REPORT

COMPLETION REPORT
CENTRAL WATERFRONT SITE
CHEVRON SUBAREA INTERIM ACTION

Prepared for

Port of Bellingham

1801 Roeder Avenue

Bellingham, Washington 98227

Prepared by

Anchor QEA, LLC

720 Olive Way, Suite 1900

Seattle, Washington 98101

June 2013

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LIST OF ACRONYMS AND ABBREVIATIONS

µg/L	micrograms per liter
AO	Agreed Order No. DE 3441
ASB	Aerated Stabilization Basin
ASTM	American Society for Testing and Materials
CESCL	Certified Erosion and Sediment Control Lead
City	City of Bellingham
Ecology	Washington State Department of Ecology
H:V	horizontal to vertical
HDPE	high-density polyethylene
IA	Interim Action
mg/kg	milligrams per kilogram
MLLW	mean lower low water
MTCA	Model Toxics Control Act (Chapter 173-340 WAC)
NAPL	Non-aqueous phase liquid
NPDES	National Pollutant Discharge Elimination System
PAH	polycyclic aromatic hydrocarbon
Port	Port of Bellingham
RAM	RAM Construction General Contractors, Inc.
Report	Completion Report
RI/FS	remedial investigation/feasibility study
Site	Central Waterfront Site
SVOC	semi-volatile organic compound
TESC	temporary erosion and sedimentation controls
TPH	total petroleum hydrocarbons
USACE	U.S. Army Corps of Engineers
VOC	volatile organic compound
WAC	Washington Administrative Code
WSST	Washington State Sales Tax

1 INTRODUCTION

The Port of Bellingham (Port) performed an Interim Action (IA) at the Central Waterfront Site (Site) in Bellingham, Washington (Figure 1), excavating and removing non-aqueous phase liquid (NAPL) petroleum and petroleum-impacted soil and sediments from the Chevron subarea beach in order to prevent previously observed petroleum sheen on Whatcom Waterway.

The IA was conducted under Agreed Order No. DE 3441 (AO), as amended on September 25, 2012 (Ecology 2006, 2012a) between the Port, the City of Bellingham (City), and the Washington State Department of Ecology (Ecology). This Completion Report (Report) has been prepared in accordance with the Model Toxics Control Act (MTCA; Washington Administrative Code [WAC] 173-340-400 (6)(b)(ii)) to document construction activities and the engineer's opinion that, based on the testing results and inspections, the interim cleanup action was constructed in substantial compliance with the Interim Action Work Plan (Anchor QEA 2012), permits, plans, and specifications.

1.1 Site Description and Background

The Site encompasses 55 acres and includes both upland property (bounded by Whatcom and I & J waterways, Roeder Avenue, and the former Aerated Stabilization Basin [ASB] facility) and in-water nearshore surface sediments in Whatcom and I & J waterways. The Site is comprised of four contaminated sites that were previously managed separately under the MTCA: the Roeder Avenue Landfill Site, the Olivine Corp. Hilton Site (Olivine Uplands), the Chevron Bellingham Port Site (Chevron Terminal), and the Colony Wharf Site (Figure 2). In 2003, due to the presence of comingled groundwater contamination, Ecology consolidated these four sites (herein referred to as subareas) into a single area-wide site now known as the Central Waterfront Site. In 2006, the Port and City entered into the AO with Ecology to perform a remedial investigation/feasibility study (RI/FS) for the Site, which is currently in progress.

The Chevron subarea was operated as a bulk fuel terminal from approximately 1913 until the late 1980s. The former terminal included two tank farms (north and south yards), a rail loading dock with associated piping, three tanker truck loading racks (one in the north yard

and two in the south yard), a rail loading rack (south yard), product storage warehouse and office (south yard), and facility piping and stormwater management features. Former terminal features, including above-ground storage tanks and loading racks, have been demolished at the property. Bulkheads in various conditions and the Chevron terminal dock remain in place along the Whatcom Waterway shoreline.

The Chevron subarea property was acquired by the Port in 2004 and is currently leased by the Port to The Landings at Colony Wharf, which in turn sublets portions of their leasehold to a gravel-hauling company and other tenants. The gravel-hauling company offloads gravel from barges using the Colony Wharf barge loading facility. The gravel is either stockpiled on site or is delivered directly to construction projects in Whatcom County.

Petroleum hydrocarbons and associated constituents have been identified in soil and groundwater within the Chevron subarea. Numerous independent investigations and interim cleanup actions have been performed by Chevron at the former Chevron property.

The first amendment to the AO (AO Amendment 2012) required the Port to undertake the Chevron subarea beach cleanup as an IA before completing the RI/FS. The IA outlined in the Work Plan developed for this Site (Anchor QEA 2012) was implemented to reduce the potential threat to human health and the environment by eliminating, or substantially reducing, one or more pathways for exposure to a hazardous substance at the Site. The approximate extent of the IA area is shown in Figure 3. The IA was implemented in advance of selecting the final cleanup action for the Site and does not preclude reasonable alternatives for the final cleanup action (WAC 173-340-430(3)(b)).

1.1.1 Construction Bidding

On October 29, 2012, Ecology approved the Work Plan (Anchor QEA 2012) and the Port prepared the final version of the construction documents. On November 4, 2012 and November 7, 2012, the Port published a Notice of Bid in the *Bellingham Herald*.

There were nine General Contractors on the Plan Holders List and six bids were received. The bids were open and read aloud in public at 10:00 a.m. on November 21, 2012, with bids

ranging from $229,954 to $485,476, including Washington State Sales Tax (WSST) of 8.7%. For comparison purposes, Anchor QEA's Engineer's Estimate was $359,248 including WSST. RAM Construction General Contractors, Inc. (RAM) of Bellingham, Washington, was determined to be the lowest responsive and responsible bidder and the Port Commission awarded the contract to them at their regular commission meeting on December 4, 2012.

1.2 Report Organization

Following this introductory section, the remaining sections of this Report are as follows:

- Section 2 – Construction Activities
- Section 3 – Surveys and As-builts
- Section 4 – Performance Sampling Results
- Section 5 – Deviations
- Section 6 – Opinion of the Engineer
- Section 7 – References

Appendices to this document include:

- Appendix A – Surveys
- Appendix B – Inspector's Field Activity Reports
- Appendix C – Analytical Data Report
- Appendix D – Summary of Weight Tickets

2 CONSTRUCTION ACTIVITIES

2.1 Mobilization and Temporary Erosion and Sedimentation Controls

The Port issued the Notice to Proceed to RAM on December 18, 2012. RAM prepared their work plans during the last two weeks of December and submitted them to the Port and Anchor QEA for approval. RAM mobilized their equipment to the Site between January 3 and January 7, 2013 and performed the pre-construction survey on January 7. RAM installed temporary erosion and sedimentation controls (TESC), including a 10-foot deep silt curtain and oil absorbent boom on the waterward side of the Site on January 7, in preparation for excavation activities.

2.2 Piling and Debris Removal

Prior to beginning excavation activities, wood debris was removed from the Site and the contractor attempted to extract exposed wood piling from the planned excavation area. RAM wrapped steel chain chokers around the pile stubs and pulled on them using a Hitachi EX 450 excavator. The excavator tugged on them repeatedly in an attempt to break the skin friction. Of the seven pile extractions attempted, only one pile was removed. Consistent with the Work Plan, U.S. Army Corps of Engineers (USACE) permit, and construction documents, and because of the inefficiency of this method and the time lost during the valuable low tide window of opportunity, the remaining piling were cut off at the bottom of the excavation rather than extracted. The piling that was successfully extracted did not appear to be treated wood, as bark was intact on the pile; this pile was approximately 14 feet long.

2.3 Excavation

Excavation activities were performed between January 7 and January 11, 2013 during nightly low tides. The excavation was accomplished with a Hitachi EX 450 long reach excavator. Excavated soils were placed directly into shipping containers for transport and disposal at the Roosevelt Regional Landfill managed by Allied Waste. Plastic liners were provided for the containers where soil moisture was excessive. The containers were filled during the night shift, stored on Site, and trucked to the transfer station (intermodal yard) in Ferndale the following day. A total of 46 containers of excavated soil and sediment weighing 1,180.5 tons

were removed from the Site (an average of 25.66 tons per container). One container of creosote-treated timber (14.76 tons) was also removed from the Site. A summary of weight tickets for the material transported off site for disposal is included in Appendix D.

The excavation was performed in "strips" based on how much excavation could be performed during a low-tide event. Excavation started each evening at the water side and worked inland. The bottom surface of the excavation at elevation +2 feet mean lower low water (MLLW) was observed for visual or olfactory evidence of petroleum impacts. During excavation on January 9, the soils encountered at elevation +2 feet MLLW had a strong petroleum-like odor and an additional foot of material was removed. Similarly, on January 10, the soils encountered at elevation +2 feet MLLW had a petroleum-like odor, so the contractor excavated an additional foot to elevation +1 foot MLLW. This horizon still had a petroleum-like odor, so Anchor QEA directed the contractor to excavate to elevation 0 feet MLLW, consistent with the Work Plan. The bottom elevation was maintained for a horizontal distance of approximately 16 feet (toward the upland) until a 2 horizontal to 1 vertical (H:V) slope was cut to match the top of the slope at the landward limits of the excavation. Free product was encountered and flowed out of the side slopes between elevations +8 feet and +3 feet MLLW on the landward side of the excavation. This product was contained in a sump and was pumped with a 3-inch submersible pump to an on-site 18,000 gallon storage tank. Steel plates were driven into the ground at the boundary between each day's work to prevent contaminated soils and product from contaminating the adjacent clean backfill.

Performance samples were collected each day in accordance with the Work Plan and are discussed below in Section 4. Two samples at the bottom of the excavation and three samples from the side slope were collected each day (Figure 4).

Vertical and horizontal controls were verified by RAM using a Trimble DGPS system in accordance with the bid specifications. Survey results are discussed in Section 3. The location of each performance sample was also recorded with the GPS unit.

2.4 Backfill

The excavation was backfilled each day prior to inundation by the tide in accordance with the bid specifications. A sheet of impermeable geomembrane (20 mil thick high-density polyethylene [HDPE]) was placed down the excavated side slope and along 10 feet of the excavation bottom. A minimum 2-foot thick layer of sand was placed over the entire excavated area followed by a minimum 1-foot thick layer of filter gravel and a minimum 1.5-foot thick layer of armor stone. A layer of fish mix was placed over the armor stone to fill the interstitial spaces. This layer was approximately equivalent to 6 inches of material (0.28 tons per square yard). A summary of weight tickets for imported backfill materials is included in Appendix D.

Each layer of material was surveyed utilizing the Trimble DGPS system prior to placing the succeeding layer in accordance with the bid specifications. The as-built drawings prepared by RAM in accordance with the bid specifications are included in Appendix A.

2.5 Water Management

RAM developed a project dewatering approach to manage stormwater and groundwater collected in the excavation prior to discharge into the ASB under existing National Pollutant Discharge Elimination System (NPDES) Permit WA-000109-1, as approved by Ecology on November 7, 2012 (Ecology 2012b). The contractor provided an 18,000-gallon liquid storage Rain for Rent container with separate settling chambers. The liquid storage container was plumbed to an oil-water separator. The liquid storage tank and oil-water separator were set up and staged upland of the excavation area. The contractor utilized one 3-inch submersible pump and one 3-inch gasoline-powered centrifugal trash pump to manage the groundwater during the nightly excavations. Secondary containment vessels were provided for the pumps and generators during fueling and dewatering. Excavation sumps were provided for each pump at approximate elevation +2. The excavation sumps collected the oily groundwater during each of the nightly excavations and the collected water was pumped directly into the liquid storage container for settling. The storage container was monitored during each work shift for capacity exceedances. No capacity exceedances were noted. Stormwater was diverted at the top of the slope above the work area with earthen berms to keep stormwater from flowing into the excavations. Mitch Pelzer of RAM was the on-site Certified Erosion

and Sediment Control Lead (CESCL) for the project. RAM provided a plastic-lined equipment decontamination bunker to collect the equipment decontamination wash water. The decontamination wash water was pumped into the liquid storage container prior to discharge to the ASB.

On Monday, January 14, 2013, after all site excavations were completed and groundwater management activity concluded, the contractor requested to discharge the stored water generated during excavation into the ASB. Anchor QEA staff inspected the plumbing from the liquid storage tank to the oil/water separator, as well as discharge hoses and couplings for leaks prior to discharge into the ASB. No leaks were noted. The volume of water discharged to the ASB is estimated at approximately 17,000 gallons. As requested by Ecology, Anchor QEA staff collected water quality samples prior to discharge and delivered them to the laboratory for analysis. Analytical results will also be provided to Ecology in a separate letter to satisfy Ecology's approval of the discharge.

3 SURVEYS AND AS-BUILTS

As part of pre-construction submittals, the contractor submitted a Survey Plan to the Port, which included the surveyor's statement of qualifications, anticipated survey schedule, and procedures and equipment to be used for each type of survey. The survey equipment used was a Trimble 5603 Total Station and M5750 Base Station with TSC2 Controller. Prior to excavation work, the contractor provided a Control Survey, showing horizontal controls with coordinates and vertical control benchmarks.

Before excavation began, the contractor provided a Pre-Excavation Survey of the entire area to be excavated. A Post-Excavation/Pre-Backfill Survey was provided upon completion of each nightly excavation and Post-Backfill Surveys were provided following placement of each layer of backfill. After the project was completed, these daily surveys were stitched together to provide surfaces for each layer of backfill (sand cap, filter layer, armor layer, and final surface, which includes the fish mix layer). See Appendix A for these surveys.

After the excavation and backfill operations were completed, the contractor provided a Post-Backfill Survey to confirm that the required backfill elevations have been met as shown on the plans. A general as-built cross-section based on the surveys showing representative backfill thicknesses is presented in Figure 5. No areas were identified as requiring corrective action.

4 PERFORMANCE SAMPLING RESULTS

4.1 Performance Sampling Procedures

Performance sampling was completed in accordance with the Ecology-approved Sampling and Analysis Plan (Anchor QEA 2012). Performance samples were collected daily in two locations along the bottom of the excavation and three from the side slope.[1] The side slope samples were collected at approximate elevations of +3, +6, and +9 feet MLLW. Only one sidewall sample was collected on January 11 because high groundwater flow made the side slope unstable. Soils to be tested for volatile organic compounds (VOCs) were collected first from undisturbed soils using dedicated sample equipment in accordance with American Society for Testing and Materials (ASTM) Method 5035B. Additional soils were collected from the same location for total petroleum hydrocarbon (TPH) analysis after VOC sample collection. The soils were collected using decontaminated stainless steel spoons and placed in decontaminated stainless steel bowls. These soils were homogenized, placed in pre-labeled glass jars, and stored in a cooler containing ice for transport to the testing laboratory. In locations where the side slopes were unstable, soil was collected in the bucket of the excavator and sampling occurred from undisturbed locations within the bucket.

In accordance with the Ecology NPDES permit requirements, one water sample was collected from the storage tank after the water had passed through an oil-water separator and prior to being discharged to the ASB.

4.2 Results

In accordance with the Ecology-approved Work Plan, performance soil samples were analyzed for benzene and TPH (gasoline, diesel, and motor-oil range). The water sample was analyzed for metals, VOCs, semi-volatile organic compounds (SVOCs), polycyclic aromatic hydrocarbons (PAHs), and TPH (gasoline, diesel, and motor-oil range) in order to comply with the Port's NPDES permit, which allows discharges to the ASB.

Results from performance sampling are discussed below, with soil and water performance sample data presented in Tables 1 and 2, respectively. Analytical lab reports are included in

[1] Performance sampling frequency/spacing was approved by Ecology as a minor modification to the Work Plan.

Appendix C. Because the IA excavation area was pre-defined based on visual extent of NAPL in sediment and soil, a quantitative remediation level was not established by Ecology for the IA. However, soil samples were collected on the base and sidewalls of the excavation to document TPH and related constituents concentrations remaining in place after completion of the IA. Ten out of the 18 soil performance samples had detected concentrations of benzene ranging from 0.00026 to 0.0036 milligrams per kilogram (mg/kg). TPH in the diesel-range was detected in 16 out of the 18 samples at concentrations ranging from 8.1 to 5,600 mg/kg; however, only two of those concentrations were above 2,000 mg/kg. The two samples with TPH in the diesel-range exceeding 2,000 mg/kg (S13 and S14) were located along the upland sidewalls of the excavation and not in beach sediments in direct contact with Whatcom Waterway. The clean backfill in the excavation was isolated from these upland impacts by placement of the impermeable liner. TPH in the gasoline-range and in the motor-oil range were detected in 9 out of 18 and 15 out of 18 samples, respectively. The detected TPH gasoline-range concentrations ranged from 5.6 to 100 mg/kg while the TPH motor oil-range concentrations ranged from 30 to 950 mg/kg.

The discharge water sample had one detected VOC (naphthalene at 0.94 micrograms per liter [µg/L]), and a total PAH concentration of 3.33 J[2] µg/L. TPH gasoline-range was detected at a concentration of 280 µg/L and TPH diesel-range was detected at concentration of 790 µg/L. In addition, several metals were detected, including barium (249 µg/L), calcium (228,000 µg/L), copper (7 µg/L), iron (1,560 µg/L), magnesium (271,000 µg/L), manganese (720 µg/L), nickel (10 µg/L), potassium (83,200 µg/L), sodium (2,260,000 µg/L), and zinc (60 µg/L). The discharge water data will be submitted to Ecology under separate cover to comply with the Port's NPDES discharge permit.

[2] Estimated value

5 DEVIATIONS

The work was generally performed in compliance with the approved Work Plan. The following deviations were noted:

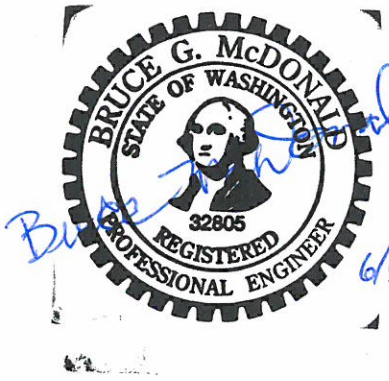
- Previously unknown buried bulkheads were discovered approximately 5 feet behind the western and southern bulkheads, which prevented excavation to full planned horizontal limits and depth between these bulkheads. These buried bulkheads were left in place to minimize destabilizing the existing outer bulkheads.
- Steel tie-back rods attached to the southern bulkhead were removed as they were no longer attached to the buried timber deadman and were not providing any support.
- Two buried pile and timber structures were discovered adjacent to the southern bulkheads and were removed and disposed of.
- Only one remnant wood pile was fully extracted from the Site. The others could not reasonably be extracted with the excavator. These piles were cut off at the bottom of the excavation.
- .Additional HDPE geomembrane (approximately 40 feet by 40 feet) was placed in the southeast section of the excavation, extending waterward of the planned extent of HDPE liner to confine large quantities of oily groundwater flowing in this area during excavation. The geomembrane was placed from approximately elevation +1 MLLW at the existing waterward timber bulkhead to approximately elevation +14 MLLW at top of slope. The excavation was completed in this area to approximately elevation 0 feet MLLW and the geomembrane was placed on an approximately 1-foot thick sand layer that was used to stop and confine the product seeps encountered during excavation.
- Only one side wall sample was collected in the southeast corner of the Site because of the unstable soils caused by the high groundwater flows.

6 OPINION OF THE ENGINEER

The interim remedial action for the contaminated soils at the Chevron Subarea of the Central Waterfront Site on Whatcom Waterway has been completed in substantial compliance with the Interim Action Work Plan dated September 2012 and the Technical Specifications dated December 2012.

Bruce McDonald

Bruce McDonald, P.E., CCM
Managing Engineer
Anchor QEA, LLC



7 REFERENCES

Anchor QEA, 2012. *Interim Action Work Plan, Central Waterfront Site, Chevron Subarea*. Prepared for the Port of Bellingham. September 2012.

Ecology (Washington State Department of Ecology), 2006. *In the Matter of Remedial Action by the Port of Bellingham and the City of Bellingham*. Agreed Order No. DE 3441 issued by Washington State Department of Ecology. September 2006.

Ecology, 2012a. *In the Matter of Remedial Action by the Port of Bellingham and the City of Bellingham*. First Amendment to Agreed Order No. DE 3441 issued by Washington State Department of Ecology. 2012.

Ecology, 2012b. Email from: Brian Sato, Ecology. To: Brian Gouran, Port of Bellingham. Regarding: Approval of Project Dewatering Approach. January 4, 2013.

TABLES

Table 1
Soil Confirmation Samples Analytical Summary

Task	CWChevronJan2013	CWChevronJan2013	CWChevronJan2013	CWChevronJan2013	CWChevronJan2013	CWChevronJan2013	CWChevronJan2013	CWChevronJan2013
Location ID	S1	S2	S3	S4	S5	S6	S7	S8
Lab Sample ID	CSIA-20130107-001B	CSIA-20130107-002B	CSIA-20130107-003S+3	CSIA-20130107-004S+6	CSIA-20130107-005S+9	CSIA20130109-006B	CSIA20130109-007B	CSIA20130109-008S+3
Sample Date	1/7/2013	1/7/2013	1/7/2013	1/7/2013	1/7/2013	1/9/2013	1/9/2013	1/9/2013
Depth	10 - 10 ft	10 - 10 ft	3 - 3 ft	6 - 6 ft	9 - 9 ft	10 - 10 ft	10 - 10 ft	3 - 3 ft
Sample Type	N	N	N	N	N	N	N	N
X	1240976	1240968	1240962	1240958	1240953	1240993	1240979	1240968
Y	642810.2	642816.8	642824.4	642832	642841.3	642818.4	642827.2	642837.4
Volatile Organics (mg/kg)								
Benzene	0.00052 U	0.00044 U	0.0006 U	0.0011 U	0.0007 U	**0.0003 J**	**0.00045 J**	**0.00038 J**
Total Petroleum Hydrocarbons (mg/kg)								
Diesel range hydrocarbons (silica gel treated)	**43**	**54**	**20**	**330**	**43**	5.9 U	**280**	6 U
Gasoline range hydrocarbons	1.8 U	2.8 U	3.3 U	5.1 U	3 U	2.8 U	2.1 U	3 U
Motor oil range (silica gel treated)	**54**	**68**	**30**	**820**	**120**	12 U	**130**	12 U

Notes:

Bold = Detected result

J = Estimated value
mg/kg = milligrams per kilogram
N = Normal Field Sample
U = Compound analyzed, but not detected above detection limit
µg/kg = micrograms per kilogram

Data Validated by LDC
EPA level 2 data validation has been applied.

FINAL VALIDATED DATA

Table 1
Soil Confirmation Samples Analytical Summary

Task	CWChevronJan2013	CWChevronJan2013	CWChevronJan2013	CWChevronJan2013	CWChevronJan2013	CWChevronJan2013	CWChevronJan2013	CWChevronJan2013
Location ID	S9	S10	S11	S12	S13	S14	S15	S16
Lab Sample ID	CSIA20130109-009S+6	CSIA20130109-010S+9	CSIA20130110-011B	CSIA20130110-012B	CSIA20130110-013S+3	CSIA20130110-014S+6	CSIA20130110-015S+9	CSIA20130111-016B
Sample Date	1/9/2013	1/9/2013	1/10/2013	1/10/2013	1/10/2013	1/10/2013	1/10/2013	1/11/2013
Depth	6 - 6 ft	9 - 9 ft	10 - 10 ft	10 - 10 ft	3 - 3 ft	6 - 6 ft	9 - 9 ft	10 - 10 ft
Sample Type	N	N	N	N	N	N	N	N
X	1240961	1240959	1241001	1240999	1240984	1240983	1240981	1241020
Y	642841.6	642847.8	642832.2	642838.5	642859	642864.8	642868.8	642850.6
Volatile Organics (mg/kg)								
Benzene	0.00044 U	**0.00026 J**	**0.0022**	**0.0036**	**0.0034**	0.0048 U	**0.0026 J**	**0.0014**
Total Petroleum Hydrocarbons (mg/kg)								
Diesel range hydrocarbons (silica gel treated)	**14**	**160**	**610**	**170**	**8.1**	**5600**	**4600**	**1600**
Gasoline range hydrocarbons	2.4 U	**14**	**20**	**5.6**	**100**	**95**	**65**	**26**
Motor oil range (silica gel treated)	**30**	**67**	**210**	**63**	12 U	**950**	**860**	**300**

Notes:

Bold = Detected result

J = Estimated value
mg/kg = milligrams per kilogram
N = Normal Field Sample
U = Compound analyzed, but not detected above detec
µg/kg = micrograms per kilogram

Data Validated by LDC
EPA level 2 data validation has been applied.

FINAL VALIDATED DATA

Table 1
Soil Confirmation Samples Analytical Summary

Task	CWChevronJan2013	CWChevronJan2013
Location ID	S17	S18
Lab Sample ID	CSIA20130111-017B	CSIA20130111-018S+9
Sample Date	1/11/2013	1/11/2013
Depth	10 - 10 ft	9 - 9 ft
Sample Type	N	N
X	1241007.51	1241003.09
Y	642859.13	642874.23
Volatile Organics (mg/kg)		
Benzene	0.00046 U	**0.00087**
Total Petroleum Hydrocarbons (mg/kg)		
Diesel range hydrocarbons (silica gel treated)	**1300**	**240**
Gasoline range hydrocarbons	**8.6**	**100**
Motor oil range (silica gel treated)	**240**	**170**

Notes:

Bold = Detected result

J = Estimated value
mg/kg = milligrams per kilogram
N = Normal Field Sample
U = Compound analyzed, but not detected above detec
µg/kg = micrograms per kilogram

Data Validated by LDC
EPA level 2 data validation has been applied.

FINAL VALIDATED DATA

Table 2
Discharge Water Sample Analytical Summary

Task	CWChevronJan2013
Sample ID	CSIA20130114-001DW
Sample Date	1/11/2013
Sample Type	N
Metals (µg/L)	
Arsenic	50 U
Barium	**249**
Calcium	**228000**
Chromium	5 U
Copper	**7**
Iron	**1560**
Lead	20 U
Magnesium	**271000**
Manganese	**720**
Mercury	0.1 U
Nickel	**10**
Potassium	**83200**
Sodium	**2260000**
Zinc	**60**
Volatile Organics (µg/L)	
1,1,1,2-Tetrachloroethane	0.2 U
1,1,1-Trichloroethane	0.2 U
1,1,2,2-Tetrachloroethane	0.2 U
1,1,2-Trichloroethane	0.2 U
1,1,2-Trichlorotrifluoroethane	0.2 U
1,1-Dichloroethane	0.2 U
1,1-Dichloroethene	0.2 U
1,1-Dichloropropene	0.2 U
1,2,3-Trichlorobenzene	0.5 U
1,2,3-Trichloropropane	0.5 U
1,2,4-Trichlorobenzene	0.5 U
1,2,4-Trimethylbenzene	0.2 U
1,2-Dibromo-3-chloropropane	0.5 U
1,2-Dichlorobenzene	0.2 U
1,2-Dichloroethane	0.2 U
1,2-Dichloroethene, cis-	0.2 U
1,2-Dichloroethene, trans-	0.2 U
1,2-Dichloropropane	0.2 U
1,3,5-Trimethylbenzene (Mesitylene)	0.2 U
1,3-Dichlorobenzene	0.2 U
1,3-Dichloropropane	0.2 U
1,3-Dichloropropene, cis-	0.2 U
1,3-Dichloropropene, trans-	0.2 U
1,4-Dichloro-2-butene, trans-	1 U
1,4-Dichlorobenzene	0.2 U
2,2-Dichloropropane	0.2 U
2-Butanone (MEK)	5 U
2-Chloroethylvinyl ether	1 U
2-Chlorotoluene	0.2 U
2-Hexanone (Methyl butyl ketone)	5 U
4-Chlorotoluene	0.2 U
4-Isopropyltoluene (4-Cymene)	0.2 U
Acetone	5 U
Acrolein	5 U
Acrylonitrile	1 U
Benzene	0.2 U
Bromobenzene	0.2 U
Bromochloromethane	0.2 U
Bromodichloromethane	0.2 U
Bromoform (Tribromomethane)	0.2 U
Bromomethane (Methyl bromide)	1 U
Carbon disulfide	0.2 U
Carbon tetrachloride (Tetrachloromethane)	0.2 U
Chlorobenzene	0.2 U
Chloroethane	0.2 U
Chloroform	0.2 U
Chloromethane	0.5 U
Dibromochloromethane	0.2 U
Dibromomethane	0.2 U
Dichloromethane (Methylene chloride)	1 U
Ethanol	10000 U
Ethyl bromide (Bromoethane)	0.2 U
Ethylbenzene	0.2 U
Ethylene dibromide (1,2-Dibromoethane)	0.2 U

Table 2
Discharge Water Sample Analytical Summary

Task	CWChevronJan2013
Sample ID	CSIA20130114-001DW
Sample Date	1/11/2013
Sample Type	N
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	0.5 U
Isopropylbenzene (Cumene)	0.2 U
m,p-Xylene	0.4 U
Methyl iodide (Iodomethane)	1 U
Methyl isobutyl ketone (4-Methyl-2-pentanone or (MIBK))	5 U
Methyl tert-butyl ether (MTBE)	0.5 U
Naphthalene	**0.94**
n-Butylbenzene	0.2 U
n-Propylbenzene	0.2 U
o-Xylene	0.2 U
sec-Butylbenzene	0.2 U
Styrene	0.2 U
tert-Butylbenzene	0.2 U
Tetrachloroethene (PCE)	0.2 U
Toluene	0.2 U
Trichloroethene (TCE)	0.2 U
Trichlorofluoromethane (Fluorotrichloromethane)	0.2 U
Vinyl acetate	0.2 U
Vinyl chloride	0.2 U
Semivolatile Organics (µg/L)	
1,2,4-Trichlorobenzene	1 U
1,2-Dichlorobenzene	1 U
1,3-Dichlorobenzene	1 U
1,4-Dichlorobenzene	1 U
2,2'-Oxybis (1-chloropropane)	1 U
2,4,5-Trichlorophenol	5 U
2,4,6-Trichlorophenol	3 U
2,4-Dichlorophenol	3 U
2,4-Dimethylphenol	3 U
2,4-Dinitrophenol	20 U
2,4-Dinitrotoluene	3 U
2,6-Dinitrotoluene	3 U
2-Chloronaphthalene	1 U
2-Chlorophenol	1 U
2-Methylphenol (o-Cresol)	1 U
2-Nitroaniline	3 U
2-Nitrophenol	3 U
3,3'-Dichlorobenzidine	5 U
3-Nitroaniline	3 U
4-Bromophenyl-phenyl ether	1 U
4-Chloro-3-methylphenol	3 U
4-Chloroaniline	5 U
4-Chlorophenyl phenyl ether	1 U
4-Methylphenol (p-Cresol)	2 U
4-Nitroaniline	3 U
4-Nitrophenol	10 U
Benzoic acid	20 U
Benzyl alcohol	2 U
bis(2-Chloroethoxy)methane	1 U
bis(2-Chloroethyl)ether	1 U
bis(2-Ethylhexyl)phthalate	3 U
Butylbenzyl phthalate	1 U
Carbazole	1 U
Dibenzofuran	**0.9 J**
Diethyl phthalate	1 U
Dimethyl phthalate	1 U
Di-n-butyl phthalate	1 U
Dinitro-o-cresol (4,6-Dinitro-2-methylphenol)	10 U
Di-n-octyl phthalate	1 U
Hexachlorobenzene	1 U
Hexachlorobutadiene (Hexachloro-1,3-butadiene)	3 U
Hexachlorocyclopentadiene	5 U
Hexachloroethane	2 U
Isophorone	1 U
Nitrobenzene	1 U
n-Nitrosodi-n-propylamine	1 U
n-Nitrosodiphenylamine	1 U
Pentachlorophenol	10 U
Phenol	1 U
Polycyclic Aromatic Hydrocarbons (µg/L)	

Table 2
Discharge Water Sample Analytical Summary

Task	CWChevronJan2013
Sample ID	CSIA20130114-001DW
Sample Date	1/11/2013
Sample Type	N
1-Methylnaphthalene	0.1 U
2-Methylnaphthalene	0.1 U
Acenaphthene	**0.8**
Acenaphthylene	0.1 U
Anthracene	**0.08 J**
Benzo(a)anthracene	0.1 U
Benzo(a)pyrene	0.1 U
Benzo(b)fluoranthene	0.1 U
Benzo(b,j,k)fluoranthenes	0.2 U
Benzo(g,h,i)perylene	0.1 U
Benzo(j)fluoranthene	0.1 U
Benzo(k)fluoranthene	0.1 U
Chrysene	0.1 U
Dibenzo(a,h)anthracene	0.1 U
Dibenzofuran	0.1 U
Fluoranthene	**0.17**
Fluorene	**0.9**
Indeno(1,2,3-c,d)pyrene	0.1 U
Naphthalene	**0.35**
Phenanthrene	**0.24**
Pyrene	**0.14**
Total HPAH (9 of 16) (U = 1/2)	**0.86**
Total LPAH (7 of 16) (U = 1/2)	**2.47 J**
Total PAH (16) (U = 1/2)	**3.33 J**
Total Petroleum Hydrocarbons (ug/L)	
Diesel range hydrocarbons	**790**
Gasoline range hydrocarbons	**280**
Motor oil range (silica gel treated)	200 U

Notes:
Bold = Detected result
J = Estimated value
mg/L = milligrams per liter
PAH = polycyclic aromatic hydrocarbon
U = Compound analyzed, but not detected above detection limit
µg/L = micrograms per liter
Totals are calculated as the sum of all detected results and 1/2 the undetected result. If all are undetected results, the highest reporting limit value is reported as the sum.
Total 16 LPAH (Low PAH) are the total of 2-Methylnapthalene, Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene and Anthracene

Total 16 HPAH (High PAH) are the total of Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(x)fluoranthenes, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene and Benzo(g,h,i)perylene

Data Validated by LDC
EPA level 2 data validation has been applied.

