Date | : 09/26/2013 16:48 | Instrument | : gcsv17a.i |
| Operator | : smh | | |
| Sample Info | : 1203*1 50 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv17a.i/2130926.b/FULL8151.m | | |
| Dilution | : 1.00 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : all |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv17a.i/2130926.b/sv17a005.d
Report Date: 30-Sep-2013 14:26

GCAL, Inc.

Data file : /var/chem/gcsv17a.i/2130926.b/sv17a005.d
Lab Smp Id: 1207
Inj Date : 26-SEP-2013 17:16
Operator : smh Inst ID: gcsv17a.i
Smp Info : 1207*1 75
Misc Info :
Comment :
Method : /var/chem/gcsv17a.i/2130926.b/FULL8151.m
Meth Date : 30-Sep-2013 14:26 smh Quant Type: ESTD
Cal Date : 26-SEP-2013 17:16 Cal File: sv17a005.d
Als bottle: 5 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (uL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

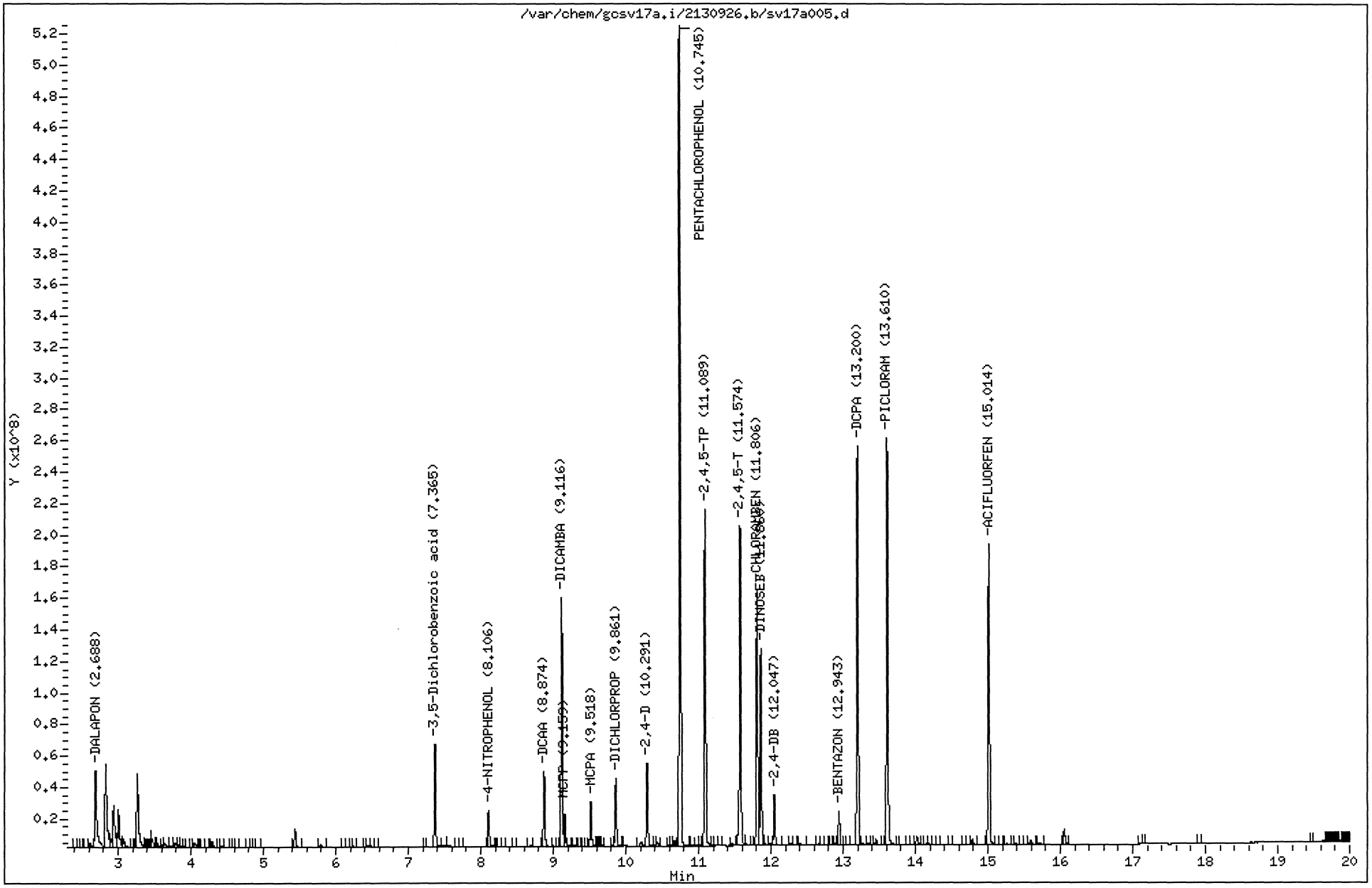
| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| 1 DALAPON | 2.688 | 2.687 | 0.001 | 92940901 | 70.8000 | 68.6 |
| 2 3,5-Dichlorobenzoic acid | 7.365 | 7.365 | 0.000 | 88360260 | 70.8000 | 67.0 |
| 3 4-NITROPHENOL | 8.106 | 8.107 | -0.001 | 32744395 | 70.8000 | 66.6 |
| $ 4 DCAA | 8.874 | 8.873 | 0.001 | 66693640 | 70.8000 | 67.0 |
| 5 DICAMBA | 9.116 | 9.117 | -0.001 | 212223321 | 70.8000 | 67.6 |
| 6 MCPP | 9.159 | 9.159 | 0.000 | 27128000 | 7080.00 | 6670 |
| 7 MCPA | 9.518 | 9.519 | -0.001 | 39891948 | 7080.00 | 6450 |
| 8 DICHLORPROP | 9.861 | 9.861 | 0.000 | 58792597 | 70.8000 | 66.7 |
| 9 2,4-D | 10.291 | 10.291 | 0.000 | 73824342 | 70.8000 | 67.3 |
| 10 PENTACHLOROPHENOL | 10.745 | 10.746 | -0.001 | 734322382 | 70.8000 | 68.3 |
| 11 2,4,5-TP | 11.089 | 11.089 | 0.000 | 296254359 | 70.8000 | 67.8 |
| 12 CHLORAMBEN | 11.806 | 11.808 | -0.002 | 226074642 | 70.8000 | 67.6 |
| 13 2,4,5-T | 11.574 | 11.573 | 0.001 | 292507237 | 70.8000 | 67.7 |

Data File: /var/chem/gcsv17a.i/2130926.b/sv17a005.d
Report Date: 30-Sep-2013 14:26

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| 14 2,4-DB | 12.047 | 12.048 | -0.001 | 44296820 | 70.8000 | 66.4 |
| 15 DINOSEB | 11.860 | 11.860 | 0.000 | 174197362 | 70.8000 | 66.6 |
| 16 BENTAZON | 12.943 | 12.942 | 0.001 | 30888827 | 70.8000 | 66.1 |
| 17 PICLORAM | 13.610 | 13.611 | -0.001 | 373374997 | 70.8000 | 68.2 |
| 18 DCPA | 13.200 | 13.200 | 0.000 | 359078976 | 70.8000 | 67.9 |
| 19 ACIFLUORFEN | 15.014 | 15.013 | 0.001 | 275968160 | 70.8000 | 67.9 |

Data File: /var/chem/gcsv17a.i/2130926.b/sv17a005.d
Date : 26-SEP-2013 17:16
Client ID:
Sample Info: 1207*1 75
Volume Injected (uL): 1.0
Column phase: RTX-35ms-30M

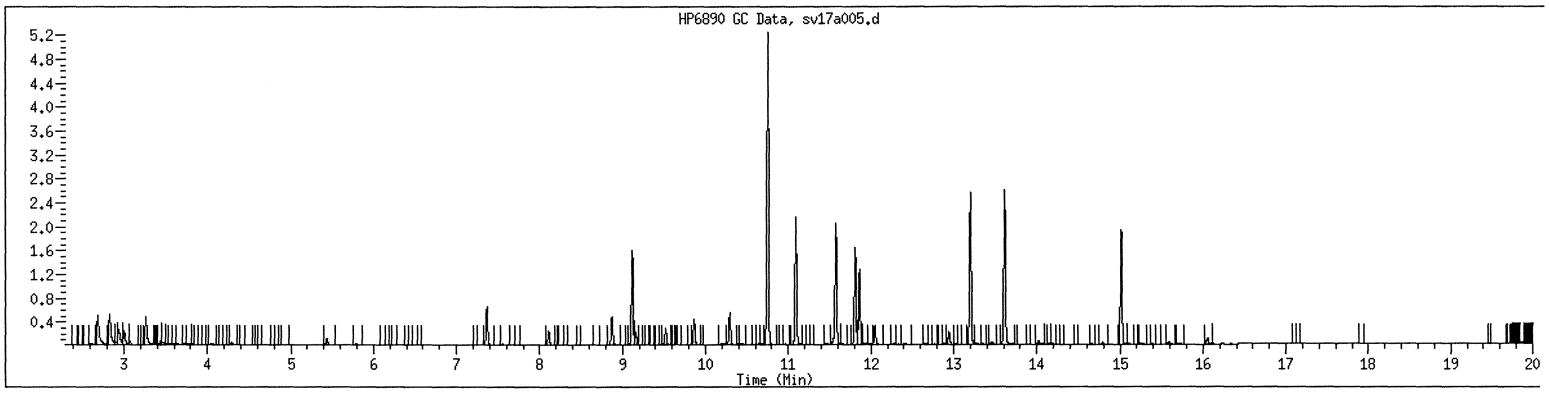
Instrument: gcsv17a.i
Operator: smh
Column diameter: 0.32




21310171 2 917

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1207 | SampleType | : CALIB_7 |
| Injection Date | : 09/26/2013 17:16 | Instrument | : gcsv17a.i |
| Operator | : smh | | |
| Sample Info | : 1207*1 75 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv17a.i/2130926.b/FULL8151.m | | |
| Dilution | : 1.00 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : all |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv17a.i/2130926.b/sv17a006.d
Report Date: 30-Sep-2013 14:26

GCAL, Inc.

Data file : /var/chem/gcsv17a.i/2130926.b/sv17a006.d
Lab Smp Id: 1204
Inj Date : 26-SEP-2013 17:44
Operator : smh Inst ID: gcsv17a.i
Smp Info : 1204*1 100
Misc Info :
Comment :
Method : /var/chem/gcsv17a.i/2130926.b/FULL8151.m
Meth Date : 30-Sep-2013 14:26 smh Quant Type: ESTD
Cal Date : 26-SEP-2013 17:44 Cal File: sv17a006.d
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (uL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

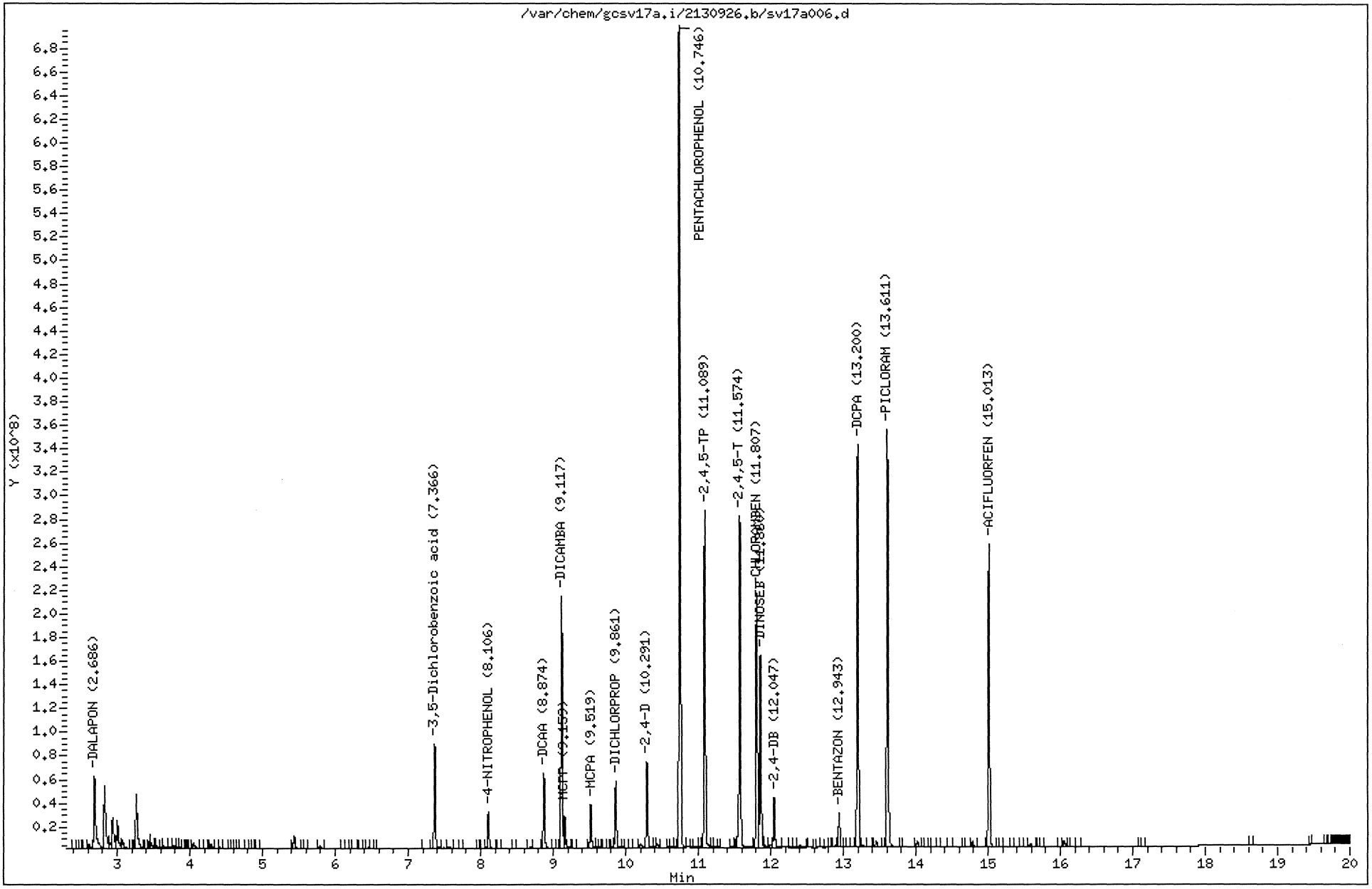
| | Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|---|
| | 1 DALAPON | 2.686 | 2.686 | 0.000 | 114829468 | 94.3000 | 90.6 |
| | 2 3,5-Dichlorobenzoic acid | 7.366 | 7.365 | 0.001 | 116287630 | 94.3000 | 88.2 |
| | 3 4-NITROPHENOL | 8.106 | 8.107 | -0.001 | 42622661 | 94.3000 | 86.7 |
| $ | 4 DCAA | 8.874 | 8.873 | 0.001 | 87560768 | 94.3000 | 87.9 |
| | 5 DICAMBA | 9.117 | 9.117 | 0.000 | 281837851 | 94.3000 | 89.8 |
| | 6 MCPP | 9.159 | 9.159 | 0.000 | 35515702 | 9430.00 | 8730 |
| | 7 MCPA | 9.519 | 9.519 | 0.000 | 51659093 | 9430.00 | 8350 |
| | 8 DICHLORPROP | 9.861 | 9.861 | 0.000 | 77256580 | 94.3000 | 87.6 |
| | 9 2,4-D | 10.291 | 10.291 | 0.000 | 97926672 | 94.3000 | 89.2 |
| | 10 PENTACHLOROPHENOL | 10.746 | 10.746 | 0.000 | 980779735 | 94.3000 | 91.2 |
| | 11 2,4,5-TP | 11.089 | 11.089 | 0.000 | 394921637 | 94.3000 | 90.4 |
| | 12 CHLORAMBEN | 11.807 | 11.808 | -0.001 | 303009499 | 94.3000 | 90.6 |
| | 13 2,4,5-T | 11.574 | 11.573 | 0.001 | 395385230 | 94.3000 | 91.6 |

Data File: /var/chem/gcsv17a.i/2130926.b/sv17a006.d
Report Date: 30-Sep-2013 14:26

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| 14 2,4-DB | 12.047 | 12.048 | -0.001 | 59940226 | 94.3000 | 89.9 |
| 15 DINOSEB | 11.860 | 11.860 | 0.000 | 228622024 | 94.3000 | 87.4 |
| 16 BENTAZON | 12.943 | 12.942 | 0.001 | 41823879 | 94.3000 | 89.5 |
| 17 PICLORAM | 13.611 | 13.611 | 0.000 | 504553757 | 94.3000 | 92.2 |
| 18 DCPA | 13.200 | 13.200 | 0.000 | 479021073 | 94.3000 | 90.6 |
| 19 ACIFLUORFEN | 15.013 | 15.013 | 0.000 | 359915483 | 94.3000 | 88.6 |

Data File: /var/chem/gcsv17a.i/2130926.b/sv17a006.d
Date : 26-SEP-2013 17:44
Client ID:
Sample Info: 1204*1 100
Volume Injected (uL): 1.0
Column phase: RTX-35ms-30M

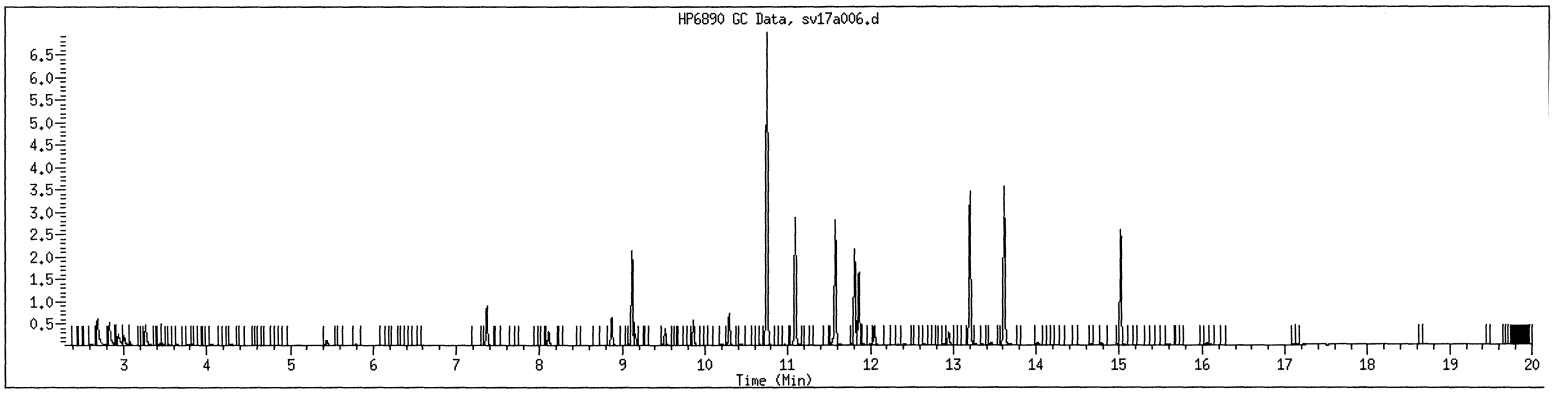
Instrument: gcsv17a.i
Operator: smh
Column diameter: 0.32




2131601712 921

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1204 | SampleType | : CALIB_4 |
| Injection Date | : 09/26/2013 17:44 | Instrument | : gcsv17a.i |
| Operator | : smh | | |
| Sample Info | : 1204*1 100 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv17a.i/2130926.b/FULL8151.m | | |
| Dilution | : 1.00 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : all |




NO MANUAL INTEGRATIONS

Data File: /var/chem/gcsv17a.i/2130926.b/sv17a007.d
Report Date: 30-Sep-2013 14:27

GCAL, Inc.

Data file : /var/chem/gcsv17a.i/2130926.b/sv17a007.d
Lab Smp Id: 1205
Inj Date : 26-SEP-2013 18:12
Operator : smh Inst ID: gcsv17a.i
Smp Info : 1205*1 84-56-6
Misc Info :
Comment :
Method : /var/chem/gcsv17a.i/2130926.b/FULL8151.m
Meth Date : 30-Sep-2013 14:27 smh Quant Type: ESTD
Cal Date : 26-SEP-2013 18:12 Cal File: sv17a007.d
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (uL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| 1 DALAPON | 2.686 | 2.686 | 0.000 | 198159637 | 188.700 | 190 |
| 2 3,5-Dichlorobenzoic acid | 7.365 | 7.365 | 0.000 | 219763288 | 188.700 | 167 |
| 3 4-NITROPHENOL | 8.106 | 8.107 | -0.001 | 78059495 | 188.700 | 159 |
| $ 4 DCAA | 8.873 | 8.873 | 0.000 | 164988448 | 188.700 | 166 |
| 5 DICAMBA | 9.117 | 9.117 | 0.000 | 547016583 | 188.700 | 174 |
| 6 MCPP | 9.160 | 9.159 | 0.001 | 65811448 | 18870.0 | 16200 |
| 7 MCPA | 9.520 | 9.519 | 0.001 | 94287837 | 18870.0 | 15200 |
| 8 DICHLORPROP | 9.861 | 9.861 | 0.000 | 142839240 | 188.700 | 162 |
| 9 2,4-D | 10.292 | 10.291 | 0.001 | 185694182 | 188.700 | 169 |
| 10 PENTACHLOROPHENOL | 10.747 | 10.746 | 0.001 | 1931780989 | 188.700 | 180(M2) |
| 11 2,4,5-TP | 11.090 | 11.089 | 0.001 | 765476641 | 188.700 | 175 |
| 12 CHLORAMBEN | 11.807 | 11.808 | -0.001 | 590450827 | 188.700 | 177 |
| 13 2,4,5-T | 11.573 | 11.573 | 0.000 | 769576067 | 188.700 | 178 |

Data File: /var/chem/gcsv17a.i/2130926.b/sv17a007.d
Report Date: 30-Sep-2013 14:27

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| 14 2,4-DB | 12.047 | 12.048 | -0.001 | 113820092 | 188.700 | 171 |
| 15 DINOSEB | 11.860 | 11.860 | 0.000 | 439483564 | 188.700 | 168 |
| 16 BENTAZON | 12.942 | 12.942 | 0.000 | 78574078 | 188.700 | 168 |
| 17 PICLORAM | 13.610 | 13.611 | -0.001 | 1004649950 | 188.700 | 184 |
| 18 DCPA | 13.200 | 13.200 | 0.000 | 931898384 | 188.700 | 176 |
| 19 ACIFLUORFEN | 15.012 | 15.013 | -0.001 | 710328851 | 188.700 | 175 |

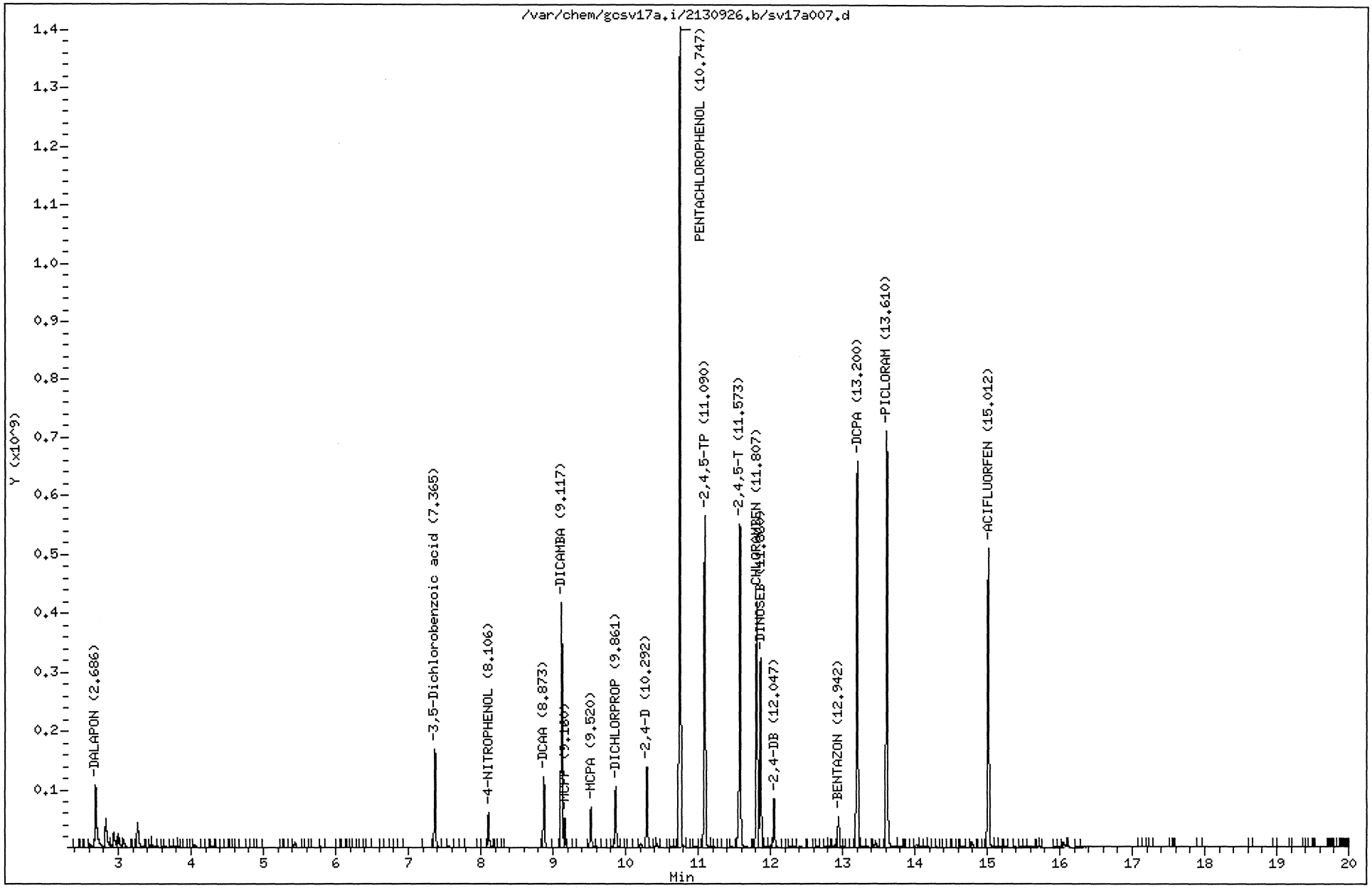
QC Flag Legend

M2- Compound response manually integrated because Target system integrated incorrectly.

Data File: /var/chem/gcsv17a.i/2130926.b/sv17a007.d
Date : 26-SEP-2013 18:12
Client ID:
Sample Info: 1205*1 84-56-6
Volume Injected (uL): 1.0
Column phase: RTX-35ms-30M

Instrument: gcsv17a.i

Operator: smh
Column diameter: 0.32

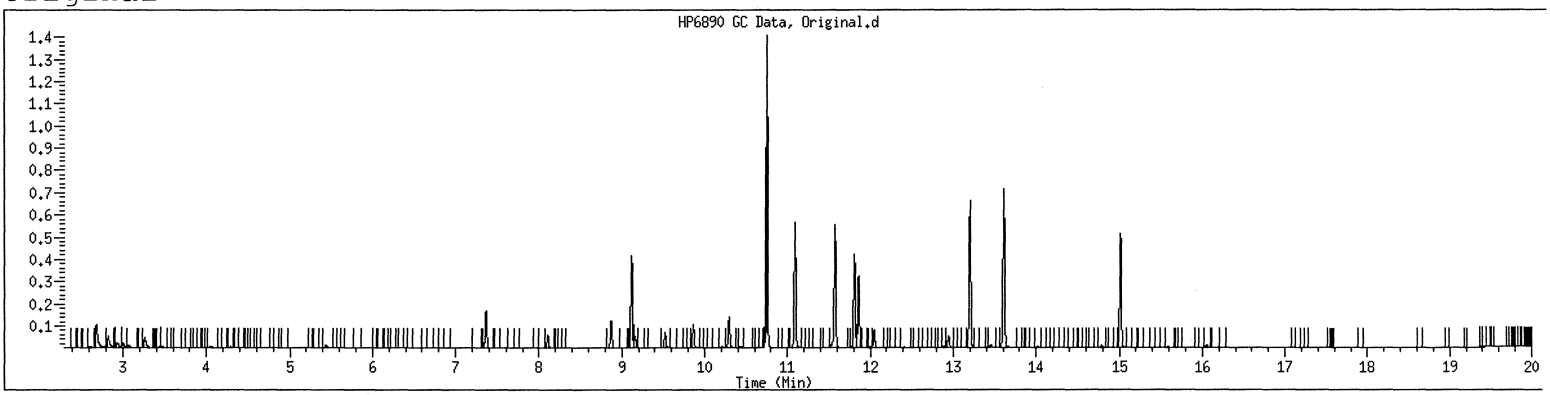



21310171 2 925

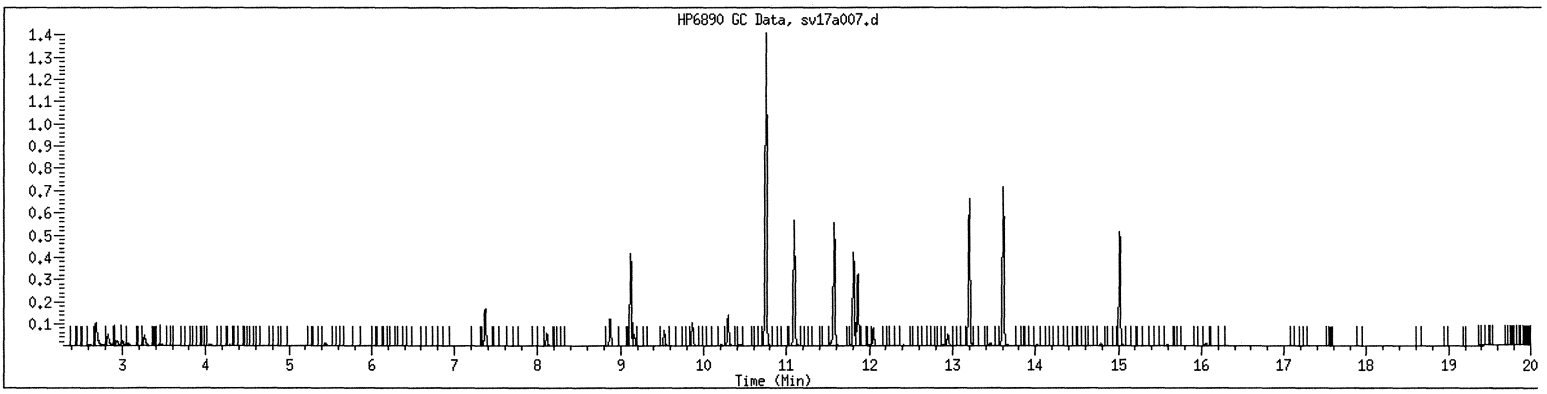
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1205 | SampleType | : CALIB_5 |
| Injection Date | : 09/26/2013 18:12 | Instrument | : gcsv17a.i |
| Operator | : smh | | |
| Sample Info | : 1205*1 84-56-6 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv17a.i/2130926.b/FULL8151.m | | |
| Dilution | : 1.00 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : all |

Original




Final



Data File: /var/chem/gcsv17a.i/2130926.b/sv17a008.d
Report Date: 25-Oct-2013 13:34

GCAL, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 1600
Level: LOW
Data Type: GC MULTI COMP
SpikeList File: DODicv.spk
Sublist File: all.sub
Method File: /var/chem/gcsv17a.i/2130926.b/FULL8151.m
Misc Info:

Client SDG: 2130926
Fraction: SV

Operator: smh
SampleType: LCS
Quant Type: ESTD

| SPIKE COMPOUND | CONC ADDED UG/L | CONC RECOVERED UG/L | % RECOVERED | LIMITS |
|---|---|---|---|---|
| 1 DALAPON | 50.0 | 42.9 | 85.89 | 80-120 |
| 2 3,5-Dichlorobenzoic acid | 50.0 | 39.3 | 78.59* | 80-120 |
| 3 4-NITROPHENOL | 50.0 | 45.1 | 90.14 | 80-120 |
| 5 DICAMBA | 50.0 | 44.9 | 89.73 | 80-120 |
| 6 MCPP | 5000 | 4800 | 95.94 | 80-120 |
| 7 MCPA | 5000 | 4610 | 92.28 | 80-120 |
| 8 DICHLORPROP | 50.0 | 49.0 | 98.08 | 80-120 |
| 9 2,4-D | 50.0 | 44.3 | 88.58 | 80-120 |
| 10 PENTACHLOROPHENOL | 50.0 | 45.5 | 91.01 | 80-120 |
| 11 2,4,5-TP | 50.0 | 48.8 | 97.52 | 80-120 |
| 12 CHLORAMBEN | 50.0 | 47.6 | 95.22 | 80-120 |
| 13 2,4,5-T | 50.0 | 44.6 | 89.22 | 80-120 |
| 14 2,4-DB | 50.0 | 50.6 | 101.22 | 80-120 |
| 15 DINOSEB | 50.0 | 45.0 | 90.00 | 80-120 |
| 16 BENTAZON | 50.0 | 42.8 | 85.63 | 80-120 |
| 17 PICLORAM | 50.0 | 47.3 | 94.54 | 80-120 |
| 18 DCPA | 50.0 | 45.8 | 91.53 | 80-120 |
| 19 ACIFLUORFEN | 50.0 | 44.6 | 89.19 | 80-120 |

MT

| SURROGATE COMPOUND | CONC ADDED UG/L | CONC RECOVERED UG/L | % RECOVERED | LIMITS |
|---|---|---|---|---|
| $ 4 DCAA | 2000 | 0.00 | * | 37-140 |

Data File: /var/chem/gcsv17a.i/2130926.b/sv17a008.d
Report Date: 25-Oct-2013 13:34

GCAL, Inc.

Data file : /var/chem/gcsv17a.i/2130926.b/sv17a008.d
Lab Smp Id: 1600
Inj Date : 26-SEP-2013 18:40
Operator : smh Inst ID: gcsv17a.i
Smp Info : 1600*1 84-56-3
Misc Info :
Comment :
Method : /var/chem/gcsv17a.i/2130926.b/FULL8151.m
Meth Date : 25-Oct-2013 13:33 dlb Quant Type: ESTD
Cal Date : 26-SEP-2013 18:12 Cal File: sv17a007.d
Als bottle: 8 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 1.00000 | Volume of final extract (uL) |
| Vo | 1.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | CONCENTRATIONS FINAL ( UG/L) |
|---|---|---|---|---|---|---|
| 1 DALAPON | 2.686 | 2.686 | 0.000 | 64858356 | 42.9441 | 42.9 |
| 2 3,5-Dichlorobenzoic acid | 7.365 | 7.365 | 0.000 | 51809122 | 39.2940 | 39.3 |
| 3 4-NITROPHENOL | 8.105 | 8.107 | -0.002 | 22163471 | 45.0700 | 45.1 |
| 5 DICAMBA | 9.116 | 9.117 | -0.001 | 140778560 | 44.8657 | 44.9 |
| 6 MCPP | 9.156 | 9.159 | -0.003 | 19519625 | 4796.82 | 4800 |
| 7 MCPA | 9.517 | 9.519 | -0.002 | 28539433 | 4614.01 | 4610 |
| 8 DICHLORPROP | 9.861 | 9.861 | 0.000 | 43244449 | 49.0382 | 49.0 |
| 9 2,4-D | 10.291 | 10.291 | 0.000 | 48613603 | 44.2910 | 44.3 |
| 10 PENTACHLOROPHENOL | 10.744 | 10.746 | -0.002 | 489296658 | 45.5061 | 45.5 |
| 11 2,4,5-TP | 11.088 | 11.089 | -0.001 | 212905467 | 48.7591 | 48.8 |
| 12 CHLORAMBEN | 11.807 | 11.808 | -0.001 | 159140635 | 47.6075 | 47.6 |
| 13 2,4,5-T | 11.573 | 11.573 | 0.000 | 192638892 | 44.6109 | 44.6 |
| 14 2,4-DB | 12.047 | 12.048 | -0.001 | 33740423 | 50.6106 | 50.6 |

Data File: /var/chem/gcsv17a.i/2130926.b/sv17a008.d
Report Date: 25-Oct-2013 13:34

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | CONCENTRATIONS FINAL ( UG/L) |
|---|---|---|---|---|---|---|
| 15 DINOSEB | 11.859 | 11.860 | -0.001 | 117735602 | 44.9996 | 45.0 |
| 16 BENTAZON | 12.943 | 12.942 | 0.001 | 20014370 | 42.8141 | 42.8(M2) |
| 17 PICLORAM | 13.610 | 13.611 | -0.001 | 258777449 | 47.2718 | 47.3 |
| 18 DCPA | 13.199 | 13.200 | -0.001 | 241983881 | 45.7666 | 45.8 |
| 19 ACIFLUORFEN | 15.013 | 15.013 | 0.000 | 181158785 | 44.5927 | 44.6 |

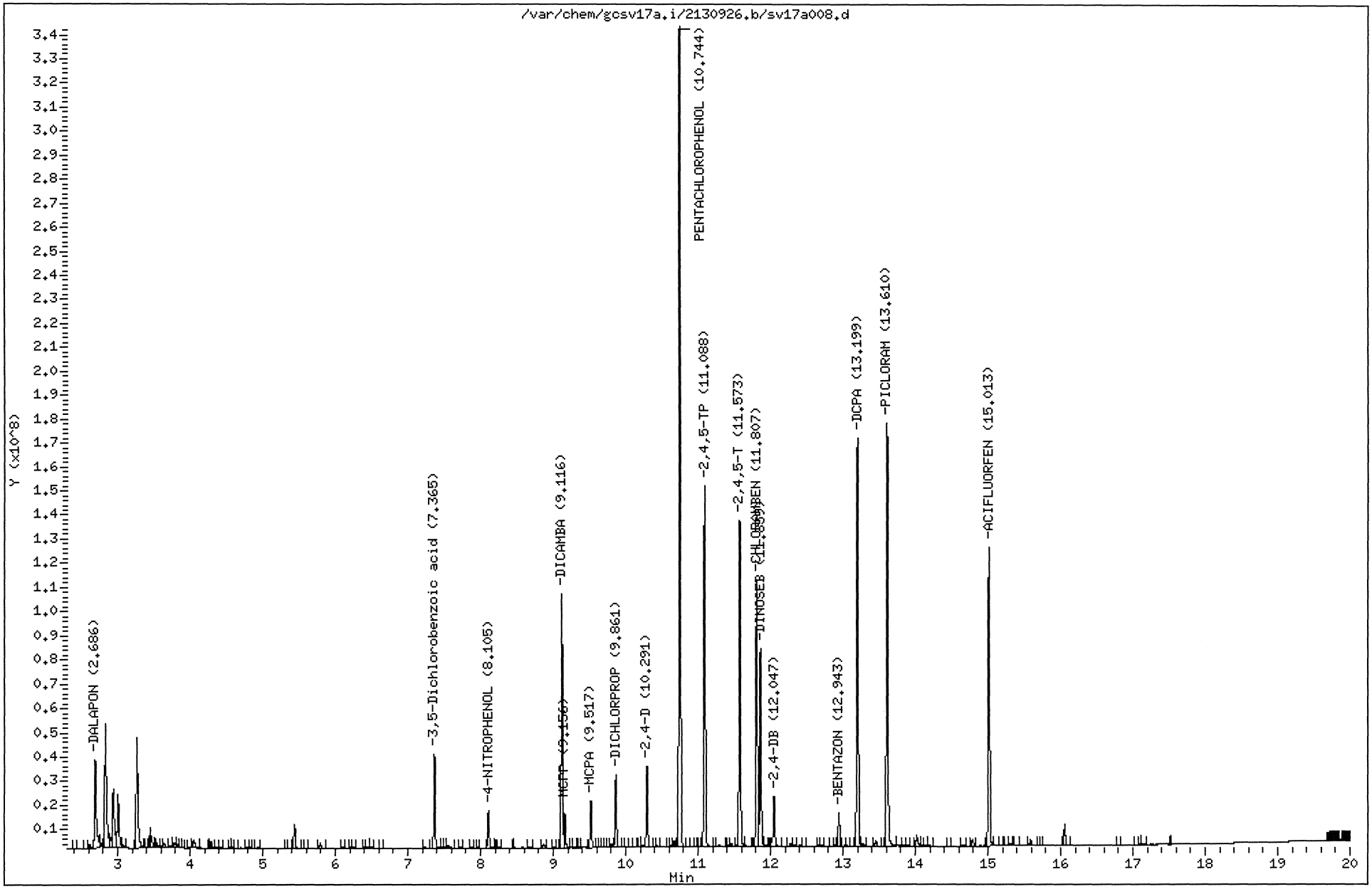
QC Flag Legend

M2- Compound response manually integrated because Target system integrated incorrectly.

Data File: /var/chem/gcsv17a.i/2130926.b/sv17a008.d
Date : 26-SEP-2013 18:40
Client ID:
Sample Info: 1600*1 84-56-3
Volume Injected (uL): 1.0
Column phase: RTX-35ms-30M

Instrument: gcsv17a.i

Operator: smh
Column diameter: 0.32



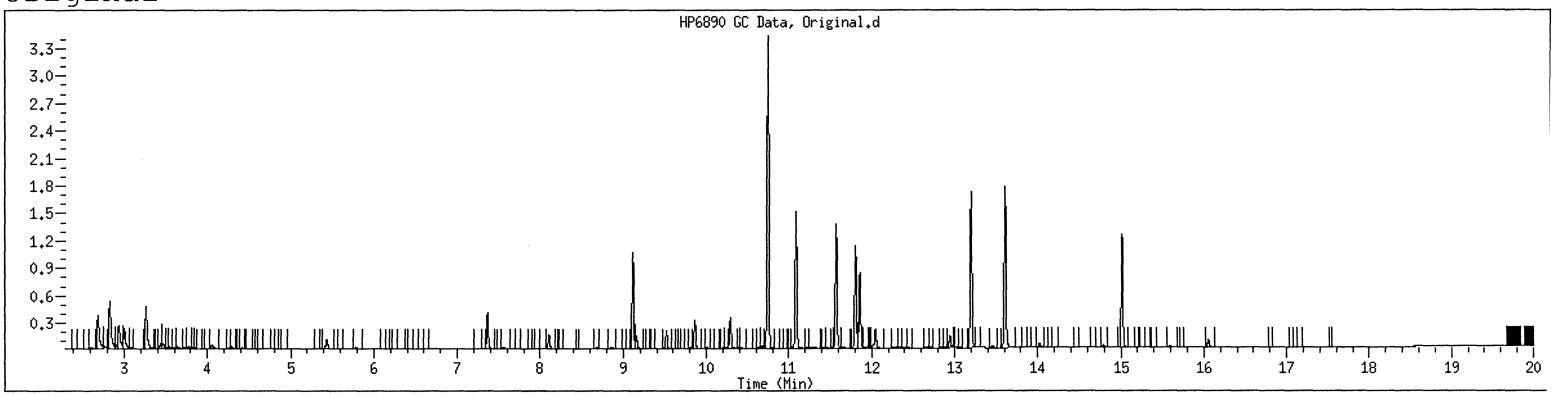

930

21310171 2

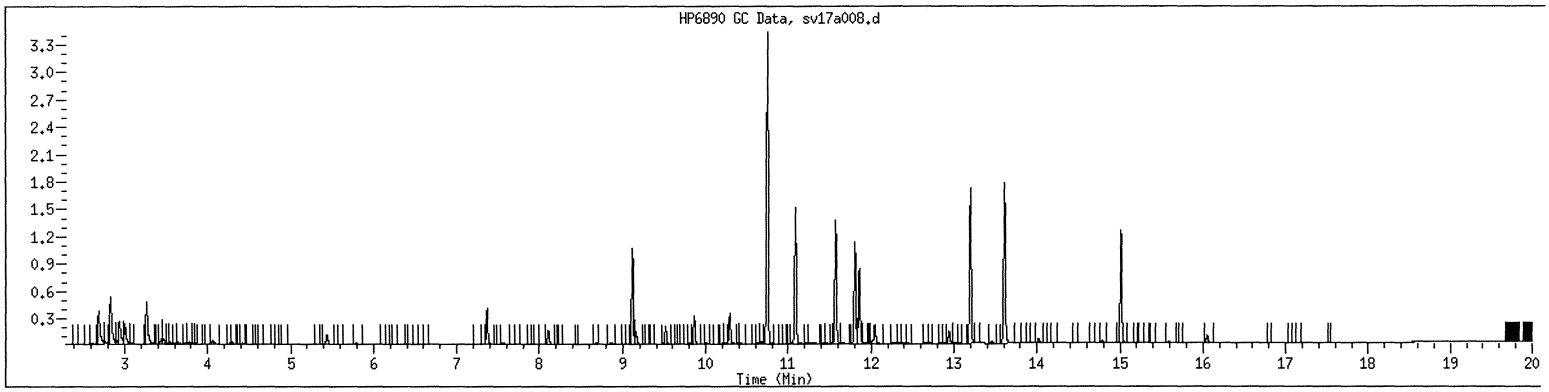
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1600 | SampleType | : LCS |
| Injection Date | : 09/26/2013 18:40 | Instrument | : gcsv17a.i |
| Operator | : smh | | |
| Sample Info | : 1600*1 84-56-3 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv17a.i/2130926.b/FULL8151.m | | |
| Dilution | : 1.00 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : all |

Original




Final



Data File: /var/chem/gcsv17a.i/2131024.b/sv17a002.d
Report Date: 25-Oct-2013 09:00

GCAL, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcsv17a.i  Injection Date: 24-OCT-2013 09:28
Lab File ID: sv17a002.d  Init. Cal. Date(s): 26-SEP-2013  26-SEP-2013
Analysis Type: WATER  Init. Cal. Times: 15:52  18:12
Lab Sample ID: 1400  Quant Type: ESTD
Method: /var/chem/gcsv17a.i/2131024.b/FULL8151.m

| COMPOUND | RRF / AMOUNT | RF47 | CCAL RRF47 | MIN RRF | %D / %DRIFT | MAX %D / %DRIFT | CURVE TYPE | |
|---|---|---|---|---|---|---|---|---|
| 1 DALAPON | 38.07344 | 47.20000 | 1253111 | 0.010 | 19.33594 | 0.000e+00 | Quadratic | <- |
| $ 4 DCAA | 996051 | 1115447 | 1115447 | 0.010 | -11.98700 | 20.00000 | Averaged | |
| 5 DICAMBA | 3137776 | 3582013 | 3582013 | 0.010 | -14.15772 | 20.00000 | Averaged | |
| 6 MCPP | 4069 | 4782 | 4782 | 0.010 | -17.51158 | 20.00000 | Averaged | |
| 7 MCPA | 6185 | 7105 | 7105 | 0.010 | -14.86335 | 20.00000 | Averaged | |
| 8 DICHLORPROP | 881853 | 991505 | 991505 | 0.010 | -12.43433 | 20.00000 | Averaged | |
| 9 2,4-D | 1097595 | 1238407 | 1238407 | 0.010 | -12.82913 | 20.00000 | Averaged | |
| 11 2,4,5-TP | 4366473 | 5018073 | 5018073 | 0.010 | -14.92280 | 20.00000 | Averaged | |
| 13 2,4,5-T | 4318201 | 5033469 | 5033469 | 0.010 | -16.56403 | 20.00000 | Averaged | |
| 14 2,4-DB | 666667 | 790159 | 790159 | 0.010 | -18.52377 | 20.00000 | Averaged | |
| 15 DINOSEB | 2616369 | 2610552 | 2610552 | 0.010 | 0.22235 | 20.00000 | Averaged | |
| 17 PICLORAM | 5474251 | 5901527 | 5901527 | 0.010 | -7.80519 | 20.00000 | Averaged | |

Average %D / Drift Results.

Calculated Average %D/Drift = 13.42977
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

Data File: /var/chem/gcsv17a.i/2131024.b/sv17a002.d
Report Date: 25-Oct-2013 09:00

GCAL, Inc.

Data file : /var/chem/gcsv17a.i/2131024.b/sv17a002.d
Lab Smp Id: 1400
Inj Date : 24-OCT-2013 09:28
Operator : tls Inst ID: gcsv17a.i
Smp Info : 1400*1 84-56-6
Misc Info :
Comment :
Method : /var/chem/gcsv17a.i/2131024.b/FULL8151.m
Meth Date : 25-Oct-2013 09:00 tls Quant Type: ESTD
Cal Date : 26-SEP-2013 18:12 Cal File: sv17a007.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AFCEEH.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (uL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| 1 DALAPON | 2.687 | 2.687 | 0.000 | 59146855 | 47.2000 | 38.1 |
| $ 4 DCAA | 8.865 | 8.871 | -0.006 | 52649106 | 47.2000 | 52.8 |
| 5 DICAMBA | 9.107 | 9.116 | -0.009 | 169071017 | 47.2000 | 53.9(M2) |
| 6 MCPP | 9.148 | 9.148 | 0.000 | 22570492 | 4720.00 | 5550(M2) |
| 7 MCPA | 9.509 | 9.517 | -0.008 | 33534404 | 4720.00 | 5420 |
| 8 DICHLORPROP | 9.851 | 9.859 | -0.008 | 46799058 | 47.2000 | 53.1 |
| 9 2,4-D | 10.283 | 10.290 | -0.007 | 58452829 | 47.2000 | 53.2 |
| 11 2,4,5-TP | 11.079 | 11.088 | -0.009 | 236853038 | 47.2000 | 54.2 |
| 13 2,4,5-T | 11.565 | 11.571 | -0.006 | 237579722 | 47.2000 | 55.0 |
| 14 2,4-DB | 12.039 | 12.047 | -0.008 | 37295503 | 47.2000 | 55.9 |
| 15 DINOSEB | 11.850 | 11.858 | -0.008 | 123218043 | 47.2000 | 47.1 |
| 17 PICLORAM | 13.604 | 13.609 | -0.005 | 278552062 | 47.2000 | 50.9 |

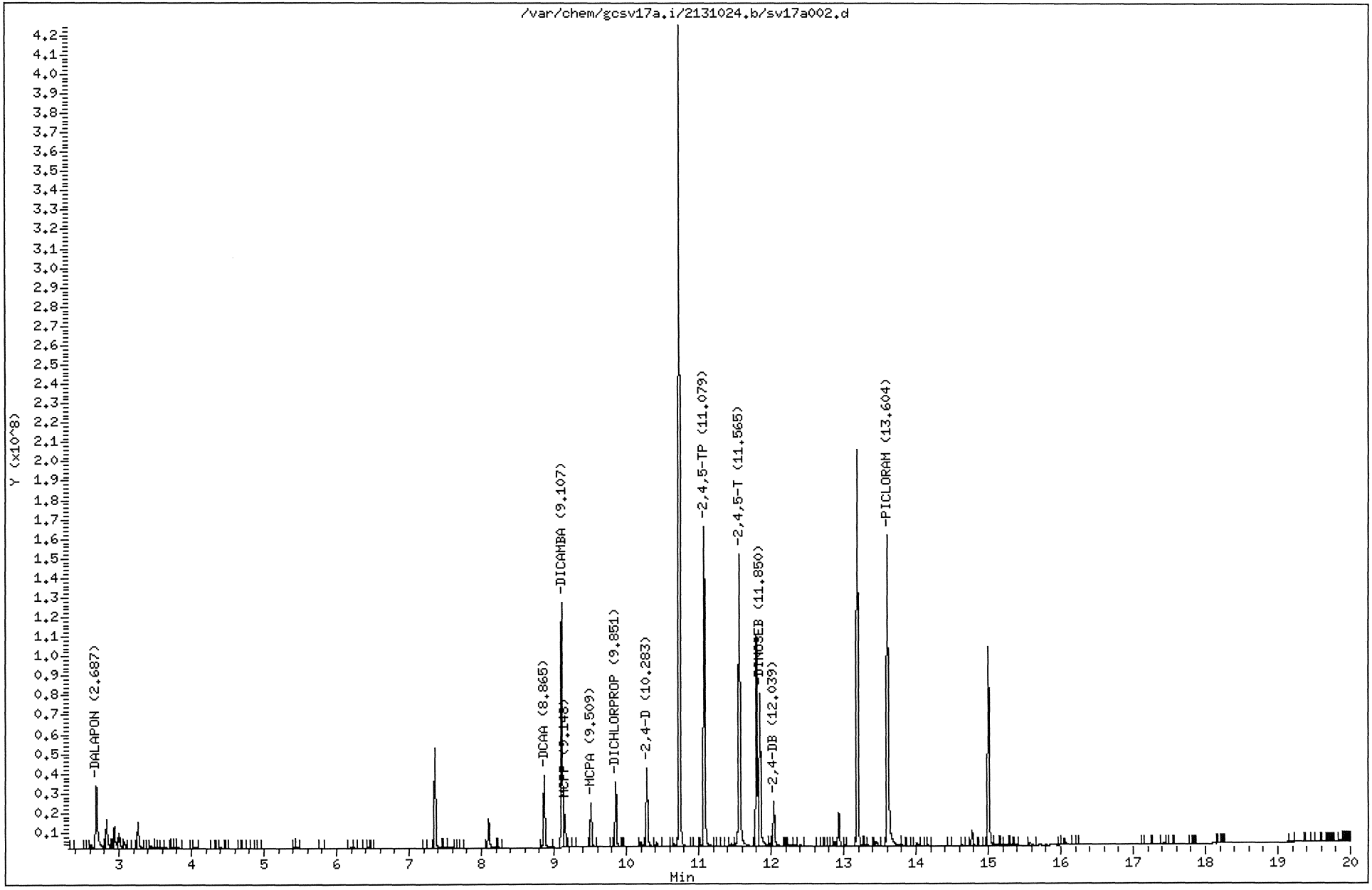
Data File: /var/chem/gcsv17a.i/2131024.b/sv17a002.d
Report Date: 25-Oct-2013 09:00

QC Flag Legend

M2- Compound response manually integrated because
Target system integrated incorrectly.

Data File: /var/chem/gcsv17a.i/2131024.b/sv17a002.d
Date : 24-OCT-2013 09:28
Client ID:
Sample Info: 1400*1 84-56-6
Volume Injected (uL): 1.0
Column phase: RTX-35ms-30M

Instrument: gcsv17a.i
Operator: tls
Column diameter: 0.32

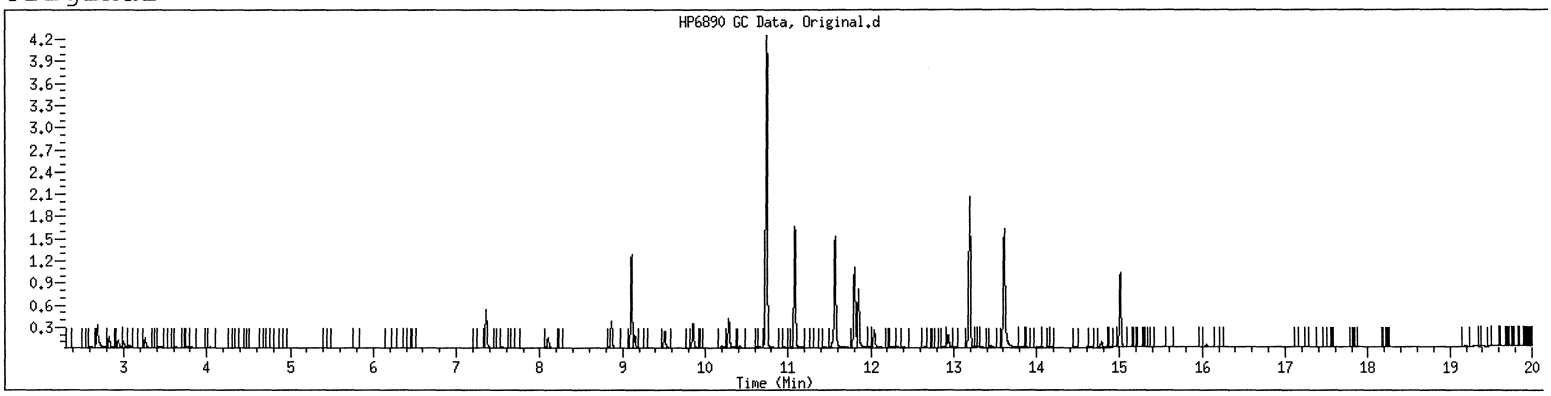



21310712 935

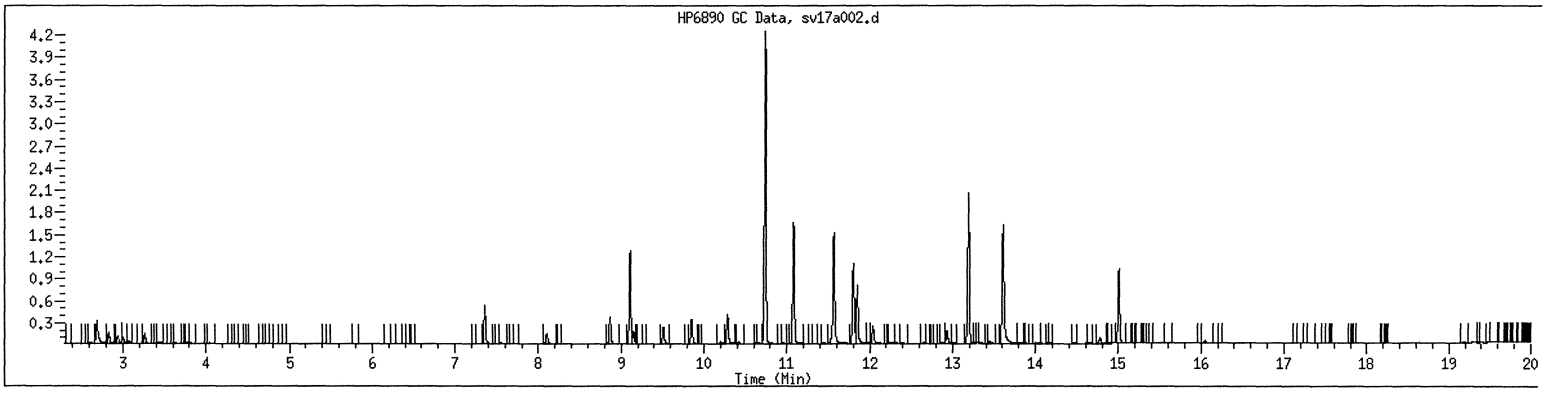
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1400 | SampleType | : CCALIB_3 |
| Injection Date | : 10/24/2013 09:28 | Instrument | : gcsv17a.i |
| Operator | : tls | | |
| Sample Info | : 1400*1 84-56-6 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv17a.i/2131024.b/FULL8151.m | | |
| Dilution | : 1.00 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : AFCEEH |

Original




Final



Data File: /var/chem/gcsv17a.i/2131024.b/sv17a011.d
Report Date: 25-Oct-2013 09:00

GCAL, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcsv17a.i  Injection Date: 24-OCT-2013 15:25
Lab File ID: sv17a011.d  Init. Cal. Date(s): 26-SEP-2013  26-SEP-2013
Analysis Type: WATER  Init. Cal. Times:  15:52  18:12
Lab Sample ID: 1400  Quant Type: ESTD
Method: /var/chem/gcsv17a.i/2131024.b/FULL8151.m

| COMPOUND | RRF / AMOUNT | RF47 | CCAL RRF47 | MIN RRF | %D / %DRIFT | MAX %D / %DRIFT | CURVE TYPE | |
|---|---|---|---|---|---|---|---|---|
| 1 DALAPON | 37.93841 | 47.20000 | 1249714 | 0.010 | 19.62201 | 0.000e+00 | Quadratic | <- |
| $ 4 DCAA | 996051 | 1035249 | 1035249 | 0.010 | -3.93541 | 20.00000 | Averaged | |
| 5 DICAMBA | 3137776 | 3306495 | 3306495 | 0.010 | -5.37703 | 20.00000 | Averaged | |
| 6 MCPP | 4069 | 4467 | 4467 | 0.010 | -9.76243 | 20.00000 | Averaged | |
| 7 MCPA | 6185 | 6468 | 6468 | 0.010 | -4.57027 | 20.00000 | Averaged | |
| 8 DICHLORPROP | 881853 | 914102 | 914102 | 0.010 | -3.65691 | 20.00000 | Averaged | |
| 9 2,4-D | 1097595 | 1135551 | 1135551 | 0.010 | -3.45807 | 20.00000 | Averaged | |
| 11 2,4,5-TP | 4366473 | 4641877 | 4641877 | 0.010 | -6.30725 | 20.00000 | Averaged | |
| 13 2,4,5-T | 4318201 | 4613546 | 4613546 | 0.010 | -6.83954 | 20.00000 | Averaged | |
| 14 2,4-DB | 666667 | 734840 | 734840 | 0.010 | -10.22596 | 20.00000 | Averaged | |
| 15 DINOSEB | 2616369 | 2994339 | 2994339 | 0.010 | -14.44634 | 20.00000 | Averaged | |
| 17 PICLORAM | 5474251 | 5691552 | 5691552 | 0.010 | -3.96951 | 20.00000 | Averaged | |

Average %D / Drift Results.

Calculated Average %D/Drift = 7.68089
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

Data File: /var/chem/gcsv17a.i/2131024.b/sv17a011.d
Report Date: 25-Oct-2013 09:00

GCAL, Inc.

Data file : /var/chem/gcsv17a.i/2131024.b/sv17a011.d
Lab Smp Id: 1400
Inj Date : 24-OCT-2013 15:25
Operator : tls Inst ID: gcsv17a.i
Smp Info : 1400*1 84-56-6
Misc Info :
Comment :
Method : /var/chem/gcsv17a.i/2131024.b/FULL8151.m
Meth Date : 25-Oct-2013 09:00 tls Quant Type: ESTD
Cal Date : 26-SEP-2013 18:12 Cal File: sv17a007.d
Als bottle: 11 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AFCEEH.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (uL) |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vi | 1.00000 | Volume injected (uL) |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT ( UG/L) | AMOUNTS ON-COL ( UG/L) |
|---|---|---|---|---|---|---|
| 1 DALAPON | 2.687 | 2.687 | 0.000 | 58986524 | 47.2000 | 37.9(M2) |
| $ 4 DCAA | 8.864 | 8.871 | -0.007 | 48863763 | 47.2000 | 49.0 |
| 5 DICAMBA | 9.107 | 9.116 | -0.009 | 156066545 | 47.2000 | 49.7 |
| 6 MCPP | 9.147 | 9.148 | -0.001 | 21082110 | 4720.00 | 5180 |
| 7 MCPA | 9.508 | 9.517 | -0.009 | 30529333 | 4720.00 | 4940 |
| 8 DICHLORPROP | 9.852 | 9.859 | -0.007 | 43145591 | 47.2000 | 48.9 |
| 9 2,4-D | 10.282 | 10.289 | -0.007 | 53598010 | 47.2000 | 48.8 |
| 11 2,4,5-TP | 11.077 | 11.087 | -0.010 | 219096592 | 47.2000 | 50.2 |
| 13 2,4,5-T | 11.563 | 11.571 | -0.008 | 217759355 | 47.2000 | 50.4 |
| 14 2,4-DB | 12.037 | 12.046 | -0.009 | 34684459 | 47.2000 | 52.0 |
| 15 DINOSEB | 11.849 | 11.858 | -0.009 | 141332789 | 47.2000 | 54.0 |
| 17 PICLORAM | 13.601 | 13.609 | -0.008 | 268641272 | 47.2000 | 49.1 |

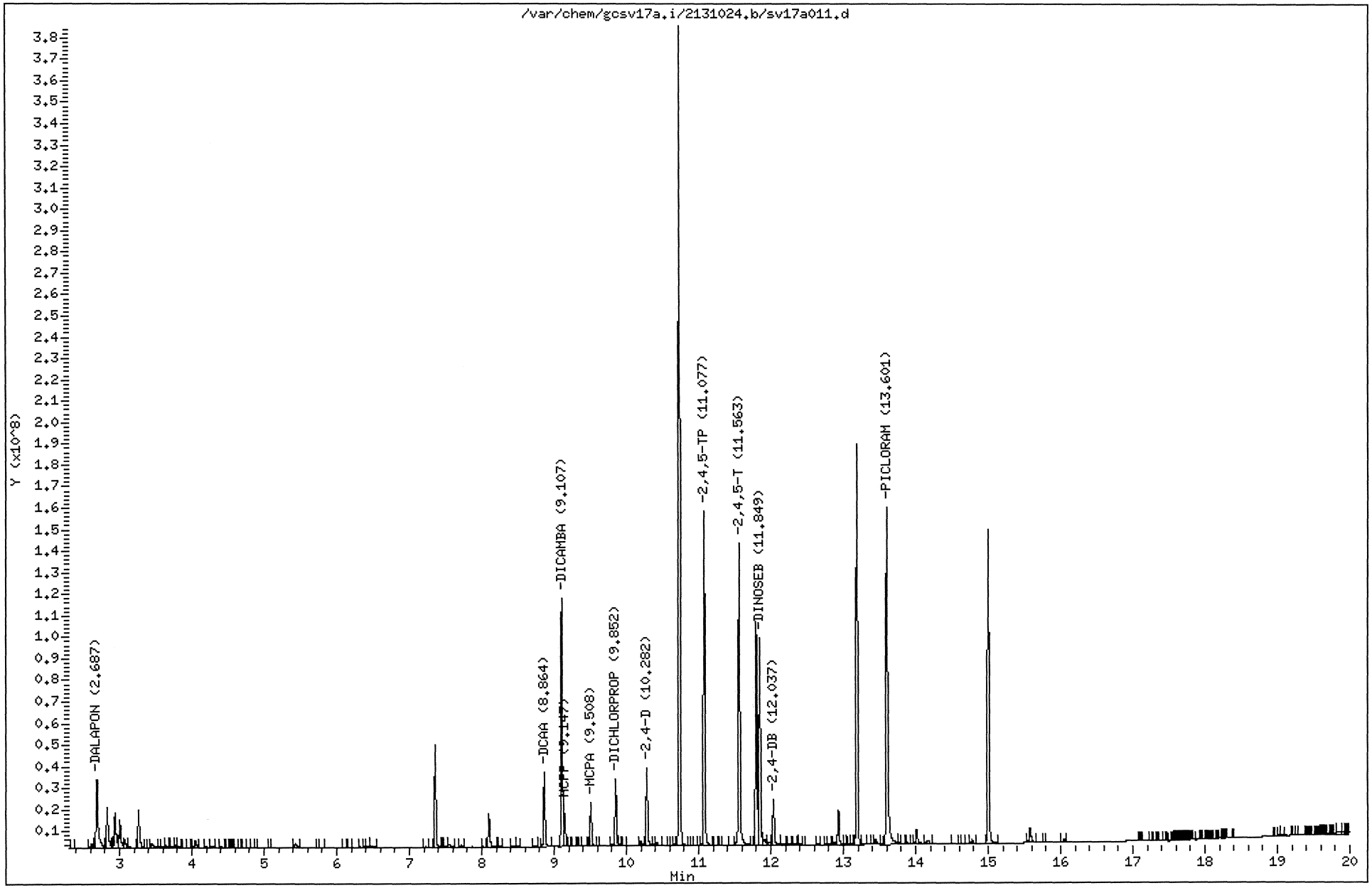
Data File: /var/chem/gcsv17a.i/2131024.b/sv17a011.d
Report Date: 25-Oct-2013 09:00

QC Flag Legend

M2- Compound response manually integrated because
Target system integrated incorrectly.

Data File: /var/chem/gcsv17a.i/2131024.b/sv17a011.d
Date : 24-OCT-2013 15:25
Client ID:
Sample Info: 1400*1 84-56-6
Volume Injected (uL): 1.0
Column phase: RTX-35ms-30M

Instrument: gcsv17a.i
Operator: tls
Column diameter: 0.32



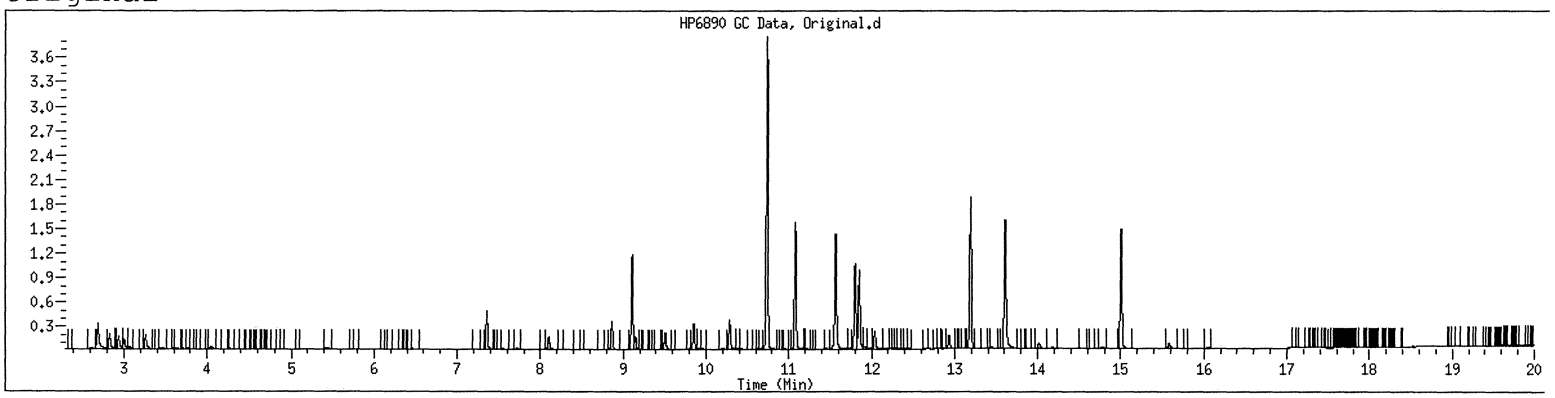

940

2131011712

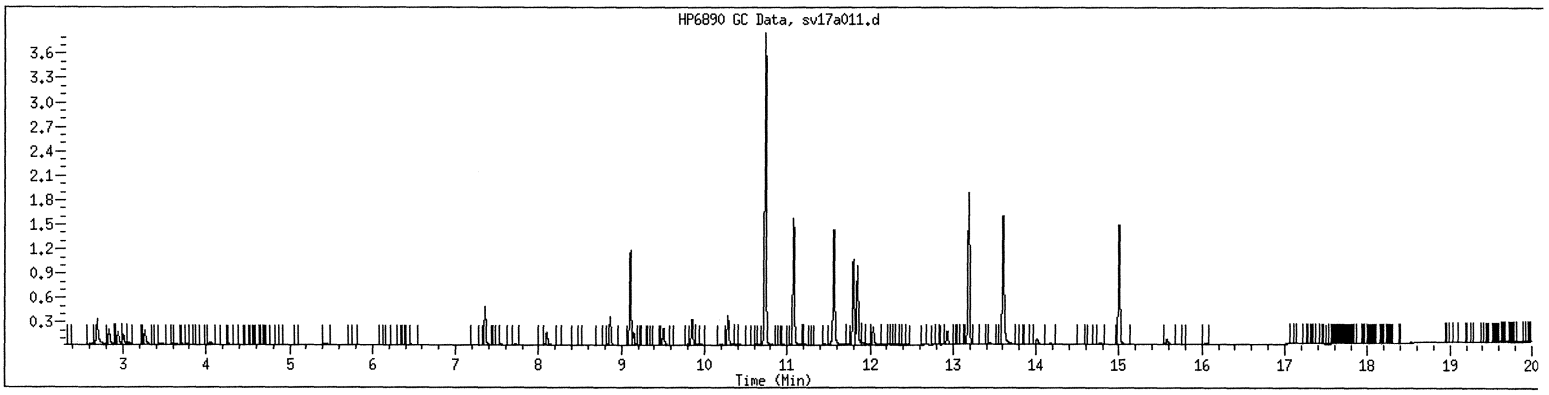
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1400 | SampleType | : CCALIB_3 |
| Injection Date | : 10/24/2013 15:25 | Instrument | : gcsv17a.i |
| Operator | : tls | | |
| Sample Info | : 1400*1 84-56-6 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv17a.i/2131024.b/FULL8151.m | | |
| Dilution | : 1.00 | | |
| Matrix | : WATER | | |
| Integrator | : Falcon | Compound Sublist | : AFCEEH |

Original




Final



1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: ID: (mm)

Concentrated Extract Volume: 10000 ( µL )

Soil Aliquot Volume: ( µL )

Injection Volume: 1 ( µL )

GPC Cleanup: (Y/N) N pH:

Prep Batch: 518091 Analytical Batch: 518528

*CONCENTRATION UNITS: ug/kg*

Sample ID: MB1245269

Contract:

SAS No.: SDG No.: 213101712

Lab Sample ID: 1245269

Date Collected: Time:

Date Received:

Date Extracted: 10/22/13

Date Analyzed: 10/24/13 Time: 1114

Dilution Factor: 1 Analyst: TLS

Prep Method: SW-846 8151A

Analytical Method: SW-846 8151A

Sulfur Cleanup: (Y/N) N Instrument ID: GCS17A

Lab File ID: 2131024/sv17a004

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 94-75-7 | 2,4'-D | 8.30 | U | 4.20 | 8.30 | 16.7 |
| 93-76-5 | 2,4,5-T | 8.30 | U | 4.20 | 8.30 | 16.7 |
| 93-72-1 | 2,4,5-TP (SILVEX) | 8.30 | U | 4.20 | 8.30 | 16.7 |
| 94-82-6 | 2,4-DB | 8.30 | U | 4.20 | 8.30 | 16.7 |
| 1918-00-9 | Dicamba | 8.30 | U | 4.20 | 8.30 | 16.7 |
| 120-36-5 | Dichloroprop | 8.30 | U | 4.20 | 8.30 | 16.7 |

Data File: /var/chem/gcsv17a.i/2131024.b/sv17a004.d
Report Date: 25-Oct-2013 09:00

GCAL, Inc.

Data file : /var/chem/gcsv17a.i/2131024.b/sv17a004.d
Lab Smp Id: 1245269
Inj Date : 24-OCT-2013 11:14
Operator : tls Inst ID: gcsv17a.i
Smp Info : 1245269*1 mb s
Misc Info :
Comment :
Method : /var/chem/gcsv17a.i/2131024.b/FULL8151.m
Meth Date : 25-Oct-2013 09:00 tls Quant Type: ESTD
Cal Date : 26-SEP-2013 18:12 Cal File: sv17a007.d
Als bottle: 4 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AFCEEH.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

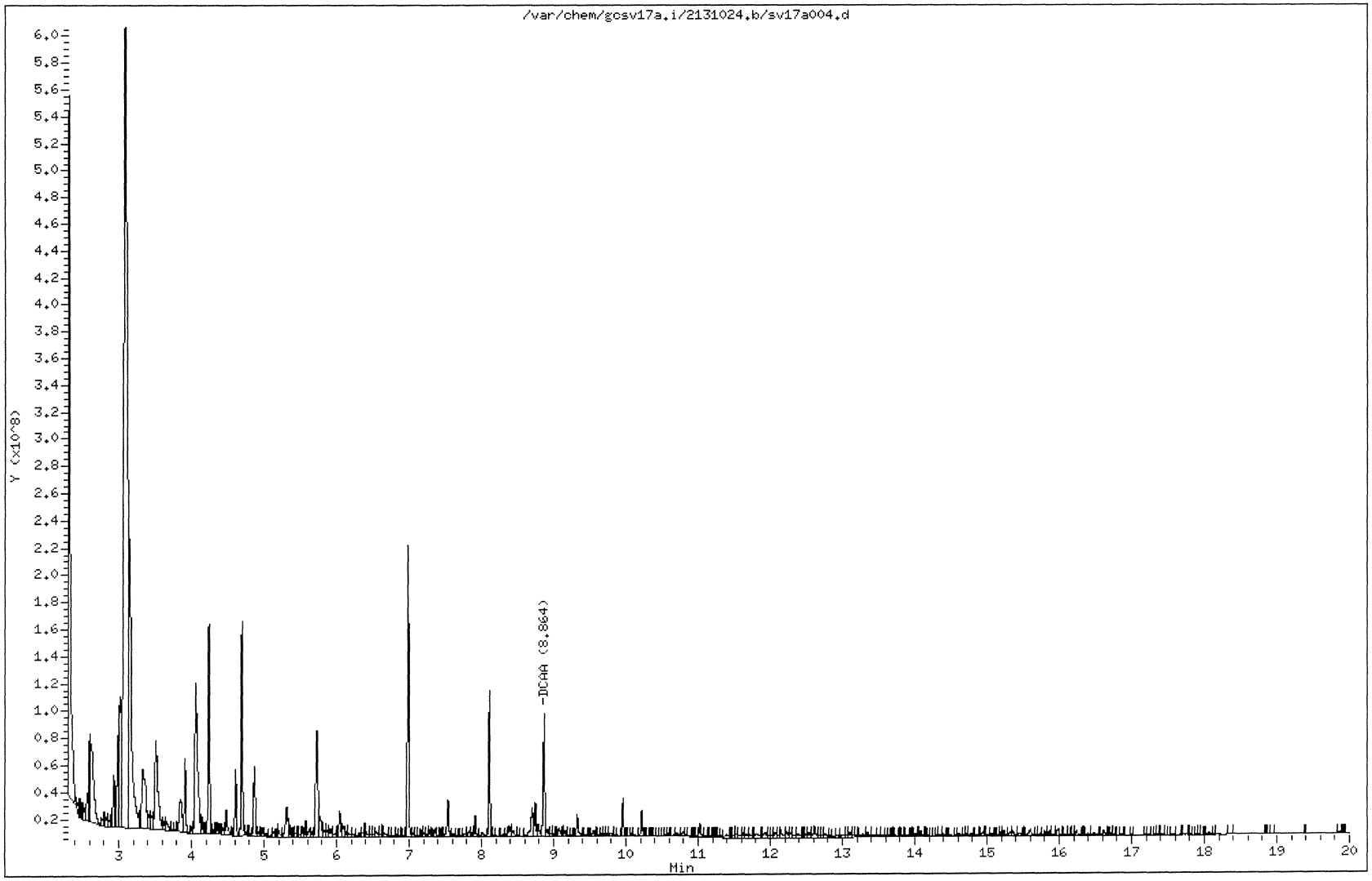
| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | FINAL (UG/KG) |
|---|---|---|---|---|---|---|
| $ 4 DCAA | 8.864 | 8.871 | -0.007 | 131733677 | 132.256 | 44.1 |

Data File: /var/chem/gcsv17a.i/2131024.b/sv17a004.d
Date : 24-OCT-2013 11:14
Client ID:
Sample Info: 1245269*1 mb s
Volume Injected (uL): 1.0
Column phase: RTX-35ms-30M

Instrument: gcsv17a.i
Operator: tls
Column diameter: 0.32

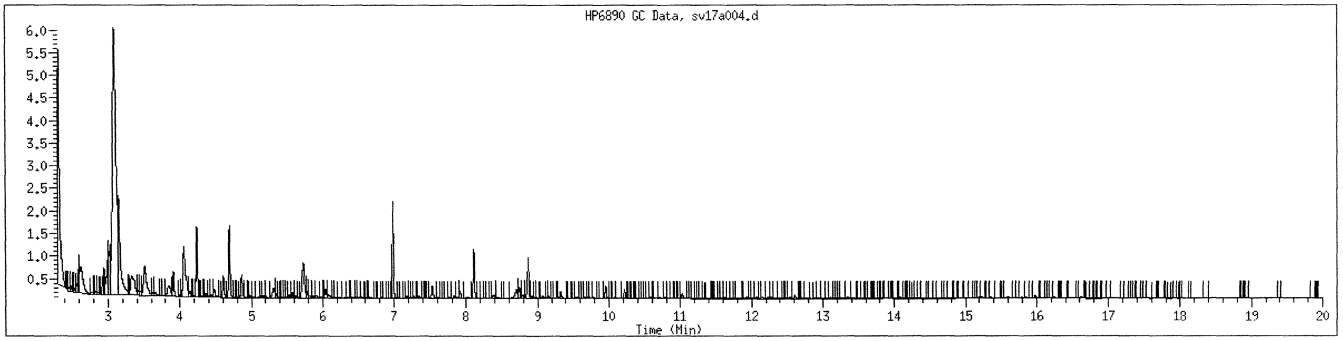



2131101712 944

Data file : /var/chem/gcsv17a.i/2131024.b/sv17a004.d Page: 1
Report Date: 10/25/2013 09:00

MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1245269 | SampleType | : BLANK |
| Injection Date | : 10/24/2013 11:14 | Instrument | : gcsv17a.i |
| Operator | : tls | | |
| Sample Info | : 1245269*1 mb s | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv17a.i/2131024.b/FULL8151.m | | |
| Dilution | : 1.00 | | |
| Matrix | : SOIL | | |
| Integrator | : Falcon | Compound Sublist | : AFCEEH |




NO MANUAL INTEGRATIONS

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: ID: (mm)

Concentrated Extract Volume: 10000 ( µL )

Soil Aliquot Volume: ( µL )

Injection Volume: 1 ( µL )

GPC Cleanup: (Y/N) N pH:

Prep Batch: 518091 Analytical Batch: 518528

*CONCENTRATION UNITS: ug/kg*

Sample ID: LCS1245270

Contract:

SAS No.: SDG No.: 213101712

Lab Sample ID: 1245270

Date Collected: Time:

Date Received:

Date Extracted: 10/22/13

Date Analyzed: 10/24/13 Time: 1142

Dilution Factor: 1 Analyst: TLS

Prep Method: SW-846 8151A

Analytical Method: SW-846 8151A

Sulfur Cleanup: (Y/N) N Instrument ID: GCS17A

Lab File ID: 2131024/sv17a005

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 94-75-7 | 2,4'-D | 18.4 | | 4.20 | 8.30 | 16.7 |
| 93-76-5 | 2,4,5-T | 21.0 | | 4.20 | 8.30 | 16.7 |
| 93-72-1 | 2,4,5-TP (SILVEX) | 20.6 | | 4.20 | 8.30 | 16.7 |
| 94-82-6 | 2,4-DB | 25.5 | | 4.20 | 8.30 | 16.7 |
| 1918-00-9 | Dicamba | 19.2 | | 4.20 | 8.30 | 16.7 |
| 120-36-5 | Dichloroprop | 20.0 | | 4.20 | 8.30 | 16.7 |

Data File: /var/chem/gcsv17a.i/2131024.b/sv17a005.d
Report Date: 25-Oct-2013 09:00

GCAL, Inc.

Data file : /var/chem/gcsv17a.i/2131024.b/sv17a005.d
Lab Smp Id: 1245270
Inj Date : 24-OCT-2013 11:42
Operator : tls Inst ID: gcsv17a.i
Smp Info : 1245270*1 lcs
Misc Info :
Comment :
Method : /var/chem/gcsv17a.i/2131024.b/FULL8151.m
Meth Date : 25-Oct-2013 09:00 tls Quant Type: ESTD
Cal Date : 26-SEP-2013 18:12 Cal File: sv17a007.d
Als bottle: 5 QC Sample: LCS
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AFCEEH.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

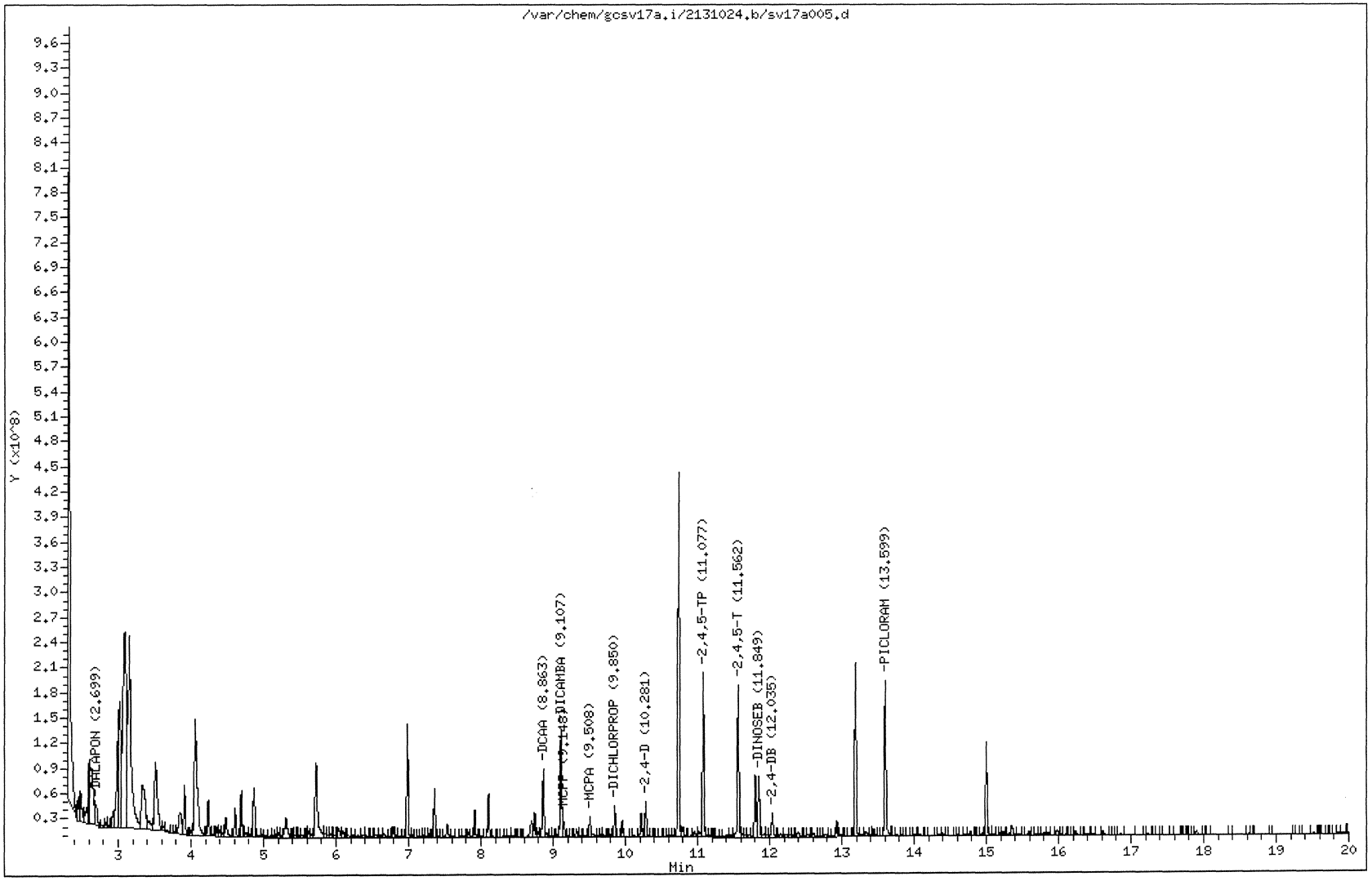
| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | FINAL (UG/KG) |
|---|---|---|---|---|---|---|
| 1 DALAPON | 2.699 | 2.687 | 0.012 | 50987804 | 31.3203 | 10.4 |
| $ 4 DCAA | 8.863 | 8.871 | -0.008 | 124480218 | 124.974 | 41.6 |
| 5 DICAMBA | 9.107 | 9.116 | -0.009 | 180722104 | 57.5956 | 19.2 |
| 6 MCPP | 9.148 | 9.148 | 0.000 | 27839629 | 6841.40 | 2280 |
| 7 MCPA | 9.508 | 9.517 | -0.009 | 36434838 | 5890.47 | 1960 |
| 8 DICHLORPROP | 9.850 | 9.859 | -0.009 | 52865455 | 59.9482 | 20.0 |
| 9 2,4-D | 10.281 | 10.290 | -0.009 | 60427421 | 55.0544 | 18.4 |
| 11 2,4,5-TP | 11.077 | 11.088 | -0.011 | 270493521 | 61.9478 | 20.6 |
| 13 2,4,5-T | 11.562 | 11.571 | -0.009 | 271950150 | 62.9777 | 21.0 |
| 14 2,4-DB | 12.035 | 12.047 | -0.012 | 51087696 | 76.6315 | 25.5 |
| 15 DINOSEB | 11.849 | 11.858 | -0.009 | 110062644 | 42.0669 | 14.0 |
| 17 PICLORAM | 13.599 | 13.609 | -0.010 | 293205234 | 53.5608 | 17.8 |

Data File: /var/chem/gcsv17a.i/2131024.b/sv17a005.d
Date : 24-OCT-2013 11:42
Client ID:
Sample Info: 1245270*1 lcs
Volume Injected (uL): 1.0
Column phase: RTX-35ms-30M

Instrument: gcsv17a.i
Operator: tls
Column diameter: 0.32

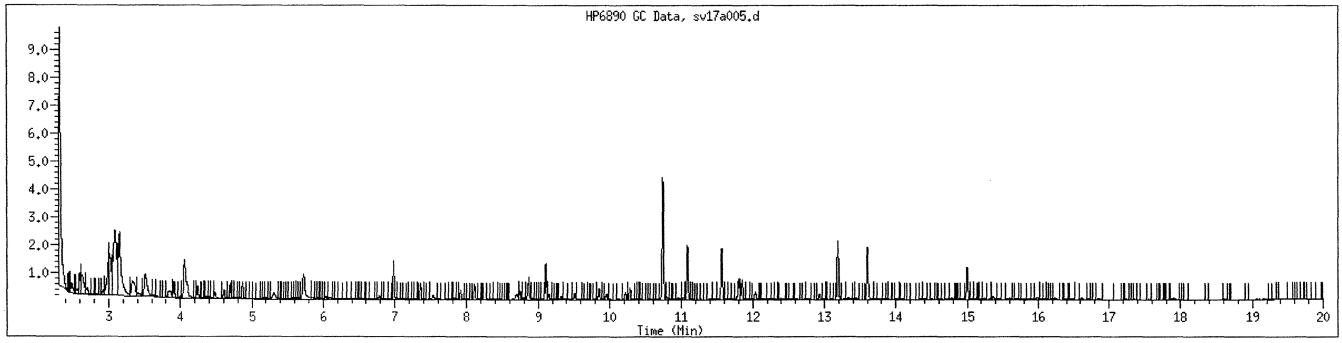



2131017 12 948

Data file : /var/chem/gcsv17a.i/2131024.b/sv17a005.d Page: 1
Report Date: 10/25/2013 09:00

MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1245270 | SampleType | : LCS |
| Injection Date | : 10/24/2013 11:42 | Instrument | : gcsv17a.i |
| Operator | : tls | | |
| Sample Info | : 1245270*1 lcs | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv17a.i/2131024.b/FULL8151.m | | |
| Dilution | : 1.00 | | |
| Matrix | : SOIL | | |
| Integrator | : Falcon | Compound Sublist | : AFCEEH |




NO MANUAL INTEGRATIONS

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: ID: (mm)

Concentrated Extract Volume: 10000 ( µL )

Soil Aliquot Volume: ( µL )

Injection Volume: 1 ( µL )

GPC Cleanup: (Y/N) N pH:

Prep Batch: 518091 Analytical Batch: 518528

*CONCENTRATION UNITS: ug/kg*

Sample ID: LCSD1245271

Contract:

SAS No.: SDG No.: 213101712

Lab Sample ID: 1245271

Date Collected: Time:

Date Received:

Date Extracted: 10/22/13

Date Analyzed: 10/24/13 Time: 1209

Dilution Factor: 1 Analyst: TLS

Prep Method: SW-846 8151A

Analytical Method: SW-846 8151A

Sulfur Cleanup: (Y/N) N Instrument ID: GCS17A

Lab File ID: 2131024/sv17a006

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| 94-75-7 | 2,4'-D | 24.7 | | 4.20 | 8.30 | 16.7 |
| 93-76-5 | 2,4,5-T | 29.1 | | 4.20 | 8.30 | 16.7 |
| 93-72-1 | 2,4,5-TP (SILVEX) | 28.3 | | 4.20 | 8.30 | 16.7 |
| 94-82-6 | 2,4-DB | 35.5 | | 4.20 | 8.30 | 16.7 |
| 1918-00-9 | Dicamba | 25.7 | | 4.20 | 8.30 | 16.7 |
| 120-36-5 | Dichloroprop | 26.8 | | 4.20 | 8.30 | 16.7 |

Data File: /var/chem/gcsv17a.i/2131024.b/sv17a006.d
Report Date: 25-Oct-2013 10:14

GCAL, Inc.

Data file : /var/chem/gcsv17a.i/2131024.b/sv17a006.d
Lab Smp Id: 1245271
Inj Date : 24-OCT-2013 12:09
Operator : tls Inst ID: gcsv17a.i
Smp Info : 1245271*1 lcsd
Misc Info :
Comment :
Method : /var/chem/gcsv17a.i/2131024.b/FULL8151.m
Meth Date : 25-Oct-2013 09:00 tls Quant Type: ESTD
Cal Date : 26-SEP-2013 18:12 Cal File: sv17a007.d
Als bottle: 6 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: AFCEEH.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 10.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN ( UG/L) | FINAL (UG/KG) |
|---|---|---|---|---|---|---|
| 1 DALAPON | 2.702 | 2.687 | 0.015 | 62318252 | 40.7634 | 13.6(M2) |
| $ 4 DCAA | 8.863 | 8.871 | -0.008 | 152487038 | 153.092 | 51.0 |
| 5 DICAMBA | 9.106 | 9.116 | -0.010 | 241564007 | 76.9858 | 25.7 |
| 6 MCPP | 9.149 | 9.148 | 0.001 | 37768170 | 9281.27 | 3090 |
| 7 MCPA | 9.508 | 9.517 | -0.009 | 46108334 | 7454.39 | 2480 |
| 8 DICHLORPROP | 9.850 | 9.859 | -0.009 | 70923499 | 80.4255 | 26.8 |
| 9 2,4-D | 10.281 | 10.289 | -0.008 | 81237884 | 74.0144 | 24.7 |
| 11 2,4,5-TP | 11.077 | 11.087 | -0.010 | 370211795 | 84.7851 | 28.3 |
| 13 2,4,5-T | 11.562 | 11.571 | -0.009 | 376842598 | 87.2684 | 29.1 |
| 14 2,4-DB | 12.035 | 12.046 | -0.011 | 70926444 | 106.390 | 35.5 |
| 15 DINOSEB | 11.848 | 11.858 | -0.010 | 150650604 | 57.5800 | 19.2 |
| 17 PICLORAM | 13.599 | 13.609 | -0.010 | 418463287 | 76.4421 | 25.5 |

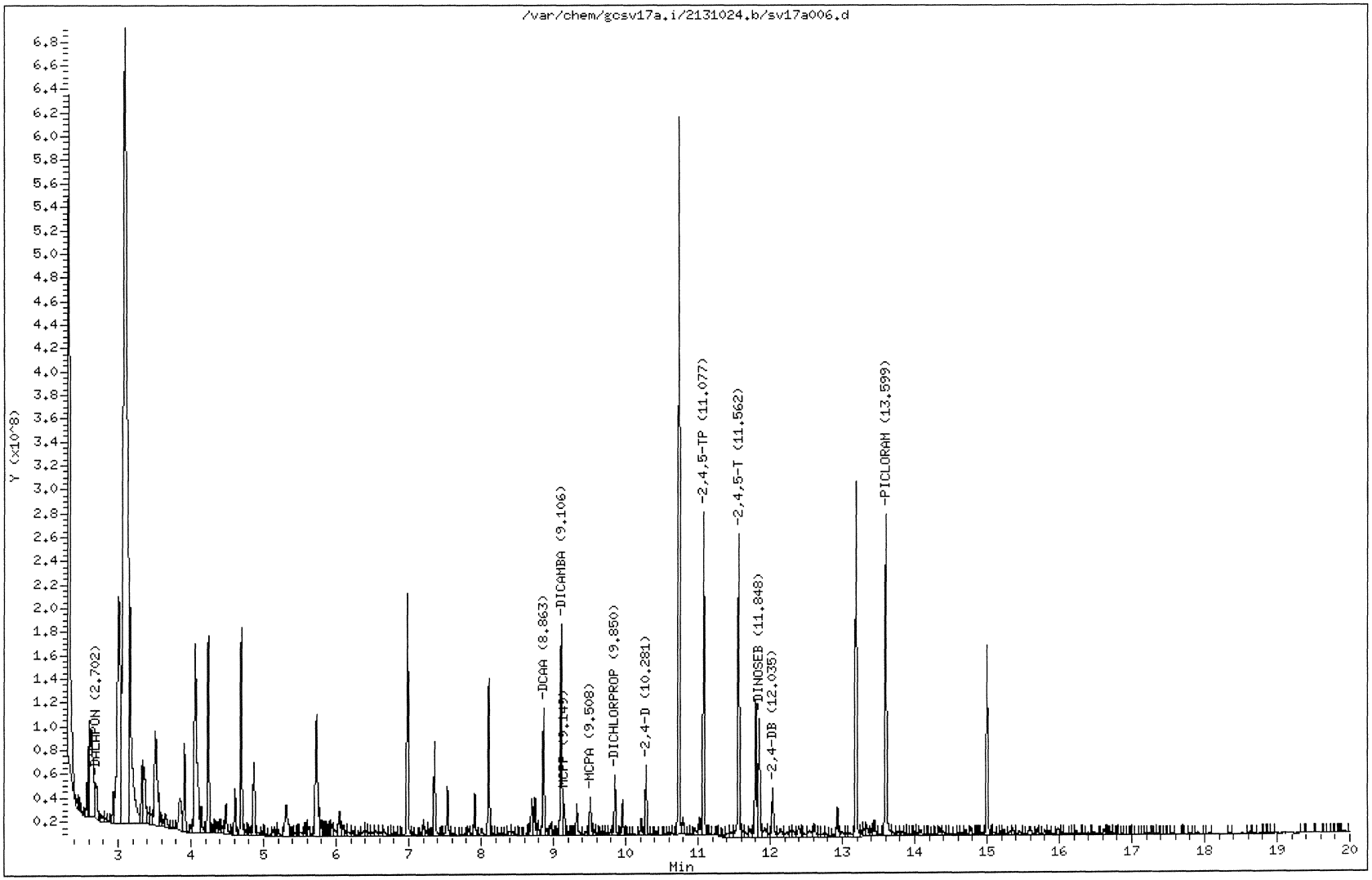
Data File: /var/chem/gcsv17a.i/2131024.b/sv17a006.d
Report Date: 25-Oct-2013 10:14

QC Flag Legend

M2- Compound response manually integrated because
Target system integrated incorrectly.

Data File: /var/chem/gcsv17a.i/2131024.b/sv17a006.d
Date : 24-OCT-2013 12:09
Client ID:
Sample Info: 1245271*1 lcsd
Volume Injected (uL): 1.0
Column phase: RTX-35ms-30M

Instrument: gcsv17a.i
Operator: tls
Column diameter: 0.32



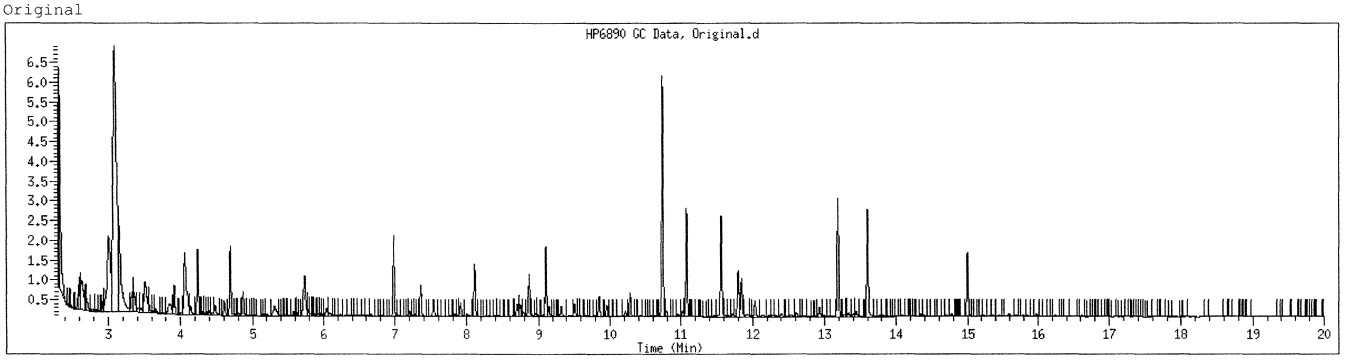

21310772 953

Data file : /var/chem/gcsv17a.i/2131024.b/sv17a006.d Page: 1
Report Date: 10/25/2013 10:14

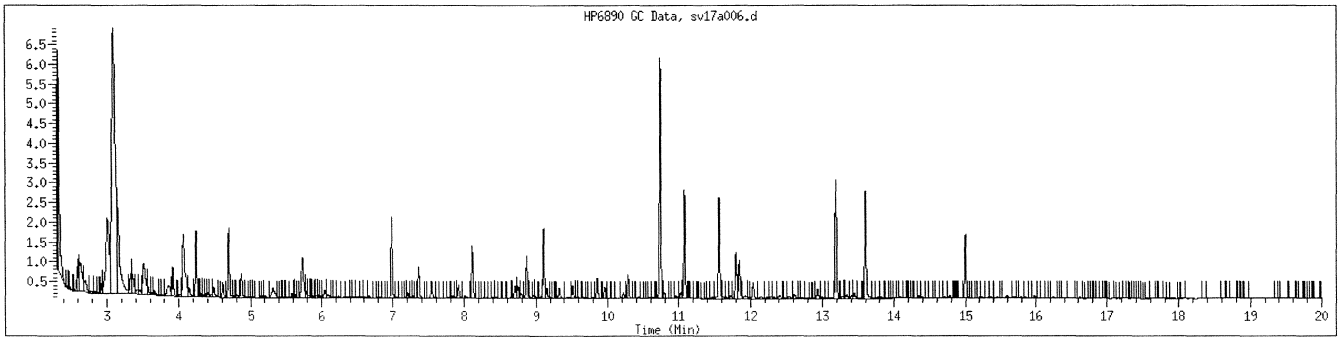
MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1245271 | SampleType | : LCSD |
| Injection Date | : 10/24/2013 12:09 | Instrument | : gcsv17a.i |
| Operator | : tls | | |
| Sample Info | : 1245271*1 lcsd | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv17a.i/2131024.b/FULL8151.m | | |
| Dilution | : 1.00 | | |
| Matrix | : SOIL | | |
| Integrator | : Falcon | Compound Sublist | : AFCEEH |

Original




Final



10/22/13 10/23/13

| EXTRACTION DATE/TIME: | Start: 1533 | End: 1381 | BATCH NO: | 518091 |
|---|---|---|---|---|
| MATRIX: | WATER ☐ SOIL ☑ OTHER ☐ | | LEVEL: | LOW ☑ MEDIUM ☐ |

| | CLIENT | CLIENT ID | GCAL ID | INITIAL VOL/WT mL g | FINAL VOLUME (mL) | Init pH | SAMPLE TYPE | COMMENTS | METHOD |
|---|---|---|---|---|---|---|---|---|---|
| | QC ACCOUNT | MB for HBN 518091 [EXTO/37053] | 1245269 | 30.0 | 10.0 | | MB | | LIQUID LIQUID/3520 |
| | QC ACCOUNT | LCS for HBN 518091 [EXTO/37053 | 1245270 | 30.0 | 10.0 | | LCS | | |
| | QC ACCOUNT | LCSD for HBN 518091 [EXTO/3705 | 1245271 | 30.0 | 10.0 | | LCSD | | SEPARATORY FUNNEL/3510 |
| | 4380 | B&T SAND-SOURCE | 21310100605 | 30.5 | 10.0 | | SAMPLE | | |
| | 4847 | RS-COMP1-101613 | 21310171201 | 30.2 | 10.0 | | SAMPLE | | |
| | 4847 | RS-COMP2-101613 | 21310171203 | 30.0 | 10.0 | | SAMPLE | | |
| | 4692 | SOIL 24101513 B | 21310172601 | 30.3 | 10.0 | | SAMPLE | | SONICATOR/3550 |
| | QC ACCOUNT | SOIL 24101513 B (1244661MS) | 1245272 | 30.1 | 10.0 | | MS | | |
| | QC ACCOUNT | SOIL 24101513 B (1244661MSD) | 1245273 | 30.0 | 10.0 | | MSD | | SHAKER |
| 0 | 4692 | SOIL 24101513A | 21310172801 | 30.0 | 10.0 | | SAMPLE | | |
| 1 | 4692 | SOIL 24101513C | 21310173401 | 30.5 | 10.0 | | SAMPLE | | |
| 2 | 4692 | VV101613 SOIL | 21310173601 | 30.0 | 10.0 | | SAMPLE | | |
| 3 | | | | | | | | | WASTE DILUTION/3580 |
| 4 | | | | | | | | | |
| 5 | | | | | | | | | |
| 6 | | | | | | | | | |
| 7 | | | | | | | | | |
| 8 | | | | | | | | | |
| 9 | | | | | | | | | |
| 0 | | | | | | | | | |
| 1 | | | | | | | | | Diazomethane Lot No: 52-3 |
| 2 | | | | | | | | | |
| 3 | | | | | | | | | Sodium Sulfate Lot No: 36377 |
| 4 | | | | | | | | | |
| 5 | | | | | | | | | ETHER DF 07 |
| 6 | | | | | | | | | |
| 7 | | | | | | | | | METHYLENE CHLORIDE |
| 8 | | | | | | | | | |

OMMENTS: SAMPLE PREPARATION INCLUDE DETERMINATION OF SAMPLE VOLUME/WEIGHT, SOLVENT EXTRACTION AND EVAPORATION OF SOLVENT O FINAL VOLUME

BALANCE ID: M33557 TEMP: 99.9

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| HERB SURR ID | 583-1-2 | MATRIX SPIKE ID | 583-1-1 | | | TECHNICIAN | DATE |
| VOLUME | 1.0 ml | VOLUME | 1.0 ml | | | | 10/22/13 |
| CONCENTRATION | 2 µg/ml | CONCENTRATION | 1 µg/ml | | | | |
| | | | | | | SUPERVISOR | DATE |
| SPIKE WITNESS | OK | | | | | TES | 10/23/13 |

Revision 3, 10/04/2010

213101712 955

LABORATORY CHRONICLE: GCSV DEPARTMENT

Date: 09/30/2013
Instrument: gcsv17a.i
Method File: /var/chem/gcsv17a.i/2130926.b/FULL8151.m
Batch: /var/chem/gcsv17a.i/2130926.b
Column-Detector: RTX-35ms-30M

| Sample ID | Standard ID | DataFile | Wgt/Vol | Injection Time | Dil | Anal | ALS | Comments |
|---|---|---|---|---|---|---|---|---|
| hex lot # 5211 | | sv17a001.d | 1000.00 ml | 26-SEP-2013 15:25 | 1.000 | smh | 1 | all |
| 1201 | | sv17a002.d | 1000.00 ml | 26-SEP-2013 15:52 | 1.000 | smh | 2 | all |
| 1202 | | sv17a003.d | 1000.00 ml | 26-SEP-2013 16:20 | 1.000 | smh | 3 | all |
| 1203 | | sv17a004.d | 1000.00 ml | 26-SEP-2013 16:48 | 1.000 | smh | 4 | all |
| 1207 | | sv17a005.d | 1000.00 ml | 26-SEP-2013 17:16 | 1.000 | smh | 5 | all |
| 1204 | | sv17a006.d | 1000.00 ml | 26-SEP-2013 17:44 | 1.000 | smh | 6 | all |
| 1205 | | sv17a007.d | 1000.00 ml | 26-SEP-2013 18:12 | 1.000 | smh | 7 | all |
| 1600 | | sv17a008.d | 1.00 ml | 26-SEP-2013 18:40 | 1.000 | smh | 8 | all |
| lod | | sv17a009.d | 30.00 g | 26-SEP-2013 19:07 | 1.000 | smh | 9 | all |
| loq | | sv17a010.d | 30.00 g | 26-SEP-2013 19:35 | 1.000 | smh | 10 | all |
| DOC 1 | | sv17a011.d | 30.00 g | 26-SEP-2013 20:03 | 1.000 | smh | 11 | all |
| DOC 2 | | sv17a012.d | 30.00 g | 26-SEP-2013 20:30 | 1.000 | smh | 12 | all |
| DOC 3 | | sv17a013.d | 30.00 g | 26-SEP-2013 20:58 | 1.000 | smh | 13 | all |
| DOC4 | | sv17a014.d | 30.00 g | 26-SEP-2013 21:25 | 1.000 | smh | 14 | all |
| 1400 | | sv17a015.d | 1000.00 ml | 26-SEP-2013 21:53 | 1.000 | smh | 15 | all |
| 1400 | | sv17a016.d | 1000.00 ml | 26-SEP-2013 22:20 | 1.000 | smh | 16 | all |

LABORATORY CHRONICLE: GCSV DEPARTMENT

Date: 10/25/2013
Instrument: gcsv17a.i
Method File: /var/chem/gcsv17a.i/2131024.b/FULL8151.m
Batch: /var/chem/gcsv17a.i/2131024.b
Column-Detector: RTX-35ms-30M

| Sample ID | Standard ID | DataFile | Wgt/Vol | Injection Time | Dil | Anal | ALS | Comments |
|---|---|---|---|---|---|---|---|---|
| hex lot # 3534 | | sv17a001.d | 1000.00 ml | 24-OCT-2013 09:00 | 1.000 | tls | 1 | AFCEEH |
| 1400 | | sv17a002.d | 1000.00 ml | 24-OCT-2013 09:28 | 1.000 | tls | 2 | AFCEEH |
| 21310154801 | | sv17a003.d | 1.00 g | 24-OCT-2013 10:46 | 1.000 | tls | 3 | AFCEEH |
| 1245269 | | sv17a004.d | 30.00 g | 24-OCT-2013 11:14 | 1.000 | tls | 4 | AFCEEH |
| 1245270 | | sv17a005.d | 30.00 g | 24-OCT-2013 11:42 | 1.000 | tls | 5 | AFCEEH |
| 1245271 | | sv17a006.d | 30.00 g | 24-OCT-2013 12:09 | 1.000 | tls | 6 | AFCEEH |
| 21310100605 | | sv17a007.d | 30.30 g | 24-OCT-2013 12:37 | 1.000 | tls | 7 | AFCEEH |
| 21310171201 | | sv17a008.d | 30.20 g | 24-OCT-2013 13:05 | 1.000 | tls | 8 | AFCEEH |
| 21310171203 | | sv17a009.d | 30.00 g | 24-OCT-2013 13:33 | 1.000 | tls | 9 | AFCEEH |
| 1400 | | sv17a010.d | 1000.00 ml | 24-OCT-2013 14:00 | 1.000 | tls | 10 | AFCEEH |
| 1400 | | sv17a011.d | 1000.00 ml | 24-OCT-2013 15:25 | 1.000 | tls | 11 | AFCEEH |
| 1400 | | sv17a026.d | 1000.00 ml | 24-OCT-2013 22:23 | 1.000 | tls | 26 | V |
| 1400 | | sv17a027.d | 1000.00 ml | 24-OCT-2013 22:51 | 1.000 | tls | 27 | V |

2F

ORGANICS SURROGATE RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

GC Column (1) : RTX-5-30M ID: .53 ( mm) GC Cloumn (2) : ID: ( mm )

Method: SW846 8015C

| EPA SAMPLE NO. | SMC1 1-(1) | # | 1-(2) | # | SMC2 2-(1) | # | 2-(2) | # | TOT OUT |
|---|---|---|---|---|---|---|---|---|---|
| 1. RS-COMP1-101613 | 0 | D | | | | | | | 0 |
| 2. RS-COMP2-101613 | 0 | D | | | | | | | 0 |
| 3. LCS1244574 | 99 | | | | | | | | 0 |
| 4. LCSD1244575 | 99 | | | | | | | | 0 |
| 5. MB1244573 | 100 | | | | | | | | 0 |

CONTROL LIMITS

SMC 1 : O-Terphenyl 63 120

SMC 2 :

# Column to be used to flag recovery limits

* Value outside of contract required limits

D Surrogate diluted out

FORM II ORG-2

3F

SOIL ORGANIC LCS/LCSD RECOVERY

Lab Name: GCAL

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Contract: Method: SW846 8015C

Prep Batch: 517972 Analytical Batch: 518036

***Spike HSN : 1244574***

| COMPOUND | UNITS | SPIKE ADDED | SAMPLE CONCENTRATION | LCS CONCENTRATION | LCS % REC | LCS % REC FLAG | QC. LIMITS |
|---|---|---|---|---|---|---|---|
| DRO | ug/kg | 33300 | 0 | 39000 | 117 | | 50 - 124 |

***Spike Dupe HSN : 1244575***

| COMPOUND | UNITS | SPIKE ADDED | LCSD CONC. | LCSD % REC | REC FLAG | % RPD | RPD FLAG | QC. LIMITS REC | QC. LIMITS RPD |
|---|---|---|---|---|---|---|---|---|---|
| DRO | ug/kg | 33300 | 36400 | 109 | | 7 | | 50 - 124 | 0 - 40 |

RPD : 0 out of 1 outside limits

Spike Recovery: 0 out of 2 outside limits

FORM III ORG-2

4C

ORGANIC METHOD BLANK SUMMARY

Lab Name: GCAL

Sample ID: MB1244573

Lab Code: LA024 Case No.:

Contract:

Lab Sample ID: 1244573

SAS No.: SDG No.: 213101712

Matrix: Solid Sulfur Cleanup: (Y/N) N

Date Extracted: 10/17/13

Date Analyzed (1): 10/18/13 Time (1): 0853

Date Analyzed (2): Time (2):

Instrument ID (1): GCS21A

Instrument ID (2):

GC Column (1): RTX-5-30M ID: .53 (mm)

GC Column (2): ID: (mm)

Method: SW846 8015C

Prep Batch: 517972 Analytical Batch: 518036

Lab File ID: 2131018/sv21a0

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES

| | SAMPLE NO. | LAB SAMPLE ID | DATE ANALYZED | TIME ANALYZED | INSTRUMENT ID |
|---|---|---|---|---|---|
| 1. | LCS1244574 | 1244574 | 10/18/13 | 0908 | GCS21A |
| 2. | LCSD1244575 | 1244575 | 10/18/13 | 0923 | GCS21A |
| 3. | RS-COMP2-101613 | 21310171203 | 10/18/13 | 1442 | GCS21A |
| 4. | RS-COMP1-101613 | 21310171201 | 10/18/13 | 1457 | GCS21A |

FORM IV ORGANIC

1D
ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL
Lab Code: LA024 Case No.:
Matrix: Solid
Sample wt/vol: 30 Units: g
Level: (low/med) LOW
% Moisture: 18.4 decanted: (Y/N)
GC Column: RTX-5-30M ID: .53 (mm)
Concentrated Extract Volume: 1000 ( µL )
Soil Aliquot Volume: ( µL )
Injection Volume: 1 ( µL )
GPC Cleanup: (Y/N) N pH:
Prep Batch: 517972 Analytical Batch: 518036

Sample ID: RS-COMP1-101613
Contract:
SAS No.: SDG No.: 213101712
Lab Sample ID: 21310171201
Date Collected: 10/16/13 Time: 1600
Date Received: 10/17/13
Date Extracted: 10/17/13
Date Analyzed: 10/18/13 Time: 1457
Dilution Factor: 10 Analyst: PMM
Prep Method: 3550B
Analytical Method: SW846 8015C
Sulfur Cleanup: (Y/N) N Instrument ID: GCS21A
Lab File ID: 2131018/sv21a027d

*CONCENTRATION UNITS: ug/kg*

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| GCSV-00-4 | DRO | 599000 | | 16000 | 24500 | 49000 |

FORM I ORG-1

GCAL, Inc.

DRO CALCULATION

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a027d.d
DCM file : /var/chem/gcsv21a.i/2131018.b/sv21a002d.d
Lab Smp Id: 21310171201
Inj Date : 18-OCT-2013 14:57
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 21310171201*10
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2131018.b/DRO.m
Meth Date : 21-Oct-2013 08:58 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 16:11 Cal File: sv21a007s.d
Als bottle: 27
Dil Factor: 10.00000
Integrator: HP Genie Compound Sublist: DRO.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 10.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 1000.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

DRO FORMULA:

$$\text{Conc} = \frac{(\text{DRO Area}) - (\text{Surr Area}) - (\text{DCM Blank Area})}{\text{RRF}} \times \text{DF} \times (\text{Vt} / \text{Ws})$$

$$= \frac{2913882077 - 10372428 - 24311877}{1963986} \times 10.0 \times (1000.0 / 30.0)$$

= 488665.7 UG/KG

GCAL, Inc.

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a027d.d
Lab Smp Id: 21310171201
Inj Date : 18-OCT-2013 14:57
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 21310171201*10
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2131018.b/DRO.m
Meth Date : 21-Oct-2013 08:58 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 16:11 Cal File: sv21a007s.d
Als bottle: 27
Dil Factor: 10.00000
Integrator: HP Genie Compound Sublist: DRO.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 10.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 1000.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN (UG/ML) | FINAL (UG/KG) |
|---|---|---|---|---|---|---|
| 1 DRO | 5.575 | 5.079 | 0.496 | 2913882077 | 1483.66 | 495000(M1) |

QC Flag Legend

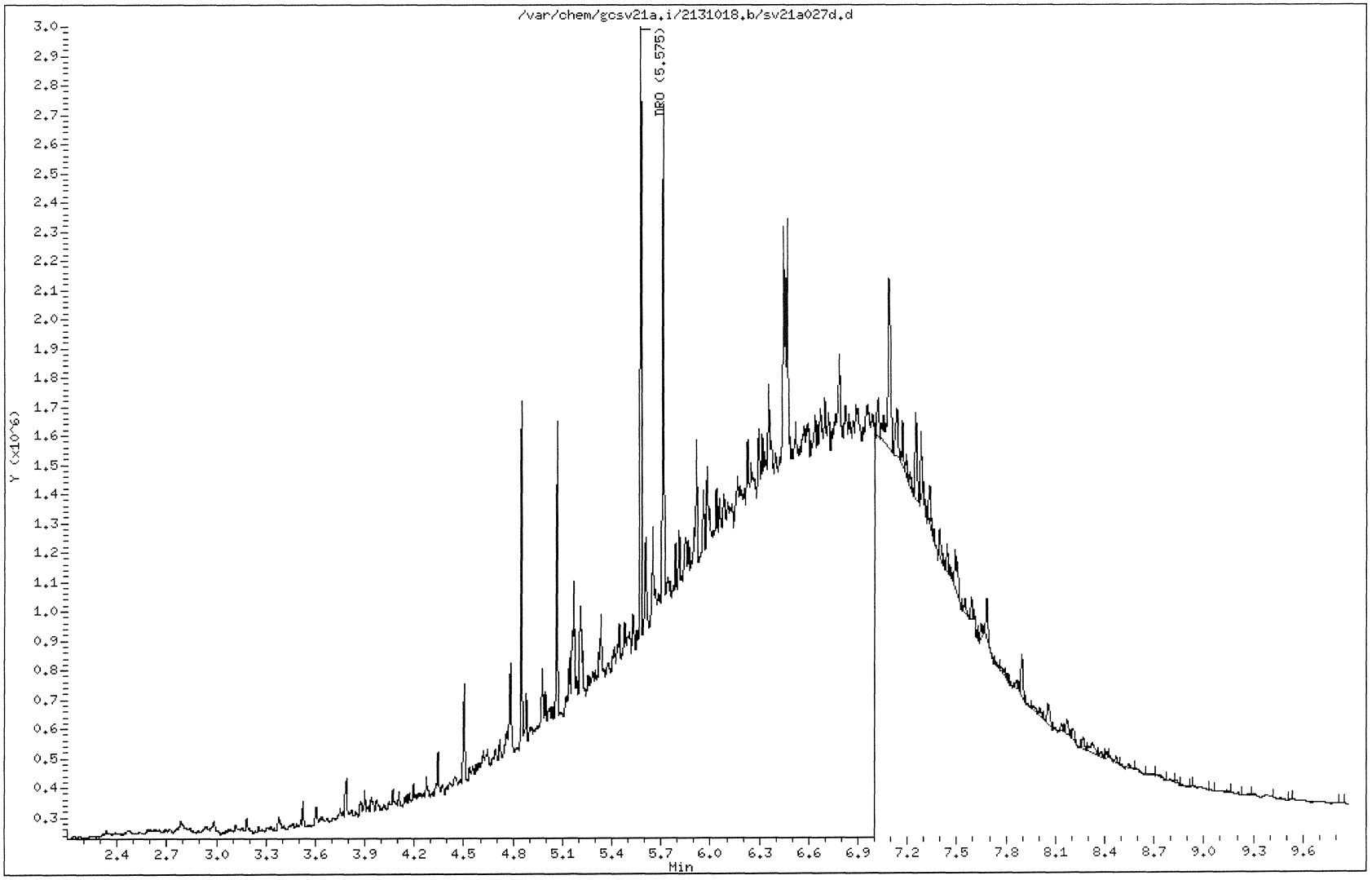
M1- Compound response manually integrated because
Target system did not integrate.

Data File: /var/chem/gcsv21a.i/2131018.b/sv21a027d.d
Date : 18-OCT-2013 14:57
Client ID:
Sample Info: 21310171201*10
Volume Injected (uL): 1.0
Column phase: RTX-5-30M

Instrument: gcsv21a.i

Operator: pmm
Column diameter: 0.53





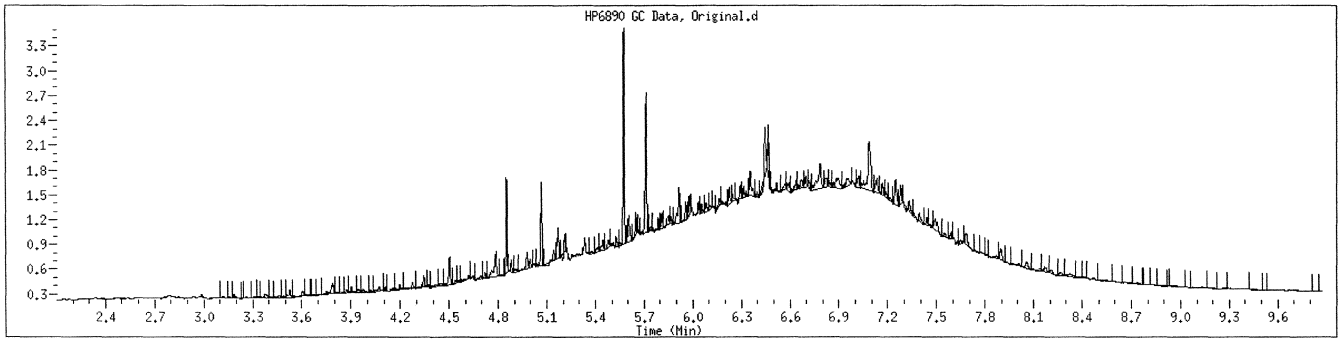

21310171 2 964

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a027d.d Page: 1
Report Date: 10/21/2013 08:58

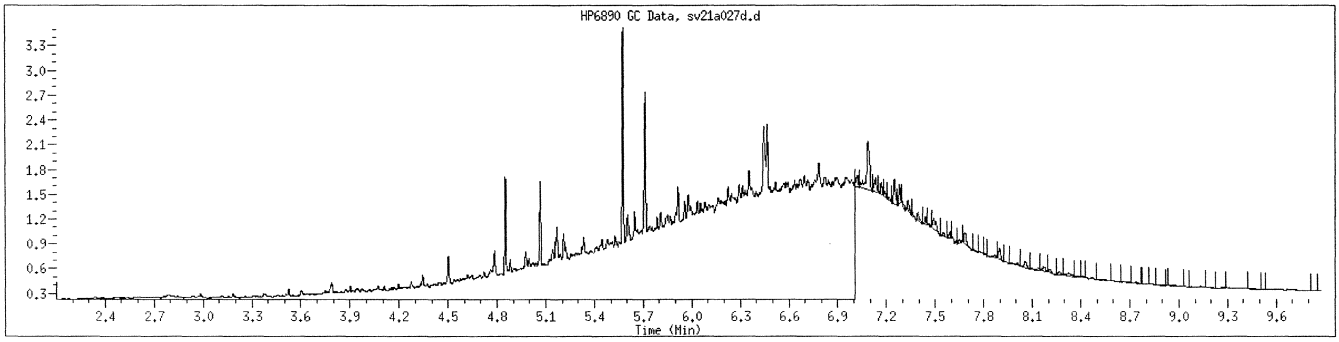
MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 21310171201 | SampleType | : SAMPLE |
| Injection Date | : 10/18/2013 14:57 | Instrument | : gcsv21a.i |
| Operator | : pmm | | |
| Sample Info | : 21310171201*10 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv21a.i/2131018.b/DRO.m | | |
| Dilution | : 10.0 | | |
| Matrix | : SOIL | | |
| Integrator | : HP Genie | Compound Sublist | : DRO |

Original




Final



GCAL, Inc.

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a027s.d
Lab Smp Id: 21310171201
Inj Date : 18-OCT-2013 14:57
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 21310171201*10
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2131018.b/DRO.m
Meth Date : 21-Oct-2013 08:58 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 16:11 Cal File: sv21a007s.d
Als bottle: 27
Dil Factor: 10.00000
Integrator: HP Genie Compound Sublist: O-TERPH.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 10.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 1000.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN (UG/ML) | FINAL (UG/KG) |
|---|---|---|---|---|---|---|
| $ 9 O-TERPHENYL | 5.065 | 5.078 | -0.013 | 10372428 | 4.13648 | 1380 |

Data File: /var/chem/gcsv21a.i/2131018.b/sv21a027s.d

Page 1

Date : 18-OCT-2013 14:57

Client ID:

Instrument: gcsv21a.i

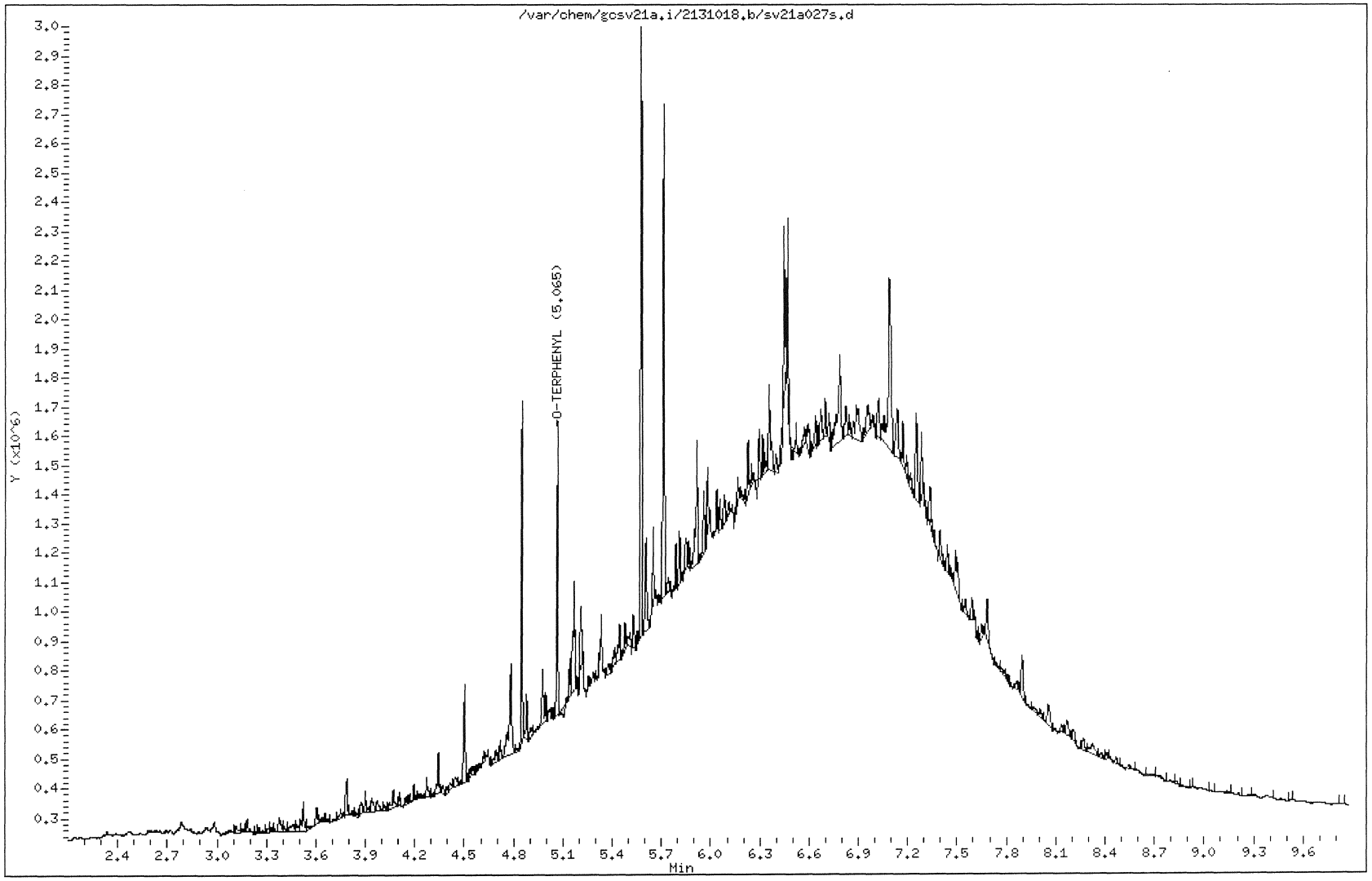
Sample Info: 21310171201*10

Volume Injected (uL): 1.0

Operator: pmm

Column phase: RTX-5-30M

Column diameter: 0.53

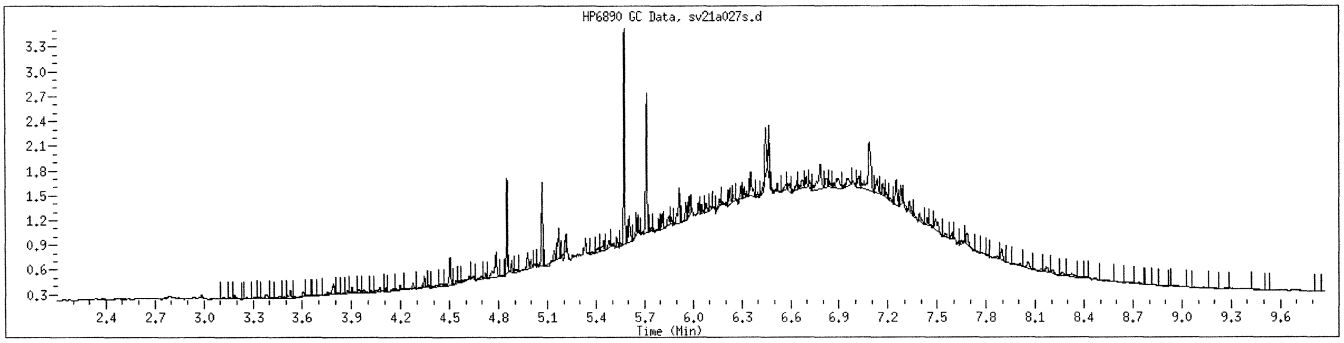



2131017 12 967

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a027s.d Page: 1
Report Date: 10/21/2013 08:59

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 21310171201 SampleType : SAMPLE
Injection Date: 10/18/2013 14:57 Instrument : gcsv21a.i
Operator : pmm
Sample Info : 21310171201*10
Misc Info :
Method : /var/chem/gcsv21a.i/2131018.b/DRO.m
Dilution : 10.0
Matrix : SOIL
Integrator : HP Genie Compound Sublist: O-TERPH




NO MANUAL INTEGRATIONS

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: 10.2 decanted: (Y/N)

GC Column: RTX-5-30M ID: .53 (mm)

Concentrated Extract Volume: 1000 ( µL )

Soil Aliquot Volume: ( µL )

Injection Volume: 1 ( µL )

GPC Cleanup: (Y/N) N pH:

Prep Batch: 517972 Analytical Batch: 518036

Sample ID: RS-COMP2-101613

Contract:

SAS No.: SDG No.: 213101712

Lab Sample ID: 21310171203

Date Collected: 10/16/13 Time: 1700

Date Received: 10/17/13

Date Extracted: 10/17/13

Date Analyzed: 10/18/13 Time: 1442

Dilution Factor: 10 Analyst: PMM

Prep Method: 3550B

Analytical Method: SW846 8015C

Sulfur Cleanup: (Y/N) N Instrument ID: GCS21A

Lab File ID: 2131018/sv21a026d

*CONCENTRATION UNITS: ug/kg*

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| GCSV-00-4 | DRO | 413000 | | 14500 | 22300 | 44600 |

FORM I ORG-1

GCAL, Inc.

DRO CALCULATION

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a026d.d
DCM file : /var/chem/gcsv21a.i/2131018.b/sv21a002d.d
Lab Smp Id: 21310171203
Inj Date : 18-OCT-2013 14:42
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 21310171203*10
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2131018.b/DRO.m
Meth Date : 21-Oct-2013 08:58 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 16:11 Cal File: sv21a007s.d
Als bottle: 26
Dil Factor: 10.00000
Integrator: HP Genie Compound Sublist: DRO.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 10.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 1000.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

DRO FORMULA:

$$\text{Conc} = \frac{(\text{DRO Area}) - (\text{Surr Area}) - (\text{DCM Blank Area})}{\text{RRF}} \times \text{DF} \times (\text{Vt} / \text{Ws})$$

$$= \frac{2221439642 - 12465844 - 24311877}{1963986} \times 10.0 \times (1000.0 / 30.0)$$

= 370787.1 UG/KG

GCAL, Inc.

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a026d.d
Lab Smp Id: 21310171203
Inj Date : 18-OCT-2013 14:42
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 21310171203*10
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2131018.b/DRO.m
Meth Date : 21-Oct-2013 08:58 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 16:11 Cal File: sv21a007s.d
Als bottle: 26
Dil Factor: 10.00000
Integrator: HP Genie Compound Sublist: DRO.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 10.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 1000.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN (UG/ML) | FINAL (UG/KG) |
|---|---|---|---|---|---|---|
| 1 DRO | 5.583 | 5.079 | 0.504 | 2221439642 | 1131.09 | 377000(M1) |

QC Flag Legend

M1- Compound response manually integrated because
Target system did not integrate.

Data File: /var/chem/gcsv21a.i/2131018.b/sv21a026d.d

Date : 18-OCT-2013 14:42

Client ID:

Sample Info: 21310171203*10

Volume Injected (uL): 1.0

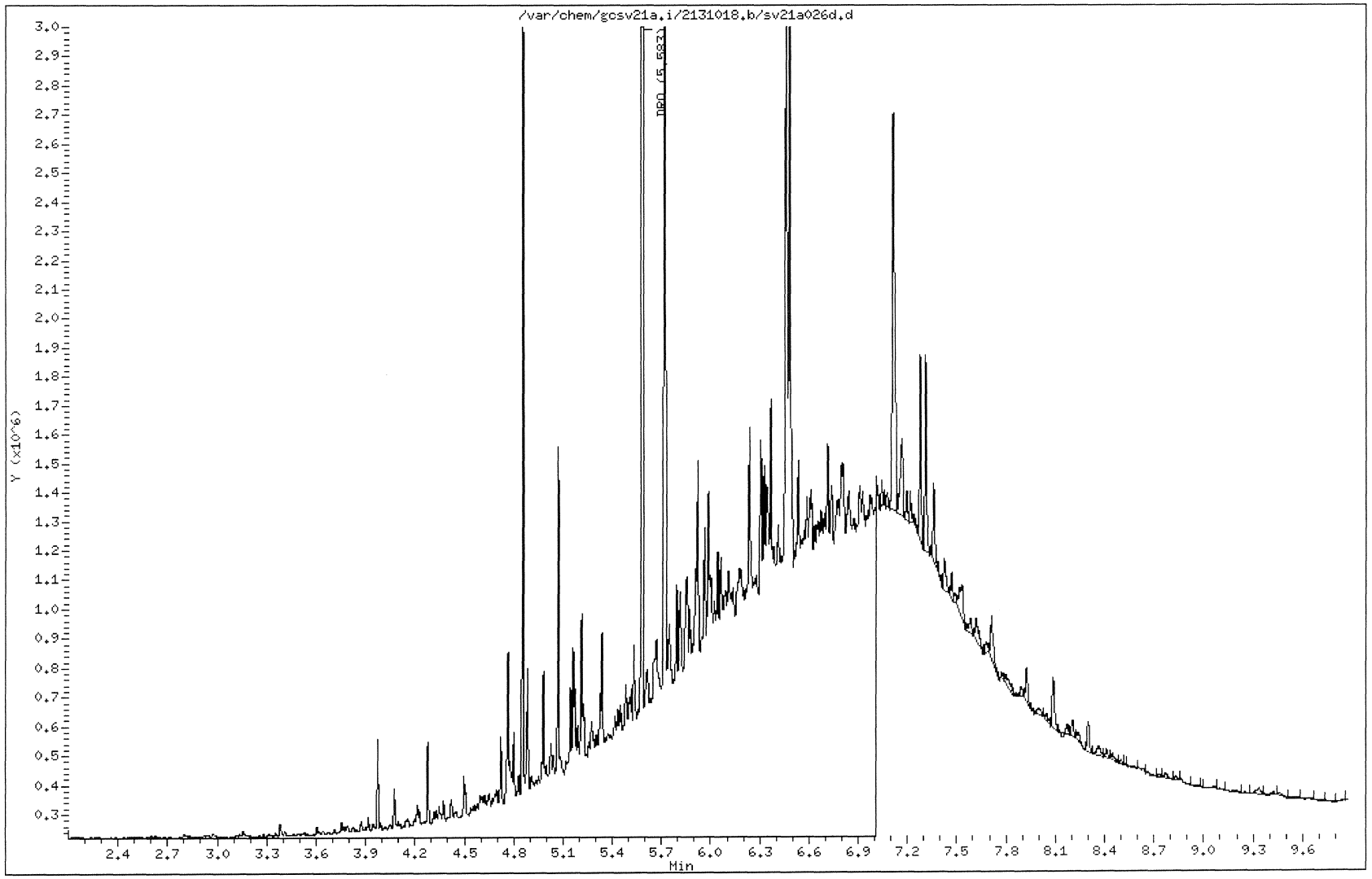
Column phase: RTX-5-30M

Instrument: gcsv21a.i

Operator: pmm

Column diameter: 0.53





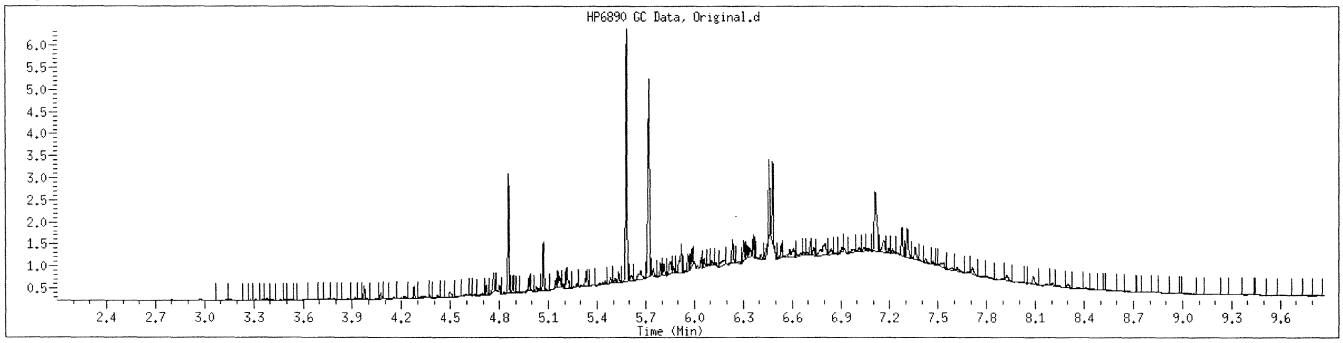

21310171 2 972

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a026d.d Page: 1
Report Date: 10/21/2013 08:58

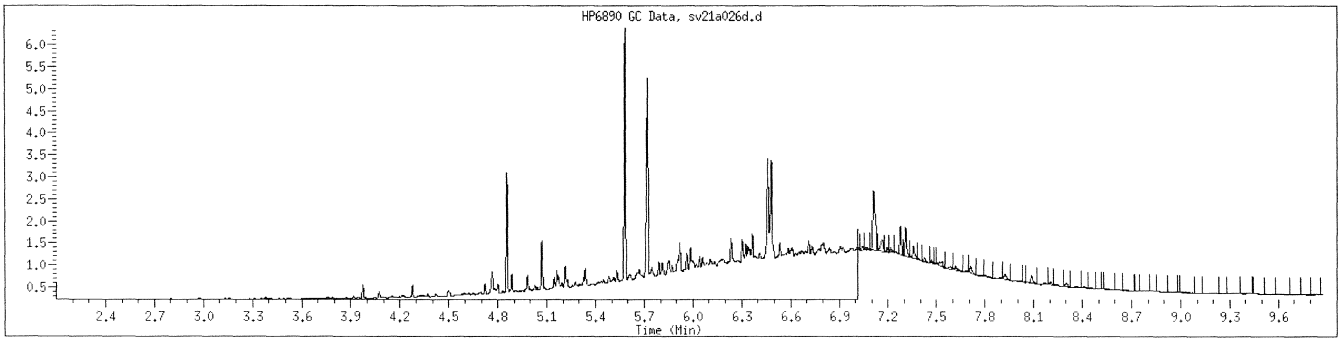
MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 21310171203 | SampleType | : SAMPLE |
| Injection Date | : 10/18/2013 14:42 | Instrument | : gcsv21a.i |
| Operator | : pmm | | |
| Sample Info | : 21310171203*10 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv21a.i/2131018.b/DRO.m | | |
| Dilution | : 10.0 | | |
| Matrix | : SOIL | | |
| Integrator | : HP Genie | Compound Sublist | : DRO |

Original




Final



GCAL, Inc.

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a026s.d
Lab Smp Id: 21310171203
Inj Date : 18-OCT-2013 14:42
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 21310171203*10
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2131018.b/DRO.m
Meth Date : 21-Oct-2013 08:58 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 16:11 Cal File: sv21a007s.d
Als bottle: 26
Dil Factor: 10.00000
Integrator: HP Genie Compound Sublist: O-TERPH.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 10.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 1000.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN (UG/ML) | FINAL (UG/KG) |
|---|---|---|---|---|---|---|
| $ 9 O-TERPHENYL | 5.070 | 5.078 | -0.008 | 12465844 | 4.97133 | 1660 |

Data File: /var/chem/gcsv21a.i/2131018.b/sv21a026s.d

Date : 18-OCT-2013 14:42

Client ID:

Sample Info: 21310171203*10

Volume Injected (uL): 1.0

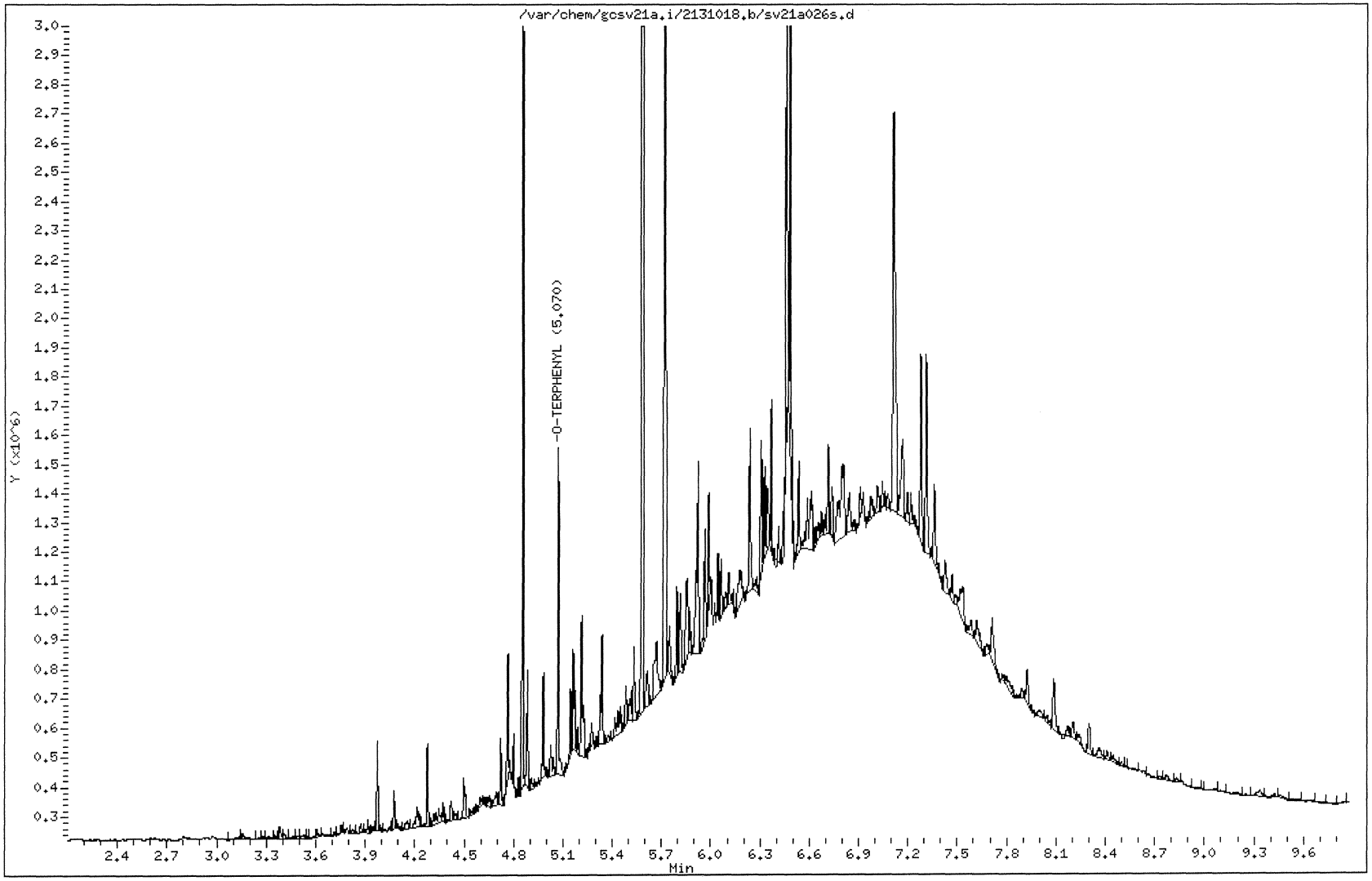
Column phase: RTX-5-30M

Instrument: gcsv21a.i

Operator: pmm

Column diameter: 0.53



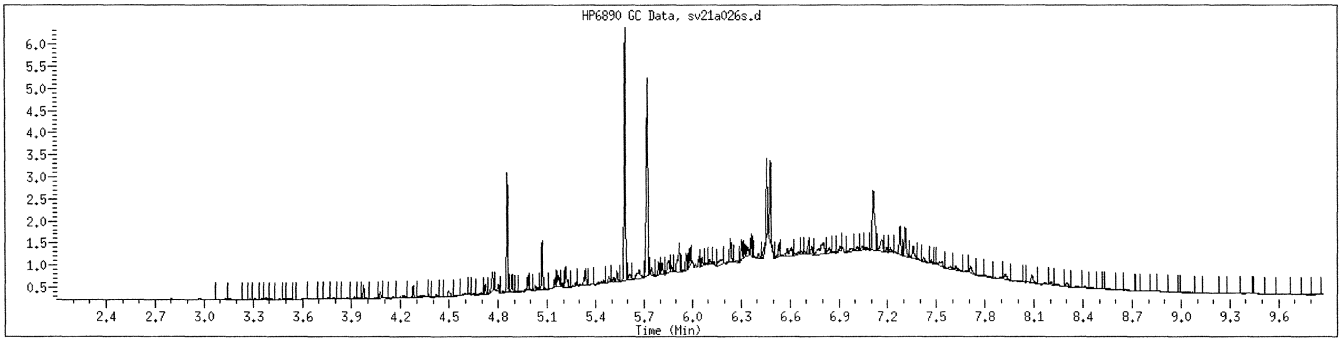



21310171 2 975

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a026s.d Page: 1
Report Date: 10/21/2013 08:58

MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 21310171203 | SampleType | : SAMPLE |
| Injection Date | : 10/18/2013 14:42 | Instrument | : gcsv21a.i |
| Operator | : pmm | | |
| Sample Info | : 21310171203*10 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv21a.i/2131018.b/DRO.m | | |
| Dilution | : 10.0 | | |
| Matrix | : SOIL | | |
| Integrator | : HP Genie | Compound Sublist | : O-TERPH |




NO MANUAL INTEGRATIONS

GCAL, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-APR-2013 11:51
End Cal Date : 22-AUG-2013 16:11
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /var/chem/gcsv21a.i/2131018.b/DRO.m
Cal Date : 21-Oct-2013 08:59 pmm
Curve Type : Average

Calibration File Names:
Level 1: /var/chem/gcsv21a.i/2130822p.b/sv21a003s.d
Level 2: /var/chem/gcsv21a.i/2130822p.b/sv21a004s.d
Level 3: /var/chem/gcsv21a.i/2130822p.b/sv21a005s.d
Level 4: /var/chem/gcsv21a.i/2130822p.b/sv21a006d.d
Level 5: /var/chem/gcsv21a.i/2130822p.b/sv21a007s.d

| Compound | 125.000 Level 1 | 250.000 Level 2 | 500.000 Level 3 | 1000.000 Level 4 | 2000.000 Level 5 | RRF | % RSD |
|---|---|---|---|---|---|---|---|
| 1 DRO | 1948703 | 1878772 | 1899924 | 1880832 | 2211701 | 1963986 | 7.195 |
| $ 9 O-TERPHENYL | 2538048 | 2538375 | 2442093 | 2355174 | 2664046 | 2507547 | 4.628 |

GCAL, Inc.

DRO CALCULATION

Data file : /var/chem/gcsv21a.i/2130822p.b/sv21a003d.d
DCM file : /var/chem/gcsv21a.i/2130822p.b/sv21a002d.d
Lab Smp Id: 1201
Inj Date : 22-AUG-2013 15:10
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1201*1 125
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2130822p.b/DRO.m
Meth Date : 23-Aug-2013 08:56 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 15:10 Cal File: sv21a003s.d
Als bottle: 3 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: DRO.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vi | 1.00000 | Volume injected (uL) |
| Uf | 1.00000 | Correction factor |

RF FORMULA:

$$\mathbf{RF} = \frac{\text{(DRO Area)} - \text{(Surr Area)}}{\text{Conc}} = \frac{259450661 - 15862803}{125.000}$$

$$= \frac{243587858}{125.000}$$

$$= 1948702.9$$

GCAL, Inc.

Data file : /var/chem/gcsv21a.i/2130822p.b/sv21a003d.d
Lab Smp Id: 1201
Inj Date : 22-AUG-2013 15:10
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1201*1 125
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2130822p.b/DRO.m
Meth Date : 23-Aug-2013 08:56 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 15:10 Cal File: sv21a003s.d
Als bottle: 3 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: DRO.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vi | 1.00000 | Volume injected (uL) |
| Uf | 1.00000 | Correction factor |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT (UG/ML) | AMOUNTS ON-COL (UG/ML) |
|---|---|---|---|---|---|---|
| 1 DRO | 5.078 | 5.078 | 0.000 | 259450661 | 125.000 | 130(M1) |

QC Flag Legend

M1- Compound response manually integrated because
Target system did not integrate.

Data File: /var/chem/gcsv21a.i/2130822p.b/sv21a003d.d



Date : 22-AUG-2013 15:10

Client ID:

Instrument: gcsv21a.i

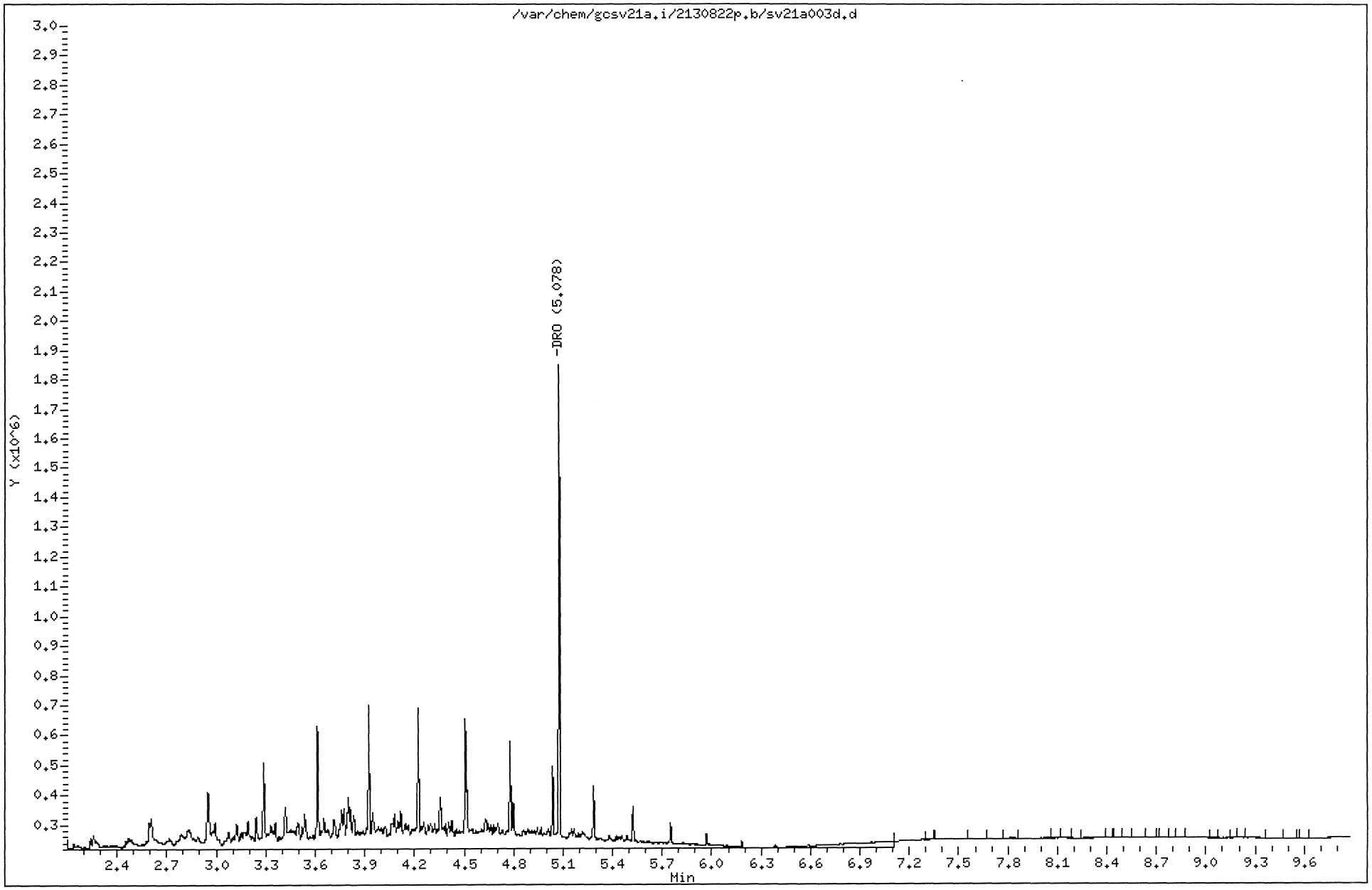
Sample Info: 1201*1 125

Volume Injected (uL): 1.0

Operator: pmm

Column phase: RTX-5-30M

Column diameter: 0.53

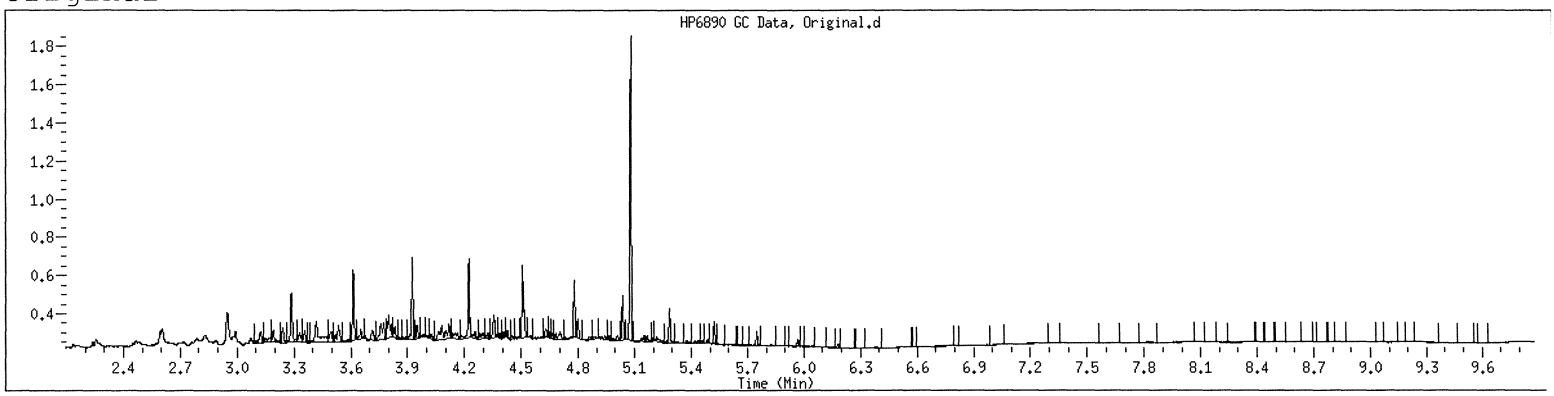



2131017 12 986

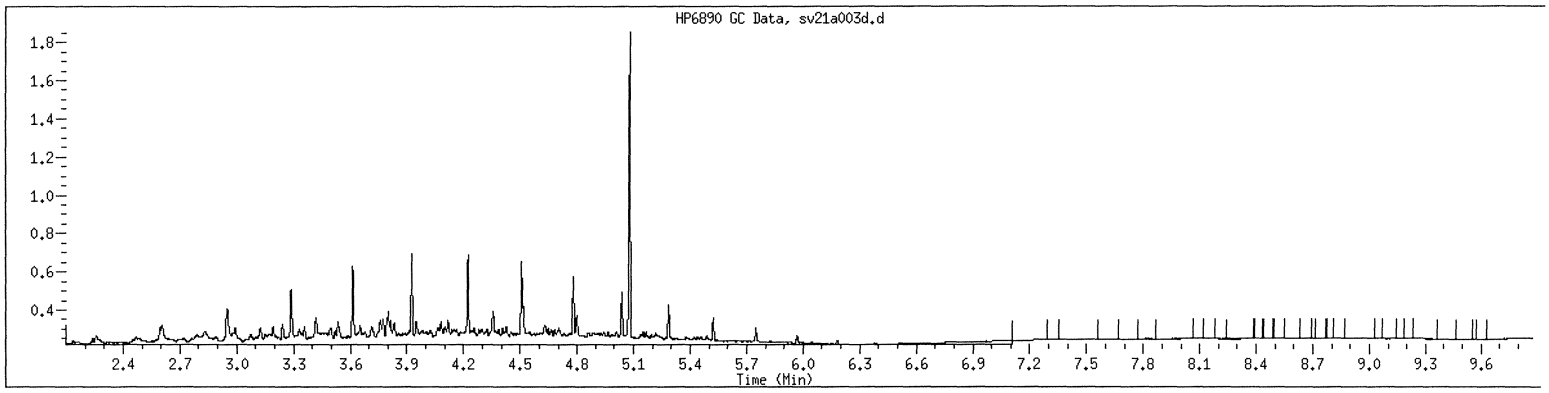
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1201 | SampleType | : CALIB_1 |
| Injection Date | : 08/22/2013 15:10 | Instrument | : gcsv21a.i |
| Operator | : pmm | | |
| Sample Info | : 1201*1 125 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv21a.i/2130822p.b/DRO.m | | |
| Dilution | : 1.00 | | |
| Matrix | : WATER | | |
| Integrator | : HP Genie | Compound Sublist | : DRO |

Original




Final



GCAL, Inc.

Data file : /var/chem/gcsv21a.i/2130822p.b/sv21a003s.d
Lab Smp Id: 1201
Inj Date : 22-AUG-2013 15:10
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1201*1 125
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2130822p.b/DRO.m
Meth Date : 23-Aug-2013 08:56 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 15:10 Cal File: sv21a003s.d
Als bottle: 3 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: O-TERPH.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vi | 1.00000 | Volume injected (uL) |
| Uf | 1.00000 | Correction factor |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT (UG/ML) | AMOUNTS ON-COL (UG/ML) |
|---|---|---|---|---|---|---|
| $ 9 O-TERPHENYL | 5.077 | 5.078 | -0.001 | 15862803 | 6.25000 | 6.33(M1) |

QC Flag Legend

M1- Compound response manually integrated because
Target system did not integrate.

Data File: /var/chem/gcsv21a.i/2130822p.b/sv21a003s.d

Date : 22-AUG-2013 15:10

Client ID:

Sample Info: 1201*1 125

Volume Injected (uL): 1.0

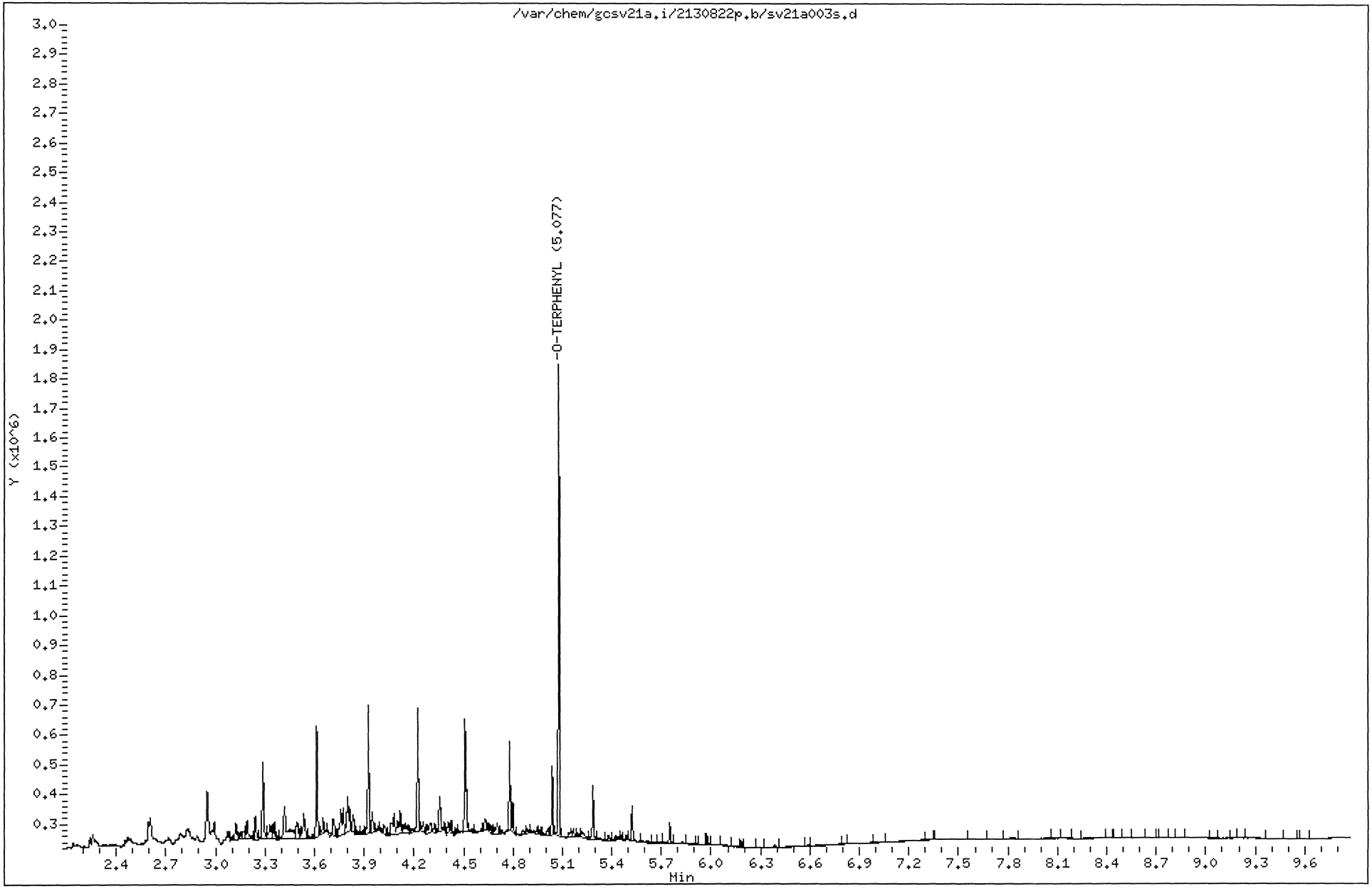
Column phase: RTX-5-30M

Instrument: gcsv21a.i

Operator: pmm

Column diameter: 0.53



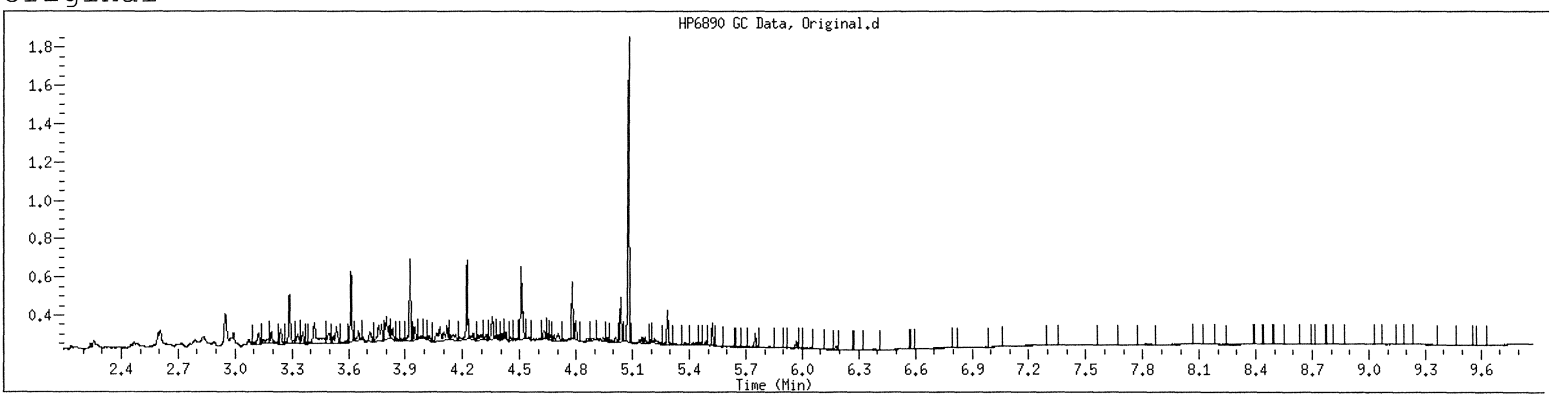



21301712 983

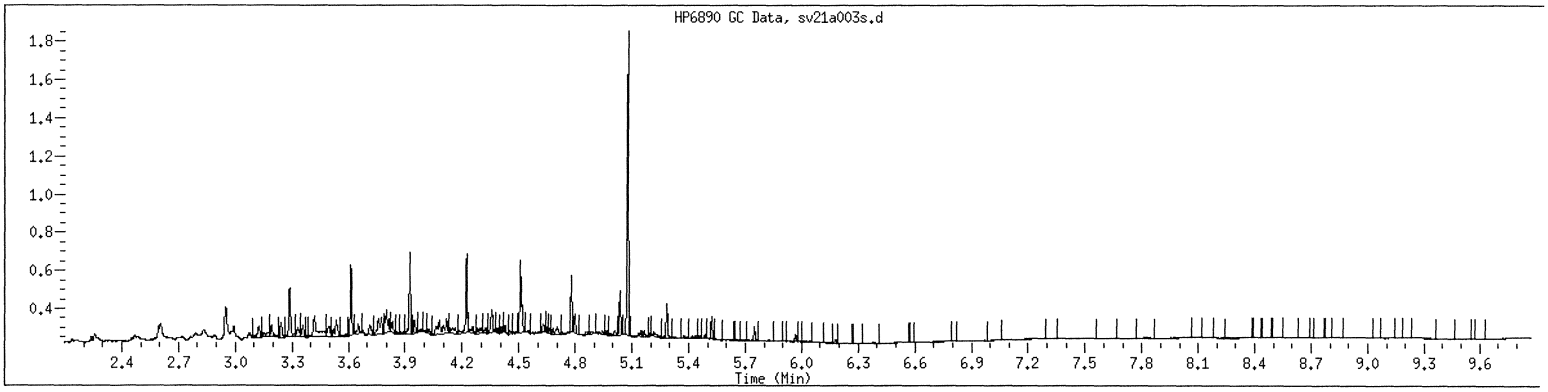
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1201 | SampleType | : CALIB_1 |
| Injection Date | : 08/22/2013 15:10 | Instrument | : gcsv21a.i |
| Operator | : pmm | | |
| Sample Info | : 1201*1 125 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv21a.i/2130822p.b/DRO.m | | |
| Dilution | : 1.00 | | |
| Matrix | : WATER | | |
| Integrator | : HP Genie | Compound Sublist | : O-TERPH |

Original




Final



GCAL, Inc.

DRO CALCULATION

Data file : /var/chem/gcsv21a.i/2130822p.b/sv21a004d.d
DCM file : /var/chem/gcsv21a.i/2130822p.b/sv21a002d.d
Lab Smp Id: 1202
Inj Date : 22-AUG-2013 15:25
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1202*1 250
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2130822p.b/DRO.m
Meth Date : 23-Aug-2013 08:56 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 15:25 Cal File: sv21a004s.d
Als bottle: 4 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: DRO.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vi | 1.00000 | Volume injected (uL) |
| Uf | 1.00000 | Correction factor |

RF FORMULA:

$$\mathbf{RF} = \frac{\text{(DRO Area) - (Surr Area)}}{\text{Conc}} = \frac{501422761 - 31729692}{250.000}$$

$$= \frac{469693069}{250.000}$$

$$= 1878772.3$$

GCAL, Inc.

Data file : /var/chem/gcsv21a.i/2130822p.b/sv21a004d.d
Lab Smp Id: 1202
Inj Date : 22-AUG-2013 15:25
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1202*1 250
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2130822p.b/DRO.m
Meth Date : 23-Aug-2013 08:56 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 15:25 Cal File: sv21a004s.d
Als bottle: 4 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: DRO.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vi | 1.00000 | Volume injected (uL) |
| Uf | 1.00000 | Correction factor |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT (UG/ML) | AMOUNTS ON-COL (UG/ML) |
|---|---|---|---|---|---|---|
| 1 DRO | 5.078 | 5.078 | 0.000 | 501422761 | 250.000 | 249(M1) |

QC Flag Legend

M1- Compound response manually integrated because
Target system did not integrate.

Data File: /var/chem/gcsv21a.i/2130822p.b/sv21a004d.d

Date : 22-AUG-2013 15:25

Client ID:

Sample Info: 1202*1 250

Volume Injected (uL): 1.0

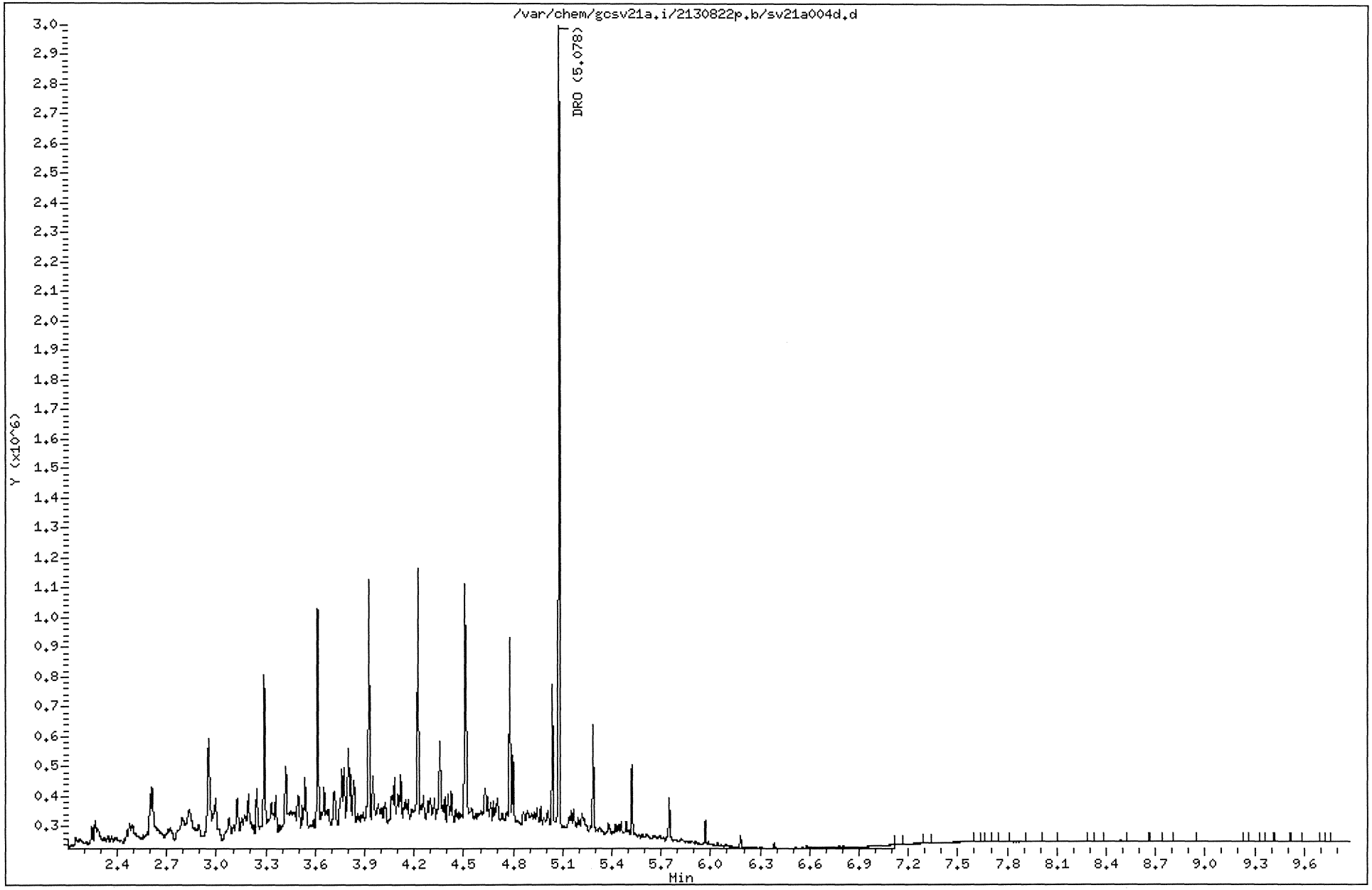
Column phase: RTX-5-30M

Instrument: gcsv21a.i

Operator: pmm

Column diameter: 0.53



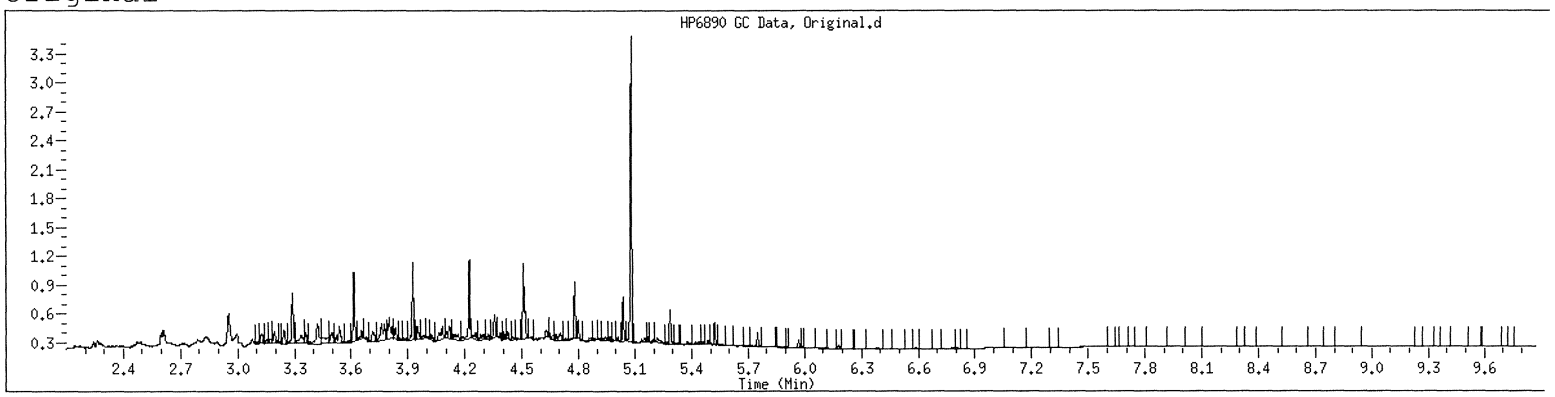



2131701712 987

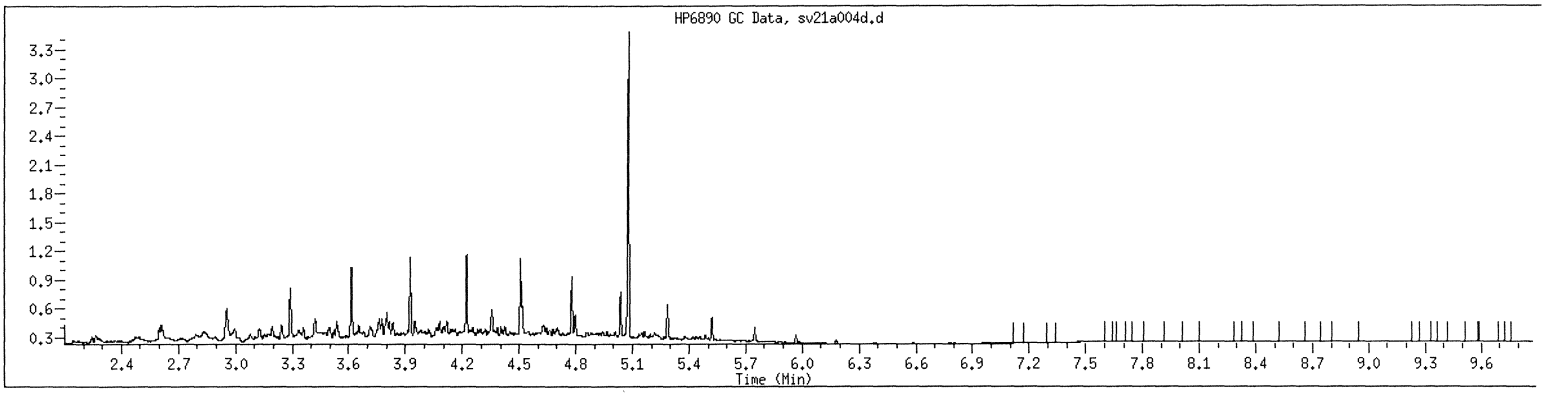
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1202 | SampleType | : CALIB_2 |
| Injection Date | : 08/22/2013 15:25 | Instrument | : gcsv21a.i |
| Operator | : pmm | | |
| Sample Info | : 1202*1 250 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv21a.i/2130822p.b/DRO.m | | |
| Dilution | : 1.00 | | |
| Matrix | : WATER | | |
| Integrator | : HP Genie | Compound Sublist | : DRO |

Original




Final



GCAL, Inc.

Data file : /var/chem/gcsv21a.i/2130822p.b/sv21a004s.d
Lab Smp Id: 1202
Inj Date : 22-AUG-2013 15:25
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1202*1 250
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2130822p.b/DRO.m
Meth Date : 23-Aug-2013 08:56 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 15:10 Cal File: sv21a003s.d
Als bottle: 4 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: O-TERPH.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vi | 1.00000 | Volume injected (uL) |
| Uf | 1.00000 | Correction factor |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT (UG/ML) | AMOUNTS ON-COL (UG/ML) |
|---|---|---|---|---|---|---|
| $ 9 O-TERPHENYL | 5.078 | 5.078 | 0.000 | 31729692 | 12.5000 | 12.7 |

Data File: /var/chem/gcsv21a.i/2130822p.b/sv21a004s.d

Date : 22-AUG-2013 15:25

Client ID:

Sample Info: 1202*1 250

Volume Injected (uL): 1.0

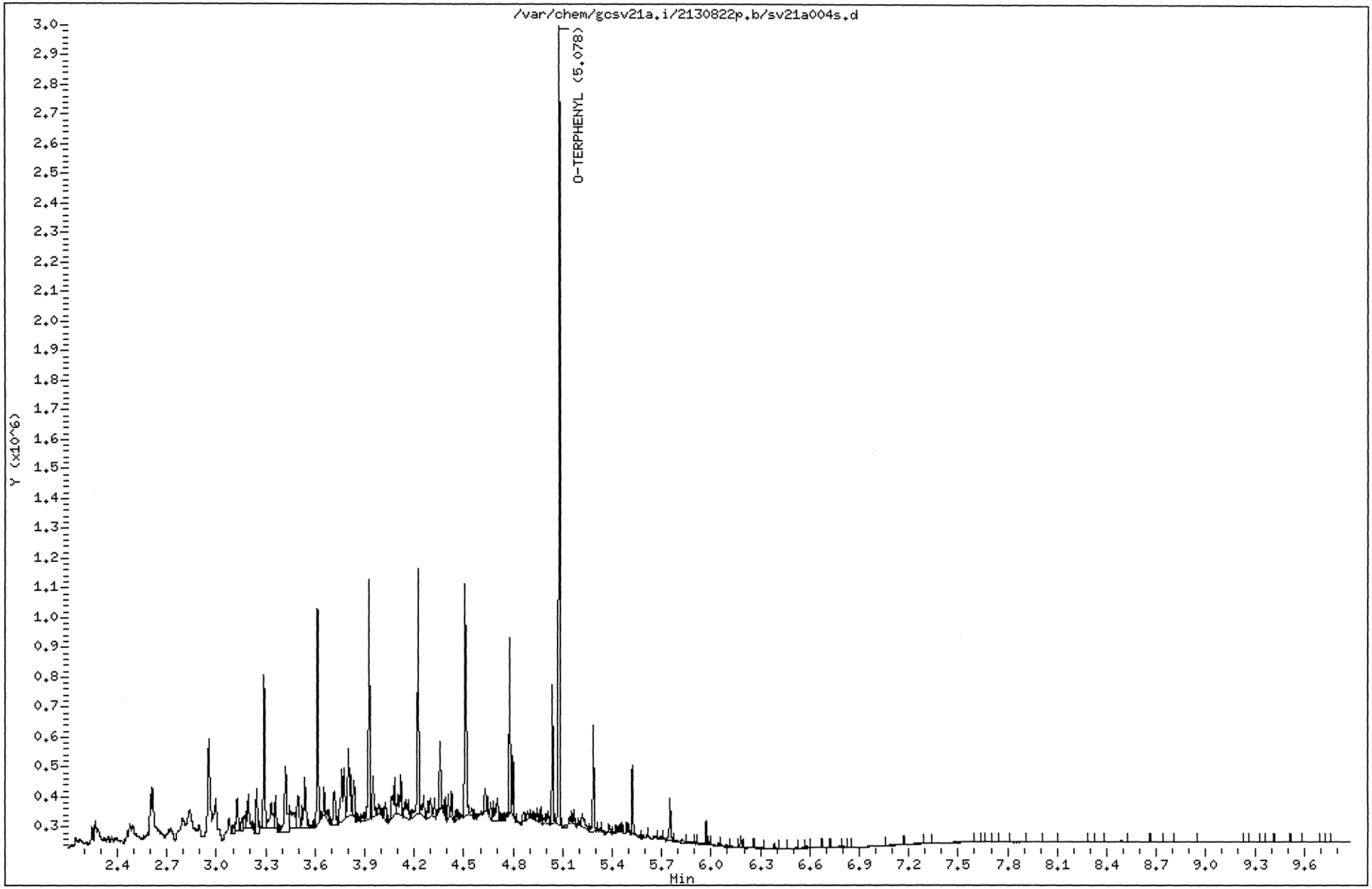
Column phase: RTX-5-30M

Instrument: gcsv21a.i

Operator: pmm

Column diameter: 0.53

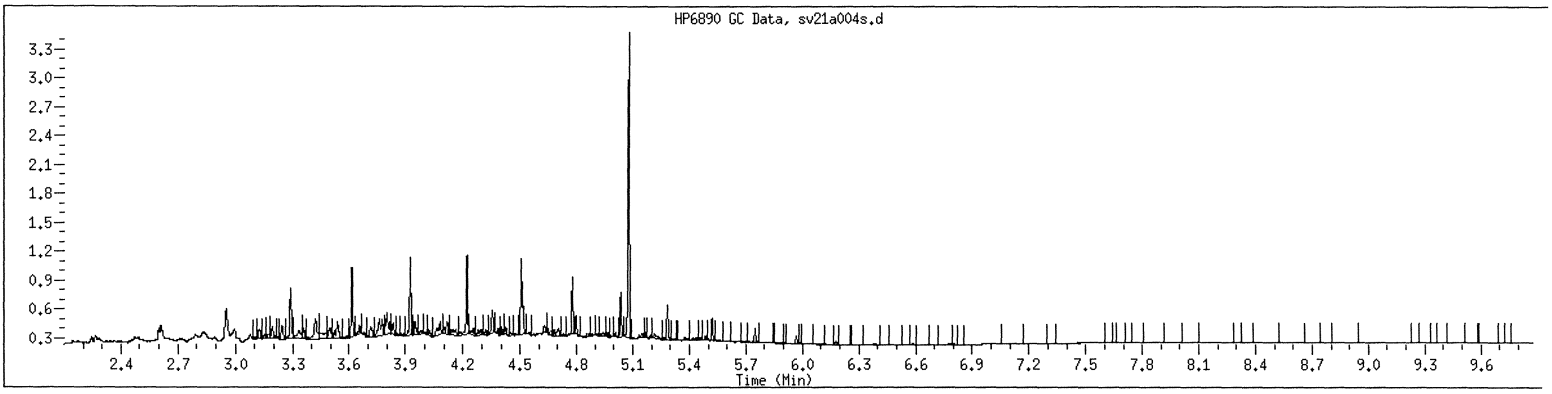





2131017 12 990

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1202 | SampleType | : CALIB_2 |
| Injection Date | : 08/22/2013 15:25 | Instrument | : gcsv21a.i |
| Operator | : pmm | | |
| Sample Info | : 1202*1 250 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv21a.i/2130822p.b/DRO.m | | |
| Dilution | : 1.00 | | |
| Matrix | : WATER | | |
| Integrator | : HP Genie | Compound Sublist | : O-TERPH |




NO MANUAL INTEGRATIONS

GCAL, Inc.

DRO CALCULATION

Data file : /var/chem/gcsv21a.i/2130822p.b/sv21a005d.d
DCM file : /var/chem/gcsv21a.i/2130822p.b/sv21a002d.d
Lab Smp Id: 1203
Inj Date : 22-AUG-2013 15:41
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1203*1 500
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2130822p.b/DRO.m
Meth Date : 23-Aug-2013 08:56 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 15:41 Cal File: sv21a005s.d
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: DRO.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vi | 1.00000 | Volume injected (uL) |
| Uf | 1.00000 | Correction factor |

RF FORMULA:

$$\mathbf{RF} = \frac{\text{(DRO Area)} - \text{(Surr Area)}}{\text{Conc}} = \frac{1011014333 - 61052331}{500.000}$$

$$= \frac{949962002}{500.000}$$

$$= 1899924.0$$

GCAL, Inc.

Data file : /var/chem/gcsv21a.i/2130822p.b/sv21a005d.d
Lab Smp Id: 1203
Inj Date : 22-AUG-2013 15:41
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1203*1 500
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2130822p.b/DRO.m
Meth Date : 23-Aug-2013 08:56 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 15:41 Cal File: sv21a005s.d
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: DRO.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vi | 1.00000 | Volume injected (uL) |
| Uf | 1.00000 | Correction factor |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT (UG/ML) | AMOUNTS ON-COL (UG/ML) |
|---|---|---|---|---|---|---|
| 1 DRO | 5.080 | 5.082 | -0.002 | 1011014333 | 500.000 | 502(M1) |

QC Flag Legend

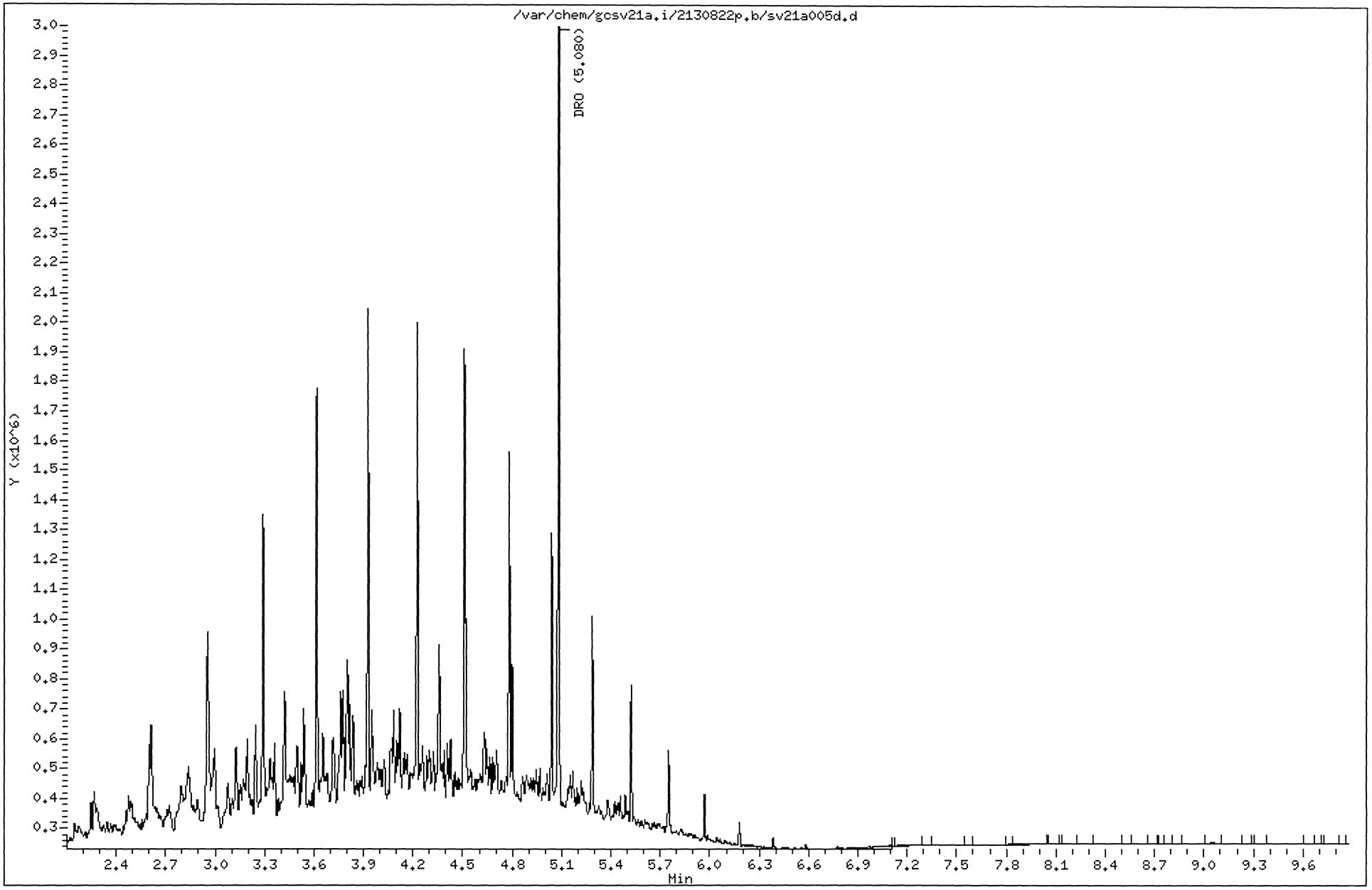
M1- Compound response manually integrated because
Target system did not integrate.

Data File: /var/chem/gcsv21a.i/2130822p.b/sv21a005d.d
Date : 22-AUG-2013 15:41
Client ID:
Sample Info: 1203*1 500
Volume Injected (uL): 1.0
Column phase: RTX-5-30M

Instrument: gcsv21a.i

Operator: pmm
Column diameter: 0.53



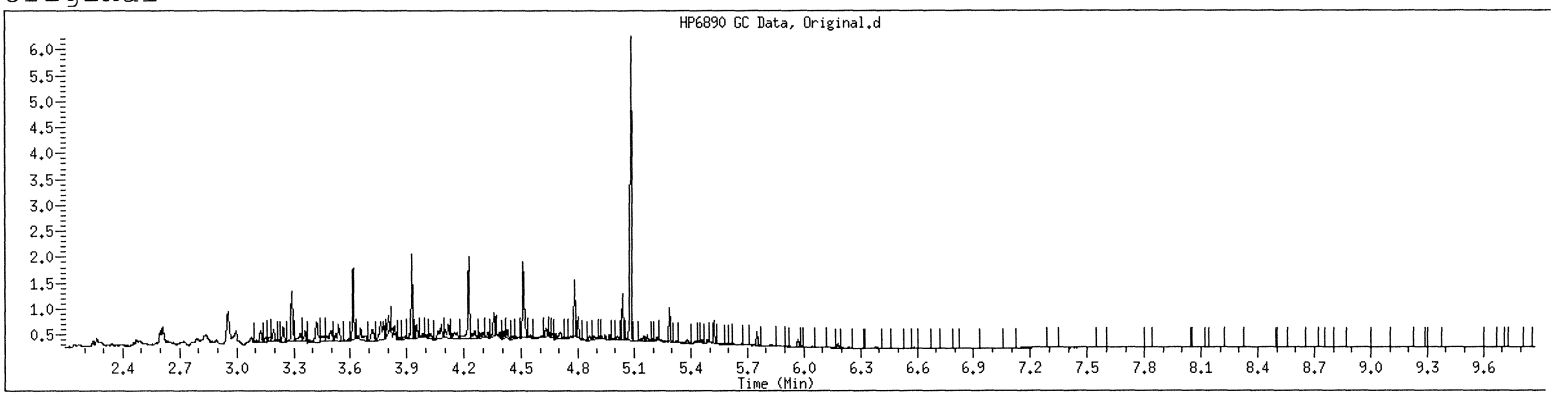



2131017 12 994

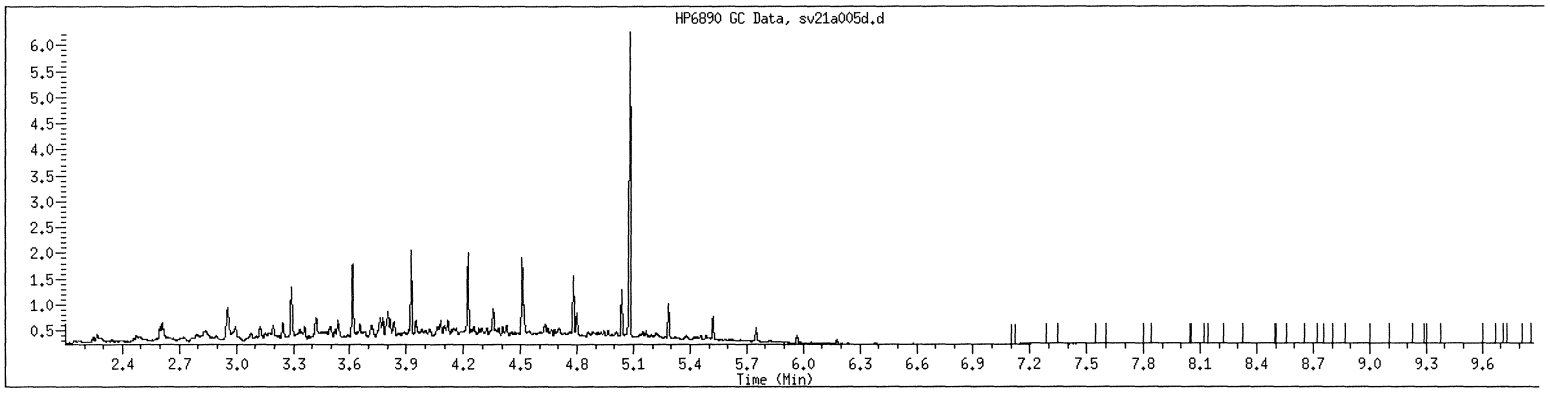
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1203 | SampleType | : CALIB_3 |
| Injection Date | : 08/22/2013 15:41 | Instrument | : gcsv21a.i |
| Operator | : pmm | | |
| Sample Info | : 1203*1 500 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv21a.i/2130822p.b/DRO.m | | |
| Dilution | : 1.00 | | |
| Matrix | : WATER | | |
| Integrator | : HP Genie | Compound Sublist | : DRO |

Original




Final



GCAL, Inc.