FINAL VALIDATED DATA

FIGURES

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ANCHOR QEA

Project North

True North

0 Feet 3,000 6,000

Figure 1
Vicinity Map
Chevron Subarea Interim Action Report
Port of Bellingham

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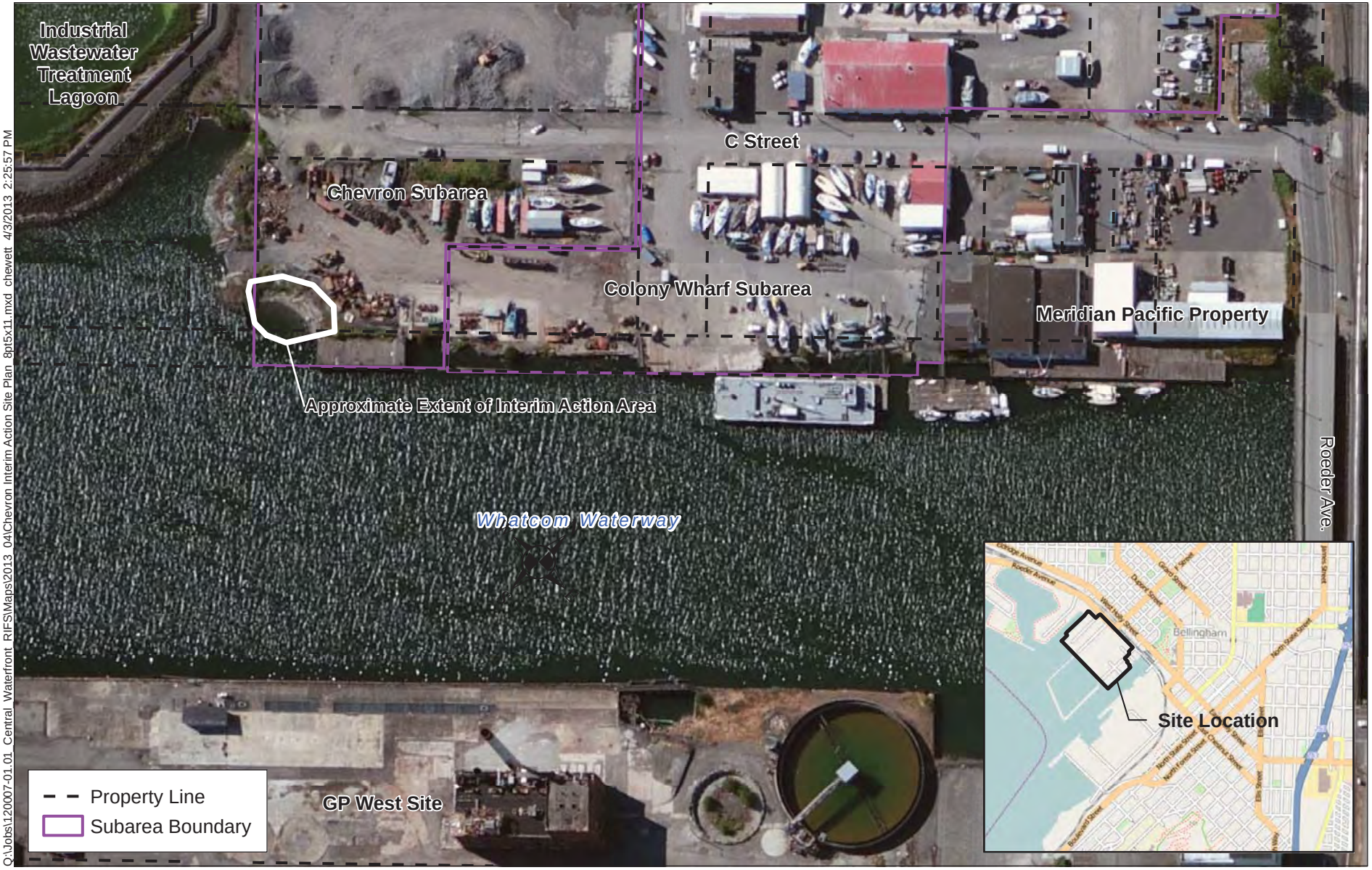
ANCHOR QEA

Figure 2
Central Waterfront Site Subareas
Chevron Subarea Interim Action Report
Port of Bellingham



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ANCHOR QEA

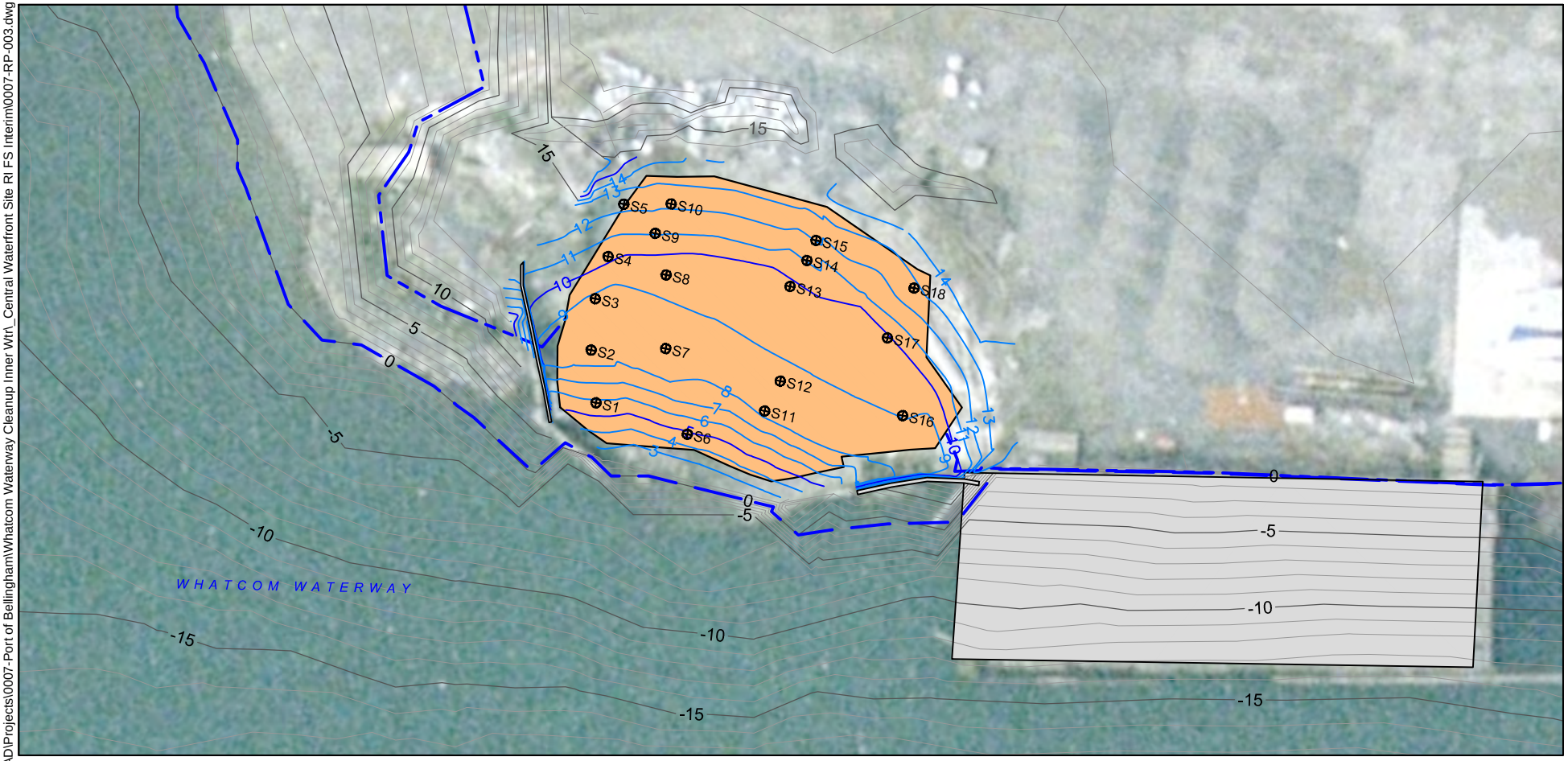
Feet
0 100 200

Project North

True North

NOTES:
1. Horizontal Datum: WA State Plane North Zone, NAD83, Feet.
2. Aerial image acquired from Bing Maps.
3. Property lines provided by Port of Bellingham.
4. Subareas provided by ENSR|AECOM.

Figure 3
Site Plan
Chevron Subarea Interim Action Report
Port of Bellingham



HORIZONTAL DATUM: Washington State Plane North, NAD83, US Feet.
VERTICAL DATUM: Mean Lower Low Water (MLLW), Feet, 1983-2001 Tidal Epoch.
NOTES:

1. Drawing prepared from surveys provided by Wilson Engineering, LLC.
2. Existing docks and pilings digitized from aerial photo.

LEGEND:

- Mean Lower Low Water (MLLW)
- Mean Higher High Water (MHHW)
- Post-Construction Major Contour (5' Interval)
- Post-Construction Minor Contour (1' Interval)
- Existing Major Contour (5' Interval)
- Existing Minor Contour (1' Interval)
- Actual Extent of Excavation
- Existing Structure
- S1 ⊕ CWF Confirmation Sampling Location

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Apr 04, 2013 4:11pm chewett

ANCHOR QEA

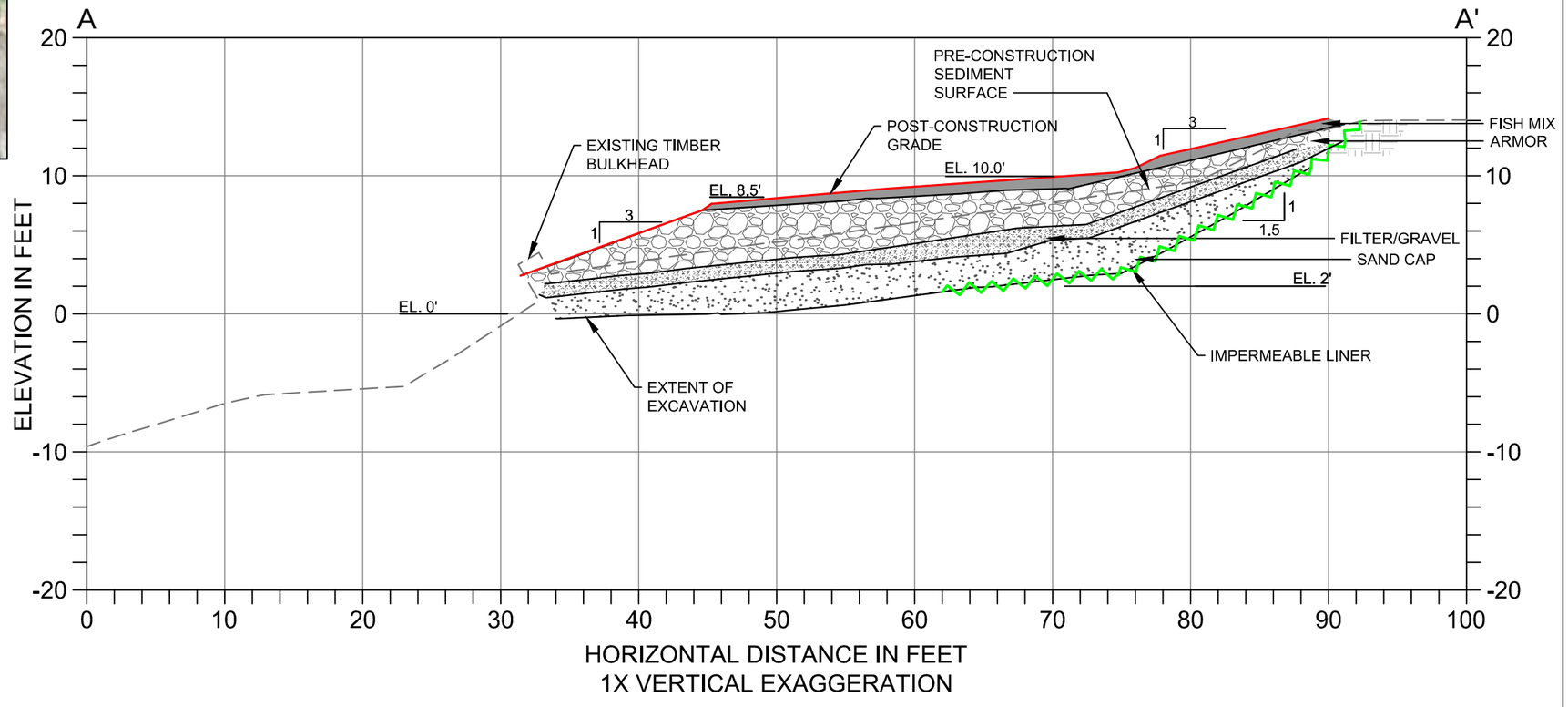
Figure 4
Performance Sampling Locations
Chevron Subarea Interim Action Report
Port of Bellingham

Plan View

0 10

Scale in Feet

PROJECT NORTH TRUE NORTH



SOURCE: Aerial image from Google Earth.
VERTICAL DATUM: Mean Lower Low Water (MLLW), Feet, 1983-2001 Tidal Epoch.

NOTES:
1. Drawing prepared from construction surveys provided by Ferguson Land Surveying.

LEGEND:

- Pre-Construction Ground
- Material Layer Separation
- Post-Construction Grade
- Impermeable Liner
- Fish Mix
- Armor Rock
- Filter/Gravel Material
- Sand Cap

0 10

Scale in Feet

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ANCHOR QEA

Figure 5
As-Built Cross-Section
Chevron Subarea Interim Action Report
Port of Bellingham

APPENDIX A
SURVEYS

BRASS CAP MON FND–C/L C ST.
COB MON ID #2100
CONVERTED EL= 14.26 MLLW
N 643300.5262
E 1241160.3128

C ST

N 643100
E 1241000
N47°11'16"E
284.83'

RANDOM TRAVERSE
NAIL/FLASHER SET
(P.L.S. #42432)
N 643106.9534
E 1240951.3636
EL= 14.78 MLLW

GRAVEL

N 643000
E 1241100

E 1241000
N 643000
N23°56'02"W
250.92'

N 642900
E 1241100

RANDOM TRAVERSE
CAPPED REBAR SET
(P.L.S. #42432)
N 642877.6090
E 1241053.1575
EL= 13.73 MLLW

CONCRETE PADS
PAINT DOT SET
C3
S45°30'25"W
7.99'
S56°04'22"E
33.50'
C2
C4
C5
S46°21'50"W
5.94'
S06°20'25"E
0.91'
C6
C7
S41°11'09"E
1.06'
TIMBER BULKHEAD
S38°08'19"W
34.33'
N79°23'46"E
44.56'
C1
N75°29'36"E
356.24'
N48°26'51"E
41.16'
S58°01'25"W
41.73'
TIMBER BULKHEAD
TIMBER BULKHEAD APPROX. LOCATION
C16
N12°17'43"W
15.97'
C15
C14
N03°23'52"W
12.76'
C13
N16°23'23"E
3.54'
N57°26'46"W
26.58'
C12
C11
C10
C9
S77°18'03"W
3.13'
S04°23'55"W
1.30'
S89°14'10"W
7.50'
EXCAVATION LIMITS
POINT & CONTOUR ELEVATIONS
REPRESENT TOP OF ARMOR ROCK
N 642800
E 1241000

N 643000
E 1240900

GRAVEL

N 642900
E 1240900

RANDOM TRAVERSE
CAPPED REBAR SET
(P.L.S. #42432)
N 642930.1563
E 1240850.0859
EL= 24.52 MLLW

BRASS CAP MON FND
N 642788.3773
E 1240708.2726

GRAPHIC SCALE

10 0 10 20

1 INCH = 10 FEET

LEGEND

- BRASS CAP SURFACE MONUMENT FND.
- RANDOM TRAVERSE REBAR/CAP SET (PLS #42432)
- RANDOM TRAVERSE NAIL/FLASHER SET (PLS #42432)
- WOOD HUB/STAKE SET AT EXCAVATION LIMITS PER PLAN

BASIS OF BEARINGS:
BEARINGS AND COORDINATES SHOWN HEREON DERIVED FROM THOSE RECORD OF SURVEYS PER AUDITOR'S FILE NOS. 2050102750 AND 2050102751 (NAD83/91), RECORDS OF WHATCOM COUNTY, WASHINGTON.

ELEVATION DATUM:
MLLW, BELLINGHAM BAY 1983–2001 TIDAL EPOCH, AS DERIVED BY DIFFERENTIAL LEVEL LOOP TO PUBLISHED BENCH MARKS IN VICINITY AND AS SHOWN ON SAID RECORD OF SURVEYS. HELD ELEVATION 19.99 (MLLW) ON 4" BRASS CAP FND. (USC&GS N6 RESET 1951) IN VERTICAL FACE OF WALL NEAR SOUTHWESTERLY CORNER OF BRICK TRAIN STATION BUILDING, LOCATED NORTH OF THE INTERSECTION OF ROEDER AND C ST.

SURVEY METHOD:
FIELD DATA GATHERED BY RAM CONSTRUCTION, INC., USING TRIMBLE GPS EQUIPMENT UNDER DIRECTION OF SCOTT M. FERGUSON (PLS #42432) AND TIED INTO LOCAL CONTROL ESTABLISHED BY FERGUSON LAND SURVEYING USING LIETZ SET 4 TOTAL STATION, ACCURACY EXCEEDS 1:5000. ALL GPS POINTS GATHERED ON ELEVATION DATUM NAVD88 AND CONVERTED IN AUTOCAD UP +0.485' (HELD SPLIT OF PORT PLANS (0.48') AND ROS A.F. NOS. 2050102750 & 2050102751 (0.49')).

SCOTT M. FERGUSON
STATE OF WASHINGTON
42432
REGISTERED
PROFESSIONAL LAND SURVEYOR

JOB NUMBER: 1259ARMORROCK

Ferguson Land Surveying
3150 Orleans Street #32592, Bellingham, WA 98228
Ph: (360) 592-0152 / (360) 319-8276 Email: fergusonlandsurvey@gmail.com

PORT OF BELLINGHAM
ARMOR ROCK ELEVATION SURVEY MAP
PTN. SE1/4 SEC. 25, TWP. 38 N., RGE. 2 E. OF W.M.

SCALE: 1"=10'
DATE: 3-5-13
FIELD BOOK: PAGE:
DRAWN BY: SMF
SHEET: 1 OF: 1

BRASS CAP MON FND–C/L C ST.
COB MON ID #2100
CONVERTED EL= 14.26 MLLW
N 643300.5262
E 1241160.3128

C ST

N 643100
E 1241000
N47°11'16"E
284.83'

RANDOM TRAVERSE
NAIL/FLASHER SET
(P.L.S. #42432)
N 643106.9534
E 1240951.3636
EL= 14.78 MLLW

GRAVEL

N 643000
E 1241100

GRAPHIC SCALE

10 0 10 20

1 INCH = 10 FEET

LEGEND

- BRASS CAP SURFACE MONUMENT FND.
- RANDOM TRAVERSE REBAR/CAP SET (PLS #42432)
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STATE OF WASHINGTON
42432
REGISTERED
PROFESSIONAL LAND SURVEYOR

N 643000
E 1240900

GRAVEL

N 642900
E 1241000

RANDOM TRAVERSE
CAPPED REBAR SET
(P.L.S. #42432)
N 642877.6090
E 1241053.1575
EL= 13.73 MLLW

CONCRETE PADS
PAINT DOT SET
C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16
S56°04'22"E 33.50'
S45°30'25"W 7.99'
S06°20'25"E 0.91'
S46°21'50"W 5.94'
S41°11'09"E 1.06'
TIMBER BULKHEAD
S38°08'19"W 34.33'
S77°18'03"W 3.13'
S04°23'55"W 1.30'
S89°14'10"W 1.50'
41.73' S58°01'25"W
N75°29'38"E 356.24'
N48°26'51"E 41.16'
N12°17'43"W 15.97'
N79°23'46"E 24.57'
N16°23'22"E 5.54'
N03°23'55"E 12.76'
N57°26'46"W 26.58'
TIMBER BULKHEAD APPROX. LOCATION
TIMBER BULKHEAD
EXCAVATION LIMITS

POINT & CONTOUR ELEVATIONS
REPRESENT TOP OF FILTER ROCK

N 642900
E 1240900

GRAVEL

N 642800
E 1241000

S75°29'32"E 209.76'

RANDOM TRAVERSE
CAPPED REBAR SET
(P.L.S. #42432)
N 642930.1563
E 1240850.0859
EL= 24.52 MLLW

BRASS CAP MON FND
N 642788.3773
E 1240708.2726

JOB NUMBER: 1259FILTERGRAV

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Ph: (360) 592-0152 / (360) 319-8276 Email: fergusonlandsurvey@gmail.com

PORT OF BELLINGHAM
FILTER ROCK ELEVATION SURVEY MAP
PTN. SE1/4 SEC. 25, TWP. 38 N., RGE. 2 E. OF W.M.

SCALE: 1"=10'
DATE: 3–5–13
FIELD BOOK: PAGE:
DRAWN BY: SMF
SHEET: 1 OF: 1

BRASS CAP MON FND–C/L C ST.
COB MON ID #2100
CONVERTED EL= 14.26 MLLW
N 643300.5262
E 1241160.3128

C ST

N 643100
E 1241000
N47°11'16"E
284.83'

RANDOM TRAVERSE
NAIL/FLASHER SET
(P.L.S. #42432)
N 643106.9534
E 1240951.3636
EL= 14.78 MLLW

GRAVEL

N23°56'02"W
250.92'

N 643000
E 1241000
E 1241100

N 642900
E 1241100

N 643000
E 1240900

N 642900
E 1241000

N 642900
E 1240900

N 642800
E 1241000

S75°29'32"E
209.76'

N75°29'38"E
356.24'

RANDOM TRAVERSE
CAPPED REBAR SET
(P.L.S. #42432)
N 642877.6090
E 1241053.1575
EL= 13.73 MLLW

CONCRETE PADS
PAINT DOT SET
C1
C2
C3
C4
C5
C6
C7
C8
C9
C10
C11
C12
C13
C14
C15
C16
S56°04'22"E 33.50'
S45°30'25"W 7.99'
S06°20'25"E 0.91'
S46°21'50"W 5.94'
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S89°14'10"W 1.50'
S77°18'03"W 3.13'
S58°01'25"W 41.73'
N57°26'46"W 26.58'
N16°23'23"W 12.76'
TIMBER BULKHEAD
TIMBER BULKHEAD APPROX. LOCATION
EXCAVATION LIMITS
POINT & CONTOUR ELEVATIONS
REPRESENT TOP OF FISH ROCK

RANDOM TRAVERSE
CAPPED REBAR SET
(P.L.S. #42432)
N 642930.1563
E 1240850.0859
EL= 24.52 MLLW

BRASS CAP MON FND
N 642788.3773
E 1240708.2726

GRAPHIC SCALE

10 0 10 20

1 INCH = 10 FEET

LEGEND

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- RANDOM TRAVERSE REBAR/CAP SET (PLS #42432)
- RANDOM TRAVERSE NAIL/FLASHER SET (PLS #42432)
- WOOD HUB/STAKE SET AT EXCAVATION LIMITS PER PLAN

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SURVEY METHOD:
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PORT OF BELLINGHAM
FISH ROCK ELEVATION SURVEY MAP
PTN. SE1/4 SEC. 25, TWP. 38 N., RGE. 2 E. OF W.M.

SCALE: 1"=10'
DATE: 3–5–13
FIELD BOOK: PAGE:
DRAWN BY: SMF
SHEET: 1 OF: 1

BRASS CAP MON FND–C/L C ST.
COB MON ID #2100
CONVERTED EL= 14.26 MLLW
N 643300.5262
E 1241160.3128

C ST

N 643100
E 1241000
N47°11'16"E
284.83'

RANDOM TRAVERSE
NAIL/FLASHER SET
(P.L.S. #42432)
N 643106.9534
E 1240951.3636
EL= 14.78 MLLW

GRAVEL

N23°56'02"W
250.92'

E 1241000
N 643000

N 643000
E 1241100

GRAPHIC SCALE

10 0 10 20

1 INCH = 10 FEET

LEGEND

- BRASS CAP SURFACE MONUMENT FND.
- RANDOM TRAVERSE REBAR/CAP SET (PLS #42432)
- RANDOM TRAVERSE NAIL/FLASHER SET (PLS #42432)
- WOOD HUB/STAKE SET AT EXCAVATION LIMITS PER PLAN

BASIS OF BEARINGS:
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ELEVATION DATUM:
MLLW, BELLINGHAM BAY 1983–2001 TIDAL EPOCH, AS DERIVED BY DIFFERENTIAL LEVEL LOOP TO PUBLISHED BENCH MARKS IN VICINITY AND AS SHOWN ON SAID RECORD OF SURVEYS. HELD ELEVATION 19.99 (MLLW) ON 4" BRASS CAP FND. (USC&GS N6 RESET 1951) IN VERTICAL FACE OF WALL NEAR SOUTHWESTERLY CORNER OF BRICK TRAIN STATION BUILDING, LOCATED NORTH OF THE INTERSECTION OF ROEDER AND C ST.

SURVEY METHOD:
FIELD DATA GATHERED BY RAM CONSTRUCTION, INC., USING TRIMBLE GPS EQUIPMENT UNDER DIRECTION OF SCOTT M. FERGUSON (PLS #42432) AND TIED INTO LOCAL CONTROL ESTABLISHED BY FERGUSON LAND SURVEYING USING LIETZ SET 4 TOTAL STATION, ACCURACY EXCEEDS 1:5000. ALL GPS POINTS GATHERED ON ELEVATION DATUM NAVD88 AND CONVERTED IN AUTOCAD UP +0.485' (HELD SPLIT OF PORT PLANS (0.48') AND ROS A.F. NOS. 2050102750 & 2050102751 (0.49')).

SCOTT M. FERGUSON
STATE OF WASHINGTON
42432
REGISTERED
PROFESSIONAL LAND SURVEYOR

E 1241000
N 643000

N 642900
E 1241100

RANDOM TRAVERSE
CAPPED REBAR SET
(P.L.S. #42432)
N 642877.6090
E 1241053.1575
EL= 13.73 MLLW

CONCRETE PADS
PAINT DOT SET
C3
S45°30'25"W
7.99'
C2
S56°04'22"E
33.50'
C4
C5
S06°20'25"E
0.91'
S46°21'50"W
5.34'
C6
C7
S41°11'09"E
1.06'
14
13
12
11
10
9
TIMBER BULKHEAD
TIMBER BULKHEAD
S38°08'19"W
34.35'
C8
EXCAVATION LIMITS
S58°01'25"W
41.73'
N48°26'51"E
41.16'
N79°23'46"E
44.56'
C1
N75°29'38"E
356.24'
S75°29'32"E
209.76'

GRAVEL

N 643000
E 1240900

N 642900
E 1240900

N 642800
E 1241000

S73°18'03"W
3.13'
C9
C10
C11
S04°23'55"W
1.30'
TIMBER BULKHEAD
C12
N57°26'46"W
26.58'
S89°14'10"W
7.50'
C13
N16°23'22"E
3.54'
C14
N05°23'52"W
12.76'
C15
N12°17'43"W
15.97'
C16

RANDOM TRAVERSE
CAPPED REBAR SET
(P.L.S. #42432)
N 642930.1563
E 1240850.0859
EL= 24.52 MLLW

BRASS CAP MON FND
N 642788.3773
E 1240708.2726

JOB NUMBER: 1259POST-CONST

Ferguson Land Surveying
3150 Orleans Street #32592, Bellingham, WA 98228
Ph: (360) 592-0152 / (360) 319-8276 Email: fergusonlandsurvey@gmail.com

PORT OF BELLINGHAM
POST CONSTRUCTION ELEVATION SURVEY MAP
PTN. SE1/4 SEC. 25, TWP. 38 N., RGE. 2 E. OF W.M.

SCALE: 1"=10'
DATE: 2-22-13
FIELD BOOK: PAGE:
DRAWN BY: SMF
SHEET: 1 OF: 1

BRASS CAP MON FND–C/L C ST.
COB MON ID #2100
CONVERTED EL= 14.26 MLLW
N 643300.5262
E 1241160.3128

C ST

N 643100
E 1241000
N47°11'16"E
284.83'

RANDOM TRAVERSE
NAIL/FLASHER SET
(P.L.S. #42432)
N 643106.9534
E 1240951.3636
EL= 14.78 MLLW

GRAVEL

N 643000
E 1241100

E 1241000
N 643000
N23°56'02"W
250.92'

N 642900
E 1241100

RANDOM TRAVERSE
CAPPED REBAR SET
(P.L.S. #42432)
N 642877.6090
E 1241053.1575
EL= 13.73 MLLW

CONCRETE PADS
PAINT DOT SET
C3
S56°04'22"E
33.50'
7.99'
S45°30'25"W
C2
C4
C5
S06°20'25"E
0.91'
S46°21'50"W
5.94'
C6
C7
S41°11'09"E
1.06'

N 643000
E 1240900

GRAVEL

N 642900
E 1241000

N79°23'46"E
44.56'
TIMBER BULKHEAD
TIMBER BULKHEAD
TIMBER BULKHEAD
TIMBER BULKHEAD
S38°08'19"W
34.33'

S75°29'32"E
209.76'

C1
N75°29'38"E
356.24'
C8
EXCAVATION LIMITS
N48°26'31"E
41.16'
S58°01'25"W
41.73'

N 642900
E 1240900

N 642800
E 1241000
S77°18'03"W
3.13'
C9
C10
C11
S04°23'55"W
1.50'
C12
S89°14'10"W
1.50'
N57°26'46"W
26.58'
C13
N09°23'52"W
12.76'
C14
C15
N12°17'43"W
15.97'
C16
N16°23'22"E
3.53'

RANDOM TRAVERSE
CAPPED REBAR SET
(P.L.S. #42432)
N 642930.1563
E 1240850.0859
EL= 24.52 MLLW

BRASS CAP MON FND
N 642788.3773
E 1240708.2726

GRAPHIC SCALE

10 0 10 20

1 INCH = 10 FEET

LEGEND

- BRASS CAP SURFACE MONUMENT FND.
- RANDOM TRAVERSE REBAR/CAP SET (PLS #42432)
- RANDOM TRAVERSE NAIL/FLASHER SET (PLS #42432)
- WOOD HUB/STAKE SET AT EXCAVATION LIMITS PER PLAN

BASIS OF BEARINGS:
BEARINGS AND COORDINATES SHOWN HEREON DERIVED FROM THOSE RECORD OF SURVEYS PER AUDITOR'S FILE NOS. 2050102750 AND 2050102751 (NAD83/91), RECORDS OF WHATCOM COUNTY, WASHINGTON.

ELEVATION DATUM:
MLLW, BELLINGHAM BAY 1983–2001 TIDAL EPOCH, AS DERIVED BY DIFFERENTIAL LEVEL LOOP TO PUBLISHED BENCH MARKS IN VICINITY AND AS SHOWN ON SAID RECORD OF SURVEYS. HELD ELEVATION 19.99 (MLLW) ON 4" BRASS CAP FND. (USC&GS N6 RESET 1951) IN VERTICAL FACE OF WALL NEAR SOUTHWESTERLY CORNER OF BRICK TRAIN STATION BUILDING, LOCATED NORTH OF THE INTERSECTION OF ROEDER AND C ST.

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SCOTT M. FERGUSON
STATE OF WASHINGTON
42432
REGISTERED
PROFESSIONAL LAND SURVEYOR

JOB NUMBER: 1259PRE–CONST

Ferguson Land Surveying
3150 Orleans Street #32592, Bellingham, WA 98228
Ph: (360) 592-0152 / (360) 319-8276 Email: fergusonlandsurvey@gmail.com

PORT OF BELLINGHAM
PRE-CONSTRUCTION ELEVATION SURVEY MAP
PTN. SE1/4 SEC. 25, TWP. 38 N., RGE. 2 E. OF W.M.

SCALE: 1"=10'
DATE: 2–22–13
FIELD BOOK: PAGE:
DRAWN BY: SMF
SHEET: 1 OF: 1

BRASS CAP MON FND–C/L C ST.
COB MON ID #2100
CONVERTED EL= 14.26 MLLW
N 643300.5262
E 1241160.3128

C ST

N 643100
E 1241000
N47°11'16"E
284.83'

RANDOM TRAVERSE
NAIL/FLASHER SET
(P.L.S. #42432)
N 643106.9534
E 1240951.3636
EL= 14.78 MLLW

GRAVEL

N23°56'02"W
250.92'

N 643000
E 1241000
N 643000
E 1241100

GRAPHIC SCALE

10 0 10 20

1 INCH = 10 FEET

LEGEND

- BRASS CAP SURFACE MONUMENT FND.
- RANDOM TRAVERSE REBAR/CAP SET (PLS #42432)
- RANDOM TRAVERSE NAIL/FLASHER SET (PLS #42432)
- WOOD HUB/STAKE SET AT EXCAVATION LIMITS PER PLAN

BASIS OF BEARINGS:
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SCOTT M. FERGUSON
STATE OF WASHINGTON
42432
REGISTERED
PROFESSIONAL LAND SURVEYOR

E 1241000
N 643000
N 642900
E 1241100

RANDOM TRAVERSE
CAPPED REBAR SET
(P.L.S. #42432)
N 642877.6090
E 1241053.1575
EL= 13.73 MLLW

CONCRETE PADS
PAINT DOT SET
S56°04'22"E
33.50'
S45°30'25"W
7.99'
S06°20'25"E
0.91'
S46°21'50"W
5.94'
S41°11'09"E
1.06'
TIMBER BULKHEAD
S38°08'19"W
34.33'
N75°29'38"E
356.24'
EXCAVATION LIMITS
POINT & CONTOUR ELEVATIONS
REPRESENT TOP OF SAND CAP
N48°26'51"E
41.16'
S58°01'25"W
41.73'
S73°18'03"W
3.13'
N12°17'43"W
15.97'
TIMBER BULKHEAD APPROX. LOCATION
TIMBER BULKHEAD
N05°23'52"W
15.76'
N57°26'46"W
26.58'
S04°23'55"W
1.30'
S89°14'10"W
7.50'
N16°23'22"E
3.54'

GRAVEL

N 642900
E 1240900
N 642800
E 1241000

S75°29'32"E
209.76'

RANDOM TRAVERSE
CAPPED REBAR SET
(P.L.S. #42432)
N 642930.1563
E 1240850.0859
EL= 24.52 MLLW

BRASS CAP MON FND
N 642788.3773
E 1240708.2726

JOB NUMBER: 1259SANDCAP

Ferguson Land Surveying
3150 Orleans Street #32592, Bellingham, WA 98228
Ph: (360) 592-0152 / (360) 319-8276 Email: fergusonlandsurvey@gmail.com

PORT OF BELLINGHAM
SAND CAP ELEVATION SURVEY MAP
PTN. SE1/4 SEC. 25, TWP. 38 N., RGE. 2 E. OF W.M.

SCALE: 1"=10'
DATE: 3-5-13
FIELD BOOK: PAGE:
DRAWN BY: SMF
SHEET: 1 OF: 1

BRASS CAP MON FND–C/L C ST.
COB MON ID #2100
CONVERTED EL= 14.26 MLLW
N 643300.5262
E 1241160.3128

C ST

N 643100
E 1241000
N47°11'16"E
284.83'

RANDOM TRAVERSE
NAIL/FLASHER SET
(P.L.S. #42432)
N 643106.9534
E 1240951.3636
EL= 14.78 MLLW

GRAVEL

N23°56'02"W
250.92'

N 643000
E 1241000

N 643000
E 1241100

N 642900
E 1241100

N 642900
E 1241000

N 643000
E 1240900

N 642900
E 1240900

S75°29'32"E
209.76'

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CAPPED REBAR SET
(P.L.S. #42432)
N 642930.1563
E 1240850.0859
EL= 24.52 MLLW

BRASS CAP MON FND
N 642788.3773
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CAPPED REBAR SET
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N 642877.6090
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CONCRETE PADS
PAINT DOT SET
S56°04'22"E 33.50'
S45°30'25"W 7.99'
S06°20'25"E 0.91'
S46°21'50"W 5.94'
S41°11'09"E 1.06'
N79°31'46"E 44.56'
S38°08'19"W 34.33'
N75°29'38"E 356.24'
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S58°01'25"W 41.73'
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N12°17'43"W 15.97'
S73°18'03"W 3.13'
N05°35'52"W 12.76'
N16°23'22"E 3.52'
N57°26'46"W 26.58'
S89°14'10"W 7.50'

REMOVED BULKHEADS
TIMBER BULKHEAD
TIMBER BULKHEAD APPROX. LOCATION
EXCAVATION LIMITS

C1 C2 C3 C4 C5 C6 C7 C8 C9 C10 C11 C12 C13 C14 C15 C16
S1 S2 S3 S4 S5 S6 S7 S8 S9 S10 S11 S12 S13 S14 S15 S16 S17

GRAPHIC SCALE
10 0 10 20
1 INCH = 10 FEET

LEGEND

- BRASS CAP SURFACE MONUMENT FND.
- RANDOM TRAVERSE REBAR/CAP SET (PLS #42432)
- RANDOM TRAVERSE NAIL/FLASHER SET (PLS #42432)
- WOOD HUB/STAKE SET AT EXCAVATION LIMITS PER PLAN
- SOIL SAMPLE

BASIS OF BEARINGS:
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SCOTT M. FERGUSON
STATE OF WASHINGTON
42432
REGISTERED
PROFESSIONAL LAND SURVEYOR

JOB NUMBER: 1259SUB–GRADE4

Ferguson Land Surveying
3150 Orleans Street #32592, Bellingham, WA 98228
Ph: (360) 592-0152 / (360) 319-8276 Email: fergusonlandsurvey@gmail.com

PORT OF BELLINGHAM
SUB-GRADE ELEVATION SURVEY MAP
PTN. SE1/4 SEC. 25, TWP. 38 N., RGE. 2 E. OF W.M.

SCALE: 1"=10'
DATE: 2–20–13
FIELD BOOK: PAGE:
DRAWN BY: SMF
SHEET: 1 OF: 1

APPENDIX B
INSPECTOR'S FIELD ACTIVITY REPORTS

DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	120007-01.01 T03.2
REPORT DATE:	Monday, January 07, 2013
REPORT NO.:	IDR001_BW
AQEA FIELD REP.:	Bud Whitaker

PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

http://tidesandcurrents.noaa.gov/noaatidepredictions/NOAATidesFacade.jsp?Stationid=9449211

DAILY TIDE PREDICTIONS IN FEET	DATE	DAY	TIME	HEIGHT
NOAA Station ID: 9449211	01/07	Mon	02:28 AM	6.51 H
Bellingham, WA	01/07	Mon	05:53 AM	5.64 L
Time Zone: LST/LDT	01/07	Mon	11:37 AM	9.09 H
Datum: MLLW	01/07	Mon	07:29 PM	-0.56 L

REPORT SUBMITTED TO:		CONTRACTOR NAME AND CONTACT:		WEATHER TEMP. & PRECIP			
			RAM Construction Lou Ivsevic-Project Manager				
AQEA	Bruce McDonald	General	Mitch Pelzer-Superintendent	AM:	Cloudy 46F 0-10MPH		
AQEA	Halah Voges	Subs	None	PM:	Cloudy 49F 0110MPH		
AQEA	Nik Bacher			Times of Site Visits:			
				from	1200	to	2300
				From		To	

PROJECT DAILY CONSTRUCTION ACTIVITY LIST

CONSTRUCTION TASK	LOCATION	GENERAL NOTES
2-01Excavation and Disposal of Contaminated Material and Debris	South and Southeast Section of Levee	Contractor excavated an approximately 15' wide strip from El. 1.5 to the upper limits of the excavation boundary. Product seep was encountered along east face of excavation in upland portion of excavation at approximate elevation +4.
2-01.3(3) Surveys	Site	Contractor provided pre-excavation survey, post excavation survey and surveyed each layer of backfill material. Environmental sampling locations were logged by the construction superintendent using Trimble GPS.
2-01.3(4) Shoring	Site	Contractor used a steel shoring plate to isolate the seep along east face of excavation from clean backfill. The shoring plate was driven into the ground alongside the northern side of the excavation and chained/secured back to an existing pile and timber structure.
2-01.3(4)C Dewatering	Site	Contractor used a 3" submersible and 3" trash pump to pump oily groundwater from the excavation to the onsite 18,000 Gallon Rain-For-Rent liquid storage tank.
2-01.3(5) Contaminated Material Storage	Site	Contractor excavated the contaminated soil and placed it directly into steel shipping/storage

LIMITATIONS: The Anchor QEA field representative is present on site solely to observe the field activities of the contractor identified and keep our client informed of the progress and quality of the work. The presence and activities of the Anchor QEA field representative and our acceptance of any non-conforming work does not relieve the contractor from complying with its contract documents. Anchor QEA does not have the authority to direct the contractors work. Any information provided by the Anchor QEA field representative is intended solely to advise the contractor of the technical requirements of the plans and specifications and/or design concept. The contractor is solely responsible for its means, methods, sequences, procedures, construction site safety, quality of the work, and adherence to the contract documents.

REVIEW BY (PM initial/date)

BMcD 1/9/13

Field Representative Signature___ _____Date___01/07/2013_____

ANCHOR QEA

DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	120007-01.01 T03.2
REPORT DATE:	Monday, January 07, 2013
REPORT NO.:	IDR001_BW
AQEA FIELD REP.:	Bud Whitaker

PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

		containers on site. A 16,000 lb. capacity forklift was used to shuttle storage containers to and from the excavation site.
2-01.3(5)C Liquid Handling	Site	Contractor pumped oily groundwater from the excavation directly into the onsite storage tank.
1-03.2(1) Spill Response Materials	Site	Spill Response kits are provided onsite.
1-03.3(1) Spill Prevention and Control	Site	Secondary containment vessels were provided during fueling of generator and trash pump.
1-05 Erosion, Sedimentation and Stormwater Controls	Site	Contractor deployed 10' height silt curtain and oil containment boom along the shoreline. Silt curtain was secured/anchored to adjacent existing piling.

PERSONNEL ON SITE (EST.)

Name (or Labor Category)	Organization	Notes
Mitch Pelzer-Project superintendent	RAM Construction	Mitch is the site superintendent and certified CESCL
Mike Conours-Operator	RAM Construction	Mike is providing soil excavation with Hitachi EX450 Long Reach Excavator.
Brad Brown-Operator	RAM Construction	Brad is shuttling storage containers to and from the excavation and transporting backfill materials to the site. Brad is also using JD544 Loader to load sand, gravel and armor rock into the JD300D off road dump truck to backfill the excavation.
Kyle Lukes	RAM Construction	Kyle is providing general labor.
Bud Whitaker	Anchor QEA	Monitoring the technical conduct of the contractor and collecting soil samples.
Bruce McDonald	Anchor QEA	Monitoring the technical conduct of the contractor and collecting soil samples.
John Hergesheimer	Port of Bellingham	
Brian Gouran	Port of Bellingham	
Mike Stoner	Port of Bellingham	
Jim Schneider	ERM representing Chartis	3rd Party Observation

EQUIPMENT ON SITE

Type of Equipment	Organization	Notes
Hitachi EX450 LCH Excavator	RAM Construction-Rental	In Use
JD544 Loader	RAM Construction	In Use
JD135C Excavator	RAM Construction	In Use
JD300D Off road Dump Truck	RAM Construction	In Use

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REVIEW BY (PM initial/date)

BMcD 1/9/13

Field Representative Signature___  _____Date___01/07/2013_____

ANCHOR QEA

DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	120007-01.01 T03.2
REPORT DATE:	Monday, January 07, 2013
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AQEA FIELD REP.:	Bud Whitaker

PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

Chev. 3500HD Pickup Truck	RAM Construction	In Use
Ford F550 Utility Truck	RAM Construction	In Use
2-Genie TML 4000N Light Plants	RAM Construction	In Use
Ford F350 Pickup Truck	RAM Construction	In Use
Chev 3500 HD Pickup Truck	RAM Construction	In Use
Conex Forklift 16,000 lb. capacity.	RAM Construction	In Use

ATTACHMENTS

	None

CONSTRUCTION OBSERVATIONS

TIME	TOPIC AND LOCATION	DESCRIPTION OF FIELD ACTIVITY, OBSERVATION AND RECOMMENDATIONS TO OWNER	
	Construction Survey	Contractor provided pre-excavation and post-excavation survey for the area excavated this shift with hand held TRIMBLE GPS Unit.	
	Mobilization	Contractor appears fully mobilized.	
	Temporary Erosion and Sediment Control	Contractor deployed 10' silt curtain secured to existing piling. All excavations are backfilled promptly after soil sampling.	
	Dewatering the Work Area	Contractor is using 3" submersible pump and 3" trash pump. Dewatering liquids are pumped directly into the onsite Rain-For-Rent liquid storage tank. Secondary containment vessel was provided during fueling of the pump and generator. Dewatering appeared to be managed well.	
	Geotextile Fabric	Contractor placed approximately 22.5'x 25 sheet of impermeable fabric in the excavation as per plan.	
	Excavation and Disposal	Contaminated soil was excavated and placed directly into the steel storage containers provided. No offsite disposal this shift. Excavation was started at approximately El. 1.5 and continued per plan to the upland limits of the excavation. The limits of excavation were previously staked by the surveyor.	
1200		Field Inspector arrived onsite and reviewed the Interim Action Work Plan and AQ Health and Safety Plan.	
1330		Bruce McDonald arrived onsite	
1345		John Hergesheimer and Brian Gouran arrived onsite-We discussed the work scheduled for this shift. 1415 Port Staff offsite.	

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REVIEW BY (PM initial/date)
BMcD 1/9/13

Field Representative Signature___ _____Date___01/07/2013_____

ANCHOR QEA

DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	120007-01.01 T03.2
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REPORT NO.:	IDR001_BW
AQEA FIELD REP.:	Bud Whitaker

PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

1450		Received call from Brian Gouran informing that Jim Schneider of ERM will be calling to schedule site visit this shift to provide 3rd party observation for Chartis/Insurance carrier	
1600		The RAM Construction crew is attempting to extract wood piling from the excavation zone using chain chokers pulled with Hitachi EX450 Excavator. The excavator was able to extract one pile out of seven attempted. The piling that was extracted did not appear to be treated, as it still had bark on it. The pile was embedded approximately 14'.	
1650		Crew begins excavating the southern area of the site. Crew is breaking out the wood piles during the excavation. We discussed the importance of not allowing any wood debris to enter the waterway.	
1700		Jim Schneider of ERM, representing Chartis arrived onsite to observe the work. 2045 Jim Schneider is offsite.	
1745		John Hergesheimer and Mike Stoner arrived onsite to observe the work. Contractor continues excavating the SW area of the site. Wood debris is stockpiled west of the work zone for reinstatement at a later time. Excavated soil is placed directly into storage containers and staged away from the excavation until the waste profile is set up and the contractor begins hauling for disposal.	
1800		Bruce McDonald and I prepared the sampling jars and vials and decontaminated the sampling equipment.	
1845		Oily water was visible seeping from the east side of the excavation. The oily water was captured in the excavation and pumped directly into the liquid storage tank with a 3" sump pump and 3" trash pump. To the best of my knowledge no oil water was allowed to enter the waterway. The contractor deployed an oil boom along the shoreline as a precaution. NOTE: The 18,000 gallon storage tank was approximately 1/3 full at end of shift.	

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REVIEW BY (PM initial/date)
BMcD 1/9/13

Field Representative Signature___ _____Date___01/07/2013_____

ANCHOR QEA

DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	120007-01.01 T03.2
REPORT DATE:	Monday, January 07, 2013
REPORT NO.:	IDR001_BW
AQEA FIELD REP.:	Bud Whitaker

PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

1955		Bruce and I started collecting soil samples. Sample ID CSIA 20130107-001B soil (bottom)/ 6 containers Sample ID CSIA 20130107-002B soil (bottom)/ 6 containers Sample ID CSIA 20130107-003S+3 soil (sidewall)/ 6 Containers Sample ID CSIA 20130107-004S+6 soil (sidewall) 6 containers Sample ID CSIA 20130107-004S+9 soil (sidewall) 6 containers NOTE: Contractor assisted with soil sample collection at the sidewalls with excavator bucket. Contractor provided GPS location of samples collected. 2145 Soil sampling is complete and contractor is now placing the sand cap, filter gravel, armor rock and impermeable liner in the excavation. Fabric size is approximately 22.5'x24'. Fish mix will be placed after all excavation and backfill is complete at the site. Contractor will provide material weigh tickets to Bruce.	
2300		Contractor is complete with all excavation and material placement and is now placing a crushed rock berm around the work zone to control stormwater runoff from the staging area into the work zone. Inspector offsite reporting.	

OTHER GENERAL OBSERVATIONS-Note any Changes, Force Account Work and Materials Testing

	Construction Entrance	Contractor provided a construction entrance from the west with 2" railroad ballast rock and corrugated steel sheets. Construction entrance appears okay.	
	Construction Photos	Anchor QEA Field Representative took photos of all activities during the work.	
	Site Safety	No safety issues noted.	
	Site Stability	Site appears stable. The wood bulkheads along the shoreline were not damaged during the excavation and backfilling. We discussed the steel tiebacks at the easterly section of the wood bulkhead. Some tiebacks are rusted and no longer securing the wood bulkhead. This issue will need to be further discussed prior to excavating this area.	

PHOTOS

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BMcD 1/9/13

Field Representative Signature___  _____Date___01/07/2013_____

DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	120007-01.01 T03.2
REPORT DATE:	Monday, January 07, 2013
REPORT NO.:	IDR001_BW
AQEA FIELD REP.:	Bud Whitaker

PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

Comment:	Removing wood debris from the site prior to excavation.

Comment:	Attempting to remove/extract existing wood piling with Hitachi EX450 Excavator and chain choker.

Comment:	Wood pile extracted and staged at upland away from work area. Pile does not appear to be treated.

Comment:	Excavating soil and placing directly into storage container.

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DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	120007-01.01 T03.2
REPORT DATE:	Monday, January 07, 2013
REPORT NO.:	IDR001_BW
AQEA FIELD REP.:	Bud Whitaker

PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

Comment:	Pumping oily water from excavation directly into liquid storage tank. Note secondary containment vessel under pumping equipment.

Comment:	Oily water seeping into excavation.

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BMcD 1/9/13

Field Representative Signature___ _____Date___01/07/2013_____

DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	120007-01.01 T03.2
REPORT DATE:	Tuesday, January 08, 2013
REPORT NO.:	IDR002_BW
AQEA FIELD REP.:	Bud Whitaker

PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

http://tidesandcurrents.noaa.gov/noaatidepredictions/NOAATidesFacade.jsp?Stationid=9449211

DAILY TIDE PREDICTIONS IN FEET	DATE	DAY	TIME	HEIGHT
NOAA Station ID: 9449211	01/08	Tue	03:32 AM	7.47 H
Bellingham, WA	01/08	Tue	07:10 AM	6.24 L
Time Zone: LST/LDT	01/08	Tue	12:24 PM	9.1 H
Datum: MLLW	01/08	Tue	08:19 PM	-1.41

REPORT SUBMITTED TO:		CONTRACTOR NAME AND CONTACT:		WEATHER TEMP. & PRECIP			
			RAM Construction	NOTE:	Storm Surge with driving rain appears to be pushing up tide conditions. High winds expected later in evening. Weather related contractor work shutdown.		
AQEA	Bruce McDonald	General	Lou Ivsevic-Project Manager Mitch Pelzer-Superintendent				
AQEA	Halah Voges	Subs	None	PM:	Heavy Rain 49F 10-20MPH		
AQEA	Nik Bacher			Times of Site Visits:			
				from	1700	to	2000
				From		To	

PROJECT DAILY CONSTRUCTION ACTIVITY LIST

CONSTRUCTION TASK	LOCATION	GENERAL NOTES
2-01Excavation and Disposal of Contaminated Material and Debris	Site	No excavation this shift.
2-01.3(3) Surveys	Site	No survey work this shift.
2-01.3(4) Shoring	Site	Steel shoring plate used on 1/7 to isolate the excavation is still in place. The shoring plate is driven into the ground alongside the northern side of the excavation and chained/secured back to an existing pile and timber structure. Appears stable.
2-01.3(4)C Dewatering	Site	No dewatering this shift.
2-01.3(5) Contaminated Material Storage	Site	Material excavated on 01/07 was hauled for disposal today during day shift. I spoke with Lou Ivsevic and confirmed that waste profile was set up and 8 containers were hauled for disposal. Approximate weight is 210 ton. Actual weight tickets will be provided by RAM Construction.
2-01.3(5)C Liquid Handling	Site	No additional liquid pumped or stored this shift.
1-03.2(1) Spill Response Materials	Site	Spill Response kits are provided onsite.
1-03.3(1) Spill Prevention and Control	Site	Secondary containment vessels are provided onsite. None used this shift.

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REVIEW BY (PM initial/date)

BMcD; 01/11/2013

Field Representative Signature___ _____Date___01/08/2013_____

ANCHOR QEA

DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	120007-01.01 T03.2
REPORT DATE:	Tuesday, January 08, 2013
REPORT NO.:	IDR002_BW
AQEA FIELD REP.:	Bud Whitaker

PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

1-05 Erosion, Sedimentation and Stormwater Controls	Site	10' height silt curtain and oil containment boom continue to be deployed along the shoreline. Silt curtain was secured/anchored to adjacent existing piling. Standing water was visible at top of slope draining to the shoreline. Exposed soil noted at top of slope. Discussed with contractor and Brian Gouran, PoB. See additional notes below.

PERSONNEL ON SITE (EST.)

Name (or Labor Category)	Organization	Notes
Mitch Pelzer-Project superintendent	RAM Construction	Mitch is the site superintendent and certified CESCL
Mike Conours-Operator	RAM Construction	Mike is the excavation equipment operator. Placing crushed rock berm at top of slope to control runoff.
Brad Brown-Operator	RAM Construction	Brad is helping to shape the erosion control berm at top of slope.
Kyle Lukes-Laborer	RAM Construction	Kyle is providing general labor.
Lou Ivsevic-Project Manager	RAM Construction	Lou is onsite discussing weather related work shut down with project superintendent.
Bud Whitaker	Anchor QEA	Monitoring the technical conduct of the contractor. No soil sampling this shift.
John Hergesheimer	Port of Bellingham	
Brian Gouran	Port of Bellingham	
Mike Stoner	Port of Bellingham	
Jim Schneider	ERM representing Chartus	3rd Party Observation
Brian Sato	Washington State DOE	

EQUIPMENT ON SITE

Type of Equipment	Organization	Notes
Hitachi EX450 LCH Excavator	RAM Construction-Rental	Idle
JD544 Loader	RAM Construction	In Use
JD135C Excavator	RAM Construction	Idle
JD300D Off road Dump Truck	RAM Construction	Idle
Chev. 3500HD Pickup Truck	RAM Construction	In Use
Ford F550 Utility Truck	RAM Construction	In Use
2-Genie TML 4000N Light Plants	RAM Construction	In Use
Ford F350 Pickup Truck	RAM Construction	In Use
Chev 3500 HD Pickup Truck	RAM Construction	In Use

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DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	120007-01.01 T03.2
REPORT DATE:	Tuesday, January 08, 2013
REPORT NO.:	IDR002_BW
AQEA FIELD REP.:	Bud Whitaker

PROJECT NAME/LOCATION	**CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA**

Conex Forklift 16,000 lb. capacity.	RAM Construction	Idle

ATTACHMENTS

	None

CONSTRUCTION OBSERVATIONS

TIME	TOPIC AND LOCATION	DESCRIPTION OF FIELD ACTIVITY, OBSERVATION AND RECOMMENDATIONS TO OWNER	
	Construction Survey	No survey this shift	
	Mobilization	Contractor mobilized 2-additional light plants to illuminate the work area.	
	Temporary Erosion and Sediment Control	Contractor deployed 10' silt curtain secured to existing piling. Wind is driving the silt curtain onshore. Standing water noted at the top of the slope was draining downslope to the shoreline. I discussed this with Mitch and he directed his crew to place a crushed rock berm at the top of slope and fill the depression where the standing water was noted with crushed rock. The existing soil that is mounded against the SW wood bulkhead was disturbed during last night activity. I discussed covering the exposed soil with plastic sheeting. Mitch agreed that the area should be covered and directed his crew to cover with plastic sheeting and sandbags.	
	Dewatering the Work Area	No dewatering this shift	
	Geotextile Fabric	No impermeable geotextile fabric was placed.	
	Excavation and Disposal	No excavation or disposal occurred this shift.	
1700		Field Inspector arrived onsite. Rain was steady and wind was blowing from the south. Tide elevation appeared much higher than yesterday. Mitch Pelzer of RAM believes this is due to storm surge. Mitch is considering shutting down the work tonight due to weather conditions. Brian Gouran, Brian Sato, John Hergesheimer, Jim Schneider and Mike Stoner arrived on site at 1700 hrs. We discussed what stormwater BMPs would be appropriate for tonight's storm conditions.	
1830		Mitch has decided to shut down the work as it is apparent that there is higher than expected storm surge with driving rain and it would be difficult to manage the excavation with the current conditions.	
2100		Contractor offsite. Site appears stable	

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DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	120007-01.01 T03.2
REPORT DATE:	Tuesday, January 08, 2013
REPORT NO.:	IDR002_BW
AQEA FIELD REP.:	Bud Whitaker

PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

OTHER GENERAL OBSERVATIONS-Note any Changes, Force Account Work and Materials Testing

	Construction Entrance	Construction entrance appears stable.	
	Construction Photos	Anchor QEA Field Representative took photos of all activities during the work.	
	Site Safety	No safety issues noted.	
	Site Stability	Site appears stable.	

PHOTOS

None Taken			

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Field Representative Signature___ _____Date___01/08/2013_____

DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	120007-01.01 T03.2
REPORT DATE:	Wednesday, January 09,
REPORT NO.:	IDR003_BW
AQEA FIELD REP.:	Bud Whitaker

PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

http://tidesandcurrents.noaa.gov/noaatidepredictions/NOAATidesFacade.jsp?Stationid=9449211

DAILY TIDE PREDICTIONS IN FEET	DATE	DAY	TIME	HEIGHT
NOAA Station ID: 9449211	01/09	Wed	04:18 AM	8.28 H
Bellingham, WA	01/09	Wed	08:20 AM	6.48 L
Time Zone: LST/LDT	01/09	Wed	01:18 PM	9.09 H
Datum: MLLW	01/09	Wed	09:07 PM	-2.02 L

REPORT SUBMITTED TO:		CONTRACTOR NAME AND CONTACT:		WEATHER TEMP. & PRECIP			
			RAM Construction Lou Ivsevic-Project Manager				
AQEA	Bruce McDonald	General	Mitch Pelzer-Superintendent	AM:	Cloudy 43F 0-10MPH		
AQEA	Halah Voges	Subs	None	PM:	Cloudy 40F 0-10MPH		
AQEA	Nik Bacher			Times of Site Visits:			
				from	1700	to	0200 1/10
				From		To	

PROJECT DAILY CONSTRUCTION ACTIVITY LIST

CONSTRUCTION TASK	LOCATION	GENERAL NOTES
2-01Excavation and Disposal of Contaminated Material and Debris	Site	Contractor excavated an approximately 25' wide strip from El. 1.0 to the toe of the 1.5/1 slope to the upper limits of the excavation boundary. Brian Gouran and Brian Sato were onsite from 6:45 to approximately 11:00. Jim Schneider of ERM arrived around 7:00 and stayed until 10:30. Product seeping from the sidewall at existing ground surface at approximate El. 8 down to El. 3 in the excavation slope continued to be a challenge. We excavated to El. 2, I collected the first sample and it smelled like bunker oil. I discussed the excavation protocol with regards to depth, visual and olfactory with Brian Sato and Brian Gouran (Jim Schneider listened in) and decided to take the excavation down to El. 1. Brian Gouran thought that was reasonable. Sediment smell was better at El.1 and that's where we stopped for depth. As stated above, digging upslope at approximate El. 3 was where the ground water was carrying the product into the excavation. The crew created a sump pit and pumped to the storage tank. They loaded 10 containers approx. 30 ton each, four were lined

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BMcD 1/14/13

Field Representative Signature___ _____Date___01/09/2013_____

ANCHOR QEA

DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	120007-01.01 T03.2
REPORT DATE:	Wednesday, January 09,
REPORT NO.:	IDR003_BW
AQEA FIELD REP.:	Bud Whitaker

PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

		for the wet soil. Brian Sato and I checked the liquid storage tank and found that the 18,000 gallon tank was only 1/3 full so no need to discharge at this time. The day crew will be onsite at 7:00 to haul out and cleanup.
2-01.3(3) Surveys	Site	Contractor provided pre-excavation and post excavation survey and surveyed each layer of the backfill. Environmental sampling locations were logged by the construction superintendent using Trimble GPS.
2-01.3(4) Shoring	Site	Contractor used 2-steel shoring plates to isolate the excavation. The shoring plates were driven into the ground alongside the northern side of the excavation and chained/secured back to an existing pile and timber structure.
2-01.3(4)C Dewatering	Site	Contractor used a 3" trash pump to pump oily groundwater from the excavation to the onsite 18,000 Gallon Rain-For-Rent liquid storage tank.
2-01.3(5) Contaminated Material Storage	Site	Contractor excavated the contaminated soil and placed it directly into steel shipping/storage containers on site. A 16,000 lb. capacity forklift was used to shuttle storage containers to and from the excavation site.
2-01.3(5)C Liquid Handling	Site	Contractor pumped oily groundwater from the excavation directly into the onsite storage tank.
1-03.2(1) Spill Response Materials	Site	Spill Response kits are provided onsite.
1-03.3(1) Spill Prevention and Control	Site	Secondary containment vessels were provided during fueling of generator and trash pump.
1-05 Erosion, Sedimentation and Stormwater Controls	Site	Contractor deployed 10' height silt curtain and oil containment boom along the shoreline. Silt curtain was secured/anchored to adjacent existing piling.