Data file : /var/chem/gcsv21a.i/2130822p.b/sv21a005s.d
Lab Smp Id: 1203
Inj Date : 22-AUG-2013 15:41
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1203*1 500
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2130822p.b/DRO.m
Meth Date : 23-Aug-2013 08:56 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 15:41 Cal File: sv21a005s.d
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: O-TERPH.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vi | 1.00000 | Volume injected (uL) |
| Uf | 1.00000 | Correction factor |

Cpnd Variable Local Compound Variable

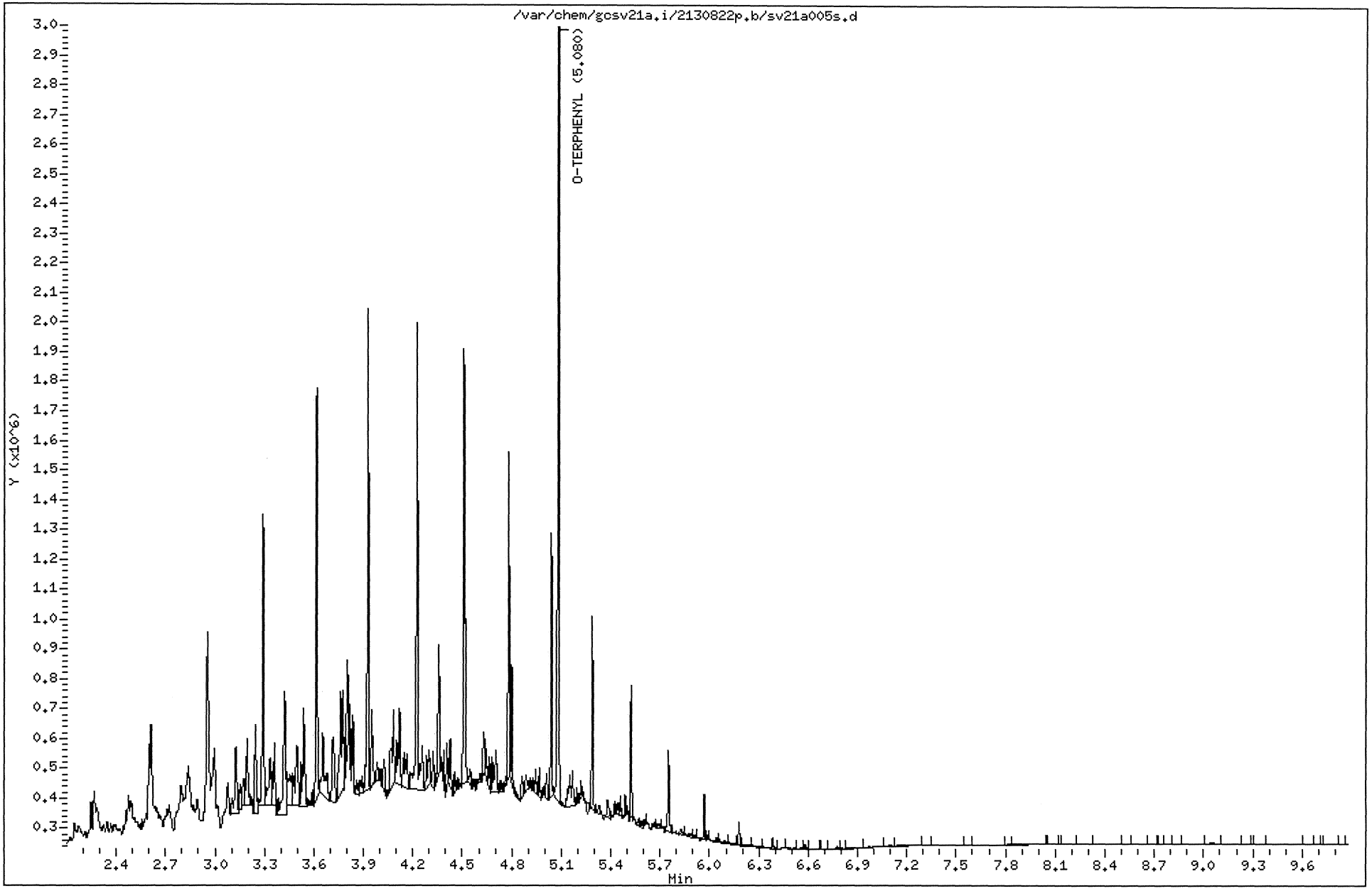
| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT (UG/ML) | AMOUNTS ON-COL (UG/ML) |
|---|---|---|---|---|---|---|
| $ 9 O-TERPHENYL | 5.080 | 5.081 | -0.001 | 61052331 | 25.0000 | 24.3 |

Data File: /var/chem/gcsv21a.i/2130822p.b/sv21a005s.d
Date : 22-AUG-2013 15:41
Client ID:
Sample Info: 1203*1 500
Volume Injected (uL): 1.0
Column phase: RTX-5-30M

Instrument: gcsv21a.i

Operator: pmm
Column diameter: 0.53

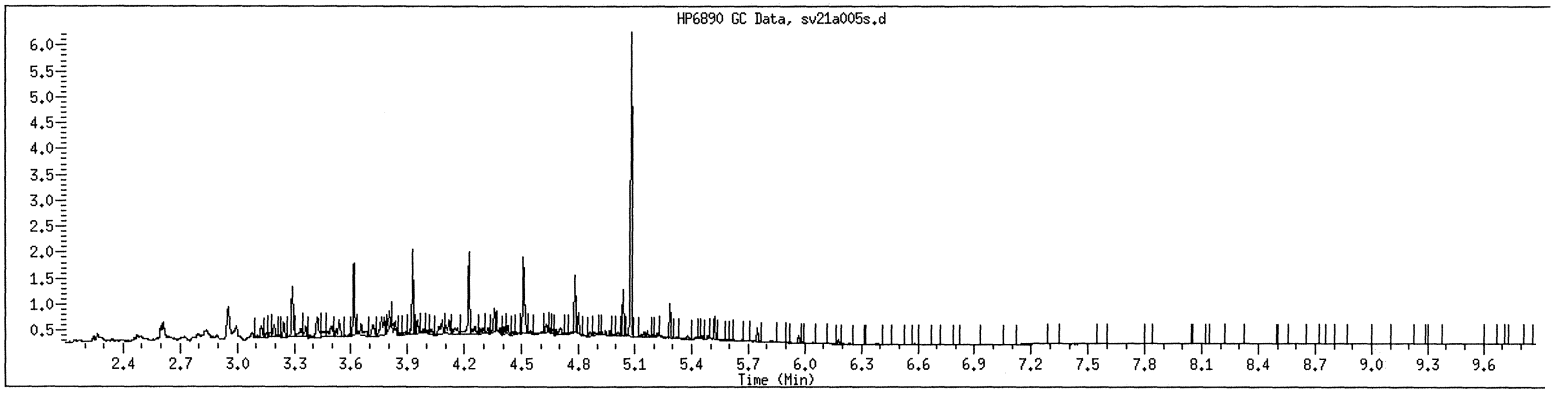





2131017 12 997

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1203 | SampleType | : CALIB_3 |
| Injection Date | : 08/22/2013 15:41 | Instrument | : gcsv21a.i |
| Operator | : pmm | | |
| Sample Info | : 1203*1 500 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv21a.i/2130822p.b/DRO.m | | |
| Dilution | : 1.00 | | |
| Matrix | : WATER | | |
| Integrator | : HP Genie | Compound Sublist | : O-TERPH |




NO MANUAL INTEGRATIONS

GCAL, Inc.

DRO CALCULATION

Data file : /var/chem/gcsv21a.i/2130822p.b/sv21a006d.d
DCM file : /var/chem/gcsv21a.i/2130822p.b/sv21a002d.d
Lab Smp Id: 1204
Inj Date : 22-AUG-2013 15:56
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1204*1 1000
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2130822p.b/DRO.m
Meth Date : 23-Aug-2013 08:56 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 15:56 Cal File: sv21a006d.d
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: DRO.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vi | 1.00000 | Volume injected (uL) |
| Uf | 1.00000 | Correction factor |

RF FORMULA:

$$\mathbf{RF} = \frac{\text{(DRO Area) - (Surr Area)}}{\text{Conc}} = \frac{1998590498 - 117758695}{1000.00}$$

$$= \frac{1880831803}{1000.00}$$

$$= 1880831.8$$

GCAL, Inc.

Data file : /var/chem/gcsv21a.i/2130822p.b/sv21a006d.d
Lab Smp Id: 1204
Inj Date : 22-AUG-2013 15:56
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1204*1 1000
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2130822p.b/DRO.m
Meth Date : 23-Aug-2013 08:56 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 15:56 Cal File: sv21a006d.d
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: DRO.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vi | 1.00000 | Volume injected (uL) |
| Uf | 1.00000 | Correction factor |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT (UG/ML) | AMOUNTS ON-COL (UG/ML) |
|---|---|---|---|---|---|---|
| 1 DRO | 5.084 | 5.082 | 0.002 | 1998590498 | 1000.00 | 981(M1) |

QC Flag Legend

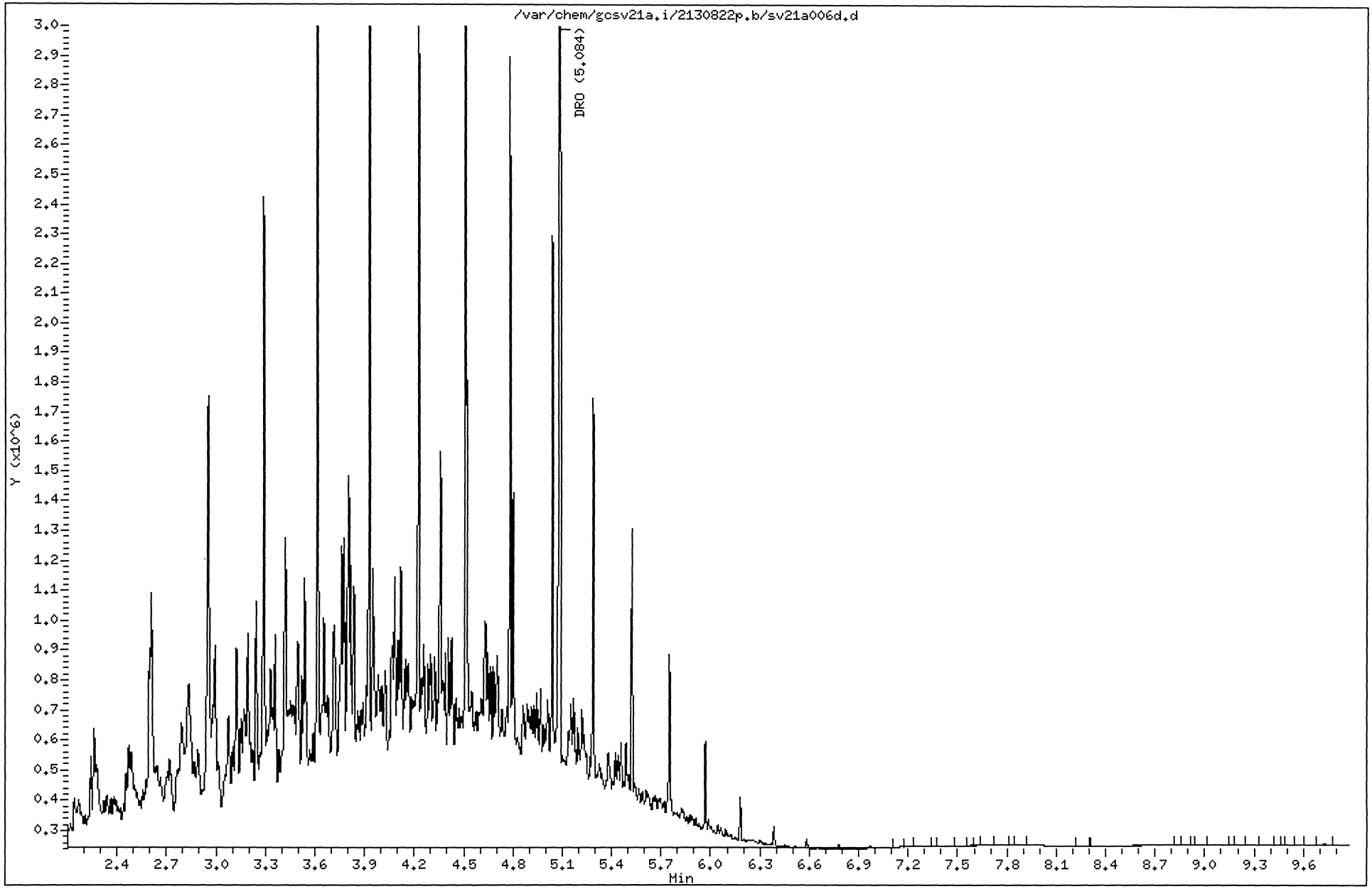
M1- Compound response manually integrated because
Target system did not integrate.

Data File: /var/chem/gcsv21a.i/2130822p.b/sv21a006d.d
Date : 22-AUG-2013 15:56
Client ID:
Sample Info: 1204*1 1000
Volume Injected (uL): 1.0
Column phase: RTX-5-30M



Instrument: gcsv21a.i

Operator: pmm
Column diameter: 0.53

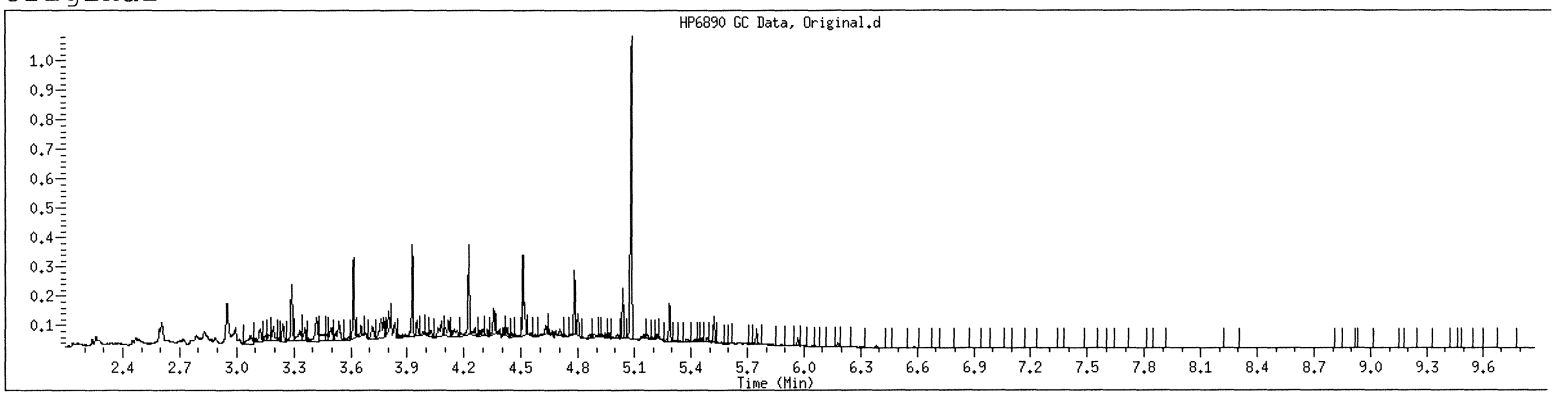



21310171 2 1001

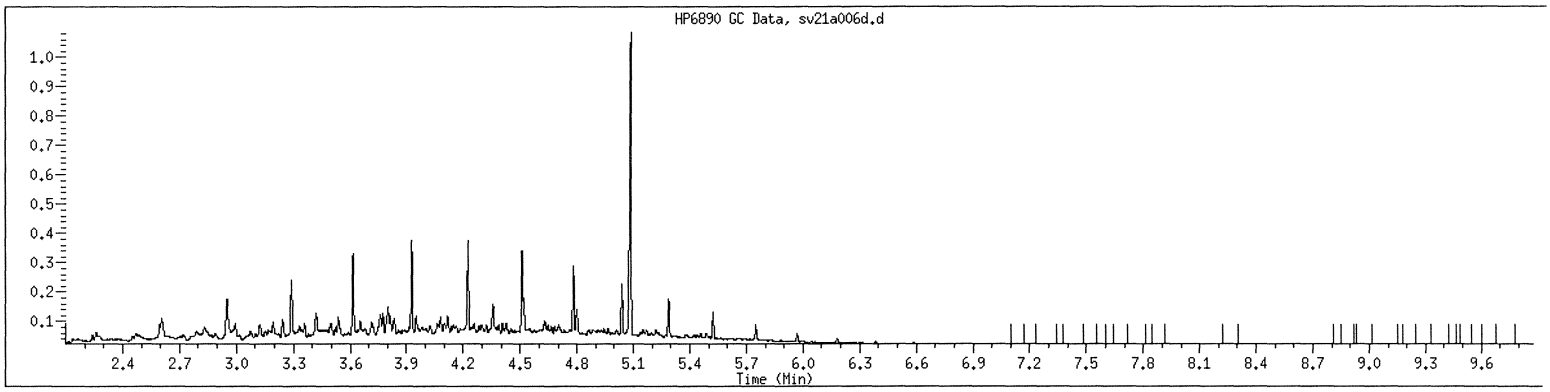
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1204 | SampleType | : CALIB_4 |
| Injection Date | : 08/22/2013 15:56 | Instrument | : gcsv21a.i |
| Operator | : pmm | | |
| Sample Info | : 1204*1 1000 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv21a.i/2130822p.b/DRO.m | | |
| Dilution | : 1.00 | | |
| Matrix | : WATER | | |
| Integrator | : HP Genie | Compound Sublist | : DRO |

Original




Final



GCAL, Inc.

Data file : /var/chem/gcsv21a.i/2130822p.b/sv21a006s.d
Lab Smp Id: 1204
Inj Date : 22-AUG-2013 15:56
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1204*1 1000
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2130822p.b/DRO.m
Meth Date : 23-Aug-2013 08:56 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 15:56 Cal File: sv21a006d.d
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: O-TERPH.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vi | 1.00000 | Volume injected (uL) |
| Uf | 1.00000 | Correction factor |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT (UG/ML) | AMOUNTS ON-COL (UG/ML) |
|---|---|---|---|---|---|---|
| $ 9 O-TERPHENYL | 5.082 | 5.081 | 0.001 | 117758695 | 50.0000 | 47.0 |

Data File: /var/chem/gcsv21a.i/2130822p.b/sv21a006s.d

Date : 22-AUG-2013 15:56

Client ID:

Sample Info: 1204*1 1000

Volume Injected (uL): 1.0

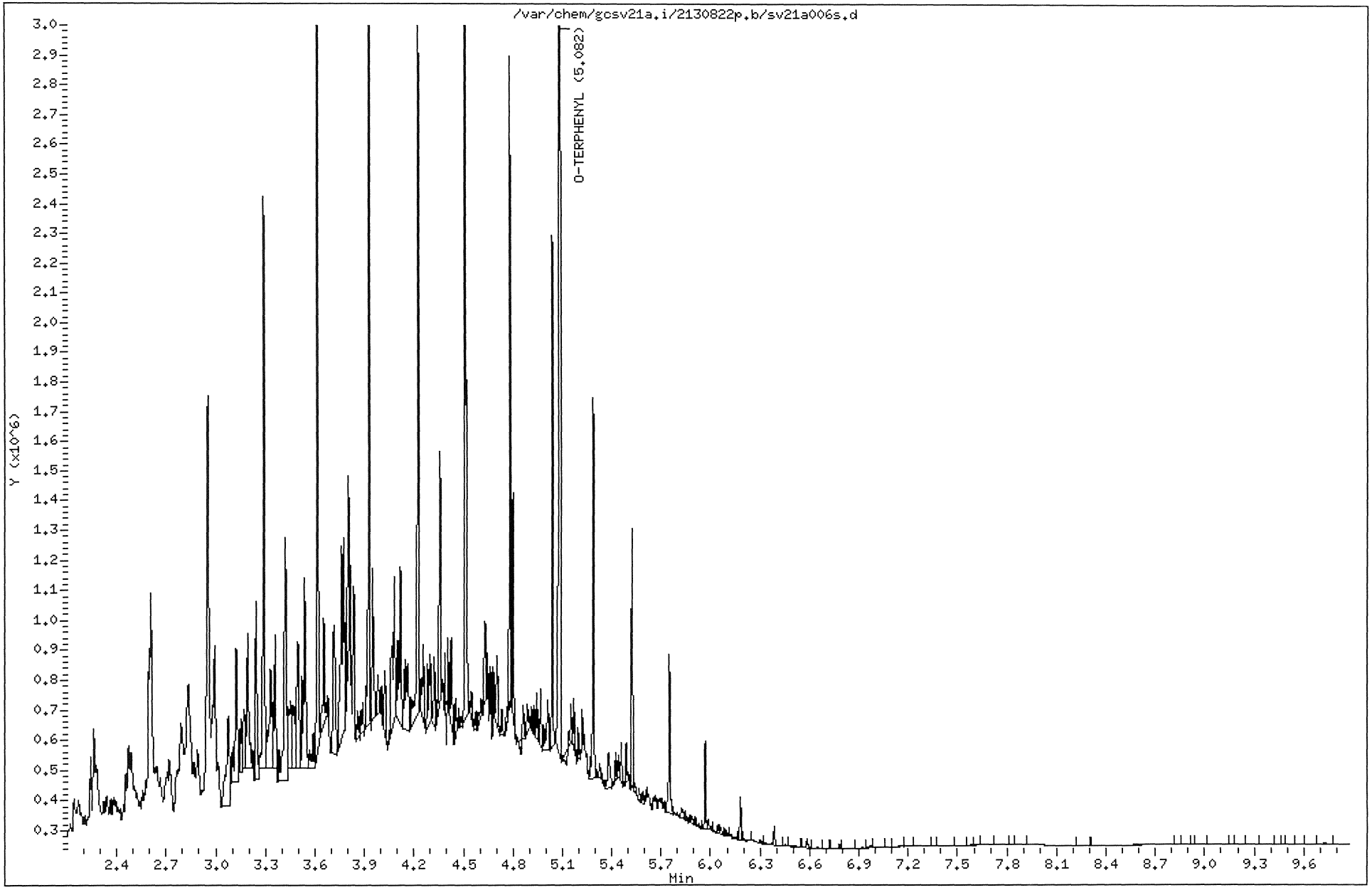
Column phase: RTX-5-30M

Instrument: gcsv21a.i

Operator: pmm

Column diameter: 0.53

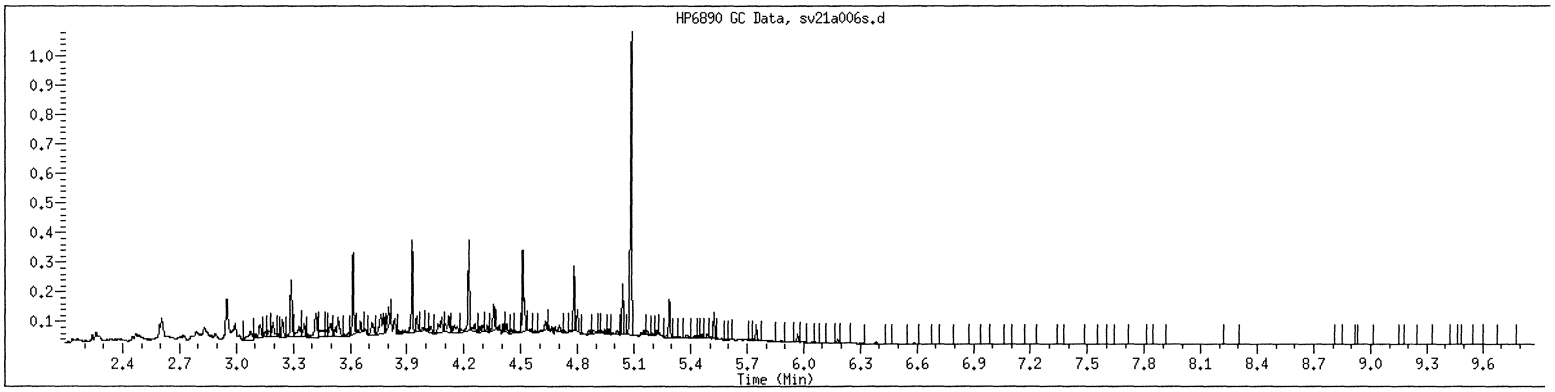





21310171 2 1004

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1204 | SampleType | : CALIB_4 |
| Injection Date | : 08/22/2013 15:56 | Instrument | : gcsv21a.i |
| Operator | : pmm | | |
| Sample Info | : 1204*1 1000 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv21a.i/2130822p.b/DRO.m | | |
| Dilution | : 1.00 | | |
| Matrix | : WATER | | |
| Integrator | : HP Genie | Compound Sublist | : O-TERPH |




NO MANUAL INTEGRATIONS

GCAL, Inc.

DRO CALCULATION

Data file : /var/chem/gcsv21a.i/2130822p.b/sv21a007d.d
DCM file : /var/chem/gcsv21a.i/2130822p.b/sv21a002d.d
Lab Smp Id: 1205
Inj Date : 22-AUG-2013 16:11
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1205*1 84-56-1
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2130822p.b/DRO.m
Meth Date : 23-Aug-2013 08:56 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 16:11 Cal File: sv21a007s.d
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: DRO.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vi | 1.00000 | Volume injected (uL) |
| Uf | 1.00000 | Correction factor |

RF FORMULA:

$$\mathbf{RF} = \frac{(\text{DRO Area}) - (\text{Surr Area})}{\text{Conc}} = \frac{4689805897 - 266404621}{2000.00}$$

$$= \frac{4423401276}{2000.00}$$

$$= 2211700.6$$

GCAL, Inc.

Data file : /var/chem/gcsv21a.i/2130822p.b/sv21a007d.d
Lab Smp Id: 1205
Inj Date : 22-AUG-2013 16:11
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1205*1 84-56-1
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2130822p.b/DRO.m
Meth Date : 23-Aug-2013 08:56 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 16:11 Cal File: sv21a007s.d
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: DRO.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vi | 1.00000 | Volume injected (uL) |
| Uf | 1.00000 | Correction factor |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT (UG/ML) | AMOUNTS ON-COL (UG/ML) |
|---|---|---|---|---|---|---|
| 1 DRO | 5.089 | 5.082 | 0.007 | 4689805897 | 2000.00 | 2270(AM1) |

QC Flag Legend

A - Target compound detected but, quantitated amount exceeded maximum amount.
M1- Compound response manually integrated because Target system did not integrate.

Data File: /var/chem/gcsv21a.i/2130822p.b/sv21a007d.d

Date : 22-AUG-2013 16:11

Client ID:

Sample Info: 1205*1 84-56-1

Volume Injected (uL): 1.0

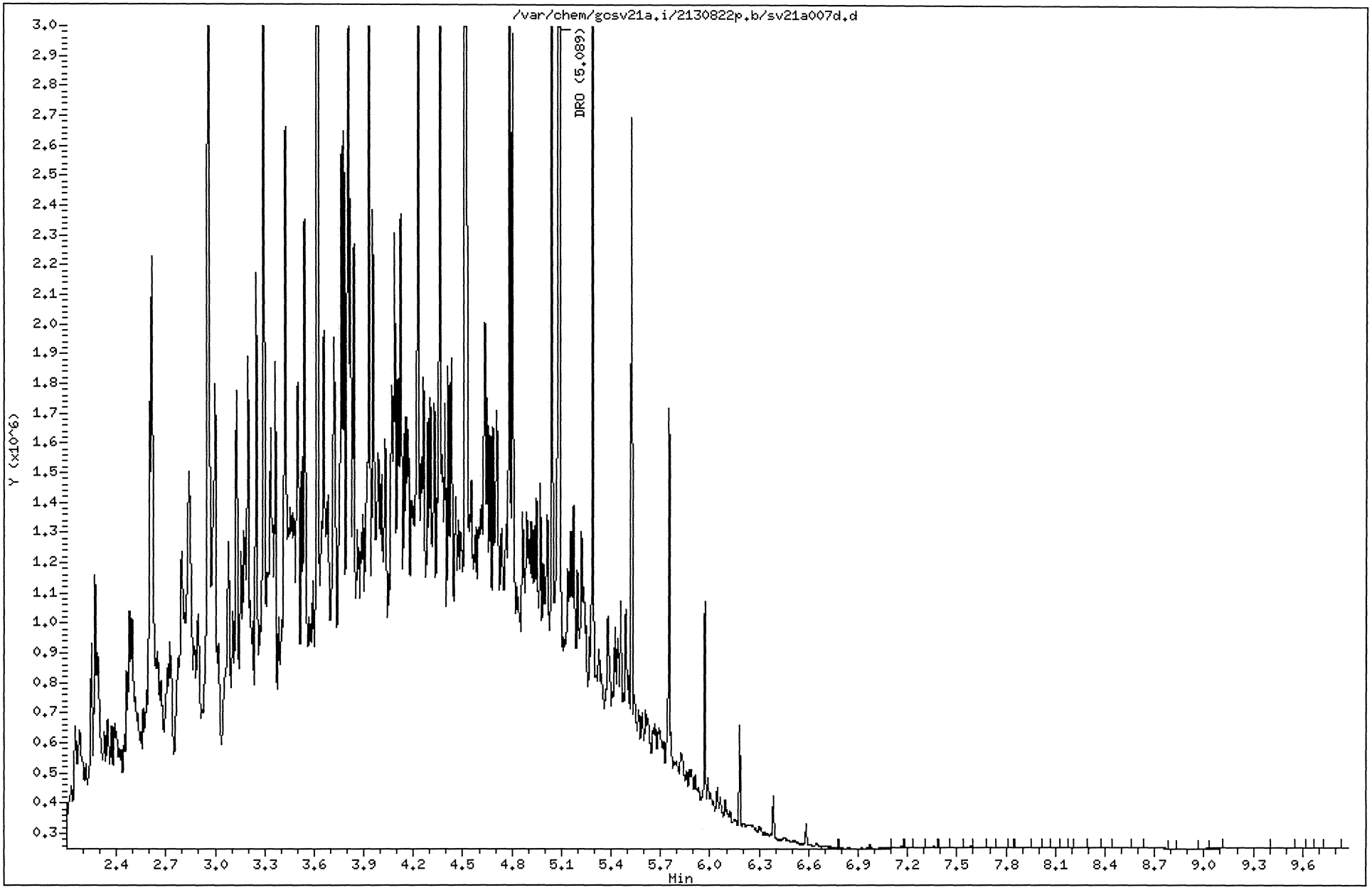
Column phase: RTX-5-30M



Instrument: gcsv21a.i

Operator: pmm

Column diameter: 0.53

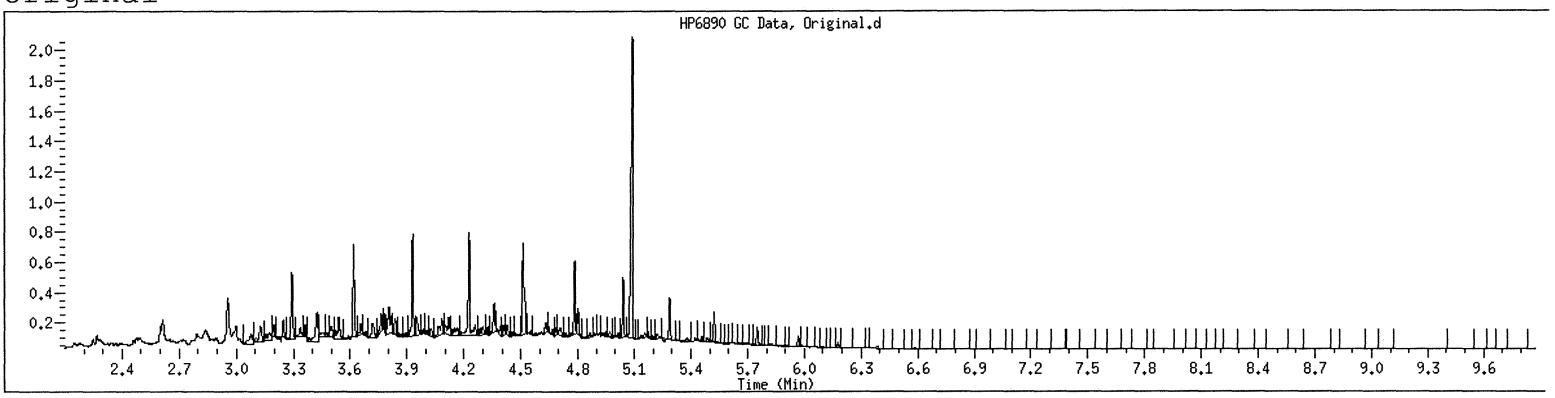



21310171 2 1008

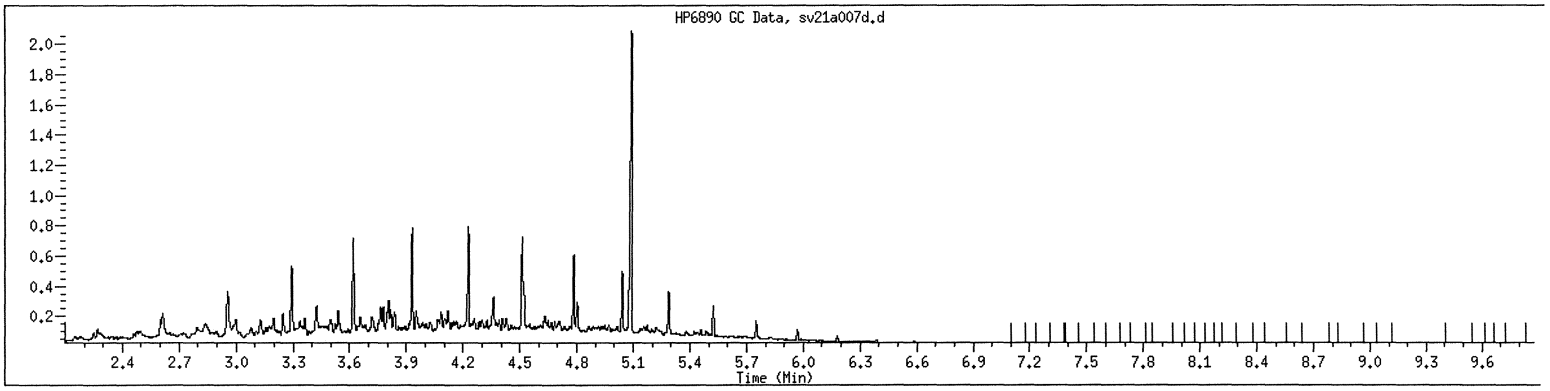
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1205 | SampleType | : CALIB_5 |
| Injection Date | : 08/22/2013 16:11 | Instrument | : gcsv21a.i |
| Operator | : pmm | | |
| Sample Info | : 1205*1 84-56-1 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv21a.i/2130822p.b/DRO.m | | |
| Dilution | : 1.00 | | |
| Matrix | : WATER | | |
| Integrator | : HP Genie | Compound Sublist | : DRO |

Original




Final



GCAL, Inc.

Data file : /var/chem/gcsv21a.i/2130822p.b/sv21a007s.d
Lab Smp Id: 1205
Inj Date : 22-AUG-2013 16:11
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1205*1 84-56-1
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2130822p.b/DRO.m
Meth Date : 23-Aug-2013 08:56 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 16:11 Cal File: sv21a007s.d
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: O-TERPH.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vi | 1.00000 | Volume injected (uL) |
| Uf | 1.00000 | Correction factor |

Cpnd Variable Local Compound Variable

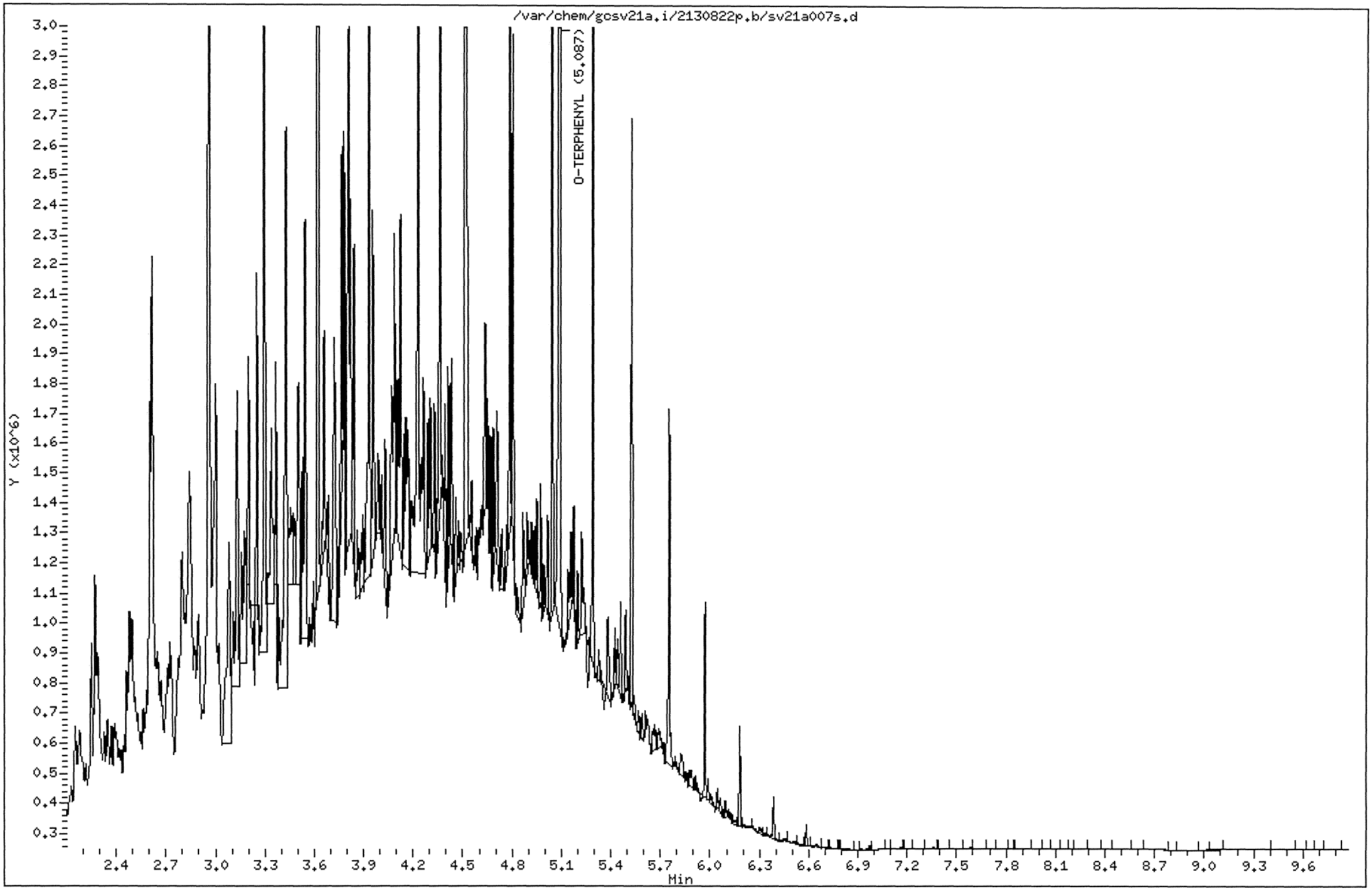
| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT (UG/ML) | AMOUNTS ON-COL (UG/ML) |
|---|---|---|---|---|---|---|
| $ 9 O-TERPHENYL | 5.087 | 5.081 | 0.006 | 266404621 | 100.000 | 106 |

Data File: /var/chem/gcsv21a.i/2130822p.b/sv21a007s.d
Date : 22-AUG-2013 16:11
Client ID:
Sample Info: 1205*1 84-56-1
Volume Injected (uL): 1.0
Column phase: RTX-5-30M



Instrument: gcsv21a.i

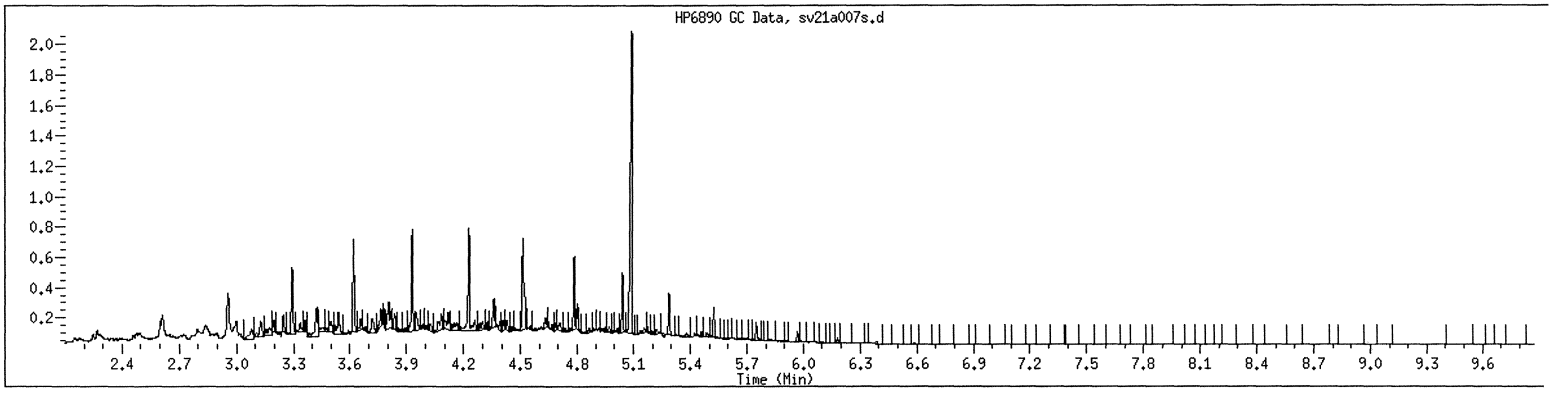
Operator: pmm
Column diameter: 0.53




21310171 2 1011

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1205 | SampleType | : CALIB_5 |
| Injection Date | : 08/22/2013 16:11 | Instrument | : gcsv21a.i |
| Operator | : pmm | | |
| Sample Info | : 1205*1 84-56-1 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv21a.i/2130822p.b/DRO.m | | |
| Dilution | : 1.00 | | |
| Matrix | : WATER | | |
| Integrator | : HP Genie | Compound Sublist | : O-TERPH |




NO MANUAL INTEGRATIONS

GCAL, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: 1600
Level: MED
Data Type: GC MULTI COMP
SpikeList File: droicv.spk
Sublist File: DRO.sub
Method File: /var/chem/gcsv21a.i/2130822p.b/DRO.m
Misc Info:

Client SDG: 2130822p
Fraction: SV

Operator: pmm
SampleType: LCS
Quant Type: ESTD

| SPIKE COMPOUND | CONC ADDED ug/L | CONC RECOVERED ug/L | % RECOVERED | LIMITS |
|---|---|---|---|---|
| 1 DRO | 500 | 452 | 90.40 | 80-120 |

GCAL, Inc.

Data file : /var/chem/gcsv21a.i/2130822p.b/sv21a008d.d
Lab Smp Id: 1600
Inj Date : 22-AUG-2013 16:30
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1600*1 84-54-3
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2130822p.b/DRO.m
Meth Date : 15-Oct-2013 15:44 rbm Quant Type: ESTD
Cal Date : 22-AUG-2013 16:11 Cal File: sv21a007s.d
Als bottle: 8 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: DRO.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Vo | 1.00000 | Volume of sample extracted (mL) |
| Vt | 1.00000 | Volume of final extract (uL) |
| Vi | 1.00000 | Volume injected (uL) |
| Uf | 1.00000 | Correction factor |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN (UG/ML) | CONCENTRATIONS FINAL ( ug/L) |
|---|---|---|---|---|---|---|
| 1 DRO | 3.615 | 5.082 | -1.467 | 888090955 | 452.188 | 452(M1) |

QC Flag Legend

M1- Compound response manually integrated because
Target system did not integrate.

Data File: /var/chem/gcsv21a.i/2130822p.b/sv21a008d.d

Date : 22-AUG-2013 16:30

Client ID:

Sample Info: 1600*1 84-54-3

Volume Injected (uL): 1.0

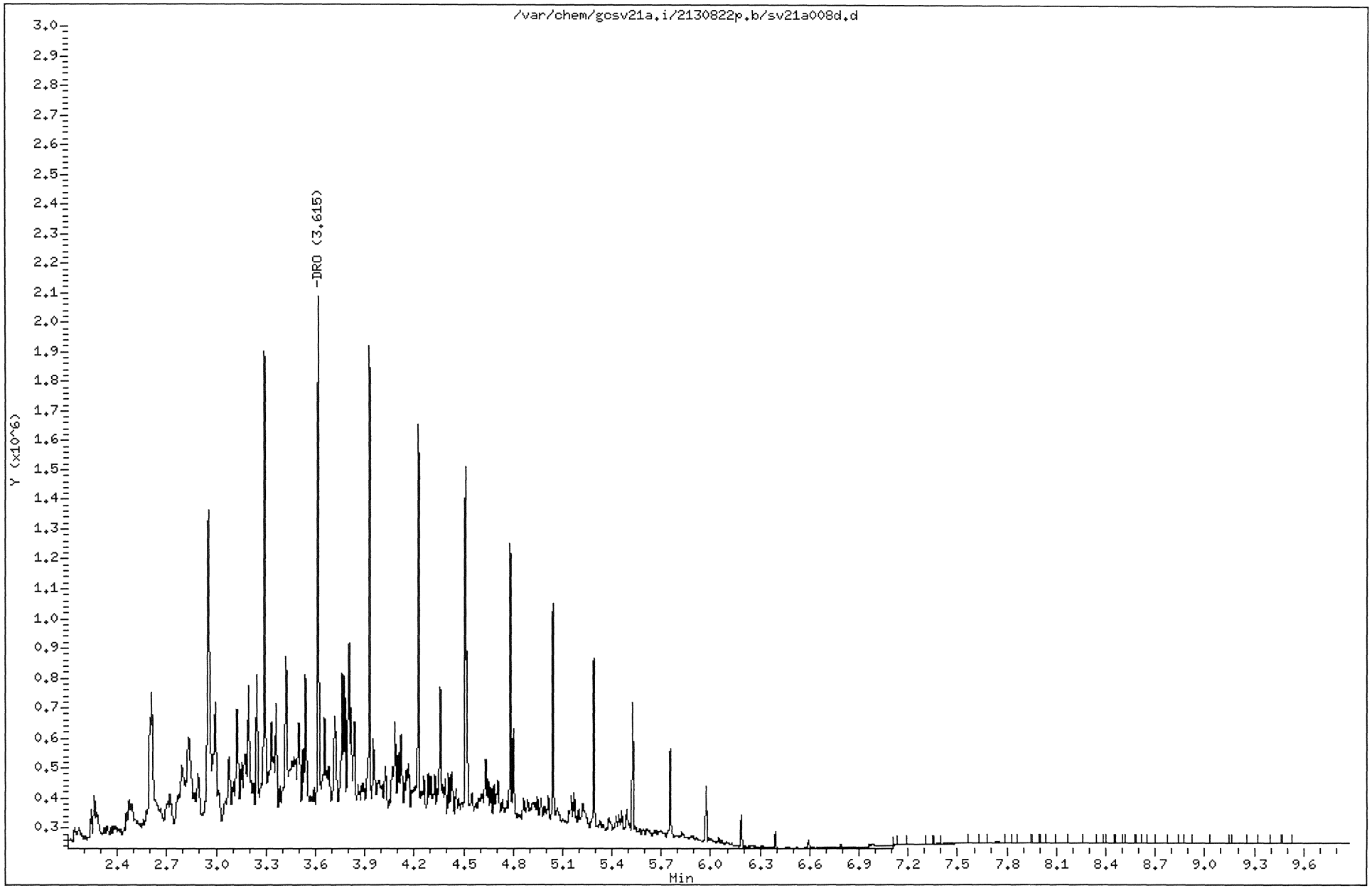
Column phase: RTX-5-30M

Instrument: gcsv21a.i

Operator: pmm

Column diameter: 0.53



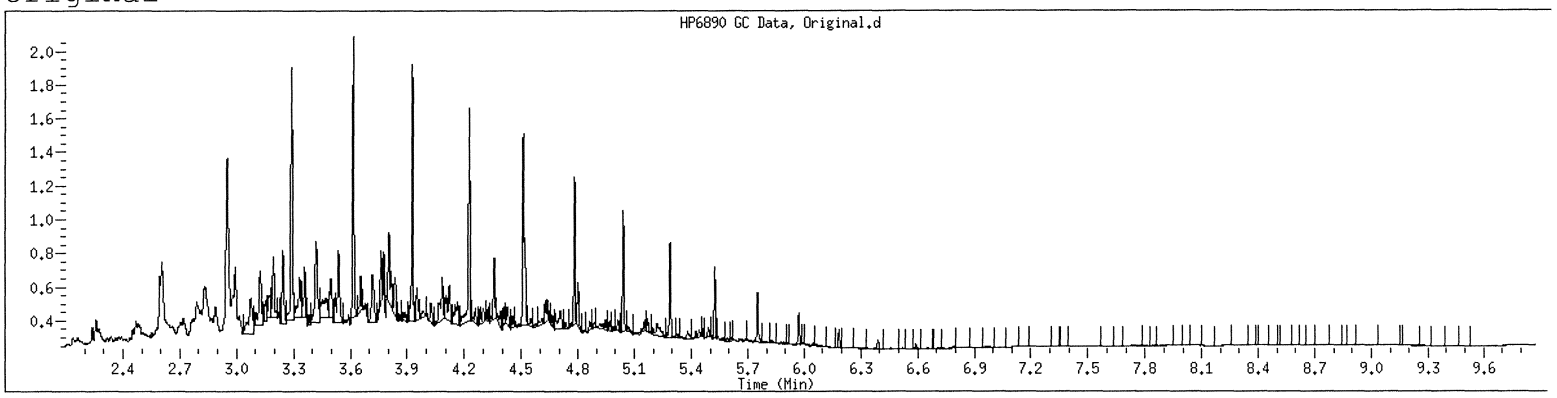



21310171 2 1015

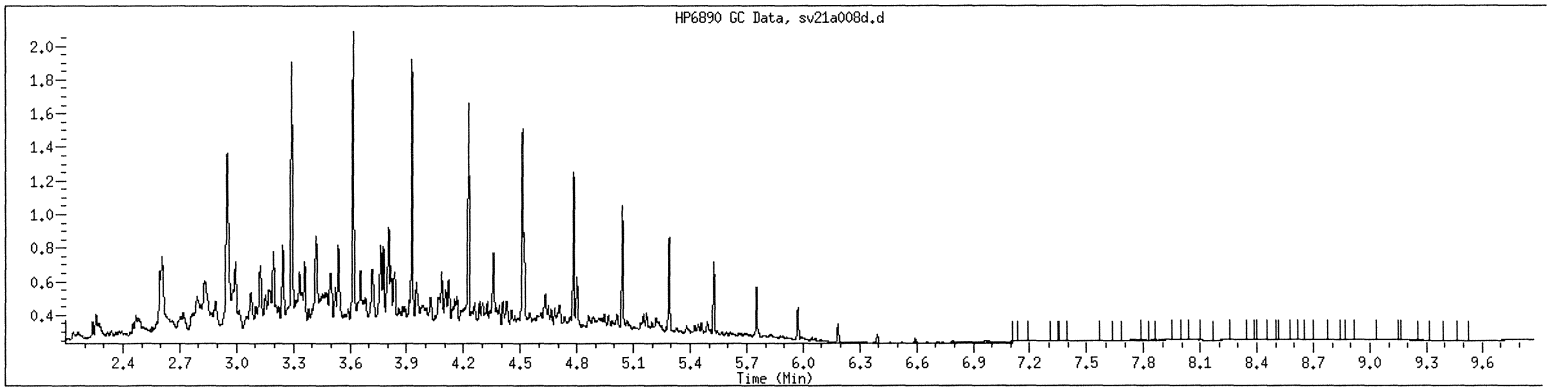
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1600 | SampleType | : LCS |
| Injection Date | : 08/22/2013 16:30 | Instrument | : gcsv21a.i |
| Operator | : pmm | | |
| Sample Info | : 1600*1 84-54-3 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv21a.i/2130822p.b/DRO.m | | |
| Dilution | : 1.00 | | |
| Matrix | : WATER | | |
| Integrator | : HP Genie | Compound Sublist | : DRO |

Original




Final



GCAL, Inc.

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a002d.d
Lab Smp Id: DCM 0000045283
Inj Date : 18-OCT-2013 08:07
Operator : pmm Inst ID: gcsv21a.i
Smp Info : DCM 0000045283
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2131018.b/DRO.m
Meth Date : 18-Oct-2013 11:19 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 16:11 Cal File: sv21a007s.d
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: DRO.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vi | 1.00000 | Volume injected (uL) |
| Uf | 1.00000 | Correction factor |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN (UG/ML) | FINAL ( ug/L) |
|---|---|---|---|---|---|---|
| 1 DRO | 6.468 | 5.079 | 1.389 | 24311877 | 12.3788 | 12.4(M1) |

QC Flag Legend

M1- Compound response manually integrated because
Target system did not integrate.

GCAL, Inc.

DRO CALCULATION

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a003d.d
DCM file : /var/chem/gcsv21a.i/2131018.b/sv21a002d.d
Lab Smp Id: 1400
Inj Date : 18-OCT-2013 08:22
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1400*1 84-56-1
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2131018.b/DRO.m
Meth Date : 18-Oct-2013 11:22 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 16:11 Cal File: sv21a007s.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: DRO.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vi | 1.00000 | Volume injected (uL) |
| Uf | 1.00000 | Correction factor |

RF FORMULA:

$$\mathbf{RF} = \frac{\text{(DRO Area) - (Surr Area)}}{\text{Conc}} = \frac{1112724400 - 64799939}{500.000}$$

$$= \frac{1047924461}{500.000}$$

$$= 2095848.9$$

$$\mathbf{\%D} = \frac{RF - RRF}{RRF} \times 100$$

$$= \frac{2095848.9 - 1963986}{1963986} \times 100$$

$$= 6.71\ \%$$

GCAL, Inc.

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a003d.d
Lab Smp Id: 1400
Inj Date : 18-OCT-2013 08:22
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1400*1 84-56-1
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2131018.b/DRO.m
Meth Date : 18-Oct-2013 11:22 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 16:11 Cal File: sv21a007s.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: DRO.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vi | 1.00000 | Volume injected (uL) |
| Uf | 1.00000 | Correction factor |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT (UG/ML) | AMOUNTS ON-COL (UG/ML) |
|---|---|---|---|---|---|---|
| 1 DRO | 5.065 | 5.079 | -0.014 | 1112724400 | 500.000 | 567(M1) |

QC Flag Legend

M1- Compound response manually integrated because
Target system did not integrate.

Data File: /var/chem/gcsv21a.i/2131018.b/sv21a003d.d

Date : 18-OCT-2013 08:22

Client ID:

Sample Info: 1400x1 84-56-1

Volume Injected (uL): 1.0

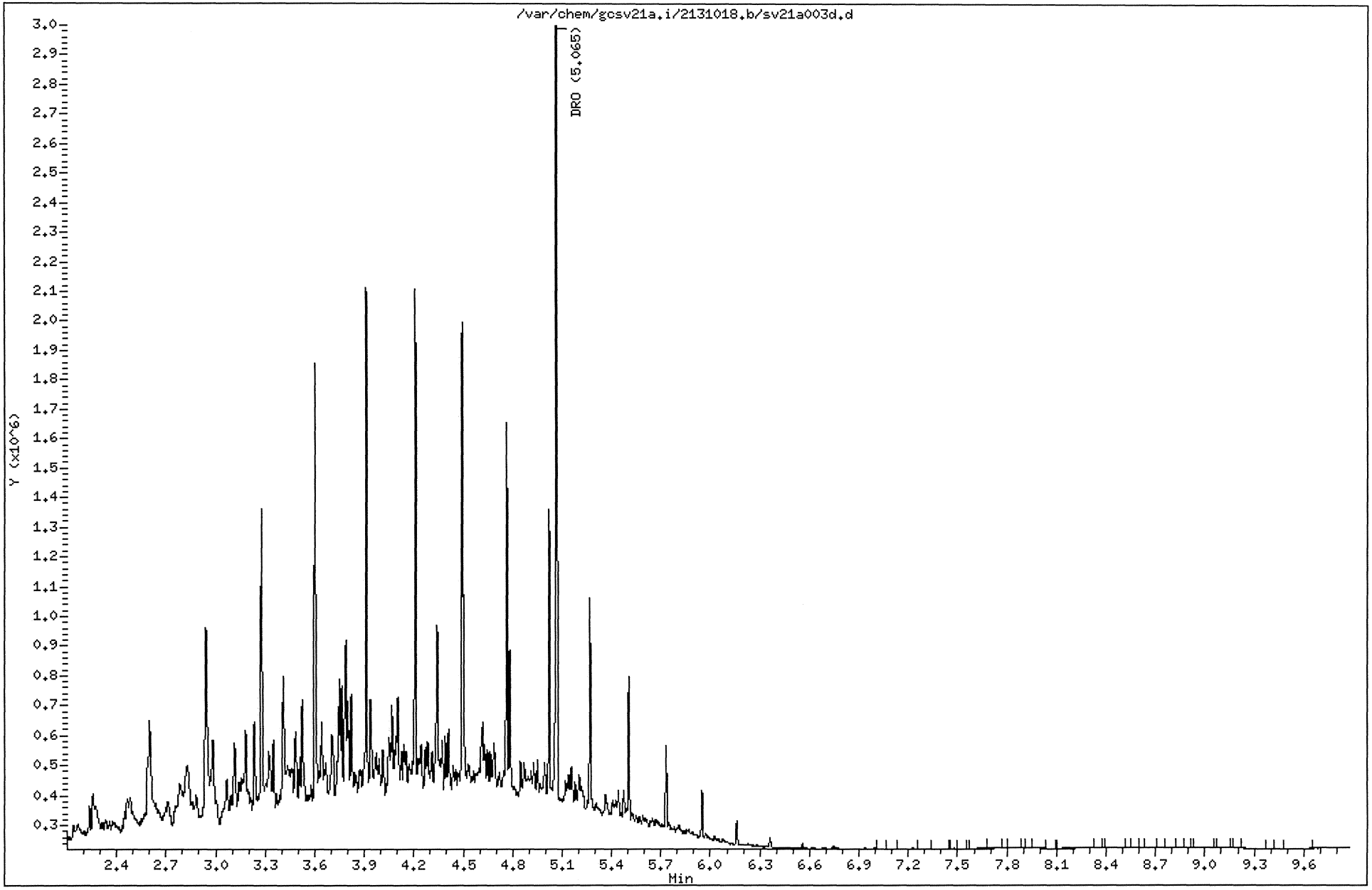
Column phase: RTX-5-30M



Instrument: gcsv21a.i

Operator: pmm

Column diameter: 0.53

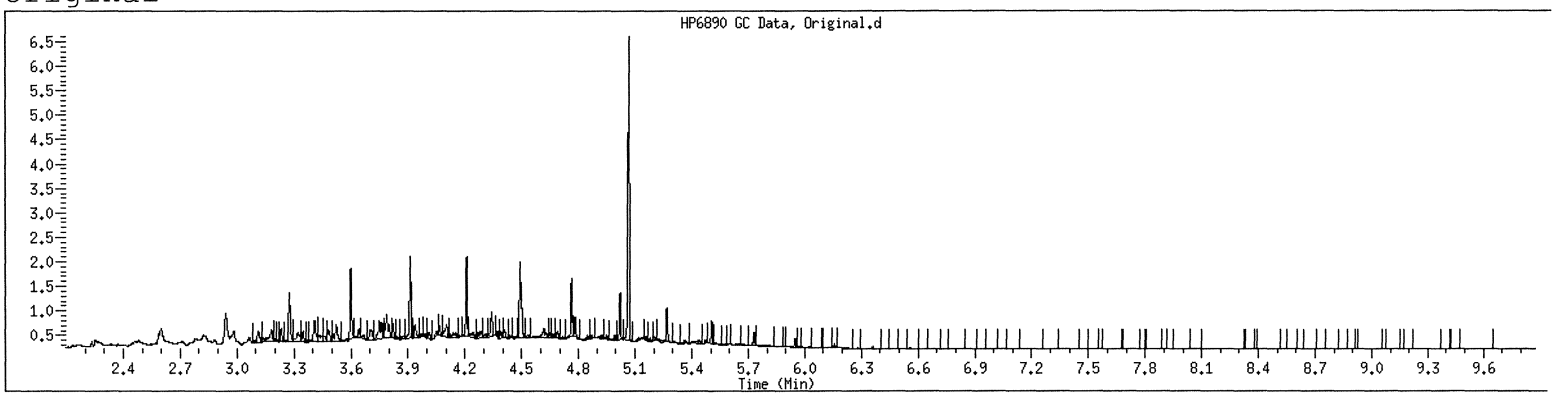



21310171 2 1020

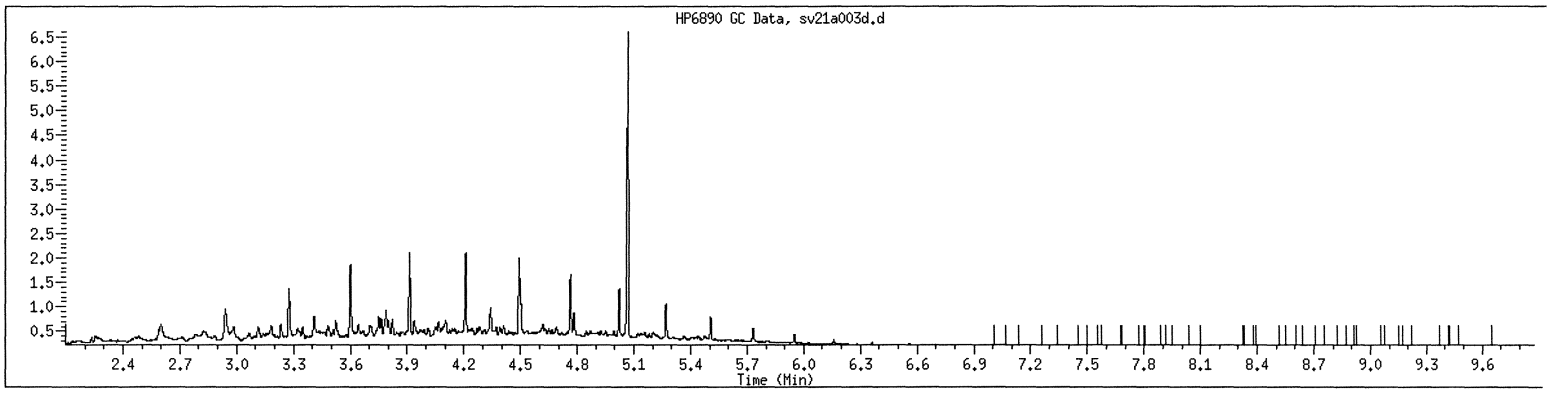
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1400 | SampleType | : CCALIB_3 |
| Injection Date | : 10/18/2013 08:22 | Instrument | : gcsv21a.i |
| Operator | : pmm | | |
| Sample Info | : 1400*1 84-56-1 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv21a.i/2131018.b/DRO.m | | |
| Dilution | : 1.00 | | |
| Matrix | : WATER | | |
| Integrator | : HP Genie | Compound Sublist | : DRO |

Original




Final



GCAL, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcsv21a.i Injection Date: 18-OCT-2013 08:22
Lab File ID: sv21a003s.d Init. Cal. Date(s): 03-APR-2013 22-AUG-2013
Analysis Type: WATER Init. Cal. Times: 11:51 16:11
Lab Sample ID: 1400 Quant Type: ESTD
Method: /var/chem/gcsv21a.i/2131018.b/DRO.m

| COMPOUND | RRF / AMOUNT | RF500 | MIN RRF | %D / %DRIFT | MAX %D / %DRIFT | CURVE TYPE |
|---|---|---|---|---|---|---|
| $ 9 O-TERPHENYL | 2507547 | 2591998 | 0.010 | -3.36784 | 20.00000 | Averaged |

| Average %D / Drift Results. |
|---|
| Calculated Average %D/Drift = 3.36784 |
| Maximun Average %D/Drift = 20.00000 |
| * Passed Average %D/Drift Test. |

GCAL, Inc.

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a003s.d
Lab Smp Id: 1400
Inj Date : 18-OCT-2013 08:22
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1400*1 84-56-1
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2131018.b/DRO.m
Meth Date : 18-Oct-2013 11:22 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 16:11 Cal File: sv21a007s.d
Als bottle: 3 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: O-TERPH.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vi | 1.00000 | Volume injected (uL) |
| Uf | 1.00000 | Correction factor |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT (UG/ML) | AMOUNTS ON-COL (UG/ML) |
|---|---|---|---|---|---|---|
| $ 9 O-TERPHENYL | 5.065 | 5.078 | -0.013 | 64799939 | 25.0000 | 25.8 |

Data File: /var/chem/gcsv21a.i/2131018.b/sv21a003s.d

Date : 18-OCT-2013 08:22

Client ID:

Sample Info: 1400x1 84-56-1

Volume Injected (uL): 1.0

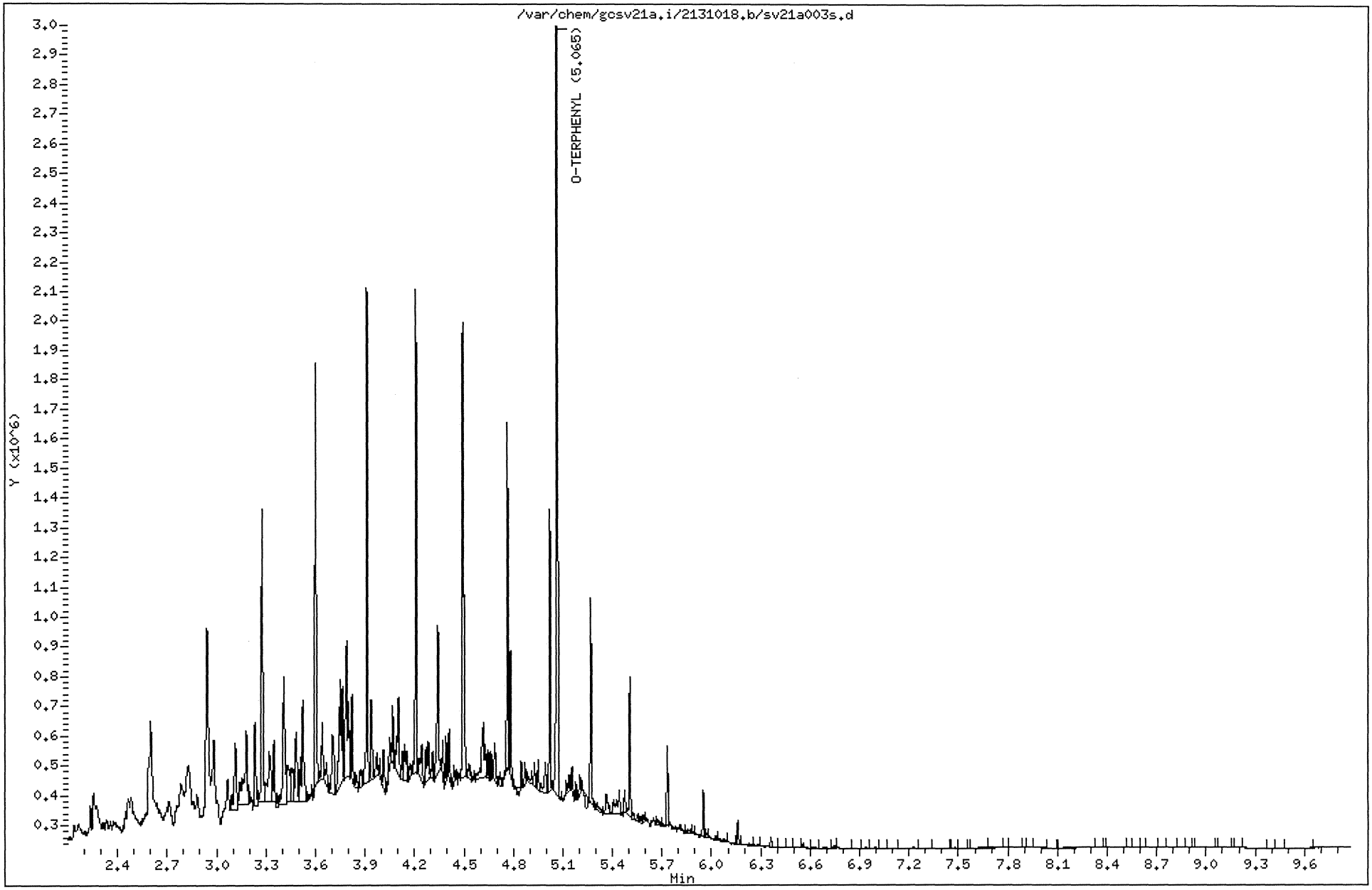
Column phase: RTX-5-30M

Instrument: gcsv21a.i

Operator: pmm

Column diameter: 0.53

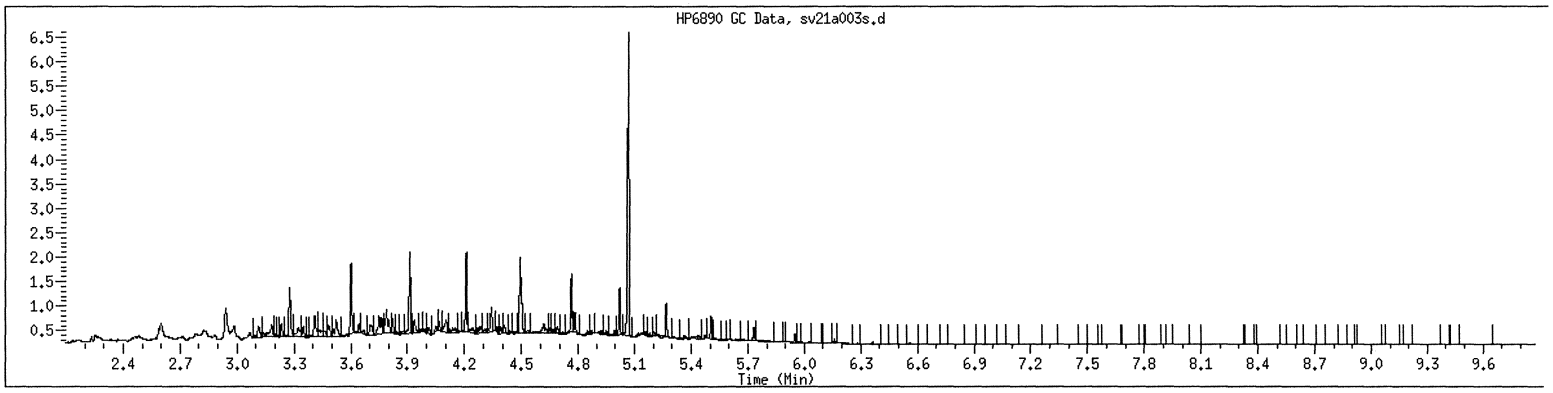





21310171 2 1024

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1400 | SampleType | : CCALIB_3 |
| Injection Date | : 10/18/2013 08:22 | Instrument | : gcsv21a.i |
| Operator | : pmm | | |
| Sample Info | : 1400*1 84-56-1 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv21a.i/2131018.b/DRO.m | | |
| Dilution | : 1.00 | | |
| Matrix | : WATER | | |
| Integrator | : HP Genie | Compound Sublist | : O-TERPH |




NO MANUAL INTEGRATIONS

GCAL, Inc.

DRO CALCULATION

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a014d.d
DCM file : /var/chem/gcsv21a.i/2131018.b/sv21a002d.d
Lab Smp Id: 1400
Inj Date : 18-OCT-2013 11:09
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1400*1 84-56-1
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2131018.b/DRO.m
Meth Date : 21-Oct-2013 08:58 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 16:11 Cal File: sv21a007s.d
Als bottle: 14 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: DRO.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vi | 1.00000 | Volume injected (uL) |
| Uf | 1.00000 | Correction factor |

RF FORMULA:

$$\mathbf{RF} = \frac{\text{(DRO Area) - (Surr Area)}}{\text{Conc}} = \frac{1112752953 - 65046887}{500.000}$$

$$= \frac{1047706066}{500.000}$$

$$= 2095412.1$$

$$\mathbf{\%D} = \frac{RF - RRF}{RRF} \times 100$$

$$= \frac{2095412.1 - 1963986}{1963986} \times 100$$

$$= 6.69\ \%$$

GCAL, Inc.

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a014d.d
Lab Smp Id: 1400
Inj Date : 18-OCT-2013 11:09
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1400*1 84-56-1
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2131018.b/DRO.m
Meth Date : 21-Oct-2013 08:58 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 16:11 Cal File: sv21a007s.d
Als bottle: 14 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: DRO.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vi | 1.00000 | Volume injected (uL) |
| Uf | 1.00000 | Correction factor |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT (UG/ML) | AMOUNTS ON-COL (UG/ML) |
|---|---|---|---|---|---|---|
| 1 DRO | 5.065 | 5.079 | -0.014 | 1112752953 | 500.000 | 567(M1) |

QC Flag Legend

M1- Compound response manually integrated because
Target system did not integrate.

Data File: /var/chem/gcsv21a.i/2131018.b/sv21a014d.d

Date : 18-OCT-2013 11:09

Client ID:

Sample Info: 1400*1 84-56-1

Volume Injected (uL): 1.0

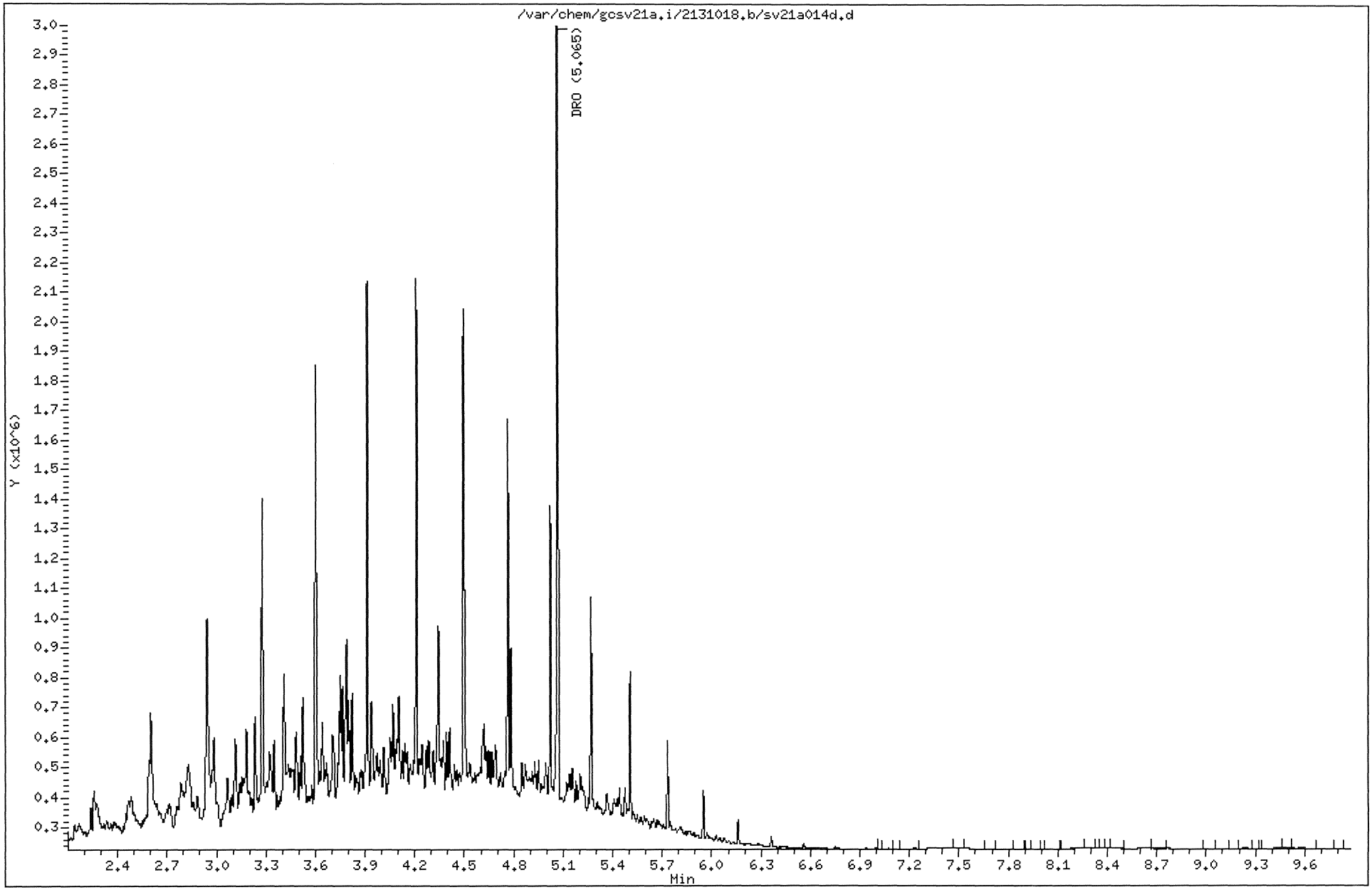
Column phase: RTX-5-30M

Instrument: gcsv21a.i

Operator: pmm

Column diameter: 0.53



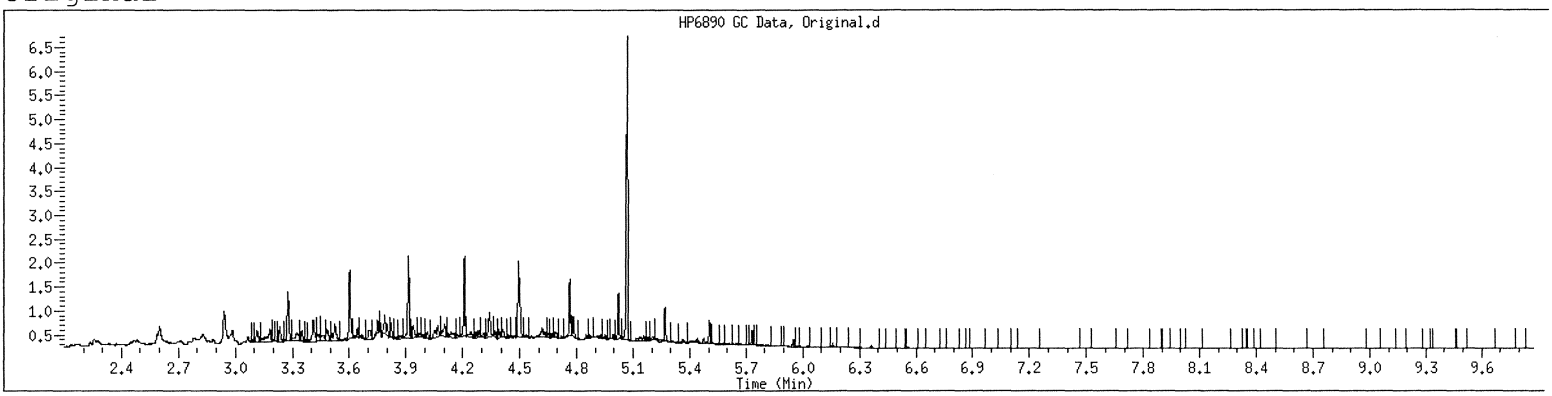



2131018.12 1025

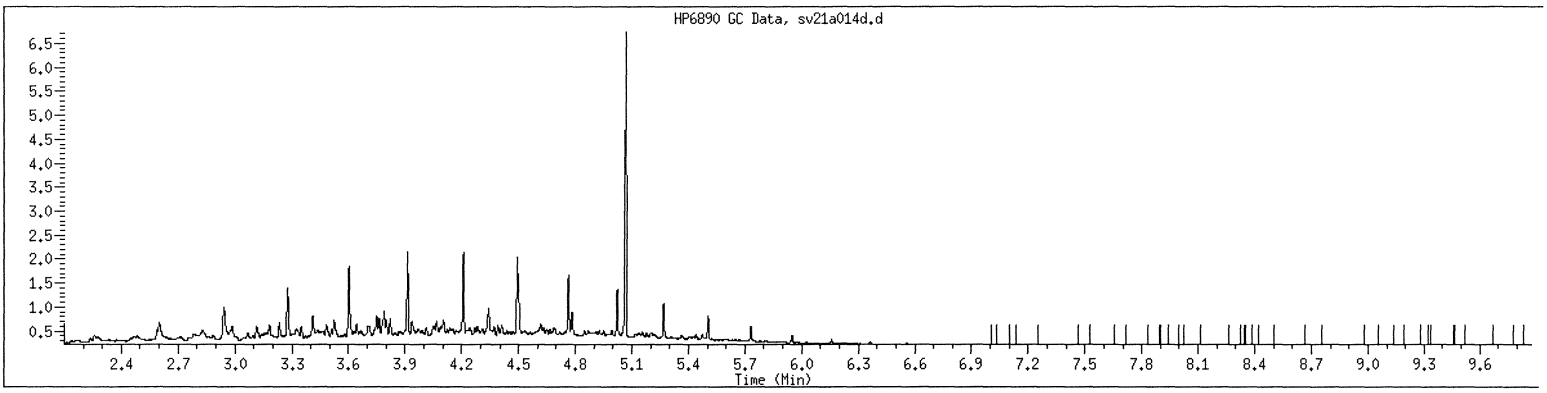
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1400 | SampleType | : CCALIB_3 |
| Injection Date | : 10/18/2013 11:09 | Instrument | : gcsv21a.i |
| Operator | : pmm | | |
| Sample Info | : 1400*1 84-56-1 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv21a.i/2131018.b/DRO.m | | |
| Dilution | : 1.00 | | |
| Matrix | : WATER | | |
| Integrator | : HP Genie | Compound Sublist | : DRO |

Original




Final



GCAL, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcsv21a.i Injection Date: 18-OCT-2013 11:09
Lab File ID: sv21a014s.d Init. Cal. Date(s): 03-APR-2013 22-AUG-2013
Analysis Type: WATER Init. Cal. Times: 11:51 16:11
Lab Sample ID: 1400 Quant Type: ESTD
Method: /var/chem/gcsv21a.i/2131018.b/DRO.m

| COMPOUND | RRF / AMOUNT | RF500 | MIN RRF | %D / %DRIFT | MAX %D / %DRIFT | CURVE TYPE |
|---|---|---|---|---|---|---|
| $ 9 O-TERPHENYL | 2507547 | 2601875 | 0.010 | -3.76177 | 20.00000 | Averaged |

Average %D / Drift Results.

Calculated Average %D/Drift = 3.76177
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

GCAL, Inc.

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a014s.d
Lab Smp Id: 1400
Inj Date : 18-OCT-2013 11:09
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1400*1 84-56-1
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2131018.b/DRO.m
Meth Date : 21-Oct-2013 08:58 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 16:11 Cal File: sv21a007s.d
Als bottle: 14 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: O-TERPH.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vi | 1.00000 | Volume injected (uL) |
| Uf | 1.00000 | Correction factor |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT (UG/ML) | AMOUNTS ON-COL (UG/ML) |
|---|---|---|---|---|---|---|
| $ 9 O-TERPHENYL | 5.065 | 5.078 | -0.013 | 65046887 | 25.0000 | 25.9 |

Data File: /var/chem/gcsv21a.i/2131018.b/sv21a014s.d

Date : 18-OCT-2013 11:09

Client ID:

Sample Info: 1400x1 84-56-1

Volume Injected (uL): 1.0

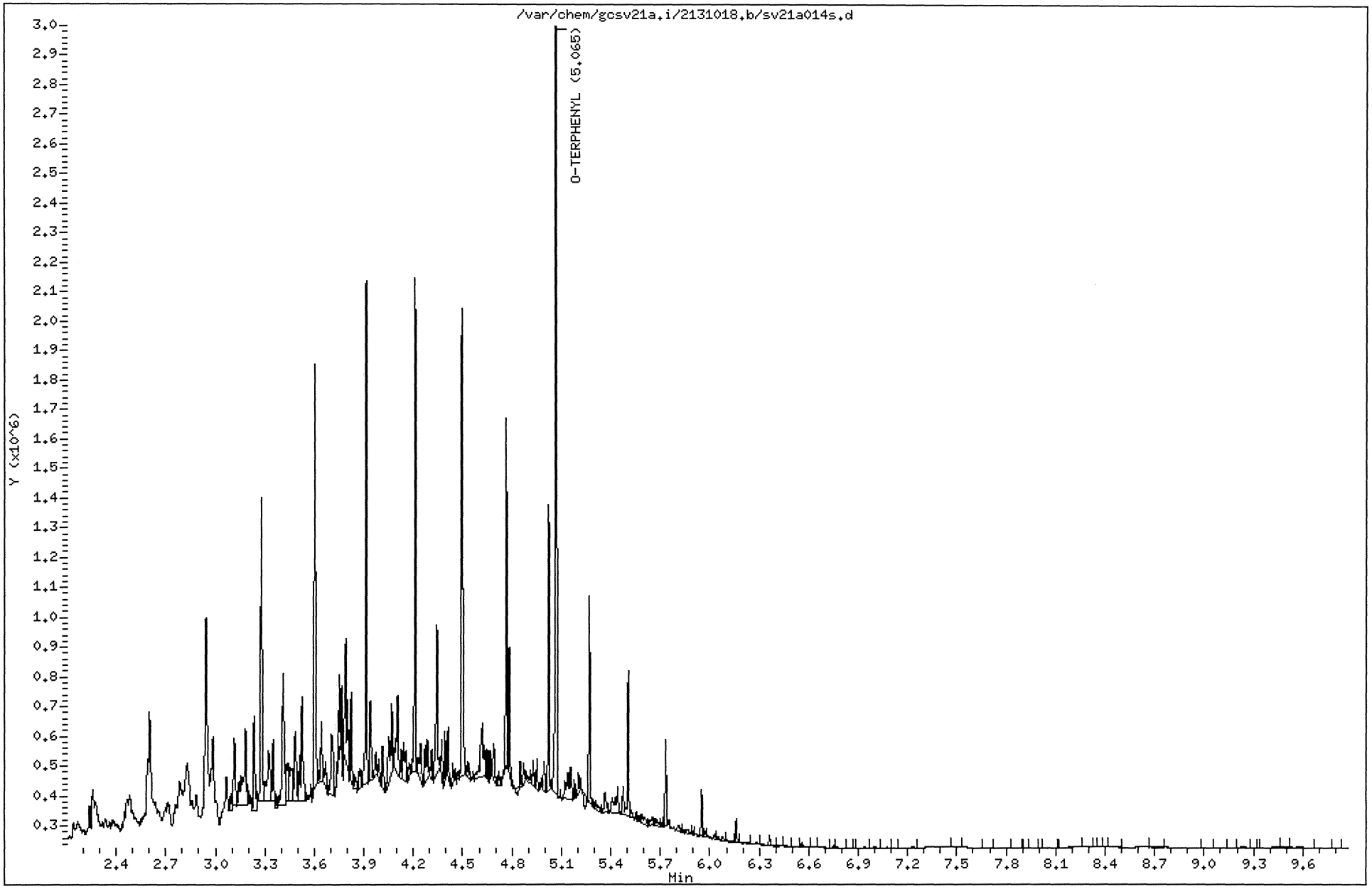
Column phase: RTX-5-30M



Instrument: gcsv21a.i

Operator: pmm

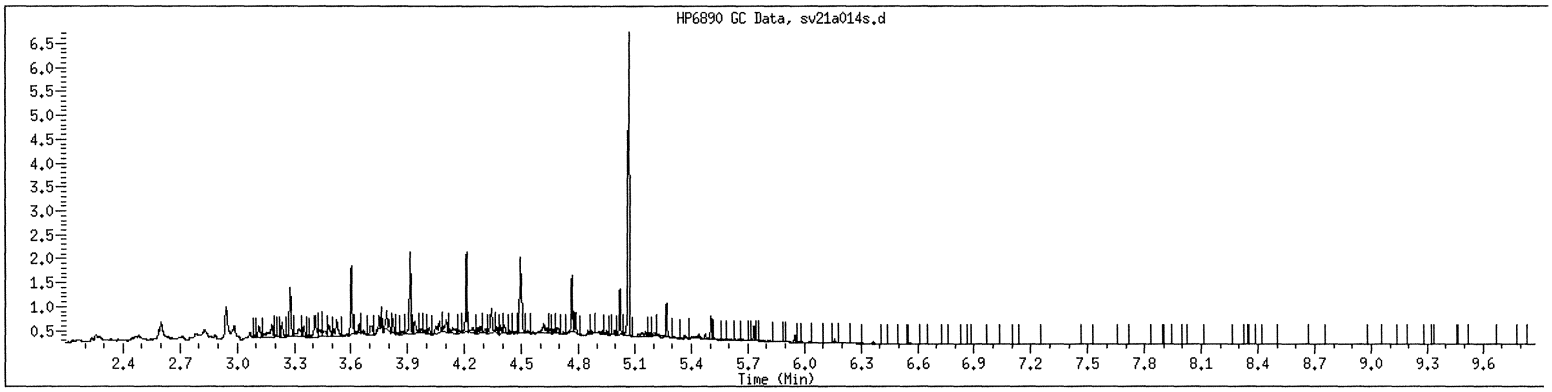
Column diameter: 0.53




2131017 12 1032

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1400 | SampleType | : CCALIB_3 |
| Injection Date | : 10/18/2013 11:09 | Instrument | : gcsv21a.i |
| Operator | : pmm | | |
| Sample Info | : 1400*1 84-56-1 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv21a.i/2131018.b/DRO.m | | |
| Dilution | : 1.00 | | |
| Matrix | : WATER | | |
| Integrator | : HP Genie | Compound Sublist | : O-TERPH |




NO MANUAL INTEGRATIONS

GCAL, Inc.

DRO CALCULATION

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a019d.d
DCM file : /var/chem/gcsv21a.i/2131018.b/sv21a002d.d
Lab Smp Id: 1400
Inj Date : 18-OCT-2013 12:43
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1400*1 84-56-1
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2131018.b/DRO.m
Meth Date : 21-Oct-2013 08:58 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 16:11 Cal File: sv21a007s.d
Als bottle: 19 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: DRO.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vi | 1.00000 | Volume injected (uL) |
| Uf | 1.00000 | Correction factor |

RF FORMULA:

$$\mathbf{RF} = \frac{\text{(DRO Area) - (Surr Area)}}{\text{Conc}} = \frac{1064792550 - 66873724}{500.000}$$

$$= \frac{997918826}{500.000}$$

$$= 1995837.7$$

$$\mathbf{\%D} = \frac{RF - RRF}{RRF} \times 100$$

$$= \frac{1995837.7 - 1963986}{1963986} \times 100$$

$$= 1.62\ \%$$

GCAL, Inc.

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a019d.d
Lab Smp Id: 1400
Inj Date : 18-OCT-2013 12:43
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1400*1 84-56-1
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2131018.b/DRO.m
Meth Date : 21-Oct-2013 08:58 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 16:11 Cal File: sv21a007s.d
Als bottle: 19 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: DRO.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vi | 1.00000 | Volume injected (uL) |
| Uf | 1.00000 | Correction factor |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT (UG/ML) | AMOUNTS ON-COL (UG/ML) |
|---|---|---|---|---|---|---|
| 1 DRO | 5.066 | 5.079 | -0.013 | 1064792550 | 500.000 | 542(M1) |

QC Flag Legend

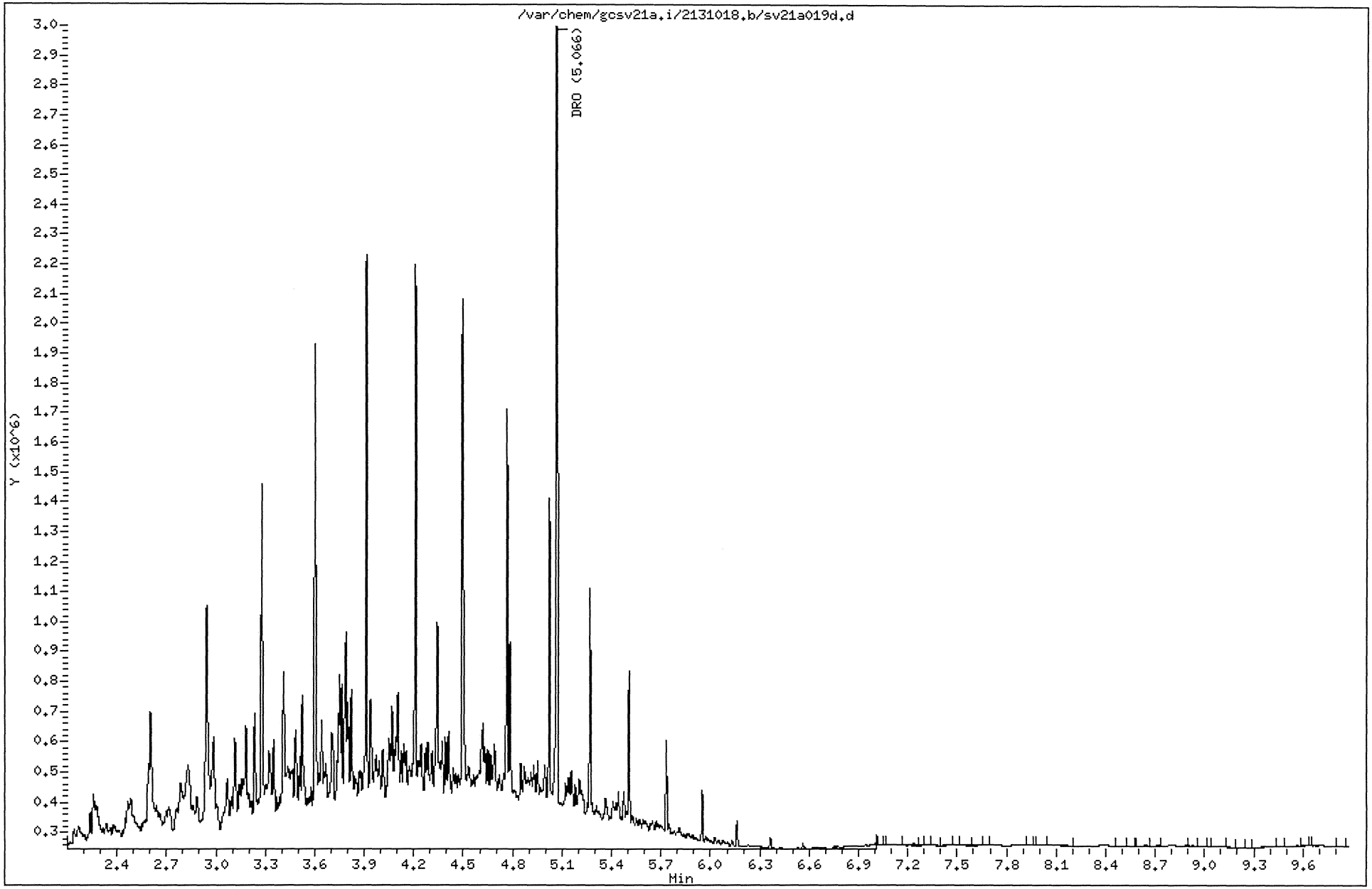
M1- Compound response manually integrated because
Target system did not integrate.

Data File: /var/chem/gcsv21a.i/2131018.b/sv21a019d.d
Date : 18-OCT-2013 12:43
Client ID:
Sample Info: 1400*1 84-56-1
Volume Injected (uL): 1.0
Column phase: RTX-5-30M

Instrument: gcsv21a.i

Operator: pmm
Column diameter: 0.53



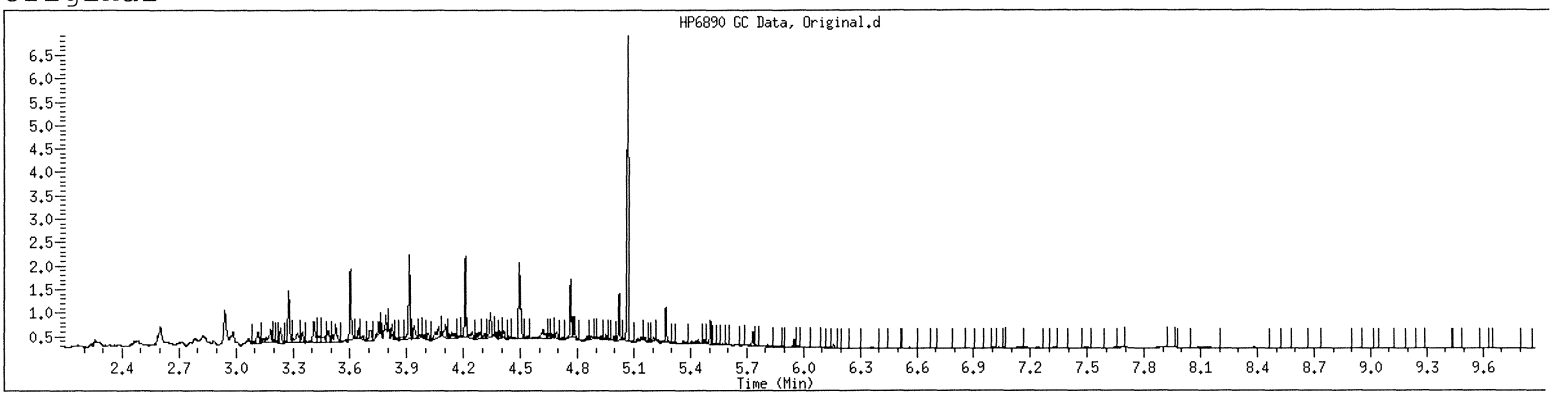



2131018.12 1035

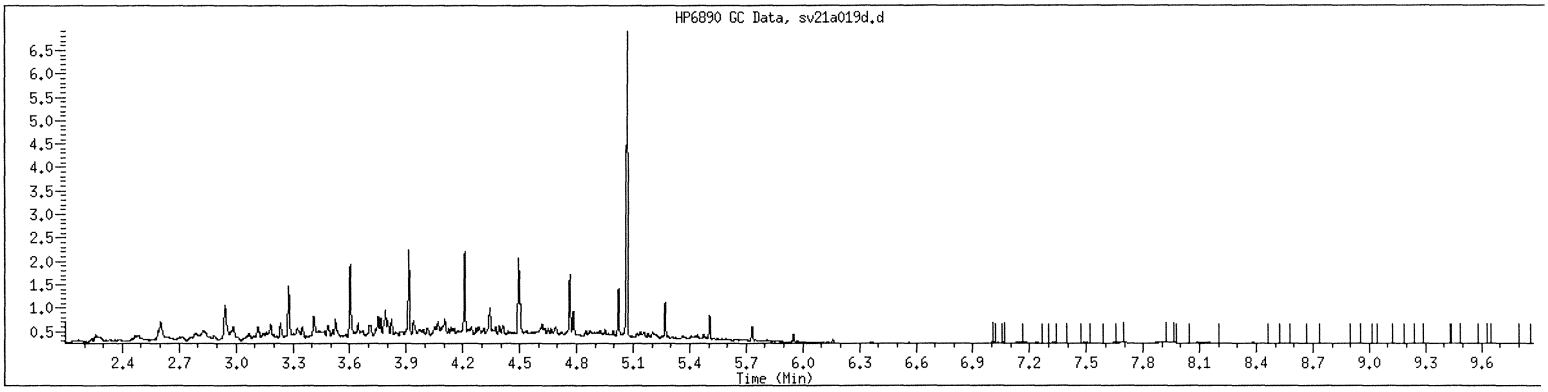
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1400 | SampleType | : CCALIB_3 |
| Injection Date | : 10/18/2013 12:43 | Instrument | : gcsv21a.i |
| Operator | : pmm | | |
| Sample Info | : 1400*1 84-56-1 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv21a.i/2131018.b/DRO.m | | |
| Dilution | : 1.00 | | |
| Matrix | : WATER | | |
| Integrator | : HP Genie | Compound Sublist | : DRO |

Original




Final



GCAL, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcsv21a.i Injection Date: 18-OCT-2013 12:43
Lab File ID: sv21a019s.d Init. Cal. Date(s): 03-APR-2013 22-AUG-2013
Analysis Type: WATER Init. Cal. Times: 11:51 16:11
Lab Sample ID: 1400 Quant Type: ESTD
Method: /var/chem/gcsv21a.i/2131018.b/DRO.m

| COMPOUND | RRF / AMOUNT | RF500 | MIN RRF | %D / %DRIFT | MAX %D / %DRIFT | CURVE TYPE |
|---|---|---|---|---|---|---|
| $ 9 O-TERPHENYL | 2507547 | 2674949 | 0.010 | -6.67591 | 20.00000 | Averaged |

| Average %D / Drift Results. |
|---|
| Calculated Average %D/Drift = 6.67591 |
| Maximun Average %D/Drift = 20.00000 |
| * Passed Average %D/Drift Test. |

GCAL, Inc.

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a019s.d
Lab Smp Id: 1400
Inj Date : 18-OCT-2013 12:43
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1400*1 84-56-1
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2131018.b/DRO.m
Meth Date : 21-Oct-2013 08:58 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 16:11 Cal File: sv21a007s.d
Als bottle: 19 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: O-TERPH.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vi | 1.00000 | Volume injected (uL) |
| Uf | 1.00000 | Correction factor |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT (UG/ML) | AMOUNTS ON-COL (UG/ML) |
|---|---|---|---|---|---|---|
| $ 9 O-TERPHENYL | 5.066 | 5.078 | -0.012 | 66873724 | 25.0000 | 26.7 |

Data File: /var/chem/gcsv21a.i/2131018.b/sv21a019s.d

Date : 18-OCT-2013 12:43

Client ID:

Sample Info: 1400*1 84-56-1

Volume Injected (uL): 1.0

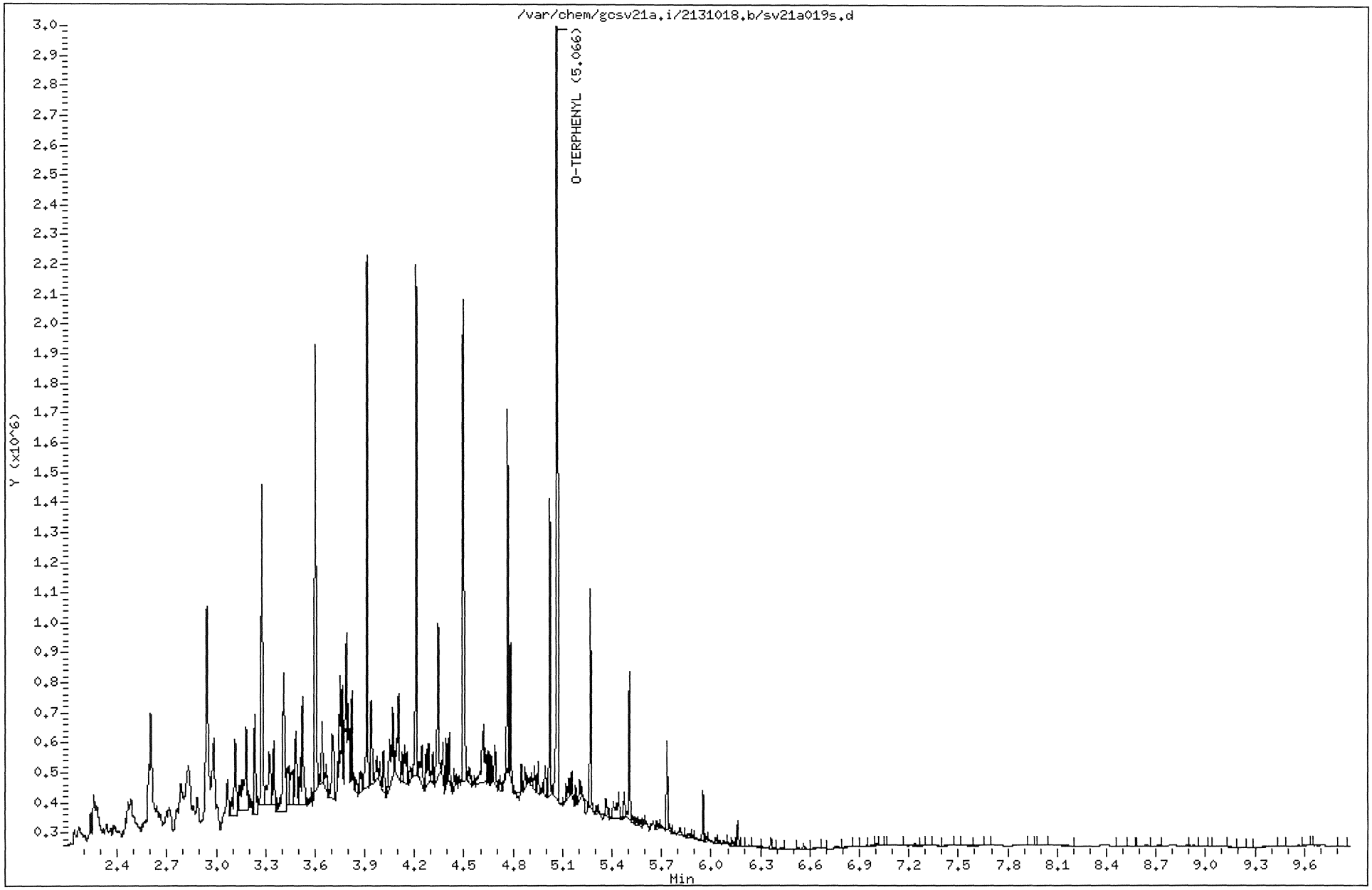
Column phase: RTX-5-30M



Instrument: gcsv21a.i

Operator: pmm

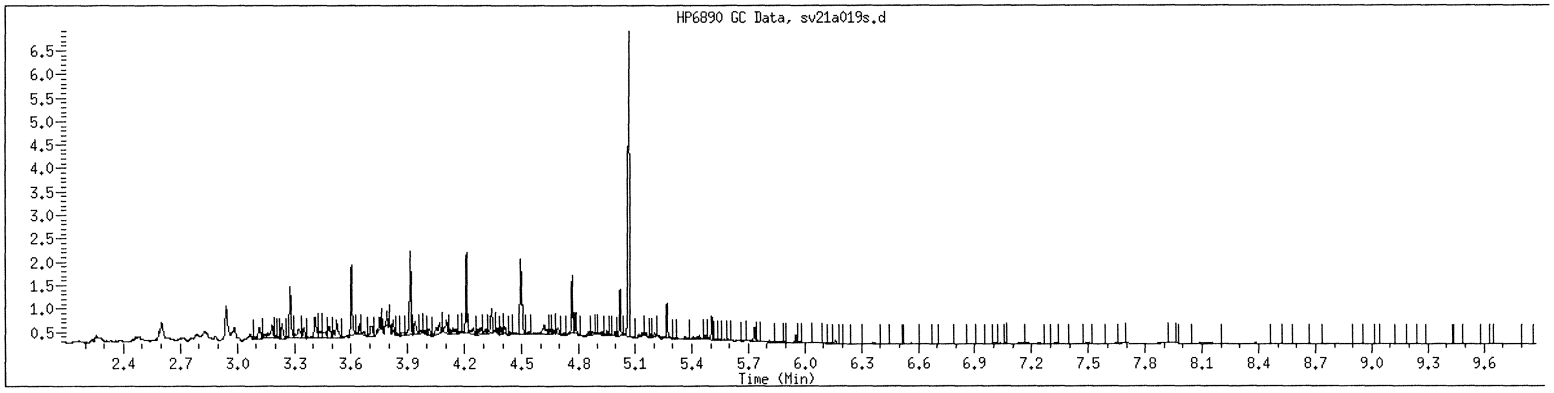
Column diameter: 0.53




2131018.12 1040

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1400 | SampleType | : CCALIB_3 |
| Injection Date | : 10/18/2013 12:43 | Instrument | : gcsv21a.i |
| Operator | : pmm | | |
| Sample Info | : 1400*1 84-56-1 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv21a.i/2131018.b/DRO.m | | |
| Dilution | : 1.00 | | |
| Matrix | : WATER | | |
| Integrator | : HP Genie | Compound Sublist | : O-TERPH |




NO MANUAL INTEGRATIONS

GCAL, Inc.

DRO CALCULATION

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a028d.d
DCM file : /var/chem/gcsv21a.i/2131018.b/sv21a002d.d
Lab Smp Id: 1400
Inj Date : 18-OCT-2013 15:12
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1400*1 84-56-1
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2131018.b/DRO.m
Meth Date : 21-Oct-2013 08:59 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 16:11 Cal File: sv21a007s.d
Als bottle: 28 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: DRO.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vi | 1.00000 | Volume injected (uL) |
| Uf | 1.00000 | Correction factor |

RF FORMULA:

$$\mathbf{RF} = \frac{\text{(DRO Area) - (Surr Area)}}{\text{Conc}} = \frac{1039633665 - 68561562}{500.000}$$

$$= \frac{971072103}{500.000}$$

$$= 1942144.2$$

$$\mathbf{\%D} = \frac{RF - RRF}{RRF} \times 100$$

$$= \frac{1942144.2 - 1963986}{1963986} \times 100$$

$$= -1.11\ \%$$

GCAL, Inc.

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a028d.d
Lab Smp Id: 1400
Inj Date : 18-OCT-2013 15:12
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1400*1 84-56-1
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2131018.b/DRO.m
Meth Date : 21-Oct-2013 08:59 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 16:11 Cal File: sv21a007s.d
Als bottle: 28 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: DRO.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vi | 1.00000 | Volume injected (uL) |
| Uf | 1.00000 | Correction factor |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT (UG/ML) | AMOUNTS ON-COL (UG/ML) |
|---|---|---|---|---|---|---|
| 1 DRO | 5.067 | 5.079 | -0.012 | 1039633665 | 500.000 | 529(M1) |

QC Flag Legend

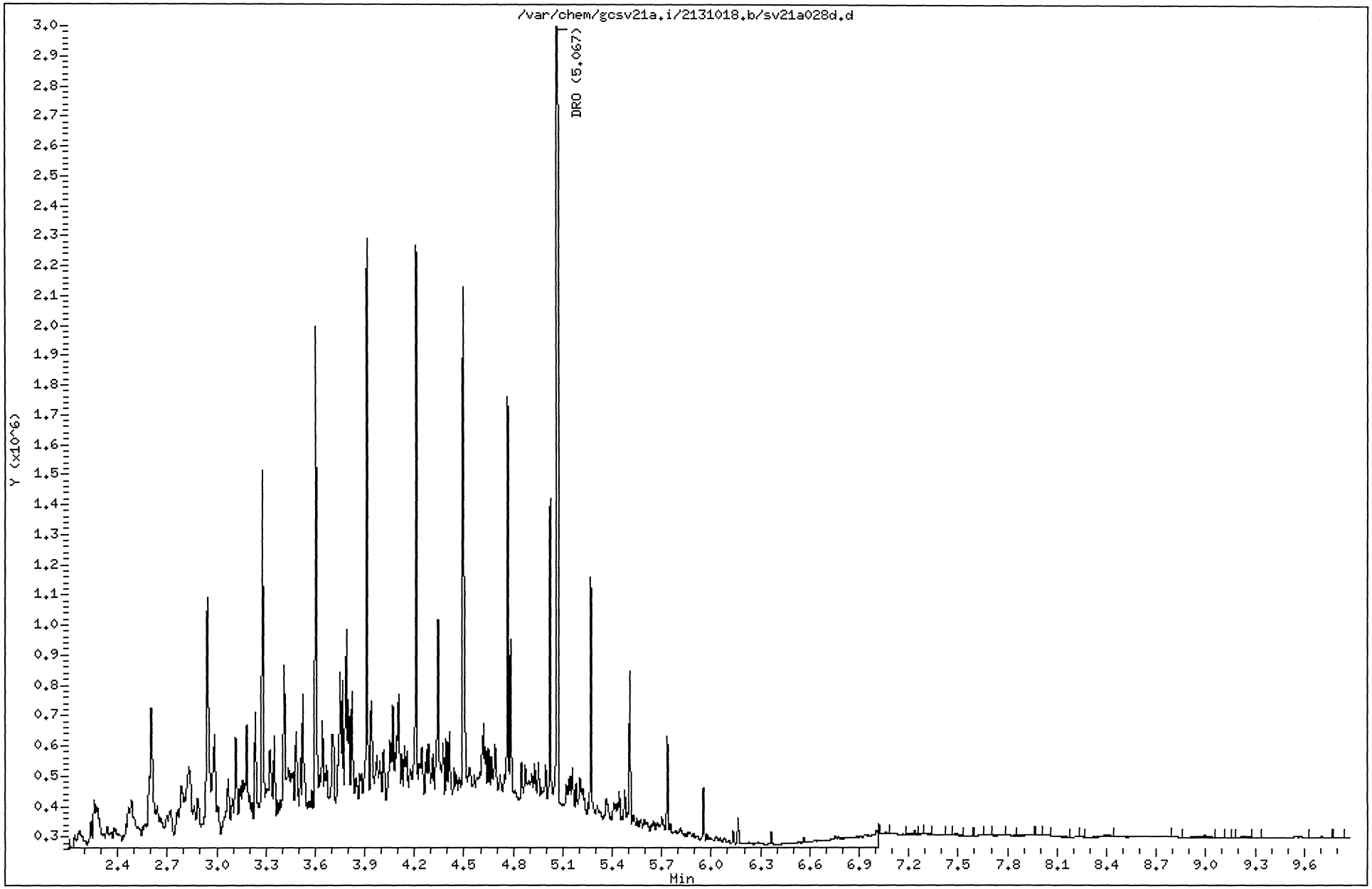
M1- Compound response manually integrated because
Target system did not integrate.

Data File: /var/chem/gcsv21a.i/2131018.b/sv21a028d.d
Date : 18-OCT-2013 15:12
Client ID:
Sample Info: 1400*1 84-56-1
Volume Injected (uL): 1.0
Column phase: RTX-5-30M



Instrument: gcsv21a.i

Operator: pmm
Column diameter: 0.53

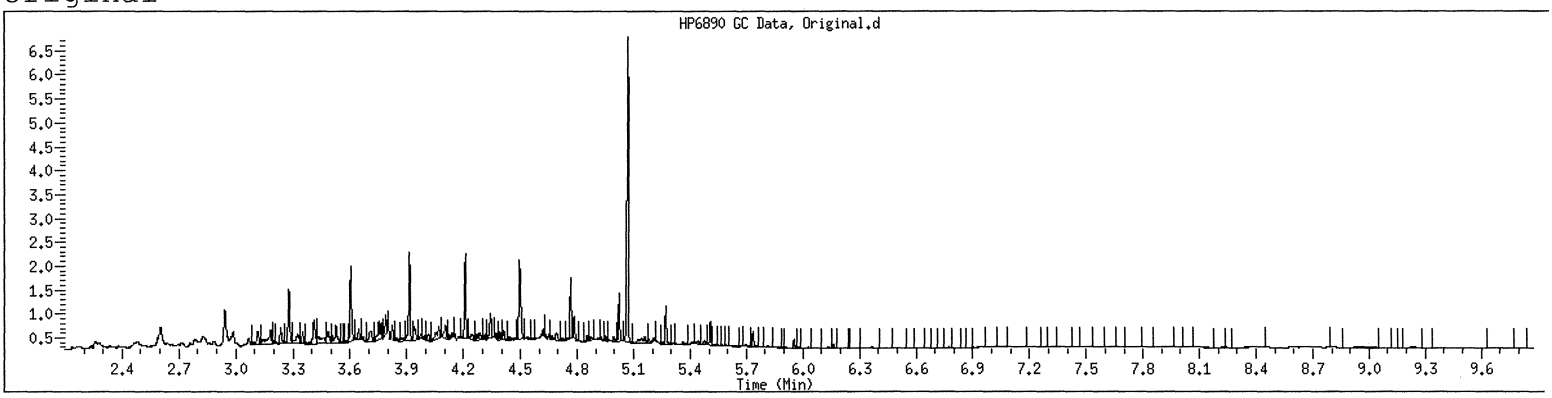



2131017 12 1044

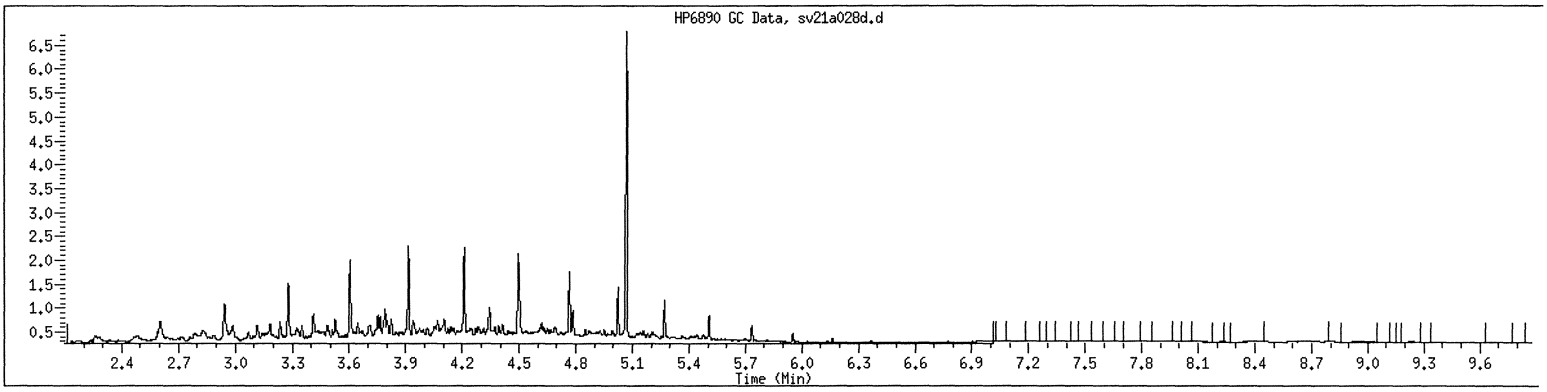
# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1400 | SampleType | : CCALIB_3 |
| Injection Date | : 10/18/2013 15:12 | Instrument | : gcsv21a.i |
| Operator | : pmm | | |
| Sample Info | : 1400*1 84-56-1 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv21a.i/2131018.b/DRO.m | | |
| Dilution | : 1.00 | | |
| Matrix | : WATER | | |
| Integrator | : HP Genie | Compound Sublist | : DRO |

Original




Final



GCAL, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: gcsv21a.i Injection Date: 18-OCT-2013 15:12
Lab File ID: sv21a028s.d Init. Cal. Date(s): 03-APR-2013 22-AUG-2013
Analysis Type: WATER Init. Cal. Times: 11:51 16:11
Lab Sample ID: 1400 Quant Type: ESTD
Method: /var/chem/gcsv21a.i/2131018.b/DRO.m

| COMPOUND | RRF / AMOUNT | RF500 | MIN RRF | %D / %DRIFT | MAX %D / %DRIFT | CURVE TYPE |
|---|---|---|---|---|---|---|
| $ 9 O-TERPHENYL | 2507547 | 2742462 | 0.010 | -9.36832 | 20.00000 | Averaged |

Average %D / Drift Results.

Calculated Average %D/Drift = 9.36832
Maximun Average %D/Drift = 20.00000
* Passed Average %D/Drift Test.

GCAL, Inc.

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a028s.d
Lab Smp Id: 1400
Inj Date : 18-OCT-2013 15:12
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1400*1 84-56-1
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2131018.b/DRO.m
Meth Date : 21-Oct-2013 08:59 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 16:11 Cal File: sv21a007s.d
Als bottle: 28 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: O-TERPH.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vo * Vi) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Vo | 1000.00000 | Volume of sample extracted (mL) |
| Vt | 1000.00000 | Volume of final extract (uL) |
| Vi | 1.00000 | Volume injected (uL) |
| Uf | 1.00000 | Correction factor |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | AMOUNTS CAL-AMT (UG/ML) | AMOUNTS ON-COL (UG/ML) |
|---|---|---|---|---|---|---|
| $ 9 O-TERPHENYL | 5.067 | 5.078 | -0.011 | 68561562 | 25.0000 | 27.3 |

Data File: /var/chem/gcsv21a.i/2131018.b/sv21a028s.d

Date : 18-OCT-2013 15:12

Client ID:

Sample Info: 1400x1 84-56-1

Volume Injected (uL): 1.0

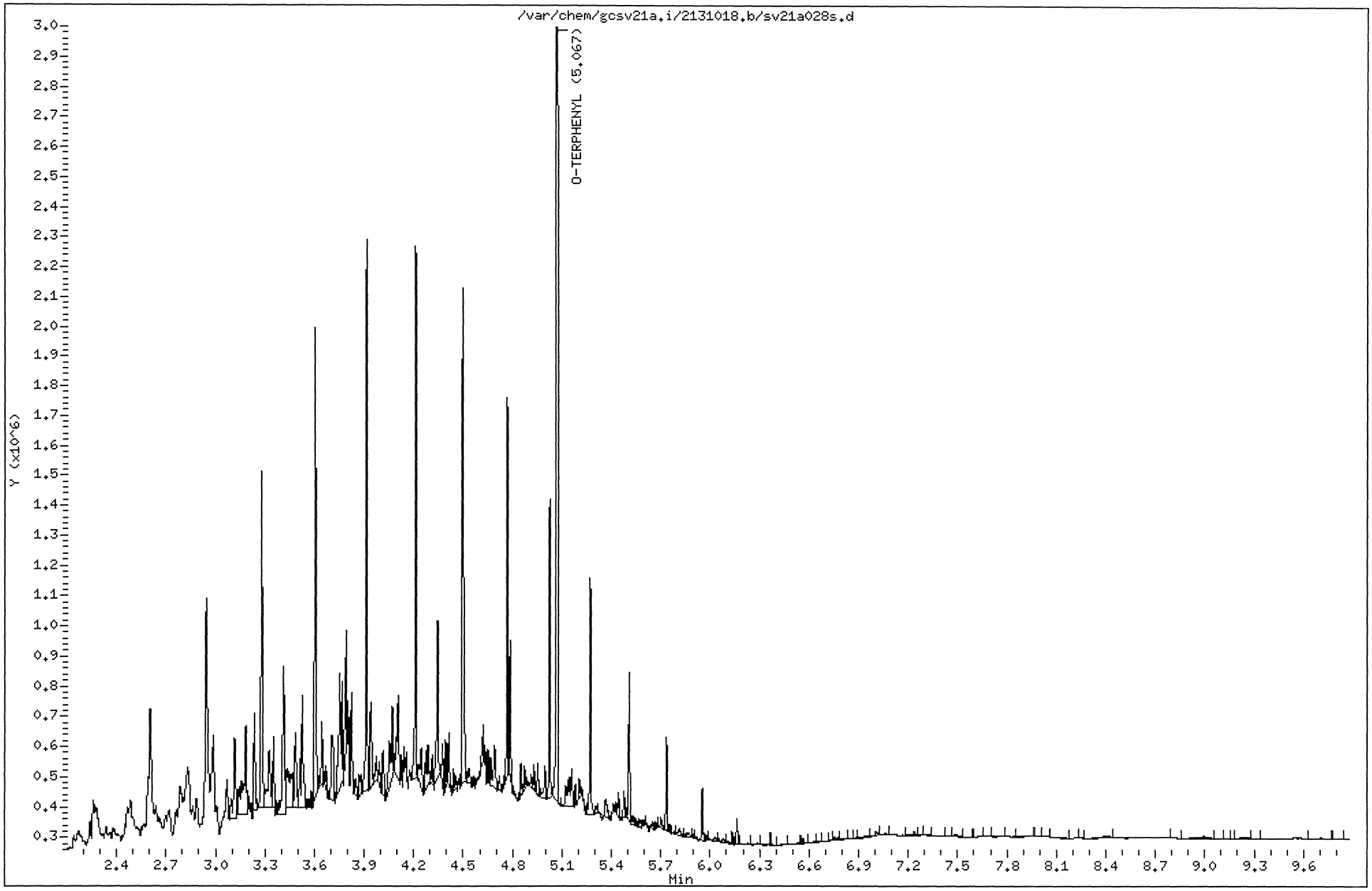
Column phase: RTX-5-30M



Instrument: gcsv21a.i

Operator: pmm

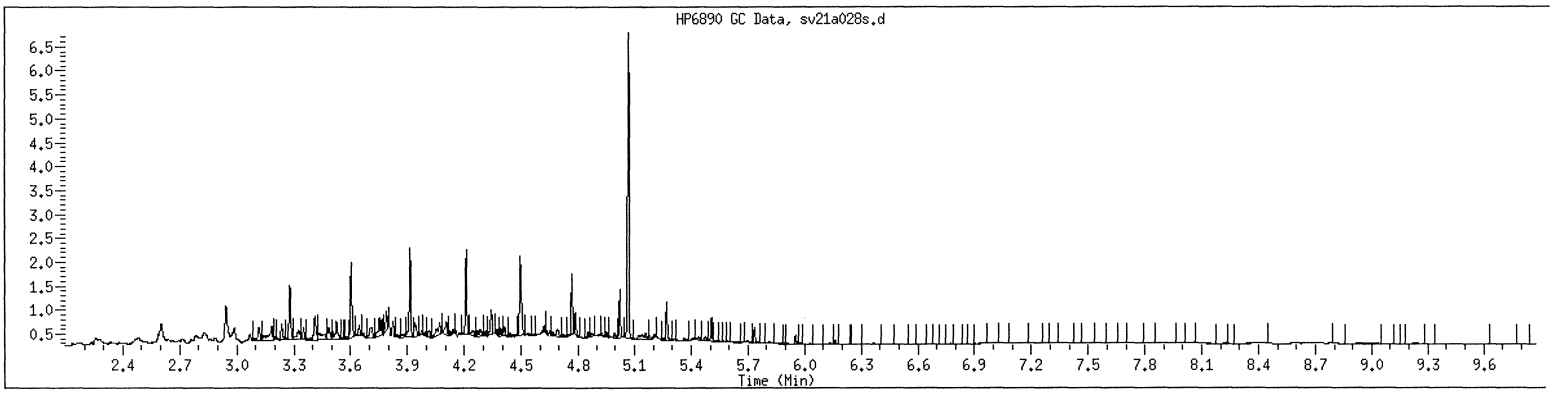
Column diameter: 0.53




2131017 12 1048

# MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1400 | SampleType | : CCALIB_3 |
| Injection Date | : 10/18/2013 15:12 | Instrument | : gcsv21a.i |
| Operator | : pmm | | |
| Sample Info | : 1400*1 84-56-1 | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv21a.i/2131018.b/DRO.m | | |
| Dilution | : 1.00 | | |
| Matrix | : WATER | | |
| Integrator | : HP Genie | Compound Sublist | : O-TERPH |




NO MANUAL INTEGRATIONS

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: RTX-5-30M ID: .53 (mm)

Concentrated Extract Volume: 1000 ( µL )

Soil Aliquot Volume: ( µL )

Injection Volume: 1 ( µL )

GPC Cleanup: (Y/N) N pH:

Prep Batch: 517972 Analytical Batch: 518036

*CONCENTRATION UNITS: ug/kg*

Sample ID: MB1244573

Contract:

SAS No.: SDG No.: 213101712

Lab Sample ID: 1244573

Date Collected: Time:

Date Received:

Date Extracted: 10/17/13

Date Analyzed: 10/18/13 Time: 0853

Dilution Factor: 1 Analyst: PMM

Prep Method: 3550B

Analytical Method: SW846 8015C

Sulfur Cleanup: (Y/N) N Instrument ID: GCS21A

Lab File ID: 2131018/sv21a005d

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| GCSV-00-4 | DRO | 2000 | U | 1310 | 2000 | 4000 |

FORM I ORG-1

213101712 1050

GCAL, Inc.

DRO CALCULATION

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a005d.d
DCM file : /var/chem/gcsv21a.i/2131018.b/sv21a002d.d
Lab Smp Id: 1244573
Inj Date : 18-OCT-2013 08:53
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1244573*1 mb s
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2131018.b/DRO.m
Meth Date : 18-Oct-2013 11:23 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 16:11 Cal File: sv21a007s.d
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: DRO.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 1000.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

DRO FORMULA:

$$\text{Conc} = \frac{(\text{DRO Area}) - (\text{Surr Area}) - (\text{DCM Blank Area})}{\text{RRF}} \times \text{DF} \times (\text{Vt} / \text{Ws})$$

$$= \frac{208598828 - 125659682 - 24311877}{1963986} \times 1.0 \times (1000.0 / 30.0)$$

= 995.0 UG/KG

GCAL, Inc.

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a005d.d
Lab Smp Id: 1244573
Inj Date : 18-OCT-2013 08:53
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1244573*1 mb s
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2131018.b/DRO.m
Meth Date : 18-Oct-2013 11:23 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 16:11 Cal File: sv21a007s.d
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: DRO.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 1000.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN (UG/ML) | FINAL (UG/KG) |
|---|---|---|---|---|---|---|
| 1 DRO | 5.068 | 5.079 | -0.011 | 208598828 | 106.212 | 3540(M1) |

QC Flag Legend

M1- Compound response manually integrated because
Target system did not integrate.

Data File: /var/chem/gcsv21a.i/2131018.b/sv21a005d.d



Date : 18-OCT-2013 08:53

Client ID:

Instrument: gcsv21a.i

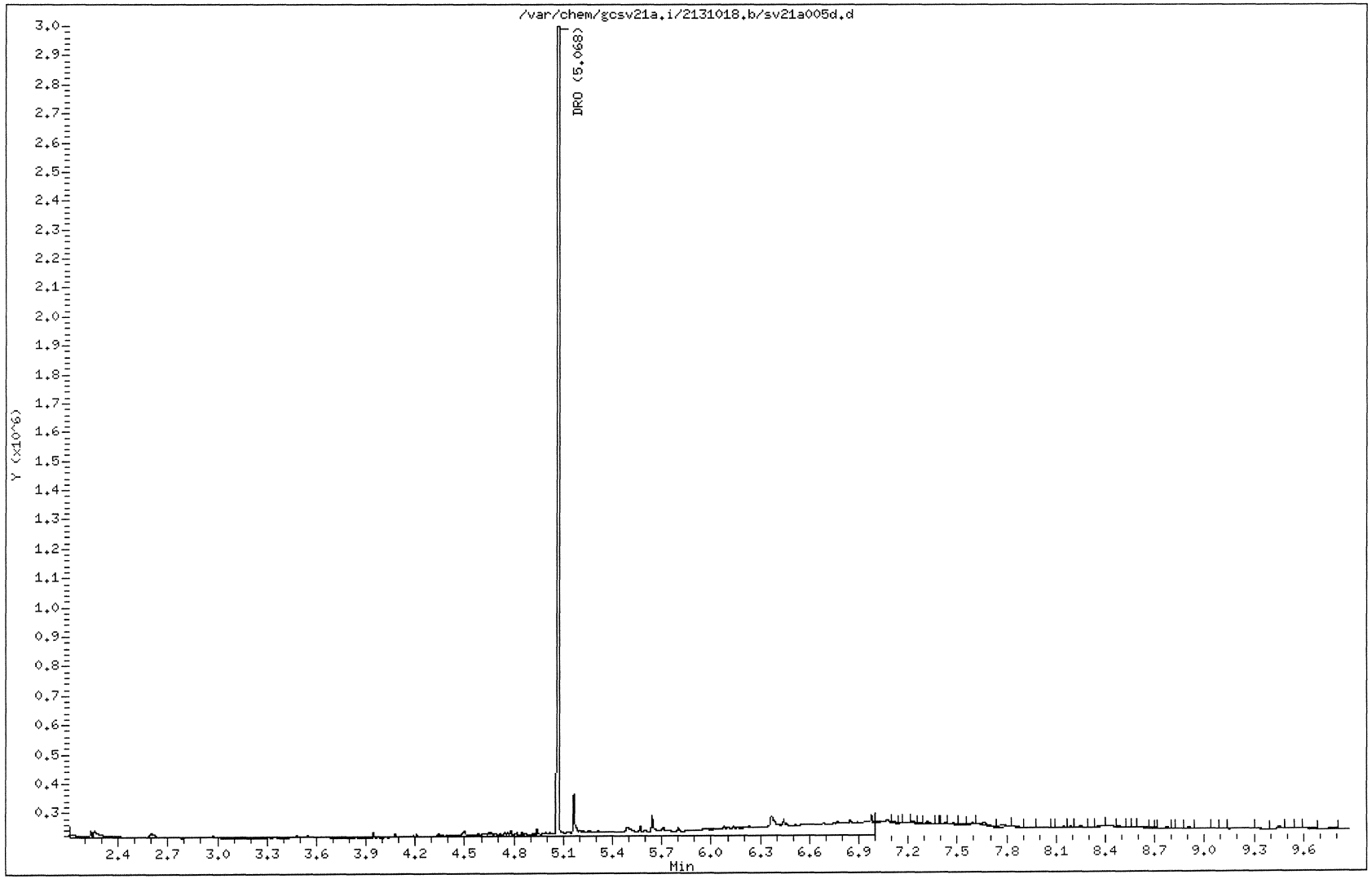
Sample Info: 1244573*1 mb s

Volume Injected (uL): 1.0

Operator: pmm

Column phase: RTX-5-30M

Column diameter: 0.53



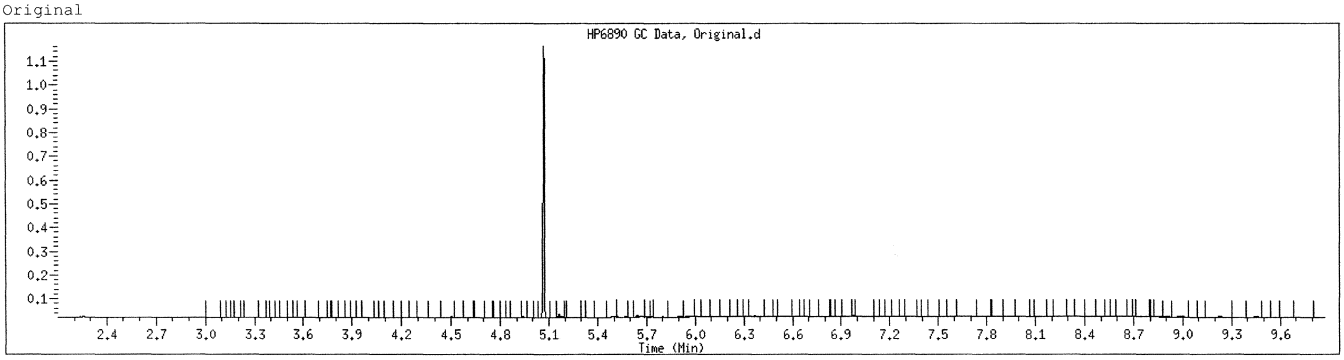

21310171 2 1053

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a005d.d Page: 1
Report Date: 10/18/2013 11:38

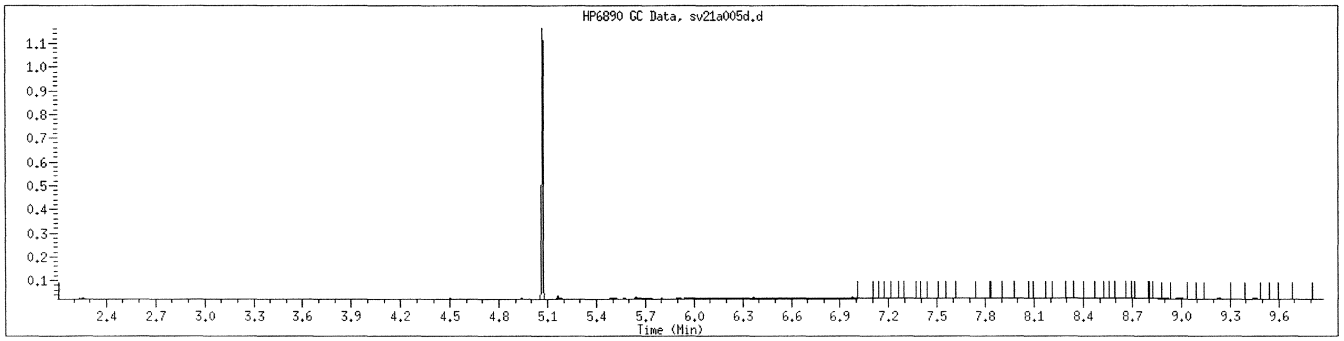
MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1244573 | SampleType | : SAMPLE |
| Injection Date | : 10/18/2013 08:53 | Instrument | : gcsv21a.i |
| Operator | : pmm | | |
| Sample Info | : 1244573*1 mb s | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv21a.i/2131018.b/DRO.m | | |
| Dilution | : 1.00 | | |
| Matrix | : SOIL | | |
| Integrator | : HP Genie | Compound Sublist | : DRO |

Original




Final



GCAL, Inc.

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a005s.d
Lab Smp Id: 1244573
Inj Date : 18-OCT-2013 08:53
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1244573*1 mb s
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2131018.b/DRO.m
Meth Date : 18-Oct-2013 11:22 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 16:11 Cal File: sv21a007s.d
Als bottle: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: O-TERPH.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 1000.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN (UG/ML) | CONCENTRATIONS FINAL (UG/KG) |
|---|---|---|---|---|---|---|
| $ 9 O-TERPHENYL | 5.068 | 5.078 | -0.010 | 125659682 | 50.1126 | 1670 |

Data File: /var/chem/gcsv21a.i/2131018.b/sv21a005s.d



Date : 18-OCT-2013 08:53

Client ID:

Instrument: gcsv21a.i

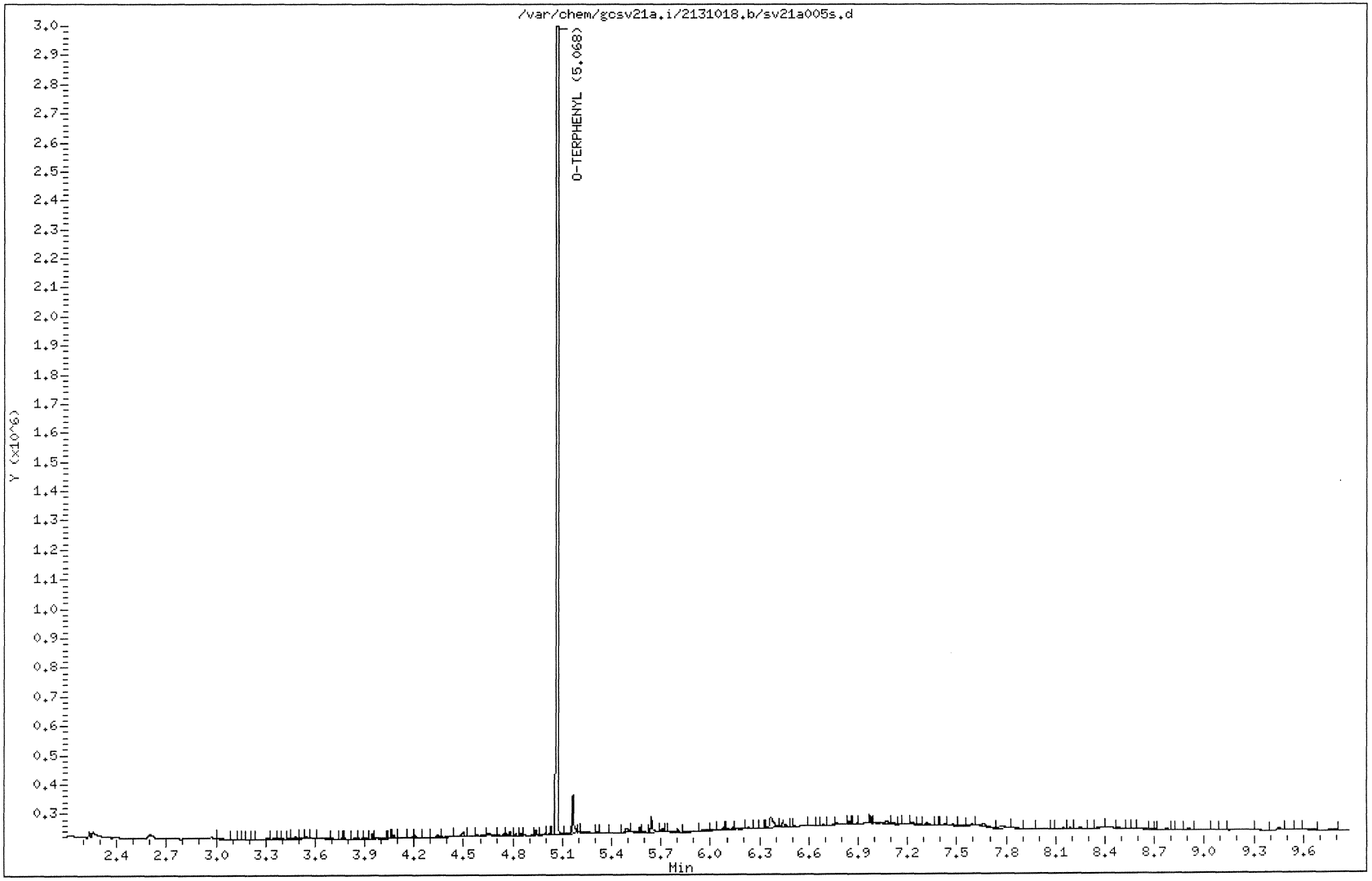
Sample Info: 1244573*1 mb s

Volume Injected (uL): 1.0

Operator: pmm

Column phase: RTX-5-30M

Column diameter: 0.53

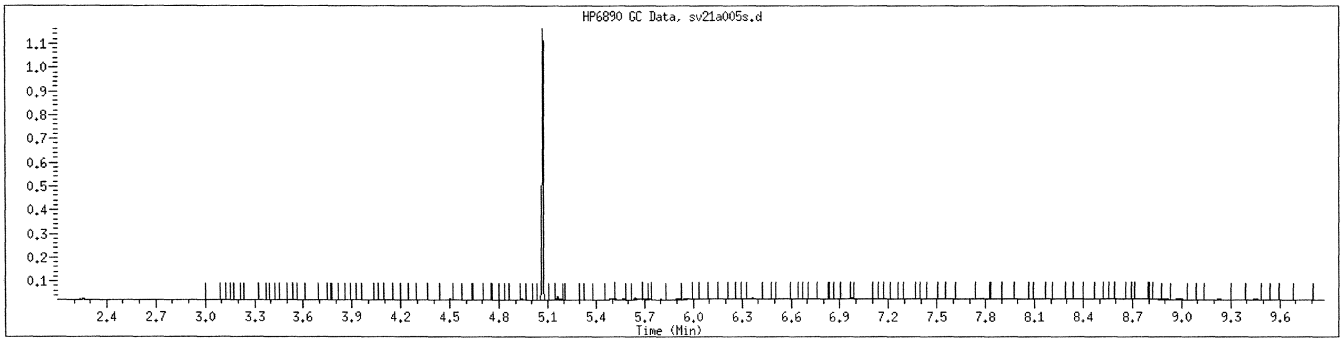



2131018 1056

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a005s.d Page: 1
Report Date: 10/18/2013 11:22

MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1244573 | SampleType | : SAMPLE |
| Injection Date | : 10/18/2013 08:53 | Instrument | : gcsv21a.i |
| Operator | : pmm | | |
| Sample Info | : 1244573*1 mb s | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv21a.i/2131018.b/DRO.m | | |
| Dilution | : 1.00 | | |
| Matrix | : SOIL | | |
| Integrator | : HP Genie | Compound Sublist | : O-TERPH |




NO MANUAL INTEGRATIONS

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: RTX-5-30M ID: .53 (mm)

Concentrated Extract Volume: 1000 ( µL )

Soil Aliquot Volume: ( µL )

Injection Volume: 1 ( µL )

GPC Cleanup: (Y/N) N pH:

Prep Batch: 517972 Analytical Batch: 518036

*CONCENTRATION UNITS: ug/kg*

Sample ID: LCS1244574

Contract:

SAS No.: SDG No.: 213101712

Lab Sample ID: 1244574

Date Collected: Time:

Date Received:

Date Extracted: 10/17/13

Date Analyzed: 10/18/13 Time: 0908

Dilution Factor: 1 Analyst: PMM

Prep Method: 3550B

Analytical Method: SW846 8015C

Sulfur Cleanup: (Y/N) N Instrument ID: GCS21A

Lab File ID: 2131018/sv21a006d

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| GCSV-00-4 | DRO | 39000 | | 1310 | 2000 | 4000 |

FORM I ORG-1

GCAL, Inc.

DRO CALCULATION

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a006d.d
DCM file : /var/chem/gcsv21a.i/2131018.b/sv21a002d.d
Lab Smp Id: 1244574
Inj Date : 18-OCT-2013 09:08
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1244574*1 lcs
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2131018.b/DRO.m
Meth Date : 18-Oct-2013 11:22 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 16:11 Cal File: sv21a007s.d
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: DRO.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 1000.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

DRO FORMULA:

$$\text{Conc} = \frac{(\text{DRO Area}) - (\text{Surr Area}) - (\text{DCM Blank Area})}{\text{RRF}} \text{ X DF X } (\text{Vt} / \text{Ws})$$

$$= \frac{2445489075 - 124242650 - 24311877}{1963986} \text{ X 1.0 X } (1000.0 / 30.0)$$

= 38984.2 UG/KG

GCAL, Inc.

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a006d.d
Lab Smp Id: 1244574
Inj Date : 18-OCT-2013 09:08
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1244574*1 lcs
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2131018.b/DRO.m
Meth Date : 18-Oct-2013 11:22 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 16:11 Cal File: sv21a007s.d
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: DRO.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 1000.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN (UG/ML) | FINAL (UG/KG) |
|---|---|---|---|---|---|---|
| 1 DRO | 5.069 | 5.079 | -0.010 | 2445489075 | 1245.17 | 41500(M1) |

QC Flag Legend

M1- Compound response manually integrated because
Target system did not integrate.

Data File: /var/chem/gcsv21a.i/2131018.b/sv21a006d.d

Page 1

Date : 18-OCT-2013 09:08

Client ID:

Instrument: gcsv21a.i

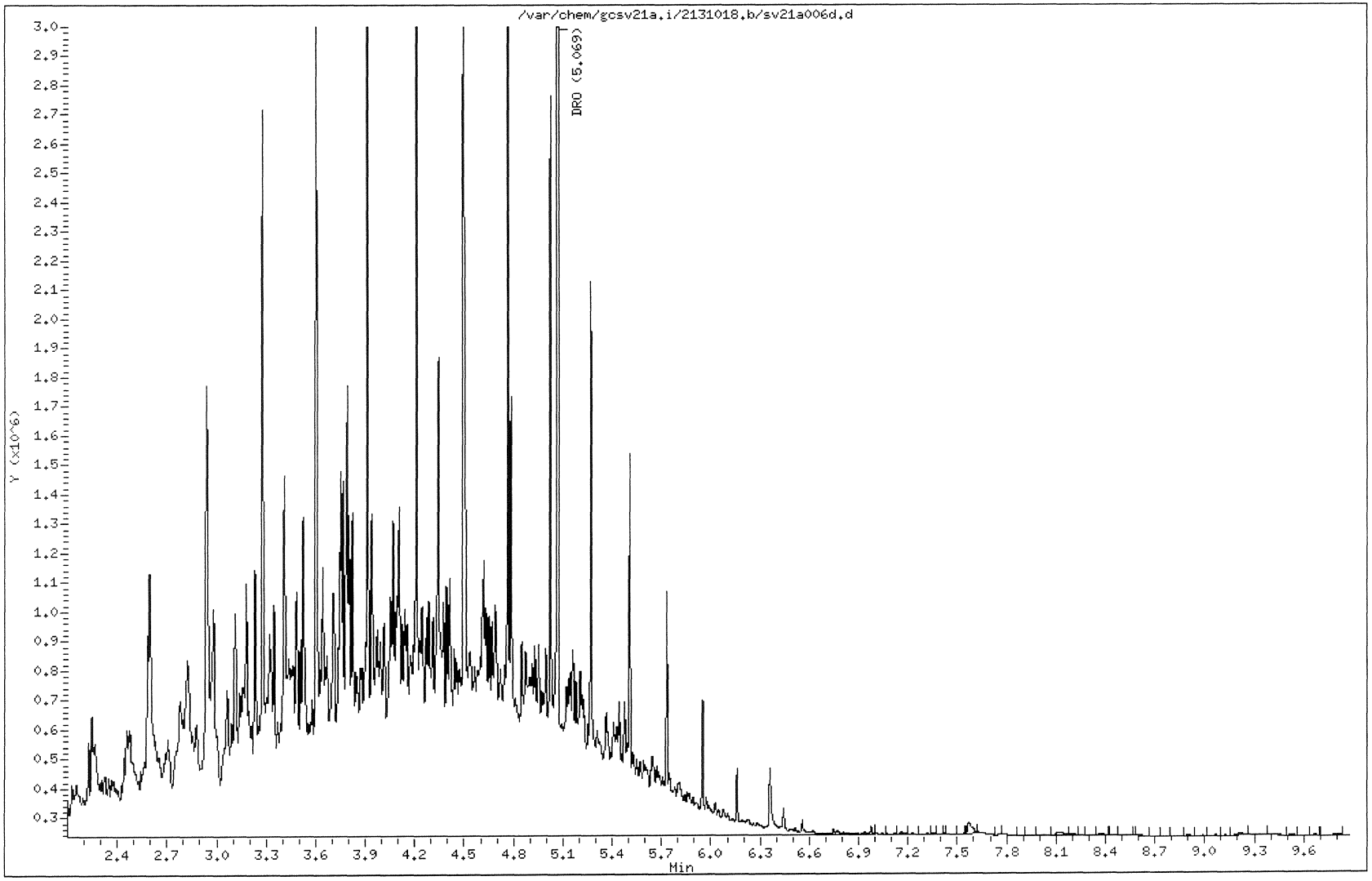
Sample Info: 1244574*1 lcs

Volume Injected (uL): 1.0

Operator: pmm

Column phase: RTX-5-30M

Column diameter: 0.53



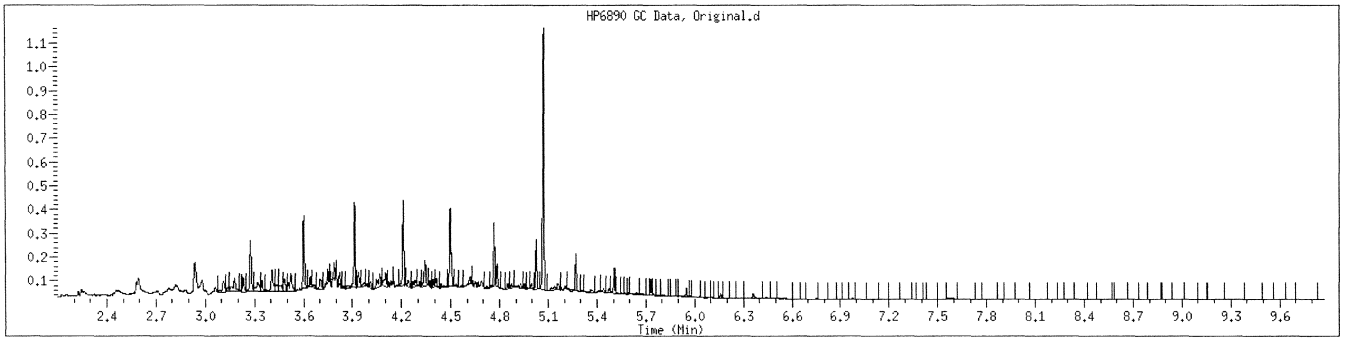

2131017 12 1051

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a006d.d Page: 1
Report Date: 10/18/2013 11:22

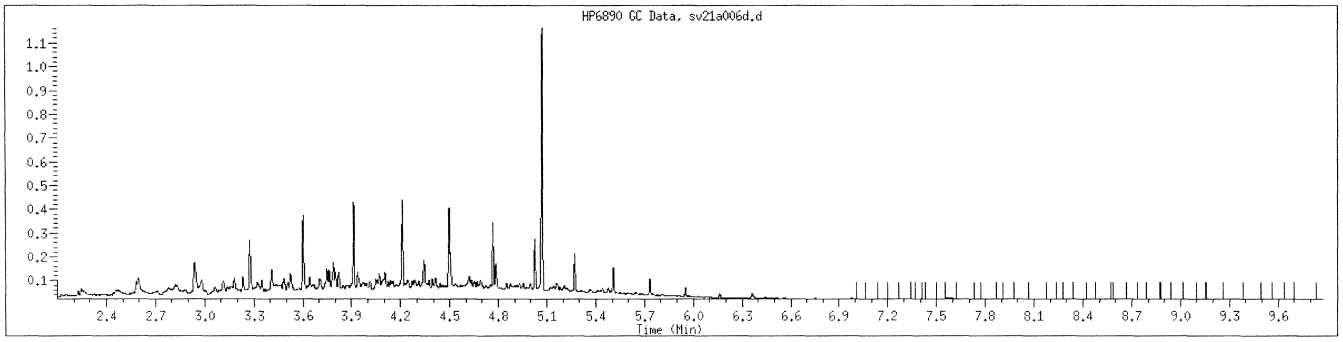
MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1244574 | SampleType | : SAMPLE |
| Injection Date | : 10/18/2013 09:08 | Instrument | : gcsv21a.i |
| Operator | : pmm | | |
| Sample Info | : 1244574*1 lcs | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv21a.i/2131018.b/DRO.m | | |
| Dilution | : 1.00 | | |
| Matrix | : SOIL | | |
| Integrator | : HP Genie | Compound Sublist | : DRO |

Original




Final



GCAL, Inc.

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a006s.d
Lab Smp Id: 1244574
Inj Date : 18-OCT-2013 09:08
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1244574*1 lcs
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2131018.b/DRO.m
Meth Date : 18-Oct-2013 11:22 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 16:11 Cal File: sv21a007s.d
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: O-TERPH.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 1000.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN (UG/ML) | CONCENTRATIONS FINAL (UG/KG) |
|---|---|---|---|---|---|---|
| $ 9 O-TERPHENYL | 5.069 | 5.078 | -0.009 | 124242650 | 49.5475 | 1650 |

Data File: /var/chem/gcsv21a.i/2131018.b/sv21a006s.d

Page 1

Date : 18-OCT-2013 09:08

Client ID:

Instrument: gcsv21a.i

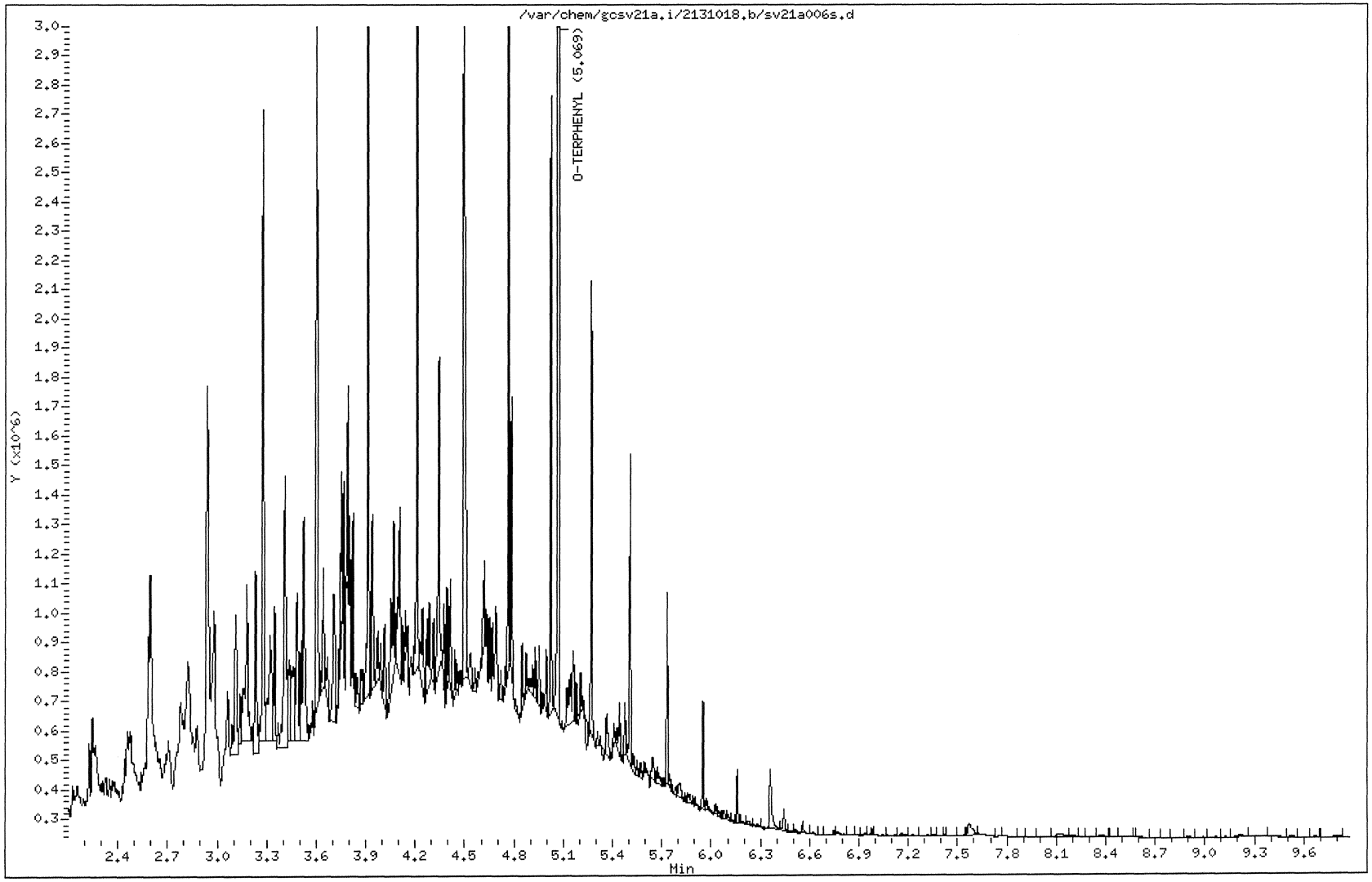
Sample Info: 1244574*1 lcs

Volume Injected (uL): 1.0

Operator: pmm

Column phase: RTX-5-30M

Column diameter: 0.53

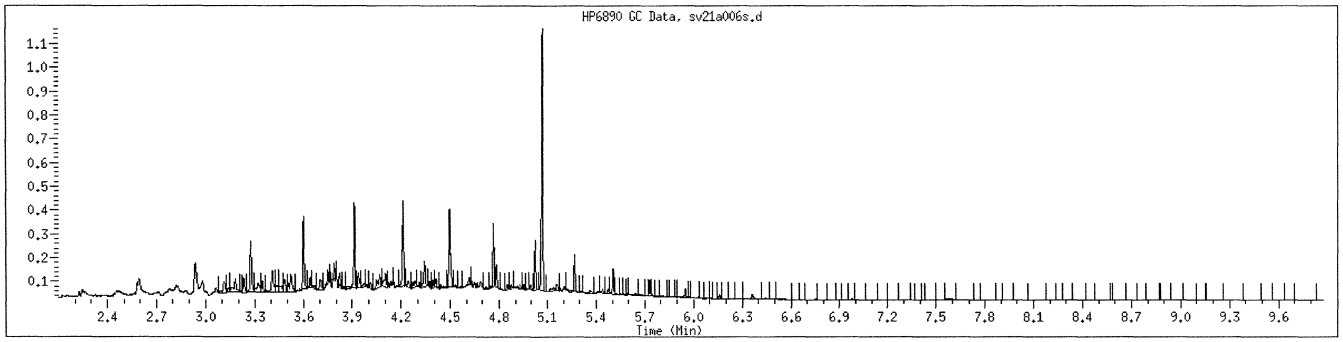



21310171 2 1064

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a006s.d Page: 1
Report Date: 10/18/2013 11:22

MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 1244574 SampleType : SAMPLE
Injection Date: 10/18/2013 09:08 Instrument : gcsv21a.i
Operator : pmm
Sample Info : 1244574*1 lcs
Misc Info :
Method : /var/chem/gcsv21a.i/2131018.b/DRO.m
Dilution : 1.00
Matrix : SOIL
Integrator : HP Genie Compound Sublist: O-TERPH




NO MANUAL INTEGRATIONS

1D

ORGANICS ANALYSIS DATA SHEET

Lab Name: GCAL

Lab Code: LA024 Case No.:

Matrix: Solid

Sample wt/vol: 30 Units: g

Level: (low/med) LOW

% Moisture: decanted: (Y/N)

GC Column: RTX-5-30M ID: .53 (mm)

Concentrated Extract Volume: 1000 ( µL )

Soil Aliquot Volume: ( µL )

Injection Volume: 1 ( µL )

GPC Cleanup: (Y/N) N pH:

Prep Batch: 517972 Analytical Batch: 518036

*CONCENTRATION UNITS: ug/kg*

Sample ID: LCSD1244575

Contract:

SAS No.: SDG No.: 213101712

Lab Sample ID: 1244575

Date Collected: Time:

Date Received:

Date Extracted: 10/17/13

Date Analyzed: 10/18/13 Time: 0923

Dilution Factor: 1 Analyst: PMM

Prep Method: 3550B

Analytical Method: SW846 8015C

Sulfur Cleanup: (Y/N) N Instrument ID: GCS21A

Lab File ID: 2131018/sv21a007d

| CAS NO. | COMPOUND | RESULT | Q | MDL | LOD | LOQ |
|---|---|---|---|---|---|---|
| GCSV-00-4 | DRO | 36400 | | 1310 | 2000 | 4000 |

FORM I ORG-1

GCAL, Inc.

DRO CALCULATION

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a007d.d
DCM file : /var/chem/gcsv21a.i/2131018.b/sv21a002d.d
Lab Smp Id: 1244575
Inj Date : 18-OCT-2013 09:23
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1244575*1 lcsd
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2131018.b/DRO.m
Meth Date : 18-Oct-2013 11:22 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 16:11 Cal File: sv21a007s.d
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: DRO.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 1000.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

DRO FORMULA:

$$\text{Conc} = \frac{(\text{DRO Area}) - (\text{Surr Area}) - (\text{DCM Blank Area})}{\text{RRF}} \text{ X DF X } (Vt / Ws)$$

$$= \frac{2295559934 - 123786133 - 24311877}{1963986} \text{ X 1.0 X } (1000.0 / 30.0)$$

= 36447.3 UG/KG

GCAL, Inc.

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a007d.d
Lab Smp Id: 1244575
Inj Date : 18-OCT-2013 09:23
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1244575*1 lcsd
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2131018.b/DRO.m
Meth Date : 18-Oct-2013 11:22 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 16:11 Cal File: sv21a007s.d
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: DRO.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 1000.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN (UG/ML) | FINAL (UG/KG) |
|---|---|---|---|---|---|---|
| 1 DRO | 5.069 | 5.079 | -0.010 | 2295559934 | 1168.83 | 39000(M1) |

QC Flag Legend

M1- Compound response manually integrated because
Target system did not integrate.

Data File: /var/chem/gcsv21a.i/2131018.b/sv21a007d.d

Page 1

Date : 18-OCT-2013 09:23

Client ID:

Instrument: gcsv21a.i

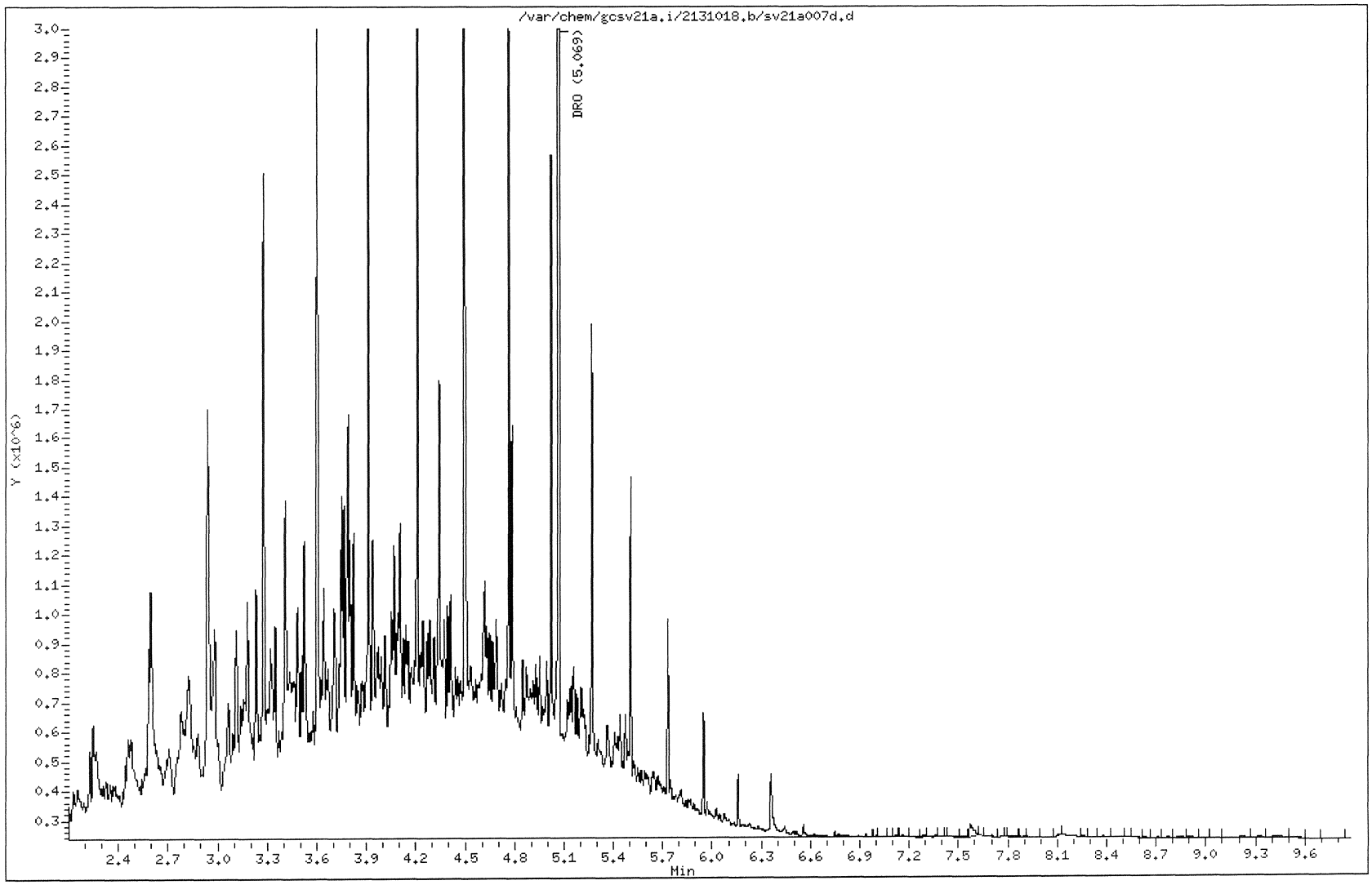
Sample Info: 1244575*1 lcsd

Volume Injected (uL): 1.0

Operator: pmm

Column phase: RTX-5-30M

Column diameter: 0.53



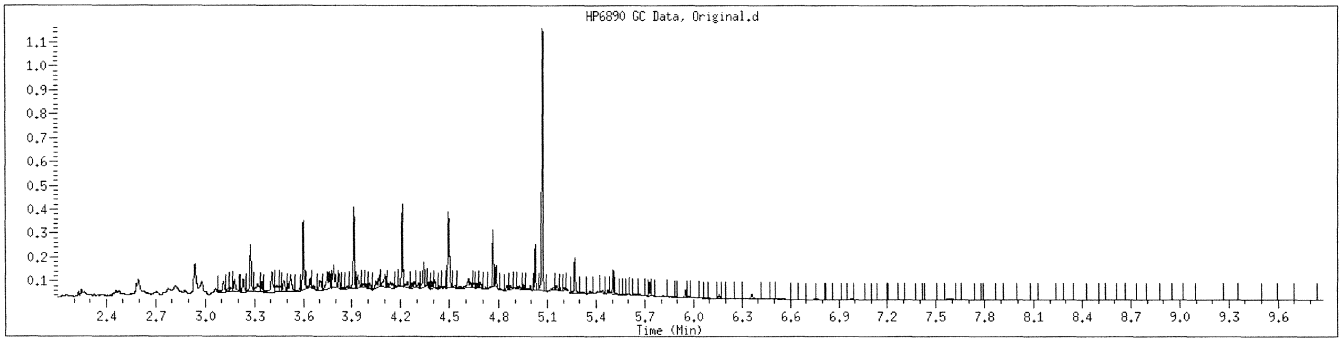

2131018.12 1069

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a007d.d Page: 1
Report Date: 10/18/2013 11:22

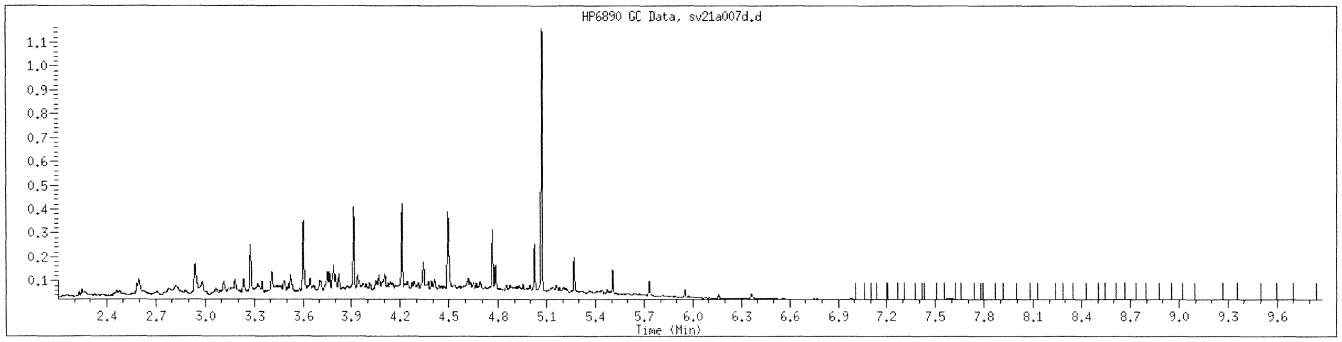
MANUAL INTEGRATION GRAPHIC REPORT

Lab ID : 1244575 SampleType : SAMPLE
Injection Date: 10/18/2013 09:23 Instrument : gcsv21a.i
Operator : pmm
Sample Info : 1244575*1 lcsd
Misc Info :
Method : /var/chem/gcsv21a.i/2131018.b/DRO.m
Dilution : 1.00
Matrix : SOIL
Integrator : HP Genie Compound Sublist: DRO

Original




Final



GCAL, Inc.

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a007s.d
Lab Smp Id: 1244575
Inj Date : 18-OCT-2013 09:23
Operator : pmm Inst ID: gcsv21a.i
Smp Info : 1244575*1 lcsd
Misc Info :
Comment :
Method : /var/chem/gcsv21a.i/2131018.b/DRO.m
Meth Date : 18-Oct-2013 11:22 pmm Quant Type: ESTD
Cal Date : 22-AUG-2013 16:11 Cal File: sv21a007s.d
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: O-TERPH.sub
Target Version: 3.50
Processing Host: org.gcal.com

Concentration Formula: Amt * DF * Uf * Vt/(Vi * Ws * (100 - M)/100) * CpndVariable

| Name | Value | Description |
|---|---|---|
| DF | 1.00000 | Dilution Factor |
| Uf | 1.00000 | Correction factor |
| Vt | 1000.00000 | Volume of final extract (uL)(1000 low, 2 |
| Vi | 1.00000 | Volume injected (uL) |
| Ws | 30.00000 | Weight of sample extracted (g) |
| M | 0.00000 | % Moisture |

Cpnd Variable Local Compound Variable

| Compounds | RT | EXP RT | DLT RT | RESPONSE | CONCENTRATIONS ON-COLUMN (UG/ML) | CONCENTRATIONS FINAL (UG/KG) |
|---|---|---|---|---|---|---|
| $ 9 O-TERPHENYL | 5.068 | 5.078 | -0.010 | 123786133 | 49.3654 | 1650 |

Data File: /var/chem/gcsv21a.i/2131018.b/sv21a007s.d

Page 1

Date : 18-OCT-2013 09:23

Client ID:

Instrument: gcsv21a.i

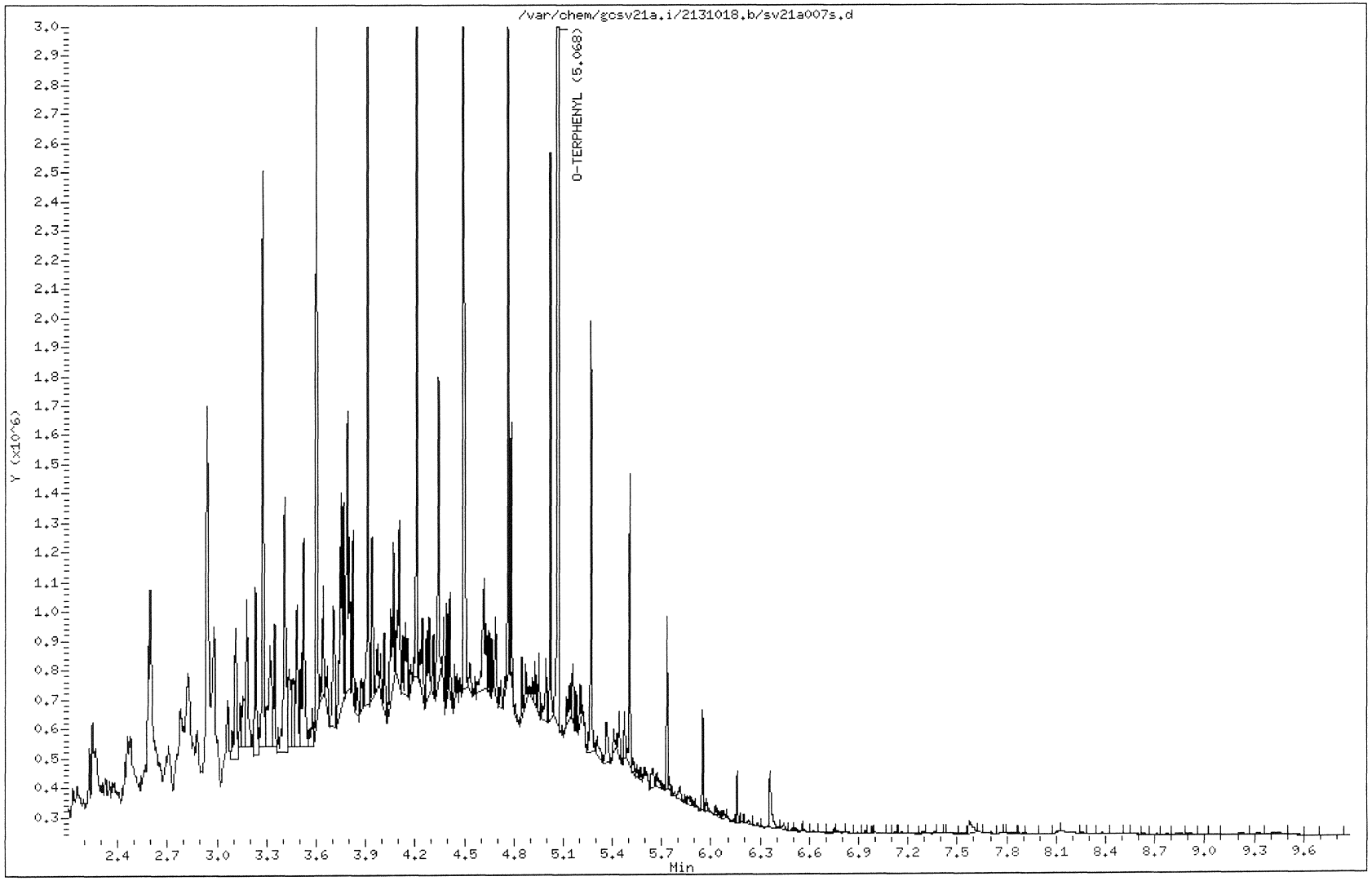
Sample Info: 1244575*1 lcsd

Volume Injected (uL): 1.0

Operator: pmm

Column phase: RTX-5-30M

Column diameter: 0.53

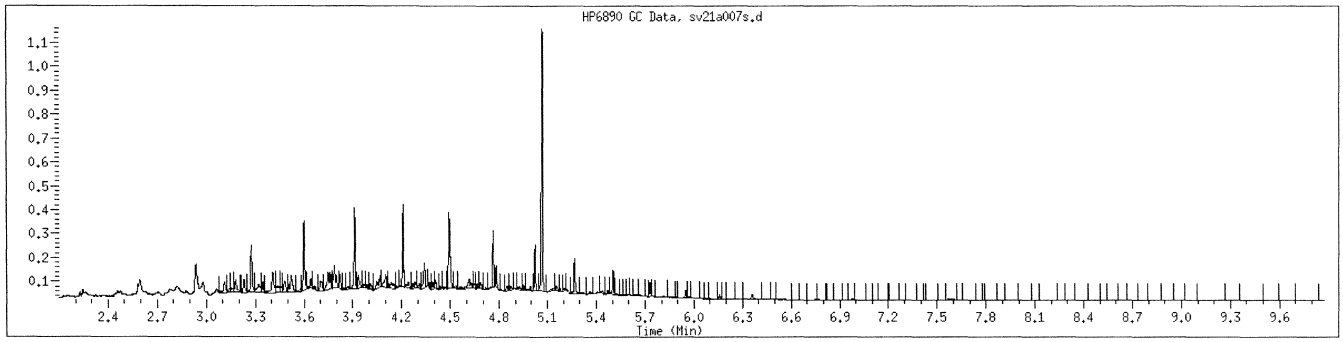



2131018.172

Data file : /var/chem/gcsv21a.i/2131018.b/sv21a007s.d Page: 1
Report Date: 10/18/2013 11:22

MANUAL INTEGRATION GRAPHIC REPORT

| | | | |
|---|---|---|---|
| Lab ID | : 1244575 | SampleType | : SAMPLE |
| Injection Date | : 10/18/2013 09:23 | Instrument | : gcsv21a.i |
| Operator | : pmm | | |
| Sample Info | : 1244575*1 lcsd | | |
| Misc Info | : | | |
| Method | : /var/chem/gcsv21a.i/2131018.b/DRO.m | | |
| Dilution | : 1.00 | | |
| Matrix | : SOIL | | |
| Integrator | : HP Genie | Compound Sublist | : O-TERPH |




NO MANUAL INTEGRATIONS

| EXTRACTION DATE/TIME: 10/17/13 | Start: 13:36 End: 17:13 | BATCH NO: | 517972 |
|---|---|---|---|
| MATRIX: | WATER ☐ SOIL ☑ OTHER ☐ | LEVEL: | LOW ☑ MEDIUM ☐ |

| | CLIENT | CLIENT ID | GCAL ID | INITIAL VOL/WT mL g | FINAL VOLUME (mL) | Init pH | SAMPLE TYPE | COMMENTS | METHOD |
|---|---|---|---|---|---|---|---|---|---|
| 1 | QC ACCOUNT | MB for HBN 517972 [EXTO/37039] | 1244573 | 30.0 | 1.0 | | MB | | SOXHLET/3540 |
| 2 | QC ACCOUNT | LCS for HBN 517972 [EXTO/37039 | 1244574 | 30.0 | 1.0 | | LCS | | |
| 3 | QC ACCOUNT | LCSD for HBN 517972 [EXTO/3703 | 1244575 | 30.0 | 1.0 | | LCSD | | SONICATOR/3550 |
| 4 | 4565 | UNDER ROAD RETEST 1 | 21310171301 | 30.0 | 1.0 | | SAMPLE | | ✓ |
| 5 | 4329 | BH-SP-02 | 21310165802 | 30.0 | 1.0 | | SAMPLE | | SHAKER |
| 6 | QC ACCOUNT | BH-SP-02 (1244255MS) | 1244576 | 30.0 | 1.0 | | MS | | |
| 7 | QC ACCOUNT | BH-SP-02 (1244255MSD) | 1244577 | 30.0 | 1.0 | | MSD | | SEPARATORY FUNNEL/3510 |
| 8 | 4329 | SPENT CATALYST 4C-51 | 21310166002 | 30.0 | 1.0 | | SAMPLE | | |
| 9 | 4847 | RS-COMP1-101613 | 21310171201 | 30.0 | 1.0 | | SAMPLE | | LIQUID/LIQUID |
| 10 | 4847 | RS-COMP2-101613 | 21310171203 | 30.0 | 1.0 | | SAMPLE | | |
| 11 | | | 21310173103 | 30.0 | 1.0 | | | 16:00 | |
| 12 | | | 21310173102 | 30.0 | 1.0 | | | ↓ | |
| 13 | | | 21310173101 | 30.0 | 1.0 | | | | |
| 14 | | | | | | | | | |
| 15 | | | | | | | | | |
| 16 | | | | | | | | | |
| 17 | | | | | | | | | |
| 18 | | | | | | | | | |
| 19 | | | | | | | | | |
| 20 | | | | | | | | | |
| 21 | | | | | | | | | |
| 22 | | | | | | | | | |
| 23 | | | | | | | | | MeCL2 Lot No: |
| 24 | | | | | | | | | DJ158 |
| 25 | | | | | | | | | |
| 26 | | | | | | | | | |
| 27 | | | | | | | | | Sodium Sulfate Lot No: |
| 28 | | | | | | | | | 0000405109 |

COMMENTS: SAMPLE PREPARATION INCLUDE DETERMINATION OF SAMPLE VOLUME/WEIGHT, SOLVENT EXTRACTION AND EVAPORATION OF SOLVENT TO FINAL VOLUME.