PERSONNEL ON SITE (EST.)

Name (or Labor Category)	Organization	Notes
Mitch Pelzer-Project superintendent	RAM Construction	Mitch is the site superintendent and certified CESCL
Mike Conours-Operator	RAM Construction	Mike is providing soil excavation with Hitachi EX450 Long Reach Excavator.
Brad Brown-Operator	RAM Construction	Brad is shuttling storage containers to and from

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BMcD 1/14/13

Field Representative Signature___  _____Date___01/09/2013_____

ANCHOR QEA

DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	120007-01.01 T03.2
REPORT DATE:	Wednesday, January 09,
REPORT NO.:	IDR003_BW
AQEA FIELD REP.:	Bud Whitaker

PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

		the excavation and transporting backfill materials to the site. Brad is also using JD544 Loader to load sand, gravel and armor rock into the JD300D off road dump truck to backfill the excavation.
Kyle Lukes	RAM Construction	Kyle is the grade checker and providing groundwater management and general labor.
Kevin Brann	RAM Construction	Kevin is assisting with groundwater management and general site labor.
Bob Carvee	RAM Construction	Bob is a General Superintendent onsite to assist with installing the liners in the shipping/storage containers. Bob is only onsite for 2-hours.
Bud Whitaker	Anchor QEA	Monitoring the technical conduct of the contractor and collecting soil samples.
Brian Gouran	Port of Bellingham	Brian is onsite to monitor the excavation
Brian Sato	Washington State DOE	Brian is onsite to monitor the excavation
Jim Schneider	ERM representing Chartus	3rd Party Observation

EQUIPMENT ON SITE

Type of Equipment	Organization	Notes
Hitachi EX450 LCH Excavator	RAM Construction-Rental	In Use
JD544 Loader	RAM Construction	In Use
JD135C Excavator	RAM Construction	In Use
JD300D Off road Dump Truck	RAM Construction	In Use
Chev. 3500HD Pickup Truck	RAM Construction	In Use
Ford F550 Utility Truck	RAM Construction	In Use
2-Genie TML 4000N Light Plants	RAM Construction	In Use
Ford F350 Pickup Truck	RAM Construction	In Use
Chev 3500 HD Pickup Truck	RAM Construction	In Use
Conex Forklift 16,000 lb. capacity.	RAM Construction	In Use

ATTACHMENTS

	None

CONSTRUCTION OBSERVATIONS

TIME	TOPIC AND LOCATION	DESCRIPTION OF FIELD ACTIVITY, OBSERVATION AND RECOMMENDATIONS TO OWNER	

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BMcD 1/14/13

Field Representative Signature___  _____Date___01/09/2013_____

ANCHOR QEA

DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	120007-01.01 T03.2
REPORT DATE:	Wednesday, January 09,
REPORT NO.:	IDR003_BW
AQEA FIELD REP.:	Bud Whitaker

PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

	Construction Survey	Contractor provided pre-excavation and post-excavation survey for the area excavated this shift with hand held TRIMBLE GPS Unit.	
	Mobilization	Contractor mobilized 2 additional light plants	
	Temporary Erosion and Sediment Control	Contractor deployed 10' silt curtain and floating absorbent oil boom, both secured to existing piling and timbers. All excavations are backfilled promptly after soil sampling. No turbidity noted.	
	Dewatering the Work Area	Contractor is using 3" submersible pump and 3" trash pump. Dewatering liquids are pumped directly into the onsite Rain-For-Rent liquid storage tank. Secondary containment vessel was provided during fueling and duration of the dewatering. Dewatering appeared to be managed well.	
	Geotextile Impermeable Liner	Contractor placed approximately 22.5'x 25 sheet of impermeable liner in the excavation as per plan.	
	Excavation and Disposal	Contaminated soil was excavated and placed directly into the steel storage containers provided. No offsite disposal this shift. Excavation was started at approximately El. 2.0 and continued per plan to the upland limits of the excavation. The limits of excavation were previously staked by the surveyor.	
1700		Field Inspector arrived onsite and discussed today's excavation plan with Mitch Pelzer of RAM. The crew is re-deploying the 10' silt curtain and floating absorbent oil boom. Attached to the existing wood pile and bulkhead timbers.	
		Mike Conours is excavating an approximately 20'x20'x 2' deep pad at the top of the slope to set the excavator to get closer to the excavation.	
1730		The crew is installing plastic liners in 4 of the shipping/storage containers to prepare for overly-wet soils.	
		The concrete vault oil/water separator is plumbed to the 18,000 gallon liquid storage tank with 3" discharge hose run to the ASB.	
		Preparing soil sampling kits and decontaminating the sampling equipment. I discussed the soil sampling locations with Mitch Pelzer, 2-samples will be collected in the excavation bottom and 3-collected from the sidewall at approximate elevations 3, 6 and 9. Mitch will provide sampling coordinates with the TRIMBLE GPS.	
1830		The crew begins excavating the approximately 25' wide strip from approximate El. 2 at the waterward side of the excavation.	

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REVIEW BY (PM initial/date)
BMcD 1/14/13

Field Representative Signature___ _____Date___01/09/2013_____

ANCHOR QEA

DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	120007-01.01 T03.2
REPORT DATE:	Wednesday, January 09,
REPORT NO.:	IDR003_BW
AQEA FIELD REP.:	Bud Whitaker

PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

1845		Brian Gouran and Brian Sato arrived to monitor the excavation and material placement. NOTE: Oily/water seep noted as soon as the crew started excavating and breaking out the wood piles and wood timbers. I notified Mitch and the operator that groundwater management is necessary at this point and secondary containment is needed for the pumping equipment. The crew excavated a 1' deep sump and contained the free product and groundwater in the sump.	
1900		Jim Schneider of ERM arrived onsite. I checked the bay for oil sheen and turbidity with Brian Sato and Jim Schneider-None noted at this time.	
2005		I attempted to collect soil sample #006 B at El. 2 and smelled oil. I discussed the excavation protocol with Brian Gouran and Brian Sato and then directed the contractor to excavate to E. 1.	
2027		I collected soil sample 006 B at El. 1 and smelled no obvious oil. The contractor continued excavating toward the 1.5/1 slope. Groundwater management was challenging, but the contractor is able to manage the oily water within the excavated sump and pump to the liquid storage tank.	
2100		I collected soil sample 007 B at approximate El. 1.	
		Wood debris is stockpiled west of the work zone for disposal or reinstatement at a later time. Treated piles and timbers are stockpiled upland west of the excavation. Excavated soil is placed directly into storage containers and staged away from the excavation for hauling and disposal during next day shift.	
2130		Crew is now placing filter gravel over the sand cap in the excavation bottom.	
2220		I collected soil sample 008 S at approximate El. 3.	
2235		I collected soil sample 009 S at approximate El. 6.	
2250		I collected soil sample 101 S at approximate El. 9.	

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PROJECT NO.:	120007-01.01 T03.2
REPORT DATE:	Wednesday, January 09,
REPORT NO.:	IDR003_BW
AQEA FIELD REP.:	Bud Whitaker

PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

		Soil Samples Collected: Sample ID CSIA 20130107-006B soil (bottom)/ 6 containers Sample ID CSIA 20130107-007B soil (bottom)/ 6 containers Sample ID CSIA 20130107-008S+3 soil (sidewall)/ 6 Containers Sample ID CSIA 20130107-009S+6 soil (sidewall) 6 containers Sample ID CSIA 20130107-010S+9 soil (sidewall) 6 containers NOTE: Contractor assisted with soil sample collection at the sidewalls with excavator bucket. Contractor provided GPS location of samples collected. 2300 Soil sampling is complete and contractor is now placing the sand cap, filter gravel, armor rock and impermeable liner in the excavation. Fabric size is approximately 22.5'x25'. Additional armor rock and fish mix will be placed after all excavation and backfill is complete at the site. Contractor will provide material weigh tickets to Bruce.	
2315		Brian Sato and I checked the liquid storage tank for volume. Brian Gouran and Brian Sato are now offsite.	
2400		Contractor is now complete with filter gravel placement and now placing armor rock.	
0100	01/10/13	Crew is placing the soil that was excavated for the excavator pad back in it's original position and cleaning up the site.	
0200	01/10/13	Crew is complete with excavation and backfill. Inspector offsite.	

OTHER GENERAL OBSERVATIONS-Note any Changes, Force Account Work and Materials Testing

	Construction Entrance	Contractor provided a construction entrance from the west with 2" railroad ballast rock and corrugated steel sheets. Construction entrance appears okay.	
	Construction Photos	Anchor QEA Field Representative took photos of all activities during the work.	
	Site Safety	No safety issues noted.	
	Site Stability	Site appears stable. The wood bulkheads along the shoreline were not damaged during the excavation and backfilling. No turbidity or oil sheen on the water noted.	

PHOTOS

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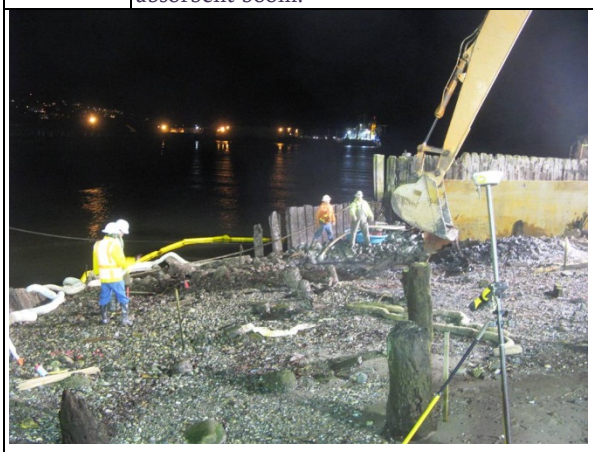
AQEA FIELD REP.:	Bud Whitaker

PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

Comment:	Crew deploying 10' silt curtain and floating oil absorbent boom.

Comment:	Excavating and removing existing wood piles and horizontal timbers.



Comment:	Crew preparing to pump oily groundwater to liquid storage tank. Note secondary containment. Brian Sato of ECY is looking on.

Comment:	Oily water seep in the excavation.

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PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

Comment:	Excavating contaminated soil and wood pile and timber debris. Brian Sato of ECY observing product seep at approximate El. 8 existing ground surface.

Comment:	Backfilling/placing material from east (shoreline) to toe of 1.5/1 slope to the west.

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DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	120007-01.01 T03.2
REPORT DATE:	Thursday, January 10, 2013
REPORT NO.:	IDR004_BW
AQEA FIELD REP.:	Bud Whitaker

PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

http://tidesandcurrents.noaa.gov/noaatidepredictions/NOAATidesFacade.jsp?Stationid=9449211

DAILY TIDE PREDICTIONS IN FEET	DATE	DAY	TIME	HEIGHT
NOAA Station ID: 9449211	01/10	Thu	04:59 AM	8.87 H
Bellingham, WA	01/10	Thu	09:22 AM	6.41 L
Time Zone: LST/LDT	01/10	Thu	02:15 PM	9.03 H
Datum: MLLW	01/10	Thu	09:54 PM	-2.32 L

REPORT SUBMITTED TO:		CONTRACTOR NAME AND CONTACT:		WEATHER TEMP. & PRECIP			
AQEA	Bruce McDonald	General	RAM Construction Lou Ivsevic-Project Manager Mitch Pelzer-Superintendent	PM:	Clear 34F 0-10MPH		
AQEA	Halah Voges	Subs	None	AM:	Clear 28F 0-10MPH Icy conditions during soil sampling.		
AQEA	Nik Bacher			Times of Site Visits:			
				from	1630	to	0300 1/11
				From		To	

PROJECT DAILY CONSTRUCTION ACTIVITY LIST

CONSTRUCTION TASK	LOCATION	GENERAL NOTES
2-01Excavation and Disposal of Contaminated Material and Debris	Site	RAM excavated an approximately 30' wide strip from El. 1.0 to the toe of the 1.5/1 slope to the upper limits of the excavation boundary. They first removed debris and dug out the wood piling. Product seep was noticed after digging out the piles. At 7:00 PM the crew deployed the de-watering pumps and began pumping into the onsite liquid storage tank. The 3" trash pump was contained in a secondary containment vessel. Creosote timbers were found buried in the excavation. The timbers were removed and added to the wood debris stockpile upland of the excavation. During additional excavation another significant product seep was found to the north near the easterly bulkhead. The product is flowing in with the groundwater that is encountered at the approximate El. 3 excavation depth. Jim Schneider of ERM arrived around 10:00 PM and stayed until 1:40AM. Product seeping from the sidewall at existing ground surface at approximate El. 8 down to El. 3 in the

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		excavation slope continued to be a challenge. We excavated to El. 2, I collected the first sample and it smelled like petroleum. I then directed the contractor to excavate the bottom to El. 1. I collected soil sample 11 and the contractor continued excavating. When collecting sample 12 the sediment smelled of petroleum so I again directed the contractor to excavate to El. 0. Sediment smell was better at El.0 and that's where we stopped for depth. The contractor excavated a 2' sump at the toe of the slope and pumped to the liquid storage tank, they managed the oily water effectively. El. 3 was where the ground water was carrying the product into the excavation. They loaded 16 containers with excavated soil, approx. 30 ton each. I checked the liquid storage tank and found that the 18,000 gallon tank was only 2/3 full so no need to discharge at this time. The day crew will be onsite at 7:00 AM to haul out and cleanup. The contractor backfilled the excavation with sand cap, filter rock and armor rock was placed on the slopes. The impermeable liner was placed along the slope and approximately 10 out from the toe. 2-22.5'x 35' sections of liner were installed with 3'-4' lap. An approximately 6' section of liner was not lapped very well. They did get a full 3-4' lap but it was not a plastic to plastic lap.
2-01.3(3) Surveys	Site	Contractor provided pre-excavation and post excavation survey and surveyed each backfill layer. Environmental sampling locations were logged by the construction superintendent using Trimble GPS.
2-01.3(4) Shoring	Site	Contractor used 2-steel shoring plates to isolate the excavation. The shoring plates were driven into the ground alongside the northern side of the excavation and chained/secured back to an existing pile and timber structure.
2-01.3(4)C Dewatering	Site	Contractor used a 3" trash pump to pump oily groundwater from the excavation to the onsite

ANCHOR QEA

DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	120007-01.01 T03.2
REPORT DATE:	Thursday, January 10, 2013
REPORT NO.:	IDR004_BW
AQEA FIELD REP.:	Bud Whitaker

PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

		18,000 Gallon Rain-For-Rent liquid storage tank.
2-01.3(5) Contaminated Material Storage	Site	Contractor excavated the contaminated soil and placed it directly into steel shipping/storage containers on site. A 16,000 lb. capacity forklift was used to shuttle storage containers to and from the excavation site.
2-01.3(5)C Liquid Handling	Site	Contractor pumped oily groundwater from the excavation directly into the onsite storage tank. No discharge to the ASB this shift.
1-03.2(1) Spill Response Materials	Site	Spill Response kits are provided onsite.
1-03.3(1) Spill Prevention and Control	Site	Secondary containment vessel was provided for the trash pump. No onsite fueling noted this shift.
1-05 Erosion, Sedimentation and Stormwater Controls	Site	Contractor maintained the 10' height silt curtain and oil containment boom along the shoreline. Silt curtain was secured/anchored to adjacent existing piling and wood timbers.

PERSONNEL ON SITE (EST.)

Name (or Labor Category)	Organization	Notes
Mitch Pelzer-Project superintendent	RAM Construction	Mitch is the site superintendent and certified CESCL
Mike Conours-Operator	RAM Construction	Mike is providing soil excavation with Hitachi EX450 Long Reach Excavator.
Brad Brown-Operator	RAM Construction	Brad is shuttling storage containers to and from the excavation and transporting backfill materials to the site. Brad is also using JD544 Loader to load sand, gravel and armor rock into the JD300D off road dump truck to backfill the excavation.
Kyle Lukes	RAM Construction	Kyle is the grade checker and providing groundwater management and general labor.
Kevin Brann	RAM Construction	Kevin is assisting with groundwater management and general site labor.
Bud Whitaker	Anchor QEA	Monitoring the technical conduct of the contractor and collecting soil samples.
Jim Schneider	ERM representing Chartis	3rd Party Observation

EQUIPMENT ON SITE

Type of Equipment	Organization	Notes
Hitachi EX450 LCH Excavator	RAM Construction-Rental	In Use

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PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

JD544 Loader	RAM Construction	In Use
JD135C Excavator	RAM Construction	In Use
JD300D Off road Dump Truck	RAM Construction	In Use
Chev. 3500HD Pickup Truck	RAM Construction	In Use
Ford F550 Utility Truck	RAM Construction	In Use
2-Genie TML 4000N Light Plants	RAM Construction	In Use
Ford F350 Pickup Truck	RAM Construction	In Use
Chev 3500 HD Pickup Truck	RAM Construction	In Use
Conex Forklift 16,000 lb. capacity.	RAM Construction	In Use

ATTACHMENTS

	None

CONSTRUCTION OBSERVATIONS

TIME	TOPIC AND LOCATION	DESCRIPTION OF FIELD ACTIVITY, OBSERVATION AND RECOMMENDATIONS TO OWNER	
	Construction Survey	Contractor provided pre-excavation and post-excavation survey for the area excavated this shift with hand held TRIMBLE GPS Unit.	
	Mobilization	Appears fully mobilized.	
	Temporary Erosion and Sediment Control	Contractor maintained 10' silt curtain and floating absorbent oil boom, both secured to existing piling and timbers. All excavations are backfilled promptly after soil sampling. No turbidity noted.	
	Dewatering the Work Area	Contractor is using 3" trash pump. Dewatering liquids are pumped directly into the onsite Rain-For-Rent liquid storage tank. Secondary containment vessel was provided for the pump for the duration of the dewatering. Dewatering appeared to be managed well.	
	Geotextile Impermeable Liner	Contractor placed approximately 2-22.5'x 25 sheets of impermeable liner in the excavation as per plan.	
	Excavation and Disposal	Contaminated soil was excavated and placed directly into the steel storage containers provided. No offsite disposal this shift. Excavation was started at approximately El. 2.0 and continued per plan to the upland limits of the excavation. The limits of excavation were previously staked by the surveyor. Excavation continued to EL. 1and then to El. 0 at the excavation bottom due to petroleum smell.	
1630		Field Inspector arrived onsite and discussed today's excavation plan with Mitch Pelzer of RAM. The crew is maintaining the 10' silt curtain and floating absorbent oil boom that are attached to the existing wood pile and bulkhead timbers. Contractor is removing debris from the excavation zone.	

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REPORT NO.:	IDR004_BW
AQEA FIELD REP.:	Bud Whitaker

PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

		Mike Conours is excavating another approximately 20'x20'x 2' deep pad at the top of the slope to set the excavator to get closer to the excavation. Mike will backfill with same soil at end of excavation and material placement.	
1730		The crew is installing plastic liners in 4 of the shipping/storage containers to prepare for overly-wet soils.	
		The concrete vault oil/water separator is plumbed to the 18,000 gallon liquid storage tank with 3" discharge hose run to the ASB.	
		Preparing soil sampling kits and decontaminating the sampling equipment. I discussed the soil sampling locations with Mitch Pelzer, 2-samples will be collected in the excavation bottom and 3-collected from the sidewall at approximate elevations 3, 6 and 9. Mitch will provide sampling coordinates with the TRIMBLE GPS.	
1800		The crew began excavating the approximately 35' wide strip from approximate El. 2 at the waterward side of the excavation.	
1830		Creosote wood timbers were found in the excavation. The crew removed the timbers and stockpile them upland of the excavation for future disposal.	
2000		Soil Sample 11 B collected at approximate EL. 1. Contractor provided coordinates with TRIMBLE GPS.	
2015		Soil Sample 12 B collected at approximate EL. 0. Contractor provided coordinates with TRIMBLE GPS.	
2030		Contractor begins placing sand cap and filter gravel from the toe of slope. Groundwater management appears okay at toe of slope. Steel sheets were placed adjacent to the tiebacks near the easterly bulkhead to isolate that area for next shift excavation.	
2200		Jim Schneider of ERM arrived onsite.	
2245		Contractor has placed armor rock at the excavation bottom and is now excavating the slope.	
2330		I collected soil sample 013 S at El. 3. The contractor continued excavating upslope	
2353		I collected soil sample 014 S at approximate El. 6.	
2400		I collected soil sample 015 S at approximate El. 9.	
		Contractor is now installing 2-sections of impermeable liner 22.5'x35' with 3-4' laps	
0100	01/11/13	Crew is completing placing the sand cap on the slope. Filter gravel is being placed after sand cap.	
0130	01/11/13	Crew begins placing armor rock. Placement appears okay.	

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0140	01/11/13	Jim Schneider is now offsite.	
0200	01/11/13	Crew is now direct dumping armor rock over the slope and grading with the Hitachi EX400 Excavator bucket. Placement appears okay.	
		Soil Samples Collected: Sample ID CSIA 20130110-011B soil (bottom)/ 6 containers Sample ID CSIA 20130110-012B soil (bottom)/ 6 containers Sample ID CSIA 20130110-013S+3 soil (sidewall)/ 6 Containers Sample ID CSIA 20130110-014S+6 soil (sidewall) 6 containers Sample ID CSIA 20130107-015S+9 soil (sidewall) 6 containers NOTE: Contractor assisted with soil sample collection at the sidewalls with excavator bucket. Contractor provided GPS location of samples collected. 2400 Soil sampling is complete and contractor is now placing the sand cap, filter gravel, armor rock and impermeable liner in the excavation. Fabric size is approximately 35'x35' with lap. Additional armor rock and fish mix will be placed after all excavation and backfill is complete at the site. Contractor will provide material weigh tickets to Bruce.	
0230	01/11/13	Crew is placing the soil that was excavated for the excavator pad back in its original position and cleaning up the site.	
0300	01/11/13	Crew is complete with excavation and backfill. Inspector offsite.	

OTHER GENERAL OBSERVATIONS-Note any Changes, Force Account Work and Materials Testing

	Construction Entrance	Contractor provided a construction entrance from the west with 2" railroad ballast rock and corrugated steel sheets. Construction entrance appears okay.	
	Construction Photos	Anchor QEA Field Representative took photos of all activities during the work.	
	Site Safety	No safety issues noted.	
	Site Stability	Site appears stable. The wood bulkheads along the shoreline were not damaged during the excavation and backfilling. No turbidity or oil sheen on the water noted.	

PHOTOS

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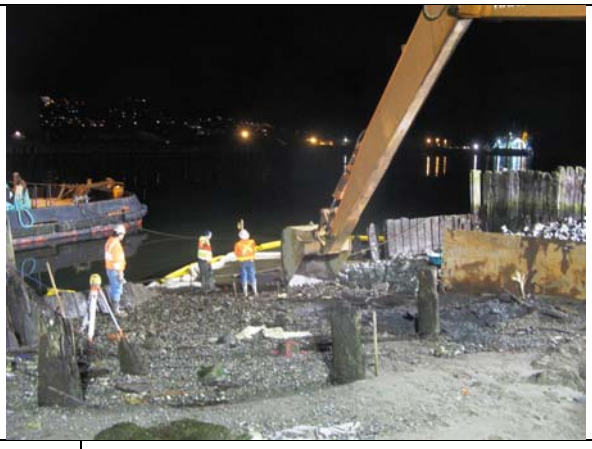
PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA



Comment: Excavating toe of slope and GPS Limits of excavation.

Comment: Creosote timber found in excavation.

Comment: Crew preparing to pump oily groundwater to liquid storage tank. Note secondary containment.

Comment: Crew begins placing sand cap and isolating product seep and groundwater in sump pit.

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PROJECT NAME/LOCATION	**CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA**

Comment:	Crew placing filter gravel. Note sump moved to toe of slope in excavation.

Comment:	Installing impermeable liner and armor rock.

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DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	120007-01.01 T03.2
REPORT DATE:	Friday, January 11, 2013
REPORT NO.:	IDR005_BW
AQEA FIELD REP.:	Bud Whitaker

PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

http://tidesandcurrents.noaa.gov/noaatidepredictions/NOAATidesFacade.jsp?Stationid=9449211

DAILY TIDE PREDICTIONS IN FEET	DATE	DAY	TIME	HEIGHT
NOAA Station ID: 9449211	01/11	Fri	05:37 AM	9.26 H
Bellingham, WA	01/11	Fri	10:20 AM	6.13 L
Time Zone: LST/LDT	01/11	Fri	03:13 PM	8.86 H
Datum: MLLW	01/11	Fri	10:40 PM	-2.29 L

REPORT SUBMITTED TO:		CONTRACTOR NAME AND CONTACT:		WEATHER TEMP. & PRECIP			
AQEA	Bruce McDonald	General	RAM Construction Lou Ivsevic-Project Manager Mitch Pelzer-Superintendent	PM:	Clear 31F 0-10MPH		
AQEA	Halah Voges	Subs	None	AM:	Clear 22F 0-10MPH Icy conditions during soil sampling.		
AQEA	Nik Bacher			Times of Site Visits:			
				from	1700	to	0130 1/12
				From		To	

PROJECT DAILY CONSTRUCTION ACTIVITY LIST

CONSTRUCTION TASK	LOCATION	GENERAL NOTES
2-01Excavation and Disposal of Contaminated Material and Debris	Site	RAM excavated the final strip approximately 40" wide strip from El. 1.0 to the toe of the 1.5/1 slope to the upper limits of the excavation boundary. They first removed debris and dug out the wood piling. 3 separate wood pile and timber structures were found parallel to the easterly bulkhead. The contractor provided GPS coordinates of the structures. A wood deadman was found where the steel tiebacks were originally secured. Four tiebacks that were not attached to anything were removed. One was left in place as it was secured to a pile in the easterly slope. The deadman was removed. Product seep was noticed almost immediately after digging out the piles and structures adjacent to the easterly bulkhead. At 7:00 PM the crew deployed the de-watering pumps and began pumping into the onsite liquid storage tank. The 3" trash pump was contained in a secondary containment vessel. Creosote timbers were also found buried in the excavation. The timbers were removed and

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		added to the wood debris stockpile upland of the excavation. During additional excavation a significant amount of product was found to the east against the easterly bulkhead. The product is also flowing in with the groundwater that is encountered at the approximate El. 3 excavation depth. Jim Schneider of ERM arrived around 10:00 PM and stayed until 1:40AM. Product seeping from the sidewall at existing ground surface at approximate El. 8 down to El. 3 in the excavation slope continued to be a challenge. We excavated to El. 2 and the excavation smelled of petroleum so I directed the contractor to excavate to El. 1. The excavation soil still smelled of petroleum so I directed the contractor to continue the excavation to El. 0 and that's where we stopped for depth. The contractor excavated a 2' sump at the toe of the slope and pumped to the liquid storage tank, they managed the oily water effectively. El. 3 was where the ground water was carrying the product into the excavation. I contacted Bruce McDonald and discussed the amount of product found and he asked me to call Brian Gouran and inform him. Bruce suggested that the excavation be plugged with approximately 1' of sand to control the product and groundwater seeps and then install the impermeable liner in the entire excavation. Contractor has a single section of liner measuring 40'x40' that was to be used for the stockpile bunker that was placed in the excavation. They loaded 9 containers with excavated soil, approx. 30 ton each. I checked the liquid storage tank and found that the 18,000 gallon tank was almost full so water sampling will take place on Monday before discharging to the ASB. The day crew will be onsite at 7:00 AM on Monday 1/14 to haul out and cleanup. The contractor backfilled the excavation with sand cap, filter rock and armor rock was placed on the slopes. The impermeable

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ANCHOR QEA

DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	120007-01.01 T03.2
REPORT DATE:	Friday, January 11, 2013
REPORT NO.:	IDR005_BW
AQEA FIELD REP.:	Bud Whitaker

PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

		liner was placed along the slope and out to the easterly bulkhead. A 40'x 40' section of liner was installed with 3'-4' lap at edge.
2-01.3(3) Surveys	Site	Contractor provided pre-excavation and post excavation survey and surveyed each backfill layer. Environmental sampling locations were logged by the construction superintendent using Trimble GPS.
2-01.3(4) Shoring	Site	Contractor removed all steel sheet shoring plates from the excavation.
2-01.3(4)C Dewatering	Site	Contractor used a 3" trash pump to pump oily groundwater from the excavation to the onsite 18,000 Gallon Rain-For-Rent liquid storage tank.
2-01.3(5) Contaminated Material Storage	Site	Contractor excavated the contaminated soil and placed it directly into steel shipping/storage containers on site. A 16,000 lb. capacity forklift was used to shuttle storage containers to and from the excavation site.
2-01.3(5)C Liquid Handling	Site	Contractor pumped oily groundwater from the excavation directly into the onsite storage tank. No discharge to the ASB this shift. Discharge is scheduled for Monday 1/14.
1-03.2(1) Spill Response Materials	Site	Spill Response kits are provided onsite.
1-03.3(1) Spill Prevention and Control	Site	Secondary containment vessel was provided for the trash pump. No onsite fueling noted this shift.
1-05 Erosion, Sedimentation and Stormwater Controls	Site	Contractor maintained the 10' height silt curtain and oil containment boom along the shoreline. Silt curtain was secured/anchored to adjacent existing piling and wood timbers.

PERSONNEL ON SITE (EST.)

Name (or Labor Category)	Organization	Notes
Mitch Pelzer-Project superintendent	RAM Construction	Mitch is the site superintendent and certified CESCL
Mike Conours-Operator	RAM Construction	Mike is providing soil excavation with Hitachi EX450 Long Reach Excavator.
Brad Brown-Operator	RAM Construction	Brad is shuttling storage containers to and from the excavation and transporting backfill materials to the site. Brad is also using JD544

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		Loader to load sand, gravel and armor rock into the JD300D off road dump truck to backfill the excavation.
Kyle Lukes	RAM Construction	Kyle is the grade checker and providing groundwater management and general labor.
Kevin Brann	RAM Construction	Kevin is assisting with groundwater management and general site labor.
Bud Whitaker	Anchor QEA	Monitoring the technical conduct of the contractor and collecting soil samples.
Jim Schneider	ERM representing Chartus	3rd Party Observation

EQUIPMENT ON SITE

Type of Equipment	Organization	Notes
Hitachi EX450 LCH Excavator	RAM Construction-Rental	In Use
JD544 Loader	RAM Construction	In Use
JD135C Excavator	RAM Construction	In Use
JD300D Off road Dump Truck	RAM Construction	In Use
Chev. 3500HD Pickup Truck	RAM Construction	In Use
Ford F550 Utility Truck	RAM Construction	In Use
2-Genie TML 4000N Light Plants	RAM Construction	In Use
Ford F350 Pickup Truck	RAM Construction	In Use
Chev 3500 HD Pickup Truck	RAM Construction	In Use
Conex Forklift 16,000 lb. capacity.	RAM Construction	In Use

ATTACHMENTS

	None

CONSTRUCTION OBSERVATIONS

TIME	TOPIC AND LOCATION	DESCRIPTION OF FIELD ACTIVITY, OBSERVATION AND RECOMMENDATIONS TO OWNER	
	Construction Survey	Contractor provided pre-excavation and post-excavation survey for the area excavated this shift with hand held TRIMBLE GPS Unit.	
	Mobilization	Appears fully mobilized.	
	Temporary Erosion and Sediment Control	Contractor maintained 10' silt curtain and floating absorbent oil boom, both secured to existing piling and timbers. All excavations are backfilled promptly after soil sampling. No turbidity noted.	

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PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

	Dewatering the Work Area	Contractor is using 3" trash pump. Dewatering liquids are pumped directly into the onsite Rain-For-Rent liquid storage tank. Secondary containment vessel was provided for the pump for the duration of the dewatering. Dewatering appeared to be managed well.	
	Geotextile Impermeable Liner	Contractor placed an approximately 40'x 40' sheet of impermeable liner in the excavation.	
	Excavation and Disposal	Contaminated soil was excavated and placed directly into the steel storage containers provided. No offsite disposal this shift. Excavation was started at approximately El. 2.0 and continued per plan to the upland limits of the excavation. The limits of excavation were previously staked by the surveyor. Excavation continued to EL. 0 at the excavation bottom due to petroleum smell.	
1800		Field Inspector arrived onsite and discussed today's excavation plan with Mitch Pelzer of RAM. The crew is maintaining the 10' silt curtain and floating absorbent oil boom that are attached to the existing wood pile and bulkhead timbers. Contractor is removing debris from the excavation zone. Crew is cutting away rusted separated steel tie backs from the easterly bulkhead.	
		Mike Conours is excavating from the north east area of the excavation zone.	
1800		Contaminated soil is loaded directly into shipping/storage containers. Some containers are lined to control runout of wet soil.	
		The concrete vault oil/water separator is plumbed to the 18,000 gallon liquid storage tank with 3" discharge hose run to the ASB.	
1900		Preparing soil sampling kits and decontaminating the sampling equipment. Icy conditions. I discussed the soil sampling locations with Mitch Pelzer, 2-samples will be collected in the excavation bottom and 3-collected from the sidewall at approximate elevations 3, 6 and 9. Mitch will provide sampling coordinates with the TRIMBLE GPS. NOTE: Only 1 sidewall sample was collected due to sidewall sloughing to almost vertical.	
1800		The crew continued excavating the approximately 35' wide strip from approximate El. 0 at the waterward side of the excavation.	
1830		Additional buried creosote wood timbers and piling were found in the excavation. The crew removed the timbers and piling and stockpiled them upland of the excavation for future disposal.	
2145		Soil Sample 16 B collected at approximate EL. 0. Contractor provided coordinates with TRIMBLE GPS.	
2154		Soil Sample 17 B collected at approximate EL. 0. Contractor provided coordinates with TRIMBLE GPS.	

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PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

2230		I called Brian Gouran to provide project update.	
2245		Contractor has placed armor rock at the excavation bottom and is now excavating the slope.	
2255		I collected soil sample 18 S in the almost vertical slope of the excavation at approximate El. 9.	
		Contractor is now installing the single section of impermeable liner 40'x40' with 3-4' lap.	
0030	01/12/13	Jim Schneider of ERM arrived onsite.	
0100	01/12/13	Crew is completing placing the sand cap on the liner and up the slope. Filter gravel is being placed after sand cap.	
0130	01/12/13	Crew completes placing armor rock. Placement appears okay.	
0130	01/12/13	Crew is complete with excavation and material placement. Jim Schneider is now offsite. Inspector offsite.	
		NOTE: Small amount of sheen noticed in water. I informed Mitch and his crew mopped up with absorbent pads. Appears okay.	
		Soil Samples Collected: Sample ID CSIA 20130110-016B soil (bottom)/ 6 containers Sample ID CSIA 20130110-017B soil (bottom)/ 6 containers Sample ID CSIA 20130110-018S+9 soil (sidewall)/ 6 Containers Free product sample collected in jar. NOTE: Contractor assisted with soil sample collection at the sidewalls with excavator bucket. Contractor provided GPS location of samples collected. Additional armor rock and fish mix will be placed after all excavation and backfill is complete at the site. Contractor will provide material weigh tickets to Bruce.	

OTHER GENERAL OBSERVATIONS-Note any Changes, Force Account Work and Materials Testing

	Construction Entrance	Contractor provided a construction entrance from the west with 2" railroad ballast rock and corrugated steel sheets. Construction entrance appears okay.	
	Construction Photos	Anchor QEA Field Representative took photos of all activities during the work.	
	Site Safety	No safety issues noted.	

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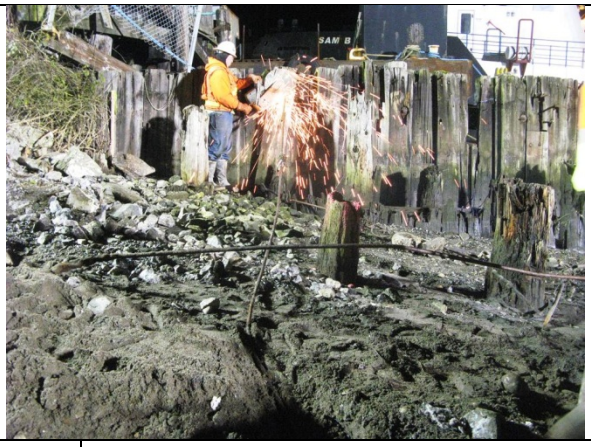
	Site Stability	Site appears stable. The wood bulkheads along the shoreline were not damaged during the excavation and backfilling. No turbidity or oil sheen on the water noted.	

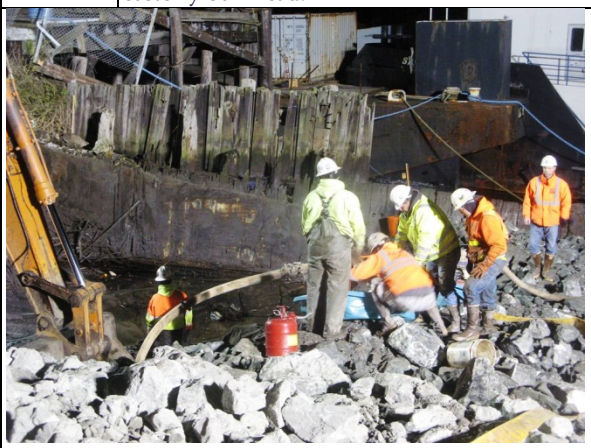
PHOTOS



Comment: Cutting away existing separated steel tiebacks from easterly bulkhead..

Comment: Product found at depth in excavation adjacent to easterly bulkhead.

Comment: Crew preparing to pump oily groundwater to liquid storage tank. Note secondary containment.



Comment: Crew is deploying second 3"pump to control groundwater and product seep.

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Comment: Crew placing sand cap.

Comment: Placing armor rock on filter gravel.

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DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	120007-01.01 T03.2
REPORT DATE:	Monday, January 14, 2013
REPORT NO.:	IDR006_BW
AQEA FIELD REP.:	Bud Whitaker

PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

http://tidesandcurrents.noaa.gov/noaatidepredictions/NOAATidesFacade.jsp?Stationid=9449211

DAILY TIDE PREDICTIONS IN FEET	DATE	DAY	TIME	HEIGHT
NOAA Station ID: 9449211	01/14	Mon	12:09 AM	-1.22 L
Bellingham, WA	01/14	Mon	07:25 AM	9.62 H
Time Zone: LST/LDT	01/14	Mon	01:10 PM	4.54 L
Datum: MLLW	01/14	Mon	06:10 PM	7.46 H

REPORT SUBMITTED TO:		CONTRACTOR NAME AND CONTACT:		WEATHER TEMP. & PRECIP			
			RAM Construction Lou Ivsevic-Project Manager				
AQEA	Bruce McDonald	General	Mitch Pelzer-Superintendent	PM:	Clear 31F 0-10MPH		
AQEA	Halah Voges	Subs	None	AM:	Clear 32F 0-10MPH Icy conditions.		
AQEA	Nik Bacher			Times of Site Visits:			
				from	0730	to	1200
				From	1900	To	2400

PROJECT DAILY CONSTRUCTION ACTIVITY LIST

CONSTRUCTION TASK	LOCATION	GENERAL NOTES
2-01Excavation and Disposal of Contaminated Material and Debris	Site	All excavation activity is complete. RAM Construction is onsite to discharge dewatering water from the liquid storage tank to the ASB. The day crew was onsite loading the storage/shipping containers onto truck and trailers and hauling from the site. 9 storage/shipping containers were hauled from the site. 1 empty container was left onsite to load any residual soil and debris from cleanup activity at the top of slope and to remove oil sludge from the Rain-For-Rent liquid storage tank. Mitch Pelzer stated that the liquid storage tank would be professionally cleaned prior to removal from the site. I requested that they send documentation of this activity. Mitch will discuss request with Lou Ivsevic. At approximately 1000 Julia Labadie, Anchor QEA arrived on site to assist with dewatering water sampling as it is discharged into the ASB. We collected one sample consisting of 19 containers. Containers were labeled and chain of custody form was completed. Water sampling was completed at

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PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

		1130. Brian Gouran of PoB arrived onsite to review the activity. We discussed contractor's schedule for armor rock and fish rock placement this evening and contractor's de-mobilization. 1900 RAM Construction is placing the armor rock layer to proposed grade. 8 truck and trailer loads of fish mix material have been delivered to the site and will be placed from approximate elevation 8.5 to elevation 10 and then upslope to approximate elevation 14. Mitch Pelzer and I discussed the finish elevation at the top of slope and how they would restore the top of slope and upland areas that were disturbed during excavation, loading and hauling activities. Mitch stated that Mike Hammes directed him to place some of the left over filter rock at the top of slope around the excavation area to stabilize the area. Mitch and I discussed the disposal of concrete debris that was removed from the beach and stockpiled in the upland. Mitch requested to haul the concrete debris with company dump truck to a recycle facility. I contacted Bruce McDonald at 1930 to discuss the proper method of disposal. Because the concrete was partially buried in some areas that were impacted with product, it was determined that the concrete debris should be hauled and disposed of with the excavation soils. Wood debris will be cut into manageable lengths and disposed of in same manner. At 2030 Jim Schneider of ERM left the site. At 2400 all armor rock and fish mix placement is complete. Some of the fish mix material was placed at the top of slope at upland area to stabilize the area.
2-01.3(3) Surveys	Site	Contractor provided post material placement survey using Trimble GPS.
2-01.3(4) Shoring	Site	No shoring used.
2-01.3(4)C Dewatering	Site	No dewatering this shift. 18,000 Gallon Rain-For-Rent liquid storage tank was discharged into

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		ASB during water sampling.
2-01.3(5) Contaminated Material Storage	Site	9 containers of stored contaminated soil were hauled from the site.
2-01.3(5)C Liquid Handling	Site	Contractor discharged the onsite storage tank to the ASB during morning shift.
1-03.2(1) Spill Response Materials	Site	Spill Response kits are provided onsite.
1-03.3(1) Spill Prevention and Control	Site	All liquid storage discharge hoses were inspected for leaks during discharge. No leaks noted in the hoses or connections.
1-05 Erosion, Sedimentation and Stormwater Controls	Site	10' height silt curtain and oil containment boom remained deployed along the shoreline. Silt curtain was secured/anchored to adjacent existing piling and wood timbers.

PERSONNEL ON SITE (EST.)

Name (or Labor Category)	Organization	Notes
Mitch Pelzer-Project superintendent	RAM Construction	Mitch is the site superintendent and certified CESCL
Mike Conours-Operator	RAM Construction	Mike is providing soil excavation with Hitachi EX450 Long Reach Excavator.
Brad Brown-Operator	RAM Construction	Brad is using JD544 Loader to load armor rock, and fish mix into the JD300D off road dump truck for placement.
Kyle Lukes	RAM Construction	Kyle is the grade checker and providing general labor.
Kevin Brann	RAM Construction	Kevin is assisting with general site labor.
Bob Carvee	RAM Construction	Bob is loading containers on truck trailers for hauling and disposal during day shift.
Bud Whitaker	Anchor QEA	Monitoring the technical conduct of the contractor and collecting discharge water sample.
Julia Labadie	Anchor QEA	Collecting discharge water samples
Jim Schneider	ERM representing Chartus	3rd Party Observation

EQUIPMENT ON SITE

Type of Equipment	Organization	Notes
Hitachi EX450 LCH Excavator	RAM Construction-Rental	In Use
JD544 Loader	RAM Construction	In Use
JD135C Excavator	RAM Construction	In Use
JD300D Off road Dump Truck	RAM Construction	In Use
Chev. 3500HD Pickup Truck	RAM Construction	In Use

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PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

Ford F550 Utility Truck	RAM Construction	In Use
2-Genie TML 4000N Light Plants	RAM Construction	In Use
Ford F350 Pickup Truck	RAM Construction	In Use
Chev 3500 HD Pickup Truck	RAM Construction	In Use
Conex Forklift 16,000 lb. capacity.	RAM Construction	In Use

ATTACHMENTS

	None

CONSTRUCTION OBSERVATIONS

TIME	TOPIC AND LOCATION	DESCRIPTION OF FIELD ACTIVITY, OBSERVATION AND RECOMMENDATIONS TO OWNER	
	Construction Survey	Contractor provided post material placement survey for the placement of armor rock and fish mix with hand held TRIMBLE GPS Unit.	
	Mobilization	Appears fully mobilized.	
	Temporary Erosion and Sediment Control	Contractor maintained 10' silt curtain and floating absorbent oil boom, both secured to existing piling and timbers. Some turbidity noted.	
	Dewatering the Work Area	No dewatering this shift.	
	Geotextile Impermeable Liner	All impermeable liner has been placed in the excavation.	
	Excavation and Disposal	No contaminated soil excavated today. 9 containers were loaded and hauled from the site.	
0630		Field communications with Bruce McDonald.	
0730		Field Inspector arrived onsite. I discussed material placement with Mitch Pelzer. We discussed achieving design grade elevations and survey needed for final material placement. I asked Mitch if he has submitted any excavation or material surveys to Bruce McDonald. Mitch stated that he has not yet provided any maps or survey documents. He will provide when all placement is complete.	
0900		All storage/shipping containers have been removed from the site. Crew is preparing to discharge water from the liquid storage tank.	
1030		Julia Labadie and I collected 1 water sample comprising of 19 containers. Sample ID CSIA 20130114-001 DW	

LIMITATIONS: The Anchor QEA field representative is present on site solely to observe the field activities of the contractor identified and keep our client informed of the progress and quality of the work. The presence and activities of the Anchor QEA field representative and our acceptance of any non-conforming work does not relieve the contractor from complying with its contract documents. Anchor QEA does not have the authority to direct the contractors work. Any information provided by the Anchor QEA field representative is intended solely to advise the contractor of the technical requirements of the plans and specifications and/or design concept. The contractor is solely responsible for its means, methods, sequences, procedures, construction site safety, quality of the work, and adherence to the contract documents.

REVIEW BY (PM initial/date)
BMcD 01/17/13

Field Representative Signature___ _____Date___01/14/2013_____

ANCHOR QEA

DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	120007-01.01 T03.2
REPORT DATE:	Monday, January 14, 2013
REPORT NO.:	IDR006_BW
AQEA FIELD REP.:	Bud Whitaker

PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

1200		Water sampling is complete. Brian Gouran arrived onsite and we discussed placement/reinstatement of natural large woody debris and final material placement. Brian suggested large woody debris be placed at approximate El. 10 at toe of 3/1 slope.	
1200		Inspector offsite to return at 1800 for armor rock and fish mix material placement.	
1800		Field Inspector arrived onsite and discussed tonight's material placement plan with Mitch Pelzer of RAM. The crew is maintaining the 10' silt curtain and floating absorbent oil boom that are attached to the existing wood pile and bulkhead timbers. Contractor is setting up and preparing to place armor rock. We discussed the need to street sweep C street after all haul out and demobilization activities are completed.	
1930		I called Bruce McDonald to discuss concrete debris disposal. See notes above.	
		Mike Conours is placing armor rock.	
2000		Jim Schneider of ERM arrived onsite to monitor activity.	
2030		Armor rock placement is complete. Fish mix placement starts.	
2045		Fish mix placement starts.	
2115		Jim Schneider of ERM left the site.	
2330		Fish mix placement is complete.	
2400		Inspector and crew offsite.	
		Water Sample Collected: Sample ID CSIA 20130114-001DW- Discharge water 19 containers.	

OTHER GENERAL OBSERVATIONS-Note any Changes, Force Account Work and Materials Testing

	Construction Entrance	Contractor provided a construction entrance from the west with 2" railroad ballast rock and corrugated steel sheets. Construction entrance appears okay. Construction entrance material and rumble sheets will be removed on 1/15 after all hauling and demobilization is completed.	
	Construction Photos	Anchor QEA Field Representative took photos of all activities during the work.	
	Site Safety	No safety issues noted.	
	Site Stability	Site appears stable. The wood bulkheads along the shoreline were not damaged during the armor rock and fish mix placement. Some turbidity on the water noted. Crew will cleanup top of slope and uplands and place crushed rock ballast at upland area around work zone for erosion control and stabilization on Tuesday 1/15.	

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REVIEW BY (PM initial/date)
BMcD 01/17/13

Field Representative Signature___  _____Date___01/14/2013_____

DAILY FIELD ACTIVITY REPORT

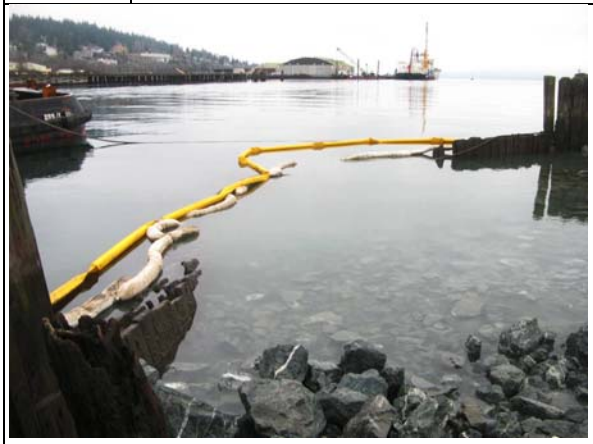
PROJECT NO.:	120007-01.01 T03.2
REPORT DATE:	Monday, January 14, 2013
REPORT NO.:	IDR006_BW
AQEA FIELD REP.:	Bud Whitaker

PROJECT NAME/LOCATION	**CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA**

PHOTOS

Comment:	Hauling contaminated material storage/shipping containers from site.

Comment:	Discharging dewatering water from the liquid storage tank through the oil/water separator to the ASB.



Comment:	10' silt curtain and absorbent oil boom in position.

Comment:	Concrete debris to be loaded into storage/shipping container for hauling and disposal.

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REVIEW BY (PM initial/date)

BMcD 01/17/13

Field Representative Signature___ _____Date___01/14/2013_____

DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	120007-01.01 T03.2
REPORT DATE:	Monday, January 14, 2013
REPORT NO.:	IDR006_BW
AQEA FIELD REP.:	Bud Whitaker

PROJECT NAME/LOCATION	**CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA**

Comment: Crew placing final armor rock to design grade.

Comment: Fish mix placement complete.

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REVIEW BY (PM initial/date)

BMcD 01/17/13

Field Representative Signature___ _____Date___01/14/2013_____

DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	120007-01.01 T03.2
REPORT DATE:	Tuesday, January 15, 2013
REPORT NO.:	IDR007_BW
AQEA FIELD REP.:	Bud Whitaker

PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

http://tidesandcurrents.noaa.gov/noaatidepredictions/NOAATidesFacade.jsp?Stationid=9449211

DAILY TIDE PREDICTIONS IN FEET	DATE	DAY	TIME	HEIGHT
NOAA Station ID: 9449211	01/15	Tue	12:53 AM	-0.26 L
Bellingham, WA	01/15	Tue	08:00 AM	9.56 H
Time Zone: LST/LDT	01/15	Tue	02:10 PM	3.9 L
Datum: MLLW	01/15	Tue	07:13 PM	6.8 H

REPORT SUBMITTED TO:		CONTRACTOR NAME AND CONTACT:		WEATHER TEMP. & PRECIP			
			RAM Construction				
			Lou Ivsevic-Project Manager				
AQEA	Bruce McDonald	General	Mitch Pelzer-Superintendent	PM:	Clear 33F 0-10MPH		
					Clear 33F 0-10MPH		
AQEA	Halah Voges	Subs	None	AM:	Icy conditions.		
AQEA	Nik Bacher			Times of Site Visits:			
				from	0800	to	1130
				From		To	

PROJECT DAILY CONSTRUCTION ACTIVITY LIST

CONSTRUCTION TASK	LOCATION	GENERAL NOTES
2-01Excavation and Disposal of Contaminated Material and Debris	Site	All excavation and material placement activity is complete. RAM Construction is onsite to hand rake the fish mix material after the first rising and reseeding tides. Excess material against the southerly and easterly bulkheads was raked away. The top of the slope was smoothed with the excavator bucket. The crew is preparing to de-mobilize the equipment from the site. The concrete ecology blocks that were part of the unused soil bunker were being loaded and hauled from site. The empty storage/shipping container that was left onsite will be loaded with any residual soil, woody debris, concrete debris or sludge from the liquid storage tank. Wood debris is being cut into manageable lengths by Kyle Lukes and will be disposed of the shipping container. Mitch stated that all wood chips and sawdust will be recovered and disposed of in the same manner. I again discussed placement of the large woody debris at approximate El. 10 with Mitch. We also discussed the need to remove the construction entrance material and rumble

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REVIEW BY (PM initial/date)

BMcD 01/17/13

Field Representative Signature___ _____Date___01/15/2013_____

ANCHOR QEA

DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	120007-01.01 T03.2
REPORT DATE:	Tuesday, January 15, 2013
REPORT NO.:	IDR007_BW
AQEA FIELD REP.:	Bud Whitaker

PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

		sheets and clean sweep C Street after all cleanup and hauling out of equipment is complete. Mitch stated that all equipment should be de-mobilized by end of day, construction entrance would be removed and street should be swept clean by end of day. They crew has constructed a lined bunker area for equipment decontamination. Decontamination water will be collected and pumped into the shipping container.
2-01.3(3) Surveys	Site	No survey this shift.
2-01.3(4) Shoring	Site	No shoring used.
2-01.3(4)C Dewatering	Site	No dewatering this shift. 18,000 Gallon Rain-For-Rent liquid storage tank was previously discharged into ASB. Rain-For-Rent liquid storage tank will be professionally cleaned on Thursday 1/17 and removed from the site. The oil/water separator has been removed from the site.
2-01.3(5) Contaminated Material Storage	Site	1 container is left onsite. It will be filled with wood debris, concrete debris, soil and liquids and hauled from the site.
2-01.3(5)C Liquid Handling	Site	Contractor has already discharged the onsite storage tank to the ASB. We discussed the decontamination water that will be captured in the lined bunker and disposed of in the shipping container.
1-03.2(1) Spill Response Materials	Site	Spill Response kits will be removed after all activity is complete.
1-03.3(1) Spill Prevention and Control	Site	Spill prevention Plan is still in effect until all site activities are complete.
1-05 Erosion, Sedimentation and Stormwater Controls	Site	10' height silt curtain and oil containment boom remained deployed along the shoreline. Silt curtain is secured/anchored to adjacent existing piling and wood timbers. I discussed removing the silt curtain and leaving the oil boom in place with Bruce McDonald. He will discuss with Port and contractor.

PERSONNEL ON SITE (EST.)

Name (or Labor Category)	Organization	Notes
Mitch Pelzer-Project superintendent	RAM Construction	Mitch is the site superintendent and certified

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DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	120007-01.01 T03.2
REPORT DATE:	Tuesday, January 15, 2013
REPORT NO.:	IDR007_BW
AQEA FIELD REP.:	Bud Whitaker

PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

		CESCL
Mike Conours-Operator	RAM Construction	Mike is loading equipment for removal from site and assisting with woody debris cleanup and removal..
Brad Brown-Operator	RAM Construction	Brad is loading ecology blocks for removal from site.
Kyle Lukes	RAM Construction	Kyle is hand raking the fish mix to fill any voids and providing general labor.
Kevin Brann	RAM Construction	Kevin is Kevin is raking out the fish mix to fill any voids and providing general labor.
Bud Whitaker	Anchor QEA	Monitoring the technical conduct of the contractor and discussing the demobilization schedule and expectations.

EQUIPMENT ON SITE

Type of Equipment	Organization	Notes
Hitachi EX450 LCH Excavator	RAM Construction-Rental	Being demobilized today
JD544 Loader	RAM Construction	Being demobilized today
JD135C Excavator	RAM Construction	Being demobilized today
JD300D Off road Dump Truck	RAM Construction	Being demobilized today
Chev. 3500HD Pickup Truck	RAM Construction	Being demobilized today
Ford F550 Utility Truck	RAM Construction	Being demobilized today
2-Genie TML 4000N Light Plants	RAM Construction	Being demobilized today
Ford F350 Pickup Truck	RAM Construction	Being demobilized today
Chev 3500 HD Pickup Truck	RAM Construction	Being demobilized today
Conex Forklift 16,000 lb. capacity.	RAM Construction	Being demobilized today

ATTACHMENTS

	None

CONSTRUCTION OBSERVATIONS

TIME	TOPIC AND LOCATION	DESCRIPTION OF FIELD ACTIVITY, OBSERVATION AND RECOMMENDATIONS TO OWNER	
	Construction Survey	No survey this day.	
	Mobilization	Contractor demobilizing.	
	Temporary Erosion and Sediment Control	10' silt curtain and floating absorbent oil boom still deployed. Bruce will discuss leaving oil boom in place and removing silt curtain with Port and Contractor. Site appears stable.	

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DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	120007-01.01 T03.2
REPORT DATE:	Tuesday, January 15, 2013
REPORT NO.:	IDR007_BW
AQEA FIELD REP.:	Bud Whitaker

PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

	Dewatering the Work Area	No dewatering this shift.	
	Geotextile Impermeable Liner	All impermeable liner has been placed in the excavation.	
	Excavation and Disposal	No contaminated soil excavated today. 43 total containers have been loaded and hauled from the site. One container is left onsite for wood and concrete debris and residual soil and decontamination water.	
0800		Field Inspector arrived onsite. I discussed the demobilization schedule with Mitch Pelzer. Crew is hand raking the fish mix and preparing to demobilize equipment and supplies. See notes above.	
0900		I discussed placement of large woody debris with Mitch Pelzer. We also discussed decontamination water that will be captured in the liner bunker and disposed of in the shipping container. Crew is cutting up woody debris to manageable size and loading into the shipping container. We discussed capturing all wood shavings and sawdust for disposal.	
1000		Mitch and I discussed sweeping C Street with a vactor sweeper or power broom. Mitch stated that they will be using a vactor sweeper.	
1130		Inspector offsite reporting and delivering soil and water samples to the ARI Lab in Tukwila, WA.	
1630		All soil and water samples delivered to ARI Lab. Chain of Custody forms completed.	

OTHER GENERAL OBSERVATIONS-Note any Changes, Force Account Work and Materials Testing

	Construction Entrance	Construction entrance material and rumble sheets will be removed after all hauling and demobilization is completed.	
	Construction Photos	Anchor QEA Field Representative took photos of all activities during the work.	
	Site Safety	No safety issues noted.	
	Site Stability	Site appears stable. Crew is cleaning up top of slope and uplands and will place crushed rock ballast at upland area around work zone for erosion control and stabilization.	

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BMcD 01/17/13

Field Representative Signature___  _____Date___01/15/2013_____

DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	120007-01.01 T03.2
REPORT DATE:	Tuesday, January 15, 2013
REPORT NO.:	IDR007_BW
AQEA FIELD REP.:	Bud Whitaker

PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

PHOTOS

Comment:	Hand raking fish mix to fill voids from rising and falling tide overnight.

Comment:	Loading ecology blocks for haul out.

Comment:	Cutting wood debris to manageable size before disposal.

Comment:	Plastic lined bunker to capture decontamination water for equipment decontamination.

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BMcD 01/17/13

Field Representative Signature___ _____Date___01/15/2013_____

DAILY FIELD ACTIVITY REPORT

PROJECT NO.:	120007-01.01 T03.2
REPORT DATE:	Tuesday, January 15, 2013
REPORT NO.:	IDR007_BW
AQEA FIELD REP.:	Bud Whitaker

PROJECT NAME/LOCATION	CHEVRON SUB AREA INTERIM ACTION, Central Waterfront, Port of Bellingham, WA

Comment: Final grade looking southwest.

Comment: Final grade looking northeast.

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REVIEW BY (PM initial/date)
BMcD 01/17/13

Field Representative Signature___ _____Date___01/15/2013_____

APPENDIX C
ANALYTICAL DATA REPORT

Table of Contents: ARI Job VZ97

Client: Anchor QEA

Project: 12007-01.01TO3.2 Cheveron Sub Area Interim Actio

AV
Signature

January-25-2013
Date

Table of Contents: ARI Job VZ97

Client: Anchor QEA

Project: 12007-01.01TO3.2 Cheveron Sub Area Interim Actio

AV
Signature

January-25-2013
Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

January 30, 2013

Nik Bacher
Anchor QEA
720 Olive Way, Suite 1900
Seattle, WA 98101

RE: Client Project: Chevron Sub Area Interim Action, 1200074-01.01 TO3.2
ARI Job No.: VZ97

Dear Nik:

Please find enclosed the Chain of Custody records (COCs), sample receipt documentation, and the final data package for samples from the project referenced above.

Sample receipt and details regarding these analyses are discussed in the Case Narrative.

An electronic copy of this package will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Sincerely,

ANALYTICAL RESOURCES, INC.