BALANCE ID: M33557 TEMP: 100.4

| TPHD SURR ID | 576-4-4 | TPHD SPIKE ID | 576-4-9 | TPHO SPIKE ID | | TECHNICIAN | DATE |
|---|---|---|---|---|---|---|---|
| VOLUME | 100mL | VOLUME | 100mL | VOLUME | | SAK | 10/17/13 |
| CONCENTRATION | 50 ug/ml | CONCENTRATION | 1000 ug/ml | CONCENTRATION | | | |
| | | ACID | | | | SUPERVISOR | DATE |
| SPIKE WITNESS | SDL | | | | | TES | 10/18/13 |

Revision 3, 10/04/2010

213101712 1074

# LABORATORY CHRONICLE: GCSV DEPARTMENT

Date: 08/28/2013
Instrument: gcsv21a.i
Method File: /var/chem/gcsv21a.i/2130822p.b/CM.m
Batch: /var/chem/gcsv21a.i/2130822p.b
Column-Detector: DB-5MS-30M

| Sample ID | Standard ID | DataFile | Wgt/Vol | Injection Time | Dil | Anal | ALS | Comments |
|---|---|---|---|---|---|---|---|---|
| cm | | sv21a001d.d | 35.00 ml | 22-AUG-2013 14:39 | 1.000 | pmm | 1 | 8015 |
| DCM 0000045283 | | sv21a002d.d | 1000.00 ml | 22-AUG-2013 14:54 | 1.000 | pmm | 2 | DRO |
| DCM 0000045283 | | sv21a002o.d | 1000.00 ml | 22-AUG-2013 14:54 | 1.000 | pmm | 2 | all |
| 1201 | | sv21a003d.d | 1000.00 ml | 22-AUG-2013 15:10 | 1.000 | pmm | 3 | DRO |
| 1201 | | sv21a003s.d | 1000.00 ml | 22-AUG-2013 15:10 | 1.000 | pmm | 3 | O-TERPH |
| 1202 | | sv21a004d.d | 1000.00 ml | 22-AUG-2013 15:25 | 1.000 | pmm | 4 | DRO |
| 1202 | | sv21a004s.d | 1000.00 ml | 22-AUG-2013 15:25 | 1.000 | pmm | 4 | O-TERPH |
| 1203 | | sv21a005d.d | 1000.00 ml | 22-AUG-2013 15:41 | 1.000 | pmm | 5 | DRO |
| 1203 | | sv21a005s.d | 1000.00 ml | 22-AUG-2013 15:41 | 1.000 | pmm | 5 | O-TERPH |
| 1204 | | sv21a006d.d | 1000.00 ml | 22-AUG-2013 15:56 | 1.000 | pmm | 6 | DRO |
| 1204 | | sv21a006s.d | 1000.00 ml | 22-AUG-2013 15:56 | 1.000 | pmm | 6 | O-TERPH |
| 1205 | | sv21a007d.d | 1000.00 ml | 22-AUG-2013 16:11 | 1.000 | pmm | 7 | DRO |
| 1205 | | sv21a007s.d | 1000.00 ml | 22-AUG-2013 16:11 | 1.000 | pmm | 7 | O-TERPH |
| 1600 | | sv21a008d.d | 1.00 ml | 22-AUG-2013 16:30 | 1.000 | pmm | 8 | DRO |
| 1600 | | sv21a008s.d | 1.00 ml | 22-AUG-2013 16:30 | 1.000 | pmm | 8 | O-TERPH |
| 1201 | | sv21a010o.d | 1000.00 ml | 22-AUG-2013 17:01 | 1.000 | pmm | 10 | all |
| 1202 | | sv21a011o.d | 1000.00 ml | 22-AUG-2013 17:16 | 1.000 | pmm | 11 | all |
| 1203 | | sv21a012o.d | 1000.00 ml | 22-AUG-2013 17:31 | 1.000 | pmm | 12 | all |
| 1204 | | sv21a013o.d | 1000.00 ml | 22-AUG-2013 17:47 | 1.000 | pmm | 13 | all |
| 1205 | | sv21a014o.d | 1000.00 ml | 22-AUG-2013 18:02 | 1.000 | pmm | 14 | all |
| 1600 | | sv21a015o.d | 1.00 ml | 22-AUG-2013 18:17 | 1.000 | pmm | 15 | all |

# LABORATORY CHRONICLE: GCSV DEPARTMENT

Date: 10/21/2013
Instrument: gcsv21a.i
Method File: /var/chem/gcsv21a.i/2131018.b/CM.m
Batch: /var/chem/gcsv21a.i/2131018.b
Column-Detector: DB-5MS-30M

| Sample ID | Standard ID | DataFile | Wgt/Vol | Injection Time | Dil | Anal | ALS | Comments |
|---|---|---|---|---|---|---|---|---|
| cm | | sv21a001d.d | 35.00 ml | 18-OCT-2013 07:52 | 1.000 | pmm | 1 | 8015 |
| DCM 0000045283 | | sv21a002d.d | 1000.00 ml | 18-OCT-2013 08:07 | 1.000 | pmm | 2 | DRO |
| DCM 0000045283 | | sv21a002o.d | 1000.00 ml | 18-OCT-2013 08:07 | 1.000 | pmm | 2 | all |
| 1400 | | sv21a003d.d | 1000.00 ml | 18-OCT-2013 08:22 | 1.000 | pmm | 3 | DRO |
| 1400 | | sv21a003s.d | 1000.00 ml | 18-OCT-2013 08:22 | 1.000 | pmm | 3 | O-TERPH |
| 1400 | | sv21a004o.d | 1000.00 ml | 18-OCT-2013 08:37 | 1.000 | pmm | 4 | all |
| 1244573 | | sv21a005d.d | 30.00 g | 18-OCT-2013 08:53 | 1.000 | pmm | 5 | DRO |
| 1244573 | | sv21a005s.d | 30.00 g | 18-OCT-2013 08:53 | 1.000 | pmm | 5 | O-TERPH |
| 1244574 | | sv21a006d.d | 30.00 g | 18-OCT-2013 09:08 | 1.000 | pmm | 6 | DRO |
| 1244574 | | sv21a006s.d | 30.00 g | 18-OCT-2013 09:08 | 1.000 | pmm | 6 | O-TERPH |
| 1244575 | | sv21a007d.d | 30.00 g | 18-OCT-2013 09:23 | 1.000 | pmm | 7 | DRO |
| 1244575 | | sv21a007s.d | 30.00 g | 18-OCT-2013 09:23 | 1.000 | pmm | 7 | O-TERPH |
| 21310171301 | | sv21a008d.d | 30.00 g | 18-OCT-2013 09:38 | 1.000 | pmm | 8 | DRO |
| 21310171301 | | sv21a008s.d | 30.00 g | 18-OCT-2013 09:38 | 1.000 | pmm | 8 | O-TERPH |
| 21310173101 | | sv21a009d.d | 30.00 g | 18-OCT-2013 09:53 | 1.000 | pmm | 9 | DRO |
| 21310173101 | | sv21a009s.d | 30.00 g | 18-OCT-2013 09:53 | 1.000 | pmm | 9 | O-TERPH |
| 21310173102 | | sv21a010d.d | 30.00 g | 18-OCT-2013 10:08 | 1.000 | pmm | 10 | DRO |
| 21310173102 | | sv21a010s.d | 30.00 g | 18-OCT-2013 10:08 | 1.000 | pmm | 10 | O-TERPH |
| 21310173103 | | sv21a011d.d | 30.00 g | 18-OCT-2013 10:23 | 1.000 | pmm | 11 | DRO |
| 21310173103 | | sv21a011s.d | 30.00 g | 18-OCT-2013 10:23 | 1.000 | pmm | 11 | O-TERPH |
| 21310171301 | | sv21a012d.d | 30.00 g | 18-OCT-2013 10:38 | 20.000 | pmm | 12 | DRO |
| 21310171301 | | sv21a012s.d | 30.00 g | 18-OCT-2013 10:38 | 20.000 | pmm | 12 | O-TERPH |
| 21310173103 | | sv21a013d.d | 30.00 g | 18-OCT-2013 10:54 | 2.000 | pmm | 13 | DRO |
| 21310173103 | | sv21a013s.d | 30.00 g | 18-OCT-2013 10:54 | 2.000 | pmm | 13 | O-TERPH |
| 1400 | | sv21a014d.d | 1000.00 ml | 18-OCT-2013 11:09 | 1.000 | pmm | 14 | DRO |
| 1400 | | sv21a014s.d | 1000.00 ml | 18-OCT-2013 11:09 | 1.000 | pmm | 14 | O-TERPH |
| 21310165802 | | sv21a015d.d | 30.00 g | 18-OCT-2013 11:24 | 10.000 | pmm | 15 | DRO |
| 21310165802 | | sv21a015s.d | 30.00 g | 18-OCT-2013 11:24 | 10.000 | pmm | 15 | O-TERPH |
| 1244576 | | sv21a016d.d | 30.00 g | 18-OCT-2013 11:43 | 1.000 | pmm | 16 | DRO |
| 1244576 | | sv21a016s.d | 30.00 g | 18-OCT-2013 11:43 | 1.000 | pmm | 16 | O-TERPH |
| 1244576 | | sv21a017d.d | 30.00 g | 18-OCT-2013 11:58 | 1.000 | pmm | 17 | DRO |
| 1244576 | | sv21a017s.d | 30.00 g | 18-OCT-2013 11:58 | 1.000 | pmm | 17 | O-TERPH |
| 21310173101 | | sv21a018d.d | 30.00 g | 18-OCT-2013 12:28 | 1.000 | pmm | 18 | DRO |
| 21310173101 | | sv21a018s.d | 30.00 g | 18-OCT-2013 12:28 | 1.000 | pmm | 18 | O-TERPH |
| 1400 | | sv21a019d.d | 1000.00 ml | 18-OCT-2013 12:43 | 1.000 | pmm | 19 | DRO |
| 1400 | | sv21a019s.d | 1000.00 ml | 18-OCT-2013 12:43 | 1.000 | pmm | 19 | O-TERPH |

LABORATORY CHRONICLE: GCSV DEPARTMENT

Date: 10/21/2013
Instrument: gcsv21a.i
Method File: /var/chem/gcsv21a.i/2131018.b/CM.m
Batch: /var/chem/gcsv21a.i/2131018.b
Column-Detector: DB-5MS-30M

| Sample ID | Standard ID | DataFile | Wgt/Vol | Injection Time | Dil | Anal | ALS | Comments |
|---|---|---|---|---|---|---|---|---|
| 21310165802 | | sv21a020d.d | 30.00 g | 18-OCT-2013 12:58 | 1.000 | pmm | 20 | DRO |
| 21310165802 | | sv21a020s.d | 30.00 g | 18-OCT-2013 12:58 | 1.000 | pmm | 20 | O-TERPH |
| 21310166002 | | sv21a021d.d | 30.00 g | 18-OCT-2013 13:13 | 1.000 | pmm | 21 | DRO |
| 21310166002 | | sv21a021s.d | 30.00 g | 18-OCT-2013 13:13 | 1.000 | pmm | 21 | O-TERPH |
| 21310165802 | | sv21a022d.d | 30.00 g | 18-OCT-2013 13:28 | 5.000 | pmm | 22 | DRO |
| 21310165802 | | sv21a022s.d | 30.00 g | 18-OCT-2013 13:28 | 5.000 | pmm | 22 | O-TERPH |
| 21310171201 | | sv21a023d.d | 30.00 g | 18-OCT-2013 13:43 | 5.000 | pmm | 23 | DRO |
| 21310171201 | | sv21a023s.d | 30.00 g | 18-OCT-2013 13:43 | 5.000 | pmm | 23 | O-TERPH |
| 21310171203 | | sv21a024d.d | 30.00 g | 18-OCT-2013 13:59 | 5.000 | pmm | 24 | DRO |
| 21310171203 | | sv21a024s.d | 30.00 g | 18-OCT-2013 13:59 | 5.000 | pmm | 24 | O-TERPH |
| 21310166002 | | sv21a025d.d | 30.00 g | 18-OCT-2013 14:14 | 5.000 | pmm | 25 | DRO |
| 21310166002 | | sv21a025s.d | 30.00 g | 18-OCT-2013 14:14 | 5.000 | pmm | 25 | O-TERPH |
| 21310171203 | | sv21a026d.d | 30.00 g | 18-OCT-2013 14:42 | 10.000 | pmm | 26 | DRO |
| 21310171203 | | sv21a026s.d | 30.00 g | 18-OCT-2013 14:42 | 10.000 | pmm | 26 | O-TERPH |
| 21310171201 | | sv21a027d.d | 30.00 g | 18-OCT-2013 14:57 | 10.000 | pmm | 27 | DRO |
| 21310171201 | | sv21a027s.d | 30.00 g | 18-OCT-2013 14:57 | 10.000 | pmm | 27 | O-TERPH |
| 1400 | | sv21a028d.d | 1000.00 ml | 18-OCT-2013 15:12 | 1.000 | pmm | 28 | DRO |
| 1400 | | sv21a028s.d | 1000.00 ml | 18-OCT-2013 15:12 | 1.000 | pmm | 28 | O-TERPH |
| 21310173101 | | sv21a029d.d | 30.00 g | 18-OCT-2013 15:27 | 1.000 | pmm | 29 | DRO |
| 21310173101 | | sv21a029s.d | 30.00 g | 18-OCT-2013 15:27 | 1.000 | pmm | 29 | O-TERPH |
| 1400 | | sv21a030d.d | 1000.00 ml | 18-OCT-2013 15:57 | 1.000 | pmm | 30 | DRO |
| 1400 | | sv21a030s.d | 1000.00 ml | 18-OCT-2013 15:57 | 1.000 | pmm | 30 | O-TERPH |
| 1244576 | | sv21a031d.d | 30.00 g | 18-OCT-2013 16:27 | 5.000 | pmm | 31 | DRO |
| 1244576 | | sv21a031s.d | 30.00 g | 18-OCT-2013 16:27 | 5.000 | pmm | 31 | O-TERPH |
| 1244577 | | sv21a032d.d | 30.00 g | 18-OCT-2013 16:42 | 5.000 | pmm | 32 | DRO |
| 1244577 | | sv21a032s.d | 30.00 g | 18-OCT-2013 16:42 | 5.000 | pmm | 32 | O-TERPH |
| 1400 | | sv21a033d.d | 1000.00 ml | 18-OCT-2013 16:57 | 1.000 | pmm | 33 | DRO |
| 1400 | | sv21a033s.d | 1000.00 ml | 18-OCT-2013 16:57 | 1.000 | pmm | 33 | O-TERPH |

U.S. EPA - CLP
COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

SOW No.:

| *EPA Sample No.* | *Lab Sample ID.* |
|---|---|
| RS-COMP1-101613 | 21310171201 |
| RS-COMP2-101613 | 21310171203 |
| RS-COMP1-101613 | 21310171202 |

| | | |
|---|---|---|
| Were ICP interelement corrections applied ? | Yes / No | YES |
| Were ICP background corrections applied ? | Yes / No | YES |
| If yes-were raw data generated before application of background corrections ? | Yes / No | NO |

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL
Sample ID: RS-COMP1-101613
Lab Code: LA024
Case No.:
Contract:
Matrix: ( soil / water ) Solid
SAS No.:
SDG No.: 213101712
Level: ( low / med )
% Solids: 81.58
Lab Sample ID: 21310171201
Date Received: 10/17/13
Time: 1030
Date Collected: 10/16/13
Time: 1600

| Analyte | Conc. | Units | C | MDL | LOD | LOQ | Method | Type | Analyzed |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 4140 | mg/kg | | 2.43 | 4.86 | 9.73 | SW-846 6010C | P | 10/29/13 1950 |
| Antimony | 1.71 | mg/kg | J | 0.73 | 1.46 | 2.92 | SW-846 6010C | P | 10/29/13 1950 |
| Arsenic | 2.85 | mg/kg | | 0.24 | 0.97 | 1.95 | SW-846 6010C | P | 10/29/13 1950 |
| Barium | 59.3 | mg/kg | | 0.12 | 0.24 | 0.49 | SW-846 6010C | P | 10/29/13 1950 |
| Beryllium | 0.17 | mg/kg | J | 0.049 | 0.097 | 0.19 | SW-846 6010C | P | 10/29/13 1950 |
| Cadmium | 2.50 | mg/kg | | 0.061 | 0.12 | 0.24 | SW-846 6010C | P | 10/29/13 1950 |
| Calcium | 2910 | mg/kg | | 9.73 | 48.6 | 38.9 | SW-846 6010C | P | 10/30/13 1839 |
| Chromium | 19.8 | mg/kg | | 0.12 | 0.49 | 0.97 | SW-846 6010C | P | 10/29/13 1950 |
| Cobalt | 3.86 | mg/kg | | 0.12 | 0.24 | 0.49 | SW-846 6010C | P | 10/29/13 1950 |
| Copper | 78.8 | mg/kg | | 0.24 | 0.97 | 1.95 | SW-846 6010C | P | 10/29/13 1950 |
| Iron | 12300 | mg/kg | | 2.43 | 4.86 | 9.73 | SW-846 6010C | P | 10/29/13 1950 |
| Lead | 455 | mg/kg | | 0.18 | 0.36 | 0.73 | SW-846 6010C | P | 10/29/13 1950 |
| Magnesium | 2070 | mg/kg | | 2.43 | 4.86 | 9.73 | SW-846 6010C | P | 10/29/13 1950 |
| Manganese | 121 | mg/kg | | 0.18 | 0.36 | 0.73 | SW-846 6010C | P | 10/30/13 1839 |
| Mercury | 0.58 | mg/kg | | 0.0059 | 0.015 | 0.015 | SW-846 7471B | AV | 10/18/13 1308 |
| Nickel | 15.0 | mg/kg | | 0.49 | 0.97 | 1.95 | SW-846 6010C | P | 10/29/13 1950 |
| Potassium | 707 | mg/kg | | 6.08 | 12.2 | 24.3 | SW-846 6010C | P | 10/29/13 1950 |
| Selenium | 1.91 | mg/kg | J | 0.49 | 0.97 | 1.95 | SW-846 6010C | P | 10/29/13 1950 |
| Silver | 0.24 | mg/kg | U | 0.12 | 0.24 | 0.49 | SW-846 6010C | P | 10/29/13 1950 |
| Sodium | 54.6 | mg/kg | J | 12.2 | 48.6 | 97.3 | SW-846 6010C | P | 10/29/13 1950 |
| Thallium | 0.79 | mg/kg | J | 0.24 | 0.49 | 0.97 | SW-846 6010C | P | 10/30/13 1839 |
| Vanadium | 10.3 | mg/kg | | 0.24 | 0.49 | 0.97 | SW-846 6010C | P | 10/29/13 1950 |
| Zinc | 907 | mg/kg | | 1.22 | 2.43 | 4.86 | SW-846 6010C | P | 10/31/13 1259 |

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL
Sample ID: RS-COMP2-101613
Lab Code: LA024
Case No.:
Contract:
Matrix: ( soil / water ) Solid
SAS No.:
SDG No.: 213101712
Level: ( low / med )
% Solids: 89.77
Lab Sample ID: 21310171203
Date Received: 10/17/13
Time: 1030
Date Collected: 10/16/13
Time: 1700

| Analyte | Conc. | Units | C | MDL | LOD | LOQ | Method | Type | Analyzed |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 3650 | mg/kg | | 2.23 | 4.46 | 8.91 | SW-846 6010C | P | 10/29/13 1956 |
| Antimony | 0.94 | mg/kg | J | 0.67 | 1.34 | 2.67 | SW-846 6010C | P | 10/29/13 1956 |
| Arsenic | 2.61 | mg/kg | | 0.22 | 0.89 | 1.78 | SW-846 6010C | P | 10/29/13 1956 |
| Barium | 28.7 | mg/kg | | 0.11 | 0.22 | 0.45 | SW-846 6010C | P | 10/29/13 1956 |
| Beryllium | 0.36 | mg/kg | | 0.045 | 0.089 | 0.18 | SW-846 6010C | P | 10/29/13 1956 |
| Cadmium | 1.07 | mg/kg | | 0.056 | 0.11 | 0.22 | SW-846 6010C | P | 10/29/13 1956 |
| Calcium | 1510 | mg/kg | | 8.91 | 44.6 | 35.6 | SW-846 6010C | P | 10/30/13 1846 |
| Chromium | 24.9 | mg/kg | | 0.11 | 0.45 | 0.89 | SW-846 6010C | P | 10/29/13 1956 |
| Cobalt | 3.86 | mg/kg | | 0.11 | 0.22 | 0.45 | SW-846 6010C | P | 10/29/13 1956 |
| Copper | 70.3 | mg/kg | | 0.22 | 0.89 | 1.78 | SW-846 6010C | P | 10/29/13 1956 |
| Iron | 286 | mg/kg | | 2.23 | 4.46 | 8.91 | SW-846 6010C | P | 10/29/13 1956 |
| Lead | 4.99 | mg/kg | | 0.17 | 0.33 | 0.67 | SW-846 6010C | P | 10/29/13 1956 |
| Magnesium | 27.4 | mg/kg | | 2.23 | 4.46 | 8.91 | SW-846 6010C | P | 10/29/13 1956 |
| Manganese | 118 | mg/kg | | 0.17 | 0.33 | 0.67 | SW-846 6010C | P | 10/30/13 1846 |
| Mercury | 0.10 | mg/kg | | 0.0050 | 0.013 | 0.013 | SW-846 7471B | AV | 10/18/13 1309 |
| Nickel | 25.1 | mg/kg | | 0.45 | 0.89 | 1.78 | SW-846 6010C | P | 10/29/13 1956 |
| Potassium | 607 | mg/kg | | 5.57 | 11.1 | 22.3 | SW-846 6010C | P | 10/29/13 1956 |
| Selenium | 1.50 | mg/kg | J | 0.45 | 0.89 | 1.78 | SW-846 6010C | P | 10/29/13 1956 |
| Silver | 0.22 | mg/kg | U | 0.11 | 0.22 | 0.45 | SW-846 6010C | P | 10/29/13 1956 |
| Sodium | 78.6 | mg/kg | J | 11.1 | 44.6 | 89.1 | SW-846 6010C | P | 10/29/13 1956 |
| Thallium | 0.59 | mg/kg | J | 0.22 | 0.45 | 0.89 | SW-846 6010C | P | 10/30/13 1846 |
| Vanadium | 8.15 | mg/kg | | 0.22 | 0.45 | 0.89 | SW-846 6010C | P | 10/29/13 1956 |
| Zinc | 508 | mg/kg | | 0.22 | 0.45 | 0.89 | SW-846 6010C | P | 10/29/13 1956 |

INORGANIC ANALYSIS DATA SHEET

Lab Name: GCAL
Sample ID: RS-COMP1-101613
Lab Code: LA024
Case No.:
Contract:
Matrix: ( soil / water ) Solid
SAS No.:
SDG No.: 213101712
Level: ( low / med )
% Solids:
Lab Sample ID: 21310171202
Date Received: 10/17/13
Time: 1030
Date Collected: 10/16/13
Time: 1600

| Analyte | Conc. | Units | C | MDL | LOD | LOQ | Method | Type | Analyzed |
|---|---|---|---|---|---|---|---|---|---|
| Lead | 5.95 | mg/L | | 0.019 | 0.019 | 0.50 | SW-846 1311/6010C | P | 11/05/13 1232 |

FORM I - IN

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Calibration Source: 225-11-4 CPI/EXAXOL Instrument ID: ICP5 ICAL ID: 2

Date Analyzed: 10/21/13 Time: 1113

## *INITIAL CALIBRATION VERIFICATION*

| *Analyte* | *True* | *Found* | *CAL %R* | *Units* | *Method* | *Type* |
|---|---|---|---|---|---|---|
| Aluminum | 10.0 | 9.46 | 95 | mg/L | SW-846 6010C | P |
| Antimony | 1.00 | 0.980 | 98 | mg/L | SW-846 6010C | P |
| Arsenic | 1.00 | 0.980 | 98 | mg/L | SW-846 6010C | P |
| Barium | 1.00 | 0.950 | 95 | mg/L | SW-846 6010C | P |
| Beryllium | 1.00 | 0.950 | 95 | mg/L | SW-846 6010C | P |
| Cadmium | 1.00 | 0.950 | 95 | mg/L | SW-846 6010C | P |
| Calcium | 10.0 | 9.68 | 97 | mg/L | SW-846 6010C | P |
| Chromium | 1.00 | 0.950 | 95 | mg/L | SW-846 6010C | P |
| Cobalt | 1.00 | 0.950 | 95 | mg/L | SW-846 6010C | P |
| Copper | 1.00 | 0.950 | 95 | mg/L | SW-846 6010C | P |
| Iron | 10.0 | 9.47 | 95 | mg/L | SW-846 6010C | P |
| Lead | 1.00 | 0.950 | 95 | mg/L | SW-846 6010C | P |
| Magnesium | 10.0 | 9.45 | 94 | mg/L | SW-846 6010C | P |
| Manganese | 1.00 | 0.950 | 95 | mg/L | SW-846 6010C | P |
| Nickel | 1.00 | 0.950 | 95 | mg/L | SW-846 6010C | P |
| Potassium | 20.0 | 19.1 | 95 | mg/L | SW-846 6010C | P |
| Selenium | 1.00 | 0.960 | 96 | mg/L | SW-846 6010C | P |
| Silver | 1.00 | 0.970 | 97 | mg/L | SW-846 6010C | P |
| Sodium | 40.0 | 38.2 | 95 | mg/L | SW-846 6010C | P |
| Thallium | 1.00 | 0.970 | 97 | mg/L | SW-846 6010C | P |
| Vanadium | 1.00 | 0.950 | 95 | mg/L | SW-846 6010C | P |
| Zinc | 1.00 | 0.940 | 94 | mg/L | SW-846 6010C | P |

ICV CONTROL LIMITS EPA 6010/6020/200.8 = 90-110 EPA 200.7 = 95-105

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Calibration Source: 225-11-1 INORGANIC VENTURES Instrument ID: ICP5 ICAL ID: 2

Date Analyzed: 10/21/13 Time: 1126

## CRDL STANDARD

| Analyte | True | Found | CAL %R | Units | Method | Type |
|---|---|---|---|---|---|---|
| Aluminum | 0.200 | 0.200 | 102 | mg/L | SW-846 6010C | P |
| Antimony | 0.0600 | 0.0580 | 96 | mg/L | SW-846 6010C | P |
| Arsenic | 0.0200 | 0.0180 | 89 | mg/L | SW-846 6010C | P |
| Barium | 0.0100 | 0.00960 | 96 | mg/L | SW-846 6010C | P |
| Beryllium | 0.00400 | 0.00360 | 91 | mg/L | SW-846 6010C | P |
| Cadmium | 0.00500 | 0.00480 | 95 | mg/L | SW-846 6010C | P |
| Calcium | 0.800 | 0.780 | 97 | mg/L | SW-846 6010C | P |
| Chromium | 0.0100 | 0.0100 | 102 | mg/L | SW-846 6010C | P |
| Cobalt | 0.0100 | 0.00900 | 90 | mg/L | SW-846 6010C | P |
| Copper | 0.0200 | 0.0180 | 91 | mg/L | SW-846 6010C | P |
| Iron | 0.200 | 0.190 | 97 | mg/L | SW-846 6010C | P |
| Lead | 0.0150 | 0.0140 | 91 | mg/L | SW-846 6010C | P |
| Magnesium | 0.200 | 0.160 | 81 | mg/L | SW-846 6010C | P |
| Manganese | 0.0150 | 0.0110 | 72 | mg/L | SW-846 6010C | P |
| Nickel | 0.0400 | 0.0390 | 97 | mg/L | SW-846 6010C | P |
| Potassium | 0.500 | 0.510 | 102 | mg/L | SW-846 6010C | P |
| Selenium | 0.0400 | 0.0380 | 94 | mg/L | SW-846 6010C | P |
| Silver | 0.0100 | 0.00940 | 94 | mg/L | SW-846 6010C | P |
| Sodium | 1.00 | 1.00 | 100 | mg/L | SW-846 6010C | P |
| Thallium | 0.0200 | 0.0200 | 98 | mg/L | SW-846 6010C | P |
| Vanadium | 0.0200 | 0.0180 | 90 | mg/L | SW-846 6010C | P |
| Zinc | 0.0200 | 0.0180 | 88 | mg/L | SW-846 6010C | P |

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Calibration Source: 225-15-5 INORGANIC VENTURES Instrument ID: ICP5 ICAL ID: 2

Date Analyzed: 10/21/13 Time: 1146

## *CONTINUING CALIBRATION VERIFICATION*

| *Analyte* | *True* | *Found* | *CAL %R* | *Units* | *Method* | *Type* |
|---|---|---|---|---|---|---|
| Aluminum | 5.00 | 5.00 | 100 | mg/L | SW-846 6010C | P |
| Antimony | 0.500 | 0.490 | 98 | mg/L | SW-846 6010C | P |
| Arsenic | 0.500 | 0.510 | 103 | mg/L | SW-846 6010C | P |
| Barium | 0.500 | 0.500 | 100 | mg/L | SW-846 6010C | P |
| Beryllium | 0.500 | 0.500 | 100 | mg/L | SW-846 6010C | P |
| Cadmium | 0.500 | 0.500 | 99 | mg/L | SW-846 6010C | P |
| Calcium | 5.00 | 4.97 | 99 | mg/L | SW-846 6010C | P |
| Chromium | 0.500 | 0.500 | 100 | mg/L | SW-846 6010C | P |
| Cobalt | 0.500 | 0.500 | 100 | mg/L | SW-846 6010C | P |
| Copper | 0.500 | 0.490 | 99 | mg/L | SW-846 6010C | P |
| Iron | 5.00 | 5.03 | 101 | mg/L | SW-846 6010C | P |
| Lead | 0.500 | 0.500 | 99 | mg/L | SW-846 6010C | P |
| Magnesium | 5.00 | 4.95 | 99 | mg/L | SW-846 6010C | P |
| Manganese | 0.500 | 0.500 | 99 | mg/L | SW-846 6010C | P |
| Nickel | 0.500 | 0.500 | 100 | mg/L | SW-846 6010C | P |
| Potassium | 10.0 | 9.95 | 100 | mg/L | SW-846 6010C | P |
| Selenium | 0.500 | 0.500 | 99 | mg/L | SW-846 6010C | P |
| Silver | 0.500 | 0.500 | 99 | mg/L | SW-846 6010C | P |
| Sodium | 20.0 | 19.3 | 97 | mg/L | SW-846 6010C | P |
| Thallium | 0.500 | 0.510 | 102 | mg/L | SW-846 6010C | P |
| Vanadium | 0.500 | 0.490 | 99 | mg/L | SW-846 6010C | P |
| Zinc | 0.500 | 0.490 | 97 | mg/L | SW-846 6010C | P |

CCV CONTROL LIMITS EPA 6010/200.7/6020/200.8 = 90-110 EPA 7470/7471/7XXX = 80-120

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Calibration Source: 225-15-5 INORGANIC VENTURES
Instrument ID: ICP5 ICAL ID: 2
Date Analyzed: 10/21/13 Time: 1343

## *CONTINUING CALIBRATION VERIFICATION*

| *Analyte* | *True* | *Found* | *CAL %R* | *Units* | *Method* | *Type* |
|---|---|---|---|---|---|---|
| Aluminum | 5.00 | 4.92 | 98 | mg/L | SW-846 6010C | P |
| Antimony | 0.500 | 0.490 | 98 | mg/L | SW-846 6010C | P |
| Arsenic | 0.500 | 0.510 | 102 | mg/L | SW-846 6010C | P |
| Barium | 0.500 | 0.500 | 100 | mg/L | SW-846 6010C | P |
| Beryllium | 0.500 | 0.500 | 99 | mg/L | SW-846 6010C | P |
| Cadmium | 0.500 | 0.500 | 99 | mg/L | SW-846 6010C | P |
| Calcium | 5.00 | 4.88 | 98 | mg/L | SW-846 6010C | P |
| Chromium | 0.500 | 0.500 | 100 | mg/L | SW-846 6010C | P |
| Cobalt | 0.500 | 0.500 | 99 | mg/L | SW-846 6010C | P |
| Copper | 0.500 | 0.490 | 98 | mg/L | SW-846 6010C | P |
| Iron | 5.00 | 4.88 | 98 | mg/L | SW-846 6010C | P |
| Lead | 0.500 | 0.490 | 99 | mg/L | SW-846 6010C | P |
| Magnesium | 5.00 | 4.84 | 97 | mg/L | SW-846 6010C | P |
| Manganese | 0.500 | 0.490 | 99 | mg/L | SW-846 6010C | P |
| Nickel | 0.500 | 0.500 | 100 | mg/L | SW-846 6010C | P |
| Potassium | 10.0 | 9.86 | 99 | mg/L | SW-846 6010C | P |
| Selenium | 0.500 | 0.490 | 97 | mg/L | SW-846 6010C | P |
| Silver | 0.500 | 0.500 | 99 | mg/L | SW-846 6010C | P |
| Sodium | 20.0 | 19.7 | 99 | mg/L | SW-846 6010C | P |
| Thallium | 0.500 | 0.510 | 102 | mg/L | SW-846 6010C | P |
| Vanadium | 0.500 | 0.490 | 99 | mg/L | SW-846 6010C | P |
| Zinc | 0.500 | 0.490 | 98 | mg/L | SW-846 6010C | P |

CCV CONTROL LIMITS EPA 6010/200.7/6020/200.8 = 90-110 EPA 7470/7471/7XXX = 80-120

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Calibration Source: 225-15-5 INORGANIC VENTURES
Instrument ID: ICP5 ICAL ID: 2
Date Analyzed: 10/21/13 Time: 1502

## *CONTINUING CALIBRATION VERIFICATION*

| *Analyte* | *True* | *Found* | *CAL %R* | *Units* | *Method* | *Type* |
|---|---|---|---|---|---|---|
| Aluminum | 5.00 | 5.06 | 101 | mg/L | SW-846 6010C | P |
| Antimony | 0.500 | 0.490 | 98 | mg/L | SW-846 6010C | P |
| Arsenic | 0.500 | 0.500 | 100 | mg/L | SW-846 6010C | P |
| Barium | 0.500 | 0.490 | 98 | mg/L | SW-846 6010C | P |
| Beryllium | 0.500 | 0.490 | 98 | mg/L | SW-846 6010C | P |
| Cadmium | 0.500 | 0.490 | 98 | mg/L | SW-846 6010C | P |
| Calcium | 5.00 | 4.88 | 98 | mg/L | SW-846 6010C | P |
| Chromium | 0.500 | 0.490 | 99 | mg/L | SW-846 6010C | P |
| Cobalt | 0.500 | 0.490 | 98 | mg/L | SW-846 6010C | P |
| Copper | 0.500 | 0.480 | 97 | mg/L | SW-846 6010C | P |
| Iron | 5.00 | 5.17 | 103 | mg/L | SW-846 6010C | P |
| Lead | 0.500 | 0.490 | 97 | mg/L | SW-846 6010C | P |
| Magnesium | 5.00 | 4.85 | 97 | mg/L | SW-846 6010C | P |
| Manganese | 0.500 | 0.490 | 98 | mg/L | SW-846 6010C | P |
| Nickel | 0.500 | 0.490 | 99 | mg/L | SW-846 6010C | P |
| Potassium | 10.0 | 10.3 | 103 | mg/L | SW-846 6010C | P |
| Selenium | 0.500 | 0.480 | 96 | mg/L | SW-846 6010C | P |
| Silver | 0.500 | 0.490 | 98 | mg/L | SW-846 6010C | P |
| Sodium | 20.0 | 19.1 | 96 | mg/L | SW-846 6010C | P |
| Thallium | 0.500 | 0.500 | 101 | mg/L | SW-846 6010C | P |
| Vanadium | 0.500 | 0.490 | 98 | mg/L | SW-846 6010C | P |
| Zinc | 0.500 | 0.480 | 97 | mg/L | SW-846 6010C | P |

CCV CONTROL LIMITS EPA 6010/200.7/6020/200.8 = 90-110 EPA 7470/7471/7XXX = 80-120

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Calibration Source: 225-11-4 CPI/EXAXOL Instrument ID: ICP5 ICAL ID: 3

Date Analyzed: 10/29/13 Time: 0936

## *INITIAL CALIBRATION VERIFICATION*

| *Analyte* | *True* | *Found* | *CAL %R* | *Units* | *Method* | *Type* |
|---|---|---|---|---|---|---|
| Aluminum | 10.0 | 9.75 | 97 | mg/L | SW-846 6010C | P |
| Antimony | 1.00 | 1.01 | 101 | mg/L | SW-846 6010C | P |
| Arsenic | 1.00 | 1.02 | 102 | mg/L | SW-846 6010C | P |
| Barium | 1.00 | 0.980 | 98 | mg/L | SW-846 6010C | P |
| Beryllium | 1.00 | 1.00 | 100 | mg/L | SW-846 6010C | P |
| Cadmium | 1.00 | 0.980 | 98 | mg/L | SW-846 6010C | P |
| Calcium | 10.0 | 9.99 | 100 | mg/L | SW-846 6010C | P |
| Chromium | 1.00 | 0.980 | 98 | mg/L | SW-846 6010C | P |
| Cobalt | 1.00 | 0.970 | 97 | mg/L | SW-846 6010C | P |
| Copper | 1.00 | 0.980 | 98 | mg/L | SW-846 6010C | P |
| Iron | 10.0 | 9.74 | 97 | mg/L | SW-846 6010C | P |
| Lead | 1.00 | 0.980 | 98 | mg/L | SW-846 6010C | P |
| Magnesium | 10.0 | 9.76 | 98 | mg/L | SW-846 6010C | P |
| Manganese | 1.00 | 0.980 | 98 | mg/L | SW-846 6010C | P |
| Nickel | 1.00 | 0.980 | 98 | mg/L | SW-846 6010C | P |
| Potassium | 20.0 | 19.6 | 98 | mg/L | SW-846 6010C | P |
| Selenium | 1.00 | 0.990 | 99 | mg/L | SW-846 6010C | P |
| Silver | 1.00 | 0.970 | 97 | mg/L | SW-846 6010C | P |
| Sodium | 40.0 | 39.1 | 98 | mg/L | SW-846 6010C | P |
| Thallium | 1.00 | 0.990 | 99 | mg/L | SW-846 6010C | P |
| Vanadium | 1.00 | 0.970 | 97 | mg/L | SW-846 6010C | P |
| Zinc | 1.00 | 0.970 | 97 | mg/L | SW-846 6010C | P |

ICV CONTROL LIMITS EPA 6010/6020/200.8 = 90-110 EPA 200.7 = 95-105

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Calibration Source: 225-14-4 INORGANIC VENTURES Instrument ID: ICP5 ICAL ID: 3

Date Analyzed: 10/29/13 Time: 0949

## *CRDL STANDARD*

| *Analyte* | *True* | *Found* | *CAL %R* | *Units* | *Method* | *Type* |
|---|---|---|---|---|---|---|
| Aluminum | 0.200 | 0.200 | 102 | mg/L | SW-846 6010C | P |
| Antimony | 0.0600 | 0.0550 | 92 | mg/L | SW-846 6010C | P |
| Arsenic | 0.0200 | 0.0220 | 110 | mg/L | SW-846 6010C | P |
| Barium | 0.0100 | 0.00990 | 99 | mg/L | SW-846 6010C | P |
| Beryllium | 0.00400 | 0.00390 | 97 | mg/L | SW-846 6010C | P |
| Cadmium | 0.00500 | 0.00480 | 96 | mg/L | SW-846 6010C | P |
| Calcium | 0.800 | 0.830 | 104 | mg/L | SW-846 6010C | P |
| Chromium | 0.0100 | 0.0110 | 105 | mg/L | SW-846 6010C | P |
| Cobalt | 0.0100 | 0.00970 | 97 | mg/L | SW-846 6010C | P |
| Copper | 0.0200 | 0.0200 | 100 | mg/L | SW-846 6010C | P |
| Iron | 0.200 | 0.200 | 98 | mg/L | SW-846 6010C | P |
| Lead | 0.0150 | 0.0150 | 99 | mg/L | SW-846 6010C | P |
| Magnesium | 0.200 | 0.190 | 96 | mg/L | SW-846 6010C | P |
| Manganese | 0.0150 | 0.0160 | 106 | mg/L | SW-846 6010C | P |
| Nickel | 0.0400 | 0.0400 | 100 | mg/L | SW-846 6010C | P |
| Potassium | 0.500 | 0.490 | 98 | mg/L | SW-846 6010C | P |
| Selenium | 0.0400 | 0.0390 | 97 | mg/L | SW-846 6010C | P |
| Silver | 0.0100 | 0.00880 | 88 | mg/L | SW-846 6010C | P |
| Sodium | 1.00 | 0.900 | 90 | mg/L | SW-846 6010C | P |
| Thallium | 0.0200 | 0.0250 | 123 | mg/L | SW-846 6010C | P |
| Vanadium | 0.0200 | 0.0180 | 91 | mg/L | SW-846 6010C | P |
| Zinc | 0.0200 | 0.0190 | 97 | mg/L | SW-846 6010C | P |

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Calibration Source: 225-20-1 INORGANIC VENTURES
Instrument ID: ICP5 ICAL ID: 3
Date Analyzed: 10/29/13 Time: 1023

## *CONTINUING CALIBRATION VERIFICATION*

| *Analyte* | *True* | *Found* | *CAL %R* | *Units* | *Method* | *Type* |
|---|---|---|---|---|---|---|
| Aluminum | 5.00 | 4.93 | 99 | mg/L | SW-846 6010C | P |
| Antimony | 0.500 | 0.490 | 98 | mg/L | SW-846 6010C | P |
| Arsenic | 0.500 | 0.510 | 101 | mg/L | SW-846 6010C | P |
| Barium | 0.500 | 0.500 | 99 | mg/L | SW-846 6010C | P |
| Beryllium | 0.500 | 0.500 | 100 | mg/L | SW-846 6010C | P |
| Cadmium | 0.500 | 0.490 | 98 | mg/L | SW-846 6010C | P |
| Calcium | 5.00 | 5.01 | 100 | mg/L | SW-846 6010C | P |
| Chromium | 0.500 | 0.500 | 100 | mg/L | SW-846 6010C | P |
| Cobalt | 0.500 | 0.500 | 100 | mg/L | SW-846 6010C | P |
| Copper | 0.500 | 0.510 | 101 | mg/L | SW-846 6010C | P |
| Iron | 5.00 | 4.92 | 98 | mg/L | SW-846 6010C | P |
| Lead | 0.500 | 0.510 | 103 | mg/L | SW-846 6010C | P |
| Magnesium | 5.00 | 4.88 | 98 | mg/L | SW-846 6010C | P |
| Manganese | 0.500 | 0.510 | 103 | mg/L | SW-846 6010C | P |
| Nickel | 0.500 | 0.500 | 100 | mg/L | SW-846 6010C | P |
| Potassium | 10.0 | 10.1 | 101 | mg/L | SW-846 6010C | P |
| Selenium | 0.500 | 0.490 | 98 | mg/L | SW-846 6010C | P |
| Silver | 0.500 | 0.510 | 101 | mg/L | SW-846 6010C | P |
| Sodium | 20.0 | 20.0 | 100 | mg/L | SW-846 6010C | P |
| Thallium | 0.500 | 0.510 | 102 | mg/L | SW-846 6010C | P |
| Vanadium | 0.500 | 0.500 | 99 | mg/L | SW-846 6010C | P |
| Zinc | 0.500 | 0.490 | 99 | mg/L | SW-846 6010C | P |

CCV CONTROL LIMITS EPA 6010/200.7/6020/200.8 = 90-110 EPA 7470/7471/7XXX = 80-120

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Calibration Source: 225-20-1 INORGANIC VENTURES Instrument ID: ICP5 ICAL ID: 3

Date Analyzed: 10/29/13 Time: 1924

## *CONTINUING CALIBRATION VERIFICATION*

| *Analyte* | *True* | *Found* | *CAL %R* | *Units* | *Method* | *Type* |
|---|---|---|---|---|---|---|
| Aluminum | 5.00 | 4.88 | 98 | mg/L | SW-846 6010C | P |
| Antimony | 0.500 | 0.490 | 98 | mg/L | SW-846 6010C | P |
| Arsenic | 0.500 | 0.490 | 97 | mg/L | SW-846 6010C | P |
| Barium | 0.500 | 0.480 | 97 | mg/L | SW-846 6010C | P |
| Beryllium | 0.500 | 0.490 | 98 | mg/L | SW-846 6010C | P |
| Cadmium | 0.500 | 0.470 | 93 | mg/L | SW-846 6010C | P |
| Calcium | 5.00 | 5.75 | 115 | mg/L | SW-846 6010C | P |
| Chromium | 0.500 | 0.490 | 97 | mg/L | SW-846 6010C | P |
| Cobalt | 0.500 | 0.480 | 96 | mg/L | SW-846 6010C | P |
| Copper | 0.500 | 0.510 | 102 | mg/L | SW-846 6010C | P |
| Iron | 5.00 | 4.69 | 94 | mg/L | SW-846 6010C | P |
| Lead | 0.500 | 0.490 | 99 | mg/L | SW-846 6010C | P |
| Magnesium | 5.00 | 4.60 | 92 | mg/L | SW-846 6010C | P |
| Manganese | 0.500 | 0.600 | 119 | mg/L | SW-846 6010C | P |
| Nickel | 0.500 | 0.480 | 96 | mg/L | SW-846 6010C | P |
| Potassium | 10.0 | 10.1 | 101 | mg/L | SW-846 6010C | P |
| Selenium | 0.500 | 0.470 | 94 | mg/L | SW-846 6010C | P |
| Silver | 0.500 | 0.520 | 104 | mg/L | SW-846 6010C | P |
| Sodium | 20.0 | 20.2 | 101 | mg/L | SW-846 6010C | P |
| Thallium | 0.500 | 0.490 | 99 | mg/L | SW-846 6010C | P |
| Vanadium | 0.500 | 0.490 | 99 | mg/L | SW-846 6010C | P |
| Zinc | 0.500 | 0.510 | 102 | mg/L | SW-846 6010C | P |

CCV CONTROL LIMITS EPA 6010/200.7/6020/200.8 = 90-110 EPA 7470/7471/7XXX = 80-120

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Calibration Source: 225-20-1 INORGANIC VENTURES Instrument ID: ICP5 ICAL ID: 3

Date Analyzed: 10/29/13 Time: 2039

## *CONTINUING CALIBRATION VERIFICATION*

| *Analyte* | *True* | *Found* | *CAL %R* | *Units* | *Method* | *Type* |
|---|---|---|---|---|---|---|
| Aluminum | 5.00 | 4.77 | 95 | mg/L | SW-846 6010C | P |
| Antimony | 0.500 | 0.500 | 100 | mg/L | SW-846 6010C | P |
| Arsenic | 0.500 | 0.500 | 101 | mg/L | SW-846 6010C | P |
| Barium | 0.500 | 0.480 | 97 | mg/L | SW-846 6010C | P |
| Beryllium | 0.500 | 0.490 | 98 | mg/L | SW-846 6010C | P |
| Cadmium | 0.500 | 0.470 | 95 | mg/L | SW-846 6010C | P |
| Calcium | 5.00 | 5.73 | 115 | mg/L | SW-846 6010C | P |
| Chromium | 0.500 | 0.490 | 97 | mg/L | SW-846 6010C | P |
| Cobalt | 0.500 | 0.480 | 97 | mg/L | SW-846 6010C | P |
| Copper | 0.500 | 0.500 | 101 | mg/L | SW-846 6010C | P |
| Iron | 5.00 | 4.92 | 98 | mg/L | SW-846 6010C | P |
| Lead | 0.500 | 0.490 | 98 | mg/L | SW-846 6010C | P |
| Magnesium | 5.00 | 4.77 | 95 | mg/L | SW-846 6010C | P |
| Manganese | 0.500 | 0.610 | 122 | mg/L | SW-846 6010C | P |
| Nickel | 0.500 | 0.490 | 97 | mg/L | SW-846 6010C | P |
| Potassium | 10.0 | 10.1 | 101 | mg/L | SW-846 6010C | P |
| Selenium | 0.500 | 0.470 | 94 | mg/L | SW-846 6010C | P |
| Silver | 0.500 | 0.510 | 102 | mg/L | SW-846 6010C | P |
| Sodium | 20.0 | 19.8 | 99 | mg/L | SW-846 6010C | P |
| Thallium | 0.500 | 0.490 | 97 | mg/L | SW-846 6010C | P |
| Vanadium | 0.500 | 0.490 | 98 | mg/L | SW-846 6010C | P |
| Zinc | 0.500 | 0.510 | 102 | mg/L | SW-846 6010C | P |

CCV CONTROL LIMITS EPA 6010/200.7/6020/200.8 = 90-110 EPA 7470/7471/7XXX = 80-120

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Calibration Source: 225-11-4 CPI/EXAXOL Instrument ID: ICP5 ICAL ID: 4

Date Analyzed: 10/30/13 Time: 1729

## *INITIAL CALIBRATION VERIFICATION*

| *Analyte* | *True* | *Found* | *CAL %R* | *Units* | *Method* | *Type* |
|---|---|---|---|---|---|---|
| Aluminum | 10.0 | 9.58 | 96 | mg/L | SW-846 6010C | P |
| Antimony | 1.00 | 1.00 | 100 | mg/L | SW-846 6010C | P |
| Arsenic | 1.00 | 1.01 | 101 | mg/L | SW-846 6010C | P |
| Barium | 1.00 | 0.970 | 97 | mg/L | SW-846 6010C | P |
| Beryllium | 1.00 | 0.970 | 97 | mg/L | SW-846 6010C | P |
| Cadmium | 1.00 | 0.970 | 97 | mg/L | SW-846 6010C | P |
| Calcium | 10.0 | 9.67 | 97 | mg/L | SW-846 6010C | P |
| Chromium | 1.00 | 0.970 | 97 | mg/L | SW-846 6010C | P |
| Cobalt | 1.00 | 0.970 | 97 | mg/L | SW-846 6010C | P |
| Copper | 1.00 | 0.970 | 97 | mg/L | SW-846 6010C | P |
| Iron | 10.0 | 9.59 | 96 | mg/L | SW-846 6010C | P |
| Lead | 1.00 | 0.980 | 98 | mg/L | SW-846 6010C | P |
| Magnesium | 10.0 | 9.51 | 95 | mg/L | SW-846 6010C | P |
| Manganese | 1.00 | 0.970 | 97 | mg/L | SW-846 6010C | P |
| Nickel | 1.00 | 0.970 | 97 | mg/L | SW-846 6010C | P |
| Potassium | 20.0 | 19.6 | 98 | mg/L | SW-846 6010C | P |
| Selenium | 1.00 | 0.990 | 99 | mg/L | SW-846 6010C | P |
| Silver | 1.00 | 0.930 | 93 | mg/L | SW-846 6010C | P |
| Sodium | 40.0 | 39.0 | 98 | mg/L | SW-846 6010C | P |
| Thallium | 1.00 | 1.00 | 100 | mg/L | SW-846 6010C | P |
| Vanadium | 1.00 | 0.960 | 96 | mg/L | SW-846 6010C | P |
| Zinc | 1.00 | 0.950 | 95 | mg/L | SW-846 6010C | P |

ICV CONTROL LIMITS EPA 6010/6020/200.8 = 90-110 EPA 200.7 = 95-105

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Calibration Source: 225-22-8 INORGANIC VENTURES
Instrument ID: ICP5 ICAL ID: 4
Date Analyzed: 10/30/13 Time: 1742

## *CRDL STANDARD*

| *Analyte* | *True* | *Found* | *CAL %R* | *Units* | *Method* | *Type* |
|---|---|---|---|---|---|---|
| Aluminum | 0.200 | 0.180 | 90 | mg/L | SW-846 6010C | P |
| Antimony | 0.0600 | 0.0660 | 111 | mg/L | SW-846 6010C | P |
| Arsenic | 0.0200 | 0.0230 | 113 | mg/L | SW-846 6010C | P |
| Barium | 0.0100 | 0.0110 | 110 | mg/L | SW-846 6010C | P |
| Beryllium | 0.00400 | 0.00510 | 126 | mg/L | SW-846 6010C | P |
| Cadmium | 0.00500 | 0.00490 | 99 | mg/L | SW-846 6010C | P |
| Calcium | 0.800 | 0.800 | 100 | mg/L | SW-846 6010C | P |
| Chromium | 0.0100 | 0.0110 | 108 | mg/L | SW-846 6010C | P |
| Cobalt | 0.0100 | 0.0100 | 104 | mg/L | SW-846 6010C | P |
| Copper | 0.0200 | 0.0210 | 106 | mg/L | SW-846 6010C | P |
| Iron | 0.200 | 0.200 | 102 | mg/L | SW-846 6010C | P |
| Lead | 0.0150 | 0.0150 | 98 | mg/L | SW-846 6010C | P |
| Magnesium | 0.200 | 0.190 | 96 | mg/L | SW-846 6010C | P |
| Manganese | 0.0150 | 0.0160 | 109 | mg/L | SW-846 6010C | P |
| Nickel | 0.0400 | 0.0420 | 104 | mg/L | SW-846 6010C | P |
| Potassium | 0.500 | 0.530 | 106 | mg/L | SW-846 6010C | P |
| Selenium | 0.0400 | 0.0430 | 107 | mg/L | SW-846 6010C | P |
| Silver | 0.0100 | 0.0110 | 113 | mg/L | SW-846 6010C | P |
| Sodium | 1.00 | 1.02 | 102 | mg/L | SW-846 6010C | P |
| Thallium | 0.0200 | 0.0220 | 108 | mg/L | SW-846 6010C | P |
| Vanadium | 0.0200 | 0.0210 | 106 | mg/L | SW-846 6010C | P |
| Zinc | 0.0200 | 0.0150 | 76 | mg/L | SW-846 6010C | P |

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Calibration Source: 225-22-6 INORGANIC VENTURES Instrument ID: ICP5 ICAL ID: 4

Date Analyzed: 10/30/13 Time: 1801

## *CONTINUING CALIBRATION VERIFICATION*

| *Analyte* | *True* | *Found* | *CAL %R* | *Units* | *Method* | *Type* |
|---|---|---|---|---|---|---|
| Aluminum | 5.00 | 5.04 | 101 | mg/L | SW-846 6010C | P |
| Antimony | 0.500 | 0.490 | 98 | mg/L | SW-846 6010C | P |
| Arsenic | 0.500 | 0.530 | 106 | mg/L | SW-846 6010C | P |
| Barium | 0.500 | 0.510 | 102 | mg/L | SW-846 6010C | P |
| Beryllium | 0.500 | 0.510 | 101 | mg/L | SW-846 6010C | P |
| Cadmium | 0.500 | 0.520 | 103 | mg/L | SW-846 6010C | P |
| Calcium | 5.00 | 5.08 | 102 | mg/L | SW-846 6010C | P |
| Chromium | 0.500 | 0.510 | 102 | mg/L | SW-846 6010C | P |
| Cobalt | 0.500 | 0.510 | 103 | mg/L | SW-846 6010C | P |
| Copper | 0.500 | 0.500 | 101 | mg/L | SW-846 6010C | P |
| Iron | 5.00 | 5.26 | 105 | mg/L | SW-846 6010C | P |
| Lead | 0.500 | 0.510 | 103 | mg/L | SW-846 6010C | P |
| Magnesium | 5.00 | 5.16 | 103 | mg/L | SW-846 6010C | P |
| Manganese | 0.500 | 0.520 | 104 | mg/L | SW-846 6010C | P |
| Nickel | 0.500 | 0.520 | 103 | mg/L | SW-846 6010C | P |
| Potassium | 10.0 | 10.2 | 102 | mg/L | SW-846 6010C | P |
| Selenium | 0.500 | 0.510 | 103 | mg/L | SW-846 6010C | P |
| Silver | 0.500 | 0.500 | 100 | mg/L | SW-846 6010C | P |
| Sodium | 20.0 | 19.9 | 100 | mg/L | SW-846 6010C | P |
| Thallium | 0.500 | 0.520 | 104 | mg/L | SW-846 6010C | P |
| Vanadium | 0.500 | 0.510 | 101 | mg/L | SW-846 6010C | P |
| Zinc | 0.500 | 0.500 | 101 | mg/L | SW-846 6010C | P |

CCV CONTROL LIMITS EPA 6010/200.7/6020/200.8 = 90-110 EPA 7470/7471/7XXX = 80-120

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Calibration Source: 225-22-6 INORGANIC VENTURES
Instrument ID: ICP5 ICAL ID: 4
Date Analyzed: 10/30/13 Time: 1926

## *CONTINUING CALIBRATION VERIFICATION*

| *Analyte* | *True* | *Found* | *CAL %R* | *Units* | *Method* | *Type* |
|---|---|---|---|---|---|---|
| Aluminum | 5.00 | 4.93 | 99 | mg/L | SW-846 6010C | P |
| Antimony | 0.500 | 0.490 | 98 | mg/L | SW-846 6010C | P |
| Arsenic | 0.500 | 0.520 | 104 | mg/L | SW-846 6010C | P |
| Barium | 0.500 | 0.500 | 101 | mg/L | SW-846 6010C | P |
| Beryllium | 0.500 | 0.500 | 101 | mg/L | SW-846 6010C | P |
| Cadmium | 0.500 | 0.500 | 101 | mg/L | SW-846 6010C | P |
| Calcium | 5.00 | 4.99 | 100 | mg/L | SW-846 6010C | P |
| Chromium | 0.500 | 0.500 | 101 | mg/L | SW-846 6010C | P |
| Cobalt | 0.500 | 0.510 | 101 | mg/L | SW-846 6010C | P |
| Copper | 0.500 | 0.500 | 100 | mg/L | SW-846 6010C | P |
| Iron | 5.00 | 5.16 | 103 | mg/L | SW-846 6010C | P |
| Lead | 0.500 | 0.500 | 100 | mg/L | SW-846 6010C | P |
| Magnesium | 5.00 | 5.05 | 101 | mg/L | SW-846 6010C | P |
| Manganese | 0.500 | 0.510 | 103 | mg/L | SW-846 6010C | P |
| Nickel | 0.500 | 0.510 | 101 | mg/L | SW-846 6010C | P |
| Potassium | 10.0 | 10.1 | 101 | mg/L | SW-846 6010C | P |
| Selenium | 0.500 | 0.490 | 99 | mg/L | SW-846 6010C | P |
| Silver | 0.500 | 0.500 | 99 | mg/L | SW-846 6010C | P |
| Sodium | 20.0 | 19.9 | 100 | mg/L | SW-846 6010C | P |
| Thallium | 0.500 | 0.510 | 102 | mg/L | SW-846 6010C | P |
| Vanadium | 0.500 | 0.500 | 100 | mg/L | SW-846 6010C | P |
| Zinc | 0.500 | 0.500 | 100 | mg/L | SW-846 6010C | P |

CCV CONTROL LIMITS EPA 6010/200.7/6020/200.8 = 90-110 EPA 7470/7471/7XXX = 80-120

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Calibration Source: 225-11-4 CPI/EXAXOL Instrument ID: ICP5 ICAL ID: 5

Date Analyzed: 10/31/13 Time: 1201

## *INITIAL CALIBRATION VERIFICATION*

| *Analyte* | *True* | *Found* | *CAL %R* | *Units* | *Method* | *Type* |
|---|---|---|---|---|---|---|
| Aluminum | 10.0 | 9.88 | 99 | mg/L | SW-846 6010C | P |
| Antimony | 1.00 | 1.00 | 100 | mg/L | SW-846 6010C | P |
| Arsenic | 1.00 | 1.02 | 102 | mg/L | SW-846 6010C | P |
| Barium | 1.00 | 0.980 | 98 | mg/L | SW-846 6010C | P |
| Beryllium | 1.00 | 0.980 | 98 | mg/L | SW-846 6010C | P |
| Cadmium | 1.00 | 0.980 | 98 | mg/L | SW-846 6010C | P |
| Calcium | 10.0 | 9.73 | 97 | mg/L | SW-846 6010C | P |
| Chromium | 1.00 | 0.990 | 99 | mg/L | SW-846 6010C | P |
| Cobalt | 1.00 | 0.980 | 98 | mg/L | SW-846 6010C | P |
| Copper | 1.00 | 0.990 | 99 | mg/L | SW-846 6010C | P |
| Iron | 10.0 | 9.79 | 98 | mg/L | SW-846 6010C | P |
| Lead | 1.00 | 0.990 | 99 | mg/L | SW-846 6010C | P |
| Magnesium | 10.0 | 9.81 | 98 | mg/L | SW-846 6010C | P |
| Manganese | 1.00 | 0.980 | 98 | mg/L | SW-846 6010C | P |
| Nickel | 1.00 | 0.980 | 98 | mg/L | SW-846 6010C | P |
| Potassium | 20.0 | 19.5 | 98 | mg/L | SW-846 6010C | P |
| Selenium | 1.00 | 1.00 | 100 | mg/L | SW-846 6010C | P |
| Silver | 1.00 | 0.970 | 97 | mg/L | SW-846 6010C | P |
| Sodium | 40.0 | 39.9 | 100 | mg/L | SW-846 6010C | P |
| Thallium | 1.00 | 1.00 | 100 | mg/L | SW-846 6010C | P |
| Vanadium | 1.00 | 0.980 | 98 | mg/L | SW-846 6010C | P |
| Zinc | 1.00 | 0.960 | 96 | mg/L | SW-846 6010C | P |

ICV CONTROL LIMITS EPA 6010/6020/200.8 = 90-110 EPA 200.7 = 95-105

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024
Case No.:
SAS No.:
SDG No.: 213101712
Calibration Source: 225-23-5 INORGANIC VENTURES
Instrument ID: ICP5
ICAL ID: 5
Date Analyzed: 10/31/13
Time: 1214

## CRDL STANDARD

| Analyte | True | Found | CAL %R | Units | Method | Type |
|---|---|---|---|---|---|---|
| Aluminum | 0.200 | 0.220 | 112 | mg/L | SW-846 6010C | P |
| Antimony | 0.0600 | 0.0600 | 101 | mg/L | SW-846 6010C | P |
| Arsenic | 0.0200 | 0.0260 | 128 | mg/L | SW-846 6010C | P |
| Barium | 0.0100 | 0.0100 | 102 | mg/L | SW-846 6010C | P |
| Beryllium | 0.00400 | 0.00410 | 103 | mg/L | SW-846 6010C | P |
| Cadmium | 0.00500 | 0.00510 | 103 | mg/L | SW-846 6010C | P |
| Calcium | 0.800 | 0.820 | 103 | mg/L | SW-846 6010C | P |
| Chromium | 0.0100 | 0.0110 | 107 | mg/L | SW-846 6010C | P |
| Cobalt | 0.0100 | 0.0100 | 103 | mg/L | SW-846 6010C | P |
| Copper | 0.0200 | 0.0200 | 100 | mg/L | SW-846 6010C | P |
| Iron | 0.200 | 0.200 | 101 | mg/L | SW-846 6010C | P |
| Lead | 0.0150 | 0.0150 | 103 | mg/L | SW-846 6010C | P |
| Magnesium | 0.200 | 0.230 | 113 | mg/L | SW-846 6010C | P |
| Manganese | 0.0150 | 0.0150 | 102 | mg/L | SW-846 6010C | P |
| Nickel | 0.0400 | 0.0400 | 100 | mg/L | SW-846 6010C | P |
| Potassium | 0.500 | 0.480 | 97 | mg/L | SW-846 6010C | P |
| Selenium | 0.0400 | 0.0360 | 90 | mg/L | SW-846 6010C | P |
| Silver | 0.0100 | 0.00970 | 97 | mg/L | SW-846 6010C | P |
| Sodium | 1.00 | 1.08 | 108 | mg/L | SW-846 6010C | P |
| Thallium | 0.0200 | 0.0220 | 109 | mg/L | SW-846 6010C | P |
| Vanadium | 0.0200 | 0.0200 | 99 | mg/L | SW-846 6010C | P |
| Zinc | 0.0200 | 0.0200 | 99 | mg/L | SW-846 6010C | P |

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Calibration Source: 225-22-9 INORGANIC VENTURES
Instrument ID: ICP5 ICAL ID: 5
Date Analyzed: 10/31/13 Time: 1246

## *CONTINUING CALIBRATION VERIFICATION*

| *Analyte* | *True* | *Found* | *CAL %R* | *Units* | *Method* | *Type* |
|---|---|---|---|---|---|---|
| Aluminum | 5.00 | 5.02 | 100 | mg/L | SW-846 6010C | P |
| Antimony | 0.500 | 0.500 | 100 | mg/L | SW-846 6010C | P |
| Arsenic | 0.500 | 0.520 | 104 | mg/L | SW-846 6010C | P |
| Barium | 0.500 | 0.510 | 102 | mg/L | SW-846 6010C | P |
| Beryllium | 0.500 | 0.510 | 101 | mg/L | SW-846 6010C | P |
| Cadmium | 0.500 | 0.520 | 103 | mg/L | SW-846 6010C | P |
| Calcium | 5.00 | 4.92 | 98 | mg/L | SW-846 6010C | P |
| Chromium | 0.500 | 0.510 | 103 | mg/L | SW-846 6010C | P |
| Cobalt | 0.500 | 0.510 | 103 | mg/L | SW-846 6010C | P |
| Copper | 0.500 | 0.520 | 103 | mg/L | SW-846 6010C | P |
| Iron | 5.00 | 5.04 | 101 | mg/L | SW-846 6010C | P |
| Lead | 0.500 | 0.510 | 102 | mg/L | SW-846 6010C | P |
| Magnesium | 5.00 | 5.07 | 101 | mg/L | SW-846 6010C | P |
| Manganese | 0.500 | 0.530 | 107 | mg/L | SW-846 6010C | P |
| Nickel | 0.500 | 0.520 | 103 | mg/L | SW-846 6010C | P |
| Potassium | 10.0 | 10.0 | 100 | mg/L | SW-846 6010C | P |
| Selenium | 0.500 | 0.510 | 102 | mg/L | SW-846 6010C | P |
| Silver | 0.500 | 0.520 | 104 | mg/L | SW-846 6010C | P |
| Sodium | 20.0 | 20.5 | 103 | mg/L | SW-846 6010C | P |
| Thallium | 0.500 | 0.520 | 104 | mg/L | SW-846 6010C | P |
| Vanadium | 0.500 | 0.510 | 103 | mg/L | SW-846 6010C | P |
| Zinc | 0.500 | 0.500 | 100 | mg/L | SW-846 6010C | P |

CCV CONTROL LIMITS EPA 6010/200.7/6020/200.8 = 90-110 EPA 7470/7471/7XXX = 80-120

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Calibration Source: 225-22-9 INORGANIC VENTURES
Instrument ID: ICP5 ICAL ID: 5
Date Analyzed: 10/31/13 Time: 1402

## *CONTINUING CALIBRATION VERIFICATION*

| *Analyte* | *True* | *Found* | *CAL %R* | *Units* | *Method* | *Type* |
|---|---|---|---|---|---|---|
| Aluminum | 5.00 | 5.12 | 102 | mg/L | SW-846 6010C | P |
| Antimony | 0.500 | 0.500 | 101 | mg/L | SW-846 6010C | P |
| Arsenic | 0.500 | 0.520 | 104 | mg/L | SW-846 6010C | P |
| Barium | 0.500 | 0.500 | 101 | mg/L | SW-846 6010C | P |
| Beryllium | 0.500 | 0.510 | 101 | mg/L | SW-846 6010C | P |
| Cadmium | 0.500 | 0.510 | 101 | mg/L | SW-846 6010C | P |
| Calcium | 5.00 | 5.44 | 109 | mg/L | SW-846 6010C | P |
| Chromium | 0.500 | 0.510 | 101 | mg/L | SW-846 6010C | P |
| Cobalt | 0.500 | 0.500 | 101 | mg/L | SW-846 6010C | P |
| Copper | 0.500 | 0.510 | 101 | mg/L | SW-846 6010C | P |
| Iron | 5.00 | 5.19 | 104 | mg/L | SW-846 6010C | P |
| Lead | 0.500 | 0.510 | 102 | mg/L | SW-846 6010C | P |
| Magnesium | 5.00 | 5.20 | 104 | mg/L | SW-846 6010C | P |
| Manganese | 0.500 | 0.520 | 105 | mg/L | SW-846 6010C | P |
| Nickel | 0.500 | 0.510 | 102 | mg/L | SW-846 6010C | P |
| Potassium | 10.0 | 10.1 | 101 | mg/L | SW-846 6010C | P |
| Selenium | 0.500 | 0.500 | 100 | mg/L | SW-846 6010C | P |
| Silver | 0.500 | 0.510 | 102 | mg/L | SW-846 6010C | P |
| Sodium | 20.0 | 20.5 | 103 | mg/L | SW-846 6010C | P |
| Thallium | 0.500 | 0.520 | 104 | mg/L | SW-846 6010C | P |
| Vanadium | 0.500 | 0.500 | 101 | mg/L | SW-846 6010C | P |
| Zinc | 0.500 | 0.490 | 99 | mg/L | SW-846 6010C | P |

CCV CONTROL LIMITS EPA 6010/200.7/6020/200.8 = 90-110 EPA 7470/7471/7XXX = 80-120

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Calibration Source: 225-11-4 CPI/EXAXOL
Instrument ID: ICP5 ICAL ID: 6
Date Analyzed: 11/05/13 Time: 0845

## *INITIAL CALIBRATION VERIFICATION*

| *Analyte* | *True* | *Found* | *CAL %R* | *Units* | *Method* | *Type* |
|---|---|---|---|---|---|---|
| Lead | 1.00 | 0.930 | 93 | mg/L | SW-846 1311/6010C | P |

ICV CONTROL LIMITS EPA 6010/6020/200.8 = 90-110 EPA 200.7 = 95-105

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Calibration Source: 225-26-3 INORGANIC VENTURES
Instrument ID: ICP5 ICAL ID: 6
Date Analyzed: 11/05/13 Time: 0857

## *CRDL STANDARD*

| *Analyte* | *True* | *Found* | *CAL %R* | *Units* | *Method* | *Type* |
|---|---|---|---|---|---|---|
| Lead | 0.0150 | 0.0140 | 90 | mg/L | SW-846 1311/6010C | P |

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Calibration Source: 225-26-2 INORGANIC VENTURES
Instrument ID: ICP5 ICAL ID: 6
Date Analyzed: 11/05/13 Time: 0916

## *CONTINUING CALIBRATION VERIFICATION*

| *Analyte* | *True* | *Found* | *CAL %R* | *Units* | *Method* | *Type* |
|---|---|---|---|---|---|---|
| Lead | 0.500 | 0.490 | 98 | mg/L | SW-846 1311/6010C | P |

CCV CONTROL LIMITS EPA 6010/200.7/6020/200.8 = 90-110 EPA 7470/7471/7XXX = 80-120

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Calibration Source: 225-26-2 INORGANIC VENTURES
Instrument ID: ICP5 ICAL ID: 6
Date Analyzed: 11/05/13 Time: 1135

## *CONTINUING CALIBRATION VERIFICATION*

| *Analyte* | *True* | *Found* | *CAL %R* | *Units* | *Method* | *Type* |
|---|---|---|---|---|---|---|
| Lead | 0.500 | 0.490 | 99 | mg/L | SW-846 1311/6010C | P |

CCV CONTROL LIMITS EPA 6010/200.7/6020/200.8 = 90-110 EPA 7470/7471/7XXX = 80-120

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Calibration Source: 225-26-2 INORGANIC VENTURES
Instrument ID: ICP5 ICAL ID: 6
Date Analyzed: 11/05/13 Time: 1238

## *CONTINUING CALIBRATION VERIFICATION*

| *Analyte* | *True* | *Found* | *CAL %R* | *Units* | *Method* | *Type* |
|---|---|---|---|---|---|---|
| Lead | 0.500 | 0.500 | 100 | mg/L | SW-846 1311/6010C | P |

CCV CONTROL LIMITS EPA 6010/200.7/6020/200.8 = 90-110 EPA 7470/7471/7XXX = 80-120

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Calibration Source: 225-26-2 INORGANIC VENTURES
Instrument ID: ICP5 ICAL ID: 6
Date Analyzed: 11/05/13 Time: 1357

## *CONTINUING CALIBRATION VERIFICATION*

| *Analyte* | *True* | *Found* | *CAL %R* | *Units* | *Method* | *Type* |
|---|---|---|---|---|---|---|
| Lead | 0.500 | 0.480 | 97 | mg/L | SW-846 1311/6010C | P |

CCV CONTROL LIMITS EPA 6010/200.7/6020/200.8 = 90-110 EPA 7470/7471/7XXX = 80-120

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Calibration Source: 225-10-4 CPI
Instrument ID: FIMS1 ICAL ID: 1
Date Analyzed: 10/18/13 Time: 1231

## *INITIAL CALIBRATION VERIFICATION*

| *Analyte* | *True* | *Found* | *CAL %R* | *Units* | *Method* | *Type* |
|---|---|---|---|---|---|---|
| Mercury | 0.00500 | 0.00510 | 102 | mg/L | SW-846 7471B | AV |

ICV CONTROL LIMITS EPA 6010/6020/200.8 = 90-110 EPA 200.7 = 95-105

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Calibration Source: 225-10-3 EXAXOL
Instrument ID: FIMS1 ICAL ID: 1
Date Analyzed: 10/18/13 Time: 1234

## *CONTINUING CALIBRATION VERIFICATION*

| *Analyte* | *True* | *Found* | *CAL %R* | *Units* | *Method* | *Type* |
|---|---|---|---|---|---|---|
| Mercury | 0.00500 | 0.00490 | 98 | mg/L | SW-846 7471B | AV |

CCV CONTROL LIMITS EPA 6010/200.7/6020/200.8 = 90-110 EPA 7470/7471/7XXX = 80-120

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Calibration Source: 225-10-3 EXAXOL
Instrument ID: FIMS1 ICAL ID: 1
Date Analyzed: 10/18/13 Time: 1255

## *CONTINUING CALIBRATION VERIFICATION*

| *Analyte* | *True* | *Found* | *CAL %R* | *Units* | *Method* | *Type* |
|---|---|---|---|---|---|---|
| Mercury | 0.00500 | 0.00500 | 99 | mg/L | SW-846 7471B | AV |

CCV CONTROL LIMITS EPA 6010/200.7/6020/200.8 = 90-110 EPA 7470/7471/7XXX = 80-120

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Calibration Source: 225-10-3 EXAXOL
Instrument ID: FIMS1 ICAL ID: 1
Date Analyzed: 10/18/13 Time: 1311

## *CONTINUING CALIBRATION VERIFICATION*

| *Analyte* | *True* | *Found* | *CAL %R* | *Units* | *Method* | *Type* |
|---|---|---|---|---|---|---|
| Mercury | 0.00500 | 0.00500 | 100 | mg/L | SW-846 7471B | AV |

CCV CONTROL LIMITS EPA 6010/200.7/6020/200.8 = 90-110 EPA 7470/7471/7XXX = 80-120

BLANKS

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Lab Sample ID: ICB
ICAL ID: 2
Lab Sample DESC: ICB FOR HBN 518197 [ICP/8702]
Preparation Blank Matrix: (soil / water)
Instrument ID: ICP5
Date Analyzed: 10/21/13 Time: 1120

## *INITIAL CALIBRATION BLANK*

| *Analyte* | *Conc.* | *C* | *Units* | *MDL* | *LOD* | *LOQ* | *Method* | *Type* |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Antimony | 0.030 | U | mg/L | 0.015 | 0.030 | 0.060 | SW-846 6010C | P |
| Arsenic | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Barium | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Beryllium | 0.0020 | U | mg/L | 0.0010 | 0.0020 | 0.0040 | SW-846 6010C | P |
| Cadmium | 0.0025 | U | mg/L | 0.0013 | 0.0025 | 0.0050 | SW-846 6010C | P |
| Calcium | 0.40 | U | mg/L | 0.20 | 0.40 | 0.80 | SW-846 6010C | P |
| Chromium | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Cobalt | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Copper | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Iron | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Lead | 0.0075 | U | mg/L | 0.0038 | 0.0075 | 0.015 | SW-846 6010C | P |
| Magnesium | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Manganese | 0.0075 | U | mg/L | 0.0038 | 0.0075 | 0.015 | SW-846 6010C | P |
| Nickel | 0.020 | U | mg/L | 0.010 | 0.020 | 0.040 | SW-846 6010C | P |
| Potassium | 0.25 | U | mg/L | 0.13 | 0.25 | 0.50 | SW-846 6010C | P |
| Selenium | 0.020 | U | mg/L | 0.010 | 0.020 | 0.040 | SW-846 6010C | P |
| Silver | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Sodium | 0.50 | U | mg/L | 0.25 | 0.50 | 1.00 | SW-846 6010C | P |
| Thallium | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Vanadium | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Zinc | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |

BLANKS

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Lab Sample ID: CCB
ICAL ID: 2
Lab Sample DESC: CCB FOR HBN 518197 [ICP/8702]
Preparation Blank Matrix: (soil / water)
Instrument ID: ICP5
Date Analyzed: 10/21/13 Time: 1153

## *CONTINUING CALIBRATION BLANK*

| *Analyte* | *Conc.* | *C* | *Units* | *MDL* | *LOD* | *LOQ* | *Method* | *Type* |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Antimony | 0.030 | U | mg/L | 0.015 | 0.030 | 0.060 | SW-846 6010C | P |
| Arsenic | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Barium | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Beryllium | 0.0020 | U | mg/L | 0.0010 | 0.0020 | 0.0040 | SW-846 6010C | P |
| Cadmium | 0.0025 | U | mg/L | 0.0013 | 0.0025 | 0.0050 | SW-846 6010C | P |
| Calcium | 0.40 | U | mg/L | 0.20 | 0.40 | 0.80 | SW-846 6010C | P |
| Chromium | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Cobalt | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Copper | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Iron | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Lead | 0.0075 | U | mg/L | 0.0038 | 0.0075 | 0.015 | SW-846 6010C | P |
| Magnesium | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Manganese | 0.0075 | U | mg/L | 0.0038 | 0.0075 | 0.015 | SW-846 6010C | P |
| Nickel | 0.020 | U | mg/L | 0.010 | 0.020 | 0.040 | SW-846 6010C | P |
| Potassium | 0.25 | U | mg/L | 0.13 | 0.25 | 0.50 | SW-846 6010C | P |
| Selenium | 0.020 | U | mg/L | 0.010 | 0.020 | 0.040 | SW-846 6010C | P |
| Silver | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Sodium | 0.50 | U | mg/L | 0.25 | 0.50 | 1.00 | SW-846 6010C | P |
| Thallium | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Vanadium | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Zinc | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |

BLANKS

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Lab Sample ID: CCB
ICAL ID: 2
Lab Sample DESC: CCB FOR HBN 518197 [ICP/8702]
Preparation Blank Matrix: (soil / water)
Instrument ID: ICP5
Date Analyzed: 10/21/13 Time: 1350

## *CONTINUING CALIBRATION BLANK*

| *Analyte* | *Conc.* | *C* | *Units* | *MDL* | *LOD* | *LOQ* | *Method* | *Type* |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Antimony | 0.030 | U | mg/L | 0.015 | 0.030 | 0.060 | SW-846 6010C | P |
| Arsenic | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Barium | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Beryllium | 0.0020 | U | mg/L | 0.0010 | 0.0020 | 0.0040 | SW-846 6010C | P |
| Cadmium | 0.0025 | U | mg/L | 0.0013 | 0.0025 | 0.0050 | SW-846 6010C | P |
| Calcium | 0.40 | U | mg/L | 0.20 | 0.40 | 0.80 | SW-846 6010C | P |
| Chromium | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Cobalt | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Copper | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Iron | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Lead | 0.0075 | U | mg/L | 0.0038 | 0.0075 | 0.015 | SW-846 6010C | P |
| Magnesium | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Manganese | 0.0075 | U | mg/L | 0.0038 | 0.0075 | 0.015 | SW-846 6010C | P |
| Nickel | 0.020 | U | mg/L | 0.010 | 0.020 | 0.040 | SW-846 6010C | P |
| Potassium | 0.25 | U | mg/L | 0.13 | 0.25 | 0.50 | SW-846 6010C | P |
| Selenium | 0.020 | U | mg/L | 0.010 | 0.020 | 0.040 | SW-846 6010C | P |
| Silver | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Sodium | 0.50 | U | mg/L | 0.25 | 0.50 | 1.00 | SW-846 6010C | P |
| Thallium | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Vanadium | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Zinc | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |

BLANKS

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Lab Sample ID: 1244705

ICAL ID: 2

Lab Sample DESC: MB1244705

Preparation Blank Matrix: (soil / water) Solid

Instrument ID: ICP5

Date Analyzed: 10/21/13 Time: 1442

## *PREPARATION BLANK*

| *Analyte* | *Conc.* | *C* | *Units* | *MDL* | *LOD* | *LOQ* | *Method* | *Type* |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 2.57 | J | mg/kg | 2.00 | 4.00 | 8.00 | SW-846 6010C | P |
| Antimony | 1.20 | U | mg/kg | 0.60 | 1.20 | 2.40 | SW-846 6010C | P |
| Arsenic | 0.80 | U | mg/kg | 0.20 | 0.80 | 1.60 | SW-846 6010C | P |
| Barium | 0.20 | U | mg/kg | 0.10 | 0.20 | 0.40 | SW-846 6010C | P |
| Beryllium | 0.080 | U | mg/kg | 0.040 | 0.080 | 0.16 | SW-846 6010C | P |
| Cadmium | 0.10 | U | mg/kg | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Calcium | 40.0 | U | mg/kg | 8.00 | 40.0 | 32.0 | SW-846 6010C | P |
| Chromium | 0.40 | U | mg/kg | 0.10 | 0.40 | 0.80 | SW-846 6010C | P |
| Cobalt | 0.20 | U | mg/kg | 0.10 | 0.20 | 0.40 | SW-846 6010C | P |
| Copper | 0.80 | U | mg/kg | 0.20 | 0.80 | 1.60 | SW-846 6010C | P |
| Iron | 4.00 | U | mg/kg | 2.00 | 4.00 | 8.00 | SW-846 6010C | P |
| Lead | 0.30 | U | mg/kg | 0.15 | 0.30 | 0.60 | SW-846 6010C | P |
| Magnesium | 4.00 | U | mg/kg | 2.00 | 4.00 | 8.00 | SW-846 6010C | P |
| Manganese | 0.30 | U | mg/kg | 0.15 | 0.30 | 0.60 | SW-846 6010C | P |
| Nickel | 0.80 | U | mg/kg | 0.40 | 0.80 | 1.60 | SW-846 6010C | P |
| Potassium | 10.0 | U | mg/kg | 5.00 | 10.0 | 20.0 | SW-846 6010C | P |
| Selenium | 0.80 | U | mg/kg | 0.40 | 0.80 | 1.60 | SW-846 6010C | P |
| Silver | 0.20 | U | mg/kg | 0.10 | 0.20 | 0.40 | SW-846 6010C | P |
| Sodium | 27.6 | J | mg/kg | 10.0 | 40.0 | 80.0 | SW-846 6010C | P |
| Thallium | 0.40 | U | mg/kg | 0.20 | 0.40 | 0.80 | SW-846 6010C | P |
| Vanadium | 0.40 | U | mg/kg | 0.20 | 0.40 | 0.80 | SW-846 6010C | P |
| Zinc | 0.40 | U | mg/kg | 0.20 | 0.40 | 0.80 | SW-846 6010C | P |

BLANKS

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Lab Sample ID: CCB
ICAL ID: 2
Lab Sample DESC: CCB FOR HBN 518197 [ICP/8702]
Preparation Blank Matrix: (soil / water)
Instrument ID: ICP5
Date Analyzed: 10/21/13 Time: 1508

## *CONTINUING CALIBRATION BLANK*

| *Analyte* | *Conc.* | *C* | *Units* | *MDL* | *LOD* | *LOQ* | *Method* | *Type* |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Antimony | 0.030 | U | mg/L | 0.015 | 0.030 | 0.060 | SW-846 6010C | P |
| Arsenic | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Barium | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Beryllium | 0.0020 | U | mg/L | 0.0010 | 0.0020 | 0.0040 | SW-846 6010C | P |
| Cadmium | 0.0025 | U | mg/L | 0.0013 | 0.0025 | 0.0050 | SW-846 6010C | P |
| Calcium | 0.40 | U | mg/L | 0.20 | 0.40 | 0.80 | SW-846 6010C | P |
| Chromium | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Cobalt | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Copper | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Iron | 0.053 | J | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Lead | 0.0075 | U | mg/L | 0.0038 | 0.0075 | 0.015 | SW-846 6010C | P |
| Magnesium | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Manganese | 0.0075 | U | mg/L | 0.0038 | 0.0075 | 0.015 | SW-846 6010C | P |
| Nickel | 0.020 | U | mg/L | 0.010 | 0.020 | 0.040 | SW-846 6010C | P |
| Potassium | 0.25 | J | mg/L | 0.13 | 0.25 | 0.50 | SW-846 6010C | P |
| Selenium | 0.020 | U | mg/L | 0.010 | 0.020 | 0.040 | SW-846 6010C | P |
| Silver | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Sodium | 0.50 | U | mg/L | 0.25 | 0.50 | 1.00 | SW-846 6010C | P |
| Thallium | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Vanadium | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Zinc | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |

BLANKS

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Lab Sample ID: ICB
ICAL ID: 3
Lab Sample DESC: ICB FOR HBN 518786 [ICP/8717]
Preparation Blank Matrix: (soil / water)
Instrument ID: ICP5
Date Analyzed: 10/29/13 Time: 0943

## *INITIAL CALIBRATION BLANK*

| *Analyte* | *Conc.* | *C* | *Units* | *MDL* | *LOD* | *LOQ* | *Method* | *Type* |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Antimony | 0.030 | U | mg/L | 0.015 | 0.030 | 0.060 | SW-846 6010C | P |
| Arsenic | 0.0056 | J | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Barium | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Beryllium | 0.0020 | U | mg/L | 0.0010 | 0.0020 | 0.0040 | SW-846 6010C | P |
| Cadmium | 0.0025 | U | mg/L | 0.0013 | 0.0025 | 0.0050 | SW-846 6010C | P |
| Calcium | 0.40 | U | mg/L | 0.20 | 0.40 | 0.80 | SW-846 6010C | P |
| Chromium | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Cobalt | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Copper | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Iron | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Lead | 0.0075 | U | mg/L | 0.0038 | 0.0075 | 0.015 | SW-846 6010C | P |
| Magnesium | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Manganese | 0.0075 | U | mg/L | 0.0038 | 0.0075 | 0.015 | SW-846 6010C | P |
| Nickel | 0.020 | U | mg/L | 0.010 | 0.020 | 0.040 | SW-846 6010C | P |
| Potassium | 0.25 | U | mg/L | 0.13 | 0.25 | 0.50 | SW-846 6010C | P |
| Selenium | 0.011 | J | mg/L | 0.010 | 0.020 | 0.040 | SW-846 6010C | P |
| Silver | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Sodium | 0.50 | U | mg/L | 0.25 | 0.50 | 1.00 | SW-846 6010C | P |
| Thallium | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Vanadium | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Zinc | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |

BLANKS

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Lab Sample ID: CCB
ICAL ID: 3
Lab Sample DESC: CCB FOR HBN 518786 [ICP/8717]
Preparation Blank Matrix: (soil / water)
Instrument ID: ICP5
Date Analyzed: 10/29/13 Time: 1029

## *CONTINUING CALIBRATION BLANK*

| *Analyte* | *Conc.* | *C* | *Units* | *MDL* | *LOD* | *LOQ* | *Method* | *Type* |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Antimony | 0.030 | U | mg/L | 0.015 | 0.030 | 0.060 | SW-846 6010C | P |
| Arsenic | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Barium | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Beryllium | 0.0020 | U | mg/L | 0.0010 | 0.0020 | 0.0040 | SW-846 6010C | P |
| Cadmium | 0.0025 | U | mg/L | 0.0013 | 0.0025 | 0.0050 | SW-846 6010C | P |
| Calcium | 0.40 | U | mg/L | 0.20 | 0.40 | 0.80 | SW-846 6010C | P |
| Chromium | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Cobalt | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Copper | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Iron | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Lead | 0.0075 | U | mg/L | 0.0038 | 0.0075 | 0.015 | SW-846 6010C | P |
| Magnesium | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Manganese | 0.0075 | U | mg/L | 0.0038 | 0.0075 | 0.015 | SW-846 6010C | P |
| Nickel | 0.020 | U | mg/L | 0.010 | 0.020 | 0.040 | SW-846 6010C | P |
| Potassium | 0.25 | U | mg/L | 0.13 | 0.25 | 0.50 | SW-846 6010C | P |
| Selenium | 0.020 | U | mg/L | 0.010 | 0.020 | 0.040 | SW-846 6010C | P |
| Silver | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Sodium | 0.50 | U | mg/L | 0.25 | 0.50 | 1.00 | SW-846 6010C | P |
| Thallium | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Vanadium | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Zinc | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |

BLANKS

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Lab Sample ID: CCB
ICAL ID: 3
Lab Sample DESC: CCB FOR HBN 518786 [ICP/8717]
Preparation Blank Matrix: (soil / water)
Instrument ID: ICP5
Date Analyzed: 10/29/13 Time: 1930

## *CONTINUING CALIBRATION BLANK*

| *Analyte* | *Conc.* | *C* | *Units* | *MDL* | *LOD* | *LOQ* | *Method* | *Type* |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Antimony | 0.030 | U | mg/L | 0.015 | 0.030 | 0.060 | SW-846 6010C | P |
| Arsenic | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Barium | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Beryllium | 0.0020 | U | mg/L | 0.0010 | 0.0020 | 0.0040 | SW-846 6010C | P |
| Cadmium | 0.0025 | U | mg/L | 0.0013 | 0.0025 | 0.0050 | SW-846 6010C | P |
| Calcium | 0.40 | U | mg/L | 0.20 | 0.40 | 0.80 | SW-846 6010C | P |
| Chromium | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Cobalt | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Copper | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Iron | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Lead | 0.0075 | U | mg/L | 0.0038 | 0.0075 | 0.015 | SW-846 6010C | P |
| Magnesium | 0.068 | J | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Manganese | 0.0075 | U | mg/L | 0.0038 | 0.0075 | 0.015 | SW-846 6010C | P |
| Nickel | 0.020 | U | mg/L | 0.010 | 0.020 | 0.040 | SW-846 6010C | P |
| Potassium | 0.25 | U | mg/L | 0.13 | 0.25 | 0.50 | SW-846 6010C | P |
| Selenium | 0.011 | J | mg/L | 0.010 | 0.020 | 0.040 | SW-846 6010C | P |
| Silver | 0.0029 | J | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Sodium | 0.50 | U | mg/L | 0.25 | 0.50 | 1.00 | SW-846 6010C | P |
| Thallium | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Vanadium | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Zinc | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |

BLANKS

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Lab Sample ID: CCB
ICAL ID: 3
Lab Sample DESC: CCB FOR HBN 518786 [ICP/8717]
Preparation Blank Matrix: (soil / water)
Instrument ID: ICP5
Date Analyzed: 10/29/13 Time: 2046

## *CONTINUING CALIBRATION BLANK*

| *Analyte* | *Conc.* | *C* | *Units* | *MDL* | *LOD* | *LOQ* | *Method* | *Type* |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Antimony | 0.030 | U | mg/L | 0.015 | 0.030 | 0.060 | SW-846 6010C | P |
| Arsenic | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Barium | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Beryllium | 0.0020 | U | mg/L | 0.0010 | 0.0020 | 0.0040 | SW-846 6010C | P |
| Cadmium | 0.0025 | U | mg/L | 0.0013 | 0.0025 | 0.0050 | SW-846 6010C | P |
| Calcium | 0.40 | U | mg/L | 0.20 | 0.40 | 0.80 | SW-846 6010C | P |
| Chromium | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Cobalt | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Copper | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Iron | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Lead | 0.0075 | U | mg/L | 0.0038 | 0.0075 | 0.015 | SW-846 6010C | P |
| Magnesium | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Manganese | 0.0075 | U | mg/L | 0.0038 | 0.0075 | 0.015 | SW-846 6010C | P |
| Nickel | 0.020 | U | mg/L | 0.010 | 0.020 | 0.040 | SW-846 6010C | P |
| Potassium | 0.16 | J | mg/L | 0.13 | 0.25 | 0.50 | SW-846 6010C | P |
| Selenium | 0.020 | U | mg/L | 0.010 | 0.020 | 0.040 | SW-846 6010C | P |
| Silver | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Sodium | 0.50 | U | mg/L | 0.25 | 0.50 | 1.00 | SW-846 6010C | P |
| Thallium | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Vanadium | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Zinc | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |

BLANKS

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Lab Sample ID: ICB
ICAL ID: 4
Lab Sample DESC: ICB FOR HBN 518882 [ICP/8719]
Preparation Blank Matrix: (soil / water)
Instrument ID: ICP5
Date Analyzed: 10/30/13 Time: 1736

## *INITIAL CALIBRATION BLANK*

| *Analyte* | *Conc.* | *C* | *Units* | *MDL* | *LOD* | *LOQ* | *Method* | *Type* |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Antimony | 0.030 | U | mg/L | 0.015 | 0.030 | 0.060 | SW-846 6010C | P |
| Arsenic | 0.0062 | J | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Barium | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Beryllium | 0.0084 | | mg/L | 0.0010 | 0.0020 | 0.0040 | SW-846 6010C | P |
| Cadmium | 0.0025 | U | mg/L | 0.0013 | 0.0025 | 0.0050 | SW-846 6010C | P |
| Calcium | 0.40 | U | mg/L | 0.20 | 0.40 | 0.80 | SW-846 6010C | P |
| Chromium | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Cobalt | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Copper | 0.0089 | J | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Iron | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Lead | 0.0075 | U | mg/L | 0.0038 | 0.0075 | 0.015 | SW-846 6010C | P |
| Magnesium | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Manganese | 0.0075 | U | mg/L | 0.0038 | 0.0075 | 0.015 | SW-846 6010C | P |
| Nickel | 0.020 | U | mg/L | 0.010 | 0.020 | 0.040 | SW-846 6010C | P |
| Potassium | 0.25 | U | mg/L | 0.13 | 0.25 | 0.50 | SW-846 6010C | P |
| Selenium | 0.020 | U | mg/L | 0.010 | 0.020 | 0.040 | SW-846 6010C | P |
| Silver | 0.0074 | J | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Sodium | 0.50 | U | mg/L | 0.25 | 0.50 | 1.00 | SW-846 6010C | P |
| Thallium | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Vanadium | 0.0076 | J | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Zinc | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |

BLANKS

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Lab Sample ID: CCB
ICAL ID: 4
Lab Sample DESC: CCB FOR HBN 518882 [ICP/8719]
Preparation Blank Matrix: (soil / water)
Instrument ID: ICP5
Date Analyzed: 10/30/13 Time: 1807

## *CONTINUING CALIBRATION BLANK*

| *Analyte* | *Conc.* | *C* | *Units* | *MDL* | *LOD* | *LOQ* | *Method* | *Type* |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Antimony | 0.030 | U | mg/L | 0.015 | 0.030 | 0.060 | SW-846 6010C | P |
| Arsenic | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Barium | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Beryllium | 0.0020 | U | mg/L | 0.0010 | 0.0020 | 0.0040 | SW-846 6010C | P |
| Cadmium | 0.0025 | U | mg/L | 0.0013 | 0.0025 | 0.0050 | SW-846 6010C | P |
| Calcium | 0.40 | U | mg/L | 0.20 | 0.40 | 0.80 | SW-846 6010C | P |
| Chromium | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Cobalt | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Copper | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Iron | 0.088 | J | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Lead | 0.0075 | U | mg/L | 0.0038 | 0.0075 | 0.015 | SW-846 6010C | P |
| Magnesium | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Manganese | 0.0075 | U | mg/L | 0.0038 | 0.0075 | 0.015 | SW-846 6010C | P |
| Nickel | 0.020 | U | mg/L | 0.010 | 0.020 | 0.040 | SW-846 6010C | P |
| Potassium | 0.25 | U | mg/L | 0.13 | 0.25 | 0.50 | SW-846 6010C | P |
| Selenium | 0.015 | J | mg/L | 0.010 | 0.020 | 0.040 | SW-846 6010C | P |
| Silver | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Sodium | 0.50 | U | mg/L | 0.25 | 0.50 | 1.00 | SW-846 6010C | P |
| Thallium | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Vanadium | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Zinc | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |

BLANKS

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Lab Sample ID: CCB
ICAL ID: 4
Lab Sample DESC: CCB FOR HBN 518882 [ICP/8719]
Preparation Blank Matrix: (soil / water)
Instrument ID: ICP5
Date Analyzed: 10/30/13 Time: 1933

## *CONTINUING CALIBRATION BLANK*

| *Analyte* | *Conc.* | *C* | *Units* | *MDL* | *LOD* | *LOQ* | *Method* | *Type* |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Antimony | 0.030 | U | mg/L | 0.015 | 0.030 | 0.060 | SW-846 6010C | P |
| Arsenic | 0.0056 | J | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Barium | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Beryllium | 0.0020 | U | mg/L | 0.0010 | 0.0020 | 0.0040 | SW-846 6010C | P |
| Cadmium | 0.0025 | U | mg/L | 0.0013 | 0.0025 | 0.0050 | SW-846 6010C | P |
| Calcium | 0.40 | U | mg/L | 0.20 | 0.40 | 0.80 | SW-846 6010C | P |
| Chromium | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Cobalt | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Copper | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Iron | 0.12 | J | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Lead | 0.0075 | U | mg/L | 0.0038 | 0.0075 | 0.015 | SW-846 6010C | P |
| Magnesium | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Manganese | 0.0040 | J | mg/L | 0.0038 | 0.0075 | 0.015 | SW-846 6010C | P |
| Nickel | 0.020 | U | mg/L | 0.010 | 0.020 | 0.040 | SW-846 6010C | P |
| Potassium | 0.25 | U | mg/L | 0.13 | 0.25 | 0.50 | SW-846 6010C | P |
| Selenium | 0.010 | J | mg/L | 0.010 | 0.020 | 0.040 | SW-846 6010C | P |
| Silver | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Sodium | 0.50 | U | mg/L | 0.25 | 0.50 | 1.00 | SW-846 6010C | P |
| Thallium | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Vanadium | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Zinc | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |

BLANKS

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Lab Sample ID: ICB
ICAL ID: 5
Lab Sample DESC: ICB FOR HBN 518958 [ICP/8720]
Preparation Blank Matrix: (soil / water)
Instrument ID: ICP5
Date Analyzed: 10/31/13 Time: 1208

## *INITIAL CALIBRATION BLANK*

| *Analyte* | *Conc.* | *C* | *Units* | *MDL* | *LOD* | *LOQ* | *Method* | *Type* |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Antimony | 0.030 | U | mg/L | 0.015 | 0.030 | 0.060 | SW-846 6010C | P |
| Arsenic | 0.0085 | J | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Barium | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Beryllium | 0.0016 | J | mg/L | 0.0010 | 0.0020 | 0.0040 | SW-846 6010C | P |
| Cadmium | 0.0025 | U | mg/L | 0.0013 | 0.0025 | 0.0050 | SW-846 6010C | P |
| Calcium | 0.40 | U | mg/L | 0.20 | 0.40 | 0.80 | SW-846 6010C | P |
| Chromium | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Cobalt | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Copper | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Iron | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Lead | 0.0075 | U | mg/L | 0.0038 | 0.0075 | 0.015 | SW-846 6010C | P |
| Magnesium | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Manganese | 0.0075 | U | mg/L | 0.0038 | 0.0075 | 0.015 | SW-846 6010C | P |
| Nickel | 0.020 | U | mg/L | 0.010 | 0.020 | 0.040 | SW-846 6010C | P |
| Potassium | 0.25 | U | mg/L | 0.13 | 0.25 | 0.50 | SW-846 6010C | P |
| Selenium | 0.011 | J | mg/L | 0.010 | 0.020 | 0.040 | SW-846 6010C | P |
| Silver | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Sodium | 0.50 | U | mg/L | 0.25 | 0.50 | 1.00 | SW-846 6010C | P |
| Thallium | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Vanadium | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Zinc | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |

BLANKS

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Lab Sample ID: CCB
ICAL ID: 5
Lab Sample DESC: CCB FOR HBN 518958 [ICP/8720]
Preparation Blank Matrix: (soil / water)
Instrument ID: ICP5
Date Analyzed: 10/31/13 Time: 1252

## *CONTINUING CALIBRATION BLANK*

| *Analyte* | *Conc.* | *C* | *Units* | *MDL* | *LOD* | *LOQ* | *Method* | *Type* |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Antimony | 0.030 | U | mg/L | 0.015 | 0.030 | 0.060 | SW-846 6010C | P |
| Arsenic | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Barium | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Beryllium | 0.0020 | U | mg/L | 0.0010 | 0.0020 | 0.0040 | SW-846 6010C | P |
| Cadmium | 0.0025 | U | mg/L | 0.0013 | 0.0025 | 0.0050 | SW-846 6010C | P |
| Calcium | 0.40 | U | mg/L | 0.20 | 0.40 | 0.80 | SW-846 6010C | P |
| Chromium | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Cobalt | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Copper | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Iron | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Lead | 0.0075 | U | mg/L | 0.0038 | 0.0075 | 0.015 | SW-846 6010C | P |
| Magnesium | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Manganese | 0.0075 | U | mg/L | 0.0038 | 0.0075 | 0.015 | SW-846 6010C | P |
| Nickel | 0.020 | U | mg/L | 0.010 | 0.020 | 0.040 | SW-846 6010C | P |
| Potassium | 0.25 | U | mg/L | 0.13 | 0.25 | 0.50 | SW-846 6010C | P |
| Selenium | 0.020 | U | mg/L | 0.010 | 0.020 | 0.040 | SW-846 6010C | P |
| Silver | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Sodium | 0.50 | U | mg/L | 0.25 | 0.50 | 1.00 | SW-846 6010C | P |
| Thallium | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Vanadium | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Zinc | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |

BLANKS

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Lab Sample ID: CCB
ICAL ID: 5
Lab Sample DESC: CCB FOR HBN 518958 [ICP/8720]
Preparation Blank Matrix: (soil / water)
Instrument ID: ICP5
Date Analyzed: 10/31/13 Time: 1409

## *CONTINUING CALIBRATION BLANK*

| *Analyte* | *Conc.* | *C* | *Units* | *MDL* | *LOD* | *LOQ* | *Method* | *Type* |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Antimony | 0.030 | U | mg/L | 0.015 | 0.030 | 0.060 | SW-846 6010C | P |
| Arsenic | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Barium | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Beryllium | 0.0020 | U | mg/L | 0.0010 | 0.0020 | 0.0040 | SW-846 6010C | P |
| Cadmium | 0.0025 | U | mg/L | 0.0013 | 0.0025 | 0.0050 | SW-846 6010C | P |
| Calcium | 0.40 | U | mg/L | 0.20 | 0.40 | 0.80 | SW-846 6010C | P |
| Chromium | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Cobalt | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Copper | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Iron | 0.053 | J | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Lead | 0.0075 | U | mg/L | 0.0038 | 0.0075 | 0.015 | SW-846 6010C | P |
| Magnesium | 0.10 | U | mg/L | 0.050 | 0.10 | 0.20 | SW-846 6010C | P |
| Manganese | 0.0075 | U | mg/L | 0.0038 | 0.0075 | 0.015 | SW-846 6010C | P |
| Nickel | 0.020 | U | mg/L | 0.010 | 0.020 | 0.040 | SW-846 6010C | P |
| Potassium | 0.25 | U | mg/L | 0.13 | 0.25 | 0.50 | SW-846 6010C | P |
| Selenium | 0.020 | U | mg/L | 0.010 | 0.020 | 0.040 | SW-846 6010C | P |
| Silver | 0.0050 | U | mg/L | 0.0025 | 0.0050 | 0.010 | SW-846 6010C | P |
| Sodium | 0.50 | U | mg/L | 0.25 | 0.50 | 1.00 | SW-846 6010C | P |
| Thallium | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Vanadium | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |
| Zinc | 0.010 | U | mg/L | 0.0050 | 0.010 | 0.020 | SW-846 6010C | P |

BLANKS

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Lab Sample ID: ICB

ICAL ID: 6

Lab Sample DESC: ICB FOR HBN 519287 [ICP/8734]

Preparation Blank Matrix: (soil / water)

Instrument ID: ICP5

Date Analyzed: 11/05/13 Time: 0851

## *INITIAL CALIBRATION BLANK*

| *Analyte* | *Conc.* | *C* | *Units* | *MDL* | *LOD* | *LOQ* | *Method* | *Type* |
|---|---|---|---|---|---|---|---|---|
| Lead | 0.0038 | U | mg/L | 0.0038 | 0.0038 | 0.10 | SW-846 1311/6010C | P |

BLANKS

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Lab Sample ID: CCB

ICAL ID: 6

Lab Sample DESC: CCB FOR HBN 519287 [ICP/8734]

Preparation Blank Matrix: (soil / water)

Instrument ID: ICP5

Date Analyzed: 11/05/13 Time: 0923

## *CONTINUING CALIBRATION BLANK*

| *Analyte* | *Conc.* | *C* | *Units* | *MDL* | *LOD* | *LOQ* | *Method* | *Type* |
|---|---|---|---|---|---|---|---|---|
| Lead | 0.0038 | U | mg/L | 0.0038 | 0.0038 | 0.10 | SW-846 1311/6010C | P |

FORM III - IN

BLANKS

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Lab Sample ID: CCB

ICAL ID: 6

Lab Sample DESC: CCB FOR HBN 519287 [ICP/8734]

Preparation Blank Matrix: (soil / water)

Instrument ID: ICP5

Date Analyzed: 11/05/13 Time: 1142

## *CONTINUING CALIBRATION BLANK*

| *Analyte* | *Conc.* | *C* | *Units* | *MDL* | *LOD* | *LOQ* | *Method* | *Type* |
|---|---|---|---|---|---|---|---|---|
| Lead | 0.0038 | U | mg/L | 0.0038 | 0.0038 | 0.10 | SW-846 1311/6010C | P |

BLANKS

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Lab Sample ID: 1251816

ICAL ID: 6

Lab Sample DESC: MB1251816

Preparation Blank Matrix: (soil / water) Water

Instrument ID: ICP5

Date Analyzed: 11/05/13 Time: 1218

## *PREPARATION BLANK*

| *Analyte* | *Conc.* | *C* | *Units* | *MDL* | *LOD* | *LOQ* | *Method* | *Type* |
|---|---|---|---|---|---|---|---|---|
| Lead | 0.0038 | U | mg/L | 0.0038 | 0.0038 | 0.10 | SW-846 1311/6010C | P |

BLANKS

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Lab Sample ID: CCB

ICAL ID: 6

Lab Sample DESC: CCB FOR HBN 519287 [ICP/8734]

Preparation Blank Matrix: (soil / water)

Instrument ID: ICP5

Date Analyzed: 11/05/13 Time: 1245

## *CONTINUING CALIBRATION BLANK*

| *Analyte* | *Conc.* | *C* | *Units* | *MDL* | *LOD* | *LOQ* | *Method* | *Type* |
|---|---|---|---|---|---|---|---|---|
| Lead | 0.0038 | U | mg/L | 0.0038 | 0.0038 | 0.10 | SW-846 1311/6010C | P |

FORM III - IN

BLANKS

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Lab Sample ID: CCB

ICAL ID: 6

Lab Sample DESC: CCB FOR HBN 519287 [ICP/8734]

Preparation Blank Matrix: (soil / water)

Instrument ID: ICP5

Date Analyzed: 11/05/13 Time: 1404

## *CONTINUING CALIBRATION BLANK*

| *Analyte* | *Conc.* | *C* | *Units* | *MDL* | *LOD* | *LOQ* | *Method* | *Type* |
|---|---|---|---|---|---|---|---|---|
| Lead | 0.0038 | U | mg/L | 0.0038 | 0.0038 | 0.10 | SW-846 1311/6010C | P |

FORM III - IN

BLANKS

Lab Name: GCAL

Contract:

Lab Code: LA024 Case No.:

SAS No.: SDG No.: 213101712

Lab Sample ID: ICB

ICAL ID: 1

Lab Sample DESC: ICB FOR HBN 518047 [HG/5872]

Preparation Blank Matrix: (soil / water)

Instrument ID: FIMS1

Date Analyzed: 10/18/13 Time: 1232

## *INITIAL CALIBRATION BLANK*

| *Analyte* | *Conc.* | *C* | *Units* | *MDL* | *LOD* | *LOQ* | *Method* | *Type* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 0.00020 | U | mg/L | 0.000070 | 0.00020 | 0.00020 | SW-846 7471B | AV |

BLANKS

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Lab Sample ID: CCB
ICAL ID: 1
Lab Sample DESC: CCB FOR HBN 518047 [HG/5872]
Preparation Blank Matrix: (soil / water)
Instrument ID: FIMS1
Date Analyzed: 10/18/13 Time: 1236

## *CONTINUING CALIBRATION BLANK*

| *Analyte* | *Conc.* | *C* | *Units* | *MDL* | *LOD* | *LOQ* | *Method* | *Type* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 0.00020 | U | mg/L | 0.000070 | 0.00020 | 0.00020 | SW-846 7471B | AV |

BLANKS

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Lab Sample ID: 1244701
ICAL ID: 1
Lab Sample DESC: MB1244701
Preparation Blank Matrix: (soil / water) Solid
Instrument ID: FIMS1
Date Analyzed: 10/18/13 Time: 1238

## *PREPARATION BLANK*

| *Analyte* | *Conc.* | *C* | *Units* | *MDL* | *LOD* | *LOQ* | *Method* | *Type* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 0.010 | U | mg/kg | 0.0040 | 0.010 | 0.010 | SW-846 7471B | AV |

FORM III - IN

BLANKS

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Lab Sample ID: CCB
ICAL ID: 1
Lab Sample DESC: CCB FOR HBN 518047 [HG/5872]
Preparation Blank Matrix: (soil / water)
Instrument ID: FIMS1
Date Analyzed: 10/18/13 Time: 1257

## *CONTINUING CALIBRATION BLANK*

| *Analyte* | *Conc.* | *C* | *Units* | *MDL* | *LOD* | *LOQ* | *Method* | *Type* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 0.00020 | U | mg/L | 0.000070 | 0.00020 | 0.00020 | SW-846 7471B | AV |

BLANKS

Lab Name: GCAL
Contract:
Lab Code: LA024 Case No.:
SAS No.: SDG No.: 213101712
Lab Sample ID: CCB
ICAL ID: 1
Lab Sample DESC: CCB FOR HBN 518047 [HG/5872]
Preparation Blank Matrix: (soil / water)
Instrument ID: FIMS1
Date Analyzed: 10/18/13 Time: 1313

## *CONTINUING CALIBRATION BLANK*

| *Analyte* | *Conc.* | *C* | *Units* | *MDL* | *LOD* | *LOQ* | *Method* | *Type* |
|---|---|---|---|---|---|---|---|---|
| Mercury | 0.00020 | U | mg/L | 0.000070 | 0.00020 | 0.00020 | SW-846 7471B | AV |

ICP INTERFERENCE CHECK SAMPLE

Lab Name: GCAL Contract: SDG No.: 213101712

Lab Code: LA024 Case No.: SAS No.: Analysis Batch 518197

ICP ID Number: ICP5 ICS Source: 225-11-2 SPEX/EXAXOL~225-11-3 SPEX/EX

Concentration Units: mg/L

| Analyte | True | | Initial Found | | | Final Found | | |
|---|---|---|---|---|---|---|---|---|
| | Sol. A | Sol. AB | Sol. A | Sol. AB | %R | Sol. A | Sol. AB | %R |
| Aluminum | 200 | 200 | 194 | 194 | 97 | | | |
| Antimony | 0 | 1.00 | 0.0073 | 1.01 | 101 | | | |
| Arsenic | 0 | 1.00 | -0.0066 | 1.03 | 103 | | | |
| Barium | 0 | 0.50 | 0.00031 | 0.50 | 100 | | | |
| Beryllium | 0 | 0.50 | -0.0002 | 0.49 | 98 | | | |
| Boron | 0 | 1.00 | 0.069 | 1.08 | 108 | | | |
| Cadmium | 0 | 1.00 | -0.0002 | 0.94 | 94 | | | |
| Calcium | 200 | 200 | 189 | 188 | 94 | | | |
| Chromium | 0 | 0.50 | -0.0004 | 0.48 | 96 | | | |
| Cobalt | 0 | 0.50 | -0.0011 | 0.46 | 92 | | | |
| Copper | 0 | 0.50 | -0.018 | 0.48 | 96 | | | |
| Iron | 200 | 200 | 187 | 186 | 93 | | | |
| Lead | 0 | 1.00 | -0.0025 | 0.91 | 91 | | | |
| Lithium | 0 | 0 | 0.0010 | 0.0011 | | | | |
| Magnesium | 200 | 200 | 187 | 186 | 93 | | | |
| Manganese | 0 | 0.50 | -0.0038 | 0.48 | 96 | | | |
| Molybdenum | 0 | 1.00 | -0.0007 | 1.00 | 100 | | | |
| Nickel | 0 | 1.00 | -0.0022 | 0.93 | 93 | | | |
| Potassium | 0 | 0 | 0.043 | 0.0080 | | | | |
| Selenium | 0 | 1.00 | -0.012 | 1.00 | 100 | | | |
| Silicon | 0 | 0 | 0.0075 | 0.041 | | | | |
| Silver | 0 | 1.00 | -0.0016 | 1.05 | 105 | | | |
| Sodium | 0 | 1.00 | 0.026 | 1.06 | 106 | | | |
| Strontium | 0 | 0 | 0.00023 | 0.00012 | | | | |
| Thallium | 0 | 1.00 | -0.0050 | 0.98 | 98 | | | |
| Tin | 0 | 0 | -0.0094 | -0.011 | | | | |
| Titanium | 0 | 0 | 0.00026 | -0.00025 | | | | |
| Vanadium | 0 | 0.50 | -0.0019 | 0.48 | 96 | | | |
| Zinc | 0 | 1.00 | -0.0012 | 0.97 | 97 | | | |
| Zirconium | 0 | 0 | 0.00005 | 0.0055 | | | | |

FORM IV - IN

ICP INTERFERENCE CHECK SAMPLE

Lab Name: GCAL Contract: SDG No.: 213101712

Lab Code: LA024 Case No.: SAS No.: Analysis Batch 518786

ICP ID Number: ICP5 ICS Source: 225-11-2 SPEX/EXAXOL~225-11-3 SPEX/EX

Concentration Units: mg/L

| Analyte | True | | Initial Found | | | Final Found | | |
|---|---|---|---|---|---|---|---|---|
| | Sol. A | Sol. AB | Sol. A | Sol. AB | %R | Sol. A | Sol. AB | %R |
| Aluminum | 200 | 200 | 201 | 201 | 100 | | | |
| Antimony | 0 | 1.00 | 0.014 | 1.03 | 103 | | | |
| Arsenic | 0 | 1.00 | 0.019 | 1.08 | 108 | | | |
| Barium | 0 | 0.50 | 0.0010 | 0.50 | 100 | | | |
| Beryllium | 0 | 0.50 | -0.0000 | 0.52 | 104 | | | |
| Boron | 0 | 1.00 | -0.021 | 0.98 | 98 | | | |
| Cadmium | 0 | 1.00 | -0.0002 | 0.97 | 97 | | | |
| Calcium | 200 | 200 | 195 | 196 | 98 | | | |
| Chromium | 0 | 0.50 | 0.0091 | 0.50 | 100 | | | |
| Cobalt | 0 | 0.50 | -0.0008 | 0.49 | 98 | | | |
| Copper | 0 | 0.50 | -0.015 | 0.49 | 98 | | | |
| Iron | 200 | 200 | 192 | 192 | 96 | | | |
| Lead | 0 | 1.00 | -0.0013 | 1.03 | 103 | | | |
| Lithium | 0 | 0 | -0.0006 | -0.0024 | | | | |
| Magnesium | 200 | 200 | 192 | 194 | 97 | | | |
| Manganese | 0 | 0.50 | 0.0027 | 0.49 | 98 | | | |
| Molybdenum | 0 | 1.00 | 0.0030 | 0.99 | 99 | | | |
| Nickel | 0 | 1.00 | -0.0014 | 0.96 | 96 | | | |
| Potassium | 0 | 0 | -0.035 | 0.014 | | | | |
| Selenium | 0 | 1.00 | 0.016 | 1.07 | 107 | | | |
| Silicon | 0 | 0 | 0.0048 | 0.030 | | | | |
| Silver | 0 | 1.00 | 0.0031 | 1.04 | 104 | | | |
| Sodium | 0 | 1.00 | -0.12 | 1.06 | 106 | | | |
| Strontium | 0 | 0 | -0.0003 | -0.00052 | | | | |
| Thallium | 0 | 1.00 | -0.0022 | 0.98 | 98 | | | |
| Tin | 0 | 0 | 0.0038 | 0.0019 | | | | |
| Titanium | 0 | 0 | 0.00053 | 0.00032 | | | | |
| Vanadium | 0 | 0.50 | -0.0055 | 0.49 | 98 | | | |
| Zinc | 0 | 1.00 | 0.0032 | 0.99 | 99 | | | |
| Zirconium | 0 | 0 | 0.00038 | 0.0057 | | | | |

ICP INTERFERENCE CHECK SAMPLE

Lab Name: GCAL Contract: SDG No.: 213101712

Lab Code: LA024 Case No.: SAS No.: Analysis Batch 518882

ICP ID Number: ICP5 ICS Source: 225-11-2 SPEX/EXAXOL~225-11-3 SPEX/EX

Concentration Units: mg/L

| Analyte | True | | Initial Found | | | Final Found | | |
|---|---|---|---|---|---|---|---|---|
| | Sol. A | Sol. AB | Sol. A | Sol. AB | %R | Sol. A | Sol. AB | %R |
| Aluminum | 200 | 200 | 197 | 195 | 98 | | | |
| Antimony | 0 | 1.00 | 0.013 | 1.02 | 102 | | | |
| Arsenic | 0 | 1.00 | 0.011 | 1.04 | 104 | | | |
| Barium | 0 | 0.50 | 0.0014 | 0.50 | 100 | | | |
| Beryllium | 0 | 0.50 | 0.00021 | 0.51 | 102 | | | |
| Boron | 0 | 1.00 | 0.0071 | 1.03 | 103 | | | |
| Cadmium | 0 | 1.00 | -0.0006 | 0.97 | 97 | | | |
| Calcium | 200 | 200 | 190 | 188 | 94 | | | |
| Chromium | 0 | 0.50 | 0.0087 | 0.50 | 100 | | | |
| Cobalt | 0 | 0.50 | -0.0014 | 0.48 | 96 | | | |
| Copper | 0 | 0.50 | -0.015 | 0.49 | 98 | | | |
| Iron | 200 | 200 | 189 | 187 | 94 | | | |
| Lead | 0 | 1.00 | -0.0013 | 0.98 | 98 | | | |
| Lithium | 0 | 0 | 0.0021 | 0.00072 | | | | |
| Magnesium | 200 | 200 | 191 | 189 | 94 | | | |
| Manganese | 0 | 0.50 | 0.00090 | 0.49 | 98 | | | |
| Molybdenum | 0 | 1.00 | 0.0035 | 1.02 | 102 | | | |
| Nickel | 0 | 1.00 | -0.0008 | 0.96 | 96 | | | |
| Potassium | 0 | 0 | -0.0017 | -0.010 | | | | |
| Selenium | 0 | 1.00 | 0.0063 | 1.03 | 103 | | | |
| Silicon | 0 | 0 | 0.018 | 0.031 | | | | |
| Silver | 0 | 1.00 | 0.0015 | 1.01 | 101 | | | |
| Sodium | 0 | 1.00 | 0.022 | 1.04 | 104 | | | |
| Strontium | 0 | 0 | -0.0001 | -0.000033 | | | | |
| Thallium | 0 | 1.00 | -0.0085 | 0.98 | 98 | | | |
| Tin | 0 | 0 | 0.0022 | -0.0010 | | | | |
| Titanium | 0 | 0 | 0.00056 | 0.00060 | | | | |
| Vanadium | 0 | 0.50 | -0.0069 | 0.49 | 98 | | | |
| Zinc | 0 | 1.00 | -0.0019 | 0.99 | 99 | | | |
| Zirconium | 0 | 0 | -0.0004 | 0.0051 | | | | |

ICP INTERFERENCE CHECK SAMPLE

Lab Name: GCAL Contract: SDG No.: 213101712

Lab Code: LA024 Case No.: SAS No.: Analysis Batch 518958

ICP ID Number: ICP5 ICS Source: 225-11-2 SPEX/EXAXOL~225-11-3 SPEX/EX

Concentration Units: mg/L

| Analyte | True | | Initial Found | | | Final Found | | |
|---|---|---|---|---|---|---|---|---|
| | Sol. A | Sol. AB | Sol. A | Sol. AB | %R | Sol. A | Sol. AB | %R |
| Aluminum | 200 | 200 | 205 | 206 | 103 | | | |
| Antimony | 0 | 1.00 | 0.021 | 1.03 | 103 | | | |
| Arsenic | 0 | 1.00 | 0.0080 | 1.07 | 107 | | | |
| Barium | 0 | 0.50 | 0.0011 | 0.52 | 104 | | | |
| Beryllium | 0 | 0.50 | -0.0000 | 0.53 | 106 | | | |
| Boron | 0 | 1.00 | -0.020 | 1.02 | 102 | | | |
| Cadmium | 0 | 1.00 | -0.0006 | 1.00 | 100 | | | |
| Calcium | 200 | 200 | 190 | 193 | 96 | | | |
| Chromium | 0 | 0.50 | 0.0066 | 0.51 | 102 | | | |
| Cobalt | 0 | 0.50 | -0.0011 | 0.50 | 100 | | | |
| Copper | 0 | 0.50 | -0.017 | 0.50 | 100 | | | |
| Iron | 200 | 200 | 194 | 196 | 98 | | | |
| Lead | 0 | 1.00 | 0.0017 | 1.00 | 100 | | | |
| Lithium | 0 | 0 | -0.0000 | 0.00060 | | | | |
| Magnesium | 200 | 200 | 195 | 200 | 100 | | | |
| Manganese | 0 | 0.50 | 0.00008 | 0.50 | 100 | | | |
| Molybdenum | 0 | 1.00 | 0.0059 | 1.00 | 100 | | | |
| Nickel | 0 | 1.00 | -0.0015 | 0.99 | 99 | | | |
| Potassium | 0 | 0 | -0.030 | -0.038 | | | | |
| Selenium | 0 | 1.00 | 0.0074 | 1.05 | 105 | | | |
| Silicon | 0 | 0 | 0.0045 | 0.020 | | | | |
| Silver | 0 | 1.00 | 0.0017 | 1.05 | 105 | | | |
| Sodium | 0 | 1.00 | 0.014 | 1.09 | 109 | | | |
| Strontium | 0 | 0 | -0.0000 | -0.00018 | | | | |
| Thallium | 0 | 1.00 | -0.0081 | 1.00 | 100 | | | |
| Tin | 0 | 0 | 0.0026 | 0.00014 | | | | |
| Titanium | 0 | 0 | 0.00012 | -0.000003 | | | | |
| Vanadium | 0 | 0.50 | -0.011 | 0.50 | 100 | | | |
| Zinc | 0 | 1.00 | -0.0041 | 1.01 | 101 | | | |
| Zirconium | 0 | 0 | -0.0006 | 0.0052 | | | | |

ICP INTERFERENCE CHECK SAMPLE

Lab Name: GCAL | Contract: | SDG No.: 213101712

Lab Code: LA024 | Case No.: | SAS No.: | Analysis Batch 519287

ICP ID Number: ICP5 | ICS Source: 225-24-10 SPEX/EXAXOL~225-24-11 SPEX/E

Concentration Units: mg/L

| Analyte | True | | Initial Found | | | Final Found | | |
|---|---|---|---|---|---|---|---|---|
| | Sol. A | Sol. AB | Sol. A | Sol. AB | %R | Sol. A | Sol. AB | %R |
| Aluminum | 200 | 200 | 199 | 197 | 98 | | | |
| Antimony | 0 | 1.00 | 0.010 | 1.02 | 102 | | | |
| Arsenic | 0 | 1.00 | -0.0060 | 1.03 | 103 | | | |
| Barium | 0 | 0.50 | 0.00049 | 0.50 | 100 | | | |
| Beryllium | 0 | 0.50 | -0.0000 | 0.50 | 100 | | | |
| Boron | 0 | 1.00 | 0.088 | 1.08 | 108 | | | |
| Cadmium | 0 | 1.00 | -0.0009 | 0.93 | 93 | | | |
| Calcium | 200 | 200 | 196 | 192 | 96 | | | |
| Chromium | 0 | 0.50 | 0.0044 | 0.49 | 98 | | | |
| Cobalt | 0 | 0.50 | -0.0011 | 0.47 | 94 | | | |
| Copper | 0 | 0.50 | -0.017 | 0.48 | 96 | | | |
| Iron | 200 | 200 | 196 | 193 | 96 | | | |
| Lead | 0 | 1.00 | 0.0022 | 0.96 | 96 | | | |
| Lithium | 0 | 0 | -0.0021 | -0.0014 | | | | |
| Magnesium | 200 | 200 | 194 | 189 | 94 | | | |
| Manganese | 0 | 0.50 | -0.0016 | 0.48 | 96 | | | |
| Molybdenum | 0 | 1.00 | 0.0028 | 0.99 | 99 | | | |
| Nickel | 0 | 1.00 | -0.0022 | 0.92 | 92 | | | |
| Potassium | 0 | 0 | 0.0080 | -0.023 | | | | |
| Selenium | 0 | 1.00 | 0.016 | 1.00 | 100 | | | |
| Silicon | 0 | 0 | -0.0083 | 0.013 | | | | |
| Silver | 0 | 1.00 | 0.00036 | 1.01 | 101 | | | |
| Sodium | 0 | 1.00 | -0.037 | 1.09 | 109 | | | |
| Strontium | 0 | 0 | -0.0001 | -0.000025 | | | | |
| Thallium | 0 | 1.00 | -0.010 | 0.98 | 98 | | | |
| Tin | 0 | 0 | -0.0039 | -0.0015 | | | | |
| Titanium | 0 | 0 | 0.00068 | 0.000065 | | | | |
| Vanadium | 0 | 0.50 | -0.0099 | 0.48 | 96 | | | |
| Zinc | 0 | 1.00 | 0.0023 | 0.97 | 97 | | | |
| Zirconium | 0 | 0 | -0.0012 | 0.0035 | | | | |

MS/MSD RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Matrix Spike - EPA Sample No: SOIL 24101513 B Method SW-846 6010C

***SAMPLE NO. : 1244707***

| COMPOUND | UNITS | SPIKE ADDED | SAMPLE CONCENTRATION | MS CONCENTRATION | MS % REC | # | QC. LIMITS |
|---|---|---|---|---|---|---|---|
| Aluminum | mg/kg | 200 | 8200 | 9860 | 831 | N | 80 - 120 |
| Antimony | mg/kg | 20 | .95 | 5.11 | 21 | N | 80 - 120 |
| Arsenic | mg/kg | 20 | 8.16 | 24.9 | 84 | | 80 - 120 |
| Barium | mg/kg | 20 | 120 | 217 | 486 | N | 80 - 120 |
| Beryllium | mg/kg | 20 | .31 | 17 | 84 | | 80 - 120 |
| Cadmium | mg/kg | 20 | .068 | 14.6 | 73 | N | 80 - 120 |
| Calcium | mg/kg | 200 | 19500 | 18900 | -333 | N | 80 - 120 |
| Chromium | mg/kg | 20 | 15.5 | 31 | 77 | N | 80 - 120 |
| Cobalt | mg/kg | 20 | 6.53 | 21.6 | 75 | N | 80 - 120 |
| Copper | mg/kg | 20 | 18 | 34.1 | 81 | | 80 - 120 |
| Iron | mg/kg | 200 | 12700 | 12300 | -235 | N | 80 - 120 |
| Lead | mg/kg | 20 | 7.23 | 21.8 | 73 | N | 80 - 120 |
| Magnesium | mg/kg | 200 | 5720 | 5910 | 97 | | 80 - 120 |
| Manganese | mg/kg | 20 | 282 | 297 | 77 | N | 80 - 120 |
| Nickel | mg/kg | 20 | 17.5 | 33 | 77 | N | 80 - 120 |
| Potassium | mg/kg | 400 | 1810 | 2280 | 118 | | 80 - 120 |
| Selenium | mg/kg | 20 | .79 | 15.8 | 75 | N | 80 - 120 |
| Silver | mg/kg | 20 | 0 | 16.5 | 82 | | 80 - 120 |
| Sodium | mg/kg | 800 | 528 | 1370 | 106 | | 80 - 120 |
| Thallium | mg/kg | 20 | 1.78 | 17.4 | 78 | N | 80 - 120 |
| Vanadium | mg/kg | 20 | 29.4 | 44.4 | 75 | N | 80 - 120 |
| Zinc | mg/kg | 20 | 34.8 | 49.6 | 74 | N | 80 - 120 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD : 1 out of 22 outside limits

Spike Recovery: 24 out of 44 outside limits

MS/MSD RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Matrix Spike - EPA Sample No: SOIL 24101513 B Method SW-846 6010C

***SAMPLE NO. : 1244708***

| COMPOUND | UNITS | SPIKE ADDED | MSD CONC. | MSD % REC | # | % RPD | # | QC. LIMITS REC | QC. LIMITS RPD |
|---|---|---|---|---|---|---|---|---|---|
| Aluminum | mg/kg | 200 | 11000 | 1380 | N | 11 | | 80 - 120 | 0 - 20 |
| Antimony | mg/kg | 20 | 4.54 | 18 | N | 12 | | 80 - 120 | 0 - 20 |
| Arsenic | mg/kg | 20 | 26.7 | 93 | | 7 | | 80 - 120 | 0 - 20 |
| Barium | mg/kg | 20 | 120 | 0 | N | 58 | * | 80 - 120 | 0 - 20 |
| Beryllium | mg/kg | 20 | 17.7 | 87 | | 4 | | 80 - 120 | 0 - 20 |
| Cadmium | mg/kg | 20 | 15.6 | 78 | N | 7 | | 80 - 120 | 0 - 20 |
| Calcium | mg/kg | 200 | 21000 | 739 | N | 11 | | 80 - 120 | 0 - 20 |
| Chromium | mg/kg | 20 | 33.6 | 91 | | 8 | | 80 - 120 | 0 - 20 |
| Cobalt | mg/kg | 20 | 22.8 | 81 | | 5 | | 80 - 120 | 0 - 20 |
| Copper | mg/kg | 20 | 35.4 | 87 | | 4 | | 80 - 120 | 0 - 20 |
| Iron | mg/kg | 200 | 13700 | 467 | N | 11 | | 80 - 120 | 0 - 20 |
| Lead | mg/kg | 20 | 22.9 | 78 | N | 5 | | 80 - 120 | 0 - 20 |
| Magnesium | mg/kg | 200 | 6170 | 226 | N | 4 | | 80 - 120 | 0 - 20 |
| Manganese | mg/kg | 20 | 302 | 101 | | 2 | | 80 - 120 | 0 - 20 |
| Nickel | mg/kg | 20 | 33.9 | 82 | | 3 | | 80 - 120 | 0 - 20 |
| Potassium | mg/kg | 400 | 2460 | 165 | N | 8 | | 80 - 120 | 0 - 20 |
| Selenium | mg/kg | 20 | 17.9 | 85 | | 12 | | 80 - 120 | 0 - 20 |
| Silver | mg/kg | 20 | 17.3 | 86 | | 5 | | 80 - 120 | 0 - 20 |
| Sodium | mg/kg | 800 | 1330 | 100 | | 3 | | 80 - 120 | 0 - 20 |
| Thallium | mg/kg | 20 | 18.2 | 82 | | 5 | | 80 - 120 | 0 - 20 |
| Vanadium | mg/kg | 20 | 48.9 | 97 | | 10 | | 80 - 120 | 0 - 20 |
| Zinc | mg/kg | 20 | 53.5 | 93 | | 8 | | 80 - 120 | 0 - 20 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD : 1 out of 22 outside limits

Spike Recovery: 24 out of 44 outside limits

MS/MSD RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Matrix Spike - EPA Sample No: RS-COMP1-101613 Method SW-846 1311/6010C

***SAMPLE NO. : 1251874***

| COMPOUND | UNITS | SPIKE ADDED | SAMPLE CONCENTRATION | MS CONCENTRATION | MS % REC | # | QC. LIMITS |
|---|---|---|---|---|---|---|---|
| Lead | mg/L | .5 | 5.95 | 6.74 | 159 | N | 75 - 125 |

***SAMPLE NO. : 1251875***

| COMPOUND | UNITS | SPIKE ADDED | MSD CONC. | MSD % REC | # | % RPD | # | QC. LIMITS REC | QC. LIMITS RPD |
|---|---|---|---|---|---|---|---|---|---|
| Lead | mg/L | .5 | 6.57 | 124 | | 3 | | 75 - 125 | 0 - 20 |

# Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD : 0 out of 1 outside limits

Spike Recovery: 1 out of 2 outside limits

MS/MSD RECOVERY

Lab Name: GCAL Contract:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Matrix Spike - EPA Sample No: SOIL 24101513 B Method SW-846 7471B

***SAMPLE NO. : 1244703***

| COMPOUND | UNITS | SPIKE ADDED | SAMPLE CONCENTRATION | MS CONCENTRATION | MS % REC | # | QC. LIMITS |
|---|---|---|---|---|---|---|---|
| Mercury | mg/kg | .25 | .013 | .29 | 110 | | 80 - 120 |

***SAMPLE NO. : 1244704***

| COMPOUND | UNITS | SPIKE ADDED | MSD CONC. | MSD % REC | # | % RPD | # | QC. LIMITS REC | QC. LIMITS RPD |
|---|---|---|---|---|---|---|---|---|---|
| Mercury | mg/kg | .25 | .27 | 104 | | 6 | | 80 - 120 | 0 - 20 |

# Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits

RPD : 0 out of 1 outside limits

Spike Recovery: 0 out of 2 outside limits

FORM V (PART 1) - IN

POST DIGEST SPIKE SAMPLE RECOVERY

Lab Name: GCAL

Sample ID: SOIL 24101513 BPDS

Lab Code: LA024 Case No.:

Contract:

Matrix: ( soil / water ) Solid

SAS No.: SDG No.: 213101712

Level: ( low / med )

Lab Sample ID: 1249183

Orig Lab Sample ID: 21310172601

| Analyte | LL | UL | Spiked Sample Result | C | Sample Result | C | Spike Added | % R | Q | Units | Method | Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 75 | 125 | 8420 | | 8200 | | 200 | 112 | | mg/kg | SW-846 6010C | P |
| Antimony | 75 | 125 | 18.8 | | .95 | J | 20 | 89 | | mg/kg | SW-846 6010C | P |
| Arsenic | 75 | 125 | 26 | | 8.16 | | 20 | 89 | | mg/kg | SW-846 6010C | P |
| Barium | 75 | 125 | 136 | | 120 | | 20 | 81 | | mg/kg | SW-846 6010C | P |
| Beryllium | 75 | 125 | 17 | | .31 | | 20 | 84 | | mg/kg | SW-846 6010C | P |
| Cadmium | 75 | 125 | 15 | | .068 | J | 20 | 74 | N | mg/kg | SW-846 6010C | P |
| Chromium | 75 | 125 | 31.6 | | 15.5 | | 20 | 81 | | mg/kg | SW-846 6010C | P |
| Cobalt | 75 | 125 | 22 | | 6.53 | | 20 | 78 | | mg/kg | SW-846 6010C | P |
| Copper | 75 | 125 | 34.5 | | 18 | | 20 | 83 | | mg/kg | SW-846 6010C | P |
| Iron | 75 | 125 | 13300 | | 12700 | | 200 | 276 | N | mg/kg | SW-846 6010C | P |
| Lead | 75 | 125 | 22.2 | | 7.23 | | 20 | 75 | | mg/kg | SW-846 6010C | P |
| Magnesium | 75 | 125 | 5890 | | 5720 | | 200 | 87 | | mg/kg | SW-846 6010C | P |
| Nickel | 75 | 125 | 32.7 | | 17.5 | | 20 | 76 | | mg/kg | SW-846 6010C | P |
| Potassium | 75 | 125 | 2140 | | 1810 | | 400 | 83 | | mg/kg | SW-846 6010C | P |
| Selenium | 75 | 125 | 18.3 | | .79 | J | 20 | 88 | | mg/kg | SW-846 6010C | P |
| Silver | 75 | 125 | 17 | | 0 | U | 20 | 85 | | mg/kg | SW-846 6010C | P |
| Sodium | 75 | 125 | 1210 | | 528 | | 800 | 86 | | mg/kg | SW-846 6010C | P |
| Vanadium | 75 | 125 | 46.4 | | 29.4 | | 20 | 85 | | mg/kg | SW-846 6010C | P |
| Zinc | 75 | 125 | 50.8 | | 34.8 | | 20 | 80 | | mg/kg | SW-846 6010C | P |

LABORATORY CONTROL SAMPLE

Lab Name: GCAL

Sample ID: LCS1244706

Lab Code: LA024

Case No.:

Contract:

Matrix: ( soil / water ) Solid

SAS No.:

SDG No.: 213101712

Lab Sample ID: 1244706

LCS Source: 209-37-17 INORGANIC VENTURES

| Analyte | True | Found | % R | LL | UL | Units | Method | Type |
|---|---|---|---|---|---|---|---|---|
| Aluminum | 200 | 208 | 104 | 80 | 120 | mg/kg | SW-846 6010C | P |
| Antimony | 20.0 | 21.0 | 105 | 80 | 120 | mg/kg | SW-846 6010C | P |
| Arsenic | 20.0 | 21.0 | 105 | 80 | 120 | mg/kg | SW-846 6010C | P |
| Barium | 20.0 | 20.6 | 103 | 80 | 120 | mg/kg | SW-846 6010C | P |
| Beryllium | 20.0 | 20.3 | 101 | 80 | 120 | mg/kg | SW-846 6010C | P |
| Cadmium | 20.0 | 20.4 | 102 | 80 | 120 | mg/kg | SW-846 6010C | P |
| Calcium | 200 | 212 | 106 | 80 | 120 | mg/kg | SW-846 6010C | P |
| Chromium | 20.0 | 20.9 | 104 | 80 | 120 | mg/kg | SW-846 6010C | P |
| Cobalt | 20.0 | 20.7 | 104 | 80 | 120 | mg/kg | SW-846 6010C | P |
| Copper | 20.0 | 21.2 | 106 | 80 | 120 | mg/kg | SW-846 6010C | P |
| Iron | 200 | 204 | 102 | 80 | 120 | mg/kg | SW-846 6010C | P |
| Lead | 20.0 | 20.3 | 102 | 80 | 120 | mg/kg | SW-846 6010C | P |
| Magnesium | 200 | 204 | 102 | 80 | 120 | mg/kg | SW-846 6010C | P |
| Manganese | 20.0 | 21.7 | 108 | 80 | 120 | mg/kg | SW-846 6010C | P |
| Nickel | 20.0 | 20.8 | 104 | 80 | 120 | mg/kg | SW-846 6010C | P |
| Potassium | 400 | 397 | 99 | 80 | 120 | mg/kg | SW-846 6010C | P |
| Selenium | 20.0 | 20.1 | 100 | 80 | 120 | mg/kg | SW-846 6010C | P |
| Silver | 20.0 | 20.5 | 103 | 80 | 120 | mg/kg | SW-846 6010C | P |
| Sodium | 800 | 811 | 101 | 80 | 120 | mg/kg | SW-846 6010C | P |
| Thallium | 20.0 | 20.8 | 104 | 80 | 120 | mg/kg | SW-846 6010C | P |
| Vanadium | 20.0 | 20.5 | 103 | 80 | 120 | mg/kg | SW-846 6010C | P |
| Zinc | 20.0 | 20.2 | 101 | 80 | 120 | mg/kg | SW-846 6010C | P |

FORM VII - IN

LABORATORY CONTROL SAMPLE

Lab Name: GCAL

Sample ID: LCS1251817

Lab Code: LA024

Case No.:

Contract:

Matrix: ( soil / water ) Water

SAS No.:

SDG No.: 213101712

Lab Sample ID: 1251817

LCS Source: 209-37-17 INORGANIC VENTURES

| Analyte | True | Found | % R | LL | UL | Units | Method | Type |
|---|---|---|---|---|---|---|---|---|
| Lead | 0.50 | 0.52 | 104 | 80 | 120 | mg/L | SW-846 1311/6010C | P |

FORM VII - IN

LABORATORY CONTROL SAMPLE

Lab Name: GCAL

Sample ID: LCS1244702

Lab Code: LA024

Case No.:

Contract:

Matrix: ( soil / water ) Solid

SAS No.:

SDG No.: 213101712

Lab Sample ID: 1244702

LCS Source: 225-10-3 EXAXOL

| Analyte | True | Found | % R | LL | UL | Units | Method | Type |
|---|---|---|---|---|---|---|---|---|
| Mercury | 0.25 | 0.27 | 107 | 80 | 120 | mg/kg | SW-846 7471B | AV |

FORM VII - IN

SERIAL DILUTIONS

Lab Name: GCAL

Sample ID: SOIL 24101513 BSD

Lab Code: LA024 Case No.

Contract:

Matrix: ( soil / water ) Solid

SAS No.: SDG No.: 213101712

Level: ( low / med )

Org Lab Sample ID: 21310172601

Lab Sample ID: 1249184

| Analyte | LL | UL | Initial Sample Result | C | Serial Dilution Result | C | % Diff. | Q | Units | Method | Type |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Aluminum | 0 | 10 | 8200 | | 9440 | | 15.1 | E | mg/kg | SW-846 6010C | P |
| Antimony | | | 0.95 | J | 0 | U | 100 | | mg/kg | SW-846 6010C | P |
| Arsenic | | | 8.16 | | 7.58 | J | 7.1 | | mg/kg | SW-846 6010C | P |
| Barium | 0 | 10 | 120 | | 143 | | 19.2 | E | mg/kg | SW-846 6010C | P |
| Beryllium | | | 0.31 | | 0.38 | J | 22.6 | | mg/kg | SW-846 6010C | P |
| Cadmium | | | 0.068 | J | 0 | U | 100 | | mg/kg | SW-846 6010C | P |
| Chromium | 0 | 10 | 15.5 | | 18.8 | | 21.3 | E | mg/kg | SW-846 6010C | P |
| Cobalt | | | 6.53 | | 8.01 | | 22.7 | | mg/kg | SW-846 6010C | P |
| Copper | | | 18.0 | | 21.4 | | 18.9 | | mg/kg | SW-846 6010C | P |
| Iron | 0 | 10 | 12700 | | 15000 | | 18.1 | E | mg/kg | SW-846 6010C | P |
| Lead | | | 7.23 | | 8.32 | | 15.1 | | mg/kg | SW-846 6010C | P |
| Magnesium | 0 | 10 | 5720 | | 6780 | | 18.5 | E | mg/kg | SW-846 6010C | P |
| Nickel | | | 17.5 | | 22.2 | | 26.9 | | mg/kg | SW-846 6010C | P |
| Potassium | 0 | 10 | 1810 | | 2090 | | 15.5 | E | mg/kg | SW-846 6010C | P |
| Selenium | | | 0.79 | J | 0 | U | 100 | | mg/kg | SW-846 6010C | P |
| Silver | | | 0 | U | 0 | U | | | mg/kg | SW-846 6010C | P |
| Sodium | 0 | 10 | 528 | | 545 | | 3.2 | | mg/kg | SW-846 6010C | P |
| Vanadium | 0 | 10 | 29.4 | | 34.3 | | 16.7 | E | mg/kg | SW-846 6010C | P |
| Zinc | 0 | 10 | 34.8 | | 39.7 | | 14.1 | E | mg/kg | SW-846 6010C | P |

FORM IX - IN

SERIAL DILUTIONS

Lab Name: GCAL

Sample ID: SOIL 24101513 BSD

Lab Code: LA024 Case No.

Contract:

Matrix: ( soil / water ) Solid

SAS No.: SDG No.: 213101712

Level: ( low / med )

Org Lab Sample ID: 21310172601

Lab Sample ID: 1245010

| Analyte | LL | UL | Initial Sample Result | C | Serial Dilution Result | C | % Diff. | Q | Units | Method | Type |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Mercury | | | 0.013 | | 0 | U | 100 | | mg/kg | SW-846 7471B | AV |

FORM IX - IN

METHOD DETECTION LIMITS

Lab Name: GCAL

Sample ID:

Lab Code: LA024

SDG No.: 213101712

Study Date: (P)09/15/13 (AV)09/15-13

Instrument ID: (P) ICP5 (AV) FIMS1

| *Analyte* | *MDL* | *Units* | *Type* |
|---|---|---|---|
| Aluminum | 2.00 | mg/kg | P |
| Antimony | 0.60 | mg/kg | P |
| Arsenic | 0.20 | mg/kg | P |
| Barium | 0.1000 | mg/kg | P |
| Beryllium | 0.0400 | mg/kg | P |
| Cadmium | 0.0500 | mg/kg | P |
| Calcium | 8.00 | mg/kg | P |
| Chromium | 0.100 | mg/kg | P |
| Cobalt | 0.100 | mg/kg | P |
| Copper | 0.200 | mg/kg | P |
| Iron | 2.00 | mg/kg | P |
| Lead | 0.150 | mg/kg | P |
| Magnesium | 2.00 | mg/kg | P |
| Manganese | 0.150 | mg/kg | P |
| Mercury | 0.0033 | mg/kg | AV |
| Nickel | 0.400 | mg/kg | P |
| Potassium | 5.00 | mg/kg | P |
| Selenium | 0.40 | mg/kg | P |
| Silver | 0.100 | mg/kg | P |
| Sodium | 10.00 | mg/kg | P |
| Thallium | 0.20 | mg/kg | P |
| Vanadium | 0.200 | mg/kg | P |
| Zinc | 0.20 | mg/kg | P |

FORM X - IN

METHOD DETECTION LIMITS

Lab Name: GCAL

Sample ID:

Lab Code: LA024

SDG No.: 213101712

Study Date: (P)09/15/13

Instrument ID: (P) ICP5

| *Analyte* | *MDL* | *Units* | *Type* |
|---|---|---|---|
| Lead | 0.00375 | mg/L | P |

FORM X - IN

IEC File Last Saved: 8/8/2013 1:22:45 PM
Printed On: 10/30/2013 10:32:57 AM

Results Data Set Name: IEC2130807
Method Name: ICP5Combine
Results Library: C:\pe\met\Results\Results.md

| | | Interfering Analytes | | | |
|---|---|---|---|---|---|
| | Analytes | Aluminum,7429-90-5 | Calcium,7440-70-2 | Chromium,7440-47-3 | Copper,7440-50-8 |
| 1 | **Aluminum,7429-90-5** | **n/a** | 0.0114231 | 0.0723162 | 0.0299804 |
| 2 | **Antimony,7440-36-0** | -0.016746 | 0.00166354 | 21.8121 | -0.101808 |
| 5 | **Arsenic,7440-38-2** | -0.318939 | -0.0322759 | 2.21757 | -0.286206 |
| 6 | **Barium,7440-39-3** | 0.00184702 | 0.0104156 | 0.0127217 | 0.00433815 |
| 7 | **Beryllium,7440-41-7** | 0 | 0 | -0.0334293 | -0.00117765 |
| 8 | **Boron,7440-42-8** | -0.0090706 | -0.0207899 | -0.433906 | -0.82872 |
| 9 | **Cadmium,7440-43-9** | -0.00283569 | 0 | 0.00670821 | -0.00383897 |
| 10 | **Calcium,7440-70-2** | 0.0878654 | **n/a** | -2.28873 | 0.257703 |
| 11 | **Chromium,7440-47-3** | 0.047788 | -0.00284669 | **n/a** | 0.0723239 |
| 12 | **Cobalt,7440-48-4** | 0 | 0 | -0.207736 | -0.00595323 |
| 13 | **Copper,7440-50-8** | 0.00267595 | 0.00357454 | -0.144176 | **n/a** |
| 14 | **Iron,7439-89-6** | 0.055016 | -0.00548008 | 0.319635 | 0.0530201 |
| 15 | **Lead,7439-92-1** | -0.0958621 | -0.0146852 | -0.134524 | 0.396809 |
| 16 | **Lithium,7439-93-2** | 0 | 0 | 0.0022063 | 0.0192682 |
| 17 | **Magnesium,7439-95-4** | -0.011101 | 0.0150073 | -0.619541 | -0.618004 |
| 18 | **Manganese,7439-96-5** | -0.00898503 | 0 | -0.0789961 | 0.00298327 |
| 19 | **Molybdenum,7439-98-7** | -0.0274013 | 0 | 0.0381256 | -0.0211671 |
| 20 | **Nickel,7440-02-0** | 0.00363295 | 0 | -0.0069176 | 0.00281882 |
| 21 | **Potassium,7440-09-7** | 0.0270262 | -0.00557059 | 0.0510589 | -0.63022 |
| 23 | **Selenium,7782-49-2** | 0.160722 | -0.0105184 | -0.126075 | 0.0352306 |
| 24 | **Silicon,7440-21-3** | 0.00205247 | 0.00353242 | 0.0253839 | 0.325918 |
| 25 | **Silver,7440-22-4** | 0.0018632 | -0.00274545 | 0.00883085 | 0.0566843 |
| 26 | **Sodium,7440-23-5** | 0.0433404 | 0.02334 | 0.37981 | -1.03245 |
| 27 | **Strontium,7440-24-6** | 0 | 0.0279568 | 0.00494832 | -0.00308292 |
| 28 | **Thallium,7440-28-0** | -0.0281553 | -0.0050046 | 0.180729 | 0.0248546 |
| 29 | **Tin,7440-31-5** | 0.00354938 | -0.0336731 | -0.0660952 | -0.0686299 |
| 30 | **Titanium,7440-32-6** | 0 | 0 | 0.00164769 | 0 |
| 31 | **Vanadium,7440-62-2** | 0.00125813 | 0.00266525 | -1.45877 | -0.00765107 |
| 34 | **Zinc,7440-66-6** | 0.00346307 | -0.00593131 | -0.028807 | 0.689343 |
| 35 | **Zirconium,7440-67-7** | 0 | 0 | -0.0604212 | -0.0110182 |

IEC File Last Saved: 8/8/2013 1:22:45 PM
Printed On: 10/30/2013 10:32:57 AM

Results Data Set Name: IEC2130807I
Method Name: ICP5Combine
Results Library: C:\pe\met\Results\Results.md

| | | Interfering Analytes | | | |
|---|---|---|---|---|---|
| | Analytes | Iron,7439-89-6 | Magnesium,7439-95-4 | Manganese,7439-96-5 | Nickel,7440-02-0 |
| 1 | **Aluminum,7429-90-5** | 0 | 0.0204431 | 0.646772 | 0.191938 |
| 2 | **Antimony,7440-36-0** | -0.0545395 | -0.00296473 | -0.137944 | -0.13756 |
| 5 | **Arsenic,7440-38-2** | -0.0791372 | -0.0123469 | -1.01514 | -1.29978 |
| 6 | **Barium,7440-39-3** | 0.0133535 | 0 | -0.00430478 | 0.030107 |
| 7 | **Beryllium,7440-41-7** | 0 | 0 | -0.00112709 | -0.00121046 |
| 8 | **Boron,7440-42-8** | -4.50322 | -0.0280124 | -1.42654 | -0.723934 |
| 9 | **Cadmium,7440-43-9** | 0.0210619 | -0.00142674 | 0.00112943 | 0.00532148 |
| 10 | **Calcium,7440-70-2** | 0.106781 | 0.205785 | 2.00266 | 0.234145 |
| 11 | **Chromium,7440-47-3** | -0.0552235 | -0.0952676 | 0.470386 | 0.0124472 |
| 12 | **Cobalt,7440-48-4** | 0.0188161 | 0 | -0.0123759 | 0.178586 |
| 13 | **Copper,7440-50-8** | 0.00411716 | 0.0102457 | 0.345848 | 0.132227 |
| 14 | **Iron,7439-89-6** | n/a | -0.00202982 | 0.0942417 | 0.061184 |
| 15 | **Lead,7439-92-1** | 0.0472364 | 0.00139245 | 0.124044 | -0.0037047 |
| 16 | **Lithium,7439-93-2** | 0 | 0 | 0.0405873 | -0.0103303 |
| 17 | **Magnesium,7439-95-4** | 0.362701 | n/a | 0.121472 | -0.303842 |
| 18 | **Manganese,7439-96-5** | -0.00467335 | 0.00729088 | n/a | 0.0157482 |
| 19 | **Molybdenum,7439-98-7** | -0.0846343 | -0.00173614 | -0.0200792 | -0.0109138 |
| 20 | **Nickel,7440-02-0** | -0.00712237 | 0 | 0.0521961 | n/a |
| 21 | **Potassium,7440-09-7** | -0.223947 | -0.0245727 | -1.44594 | -0.0729646 |
| 23 | **Selenium,7782-49-2** | -0.271701 | -0.0124598 | 0.872862 | -0.0972613 |
| 24 | **Silicon,7440-21-3** | -0.00815001 | 0.111775 | 0.449564 | 0.0620715 |
| 25 | **Silver,7440-22-4** | -0.0274146 | 0.00334465 | 0.199377 | -0.00121338 |
| 26 | **Sodium,7440-23-5** | -0.0414973 | 0.0183802 | -1.19646 | -0.556702 |
| 27 | **Strontium,7440-24-6** | 0.0018144 | 0 | 0.00473766 | 0.00175951 |
| 28 | **Thallium,7440-28-0** | -0.0233284 | -0.00221231 | -0.713026 | -0.110299 |
| 29 | **Tin,7440-31-5** | -0.00565833 | 0.00154476 | -0.123334 | -0.0717827 |
| 30 | **Titanium,7440-32-6** | 0.00207598 | 0 | 0 | 0.00279454 |
| 31 | **Vanadium,7440-62-2** | 0.0493408 | 0.0269077 | 0.0965387 | 0.00140679 |
| 34 | **Zinc,7440-66-6** | 0.104534 | 0 | 0.166015 | 6.80594 |
| 35 | **Zirconium,7440-67-7** | 0 | 0 | -0.00195425 | -0.0374133 |



213101712 1154

IEC File Last Saved: 8/8/2013 1:22:45 PM
Printed On: 10/30/2013 10:32:57 AM

Results Data Set Name: IEC2130807I
Method Name: ICP5Combine
Results Library: C:\pe\met\Results\Results.md

| | Analytes | Titanium,7440-32-6 | Interfering Analytes<br>Vanadium,7440-62-2 |
|---|---|---|---|
| 1 | **Aluminum,7429-90-5** | 2.64785 | 10.2772 |
| 2 | **Antimony,7440-36-0** | -2.55174 | -1.58426 |
| 5 | **Arsenic,7440-38-2** | -0.218478 | -31.4893 |
| 6 | **Barium,7440-39-3** | 0 | -1.26858 |
| 7 | **Beryllium,7440-41-7** | -2.76332 | -0.0132441 |
| 8 | **Boron,7440-42-8** | -0.829725 | -0.701248 |
| 9 | **Cadmium,7440-43-9** | -0.00246774 | -0.00509418 |
| 10 | **Calcium,7440-70-2** | 0.778074 | 0.344665 |
| 11 | **Chromium,7440-47-3** | 0.0929373 | -0.956774 |
| 12 | **Cobalt,7440-48-4** | 2.07729 | 0.0130046 |
| 13 | **Copper,7440-50-8** | 0.090169 | -0.10125 |
| 14 | **Iron,7439-89-6** | 0.0810551 | 0.291678 |
| 15 | **Lead,7439-92-1** | -0.256361 | -0.0284553 |
| 16 | **Lithium,7439-93-2** | 0.0174121 | 0.0014193 |
| 17 | **Magnesium,7439-95-4** | -0.599939 | -0.0326657 |
| 18 | **Manganese,7439-96-5** | 0.0226882 | 0.005757 |
| 19 | **Molybdenum,7439-98-7** | -0.0077775 | -0.276596 |
| 20 | **Nickel,7440-02-0** | 0.102745 | 0.0252446 |
| 21 | **Potassium,7440-09-7** | 2.29033 | -0.255363 |
| 23 | **Selenium,7782-49-2** | -0.129623 | 0.198171 |
| 24 | **Silicon,7440-21-3** | 0 | 0.596969 |
| 25 | **Silver,7440-22-4** | 0.0552883 | -4.02086 |
| 26 | **Sodium,7440-23-5** | -1.14699 | -0.356018 |
| 27 | **Strontium,7440-24-6** | 0.00760969 | 0.00139072 |
| 28 | **Thallium,7440-28-0** | -13.2187 | -2.5545 |
| 29 | **Tin,7440-31-5** | -3.6389 | -0.0244301 |
| 30 | **Titanium,7440-32-6** | **n/a** | 0.0911389 |
| 31 | **Vanadium,7440-62-2** | 0 | **n/a** |
| 34 | **Zinc,7440-66-6** | -0.563533 | 0 |
| 35 | **Zirconium,7440-67-7** | 0.527037 | -0.0148508 |

ICP LINEAR RANGES

Lab Name: GCAL

Lab Code: LA024 SDG No.: 213101712

Study Date: 07/31/13 Instrument ID: ICP5

| *Analyte* | *Concentration* | *% Recovery* | *Units* | *Type* |
|---|---|---|---|---|
| Aluminum | 60000 | 91 | mg/kg | P |
| Antimony | 1000 | 90 | mg/kg | P |
| Arsenic | 1000 | 96 | mg/kg | P |
| Barium | 1000 | 93 | mg/kg | P |
| Beryllium | 160 | 94 | mg/kg | P |
| Boron | 2000 | 93 | mg/kg | P |
| Cadmium | 600 | 96 | mg/kg | P |
| Calcium | 80000 | 91 | mg/kg | P |
| Chromium | 4000 | 94 | mg/kg | P |
| Cobalt | 6000 | 100 | mg/kg | P |
| Copper | 2000 | 92 | mg/kg | P |
| Iron | 20000 | 92 | mg/kg | P |
| Lead | 20000 | 98 | mg/kg | P |
| Lithium | 800 | 93 | mg/kg | P |
| Magnesium | 36000 | 92 | mg/kg | P |
| Manganese | 1200 | 90 | mg/kg | P |
| Molybdenum | 4000 | 90 | mg/kg | P |
| Nickel | 2400 | 95 | mg/kg | P |
| Potassium | 6400 | 91 | mg/kg | P |
| Selenium | 600 | 91 | mg/kg | P |
| Silicon | 800 | 99 | mg/kg | P |
| Silver | 400 | 98 | mg/kg | P |
| Sodium | 24000 | 90 | mg/kg | P |
| Strontium | 200 | 98 | mg/kg | P |
| Thallium | 1000 | 102 | mg/kg | P |
| Tin | 2000 | 90 | mg/kg | P |
| Titanium | 1600 | 95 | mg/kg | P |
| Vanadium | 4000 | 96 | mg/kg | P |
| Zinc | 600 | 90 | mg/kg | P |
| Zirconium | 400 | 106 | mg/kg | P |

FORM XII - IN

ICP LINEAR RANGES

Lab Name: GCAL

Lab Code: LA024 SDG No.: 213101712

Study Date: 07/31/13 Instrument ID: ICP5

| *Analyte* | *Concentration* | *% Recovery* | *Units* | *Type* |
|---|---|---|---|---|
| Aluminum | 1500 | 91 | mg/L | P |
| Antimony | 25 | 90 | mg/L | P |
| Arsenic | 25 | 96 | mg/L | P |
| Barium | 25 | 93 | mg/L | P |
| Beryllium | 4 | 94 | mg/L | P |
| Boron | 50 | 93 | mg/L | P |
| Cadmium | 15 | 96 | mg/L | P |
| Calcium | 2000 | 91 | mg/L | P |
| Chromium | 100 | 94 | mg/L | P |
| Cobalt | 150 | 100 | mg/L | P |
| Copper | 50 | 92 | mg/L | P |
| Iron | 500 | 92 | mg/L | P |
| Lead | 500 | 98 | mg/L | P |
| Lithium | 20 | 93 | mg/L | P |
| Magnesium | 900 | 92 | mg/L | P |
| Manganese | 30 | 90 | mg/L | P |
| Molybdenum | 100 | 90 | mg/L | P |
| Nickel | 60 | 95 | mg/L | P |
| Potassium | 160 | 91 | mg/L | P |
| Selenium | 15 | 91 | mg/L | P |
| Silicon | 20 | 99 | mg/L | P |
| Silver | 10 | 98 | mg/L | P |
| Sodium | 600 | 90 | mg/L | P |
| Strontium | 5 | 98 | mg/L | P |
| Thallium | 25 | 102 | mg/L | P |
| Tin | 50 | 90 | mg/L | P |
| Titanium | 40 | 95 | mg/L | P |
| Vanadium | 100 | 96 | mg/L | P |
| Zinc | 15 | 90 | mg/L | P |
| Zirconium | 10 | 106 | mg/L | P |

FORM XII - IN

PREPARATION LOG

Lab Name: GCAL Sample ID:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Method: SW-846 6010C Method Type: P Prep Batch: 517994

| EPA Sample No. | Preparation Date | Weight | Units | Volume | Units |
|---|---|---|---|---|---|
| LCS1244706 | 10/18/13 | 1.25 | g | 50 | mL |
| MB1244705 | 10/18/13 | 1.25 | g | 50 | mL |
| RS-COMP1-101613 | 10/18/13 | 1.26 | g | 50 | mL |
| RS-COMP2-101613 | 10/18/13 | 1.25 | g | 50 | mL |
| SOIL 24101513 BMS | 10/18/13 | 1.25 | g | 50 | mL |
| SOIL 24101513 BMSD | 10/18/13 | 1.25 | g | 50 | mL |

FORM XIII - IN

PREPARATION LOG

Lab Name: GCAL Sample ID:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Method: SW-846 1311/6010C Method Type: P Prep Batch: 519175

| EPA Sample No. | Preparation Date | Weight | Units | Volume | Units |
|---|---|---|---|---|---|
| LCS1251817 | 11/04/13 | | | 50 | mL |
| MB1251816 | 11/04/13 | | | 50 | mL |
| RS-COMP1-101613 | 11/04/13 | | | 50 | mL |
| RS-COMP1-101613MS | 11/04/13 | | | 50 | mL |
| RS-COMP1-101613MSD | 11/04/13 | | | 50 | mL |

FORM XIII - IN

PREPARATION LOG

Lab Name: GCAL Sample ID:

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712

Method: SW-846 7471B Method Type: AV Prep Batch: 517993

| EPA Sample No. | Preparation Date | Weight | Units | Volume | Units |
|---|---|---|---|---|---|
| LCS1244702 | 10/18/13 | 0.6 | g | 30 | mL |
| MB1244701 | 10/18/13 | 0.6 | g | 30 | mL |
| RS-COMP1-101613 | 10/18/13 | 0.5 | g | 30 | mL |
| RS-COMP2-101613 | 10/18/13 | 0.53 | g | 30 | mL |
| SOIL 24101513 BMS | 10/18/13 | 0.6 | g | 30 | mL |
| SOIL 24101513 BMSD | 10/18/13 | 0.6 | g | 30 | mL |

FORM XIII - IN

ANALYSIS RUN LOG

Lab Name: GCAL  Contract:  Start Date: 10/21/13

Lab Code: LA024  Case No.:  SAS No.:  SDG No.: 213101712  End Date: 10/22/13

Instrument ID Number: ICP5  Method: SW-846 6010C  Method Type: P  Analysis Batch: 518197

| Sample No. | PF | D/F | Time | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co | Cu | Fe | Pb | Li | Mg | Mn | Hg | Mo | Ni | K | Se | Si | Ag | Na | Sr | Tl | Sn | Ti | V | Zn | Zr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Analyte Symbols | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ICV | * | 1 | 1113 | X | X | X | X | X | | X | X | X | X | X | X | X | | X | X | | | X | X | X | | X | X | | X | | | X | X | |
| ICB | * | 1 | 1120 | X | X | X | X | X | | X | X | X | X | X | X | X | | X | X | | | X | X | X | | X | X | | X | | | X | X | |
| CRDL | * | 1 | 1126 | X | X | X | X | X | | X | X | X | X | X | X | X | | X | X | | | X | X | X | | X | X | | X | | | X | X | |
| ICSA | * | 1 | 1132 | X | X | X | X | X | | X | X | X | X | X | X | X | | X | X | | | X | X | X | | X | X | | X | | | X | X | |
| ICSAB | * | 1 | 1139 | X | X | X | X | X | | X | X | X | X | X | X | X | | X | X | | | X | X | X | | X | X | | X | | | X | X | |
| CCV | * | 1 | 1146 | X | X | X | X | X | | X | X | X | X | X | X | X | | X | X | | | X | X | X | | X | X | | X | | | X | X | |
| CCB | * | 1 | 1153 | X | X | X | X | X | | X | X | X | X | X | X | X | | X | X | | | X | X | X | | X | X | | X | | | X | X | |
| CCV | * | 1 | 1343 | X | X | X | X | X | | X | X | X | X | X | X | X | | X | X | | | X | X | X | | X | X | | X | | | X | X | |
| CCB | * | 1 | 1350 | X | X | X | X | X | | X | X | X | X | X | X | X | | X | X | | | X | X | X | | X | X | | X | | | X | X | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 1 | 1403 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 1 | 1409 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 5 | 1416 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 5 | 1422 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 5 | 1429 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 5 | 1435 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MB1244705 | * | 1 | 1442 | X | X | X | X | X | | X | X | X | X | | X | X | | X | | | | X | X | X | | X | X | | X | | | X | X | |
| LCS1244706 | * | 1 | 1448 | X | X | X | X | X | | X | X | X | X | | X | X | | X | | | | X | X | X | | X | X | | X | | | X | X | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 1 | 1455 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV | * | 1 | 1502 | X | X | X | X | X | | X | X | X | X | X | X | X | | X | X | | | X | X | X | | X | X | | X | | | X | X | |
| CCB | * | 1 | 1508 | X | X | X | X | X | | X | X | X | X | X | X | X | | X | X | | | X | X | X | | X | X | | X | | | X | X | |

213101712 1161

ANALYSIS RUN LOG

Lab Name: GCAL | Contract: | Start Date: 10/29/13

Lab Code: LA024 | Case No.: | SAS No.: | SDG No.: 213101712 | End Date: 10/30/13

Instrument ID Number: ICP5 | Method: SW-846 6010C | Method Type: P | Analysis Batch: 518786

| Sample No. | PF | D/F | Time | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co | Cu | Fe | Pb | Li | Mg | Mn | Hg | Mo | Ni | K | Se | Si | Ag | Na | Sr | Tl | Sn | Ti | V | Zn | Zr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Analyte Symbols | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ICV | * | 1 | 0936 | X | X | X | X | X | | X | | X | X | X | X | X | | X | | | | X | X | X | | X | X | | | | | X | X | |
| ICB | * | 1 | 0943 | X | X | X | X | X | | X | | X | X | X | X | X | | X | | | | X | X | X | | X | X | | | | | X | X | |
| CRDL | * | 1 | 0949 | X | X | X | X | X | | X | | X | X | X | X | X | | X | | | | X | X | X | | X | X | | | | | X | X | |
| ICSA | * | 1 | 0955 | X | X | X | X | X | | X | | X | X | X | X | X | | X | | | | X | X | X | | X | X | | | | | X | X | |
| ICSAB | * | 1 | 1002 | X | X | X | X | X | | X | | X | X | X | X | X | | X | | | | X | X | X | | X | X | | | | | X | X | |
| CCV | * | 1 | 1023 | X | X | X | X | X | | X | | X | X | X | X | X | | X | | | | X | X | X | | X | X | | | | | X | X | |
| CCB | * | 1 | 1029 | X | X | X | X | X | | X | | X | X | X | X | X | | X | | | | X | X | X | | X | X | | | | | X | X | |
| CCV | * | 1 | 1924 | X | X | X | X | X | | X | | X | X | X | X | X | | X | | | | X | X | X | | X | X | | | | | X | X | |
| CCB | * | 1 | 1930 | X | X | X | X | X | | X | | X | X | X | X | X | | X | | | | X | X | X | | X | X | | | | | X | X | |
| MB1244705 | * | 1 | 1937 | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | |
| LCS1244706 | * | 1 | 1943 | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | | | |
| RS-COMP1-101613 | * | 1 | 1950 | X | X | X | X | X | | X | | X | X | X | X | X | | X | | | | X | X | X | | X | X | | | | | X | | |
| RS-COMP2-101613 | * | 1 | 1956 | X | X | X | X | X | | X | | X | X | X | X | X | | X | | | | X | X | X | | X | X | | | | | X | X | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 1 | 2002 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SOIL 24101513 BMS | * | 1 | 2009 | X | X | X | X | X | | X | | X | X | X | X | X | | X | | | | X | X | X | | X | X | | | | | X | X | |
| SOIL 24101513 BMSD | * | 1 | 2015 | X | X | X | X | X | | X | | X | X | X | X | X | | X | | | | X | X | X | | X | X | | | | | X | X | |
| SOIL 24101513 BPDS | * | 1 | 2021 | X | X | X | X | X | | X | | X | X | X | X | X | | X | | | | X | X | X | | X | X | | | | | X | X | |
| SOIL 24101513 BSD | * | 5 | 2027 | X | X | X | X | X | | X | | X | X | X | X | X | | X | | | | X | X | X | | X | X | | | | | X | X | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 1 | 2033 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV | * | 1 | 2039 | X | X | X | X | X | | X | | X | X | X | X | X | | X | | | | X | X | X | | X | X | | | | | X | X | |
| CCB | * | 1 | 2046 | X | X | X | X | X | | X | | X | X | X | X | X | | X | | | | X | X | X | | X | X | | | | | X | X | |

213101712 1162

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: GCAL Contract: Start Date: 10/30/13

Lab Code: LA024 Case No.: SAS No.: SDG No.: 213101712 End Date: 10/31/13

Instrument ID Number: ICP5 Method: SW-846 6010C Method Type: P Analysis Batch: 518882

| Sample No. | PF | D/F | Time | Analyte Symbols | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co | Cu | Fe | Pb | Li | Mg | Mn | Hg | Mo | Ni | K | Se | Si | Ag | Na | Sr | Tl | Sn | Ti | V | Zn | Zr |
| ICV | * | 1 | 1729 | | | | | | | | X | | | | | | | | X | | | | | | | | | | X | | | | | |
| ICB | * | 1 | 1736 | | | | | | | | X | | | | | | | | X | | | | | | | | | | X | | | | | |
| CRDL | * | 1 | 1742 | | | | | | | | X | | | | | | | | X | | | | | | | | | | X | | | | | |
| ICSA | * | 1 | 1749 | | | | | | | | X | | | | | | | | X | | | | | | | | | | X | | | | | |
| ICSAB | * | 1 | 1755 | | | | | | | | X | | | | | | | | X | | | | | | | | | | X | | | | | |
| CCV | * | 1 | 1801 | | | | | | | | X | | | | | | | | X | | | | | | | | | | X | | | | | |
| CCB | * | 1 | 1807 | | | | | | | | X | | | | | | | | X | | | | | | | | | | X | | | | | |
| MB1244705 | * | 1 | 1820 | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| LCS1244706 | * | 1 | 1826 | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | | |
| RS-COMP1-101613DL | * | 1 | 1839 | | | | | | | | X | | | | | | | | X | | | | | | | | | | X | | | | | |
| RS-COMP2-101613RE | * | 1 | 1846 | | | | | | | | X | | | | | | | | X | | | | | | | | | | X | | | | | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 1 | 1853 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 1 | 1907 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV | * | 1 | 1926 | | | | | | | | X | | | | | | | | X | | | | | | | | | | X | | | | | |
| CCB | * | 1 | 1933 | | | | | | | | X | | | | | | | | X | | | | | | | | | | X | | | | | |

213101712 1163

ANALYSIS RUN LOG

Lab Name: GCAL | Contract: | Start Date: 10/31/13

Lab Code: LA024 | Case No.: | SAS No.: | SDG No.: 213101712 | End Date: 11/01/13

Instrument ID Number: ICP5 | Method: SW-846 6010C | Method Type: P | Analysis Batch: 518958

| Sample No. | PF | D/F | Time | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co | Cu | Fe | Pb | Li | Mg | Mn | Hg | Mo | Ni | K | Se | Si | Ag | Na | Sr | Tl | Sn | Ti | V | Zn | Zr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Analyte Symbols | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ICV | * | 1 | 1201 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | |
| ICB | * | 1 | 1208 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | |
| CRDL | * | 1 | 1214 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | |
| ICSA | * | 1 | 1221 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | |
| ICSAB | * | 1 | 1227 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | |
| CCV | * | 1 | 1246 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | |
| CCB | * | 1 | 1252 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | |
| RS-COMP1-101613DL1 | * | 5 | 1259 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 50 | 1305 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 1 | 1311 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 1 | 1318 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 1 | 1324 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 1 | 1331 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 1 | 1337 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 5 | 1344 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 1 | 1350 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 1 | 1356 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV | * | 1 | 1402 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | |
| CCB | * | 1 | 1409 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | X | |

2131017 12 1164

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: GCAL
Contract:
Start Date: 11/05/13

Lab Code: LA024 Case No.:
SAS No.:
SDG No.: 213101712
End Date: 11/05/13

Instrument ID Number: ICP5
Method: SW-846 1311 60
Method Type: P
Analysis Batch: 519287

| Sample No. | PF | D/F | Time | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co | Cu | Fe | Pb | Li | Mg | Mn | Hg | Mo | Ni | K | Se | Si | Ag | Na | Sr | Tl | Sn | Ti | V | Zn | Zr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Analyte Symbols | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ICV | * | 1 | 0845 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| ICB | * | 1 | 0851 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| CRDL | * | 1 | 0857 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| ICSA | * | 1 | 0904 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| ICSAB | * | 1 | 0910 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| CCV | * | 1 | 0916 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| CCB | * | 1 | 0923 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| CCV | * | 1 | 1135 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| CCB | * | 1 | 1142 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 25 | 1150 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MB1251816 | * | 1 | 1218 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| LCS1251817 | * | 1 | 1225 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| RS-COMP1-101613 | * | 5 | 1232 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| CCV | * | 1 | 1238 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| CCB | * | 1 | 1245 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| RS-COMP1-101613MS | * | 5 | 1252 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| RS-COMP1-101613MSD | * | 5 | 1258 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| RS-COMP1-101613PDS | * | 5 | 1305 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| RS-COMP1-101613SD | * | 25 | 1312 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 5 | 1318 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 5 | 1325 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 5 | 1331 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 1 | 1338 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 1 | 1344 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 1 | 1351 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV | * | 1 | 1357 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |
| CCB | * | 1 | 1404 | | | | | | | | | | | | | X | | | | | | | | | | | | | | | | | | |

213101712 1165

FORM XIV - IN

ANALYSIS RUN LOG

Lab Name: GCAL
Contract:
Start Date: 10/18/13

Lab Code: LA024 Case No.:
SAS No.:
SDG No.: 213101712
End Date: 10/18/13

Instrument ID Number: FIMS1
Method: SW-846 7471B
Method Type: AV
Analysis Batch: 518047

| Sample No. | PF | D/F | Time | Al | Sb | As | Ba | Be | B | Cd | Ca | Cr | Co | Cu | Fe | Pb | Li | Mg | Mn | Hg | Mo | Ni | K | Se | Si | Ag | Na | Sr | Tl | Sn | Ti | V | Zn | Zr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Analyte Symbols | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ICV | * | 1 | 1231 | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| ICB | * | 1 | 1232 | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| CCV | * | 1 | 1234 | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| CCB | * | 1 | 1236 | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| MB1244701 | * | 1 | 1238 | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| LCS1244702 | * | 1 | 1239 | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 1 | 1241 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SOIL 24101513 BMS | * | 1 | 1243 | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| SOIL 24101513 BMSD | * | 1 | 1244 | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| SOIL 24101513 BSD | * | 5 | 1246 | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 1 | 1248 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 1 | 1250 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 1 | 1252 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| CCV | * | 1 | 1255 | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| CCB | * | 1 | 1257 | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 1 | 1259 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 1 | 1300 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 1 | 1302 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 1 | 1304 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ZZZZZZZZZZZZZZZZZZZZZZZZZZZZZZ | | 1 | 1306 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| RS-COMP1-101613 | * | 1 | 1308 | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| RS-COMP2-101613 | * | 1 | 1309 | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| CCV | * | 1 | 1311 | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |
| CCB | * | 1 | 1313 | | | | | | | | | | | | | | | | | X | | | | | | | | | | | | | | |

213101712 1166

FORM XIV - IN

GCAL ANALYTICAL LABORATORIES, LLC

# ICP

## BY METHODS EPA 200.7/6010B/6010C

Date: 10/21/13
Analyst: PJS

Instrument ID: ICP5
HBN: 518197
Batch: 8702

| | | | |
|---|---|---|---|
| Cal Standard | 225-16-10 | Exp. Date | 11/21/13 |
| ICV Standard | 225-11-4 | Exp. Date | 11/14/13 |
| CRDL Standard | 225-14-4 | Exp. Date | 11/17/13 |
| ICSA Standard | 225-11-2 | Exp. Date | 11/14/13 |
| ICSAB Standard | 225-11-3 | Exp. Date | 11/14/13 |
| Internal Standard | 225-15-6 | Exp. Date | 11/18/13 |

ICP Acid Matrix (Calibration Blank) (6% HNO3/10% HCl) 225-16-9 Exp. Date 11/21/13

ICP Acid Rinse (5% HNO3) 225-16-11 Exp. Date 11/21/13

**QC Limits:**

| | GCAL Limits | DOD Limits |
|---|---|---|
| ICV/ICV2 (6010B/6010C) | 90-110% | 90-110% |
| CCV (6010B/6010C) | 90-110% | 90-110% |
| ICV/ICV2 (200.7) | 95-105% | N/A |
| CCV (1st – 200.7) | 95-105% | N/A |
| Continuing CCV (200.7) | 90-110% | N/A |
| ICSA/ICSAB | 80-120% | 80-120% |
| CRDL/CRDL2 | 50-150% | 80-120% |

Revision 001: 6/4/2013

Reviewer/Date: AWG 10/21/13 AWG 10/22/13

213101712 1167

# ICP Analysis

INSTRUMENT ID = **ICP5**

ANALYST / DATE / TIME: PJS, 10/21/2013,

QC CONTROL LIMITS: ICV (200.7) 95-105% ICSAB 80-120% ICV (6010B) 90-110% CCV 90-110%

| AS# | SAMPLE ID | | | | | Dilution |
|---|---|---|---|---|---|---|
| 1 | CAL. BLK-1300 | | | | | |
| 2 | CAL. STD-1301 | | | | | |
| ✓1 | ICV-1600 | | | | | |
| ~~12~~ | ~~ICV2-1601~~ | | | | | |
| ✓1 | ICB-1700 | | | | | |
| ✓3 | CRDL-2300 | | | | | |
| 4 | ~~CRDL-2301~~ | | | | | |
| ✓5 | ICSA-2000 | | | | | |
| ✓6 | ICSAB-2100 | | | | | |
| ✓7 | CCV-1800 | ✓1800 | | | | |
| ✓1 | CCB-1900 | ✓1900 | | | | |
| 17 | | TBLK F1 | | | | 5x |
| 18 | 1245442 | M | MB for HBN 518128 | 6010C | W | |
| 19 | 1245443 | M | LCS for HBN 518128 | 6010C | W | |
| 20 | | M | 21310166106 | TCLP6010 | S | 5x |
| 21 | | M | 21310171101 | TCLP6010 | W | 5x |
| 22 | | M | 21310173001 | TCLP6010 | S | 5x |
| 23 | | M | 21310152502 | TCLP6010 | S | 5x |
| 24 | 1244705 | M | MB for HBN 517994 | 6010C | S | R\|RMn,Cu |
| 25 | 1244706 | M | LCS for HBN 517994 | 6010C | S | ↓ |
| 26 | | M | 21310174601 | 6010C | S | |
| ✓7 | CCV-1800 | | | | | |
| ✓1 | CCB-1900 | | | | | |
| 27 | | M | ~~21310174602~~ | ~~6010C~~ | ~~S~~ | R\|R@5x, Fe OLR |
| 28 | | M | 21310174603 | 6010C | S | 5x |
| 29 | | M | 21310174604 | 6010C | S | |
| 30 | | M | 21310174605 | 6010C | S | 5x |
| 31 | | M | 21310166001 | TCLP6010 | S | 5x |
| 32 | 1245446 | M | 21310166001 MS | 6010C | W | 5x |
| 33 | 1245447 | M | 21310166001 MSD | 6010C | W | 5x |
| 34 | | M | 21310165401 | TCLP6010 | S | 5x |
| 35 | 1245444 | M | 21310165401 MS | 6010C | W | 5x |
| 36 | 1245445 | M | 21310165401 MSD | 6010C | W | 5x |
| ✓7 | CCV-1800 | | | | | |
| ✓1 | CCB-1900 | | | | | |
| 37 | 1245757 | | 21310165401 PDS | TCLP6010 | S | 5x |
| 38 | 1245758 | | 21310165401 SD | TCLP6010 | S | 25x |
| 39 | | M | 21310164901 | TCLP6010 | S | 5x |
| 40 | | M | 21310164903 | TCLP6010 | S | 5x |
| 41 | | M | 21310164905 | TCLP6010 | S | 5x |
| 42 | | M | 21310165001 | TCLP6010 | S | 5x |
| 43 | | M | 21310165002 | TCLP6010 | S | 5x |
| 44 | | M | 21310165003 | TCLP6010 | S | 5x |
| 45 | | M | 21310165402 | TCLP6010 | S | 5x |
| 46 | | M | 21310165403 | TCLP6010 | S | 5x |
| ✓7 | CCV-1800 | | | | | |
| ✓1 | CCB-1900 | | | | | |

| AS# | SAMPLE ID | | | | | Dilution |
|---|---|---|---|---|---|---|
| 47 | | R | 21310163301 | TCLP6010 | S | 5x |
| 48 | | M | 21310154201 | TCLP6010 | S | 5x |
| 49 | | M | 21310165801 | TCLP6010 | S | 5x |
| 50 | | | 21310174101 | TCLP6010 | S | 5x |
| 51 | | | 21310174102 | TCLP6010 | S | 5x |
| 52 | 1244156 | M | MB for HBN 517896 | 6010C | S | |
| 53 | 1244157 | M | LCS for HBN 517896 | 6010C | S | |
| 54 | | R | 21310163006 | 6010C | S | |
| 55 | 1244158 | M | 21310163006 MS | 6010C | S | |
| 56 | 1244159 | M | 21310163006 MSD | 6010C | S | |
| ✓7 | CCV-1800 | | | | | |
| ✓1 | CCB-1900 | | | | | |
| 57 | 1245759 | | 21310163006 PDS | 6010C | S | |
| 58 | 1245760 | | 21310163006 SD | 6010C | S | 5x |
| 59 | | R | 21310163002 | 6010C | S | |
| 60 | | R | 21310163003 | 6010C | S | |
| 61 | | R | 21310163004 | 6010C | S | |
| 62 | | R | 21310163005 | 6010C | S | |
| 63 | | R | 21310163007 | 6010C | S | |
| 64 | | R | 21310163102 | 6010C | S | |
| 65 | | R | 21310163103 | 6010C | S | |
| 66 | | R | 21310163104 | 6010C | S | |
| ✓7 | CCV-1800 | | | | | |
| ✓1 | CCB-1900 | | | | | |
| 67 | | R | 21310163105 | 6010C | S | |
| 68 | | R | 21310163106 | 6010C | S | |
| 69 | | R | 21310163107 | 6010C | S | |
| 70 | | R | 21310163108 | 6010C | S | |
| 71 | | R | 21310163109 | 6010C | S | |
| 72 | | R | 21310163110 | 6010C | S | |
| 73 | | R | 21310163111 | 6010C | S | |
| 74 | | R | 21310163112 | 6010C | S | |
| 75 | | R | ~~21310163201~~ | ~~6010C~~ | ~~S~~ | R\|R@5x, Fe OLR |
| 76 | | M | 21310166002 | 6010C | S | 500x |
| ✓7 | CCV-1800 | | | | | |
| ✓1 | CCB-1900 | | | | | |
| 77 | | | TBLK F1 | | | 5x |
| 78 | 1243846 | | MB for HBN 517846 * | Na | | |
| 79 | 1243847 | | LCS for HBN 517846 | ↓ | | |
| 80 | | M | 21310142901 | TCLP6010 | S | 5x |
| 81 | 1244031 | M | 21310142901 MS | 6010C | W | 5x |
| 82 | | M | 21310114801 | TCLP6010 | S | 5x |
| 83 | 1244030 | M | 21310114801 MS | 6010C | W | 5x |
| 84 | 1245761 | | 21310114801 PDS | TCLP6010 | S | 5x |
| 85 | 1245762 | | 21310114801 SD | TCLP6010 | S | 25x |
| 86 | | R | 21310154601 | 6010C | W | |
| ✓7 | CCV-1800 | | | | | |
| ✓1 | CCB-1900 | | | | | |

COMMENTS: 8702, 518197

*MB|LCS posted into 8697, 517971

ANALYST QC REV:

SECONDARY REV:

QC: all acceptable qc noted with a checkmark; failures as indicated.

213101712 1168

Reprocessing Begun
Logged In Analyst: met Technique: ICP Continuous

Results Data Set (original): 2131021B
Results Library (original): C:\pe\met\Results\Results.mdb
Results Data Set (reprocessed): 8702
Results Library (reprocessed): C:\pe\met\Results\Results.mdb

Method Loaded
Method Name: ICP5Combined Method Last Saved: 9/27/2013 12:05:13 PM
IEC File: 2130731IEC.iec MSF File:
Method Description:

| Analyte | Calibration Equation | Processing | View | Internal Standard | IEC |
|---|---|---|---|---|---|
| Aluminum,7429-90-5 | Lin, Calc Int | Peak Area | Radial | Yttrium,7440-65-5R | Yes |
| Antimony,7440-36-0 | Lin, Calc Int | Peak Area | Axial | Yttrium,7440-65-5A | Yes |
| Arsenic,7440-38-2 | Lin, Calc Int | Peak Area | Axial | Yttrium,7440-65-5A | Yes |
| Barium,7440-39-3 | Lin, Calc Int | Peak Area | Axial | Yttrium,7440-65-5A | Yes |
| Beryllium,7440-41-7 | Lin, Calc Int | Peak Area | Axial | Yttrium,7440-65-5A | Yes |
| Boron,7440-42-8 | Lin, Calc Int | Peak Area | Axial | Yttrium,7440-65-5A | Yes |
| Cadmium,7440-43-9 | Lin, Calc Int | Peak Area | Axial | Yttrium,7440-65-5A | Yes |
| Calcium,7440-70-2 | Lin, Calc Int | Peak Area | Radial | Yttrium,7440-65-5R | Yes |
| Cerium, | Lin, Calc Int | Peak Area | Axial | Yttrium,7440-65-5A | No |
| Chromium,7440-47-3 | Lin, Calc Int | Peak Area | Axial | Yttrium,7440-65-5A | Yes |
| Cobalt,7440-48-4 | Lin, Calc Int | Peak Area | Axial | Yttrium,7440-65-5A | Yes |
| Copper,7440-50-8 | Lin, Calc Int | Peak Area | Axial | Yttrium,7440-65-5A | Yes |
| Iron,7439-89-6 | Lin, Calc Int | Peak Area | Radial | Yttrium,7440-65-5R | Yes |
| Lead,7439-92-1 | Lin, Calc Int | Peak Area | Axial | Yttrium,7440-65-5A | Yes |
| Lithium,7439-93-2 | Lin, Calc Int | Peak Area | Radial | Yttrium,7440-65-5R | Yes |
| Magnesium,7439-95-4 | Lin, Calc Int | Peak Area | Radial | Yttrium,7440-65-5R | Yes |
| Manganese,7439-96-5 | Lin, Calc Int | Peak Area | Axial | Yttrium,7440-65-5A | Yes |
| Molybdenum,7439-98-7 | Lin, Calc Int | Peak Area | Axial | Yttrium,7440-65-5A | Yes |
| Nickel,7440-02-0 | Lin, Calc Int | Peak Area | Axial | Yttrium,7440-65-5A | Yes |
| Phosphorus,7723-14-0 | Lin, Calc Int | Peak Area | Axial | Yttrium,7440-65-5A | No |
| Potassium,7440-09-7 | Lin, Calc Int | Peak Area | Radial | Yttrium,7440-65-5R | Yes |
| Selenium,7782-49-2 | Lin, Calc Int | Peak Area | Axial | Yttrium,7440-65-5A | Yes |
| Silicon,7440-21-3 | Lin, Calc Int | Peak Area | Radial | Yttrium,7440-65-5R | Yes |
| Silver,7440-22-4 | Lin, Calc Int | Peak Area | Axial | Yttrium,7440-65-5A | Yes |
| Sodium,7440-23-5 | Lin, Calc Int | Peak Area | Radial | Yttrium,7440-65-5R | Yes |
| Strontium,7440-24-6 | Lin, Calc Int | Peak Area | Radial | Yttrium,7440-65-5R | Yes |
| Thallium,7440-28-0 | Lin, Calc Int | Peak Area | Axial | Yttrium,7440-65-5A | Yes |
| Tin,7440-31-5 | Lin, Calc Int | Peak Area | Axial | Yttrium,7440-65-5A | Yes |
| Titanium,7440-32-6 | Lin, Calc Int | Peak Area | Axial | Yttrium,7440-65-5A | Yes |
| Vanadium,7440-62-2 | Lin, Calc Int | Peak Area | Axial | Yttrium,7440-65-5A | Yes |
| Zinc,7440-66-6 | Lin, Calc Int | Peak Area | Axial | Yttrium,7440-65-5A | Yes |
| Zirconium,7440-67-7 | Lin, Calc Int | Peak Area | Axial | Yttrium,7440-65-5A | Yes |
| Scandium-IS | Lin, Calc Int | Peak Area | Axial | n/a | n/a |
| Yttrium,7440-65-5A | Lin, Calc Int | Peak Area | Axial | n/a | n/a |
| Yttrium,7440-65-5R | Lin, Calc Int | Peak Area | Radial | n/a | n/a |
| Ar 420.067 R | Lin, Calc Int | Peak Area | Radial | n/a | n/a |
| Ar 363.268 A | Lin, Calc Int | Peak Area | Axial | n/a | n/a |

Sequence No.: 1 Autosampler Location: 1
Sample ID: 1300 Date Collected: 10/21/2013 11:00:34 AM
Analyst: Data Type: Reprocessed on 10/21/2013 3:37:42 PM
Logged In Analyst (Original) : met
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Mean Data: 1300

| Analyte | Mean Corrected Intensity | Std.Dev. | RSD | Conc. | Calib Units |
|---|---|---|---|---|---|
| Scandium-IS | 8643364.3 | 66560.10 | 0.77% | 100.000 | % |
| Yttrium,7440-65-5A | 4263984.1 | 37139.86 | 0.87% | 100.000 | % |
| Yttrium,7440-65-5R | 374052.9 | 1792.82 | 0.48% | 100.000 | % |
| Ar 420.067 R | 2914954.1 | 12199.58 | 0.42% | 100.000 | % |
| Ar 363.268 A | 57661.2 | 211.01 | 0.37% | 100.000 | % |

| | | | | | |
|---|---|---|---|---|---|
| Aluminum,7429-90-5† | -587.5 | 77.87 | 13.25% | [0.00] | mg/L |
| Antimony,7440-36-0† | 13.3 | 12.45 | 93.57% | [0.00] | mg/L |
| Arsenic,7440-38-2† | -46.6 | 2.35 | 5.05% | [0.00] | mg/L |
| Barium,7440-39-3† | 123.6 | 5.12 | 4.14% | [0.00] | mg/L |
| Beryllium,7440-41-7† | 2566.6 | 411.92 | 16.05% | [0.00] | mg/L |
| Boron,7440-42-8† | 3852.6 | 207.73 | 5.39% | [0.00] | mg/L |
| Cadmium,7440-43-9† | -247.5 | 27.02 | 10.92% | [0.00] | mg/L |
| Calcium,7440-70-2† | 1883.5 | 64.68 | 3.43% | [0.00] | mg/L |
| Chromium,7440-47-3† | -4997.9 | 79.61 | 1.59% | [0.00] | mg/L |
| Cobalt,7440-48-4† | 128.7 | 8.94 | 6.95% | [0.00] | mg/L |
| Copper,7440-50-8† | 8124.1 | 155.15 | 1.91% | [0.00] | mg/L |
| Iron,7439-89-6† | -3106.8 | 38.39 | 1.24% | [0.00] | mg/L |
| Lead,7439-92-1† | 719.6 | 29.78 | 4.14% | [0.00] | mg/L |
| Lithium,7439-93-2† | -109.4 | 111.03 | 101.48% | [0.00] | mg/L |
| Magnesium,7439-95-4† | 3452.4 | 13.83 | 0.40% | [0.00] | mg/L |
| Manganese,7439-96-5† | 1405.2 | 44.95 | 3.20% | [0.00] | mg/L |
| Molybdenum,7439-98-7 | -320.7 | 13.83 | 4.31% | [0.00] | mg/L |
| Nickel,7440-02-0† | -318.7 | 46.83 | 14.70% | [0.00] | mg/L |
| Potassium,7440-09-7† | 364.9 | 239.57 | 65.66% | [0.00] | mg/L |
| Selenium,7782-49-2† | 270.7 | 20.44 | 7.55% | [0.00] | mg/L |
| Silicon,7440-21-3† | 538.4 | 21.28 | 3.95% | [0.00] | mg/L |
| Silver,7440-22-4† | 10187.4 | 114.65 | 1.13% | [0.00] | mg/L |
| Sodium,7440-23-5† | 184.3 | 38.83 | 21.06% | [0.00] | mg/L |
| Strontium,7440-24-6† | 3271.1 | 80.43 | 2.46% | [0.00] | mg/L |
| Thallium,7440-28-0† | -95.9 | 7.74 | 8.07% | [0.00] | mg/L |
| Tin,7440-31-5† | 46.5 | 8.27 | 17.79% | [0.00] | mg/L |
| Titanium,7440-32-6† | 11264.9 | 196.09 | 1.74% | [0.00] | mg/L |
| Vanadium,7440-62-2† | 8737.0 | 211.60 | 2.42% | [0.00] | mg/L |
| Zinc,7440-66-6† | 602.4 | 25.84 | 4.29% | [0.00] | mg/L |
| Zirconium,7440-67-7† | 3492.7 | 147.35 | 4.22% | [0.00] | mg/L |

**Sequence No.: 2**
**Sample ID: 1301**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 2**
**Date Collected: 10/21/2013 11:07:01 AM**
**Data Type: Reprocessed on 10/21/2013 3:37:47 PM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 1301**

| Analyte | Mean Corrected Intensity | Std.Dev. | RSD | Conc. | Calib Units |
|---|---|---|---|---|---|
| Scandium-IS | 8345021.3 | 22421.27 | 0.27% | 96.5483 | % |
| Yttrium,7440-65-5A | 4084476.5 | 22208.59 | 0.54% | 95.7901 | % |
| Yttrium,7440-65-5R | 365625.3 | 1734.56 | 0.47% | 97.7470 | % |
| Ar 420.067 R | 2907866.8 | 5197.26 | 0.18% | 99.7569 | % |
| Ar 363.268 A | 58359.2 | 627.80 | 1.08% | 101.211 | % |
| Aluminum,7429-90-5† | 27361.8 | 88.83 | 0.32% | [10.00000] | mg/L |
| Antimony,7440-36-0† | 3059.0 | 15.64 | 0.51% | [1.000000] | mg/L |
| Arsenic,7440-38-2† | 2200.8 | 3.07 | 0.14% | [1.000000] | mg/L |
| Barium,7440-39-3† | 228828.9 | 914.77 | 0.40% | [1.000000] | mg/L |
| Beryllium,7440-41-7† | 10227387.2 | 132232.41 | 1.29% | [1.000000] | mg/L |
| Boron,7440-42-8† | 462692.0 | 5562.67 | 1.20% | [5.00] | mg/L |
| Cadmium,7440-43-9† | 234167.1 | 764.09 | 0.33% | [1.000000] | mg/L |
| Calcium,7440-70-2† | 196739.4 | 645.80 | 0.33% | [10.00000] | mg/L |
| Chromium,7440-47-3† | 212073.0 | 1064.71 | 0.50% | [1.000000] | mg/L |
| Cobalt,7440-48-4† | 72872.7 | 297.85 | 0.41% | [1.000000] | mg/L |
| Copper,7440-50-8† | 480152.9 | 2463.79 | 0.51% | [1.000000] | mg/L |
| Iron,7439-89-6† | 182300.3 | 219.01 | 0.12% | [10.00000] | mg/L |
| Lead,7439-92-1† | 30228.1 | 58.86 | 0.19% | [1.000000] | mg/L |
| Lithium,7439-93-2† | 106761.1 | 90.70 | 0.08% | [1.00] | mg/L |
| Magnesium,7439-95-4† | 43896.8 | 226.54 | 0.52% | [10.00000] | mg/L |
| Manganese,7439-96-5† | 1416232.3 | 6914.92 | 0.49% | [1.000000] | mg/L |
| Molybdenum,7439-98-7 | 28060.4 | 191.10 | 0.68% | [1.00] | mg/L |
| Nickel,7440-02-0† | 118710.5 | 544.00 | 0.46% | [1.000000] | mg/L |
| Potassium,7440-09-7† | 108529.5 | 149.37 | 0.14% | [20.00000] | mg/L |
| Selenium,7782-49-2† | 3349.0 | 38.89 | 1.16% | [1.000000] | mg/L |
| Silicon,7440-21-3† | 37066.9 | 148.86 | 0.40% | [10.0] | mg/L |
| Silver,7440-22-4† | 605485.3 | 2612.80 | 0.43% | [1.000000] | mg/L |
| Sodium,7440-23-5† | 289065.5 | 585.47 | 0.20% | [40.00000] | mg/L |
| Strontium,7440-24-6† | 742948.0 | 18205.43 | 2.45% | [1.00] | mg/L |

| | | | | | |
|---|---|---|---|---|---|
| Thallium,7440-28-0† | 3895.9 | 26.91 | 0.69% | [1.000000] | mg/L |
| Tin,7440-31-5† | 10479.7 | 48.36 | 0.46% | [1.00] | mg/L |
| Titanium,7440-32-6† | 1392460.0 | 8238.37 | 0.59% | [1.000000] | mg/L |
| Vanadium,7440-62-2† | 335185.7 | 1562.07 | 0.47% | [1.000000] | mg/L |
| Zinc,7440-66-6† | 154510.7 | 788.93 | 0.51% | [1.000000] | mg/L |
| Zirconium,7440-67-7† | 861517.8 | 4028.61 | 0.47% | [1.000000] | mg/L |

**Sequence No.: 3**
**Sample ID: 1600**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 11**
**Date Collected: 10/21/2013 11:13:32 AM**
**Data Type: Reprocessed on 10/21/2013 3:37:50 PM**
**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 1600**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 8369190.2 | 96.8279 | % | 0.67051 | | | | 0.69% |
| Yttrium,7440-65-5A | 4138234.9 | 97.0509 | % | 0.29175 | | | | 0.30% |
| Yttrium,7440-65-5R | 368682.1 | 98.5642 | % | 0.67299 | | | | 0.68% |
| Ar 420.067 R | 2900302.7 | 99.4974 | % | 0.28889 | | | | 0.29% |
| Ar 363.268 A | 58009.1 | 100.603 | % | 1.2783 | | | | 1.27% |
| Aluminum,7429-90-5† | 25915.0 | 9.45773 | mg/L | 0.037221 | 9.45773 | mg/L | 0.037221 | 0.39% |
| QC value within limits for Aluminum,7429-90-5 Recovery = 94.58% | | | | | | | | |
| Antimony,7440-36-0† | 3059.6 | 0.98450 | mg/L | 0.008314 | 0.98450 | mg/L | 0.008314 | 0.84% |
| QC value within limits for Antimony,7440-36-0 Recovery = 98.45% | | | | | | | | |
| Arsenic,7440-38-2† | 2086.7 | 0.98265 | mg/L | 0.006064 | 0.98265 | mg/L | 0.006064 | 0.62% |
| QC value within limits for Arsenic,7440-38-2 Recovery = 98.26% | | | | | | | | |
| Barium,7440-39-3† | 217422.9 | 0.95107 | mg/L | 0.003856 | 0.95107 | mg/L | 0.003856 | 0.41% |
| QC value within limits for Barium,7440-39-3 Recovery = 95.11% | | | | | | | | |
| Beryllium,7440-41-7† | 9658367.9 | 0.94712 | mg/L | 0.004711 | 0.94712 | mg/L | 0.004711 | 0.50% |
| QC value within limits for Beryllium,7440-41-7 Recovery = 94.71% | | | | | | | | |
| Boron,7440-42-8† | 450674.2 | 4.91803 | mg/L | 0.049066 | 4.91803 | mg/L | 0.049066 | 1.00% |
| QC value within limits for Boron,7440-42-8 Recovery = 98.36% | | | | | | | | |
| Cadmium,7440-43-9† | 222721.5 | 0.95096 | mg/L | 0.006143 | 0.95096 | mg/L | 0.006143 | 0.65% |
| QC value within limits for Cadmium,7440-43-9 Recovery = 95.10% | | | | | | | | |
| Calcium,7440-70-2† | 190618.3 | 9.68381 | mg/L | 0.023704 | 9.68381 | mg/L | 0.023704 | 0.24% |
| QC value within limits for Calcium,7440-70-2 Recovery = 96.84% | | | | | | | | |
| Chromium,7440-47-3† | 201752.9 | 0.95262 | mg/L | 0.003536 | 0.95262 | mg/L | 0.003536 | 0.37% |
| QC value within limits for Chromium,7440-47-3 Recovery = 95.26% | | | | | | | | |
| Cobalt,7440-48-4† | 69119.7 | 0.94632 | mg/L | 0.003179 | 0.94632 | mg/L | 0.003179 | 0.34% |
| QC value within limits for Cobalt,7440-48-4 Recovery = 94.63% | | | | | | | | |
| Copper,7440-50-8† | 454417.8 | 0.94590 | mg/L | 0.003668 | 0.94590 | mg/L | 0.003668 | 0.39% |
| QC value within limits for Copper,7440-50-8 Recovery = 94.59% | | | | | | | | |
| Iron,7439-89-6† | 172577.2 | 9.46534 | mg/L | 0.024476 | 9.46534 | mg/L | 0.024476 | 0.26% |
| QC value within limits for Iron,7439-89-6 Recovery = 94.65% | | | | | | | | |
| Lead,7439-92-1† | 28720.6 | 0.95063 | mg/L | 0.004610 | 0.95063 | mg/L | 0.004610 | 0.48% |
| QC value within limits for Lead,7439-92-1 Recovery = 95.06% | | | | | | | | |
| Lithium,7439-93-2† | 101378.2 | 0.94951 | mg/L | 0.002931 | 0.94951 | mg/L | 0.002931 | 0.31% |
| QC value within limits for Lithium,7439-93-2 Recovery = 94.95% | | | | | | | | |
| Magnesium,7439-95-4† | 41471.3 | 9.44596 | mg/L | 0.028058 | 9.44596 | mg/L | 0.028058 | 0.30% |
| QC value within limits for Magnesium,7439-95-4 Recovery = 94.46% | | | | | | | | |
| Manganese,7439-96-5† | 1343509.9 | 0.94874 | mg/L | 0.003984 | 0.94874 | mg/L | 0.003984 | 0.42% |
| QC value within limits for Manganese,7439-96-5 Recovery = 94.87% | | | | | | | | |
| Molybdenum,7439-98-7 | 26695.6 | 0.95272 | mg/L | 0.000913 | 0.95272 | mg/L | 0.000913 | 0.10% |
| QC value within limits for Molybdenum,7439-98-7 Recovery = 95.27% | | | | | | | | |
| Nickel,7440-02-0† | 112714.9 | 0.94936 | mg/L | 0.005889 | 0.94936 | mg/L | 0.005889 | 0.62% |
| QC value within limits for Nickel,7440-02-0 Recovery = 94.94% | | | | | | | | |
| Potassium,7440-09-7† | 103573.8 | 19.0889 | mg/L | 0.10269 | 19.0889 | mg/L | 0.10269 | 0.54% |
| QC value within limits for Potassium,7440-09-7 Recovery = 95.44% | | | | | | | | |
| Selenium,7782-49-2† | 3208.8 | 0.95870 | mg/L | 0.003509 | 0.95870 | mg/L | 0.003509 | 0.37% |
| QC value within limits for Selenium,7782-49-2 Recovery = 95.87% | | | | | | | | |
| Silicon,7440-21-3† | 37027.7 | 9.98700 | mg/L | 0.052562 | 9.98700 | mg/L | 0.052562 | 0.53% |
| QC value within limits for Silicon,7440-21-3 Recovery = 99.87% | | | | | | | | |
| Silver,7440-22-4† | 583716.3 | 0.96778 | mg/L | 0.003361 | 0.96778 | mg/L | 0.003361 | 0.35% |
| QC value within limits for Silver,7440-22-4 Recovery = 96.78% | | | | | | | | |
| Sodium,7440-23-5† | 275793.6 | 38.1668 | mg/L | 0.09054 | 38.1668 | mg/L | 0.09054 | 0.24% |
| QC value within limits for Sodium,7440-23-5 Recovery = 95.42% | | | | | | | | |
| Strontium,7440-24-6† | 699996.6 | 0.94188 | mg/L | 0.006551 | 0.94188 | mg/L | 0.006551 | 0.70% |
| QC value within limits for Strontium,7440-24-6 Recovery = 94.19% | | | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Thallium,7440-28-0† | 3718.6 | 0.97102 mg/L | 0.000517 | 0.97102 mg/L | 0.000517 | 0.05% |
| QC value within limits for Thallium,7440-28-0 Recovery = 97.10% | | | | | | |
| Tin,7440-31-5† | 10177.8 | 0.97543 mg/L | 0.003253 | 0.97543 mg/L | 0.003253 | 0.33% |
| QC value within limits for Tin,7440-31-5 Recovery = 97.54% | | | | | | |
| Titanium,7440-32-6† | 1365907.8 | 0.98082 mg/L | 0.004027 | 0.98082 mg/L | 0.004027 | 0.41% |
| QC value within limits for Titanium,7440-32-6 Recovery = 98.08% | | | | | | |
| Vanadium,7440-62-2† | 316656.8 | 0.94526 mg/L | 0.004417 | 0.94526 mg/L | 0.004417 | 0.47% |
| QC value within limits for Vanadium,7440-62-2 Recovery = 94.53% | | | | | | |
| Zinc,7440-66-6† | 147065.7 | 0.94416 mg/L | 0.005402 | 0.94416 mg/L | 0.005402 | 0.57% |
| QC value within limits for Zinc,7440-66-6 Recovery = 94.42% | | | | | | |
| Zirconium,7440-67-7† | 839635.1 | 0.97420 mg/L | 0.003810 | 0.97420 mg/L | 0.003810 | 0.39% |
| QC value within limits for Zirconium,7440-67-7 Recovery = 97.42% | | | | | | |

All analyte(s) passed QC.