Cheronne Oreiro
Project Manager
(206) 695-6214
cheronneo@arilabs.com
www.arilabs.com

cc: eFile VZ97

Enclosures

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

Chain of Custody Documentation

ARI Job ID: VZ97

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page: 1 of 5	
ARI Client Company: Anchor QEA	Phone: 206 287 9130	Date: 01.07.13	Ice Present?
Client Contact: Nik Backer		No. of Coolers:	Cooler Temps:
Client Project Name: Chevron Subarea Interim Action			
Client Project #: 120007-01.01 T03.2	Samplers: Bruce McD. Bud W		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No Containers	Analysis Requested: SIM NWTPH-Gx BTEX	NWTPH-Gx BTEX	Total Solids	NWTPH-Dx					Notes/Comments
20130107-001B													
CS1A-~~20130107-001B~~	1/7/13	7:55pm	Soil	6	X	X	X	X					Approx Elevation +2
CS1A-20130107-002B	1/7/13	8:05pm	Soil	6	X	X	X	X					Approx Elevation +2
CS1A-20130107-0035+3	1/7/13	9:35pm	Soil	6	X	X	X	X					Approx Elevation +3
CS1A-20130107-0045+6	1/7/13	9:40pm	Soil	6	X	X	X	X					Approx Elevation +6
CS1A-20130107-0055+9	1/7/13	9:45pm	Soil	6	X	X	X	X					Approx Elevation +9

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
TPH-Dx Silica Gel Cleanup	Printed Name: Lewis Bud Williamson	Printed Name: A. Volgardsen	Printed Name	Printed Name:
	Company: Anchor QEA	Company: ARI	Company	Company:
	Date & Time: 1/15/13 1635	Date & Time: 1/15/13 1635	Date & Time	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

V27 : 65553

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page: 2 of 5	
ARI Client Company: ANCHOR QEA	Phone: 206.287.9130	Date: 01.09.13	Ice Present?
Client Contact: NIK BACKER		No. of Coolers:	Cooler Temps:
Client Project Name: CHEVRON SUBAREA INTERIM ACTION			
Client Project #: 120007-01.01 T03.2	Samplers: BOD WHITAKER		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No Containers	Analysis Requested: SIM NWTPH-Gx BENZENE	Analysis Requested: NWTPH-Gx	Analysis Requested: TOTAL SOLIDS	Analysis Requested: NWTPH-Dx	Notes/Comments
CS1A20130109-006B	1/9/13	2027	SOIL	6					APPROX EL 1
CS1A20130109-007B	1/9/13	2100			X	X	X	X	APPROX EL. 1
CS1A20130109-008SH3	1/9/13	2220							APPROX EL 3
CS1A20130109-009SH6	1/9/13	2235							APPROX EL. 6
~~CS1A20130110-~~									APPROX EL 9
CS1A20130109-010SH9	1/9/13	2250							

Comments/Special Instructions	Relinquished by (Signature)	Received by (Signature)	Relinquished by (Signature)	Received by (Signature)
TPH-DX SILICA GEL CLEANUP	Printed Name: LEWIS BOD WHITAKER	Printed Name: A. Volgardsen	Printed Name.	Printed Name.
	Company: ANCHOR QEA	Company: ARI	Company.	Company.
	Date & Time: 1/15/13 1635	Date & Time: 1/15/13 1635	Date & Time:	Date & Time.

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:
ARI Client Company: ANCHOR QEA	Phone: 206.287 9130
Client Contact: NIK BACHER	
Client Project Name: CHEVRON SUB AREA INTERIM ACTION	
Client Project #: 120007-01.01 T03.2	Samplers: BUD WHITAKER

Page: 3 of 5

Date: 01.10.13 | Ice Present?

No. of Coolers: | Cooler Temps:

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No Containers	Analysis Requested: SIMNWTPH GX BTEX	NWTPH GX	Total Solids	NWTPH DX					Notes/Comments
CSIA20130110-011B	1/10/13	2000	Soil	6									Approx El. 1
CSIA20130110-012B		2015											Approx El. 0
CSIA20130110-013S+3		2330											Approx El. 3
CSIA20130110-014S+6		2353											Approx El. 6
CSIA20130110-015S+9		2400											Approx El 9

Comments/Special Instructions

TPH-DX

SILICA GEL CLEANUP

Relinquished by (Signature)	Received by (Signature)	Relinquished by (Signature)	Received by: (Signature)
Printed Name: LEWIS BUD WHITAKER	Printed Name: A. Volgardsen	Printed Name	Printed Name
Company: ANCHOR QEA	Company: ARI	Company	Company
Date & Time: 1/15/13 1635	Date & Time: 1/15/13 1635	Date & Time	Date & Time

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

0227 0995

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page: 4 of 5	
ARI Client Company: ANCHOR QEA	Phone: 206 287 9130	Date: 01.11.13	Ice Present?
Client Contact: NIK BACHER		No. of Coolers:	Cooler Temps:
Client Project Name: CHEVRON SUB AREA / INTERIM ACTION			
Client Project #: 120007-01.01 TO3.2	Samplers: BUD WHITTAKER		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No Containers	Analysis Requested: SIM NWTPH GX Benzene	NWTPH GX	TOTAL SOLIDS	NWTPH DX					Notes/Comments
CSIA20130111-016 B	01/11/13	2145	SOIL	6	↓	↓	↓	↓					APPROX EL. 0
CSIA20130111-017 B	01/11/13	2154	SOIL	6	↓	↓	↓	↓					APPROX EL. 0
CSIA20130111-018 B	01/11/13	2255	SOIL	6	↓	↓	↓	↓					APPROX EL 9

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
TPH-DX SILICA GEL CLEANUP	Printed Name: LEWIS BUD WHITTAKER	Printed Name: A. Volgardsen	Printed Name:	Printed Name:
	Company: ANCHOR QEA	Company: ARI	Company:	Company:
	Date & Time: 1/15/13 1635	Date & Time: 1/15/13 1635	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested:	Page: 5 of 5	
ARI Client Company: ANCHOR QEA	Phone: 206 287 9130	Date: 1/14/13	Ice Present?
Client Contact: Nik Bachler		No. of Coolers:	Cooler Temps:
Client Project Name: CHEVRON SUBAREA INTERIM ACTION			
Client Project #: 120007-01.01 T03.2	Samplers: JL, BW		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No Containers	NWTPH-Dx w/Silica gel	NWTPH-G	VOCs	SIM PAHs	SVOCs	Metals	Ethanol	Benzene	Notes/Comments
CS1A20130114-001DW	1/14/2013	1030	W	19	X	X	X	X	X	X	X		
CS1A20130111-001RB	1/11/13	2400	W	10	X							X	
~~CS1A20130111-001RB~~	~~1/11/13~~	~~2400~~	~~W~~	~~10~~									
~~CS1A20130111-001FP~~	~~1/11/13~~	~~2200~~	~~W~~	~~1~~									

Comments/Special Instructions: TPH-Dx with Silica gel cleanup	Relinquished by (Signature)	Received by (Signature)	Relinquished by (Signature)	Received by (Signature)
	Printed Name: LEWIS BUD WHITTAKER	Printed Name: A. Volgardsen	Printed Name	Printed Name
	Company: ANCHOR QEA	Company: ARI	Company	Company:
	Date & Time: 1/15/13 1635	Date & Time: 1/15/13 1635	Date & Time	Date & Time

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

120007 : 0995

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client Anchor

Project Name Chevron Sub Area Interim action

COC No(s). (NA)

Delivered by Fed-Ex UPS Courier (Hand Delivered) Other.

Assigned ARI Job No VZ97

Tracking No (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler? YES (NO)

Were custody papers included with the cooler? (YES) NO

Were custody papers properly filled out (ink, signed, etc.) (YES) NO

Temperature of Cooler(s) (°C) (recommended 2.0-6 0 °C for chemistry) 5.3 1.9

If cooler temperature is out of compliance fill out form 00070F Temp Gun ID# 90877752

Cooler Accepted by AV Date 1/15/13 Time 1635

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler? YES (NO)

What kind of packing material was used? Bubble Wrap (Wet Ice) Gel Packs ~~Baggies~~ Foam Block Paper Other:

Was sufficient ice used (if appropriate)? NA (YES) NO

Were all bottles sealed in individual plastic bags? YES (NO)

Did all bottles arrive in good condition (unbroken)? (YES) NO

Were all bottle labels complete and legible? (YES) NO

Did the number of containers listed on COC match with the number of containers received? (YES) NO

Did all bottle labels and tags agree with custody papers? (YES) NO

Were all bottles used correct for the requested analyses? (YES) NO

Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs) NA (YES) NO

Were all VOC vials free of air bubbles? NA YES NO

Was sufficient amount of sample sent in each bottle? (YES) NO

Date VOC Trip Blank was made at ARI NA 1-8-13

Was Sample Split by ARI (NA) YES Date/Time Equipment Split by:

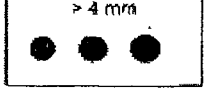
Samples Logged by JS Date 1-16-13 Time 1520

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By Date

Small Air Bubbles ~2mm	Peabubbles 2-4 mm	LARGE Air Bubbles > 4 mm
		

Small → "sm"
Peabubbles → "pb"
Large → "lg"
Headspace → "hs"

PRESERVATION VERIFICATION 01/16/13
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **VZ97**

Inquiry Number: NONE
Analysis Requested: 01/16/13
Contact: Bacher,Nik
Client: Anchor QEA
Logged by: TS
Sample Set Used: Yes-490
Validatable Package: No
Deliverables:

PC: Cheronne
VTSR: 01/16/13

Project #: 120007-01.01TO3.2
Project: Cheveron Sub Area Interim Action
Sample Site:
SDG No:
Analytical Protocol: In-house

LOGNUM ARI ID	CLIENT ID	CN >12	WAD >12	NH3 <2	COD <2	FOG <2	MET <2	PHEN <2	PHOS <2	TKN <2	NO23 <2	TOC <2	S2 >9	TPHD <2	Fe2+ <2	DMET FLT	DOC FLT	PARAMETER	ADJUSTED TO	LOT NUMBER	AMOUNT ADDED	DATE/BY
13-1100 **VZ97S**	CSIA20130114-001DW						TOT pass															
13-1101 **VZ97T**	CSIA20130111-001RB																					

VZ97 55555

Checked By TB Date 1-16-13

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: VZ97

Case Narrative

Client: Anchor QEA
Project: Chevron Sub Area Interim Action, 120007-01.01 TO3.2
ARI Job No.: VZ97

Sample Receipt

Eighteen soil samples, two water samples, and a trip blank were received on January 15, 2013 under ARI job VZ97. The cooler temperatures measured by IR thermometer following ARI SOP were 1.9 and 5.9°C. For further details regarding sample receipt, please refer to the Cooler Receipt Form.

Volatiles by SW8260C

The samples were analyzed within the method recommended holding times.

Initial calibrations were within method requirements.

The continuing calibration was outside the 20% control limit high for Acetone. All detected results for this compound have been flagged with a "Q" qualifier. No further corrective action was taken.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank was clean at the reporting limits. The LCS and LCSD percent recoveries were within control limits.

Benzene by SW8260-SIM

The samples and associated laboratory QC were analyzed within the method recommended holding times.

Initial and continuing calibrations were within method requirements. Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blanks were clean at the reporting limits. The LCS and LCSD percent recoveries were within control limits.

The matrix spike and matrix spike duplicate percent recoveries were within advisory control limits.

Semivolatiles and Ethanol by SW8270D/8015B

The samples were extracted and analyzed within the method recommended holding times.

Initial calibrations were within method requirements.

The continuing calibration on 1/23/13 was outside the 20% control limit high for Benzoic Acid. All detected results for this compound have been flagged with a "Q" qualifier. No further corrective action was taken.

Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blanks were clean at the reporting limits. The LCS and LCSD percent recoveries were within control limits.

The matrix spike and matrix spike duplicate percent recoveries were within advisory control limits.

PAHs by SW8270-SIM

The sample was extracted and analyzed within the method recommended holding times.

Initial and continuing calibrations were within method requirements. Internal standard areas were within limits.

The surrogate percent recoveries were within control limits.

The method blank was clean at the reporting limits. The LCS and LCSD percent recoveries were within control limits.

Acid/Silica Cleaned NWTPH-Dx

The samples and associated laboratory QC were extracted and analyzed within the method recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blanks were clean at the reporting limits. The LCS and LCSD percent recoveries were within control limits.

The matrix spike and matrix spike duplicate percent recoveries were within advisory control limits.

NWTPH-Gx

The samples and associated laboratory QC were analyzed within the method recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blanks were clean at the reporting limits. The LCS and LCSD percent recoveries were within control limits.

The matrix spike and matrix spike duplicate percent recoveries were within advisory control limits.

Metals by SW6010C/7470A

The sample and associated laboratory QC were digested and analyzed within method recommended holding times.

The method blanks were clean at the reporting limits. The LCS percent recoveries were within control limits.

The matrix spike percent recoveries and duplicate RPDs were within control limits.

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: VZ97
Client: Anchor QEA
Project Event: 12007-01.01TO3.2
Project Name: Cheveron Sub Area Interim Action

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	CSIA-20130107-001B	VZ97A	13-1082	Soil	01/07/13 19:55	01/15/13 16:35
2.	CSIA-20130107-002B	VZ97B	13-1083	Soil	01/07/13 20:05	01/16/13 16:35
3.	CSIA-20130107-003S+3	VZ97C	13-1084	Soil	01/07/13 21:35	01/16/13 16:35
4.	CSIA-20130107-004S+6	VZ97D	13-1085	Soil	01/07/13 21:40	01/16/13 16:35
5.	CSIA-20130107-005S+9	VZ97E	13-1086	Soil	01/07/13 21:45	01/16/13 16:35
6.	CSIA20130109-006B	VZ97F	13-1087	Soil	01/09/13 20:27	01/16/13 16:35
7.	CSIA20130109-007B	VZ97G	13-1088	Soil	01/09/13 21:00	01/16/13 16:35
8.	CSIA20130109-008S+3	VZ97H	13-1089	Soil	01/09/13 22:20	01/16/13 16:35
9.	CSIA20130109-009S+6	VZ97I	13-1090	Soil	01/09/13 22:35	01/16/13 16:35
10.	CSIA20130109-010S+9	VZ97J	13-1091	Soil	01/09/13 22:50	01/16/13 16:35
11.	CSIA20130110-011B	VZ97K	13-1092	Soil	01/10/13 20:00	01/16/13 16:35
12.	CSIA20130110-012B	VZ97L	13-1093	Soil	01/10/13 20:15	01/16/13 16:35
13.	CSIA20130110-013S+3	VZ97M	13-1094	Soil	01/10/13 23:30	01/16/13 16:35
14.	CSIA20130110-014S+6	VZ97N	13-1095	Soil	01/10/13 23:53	01/16/13 16:35
15.	CSIA20130110-015S+9	VZ97O	13-1096	Soil	01/10/13 00:00	01/16/13 16:35
16.	CSIA20130111-016B	VZ97P	13-1097	Soil	01/11/13 21:45	01/16/13 16:35
17.	CSIA20130111-017B	VZ97Q	13-1098	Soil	01/11/13 21:54	01/16/13 16:35
18.	CSIA20130111-018S+9	VZ97R	13-1099	Soil	01/11/13 22:55	01/16/13 16:35
19.	CSIA20130114-001DW	VZ97S	13-1100	Water	01/11/13 22:55	01/16/13 16:35
20.	CSIA20130111-001RB	VZ97T	13-1101	Water	01/11/13 00:00	01/16/13 16:35
21.	Trip Blanks	VZ97U	13-1113	Water	01/07/13	01/15/13 16:35

VZ97 00014

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Data Reporting Qualifiers

Effective 2/14/2011

Inorganic Data

U	Indicates that the target analyte was not detected at the reported concentration
*	Duplicate RPD is not within established control limits
B	Reported value is less than the CRDL but ≥ the Reporting Limit
N	Matrix Spike recovery not within established control limits
NA	Not Applicable, analyte not spiked
H	The natural concentration of the spiked element is so much greater than the concentration spiked that an accurate determination of spike recovery is not possible
L	Analyte concentration is ≤5 times the Reporting Limit and the replicate control limit defaults to ±1 RL instead of the normal 20% RPD

Organic Data

U	Indicates that the target analyte was not detected at the reported concentration
*	Flagged value is not within established control limits
B	Analyte detected in an associated Method Blank at a concentration greater than one-half of ARI's Reporting Limit or 5% of the regulatory limit or 5% of the analyte concentration in the sample.
J	Estimated concentration when the value is less than ARI's established reporting limits
D	The spiked compound was not detected due to sample extract dilution
E	Estimated concentration calculated for an analyte response above the valid instrument calibration range. A dilution is required to obtain an accurate quantification of the analyte.
Q	Indicates a detected analyte with an initial or continuing calibration that does not meet established acceptance criteria (<20%RSD, <20%Drift or minimum RRF).

VZ97 · 00015

S Indicates an analyte response that has saturated the detector. The calculated concentration is not valid, a dilution is required to obtain valid quantification of the analyte

NA The flagged analyte was not analyzed for

NR Spiked compound recovery is not reported due to chromatographic interference

NS The flagged analyte was not spiked into the sample

M Estimated value for an analyte detected and confirmed by an analyst but with low spectral match parameters This flag is used only for GC-MS analyses

M2 The sample contains PCB congeners that do not match any standard Aroclor pattern The PCBs are identified and quantified as the Aroclor whose pattern most closely matches that of the sample. The reported value is an estimate.

N The analysis indicates the presence of an analyte for which there is presumptive evidence to make a "tentative identification"

Y The analyte is not detected at or above the reported concentration. The reporting limit is raised due to chromatographic interference. The Y flag is equivalent to the U flag with a raised reporting limit.

EMPC Estimated Maximum Possible Concentration (EMPC) defined in EPA Statement of Work DLM02.2 as a value "calculated for 2,3,7,8-substituted isomers for which the quantitation and /or confirmation ion(s) has signal to noise in excess of 2 5, but does not meet identification criteria" **(Dioxin/Furan analysis only)**

C The analyte was positively identified on only one of two chromatographic columns. Chromatographic interference prevented a positive identification on the second column

P The analyte was detected on both chromatographic columns but the quantified values differ by ≥40% RPD with no obvious chromatographic interference

X Analyte signal includes interference from polychlorinated diphenyl ethers. **(Dioxin/Furan analysis only)**

Z Analyte signal includes interference from the sample matrix or perfluorokerosene ions **(Dioxin/Furan analysis only)**

UZ97 · 00016

Geotechnical Data

A	The total of all fines fractions This flag is used to report total fines when only sieve analysis is requested and balances total grain size with sample weight.
F	Samples were frozen prior to particle size determination
SM	Sample matrix was not appropriate for the requested analysis. This normally refers to samples contaminated with an organic product that interferes with the sieving process and/or moisture content, porosity and saturation calculations
SS	Sample did not contain the proportion of "fines" required to perform the pipette portion of the grain size analysis
W	Weight of sample in some pipette aliquots was below the level required for accurate weighting

VZ97 : 00017

DL[1] LOD[1], LOQ[1] and Control Limits Summary for VOA Analysis of Water 10 mL Purge Volume (EPA Method 8260C)					
Analyte	**DL[1] µg/L**	**LOD[1] µg/L**	**LOQ[1] µg/L**	**LCS Recovery[2,4]**	**Replicate RPD[3]**
Chloromethane	0.095	0.25	**0.5**	77 – 122	≤ 40
Vinyl Chloride	0.057	0.1	**0.2**	74 – 123	≤ 40
Bromomethane	0.252	0.5	**1.0**	68 – 130	≤ 40
Chloroethane	0.086	0.1	**0.2**	68 – 133	≤ 40
Trichlorofluoromethane	0.037	0.1	**0.2**	74 – 135	≤ 40
Acrolein	2.476	2.5	**5.0**	60 – 124	≤ 40
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.043	0.1	**0.2**	76 – 124	≤ 40
Acetone	2.057	2.5	**5.0**	64 – 125	≤ 40
1,1-Dichloroethene	0.054	0.1	**0.2**	74 – 120	≤ 40
Bromoethane	0.041	0.1	**0.2**	77 – 122	≤ 40
Iodomethane (Methyl Iodide)	0.227	0.5	**1.0**	76 – 123	≤ 40
Methylene Chloride	0.485	0.5	**1.0**	71 – 125	≤ 40
Acrylonitrile	0.604	1.0	**1.0**	76 – 123	≤ 40
Carbon Disulfide	0.037	0.1	**0.2**	77 – 124	≤ 40
trans-1,2-Dichloroethene	0.048	0.1	**0.2**	75 – 120	≤ 40
Vinyl Acetate	0.069	0.1	**0.2**	74 – **120**	≤ 40
1,1-Dichloroethane	0.053	0.1	**0.2**	80 – 120	≤ 40
2-Butanone	0.814	2.5	**5.0**	73 – 123	≤ 40
2,2-Dichloropropane	0.052	0.1	**0.2**	72 – 133	≤ 40
cis-1,2-Dichloroethene	0.043	0.1	**0.2**	78 – 120	≤ 40
Chloroform	0.027	0.1	**0.2**	**80 – 120**	≤ 40
Bromochloromethane	0.061	0.1	**0.2**	**80 – 120**	≤ 40
1,1,1-Trichloroethane	0.041	0.1	**0.2**	79 – 124	≤ 40
1,1-Dichloropropene	0.034	0.1	**0.2**	**80 – 120**	≤ 40
Carbon Tetrachloride	0.044	0.1	**0.2**	71 – 139	≤ 40
1,2-Dichloroethane	0.072	0.1	**0.2**	**80** – 121	≤ 40
Benzene	0.027	0.1	**0.2**	**80 – 120**	≤ 40
Trichloroethene	0.049	0.1	**0.2**	**80 – 120**	≤ 40
1,2-Dichloropropane	0.035	0.1	**0.2**	**80 – 120**	≤ 40
Bromodichloromethane	0.051	0.1	**0.2**	**80** – 122	≤ 40
Dibromomethane	0.145	0.2	**0.2**	**80 – 120**	≤ 40
2-Chloroethylvinyl Ether	0.250	0.5	**1.0**	62 – 130	≤ 40
4-Methyl-2-Pentanone	0.974	2.5	**5.0**	**80** – 125	≤ 40

UZ97 : 00018

DL[1] LOD[1], LOQ[1] and Control Limits Summary for VOA Analysis of Water 10 mL Purge Volume (EPA Method 8260C)					
Analyte	**DL[1] µg/L**	**LOD[1] µg/L**	**LOQ[1] µg/L**	**LCS Recovery[2,4]**	**Replicate RPD[3]**
cis 1,3-dichloropropene	0.061	0.1	**0.2**	**80 – 127**	≤ 40
Toluene	0.040	0.1	**0.2**	**80 – 120**	≤ 40
trans 1,3-Dichloropropene	0.081	0.1	**0.2**	79 – 132	≤ 40
2-Hexanone	0.902	2.5	**5.0**	80 – 129	≤ 40
1,1,2-Trichloroethane	0.129	0.2	**0.2**	**80 – 120**	≤ 40
1,3-Dichloropropane	0.062	0.1	**0.2**	**80 – 120**	≤ 40
Tetrachloroethene	0.047	0.1	**0.2**	**80 – 120**	≤ 40
Dibromochloromethane	0.048	0.1	**0.2**	**80** – 120	≤ 40
1,2-Dibromoethane (Ethylene Dibromide)	0.075	0.1	**0.2**	**80 – 120**	≤ 40
Chlorobenzene	0.023	0.1	**0.2**	**80 – 120**	≤ 40
Ethyl Benzene	0.037	0.1	**0.2**	**80 – 120**	≤ 40
1,1,1,2-Tetrachloroethane	0.040	0.1	**0.2**	**80** – 128	≤ 40
m,p-xylene	0.052	0.2	**0.4**	**80 – 120**	≤ 40
o-Xylene	0.035	0.1	**0.2**	**80** – 120	≤ 40
Styrene	0.045	0.1	**0.2**	**80** – 121	≤ 40
Bromoform	0.062	0.1	**0.2**	62 – 149	≤ 40
1,1,2,2-Tetrachloroethane	0.060	0.1	**0.2**	**80 – 120**	≤ 40
1,2,3-Trichloropropane	0.131	0.25	**0.5**	**80 – 120**	≤ 40
trans-1,4-Dichloro 2-Butene	0.324	0.5	**1.0**	47 – 147	≤ 40
n-Propyl Benzene	0.023	0.1	**0.2**	**80 – 120**	≤ 40
Bromobenzene	0.060	0.1	**0.2**	**80 – 120**	≤ 40
iso-propyl Benzene	0.021	0.1	**0.2**	**80 – 120**	≤ 40
2-Chloro Toluene	0.024	0.1	**0.2**	**80 – 120**	≤ 40
4-Chloro Toluene	0.016	0.1	**0.2**	**80 – 120**	≤ 40
tert-Butyl Benzene	0.026	0.1	**0.2**	**80** – 121	≤ 40
1,3,5-Trimethyl Benzene	0.015	0.1	**0.2**	**80 – 120**	≤ 40
1,2,4-Trimethylbenzene	0.024	0.1	**0.2**	**80** – 122	≤ 40
sec-Butyl Benzene	0.024	0.1	**0.2**	**80** – 121	≤ 40
4-Isopropyl Toluene	0.026	0.1	**0.2**	**80** – 124	≤ 40
1,3-Dichlorobenzene	0.036	0.1	**0.2**	**80 – 120**	≤ 40
1,4-Dichlorobenzene	0.040	0.1	**0.2**	**80 – 120**	≤ 40
n-Butyl Benzene	0.025	0.1	**0.2**	**80** – 125	≤ 40
1,2-Dichlorobenzene	0.036	0.1	**0.2**	**80 – 120**	≤ 40

DL[1] LOD[1], LOQ[1] and Control Limits Summary for VOA Analysis of Water 10 mL Purge Volume (EPA Method 8260C)					
Analyte	**DL[1] µg/L**	**LOD[1] µg/L**	**LOQ[1] µg/L**	**LCS Recovery[2,4]**	**Replicate RPD[3]**
1,2-Dibromo 3-Chloropropane	0.366	0.5	**0.5**	79 – 129	≤ 40
1,2,4-Trichlorobenzene	0.107	0.25	**0.5**	77 – 127	≤ 40
Hexachloro-1,3-Butadiene	0.073	0.25	**0.5**	80 – 135	≤ 40
Naphthalene	0.118	0.25	**0.5**	**80** – 128	≤ 40
1,2,3-Trichlorobenzene	0.110	0.25	**0.5**	**80** - 125	≤ 40
Dichlorodifluoromethane	0.052	0.1	**0.2**	68 – 133	≤ 40
Methyl-*tert*-butyl ether	0.073	0.25	**0.5**	79 – 121	≤ 40
Surrogate Standards			**MB / LCS**	**Samples**	**RPD**
1,2-Dichloroethane-d_4			**80 – 120**	**80** – 130	≤ 40
1,2-Dichlorobenzene-d_4			**80 – 120**	**80 – 120**	≤ 40
Toluene-d_8			**80 – 120**	**80 – 120**	≤ 40
4-Bromofluorobenzene			**80 – 120**	**80 – 120**	≤ 40

(1) Detection Limit (DL), Limit of Detection (LOD) and Limit of Quantitation (LOQ) are defined in ARI SOP 1018S
(2) Control limits calculated using all data from 1/1/12 through 5/31/12.
(3) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then $RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$
(4) Highlighted control limits (**bold font**) are adjusted from the calculated values to reflect that:
a. ARI does not use control limits < 10 for the lower limit or < 100 for the upper limit or
b. Control limits for analyzes with no separate preparation procedure are adjusted to reflect the minimum uncertainty in the calibration of the instrument allowed by the referenced analytical method.