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**Sequence No.: 4**
**Sample ID: 1700**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 1**
**Date Collected: 10/21/2013 11:20:03 AM**
**Data Type: Reprocessed on 10/21/2013 3:37:53 PM**
**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 1700**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 8782691.6 | 101.612 | % | 0.4626 | | | | 0.46% |
| Yttrium,7440-65-5A | 4330535.1 | 101.561 | % | 0.4462 | | | | 0.44% |
| Yttrium,7440-65-5R | 387647.4 | 103.634 | % | 0.9761 | | | | 0.94% |
| Ar 420.067 R | 2915646.3 | 100.024 | % | 0.2991 | | | | 0.30% |
| Ar 363.268 A | 56977.0 | 98.8133 | % | 0.13664 | | | | 0.14% |
| Aluminum,7429-90-5† | 17.3 | 0.00631 | mg/L | 0.033252 | 0.00631 | mg/L | 0.033252 | 527.30% |
| QC value within limits for Aluminum,7429-90-5 Recovery = Not calculated | | | | | | | | |
| Antimony,7440-36-0† | 6.4 | 0.00208 | mg/L | 0.000630 | 0.00208 | mg/L | 0.000630 | 30.34% |
| QC value within limits for Antimony,7440-36-0 Recovery = Not calculated | | | | | | | | |
| Arsenic,7440-38-2† | 2.8 | 0.00129 | mg/L | 0.004782 | 0.00129 | mg/L | 0.004782 | 369.39% |
| QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated | | | | | | | | |
| Barium,7440-39-3† | 28.5 | 0.00012 | mg/L | 0.000097 | 0.00012 | mg/L | 0.000097 | 77.68% |
| QC value within limits for Barium,7440-39-3 Recovery = Not calculated | | | | | | | | |
| Beryllium,7440-41-7† | 2295.8 | 0.00023 | mg/L | 0.000081 | 0.00023 | mg/L | 0.000081 | 35.73% |
| QC value within limits for Beryllium,7440-41-7 Recovery = Not calculated | | | | | | | | |
| Boron,7440-42-8† | 2456.4 | 0.02660 | mg/L | 0.009239 | 0.02660 | mg/L | 0.009239 | 34.73% |
| QC value within limits for Boron,7440-42-8 Recovery = Not calculated | | | | | | | | |
| Cadmium,7440-43-9† | 71.5 | 0.00031 | mg/L | 0.000115 | 0.00031 | mg/L | 0.000115 | 37.75% |
| QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated | | | | | | | | |
| Calcium,7440-70-2† | 38.2 | 0.00194 | mg/L | 0.002898 | 0.00194 | mg/L | 0.002898 | 149.05% |
| QC value within limits for Calcium,7440-70-2 Recovery = Not calculated | | | | | | | | |
| Chromium,7440-47-3† | 112.8 | 0.00053 | mg/L | 0.000120 | 0.00053 | mg/L | 0.000120 | 22.60% |
| QC value within limits for Chromium,7440-47-3 Recovery = Not calculated | | | | | | | | |
| Cobalt,7440-48-4† | -2.6 | -0.00004 | mg/L | 0.000193 | -0.00004 | mg/L | 0.000193 | 525.28% |
| QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated | | | | | | | | |
| Copper,7440-50-8† | 303.3 | 0.00063 | mg/L | 0.000478 | 0.00063 | mg/L | 0.000478 | 75.70% |
| QC value within limits for Copper,7440-50-8 Recovery = Not calculated | | | | | | | | |
| Iron,7439-89-6† | 224.2 | 0.01230 | mg/L | 0.004377 | 0.01230 | mg/L | 0.004377 | 35.60% |
| QC value within limits for Iron,7439-89-6 Recovery = Not calculated | | | | | | | | |
| Lead,7439-92-1† | -14.0 | -0.00046 | mg/L | 0.000442 | -0.00046 | mg/L | 0.000442 | 95.17% |
| QC value within limits for Lead,7439-92-1 Recovery = Not calculated | | | | | | | | |
| Lithium,7439-93-2† | 303.1 | 0.00284 | mg/L | 0.000448 | 0.00284 | mg/L | 0.000448 | 15.76% |
| QC value within limits for Lithium,7439-93-2 Recovery = Not calculated | | | | | | | | |
| Magnesium,7439-95-4† | -139.1 | -0.03170 | mg/L | 0.009802 | -0.03170 | mg/L | 0.009802 | 30.92% |
| QC value within limits for Magnesium,7439-95-4 Recovery = Not calculated | | | | | | | | |
| Manganese,7439-96-5† | 1092.0 | 0.00077 | mg/L | 0.000100 | 0.00077 | mg/L | 0.000100 | 12.94% |
| QC value within limits for Manganese,7439-96-5 Recovery = Not calculated | | | | | | | | |
| Molybdenum,7439-98-7 | 95.5 | 0.00341 | mg/L | 0.000953 | 0.00341 | mg/L | 0.000953 | 27.98% |
| QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated | | | | | | | | |
| Nickel,7440-02-0† | -2.9 | -0.00002 | mg/L | 0.000368 | -0.00002 | mg/L | 0.000368 | >999.9% |
| QC value within limits for Nickel,7440-02-0 Recovery = Not calculated | | | | | | | | |
| Potassium,7440-09-7† | 391.3 | 0.07211 | mg/L | 0.011805 | 0.07211 | mg/L | 0.011805 | 16.37% |
| QC value within limits for Potassium,7440-09-7 Recovery = Not calculated | | | | | | | | |
| Selenium,7782-49-2† | 9.0 | 0.00270 | mg/L | 0.005105 | 0.00270 | mg/L | 0.005105 | 188.97% |
| QC value within limits for Selenium,7782-49-2 Recovery = Not calculated | | | | | | | | |
| Silicon,7440-21-3† | 71.3 | 0.01925 | mg/L | 0.004824 | 0.01925 | mg/L | 0.004824 | 25.06% |

QC value within limits for Silicon,7440-21-3 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Silver,7440-22-4† | 778.1 | 0.00129 mg/L | 0.000485 | 0.00129 mg/L | 0.000485 | 37.71% |

QC value within limits for Silver,7440-22-4 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Sodium,7440-23-5† | 509.3 | 0.07048 mg/L | 0.016347 | 0.07048 mg/L | 0.016347 | 23.19% |

QC value within limits for Sodium,7440-23-5 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Strontium,7440-24-6† | 118.5 | 0.00016 mg/L | 0.000033 | 0.00016 mg/L | 0.000033 | 20.39% |

QC value within limits for Strontium,7440-24-6 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Thallium,7440-28-0† | 9.6 | 0.00248 mg/L | 0.001728 | 0.00248 mg/L | 0.001728 | 69.64% |

QC value within limits for Thallium,7440-28-0 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Tin,7440-31-5† | 48.8 | 0.00466 mg/L | 0.001733 | 0.00466 mg/L | 0.001733 | 37.21% |

QC value within limits for Tin,7440-31-5 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Titanium,7440-32-6† | 481.6 | 0.00035 mg/L | 0.000049 | 0.00035 mg/L | 0.000049 | 14.20% |

QC value within limits for Titanium,7440-32-6 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Vanadium,7440-62-2† | 96.4 | 0.00029 mg/L | 0.000539 | 0.00029 mg/L | 0.000539 | 186.71% |

QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Zinc,7440-66-6† | -82.0 | -0.00053 mg/L | 0.000318 | -0.00053 mg/L | 0.000318 | 59.85% |

QC value within limits for Zinc,7440-66-6 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Zirconium,7440-67-7† | 377.1 | 0.00044 mg/L | 0.000119 | 0.00044 mg/L | 0.000119 | 27.20% |

QC value within limits for Zirconium,7440-67-7 Recovery = Not calculated

All analyte(s) passed QC.

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**Sequence No.: 5** **Autosampler Location: 3**
**Sample ID: 2300** **Date Collected: 10/21/2013 11:26:29 AM**
**Analyst:** **Data Type: Reprocessed on 10/21/2013 3:37:56 PM**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Mean Data: 2300**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 8829343.4 | 102.152 | % | 0.9627 | | | | 0.94% |
| Yttrium,7440-65-5A | 4344021.1 | 101.877 | % | 0.9767 | | | | 0.96% |
| Yttrium,7440-65-5R | 387609.7 | 103.624 | % | 0.6574 | | | | 0.63% |
| Ar 420.067 R | 2914072.6 | 99.9698 | % | 0.13199 | | | | 0.13% |
| Ar 363.268 A | 57534.0 | 99.7793 | % | 0.27380 | | | | 0.27% |
| Aluminum,7429-90-5† | 559.0 | 0.20404 | mg/L | 0.026124 | 0.20404 | mg/L | 0.026124 | 12.80% |

QC value within limits for Aluminum,7429-90-5 Recovery = 102.02%

| | | | | | | |
|---|---|---|---|---|---|---|
| Antimony,7440-36-0† | 176.7 | 0.05760 | mg/L | 0.000889 | 0.05760 | mg/L | 0.000889 | 1.54% |

QC value within limits for Antimony,7440-36-0 Recovery = 96.00%

| | | | | | | |
|---|---|---|---|---|---|---|
| Arsenic,7440-38-2† | 37.5 | 0.01778 | mg/L | 0.006083 | 0.01778 | mg/L | 0.006083 | 34.21% |

QC value within limits for Arsenic,7440-38-2 Recovery = 88.92%

| | | | | | | |
|---|---|---|---|---|---|---|
| Barium,7440-39-3† | 2197.5 | 0.00961 | mg/L | 0.000111 | 0.00961 | mg/L | 0.000111 | 1.16% |

QC value within limits for Barium,7440-39-3 Recovery = 96.14%

| | | | | | | |
|---|---|---|---|---|---|---|
| Beryllium,7440-41-7† | 36863.8 | 0.00363 | mg/L | 0.000055 | 0.00363 | mg/L | 0.000055 | 1.51% |

QC value within limits for Beryllium,7440-41-7 Recovery = 90.78%

| | | | | | | |
|---|---|---|---|---|---|---|
| Boron,7440-42-8† | 85204.9 | 0.92173 | mg/L | 0.011654 | 0.92173 | mg/L | 0.011654 | 1.26% |

QC value within limits for Boron,7440-42-8 Recovery = 92.17%

| | | | | | | |
|---|---|---|---|---|---|---|
| Cadmium,7440-43-9† | 1117.0 | 0.00477 | mg/L | 0.000013 | 0.00477 | mg/L | 0.000013 | 0.27% |

QC value within limits for Cadmium,7440-43-9 Recovery = 95.33%

| | | | | | | |
|---|---|---|---|---|---|---|
| Calcium,7440-70-2† | 15261.3 | 0.77562 | mg/L | 0.018027 | 0.77562 | mg/L | 0.018027 | 2.32% |

QC value within limits for Calcium,7440-70-2 Recovery = 96.95%

| | | | | | | |
|---|---|---|---|---|---|---|
| Chromium,7440-47-3† | 2164.9 | 0.01024 | mg/L | 0.000146 | 0.01024 | mg/L | 0.000146 | 1.43% |

QC value within limits for Chromium,7440-47-3 Recovery = 102.36%

| | | | | | | |
|---|---|---|---|---|---|---|
| Cobalt,7440-48-4† | 655.1 | 0.00896 | mg/L | 0.000230 | 0.00896 | mg/L | 0.000230 | 2.57% |

QC value within limits for Cobalt,7440-48-4 Recovery = 89.62%

| | | | | | | |
|---|---|---|---|---|---|---|
| Copper,7440-50-8† | 8786.1 | 0.01829 | mg/L | 0.000429 | 0.01829 | mg/L | 0.000429 | 2.35% |

QC value within limits for Copper,7440-50-8 Recovery = 91.43%

| | | | | | | |
|---|---|---|---|---|---|---|
| Iron,7439-89-6† | 3546.0 | 0.19449 | mg/L | 0.004995 | 0.19449 | mg/L | 0.004995 | 2.57% |

QC value within limits for Iron,7439-89-6 Recovery = 97.25%

| | | | | | | |
|---|---|---|---|---|---|---|
| Lead,7439-92-1† | 410.6 | 0.01360 | mg/L | 0.000998 | 0.01360 | mg/L | 0.000998 | 7.33% |

QC value within limits for Lead,7439-92-1 Recovery = 90.68%

| | | | | | | |
|---|---|---|---|---|---|---|
| Lithium,7439-93-2† | 5563.7 | 0.05211 | mg/L | 0.000201 | 0.05211 | mg/L | 0.000201 | 0.39% |

QC value within limits for Lithium,7439-93-2 Recovery = 104.23%

| | | | | | | |
|---|---|---|---|---|---|---|
| Magnesium,7439-95-4† | 715.4 | 0.16292 | mg/L | 0.003099 | 0.16292 | mg/L | 0.003099 | 1.90% |

QC value within limits for Magnesium,7439-95-4 Recovery = 81.46%

| | | | | | | |
|---|---|---|---|---|---|---|
| Manganese,7439-96-5† | 15272.7 | 0.01079 | mg/L | 0.000235 | 0.01079 | mg/L | 0.000235 | 2.17% |

QC value within limits for Manganese,7439-96-5 Recovery = 71.90%

| | | | | | | |
|---|---|---|---|---|---|---|
| Molybdenum,7439-98-7 | 796.8 | 0.02842 | mg/L | 0.000186 | 0.02842 | mg/L | 0.000186 | 0.66% |

QC value within limits for Molybdenum,7439-98-7 Recovery = 94.74%

| | | | | | | |
|---|---|---|---|---|---|---|
| Nickel,7440-02-0† | 4622.8 | 0.03894 mg/L | 0.000241 | 0.03894 mg/L | 0.000241 | 0.62% |
| QC value within limits for Nickel,7440-02-0 Recovery = 97.35% | | | | | | |
| Potassium,7440-09-7† | 2765.1 | 0.50962 mg/L | 0.023024 | 0.50962 mg/L | 0.023024 | 4.52% |
| QC value within limits for Potassium,7440-09-7 Recovery = 101.92% | | | | | | |
| Selenium,7782-49-2† | 125.5 | 0.03751 mg/L | 0.003112 | 0.03751 mg/L | 0.003112 | 8.30% |
| QC value within limits for Selenium,7782-49-2 Recovery = 93.77% | | | | | | |
| Silicon,7440-21-3† | 702.7 | 0.18953 mg/L | 0.012443 | 0.18953 mg/L | 0.012443 | 6.56% |
| QC value within limits for Silicon,7440-21-3 Recovery = 94.77% | | | | | | |
| Silver,7440-22-4† | 5669.1 | 0.00944 mg/L | 0.000437 | 0.00944 mg/L | 0.000437 | 4.63% |
| QC value within limits for Silver,7440-22-4 Recovery = 94.38% | | | | | | |
| Sodium,7440-23-5† | 7192.2 | 0.99528 mg/L | 0.026048 | 0.99528 mg/L | 0.026048 | 2.62% |
| QC value within limits for Sodium,7440-23-5 Recovery = 99.53% | | | | | | |
| Strontium,7440-24-6† | 35434.3 | 0.04767 mg/L | 0.001372 | 0.04767 mg/L | 0.001372 | 2.88% |
| QC value within limits for Strontium,7440-24-6 Recovery = 95.34% | | | | | | |
| Thallium,7440-28-0† | 75.4 | 0.01954 mg/L | 0.003870 | 0.01954 mg/L | 0.003870 | 19.81% |
| QC value within limits for Thallium,7440-28-0 Recovery = 97.69% | | | | | | |
| Tin,7440-31-5† | 257.2 | 0.02461 mg/L | 0.000693 | 0.02461 mg/L | 0.000693 | 2.82% |
| QC value within limits for Tin,7440-31-5 Recovery = 98.44% | | | | | | |
| Titanium,7440-32-6† | 13078.9 | 0.00939 mg/L | 0.000262 | 0.00939 mg/L | 0.000262 | 2.79% |
| QC value within limits for Titanium,7440-32-6 Recovery = 93.90% | | | | | | |
| Vanadium,7440-62-2† | 6067.5 | 0.01810 mg/L | 0.000799 | 0.01810 mg/L | 0.000799 | 4.41% |
| QC value within limits for Vanadium,7440-62-2 Recovery = 90.50% | | | | | | |
| Zinc,7440-66-6† | 2773.0 | 0.01766 mg/L | 0.000145 | 0.01766 mg/L | 0.000145 | 0.82% |
| QC value within limits for Zinc,7440-66-6 Recovery = 88.28% | | | | | | |
| Zirconium,7440-67-7† | 11217.1 | 0.01302 mg/L | 0.000440 | 0.01302 mg/L | 0.000440 | 3.38% |
| QC value greater than the upper limit for Zirconium,7440-67-7 Recovery = 130.18% | | | | | | |

QC Failed. Continue with analysis.

**Sequence No.: 6**
**Sample ID: 2000**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 5**
**Date Collected: 10/21/2013 11:32:59 AM**
**Data Type: Reprocessed on 10/21/2013 3:37:59 PM**
**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 2000**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 7867691.4 | 91.0258 | % | 0.55958 | | | | 0.61% |
| Yttrium,7440-65-5A | 3870368.7 | 90.7688 | % | 0.11524 | | | | 0.13% |
| Yttrium,7440-65-5R | 353804.2 | 94.5867 | % | 0.39821 | | | | 0.42% |
| Ar 420.067 R | 2783371.9 | 95.4860 | % | 0.53993 | | | | 0.57% |
| Ar 363.268 A | 59652.1 | 103.453 | % | 0.4831 | | | | 0.47% |
| Aluminum,7429-90-5† | 531278.3 | 194.162 | mg/L | 3.4139 | 194.162 | mg/L | 3.4139 | 1.76% |
| QC value within limits for Aluminum,7429-90-5 Recovery = 97.08% | | | | | | | | |
| Antimony,7440-36-0† | -20.9 | 0.00732 | mg/L | 0.006066 | 0.00732 | mg/L | 0.006066 | 82.89% |
| QC value within limits for Antimony,7440-36-0 Recovery = Not calculated | | | | | | | | |
| Arsenic,7440-38-2† | -202.9 | -0.00658 | mg/L | 0.004959 | -0.00658 | mg/L | 0.004959 | 75.30% |
| QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated | | | | | | | | |
| Barium,7440-39-3† | 1171.9 | 0.00031 | mg/L | 0.000227 | 0.00031 | mg/L | 0.000227 | 72.83% |
| QC value within limits for Barium,7440-39-3 Recovery = Not calculated | | | | | | | | |
| Beryllium,7440-41-7† | -2743.6 | -0.00027 | mg/L | 0.000018 | -0.00027 | mg/L | 0.000018 | 6.73% |
| QC value within limits for Beryllium,7440-41-7 Recovery = Not calculated | | | | | | | | |
| Boron,7440-42-8† | -72678.8 | 0.06864 | mg/L | 0.013889 | 0.06864 | mg/L | 0.013889 | 20.23% |
| QC value within limits for Boron,7440-42-8 Recovery = Not calculated | | | | | | | | |
| Cadmium,7440-43-9† | 678.6 | -0.00023 | mg/L | 0.000137 | -0.00023 | mg/L | 0.000137 | 60.22% |
| QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated | | | | | | | | |
| Calcium,7440-70-2† | 3716775.9 | 188.843 | mg/L | 2.8859 | 188.843 | mg/L | 2.8859 | 1.53% |
| QC value within limits for Calcium,7440-70-2 Recovery = 94.42% | | | | | | | | |
| Chromium,7440-47-3† | -4224.3 | -0.00048 | mg/L | 0.000750 | -0.00048 | mg/L | 0.000750 | 155.54% |
| QC value within limits for Chromium,7440-47-3 Recovery = Not calculated | | | | | | | | |
| Cobalt,7440-48-4† | 177.3 | -0.00109 | mg/L | 0.000152 | -0.00109 | mg/L | 0.000152 | 13.91% |
| QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated | | | | | | | | |
| Copper,7440-50-8† | -6801.9 | -0.01805 | mg/L | 0.000244 | -0.01805 | mg/L | 0.000244 | 1.35% |
| QC value within limits for Copper,7440-50-8 Recovery = Not calculated | | | | | | | | |
| Iron,7439-89-6† | 3413158.0 | 187.218 | mg/L | 3.0761 | 187.218 | mg/L | 3.0761 | 1.64% |
| QC value within limits for Iron,7439-89-6 Recovery = 93.61% | | | | | | | | |
| Lead,7439-92-1† | -447.5 | -0.00252 | mg/L | 0.000880 | -0.00252 | mg/L | 0.000880 | 35.00% |
| QC value within limits for Lead,7439-92-1 Recovery = Not calculated | | | | | | | | |
| Lithium,7439-93-2† | 112.0 | 0.00105 | mg/L | 0.000981 | 0.00105 | mg/L | 0.000981 | 93.49% |

QC value within limits for Lithium,7439-93-2 Recovery = Not calculated
Magnesium,7439-95-4† 821217.1 187.010 mg/L 2.7891 187.010 mg/L 2.7891 1.49%
QC value within limits for Magnesium,7439-95-4 Recovery = 93.51%
Manganese,7439-96-5† -7227.6 -0.00385 mg/L 0.000134 -0.00385 mg/L 0.000134 3.49%
QC value within limits for Manganese,7439-96-5 Recovery = Not calculated
Molybdenum,7439-98-7 -624.8 -0.00077 mg/L 0.000400 -0.00077 mg/L 0.000400 51.94%
QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated
Nickel,7440-02-0† -341.5 -0.00225 mg/L 0.000289 -0.00225 mg/L 0.000289 12.85%
QC value within limits for Nickel,7440-02-0 Recovery = Not calculated
Potassium,7440-09-7† 2.0 0.04269 mg/L 0.017534 0.04269 mg/L 0.017534 41.07%
QC value within limits for Potassium,7440-09-7 Recovery = Not calculated
Selenium,7782-49-2† -120.1 -0.01187 mg/L 0.003154 -0.01187 mg/L 0.003154 26.56%
QC value within limits for Selenium,7782-49-2 Recovery = Not calculated
Silicon,7440-21-3† 103.5 0.00746 mg/L 0.001369 0.00746 mg/L 0.001369 18.34%
QC value within limits for Silicon,7440-21-3 Recovery = Not calculated
Silver,7440-22-4† -3836.5 -0.00162 mg/L 0.000421 -0.00162 mg/L 0.000421 26.01%
QC value within limits for Silver,7440-22-4 Recovery = Not calculated
Sodium,7440-23-5† 249.1 0.02596 mg/L 0.010446 0.02596 mg/L 0.010446 40.23%
QC value within limits for Sodium,7440-23-5 Recovery = Not calculated
Strontium,7440-24-6† 4348.2 0.00023 mg/L 0.000144 0.00023 mg/L 0.000144 62.18%
QC value within limits for Strontium,7440-24-6 Recovery = Not calculated
Thallium,7440-28-0† -63.4 -0.00503 mg/L 0.002735 -0.00503 mg/L 0.002735 54.41%
QC value within limits for Thallium,7440-28-0 Recovery = Not calculated
Tin,7440-31-5† -166.5 -0.00944 mg/L 0.002773 -0.00944 mg/L 0.002773 29.37%
QC value within limits for Tin,7440-31-5 Recovery = Not calculated
Titanium,7440-32-6† 903.2 0.00026 mg/L 0.000015 0.00026 mg/L 0.000015 5.88%
QC value within limits for Titanium,7440-32-6 Recovery = Not calculated
Vanadium,7440-62-2† 4422.0 -0.00186 mg/L 0.000298 -0.00186 mg/L 0.000298 16.07%
QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated
Zinc,7440-66-6† 2764.5 -0.00120 mg/L 0.000057 -0.00120 mg/L 0.000057 4.74%
QC value within limits for Zinc,7440-66-6 Recovery = Not calculated
Zirconium,7440-67-7† 50.0 0.00006 mg/L 0.000191 0.00006 mg/L 0.000191 339.44%
QC value within limits for Zirconium,7440-67-7 Recovery = Not calculated
All analyte(s) passed QC.

---

**Sequence No.: 7**
**Sample ID: 2100**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 6**
**Date Collected: 10/21/2013 11:39:37 AM**
**Data Type: Reprocessed on 10/21/2013 3:38:02 PM**
**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 2100**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 7821040.6 | 90.4861 | % | 0.59194 | | | | 0.65% |
| Yttrium,7440-65-5A | 3867152.9 | 90.6934 | % | 0.70448 | | | | 0.78% |
| Yttrium,7440-65-5R | 354626.4 | 94.8065 | % | 0.18814 | | | | 0.20% |
| Ar 420.067 R | 2767363.2 | 94.9368 | % | 0.63461 | | | | 0.67% |
| Ar 363.268 A | 58920.0 | 102.183 | % | 0.3079 | | | | 0.30% |
| Aluminum,7429-90-5† | 529662.5 | 193.566 | mg/L | 4.0332 | 193.566 | mg/L | 4.0332 | 2.08% |
| QC value within limits for Aluminum,7429-90-5 Recovery = 96.78% | | | | | | | | |
| Antimony,7440-36-0† | 3068.2 | 1.00762 | mg/L | 0.008175 | 1.00762 | mg/L | 0.008175 | 0.81% |
| QC value within limits for Antimony,7440-36-0 Recovery = 100.76% | | | | | | | | |
| Arsenic,7440-38-2† | 2034.5 | 1.02566 | mg/L | 0.010544 | 1.02566 | mg/L | 0.010544 | 1.03% |
| QC value within limits for Arsenic,7440-38-2 Recovery = 102.57% | | | | | | | | |
| Barium,7440-39-3† | 114447.8 | 0.49594 | mg/L | 0.000536 | 0.49594 | mg/L | 0.000536 | 0.11% |
| QC value within limits for Barium,7440-39-3 Recovery = 99.19% | | | | | | | | |
| Beryllium,7440-41-7† | 5031991.4 | 0.49204 | mg/L | 0.001580 | 0.49204 | mg/L | 0.001580 | 0.32% |
| QC value within limits for Beryllium,7440-41-7 Recovery = 98.41% | | | | | | | | |
| Boron,7440-42-8† | 20935.2 | 1.07776 | mg/L | 0.025918 | 1.07776 | mg/L | 0.025918 | 2.40% |
| QC value within limits for Boron,7440-42-8 Recovery = 107.78% | | | | | | | | |
| Cadmium,7440-43-9† | 220492.0 | 0.93849 | mg/L | 0.001494 | 0.93849 | mg/L | 0.001494 | 0.16% |
| QC value within limits for Cadmium,7440-43-9 Recovery = 93.85% | | | | | | | | |
| Calcium,7440-70-2† | 3696409.7 | 187.808 | mg/L | 3.7286 | 187.808 | mg/L | 3.7286 | 1.99% |
| QC value within limits for Calcium,7440-70-2 Recovery = 93.90% | | | | | | | | |
| Chromium,7440-47-3† | 97946.6 | 0.48132 | mg/L | 0.001072 | 0.48132 | mg/L | 0.001072 | 0.22% |
| QC value within limits for Chromium,7440-47-3 Recovery = 96.26% | | | | | | | | |
| Cobalt,7440-48-4† | 33904.6 | 0.46169 | mg/L | 0.002035 | 0.46169 | mg/L | 0.002035 | 0.44% |
| QC value within limits for Cobalt,7440-48-4 Recovery = 92.34% | | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Copper,7440-50-8† | 231619.3 | 0.47836 | mg/L | 0.000520 | 0.47836 | mg/L | 0.000520 | 0.11% |
| QC value within limits for Copper,7440-50-8 Recovery = 95.67% | | | | | | | | |
| Iron,7439-89-6† | 3393892.8 | 186.161 | mg/L | 3.8227 | 186.161 | mg/L | 3.8227 | 2.05% |
| QC value within limits for Iron,7439-89-6 Recovery = 93.08% | | | | | | | | |
| Lead,7439-92-1† | 27172.7 | 0.91101 | mg/L | 0.004280 | 0.91101 | mg/L | 0.004280 | 0.47% |
| QC value within limits for Lead,7439-92-1 Recovery = 91.10% | | | | | | | | |
| Lithium,7439-93-2† | 123.0 | 0.00113 | mg/L | 0.000714 | 0.00113 | mg/L | 0.000714 | 63.12% |
| Magnesium,7439-95-4† | 815588.9 | 185.730 | mg/L | 3.4188 | 185.730 | mg/L | 3.4188 | 1.84% |
| QC value within limits for Magnesium,7439-95-4 Recovery = 92.86% | | | | | | | | |
| Manganese,7439-96-5† | 671447.1 | 0.47538 | mg/L | 0.001427 | 0.47538 | mg/L | 0.001427 | 0.30% |
| QC value within limits for Manganese,7439-96-5 Recovery = 95.08% | | | | | | | | |
| Molybdenum,7439-98-7 | 27477.5 | 1.00076 | mg/L | 0.005892 | 1.00076 | mg/L | 0.005892 | 0.59% |
| QC value within limits for Molybdenum,7439-98-7 Recovery = 100.08% | | | | | | | | |
| Nickel,7440-02-0† | 110177.2 | 0.92870 | mg/L | 0.002056 | 0.92870 | mg/L | 0.002056 | 0.22% |
| QC value within limits for Nickel,7440-02-0 Recovery = 92.87% | | | | | | | | |
| Potassium,7440-09-7† | -191.3 | 0.00797 | mg/L | 0.017281 | 0.00797 | mg/L | 0.017281 | 216.70% |
| Selenium,7782-49-2† | 3282.4 | 1.00348 | mg/L | 0.008662 | 1.00348 | mg/L | 0.008662 | 0.86% |
| QC value within limits for Selenium,7782-49-2 Recovery = 100.35% | | | | | | | | |
| Silicon,7440-21-3† | 229.6 | 0.04091 | mg/L | 0.007378 | 0.04091 | mg/L | 0.007378 | 18.03% |
| Silver,7440-22-4† | 628906.2 | 1.04519 | mg/L | 0.001280 | 1.04519 | mg/L | 0.001280 | 0.12% |
| QC value within limits for Silver,7440-22-4 Recovery = 104.52% | | | | | | | | |
| Sodium,7440-23-5† | 7737.0 | 1.06375 | mg/L | 0.025782 | 1.06375 | mg/L | 0.025782 | 2.42% |
| QC value within limits for Sodium,7440-23-5 Recovery = 106.37% | | | | | | | | |
| Strontium,7440-24-6† | 4245.0 | 0.00012 | mg/L | 0.000115 | 0.00012 | mg/L | 0.000115 | 97.67% |
| Thallium,7440-28-0† | 3773.3 | 0.98127 | mg/L | 0.003361 | 0.98127 | mg/L | 0.003361 | 0.34% |
| QC value within limits for Thallium,7440-28-0 Recovery = 98.13% | | | | | | | | |
| Tin,7440-31-5† | -181.6 | -0.01072 | mg/L | 0.000344 | -0.01072 | mg/L | 0.000344 | 3.21% |
| Titanium,7440-32-6† | 257.3 | -0.00025 | mg/L | 0.000134 | -0.00025 | mg/L | 0.000134 | 53.72% |
| Vanadium,7440-62-2† | 166220.6 | 0.48161 | mg/L | 0.000537 | 0.48161 | mg/L | 0.000537 | 0.11% |
| QC value within limits for Vanadium,7440-62-2 Recovery = 96.32% | | | | | | | | |
| Zinc,7440-66-6† | 153995.5 | 0.97093 | mg/L | 0.001399 | 0.97093 | mg/L | 0.001399 | 0.14% |
| QC value within limits for Zinc,7440-66-6 Recovery = 97.09% | | | | | | | | |
| Zirconium,7440-67-7† | 4658.1 | 0.00548 | mg/L | 0.000527 | 0.00548 | mg/L | 0.000527 | 9.61% |

All analyte(s) passed QC.

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**Sequence No.: 8**
**Sample ID: 1800**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 7**
**Date Collected: 10/21/2013 11:46:22 AM**
**Data Type: Reprocessed on 10/21/2013 3:38:05 PM**

**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 1800**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 8609763.3 | 99.6113 | % | 0.31504 | | | | 0.32% |
| Yttrium,7440-65-5A | 4202378.6 | 98.5552 | % | 0.28296 | | | | 0.29% |
| Yttrium,7440-65-5R | 385430.2 | 103.042 | % | 0.3133 | | | | 0.30% |
| Ar 420.067 R | 2904845.7 | 99.6532 | % | 0.83654 | | | | 0.84% |
| Ar 363.268 A | 57040.2 | 98.9229 | % | 0.42121 | | | | 0.43% |
| Aluminum,7429-90-5† | 13705.2 | 5.00186 | mg/L | 0.034516 | 5.00186 | mg/L | 0.034516 | 0.69% |
| QC value within limits for Aluminum,7429-90-5 Recovery = 100.04% | | | | | | | | |
| Antimony,7440-36-0† | 1517.6 | 0.48779 | mg/L | 0.001867 | 0.48779 | mg/L | 0.001867 | 0.38% |
| QC value within limits for Antimony,7440-36-0 Recovery = 97.56% | | | | | | | | |
| Arsenic,7440-38-2† | 1088.1 | 0.51251 | mg/L | 0.004096 | 0.51251 | mg/L | 0.004096 | 0.80% |
| QC value within limits for Arsenic,7440-38-2 Recovery = 102.50% | | | | | | | | |
| Barium,7440-39-3† | 114313.5 | 0.50004 | mg/L | 0.003789 | 0.50004 | mg/L | 0.003789 | 0.76% |
| QC value within limits for Barium,7440-39-3 Recovery = 100.01% | | | | | | | | |
| Beryllium,7440-41-7† | 5080857.9 | 0.49819 | mg/L | 0.001154 | 0.49819 | mg/L | 0.001154 | 0.23% |
| QC value within limits for Beryllium,7440-41-7 Recovery = 99.64% | | | | | | | | |
| Boron,7440-42-8† | 222262.4 | 2.42725 | mg/L | 0.018579 | 2.42725 | mg/L | 0.018579 | 0.77% |
| QC value within limits for Boron,7440-42-8 Recovery = 97.09% | | | | | | | | |
| Cadmium,7440-43-9† | 115985.0 | 0.49522 | mg/L | 0.005222 | 0.49522 | mg/L | 0.005222 | 1.05% |
| QC value within limits for Cadmium,7440-43-9 Recovery = 99.04% | | | | | | | | |
| Calcium,7440-70-2† | 97864.9 | 4.97170 | mg/L | 0.033469 | 4.97170 | mg/L | 0.033469 | 0.67% |
| QC value within limits for Calcium,7440-70-2 Recovery = 99.43% | | | | | | | | |
| Chromium,7440-47-3† | 106164.8 | 0.50128 | mg/L | 0.003718 | 0.50128 | mg/L | 0.003718 | 0.74% |
| QC value within limits for Chromium,7440-47-3 Recovery = 100.26% | | | | | | | | |
| Cobalt,7440-48-4† | 36396.5 | 0.49834 | mg/L | 0.004105 | 0.49834 | mg/L | 0.004105 | 0.82% |
| QC value within limits for Cobalt,7440-48-4 Recovery = 99.67% | | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Copper,7440-50-8† | 237102.5 | 0.49354 mg/L | 0.003875 | 0.49354 mg/L | 0.003875 | 0.79% |
| QC value within limits for Copper,7440-50-8 Recovery = 98.71% | | | | | | |
| Iron,7439-89-6† | 91764.1 | 5.03299 mg/L | 0.022381 | 5.03299 mg/L | 0.022381 | 0.44% |
| QC value within limits for Iron,7439-89-6 Recovery = 100.66% | | | | | | |
| Lead,7439-92-1† | 14972.2 | 0.49557 mg/L | 0.001827 | 0.49557 mg/L | 0.001827 | 0.37% |
| QC value within limits for Lead,7439-92-1 Recovery = 99.11% | | | | | | |
| Lithium,7439-93-2† | 54053.5 | 0.50627 mg/L | 0.003876 | 0.50627 mg/L | 0.003876 | 0.77% |
| QC value within limits for Lithium,7439-93-2 Recovery = 101.25% | | | | | | |
| Magnesium,7439-95-4† | 21735.2 | 4.95060 mg/L | 0.029215 | 4.95060 mg/L | 0.029215 | 0.59% |
| QC value within limits for Magnesium,7439-95-4 Recovery = 99.01% | | | | | | |
| Manganese,7439-96-5† | 701551.7 | 0.49541 mg/L | 0.003588 | 0.49541 mg/L | 0.003588 | 0.72% |
| QC value within limits for Manganese,7439-96-5 Recovery = 99.08% | | | | | | |
| Molybdenum,7439-98-7 | 13963.6 | 0.49834 mg/L | 0.001169 | 0.49834 mg/L | 0.001169 | 0.23% |
| QC value within limits for Molybdenum,7439-98-7 Recovery = 99.67% | | | | | | |
| Nickel,7440-02-0† | 59447.1 | 0.50070 mg/L | 0.003771 | 0.50070 mg/L | 0.003771 | 0.75% |
| QC value within limits for Nickel,7440-02-0 Recovery = 100.14% | | | | | | |
| Potassium,7440-09-7† | 53999.6 | 9.95230 mg/L | 0.102197 | 9.95230 mg/L | 0.102197 | 1.03% |
| QC value within limits for Potassium,7440-09-7 Recovery = 99.52% | | | | | | |
| Selenium,7782-49-2† | 1664.6 | 0.49734 mg/L | 0.003416 | 0.49734 mg/L | 0.003416 | 0.69% |
| QC value within limits for Selenium,7782-49-2 Recovery = 99.47% | | | | | | |
| Silicon,7440-21-3† | 18037.2 | 4.86486 mg/L | 0.056815 | 4.86486 mg/L | 0.056815 | 1.17% |
| QC value within limits for Silicon,7440-21-3 Recovery = 97.30% | | | | | | |
| Silver,7440-22-4† | 298973.4 | 0.49573 mg/L | 0.003719 | 0.49573 mg/L | 0.003719 | 0.75% |
| QC value within limits for Silver,7440-22-4 Recovery = 99.15% | | | | | | |
| Sodium,7440-23-5† | 139796.5 | 19.3463 mg/L | 0.30790 | 19.3463 mg/L | 0.30790 | 1.59% |
| QC value within limits for Sodium,7440-23-5 Recovery = 96.73% | | | | | | |
| Strontium,7440-24-6† | 366111.3 | 0.49262 mg/L | 0.008226 | 0.49262 mg/L | 0.008226 | 1.67% |
| QC value within limits for Strontium,7440-24-6 Recovery = 98.52% | | | | | | |
| Thallium,7440-28-0† | 1949.4 | 0.50881 mg/L | 0.002347 | 0.50881 mg/L | 0.002347 | 0.46% |
| QC value within limits for Thallium,7440-28-0 Recovery = 101.76% | | | | | | |
| Tin,7440-31-5† | 5175.6 | 0.49603 mg/L | 0.003226 | 0.49603 mg/L | 0.003226 | 0.65% |
| QC value within limits for Tin,7440-31-5 Recovery = 99.21% | | | | | | |
| Titanium,7440-32-6† | 692201.0 | 0.49705 mg/L | 0.003886 | 0.49705 mg/L | 0.003886 | 0.78% |
| QC value within limits for Titanium,7440-32-6 Recovery = 99.41% | | | | | | |
| Vanadium,7440-62-2† | 165770.1 | 0.49485 mg/L | 0.004289 | 0.49485 mg/L | 0.004289 | 0.87% |
| QC value within limits for Vanadium,7440-62-2 Recovery = 98.97% | | | | | | |
| Zinc,7440-66-6† | 75901.8 | 0.48719 mg/L | 0.005063 | 0.48719 mg/L | 0.005063 | 1.04% |
| QC value within limits for Zinc,7440-66-6 Recovery = 97.44% | | | | | | |
| Zirconium,7440-67-7† | 426883.2 | 0.49530 mg/L | 0.002520 | 0.49530 mg/L | 0.002520 | 0.51% |
| QC value within limits for Zirconium,7440-67-7 Recovery = 99.06% | | | | | | |

All analyte(s) passed QC.

**Sequence No.: 9**
**Sample ID: 1900**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 1**
**Date Collected: 10/21/2013 11:53:00 AM**
**Data Type: Reprocessed on 10/21/2013 3:38:08 PM**
**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 1900**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 8798427.4 | 101.794 | % | 1.0496 | | | | 1.03% |
| Yttrium,7440-65-5A | 4439642.5 | 104.120 | % | 1.3188 | | | | 1.27% |
| Yttrium,7440-65-5R | 390553.2 | 104.411 | % | 0.7852 | | | | 0.75% |
| Ar 420.067 R | 2897344.3 | 99.3959 | % | 0.44639 | | | | 0.45% |
| Ar 363.268 A | 56530.1 | 98.0383 | % | 0.82225 | | | | 0.84% |
| Aluminum,7429-90-5† | 89.1 | 0.03259 mg/L | | 0.027181 | 0.03259 mg/L | | 0.027181 | 83.39% |
| QC value within limits for Aluminum,7429-90-5 Recovery = Not calculated | | | | | | | | |
| Antimony,7440-36-0† | 8.9 | 0.00285 mg/L | | 0.006533 | 0.00285 mg/L | | 0.006533 | 229.47% |
| QC value within limits for Antimony,7440-36-0 Recovery = Not calculated | | | | | | | | |
| Arsenic,7440-38-2† | 0.7 | 0.00031 mg/L | | 0.002142 | 0.00031 mg/L | | 0.002142 | 698.29% |
| QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated | | | | | | | | |
| Barium,7440-39-3† | 10.2 | 0.00004 mg/L | | 0.000055 | 0.00004 mg/L | | 0.000055 | 128.28% |
| QC value within limits for Barium,7440-39-3 Recovery = Not calculated | | | | | | | | |
| Beryllium,7440-41-7† | 759.0 | 0.00007 mg/L | | 0.000031 | 0.00007 mg/L | | 0.000031 | 42.42% |
| QC value within limits for Beryllium,7440-41-7 Recovery = Not calculated | | | | | | | | |
| Boron,7440-42-8† | 241.3 | 0.00273 mg/L | | 0.004101 | 0.00273 mg/L | | 0.004101 | 150.14% |
| QC value within limits for Boron,7440-42-8 Recovery = Not calculated | | | | | | | | |
| Cadmium,7440-43-9† | 40.9 | 0.00017 mg/L | | 0.000048 | 0.00017 mg/L | | 0.000048 | 27.81% |

QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated
Calcium,7440-70-2† 120.9 0.00615 mg/L 0.005801 0.00615 mg/L 0.005801 94.34%
QC value within limits for Calcium,7440-70-2 Recovery = Not calculated
Chromium,7440-47-3† 464.2 0.00219 mg/L 0.000284 0.00219 mg/L 0.000284 13.01%
QC value within limits for Chromium,7440-47-3 Recovery = Not calculated
Cobalt,7440-48-4† -2.1 -0.00003 mg/L 0.000323 -0.00003 mg/L 0.000323 >999.9%
QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated
Copper,7440-50-8† -657.8 -0.00137 mg/L 0.000114 -0.00137 mg/L 0.000114 8.33%
QC value within limits for Copper,7440-50-8 Recovery = Not calculated
Iron,7439-89-6† 505.6 0.02773 mg/L 0.002945 0.02773 mg/L 0.002945 10.62%
QC value within limits for Iron,7439-89-6 Recovery = Not calculated
Lead,7439-92-1† -15.0 -0.00049 mg/L 0.001191 -0.00049 mg/L 0.001191 241.82%
QC value within limits for Lead,7439-92-1 Recovery = Not calculated
Lithium,7439-93-2† 85.7 0.00080 mg/L 0.001243 0.00080 mg/L 0.001243 154.84%
QC value within limits for Lithium,7439-93-2 Recovery = Not calculated
Magnesium,7439-95-4† -129.4 -0.02949 mg/L 0.000594 -0.02949 mg/L 0.000594 2.01%
QC value within limits for Magnesium,7439-95-4 Recovery = Not calculated
Manganese,7439-96-5† 350.8 0.00025 mg/L 0.000023 0.00025 mg/L 0.000023 9.22%
QC value within limits for Manganese,7439-96-5 Recovery = Not calculated
Molybdenum,7439-98-7 62.8 0.00224 mg/L 0.001071 0.00224 mg/L 0.001071 47.79%
QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated
Nickel,7440-02-0† 47.3 0.00040 mg/L 0.000703 0.00040 mg/L 0.000703 176.34%
QC value within limits for Nickel,7440-02-0 Recovery = Not calculated
Potassium,7440-09-7† 57.2 0.01055 mg/L 0.007526 0.01055 mg/L 0.007526 71.37%
QC value within limits for Potassium,7440-09-7 Recovery = Not calculated
Selenium,7782-49-2† -7.0 -0.00207 mg/L 0.003126 -0.00207 mg/L 0.003126 150.73%
QC value within limits for Selenium,7782-49-2 Recovery = Not calculated
Silicon,7440-21-3† -9.2 -0.00249 mg/L 0.002077 -0.00249 mg/L 0.002077 83.38%
QC value within limits for Silicon,7440-21-3 Recovery = Not calculated
Silver,7440-22-4† -280.0 -0.00047 mg/L 0.000393 -0.00047 mg/L 0.000393 84.36%
QC value within limits for Silver,7440-22-4 Recovery = Not calculated
Sodium,7440-23-5† 199.6 0.02762 mg/L 0.008365 0.02762 mg/L 0.008365 30.29%
QC value within limits for Sodium,7440-23-5 Recovery = Not calculated
Strontium,7440-24-6† -88.1 -0.00012 mg/L 0.000121 -0.00012 mg/L 0.000121 101.88%
QC value within limits for Strontium,7440-24-6 Recovery = Not calculated
Thallium,7440-28-0† 0.4 0.00009 mg/L 0.001273 0.00009 mg/L 0.001273 >999.9%
QC value within limits for Thallium,7440-28-0 Recovery = Not calculated
Tin,7440-31-5† 13.7 0.00131 mg/L 0.000488 0.00131 mg/L 0.000488 37.20%
QC value within limits for Tin,7440-31-5 Recovery = Not calculated
Titanium,7440-32-6† -554.7 -0.00040 mg/L 0.000168 -0.00040 mg/L 0.000168 42.24%
QC value within limits for Titanium,7440-32-6 Recovery = Not calculated
Vanadium,7440-62-2† -384.8 -0.00115 mg/L 0.000297 -0.00115 mg/L 0.000297 25.93%
QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated
Zinc,7440-66-6† -137.0 -0.00089 mg/L 0.000031 -0.00089 mg/L 0.000031 3.44%
QC value within limits for Zinc,7440-66-6 Recovery = Not calculated
Zirconium,7440-67-7† 106.8 0.00012 mg/L 0.000322 0.00012 mg/L 0.000322 259.14%
QC value within limits for Zirconium,7440-67-7 Recovery = Not calculated
All analyte(s) passed QC.

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**Sequence No.: 10** **Autosampler Location: 7**
**Sample ID: 1800** **Date Collected: 10/21/2013 1:43:23 PM**
**Analyst:** **Data Type: Reprocessed on 10/21/2013 3:38:11 PM**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Mean Data: 1800**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 8710228.0 | 100.774 | % | 0.7195 | | | | 0.71% |
| Yttrium,7440-65-5A | 4233668.0 | 99.2890 | % | 0.67905 | | | | 0.68% |
| Yttrium,7440-65-5R | 391832.0 | 104.753 | % | 0.7339 | | | | 0.70% |
| Ar 420.067 R | 2893091.4 | 99.2500 | % | 0.16739 | | | | 0.17% |
| Ar 363.268 A | 56436.8 | 97.8765 | % | 0.36548 | | | | 0.37% |
| Aluminum,7429-90-5† | 13473.2 | 4.91706 | mg/L | 0.035173 | 4.91706 | mg/L | 0.035173 | 0.72% |
| QC value within limits for Aluminum,7429-90-5 Recovery = 98.34% | | | | | | | | |
| Antimony,7440-36-0† | 1519.2 | 0.48831 | mg/L | 0.004298 | 0.48831 | mg/L | 0.004298 | 0.88% |
| QC value within limits for Antimony,7440-36-0 Recovery = 97.66% | | | | | | | | |
| Arsenic,7440-38-2† | 1081.7 | 0.50953 | mg/L | 0.002213 | 0.50953 | mg/L | 0.002213 | 0.43% |
| QC value within limits for Arsenic,7440-38-2 Recovery = 101.91% | | | | | | | | |

```
Barium,7440-39-3†      114024.6     0.49878 mg/L      0.004580     0.49878 mg/L      0.004580   0.92%
   QC value within limits for Barium,7440-39-3  Recovery = 99.76%
Beryllium,7440-41-7† 5061131.3      0.49626 mg/L      0.000304     0.49626 mg/L      0.000304   0.06%
   QC value within limits for Beryllium,7440-41-7  Recovery = 99.25%
Boron,7440-42-8†       220296.5     2.40532 mg/L      0.017045     2.40532 mg/L      0.017045   0.71%
   QC value within limits for Boron,7440-42-8  Recovery = 96.21%
Cadmium,7440-43-9†     116368.4     0.49686 mg/L      0.004123     0.49686 mg/L      0.004123   0.83%
   QC value within limits for Cadmium,7440-43-9  Recovery = 99.37%
Calcium,7440-70-2†      96105.1     4.88230 mg/L      0.038341     4.88230 mg/L      0.038341   0.79%
   QC value within limits for Calcium,7440-70-2  Recovery = 97.65%
Cerium,†                  905.2                                                        166.76  18.42%
   Unable to evaluate QC.
Chromium,7440-47-3†    106104.1     0.50098 mg/L      0.004550     0.50098 mg/L      0.004550   0.91%
   QC value within limits for Chromium,7440-47-3  Recovery = 100.20%
Cobalt,7440-48-4†       36304.4     0.49708 mg/L      0.003725     0.49708 mg/L      0.003725   0.75%
   QC value within limits for Cobalt,7440-48-4  Recovery = 99.42%
Copper,7440-50-8†      236186.6     0.49164 mg/L      0.004510     0.49164 mg/L      0.004510   0.92%
   QC value within limits for Copper,7440-50-8  Recovery = 98.33%
Iron,7439-89-6†         89041.8     4.88367 mg/L      0.048084     4.88367 mg/L      0.048084   0.98%
   QC value within limits for Iron,7439-89-6  Recovery = 97.67%
Lead,7439-92-1†         14934.2     0.49431 mg/L      0.005246     0.49431 mg/L      0.005246   1.06%
   QC value within limits for Lead,7439-92-1  Recovery = 98.86%
Lithium,7439-93-2†      54041.2     0.50615 mg/L      0.005830     0.50615 mg/L      0.005830   1.15%
   QC value within limits for Lithium,7439-93-2  Recovery = 101.23%
Magnesium,7439-95-4†    21265.0     4.84354 mg/L      0.027806     4.84354 mg/L      0.027806   0.57%
   QC value within limits for Magnesium,7439-95-4  Recovery = 96.87%
Manganese,7439-96-5†   699870.3     0.49423 mg/L      0.004948     0.49423 mg/L      0.004948   1.00%
   QC value within limits for Manganese,7439-96-5  Recovery = 98.85%
Molybdenum,7439-98-7    13845.9     0.49414 mg/L      0.005149     0.49414 mg/L      0.005149   1.04%
   QC value within limits for Molybdenum,7439-98-7  Recovery = 98.83%
Nickel,7440-02-0†       59372.8     0.50008 mg/L      0.004339     0.50008 mg/L      0.004339   0.87%
   QC value within limits for Nickel,7440-02-0  Recovery = 100.02%
Phosphorus,7723-14-0     4793.9                                                         56.86   1.19%
   Unable to evaluate QC.
Potassium,7440-09-7†    53473.0     9.85522 mg/L      0.135205     9.85522 mg/L      0.135205   1.37%
   QC value within limits for Potassium,7440-09-7  Recovery = 98.55%
Selenium,7782-49-2†      1626.9     0.48606 mg/L      0.007770     0.48606 mg/L      0.007770   1.60%
   QC value within limits for Selenium,7782-49-2  Recovery = 97.21%
Silicon,7440-21-3†      17979.8     4.84939 mg/L      0.056539     4.84939 mg/L      0.056539   1.17%
   QC value within limits for Silicon,7440-21-3  Recovery = 96.99%
Silver,7440-22-4†      298812.3     0.49546 mg/L      0.004069     0.49546 mg/L      0.004069   0.82%
   QC value within limits for Silver,7440-22-4  Recovery = 99.09%
Sodium,7440-23-5†      142476.7    19.7172 mg/L       0.17636     19.7172 mg/L       0.17636   0.89%
   QC value within limits for Sodium,7440-23-5  Recovery = 98.59%
Strontium,7440-24-6†   361241.6     0.48607 mg/L      0.010020     0.48607 mg/L      0.010020   2.06%
   QC value within limits for Strontium,7440-24-6  Recovery = 97.21%
Thallium,7440-28-0†      1944.5     0.50752 mg/L      0.005568     0.50752 mg/L      0.005568   1.10%
   QC value within limits for Thallium,7440-28-0  Recovery = 101.50%
Tin,7440-31-5†           5241.2     0.50228 mg/L      0.003954     0.50228 mg/L      0.003954   0.79%
   QC value within limits for Tin,7440-31-5  Recovery = 100.46%
Titanium,7440-32-6†    691341.4     0.49643 mg/L      0.004341     0.49643 mg/L      0.004341   0.87%
   QC value within limits for Titanium,7440-32-6  Recovery = 99.29%
Vanadium,7440-62-2†    165583.2     0.49430 mg/L      0.004111     0.49430 mg/L      0.004111   0.83%
   QC value within limits for Vanadium,7440-62-2  Recovery = 98.86%
Zinc,7440-66-6†         76256.9     0.48951 mg/L      0.005070     0.48951 mg/L      0.005070   1.04%
   QC value within limits for Zinc,7440-66-6  Recovery = 97.90%
Zirconium,7440-67-7†   430973.5     0.50005 mg/L      0.005100     0.50005 mg/L      0.005100   1.02%
   QC value within limits for Zirconium,7440-67-7  Recovery = 100.01%
All analyte(s) passed QC. One or more analytes were not evaluated.
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**Sequence No.: 11** | **Autosampler Location: 1**
**Sample ID: 1900** | **Date Collected: 10/21/2013 1:50:00 PM**
**Analyst:** | **Data Type: Reprocessed on 10/21/2013 3:38:14 PM**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:** | **Initial Sample Vol:**
**Dilution:** | **Sample Prep Vol:**

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**Mean Data: 1900**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Scandium-IS | 8852855.3 | 102.424 % | 0.5031 | | | | 0.49% |
| Yttrium,7440-65-5A | 4365654.0 | 102.384 % | 0.5466 | | | | 0.53% |
| Yttrium,7440-65-5R | 396002.8 | 105.868 % | 0.4258 | | | | 0.40% |
| Ar 420.067 R | 2906641.2 | 99.7148 % | 0.31414 | | | | 0.32% |
| Ar 363.268 A | 55599.9 | 96.4251 % | 0.38671 | | | | 0.40% |
| Aluminum,7429-90-5† | 49.6 | 0.01812 mg/L | 0.014992 | 0.01812 mg/L | 0.014992 | 82.72% | |
| QC value within limits for Aluminum,7429-90-5 Recovery = Not calculated | | | | | | | |
| Antimony,7440-36-0† | 4.1 | 0.00130 mg/L | 0.004830 | 0.00130 mg/L | 0.004830 | 371.34% | |
| QC value within limits for Antimony,7440-36-0 Recovery = Not calculated | | | | | | | |
| Arsenic,7440-38-2† | -6.4 | -0.00293 mg/L | 0.002017 | -0.00293 mg/L | 0.002017 | 68.76% | |
| QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated | | | | | | | |
| Barium,7440-39-3† | -22.0 | -0.00010 mg/L | 0.000209 | -0.00010 mg/L | 0.000209 | 215.71% | |
| QC value within limits for Barium,7440-39-3 Recovery = Not calculated | | | | | | | |
| Beryllium,7440-41-7† | 601.9 | 0.00006 mg/L | 0.000026 | 0.00006 mg/L | 0.000026 | 44.50% | |
| QC value within limits for Beryllium,7440-41-7 Recovery = Not calculated | | | | | | | |
| Boron,7440-42-8† | -297.2 | -0.00314 mg/L | 0.004725 | -0.00314 mg/L | 0.004725 | 150.43% | |
| QC value within limits for Boron,7440-42-8 Recovery = Not calculated | | | | | | | |
| Cadmium,7440-43-9† | 54.4 | 0.00023 mg/L | 0.000115 | 0.00023 mg/L | 0.000115 | 49.61% | |
| QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated | | | | | | | |
| Calcium,7440-70-2† | -109.2 | -0.00554 mg/L | 0.001099 | -0.00554 mg/L | 0.001099 | 19.85% | |
| QC value within limits for Calcium,7440-70-2 Recovery = Not calculated | | | | | | | |
| Cerium,† | -2193.0 | | | | 67.32 | 3.07% | |
| Chromium,7440-47-3† | 418.6 | 0.00197 mg/L | 0.000377 | 0.00197 mg/L | 0.000377 | 19.16% | |
| QC value within limits for Chromium,7440-47-3 Recovery = Not calculated | | | | | | | |
| Cobalt,7440-48-4† | -12.4 | -0.00017 mg/L | 0.000213 | -0.00017 mg/L | 0.000213 | 124.95% | |
| QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated | | | | | | | |
| Copper,7440-50-8† | -593.2 | -0.00123 mg/L | 0.000332 | -0.00123 mg/L | 0.000332 | 26.88% | |
| QC value within limits for Copper,7440-50-8 Recovery = Not calculated | | | | | | | |
| Iron,7439-89-6† | 304.8 | 0.01672 mg/L | 0.002768 | 0.01672 mg/L | 0.002768 | 16.56% | |
| QC value within limits for Iron,7439-89-6 Recovery = Not calculated | | | | | | | |
| Lead,7439-92-1† | -2.7 | -0.00009 mg/L | 0.000958 | -0.00009 mg/L | 0.000958 | >999.9% | |
| QC value within limits for Lead,7439-92-1 Recovery = Not calculated | | | | | | | |
| Lithium,7439-93-2† | 187.7 | 0.00176 mg/L | 0.000224 | 0.00176 mg/L | 0.000224 | 12.74% | |
| QC value within limits for Lithium,7439-93-2 Recovery = Not calculated | | | | | | | |
| Magnesium,7439-95-4† | -227.3 | -0.05179 mg/L | 0.011558 | -0.05179 mg/L | 0.011558 | 22.32% | |
| QC value within limits for Magnesium,7439-95-4 Recovery = Not calculated | | | | | | | |
| Manganese,7439-96-5† | -2710.6 | -0.00191 mg/L | 0.000122 | -0.00191 mg/L | 0.000122 | 6.39% | |
| QC value within limits for Manganese,7439-96-5 Recovery = Not calculated | | | | | | | |
| Molybdenum,7439-98-7 | 46.2 | 0.00165 mg/L | 0.000647 | 0.00165 mg/L | 0.000647 | 39.24% | |
| QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated | | | | | | | |
| Nickel,7440-02-0† | 11.0 | 0.00009 mg/L | 0.000276 | 0.00009 mg/L | 0.000276 | 296.31% | |
| QC value within limits for Nickel,7440-02-0 Recovery = Not calculated | | | | | | | |
| Phosphorus,7723-14-0 | -285.5 | | | | 29.73 | 10.41% | |
| Potassium,7440-09-7† | 142.3 | 0.02621 mg/L | 0.026841 | 0.02621 mg/L | 0.026841 | 102.39% | |
| QC value within limits for Potassium,7440-09-7 Recovery = Not calculated | | | | | | | |
| Selenium,7782-49-2† | 7.6 | 0.00226 mg/L | 0.001376 | 0.00226 mg/L | 0.001376 | 60.75% | |
| QC value within limits for Selenium,7782-49-2 Recovery = Not calculated | | | | | | | |
| Silicon,7440-21-3† | 0.2 | 0.00005 mg/L | 0.003647 | 0.00005 mg/L | 0.003647 | >999.9% | |
| QC value within limits for Silicon,7440-21-3 Recovery = Not calculated | | | | | | | |
| Silver,7440-22-4† | -633.6 | -0.00105 mg/L | 0.000375 | -0.00105 mg/L | 0.000375 | 35.78% | |
| QC value within limits for Silver,7440-22-4 Recovery = Not calculated | | | | | | | |
| Sodium,7440-23-5† | 187.3 | 0.02591 mg/L | 0.016426 | 0.02591 mg/L | 0.016426 | 63.40% | |
| QC value within limits for Sodium,7440-23-5 Recovery = Not calculated | | | | | | | |
| Strontium,7440-24-6† | -143.7 | -0.00019 mg/L | 0.000186 | -0.00019 mg/L | 0.000186 | 96.40% | |
| QC value within limits for Strontium,7440-24-6 Recovery = Not calculated | | | | | | | |
| Thallium,7440-28-0† | 8.7 | 0.00221 mg/L | 0.001019 | 0.00221 mg/L | 0.001019 | 46.02% | |
| QC value within limits for Thallium,7440-28-0 Recovery = Not calculated | | | | | | | |
| Tin,7440-31-5† | 19.6 | 0.00187 mg/L | 0.001076 | 0.00187 mg/L | 0.001076 | 57.56% | |
| QC value within limits for Tin,7440-31-5 Recovery = Not calculated | | | | | | | |
| Titanium,7440-32-6† | -439.7 | -0.00032 mg/L | 0.000174 | -0.00032 mg/L | 0.000174 | 55.13% | |
| QC value within limits for Titanium,7440-32-6 Recovery = Not calculated | | | | | | | |
| Vanadium,7440-62-2† | -173.2 | -0.00051 mg/L | 0.000211 | -0.00051 mg/L | 0.000211 | 41.15% | |
| QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated | | | | | | | |
| Zinc,7440-66-6† | -173.9 | -0.00113 mg/L | 0.000071 | -0.00113 mg/L | 0.000071 | 6.26% | |
| QC value within limits for Zinc,7440-66-6 Recovery = Not calculated | | | | | | | |
| Zirconium,7440-67-7† | -52.7 | -0.00006 mg/L | 0.000363 | -0.00006 mg/L | 0.000363 | 595.60% | |
| QC value within limits for Zirconium,7440-67-7 Recovery = Not calculated | | | | | | | |

All analyte(s) passed QC.

**Sequence No.: 12** **Autosampler Location: 17**
**Sample ID: TBLK F1** **Date Collected: 10/21/2013 1:56:37 PM**

Analyst:
Logged In Analyst (Original) : met
Initial Sample Wt:
Dilution: 5X

Data Type: Reprocessed on 10/21/2013 3:38:17 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: TBLK F1

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 8254562.3 | 95.5017 | % | 0.22911 | | | | 0.24% |
| Yttrium,7440-65-5A | 4067454.8 | 95.3909 | % | 0.69721 | | | | 0.73% |
| Yttrium,7440-65-5R | 372202.3 | 99.5053 | % | 1.39970 | | | | 1.41% |
| Ar 420.067 R | 2905372.5 | 99.6713 | % | 0.81753 | | | | 0.82% |
| Ar 363.268 A | 56626.2 | 98.2050 | % | 0.85425 | | | | 0.87% |
| Aluminum,7429-90-5† | -18.2 | -0.00666 | mg/L | 0.019415 | -0.03332 | mg/L | 0.097076 | 291.32% |
| Antimony,7440-36-0† | 1.8 | 0.00061 | mg/L | 0.003332 | 0.00304 | mg/L | 0.016660 | 547.82% |
| Arsenic,7440-38-2† | -21.6 | -0.00979 | mg/L | 0.003555 | -0.04895 | mg/L ✓ | 0.017773 | 36.31% |
| Barium,7440-39-3† | 172.6 | 0.00076 | mg/L | 0.000056 | 0.00378 | mg/L ✓ | 0.000280 | 7.41% |
| Beryllium,7440-41-7† | -1186.3 | -0.00012 | mg/L | 0.000019 | -0.00058 | mg/L | 0.000096 | 16.55% |
| Boron,7440-42-8† | -1899.4 | -0.02054 | mg/L | 0.000753 | -0.10269 | mg/L | 0.003767 | 3.67% |
| Cadmium,7440-43-9† | -21.5 | -0.00009 | mg/L | 0.000088 | -0.00046 | mg/L ✓ | 0.000438 | 95.67% |
| Calcium,7440-70-2† | 66.1 | 0.00337 | mg/L | 0.001759 | 0.01686 | mg/L | 0.008793 | 52.16% |
| Cerium,† | -2659.8 | | | | | | 203.75 | 7.66% |
| Chromium,7440-47-3† | -148.7 | -0.00070 | mg/L | 0.000159 | -0.00350 | mg/L ✓ | 0.000794 | 22.69% |
| Cobalt,7440-48-4† | 14.3 | 0.00020 | mg/L | 0.000036 | 0.00099 | mg/L | 0.000181 | 18.33% |
| Copper,7440-50-8† | 29.4 | 0.00006 | mg/L | 0.000195 | 0.00031 | mg/L | 0.000977 | 311.23% |
| Iron,7439-89-6† | -27.6 | -0.00151 | mg/L | 0.004305 | -0.00757 | mg/L | 0.021526 | 284.54% |
| Lead,7439-92-1† | 5.5 | 0.00018 | mg/L | 0.001081 | 0.00091 | mg/L ✓ | 0.005404 | 595.64% |
| Lithium,7439-93-2† | 97.5 | 0.00091 | mg/L | 0.000949 | 0.00457 | mg/L | 0.004746 | 103.93% |
| Magnesium,7439-95-4† | -102.0 | -0.02324 | mg/L | 0.006297 | -0.11622 | mg/L | 0.031486 | 27.09% |
| Manganese,7439-96-5† | -5143.6 | -0.00363 | mg/L | 0.000031 | -0.01816 | mg/L | 0.000154 | 0.85% |
| Molybdenum,7439-98-7 | -39.8 | -0.00142 | mg/L | 0.001038 | -0.00710 | mg/L | 0.005191 | 73.14% |
| Nickel,7440-02-0† | -3.0 | -0.00002 | mg/L | 0.000429 | -0.00012 | mg/L | 0.002147 | >999.9% |
| Phosphorus,7723-14-0 | -264.7 | | | | | | 20.91 | 7.90% |
| Potassium,7440-09-7† | 636.7 | 0.11733 | mg/L | 0.033030 | 0.58666 | mg/L | 0.165148 | 28.15% |
| Selenium,7782-49-2† | 9.8 | 0.00292 | mg/L | 0.004597 | 0.01459 | mg/L ✓ | 0.022985 | 157.52% |
| Silicon,7440-21-3† | -14.0 | -0.00379 | mg/L | 0.002243 | -0.01893 | mg/L | 0.011213 | 59.23% |
| Silver,7440-22-4† | -37.4 | -0.00005 | mg/L | 0.000175 | -0.00027 | mg/L ✓ | 0.000875 | 319.62% |
| Sodium,7440-23-5† | 1919832.5 | 265.661 | mg/L | 5.8304 | 1328.30 | mg/L | 29.152 | 2.19% |
| Strontium,7440-24-6† | 71.0 | 0.00010 | mg/L | 0.000054 | 0.00048 | mg/L | 0.000271 | 56.69% |
| Thallium,7440-28-0† | 7.5 | 0.00192 | mg/L | 0.001877 | 0.00960 | mg/L | 0.009385 | 97.79% |
| Tin,7440-31-5† | -16.4 | -0.00157 | mg/L | 0.000744 | -0.00783 | mg/L | 0.003718 | 47.49% |
| Titanium,7440-32-6† | -314.0 | -0.00023 | mg/L | 0.000023 | -0.00113 | mg/L | 0.000114 | 10.12% |
| Vanadium,7440-62-2† | 516.7 | 0.00154 | mg/L | 0.000142 | 0.00771 | mg/L | 0.000710 | 9.22% |
| Zinc,7440-66-6† | -191.4 | -0.00124 | mg/L | 0.000145 | -0.00619 | mg/L | 0.000727 | 11.74% |
| Zirconium,7440-67-7† | -243.0 | -0.00028 | mg/L | 0.000269 | -0.00141 | mg/L | 0.001344 | 95.31% |

Sequence No.: 13
Sample ID: 1245442
Analyst:
Logged In Analyst (Original) : met
Initial Sample Wt:
Dilution: 1X

Autosampler Location: 18
Date Collected: 10/21/2013 2:03:05 PM
Data Type: Reprocessed on 10/21/2013 3:38:20 PM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: 1245442

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 9055504.1 | 104.768 | % | 0.9551 | | | | 0.91% |
| Yttrium,7440-65-5A | 4473767.3 | 104.920 | % | 1.0722 | | | | 1.02% |
| Yttrium,7440-65-5R | 402753.7 | 107.673 | % | 0.9182 | | | | 0.85% |
| Ar 420.067 R | 2910708.2 | 99.8543 | % | 0.40333 | | | | 0.40% |
| Ar 363.268 A | 55738.7 | 96.6658 | % | 0.86776 | | | | 0.90% |
| Aluminum,7429-90-5† | 12.1 | 0.00445 | mg/L | 0.010840 | 0.00445 | mg/L | 0.010840 | 243.59% |
| Antimony,7440-36-0† | -1.1 | -0.00041 | mg/L | 0.002676 | -0.00041 | mg/L | 0.002676 | 655.49% |
| Arsenic,7440-38-2† | -0.3 | -0.00017 | mg/L | 0.001703 | -0.00017 | mg/L | 0.001703 | 984.41% |
| Barium,7440-39-3† | 253.4 | 0.00111 | mg/L | 0.000079 | 0.00111 | mg/L | 0.000079 | 7.17% |
| Beryllium,7440-41-7† | -1504.9 | -0.00015 | mg/L | 0.000012 | -0.00015 | mg/L | 0.000012 | 8.04% |
| Boron,7440-42-8† | -2404.4 | -0.02593 | mg/L | 0.000129 | -0.02593 | mg/L | 0.000129 | 0.50% |
| Cadmium,7440-43-9† | 2.7 | 0.00001 | mg/L | 0.000062 | 0.00001 | mg/L | 0.000062 | 555.50% |
| Calcium,7440-70-2† | 350.3 | 0.01783 | mg/L | 0.002286 | 0.01783 | mg/L | 0.002286 | 12.83% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Chromium,7440-47-3† | 304.0 | 0.00143 | mg/L | 0.000337 | 0.00143 | mg/L | 0.000337 | 23.59% |
| Cobalt,7440-48-4† | -23.0 | -0.00031 | mg/L | 0.000450 | -0.00031 | mg/L | 0.000450 | 143.01% |
| Copper,7440-50-8† | -990.6 | -0.00206 | mg/L | 0.000413 | -0.00206 | mg/L | 0.000413 | 20.03% |
| Iron,7439-89-6† | 266.6 | 0.01463 | mg/L | 0.001135 | 0.01463 | mg/L | 0.001135 | 7.76% |
| Lead,7439-92-1† | -47.9 | -0.00158 | mg/L | 0.000526 | -0.00158 | mg/L | 0.000526 | 33.20% |
| Lithium,7439-93-2† | 221.9 | 0.00208 | mg/L | 0.001290 | 0.00208 | mg/L | 0.001290 | 62.07% |
| Magnesium,7439-95-4† | -235.4 | -0.05364 | mg/L | 0.009484 | -0.05364 | mg/L | 0.009484 | 17.68% |
| Manganese,7439-96-5† | -4927.2 | -0.00348 | mg/L | 0.000011 | -0.00348 | mg/L | 0.000011 | 0.31% |
| Molybdenum,7439-98-7 | -22.7 | -0.00081 | mg/L | 0.000381 | -0.00081 | mg/L | 0.000381 | 47.15% |
| Nickel,7440-02-0† | -2.6 | -0.00002 | mg/L | 0.000275 | -0.00002 | mg/L | 0.000275 | >999.9% |
| Potassium,7440-09-7† | 101.2 | 0.01865 | mg/L | 0.023135 | 0.01865 | mg/L | 0.023135 | 124.04% |
| Selenium,7782-49-2† | -27.6 | -0.00823 | mg/L | 0.003541 | -0.00823 | mg/L | 0.003541 | 43.01% |
| Silicon,7440-21-3† | -83.2 | -0.02244 | mg/L | 0.001092 | -0.02244 | mg/L | 0.001092 | 4.87% |
| Silver,7440-22-4† | -1577.8 | -0.00261 | mg/L | 0.000293 | -0.00261 | mg/L | 0.000293 | 11.24% |
| Sodium,7440-23-5† | 2086.7 | 0.28875 | mg/L | 0.010427 | 0.28875 | mg/L | 0.010427 | 3.61% |
| Strontium,7440-24-6† | -312.2 | -0.00042 | mg/L | 0.000104 | -0.00042 | mg/L | 0.000104 | 24.67% |
| Thallium,7440-28-0† | 5.9 | 0.00151 | mg/L | 0.002472 | 0.00151 | mg/L | 0.002472 | 164.24% |
| Tin,7440-31-5† | -36.4 | -0.00348 | mg/L | 0.000884 | -0.00348 | mg/L | 0.000884 | 25.42% |
| Titanium,7440-32-6† | -894.2 | -0.00064 | mg/L | 0.000160 | -0.00064 | mg/L | 0.000160 | 24.99% |
| Vanadium,7440-62-2† | -181.9 | -0.00054 | mg/L | 0.000416 | -0.00054 | mg/L | 0.000416 | 77.04% |
| Zinc,7440-66-6† | -285.1 | -0.00184 | mg/L | 0.000003 | -0.00184 | mg/L | 0.000003 | 0.17% |
| Zirconium,7440-67-7† | -773.8 | -0.00090 | mg/L | 0.000061 | -0.00090 | mg/L | 0.000061 | 6.77% |

**Sequence No.: 14**
**Sample ID: 1245443**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution: 1X**

**Autosampler Location: 19**
**Date Collected: 10/21/2013 2:09:34 PM**
**Data Type: Reprocessed on 10/21/2013 3:38:24 PM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 1245443**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 8782769.3 | 101.613 | % | 0.3848 | | | | 0.38% |
| Yttrium,7440-65-5A | 4282507.2 | 100.434 | % | 0.6097 | | | | 0.61% |
| Yttrium,7440-65-5R | 397148.5 | 106.174 | % | 0.8065 | | | | 0.76% |
| Ar 420.067 R | 2895633.8 | 99.3372 | % | 0.71507 | | | | 0.72% |
| Ar 363.268 A | 55970.1 | 97.0670 | % | 0.89265 | | | | 0.92% |
| Aluminum,7429-90-5† | 13762.0 | 5.02242 | mg/L | 0.048952 | 5.02242 | mg/L | 0.048952 | 0.97% |
| Antimony,7440-36-0† | 1607.8 | 0.51713 | mg/L | 0.004873 | 0.51713 | mg/L | 0.004873 | 0.94% |
| Arsenic,7440-38-2† | 1098.4 | 0.51757 | mg/L | 0.001653 | 0.51757 | mg/L | 0.001653 | 0.32% |
| Barium,7440-39-3† | 116899.6 | 0.51135 | mg/L | 0.003718 | 0.51135 | mg/L | 0.003718 | 0.73% |
| Beryllium,7440-41-7† | 5141068.7 | 0.50414 | mg/L | 0.001351 | 0.50414 | mg/L | 0.001351 | 0.27% |
| Boron,7440-42-8† | 229776.6 | 2.50832 | mg/L | 0.003662 | 2.50832 | mg/L | 0.003662 | 0.15% |
| Cadmium,7440-43-9† | 119039.3 | 0.50827 | mg/L | 0.004418 | 0.50827 | mg/L | 0.004418 | 0.87% |
| Calcium,7440-70-2† | 98174.8 | 4.98744 | mg/L | 0.041181 | 4.98744 | mg/L | 0.041181 | 0.83% |
| Chromium,7440-47-3† | 108497.4 | 0.51228 | mg/L | 0.003657 | 0.51228 | mg/L | 0.003657 | 0.71% |
| Cobalt,7440-48-4† | 37326.3 | 0.51106 | mg/L | 0.003314 | 0.51106 | mg/L | 0.003314 | 0.65% |
| Copper,7440-50-8† | 242355.9 | 0.50448 | mg/L | 0.003667 | 0.50448 | mg/L | 0.003667 | 0.73% |
| Iron,7439-89-6† | 90963.8 | 4.98908 | mg/L | 0.040626 | 4.98908 | mg/L | 0.040626 | 0.81% |
| Lead,7439-92-1† | 15266.7 | 0.50532 | mg/L | 0.004373 | 0.50532 | mg/L | 0.004373 | 0.87% |
| Lithium,7439-93-2† | 54316.0 | 0.50873 | mg/L | 0.005702 | 0.50873 | mg/L | 0.005702 | 1.12% |
| Magnesium,7439-95-4† | 21550.3 | 4.90854 | mg/L | 0.031805 | 4.90854 | mg/L | 0.031805 | 0.65% |
| Manganese,7439-96-5† | 715475.6 | 0.50525 | mg/L | 0.003673 | 0.50525 | mg/L | 0.003673 | 0.73% |
| Molybdenum,7439-98-7 | 14346.4 | 0.51199 | mg/L | 0.004087 | 0.51199 | mg/L | 0.004087 | 0.80% |
| Nickel,7440-02-0† | 61235.6 | 0.51577 | mg/L | 0.002890 | 0.51577 | mg/L | 0.002890 | 0.56% |
| Potassium,7440-09-7† | 54627.5 | 10.0680 | mg/L | 0.08928 | 10.0680 | mg/L | 0.08928 | 0.89% |
| Selenium,7782-49-2† | 1670.8 | 0.49916 | mg/L | 0.006985 | 0.49916 | mg/L | 0.006985 | 1.40% |
| Silicon,7440-21-3† | 18147.0 | 4.89448 | mg/L | 0.051318 | 4.89448 | mg/L | 0.051318 | 1.05% |
| Silver,7440-22-4† | 307808.3 | 0.51036 | mg/L | 0.003492 | 0.51036 | mg/L | 0.003492 | 0.68% |
| Sodium,7440-23-5† | 141692.6 | 19.6088 | mg/L | 0.11918 | 19.6088 | mg/L | 0.11918 | 0.61% |
| Strontium,7440-24-6† | 369172.2 | 0.49674 | mg/L | 0.003469 | 0.49674 | mg/L | 0.003469 | 0.70% |
| Thallium,7440-28-0† | 1986.0 | 0.51853 | mg/L | 0.003689 | 0.51853 | mg/L | 0.003689 | 0.71% |
| Tin,7440-31-5† | 5652.1 | 0.54158 | mg/L | 0.005028 | 0.54158 | mg/L | 0.005028 | 0.93% |
| Titanium,7440-32-6† | 722929.5 | 0.51912 | mg/L | 0.002495 | 0.51912 | mg/L | 0.002495 | 0.48% |
| Vanadium,7440-62-2† | 169672.2 | 0.50651 | mg/L | 0.003955 | 0.50651 | mg/L | 0.003955 | 0.78% |
| Zinc,7440-66-6† | 78498.6 | 0.50390 | mg/L | 0.003263 | 0.50390 | mg/L | 0.003263 | 0.65% |
| Zirconium,7440-67-7† | 17657.1 | 0.02029 | mg/L | 0.007721 | 0.02029 | mg/L | 0.007721 | 38.06% |

**Sequence No.: 15**
**Sample ID: 21310166106**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution: 5X**

**Autosampler Location: 20**
**Date Collected: 10/21/2013 2:16:11 PM**
**Data Type: Reprocessed on 10/21/2013 3:38:26 PM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 21310166106**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 8294910.0 | 95.9685 | % | 1.08235 | | | | 1.13% |
| Yttrium,7440-65-5A | 4076950.1 | 95.6136 | % | 1.03540 | | | | 1.08% |
| Yttrium,7440-65-5R | 372392.4 | 99.5561 | % | 2.38049 | | | | 2.39% |
| Ar 420.067 R | 2874785.2 | 98.6220 | % | 0.58703 | | | | 0.60% |
| Ar 363.268 A | 56855.2 | 98.6021 | % | 0.25772 | | | | 0.26% |
| Aluminum,7429-90-5† | 38.6 | 0.01338 | mg/L | 0.009108 | 0.06690 | mg/L | 0.045541 | 68.07% |
| Antimony,7440-36-0† | 3.9 | 0.00152 | mg/L | 0.002193 | 0.00758 | mg/L | 0.010965 | 144.67% |
| Arsenic,7440-38-2† | -27.4 | -0.01091 | mg/L | 0.002953 | -0.05455 | mg/L | 0.014765 | 27.07% |
| Barium,7440-39-3† | 60399.0 | 0.26378 | mg/L | 0.000282 | 1.31891 | mg/L | 0.001408 | 0.11% |
| Beryllium,7440-41-7† | 2103.4 | 0.00021 | mg/L | 0.000038 | 0.00103 | mg/L | 0.000192 | 18.65% |
| Boron,7440-42-8† | 1553.1 | 0.02971 | mg/L | 0.004264 | 0.14857 | mg/L | 0.021320 | 14.35% |
| Cadmium,7440-43-9† | 92.3 | 0.00034 | mg/L | 0.000053 | 0.00172 | mg/L | 0.000267 | 15.50% |
| Calcium,7440-70-2† | 257884.6 | 13.1054 | mg/L | 0.50951 | 65.5268 | mg/L | 2.54754 | 3.89% |
| Chromium,7440-47-3† | -97.7 | -0.00030 | mg/L | 0.000317 | -0.00150 | mg/L | 0.001586 | 105.59% |
| Cobalt,7440-48-4† | 296.9 | 0.00404 | mg/L | 0.000039 | 0.02018 | mg/L | 0.000195 | 0.97% |
| Copper,7440-50-8† | 39.0 | -0.00028 | mg/L | 0.000099 | -0.00141 | mg/L | 0.000493 | 35.03% |
| Iron,7439-89-6† | 46343.7 | 2.54217 | mg/L | 0.101811 | 12.7108 | mg/L | 0.50906 | 4.00% |
| Lead,7439-92-1† | 75.6 | 0.00247 | mg/L | 0.001308 | 0.01237 | mg/L | 0.006539 | 52.87% |
| Lithium,7439-93-2† | 332.9 | 0.00309 | mg/L | 0.001379 | 0.01543 | mg/L | 0.006894 | 44.67% |
| Magnesium,7439-95-4† | 15930.8 | 3.62794 | mg/L | 0.176340 | 18.1397 | mg/L | 0.88170 | 4.86% |
| Manganese,7439-96-5† | 1096079.0 | 0.77393 | mg/L | 0.000648 | 3.86963 | mg/L | 0.003238 | 0.08% |
| Molybdenum,7439-98-7 | 79.1 | 0.00306 | mg/L | 0.001252 | 0.01528 | mg/L | 0.006260 | 40.97% |
| Nickel,7440-02-0† | 725.0 | 0.00609 | mg/L | 0.000205 | 0.03043 | mg/L | 0.001023 | 3.36% |
| Potassium,7440-09-7† | 4162.6 | 0.76894 | mg/L | 0.023146 | 3.84469 | mg/L | 0.115730 | 3.01% |
| Selenium,7782-49-2† | 6.7 | 0.00219 | mg/L | 0.002772 | 0.01097 | mg/L | 0.013858 | 126.37% |
| Silicon,7440-21-3† | 2190.8 | 0.59027 | mg/L | 0.030878 | 2.95134 | mg/L | 0.154391 | 5.23% |
| Silver,7440-22-4† | -228.9 | -0.00043 | mg/L | 0.000206 | -0.00216 | mg/L | 0.001032 | 47.74% |
| Sodium,7440-23-5† | 1686592.1 | 233.386 | mg/L | 9.9335 | 1166.93 | mg/L | 49.667 | 4.26% |
| Strontium,7440-24-6† | 54562.9 | 0.07307 | mg/L | 0.003173 | 0.36533 | mg/L | 0.015865 | 4.34% |
| Thallium,7440-28-0† | 5.9 | 0.00221 | mg/L | 0.000740 | 0.01103 | mg/L | 0.003702 | 33.55% |
| Tin,7440-31-5† | -35.1 | -0.00280 | mg/L | 0.000783 | -0.01400 | mg/L | 0.003914 | 27.96% |
| Titanium,7440-32-6† | -117.4 | -0.00009 | mg/L | 0.000086 | -0.00045 | mg/L | 0.000428 | 95.28% |
| Vanadium,7440-62-2† | 527.0 | 0.00124 | mg/L | 0.000392 | 0.00619 | mg/L | 0.001958 | 31.62% |
| Zinc,7440-66-6† | 833.6 | 0.00504 | mg/L | 0.000084 | 0.02519 | mg/L | 0.000418 | 1.66% |
| Zirconium,7440-67-7† | -636.5 | -0.00074 | mg/L | 0.000126 | -0.00368 | mg/L | 0.000631 | 17.12% |

**Sequence No.: 16**
**Sample ID: 21310171101**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution: 5X**

**Autosampler Location: 21**
**Date Collected: 10/21/2013 2:22:42 PM**
**Data Type: Reprocessed on 10/21/2013 3:38:30 PM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 21310171101**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 8336258.6 | 96.4469 | % | 0.21690 | | | | 0.22% |
| Yttrium,7440-65-5A | 4120948.1 | 96.6455 | % | 0.15179 | | | | 0.16% |
| Yttrium,7440-65-5R | 373891.6 | 99.9569 | % | 0.65870 | | | | 0.66% |
| Ar 420.067 R | 2885314.6 | 98.9832 | % | 0.33972 | | | | 0.34% |
| Ar 363.268 A | 56938.6 | 98.7467 | % | 0.08830 | | | | 0.09% |
| Aluminum,7429-90-5† | 8.3 | 0.00284 | mg/L | 0.019031 | 0.01418 | mg/L | 0.095155 | 670.85% |
| Antimony,7440-36-0† | 8.4 | 0.00279 | mg/L | 0.006607 | 0.01395 | mg/L | 0.033034 | 236.74% |
| Arsenic,7440-38-2† | -27.4 | -0.01203 | mg/L | 0.001503 | -0.06017 | mg/L | 0.007517 | 12.49% |
| Barium,7440-39-3† | 7206.9 | 0.03145 | mg/L | 0.000090 | 0.15724 | mg/L | 0.000448 | 0.29% |
| Beryllium,7440-41-7† | -1286.5 | -0.00013 | mg/L | 0.000007 | -0.00063 | mg/L | 0.000036 | 5.64% |
| Boron,7440-42-8† | 4382.2 | 0.04803 | mg/L | 0.000810 | 0.24014 | mg/L | 0.004048 | 1.69% |
| Cadmium,7440-43-9† | -1.9 | -0.00001 | mg/L | 0.000032 | -0.00004 | mg/L | 0.000160 | 414.51% |
| Calcium,7440-70-2† | 91323.2 | 4.64118 | mg/L | 0.096844 | 23.2059 | mg/L | 0.48422 | 2.09% |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Chromium,7440-47-3† | -41.1 | -0.00014 | mg/L | 0.000055 | -0.00070 | mg/L | 0.000275 | 39.11% |
| Cobalt,7440-48-4† | 14.6 | 0.00020 | mg/L | 0.000226 | 0.00101 | mg/L | 0.001129 | 111.96% |
| Copper,7440-50-8† | 865.7 | 0.00171 | mg/L | 0.000120 | 0.00854 | mg/L | 0.000600 | 7.03% |
| Iron,7439-89-6† | 1091.6 | 0.05989 | mg/L | 0.001136 | 0.29945 | mg/L | 0.005681 | 1.90% |
| Lead,7439-92-1† | 18.0 | 0.00064 | mg/L | 0.000609 | 0.00318 | mg/L | 0.003045 | 95.83% |
| Lithium,7439-93-2† | 209.2 | 0.00195 | mg/L | 0.001672 | 0.00976 | mg/L | 0.008362 | 85.69% |
| Magnesium,7439-95-4† | 5737.1 | 1.30684 | mg/L | 0.011242 | 6.53420 | mg/L | 0.056210 | 0.86% |
| Manganese,7439-96-5† | 266506.3 | 0.18817 | mg/L | 0.000354 | 0.94085 | mg/L | 0.001769 | 0.19% |
| Molybdenum,7439-98-7 | -17.1 | -0.00060 | mg/L | 0.000656 | -0.00298 | mg/L | 0.003282 | 110.04% |
| Nickel,7440-02-0† | 50.3 | 0.00041 | mg/L | 0.000252 | 0.00207 | mg/L | 0.001261 | 60.93% |
| Potassium,7440-09-7† | 10511.0 | 1.93734 | mg/L | 0.040107 | 9.68669 | mg/L | 0.200533 | 2.07% |
| Selenium,7782-49-2† | -8.7 | -0.00268 | mg/L | 0.002136 | -0.01341 | mg/L | 0.010680 | 79.67% |
| Silicon,7440-21-3† | 1283.3 | 0.34597 | mg/L | 0.002711 | 1.72987 | mg/L | 0.013555 | 0.78% |
| Silver,7440-22-4† | -571.4 | -0.00097 | mg/L | 0.000300 | -0.00483 | mg/L | 0.001501 | 31.06% |
| Sodium,7440-23-5† | 1341663.1 | 185.655 | mg/L | 4.0430 | 928.277 | mg/L | 20.2152 | 2.18% |
| Strontium,7440-24-6† | 12553.3 | 0.01677 | mg/L | 0.000389 | 0.08383 | mg/L | 0.001946 | 2.32% |
| Thallium,7440-28-0† | 5.3 | 0.00151 | mg/L | 0.001429 | 0.00756 | mg/L | 0.007143 | 94.47% |
| Tin,7440-31-5† | -12.4 | -0.00101 | mg/L | 0.000023 | -0.00504 | mg/L | 0.000117 | 2.33% |
| Titanium,7440-32-6† | -302.5 | -0.00022 | mg/L | 0.000142 | -0.00109 | mg/L | 0.000710 | 65.25% |
| Vanadium,7440-62-2† | 389.6 | 0.00109 | mg/L | 0.000121 | 0.00547 | mg/L | 0.000603 | 11.03% |
| Zinc,7440-66-6† | 12829.6 | 0.08302 | mg/L | 0.000154 | 0.41510 | mg/L | 0.000770 | 0.19% |
| Zirconium,7440-67-7† | -471.2 | -0.00055 | mg/L | 0.000110 | -0.00273 | mg/L | 0.000548 | 20.04% |

**Sequence No.: 17**
**Sample ID: 21310173001**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution: 5X**

**Autosampler Location: 22**
**Date Collected: 10/21/2013 2:29:13 PM**
**Data Type: Reprocessed on 10/21/2013 3:38:33 PM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 21310173001**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 8218963.2 | 95.0899 | % | 0.18352 | | | | 0.19% |
| Yttrium,7440-65-5A | 4017931.4 | 94.2295 | % | 0.25753 | | | | 0.27% |
| Yttrium,7440-65-5R | 370447.7 | 99.0362 | % | 0.92454 | | | | 0.93% |
| Ar 420.067 R | 2891900.1 | 99.2091 | % | 0.26896 | | | | 0.27% |
| Ar 363.268 A | 56921.2 | 98.7165 | % | 0.35361 | | | | 0.36% |
| Aluminum,7429-90-5† | 526.2 | 0.19204 | mg/L | 0.030713 | 0.96018 | mg/L | 0.153566 | 15.99% |
| Antimony,7440-36-0† | 5.6 | 0.00186 | mg/L | 0.002365 | 0.00930 | mg/L | 0.011826 | 127.15% |
| Arsenic,7440-38-2† | -47.1 | -0.02055 | mg/L | 0.004972 | -0.10274 | mg/L | 0.024859 | 24.20% |
| Barium,7440-39-3† | 18549.9 | 0.08087 | mg/L | 0.000335 | 0.40437 | mg/L | 0.001676 | 0.41% |
| Beryllium,7440-41-7† | -1515.0 | -0.00015 | mg/L | 0.000012 | -0.00073 | mg/L | 0.000060 | 8.23% |
| Boron,7440-42-8† | 432.7 | 0.00941 | mg/L | 0.000837 | 0.04706 | mg/L | 0.004183 | 8.89% |
| Cadmium,7440-43-9† | -0.1 | -0.00002 | mg/L | 0.000017 | -0.00009 | mg/L | 0.000087 | 95.13% |
| Calcium,7440-70-2† | 339302.9 | 17.2458 | mg/L | 0.49003 | 86.2292 | mg/L | 2.45017 | 2.84% |
| Chromium,7440-47-3† | 25.7 | 0.00031 | mg/L | 0.000040 | 0.00153 | mg/L | 0.000199 | 13.02% |
| Cobalt,7440-48-4† | 38.9 | 0.00051 | mg/L | 0.000183 | 0.00257 | mg/L | 0.000913 | 35.47% |
| Copper,7440-50-8† | 3671.4 | 0.00755 | mg/L | 0.000223 | 0.03774 | mg/L | 0.001117 | 2.96% |
| Iron,7439-89-6† | 17218.9 | 0.94461 | mg/L | 0.013496 | 4.72307 | mg/L | 0.067481 | 1.43% |
| Lead,7439-92-1† | 74.5 | 0.00268 | mg/L | 0.000163 | 0.01340 | mg/L | 0.000817 | 6.10% |
| Lithium,7439-93-2† | 356.9 | 0.00334 | mg/L | 0.000434 | 0.01670 | mg/L | 0.002172 | 13.00% |
| Magnesium,7439-95-4† | 5364.9 | 1.22156 | mg/L | 0.025920 | 6.10782 | mg/L | 0.129600 | 2.12% |
| Manganese,7439-96-5† | 75616.3 | 0.05339 | mg/L | 0.000069 | 0.26695 | mg/L | 0.000344 | 0.13% |
| Molybdenum,7439-98-7 | -24.6 | -0.00079 | mg/L | 0.000960 | -0.00395 | mg/L | 0.004801 | 121.68% |
| Nickel,7440-02-0† | 575.4 | 0.00485 | mg/L | 0.000156 | 0.02425 | mg/L | 0.000779 | 3.21% |
| Potassium,7440-09-7† | 1410.2 | 0.26029 | mg/L | 0.026961 | 1.30146 | mg/L | 0.134805 | 10.36% |
| Selenium,7782-49-2† | -21.6 | -0.00607 | mg/L | 0.003531 | -0.03035 | mg/L | 0.017657 | 58.18% |
| Silicon,7440-21-3† | 2207.3 | 0.59527 | mg/L | 0.016227 | 2.97634 | mg/L | 0.081134 | 2.73% |
| Silver,7440-22-4† | -387.1 | -0.00057 | mg/L | 0.000160 | -0.00286 | mg/L | 0.000802 | 28.02% |
| Sodium,7440-23-5† | 2198033.9 | 304.157 | mg/L | 8.7235 | 1520.78 | mg/L | 43.617 | 2.87% |
| Strontium,7440-24-6† | 56053.0 | 0.07496 | mg/L | 0.002006 | 0.37481 | mg/L | 0.010032 | 2.68% |
| Thallium,7440-28-0† | -4.6 | -0.00100 | mg/L | 0.000106 | -0.00502 | mg/L | 0.000528 | 10.52% |
| Tin,7440-31-5† | -66.1 | -0.00571 | mg/L | 0.000384 | -0.02855 | mg/L | 0.001921 | 6.73% |
| Titanium,7440-32-6† | 654.1 | 0.00047 | mg/L | 0.000080 | 0.00234 | mg/L | 0.000401 | 17.14% |
| Vanadium,7440-62-2† | 741.5 | 0.00208 | mg/L | 0.000239 | 0.01041 | mg/L | 0.001197 | 11.50% |
| Zinc,7440-66-6† | 412258.8 | 2.66811 | mg/L | 0.009460 | 13.3406 | mg/L | 0.04730 | 0.35% |
| Zirconium,7440-67-7† | -264.2 | -0.00031 | mg/L | 0.000158 | -0.00153 | mg/L | 0.000792 | 51.69% |

Sequence No.: 18
Sample ID: 21310152502
Analyst:
Logged In Analyst (Original) : met
Initial Sample Wt:
Dilution: 5X

Autosampler Location: 23
Date Collected: 10/21/2013 2:35:45 PM
Data Type: Reprocessed on 10/21/2013 3:38:35 PM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: 21310152502

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 8338138.7 | 96.4687 | % | 0.16540 | | | | 0.17% |
| Yttrium,7440-65-5A | 4084465.3 | 95.7899 | % | 0.38357 | | | | 0.40% |
| Yttrium,7440-65-5R | 376255.5 | 100.589 | % | 0.6501 | | | | 0.65% |
| Ar 420.067 R | 2897160.2 | 99.3896 | % | 0.57963 | | | | 0.58% |
| Ar 363.268 A | 56551.9 | 98.0761 | % | 0.61833 | | | | 0.63% |
| Aluminum,7429-90-5† | 117.7 | 0.04217 | mg/L | 0.011204 | 0.21086 | mg/L | 0.056020 | 26.57% |
| Antimony,7440-36-0† | 41673.9 | 13.6233 | mg/L | 0.05148 | 68.1167 | mg/L | 0.25742 | 0.38% |
| Arsenic,7440-38-2† | 59.1 | 0.03066 | mg/L | 0.002702 | 0.15330 | mg/L | 0.013512 | 8.81% |
| Barium,7440-39-3† | 6747.6 | 0.02938 | mg/L | 0.000128 | 0.14691 | mg/L | 0.000638 | 0.43% |
| Beryllium,7440-41-7† | -1635.3 | -0.00016 | mg/L | 0.000013 | -0.00078 | mg/L | 0.000067 | 8.62% |
| Boron,7440-42-8† | 18163.3 | 0.19890 | mg/L | 0.000829 | 0.99448 | mg/L | 0.004147 | 0.42% |
| Cadmium,7440-43-9† | -85.7 | -0.00038 | mg/L | 0.000017 | -0.00190 | mg/L | 0.000084 | 4.42% |
| Calcium,7440-70-2† | 65686.5 | 3.33724 | mg/L | 0.081384 | 16.6862 | mg/L | 0.40692 | 2.44% |
| Chromium,7440-47-3† | 6409.9 | 0.03003 | mg/L | 0.000053 | 0.15016 | mg/L | 0.000264 | 0.18% |
| Cobalt,7440-48-4† | 3516.7 | 0.04783 | mg/L | 0.000115 | 0.23915 | mg/L | 0.000576 | 0.24% |
| Copper,7440-50-8† | 14744.4 | 0.03021 | mg/L | 0.000306 | 0.15106 | mg/L | 0.001528 | 1.01% |
| Iron,7439-89-6† | 248.9 | 0.01347 | mg/L | 0.004786 | 0.06734 | mg/L | 0.023932 | 35.54% |
| Lead,7439-92-1† | -24.4 | -0.00081 | mg/L | 0.000861 | -0.00405 | mg/L | 0.004307 | 106.32% |
| Lithium,7439-93-2† | 297.1 | 0.00279 | mg/L | 0.001182 | 0.01395 | mg/L | 0.005911 | 42.38% |
| Magnesium,7439-95-4† | 1972.0 | 0.44990 | mg/L | 0.021533 | 2.24952 | mg/L | 0.107666 | 4.79% |
| Manganese,7439-96-5† | 639243.0 | 0.45133 | mg/L | 0.001875 | 2.25665 | mg/L | 0.009376 | 0.42% |
| Molybdenum,7439-98-7 | -40.9 | -0.00142 | mg/L | 0.000200 | -0.00709 | mg/L | 0.001001 | 14.12% |
| Nickel,7440-02-0† | 293482.0 | 2.47223 | mg/L | 0.008206 | 12.3611 | mg/L | 0.04103 | 0.33% |
| Potassium,7440-09-7† | 2626.0 | 0.48481 | mg/L | 0.061636 | 2.42407 | mg/L | 0.308182 | 12.71% |
| Selenium,7782-49-2† | 3.7 | 0.00100 | mg/L | 0.006622 | 0.00499 | mg/L | 0.033111 | 663.62% |
| Silicon,7440-21-3† | 572.7 | 0.15409 | mg/L | 0.003197 | 0.77043 | mg/L | 0.015984 | 2.07% |
| Silver,7440-22-4† | -398.8 | -0.00073 | mg/L | 0.000060 | -0.00366 | mg/L | 0.000299 | 8.16% |
| Sodium,7440-23-5† | 2121061.9 | 293.508 | mg/L | 7.6428 | 1467.54 | mg/L | 38.214 | 2.60% |
| Strontium,7440-24-6† | 8561.7 | 0.01142 | mg/L | 0.000474 | 0.05712 | mg/L | 0.002371 | 4.15% |
| Thallium,7440-28-0† | 7.4 | 0.00250 | mg/L | 0.002586 | 0.01252 | mg/L | 0.012930 | 103.26% |
| Tin,7440-31-5† | -33.7 | -0.00287 | mg/L | 0.001165 | -0.01436 | mg/L | 0.005825 | 40.56% |
| Titanium,7440-32-6† | -306.0 | -0.00023 | mg/L | 0.000139 | -0.00113 | mg/L | 0.000693 | 61.12% |
| Vanadium,7440-62-2† | 608.1 | 0.00179 | mg/L | 0.000262 | 0.00895 | mg/L | 0.001311 | 14.65% |
| Zinc,7440-66-6† | 15957.1 | 0.08637 | mg/L | 0.000502 | 0.43186 | mg/L | 0.002509 | 0.58% |
| Zirconium,7440-67-7† | -541.0 | -0.00053 | mg/L | 0.000069 | -0.00266 | mg/L | 0.000346 | 13.02% |

Sequence No.: 19
Sample ID: 1244705
Analyst:
Logged In Analyst (Original) : met
Initial Sample Wt: 1.25 g
Dilution: 1X

Autosampler Location: 24
Date Collected: 10/21/2013 2:42:20 PM
Data Type: Reprocessed on 10/21/2013 3:38:38 PM

Initial Sample Vol:
Sample Prep Vol: 50 mL

Mean Data: 1244705

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 8947912.6 | 103.523 | % | 0.5156 | | | | 0.50% |
| Yttrium,7440-65-5A | 4394337.5 | 103.057 | % | 0.6121 | | | | 0.59% |
| Yttrium,7440-65-5R | 397991.2 | 106.400 | % | 0.4420 | | | | 0.42% |
| Ar 420.067 R | 2923901.9 | 100.307 | % | 0.5068 | | | | 0.51% |
| Ar 363.268 A | 55528.7 | 96.3016 | % | 0.32680 | | | | 0.34% |
| Aluminum,7429-90-5† | 175.5 | 0.06414 | mg/L | 0.008637 | 2.56544 | mg/kg | 0.345475 | 13.47% |
| Antimony,7440-36-0† | 29.8 | 0.00972 | mg/L | 0.001337 | 0.38864 | mg/kg | 0.053477 | 13.76% |
| Arsenic,7440-38-2† | -4.5 | -0.00206 | mg/L | 0.003277 | -0.08229 | mg/kg | 0.131093 | 159.31% |
| Barium,7440-39-3† | 468.0 | 0.00204 | mg/L | 0.000053 | 0.08156 | mg/kg | 0.002128 | 2.61% |
| Beryllium,7440-41-7† | -1299.9 | -0.00013 | mg/L | 0.000005 | -0.00510 | mg/kg | 0.000216 | 4.24% |
| Boron,7440-42-8† | -2019.0 | -0.02169 | mg/L | 0.000427 | -0.86750 | mg/kg | 0.017073 | 1.97% |
| Cadmium,7440-43-9† | -5.1 | -0.00002 | mg/L | 0.000065 | -0.00089 | mg/kg | 0.002587 | 290.73% |
| Calcium,7440-70-2† | 8910.7 | 0.45292 | mg/L | 0.002793 | 18.1168 | mg/kg | 0.11172 | 0.62% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Chromium,7440-47-3† | 239.5 | 0.00113 | mg/L | 0.000254 | 0.04512 | mg/kg | 0.010144 | 22.48% |
| Cobalt,7440-48-4† | -23.8 | -0.00033 | mg/L | 0.000085 | -0.01310 | mg/kg | 0.003411 | 26.04% |
| Copper,7440-50-8† | -800.4 | -0.00167 | mg/L | 0.000055 | -0.06672 | mg/kg | 0.002182 | 3.27% |
| Iron,7439-89-6† | 503.0 | 0.02759 | mg/L | 0.002714 | 1.10372 | mg/kg | 0.108574 | 9.84% |
| Lead,7439-92-1† | -34.0 | -0.00111 | mg/L | 0.000114 | -0.04444 | mg/kg | 0.004541 | 10.22% |
| Lithium,7439-93-2† | 116.4 | 0.00109 | mg/L | 0.001107 | 0.04360 | mg/kg | 0.044273 | 101.54% |
| Magnesium,7439-95-4† | -72.5 | -0.01653 | mg/L | 0.015359 | -0.66105 | mg/kg | 0.614355 | 92.94% |
| Manganese,7439-96-5† | -3153.3 | -0.00223 | mg/L | 0.000044 | -0.08902 | mg/kg | 0.001757 | 1.97% |
| Molybdenum,7439-98-7 | -19.9 | -0.00070 | mg/L | 0.000394 | -0.02818 | mg/kg | 0.015763 | 55.93% |
| Nickel,7440-02-0† | 166.7 | 0.00140 | mg/L | 0.000449 | 0.05617 | mg/kg | 0.017964 | 31.98% |
| Potassium,7440-09-7† | 310.1 | 0.05716 | mg/L | 0.022213 | 2.28627 | mg/kg | 0.888519 | 38.86% |
| Selenium,7782-49-2† | -17.2 | -0.00515 | mg/L | 0.002304 | -0.20582 | mg/kg | 0.092142 | 44.77% |
| Silicon,7440-21-3† | -51.5 | -0.01390 | mg/L | 0.006692 | -0.55605 | mg/kg | 0.267685 | 48.14% |
| Silver,7440-22-4† | -1399.4 | -0.00231 | mg/L | 0.000086 | -0.09248 | mg/kg | 0.003440 | 3.72% |
| Sodium,7440-23-5† | 4991.9 | 0.69074 | mg/L | 0.073045 | 27.6297 | mg/kg | 2.92178 | 10.57% |
| Strontium,7440-24-6† | 205.2 | 0.00026 | mg/L | 0.000177 | 0.01054 | mg/kg | 0.007082 | 67.20% |
| Thallium,7440-28-0† | -1.5 | -0.00039 | mg/L | 0.000977 | -0.01552 | mg/kg | 0.039094 | 251.89% |
| Tin,7440-31-5† | -34.8 | -0.00331 | mg/L | 0.000169 | -0.13226 | mg/kg | 0.006743 | 5.10% |
| Titanium,7440-32-6† | -227.9 | -0.00016 | mg/L | 0.000132 | -0.00655 | mg/kg | 0.005278 | 80.64% |
| Vanadium,7440-62-2† | -264.4 | -0.00079 | mg/L | 0.000684 | -0.03156 | mg/kg | 0.027360 | 86.68% |
| Zinc,7440-66-6† | 270.9 | 0.00174 | mg/L | 0.000115 | 0.06980 | mg/kg | 0.004611 | 6.61% |
| Zirconium,7440-67-7† | -586.1 | -0.00068 | mg/L | 0.000114 | -0.02720 | mg/kg | 0.004565 | 16.78% |

**Sequence No.: 20**
**Sample ID: 1244706**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt: 1.25 g**
**Dilution: 1X**

**Autosampler Location: 25**
**Date Collected: 10/21/2013 2:48:43 PM**
**Data Type: Reprocessed on 10/21/2013 3:38:41 PM**

**Initial Sample Vol:**
**Sample Prep Vol: 50 mL**

**Mean Data: 1244706**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 8773191.4 | 101.502 | % | 0.7570 | | | | 0.75% |
| Yttrium,7440-65-5A | 4261379.9 | 99.9389 | % | 0.74813 | | | | 0.75% |
| Yttrium,7440-65-5R | 387545.8 | 103.607 | % | 1.5206 | | | | 1.47% |
| Ar 420.067 R | 2905680.8 | 99.6819 | % | 0.72105 | | | | 0.72% |
| Ar 363.268 A | 55886.1 | 96.9214 | % | 0.32131 | | | | 0.33% |
| Aluminum,7429-90-5† | 14223.9 | 5.19113 | mg/L | 0.161725 | 207.645 | mg/kg | 6.4690 | 3.12% |
| Antimony,7440-36-0† | 1634.0 | 0.52553 | mg/L | 0.007532 | 21.0212 | mg/kg | 0.30127 | 1.43% |
| Arsenic,7440-38-2† | 1115.8 | 0.52571 | mg/L | 0.009839 | 21.0285 | mg/kg | 0.39354 | 1.87% |
| Barium,7440-39-3† | 117981.2 | 0.51608 | mg/L | 0.004305 | 20.6433 | mg/kg | 0.17221 | 0.83% |
| Beryllium,7440-41-7† | 5172294.4 | 0.50722 | mg/L | 0.003085 | 20.2889 | mg/kg | 0.12340 | 0.61% |
| Boron,7440-42-8† | 222093.1 | 2.42581 | mg/L | 0.033430 | 97.0323 | mg/kg | 1.33719 | 1.38% |
| Cadmium,7440-43-9† | 119718.2 | 0.51116 | mg/L | 0.005066 | 20.4466 | mg/kg | 0.20266 | 0.99% |
| Calcium,7440-70-2† | 104535.9 | 5.31069 | mg/L | 0.093406 | 212.428 | mg/kg | 3.7363 | 1.76% |
| Chromium,7440-47-3† | 110487.8 | 0.52168 | mg/L | 0.004776 | 20.8672 | mg/kg | 0.19103 | 0.92% |
| Cobalt,7440-48-4† | 37883.4 | 0.51868 | mg/L | 0.005781 | 20.7471 | mg/kg | 0.23124 | 1.11% |
| Copper,7440-50-8† | 247038.8 | 0.51423 | mg/L | 0.004375 | 20.5691 | mg/kg | 0.17499 | 0.85% |
| Iron,7439-89-6† | 92844.5 | 5.09223 | mg/L | 0.108497 | 203.689 | mg/kg | 4.3399 | 2.13% |
| Lead,7439-92-1† | 15347.7 | 0.50801 | mg/L | 0.003109 | 20.3206 | mg/kg | 0.12436 | 0.61% |
| Lithium,7439-93-2† | 53595.3 | 0.50198 | mg/L | 0.010863 | 20.0790 | mg/kg | 0.43453 | 2.16% |
| Magnesium,7439-95-4† | 22373.6 | 5.09606 | mg/L | 0.147492 | 203.843 | mg/kg | 5.8997 | 2.89% |
| Manganese,7439-96-5† | 726967.7 | 0.51336 | mg/L | 0.004669 | 20.5344 | mg/kg | 0.18675 | 0.91% |
| Molybdenum,7439-98-7 | 14800.6 | 0.52819 | mg/L | 0.003749 | 21.1276 | mg/kg | 0.14998 | 0.71% |
| Nickel,7440-02-0† | 61856.5 | 0.52100 | mg/L | 0.004268 | 20.8398 | mg/kg | 0.17070 | 0.82% |
| Potassium,7440-09-7† | 53848.7 | 9.92448 | mg/L | 0.227081 | 396.979 | mg/kg | 9.0833 | 2.29% |
| Selenium,7782-49-2† | 1681.1 | 0.50226 | mg/L | 0.010368 | 20.0902 | mg/kg | 0.41471 | 2.06% |
| Silicon,7440-21-3† | 1061.5 | 0.28506 | mg/L | 0.008529 | 11.4022 | mg/kg | 0.34114 | 2.99% |
| Silver,7440-22-4† | 309357.6 | 0.51295 | mg/L | 0.004970 | 20.5180 | mg/kg | 0.19881 | 0.97% |
| Sodium,7440-23-5† | 146530.2 | 20.2782 | mg/L | 0.39118 | 811.128 | mg/kg | 15.6472 | 1.93% |
| Strontium,7440-24-6† | 377754.2 | 0.50829 | mg/L | 0.011593 | 20.3314 | mg/kg | 0.46372 | 2.28% |
| Thallium,7440-28-0† | 1993.5 | 0.52062 | mg/L | 0.008212 | 20.8248 | mg/kg | 0.32849 | 1.58% |
| Tin,7440-31-5† | 5634.1 | 0.53991 | mg/L | 0.004843 | 21.5965 | mg/kg | 0.19373 | 0.90% |
| Titanium,7440-32-6† | 738720.8 | 0.53046 | mg/L | 0.004705 | 21.2182 | mg/kg | 0.18818 | 0.89% |
| Vanadium,7440-62-2† | 171814.7 | 0.51290 | mg/L | 0.004288 | 20.5160 | mg/kg | 0.17154 | 0.84% |
| Zinc,7440-66-6† | 78587.5 | 0.50443 | mg/L | 0.004550 | 20.1772 | mg/kg | 0.18198 | 0.90% |
| Zirconium,7440-67-7† | 222.1 | 0.00004 | mg/L | 0.000135 | 0.00174 | mg/kg | 0.005400 | 310.83% |

**Sequence No.: 21**
**Sample ID: 21310174601**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt: 1.26 g**
**Dilution: 1X**

**Autosampler Location: 26**
**Date Collected: 10/21/2013 2:55:20 PM**
**Data Type: Reprocessed on 10/21/2013 3:38:43 PM**

**Initial Sample Vol:**
**Sample Prep Vol: 50 mL**

**Mean Data: 21310174601**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 8628071.1 | 99.8231 | % | 0.31299 | | | | 0.31% |
| Yttrium,7440-65-5A | 4774259.6 | 111.967 | % | 0.3378 | | | | 0.30% |
| Yttrium,7440-65-5R | 450701.2 | 120.491 | % | 0.7033 | | | | 0.58% |
| Ar 420.067 R | 2781420.5 | 95.4190 | % | 0.53189 | | | | 0.56% |
| Ar 363.268 A | 51763.7 | 89.7721 | % | 0.70276 | | | | 0.78% |
| Aluminum,7429-90-5† | 1100535.4 | 402.117 | mg/L | 5.0107 | 15957.0 | mg/kg | 198.84 | 1.25% |
| Antimony,7440-36-0† | -279.2 | 0.01197 | mg/L | 0.002916 | 0.47514 | mg/kg | 0.115718 | 24.35% |
| Arsenic,7440-38-2† | -422.3 | 0.01441 | mg/L | 0.018621 | 0.57191 | mg/kg | 0.738923 | 129.20% |
| Barium,7440-39-3† | 724426.5 | 3.16027 | mg/L | 0.004789 | 125.408 | mg/kg | 0.1900 | 0.15% |
| Beryllium,7440-41-7† | -732739.6 | 0.01518 | mg/L | 0.001191 | 0.60239 | mg/kg | 0.047275 | 7.85% |
| Boron,7440-42-8† | -176763.2 | 0.11085 | mg/L | 0.029935 | 4.39897 | mg/kg | 1.187889 | 27.00% |
| Cadmium,7440-43-9† | 1897.1 | 0.00023 | mg/L | 0.000347 | 0.00895 | mg/kg | 0.013787 | 154.11% |
| Calcium,7440-70-2† | 172819.5 | 8.64242 | mg/L | 0.046243 | 342.953 | mg/kg | 1.8350 | 0.54% |
| Chromium,7440-47-3† | 100079.8 | 0.48277 | mg/L | 0.001157 | 19.1574 | mg/kg | 0.04592 | 0.24% |
| Cobalt,7440-48-4† | 26861.5 | 0.29520 | mg/L | 0.002032 | 11.7142 | mg/kg | 0.08062 | 0.69% |
| Copper,7440-50-8† | 208518.1 | 0.42534 | mg/L | 0.001180 | 16.8786 | mg/kg | 0.04683 | 0.28% |
| Iron,7439-89-6† | 8005988.6 | 439.139 | mg/L | 5.0044 | 17426.2 | mg/kg | 198.59 | 1.14% |
| Lead,7439-92-1† | 3493.8 | 0.14057 | mg/L | 0.001203 | 5.57817 | mg/kg | 0.047736 | 0.86% |
| Lithium,7439-93-2† | 35041.2 | 0.32742 | mg/L | 0.001700 | 12.9927 | mg/kg | 0.06746 | 0.52% |
| Magnesium,7439-95-4† | 496784.1 | 113.035 | mg/L | 0.7173 | 4485.51 | mg/kg | 28.464 | 0.63% |
| Manganese,7439-96-5† | 8745493.4 | 6.17934 | mg/L | 0.071525 | 245.212 | mg/kg | 2.8383 | 1.16% |
| Molybdenum,7439-98-7 | -1392.3 | -0.00061 | mg/L | 0.001074 | -0.02432 | mg/kg | 0.042636 | 175.32% |
| Nickel,7440-02-0† | 45638.8 | 0.38255 | mg/L | 0.001572 | 15.1806 | mg/kg | 0.06240 | 0.41% |
| Potassium,7440-09-7† | 783800.5 | 144.468 | mg/L | 1.9528 | 5732.85 | mg/kg | 77.493 | 1.35% |
| Selenium,7782-49-2† | -121.9 | 0.01837 | mg/L | 0.010914 | 0.72903 | mg/kg | 0.433109 | 59.41% |
| Silicon,7440-21-3† | 48660.3 | 13.1143 | mg/L | 0.04333 | 520.408 | mg/kg | 1.7193 | 0.33% |
| Silver,7440-22-4† | -13320.3 | -0.01037 | mg/L | 0.000160 | -0.41154 | mg/kg | 0.006334 | 1.54% |
| Sodium,7440-23-5† | 9805.0 | 1.39951 | mg/L | 0.009347 | 55.5361 | mg/kg | 0.37093 | 0.67% |
| Strontium,7440-24-6† | 108830.2 | 0.14517 | mg/L | 0.001316 | 5.76074 | mg/kg | 0.052232 | 0.91% |
| Thallium,7440-28-0† | -1600.3 | 0.03295 | mg/L | 0.009254 | 1.30769 | mg/kg | 0.367231 | 28.08% |
| Tin,7440-31-5† | -821.3 | 0.03797 | mg/L | 0.004471 | 1.50682 | mg/kg | 0.177420 | 11.77% |
| Titanium,7440-32-6† | 43733770.5 | 31.4066 | mg/L | 0.36006 | 1246.29 | mg/kg | 14.288 | 1.15% |
| Vanadium,7440-62-2† | 307508.9 | 0.89228 | mg/L | 0.001916 | 35.4079 | mg/kg | 0.07603 | 0.21% |
| Zinc,7440-66-6† | 178069.9 | 1.11900 | mg/L | 0.002358 | 44.4047 | mg/kg | 0.09359 | 0.21% |
| Zirconium,7440-67-7† | 5832.9 | -0.00971 | mg/L | 0.000464 | -0.38528 | mg/kg | 0.018407 | 4.78% |

**Sequence No.: 22**
**Sample ID: 1800**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 7**
**Date Collected: 10/21/2013 3:02:06 PM**
**Data Type: Reprocessed on 10/21/2013 3:38:46 PM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 1800**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 8795474.7 | 101.760 | % | 0.2116 | | | | 0.21% |
| Yttrium,7440-65-5A | 4369271.2 | 102.469 | % | 0.3105 | | | | 0.30% |
| Yttrium,7440-65-5R | 406665.1 | 108.719 | % | 0.2896 | | | | 0.27% |
| Ar 420.067 R | 2867741.6 | 98.3803 | % | 0.40932 | | | | 0.42% |
| Ar 363.268 A | 54820.4 | 95.0732 | % | 0.73936 | | | | 0.78% |
| Aluminum,7429-90-5† | 13872.2 | 5.06293 | mg/L | 0.011328 | 5.06293 | mg/L | 0.011328 | 0.22% |
| QC value within limits for Aluminum,7429-90-5 Recovery = 101.26% | | | | | | | | |
| Antimony,7440-36-0† | 1529.1 | 0.49174 | mg/L | 0.003130 | 0.49174 | mg/L | 0.003130 | 0.64% |
| QC value within limits for Antimony,7440-36-0 Recovery = 98.35% | | | | | | | | |
| Arsenic,7440-38-2† | 1063.3 | 0.50102 | mg/L | 0.003979 | 0.50102 | mg/L | 0.003979 | 0.79% |
| QC value within limits for Arsenic,7440-38-2 Recovery = 100.20% | | | | | | | | |
| Barium,7440-39-3† | 112463.1 | 0.49194 | mg/L | 0.001601 | 0.49194 | mg/L | 0.001601 | 0.33% |
| QC value within limits for Barium,7440-39-3 Recovery = 98.39% | | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Beryllium,7440-41-7† | 4980373.7 | 0.48839 mg/L | 0.001700 | 0.48839 mg/L | 0.001700 | 0.35% |
| QC value within limits for Beryllium,7440-41-7 Recovery = 97.68% | | | | | | |
| Boron,7440-42-8† | 215961.5 | 2.35973 mg/L | 0.021259 | 2.35973 mg/L | 0.021259 | 0.90% |
| QC value within limits for Boron,7440-42-8 Recovery = 94.39% | | | | | | |
| Cadmium,7440-43-9† | 114404.5 | 0.48847 mg/L | 0.002180 | 0.48847 mg/L | 0.002180 | 0.45% |
| QC value within limits for Cadmium,7440-43-9 Recovery = 97.69% | | | | | | |
| Calcium,7440-70-2† | 96107.3 | 4.88236 mg/L | 0.024114 | 4.88236 mg/L | 0.024114 | 0.49% |
| QC value within limits for Calcium,7440-70-2 Recovery = 97.65% | | | | | | |
| Chromium,7440-47-3† | 104561.6 | 0.49371 mg/L | 0.001895 | 0.49371 mg/L | 0.001895 | 0.38% |
| QC value within limits for Chromium,7440-47-3 Recovery = 98.74% | | | | | | |
| Cobalt,7440-48-4† | 35715.6 | 0.48898 mg/L | 0.001464 | 0.48898 mg/L | 0.001464 | 0.30% |
| QC value within limits for Cobalt,7440-48-4 Recovery = 97.80% | | | | | | |
| Copper,7440-50-8† | 232832.8 | 0.48465 mg/L | 0.001604 | 0.48465 mg/L | 0.001604 | 0.33% |
| QC value within limits for Copper,7440-50-8 Recovery = 96.93% | | | | | | |
| Iron,7439-89-6† | 94173.4 | 5.16515 mg/L | 0.016363 | 5.16515 mg/L | 0.016363 | 0.32% |
| QC value within limits for Iron,7439-89-6 Recovery = 103.30% | | | | | | |
| Lead,7439-92-1† | 14693.2 | 0.48634 mg/L | 0.001714 | 0.48634 mg/L | 0.001714 | 0.35% |
| QC value within limits for Lead,7439-92-1 Recovery = 97.27% | | | | | | |
| Lithium,7439-93-2† | 54474.3 | 0.51021 mg/L | 0.002186 | 0.51021 mg/L | 0.002186 | 0.43% |
| QC value within limits for Lithium,7439-93-2 Recovery = 102.04% | | | | | | |
| Magnesium,7439-95-4† | 21304.2 | 4.85237 mg/L | 0.015546 | 4.85237 mg/L | 0.015546 | 0.32% |
| QC value within limits for Magnesium,7439-95-4 Recovery = 97.05% | | | | | | |
| Manganese,7439-96-5† | 692549.7 | 0.48906 mg/L | 0.001273 | 0.48906 mg/L | 0.001273 | 0.26% |
| QC value within limits for Manganese,7439-96-5 Recovery = 97.81% | | | | | | |
| Molybdenum,7439-98-7 | 13825.2 | 0.49342 mg/L | 0.003697 | 0.49342 mg/L | 0.003697 | 0.75% |
| QC value within limits for Molybdenum,7439-98-7 Recovery = 98.68% | | | | | | |
| Nickel,7440-02-0† | 58532.5 | 0.49300 mg/L | 0.002766 | 0.49300 mg/L | 0.002766 | 0.56% |
| QC value within limits for Nickel,7440-02-0 Recovery = 98.60% | | | | | | |
| Potassium,7440-09-7† | 56122.8 | 10.3436 mg/L | 0.01898 | 10.3436 mg/L | 0.01898 | 0.18% |
| QC value within limits for Potassium,7440-09-7 Recovery = 103.44% | | | | | | |
| Selenium,7782-49-2† | 1602.3 | 0.47879 mg/L | 0.007308 | 0.47879 mg/L | 0.007308 | 1.53% |
| QC value within limits for Selenium,7782-49-2 Recovery = 95.76% | | | | | | |
| Silicon,7440-21-3† | 18009.0 | 4.85728 mg/L | 0.066073 | 4.85728 mg/L | 0.066073 | 1.36% |
| QC value within limits for Silicon,7440-21-3 Recovery = 97.15% | | | | | | |
| Silver,7440-22-4† | 294418.2 | 0.48818 mg/L | 0.001315 | 0.48818 mg/L | 0.001315 | 0.27% |
| QC value within limits for Silver,7440-22-4 Recovery = 97.64% | | | | | | |
| Sodium,7440-23-5† | 138197.6 | 19.1251 mg/L | 0.41351 | 19.1251 mg/L | 0.41351 | 2.16% |
| QC value within limits for Sodium,7440-23-5 Recovery = 95.63% | | | | | | |
| Strontium,7440-24-6† | 357459.3 | 0.48098 mg/L | 0.011141 | 0.48098 mg/L | 0.011141 | 2.32% |
| QC value within limits for Strontium,7440-24-6 Recovery = 96.20% | | | | | | |
| Thallium,7440-28-0† | 1930.9 | 0.50417 mg/L | 0.003774 | 0.50417 mg/L | 0.003774 | 0.75% |
| QC value within limits for Thallium,7440-28-0 Recovery = 100.83% | | | | | | |
| Tin,7440-31-5† | 5181.8 | 0.49665 mg/L | 0.002882 | 0.49665 mg/L | 0.002882 | 0.58% |
| QC value within limits for Tin,7440-31-5 Recovery = 99.33% | | | | | | |
| Titanium,7440-32-6† | 704766.2 | 0.50607 mg/L | 0.002020 | 0.50607 mg/L | 0.002020 | 0.40% |
| QC value within limits for Titanium,7440-32-6 Recovery = 101.21% | | | | | | |
| Vanadium,7440-62-2† | 163347.2 | 0.48760 mg/L | 0.001732 | 0.48760 mg/L | 0.001732 | 0.36% |
| QC value within limits for Vanadium,7440-62-2 Recovery = 97.52% | | | | | | |
| Zinc,7440-66-6† | 75300.4 | 0.48335 mg/L | 0.001884 | 0.48335 mg/L | 0.001884 | 0.39% |
| QC value within limits for Zinc,7440-66-6 Recovery = 96.67% | | | | | | |
| Zirconium,7440-67-7† | 415082.4 | 0.48160 mg/L | 0.009157 | 0.48160 mg/L | 0.009157 | 1.90% |
| QC value within limits for Zirconium,7440-67-7 Recovery = 96.32% | | | | | | |

All analyte(s) passed QC.

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**Sequence No.: 23**
**Sample ID: 1900**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 1**
**Date Collected: 10/21/2013 3:08:42 PM**
**Data Type: Reprocessed on 10/21/2013 3:38:49 PM**
**Initial Sample Vol:**
**Sample Prep Vol:**

---

**Mean Data: 1900**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 9057514.7 | 104.792 | % | 0.9843 | | | | 0.94% |
| Yttrium,7440-65-5A | 4472961.4 | 104.901 | % | 0.9425 | | | | 0.90% |
| Yttrium,7440-65-5R | 405783.5 | 108.483 | % | 1.2325 | | | | 1.14% |
| Ar 420.067 R | 2876606.8 | 98.6845 | % | 0.29892 | | | | 0.30% |
| Ar 363.268 A | 54568.8 | 94.6369 | % | 0.40888 | | | | 0.43% |
| Aluminum,7429-90-5† | 129.8 | 0.04743 | mg/L | 0.009648 | 0.04743 | mg/L | 0.009648 | 20.34% |

QC value within limits for Aluminum,7429-90-5 Recovery = Not calculated
Antimony,7440-36-0† 4.7 0.00149 mg/L 0.002840 0.00149 mg/L 0.002840 190.76%
QC value within limits for Antimony,7440-36-0 Recovery = Not calculated
Arsenic,7440-38-2† -0.7 -0.00032 mg/L 0.000634 -0.00032 mg/L 0.000634 195.81%
QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated
Barium,7440-39-3† 30.2 0.00013 mg/L 0.000164 0.00013 mg/L 0.000164 125.53%
QC value within limits for Barium,7440-39-3 Recovery = Not calculated
Beryllium,7440-41-7† -190.4 -0.00001 mg/L 0.000024 -0.00001 mg/L 0.000024 211.92%
QC value within limits for Beryllium,7440-41-7 Recovery = Not calculated
Boron,7440-42-8† -507.3 -0.00525 mg/L 0.003578 -0.00525 mg/L 0.003578 68.19%
QC value within limits for Boron,7440-42-8 Recovery = Not calculated
Cadmium,7440-43-9† 45.1 0.00019 mg/L 0.000062 0.00019 mg/L 0.000062 32.54%
QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated
Calcium,7440-70-2† -155.5 -0.00789 mg/L 0.001877 -0.00789 mg/L 0.001877 23.78%
QC value within limits for Calcium,7440-70-2 Recovery = Not calculated
Chromium,7440-47-3† 466.0 0.00219 mg/L 0.000193 0.00219 mg/L 0.000193 8.81%
QC value within limits for Chromium,7440-47-3 Recovery = Not calculated
Cobalt,7440-48-4† -14.8 -0.00021 mg/L 0.000331 -0.00021 mg/L 0.000331 158.76%
QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated
Copper,7440-50-8† -780.2 -0.00162 mg/L 0.000334 -0.00162 mg/L 0.000334 20.57%
QC value within limits for Copper,7440-50-8 Recovery = Not calculated
Iron,7439-89-6† 966.2 0.05300 mg/L 0.002228 0.05300 mg/L 0.002228 4.20%
QC value within limits for Iron,7439-89-6 Recovery = Not calculated
Lead,7439-92-1† -63.2 -0.00209 mg/L 0.000765 -0.00209 mg/L 0.000765 36.64%
QC value within limits for Lead,7439-92-1 Recovery = Not calculated
Lithium,7439-93-2† 356.7 0.00334 mg/L 0.000636 0.00334 mg/L 0.000636 19.05%
QC value within limits for Lithium,7439-93-2 Recovery = Not calculated
Magnesium,7439-95-4† -322.2 -0.07341 mg/L 0.006367 -0.07341 mg/L 0.006367 8.67%
QC value within limits for Magnesium,7439-95-4 Recovery = Not calculated
Manganese,7439-96-5† -2282.1 -0.00161 mg/L 0.000073 -0.00161 mg/L 0.000073 4.56%
QC value within limits for Manganese,7439-96-5 Recovery = Not calculated
Molybdenum,7439-98-7 57.8 0.00207 mg/L 0.000431 0.00207 mg/L 0.000431 20.84%
QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated
Nickel,7440-02-0† 54.1 0.00046 mg/L 0.000229 0.00046 mg/L 0.000229 50.17%
QC value within limits for Nickel,7440-02-0 Recovery = Not calculated
Potassium,7440-09-7† 1337.1 0.24640 mg/L 0.039370 0.24640 mg/L 0.039370 15.98%
QC value within limits for Potassium,7440-09-7 Recovery = Not calculated
Selenium,7782-49-2† -16.0 -0.00476 mg/L 0.007445 -0.00476 mg/L 0.007445 156.54%
QC value within limits for Selenium,7782-49-2 Recovery = Not calculated
Silicon,7440-21-3† -23.4 -0.00631 mg/L 0.008664 -0.00631 mg/L 0.008664 137.38%
QC value within limits for Silicon,7440-21-3 Recovery = Not calculated
Silver,7440-22-4† -1131.4 -0.00187 mg/L 0.000214 -0.00187 mg/L 0.000214 11.46%
QC value within limits for Silver,7440-22-4 Recovery = Not calculated
Sodium,7440-23-5† 1665.6 0.23048 mg/L 0.008300 0.23048 mg/L 0.008300 3.60%
QC value within limits for Sodium,7440-23-5 Recovery = Not calculated
Strontium,7440-24-6† -239.2 -0.00032 mg/L 0.000102 -0.00032 mg/L 0.000102 31.71%
QC value within limits for Strontium,7440-24-6 Recovery = Not calculated
Thallium,7440-28-0† 15.3 0.00396 mg/L 0.001164 0.00396 mg/L 0.001164 29.42%
QC value within limits for Thallium,7440-28-0 Recovery = Not calculated
Tin,7440-31-5† 15.1 0.00145 mg/L 0.001104 0.00145 mg/L 0.001104 75.94%
QC value within limits for Tin,7440-31-5 Recovery = Not calculated
Titanium,7440-32-6† 3552.8 0.00255 mg/L 0.000203 0.00255 mg/L 0.000203 7.96%
QC value within limits for Titanium,7440-32-6 Recovery = Not calculated
Vanadium,7440-62-2† -281.6 -0.00084 mg/L 0.000195 -0.00084 mg/L 0.000195 23.33%
QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated
Zinc,7440-66-6† -175.3 -0.00114 mg/L 0.000141 -0.00114 mg/L 0.000141 12.36%
QC value within limits for Zinc,7440-66-6 Recovery = Not calculated
Zirconium,7440-67-7† -448.9 -0.00052 mg/L 0.000190 -0.00052 mg/L 0.000190 36.30%
QC value within limits for Zirconium,7440-67-7 Recovery = Not calculated
All analyte(s) passed QC.

GCAL ANALYTICAL LABORATORIES, LLC

# ICP

BY METHODS EPA 200.7/6010B/6010C

Date: 10/25/13
Analyst: CMB, AWG

Instrument ID: ICP 5
HBN: 518786
Batch: 8717

| | | | |
|---|---|---|---|
| Cal Standard | 225-21-3 | Exp. Date | 11/25/13 |
| ICV Standard | 225-11-4 | Exp. Date | 11/14/13 |
| CRDL Standard | 225-14-4 | Exp. Date | 11/17/13 |
| ICSA Standard | 225-11-2 | Exp. Date | 11/14/13 |
| ICSAB Standard | 225-11-3 | Exp. Date | 11/14/13 |
| Internal Standard | 225-21-4 | Exp. Date | 11/25/13 |

| | | | |
|---|---|---|---|
| ICP Acid Matrix (Calibration Blank) (6% HNO3/10% HCl) | 225-16-9 | Exp. Date | 11/21/13 |
| ICP Acid Rinse (5% HNO3) | 225-19-12 | Exp. Date | 11/28/13 |

**QC Limits:**

| | GCAL Limits | DOD Limits |
|---|---|---|
| ICV/ICV2 (6010B/6010C) | 90-110% | 90-110% |
| CCV (6010B/6010C) | 90-110% | 90-110% |
| ICV/ICV2 (200.7) | 95-105% | N/A |
| CCV (1st – 200.7) | 95-105% | N/A |
| Continuing CCV (200.7) | 90-110% | N/A |
| ICSA/ICSAB | 80-120% | 80-120% |
| CRDL/CRDL2 | 50-150% | 80-120% |

Revision 001: 6/4/2013

Reviewer/Date: AWG 11/1/13
AWG 10/30/13
AWG 11/4/13

213101712 1190

## ICP Analysis

INSTRUMENT ID = **ICP5**

ANALYST / DATE / TIME: CMB, 10/29/2013,

QC CONTROL LIMITS: ICV (200.7) 95-105% ICV (6010B) 90-110% ICSAB 80-120% CCV 90-110%

| AS# | SAMPLE ID |
|---|---|
| 1 | CAL. BLK-1300 |
| 2 | CAL. STD-1301 |
| ✓11 | ICV-1600 ✓ 200.7✓ |
| 12 | ~~ICV2-1601~~ |
| ✓1 | ICB-1700 |
| ✓3 | CRDL-2300 |
| 4 | ~~CRDL-2301~~ |
| ✓5 | ICSA-2000 |
| ✓6 | ICSAB-2100 |
| ✓7 | CCV-1800 200.7✓ |
| ✓ | CCB-1900 |

| AS# | | | | | Dilution |
|---|---|---|---|---|---|
| | | | 1800 1900 | | |
| 17 | 1245227 | M MB for HBN 518082 | 6010C | W | |
| 18 | 1245228 | M LCS for HBN 518082 | 6010C | W | |
| 19 | | R 21310183903 Ca | 6010C | W | 10x R/R@1x |
| 20 | 1245229 | M 21310183903 MS | 6010C | W | 10x |
| 21 | 1245230 | M 21310183903 MSD | 6010C | W | 10x |
| 22 | ~~1248951~~ 1250471 | 21310183903 PDS | 6010C | W | 10x |
| 23 | ~~1248952~~ AWa 11/1/13 | 21310183903 SD | 6010C | W | 50x |
| 24 | 1250472 | ~~M 21310183601~~ | ~~6010C~~ | ~~W~~ | ~~500x~~ R/R@50x |
| 25 | | R 21310183901 Ca | 6010C | W | 10x R/R@1x |
| 26 | | R 21310183902 Na, Ca, Mg | 6010C | W | 10x |
| 7 | CCV-1800 ✓ | | | | |
| 1 | CCB-1900 ✓ | | | | |
| 27 | 225-21-6 | CRDL-2 Zr @ 0.0045mg/L 51% | | | |
| 28 | | R 21310183904 Na, Ca, Mg | 6010C | W | 10x R/R@1x |
| 29 | | R 21310183905 Na, Ca, Mg | 6010C | W | 10x |
| 30 | | R 21310183906 Na, Ca, Mg | 6010C | W | 10x |
| 31 | | R 21310183907 Ca | 6010C | W | 10x |
| 32 | | R 21310183908 Ca | 6010C | W | 10x |
| 33 | | R 21310184001 Ca | 6010C | W | 10x |
| 34 | | R 21310184002 Na, Ca, Mg | 6010C | W | 10x |
| 35 | | R 21310184003 Na, Ca, Mg | 6010C | W | 10x |
| 36 | | R 21310184004 Na, Ca, Mg | 6010C | W | 10x |
| 7 | CCV-1800 ✓ | AWa 11/4/13 | | | |
| 1 | CCB-1900 ✓ | | | | |
| 37 | | R 21310184005 Ca | 6010C | W | 10x R/R@1x |
| 38 | | R 21310184006 Ca | 6010C | W | 10x |
| 39 | | R 21310184007 Na, Ca, Mg AWa 11/4/13 | 6010C | W | 10x |
| 40 | | R 21310184008 Ca | 6010C | W | 10x |
| 41 | | R 21310184009 Na, Ca, Mg | 6010C | W | 10x ** |
| 42 | 1245223 | M MB for HBN 518081 | 6010C_D | W | MB>RL for Na |
| 43 | 1245224 | M LCS for HBN 518081 | 6010C_D | W | |
| 44 | | R 21310183904 Na, Ca, Mg | 6010C_D | W | 10x R/R@1x |
| 45 | 1245225 | M 21310183904 MS | 6010C_D | W | 10x |
| 46 | 1245226 | M 21310183904 MSD | 6010C_D | W | 10x |
| 7 | CCV-1800 ✓ | | | | |
| 1 | CCB-1900 ✓ | | | | |

| AS# | SAMPLE ID | | | | Dilution |
|---|---|---|---|---|---|
| 47 | ~~1248953~~ 1250473 | 21310183904 PDS Na, Ca, Mg | 6010C | W | 10x R/R@1x |
| 48 | ~~1248954~~ AWa 11/1/13 | 21310183904 SD | 6010C | W | 50x |
| 49 | 1250474 | ~~R 21310183901~~ | ~~6010C_D~~ | ~~W~~ | ~~10x~~ |
| 50 | | R 21310183902 Na, Ca, Mg | 6010C_D | W | 10x |
| 51 | | ~~R 21310183903~~ | ~~6010C_D~~ | ~~W~~ | ~~10x~~ |
| 52 | | R 21310183905 Na, Ca, Mg | 6010C_D | W | 10x |
| 53 | | R 21310183906 Na, Ca, Mg AWa 10/30/13 | 6010C_D | W | 10x |
| 54 | | ~~R 21310183907 Na~~ | ~~6010C_D~~ | ~~W~~ | ~~10x~~ |
| 55 | | ~~R 21310183908~~ | ~~6010C_D~~ | ~~W~~ | ~~10x~~ |
| 56 | | ~~R 21310184001~~ | ~~6010C_D~~ | ~~W~~ | ~~10x~~ |
| 7 | CCV-1800 | F: Ca, Mg, Mn | | | |
| 1 | CCB-1900 ✓ | AWa 10/30/13 | | | |
| 57 | | R 21310184002 Na, Ca, Mg | 6010C_D | W | 10x |
| 58 | | R 21310184003 Na, Ca, Mg | 6010C_D | W | 10x |
| 59 | | R 21310184004 Na, Ca, Mg | 6010C_D | W | 10x |
| 60 | | ~~R 21310184005~~ | ~~6010C_D~~ | ~~W~~ | ~~10x~~ |
| 61 | | ~~R 21310184006~~ | ~~6010C_D~~ | ~~W~~ | ~~10x~~ |
| 62 | | ~~R 21310184007 Na, Ca, Mg~~ AWa 11/4/13 | ~~6010C_D~~ | ~~W~~ | ~~10x~~ Data not used AWa 11-4-13 |
| 63 | | ~~R 21310184008~~ | ~~6010C_D~~ | ~~W~~ | ~~10x~~ |
| 64 | | R 21310184009 Na, Ca, Mg | 6010C_D | W | 10x |
| 65 | | ~~M 21310181502~~ | ~~6010C~~ | ~~S~~ | ~~5x~~ R/R@1x, 5x |
| 66 | | 2500 | | | incorrect sample? AWa 10/30/13 |
| 7 | CCV-1800 | F: Ca, Mg, Mn AWa 10/30/13 | | | |
| 1 | CCB-1900 ✓ | | | | |
| 67 | 1244705 | (*) MB for HBN 517994 Cu, Mn | | R/R Mn | |
| 68 | 1244706 | LCS for HBN 517994 | | | Ca, Tl |
| 69 | | 21310171201 R/R Zn Sx | | R/R Mn@1x | |
| 70 | | 21310171203 | | | |
| 71 | | M 21310172601 | 6010C | S | |
| 72 | 1244707 | M 21310172601 MS | 6010C | S | |
| 73 | 1244708 | M 21310172601 MSD | 6010C | S | |
| 74 | 1249183 | 21310172601 PDS | | | |
| 75 | 1249184 | M 21310172601 SD | 6010C | S | 5X |
| 76 | | 21310173401 | | | |
| 7 | CCV-1800 | F: Ca, Mg, Mn AWa 10/30/13 | | | |
| 1 | CCB-1900 ✓ | | | | |
| 77 | | M 21310173601 | 6010C | S | |
| 78 | 1245115 | MB for HBN 518059 Zr (**) | | | |
| 79 | 1245116 | LCS for HBN 518059 | | | |
| 80 | | M 21310182401 | 200.7_W | W | 5x |
| 81 | | M 21310182501 | 200.7_W | W | |
| 82 | | *M 21310182602 ~~R/R Fe~~ | 200.7_W | W | 20x |
| 83 | | 2500 | | | |
| 84 | | M 21310183301 | 200.7_W | W | 20x |
| 85 | | 2500 | | | |
| 86 | | 2500 | | | |
| 7 | CCV-1800 | F: Ca, Mg, Mn AWa 10/30/13 | | | |
| 1 | CCB-1900 ✓ | | | | |

COMMENTS: 8717, 518786 **Insig compared to samples (**) MB/LCS posted into 8712, 518654 (*) MB/LCS posted into 8702, 518197

* Mn > LR, Sample reported @ this dilution - IEC factor for Mn on Zr is not affecting the sample. Neg factor - Sample is not biased high

ANALYST QC REV: _____

SECONDARY REV: _____

QC: all acceptable qc noted with a checkmark; failures as indicated.

Reprocessing Begun
Logged In Analyst: met Technique: ICP Continuous

Results Data Set (original): 2131029
Results Library (original): C:\pe\met\Results\Results.mdb
Results Data Set (reprocessed): 8717
Results Library (reprocessed): C:\pe\met\Results\Results.mdb

Sequence No.: 1
Sample ID: 1300
Analyst:
Logged In Analyst (Original) : met
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 10/29/2013 9:23:20 AM
Data Type: Reprocessed on 10/30/2013 8:10:12 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: 1300

| Analyte | Mean Corrected Intensity | Std.Dev. | RSD | Conc. | Calib Units |
|---|---|---|---|---|---|
| Scandium-IS | 7551145.5 | 49375.89 | 0.65% | 100.000 | % |
| Yttrium,7440-65-5A | 3678770.2 | 27317.21 | 0.74% | 100.000 | % |
| Yttrium,7440-65-5R | 322846.0 | 2663.42 | 0.82% | 100.000 | % |
| Ar 420.067 R | 4099826.6 | 30555.07 | 0.75% | 100.000 | % |
| Ar 363.268 A | 97994.5 | 447.62 | 0.46% | 100.000 | % |
| Aluminum,7429-90-5† | -158.8 | 45.16 | 28.44% | [0.00] | mg/L |
| Antimony,7440-36-0† | 61.2 | 6.02 | 9.84% | [0.00] | mg/L |
| Arsenic,7440-38-2† | -49.8 | 3.03 | 6.08% | [0.00] | mg/L |
| Barium,7440-39-3† | 216.5 | 18.17 | 8.39% | [0.00] | mg/L |
| Beryllium,7440-41-7† | 7697.7 | 80.22 | 1.04% | [0.00] | mg/L |
| Boron,7440-42-8† | 1749.1 | 13.30 | 0.76% | [0.00] | mg/L |
| Cadmium,7440-43-9† | -316.6 | 16.73 | 5.28% | [0.00] | mg/L |
| Calcium,7440-70-2† | 589.5 | 25.64 | 4.35% | [0.00] | mg/L |
| Chromium,7440-47-3† | -4563.2 | 38.30 | 0.84% | [0.00] | mg/L |
| Cobalt,7440-48-4† | 107.9 | 27.50 | 25.48% | [0.00] | mg/L |
| Copper,7440-50-8† | 9710.5 | 70.03 | 0.72% | [0.00] | mg/L |
| Iron,7439-89-6† | -2668.0 | 34.52 | 1.29% | [0.00] | mg/L |
| Lead,7439-92-1† | 773.2 | 14.27 | 1.85% | [0.00] | mg/L |
| Lithium,7439-93-2† | -323.6 | 59.77 | 18.47% | [0.00] | mg/L |
| Magnesium,7439-95-4† | 2081.8 | 68.13 | 3.27% | [0.00] | mg/L |
| Manganese,7439-96-5† | -5560.7 | 212.63 | 3.82% | [0.00] | mg/L |
| Molybdenum,7439-98-7 | -413.5 | 16.31 | 3.94% | [0.00] | mg/L |
| Nickel,7440-02-0† | -345.5 | 34.89 | 10.10% | [0.00] | mg/L |
| Potassium,7440-09-7† | 641.5 | 119.66 | 18.65% | [0.00] | mg/L |
| Selenium,7782-49-2† | 196.6 | 12.89 | 6.56% | [0.00] | mg/L |
| Silicon,7440-21-3† | 580.7 | 17.70 | 3.05% | [0.00] | mg/L |
| Silver,7440-22-4† | 19925.8 | 305.40 | 1.53% | [0.00] | mg/L |
| Sodium,7440-23-5† | 2278.1 | 200.81 | 8.81% | [0.00] | mg/L |
| Strontium,7440-24-6† | 2173.5 | 95.10 | 4.38% | [0.00] | mg/L |
| Thallium,7440-28-0† | -146.9 | 3.66 | 2.49% | [0.00] | mg/L |
| Tin,7440-31-5† | 49.0 | 8.06 | 16.45% | [0.00] | mg/L |
| Titanium,7440-32-6† | 7293.1 | 102.14 | 1.40% | [0.00] | mg/L |
| Vanadium,7440-62-2† | 11240.3 | 71.34 | 0.63% | [0.00] | mg/L |
| Zinc,7440-66-6† | 308.0 | 13.91 | 4.52% | [0.00] | mg/L |
| Zirconium,7440-67-7† | 1955.0 | 138.66 | 7.09% | [0.00] | mg/L |

Sequence No.: 2
Sample ID: 1301
Analyst:
Logged In Analyst (Original) : met
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 10/29/2013 9:29:40 AM
Data Type: Reprocessed on 10/30/2013 8:10:49 AM
Initial Sample Vol:
Sample Prep Vol:

Mean Data: 1301

| Analyte | Mean Corrected Intensity | Std.Dev. | RSD | Conc. | Calib Units |
|---|---|---|---|---|---|
| Scandium-IS | 7419747.2 | 30721.89 | 0.41% | 98.2599 | % |
| Yttrium,7440-65-5A | 3684192.6 | 36592.26 | 0.99% | 100.147 | % |

| | | | | | |
|---|---|---|---|---|---|
| Yttrium,7440-65-5R | 326570.3 | 2338.14 | 0.72% | 101.154 | % |
| Ar 420.067 R | 4175450.8 | 17562.62 | 0.42% | 101.845 | % |
| Ar 363.268 A | 97440.6 | 358.58 | 0.37% | 99.4347 | % |
| Aluminum,7429-90-5† | 33468.4 | 122.41 | 0.37% | [10.00000] | mg/L |
| Antimony,7440-36-0† | 3727.9 | 24.36 | 0.65% | [1.000000] | mg/L |
| Arsenic,7440-38-2† | 2570.8 | 26.22 | 1.02% | [1.000000] | mg/L |
| Barium,7440-39-3† | 258925.2 | 577.41 | 0.22% | [1.000000] | mg/L |
| Beryllium,7440-41-7† | 8179718.4 | 68509.85 | 0.84% | [1.000000] | mg/L |
| Boron,7440-42-8† | 401442.9 | 2553.16 | 0.64% | [5.00] | mg/L |
| Cadmium,7440-43-9† | 285482.3 | 762.04 | 0.27% | [1.000000] | mg/L |
| Calcium,7440-70-2† | 170338.1 | 378.98 | 0.22% | [10.00000] | mg/L |
| Chromium,7440-47-3† | 188583.3 | 479.82 | 0.25% | [1.000000] | mg/L |
| Cobalt,7440-48-4† | 82257.6 | 219.22 | 0.27% | [1.000000] | mg/L |
| Copper,7440-50-8† | 531866.2 | 1194.98 | 0.22% | [1.000000] | mg/L |
| Iron,7439-89-6† | 214559.3 | 690.50 | 0.32% | [10.00000] | mg/L |
| Lead,7439-92-1† | 30129.5 | 56.73 | 0.19% | [1.000000] | mg/L |
| Lithium,7439-93-2† | 69762.7 | 561.55 | 0.80% | [1.00] | mg/L |
| Magnesium,7439-95-4† | 35857.8 | 43.91 | 0.12% | [10.00000] | mg/L |
| Manganese,7439-96-5† | 1647831.4 | 5030.22 | 0.31% | [1.000000] | mg/L |
| Molybdenum,7439-98-7 | 29719.1 | 159.18 | 0.54% | [1.00] | mg/L |
| Nickel,7440-02-0† | 112573.7 | 337.83 | 0.30% | [1.000000] | mg/L |
| Potassium,7440-09-7† | 72196.6 | 382.99 | 0.53% | [20.00000] | mg/L |
| Selenium,7782-49-2† | 3200.9 | 26.10 | 0.82% | [1.000000] | mg/L |
| Silicon,7440-21-3† | 41614.0 | 433.86 | 1.04% | [10.0] | mg/L |
| Silver,7440-22-4† | 555928.9 | 839.85 | 0.15% | [1.000000] | mg/L |
| Sodium,7440-23-5† | 374069.2 | 9236.39 | 2.47% | [40.00000] | mg/L |
| Strontium,7440-24-6† | 733441.2 | 17320.59 | 2.36% | [1.00] | mg/L |
| Thallium,7440-28-0† | 4891.4 | 45.33 | 0.93% | [1.000000] | mg/L |
| Tin,7440-31-5† | 11532.0 | 70.02 | 0.61% | [1.00] | mg/L |
| Titanium,7440-32-6† | 1237197.0 | 2408.26 | 0.19% | [1.000000] | mg/L |
| Vanadium,7440-62-2† | 402224.0 | 857.13 | 0.21% | [1.000000] | mg/L |
| Zinc,7440-66-6† | 163481.3 | 303.01 | 0.19% | [1.000000] | mg/L |
| Zirconium,7440-67-7† | 759786.4 | 999.10 | 0.13% | [1.000000] | mg/L |

**Sequence No.: 3**
**Sample ID: 1600**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 11**
**Date Collected: 10/29/2013 9:36:14 AM**
**Data Type: Reprocessed on 10/30/2013 8:10:55 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 1600**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 7414616.3 | 98.1919 | % | 0.47896 | | | | 0.49% |
| Yttrium,7440-65-5A | 3640416.6 | 98.9574 | % | 0.81362 | | | | 0.82% |
| Yttrium,7440-65-5R | 328019.5 | 101.602 | % | 0.7164 | | | | 0.71% |
| Ar 420.067 R | 4141536.5 | 101.017 | % | 0.7131 | | | | 0.71% |
| Ar 363.268 A | 97650.5 | 99.6489 | % | 0.31396 | | | | 0.32% |
| Aluminum,7429-90-5† | 32665.8 | 9.74639 | mg/L | 0.055312 | 9.74639 | mg/L | 0.055312 | 0.57% |
| QC value within limits for Aluminum,7429-90-5 Recovery = 97.46% | | | | | | | | |
| Antimony,7440-36-0† | 3829.6 | 1.01104 | mg/L | 0.005505 | 1.01104 | mg/L | 0.005505 | 0.54% |
| QC value within limits for Antimony,7440-36-0 Recovery = 101.10% | | | | | | | | |
| Arsenic,7440-38-2† | 2521.4 | 1.01631 | mg/L | 0.017040 | 1.01631 | mg/L | 0.017040 | 1.68% |
| QC value within limits for Arsenic,7440-38-2 Recovery = 101.63% | | | | | | | | |
| Barium,7440-39-3† | 252606.5 | 0.97654 | mg/L | 0.000271 | 0.97654 | mg/L | 0.000271 | 0.03% |
| QC value within limits for Barium,7440-39-3 Recovery = 97.65% | | | | | | | | |
| Beryllium,7440-41-7† | 8160271.9 | 1.00038 | mg/L | 0.004556 | 1.00038 | mg/L | 0.004556 | 0.46% |
| QC value within limits for Beryllium,7440-41-7 Recovery = 100.04% | | | | | | | | |
| Boron,7440-42-8† | 383266.8 | 4.82288 | mg/L | 0.011016 | 4.82288 | mg/L | 0.011016 | 0.23% |
| QC value within limits for Boron,7440-42-8 Recovery = 96.46% | | | | | | | | |
| Cadmium,7440-43-9† | 278791.2 | 0.97640 | mg/L | 0.001017 | 0.97640 | mg/L | 0.001017 | 0.10% |
| QC value within limits for Cadmium,7440-43-9 Recovery = 97.64% | | | | | | | | |
| Calcium,7440-70-2† | 170267.7 | 9.99066 | mg/L | 0.021991 | 9.99066 | mg/L | 0.021991 | 0.22% |
| QC value within limits for Calcium,7440-70-2 Recovery = 99.91% | | | | | | | | |
| Chromium,7440-47-3† | 184583.8 | 0.98012 | mg/L | 0.001552 | 0.98012 | mg/L | 0.001552 | 0.16% |
| QC value within limits for Chromium,7440-47-3 Recovery = 98.01% | | | | | | | | |
| Cobalt,7440-48-4† | 80302.8 | 0.97405 | mg/L | 0.000511 | 0.97405 | mg/L | 0.000511 | 0.05% |
| QC value within limits for Cobalt,7440-48-4 Recovery = 97.41% | | | | | | | | |
| Copper,7440-50-8† | 519728.9 | 0.97666 | mg/L | 0.002066 | 0.97666 | mg/L | 0.002066 | 0.21% |

QC value within limits for Copper,7440-50-8 Recovery = 97.67%
Iron,7439-89-6† 208972.6 9.73828 mg/L 0.022445 9.73828 mg/L 0.022445 0.23%
QC value within limits for Iron,7439-89-6 Recovery = 97.38%
Lead,7439-92-1† 29517.5 0.98020 mg/L 0.002283 0.98020 mg/L 0.002283 0.23%
QC value within limits for Lead,7439-92-1 Recovery = 98.02%
Lithium,7439-93-2† 67740.5 0.97094 mg/L 0.006278 0.97094 mg/L 0.006278 0.65%
QC value within limits for Lithium,7439-93-2 Recovery = 97.09%
Magnesium,7439-95-4† 35015.9 9.76364 mg/L 0.016836 9.76364 mg/L 0.016836 0.17%
QC value within limits for Magnesium,7439-95-4 Recovery = 97.64%
Manganese,7439-96-5† 1614780.1 0.98004 mg/L 0.001341 0.98004 mg/L 0.001341 0.14%
QC value within limits for Manganese,7439-96-5 Recovery = 98.00%
Molybdenum,7439-98-7 28460.5 0.95905 mg/L 0.009259 0.95905 mg/L 0.009259 0.97%
QC value within limits for Molybdenum,7439-98-7 Recovery = 95.90%
Nickel,7440-02-0† 110167.6 0.97849 mg/L 0.000508 0.97849 mg/L 0.000508 0.05%
QC value within limits for Nickel,7440-02-0 Recovery = 97.85%
Potassium,7440-09-7† 70839.1 19.6262 mg/L 0.11122 19.6262 mg/L 0.11122 0.57%
QC value within limits for Potassium,7440-09-7 Recovery = 98.13%
Selenium,7782-49-2† 3172.7 0.99175 mg/L 0.010586 0.99175 mg/L 0.010586 1.07%
QC value within limits for Selenium,7782-49-2 Recovery = 99.18%
Silicon,7440-21-3† 41518.4 9.97456 mg/L 0.059307 9.97456 mg/L 0.059307 0.59%
QC value within limits for Silicon,7440-21-3 Recovery = 99.75%
Silver,7440-22-4† 536343.7 0.96861 mg/L 0.001996 0.96861 mg/L 0.001996 0.21%
QC value within limits for Silver,7440-22-4 Recovery = 96.86%
Sodium,7440-23-5† 365733.0 39.1120 mg/L 0.07317 39.1120 mg/L 0.07317 0.19%
QC value within limits for Sodium,7440-23-5 Recovery = 97.78%
Strontium,7440-24-6† 709580.6 0.96715 mg/L 0.002034 0.96715 mg/L 0.002034 0.21%
QC value within limits for Strontium,7440-24-6 Recovery = 96.72%
Thallium,7440-28-0† 4776.4 0.99311 mg/L 0.009941 0.99311 mg/L 0.009941 1.00%
QC value within limits for Thallium,7440-28-0 Recovery = 99.31%
Tin,7440-31-5† 11127.6 0.96918 mg/L 0.009441 0.96918 mg/L 0.009441 0.97%
QC value within limits for Tin,7440-31-5 Recovery = 96.92%
Titanium,7440-32-6† 1212029.3 0.97954 mg/L 0.000885 0.97954 mg/L 0.000885 0.09%
QC value within limits for Titanium,7440-32-6 Recovery = 97.95%
Vanadium,7440-62-2† 391149.9 0.97302 mg/L 0.000219 0.97302 mg/L 0.000219 0.02%
QC value within limits for Vanadium,7440-62-2 Recovery = 97.30%
Zinc,7440-66-6† 160028.4 0.97097 mg/L 0.000535 0.97097 mg/L 0.000535 0.06%
QC value within limits for Zinc,7440-66-6 Recovery = 97.10%
Zirconium,7440-67-7† 737966.7 0.97089 mg/L 0.000975 0.97089 mg/L 0.000975 0.10%
QC value within limits for Zirconium,7440-67-7 Recovery = 97.09%
All analyte(s) passed QC. ✓

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**Sequence No.: 4** **Autosampler Location: 1**
**Sample ID: 1700** **Date Collected: 10/29/2013 9:43:06 AM**
**Analyst:** **Data Type: Reprocessed on 10/30/2013 8:11:04 AM**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Mean Data: 1700**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 7339125.5 | 97.1922 | % | 4.85542 | | | | 5.00% |
| Yttrium,7440-65-5A | 3714314.3 | 100.966 | % | 2.2731 | | | | 2.25% |
| Yttrium,7440-65-5R | 331429.6 | 102.659 | % | 1.2332 | | | | 1.20% ✓ |
| Ar 420.067 R | 4124794.1 | 100.609 | % | 0.6439 | | | | 0.64% |
| Ar 363.268 A | 97516.6 | 99.5123 | % | 0.24287 | | | | 0.24% |
| Aluminum,7429-90-5† | -54.0 | -0.01614 | mg/L | 0.018816 | -0.01614 | mg/L | 0.018816 | 116.58% |
| QC value within limits for Aluminum,7429-90-5 Recovery = Not calculated | | | | | | | | |
| Antimony,7440-36-0† | 8.3 | 0.00222 | mg/L | 0.004895 | 0.00222 | mg/L | 0.004895 | 220.65% |
| QC value within limits for Antimony,7440-36-0 Recovery = Not calculated | | | | | | | | |
| Arsenic,7440-38-2† | 14.3 | 0.00557 | mg/L | 0.003322 | 0.00557 | mg/L | 0.003322 | 59.65% |
| QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated | | | | | | | | |
| Barium,7440-39-3† | 92.7 | 0.00036 | mg/L | 0.000088 | 0.00036 | mg/L | 0.000088 | 24.50% |
| QC value within limits for Barium,7440-39-3 Recovery = Not calculated | | | | | | | | |
| Beryllium,7440-41-7† | 2681.2 | 0.00033 | mg/L | 0.000076 | 0.00033 | mg/L | 0.000076 | 23.07% |
| QC value within limits for Beryllium,7440-41-7 Recovery = Not calculated | | | | | | | | |
| Boron,7440-42-8† | 9359.4 | 0.11665 | mg/L | 0.008307 | 0.11665 | mg/L | 0.008307 | 7.12% |
| QC value within limits for Boron,7440-42-8 Recovery = Not calculated | | | | | | | | |
| Cadmium,7440-43-9† | 72.2 | 0.00025 | mg/L | 0.000110 | 0.00025 | mg/L | 0.000110 | 43.72% |
| QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated | | | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Calcium,7440-70-2† | 187.0 | 0.01098 mg/L | 0.001381 | 0.01098 mg/L | 0.001381 | 12.58% |
| QC value within limits for Calcium,7440-70-2 Recovery = Not calculated | | | | | | |
| Chromium,7440-47-3† | 20.7 | 0.00011 mg/L | 0.000527 | 0.00011 mg/L | 0.000527 | 478.89% |
| QC value within limits for Chromium,7440-47-3 Recovery = Not calculated | | | | | | |
| Cobalt,7440-48-4† | 22.3 | 0.00027 mg/L | 0.000196 | 0.00027 mg/L | 0.000196 | 72.66% |
| QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated | | | | | | |
| Copper,7440-50-8† | 1148.0 | 0.00216 mg/L | 0.000513 | 0.00216 mg/L | 0.000513 | 23.75% |
| QC value within limits for Copper,7440-50-8 Recovery = Not calculated | | | | | | |
| Iron,7439-89-6† | 349.2 | 0.01627 mg/L | 0.001616 | 0.01627 mg/L | 0.001616 | 9.93% |
| QC value within limits for Iron,7439-89-6 Recovery = Not calculated | | | | | | |
| Lead,7439-92-1† | -4.5 | -0.00015 mg/L | 0.000849 | -0.00015 mg/L | 0.000849 | 556.89% |
| QC value within limits for Lead,7439-92-1 Recovery = Not calculated | | | | | | |
| Lithium,7439-93-2† | 338.5 | 0.00485 mg/L | 0.001311 | 0.00485 mg/L | 0.001311 | 27.03% |
| QC value within limits for Lithium,7439-93-2 Recovery = Not calculated | | | | | | |
| Magnesium,7439-95-4† | -25.7 | -0.00718 mg/L | 0.016333 | -0.00718 mg/L | 0.016333 | 227.58% |
| QC value within limits for Magnesium,7439-95-4 Recovery = Not calculated | | | | | | |
| Manganese,7439-96-5† | 812.7 | 0.00049 mg/L | 0.000299 | 0.00049 mg/L | 0.000299 | 60.53% |
| QC value within limits for Manganese,7439-96-5 Recovery = Not calculated | | | | | | |
| Molybdenum,7439-98-7 | 197.2 | 0.00664 mg/L | 0.001109 | 0.00664 mg/L | 0.001109 | 16.71% |
| QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated | | | | | | |
| Nickel,7440-02-0† | 28.5 | 0.00025 mg/L | 0.000218 | 0.00025 mg/L | 0.000218 | 86.04% |
| QC value within limits for Nickel,7440-02-0 Recovery = Not calculated | | | | | | |
| Potassium,7440-09-7† | 85.4 | 0.02365 mg/L | 0.016849 | 0.02365 mg/L | 0.016849 | 71.23% |
| QC value within limits for Potassium,7440-09-7 Recovery = Not calculated | | | | | | |
| Selenium,7782-49-2† | 36.3 | 0.01136 mg/L | 0.006661 | 0.01136 mg/L | 0.006661 | 58.66% |
| QC value within limits for Selenium,7782-49-2 Recovery = Not calculated | | | | | | |
| Silicon,7440-21-3† | 182.9 | 0.04395 mg/L | 0.006937 | 0.04395 mg/L | 0.006937 | 15.78% |
| QC value within limits for Silicon,7440-21-3 Recovery = Not calculated | | | | | | |
| Silver,7440-22-4† | 241.2 | 0.00043 mg/L | 0.001064 | 0.00043 mg/L | 0.001064 | 245.35% |
| QC value within limits for Silver,7440-22-4 Recovery = Not calculated | | | | | | |
| Sodium,7440-23-5† | -611.1 | -0.06534 mg/L | 0.014551 | -0.06534 mg/L | 0.014551 | 22.27% |
| QC value within limits for Sodium,7440-23-5 Recovery = Not calculated | | | | | | |
| Strontium,7440-24-6† | 269.5 | 0.00037 mg/L | 0.000100 | 0.00037 mg/L | 0.000100 | 27.25% |
| QC value within limits for Strontium,7440-24-6 Recovery = Not calculated | | | | | | |
| Thallium,7440-28-0† | 23.0 | 0.00471 mg/L | 0.004075 | 0.00471 mg/L | 0.004075 | 86.58% |
| QC value within limits for Thallium,7440-28-0 Recovery = Not calculated | | | | | | |
| Tin,7440-31-5† | 19.5 | 0.00169 mg/L | 0.000321 | 0.00169 mg/L | 0.000321 | 18.98% |
| QC value within limits for Tin,7440-31-5 Recovery = Not calculated | | | | | | |
| Titanium,7440-32-6† | 965.5 | 0.00078 mg/L | 0.000237 | 0.00078 mg/L | 0.000237 | 30.35% |
| QC value within limits for Titanium,7440-32-6 Recovery = Not calculated | | | | | | |
| Vanadium,7440-62-2† | -60.6 | -0.00015 mg/L | 0.000372 | -0.00015 mg/L | 0.000372 | 246.34% |
| QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated | | | | | | |
| Zinc,7440-66-6† | 59.7 | 0.00036 mg/L | 0.000074 | 0.00036 mg/L | 0.000074 | 20.45% |
| QC value within limits for Zinc,7440-66-6 Recovery = Not calculated | | | | | | |
| Zirconium,7440-67-7† | 351.7 | 0.00046 mg/L | 0.000507 | 0.00046 mg/L | 0.000507 | 109.65% |
| QC value within limits for Zirconium,7440-67-7 Recovery = Not calculated | | | | | | |

All analyte(s) passed QC. ✓

---

**Sequence No.: 5**
**Sample ID: 2300**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 3**
**Date Collected: 10/29/2013 9:49:30 AM**
**Data Type: Reprocessed on 10/30/2013 8:11:07 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

---

**Mean Data: 2300**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 7514628.1 | 99.5164 | % | 1.52927 | | | | 1.54% |
| Yttrium,7440-65-5A | 3753003.5 | 102.018 | % | 1.3265 | | | | 1.30% ✓ |
| Yttrium,7440-65-5R | 327548.6 | 101.457 | % | 1.2660 | | | | 1.25% |
| Ar 420.067 R | 4092548.9 | 99.8225 | % | 0.42346 | | | | 0.42% |
| Ar 363.268 A | 97419.7 | 99.4134 | % | 0.70433 | | | | 0.71% |
| Aluminum,7429-90-5† | 683.9 | 0.20409 | mg/L | 0.008319 | 0.20409 | mg/L | 0.008319 | 4.08% |
| QC value within limits for Aluminum,7429-90-5 Recovery = 102.04% | | | | | | | | |
| Antimony,7440-36-0† | 205.9 | 0.05509 | mg/L | 0.001475 | 0.05509 | mg/L | 0.001475 | 2.68% |
| QC value within limits for Antimony,7440-36-0 Recovery = 91.81% | | | | | | | | |
| Arsenic,7440-38-2† | 54.7 | 0.02201 | mg/L | 0.003202 | 0.02201 | mg/L | 0.003202 | 14.55% |
| QC value within limits for Arsenic,7440-38-2 Recovery = 110.04% | | | | | | | | |
| Barium,7440-39-3† | 2551.4 | 0.00986 | mg/L | 0.000153 | 0.00986 | mg/L | 0.000153 | 1.55% |

QC value within limits for Barium,7440-39-3 Recovery = 98.64%

| | | | | | | |
|---|---|---|---|---|---|---|
| Beryllium,7440-41-7† | 31653.2 | 0.00390 mg/L | 0.000007 | 0.00390 mg/L | 0.000007 | 0.19% |

QC value within limits for Beryllium,7440-41-7 Recovery = 97.44%

| | | | | | | |
|---|---|---|---|---|---|---|
| Boron,7440-42-8† | 78644.0 | 0.98051 mg/L | 0.003185 | 0.98051 mg/L | 0.003185 | 0.32% |

QC value within limits for Boron,7440-42-8 Recovery = 98.05%

| | | | | | | |
|---|---|---|---|---|---|---|
| Cadmium,7440-43-9† | 1375.4 | 0.00481 mg/L | 0.000144 | 0.00481 mg/L | 0.000144 | 2.98% |

QC value within limits for Cadmium,7440-43-9 Recovery = 96.29%

| | | | | | | |
|---|---|---|---|---|---|---|
| Calcium,7440-70-2† | 14202.7 | 0.83368 mg/L | 0.015950 | 0.83368 mg/L | 0.015950 | 1.91% |

QC value within limits for Calcium,7440-70-2 Recovery = 104.21%

| | | | | | | |
|---|---|---|---|---|---|---|
| Chromium,7440-47-3† | 1982.4 | 0.01054 mg/L | 0.000377 | 0.01054 mg/L | 0.000377 | 3.58% |

QC value within limits for Chromium,7440-47-3 Recovery = 105.41%

| | | | | | | |
|---|---|---|---|---|---|---|
| Cobalt,7440-48-4† | 798.4 | 0.00968 mg/L | 0.000184 | 0.00968 mg/L | 0.000184 | 1.91% |

QC value within limits for Cobalt,7440-48-4 Recovery = 96.77%

| | | | | | | |
|---|---|---|---|---|---|---|
| Copper,7440-50-8† | 10639.3 | 0.01999 mg/L | 0.000343 | 0.01999 mg/L | 0.000343 | 1.71% |

QC value within limits for Copper,7440-50-8 Recovery = 99.95%

| | | | | | | |
|---|---|---|---|---|---|---|
| Iron,7439-89-6† | 4193.6 | 0.19543 mg/L | 0.000958 | 0.19543 mg/L | 0.000958 | 0.49% |

QC value within limits for Iron,7439-89-6 Recovery = 97.72%

| | | | | | | |
|---|---|---|---|---|---|---|
| Lead,7439-92-1† | 444.8 | 0.01478 mg/L | 0.000224 | 0.01478 mg/L | 0.000224 | 1.52% |

QC value within limits for Lead,7439-92-1 Recovery = 98.53%

| | | | | | | |
|---|---|---|---|---|---|---|
| Lithium,7439-93-2† | 3624.0 | 0.05195 mg/L | 0.001698 | 0.05195 mg/L | 0.001698 | 3.27% |

QC value within limits for Lithium,7439-93-2 Recovery = 103.89%

| | | | | | | |
|---|---|---|---|---|---|---|
| Magnesium,7439-95-4† | 690.3 | 0.19247 mg/L | 0.018064 | 0.19247 mg/L | 0.018064 | 9.39% |

QC value within limits for Magnesium,7439-95-4 Recovery = 96.24%

| | | | | | | |
|---|---|---|---|---|---|---|
| Manganese,7439-96-5† | 26115.6 | 0.01585 mg/L | 0.000227 | 0.01585 mg/L | 0.000227 | 1.43% |

QC value within limits for Manganese,7439-96-5 Recovery = 105.66%

| | | | | | | |
|---|---|---|---|---|---|---|
| Molybdenum,7439-98-7 | 922.9 | 0.03108 mg/L | 0.000976 | 0.03108 mg/L | 0.000976 | 3.14% |

QC value within limits for Molybdenum,7439-98-7 Recovery = 103.61%

| | | | | | | |
|---|---|---|---|---|---|---|
| Nickel,7440-02-0† | 4512.0 | 0.04008 mg/L | 0.000533 | 0.04008 mg/L | 0.000533 | 1.33% |

QC value within limits for Nickel,7440-02-0 Recovery = 100.20%

| | | | | | | |
|---|---|---|---|---|---|---|
| Potassium,7440-09-7† | 1776.5 | 0.49219 mg/L | 0.033110 | 0.49219 mg/L | 0.033110 | 6.73% |

QC value within limits for Potassium,7440-09-7 Recovery = 98.44%

| | | | | | | |
|---|---|---|---|---|---|---|
| Selenium,7782-49-2† | 124.4 | 0.03889 mg/L | 0.006010 | 0.03889 mg/L | 0.006010 | 15.45% |

QC value within limits for Selenium,7782-49-2 Recovery = 97.22%

| | | | | | | |
|---|---|---|---|---|---|---|
| Silicon,7440-21-3† | 841.0 | 0.20206 mg/L | 0.005454 | 0.20206 mg/L | 0.005454 | 2.70% |

QC value within limits for Silicon,7440-21-3 Recovery = 101.03%

| | | | | | | |
|---|---|---|---|---|---|---|
| Silver,7440-22-4† | 4868.4 | 0.00883 mg/L | 0.000274 | 0.00883 mg/L | 0.000274 | 3.10% |

QC value within limits for Silver,7440-22-4 Recovery = 88.32%

| | | | | | | |
|---|---|---|---|---|---|---|
| Sodium,7440-23-5† | 8455.2 | 0.90418 mg/L | 0.006565 | 0.90418 mg/L | 0.006565 | 0.73% |

QC value within limits for Sodium,7440-23-5 Recovery = 90.42%

| | | | | | | |
|---|---|---|---|---|---|---|
| Strontium,7440-24-6† | 36337.3 | 0.04952 mg/L | 0.000295 | 0.04952 mg/L | 0.000295 | 0.59% |

QC value within limits for Strontium,7440-24-6 Recovery = 99.04%

| | | | | | | |
|---|---|---|---|---|---|---|
| Thallium,7440-28-0† | 119.0 | 0.02453 mg/L | 0.001686 | 0.02453 mg/L | 0.001686 | 6.87% |

QC value within limits for Thallium,7440-28-0 Recovery = 122.67%

| | | | | | | |
|---|---|---|---|---|---|---|
| Tin,7440-31-5† | 322.2 | 0.02801 mg/L | 0.001007 | 0.02801 mg/L | 0.001007 | 3.59% |

QC value within limits for Tin,7440-31-5 Recovery = 112.03%

| | | | | | | |
|---|---|---|---|---|---|---|
| Titanium,7440-32-6† | 12090.4 | 0.00977 mg/L | 0.000075 | 0.00977 mg/L | 0.000075 | 0.77% |

QC value within limits for Titanium,7440-32-6 Recovery = 97.70%

| | | | | | | |
|---|---|---|---|---|---|---|
| Vanadium,7440-62-2† | 7320.3 | 0.01820 mg/L | 0.000145 | 0.01820 mg/L | 0.000145 | 0.80% |

QC value within limits for Vanadium,7440-62-2 Recovery = 90.98%

| | | | | | | |
|---|---|---|---|---|---|---|
| Zinc,7440-66-6† | 3227.2 | 0.01944 mg/L | 0.000288 | 0.01944 mg/L | 0.000288 | 1.48% |

QC value within limits for Zinc,7440-66-6 Recovery = 97.20%

| | | | | | | |
|---|---|---|---|---|---|---|
| Zirconium,7440-67-7† | 9878.6 | 0.01300 mg/L | 0.000651 | 0.01300 mg/L | 0.000651 | 5.01% |

QC value within limits for Zirconium,7440-67-7 Recovery = 129.99%

All analyte(s) passed QC.

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**Sequence No.: 6**
**Sample ID: 2000**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 5**
**Date Collected: 10/29/2013 9:55:58 AM**
**Data Type: Reprocessed on 10/30/2013 8:11:09 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 2000**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 7114619.2 | 94.2191 | % | 0.18325 | | | | 0.19% |
| Yttrium,7440-65-5A | 3394252.5 | 92.2660 | % | 0.32601 | | | | 0.35% |
| Yttrium,7440-65-5R | 309885.0 | 95.9854 | % | 0.62908 | | | | 0.66% |
| Ar 420.067 R | 4003375.5 | 97.6474 | % | 0.53716 | | | | 0.55% |
| Ar 363.268 A | 97616.6 | 99.6144 | % | 0.20508 | | | | 0.21% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Aluminum,7429-90-5† | 673794.6 | 201.317 mg/L | 2.1656 | 201.317 mg/L | 2.1656 | 1.08% |
| QC value within limits for Aluminum,7429-90-5 Recovery = 100.66% | | | | | | |
| Antimony,7440-36-0† | -1.1 | 0.01404 mg/L | 0.005160 | 0.01404 mg/L | 0.005160 | 36.76% |
| QC value within limits for Antimony,7440-36-0 Recovery = Not calculated | | | | | | |
| Arsenic,7440-38-2† | -178.7 | 0.01889 mg/L | 0.002455 | 0.01889 mg/L | 0.002455 | 13.00% |
| QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated | | | | | | |
| Barium,7440-39-3† | 1542.3 | 0.00100 mg/L | 0.000102 | 0.00100 mg/L | 0.000102 | 10.20% |
| QC value within limits for Barium,7440-39-3 Recovery = Not calculated | | | | | | |
| Beryllium,7440-41-7† | -722.5 | -0.00009 mg/L | 0.000011 | -0.00009 mg/L | 0.000011 | 13.25% |
| QC value within limits for Beryllium,7440-41-7 Recovery = Not calculated | | | | | | |
| Boron,7440-42-8† | -72057.3 | -0.02124 mg/L | 0.008091 | -0.02124 mg/L | 0.008091 | 38.10% |
| QC value within limits for Boron,7440-42-8 Recovery = Not calculated | | | | | | |
| Cadmium,7440-43-9† | 842.9 | -0.00025 mg/L | 0.000086 | -0.00025 mg/L | 0.000086 | 34.76% |
| QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated | | | | | | |
| Calcium,7440-70-2† | 3327873.6 | 195.291 mg/L | 1.7133 | 195.291 mg/L | 1.7133 | 0.88% |
| QC value within limits for Calcium,7440-70-2 Recovery = 97.65% | | | | | | |
| Chromium,7440-47-3† | -2026.9 | 0.00909 mg/L | 0.000540 | 0.00909 mg/L | 0.000540 | 5.94% |
| QC value within limits for Chromium,7440-47-3 Recovery = Not calculated | | | | | | |
| Cobalt,7440-48-4† | 230.0 | -0.00082 mg/L | 0.000272 | -0.00082 mg/L | 0.000272 | 33.07% |
| QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated | | | | | | |
| Copper,7440-50-8† | -5983.2 | -0.01524 mg/L | 0.000416 | -0.01524 mg/L | 0.000416 | 2.73% |
| QC value within limits for Copper,7440-50-8 Recovery = Not calculated | | | | | | |
| Iron,7439-89-6† | 4121282.3 | 192.072 mg/L | 1.8486 | 192.072 mg/L | 1.8486 | 0.96% |
| QC value within limits for Iron,7439-89-6 Recovery = 96.04% | | | | | | |
| Lead,7439-92-1† | -424.7 | -0.00126 mg/L | 0.000937 | -0.00126 mg/L | 0.000937 | 74.15% |
| QC value within limits for Lead,7439-92-1 Recovery = Not calculated | | | | | | |
| Lithium,7439-93-2† | -43.0 | -0.00062 mg/L | 0.001641 | -0.00062 mg/L | 0.001641 | 266.04% |
| QC value within limits for Lithium,7439-93-2 Recovery = Not calculated | | | | | | |
| Magnesium,7439-95-4† | 688185.7 | 191.850 mg/L | 1.5736 | 191.850 mg/L | 1.5736 | 0.82% |
| QC value within limits for Magnesium,7439-95-4 Recovery = 95.93% | | | | | | |
| Manganese,7439-96-5† | 2231.0 | 0.00266 mg/L | 0.000232 | 0.00266 mg/L | 0.000232 | 8.71% |
| QC value within limits for Manganese,7439-96-5 Recovery = Not calculated | | | | | | |
| Molybdenum,7439-98-7 | -568.5 | 0.00298 mg/L | 0.000422 | 0.00298 mg/L | 0.000422 | 14.14% |
| QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated | | | | | | |
| Nickel,7440-02-0† | -228.7 | -0.00140 mg/L | 0.000504 | -0.00140 mg/L | 0.000504 | 36.14% |
| QC value within limits for Nickel,7440-02-0 Recovery = Not calculated | | | | | | |
| Potassium,7440-09-7† | -283.9 | -0.03526 mg/L | 0.059242 | -0.03526 mg/L | 0.059242 | 168.00% |
| QC value within limits for Potassium,7440-09-7 Recovery = Not calculated | | | | | | |
| Selenium,7782-49-2† | -26.6 | 0.01595 mg/L | 0.002294 | 0.01595 mg/L | 0.002294 | 14.38% |
| QC value within limits for Selenium,7782-49-2 Recovery = Not calculated | | | | | | |
| Silicon,7440-21-3† | 107.3 | 0.00480 mg/L | 0.004725 | 0.00480 mg/L | 0.004725 | 98.53% |
| QC value within limits for Silicon,7440-21-3 Recovery = Not calculated | | | | | | |
| Silver,7440-22-4† | -960.6 | 0.00310 mg/L | 0.000300 | 0.00310 mg/L | 0.000300 | 9.69% |
| QC value within limits for Silver,7440-22-4 Recovery = Not calculated | | | | | | |
| Sodium,7440-23-5† | -1050.3 | -0.12115 mg/L | 0.010511 | -0.12115 mg/L | 0.010511 | 8.68% |
| QC value within limits for Sodium,7440-23-5 Recovery = Not calculated | | | | | | |
| Strontium,7440-24-6† | 3978.2 | -0.00039 mg/L | 0.000063 | -0.00039 mg/L | 0.000063 | 16.29% |
| QC value within limits for Strontium,7440-24-6 Recovery = Not calculated | | | | | | |
| Thallium,7440-28-0† | -67.6 | -0.00222 mg/L | 0.001792 | -0.00222 mg/L | 0.001792 | 80.67% |
| QC value within limits for Thallium,7440-28-0 Recovery = Not calculated | | | | | | |
| Tin,7440-31-5† | -32.5 | 0.00384 mg/L | 0.001441 | 0.00384 mg/L | 0.001441 | 37.55% |
| QC value within limits for Tin,7440-31-5 Recovery = Not calculated | | | | | | |
| Titanium,7440-32-6† | 1149.2 | 0.00053 mg/L | 0.000079 | 0.00053 mg/L | 0.000079 | 14.98% |
| QC value within limits for Titanium,7440-32-6 Recovery = Not calculated | | | | | | |
| Vanadium,7440-62-2† | 3991.1 | -0.00551 mg/L | 0.000286 | -0.00551 mg/L | 0.000286 | 5.20% |
| QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated | | | | | | |
| Zinc,7440-66-6† | 3726.7 | 0.00320 mg/L | 0.000353 | 0.00320 mg/L | 0.000353 | 11.04% |
| QC value within limits for Zinc,7440-66-6 Recovery = Not calculated | | | | | | |
| Zirconium,7440-67-7† | 287.5 | 0.00038 mg/L | 0.000144 | 0.00038 mg/L | 0.000144 | 38.23% |
| QC value within limits for Zirconium,7440-67-7 Recovery = Not calculated | | | | | | |

All analyte(s) passed QC.

---

**Sequence No.: 7**
**Sample ID: 2100**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 6**
**Date Collected: 10/29/2013 10:02:29 AM**
**Data Type: Reprocessed on 10/30/2013 8:11:12 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

---

**Mean Data: 2100**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 7005302.8 | 92.7714 | % | 0.67317 | | | | 0.73% |
| Yttrium,7440-65-5A | 3431956.9 | 93.2909 | % | 0.93919 | | | | 1.01% |
| Yttrium,7440-65-5R | 314210.1 | 97.3251 | % | 0.38095 | | | | 0.39% |
| Ar 420.067 R | 4049429.7 | 98.7708 | % | 0.47796 | | | | 0.48% |
| Ar 363.268 A | 97380.6 | 99.3735 | % | 0.37568 | | | | 0.38% |
| Aluminum,7429-90-5† | 671495.3 | 200.624 | mg/L | 2.1821 | 200.624 | mg/L | 2.1821 | 1.09% |
| QC value within limits for Aluminum,7429-90-5 Recovery = 100.31% | | | | | | | | |
| Antimony,7440-36-0† | 3837.7 | 1.03404 | mg/L | 0.021071 | 1.03404 | mg/L | 0.021071 | 2.04% |
| QC value within limits for Antimony,7440-36-0 Recovery = 103.40% | | | | | | | | |
| Arsenic,7440-38-2† | 2513.7 | 1.08246 | mg/L | 0.028851 | 1.08246 | mg/L | 0.028851 | 2.67% |
| QC value within limits for Arsenic,7440-38-2 Recovery = 108.25% | | | | | | | | |
| Barium,7440-39-3† | 131769.0 | 0.50453 | mg/L | 0.000511 | 0.50453 | mg/L | 0.000511 | 0.10% |
| QC value within limits for Barium,7440-39-3 Recovery = 100.91% | | | | | | | | |
| Beryllium,7440-41-7† | 4265838.9 | 0.52154 | mg/L | 0.008885 | 0.52154 | mg/L | 0.008885 | 1.70% |
| QC value within limits for Beryllium,7440-41-7 Recovery = 104.31% | | | | | | | | |
| Boron,7440-42-8† | 7679.2 | 0.97618 | mg/L | 0.016316 | 0.97618 | mg/L | 0.016316 | 1.67% |
| QC value within limits for Boron,7440-42-8 Recovery = 97.62% | | | | | | | | |
| Cadmium,7440-43-9† | 276570.9 | 0.96557 | mg/L | 0.002031 | 0.96557 | mg/L | 0.002031 | 0.21% |
| QC value within limits for Cadmium,7440-43-9 Recovery = 96.56% | | | | | | | | |
| Calcium,7440-70-2† | 3338493.2 | 195.914 | mg/L | 1.8907 | 195.914 | mg/L | 1.8907 | 0.97% |
| QC value within limits for Calcium,7440-70-2 Recovery = 97.96% | | | | | | | | |
| Chromium,7440-47-3† | 91385.1 | 0.50486 | mg/L | 0.001336 | 0.50486 | mg/L | 0.001336 | 0.26% |
| QC value within limits for Chromium,7440-47-3 Recovery = 100.97% | | | | | | | | |
| Cobalt,7440-48-4† | 40453.7 | 0.48810 | mg/L | 0.008160 | 0.48810 | mg/L | 0.008160 | 1.67% |
| QC value within limits for Cobalt,7440-48-4 Recovery = 97.62% | | | | | | | | |
| Copper,7440-50-8† | 264546.8 | 0.49320 | mg/L | 0.000920 | 0.49320 | mg/L | 0.000920 | 0.19% |
| QC value within limits for Copper,7440-50-8 Recovery = 98.64% | | | | | | | | |
| Iron,7439-89-6† | 4130112.5 | 192.483 | mg/L | 1.7251 | 192.483 | mg/L | 1.7251 | 0.90% |
| QC value within limits for Iron,7439-89-6 Recovery = 96.24% | | | | | | | | |
| Lead,7439-92-1† | 30534.2 | 1.02601 | mg/L | 0.015410 | 1.02601 | mg/L | 0.015410 | 1.50% |
| QC value within limits for Lead,7439-92-1 Recovery = 102.60% | | | | | | | | |
| Lithium,7439-93-2† | -168.5 | -0.00244 | mg/L | 0.001301 | -0.00244 | mg/L | 0.001301 | 53.37% |
| Magnesium,7439-95-4† | 695090.8 | 193.777 | mg/L | 1.6825 | 193.777 | mg/L | 1.6825 | 0.87% |
| QC value within limits for Magnesium,7439-95-4 Recovery = 96.89% | | | | | | | | |
| Manganese,7439-96-5† | 809628.5 | 0.49264 | mg/L | 0.000518 | 0.49264 | mg/L | 0.000518 | 0.11% |
| QC value within limits for Manganese,7439-96-5 Recovery = 98.53% | | | | | | | | |
| Molybdenum,7439-98-7 | 28808.6 | 0.99164 | mg/L | 0.011912 | 0.99164 | mg/L | 0.011912 | 1.20% |
| QC value within limits for Molybdenum,7439-98-7 Recovery = 99.16% | | | | | | | | |
| Nickel,7440-02-0† | 107585.0 | 0.95629 | mg/L | 0.001163 | 0.95629 | mg/L | 0.001163 | 0.12% |
| QC value within limits for Nickel,7440-02-0 Recovery = 95.63% | | | | | | | | |
| Potassium,7440-09-7† | -112.5 | 0.01358 | mg/L | 0.015079 | 0.01358 | mg/L | 0.015079 | 111.05% |
| Selenium,7782-49-2† | 3346.9 | 1.06975 | mg/L | 0.014975 | 1.06975 | mg/L | 0.014975 | 1.40% |
| QC value within limits for Selenium,7782-49-2 Recovery = 106.97% | | | | | | | | |
| Silicon,7440-21-3† | 214.8 | 0.02965 | mg/L | 0.002781 | 0.02965 | mg/L | 0.002781 | 9.38% |
| Silver,7440-22-4† | 575945.4 | 1.04270 | mg/L | 0.000529 | 1.04270 | mg/L | 0.000529 | 0.05% |
| QC value within limits for Silver,7440-22-4 Recovery = 104.27% | | | | | | | | |
| Sodium,7440-23-5† | 9934.5 | 1.05510 | mg/L | 0.020242 | 1.05510 | mg/L | 0.020242 | 1.92% |
| QC value within limits for Sodium,7440-23-5 Recovery = 105.51% | | | | | | | | |
| Strontium,7440-24-6† | 3894.8 | -0.00052 | mg/L | 0.000142 | -0.00052 | mg/L | 0.000142 | 27.17% |
| Thallium,7440-28-0† | 4753.1 | 0.98493 | mg/L | 0.018102 | 0.98493 | mg/L | 0.018102 | 1.84% |
| QC value within limits for Thallium,7440-28-0 Recovery = 98.49% | | | | | | | | |
| Tin,7440-31-5† | -57.7 | 0.00189 | mg/L | 0.004267 | 0.00189 | mg/L | 0.004267 | 226.34% |
| Titanium,7440-32-6† | 948.1 | 0.00032 | mg/L | 0.000299 | 0.00032 | mg/L | 0.000299 | 94.17% |
| Vanadium,7440-62-2† | 203637.3 | 0.49145 | mg/L | 0.000408 | 0.49145 | mg/L | 0.000408 | 0.08% |
| QC value within limits for Vanadium,7440-62-2 Recovery = 98.29% | | | | | | | | |
| Zinc,7440-66-6† | 166807.7 | 0.99378 | mg/L | 0.000800 | 0.99378 | mg/L | 0.000800 | 0.08% |
| QC value within limits for Zinc,7440-66-6 Recovery = 99.38% | | | | | | | | |
| Zirconium,7440-67-7† | 4305.1 | 0.00574 | mg/L | 0.000337 | 0.00574 | mg/L | 0.000337 | 5.87% |

All analyte(s) passed QC.

**Sequence No.:** 8
**Sample ID:** 1800
**Analyst:**
**Logged In Analyst (Original) :** met
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location:** 3
**Date Collected:** 10/29/2013 10:08:29 AM
**Data Type:** Reprocessed on 10/30/2013 8:11:14 AM
**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data:** 1800

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 7529851.0 | 99.7180 | % | 0.62113 | | | | 0.62% |
| Yttrium,7440-65-5A | 3783673.2 | 102.852 | % | 0.6895 | | | | 0.67% |
| Yttrium,7440-65-5R | 337669.3 | 104.591 | % | 1.6347 | | | | 1.56% |
| Ar 420.067 R | 4126505.2 | 100.651 | % | 1.0676 | | | | 1.06% |
| Ar 363.268 A | 97002.2 | 98.9874 | % | 0.47620 | | | | 0.48% |
| Aluminum,7429-90-5† | 926.4 | 0.27656 | mg/L | 0.031381 | 0.27656 | mg/L | 0.031381 | 11.35% |
| QC value less than the lower limit for Aluminum,7429-90-5 Recovery = 5.53% | | | | | | | | |
| Antimony,7440-36-0† | 232.9 | 0.06234 | mg/L | 0.001998 | 0.06234 | mg/L | 0.001998 | 3.20% |
| QC value less than the lower limit for Antimony,7440-36-0 Recovery = 12.47% | | | | | | | | |
| Arsenic,7440-38-2† | 52.7 | 0.02128 | mg/L | 0.002771 | 0.02128 | mg/L | 0.002771 | 13.02% |
| QC value less than the lower limit for Arsenic,7440-38-2 Recovery = 4.26% | | | | | | | | |
| Barium,7440-39-3† | 2572.5 | 0.00994 | mg/L | 0.000138 | 0.00994 | mg/L | 0.000138 | 1.39% |
| QC value less than the lower limit for Barium,7440-39-3 Recovery = 1.99% | | | | | | | | |
| Beryllium,7440-41-7† | 32540.0 | 0.00401 | mg/L | 0.000036 | 0.00401 | mg/L | 0.000036 | 0.90% |
| QC value less than the lower limit for Beryllium,7440-41-7 Recovery = 0.80% | | | | | | | | |
| Boron,7440-42-8† | 76675.9 | 0.95656 | mg/L | 0.003146 | 0.95656 | mg/L | 0.003146 | 0.33% |
| QC value less than the lower limit for Boron,7440-42-8 Recovery = 38.26% | | | | | | | | |
| Cadmium,7440-43-9† | 1420.0 | 0.00497 | mg/L | 0.000087 | 0.00497 | mg/L | 0.000087 | 1.76% |
| QC value less than the lower limit for Cadmium,7440-43-9 Recovery = 0.99% | | | | | | | | |
| Calcium,7440-70-2† | 15654.5 | 0.91887 | mg/L | 0.018776 | 0.91887 | mg/L | 0.018776 | 2.04% |
| QC value less than the lower limit for Calcium,7440-70-2 Recovery = 18.38% | | | | | | | | |
| Chromium,7440-47-3† | 1938.2 | 0.01032 | mg/L | 0.000254 | 0.01032 | mg/L | 0.000254 | 2.46% |
| QC value less than the lower limit for Chromium,7440-47-3 Recovery = 2.06% | | | | | | | | |
| Cobalt,7440-48-4† | 797.4 | 0.00966 | mg/L | 0.000163 | 0.00966 | mg/L | 0.000163 | 1.69% |
| QC value less than the lower limit for Cobalt,7440-48-4 Recovery = 1.93% | | | | | | | | |
| Copper,7440-50-8† | 11028.2 | 0.02072 | mg/L | 0.000273 | 0.02072 | mg/L | 0.000273 | 1.32% |
| QC value less than the lower limit for Copper,7440-50-8 Recovery = 4.14% | | | | | | | | |
| Iron,7439-89-6† | 6804.9 | 0.31713 | mg/L | 0.017058 | 0.31713 | mg/L | 0.017058 | 5.38% |
| QC value less than the lower limit for Iron,7439-89-6 Recovery = 6.34% | | | | | | | | |
| Lead,7439-92-1† | 462.2 | 0.01536 | mg/L | 0.001526 | 0.01536 | mg/L | 0.001526 | 9.94% |
| QC value less than the lower limit for Lead,7439-92-1 Recovery = 3.07% | | | | | | | | |
| Lithium,7439-93-2† | 3618.9 | 0.05187 | mg/L | 0.001536 | 0.05187 | mg/L | 0.001536 | 2.96% |
| QC value less than the lower limit for Lithium,7439-93-2 Recovery = 10.37% | | | | | | | | |
| Magnesium,7439-95-4† | 1030.2 | 0.28720 | mg/L | 0.011411 | 0.28720 | mg/L | 0.011411 | 3.97% |
| QC value less than the lower limit for Magnesium,7439-95-4 Recovery = 5.74% | | | | | | | | |
| Manganese,7439-96-5† | 27058.9 | 0.01642 | mg/L | 0.000121 | 0.01642 | mg/L | 0.000121 | 0.73% |
| QC value less than the lower limit for Manganese,7439-96-5 Recovery = 3.28% | | | | | | | | |
| Molybdenum,7439-98-7 | 988.7 | 0.03331 | mg/L | 0.000886 | 0.03331 | mg/L | 0.000886 | 2.66% |
| QC value less than the lower limit for Molybdenum,7439-98-7 Recovery = 6.66% | | | | | | | | |
| Nickel,7440-02-0† | 4525.3 | 0.04020 | mg/L | 0.000906 | 0.04020 | mg/L | 0.000906 | 2.25% |
| QC value less than the lower limit for Nickel,7440-02-0 Recovery = 8.04% | | | | | | | | |
| Potassium,7440-09-7† | 1687.6 | 0.46759 | mg/L | 0.023328 | 0.46759 | mg/L | 0.023328 | 4.99% |
| QC value less than the lower limit for Potassium,7440-09-7 Recovery = 4.68% | | | | | | | | |
| Selenium,7782-49-2† | 139.8 | 0.04373 | mg/L | 0.003928 | 0.04373 | mg/L | 0.003928 | 8.98% |
| QC value less than the lower limit for Selenium,7782-49-2 Recovery = 8.75% | | | | | | | | |
| Silicon,7440-21-3† | 783.7 | 0.18826 | mg/L | 0.013097 | 0.18826 | mg/L | 0.013097 | 6.96% |
| QC value less than the lower limit for Silicon,7440-21-3 Recovery = 3.77% | | | | | | | | |
| Silver,7440-22-4† | 5227.5 | 0.00948 | mg/L | 0.000529 | 0.00948 | mg/L | 0.000529 | 5.58% |
| QC value less than the lower limit for Silver,7440-22-4 Recovery = 1.90% | | | | | | | | |
| Sodium,7440-23-5† | 8174.3 | 0.87414 | mg/L | 0.010060 | 0.87414 | mg/L | 0.010060 | 1.15% |
| QC value less than the lower limit for Sodium,7440-23-5 Recovery = 4.37% | | | | | | | | |
| Strontium,7440-24-6† | 35697.2 | 0.04864 | mg/L | 0.000401 | 0.04864 | mg/L | 0.000401 | 0.82% |
| QC value less than the lower limit for Strontium,7440-24-6 Recovery = 9.73% | | | | | | | | |
| Thallium,7440-28-0† | 127.9 | 0.02636 | mg/L | 0.001000 | 0.02636 | mg/L | 0.001000 | 3.79% |
| QC value less than the lower limit for Thallium,7440-28-0 Recovery = 5.27% | | | | | | | | |
| Tin,7440-31-5† | 301.6 | 0.02622 | mg/L | 0.001422 | 0.02622 | mg/L | 0.001422 | 5.42% |
| QC value less than the lower limit for Tin,7440-31-5 Recovery = 5.24% | | | | | | | | |
| Titanium,7440-32-6† | 11860.4 | 0.00958 | mg/L | 0.000081 | 0.00958 | mg/L | 0.000081 | 0.84% |
| QC value less than the lower limit for Titanium,7440-32-6 Recovery = 1.92% | | | | | | | | |
| Vanadium,7440-62-2† | 7364.5 | 0.01830 | mg/L | 0.000151 | 0.01830 | mg/L | 0.000151 | 0.83% |
| QC value less than the lower limit for Vanadium,7440-62-2 Recovery = 3.66% | | | | | | | | |
| Zinc,7440-66-6† | 3261.1 | 0.01963 | mg/L | 0.000469 | 0.01963 | mg/L | 0.000469 | 2.39% |
| QC value less than the lower limit for Zinc,7440-66-6 Recovery = 3.93% | | | | | | | | |
| Zirconium,7440-67-7† | 7306.9 | 0.00961 | mg/L | 0.000157 | 0.00961 | mg/L | 0.000157 | 1.63% |
| QC value less than the lower limit for Zirconium,7440-67-7 Recovery = 1.92% | | | | | | | | |

QC Failed. Continue with analysis.

Wrong AS# AWG 10/30/13

**Sequence No.: 9**
**Sample ID: 1900**

**Autosampler Location: 4**
**Date Collected: 10/29/2013 10:15:09 AM**

**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Data Type: Reprocessed on 10/30/2013 8:11:16 AM**
**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 1900**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 14165443.8 | 187.593 | % | 1.7188 | | | | 0.92% |
| Internal Standard Check greater than the upper limit for Scandium-IS. Recovery = 187.6% | | | | | | | | |
| Yttrium,7440-65-5A | 6970325.4 | 189.474 | % | 2.4484 | | | | 1.29% |
| Internal Standard Check greater than the upper limit for Yttrium,7440-65-5A. Recovery = 189.5% | | | | | | | | |
| Yttrium,7440-65-5R | 609477.9 | 188.783 | % | 1.9821 | | | | 1.05% |
| Internal Standard Check greater than the upper limit for Yttrium,7440-65-5R. Recovery = 188.8% | | | | | | | | |
| Ar 420.067 R | 3089652.2 | 75.3606 | % | 0.55889 | | | | 0.74% |
| Ar 363.268 A | 80175.7 | 81.8165 | % | 0.09033 | | | | 0.11% |
| Aluminum,7429-90-5† | 43.5 | 0.01320 | mg/L | 0.004599 | 0.01320 | mg/L | 0.004599 | 34.83% |
| QC value within limits for Aluminum,7429-90-5 Recovery = Not calculated | | | | | | | | |
| Antimony,7440-36-0† | -34.2 | -0.00957 | mg/L | 0.000385 | -0.00957 | mg/L | 0.000385 | 4.03% |
| QC value within limits for Antimony,7440-36-0 Recovery = Not calculated | | | | | | | | |
| Arsenic,7440-38-2† | 31.7 | 0.01173 | mg/L | 0.001419 | 0.01173 | mg/L | 0.001419 | 12.09% |
| QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated | | | | | | | | |
| Barium,7440-39-3† | -180.8 | -0.00072 | mg/L | 0.000048 | -0.00072 | mg/L | 0.000048 | 6.70% |
| QC value within limits for Barium,7440-39-3 Recovery = Not calculated | | | | | | | | |
| Beryllium,7440-41-7† | -4630.3 | -0.00057 | mg/L | 0.000007 | -0.00057 | mg/L | 0.000007 | 1.17% |
| QC value within limits for Beryllium,7440-41-7 Recovery = Not calculated | | | | | | | | |
| Boron,7440-42-8† | 92.3 | 0.00149 | mg/L | 0.000914 | 0.00149 | mg/L | 0.000914 | 61.32% |
| QC value within limits for Boron,7440-42-8 Recovery = Not calculated | | | | | | | | |
| Cadmium,7440-43-9† | 189.1 | 0.00066 | mg/L | 0.000014 | 0.00066 | mg/L | 0.000014 | 2.09% |
| QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated | | | | | | | | |
| Calcium,7440-70-2† | -350.7 | -0.02048 | mg/L | 0.000315 | -0.02048 | mg/L | 0.000315 | 1.54% |
| QC value within limits for Calcium,7440-70-2 Recovery = Not calculated | | | | | | | | |
| Chromium,7440-47-3† | 3047.3 | 0.01611 | mg/L | 0.000108 | 0.01611 | mg/L | 0.000108 | 0.67% |
| QC value greater than the upper limit for Chromium,7440-47-3 Recovery = Not calculated | | | | | | | | |
| Cobalt,7440-48-4† | -132.2 | -0.00160 | mg/L | 0.000119 | -0.00160 | mg/L | 0.000119 | 7.43% |
| QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated | | | | | | | | |
| Copper,7440-50-8† | -6973.8 | -0.01311 | mg/L | 0.000134 | -0.01311 | mg/L | 0.000134 | 1.02% |
| QC value within limits for Copper,7440-50-8 Recovery = Not calculated | | | | | | | | |
| Iron,7439-89-6† | 1745.6 | 0.08136 | mg/L | 0.000211 | 0.08136 | mg/L | 0.000211 | 0.26% |
| QC value within limits for Iron,7439-89-6 Recovery = Not calculated | | | | | | | | |
| Lead,7439-92-1† | -511.2 | -0.01696 | mg/L | 0.000157 | -0.01696 | mg/L | 0.000157 | 0.92% |
| QC value within limits for Lead,7439-92-1 Recovery = Not calculated | | | | | | | | |
| Lithium,7439-93-2† | 37.8 | 0.00054 | mg/L | 0.001396 | 0.00054 | mg/L | 0.001396 | 257.80% |
| QC value within limits for Lithium,7439-93-2 Recovery = Not calculated | | | | | | | | |
| Magnesium,7439-95-4† | -1354.2 | -0.37768 | mg/L | 0.003242 | -0.37768 | mg/L | 0.003242 | 0.86% |
| QC value within limits for Magnesium,7439-95-4 Recovery = Not calculated | | | | | | | | |
| Manganese,7439-96-5† | 3532.6 | 0.00215 | mg/L | 0.000017 | 0.00215 | mg/L | 0.000017 | 0.80% |
| QC value within limits for Manganese,7439-96-5 Recovery = Not calculated | | | | | | | | |
| Molybdenum,7439-98-7 | 319.2 | 0.01074 | mg/L | 0.000375 | 0.01074 | mg/L | 0.000375 | 3.50% |
| QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated | | | | | | | | |
| Nickel,7440-02-0† | 214.6 | 0.00191 | mg/L | 0.000196 | 0.00191 | mg/L | 0.000196 | 10.26% |
| QC value within limits for Nickel,7440-02-0 Recovery = Not calculated | | | | | | | | |
| Potassium,7440-09-7† | -465.5 | -0.12895 | mg/L | 0.006263 | -0.12895 | mg/L | 0.006263 | 4.86% |
| QC value within limits for Potassium,7440-09-7 Recovery = Not calculated | | | | | | | | |
| Selenium,7782-49-2† | -127.4 | -0.03979 | mg/L | 0.002731 | -0.03979 | mg/L | 0.002731 | 6.86% |
| QC value within limits for Selenium,7782-49-2 Recovery = Not calculated | | | | | | | | |
| Silicon,7440-21-3† | -354.8 | -0.08520 | mg/L | 0.001475 | -0.08520 | mg/L | 0.001475 | 1.73% |
| QC value within limits for Silicon,7440-21-3 Recovery = Not calculated | | | | | | | | |
| Silver,7440-22-4† | -14582.3 | -0.02630 | mg/L | 0.000152 | -0.02630 | mg/L | 0.000152 | 0.58% |
| QC value less than the lower limit for Silver,7440-22-4 Recovery = Not calculated | | | | | | | | |
| Sodium,7440-23-5† | -2039.3 | -0.21808 | mg/L | 0.005865 | -0.21808 | mg/L | 0.005865 | 2.69% |
| QC value within limits for Sodium,7440-23-5 Recovery = Not calculated | | | | | | | | |
| Strontium,7440-24-6† | -1413.2 | -0.00193 | mg/L | 0.000065 | -0.00193 | mg/L | 0.000065 | 3.39% |
| QC value within limits for Strontium,7440-24-6 Recovery = Not calculated | | | | | | | | |
| Thallium,7440-28-0† | 99.1 | 0.02019 | mg/L | 0.000891 | 0.02019 | mg/L | 0.000891 | 4.41% |
| QC value greater than the upper limit for Thallium,7440-28-0 Recovery = Not calculated | | | | | | | | |
| Tin,7440-31-5† | -46.1 | -0.00400 | mg/L | 0.000318 | -0.00400 | mg/L | 0.000318 | 7.95% |
| QC value within limits for Tin,7440-31-5 Recovery = Not calculated | | | | | | | | |
| Titanium,7440-32-6† | -2241.1 | -0.00181 | mg/L | 0.000056 | -0.00181 | mg/L | 0.000056 | 3.11% |
| QC value within limits for Titanium,7440-32-6 Recovery = Not calculated | | | | | | | | |
| Vanadium,7440-62-2† | -7528.9 | -0.01869 | mg/L | 0.000221 | -0.01869 | mg/L | 0.000221 | 1.18% |

AWG 10/30/13

QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated
Zinc,7440-66-6† -202.8 -0.00125 mg/L 0.000084 -0.00125 mg/L 0.000084 6.67%
QC value within limits for Zinc,7440-66-6 Recovery = Not calculated
Zirconium,7440-67-7† -1114.0 -0.00146 mg/L 0.000147 -0.00146 mg/L 0.000147 10.03%
QC value within limits for Zirconium,7440-67-7 Recovery = Not calculated
Internal Standard Check failed. Continue with analysis.
QC Failed. Continue with analysis.

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**Sequence No.: 10** **Autosampler Location: 7**
**Sample ID: 1800** **Date Collected: 10/29/2013 10:23:13 AM**
**Analyst:** **Data Type: Reprocessed on 10/30/2013 8:11:20 AM**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Mean Data: 1800**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 7220569.4 | 95.6222 | % | 3.02776 | | | | 3.17% |
| Yttrium,7440-65-5A | 3612703.7 | 98.2041 | % | 3.11282 | | | | 3.17% |
| Yttrium,7440-65-5R | 326651.3 | 101.179 | % | 1.4648 | | | | 1.45% |
| Ar 420.067 R | 4123071.7 | 100.567 | % | 0.6912 | | | | 0.69% |
| Ar 363.268 A | 97880.9 | 99.8840 | % | 0.21398 | | | | 0.21% |
| Aluminum,7429-90-5† | 16522.7 | 4.92975 | mg/L | 0.027483 | 4.92975 | mg/L | 0.027483 | 0.56% |
| QC value within limits for Aluminum,7429-90-5 Recovery = 98.60% | | | | | | | | |
| Antimony,7440-36-0† | 1850.7 | 0.48811 | mg/L | 0.017055 | 0.48811 | mg/L | 0.017055 | 3.49% |
| QC value within limits for Antimony,7440-36-0 Recovery = 97.62% | | | | | | | | |
| Arsenic,7440-38-2† | 1253.7 | 0.50580 | mg/L | 0.011819 | 0.50580 | mg/L | 0.011819 | 2.34% |
| QC value within limits for Arsenic,7440-38-2 Recovery = 101.16% | | | | | | | | |
| Barium,7440-39-3† | 128671.4 | 0.49743 | mg/L | 0.011537 | 0.49743 | mg/L | 0.011537 | 2.32% |
| QC value within limits for Barium,7440-39-3 Recovery = 99.49% | | | | | | | | |
| Beryllium,7440-41-7† | 4082059.9 | 0.50045 | mg/L | 0.020861 | 0.50045 | mg/L | 0.020861 | 4.17% |
| QC value within limits for Beryllium,7440-41-7 Recovery = 100.09% | | | | | | | | |
| Boron,7440-42-8† | 196464.0 | 2.47190 | mg/L | 0.058375 | 2.47190 | mg/L | 0.058375 | 2.36% |
| QC value within limits for Boron,7440-42-8 Recovery = 98.88% | | | | | | | | |
| Cadmium,7440-43-9† | 140279.0 | 0.49129 | mg/L | 0.009894 | 0.49129 | mg/L | 0.009894 | 2.01% |
| QC value within limits for Cadmium,7440-43-9 Recovery = 98.26% | | | | | | | | |
| Calcium,7440-70-2† | 85398.3 | 5.01081 | mg/L | 0.007594 | 5.01081 | mg/L | 0.007594 | 0.15% |
| QC value within limits for Calcium,7440-70-2 Recovery = 100.22% | | | | | | | | |
| Chromium,7440-47-3† | 94464.8 | 0.50158 | mg/L | 0.011396 | 0.50158 | mg/L | 0.011396 | 2.27% |
| QC value within limits for Chromium,7440-47-3 Recovery = 100.32% | | | | | | | | |
| Cobalt,7440-48-4† | 41079.5 | 0.49829 | mg/L | 0.010435 | 0.49829 | mg/L | 0.010435 | 2.09% |
| QC value within limits for Cobalt,7440-48-4 Recovery = 99.66% | | | | | | | | |
| Copper,7440-50-8† | 269491.1 | 0.50642 | mg/L | 0.013896 | 0.50642 | mg/L | 0.013896 | 2.74% |
| QC value within limits for Copper,7440-50-8 Recovery = 101.28% | | | | | | | | |
| Iron,7439-89-6† | 105526.7 | 4.91761 | mg/L | 0.014598 | 4.91761 | mg/L | 0.014598 | 0.30% |
| QC value within limits for Iron,7439-89-6 Recovery = 98.35% | | | | | | | | |
| Lead,7439-92-1† | 15453.1 | 0.51315 | mg/L | 0.014606 | 0.51315 | mg/L | 0.014606 | 2.85% |
| QC value within limits for Lead,7439-92-1 Recovery = 102.63% | | | | | | | | |
| Lithium,7439-93-2† | 35341.6 | 0.50656 | mg/L | 0.002890 | 0.50656 | mg/L | 0.002890 | 0.57% |
| QC value within limits for Lithium,7439-93-2 Recovery = 101.31% | | | | | | | | |
| Magnesium,7439-95-4† | 17504.9 | 4.88099 | mg/L | 0.025495 | 4.88099 | mg/L | 0.025495 | 0.52% |
| QC value within limits for Magnesium,7439-95-4 Recovery = 97.62% | | | | | | | | |
| Manganese,7439-96-5† | 844789.2 | 0.51272 | mg/L | 0.011632 | 0.51272 | mg/L | 0.011632 | 2.27% |
| QC value within limits for Manganese,7439-96-5 Recovery = 102.54% | | | | | | | | |
| Molybdenum,7439-98-7 | 14677.2 | 0.49457 | mg/L | 0.015812 | 0.49457 | mg/L | 0.015812 | 3.20% |
| QC value within limits for Molybdenum,7439-98-7 Recovery = 98.91% | | | | | | | | |
| Nickel,7440-02-0† | 56413.8 | 0.50106 | mg/L | 0.011508 | 0.50106 | mg/L | 0.011508 | 2.30% |
| QC value within limits for Nickel,7440-02-0 Recovery = 100.21% | | | | | | | | |
| Potassium,7440-09-7† | 36442.8 | 10.0966 | mg/L | 0.05390 | 10.0966 | mg/L | 0.05390 | 0.53% |
| QC value within limits for Potassium,7440-09-7 Recovery = 100.97% | | | | | | | | |
| Selenium,7782-49-2† | 1570.2 | 0.49082 | mg/L | 0.020676 | 0.49082 | mg/L | 0.020676 | 4.21% |
| QC value within limits for Selenium,7782-49-2 Recovery = 98.16% | | | | | | | | |
| Silicon,7440-21-3† | 20392.5 | 4.89913 | mg/L | 0.044204 | 4.89913 | mg/L | 0.044204 | 0.90% |
| QC value within limits for Silicon,7440-21-3 Recovery = 97.98% | | | | | | | | |
| Silver,7440-22-4† | 280855.5 | 0.50716 | mg/L | 0.012856 | 0.50716 | mg/L | 0.012856 | 2.53% |
| QC value within limits for Silver,7440-22-4 Recovery = 101.43% | | | | | | | | |
| Sodium,7440-23-5† | 187267.8 | 20.0267 | mg/L | 0.03253 | 20.0267 | mg/L | 0.03253 | 0.16% |
| QC value within limits for Sodium,7440-23-5 Recovery = 100.13% | | | | | | | | |
| Strontium,7440-24-6† | 363063.8 | 0.49486 | mg/L | 0.001314 | 0.49486 | mg/L | 0.001314 | 0.27% |

QC value within limits for Strontium,7440-24-6 Recovery = 98.97%

| | | | | | | |
|---|---|---|---|---|---|---|
| Thallium,7440-28-0† | 2452.2 | 0.50978 mg/L | 0.012158 | 0.50978 mg/L | 0.012158 | 2.38% |

QC value within limits for Thallium,7440-28-0 Recovery = 101.96%

| | | | | | | |
|---|---|---|---|---|---|---|
| Tin,7440-31-5† | 5602.3 | 0.48797 mg/L | 0.013841 | 0.48797 mg/L | 0.013841 | 2.84% |

QC value within limits for Tin,7440-31-5 Recovery = 97.59%

| | | | | | | |
|---|---|---|---|---|---|---|
| Titanium,7440-32-6† | 616473.9 | 0.49823 mg/L | 0.012325 | 0.49823 mg/L | 0.012325 | 2.47% |

QC value within limits for Titanium,7440-32-6 Recovery = 99.65%

| | | | | | | |
|---|---|---|---|---|---|---|
| Vanadium,7440-62-2† | 199500.6 | 0.49628 mg/L | 0.012436 | 0.49628 mg/L | 0.012436 | 2.51% |

QC value within limits for Vanadium,7440-62-2 Recovery = 99.26%

| | | | | | | |
|---|---|---|---|---|---|---|
| Zinc,7440-66-6† | 81405.3 | 0.49390 mg/L | 0.011494 | 0.49390 mg/L | 0.011494 | 2.33% |

QC value within limits for Zinc,7440-66-6 Recovery = 98.78%

| | | | | | | |
|---|---|---|---|---|---|---|
| Zirconium,7440-67-7† | 375915.4 | 0.49456 mg/L | 0.014628 | 0.49456 mg/L | 0.014628 | 2.96% |

QC value within limits for Zirconium,7440-67-7 Recovery = 98.91%

All analyte(s) passed QC. ✓

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**Sequence No.: 11**
**Sample ID: 1900**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 1**
**Date Collected: 10/29/2013 10:29:49 AM**
**Data Type: Reprocessed on 10/30/2013 8:11:22 AM**
**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 1900**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 7428446.6 | 98.3751 | % | 0.98532 | | | | 1.00% |
| Yttrium,7440-65-5A | 3646119.9 | 99.1125 | % | 0.92653 | | | | 0.93% ✓ |
| Yttrium,7440-65-5R | 323559.9 | 100.221 | % ✓ | 0.8983 | | | | 0.90% |
| Ar 420.067 R | 4057770.1 | 98.9742 | % | 0.73313 | | | | 0.74% |
| Ar 363.268 A | 97024.5 | 99.0102 | % | 0.27737 | | | | 0.28% |
| Aluminum,7429-90-5† | -12.8 | -0.00384 | mg/L | 0.025261 | -0.00384 | mg/L | 0.025261 | 658.25% |
| QC value within limits for Aluminum,7429-90-5 Recovery = Not calculated | | | | | | | | |
| Antimony,7440-36-0† | 15.5 | 0.00415 | mg/L | 0.002449 | 0.00415 | mg/L | 0.002449 | 59.04% |
| QC value within limits for Antimony,7440-36-0 Recovery = Not calculated | | | | | | | | |
| Arsenic,7440-38-2† | -4.0 | -0.00154 | mg/L | 0.003589 | -0.00154 | mg/L | 0.003589 | 232.72% |
| QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated | | | | | | | | |
| Barium,7440-39-3† | 147.4 | 0.00057 | mg/L | 0.000022 | 0.00057 | mg/L | 0.000022 | 3.87% |
| QC value within limits for Barium,7440-39-3 Recovery = Not calculated | | | | | | | | |
| Beryllium,7440-41-7† | 1080.9 | 0.00013 | mg/L | 0.000045 | 0.00013 | mg/L | 0.000045 | 34.17% |
| QC value within limits for Beryllium,7440-41-7 Recovery = Not calculated | | | | | | | | |
| Boron,7440-42-8† | 4296.7 | 0.05360 | mg/L | 0.003144 | 0.05360 | mg/L | 0.003144 | 5.87% |
| QC value within limits for Boron,7440-42-8 Recovery = Not calculated | | | | | | | | |
| Cadmium,7440-43-9† | 45.7 | 0.00016 | mg/L | 0.000055 | 0.00016 | mg/L | 0.000055 | 34.17% |
| QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated | | | | | | | | |
| Calcium,7440-70-2† | 186.1 | 0.01093 | mg/L | 0.002658 | 0.01093 | mg/L | 0.002658 | 24.32% |
| QC value within limits for Calcium,7440-70-2 Recovery = Not calculated | | | | | | | | |
| Chromium,7440-47-3† | 59.3 | 0.00031 | mg/L | 0.000412 | 0.00031 | mg/L | 0.000412 | 131.37% |
| QC value within limits for Chromium,7440-47-3 Recovery = Not calculated | | | | | | | | |
| Cobalt,7440-48-4† | -11.2 | -0.00014 | mg/L | 0.000181 | -0.00014 | mg/L | 0.000181 | 131.98% |
| QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated | | | | | | | | |
| Copper,7440-50-8† | 225.6 | 0.00042 | mg/L | 0.000099 | 0.00042 | mg/L | 0.000099 | 23.35% |
| QC value within limits for Copper,7440-50-8 Recovery = Not calculated | | | | | | | | |
| Iron,7439-89-6† | 380.0 | 0.01771 | mg/L | 0.003410 | 0.01771 | mg/L | 0.003410 | 19.25% |
| QC value within limits for Iron,7439-89-6 Recovery = Not calculated | | | | | | | | |
| Lead,7439-92-1† | -10.9 | -0.00036 | mg/L | 0.001038 | -0.00036 | mg/L | 0.001038 | 286.54% |
| QC value within limits for Lead,7439-92-1 Recovery = Not calculated | | | | | | | | |
| Lithium,7439-93-2† | 170.9 | 0.00245 | mg/L | 0.001441 | 0.00245 | mg/L | 0.001441 | 58.85% |
| QC value within limits for Lithium,7439-93-2 Recovery = Not calculated | | | | | | | | |
| Magnesium,7439-95-4† | -40.5 | -0.01130 | mg/L | 0.036098 | -0.01130 | mg/L | 0.036098 | 319.34% |
| QC value within limits for Magnesium,7439-95-4 Recovery = Not calculated | | | | | | | | |
| Manganese,7439-96-5† | 2157.8 | 0.00131 | mg/L | 0.000160 | 0.00131 | mg/L | 0.000160 | 12.19% |
| QC value within limits for Manganese,7439-96-5 Recovery = Not calculated | | | | | | | | |
| Molybdenum,7439-98-7 | 112.8 | 0.00380 | mg/L | 0.000963 | 0.00380 | mg/L | 0.000963 | 25.35% |
| QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated | | | | | | | | |
| Nickel,7440-02-0† | 15.6 | 0.00014 | mg/L | 0.000206 | 0.00014 | mg/L | 0.000206 | 148.42% |
| QC value within limits for Nickel,7440-02-0 Recovery = Not calculated | | | | | | | | |
| Potassium,7440-09-7† | -83.3 | -0.02308 | mg/L | 0.016226 | -0.02308 | mg/L | 0.016226 | 70.30% |
| QC value within limits for Potassium,7440-09-7 Recovery = Not calculated | | | | | | | | |
| Selenium,7782-49-2† | 18.4 | 0.00575 | mg/L | 0.002387 | 0.00575 | mg/L | 0.002387 | 41.50% |
| QC value within limits for Selenium,7782-49-2 Recovery = Not calculated | | | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Silicon,7440-21-3† | 111.0 | 0.02668 mg/L | 0.004074 | 0.02668 mg/L | 0.004074 | 15.27% |
| QC value within limits for Silicon,7440-21-3 Recovery = Not calculated | | | | | | |
| Silver,7440-22-4† | -375.3 | -0.00068 mg/L | 0.000233 | -0.00068 mg/L | 0.000233 | 34.50% |
| QC value within limits for Silver,7440-22-4 Recovery = Not calculated | | | | | | |
| Sodium,7440-23-5† | -1244.7 | -0.13310 mg/L | 0.015102 | -0.13310 mg/L | 0.015102 | 11.35% |
| QC value within limits for Sodium,7440-23-5 Recovery = Not calculated | | | | | | |
| Strontium,7440-24-6† | 236.0 | 0.00032 mg/L | 0.000165 | 0.00032 mg/L | 0.000165 | 51.38% |
| QC value within limits for Strontium,7440-24-6 Recovery = Not calculated | | | | | | |
| Thallium,7440-28-0† | 17.3 | 0.00355 mg/L | 0.002077 | 0.00355 mg/L | 0.002077 | 58.47% |
| QC value within limits for Thallium,7440-28-0 Recovery = Not calculated | | | | | | |
| Tin,7440-31-5† | 16.1 | 0.00140 mg/L | 0.001145 | 0.00140 mg/L | 0.001145 | 82.01% |
| QC value within limits for Tin,7440-31-5 Recovery = Not calculated | | | | | | |
| Titanium,7440-32-6† | 421.2 | 0.00034 mg/L | 0.000086 | 0.00034 mg/L | 0.000086 | 25.41% |
| QC value within limits for Titanium,7440-32-6 Recovery = Not calculated | | | | | | |
| Vanadium,7440-62-2† | -57.4 | -0.00014 mg/L | 0.000218 | -0.00014 mg/L | 0.000218 | 152.41% |
| QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated | | | | | | |
| Zinc,7440-66-6† | 17.8 | 0.00011 mg/L | 0.000123 | 0.00011 mg/L | 0.000123 | 115.92% |
| QC value within limits for Zinc,7440-66-6 Recovery = Not calculated | | | | | | |
| Zirconium,7440-67-7† | 277.9 | 0.00037 mg/L | 0.000235 | 0.00037 mg/L | 0.000235 | 64.22% |
| QC value within limits for Zirconium,7440-67-7 Recovery = Not calculated | | | | | | |

All analyte(s) passed QC.

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**Sequence No.: 12**
**Sample ID: 1800**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 7**
**Date Collected: 10/29/2013 12:46:08 PM**
**Data Type: Reprocessed on 10/30/2013 8:11:24 AM**
**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 1800**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 7526280.5 | 99.6707 | % | 0.46486 | | | | 0.47% |
| Yttrium,7440-65-5A | 3617874.5 | 98.3447 | % | 0.38542 | | | | 0.39% |
| Yttrium,7440-65-5R | 328871.7 | 101.866 | % | 0.9039 | | | | 0.89% |
| Ar 420.067 R | 4166103.9 | 101.617 | % | 0.4690 | | | | 0.46% |
| Ar 363.268 A | 96700.1 | 98.6791 | % | 0.42787 | | | | 0.43% |
| Aluminum,7429-90-5† | 16336.4 | 4.87416 | mg/L | 0.022304 | 4.87416 | mg/L | 0.022304 | 0.46% |
| QC value within limits for Aluminum,7429-90-5 Recovery = 97.48% | | | | | | | | |
| Antimony,7440-36-0† | 1862.9 | 0.49150 | mg/L | 0.004703 | 0.49150 | mg/L | 0.004703 | 0.96% |
| QC value within limits for Antimony,7440-36-0 Recovery = 98.30% | | | | | | | | |
| Arsenic,7440-38-2† | 1232.4 | 0.49737 | mg/L | 0.008421 | 0.49737 | mg/L | 0.008421 | 1.69% |
| QC value within limits for Arsenic,7440-38-2 Recovery = 99.47% | | | | | | | | |
| Barium,7440-39-3† | 127469.5 | 0.49278 | mg/L | 0.005720 | 0.49278 | mg/L | 0.005720 | 1.16% |
| QC value within limits for Barium,7440-39-3 Recovery = 98.56% | | | | | | | | |
| Beryllium,7440-41-7† | 4096471.1 | 0.50219 | mg/L | 0.001011 | 0.50219 | mg/L | 0.001011 | 0.20% |
| QC value within limits for Beryllium,7440-41-7 Recovery = 100.44% | | | | | | | | |
| Boron,7440-42-8† | 190416.7 | 2.39614 | mg/L | 0.038671 | 2.39614 | mg/L | 0.038671 | 1.61% |
| QC value within limits for Boron,7440-42-8 Recovery = 95.85% | | | | | | | | |
| Cadmium,7440-43-9† | 139207.5 | 0.48754 | mg/L | 0.005528 | 0.48754 | mg/L | 0.005528 | 1.13% |
| QC value within limits for Cadmium,7440-43-9 Recovery = 97.51% | | | | | | | | |
| Calcium,7440-70-2† | 84758.1 | 4.97324 | mg/L | 0.011983 | 4.97324 | mg/L | 0.011983 | 0.24% |
| QC value within limits for Calcium,7440-70-2 Recovery = 99.46% | | | | | | | | |
| Chromium,7440-47-3† | 93238.0 | 0.49506 | mg/L | 0.005338 | 0.49506 | mg/L | 0.005338 | 1.08% |
| QC value within limits for Chromium,7440-47-3 Recovery = 99.01% | | | | | | | | |
| Cobalt,7440-48-4† | 40549.1 | 0.49186 | mg/L | 0.005500 | 0.49186 | mg/L | 0.005500 | 1.12% |
| QC value within limits for Cobalt,7440-48-4 Recovery = 98.37% | | | | | | | | |
| Copper,7440-50-8† | 266318.5 | 0.50046 | mg/L | 0.004732 | 0.50046 | mg/L | 0.004732 | 0.95% |
| QC value within limits for Copper,7440-50-8 Recovery = 100.09% | | | | | | | | |
| Iron,7439-89-6† | 103528.5 | 4.82449 | mg/L | 0.010460 | 4.82449 | mg/L | 0.010460 | 0.22% |
| QC value within limits for Iron,7439-89-6 Recovery = 96.49% | | | | | | | | |
| Lead,7439-92-1† | 15323.4 | 0.50884 | mg/L | 0.003526 | 0.50884 | mg/L | 0.003526 | 0.69% |
| QC value within limits for Lead,7439-92-1 Recovery = 101.77% | | | | | | | | |
| Lithium,7439-93-2† | 34748.7 | 0.49806 | mg/L | 0.002772 | 0.49806 | mg/L | 0.002772 | 0.56% |
| QC value within limits for Lithium,7439-93-2 Recovery = 99.61% | | | | | | | | |
| Magnesium,7439-95-4† | 17327.8 | 4.83160 | mg/L | 0.014129 | 4.83160 | mg/L | 0.014129 | 0.29% |
| QC value within limits for Magnesium,7439-95-4 Recovery = 96.63% | | | | | | | | |
| Manganese,7439-96-5† | 848256.1 | 0.51482 | mg/L | 0.005398 | 0.51482 | mg/L | 0.005398 | 1.05% |
| QC value within limits for Manganese,7439-96-5 Recovery = 102.96% | | | | | | | | |
| Molybdenum,7439-98-7 | 14350.9 | 0.48358 | mg/L | 0.005582 | 0.48358 | mg/L | 0.005582 | 1.15% |

AWG 11/12/13

213101712 1203

**Logged In Analyst (Original) : met**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution: 1X** **Sample Prep Vol:**

**Mean Data: 2500**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6754693.2 | 89.4526 | % | 0.33972 | | | | 0.38% |
| Yttrium,7440-65-5A | 3351205.6 | 91.0958 | % | 1.03404 | | | | 1.14% |
| Yttrium,7440-65-5R | 305826.7 | 94.7283 | % | 0.96215 | | | | 1.02% |
| Ar 420.067 R | 3935632.6 | 95.9951 | % | 0.27078 | | | | 0.28% |
| Ar 363.268 A | 97021.2 | 99.0068 | % | 0.80215 | | | | 0.81% |
| Aluminum,7429-90-5† | 37.1 | 0.01109 | mg/L | 0.017412 | 0.01109 | mg/L | 0.017412 | 157.08% |
| Antimony,7440-36-0† | 1.4 | 0.00039 | mg/L | 0.005191 | 0.00039 | mg/L | 0.005191 | >999.9% |
| Arsenic,7440-38-2† | 6.8 | 0.00268 | mg/L | 0.000429 | 0.00268 | mg/L | 0.000429 | 16.01% |
| Barium,7440-39-3† | -19.5 | -0.00007 | mg/L | 0.000030 | -0.00007 | mg/L | 0.000030 | 40.40% |
| Beryllium,7440-41-7† | -1021.0 | -0.00013 | mg/L | 0.000024 | -0.00013 | mg/L | 0.000024 | 18.55% |
| Boron,7440-42-8† | 369.0 | 0.00461 | mg/L | 0.000140 | 0.00461 | mg/L | 0.000140 | 3.05% |
| Cadmium,7440-43-9† | 15.5 | 0.00005 | mg/L | 0.000049 | 0.00005 | mg/L | 0.000049 | 89.85% |
| Calcium,7440-70-2† | -132.4 | -0.00777 | mg/L | 0.006336 | -0.00777 | mg/L | 0.006336 | 81.49% |
| Chromium,7440-47-3† | -76.4 | -0.00040 | mg/L | 0.000235 | -0.00040 | mg/L | 0.000235 | 58.30% |
| Cobalt,7440-48-4† | -14.5 | -0.00018 | mg/L | 0.000109 | -0.00018 | mg/L | 0.000109 | 62.28% |
| Copper,7440-50-8† | 192.4 | 0.00036 | mg/L | 0.000299 | 0.00036 | mg/L | 0.000299 | 82.61% |
| Iron,7439-89-6† | 53.7 | 0.00250 | mg/L | 0.001984 | 0.00250 | mg/L | 0.001984 | 79.21% |
| Lead,7439-92-1† | -12.6 | -0.00042 | mg/L | 0.001174 | -0.00042 | mg/L | 0.001174 | 280.92% |
| Lithium,7439-93-2† | -95.6 | -0.00137 | mg/L | 0.002054 | -0.00137 | mg/L | 0.002054 | 149.94% |
| Magnesium,7439-95-4† | 26.4 | 0.00736 | mg/L | 0.023456 | 0.00736 | mg/L | 0.023456 | 318.56% |
| Manganese,7439-96-5† | -578.7 | -0.00035 | mg/L | 0.000046 | -0.00035 | mg/L | 0.000046 | 13.21% |
| Molybdenum,7439-98-7 | 11.2 | 0.00038 | mg/L | 0.000846 | 0.00038 | mg/L | 0.000846 | 223.57% |
| Nickel,7440-02-0† | -53.6 | -0.00048 | mg/L | 0.000336 | -0.00048 | mg/L | 0.000336 | 70.69% |
| Potassium,7440-09-7† | -76.4 | -0.02116 | mg/L | 0.016080 | -0.02116 | mg/L | 0.016080 | 75.98% |
| Selenium,7782-49-2† | -11.3 | -0.00354 | mg/L | 0.001117 | -0.00354 | mg/L | 0.001117 | 31.59% |
| Silicon,7440-21-3† | -44.8 | -0.01076 | mg/L | 0.006140 | -0.01076 | mg/L | 0.006140 | 57.05% |
| Silver,7440-22-4† | -310.3 | -0.00056 | mg/L | 0.000443 | -0.00056 | mg/L | 0.000443 | 79.77% |
| Sodium,7440-23-5† | 3327.8 | 0.35584 | mg/L | 0.038532 | 0.35584 | mg/L | 0.038532 | 10.83% |
| Strontium,7440-24-6† | 829.8 | 0.00113 | mg/L | 0.000164 | 0.00113 | mg/L | 0.000164 | 14.47% |
| Thallium,7440-28-0† | 28.5 | 0.00581 | mg/L | 0.002005 | 0.00581 | mg/L | 0.002005 | 34.50% |
| Tin,7440-31-5† | -18.8 | -0.00163 | mg/L | 0.000343 | -0.00163 | mg/L | 0.000343 | 20.98% |
| Titanium,7440-32-6† | -937.4 | -0.00076 | mg/L | 0.000134 | -0.00076 | mg/L | 0.000134 | 17.74% |
| Vanadium,7440-62-2† | 287.8 | 0.00071 | mg/L | 0.000262 | 0.00071 | mg/L | 0.000262 | 36.70% |
| Zinc,7440-66-6† | -133.1 | -0.00081 | mg/L | 0.000132 | -0.00081 | mg/L | 0.000132 | 16.21% |
| Zirconium,7440-67-7† | -155.2 | -0.00020 | mg/L | 0.000067 | -0.00020 | mg/L | 0.000067 | 32.73% |

AWG 11/12/13

**Sequence No.: 72** **Autosampler Location: 7**
**Sample ID: 1800** **Date Collected: 10/29/2013 7:24:27 PM**
**Analyst:** **Data Type: Reprocessed on 10/30/2013 8:13:33 AM**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

**Mean Data: 1800**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6293137.3 | 83.3402 | % | 1.65586 | | | | 1.99% |
| Yttrium,7440-65-5A | 3033280.2 | 82.4536 | % | 1.42629 | | | | 1.73% |
| Yttrium,7440-65-5R | 277215.7 | 85.8662 | % | 1.86347 | | | | 2.17% |
| Ar 420.067 R | 3854608.5 | 94.0188 | % | 0.41315 | | | | 0.44% |
| Ar 363.268 A | 97312.5 | 99.3040 | % | 0.11752 | | | | 0.12% |
| Aluminum,7429-90-5† | 16348.8 | 4.87780 | mg/L | 0.054938 | 4.87780 | mg/L | 0.054938 | 1.13% |
| QC value within limits for Aluminum,7429-90-5 Recovery = 97.56% | | | | | | | | |
| Antimony,7440-36-0† | 1856.6 | 0.48997 | mg/L | 0.009655 | 0.48997 | mg/L | 0.009655 | 1.97% |
| QC value within limits for Antimony,7440-36-0 Recovery = 97.99% | | | | | | | | |
| Arsenic,7440-38-2† | 1205.8 | 0.48715 | mg/L | 0.008264 | 0.48715 | mg/L | 0.008264 | 1.70% |
| QC value within limits for Arsenic,7440-38-2 Recovery = 97.43% | | | | | | | | |
| Barium,7440-39-3† | 125283.4 | 0.48433 | mg/L | 0.008931 | 0.48433 | mg/L | 0.008931 | 1.84% |
| QC value within limits for Barium,7440-39-3 Recovery = 96.87% | | | | | | | | |
| Beryllium,7440-41-7† | 3995723.6 | 0.48986 | mg/L | 0.000404 | 0.48986 | mg/L | 0.000404 | 0.08% |
| QC value within limits for Beryllium,7440-41-7 Recovery = 97.97% | | | | | | | | |
| Boron,7440-42-8† | 185986.9 | 2.34047 | mg/L | 0.056323 | 2.34047 | mg/L | 0.056323 | 2.41% |

QC value within limits for Boron,7440-42-8 Recovery = 93.62%
Cadmium,7440-43-9† 133172.1 0.46640 mg/L 0.008655 0.46640 mg/L 0.008655 1.86%
QC value within limits for Cadmium,7440-43-9 Recovery = 93.28%
Calcium,7440-70-2† 98043.9 5.75309 mg/L 0.062033 5.75309 mg/L 0.062033 1.08%
QC value greater than the upper limit for Calcium,7440-70-2 Recovery = 115.06%
Chromium,7440-47-3† 91791.1 0.48732 mg/L 0.008724 0.48732 mg/L 0.008724 1.79%
QC value within limits for Chromium,7440-47-3 Recovery = 97.46%
Cobalt,7440-48-4† 39690.1 0.48143 mg/L 0.008531 0.48143 mg/L 0.008531 1.77%
QC value within limits for Cobalt,7440-48-4 Recovery = 96.29%
Copper,7440-50-8† 272580.2 0.51220 mg/L 0.009915 0.51220 mg/L 0.009915 1.94%
QC value within limits for Copper,7440-50-8 Recovery = 102.44%
Iron,7439-89-6† 100595.6 4.68780 mg/L 0.039456 4.68780 mg/L 0.039456 0.84%
QC value within limits for Iron,7439-89-6 Recovery = 93.76%
Lead,7439-92-1† 14842.4 0.49287 mg/L 0.011682 0.49287 mg/L 0.011682 2.37%
QC value within limits for Lead,7439-92-1 Recovery = 98.57%
Lithium,7439-93-2† 35262.0 0.50542 mg/L 0.003677 0.50542 mg/L 0.003677 0.73%
QC value within limits for Lithium,7439-93-2 Recovery = 101.08%
Magnesium,7439-95-4† 16481.4 4.59558 mg/L 0.055000 4.59558 mg/L 0.055000 1.20%
QC value within limits for Magnesium,7439-95-4 Recovery = 91.91%
Manganese,7439-96-5† 984260.6 0.59735 mg/L 0.000308 0.59735 mg/L 0.000308 0.05%
QC value greater than the upper limit for Manganese,7439-96-5 Recovery = 119.47%
Molybdenum,7439-98-7 14265.7 0.48071 mg/L 0.012009 0.48071 mg/L 0.012009 2.50%
QC value within limits for Molybdenum,7439-98-7 Recovery = 96.14%
Nickel,7440-02-0† 54286.0 0.48215 mg/L 0.007794 0.48215 mg/L 0.007794 1.62%
QC value within limits for Nickel,7440-02-0 Recovery = 96.43%
Potassium,7440-09-7† 36361.4 10.0742 mg/L 0.04921 10.0742 mg/L 0.04921 0.49%
QC value within limits for Potassium,7440-09-7 Recovery = 100.74%
Selenium,7782-49-2† 1497.7 0.46805 mg/L 0.017573 0.46805 mg/L 0.017573 3.75%
QC value within limits for Selenium,7782-49-2 Recovery = 93.61%
Silicon,7440-21-3† 20704.2 4.97403 mg/L 0.019549 4.97403 mg/L 0.019549 0.39%
QC value within limits for Silicon,7440-21-3 Recovery = 99.48%
Silver,7440-22-4† 287100.7 0.51836 mg/L 0.009983 0.51836 mg/L 0.009983 1.93%
QC value within limits for Silver,7440-22-4 Recovery = 103.67%
Sodium,7440-23-5† 188543.8 20.1632 mg/L 0.20640 20.1632 mg/L 0.20640 1.02%
QC value within limits for Sodium,7440-23-5 Recovery = 100.82%
Strontium,7440-24-6† 360396.5 0.49120 mg/L 0.005488 0.49120 mg/L 0.005488 1.12%
QC value within limits for Strontium,7440-24-6 Recovery = 98.24%
Thallium,7440-28-0† 2368.2 0.49250 mg/L 0.012694 0.49250 mg/L 0.012694 2.58%
QC value within limits for Thallium,7440-28-0 Recovery = 98.50%
Tin,7440-31-5† 5427.4 0.47279 mg/L 0.009632 0.47279 mg/L 0.009632 2.04%
QC value within limits for Tin,7440-31-5 Recovery = 94.56%
Titanium,7440-32-6† 600591.1 0.48539 mg/L 0.001346 0.48539 mg/L 0.001346 0.28%
QC value within limits for Titanium,7440-32-6 Recovery = 97.08%
Vanadium,7440-62-2† 198298.1 0.49328 mg/L 0.009290 0.49328 mg/L 0.009290 1.88%
QC value within limits for Vanadium,7440-62-2 Recovery = 98.66%
Zinc,7440-66-6† 84187.7 0.51105 mg/L 0.008825 0.51105 mg/L 0.008825 1.73%
QC value within limits for Zinc,7440-66-6 Recovery = 102.21%
Zirconium,7440-67-7† 378089.9 0.49743 mg/L 0.009214 0.49743 mg/L 0.009214 1.85%
QC value within limits for Zirconium,7440-67-7 Recovery = 99.49%
QC Failed. Continue with analysis.

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**Sequence No.: 73** **Autosampler Location: 1**
**Sample ID: 1900** **Date Collected: 10/29/2013 7:30:53 PM**
**Analyst:** **Data Type: Reprocessed on 10/30/2013 8:13:35 AM**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Mean Data: 1900**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6520841.8 | 86.3557 | % | 0.03948 | | | | 0.05% |
| Yttrium,7440-65-5A | 3170295.8 | 86.1781 | % | 0.05773 | | | | 0.07% |
| Yttrium,7440-65-5R | 282335.9 | 87.4522 | % | 0.45314 | | | | 0.52% |
| Ar 420.067 R | 3957478.2 | 96.5279 | % | 0.51055 | | | | 0.53% |
| Ar 363.268 A | 97703.5 | 99.7030 | % | 0.26296 | | | | 0.26% |
| Aluminum,7429-90-5† | -25.1 | -0.00753 | mg/L | 0.017401 | -0.00753 | mg/L | 0.017401 | 231.06% |
| QC value within limits for Aluminum,7429-90-5 Recovery = Not calculated | | | | | | | | |
| Antimony,7440-36-0† | 12.4 | 0.00338 | mg/L | 0.001247 | 0.00338 | mg/L | 0.001247 | 36.93% |
| QC value within limits for Antimony,7440-36-0 Recovery = Not calculated | | | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Arsenic,7440-38-2† | -3.2 | -0.00117 mg/L | 0.000920 | -0.00117 mg/L | 0.000920 | 78.44% |
| QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated | | | | | | |
| Barium,7440-39-3† | 137.1 | 0.00053 mg/L | 0.000015 | 0.00053 mg/L | 0.000015 | 2.88% |
| QC value within limits for Barium,7440-39-3 Recovery = Not calculated | | | | | | |
| Beryllium,7440-41-7† | 1260.0 | 0.00016 mg/L | 0.000057 | 0.00016 mg/L | 0.000057 | 36.63% |
| QC value within limits for Beryllium,7440-41-7 Recovery = Not calculated | | | | | | |
| Boron,7440-42-8† | 3671.9 | 0.04575 mg/L | 0.003891 | 0.04575 mg/L | 0.003891 | 8.50% |
| QC value within limits for Boron,7440-42-8 Recovery = Not calculated | | | | | | |
| Cadmium,7440-43-9† | 39.4 | 0.00014 mg/L | 0.000036 | 0.00014 mg/L | 0.000036 | 26.10% |
| QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated | | | | | | |
| Calcium,7440-70-2† | 149.4 | 0.00875 mg/L | 0.001768 | 0.00875 mg/L | 0.001768 | 20.21% |
| QC value within limits for Calcium,7440-70-2 Recovery = Not calculated | | | | | | |
| Chromium,7440-47-3† | -299.7 | -0.00158 mg/L | 0.000140 | -0.00158 mg/L | 0.000140 | 8.87% |
| QC value within limits for Chromium,7440-47-3 Recovery = Not calculated | | | | | | |
| Cobalt,7440-48-4† | -6.0 | -0.00007 mg/L | 0.000166 | -0.00007 mg/L | 0.000166 | 222.45% |
| QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated | | | | | | |
| Copper,7440-50-8† | 1033.9 | 0.00194 mg/L | 0.000521 | 0.00194 mg/L | 0.000521 | 26.79% |
| QC value within limits for Copper,7440-50-8 Recovery = Not calculated | | | | | | |
| Iron,7439-89-6† | 43.8 | 0.00204 mg/L | 0.001339 | 0.00204 mg/L | 0.001339 | 65.54% |
| QC value within limits for Iron,7439-89-6 Recovery = Not calculated | | | | | | |
| Lead,7439-92-1† | 5.1 | 0.00017 mg/L | 0.000451 | 0.00017 mg/L | 0.000451 | 270.88% |
| QC value within limits for Lead,7439-92-1 Recovery = Not calculated | | | | | | |
| Lithium,7439-93-2† | -14.8 | -0.00021 mg/L | 0.001776 | -0.00021 mg/L | 0.001776 | 834.72% |
| QC value within limits for Lithium,7439-93-2 Recovery = Not calculated | | | | | | |
| Magnesium,7439-95-4† | 244.3 | 0.06813 mg/L | 0.016123 | 0.06813 mg/L | 0.016123 | 23.66% |
| QC value within limits for Magnesium,7439-95-4 Recovery = Not calculated | | | | | | |
| Manganese,7439-96-5† | 2802.4 | 0.00170 mg/L | 0.000189 | 0.00170 mg/L | 0.000189 | 11.09% |
| QC value within limits for Manganese,7439-96-5 Recovery = Not calculated | | | | | | |
| Molybdenum,7439-98-7 | 63.4 | 0.00214 mg/L | 0.001106 | 0.00214 mg/L | 0.001106 | 51.80% |
| QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated | | | | | | |
| Nickel,7440-02-0† | -84.1 | -0.00075 mg/L | 0.000565 | -0.00075 mg/L | 0.000565 | 75.56% |
| QC value within limits for Nickel,7440-02-0 Recovery = Not calculated | | | | | | |
| Potassium,7440-09-7† | 13.0 | 0.00361 mg/L | 0.034246 | 0.00361 mg/L | 0.034246 | 948.57% |
| QC value within limits for Potassium,7440-09-7 Recovery = Not calculated | | | | | | |
| Selenium,7782-49-2† | 33.6 | 0.01050 mg/L | 0.001947 | 0.01050 mg/L | 0.001947 | 18.54% |
| QC value within limits for Selenium,7782-49-2 Recovery = Not calculated | | | | | | |
| Silicon,7440-21-3† | 113.0 | 0.02715 mg/L | 0.001465 | 0.02715 mg/L | 0.001465 | 5.40% |
| QC value within limits for Silicon,7440-21-3 Recovery = Not calculated | | | | | | |
| Silver,7440-22-4† | 1598.1 | 0.00288 mg/L | 0.000344 | 0.00288 mg/L | 0.000344 | 11.93% |
| QC value within limits for Silver,7440-22-4 Recovery = Not calculated | | | | | | |
| Sodium,7440-23-5† | -1090.9 | -0.11664 mg/L | 0.015728 | -0.11664 mg/L | 0.015728 | 13.48% |
| QC value within limits for Sodium,7440-23-5 Recovery = Not calculated | | | | | | |
| Strontium,7440-24-6† | 1432.4 | 0.00195 mg/L | 0.000198 | 0.00195 mg/L | 0.000198 | 10.15% |
| QC value within limits for Strontium,7440-24-6 Recovery = Not calculated | | | | | | |
| Thallium,7440-28-0† | 18.1 | 0.00372 mg/L | 0.001937 | 0.00372 mg/L | 0.001937 | 52.09% |
| QC value within limits for Thallium,7440-28-0 Recovery = Not calculated | | | | | | |
| Tin,7440-31-5† | -4.1 | -0.00036 mg/L | 0.000603 | -0.00036 mg/L | 0.000603 | 169.57% |
| QC value within limits for Tin,7440-31-5 Recovery = Not calculated | | | | | | |
| Titanium,7440-32-6† | 602.5 | 0.00049 mg/L | 0.000030 | 0.00049 mg/L | 0.000030 | 6.25% |
| QC value within limits for Titanium,7440-32-6 Recovery = Not calculated | | | | | | |
| Vanadium,7440-62-2† | 822.9 | 0.00204 mg/L | 0.000107 | 0.00204 mg/L | 0.000107 | 5.25% |
| QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated | | | | | | |
| Zinc,7440-66-6† | 19.8 | 0.00012 mg/L | 0.000170 | 0.00012 mg/L | 0.000170 | 136.12% |
| QC value within limits for Zinc,7440-66-6 Recovery = Not calculated | | | | | | |
| Zirconium,7440-67-7† | 487.4 | 0.00064 mg/L | 0.000072 | 0.00064 mg/L | 0.000072 | 11.25% |
| QC value within limits for Zirconium,7440-67-7 Recovery = Not calculated | | | | | | |

All analyte(s) passed QC.

**Sequence No.: 74**
**Sample ID: 1244705**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution: 1X**

**Autosampler Location: 67**
**Date Collected: 10/29/2013 7:37:13 PM**
**Data Type: Reprocessed on 10/30/2013 8:13:38 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 1244705**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6489497.7 | 85.9406 | % | 0.69046 | | | | 0.80% |
| Yttrium,7440-65-5A | 3151761.0 | 85.6743 | % | 0.59929 | | | | 0.70% |

Reprocess as soils AWG 10/30/13

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| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Yttrium,7440-65-5R | 281980.6 | 87.3421 | % | 1.11137 | | | | 1.27% |
| Ar 420.067 R | 3977454.9 | 97.0152 | % | 0.61361 | | | | 0.63% |
| Ar 363.268 A | 98065.6 | 100.073 | % | 0.3258 | | | | 0.33% |
| Aluminum,7429-90-5† | 79.0 | 0.02358 | mg/L | 0.038541 | 0.02358 | mg/L | 0.038541 | 163.48% |
| Antimony,7440-36-0† | 6.1 | 0.00168 | mg/L | 0.005810 | 0.00168 | mg/L | 0.005810 | 345.64% |
| Arsenic,7440-38-2† | 6.5 | 0.00261 | mg/L | 0.005595 | 0.00261 | mg/L | 0.005595 | 214.04% |
| Barium,7440-39-3† | 550.6 | 0.00212 | mg/L | 0.000025 | 0.00212 | mg/L | 0.000025 | 1.16% |
| Beryllium,7440-41-7† | -75.7 | -0.00001 | mg/L | 0.000020 | -0.00001 | mg/L | 0.000020 | 250.57% |
| Boron,7440-42-8† | 2355.8 | 0.02943 | mg/L | 0.001106 | 0.02943 | mg/L | 0.001106 | 3.76% |
| Cadmium,7440-43-9† | -21.2 | -0.00007 | mg/L | 0.000051 | -0.00007 | mg/L | 0.000051 | 68.53% |
| Calcium,7440-70-2† | 6812.2 | 0.39989 | mg/L | 0.007623 | 0.39989 | mg/L | 0.007623 | 1.91% |
| Chromium,7440-47-3† | -266.4 | -0.00140 | mg/L | 0.000193 | -0.00140 | mg/L | 0.000193 | 13.75% |
| Cobalt,7440-48-4† | -48.8 | -0.00059 | mg/L | 0.000467 | -0.00059 | mg/L | 0.000467 | 78.50% |
| Copper,7440-50-8† | 697.7 | 0.00131 | mg/L | 0.000327 | 0.00131 | mg/L | 0.000327 | 24.98% |
| Iron,7439-89-6† | 341.1 | 0.01590 | mg/L | 0.002478 | 0.01590 | mg/L | 0.002478 | 15.59% |
| Lead,7439-92-1† | 6.9 | 0.00023 | mg/L | 0.000931 | 0.00023 | mg/L | 0.000931 | 397.19% |
| Lithium,7439-93-2† | -48.7 | -0.00070 | mg/L | 0.001145 | -0.00070 | mg/L | 0.001145 | 163.91% |
| Magnesium,7439-95-4† | 365.9 | 0.10204 | mg/L | 0.016726 | 0.10204 | mg/L | 0.016726 | 16.39% |
| Manganese,7439-96-5† | 3958.6 | 0.00240 | mg/L | 0.000116 | 0.00240 | mg/L | 0.000116 | 4.84% |
| Molybdenum,7439-98-7 | 22.7 | 0.00077 | mg/L | 0.000588 | 0.00077 | mg/L | 0.000588 | 76.76% |
| Nickel,7440-02-0† | 5.5 | 0.00005 | mg/L | 0.000350 | 0.00005 | mg/L | 0.000350 | 721.20% |
| Potassium,7440-09-7† | -0.7 | -0.00020 | mg/L | 0.010951 | -0.00020 | mg/L | 0.010951 | >999.9% |
| Selenium,7782-49-2† | 8.7 | 0.00272 | mg/L | 0.006286 | 0.00272 | mg/L | 0.006286 | 230.83% |
| Silicon,7440-21-3† | 53.8 | 0.01292 | mg/L | 0.004158 | 0.01292 | mg/L | 0.004158 | 32.18% |
| Silver,7440-22-4† | 1121.7 | 0.00202 | mg/L | 0.000381 | 0.00202 | mg/L | 0.000381 | 18.83% |
| Sodium,7440-23-5† | -1335.4 | -0.14280 | mg/L | 0.009747 | -0.14280 | mg/L | 0.009747 | 6.83% |
| Strontium,7440-24-6† | 1716.5 | 0.00233 | mg/L | 0.000040 | 0.00233 | mg/L | 0.000040 | 1.71% |
| Thallium,7440-28-0† | 14.7 | 0.00302 | mg/L | 0.001857 | 0.00302 | mg/L | 0.001857 | 61.46% |
| Tin,7440-31-5† | -20.1 | -0.00172 | mg/L | 0.000324 | -0.00172 | mg/L | 0.000324 | 18.82% |
| Titanium,7440-32-6† | 534.8 | 0.00043 | mg/L | 0.000083 | 0.00043 | mg/L | 0.000083 | 19.26% |
| Vanadium,7440-62-2† | 635.8 | 0.00157 | mg/L | 0.000197 | 0.00157 | mg/L | 0.000197 | 12.51% |
| Zinc,7440-66-6† | 607.2 | 0.00371 | mg/L | 0.000152 | 0.00371 | mg/L | 0.000152 | 4.10% |
| Zirconium,7440-67-7† | 258.8 | 0.00034 | mg/L | 0.000224 | 0.00034 | mg/L | 0.000224 | 65.90% |

**Sequence No.: 75**
**Sample ID: 1244706**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution: 1X**

**Autosampler Location: 68**
**Date Collected: 10/29/2013 7:43:35 PM**
**Data Type: Reprocessed on 10/30/2013 8:13:40 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 1244706**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6374612.4 | 84.4191 | % | 0.42176 | | | | 0.50% |
| Yttrium,7440-65-5A | 3075732.3 | 83.6076 | % | 0.50810 | | | | 0.61% |
| Yttrium,7440-65-5R | 272441.3 | 84.3874 | % | 0.60828 | | | | 0.72% |
| Ar 420.067 R | 3855710.7 | 94.0457 | % | 0.79135 | | | | 0.84% |
| Ar 363.268 A | 99390.7 | 101.425 | % | 0.1428 | | | | 0.14% |
| Aluminum,7429-90-5† | 17666.4 | 5.27127 | mg/L | 0.033042 | 5.27127 | mg/L | 0.033042 | 0.63% |
| Antimony,7440-36-0† | 1920.2 | 0.50661 | mg/L | 0.005139 | 0.50661 | mg/L | 0.005139 | 1.01% |
| Arsenic,7440-38-2† | 1232.4 | 0.49815 | mg/L | 0.006934 | 0.49815 | mg/L | 0.006934 | 1.39% |
| Barium,7440-39-3† | 130289.6 | 0.50369 | mg/L | 0.011344 | 0.50369 | mg/L | 0.011344 | 2.25% |
| Beryllium,7440-41-7† | 4168872.5 | 0.51110 | mg/L | 0.000751 | 0.51110 | mg/L | 0.000751 | 0.15% |
| Boron,7440-42-8† | 181923.9 | 2.29113 | mg/L | 0.041802 | 2.29113 | mg/L | 0.041802 | 1.82% |
| Cadmium,7440-43-9† | 137005.9 | 0.47983 | mg/L | 0.011834 | 0.47983 | mg/L | 0.011834 | 2.47% |
| Calcium,7440-70-2† | 89684.5 | 5.26239 | mg/L | 0.005704 | 5.26239 | mg/L | 0.005704 | 0.11% |
| Chromium,7440-47-3† | 96341.2 | 0.51153 | mg/L | 0.010750 | 0.51153 | mg/L | 0.010750 | 2.10% |
| Cobalt,7440-48-4† | 41486.7 | 0.50321 | mg/L | 0.010819 | 0.50321 | mg/L | 0.010819 | 2.15% |
| Copper,7440-50-8† | 285953.0 | 0.53737 | mg/L | 0.010378 | 0.53737 | mg/L | 0.010378 | 1.93% |
| Iron,7439-89-6† | 106783.8 | 4.97618 | mg/L | 0.015814 | 4.97618 | mg/L | 0.015814 | 0.32% |
| Lead,7439-92-1† | 15164.2 | 0.50358 | mg/L | 0.006427 | 0.50358 | mg/L | 0.006427 | 1.28% |
| Lithium,7439-93-2† | 35917.6 | 0.51482 | mg/L | 0.005898 | 0.51482 | mg/L | 0.005898 | 1.15% |
| Magnesium,7439-95-4† | 17608.5 | 4.90988 | mg/L | 0.053187 | 4.90988 | mg/L | 0.053187 | 1.08% |
| Manganese,7439-96-5† | 849585.3 | 0.51563 | mg/L | 0.010935 | 0.51563 | mg/L | 0.010935 | 2.12% |
| Molybdenum,7439-98-7 | 14761.9 | 0.49744 | mg/L | 0.002969 | 0.49744 | mg/L | 0.002969 | 0.60% |
| Nickel,7440-02-0† | 56812.3 | 0.50459 | mg/L | 0.010905 | 0.50459 | mg/L | 0.010905 | 2.16% |
| Potassium,7440-09-7† | 37152.1 | 10.2931 | mg/L | 0.12600 | 10.2931 | mg/L | 0.12600 | 1.22% |
| Selenium,7782-49-2† | 1518.5 | 0.47464 | mg/L | 0.010267 | 0.47464 | mg/L | 0.010267 | 2.16% |
| Silicon,7440-21-3† | 1312.7 | 0.31416 | mg/L | 0.003855 | 0.31416 | mg/L | 0.003855 | 1.23% |

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|---|---|---|---|---|---|---|---|
| Silver,7440-22-4† | 289638.5 | 0.52302 | mg/L | 0.010899 | 0.52302 | mg/L | 0.010899 | 2.08% |
| Sodium,7440-23-5† | 195517.8 | 20.9089 | mg/L | 0.14746 | 20.9089 | mg/L | 0.14746 | 0.71% |
| Strontium,7440-24-6† | 385572.7 | 0.52554 | mg/L | 0.002540 | 0.52554 | mg/L | 0.002540 | 0.48% |
| Thallium,7440-28-0† | 2420.4 | 0.50352 | mg/L | 0.004605 | 0.50352 | mg/L | 0.004605 | 0.91% |
| Tin,7440-31-5† | 5577.5 | 0.48588 | mg/L | 0.005106 | 0.48588 | mg/L | 0.005106 | 1.05% |
| Titanium,7440-32-6† | 633021.5 | 0.51160 | mg/L | 0.000656 | 0.51160 | mg/L | 0.000656 | 0.13% |
| Vanadium,7440-62-2† | 206321.9 | 0.51325 | mg/L | 0.011649 | 0.51325 | mg/L | 0.011649 | 2.27% |
| Zinc,7440-66-6† | 81261.9 | 0.49298 | mg/L | 0.010487 | 0.49298 | mg/L | 0.010487 | 2.13% |
| Zirconium,7440-67-7† | 4781.9 | 0.00609 | mg/L | 0.001373 | 0.00609 | mg/L | 0.001373 | 22.54% |

**Sequence No.: 76**
**Sample ID: 21310171201**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution: 1X**

**Autosampler Location: 69**
**Date Collected: 10/29/2013 7:50:04 PM**
**Data Type: Reprocessed on 10/30/2013 8:13:42 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 21310171201**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6519957.6 | 86.3440 | % | 0.28892 | | | | 0.33% |
| Yttrium,7440-65-5A | 3434070.5 | 93.3483 | % | 0.33245 | | | | 0.36% |
| Yttrium,7440-65-5R | 311216.9 | 96.3979 | % | 0.50988 | | | | 0.53% |
| Ar 420.067 R | 3912582.8 | 95.4329 | % | 0.73684 | | | | 0.77% |
| Ar 363.268 A | 96611.2 | 98.5883 | % | 0.39119 | | | | 0.40% |
| Aluminum,7429-90-5† | 293796.6 | 87.7653 | mg/L | 0.38973 | 87.7653 | mg/L | 0.38973 | 0.44% |
| Antimony,7440-36-0† | 70.1 | 0.03836 | mg/L | 0.002835 | 0.03836 | mg/L | 0.002835 | 7.39% |
| Arsenic,7440-38-2† | -1.8 | 0.06017 | mg/L | 0.004534 | 0.06017 | mg/L | 0.004534 | 7.53% |
| Barium,7440-39-3† | 316714.0 | 1.21936 | mg/L | 0.009215 | 1.21936 | mg/L | 0.009215 | 0.76% |
| Beryllium,7440-41-7† | -82612.5 | 0.00295 | mg/L | 0.000031 | 0.00295 | mg/L | 0.000031 | 1.04% |
| Boron,7440-42-8† | -97620.7 | -0.07197 | mg/L | 0.018122 | -0.07197 | mg/L | 0.018122 | 25.18% |
| Cadmium,7440-43-9† | 16047.2 | 0.05124 | mg/L | 0.000420 | 0.05124 | mg/L | 0.000420 | 0.82% |
| Calcium,7440-70-2† | 969597.0 | 56.8704 | mg/L | 0.18830 | 56.8704 | mg/L | 0.18830 | 0.33% |
| Chromium,7440-47-3† | 74221.8 | 0.40607 | mg/L | 0.002518 | 0.40607 | mg/L | 0.002518 | 0.62% |
| Cobalt,7440-48-4† | 7704.5 | 0.07920 | mg/L | 0.000889 | 0.07920 | mg/L | 0.000889 | 1.12% |
| Copper,7440-50-8† | 874010.0 | 1.64017 | mg/L | 0.003899 | 1.64017 | mg/L | 0.003899 | 0.24% |
| Iron,7439-89-6† | 5391190.4 | 251.263 | mg/L | 3.0185 | 251.263 | mg/L | 3.0185 | 1.20% |
| Lead,7439-92-1† | 287844.5 | 9.55124 | mg/L | 0.077301 | 9.55124 | mg/L | 0.077301 | 0.81% |
| Lithium,7439-93-2† | 13483.7 | 0.19307 | mg/L | 0.002457 | 0.19307 | mg/L | 0.002457 | 1.27% |
| Magnesium,7439-95-4† | 154344.7 | 42.9564 | mg/L | 0.10566 | 42.9564 | mg/L | 0.10566 | 0.25% |
| Manganese,7439-96-5† | 3894233.2 | 2.36481 | mg/L | 0.005417 | 2.36481 | mg/L | 0.005417 | 0.23% |
| Molybdenum,7439-98-7 | 1078.4 | 0.06020 | mg/L | 0.001883 | 0.06020 | mg/L | 0.001883 | 3.13% |
| Nickel,7440-02-0† | 34504.8 | 0.30736 | mg/L | 0.002494 | 0.30736 | mg/L | 0.002494 | 0.81% |
| Potassium,7440-09-7† | 51804.5 | 14.3999 | mg/L | 0.10609 | 14.3999 | mg/L | 0.10609 | 0.74% |
| Selenium,7782-49-2† | -18.3 | 0.04809 | mg/L | 0.003169 | 0.04809 | mg/L | 0.003169 | 6.59% |
| Silicon,7440-21-3† | 79281.5 | 19.0468 | mg/L | 0.06595 | 19.0468 | mg/L | 0.06595 | 0.35% |
| Silver,7440-22-4† | -3184.3 | 0.00110 | mg/L | 0.000053 | 0.00110 | mg/L | 0.000053 | 4.78% |
| Sodium,7440-23-5† | 13621.6 | 1.47112 | mg/L | 0.008687 | 1.47112 | mg/L | 0.008687 | 0.59% |
| Strontium,7440-24-6† | 236012.1 | 0.31970 | mg/L | 0.001374 | 0.31970 | mg/L | 0.001374 | 0.43% |
| Thallium,7440-28-0† | -255.1 | 0.02109 | mg/L | 0.001573 | 0.02109 | mg/L | 0.001573 | 7.46% |
| Tin,7440-31-5† | 3180.6 | 0.29639 | mg/L | 0.002758 | 0.29639 | mg/L | 0.002758 | 0.93% |
| Titanium,7440-32-6† | 5835123.3 | 4.71586 | mg/L | 0.008244 | 4.71586 | mg/L | 0.008244 | 0.17% |
| Vanadium,7440-62-2† | 92142.9 | 0.21562 | mg/L | 0.001992 | 0.21562 | mg/L | 0.001992 | 0.92% |
| Zinc,7440-66-6† | 2608180.2 | 15.9268 | mg/L | 0.03925 | 15.9268 | mg/L | 0.03925 | 0.25% |
| Zirconium,7440-67-7† | 43100.4 | 0.05430 | mg/L | 0.001247 | 0.05430 | mg/L | 0.001247 | 2.30% |

**Sequence No.: 77**
**Sample ID: 21310171203**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution: 1X**

**Autosampler Location: 70**
**Date Collected: 10/29/2013 7:56:30 PM**
**Data Type: Reprocessed on 10/30/2013 8:13:44 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 21310171203**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6435551.5 | 85.2262 | % | 0.51226 | | | | 0.60% |
| Yttrium,7440-65-5A | 3940631.0 | 107.118 | % | 0.5502 | | | | 0.51% |

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|---|---|---|---|---|---|---|---|
| Yttrium,7440-65-5R | 362583.7 | 112.309 | % | 0.6275 | | | 0.56% |
| Ar 420.067 R | 3979460.5 | 97.0641 | % | 1.24156 | | | 1.28% |
| Ar 363.268 A | 95175.0 | 97.1228 | % | 0.41630 | | | 0.43% |
| Aluminum,7429-90-5† | 282937.4 | 84.5211 | mg/L | 0.56196 | 84.5211 | mg/L | 0.56196 | 0.66% |
| Antimony,7440-36-0† | 29.5 | 0.02474 | mg/L | 0.001160 | 0.02474 | mg/L | 0.001160 | 4.69% |
| Arsenic,7440-38-2† | 4.1 | 0.06012 | mg/L | 0.003061 | 0.06012 | mg/L | 0.003061 | 5.09% |
| Barium,7440-39-3† | 167909.4 | 0.64480 | mg/L | 0.002202 | 0.64480 | mg/L | 0.002202 | 0.34% |
| Beryllium,7440-41-7† | -49114.3 | 0.00753 | mg/L | 0.000067 | 0.00753 | mg/L | 0.000067 | 0.89% |
| Boron,7440-42-8† | -100386.7 | -0.08235 | mg/L | 0.025536 | -0.08235 | mg/L | 0.025536 | 31.01% |
| Cadmium,7440-43-9† | 8295.7 | 0.02394 | mg/L | 0.000090 | 0.02394 | mg/L | 0.000090 | 0.38% |
| Calcium,7440-70-2† | 549022.9 | 32.1832 | mg/L | 0.16979 | 32.1832 | mg/L | 0.16979 | 0.53% |
| Chromium,7440-47-3† | 103646.9 | 0.56061 | mg/L | 0.001234 | 0.56061 | mg/L | 0.001234 | 0.22% |
| Cobalt,7440-48-4† | 8343.9 | 0.08650 | mg/L | 0.000426 | 0.08650 | mg/L | 0.000426 | 0.49% |
| Copper,7440-50-8† | 850959.1 | 1.59701 | mg/L | 0.002017 | 1.59701 | mg/L | 0.002017 | 0.13% |
| Iron,7439-89-6† | 5508196.2 | 256.716 | mg/L | 5.1585 | 256.716 | mg/L | 5.1585 | 2.01% |
| Lead,7439-92-1† | 135180.9 | 4.48347 | mg/L | 0.014360 | 4.48347 | mg/L | 0.014360 | 0.32% |
| Lithium,7439-93-2† | 12188.0 | 0.17449 | mg/L | 0.001582 | 0.17449 | mg/L | 0.001582 | 0.91% |
| Magnesium,7439-95-4† | 88485.9 | 24.5883 | mg/L | 0.10368 | 24.5883 | mg/L | 0.10368 | 0.42% |
| Manganese,7439-96-5† | 4165813.8 | 2.52976 | mg/L | 0.001452 | 2.52976 | mg/L | 0.001452 | 0.06% |
| Molybdenum,7439-98-7 | 1125.0 | 0.06210 | mg/L | 0.000104 | 0.06210 | mg/L | 0.000104 | 0.17% |
| Nickel,7440-02-0† | 62965.0 | 0.56020 | mg/L | 0.001888 | 0.56020 | mg/L | 0.001888 | 0.34% |
| Potassium,7440-09-7† | 48520.6 | 13.4908 | mg/L | 0.15223 | 13.4908 | mg/L | 0.15223 | 1.13% |
| Selenium,7782-49-2† | -39.9 | 0.04279 | mg/L | 0.001986 | 0.04279 | mg/L | 0.001986 | 4.64% |
| Silicon,7440-21-3† | 60777.6 | 14.6023 | mg/L | 0.06419 | 14.6023 | mg/L | 0.06419 | 0.44% |
| Silver,7440-22-4† | -9497.1 | -0.01026 | mg/L | 0.000732 | -0.01026 | mg/L | 0.000732 | 7.13% |
| Sodium,7440-23-5† | 19639.0 | 2.11628 | mg/L | 0.012063 | 2.11628 | mg/L | 0.012063 | 0.57% |
| Strontium,7440-24-6† | 357288.0 | 0.48572 | mg/L | 0.003350 | 0.48572 | mg/L | 0.003350 | 0.69% |
| Thallium,7440-28-0† | -288.7 | 0.01640 | mg/L | 0.002244 | 0.01640 | mg/L | 0.002244 | 13.68% |
| Tin,7440-31-5† | 3857.2 | 0.35496 | mg/L | 0.002519 | 0.35496 | mg/L | 0.002519 | 0.71% |
| Titanium,7440-32-6† | 6047124.2 | 4.88721 | mg/L | 0.007212 | 4.88721 | mg/L | 0.007212 | 0.15% |
| Vanadium,7440-62-2† | 80221.0 | 0.18649 | mg/L | 0.000476 | 0.18649 | mg/L | 0.000476 | 0.26% |
| Zinc,7440-66-6† | 1873697.5 | 11.4317 | mg/L | 0.02650 | 11.4317 | mg/L | 0.02650 | 0.23% |
| Zirconium,7440-67-7† | 45186.9 | 0.05698 | mg/L | 0.000763 | 0.05698 | mg/L | 0.000763 | 1.34% |

**Sequence No.: 78**
**Sample ID: 21310172601**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution: 1X**

**Autosampler Location: 71**
**Date Collected: 10/29/2013 8:02:56 PM**
**Data Type: Reprocessed on 10/30/2013 8:13:46 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 21310172601**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 5946243.5 | 78.7462 | % | 0.34880 | | | | 0.44% |
| Yttrium,7440-65-5A | 3230595.0 | 87.8173 | % | 0.60663 | | | | 0.69% |
| Yttrium,7440-65-5R | 305913.4 | 94.7552 | % | 0.68683 | | | | 0.72% |
| Ar 420.067 R | 3654615.5 | 89.1407 | % | 0.50891 | | | | 0.57% |
| Ar 363.268 A | 95067.4 | 97.0130 | % | 0.07107 | | | | 0.07% |
| Aluminum,7429-90-5† | 707936.7 | 211.479 | mg/L | 1.2777 | 211.479 | mg/L | 1.2777 | 0.60% |
| Antimony,7440-36-0† | -37.6 | 0.02778 | mg/L | 0.001565 | 0.02778 | mg/L | 0.001565 | 5.63% |
| Arsenic,7440-38-2† | 155.6 | 0.20441 | mg/L | 0.009079 | 0.20441 | mg/L | 0.009079 | 4.44% |
| Barium,7440-39-3† | 779059.8 | 2.99983 | mg/L | 0.003497 | 2.99983 | mg/L | 0.003497 | 0.12% |
| Beryllium,7440-41-7† | -150602.9 | 0.00678 | mg/L | 0.000168 | 0.00678 | mg/L | 0.000168 | 2.47% |
| Boron,7440-42-8† | -125763.2 | -0.10594 | mg/L | 0.027587 | -0.10594 | mg/L | 0.027587 | 26.04% |
| Cadmium,7440-43-9† | 2196.1 | 0.00185 | mg/L | 0.000135 | 0.00185 | mg/L | 0.000135 | 7.30% |
| Calcium,7440-70-2† | 8760910.8 | 514.222 | mg/L | 11.7448 | 514.222 | mg/L | 11.7448 | 2.28% |
| Chromium,7440-47-3† | 69206.9 | 0.38614 | mg/L | 0.000520 | 0.38614 | mg/L | 0.000520 | 0.13% |
| Cobalt,7440-48-4† | 15471.1 | 0.16329 | mg/L | 0.000488 | 0.16329 | mg/L | 0.000488 | 0.30% |
| Copper,7440-50-8† | 247402.9 | 0.45683 | mg/L | 0.000883 | 0.45683 | mg/L | 0.000883 | 0.19% |
| Iron,7439-89-6† | 6789231.0 | 316.417 | mg/L | 7.0867 | 316.417 | mg/L | 7.0867 | 2.24% |
| Lead,7439-92-1† | 5230.1 | 0.18763 | mg/L | 0.001269 | 0.18763 | mg/L | 0.001269 | 0.68% |
| Lithium,7439-93-2† | 27396.8 | 0.39227 | mg/L | 0.003854 | 0.39227 | mg/L | 0.003854 | 0.98% |
| Magnesium,7439-95-4† | 517521.3 | 144.211 | mg/L | 0.0296 | 144.211 | mg/L | 0.0296 | 0.02% |
| Manganese,7439-96-5† | 11437752.1 | 6.94323 | mg/L | 0.031128 | 6.94323 | mg/L | 0.031128 | 0.45% |
| Molybdenum,7439-98-7 | -388.0 | 0.02019 | mg/L | 0.001582 | 0.02019 | mg/L | 0.001582 | 7.84% |
| Nickel,7440-02-0† | 48990.4 | 0.43536 | mg/L | 0.001169 | 0.43536 | mg/L | 0.001169 | 0.27% |
| Potassium,7440-09-7† | 161858.0 | 44.8994 | mg/L | 0.40075 | 44.8994 | mg/L | 0.40075 | 0.89% |
| Selenium,7782-49-2† | -81.4 | 0.02881 | mg/L | 0.006120 | 0.02881 | mg/L | 0.006120 | 21.25% |
| Silicon,7440-21-3† | 92171.3 | 22.1296 | mg/L | 0.08507 | 22.1296 | mg/L | 0.08507 | 0.38% |

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|---|---|---|---|---|---|---|---|
| Silver,7440-22-4† | -9115.1 | -0.00603 | mg/L | 0.000057 | -0.00603 | mg/L | 0.000057 | 0.95% |
| Sodium,7440-23-5† | 127450.5 | 13.6375 | mg/L | 0.10698 | 13.6375 | mg/L | 0.10698 | 0.78% |
| Strontium,7440-24-6† | 1565391.9 | 2.11925 | mg/L | 0.051477 | 2.11925 | mg/L | 0.051477 | 2.43% |
| Thallium,7440-28-0† | -484.2 | 0.04446 | mg/L | 0.001851 | 0.04446 | mg/L | 0.001851 | 4.16% |
| Tin,7440-31-5† | -375.4 | 0.01967 | mg/L | 0.001000 | 0.01967 | mg/L | 0.001000 | 5.09% |
| Titanium,7440-32-6† | 11263444.5 | 9.10327 | mg/L | 0.056960 | 9.10327 | mg/L | 0.056960 | 0.63% |
| Vanadium,7440-62-2† | 307496.0 | 0.74322 | mg/L | 0.000741 | 0.74322 | mg/L | 0.000741 | 0.10% |
| Zinc,7440-66-6† | 147954.1 | 0.87497 | mg/L | 0.004159 | 0.87497 | mg/L | 0.004159 | 0.48% |
| Zirconium,7440-67-7† | 132263.2 | 0.16935 | mg/L | 0.004110 | 0.16935 | mg/L | 0.004110 | 2.43% |

**Sequence No.: 79**
**Sample ID: 1244707**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution: 1X**

**Autosampler Location: 72**
**Date Collected: 10/29/2013 8:09:27 PM**
**Data Type: Reprocessed on 10/30/2013 8:13:48 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 1244707**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 5870163.4 | 77.7387 | % | 0.68089 | | | | 0.88% |
| Yttrium,7440-65-5A | 3172756.7 | 86.2450 | % | 0.22936 | | | | 0.27% |