VZ97 : 00020

DL[1] LOD[1], LOQ[1] and Control Limits Summary
VOA Analysis of Soil (EPA Method 8260C)

Analyte	DL[1,5] µg/kg	LOD[1] µg/kg	LOQ[1] µg/kg	LCS Recovery[2,4]	Replicate RPD[3]
Dichlorodifluoromethane	0.207	0.5	**1.0**	67 – 142	≤ 40
Chloromethane	0.263	0.5	**1.0**	65 – 129	≤ 40
Vinyl Chloride	0.235	0.5	**1.0**	74 – 134	≤ 40
Bromomethane	0.187	0.5	**1.0**	40 – 172	≤ 40
Chloroethane	0.462	0.5	**1.0**	53 – 154	≤ 40
Trichlorofluoromethane	0.266	0.5	**1.0**	57 – 161	≤ 40
Acrolein*	3.809	25	**50.0**	60 – 130	≤ 40
Acetone*	0.482	2.5	**5.0**	48 – 132	≤ 40
1,1,2-Trichloro-1,2,2-Trifluoroethane	0.287	1.0	**2.0**	72 – 142	≤ 40
1,1-Dichloroethene	0.336	0.5	**1.0**	73 – 138	≤ 40
Bromoethane	0.440	1.0	**2.0**	74 – 132	≤ 40
Iodomethane (Methyl Iodide)	0.215	0.5	**1.0**	34 – 181	≤ 40
Methylene Chloride	0.635	1.0	**2.0**	61 – 128	≤ 40
Carbon Disulfide	0.559	1.0	**1.0**	72 – 146	≤ 40
Acrylonitrile	1.026	2.5	**5.0**	59 – 124	≤ 40
Methyl-t-butyl ether (MTBE)	0.231	0.5	**1.0**	68 – 124	≤ 40
trans-1,2-Dichloroethene	0.266	0.5	**1.0**	73 – 131	≤ 40
Vinyl Acetate	0.381	2.5	**5.0**	54 – 138	≤ 40
1,1-Dichloroethane	0.203	0.5	**1.0**	65 – 139	≤ 40
2-Butanone*	0.513	2.5	**5.0**	64 – 120	≤ 40
2,2-Dichloropropane	0.292	0.5	**1.0**	77 – 137	≤ 40
cis-1,2-Dichloroethene	0.240	0.5	**1.0**	75 – 124	≤ 40
Chloroform	0.234	0.5	**1.0**	75 – 126	≤ 40
Bromochloromethane	0.323	0.5	**1.0**	69 – 133	≤ 40
1,1,1-Trichloroethane	0.226	0.5	**1.0**	78 – 133	≤ 40
1,1-Dichloropropene	0.312	0.5	**1.0**	80 – 123	≤ 40
Carbon Tetrachloride	0.213	0.5	**1.0**	76 – 136	≤ 40
1,2-Dichloroethane	0.191	0.5	**1.0**	77 – **120**	≤ 40
Benzene	0.296	0.5	**1.0**	80 – **120**	≤ 40
Trichloroethene	0.212	0.5	**1.0**	80 – 120	≤ 40
1,2-Dichloropropane	0.162	0.5	**1.0**	74 – **120**	≤ 40
Bromodichloromethane	0.254	0.5	**1.0**	80 – 122	≤ 40
Dibromomethane	0.147	0.5	**1.0**	80 – **120**	≤ 40

VZ97 : 00021

DL[1] LOD[1], LOQ[1] and Control Limits Summary
VOA Analysis of Soil (EPA Method 8260C)

Analyte	DL[1,5] µg/kg	LOD[1] µg/kg	LOQ[1] µg/kg	LCS Recovery[2,4]	Replicate RPD[3]
2-Chloroethyl Vinyl Ether	0.276	2.5	**5.0**	20 – 157	≤ 40
4-Methyl-2-Pentanone*	0.420	2.5	**5.0**	70 – 124	≤ 40
cis-1,3-Dichloropropene	0.226	0.5	**1.0**	80 – 124	≤ 40
Toluene	0.151	0.5	**1.0**	78 – **120**	≤ 40
trans-1,3-Dichloropropene	0.216	0.5	**1.0**	80 – 126	≤ 40
1,1,2-Trichloroethane	0.286	0.5	**1.0**	77 – **120**	≤ 40
1,2-Dibromoethane (Ethylene Dibromide)	0.176	0.5	**1.0**	79 – **120**	≤ 40
2-Hexanone*	0.439	2.5	**5.0**	62 – 128	≤ 40
1,3-Dichloropropane	0.209	0.5	**1.0**	77 – **120**	≤ 40
Tetrachloroethene	0.257	0.5	**1.0**	76 – 131	≤ 40
Dibromochloromethane	0.266	0.5	**1.0**	77 – 123	≤ 40
Chlorobenzene	0.219	0.5	**1.0**	80 – **120**	≤ 40
1,1,1,2-Tetrachloroethane	0.233	0.5	**1.0**	80 – **120**	≤ 40
Ethyl Benzene	0.202	0.5	**1.0**	**80** – **120**	≤ 40
m,p-Xylene	0.392	0.5	**1.0**	**80** – 123	≤ 40
o-Xylene	0.224	0.5	**1.0**	**80** – **120**	≤ 40
Styrene	0.138	0.5	**1.0**	**80** – 122	≤ 40
Bromoform	0.297	0.5	**1.0**	63 – **120**	≤ 40
Isopropyl Benzene	0.233	0.5	**1.0**	77 – 127	≤ 40
1,1,2,2-Tetrachloroethane	0.253	0.5	**1.0**	71 – **120**	≤ 40
1,2,3-Trichloropropane	0.517	1.0	**2.0**	75 – **120**	≤ 40
trans-1,4-Dichloro-2-Butene	0.437	2.5	**5.0**	62 – 127	≤ 40
n-Propyl Benzene	0.272	0.5	**1.0**	76 – 126	≤ 40
Bromobenzene	0.153	0.5	**1.0**	75 – **120**	≤ 40
1,3,5-Trimethylbenzene	0.254	0.5	**1.0**	77 – 126	≤ 40
2-Chlorotoluene	0.300	0.5	**1.0**	76 – 120	≤ 40
4-Chlorotoluene	0.277	0.5	**1.0**	75 – 121	≤ 40
t-Butylbenzene	0.306	0.5	**1.0**	77 – 125	≤ 40
1,2,4-Trimethylbenzene	0.230	0.5	**1.0**	77 – 125	≤ 40
s-Butylbenzene	0.240	0.5	**1.0**	77 – 127	≤ 40
4-Isopropyl Toluene	0.236	0.5	**1.0**	78 – 131	≤ 40
1,3-Dichlorobenzene	0.227	0.5	**1.0**	76 – 120	≤ 40
1,4-Dichlorobenzene	0.232	0.5	**1.0**	75 – **120**	≤ 40

V297 · 00002

DL[1] LOD[1], LOQ[1] and Control Limits Summary VOA Analysis of Soil (EPA Method 8260C)					
Analyte	**DL[1,5] µg/kg**	**LOD[1] µg/kg**	**LOQ[1] µg/kg**	**LCS Recovery[2,4]**	**Replicate RPD[3]**
n-Butylbenzene	0.262	0.5	**1.0**	75 – 134	≤ 40
1,2-Dichlorobenzene	0.293	0.5	**1.0**	77 – **120**	≤ 40
1,2-Dibromo-3-Chloropropane	0.586	2.5	**5.0**	61 – 128	≤ 40
1,2,4-Trichlorobenzene	0.332	2.5	**5.0**	75 – 130	≤ 40
Hexachloro-1,3-Butadiene	0.410	2.5	**5.0**	72 – 135	≤ 40
Naphthalene	0.429	2.5	**5.0**	71 – 122	≤ 40
1,2,3-Trichlorobenzene	0.305	2.5	**5.0**	76 – 122	≤ 40
Surrogate Standards			**MB / LCS**	**Samples**	**RPD**
1,2-Dichloroethane-d_4			**80** – 122	**80** – 149	≤ 40
1,2-Dichlorobenzene-d_4			**80 – 120**	**80 – 120**	≤ 40
Toluene-d_8			**80 – 120**	77 – **120**	≤ 40
4-Bromofluorobenzene			**80 – 120**	**80 – 120**	≤ 40

(1) Detection Limit (DL), Limit of Detection (LOD) and Limit of Quantitation (LOQ) are defined in ARI SOP 1018S
(2) Control limits calculated using all data from 1/1/12 through 5/31/12.
(3) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then $RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$
(4) Highlighted control limits (**bold font**) are adjusted from the calculated values to reflect that:
a. ARI does not use control limits < 10 for the lower limit or < 100 for the upper limit or
b. Control limits for analyzes with no separate preparation procedure are adjusted to reflect the minimum uncertainty in the calibration of the instrument allowed by the referenced analytical method.
(5) MDL study QD19 – 3/8/10

UZ97 : 00023

Volatile Organics Selected Ion Monitoring
DL, LOD, LOQ and Control Limit Summary [1]
EPA Method 8260C - SIM

Analyte	Aqueous Samples				Solid Samples				RPD[4]
	DL[2] ng/L	LOD ng/L	LOQ ng/L	LCS[5,6] Recovery	DL[3] µg/kg	LOD µg/kg	LOQ µg/kg	LCS[5,6] Recovery	
Acrylonitrile	15.8 [7]	**25**	**50**	75 – 125					≤ 40
Vinyl Chloride	5.01	**10**	**20**	76 – **120**					≤ 40
1,1-Dichloroethene	4.59	**10**	**20**	**80 – 120**					≤ 40
cis-1,2-Dichloroethene	3.62	**10**	**20**	**80 – 120**					≤ 40
trans-1,2-Dichloroethene	5.06	**10**	**20**	**80 – 120**					≤ 40
Trichloroethene	6.49	**10**	**20**	**80 – 120**					≤ 40
Tetrachloroethene	6.82	**10**	**20**	**80** – 122					≤ 40
1,1,2,2-Tetrachloroethane	4.73	**10**	**20**	**80** – 128					≤ 40
1,2-Dichloroethane	4.42	**10**	**20**	**80** – 128					≤ 40
Benzene	5.03	**10**	**20**	**80 – 120**	0.082	**0.5**	**1.0**	75– 125	≤ 40
Toluene					0.137	**0.5**	**1.0**	75– 125	≤ 40
Ethyl Benzene					0.104	**0.5**	**1.0**	75– 125	≤ 40
m, p - Xylene					0.293	**1.0**	**2.0**	75– 125	≤ 40
o - Xylene					0.083	**0.5**	**1.0**	75– 125	≤ 40
Surrogate % Recovery	**MB / LCS**	**Sample**			**MB / LCS[6]**	**Sample[6]**			
d_4-1,2-Dichloroethane	78 – 126	**80** – 129			75 – 125	75– 125			≤ 40
d_8-Toluene	**80 – 120**	**80 – 120**			75 – 125	75– 125			≤ 40

(1) Detection Limit (DL), Limit of Detection (LOD) and Limit of Quantitation (LOQ) are defined in ARI SOP 1018S
(2) LOD effective 2/16/12
(3) MDL study RI48 (6/25/10)
(4) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

(5) Highlighted control limits (**bold font**) are adjusted from the calculated values to reflect that:
a. ARI does not use control limits < 10 for the lower limit or < 100 for the upper limit or
b. Control limits for analyzes with no separate preparation procedure are adjusted to reflect the minimum uncertainty in the calibration of the instrument allowed by the referenced analytical method.
(6) 75 – 125 are default values used when there is insufficient data to calculate historic control limits.
(7) MDL Study 5/20/2010

VZ97 0024

LOD, LOQ and Control Limits Summary
GC - MS – SVOA Analysis of Aqueous Samples
EPA Method 8270D
ARI Analysis: BANWLI & BANWSI

Continuous Liquid-Liquid (EPA Method 3520C, Bench Sheet 3006F) or Separatory Funnel (EPA method 3510C, Bench Sheet 3010F) extraction using 500mL sample concentrated to 0.5 mL final extract volume

LOD Spike level = LOQ (unless otherwise noted)

Analyte	DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	LCS, MS Recovery[2,3]	Replicate RPD[4]
Phenol	**0.445**	**0.5**	**1**	26 – 112	≤ 40
Bis(2-Chloroethyl)ether	**0.257**	**0.5**	**1**	51 – **100**	≤ 40
2-Chlorophenol	**0.246**	**0.5**	**1**	50 – **100**	≤ 40
1,3-Dichlorobenzene	**0.499**	**0.5**	**1**	27 – **100**	≤ 40
1,4-Dichlorobenzene	**0.470**	**0.5**	**1**	29 – **100**	≤ 40
1,2-Dichlorobenzene	**0.436**	**0.5**	**1**	32 – **100**	≤ 40
Benzyl alcohol	**0.409**	**1.0**	**2**	**10** - 128	≤ 40
2,2'-oxybis(1-Chloropropane)	**0.221**	**0.5**	**1**	39 - 101	≤ 40
2-Methylphenol	**0.329**	**0.5**	**1**	47 – **100**	≤ 40
Hexachloroethane	**0.610**	**1.0**	**2**	19 – **100**	≤ 40
N-Nitroso-di-n-propylamine	**0.365**	**0.5**	**1**	46 – **100**	≤ 40
4-Methylphenol	**0.536**	**1.0**	**2**	46 – **100**	≤ 40
Nitrobenzene	**0.490**	**0.5**	**1**	46 – 103	≤ 40
Isophorone	**0.258**	**0.5**	**1**	62 – 105	≤ 40
2-Nitrophenol	**0.979**	**1.5**	**3**	32 – 116	≤ 40
2,4-Dimethylphenol	**0.627**	**1.5**	**3**	15 – **100**	≤ 40
Bis(2-Chloroethoxy)methane	**0.252**	**0.5**	**1**	44 – **100**	≤ 40
2,4-Dichlorophenol	**1.109**	**1.5**	**3**	35 – 114	≤ 40
1,2,4-Trichlorobenzene	**0.495**	**0.5**	**1**	34 – **100**	≤ 40
Naphthalene	**0.326**	**0.5**	**1**	48 – **100**	≤ 40
Benzoic acid	**8.647**	**10**	**20**	**10** - 172	≤ 40
4-Chloroaniline	**1.733**	**2.5**	**5**	**10** - 153	≤ 40
2,6-Dinitrotoluene	**1.300**	**1.5**	**3**	32 – 129	≤ 40
Hexachlorobutadiene	**0.604**	**1.5**	**3**	22 – **100**	≤ 40
4-Chloro-3-methylphenol	**0.919**	**1.5**	**3**	33 – 123	≤ 40
Hexachlorocyclopentadiene	**1.862**	**2.5**	**5**	**10** – **100**	≤ 40
2,4,6-Trichlorophenol	**1.235**	**1.5**	**3**	37 – 120	≤ 40
2,4,5-Trichlorophenol	**1.706**	**2.5**	**5**	37 – 124	≤ 40
2-Chloronaphthalene	**0.340**	**0.5**	**1**	49 – **100**	≤ 40
2-Nitroaniline	**0.784**	**1.5**	**3**	18 – 140	≤ 40
Acenaphthylene	**0.274**	**0.5**	**1**	47 – 110	≤ 40
Dimethylphthalate	**0.264**	**0.5**	**1**	60 – 106	≤ 40
Acenaphthene	**0.347**	**0.5**	**1**	55 – 101	≤ 40

YZ97 00025

LOD, LOQ and Control Limits Summary
GC - MS – SVOA Analysis of Aqueous Samples
EPA Method 8270D
ARI Analysis: BANWLI & BANWSI

Continuous Liquid-Liquid (EPA Method 3520C, Bench Sheet 3006F) or Separatory Funnel (EPA method 3510C, Bench Sheet 3010F) extraction using 500mL sample concentrated to 0.5 mL final extract volume

LOD Spike level = LOQ (unless otherwise noted)

Analyte	DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	LCS, MS Recovery[2,3]	Replicate RPD[4]
3-Nitroaniline	1.140	1.5	3	10 – 208	≤ 40
2-Methylnaphthalene	0.241	0.5	1	38 – 100	≤ 40
2,4-Dinitrophenol	5.474	10	20	10 – 224	≤ 40
Dibenzofuran	0.198	0.5	1	46 – 108	≤ 40
4-Nitrophenol	2.895	5.0	10	10 – 103	≤ 40
2,4-Dinitrotoluene	1.277	1.5	3	33 – 134	≤ 40
Fluorene	0.266	0.5	1	59 – 108	≤ 40
4-Chlorophenyl-phenylether	0.342	0.5	1	54 – 104	≤ 40
Diethylphthalate	0.407	0.5	1	60 - 108	≤ 40
4-Nitroaniline	1.366	1.5	3	13 – 144	≤ 40
4,6-Dinitro-2-methylphenol	4.928	5.0	10	10 – 190	≤ 40
N-Nitrosodiphenylamine	0.392	0.5	1	39 – 100	≤ 40
4-Bromophenyl-phenylether	0.262	0.5	1	56 – 105	≤ 40
Hexachlorobenzene	0.335	0.5	1	54 – 108	≤ 40
Pentachlorophenol	2.746	5.0	10	25 – 144	≤ 40
Phenanthrene	0.283	0.5	1	64 – 115	≤ 40
Anthracene	0.303	0.5	1	59 – 107	≤ 40
Carbazole	0.251	0.5	1	36 – 123	≤ 40
Di-n-butylphthalate	0.304	0.5	1	62 – 110	≤ 40
Fluoranthene	0.290	0.5	1	63 – 119	≤ 40
Pyrene	0.379	0.5	1	57 – 117	≤ 40
Butylbenzylphthalate	0.402	0.5	1	49 – 118	≤ 40
Benzo(a)anthracene	0.373	0.5	1	61 – 113	≤ 40
3,3'-Dichlorobenzidine	1.553	2.5	5	10 – 151	≤ 40
Chrysene	0.397	0.5	1	62 – 115	≤ 40
bis(2-Ethylhexyl)phthalate	1.050	1.5	3	47 – 127	≤ 40
Di-n-octylphthalate	0.331	0.5	1	60 – 106	≤ 40
Benzo(b)fluoranthene	0.298	0.5	1	61 – 120	≤ 40
Benzo(k)fluoranthene	0.487	0.5	1	59 – 120	≤ 40
Benzo(a)pyrene	0.425	0.5	1	46 – 105	≤ 40
Indeno(1,2,3-cd)pyrene	0.435	0.5	1	42 – 134	≤ 40
Dibenzo(a,h)anthracene	0.437	0.5	1	46 – 132	≤ 40
Benzo(g,h,i)perylene	0.464	0.5	1	33 – 135	≤ 40
N-Nitrosodimethylamine	1.209	1.5	3	17 - 106	≤ 40

VZ97 : 00026

LOD, LOQ and Control Limits Summary
GC - MS – SVOA Analysis of Aqueous Samples
EPA Method 8270D
ARI Analysis: BANWLI & BANWSI

Continuous Liquid-Liquid (EPA Method 3520C, Bench Sheet 3006F) or Separatory Funnel (EPA method 3510C, Bench Sheet 3010F) extraction using 500mL sample concentrated to 0.5 mL final extract volume

LOD Spike level = LOQ (unless otherwise noted)

Analyte	DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	LCS, MS Recovery[2,3]	Replicate RPD[4]
Aniline	**0.470**	**0.5**	**1**	**10** – 113	≤ 40
1-methylnaphthalene	**0.199**	**0.5**	**1**	43 – **100**	≤ 40
Azobenzene (1,2-DP-Hydrazine)	**0.214**	**0.5**	**1**	52 – 111	≤ 40
Benzofluoranthenes, Total	**2.317**	**2.5**	**5**	60 – 130[5]	≤ 40
Surrogate Standard Recovery			**MB / LCS**	**Samples**	**RPD**
2-Fluorophenol			33 – 100	23 – **100**	≤ 40
Phenol-d_5			15 - 121	16 – 106	≤ 40
2-Chlorophenol-d_4			46 – 102	33 – 100	≤ 40
1,2-Dichlorobenzene-d_4			40 – **100**	27 – **100**	≤ 40
Nitrobenzene-d_5			50 – **100**	34 – 101	≤ 40
2-Fluorobiphenyl			51 – **100**	38 – **100**	≤ 40
2,4,6-Tribromophenol			46 – 125	31 – 128	≤ 40
p-Terphenyl-d_{14}			54 – 117	27 – 122	≤ 40

(1) Detection Limit (DL), Limit of Detection (LOD) and Limit of Quantitation (LOQ) are defined in ARI SOP 1018S
(2) Control limits calculated using all data from 8/1/10 through 7/31/11.
(3) Highlighted control limits (**bold font**) are adjusted from the calculated values to reflect that ARI does not use control limits < 10 for the lower limit or < 100 for the upper limit.
(4) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then $RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$

(5) 30 – 160 are default limits used when there is insufficient data to calculate historic control limits.

VZ97 : 00027

Summary of Laboratory Control Limits

Default limits of 30-160% recovery and 30% RPD apply for all organic analytes when laboratory generated control limits are not available on ARI's web site. Default limits for all inorganic analytes are 75-125% recovery and 25% RPD.

ARI's laboratory generated Quality Control Limits may be superseded by project specific data quality objectives (DQO) provided by ARI's clients. The use of project specific DQO must be approved by ARI's Laboratory and QA Program Managers.

VZ97:00028

DL[1], LOD[2], LOQ[3] and Control Limits Summary
Analysis of Water Samples for PNA
EPA Method 8270 – SIM
ARI Analyses: PNSWLL & PNSWSL

Separatory Funnel (EPA Method 3510C) or Liq-Liq (EPA Method 3520C) Extraction using 500 mL sample with extract concentrated to 0.5 mL final volume. ARI Bench Sheet 3053F or 3054F

LOD Spike level = LOQ = 0.1ppb

Analyte	DL[1] µg/L	LOD[2] µg/L	LOQ[3] µg/L	LCS Control Limit[4,5]	Replicate RPD[6]
Naphthalene	0.020	**0.050**	**0.1**	37 – 100	≤ 40
2-Methylnaphthalene	0.020	**0.050**	**0.1**	34 – 107	≤ 40
Acenaphthylene	0.024	**0.050**	**0.1**	32 – 104	≤ 40
Acenaphthene	0.015	**0.050**	**0.1**	40 – 102	≤ 40
Dibenzofuran	0.016	**0.050**	**0.1**	44 – 104	≤ 40
Fluorene	0.019	**0.050**	**0.1**	43 – 114	≤ 40
Phenanthrene	0.026	**0.050**	**0.1**	43 – 116	≤ 40
Anthracene	0.025	**0.050**	**0.1**	30 – 121	≤ 40
Fluoranthene	0.021	**0.050**	**0.1**	46 – 138	≤ 40
Pyrene	0.028	**0.050**	**0.1**	47 – 124	≤ 40
Benzo(a)anthracene	0.023	**0.050**	**0.1**	38 – 134	≤ 40
Chrysene	0.026	**0.050**	**0.1**	52 – 112	≤ 40
Benzo(b)fluoranthene	0.027	**0.050**	**0.1**	49 – 123	≤ 40
Benzo(k)fluoranthene	0.027	**0.050**	**0.1**	50 – 127	≤ 40
Benzo(a)pyrene	0.059	**0.075**	**0.1**	24 – 118	≤ 40
Indeno(1,2,3-cd)pyrene	0.029	**0.050**	**0.1**	32 – 123	≤ 40
Dibenz(a,h)anthracene	0.042	**0.050**	**0.1**	30 – 127	≤ 40
Benzo(g,h,i)perylene	0.030	**0.050**	**0.1**	26 – 124	≤ 40
1-Methylnaphthalene	0.016	**0.050**	**0.1**	30 – 160[7]	≤ 40
Perylene	0.061	**0.075**	**0.1**	30 – 160[7]	≤ 40
Surrogate Standard Recovery			**MB / LCS**	**Samples**	**RPD**
2-Methylnapthalene-d_{10}			40 – 110	33 – 107	≤ 40
Dibenzo(a,h)anthracene-d_{14}			33 – 140	**10** – 142	≤ 40

(1) Detection Limit (DL) as defined in ARI SOP 1018S
(2) Limit of Detection (LOD) as defined in ARI SOP 1018S
(3) Limit of Quantitation (LOQ) as defined in ARI SOP 1018S
(4) Highlighted control limits (**bold font**) are adjusted from the calculated values to reflect that ARI does not use control limits < 10 for the lower limit or < 100 for the upper limit.
(5) Control limits calculated using all data from 6/1/10 through 5/31/11.
(6) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then $RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$
(7) Default limits pending generation of historic limits for total benzofluoranthenes and 1-Methylnaphthalene.

UZ97 00029

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Quality Control Criteria
Total Petroleum Hydrocarbons
(Diesel & Motor Oil)

Analysis Code	Analyte[5]	DL[1] ppm	LOD[1] ppm	LOQ[2] ppm	Spike % Recovery Control Limits[3]			RPD[4]
					LCS	MB/LCS Surrogate	Sample Surrogate	
HCIWVX	NWTPH-HCID – Water Samples	--	--	0.50 [7]	--	--	50-150	≤ 40
HCISVX	NWTPH-HCID – Solid Samples	--	--	50 [7]	--	--	50-150	
Aqueous Samples – No Extract Clean-up – Separatory Funnel Extraction – 500 to 1.0 mL								
DIESWI	DRO – NWTPH-Dext (C_{12}-C_{24})	0.022	0.05	0.1	64-112	50-150	50-150	≤ 40
AK2WSI	DRO – AK102 (C_{10}-C_{25})	0.022	0.05	0.1	75-125 [6]	60-120	50-150	
OILWSI	RRO – NWTPH-Dext (C_{24}-C_{38})	0.044	0.1	0.2	60 – 130 [8]	50-150	50-150	
AK3WSI	RRO – AK103 (C_{25}-C_{36})	0.030 [9]	0.1	0.2	60-120 [6]	60-120	50-150	
Aqueous Samples – With Acid and/or Silica Gel Clean-up – Separatory Funnel Extraction – 500 to 1.0 mL								
DIESWI	DRO – NWTPH-Dext (C_{12}-C_{24})	0.039	0.05	0.1	61-104	50-150	50-150	≤ 40
AK2WSI	DRO – AK102 (C_{10}-C_{25})	0.042	0.05	0.1	75-125 [6]	60-120	50-150	
OILWSI	RRO – NWTPH-Dext (C_{24}-C_{38})	0.010	0.1	0.2	60 – 130 [8]	50-150	50-150	
AK3WSI	RRO – AK103 (C_{25}-C_{36})	0.030 [8]	0.1	0.2	60-120 [6]	60-120	50-150	
Solid Matrix Samples – No Extract Clean-up – Microwave Extraction – 10 g to 1 mL								
DIESMI	DRO – NWTPH-Dext (C_{12}-C_{24})	1.35	2.5	5	62-119	50-150	50-150	≤ 40
DIESMI	DRO – NWTPH-Dext Jet A	2.22 [11]	2.5	5	60 – 130 [8]	50-150	50-150	
AK2SMI	DRO – AK102 (C_{10}-C_{25})	2.43	2.5	5	75-125 [6]	60-120	50-150	
OILSMI	RRO – NWTPH-Dext (C_{24}-C_{38})	2.48	5	10	60 – 130 [8]	50-150	50-150	
AK3SMI	RRO – AK103 (C_{25}-C_{36})	0.665 [9]	5	10	60-120 [6]	60-120	50-150	
Solid Matrix Samples – With Acid and/or Silica Gel Clean-up – Microwave Extraction – 10 g to 1 mL								
DIESMI	DRO – NWTPH-Dext (C_{12}-C_{24})	1.28	2.5	5	60-108	50-150	50-150	≤ 40
AK2SMI	DRO – AK102 (C_{10}-C_{25})	2.06	2.5	5	75-125 [6]	60-120	50-150	
OILSMI	RRO – NWTPH-Dext (C_{24}-C_{38})	1.57	5	10	60 – 130 [8]	50-150	50-150	
AK3SMI	RRO – AK103 (C_{25}-C_{36})	0.665 [10]	5	10	60-120 [6]	60-120	50-150	

(1) DL (Detection Limit) and LOD (Limit of Detection) as defined in ARI SOP 1018S.
(2) Limit of Quantitation as defined in ARI SOP 1018S. The spike concentration used to determine the DL and the concentration of the lowest standard used to calibrate the GC-FID instrument.
(3) All surrogate recovery limits are specified in the published methods (AK102, AK103 & NWTPH-Dext). The surrogate standard is *o*-Terphenyl.
(4) Acceptance criteria for the relative percent difference (RPD) between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then $RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$
(5) DRO = Diesel Range Organics and RRO = Residual Range Organics as defined in the methods referenced in footnote 3.
(6) Method specified LCS acceptance limits.
(7) Method specified reporting limits
(8) Default LCS control limits pending calculation of historic limits
(9) MDL study QD55 completed 2/12/10
(10) MDL study QD35 completed 1/29/10
(11) LOD Study UI44 completed 2/28/12

UZ97 : 00030

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Quality Control Criteria
Gasoline and BTEX

Method	Analyte	DL[1]	LOD[1]	LOQ[1]	Spike % Recovery Control Limits			RPD[3]
					LCS	MB/LCS Surrogate	Sample Surrogate	
Aqueous Samples 5 mL purge volume (DL, LOD & LOQ values in µg/L (ppb) for BTEX and mg/L (ppm) for gasoline								
NWTPH-G	Toluene – Naphthalene	0.057	0.125	0.25	**80 – 120**	--	--	≤ 40
8015B	2-methylpentane – 1,2,4-Trimethylbenzene	0.031	0.125	0.25	**80 – 120**	--	--	
WA-TPH-G	Toluene – nC_{12})	0.087	0.125	0.25	**80 – 120**	--	--	
AK-101	nC_6 – nC_{12}	0.032	0.050	0.10	**80 – 120**	--	--	
	Trifluorotoluene (TFT)	--	--	--	--	**80 - 120**	**80 – 120**	
	Bromobenzene	--	--	--	--	**80 - 120**	**80 – 120**	
8021B	Benzene	0.094	0.5	1.0	76 – **120**	--	--	≤ 40
8021B	Toluene	0.113	0.5	1.0	77 – 122	--	--	
8021B	Ethylbenzene	0.117	0.5	1.0	68 – **120**	--	--	
8021B	m/p-Xylene	0.265	1.0	2.0	75 – **120**	--	--	
8021B	o-Xylene	0.136	0.5	1.0	75 – 121	--	--	
	Trifluorotoluene (TFT)	--	--	--	--	**80 – 120**	**80 - 120**	
	Bromobenzene	--	--	--	--	**80 – 120**	77 - **120**	
Solid Samples - (DL, LOD & LOQ values in µg/kg (ppb) for BTEX and mg/kg (ppm) for gasoline								
NWTPH-G	Toluene – Naphthalene	1.66	2.5	5	**80 – 120**	--	--	≤ 40
8015B	2-methylpentane – 1,2,4-Trimethylbenzene	1.57	2.5	5	**80 – 120**	--	--	
WA-TPH-G	Toluene – nC_{12})	1.54	2.5	5	**80 – 120**	--	--	
AK-101	nC_6 – nC_{12}	1.84	2.5	5	**80** – 127	--	--	
	Trifluorotoluene (TFT)	--	--	--	--	**80 - 120**	65-128	
	Bromobenzene	--	--	--	--	**80 - 120**	52-149	
8021B	Benzene	4.59	12.5	25	78 – **120**	--	--	≤ 40
8021B	Toluene	7.13	12.5	25	80 – **120**	--	--	
8021B	Ethylbenzene	4.98	12.5	25	73 – **120**	--	--	
8021B	m/p-Xylene	11.9	25.0	50	79 – **120**	--	--	
8021B	o-Xylene	6.23	12.5	25	80 – **120**	--	--	
	Trifluorotoluene (TFT)	--	--	--	--	**80 - 120**	69 – 126	
	Bromobenzene	--	--	--	--	**80 - 120**	49 – 143	

(1) Detection Limit (DL), Limit of Detection (LOD) and Limit of Quantitation (LOQ) as defined in ARI SOP 1018S.
(2) Highlighted control limits (bold font) are adjusted from the calculated values as follows:
a) Highlighted control limits (**bold font**) adjusted to demonstrate that ARI does not use control limits < 10 for the lower limit or < 100 for the upper limit.
b) Control limits for analytes with no separate preparation procedure are adjusted to reflect the minimum uncertainty in the calibration of the instrument allowed by the referenced analytical method.
(3) Acceptance criteria for the relative percent difference (RPD) between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

(4) Default control limits pending sufficient data to calculate historic limits.