| Yttrium,7440-65-5R | 2989605.5 | 92.6016 | % | 1.12892 | | | | 1.22% |
| Ar 420.067 R | 3620891.6 | 88.3182 | % | 0.49397 | | | | 0.56% |
| Ar 363.268 A | 94459.8 | 96.3929 | % | 0.47894 | | | | 0.50% |
| Aluminum,7429-90-5† | 851486.9 | 254.358 | mg/L | 1.3665 | 254.358 | mg/L | 1.3665 | 0.54% |
| Antimony,7440-36-0† | 334.5 | 0.12713 | mg/L | 0.014398 | 0.12713 | mg/L | 0.014398 | 11.33% |
| Arsenic,7440-38-2† | 1119.6 | 0.60421 | mg/L | 0.013254 | 0.60421 | mg/L | 0.013254 | 2.19% |
| Barium,7440-39-3† | 1408900.2 | 5.43307 | mg/L | 0.004841 | 5.43307 | mg/L | 0.004841 | 0.09% |
| Beryllium,7440-41-7† | 3226192.8 | 0.42745 | mg/L | 0.003964 | 0.42745 | mg/L | 0.003964 | 0.93% |
| Boron,7440-42-8† | 43715.9 | 1.95654 | mg/L | 0.039441 | 1.95654 | mg/L | 0.039441 | 2.02% |
| Cadmium,7440-43-9† | 105352.4 | 0.36357 | mg/L | 0.000733 | 0.36357 | mg/L | 0.000733 | 0.20% |
| Calcium,7440-70-2† | 8462219.7 | 496.681 | mg/L | 8.7256 | 496.681 | mg/L | 8.7256 | 1.76% |
| Chromium,7440-47-3† | 143235.6 | 0.77630 | mg/L | 0.001835 | 0.77630 | mg/L | 0.001835 | 0.24% |
| Cobalt,7440-48-4† | 46887.1 | 0.53956 | mg/L | 0.005776 | 0.53956 | mg/L | 0.005776 | 1.07% |
| Copper,7440-50-8† | 464467.9 | 0.86455 | mg/L | 0.001202 | 0.86455 | mg/L | 0.001202 | 0.14% |
| Iron,7439-89-6† | 6539111.4 | 304.756 | mg/L | 5.3386 | 304.756 | mg/L | 5.3386 | 1.75% |
| Lead,7439-92-1† | 16244.5 | 0.55818 | mg/L | 0.006974 | 0.55818 | mg/L | 0.006974 | 1.25% |
| Lithium,7439-93-2† | 58146.6 | 0.83297 | mg/L | 0.006931 | 0.83297 | mg/L | 0.006931 | 0.83% |
| Magnesium,7439-95-4† | 535040.9 | 149.104 | mg/L | 0.3636 | 149.104 | mg/L | 0.3636 | 0.24% |
| Manganese,7439-96-5† | 12063037.4 | 7.32294 | mg/L | 0.067191 | 7.32294 | mg/L | 0.067191 | 0.92% |
| Molybdenum,7439-98-7 | 10345.0 | 0.38167 | mg/L | 0.002499 | 0.38167 | mg/L | 0.002499 | 0.65% |
| Nickel,7440-02-0† | 92556.3 | 0.82180 | mg/L | 0.001028 | 0.82180 | mg/L | 0.001028 | 0.13% |
| Potassium,7440-09-7† | 204261.7 | 56.6368 | mg/L | 0.66064 | 56.6368 | mg/L | 0.66064 | 1.17% |
| Selenium,7782-49-2† | 1109.8 | 0.39078 | mg/L | 0.021599 | 0.39078 | mg/L | 0.021599 | 5.53% |
| Silicon,7440-21-3† | 81540.7 | 19.5738 | mg/L | 0.06274 | 19.5738 | mg/L | 0.06274 | 0.32% |
| Silver,7440-22-4† | 229072.4 | 0.42321 | mg/L | 0.000422 | 0.42321 | mg/L | 0.000422 | 0.10% |
| Sodium,7440-23-5† | 326423.4 | 34.9163 | mg/L | 0.26603 | 34.9163 | mg/L | 0.26603 | 0.76% |
| Strontium,7440-24-6† | 1929955.2 | 2.61680 | mg/L | 0.052055 | 2.61680 | mg/L | 0.052055 | 1.99% |
| Thallium,7440-28-0† | 1208.2 | 0.42997 | mg/L | 0.009584 | 0.42997 | mg/L | 0.009584 | 2.23% |
| Tin,7440-31-5† | 3826.2 | 0.39366 | mg/L | 0.004184 | 0.39366 | mg/L | 0.004184 | 1.06% |
| Titanium,7440-32-6† | 14770199.6 | 11.9377 | mg/L | 0.10607 | 11.9377 | mg/L | 0.10607 | 0.89% |
| Vanadium,7440-62-2† | 458432.0 | 1.11945 | mg/L | 0.001090 | 1.11945 | mg/L | 0.001090 | 0.10% |
| Zinc,7440-66-6† | 208684.3 | 1.24605 | mg/L | 0.000927 | 1.24605 | mg/L | 0.000927 | 0.07% |
| Zirconium,7440-67-7† | 174759.4 | 0.22384 | mg/L | 0.002846 | 0.22384 | mg/L | 0.002846 | 1.27% |

**Sequence No.: 80**
**Sample ID: 1244708**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution: 1X**

**Autosampler Location: 73**
**Date Collected: 10/29/2013 8:15:18 PM**
**Data Type: Reprocessed on 10/30/2013 8:13:50 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 1244708**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 5974329.3 | 79.1182 | % | 0.33438 | | | | 0.42% |
| Yttrium,7440-65-5A | 3299162.9 | 89.6811 | % | 1.07174 | | | | 1.20% |

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213101712 1210

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Yttrium,7440-65-5R | 307378.6 | 95.2090 | % | 1.04711 | | | | 1.10% |
| Ar 420.067 R | 3699830.6 | 90.2436 | % | 0.68656 | | | | 0.76% |
| Ar 363.268 A | 93848.0 | 95.7687 | % | 0.29046 | | | | 0.30% |
| Aluminum,7429-90-5† | 946792.6 | 282.830 | mg/L | 1.4645 | 282.830 | mg/L | 1.4645 | 0.52% |
| Antimony,7440-36-0† | 271.6 | 0.11361 | mg/L | 0.010231 | 0.11361 | mg/L | 0.010231 | 9.01% |
| Arsenic,7440-38-2† | 1186.5 | 0.64779 | mg/L | 0.006140 | 0.64779 | mg/L | 0.006140 | 0.95% |
| Barium,7440-39-3† | 779641.2 | 3.00183 | mg/L | 0.003220 | 3.00183 | mg/L | 0.003220 | 0.11% |
| Beryllium,7440-41-7† | 3348491.8 | 0.44490 | mg/L | 0.006450 | 0.44490 | mg/L | 0.006450 | 1.45% |
| Boron,7440-42-8† | 28883.5 | 1.93137 | mg/L | 0.012209 | 1.93137 | mg/L | 0.012209 | 0.63% |
| Cadmium,7440-43-9† | 112687.8 | 0.38862 | mg/L | 0.001259 | 0.38862 | mg/L | 0.001259 | 0.32% |
| Calcium,7440-70-2† | 9424097.4 | 553.141 | mg/L | 6.1752 | 553.141 | mg/L | 6.1752 | 1.12% |
| Chromium,7440-47-3† | 155708.5 | 0.84375 | mg/L | 0.001251 | 0.84375 | mg/L | 0.001251 | 0.15% |
| Cobalt,7440-48-4† | 49524.9 | 0.56911 | mg/L | 0.009052 | 0.56911 | mg/L | 0.009052 | 1.59% |
| Copper,7440-50-8† | 482123.1 | 0.89715 | mg/L | 0.000951 | 0.89715 | mg/L | 0.000951 | 0.11% |
| Iron,7439-89-6† | 7286593.4 | 339.593 | mg/L | 3.6681 | 339.593 | mg/L | 3.6681 | 1.08% |
| Lead,7439-92-1† | 11054.8 | 0.58719 | mg/L | 0.013906 | 0.58719 | mg/L | 0.013906 | 2.37% |
| Lithium,7439-93-2† | 61544.0 | 0.88165 | mg/L | 0.005362 | 0.88165 | mg/L | 0.005362 | 0.61% |
| Magnesium,7439-95-4† | 558374.3 | 155.599 | mg/L | 0.6391 | 155.599 | mg/L | 0.6391 | 0.41% |
| Manganese,7439-96-5† | 12260409.4 | 7.44307 | mg/L | 0.106212 | 7.44307 | mg/L | 0.106212 | 1.43% |
| Molybdenum,7439-98-7 | 104939.9 | 0.39046 | mg/L | 0.003331 | 0.39046 | mg/L | 0.003331 | 0.85% |
| Nickel,7440-02-0† | 95057.4 | 0.84406 | mg/L | 0.001413 | 0.84406 | mg/L | 0.001413 | 0.17% |
| Potassium,7440-09-7† | 221047.0 | 61.2923 | mg/L | 0.18870 | 61.2923 | mg/L | 0.18870 | 0.31% |
| Selenium,7782-49-2† | 1248.9 | 0.43982 | mg/L | 0.018826 | 0.43982 | mg/L | 0.018826 | 4.28% |
| Silicon,7440-21-3† | 114889.4 | 27.5868 | mg/L | 0.09384 | 27.5868 | mg/L | 0.09384 | 0.34% |
| Silver,7440-22-4† | 239764.7 | 0.44386 | mg/L | 0.000879 | 0.44386 | mg/L | 0.000879 | 0.20% |
| Sodium,7440-23-5† | 316567.2 | 33.8624 | mg/L | 0.21057 | 33.8624 | mg/L | 0.21057 | 0.62% |
| Strontium,7440-24-6† | 2066575.1 | 2.80142 | mg/L | 0.024237 | 2.80142 | mg/L | 0.024237 | 0.87% |
| Thallium,7440-28-0† | 1238.3 | 0.45029 | mg/L | 0.000181 | 0.45029 | mg/L | 0.000181 | 0.04% |
| Tin,7440-31-5† | 3996.1 | 0.41367 | mg/L | 0.007320 | 0.41367 | mg/L | 0.007320 | 1.77% |
| Titanium,7440-32-6† | 15883066.8 | 12.8371 | mg/L | 0.18222 | 12.8371 | mg/L | 0.18222 | 1.42% |
| Vanadium,7440-62-2† | 504403.7 | 1.23175 | mg/L | 0.001698 | 1.23175 | mg/L | 0.001698 | 0.14% |
| Zinc,7440-66-6† | 225057.2 | 1.34311 | mg/L | 0.003043 | 1.34311 | mg/L | 0.003043 | 0.23% |
| Zirconium,7440-67-7† | 182596.7 | 0.23368 | mg/L | 0.000974 | 0.23368 | mg/L | 0.000974 | 0.42% |

**Sequence No.: 81**
**Sample ID: 1249183**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution: 1X**

**Autosampler Location: 74**
**Date Collected: 10/29/2013 8:21:10 PM**
**Data Type: Reprocessed on 10/30/2013 8:13:52 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 1249183**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 5980389.1 | 79.1984 | % | 0.28494 | | | | 0.36% |
| Yttrium,7440-65-5A | 3285734.3 | 89.3161 | % | 0.78832 | | | | 0.88% |
| Yttrium,7440-65-5R | 306675.8 | 94.9913 | % | 1.01827 | | | | 1.07% |
| Ar 420.067 R | 3791882.8 | 92.4889 | % | 0.76848 | | | | 0.83% |
| Ar 363.268 A | 94613.5 | 96.5498 | % | 0.41588 | | | | 0.43% |
| Aluminum,7429-90-5† | 727275.6 | 217.250 | mg/L | 1.3721 | 217.250 | mg/L | 1.3721 | 0.63% |
| Antimony,7440-36-0† | 1575.3 | 0.45468 | mg/L | 0.010400 | 0.45468 | mg/L | 0.010400 | 2.29% |
| Arsenic,7440-38-2† | 1204.2 | 0.62954 | mg/L | 0.007877 | 0.62954 | mg/L | 0.007877 | 1.25% |
| Barium,7440-39-3† | 884015.0 | 3.40528 | mg/L | 0.002686 | 3.40528 | mg/L | 0.002686 | 0.08% |
| Beryllium,7440-41-7† | 3282953.1 | 0.42809 | mg/L | 0.003390 | 0.42809 | mg/L | 0.003390 | 0.79% |
| Boron,7440-42-8† | 41341.1 | 2.03972 | mg/L | 0.032747 | 2.03972 | mg/L | 0.032747 | 1.61% |
| Cadmium,7440-43-9† | 107849.0 | 0.37167 | mg/L | 0.000406 | 0.37167 | mg/L | 0.000406 | 0.11% |
| Calcium,7440-70-2† | 9134407.7 | 536.146 | mg/L | 9.0903 | 536.146 | mg/L | 9.0903 | 1.70% |
| Chromium,7440-47-3† | 145453.8 | 0.79159 | mg/L | 0.001550 | 0.79159 | mg/L | 0.001550 | 0.20% |
| Cobalt,7440-48-4† | 47432.7 | 0.55046 | mg/L | 0.002478 | 0.55046 | mg/L | 0.002478 | 0.45% |
| Copper,7440-50-8† | 470150.7 | 0.87532 | mg/L | 0.000292 | 0.87532 | mg/L | 0.000292 | 0.03% |
| Iron,7439-89-6† | 7083298.9 | 330.122 | mg/L | 5.4438 | 330.122 | mg/L | 5.4438 | 1.65% |
| Lead,7439-92-1† | 16750.5 | 0.57022 | mg/L | 0.003764 | 0.57022 | mg/L | 0.003764 | 0.66% |
| Lithium,7439-93-2† | 56137.6 | 0.80422 | mg/L | 0.007890 | 0.80422 | mg/L | 0.007890 | 0.98% |
| Magnesium,7439-95-4† | 533273.1 | 148.600 | mg/L | 0.2903 | 148.600 | mg/L | 0.2903 | 0.20% |
| Manganese,7439-96-5† | 11970975.4 | 7.26691 | mg/L | 0.058542 | 7.26691 | mg/L | 0.058542 | 0.81% |
| Molybdenum,7439-98-7 | 11623.5 | 0.42581 | mg/L | 0.002774 | 0.42581 | mg/L | 0.002774 | 0.65% |
| Nickel,7440-02-0† | 91646.5 | 0.81427 | mg/L | 0.001463 | 0.81427 | mg/L | 0.001463 | 0.18% |
| Potassium,7440-09-7† | 191533.4 | 53.1228 | mg/L | 0.33974 | 53.1228 | mg/L | 0.33974 | 0.64% |
| Selenium,7782-49-2† | 1258.5 | 0.45027 | mg/L | 0.013309 | 0.45027 | mg/L | 0.013309 | 2.96% |
| Silicon,7440-21-3† | 112171.6 | 26.9347 | mg/L | 0.18123 | 26.9347 | mg/L | 0.18123 | 0.67% |

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|---|---|---|---|---|---|---|---|
| Silver,7440-22-4† | 236409.7 | 0.43762 | mg/L | 0.000456 | 0.43762 | mg/L | 0.000456 | 0.10% |
| Sodium,7440-23-5† | 288812.6 | 30.8936 | mg/L | 0.24011 | 30.8936 | mg/L | 0.24011 | 0.78% |
| Strontium,7440-24-6† | 1915780.2 | 2.59634 | mg/L | 0.051043 | 2.59634 | mg/L | 0.051043 | 1.97% |
| Thallium,7440-28-0† | 1329.6 | 0.42447 | mg/L | 0.011318 | 0.42447 | mg/L | 0.011318 | 2.67% |
| Tin,7440-31-5† | 4079.6 | 0.40893 | mg/L | 0.003086 | 0.40893 | mg/L | 0.003086 | 0.75% |
| Titanium,7440-32-6† | 11948833.1 | 9.65719 | mg/L | 0.079229 | 9.65719 | mg/L | 0.079229 | 0.82% |
| Vanadium,7440-62-2† | 478744.4 | 1.16868 | mg/L | 0.000692 | 1.16868 | mg/L | 0.000692 | 0.06% |
| Zinc,7440-66-6† | 214299.1 | 1.27687 | mg/L | 0.000339 | 1.27687 | mg/L | 0.000339 | 0.03% |
| Zirconium,7440-67-7† | 157183.5 | 0.20191 | mg/L | 0.002471 | 0.20191 | mg/L | 0.002471 | 1.22% |

**Sequence No.: 82**
**Sample ID: 1249184**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution: 1X**

**Autosampler Location: 75**
**Date Collected: 10/29/2013 8:27:02 PM**
**Data Type: Reprocessed on 10/30/2013 8:13:54 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 1249184**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6108042.3 | 80.8889 | % | 0.15640 | | | | 0.19% |
| Yttrium,7440-65-5A | 3036159.4 | 82.5319 | % | 0.20913 | | | | 0.25% |
| Yttrium,7440-65-5R | 283813.1 | 87.9097 | % | 0.67813 | | | | 0.77% |
| Ar 420.067 R | 3846352.4 | 93.8174 | % | 0.98550 | | | | 1.05% |
| Ar 363.268 A | 96570.8 | 98.5471 | % | 0.34711 | | | | 0.35% |
| Aluminum,7429-90-5† | 163002.7 | 48.6928 | mg/L | 0.25767 | 48.6928 | mg/L | 0.25767 | 0.53% |
| Antimony,7440-36-0† | 12.0 | 0.01213 | mg/L | 0.001877 | 0.01213 | mg/L | 0.001877 | 15.47% |
| Arsenic,7440-38-2† | 14.5 | 0.03907 | mg/L | 0.003497 | 0.03907 | mg/L | 0.003497 | 8.95% |
| Barium,7440-39-3† | 185386.5 | 0.71390 | mg/L | 0.006556 | 0.71390 | mg/L | 0.006556 | 0.92% |
| Beryllium,7440-41-7† | -35827.5 | 0.00158 | mg/L | 0.000083 | 0.00158 | mg/L | 0.000083 | 5.26% |
| Boron,7440-42-8† | -23601.3 | 0.05003 | mg/L | 0.009089 | 0.05003 | mg/L | 0.009089 | 18.16% |
| Cadmium,7440-43-9† | 503.8 | 0.00039 | mg/L | 0.000063 | 0.00039 | mg/L | 0.000063 | 16.30% |
| Calcium,7440-70-2† | 2013225.2 | 118.166 | mg/L | 1.0409 | 118.166 | mg/L | 1.0409 | 0.88% |
| Chromium,7440-47-3† | 16436.1 | 0.09174 | mg/L | 0.001030 | 0.09174 | mg/L | 0.001030 | 1.12% |
| Cobalt,7440-48-4† | 3756.2 | 0.03980 | mg/L | 0.000568 | 0.03980 | mg/L | 0.000568 | 1.43% |
| Copper,7440-50-8† | 59360.7 | 0.10965 | mg/L | 0.001172 | 0.10965 | mg/L | 0.001172 | 1.07% |
| Iron,7439-89-6† | 1599259.3 | 74.5346 | mg/L | 0.56663 | 74.5346 | mg/L | 0.56663 | 0.76% |
| Lead,7439-92-1† | 1269.4 | 0.04529 | mg/L | 0.001961 | 0.04529 | mg/L | 0.001961 | 4.33% |
| Lithium,7439-93-2† | 6864.9 | 0.09830 | mg/L | 0.003305 | 0.09830 | mg/L | 0.003305 | 3.36% |
| Magnesium,7439-95-4† | 123091.0 | 34.3005 | mg/L | 0.06418 | 34.3005 | mg/L | 0.06418 | 0.19% |
| Manganese,7439-96-5† | 2714671.2 | 1.64791 | mg/L | 0.002621 | 1.64791 | mg/L | 0.002621 | 0.16% |
| Molybdenum,7439-98-7 | 34.0 | 0.00895 | mg/L | 0.001189 | 0.00895 | mg/L | 0.001189 | 13.29% |
| Nickel,7440-02-0† | 12370.8 | 0.10993 | mg/L | 0.000405 | 0.10993 | mg/L | 0.000405 | 0.37% |
| Potassium,7440-09-7† | 37356.5 | 10.3630 | mg/L | 0.07927 | 10.3630 | mg/L | 0.07927 | 0.76% |
| Selenium,7782-49-2† | -42.2 | -0.00026 | mg/L | 0.007130 | -0.00026 | mg/L | 0.007130 | >999.9% |
| Silicon,7440-21-3† | 21937.4 | 5.26700 | mg/L | 0.025590 | 5.26700 | mg/L | 0.025590 | 0.49% |
| Silver,7440-22-4† | -520.3 | 0.00149 | mg/L | 0.000472 | 0.00149 | mg/L | 0.000472 | 31.61% |
| Sodium,7440-23-5† | 28835.1 | 3.08564 | mg/L | 0.006899 | 3.08564 | mg/L | 0.006899 | 0.22% |
| Strontium,7440-24-6† | 356624.8 | 0.48277 | mg/L | 0.004233 | 0.48277 | mg/L | 0.004233 | 0.88% |
| Thallium,7440-28-0† | -119.9 | 0.00937 | mg/L | 0.001756 | 0.00937 | mg/L | 0.001756 | 18.75% |
| Tin,7440-31-5† | -142.3 | -0.00010 | mg/L | 0.001371 | -0.00010 | mg/L | 0.001371 | >999.9% |
| Titanium,7440-32-6† | 2665186.4 | 2.15404 | mg/L | 0.002472 | 2.15404 | mg/L | 0.002472 | 0.11% |
| Vanadium,7440-62-2† | 72256.0 | 0.17463 | mg/L | 0.002125 | 0.17463 | mg/L | 0.002125 | 1.22% |
| Zinc,7440-66-6† | 34242.4 | 0.20232 | mg/L | 0.001917 | 0.20232 | mg/L | 0.001917 | 0.95% |
| Zirconium,7440-67-7† | 30328.5 | 0.03880 | mg/L | 0.000812 | 0.03880 | mg/L | 0.000812 | 2.09% |

**Sequence No.: 83**
**Sample ID: 21310173401**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution: 1X**

**Autosampler Location: 76**
**Date Collected: 10/29/2013 8:33:21 PM**
**Data Type: Reprocessed on 10/30/2013 8:13:56 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 21310173401**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 5943610.0 | 78.7114 | % | 0.37327 | | | | 0.47% |
| Yttrium,7440-65-5A | 3283458.1 | 89.2542 | % | 0.79581 | | | | 0.89% |

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| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Yttrium,7440-65-5R | 306069.6 | 94.8036 | % | 0.19344 | | | | 0.20% |
| Ar 420.067 R | 3748051.4 | 91.4198 | % | 0.66017 | | | | 0.72% |
| Ar 363.268 A | 95158.9 | 97.1064 | % | 0.14128 | | | | 0.15% |
| Aluminum,7429-90-5† | 668831.2 | 199.805 | mg/L | 1.2435 | 199.805 | mg/L | 1.2435 | 0.62% |
| Antimony,7440-36-0† | -16.0 | 0.02678 | mg/L | 0.003587 | 0.02678 | mg/L | 0.003587 | 13.40% |
| Arsenic,7440-38-2† | 81.6 | 0.15368 | mg/L | 0.006684 | 0.15368 | mg/L | 0.006684 | 4.35% |
| Barium,7440-39-3† | 539595.7 | 2.07715 | mg/L | 0.001145 | 2.07715 | mg/L | 0.001145 | 0.06% |
| Beryllium,7440-41-7† | -103613.7 | 0.00685 | mg/L | 0.000157 | 0.00685 | mg/L | 0.000157 | 2.29% |
| Boron,7440-42-8† | -98741.8 | -0.05431 | mg/L | 0.006140 | -0.05431 | mg/L | 0.006140 | 11.31% |
| Cadmium,7440-43-9† | 1890.0 | 0.00200 | mg/L | 0.000191 | 0.00200 | mg/L | 0.000191 | 9.55% |
| Calcium,7440-70-2† | 6146229.2 | 360.740 | mg/L | 3.2579 | 360.740 | mg/L | 3.2579 | 0.90% |
| Chromium,7440-47-3† | 50205.7 | 0.27908 | mg/L | 0.000935 | 0.27908 | mg/L | 0.000935 | 0.33% |
| Cobalt,7440-48-4† | 11895.0 | 0.12524 | mg/L | 0.001554 | 0.12524 | mg/L | 0.001554 | 1.24% |
| Copper,7440-50-8† | 918989.9 | 1.72120 | mg/L | 0.002072 | 1.72120 | mg/L | 0.002072 | 0.12% |
| Iron,7439-89-6† | 5462923.5 | 254.601 | mg/L | 2.4856 | 254.601 | mg/L | 2.4856 | 0.98% |
| Lead,7439-92-1† | 7834.4 | 0.27273 | mg/L | 0.003458 | 0.27273 | mg/L | 0.003458 | 1.27% |
| Lithium,7439-93-2† | 24312.6 | 0.34811 | mg/L | 0.002306 | 0.34811 | mg/L | 0.002306 | 0.66% |
| Magnesium,7439-95-4† | 392027.1 | 109.237 | mg/L | 0.2805 | 109.237 | mg/L | 0.2805 | 0.26% |
| Manganese,7439-96-5† | 9923125.3 | 6.02397 | mg/L | 0.058489 | 6.02397 | mg/L | 0.058489 | 0.97% |
| Molybdenum,7439-98-7 | -435.1 | 0.01293 | mg/L | 0.001979 | 0.01293 | mg/L | 0.001979 | 15.30% |
| Nickel,7440-02-0† | 32029.1 | 0.28455 | mg/L | 0.000835 | 0.28455 | mg/L | 0.000835 | 0.29% |
| Potassium,7440-09-7† | 172318.0 | 47.7859 | mg/L | 0.11158 | 47.7859 | mg/L | 0.11158 | 0.23% |
| Selenium,7782-49-2† | -48.2 | 0.02272 | mg/L | 0.006767 | 0.02272 | mg/L | 0.006767 | 29.79% |
| Silicon,7440-21-3† | 81986.7 | 19.6863 | mg/L | 0.08883 | 19.6863 | mg/L | 0.08883 | 0.45% |
| Silver,7440-22-4† | -7367.0 | -0.00552 | mg/L | 0.000400 | -0.00552 | mg/L | 0.000400 | 7.24% |
| Sodium,7440-23-5† | 111692.3 | 11.9523 | mg/L | 0.08804 | 11.9523 | mg/L | 0.08804 | 0.74% |
| Strontium,7440-24-6† | 1201454.2 | 1.62748 | mg/L | 0.020644 | 1.62748 | mg/L | 0.020644 | 1.27% |
| Thallium,7440-28-0† | -399.1 | 0.03091 | mg/L | 0.003201 | 0.03091 | mg/L | 0.003201 | 10.36% |
| Tin,7440-31-5† | -284.9 | 0.01460 | mg/L | 0.000906 | 0.01460 | mg/L | 0.000906 | 6.21% |
| Titanium,7440-32-6† | 8728982.3 | 7.05487 | mg/L | 0.061680 | 7.05487 | mg/L | 0.061680 | 0.87% |
| Vanadium,7440-62-2† | 218932.3 | 0.52741 | mg/L | 0.000060 | 0.52741 | mg/L | 0.000060 | 0.01% |
| Zinc,7440-66-6† | 151603.6 | 0.90203 | mg/L | 0.000413 | 0.90203 | mg/L | 0.000413 | 0.05% |
| Zirconium,7440-67-7† | 103757.6 | 0.13291 | mg/L | 0.001434 | 0.13291 | mg/L | 0.001434 | 1.08% |

Reprocess AWG 10/30/13

**Sequence No.: 84**
**Sample ID: 1800**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 7**
**Date Collected: 10/29/2013 8:39:54 PM**
**Data Type: Reprocessed on 10/30/2013 8:13:58 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 1800**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6479699.5 | 85.8108 | % | 0.42513 | | | | 0.50% |
| Yttrium,7440-65-5A | 3153849.9 | 85.7311 | % | 0.40881 | | | | 0.48% |
| Yttrium,7440-65-5R | 288949.2 | 89.5006 | % | 0.31479 | | | | 0.35% |
| Ar 420.067 R | 4026564.4 | 98.2130 | % | 0.62716 | | | | 0.64% |
| Ar 363.268 A | 97580.9 | 99.5779 | % | 0.61652 | | | | 0.62% |
| Aluminum,7429-90-5† | 16535.6 | 4.93362 | mg/L | 0.023183 | 4.93362 | mg/L | 0.023183 | 0.47% |
| QC value within limits for Aluminum,7429-90-5 Recovery = 98.67% | | | | | | | | |
| Antimony,7440-36-0† | 1835.3 | 0.48432 | mg/L | 0.005782 | 0.48432 | mg/L | 0.005782 | 1.19% |
| QC value within limits for Antimony,7440-36-0 Recovery = 96.86% | | | | | | | | |
| Arsenic,7440-38-2† | 1194.1 | 0.48251 | mg/L | 0.007078 | 0.48251 | mg/L | 0.007078 | 1.47% |
| QC value within limits for Arsenic,7440-38-2 Recovery = 96.50% | | | | | | | | |
| Barium,7440-39-3† | 125244.9 | 0.48417 | mg/L | 0.008383 | 0.48417 | mg/L | 0.008383 | 1.73% |
| QC value within limits for Barium,7440-39-3 Recovery = 96.83% | | | | | | | | |
| Beryllium,7440-41-7† | 4031572.5 | 0.49427 | mg/L | 0.001218 | 0.49427 | mg/L | 0.001218 | 0.25% |
| QC value within limits for Beryllium,7440-41-7 Recovery = 98.85% | | | | | | | | |
| Boron,7440-42-8† | 186903.2 | 2.35295 | mg/L | 0.060196 | 2.35295 | mg/L | 0.060196 | 2.56% |
| QC value within limits for Boron,7440-42-8 Recovery = 94.12% | | | | | | | | |
| Cadmium,7440-43-9† | 134713.5 | 0.47180 | mg/L | 0.009629 | 0.47180 | mg/L | 0.009629 | 2.04% |
| QC value within limits for Cadmium,7440-43-9 Recovery = 94.36% | | | | | | | | |
| Calcium,7440-70-2† | 102977.6 | 6.04263 | mg/L | 0.015822 | 6.04263 | mg/L | 0.015822 | 0.26% |
| QC value greater than the upper limit for Calcium,7440-70-2 Recovery = 120.85% | | | | | | | | |
| Chromium,7440-47-3† | 91555.1 | 0.48609 | mg/L | 0.008020 | 0.48609 | mg/L | 0.008020 | 1.65% |
| QC value within limits for Chromium,7440-47-3 Recovery = 97.22% | | | | | | | | |
| Cobalt,7440-48-4† | 39720.1 | 0.48177 | mg/L | 0.008936 | 0.48177 | mg/L | 0.008936 | 1.85% |
| QC value within limits for Cobalt,7440-48-4 Recovery = 96.35% | | | | | | | | |
| Copper,7440-50-8† | 268752.0 | 0.50500 | mg/L | 0.007239 | 0.50500 | mg/L | 0.007239 | 1.43% |

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QC value within limits for Copper,7440-50-8 Recovery = 101.00%
Iron,7439-89-6† 105513.3 4.91700 mg/L 0.009169 4.91700 mg/L 0.009169 0.19%
QC value within limits for Iron,7439-89-6 Recovery = 98.34%
Lead,7439-92-1† 14798.7 0.49142 mg/L 0.001194 0.49142 mg/L 0.001194 0.24%
QC value within limits for Lead,7439-92-1 Recovery = 98.28%
Lithium,7439-93-2† 34985.1 0.50145 mg/L 0.002857 0.50145 mg/L 0.002857 0.57%
QC value within limits for Lithium,7439-93-2 Recovery = 100.29%
Magnesium,7439-95-4† 17097.9 4.76742 mg/L 0.014228 4.76742 mg/L 0.014228 0.30%
QC value within limits for Magnesium,7439-95-4 Recovery = 95.35%
Manganese,7439-96-5† 1004832.9 0.60984 mg/L 0.000292 0.60984 mg/L 0.000292 0.05%
QC value greater than the upper limit for Manganese,7439-96-5 Recovery = 121.97%
Molybdenum,7439-98-7 14106.2 0.47536 mg/L 0.003281 0.47536 mg/L 0.003281 0.69%
QC value within limits for Molybdenum,7439-98-7 Recovery = 95.07%
Nickel,7440-02-0† 54661.6 0.48549 mg/L 0.008950 0.48549 mg/L 0.008950 1.84%
QC value within limits for Nickel,7440-02-0 Recovery = 97.10%
Potassium,7440-09-7† 36540.9 10.1239 mg/L 0.03971 10.1239 mg/L 0.03971 0.39%
QC value within limits for Potassium,7440-09-7 Recovery = 101.24%
Selenium,7782-49-2† 1496.5 0.46772 mg/L 0.008343 0.46772 mg/L 0.008343 1.78%
QC value within limits for Selenium,7782-49-2 Recovery = 93.54%
Silicon,7440-21-3† 20651.8 4.96141 mg/L 0.064262 4.96141 mg/L 0.064262 1.30%
QC value within limits for Silicon,7440-21-3 Recovery = 99.23%
Silver,7440-22-4† 282514.7 0.51009 mg/L 0.008872 0.51009 mg/L 0.008872 1.74%
QC value within limits for Silver,7440-22-4 Recovery = 102.02%
Sodium,7440-23-5† 185475.1 19.8351 mg/L 0.19748 19.8351 mg/L 0.19748 1.00%
QC value within limits for Sodium,7440-23-5 Recovery = 99.18%
Strontium,7440-24-6† 356803.7 0.48629 mg/L 0.003494 0.48629 mg/L 0.003494 0.72%
QC value within limits for Strontium,7440-24-6 Recovery = 97.26%
Thallium,7440-28-0† 2338.6 0.48656 mg/L 0.002110 0.48656 mg/L 0.002110 0.43%
QC value within limits for Thallium,7440-28-0 Recovery = 97.31%
Tin,7440-31-5† 5220.5 0.45489 mg/L 0.002825 0.45489 mg/L 0.002825 0.62%
QC value within limits for Tin,7440-31-5 Recovery = 90.98%
Titanium,7440-32-6† 612106.1 0.49470 mg/L 0.000645 0.49470 mg/L 0.000645 0.13%
QC value within limits for Titanium,7440-32-6 Recovery = 98.94%
Vanadium,7440-62-2† 196452.7 0.48868 mg/L 0.007954 0.48868 mg/L 0.007954 1.63%
QC value within limits for Vanadium,7440-62-2 Recovery = 97.74%
Zinc,7440-66-6† 84189.5 0.51102 mg/L 0.008276 0.51102 mg/L 0.008276 1.62%
QC value within limits for Zinc,7440-66-6 Recovery = 102.20%
Zirconium,7440-67-7† 385581.1 0.50729 mg/L 0.002735 0.50729 mg/L 0.002735 0.54%
QC value within limits for Zirconium,7440-67-7 Recovery = 101.46%
QC Failed. Continue with analysis.

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**Sequence No.: 85** **Autosampler Location: 1**
**Sample ID: 1900** **Date Collected: 10/29/2013 8:46:20 PM**
**Analyst:** **Data Type: Reprocessed on 10/30/2013 8:14:00 AM**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Mean Data: 1900**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6252818.1 | 82.8062 | % | 0.34285 | | | | 0.41% |
| Yttrium,7440-65-5A | 3047235.6 | 82.8330 | % | 0.31911 | | | | 0.39% |
| Yttrium,7440-65-5R | 276948.0 | 85.7833 | % | 0.88905 | | | | 1.04% |
| Ar 420.067 R | 3982287.2 | 97.1331 | % | 0.65707 | | | | 0.68% |
| Ar 363.268 A | 98248.9 | 100.260 | % | 0.4247 | | | | 0.42% |
| Aluminum,7429-90-5† | 53.7 | 0.01601 | mg/L | 0.023114 | 0.01601 | mg/L | 0.023114 | 144.38% |
| QC value within limits for Aluminum,7429-90-5 Recovery = Not calculated | | | | | | | | |
| Antimony,7440-36-0† | -3.8 | -0.00096 | mg/L | 0.001367 | -0.00096 | mg/L | 0.001367 | 142.03% |
| QC value within limits for Antimony,7440-36-0 Recovery = Not calculated | | | | | | | | |
| Arsenic,7440-38-2† | 12.0 | 0.00477 | mg/L | 0.000429 | 0.00477 | mg/L | 0.000429 | 8.99% |
| QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated | | | | | | | | |
| Barium,7440-39-3† | 215.5 | 0.00083 | mg/L | 0.000047 | 0.00083 | mg/L | 0.000047 | 5.59% |
| QC value within limits for Barium,7440-39-3 Recovery = Not calculated | | | | | | | | |
| Beryllium,7440-41-7† | 1572.1 | 0.00020 | mg/L | 0.000029 | 0.00020 | mg/L | 0.000029 | 14.47% |
| QC value within limits for Beryllium,7440-41-7 Recovery = Not calculated | | | | | | | | |
| Boron,7440-42-8† | 5442.2 | 0.06797 | mg/L | 0.004931 | 0.06797 | mg/L | 0.004931 | 7.25% |
| QC value within limits for Boron,7440-42-8 Recovery = Not calculated | | | | | | | | |
| Cadmium,7440-43-9† | 16.3 | 0.00006 | mg/L | 0.000037 | 0.00006 | mg/L | 0.000037 | 64.73% |
| QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated | | | | | | | | |

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|---|---|---|---|---|---|---|
| Calcium,7440-70-2† | 622.2 | 0.03648 mg/L | 0.003566 | 0.03648 mg/L | 0.003566 | 9.77% |
| QC value within limits for Calcium,7440-70-2 Recovery = Not calculated | | | | | | |
| Chromium,7440-47-3† | -361.4 | -0.00191 mg/L | 0.000082 | -0.00191 mg/L | 0.000082 | 4.31% |
| QC value within limits for Chromium,7440-47-3 Recovery = Not calculated | | | | | | |
| Cobalt,7440-48-4† | -11.4 | -0.00014 mg/L | 0.000113 | -0.00014 mg/L | 0.000113 | 78.20% |
| QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated | | | | | | |
| Copper,7440-50-8† | 1705.5 | 0.00320 mg/L | 0.000531 | 0.00320 mg/L | 0.000531 | 16.59% |
| QC value within limits for Copper,7440-50-8 Recovery = Not calculated | | | | | | |
| Iron,7439-89-6† | 833.5 | 0.03885 mg/L | 0.001723 | 0.03885 mg/L | 0.001723 | 4.44% |
| QC value within limits for Iron,7439-89-6 Recovery = Not calculated | | | | | | |
| Lead,7439-92-1† | 65.6 | 0.00218 mg/L | 0.000867 | 0.00218 mg/L | 0.000867 | 39.84% |
| QC value within limits for Lead,7439-92-1 Recovery = Not calculated | | | | | | |
| Lithium,7439-93-2† | 418.3 | 0.00600 mg/L | 0.001594 | 0.00600 mg/L | 0.001594 | 26.59% |
| QC value within limits for Lithium,7439-93-2 Recovery = Not calculated | | | | | | |
| Magnesium,7439-95-4† | 298.9 | 0.08335 mg/L | 0.039735 | 0.08335 mg/L | 0.039735 | 47.67% |
| QC value within limits for Magnesium,7439-95-4 Recovery = Not calculated | | | | | | |
| Manganese,7439-96-5† | 9270.0 | 0.00563 mg/L | 0.000029 | 0.00563 mg/L | 0.000029 | 0.52% |
| QC value within limits for Manganese,7439-96-5 Recovery = Not calculated | | | | | | |
| Molybdenum,7439-98-7 | 83.2 | 0.00280 mg/L | 0.001210 | 0.00280 mg/L | 0.001210 | 43.16% |
| QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated | | | | | | |
| Nickel,7440-02-0† | -61.3 | -0.00054 mg/L | 0.000199 | -0.00054 mg/L | 0.000199 | 36.59% |
| QC value within limits for Nickel,7440-02-0 Recovery = Not calculated | | | | | | |
| Potassium,7440-09-7† | 335.2 | 0.09287 mg/L | 0.048628 | 0.09287 mg/L | 0.048628 | 52.36% |
| QC value within limits for Potassium,7440-09-7 Recovery = Not calculated | | | | | | |
| Selenium,7782-49-2† | 17.1 | 0.00534 mg/L | 0.006680 | 0.00534 mg/L | 0.006680 | 125.15% |
| QC value within limits for Selenium,7782-49-2 Recovery = Not calculated | | | | | | |
| Silicon,7440-21-3† | 178.8 | 0.04295 mg/L | 0.005289 | 0.04295 mg/L | 0.005289 | 12.31% |
| QC value within limits for Silicon,7440-21-3 Recovery = Not calculated | | | | | | |
| Silver,7440-22-4† | 2053.6 | 0.00370 mg/L | 0.000384 | 0.00370 mg/L | 0.000384 | 10.36% |
| QC value within limits for Silver,7440-22-4 Recovery = Not calculated | | | | | | |
| Sodium,7440-23-5† | -1203.3 | -0.12865 mg/L | 0.013283 | -0.12865 mg/L | 0.013283 | 10.32% |
| QC value within limits for Sodium,7440-23-5 Recovery = Not calculated | | | | | | |
| Strontium,7440-24-6† | 1701.7 | 0.00232 mg/L | 0.000160 | 0.00232 mg/L | 0.000160 | 6.92% |
| QC value within limits for Strontium,7440-24-6 Recovery = Not calculated | | | | | | |
| Thallium,7440-28-0† | 13.2 | 0.00274 mg/L | 0.005188 | 0.00274 mg/L | 0.005188 | 189.51% |
| QC value within limits for Thallium,7440-28-0 Recovery = Not calculated | | | | | | |
| Tin,7440-31-5† | 28.0 | 0.00244 mg/L | 0.000922 | 0.00244 mg/L | 0.000922 | 37.80% |
| QC value within limits for Tin,7440-31-5 Recovery = Not calculated | | | | | | |
| Titanium,7440-32-6† | 2639.2 | 0.00213 mg/L | 0.000058 | 0.00213 mg/L | 0.000058 | 2.73% |
| QC value within limits for Titanium,7440-32-6 Recovery = Not calculated | | | | | | |
| Vanadium,7440-62-2† | 810.2 | 0.00201 mg/L | 0.000297 | 0.00201 mg/L | 0.000297 | 14.80% |
| QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated | | | | | | |
| Zinc,7440-66-6† | 44.7 | 0.00027 mg/L | 0.000191 | 0.00027 mg/L | 0.000191 | 70.33% |
| QC value within limits for Zinc,7440-66-6 Recovery = Not calculated | | | | | | |
| Zirconium,7440-67-7† | 284.0 | 0.00037 mg/L | 0.000225 | 0.00037 mg/L | 0.000225 | 60.34% |
| QC value within limits for Zirconium,7440-67-7 Recovery = Not calculated | | | | | | |

All analyte(s) passed QC.

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**Sequence No.: 86**
**Sample ID: 21310173601**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution: 1X**

**Autosampler Location: 77**
**Date Collected: 10/29/2013 8:52:38 PM**
**Data Type: Reprocessed on 10/30/2013 8:14:03 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 21310173601**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 5683889.1 | 75.2719 | % | 0.69824 | | | | 0.93% |
| Yttrium,7440-65-5A | 3085178.8 | 83.8644 | % | 0.39691 | | | | 0.47% |
| Yttrium,7440-65-5R | 292230.3 | 90.5169 | % | 0.50927 | | | | 0.56% |
| Ar 420.067 R | 3606965.2 | 87.9785 | % | 1.17979 | | | | 1.34% |
| Ar 363.268 A | 95020.4 | 96.9650 | % | 0.31127 | | | | 0.32% |
| Aluminum,7429-90-5† | 586780.5 | 175.284 | mg/L | 1.0571 | 175.284 | mg/L | 1.0571 | 0.60% |
| Antimony,7440-36-0† | -3.3 | 0.01872 | mg/L | 0.002922 | 0.01872 | mg/L | 0.002922 | 15.61% |
| Arsenic,7440-38-2† | 79.8 | 0.15674 | mg/L | 0.004546 | 0.15674 | mg/L | 0.004546 | 2.90% |
| Barium,7440-39-3† | 536588.9 | 2.06168 | mg/L | 0.000565 | 2.06168 | mg/L | 0.000565 | 0.03% |
| Beryllium,7440-41-7† | -128271.3 | 0.00471 | mg/L | 0.000166 | 0.00471 | mg/L | 0.000166 | 3.53% |
| Boron,7440-42-8† | -92918.7 | -0.05148 | mg/L | 0.006792 | -0.05148 | mg/L | 0.006792 | 13.19% |
| Cadmium,7440-43-9† | 1612.5 | 0.00129 | mg/L | 0.000050 | 0.00129 | mg/L | 0.000050 | 3.88% |

Reprocess AWC 10/30/13

213101712 1215

Reprocessing Begun
Logged In Analyst: met Technique: ICP Continuous

Results Data Set (original): 2131029
Results Library (original): C:\pe\met\Results\Results.mdb
Results Data Set (reprocessed): 8717
Results Library (reprocessed): C:\pe\met\Results\Results.mdb

Sequence No.: 1
Sample ID: 1244705
Analyst:
Logged In Analyst (Original) : met
Initial Sample Wt: 1.25 g
Dilution: 1X

Autosampler Location: 67
Date Collected: 10/29/2013 7:37:13 PM
Data Type: Reprocessed on 10/30/2013 11:20:43 AM

Initial Sample Vol:
Sample Prep Vol: 50 mL

Mean Data: 1244705

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6489497.7 | 89.2440 | % | 0.71700 | | | | 0.80% |
| Yttrium,7440-65-5A | 3151761.0 | 89.8413 | % | 0.62843 | | | | 0.70% |
| Yttrium,7440-65-5R | 281980.6 | 88.8611 | % | 1.13069 | | | | 1.27% |
| Ar 420.067 R | 3977454.9 | 89.2251 | % | 0.56433 | | | | 0.63% |
| Ar 363.268 A | 98065.6 | 112.506 | % | 0.3663 | | | | 0.33% |
| Aluminum,7429-90-5† | 38.3 | 0.01129 | mg/L | 0.037362 | 0.45174 | mg/kg | 1.494469 | 330.82% |
| Antimony,7440-36-0† | -9.2 | -0.00273 | mg/L | 0.006070 | -0.10914 | mg/kg | 0.242807 | 222.47% |
| Arsenic,7440-38-2† | 4.5 | 0.00193 | mg/L | 0.005876 | 0.07720 | mg/kg | 0.235035 | 304.45% |
| Barium,7440-39-3† | 572.9 | 0.00231 | mg/L | 0.000025 | 0.09258 | mg/kg | 0.000985 | 1.06% |
| Beryllium,7440-41-7† | 719.4 | 0.00009 | mg/L | 0.000020 | 0.00375 | mg/kg | 0.000805 | 21.49% |
| Boron,7440-42-8† | 1835.3 | 0.02497 | mg/L | 0.001147 | 0.99886 | mg/kg | 0.045885 | 4.59% |
| Cadmium,7440-43-9† | -55.0 | -0.00020 | mg/L | 0.000051 | -0.00816 | mg/kg | 0.002051 | 25.14% |
| Calcium,7440-70-2† | 6600.3 | 0.37418 | mg/L | 0.007236 | 14.9674 | mg/kg | 0.28942 | 1.93% |
| Chromium,7440-47-3† | 302.8 | 0.00167 | mg/L | 0.000191 | 0.06698 | mg/kg | 0.007654 | 11.43% |
| Cobalt,7440-48-4† | -23.6 | -0.00030 | mg/L | 0.000468 | -0.01214 | mg/kg | 0.018705 | 154.13% |
| Copper,7440-50-8† | -110.9 | -0.00022 | mg/L | 0.000323 | -0.00871 | mg/kg | 0.012921 | 148.40% |
| Iron,7439-89-6† | 451.2 | 0.02154 | mg/L | 0.002495 | 0.86158 | mg/kg | 0.099794 | 11.58% |
| Lead,7439-92-1† | -70.1 | -0.00239 | mg/L | 0.000913 | -0.09551 | mg/kg | 0.036522 | 38.24% |
| Lithium,7439-93-2† | -123.2 | -0.00175 | mg/L | 0.001115 | -0.06998 | mg/kg | 0.044598 | 63.73% |
| Magnesium,7439-95-4† | 49.3 | 0.01384 | mg/L | 0.016582 | 0.55369 | mg/kg | 0.663271 | 119.79% |
| Manganese,7439-96-5† | -524.5 | -0.00034 | mg/L | 0.000118 | -0.01354 | mg/kg | 0.004723 | 34.87% |
| Molybdenum,7439-98-7 | 61.8 | 0.00229 | mg/L | 0.000618 | 0.09176 | mg/kg | 0.024714 | 26.93% |
| Nickel,7440-02-0† | 96.4 | 0.00090 | mg/L | 0.000351 | 0.03601 | mg/kg | 0.014048 | 39.01% |
| Potassium,7440-09-7† | 229.7 | 0.06501 | mg/L | 0.010998 | 2.60038 | mg/kg | 0.439918 | 16.92% |
| Selenium,7782-49-2† | -19.5 | -0.00662 | mg/L | 0.006526 | -0.26467 | mg/kg | 0.261052 | 98.63% |
| Silicon,7440-21-3† | -10.8 | -0.00264 | mg/L | 0.004142 | -0.10568 | mg/kg | 0.165695 | 156.79% |
| Silver,7440-22-4† | 161.7 | 0.00030 | mg/L | 0.000372 | 0.01188 | mg/kg | 0.014891 | 125.35% |
| Sodium,7440-23-5† | -4440.7 | -0.47951 | mg/L | 0.009674 | -19.1803 | mg/kg | 0.38695 | 2.02% |
| Strontium,7440-24-6† | -138.1 | -0.00019 | mg/L | 0.000037 | -0.00763 | mg/kg | 0.001499 | 19.64% |
| Thallium,7440-28-0† | 2.0 | 0.00044 | mg/L | 0.001875 | 0.01753 | mg/kg | 0.074984 | 427.71% |
| Tin,7440-31-5† | -16.5 | -0.00157 | mg/L | 0.000342 | -0.06275 | mg/kg | 0.013693 | 21.82% |
| Titanium,7440-32-6† | 840.5 | 0.00073 | mg/L | 0.000086 | 0.02939 | mg/kg | 0.003433 | 11.68% |
| Vanadium,7440-62-2† | -228.7 | -0.00059 | mg/L | 0.000196 | -0.02370 | mg/kg | 0.007822 | 33.01% |
| Zinc,7440-66-6† | 16.5 | 0.00010 | mg/L | 0.000152 | 0.00399 | mg/kg | 0.006081 | 152.26% |
| Zirconium,7440-67-7† | -82.9 | -0.00011 | mg/L | 0.000220 | -0.00451 | mg/kg | 0.008815 | 195.57% |

Sequence No.: 2
Sample ID: 1244706
Analyst:
Logged In Analyst (Original) : met
Initial Sample Wt: 1.25 g
Dilution: 1X

Autosampler Location: 68
Date Collected: 10/29/2013 7:43:35 PM
Data Type: Reprocessed on 10/30/2013 11:20:45 AM

Initial Sample Vol:
Sample Prep Vol: 50 mL

Mean Data: 1244706

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6374612.4 | 87.6641 | % | 0.43797 | | | | 0.50% |
| Yttrium,7440-65-5A | 3075732.3 | 87.6741 | % | 0.53281 | | | | 0.61% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Yttrium,7440-65-5R | 272441.3 | 85.8549 % | 0.61886 | | | | 0.72% |
| Ar 420.067 R | 3855710.7 | 86.4941 % | 0.72781 | | | | 0.84% |
| Ar 363.268 A | 99390.7 | 114.026 % | 0.1605 | | | | 0.14% |
| Aluminum,7429-90-5† | 17325.1 | 5.09820 mg/L | 0.032030 | 203.928 | mg/kg | 1.2812 | 0.63% |
| Antimony,7440-36-0† | 1816.1 | 0.52527 mg/L | 0.005378 | 21.0106 | mg/kg | 0.21513 | 1.02% |
| Arsenic,7440-38-2† | 1173.5 | 0.52121 mg/L | 0.007268 | 20.8482 | mg/kg | 0.29072 | 1.39% |
| Barium,7440-39-3† | 124294.4 | 0.50372 mg/L | 0.011340 | 20.1487 | mg/kg | 0.45359 | 2.25% |
| Beryllium,7440-41-7† | 3976304.5 | 0.50760 mg/L | 0.000745 | 20.3038 | mg/kg | 0.02982 | 0.15% |
| Boron,7440-42-8† | 173074.8 | 2.37032 mg/L | 0.043362 | 94.8128 | mg/kg | 1.73449 | 1.83% |
| Cadmium,7440-43-9† | 130616.5 | 0.48284 mg/L | 0.011912 | 19.3138 | mg/kg | 0.47646 | 2.47% |
| Calcium,7440-70-2† | 88056.0 | 4.98941 mg/L | 0.005413 | 199.576 | mg/kg | 0.2165 | 0.11% |
| Chromium,7440-47-3† | 92429.5 | 0.51097 mg/L | 0.010674 | 20.4389 | mg/kg | 0.42696 | 2.09% |
| Cobalt,7440-48-4† | 39585.4 | 0.50442 mg/L | 0.010839 | 20.1767 | mg/kg | 0.43356 | 2.15% |
| Copper,7440-50-8† | 271913.8 | 0.52970 mg/L | 0.010259 | 21.1880 | mg/kg | 0.41037 | 1.94% |
| Iron,7439-89-6† | 105074.4 | 5.01549 mg/L | 0.015921 | 200.620 | mg/kg | 0.6369 | 0.32% |
| Lead,7439-92-1† | 14384.2 | 0.49130 mg/L | 0.006304 | 19.6520 | mg/kg | 0.25216 | 1.28% |
| Lithium,7439-93-2† | 35228.3 | 0.50017 mg/L | 0.005743 | 20.0069 | mg/kg | 0.22971 | 1.15% |
| Magnesium,7439-95-4† | 16997.1 | 4.78028 mg/L | 0.052729 | 191.211 | mg/kg | 2.1092 | 1.10% |
| Manganese,7439-96-5† | 805880.6 | 0.52055 mg/L | 0.011098 | 20.8222 | mg/kg | 0.44394 | 2.13% |
| Molybdenum,7439-98-7 | 14117.4 | 0.52427 mg/L | 0.003120 | 20.9709 | mg/kg | 0.12480 | 0.60% |
| Nickel,7440-02-0† | 54268.4 | 0.50676 mg/L | 0.010934 | 20.2704 | mg/kg | 0.43735 | 2.16% |
| Potassium,7440-09-7† | 36747.5 | 10.4023 mg/L | 0.12654 | 416.091 | mg/kg | 5.0614 | 1.22% |
| Selenium,7782-49-2† | 1420.3 | 0.48336 mg/L | 0.010660 | 19.3344 | mg/kg | 0.42640 | 2.21% |
| Silicon,7440-21-3† | 1226.5 | 0.29747 mg/L | 0.003841 | 11.8987 | mg/kg | 0.15363 | 1.29% |
| Silver,7440-22-4† | 275296.5 | 0.50904 mg/L | 0.010643 | 20.3615 | mg/kg | 0.42571 | 2.09% |
| Sodium,7440-23-5† | 189047.6 | 20.4150 mg/L | 0.14635 | 816.600 | mg/kg | 5.8541 | 0.72% |
| Strontium,7440-24-6† | 377156.7 | 0.49215 mg/L | 0.002390 | 19.6861 | mg/kg | 0.09559 | 0.49% |
| Thallium,7440-28-0† | 2296.1 | 0.50595 mg/L | 0.004650 | 20.2378 | mg/kg | 0.18599 | 0.92% |
| Tin,7440-31-5† | 5321.4 | 0.51294 mg/L | 0.005389 | 20.5175 | mg/kg | 0.21554 | 1.05% |
| Titanium,7440-32-6† | 603991.4 | 0.52800 mg/L | 0.000677 | 21.1201 | mg/kg | 0.02707 | 0.13% |
| Vanadium,7440-62-2† | 195917.3 | 0.50782 mg/L | 0.011575 | 20.3130 | mg/kg | 0.46299 | 2.28% |
| Zinc,7440-66-6† | 76930.3 | 0.48858 mg/L | 0.010470 | 19.5432 | mg/kg | 0.41879 | 2.14% |
| Zirconium,7440-67-7† | 4230.4 | 0.00552 mg/L | 0.001349 | 0.22095 | mg/kg | 0.053954 | 24.42% |

**Sequence No.: 3**
**Sample ID: 21310171201**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt: 1.26 g**
**Dilution: 1X**

**Autosampler Location: 69**
**Date Collected: 10/29/2013 7:50:04 PM**
**Data Type: Reprocessed on 10/30/2013 11:20:47 AM**

**Initial Sample Vol:**
**Sample Prep Vol: 50 mL**

**Mean Data: 21310171201**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6519957.6 | 89.6629 | % | 0.30003 | | | | 0.33% |
| Yttrium,7440-65-5A | 3434070.5 | 97.8886 | % | 0.34862 | | | | 0.36% |
| Yttrium,7440-65-5R | 311216.9 | 98.0744 | % | 0.51874 | | | | 0.53% |
| Ar 420.067 R | 3912582.8 | 87.7699 | % | 0.67767 | | | | 0.77% |
| Ar 363.268 A | 96611.2 | 110.837 | % | 0.4398 | | | | 0.40% |
| Aluminum,7429-90-5† | 288735.3 | 85.0676 | mg/L | 0.37780 | 3375.70 | mg/kg | 14.992 | 0.44% |
| Antimony,7440-36-0† | 51.8 | 0.03521 | mg/L | 0.002969 | 1.39716 | mg/kg | 0.117822 | 8.43% |
| Arsenic,7440-38-2† | -3.5 | 0.05853 | mg/L | 0.004776 | 2.32270 | mg/kg | 0.189523 | 8.16% |
| Barium,7440-39-3† | 302072.1 | 1.21916 | mg/L | 0.009212 | 48.3794 | mg/kg | 0.36556 | 0.76% |
| Beryllium,7440-41-7† | -77989.1 | 0.00354 | mg/L | 0.000030 | 0.14043 | mg/kg | 0.001199 | 0.85% |
| Boron,7440-42-8† | -93504.1 | -0.11517 | mg/L | 0.018453 | -4.57022 | mg/kg | 0.732264 | 16.02% |
| Cadmium,7440-43-9† | 15268.0 | 0.05144 | mg/L | 0.000423 | 2.04114 | mg/kg | 0.016769 | 0.82% |
| Calcium,7440-70-2† | 952927.7 | 53.9721 | mg/L | 0.17873 | 2141.75 | mg/kg | 7.092 | 0.33% |
| Chromium,7440-47-3† | 71336.1 | 0.40649 | mg/L | 0.002499 | 16.1306 | mg/kg | 0.09917 | 0.61% |
| Cobalt,7440-48-4† | 7370.0 | 0.07933 | mg/L | 0.000891 | 3.14793 | mg/kg | 0.035346 | 1.12% |
| Copper,7440-50-8† | 832695.6 | 1.61983 | mg/L | 0.003855 | 64.2789 | mg/kg | 0.15296 | 0.24% |
| Iron,7439-89-6† | 5299151.8 | 252.974 | mg/L | 3.0390 | 10038.6 | mg/kg | 120.59 | 1.20% |
| Lead,7439-92-1† | 274417.1 | 9.36516 | mg/L | 0.075822 | 371.633 | mg/kg | 3.0088 | 0.81% |
| Lithium,7439-93-2† | 13177.9 | 0.18690 | mg/L | 0.002393 | 7.41678 | mg/kg | 0.094943 | 1.28% |
| Magnesium,7439-95-4† | 151395.9 | 42.4980 | mg/L | 0.10475 | 1686.43 | mg/kg | 4.157 | 0.25% |
| Manganese,7439-96-5† | 3709312.4 | 2.39732 | mg/L | 0.005498 | 95.1319 | mg/kg | 0.21818 | 0.23% |
| Molybdenum,7439-98-7 | 1068.5 | 0.06361 | mg/L | 0.001977 | 2.52436 | mg/kg | 0.078467 | 3.11% |
| Nickel,7440-02-0† | 32995.5 | 0.30902 | mg/L | 0.002500 | 12.2627 | mg/kg | 0.09922 | 0.81% |
| Potassium,7440-09-7† | 51149.4 | 14.5266 | mg/L | 0.10655 | 576.452 | mg/kg | 4.2280 | 0.73% |
| Selenium,7782-49-2† | -45.3 | 0.03928 | mg/L | 0.003275 | 1.55869 | mg/kg | 0.129953 | 8.34% |
| Silicon,7440-21-3† | 77862.6 | 18.9601 | mg/L | 0.06571 | 752.384 | mg/kg | 2.6074 | 0.35% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Silver,7440-22-4† | -3944.7 | -0.00042 | mg/L | 0.000054 | -0.01658 | mg/kg | 0.002131 | 12.86% |
| Sodium,7440-23-5† | 10260.6 | 1.12292 | mg/L | 0.008622 | 44.5603 | mg/kg | 0.34214 | 0.77% |
| Strontium,7440-24-6† | 230152.6 | 0.29841 | mg/L | 0.001293 | 11.8415 | mg/kg | 0.05130 | 0.43% |
| Thallium,7440-28-0† | -255.3 | 0.01991 | mg/L | 0.001587 | 0.79003 | mg/kg | 0.062981 | 7.97% |
| Tin,7440-31-5† | 3035.7 | 0.31237 | mg/L | 0.002910 | 12.3955 | mg/kg | 0.11549 | 0.93% |
| Titanium,7440-32-6† | 5564810.6 | 4.86470 | mg/L | 0.008504 | 193.044 | mg/kg | 0.3375 | 0.17% |
| Vanadium,7440-62-2† | 87034.2 | 0.21194 | mg/L | 0.001981 | 8.41022 | mg/kg | 0.078619 | 0.93% |
| Zinc,7440-66-6† | 2486645.7 | 15.8979 | mg/L | 0.03919 | 630.867 | mg/kg | 1.5551 | 0.25% |
| Zirconium,7440-67-7† | 40771.7 | 0.05280 | mg/L | 0.001225 | 2.09511 | mg/kg | 0.048621 | 2.32% |

**Sequence No.: 4**
**Sample ID: 21310171203**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt: 1.25 g**
**Dilution: 1X**

**Autosampler Location: 70**
**Date Collected: 10/29/2013 7:56:30 PM**
**Data Type: Reprocessed on 10/30/2013 11:20:49 AM**

**Initial Sample Vol:**
**Sample Prep Vol: 50 mL**

**Mean Data: 21310171203**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6435551.5 | 88.5022 | % | 0.53195 | | | | 0.60% |
| Yttrium,7440-65-5A | 3940631.0 | 112.328 | % | 0.5769 | | | | 0.51% |
| Yttrium,7440-65-5R | 362583.7 | 114.262 | % | 0.6384 | | | | 0.56% |
| Ar 420.067 R | 3979460.5 | 89.2701 | % | 1.14186 | | | | 1.28% |
| Ar 363.268 A | 95175.0 | 109.190 | % | 0.4680 | | | | 0.43% |
| Aluminum,7429-90-5† | 278061.7 | 81.9226 | mg/L | 0.54476 | 3276.90 | mg/kg | 21.791 | 0.66% |
| Antimony,7440-36-0† | 13.1 | 0.02114 | mg/L | 0.001202 | 0.84559 | mg/kg | 0.048072 | 5.69% |
| Arsenic,7440-38-2† | 2.3 | 0.05868 | mg/L | 0.003230 | 2.34736 | mg/kg | 0.129190 | 5.50% |
| Barium,7440-39-3† | 160169.3 | 0.64478 | mg/L | 0.002202 | 25.7911 | mg/kg | 0.08808 | 0.34% |
| Beryllium,7440-41-7† | -46044.7 | 0.00810 | mg/L | 0.000066 | 0.32394 | mg/kg | 0.002655 | 0.82% |
| Boron,7440-42-8† | -96141.8 | -0.12663 | mg/L | 0.025785 | -5.06510 | mg/kg | 1.031412 | 20.36% |
| Cadmium,7440-43-9† | 7876.1 | 0.02395 | mg/L | 0.000091 | 0.95815 | mg/kg | 0.003635 | 0.38% |
| Calcium,7440-70-2† | 539542.6 | 30.5397 | mg/L | 0.16118 | 1221.59 | mg/kg | 6.447 | 0.53% |
| Chromium,7440-47-3† | 99396.4 | 0.55995 | mg/L | 0.001222 | 22.3979 | mg/kg | 0.04890 | 0.22% |
| Cobalt,7440-48-4† | 7979.8 | 0.08663 | mg/L | 0.000427 | 3.46538 | mg/kg | 0.017078 | 0.49% |
| Copper,7440-50-8† | 810713.9 | 1.57715 | mg/L | 0.001994 | 63.0861 | mg/kg | 0.07978 | 0.13% |
| Iron,7439-89-6† | 5414157.5 | 258.464 | mg/L | 5.1935 | 10338.6 | mg/kg | 207.74 | 2.01% |
| Lead,7439-92-1† | 128834.3 | 4.39454 | mg/L | 0.014086 | 175.782 | mg/kg | 0.5635 | 0.32% |
| Lithium,7439-93-2† | 11904.3 | 0.16881 | mg/L | 0.001540 | 6.75249 | mg/kg | 0.061613 | 0.91% |
| Magnesium,7439-95-4† | 86662.9 | 24.2880 | mg/L | 0.10281 | 971.521 | mg/kg | 4.1125 | 0.42% |
| Manganese,7439-96-5† | 3968296.6 | 2.56473 | mg/L | 0.001474 | 102.589 | mg/kg | 0.0590 | 0.06% |
| Molybdenum,7439-98-7 | 1113.0 | 0.06560 | mg/L | 0.000122 | 2.62409 | mg/kg | 0.004879 | 0.19% |
| Nickel,7440-02-0† | 60135.7 | 0.56252 | mg/L | 0.001893 | 22.5007 | mg/kg | 0.07571 | 0.34% |
| Potassium,7440-09-7† | 47921.7 | 13.6136 | mg/L | 0.15288 | 544.542 | mg/kg | 6.1153 | 1.12% |
| Selenium,7782-49-2† | -65.9 | 0.03373 | mg/L | 0.002101 | 1.34903 | mg/kg | 0.084033 | 6.23% |
| Silicon,7440-21-3† | 59674.9 | 14.5322 | mg/L | 0.06395 | 581.289 | mg/kg | 2.5578 | 0.44% |
| Silver,7440-22-4† | -9964.6 | -0.01151 | mg/L | 0.000717 | -0.46050 | mg/kg | 0.028694 | 6.23% |
| Sodium,7440-23-5† | 16175.2 | 1.76325 | mg/L | 0.011972 | 70.5299 | mg/kg | 0.47886 | 0.68% |
| Strontium,7440-24-6† | 349355.4 | 0.45465 | mg/L | 0.003152 | 18.1858 | mg/kg | 0.12610 | 0.69% |
| Thallium,7440-28-0† | -287.4 | 0.01523 | mg/L | 0.002268 | 0.60925 | mg/kg | 0.090711 | 14.89% |
| Tin,7440-31-5† | 3680.9 | 0.37425 | mg/L | 0.002657 | 14.9699 | mg/kg | 0.10630 | 0.71% |
| Titanium,7440-32-6† | 5766978.5 | 5.04144 | mg/L | 0.007439 | 201.658 | mg/kg | 0.2975 | 0.15% |
| Vanadium,7440-62-2† | 75665.2 | 0.18298 | mg/L | 0.000475 | 7.31924 | mg/kg | 0.019001 | 0.26% |
| Zinc,7440-66-6† | 1786229.5 | 11.4099 | mg/L | 0.02646 | 456.395 | mg/kg | 1.0584 | 0.23% |
| Zirconium,7440-67-7† | 42761.4 | 0.05542 | mg/L | 0.000750 | 2.21682 | mg/kg | 0.030011 | 1.35% |

**Sequence No.: 5**
**Sample ID: 21310172601**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt: 1.25 g**
**Dilution: 1X**

**Autosampler Location: 71**
**Date Collected: 10/29/2013 8:02:56 PM**
**Data Type: Reprocessed on 10/30/2013 11:20:50 AM**

**Initial Sample Vol:**
**Sample Prep Vol: 50 mL**

**Mean Data: 21310172601**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 5946243.5 | 81.7732 | % | 0.36220 | | | | 0.44% |
| Yttrium,7440-65-5A | 3230595.0 | 92.0885 | % | 0.63613 | | | | 0.69% |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Yttrium,7440-65-5R | 305913.4 | 96.4031 | % | 0.69877 | | | | 0.72% |
| Ar 420.067 R | 3654615.5 | 81.9830 | % | 0.46805 | | | | 0.57% |
| Ar 363.268 A | 95067.4 | 109.066 | % | 0.0799 | | | | 0.07% |
| Aluminum,7429-90-5† | 695796.2 | 204.995 | mg/L | 1.2386 | 8199.80 | mg/kg | 49.545 | 0.60% |
| Antimony,7440-36-0† | -50.9 | 0.02369 | mg/L | 0.001620 | 0.94743 | mg/kg | 0.064793 | 6.84% |
| Arsenic,7440-38-2† | 146.7 | 0.20390 | mg/L | 0.009453 | 8.15594 | mg/kg | 0.378113 | 4.64% |
| Barium,7440-39-3† | 742973.5 | 2.99929 | mg/L | 0.003493 | 119.972 | mg/kg | 0.1397 | 0.12% |
| Beryllium,7440-41-7† | -142826.1 | 0.00780 | mg/L | 0.000172 | 0.31210 | mg/kg | 0.006873 | 2.20% |
| Boron,7440-42-8† | -120341.3 | -0.16055 | mg/L | 0.027635 | -6.42215 | mg/kg | 1.105420 | 17.21% |
| Cadmium,7440-43-9† | 2059.5 | 0.00171 | mg/L | 0.000136 | 0.06824 | mg/kg | 0.005442 | 7.97% |
| Calcium,7440-70-2† | 8611060.3 | 488.078 | mg/L | 11.1479 | 19523.1 | mg/kg | 445.92 | 2.28% |
| Chromium,7440-47-3† | 66553.8 | 0.38677 | mg/L | 0.000520 | 15.4706 | mg/kg | 0.02081 | 0.13% |
| Cobalt,7440-48-4† | 14776.5 | 0.16330 | mg/L | 0.000493 | 6.53213 | mg/kg | 0.019701 | 0.30% |
| Copper,7440-50-8† | 235151.6 | 0.45004 | mg/L | 0.000873 | 18.0015 | mg/kg | 0.03490 | 0.19% |
| Iron,7439-89-6† | 6673294.9 | 318.570 | mg/L | 7.1348 | 12742.8 | mg/kg | 285.39 | 2.24% |
| Lead,7439-92-1† | 4910.8 | 0.18064 | mg/L | 0.001234 | 7.22577 | mg/kg | 0.049378 | 0.68% |
| Lithium,7439-93-2† | 26853.2 | 0.38084 | mg/L | 0.003752 | 15.2334 | mg/kg | 0.15009 | 0.99% |
| Magnesium,7439-95-4† | 508364.6 | 142.881 | mg/L | 0.0294 | 5715.24 | mg/kg | 1.174 | 0.02% |
| Manganese,7439-96-5† | 10902949.6 | 7.04411 | mg/L | 0.031592 | 281.764 | mg/kg | 1.2637 | 0.45% |
| Molybdenum,7439-98-7 | -329.9 | 0.02102 | mg/L | 0.001649 | 0.84082 | mg/kg | 0.065971 | 7.85% |
| Nickel,7440-02-0† | 46809.3 | 0.43735 | mg/L | 0.001172 | 17.4938 | mg/kg | 0.04689 | 0.27% |
| Potassium,7440-09-7† | 159321.7 | 45.1561 | mg/L | 0.40247 | 1806.25 | mg/kg | 16.099 | 0.89% |
| Selenium,7782-49-2† | -105.4 | 0.01967 | mg/L | 0.006366 | 0.78684 | mg/kg | 0.254658 | 32.36% |
| Silicon,7440-21-3† | 90532.0 | 22.0315 | mg/L | 0.08476 | 881.258 | mg/kg | 3.3903 | 0.38% |
| Silver,7440-22-4† | -9600.4 | -0.00737 | mg/L | 0.000055 | -0.29498 | mg/kg | 0.002219 | 0.75% |
| Sodium,7440-23-5† | 122143.8 | 13.1993 | mg/L | 0.10620 | 527.973 | mg/kg | 4.2481 | 0.80% |
| Strontium,7440-24-6† | 1536808.6 | 1.99169 | mg/L | 0.048437 | 79.6676 | mg/kg | 1.93747 | 2.43% |
| Thallium,7440-28-0† | -473.8 | 0.04447 | mg/L | 0.001859 | 1.77875 | mg/kg | 0.074358 | 4.18% |
| Tin,7440-31-5† | -355.4 | 0.01834 | mg/L | 0.001034 | 0.73349 | mg/kg | 0.041372 | 5.64% |
| Titanium,7440-32-6† | 10741356.8 | 9.39031 | mg/L | 0.058754 | 375.612 | mg/kg | 2.3502 | 0.63% |
| Vanadium,7440-62-2† | 292398.8 | 0.73619 | mg/L | 0.000739 | 29.4476 | mg/kg | 0.02958 | 0.10% |
| Zinc,7440-66-6† | 140529.2 | 0.86971 | mg/L | 0.004157 | 34.7885 | mg/kg | 0.16630 | 0.48% |
| Zirconium,7440-67-7† | 125799.0 | 0.16574 | mg/L | 0.004038 | 6.62974 | mg/kg | 0.161518 | 2.44% |

**Sequence No.: 6**
**Sample ID: 1244707**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt: 1.25 g**
**Dilution: 1X**

**Autosampler Location: 72**
**Date Collected: 10/29/2013 8:09:27 PM**
**Data Type: Reprocessed on 10/30/2013 11:20:52 AM**

**Initial Sample Vol:**
**Sample Prep Vol: 50 mL**

**Mean Data: 1244707**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 5870163.4 | 80.7269 | % | 0.70706 | | | | 0.88% |
| Yttrium,7440-65-5A | 3172756.7 | 90.4398 | % | 0.24051 | | | | 0.27% |
| Yttrium,7440-65-5R | 298960.5 | 94.2120 | % | 1.14855 | | | | 1.22% |
| Ar 420.067 R | 3620891.6 | 81.2264 | % | 0.45431 | | | | 0.56% |
| Ar 363.268 A | 94459.8 | 108.369 | % | 0.5384 | | | | 0.50% |
| Aluminum,7429-90-5† | 836892.7 | 246.562 | mg/L | 1.3247 | 9862.48 | mg/kg | 52.987 | 0.54% |
| Antimony,7440-36-0† | 303.9 | 0.12776 | mg/L | 0.015034 | 5.11040 | mg/kg | 0.601344 | 11.77% |
| Arsenic,7440-38-2† | 1066.0 | 0.62204 | mg/L | 0.013895 | 24.8815 | mg/kg | 0.55581 | 2.23% |
| Barium,7440-39-3† | 1343600.8 | 5.43173 | mg/L | 0.004844 | 217.269 | mg/kg | 0.1937 | 0.09% |
| Beryllium,7440-41-7† | 3077347.9 | 0.42577 | mg/L | 0.003947 | 17.0308 | mg/kg | 0.15790 | 0.93% |
| Boron,7440-42-8† | 41277.1 | 1.98045 | mg/L | 0.040178 | 79.2180 | mg/kg | 1.60711 | 2.03% |
| Cadmium,7440-43-9† | 100431.2 | 0.36579 | mg/L | 0.000738 | 14.6318 | mg/kg | 0.02950 | 0.20% |
| Calcium,7440-70-2† | 8317474.8 | 471.428 | mg/L | 8.2821 | 18857.1 | mg/kg | 331.28 | 1.76% |
| Chromium,7440-47-3† | 137148.9 | 0.77419 | mg/L | 0.001825 | 30.9674 | mg/kg | 0.07299 | 0.24% |
| Cobalt,7440-48-4† | 44735.3 | 0.54010 | mg/L | 0.005793 | 21.6042 | mg/kg | 0.23172 | 1.07% |
| Copper,7440-50-8† | 442148.8 | 0.85308 | mg/L | 0.001188 | 34.1230 | mg/kg | 0.04750 | 0.14% |
| Iron,7439-89-6† | 6427450.7 | 306.830 | mg/L | 5.3749 | 12273.2 | mg/kg | 215.00 | 1.75% |
| Lead,7439-92-1† | 15414.4 | 0.54410 | mg/L | 0.006851 | 21.7641 | mg/kg | 0.27405 | 1.26% |
| Lithium,7439-93-2† | 57077.3 | 0.80992 | mg/L | 0.006748 | 32.3967 | mg/kg | 0.26993 | 0.83% |
| Magnesium,7439-95-4† | 525584.7 | 147.732 | mg/L | 0.3604 | 5909.28 | mg/kg | 14.418 | 0.24% |
| Manganese,7439-96-5† | 11499233.1 | 7.42948 | mg/L | 0.068194 | 297.179 | mg/kg | 2.7278 | 0.92% |
| Molybdenum,7439-98-7 | 9905.3 | 0.40088 | mg/L | 0.002645 | 16.0353 | mg/kg | 0.10580 | 0.66% |
| Nickel,7440-02-0† | 88354.5 | 0.82479 | mg/L | 0.001030 | 32.9916 | mg/kg | 0.04122 | 0.12% |
| Potassium,7440-09-7† | 201000.5 | 56.9436 | mg/L | 0.66346 | 2277.74 | mg/kg | 26.538 | 1.17% |
| Selenium,7782-49-2† | 1030.5 | 0.39607 | mg/L | 0.022386 | 15.8430 | mg/kg | 0.89542 | 5.65% |
| Silicon,7440-21-3† | 80083.1 | 19.4852 | mg/L | 0.06250 | 779.408 | mg/kg | 2.5001 | 0.32% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Silver,7440-22-4† | 217539.6 | 0.41174 | mg/L | 0.000412 | 16.4697 | mg/kg | 0.01650 | 0.10% |
| Sodium,7440-23-5† | 317715.6 | 34.3194 | mg/L | 0.26406 | 1372.78 | mg/kg | 10.562 | 0.77% |
| Strontium,7440-24-6† | 1895140.1 | 2.45989 | mg/L | 0.048981 | 98.3954 | mg/kg | 1.95925 | 1.99% |
| Thallium,7440-28-0† | 1140.1 | 0.43450 | mg/L | 0.009656 | 17.3799 | mg/kg | 0.38623 | 2.22% |
| Tin,7440-31-5† | 3651.4 | 0.41284 | mg/L | 0.004425 | 16.5134 | mg/kg | 0.17699 | 1.07% |
| Titanium,7440-32-6† | 14085462.4 | 12.3140 | mg/L | 0.10941 | 492.560 | mg/kg | 4.3765 | 0.89% |
| Vanadium,7440-62-2† | 436334.1 | 1.11003 | mg/L | 0.001083 | 44.4012 | mg/kg | 0.04331 | 0.10% |
| Zinc,7440-66-6† | 198442.7 | 1.24026 | mg/L | 0.000921 | 49.6106 | mg/kg | 0.03683 | 0.07% |
| Zirconium,7440-67-7† | 166324.1 | 0.21922 | mg/L | 0.002799 | 8.76867 | mg/kg | 0.111980 | 1.28% |

**Sequence No.: 7**
**Sample ID: 1244708**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt: 1.25 g**
**Dilution: 1X**

**Autosampler Location: 73**
**Date Collected: 10/29/2013 8:15:18 PM**
**Data Type: Reprocessed on 10/30/2013 11:20:54 AM**

**Initial Sample Vol:**
**Sample Prep Vol: 50 mL**

**Mean Data: 1244708**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 5974329.3 | 82.1594 | % | 0.34723 | | | | 0.42% |
| Yttrium,7440-65-5A | 3299162.9 | 94.0430 | % | 1.12387 | | | | 1.20% |
| Yttrium,7440-65-5R | 307378.6 | 96.8648 | % | 1.06532 | | | | 1.10% |
| Ar 420.067 R | 3699830.6 | 82.9973 | % | 0.63143 | | | | 0.76% |
| Ar 363.268 A | 93848.0 | 107.667 | % | 0.3266 | | | | 0.30% |
| Aluminum,7429-90-5† | 930569.2 | 274.163 | mg/L | 1.4197 | 10966.5 | mg/kg | 56.79 | 0.52% |
| Antimony,7440-36-0† | 243.9 | 0.11357 | mg/L | 0.010684 | 4.54291 | mg/kg | 0.427356 | 9.41% |
| Arsenic,7440-38-2† | 1129.8 | 0.66656 | mg/L | 0.006411 | 26.6624 | mg/kg | 0.25642 | 0.96% |
| Barium,7440-39-3† | 743528.0 | 3.00131 | mg/L | 0.003216 | 120.052 | mg/kg | 0.1287 | 0.11% |
| Beryllium,7440-41-7† | 3193974.5 | 0.44318 | mg/L | 0.006423 | 17.7273 | mg/kg | 0.25692 | 1.45% |
| Boron,7440-42-8† | 27132.6 | 1.94940 | mg/L | 0.012168 | 77.9761 | mg/kg | 0.48671 | 0.62% |
| Cadmium,7440-43-9† | 107426.3 | 0.39101 | mg/L | 0.001267 | 15.6403 | mg/kg | 0.05070 | 0.32% |
| Calcium,7440-70-2† | 9262910.7 | 525.018 | mg/L | 5.8613 | 21000.7 | mg/kg | 234.45 | 1.12% |
| Chromium,7440-47-3† | 149043.3 | 0.84120 | mg/L | 0.001243 | 33.6482 | mg/kg | 0.04972 | 0.15% |
| Cobalt,7440-48-4† | 47250.8 | 0.56965 | mg/L | 0.009059 | 22.7862 | mg/kg | 0.36235 | 1.59% |
| Copper,7440-50-8† | 458985.1 | 0.88531 | mg/L | 0.000940 | 35.4123 | mg/kg | 0.03760 | 0.11% |
| Iron,7439-89-6† | 7162155.6 | 341.903 | mg/L | 3.6930 | 13676.1 | mg/kg | 147.72 | 1.08% |
| Lead,7439-92-1† | 16187.1 | 0.57247 | mg/L | 0.013635 | 22.8988 | mg/kg | 0.54542 | 2.38% |
| Lithium,7439-93-2† | 60416.7 | 0.85731 | mg/L | 0.005221 | 34.2925 | mg/kg | 0.20884 | 0.61% |
| Magnesium,7439-95-4† | 548519.3 | 154.171 | mg/L | 0.6336 | 6166.83 | mg/kg | 25.343 | 0.41% |
| Manganese,7439-96-5† | 11687450.7 | 7.55139 | mg/L | 0.107799 | 302.056 | mg/kg | 4.3120 | 1.43% |
| Molybdenum,7439-98-7 | 10047.4 | 0.40993 | mg/L | 0.003489 | 16.3970 | mg/kg | 0.13956 | 0.85% |
| Nickel,7440-02-0† | 90739.6 | 0.84711 | mg/L | 0.001417 | 33.8845 | mg/kg | 0.05670 | 0.17% |
| Potassium,7440-09-7† | 217499.0 | 61.6190 | mg/L | 0.18951 | 2464.76 | mg/kg | 7.581 | 0.31% |
| Selenium,7782-49-2† | 1163.2 | 0.44695 | mg/L | 0.019545 | 17.8781 | mg/kg | 0.78182 | 4.37% |
| Silicon,7440-21-3† | 112861.8 | 27.4683 | mg/L | 0.09349 | 1098.73 | mg/kg | 3.740 | 0.34% |
| Silver,7440-22-4† | 227736.0 | 0.43194 | mg/L | 0.000858 | 17.2775 | mg/kg | 0.03434 | 0.20% |
| Sodium,7440-23-5† | 308027.8 | 33.2735 | mg/L | 0.20899 | 1330.94 | mg/kg | 8.359 | 0.63% |
| Strontium,7440-24-6† | 2029424.7 | 2.63360 | mg/L | 0.022806 | 105.344 | mg/kg | 0.9122 | 0.87% |
| Thallium,7440-28-0† | 1168.8 | 0.45522 | mg/L | 0.000222 | 18.2090 | mg/kg | 0.00890 | 0.05% |
| Tin,7440-31-5† | 3813.3 | 0.43367 | mg/L | 0.007692 | 17.3469 | mg/kg | 0.30767 | 1.77% |
| Titanium,7440-32-6† | 15146712.8 | 13.2418 | mg/L | 0.18795 | 529.671 | mg/kg | 7.5182 | 1.42% |
| Vanadium,7440-62-2† | 480173.6 | 1.22160 | mg/L | 0.001689 | 48.8639 | mg/kg | 0.06756 | 0.14% |
| Zinc,7440-66-6† | 214056.1 | 1.33714 | mg/L | 0.003040 | 53.4857 | mg/kg | 0.12159 | 0.23% |
| Zirconium,7440-67-7† | 173797.9 | 0.22887 | mg/L | 0.000959 | 9.15487 | mg/kg | 0.038365 | 0.42% |

**Sequence No.: 8**
**Sample ID: 1249183**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt: 1.25 g**
**Dilution: 1X**

**Autosampler Location: 74**
**Date Collected: 10/29/2013 8:21:10 PM**
**Data Type: Reprocessed on 10/30/2013 11:20:55 AM**

**Initial Sample Vol:**
**Sample Prep Vol: 50 mL**

**Mean Data: 1249183**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 5980389.1 | 82.2428 | % | 0.29589 | | | | 0.36% |
| Yttrium,7440-65-5A | 3285734.3 | 93.6602 | % | 0.82666 | | | | 0.88% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Yttrium,7440-65-5R | 306675.8 | 96.6433 | % | 1.03598 | | | 1.07% |
| Ar 420.067 R | 3791882.8 | 85.0622 | % | 0.70677 | | | 0.83% |
| Ar 363.268 A | 94613.5 | 108.545 | % | 0.4676 | | | 0.43% |
| Aluminum,7429-90-5† | 714804.6 | 210.590 | mg/L | 1.3301 | 8423.60 mg/kg | 53.204 | 0.63% |
| Antimony,7440-36-0† | 1487.3 | 0.47003 | mg/L | 0.010871 | 18.8013 mg/kg | 0.43483 | 2.31% |
| Arsenic,7440-38-2† | 1146.6 | 0.64930 | mg/L | 0.008351 | 25.9721 mg/kg | 0.33404 | 1.29% |
| Barium,7440-39-3† | 843060.7 | 3.40462 | mg/L | 0.002683 | 136.185 mg/kg | 0.1073 | 0.08% |
| Beryllium,7440-41-7† | 3131475.5 | 0.42616 | mg/L | 0.003375 | 17.0464 mg/kg | 0.13498 | 0.79% |
| Boron,7440-42-8† | 39012.4 | 2.06321 | mg/L | 0.033204 | 82.5283 mg/kg | 1.32815 | 1.61% |
| Cadmium,7440-43-9† | 102812.0 | 0.37395 | mg/L | 0.000408 | 14.9580 mg/kg | 0.01634 | 0.11% |
| Calcium,7440-70-2† | 8978172.8 | 508.887 | mg/L | 8.6283 | 20355.5 mg/kg | 345.13 | 1.70% |
| Chromium,7440-47-3† | 139264.2 | 0.78935 | mg/L | 0.001544 | 31.5739 mg/kg | 0.06176 | 0.20% |
| Cobalt,7440-48-4† | 45255.6 | 0.55116 | mg/L | 0.002486 | 22.0463 mg/kg | 0.09946 | 0.45% |
| Copper,7440-50-8† | 447568.0 | 0.86374 | mg/L | 0.000288 | 34.5496 mg/kg | 0.01151 | 0.03% |
| Iron,7439-89-6† | 6962336.2 | 332.368 | mg/L | 5.4808 | 13294.7 mg/kg | 219.23 | 1.65% |
| Lead,7439-92-1† | 15896.9 | 0.55587 | mg/L | 0.003698 | 22.2348 mg/kg | 0.14791 | 0.67% |
| Lithium,7439-93-2† | 55102.7 | 0.78192 | mg/L | 0.007682 | 31.2769 mg/kg | 0.30728 | 0.98% |
| Magnesium,7439-95-4† | 523847.1 | 147.232 | mg/L | 0.2878 | 5889.27 mg/kg | 11.511 | 0.20% |
| Manganese,7439-96-5† | 11411441.1 | 7.37263 | mg/L | 0.059416 | 294.905 mg/kg | 2.3766 | 0.81% |
| Molybdenum,7439-98-7 | 11124.6 | 0.44727 | mg/L | 0.002892 | 17.8907 mg/kg | 0.11570 | 0.65% |
| Nickel,7440-02-0† | 87486.9 | 0.81724 | mg/L | 0.001467 | 32.6897 mg/kg | 0.05869 | 0.18% |
| Potassium,7440-09-7† | 188489.9 | 53.4147 | mg/L | 0.34119 | 2136.59 mg/kg | 13.648 | 0.64% |
| Selenium,7782-49-2† | 1172.4 | 0.45718 | mg/L | 0.013862 | 18.2870 mg/kg | 0.55447 | 3.03% |
| Silicon,7440-21-3† | 110190.4 | 26.8186 | mg/L | 0.18055 | 1072.74 mg/kg | 7.222 | 0.67% |
| Silver,7440-22-4† | 224536.6 | 0.42584 | mg/L | 0.000444 | 17.0337 mg/kg | 0.01777 | 0.10% |
| Sodium,7440-23-5† | 280747.7 | 30.3267 | mg/L | 0.23833 | 1213.07 mg/kg | 9.533 | 0.79% |
| Strontium,7440-24-6† | 1881207.5 | 2.44062 | mg/L | 0.048029 | 97.6250 mg/kg | 1.92116 | 1.97% |
| Thallium,7440-28-0† | 1255.9 | 0.42832 | mg/L | 0.011452 | 17.1328 mg/kg | 0.45808 | 2.67% |
| Tin,7440-31-5† | 3893.0 | 0.42899 | mg/L | 0.003289 | 17.1597 mg/kg | 0.13156 | 0.77% |
| Titanium,7440-32-6† | 11394955.8 | 9.96168 | mg/L | 0.081724 | 398.467 mg/kg | 3.2690 | 0.82% |
| Vanadium,7440-62-2† | 455704.4 | 1.15893 | mg/L | 0.000685 | 46.3572 mg/kg | 0.02741 | 0.06% |
| Zinc,7440-66-6† | 203797.0 | 1.27096 | mg/L | 0.000332 | 50.8386 mg/kg | 0.01328 | 0.03% |
| Zirconium,7440-67-7† | 149563.4 | 0.19772 | mg/L | 0.002429 | 7.90899 mg/kg | 0.097169 | 1.23% |

**Sequence No.: 9**
**Sample ID: 1249184**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt: 1.25 g**
**Dilution: 1X**

**Autosampler Location: 75**
**Date Collected: 10/29/2013 8:27:02 PM**
**Data Type: Reprocessed on 10/30/2013 11:20:57 AM**

**Initial Sample Vol:**
**Sample Prep Vol: 50 mL**

Reprocess 5x AWG 10/30/13

**Mean Data: 1249184**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6108042.3 | 83.9982 | % | 0.16242 | | | | 0.19% |
| Yttrium,7440-65-5A | 3036159.4 | 86.5461 | % | 0.21931 | | | | 0.25% |
| Yttrium,7440-65-5R | 283813.1 | 89.4386 | % | 0.68992 | | | | 0.77% |
| Ar 420.067 R | 3846352.4 | 86.2841 | % | 0.90637 | | | | 1.05% |
| Ar 363.268 A | 96570.8 | 110.791 | % | 0.3902 | | | | 0.35% |
| Aluminum,7429-90-5† | 160177.1 | 47.1910 | mg/L | 0.24978 | 1887.64 | mg/kg | 9.991 | 0.53% |
| Antimony,7440-36-0† | -3.6 | 0.00800 | mg/L | 0.001963 | 0.31982 | mg/kg | 0.078514 | 24.55% |
| Arsenic,7440-38-2† | 12.1 | 0.03792 | mg/L | 0.003679 | 1.51674 | mg/kg | 0.147161 | 9.70% |
| Barium,7440-39-3† | 176835.8 | 0.71391 | mg/L | 0.006553 | 28.5566 | mg/kg | 0.26212 | 0.92% |
| Beryllium,7440-41-7† | -33374.2 | 0.00190 | mg/L | 0.000082 | 0.07603 | mg/kg | 0.003297 | 4.34% |
| Boron,7440-42-8† | -22917.9 | 0.03573 | mg/L | 0.009372 | 1.42914 | mg/kg | 0.374897 | 26.23% |
| Cadmium,7440-43-9† | 445.6 | 0.00025 | mg/L | 0.000063 | 0.01012 | mg/kg | 0.002531 | 25.02% |
| Calcium,7440-70-2† | 1978716.5 | 112.154 | mg/L | 0.9880 | 4486.15 | mg/kg | 39.520 | 0.88% |
| Chromium,7440-47-3† | 16230.6 | 0.09422 | mg/L | 0.001023 | 3.76888 | mg/kg | 0.040923 | 1.09% |
| Cobalt,7440-48-4† | 3604.9 | 0.04003 | mg/L | 0.000569 | 1.60126 | mg/kg | 0.022761 | 1.42% |
| Copper,7440-50-8† | 55831.2 | 0.10687 | mg/L | 0.001158 | 4.27485 | mg/kg | 0.046340 | 1.08% |
| Iron,7439-89-6† | 1572038.2 | 75.0460 | mg/L | 0.57048 | 3001.84 | mg/kg | 22.819 | 0.76% |
| Lead,7439-92-1† | 1133.8 | 0.04162 | mg/L | 0.001924 | 1.66492 | mg/kg | 0.076955 | 4.62% |
| Lithium,7439-93-2† | 6672.2 | 0.09463 | mg/L | 0.003218 | 3.78525 | mg/kg | 0.128723 | 3.40% |
| Magnesium,7439-95-4† | 120676.5 | 33.9176 | mg/L | 0.06362 | 1356.70 | mg/kg | 2.545 | 0.19% |
| Manganese,7439-96-5† | 2584460.5 | 1.66974 | mg/L | 0.002660 | 66.7895 | mg/kg | 0.10641 | 0.16% |
| Molybdenum,7439-98-7 | 72.6 | 0.01050 | mg/L | 0.001249 | 0.41985 | mg/kg | 0.049949 | 11.90% |
| Nickel,7440-02-0† | 11888.2 | 0.11107 | mg/L | 0.000406 | 4.44289 | mg/kg | 0.016257 | 0.37% |
| Potassium,7440-09-7† | 36948.4 | 10.4724 | mg/L | 0.07961 | 418.897 | mg/kg | 3.1843 | 0.76% |
| Selenium,7782-49-2† | -68.0 | -0.00991 | mg/L | 0.007399 | -0.39622 | mg/kg | 0.295948 | 74.69% |
| Silicon,7440-21-3† | 21498.7 | 5.23183 | mg/L | 0.025494 | 209.273 | mg/kg | 1.0198 | 0.49% |

Sequence No.: 1
Sample ID: 1249184
Analyst:
Logged In Analyst (Original) : met
Initial Sample Wt: 1.25 g
Dilution: 5X

Autosampler Location: 75
Date Collected: 10/29/2013 8:27:02 PM
Data Type: Reprocessed on 10/30/2013 11:39:09 AM

Initial Sample Vol:
Sample Prep Vol: 50 mL

Mean Data: 1249184

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6108042.3 | 83.9982 | % | 0.16242 | | | | 0.19% |
| Yttrium,7440-65-5A | 3036159.4 | 86.5461 | % | 0.21931 | | | | 0.25% |
| Yttrium,7440-65-5R | 283813.1 | 89.4386 | % | 0.68992 | | | | 0.77% |
| Ar 420.067 R | 3846352.4 | 86.2841 | % | 0.90637 | | | | 1.05% |
| Ar 363.268 A | 96570.8 | 110.791 | % | 0.3902 | | | | 0.35% |
| Aluminum,7429-90-5† | 160177.1 | 47.1910 | mg/L | 0.24978 | 9438.20 | mg/kg | 49.956 | 0.53% |
| Antimony,7440-36-0† | -3.6 | 0.00800 | mg/L | 0.001963 | 1.59908 | mg/kg | 0.392568 | 24.55% |
| Arsenic,7440-38-2† | 12.1 | 0.03792 | mg/L | 0.003679 | 7.58369 | mg/kg | 0.735805 | 9.70% |
| Barium,7440-39-3† | 176835.8 | 0.71391 | mg/L | 0.006553 | 142.783 | mg/kg | 1.3106 | 0.92% |
| Beryllium,7440-41-7† | -33374.2 | 0.00190 | mg/L | 0.000082 | 0.38013 | mg/kg | 0.016486 | 4.34% |
| Boron,7440-42-8† | -22917.9 | 0.03573 | mg/L | 0.009372 | 7.14572 | mg/kg | 1.874483 | 26.23% |
| Cadmium,7440-43-9† | 445.6 | 0.00025 | mg/L | 0.000063 | 0.05058 | mg/kg | 0.012657 | 25.02% |
| Calcium,7440-70-2† | 1978716.5 | 112.154 | mg/L | 0.9880 | 22430.7 | mg/kg | 197.60 | 0.88% |
| Chromium,7440-47-3† | 16230.6 | 0.09422 | mg/L | 0.001023 | 18.8444 | mg/kg | 0.20461 | 1.09% |
| Cobalt,7440-48-4† | 3604.9 | 0.04003 | mg/L | 0.000569 | 8.00632 | mg/kg | 0.113805 | 1.42% |
| Copper,7440-50-8† | 55831.2 | 0.10687 | mg/L | 0.001158 | 21.3743 | mg/kg | 0.23170 | 1.08% |
| Iron,7439-89-6† | 1572038.2 | 75.0460 | mg/L | 0.57048 | 15009.2 | mg/kg | 114.10 | 0.76% |
| Lead,7439-92-1† | 1133.8 | 0.04162 | mg/L | 0.001924 | 8.32459 | mg/kg | 0.384774 | 4.62% |
| Lithium,7439-93-2† | 6672.2 | 0.09463 | mg/L | 0.003218 | 18.9262 | mg/kg | 0.64361 | 3.40% |
| Magnesium,7439-95-4† | 120676.5 | 33.9176 | mg/L | 0.06362 | 6783.52 | mg/kg | 12.725 | 0.19% |
| Manganese,7439-96-5† | 2584460.5 | 1.66974 | mg/L | 0.002660 | 333.948 | mg/kg | 0.5321 | 0.16% |
| Molybdenum,7439-98-7 | 72.6 | 0.01050 | mg/L | 0.001249 | 2.09926 | mg/kg | 0.249745 | 11.90% |
| Nickel,7440-02-0† | 11888.2 | 0.11107 | mg/L | 0.000406 | 22.2144 | mg/kg | 0.08129 | 0.37% |
| Potassium,7440-09-7† | 36948.4 | 10.4724 | mg/L | 0.07961 | 2094.48 | mg/kg | 15.922 | 0.76% |
| Selenium,7782-49-2† | -68.0 | -0.00991 | mg/L | 0.007399 | -1.98109 | mg/kg | 1.479741 | 74.69% |
| Silicon,7440-21-3† | 21498.7 | 5.23183 | mg/L | 0.025494 | 1046.37 | mg/kg | 5.099 | 0.49% |
| Silver,7440-22-4† | -1404.2 | -0.00018 | mg/L | 0.000461 | -0.03515 | mg/kg | 0.092230 | 262.40% |
| Sodium,7440-23-5† | 25214.1 | 2.72517 | mg/L | 0.006848 | 545.034 | mg/kg | 1.3696 | 0.25% |
| Strontium,7440-24-6† | 348703.5 | 0.45187 | mg/L | 0.003983 | 90.3742 | mg/kg | 0.79656 | 0.88% |
| Thallium,7440-28-0† | -126.4 | 0.00737 | mg/L | 0.001772 | 1.47374 | mg/kg | 0.354466 | 24.05% |
| Tin,7440-31-5† | -133.1 | -0.00047 | mg/L | 0.001449 | -0.09407 | mg/kg | 0.289848 | 308.12% |
| Titanium,7440-32-6† | 2541900.9 | 2.22218 | mg/L | 0.002550 | 444.436 | mg/kg | 0.5099 | 0.11% |
| Vanadium,7440-62-2† | 68069.6 | 0.17133 | mg/L | 0.002111 | 34.2659 | mg/kg | 0.42226 | 1.23% |
| Zinc,7440-66-6† | 32091.7 | 0.19833 | mg/L | 0.001915 | 39.6655 | mg/kg | 0.38292 | 0.97% |
| Zirconium,7440-67-7† | 28592.1 | 0.03763 | mg/L | 0.000798 | 7.52512 | mg/kg | 0.159515 | 2.12% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Silver,7440-22-4† | -1404.2 | -0.00018 | mg/L | 0.000461 | -0.00703 | mg/kg | 0.018446 | 262.40% |
| Sodium,7440-23-5† | 25214.1 | 2.72517 | mg/L | 0.006848 | 109.007 | mg/kg | 0.2739 | 0.25% |
| Strontium,7440-24-6† | 348703.5 | 0.45187 | mg/L | 0.003983 | 18.0748 | mg/kg | 0.15931 | 0.88% |
| Thallium,7440-28-0† | -126.4 | 0.00737 | mg/L | 0.001772 | 0.29475 | mg/kg | 0.070893 | 24.05% |
| Tin,7440-31-5† | -133.1 | -0.00047 | mg/L | 0.001449 | -0.01881 | mg/kg | 0.057970 | 308.12% |
| Titanium,7440-32-6† | 2541900.9 | 2.22218 | mg/L | 0.002550 | 88.8873 | mg/kg | 0.10199 | 0.11% |
| Vanadium,7440-62-2† | 68069.6 | 0.17133 | mg/L | 0.002111 | 6.85318 | mg/kg | 0.084451 | 1.23% |
| Zinc,7440-66-6† | 32091.7 | 0.19833 | mg/L | 0.001915 | 7.93310 | mg/kg | 0.076584 | 0.97% |
| Zirconium,7440-67-7† | 28592.1 | 0.03763 | mg/L | 0.000798 | 1.50502 | mg/kg | 0.031903 | 2.12% |

AWG 10/30/13

**Sequence No.: 10**
**Sample ID: 21310173401**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt: 1.26 g**
**Dilution: 1X**

**Autosampler Location: 76**
**Date Collected: 10/29/2013 8:33:21 PM**
**Data Type: Reprocessed on 10/30/2013 11:20:59 AM**

**Initial Sample Vol:**
**Sample Prep Vol: 50 mL**

**Mean Data: 21310173401**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 5943610.0 | 81.7370 | % | 0.38762 | | | | 0.47% |
| Yttrium,7440-65-5A | 3283458.1 | 93.5954 | % | 0.83452 | | | | 0.89% |
| Yttrium,7440-65-5R | 306069.6 | 96.4523 | % | 0.19681 | | | | 0.20% |
| Ar 420.067 R | 3748051.4 | 84.0790 | % | 0.60716 | | | | 0.72% |
| Ar 363.268 A | 95158.9 | 109.171 | % | 0.1588 | | | | 0.15% |
| Aluminum,7429-90-5† | 657359.2 | 193.679 | mg/L | 1.2055 | 7685.67 | mg/kg | 47.837 | 0.62% |
| Antimony,7440-36-0† | -30.2 | 0.02274 | mg/L | 0.003743 | 0.90219 | mg/kg | 0.148527 | 16.46% |
| Arsenic,7440-38-2† | 76.1 | 0.15207 | mg/L | 0.006973 | 6.03456 | mg/kg | 0.276709 | 4.59% |
| Barium,7440-39-3† | 514616.1 | 2.07684 | mg/L | 0.001146 | 82.4143 | mg/kg | 0.04546 | 0.06% |
| Beryllium,7440-41-7† | -98016.3 | 0.00766 | mg/L | 0.000163 | 0.30401 | mg/kg | 0.006454 | 2.12% |
| Boron,7440-42-8† | -94573.2 | -0.09816 | mg/L | 0.006038 | -3.89508 | mg/kg | 0.239605 | 6.15% |
| Cadmium,7440-43-9† | 1767.5 | 0.00186 | mg/L | 0.000192 | 0.07369 | mg/kg | 0.007627 | 10.35% |
| Calcium,7440-70-2† | 6041072.9 | 342.397 | mg/L | 3.0923 | 13587.2 | mg/kg | 122.71 | 0.90% |
| Chromium,7440-47-3† | 48433.9 | 0.28044 | mg/L | 0.000931 | 11.1287 | mg/kg | 0.03696 | 0.33% |
| Cobalt,7440-48-4† | 11366.2 | 0.12531 | mg/L | 0.001554 | 4.97270 | mg/kg | 0.061668 | 1.24% |
| Copper,7440-50-8† | 875589.3 | 1.69993 | mg/L | 0.002048 | 67.4577 | mg/kg | 0.08126 | 0.12% |
| Iron,7439-89-6† | 5369658.7 | 256.335 | mg/L | 2.5025 | 10172.0 | mg/kg | 99.30 | 0.98% |
| Lead,7439-92-1† | 7394.3 | 0.26425 | mg/L | 0.003398 | 10.4859 | mg/kg | 0.13484 | 1.29% |
| Lithium,7439-93-2† | 23821.7 | 0.33784 | mg/L | 0.002245 | 13.4064 | mg/kg | 0.08910 | 0.66% |
| Magnesium,7439-95-4† | 385015.5 | 108.209 | mg/L | 0.2781 | 4294.00 | mg/kg | 11.034 | 0.26% |
| Manganese,7439-96-5† | 9458573.9 | 6.11112 | mg/L | 0.059363 | 242.505 | mg/kg | 2.3557 | 0.97% |
| Molybdenum,7439-98-7 | -374.7 | 0.01365 | mg/L | 0.002068 | 0.54173 | mg/kg | 0.082060 | 15.15% |
| Nickel,7440-02-0† | 30634.7 | 0.28615 | mg/L | 0.000837 | 11.3551 | mg/kg | 0.03322 | 0.29% |
| Potassium,7440-09-7† | 169602.9 | 48.0551 | mg/L | 0.11206 | 1906.95 | mg/kg | 4.447 | 0.23% |
| Selenium,7782-49-2† | -73.7 | 0.01390 | mg/L | 0.007024 | 0.55149 | mg/kg | 0.278716 | 50.54% |
| Silicon,7440-21-3† | 80521.5 | 19.5973 | mg/L | 0.08850 | 777.669 | mg/kg | 3.5119 | 0.45% |
| Silver,7440-22-4† | -7933.3 | -0.00692 | mg/L | 0.000389 | -0.27460 | mg/kg | 0.015433 | 5.62% |
| Sodium,7440-23-5† | 106655.0 | 11.5264 | mg/L | 0.08739 | 457.398 | mg/kg | 3.4677 | 0.76% |
| Strontium,7440-24-6† | 1179091.8 | 1.52897 | mg/L | 0.019426 | 60.6733 | mg/kg | 0.77085 | 1.27% |
| Thallium,7440-28-0† | -392.7 | 0.03027 | mg/L | 0.003220 | 1.20103 | mg/kg | 0.127785 | 10.64% |
| Tin,7440-31-5† | -269.1 | 0.01371 | mg/L | 0.000946 | 0.54423 | mg/kg | 0.037537 | 6.90% |
| Titanium,7440-32-6† | 8324447.3 | 7.27738 | mg/L | 0.063622 | 288.785 | mg/kg | 2.5247 | 0.87% |
| Vanadium,7440-62-2† | 207942.8 | 0.52177 | mg/L | 0.000060 | 20.7051 | mg/kg | 0.00237 | 0.01% |
| Zinc,7440-66-6† | 144009.4 | 0.89681 | mg/L | 0.000415 | 35.5877 | mg/kg | 0.01648 | 0.05% |
| Zirconium,7440-67-7† | 98615.5 | 0.12998 | mg/L | 0.001410 | 5.15812 | mg/kg | 0.055945 | 1.08% |

**Sequence No.: 11**
**Sample ID: 1800**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 7**
**Date Collected: 10/29/2013 8:39:54 PM**
**Data Type: Reprocessed on 10/30/2013 11:21:00 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 1800**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6479699.5 | 89.1093 | % | 0.44147 | | | | 0.50% |
| Yttrium,7440-65-5A | 3153849.9 | 89.9009 | % | 0.42870 | | | | 0.48% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Yttrium,7440-65-5R | 288949.2 | 91.0571 % | 0.32027 | | | 0.35% |
| Ar 420.067 R | 4026564.4 | 90.3268 % | 0.57680 | | | 0.64% |
| Ar 363.268 A | 97580.9 | 111.950 % | 0.6931 | | | 0.62% |
| Aluminum,7429-90-5† | 16213.6 | 4.77089 mg/L | 0.022472 | 4.77089 mg/L | 0.022472 | 0.47% |
| QC value within limits for Aluminum,7429-90-5 Recovery = 95.42% | | | | | | |
| Antimony,7440-36-0† | 1735.2 | 0.50195 mg/L | 0.006047 | 0.50195 mg/L | 0.006047 | 1.20% |
| QC value within limits for Antimony,7440-36-0 Recovery = 100.39% | | | | | | |
| Arsenic,7440-38-2† | 1137.0 | 0.50483 mg/L | 0.007426 | 0.50483 mg/L | 0.007426 | 1.47% |
| QC value within limits for Arsenic,7440-38-2 Recovery = 100.97% | | | | | | |
| Barium,7440-39-3† | 119483.7 | 0.48421 mg/L | 0.008381 | 0.48421 mg/L | 0.008381 | 1.73% |
| QC value within limits for Barium,7440-39-3 Recovery = 96.84% | | | | | | |
| Beryllium,7440-41-7† | 3845372.7 | 0.49088 mg/L | 0.001209 | 0.49088 mg/L | 0.001209 | 0.25% |
| QC value within limits for Beryllium,7440-41-7 Recovery = 98.18% | | | | | | |
| Boron,7440-42-8† | 177823.1 | 2.43445 mg/L | 0.062443 | 2.43445 mg/L | 0.062443 | 2.56% |
| QC value within limits for Boron,7440-42-8 Recovery = 97.38% | | | | | | |
| Cadmium,7440-43-9† | 128430.4 | 0.47476 mg/L | 0.009692 | 0.47476 mg/L | 0.009692 | 2.04% |
| QC value within limits for Cadmium,7440-43-9 Recovery = 94.95% | | | | | | |
| Calcium,7440-70-2† | 101121.8 | 5.72999 mg/L | 0.015018 | 5.72999 mg/L | 0.015018 | 0.26% |
| QC value greater than the upper limit for Calcium,7440-70-2 Recovery = 114.60% | | | | | | |
| Chromium,7440-47-3† | 87865.4 | 0.48571 mg/L | 0.007963 | 0.48571 mg/L | 0.007963 | 1.64% |
| QC value within limits for Chromium,7440-47-3 Recovery = 97.14% | | | | | | |
| Cobalt,7440-48-4† | 37900.8 | 0.48294 mg/L | 0.008953 | 0.48294 mg/L | 0.008953 | 1.85% |
| QC value within limits for Cobalt,7440-48-4 Recovery = 96.59% | | | | | | |
| Copper,7440-50-8† | 255510.5 | 0.49769 mg/L | 0.007156 | 0.49769 mg/L | 0.007156 | 1.44% |
| QC value within limits for Copper,7440-50-8 Recovery = 99.54% | | | | | | |
| Iron,7439-89-6† | 103825.6 | 4.95591 mg/L | 0.009231 | 4.95591 mg/L | 0.009231 | 0.19% |
| QC value within limits for Iron,7439-89-6 Recovery = 99.12% | | | | | | |
| Lead,7439-92-1† | 14035.6 | 0.47938 mg/L | 0.001171 | 0.47938 mg/L | 0.001171 | 0.24% |
| QC value within limits for Lead,7439-92-1 Recovery = 95.88% | | | | | | |
| Lithium,7439-93-2† | 34311.8 | 0.48716 mg/L | 0.002781 | 0.48716 mg/L | 0.002781 | 0.57% |
| QC value within limits for Lithium,7439-93-2 Recovery = 97.43% | | | | | | |
| Magnesium,7439-95-4† | 16495.2 | 4.63905 mg/L | 0.014106 | 4.63905 mg/L | 0.014106 | 0.30% |
| QC value within limits for Magnesium,7439-95-4 Recovery = 92.78% | | | | | | |
| Manganese,7439-96-5† | 953927.6 | 0.61617 mg/L | 0.000296 | 0.61617 mg/L | 0.000296 | 0.05% |
| QC value greater than the upper limit for Manganese,7439-96-5 Recovery = 123.23% | | | | | | |
| Molybdenum,7439-98-7 | 13492.1 | 0.50107 mg/L | 0.003448 | 0.50107 mg/L | 0.003448 | 0.69% |
| QC value within limits for Molybdenum,7439-98-7 Recovery = 100.21% | | | | | | |
| Nickel,7440-02-0† | 52217.5 | 0.48760 mg/L | 0.008974 | 0.48760 mg/L | 0.008974 | 1.84% |
| QC value within limits for Nickel,7440-02-0 Recovery = 97.52% | | | | | | |
| Potassium,7440-09-7† | 36146.7 | 10.2324 mg/L | 0.03988 | 10.2324 mg/L | 0.03988 | 0.39% |
| QC value within limits for Potassium,7440-09-7 Recovery = 102.32% | | | | | | |
| Selenium,7782-49-2† | 1399.3 | 0.47618 mg/L | 0.008663 | 0.47618 mg/L | 0.008663 | 1.82% |
| QC value within limits for Selenium,7782-49-2 Recovery = 95.24% | | | | | | |
| Silicon,7440-21-3† | 20235.0 | 4.92735 mg/L | 0.064022 | 4.92735 mg/L | 0.064022 | 1.30% |
| QC value within limits for Silicon,7440-21-3 Recovery = 98.55% | | | | | | |
| Silver,7440-22-4† | 268503.2 | 0.49641 mg/L | 0.008663 | 0.49641 mg/L | 0.008663 | 1.75% |
| QC value within limits for Silver,7440-22-4 Recovery = 99.28% | | | | | | |
| Sodium,7440-23-5† | 179176.5 | 19.3492 mg/L | 0.19601 | 19.3492 mg/L | 0.19601 | 1.01% |
| QC value within limits for Sodium,7440-23-5 Recovery = 96.75% | | | | | | |
| Strontium,7440-24-6† | 348879.4 | 0.45522 mg/L | 0.003288 | 0.45522 mg/L | 0.003288 | 0.72% |
| QC value within limits for Strontium,7440-24-6 Recovery = 91.04% | | | | | | |
| Thallium,7440-28-0† | 2218.1 | 0.48882 mg/L | 0.002130 | 0.48882 mg/L | 0.002130 | 0.44% |
| QC value within limits for Thallium,7440-28-0 Recovery = 97.76% | | | | | | |
| Tin,7440-31-5† | 4981.0 | 0.48024 mg/L | 0.002981 | 0.48024 mg/L | 0.002981 | 0.62% |
| QC value within limits for Tin,7440-31-5 Recovery = 96.05% | | | | | | |
| Titanium,7440-32-6† | 584046.1 | 0.51057 mg/L | 0.000665 | 0.51057 mg/L | 0.000665 | 0.13% |
| QC value within limits for Titanium,7440-32-6 Recovery = 102.11% | | | | | | |
| Vanadium,7440-62-2† | 186505.8 | 0.48340 mg/L | 0.007903 | 0.48340 mg/L | 0.007903 | 1.63% |
| QC value within limits for Vanadium,7440-62-2 Recovery = 96.68% | | | | | | |
| Zinc,7440-66-6† | 79722.1 | 0.50660 mg/L | 0.008262 | 0.50660 mg/L | 0.008262 | 1.63% |
| QC value within limits for Zinc,7440-66-6 Recovery = 101.32% | | | | | | |
| Zirconium,7440-67-7† | 367367.5 | 0.49806 mg/L | 0.002688 | 0.49806 mg/L | 0.002688 | 0.54% |
| QC value within limits for Zirconium,7440-67-7 Recovery = 99.61% | | | | | | |

QC Failed. Continue with analysis.

---

**Sequence No.: 12**
**Sample ID: 1900**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 1**
**Date Collected: 10/29/2013 8:46:20 PM**
**Data Type: Reprocessed on 10/30/2013 11:21:02 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 1900**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6252818.1 | 85.9892 | % | 0.35603 | | | | 0.41% |
| Yttrium,7440-65-5A | 3047235.6 | 86.8618 | % | 0.33463 | | | | 0.39% |
| Yttrium,7440-65-5R | 276948.0 | 87.2751 | % | 0.90451 | | | | 1.04% |
| Ar 420.067 R | 3982287.2 | 89.3335 | % | 0.60431 | | | | 0.68% |
| Ar 363.268 A | 98248.9 | 112.716 | % | 0.4775 | | | | 0.42% |
| Aluminum,7429-90-5† | 13.5 | 0.00396 | mg/L | 0.022407 | 0.00396 | mg/L | 0.022407 | 566.00% |
| QC value within limits for Aluminum,7429-90-5 Recovery = Not calculated | | | | | | | | |
| Antimony,7440-36-0† | -18.6 | -0.00549 | mg/L | 0.001429 | -0.00549 | mg/L | 0.001429 | 26.02% |
| QC value within limits for Antimony,7440-36-0 Recovery = Not calculated | | | | | | | | |
| Arsenic,7440-38-2† | 9.8 | 0.00419 | mg/L | 0.000450 | 0.00419 | mg/L | 0.000450 | 10.73% |
| QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated | | | | | | | | |
| Barium,7440-39-3† | 253.3 | 0.00102 | mg/L | 0.000047 | 0.00102 | mg/L | 0.000047 | 4.55% |
| QC value within limits for Barium,7440-39-3 Recovery = Not calculated | | | | | | | | |
| Beryllium,7440-41-7† | 2290.8 | 0.00030 | mg/L | 0.000028 | 0.00030 | mg/L | 0.000028 | 9.53% |
| QC value within limits for Beryllium,7440-41-7 Recovery = Not calculated | | | | | | | | |
| Boron,7440-42-8† | 4778.5 | 0.06495 | mg/L | 0.005115 | 0.06495 | mg/L | 0.005115 | 7.88% |
| QC value within limits for Boron,7440-42-8 Recovery = Not calculated | | | | | | | | |
| Cadmium,7440-43-9† | -19.3 | -0.00007 | mg/L | 0.000037 | -0.00007 | mg/L | 0.000037 | 51.06% |
| QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated | | | | | | | | |
| Calcium,7440-70-2† | 516.1 | 0.02925 | mg/L | 0.003385 | 0.02925 | mg/L | 0.003385 | 11.57% |
| QC value within limits for Calcium,7440-70-2 Recovery = Not calculated | | | | | | | | |
| Chromium,7440-47-3† | 212.2 | 0.00117 | mg/L | 0.000082 | 0.00117 | mg/L | 0.000082 | 6.97% |
| QC value within limits for Chromium,7440-47-3 Recovery = Not calculated | | | | | | | | |
| Cobalt,7440-48-4† | 12.0 | 0.00015 | mg/L | 0.000113 | 0.00015 | mg/L | 0.000113 | 76.70% |
| QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated | | | | | | | | |
| Copper,7440-50-8† | 850.1 | 0.00166 | mg/L | 0.000525 | 0.00166 | mg/L | 0.000525 | 31.73% |
| QC value within limits for Copper,7440-50-8 Recovery = Not calculated | | | | | | | | |
| Iron,7439-89-6† | 935.2 | 0.04464 | mg/L | 0.001735 | 0.04464 | mg/L | 0.001735 | 3.89% |
| QC value within limits for Iron,7439-89-6 Recovery = Not calculated | | | | | | | | |
| Lead,7439-92-1† | -14.1 | -0.00048 | mg/L | 0.000851 | -0.00048 | mg/L | 0.000851 | 176.59% |
| QC value within limits for Lead,7439-92-1 Recovery = Not calculated | | | | | | | | |
| Lithium,7439-93-2† | 335.8 | 0.00477 | mg/L | 0.001552 | 0.00477 | mg/L | 0.001552 | 32.55% |
| QC value within limits for Lithium,7439-93-2 Recovery = Not calculated | | | | | | | | |
| Magnesium,7439-95-4† | -16.6 | -0.00468 | mg/L | 0.039393 | -0.00468 | mg/L | 0.039393 | 841.19% |
| QC value within limits for Magnesium,7439-95-4 Recovery = Not calculated | | | | | | | | |
| Manganese,7439-96-5† | 4540.6 | 0.00293 | mg/L | 0.000030 | 0.00293 | mg/L | 0.000030 | 1.02% |
| QC value within limits for Manganese,7439-96-5 Recovery = Not calculated | | | | | | | | |
| Molybdenum,7439-98-7 | 119.5 | 0.00443 | mg/L | 0.001271 | 0.00443 | mg/L | 0.001271 | 28.67% |
| QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated | | | | | | | | |
| Nickel,7440-02-0† | 32.7 | 0.00031 | mg/L | 0.000200 | 0.00031 | mg/L | 0.000200 | 65.42% |
| QC value within limits for Nickel,7440-02-0 Recovery = Not calculated | | | | | | | | |
| Potassium,7440-09-7† | 559.9 | 0.15847 | mg/L | 0.048836 | 0.15847 | mg/L | 0.048836 | 30.82% |
| QC value within limits for Potassium,7440-09-7 Recovery = Not calculated | | | | | | | | |
| Selenium,7782-49-2† | -11.5 | -0.00390 | mg/L | 0.006936 | -0.00390 | mg/L | 0.006936 | 177.76% |
| QC value within limits for Selenium,7782-49-2 Recovery = Not calculated | | | | | | | | |
| Silicon,7440-21-3† | 112.0 | 0.02728 | mg/L | 0.005270 | 0.02728 | mg/L | 0.005270 | 19.32% |
| QC value within limits for Silicon,7440-21-3 Recovery = Not calculated | | | | | | | | |
| Silver,7440-22-4† | 1050.3 | 0.00193 | mg/L | 0.000375 | 0.00193 | mg/L | 0.000375 | 19.37% |
| QC value within limits for Silver,7440-22-4 Recovery = Not calculated | | | | | | | | |
| Sodium,7440-23-5† | -4310.8 | -0.46547 | mg/L | 0.013184 | -0.46547 | mg/L | 0.013184 | 2.83% |
| QC value within limits for Sodium,7440-23-5 Recovery = Not calculated | | | | | | | | |
| Strontium,7440-24-6† | -152.6 | -0.00020 | mg/L | 0.000151 | -0.00020 | mg/L | 0.000151 | 75.41% |
| QC value within limits for Strontium,7440-24-6 Recovery = Not calculated | | | | | | | | |
| Thallium,7440-28-0† | 0.5 | 0.00015 | mg/L | 0.005239 | 0.00015 | mg/L | 0.005239 | >999.9% |
| QC value within limits for Thallium,7440-28-0 Recovery = Not calculated | | | | | | | | |
| Tin,7440-31-5† | 29.3 | 0.00282 | mg/L | 0.000973 | 0.00282 | mg/L | 0.000973 | 34.44% |
| QC value within limits for Tin,7440-31-5 Recovery = Not calculated | | | | | | | | |
| Titanium,7440-32-6† | 2847.3 | 0.00249 | mg/L | 0.000060 | 0.00249 | mg/L | 0.000060 | 2.41% |
| QC value within limits for Titanium,7440-32-6 Recovery = Not calculated | | | | | | | | |
| Vanadium,7440-62-2† | -62.4 | -0.00016 | mg/L | 0.000295 | -0.00016 | mg/L | 0.000295 | 181.67% |
| QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated | | | | | | | | |
| Zinc,7440-66-6† | -519.9 | -0.00334 | mg/L | 0.000191 | -0.00334 | mg/L | 0.000191 | 5.71% |
| QC value within limits for Zinc,7440-66-6 Recovery = Not calculated | | | | | | | | |
| Zirconium,7440-67-7† | -58.8 | -0.00008 | mg/L | 0.000221 | -0.00008 | mg/L | 0.000221 | 272.73% |
| QC value within limits for Zirconium,7440-67-7 Recovery = Not calculated | | | | | | | | |

All analyte(s) passed QC.

GCAL ANALYTICAL LABORATORIES, LLC

# ICP

BY METHODS EPA 200.7/6010B/6010C

Date: 10/30/13
Analyst: CMB, AWG

Instrument ID: ICP 5
HBN: 518882
Batch: 8719

| | | | |
|---|---|---|---|
| Cal Standard | 225-22-6 | Exp. Date | 11/30/13 |
| ICV Standard | 225-11-4 | Exp. Date | 11/14/13 |
| CRDL Standard | 225-22-8 | Exp. Date | 11/30/13 |
| ICSA Standard | 225-11-2 | Exp. Date | 11/14/13 |
| ICSAB Standard | 225-11-3 | Exp. Date | 11/14/13 |
| Internal Standard | 225-22-7 | Exp. Date | 11/30/13 |

| | | | |
|---|---|---|---|
| ICP Acid Matrix (Calibration Blank) (6% HNO3/10% HCl) | 225-21-7 | Exp. Date | 11/30/13 |
| ICP Acid Rinse (5% HNO3) | 225-22-5 | Exp. Date | 11/30/13 |

**QC Limits:**

| | GCAL Limits | DOD Limits |
|---|---|---|
| ICV/ICV2 (6010B/6010C) | 90-110% | 90-110% |
| CCV (6010B/6010C) | 90-110% | 90-110% |
| ICV/ICV2 (200.7) | 95-105% | N/A |
| CCV (1st – 200.7) | 95-105% | N/A |
| Continuing CCV (200.7) | 90-110% | N/A |
| ICSA/ICSAB | 80-120% | 80-120% |
| CRDL/CRDL2 | 50-150% | 80-120% |

Revision 001: 6/4/2013

Reviewer/Date: AWG 10/31/13

213101712 1226

# ICP Analysis

INSTRUMENT ID = **ICP5**

ANALYST / DATE / TIME: AWG, 10/30/2013,

QC CONTROL LIMITS: ICV (200.7) 95-105% ICV (6010B) 90-110% ICSAB 80-120% CCV 90-110%

| AS# | SAMPLE ID | | | | | Dilution |
|---|---|---|---|---|---|---|
| 1 | CALIBRATION BLANK | | | | | |
| 2 | STANDARD 1 | | | | | |
| ✓ 11 | ICV-1600 | | | | | |
| ~~12~~ | ~~ICV2-1601~~ | | | | | |
| ✓ | ICB-1700 F: Be ↑ | | | | | |
| ✓ 3 | CRDL-2300 F: Br (Br F DOD only) | | | | | |
| ~~4~~ | ~~CRDL-2301~~ | | | | | |
| ✓ 5 | ICSA-2000 | | | | | |
| ✓ 6 | ICSAB-2100 | | | | | |
| ✓ 7 | CCV-1800 | | | | | |
| ✓ 8 | CCB-1900 | | | | | |
| 17 | 1244705 | MB for HBN 517994 Mn | 6010C * | | | |
| 18 | 1244706 | LCS for HBN 517994 ↓ | 6010C | | | |
| 19 | K | ~~21310171201 5X Zn~~ | ~~6010C~~ | ~~S~~ | 5X | R/R CRDL F AWG 10/31/13 |
| 20 | K | 21310171201 Ca, Mn, Tl | 6010C | S | | |
| 21 | | 21310171203 ↓ | 6010C | S | | |
| 22 | M | 21310172801 | 6010C | S | | |
| 23 | M | ~~21310181502 5X~~ | ~~6010C~~ | ~~S~~ | ~~5X~~ | Report 1x AWG 10/31/13 |
| 24 | M | 21310181502 | 6010C | S | | |
| 25 | | 2500 | | | | |
| 26 | | 2500 | | | | |
| ✓ 7 | CCV-1800 | | | | | |
| ✓ 8 | CCB-1900 | | | | | |
| 27 | | TBLK 518754 F1 | TCLP6010 | | 5X | |
| 28 | 1248772 | M MB for HBN 518754 | 6010C | W | | |
| 29 | 1248773 | M LCS for HBN 518754 | 6010C | W | | |
| 30 | | M 21310165201 | TCLP6010 | S | 5X | |
| 31 | | I 21310240101 | TCLP6010 | W | 5X | |
| 32 | 1248840 | M 21310240101 MS | 6010C | W | 5X | |
| 33 | | M 21310233101 | TCLP6010 | S | 5X | |
| 34 | 1248775 | M 21310233101 MS | 6010C | W | 5X | |
| 35 | 1248774 | M 21310233101 MSD | 6010C | W | 5X | |
| 36 | | M 21310234401 | TCLP6010 | S | 5X | |
| ✓ 7 | CCV-1800 | | | | | |
| ✓ 8 | CCB-1900 | | | | | |
| 37 | | M 21310234301 | TCLP6010 | S | 5X | |
| 38 | 1248776 | M 21310234301 MS | 6010C | W | 5X | |
| 39 | 1248777 | M 21310234301 MSD | 6010C | W | 5X | |
| 40 | 1249368 | 21310234301 PDS | TCLP6010 | S | 5X | |
| 41 | 1249369 | 21310234301 SD | TCLP6010 | S | 25x | |
| 42 | | M 21310232901 | TCLP6010 | S | 5X | R/R 10x ↓ Ni OLR |
| 43 | 1248778 | M 21310232901 MS | 6010C | W | 5X | |
| 44 | | M 21310234501 | TCLP6010 | S | 5X | |
| 45 | | M 21310234801 | TCLP6010 | S | 5X | |
| 46 | | M ~~21310233301~~ | ~~TCLP6010~~ | ~~S~~ | ~~5X~~ | R/R@10x Ni OLR |
| ✓ | CCV-1800 F: Ni | | | | | |
| ✓ | CCB-1900 | | | | | |

| AS# | SAMPLE ID | | | | | Dilution |
|---|---|---|---|---|---|---|
| 47 | | M 21310261502 | 6010C | W | | |
| 48 | | M 21310253524 | 6010C | W | | |
| 49 | | M 21310183601 | 6010C | W | | 50X R/R Ni |
| 50 | | R 21310183903 | 6010C | W | | Report Ca CCV F |
| 51 | 1245229 | M 21310183903 MS | 6010C | W | | from 1x |
| 52 | 1245230 | M 21310183903 MSD | 6010C | W | | same as dissolve |
| 53 | 1248951 | 21310183903 PDS | 6010C | W | | |
| 54 | 1248952 | 21310183903 SD | 6010C | W | | 5x |
| 55 | | R 21310183901 | 6010C | W | | |
| 56 | | R 21310183907 | 6010C | W | | |
| ✓ | CCV-1800 | | | | | |
| ✓ | CCB-1900 | | | | | |
| 57 | | R 21310183908 | 6010C | W | | |
| 58 | | R 21310184001 | 6010C | W | | |
| 59 | | R 21310184005 | 6010C | W | | |
| 60 | | R 21310184006 | 6010C | W | | |
| 61 | | R 21310184008 | 6010C | W | | |
| 62 | | R 21310183901 | 6010C_D | W | | |
| 63 | | R 21310183903 | 6010C_D | W | | |
| 64 | | R 21310183907 | 6010C_D | W | | |
| 65 | | R 21310183908 | 6010C_D | W | | |
| 66 | | R 21310184001 | 6010C_D | W | | |
| ✓ | CCV-1800 F: Ca | | | | | |
| ✓ | CCB-1900 | | | | | |
| 67 | | R 21310184005 | 6010C_D | W | | |
| 68 | | R 21310184006 | 6010C_D | W | | |
| 69 | | R 21310184008 | 6010C_D | W | | ↓ |
| 70 | ~~1245219~~ | ~~M MB for HBN 518080~~ | ~~6010C~~ | ~~R/R~~ S | | Na 7 RL |
| 71 | 1245220 | M LCS for HBN 518080 | 6010C | S | | |
| 72 | | R 21310184203 | 6010C | S | | 10X R/R@1x |
| 73 | 1245221 | M 21310184203 MS | 6010C | S | | 10X |
| 74 | 1245222 | M 21310184203 MSD | 6010C | S | | 10X |
| 75 | 1249370 | 21310184203 PDS | 6010C | S | | 10X |
| 76 | 1249371 | 21310184203 SD | 6010C | S | | 50x ↓ |
| ✓ | CCV-1800 | | | | | |
| ✓ | CCB-1900 | | | | | |
| 77 | | R 21310184101 | 6010C | S | | 10X |
| 78 | | R 21310184104 | 6010C | S | | 10X |
| 79 | | R 21310184105 | 6010C | S | | 10X |
| 80 | | R ~~21310184106~~ | ~~6010C~~ | ~~S~~ | ~~10X~~ | R/R@1x |
| 81 | | R ~~21310184107~~ | ~~6010C~~ | ~~S~~ | ~~10X~~ | |
| 82 | | R ~~21310184109~~ | ~~6010C~~ | ~~S~~ | ~~10X~~ | |
| 83 | | R ~~21310184111~~ | ~~6010C~~ | ~~S~~ | ~~10X~~ | |
| 84 | | R ~~21310184112~~ | ~~6010C~~ | ~~S~~ | ~~10X~~ | |
| 85 | | R ~~21310184113~~ | ~~6010C~~ | ~~S~~ | ~~10X~~ | |
| 86 | | R ~~21310184302~~ | ~~6010C~~ | ~~S~~ | ~~10X~~ | |
| ✓ | CCV-1800 F: Ca, Fe | | | | | |
| ✓ | CCB-1900 | | | | | |

COMMENTS: 8719, 518882

* MB/LCS posted into 8702, 518197

ANALYST QC REV:

SECONDARY REV:

QC: all acceptable qc noted with a checkmark; failures as indicated.

213101712 1227

# Level Package

## Metals

**213101712**

Type: Level IV DOD Client: Resolution

SQR: 150043 Date Complete: _____

| Queue | Batch Rule | Batch No. | ~~HBN~~ |
|---|---|---|---|
| TCLP | TCLP Procedure Not in TCLP | 8305 Book? | 519025 |
| DIGM | SW-846 7471B Soil Preparation | 34763 | ~~517993~~ |
| DIGM | 6010C Metals Solid Prep | 34764 | 517994 ✓ |
| DIGM | 6010C Metals Water Prep | 34895 | 519175 ✓ |
| ICP | ICP Metals Analysis | 8717 | 518786 |
| ICP | ICP Metals Analysis | 8719 | 518882 |
| ICP | ICP Metals Analysis | 8720 | 518958 |
| ICP | ICP Metals Analysis | 8734 | 519287 |
| HG | Hg Analysis - Solid | 5872 | 518047 |

_____ Out of control CCV/CCB do not bracket samples of this work order

_____ Add a case narrative for CCB out of control in analytical batch _____.
(Use MET41 but with a CCB instead of a Prep Blank)

_____ Add a case narrative MET13 for serial dilution excursions in the following prep batches _____.

Comments:

_____

_____

_____

_____

Reprocessing Begun
Logged In Analyst: met Technique: ICP Continuous

Results Data Set (original): 2131030 F
Results Library (original): C:\pe\met\Results\Results.mdb
Results Data Set (reprocessed): 8719
Results Library (reprocessed): C:\pe\met\Results\Results.mdb

Sequence No.: 1 Autosampler Location: 1
Sample ID: 1300 Date Collected: 10/30/2013 5:16:42 PM
Analyst: Data Type: Reprocessed on 10/31/2013 8:26:26 AM
Logged In Analyst (Original) : met
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Mean Data: 1300

| Analyte | Mean Corrected Intensity | Std.Dev. | RSD | Conc. | Calib Units |
|---|---|---|---|---|---|
| Scandium-IS | 6813504.1 | 83807.38 | 1.23% | 100.0000 | % |
| Yttrium,7440-65-5A | 3241648.9 | 77993.68 | 2.41% | 100.000 | % |
| Yttrium,7440-65-5R | 335456.8 | 6238.85 | 1.86% | 100.000 | % |
| Ar 420.067 R | 3786237.7 | 28242.47 | 0.75% | 100.000 | % |
| Ar 363.268 A | 141704.1 | 441.25 | 0.31% | 100.000 | % |
| Aluminum,7429-90-5† | 14.0 | 78.90 | 561.91% | [0.00] | mg/L |
| Antimony,7440-36-0† | 56.7 | 5.07 | 8.95% | [0.00] | mg/L |
| Arsenic,7440-38-2† | -44.8 | 11.55 | 25.79% | [0.00] | mg/L |
| Barium,7440-39-3† | 54.5 | 7.03 | 12.91% | [0.00] | mg/L |
| Beryllium,7440-41-7† | -667.0 | 163.46 | 24.51% | [0.00] | mg/L |
| Boron,7440-42-8† | 1762.9 | 92.36 | 5.24% | [0.00] | mg/L |
| Cadmium,7440-43-9† | -147.5 | 16.68 | 11.30% | [0.00] | mg/L |
| Calcium,7440-70-2† | 1013.9 | 27.60 | 2.72% | [0.00] | mg/L |
| Chromium,7440-47-3† | -3625.0 | 101.75 | 2.81% | [0.00] | mg/L |
| Cobalt,7440-48-4† | 47.0 | 24.16 | 51.36% | [0.00] | mg/L |
| Copper,7440-50-8† | 9752.6 | 107.86 | 1.11% | [0.00] | mg/L |
| Iron,7439-89-6† | -1618.5 | 33.16 | 2.05% | [0.00] | mg/L |
| Lead,7439-92-1† | 688.1 | 38.53 | 5.60% | [0.00] | mg/L |
| Lithium,7439-93-2† | -354.0 | 97.16 | 27.45% | [0.00] | mg/L |
| Magnesium,7439-95-4† | 1837.6 | 61.21 | 3.33% | [0.00] | mg/L |
| Manganese,7439-96-5† | -3664.5 | 159.63 | 4.36% | [0.00] | mg/L |
| Molybdenum,7439-98-7 | -324.8 | 11.03 | 3.40% | [0.00] | mg/L |
| Nickel,7440-02-0† | -310.5 | 36.62 | 11.79% | [0.00] | mg/L |
| Potassium,7440-09-7† | 206.1 | 86.30 | 41.88% | [0.00] | mg/L |
| Selenium,7782-49-2† | 160.9 | 5.50 | 3.42% | [0.00] | mg/L |
| Silicon,7440-21-3† | 469.5 | 11.94 | 2.54% | [0.00] | mg/L |
| Silver,7440-22-4† | 16139.1 | 223.38 | 1.38% | [0.00] | mg/L |
| Sodium,7440-23-5† | 164.2 | 36.25 | 22.08% | [0.00] | mg/L |
| Strontium,7440-24-6† | 3297.8 | 129.79 | 3.94% | [0.00] | mg/L |
| Thallium,7440-28-0† | -100.6 | 5.28 | 5.25% | [0.00] | mg/L |
| Tin,7440-31-5† | 31.2 | 4.43 | 14.16% | [0.00] | mg/L |
| Titanium,7440-32-6† | 5619.4 | 99.78 | 1.78% | [0.00] | mg/L |
| Vanadium,7440-62-2† | 12136.3 | 245.04 | 2.02% | [0.00] | mg/L |
| Zinc,7440-66-6† | 1333.9 | 87.10 | 6.53% | [0.00] | mg/L |
| Zirconium,7440-67-7† | 2124.4 | 54.19 | 2.55% | [0.00] | mg/L |

Sequence No.: 2 Autosampler Location: 2
Sample ID: 1301 Date Collected: 10/30/2013 5:23:18 PM
Analyst: Data Type: Reprocessed on 10/31/2013 8:26:28 AM
Logged In Analyst (Original) : met
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Mean Data: 1301

| Analyte | Mean Corrected Intensity | Std.Dev. | RSD | Conc. | Calib Units |
|---|---|---|---|---|---|
| Scandium-IS | 6822576.2 | 179054.29 | 2.62% | 100.133 | % |
| Yttrium,7440-65-5A | 3183245.7 | 105182.25 | 3.30% | 98.1984 | % |

| | | | | | |
|---|---|---|---|---|---|
| Yttrium,7440-65-5R | 337857.0 | 3229.39 | 0.96% | 100.715 | % |
| Ar 420.067 R | 3721768.6 | 18281.30 | 0.49% | 98.2973 | % |
| Ar 363.268 A | 140459.1 | 821.13 | 0.58% | 99.1214 | % |
| Aluminum,7429-90-5† | 32393.0 | 197.21 | 0.61% | [10.00000] | mg/L |
| Antimony,7440-36-0† | 3248.9 | 35.00 | 1.08% | [1.000000] | mg/L |
| Arsenic,7440-38-2† | 2143.6 | 29.75 | 1.39% | [1.000000] | mg/L |
| Barium,7440-39-3† | 219333.6 | 1210.39 | 0.55% | [1.000000] | mg/L |
| Beryllium,7440-41-7† | 7545241.9 | 157100.55 | 2.08% | [1.000000] | mg/L |
| Boron,7440-42-8† | 376253.0 | 3817.00 | 1.01% | [5.00] | mg/L |
| Cadmium,7440-43-9† | 233165.1 | 1535.07 | 0.66% | [1.000000] | mg/L |
| Calcium,7440-70-2† | 162979.1 | 1076.28 | 0.66% | [10.00000] | mg/L |
| Chromium,7440-47-3† | 157799.3 | 784.52 | 0.50% | [1.000000] | mg/L |
| Cobalt,7440-48-4† | 70436.2 | 400.17 | 0.57% | [1.000000] | mg/L |
| Copper,7440-50-8† | 497458.8 | 4826.94 | 0.97% | [1.000000] | mg/L |
| Iron,7439-89-6† | 198230.0 | 1772.49 | 0.89% | [10.00000] | mg/L |
| Lead,7439-92-1† | 24933.5 | 230.90 | 0.93% | [1.000000] | mg/L |
| Lithium,7439-93-2† | 78551.9 | 755.15 | 0.96% | [1.00] | mg/L |
| Magnesium,7439-95-4† | 32276.0 | 216.34 | 0.67% | [10.00000] | mg/L |
| Manganese,7439-96-5† | 1416486.0 | 7140.64 | 0.50% | [1.000000] | mg/L |
| Molybdenum,7439-98-7 | 23886.1 | 365.05 | 1.53% | [1.00] | mg/L |
| Nickel,7440-02-0† | 94016.2 | 343.76 | 0.37% | [1.000000] | mg/L |
| Potassium,7440-09-7† | 75725.1 | 826.26 | 1.09% | [20.00000] | mg/L |
| Selenium,7782-49-2† | 2663.4 | 58.36 | 2.19% | [1.000000] | mg/L |
| Silicon,7440-21-3† | 39979.9 | 521.30 | 1.30% | [10.0] | mg/L |
| Silver,7440-22-4† | 517158.6 | 4330.48 | 0.84% | [1.000000] | mg/L |
| Sodium,7440-23-5† | 387395.5 | 8040.63 | 2.08% | [40.00000] | mg/L |
| Strontium,7440-24-6† | 756883.9 | 15587.10 | 2.06% | [1.00] | mg/L |
| Thallium,7440-28-0† | 4143.3 | 54.97 | 1.33% | [1.000000] | mg/L |
| Tin,7440-31-5† | 9166.8 | 87.33 | 0.95% | [1.00] | mg/L |
| Titanium,7440-32-6† | 1023566.4 | 7663.01 | 0.75% | [1.000000] | mg/L |
| Vanadium,7440-62-2† | 356150.2 | 2246.34 | 0.63% | [1.000000] | mg/L |
| Zinc,7440-66-6† | 142830.4 | 702.52 | 0.49% | [1.000000] | mg/L |
| Zirconium,7440-67-7† | 658214.2 | 3851.23 | 0.59% | [1.000000] | mg/L |

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**Sequence No.: 3**
**Sample ID: 1600**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 11**
**Date Collected: 10/30/2013 5:29:52 PM**
**Data Type: Reprocessed on 10/31/2013 8:26:31 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 1600**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6792258.8 | 99.6882 | % | 2.29333 | | | | 2.30% |
| Yttrium,7440-65-5A | 3203596.3 | 98.8261 | % | 1.32062 | | | | 1.34% |
| Yttrium,7440-65-5R | 331250.1 | 98.7460 | % | 2.00790 | | | | 2.03% |
| Ar 420.067 R | 3676908.7 | 97.1125 | % | 0.36866 | | | | 0.38% |
| Ar 363.268 A | 141369.2 | 99.7637 | % | 0.07674 | | | | 0.08% |
| Aluminum,7429-90-5† | 31075.0 | 9.57932 | mg/L | 0.145259 | 9.57932 | mg/L | 0.145259 | 1.52% |
| QC value within limits for Aluminum,7429-90-5 Recovery = 95.79% | | | | | | | | |
| Antimony,7440-36-0† | 3311.8 | 1.00337 | mg/L | 0.020360 | 1.00337 | mg/L | 0.020360 | 2.03% |
| QC value within limits for Antimony,7440-36-0 Recovery = 100.34% | | | | | | | | |
| Arsenic,7440-38-2† | 2095.7 | 1.01284 | mg/L | 0.017619 | 1.01284 | mg/L | 0.017619 | 1.74% |
| QC value within limits for Arsenic,7440-38-2 Recovery = 101.28% | | | | | | | | |
| Barium,7440-39-3† | 212192.3 | 0.96838 | mg/L | 0.003065 | 0.96838 | mg/L | 0.003065 | 0.32% |
| QC value within limits for Barium,7440-39-3 Recovery = 96.84% | | | | | | | | |
| Beryllium,7440-41-7† | 7289823.1 | 0.96898 | mg/L | 0.004817 | 0.96898 | mg/L | 0.004817 | 0.50% |
| QC value within limits for Beryllium,7440-41-7 Recovery = 96.90% | | | | | | | | |
| Boron,7440-42-8† | 374039.6 | 5.01914 | mg/L | 0.019640 | 5.01914 | mg/L | 0.019640 | 0.39% |
| QC value within limits for Boron,7440-42-8 Recovery = 100.38% | | | | | | | | |
| Cadmium,7440-43-9† | 226707.2 | 0.97214 | mg/L | 0.002597 | 0.97214 | mg/L | 0.002597 | 0.27% |
| QC value within limits for Cadmium,7440-43-9 Recovery = 97.21% | | | | | | | | |
| Calcium,7440-70-2† | 157711.0 | 9.67163 | mg/L | 0.128439 | 9.67163 | mg/L | 0.128439 | 1.33% |
| QC value within limits for Calcium,7440-70-2 Recovery = 96.72% | | | | | | | | |
| Chromium,7440-47-3† | 152975.6 | 0.97073 | mg/L | 0.002466 | 0.97073 | mg/L | 0.002466 | 0.25% |
| QC value within limits for Chromium,7440-47-3 Recovery = 97.07% | | | | | | | | |
| Cobalt,7440-48-4† | 68213.8 | 0.96621 | mg/L | 0.002635 | 0.96621 | mg/L | 0.002635 | 0.27% |
| QC value within limits for Cobalt,7440-48-4 Recovery = 96.62% | | | | | | | | |
| Copper,7440-50-8† | 480575.0 | 0.96555 | mg/L | 0.005272 | 0.96555 | mg/L | 0.005272 | 0.55% |

QC value within limits for Copper,7440-50-8 Recovery = 96.55%
Iron,7439-89-6† 190104.7 9.58878 mg/L 0.147198 9.58878 mg/L 0.147198 1.54%
QC value within limits for Iron,7439-89-6 Recovery = 95.89%
Lead,7439-92-1† 24374.0 0.97807 mg/L 0.019061 0.97807 mg/L 0.019061 1.95%
QC value within limits for Lead,7439-92-1 Recovery = 97.81%
Lithium,7439-93-2† 76933.4 0.97933 mg/L 0.019379 0.97933 mg/L 0.019379 1.98%
QC value within limits for Lithium,7439-93-2 Recovery = 97.93%
Magnesium,7439-95-4† 30697.9 9.50956 mg/L 0.108904 9.50956 mg/L 0.108904 1.15%
QC value within limits for Magnesium,7439-95-4 Recovery = 95.10%
Manganese,7439-96-5† 1372608.3 0.96912 mg/L 0.003499 0.96912 mg/L 0.003499 0.36%
QC value within limits for Manganese,7439-96-5 Recovery = 96.91%
Molybdenum,7439-98-7 23572.3 0.98824 mg/L 0.014804 0.98824 mg/L 0.014804 1.50%
QC value within limits for Molybdenum,7439-98-7 Recovery = 98.82%
Nickel,7440-02-0† 91010.1 0.96788 mg/L 0.003081 0.96788 mg/L 0.003081 0.32%
QC value within limits for Nickel,7440-02-0 Recovery = 96.79%
Potassium,7440-09-7† 74323.9 19.6321 mg/L 0.33837 19.6321 mg/L 0.33837 1.72%
QC value within limits for Potassium,7440-09-7 Recovery = 98.16%
Selenium,7782-49-2† 2629.2 0.98770 mg/L 0.013496 0.98770 mg/L 0.013496 1.37%
QC value within limits for Selenium,7782-49-2 Recovery = 98.77%
Silicon,7440-21-3† 39173.1 9.79575 mg/L 0.247738 9.79575 mg/L 0.247738 2.53%
QC value within limits for Silicon,7440-21-3 Recovery = 97.96%
Silver,7440-22-4† 480545.0 0.93301 mg/L 0.004492 0.93301 mg/L 0.004492 0.48%
QC value within limits for Silver,7440-22-4 Recovery = 93.30%
Sodium,7440-23-5† 377755.9 39.0081 mg/L 1.61189 39.0081 mg/L 1.61189 4.13%
QC value within limits for Sodium,7440-23-5 Recovery = 97.52%
Strontium,7440-24-6† 729588.8 0.96363 mg/L 0.040543 0.96363 mg/L 0.040543 4.21%
QC value within limits for Strontium,7440-24-6 Recovery = 96.36%
Thallium,7440-28-0† 4071.5 0.99959 mg/L 0.014584 0.99959 mg/L 0.014584 1.46%
QC value within limits for Thallium,7440-28-0 Recovery = 99.96%
Tin,7440-31-5† 9170.1 1.00470 mg/L 0.017721 1.00470 mg/L 0.017721 1.76%
QC value within limits for Tin,7440-31-5 Recovery = 100.47%
Titanium,7440-32-6† 1029278.3 1.00547 mg/L 0.002999 1.00547 mg/L 0.002999 0.30%
QC value within limits for Titanium,7440-32-6 Recovery = 100.55%
Vanadium,7440-62-2† 343292.2 0.96446 mg/L 0.003206 0.96446 mg/L 0.003206 0.33%
QC value within limits for Vanadium,7440-62-2 Recovery = 96.45%
Zinc,7440-66-6† 137190.0 0.95271 mg/L 0.002884 0.95271 mg/L 0.002884 0.30%
QC value within limits for Zinc,7440-66-6 Recovery = 95.27%
Zirconium,7440-67-7† 632838.3 0.96104 mg/L 0.003312 0.96104 mg/L 0.003312 0.34%
QC value within limits for Zirconium,7440-67-7 Recovery = 96.10%
All analyte(s) passed QC.

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**Sequence No.: 4**
**Sample ID: 1700**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 1**
**Date Collected: 10/30/2013 5:36:24 PM**
**Data Type: Reprocessed on 10/31/2013 8:26:36 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 1700**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6928484.7 | 101.688 | % | 2.8235 | | | | 2.78% |
| Yttrium,7440-65-5A | 3302533.1 | 101.878 | % | 1.4418 | | | | 1.42% |
| Yttrium,7440-65-5R | 350138.1 | 104.376 | % | 1.9354 | | | | 1.85% |
| Ar 420.067 R | 3799697.7 | 100.355 | % | 0.8662 | | | | 0.86% |
| Ar 363.268 A | 141855.1 | 100.107 | % | 0.1249 | | | | 0.12% |
| Aluminum,7429-90-5† | -19.0 | -0.00596 | mg/L | 0.009685 | -0.00596 | mg/L | 0.009685 | 162.44% |
| QC value within limits for Aluminum,7429-90-5 Recovery = Not calculated | | | | | | | | |
| Antimony,7440-36-0† | -1.8 | -0.00052 | mg/L | 0.001600 | -0.00052 | mg/L | 0.001600 | 308.40% |
| QC value within limits for Antimony,7440-36-0 Recovery = Not calculated | | | | | | | | |
| Arsenic,7440-38-2† | 12.7 | 0.00618 | mg/L | 0.004039 | 0.00618 | mg/L | 0.004039 | 65.30% |
| QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated | | | | | | | | |
| Barium,7440-39-3† | 94.2 | 0.00044 | mg/L | 0.000111 | 0.00044 | mg/L | 0.000111 | 25.35% |
| QC value within limits for Barium,7440-39-3 Recovery = Not calculated | | | | | | | | |
| Beryllium,7440-41-7† | 63023.5 | 0.00838 | mg/L | 0.013874 | 0.00838 | mg/L | 0.013874 | 165.59% |
| QC value greater than the upper limit for Beryllium,7440-41-7 Recovery = Not calculated | | | | | | | | |
| Boron,7440-42-8† | 3153.9 | 0.04202 | mg/L | 0.007972 | 0.04202 | mg/L | 0.007972 | 18.97% |
| QC value within limits for Boron,7440-42-8 Recovery = Not calculated | | | | | | | | |
| Cadmium,7440-43-9† | 34.0 | 0.00015 | mg/L | 0.000094 | 0.00015 | mg/L | 0.000094 | 64.61% |
| QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated | | | | | | | | |

Calcium,7440-70-2† -3.1 -0.00020 mg/L 0.002641 -0.00020 mg/L 0.002641 >999.9%
QC value within limits for Calcium,7440-70-2 Recovery = Not calculated
Chromium,7440-47-3† -88.9 -0.00056 mg/L 0.000368 -0.00056 mg/L 0.000368 65.84%
QC value within limits for Chromium,7440-47-3 Recovery = Not calculated
Cobalt,7440-48-4† 27.4 0.00037 mg/L 0.000078 0.00037 mg/L 0.000078 21.15%
QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated
Copper,7440-50-8† 4449.3 0.00894 mg/L 0.013981 0.00894 mg/L 0.013981 156.31%
QC value within limits for Copper,7440-50-8 Recovery = Not calculated
Iron,7439-89-6† 367.4 0.01853 mg/L 0.003657 0.01853 mg/L 0.003657 19.73%
QC value within limits for Iron,7439-89-6 Recovery = Not calculated
Lead,7439-92-1† -43.8 -0.00176 mg/L 0.000680 -0.00176 mg/L 0.000680 38.62%
QC value within limits for Lead,7439-92-1 Recovery = Not calculated
Lithium,7439-93-2† 231.2 0.00294 mg/L 0.000643 0.00294 mg/L 0.000643 21.86%
QC value within limits for Lithium,7439-93-2 Recovery = Not calculated
Magnesium,7439-95-4† -79.7 -0.02469 mg/L 0.007674 -0.02469 mg/L 0.007674 31.08%
QC value within limits for Magnesium,7439-95-4 Recovery = Not calculated
Manganese,7439-96-5† 523.7 0.00037 mg/L 0.000157 0.00037 mg/L 0.000157 42.39%
QC value within limits for Manganese,7439-96-5 Recovery = Not calculated
Molybdenum,7439-98-7 129.6 0.00543 mg/L 0.001845 0.00543 mg/L 0.001845 33.98%
QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated
Nickel,7440-02-0† 81.5 0.00087 mg/L 0.000281 0.00087 mg/L 0.000281 32.49%
QC value within limits for Nickel,7440-02-0 Recovery = Not calculated
Potassium,7440-09-7† 214.4 0.05661 mg/L 0.022750 0.05661 mg/L 0.022750 40.19%
QC value within limits for Potassium,7440-09-7 Recovery = Not calculated
Selenium,7782-49-2† 26.4 0.00991 mg/L 0.002003 0.00991 mg/L 0.002003 20.21%
QC value within limits for Selenium,7782-49-2 Recovery = Not calculated
Silicon,7440-21-3† 149.7 0.03745 mg/L 0.004300 0.03745 mg/L 0.004300 11.48%
QC value within limits for Silicon,7440-21-3 Recovery = Not calculated
Silver,7440-22-4† 3815.5 0.00741 mg/L 0.013021 0.00741 mg/L 0.013021 175.77%
QC value within limits for Silver,7440-22-4 Recovery = Not calculated
Sodium,7440-23-5† 734.3 0.07584 mg/L 0.015143 0.07584 mg/L 0.015143 19.97%
QC value within limits for Sodium,7440-23-5 Recovery = Not calculated
Strontium,7440-24-6† 328.2 0.00043 mg/L 0.000021 0.00043 mg/L 0.000021 4.74%
QC value within limits for Strontium,7440-24-6 Recovery = Not calculated
Thallium,7440-28-0† 13.8 0.00346 mg/L 0.001075 0.00346 mg/L 0.001075 31.06%
QC value within limits for Thallium,7440-28-0 Recovery = Not calculated
Tin,7440-31-5† 34.1 0.00376 mg/L 0.002400 0.00376 mg/L 0.002400 63.85%
QC value within limits for Tin,7440-31-5 Recovery = Not calculated
Titanium,7440-32-6† 9454.7 0.00924 mg/L 0.014012 0.00924 mg/L 0.014012 151.70%
QC value within limits for Titanium,7440-32-6 Recovery = Not calculated
Vanadium,7440-62-2† 2719.0 0.00763 mg/L 0.013741 0.00763 mg/L 0.013741 180.01%
QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated
Zinc,7440-66-6† -248.0 -0.00175 mg/L 0.000051 -0.00175 mg/L 0.000051 2.94%
QC value within limits for Zinc,7440-66-6 Recovery = Not calculated
Zirconium,7440-67-7† 5464.3 0.00830 mg/L 0.013783 0.00830 mg/L 0.013783 166.12%
QC value within limits for Zirconium,7440-67-7 Recovery = Not calculated
QC Failed. Continue with analysis.

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**Sequence No.: 5** **Autosampler Location: 3**
**Sample ID: 2300** **Date Collected: 10/30/2013 5:42:47 PM**
**Analyst:** **Data Type: Reprocessed on 10/31/2013 8:26:39 AM**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Mean Data: 2300**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6995585.1 | 102.672 | % | 0.2065 | | | | 0.20% |
| Yttrium,7440-65-5A | 3256927.3 | 100.471 | % | 0.2387 | | | | 0.24% |
| Yttrium,7440-65-5R | 344557.9 | 102.713 | % | 2.6856 | | | | 2.61% |
| Ar 420.067 R | 3806659.2 | 100.539 | % | 0.9758 | | | | 0.97% |
| Ar 363.268 A | 141891.0 | 100.132 | % | 0.1107 | | | | 0.11% |
| Aluminum,7429-90-5† | 586.3 | 0.18071 | mg/L | 0.013225 | 0.18071 | mg/L | 0.013225 | 7.32% |
| QC value within limits for Aluminum,7429-90-5 Recovery = 90.35% | | | | | | | | |
| Antimony,7440-36-0† | 216.1 | 0.06636 | mg/L | 0.005437 | 0.06636 | mg/L | 0.005437 | 8.19% |
| QC value within limits for Antimony,7440-36-0 Recovery = 110.60% | | | | | | | | |
| Arsenic,7440-38-2† | 46.7 | 0.02262 | mg/L | 0.000989 | 0.02262 | mg/L | 0.000989 | 4.37% |
| QC value within limits for Arsenic,7440-38-2 Recovery = 113.09% | | | | | | | | |
| Barium,7440-39-3† | 2400.9 | 0.01096 | mg/L | 0.000155 | 0.01096 | mg/L | 0.000155 | 1.42% |

QC value within limits for Barium,7440-39-3 Recovery = 109.60%
Beryllium,7440-41-7† 37871.7 0.00505 mg/L 0.001590 0.00505 mg/L 0.001590 31.49%
QC value within limits for Beryllium,7440-41-7 Recovery = 126.25%
Boron,7440-42-8† 77625.0 1.03260 mg/L 0.015919 1.03260 mg/L 0.015919 1.54%
QC value within limits for Boron,7440-42-8 Recovery = 103.26%
Cadmium,7440-43-9† 1153.9 0.00495 mg/L 0.000160 0.00495 mg/L 0.000160 3.23%
QC value within limits for Cadmium,7440-43-9 Recovery = 98.91%
Calcium,7440-70-2† 13045.4 0.80032 mg/L 0.023602 0.80032 mg/L 0.023602 2.95%
QC value within limits for Calcium,7440-70-2 Recovery = 100.04%
Chromium,7440-47-3† 1691.8 0.01075 mg/L 0.001449 0.01075 mg/L 0.001449 13.47%
QC value within limits for Chromium,7440-47-3 Recovery = 107.54%
Cobalt,7440-48-4† 737.0 0.01043 mg/L 0.000195 0.01043 mg/L 0.000195 1.87%
QC value within limits for Cobalt,7440-48-4 Recovery = 104.32%
Copper,7440-50-8† 10573.2 0.02124 mg/L 0.001625 0.02124 mg/L 0.001625 7.65%
QC value within limits for Copper,7440-50-8 Recovery = 106.20%
Iron,7439-89-6† 4057.5 0.20466 mg/L 0.006085 0.20466 mg/L 0.006085 2.97%
QC value within limits for Iron,7439-89-6 Recovery = 102.33%
Lead,7439-92-1† 367.5 0.01475 mg/L 0.001693 0.01475 mg/L 0.001693 11.47%
QC value within limits for Lead,7439-92-1 Recovery = 98.36%
Lithium,7439-93-2† 4133.4 0.05262 mg/L 0.002647 0.05262 mg/L 0.002647 5.03%
QC value within limits for Lithium,7439-93-2 Recovery = 105.24%
Magnesium,7439-95-4† 616.7 0.19103 mg/L 0.012701 0.19103 mg/L 0.012701 6.65%
QC value within limits for Magnesium,7439-95-4 Recovery = 95.51%
Manganese,7439-96-5† 23104.7 0.01631 mg/L 0.001618 0.01631 mg/L 0.001618 9.92%
QC value within limits for Manganese,7439-96-5 Recovery = 108.75%
Molybdenum,7439-98-7 772.7 0.03238 mg/L 0.000245 0.03238 mg/L 0.000245 0.76%
QC value within limits for Molybdenum,7439-98-7 Recovery = 107.93%
Nickel,7440-02-0† 3913.8 0.04163 mg/L 0.001320 0.04163 mg/L 0.001320 3.17%
QC value within limits for Nickel,7440-02-0 Recovery = 104.07%
Potassium,7440-09-7† 2011.4 0.53130 mg/L 0.045352 0.53130 mg/L 0.045352 8.54%
QC value within limits for Potassium,7440-09-7 Recovery = 106.26%
Selenium,7782-49-2† 113.7 0.04271 mg/L 0.002443 0.04271 mg/L 0.002443 5.72%
QC value within limits for Selenium,7782-49-2 Recovery = 106.77%
Silicon,7440-21-3† 1007.6 0.25197 mg/L 0.016517 0.25197 mg/L 0.016517 6.56%
QC value within limits for Silicon,7440-21-3 Recovery = 125.98%
Silver,7440-22-4† 5779.2 0.01126 mg/L 0.001907 0.01126 mg/L 0.001907 16.93%
QC value within limits for Silver,7440-22-4 Recovery = 112.62%
Sodium,7440-23-5† 9878.1 1.02001 mg/L 0.032372 1.02001 mg/L 0.032372 3.17%
QC value within limits for Sodium,7440-23-5 Recovery = 102.00%
Strontium,7440-24-6† 37151.6 0.04906 mg/L 0.001669 0.04906 mg/L 0.001669 3.40%
QC value within limits for Strontium,7440-24-6 Recovery = 98.12%
Thallium,7440-28-0† 88.2 0.02151 mg/L 0.000710 0.02151 mg/L 0.000710 3.30%
QC value within limits for Thallium,7440-28-0 Recovery = 107.57%
Tin,7440-31-5† 260.7 0.02851 mg/L 0.000333 0.02851 mg/L 0.000333 1.17%
QC value within limits for Tin,7440-31-5 Recovery = 114.05%
Titanium,7440-32-6† 11122.4 0.01086 mg/L 0.000117 0.01086 mg/L 0.000117 1.08%
QC value within limits for Titanium,7440-32-6 Recovery = 108.64%
Vanadium,7440-62-2† 7528.6 0.02114 mg/L 0.002066 0.02114 mg/L 0.002066 9.78%
QC value within limits for Vanadium,7440-62-2 Recovery = 105.68%
Zinc,7440-66-6† 2216.3 0.01521 mg/L 0.000330 0.01521 mg/L 0.000330 2.17%
QC value within limits for Zinc,7440-66-6 Recovery = 76.03%
Zirconium,7440-67-7† 9800.5 0.01489 mg/L 0.002344 0.01489 mg/L 0.002344 15.75%
QC value greater than the upper limit for Zirconium,7440-67-7 Recovery = 148.87%
QC Failed. Continue with analysis.

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**Sequence No.: 6** **Autosampler Location: 5**
**Sample ID: 2000** **Date Collected: 10/30/2013 5:49:08 PM**
**Analyst:** **Data Type: Reprocessed on 10/31/2013 8:26:41 AM**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Mean Data: 2000**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6588551.9 | 96.6984 | % | 1.68657 | | | | 1.74% |
| Yttrium,7440-65-5A | 3040446.4 | 93.7932 | % | 1.35453 | | | | 1.44% |
| Yttrium,7440-65-5R | 324424.6 | 96.7113 | % | 1.12982 | | | | 1.17% |
| Ar 420.067 R | 3611794.7 | 95.3927 | % | 0.61949 | | | | 0.65% |
| Ar 363.268 A | 134237.7 | 94.7310 | % | 0.26250 | | | | 0.28% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Aluminum,7429-90-5† | 639583.9 | 197.439 mg/L | 6.7928 | 197.439 mg/L | 6.7928 | 3.44% |
| QC value within limits for Aluminum,7429-90-5 Recovery = 98.72% | | | | | | |
| Antimony,7440-36-0† | -3.7 | 0.01298 mg/L | 0.003533 | 0.01298 mg/L | 0.003533 | 27.22% |
| QC value within limits for Antimony,7440-36-0 Recovery = Not calculated | | | | | | |
| Arsenic,7440-38-2† | -162.7 | 0.01082 mg/L | 0.003115 | 0.01082 mg/L | 0.003115 | 28.80% |
| QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated | | | | | | |
| Barium,7440-39-3† | 1380.2 | 0.00144 mg/L | 0.000291 | 0.00144 mg/L | 0.000291 | 20.24% |
| QC value within limits for Barium,7440-39-3 Recovery = Not calculated | | | | | | |
| Beryllium,7440-41-7† | 1540.6 | 0.00021 mg/L | 0.000539 | 0.00021 mg/L | 0.000539 | 261.16% |
| QC value within limits for Beryllium,7440-41-7 Recovery = Not calculated | | | | | | |
| Boron,7440-42-8† | -64417.7 | 0.00707 mg/L | 0.054939 | 0.00707 mg/L | 0.054939 | 776.93% |
| QC value within limits for Boron,7440-42-8 Recovery = Not calculated | | | | | | |
| Cadmium,7440-43-9† | 580.8 | -0.00066 mg/L | 0.000081 | -0.00066 mg/L | 0.000081 | 12.20% |
| QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated | | | | | | |
| Calcium,7440-70-2† | 3093725.4 | 189.747 mg/L | 6.0061 | 189.747 mg/L | 6.0061 | 3.17% |
| QC value within limits for Calcium,7440-70-2 Recovery = 94.87% | | | | | | |
| Chromium,7440-47-3† | -1747.3 | 0.00869 mg/L | 0.001760 | 0.00869 mg/L | 0.001760 | 20.26% |
| QC value within limits for Chromium,7440-47-3 Recovery = Not calculated | | | | | | |
| Cobalt,7440-48-4† | 154.3 | -0.00137 mg/L | 0.000163 | -0.00137 mg/L | 0.000163 | 11.84% |
| QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated | | | | | | |
| Copper,7440-50-8† | -5600.0 | -0.01520 mg/L | 0.001069 | -0.01520 mg/L | 0.001069 | 7.03% |
| QC value within limits for Copper,7440-50-8 Recovery = Not calculated | | | | | | |
| Iron,7439-89-6† | 3750618.6 | 189.196 mg/L | 6.2140 | 189.196 mg/L | 6.2140 | 3.28% |
| QC value within limits for Iron,7439-89-6 Recovery = 94.60% | | | | | | |
| Lead,7439-92-1† | -345.3 | -0.00133 mg/L | 0.000521 | -0.00133 mg/L | 0.000521 | 39.05% |
| QC value within limits for Lead,7439-92-1 Recovery = Not calculated | | | | | | |
| Lithium,7439-93-2† | 166.5 | 0.00212 mg/L | 0.000323 | 0.00212 mg/L | 0.000323 | 15.24% |
| QC value within limits for Lithium,7439-93-2 Recovery = Not calculated | | | | | | |
| Magnesium,7439-95-4† | 616516.8 | 190.945 mg/L | 6.1128 | 190.945 mg/L | 6.1128 | 3.20% |
| QC value within limits for Magnesium,7439-95-4 Recovery = 95.47% | | | | | | |
| Manganese,7439-96-5† | -514.6 | 0.00090 mg/L | 0.000122 | 0.00090 mg/L | 0.000122 | 13.57% |
| QC value within limits for Manganese,7439-96-5 Recovery = Not calculated | | | | | | |
| Molybdenum,7439-98-7 | -435.7 | 0.00351 mg/L | 0.002436 | 0.00351 mg/L | 0.002436 | 69.29% |
| QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated | | | | | | |
| Nickel,7440-02-0† | -142.0 | -0.00088 mg/L | 0.000357 | -0.00088 mg/L | 0.000357 | 40.59% |
| QC value within limits for Nickel,7440-02-0 Recovery = Not calculated | | | | | | |
| Potassium,7440-09-7† | -168.4 | -0.00171 mg/L | 0.029099 | -0.00171 mg/L | 0.029099 | >999.9% |
| QC value within limits for Potassium,7440-09-7 Recovery = Not calculated | | | | | | |
| Selenium,7782-49-2† | -47.3 | 0.00627 mg/L | 0.004460 | 0.00627 mg/L | 0.004460 | 71.11% |
| QC value within limits for Selenium,7782-49-2 Recovery = Not calculated | | | | | | |
| Silicon,7440-21-3† | 154.5 | 0.01775 mg/L | 0.008006 | 0.01775 mg/L | 0.008006 | 45.10% |
| QC value within limits for Silicon,7440-21-3 Recovery = Not calculated | | | | | | |
| Silver,7440-22-4† | -1657.8 | 0.00153 mg/L | 0.000487 | 0.00153 mg/L | 0.000487 | 31.81% |
| QC value within limits for Silver,7440-22-4 Recovery = Not calculated | | | | | | |
| Sodium,7440-23-5† | 297.7 | 0.02209 mg/L | 0.006637 | 0.02209 mg/L | 0.006637 | 30.05% |
| QC value within limits for Sodium,7440-23-5 Recovery = Not calculated | | | | | | |
| Strontium,7440-24-6† | 4140.1 | -0.00018 mg/L | 0.000078 | -0.00018 mg/L | 0.000078 | 43.17% |
| QC value within limits for Strontium,7440-24-6 Recovery = Not calculated | | | | | | |
| Thallium,7440-28-0† | -82.2 | -0.00846 mg/L | 0.002199 | -0.00846 mg/L | 0.002199 | 25.99% |
| QC value within limits for Thallium,7440-28-0 Recovery = Not calculated | | | | | | |
| Tin,7440-31-5† | -39.2 | 0.00220 mg/L | 0.002686 | 0.00220 mg/L | 0.002686 | 122.32% |
| QC value within limits for Tin,7440-31-5 Recovery = Not calculated | | | | | | |
| Titanium,7440-32-6† | 971.8 | 0.00056 mg/L | 0.000086 | 0.00056 mg/L | 0.000086 | 15.42% |
| QC value within limits for Titanium,7440-32-6 Recovery = Not calculated | | | | | | |
| Vanadium,7440-62-2† | 2958.0 | -0.00694 mg/L | 0.000204 | -0.00694 mg/L | 0.000204 | 2.94% |
| QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated | | | | | | |
| Zinc,7440-66-6† | 2493.6 | -0.00186 mg/L | 0.000969 | -0.00186 mg/L | 0.000969 | 52.11% |
| QC value within limits for Zinc,7440-66-6 Recovery = Not calculated | | | | | | |
| Zirconium,7440-67-7† | -317.0 | -0.00048 mg/L | 0.000839 | -0.00048 mg/L | 0.000839 | 173.76% |
| QC value within limits for Zirconium,7440-67-7 Recovery = Not calculated | | | | | | |

All analyte(s) passed QC.

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**Sequence No.: 7**
**Sample ID: 2100**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 6**
**Date Collected: 10/30/2013 5:55:38 PM**
**Data Type: Reprocessed on 10/31/2013 8:26:43 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 2100**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6513866.6 | 95.6023 | % | 0.95575 | | | | 1.00% |
| Yttrium,7440-65-5A | 3023796.3 | 93.2796 | % | 1.01524 | | | | 1.09% |
| Yttrium,7440-65-5R | 328756.9 | 98.0028 | % | 1.44632 | | | | 1.48% |
| Ar 420.067 R | 3597623.1 | 95.0184 | % | 0.71698 | | | | 0.75% |
| Ar 363.268 A | 130041.1 | 91.7695 | % | 0.34212 | | | | 0.37% |
| Aluminum,7429-90-5† | 632502.8 | 195.247 | mg/L | 6.2805 | 195.247 | mg/L | 6.2805 | 3.22% |
| QC value within limits for Aluminum,7429-90-5 Recovery = 97.62% | | | | | | | | |
| Antimony,7440-36-0† | 3308.4 | 1.02259 | mg/L | 0.013573 | 1.02259 | mg/L | 0.013573 | 1.33% |
| QC value within limits for Antimony,7440-36-0 Recovery = 102.26% | | | | | | | | |
| Arsenic,7440-38-2† | 2019.9 | 1.04434 | mg/L | 0.016853 | 1.04434 | mg/L | 0.016853 | 1.61% |
| QC value within limits for Arsenic,7440-38-2 Recovery = 104.43% | | | | | | | | |
| Barium,7440-39-3† | 111409.5 | 0.50373 | mg/L | 0.002673 | 0.50373 | mg/L | 0.002673 | 0.53% |
| QC value within limits for Barium,7440-39-3 Recovery = 100.75% | | | | | | | | |
| Beryllium,7440-41-7† | 3854696.2 | 0.51091 | mg/L | 0.002518 | 0.51091 | mg/L | 0.002518 | 0.49% |
| QC value within limits for Beryllium,7440-41-7 Recovery = 102.18% | | | | | | | | |
| Boron,7440-42-8† | 13244.1 | 1.03334 | mg/L | 0.030808 | 1.03334 | mg/L | 0.030808 | 2.98% |
| QC value within limits for Boron,7440-42-8 Recovery = 103.33% | | | | | | | | |
| Cadmium,7440-43-9† | 225757.5 | 0.96510 | mg/L | 0.006695 | 0.96510 | mg/L | 0.006695 | 0.69% |
| QC value within limits for Cadmium,7440-43-9 Recovery = 96.51% | | | | | | | | |
| Calcium,7440-70-2† | 3057434.2 | 187.520 | mg/L | 5.1950 | 187.520 | mg/L | 5.1950 | 2.77% |
| QC value within limits for Calcium,7440-70-2 Recovery = 93.76% | | | | | | | | |
| Chromium,7440-47-3† | 76122.2 | 0.50220 | mg/L | 0.002691 | 0.50220 | mg/L | 0.002691 | 0.54% |
| QC value within limits for Chromium,7440-47-3 Recovery = 100.44% | | | | | | | | |
| Cobalt,7440-48-4† | 34359.6 | 0.48421 | mg/L | 0.004430 | 0.48421 | mg/L | 0.004430 | 0.91% |
| QC value within limits for Cobalt,7440-48-4 Recovery = 96.84% | | | | | | | | |
| Copper,7440-50-8† | 247681.3 | 0.49381 | mg/L | 0.002041 | 0.49381 | mg/L | 0.002041 | 0.41% |
| QC value within limits for Copper,7440-50-8 Recovery = 98.76% | | | | | | | | |
| Iron,7439-89-6† | 3715220.7 | 187.410 | mg/L | 5.5776 | 187.410 | mg/L | 5.5776 | 2.98% |
| QC value within limits for Iron,7439-89-6 Recovery = 93.70% | | | | | | | | |
| Lead,7439-92-1† | 24065.2 | 0.97736 | mg/L | 0.014953 | 0.97736 | mg/L | 0.014953 | 1.53% |
| QC value within limits for Lead,7439-92-1 Recovery = 97.74% | | | | | | | | |
| Lithium,7439-93-2† | 58.1 | 0.00072 | mg/L | 0.001198 | 0.00072 | mg/L | 0.001198 | 166.73% |
| Magnesium,7439-95-4† | 611538.2 | 189.404 | mg/L | 5.1226 | 189.404 | mg/L | 5.1226 | 2.70% |
| QC value within limits for Magnesium,7439-95-4 Recovery = 94.70% | | | | | | | | |
| Manganese,7439-96-5† | 690308.7 | 0.48861 | mg/L | 0.002120 | 0.48861 | mg/L | 0.002120 | 0.43% |
| QC value within limits for Manganese,7439-96-5 Recovery = 97.72% | | | | | | | | |
| Molybdenum,7439-98-7 | 23874.7 | 1.02122 | mg/L | 0.015279 | 1.02122 | mg/L | 0.015279 | 1.50% |
| QC value within limits for Molybdenum,7439-98-7 Recovery = 102.12% | | | | | | | | |
| Nickel,7440-02-0† | 90528.2 | 0.96349 | mg/L | 0.005883 | 0.96349 | mg/L | 0.005883 | 0.61% |
| QC value within limits for Nickel,7440-02-0 Recovery = 96.35% | | | | | | | | |
| Potassium,7440-09-7† | -204.5 | -0.01043 | mg/L | 0.030621 | -0.01043 | mg/L | 0.030621 | 293.72% |
| Selenium,7782-49-2† | 2672.7 | 1.02699 | mg/L | 0.035295 | 1.02699 | mg/L | 0.035295 | 3.44% |
| QC value within limits for Selenium,7782-49-2 Recovery = 102.70% | | | | | | | | |
| Silicon,7440-21-3† | 208.2 | 0.03062 | mg/L | 0.001727 | 0.03062 | mg/L | 0.001727 | 5.64% |
| Silver,7440-22-4† | 517767.7 | 1.00772 | mg/L | 0.002682 | 1.00772 | mg/L | 0.002682 | 0.27% |
| QC value within limits for Silver,7440-22-4 Recovery = 100.77% | | | | | | | | |
| Sodium,7440-23-5† | 10136.4 | 1.03971 | mg/L | 0.037868 | 1.03971 | mg/L | 0.037868 | 3.64% |
| QC value within limits for Sodium,7440-23-5 Recovery = 103.97% | | | | | | | | |
| Strontium,7440-24-6† | 4206.1 | -0.00003 | mg/L | 0.000150 | -0.00003 | mg/L | 0.000150 | 452.48% |
| Thallium,7440-28-0† | 4022.1 | 0.98363 | mg/L | 0.017165 | 0.98363 | mg/L | 0.017165 | 1.75% |
| QC value within limits for Thallium,7440-28-0 Recovery = 98.36% | | | | | | | | |
| Tin,7440-31-5† | -70.1 | -0.00104 | mg/L | 0.004028 | -0.00104 | mg/L | 0.004028 | 387.69% |
| Titanium,7440-32-6† | 1066.2 | 0.00060 | mg/L | 0.000140 | 0.00060 | mg/L | 0.000140 | 23.20% |
| Vanadium,7440-62-2† | 178326.1 | 0.48627 | mg/L | 0.002168 | 0.48627 | mg/L | 0.002168 | 0.45% |
| QC value within limits for Vanadium,7440-62-2 Recovery = 97.25% | | | | | | | | |
| Zinc,7440-66-6† | 145375.1 | 0.99170 | mg/L | 0.005347 | 0.99170 | mg/L | 0.005347 | 0.54% |
| QC value within limits for Zinc,7440-66-6 Recovery = 99.17% | | | | | | | | |
| Zirconium,7440-67-7† | 3313.2 | 0.00511 | mg/L | 0.000493 | 0.00511 | mg/L | 0.000493 | 9.64% |

All analyte(s) passed QC.

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**Sequence No.: 8**
**Sample ID: 1800**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 7**
**Date Collected: 10/30/2013 6:01:29 PM**
**Data Type: Reprocessed on 10/31/2013 8:26:46 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 1800**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 7086242.7 | 104.003 | % | 2.0576 | | | | 1.98% |
| Yttrium,7440-65-5A | 3310902.5 | 102.136 | % | 1.8717 | | | | 1.83% |
| Yttrium,7440-65-5R | 346425.4 | 103.270 | % | 0.9631 | | | | 0.93% |
| Ar 420.067 R | 3784670.1 | 99.9586 | % | 0.75811 | | | | 0.76% |
| Ar 363.268 A | 141072.2 | 99.5541 | % | 0.27715 | | | | 0.28% |
| Aluminum,7429-90-5† | 16360.9 | 5.04358 | mg/L | 0.068525 | 5.04358 | mg/L | 0.068525 | 1.36% |
| QC value within limits for Aluminum,7429-90-5 Recovery = 100.87% | | | | | | | | |
| Antimony,7440-36-0† | 1624.5 | 0.49157 | mg/L | 0.018991 | 0.49157 | mg/L | 0.018991 | 3.86% |
| QC value within limits for Antimony,7440-36-0 Recovery = 98.31% | | | | | | | | |
| Arsenic,7440-38-2† | 1101.6 | 0.53241 | mg/L | 0.022479 | 0.53241 | mg/L | 0.022479 | 4.22% |
| QC value within limits for Arsenic,7440-38-2 Recovery = 106.48% | | | | | | | | |
| Barium,7440-39-3† | 111817.4 | 0.51029 | mg/L | 0.021636 | 0.51029 | mg/L | 0.021636 | 4.24% |
| QC value within limits for Barium,7440-39-3 Recovery = 102.06% | | | | | | | | |
| Beryllium,7440-41-7† | 3817556.4 | 0.50736 | mg/L | 0.002403 | 0.50736 | mg/L | 0.002403 | 0.47% |
| QC value within limits for Beryllium,7440-41-7 Recovery = 101.47% | | | | | | | | |
| Boron,7440-42-8† | 186284.3 | 2.50201 | mg/L | 0.107361 | 2.50201 | mg/L | 0.107361 | 4.29% |
| QC value within limits for Boron,7440-42-8 Recovery = 100.08% | | | | | | | | |
| Cadmium,7440-43-9† | 120489.6 | 0.51667 | mg/L | 0.020683 | 0.51667 | mg/L | 0.020683 | 4.00% |
| QC value within limits for Cadmium,7440-43-9 Recovery = 103.33% | | | | | | | | |
| Calcium,7440-70-2† | 82885.8 | 5.08292 | mg/L | 0.049358 | 5.08292 | mg/L | 0.049358 | 0.97% |
| QC value within limits for Calcium,7440-70-2 Recovery = 101.66% | | | | | | | | |
| Chromium,7440-47-3† | 80231.6 | 0.50915 | mg/L | 0.020546 | 0.50915 | mg/L | 0.020546 | 4.04% |
| QC value within limits for Chromium,7440-47-3 Recovery = 101.83% | | | | | | | | |
| Cobalt,7440-48-4† | 36182.3 | 0.51257 | mg/L | 0.021931 | 0.51257 | mg/L | 0.021931 | 4.28% |
| QC value within limits for Cobalt,7440-48-4 Recovery = 102.51% | | | | | | | | |
| Copper,7440-50-8† | 251328.7 | 0.50495 | mg/L | 0.020974 | 0.50495 | mg/L | 0.020974 | 4.15% |
| QC value within limits for Copper,7440-50-8 Recovery = 100.99% | | | | | | | | |
| Iron,7439-89-6† | 104201.7 | 5.25591 | mg/L | 0.038712 | 5.25591 | mg/L | 0.038712 | 0.74% |
| QC value within limits for Iron,7439-89-6 Recovery = 105.12% | | | | | | | | |
| Lead,7439-92-1† | 12781.9 | 0.51289 | mg/L | 0.021133 | 0.51289 | mg/L | 0.021133 | 4.12% |
| QC value within limits for Lead,7439-92-1 Recovery = 102.58% | | | | | | | | |
| Lithium,7439-93-2† | 40433.5 | 0.51470 | mg/L | 0.007476 | 0.51470 | mg/L | 0.007476 | 1.45% |
| QC value within limits for Lithium,7439-93-2 Recovery = 102.94% | | | | | | | | |
| Magnesium,7439-95-4† | 16655.3 | 5.15937 | mg/L | 0.071800 | 5.15937 | mg/L | 0.071800 | 1.39% |
| QC value within limits for Magnesium,7439-95-4 Recovery = 103.19% | | | | | | | | |
| Manganese,7439-96-5† | 733661.1 | 0.51799 | mg/L | 0.021517 | 0.51799 | mg/L | 0.021517 | 4.15% |
| QC value within limits for Manganese,7439-96-5 Recovery = 103.60% | | | | | | | | |
| Molybdenum,7439-98-7 | 12144.1 | 0.50916 | mg/L | 0.017053 | 0.50916 | mg/L | 0.017053 | 3.35% |
| QC value within limits for Molybdenum,7439-98-7 Recovery = 101.83% | | | | | | | | |
| Nickel,7440-02-0† | 48453.3 | 0.51530 | mg/L | 0.020839 | 0.51530 | mg/L | 0.020839 | 4.04% |
| QC value within limits for Nickel,7440-02-0 Recovery = 103.06% | | | | | | | | |
| Potassium,7440-09-7† | 38523.7 | 10.1759 | mg/L | 0.12932 | 10.1759 | mg/L | 0.12932 | 1.27% |
| QC value within limits for Potassium,7440-09-7 Recovery = 101.76% | | | | | | | | |
| Selenium,7782-49-2† | 1369.0 | 0.51435 | mg/L | 0.023259 | 0.51435 | mg/L | 0.023259 | 4.52% |
| QC value within limits for Selenium,7782-49-2 Recovery = 102.87% | | | | | | | | |
| Silicon,7440-21-3† | 19596.5 | 4.90027 | mg/L | 0.094181 | 4.90027 | mg/L | 0.094181 | 1.92% |
| QC value within limits for Silicon,7440-21-3 Recovery = 98.01% | | | | | | | | |
| Silver,7440-22-4† | 257376.0 | 0.49968 | mg/L | 0.018702 | 0.49968 | mg/L | 0.018702 | 3.74% |
| QC value within limits for Silver,7440-22-4 Recovery = 99.94% | | | | | | | | |
| Sodium,7440-23-5† | 192880.5 | 19.9174 | mg/L | 0.43833 | 19.9174 | mg/L | 0.43833 | 2.20% |
| QC value within limits for Sodium,7440-23-5 Recovery = 99.59% | | | | | | | | |
| Strontium,7440-24-6† | 371009.9 | 0.49002 | mg/L | 0.010919 | 0.49002 | mg/L | 0.010919 | 2.23% |
| QC value within limits for Strontium,7440-24-6 Recovery = 98.00% | | | | | | | | |
| Thallium,7440-28-0† | 2126.1 | 0.52167 | mg/L | 0.016058 | 0.52167 | mg/L | 0.016058 | 3.08% |
| QC value within limits for Thallium,7440-28-0 Recovery = 104.33% | | | | | | | | |
| Tin,7440-31-5† | 4548.7 | 0.49839 | mg/L | 0.019873 | 0.49839 | mg/L | 0.019873 | 3.99% |
| QC value within limits for Tin,7440-31-5 Recovery = 99.68% | | | | | | | | |
| Titanium,7440-32-6† | 511020.8 | 0.49920 | mg/L | 0.004051 | 0.49920 | mg/L | 0.004051 | 0.81% |
| QC value within limits for Titanium,7440-32-6 Recovery = 99.84% | | | | | | | | |
| Vanadium,7440-62-2† | 180483.6 | 0.50704 | mg/L | 0.021477 | 0.50704 | mg/L | 0.021477 | 4.24% |
| QC value within limits for Vanadium,7440-62-2 Recovery = 101.41% | | | | | | | | |
| Zinc,7440-66-6† | 72652.7 | 0.50448 | mg/L | 0.019267 | 0.50448 | mg/L | 0.019267 | 3.82% |
| QC value within limits for Zinc,7440-66-6 Recovery = 100.90% | | | | | | | | |
| Zirconium,7440-67-7† | 329752.7 | 0.50078 | mg/L | 0.022534 | 0.50078 | mg/L | 0.022534 | 4.50% |
| QC value within limits for Zirconium,7440-67-7 Recovery = 100.16% | | | | | | | | |

All analyte(s) passed QC.

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**Sequence No.: 9** **Autosampler Location: 1**
**Sample ID: 1900** **Date Collected: 10/30/2013 6:07:52 PM**

**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Data Type: Reprocessed on 10/31/2013 8:26:48 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 1900**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6800641.0 | 99.8112 | % | 1.91801 | | | | 1.92% |
| Yttrium,7440-65-5A | 3291843.7 | 101.548 | % | 1.6298 | | | | 1.60% |
| Yttrium,7440-65-5R | 348826.7 | 103.986 | % | 1.3951 | | | | 1.34% |
| Ar 420.067 R | 3836296.2 | 101.322 | % | 0.6979 | | | | 0.69% |
| Ar 363.268 A | 139653.8 | 98.5531 | % | 0.35171 | | | | 0.36% |
| Aluminum,7429-90-5† | -52.8 | -0.01631 | mg/L | 0.013606 | -0.01631 | mg/L | 0.013606 | 83.43% |
| QC value within limits for Aluminum,7429-90-5 Recovery = Not calculated | | | | | | | | |
| Antimony,7440-36-0† | -0.7 | -0.00019 | mg/L | 0.001604 | -0.00019 | mg/L | 0.001604 | 850.15% |
| QC value within limits for Antimony,7440-36-0 Recovery = Not calculated | | | | | | | | |
| Arsenic,7440-38-2† | 3.7 | 0.00174 | mg/L | 0.003113 | 0.00174 | mg/L | 0.003113 | 179.41% |
| QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated | | | | | | | | |
| Barium,7440-39-3† | 47.7 | 0.00022 | mg/L | 0.000090 | 0.00022 | mg/L | 0.000090 | 41.60% |
| QC value within limits for Barium,7440-39-3 Recovery = Not calculated | | | | | | | | |
| Beryllium,7440-41-7† | 1756.5 | 0.00023 | mg/L | 0.000078 | 0.00023 | mg/L | 0.000078 | 33.37% |
| QC value within limits for Beryllium,7440-41-7 Recovery = Not calculated | | | | | | | | |
| Boron,7440-42-8† | 1815.7 | 0.02453 | mg/L | 0.004349 | 0.02453 | mg/L | 0.004349 | 17.73% |
| QC value within limits for Boron,7440-42-8 Recovery = Not calculated | | | | | | | | |
| Cadmium,7440-43-9† | -13.2 | -0.00006 | mg/L | 0.000082 | -0.00006 | mg/L | 0.000082 | 140.26% |
| QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated | | | | | | | | |
| Calcium,7440-70-2† | 196.0 | 0.01201 | mg/L | 0.004172 | 0.01201 | mg/L | 0.004172 | 34.73% |
| QC value within limits for Calcium,7440-70-2 Recovery = Not calculated | | | | | | | | |
| Chromium,7440-47-3† | -159.6 | -0.00101 | mg/L | 0.000201 | -0.00101 | mg/L | 0.000201 | 20.03% |
| QC value within limits for Chromium,7440-47-3 Recovery = Not calculated | | | | | | | | |
| Cobalt,7440-48-4† | -0.8 | -0.00002 | mg/L | 0.000182 | -0.00002 | mg/L | 0.000182 | >999.9% |
| QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated | | | | | | | | |
| Copper,7440-50-8† | 236.3 | 0.00047 | mg/L | 0.000367 | 0.00047 | mg/L | 0.000367 | 77.48% |
| QC value within limits for Copper,7440-50-8 Recovery = Not calculated | | | | | | | | |
| Iron,7439-89-6† | 1746.1 | 0.08809 | mg/L | 0.001580 | 0.08809 | mg/L | 0.001580 | 1.79% |
| QC value within limits for Iron,7439-89-6 Recovery = Not calculated | | | | | | | | |
| Lead,7439-92-1† | -63.0 | -0.00253 | mg/L | 0.000151 | -0.00253 | mg/L | 0.000151 | 5.96% |
| QC value within limits for Lead,7439-92-1 Recovery = Not calculated | | | | | | | | |
| Lithium,7439-93-2† | 351.0 | 0.00447 | mg/L | 0.004467 | 0.00447 | mg/L | 0.004467 | 99.97% |
| QC value within limits for Lithium,7439-93-2 Recovery = Not calculated | | | | | | | | |
| Magnesium,7439-95-4† | 33.3 | 0.01030 | mg/L | 0.012935 | 0.01030 | mg/L | 0.012935 | 125.64% |
| QC value within limits for Magnesium,7439-95-4 Recovery = Not calculated | | | | | | | | |
| Manganese,7439-96-5† | 702.1 | 0.00050 | mg/L | 0.000073 | 0.00050 | mg/L | 0.000073 | 14.78% |
| QC value within limits for Manganese,7439-96-5 Recovery = Not calculated | | | | | | | | |
| Molybdenum,7439-98-7 | 70.1 | 0.00294 | mg/L | 0.000736 | 0.00294 | mg/L | 0.000736 | 25.01% |
| QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated | | | | | | | | |
| Nickel,7440-02-0† | 5.7 | 0.00006 | mg/L | 0.000297 | 0.00006 | mg/L | 0.000297 | 487.78% |
| QC value within limits for Nickel,7440-02-0 Recovery = Not calculated | | | | | | | | |
| Potassium,7440-09-7† | 265.8 | 0.07023 | mg/L | 0.121745 | 0.07023 | mg/L | 0.121745 | 173.35% |
| QC value within limits for Potassium,7440-09-7 Recovery = Not calculated | | | | | | | | |
| Selenium,7782-49-2† | 41.0 | 0.01544 | mg/L | 0.000720 | 0.01544 | mg/L | 0.000720 | 4.67% |
| QC value within limits for Selenium,7782-49-2 Recovery = Not calculated | | | | | | | | |
| Silicon,7440-21-3† | 87.8 | 0.02197 | mg/L | 0.009578 | 0.02197 | mg/L | 0.009578 | 43.60% |
| QC value within limits for Silicon,7440-21-3 Recovery = Not calculated | | | | | | | | |
| Silver,7440-22-4† | -474.9 | -0.00092 | mg/L | 0.000370 | -0.00092 | mg/L | 0.000370 | 40.34% |
| QC value within limits for Silver,7440-22-4 Recovery = Not calculated | | | | | | | | |
| Sodium,7440-23-5† | 1372.4 | 0.14171 | mg/L | 0.207080 | 0.14171 | mg/L | 0.207080 | 146.13% |
| QC value within limits for Sodium,7440-23-5 Recovery = Not calculated | | | | | | | | |
| Strontium,7440-24-6† | 2410.4 | 0.00318 | mg/L | 0.004749 | 0.00318 | mg/L | 0.004749 | 149.16% |
| QC value within limits for Strontium,7440-24-6 Recovery = Not calculated | | | | | | | | |
| Thallium,7440-28-0† | 3.1 | 0.00075 | mg/L | 0.003400 | 0.00075 | mg/L | 0.003400 | 451.55% |
| QC value within limits for Thallium,7440-28-0 Recovery = Not calculated | | | | | | | | |
| Tin,7440-31-5† | 8.5 | 0.00093 | mg/L | 0.002649 | 0.00093 | mg/L | 0.002649 | 285.26% |
| QC value within limits for Tin,7440-31-5 Recovery = Not calculated | | | | | | | | |
| Titanium,7440-32-6† | 661.8 | 0.00065 | mg/L | 0.000150 | 0.00065 | mg/L | 0.000150 | 23.22% |
| QC value within limits for Titanium,7440-32-6 Recovery = Not calculated | | | | | | | | |
| Vanadium,7440-62-2† | -194.5 | -0.00055 | mg/L | 0.000587 | -0.00055 | mg/L | 0.000587 | 106.36% |
| QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated | | | | | | | | |
| Zinc,7440-66-6† | -295.4 | -0.00208 | mg/L | 0.000165 | -0.00208 | mg/L | 0.000165 | 7.96% |
| QC value within limits for Zinc,7440-66-6 Recovery = Not calculated | | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Zirconium,7440-67-7† | -43.7 | -0.00007 | mg/L | 0.000133 | -0.00007 | mg/L | 0.000133 199.50% |

QC value within limits for Zirconium,7440-67-7 Recovery = Not calculated
All analyte(s) passed QC.

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**Sequence No.: 10**
**Sample ID: 1244705**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt: 1.25 g**
**Dilution: 1X**

**Autosampler Location: 17**
**Date Collected: 10/30/2013 6:20:35 PM**
**Data Type: Reprocessed on 10/31/2013 8:26:51 AM**

**Initial Sample Vol:**
**Sample Prep Vol: 50 mL**

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**Mean Data: 1244705**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6896077.5 | 101.212 | % | 1.0106 | | | | 1.00% |
| Yttrium,7440-65-5A | 3206371.8 | 98.9118 | % | 0.78599 | | | | 0.79% |
| Yttrium,7440-65-5R | 336577.9 | 100.334 | % | 2.4283 | | | | 2.42% |
| Ar 420.067 R | 3736527.8 | 98.6871 | % | 1.15297 | | | | 1.17% |
| Ar 363.268 A | 137709.7 | 97.1812 | % | 0.43736 | | | | 0.45% |
| Aluminum,7429-90-5† | 133.6 | 0.04123 | mg/L | 0.031793 | 1.64928 | mg/kg | 1.271723 | 77.11% |
| Antimony,7440-36-0† | -5.7 | -0.00175 | mg/L | 0.004139 | -0.06989 | mg/kg | 0.165544 | 236.86% |
| Arsenic,7440-38-2† | -2.8 | -0.00129 | mg/L | 0.001707 | -0.05149 | mg/kg | 0.068293 | 132.62% |
| Barium,7440-39-3† | 520.8 | 0.00237 | mg/L | 0.000182 | 0.09474 | mg/kg | 0.007281 | 7.69% |
| Beryllium,7440-41-7† | 378.6 | 0.00005 | mg/L | 0.000011 | 0.00210 | mg/kg | 0.000422 | 20.08% |
| Boron,7440-42-8† | 254.7 | 0.00360 | mg/L | 0.000271 | 0.14412 | mg/kg | 0.010832 | 7.52% |
| Cadmium,7440-43-9† | -46.6 | -0.00020 | mg/L | 0.000194 | -0.00802 | mg/kg | 0.007746 | 96.52% |
| Calcium,7440-70-2† | 6678.0 | 0.40973 | mg/L | 0.008766 | 16.3891 | mg/kg | 0.35062 | 2.14% |
| Chromium,7440-47-3† | -23.1 | -0.00014 | mg/L | 0.000354 | -0.00570 | mg/kg | 0.014160 | 248.38% |
| Cobalt,7440-48-4† | -13.3 | -0.00019 | mg/L | 0.000209 | -0.00766 | mg/kg | 0.008344 | 108.99% |
| Copper,7440-50-8† | -183.7 | -0.00037 | mg/L | 0.000174 | -0.01489 | mg/kg | 0.006976 | 46.84% |
| Iron,7439-89-6† | 905.0 | 0.04565 | mg/L | 0.000602 | 1.82610 | mg/kg | 0.024088 | 1.32% |
| Lead,7439-92-1† | -51.9 | -0.00207 | mg/L | 0.001355 | -0.08290 | mg/kg | 0.054182 | 65.36% |
| Lithium,7439-93-2† | 65.8 | 0.00084 | mg/L | 0.000563 | 0.03349 | mg/kg | 0.022527 | 67.26% |
| Magnesium,7439-95-4† | 127.4 | 0.03944 | mg/L | 0.008405 | 1.57756 | mg/kg | 0.336182 | 21.31% |
| Manganese,7439-96-5† | 2360.1 | 0.00167 | mg/L | 0.000106 | 0.06666 | mg/kg | 0.004222 | 6.33% |
| Molybdenum,7439-98-7 | 44.4 | 0.00186 | mg/L | 0.000336 | 0.07453 | mg/kg | 0.013443 | 18.04% |
| Nickel,7440-02-0† | 32.0 | 0.00034 | mg/L | 0.000706 | 0.01363 | mg/kg | 0.028229 | 207.04% |
| Potassium,7440-09-7† | 123.4 | 0.03259 | mg/L | 0.040904 | 1.30369 | mg/kg | 1.636148 | 125.50% |
| Selenium,7782-49-2† | 12.2 | 0.00458 | mg/L | 0.004755 | 0.18304 | mg/kg | 0.190220 | 103.92% |
| Silicon,7440-21-3† | 50.0 | 0.01250 | mg/L | 0.007735 | 0.50009 | mg/kg | 0.309383 | 61.87% |
| Silver,7440-22-4† | -629.7 | -0.00122 | mg/L | 0.000460 | -0.04877 | mg/kg | 0.018410 | 37.75% |
| Sodium,7440-23-5† | 316.6 | 0.03268 | mg/L | 0.007527 | 1.30731 | mg/kg | 0.301069 | 23.03% |
| Strontium,7440-24-6† | 526.6 | 0.00068 | mg/L | 0.000270 | 0.02737 | mg/kg | 0.010780 | 39.39% |
| Thallium,7440-28-0† | -6.6 | -0.00157 | mg/L | 0.000729 | -0.06264 | mg/kg | 0.029154 | 46.54% |
| Tin,7440-31-5† | -18.8 | -0.00203 | mg/L | 0.000426 | -0.08133 | mg/kg | 0.017024 | 20.93% |
| Titanium,7440-32-6† | 897.0 | 0.00088 | mg/L | 0.000250 | 0.03505 | mg/kg | 0.009999 | 28.52% |
| Vanadium,7440-62-2† | -312.2 | -0.00088 | mg/L | 0.000149 | -0.03525 | mg/kg | 0.005978 | 16.96% |
| Zinc,7440-66-6† | -363.7 | -0.00255 | mg/L | 0.000131 | -0.10202 | mg/kg | 0.005257 | 5.15% |
| Zirconium,7440-67-7† | 35.6 | 0.00005 | mg/L | 0.000200 | 0.00214 | mg/kg | 0.007995 | 372.79% |

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**Sequence No.: 11**
**Sample ID: 1244706**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt: 1.25 g**
**Dilution: 1X**

**Autosampler Location: 18**
**Date Collected: 10/30/2013 6:26:57 PM**
**Data Type: Reprocessed on 10/31/2013 8:26:52 AM**

**Initial Sample Vol:**
**Sample Prep Vol: 50 mL**

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**Mean Data: 1244706**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6970718.4 | 102.307 | % | 1.9184 | | | | 1.88% |
| Yttrium,7440-65-5A | 3242426.2 | 100.024 | % | 1.6199 | | | | 1.62% |
| Yttrium,7440-65-5R | 334882.7 | 99.8288 | % | 0.82393 | | | | 0.83% |
| Ar 420.067 R | 3710629.0 | 98.0031 | % | 0.52326 | | | | 0.53% |
| Ar 363.268 A | 137857.4 | 97.2854 | % | 0.28569 | | | | 0.29% |
| Aluminum,7429-90-5† | 17513.7 | 5.39906 | mg/L | 0.126456 | 215.962 | mg/kg | 5.0582 | 2.34% |
| Antimony,7440-36-0† | 1751.9 | 0.53039 | mg/L | 0.011705 | 21.2156 | mg/kg | 0.46819 | 2.21% |
| Arsenic,7440-38-2† | 1138.4 | 0.55051 | mg/L | 0.015239 | 22.0205 | mg/kg | 0.60957 | 2.77% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Barium,7440-39-3† | 116425.9 | 0.53133 | mg/L | 0.020608 | 21.2532 | mg/kg | 0.82433 | 3.88% |
| Beryllium,7440-41-7† | 3898398.6 | 0.51818 | mg/L | 0.015012 | 20.7272 | mg/kg | 0.60046 | 2.90% |
| Boron,7440-42-8† | 189028.7 | 2.53892 | mg/L | 0.119950 | 101.557 | mg/kg | 4.7980 | 4.72% |
| Cadmium,7440-43-9† | 122615.0 | 0.52578 | mg/L | 0.022355 | 21.0313 | mg/kg | 0.89422 | 4.25% |
| Calcium,7440-70-2† | 89007.7 | 5.45841 | mg/L | 0.123678 | 218.336 | mg/kg | 4.9471 | 2.27% |
| Chromium,7440-47-3† | 84322.3 | 0.53509 | mg/L | 0.019580 | 21.4035 | mg/kg | 0.78322 | 3.66% |
| Cobalt,7440-48-4† | 37806.1 | 0.53554 | mg/L | 0.021628 | 21.4218 | mg/kg | 0.86513 | 4.04% |
| Copper,7440-50-8† | 264606.9 | 0.53163 | mg/L | 0.019846 | 21.2652 | mg/kg | 0.79385 | 3.73% |
| Iron,7439-89-6† | 105469.5 | 5.31983 | mg/L | 0.140299 | 212.793 | mg/kg | 5.6119 | 2.64% |
| Lead,7439-92-1† | 13122.8 | 0.52660 | mg/L | 0.015038 | 21.0640 | mg/kg | 0.60152 | 2.86% |
| Lithium,7439-93-2† | 41110.3 | 0.52331 | mg/L | 0.015615 | 20.9326 | mg/kg | 0.62458 | 2.98% |
| Magnesium,7439-95-4† | 17457.3 | 5.40789 | mg/L | 0.146197 | 216.316 | mg/kg | 5.8479 | 2.70% |
| Manganese,7439-96-5† | 767962.0 | 0.54221 | mg/L | 0.021094 | 21.6884 | mg/kg | 0.84377 | 3.89% |
| Molybdenum,7439-98-7 | 12985.6 | 0.54442 | mg/L | 0.017446 | 21.7766 | mg/kg | 0.69782 | 3.20% |
| Nickel,7440-02-0† | 50538.8 | 0.53748 | mg/L | 0.021582 | 21.4991 | mg/kg | 0.86328 | 4.02% |
| Potassium,7440-09-7† | 39386.4 | 10.4037 | mg/L | 0.24115 | 416.148 | mg/kg | 9.6459 | 2.32% |
| Selenium,7782-49-2† | 1382.2 | 0.51926 | mg/L | 0.018502 | 20.7705 | mg/kg | 0.74007 | 3.56% |
| Silicon,7440-21-3† | 1358.5 | 0.33842 | mg/L | 0.010113 | 13.5368 | mg/kg | 0.40454 | 2.99% |
| Silver,7440-22-4† | 262008.1 | 0.50873 | mg/L | 0.019009 | 20.3491 | mg/kg | 0.76036 | 3.74% |
| Sodium,7440-23-5† | 207015.1 | 21.3769 | mg/L | 0.55066 | 855.077 | mg/kg | 22.0265 | 2.58% |
| Strontium,7440-24-6† | 398275.5 | 0.52603 | mg/L | 0.013690 | 21.0413 | mg/kg | 0.54760 | 2.60% |
| Thallium,7440-28-0† | 2178.3 | 0.53485 | mg/L | 0.018412 | 21.3939 | mg/kg | 0.73648 | 3.44% |
| Tin,7440-31-5† | 4933.3 | 0.54051 | mg/L | 0.015458 | 21.6202 | mg/kg | 0.61833 | 2.86% |
| Titanium,7440-32-6† | 549612.7 | 0.53690 | mg/L | 0.016092 | 21.4759 | mg/kg | 0.64369 | 3.00% |
| Vanadium,7440-62-2† | 189215.5 | 0.53158 | mg/L | 0.021688 | 21.2632 | mg/kg | 0.86751 | 4.08% |
| Zinc,7440-66-6† | 73370.5 | 0.50935 | mg/L | 0.020286 | 20.3740 | mg/kg | 0.81143 | 3.98% |
| Zirconium,7440-67-7† | 3938.9 | 0.00577 | mg/L | 0.000491 | 0.23073 | mg/kg | 0.019620 | 8.50% |

**Sequence No.: 12**
**Sample ID: 21310171201**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt: 1.26 g**
**Dilution: 5X**

**Autosampler Location: 19**
**Date Collected: 10/30/2013 6:33:26 PM**
**Data Type: Reprocessed on 10/31/2013 8:26:54 AM**

**Initial Sample Vol:**
**Sample Prep Vol: 50 mL**

**Mean Data: 21310171201**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6988423.2 | 102.567 | % | 2.1077 | | | | 2.05% |
| Yttrium,7440-65-5A | 3313170.0 | 102.206 | % | 0.8404 | | | | 0.82% |
| Yttrium,7440-65-5R | 360912.7 | 107.588 | % | 0.9446 | | | | 0.88% |
| Ar 420.067 R | 3792275.3 | 100.159 | % | 0.3280 | | | | 0.33% |
| Ar 363.268 A | 136396.8 | 96.2547 | % | 0.35807 | | | | 0.37% |
| Aluminum,7429-90-5† | 63171.8 | 19.4975 | mg/L | 0.45692 | 3868.55 | mg/kg | 90.659 | 2.34% |
| Antimony,7440-36-0† | 24.8 | 0.01213 | mg/L | 0.002380 | 2.40606 | mg/kg | 0.472246 | 19.63% |
| Arsenic,7440-38-2† | -3.7 | 0.01201 | mg/L | 0.002158 | 2.38267 | mg/kg | 0.428250 | 17.97% |
| Barium,7440-39-3† | 61162.6 | 0.27797 | mg/L | 0.001025 | 55.1528 | mg/kg | 0.20331 | 0.37% |
| Beryllium,7440-41-7† | -7688.3 | 0.00207 | mg/L | 0.000733 | 0.41019 | mg/kg | 0.145364 | 35.44% |
| Boron,7440-42-8† | -16976.6 | 0.03844 | mg/L | 0.002204 | 7.62731 | mg/kg | 0.437331 | 5.73% |
| Cadmium,7440-43-9† | 3178.8 | 0.01248 | mg/L | 0.000455 | 2.47713 | mg/kg | 0.090344 | 3.65% |
| Calcium,7440-70-2† | 212933.3 | 13.0531 | mg/L | 0.26563 | 2589.90 | mg/kg | 52.704 | 2.03% |
| Chromium,7440-47-3† | 14924.1 | 0.09754 | mg/L | 0.000283 | 19.3534 | mg/kg | 0.05624 | 0.29% |
| Cobalt,7440-48-4† | 1612.9 | 0.01951 | mg/L | 0.000437 | 3.87004 | mg/kg | 0.086713 | 2.24% |
| Copper,7440-50-8† | 178969.2 | 0.35904 | mg/L | 0.001878 | 71.2380 | mg/kg | 0.37270 | 0.52% |
| Iron,7439-89-6† | 1149621.4 | 57.9931 | mg/L | 2.36830 | 11506.6 | mg/kg | 469.90 | 4.08% |
| Lead,7439-92-1† | 54641.2 | 2.19088 | mg/L | 0.008175 | 434.698 | mg/kg | 1.6219 | 0.37% |
| Lithium,7439-93-2† | 3465.2 | 0.04407 | mg/L | 0.001606 | 8.74316 | mg/kg | 0.318608 | 3.64% |
| Magnesium,7439-95-4† | 33826.3 | 10.4602 | mg/L | 0.20933 | 2075.44 | mg/kg | 41.535 | 2.00% |
| Manganese,7439-96-5† | 779217.6 | 0.55046 | mg/L | 0.002347 | 109.217 | mg/kg | 0.4657 | 0.43% |
| Molybdenum,7439-98-7 | 293.3 | 0.01778 | mg/L | 0.000521 | 3.52786 | mg/kg | 0.103341 | 2.93% |
| Nickel,7440-02-0† | 7206.1 | 0.07684 | mg/L | 0.000805 | 15.2469 | mg/kg | 0.15980 | 1.05% |
| Potassium,7440-09-7† | 12268.1 | 3.25144 | mg/L | 0.106846 | 645.127 | mg/kg | 21.1996 | 3.29% |
| Selenium,7782-49-2† | 5.4 | 0.01458 | mg/L | 0.002572 | 2.89262 | mg/kg | 0.510227 | 17.64% |
| Silicon,7440-21-3† | 18301.3 | 4.57643 | mg/L | 0.087818 | 908.023 | mg/kg | 17.4242 | 1.92% |
| Silver,7440-22-4† | -1088.1 | -0.00054 | mg/L | 0.000951 | -0.10757 | mg/kg | 0.188767 | 175.48% |
| Sodium,7440-23-5† | 3731.3 | 0.38867 | mg/L | 0.002297 | 77.1174 | mg/kg | 0.45577 | 0.59% |
| Strontium,7440-24-6† | 53712.5 | 0.07048 | mg/L | 0.001602 | 13.9849 | mg/kg | 0.31787 | 2.27% |
| Thallium,7440-28-0† | -59.2 | 0.00294 | mg/L | 0.003041 | 0.58310 | mg/kg | 0.603387 | 103.48% |
| Tin,7440-31-5† | 642.1 | 0.07489 | mg/L | 0.001975 | 14.8591 | mg/kg | 0.39179 | 2.64% |
| Titanium,7440-32-6† | 1141364.9 | 1.11496 | mg/L | 0.005369 | 221.222 | mg/kg | 1.0652 | 0.48% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Vanadium,7440-62-2† | 17717.8 | 0.04663 | mg/L | 0.001191 | 9.25252 | mg/kg | 0.236363 | 2.55% |
| Zinc,7440-66-6† | 525927.7 | 3.67590 | mg/L | 0.014750 | 729.345 | mg/kg | 2.9266 | 0.40% |
| Zirconium,7440-67-7† | 7130.8 | 0.01026 | mg/L | 0.000527 | 2.03575 | mg/kg | 0.104538 | 5.14% |

**Sequence No.: 13**
**Sample ID: 21310171201**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt: 1.26 g**
**Dilution: 1X**

**Autosampler Location: 20**
**Date Collected: 10/30/2013 6:39:54 PM**
**Data Type: Reprocessed on 10/31/2013 8:26:56 AM**

**Initial Sample Vol:**
**Sample Prep Vol: 50 mL**

**Mean Data: 21310171201**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6969186.9 | 102.285 | % | 1.4011 | | | | 1.37% |
| Yttrium,7440-65-5A | 3553358.8 | 109.616 | % | 0.9617 | | | | 0.88% |
| Yttrium,7440-65-5R | 377429.9 | 112.512 | % | 0.9060 | | | | 0.81% |
| Ar 420.067 R | 3797168.9 | 100.289 | % | 0.9904 | | | | 0.99% |
| Ar 363.268 A | 125762.8 | 88.7503 | % | 0.17532 | | | | 0.20% |
| Aluminum,7429-90-5† | 291539.9 | 89.9816 | mg/L | 1.11812 | 3570.70 | mg/kg | 44.370 | 1.24% |
| Antimony,7440-36-0† | 40.8 | 0.03407 | mg/L | 0.000682 | 1.35198 | mg/kg | 0.027047 | 2.00% |
| Arsenic,7440-38-2† | -9.7 | 0.05913 | mg/L | 0.001733 | 2.34644 | mg/kg | 0.068758 | 2.93% |
| Barium,7440-39-3† | 277214.9 | 1.25975 | mg/L | 0.013207 | 49.9900 | mg/kg | 0.52410 | 1.05% |
| Beryllium,7440-41-7† | -68662.1 | 0.00503 | mg/L | 0.000117 | 0.19972 | mg/kg | 0.004652 | 2.33% |
| Boron,7440-42-8† | -88284.5 | 0.06697 | mg/L | 0.030930 | 2.65742 | mg/kg | 1.227377 | 46.19% |
| Cadmium,7440-43-9† | 14029.0 | 0.05476 | mg/L | 0.000897 | 2.17319 | mg/kg | 0.035609 | 1.64% |
| Calcium,7440-70-2† | 975374.0 | 59.7912 | mg/L | 0.62921 | 2372.67 | mg/kg | 24.969 | 1.05% |
| Chromium,7440-47-3† | 64041.5 | 0.41976 | mg/L | 0.004660 | 16.6570 | mg/kg | 0.18491 | 1.11% |
| Cobalt,7440-48-4† | 6977.7 | 0.08339 | mg/L | 0.000760 | 3.30925 | mg/kg | 0.030165 | 0.91% |
| Copper,7440-50-8† | 819451.3 | 1.64393 | mg/L | 0.008362 | 65.2354 | mg/kg | 0.33181 | 0.51% |
| Iron,7439-89-6† | 5401506.2 | 272.481 | mg/L | 5.1309 | 10812.8 | mg/kg | 203.61 | 1.88% |
| Lead,7439-92-1† | 244100.4 | 9.78706 | mg/L | 0.116339 | 388.375 | mg/kg | 4.6166 | 1.19% |
| Lithium,7439-93-2† | 15169.3 | 0.19289 | mg/L | 0.002003 | 7.65446 | mg/kg | 0.079466 | 1.04% |
| Magnesium,7439-95-4† | 153872.6 | 47.5793 | mg/L | 0.45776 | 1888.07 | mg/kg | 18.165 | 0.96% |
| Manganese,7439-96-5† | 3509864.9 | 2.47951 | mg/L | 0.006402 | 98.3931 | mg/kg | 0.25403 | 0.26% |
| Molybdenum,7439-98-7 | 933.4 | 0.06486 | mg/L | 0.000706 | 2.57388 | mg/kg | 0.028018 | 1.09% |
| Nickel,7440-02-0† | 30303.9 | 0.32328 | mg/L | 0.003529 | 12.8285 | mg/kg | 0.14003 | 1.09% |
| Potassium,7440-09-7† | 55217.2 | 14.6367 | mg/L | 0.20686 | 580.820 | mg/kg | 8.2089 | 1.41% |
| Selenium,7782-49-2† | -31.6 | 0.04743 | mg/L | 0.001640 | 1.88196 | mg/kg | 0.065063 | 3.46% |
| Silicon,7440-21-3† | 84014.7 | 21.0089 | mg/L | 0.22063 | 833.686 | mg/kg | 8.7552 | 1.05% |
| Silver,7440-22-4† | -4603.8 | -0.00154 | mg/L | 0.000142 | -0.06121 | mg/kg | 0.005624 | 9.19% |
| Sodium,7440-23-5† | 15990.7 | 1.66686 | mg/L | 0.014140 | 66.1453 | mg/kg | 0.56113 | 0.85% |
| Strontium,7440-24-6† | 245865.3 | 0.32262 | mg/L | 0.003988 | 12.8025 | mg/kg | 0.15824 | 1.24% |
| Thallium,7440-28-0† | -260.1 | 0.01629 | mg/L | 0.001690 | 0.64646 | mg/kg | 0.067050 | 10.37% |
| Tin,7440-31-5† | 2780.2 | 0.32551 | mg/L | 0.004073 | 12.9172 | mg/kg | 0.16165 | 1.25% |
| Titanium,7440-32-6† | 5226945.4 | 5.10601 | mg/L | 0.028924 | 202.620 | mg/kg | 1.1478 | 0.57% |
| Vanadium,7440-62-2† | 81964.3 | 0.21550 | mg/L | 0.002789 | 8.55176 | mg/kg | 0.110670 | 1.29% |
| Zinc,7440-66-6† | 2351956.3 | 16.4375 | mg/L | 0.05616 | 652.281 | mg/kg | 2.2285 | 0.34% |
| Zirconium,7440-67-7† | 38719.1 | 0.05620 | mg/L | 0.000812 | 2.23000 | mg/kg | 0.032218 | 1.44% |

**Sequence No.: 14**
**Sample ID: 21310171203**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt: 1.25 g**
**Dilution: 1X**

**Autosampler Location: 21**
**Date Collected: 10/30/2013 6:46:22 PM**
**Data Type: Reprocessed on 10/31/2013 8:26:57 AM**

**Initial Sample Vol:**
**Sample Prep Vol: 50 mL**

**Mean Data: 21310171203**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6837109.0 | 100.346 | % | 0.9028 | | | | 0.90% |
| Yttrium,7440-65-5A | 4050727.6 | 124.959 | % | 1.5285 | | | | 1.22% |
| Yttrium,7440-65-5R | 433504.6 | 129.228 | % | 0.7080 | | | | 0.55% |
| Ar 420.067 R | 3721133.7 | 98.2805 | % | 0.32961 | | | | 0.34% |
| Ar 363.268 A | 118798.4 | 83.8356 | % | 0.44166 | | | | 0.53% |
| Aluminum,7429-90-5† | 285930.9 | 88.2501 | mg/L | 0.66923 | 3530.00 | mg/kg | 26.769 | 0.76% |
| Antimony,7440-36-0† | 16.4 | 0.02338 | mg/L | 0.007296 | 0.93520 | mg/kg | 0.291825 | 31.20% |
| Arsenic,7440-38-2† | -4.6 | 0.05918 | mg/L | 0.006118 | 2.36725 | mg/kg | 0.244708 | 10.34% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Barium,7440-39-3† | 152728.6 | 0.69244 | mg/L | 0.004248 | 27.6975 | mg/kg | 0.16991 | 0.61% |
| Beryllium,7440-41-7† | -38406.1 | 0.00985 | mg/L | 0.000112 | 0.39404 | mg/kg | 0.004466 | 1.13% |
| Boron,7440-42-8† | -91585.2 | 0.01513 | mg/L | 0.043194 | 0.60533 | mg/kg | 1.727751 | 285.42% |
| Cadmium,7440-43-9† | 7190.4 | 0.02543 | mg/L | 0.000711 | 1.01736 | mg/kg | 0.028428 | 2.79% |
| Calcium,7440-70-2† | 553850.5 | 33.9319 | mg/L | 0.14822 | 1357.28 | mg/kg | 5.929 | 0.44% |
| Chromium,7440-47-3† | 91583.6 | 0.59211 | mg/L | 0.002477 | 23.6846 | mg/kg | 0.09909 | 0.42% |
| Cobalt,7440-48-4† | 7536.7 | 0.09075 | mg/L | 0.001977 | 3.62989 | mg/kg | 0.079077 | 2.18% |
| Copper,7440-50-8† | 806067.4 | 1.61724 | mg/L | 0.003084 | 64.6898 | mg/kg | 0.12336 | 0.19% |
| Iron,7439-89-6† | 5368251.2 | 270.804 | mg/L | 8.1234 | 10832.1 | mg/kg | 324.94 | 3.00% |
| Lead,7439-92-1† | 117036.4 | 4.69058 | mg/L | 0.028636 | 187.623 | mg/kg | 1.1454 | 0.61% |
| Lithium,7439-93-2† | 14049.4 | 0.17863 | mg/L | 0.003074 | 7.14506 | mg/kg | 0.122962 | 1.72% |
| Magnesium,7439-95-4† | 87210.5 | 26.9269 | mg/L | 0.08608 | 1077.08 | mg/kg | 3.443 | 0.32% |
| Manganese,7439-96-5† | 3746914.2 | 2.64699 | mg/L | 0.005457 | 105.879 | mg/kg | 0.2183 | 0.21% |
| Molybdenum,7439-98-7 | 1016.4 | 0.06811 | mg/L | 0.000467 | 2.72440 | mg/kg | 0.018695 | 0.69% |
| Nickel,7440-02-0† | 56310.0 | 0.59985 | mg/L | 0.002898 | 23.9940 | mg/kg | 0.11593 | 0.48% |
| Potassium,7440-09-7† | 52631.1 | 13.9522 | mg/L | 0.14701 | 558.089 | mg/kg | 5.8804 | 1.05% |
| Selenium,7782-49-2† | -28.9 | 0.04765 | mg/L | 0.011605 | 1.90605 | mg/kg | 0.464212 | 24.35% |
| Silicon,7440-21-3† | 65819.2 | 16.4600 | mg/L | 0.09903 | 658.402 | mg/kg | 3.9612 | 0.60% |
| Silver,7440-22-4† | -9954.9 | -0.01208 | mg/L | 0.000163 | -0.48323 | mg/kg | 0.006523 | 1.35% |
| Sodium,7440-23-5† | 22973.8 | 2.38947 | mg/L | 0.020866 | 95.5788 | mg/kg | 0.83465 | 0.87% |
| Strontium,7440-24-6† | 383846.4 | 0.50565 | mg/L | 0.004196 | 20.2258 | mg/kg | 0.16785 | 0.83% |
| Thallium,7440-28-0† | -288.0 | 0.01319 | mg/L | 0.001527 | 0.52759 | mg/kg | 0.061092 | 11.58% |
| Tin,7440-31-5† | 3353.9 | 0.38836 | mg/L | 0.006049 | 15.5343 | mg/kg | 0.24197 | 1.56% |
| Titanium,7440-32-6† | 5524110.6 | 5.39634 | mg/L | 0.018887 | 215.854 | mg/kg | 0.7555 | 0.35% |
| Vanadium,7440-62-2† | 73326.5 | 0.19220 | mg/L | 0.001741 | 7.68794 | mg/kg | 0.069623 | 0.91% |
| Zinc,7440-66-6† | 1684088.7 | 11.7598 | mg/L | 0.01859 | 470.394 | mg/kg | 0.7436 | 0.16% |
| Zirconium,7440-67-7† | 41617.7 | 0.06047 | mg/L | 0.001508 | 2.41870 | mg/kg | 0.060304 | 2.49% |

**Sequence No.: 15**
**Sample ID: 21310172801**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt: 1.25 g**
**Dilution: 1X**

**Autosampler Location: 22**
**Date Collected: 10/30/2013 6:53:58 PM**
**Data Type: Reprocessed on 10/31/2013 8:26:59 AM**

**Initial Sample Vol:**
**Sample Prep Vol: 50 mL**

**Mean Data: 21310172801**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6532293.3 | 95.8727 | % | 0.98726 | | | | 1.03% |
| Yttrium,7440-65-5A | 3389825.7 | 104.571 | % | 0.8301 | | | | 0.79% |
| Yttrium,7440-65-5R | 370489.1 | 110.443 | % | 0.6438 | | | | 0.58% |
| Ar 420.067 R | 3594743.2 | 94.9424 | % | 1.34713 | | | | 1.42% |
| Ar 363.268 A | 119759.0 | 84.5134 | % | 0.17794 | | | | 0.21% |
| Aluminum,7429-90-5† | 604039.7 | 186.431 | mg/L | 1.3392 | 7457.25 | mg/kg | 53.566 | 0.72% |
| Antimony,7440-36-0† | -42.4 | 0.01695 | mg/L | 0.001495 | 0.67783 | mg/kg | 0.059804 | 8.82% |
| Arsenic,7440-38-2† | 61.1 | 0.15569 | mg/L | 0.005740 | 6.22780 | mg/kg | 0.229581 | 3.69% |
| Barium,7440-39-3† | 638019.1 | 2.90063 | mg/L | 0.003068 | 116.025 | mg/kg | 0.1227 | 0.11% |
| Beryllium,7440-41-7† | -112790.5 | 0.00834 | mg/L | 0.000138 | 0.33348 | mg/kg | 0.005538 | 1.66% |
| Boron,7440-42-8† | -91606.8 | 0.09627 | mg/L | 0.010751 | 3.85067 | mg/kg | 0.430032 | 11.17% |
| Cadmium,7440-43-9† | 2217.6 | 0.00422 | mg/L | 0.000068 | 0.16881 | mg/kg | 0.002740 | 1.62% |
| Calcium,7440-70-2† | 7753930.7 | 475.674 | mg/L | 3.2659 | 19026.9 | mg/kg | 130.64 | 0.69% |
| Chromium,7440-47-3† | 84640.2 | 0.55210 | mg/L | 0.001362 | 22.0839 | mg/kg | 0.05450 | 0.25% |
| Cobalt,7440-48-4† | 11420.0 | 0.13940 | mg/L | 0.001647 | 5.57587 | mg/kg | 0.065892 | 1.18% |
| Copper,7440-50-8† | 232338.9 | 0.45963 | mg/L | 0.002140 | 18.3852 | mg/kg | 0.08558 | 0.47% |
| Iron,7439-89-6† | 5640368.2 | 284.527 | mg/L | 1.7500 | 11381.1 | mg/kg | 70.00 | 0.62% |
| Lead,7439-92-1† | 33115.7 | 1.34070 | mg/L | 0.001494 | 53.6280 | mg/kg | 0.05974 | 0.11% |
| Lithium,7439-93-2† | 22654.6 | 0.28799 | mg/L | 0.001284 | 11.5196 | mg/kg | 0.05136 | 0.45% |
| Magnesium,7439-95-4† | 364794.6 | 112.920 | mg/L | 0.5592 | 4516.81 | mg/kg | 22.369 | 0.50% |
| Manganese,7439-96-5† | 9057774.3 | 6.39656 | mg/L | 0.045394 | 255.862 | mg/kg | 1.8158 | 0.71% |
| Molybdenum,7439-98-7 | -117.0 | 0.02486 | mg/L | 0.000917 | 0.99428 | mg/kg | 0.036669 | 3.69% |
| Nickel,7440-02-0† | 46938.5 | 0.49940 | mg/L | 0.000932 | 19.9759 | mg/kg | 0.03726 | 0.19% |
| Potassium,7440-09-7† | 180492.3 | 47.7249 | mg/L | 0.38740 | 1909.00 | mg/kg | 15.496 | 0.81% |
| Selenium,7782-49-2† | -19.9 | 0.04176 | mg/L | 0.011951 | 1.67032 | mg/kg | 0.478044 | 28.62% |
| Silicon,7440-21-3† | 118847.3 | 29.7109 | mg/L | 0.18853 | 1188.44 | mg/kg | 7.541 | 0.63% |
| Silver,7440-22-4† | -2240.8 | 0.00490 | mg/L | 0.000210 | 0.19600 | mg/kg | 0.008411 | 4.29% |
| Sodium,7440-23-5† | 92096.1 | 9.51789 | mg/L | 0.074960 | 380.716 | mg/kg | 2.9984 | 0.79% |
| Strontium,7440-24-6† | 1445855.7 | 1.89636 | mg/L | 0.062310 | 75.8544 | mg/kg | 2.49239 | 3.29% |
| Thallium,7440-28-0† | -398.4 | 0.03575 | mg/L | 0.003189 | 1.43014 | mg/kg | 0.127573 | 8.92% |
| Tin,7440-31-5† | -222.6 | 0.02403 | mg/L | 0.000967 | 0.96136 | mg/kg | 0.038672 | 4.02% |
| Titanium,7440-32-6† | 8612305.5 | 8.41336 | mg/L | 0.067475 | 336.535 | mg/kg | 2.6990 | 0.80% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Vanadium,7440-62-2† | 232291.8 | 0.63381 | mg/L | 0.000795 | 25.3526 | mg/kg | 0.03182 | 0.13% |
| Zinc,7440-66-6† | 235908.9 | 1.62408 | mg/L | 0.006477 | 64.9632 | mg/kg | 0.25908 | 0.40% |
| Zirconium,7440-67-7† | 110605.7 | 0.16368 | mg/L | 0.000524 | 6.54732 | mg/kg | 0.020976 | 0.32% |

**Sequence No.: 16**
**Sample ID: 21310181502**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt: 1.26 g**
**Dilution: 5X**

**Autosampler Location: 23**
**Date Collected: 10/30/2013 7:01:00 PM**
**Data Type: Reprocessed on 10/31/2013 8:27:01 AM**

**Initial Sample Vol:**
**Sample Prep Vol: 50 mL**

**Mean Data: 21310181502**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6909711.8 | 101.412 | % | 1.0671 | | | | 1.05% |
| Yttrium,7440-65-5A | 3245401.5 | 100.116 | % | 0.9564 | | | | 0.96% |
| Yttrium,7440-65-5R | 343376.0 | 102.361 | % | 2.0136 | | | | 1.97% |
| Ar 420.067 R | 3876885.3 | 102.394 | % | 1.3419 | | | | 1.31% |
| Ar 363.268 A | 135465.3 | 95.5973 | % | 0.47146 | | | | 0.49% |
| Aluminum,7429-90-5† | 1189.2 | 0.36667 | mg/L | 0.017189 | 72.7525 | mg/kg | 3.41053 | 4.69% |
| Antimony,7440-36-0† | 8.5 | 0.00249 | mg/L | 0.002049 | 0.49348 | mg/kg | 0.406585 | 82.39% |
| Arsenic,7440-38-2† | 2.7 | 0.00304 | mg/L | 0.004267 | 0.60231 | mg/kg | 0.846593 | 140.56% |
| Barium,7440-39-3† | 4629.4 | 0.02092 | mg/L | 0.001031 | 4.15077 | mg/kg | 0.204602 | 4.93% |
| Beryllium,7440-41-7† | -848.7 | 0.00006 | mg/L | 0.000040 | 0.01114 | mg/kg | 0.007972 | 71.53% |
| Boron,7440-42-8† | -4227.2 | -0.00095 | mg/L | 0.000767 | -0.18787 | mg/kg | 0.152199 | 81.01% |
| Cadmium,7440-43-9† | -17.2 | -0.00033 | mg/L | 0.000038 | -0.06507 | mg/kg | 0.007551 | 11.61% |
| Calcium,7440-70-2† | 30094.5 | 1.84449 | mg/L | 0.019959 | 365.971 | mg/kg | 3.9601 | 1.08% |
| Chromium,7440-47-3† | 7425.6 | 0.04766 | mg/L | 0.000216 | 9.45600 | mg/kg | 0.042771 | 0.45% |
| Cobalt,7440-48-4† | 94.1 | 0.00094 | mg/L | 0.000043 | 0.18748 | mg/kg | 0.008616 | 4.60% |
| Copper,7440-50-8† | 39191.7 | 0.07859 | mg/L | 0.002550 | 15.5940 | mg/kg | 0.50594 | 3.24% |
| Iron,7439-89-6† | 239706.4 | 12.0923 | mg/L | 0.18352 | 2399.26 | mg/kg | 36.413 | 1.52% |
| Lead,7439-92-1† | 131.1 | 0.00471 | mg/L | 0.000834 | 0.93380 | mg/kg | 0.165432 | 17.72% |
| Lithium,7439-93-2† | 312.4 | 0.00397 | mg/L | 0.000667 | 0.78700 | mg/kg | 0.132288 | 16.81% |
| Magnesium,7439-95-4† | 2633.4 | 0.81167 | mg/L | 0.022006 | 161.045 | mg/kg | 4.3662 | 2.71% |
| Manganese,7439-96-5† | 360693.3 | 0.25469 | mg/L | 0.006650 | 50.5339 | mg/kg | 1.31944 | 2.61% |
| Molybdenum,7439-98-7 | 8.7 | 0.00141 | mg/L | 0.000636 | 0.27910 | mg/kg | 0.126258 | 45.24% |
| Nickel,7440-02-0† | 27080.6 | 0.28811 | mg/L | 0.005712 | 57.1641 | mg/kg | 1.13338 | 1.98% |
| Potassium,7440-09-7† | 2393.0 | 0.63506 | mg/L | 0.030024 | 126.004 | mg/kg | 5.9571 | 4.73% |
| Selenium,7782-49-2† | 2.9 | 0.00415 | mg/L | 0.003358 | 0.82342 | mg/kg | 0.666202 | 80.91% |
| Silicon,7440-21-3† | 535.7 | 0.13383 | mg/L | 0.003448 | 26.5541 | mg/kg | 0.68415 | 2.58% |
| Silver,7440-22-4† | -760.8 | -0.00119 | mg/L | 0.000702 | -0.23543 | mg/kg | 0.139305 | 59.17% |
| Sodium,7440-23-5† | 53778.0 | 5.55380 | mg/L | 0.131728 | 1101.95 | mg/kg | 26.137 | 2.37% |
| Strontium,7440-24-6† | 5120.4 | 0.00669 | mg/L | 0.000302 | 1.32725 | mg/kg | 0.059939 | 4.52% |
| Thallium,7440-28-0† | -8.9 | -0.00085 | mg/L | 0.001154 | -0.16838 | mg/kg | 0.229008 | 136.01% |
| Tin,7440-31-5† | -16.8 | -0.00143 | mg/L | 0.001994 | -0.28357 | mg/kg | 0.395645 | 139.52% |
| Titanium,7440-32-6† | 61607.2 | 0.06016 | mg/L | 0.003124 | 11.9370 | mg/kg | 0.61986 | 5.19% |
| Vanadium,7440-62-2† | 878.8 | 0.00189 | mg/L | 0.000763 | 0.37458 | mg/kg | 0.151321 | 40.40% |
| Zinc,7440-66-6† | 6692.9 | 0.04358 | mg/L | 0.002277 | 8.64737 | mg/kg | 0.451868 | 5.23% |
| Zirconium,7440-67-7† | 343.6 | 0.00051 | mg/L | 0.000075 | 0.10027 | mg/kg | 0.014958 | 14.92% |

**Sequence No.: 17**
**Sample ID: 21310181502**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt: 1.26 g**
**Dilution: 1X**

**Autosampler Location: 24**
**Date Collected: 10/30/2013 7:07:28 PM**
**Data Type: Reprocessed on 10/31/2013 8:27:02 AM**

**Initial Sample Vol:**
**Sample Prep Vol: 50 mL**

**Mean Data: 21310181502**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 7020617.1 | 103.040 | % | 1.1286 | | | | 1.10% |
| Yttrium,7440-65-5A | 3332709.2 | 102.809 | % | 0.0477 | | | | 0.05% |
| Yttrium,7440-65-5R | 344193.8 | 102.605 | % | 1.4801 | | | | 1.44% |
| Ar 420.067 R | 3856274.0 | 101.850 | % | 0.3552 | | | | 0.35% |
| Ar 363.268 A | 134648.8 | 95.0211 | % | 0.20605 | | | | 0.22% |
| Aluminum,7429-90-5† | 776.5 | 0.23786 | mg/L | 0.015644 | 9.43880 | mg/kg | 0.620810 | 6.58% |
| Antimony,7440-36-0† | 14.3 | 0.00361 | mg/L | 0.004435 | 0.14322 | mg/kg | 0.176009 | 122.89% |
| Arsenic,7440-38-2† | 2.8 | 0.00889 | mg/L | 0.003247 | 0.35279 | mg/kg | 0.128855 | 36.52% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Barium,7440-39-3† | 18092.4 | 0.08166 | mg/L | 0.000866 | 3.24062 | mg/kg | 0.034360 | 1.06% |
| Beryllium,7440-41-7† | -5616.2 | -0.00009 | mg/L | 0.000022 | -0.00359 | mg/kg | 0.000886 | 24.71% |
| Boron,7440-42-8† | -19144.8 | 0.00123 | mg/L | 0.006982 | 0.04872 | mg/kg | 0.277054 | 568.63% |
| Cadmium,7440-43-9† | 185.0 | -0.00039 | mg/L | 0.000035 | -0.01547 | mg/kg | 0.001376 | 8.90% |
| Calcium,7440-70-2† | 72701.5 | 4.45182 | mg/L | 0.085262 | 176.659 | mg/kg | 3.3834 | 1.92% |
| Chromium,7440-47-3† | 34948.8 | 0.22425 | mg/L | 0.000688 | 8.89887 | mg/kg | 0.027300 | 0.31% |
| Cobalt,7440-48-4† | 391.1 | 0.00383 | mg/L | 0.000120 | 0.15200 | mg/kg | 0.004775 | 3.14% |
| Copper,7440-50-8† | 174508.4 | 0.34996 | mg/L | 0.000520 | 13.8872 | mg/kg | 0.02065 | 0.15% |
| Iron,7439-89-6† | 1110404.6 | 56.0157 | mg/L | 1.29197 | 2222.84 | mg/kg | 51.269 | 2.31% |
| Lead,7439-92-1† | 459.4 | 0.01568 | mg/L | 0.001661 | 0.62217 | mg/kg | 0.065910 | 10.59% |
| Lithium,7439-93-2† | 198.0 | 0.00248 | mg/L | 0.001345 | 0.09829 | mg/kg | 0.053390 | 54.32% |
| Magnesium,7439-95-4† | 9263.6 | 2.85052 | mg/L | 0.076655 | 113.116 | mg/kg | 3.0419 | 2.69% |
| Manganese,7439-96-5† | 1617433.8 | 1.14210 | mg/L | 0.003059 | 45.3213 | mg/kg | 0.12139 | 0.27% |
| Molybdenum,7439-98-7 | -49.9 | 0.00270 | mg/L | 0.000426 | 0.10727 | mg/kg | 0.016887 | 15.74% |
| Nickel,7440-02-0† | 129648.1 | 1.37931 | mg/L | 0.002661 | 54.7346 | mg/kg | 0.10559 | 0.19% |
| Potassium,7440-09-7† | 8586.8 | 2.28195 | mg/L | 0.044604 | 90.5536 | mg/kg | 1.77001 | 1.95% |
| Selenium,7782-49-2† | 22.2 | 0.02277 | mg/L | 0.004278 | 0.90368 | mg/kg | 0.169754 | 18.78% |
| Silicon,7440-21-3† | 1369.2 | 0.34187 | mg/L | 0.007158 | 13.5663 | mg/kg | 0.28405 | 2.09% |
| Silver,7440-22-4† | -1794.6 | -0.00216 | mg/L | 0.000041 | -0.08559 | mg/kg | 0.001632 | 1.91% |
| Sodium,7440-23-5† | 264190.2 | 27.2834 | mg/L | 0.60596 | 1082.68 | mg/kg | 24.046 | 2.22% |
| Strontium,7440-24-6† | 10986.7 | 0.01428 | mg/L | 0.000343 | 0.56666 | mg/kg | 0.013592 | 2.40% |
| Thallium,7440-28-0† | -19.3 | 0.00069 | mg/L | 0.002451 | 0.02752 | mg/kg | 0.097269 | 353.50% |
| Tin,7440-31-5† | -46.0 | -0.00344 | mg/L | 0.001146 | -0.13632 | mg/kg | 0.045468 | 33.35% |
| Titanium,7440-32-6† | 238198.2 | 0.23259 | mg/L | 0.000921 | 9.22987 | mg/kg | 0.036547 | 0.40% |
| Vanadium,7440-62-2† | 3192.1 | 0.00632 | mg/L | 0.000054 | 0.25092 | mg/kg | 0.002158 | 0.86% |
| Zinc,7440-66-6† | 24909.2 | 0.15889 | mg/L | 0.001610 | 6.30508 | mg/kg | 0.063898 | 1.01% |
| Zirconium,7440-67-7† | 969.5 | 0.00142 | mg/L | 0.000127 | 0.05641 | mg/kg | 0.005037 | 8.93% |

**Sequence No.: 18**
**Sample ID: 2500**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution: 1X**

**Autosampler Location: 25**
**Date Collected: 10/30/2013 7:13:57 PM**
**Data Type: Reprocessed on 10/31/2013 8:27:04 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 2500**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6974233.6 | 102.359 | % | 0.7468 | | | | 0.73% |
| Yttrium,7440-65-5A | 3353656.2 | 103.455 | % | 1.2754 | | | | 1.23% |
| Yttrium,7440-65-5R | 355519.8 | 105.981 | % | 0.6437 | | | | 0.61% |
| Ar 420.067 R | 3869589.2 | 102.201 | % | 0.3111 | | | | 0.30% |
| Ar 363.268 A | 136288.0 | 96.1779 | % | 0.38092 | | | | 0.40% |
| Aluminum,7429-90-5† | -53.3 | -0.01646 | mg/L | 0.014251 | -0.01646 | mg/L | 0.014251 | 86.55% |
| Antimony,7440-36-0† | -10.0 | -0.00306 | mg/L | 0.001541 | -0.00306 | mg/L | 0.001541 | 50.30% |
| Arsenic,7440-38-2† | 0.5 | 0.00020 | mg/L | 0.001711 | 0.00020 | mg/L | 0.001711 | 838.90% |
| Barium,7440-39-3† | 56.2 | 0.00025 | mg/L | 0.000025 | 0.00025 | mg/L | 0.000025 | 9.89% |
| Beryllium,7440-41-7† | -149.0 | -0.00002 | mg/L | 0.000019 | -0.00002 | mg/L | 0.000019 | 103.78% |
| Boron,7440-42-8† | -397.2 | -0.00495 | mg/L | 0.000402 | -0.00495 | mg/L | 0.000402 | 8.11% |
| Cadmium,7440-43-9† | -63.4 | -0.00027 | mg/L | 0.000040 | -0.00027 | mg/L | 0.000040 | 14.66% |
| Calcium,7440-70-2† | -132.3 | -0.00812 | mg/L | 0.000190 | -0.00812 | mg/L | 0.000190 | 2.33% |
| Chromium,7440-47-3† | -87.9 | -0.00055 | mg/L | 0.000194 | -0.00055 | mg/L | 0.000194 | 35.03% |
| Cobalt,7440-48-4† | -2.3 | -0.00004 | mg/L | 0.000133 | -0.00004 | mg/L | 0.000133 | 378.87% |
| Copper,7440-50-8† | -376.3 | -0.00076 | mg/L | 0.000231 | -0.00076 | mg/L | 0.000231 | 30.51% |
| Iron,7439-89-6† | 1429.4 | 0.07211 | mg/L | 0.018737 | 0.07211 | mg/L | 0.018737 | 25.98% |
| Lead,7439-92-1† | -87.3 | -0.00350 | mg/L | 0.000785 | -0.00350 | mg/L | 0.000785 | 22.40% |
| Lithium,7439-93-2† | -56.5 | -0.00072 | mg/L | 0.001198 | -0.00072 | mg/L | 0.001198 | 166.69% |
| Magnesium,7439-95-4† | -10.0 | -0.00313 | mg/L | 0.011383 | -0.00313 | mg/L | 0.011383 | 364.13% |
| Manganese,7439-96-5† | 654.9 | 0.00046 | mg/L | 0.000335 | 0.00046 | mg/L | 0.000335 | 72.41% |
| Molybdenum,7439-98-7 | -15.3 | -0.00064 | mg/L | 0.000915 | -0.00064 | mg/L | 0.000915 | 143.71% |
| Nickel,7440-02-0† | 74.5 | 0.00079 | mg/L | 0.000456 | 0.00079 | mg/L | 0.000456 | 57.52% |
| Potassium,7440-09-7† | 63.6 | 0.01680 | mg/L | 0.020377 | 0.01680 | mg/L | 0.020377 | 121.29% |
| Selenium,7782-49-2† | -3.7 | -0.00136 | mg/L | 0.001801 | -0.00136 | mg/L | 0.001801 | 132.41% |
| Silicon,7440-21-3† | 10.6 | 0.00265 | mg/L | 0.003837 | 0.00265 | mg/L | 0.003837 | 144.86% |
| Silver,7440-22-4† | -1329.1 | -0.00257 | mg/L | 0.000443 | -0.00257 | mg/L | 0.000443 | 17.24% |
| Sodium,7440-23-5† | 247.1 | 0.02552 | mg/L | 0.008331 | 0.02552 | mg/L | 0.008331 | 32.65% |
| Strontium,7440-24-6† | -4.7 | -0.00001 | mg/L | 0.000062 | -0.00001 | mg/L | 0.000062 | >999.9% |
| Thallium,7440-28-0† | -1.6 | -0.00039 | mg/L | 0.002502 | -0.00039 | mg/L | 0.002502 | 643.57% |
| Tin,7440-31-5† | -13.3 | -0.00145 | mg/L | 0.001203 | -0.00145 | mg/L | 0.001203 | 82.74% |
| Titanium,7440-32-6† | 492.4 | 0.00048 | mg/L | 0.000072 | 0.00048 | mg/L | 0.000072 | 15.02% |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Vanadium,7440-62-2† | -169.6 | -0.00048 | mg/L | 0.000338 | -0.00048 | mg/L | 0.000338 | 70.35% |
| Zinc,7440-66-6† | -1004.0 | -0.00704 | mg/L | 0.000253 | -0.00704 | mg/L | 0.000253 | 3.60% |
| Zirconium,7440-67-7† | -544.7 | -0.00083 | mg/L | 0.000309 | -0.00083 | mg/L | 0.000309 | 37.36% |

**Sequence No.: 19**
**Sample ID: 2500**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution: 1X**

**Autosampler Location: 26**
**Date Collected: 10/30/2013 7:20:16 PM**
**Data Type: Reprocessed on 10/31/2013 8:27:06 AM**
**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 2500**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6991940.9 | 102.619 | % | 0.4591 | | | | 0.45% |
| Yttrium,7440-65-5A | 3353183.3 | 103.441 | % | 1.8377 | | | | 1.78% |
| Yttrium,7440-65-5R | 356146.8 | 106.168 | % | 0.8250 | | | | 0.78% |
| Ar 420.067 R | 3887287.1 | 102.669 | % | 0.2279 | | | | 0.22% |
| Ar 363.268 A | 135722.5 | 95.7789 | % | 0.53539 | | | | 0.56% |
| Aluminum,7429-90-5† | 3.1 | 0.00098 | mg/L | 0.005975 | 0.00098 | mg/L | 0.005975 | 610.13% |
| Antimony,7440-36-0† | 3.2 | 0.00097 | mg/L | 0.005199 | 0.00097 | mg/L | 0.005199 | 535.01% |
| Arsenic,7440-38-2† | 1.1 | 0.00049 | mg/L | 0.004171 | 0.00049 | mg/L | 0.004171 | 846.38% |
| Barium,7440-39-3† | 63.6 | 0.00029 | mg/L | 0.000024 | 0.00029 | mg/L | 0.000024 | 8.21% |
| Beryllium,7440-41-7† | 46.8 | 0.00001 | mg/L | 0.000014 | 0.00001 | mg/L | 0.000014 | 210.54% |
| Boron,7440-42-8† | -416.6 | -0.00548 | mg/L | 0.000210 | -0.00548 | mg/L | 0.000210 | 3.83% |
| Cadmium,7440-43-9† | -68.6 | -0.00029 | mg/L | 0.000032 | -0.00029 | mg/L | 0.000032 | 10.91% |
| Calcium,7440-70-2† | -201.0 | -0.01233 | mg/L | 0.010494 | -0.01233 | mg/L | 0.010494 | 85.12% |
| Chromium,7440-47-3† | 2.8 | 0.00002 | mg/L | 0.000108 | 0.00002 | mg/L | 0.000108 | 619.61% |
| Cobalt,7440-48-4† | -20.2 | -0.00029 | mg/L | 0.000325 | -0.00029 | mg/L | 0.000325 | 113.12% |
| Copper,7440-50-8† | -529.7 | -0.00106 | mg/L | 0.000330 | -0.00106 | mg/L | 0.000330 | 30.97% |
| Iron,7439-89-6† | 281.5 | 0.01420 | mg/L | 0.012798 | 0.01420 | mg/L | 0.012798 | 90.12% |
| Lead,7439-92-1† | -84.9 | -0.00340 | mg/L | 0.000698 | -0.00340 | mg/L | 0.000698 | 20.50% |
| Lithium,7439-93-2† | -59.6 | -0.00076 | mg/L | 0.001540 | -0.00076 | mg/L | 0.001540 | 203.16% |
| Magnesium,7439-95-4† | -13.1 | -0.00407 | mg/L | 0.006438 | -0.00407 | mg/L | 0.006438 | 158.11% |
| Manganese,7439-96-5† | -781.0 | -0.00055 | mg/L | 0.000084 | -0.00055 | mg/L | 0.000084 | 15.22% |
| Molybdenum,7439-98-7 | -16.4 | -0.00068 | mg/L | 0.000237 | -0.00068 | mg/L | 0.000237 | 34.62% |
| Nickel,7440-02-0† | -57.7 | -0.00061 | mg/L | 0.000149 | -0.00061 | mg/L | 0.000149 | 24.34% |
| Potassium,7440-09-7† | -34.1 | -0.00900 | mg/L | 0.020578 | -0.00900 | mg/L | 0.020578 | 228.71% |
| Selenium,7782-49-2† | -1.8 | -0.00065 | mg/L | 0.002085 | -0.00065 | mg/L | 0.002085 | 318.34% |
| Silicon,7440-21-3† | -23.2 | -0.00580 | mg/L | 0.005620 | -0.00580 | mg/L | 0.005620 | 96.94% |
| Silver,7440-22-4† | -1251.7 | -0.00242 | mg/L | 0.000346 | -0.00242 | mg/L | 0.000346 | 14.29% |
| Sodium,7440-23-5† | -110.7 | -0.01143 | mg/L | 0.009194 | -0.01143 | mg/L | 0.009194 | 80.46% |
| Strontium,7440-24-6† | 41.8 | 0.00006 | mg/L | 0.000038 | 0.00006 | mg/L | 0.000038 | 67.68% |
| Thallium,7440-28-0† | 9.3 | 0.00223 | mg/L | 0.001870 | 0.00223 | mg/L | 0.001870 | 83.70% |
| Tin,7440-31-5† | -24.4 | -0.00266 | mg/L | 0.002042 | -0.00266 | mg/L | 0.002042 | 76.83% |
| Titanium,7440-32-6† | 143.3 | 0.00014 | mg/L | 0.000049 | 0.00014 | mg/L | 0.000049 | 35.27% |
| Vanadium,7440-62-2† | -261.1 | -0.00073 | mg/L | 0.000254 | -0.00073 | mg/L | 0.000254 | 34.65% |
| Zinc,7440-66-6† | -973.4 | -0.00681 | mg/L | 0.000077 | -0.00681 | mg/L | 0.000077 | 1.13% |
| Zirconium,7440-67-7† | -570.9 | -0.00087 | mg/L | 0.000197 | -0.00087 | mg/L | 0.000197 | 22.74% |

**Sequence No.: 20**
**Sample ID: 1800**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 7**
**Date Collected: 10/30/2013 7:26:34 PM**
**Data Type: Reprocessed on 10/31/2013 8:27:07 AM**
**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 1800**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6966792.1 | 102.250 | % | 1.6581 | | | | 1.62% |
| Yttrium,7440-65-5A | 3243544.7 | 100.058 | % | 1.3616 | | | | 1.36% |
| Yttrium,7440-65-5R | 346297.7 | 103.232 | % | 1.4929 | | | | 1.45% |
| Ar 420.067 R | 3773431.1 | 99.6618 | % | 0.43652 | | | | 0.44% |
| Ar 363.268 A | 135481.5 | 95.6087 | % | 0.35023 | | | | 0.37% |
| Aluminum,7429-90-5† | 15992.0 | 4.92974 | mg/L | 0.078319 | 4.92974 | mg/L | 0.078319 | 1.59% |
| QC value within limits for Aluminum,7429-90-5 Recovery = 98.59% | | | | | | | | |
| Antimony,7440-36-0† | 1612.6 | 0.48804 | mg/L | 0.003564 | 0.48804 | mg/L | 0.003564 | 0.73% |

QC value within limits for Antimony,7440-36-0 Recovery = 97.61%
Arsenic,7440-38-2† 1077.8 0.52110 mg/L 0.007082 0.52110 mg/L 0.007082 1.36%
QC value within limits for Arsenic,7440-38-2 Recovery = 104.22%
Barium,7440-39-3† 110453.9 0.50407 mg/L 0.005960 0.50407 mg/L 0.005960 1.18%
QC value within limits for Barium,7440-39-3 Recovery = 100.81%
Beryllium,7440-41-7† 3797837.5 0.50476 mg/L 0.002491 0.50476 mg/L 0.002491 0.49%
QC value within limits for Beryllium,7440-41-7 Recovery = 100.95%
Boron,7440-42-8† 183084.0 2.45903 mg/L 0.043038 2.45903 mg/L 0.043038 1.75%
QC value within limits for Boron,7440-42-8 Recovery = 98.36%
Cadmium,7440-43-9† 117659.0 0.50453 mg/L 0.005614 0.50453 mg/L 0.005614 1.11%
QC value within limits for Cadmium,7440-43-9 Recovery = 100.91%
Calcium,7440-70-2† 81300.8 4.98571 mg/L 0.065448 4.98571 mg/L 0.065448 1.31%
QC value within limits for Calcium,7440-70-2 Recovery = 99.71%
Chromium,7440-47-3† 79391.0 0.50381 mg/L 0.006132 0.50381 mg/L 0.006132 1.22%
QC value within limits for Chromium,7440-47-3 Recovery = 100.76%
Cobalt,7440-48-4† 35714.9 0.50593 mg/L 0.006425 0.50593 mg/L 0.006425 1.27%
QC value within limits for Cobalt,7440-48-4 Recovery = 101.19%
Copper,7440-50-8† 250104.8 0.50249 mg/L 0.006177 0.50249 mg/L 0.006177 1.23%
QC value within limits for Copper,7440-50-8 Recovery = 100.50%
Iron,7439-89-6† 102307.0 5.16034 mg/L 0.057784 5.16034 mg/L 0.057784 1.12%
QC value within limits for Iron,7439-89-6 Recovery = 103.21%
Lead,7439-92-1† 12492.6 0.50128 mg/L 0.004318 0.50128 mg/L 0.004318 0.86%
QC value within limits for Lead,7439-92-1 Recovery = 100.26%
Lithium,7439-93-2† 40377.1 0.51398 mg/L 0.006435 0.51398 mg/L 0.006435 1.25%
QC value within limits for Lithium,7439-93-2 Recovery = 102.80%
Magnesium,7439-95-4† 16298.1 5.04873 mg/L 0.071026 5.04873 mg/L 0.071026 1.41%
QC value within limits for Magnesium,7439-95-4 Recovery = 100.97%
Manganese,7439-96-5† 728031.6 0.51402 mg/L 0.001434 0.51402 mg/L 0.001434 0.28%
QC value within limits for Manganese,7439-96-5 Recovery = 102.80%
Molybdenum,7439-98-7 11798.3 0.49467 mg/L 0.007225 0.49467 mg/L 0.007225 1.46%
QC value within limits for Molybdenum,7439-98-7 Recovery = 98.93%
Nickel,7440-02-0† 47687.6 0.50716 mg/L 0.005790 0.50716 mg/L 0.005790 1.14%
QC value within limits for Nickel,7440-02-0 Recovery = 101.43%
Potassium,7440-09-7† 38195.8 10.0892 mg/L 0.09825 10.0892 mg/L 0.09825 0.97%
QC value within limits for Potassium,7440-09-7 Recovery = 100.89%
Selenium,7782-49-2† 1311.9 0.49290 mg/L 0.013909 0.49290 mg/L 0.013909 2.82%
QC value within limits for Selenium,7782-49-2 Recovery = 98.58%
Silicon,7440-21-3† 20056.3 5.01529 mg/L 0.090470 5.01529 mg/L 0.090470 1.80%
QC value within limits for Silicon,7440-21-3 Recovery = 100.31%
Silver,7440-22-4† 256151.7 0.49729 mg/L 0.006678 0.49729 mg/L 0.006678 1.34%
QC value within limits for Silver,7440-22-4 Recovery = 99.46%
Sodium,7440-23-5† 192758.2 19.9048 mg/L 0.23433 19.9048 mg/L 0.23433 1.18%
QC value within limits for Sodium,7440-23-5 Recovery = 99.52%
Strontium,7440-24-6† 369751.4 0.48836 mg/L 0.006181 0.48836 mg/L 0.006181 1.27%
QC value within limits for Strontium,7440-24-6 Recovery = 97.67%
Thallium,7440-28-0† 2077.0 0.50983 mg/L 0.006563 0.50983 mg/L 0.006563 1.29%
QC value within limits for Thallium,7440-28-0 Recovery = 101.97%
Tin,7440-31-5† 4386.6 0.48071 mg/L 0.004623 0.48071 mg/L 0.004623 0.96%
QC value within limits for Tin,7440-31-5 Recovery = 96.14%
Titanium,7440-32-6† 514631.9 0.50272 mg/L 0.001251 0.50272 mg/L 0.001251 0.25%
QC value within limits for Titanium,7440-32-6 Recovery = 100.54%
Vanadium,7440-62-2† 178299.1 0.50091 mg/L 0.006402 0.50091 mg/L 0.006402 1.28%
QC value within limits for Vanadium,7440-62-2 Recovery = 100.18%
Zinc,7440-66-6† 71770.5 0.49837 mg/L 0.006218 0.49837 mg/L 0.006218 1.25%
QC value within limits for Zinc,7440-66-6 Recovery = 99.67%
Zirconium,7440-67-7† 330138.9 0.50137 mg/L 0.005376 0.50137 mg/L 0.005376 1.07%
QC value within limits for Zirconium,7440-67-7 Recovery = 100.27%
All analyte(s) passed QC.

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**Sequence No.: 21** **Autosampler Location: 1**
**Sample ID: 1900** **Date Collected: 10/30/2013 7:33:00 PM**
**Analyst:** **Data Type: Reprocessed on 10/31/2013 8:27:09 AM**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

---

**Mean Data: 1900**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6935449.0 | 101.790 | % | 1.0593 | | | | 1.04% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Yttrium,7440-65-5A | 3241982.5 | 100.010 % | 0.9796 | | | 0.98% |
| Yttrium,7440-65-5R | 340138.0 | 101.395 % | 0.5251 | | | 0.52% |
| Ar 420.067 R | 3802871.8 | 100.439 % | 0.3487 | | | 0.35% |
| Ar 363.268 A | 135553.0 | 95.6592 % | 0.07023 | | | 0.07% |
| Aluminum,7429-90-5† | 17.2 | 0.00532 mg/L | 0.033282 | 0.00532 mg/L | 0.033282 | 626.04% |
| QC value within limits for Aluminum,7429-90-5 Recovery = Not calculated | | | | | | |
| Antimony,7440-36-0† | -5.3 | -0.00160 mg/L | 0.000216 | -0.00160 mg/L | 0.000216 | 13.48% |
| QC value within limits for Antimony,7440-36-0 Recovery = Not calculated | | | | | | |
| Arsenic,7440-38-2† | 12.1 | 0.00564 mg/L | 0.002814 | 0.00564 mg/L | 0.002814 | 49.91% |
| QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated | | | | | | |
| Barium,7440-39-3† | 168.7 | 0.00077 mg/L | 0.000083 | 0.00077 mg/L | 0.000083 | 10.89% |
| QC value within limits for Barium,7440-39-3 Recovery = Not calculated | | | | | | |
| Beryllium,7440-41-7† | 4605.2 | 0.00061 mg/L | 0.000086 | 0.00061 mg/L | 0.000086 | 13.99% |
| QC value within limits for Beryllium,7440-41-7 Recovery = Not calculated | | | | | | |
| Boron,7440-42-8† | 1590.9 | 0.02170 mg/L | 0.004681 | 0.02170 mg/L | 0.004681 | 21.57% |
| QC value within limits for Boron,7440-42-8 Recovery = Not calculated | | | | | | |
| Cadmium,7440-43-9† | 35.7 | 0.00015 mg/L | 0.000094 | 0.00015 mg/L | 0.000094 | 62.20% |
| QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated | | | | | | |
| Calcium,7440-70-2† | 105.9 | 0.00647 mg/L | 0.004977 | 0.00647 mg/L | 0.004977 | 76.91% |
| QC value within limits for Calcium,7440-70-2 Recovery = Not calculated | | | | | | |
| Chromium,7440-47-3† | -110.7 | -0.00070 mg/L | 0.000307 | -0.00070 mg/L | 0.000307 | 44.11% |
| QC value within limits for Chromium,7440-47-3 Recovery = Not calculated | | | | | | |
| Cobalt,7440-48-4† | 19.3 | 0.00027 mg/L | 0.000339 | 0.00027 mg/L | 0.000339 | 126.25% |
| QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated | | | | | | |
| Copper,7440-50-8† | 882.2 | 0.00177 mg/L | 0.000787 | 0.00177 mg/L | 0.000787 | 44.45% |
| QC value within limits for Copper,7440-50-8 Recovery = Not calculated | | | | | | |
| Iron,7439-89-6† | 2444.7 | 0.12333 mg/L | 0.004576 | 0.12333 mg/L | 0.004576 | 3.71% |
| QC value within limits for Iron,7439-89-6 Recovery = Not calculated | | | | | | |
| Lead,7439-92-1† | -40.4 | -0.00162 mg/L | 0.000608 | -0.00162 mg/L | 0.000608 | 37.44% |
| QC value within limits for Lead,7439-92-1 Recovery = Not calculated | | | | | | |
| Lithium,7439-93-2† | 250.4 | 0.00319 mg/L | 0.000686 | 0.00319 mg/L | 0.000686 | 21.53% |
| QC value within limits for Lithium,7439-93-2 Recovery = Not calculated | | | | | | |
| Magnesium,7439-95-4† | 25.5 | 0.00785 mg/L | 0.007056 | 0.00785 mg/L | 0.007056 | 89.93% |
| QC value within limits for Magnesium,7439-95-4 Recovery = Not calculated | | | | | | |
| Manganese,7439-96-5† | 5719.3 | 0.00404 mg/L | 0.000039 | 0.00404 mg/L | 0.000039 | 0.96% |
| QC value within limits for Manganese,7439-96-5 Recovery = Not calculated | | | | | | |
| Molybdenum,7439-98-7 | 73.5 | 0.00309 mg/L | 0.000311 | 0.00309 mg/L | 0.000311 | 10.07% |
| QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated | | | | | | |
| Nickel,7440-02-0† | 27.9 | 0.00030 mg/L | 0.000352 | 0.00030 mg/L | 0.000352 | 118.51% |
| QC value within limits for Nickel,7440-02-0 Recovery = Not calculated | | | | | | |
| Potassium,7440-09-7† | 253.3 | 0.06692 mg/L | 0.021244 | 0.06692 mg/L | 0.021244 | 31.74% |
| QC value within limits for Potassium,7440-09-7 Recovery = Not calculated | | | | | | |
| Selenium,7782-49-2† | 27.3 | 0.01029 mg/L | 0.005067 | 0.01029 mg/L | 0.005067 | 49.22% |
| QC value within limits for Selenium,7782-49-2 Recovery = Not calculated | | | | | | |
| Silicon,7440-21-3† | 132.9 | 0.03325 mg/L | 0.002659 | 0.03325 mg/L | 0.002659 | 8.00% |
| QC value within limits for Silicon,7440-21-3 Recovery = Not calculated | | | | | | |
| Silver,7440-22-4† | -561.2 | -0.00108 mg/L | 0.000628 | -0.00108 mg/L | 0.000628 | 57.95% |
| QC value within limits for Silver,7440-22-4 Recovery = Not calculated | | | | | | |
| Sodium,7440-23-5† | 594.5 | 0.06139 mg/L | 0.034419 | 0.06139 mg/L | 0.034419 | 56.06% |
| QC value within limits for Sodium,7440-23-5 Recovery = Not calculated | | | | | | |
| Strontium,7440-24-6† | 1021.9 | 0.00135 mg/L | 0.000826 | 0.00135 mg/L | 0.000826 | 61.19% |
| QC value within limits for Strontium,7440-24-6 Recovery = Not calculated | | | | | | |
| Thallium,7440-28-0† | -2.8 | -0.00064 mg/L | 0.002720 | -0.00064 mg/L | 0.002720 | 423.10% |
| QC value within limits for Thallium,7440-28-0 Recovery = Not calculated | | | | | | |
| Tin,7440-31-5† | 7.4 | 0.00081 mg/L | 0.000027 | 0.00081 mg/L | 0.000027 | 3.30% |
| QC value within limits for Tin,7440-31-5 Recovery = Not calculated | | | | | | |
| Titanium,7440-32-6† | 1641.1 | 0.00160 mg/L | 0.000219 | 0.00160 mg/L | 0.000219 | 13.63% |
| QC value within limits for Titanium,7440-32-6 Recovery = Not calculated | | | | | | |
| Vanadium,7440-62-2† | -87.7 | -0.00025 mg/L | 0.000395 | -0.00025 mg/L | 0.000395 | 155.54% |
| QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated | | | | | | |
| Zinc,7440-66-6† | -35.1 | -0.00026 mg/L | 0.000346 | -0.00026 mg/L | 0.000346 | 132.50% |
| QC value within limits for Zinc,7440-66-6 Recovery = Not calculated | | | | | | |
| Zirconium,7440-67-7† | 269.9 | 0.00041 mg/L | 0.000043 | 0.00041 mg/L | 0.000043 | 10.61% |
| QC value within limits for Zirconium,7440-67-7 Recovery = Not calculated | | | | | | |

All analyte(s) passed QC.

==========

**Sequence No.: 22**
**Sample ID: TBLK 518754 F1**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**

**Autosampler Location: 27**
**Date Collected: 10/30/2013 7:39:19 PM**
**Data Type: Reprocessed on 10/31/2013 8:27:11 AM**

**Initial Sample Vol:**

AWG 11/12/13

GCAL ANALYTICAL LABORATORIES, LLC

# ICP

BY METHODS EPA 200.7/6010B/6010C

Date: 10/31/13
Analyst: CMB

Instrument ID: ICP 5
HBN: 518958, 518460, 518959
Batch: 8720, 8722, 8721
CEC ESP

| | | | |
|---|---|---|---|
| Cal Standard | 225-22-9 | Exp. Date | ~~11/31/1~~ CMB 10/31/13 12/1/13 |
| ICV Standard | 225-11-4 | Exp. Date | 11/14/13 |
| CRDL Standard | 225-23-5 | Exp. Date | 12/1/13 |
| ICSA Standard | 225-11-2 | Exp. Date | 11/14/13 |
| ICSAB Standard | 225-11-3 | Exp. Date | 11/14/13 |
| Internal Standard | 225-22-10 | Exp. Date | 12/1/13 |

ICP Acid Matrix (Calibration Blank) (6% HNO3/10% HCl) 225-21-7 Exp. Date 11/30/13

ICP Acid Rinse (5% HNO3) 225-22-5 Exp. Date 11/30/13

**QC Limits:**

| | GCAL Limits | DOD Limits |
|---|---|---|
| ICV/ICV2 (6010B/6010C) | 90-110% | 90-110% |
| CCV (6010B/6010C) | 90-110% | 90-110% |
| ICV/ICV2 (200.7) | 95-105% | N/A |
| CCV (1st – 200.7) | 95-105% | N/A |
| Continuing CCV (200.7) | 90-110% | N/A |
| ICSA/ICSAB | 80-120% | 80-120% |
| CRDL/CRDL2 | 50-150% | 80-120% |

Revision 001: 6/4/2013

Reviewer/Date: AWG 11/1/13

213101712 1247

# ICP Analysis

INSTRUMENT ID = **ICP5**

ANALYST / DATE / TIME: AWG, 10/31/2013,

QC CONTROL LIMITS: ICV (200.7) 95-105% ICSAB 80-120%
ICV (6010B) 90-110% CCV 90-110%

| AS# | SAMPLE ID |
|---|---|
| 1 | CALIBRATION BLANK |
| 2 | STANDARD 1 |
| ✓ 11 | ICV-1600 |
| ~~12~~ | ~~ICV2-1601~~ |
| ✓ 1 | ICB-1700 |
| ✓ 3 | CRDL-2300 |
| ~~4~~ | ~~CRDL-2301~~ |
| ✓ 5 | ICSA-2000 |
| ✓ 6 | ICSAB-2100 |
| ✓ 7 | CCV-1800 |
| ✓ 1 | CCB-1900 |

| AS# | | SAMPLE ID | | | Dilution |
|---|---|---|---|---|---|
| 17 | | K 21310171201 Zn | 6010C | S | 5X |
| 18 | | M 21310183601 Ni | 6010C | W | 50X |
| 19 | 1245219 | M MB for HBN 518080 Na | 6010C | S | |
| 20 | | R 21310184203 | 6010C | S | |
| 21 | 1245221 | M 21310184203 MS | 6010C | S | |
| 22 | 1245222 | M 21310184203 MSD | 6010C | S | |
| 23 | 1249370 | 21310184203 PDS | 6010C | S | |
| 24 | 1249371 | 21310184203 SD | 6010C | S | 5x |
| 25 | | R 21310184106 | 6010C | S | |
| 26 | | R 21310184107 | 6010C | S | |
| ✓ 7 | | CCV-1800 | | | |
| ✓ 1 | | CCB-1900 | | | |
| 27 | | R 21310184109 Na | 6010C | S | |
| 28 | | R 21310184111 | 6010C | S | |
| 29 | | R 21310184112 | 6010C | S | |
| 30 | | R 21310184113 | 6010C | S | |
| 31 | | R 21310184302 | 6010C | S | |
| 32 | | R 21310184305 | 6010C | S | |
| 33 | | R 21310184306 | 6010C | S | |
| 34 | | R 21310184307 | 6010C | S | |
| 35 | 1246455 | MB for HBN 518358 | ESP | | |
| 36 | | 21310184301 | ESP | | |
| ✓ 7 | | CCV-1800 F: Zr | | | |
| ✓ 1 | | CCB-1900 | | | |
| 37 | | 21310184303 Na | ESP | | |
| 38 | | 21310184304 | ESP | | |
| 39 | | 21310184308 | ESP | | |
| 40 | | 21310184309 | ESP | | |
| 41 | | 21310184310 | ESP | | |
| 42 | | 21310184102 | ESP | | |
| 43 | 1247547 | 21310184102 DUP | ESP | | |
| 44 | | 21310184103 | ESP | | |
| 45 | | 21310184108 | ESP | | |
| 46 | | 21310184110 | ESP | | |
| ✓ 7 | | CCV-1800 | | | |
| ✓ 1 | | CCB-1900 F: Mn | | | |

| AS# | | SAMPLE ID | | | Dilution |
|---|---|---|---|---|---|
| 47 | | 21310184201 | ESP Na | | |
| 48 | 1247047 | MB for HBN 518450 | CEC | | |
| 49 | | 21310184108 | CEC | | 10x |
| 50 | | 21310184201 | CEC | | |
| 51 | | 21310184102 | CEC | | |
| 52 | 1247659 | 21310184102 DUP | CEC | | |
| 53 | | 21310184103 | CEC | | |
| 54 | | 21310184110 | CEC | | |
| 55 | | 21310184301 | CEC | | |
| 56 | | 21310184303 | CEC | | |
| ✓ 7 | | CCV-1800 | | | |
| ✓ 1 | | CCB-1900 F: Mn | | | |
| 57 | | 21310184304 | CEC Na | | 10X |
| 58 | | 21310184308 | CEC | | |
| 59 | | 21310184309 | CEC | | |
| 60 | | 21310184310 | CEC | | |
| 61 | | R 21310183901 Ca | 6010C_D | W | 10X |
| 62 | | R 21310183903 | 6010C_D | W | 10X |
| 63 | | R 21310183907 | 6010C_D | W | 10X |
| 64 | | R 21310183908 | 6010C_D | W | 10X |
| 65 | | R 21310184001 | 6010C_D | W | 10X |
| 66 | | R 21310184005 | 6010C_D | W | 10X |
| ✓ 7 | | CCV-1800 | | | |
| ✓ 1 | | CCB-1900 | | | |
| 67 | | R 21310184006 Ca | 6010C_D | W | 10X |
| 68 | | R 21310184008 | 6010C_D | W | 10X |
| 69 | 1246910 | MB for HBN 518424 * | 6010C Ca, Fe | | |
| 70 | 1246911 | LCS for HBN 518424 | 6010C | | |
| 71 | | R 21310184102 | 6010C | S | |
| 72 | 1247106 | M 21310184102 MS | 6010C | S | |
| 73 | 1247107 | M 21310184102 MSD | 6010C | S | |
| 74 | 1249372 | 21310184102 PDS | 6010C | S | |
| 75 | 1249373 | 21310184102 SD | 6010C | S | 5x |
| 76 | | M 21310230501 Ca, Fe | 6010C | S | 10X Reprep Sb |
| ✓ 7 | | CCV-1800 F: Mg | | | |
| ✓ 1 | | CCB-1900 | | | |
| 77 | | R 21310184103 | 6010C | S | |
| 78 | | R 21310184108 | 6010C | S | |
| 79 | | R 21310184110 | 6010C | S | |
| 80 | | R 21310184201 | 6010C | S | |
| 81 | | M 21310233302 | 6010C | S | 50X |
| 82 | 1246397 | M MB for HBN 518342 | 6010C | S | |
| 83 | 1246398 | M LCS for HBN 518342 | 6010C | S | |
| 84 | | M 21310225302 | 6010C | S | 50X R/R@10X |
| 85 | 1246399 | M 21310225302 MS | 6010C | S | 50X A10R |
| 86 | 1246400 | M 21310225302 MSD | 6010C | S | 50X |
| ✓ 7 | | CCV-1800 | | | |
| ✓ 1 | | CCB-1900 | | | |

COMMENTS: 8720, 518958
* MB/LCS posted into 8719, 518882

ANALYST QC REV:
SECONDARY REV:

QC: all acceptable qc noted with a checkmark; failures as indicated.

213101712 1248

Reprocessing Begun
Logged In Analyst: met Technique: ICP Continuous

Results Data Set (original): 2131031 A
Results Library (original): C:\pe\met\Results\Results.mdb
Results Data Set (reprocessed): 8720
Results Library (reprocessed): C:\pe\met\Results\Results.mdb

Sequence No.: 1 Autosampler Location: 1
Sample ID: 1300 Date Collected: 10/31/2013 11:49:03 AM
Analyst: Data Type: Reprocessed on 11/1/2013 8:30:24 AM
Logged In Analyst (Original) : met
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Mean Data: 1300

| Analyte | Mean Corrected Intensity | Std.Dev. | RSD | Conc. | Calib Units |
|---|---|---|---|---|---|
| Scandium-IS | 7010790.8 | 36090.78 | 0.51% | 100.0000 | % |
| Yttrium,7440-65-5A | 3357018.2 | 20961.14 | 0.62% | 100.0000 | % |
| Yttrium,7440-65-5R | 324755.4 | 544.83 | 0.17% | 100.000 | % |
| Ar 420.067 R | 3784077.4 | 19235.31 | 0.51% | 100.000 | % |
| Ar 363.268 A | 134461.5 | 276.37 | 0.21% | 100.000 | % |
| Aluminum,7429-90-5† | 16.8 | 65.98 | 392.24% | [0.00] | mg/L |
| Antimony,7440-36-0† | 43.5 | 11.31 | 26.00% | [0.00] | mg/L |
| Arsenic,7440-38-2† | -44.7 | 2.18 | 4.89% | [0.00] | mg/L |
| Barium,7440-39-3† | 36.5 | 37.09 | 101.75% | [0.00] | mg/L |
| Beryllium,7440-41-7† | 3687.0 | 50.29 | 1.36% | [0.00] | mg/L |
| Boron,7440-42-8† | 2778.3 | 170.31 | 6.13% | [0.00] | mg/L |
| Cadmium,7440-43-9† | -174.1 | 28.36 | 16.29% | [0.00] | mg/L |
| Calcium,7440-70-2† | 608.6 | 72.73 | 11.95% | [0.00] | mg/L |
| Chromium,7440-47-3† | -3461.7 | 58.54 | 1.69% | [0.00] | mg/L |
| Cobalt,7440-48-4† | 24.3 | 13.94 | 57.35% | [0.00] | mg/L |
| Copper,7440-50-8† | 9376.1 | 176.30 | 1.88% | [0.00] | mg/L |
| Iron,7439-89-6† | -1267.3 | 44.13 | 3.48% | [0.00] | mg/L |
| Lead,7439-92-1† | 604.3 | 27.74 | 4.59% | [0.00] | mg/L |
| Lithium,7439-93-2† | -211.9 | 92.67 | 43.74% | [0.00] | mg/L |
| Magnesium,7439-95-4† | 1909.7 | 24.93 | 1.31% | [0.00] | mg/L |
| Manganese,7439-96-5† | -2367.5 | 46.01 | 1.94% | [0.00] | mg/L |
| Molybdenum,7439-98-7 | -278.0 | 9.05 | 3.25% | [0.00] | mg/L |
| Nickel,7440-02-0† | -161.6 | 16.05 | 9.93% | [0.00] | mg/L |
| Potassium,7440-09-7† | 228.4 | 64.95 | 28.44% | [0.00] | mg/L |
| Selenium,7782-49-2† | 159.4 | 13.01 | 8.16% | [0.00] | mg/L |
| Silicon,7440-21-3† | 551.7 | 8.90 | 1.61% | [0.00] | mg/L |
| Silver,7440-22-4† | 14393.4 | 155.51 | 1.08% | [0.00] | mg/L |
| Sodium,7440-23-5† | 595.1 | 82.70 | 13.90% | [0.00] | mg/L |
| Strontium,7440-24-6† | 3645.2 | 68.11 | 1.87% | [0.00] | mg/L |
| Thallium,7440-28-0† | -93.6 | 15.66 | 16.74% | [0.00] | mg/L |
| Tin,7440-31-5† | 51.9 | 15.25 | 29.37% | [0.00] | mg/L |
| Titanium,7440-32-6† | 6122.0 | 136.06 | 2.22% | [0.00] | mg/L |
| Vanadium,7440-62-2† | 9991.3 | 183.85 | 1.84% | [0.00] | mg/L |
| Zinc,7440-66-6† | 1153.8 | 17.57 | 1.52% | [0.00] | mg/L |
| Zirconium,7440-67-7† | 1943.9 | 153.58 | 7.90% | [0.00] | mg/L |

Sequence No.: 2 Autosampler Location: 2
Sample ID: 1301 Date Collected: 10/31/2013 11:55:22 AM
Analyst: Data Type: Reprocessed on 11/1/2013 8:30:49 AM
Logged In Analyst (Original) : met
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:

Mean Data: 1301

| Analyte | Mean Corrected Intensity | Std.Dev. | RSD | Conc. | Calib Units |
|---|---|---|---|---|---|
| Scandium-IS | 6740477.4 | 54854.58 | 0.81% | 96.1443 | % |
| Yttrium,7440-65-5A | 3261355.3 | 17394.78 | 0.53% | 97.1504 | % |

| | | | | | |
|---|---|---|---|---|---|
| Yttrium,7440-65-5R | 327869.8 | 1819.21 | 0.55% | 100.959 | % |
| Ar 420.067 R | 3705753.1 | 40108.74 | 1.08% | 97.9302 | % |
| Ar 363.268 A | 133587.7 | 404.76 | 0.30% | 99.3501 | % |
| Aluminum,7429-90-5† | 30182.0 | 236.83 | 0.78% | [10.00000] | mg/L |
| Antimony,7440-36-0† | 3173.8 | 4.57 | 0.14% | [1.000000] | mg/L |
| Arsenic,7440-38-2† | 2009.1 | 2.14 | 0.11% | [1.000000] | mg/L |
| Barium,7440-39-3† | 215781.7 | 231.97 | 0.11% | [1.000000] | mg/L |
| Beryllium,7440-41-7† | 7210400.3 | 27229.34 | 0.38% | [1.000000] | mg/L |
| Boron,7440-42-8† | 352766.8 | 3079.70 | 0.87% | [5.00] | mg/L |
| Cadmium,7440-43-9† | 224352.1 | 429.21 | 0.19% | [1.000000] | mg/L |
| Calcium,7440-70-2† | 158572.2 | 1218.02 | 0.77% | [10.00000] | mg/L |
| Chromium,7440-47-3† | 158452.3 | 129.64 | 0.08% | [1.000000] | mg/L |
| Cobalt,7440-48-4† | 68136.8 | 89.69 | 0.13% | [1.000000] | mg/L |
| Copper,7440-50-8† | 472282.1 | 929.00 | 0.20% | [1.000000] | mg/L |
| Iron,7439-89-6† | 185520.0 | 1522.65 | 0.82% | [10.00000] | mg/L |
| Lead,7439-92-1† | 24575.0 | 121.84 | 0.50% | [1.000000] | mg/L |
| Lithium,7439-93-2† | 75619.3 | 815.93 | 1.08% | [1.00] | mg/L |
| Magnesium,7439-95-4† | 30447.1 | 298.27 | 0.98% | [10.00000] | mg/L |
| Manganese,7439-96-5† | 1375116.5 | 1133.97 | 0.08% | [1.000000] | mg/L |
| Molybdenum,7439-98-7 | 25134.1 | 61.96 | 0.25% | [1.00] | mg/L |
| Nickel,7440-02-0† | 91997.7 | 51.49 | 0.06% | [1.000000] | mg/L |
| Potassium,7440-09-7† | 74634.8 | 1075.56 | 1.44% | [20.00000] | mg/L |
| Selenium,7782-49-2† | 2451.9 | 8.89 | 0.36% | [1.000000] | mg/L |
| Silicon,7440-21-3† | 37319.9 | 410.90 | 1.10% | [10.0] | mg/L |
| Silver,7440-22-4† | 494848.7 | 740.63 | 0.15% | [1.000000] | mg/L |
| Sodium,7440-23-5† | 356314.8 | 816.59 | 0.23% | [40.00000] | mg/L |
| Strontium,7440-24-6† | 705190.4 | 622.30 | 0.09% | [1.00] | mg/L |
| Thallium,7440-28-0† | 4067.9 | 5.06 | 0.12% | [1.000000] | mg/L |
| Tin,7440-31-5† | 9328.1 | 12.64 | 0.14% | [1.00] | mg/L |
| Titanium,7440-32-6† | 1063911.5 | 1718.86 | 0.16% | [1.000000] | mg/L |
| Vanadium,7440-62-2† | 346504.8 | 249.12 | 0.07% | [1.000000] | mg/L |
| Zinc,7440-66-6† | 136581.9 | 276.95 | 0.20% | [1.000000] | mg/L |
| Zirconium,7440-67-7† | 673116.9 | 565.96 | 0.08% | [1.000000] | mg/L |

**Sequence No.: 3**
**Sample ID: 1600**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 11**
**Date Collected: 10/31/2013 12:01:53 PM**
**Data Type: Reprocessed on 11/1/2013 8:30:51 AM**
**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 1600**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6636773.3 | 94.6651 | % | 0.98401 | | | | 1.04% |
| Yttrium,7440-65-5A | 3241553.5 | 96.5605 | % | 0.95160 | | | | 0.99% |
| Yttrium,7440-65-5R | 319511.0 | 98.3851 | % | 0.48213 | | | | 0.49% |
| Ar 420.067 R | 3658442.6 | 96.6799 | % | 0.71391 | | | | 0.74% |
| Ar 363.268 A | 133407.4 | 99.2161 | % | 0.24165 | | | | 0.24% |
| Aluminum,7429-90-5† | 29847.1 | 9.87512 | mg/L | 0.082884 | 9.87512 | mg/L | 0.082884 | 0.84% |
| QC value within limits for Aluminum,7429-90-5 Recovery = 98.75% | | | | | | | | |
| Antimony,7440-36-0† | 3218.7 | 0.99778 | mg/L | 0.007451 | 0.99778 | mg/L | 0.007451 | 0.75% |
| QC value within limits for Antimony,7440-36-0 Recovery = 99.78% | | | | | | | | |
| Arsenic,7440-38-2† | 1984.6 | 1.02359 | mg/L | 0.009821 | 1.02359 | mg/L | 0.009821 | 0.96% |
| QC value within limits for Arsenic,7440-38-2 Recovery = 102.36% | | | | | | | | |
| Barium,7440-39-3† | 211884.3 | 0.98289 | mg/L | 0.001316 | 0.98289 | mg/L | 0.001316 | 0.13% |
| QC value within limits for Barium,7440-39-3 Recovery = 98.29% | | | | | | | | |
| Beryllium,7440-41-7† | 7041068.1 | 0.97929 | mg/L | 0.005086 | 0.97929 | mg/L | 0.005086 | 0.52% |
| QC value within limits for Beryllium,7440-41-7 Recovery = 97.93% | | | | | | | | |
| Boron,7440-42-8† | 346656.7 | 4.96293 | mg/L | 0.044297 | 4.96293 | mg/L | 0.044297 | 0.89% |
| QC value within limits for Boron,7440-42-8 Recovery = 99.26% | | | | | | | | |
| Cadmium,7440-43-9† | 220380.5 | 0.98213 | mg/L | 0.003318 | 0.98213 | mg/L | 0.003318 | 0.34% |
| QC value within limits for Cadmium,7440-43-9 Recovery = 98.21% | | | | | | | | |
| Calcium,7440-70-2† | 154336.6 | 9.72765 | mg/L | 0.060951 | 9.72765 | mg/L | 0.060951 | 0.63% |
| QC value within limits for Calcium,7440-70-2 Recovery = 97.28% | | | | | | | | |
| Chromium,7440-47-3† | 156239.4 | 0.98736 | mg/L | 0.000780 | 0.98736 | mg/L | 0.000780 | 0.08% |
| QC value within limits for Chromium,7440-47-3 Recovery = 98.74% | | | | | | | | |
| Cobalt,7440-48-4† | 66761.7 | 0.97762 | mg/L | 0.002895 | 0.97762 | mg/L | 0.002895 | 0.30% |
| QC value within limits for Cobalt,7440-48-4 Recovery = 97.76% | | | | | | | | |
| Copper,7440-50-8† | 466017.3 | 0.98622 | mg/L | 0.001770 | 0.98622 | mg/L | 0.001770 | 0.18% |

QC value within limits for Copper,7440-50-8 Recovery = 98.62%

| | | | | | | |
|---|---|---|---|---|---|---|
| Iron,7439-89-6† | 181703.0 | 9.79290 mg/L | 0.083619 | 9.79290 mg/L | 0.083619 | 0.85% |

QC value within limits for Iron,7439-89-6 Recovery = 97.93%

| | | | | | | |
|---|---|---|---|---|---|---|
| Lead,7439-92-1† | 24306.6 | 0.98960 mg/L | 0.010459 | 0.98960 mg/L | 0.010459 | 1.06% |

QC value within limits for Lead,7439-92-1 Recovery = 98.96%

| | | | | | | |
|---|---|---|---|---|---|---|
| Lithium,7439-93-2† | 73856.2 | 0.97662 mg/L | 0.014383 | 0.97662 mg/L | 0.014383 | 1.47% |

QC value within limits for Lithium,7439-93-2 Recovery = 97.66%

| | | | | | | |
|---|---|---|---|---|---|---|
| Magnesium,7439-95-4† | 29885.2 | 9.81388 mg/L | 0.072547 | 9.81388 mg/L | 0.072547 | 0.74% |

QC value within limits for Magnesium,7439-95-4 Recovery = 98.14%

| | | | | | | |
|---|---|---|---|---|---|---|
| Manganese,7439-96-5† | 1352150.5 | 0.98339 mg/L | 0.001050 | 0.98339 mg/L | 0.001050 | 0.11% |

QC value within limits for Manganese,7439-96-5 Recovery = 98.34%

| | | | | | | |
|---|---|---|---|---|---|---|
| Molybdenum,7439-98-7 | 24183.3 | 0.96358 mg/L | 0.005746 | 0.96358 mg/L | 0.005746 | 0.60% |

QC value within limits for Molybdenum,7439-98-7 Recovery = 96.36%

| | | | | | | |
|---|---|---|---|---|---|---|
| Nickel,7440-02-0† | 90226.7 | 0.98061 mg/L | 0.002937 | 0.98061 mg/L | 0.002937 | 0.30% |

QC value within limits for Nickel,7440-02-0 Recovery = 98.06%

| | | | | | | |
|---|---|---|---|---|---|---|
| Potassium,7440-09-7† | 72907.3 | 19.5394 mg/L | 0.30072 | 19.5394 mg/L | 0.30072 | 1.54% |

QC value within limits for Potassium,7440-09-7 Recovery = 97.70%

| | | | | | | |
|---|---|---|---|---|---|---|
| Selenium,7782-49-2† | 2448.4 | 0.99912 mg/L | 0.001449 | 0.99912 mg/L | 0.001449 | 0.14% |

QC value within limits for Selenium,7782-49-2 Recovery = 99.91%

| | | | | | | |
|---|---|---|---|---|---|---|
| Silicon,7440-21-3† | 38184.1 | 10.2291 mg/L | 0.16207 | 10.2291 mg/L | 0.16207 | 1.58% |

QC value within limits for Silicon,7440-21-3 Recovery = 102.29%

| | | | | | | |
|---|---|---|---|---|---|---|
| Silver,7440-22-4† | 478147.3 | 0.97012 mg/L | 0.001217 | 0.97012 mg/L | 0.001217 | 0.13% |

QC value within limits for Silver,7440-22-4 Recovery = 97.01%

| | | | | | | |
|---|---|---|---|---|---|---|
| Sodium,7440-23-5† | 355210.1 | 39.8794 mg/L | 0.80018 | 39.8794 mg/L | 0.80018 | 2.01% |

QC value within limits for Sodium,7440-23-5 Recovery = 99.70%

| | | | | | | |
|---|---|---|---|---|---|---|
| Strontium,7440-24-6† | 696188.1 | 0.98693 mg/L | 0.018164 | 0.98693 mg/L | 0.018164 | 1.84% |

QC value within limits for Strontium,7440-24-6 Recovery = 98.69%

| | | | | | | |
|---|---|---|---|---|---|---|
| Thallium,7440-28-0† | 4008.3 | 1.00206 mg/L | 0.006768 | 1.00206 mg/L | 0.006768 | 0.68% |

QC value within limits for Thallium,7440-28-0 Recovery = 100.21%

| | | | | | | |
|---|---|---|---|---|---|---|
| Tin,7440-31-5† | 9075.3 | 0.97717 mg/L | 0.008128 | 0.97717 mg/L | 0.008128 | 0.83% |

QC value within limits for Tin,7440-31-5 Recovery = 97.72%

| | | | | | | |
|---|---|---|---|---|---|---|
| Titanium,7440-32-6† | 1049443.0 | 0.98629 mg/L | 0.001958 | 0.98629 mg/L | 0.001958 | 0.20% |

QC value within limits for Titanium,7440-32-6 Recovery = 98.63%

| | | | | | | |
|---|---|---|---|---|---|---|
| Vanadium,7440-62-2† | 339440.8 | 0.98018 mg/L | 0.001616 | 0.98018 mg/L | 0.001616 | 0.16% |

QC value within limits for Vanadium,7440-62-2 Recovery = 98.02%

| | | | | | | |
|---|---|---|---|---|---|---|
| Zinc,7440-66-6† | 132795.8 | 0.96435 mg/L | 0.002349 | 0.96435 mg/L | 0.002349 | 0.24% |

QC value within limits for Zinc,7440-66-6 Recovery = 96.43%

| | | | | | | |
|---|---|---|---|---|---|---|
| Zirconium,7440-67-7† | 649861.1 | 0.96505 mg/L | 0.000743 | 0.96505 mg/L | 0.000743 | 0.08% |

QC value within limits for Zirconium,7440-67-7 Recovery = 96.51%

All analyte(s) passed QC.

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**Sequence No.: 4**
**Sample ID: 1700**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 1**
**Date Collected: 10/31/2013 12:08:24 PM**
**Data Type: Reprocessed on 11/1/2013 8:30:58 AM**
**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 1700**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6810226.9 | 97.1392 | % | 0.70119 | | | | 0.72% |
| Yttrium,7440-65-5A | 3267387.2 | 97.3300 | % | 0.62003 | | | | 0.64% |
| Yttrium,7440-65-5R | 315708.7 | 97.2143 | % | 0.09808 | | | | 0.10% |
| Ar 420.067 R | 3660588.9 | 96.7366 | % | 0.69445 | | | | 0.72% |
| Ar 363.268 A | 133036.9 | 98.9405 | % | 0.16349 | | | | 0.17% |
| Aluminum,7429-90-5† | -6.3 | -0.00212 | mg/L | 0.015050 | -0.00212 | mg/L | 0.015050 | 710.54% |

QC value within limits for Aluminum,7429-90-5 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Antimony,7440-36-0† | 10.2 | 0.00319 | mg/L | 0.001347 | 0.00319 | mg/L | 0.001347 | 42.20% |

QC value within limits for Antimony,7440-36-0 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Arsenic,7440-38-2† | 16.9 | 0.00849 | mg/L | 0.001329 | 0.00849 | mg/L | 0.001329 | 15.65% |

QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Barium,7440-39-3† | 269.5 | 0.00125 | mg/L | 0.000211 | 0.00125 | mg/L | 0.000211 | 16.89% |

QC value within limits for Barium,7440-39-3 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Beryllium,7440-41-7† | 11253.7 | 0.00157 | mg/L | 0.000492 | 0.00157 | mg/L | 0.000492 | 31.45% |

QC value within limits for Beryllium,7440-41-7 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Boron,7440-42-8† | 6450.1 | 0.09153 | mg/L | 0.016895 | 0.09153 | mg/L | 0.016895 | 18.46% |

QC value within limits for Boron,7440-42-8 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Cadmium,7440-43-9† | 269.7 | 0.00120 | mg/L | 0.000194 | 0.00120 | mg/L | 0.000194 | 16.15% |

QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated

Calcium,7440-70-2† 227.2 0.01432 mg/L 0.004176 0.01432 mg/L 0.004176 29.16%
QC value within limits for Calcium,7440-70-2 Recovery = Not calculated
Chromium,7440-47-3† 194.0 0.00123 mg/L 0.000548 0.00123 mg/L 0.000548 44.65%
QC value within limits for Chromium,7440-47-3 Recovery = Not calculated
Cobalt,7440-48-4† 93.4 0.00137 mg/L 0.000199 0.00137 mg/L 0.000199 14.55%
QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated
Copper,7440-50-8† 1676.8 0.00355 mg/L 0.001083 0.00355 mg/L 0.001083 30.50%
QC value within limits for Copper,7440-50-8 Recovery = Not calculated
Iron,7439-89-6† 424.5 0.02288 mg/L 0.001262 0.02288 mg/L 0.001262 5.52%
QC value within limits for Iron,7439-89-6 Recovery = Not calculated
Lead,7439-92-1† 45.4 0.00185 mg/L 0.000526 0.00185 mg/L 0.000526 28.50%
QC value within limits for Lead,7439-92-1 Recovery = Not calculated
Lithium,7439-93-2† 463.7 0.00613 mg/L 0.001394 0.00613 mg/L 0.001394 22.74%
QC value within limits for Lithium,7439-93-2 Recovery = Not calculated
Magnesium,7439-95-4† 34.9 0.01147 mg/L 0.018371 0.01147 mg/L 0.018371 160.22%
QC value within limits for Magnesium,7439-95-4 Recovery = Not calculated
Manganese,7439-96-5† 2356.2 0.00171 mg/L 0.000548 0.00171 mg/L 0.000548 31.98%
QC value within limits for Manganese,7439-96-5 Recovery = Not calculated
Molybdenum,7439-98-7 133.7 0.00532 mg/L 0.001641 0.00532 mg/L 0.001641 30.84%
QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated
Nickel,7440-02-0† 118.3 0.00129 mg/L 0.000192 0.00129 mg/L 0.000192 14.92%
QC value within limits for Nickel,7440-02-0 Recovery = Not calculated
Potassium,7440-09-7† 126.4 0.03388 mg/L 0.012674 0.03388 mg/L 0.012674 37.40%
QC value within limits for Potassium,7440-09-7 Recovery = Not calculated
Selenium,7782-49-2† 26.9 0.01096 mg/L 0.007776 0.01096 mg/L 0.007776 70.96%
QC value within limits for Selenium,7782-49-2 Recovery = Not calculated
Silicon,7440-21-3† 182.3 0.04884 mg/L 0.004381 0.04884 mg/L 0.004381 8.97%
QC value within limits for Silicon,7440-21-3 Recovery = Not calculated
Silver,7440-22-4† 679.2 0.00138 mg/L 0.000533 0.00138 mg/L 0.000533 38.60%
QC value within limits for Silver,7440-22-4 Recovery = Not calculated
Sodium,7440-23-5† 897.7 0.10079 mg/L 0.026689 0.10079 mg/L 0.026689 26.48%
QC value within limits for Sodium,7440-23-5 Recovery = Not calculated
Strontium,7440-24-6† 1474.7 0.00209 mg/L 0.000344 0.00209 mg/L 0.000344 16.44%
QC value within limits for Strontium,7440-24-6 Recovery = Not calculated
Thallium,7440-28-0† 13.2 0.00327 mg/L 0.001426 0.00327 mg/L 0.001426 43.55%
QC value within limits for Thallium,7440-28-0 Recovery = Not calculated
Tin,7440-31-5† 51.6 0.00554 mg/L 0.001364 0.00554 mg/L 0.001364 24.64%
QC value within limits for Tin,7440-31-5 Recovery = Not calculated
Titanium,7440-32-6† 1887.7 0.00177 mg/L 0.000188 0.00177 mg/L 0.000188 10.62%
QC value within limits for Titanium,7440-32-6 Recovery = Not calculated
Vanadium,7440-62-2† 638.7 0.00184 mg/L 0.000402 0.00184 mg/L 0.000402 21.80%
QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated
Zinc,7440-66-6† 160.7 0.00116 mg/L 0.000179 0.00116 mg/L 0.000179 15.35%
QC value within limits for Zinc,7440-66-6 Recovery = Not calculated
Zirconium,7440-67-7† 1323.4 0.00197 mg/L 0.000651 0.00197 mg/L 0.000651 33.11%
QC value within limits for Zirconium,7440-67-7 Recovery = Not calculated
All analyte(s) passed QC.

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**Sequence No.: 5**
**Sample ID: 2300**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 3**
**Date Collected: 10/31/2013 12:14:43 PM**
**Data Type: Reprocessed on 11/1/2013 8:31:00 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 2300**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6726631.1 | 95.9468 | % | 0.40883 | | | | 0.43% |
| Yttrium,7440-65-5A | 3291281.6 | 98.0418 | % | 1.08628 | | | | 1.11% |
| Yttrium,7440-65-5R | 309014.2 | 95.1529 | % | 3.36266 | | | | 3.53% |
| Ar 420.067 R | 3639432.9 | 96.1775 | % | 0.36767 | | | | 0.38% |
| Ar 363.268 A | 132890.1 | 98.8313 | % | 0.32588 | | | | 0.33% |
| Aluminum,7429-90-5† | 679.3 | 0.22481 | mg/L | 0.009473 | 0.22481 | mg/L | 0.009473 | 4.21% |
| QC value within limits for Aluminum,7429-90-5 Recovery = 112.40% | | | | | | | | |
| Antimony,7440-36-0† | 192.1 | 0.06039 | mg/L | 0.002122 | 0.06039 | mg/L | 0.002122 | 3.51% |
| QC value within limits for Antimony,7440-36-0 Recovery = 100.64% | | | | | | | | |
| Arsenic,7440-38-2† | 49.8 | 0.02556 | mg/L | 0.004385 | 0.02556 | mg/L | 0.004385 | 17.16% |
| QC value within limits for Arsenic,7440-38-2 Recovery = 127.81% | | | | | | | | |
| Barium,7440-39-3† | 2207.9 | 0.01024 | mg/L | 0.000240 | 0.01024 | mg/L | 0.000240 | 2.34% |

QC value within limits for Barium,7440-39-3 Recovery = 102.44%
Beryllium,7440-41-7† 29541.0 0.00412 mg/L 0.000027 0.00412 mg/L 0.000027 0.64%
QC value within limits for Beryllium,7440-41-7 Recovery = 103.12%
Boron,7440-42-8† 70123.0 0.99493 mg/L 0.013775 0.99493 mg/L 0.013775 1.38%
QC value within limits for Boron,7440-42-8 Recovery = 99.49%
Cadmium,7440-43-9† 1155.3 0.00515 mg/L 0.000027 0.00515 mg/L 0.000027 0.53%
QC value within limits for Cadmium,7440-43-9 Recovery = 102.92%
Calcium,7440-70-2† 13072.7 0.82428 mg/L 0.015579 0.82428 mg/L 0.015579 1.89%
QC value within limits for Calcium,7440-70-2 Recovery = 103.03%
Chromium,7440-47-3† 1686.3 0.01068 mg/L 0.000380 0.01068 mg/L 0.000380 3.56%
QC value within limits for Chromium,7440-47-3 Recovery = 106.75%
Cobalt,7440-48-4† 705.7 0.01033 mg/L 0.000388 0.01033 mg/L 0.000388 3.75%
QC value within limits for Cobalt,7440-48-4 Recovery = 103.28%
Copper,7440-50-8† 9467.7 0.02003 mg/L 0.000053 0.02003 mg/L 0.000053 0.26%
QC value within limits for Copper,7440-50-8 Recovery = 100.16%
Iron,7439-89-6† 3744.5 0.20182 mg/L 0.002008 0.20182 mg/L 0.002008 1.00%
QC value within limits for Iron,7439-89-6 Recovery = 100.91%
Lead,7439-92-1† 378.7 0.01543 mg/L 0.000185 0.01543 mg/L 0.000185 1.20%
QC value within limits for Lead,7439-92-1 Recovery = 102.86%
Lithium,7439-93-2† 4012.0 0.05305 mg/L 0.000598 0.05305 mg/L 0.000598 1.13%
QC value within limits for Lithium,7439-93-2 Recovery = 106.11%
Magnesium,7439-95-4† 688.5 0.22610 mg/L 0.020152 0.22610 mg/L 0.020152 8.91%
QC value within limits for Magnesium,7439-95-4 Recovery = 113.05%
Manganese,7439-96-5† 21030.5 0.01529 mg/L 0.000116 0.01529 mg/L 0.000116 0.76%
QC value within limits for Manganese,7439-96-5 Recovery = 101.97%
Molybdenum,7439-98-7 761.3 0.03032 mg/L 0.001652 0.03032 mg/L 0.001652 5.45%
QC value within limits for Molybdenum,7439-98-7 Recovery = 101.07%
Nickel,7440-02-0† 3667.4 0.03986 mg/L 0.000701 0.03986 mg/L 0.000701 1.76%
QC value within limits for Nickel,7440-02-0 Recovery = 99.65%
Potassium,7440-09-7† 1809.2 0.48488 mg/L 0.056295 0.48488 mg/L 0.056295 11.61%
QC value within limits for Potassium,7440-09-7 Recovery = 96.98%
Selenium,7782-49-2† 88.3 0.03604 mg/L 0.005946 0.03604 mg/L 0.005946 16.50%
QC value within limits for Selenium,7782-49-2 Recovery = 90.10%
Silicon,7440-21-3† 849.8 0.22765 mg/L 0.006102 0.22765 mg/L 0.006102 2.68%
QC value within limits for Silicon,7440-21-3 Recovery = 113.83%
Silver,7440-22-4† 4754.8 0.00969 mg/L 0.000430 0.00969 mg/L 0.000430 4.44%
QC value within limits for Silver,7440-22-4 Recovery = 96.90%
Sodium,7440-23-5† 9637.4 1.08195 mg/L 0.033717 1.08195 mg/L 0.033717 3.12%
QC value within limits for Sodium,7440-23-5 Recovery = 108.19%
Strontium,7440-24-6† 37564.8 0.05325 mg/L 0.001595 0.05325 mg/L 0.001595 3.00%
QC value within limits for Strontium,7440-24-6 Recovery = 106.49%
Thallium,7440-28-0† 87.7 0.02177 mg/L 0.004034 0.02177 mg/L 0.004034 18.53%
QC value within limits for Thallium,7440-28-0 Recovery = 108.87%
Tin,7440-31-5† 239.6 0.02576 mg/L 0.001529 0.02576 mg/L 0.001529 5.94%
QC value within limits for Tin,7440-31-5 Recovery = 103.04%
Titanium,7440-32-6† 10389.6 0.00976 mg/L 0.000079 0.00976 mg/L 0.000079 0.81%
QC value within limits for Titanium,7440-32-6 Recovery = 97.63%
Vanadium,7440-62-2† 6872.9 0.01983 mg/L 0.000363 0.01983 mg/L 0.000363 1.83%
QC value within limits for Vanadium,7440-62-2 Recovery = 99.15%
Zinc,7440-66-6† 2736.5 0.01974 mg/L 0.000400 0.01974 mg/L 0.000400 2.02%
QC value within limits for Zinc,7440-66-6 Recovery = 98.69%
Zirconium,7440-67-7† 8078.7 0.01200 mg/L 0.000483 0.01200 mg/L 0.000483 4.03%
QC value within limits for Zirconium,7440-67-7 Recovery = 119.99%
All analyte(s) passed QC.

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**Sequence No.: 6** **Autosampler Location: 5**
**Sample ID: 2000** **Date Collected: 10/31/2013 12:21:19 PM**
**Analyst:** **Data Type: Reprocessed on 11/1/2013 8:31:02 AM**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Mean Data: 2000**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6424074.8 | 91.6312 | % | 0.07696 | | | | 0.08% |
| Yttrium,7440-65-5A | 3036871.4 | 90.4634 | % | 0.22580 | | | | 0.25% |
| Yttrium,7440-65-5R | 303017.0 | 93.3062 | % | 0.37667 | | | | 0.40% |
| Ar 420.067 R | 3548476.7 | 93.7739 | % | 0.57343 | | | | 0.61% |
| Ar 363.268 A | 127673.4 | 94.9516 | % | 0.23601 | | | | 0.25% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Aluminum,7429-90-5† | 619232.3 | 205.160 mg/L | 2.9050 | 205.160 mg/L | 2.9050 | 1.42% |
| QC value within limits for Aluminum,7429-90-5 Recovery = 102.58% | | | | | | |
| Antimony,7440-36-0† | 21.4 | 0.02131 mg/L | 0.007826 | 0.02131 mg/L | 0.007826 | 36.73% |
| QC value within limits for Antimony,7440-36-0 Recovery = Not calculated | | | | | | |
| Arsenic,7440-38-2† | -163.7 | 0.00803 mg/L | 0.007069 | 0.00803 mg/L | 0.007069 | 88.03% |
| QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated | | | | | | |
| Barium,7440-39-3† | 1305.7 | 0.00111 mg/L | 0.000076 | 0.00111 mg/L | 0.000076 | 6.82% |
| QC value within limits for Barium,7440-39-3 Recovery = Not calculated | | | | | | |
| Beryllium,7440-41-7† | -666.9 | -0.00009 mg/L | 0.000020 | -0.00009 mg/L | 0.000020 | 21.43% |
| QC value within limits for Beryllium,7440-41-7 Recovery = Not calculated | | | | | | |
| Boron,7440-42-8† | -63824.8 | -0.02017 mg/L | 0.016895 | -0.02017 mg/L | 0.016895 | 83.78% |
| QC value within limits for Boron,7440-42-8 Recovery = Not calculated | | | | | | |
| Cadmium,7440-43-9† | 576.4 | -0.00065 mg/L | 0.000042 | -0.00065 mg/L | 0.000042 | 6.41% |
| QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated | | | | | | |
| Calcium,7440-70-2† | 3013214.0 | 189.943 mg/L | 2.2220 | 189.943 mg/L | 2.2220 | 1.17% |
| QC value within limits for Calcium,7440-70-2 Recovery = 94.97% | | | | | | |
| Chromium,7440-47-3† | -2129.4 | 0.00661 mg/L | 0.001132 | 0.00661 mg/L | 0.001132 | 17.13% |
| QC value within limits for Chromium,7440-47-3 Recovery = Not calculated | | | | | | |
| Cobalt,7440-48-4† | 173.6 | -0.00110 mg/L | 0.000136 | -0.00110 mg/L | 0.000136 | 12.35% |
| QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated | | | | | | |
| Copper,7440-50-8† | -6286.9 | -0.01734 mg/L | 0.000212 | -0.01734 mg/L | 0.000212 | 1.22% |
| QC value within limits for Copper,7440-50-8 Recovery = Not calculated | | | | | | |
| Iron,7439-89-6† | 3597351.7 | 193.897 mg/L | 2.5874 | 193.897 mg/L | 2.5874 | 1.33% |
| QC value within limits for Iron,7439-89-6 Recovery = 96.95% | | | | | | |
| Lead,7439-92-1† | -277.5 | 0.00174 mg/L | 0.000670 | 0.00174 mg/L | 0.000670 | 38.59% |
| QC value within limits for Lead,7439-92-1 Recovery = Not calculated | | | | | | |
| Lithium,7439-93-2† | -1.3 | -0.00002 mg/L | 0.001425 | -0.00002 mg/L | 0.001425 | >999.9% |
| QC value within limits for Lithium,7439-93-2 Recovery = Not calculated | | | | | | |
| Magnesium,7439-95-4† | 594229.9 | 195.097 mg/L | 2.2721 | 195.097 mg/L | 2.2721 | 1.16% |
| QC value within limits for Magnesium,7439-95-4 Recovery = 97.55% | | | | | | |
| Manganese,7439-96-5† | -1703.4 | 0.00009 mg/L | 0.000101 | 0.00009 mg/L | 0.000101 | 116.37% |
| QC value within limits for Manganese,7439-96-5 Recovery = Not calculated | | | | | | |
| Molybdenum,7439-98-7 | -414.9 | 0.00587 mg/L | 0.001088 | 0.00587 mg/L | 0.001088 | 18.54% |
| QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated | | | | | | |
| Nickel,7440-02-0† | -193.4 | -0.00147 mg/L | 0.000166 | -0.00147 mg/L | 0.000166 | 11.34% |
| QC value within limits for Nickel,7440-02-0 Recovery = Not calculated | | | | | | |
| Potassium,7440-09-7† | -275.0 | -0.02997 mg/L | 0.022607 | -0.02997 mg/L | 0.022607 | 75.44% |
| QC value within limits for Potassium,7440-09-7 Recovery = Not calculated | | | | | | |
| Selenium,7782-49-2† | -40.9 | 0.00744 mg/L | 0.008351 | 0.00744 mg/L | 0.008351 | 112.23% |
| QC value within limits for Selenium,7782-49-2 Recovery = Not calculated | | | | | | |
| Silicon,7440-21-3† | 96.6 | 0.00455 mg/L | 0.006253 | 0.00455 mg/L | 0.006253 | 137.46% |
| QC value within limits for Silicon,7440-21-3 Recovery = Not calculated | | | | | | |
| Silver,7440-22-4† | -1544.1 | 0.00170 mg/L | 0.000569 | 0.00170 mg/L | 0.000569 | 33.40% |
| QC value within limits for Silver,7440-22-4 Recovery = Not calculated | | | | | | |
| Sodium,7440-23-5† | 201.1 | 0.01370 mg/L | 0.016198 | 0.01370 mg/L | 0.016198 | 118.24% |
| QC value within limits for Sodium,7440-23-5 Recovery = Not calculated | | | | | | |
| Strontium,7440-24-6† | 3973.3 | -0.00003 mg/L | 0.000221 | -0.00003 mg/L | 0.000221 | 740.63% |
| QC value within limits for Strontium,7440-24-6 Recovery = Not calculated | | | | | | |
| Thallium,7440-28-0† | -80.6 | -0.00811 mg/L | 0.000597 | -0.00811 mg/L | 0.000597 | 7.36% |
| QC value within limits for Thallium,7440-28-0 Recovery = Not calculated | | | | | | |
| Tin,7440-31-5† | -36.2 | 0.00259 mg/L | 0.001320 | 0.00259 mg/L | 0.001320 | 51.01% |
| QC value within limits for Tin,7440-31-5 Recovery = Not calculated | | | | | | |
| Titanium,7440-32-6† | 551.1 | 0.00012 mg/L | 0.000253 | 0.00012 mg/L | 0.000253 | 220.04% |
| QC value within limits for Titanium,7440-32-6 Recovery = Not calculated | | | | | | |
| Vanadium,7440-62-2† | 1753.4 | -0.01054 mg/L | 0.000363 | -0.01054 mg/L | 0.000363 | 3.45% |
| QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated | | | | | | |
| Zinc,7440-66-6† | 2154.9 | -0.00405 mg/L | 0.000163 | -0.00405 mg/L | 0.000163 | 4.02% |
| QC value within limits for Zinc,7440-66-6 Recovery = Not calculated | | | | | | |
| Zirconium,7440-67-7† | -404.5 | -0.00060 mg/L | 0.000529 | -0.00060 mg/L | 0.000529 | 87.83% |
| QC value within limits for Zirconium,7440-67-7 Recovery = Not calculated | | | | | | |

All analyte(s) passed QC.

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**Sequence No.: 7**
**Sample ID: 2100**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 6**
**Date Collected: 10/31/2013 12:27:49 PM**
**Data Type: Reprocessed on 11/1/2013 8:31:03 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 2100**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6461334.9 | 92.1627 | % | 0.35354 | | | | 0.38% |
| Yttrium,7440-65-5A | 3065692.9 | 91.3219 | % | 0.28462 | | | | 0.31% |
| Yttrium,7440-65-5R | 308342.1 | 94.9459 | % | 0.29722 | | | | 0.31% |
| Ar 420.067 R | 3632108.5 | 95.9840 | % | 0.51344 | | | | 0.53% |
| Ar 363.268 A | 126636.1 | 94.1802 | % | 0.26048 | | | | 0.28% |
| Aluminum,7429-90-5† | 621070.9 | 205.763 | mg/L | 2.6063 | 205.763 | mg/L | 2.6063 | 1.27% |
| QC value within limits for Aluminum,7429-90-5 Recovery = 102.88% | | | | | | | | |
| Antimony,7440-36-0† | 3248.5 | 1.02825 | mg/L | 0.005055 | 1.02825 | mg/L | 0.005055 | 0.49% |
| QC value within limits for Antimony,7440-36-0 Recovery = 102.83% | | | | | | | | |
| Arsenic,7440-38-2† | 1937.5 | 1.07123 | mg/L | 0.031022 | 1.07123 | mg/L | 0.031022 | 2.90% |
| QC value within limits for Arsenic,7440-38-2 Recovery = 107.12% | | | | | | | | |
| Barium,7440-39-3† | 112408.3 | 0.51654 | mg/L | 0.000481 | 0.51654 | mg/L | 0.000481 | 0.09% |
| QC value within limits for Barium,7440-39-3 Recovery = 103.31% | | | | | | | | |
| Beryllium,7440-41-7† | 3792761.8 | 0.52604 | mg/L | 0.000530 | 0.52604 | mg/L | 0.000530 | 0.10% |
| QC value within limits for Beryllium,7440-41-7 Recovery = 105.21% | | | | | | | | |
| Boron,7440-42-8† | 8867.9 | 1.02402 | mg/L | 0.016076 | 1.02402 | mg/L | 0.016076 | 1.57% |
| QC value within limits for Boron,7440-42-8 Recovery = 102.40% | | | | | | | | |
| Cadmium,7440-43-9† | 225055.1 | 0.99986 | mg/L | 0.001096 | 0.99986 | mg/L | 0.001096 | 0.11% |
| QC value within limits for Cadmium,7440-43-9 Recovery = 99.99% | | | | | | | | |
| Calcium,7440-70-2† | 3062490.3 | 193.048 | mg/L | 1.8964 | 193.048 | mg/L | 1.8964 | 0.98% |
| QC value within limits for Calcium,7440-70-2 Recovery = 96.52% | | | | | | | | |
| Chromium,7440-47-3† | 78280.5 | 0.51484 | mg/L | 0.000656 | 0.51484 | mg/L | 0.000656 | 0.13% |
| QC value within limits for Chromium,7440-47-3 Recovery = 102.97% | | | | | | | | |
| Cobalt,7440-48-4† | 34024.6 | 0.49559 | mg/L | 0.007027 | 0.49559 | mg/L | 0.007027 | 1.42% |
| QC value within limits for Cobalt,7440-48-4 Recovery = 99.12% | | | | | | | | |
| Copper,7440-50-8† | 239118.5 | 0.50203 | mg/L | 0.000649 | 0.50203 | mg/L | 0.000649 | 0.13% |
| QC value within limits for Copper,7440-50-8 Recovery = 100.41% | | | | | | | | |
| Iron,7439-89-6† | 3643612.0 | 196.390 | mg/L | 2.2803 | 196.390 | mg/L | 2.2803 | 1.16% |
| QC value within limits for Iron,7439-89-6 Recovery = 98.19% | | | | | | | | |
| Lead,7439-92-1† | 24321.1 | 1.00250 | mg/L | 0.011929 | 1.00250 | mg/L | 0.011929 | 1.19% |
| QC value within limits for Lead,7439-92-1 Recovery = 100.25% | | | | | | | | |
| Lithium,7439-93-2† | 46.7 | 0.00060 | mg/L | 0.001286 | 0.00060 | mg/L | 0.001286 | 215.97% |
| Magnesium,7439-95-4† | 608381.2 | 199.745 | mg/L | 1.9472 | 199.745 | mg/L | 1.9472 | 0.97% |
| QC value within limits for Magnesium,7439-95-4 Recovery = 99.87% | | | | | | | | |
| Manganese,7439-96-5† | 686095.6 | 0.50027 | mg/L | 0.000616 | 0.50027 | mg/L | 0.000616 | 0.12% |
| QC value within limits for Manganese,7439-96-5 Recovery = 100.05% | | | | | | | | |
| Molybdenum,7439-98-7 | 24513.1 | 0.99805 | mg/L | 0.016265 | 0.99805 | mg/L | 0.016265 | 1.63% |
| QC value within limits for Molybdenum,7439-98-7 Recovery = 99.81% | | | | | | | | |
| Nickel,7440-02-0† | 90890.1 | 0.98857 | mg/L | 0.001275 | 0.98857 | mg/L | 0.001275 | 0.13% |
| QC value within limits for Nickel,7440-02-0 Recovery = 98.86% | | | | | | | | |
| Potassium,7440-09-7† | -311.7 | -0.03790 | mg/L | 0.035038 | -0.03790 | mg/L | 0.035038 | 92.44% |
| Selenium,7782-49-2† | 2513.3 | 1.04948 | mg/L | 0.029900 | 1.04948 | mg/L | 0.029900 | 2.85% |
| QC value within limits for Selenium,7782-49-2 Recovery = 104.95% | | | | | | | | |
| Silicon,7440-21-3† | 158.6 | 0.01990 | mg/L | 0.001580 | 0.01990 | mg/L | 0.001580 | 7.94% |
| Silver,7440-22-4† | 516503.1 | 1.05056 | mg/L | 0.001541 | 1.05056 | mg/L | 0.001541 | 0.15% |
| QC value within limits for Silver,7440-22-4 Recovery = 105.06% | | | | | | | | |
| Sodium,7440-23-5† | 9760.0 | 1.08837 | mg/L | 0.009726 | 1.08837 | mg/L | 0.009726 | 0.89% |
| QC value within limits for Sodium,7440-23-5 Recovery = 108.84% | | | | | | | | |
| Strontium,7440-24-6† | 3933.9 | -0.00018 | mg/L | 0.000093 | -0.00018 | mg/L | 0.000093 | 50.81% |
| Thallium,7440-28-0† | 3994.8 | 0.99548 | mg/L | 0.015489 | 0.99548 | mg/L | 0.015489 | 1.56% |
| QC value within limits for Thallium,7440-28-0 Recovery = 99.55% | | | | | | | | |
| Tin,7440-31-5† | -62.0 | 0.00014 | mg/L | 0.001639 | 0.00014 | mg/L | 0.001639 | >999.9% |
| Titanium,7440-32-6† | 484.5 | 0.00000 | mg/L | 0.000149 | 0.00000 | mg/L | 0.000149 | >999.9% |
| Vanadium,7440-62-2† | 178013.9 | 0.49858 | mg/L | 0.000781 | 0.49858 | mg/L | 0.000781 | 0.16% |
| QC value within limits for Vanadium,7440-62-2 Recovery = 99.72% | | | | | | | | |
| Zinc,7440-66-6† | 141860.3 | 1.01141 | mg/L | 0.001648 | 1.01141 | mg/L | 0.001648 | 0.16% |
| QC value within limits for Zinc,7440-66-6 Recovery = 101.14% | | | | | | | | |
| Zirconium,7440-67-7† | 3460.3 | 0.00522 | mg/L | 0.000543 | 0.00522 | mg/L | 0.000543 | 10.40% |

All analyte(s) passed QC.

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**Sequence No.: 8**
**Sample ID: 1800**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 7**
**Date Collected: 10/31/2013 12:33:38 PM**
**Data Type: Reprocessed on 11/1/2013 8:31:05 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 1800**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6780172.7 | 96.7105 | % | 0.04425 | | | | 0.05% |
| Yttrium,7440-65-5A | 3325104.6 | 99.0493 | % | 0.27350 | | | | 0.28% |
| Yttrium,7440-65-5R | 328591.7 | 101.181 | % | 0.5246 | | | | 0.52% |
| Ar 420.067 R | 3812429.0 | 100.749 | % | 0.7243 | | | | 0.72% |
| Ar 363.268 A | 135716.8 | 100.934 | % | 0.2862 | | | | 0.28% |
| Aluminum,7429-90-5† | 16364.5 | 5.41479 | mg/L | 0.034307 | 5.41479 | mg/L | 0.034307 | 0.63% |
| QC value within limits for Aluminum,7429-90-5 Recovery = 108.30% | | | | | | | | |
| Antimony,7440-36-0† | 1611.0 | 0.49917 | mg/L | 0.007146 | 0.49917 | mg/L | 0.007146 | 1.43% |
| QC value within limits for Antimony,7440-36-0 Recovery = 99.83% | | | | | | | | |
| Arsenic,7440-38-2† | 1018.7 | 0.52565 | mg/L | 0.005760 | 0.52565 | mg/L | 0.005760 | 1.10% |
| QC value within limits for Arsenic,7440-38-2 Recovery = 105.13% | | | | | | | | |
| Barium,7440-39-3† | 109617.4 | 0.50848 | mg/L | 0.000745 | 0.50848 | mg/L | 0.000745 | 0.15% |
| QC value within limits for Barium,7440-39-3 Recovery = 101.70% | | | | | | | | |
| Beryllium,7440-41-7† | 3607734.4 | 0.50176 | mg/L | 0.001032 | 0.50176 | mg/L | 0.001032 | 0.21% |
| QC value within limits for Beryllium,7440-41-7 Recovery = 100.35% | | | | | | | | |
| Boron,7440-42-8† | 176306.9 | 2.52655 | mg/L | 0.018673 | 2.52655 | mg/L | 0.018673 | 0.74% |
| QC value within limits for Boron,7440-42-8 Recovery = 101.06% | | | | | | | | |
| Cadmium,7440-43-9† | 115535.9 | 0.51488 | mg/L | 0.000609 | 0.51488 | mg/L | 0.000609 | 0.12% |
| QC value within limits for Cadmium,7440-43-9 Recovery = 102.98% | | | | | | | | |
| Calcium,7440-70-2† | 84796.1 | 5.34460 | mg/L | 0.024558 | 5.34460 | mg/L | 0.024558 | 0.46% |
| QC value within limits for Calcium,7440-70-2 Recovery = 106.89% | | | | | | | | |
| Chromium,7440-47-3† | 80575.5 | 0.50926 | mg/L | 0.001398 | 0.50926 | mg/L | 0.001398 | 0.27% |
| QC value within limits for Chromium,7440-47-3 Recovery = 101.85% | | | | | | | | |
| Cobalt,7440-48-4† | 34968.6 | 0.51209 | mg/L | 0.000358 | 0.51209 | mg/L | 0.000358 | 0.07% |
| QC value within limits for Cobalt,7440-48-4 Recovery = 102.42% | | | | | | | | |
| Copper,7440-50-8† | 238699.0 | 0.50514 | mg/L | 0.000402 | 0.50514 | mg/L | 0.000402 | 0.08% |
| QC value within limits for Copper,7440-50-8 Recovery = 101.03% | | | | | | | | |
| Iron,7439-89-6† | 102218.6 | 5.50913 | mg/L | 0.019402 | 5.50913 | mg/L | 0.019402 | 0.35% |
| QC value within limits for Iron,7439-89-6 Recovery = 110.18% | | | | | | | | |
| Lead,7439-92-1† | 12571.1 | 0.51182 | mg/L | 0.006283 | 0.51182 | mg/L | 0.006283 | 1.23% |
| QC value within limits for Lead,7439-92-1 Recovery = 102.36% | | | | | | | | |
| Lithium,7439-93-2† | 38185.0 | 0.50493 | mg/L | 0.004232 | 0.50493 | mg/L | 0.004232 | 0.84% |
| QC value within limits for Lithium,7439-93-2 Recovery = 100.99% | | | | | | | | |
| Magnesium,7439-95-4† | 16891.3 | 5.54676 | mg/L | 0.023130 | 5.54676 | mg/L | 0.023130 | 0.42% |
| QC value greater than the upper limit for Magnesium,7439-95-4 Recovery = 110.94% | | | | | | | | |
| Manganese,7439-96-5† | 697632.7 | 0.50738 | mg/L | 0.000576 | 0.50738 | mg/L | 0.000576 | 0.11% |
| QC value within limits for Manganese,7439-96-5 Recovery = 101.48% | | | | | | | | |
| Molybdenum,7439-98-7 | 12614.2 | 0.50265 | mg/L | 0.005770 | 0.50265 | mg/L | 0.005770 | 1.15% |
| QC value within limits for Molybdenum,7439-98-7 Recovery = 100.53% | | | | | | | | |
| Nickel,7440-02-0† | 47349.0 | 0.51461 | mg/L | 0.000788 | 0.51461 | mg/L | 0.000788 | 0.15% |
| QC value within limits for Nickel,7440-02-0 Recovery = 102.92% | | | | | | | | |
| Potassium,7440-09-7† | 37259.7 | 9.98584 | mg/L | 0.110294 | 9.98584 | mg/L | 0.110294 | 1.10% |
| QC value within limits for Potassium,7440-09-7 Recovery = 99.86% | | | | | | | | |
| Selenium,7782-49-2† | 1256.8 | 0.51297 | mg/L | 0.002688 | 0.51297 | mg/L | 0.002688 | 0.52% |
| QC value within limits for Selenium,7782-49-2 Recovery = 102.59% | | | | | | | | |
| Silicon,7440-21-3† | 18665.7 | 5.00021 | mg/L | 0.074213 | 5.00021 | mg/L | 0.074213 | 1.48% |
| QC value within limits for Silicon,7440-21-3 Recovery = 100.00% | | | | | | | | |
| Silver,7440-22-4† | 249689.9 | 0.50658 | mg/L | 0.000376 | 0.50658 | mg/L | 0.000376 | 0.07% |
| QC value within limits for Silver,7440-22-4 Recovery = 101.32% | | | | | | | | |
| Sodium,7440-23-5† | 181996.0 | 20.4327 | mg/L | 0.24242 | 20.4327 | mg/L | 0.24242 | 1.19% |
| QC value within limits for Sodium,7440-23-5 Recovery = 102.16% | | | | | | | | |
| Strontium,7440-24-6† | 357093.8 | 0.50621 | mg/L | 0.005315 | 0.50621 | mg/L | 0.005315 | 1.05% |
| QC value within limits for Strontium,7440-24-6 Recovery = 101.24% | | | | | | | | |
| Thallium,7440-28-0† | 2079.1 | 0.51963 | mg/L | 0.004939 | 0.51963 | mg/L | 0.004939 | 0.95% |
| QC value within limits for Thallium,7440-28-0 Recovery = 103.93% | | | | | | | | |
| Tin,7440-31-5† | 4569.7 | 0.49207 | mg/L | 0.006810 | 0.49207 | mg/L | 0.006810 | 1.38% |
| QC value within limits for Tin,7440-31-5 Recovery = 98.41% | | | | | | | | |
| Titanium,7440-32-6† | 531974.9 | 0.49996 | mg/L | 0.000715 | 0.49996 | mg/L | 0.000715 | 0.14% |
| QC value within limits for Titanium,7440-32-6 Recovery = 99.99% | | | | | | | | |
| Vanadium,7440-62-2† | 174600.6 | 0.50414 | mg/L | 0.000805 | 0.50414 | mg/L | 0.000805 | 0.16% |
| QC value within limits for Vanadium,7440-62-2 Recovery = 100.83% | | | | | | | | |
| Zinc,7440-66-6† | 68639.8 | 0.49835 | mg/L | 0.000253 | 0.49835 | mg/L | 0.000253 | 0.05% |
| QC value within limits for Zinc,7440-66-6 Recovery = 99.67% | | | | | | | | |
| Zirconium,7440-67-7† | 334380.9 | 0.49657 | mg/L | 0.002430 | 0.49657 | mg/L | 0.002430 | 0.49% |
| QC value within limits for Zirconium,7440-67-7 Recovery = 99.31% | | | | | | | | |

QC Failed. Continue with analysis.

AWG 11/1/13

R/R AWG ~~10~~ 11/1/13

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**Sequence No.:** 9 **Autosampler Location:** 7

**Sample ID:** 1800 **Date Collected:** 10/31/2013 12:46:18 PM

Analyst:
Logged In Analyst (Original) : met
Initial Sample Wt:
Dilution:

Data Type: Reprocessed on 11/1/2013 8:31:07 AM
Initial Sample Vol:
Sample Prep Vol:

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Mean Data: 1800

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6843175.0 | 97.6092 | % | 0.39154 | | | | 0.40% |
| Yttrium,7440-65-5A | 3263369.2 | 97.2104 | % | 0.24936 | | | | 0.26% |
| Yttrium,7440-65-5R | 323977.7 | 99.7605 | % | 0.60345 | | | | 0.60% |
| Ar 420.067 R | 3732917.0 | 98.6480 | % | 0.81578 | | | | 0.83% |
| Ar 363.268 A | 134208.7 | 99.8120 | % | 0.25146 | | | | 0.25% |
| Aluminum,7429-90-5† | 15171.3 | 5.01935 | mg/L | 0.070373 | 5.01935 | mg/L | 0.070373 | 1.40% |
| QC value within limits for Aluminum,7429-90-5 Recovery = 100.39% | | | | | | | | |
| Antimony,7440-36-0† | 1618.2 | 0.50132 | mg/L | 0.002378 | 0.50132 | mg/L | 0.002378 | 0.47% |
| QC value within limits for Antimony,7440-36-0 Recovery = 100.26% | | | | | | | | |
| Arsenic,7440-38-2† | 1003.8 | 0.51830 | mg/L | 0.002415 | 0.51830 | mg/L | 0.002415 | 0.47% |
| QC value within limits for Arsenic,7440-38-2 Recovery = 103.66% | | | | | | | | |
| Barium,7440-39-3† | 110397.9 | 0.51212 | mg/L | 0.002481 | 0.51212 | mg/L | 0.002481 | 0.48% |
| QC value within limits for Barium,7440-39-3 Recovery = 102.42% | | | | | | | | |
| Beryllium,7440-41-7† | 3639361.3 | 0.50615 | mg/L | 0.000579 | 0.50615 | mg/L | 0.000579 | 0.11% |
| QC value within limits for Beryllium,7440-41-7 Recovery = 101.23% | | | | | | | | |
| Boron,7440-42-8† | 178181.5 | 2.55102 | mg/L | 0.010281 | 2.55102 | mg/L | 0.010281 | 0.40% |
| QC value within limits for Boron,7440-42-8 Recovery = 102.04% | | | | | | | | |
| Cadmium,7440-43-9† | 115579.1 | 0.51508 | mg/L | 0.003442 | 0.51508 | mg/L | 0.003442 | 0.67% |
| QC value within limits for Cadmium,7440-43-9 Recovery = 103.02% | | | | | | | | |
| Calcium,7440-70-2† | 78054.5 | 4.91959 | mg/L | 0.036328 | 4.91959 | mg/L | 0.036328 | 0.74% |
| QC value within limits for Calcium,7440-70-2 Recovery = 98.39% | | | | | | | | |
| Chromium,7440-47-3† | 81305.2 | 0.51381 | mg/L | 0.001410 | 0.51381 | mg/L | 0.001410 | 0.27% |
| QC value within limits for Chromium,7440-47-3 Recovery = 102.76% | | | | | | | | |
| Cobalt,7440-48-4† | 35138.8 | 0.51459 | mg/L | 0.001187 | 0.51459 | mg/L | 0.001187 | 0.23% |
| QC value within limits for Cobalt,7440-48-4 Recovery = 102.92% | | | | | | | | |
| Copper,7440-50-8† | 243915.0 | 0.51618 | mg/L | 0.000992 | 0.51618 | mg/L | 0.000992 | 0.19% |
| QC value within limits for Copper,7440-50-8 Recovery = 103.24% | | | | | | | | |
| Iron,7439-89-6† | 93429.7 | 5.03540 | mg/L | 0.045753 | 5.03540 | mg/L | 0.045753 | 0.91% |
| QC value within limits for Iron,7439-89-6 Recovery = 100.71% | | | | | | | | |
| Lead,7439-92-1† | 12502.9 | 0.50902 | mg/L | 0.003314 | 0.50902 | mg/L | 0.003314 | 0.65% |
| QC value within limits for Lead,7439-92-1 Recovery = 101.80% | | | | | | | | |
| Lithium,7439-93-2† | 38390.1 | 0.50764 | mg/L | 0.004455 | 0.50764 | mg/L | 0.004455 | 0.88% |
| QC value within limits for Lithium,7439-93-2 Recovery = 101.53% | | | | | | | | |
| Magnesium,7439-95-4† | 15438.0 | 5.06962 | mg/L | 0.035433 | 5.06962 | mg/L | 0.035433 | 0.70% |
| QC value within limits for Magnesium,7439-95-4 Recovery = 101.39% | | | | | | | | |
| Manganese,7439-96-5† | 734446.5 | 0.53415 | mg/L | 0.005081 | 0.53415 | mg/L | 0.005081 | 0.95% |
| QC value within limits for Manganese,7439-96-5 Recovery = 106.83% | | | | | | | | |
| Molybdenum,7439-98-7 | 12593.2 | 0.50177 | mg/L | 0.001532 | 0.50177 | mg/L | 0.001532 | 0.31% |
| QC value within limits for Molybdenum,7439-98-7 Recovery = 100.35% | | | | | | | | |
| Nickel,7440-02-0† | 47559.7 | 0.51689 | mg/L | 0.001610 | 0.51689 | mg/L | 0.001610 | 0.31% |
| QC value within limits for Nickel,7440-02-0 Recovery = 103.38% | | | | | | | | |
| Potassium,7440-09-7† | 37456.4 | 10.0385 | mg/L | 0.14195 | 10.0385 | mg/L | 0.14195 | 1.41% |
| QC value within limits for Potassium,7440-09-7 Recovery = 100.39% | | | | | | | | |
| Selenium,7782-49-2† | 1251.7 | 0.51078 | mg/L | 0.004139 | 0.51078 | mg/L | 0.004139 | 0.81% |
| QC value within limits for Selenium,7782-49-2 Recovery = 102.16% | | | | | | | | |
| Silicon,7440-21-3† | 18677.5 | 5.00341 | mg/L | 0.071186 | 5.00341 | mg/L | 0.071186 | 1.42% |
| QC value within limits for Silicon,7440-21-3 Recovery = 100.07% | | | | | | | | |
| Silver,7440-22-4† | 256424.5 | 0.52021 | mg/L | 0.001460 | 0.52021 | mg/L | 0.001460 | 0.28% |
| QC value within limits for Silver,7440-22-4 Recovery = 104.04% | | | | | | | | |
| Sodium,7440-23-5† | 182962.4 | 20.5412 | mg/L | 0.42198 | 20.5412 | mg/L | 0.42198 | 2.05% |
| QC value within limits for Sodium,7440-23-5 Recovery = 102.71% | | | | | | | | |
| Strontium,7440-24-6† | 358484.8 | 0.50820 | mg/L | 0.010376 | 0.50820 | mg/L | 0.010376 | 2.04% |
| QC value within limits for Strontium,7440-24-6 Recovery = 101.64% | | | | | | | | |
| Thallium,7440-28-0† | 2071.2 | 0.51771 | mg/L | 0.002589 | 0.51771 | mg/L | 0.002589 | 0.50% |
| QC value within limits for Thallium,7440-28-0 Recovery = 103.54% | | | | | | | | |
| Tin,7440-31-5† | 4627.4 | 0.49824 | mg/L | 0.001669 | 0.49824 | mg/L | 0.001669 | 0.34% |
| QC value within limits for Tin,7440-31-5 Recovery = 99.65% | | | | | | | | |
| Titanium,7440-32-6† | 532318.2 | 0.50028 | mg/L | 0.001207 | 0.50028 | mg/L | 0.001207 | 0.24% |
| QC value within limits for Titanium,7440-32-6 Recovery = 100.06% | | | | | | | | |
| Vanadium,7440-62-2† | 177647.2 | 0.51298 | mg/L | 0.002126 | 0.51298 | mg/L | 0.002126 | 0.41% |
| QC value within limits for Vanadium,7440-62-2 Recovery = 102.60% | | | | | | | | |
| Zinc,7440-66-6† | 69062.9 | 0.50147 | mg/L | 0.002104 | 0.50147 | mg/L | 0.002104 | 0.42% |
| QC value within limits for Zinc,7440-66-6 Recovery = 100.29% | | | | | | | | |

Zirconium,7440-67-7† 345660.9 0.51332 mg/L 0.001744 0.51332 mg/L 0.001744 0.34%
QC value within limits for Zirconium,7440-67-7 Recovery = 102.66%
All analyte(s) passed QC.

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**Sequence No.: 10** **Autosampler Location: 1**
**Sample ID: 1900** **Date Collected: 10/31/2013 12:52:43 PM**
**Analyst:** **Data Type: Reprocessed on 11/1/2013 8:31:09 AM**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Mean Data: 1900**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6881657.6 | 98.1581 | % | 2.15033 | | | | 2.19% |
| Yttrium,7440-65-5A | 3304605.8 | 98.4387 | % | 1.92090 | | | | 1.95% |
| Yttrium,7440-65-5R | 315200.1 | 97.0577 | % | 2.23477 | | | | 2.30% |
| Ar 420.067 R | 3695596.3 | 97.6618 | % | 0.53587 | | | | 0.55% |
| Ar 363.268 A | 133621.2 | 99.3751 | % | 0.12850 | | | | 0.13% |
| Aluminum,7429-90-5† | -26.5 | -0.00880 | mg/L | 0.022694 | -0.00880 | mg/L | 0.022694 | 257.90% |
| QC value within limits for Aluminum,7429-90-5 Recovery = Not calculated | | | | | | | | |
| Antimony,7440-36-0† | 10.6 | 0.00333 | mg/L | 0.001602 | 0.00333 | mg/L | 0.001602 | 48.18% |
| QC value within limits for Antimony,7440-36-0 Recovery = Not calculated | | | | | | | | |
| Arsenic,7440-38-2† | 9.9 | 0.00493 | mg/L | 0.001814 | 0.00493 | mg/L | 0.001814 | 36.82% |
| QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated | | | | | | | | |
| Barium,7440-39-3† | 120.9 | 0.00056 | mg/L | 0.000115 | 0.00056 | mg/L | 0.000115 | 20.56% |
| QC value within limits for Barium,7440-39-3 Recovery = Not calculated | | | | | | | | |
| Beryllium,7440-41-7† | 4582.4 | 0.00064 | mg/L | 0.000176 | 0.00064 | mg/L | 0.000176 | 27.56% |
| QC value within limits for Beryllium,7440-41-7 Recovery = Not calculated | | | | | | | | |
| Boron,7440-42-8† | 2165.4 | 0.03080 | mg/L | 0.008110 | 0.03080 | mg/L | 0.008110 | 26.33% |
| QC value within limits for Boron,7440-42-8 Recovery = Not calculated | | | | | | | | |
| Cadmium,7440-43-9† | 128.1 | 0.00057 | mg/L | 0.000093 | 0.00057 | mg/L | 0.000093 | 16.31% |
| QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated | | | | | | | | |
| Calcium,7440-70-2† | 180.1 | 0.01136 | mg/L | 0.003051 | 0.01136 | mg/L | 0.003051 | 26.87% |
| QC value within limits for Calcium,7440-70-2 Recovery = Not calculated | | | | | | | | |
| Chromium,7440-47-3† | 201.7 | 0.00128 | mg/L | 0.000258 | 0.00128 | mg/L | 0.000258 | 20.18% |
| QC value within limits for Chromium,7440-47-3 Recovery = Not calculated | | | | | | | | |
| Cobalt,7440-48-4† | 26.1 | 0.00038 | mg/L | 0.000303 | 0.00038 | mg/L | 0.000303 | 79.13% |
| QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated | | | | | | | | |
| Copper,7440-50-8† | 430.1 | 0.00091 | mg/L | 0.000752 | 0.00091 | mg/L | 0.000752 | 82.64% |
| QC value within limits for Copper,7440-50-8 Recovery = Not calculated | | | | | | | | |
| Iron,7439-89-6† | 418.8 | 0.02257 | mg/L | 0.003078 | 0.02257 | mg/L | 0.003078 | 13.64% |
| QC value within limits for Iron,7439-89-6 Recovery = Not calculated | | | | | | | | |
| Lead,7439-92-1† | 41.0 | 0.00167 | mg/L | 0.000712 | 0.00167 | mg/L | 0.000712 | 42.71% |
| QC value within limits for Lead,7439-92-1 Recovery = Not calculated | | | | | | | | |
| Lithium,7439-93-2† | 205.2 | 0.00271 | mg/L | 0.000965 | 0.00271 | mg/L | 0.000965 | 35.57% |
| QC value within limits for Lithium,7439-93-2 Recovery = Not calculated | | | | | | | | |
| Magnesium,7439-95-4† | 56.3 | 0.01847 | mg/L | 0.010190 | 0.01847 | mg/L | 0.010190 | 55.16% |
| QC value within limits for Magnesium,7439-95-4 Recovery = Not calculated | | | | | | | | |
| Manganese,7439-96-5† | 771.6 | 0.00056 | mg/L | 0.000069 | 0.00056 | mg/L | 0.000069 | 12.24% |
| QC value within limits for Manganese,7439-96-5 Recovery = Not calculated | | | | | | | | |
| Molybdenum,7439-98-7 | 42.0 | 0.00167 | mg/L | 0.000581 | 0.00167 | mg/L | 0.000581 | 34.72% |
| QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated | | | | | | | | |
| Nickel,7440-02-0† | 83.7 | 0.00091 | mg/L | 0.000274 | 0.00091 | mg/L | 0.000274 | 30.14% |
| QC value within limits for Nickel,7440-02-0 Recovery = Not calculated | | | | | | | | |
| Potassium,7440-09-7† | 1.4 | 0.00037 | mg/L | 0.028242 | 0.00037 | mg/L | 0.028242 | >999.9% |
| QC value within limits for Potassium,7440-09-7 Recovery = Not calculated | | | | | | | | |
| Selenium,7782-49-2† | 10.3 | 0.00423 | mg/L | 0.004422 | 0.00423 | mg/L | 0.004422 | 104.60% |
| QC value within limits for Selenium,7782-49-2 Recovery = Not calculated | | | | | | | | |
| Silicon,7440-21-3† | 77.9 | 0.02087 | mg/L | 0.002291 | 0.02087 | mg/L | 0.002291 | 10.97% |
| QC value within limits for Silicon,7440-21-3 Recovery = Not calculated | | | | | | | | |
| Silver,7440-22-4† | 15.4 | 0.00003 | mg/L | 0.000739 | 0.00003 | mg/L | 0.000739 | >999.9% |
| QC value within limits for Silver,7440-22-4 Recovery = Not calculated | | | | | | | | |
| Sodium,7440-23-5† | 165.7 | 0.01860 | mg/L | 0.007856 | 0.01860 | mg/L | 0.007856 | 42.24% |
| QC value within limits for Sodium,7440-23-5 Recovery = Not calculated | | | | | | | | |
| Strontium,7440-24-6† | 706.3 | 0.00100 | mg/L | 0.000138 | 0.00100 | mg/L | 0.000138 | 13.75% |
| QC value within limits for Strontium,7440-24-6 Recovery = Not calculated | | | | | | | | |
| Thallium,7440-28-0† | 4.1 | 0.00102 | mg/L | 0.002227 | 0.00102 | mg/L | 0.002227 | 218.91% |
| QC value within limits for Thallium,7440-28-0 Recovery = Not calculated | | | | | | | | |
| Tin,7440-31-5† | 17.5 | 0.00187 | mg/L | 0.000174 | 0.00187 | mg/L | 0.000174 | 9.30% |

QC value within limits for Tin,7440-31-5 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Titanium,7440-32-6† | 512.5 | 0.00048 mg/L | 0.000339 | 0.00048 mg/L | 0.000339 | 70.37% |

QC value within limits for Titanium,7440-32-6 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Vanadium,7440-62-2† | 115.3 | 0.00033 mg/L | 0.000508 | 0.00033 mg/L | 0.000508 | 152.51% |

QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Zinc,7440-66-6† | 82.3 | 0.00059 mg/L | 0.000368 | 0.00059 mg/L | 0.000368 | 62.01% |

QC value within limits for Zinc,7440-66-6 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Zirconium,7440-67-7† | 584.2 | 0.00087 mg/L | 0.000276 | 0.00087 mg/L | 0.000276 | 31.76% |

QC value within limits for Zirconium,7440-67-7 Recovery = Not calculated

All analyte(s) passed QC.

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**Sequence No.: 11**
**Sample ID: 21310171201**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt: 1.26 g**
**Dilution: 5X**

**Autosampler Location: 17**
**Date Collected: 10/31/2013 12:59:01 PM**
**Data Type: Reprocessed on 11/1/2013 8:31:11 AM**
**Initial Sample Vol:**
**Sample Prep Vol: 50 mL**

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**Mean Data: 21310171201**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6847552.0 | 97.6716 | % | 0.74720 | | | | 0.77% |
| Yttrium,7440-65-5A | 3325590.8 | 99.0638 | % | 0.83034 | | | | 0.84% |
| Yttrium,7440-65-5R | 328616.0 | 101.189 | % | 0.9814 | | | | 0.97% |
| Ar 420.067 R | 3642798.0 | 96.2665 | % | 0.79461 | | | | 0.83% |
| Ar 363.268 A | 130151.3 | 96.7945 | % | 0.15785 | | | | 0.16% |
| Aluminum,7429-90-5† | 68446.9 | 22.6712 | mg/L | 0.16976 | 4498.26 | mg/kg | 33.683 | 0.75% |
| Antimony,7440-36-0† | 12.7 | 0.01062 | mg/L | 0.001062 | 2.10663 | mg/kg | 0.210786 | 10.01% |
| Arsenic,7440-38-2† | 3.4 | 0.01682 | mg/L | 0.004262 | 3.33761 | mg/kg | 0.845697 | 25.34% |
| Barium,7440-39-3† | 63258.1 | 0.29225 | mg/L | 0.000910 | 57.9855 | mg/kg | 0.18062 | 0.31% |
| Beryllium,7440-41-7† | -35738.5 | 0.00081 | mg/L | 0.000119 | 0.16082 | mg/kg | 0.023635 | 14.70% |
| Boron,7440-42-8† | -18903.9 | 0.00431 | mg/L | 0.002915 | 0.85514 | mg/kg | 0.578429 | 67.64% |
| Cadmium,7440-43-9† | 2997.5 | 0.01219 | mg/L | 0.000237 | 2.41860 | mg/kg | 0.047006 | 1.94% |
| Calcium,7440-70-2† | 207250.9 | 13.0566 | mg/L | 0.12543 | 2590.60 | mg/kg | 24.888 | 0.96% |
| Chromium,7440-47-3† | 18631.7 | 0.12042 | mg/L | 0.003643 | 23.8938 | mg/kg | 0.72276 | 3.02% |
| Cobalt,7440-48-4† | 1686.1 | 0.01931 | mg/L | 0.000211 | 3.83175 | mg/kg | 0.041946 | 1.09% |
| Copper,7440-50-8† | 175546.5 | 0.37086 | mg/L | 0.001464 | 73.5839 | mg/kg | 0.29044 | 0.39% |
| Iron,7439-89-6† | 1106059.0 | 59.6179 | mg/L | 1.38604 | 11829.0 | mg/kg | 275.01 | 2.32% |
| Lead,7439-92-1† | 53718.0 | 2.18575 | mg/L | 0.013319 | 433.680 | mg/kg | 2.6426 | 0.61% |
| Lithium,7439-93-2† | 3325.1 | 0.04391 | mg/L | 0.000878 | 8.71148 | mg/kg | 0.174132 | 2.00% |
| Magnesium,7439-95-4† | 32951.1 | 10.8023 | mg/L | 0.08000 | 2143.32 | mg/kg | 15.873 | 0.74% |
| Manganese,7439-96-5† | 777532.4 | 0.56579 | mg/L | 0.002610 | 112.261 | mg/kg | 0.5178 | 0.46% |
| Molybdenum,7439-98-7 | 221.8 | 0.01456 | mg/L | 0.000661 | 2.88849 | mg/kg | 0.131075 | 4.54% |
| Nickel,7440-02-0† | 7110.9 | 0.07739 | mg/L | 0.001131 | 15.3555 | mg/kg | 0.22445 | 1.46% |
| Potassium,7440-09-7† | 14610.8 | 3.92465 | mg/L | 0.053576 | 778.701 | mg/kg | 10.6301 | 1.37% |
| Selenium,7782-49-2† | -13.8 | 0.00699 | mg/L | 0.006767 | 1.38615 | mg/kg | 1.342581 | 96.86% |
| Silicon,7440-21-3† | 47387.6 | 12.6965 | mg/L | 0.01610 | 2519.14 | mg/kg | 3.195 | 0.13% |
| Silver,7440-22-4† | -1391.4 | -0.00126 | mg/L | 0.000087 | -0.25026 | mg/kg | 0.017304 | 6.91% |
| Sodium,7440-23-5† | 5826.3 | 0.65852 | mg/L | 0.030525 | 130.659 | mg/kg | 6.0565 | 4.64% |
| Strontium,7440-24-6† | 55251.6 | 0.07786 | mg/L | 0.001180 | 15.4480 | mg/kg | 0.23412 | 1.52% |
| Thallium,7440-28-0† | -90.7 | 0.00789 | mg/L | 0.001957 | 1.56485 | mg/kg | 0.388203 | 24.81% |
| Tin,7440-31-5† | 622.5 | 0.07511 | mg/L | 0.005336 | 14.9028 | mg/kg | 1.05870 | 7.10% |
| Titanium,7440-32-6† | 2218154.9 | 2.08478 | mg/L | 0.043792 | 413.646 | mg/kg | 8.6889 | 2.10% |
| Vanadium,7440-62-2† | 17973.2 | 0.04869 | mg/L | 0.000284 | 9.66141 | mg/kg | 0.056342 | 0.58% |
| Zinc,7440-66-6† | 510478.6 | 3.73160 | mg/L | 0.016089 | 740.396 | mg/kg | 3.1923 | 0.43% |
| Zirconium,7440-67-7† | 15886.5 | 0.02252 | mg/L | 0.008697 | 4.46797 | mg/kg | 1.725556 | 38.62% |

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**Sequence No.: 12**
**Sample ID: 21310183601**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution: 50X**

**Autosampler Location: 18**
**Date Collected: 10/31/2013 1:05:20 PM**
**Data Type: Reprocessed on 11/1/2013 8:31:12 AM**
**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 21310183601**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6804692.6 | 97.0603 | % | 0.96818 | | | | 1.00% |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Yttrium,7440-65-5A | 3292696.8 | 98.0840 | % | 0.94264 | | | | 0.96% |
| Yttrium,7440-65-5R | 315543.0 | 97.1633 | % | 0.25638 | | | | 0.26% |
| Ar 420.067 R | 3638958.1 | 96.1650 | % | 0.60028 | | | | 0.62% |
| Ar 363.268 A | 133766.8 | 99.4834 | % | 0.20135 | | | | 0.20% |
| Aluminum,7429-90-5† | 1265.5 | 0.39067 | mg/L | 0.026820 | 19.5337 | mg/L | 1.34099 | 6.87% |
| Antimony,7440-36-0† | 559.1 | 0.06305 | mg/L | 0.002945 | 3.15247 | mg/L | 0.147231 | 4.67% |
| Arsenic,7440-38-2† | -32.6 | 0.00717 | mg/L | 0.003791 | 0.35861 | mg/L | 0.189553 | 52.86% |
| Barium,7440-39-3† | 1777.7 | 0.00715 | mg/L | 0.000175 | 0.35735 | mg/L | 0.008736 | 2.44% |
| Beryllium,7440-41-7† | -190630.7 | -0.00184 | mg/L | 0.000161 | -0.09208 | mg/L | 0.008045 | 8.74% |
| Boron,7440-42-8† | -2597.1 | 0.00342 | mg/L | 0.000702 | 0.17083 | mg/L | 0.035083 | 20.54% |
| Cadmium,7440-43-9† | 22.3 | -0.00012 | mg/L | 0.000077 | -0.00584 | mg/L | 0.003844 | 65.82% |
| Calcium,7440-70-2† | 10113.9 | 0.63830 | mg/L | 0.015383 | 31.9149 | mg/L | 0.76914 | 2.41% |
| Chromium,7440-47-3† | 1014126.5 | 6.39900 | mg/L | 0.012078 | 319.950 | mg/L | 0.6039 | 0.19% |
| Cobalt,7440-48-4† | 2290.0 | 0.01141 | mg/L | 0.000462 | 0.57063 | mg/L | 0.023077 | 4.04% |
| Copper,7440-50-8† | 32644.3 | 0.06535 | mg/L | 0.000220 | 3.26738 | mg/L | 0.011021 | 0.34% |
| Iron,7439-89-6† | 36784.1 | 1.97821 | mg/L | 0.047720 | 98.9104 | mg/L | 2.38602 | 2.41% |
| Lead,7439-92-1† | 1052.8 | 0.04598 | mg/L | 0.001769 | 2.29899 | mg/L | 0.088453 | 3.85% |
| Lithium,7439-93-2† | -28.6 | -0.00025 | mg/L | 0.001346 | -0.01254 | mg/L | 0.067294 | 536.85% |
| Magnesium,7439-95-4† | 706.7 | 0.24950 | mg/L | 0.008393 | 12.4752 | mg/L | 0.41966 | 3.36% |
| Manganese,7439-96-5† | 150207.0 | 0.10909 | mg/L | 0.000276 | 5.45460 | mg/L | 0.013823 | 0.25% |
| Molybdenum,7439-98-7 | 136960.6 | 5.44950 | mg/L | 0.044738 | 272.475 | mg/L | 2.2369 | 0.82% |
| Nickel,7440-02-0† | 2672455.9 | 29.0483 | mg/L | 0.04492 | 1452.42 | mg/L | 2.246 | 0.15% |
| Potassium,7440-09-7† | -45.3 | -0.02991 | mg/L | 0.006706 | -1.49551 | mg/L | 0.335285 | 22.42% |
| Selenium,7782-49-2† | 11.2 | 0.00976 | mg/L | 0.005068 | 0.48804 | mg/L | 0.253387 | 51.92% |
| Silicon,7440-21-3† | 609.3 | 0.16127 | mg/L | 0.091492 | 8.06360 | mg/L | 4.574617 | 56.73% |
| Silver,7440-22-4† | -112.7 | -0.00103 | mg/L | 0.000333 | -0.05146 | mg/L | 0.016671 | 32.40% |
| Sodium,7440-23-5† | 201.6 | 0.04670 | mg/L | 0.005712 | 2.33506 | mg/L | 0.285594 | 12.23% |
| Strontium,7440-24-6† | 648.0 | 0.00075 | mg/L | 0.000113 | 0.03737 | mg/L | 0.005664 | 15.16% |
| Thallium,7440-28-0† | -368.7 | 0.02782 | mg/L | 0.006067 | 1.39104 | mg/L | 0.303351 | 21.81% |
| Tin,7440-31-5† | 4349.7 | 0.50092 | mg/L | 0.007519 | 25.0459 | mg/L | 0.37597 | 1.50% |
| Titanium,7440-32-6† | 9374413.3 | 8.81118 | mg/L | 0.063055 | 440.559 | mg/L | 3.1527 | 0.72% |
| Vanadium,7440-62-2† | -27726.8 | -0.07084 | mg/L | 0.001174 | -3.54196 | mg/L | 0.058723 | 1.66% |
| Zinc,7440-66-6† | 51947.8 | 0.18751 | mg/L | 0.001964 | 9.37571 | mg/L | 0.098184 | 1.05% |
| Zirconium,7440-67-7† | -761.1 | -0.00430 | mg/L | 0.000293 | -0.21506 | mg/L | 0.014649 | 6.81% |

**Sequence No.: 13**
**Sample ID: 1245219**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt: 1.25 g**
**Dilution: 1X**

**Autosampler Location: 19**
**Date Collected: 10/31/2013 1:11:53 PM**
**Data Type: Reprocessed on 11/1/2013 8:31:14 AM**

**Initial Sample Vol:**
**Sample Prep Vol: 50 mL**

**Mean Data: 1245219**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 7107256.2 | 101.376 | % | 0.8998 | | | | 0.89% |
| Yttrium,7440-65-5A | 3399768.7 | 101.273 | % | 0.8869 | | | | 0.88% |
| Yttrium,7440-65-5R | 327296.3 | 100.782 | % | 0.6107 | | | | 0.61% |
| Ar 420.067 R | 3758672.4 | 99.3286 | % | 0.58244 | | | | 0.59% |
| Ar 363.268 A | 135024.5 | 100.419 | % | 0.1759 | | | | 0.18% |
| Aluminum,7429-90-5† | 184.2 | 0.06098 | mg/L | 0.023719 | 2.43921 | mg/kg | 0.948746 | 38.90% |
| Antimony,7440-36-0† | 3.1 | 0.00081 | mg/L | 0.002604 | 0.03244 | mg/kg | 0.104164 | 321.07% |
| Arsenic,7440-38-2† | 7.7 | 0.00387 | mg/L | 0.001398 | 0.15460 | mg/kg | 0.055920 | 36.17% |
| Barium,7440-39-3† | 532.0 | 0.00246 | mg/L | 0.000139 | 0.09850 | mg/kg | 0.005580 | 5.66% |
| Beryllium,7440-41-7† | -568.1 | -0.00004 | mg/L | 0.000018 | -0.00172 | mg/kg | 0.000718 | 41.84% |
| Boron,7440-42-8† | -1034.5 | -0.01460 | mg/L | 0.000545 | -0.58410 | mg/kg | 0.021790 | 3.73% |
| Cadmium,7440-43-9† | -10.7 | -0.00005 | mg/L | 0.000026 | -0.00191 | mg/kg | 0.001033 | 54.03% |
| Calcium,7440-70-2† | 2279.2 | 0.14371 | mg/L | 0.006017 | 5.74860 | mg/kg | 0.240697 | 4.19% |
| Chromium,7440-47-3† | 1446.4 | 0.00913 | mg/L | 0.001654 | 0.36503 | mg/kg | 0.066153 | 18.12% |
| Cobalt,7440-48-4† | 8.5 | 0.00009 | mg/L | 0.000129 | 0.00369 | mg/kg | 0.005143 | 139.37% |
| Copper,7440-50-8† | -602.3 | -0.00128 | mg/L | 0.000102 | -0.05129 | mg/kg | 0.004080 | 7.96% |
| Iron,7439-89-6† | 41.9 | 0.00225 | mg/L | 0.003581 | 0.08989 | mg/kg | 0.143223 | 159.34% |
| Lead,7439-92-1† | 10.8 | 0.00045 | mg/L | 0.000540 | 0.01805 | mg/kg | 0.021598 | 119.65% |
| Lithium,7439-93-2† | -207.9 | -0.00275 | mg/L | 0.000271 | -0.10997 | mg/kg | 0.010848 | 9.86% |
| Magnesium,7439-95-4† | 95.2 | 0.03128 | mg/L | 0.019883 | 1.25105 | mg/kg | 0.795304 | 63.57% |
| Manganese,7439-96-5† | 3615.4 | 0.00263 | mg/L | 0.000226 | 0.10517 | mg/kg | 0.009032 | 8.59% |
| Molybdenum,7439-98-7 | 572.4 | 0.02277 | mg/L | 0.005129 | 0.91098 | mg/kg | 0.205144 | 22.52% |
| Nickel,7440-02-0† | 3575.7 | 0.03887 | mg/L | 0.011025 | 1.55464 | mg/kg | 0.441010 | 28.37% |
| Potassium,7440-09-7† | -152.3 | -0.04084 | mg/L | 0.017073 | -1.63376 | mg/kg | 0.682902 | 41.80% |
| Selenium,7782-49-2† | -21.2 | -0.00865 | mg/L | 0.001596 | -0.34619 | mg/kg | 0.063822 | 18.44% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Silicon,7440-21-3† | 59.7 | 0.01600 | mg/L | 0.005085 | 0.63996 | mg/kg | 0.203397 | 31.78% |
| Silver,7440-22-4† | -321.4 | -0.00065 | mg/L | 0.000448 | -0.02604 | mg/kg | 0.017933 | 68.86% |
| Sodium,7440-23-5† | -21.5 | -0.00238 | mg/L | 0.005818 | -0.09522 | mg/kg | 0.232729 | 244.40% |
| Strontium,7440-24-6† | 239.4 | 0.00034 | mg/L | 0.000149 | 0.01341 | mg/kg | 0.005943 | 44.33% |
| Thallium,7440-28-0† | -7.0 | -0.00154 | mg/L | 0.001511 | -0.06174 | mg/kg | 0.060427 | 97.87% |
| Tin,7440-31-5† | -38.1 | -0.00402 | mg/L | 0.001029 | -0.16098 | mg/kg | 0.041159 | 25.57% |
| Titanium,7440-32-6† | 13683.6 | 0.01286 | mg/L | 0.002748 | 0.51446 | mg/kg | 0.109939 | 21.37% |
| Vanadium,7440-62-2† | -47.4 | -0.00013 | mg/L | 0.000496 | -0.00501 | mg/kg | 0.019850 | 396.57% |
| Zinc,7440-66-6† | -487.4 | -0.00382 | mg/L | 0.000053 | -0.15299 | mg/kg | 0.002136 | 1.40% |
| Zirconium,7440-67-7† | -80.4 | -0.00012 | mg/L | 0.000370 | -0.00497 | mg/kg | 0.014794 | 297.72% |

**Sequence No.: 14**
**Sample ID: 21310184203**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt: 1.25 g**
**Dilution: 1X**

**Autosampler Location: 20**
**Date Collected: 10/31/2013 1:18:17 PM**
**Data Type: Reprocessed on 11/1/2013 8:31:16 AM**

**Initial Sample Vol:**
**Sample Prep Vol: 50 mL**

**Mean Data: 21310184203**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 7138439.1 | 101.821 | % | 0.7488 | | | | 0.74% |
| Yttrium,7440-65-5A | 3536781.4 | 105.355 | % | 0.2802 | | | | 0.27% |
| Yttrium,7440-65-5R | 349698.8 | 107.681 | % | 0.8510 | | | | 0.79% |
| Ar 420.067 R | 3800275.3 | 100.428 | % | 0.6457 | | | | 0.64% |
| Ar 363.268 A | 131754.2 | 97.9865 | % | 0.27283 | | | | 0.28% |
| Aluminum,7429-90-5† | 158748.0 | 52.5907 | mg/L | 0.43109 | 2103.63 | mg/kg | 19.363 | 0.92% |
| Antimony,7440-36-0† | -6.6 | 0.00412 | mg/L | 0.001747 | 0.16492 | mg/kg | 0.069885 | 42.38% |
| Arsenic,7440-38-2† | -41.8 | 0.01265 | mg/L | 0.002603 | 0.50620 | mg/kg | 0.107330 | 21.20% |
| Barium,7440-39-3† | 149959.8 | 0.69369 | mg/L | 0.009933 | 27.7474 | mg/kg | 0.39752 | 1.43% |
| Beryllium,7440-41-7† | 29172.5 | 0.00610 | mg/L | 0.000064 | 0.24408 | mg/kg | 0.002572 | 1.05% |
| Boron,7440-42-8† | -28903.2 | 0.02557 | mg/L | 0.003902 | 1.02267 | mg/kg | 0.156087 | 15.26% |
| Cadmium,7440-43-9† | 400.5 | -0.00004 | mg/L | 0.000048 | -0.00148 | mg/kg | 0.001933 | 130.24% |
| Calcium,7440-70-2† | 208897.2 | 13.1478 | mg/L | 0.12558 | 525.912 | mg/kg | 5.0231 | 0.96% |
| Chromium,7440-47-3† | 18003.3 | 0.11773 | mg/L | 0.001405 | 4.70922 | mg/kg | 0.059815 | 1.27% |
| Cobalt,7440-48-4† | 6297.9 | 0.08913 | mg/L | 0.000339 | 3.56525 | mg/kg | 0.013541 | 0.38% |
| Copper,7440-50-8† | 19155.6 | 0.03875 | mg/L | 0.000652 | 1.54984 | mg/kg | 0.026065 | 1.68% |
| Iron,7439-89-6† | 1767553.4 | 95.2724 | mg/L | 0.34201 | 3810.90 | mg/kg | 13.681 | 0.36% |
| Lead,7439-92-1† | 1552.9 | 0.06375 | mg/L | 0.001123 | 2.55016 | mg/kg | 0.044913 | 1.76% |
| Lithium,7439-93-2† | 6399.1 | 0.08450 | mg/L | 0.001092 | 3.38007 | mg/kg | 0.043673 | 1.29% |
| Magnesium,7439-95-4† | 78295.2 | 25.6812 | mg/L | 0.25474 | 1027.25 | mg/kg | 10.189 | 0.99% |
| Manganese,7439-96-5† | 3663761.8 | 2.66505 | mg/L | 0.002357 | 106.602 | mg/kg | 0.0943 | 0.09% |
| Molybdenum,7439-98-7 | -35.1 | 0.00826 | mg/L | 0.000705 | 0.33041 | mg/kg | 0.028202 | 8.54% |
| Nickel,7440-02-0† | 11256.1 | 0.12262 | mg/L | 0.001131 | 4.90481 | mg/kg | 0.045229 | 0.92% |
| Potassium,7440-09-7† | 37327.9 | 10.0257 | mg/L | 0.09146 | 401.027 | mg/kg | 3.6585 | 0.91% |
| Selenium,7782-49-2† | -30.3 | 0.00329 | mg/L | 0.002606 | 0.13142 | mg/kg | 0.104236 | 79.31% |
| Silicon,7440-21-3† | 49085.6 | 13.1491 | mg/L | 0.10914 | 525.964 | mg/kg | 4.3655 | 0.83% |
| Silver,7440-22-4† | -2514.8 | -0.00248 | mg/L | 0.000156 | -0.09909 | mg/kg | 0.006225 | 6.28% |
| Sodium,7440-23-5† | 75390.3 | 8.46839 | mg/L | 0.083414 | 338.736 | mg/kg | 3.3366 | 0.99% |
| Strontium,7440-24-6† | 88637.5 | 0.12513 | mg/L | 0.001080 | 5.00531 | mg/kg | 0.043185 | 0.86% |
| Thallium,7440-28-0† | -68.9 | -0.00098 | mg/L | 0.000985 | -0.03928 | mg/kg | 0.039404 | 100.31% |
| Tin,7440-31-5† | -48.8 | -0.00143 | mg/L | 0.001193 | -0.05708 | mg/kg | 0.047735 | 83.63% |
| Titanium,7440-32-6† | 788064.5 | 0.74051 | mg/L | 0.001173 | 29.6204 | mg/kg | 0.04691 | 0.16% |
| Vanadium,7440-62-2† | 61692.0 | 0.17246 | mg/L | 0.002812 | 6.89821 | mg/kg | 0.112461 | 1.63% |
| Zinc,7440-66-6† | 27033.8 | 0.18699 | mg/L | 0.000579 | 7.47941 | mg/kg | 0.023163 | 0.31% |
| Zirconium,7440-67-7† | 40829.2 | 0.06029 | mg/L | 0.003104 | 2.41145 | mg/kg | 0.124144 | 5.15% |

**Sequence No.: 15**
**Sample ID: 1245221**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt: 1.25 g**
**Dilution: 1X**

**Autosampler Location: 21**
**Date Collected: 10/31/2013 1:24:39 PM**
**Data Type: Reprocessed on 11/1/2013 8:31:17 AM**

**Initial Sample Vol:**
**Sample Prep Vol: 50 mL**

**Mean Data: 1245221**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 7128447.2 | 101.678 | % | 1.4280 | | | | 1.40% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Yttrium,7440-65-5A | 3525764.2 | 105.027 | % | 1.2266 | | | 1.17% |
| Yttrium,7440-65-5R | 347229.5 | 106.920 | % | 0.9647 | | | 0.90% |
| Ar 420.067 R | 3788715.3 | 100.123 | % | 0.5590 | | | 0.56% |
| Ar 363.268 A | 130651.2 | 97.1663 | % | 0.57676 | | | 0.59% |
| Aluminum,7429-90-5† | 328370.3 | 108.780 | mg/L | 1.0191 | 4351.21 | mg/kg | 40.764 | 0.94% |
| Antimony,7440-36-0† | 825.2 | 0.25985 | mg/L | 0.004012 | 10.3939 | mg/kg | 0.16047 | 1.54% |
| Arsenic,7440-38-2† | 981.8 | 0.56146 | mg/L | 0.010220 | 22.4584 | mg/kg | 0.40879 | 1.82% |
| Barium,7440-39-3† | 280695.4 | 1.29984 | mg/L | 0.012536 | 51.9936 | mg/kg | 0.50143 | 0.96% |
| Beryllium,7440-41-7† | 4007192.0 | 0.56112 | mg/L | 0.000366 | 22.4450 | mg/kg | 0.01463 | 0.07% |
| Boron,7440-42-8† | 151121.1 | 2.67847 | mg/L | 0.036224 | 107.139 | mg/kg | 1.4489 | 1.35% |
| Cadmium,7440-43-9† | 123199.7 | 0.54704 | mg/L | 0.006402 | 21.8815 | mg/kg | 0.25608 | 1.17% |
| Calcium,7440-70-2† | 307730.0 | 19.3695 | mg/L | 0.12924 | 774.781 | mg/kg | 5.1697 | 0.67% |
| Chromium,7440-47-3† | 110313.6 | 0.70014 | mg/L | 0.006167 | 28.0056 | mg/kg | 0.24670 | 0.88% |
| Cobalt,7440-48-4† | 43198.3 | 0.62784 | mg/L | 0.006253 | 25.1138 | mg/kg | 0.25012 | 1.00% |
| Copper,7440-50-8† | 280001.4 | 0.59045 | mg/L | 0.006166 | 23.6179 | mg/kg | 0.24665 | 1.04% |
| Iron,7439-89-6† | 2167317.7 | 116.817 | mg/L | 3.1347 | 4672.69 | mg/kg | 125.388 | 2.68% |
| Lead,7439-92-1† | 14695.1 | 0.60309 | mg/L | 0.007809 | 24.1237 | mg/kg | 0.31237 | 1.29% |
| Lithium,7439-93-2† | 48833.1 | 0.64560 | mg/L | 0.007564 | 25.8242 | mg/kg | 0.30256 | 1.17% |
| Magnesium,7439-95-4† | 115890.3 | 38.0231 | mg/L | 0.24847 | 1520.92 | mg/kg | 9.939 | 0.65% |
| Manganese,7439-96-5† | 4399789.3 | 3.20082 | mg/L | 0.003252 | 128.033 | mg/kg | 0.1301 | 0.10% |
| Molybdenum,7439-98-7 | 12536.5 | 0.51201 | mg/L | 0.009088 | 20.4803 | mg/kg | 0.36354 | 1.78% |
| Nickel,7440-02-0† | 61245.7 | 0.66579 | mg/L | 0.006673 | 26.6314 | mg/kg | 0.26693 | 1.00% |
| Potassium,7440-09-7† | 108371.8 | 29.0656 | mg/L | 0.27607 | 1162.63 | mg/kg | 11.043 | 0.95% |
| Selenium,7782-49-2† | 1301.7 | 0.54328 | mg/L | 0.018014 | 21.7313 | mg/kg | 0.72055 | 3.32% |
| Silicon,7440-21-3† | 60580.3 | 16.2270 | mg/L | 0.11251 | 649.079 | mg/kg | 4.5004 | 0.69% |
| Silver,7440-22-4† | 263458.2 | 0.53768 | mg/L | 0.004781 | 21.5073 | mg/kg | 0.19124 | 0.89% |
| Sodium,7440-23-5† | 272155.6 | 30.5583 | mg/L | 0.89459 | 1222.33 | mg/kg | 35.784 | 2.93% |
| Strontium,7440-24-6† | 502081.5 | 0.71119 | mg/L | 0.019528 | 28.4477 | mg/kg | 0.78111 | 2.75% |
| Thallium,7440-28-0† | 2051.1 | 0.53991 | mg/L | 0.005496 | 21.5963 | mg/kg | 0.21985 | 1.02% |
| Tin,7440-31-5† | 4969.6 | 0.54120 | mg/L | 0.006369 | 21.6480 | mg/kg | 0.25475 | 1.18% |
| Titanium,7440-32-6† | 2053497.0 | 1.92982 | mg/L | 0.001691 | 77.1929 | mg/kg | 0.06766 | 0.09% |
| Vanadium,7440-62-2† | 270492.2 | 0.77436 | mg/L | 0.007629 | 30.9746 | mg/kg | 0.30517 | 0.99% |
| Zinc,7440-66-6† | 105401.7 | 0.75487 | mg/L | 0.008243 | 30.1950 | mg/kg | 0.32971 | 1.09% |
| Zirconium,7440-67-7† | 96518.3 | 0.14246 | mg/L | 0.002929 | 5.69857 | mg/kg | 0.117166 | 2.06% |

**Sequence No.: 16**
**Sample ID: 1245222**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt: 1.25 g**
**Dilution: 1X**

**Autosampler Location: 22**
**Date Collected: 10/31/2013 1:31:07 PM**
**Data Type: Reprocessed on 11/1/2013 8:31:19 AM**

**Initial Sample Vol:**
**Sample Prep Vol: 50 mL**

**Mean Data: 1245222**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6934425.3 | 98.9107 | % | 0.35761 | | | | 0.36% |
| Yttrium,7440-65-5A | 3446260.2 | 102.658 | % | 0.5265 | | | | 0.51% |
| Yttrium,7440-65-5R | 342473.7 | 105.456 | % | 0.6435 | | | | 0.61% |
| Ar 420.067 R | 3712243.9 | 98.1017 | % | 0.75644 | | | | 0.77% |
| Ar 363.268 A | 129299.1 | 96.1607 | % | 0.08442 | | | | 0.09% |
| Aluminum,7429-90-5† | 340768.9 | 112.888 | mg/L | 1.0008 | 4515.52 | mg/kg | 40.033 | 0.89% |
| Antimony,7440-36-0† | 814.7 | 0.25743 | mg/L | 0.005913 | 10.2972 | mg/kg | 0.23651 | 2.30% |
| Arsenic,7440-38-2† | 936.1 | 0.54020 | mg/L | 0.006528 | 21.6079 | mg/kg | 0.26350 | 1.22% |
| Barium,7440-39-3† | 290579.4 | 1.34559 | mg/L | 0.020509 | 53.8235 | mg/kg | 0.82275 | 1.53% |
| Beryllium,7440-41-7† | 3768056.7 | 0.52827 | mg/L | 0.001095 | 21.1310 | mg/kg | 0.04381 | 0.21% |
| Boron,7440-42-8† | 145254.1 | 2.60848 | mg/L | 0.015662 | 104.339 | mg/kg | 0.6265 | 0.60% |
| Cadmium,7440-43-9† | 116560.9 | 0.51740 | mg/L | 0.008698 | 20.6960 | mg/kg | 0.34792 | 1.68% |
| Calcium,7440-70-2† | 310159.5 | 19.5213 | mg/L | 0.11855 | 780.854 | mg/kg | 4.7419 | 0.61% |
| Chromium,7440-47-3† | 107599.6 | 0.68289 | mg/L | 0.009204 | 27.3155 | mg/kg | 0.37054 | 1.36% |
| Cobalt,7440-48-4† | 42104.2 | 0.61150 | mg/L | 0.010298 | 24.4600 | mg/kg | 0.41193 | 1.68% |
| Copper,7440-50-8† | 273407.7 | 0.57636 | mg/L | 0.008292 | 23.0544 | mg/kg | 0.33168 | 1.44% |
| Iron,7439-89-6† | 2219623.1 | 119.636 | mg/L | 1.5653 | 4785.45 | mg/kg | 62.610 | 1.31% |
| Lead,7439-92-1† | 14288.9 | 0.58683 | mg/L | 0.008164 | 23.4732 | mg/kg | 0.32655 | 1.39% |
| Lithium,7439-93-2† | 47368.4 | 0.62622 | mg/L | 0.004153 | 25.0489 | mg/kg | 0.16613 | 0.66% |
| Magnesium,7439-95-4† | 117624.8 | 38.5918 | mg/L | 0.23111 | 1543.67 | mg/kg | 9.245 | 0.60% |
| Manganese,7439-96-5† | 4745126.1 | 3.45199 | mg/L | 0.006188 | 138.080 | mg/kg | 0.2475 | 0.18% |
| Molybdenum,7439-98-7 | 12182.6 | 0.49828 | mg/L | 0.004436 | 19.9313 | mg/kg | 0.17745 | 0.89% |
| Nickel,7440-02-0† | 59409.9 | 0.64581 | mg/L | 0.011835 | 25.8325 | mg/kg | 0.47421 | 1.84% |
| Potassium,7440-09-7† | 109527.2 | 29.3759 | mg/L | 0.21394 | 1175.03 | mg/kg | 8.558 | 0.73% |
| Selenium,7782-49-2† | 1243.7 | 0.51953 | mg/L | 0.013233 | 20.7814 | mg/kg | 0.52933 | 2.55% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Silicon,7440-21-3† | 72947.6 | 19.5407 | mg/L | 0.13692 | 781.628 | mg/kg | 5.4768 | 0.70% |
| Silver,7440-22-4† | 251790.3 | 0.51408 | mg/L | 0.007315 | 20.5630 | mg/kg | 0.29260 | 1.42% |
| Sodium,7440-23-5† | 272309.3 | 30.5759 | mg/L | 0.31742 | 1223.03 | mg/kg | 12.697 | 1.04% |
| Strontium,7440-24-6† | 497905.6 | 0.70526 | mg/L | 0.006954 | 28.2104 | mg/kg | 0.27817 | 0.99% |
| Thallium,7440-28-0† | 1961.0 | 0.51960 | mg/L | 0.004646 | 20.7839 | mg/kg | 0.18585 | 0.89% |
| Tin,7440-31-5† | 4779.9 | 0.52132 | mg/L | 0.006748 | 20.8527 | mg/kg | 0.26991 | 1.29% |
| Titanium,7440-32-6† | 2175173.2 | 2.04418 | mg/L | 0.005195 | 81.7674 | mg/kg | 0.20780 | 0.25% |
| Vanadium,7440-62-2† | 266931.1 | 0.76388 | mg/L | 0.012003 | 30.5551 | mg/kg | 0.48012 | 1.57% |
| Zinc,7440-66-6† | 103253.8 | 0.73901 | mg/L | 0.012417 | 29.5603 | mg/kg | 0.49669 | 1.68% |
| Zirconium,7440-67-7† | 103634.4 | 0.15297 | mg/L | 0.003867 | 6.11897 | mg/kg | 0.154676 | 2.53% |

**Sequence No.: 17**
**Sample ID: 1249370**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt: 1.25 g**
**Dilution: 1X**

**Autosampler Location: 23**
**Date Collected: 10/31/2013 1:37:34 PM**
**Data Type: Reprocessed on 11/1/2013 8:31:21 AM**

**Initial Sample Vol:**
**Sample Prep Vol: 50 mL**

**Mean Data: 1249370**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6941471.1 | 99.0112 | % | 0.84492 | | | | 0.85% |
| Yttrium,7440-65-5A | 3463307.9 | 103.166 | % | 0.9534 | | | | 0.92% |
| Yttrium,7440-65-5R | 339736.1 | 104.613 | % | 0.1655 | | | | 0.16% |
| Ar 421.067 R | 3696455.9 | 97.6845 | % | 0.26207 | | | | 0.27% |
| Ar 363.268 A | 131567.6 | 97.8478 | % | 0.25177 | | | | 0.26% |
| Aluminum,7429-90-5† | 175465.7 | 58.1228 | mg/L | 0.63032 | 2324.91 | mg/kg | 25.533 | 1.10% |
| Antimony,7440-36-0† | 1410.7 | 0.44296 | mg/L | 0.002231 | 17.7183 | mg/kg | 0.08924 | 0.50% |
| Arsenic,7440-38-2† | 900.0 | 0.49897 | mg/L | 0.003218 | 19.9588 | mg/kg | 0.12871 | 0.64% |
| Barium,7440-39-3† | 251253.2 | 1.16360 | mg/L | 0.013203 | 46.5440 | mg/kg | 0.76811 | 1.65% |
| Beryllium,7440-41-7† | 3403309.7 | 0.47558 | mg/L | 0.000332 | 19.0234 | mg/kg | 0.01327 | 0.07% |
| Boron,7440-42-8† | 143609.2 | 2.48856 | mg/L | 0.050995 | 99.5423 | mg/kg | 2.03980 | 2.05% |
| Cadmium,7440-43-9† | 106126.6 | 0.47116 | mg/L | 0.008619 | 18.8465 | mg/kg | 0.34476 | 1.83% |
| Calcium,7440-70-2† | 277910.8 | 17.4977 | mg/L | 0.19093 | 699.909 | mg/kg | 7.6370 | 1.09% |
| Chromium,7440-47-3† | 93097.7 | 0.59212 | mg/L | 0.010175 | 23.6849 | mg/kg | 0.40701 | 1.72% |
| Cobalt,7440-48-4† | 38263.2 | 0.55709 | mg/L | 0.008985 | 22.2836 | mg/kg | 0.35941 | 1.61% |
| Copper,7440-50-8† | 245506.9 | 0.51779 | mg/L | 0.007581 | 20.7118 | mg/kg | 0.30326 | 1.46% |
| Iron,7439-89-6† | 1830531.2 | 98.6664 | mg/L | 1.85189 | 3946.66 | mg/kg | 74.076 | 1.88% |
| Lead,7439-92-1† | 13037.0 | 0.53147 | mg/L | 0.007836 | 21.2587 | mg/kg | 0.31344 | 1.47% |
| Lithium,7439-93-2† | 41535.3 | 0.54912 | mg/L | 0.007950 | 21.9646 | mg/kg | 0.31798 | 1.45% |
| Magnesium,7439-95-4† | 90778.1 | 29.7808 | mg/L | 0.34468 | 1191.23 | mg/kg | 13.787 | 1.16% |
| Manganese,7439-96-5† | 4234229.1 | 3.07995 | mg/L | 0.003012 | 123.198 | mg/kg | 0.1205 | 0.10% |
| Molybdenum,7439-98-7 | 11513.3 | 0.46832 | mg/L | 0.003447 | 18.7328 | mg/kg | 0.13786 | 0.74% |
| Nickel,7440-02-0† | 53673.8 | 0.58361 | mg/L | 0.008629 | 23.3444 | mg/kg | 0.34518 | 1.48% |
| Potassium,7440-09-7† | 72941.6 | 19.5696 | mg/L | 0.29153 | 782.786 | mg/kg | 11.6612 | 1.49% |
| Selenium,7782-49-2† | 1140.7 | 0.48071 | mg/L | 0.002653 | 19.2284 | mg/kg | 0.10613 | 0.55% |
| Silicon,7440-21-3† | 78500.7 | 21.0299 | mg/L | 0.21365 | 841.194 | mg/kg | 8.5461 | 1.02% |
| Silver,7440-22-4† | 231182.6 | 0.47165 | mg/L | 0.005888 | 18.8659 | mg/kg | 0.23554 | 1.25% |
| Sodium,7440-23-5† | 250216.4 | 28.0960 | mg/L | 0.35540 | 1123.84 | mg/kg | 14.216 | 1.26% |
| Strontium,7440-24-6† | 437702.2 | 0.61999 | mg/L | 0.007141 | 24.7996 | mg/kg | 0.28564 | 1.15% |
| Thallium,7440-28-0† | 1841.6 | 0.47762 | mg/L | 0.010769 | 19.1047 | mg/kg | 0.43076 | 2.25% |
| Tin,7440-31-5† | 4485.0 | 0.48690 | mg/L | 0.006292 | 19.4759 | mg/kg | 0.25170 | 1.29% |
| Titanium,7440-32-6† | 1367134.4 | 1.28474 | mg/L | 0.013629 | 51.3896 | mg/kg | 0.54518 | 1.06% |
| Vanadium,7440-62-2† | 227860.8 | 0.65237 | mg/L | 0.010271 | 26.0948 | mg/kg | 0.41085 | 1.57% |
| Zinc,7440-66-6† | 90221.8 | 0.64606 | mg/L | 0.010137 | 25.8423 | mg/kg | 0.40549 | 1.57% |
| Zirconium,7440-67-7† | 72909.2 | 0.10772 | mg/L | 0.005878 | 4.30870 | mg/kg | 0.235108 | 5.46% |

**Sequence No.: 18**
**Sample ID: 1249371**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt: 1.25 g**
**Dilution: 5X**

**Autosampler Location: 24**
**Date Collected: 10/31/2013 1:44:01 PM**
**Data Type: Reprocessed on 11/1/2013 8:31:22 AM**

**Initial Sample Vol:**
**Sample Prep Vol: 50 mL**

**Mean Data: 1249371**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6927842.2 | 98.8168 | % | 0.49376 | | | | 0.50% |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Yttrium,7440-65-5A | 3351961.6 | 99.8494 | % | 0.49538 | | | | 0.50% |
| Yttrium,7440-65-5R | 327583.7 | 100.871 | % | 0.7799 | | | | 0.77% |
| Ar 420.067 R | 3685713.9 | 97.4006 | % | 1.02137 | | | | 1.05% |
| Ar 363.268 A | 134146.0 | 99.7654 | % | 0.32082 | | | | 0.32% |
| Aluminum,7429-90-5† | 34763.8 | 11.5167 | mg/L | 0.06569 | 2303.33 | mg/kg | 13.137 | 0.57% |
| Antimony,7440-36-0† | 38.6 | 0.01355 | mg/L | 0.006070 | 2.70931 | mg/kg | 1.213944 | 44.81% |
| Arsenic,7440-38-2† | 7.1 | 0.01088 | mg/L | 0.005443 | 2.17687 | mg/kg | 1.089633 | 50.06% |
| Barium,7440-39-3† | 33122.9 | 0.15322 | mg/L | 0.001922 | 30.6444 | mg/kg | 0.38444 | 1.25% |
| Beryllium,7440-41-7† | 11562.8 | 0.00210 | mg/L | 0.000122 | 0.41971 | mg/kg | 0.024325 | 5.80% |
| Boron,7440-42-8† | -3076.6 | 0.05224 | mg/L | 0.007769 | 10.4485 | mg/kg | 1.55371 | 14.87% |
| Cadmium,7440-43-9† | 270.1 | 0.00080 | mg/L | 0.000196 | 0.16047 | mg/kg | 0.039245 | 24.46% |
| Calcium,7440-70-2† | 44957.5 | 2.82946 | mg/L | 0.017301 | 565.892 | mg/kg | 3.4602 | 0.61% |
| Chromium,7440-47-3† | 4021.8 | 0.02626 | mg/L | 0.000355 | 5.25172 | mg/kg | 0.070981 | 1.35% |
| Cobalt,7440-48-4† | 1426.2 | 0.02017 | mg/L | 0.000419 | 4.03466 | mg/kg | 0.083805 | 2.08% |
| Copper,7440-50-8† | 6594.4 | 0.01356 | mg/L | 0.001499 | 2.71201 | mg/kg | 0.299781 | 11.05% |
| Iron,7439-89-6† | 389152.0 | 20.9756 | mg/L | 0.08760 | 4195.12 | mg/kg | 17.519 | 0.42% |
| Lead,7439-92-1† | 370.2 | 0.01518 | mg/L | 0.000337 | 3.03677 | mg/kg | 0.067416 | 2.22% |
| Lithium,7439-93-2† | 2463.6 | 0.03255 | mg/L | 0.000762 | 6.51021 | mg/kg | 0.152421 | 2.34% |
| Magnesium,7439-95-4† | 16717.3 | 5.48315 | mg/L | 0.019553 | 1096.63 | mg/kg | 3.911 | 0.36% |
| Manganese,7439-96-5† | 823148.6 | 0.59876 | mg/L | 0.001710 | 119.752 | mg/kg | 0.3419 | 0.29% |
| Molybdenum,7439-98-7 | 96.8 | 0.00598 | mg/L | 0.001208 | 1.19530 | mg/kg | 0.241636 | 20.22% |
| Nickel,7440-02-0† | 2529.5 | 0.02755 | mg/L | 0.000483 | 5.51054 | mg/kg | 0.096574 | 1.75% |
| Potassium,7440-09-7† | 8788.2 | 2.36001 | mg/L | 0.029279 | 472.002 | mg/kg | 5.8558 | 1.24% |
| Selenium,7782-49-2† | 2.0 | 0.00428 | mg/L | 0.003948 | 0.85572 | mg/kg | 0.789535 | 92.27% |
| Silicon,7440-21-3† | 13384.3 | 3.58560 | mg/L | 0.040139 | 717.120 | mg/kg | 8.0278 | 1.12% |
| Silver,7440-22-4† | -510.1 | -0.00046 | mg/L | 0.000197 | -0.09239 | mg/kg | 0.039411 | 42.66% |
| Sodium,7440-23-5† | 17548.7 | 1.97119 | mg/L | 0.018653 | 394.237 | mg/kg | 3.7305 | 0.95% |
| Strontium,7440-24-6† | 19983.4 | 0.02822 | mg/L | 0.000229 | 5.64317 | mg/kg | 0.045847 | 0.81% |
| Thallium,7440-28-0† | -10.7 | 0.00109 | mg/L | 0.002243 | 0.21767 | mg/kg | 0.448574 | 206.08% |
| Tin,7440-31-5† | 21.6 | 0.00321 | mg/L | 0.001583 | 0.64276 | mg/kg | 0.316533 | 49.25% |
| Titanium,7440-32-6† | 189751.8 | 0.17831 | mg/L | 0.010660 | 35.6612 | mg/kg | 2.13205 | 5.98% |
| Vanadium,7440-62-2† | 13449.2 | 0.03759 | mg/L | 0.000435 | 7.51766 | mg/kg | 0.086949 | 1.16% |
| Zinc,7440-66-6† | 5803.8 | 0.04008 | mg/L | 0.001076 | 8.01646 | mg/kg | 0.215232 | 2.68% |
| Zirconium,7440-67-7† | 8196.5 | 0.01209 | mg/L | 0.000585 | 2.41747 | mg/kg | 0.117061 | 4.84% |

**Sequence No.: 19**
**Sample ID: 21310184106**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt: 1.26 g**
**Dilution: 1X**

**Autosampler Location: 25**
**Date Collected: 10/31/2013 1:50:11 PM**
**Data Type: Reprocessed on 11/1/2013 8:31:24 AM**

**Initial Sample Vol:**
**Sample Prep Vol: 50 mL**

**Mean Data: 21310184106**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6881875.9 | 98.1612 | % | 0.61802 | | | | 0.63% |
| Yttrium,7440-65-5A | 3381873.8 | 100.740 | % | 0.3871 | | | | 0.38% |
| Yttrium,7440-65-5R | 337016.4 | 103.775 | % | 3.7469 | | | | 3.61% |
| Ar 420.067 R | 3635937.4 | 96.0852 | % | 0.69706 | | | | 0.72% |
| Ar 363.268 A | 131390.8 | 97.7163 | % | 0.19721 | | | | 0.20% |
| Aluminum,7429-90-5† | 192202.9 | 63.6748 | mg/L | 4.08038 | 2526.78 | mg/kg | 161.920 | 6.41% |
| Antimony,7440-36-0† | 2.6 | 0.00662 | mg/L | 0.002602 | 0.26289 | mg/kg | 0.103250 | 39.28% |
| Arsenic,7440-38-2† | -55.4 | 0.01199 | mg/L | 0.007203 | 0.47588 | mg/kg | 0.289003 | 60.73% |
| Barium,7440-39-3† | 98966.7 | 0.45635 | mg/L | 0.004204 | 18.1091 | mg/kg | 0.17038 | 0.94% |
| Beryllium,7440-41-7† | 17755.9 | 0.00425 | mg/L | 0.000015 | 0.16880 | mg/kg | 0.000598 | 0.35% |
| Boron,7440-42-8† | -30734.4 | 0.04306 | mg/L | 0.017527 | 1.70871 | mg/kg | 0.695514 | 40.70% |
| Cadmium,7440-43-9† | 426.6 | -0.00008 | mg/L | 0.000076 | -0.00305 | mg/kg | 0.003001 | 98.52% |
| Calcium,7440-70-2† | 1548188.2 | 97.6058 | mg/L | 4.27170 | 3873.24 | mg/kg | 169.512 | 4.38% |
| Chromium,7440-47-3† | 22486.4 | 0.14769 | mg/L | 0.001409 | 5.86063 | mg/kg | 0.055932 | 0.95% |
| Cobalt,7440-48-4† | 3072.1 | 0.04180 | mg/L | 0.000565 | 1.65886 | mg/kg | 0.022429 | 1.35% |
| Copper,7440-50-8† | 23362.2 | 0.04761 | mg/L | 0.000700 | 1.88942 | mg/kg | 0.027782 | 1.47% |
| Iron,7439-89-6† | 1945076.8 | 104.841 | mg/L | 4.9195 | 4160.37 | mg/kg | 195.220 | 4.69% |
| Lead,7439-92-1† | 1589.3 | 0.06720 | mg/L | 0.001528 | 2.66651 | mg/kg | 0.060620 | 2.27% |
| Lithium,7439-93-2† | 7292.4 | 0.09636 | mg/L | 0.005576 | 3.82397 | mg/kg | 0.221258 | 5.79% |
| Magnesium,7439-95-4† | 106469.9 | 34.9303 | mg/L | 2.34192 | 1386.12 | mg/kg | 92.933 | 6.70% |
| Manganese,7439-96-5† | 2035766.2 | 1.48123 | mg/L | 0.003738 | 58.7791 | mg/kg | 0.14835 | 0.25% |
| Molybdenum,7439-98-7 | -85.9 | 0.00735 | mg/L | 0.000108 | 0.29152 | mg/kg | 0.005476 | 1.88% |
| Nickel,7440-02-0† | 9177.2 | 0.10012 | mg/L | 0.001473 | 3.97312 | mg/kg | 0.058469 | 1.47% |
| Potassium,7440-09-7† | 44224.3 | 11.8748 | mg/L | 0.64174 | 471.221 | mg/kg | 25.4660 | 5.40% |
| Selenium,7782-49-2† | -46.3 | -0.00038 | mg/L | 0.004707 | -0.01511 | mg/kg | 0.186785 | >999.9% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Silicon,7440-21-3† | 70577.3 | 18.9071 | mg/L | 1.18666 | 750.282 | mg/kg | 47.0896 | 6.28% |
| Silver,7440-22-4† | -3155.8 | -0.00305 | mg/L | 0.000400 | -0.12099 | mg/kg | 0.015868 | 13.11% |
| Sodium,7440-23-5† | 65840.5 | 7.39257 | mg/L | 0.460618 | 293.356 | mg/kg | 18.2785 | 6.23% |
| Strontium,7440-24-6† | 97190.6 | 0.13489 | mg/L | 0.009041 | 5.35275 | mg/kg | 0.358764 | 6.70% |
| Thallium,7440-28-0† | -79.3 | -0.00465 | mg/L | 0.001817 | -0.18434 | mg/kg | 0.072107 | 39.12% |
| Tin,7440-31-5† | -105.6 | -0.00516 | mg/L | 0.000865 | -0.20495 | mg/kg | 0.034327 | 16.75% |
| Titanium,7440-32-6† | 686117.4 | 0.64467 | mg/L | 0.001130 | 25.5820 | mg/kg | 0.04485 | 0.18% |
| Vanadium,7440-62-2† | 65171.6 | 0.18169 | mg/L | 0.001917 | 7.21003 | mg/kg | 0.076075 | 1.06% |
| Zinc,7440-66-6† | 27204.8 | 0.18799 | mg/L | 0.002731 | 7.45995 | mg/kg | 0.108374 | 1.45% |
| Zirconium,7440-67-7† | 36522.1 | 0.05394 | mg/L | 0.001925 | 2.14035 | mg/kg | 0.076394 | 3.57% |

**Sequence No.: 20**
**Sample ID: 21310184107**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt: 1.25 g**
**Dilution: 1X**

**Autosampler Location: 26**
**Date Collected: 10/31/2013 1:56:29 PM**
**Data Type: Reprocessed on 11/1/2013 8:31:25 AM**

**Initial Sample Vol:**
**Sample Prep Vol: 50 mL**

**Mean Data: 21310184107**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6723278.9 | 95.8990 | % | 0.19422 | | | | 0.20% |
| Yttrium,7440-65-5A | 3274871.7 | 97.5530 | % | 0.24418 | | | | 0.25% |
| Yttrium,7440-65-5R | 334297.0 | 102.938 | % | 0.9665 | | | | 0.94% |
| Ar 420.067 R | 3684023.3 | 97.3559 | % | 0.11205 | | | | 0.12% |
| Ar 362.268 A | 134258.5 | 99.8490 | % | 0.07824 | | | | 0.08% |
| Aluminum,7429-90-5† | 111508.9 | 36.9380 | mg/L | 0.33149 | 1477.52 | mg/kg | 13.260 | 0.90% |
| Antimony,7440-36-0† | 6.5 | 0.00479 | mg/L | 0.000791 | 0.19168 | mg/kg | 0.031639 | 16.51% |
| Arsenic,7440-38-2† | -62.0 | -0.00117 | mg/L | 0.004905 | -0.04694 | mg/kg | 0.194611 | 414.64% |
| Barium,7440-39-3† | 118672.1 | 0.54668 | mg/L | 0.003070 | 21.8672 | mg/kg | 0.12281 | 0.56% |
| Beryllium,7440-41-7† | 6592.4 | 0.00226 | mg/L | 0.000022 | 0.09055 | mg/kg | 0.000870 | 0.96% |
| Boron,7440-42-8† | -13120.0 | 0.02934 | mg/L | 0.007038 | 1.17344 | mg/kg | 0.281525 | 23.99% |
| Cadmium,7440-43-9† | 136.9 | -0.00018 | mg/L | 0.000023 | -0.00704 | mg/kg | 0.000923 | 13.12% |
| Calcium,7440-70-2† | 4188623.4 | 264.124 | mg/L | 8.1129 | 10565.0 | mg/kg | 324.52 | 3.07% |
| Chromium,7440-47-3† | 12498.4 | 0.08422 | mg/L | 0.000470 | 3.36895 | mg/kg | 0.018798 | 0.56% |
| Cobalt,7440-48-4† | 1773.3 | 0.02418 | mg/L | 0.000367 | 0.96737 | mg/kg | 0.014683 | 1.52% |
| Copper,7440-50-8† | 16354.1 | 0.03230 | mg/L | 0.000202 | 1.29189 | mg/kg | 0.008089 | 0.63% |
| Iron,7439-89-6† | 845190.3 | 45.5572 | mg/L | 1.42360 | 1822.29 | mg/kg | 57.144 | 3.14% |
| Lead,7439-92-1† | 872.4 | 0.04062 | mg/L | 0.000410 | 1.62485 | mg/kg | 0.016409 | 1.01% |
| Lithium,7439-93-2† | 5197.6 | 0.06866 | mg/L | 0.001225 | 2.74633 | mg/kg | 0.049007 | 1.78% |
| Magnesium,7439-95-4† | 147940.3 | 48.5693 | mg/L | 0.35109 | 1942.77 | mg/kg | 14.044 | 0.72% |
| Manganese,7439-96-5† | 2278273.4 | 1.65697 | mg/L | 0.007045 | 66.2788 | mg/kg | 0.28182 | 0.43% |
| Molybdenum,7439-98-7 | 44.0 | 0.00677 | mg/L | 0.000544 | 0.27076 | mg/kg | 0.021764 | 8.04% |
| Nickel,7440-02-0† | 5350.8 | 0.05821 | mg/L | 0.000288 | 2.32855 | mg/kg | 0.011525 | 0.49% |
| Potassium,7440-09-7† | 26633.7 | 7.15028 | mg/L | 0.086431 | 286.011 | mg/kg | 3.4573 | 1.21% |
| Selenium,7782-49-2† | -65.1 | -0.01810 | mg/L | 0.008173 | -0.72399 | mg/kg | 0.326907 | 45.15% |
| Silicon,7440-21-3† | 52200.0 | 13.9803 | mg/L | 0.09361 | 559.212 | mg/kg | 3.7444 | 0.67% |
| Silver,7440-22-4† | -2072.7 | -0.00236 | mg/L | 0.000040 | -0.09447 | mg/kg | 0.001618 | 1.71% |
| Sodium,7440-23-5† | 54746.8 | 6.14174 | mg/L | 0.068319 | 245.670 | mg/kg | 2.7568 | 1.12% |
| Strontium,7440-24-6† | 190842.7 | 0.26315 | mg/L | 0.002379 | 10.5259 | mg/kg | 0.09517 | 0.90% |
| Thallium,7440-28-0† | -66.2 | -0.00486 | mg/L | 0.000565 | -0.19452 | mg/kg | 0.022620 | 11.63% |
| Tin,7440-31-5† | -158.8 | -0.00609 | mg/L | 0.001009 | -0.24350 | mg/kg | 0.040350 | 16.57% |
| Titanium,7440-32-6† | 517212.5 | 0.48604 | mg/L | 0.002399 | 19.4415 | mg/kg | 0.05595 | 0.29% |
| Vanadium,7440-62-2† | 38238.8 | 0.10601 | mg/L | 0.000984 | 4.24020 | mg/kg | 0.036153 | 0.85% |
| Zinc,7440-66-6† | 16924.7 | 0.12017 | mg/L | 0.001152 | 4.80696 | mg/kg | 0.046068 | 0.96% |
| Zirconium,7440-67-7† | 27341.4 | 0.04038 | mg/L | 0.000717 | 1.61500 | mg/kg | 0.028697 | 1.78% |

**Sequence No.: 21**
**Sample ID: 1800**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 7**
**Date Collected: 10/31/2013 2:02:46 PM**
**Data Type: Reprocessed on 11/1/2013 8:31:27 AM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 1800**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6844818.8 | 97.6326 | % | 0.23549 | | | | 0.24% |

| | | | | | | |
|---|---|---|---|---|---|---|
| Yttrium,7440-65-5A | 3276243.6 | 97.5939 % | 0.29424 | | | 0.30% |
| Yttrium,7440-65-5R | 325941.9 | 100.365 % | 0.8788 | | | 0.88% |
| Ar 420.067 R | 3748362.2 | 99.0562 % | 0.60254 | | | 0.61% |
| Ar 363.268 A | 135565.0 | 100.821 % | 0.1925 | | | 0.19% |
| Aluminum,7429-90-5† | 15462.5 | 5.11595 mg/L | 0.036721 | 5.11595 mg/L | 0.036721 | 0.72% |
| QC value within limits for Aluminum,7429-90-5 Recovery = 102.32% | | | | | | |
| Antimony,7440-36-0† | 1623.5 | 0.50317 mg/L | 0.006298 | 0.50317 mg/L | 0.006298 | 1.25% |
| QC value within limits for Antimony,7440-36-0 Recovery = 100.63% | | | | | | |
| Arsenic,7440-38-2† | 1012.0 | 0.52214 mg/L | 0.000432 | 0.52214 mg/L | 0.000432 | 0.08% |
| QC value within limits for Arsenic,7440-38-2 Recovery = 104.43% | | | | | | |
| Barium,7440-39-3† | 108541.2 | 0.50349 mg/L | 0.003670 | 0.50349 mg/L | 0.003670 | 0.73% |
| QC value within limits for Barium,7440-39-3 Recovery = 100.70% | | | | | | |
| Beryllium,7440-41-7† | 3646627.1 | 0.50716 mg/L | 0.000856 | 0.50716 mg/L | 0.000856 | 0.17% |
| QC value within limits for Beryllium,7440-41-7 Recovery = 101.43% | | | | | | |
| Boron,7440-42-8† | 173085.8 | 2.47947 mg/L | 0.016033 | 2.47947 mg/L | 0.016033 | 0.65% |
| QC value within limits for Boron,7440-42-8 Recovery = 99.18% | | | | | | |
| Cadmium,7440-43-9† | 113357.3 | 0.50518 mg/L | 0.004275 | 0.50518 mg/L | 0.004275 | 0.85% |
| QC value within limits for Cadmium,7440-43-9 Recovery = 101.04% | | | | | | |
| Calcium,7440-70-2† | 86260.1 | 5.43701 mg/L | 0.050686 | 5.43701 mg/L | 0.050686 | 0.93% |
| QC value within limits for Calcium,7440-70-2 Recovery = 108.74% | | | | | | |
| Chromium,7440-47-3† | 79934.4 | 0.50517 mg/L | 0.003896 | 0.50517 mg/L | 0.003896 | 0.77% |
| QC value within limits for Chromium,7440-47-3 Recovery = 101.03% | | | | | | |
| Cobalt,7440-48-4† | 34451.2 | 0.50450 mg/L | 0.003610 | 0.50450 mg/L | 0.003610 | 0.72% |
| QC value within limits for Cobalt,7440-48-4 Recovery = 100.90% | | | | | | |
| Copper,7440-50-8† | 239711.5 | 0.50728 mg/L | 0.002299 | 0.50728 mg/L | 0.002299 | 0.45% |
| QC value within limits for Copper,7440-50-8 Recovery = 101.46% | | | | | | |
| Iron,7439-89-6† | 96303.8 | 5.19032 mg/L | 0.016741 | 5.19032 mg/L | 0.016741 | 0.32% |
| QC value within limits for Iron,7439-89-6 Recovery = 103.81% | | | | | | |
| Lead,7439-92-1† | 12482.4 | 0.50819 mg/L | 0.002947 | 0.50819 mg/L | 0.002947 | 0.58% |
| QC value within limits for Lead,7439-92-1 Recovery = 101.64% | | | | | | |
| Lithium,7439-93-2† | 38406.4 | 0.50785 mg/L | 0.005172 | 0.50785 mg/L | 0.005172 | 1.02% |
| QC value within limits for Lithium,7439-93-2 Recovery = 101.57% | | | | | | |
| Magnesium,7439-95-4† | 15824.8 | 5.19661 mg/L | 0.004872 | 5.19661 mg/L | 0.004872 | 0.09% |
| QC value within limits for Magnesium,7439-95-4 Recovery = 103.93% | | | | | | |
| Manganese,7439-96-5† | 720495.0 | 0.52400 mg/L | 0.003841 | 0.52400 mg/L | 0.003841 | 0.73% |
| QC value within limits for Manganese,7439-96-5 Recovery = 104.80% | | | | | | |
| Molybdenum,7439-98-7 | 12559.0 | 0.50042 mg/L | 0.005607 | 0.50042 mg/L | 0.005607 | 1.12% |
| QC value within limits for Molybdenum,7439-98-7 Recovery = 100.08% | | | | | | |
| Nickel,7440-02-0† | 46722.4 | 0.50779 mg/L | 0.002347 | 0.50779 mg/L | 0.002347 | 0.46% |
| QC value within limits for Nickel,7440-02-0 Recovery = 101.56% | | | | | | |
| Potassium,7440-09-7† | 37727.5 | 10.1111 mg/L | 0.15900 | 10.1111 mg/L | 0.15900 | 1.57% |
| QC value within limits for Potassium,7440-09-7 Recovery = 101.11% | | | | | | |
| Selenium,7782-49-2† | 1227.6 | 0.50100 mg/L | 0.012011 | 0.50100 mg/L | 0.012011 | 2.40% |
| QC value within limits for Selenium,7782-49-2 Recovery = 100.20% | | | | | | |
| Silicon,7440-21-3† | 18989.2 | 5.08691 mg/L | 0.063251 | 5.08691 mg/L | 0.063251 | 1.24% |
| QC value within limits for Silicon,7440-21-3 Recovery = 101.74% | | | | | | |
| Silver,7440-22-4† | 251602.1 | 0.51043 mg/L | 0.001791 | 0.51043 mg/L | 0.001791 | 0.35% |
| QC value within limits for Silver,7440-22-4 Recovery = 102.09% | | | | | | |
| Sodium,7440-23-5† | 182780.9 | 20.5208 mg/L | 0.54294 | 20.5208 mg/L | 0.54294 | 2.65% |
| QC value within limits for Sodium,7440-23-5 Recovery = 102.60% | | | | | | |
| Strontium,7440-24-6† | 359353.3 | 0.50941 mg/L | 0.012697 | 0.50941 mg/L | 0.012697 | 2.49% |
| QC value within limits for Strontium,7440-24-6 Recovery = 101.88% | | | | | | |
| Thallium,7440-28-0† | 2072.8 | 0.51809 mg/L | 0.005836 | 0.51809 mg/L | 0.005836 | 1.13% |
| QC value within limits for Thallium,7440-28-0 Recovery = 103.62% | | | | | | |
| Tin,7440-31-5† | 4631.3 | 0.49869 mg/L | 0.002677 | 0.49869 mg/L | 0.002677 | 0.54% |
| QC value within limits for Tin,7440-31-5 Recovery = 99.74% | | | | | | |
| Titanium,7440-32-6† | 534154.0 | 0.50201 mg/L | 0.001052 | 0.50201 mg/L | 0.001052 | 0.21% |
| QC value within limits for Titanium,7440-32-6 Recovery = 100.40% | | | | | | |
| Vanadium,7440-62-2† | 174142.7 | 0.50284 mg/L | 0.002642 | 0.50284 mg/L | 0.002642 | 0.53% |
| QC value within limits for Vanadium,7440-62-2 Recovery = 100.57% | | | | | | |
| Zinc,7440-66-6† | 67968.1 | 0.49351 mg/L | 0.002830 | 0.49351 mg/L | 0.002830 | 0.57% |
| QC value within limits for Zinc,7440-66-6 Recovery = 98.70% | | | | | | |
| Zirconium,7440-67-7† | 347893.0 | 0.51664 mg/L | 0.011377 | 0.51664 mg/L | 0.011377 | 2.20% |
| QC value within limits for Zirconium,7440-67-7 Recovery = 103.33% | | | | | | |

All analyte(s) passed QC.

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**Sequence No.: 22**
**Sample ID: 1900**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**

**Autosampler Location: 1**
**Date Collected: 10/31/2013 2:09:09 PM**
**Data Type: Reprocessed on 11/1/2013 8:31:29 AM**
**Initial Sample Vol:**

Dilution: Sample Prep Vol:

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Mean Data: 1900

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6811345.0 | 97.1552 | % | 0.44835 | | | | 0.46% |
| Yttrium,7440-65-5A | 3267221.0 | 97.3251 | % | 0.45790 | | | | 0.47% |
| Yttrium,7440-65-5R | 320436.5 | 98.6701 | % | 1.32554 | | | | 1.34% |
| Ar 420.067 R | 3707843.7 | 97.9854 | % | 0.88681 | | | | 0.91% |
| Ar 363.268 A | 133272.8 | 99.1160 | % | 0.20527 | | | | 0.21% |
| Aluminum,7429-90-5† | 60.9 | 0.02016 | mg/L | 0.037646 | 0.02016 | mg/L | 0.037646 | 186.73% |
| QC value within limits for Aluminum,7429-90-5 Recovery = Not calculated | | | | | | | | |
| Antimony,7440-36-0† | 11.7 | 0.00370 | mg/L | 0.004077 | 0.00370 | mg/L | 0.004077 | 110.24% |
| QC value within limits for Antimony,7440-36-0 Recovery = Not calculated | | | | | | | | |
| Arsenic,7440-38-2† | 9.8 | 0.00494 | mg/L | 0.003128 | 0.00494 | mg/L | 0.003128 | 63.37% |
| QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated | | | | | | | | |
| Barium,7440-39-3† | 130.6 | 0.00060 | mg/L | 0.000076 | 0.00060 | mg/L | 0.000076 | 12.49% |
| QC value within limits for Barium,7440-39-3 Recovery = Not calculated | | | | | | | | |
| Beryllium,7440-41-7† | 4093.4 | 0.00057 | mg/L | 0.000113 | 0.00057 | mg/L | 0.000113 | 19.83% |
| QC value within limits for Beryllium,7440-41-7 Recovery = Not calculated | | | | | | | | |
| Boron,7440-42-8† | 1905.3 | 0.02725 | mg/L | 0.007553 | 0.02725 | mg/L | 0.007553 | 27.71% |
| QC value within limits for Boron,7440-42-8 Recovery = Not calculated | | | | | | | | |
| Cadmium,7440-43-9† | 137.9 | 0.00061 | mg/L | 0.000071 | 0.00061 | mg/L | 0.000071 | 11.51% |
| QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated | | | | | | | | |
| Calcium,7440-70-2† | 1496.6 | 0.09436 | mg/L | 0.016657 | 0.09436 | mg/L | 0.016657 | 17.65% |
| QC value within limits for Calcium,7440-70-2 Recovery = Not calculated | | | | | | | | |
| Chromium,7440-47-3† | 74.5 | 0.00047 | mg/L | 0.000194 | 0.00047 | mg/L | 0.000194 | 40.94% |
| QC value within limits for Chromium,7440-47-3 Recovery = Not calculated | | | | | | | | |
| Cobalt,7440-48-4† | 51.3 | 0.00075 | mg/L | 0.000348 | 0.00075 | mg/L | 0.000348 | 46.43% |
| QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated | | | | | | | | |
| Copper,7440-50-8† | 761.7 | 0.00161 | mg/L | 0.000236 | 0.00161 | mg/L | 0.000236 | 14.64% |
| QC value within limits for Copper,7440-50-8 Recovery = Not calculated | | | | | | | | |
| Iron,7439-89-6† | 976.7 | 0.05265 | mg/L | 0.006544 | 0.05265 | mg/L | 0.006544 | 12.43% |
| QC value within limits for Iron,7439-89-6 Recovery = Not calculated | | | | | | | | |
| Lead,7439-92-1† | 10.5 | 0.00043 | mg/L | 0.001812 | 0.00043 | mg/L | 0.001812 | 422.75% |
| QC value within limits for Lead,7439-92-1 Recovery = Not calculated | | | | | | | | |
| Lithium,7439-93-2† | 219.4 | 0.00290 | mg/L | 0.002095 | 0.00290 | mg/L | 0.002095 | 72.21% |
| QC value within limits for Lithium,7439-93-2 Recovery = Not calculated | | | | | | | | |
| Magnesium,7439-95-4† | 47.7 | 0.01563 | mg/L | 0.012796 | 0.01563 | mg/L | 0.012796 | 81.86% |
| QC value within limits for Magnesium,7439-95-4 Recovery = Not calculated | | | | | | | | |
| Manganese,7439-96-5† | 3822.2 | 0.00278 | mg/L | 0.000145 | 0.00278 | mg/L | 0.000145 | 5.23% |
| QC value within limits for Manganese,7439-96-5 Recovery = Not calculated | | | | | | | | |
| Molybdenum,7439-98-7 | 57.1 | 0.00228 | mg/L | 0.000941 | 0.00228 | mg/L | 0.000941 | 41.34% |
| QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated | | | | | | | | |
| Nickel,7440-02-0† | 96.4 | 0.00105 | mg/L | 0.000201 | 0.00105 | mg/L | 0.000201 | 19.18% |
| QC value within limits for Nickel,7440-02-0 Recovery = Not calculated | | | | | | | | |
| Potassium,7440-09-7† | 28.2 | 0.00757 | mg/L | 0.005999 | 0.00757 | mg/L | 0.005999 | 79.24% |
| QC value within limits for Potassium,7440-09-7 Recovery = Not calculated | | | | | | | | |
| Selenium,7782-49-2† | 13.8 | 0.00563 | mg/L | 0.004908 | 0.00563 | mg/L | 0.004908 | 87.23% |
| QC value within limits for Selenium,7782-49-2 Recovery = Not calculated | | | | | | | | |
| Silicon,7440-21-3† | 82.0 | 0.02197 | mg/L | 0.007170 | 0.02197 | mg/L | 0.007170 | 32.63% |
| QC value within limits for Silicon,7440-21-3 Recovery = Not calculated | | | | | | | | |
| Silver,7440-22-4† | 176.6 | 0.00036 | mg/L | 0.000154 | 0.00036 | mg/L | 0.000154 | 42.70% |
| QC value within limits for Silver,7440-22-4 Recovery = Not calculated | | | | | | | | |
| Sodium,7440-23-5† | 224.5 | 0.02520 | mg/L | 0.008986 | 0.02520 | mg/L | 0.008986 | 35.65% |
| QC value within limits for Sodium,7440-23-5 Recovery = Not calculated | | | | | | | | |
| Strontium,7440-24-6† | 664.9 | 0.00094 | mg/L | 0.000061 | 0.00094 | mg/L | 0.000061 | 6.51% |
| QC value within limits for Strontium,7440-24-6 Recovery = Not calculated | | | | | | | | |
| Thallium,7440-28-0† | 4.5 | 0.00112 | mg/L | 0.001507 | 0.00112 | mg/L | 0.001507 | 134.92% |
| QC value within limits for Thallium,7440-28-0 Recovery = Not calculated | | | | | | | | |
| Tin,7440-31-5† | 11.7 | 0.00126 | mg/L | 0.000316 | 0.00126 | mg/L | 0.000316 | 25.13% |
| QC value within limits for Tin,7440-31-5 Recovery = Not calculated | | | | | | | | |
| Titanium,7440-32-6† | 964.4 | 0.00091 | mg/L | 0.000278 | 0.00091 | mg/L | 0.000278 | 30.69% |
| QC value within limits for Titanium,7440-32-6 Recovery = Not calculated | | | | | | | | |
| Vanadium,7440-62-2† | 305.3 | 0.00088 | mg/L | 0.000313 | 0.00088 | mg/L | 0.000313 | 35.65% |
| QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated | | | | | | | | |
| Zinc,7440-66-6† | 150.0 | 0.00108 | mg/L | 0.000141 | 0.00108 | mg/L | 0.000141 | 12.99% |
| QC value within limits for Zinc,7440-66-6 Recovery = Not calculated | | | | | | | | |
| Zirconium,7440-67-7† | 620.6 | 0.00092 | mg/L | 0.000402 | 0.00092 | mg/L | 0.000402 | 43.58% |
| QC value within limits for Zirconium,7440-67-7 Recovery = Not calculated | | | | | | | | |

All analyte(s) passed QC.

GCAL ANALYTICAL LABORATORIES, LLC

# ICP

BY METHODS EPA 200.7/6010B/6010C

Date: 11/6/13
Analyst: CMB, AWG

Instrument ID: ICP 5
HBN: 519287
Batch: 8734

| | | | |
|---|---|---|---|
| Cal Standard | 225-27-6 | Exp. Date | 12/5/13 |
| ICV Standard | 225-11-4 | Exp. Date | CMB 11/13 ~~12~~ 11/14/13 |
| CRDL Standard | 225-24-3 | Exp. Date | 12/4/13 |
| ICSA Standard | 225-24-10 | Exp. Date | 12/1/13 |
| ICSAB Standard | 225-24-11 | Exp. Date | 12/1/13 |
| Internal Standard | 225-27-7 | Exp. Date | 12/5/13 |

| | | | |
|---|---|---|---|
| ICP Acid Matrix (Calibration Blank) (6% HNO3/10% HCl) | 225-25-1 | Exp. Date | 12/2/13 |
| ICP Acid Rinse (5% HNO3) | 225-27-8 | Exp. Date | 12/5/13 |

**QC Limits:**

| | GCAL Limits | DOD Limits |
|---|---|---|
| ICV/ICV2 (6010B/6010C) | 90-110% | 90-110% |
| CCV (6010B/6010C) | 90-110% | 90-110% |
| ICV/ICV2 (200.7) | 95-105% | N/A |
| CCV (1st – 200.7) | 95-105% | N/A |
| Continuing CCV (200.7) | 90-110% | N/A |
| ICSA/ICSAB | 80-120% | 80-120% |
| CRDL/CRDL2 | 50-150% | 80-120% |

Revision 001: 6/4/2013

Reviewer/Date: AWG 11/6/13, AWG 11/5/13

213101712 1268

**ICP Analysis** INSTRUMENT ID = **ICP5** ANALYST / DATE / TIME: BAM, 11/5/2013.

QC CONTROL LIMITS: ICV (200.7) 95-105% ICV (6010B) 90-110% ICSAB 80-120% CCV 90-110%

| AS# | SAMPLE ID | | | | |
|---|---|---|---|---|---|
| 1 | CALIBRATION BLANK | | | | |
| 2 | STANDARD 1 | | | | |
| 11 | ICV-1600 | | | | |
| 12 | ~~ICV2-1601~~ | | | | |
| 1 | ICB-1700 | | | | |
| 3 | CRDL-2300 | | | | |
| 4 | ~~CRDL-2301~~ | | | | |
| 5 | ICSA-2000 | | | | |
| 6 | ICSAB-2100 | | | | |
| 7 | CCV-1800 | | | | |
| 1 | CCB-1900 | | | | |
| 17 | 1245642 | M MB for HBN 518181 | 6010C | W | |
| 18 | 1245643 | M LCS for HBN 518181 | 6010C | W | |
| 19 | | K 21310210401 | 6010C | W | |
| 20 | 1245644 | M 21310210401 MS | 6010C | W | |
| 21 | 1245645 | M 21310210401 MSD | 6010C | W | |
| 22 | 1252408 | 21310210401 PDS | 6010C | W | |
| 23 | ~~1252409~~ | ~~21310210401 SD~~ | ~~6010C~~ | ~~W~~ | ~~5x~~ R/R not analyzed |
| 24 | | K 21310210402 | 6010C | W | |
| 25 | | K ~~21310210403~~ | 6010C | W | R/R AWA 11/6/13 |
| 26 | | K 21310210404 | 6010C | W | |
| 7 | CCV-1800 | | | | |
| 1 | CCB-1900 | | | | |
| 27 | | K 21310210405 | 6010C | W | |
| 28 | | K 21310210406 | 6010C | W | |
| 29 | | K 21310210407 FLDDUP | 6010C | W | |
| 30 | | TBLK L1 | | | |
| 31 | | | | | |
| 32 | | | | | |
| 33 | | | | | |
| 34 | | | | | |
| 35 | | | | | |
| 36 | | | | | |
| 7 | CCV-1800 | | | | |
| 1 | CCB-1900 | | | | |
| 37 | | M 21310240501 | 6010C | W | 25x |
| 38 | ~~1251816~~ | ~~M MB for HBN 519175~~ | ~~6010C~~ | ~~W~~ | |
| 39 | | TBLK F1 | | | 5x |
| 40 | 1251816 | M MB for HBN 519175 | 6010C | W | |
| 41 | 1251817 | M LCS for HBN 519175 | 6010C | W | |
| 42 | | 21310171202 | TCLP6010 | S | 5x |
| 43 | 1251874 | M 21310171202 MS | 6010C | W | 5x |
| 44 | 1251875 | M 21310171202 MSD | 6010C | W | 5x |
| 45 | 1252516 | 21310171202 PDS | TCLP6010 | S | 5x |
| 46 | 1252517 | 21310171202 SD | TCLP6010 | S | 25x |
| 7 | ~~CCV-1800~~ | AWA 11/6/13 | | | |
| 1 | ~~CCB-1900~~ | | | | |

| AS# | SAMPLE ID | | | | Dilution |
|---|---|---|---|---|---|
| 47 | | M 21310313901 | TCLP6010 | S | 5x |
| 48 | | M 21311011101 | TCLP6010 | S | 5x |
| 49 | | M 21310314301 | TCLP6010 | S | 5x |
| 50 | | 21311020801 | 6010C | W | |
| 51 | | 21311020802 | 6010C | W | |
| 52 | | 21311020803 | 6010C | W | |
| 53 | | | | | |
| 54 | | | | | |
| 55 | | | | | |
| 56 | | | | | |
| 7 | CCV-1800 | | | | |
| 1 | CCB-1900 | | | | |
| 57 | | M ~~21310310601~~ | ~~6010C~~ | ~~S~~ | R/R@100x |
| 58 | | M 21310225101 | 6010C | W | |
| 59 | | 21310304901 | | | 10x |
| 60 | 1252225 | MB for HBN 519226 | | | |
| 61 | 1252226 | LCS for HBN 519226 | | | |
| 62 | | | | | |
| 63 | | | | | |
| 64 | | | | | |
| 65 | | | | | |
| 66 | | | | | |
| 7 | CCV-1800 F.T. | | | | |
| 1 | CCB-1900 F.T. | | | | |
| 67 | 1252409 | 21310210401 SD | 6010C | W | 5x |
| 68 | | K 21310210403 | 6010C | W | |
| 69 | | | | | |
| 70 | | | | | |
| 71 | | | | | |
| 72 | | | | | |
| 73 | | | | | |
| 74 | | | | | |
| 75 | | | | | |
| 76 | | | | | |
| 7 | CCV-1800 F.T. | | | | |
| 1 | CCB-1900 | | | | |
| 77 | | 21310261601 | R/R Se | | 5x |
| 78 | 1252227 | 21310261601 MS | | | 5x |
| 79 | 1252228 | 21310261601 MSD | | | 5x |
| 80 | | | | | |
| 81 | | | | | |
| 82 | | | | | |
| 83 | | | | | |
| 84 | | | | | |
| 85 | | | | | |
| 86 | | | | | |
| 7 | CCV-1800 | | | | |
| 1 | CCB-1900 | | | | |

COMMENTS: 8734 , 519287

ANALYST QC REV:

SECONDARY REV:

QC: all acceptable qc noted with a checkmark; failures as indicated.

**Sequence No.: 1**
**Sample ID: 1300**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 1**
**Date Collected: 11/5/2013 8:33:20 AM**
**Data Type: Reprocessed on 11/5/2013 3:55:17 PM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 1300**

| Analyte | Mean Corrected Intensity | Std.Dev. | RSD | Conc. | Calib Units |
|---|---|---|---|---|---|
| Scandium-IS | 7265780.9 | 42382.25 | 0.58% | 100.000 | % |
| Yttrium,7440-65-5A | 3621382.3 | 25208.06 | 0.70% | 100.000 | % |
| Yttrium,7440-65-5R | 301241.9 | 3399.04 | 1.13% | 100.000 | % |
| Ar 420.067 R | 5040677.3 | 47453.41 | 0.94% | 100.000 | % |
| Ar 363.268 A | 161893.0 | 195.39 | 0.12% | 100.000 | % |
| Aluminum,7429-90-5† | 49.1 | 147.96 | 301.36% | [0.00] | mg/L |
| Antimony,7440-36-0† | 31.9 | 5.36 | 16.81% | [0.00] | mg/L |
| Arsenic,7440-38-2† | -63.1 | 6.04 | 9.57% | [0.00] | mg/L |
| Barium,7440-39-3† | 52.4 | 25.45 | 48.60% | [0.00] | mg/L |
| Beryllium,7440-41-7† | 6494.5 | 188.28 | 2.90% | [0.00] | mg/L |
| Boron,7440-42-8† | 3343.3 | 20.11 | 0.60% | [0.00] | mg/L |
| Cadmium,7440-43-9† | -238.0 | 19.68 | 8.27% | [0.00] | mg/L |
| Calcium,7440-70-2† | 854.8 | 29.09 | 3.40% | [0.00] | mg/L |
| Chromium,7440-47-3† | -5631.7 | 77.81 | 1.38% | [0.00] | mg/L |
| Cobalt,7440-48-4† | 103.5 | 35.03 | 33.85% | [0.00] | mg/L |
| Copper,7440-50-8† | 12692.4 | 82.80 | 0.65% | [0.00] | mg/L |
| Iron,7439-89-6† | -3478.3 | 36.96 | 1.06% | [0.00] | mg/L |
| Lead,7439-92-1† | 988.5 | 5.60 | 0.57% | [0.00] | mg/L |
| Lithium,7439-93-2† | -420.4 | 47.99 | 11.41% | [0.00] | mg/L |
| Magnesium,7439-95-4† | 3633.4 | 34.45 | 0.95% | [0.00] | mg/L |
| Manganese,7439-96-5† | -7513.9 | 86.98 | 1.16% | [0.00] | mg/L |
| Molybdenum,7439-98-7 | -539.5 | 18.37 | 3.40% | [0.00] | mg/L |
| Nickel,7440-02-0† | -627.2 | 16.74 | 2.67% | [0.00] | mg/L |
| Potassium,7440-09-7† | 26.6 | 191.10 | 718.66% | [0.00] | mg/L |
| Selenium,7782-49-2† | 219.7 | 15.25 | 6.94% | [0.00] | mg/L |
| Silicon,7440-21-3† | 897.2 | 35.43 | 3.95% | [0.00] | mg/L |
| Silver,7440-22-4† | 25031.2 | 78.05 | 0.31% | [0.00] | mg/L |
| Sodium,7440-23-5† | 1395.8 | 171.45 | 12.28% | [0.00] | mg/L |
| Strontium,7440-24-6† | 6404.1 | 12.43 | 0.19% | [0.00] | mg/L |
| Thallium,7440-28-0† | -136.5 | 2.66 | 1.95% | [0.00] | mg/L |
| Tin,7440-31-5† | 50.0 | 9.43 | 18.87% | [0.00] | mg/L |
| Titanium,7440-32-6† | 9171.7 | 175.86 | 1.92% | [0.00] | mg/L |
| Vanadium,7440-62-2† | 13821.5 | 45.98 | 0.33% | [0.00] | mg/L |
| Zinc,7440-66-6† | 493.4 | 14.35 | 2.91% | [0.00] | mg/L |
| Zirconium,7440-67-7† | 3265.0 | 287.71 | 8.81% | [0.00] | mg/L |

**Sequence No.: 2**
**Sample ID: 1301**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 2**
**Date Collected: 11/5/2013 8:39:45 AM**
**Data Type: Reprocessed on 11/5/2013 3:55:19 PM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 1301**

| Analyte | Mean Corrected Intensity | Std.Dev. | RSD | Conc. | Calib Units |
|---|---|---|---|---|---|
| Scandium-IS | 6961030.7 | 26909.57 | 0.39% | 95.8057 | % |
| Yttrium,7440-65-5A | 3321894.3 | 15310.80 | 0.46% | 91.7300 | % |
| Yttrium,7440-65-5R | 293817.8 | 10223.55 | 3.48% | 97.5355 | % |
| Ar 420.067 R | 5093300.1 | 16822.98 | 0.33% | 101.044 | % |
| Ar 363.268 A | 163278.7 | 455.27 | 0.28% | 100.856 | % |
| Aluminum,7429-90-5† | 28719.0 | 1173.38 | 4.09% | [10.00000] | mg/L |
| Antimony,7440-36-0† | 3953.0 | 21.30 | 0.54% | [1.000000] | mg/L |
| Arsenic,7440-38-2† | 2673.7 | 50.15 | 1.88% | [1.000000] | mg/L |
| Barium,7440-39-3† | 250509.9 | 435.58 | 0.17% | [1.000000] | mg/L |
| Beryllium,7440-41-7† | 8382254.5 | 42551.41 | 0.51% | [1.000000] | mg/L |
| Boron,7440-42-8† | 448491.8 | 1637.24 | 0.37% | [5.00] | mg/L |

| | | | | | |
|---|---|---|---|---|---|
| Cadmium,7440-43-9† | 306026.0 | 535.34 | 0.17% | [1.000000] | mg/L |
| Calcium,7440-70-2† | 173638.2 | 6873.51 | 3.96% | [10.00000] | mg/L |
| Chromium,7440-47-3† | 197683.1 | 312.18 | 0.16% | [1.000000] | mg/L |
| Cobalt,7440-48-4† | 83214.6 | 96.84 | 0.12% | [1.000000] | mg/L |
| Copper,7440-50-8† | 518521.2 | 354.12 | 0.07% | [1.000000] | mg/L |
| Iron,7439-89-6† | 187802.9 | 7124.43 | 3.79% | [10.00000] | mg/L |
| Lead,7439-92-1† | 32610.8 | 277.26 | 0.85% | [1.000000] | mg/L |
| Lithium,7439-93-2† | 63000.0 | 2206.14 | 3.50% | [1.00] | mg/L |
| Magnesium,7439-95-4† | 36002.0 | 1683.41 | 4.68% | [10.00000] | mg/L |
| Manganese,7439-96-5† | 1585416.6 | 712.28 | 0.04% | [1.000000] | mg/L |
| Molybdenum,7439-98-7 | 29540.8 | 246.10 | 0.83% | [1.00] | mg/L |
| Nickel,7440-02-0† | 115410.5 | 109.09 | 0.09% | [1.000000] | mg/L |
| Potassium,7440-09-7† | 72699.6 | 2576.80 | 3.54% | [20.00000] | mg/L |
| Selenium,7782-49-2† | 3578.4 | 21.96 | 0.61% | [1.000000] | mg/L |
| Silicon,7440-21-3† | 37762.0 | 1433.77 | 3.80% | [10.0] | mg/L |
| Silver,7440-22-4† | 585865.6 | 384.29 | 0.07% | [1.000000] | mg/L |
| Sodium,7440-23-5† | 334784.6 | 8743.64 | 2.61% | [40.00000] | mg/L |
| Strontium,7440-24-6† | 663571.6 | 17855.57 | 2.69% | [1.00] | mg/L |
| Thallium,7440-28-0† | 4943.0 | 17.89 | 0.36% | [1.000000] | mg/L |
| Tin,7440-31-5† | 12344.5 | 89.24 | 0.72% | [1.00] | mg/L |
| Titanium,7440-32-6† | 1227742.8 | 686.07 | 0.06% | [1.000000] | mg/L |
| Vanadium,7440-62-2† | 387368.2 | 121.35 | 0.03% | [1.000000] | mg/L |
| Zinc,7440-66-6† | 173243.4 | 106.14 | 0.06% | [1.000000] | mg/L |
| Zirconium,7440-67-7† | 751109.3 | 900.11 | 0.12% | [1.000000] | mg/L |

**Sequence No.: 3**
**Sample ID: 1600**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 11**
**Date Collected: 11/5/2013 8:45:37 AM**
**Data Type: Reprocessed on 11/5/2013 3:55:22 PM**
**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 1600**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6888585.6 | 94.8086 | % | 0.87440 | | | | 0.92% |
| Yttrium,7440-65-5A | 3318018.7 | 91.6230 | % | 1.03272 | | | | 1.13% |
| Yttrium,7440-65-5R | 286327.7 | 95.0491 | % | 0.43771 | | | | 0.46% |
| Ar 420.067 R | 4978859.0 | 98.7736 | % | 0.70564 | | | | 0.71% |
| Ar 363.268 A | 163169.2 | 100.788 | % | 0.0377 | | | | 0.04% |
| Aluminum,7429-90-5† | 28007.6 | 9.73876 | mg/L | 0.072627 | 9.73876 | mg/L | 0.072627 | 0.75% |
| QC value within limits for Aluminum,7429-90-5 Recovery = 97.39% | | | | | | | | |
| Antimony,7440-36-0† | 3841.3 | 0.95591 | mg/L | 0.003485 | 0.95591 | mg/L | 0.003485 | 0.36% |
| QC value within limits for Antimony,7440-36-0 Recovery = 95.59% | | | | | | | | |
| Arsenic,7440-38-2† | 2488.9 | 0.96565 | mg/L | 0.022242 | 0.96565 | mg/L | 0.022242 | 2.30% |
| QC value within limits for Arsenic,7440-38-2 Recovery = 96.57% | | | | | | | | |
| Barium,7440-39-3† | 238477.9 | 0.95288 | mg/L | 0.008441 | 0.95288 | mg/L | 0.008441 | 0.89% |
| QC value within limits for Barium,7440-39-3 Recovery = 95.29% | | | | | | | | |
| Beryllium,7440-41-7† | 8004146.8 | 0.95762 | mg/L | 0.013172 | 0.95762 | mg/L | 0.013172 | 1.38% |
| QC value within limits for Beryllium,7440-41-7 Recovery = 95.76% | | | | | | | | |
| Boron,7440-42-8† | 425739.1 | 4.79544 | mg/L | 0.025951 | 4.79544 | mg/L | 0.025951 | 0.54% |
| QC value within limits for Boron,7440-42-8 Recovery = 95.91% | | | | | | | | |
| Cadmium,7440-43-9† | 289340.9 | 0.94531 | mg/L | 0.010058 | 0.94531 | mg/L | 0.010058 | 1.06% |
| QC value within limits for Cadmium,7440-43-9 Recovery = 94.53% | | | | | | | | |
| Calcium,7440-70-2† | 171333.4 | 9.86211 | mg/L | 0.038793 | 9.86211 | mg/L | 0.038793 | 0.39% |
| QC value within limits for Calcium,7440-70-2 Recovery = 98.62% | | | | | | | | |
| Chromium,7440-47-3† | 189239.8 | 0.95859 | mg/L | 0.006179 | 0.95859 | mg/L | 0.006179 | 0.64% |
| QC value within limits for Chromium,7440-47-3 Recovery = 95.86% | | | | | | | | |
| Cobalt,7440-48-4† | 79009.9 | 0.94731 | mg/L | 0.010478 | 0.94731 | mg/L | 0.010478 | 1.11% |
| QC value within limits for Cobalt,7440-48-4 Recovery = 94.73% | | | | | | | | |
| Copper,7440-50-8† | 496014.8 | 0.95609 | mg/L | 0.007913 | 0.95609 | mg/L | 0.007913 | 0.83% |
| QC value within limits for Copper,7440-50-8 Recovery = 95.61% | | | | | | | | |
| Iron,7439-89-6† | 182694.4 | 9.72666 | mg/L | 0.035229 | 9.72666 | mg/L | 0.035229 | 0.36% |
| QC value within limits for Iron,7439-89-6 Recovery = 97.27% | | | | | | | | |
| Lead,7439-92-1† | 30241.8 | 0.92787 | mg/L | 0.011768 | 0.92787 | mg/L | 0.011768 | 1.27% |
| QC value within limits for Lead,7439-92-1 Recovery = 92.79% | | | | | | | | |
| Lithium,7439-93-2† | 61884.4 | 0.98222 | mg/L | 0.003769 | 0.98222 | mg/L | 0.003769 | 0.38% |
| QC value within limits for Lithium,7439-93-2 Recovery = 98.22% | | | | | | | | |
| Magnesium,7439-95-4† | 34676.1 | 9.63013 | mg/L | 0.042827 | 9.63013 | mg/L | 0.042827 | 0.44% |
| QC value within limits for Magnesium,7439-95-4 Recovery = 96.30% | | | | | | | | |

Manganese,7439-96-5† 1515704.0 0.95612 mg/L 0.008122 0.95612 mg/L 0.008122 0.85%
QC value within limits for Manganese,7439-96-5 Recovery = 95.61%
Molybdenum,7439-98-7 27396.4 0.92880 mg/L 0.007587 0.92880 mg/L 0.007587 0.82%
QC value within limits for Molybdenum,7439-98-7 Recovery = 92.88%
Nickel,7440-02-0† 109755.9 0.95087 mg/L 0.009015 0.95087 mg/L 0.009015 0.95%
QC value within limits for Nickel,7440-02-0 Recovery = 95.09%
Potassium,7440-09-7† 71637.6 19.7101 mg/L 0.09973 19.7101 mg/L 0.09973 0.51%
QC value within limits for Potassium,7440-09-7 Recovery = 98.55%
Selenium,7782-49-2† 3331.1 0.93146 mg/L 0.022085 0.93146 mg/L 0.022085 2.37%
QC value within limits for Selenium,7782-49-2 Recovery = 93.15%
Silicon,7440-21-3† 38744.9 10.2578 mg/L 0.07127 10.2578 mg/L 0.07127 0.69%
QC value within limits for Silicon,7440-21-3 Recovery = 102.58%
Silver,7440-22-4† 555533.1 0.95198 mg/L 0.008988 0.95198 mg/L 0.008988 0.94%
QC value within limits for Silver,7440-22-4 Recovery = 95.20%
Sodium,7440-23-5† 329091.6 39.3231 mg/L 0.14734 39.3231 mg/L 0.14734 0.37%
QC value within limits for Sodium,7440-23-5 Recovery = 98.31%
Strontium,7440-24-6† 647369.2 0.97527 mg/L 0.002934 0.97527 mg/L 0.002934 0.30%
QC value within limits for Strontium,7440-24-6 Recovery = 97.53%
Thallium,7440-28-0† 4622.6 0.95158 mg/L 0.011429 0.95158 mg/L 0.011429 1.20%
QC value within limits for Thallium,7440-28-0 Recovery = 95.16%
Tin,7440-31-5† 11428.3 0.92999 mg/L 0.013623 0.92999 mg/L 0.013623 1.46%
QC value within limits for Tin,7440-31-5 Recovery = 93.00%
Titanium,7440-32-6† 1189639.0 0.96885 mg/L 0.007676 0.96885 mg/L 0.007676 0.79%
QC value within limits for Titanium,7440-32-6 Recovery = 96.89%
Vanadium,7440-62-2† 367722.5 0.94982 mg/L 0.008335 0.94982 mg/L 0.008335 0.88%
QC value within limits for Vanadium,7440-62-2 Recovery = 94.98%
Zinc,7440-66-6† 164936.9 0.94434 mg/L 0.010259 0.94434 mg/L 0.010259 1.09%
QC value within limits for Zinc,7440-66-6 Recovery = 94.43%
Zirconium,7440-67-7† 720776.4 0.95923 mg/L 0.008695 0.95923 mg/L 0.008695 0.91%
QC value within limits for Zirconium,7440-67-7 Recovery = 95.92%
All analyte(s) passed QC.

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**Sequence No.: 4**
**Sample ID: 1700**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 1**
**Date Collected: 11/5/2013 8:51:23 AM**
**Data Type: Reprocessed on 11/5/2013 3:55:25 PM**
**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 1700**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 7249054.6 | 99.7698 | % | 1.90469 | | | | 1.91% |
| Yttrium,7440-65-5A | 3495824.8 | 96.5329 | % | 2.34455 | | | | 2.43% |
| Yttrium,7440-65-5R | 297833.9 | 98.8687 | % | 0.75164 | | | | 0.76% |
| Ar 420.067 R | 4890947.2 | 97.0296 | % | 0.55772 | | | | 0.57% |
| Ar 363.268 A | 161246.4 | 99.6005 | % | 0.26693 | | | | 0.27% |
| Aluminum,7429-90-5† | -35.6 | -0.01240 | mg/L | 0.019579 | -0.01240 | mg/L | 0.019579 | 157.84% |
| QC value within limits for Aluminum,7429-90-5 Recovery = Not calculated | | | | | | | | |
| Antimony,7440-36-0† | 15.1 | 0.00384 | mg/L | 0.003362 | 0.00384 | mg/L | 0.003362 | 87.48% |
| QC value within limits for Antimony,7440-36-0 Recovery = Not calculated | | | | | | | | |
| Arsenic,7440-38-2† | 9.0 | 0.00340 | mg/L | 0.003417 | 0.00340 | mg/L | 0.003417 | 100.57% |
| QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated | | | | | | | | |
| Barium,7440-39-3† | 93.6 | 0.00037 | mg/L | 0.000091 | 0.00037 | mg/L | 0.000091 | 24.18% |
| QC value within limits for Barium,7440-39-3 Recovery = Not calculated | | | | | | | | |
| Beryllium,7440-41-7† | 2545.3 | 0.00030 | mg/L | 0.000095 | 0.00030 | mg/L | 0.000095 | 31.18% |
| QC value within limits for Beryllium,7440-41-7 Recovery = Not calculated | | | | | | | | |
| Boron,7440-42-8† | 2148.2 | 0.02399 | mg/L | 0.006381 | 0.02399 | mg/L | 0.006381 | 26.60% |
| QC value within limits for Boron,7440-42-8 Recovery = Not calculated | | | | | | | | |
| Cadmium,7440-43-9† | 133.2 | 0.00044 | mg/L | 0.000044 | 0.00044 | mg/L | 0.000044 | 10.20% |
| QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated | | | | | | | | |
| Calcium,7440-70-2† | 85.2 | 0.00491 | mg/L | 0.003013 | 0.00491 | mg/L | 0.003013 | 61.35% |
| QC value within limits for Calcium,7440-70-2 Recovery = Not calculated | | | | | | | | |
| Chromium,7440-47-3† | -135.7 | -0.00069 | mg/L | 0.000806 | -0.00069 | mg/L | 0.000806 | 117.09% |
| QC value within limits for Chromium,7440-47-3 Recovery = Not calculated | | | | | | | | |
| Cobalt,7440-48-4† | 34.1 | 0.00041 | mg/L | 0.000214 | 0.00041 | mg/L | 0.000214 | 52.48% |
| QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated | | | | | | | | |
| Copper,7440-50-8† | 312.7 | 0.00060 | mg/L | 0.000498 | 0.00060 | mg/L | 0.000498 | 82.57% |
| QC value within limits for Copper,7440-50-8 Recovery = Not calculated | | | | | | | | |
| Iron,7439-89-6† | 178.6 | 0.00951 | mg/L | 0.003026 | 0.00951 | mg/L | 0.003026 | 31.81% |

QC value within limits for Iron,7439-89-6 Recovery = Not calculated
Lead,7439-92-1† 26.4 0.00081 mg/L 0.000362 0.00081 mg/L 0.000362 44.80%
QC value within limits for Lead,7439-92-1 Recovery = Not calculated
Lithium,7439-93-2† 99.3 0.00158 mg/L 0.001231 0.00158 mg/L 0.001231 78.09%
QC value within limits for Lithium,7439-93-2 Recovery = Not calculated
Magnesium,7439-95-4† -136.8 -0.03800 mg/L 0.006851 -0.03800 mg/L 0.006851 18.03%
QC value within limits for Magnesium,7439-95-4 Recovery = Not calculated
Manganese,7439-96-5† 995.8 0.00063 mg/L 0.000097 0.00063 mg/L 0.000097 15.42%
QC value within limits for Manganese,7439-96-5 Recovery = Not calculated
Molybdenum,7439-98-7 158.6 0.00537 mg/L 0.000831 0.00537 mg/L 0.000831 15.47%
QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated
Nickel,7440-02-0† 52.1 0.00045 mg/L 0.000332 0.00045 mg/L 0.000332 73.67%
QC value within limits for Nickel,7440-02-0 Recovery = Not calculated
Potassium,7440-09-7† 121.1 0.03331 mg/L 0.027626 0.03331 mg/L 0.027626 82.93%
QC value within limits for Potassium,7440-09-7 Recovery = Not calculated
Selenium,7782-49-2† 35.4 0.00989 mg/L 0.003036 0.00989 mg/L 0.003036 30.71%
QC value within limits for Selenium,7782-49-2 Recovery = Not calculated
Silicon,7440-21-3† -60.4 -0.01600 mg/L 0.004625 -0.01600 mg/L 0.004625 28.91%
QC value within limits for Silicon,7440-21-3 Recovery = Not calculated
Silver,7440-22-4† 148.0 0.00026 mg/L 0.001513 0.00026 mg/L 0.001513 591.24%
QC value within limits for Silver,7440-22-4 Recovery = Not calculated
Sodium,7440-23-5† -221.3 -0.02644 mg/L 0.012505 -0.02644 mg/L 0.012505 47.29%
QC value within limits for Sodium,7440-23-5 Recovery = Not calculated
Strontium,7440-24-6† 62.8 0.00009 mg/L 0.000114 0.00009 mg/L 0.000114 120.46%
QC value within limits for Strontium,7440-24-6 Recovery = Not calculated
Thallium,7440-28-0† 17.7 0.00359 mg/L 0.001438 0.00359 mg/L 0.001438 40.07%
QC value within limits for Thallium,7440-28-0 Recovery = Not calculated
Tin,7440-31-5† 27.9 0.00226 mg/L 0.000598 0.00226 mg/L 0.000598 26.44%
QC value within limits for Tin,7440-31-5 Recovery = Not calculated
Titanium,7440-32-6† 416.2 0.00034 mg/L 0.000165 0.00034 mg/L 0.000165 48.81%
QC value within limits for Titanium,7440-32-6 Recovery = Not calculated
Vanadium,7440-62-2† 294.6 0.00076 mg/L 0.000836 0.00076 mg/L 0.000836 110.05%
QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated
Zinc,7440-66-6† 57.9 0.00033 mg/L 0.000109 0.00033 mg/L 0.000109 32.97%
QC value within limits for Zinc,7440-66-6 Recovery = Not calculated
Zirconium,7440-67-7† 354.9 0.00047 mg/L 0.000352 0.00047 mg/L 0.000352 74.60%
QC value within limits for Zirconium,7440-67-7 Recovery = Not calculated
All analyte(s) passed QC.

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**Sequence No.: 5** **Autosampler Location: 3**
**Sample ID: 2300** **Date Collected: 11/5/2013 8:57:43 AM**
**Analyst:** **Data Type: Reprocessed on 11/5/2013 3:55:27 PM**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Mean Data: 2300**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 7353837.3 | 101.212 | % | 0.8956 | | | | 0.88% |
| Yttrium,7440-65-5A | 3610825.2 | 99.7085 | % | 0.35006 | | | | 0.35% |
| Yttrium,7440-65-5R | 303694.2 | 100.814 | % | 0.5780 | | | | 0.57% |
| Ar 420.067 R | 5032927.6 | 99.8463 | % | 0.45243 | | | | 0.45% |
| Ar 363.268 A | 161671.0 | 99.8628 | % | 0.26161 | | | | 0.26% |
| Aluminum,7429-90-5† | 519.4 | 0.18060 | mg/L | 0.009745 | 0.18060 | mg/L | 0.009745 | 5.40% |
| QC value within limits for Aluminum,7429-90-5 Recovery = 90.30% | | | | | | | | |
| Antimony,7440-36-0† | 228.5 | 0.05770 | mg/L | 0.003383 | 0.05770 | mg/L | 0.003383 | 5.86% |
| QC value within limits for Antimony,7440-36-0 Recovery = 96.16% | | | | | | | | |
| Arsenic,7440-38-2† | 42.7 | 0.01669 | mg/L | 0.005025 | 0.01669 | mg/L | 0.005025 | 30.10% |
| QC value within limits for Arsenic,7440-38-2 Recovery = 83.46% | | | | | | | | |
| Barium,7440-39-3† | 2428.5 | 0.00970 | mg/L | 0.000159 | 0.00970 | mg/L | 0.000159 | 1.64% |
| QC value within limits for Barium,7440-39-3 Recovery = 97.05% | | | | | | | | |
| Beryllium,7440-41-7† | 31013.0 | 0.00373 | mg/L | 0.000015 | 0.00373 | mg/L | 0.000015 | 0.41% |
| QC value within limits for Beryllium,7440-41-7 Recovery = 93.14% | | | | | | | | |
| Boron,7440-42-8† | 80799.0 | 0.90175 | mg/L | 0.003195 | 0.90175 | mg/L | 0.003195 | 0.35% |
| QC value within limits for Boron,7440-42-8 Recovery = 90.18% | | | | | | | | |
| Cadmium,7440-43-9† | 1424.8 | 0.00465 | mg/L | 0.000019 | 0.00465 | mg/L | 0.000019 | 0.41% |
| QC value within limits for Cadmium,7440-43-9 Recovery = 93.05% | | | | | | | | |
| Calcium,7440-70-2† | 14071.5 | 0.81028 | mg/L | 0.004442 | 0.81028 | mg/L | 0.004442 | 0.55% |
| QC value within limits for Calcium,7440-70-2 Recovery = 101.29% | | | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Chromium,7440-47-3† | 1700.7 | 0.00863 mg/L | 0.000509 | 0.00863 mg/L | 0.000509 | 5.90% |
| QC value within limits for Chromium,7440-47-3 Recovery = 86.32% | | | | | | |
| Cobalt,7440-48-4† | 819.3 | 0.00982 mg/L | 0.000091 | 0.00982 mg/L | 0.000091 | 0.93% |
| QC value within limits for Cobalt,7440-48-4 Recovery = 98.18% | | | | | | |
| Copper,7440-50-8† | 9427.0 | 0.01817 mg/L | 0.000143 | 0.01817 mg/L | 0.000143 | 0.79% |
| QC value within limits for Copper,7440-50-8 Recovery = 90.83% | | | | | | |
| Iron,7439-89-6† | 3575.0 | 0.19034 mg/L | 0.002234 | 0.19034 mg/L | 0.002234 | 1.17% |
| QC value within limits for Iron,7439-89-6 Recovery = 95.17% | | | | | | |
| Lead,7439-92-1† | 440.0 | 0.01351 mg/L | 0.001518 | 0.01351 mg/L | 0.001518 | 11.24% |
| QC value within limits for Lead,7439-92-1 Recovery = 90.05% | | | | | | |
| Lithium,7439-93-2† | 3401.4 | 0.05399 mg/L | 0.000855 | 0.05399 mg/L | 0.000855 | 1.58% |
| QC value within limits for Lithium,7439-93-2 Recovery = 107.98% | | | | | | |
| Magnesium,7439-95-4† | 622.5 | 0.17286 mg/L | 0.028574 | 0.17286 mg/L | 0.028574 | 16.53% |
| QC value within limits for Magnesium,7439-95-4 Recovery = 86.43% | | | | | | |
| Manganese,7439-96-5† | 23423.5 | 0.01478 mg/L | 0.000091 | 0.01478 mg/L | 0.000091 | 0.62% |
| QC value within limits for Manganese,7439-96-5 Recovery = 98.50% | | | | | | |
| Molybdenum,7439-98-7 | 884.2 | 0.02996 mg/L | 0.000587 | 0.02996 mg/L | 0.000587 | 1.96% |
| QC value within limits for Molybdenum,7439-98-7 Recovery = 99.86% | | | | | | |
| Nickel,7440-02-0† | 4517.6 | 0.03914 mg/L | 0.000894 | 0.03914 mg/L | 0.000894 | 2.28% |
| QC value within limits for Nickel,7440-02-0 Recovery = 97.86% | | | | | | |
| Potassium,7440-09-7† | 1797.0 | 0.49444 mg/L | 0.034524 | 0.49444 mg/L | 0.034524 | 6.98% |
| QC value within limits for Potassium,7440-09-7 Recovery = 98.89% | | | | | | |
| Selenium,7782-49-2† | 147.1 | 0.04112 mg/L | 0.001895 | 0.04112 mg/L | 0.001895 | 4.61% |
| QC value within limits for Selenium,7782-49-2 Recovery = 102.80% | | | | | | |
| Silicon,7440-21-3† | 705.5 | 0.18678 mg/L | 0.005691 | 0.18678 mg/L | 0.005691 | 3.05% |
| QC value within limits for Silicon,7440-21-3 Recovery = 93.39% | | | | | | |
| Silver,7440-22-4† | 5417.0 | 0.00932 mg/L | 0.000375 | 0.00932 mg/L | 0.000375 | 4.02% |
| QC value within limits for Silver,7440-22-4 Recovery = 93.23% | | | | | | |
| Sodium,7440-23-5† | 8011.8 | 0.95730 mg/L | 0.026653 | 0.95730 mg/L | 0.026653 | 2.78% |
| QC value within limits for Sodium,7440-23-5 Recovery = 95.73% | | | | | | |
| Strontium,7440-24-6† | 33007.6 | 0.04972 mg/L | 0.000626 | 0.04972 mg/L | 0.000626 | 1.26% |
| QC value within limits for Strontium,7440-24-6 Recovery = 99.44% | | | | | | |
| Thallium,7440-28-0† | 102.9 | 0.02102 mg/L | 0.002572 | 0.02102 mg/L | 0.002572 | 12.24% |
| QC value within limits for Thallium,7440-28-0 Recovery = 105.09% | | | | | | |
| Tin,7440-31-5† | 293.0 | 0.02380 mg/L | 0.000192 | 0.02380 mg/L | 0.000192 | 0.81% |
| QC value within limits for Tin,7440-31-5 Recovery = 95.22% | | | | | | |
| Titanium,7440-32-6† | 11141.4 | 0.00907 mg/L | 0.000155 | 0.00907 mg/L | 0.000155 | 1.71% |
| QC value within limits for Titanium,7440-32-6 Recovery = 90.72% | | | | | | |
| Vanadium,7440-62-2† | 7189.1 | 0.01855 mg/L | 0.000219 | 0.01855 mg/L | 0.000219 | 1.18% |
| QC value within limits for Vanadium,7440-62-2 Recovery = 92.77% | | | | | | |
| Zinc,7440-66-6† | 3138.8 | 0.01783 mg/L | 0.000143 | 0.01783 mg/L | 0.000143 | 0.80% |
| QC value within limits for Zinc,7440-66-6 Recovery = 89.13% | | | | | | |
| Zirconium,7440-67-7† | 9167.9 | 0.01220 mg/L | 0.000733 | 0.01220 mg/L | 0.000733 | 6.01% |
| QC value within limits for Zirconium,7440-67-7 Recovery = 122.04% | | | | | | |

All analyte(s) passed QC.

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**Sequence No.: 6** **Autosampler Location: 5**
**Sample ID: 2000** **Date Collected: 11/5/2013 9:04:10 AM**
**Analyst:** **Data Type: Reprocessed on 11/5/2013 3:55:30 PM**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Mean Data: 2000**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6635518.3 | 91.3256 | % | 1.07463 | | | | 1.18% |
| Yttrium,7440-65-5A | 3113032.9 | 85.9626 | % | 0.73911 | | | | 0.86% |
| Yttrium,7440-65-5R | 274838.3 | 91.2351 | % | 0.37461 | | | | 0.41% |
| Ar 420.067 R | 4921319.3 | 97.6321 | % | 0.78244 | | | | 0.80% |
| Ar 363.268 A | 158673.4 | 98.0113 | % | 0.05435 | | | | 0.06% |
| Aluminum,7429-90-5† | 571083.9 | 198.846 | mg/L | 2.5415 | 198.846 | mg/L | 2.5415 | 1.28% |
| QC value within limits for Aluminum,7429-90-5 Recovery = 99.42% | | | | | | | | |
| Antimony,7440-36-0† | -17.6 | 0.01016 | mg/L | 0.003392 | 0.01016 | mg/L | 0.003392 | 33.37% |
| QC value within limits for Antimony,7440-36-0 Recovery = Not calculated | | | | | | | | |
| Arsenic,7440-38-2† | -251.0 | -0.00603 | mg/L | 0.002463 | -0.00603 | mg/L | 0.002463 | 40.86% |
| QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated | | | | | | | | |
| Barium,7440-39-3† | 1380.5 | 0.00049 | mg/L | 0.000073 | 0.00049 | mg/L | 0.000073 | 14.86% |
| QC value within limits for Barium,7440-39-3 Recovery = Not calculated | | | | | | | | |
| Beryllium,7440-41-7† | -489.1 | -0.00006 | mg/L | 0.000022 | -0.00006 | mg/L | 0.000022 | 39.80% |

QC value within limits for Beryllium,7440-41-7 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Boron,7440-42-8† | -72252.1 | 0.08827 mg/L | 0.005511 | 0.08827 mg/L | 0.005511 | 6.24% |

QC value within limits for Boron,7440-42-8 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Cadmium,7440-43-9† | 730.7 | -0.00090 mg/L | 0.000081 | -0.00090 mg/L | 0.000081 | 9.04% |

QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Calcium,7440-70-2† | 3404530.2 | 195.992 mg/L | 1.9375 | 195.992 mg/L | 1.9375 | 0.99% |

QC value within limits for Calcium,7440-70-2 Recovery = 98.00%

| | | | | | | |
|---|---|---|---|---|---|---|
| Chromium,7440-47-3† | -3155.7 | 0.00443 mg/L | 0.000454 | 0.00443 mg/L | 0.000454 | 10.24% |

QC value within limits for Chromium,7440-47-3 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Cobalt,7440-48-4† | 213.3 | -0.00113 mg/L | 0.000344 | -0.00113 mg/L | 0.000344 | 30.50% |

QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Copper,7440-50-8† | -6683.2 | -0.01692 mg/L | 0.000098 | -0.01692 mg/L | 0.000098 | 0.58% |

QC value within limits for Copper,7440-50-8 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Iron,7439-89-6† | 3680245.6 | 195.954 mg/L | 2.0025 | 195.954 mg/L | 2.0025 | 1.02% |

QC value within limits for Iron,7439-89-6 Recovery = 97.98%

| | | | | | | |
|---|---|---|---|---|---|---|
| Lead,7439-92-1† | -332.3 | 0.00223 mg/L | 0.000920 | 0.00223 mg/L | 0.000920 | 41.28% |

QC value within limits for Lead,7439-92-1 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Lithium,7439-93-2† | -134.6 | -0.00214 mg/L | 0.001349 | -0.00214 mg/L | 0.001349 | 63.15% |

QC value within limits for Lithium,7439-93-2 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Magnesium,7439-95-4† | 699615.6 | 194.255 mg/L | 1.4809 | 194.255 mg/L | 1.4809 | 0.76% |

QC value within limits for Magnesium,7439-95-4 Recovery = 97.13%

| | | | | | | |
|---|---|---|---|---|---|---|
| Manganese,7439-96-5† | -4522.3 | -0.00157 mg/L | 0.000123 | -0.00157 mg/L | 0.000123 | 7.81% |

QC value within limits for Manganese,7439-96-5 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Molybdenum,7439-98-7 | -578.1 | 0.00280 mg/L | 0.001131 | 0.00280 mg/L | 0.001131 | 40.36% |

QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Nickel,7440-02-0† | -328.8 | -0.00218 mg/L | 0.000156 | -0.00218 mg/L | 0.000156 | 7.19% |

QC value within limits for Nickel,7440-02-0 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Potassium,7440-09-7† | -132.2 | 0.00800 mg/L | 0.047695 | 0.00800 mg/L | 0.047695 | 596.03% |

QC value within limits for Potassium,7440-09-7 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Selenium,7782-49-2† | -34.3 | 0.01619 mg/L | 0.007476 | 0.01619 mg/L | 0.007476 | 46.18% |

QC value within limits for Selenium,7782-49-2 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Silicon,7440-21-3† | 48.6 | -0.00834 mg/L | 0.003951 | -0.00834 mg/L | 0.003951 | 47.35% |

QC value within limits for Silicon,7440-21-3 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Silver,7440-22-4† | -2666.5 | 0.00036 mg/L | 0.000525 | 0.00036 mg/L | 0.000525 | 144.50% |

QC value within limits for Silver,7440-22-4 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Sodium,7440-23-5† | -239.2 | -0.03723 mg/L | 0.012804 | -0.03723 mg/L | 0.012804 | 34.39% |

QC value within limits for Sodium,7440-23-5 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Strontium,7440-24-6† | 3783.2 | -0.00014 mg/L | 0.000095 | -0.00014 mg/L | 0.000095 | 69.71% |

QC value within limits for Strontium,7440-24-6 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Thallium,7440-28-0† | -109.1 | -0.01047 mg/L | 0.001566 | -0.01047 mg/L | 0.001566 | 14.95% |

QC value within limits for Thallium,7440-28-0 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Tin,7440-31-5† | -131.2 | -0.00392 mg/L | 0.001244 | -0.00392 mg/L | 0.001244 | 31.72% |

QC value within limits for Tin,7440-31-5 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Titanium,7440-32-6† | 1328.8 | 0.00067 mg/L | 0.000201 | 0.00067 mg/L | 0.000201 | 29.78% |

QC value within limits for Titanium,7440-32-6 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Vanadium,7440-62-2† | 2226.1 | -0.00995 mg/L | 0.000755 | -0.00995 mg/L | 0.000755 | 7.59% |

QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Zinc,7440-66-6† | 3855.7 | 0.00227 mg/L | 0.000145 | 0.00227 mg/L | 0.000145 | 6.37% |

QC value within limits for Zinc,7440-66-6 Recovery = Not calculated

| | | | | | | |
|---|---|---|---|---|---|---|
| Zirconium,7440-67-7† | -916.1 | -0.00122 mg/L | 0.000084 | -0.00122 mg/L | 0.000084 | 6.90% |

QC value within limits for Zirconium,7440-67-7 Recovery = Not calculated

All analyte(s) passed QC.

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**Sequence No.: 7**
**Sample ID: 2100**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 6**
**Date Collected: 11/5/2013 9:10:39 AM**
**Data Type: Reprocessed on 11/5/2013 3:55:33 PM**
**Initial Sample Vol:**
**Sample Prep Vol:**

---

**Mean Data: 2100**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6463136.3 | 88.9531 | % | 0.07274 | | | | 0.08% |
| Yttrium,7440-65-5A | 3049794.0 | 84.2163 | % | 0.00588 | | | | 0.01% |
| Yttrium,7440-65-5R | 270614.1 | 89.8328 | % | 0.50059 | | | | 0.56% |
| Ar 420.067 R | 4803781.6 | 95.3003 | % | 0.76475 | | | | 0.80% |
| Ar 363.268 A | 155937.6 | 96.3213 | % | 0.23803 | | | | 0.25% |
| Aluminum,7429-90-5† | 566410.4 | 197.213 | mg/L | 1.8173 | 197.213 | mg/L | 1.8173 | 0.92% |

QC value within limits for Aluminum,7429-90-5 Recovery = 98.61%

| | | | | | | |
|---|---|---|---|---|---|---|
| Antimony,7440-36-0† | 3998.8 | 1.01642 mg/L | 0.014701 | 1.01642 mg/L | 0.014701 | 1.45% |
| QC value within limits for Antimony,7440-36-0 Recovery = 101.64% | | | | | | |
| Arsenic,7440-38-2† | 2481.8 | 1.03113 mg/L | 0.019489 | 1.03113 mg/L | 0.019489 | 1.89% |
| QC value within limits for Arsenic,7440-38-2 Recovery = 103.11% | | | | | | |
| Barium,7440-39-3† | 125642.6 | 0.49720 mg/L | 0.001109 | 0.49720 mg/L | 0.001109 | 0.22% |
| QC value within limits for Barium,7440-39-3 Recovery = 99.44% | | | | | | |
| Beryllium,7440-41-7† | 4202241.0 | 0.50135 mg/L | 0.000849 | 0.50135 mg/L | 0.000849 | 0.17% |
| QC value within limits for Beryllium,7440-41-7 Recovery = 100.27% | | | | | | |
| Boron,7440-42-8† | 17774.2 | 1.07963 mg/L | 0.008984 | 1.07963 mg/L | 0.008984 | 0.83% |
| QC value within limits for Boron,7440-42-8 Recovery = 107.96% | | | | | | |
| Cadmium,7440-43-9† | 286609.4 | 0.93332 mg/L | 0.001529 | 0.93332 mg/L | 0.001529 | 0.16% |
| QC value within limits for Cadmium,7440-43-9 Recovery = 93.33% | | | | | | |
| Calcium,7440-70-2† | 3327862.4 | 191.578 mg/L | 1.3422 | 191.578 mg/L | 1.3422 | 0.70% |
| QC value within limits for Calcium,7440-70-2 Recovery = 95.79% | | | | | | |
| Chromium,7440-47-3† | 92805.1 | 0.48944 mg/L | 0.001448 | 0.48944 mg/L | 0.001448 | 0.30% |
| QC value within limits for Chromium,7440-47-3 Recovery = 97.89% | | | | | | |
| Cobalt,7440-48-4† | 39594.2 | 0.47212 mg/L | 0.004844 | 0.47212 mg/L | 0.004844 | 1.03% |
| QC value within limits for Cobalt,7440-48-4 Recovery = 94.42% | | | | | | |
| Copper,7440-50-8† | 251004.1 | 0.47996 mg/L | 0.001513 | 0.47996 mg/L | 0.001513 | 0.32% |
| QC value within limits for Copper,7440-50-8 Recovery = 95.99% | | | | | | |
| Iron,7439-89-6† | 3620359.1 | 192.765 mg/L | 1.3291 | 192.765 mg/L | 1.3291 | 0.69% |
| QC value within limits for Iron,7439-89-6 Recovery = 96.38% | | | | | | |
| Lead,7439-92-1† | 30949.7 | 0.96124 mg/L | 0.011599 | 0.96124 mg/L | 0.011599 | 1.21% |
| QC value within limits for Lead,7439-92-1 Recovery = 96.12% | | | | | | |
| Lithium,7439-93-2† | -84.9 | -0.00137 mg/L | 0.001301 | -0.00137 mg/L | 0.001301 | 95.03% |
| Magnesium,7439-95-4† | 680688.1 | 189.000 mg/L | 0.9740 | 189.000 mg/L | 0.9740 | 0.52% |
| QC value within limits for Magnesium,7439-95-4 Recovery = 94.50% | | | | | | |
| Manganese,7439-96-5† | 754910.1 | 0.47747 mg/L | 0.000771 | 0.47747 mg/L | 0.000771 | 0.16% |
| QC value within limits for Manganese,7439-96-5 Recovery = 95.49% | | | | | | |
| Molybdenum,7439-98-7 | 28638.6 | 0.99165 mg/L | 0.012983 | 0.99165 mg/L | 0.012983 | 1.31% |
| QC value within limits for Molybdenum,7439-98-7 Recovery = 99.17% | | | | | | |
| Nickel,7440-02-0† | 106607.4 | 0.92434 mg/L | 0.001369 | 0.92434 mg/L | 0.001369 | 0.15% |
| QC value within limits for Nickel,7440-02-0 Recovery = 92.43% | | | | | | |
| Potassium,7440-09-7† | -245.8 | -0.02290 mg/L | 0.081215 | -0.02290 mg/L | 0.081215 | 354.65% |
| Selenium,7782-49-2† | 3499.0 | 1.00247 mg/L | 0.019226 | 1.00247 mg/L | 0.019226 | 1.92% |
| QC value within limits for Selenium,7782-49-2 Recovery = 100.25% | | | | | | |
| Silicon,7440-21-3† | 128.4 | 0.01263 mg/L | 0.007346 | 0.01263 mg/L | 0.007346 | 58.18% |
| Silver,7440-22-4† | 589404.4 | 1.01270 mg/L | 0.001949 | 1.01270 mg/L | 0.001949 | 0.19% |
| QC value within limits for Silver,7440-22-4 Recovery = 101.27% | | | | | | |
| Sodium,7440-23-5† | 9161.1 | 1.08766 mg/L | 0.025391 | 1.08766 mg/L | 0.025391 | 2.33% |
| QC value within limits for Sodium,7440-23-5 Recovery = 108.77% | | | | | | |
| Strontium,7440-24-6† | 3774.6 | -0.00002 mg/L | 0.000200 | -0.00002 mg/L | 0.000200 | 802.46% |
| Thallium,7440-28-0† | 4769.4 | 0.97792 mg/L | 0.015779 | 0.97792 mg/L | 0.015779 | 1.61% |
| QC value within limits for Thallium,7440-28-0 Recovery = 97.79% | | | | | | |
| Tin,7440-31-5† | -102.5 | -0.00154 mg/L | 0.001456 | -0.00154 mg/L | 0.001456 | 94.28% |
| Titanium,7440-32-6† | 630.1 | 0.00006 mg/L | 0.000104 | 0.00006 mg/L | 0.000104 | 159.58% |
| Vanadium,7440-62-2† | 190063.4 | 0.47594 mg/L | 0.001026 | 0.47594 mg/L | 0.001026 | 0.22% |
| QC value within limits for Vanadium,7440-62-2 Recovery = 95.19% | | | | | | |
| Zinc,7440-66-6† | 172128.5 | 0.96718 mg/L | 0.001772 | 0.96718 mg/L | 0.001772 | 0.18% |
| QC value within limits for Zinc,7440-66-6 Recovery = 96.72% | | | | | | |
| Zirconium,7440-67-7† | 2541.7 | 0.00346 mg/L | 0.000231 | 0.00346 mg/L | 0.000231 | 6.67% |

All analyte(s) passed QC.

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**Sequence No.: 8**
**Sample ID: 1800**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 7**
**Date Collected: 11/5/2013 9:16:28 AM**
**Data Type: Reprocessed on 11/5/2013 3:55:36 PM**
**Initial Sample Vol:**
**Sample Prep Vol:**

---

**Mean Data: 1800**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 7034494.3 | 96.8168 | % | 0.59029 | | | | 0.61% |
| Yttrium,7440-65-5A | 3425189.8 | 94.5824 | % | 0.17901 | | | | 0.19% |
| Yttrium,7440-65-5R | 291919.8 | 96.9054 | % | 2.55559 | | | | 2.64% |
| Ar 420.067 R | 4930600.4 | 97.8162 | % | 0.59412 | | | | 0.61% |
| Ar 363.268 A | 162281.3 | 100.240 | % | 0.1143 | | | | 0.11% |
| Aluminum,7429-90-5† | 15082.5 | 5.24487 | mg/L | 0.133084 | 5.24487 | mg/L | 0.133084 | 2.54% |

QC value within limits for Aluminum,7429-90-5 Recovery = 104.90%

Antimony,7440-36-0† 1905.9 0.47405 mg/L 0.006488 0.47405 mg/L 0.006488 1.37%
QC value within limits for Antimony,7440-36-0 Recovery = 94.81%
Arsenic,7440-38-2† 1307.2 0.50671 mg/L 0.001479 0.50671 mg/L 0.001479 0.29%
QC value within limits for Arsenic,7440-38-2 Recovery = 101.34%
Barium,7440-39-3† 122088.4 0.48782 mg/L 0.000853 0.48782 mg/L 0.000853 0.17%
QC value within limits for Barium,7440-39-3 Recovery = 97.56%
Beryllium,7440-41-7† 4038239.5 0.48313 mg/L 0.003145 0.48313 mg/L 0.003145 0.65%
QC value within limits for Beryllium,7440-41-7 Recovery = 96.63%
Boron,7440-42-8† 212198.8 2.39209 mg/L 0.018461 2.39209 mg/L 0.018461 0.77%
QC value within limits for Boron,7440-42-8 Recovery = 95.68%
Cadmium,7440-43-9† 146286.0 0.47793 mg/L 0.000958 0.47793 mg/L 0.000958 0.20%
QC value within limits for Cadmium,7440-43-9 Recovery = 95.59%
Calcium,7440-70-2† 90922.7 5.23360 mg/L 0.151760 5.23360 mg/L 0.151760 2.90%
QC value within limits for Calcium,7440-70-2 Recovery = 104.67%
Chromium,7440-47-3† 96580.5 0.48925 mg/L 0.000926 0.48925 mg/L 0.000926 0.19%
QC value within limits for Chromium,7440-47-3 Recovery = 97.85%
Cobalt,7440-48-4† 40377.1 0.48412 mg/L 0.001312 0.48412 mg/L 0.001312 0.27%
QC value within limits for Cobalt,7440-48-4 Recovery = 96.82%
Copper,7440-50-8† 253013.0 0.48769 mg/L 0.001161 0.48769 mg/L 0.001161 0.24%
QC value within limits for Copper,7440-50-8 Recovery = 97.54%
Iron,7439-89-6† 98774.5 5.25879 mg/L 0.144805 5.25879 mg/L 0.144805 2.75%
QC value within limits for Iron,7439-89-6 Recovery = 105.18%
Lead,7439-92-1† 15945.6 0.48924 mg/L 0.001447 0.48924 mg/L 0.001447 0.30%
QC value within limits for Lead,7439-92-1 Recovery = 97.85%
Lithium,7439-93-2† 33653.0 0.53414 mg/L 0.011737 0.53414 mg/L 0.011737 2.20%
QC value within limits for Lithium,7439-93-2 Recovery = 106.83%
Magnesium,7439-95-4† 18582.6 5.16063 mg/L 0.199083 5.16063 mg/L 0.199083 3.86%
QC value within limits for Magnesium,7439-95-4 Recovery = 103.21%
Manganese,7439-96-5† 774084.2 0.48830 mg/L 0.000971 0.48830 mg/L 0.000971 0.20%
QC value within limits for Manganese,7439-96-5 Recovery = 97.66%
Molybdenum,7439-98-7 14524.4 0.49242 mg/L 0.001638 0.49242 mg/L 0.001638 0.33%
QC value within limits for Molybdenum,7439-98-7 Recovery = 98.48%
Nickel,7440-02-0† 56314.9 0.48789 mg/L 0.001067 0.48789 mg/L 0.001067 0.22%
QC value within limits for Nickel,7440-02-0 Recovery = 97.58%
Potassium,7440-09-7† 37940.9 10.4390 mg/L 0.25649 10.4390 mg/L 0.25649 2.46%
QC value within limits for Potassium,7440-09-7 Recovery = 104.39%
Selenium,7782-49-2† 1724.8 0.48233 mg/L 0.003246 0.48233 mg/L 0.003246 0.67%
QC value within limits for Selenium,7782-49-2 Recovery = 96.47%
Silicon,7440-21-3† 19236.0 5.09274 mg/L 0.137887 5.09274 mg/L 0.137887 2.71%
QC value within limits for Silicon,7440-21-3 Recovery = 101.85%
Silver,7440-22-4† 285429.3 0.48911 mg/L 0.000828 0.48911 mg/L 0.000828 0.17%
QC value within limits for Silver,7440-22-4 Recovery = 97.82%
Sodium,7440-23-5† 169665.1 20.2732 mg/L 0.06613 20.2732 mg/L 0.06613 0.33%
QC value within limits for Sodium,7440-23-5 Recovery = 101.37%
Strontium,7440-24-6† 335855.8 0.50597 mg/L 0.002333 0.50597 mg/L 0.002333 0.46%
QC value within limits for Strontium,7440-24-6 Recovery = 101.19%
Thallium,7440-28-0† 2395.2 0.49285 mg/L 0.002878 0.49285 mg/L 0.002878 0.58%
QC value within limits for Thallium,7440-28-0 Recovery = 98.57%
Tin,7440-31-5† 5886.3 0.47896 mg/L 0.002350 0.47896 mg/L 0.002350 0.49%
QC value within limits for Tin,7440-31-5 Recovery = 95.79%
Titanium,7440-32-6† 597303.3 0.48645 mg/L 0.000806 0.48645 mg/L 0.000806 0.17%
QC value within limits for Titanium,7440-32-6 Recovery = 97.29%
Vanadium,7440-62-2† 186839.8 0.48258 mg/L 0.001101 0.48258 mg/L 0.001101 0.23%
QC value within limits for Vanadium,7440-62-2 Recovery = 96.52%
Zinc,7440-66-6† 83466.4 0.47780 mg/L 0.001158 0.47780 mg/L 0.001158 0.24%
QC value within limits for Zinc,7440-66-6 Recovery = 95.56%
Zirconium,7440-67-7† 364715.1 0.48537 mg/L 0.003421 0.48537 mg/L 0.003421 0.70%
QC value within limits for Zirconium,7440-67-7 Recovery = 97.07%
All analyte(s) passed QC.

---

**Sequence No.: 9**
**Sample ID: 1900**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 1**
**Date Collected: 11/5/2013 9:23:02 AM**
**Data Type: Reprocessed on 11/5/2013 3:55:39 PM**

**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 1900**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|

| | | | | | | |
|---|---|---|---|---|---|---|
| Scandium-IS | 7331726.8 | 100.908 % | 0.6914 | | | 0.69% |
| Yttrium,7440-65-5A | 3638808.9 | 100.481 % | 0.2558 | | | 0.25% |
| Yttrium,7440-65-5R | 303885.6 | 100.878 % | 0.2999 | | | 0.30% |
| Ar 420.067 R | 5042760.1 | 100.041 % | 0.4406 | | | 0.44% |
| Ar 363.268 A | 161973.1 | 100.049 % | 0.2203 | | | 0.22% |
| Aluminum,7429-90-5† | 32.8 | 0.01140 mg/L | 0.017684 | 0.01140 mg/L | 0.017684 | 155.06% |
| QC value within limits for Aluminum,7429-90-5 Recovery = Not calculated | | | | | | |
| Antimony,7440-36-0† | 17.2 | 0.00435 mg/L | 0.002862 | 0.00435 mg/L | 0.002862 | 65.81% |
| QC value within limits for Antimony,7440-36-0 Recovery = Not calculated | | | | | | |
| Arsenic,7440-38-2† | 3.2 | 0.00122 mg/L | 0.001535 | 0.00122 mg/L | 0.001535 | 126.16% |
| QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated | | | | | | |
| Barium,7440-39-3† | 68.4 | 0.00027 mg/L | 0.000090 | 0.00027 mg/L | 0.000090 | 32.93% |
| QC value within limits for Barium,7440-39-3 Recovery = Not calculated | | | | | | |
| Beryllium,7440-41-7† | 1525.7 | 0.00018 mg/L | 0.000031 | 0.00018 mg/L | 0.000031 | 16.85% |
| QC value within limits for Beryllium,7440-41-7 Recovery = Not calculated | | | | | | |
| Boron,7440-42-8† | 900.5 | 0.01011 mg/L | 0.003778 | 0.01011 mg/L | 0.003778 | 37.36% |
| QC value within limits for Boron,7440-42-8 Recovery = Not calculated | | | | | | |
| Cadmium,7440-43-9† | 57.4 | 0.00019 mg/L | 0.000017 | 0.00019 mg/L | 0.000017 | 8.81% |
| QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated | | | | | | |
| Calcium,7440-70-2† | 255.4 | 0.01471 mg/L | 0.005216 | 0.01471 mg/L | 0.005216 | 35.46% |
| QC value within limits for Calcium,7440-70-2 Recovery = Not calculated | | | | | | |
| Chromium,7440-47-3† | 100.2 | 0.00051 mg/L | 0.000512 | 0.00051 mg/L | 0.000512 | 101.36% |
| QC value within limits for Chromium,7440-47-3 Recovery = Not calculated | | | | | | |
| Cobalt,7440-48-4† | 46.4 | 0.00056 mg/L | 0.000309 | 0.00056 mg/L | 0.000309 | 55.43% |
| QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated | | | | | | |
| Copper,7440-50-8† | -1.6 | 0.00000 mg/L | 0.000135 | 0.00000 mg/L | 0.000135 | >999.9% |
| QC value within limits for Copper,7440-50-8 Recovery = Not calculated | | | | | | |
| Iron,7439-89-6† | 297.7 | 0.01585 mg/L | 0.002354 | 0.01585 mg/L | 0.002354 | 14.85% |
| QC value within limits for Iron,7439-89-6 Recovery = Not calculated | | | | | | |
| Lead,7439-92-1† | 7.3 | 0.00023 mg/L | 0.001019 | 0.00023 mg/L | 0.001019 | 451.91% |
| QC value within limits for Lead,7439-92-1 Recovery = Not calculated | | | | | | |
| Lithium,7439-93-2† | -165.3 | -0.00262 mg/L | 0.003078 | -0.00262 mg/L | 0.003078 | 117.32% |
| QC value within limits for Lithium,7439-93-2 Recovery = Not calculated | | | | | | |
| Magnesium,7439-95-4† | -59.5 | -0.01654 mg/L | 0.005599 | -0.01654 mg/L | 0.005599 | 33.86% |
| QC value within limits for Magnesium,7439-95-4 Recovery = Not calculated | | | | | | |
| Manganese,7439-96-5† | 525.6 | 0.00033 mg/L | 0.000014 | 0.00033 mg/L | 0.000014 | 4.35% |
| QC value within limits for Manganese,7439-96-5 Recovery = Not calculated | | | | | | |
| Molybdenum,7439-98-7 | 102.2 | 0.00346 mg/L | 0.000294 | 0.00346 mg/L | 0.000294 | 8.49% |
| QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated | | | | | | |
| Nickel,7440-02-0† | 21.5 | 0.00019 mg/L | 0.000632 | 0.00019 mg/L | 0.000632 | 339.85% |
| QC value within limits for Nickel,7440-02-0 Recovery = Not calculated | | | | | | |
| Potassium,7440-09-7† | 52.2 | 0.01436 mg/L | 0.036862 | 0.01436 mg/L | 0.036862 | 256.67% |
| QC value within limits for Potassium,7440-09-7 Recovery = Not calculated | | | | | | |
| Selenium,7782-49-2† | 29.0 | 0.00811 mg/L | 0.001374 | 0.00811 mg/L | 0.001374 | 16.94% |
| QC value within limits for Selenium,7782-49-2 Recovery = Not calculated | | | | | | |
| Silicon,7440-21-3† | -73.9 | -0.01957 mg/L | 0.002764 | -0.01957 mg/L | 0.002764 | 14.12% |
| QC value within limits for Silicon,7440-21-3 Recovery = Not calculated | | | | | | |
| Silver,7440-22-4† | -23.2 | -0.00004 mg/L | 0.000061 | -0.00004 mg/L | 0.000061 | 157.46% |
| QC value within limits for Silver,7440-22-4 Recovery = Not calculated | | | | | | |
| Sodium,7440-23-5† | -612.7 | -0.07320 mg/L | 0.007009 | -0.07320 mg/L | 0.007009 | 9.58% |
| QC value within limits for Sodium,7440-23-5 Recovery = Not calculated | | | | | | |
| Strontium,7440-24-6† | -0.3 | 0.00000 mg/L | 0.000314 | 0.00000 mg/L | 0.000314 | >999.9% |
| QC value within limits for Strontium,7440-24-6 Recovery = Not calculated | | | | | | |
| Thallium,7440-28-0† | 13.2 | 0.00267 mg/L | 0.002113 | 0.00267 mg/L | 0.002113 | 79.25% |
| QC value within limits for Thallium,7440-28-0 Recovery = Not calculated | | | | | | |
| Tin,7440-31-5† | 10.5 | 0.00085 mg/L | 0.001210 | 0.00085 mg/L | 0.001210 | 141.78% |
| QC value within limits for Tin,7440-31-5 Recovery = Not calculated | | | | | | |
| Titanium,7440-32-6† | 158.5 | 0.00013 mg/L | 0.000195 | 0.00013 mg/L | 0.000195 | 150.79% |
| QC value within limits for Titanium,7440-32-6 Recovery = Not calculated | | | | | | |
| Vanadium,7440-62-2† | 41.6 | 0.00011 mg/L | 0.000228 | 0.00011 mg/L | 0.000228 | 212.18% |
| QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated | | | | | | |
| Zinc,7440-66-6† | -22.0 | -0.00013 mg/L | 0.000143 | -0.00013 mg/L | 0.000143 | 110.07% |
| QC value within limits for Zinc,7440-66-6 Recovery = Not calculated | | | | | | |
| Zirconium,7440-67-7† | 29.2 | 0.00004 mg/L | 0.000125 | 0.00004 mg/L | 0.000125 | 321.21% |
| QC value within limits for Zirconium,7440-67-7 Recovery = Not calculated | | | | | | |

All analyte(s) passed QC.

==========

**Sequence No.: 10**
**Sample ID: 1245642**
**Analyst:**
**Logged In Analyst (Original) : met**

**Autosampler Location: 17**
**Date Collected: 11/5/2013 9:51:09 AM**
**Data Type: Reprocessed on 11/5/2013 3:55:42 PM**

AWG 11/12/13

213101712 1278

**Mean Data: TBLK L1**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 7954081.0 | 109.473 | % | 1.0926 | | | | 1.00% |
| Yttrium,7440-65-5A | 3844707.1 | 106.167 | % | 1.0638 | | | | 1.00% |
| Yttrium,7440-65-5R | 337187.4 | 111.932 | % | 0.9710 | | | | 0.87% |
| Ar 420.067 R | 5136884.6 | 101.909 | % | 0.1446 | | | | 0.14% |
| Ar 363.268 A | 161311.5 | 99.6408 | % | 0.13762 | | | | 0.14% |
| Aluminum,7429-90-5† | -175.1 | -0.06095 | mg/L | 0.020331 | -0.06095 | mg/L | 0.020331 | 33.35% |
| Antimony,7440-36-0† | 6.3 | 0.00159 | mg/L | 0.003664 | 0.00159 | mg/L | 0.003664 | 230.34% |
| Arsenic,7440-38-2† | -6.1 | -0.00229 | mg/L | 0.003606 | -0.00229 | mg/L | 0.003606 | 157.61% |
| Barium,7440-39-3† | 386.5 | 0.00154 | mg/L | 0.000063 | 0.00154 | mg/L | 0.000063 | 4.09% |
| Beryllium,7440-41-7† | -213.2 | -0.00003 | mg/L | 0.000003 | -0.00003 | mg/L | 0.000003 | 12.92% |
| Boron,7440-42-8† | -717.6 | -0.00794 | mg/L | 0.000320 | -0.00794 | mg/L | 0.000320 | 4.03% |
| Cadmium,7440-43-9† | -64.5 | -0.00021 | mg/L | 0.000042 | -0.00021 | mg/L | 0.000042 | 20.03% |
| Calcium,7440-70-2† | 1281.2 | 0.07380 | mg/L | 0.005856 | 0.07380 | mg/L | 0.005856 | 7.94% |
| Chromium,7440-47-3† | -43.2 | -0.00022 | mg/L | 0.000294 | -0.00022 | mg/L | 0.000294 | 131.72% |
| Cobalt,7440-48-4† | 25.8 | 0.00031 | mg/L | 0.000157 | 0.00031 | mg/L | 0.000157 | 50.59% |
| Copper,7440-50-8† | 37.8 | 0.00007 | mg/L | 0.000619 | 0.00007 | mg/L | 0.000619 | 856.61% |
| Iron,7439-89-6† | 240.8 | 0.01283 | mg/L | 0.000801 | 0.01283 | mg/L | 0.000801 | 6.25% |
| Lead,7439-92-1† | -97.2 | -0.00299 | mg/L | 0.001042 | -0.00299 | mg/L | 0.001042 | 34.86% |
| Lithium,7439-93-2† | -100.8 | -0.00160 | mg/L | 0.000166 | -0.00160 | mg/L | 0.000166 | 10.37% |
| Magnesium,7439-95-4† | -259.3 | -0.07203 | mg/L | 0.012568 | -0.07203 | mg/L | 0.012568 | 17.45% |
| Manganese,7439-96-5† | 5495.6 | 0.00347 | mg/L | 0.000033 | 0.00347 | mg/L | 0.000033 | 0.96% |
| Molybdenum,7439-98-7 | 22.7 | 0.00077 | mg/L | 0.000418 | 0.00077 | mg/L | 0.000418 | 54.48% |
| Nickel,7440-02-0† | -14.3 | -0.00012 | mg/L | 0.000566 | -0.00012 | mg/L | 0.000566 | 457.34% |
| Potassium,7440-09-7† | 44.9 | 0.01235 | mg/L | 0.043204 | 0.01235 | mg/L | 0.043204 | 349.79% |
| Selenium,7782-49-2† | -4.2 | -0.00115 | mg/L | 0.001808 | -0.00115 | mg/L | 0.001808 | 157.21% |
| Silicon,7440-21-3† | -54.7 | -0.01449 | mg/L | 0.004507 | -0.01449 | mg/L | 0.004507 | 31.10% |
| Silver,7440-22-4† | -631.5 | -0.00108 | mg/L | 0.000387 | -0.00108 | mg/L | 0.000387 | 35.90% |
| Sodium,7440-23-5† | 37.9 | 0.00453 | mg/L | 0.006960 | 0.00453 | mg/L | 0.006960 | 153.58% |
| Strontium,7440-24-6† | -174.6 | -0.00027 | mg/L | 0.000168 | -0.00027 | mg/L | 0.000168 | 63.28% |
| Thallium,7440-28-0† | 13.1 | 0.00265 | mg/L | 0.001197 | 0.00265 | mg/L | 0.001197 | 45.22% |
| Tin,7440-31-5† | -36.6 | -0.00296 | mg/L | 0.000978 | -0.00296 | mg/L | 0.000978 | 33.00% |
| Titanium,7440-32-6† | -61.3 | -0.00005 | mg/L | 0.000190 | -0.00005 | mg/L | 0.000190 | 379.80% |
| Vanadium,7440-62-2† | -42.7 | -0.00011 | mg/L | 0.000433 | -0.00011 | mg/L | 0.000433 | 394.56% |
| Zinc,7440-66-6† | -79.9 | -0.00046 | mg/L | 0.000062 | -0.00046 | mg/L | 0.000062 | 13.32% |
| Zirconium,7440-67-7† | -451.7 | -0.00060 | mg/L | 0.000138 | -0.00060 | mg/L | 0.000138 | 23.01% |

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**Sequence No.: 26**
**Sample ID: 1800**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 7**
**Date Collected: 11/5/2013 11:35:36 AM**
**Data Type: Reprocessed on 11/5/2013 3:56:27 PM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 1800**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 7389031.2 | 101.696 | % | 0.9403 | | | | 0.92% |
| Yttrium,7440-65-5A | 3604749.4 | 99.5407 | % | 0.72866 | | | | 0.73% |
| Yttrium,7440-65-5R | 312482.9 | 103.732 | % | 1.5077 | | | | 1.45% |
| Ar 420.067 R | 5066995.9 | 100.522 | % | 0.8339 | | | | 0.83% |
| Ar 363.268 A | 162940.8 | 100.647 | % | 0.1391 | | | | 0.14% |
| Aluminum,7429-90-5† | 14655.7 | 5.09624 | mg/L | 0.098663 | 5.09624 | mg/L | 0.098663 | 1.94% |
| QC value within limits for Aluminum,7429-90-5 Recovery = 101.92% | | | | | | | | |
| Antimony,7440-36-0† | 1907.3 | 0.47434 | mg/L | 0.002769 | 0.47434 | mg/L | 0.002769 | 0.58% |
| QC value within limits for Antimony,7440-36-0 Recovery = 94.87% | | | | | | | | |
| Arsenic,7440-38-2† | 1320.2 | 0.51160 | mg/L | 0.001597 | 0.51160 | mg/L | 0.001597 | 0.31% |
| QC value within limits for Arsenic,7440-38-2 Recovery = 102.32% | | | | | | | | |
| Barium,7440-39-3† | 123125.0 | 0.49196 | mg/L | 0.002053 | 0.49196 | mg/L | 0.002053 | 0.42% |
| QC value within limits for Barium,7440-39-3 Recovery = 98.39% | | | | | | | | |
| Beryllium,7440-41-7† | 4054856.4 | 0.48512 | mg/L | 0.002240 | 0.48512 | mg/L | 0.002240 | 0.46% |
| QC value within limits for Beryllium,7440-41-7 Recovery = 97.02% | | | | | | | | |
| Boron,7440-42-8† | 215364.8 | 2.42689 | mg/L | 0.007512 | 2.42689 | mg/L | 0.007512 | 0.31% |
| QC value within limits for Boron,7440-42-8 Recovery = 97.08% | | | | | | | | |
| Cadmium,7440-43-9† | 148560.5 | 0.48536 | mg/L | 0.002404 | 0.48536 | mg/L | 0.002404 | 0.50% |
| QC value within limits for Cadmium,7440-43-9 Recovery = 97.07% | | | | | | | | |
| Calcium,7440-70-2† | 89791.7 | 5.16849 | mg/L | 0.080304 | 5.16849 | mg/L | 0.080304 | 1.55% |

QC value within limits for Calcium,7440-70-2 Recovery = 103.37%
Chromium,7440-47-3† 97118.7 0.49197 mg/L 0.002269 0.49197 mg/L 0.002269 0.46%
QC value within limits for Chromium,7440-47-3 Recovery = 98.39%
Cobalt,7440-48-4† 40959.5 0.49112 mg/L 0.003291 0.49112 mg/L 0.003291 0.67%
QC value within limits for Cobalt,7440-48-4 Recovery = 98.22%
Copper,7440-50-8† 251884.3 0.48551 mg/L 0.002566 0.48551 mg/L 0.002566 0.53%
QC value within limits for Copper,7440-50-8 Recovery = 97.10%
Iron,7439-89-6† 96688.7 5.14773 mg/L 0.071464 5.14773 mg/L 0.071464 1.39%
QC value within limits for Iron,7439-89-6 Recovery = 102.95%
Lead,7439-92-1† 16065.7 0.49292 mg/L 0.003297 0.49292 mg/L 0.003297 0.67%
QC value within limits for Lead,7439-92-1 Recovery = 98.58%
Lithium,7439-93-2† 33003.2 0.52383 mg/L 0.006341 0.52383 mg/L 0.006341 1.21%
QC value within limits for Lithium,7439-93-2 Recovery = 104.77%
Magnesium,7439-95-4† 18412.2 5.11335 mg/L 0.097786 5.11335 mg/L 0.097786 1.91%
QC value within limits for Magnesium,7439-95-4 Recovery = 102.27%
Manganese,7439-96-5† 783055.3 0.49396 mg/L 0.002452 0.49396 mg/L 0.002452 0.50%
QC value within limits for Manganese,7439-96-5 Recovery = 98.79%
Molybdenum,7439-98-7 14401.7 0.48825 mg/L 0.003174 0.48825 mg/L 0.003174 0.65%
QC value within limits for Molybdenum,7439-98-7 Recovery = 97.65%
Nickel,7440-02-0† 56888.2 0.49285 mg/L 0.002412 0.49285 mg/L 0.002412 0.49%
QC value within limits for Nickel,7440-02-0 Recovery = 98.57%
Potassium,7440-09-7† 36990.7 10.1775 mg/L 0.09464 10.1775 mg/L 0.09464 0.93%
QC value within limits for Potassium,7440-09-7 Recovery = 101.78%
Selenium,7782-49-2† 1719.0 0.48071 mg/L 0.004923 0.48071 mg/L 0.004923 1.02%
QC value within limits for Selenium,7782-49-2 Recovery = 96.14%
Silicon,7440-21-3† 19067.2 5.04802 mg/L 0.062369 5.04802 mg/L 0.062369 1.24%
QC value within limits for Silicon,7440-21-3 Recovery = 100.96%
Silver,7440-22-4† 284204.6 0.48702 mg/L 0.002689 0.48702 mg/L 0.002689 0.55%
QC value within limits for Silver,7440-22-4 Recovery = 97.40%
Sodium,7440-23-5† 173139.1 20.6883 mg/L 0.32649 20.6883 mg/L 0.32649 1.58%
QC value within limits for Sodium,7440-23-5 Recovery = 103.44%
Strontium,7440-24-6† 342681.9 0.51626 mg/L 0.009371 0.51626 mg/L 0.009371 1.82%
QC value within limits for Strontium,7440-24-6 Recovery = 103.25%
Thallium,7440-28-0† 2389.8 0.49178 mg/L 0.001836 0.49178 mg/L 0.001836 0.37%
QC value within limits for Thallium,7440-28-0 Recovery = 98.36%
Tin,7440-31-5† 5936.2 0.48301 mg/L 0.003745 0.48301 mg/L 0.003745 0.78%
QC value within limits for Tin,7440-31-5 Recovery = 96.60%
Titanium,7440-32-6† 600019.1 0.48866 mg/L 0.002657 0.48866 mg/L 0.002657 0.54%
QC value within limits for Titanium,7440-32-6 Recovery = 97.73%
Vanadium,7440-62-2† 187805.1 0.48508 mg/L 0.002193 0.48508 mg/L 0.002193 0.45%
QC value within limits for Vanadium,7440-62-2 Recovery = 97.02%
Zinc,7440-66-6† 84090.2 0.48138 mg/L 0.002383 0.48138 mg/L 0.002383 0.50%
QC value within limits for Zinc,7440-66-6 Recovery = 96.28%
Zirconium,7440-67-7† 366939.0 0.48833 mg/L 0.002636 0.48833 mg/L 0.002636 0.54%
QC value within limits for Zirconium,7440-67-7 Recovery = 97.67%
All analyte(s) passed QC.

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**Sequence No.: 27** **Autosampler Location: 1**
**Sample ID: 1900** **Date Collected: 11/5/2013 11:42:28 AM**
**Analyst:** **Data Type: Reprocessed on 11/5/2013 3:56:29 PM**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

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**Mean Data: 1900**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 7684615.9 | 105.764 | % | 0.6106 | | | | 0.58% |
| Yttrium,7440-65-5A | 3831993.0 | 105.816 | % | 0.3938 | | | | 0.37% |
| Yttrium,7440-65-5R | 324542.4 | 107.735 | % | 1.5422 | | | | 1.43% |
| Ar 420.067 R | 5031802.2 | 99.8239 | % | 0.59607 | | | | 0.60% |
| Ar 363.268 A | 160962.5 | 99.4252 | % | 0.17015 | | | | 0.17% |
| Aluminum,7429-90-5† | 275.8 | 0.09605 | mg/L | 0.028929 | 0.09605 | mg/L | 0.028929 | 30.12% |
| QC value within limits for Aluminum,7429-90-5 Recovery = Not calculated | | | | | | | | |
| Antimony,7440-36-0† | 5.3 | 0.00132 | mg/L | 0.005575 | 0.00132 | mg/L | 0.005575 | 422.53% |
| QC value within limits for Antimony,7440-36-0 Recovery = Not calculated | | | | | | | | |
| Arsenic,7440-38-2† | 0.0 | -0.00001 | mg/L | 0.001956 | -0.00001 | mg/L | 0.001956 | >999.9% |
| QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated | | | | | | | | |
| Barium,7440-39-3† | 97.4 | 0.00039 | mg/L | 0.000072 | 0.00039 | mg/L | 0.000072 | 18.60% |
| QC value within limits for Barium,7440-39-3 Recovery = Not calculated | | | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Beryllium,7440-41-7† | 869.2 | 0.00010 mg/L | 0.000042 | 0.00010 mg/L | 0.000042 | 40.19% |
| QC value within limits for Beryllium,7440-41-7 Recovery = Not calculated | | | | | | |
| Boron,7440-42-8† | 339.8 | 0.00387 mg/L | 0.003856 | 0.00387 mg/L | 0.003856 | 99.61% |
| QC value within limits for Boron,7440-42-8 Recovery = Not calculated | | | | | | |
| Cadmium,7440-43-9† | 10.2 | 0.00003 mg/L | 0.000019 | 0.00003 mg/L | 0.000019 | 57.92% |
| QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated | | | | | | |
| Calcium,7440-70-2† | 130.1 | 0.00749 mg/L | 0.003050 | 0.00749 mg/L | 0.003050 | 40.70% |
| QC value within limits for Calcium,7440-70-2 Recovery = Not calculated | | | | | | |
| Chromium,7440-47-3† | 238.3 | 0.00120 mg/L | 0.000455 | 0.00120 mg/L | 0.000455 | 38.11% |
| QC value within limits for Chromium,7440-47-3 Recovery = Not calculated | | | | | | |
| Cobalt,7440-48-4† | 45.7 | 0.00055 mg/L | 0.000225 | 0.00055 mg/L | 0.000225 | 40.92% |
| QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated | | | | | | |
| Copper,7440-50-8† | -606.3 | -0.00117 mg/L | 0.000322 | -0.00117 mg/L | 0.000322 | 27.56% |
| QC value within limits for Copper,7440-50-8 Recovery = Not calculated | | | | | | |
| Iron,7439-89-6† | 352.2 | 0.01875 mg/L | 0.017032 | 0.01875 mg/L | 0.017032 | 90.84% |
| QC value within limits for Iron,7439-89-6 Recovery = Not calculated | | | | | | |
| Lead,7439-92-1† | -76.0 | -0.00232 mg/L | 0.000782 | -0.00232 mg/L | 0.000782 | 33.65% |
| QC value within limits for Lead,7439-92-1 Recovery = Not calculated | | | | | | |
| Lithium,7439-93-2† | 35.1 | 0.00056 mg/L | 0.000605 | 0.00056 mg/L | 0.000605 | 108.54% |
| QC value within limits for Lithium,7439-93-2 Recovery = Not calculated | | | | | | |
| Magnesium,7439-95-4† | -198.4 | -0.05513 mg/L | 0.020036 | -0.05513 mg/L | 0.020036 | 36.35% |
| QC value within limits for Magnesium,7439-95-4 Recovery = Not calculated | | | | | | |
| Manganese,7439-96-5† | 538.7 | 0.00034 mg/L | 0.000047 | 0.00034 mg/L | 0.000047 | 13.70% |
| QC value within limits for Manganese,7439-96-5 Recovery = Not calculated | | | | | | |
| Molybdenum,7439-98-7 | 120.4 | 0.00408 mg/L | 0.000901 | 0.00408 mg/L | 0.000901 | 22.08% |
| QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated | | | | | | |
| Nickel,7440-02-0† | 33.7 | 0.00029 mg/L | 0.000425 | 0.00029 mg/L | 0.000425 | 145.72% |
| QC value within limits for Nickel,7440-02-0 Recovery = Not calculated | | | | | | |
| Potassium,7440-09-7† | 64.3 | 0.01770 mg/L | 0.035049 | 0.01770 mg/L | 0.035049 | 198.05% |
| QC value within limits for Potassium,7440-09-7 Recovery = Not calculated | | | | | | |
| Selenium,7782-49-2† | 11.8 | 0.00329 mg/L | 0.002000 | 0.00329 mg/L | 0.002000 | 60.77% |
| QC value within limits for Selenium,7782-49-2 Recovery = Not calculated | | | | | | |
| Silicon,7440-21-3† | -87.0 | -0.02304 mg/L | 0.004562 | -0.02304 mg/L | 0.004562 | 19.80% |
| QC value within limits for Silicon,7440-21-3 Recovery = Not calculated | | | | | | |
| Silver,7440-22-4† | -1144.0 | -0.00196 mg/L | 0.000754 | -0.00196 mg/L | 0.000754 | 38.51% |
| QC value within limits for Silver,7440-22-4 Recovery = Not calculated | | | | | | |
| Sodium,7440-23-5† | -520.5 | -0.06220 mg/L | 0.011856 | -0.06220 mg/L | 0.011856 | 19.06% |
| QC value within limits for Sodium,7440-23-5 Recovery = Not calculated | | | | | | |
| Strontium,7440-24-6† | -402.7 | -0.00061 mg/L | 0.000074 | -0.00061 mg/L | 0.000074 | 12.16% |
| QC value within limits for Strontium,7440-24-6 Recovery = Not calculated | | | | | | |
| Thallium,7440-28-0† | 20.9 | 0.00424 mg/L | 0.002948 | 0.00424 mg/L | 0.002948 | 69.59% |
| QC value within limits for Thallium,7440-28-0 Recovery = Not calculated | | | | | | |
| Tin,7440-31-5† | -15.0 | -0.00121 mg/L | 0.000865 | -0.00121 mg/L | 0.000865 | 71.32% |
| QC value within limits for Tin,7440-31-5 Recovery = Not calculated | | | | | | |
| Titanium,7440-32-6† | 67.7 | 0.00006 mg/L | 0.000364 | 0.00006 mg/L | 0.000364 | 659.52% |
| QC value within limits for Titanium,7440-32-6 Recovery = Not calculated | | | | | | |
| Vanadium,7440-62-2† | -550.1 | -0.00142 mg/L | 0.000190 | -0.00142 mg/L | 0.000190 | 13.43% |
| QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated | | | | | | |
| Zinc,7440-66-6† | -59.4 | -0.00035 mg/L | 0.000016 | -0.00035 mg/L | 0.000016 | 4.63% |
| QC value within limits for Zinc,7440-66-6 Recovery = Not calculated | | | | | | |
| Zirconium,7440-67-7† | -240.5 | -0.00032 mg/L | 0.000294 | -0.00032 mg/L | 0.000294 | 91.90% |
| QC value within limits for Zirconium,7440-67-7 Recovery = Not calculated | | | | | | |

All analyte(s) passed QC.

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**Sequence No.: 28**
**Sample ID: 21310240501**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution: 25X**

**Autosampler Location: 37**
**Date Collected: 11/5/2013 11:50:41 AM**
**Data Type: Reprocessed on 11/5/2013 3:56:32 PM**

**Initial Sample Vol:**
**Sample Prep Vol:**

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**Mean Data: 21310240501**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 7163310.2 | 98.5897 | % | 0.64688 | | | | 0.66% |
| Yttrium,7440-65-5A | 3352979.2 | 92.5884 | % | 0.58341 | | | | 0.63% |
| Yttrium,7440-65-5R | 301689.0 | 100.148 | % | 1.0428 | | | | 1.04% |
| Ar 420.067 R | 5070544.7 | 100.593 | % | 0.5663 | | | | 0.56% |
| Ar 363.268 A | 163252.8 | 100.840 | % | 0.3315 | | | | 0.33% |
| Aluminum,7429-90-5† | 2595847.6 | 903.877 | mg/L | 4.2834 | 22596.9 | mg/L | 107.08 | 0.47% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Antimony,7440-36-0† | 12.1 | 0.01521 | mg/L | 0.004822 | 0.38027 | mg/L | 0.120542 | 31.70% |
| Arsenic,7440-38-2† | -828.2 | -0.02053 | mg/L | 0.009237 | -0.51335 | mg/L | 0.230914 | 44.98% |
| Barium,7440-39-3† | 510.7 | 0.00035 | mg/L | 0.000185 | 0.00874 | mg/L | 0.004624 | 52.91% |
| Beryllium,7440-41-7† | 512.8 | 0.00009 | mg/L | 0.000021 | 0.00222 | mg/L | 0.000518 | 23.34% |
| Boron,7440-42-8† | -135.1 | 0.01127 | mg/L | 0.000979 | 0.28164 | mg/L | 0.024468 | 8.69% |
| Cadmium,7440-43-9† | -672.8 | 0.00034 | mg/L | 0.000204 | 0.00861 | mg/L | 0.005109 | 59.36% |
| Calcium,7440-70-2† | 2404.3 | 0.05904 | mg/L | 0.004952 | 1.47591 | mg/L | 0.123802 | 8.39% |
| Chromium,7440-47-3† | 28843.3 | 0.10274 | mg/L | 0.000595 | 2.56839 | mg/L | 0.014879 | 0.58% |
| Cobalt,7440-48-4† | 248.3 | 0.00288 | mg/L | 0.000337 | 0.07206 | mg/L | 0.008415 | 11.68% |
| Copper,7440-50-8† | 172676.4 | 0.33054 | mg/L | 0.001640 | 8.26342 | mg/L | 0.041002 | 0.50% |
| Iron,7439-89-6† | 15807.8 | 0.79189 | mg/L | 0.011008 | 19.7973 | mg/L | 0.27521 | 1.39% |
| Lead,7439-92-1† | -2835.3 | -0.00044 | mg/L | 0.002512 | -0.01107 | mg/L | 0.062798 | 567.17% |
| Lithium,7439-93-2† | 67.5 | 0.00107 | mg/L | 0.001192 | 0.02675 | mg/L | 0.029806 | 111.44% |
| Magnesium,7439-95-4† | 107.8 | 0.04013 | mg/L | 0.015077 | 1.00334 | mg/L | 0.376913 | 37.57% |
| Manganese,7439-96-5† | 16358.6 | 0.01844 | mg/L | 0.000062 | 0.46111 | mg/L | 0.001539 | 0.33% |
| Molybdenum,7439-98-7 | -503.8 | 0.00779 | mg/L | 0.000503 | 0.19486 | mg/L | 0.012569 | 6.45% |
| Nickel,7440-02-0† | 65575.4 | 0.56491 | mg/L | 0.003204 | 14.1228 | mg/L | 0.08010 | 0.57% |
| Potassium,7440-09-7† | 426.9 | 0.09346 | mg/L | 0.025481 | 2.33638 | mg/L | 0.637027 | 27.27% |
| Selenium,7782-49-2† | 380.1 | -0.03876 | mg/L | 0.011022 | -0.96910 | mg/L | 0.275550 | 28.43% |
| Silicon,7440-21-3† | 1191.6 | 0.31353 | mg/L | 0.009860 | 7.83830 | mg/L | 0.246493 | 3.14% |
| Silver,7440-22-4† | 3505.7 | 0.00434 | mg/L | 0.000642 | 0.10858 | mg/L | 0.016062 | 14.79% |
| Sodium,7440-23-5† | 14280.0 | 1.66766 | mg/L | 0.021722 | 41.6914 | mg/L | 0.54305 | 1.30% |
| Strontium,7440-24-6† | 751.9 | 0.00113 | mg/L | 0.000206 | 0.02817 | mg/L | 0.005158 | 18.31% |
| Thallium,7440-28-0† | -98.3 | 0.00575 | mg/L | 0.004463 | 0.14382 | mg/L | 0.111570 | 77.58% |
| Tin,7440-31-5† | 86.1 | 0.00388 | mg/L | 0.002998 | 0.09702 | mg/L | 0.074940 | 77.24% |
| Titanium,7440-32-6† | 9569.0 | 0.00779 | mg/L | 0.000237 | 0.19474 | mg/L | 0.005932 | 3.05% |
| Vanadium,7440-62-2† | 4076.8 | 0.00956 | mg/L | 0.000173 | 0.23895 | mg/L | 0.004328 | 1.81% |
| Zinc,7440-66-6† | 19717.8 | 0.10651 | mg/L | 0.000032 | 2.66272 | mg/L | 0.000808 | 0.03% |
| Zirconium,7440-67-7† | 398.9 | 0.00056 | mg/L | 0.000318 | 0.01402 | mg/L | 0.007940 | 56.63% |

**Sequence No.: 29**
**Sample ID: 1251816**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution: 1X**

**Autosampler Location: 38**
**Date Collected: 11/5/2013 11:58:08 AM**
**Data Type: Reprocessed on 11/5/2013 3:56:36 PM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 1251816**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 7728528.2 | 106.369 | % | 1.6721 | | | | 1.57% |
| Yttrium,7440-65-5A | 3822585.9 | 105.556 | % | 0.2511 | | | | 0.24% |
| Yttrium,7440-65-5R | 330649.6 | 109.762 | % | 0.6693 | | | | 0.61% |
| Ar 420.067 R | 5116333.9 | 101.501 | % | 0.6038 | | | | 0.59% |
| Ar 363.268 A | 162459.5 | 100.350 | % | 0.5044 | | | | 0.50% |
| Aluminum,7429-90-5† | 463.6 | 0.16145 | mg/L | 0.038822 | 0.16145 | mg/L | 0.038822 | 24.05% |
| Antimony,7440-36-0† | 10.6 | 0.00267 | mg/L | 0.002453 | 0.00267 | mg/L | 0.002453 | 91.72% |
| Arsenic,7440-38-2† | -3.4 | -0.00124 | mg/L | 0.003835 | -0.00124 | mg/L | 0.003835 | 310.48% |
| Barium,7440-39-3† | 242.5 | 0.00097 | mg/L | 0.000044 | 0.00097 | mg/L | 0.000044 | 4.60% |
| Beryllium,7440-41-7† | -432.9 | -0.00005 | mg/L | 0.000019 | -0.00005 | mg/L | 0.000019 | 36.06% |
| Boron,7440-42-8† | -742.6 | -0.00824 | mg/L | 0.000931 | -0.00824 | mg/L | 0.000931 | 11.29% |
| Cadmium,7440-43-9† | -72.5 | -0.00024 | mg/L | 0.000044 | -0.00024 | mg/L | 0.000044 | 18.74% |
| Calcium,7440-70-2† | 1529.7 | 0.08810 | mg/L | 0.002441 | 0.08810 | mg/L | 0.002441 | 2.77% |
| Chromium,7440-47-3† | 143.1 | 0.00071 | mg/L | 0.000211 | 0.00071 | mg/L | 0.000211 | 29.78% |
| Cobalt,7440-48-4† | 38.1 | 0.00046 | mg/L | 0.000293 | 0.00046 | mg/L | 0.000293 | 64.05% |
| Copper,7440-50-8† | -238.8 | -0.00046 | mg/L | 0.000146 | -0.00046 | mg/L | 0.000146 | 31.58% |
| Iron,7439-89-6† | 152.3 | 0.00810 | mg/L | 0.001867 | 0.00810 | mg/L | 0.001867 | 23.05% |
| Lead,7439-92-1† | -67.8 | -0.00206 | mg/L | 0.000257 | -0.00206 | mg/L | 0.000257 | 12.48% |
| Lithium,7439-93-2† | -42.0 | -0.00067 | mg/L | 0.001794 | -0.00067 | mg/L | 0.001794 | 269.05% |
| Magnesium,7439-95-4† | -259.7 | -0.07214 | mg/L | 0.027294 | -0.07214 | mg/L | 0.027294 | 37.83% |
| Manganese,7439-96-5† | 931.1 | 0.00059 | mg/L | 0.000038 | 0.00059 | mg/L | 0.000038 | 6.51% |
| Molybdenum,7439-98-7 | 56.1 | 0.00190 | mg/L | 0.000256 | 0.00190 | mg/L | 0.000256 | 13.47% |
| Nickel,7440-02-0† | 13.9 | 0.00012 | mg/L | 0.000290 | 0.00012 | mg/L | 0.000290 | 242.27% |
| Potassium,7440-09-7† | 120.0 | 0.03300 | mg/L | 0.039696 | 0.03300 | mg/L | 0.039696 | 120.27% |
| Selenium,7782-49-2† | -8.9 | -0.00252 | mg/L | 0.001208 | -0.00252 | mg/L | 0.001208 | 47.92% |
| Silicon,7440-21-3† | -114.8 | -0.03040 | mg/L | 0.005355 | -0.03040 | mg/L | 0.005355 | 17.61% |
| Silver,7440-22-4† | -1073.6 | -0.00184 | mg/L | 0.000462 | -0.00184 | mg/L | 0.000462 | 25.17% |
| Sodium,7440-23-5† | -506.6 | -0.06054 | mg/L | 0.011827 | -0.06054 | mg/L | 0.011827 | 19.54% |
| Strontium,7440-24-6† | -493.6 | -0.00075 | mg/L | 0.000111 | -0.00075 | mg/L | 0.000111 | 14.82% |
| Thallium,7440-28-0† | 5.7 | 0.00116 | mg/L | 0.001229 | 0.00116 | mg/L | 0.001229 | 106.29% |

Wrong Sample - R/R
AWG 11/5/13

213101712 1282

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Tin,7440-31-5† | -9.5 | -0.00077 mg/L | 0.000247 | -0.00077 mg/L | 0.000247 | 32.11% |
| Titanium,7440-32-6† | -210.0 | -0.00017 mg/L | 0.000085 | -0.00017 mg/L | 0.000085 | 49.74% |
| Vanadium,7440-62-2† | -329.5 | -0.00085 mg/L | 0.000013 | -0.00085 mg/L | 0.000013 | 1.52% |
| Zinc,7440-66-6† | -152.4 | -0.00088 mg/L | 0.000155 | -0.00088 mg/L | 0.000155 | 17.57% |
| Zirconium,7440-67-7† | -531.1 | -0.00071 mg/L | 0.000200 | -0.00071 mg/L | 0.000200 | 28.29% |

**Sequence No.: 30**
**Sample ID: TBLK F1**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution: 5X**

**Autosampler Location: 39**
**Date Collected: 11/5/2013 12:12:17 PM**
**Data Type: Reprocessed on 11/5/2013 3:56:39 PM**
**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: TBLK F1**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6991666.4 | 96.2273 | % | 0.81692 | | | | 0.85% |
| Yttrium,7440-65-5A | 3299944.2 | 91.1239 | % | 0.63010 | | | | 0.69% |
| Yttrium,7440-65-5R | 289892.1 | 96.2323 | % | 1.38104 | | | | 1.44% |
| Ar 420.067 R | 5010763.6 | 99.4066 | % | 1.24378 | | | | 1.25% |
| Ar 363.268 A | 166593.1 | 102.903 | % | 0.4829 | | | | 0.47% |
| Aluminum,7429-90-5† | -56.4 | -0.01970 | mg/L | 0.029347 | -0.09848 | mg/L | 0.146734 | 149.00% |
| Antimony,7440-36-0† | 4.7 | 0.00129 | mg/L | 0.001417 | 0.00643 | mg/L | 0.007086 | 110.25% |
| Arsenic,7440-38-2† | -35.4 | -0.01311 | mg/L | 0.001686 | -0.06554 | mg/L | 0.008431 | 12.86% |
| Barium,7440-39-3† | 183.9 | 0.00074 | mg/L | 0.000017 | 0.00369 | mg/L | 0.000083 | 2.24% |
| Beryllium,7440-41-7† | 245.2 | 0.00003 | mg/L | 0.000025 | 0.00016 | mg/L | 0.000127 | 81.68% |
| Boron,7440-42-8† | -386.9 | -0.00436 | mg/L | 0.000581 | -0.02181 | mg/L | 0.002905 | 13.32% |
| Cadmium,7440-43-9† | -122.7 | -0.00040 | mg/L | 0.000084 | -0.00200 | mg/L | 0.000418 | 20.87% |
| Calcium,7440-70-2† | 567.2 | 0.03265 | mg/L | 0.003319 | 0.16323 | mg/L | 0.016593 | 10.17% |
| Chromium,7440-47-3† | -793.2 | -0.00401 | mg/L | 0.000221 | -0.02003 | mg/L | 0.001106 | 5.52% |
| Cobalt,7440-48-4† | 60.2 | 0.00072 | mg/L | 0.000192 | 0.00361 | mg/L | 0.000958 | 26.55% |
| Copper,7440-50-8† | 1490.9 | 0.00287 | mg/L | 0.000616 | 0.01437 | mg/L | 0.003079 | 21.42% |
| Iron,7439-89-6† | -229.1 | -0.01220 | mg/L | 0.005492 | -0.06098 | mg/L | 0.027460 | 45.03% |
| Lead,7439-92-1† | 20.3 | 0.00062 | mg/L | 0.001098 | 0.00311 | mg/L | 0.005490 | 176.76% |
| Lithium,7439-93-2† | -4.5 | -0.00007 | mg/L | 0.001322 | -0.00036 | mg/L | 0.006610 | >999.9% |
| Magnesium,7439-95-4† | 108.3 | 0.03009 | mg/L | 0.021788 | 0.15047 | mg/L | 0.108939 | 72.40% |
| Manganese,7439-96-5† | 1207.2 | 0.00076 | mg/L | 0.000009 | 0.00380 | mg/L | 0.000045 | 1.19% |
| Molybdenum,7439-98-7 | -15.1 | -0.00051 | mg/L | 0.001136 | -0.00255 | mg/L | 0.005678 | 222.41% |
| Nickel,7440-02-0† | -74.4 | -0.00064 | mg/L | 0.000343 | -0.00322 | mg/L | 0.001713 | 53.13% |
| Potassium,7440-09-7† | 322.4 | 0.08871 | mg/L | 0.028639 | 0.44353 | mg/L | 0.143196 | 32.29% |
| Selenium,7782-49-2† | 28.2 | 0.00788 | mg/L | 0.001406 | 0.03938 | mg/L | 0.007028 | 17.85% |
| Silicon,7440-21-3† | -24.0 | -0.00637 | mg/L | 0.004415 | -0.03185 | mg/L | 0.022074 | 69.31% |
| Silver,7440-22-4† | 3394.7 | 0.00581 | mg/L | 0.000022 | 0.02905 | mg/L | 0.000108 | 0.37% |
| Sodium,7440-23-5† | 1646097.6 | 196.675 | mg/L | 2.8812 | 983.377 | mg/L | 14.4061 | 1.46% |
| Strontium,7440-24-6† | 204.1 | 0.00031 | mg/L | 0.000093 | 0.00153 | mg/L | 0.000463 | 30.19% |
| Thallium,7440-28-0† | 7.3 | 0.00150 | mg/L | 0.001449 | 0.00750 | mg/L | 0.007246 | 96.63% |
| Tin,7440-31-5† | -17.4 | -0.00141 | mg/L | 0.000141 | -0.00705 | mg/L | 0.000705 | 10.01% |
| Titanium,7440-32-6† | 881.8 | 0.00072 | mg/L | 0.000072 | 0.00359 | mg/L | 0.000359 | 9.99% |
| Vanadium,7440-62-2† | 1507.9 | 0.00389 | mg/L | 0.000424 | 0.01943 | mg/L | 0.002120 | 10.91% |
| Zinc,7440-66-6† | 122.8 | 0.00071 | mg/L | 0.000046 | 0.00356 | mg/L | 0.000231 | 6.49% |
| Zirconium,7440-67-7† | -74.3 | -0.00010 | mg/L | 0.000294 | -0.00050 | mg/L | 0.001471 | 295.76% |

**Sequence No.: 31**
**Sample ID: 1251816**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution: 1X**

**Autosampler Location: 40**
**Date Collected: 11/5/2013 12:18:56 PM**
**Data Type: Reprocessed on 11/5/2013 3:56:41 PM**
**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 1251816**

| Analyte | Mean Corrected Intensity | Calib. Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 7322826.6 | 100.785 | % | 0.2086 | | | | 0.21% |
| Yttrium,7440-65-5A | 3672279.1 | 101.405 | % | 1.0918 | | | | 1.08% |
| Yttrium,7440-65-5R | 318204.6 | 105.631 | % | 3.1651 | | | | 3.00% |
| Ar 420.067 R | 4970233.5 | 98.6025 | % | 0.57397 | | | | 0.58% |
| Ar 363.268 A | 163119.3 | 100.757 | % | 0.1342 | | | | 0.13% |
| Aluminum,7429-90-5† | -112.4 | -0.03915 | mg/L | 0.012344 | -0.03915 | mg/L | 0.012344 | 31.53% |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Antimony,7440-36-0† | -7.8 | -0.00200 | mg/L | 0.001457 | -0.00200 | mg/L | 0.001457 | 72.99% |
| Arsenic,7440-38-2† | -7.5 | -0.00284 | mg/L | 0.001474 | -0.00284 | mg/L | 0.001474 | 51.88% |
| Barium,7440-39-3† | 206.1 | 0.00082 | mg/L | 0.000028 | 0.00082 | mg/L | 0.000028 | 3.40% |
| Beryllium,7440-41-7† | -335.9 | -0.00004 | mg/L | 0.000006 | -0.00004 | mg/L | 0.000006 | 14.31% |
| Boron,7440-42-8† | -908.0 | -0.01009 | mg/L | 0.000786 | -0.01009 | mg/L | 0.000786 | 7.79% |
| Cadmium,7440-43-9† | -62.4 | -0.00020 | mg/L | 0.000046 | -0.00020 | mg/L | 0.000046 | 22.52% |
| Calcium,7440-70-2† | 547.3 | 0.03153 | mg/L | 0.006264 | 0.03153 | mg/L | 0.006264 | 19.86% |
| Chromium,7440-47-3† | 132.6 | 0.00067 | mg/L | 0.000569 | 0.00067 | mg/L | 0.000569 | 85.23% |
| Cobalt,7440-48-4† | 20.8 | 0.00025 | mg/L | 0.000182 | 0.00025 | mg/L | 0.000182 | 72.35% |
| Copper,7440-50-8† | -350.3 | -0.00068 | mg/L | 0.000232 | -0.00068 | mg/L | 0.000232 | 34.38% |
| Iron,7439-89-6† | 137.9 | 0.00735 | mg/L | 0.005938 | 0.00735 | mg/L | 0.005938 | 80.85% |
| Lead,7439-92-1† | -35.6 | -0.00110 | mg/L | 0.000763 | -0.00110 | mg/L | 0.000763 | 69.72% |
| Lithium,7439-93-2† | 8.8 | 0.00014 | mg/L | 0.001583 | 0.00014 | mg/L | 0.001583 | >999.9% |
| Magnesium,7439-95-4† | -198.9 | -0.05526 | mg/L | 0.038953 | -0.05526 | mg/L | 0.038953 | 70.49% |
| Manganese,7439-96-5† | 314.3 | 0.00020 | mg/L | 0.000060 | 0.00020 | mg/L | 0.000060 | 30.06% |
| Molybdenum,7439-98-7 | 32.7 | 0.00111 | mg/L | 0.000152 | 0.00111 | mg/L | 0.000152 | 13.74% |
| Nickel,7440-02-0† | -13.6 | -0.00012 | mg/L | 0.000283 | -0.00012 | mg/L | 0.000283 | 241.37% |
| Potassium,7440-09-7† | -92.4 | -0.02542 | mg/L | 0.038097 | -0.02542 | mg/L | 0.038097 | 149.87% |
| Selenium,7782-49-2† | -3.6 | -0.00099 | mg/L | 0.004939 | -0.00099 | mg/L | 0.004939 | 498.84% |
| Silicon,7440-21-3† | -134.2 | -0.03554 | mg/L | 0.014568 | -0.03554 | mg/L | 0.014568 | 40.99% |
| Silver,7440-22-4† | -986.2 | -0.00168 | mg/L | 0.000395 | -0.00168 | mg/L | 0.000395 | 23.45% |
| Sodium,7440-23-5† | 1623.9 | 0.19403 | mg/L | 0.009951 | 0.19403 | mg/L | 0.009951 | 5.13% |
| Strontium,7440-24-6† | -547.5 | -0.00083 | mg/L | 0.000304 | -0.00083 | mg/L | 0.000304 | 36.74% |
| Thallium,7440-28-0† | 1.1 | 0.00021 | mg/L | 0.001910 | 0.00021 | mg/L | 0.001910 | 903.76% |
| Tin,7440-31-5† | -30.8 | -0.00250 | mg/L | 0.000774 | -0.00250 | mg/L | 0.000774 | 30.98% |
| Titanium,7440-32-6† | -456.4 | -0.00037 | mg/L | 0.000110 | -0.00037 | mg/L | 0.000110 | 29.71% |
| Vanadium,7440-62-2† | -168.1 | -0.00043 | mg/L | 0.000204 | -0.00043 | mg/L | 0.000204 | 47.21% |
| Zinc,7440-66-6† | -141.7 | -0.00082 | mg/L | 0.000158 | -0.00082 | mg/L | 0.000158 | 19.31% |
| Zirconium,7440-67-7† | -387.9 | -0.00052 | mg/L | 0.000254 | -0.00052 | mg/L | 0.000254 | 49.29% |

**Sequence No.: 32**
**Sample ID: 1251817**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution: 1X**

**Autosampler Location: 41**
**Date Collected: 11/5/2013 12:25:32 PM**
**Data Type: Reprocessed on 11/5/2013 3:56:44 PM**
**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 1251817**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 7198844.9 | 99.0788 | % | 1.35094 | | | | 1.36% |
| Yttrium,7440-65-5A | 3499712.9 | 96.6402 | % | 0.85164 | | | | 0.88% |
| Yttrium,7440-65-5R | 314868.4 | 104.523 | % | 5.5793 | | | | 5.34% |
| Ar 420.067 R | 4964909.5 | 98.4969 | % | 0.31641 | | | | 0.32% |
| Ar 363.268 A | 163286.9 | 100.861 | % | 0.2217 | | | | 0.22% |
| Aluminum,7429-90-5† | 14844.5 | 5.16151 | mg/L | 0.385809 | 5.16151 | mg/L | 0.385809 | 7.47% |
| Antimony,7440-36-0† | 2089.6 | 0.51996 | mg/L | 0.003543 | 0.51996 | mg/L | 0.003543 | 0.68% |
| Arsenic,7440-38-2† | 1397.1 | 0.54143 | mg/L | 0.003186 | 0.54143 | mg/L | 0.003186 | 0.59% |
| Barium,7440-39-3† | 131091.3 | 0.52380 | mg/L | 0.004278 | 0.52380 | mg/L | 0.004278 | 0.82% |
| Beryllium,7440-41-7† | 4340684.8 | 0.51933 | mg/L | 0.003467 | 0.51933 | mg/L | 0.003467 | 0.67% |
| Boron,7440-42-8† | 229656.8 | 2.58646 | mg/L | 0.034584 | 2.58646 | mg/L | 0.034584 | 1.34% |
| Cadmium,7440-43-9† | 156934.4 | 0.51273 | mg/L | 0.003678 | 0.51273 | mg/L | 0.003678 | 0.72% |
| Calcium,7440-70-2† | 88650.5 | 5.10272 | mg/L | 0.370398 | 5.10272 | mg/L | 0.370398 | 7.26% |
| Chromium,7440-47-3† | 103225.9 | 0.52287 | mg/L | 0.004613 | 0.52287 | mg/L | 0.004613 | 0.88% |
| Cobalt,7440-48-4† | 43663.4 | 0.52353 | mg/L | 0.004516 | 0.52353 | mg/L | 0.004516 | 0.86% |
| Copper,7440-50-8† | 269231.2 | 0.51895 | mg/L | 0.004330 | 0.51895 | mg/L | 0.004330 | 0.83% |
| Iron,7439-89-6† | 96964.5 | 5.16239 | mg/L | 0.378237 | 5.16239 | mg/L | 0.378237 | 7.33% |
| Lead,7439-92-1† | 16978.4 | 0.52091 | mg/L | 0.003027 | 0.52091 | mg/L | 0.003027 | 0.58% |
| Lithium,7439-93-2† | 32560.3 | 0.51679 | mg/L | 0.036161 | 0.51679 | mg/L | 0.036161 | 7.00% |
| Magnesium,7439-95-4† | 18153.3 | 5.04148 | mg/L | 0.425275 | 5.04148 | mg/L | 0.425275 | 8.44% |
| Manganese,7439-96-5† | 832892.3 | 0.52540 | mg/L | 0.003983 | 0.52540 | mg/L | 0.003983 | 0.76% |
| Molybdenum,7439-98-7 | 15193.2 | 0.51505 | mg/L | 0.005760 | 0.51505 | mg/L | 0.005760 | 1.12% |
| Nickel,7440-02-0† | 60682.7 | 0.52572 | mg/L | 0.003630 | 0.52572 | mg/L | 0.003630 | 0.69% |
| Potassium,7440-09-7† | 37227.3 | 10.2426 | mg/L | 0.78081 | 10.2426 | mg/L | 0.78081 | 7.62% |
| Selenium,7782-49-2† | 1828.4 | 0.51124 | mg/L | 0.012492 | 0.51124 | mg/L | 0.012492 | 2.44% |
| Silicon,7440-21-3† | 19233.1 | 5.09192 | mg/L | 0.376607 | 5.09192 | mg/L | 0.376607 | 7.40% |
| Silver,7440-22-4† | 300485.4 | 0.51493 | mg/L | 0.003911 | 0.51493 | mg/L | 0.003911 | 0.76% |
| Sodium,7440-23-5† | 176431.0 | 21.0818 | mg/L | 1.81879 | 21.0818 | mg/L | 1.81879 | 8.63% |
| Strontium,7440-24-6† | 347854.8 | 0.52405 | mg/L | 0.049162 | 0.52405 | mg/L | 0.049162 | 9.38% |
| Thallium,7440-28-0† | 2508.0 | 0.51631 | mg/L | 0.004612 | 0.51631 | mg/L | 0.004612 | 0.89% |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Tin,7440-31-5† | 6448.7 | 0.52467 | mg/L | 0.001740 | 0.52467 | mg/L | 0.001740 | 0.33% |
| Titanium,7440-32-6† | 647601.4 | 0.52741 | mg/L | 0.003806 | 0.52741 | mg/L | 0.003806 | 0.72% |
| Vanadium,7440-62-2† | 200324.2 | 0.51745 | mg/L | 0.004125 | 0.51745 | mg/L | 0.004125 | 0.80% |
| Zinc,7440-66-6† | 89814.3 | 0.51419 | mg/L | 0.003897 | 0.51419 | mg/L | 0.003897 | 0.76% |
| Zirconium,7440-67-7† | 12347.7 | 0.01623 | mg/L | 0.005045 | 0.01623 | mg/L | 0.005045 | 31.09% |

**Sequence No.: 33**
**Sample ID: 21310171202**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution: 5X**

**Autosampler Location: 42**
**Date Collected: 11/5/2013 12:32:16 PM**
**Data Type: Reprocessed on 11/5/2013 3:56:47 PM**
**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 21310171202**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 6736106.2 | 92.7100 | % | 0.79529 | | | | 0.86% |
| Yttrium,7440-65-5A | 3179430.5 | 87.7960 | % | 0.71133 | | | | 0.81% |
| Yttrium,7440-65-5R | 279356.3 | 92.7349 | % | 0.44672 | | | | 0.48% |
| Ar 420.067 R | 4880740.1 | 96.8271 | % | 0.71376 | | | | 0.74% |
| Ar 363.268 A | 166877.4 | 103.079 | % | 0.2333 | | | | 0.23% |
| Aluminum,7429-90-5† | 198.1 | 0.06867 | mg/L | 0.016770 | 0.34335 | mg/L | 0.083848 | 24.42% |
| Antimony,7440-36-0† | 8.2 | 0.00216 | mg/L | 0.002436 | 0.01080 | mg/L | 0.012180 | 112.81% |
| Arsenic,7440-38-2† | -37.5 | -0.01320 | mg/L | 0.003631 | -0.06600 | mg/L | 0.018156 | 27.51% |
| Barium,7440-39-3† | 30107.0 | 0.12004 | mg/L | 0.001292 | 0.60020 | mg/L | 0.006461 | 1.08% |
| Beryllium,7440-41-7† | 2756.6 | 0.00033 | mg/L | 0.000037 | 0.00166 | mg/L | 0.000187 | 11.30% |
| Boron,7440-42-8† | 4428.1 | 0.05351 | mg/L | 0.004516 | 0.26756 | mg/L | 0.022580 | 8.44% |
| Cadmium,7440-43-9† | 3061.5 | 0.00999 | mg/L | 0.000171 | 0.04994 | mg/L | 0.000854 | 1.71% |
| Calcium,7440-70-2† | 228832.7 | 13.1782 | mg/L | 0.18918 | 65.8911 | mg/L | 0.94589 | 1.44% |
| Chromium,7440-47-3† | -360.4 | -0.00174 | mg/L | 0.000429 | -0.00872 | mg/L | 0.002145 | 24.61% |
| Cobalt,7440-48-4† | 321.0 | 0.00384 | mg/L | 0.000158 | 0.01920 | mg/L | 0.000790 | 4.12% |
| Copper,7440-50-8† | 17102.9 | 0.03288 | mg/L | 0.000464 | 0.16441 | mg/L | 0.002319 | 1.41% |
| Iron,7439-89-6† | 15145.1 | 0.80649 | mg/L | 0.011838 | 4.03245 | mg/L | 0.059192 | 1.47% |
| Lead,7439-92-1† | 38783.5 | 1.18942 | mg/L | 0.020664 | 5.94709 | mg/L | 0.103320 | 1.74% |
| Lithium,7439-93-2† | 66.9 | 0.00106 | mg/L | 0.001505 | 0.00528 | mg/L | 0.007526 | 142.46% |
| Magnesium,7439-95-4† | 2217.5 | 0.61545 | mg/L | 0.011222 | 3.07725 | mg/L | 0.056112 | 1.82% |
| Manganese,7439-96-5† | 202122.6 | 0.12749 | mg/L | 0.001995 | 0.63744 | mg/L | 0.009973 | 1.56% |
| Molybdenum,7439-98-7 | 88.7 | 0.00308 | mg/L | 0.000993 | 0.01539 | mg/L | 0.004967 | 32.28% |
| Nickel,7440-02-0† | 1333.0 | 0.01155 | mg/L | 0.000340 | 0.05774 | mg/L | 0.001701 | 2.95% |
| Potassium,7440-09-7† | 3670.8 | 1.01032 | mg/L | 0.044904 | 5.05158 | mg/L | 0.224519 | 4.44% |
| Selenium,7782-49-2† | 41.3 | 0.01178 | mg/L | 0.007847 | 0.05890 | mg/L | 0.039237 | 66.61% |
| Silicon,7440-21-3† | 2701.1 | 0.71513 | mg/L | 0.003170 | 3.57563 | mg/L | 0.015848 | 0.44% |
| Silver,7440-22-4† | 3430.0 | 0.00590 | mg/L | 0.000176 | 0.02951 | mg/L | 0.000881 | 2.99% |
| Sodium,7440-23-5† | 2546367.8 | 304.239 | mg/L | 9.5829 | 1521.20 | mg/L | 47.915 | 3.15% |
| Strontium,7440-24-6† | 43095.5 | 0.06457 | mg/L | 0.001073 | 0.32287 | mg/L | 0.005367 | 1.66% |
| Thallium,7440-28-0† | 12.2 | 0.00266 | mg/L | 0.001765 | 0.01332 | mg/L | 0.008827 | 66.27% |
| Tin,7440-31-5† | -27.4 | -0.00175 | mg/L | 0.001501 | -0.00876 | mg/L | 0.007506 | 85.67% |
| Titanium,7440-32-6† | 1233.0 | 0.00100 | mg/L | 0.000204 | 0.00501 | mg/L | 0.001018 | 20.33% |
| Vanadium,7440-62-2† | 1870.6 | 0.00472 | mg/L | 0.000314 | 0.02361 | mg/L | 0.001571 | 6.65% |
| Zinc,7440-66-6† | 640242.2 | 3.69549 | mg/L | 0.060231 | 18.4775 | mg/L | 0.30115 | 1.63% |
| Zirconium,7440-67-7† | -157.5 | -0.00021 | mg/L | 0.000135 | -0.00105 | mg/L | 0.000677 | 64.70% |

**Sequence No.: 34**
**Sample ID: 1800**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 7**
**Date Collected: 11/5/2013 12:38:50 PM**
**Data Type: Reprocessed on 11/5/2013 3:56:48 PM**
**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 1800**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 7624780.8 | 104.941 | % | 1.1947 | | | | 1.14% |
| Yttrium,7440-65-5A | 3701092.2 | 102.201 | % | 0.5701 | | | | 0.56% |
| Yttrium,7440-65-5R | 323109.6 | 107.259 | % | 0.5276 | | | | 0.49% |
| Ar 420.067 R | 5103871.5 | 101.254 | % | 0.7194 | | | | 0.71% |
| Ar 363.268 A | 162447.4 | 100.342 | % | 0.3042 | | | | 0.30% |
| Aluminum,7429-90-5† | 14111.0 | 4.90658 | mg/L | 0.059531 | 4.90658 | mg/L | 0.059531 | 1.21% |

QC value within limits for Aluminum,7429-90-5 Recovery = 98.13%

| | | | | | | |
|---|---|---|---|---|---|---|
| Antimony,7440-36-0† | 1925.2 | 0.47886 mg/L | 0.001303 | 0.47886 mg/L | 0.001303 | 0.27% |

QC value within limits for Antimony,7440-36-0 Recovery = 95.77%

| | | | | | | |
|---|---|---|---|---|---|---|
| Arsenic,7440-38-2† | 1329.3 | 0.51494 mg/L | 0.006944 | 0.51494 mg/L | 0.006944 | 1.35% |

QC value within limits for Arsenic,7440-38-2 Recovery = 102.99%

| | | | | | | |
|---|---|---|---|---|---|---|
| Barium,7440-39-3† | 123255.6 | 0.49248 mg/L | 0.003448 | 0.49248 mg/L | 0.003448 | 0.70% |

QC value within limits for Barium,7440-39-3 Recovery = 98.50%

| | | | | | | |
|---|---|---|---|---|---|---|
| Beryllium,7440-41-7† | 4079113.7 | 0.48800 mg/L | 0.006424 | 0.48800 mg/L | 0.006424 | 1.32% |

QC value within limits for Beryllium,7440-41-7 Recovery = 97.60%

| | | | | | | |
|---|---|---|---|---|---|---|
| Boron,7440-42-8† | 215816.3 | 2.43118 mg/L | 0.032045 | 2.43118 mg/L | 0.032045 | 1.32% |

QC value within limits for Boron,7440-42-8 Recovery = 97.25%

| | | | | | | |
|---|---|---|---|---|---|---|
| Cadmium,7440-43-9† | 150246.5 | 0.49087 mg/L | 0.003714 | 0.49087 mg/L | 0.003714 | 0.76% |

QC value within limits for Cadmium,7440-43-9 Recovery = 98.17%

| | | | | | | |
|---|---|---|---|---|---|---|
| Calcium,7440-70-2† | 88062.1 | 5.06895 mg/L | 0.035933 | 5.06895 mg/L | 0.035933 | 0.71% |

QC value within limits for Calcium,7440-70-2 Recovery = 101.38%

| | | | | | | |
|---|---|---|---|---|---|---|
| Chromium,7440-47-3† | 97212.7 | 0.49243 mg/L | 0.004046 | 0.49243 mg/L | 0.004046 | 0.82% |

QC value within limits for Chromium,7440-47-3 Recovery = 98.49%

| | | | | | | |
|---|---|---|---|---|---|---|
| Cobalt,7440-48-4† | 41155.6 | 0.49348 mg/L | 0.003036 | 0.49348 mg/L | 0.003036 | 0.62% |

QC value within limits for Cobalt,7440-48-4 Recovery = 98.70%

| | | | | | | |
|---|---|---|---|---|---|---|
| Copper,7440-50-8† | 250531.0 | 0.48290 mg/L | 0.003691 | 0.48290 mg/L | 0.003691 | 0.76% |

QC value within limits for Copper,7440-50-8 Recovery = 96.58%

| | | | | | | |
|---|---|---|---|---|---|---|
| Iron,7439-89-6† | 93601.8 | 4.98337 mg/L | 0.044117 | 4.98337 mg/L | 0.044117 | 0.89% |

QC value within limits for Iron,7439-89-6 Recovery = 99.67%

| | | | | | | |
|---|---|---|---|---|---|---|
| Lead,7439-92-1† | 16263.4 | 0.49897 mg/L | 0.004779 | 0.49897 mg/L | 0.004779 | 0.96% |

QC value within limits for Lead,7439-92-1 Recovery = 99.79%

| | | | | | | |
|---|---|---|---|---|---|---|
| Lithium,7439-93-2† | 31708.7 | 0.50328 mg/L | 0.003579 | 0.50328 mg/L | 0.003579 | 0.71% |

QC value within limits for Lithium,7439-93-2 Recovery = 100.66%

| | | | | | | |
|---|---|---|---|---|---|---|
| Magnesium,7439-95-4† | 17864.3 | 4.96121 mg/L | 0.010435 | 4.96121 mg/L | 0.010435 | 0.21% |

QC value within limits for Magnesium,7439-95-4 Recovery = 99.22%

| | | | | | | |
|---|---|---|---|---|---|---|
| Manganese,7439-96-5† | 783481.9 | 0.49423 mg/L | 0.003357 | 0.49423 mg/L | 0.003357 | 0.68% |

QC value within limits for Manganese,7439-96-5 Recovery = 98.85%

| | | | | | | |
|---|---|---|---|---|---|---|
| Molybdenum,7439-98-7 | 14438.2 | 0.48946 mg/L | 0.004576 | 0.48946 mg/L | 0.004576 | 0.93% |

QC value within limits for Molybdenum,7439-98-7 Recovery = 97.89%

| | | | | | | |
|---|---|---|---|---|---|---|
| Nickel,7440-02-0† | 57218.9 | 0.49572 mg/L | 0.002655 | 0.49572 mg/L | 0.002655 | 0.54% |

QC value within limits for Nickel,7440-02-0 Recovery = 99.14%

| | | | | | | |
|---|---|---|---|---|---|---|
| Potassium,7440-09-7† | 36017.4 | 9.90973 mg/L | 0.110261 | 9.90973 mg/L | 0.110261 | 1.11% |

QC value within limits for Potassium,7440-09-7 Recovery = 99.10%

| | | | | | | |
|---|---|---|---|---|---|---|
| Selenium,7782-49-2† | 1759.8 | 0.49208 mg/L | 0.004299 | 0.49208 mg/L | 0.004299 | 0.87% |

QC value within limits for Selenium,7782-49-2 Recovery = 98.42%

| | | | | | | |
|---|---|---|---|---|---|---|
| Silicon,7440-21-3† | 18501.4 | 4.89822 mg/L | 0.054536 | 4.89822 mg/L | 0.054536 | 1.11% |

QC value within limits for Silicon,7440-21-3 Recovery = 97.96%

| | | | | | | |
|---|---|---|---|---|---|---|
| Silver,7440-22-4† | 283020.1 | 0.48500 mg/L | 0.004033 | 0.48500 mg/L | 0.004033 | 0.83% |

QC value within limits for Silver,7440-22-4 Recovery = 97.00%

| | | | | | | |
|---|---|---|---|---|---|---|
| Sodium,7440-23-5† | 170539.1 | 20.3777 mg/L | 0.22554 | 20.3777 mg/L | 0.22554 | 1.11% |

QC value within limits for Sodium,7440-23-5 Recovery = 101.89%

| | | | | | | |
|---|---|---|---|---|---|---|
| Strontium,7440-24-6† | 330287.1 | 0.49758 mg/L | 0.006611 | 0.49758 mg/L | 0.006611 | 1.33% |

QC value within limits for Strontium,7440-24-6 Recovery = 99.52%

| | | | | | | |
|---|---|---|---|---|---|---|
| Thallium,7440-28-0† | 2403.1 | 0.49442 mg/L | 0.005182 | 0.49442 mg/L | 0.005182 | 1.05% |

QC value within limits for Thallium,7440-28-0 Recovery = 98.88%

| | | | | | | |
|---|---|---|---|---|---|---|
| Tin,7440-31-5† | 6002.3 | 0.48835 mg/L | 0.002838 | 0.48835 mg/L | 0.002838 | 0.58% |

QC value within limits for Tin,7440-31-5 Recovery = 97.67%

| | | | | | | |
|---|---|---|---|---|---|---|
| Titanium,7440-32-6† | 596812.6 | 0.48605 mg/L | 0.004128 | 0.48605 mg/L | 0.004128 | 0.85% |

QC value within limits for Titanium,7440-32-6 Recovery = 97.21%

| | | | | | | |
|---|---|---|---|---|---|---|
| Vanadium,7440-62-2† | 187850.0 | 0.48521 mg/L | 0.003402 | 0.48521 mg/L | 0.003402 | 0.70% |

QC value within limits for Vanadium,7440-62-2 Recovery = 97.04%

| | | | | | | |
|---|---|---|---|---|---|---|
| Zinc,7440-66-6† | 84946.2 | 0.48632 mg/L | 0.003531 | 0.48632 mg/L | 0.003531 | 0.73% |

QC value within limits for Zinc,7440-66-6 Recovery = 97.26%

| | | | | | | |
|---|---|---|---|---|---|---|
| Zirconium,7440-67-7† | 357377.3 | 0.47560 mg/L | 0.009766 | 0.47560 mg/L | 0.009766 | 2.05% |

QC value within limits for Zirconium,7440-67-7 Recovery = 95.12%

All analyte(s) passed QC.

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**Sequence No.: 35**
**Sample ID: 1900**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 1**
**Date Collected: 11/5/2013 12:45:42 PM**
**Data Type: Reprocessed on 11/5/2013 3:56:50 PM**

**Initial Sample Vol:**
**Sample Prep Vol:**

---

**Mean Data: 1900**

**Mean Corrected** **Calib.** **Sample**

printer error AWG 11/5/13

213101712 1286

**Sequence No.:** 1
**Sample ID:** 1900
**Analyst:**
**Logged In Analyst (Original) :** met
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location:** 1
**Date Collected:** 11/5/2013 12:45:42 PM
**Data Type:** Reprocessed on 11/5/2013 4:04:39 PM

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data:** 1900

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 7835378.1 | 107.839 | % | 0.3654 | | | | 0.34% |
| Yttrium,7440-65-5A | 3872500.9 | 106.934 | % | 0.3413 | | | | 0.32% |
| Yttrium,7440-65-5R | 330201.8 | 109.613 | % | 1.1403 | | | | 1.04% |
| Ar 420.067 R | 5103704.1 | 101.250 | % | 0.8492 | | | | 0.84% |
| Ar 363.268 A | 161668.3 | 99.8612 | % | 0.59483 | | | | 0.60% |
| Aluminum,7429-90-5† | 85.3 | 0.02972 | mg/L | 0.034213 | 0.02972 | mg/L | 0.034213 | 115.11% |
| QC value within limits for Aluminum,7429-90-5 Recovery = Not calculated | | | | | | | | |
| Antimony,7440-36-0† | -3.4 | -0.00090 | mg/L | 0.003547 | -0.00090 | mg/L | 0.003547 | 395.71% |
| QC value within limits for Antimony,7440-36-0 Recovery = Not calculated | | | | | | | | |
| Arsenic,7440-38-2† | -1.6 | -0.00061 | mg/L | 0.000663 | -0.00061 | mg/L | 0.000663 | 108.35% |
| QC value within limits for Arsenic,7440-38-2 Recovery = Not calculated | | | | | | | | |
| Barium,7440-39-3† | 104.9 | 0.00042 | mg/L | 0.000128 | 0.00042 | mg/L | 0.000128 | 30.72% |
| QC value within limits for Barium,7440-39-3 Recovery = Not calculated | | | | | | | | |
| Beryllium,7440-41-7† | 793.5 | 0.00009 | mg/L | 0.000022 | 0.00009 | mg/L | 0.000022 | 22.89% |
| QC value within limits for Beryllium,7440-41-7 Recovery = Not calculated | | | | | | | | |
| Boron,7440-42-8† | 627.4 | 0.00703 | mg/L | 0.003921 | 0.00703 | mg/L | 0.003921 | 55.79% |
| QC value within limits for Boron,7440-42-8 Recovery = Not calculated | | | | | | | | |
| Cadmium,7440-43-9† | -9.5 | -0.00003 | mg/L | 0.000058 | -0.00003 | mg/L | 0.000058 | 185.11% |
| QC value within limits for Cadmium,7440-43-9 Recovery = Not calculated | | | | | | | | |
| Calcium,7440-70-2† | 1281.9 | 0.07383 | mg/L | 0.003160 | 0.07383 | mg/L | 0.003160 | 4.28% |
| QC value within limits for Calcium,7440-70-2 Recovery = Not calculated | | | | | | | | |
| Chromium,7440-47-3† | 271.4 | 0.00137 | mg/L | 0.000844 | 0.00137 | mg/L | 0.000844 | 61.75% |
| QC value within limits for Chromium,7440-47-3 Recovery = Not calculated | | | | | | | | |
| Cobalt,7440-48-4† | 36.7 | 0.00044 | mg/L | 0.000217 | 0.00044 | mg/L | 0.000217 | 49.23% |
| QC value within limits for Cobalt,7440-48-4 Recovery = Not calculated | | | | | | | | |
| Copper,7440-50-8† | -506.3 | -0.00098 | mg/L | 0.000458 | -0.00098 | mg/L | 0.000458 | 46.94% |
| QC value within limits for Copper,7440-50-8 Recovery = Not calculated | | | | | | | | |
| Iron,7439-89-6† | 140.9 | 0.00750 | mg/L | 0.003385 | 0.00750 | mg/L | 0.003385 | 45.13% |
| QC value within limits for Iron,7439-89-6 Recovery = Not calculated | | | | | | | | |
| Lead,7439-92-1† | -45.1 | -0.00138 | mg/L | 0.001051 | -0.00138 | mg/L | 0.001051 | 76.26% |
| QC value within limits for Lead,7439-92-1 Recovery = Not calculated | | | | | | | | |
| Lithium,7439-93-2† | 146.2 | 0.00232 | mg/L | 0.000957 | 0.00232 | mg/L | 0.000957 | 41.22% |
| QC value within limits for Lithium,7439-93-2 Recovery = Not calculated | | | | | | | | |
| Magnesium,7439-95-4† | -182.0 | -0.05055 | mg/L | 0.018978 | -0.05055 | mg/L | 0.018978 | 37.55% |
| QC value within limits for Magnesium,7439-95-4 Recovery = Not calculated | | | | | | | | |
| Manganese,7439-96-5† | 653.2 | 0.00041 | mg/L | 0.000039 | 0.00041 | mg/L | 0.000039 | 9.53% |
| QC value within limits for Manganese,7439-96-5 Recovery = Not calculated | | | | | | | | |
| Molybdenum,7439-98-7 | 112.8 | 0.00382 | mg/L | 0.000015 | 0.00382 | mg/L | 0.000015 | 0.40% |
| QC value within limits for Molybdenum,7439-98-7 Recovery = Not calculated | | | | | | | | |
| Nickel,7440-02-0† | 54.3 | 0.00047 | mg/L | 0.000321 | 0.00047 | mg/L | 0.000321 | 68.07% |
| QC value within limits for Nickel,7440-02-0 Recovery = Not calculated | | | | | | | | |
| Potassium,7440-09-7† | -45.2 | -0.01243 | mg/L | 0.016214 | -0.01243 | mg/L | 0.016214 | 130.41% |
| QC value within limits for Potassium,7440-09-7 Recovery = Not calculated | | | | | | | | |
| Selenium,7782-49-2† | 15.5 | 0.00433 | mg/L | 0.004165 | 0.00433 | mg/L | 0.004165 | 96.22% |
| QC value within limits for Selenium,7782-49-2 Recovery = Not calculated | | | | | | | | |
| Silicon,7440-21-3† | -83.1 | -0.02199 | mg/L | 0.001797 | -0.02199 | mg/L | 0.001797 | 8.17% |
| QC value within limits for Silicon,7440-21-3 Recovery = Not calculated | | | | | | | | |
| Silver,7440-22-4† | -1111.1 | -0.00190 | mg/L | 0.000444 | -0.00190 | mg/L | 0.000444 | 23.37% |
| QC value within limits for Silver,7440-22-4 Recovery = Not calculated | | | | | | | | |
| Sodium,7440-23-5† | -44.3 | -0.00529 | mg/L | 0.002369 | -0.00529 | mg/L | 0.002369 | 44.78% |
| QC value within limits for Sodium,7440-23-5 Recovery = Not calculated | | | | | | | | |
| Strontium,7440-24-6† | -427.5 | -0.00065 | mg/L | 0.000246 | -0.00065 | mg/L | 0.000246 | 38.09% |
| QC value within limits for Strontium,7440-24-6 Recovery = Not calculated | | | | | | | | |
| Thallium,7440-28-0† | 30.3 | 0.00613 | mg/L | 0.001182 | 0.00613 | mg/L | 0.001182 | 19.27% |
| QC value within limits for Thallium,7440-28-0 Recovery = Not calculated | | | | | | | | |
| Tin,7440-31-5† | -7.9 | -0.00064 | mg/L | 0.000490 | -0.00064 | mg/L | 0.000490 | 76.78% |
| QC value within limits for Tin,7440-31-5 Recovery = Not calculated | | | | | | | | |
| Titanium,7440-32-6† | 132.9 | 0.00011 | mg/L | 0.000252 | 0.00011 | mg/L | 0.000252 | 232.31% |
| QC value within limits for Titanium,7440-32-6 Recovery = Not calculated | | | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| Vanadium,7440-62-2† | -488.5 | -0.00126 mg/L | 0.000131 | -0.00126 mg/L | 0.000131 | 10.39% |
| QC value within limits for Vanadium,7440-62-2 Recovery = Not calculated | | | | | | |
| Zinc,7440-66-6† | 379.9 | 0.00219 mg/L | 0.000096 | 0.00219 mg/L | 0.000096 | 4.39% |
| QC value within limits for Zinc,7440-66-6 Recovery = Not calculated | | | | | | |
| Zirconium,7440-67-7† | -263.5 | -0.00035 mg/L | 0.000289 | -0.00035 mg/L | 0.000289 | 82.51% |
| QC value within limits for Zirconium,7440-67-7 Recovery = Not calculated | | | | | | |

All analyte(s) passed QC.

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**Sequence No.: 2**
**Sample ID: 1251874**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution: 5X**

**Autosampler Location: 43**
**Date Collected: 11/5/2013 12:52:20 PM**
**Data Type: Reprocessed on 11/5/2013 4:04:41 PM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 1251874**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 7058895.1 | 97.1526 | % | 2.69575 | | | | 2.77% |
| Yttrium,7440-65-5A | 3324377.3 | 91.7986 | % | 2.40828 | | | | 2.62% |
| Yttrium,7440-65-5R | 314089.6 | 104.265 | % | 0.3883 | | | | 0.37% |
| Ar 420.067 R | 5077133.0 | 100.723 | % | 0.7169 | | | | 0.71% |
| Ar 363.268 A | 166357.0 | 102.757 | % | 0.3710 | | | | 0.36% |
| Aluminum,7429-90-5† | 3286.0 | 1.14227 | mg/L | 0.017414 | 5.71134 | mg/L | 0.087072 | 1.52% |
| Antimony,7440-36-0† | 478.3 | 0.11927 | mg/L | 0.000513 | 0.59634 | mg/L | 0.002563 | 0.43% |
| Arsenic,7440-38-2† | 263.4 | 0.10351 | mg/L | 0.002459 | 0.51757 | mg/L | 0.012294 | 2.38% |
| Barium,7440-39-3† | 57561.3 | 0.22974 | mg/L | 0.001715 | 1.14871 | mg/L | 0.008575 | 0.75% |
| Beryllium,7440-41-7† | 946314.8 | 0.11321 | mg/L | 0.000536 | 0.56606 | mg/L | 0.002678 | 0.47% |
| Boron,7440-42-8† | 53867.1 | 0.61033 | mg/L | 0.006177 | 3.05166 | mg/L | 0.030887 | 1.01% |
| Cadmium,7440-43-9† | 38061.4 | 0.12434 | mg/L | 0.001757 | 0.62169 | mg/L | 0.008783 | 1.41% |
| Calcium,7440-70-2† | 254043.5 | 14.6295 | mg/L | 0.25458 | 73.1477 | mg/L | 1.27291 | 1.74% |
| Chromium,7440-47-3† | 21560.5 | 0.10929 | mg/L | 0.001070 | 0.54647 | mg/L | 0.005351 | 0.98% |
| Cobalt,7440-48-4† | 9739.8 | 0.11678 | mg/L | 0.001081 | 0.58389 | mg/L | 0.005406 | 0.93% |
| Copper,7440-50-8† | 77423.5 | 0.14915 | mg/L | 0.000575 | 0.74576 | mg/L | 0.002877 | 0.39% |
| Iron,7439-89-6† | 36067.1 | 1.92038 | mg/L | 0.021231 | 9.60190 | mg/L | 0.106156 | 1.11% |
| Lead,7439-92-1† | 43967.7 | 1.34845 | mg/L | 0.022119 | 6.74223 | mg/L | 0.110596 | 1.64% |
| Lithium,7439-93-2† | 6696.2 | 0.10627 | mg/L | 0.002607 | 0.53137 | mg/L | 0.013033 | 2.45% |
| Magnesium,7439-95-4† | 6009.7 | 1.66860 | mg/L | 0.036740 | 8.34300 | mg/L | 0.183702 | 2.20% |
| Manganese,7439-96-5† | 383865.8 | 0.24213 | mg/L | 0.001836 | 1.21067 | mg/L | 0.009180 | 0.76% |
| Molybdenum,7439-98-7 | 3379.6 | 0.11464 | mg/L | 0.001337 | 0.57321 | mg/L | 0.006684 | 1.17% |
| Nickel,7440-02-0† | 14818.6 | 0.12838 | mg/L | 0.000779 | 0.64191 | mg/L | 0.003894 | 0.61% |
| Potassium,7440-09-7† | 11654.3 | 3.20691 | mg/L | 0.075181 | 16.0345 | mg/L | 0.37590 | 2.34% |
| Selenium,7782-49-2† | 453.8 | 0.12712 | mg/L | 0.006184 | 0.63558 | mg/L | 0.030921 | 4.87% |
| Silicon,7440-21-3† | 6983.7 | 1.84893 | mg/L | 0.021538 | 9.24466 | mg/L | 0.107691 | 1.16% |
| Silver,7440-22-4† | 67776.5 | 0.11619 | mg/L | 0.000628 | 0.58093 | mg/L | 0.003138 | 0.54% |
| Sodium,7440-23-5† | 2543520.6 | 303.900 | mg/L | 6.6465 | 1519.50 | mg/L | 33.232 | 2.19% |
| Strontium,7440-24-6† | 115192.2 | 0.17318 | mg/L | 0.002865 | 0.86590 | mg/L | 0.014327 | 1.65% |
| Thallium,7440-28-0† | 529.6 | 0.10924 | mg/L | 0.001403 | 0.54619 | mg/L | 0.007017 | 1.28% |
| Tin,7440-31-5† | 1352.8 | 0.11055 | mg/L | 0.000999 | 0.55277 | mg/L | 0.004995 | 0.90% |
| Titanium,7440-32-6† | 137896.1 | 0.11230 | mg/L | 0.000815 | 0.56151 | mg/L | 0.004077 | 0.73% |
| Vanadium,7440-62-2† | 46014.1 | 0.11874 | mg/L | 0.001067 | 0.59372 | mg/L | 0.005334 | 0.90% |
| Zinc,7440-66-6† | 680050.8 | 3.92434 | mg/L | 0.044978 | 19.6217 | mg/L | 0.22489 | 1.15% |
| Zirconium,7440-67-7† | 6271.0 | 0.00831 | mg/L | 0.001378 | 0.04153 | mg/L | 0.006890 | 16.59% |

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**Sequence No.: 3**
**Sample ID: 1251875**
**Analyst:**
**Logged In Analyst (Original) : met**
**Initial Sample Wt:**
**Dilution: 5X**

**Autosampler Location: 44**
**Date Collected: 11/5/2013 12:58:57 PM**
**Data Type: Reprocessed on 11/5/2013 4:04:42 PM**

**Initial Sample Vol:**
**Sample Prep Vol:**

**Mean Data: 1251875**

| Analyte | Mean Corrected Intensity | Conc. | Calib. Units | Std.Dev. | Sample Conc. | Sample Units | Std.Dev. | RSD |
|---|---|---|---|---|---|---|---|---|
| Scandium-IS | 7240903.7 | 99.6576 | % | 1.32036 | | | | 1.32% |
| Yttrium,7440-65-5A | 3408493.4 | 94.1213 | % | 1.16132 | | | | 1.23% |
| Yttrium,7440-65-5R | 302579.4 | 100.444 | % | 5.1784 | | | | 5.16% |
| Ar 420.067 R | 5071583.0 | 100.613 | % | 0.6619 | | | | 0.66% |

AWA 11/12/13

213101712 1288

GCAL

**Mercury**

BY METHODS EPA 245.2/7470A/7471B

Date: 10/18/13
Analyst: CMB

InstrumentID: FIMS 2
HBN: 518047
Batch: 5872

| | | | |
|---|---|---|---|
| Hg CCV Standard | 225-10-3 | Exp. Date | 10/21/13 |
| Hg ICV Standard | 225-10-4 | Exp. Date | 10/21/13 |
| Hg Acid Rinse (10% HCl) | 225-13-9 | Exp. Date | 11/17/13 |
| Carrier Acid (3% HCl) | 225-13-10 | Exp. Date | 11/17/13 |
| SnCl2 | 225-14-6 | Exp. Date | 10/19/13 |
| NaCl2/(NH2OH)2 | 225-13-12 | Exp. Date | 11/17/13 |
| Calibration ID | 10/18/13 (Date Std. was Prepared) | | |

R Value 0.999923

R ≥ 0.9995

**QC Limits:**

| | GCAL Limits | DOD Limits |
|---|---|---|
| ICV (7470A/7471B/245.2) | 90-110% | 90-110% |
| CCV (7470A/7471B) | 90-110% | 90-110% |
| CCV (1st – 245.2) | 95-105% | N/A |
| Continuing CCV (245.2) | 90-110% | N/A |
| LCS/LCSD (7470A/7471B) | 80-120% | 80/120% |
| LCS/LCSD (245.2) | 85-115% | N/A |
| MS/MSD (7470A/7471B) | 80-120% | 80/120% |
| MS/MSD (245.2) | 70-130% | N/A |

Reviewer/Date: AWG 10/21/13

**Mercury Analysis** INSTRUMENT ID = **FIMS1** ANALYST / DATE / TIME: CMB, 10/18/2013,

SnCl2 ID _____
NaCl2/ (NH2OH)2 ID _____
Calibration ID _____

| AS# | SAMPLE ID | | | Dilution | % Rec. |
|---|---|---|---|---|---|
| 1 | CALIBRATION BLANK | | | | |
| 2 | STD 1 (0.2 ppb) | | | | |
| 3 | STD 2 (0.5 ppb) | | | | |
| 4 | STD 3 (2.0 ppb) | Calibration Correlation | | | |
| 5 | STD 4 (5.0 ppb) | r = | | | |
| 6 | STD 5 (10.0 ppb) | | | | % Rec. |
| 9 | ICV-1600 | | | | 102 |
| 1 | ICB-1700 | | | | |
| 5 | CCV-1800 | | | | 98 |
| 1 | CCB-1900 | | | | |
| 17 | 1244701 | M MB for HBN 517993 | 7471A_S | | |
| 18 | 1244702 | M LCS for HBN 517993 | 7471A_S | | 107 |
| 19 | | M 21310172601 | 7471A_S | | |
| 20 | 1244703 | M 21310172601 MS | 7471A_S | | 110 |
| 21 | 1244704 | M 21310172601 MSD | 7471A_S | | 104 |
| 22 | 1245010 | 21310172601 SD | 7471A_S | 5x | |
| 23 | | M 21310166002 | 7471A_S | | |
| 24 | | M 21310172801 | 7471A_S | | |
| 25 | | M 21310173401 | 7471A_S | | |
| 26 | | ~~M 21310173601~~ | ~~7471A_S~~ | DNTA NOVSD | |
| 5 | CCV-1800 | | | EMB 10/18/13 | 99 |
| 1 | CCB-1900 | | | | |
| 27 | | M 21310174601 | 7471A_S | | |
| 28 | | M 21310174602 | 7471A_S | | |
| 29 | | M 21310174603 | 7471A_S | | |
| 30 | | M 21310174604 | 7471A_S | | |
| 31 | | M 21310174605 | 7471A_S | | |
| 32 | | K 21310171201 | 7471A_S | | |
| 33 | | 21310171203 | 7471A_S | | |
| 34 | | | | | |
| 35 | | | | | |
| 36 | | | | | |
| 5 | CCV-1800 | | | | 100 |
| 1 | CCB-1900 | | | | |
| 37 | | | | | |
| 38 | | | | | |
| 39 | | | | | |
| 40 | | | | | |
| 41 | | | | | |
| 42 | | | | | |
| 43 | | | | | |
| 44 | | | | | |
| 45 | | | | | |
| 46 | | | | | |
| 5 | CCV-1800 | | | | |
| 1 | CCB-1900 | | | | |

| AS# | SAMPLE ID | Dilution % Rec. |
|---|---|---|
| 47 | | |
| 48 | | |
| 49 | | |
| 50 | | |
| 51 | | |
| 52 | | |
| 53 | | |
| 54 | | |
| 55 | | |
| 56 | | |
| 5 | CCV-1800 | |
| 1 | CCB-1900 | |
| 57 | | |
| 58 | | |
| 59 | | |
| 60 | | |
| 61 | | |
| 62 | | |
| 63 | | |
| 64 | | |
| 65 | | |
| 66 | | |
| 5 | CCV-1800 | |
| 1 | CCB-1900 | |
| 67 | | |
| 68 | | |
| 69 | | |
| 70 | | |
| 71 | | |
| 72 | | |
| 73 | | |
| 74 | | |
| 75 | | |
| 76 | | |
| 5 | CCV-1800 | |
| 1 | CCB-1900 | |
| 77 | | |
| 78 | | |
| 79 | | |
| 80 | | |
| 81 | | |
| 82 | | |
| 83 | | |
| 84 | | |
| 85 | | |
| 86 | | |
| 5 | CCV-1800 | |
| 1 | CCB-1900 | |

QC CONTROL LIMITS: ICV 90-110% CCV 80-120%

COMMENTS: 5872 , 518047

ANALYST QC REV: _____
SECONDARY REV: _____

QC: all acceptable qc noted with a checkmark; failures as indicated.

213101712 1290

Reprocessing Begun
Logged In Analyst: met Technique: AA FIMS-MHS

Results Data Set (original): 2131018 S
Results Library (original): C:\data-AA\met\Results\Results.mdb
Results Data Set (reprocessed): 5872
Results Library (reprocessed): C:\data-AA\met\Results\Results.mdb

Sequence No.: 1
Sample ID: 1300
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 1
Date Collected: 10/18/2013 12:16:27 PM
Data Type: Reprocessed on 10/18/2013 1:22:50 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1300

| Repl # | SampleConc mg/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|
| 1 | | [0.00] | 0.007 | 0.007 | 0.001 | 12:17:05 | Yes |
| 2 | | [0.00] | 0.007 | 0.007 | 0.001 | 12:17:38 | Yes |
| Mean: | | [0.00] | 0.007 | | | | |
| SD: | | 0.00 | 0.0001 | | | | |
| %RSD: | | 0.00 | 0.83 | | | | |

Auto-zero performed.

Sequence No.: 2
Sample ID: 1301
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 2
Date Collected: 10/18/2013 12:17:56 PM
Data Type: Reprocessed on 10/18/2013 1:22:50 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1301

| Repl # | SampleConc mg/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|
| 1 | | [0.2] | 0.011 | 0.018 | 0.002 | 12:18:49 | Yes |
| 2 | | [0.2] | 0.003 | 0.010 | 0.001 | 12:19:21 | Yes |
| Mean: | | [0.2] | 0.007 | | | | |
| SD: | | 0.0 | 0.0054 | | | | |
| %RSD: | | 0.0 | 78.70 | | | | |

Standard number 1 applied. [0.2]
Correlation Coef.: 0.999847 Slope: 0.03742 Intercept: -0.00262

Sequence No.: 3
Sample ID: 1302
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 3
Date Collected: 10/18/2013 12:19:40 PM
Data Type: Reprocessed on 10/18/2013 1:22:51 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1302

| Repl # | SampleConc mg/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|
| 1 | | [0.5] | 0.011 | 0.018 | 0.002 | 12:20:34 | Yes |
| 2 | | [0.5] | 0.010 | 0.018 | 0.002 | 12:21:06 | Yes |
| Mean: | | [0.5] | 0.011 | | | | |
| SD: | | 0.0 | 0.0004 | | | | |
| %RSD: | | 0.0 | 3.84 | | | | |

Standard number 2 applied. [0.5]
Correlation Coef.: 0.999745 Slope: 0.03754 Intercept: -0.00359

Sequence No.: 4
Sample ID: 1303
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 4
Date Collected: 10/18/2013 12:21:26 PM
Data Type: Reprocessed on 10/18/2013 1:22:51 PM
Initial Sample Vol:
Sample Prep Vol:

**Replicate Data: 1303**

| Repl # | SampleConc mg/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|
| 1 | | [2.0] | 0.052 | 0.059 | 0.008 | 12:22:19 | Yes |
| 2 | | [2.0] | 0.049 | 0.056 | 0.007 | 12:22:53 | Yes |
| Mean: | | [2.0] | 0.051 | | | | |
| SD: | | 0.0 | 0.0019 | | | | |
| %RSD: | | 0.0 | 3.72 | | | | |

Standard number 3 applied. [2.0]
Correlation Coef.: 0.998091 Slope: 0.03779 Intercept: -0.00767

**Sequence No.: 5** **Autosampler Location: 5**
**Sample ID: 1304** **Date Collected: 10/18/2013 12:23:13 PM**
**Analyst:** **Data Type: Reprocessed on 10/18/2013 1:22:52 PM**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

**Replicate Data: 1304**

| Repl # | SampleConc mg/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|
| 1 | | [5.0] | 0.126 | 0.134 | 0.017 | 12:24:08 | Yes |
| 2 | | [5.0] | 0.120 | 0.127 | 0.017 | 12:24:40 | Yes |
| Mean: | | [5.0] | 0.123 | | | | |
| SD: | | 0.0 | 0.0045 | | | | |
| %RSD: | | 0.0 | 3.62 | | | | |

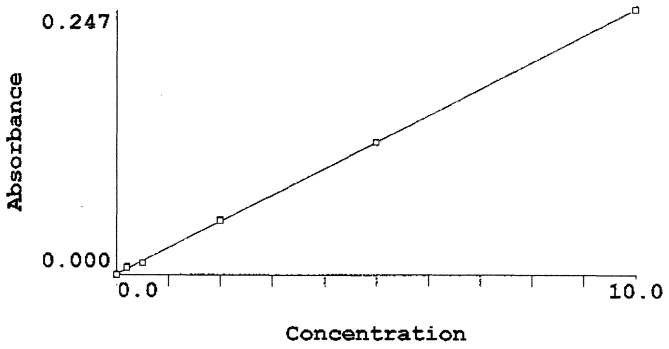
Standard number 4 applied. [5.0]
Correlation Coef.: 0.985275 Slope: 0.03625 Intercept: -0.01275

**Sequence No.: 6** **Autosampler Location: 6**
**Sample ID: 1305** **Date Collected: 10/18/2013 12:25:01 PM**
**Analyst:** **Data Type: Reprocessed on 10/18/2013 1:22:52 PM**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

**Replicate Data: 1305**

| Repl # | SampleConc mg/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|
| 1 | | [10.0] | 0.250 | 0.257 | 0.033 | 12:25:56 | Yes |
| 2 | | [10.0] | 0.243 | 0.250 | 0.033 | 12:26:29 | Yes |
| Mean: | | [10.0] | 0.247 | | | | |
| SD: | | 0.0 | 0.0050 | | | | |
| %RSD: | | 0.0 | 2.04 | | | | |

Standard number 5 applied. [10.0]
Correlation Coef.: 0.999923 Slope: 0.02462 Intercept: 0.00037




**Calibration data for Hg 253.7** **Equation: Linear, Calculated Intercept**

| ID | Mean Signal (Abs) | Entered Conc. ug/L | Calculated Conc. ug/L | Standard Deviation | %RSD |
|---|---|---|---|---|---|
| 1300 | 0.0000 | 0 | -0.014947 | 0.00 | 0.8 |

| | | | | | |
|---|---|---|---|---|---|
| 1301 | 0.0069 | 0.2 | 0.263416 | 0.01 | 78.7 |
| 1302 | 0.0108 | 0.5 | 0.422400 | 0.00 | 3.8 |
| 1303 | 0.0505 | 2.0 | 2.038319 | 0.00 | 3.7 |
| 1304 | 0.1233 | 5.0 | 4.991729 | 0.00 | 3.6 |
| 1305 | 0.2465 | 10.0 | 9.999083 | 0.01 | 2.0 |

Correlation Coef.: 0.999923 Slope: 0.02462 Intercept: 0.00037

---

**Sequence No.: 7** **Autosampler Location: 9**
**Sample ID: 1600** **Date Collected: 10/18/2013 12:31:05 PM**
**Analyst:** **Data Type: Reprocessed on 10/18/2013 1:22:53 PM**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

---

**Replicate Data: 1600**

| Repl # | SampleConc mg/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|
| 1 | 0.005123 | 5.1227 | 0.126 | 0.134 | 0.017 | 12:31:57 | Yes |
| 2 | 0.005032 | 5.0318 | 0.124 | 0.132 | 0.017 | 12:32:30 | Yes |
| Mean: | 0.005077 | 5.0773 | 0.125 | | | | |
| SD: | 0.000064 | 0.064315 | 0.0016 | | | | |
| %RSD: | 1.2667 | 1.2667 | 1.26 | | | | |

QC value within limits for Hg 253.7 Recovery = 101.55%
All analyte(s) passed QC.

---

**Sequence No.: 8** **Autosampler Location: 1**
**Sample ID: 1700** **Date Collected: 10/18/2013 12:32:49 PM**
**Analyst:** **Data Type: Reprocessed on 10/18/2013 1:22:53 PM**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

---

**Replicate Data: 1700**

| Repl # | SampleConc mg/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|
| 1 | -0.000053 | -0.053282 | -0.001 | 0.006 | 0.001 | 12:33:40 | Yes |
| 2 | -0.000096 | -0.096166 | -0.002 | 0.005 | 0.001 | 12:34:13 | Yes |
| Mean: | -0.000075 | -0.074724 | -0.001 | | | | |
| SD: | 0.000030 | 0.030323 | 0.0007 | | | | |
| %RSD: | 40.580 | 40.580 | 50.73 | | | | |

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

---

**Sequence No.: 9** **Autosampler Location: 5**
**Sample ID: 1800** **Date Collected: 10/18/2013 12:34:31 PM**
**Analyst:** **Data Type: Reprocessed on 10/18/2013 1:22:53 PM**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

---

**Replicate Data: 1800**

| Repl # | SampleConc mg/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|
| 1 | 0.004949 | 4.9487 | 0.122 | 0.129 | 0.017 | 12:35:25 | Yes |
| 2 | 0.004820 | 4.8198 | 0.119 | 0.126 | 0.017 | 12:35:58 | Yes |
| Mean: | 0.004884 | 4.8842 | 0.121 | | | | |
| SD: | 0.000091 | 0.091130 | 0.0022 | | | | |
| %RSD: | 1.8658 | 1.8658 | 1.86 | | | | |

QC value within limits for Hg 253.7 Recovery = 97.68%
All analyte(s) passed QC.

---

**Sequence No.: 10** **Autosampler Location: 1**
**Sample ID: 1900** **Date Collected: 10/18/2013 12:36:18 PM**
**Analyst:** **Data Type: Reprocessed on 10/18/2013 1:22:54 PM**
**Initial Sample Wt:** **Initial Sample Vol:**
**Dilution:** **Sample Prep Vol:**

---

Replicate Data: 1900

| Repl # | SampleConc mg/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|
| 1 | -0.000080 | -0.080313 | -0.002 | 0.006 | 0.001 | 12:37:11 | Yes |
| 2 | -0.000079 | -0.078746 | -0.002 | 0.006 | 0.001 | 12:37:44 | Yes |
| Mean: | -0.000080 | -0.079529 | -0.002 | | | | |
| SD: | 0.000001 | 0.001108 | 0.0000 | | | | |
| %RSD: | 1.3931 | 1.3931 | 1.72 | | | | |

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

---

Sequence No.: 11
Sample ID: 1244701
Analyst:
Initial Sample Wt: 0.6 g
Dilution: 1X

Autosampler Location: 17
Date Collected: 10/18/2013 12:38:02 PM
Data Type: Reprocessed on 10/18/2013 1:22:54 PM
Initial Sample Vol:
Sample Prep Vol: 30 mL

---

Replicate Data: 1244701

| Repl # | SampleConc mg/kg | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|
| 1 | 0.005228 | 0.10457 | 0.003 | 0.010 | 0.001 | 12:38:55 | Yes |
| 2 | 0.002713 | 0.054261 | 0.002 | 0.009 | 0.001 | 12:39:28 | Yes |
| Mean: | 0.003971 | 0.079413 | 0.002 | | | | |
| SD: | 0.001779 | 0.035571 | 0.0009 | | | | |
| %RSD: | 44.792 | 44.792 | 37.70 | | | | |

---

Sequence No.: 12
Sample ID: 1244702
Analyst:
Initial Sample Wt: 0.6 g
Dilution: 1X

Autosampler Location: 18
Date Collected: 10/18/2013 12:39:46 PM
Data Type: Reprocessed on 10/18/2013 1:22:55 PM
Initial Sample Vol:
Sample Prep Vol: 30 mL

---

Replicate Data: 1244702

| Repl # | SampleConc mg/kg | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|
| 1 | 0.27446 | 5.4892 | 0.136 | 0.143 | 0.018 | 12:40:38 | Yes |
| 2 | 0.26036 | 5.2072 | 0.129 | 0.136 | 0.018 | 12:41:11 | Yes |
| Mean: | 0.26741 | 5.3482 | 0.132 | | | | |
| SD: | 0.009969 | 0.19939 | 0.0049 | | | | |
| %RSD: | 3.7281 | 3.7281 | 3.72 | | | | |

---

Sequence No.: 13
Sample ID: 21310172601
Analyst:
Initial Sample Wt: 0.6 g
Dilution: 1X

Autosampler Location: 19
Date Collected: 10/18/2013 12:41:29 PM
Data Type: Reprocessed on 10/18/2013 1:22:55 PM
Initial Sample Vol:
Sample Prep Vol: 30 mL

---

Replicate Data: 21310172601

| Repl # | SampleConc mg/kg | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|
| 1 | 0.013038 | 0.26076 | 0.007 | 0.014 | 0.002 | 12:42:21 | Yes |
| 2 | 0.012280 | 0.24561 | 0.006 | 0.014 | 0.002 | 12:42:55 | Yes |
| Mean: | 0.012659 | 0.25318 | 0.007 | | | | |
| SD: | 0.000536 | 0.010717 | 0.0003 | | | | |
| %RSD: | 4.2327 | 4.2327 | 4.00 | | | | |

---

Sequence No.: 14
Sample ID: 1244703
Analyst:
Initial Sample Wt: 0.6 g
Dilution: 1X

Autosampler Location: 20
Date Collected: 10/18/2013 12:43:13 PM
Data Type: Reprocessed on 10/18/2013 1:22:55 PM
Initial Sample Vol:
Sample Prep Vol: 30 mL

---

Replicate Data: 1244703

| Repl | SampleConc | StndConc | BlnkCorr | Peak | Peak | Time | Peak |
|---|---|---|---|---|---|---|---|

| # | mg/kg | ug/L | Signal | Area | Height | | Stored |
|---|---|---|---|---|---|---|---|
| 1 | 0.29183 | 5.8366 | 0.144 | 0.151 | 0.019 | 12:44:06 | Yes |
| 2 | 0.28312 | 5.6624 | 0.140 | 0.147 | 0.019 | 12:44:38 | Yes |
| Mean: | 0.28748 | 5.7495 | 0.142 | | | | |
| SD: | 0.006156 | 0.12312 | 0.0030 | | | | |
| %RSD: | 2.1414 | 2.1414 | 2.14 | | | | |

**Sequence No.: 15**
**Sample ID: 1244704**
**Analyst:**
**Initial Sample Wt: 0.6 g**
**Dilution: 1X**

**Autosampler Location: 21**
**Date Collected: 10/18/2013 12:44:57 PM**
**Data Type: Reprocessed on 10/18/2013 1:22:56 PM**
**Initial Sample Vol:**
**Sample Prep Vol: 30 mL**

**Replicate Data: 1244704**

| Repl # | SampleConc mg/kg | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|
| 1 | 0.27662 | 5.5323 | 0.137 | 0.144 | 0.018 | 12:45:49 | Yes |
| 2 | 0.26756 | 5.3512 | 0.132 | 0.139 | 0.018 | 12:46:22 | Yes |
| Mean: | 0.27209 | 5.4418 | 0.134 | | | | |
| SD: | 0.006404 | 0.12808 | 0.0032 | | | | |
| %RSD: | 2.3537 | 2.3537 | 2.35 | | | | |

**Sequence No.: 16**
**Sample ID: 1245010**
**Analyst:**
**Initial Sample Wt: 0.6 g**
**Dilution: 5X**

**Autosampler Location: 22**
**Date Collected: 10/18/2013 12:46:42 PM**
**Data Type: Reprocessed on 10/18/2013 1:22:56 PM**
**Initial Sample Vol:**
**Sample Prep Vol: 30 mL**

**Replicate Data: 1245010**

| Repl # | SampleConc mg/kg | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|
| 1 | 0.002363 | 0.009454 | 0.001 | 0.008 | 0.001 | 12:47:34 | Yes |
| 2 | 0.002307 | 0.009228 | 0.001 | 0.008 | 0.001 | 12:48:07 | Yes |
| Mean: | 0.002335 | 0.009341 | 0.001 | | | | |
| SD: | 0.000040 | 0.000160 | 0.0000 | | | | |
| %RSD: | 1.7105 | 1.7105 | 0.66 | | | | |

**Sequence No.: 17**
**Sample ID: 21310166002**
**Analyst:**
**Initial Sample Wt: 0.5 g**
**Dilution: 1X**

**Autosampler Location: 23**
**Date Collected: 10/18/2013 12:48:28 PM**
**Data Type: Reprocessed on 10/18/2013 1:22:56 PM**
**Initial Sample Vol:**
**Sample Prep Vol: 30 mL**

**Replicate Data: 21310166002**

| Repl # | SampleConc mg/kg | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|
| 1 | 0.020333 | 0.33889 | 0.009 | 0.016 | 0.002 | 12:49:21 | Yes |
| 2 | 0.017372 | 0.28953 | 0.007 | 0.015 | 0.002 | 12:49:54 | Yes |
| Mean: | 0.018853 | 0.31421 | 0.008 | | | | |
| SD: | 0.002094 | 0.034898 | 0.0009 | | | | |
| %RSD: | 11.107 | 11.107 | 10.60 | | | | |

**Sequence No.: 18**
**Sample ID: 21310172801**
**Analyst:**
**Initial Sample Wt: 0.5 g**
**Dilution: 1X**

**Autosampler Location: 24**
**Date Collected: 10/18/2013 12:50:14 PM**
**Data Type: Reprocessed on 10/18/2013 1:22:56 PM**
**Initial Sample Vol:**
**Sample Prep Vol: 30 mL**

**Replicate Data: 21310172801**

| Repl # | SampleConc mg/kg | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|
| 1 | 0.037846 | 0.63076 | 0.016 | 0.023 | 0.003 | 12:51:08 | Yes |
| 2 | 0.034800 | 0.57999 | 0.015 | 0.022 | 0.003 | 12:51:41 | Yes |
| Mean: | 0.036323 | 0.60538 | 0.015 | | | | |

| | | | |
|---|---|---|---|
| SD: | 0.002154 | 0.035900 | 0.0009 |
| %RSD: | 5.9301 | 5.9301 | 5.79 |

**Sequence No.: 19**
**Sample ID: 21310173401**
**Analyst:**
**Initial Sample Wt: 0.54 g**
**Dilution: 1X**

**Autosampler Location: 25**
**Date Collected: 10/18/2013 12:52:00 PM**
**Data Type: Reprocessed on 10/18/2013 1:22:57 PM**
**Initial Sample Vol:**
**Sample Prep Vol: 30 mL**

**Replicate Data: 21310173401**

| Repl # | SampleConc mg/kg | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|
| 1 | 0.023829 | 0.42893 | 0.011 | 0.018 | 0.002 | 12:52:56 | Yes |
| 2 | 0.021305 | 0.38350 | 0.010 | 0.017 | 0.002 | 12:53:29 | Yes |
| Mean: | 0.022567 | 0.40621 | 0.010 | | | | |
| SD: | 0.001785 | 0.032127 | 0.0008 | | | | |
| %RSD: | 7.9090 | 7.9090 | 7.63 | | | | |

**Sequence No.: 20**
**Sample ID: 21310173601**
**Analyst:**
**Initial Sample Wt: 0.5 g**
**Dilution: 1X**

**Autosampler Location: 26**
**Date Collected: 10/18/2013 12:53:49 PM**
**Data Type: Reprocessed on 10/18/2013 1:22:57 PM**
**Initial Sample Vol:**
**Sample Prep Vol: 30 mL**

**Replicate Data: 21310173601**

| Repl # | SampleConc mg/kg | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|
| 1 | -0.014436 | -0.24060 | -0.006 | 0.002 | 0.000 | 12:54:43 | Yes |
| 2 | -0.014378 | -0.23964 | -0.006 | 0.002 | 0.000 | 12:55:16 | Yes |
| Mean: | -0.014407 | -0.24012 | -0.006 | | | | |
| SD: | 0.000041 | 0.000679 | 0.0000 | | | | |
| %RSD: | 0.28297 | 0.28297 | 0.30 | | | | |

**Sequence No.: 21**
**Sample ID: 1800**
**Analyst:**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 5**
**Date Collected: 10/18/2013 12:55:36 PM**
**Data Type: Reprocessed on 10/18/2013 1:22:58 PM**
**Initial Sample Vol:**
**Sample Prep Vol:**

**Replicate Data: 1800**

| Repl # | SampleConc mg/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|
| 1 | 0.005047 | 5.0471 | 0.125 | 0.132 | 0.017 | 12:56:30 | Yes |
| 2 | 0.004857 | 4.8569 | 0.120 | 0.127 | 0.017 | 12:57:03 | Yes |
| Mean: | 0.004952 | 4.9520 | 0.122 | | | | |
| SD: | 0.000134 | 0.13443 | 0.0033 | | | | |
| %RSD: | 2.7147 | 2.7147 | 2.71 | | | | |

QC value within limits for Hg 253.7 Recovery = 99.04%
All analyte(s) passed QC.

**Sequence No.: 22**
**Sample ID: 1900**
**Analyst:**
**Initial Sample Wt:**
**Dilution:**

**Autosampler Location: 1**
**Date Collected: 10/18/2013 12:57:23 PM**
**Data Type: Reprocessed on 10/18/2013 1:22:58 PM**
**Initial Sample Vol:**
**Sample Prep Vol:**

**Replicate Data: 1900**

| Repl # | SampleConc mg/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|
| 1 | -0.000011 | -0.011430 | 0.000 | 0.007 | 0.001 | 12:58:15 | Yes |
| 2 | -0.000038 | -0.037768 | -0.001 | 0.007 | 0.001 | 12:58:48 | Yes |
| Mean: | -0.000025 | -0.024599 | -0.000 | | | | |
| SD: | 0.000019 | 0.018623 | 0.0005 | | | | |
| %RSD: | 75.708 | 75.708 | 192.95 | | | | |

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

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**Sequence No.: 23**
**Sample ID: 21310174601**
**Analyst:**
**Initial Sample Wt: 0.56 g**
**Dilution: 1X**

**Autosampler Location: 27**
**Date Collected: 10/18/2013 12:59:06 PM**
**Data Type: Reprocessed on 10/18/2013 1:22:59 PM**
**Initial Sample Vol:**
**Sample Prep Vol: 30 mL**

**Replicate Data: 21310174601**

| Repl # | SampleConc mg/kg | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|
| 1 | 0.014626 | 0.27302 | 0.007 | 0.014 | 0.002 | 13:00:01 | Yes |
| 2 | 0.011185 | 0.20878 | 0.006 | 0.013 | 0.002 | 13:00:34 | Yes |
| Mean: | 0.012906 | 0.24090 | 0.006 | | | | |
| SD: | 0.002433 | 0.045424 | 0.0011 | | | | |
| %RSD: | 18.856 | 18.856 | 17.75 | | | | |

---

**Sequence No.: 24**
**Sample ID: 21310174602**
**Analyst:**
**Initial Sample Wt: 0.54 g**
**Dilution: 1X**

**Autosampler Location: 28**
**Date Collected: 10/18/2013 1:00:54 PM**
**Data Type: Reprocessed on 10/18/2013 1:22:59 PM**
**Initial Sample Vol:**
**Sample Prep Vol: 30 mL**

**Replicate Data: 21310174602**

| Repl # | SampleConc mg/kg | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|
| 1 | 0.016062 | 0.28911 | 0.007 | 0.015 | 0.002 | 13:01:49 | Yes |
| 2 | 0.012580 | 0.22644 | 0.006 | 0.013 | 0.002 | 13:02:22 | Yes |
| Mean: | 0.014321 | 0.25778 | 0.007 | | | | |
| SD: | 0.002462 | 0.044319 | 0.0011 | | | | |
| %RSD: | 17.193 | 17.193 | 16.25 | | | | |

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**Sequence No.: 25**
**Sample ID: 21310174603**
**Analyst:**
**Initial Sample Wt: 0.55 g**
**Dilution: 1X**

**Autosampler Location: 29**
**Date Collected: 10/18/2013 1:02:43 PM**
**Data Type: Reprocessed on 10/18/2013 1:22:59 PM**
**Initial Sample Vol:**
**Sample Prep Vol: 30 mL**

**Replicate Data: 21310174603**

| Repl # | SampleConc mg/kg | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|
| 1 | 0.11290 | 2.0698 | 0.051 | 0.059 | 0.007 | 13:03:38 | Yes |
| 2 | 0.11003 | 2.0172 | 0.050 | 0.057 | 0.007 | 13:04:11 | Yes |
| Mean: | 0.11146 | 2.0435 | 0.051 | | | | |
| SD: | 0.002029 | 0.037206 | 0.0009 | | | | |
| %RSD: | 1.8207 | 1.8207 | 1.81 | | | | |

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**Sequence No.: 26**
**Sample ID: 21310174604**
**Analyst:**
**Initial Sample Wt: 0.5 g**
**Dilution: 1X**

**Autosampler Location: 30**
**Date Collected: 10/18/2013 1:04:32 PM**
**Data Type: Reprocessed on 10/18/2013 1:22:59 PM**
**Initial Sample Vol:**
**Sample Prep Vol: 30 mL**

**Replicate Data: 21310174604**

| Repl # | SampleConc mg/kg | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|
| 1 | 0.23326 | 3.8876 | 0.096 | 0.103 | 0.013 | 13:05:27 | Yes |
| 2 | 0.22414 | 3.7357 | 0.092 | 0.100 | 0.013 | 13:06:00 | Yes |
| Mean: | 0.22870 | 3.8117 | 0.094 | | | | |
| SD: | 0.006445 | 0.10742 | 0.0026 | | | | |
| %RSD: | 2.8181 | 2.8181 | 2.81 | | | | |

---

Sequence No.: 27
Sample ID: 21310174605
Analyst:
Initial Sample Wt: 0.52 g
Dilution: 1X

Autosampler Location: 31
Date Collected: 10/18/2013 1:06:22 PM
Data Type: Reprocessed on 10/18/2013 1:23:00 PM
Initial Sample Vol:
Sample Prep Vol: 30 mL

Replicate Data: 21310174605

| Repl # | SampleConc mg/kg | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|
| 1 | 0.019086 | 0.33082 | 0.009 | 0.016 | 0.002 | 13:07:17 | Yes |
| 2 | 0.017132 | 0.29695 | 0.008 | 0.015 | 0.002 | 13:07:50 | Yes |
| Mean: | 0.018109 | 0.31389 | 0.008 | | | | |
| SD: | 0.001382 | 0.023950 | 0.0006 | | | | |
| %RSD: | 7.6302 | 7.6302 | 7.28 | | | | |

Sequence No.: 28
Sample ID: 21310171201
Analyst:
Initial Sample Wt: 0.5 g
Dilution: 1X

Autosampler Location: 32
Date Collected: 10/18/2013 1:08:11 PM
Data Type: Reprocessed on 10/18/2013 1:23:00 PM
Initial Sample Vol:
Sample Prep Vol: 30 mL

Replicate Data: 21310171201

| Repl # | SampleConc mg/kg | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|
| 1 | 0.47604 | 7.9340 | 0.196 | 0.203 | 0.025 | 13:09:03 | Yes |
| 2 | 0.46601 | 7.7668 | 0.192 | 0.199 | 0.025 | 13:09:35 | Yes |
| Mean: | 0.47102 | 7.8504 | 0.194 | | | | |
| SD: | 0.007092 | 0.11820 | 0.0029 | | | | |
| %RSD: | 1.5056 | 1.5056 | 1.50 | | | | |

Sequence No.: 29
Sample ID: 21310171203
Analyst:
Initial Sample Wt: 0.53 g
Dilution: 1X

Autosampler Location: 33
Date Collected: 10/18/2013 1:09:53 PM
Data Type: Reprocessed on 10/18/2013 1:23:00 PM
Initial Sample Vol:
Sample Prep Vol: 30 mL

Replicate Data: 21310171203

| Repl # | SampleConc mg/kg | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|
| 1 | 0.096117 | 1.6981 | 0.042 | 0.049 | 0.006 | 13:10:44 | Yes |
| 2 | 0.089190 | 1.5757 | 0.039 | 0.046 | 0.006 | 13:11:17 | Yes |
| Mean: | 0.092654 | 1.6369 | 0.041 | | | | |
| SD: | 0.004898 | 0.086527 | 0.0021 | | | | |
| %RSD: | 5.2861 | 5.2861 | 5.24 | | | | |

Sequence No.: 30
Sample ID: 1800
Analyst:
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 10/18/2013 1:11:35 PM
Data Type: Reprocessed on 10/18/2013 1:23:01 PM
Initial Sample Vol:
Sample Prep Vol:

Replicate Data: 1800

| Repl # | SampleConc mg/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|
| 1 | 0.005123 | 5.1229 | 0.126 | 0.134 | 0.017 | 13:12:29 | Yes |
| 2 | 0.004887 | 4.8865 | 0.121 | 0.128 | 0.017 | 13:13:02 | Yes |
| Mean: | 0.005005 | 5.0047 | 0.124 | | | | |
| SD: | 0.000167 | 0.16715 | 0.0041 | | | | |
| %RSD: | 3.3398 | 3.3398 | 3.33 | | | | |

QC value within limits for Hg 253.7 Recovery = 100.09%
All analyte(s) passed QC.

Sequence No.: 31
Sample ID: 1900

Autosampler Location: 1
Date Collected: 10/18/2013 1:13:23 PM

Analyst:
Initial Sample Wt:
Dilution:

Data Type: Reprocessed on 10/18/2013 1:23:01 PM
Initial Sample Vol:
Sample Prep Vol:

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Replicate Data: 1900

| Repl # | SampleConc mg/L | StndConc ug/L | BlnkCorr Signal | Peak Area | Peak Height | Time | Peak Stored |
|---|---|---|---|---|---|---|---|
| 1 | -0.000040 | -0.039743 | -0.001 | 0.007 | 0.001 | 13:14:15 | Yes |
| 2 | -0.000029 | -0.028857 | -0.000 | 0.007 | 0.001 | 13:14:48 | Yes |
| Mean: | -0.000034 | -0.034300 | -0.000 | | | | |
| SD: | 0.000008 | 0.007698 | 0.0002 | | | | |
| %RSD: | 22.442 | 22.442 | 39.78 | | | | |

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

# TCLP EXTRACTIONS

GCAL ANALYTICAL LABORATORIES, LLC

ANALYST: ~~FES~~ IXJ RBM
DATE: ~~10/11/13~~ 10/31/13 11/13/13

HBN: ~~518964~~ 519025 RBM 11/13/13
BATCH: ~~8302~~ 8305

Temp. Controls: 23 ± 2 °C
Min. Temp °C: 21.2
Max. Temp °C: 26.1

| Sample Number: | 2131029320 1 | 2131017120 2 | 2131031430 1 | 2131031390 4 |
|---|---|---|---|---|
| Sample Description | | Soil | Waste | Soil |
| Matrix Spike Required | | NA | MS | NA |
| 100% solid (Skip to 3)* (√) | | ✓ | ✓ | ✓ |
| Sample is <100% (√) | | | | |
| **1. FILTRATION (Pressure Filtration is Required if Solids are ≥ 10%)** | | | | |
| Filter Weight (F) | | | | |
| Filtrate Vessel Weight (V) | | | | |
| Subsample Weight (100 g minimum) (S) | | | | |
| Weight of Liquid Phase (V+liquid)-V (L) | | | | |
| Weight of Solid Phase (S-L) (SP) | | | | |
| % Solids (SP/S) x 100 * (%S) | | | | |
| %Dry Solids = [(Dried SP-F)/S] x 100* (%DS) | | | | |
| **2.EXTRACTION FLUID DETERMINATION** | | | | |
| Particle Size Reduced (app. 1mm) (√) | | | | |
| Actual Weight of subsample (5.0± 0.1g) | | 5.0 | 5.09 IXJ | 5.0 |
| Actual volume of water (96.5± 1mL) | | 96.0 | 96.0 | 96.0 |
| Initial pH (After 5 min. mixing) "pH-1" | | 8.01 | 7.81 | 9.04 |
| √ If pH >5, if 3.5 mL 1N HCl added | | ✓ | ✓ | ✓ |
| √ If heated and held at 50°C for 10 minutes | | ✓ | ✓ | ✓ |
| Second pH "pH-2" | | 1.00 | 0.82 | 5.28 |
| If pH-1 or pH-2 <5.0 use Fluid 1 (√) | | ✓ | ✓ | ✓ |
| If pH-2 >5.0 use Fluid 11 (√) | | | | |
| **3. PREPARATION FOR EXTRACTION PROCEDURE*** | | | | |
| Particle Size Reduced (95. mm max) (√) | | | | |
| Weight of Solids to be Extracted (X) | | 100.0 | 100.0 | 100.0 |
| Filtrate Vessel Weight (multiphasic) (EV) | | | | |
| Weight of Filtrate + Vessel (multiphasic) (EF) | | | | |
| **Amount of Fluid Needed = 20 x X** | | 2000 | 2000 | 2000 |
| **4. TCLP ROTATION (Rotate for 18 ± 2 hours at 23 ± 2°C and 30 ± 2 rpm)** | | | | |
| Start Time/ Stop Time | | 8:00/22:00 | 8:00/22:00 | 8:00/22:00 |
| **5. FINAL TCLP EXTRACT** | | | | |
| **If the phases will be analyzed separately, determine the volume of each phase:** | | | | |
| Volume Extract obtained in Step 5 (EF-EV) | | | | |
| Volume filtrate from Step 4 (L) | | 500 | 500 | 1500 |
| pH of TCLP Extract (If two phase,record pH for each phase) | | 5.05 | 5.02 | 5.89 |

* If sample is <0.5 %S or <0.5 %DS; Filter sample , collect filtrate and skip to 6. If sample is 100% solid, use 100 grams sample and 2000mLs fluid.
%DS is only performed if it is suspected that after drying, the %S will be <0.5%.

Ext. Fluid #1 pH/ID: 489-552-66-1
Ext. Fluid #2 pH/ID:
Balance ID: 1117331005

Rotator ID: 2, 4
Rotation Start Date: 111113
Rotation Stop Date: 111213

Reviewer/Date: RBM

Revision 005: 5/14/2013



213101712 1300

# ICP SAMPLE PREPARATION FORM

| EXTRACTION DATE/TIME: | Start: 11:00 End: 13:00 | BATCH NO: | 519175 |
|---|---|---|---|
| MATRIX: | WATER ☑ SOIL ☐ TCLP EXT ☐ ORGANIC ☐ | METHOD: | 200.0 ☐ 200.7 ☐ 3010A ☑ 3050B ☐ 3051 ☐ |

| | CLIENT | CLIENT ID | GCAL ID | INITIAL VOL/WT mL g | FINAL VOLUME (mL) | SAMPLE TYPE | COMMENTS | REAGENTS/ STANDARDS |
|---|---|---|---|---|---|---|---|---|
| 1 | QC ACCOUNT | MB for HBN 519175 [DIGM/34895] | 1251816 | 50 | 50 | MB | | HNO3 |
| 2 | QC ACCOUNT | LCS for HBN 519175 [DIGM/34895 | 1251817 | | | LCS | | 226-4-2 |
| 3 | 4847 | RS-COMP1-101613 | 21310171202 | | | SAMPLE | | HCL |
| 4 | QC ACCOUNT | RS-COMP1-101613 (1244552MS) | 1251874 | | | MS | | 226-4-3 |
| 5 | QC ACCOUNT | RS-COMP1-101613 (1244552MSD) | 1251875 | | | MSD | | H2O2 |
| 6 | 4569 | MONTHLY CHIP SAMPLE | 21310314301 | | | SAMPLE | | |
| 7 | 4860 | FM-1s | 21311020801 | | | SAMPLE | | SOLID MATERIAL: |
| 8 | 4860 | FM-3r | 21311020802 | | | SAMPLE | | |
| 9 | 4860 | FM-d | 21311020803 | | | SAMPLE | | |
| 10 | 0042 | MDI BOX 279516 | 21310313901 | | | SAMPLE | | |
| 11 | 0176 | 2013133 | 21311011101 | | | SAMPLE | | |
| 12 | | | | | | | | |
| 13 | | | | | | | | |
| 14 | | | | | | | | |
| 15 | | | | | | | | |
| 16 | | | | | | | | |
| 17 | | | | | | | | SPIKING SOLUTIONS (LCS/MS) |
| 18 | | | | | | | | |
| 19 | | | | | | | | GCALI-1 - 250uL |
| 20 | | | | | | | | 209-374-4 |
| 21 | | | | | | | | GCALI-2 - 250uL |
| 22 | | | | | | | | 209-38-4 |
| 23 | | | | | | | | ORGANOMETALLIC ICP SPIKE 0.025g |
| 24 | | | | | | | | |
| 25 | | | | | | | | |
| 26 | | | | | | | | |
| 27 | | | | | | | | |
| 28 | | | | | | | | |

COMMENTS:

BALANCE ID: _____ TEMP: 95°

| BLOCK ID | TECHNICIAN | DATE |
|---|---|---|
| H2 13092-4 | JG | 11-4-13 |
| REPIPET BOTTLES VERIFIED | REVIEW | DATE |
| JG | AWG | 11/5/13 |

Revision 1, 08/10/2010

213101712 1301

# ICP SAMPLE PREPARATION FORM

| | | | |
|---|---|---|---|
| **EXTRACTION DATE/TIME:** | Start: 7:00 End: 12:00 | **BATCH NO:** | 517994 |
| **MATRIX:** | WATER ☐ SOIL ☑ TCLP EXT ☐ ORGANIC ☐ | **METHOD:** | 200.0 ☐ 200.7 ☐ 3010A ☐ 3050B ☑ 3051 ☐ |

| | CLIENT | CLIENT ID | GCAL ID | INITIAL VOL/WT mL (g) | FINAL VOLUME (mL) | SAMPLE TYPE | COMMENTS | REAGENTS/ STANDARDS |
|---|---|---|---|---|---|---|---|---|
| 1 | QC ACCOUNT | MB for HBN 517994 [DIGM/34764] | 1244705 | 1.25 | 50 | MB | | HNO3 |
| 2 | QC ACCOUNT | LCS for HBN 517994 [DIGM/34764 | 1244706 | 1.25 | | LCS | | 226.2-1. |
| 3 | 4847 | RS-COMP1-101613 | 21310171201 | 1.26 | | SAMPLE | | HCL |
| 4 | 4847 | RS-COMP2-101613 | 21310171203 | 1.25 | | SAMPLE | | 226.2-1 |
| 5 | 4692 | SOIL 24101513 B | 21310172601 | 1.25 | | SAMPLE | | H2O2 |
| 6 | QC ACCOUNT | SOIL 24101513 B (1244661MS) | 1244707 | 1.25 | | MS | | 709.37-16 |
| 7 | QC ACCOUNT | SOIL 24101513 B (1244661MSD) | 1244708 | 1.25 | | MSD | | SOLID MATERIAL: |
| 8 | 4692 | SOIL 24101513A | 21310172801 | 1.25 | | SAMPLE | | C.991-32014 |
| 9 | 4692 | SOIL 24101513C | 21310173401 | 1.26 | | SAMPLE | | |
| 10 | 4692 | VV101613 SOIL | 21310173601 | 1.25 | | SAMPLE | | |
| 11 | 4791 | N-1 12 | 21310174601 | 1.26 | | SAMPLE | | |
| 12 | 4791 | N-2 12 | 21310174602 | 1.25 | | SAMPLE | | |
| 13 | 4791 | N-3 16 | 21310174603 | 1.26 | | SAMPLE | | |
| 14 | 4791 | N-4 12 | 21310174604 | 1.25 | | SAMPLE | | |
| 15 | 4791 | BACKGROUND 16 | 21310174605 | 1.25 | | SAMPLE | | |
| 16 | 4787 | F45-SB-A1-3.5 | 21310175201 | 1.26 | | SAMPLE | | |
| 17 | 4787 | F45-SB-A2-3.5 | 21310175202 | 1.25 | | SAMPLE | | SPIKING SOLUTIONS (LCS/MS) |
| 18 | 4787 | F45-SB-A3-3.5 | 21310175203 | 1.25 | ✓ | SAMPLE | | |
| | | | | | | | | GCALI-1 - 250uL |
| 20 | | | | | | | | 709.37-11 |
| 21 | | | | | | | | GCALI-2 - 250uL |
| 22 | | | | | | | | 709.38-11 |
| 23 | | | | | | | | ORGANOMETALLIC ICP SPIKE 0.025g |
| 24 | | | | | | | | |
| 25 | | | | | | | | |
| 26 | | | | | | | | |
| 27 | | | | | | | | |
| 28 | | | | | | | | |

COMMENTS:
BALANCE ID: F224ms004 TEMP: 95°

| BLOCK ID | TECHNICIAN | DATE |
|---|---|---|
| A2 130973 | JCL | 10-18-13 |
| **REPIPET BOTTLES VERIFIED** | **REVIEW** | **DATE** |
| JCL | AWG | 10/21/13 |

Revision 1, 08/10/2010

213101712 1302

# HG SAMPLE PREPARATION FORM

| EXTRACTION DATE/TIME: | Start: 10:13 End: 10:40 | BATCH NO: | 517993 |
|---|---|---|---|
| MATRIX: | WATER ☐ SOIL ☑ TCLP EXT ☐ ORGANIC ☐ | METHOD: | 245.2 ☐ 7470A ☐ 7471B ☑ |

| | CLIENT | CLIENT ID | GCAL ID | INITIAL VOL/WT mL g | FINAL VOLUME (mL) | SAMPLE TYPE | COMMENTS | REAGENTS/ STANDARDS |
|---|---|---|---|---|---|---|---|---|
| 1 | QC ACCOUNT | MB for HBN 517993 [DIGM/34763] | 1244701 | 0.60 | 30 | MB | | HNO3 |
| 2 | QC ACCOUNT | LCS for HBN 517993 [DIGM/34763 | 1244702 | 0.60 | | LCS | | |
| 3 | 4329 | SPENT CATALYST 4C-51 | 21310166002 | 0.50 | | SAMPLE | | H2SO4 |
| 4 | 4847 | RS-COMP1-101613 | 21310171201 | 0.90 | | SAMPLE | | |
| 5 | 4847 | RS-COMP2-101613 | 21310171203 | 0.93 | | SAMPLE | | Aqua Regia |
| 6 | 4692 | SOIL 24101513 B | 21310172601 | 0.60 | | SAMPLE | | 209-37-10 |
| 7 | QC ACCOUNT | SOIL 24101513 B (1244661MS) | 1244703 | 0.60 | | MS | | KMN04 |
| 8 | QC ACCOUNT | SOIL 24101513 B (1244661MSD) | 1244704 | 0.60 | | MSD | | 726-1-9 |
| 9 | 4692 | SOIL 24101513A | 21310172801 | 0.90 | | SAMPLE | | K2S2O6 |
| 10 | 4692 | SOIL 24101513C | 21310173401 | 0.94 | | SAMPLE | | |
| 11 | 4692 | VV101613 SOIL | 21310173601 | 0.90 | | SAMPLE | | Hg Calib ID |
| 12 | 4791 | N-1 12 | 21310174601 | 0.96 | | SAMPLE | | |
| 13 | 4791 | N-2 12 | 21310174602 | 0.94 | | SAMPLE | | 0.1 ppm CCV Working Solution |
| 14 | 4791 | N-3 16 | 21310174603 | 0.93 | | SAMPLE | | |
| 15 | 4791 | N-4 12 | 21310174604 | 0.90 | | SAMPLE | | 0.1 ppm ICV Working Solution |
| 16 | 4791 | BACKGROUND 16 | 21310174605 | 0.92 | ✓ | SAMPLE | | |
| 17 | | | | | | | | Hg ICV |
| 18 | | | | | | | | |
| 19 | | | | | | | | SPIKE SOLUTIONS (LCS/MS) |
| 20 | | | | | | | | |
| 21 | | | | | | | | Hg Spike 100uL / 150uL |
| 22 | | | | | | | | 285-10-3 |
| 23 | | | | | | | | ORGANOMETALLIC HG SPIKE 0.025g |
| 24 | | | | | | | | |
| 25 | | | | | | | | SOLID MATERIAL: |
| 26 | | | | | | | | C0913E014 |

## Hg Solid Calibration

| Calib Blk | Conc (ug/L) | 0.1ppm Spk Added | Final Volume |
|---|---|---|---|
| Standard 1 | 0.20 | 60 uL | 30mL |
| Standard 2 | 0.50 | 150 uL | 30 mL |
| Standard 3 | 2.00 | 600 uL | 30 mL |
| Standard 4 | 5.00 | 1500 ul | 30 mL |
| Standard 5 | 10.0 | 3000 uL | 30 mL |
| ICV | 5.00 | 1500 uL | 30 mL |

## Hg Water Calibration

| Calib Blk | Conc (ug/L) | 0.1ppm Spk Added | Final Volum |
|---|---|---|---|
| Standard 1 | 0.20 | 40 uL | 20 mL |
| Standard 2 | 0.50 | 100 uL | 20 mL |
| Standard 3 | 2.00 | 400 uL | 20 mL |
| Standard 4 | 5.00 | 1000 ul | 20 mL |
| Standard 5 | 10.0 | 2000 uL | 20 mL |
| ICV | 5.00 | 1000 uL | 20 mL |

| BLOCK ID | TECHNICIAN | DATE |
|---|---|---|
| BI 130923 | JCL | 10-18-13 |
| **REPIPET BOTTLES VERIFIED** | **REVIEW** | **DATE** |
| JCL | AWG | 10/21/13 |

BALANCE ID: F22403004 TEMP: 95°

Revision 1, 08/10/2010

213101712 1303

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21310171201 | RS-COMP1-101613 | Solid | 10/16/2013 16:00 | 10/17/2013 10:30 |

## EPA 9045D

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 1 | 10/21/2013 16:40 | DNM | 517980 |

| CAS# | Parameter | Result | RDL | MDL | Units |
|---|---|---|---|---|---|
| pH | pH | 7.25 | 1.00 | 1.00 | pH unit |

RESULTS REPORTED ON A DRY WEIGHT BASIS

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21310171201 | RS-COMP1-101613 | Solid | 10/16/2013 16:00 | 10/17/2013 10:30 |

## EPA 7.3.3.2, Rev 3/9012B

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| 10/21/2013 11:45 | 517965 | EPA 7.3.3.2 | 1 | 10/22/2013 09:46 | AEL | 518250 |

| CAS# | Parameter | Result | RDL | MDL | Units |
|---|---|---|---|---|---|
| 57-12-5R | Reactivity Cyanide | 250U | 250 | 250 | mg/kg |

RESULTS REPORTED ON A DRY WEIGHT BASIS

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21310171201 | RS-COMP1-101613 | Solid | 10/16/2013 16:00 | 10/17/2013 10:30 |

## EPA 7.3.4.2, Rev. 3/9034

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| 10/21/2013 11:45 | 517966 | EPA 7.3.4.2 | 1 | 10/22/2013 08:35 | DMT | 518248 |

| CAS# | Parameter | Result | RDL | MDL | Units |
|---|---|---|---|---|---|
| 18496-25-8R | Reactivity Sulfide | 80U | 80 | 80 | mg/kg |

RESULTS REPORTED ON A DRY WEIGHT BASIS

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21310171201 | RS-COMP1-101613 | Solid | 10/16/2013 16:00 | 10/17/2013 10:30 |

## EPA 1030

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 1 | 10/18/2013 13:30 | JEM | 518058 |

| CAS# | Parameter | Result | RDL | MDL | Units |
|---|---|---|---|---|---|
| 000000-01-7 | Ignitable | NO | | | |

RESULTS REPORTED ON A DRY WEIGHT BASIS

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21310171203 | RS-COMP2-101613 | Solid | 10/16/2013 17:00 | 10/17/2013 10:30 |

## EPA 9045D

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 1 | 10/21/2013 16:40 | DNM | 517980 |

| CAS# | Parameter | Result | RDL | MDL | Units |
|---|---|---|---|---|---|
| pH | pH | 6.18 | 1.00 | 1.00 | pH unit |

RESULTS REPORTED ON A DRY WEIGHT BASIS

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21310171203 | RS-COMP2-101613 | Solid | 10/16/2013 17:00 | 10/17/2013 10:30 |

## EPA 7.3.3.2, Rev 3/9012B

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| 10/21/2013 11:45 | 517965 | EPA 7.3.3.2 | 1 | 10/22/2013 09:47 | AEL | 518250 |

| CAS# | Parameter | Result | RDL | MDL | Units |
|---|---|---|---|---|---|
| 57-12-5R | Reactivity Cyanide | 250U | 250 | 250 | mg/kg |

RESULTS REPORTED ON A DRY WEIGHT BASIS

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21310171203 | RS-COMP2-101613 | Solid | 10/16/2013 17:00 | 10/17/2013 10:30 |

## EPA 7.3.4.2, Rev. 3/9034

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| 10/21/2013 11:45 | 517966 | EPA 7.3.4.2 | 1 | 10/22/2013 08:35 | DMT | 518248 |

| CAS# | Parameter | Result | RDL | MDL | Units |
|---|---|---|---|---|---|
| 18496-25-8R | Reactivity Sulfide | 80U | 80 | 80 | mg/kg |

RESULTS REPORTED ON A DRY WEIGHT BASIS

| GCAL ID | Client ID | Matrix | Collect Date/Time | Receive Date/Time |
|---|---|---|---|---|
| 21310171203 | RS-COMP2-101613 | Solid | 10/16/2013 17:00 | 10/17/2013 10:30 |

## EPA 1030

| Prep Date | Prep Batch | Prep Method | Dilution | Analyzed | By | Analytical Batch |
|---|---|---|---|---|---|---|
| | | | 1 | 10/18/2013 13:30 | JEM | 518058 |

| CAS# | Parameter | Result | RDL | MDL | Units |
|---|---|---|---|---|---|
| 000000-01-7 | Ignitable | NO | | | |

RESULTS REPORTED ON A DRY WEIGHT BASIS

# General Chemistry Quality Control Summary

| | | | | | | |
|---|---|---|---|---|---|---|
| **Analytical Batch** 517980 | **Client ID** | BOX #S N17881RB,N19050,N26841 | | 1242900DUP | | |
| **Prep Batch** N/A | **GCAL ID** | 21310120501 | | 1244629 | | |
| | **Sample Type** | SAMPLE | | DUP | | |
| | **Analytical Date** | 10/21/2013 16:40 | | 10/21/2013 16:40 | | |
| | **Matrix** | Solid | | Solid | | |
| **EPA 9045D** | | **Units** | pH unit | **Result** | **RPD** | **RPD Limit** |
| | | **Result** | **RDL** | | | |
| pH | pH | 8.15 | 1.00 | 8.16 | 0 | 6 |

213101712 1312

# General Chemistry Quality Control Summary

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Analytical Batch** 518250 | **Client ID** | MB517965 | | | LCS517965 | | |
| **Prep Batch** 517965 | **GCAL ID** | 1244514 | | | 1244515 | | |
| **Prep Method** EPA 7.3.3.2 | **Sample Type** | Method Blank | | | LCS | | |
| | **Prep Date** | 10/21/2013 11:45 | | | 10/21/2013 11:45 | | |
| | **Analytical Date** | 10/22/2013 09:28 | | | 10/22/2013 09:29 | | |
| | **Matrix** | Solid | | | Solid | | |
| **EPA 7.3.3.2, Rev 3/9012B** | | **Units** | mg/kg | **Spike** | **Result** | | **Control** |
| | | **Result** | **RDL** | **Added** | | **% R** | **Limits % R** |
| 57-12-5R Reactivity Cyanide | | 250U | 250 | 250 | 17.3 | 7 | 1 - 25 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Analytical Batch** 518250 | **Client ID** | 13-06-01 (TCLP) | | 1244147DUP | | |
| **Prep Batch** 517965 | **GCAL ID** | 21310164901 | | 1244516 | | |
| **Prep Method** EPA 7.3.3.2 | **Sample Type** | SAMPLE | | DUP | | |
| | **Prep Date** | 10/21/2013 11:45 | | 10/21/2013 11:45 | | |
| | **Analytical Date** | 10/22/2013 09:30 | | 10/22/2013 09:31 | | |
| | **Matrix** | Solid | | Solid | | |
| **EPA 7.3.3.2, Rev 3/9012B** | | **Units** | mg/kg | **Result** | | **RPD** |
| | | **Result** | **RDL** | | **RPD** | **Limit** |
| 57-12-5R Reactivity Cyanide | | 0.0 | 250 | 0.0 | 0 | 25 |

213101712 1313

# General Chemistry Quality Control Summary

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Analytical Batch** 518248 | **Client ID** | MB517966 | | | LCS517966 | | |
| **Prep Batch** 517966 | **GCAL ID** | 1244517 | | | 1244518 | | |
| **Prep Method** EPA 7.3.4.2 | **Sample Type** | Method Blank | | | LCS | | |
| | **Prep Date** | 10/21/2013 11:45 | | | 10/21/2013 11:45 | | |
| | **Analytical Date** | 10/22/2013 08:35 | | | 10/22/2013 08:35 | | |
| | **Matrix** | Solid | | | Solid | | |
| **EPA 7.3.4.2, Rev. 3/9034** | | **Units** | mg/kg | **Spike** | **Result** | | **Control** |
| | | **Result** | **RDL** | **Added** | | **% R** | **Limits % R** |
| 18496-25-8R Reactivity Sulfide | | 80U | 80 | 1000 | 1041 | 104 | 20 - 120 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Analytical Batch** 518248 | **Client ID** | 13-06-01 (TCLP) | | 1244147DUP | | |
| **Prep Batch** 517966 | **GCAL ID** | 21310164901 | | 1244519 | | |
| **Prep Method** EPA 7.3.4.2 | **Sample Type** | SAMPLE | | DUP | | |
| | **Prep Date** | 10/21/2013 11:45 | | 10/21/2013 11:45 | | |
| | **Analytical Date** | 10/22/2013 08:35 | | 10/22/2013 08:35 | | |
| | **Matrix** | Solid | | Solid | | |
| **EPA 7.3.4.2, Rev. 3/9034** | | **Units** | mg/kg | **Result** | | **RPD** |
| | | **Result** | **RDL** | | **RPD** | **Limit** |
| 18496-25-8R Reactivity Sulfide | | 0 | 80 | 0 | 0 | 25 |

213101712 1314

GCAL ANALYTICAL LABORATORIES, LLC

# pH SOLIDS LOGBOOK

**METHOD EPA 9045 D**

Analyst: DNM

Date: 10-21-13

QC Limits: True Value ± 0.05 pH units

Slope Limits: 92-108

| CALIBRATION TIME | pH METER | BUFFER | LOT # | EXPIRATION DATE | CALIBRATION LEVELS 1 | 2 | 3 | SLOPE | QC CHECK Actual Value | Meter Reading |
|---|---|---|---|---|---|---|---|---|---|---|
| 8:40 | #010 | 1.00 | 2121358 | 1-14 | 1.00 | 4.00 | 7.00 | 10.00-13.00 | 1004 | 8.00 | 8.00 |
| | | 4.00 | 2121359 | 4-18 | | | | | | |
| | | 7.00 | 2121139 | 1-15 | | | | | | |
| | | 10.00 | 2121022 | 6-15 | | | | | | |
| | | 13.00 | 2121340 | 10-13 | | | | | | |
| | | | | | | | | | | |

HBN: 517980

BATCH: 4131

## pH RESULTS

| SAMPLE ID 14:40 | SOLIDS Initial Weight (20 ± 0.1g) | DI Volume (min. 20mL max. 100 mL) | SHAKE TIME (5 minutes) Start | End | SETTLING TIME (1 hr.) Start | End | ANALYST | SAMPLE TEMP(°C) | RESULT (pH units) |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 8.15 |
| 2131012050 1 | 20 | 20 | 14:50 | 14:55 | 14:55 | 15:55 | DNM | 22.4 | ~~6.32~~ |
| 1244029 | | | | | | | | | ~~6.33~~ |
| 2131016490 1 | | | | | | | | | 6.32 |
| 2131016490 3 | | | | | | | | | 6.51 |
| 2131016490 5 | | | | | | | | | 8.96 |
| 2131016500 1 | | | | | | | | | 7.38 |
| 2131016500 2 | | | | | | | | | 8.08 |
| 2131016500 3 | | | | | | | | | 8.32 |
| 2131016520 1 | | | | | | | | | 4.81 |
| 2131016520 3 | | | | | | | | | 4.53 |
| 2131016540 1 | | | | | | | | | 10.41 |
| 2131016540 2 | | | | | | | | | 11.99 |
| 2131016540 3 | | | | | | | | | 9.10 |
| 2131016550 1 | | | | | | | | | 7.21 |
| 2131017120 1 | | | | | | | | | 7.25 |
| 2131017120 3 | | | | | | | | | 6.18 |
| 2131016610 6 | | | | | | | | | 7.86 |
| 2131017390 1 | | | | | | | | | 1.90 |
| QC Check | | | | | | | | | 8.00 |
| | | | | | | | | | |
| | | | | | | | | | |

Range 1 QC Check True Value 8.00

Lot #: 2121357 Exp. Date 11/13

Range 2 QC Check True Value _____

Lot #: _____ Exp. Date _____



Revision - 006 : 7/29/2013

Secondary Reviewer/Date KSW 10/22/13

213101712 1315

LACHAT STANDARD IDs

Analyst: AEL

Date: 10-22-13

HBN #: 518250

Batch #: 12061

| CHLORIDE | SM4500 Cl-E/EPA 9251 |
|---|---|
| CCV Lot # | |
| CCV Expiration Date | |
| ICV/LCS Lot # | |
| ICV Expiration Date | |
| 0.5M Ferric Nitrate Lot # | |
| Mercuric Thiocyanate Lot # | |
| Calibration Date | |
| Calibration Expiration Date | |

| CYANIDE | EPA 335.4/EPA 9012A |
|---|---|
| CCV Lot # | 2121581 |
| CCV Expiration Date | 1-30-14 |
| ICV/LCS Lot # | NA |
| ICV Expiration Date | ↓ |
| Phosphate Buffer Lot # | 943-26-6 |
| Pyridine-Barbituric Acid Lot # | 2121419 |
| Chloramine T Lot # | 950-12-7 |
| 0.25N NaOH Lot # | 950-12-6 |
| Calibration Date | 8-30-13 |
| Calibration Expiration Date | 1-30-14 |

| PHENOLICS | EPA 420.4/EPA 9066 |
|---|---|
| CCV Lot # | |
| CCV Expiration Date | |
| ICV/LCS Lot # | |
| ICV Expiration Date | |
| Phenol Buffer Lot # | |
| 4-Aminoantipyrine Lot # | |
| Calibration Date | |
| Calibration Expiration Date | |

| N+N/NITRATE/NITRITE | EPA 353.2 |
|---|---|
| NO3 CCV Lot # | |
| CCV Expiration Date | |
| NO2 CCV Lot # | |
| CCV Expiration Date | |
| NO3 ICV/LCS Lot # | |
| ICV Expiration Date | |
| NO2 ICV/CCV Lot # | |
| ICV Expiration Date | |
| Ammonium Chloride Buffer | |
| Sulfanilamide Color Reagent | |
| HCl Concentrated | |
| NH4OH Concentrated | |
| Sodium Thiosulfate 0.025N | |
| N+N Calibration Date | |
| N+N Calibration Expiration Date | |
| NO2 Calibration Date | |
| NO2 Calibration Expiration Date | |
| Column Efficiency (90-110%) | |
| LCS NO3 X 100 / LCS NO2 | |

| TOTAL PHOSPHORUS | EPA 365.1 |
|---|---|
| CCV Lot # | |
| CCV Expiration Date | |
| ICV/LCS Lot # | |
| ICV Expiration Date | |
| Ascorbic Acid Lot # | |
| 0.11N H2SO4 Lot # | |
| Molybdate Color Lot # | |
| Calibration Date | |
| Calibration Expiration Date | |

Reviewed By: KSW 10/22/2013

213101712 1316

Author: AEL

Date : 10/22/2013

Original Run Filename: OM_10-22-2013_09-26-04.OMN created 10/22/2013 09:26:04
Original Run Author's Signature: [AEL]
Current Run Filename: OM_10-22-2013_09-26-04.OMN last modified 10/22/2013 09:55:38
Current Run Author's Signature: [AEL]
Description: Default New Run

| Sample | Rep. | Channel 1 Cyanide~57-12-5 (mg/L) | Detection Time | MDF | |
|---|---|---|---|---|---|
| 1800 | 1 | 0.0546 | 10/22/2013@09:26:54 | | 104 |
| Known Conc: | | 0.0500 | | | |
| Calibration: | | Table/Fig. 1 | | | |
| 1900 | 1 | -0.0010 | 10/22/2013@09:27:52 | | |
| Known Conc: | | 0.0000 | | | |
| 1244514 BLK | 1 | -0.0006 | 10/22/2013@09:28:50 | | |
| 1244515 LCS | 1 | 0.3451 | 10/22/2013@09:29:48 | 10.00 | 77. |
| 21310164901 | 1 | -0.0004 | 10/22/2013@09:30:46 | | |
| 1244516 MB | 1 | -0.0006 | 10/22/2013@09:31:42 | | |
| 21310164903 | 1 | -0.0005 | 10/22/2013@09:32:40 | | |
| 21310164905 | 1 | -0.0006 | 10/22/2013@09:33:37 | | |
| 21310165001 | 1 | 0.0100 | 10/22/2013@09:34:34 | | |
| 21310165002 | 1 | -0.0014 | 10/22/2013@09:35:30 | | |
| 21310165003 | 1 | -0.0010 | 10/22/2013@09:36:27 | | |
| 21310165201 | 1 | -0.0011 | 10/22/2013@09:37:23 | | |
| 1800 | 1 | 0.0504 | 10/22/2013@09:38:19 | | 101 |
| Known Conc: | | 0.0500 | | | |
| 1900 | 1 | -0.0010 | 10/22/2013@09:39:14 | | |
| Known Conc: | | 0.0000 | | | |
| 21310165203 | 1 | -0.0007 | 10/22/2013@09:40:10 | | |
| 21310165401 | 1 | -0.0003 | 10/22/2013@09:41:06 | | |
| 21310165402 | 1 | -0.0007 | 10/22/2013@09:42:05 | | |
| 21310165403 | 1 | -0.0007 | 10/22/2013@09:43:03 | | |
| 21310165501 | 1 | -0.0011 | 10/22/2013@09:44:01 | | |
| 21310165801 | 1 | -0.0010 | 10/22/2013@09:44:58 | | |
| 21310166001 | 1 | -0.0007 | 10/22/2013@09:45:56 | | |
| 21310171201 | 1 | -0.0008 | 10/22/2013@09:46:53 | | Reading x 5 x 10 |
| 21310171203 | 1 | -0.0013 | 10/22/2013@09:47:50 | | |
| 21310166106 | 1 | -0.0007 | 10/22/2013@09:48:48 | | |
| 1800 | 1 | 0.0502 | 10/22/2013@09:49:44 | | 100 |
| Known Conc: | | 0.0500 | | | |
| 1900 | 1 | -0.0016 | 10/22/2013@09:50:40 | | |
| Known Conc: | | 0.0000 | | | |
| 21310173901 | 1 | -0.0008 | 10/22/2013@09:51:36 | | |
| 21310181501 | 1 | -0.0008 | 10/22/2013@09:52:33 | | |
| 1800 | 1 | 0.0500 | 10/22/2013@09:53:28 | | 100 |
| Known Conc: | | 0.0500 | | | |
| 1900 | 1 | -0.0014 | 10/22/2013@09:54:23 | | |
| Known Conc: | | 0.0000 | | | |

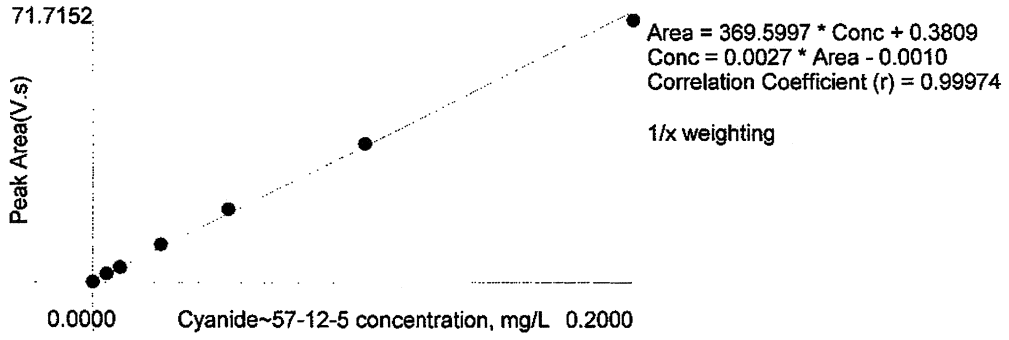
Table 1: Cyanide~57-12-5

| | Conc. (mg/L) | Rep | Peak Area (Volt-s) | Peak Height (Volts) | % Residual | Detection Date | Detection Time |
|---|---|---|---|---|---|---|---|
| 1 | 0.2000 | 1 | 71.7152 | 3.8759 | 3.5 | 08/30/2013 | 16:14:46 |
| 2 | 0.1000 | 1 | 37.9912 | 2.1352 | -1.7 | 08/30/2013 | 16:15:44 |
| 3 | 0.0500 | 1 | 19.9923 | 1.1331 | -6.0 | 08/30/2013 | 16:16:43 |
| 4 | 0.0250 | 1 | 10.3401 | 0.5884 | -7.5 | 08/30/2013 | 16:17:41 |
| 5 | 0.0100 | 1 | 4.0516 | 0.2315 | 0.6 | 08/30/2013 | 16:18:40 |
| 6 | 0.0050 | 1 | 2.3390 | 0.1258 | -4.9 | 08/30/2013 | 16:19:38 |
| 7 | 0.0000 | 1 | 0.0587 | 0.0024 | | 08/30/2013 | 16:20:37 |

Author: AEL

Date : 10/22/2013

Figure 1: Cyanide~57-12-5






213101712 1318

# SW-846 7.3.3.2, 7.3.4.2

| START | 10-21-13 11:45 | END | 11:10 | ANALYST | DNM |
|---|---|---|---|---|---|
| | | | | CN R HBN: | 517965 |
| MATRIX | WATER SOLID | | | S R HBN: | 517965 |

| | CLIENT | CLIENT ID | GCAL ID | INITIAL VOL/WT mL g | FINAL VOLUME (mL) | SAMPLE TYPE | COMMENTS | REAGENT LOT NO: |
|---|---|---|---|---|---|---|---|---|
| 1 | QC ACCOUNT | MB for HBN 517965 [INPR/12526] | 1244514 | 10.0 | 100 | MB | | 0.01N H2SO4: |
| 2 | QC ACCOUNT | LCS for HBN 517965 [INPR/12526 | 1244515 | 10.0 | 100 | LCS | | 8-60-1 |
| 3 | 0286 | 13-06-01 (TCLP) | 21310164901 | 10.0 | 100 | SAMPLE | | Sodium Sulfide |
| 4 | QC ACCOUNT | 13-06-01 (TCLP) (1244147DUP) | 1244516 | 10.0 | 100 | DUP | | 8-60-2 |
| 5 | 0286 | 13-06-02 (TCLP) | 21310164903 | 10.0 | 100 | SAMPLE | | 1N Sodium Hydroxide: |
| 6 | 0286 | 13-06-03 (TCLP) | 21310164905 | 10.0 | 100 | SAMPLE | | 8-59-1 |
| 7 | 0286 | RB29841ML | 21310165001 | 10.0 | 100 | SAMPLE | | |
| 8 | 0286 | RB29842ML | 21310165002 | 10.0 | 100 | SAMPLE | | |
| 9 | 0286 | RB29450ML | 21310165003 | 10.0 | 100 | SAMPLE | | |
| 10 | 0286 | DRUM #22734 (TCLP) | 21310165201 | 10.0 | 100 | SAMPLE | | |
| 11 | 0286 | DRUM #22731 (TCLP) | 21310165203 | 10.0 | 100 | SAMPLE | | |
| 12 | 0286 | DRUM #22755 | 21310165401 | 10.0 | 100 | SAMPLE | | |
| 13 | 0286 | DRUM #22732 | 21310165402 | 10.0 | 100 | SAMPLE | | |
| 14 | 0286 | DRUM #22733 | 21310165403 | 10.0 | 100 | SAMPLE | | |
| 15 | 0286 | DRUM #23206 (TCLP) | 21310165501 | 10.0 | 100 | SAMPLE | | |
| 16 | 4329 | BH-SP-02 (TCLP) | 21310165801 | 10.0 | 100 | SAMPLE | | |
| 17 | 4329 | SPENT CATALYST 4C-51 (TCLP) | 21310166001 | 10.0 | 100 | SAMPLE | | |
| 18 | 4847 | RS-COMP1-101613 | 21310171201 | 10.0 | 100 | SAMPLE | | |
| 19 | 4847 | RS-COMP2-101613 | 21310171203 | 10.0 | 100 | SAMPLE | | |
| 20 | [illegible]60 | CRUDE UNIT | 21310166106 | 10.0 | 100 | SAMPLE | | |
| 21 | 0176 | OXO WASTE (TCLP) | 21310173901 | 10.0 | 100 | SAMPLE | | |
| 22 | 4329 | RASCHIG RINGS FROM 77C-21 TCLP | 21310181501 | 10.0 | 100 | SAMPLE | | |
| 23 | | | | | | | | |
| 24 | | | | | | | | |
| 25 | | | | | | | | |
| 26 | | | | | | | | |

COMMENTS:

BALANCE ID: 1127492894 TEMP: NA

| | | | | | |
|---|---|---|---|---|---|
| SULFIDE SPIKE ID | 2121511 | CONCENTRATION | 10,000 mg/L | Analyst Review | DATE |
| SULFIDE LCS VOLUME | 1.0mL | | | DNM | 10-21-13 |
| CYANIDE LCS SPIKE ID | 2121422 | CONCENTRATION | 1000ppm | | |
| CYANIDE LCS VOLUME | 2.1mL | | | Secondary Review | DATE |
| SPIKE WITNESS | DT | | | DT | 10-21- |

Revision 1, 08/10/2010

213101712 1319

GCAL

# SULFIDE-TITRIMETRIC
## Methods 4500 S E/SW846 9034

Analyst: DMT
Date: 10-22-13
Time: 8:35

HBN: 518248
Batch: 11160

| SAMPLE Identification | Sulfide TES T or R | SAMPLE VOL. Titrated (mL) | 0.025 N Iodine SOLN (mL) | 0.025 Sodium Thiosulfate SOLN-Titrant (mL) | 6N Acid Vol. (mL) | DILUTION | CONC. | UNITS | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 1244517 MB | R | 50 | 20 | 20.3 | 2.5 | NA | <80 | mg/L | |
| 1244518 LCS | | | | 7.0 | | | 1041 | | 104% |
| 21310164901 | | | | 20.2 | | | <80 | | |
| 1244519 DUP | | | | 20.5 | | | <80 | | 0% RPD |
| 21310164903 | | | | 20.3 | | | <80 | | |
| 21310164905 | | | | 20.8 | | | <80 | | |
| 21310165001 | | | | 20.5 | | | <80 | | |
| 21310165002 | | | | 20.2 | | | <80 | | |
| 21310165003 | | | | 20.1 | | | <80 | | |
| 21310165201 | | | | 19.4 | 3.5 | | <80 | | |
| 21310165203 | | | | 19.5 | 3.5 | | <80 | | |
| 21310165401 | | | | 19.8 | 2.5 | | <80 | | |
| 21310165402 | | | | 19.7 | | | <80 | | |
| 21310165403 | | | | 20.7 | | | <80 | | |
| 21310165501 | | | | 20.0 | | | <80 | | |
| 21310165801 | | | | 19.5 | | | <80 | | |
| 21310166001 | | | | 19.9 | | | <80 | | |
| 21310171201 | | | | 19.9 | | | <80 | | |

T=Total
R=Reactive

Total Sulfide (mg/L or mg/kg) = (mL Iodine x N Iodine) - (mL Titrant x N Titrant) x 16030 / Sample Wt (g) or Sample Volume (mL)

Reactivity Sulfide = Total Sulfide X (final extract volume ÷ initial volume)

0.025 N Iodine Lot # 2121705 Expiration Date: 9/30/14
0.025 N Sodium Thiosulfate Lot # 2121669 Expiration Date: 6/30/15
1:1 HCl Lot # 943-25-7 Expiration Date: 3/24/14
Sulfide Lot#: 2121511 Expiration Date: 3/31/15
Starch Indicator Lot#: 2121670 Expiration Date: 5/30/15

Determined Standard Concentration Values:

Average:

Reviewer/Date: DMT 10/22/13
Secondary Reviewer/Date: KSW 10/22/13

Revision 005: 7/10/2013



21310171201 1320

GCAL ANALYTICAL LABORATORIES, LLC

# SULFIDE-TITRIMETRIC
## Methods 4500 S E/SW846 9034

Analyst: DMT
Date: 10-22-13
Time: 8:35

HBN: 518248
Batch: 11160

| SAMPLE Identification | Sulfide TES T or R | SAMPLE VOL. Titrated (mL) | 0.025 N Iodine SOLN (mL) | 0.025 Sodium Thiosulfate SOLN-Titrant (mL) | 6N Acid Vol. (mL) | DILUTION | CONC. | UNITS | COMMENTS |
|---|---|---|---|---|---|---|---|---|---|
| 21310171263 | R | 50 | 20 | 20.4 | 2.5 | NA | <80 | mg/L | |
| 21310166106 | ↓ | ↓ | ↓ | 19.7 | ↓ | ↓ | <80 | ↓ | |
| 21310173901 | ↓ | ↓ | ↓ | 20.0 | ↓ | ↓ | <80 | ↓ | |
| 21310181501 | ↓ | ↓ | ↓ | 20.1 | ↓ | ↓ | <80 | ↓ | |

T=Total
R=Reactive

Total Sulfide (mg/L or mg/kg) = (mL Iodine x N Iodine) - (mL Titrant x N Titrant) x 16030 / Sample Wt (g) or Sample Volume (mL)

Reactivity Sulfide = Total Sulfide X (final extract volume ÷ initial volume)

0.025 N Iodine Lot # 2121705 Expiration Date: 9/30/14
0.025 N Sodium Thiosulfate Lot # 2121669 Expiration Date: 6/30/15
1:1 HCl Lot # 943-25-7 Expiration Date: 3/24/14
Sulfide Lot#: 2121511 Expiration Date: 3/31/15
Starch Indicator Lot#: 2121670 Expiration Date: 5/30/15

Determined Standard Concentration Values:

Average:

Reviewer/Date: DMT 10/22/13
Secondary Reviewer/Date: [illegible] 10/22/13

21310171212
13221

Revision 005: 7/10/2013

GCAL

# Ignitability of Solids
## SW-846 1030

Analyst: JEm
Date: 10-18-13
Time: 13:30
HBN: 518058

| Sample Number | Hood Velocity | Ambient Temp | Thermocoupler Temp | Material Description | | | | | Powder Size | | | | | | Time Elapsed From Application of Flame and Ignition | Burn Time | Burn Rate = 100 mm/Burn Time | Ignitabile or Non-ignitable |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Paste | Powder | Beads | Metallic | Non-Metallic | Fine | Granular | Clay | Sand | Soil | Sludge | | | | |
| 2131017 1201 | 140 | 66 | >1000 | | | | | ✓ | | ✓ | | | ✓ | | did not ignite or propagate | 2min | | NON |
| 2131017 1203 | 140 | 66 | >1000 | | | | | ✓ | | ✓ | | | ✓ | | did not ignite or propagate | 2min | | NON |
| 2131066106 | 140 | 66 | >1000 | | | | | ✓ | ✓ | | ✓ | | | | did not ignite or propagate | 2min | | NON |
| 2131016610608 | 140 | 66 | >10000 | | | | | ✓ | ✓ | | ✓ | | | | did not ignite or propagate | 2min | | NON |
| 2131010243 8 | 140 | 66 | >1000 | | | | | ✓ | ✓ | | | | ✓ | | ignited but did not propagate | 2min | | NON |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |

Secondary Review: KS 10/18/13

ZL3T01712 1322

GCAL

# SOLIDS DATA SHEET

TSS Oven Temp: 103 - 105 °C
TDS Oven Temp: 178 - 182 °C
TS Oven Temp: 103 - 105 °C
TVS/VSS Muffle Furnace Temp: 550±5% °C
Ash Muffle Furnace Temp: 800±5% °C

Test: D. wt
LCS True Value: NA
HBN: 517984
LCS Lot No.: NA
LCS Exp. Date: NA
BATCH: 20608

| | | |
|---|---|---|
| IW/FW1/FW2: IW | IW/FW1/FW2: FW1 | IW/FW1/FW2: FW2 |
| Balance ID: AX504 | Balance ID: AX504 | Balance ID: AX504 |
| Date/Time: 10/17/13 1503 | Date/Time: 10/18/13 941 | Date/Time: 10/18/13 1359 |
| Analyst: DJH | Analyst: BNL | Analyst: |
| Oven ID: 11 | Oven ID: 11 | Oven ID: |
| Oven Temp °C IN: 104 | Oven Temp °C IN: 104 | Oven Temp °C IN: |
| Date/Time IN: 10/17/13 1530 | Date/Time IN: 10/18/13 948 | Date/Time IN: |
| Date/Time OUT: 10/18/13 750 | Date/Time OUT: 10/18/13 1222 | Date/Time OUT: |
| Oven Temp °C OUT: 104 | Oven Temp °C OUT: 104 | Oven Temp °C OUT: |
| Analyst: DJH/BNL | Analyst: BNL | Analyst: |
| Desiccator ID: 5 | Desiccator ID: 4 | Desiccator ID: |
| Date/Time IN: 10/18/13 750 | Date/Time IN: 10/18/13 1222 | Date/Time IN: |
| Date/Time OUT: 10/18/13 941 | Date/Time OUT: 10/18/13 1344 | Date/Time OUT: |
| Analyst: BNL | Analyst: BNL | Analyst: |

Comments:

IW - Initial Weight
FW1 - 1st Final Weight
FW2 - 2nd Final Weight

Secondary Reviewer/Date: KSW 10/18/13

Rev 003: 09/12/2013

2131017712 1323

# TOTAL SOLIDS AND MOISTURE ANALYSIS (SOLID MATRIX)

Method 2540G

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| HBN | 517984 | | | ANALYST: | DJH | | | | | | DATE: | 10/17/2013 |
| SOLI | 20608 | | | REVIEW: | | | | | | | TIME: | 15:03:00 |
| Sample ID | Pan ID | Pan Mass (g) | Initial Mass (g) (Sample & Pan) | Final Wt. 1 (g) (Sample & Pan) | Final Wt. 2 (g) (Sample & Pan) | Diff (g) | Final Wt. 3 (g) (Sample & Pan) | Diff (g) | Initial Mass Less Pan (g) | Final Mass Less Pan (g) | Total Solid % | Total Moisture % |
| 21310170621 | 25 | 1.2975 | 8.7893 | 8.4152 | 8.4152 | 0.0000 | | | 7.4918 | 7.1177 | 95.01 | 4.99 |
| 21310170622 | 26 | 1.3068 | 12.5403 | 11.6723 | 11.6720 | 0.0003 | | | 11.2335 | 10.3652 | 92.27 | 7.73 |
| 21310170623 | 27 | 1.3043 | 12.8610 | 10.9969 | 10.9969 | 0.0000 | | | 11.5567 | 9.6926 | 83.87 | 16.13 |
| 21310170624 | 28 | 1.3201 | 11.0523 | 10.3151 | 10.3154 | 0.0003 | | | 9.7322 | 8.9953 | 92.43 | 7.57 |
| 21310171201 | 29 | 1.3748 | 11.3523 | 9.5155 | 9.5154 | 0.0001 | | | 9.9775 | 8.1406 | 81.59 | 18.41 |
| 21310171203 | 30 | 1.3290 | 12.0654 | 10.9677 | 10.9677 | 0.0000 | | | 10.7364 | 9.6387 | 89.78 | 10.22 |
| 1244648 RP | 31 | 1.3144 | 12.4030 | 11.3058 | 11.3058 | 0.0000 | | | 11.0886 | 9.9914 | 90.11 | 9.89 |
| 21310171301 | 32 | 1.3062 | 10.2902 | 8.5245 | 8.5245 | 0.0000 | | | 8.9840 | 7.2183 | 80.35 | 19.65 |
| | | | | | | | | | #VALUE! | | | |

3.28% RPD

TS % = ((Final Sample Mass - Initial Sample Mass) x 100) / Initial Sample Mass

TM % = 100-TS%

Method 2540G

21310171212 1324

GCAL
ANALYTICAL LABORATORIES, LLC

# SOLIDS DATA SHEET

TSS Oven Temp: 103 - 105 °C
TDS Oven Temp: 178 - 182 °C
TS Oven Temp: 103 - 105 °C
TVS/VSS Muffle Furnace Temp: 550±5% °C
Ash Muffle Furnace Temp: 800±5% °C

Test: Dryweight
LCS True Value: NA
HBN: 518038
LCS Lot No.: NA
LCS Exp. Date: NA
BATCH: 20615

| | | |
|---|---|---|
| IW/FW1/FW2: IW | IW/FW1/FW2: FW1 | IW/FW1/FW2: FW2 |
| Balance ID: AX504 | Balance ID: ~~AX604~~ | Balance ID: AX504 |
| Date/Time: 10-18-13 / 16:25 | Date/Time: 10/21/13 949 | Date/Time: 10/21/13 1436 |
| Analyst: JEM | Analyst: BML | Analyst: BML |
| Oven ID: 11 | Oven ID: ~~104~~ 11 10/21/13 BML | Oven ID: |
| Oven Temp °C IN: 104 | Oven Temp °C IN: 104 | Oven Temp °C IN: |
| Date/Time IN: 10-18-13 / 17:10 | Date/Time IN: 10/21/13 959 | Date/Time IN: |
| Date/Time OUT: 10/21/13 822 | Date/Time OUT: 10/21/13 1059 | Date/Time OUT: |
| Oven Temp °C OUT: 104 | Oven Temp °C OUT: 104 | Oven Temp °C OUT: |
| Analyst: JEM/BML | Analyst: BML | Analyst: |
| Desiccator ID: 4 | Desiccator ID: 5 | Desiccator ID: |
| Date/Time IN: 10/21/13 822 | Date/Time IN: 10/21/13 1059 | Date/Time IN: |
| Date/Time OUT: 10/21/13 949 | Date/Time OUT: 10/21/13 1436 | Date/Time OUT: |
| Analyst: BML | Analyst: BML | Analyst: |

Comments:

IW - Initial Weight
FW1 - 1st Final Weight
FW2 - 2nd Final Weight

Secondary Reviewer/Date: KSD 10/22/13

Rev 003: 09/12/2013

2131017 12 1325

## TOTAL SOLIDS AND MOISTURE ANALYSIS (SOLID MATRIX)

Method 2540G

| HBN | 518038 | ANALYST: | JEM | DATE: | 10/18/2013 |
|---|---|---|---|---|---|
| SOLI | 20615 | REVIEW: | KSJ 10/22/13 | TIME: | 16:25:00 |

| Sample ID | Pan ID | Pan Mass (g) | Initial Mass (g) (Sample & Pan) | Final Wt. 1 (g) (Sample & Pan) | Final Wt. 2 (g) (Sample & Pan) | Diff (g) | Final Wt. 3 (g) (Sample & Pan) | Diff (g) | Initial Mass Less Pan (g) | Final Mass Less Pan (g) | Total Solid % | Totol Moisture % |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 21310174601 | 101 | 1.3183 | 12.5907 | 11.1506 | 11.1505 | 0.0001 | | | 11.2724 | 9.8322 | 87.22 | 12.78 |
| 21310174602 | 102 | 1.3189 | 11.0297 | 8.9489 | 8.9488 | 0.0001 | | | 9.7108 | 7.6299 | 78.57 | 21.43 |
| 21310174603 | 103 | 1.3184 | 11.8365 | 10.0375 | 10.0370 | 0.0005 | | | 10.5181 | 8.7186 | 82.89 | 17.11 |
| 1244935 DMP | 104 | 1.3211 | 12.4118 | 10.4845 | 10.4844 | 0.0001 | | | 11.0907 | 9.1633 | 82.62 | 17.38 |
| 21310174604 | 105 | 1.3174 | 12.8931 | 11.0036 | 11.0037 | 0.0001 | | | 11.5757 | 9.6863 | 83.68 | 16.32 |
| 21310174605 | 106 | 1.3265 | 10.7296 | 7.9707 | 7.9707 | 0.0000 | | | 9.4031 | 6.6442 | 70.66 | 29.34 |
| 21310175201 | 107 | 1.3243 | 11.4525 | 10.2327 | 10.2326 | 0.0001 | | | 10.1282 | 8.9083 | 87.96 | 12.04 |
| 21310175202 | 108 | 1.3159 | 12.4964 | 10.9985 | 10.9987 | 0.0002 | | | 11.1805 | 9.6828 | 86.60 | 13.40 |
| 21310175203 | 109 | 1.3293 | 11.4260 | 9.6297 | 9.6297 | 0.0000 | | | 10.0967 | 8.3004 | 82.21 | 17.79 |
| 21310171205 | 110 | 1.3333 | 11.0002 | 8.5179 | 8.5176 | 0.0003 | | | 9.6669 | 7.1843 | 74.32 | 25.68 |
| 21310171207 | 111 | 1.3049 | 12.0311 | 11.7914 | 11.7913 | 0.0001 | | | 10.7262 | 10.4864 | 97.76 | 2.24 |
| 21310171209 | 112 | 1.3296 | 11.9319 | 10.9417 | 10.9416 | 0.0001 | | | 10.6023 | 9.6120 | 90.66 | 9.34 |
| 21310171211 | 113 | 1.3162 | 13.0502 | 9.9491 | 9.9490 | 0.0001 | | | 11.7340 | 8.6328 | 73.57 | 26.43 |
| 1244936 DMP | 114 | 1.3181 | 13.2743 | 9.9999 | 9.9998 | 0.0001 | | | 11.9562 | 8.6817 | 72.61 | 27.39 |
| 21310171213 | 115 | 1.3227 | 11.7438 | 8.0852 | 8.0850 | 0.0002 | | | 10.4211 | 6.7623 | 64.89 | 35.11 |

1.5790 RPD

3.5790 RPD

TS % = ((Final Sample Mass - Initial Sample Mass) x 100) / Initial Sample Mass

TM % = 100-TS%

Method 2540G

21310171712 1326

Total Solids Solid Spreadsheet, Version 2, 01/26/11

GCAL ANALYTICAL LABORATORIES, LLC

7979 GSRI Ave., Baton Rouge, LA 70820-7402
Phone: 225.769.4900 • Fax: 225.767.5717 • www.gcal.com

# CHAIN OF CUSTODY RECORD

**Client ID:** 4847 - Resolution Consultants - AECOM
**SDG:** 213101712
**Due Date:** 10/28/13

**Report to:**
Client: Robert Shoemaker
Address: 250 Apollo Drive
Chelmsford MA 01824
Contact: Robert Shoemaker
Phone: 9789052393
E-mail: robert.shoemaker@aecom.com

**Bill to:**
Client: Keith D Wright
Address: 4840 Cox Road
Glen Allen, VA 23060
Contact:
Phone: 804-515-8355
E-mail:

P.O. Number:
Project Name/Number: Davisville 60273164
Sampled By:

GCAL use only:
Custody Seal used ☐ yes ☐ no
intact ☐ yes ☐ no
Temperature °C 4.7 522

☐ Dissolved Analysis Requested
☐ Field filtered
☐ Lab filtered

Analytical Requests & Method

| Matrix[1] | Date | Time (2400) | Comp | Grab | Sample Description | No Containers | SVOCs (Ice) | TPH (Ice) | Pest/PCBs (Ice) | Metals (Ice) | Ignitability/reactivity/corrosivity (Ice) | Herbicides (Ice) | TCLP (Ice) | | VOCs (DI meoH) | TCLP VOCs (Ice) | | Preservative |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SE | 10/16/13 | 1600 | X | | RS-COMP1-101613 | 4 | X | X | X | X | X | X | X | | | | | 1,2 |
| SE | 10/16/13 | 1700 | X | | RS-COMP2-101613 | 4 | X | X | X | X | X | X | X | | | | | 3,4 |
| SE | 10/16/13 | 15:10 | | X | RS-CB02-101613 | 6 | | | | | | | | | X | X | | 5,6 |
| SE | 10/16/13 | 16:10 | | X | RS-CB05-101613 | 6 | | | | | | | | | X | X | | 7,8 |
| SE | 10/16/13 | 15:05 | | X | RS-~~CB06~~ CB03-101613 | 6 | | | | | | | | | X | X | | 9,10 |
| SE | 10/16/13 | 15:35 | | X | RS-CB08-101613 | 6 | | | | | | | | | X | X | | 11,12 |
| SE | 10/16/13 | 15:00 | | X | RS-QDC1-101613 | 6 | | | | | | | | | X | X | | 13,14 |
| WQ | 09/30/13 | – | | X | TB01-101613 | 4 | | | | | | | | | X | | | did not receive 10/18 SH |

Air Bill No: 8017 8129 1257

Turn Around Time (Business Days): ☐ 24h* ☐ 48h* ☐ 3 days* ☐ 1 week* ☐ Standard (Per Contract/Quote)

| Relinquished by: (Signature) | Date: | Time: | Received by: (Signature) | Date: | Time: |
|---|---|---|---|---|---|
| [signature] | 10/16/13 | 1700 | | | |
| [signature] | 10/17/13 | 1030 | [signature] | 10/17/13 | 1030 |
| Relinquished by: (Signature) | Date: | Time: | Received by: (Signature) | Date: | Time: |

Note: TCLP lead added for sample 2 based on client reg limits. All other samples were below, no TCLP needed 11/14 SH

By submitting these samples, you agree to GCAL's terms and conditions contained in our most recent schedule of services.

Matrix1: W = water, S = solid, L = liquid, T = ...

WHITE: CLIENT FINAL REPORT

GCAL ANALYTICAL LABORATORIES, LLC

# SAMPLE RECEIVING CHECKLIST

*213101712*

| SAMPLE DELIVERY GROUP 213101712 | |
|---|---|
| **Client**<br>4847 - Resolution Consultants - AECOM | **Transport Method**<br>FEDEX |
| **Profile Number**<br>245664 | **Received By**<br>Law, Brittany P. |
| **Line Item(s)**<br>1 - Soil | **Receive Date(s)**<br>10/17/13 |

| CHECKLIST | YES | NO | NA |
|---|---|---|---|
| Were all samples received using proper thermal preservation? | ✓ | | |
| When used, were all custody seals intact? | ✓ | | |
| Were all samples received in proper containers? | ✓ | | |
| Were all samples received using proper chemical preservation? | ✓ | | |
| Was preservative added to any container at the lab? | | ✓ | |
| Were all containers received in good condition? | ✓ | | |
| Were all VOA vials received with no head space? | ✓ | | |
| Do all sample labels match the Chain of Custody? | | ✓ | |
| Did the Chain of Custody list the sampling technician? | | ✓ | |
| Was the COC maintained i.e. all signatures, dates and time of receipt included? | ✓ | | |

## COOLERS

| Airbill | Thermometer ID: E22 | Temp(°C) |
|---|---|---|
| 8017 8129 1251 | | 4.7 |

## DISCREPANCIES

None

## LAB PRESERVATIONS

None

| NOTES | |
|---|---|

213101712 1328

# Appendix C

# Daily Field Reports

# DAILY REPORT

RESOLUTION CONSULTANTS

| | | | |
|---|---|---|---|
| | | **Date:** | December 2, 2013 |
| | | **Day:** | Monday |
| **Project:** | Maintenance Cleaning of the QDC Outfall 001 Drain Line and Associated Catch Basins; Former NCBC Davisville, North Kingstown, RI | | |
| **Contract No.:** | N62470-11-D-8013 | **Wind:** | none |
| **CTO No.:** | WE23 | **Humidity:** | low |
| **Resolution Project No.:** | 60273164 | **Weather:** | cloudy with temperatures ranging from 30-45° F |
| **Navy RPM:** | Jeffrey Dale | | |
| **Resolution Consultants Personnel On Site:** | Brian Serrecchia, Robert Shoemaker | | |
| **Subcontractors On Site:** | Cyn Environmental: Kevin (foreman), Kris, and Eric. | | |
| **Navy Personnel On Site:** | None | | |
| **Visitors On Site:** | None | | |
| **Equipment On Site:** | Vactor Truck (3000 gallon), Support truck, 30 yard dumpster | | |
| **Health And Safety Levels And Activities:** | A tailgate health and safety meeting was conducted prior to the start of all work activities. All work was performed in Level D, with the addition of earplugs, as appropriate. | | |
| **Work Performed:** | Resolution and Cyn personnel performed a site walk to inspect the catch basins and QDC Outfall 001. Cyn personnel cleaned 10 catch basins (CB-02, CB-03-01, CB-03-02, CB-03-03, CB-03-04, CB-09-01, CB-09-02, CB-08, CB-06, and CB-07). Note: CB-02 and CB-08 will be revisited and pressure washed tomorrow. | | |
| **Problems Encountered/ Corrective Action Taken:** | Catch basins CB-02 and CB-08 could not be completely vactored out from the ground surface due to the thickness of the residual material in the catch basins and the presence of debris in the catch basins. Therefore, Cyn will need to enter these catch basins for adequate cleaning. It is also anticipated that catch basins CB-03, CB-09, and CB-04 will require entry for adequate cleaning. Cyn personnel will follow all Confined Space Entry procedures in their HASP and will have proper monitoring and PPE. A pressure washer will be brought to the site to aid in the cleaning. | | |
| **Special Notes:** | All confined space entry procedures will be reviewed during the tailgate safety meeting Tuesday December 3, 2013. A Frac Tank for the aqueous waste stream will be delivered on the morning of Tuesday December 3, 2013. | | |
| **Tomorrow's Expectations:** | Complete the cleaning of catch basins CB-02 and CB-08, and clean catch basins CB-09, CB-04, and CB-05. These catch basins will be entered and pressure washed as needed. | | |
| **By:** Brian Serrecchia | TITLE: Field Site Manager (Resolution Consultants) (m)508-717-7792 | | |

# DAILY REPORT

RESOLUTION CONSULTANTS

| | | | |
|---|---|---|---|
| | | **Date:** | December 3, 2013 |
| | | **Day:** | Tuesday |
| **Project:** | Maintenance Cleaning of the QDC Outfall 001 Drain Line and Associated Catch Basins; Former NCBC Davisville, North Kingstown, RI | | |
| **Contract No.:** | N62470-11-D-8013 | **Wind:** | none |
| **CTO No.:** | WE23 | **Humidity:** | low |
| **Resolution Project No.:** | 60273164 | **Weather:** | cloudy with temperatures ranging from 30-45° F |
| **Navy RPM:** | Jeffrey Dale | | |
| **Resolution Consultants Personnel On Site:** | Brian Serrecchia | | |
| **Subcontractors On Site:** | Cyn Environmental: Kevin Sullivan (foreman), Chris Vingi, and Eric Hollis. | | |
| **Navy Personnel On Site:** | None | | |
| **Visitors On Site:** | None | | |
| **Equipment On Site:** | Vactor Truck (3000 gallon), Support truck, 30 yard dumpster, and 21,000 gallon Frac Tank | | |
| **Health And Safety Levels And Activities:** | A tailgate health and safety meeting was conducted prior to the start of all work activities. Confined space entry was discussed and appropriate equipment was used during the entry of catch basins. | | |

**Work Performed:**

Cyn personnel cleaned 5 catch basins (CB-02, CB-08, CB-09, CB-03 and CB-04). All required confined space entry to clean and pressure wash the walls.

| ID | DTB | Wall Material | Floor Material | Amount of Sediment |
|---|---|---|---|---|
| CB-02 | 11’ | Brick | Concrete | 8” |
| CB-08 | 9’ | Brick | Concrete | 6” |
| CB-09 | 8.5’ | Brick | Concrete | 3” |
| CB-03 | 10’ | Brick | Concrete | 36” |
| CB-04 | 18’ | Brick/Concrete | Concrete | 60” |

| | |
|---|---|
| **Problems Encountered/ Corrective Action Taken:** | none |
| **Special Notes:** | All confined space entry procedures were reviewed during the tailgate safety meeting today. A Frac Tank for the aqueous waste stream was delivered this morning. |
| **Tomorrow’s Expectations:** | Complete the cleaning of catch basins CB-05, construct containment at QDC Outfall 001, and construct a hay bale enclosure at the fire hydrant. |
| **By:** Brian Serrecchia | TITLE: Field Site Manager (Resolution Consultants) (m)508-717-7792 |

# DAILY REPORT

RESOLUTION CONSULTANTS

| | | | |
|---|---|---|---|
| | | **Date:** | December 4, 2013 |
| | | **Day:** | Tuesday |
| **Project:** | Maintenance Cleaning of the QDC Outfall 001 Drain Line and Associated Catch Basins; Former NCBC Davisville, North Kingstown, RI | | |
| **Contract No.:** | N62470-11-D-8013 | **Wind:** | none |
| **CTO No.:** | WE23 | **Humidity:** | low |
| **Resolution Project No.:** | 60273164 | **Weather:** | cloudy with temperatures ranging from 30-45° F |
| **Navy RPM:** | Jeffrey Dale | | |
| **Resolution Consultants Personnel On Site:** | Brian Serrecchia | | |
| **Subcontractors On Site:** | Cyn Environmental: Kevin Sullivan (foreman), Chris Vingi, and Eric Hollis. | | |
| **Navy Personnel On Site:** | None | | |
| **Visitors On Site:** | Christine Williams(617-918-1384) from EPA and Richard Gottllieb (401-222-2797) from RIDEM | | |
| **Equipment On Site:** | Vactor Truck (3000 gallon), Support truck, 30 yard dumpster, and 21,000 gallon Frac Tank | | |
| **Health And Safety Levels And Activities:** | A tailgate health and safety meeting was conducted prior to the start of all work activities. Confined space entry was discussed and appropriate equipment was used during the entry of catch basins. | | |

**Work Performed:**

Cyn personnel cleaned catch basins CB-05. Confined space entry was required to clean and pressure wash the walls.

| ID | DTB | Wall Material | Floor Material | Amount of Sediment |
|---|---|---|---|---|
| CB-05 | 9’ | Brick | Concrete | 28” |

Cyn emptied and cleaned the vactor truck, offloading 5-6 yards of solids in the rolloff dumpster and approximately 200 gallons of water into the frac tank.

Cyn cleared the area leading to and around the excavation at QDC Outfall 001 in preparation of constructing the containment basin. Cyn also constructed a hay bale enclosure at the fire hydrant to prevent freezing of the water meter.

| | |
|---|---|
| **Problems Encountered/ Corrective Action Taken:** | none |
| **Special Notes:** | During the site visit by EPA and RIDEM, they recommended that the containment at QDC Outfall 001 be constructed one day prior to cleaning the drain line associated with CB-04 instead of today since there may be rain in the forecast. Resolution agreed with this suggestion. The area was cleared, but the liner was not installed. |
| **Tomorrow’s Expectations:** | Begin cleaning the drain lines with the water jetting.QDC will install the water meter on the hydrant first thing in the morning. |
| **By:** Brian Serrecchia | TITLE: Field Site Manager (Resolution Consultants) (m)508-717-7792 |

# DAILY REPORT

RESOLUTION CONSULTANTS

| | | | |
|---|---|---|---|
| | | **Date:** | December 5, 2013 |
| | | **Day:** | Thursday |
| **Project:** | Maintenance Cleaning of the QDC Outfall 001 Drain Line and Associated Catch Basins; Former NCBC Davisville, North Kingstown, RI | | |
| **Contract No.:** | N62470-11-D-8013 | **Wind:** | none |
| **CTO No.:** | WE23 | **Humidity:** | low |
| **Resolution Project No.:** | 60273164 | **Weather:** | cloudy with temperatures ranging from 30-45° F |
| **Navy RPM:** | Jeffrey Dale | | |
| **Resolution Consultants Personnel On Site:** | Brian Serrecchia, Robert Shoemaker | | |
| **Subcontractors On Site:** | Cyn Environmental: Kevin Sullivan (foreman), Chris Vingi<br>Podgurski: Mike Cannon | | |
| **Navy Personnel On Site:** | None | | |
| **Visitors On Site:** | Dave Galvin (Cyn Account Manager) | | |
| **Equipment On Site:** | Vactor Truck (3000 gallon), Support truck, 30 yard dumpster, and 21,000 gallon Frac Tank, Water Jetting Truck | | |
| **Health And Safety Levels And Activities:** | A tailgate health and safety meeting was conducted prior to the start of all work activities. | | |
| **Work Performed:** | Cyn personnel along with Podgurski personnel cleaned the drain lines associated with CB-09-01, CB-09-02, CB-03-04, CB-03-03, CB-03-02, CB-03-01, CB-08, CB-07, and CB-06 via water jetting and vactoring.<br><br>Cyn emptied and cleaned the vactor truck, offloading 2-3 yards of solids in the rolloff dumpster and approximately 5,000 gallons of water into the frac tank. | | |
| **Problems Encountered/ Corrective Action Taken:** | After discussing the fire hydrant with QDC, it was decided to use the fire hydrant near the intersection of Marine Road and Davisville Road instead of the fire hydrant near the trailer. QDC believes the fire hydrant near the trailer is on a dry water line. The hay bale enclosure that had previously been constructed at the hydrant near the trailer was moved to the hydrant near the intersection of Marine Road and Davisville Road. | | |
| **Special Notes:** | none | | |
| **Tomorrow's Expectations:** | Continue cleaning the drain lines with the water jetting/vactoring. | | |
| **By:** Brian Serrecchia | TITLE: Field Site Manager (Resolution Consultants) (m)508-717-7792 | | |

# DAILY REPORT

RESOLUTION CONSULTANTS

| | | | |
|---|---|---|---|
| | | **Date:** | December 6, 2013 |
| | | **Day:** | Friday |
| **Project:** | Maintenance Cleaning of the QDC Outfall 001 Drain Line and Associated Catch Basins; Former NCBC Davisville, North Kingstown, RI | | |
| **Contract No.:** | N62470-11-D-8013 | **Wind:** | none |
| **CTO No.:** | WE23 | **Humidity:** | low |
| **Resolution Project No.:** | 60273164 | **Weather:** | cloudy with temperatures ranging from 30-45° F |
| **Navy RPM:** | Jeffrey Dale | | |
| **Resolution Consultants Personnel On Site:** | Brian Serrecchia | | |
| **Subcontractors On Site:** | Cyn Environmental: Kevin Sullivan (foreman), Chris Vingi<br>Podgurski: Mike Cannon | | |
| **Navy Personnel On Site:** | None | | |
| **Visitors On Site:** | None | | |
| **Equipment On Site:** | 2 Vactor Trucks (3000 gallon), Support truck, 30 yard dumpster, and 21,000 gallon Frac Tank, Water Jetting Truck | | |
| **Health And Safety Levels And Activities:** | A tailgate health and safety meeting was conducted prior to the start of all work activities.<br>An additional H&S meeting took place after Cyn personnel cut his left hand with a blade. We discussed how it happened, and discussed the corrective action that would be in place. AECOM reminded Cyn personnel to use cut resistant gloves and automatic retractable blades or seat belt cutters when cutting is required on the site. | | |
| **Work Performed:** | Cyn constructed the containment at the outfall area with two layers of plastic and hay bales. In addition, sand bags were placed at the end of the pipe to help control water flow. An additional vactor truck was staged at the end of the pipe to collect any water from that end.<br>Drain lines were cleaned from CB-04 to CB-05. An attempt to clean the drain line from CB-05 to the outfall was made; however the sediment was caked on to the pipe and very difficult to remove. See special notes below for additional information.<br>Cyn emptied and cleaned the vactor truck, offloading 2-3 yards of solids in the rolloff dumpster and approximately 3,000 gallons of water into the frac tank.<br>Total to Date: ~8000 gallons of water and 8 yards of sediment | | |
| **Problems Encountered/ Corrective Action Taken:** | Chris Vingi (Cyn field staff) cut his left hand with a fixed blade knife, Cyn was reminded that only safe cutting tools are to be used on this job. AECOM recommended automatic retractable blades or seat belt cutters. | | |
| **Special Notes:** | During the cleaning of the drain line between CB-05 and the outfall, it was determined that the sediment was very hard and compact and would need additional pressure and water to free the sediment up. Based on the amount of water that would be produced to effectively clean the outfall pipe, Cyn suggested that the soil at the end of the outfall be excavated and a sump installed to collect the large volume of water that will be produced during the cleaning. The sump will require a mini excavator and a 300 gallon plastic sump. Construction of the containment will be done on December 12, 2013. | | |

| ***DAILY REPORT*** | | **Date:** | *December 6, 2013* |
|---|---|---|---|
| | | **Day:** | *Friday* |
| ***Tomorrow's Expectations:*** | *Continue cleaning the drain lines with the water jetting.* | | |
| ***By:*** *Brian Serrecchia* | *TITLE: Field Site Manager (Resolution Consultants) (m)508-717-7792* | | |

# DAILY REPORT

RESOLUTION CONSULTANTS

| | | | |
|---|---|---|---|
| | | **Date:** | December 9, 2013 |
| | | **Day:** | Monday |
| **Project:** | Maintenance Cleaning of the QDC Outfall 001 Drain Line and Associated Catch Basins; Former NCBC Davisville, North Kingstown, RI | | |
| **Contract No.:** | N62470-11-D-8013 | **Wind:** | none |
| **CTO No.:** | WE23 | **Humidity:** | low |
| **Resolution Project No.:** | 60273164 | **Weather:** | Rain with temperatures ranging from 30-45° F |
| **Navy RPM:** | Jeffrey Dale | | |
| **Resolution Consultants Personnel On Site:** | Brian Serrecchia | | |
| **Subcontractors On Site:** | Cyn Environmental: Kevin Sullivan (foreman), Eric Hollis<br>Podgurski: Mike Gorman | | |
| **Navy Personnel On Site:** | None | | |
| **Visitors On Site:** | EPA contractor Andrew Glucksman (Mabbett Associates) | | |
| **Equipment On Site:** | Vactor Truck (3000 gallon), Support truck, 30 yard dumpster, and 21,000 gallon Frac Tank, Water Jetting Truck | | |
| **Health And Safety Levels And Activities:** | A tailgate health and safety meeting was conducted prior to the start of all work activities. | | |
| **Work Performed:** | Cyn personnel along with Podgurski personnel cleaned the drains with water jetting associated with CB-09, CB-03, CB-04.<br>Cyn emptied and cleaned the vactor truck, offloading 2-3 yards of solids in the rolloff dumpster and approximately 3,000 gallons of water into the frac tank. An aqueous sample for waste characterization analysis was collected from the frac tank by Cyn.<br>Total to Date: ~11,000 gallons of water and 12 yards of sediment | | |
| **Problems Encountered/ Corrective Action Taken:** | none | | |
| **Special Notes:** | none | | |
| **Tomorrow's Expectations:** | Return to the site on Thursday December 12, 2013, construct the sump at the outfall to handle the higher pressure/volume needed, and complete the cleaning of the drain line from CB-05 to QDC Outfall 001. This should complete the maintenance cleaning activity for the QDC Outfall 001 drain line and associated catch basins. | | |
| **By:** Brian Serrecchia | TITLE: Field Site Manager (Resolution Consultants) (m)508-717-7792 | | |

# DAILY REPORT

RESOLUTION CONSULTANTS

| | | | |
|---|---|---|---|
| | | **Date:** | December 19, 2013 |
| | | **Day:** | Thursday |
| **Project:** | Maintenance Cleaning of the QDC Outfall 001 Drain Line and Associated Catch Basins; Former NCBC Davisville, North Kingstown, RI | | |
| **Contract No.:** | N62470-11-D-8013 | **Wind:** | moderate |
| **CTO No.:** | WE23 | **Humidity:** | low |
| **Resolution Project No.:** | 60273164 | **Weather:** | sunny with temperatures ranging from 30-45° F |
| **Navy RPM:** | Jeffrey Dale | | |
| **Resolution Consultants Personnel On Site:** | Brian Serrecchia, Bob Shoemaker | | |
| **Subcontractors On Site:** | Cyn Environmental: Bill Gardner (foreman), Chris Vingi, Calos Marcel, and Andy Estes<br>Podgurski: Mike Gorman | | |
| **Navy Personnel On Site:** | None | | |
| **Visitors On Site:** | Andrew Glucksman (Mabbett), Bill Brandon (EPA), Jerry Keefe (EPA) | | |
| **Equipment On Site:** | 2 Vactor Trucks (3000 gallon), Support truck, 30 yard dumpster, and 21,000 gallon Frac Tank, Water Jetting Truck | | |
| **Health And Safety Levels And Activities:** | A tailgate health and safety meeting was conducted prior to the start of all work activities.<br>Topics included: slips and trips due to the snow/ice that was present, reiterated that no fixed blade knives used during the project, and also discussed the use of a reciprocating saw during the cutting of a steel drum (temporary sump) at the outfall. | | |
| **Work Performed:** | The area immediately downgradient of the outfall was excavated to a depth of approximately 18" below the existing grade. The excavated area was lined with two layers of 10 mil poly sheeting and a cut steel drum was installed as a temporary sump to collect the wash water during the water jetting from CB05 to the outfall. A hose from an additional vactor truck was deployed in the temporary sump to aid in collecting the wash water. At the completion of the water jetting, the poly sheeting was removed and disposed of with the solid waste, and the spoils from the exaction were put back in place outside the outfall.<br>Cyn emptied and cleaned the vactor truck, offloading ~1.5 yard of solids in the rolloff dumpster and approximately 2,100 gallons of water was taken offsite. | | |
| **Problems Encountered/ Corrective Action Taken:** | none | | |
| **Special Notes:** | | | |
| **Tomorrow's Expectations:** | Monday- 12/23/13 – Pump and clean the frac tank<br>Tuesday – remove frac tank from site<br>Week of December 30th remove rolloff container from site | | |
| **By:** Brian Serrecchia | TITLE: Field Site Manager (Resolution Consultants) (m)508-717-7792 | | |

# DAILY REPORT

RESOLUTION CONSULTANTS

| | | | |
|---|---|---|---|
| | | **Date:** | December 23, 2013 |
| | | **Day:** | Monday |
| **Project:** | Maintenance Cleaning of the QDC Outfall 001 Drain Line and Associated Catch Basins; Former NCBC Davisville, North Kingstown, RI | | |
| **Contract No.:** | N62470-11-D-8013 | **Wind:** | none |
| **CTO No.:** | WE23 | **Humidity:** | low |
| **Resolution Project No.:** | 60273164 | **Weather:** | cloudy with light rain, temperatures ranging from 40-42° F |
| **Navy RPM:** | Jeffrey Dale | | |
| **Resolution Consultants Personnel On Site:** | Robert Shoemaker | | |
| **Subcontractors On Site:** | Cyn Environmental: Kevin Sullivan (foreman), Chris Vingi, Christian Amaro, and Wayne Martin | | |
| **Navy Personnel On Site:** | None | | |
| **Visitors On Site:** | None | | |
| **Equipment On Site:** | 1 Vactor Trucks (3000 gallon), Support truck, 30 yard dumpster, and 21,000 gallon Frac Tank | | |
| **Health And Safety Levels And Activities:** | A tailgate health and safety meeting was conducted prior to the start of all work activities.<br>Topics included: potential rain, slips and trips, reiterated that no fixed blade knives used during the project | | |
| **Work Performed:** | The excavation spoils that were put back in place in the area immediately downgradient of the outfall were vactored up to the greatest extent possible. Approximately 1 yard of solids were vactored and emptied into the rolloff dumpster.<br>Cyn cleaned and vactored the 21,000 gallon frac tank. Approximately 2,200 gallons of water was taken offsite. | | |
| **Problems Encountered/ Corrective Action Taken:** | none | | |
| **Special Notes:** | | | |
| **Tomorrow's Expectations:** | Tuesday December 31st remove rolloff container from site | | |
| **By:** Robert Shoemaker | TITLE: CTO Manager (Resolution Consultants) (m)774-242-9037 | | |

# Appendix D

# Waste Manifests

207916 ST

CNHW 403

| NON-HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Waste Tracking Number |
|---|---|---|---|---|
| | R I 6 1 7 0 0 2 2 0 3 6 | 1 | (800) 899-1038 | 207916ST - CYN2 |

5. Generator's Name and Mailing Address
Att: Mr. David Barney
Department of the Navy - NAVFAC HQ
P.O. Box 169
South Weymouth MA 02190
Generator's Phone: 617 753-4656

Generator's Site Address (if different than mailing address)
Department of the Navy - NCBC Davisville
151 Marine Road
North Kingstown RI 02852

6. Transporter 1 Company Name
Cyn Oil Corporation
U.S. EPA ID Number: MAD082303777

7. Transporter 2 Company Name
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Cyn Oil Corporation
1771 Washington St.
Stoughton MA 02072
Facility's Phone: 781 341-5108
U.S. EPA ID Number: MAD082303777

| 9. Waste Shipping Name and Description | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. |
|---|---|---|---|---|
| 1. Non-RCRA, Non-DOT Regulated Material | 001 | TT | 5862 | G |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |

13. Special Handling Instructions and Additional Information
(1) Non-regulated waste water, Cyn lab ID no. 09013910.

GENERATOR/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national government regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.

I certify that the waste minimization statement identified in 40 CFR 262.27 (if I am a large quantity generator) or (if I am a small quantity generator) is true.

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: DAVID BARNEY
Signature:
Month Day Year: 12 13 13

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Kevin M. Sullivan
Signature:
Month Day Year: 12 13 13

Transporter 2 Printed/Typed Name:
Signature:
Month Day Year:

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number:
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year:

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Richard Hume
Signature:
Month Day Year: 12 13 13

GENERATOR | INT'L | TRANSPORTER | DESIGNATED FACILITY

169-BLC-O 6 10498 (Rev. 9/09)

DESIGNATED FACILITY TO GENERATOR

CNHW

| NON-HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Waste Tracking Number |
|---|---|---|---|---|
| | R I 6 1 7 0 0 2 2 0 3 6 | 1 | (800) 899-1038 | 2 0 7 9 1 6 S T - C Y N 3 |

GENERATOR

5. Generator's Name and Mailing Address
Department of the Navy - NAVFAC HQ
P.O. Box 169
South Weymouth MA 02190
Generator's Phone: 617 753-4656

Att: Mr. David Barney

Generator's Site Address (if different than mailing address)
Department of the Navy - NCBC Davisville
151 Marine Road
North Kingstown RI 02852

6. Transporter 1 Company Name
Cyn Oil Corporation
U.S. EPA ID Number
M A D 0 8 2 3 0 3 7 7 7

7. Transporter 2 Company Name
U.S. EPA ID Number

8. Designated Facility Name and Site Address
Cyn Oil Corporation
1771 Washington St.
Stoughton MA 02072
Facility's Phone: 781 341-5108
U.S. EPA ID Number
M A D 0 8 2 3 0 3 7 7 7

| | 9. Waste Shipping Name and Description | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | |
|---|---|---|---|---|---|---|
| | 1. Non-RCRA, Non-DOT Regulated Material | 0 0 1 | TT | 2100 | G | |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

13. Special Handling Instructions and Additional Information
(I) Non-regulated waste water, Cyn lab ID no. 09013910.

GENERATOR/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.

14. GENERATOR/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: DAVID BARNEY
Signature
Month 12 Day 19 Year 13

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: CARLOS MARCAL
Signature
Month 12 Day 19 Year 13
Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

17. Discrepancy
17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:
17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a
Printed/Typed Name: Richard Hume
Signature
Month 12 Day 20 Year 13

CNHW

| NON-HAZARDOUS WASTE MANIFEST | 1. Generator ID Number | 2. Page 1 of | 3. Emergency Response Phone | 4. Waste Tracking Number |
|---|---|---|---|---|
| | R I 6 1 7 0 0 2 2 0 3 6 | 1 | (800) 899-1038 | 2 0 7 9 1 6 S T - C Y N 4 |

GENERATOR

5. Generator's Name and Mailing Address
Att: Mr. David Barney
Department of the Navy - NAVFAC HQ
P.O. Box 169
South Weymouth MA 02190
Generator's Phone: 617 753-4656

Generator's Site Address (if different than mailing address)
Department of the Navy - NCBC Davisville
151 Marine Road
North Kingstown RI 02852

6. Transporter 1 Company Name
Cyn Oil Corporation
U.S. EPA ID Number: M A D 0 8 2 3 0 3 7 7 7

7. Transporter 2 Company Name
U.S. EPA ID Number:

8. Designated Facility Name and Site Address
Cyn Oil Corporation
1771 Washington St.
Stoughton MA 02072
Facility's Phone: 781 341-5108
U.S. EPA ID Number: M A D 0 8 2 3 0 3 7 7 7

| 9. Waste Shipping Name and Description | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. |
|---|---|---|---|---|
| 1. Non-RCRA, Non-DOT Regulated Material | 0 0 1 | TT | 2200 | G |
| 2. | | | | |
| 3. | | | | |
| 4. | | | | |

13. Special Handling Instructions and Additional Information
(1) Non-regulated waste water, Cyn lab ID no. 09013910.

~~GENERATOR/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.~~

~~I certify that the waste minimization statement identified in 40 CFR 262.27 (a)(4) or (b)(4) is a true and accurate statement.~~

14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

Generator's/Offeror's Printed/Typed Name: DAVID BARNEY
Signature:
Month Day Year: 12 23 13

INT'L

15. International Shipments ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit:
Transporter Signature (for exports only): Date leaving U.S.:

TRANSPORTER

16. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Kevin M. Sullivan
Signature:
Month Day Year: 12 23 13

Transporter 2 Printed/Typed Name
Signature
Month Day Year

DESIGNATED FACILITY

17. Discrepancy

17a. Discrepancy Indication Space ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection

Manifest Reference Number:

17b. Alternate Facility (or Generator)
U.S. EPA ID Number
Facility's Phone:

17c. Signature of Alternate Facility (or Generator)
Month Day Year

18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a

Printed/Typed Name: John Donahue
Signature:
Month Day Year: 12 23 13

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved. OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: R I G 1 7 0 0 2 2 0 3 6
2. Page 1 of: 1
3. Emergency Response Phone: (800) 309-1001
4. Manifest Tracking Number: 012337399 JJK

5. Generator's Name and Mailing Address: Department of the Navy - NAVFAC HQ, P O Box 169, South Weymouth MA 02190
Attn: Mr. David Barney
Generator's Phone: 617 753-4056

Generator's Site Address (if different than mailing address): Department of the Navy NCBC Davisville, 151 Marine Road, North Kingstown RI 02852

6. Transporter 1 Company Name: Cyn Oil Corporation — U.S. EPA ID Number: M A D 0 8 2 3 0 3 7 7 7

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Chemical Waste Management, 1550 Balmer Road, Model City NY 14107 — U.S. EPA ID Number: N Y D 0 4 0 8 3 6 6 7 9
Facility's Phone: 716 754-8231

| 9a. HM | 9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | 10. Containers Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes | | |
|---|---|---|---|---|---|---|---|---|
| X | 1. RQ UN3288, WASTE Toxic solid, inorganic, n.o.s. (Lead) 6.1 PGIII | 0 0 1 | CM | 10 | Y | D008 | T | |
| | 2. | | | | | | | |
| | 3. | | | | | | | |
| | 4. | | | | | | | |

14. Special Handling Instructions and Additional Information: (E) Catch basin spoils (silt/sand) containing lead LHG#154
Pink #NY 301 7[illegible]
Trailer # 5260
Lot # 2509
31 yrs 3320
(Pro) 2220 (TN)

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: DAVID BARNEY — Signature: [signature] — Month 12 Day 12 Year 15

**GENERATOR**

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. — Port of entry/exit: — Date leaving U.S.:
Transporter signature (for exports only):

**INT'L**

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Jeffrey Hawkins — Signature: [signature] — Month 12 Day 31 Year 2015
Transporter 2 Printed/Typed Name — Signature — Month Day Year

**TRANSPORTER**

18. Discrepancy
18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H132 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Jody Pochynok — Signature: [signature] — Month 1 Day 7 Year 16

**DESIGNATED FACILITY**

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

**TRANSPORTER'S COPY**

207916ST

Please print or type. (Form designed for use on elite (12-pitch) typewriter.)

Form Approved OMB No. 2050-0039

**UNIFORM HAZARDOUS WASTE MANIFEST**

1. Generator ID Number: R 1 6 1 7 0 0 2 2 0 3 6
2. Page 1 of: 1
3. Emergency Response Phone: (800) 859-1018
4. Manifest Tracking Number: 012337507 JJK

5. Generator's Name and Mailing Address: Attn. Mr. David Barney
Department of the Navy - NAVFAC HQ
P O Box 189
South Weymouth MA 02190
Generator's Phone: 6 1 7 7 5 3 - 4 6 5 6

Generator's Site Address (if different than mailing address):
Department of the Navy - NCRC Davisville
151 Marine Road
North Kingstown RI 02852

6. Transporter 1 Company Name: Cyn Oil Corporation — U.S. EPA ID Number: M A D 0 8 2 3 0 3 7 7 7

7. Transporter 2 Company Name — U.S. EPA ID Number:

8. Designated Facility Name and Site Address: Chemical Waste Management
1550 Balmer Road
Model City NY 14107
Facility's Phone: 716 754-8231 — U.S. EPA ID Number: N Y D 0 4 9 8 3 6 6 7 9

| 9a. HM | 9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any)) | 10. Containers No. | Type | 11. Total Quantity | 12. Unit Wt./Vol. | 13. Waste Codes |
|---|---|---|---|---|---|---|
| X | 1. RQ UN3288, WASTE Toxic solid, inorganic, n.o.s. (Lead) 6.1, PGIII | 0 0 1 | CM | 8 | Y | D008 T |
| | 2. | | | | | |
| | 3. | | | | | |
| | 4. | | | | | |

14. Special Handling Instructions and Additional Information: (E) Catch basin spoils (silt/sand) containing lead SIS# 1017015-1 ERC#151
Mani.# NY301783 MDC
TRUCK# 826
R/O# 2510 JOB# 207916-ST
8/46-3365

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: X DAVID BARNEY — Signature: X — Month 01 Day 15 Year 2014

16. International Shipments: ☐ Import to U.S. ☐ Export from U.S. Port of entry/exit: Date leaving U.S.:
Transporter signature (for exports only):

17. Transporter Acknowledgment of Receipt of Materials
Transporter 1 Printed/Typed Name: Jeffery Henriques — Signature: — Month 01 Day 15 Year 2014
Transporter 2 Printed/Typed Name — Signature — Month Day Year

18. Discrepancy
18a. Discrepancy Indication Space: ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☐ Full Rejection
Manifest Reference Number:
18b. Alternate Facility (or Generator) — U.S. EPA ID Number
Facility's Phone:
18c. Signature of Alternate Facility (or Generator) — Month Day Year

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)
1. H132 2. 3. 4.

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a
Printed/Typed Name: Jody Hinck — Signature — Month 1 Day 7 Year 14

GENERATOR — INT'L — TRANSPORTER — DESIGNATED FACILITY

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

TRANSPORTER'S COPY