UZ97 : 00031

Quality Control Parameters for Metals Analysis-ICP-OES EPA Methods 200.7 and 6010C

	Aqueous Samples[2]			Spike Recovery		RPD[5]	Solids[3]	Tissue[4]
Analyte	DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	Matrix Spike	LCS		LOQ mg/kg	LOQ mg/kg
Aluminum	7.57	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Antimony	6.28	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Arsenic	3.33	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Barium	1.33	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Beryllium	0.16	0.5	**1.0**	75 – 125	80 – 120	≤ 20	**0.1**	**0.02**
Boron	7.39	10	**20**	75 – 125	80 – 120	≤ 20	**2.0**	**0.4**
Cadmium	0.18	0.5	**2.0**	75 – 125	80 – 120	≤ 20	**0.2**	**0.04**
Calcium	11.27	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Chromium	1.24	2.5	**5.0**	75 – 125	80 – 120	≤ 20	**0.5**	**0.1**
Cobalt	0.27	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Copper	0.92	1.0	**2.0**	75 – 125	80 – 120	≤ 20	**0.2**	**0.04**
Iron	7.50	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Lead	1.55	10	**20**	75 – 125	80 – 120	≤ 20	**2.0**	**0.4**
Magnesium	9.61	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Manganese	0.28	0.5	**1.0**	75 – 125	80 – 120	≤ 20	**0.1**	**0.02**
Molybdenum	0.79	2.5	**5.0**	75 – 125	80 – 120	≤ 20	**0.5**	**0.1**
Nickel	3.86	5.0	**10**	75 – 125	80 – 120	≤ 20	**1.0**	**0.2**
Potassium	65.70	250	**500**	75 – 125	80 – 120	≤ 20	**50**	**10**
Selenium	4.99	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Silicon	8.17	30	**60**	75 – 125	80 – 120	≤ 20	**(6)**	**(6)**
Silver	0.43	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Sodium	11.35	250	**500**	75 – 125	80 – 120	≤ 20	**50**	**10**
Strontium	0.09	1.0	**1.0**	75 – 125	80 – 120	≤ 20	**0.1**	**0.02**
Thallium	3.10	25	**50**	75 – 125	80 – 120	≤ 20	**5.0**	**1.0**
Tin	1.41	5.0	**10**	75 – 125	80 – 120	≤ 20	**1.0**	**0.2**
Titanium	2.11	2.5	**5.0**	75 – 125	80 – 120	≤ 20	**0.5**	**0.01**
Vanadium	0.27	1.5	**3.0**	75 – 125	80 – 120	≤ 20	**0.3**	**0.06**
Zinc	1.45	5.0	**10**	75 – 125	80 – 120	≤ 20	**1.0**	**0.2**

(1) Detection Limit (DL), Limit of Detection Limit (LOD) and Limit of Quantitation (LOQ) as defined in ARI SOP 1018S
(2) 50 mL sample and 50 mL final volume
(3) Solids LOQ based on 100% solids using 1.0 g sample with 100 mL final volume.
(4) Tissue is reported on an "as received" (wet weight) basis using 2.5 g sample with 50 mL final volume.
(5) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then $RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$
(6) ARI does not analyze for Silicon in solids or tissue samples

Analytical Resources,Incorporated
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Quality Control Parameters for Metals Analysis ICP-MS EPA Methods 200.8 or 6020A								
Analyte	Mass	Aqueous Samples[2]			Spike Recovery		RPD[3]	Solids[2]
		DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	Matrix Spike	LCS		LOQ[1] mg/kg
Aluminum	27	1.601	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Antimony	121	0.010	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
	123	0.011	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Arsenic #1	75	0.048	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Arsenic #2	75	0.092	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Barium	135	0.020	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	137	0.019	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Beryllium	9	0.021	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Cadmium	111	0.010	0.05	**0.1**	75 – 125	80 – 120	≤ 20	**0.1**
	114	0.005	0.05	**0.1**	75 – 125	80 – 120	≤ 20	**0.1**
Calcium	43	3.983	25	**50.0**	75 – 125	80 – 120	≤ 20	**50.0**
Chromium	52	0.045	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	53	0.118	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Cobalt	59	0.011	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Copper	63	0.158	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	65	0.236	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Iron	54	5.753	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
	57	3.876	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Lead	208	0.046	0.05	**0.1**	75 – 125	80 – 120	≤ 20	**0.1**
Magnesium	24	0.297	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Manganese	55	0.022	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Molybdenum	98	0.013	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Nickel	60	0.079	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	62	0.089	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
Potassium	39	2.944	10	**20.0**	75 – 125	80 – 120	≤ 20	**20.0**
Selenium	82	0.127	0.25	**0.5**	75 – 125	80 – 120	≤ 20	**0.5**
	78	0.324	0.25	**2.0**	75 – 125	80 – 120	≤ 20	**2.0**
Silver	107	0.008	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Sodium	23	2.833	50	**100.0**	75 – 125	80 – 120	≤ 20	**100.0**
Thorium[4]	232	0.013	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Thallium	205	0.004	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Uranium[4]	238	0.003	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Vanadium	51	0.043	0.1	**0.2**	75 – 125	80 – 120	≤ 20	**0.2**
Zinc	66	0.497	2	**4.0**	75 – 125	80 – 120	≤ 20	**4.0**
	67	0.531	2	**4.0**	75 – 125	80 – 120	≤ 20	**4.0**
	68	0.524	2	**4.0**	75 – 125	80 – 120	≤ 20	**4.0**

(1) Detection Limit (DL), Limit of Detection Limit (LOD) and Limit of Quantitation (LOQ) as defined in ARI SOP 1018S
(2) 50 mL sample and 50 mL final volume Solids LOQ based on 100% solids using 1.0 g sample 100 mL final volume.

(3) Relative Percent Difference in replicate analyzes. $RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$ where C_O=Original, C_D=Duplicate

(4) ARI has no accreditation for these elements.

UZ97 00038

Quality Control Parameters for Mercury Analysis using CVAA
EPA Methods 7470A or 245.1 for Aqueous Samples
EPA Methods 7471B or 245.5 for Solid Samples

	Aqueous Samples[2]			Spike Recovery		RPD[5]
	DL[1] µg/L	LOD[1] µg/L	LOQ[1] µg/L	Matrix Spike	LCS	
Mercury	0.0069	0.05	**0.10**[2]	75 – 125	80 – 120	≤ 20
Mercury (low level)	0.0026	0.01	**0.02**[2]	75 – 125	80 – 120	≤ 20
	Soil / Sediment Samples			**Spike Recovery**		**RPD**[5]
	DL[1] mg/kg	**LOD[1] mg/kg**	**LOQ[1] mg/kg**	**Matrix Spike**	**LCS**	
Mercury	0.0021	0.0125	0.025[3]	75 – 125	80 – 120	≤ 20
	Tissue Samples			**Spike Recovery**		**RPD**[5]
	DL[1] mg/kg	**LOD[1] mg/kg**	**LOQ[1] mg/kg**	**Matrix Spike**	**LCS**	
Mercury	0.0021	0.0125	0.005[4]	75 – 125	80 – 120	≤ 20

(1) Detection Limit (DL), Limit of Detection Limit (LOD) and Limit of Quantitation (LOQ) as defined in ARI SOP 1018S
(2) 20 mL sample with 20 mL final volume
(3) 0.2 g sample with 50 mL final volume assuming 100% dry weight. Soil and sediment are reported on a dry weight basis.
(4) Tissue LOQ is 0.005 mg/kg as received (wet weight) based on 1 g sample with 50 mL final volume.
(5) Relative Percent Difference between analytes in replicate analyzes. If C_O and C_D are the concentrations of the original and duplicate respectively then

$$RPD = \frac{|C_O - C_D|}{\frac{C_O + C_D}{2}} x100$$

Volatile Analysis
Report and Summary QC Forms

ARI Job ID: VZ97

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: CSIA20130114-001DW**
 SAMPLE

Lab Sample ID: VZ97S
LIMS ID: 13-1100
Matrix: Water
Data Release Authorized: MW
Reported: 01/23/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: 01/11/13
Date Received: 01/16/13

Instrument/Analyst: NT3/PAB
Date Analyzed: 01/18/13 15:51

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

Lab Sample ID: VZ97S
LIMS ID: 13-1100
Matrix: Water
Date Analyzed: 01/18/13 15:51

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Iodomethane	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	1,2-Dibromoethane	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	**Naphthalene**	**0.50**	**0.94**	
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U
1634-04-4	Methyl tert-Butyl Ether	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	111%
d8-Toluene	98.7%
Bromofluorobenzene	96.4%
d4-1,2-Dichlorobenzene	108%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: Trip Blanks**
 SAMPLE

Lab Sample ID: VZ97U
LIMS ID: 13-1113
Matrix: Water
Data Release Authorized: MW
Reported: 01/23/13

QC Report No: VZ97-Anchor QEA
Project: Cheveron Sub Area Interim Action
12007-01.01TO3.2
Date Sampled: 01/07/13
Date Received: 01/15/13

Instrument/Analyst: NT3/PAB
Date Analyzed: 01/18/13 11:50

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: Trip Blanks**
 SAMPLE

Lab Sample ID: VZ97U
LIMS ID: 13-1113
Matrix: Water
Date Analyzed: 01/18/13 11:50

QC Report No: VZ97-Anchor QEA
Project: Cheveron Sub Area Interim Action
12007-01.01TO3.2

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Iodomethane	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	1,2-Dibromoethane	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U
1634-04-4	Methyl tert-Butyl Ether	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	109%
d8-Toluene	102%
Bromofluorobenzene	96.9%
d4-1,2-Dichlorobenzene	103%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

VOA SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2

ARI ID	Client ID	PV	DCE	TOL	BFB	DCB	TOT OUT
MB-011813A	Method Blank	10	107%	104%	93.5%	101%	0
LCS-011813A	Lab Control	10	104%	99.3%	99.7%	100%	0
LCSD-011813A	Lab Control Dup	10	104%	102%	98.6%	98.9%	0
VZ97S	CSIA20130114-001DW	10	111%	98.7%	96.4%	108%	0
VZ97U	Trip Blanks	10	109%	102%	96.9%	103%	0

	LCS/MB LIMITS	QC LIMITS
SW8260C		
(DCE) = d4-1,2-Dichloroethane	(80-120)	(80-130)
(TOL) = d8-Toluene	(80-120)	(80-120)
(BFB) = Bromofluorobenzene	(80-120)	(80-120)
(DCB) = d4-1,2-Dichlorobenzene	(80-120)	(80-120)

Prep Method: SW5030B
Log Number Range: 13-1100 to 13-1113

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-011813A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-011813A
LIMS ID: 13-1100
Matrix: Water
Data Release Authorized:
Reported: 01/23/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: NT3/PAB
LCSD: NT3/PAB
Date Analyzed LCS: 01/18/13 09:32
LCSD: 01/18/13 10:05

Sample Amount LCS: 10.0 mL
LCSD: 10.0 mL
Purge Volume LCS: 10.0 mL
LCSD: 10.0 mL

Analyte	LCS		Spike Added-LCS	LCS Recovery	LCSD		Spike Added-LCSD	LCSD Recovery	RPD
Chloromethane	10.6		10.0	106%	10.4		10.0	104%	1.9%
Bromomethane	9.56		10.0	95.6%	9.55		10.0	95.5%	0.1%
Vinyl Chloride	10.8		10.0	108%	10.6		10.0	106%	1.9%
Chloroethane	10.2		10.0	102%	9.68		10.0	96.8%	5.2%
Methylene Chloride	9.86		10.0	98.6%	9.62		10.0	96.2%	2.5%
Acetone	62.1	Q	50.0	124%	55.5	Q	50.0	111%	11.2%
Carbon Disulfide	10.4		10.0	104%	10.3		10.0	103%	1.0%
1,1-Dichloroethene	10.2		10.0	102%	9.98		10.0	99.8%	2.2%
1,1-Dichloroethane	10.5		10.0	105%	10.3		10.0	103%	1.9%
trans-1,2-Dichloroethene	10.2		10.0	102%	10.0		10.0	100%	2.0%
cis-1,2-Dichloroethene	10.1		10.0	101%	10.0		10.0	100%	1.0%
Chloroform	10.9		10.0	109%	10.3		10.0	103%	5.7%
1,2-Dichloroethane	11.1		10.0	111%	10.6		10.0	106%	4.6%
2-Butanone	59.1		50.0	118%	55.2		50.0	110%	6.8%
1,1,1-Trichloroethane	10.6		10.0	106%	10.4		10.0	104%	1.9%
Carbon Tetrachloride	10.2		10.0	102%	10.1		10.0	101%	1.0%
Vinyl Acetate	10.5		10.0	105%	10.6		10.0	106%	0.9%
Bromodichloromethane	10.2		10.0	102%	10.1		10.0	101%	1.0%
1,2-Dichloropropane	10.0		10.0	100%	10.2		10.0	102%	2.0%
cis-1,3-Dichloropropene	10.1		10.0	101%	10.6		10.0	106%	4.8%
Trichloroethene	10.0		10.0	100%	10.2		10.0	102%	2.0%
Dibromochloromethane	10.1		10.0	101%	9.83		10.0	98.3%	2.7%
1,1,2-Trichloroethane	10.1		10.0	101%	10.6		10.0	106%	4.8%
Benzene	10.6		10.0	106%	10.5		10.0	105%	0.9%
trans-1,3-Dichloropropene	10.4		10.0	104%	10.8		10.0	108%	3.8%
2-Chloroethylvinylether	9.63		10.0	96.3%	9.77		10.0	97.7%	1.4%
Bromoform	10.0		10.0	100%	10.6		10.0	106%	5.8%
4-Methyl-2-Pentanone (MIBK)	57.2		50.0	114%	55.6		50.0	111%	2.8%
2-Hexanone	53.0		50.0	106%	51.1		50.0	102%	3.7%
Tetrachloroethene	9.62		10.0	96.2%	10.1		10.0	101%	4.9%
1,1,2,2-Tetrachloroethane	9.66		10.0	96.6%	9.86		10.0	98.6%	2.0%
Toluene	10.4		10.0	104%	10.5		10.0	105%	1.0%
Chlorobenzene	10.0		10.0	100%	10.2		10.0	102%	2.0%
Ethylbenzene	10.2		10.0	102%	10.8		10.0	108%	5.7%
Styrene	10.5		10.0	105%	10.5		10.0	105%	0.0%
Trichlorofluoromethane	10.2		10.0	102%	9.91		10.0	99.1%	2.9%
1,1,2-Trichloro-1,2,2-trifluoroetha	11.3		10.0	113%	10.9		10.0	109%	3.6%
m,p-Xylene	21.2		20.0	106%	21.6		20.0	108%	1.9%

Lab Sample ID: LCS-011813A QC Report No: VZ97-Anchor QEA
LIMS ID: 13-1100 Project: Chevron Sub Area Interim Action
Matrix: Water 120007-01.01TO3.2

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
o-Xylene	10.2	10.0	102%	10.3	10.0	103%	1.0%
1,2-Dichlorobenzene	10.2	10.0	102%	10.1	10.0	101%	1.0%
1,3-Dichlorobenzene	10.0	10.0	100%	10.2	10.0	102%	2.0%
1,4-Dichlorobenzene	10.0	10.0	100%	10.1	10.0	101%	1.0%
Acrolein	58.2	50.0	116%	50.8	50.0	102%	13.6%
Iodomethane	10.1	10.0	101%	10.0	10.0	100%	1.0%
Bromoethane	10.1	10.0	101%	9.94	10.0	99.4%	1.6%
Acrylonitrile	11.6	10.0	116%	10.8	10.0	108%	7.1%
1,1-Dichloropropene	10.5	10.0	105%	10.2	10.0	102%	2.9%
Dibromomethane	9.89	10.0	98.9%	9.67	10.0	96.7%	2.2%
1,1,1,2-Tetrachloroethane	10.6	10.0	106%	10.2	10.0	102%	3.8%
1,2-Dibromo-3-chloropropane	9.61	10.0	96.1%	8.95	10.0	89.5%	7.1%
1,2,3-Trichloropropane	10.3	10.0	103%	10.3	10.0	103%	0.0%
trans-1,4-Dichloro-2-butene	9.85	10.0	98.5%	10.1	10.0	101%	2.5%
1,3,5-Trimethylbenzene	10.9	10.0	109%	11.2	10.0	112%	2.7%
1,2,4-Trimethylbenzene	10.8	10.0	108%	11.1	10.0	111%	2.7%
Hexachlorobutadiene	8.80	10.0	88.0%	9.32	10.0	93.2%	5.7%
1,2-Dibromoethane	10.6	10.0	106%	10.2	10.0	102%	3.8%
Bromochloromethane	10.7	10.0	107%	10.8	10.0	108%	0.9%
2,2-Dichloropropane	10.0	10.0	100%	9.67	10.0	96.7%	3.4%
1,3-Dichloropropane	9.73	10.0	97.3%	10.0	10.0	100%	2.7%
Isopropylbenzene	10.8	10.0	108%	11.3	10.0	113%	4.5%
n-Propylbenzene	10.7	10.0	107%	11.1	10.0	111%	3.7%
Bromobenzene	9.97	10.0	99.7%	10.2	10.0	102%	2.3%
2-Chlorotoluene	10.2	10.0	102%	10.7	10.0	107%	4.8%
4-Chlorotoluene	10.2	10.0	102%	10.7	10.0	107%	4.8%
tert-Butylbenzene	10.3	10.0	103%	10.8	10.0	108%	4.7%
sec-Butylbenzene	10.8	10.0	108%	11.3	10.0	113%	4.5%
4-Isopropyltoluene	10.7	10.0	107%	11.1	10.0	111%	3.7%
n-Butylbenzene	10.4	10.0	104%	10.7	10.0	107%	2.8%
1,2,4-Trichlorobenzene	9.31	10.0	93.1%	9.81	10.0	98.1%	5.2%
Naphthalene	9.92	10.0	99.2%	10.2	10.0	102%	2.8%
1,2,3-Trichlorobenzene	9.60	10.0	96.0%	10.3	10.0	103%	7.0%
Methyl tert-Butyl Ether	11.2	10.0	112%	10.6	10.0	106%	5.5%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	104%	104%
d8-Toluene	99.3%	102%
Bromofluorobenzene	99.7%	98.6%
d4-1,2-Dichlorobenzene	100%	98.9%

4A

VOLATILE METHOD BLANK SUMMARY

Method Blank ID.

MB0118

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No: VZ97

Project: CHEVRON SUB AREA

Lab File ID: MB0118

Lab Sample ID: MB0118

Date Analyzed: 01/18/13

Time Analyzed: 1032

Instrument ID: NT3

Heated Purge: (Y/N) N

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS0118	LCS0118	LCS0118	0932
02	LCS0118	LCS0118	LCS0118A	1005
03	TRIP BLANKS	VZ97U	VZ97U	1150
04	CSIA20130114	VZ97S	VZ97S	1551
05				
06				
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COMMENTS:

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-011813A**
 METHOD BLANK

Lab Sample ID: MB-011813A
LIMS ID: 13-1100
Matrix: Water
Data Release Authorized: MW
Reported: 01/23/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT3/PAB
Date Analyzed: 01/18/13 10:32

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

Lab Sample ID: MB-011813A
LIMS ID: 13-1100
Matrix: Water
Date Analyzed: 01/18/13 10:32

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Iodomethane	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	1,2-Dibromoethane	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U
1634-04-4	Methyl tert-Butyl Ether	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	107%
d8-Toluene	104%
Bromofluorobenzene	93.5%
d4-1,2-Dichlorobenzene	101%

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ANALYTICAL RESOURCES INC Contract: ANCHOR QEA

Lab Code: ARI Case No.: CHEVRON SUB AREA SDG No.: VZ97

Lab File ID: BFB0115X BFB Injection Date: 01/15/13

Instrument ID: NT3 BFB Injection Time: 1430

GC Column: RTXVMS ID: 0.18 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.6
75	30.0 - 60.0% of mass 95	51.0
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.4
173	Less than 2.0% of mass 174	0.4 (0.5)1
174	50.0 - 100.0% of mass 95	79.9
175	5.0 - 9.0% of mass 174	6.1 (7.6)1
176	95.0 - 101.0% of mass 174	76.2 (95.4)1
177	5.0 - 9.0% of mass 176	4.4 (5.7)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD0.2	IC0115	0020115	01/15/13	1536
02	VSTD80	IC0115	8000115	01/15/13	1603
03	VSTD40	IC0115	4000115	01/15/13	1630
04	VSTD20	IC0115	2000115	01/15/13	1657
05	VSTD10	IC0115	1000115	01/15/13	1724
06	VSTD2	IC0115	0200115	01/15/13	1750
07	VSTD1	IC0115	0100115	01/15/13	1816
08	VSTD0.5	IC0115	0050115	01/15/13	1843
09					
10					
11					
12					
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14					
15					
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17					
18					
19					
20					
21					
22					

VZ97 00016

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ANALYTICAL RESOURCES INC Contract: ANCHOR QEA

Lab Code: ARI Case No.: CHEVRON SUB AREA SDG No.: VZ97

Lab File ID: BFB0118A BFB Injection Date: 01/18/13

Instrument ID: NT3 BFB Injection Time: 0834

GC Column: RTXVMS ID: 0.18 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	20.5
75	30.0 - 60.0% of mass 95	51.4
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.6
173	Less than 2.0% of mass 174	0.8 (1.1)1
174	50.0 - 100.0% of mass 95	71.9
175	5.0 - 9.0% of mass 174	5.1 (7.0)1
176	95.0 - 101.0% of mass 174	68.4 (95.2)1
177	5.0 - 9.0% of mass 176	4.4 (6.5)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD10	CC0118	CC0118	01/18/13	0905
02	LCS0118	LCS0118	LCS0118	01/18/13	0932
03	LCS0118	LCS0118	LCS0118A	01/18/13	1005
04	MB0118	MB0118	MB0118	01/18/13	1032
05	TRIP BLANKS	VZ97U	VZ97U	01/18/13	1150
06	CSIA20130114-001	VZ97S	VZ97S	01/18/13	1551
07					
08					
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20					
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22					

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB AREA

Instrument ID: NT3 Calibration Date: 01/15/13

LAB FILE ID: RF0.2: 0020115 RF0.5: 0050115 RF1: 0100115
RF2: 0200115 RF10: 1000115

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF10
Chloromethane	0.839	0.795	0.797	0.601	0.730
Vinyl Chloride	0.760	0.860	0.934	0.683	0.846
Bromomethane	0.543	0.505	0.523	0.367	0.442
Chloroethane	0.622	0.506	0.611	0.446	0.538
Trichlorofluoromethane	0.940	1.011	0.960	0.740	0.899
Acrolein	0.132	0.074	0.107	0.077	0.102
112Trichloro122Trifluoroetha	0.548	0.482	0.688	0.488	0.617
Acetone		0.120	0.122	0.071	0.124
1,1-Dichloroethene	0.428	0.631	0.679	0.466	0.531
Bromoethane	0.515	0.452	0.457	0.358	0.411
Iodomethane	0.851	0.905	0.992	0.720	0.859
Methylene Chloride	0.840	0.645	0.754	0.522	0.599
Acrylonitrile		0.169	0.232	0.164	0.201
Carbon Disulfide	2.162	2.341	2.303	1.723	2.013
Trans-1,2-Dichloroethene	0.755	0.602	0.654	0.495	0.579
Vinyl Acetate	0.546	0.673	0.689	0.522	0.698
1,1-Dichloroethane	1.144	1.135	1.306	0.907	1.074
2-Butanone	0.272	0.232	0.276	0.182	0.263
2,2-Dichloropropane	0.826	0.845	0.851	0.646	0.707
Cis-1,2-Dichloroethene	0.666	0.674	0.674	0.524	0.605
Chloroform	0.966	0.971	1.083	0.783	0.956
Bromochloromethane	0.264	0.220	0.365	0.221	0.279
1,1,1-Trichloroethane	0.799	0.903	0.959	0.693	0.827
1,1-Dichloropropene	0.496	0.486	0.560	0.394	0.484
Carbon Tetrachloride	0.498	0.491	0.563	0.387	0.447
1,2-Dichloroethane	0.372	0.504	0.496	0.368	0.445
Benzene	1.408	1.564	1.530	1.152	1.386
Trichloroethene	0.396	0.349	0.324	0.282	0.331
1,2-Dichloropropane	0.365	0.386	0.389	0.272	0.334
Bromodichloromethane	0.428	0.474	0.453	0.359	0.431
Dibromomethane	0.270	0.222	0.215	0.157	0.192
2-Chloroethyl Vinyl Ether		0.210	0.153	0.151	0.175
4-Methyl-2-Pentanone	0.342	0.393	0.410	0.314	0.369
Cis 1,3-dichloropropene	0.472	0.482	0.488	0.394	0.492
Toluene	0.735	0.792	0.755	0.586	0.734
Trans 1,3-Dichloropropene	0.494	0.534	0.476	0.359	0.469
2-Hexanone	0.286	0.324	0.333	0.265	0.311

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB AREA

Instrument ID: NT3 Calibration Date: 01/15/13

LAB FILE ID: RF0.2: 0020115 RF0.5: 0050115 RF1: 0100115
RF2: 0200115 RF10: 1000115

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF10
1,1,2-Trichloroethane	0.249	0.285	0.268	0.205	0.246
1,3-Dichloropropane	0.524	0.517	0.533	0.388	0.508
Tetrachloroethene	0.271	0.341	0.317	0.266	0.334
Chlorodibromomethane	0.323	0.299	0.344	0.252	0.311
1,2-Dibromoethane	0.242	0.306	0.298	0.219	0.271
Chlorobenzene	0.880	0.881	1.009	0.728	0.919
Ethyl Benzene	1.476	1.663	1.735	1.249	1.652
1,1,1,2-Tetrachloroethane	0.305	0.321	0.350	0.262	0.350
m,p-xylene	0.480	0.599	0.595	0.439	0.614
o-Xylene	0.513	0.584	0.632	0.476	0.620
Styrene	0.885	0.852	0.950	0.753	1.008
Bromoform	0.292	0.350	0.407	0.327	0.396
1,1,2,2-Tetrachloroethane	0.992	0.809	0.788	0.657	0.765
1,2,3-Trichloropropane		0.225	0.250	0.194	0.220
Trans-1,4-Dichloro 2-Butene		0.354	0.298	0.240	0.299
N-Propyl Benzene	2.827	3.136	3.234	2.415	3.194
Bromobenzene	0.606	0.714	0.730	0.580	0.654
Isopropyl Benzene	2.125	2.481	2.570	2.075	2.722
2-Chloro Toluene	2.037	2.218	2.299	1.764	2.222
4-Chloro Toluene	2.123	2.116	2.064	1.704	2.078
T-Butyl Benzene	1.722	1.894	1.936	1.527	2.020
1,3,5-Trimethyl Benzene	1.909	2.067	2.147	1.734	2.312
1,2,4-Trimethylbenzene	2.019	2.051	2.170	1.702	2.343
S-Butyl Benzene	2.728	2.890	2.876	2.328	3.056
4-Isopropyl Toluene	2.210	2.071	2.324	1.813	2.438
1,3-Dichlorobenzene	1.263	1.346	1.451	1.097	1.339
1,4-Dichlorobenzene	1.540	1.428	1.490	1.140	1.413
N-Butyl Benzene	2.364	2.151	2.351	1.837	2.386
1,2-Dichlorobenzene	1.315	1.345	1.351	1.052	1.335
1,2-Dibromo 3-Chloropropane		0.219	0.209	0.137	0.157
1,2,4-Trichlorobenzene	0.713	0.799	0.825	0.629	0.804
Hexachloro 1,3-Butadiene	0.494	0.431	0.328	0.291	0.353
Naphthalene	1.618	1.861	1.991	1.705	2.152
1,2,3-Trichlorobenzene	0.649	0.668	0.692	0.582	0.745
Dichlorodifluoromethane	0.619	0.581	0.680	0.524	0.649
Methyl tert butyl ether	1.548	1.674	1.848	1.452	1.797

VZ97 : 00049

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB AREA

Instrument ID: NT3 Calibration Date: 01/15/13

LAB FILE ID: RF0.2: 0020115 RF0.5: 0050115 RF1: 0100115
RF2: 0200115 RF10: 1000115

COMPOUND	RF0.2	RF0.5	RF1	RF2	RF10
d4-1,2-Dichloroethane	0.650	0.704	0.711	0.672	0.656
d8-Toluene	1.173	1.188	1.153	1.152	1.150
4-Bromofluorobenzene	0.529	0.527	0.547	0.520	0.538
d4-1,2-Dichlorobenzene	0.895	0.884	0.898	0.887	0.903
Dibromofluoromethane	0.519	0.564	0.551	0.567	0.532

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB AREA

Instrument ID: NT3 Calibration Date: 01/15/13

LAB FILE ID: RF20: 2000115 RF40: 4000115 RF80: 8000115

COMPOUND	RF20	RF40	RF80
Chloromethane	0.747	0.736	0.640
Vinyl Chloride	0.888	0.868	0.804
Bromomethane	0.472	0.462	0.422
Chloroethane	0.553	0.578	0.546
Trichlorofluoromethane	0.960	0.993	0.958
Acrolein	0.098	0.105	0.096
112Trichloro122Trifluoroetha	0.645	0.635	0.598
Acetone	0.092	0.112	0.103
1,1-Dichloroethene	0.567	0.547	0.525
Bromoethane	0.440	0.427	0.400
Iodomethane	0.896	0.876	0.811
Methylene Chloride	0.617	0.610	0.553
Acrylonitrile	0.186	0.198	0.191
Carbon Disulfide	2.126	2.015	1.767
Trans-1,2-Dichloroethene	0.618	0.602	0.555
Vinyl Acetate	0.727	0.752	0.716
1,1-Dichloroethane	1.147	1.104	1.005
2-Butanone	0.248	0.256	0.238
2,2-Dichloropropane	0.796	0.774	0.682
Cis-1,2-Dichloroethene	0.637	0.618	0.578
Chloroform	1.017	0.977	0.882
Bromochloromethane	0.282	0.281	0.264
1,1,1-Trichloroethane	0.878	0.856	0.791
1,1-Dichloropropene	0.509	0.515	0.471
Carbon Tetrachloride	0.458	0.452	0.404
1,2-Dichloroethane	0.467	0.454	0.422
Benzene	1.416	1.348	1.102
Trichloroethene	0.345	0.343	0.322
1,2-Dichloropropane	0.349	0.352	0.334
Bromodichloromethane	0.424	0.435	0.395
Dibromomethane	0.201	0.196	0.184
2-Chloroethyl Vinyl Ether	0.176	0.182	0.183
4-Methyl-2-Pentanone	0.391	0.351	0.264
Cis 1,3-dichloropropene	0.517	0.532	0.510
Toluene	0.772	0.774	0.697
Trans 1,3-Dichloropropene	0.485	0.485	0.463
2-Hexanone	0.328	0.287	0.229

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB AREA

Instrument ID: NT3 Calibration Date: 01/15/13

LAB FILE ID: RF20: 2000115 RF40: 4000115 RF80: 8000115

COMPOUND	RF20	RF40	RF80
1,1,2-Trichloroethane	0.251	0.249	0.240
1,3-Dichloropropane	0.512	0.516	0.501
Tetrachloroethene	0.351	0.344	0.344
Chlorodibromomethane	0.330	0.327	0.314
1,2-Dibromoethane	0.268	0.262	0.249
Chlorobenzene	0.948	0.916	0.836
Ethyl Benzene	1.690	1.559	1.240
1,1,1,2-Tetrachloroethane	0.367	0.366	0.344
m,p-xylene	0.648	0.617	0.525
o-Xylene	0.670	0.647	0.609
Styrene	1.071	1.031	0.912
Bromoform	0.409	0.400	0.405
1,1,2,2-Tetrachloroethane	0.776	0.749	0.722
1,2,3-Trichloropropane	0.230	0.221	0.218
Trans-1,4-Dichloro 2-Butene	0.306	0.294	0.293
N-Propyl Benzene	3.296	2.962	2.320
Bromobenzene	0.687	0.670	0.670
Isopropyl Benzene	2.840	2.620	2.160
2-Chloro Toluene	2.300	2.184	1.953
4-Chloro Toluene	2.110	1.998	1.767
T-Butyl Benzene	2.105	2.033	1.744
1,3,5-Trimethyl Benzene	2.453	2.292	1.924
1,2,4-Trimethylbenzene	2.447	2.295	1.922
S-Butyl Benzene	3.162	2.864	2.250
4-Isopropyl Toluene	2.567	2.395	1.973
1,3-Dichlorobenzene	1.382	1.343	1.246
1,4-Dichlorobenzene	1.416	1.363	1.283
N-Butyl Benzene	2.458	2.282	1.896
1,2-Dichlorobenzene	1.341	1.290	1.191
1,2-Dibromo 3-Chloropropane	0.166	0.160	0.150
1,2,4-Trichlorobenzene	0.841	0.816	0.828
Hexachloro 1,3-Butadiene	0.366	0.353	0.351
Naphthalene	2.278	2.150	1.878
1,2,3-Trichlorobenzene	0.782	0.759	0.792
Dichlorodifluoromethane	0.660	0.655	0.586
Methyl tert butyl ether	1.852	1.814	1.617

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB AREA

Instrument ID: NT3 Calibration Date: 01/15/13

LAB FILE ID: RF20: 2000115 RF40: 4000115 RF80: 8000115

COMPOUND	RF20	RF40	RF80
d4-1,2-Dichloroethane	0.668	0.663	0.620
d8-Toluene	1.168	1.166	1.157
4-Bromofluorobenzene	0.537	0.520	0.511
d4-1,2-Dichlorobenzene	0.917	0.898	0.905
Dibromofluoromethane	0.539	0.540	0.508

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB AREA

Instrument ID: NT3 Calibration Date: 01/15/13

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R^2
Chloromethane	AVRG	0.736	11.0
Vinyl Chloride	AVRG	0.830	9.6
Bromomethane	AVRG	0.467	12.3
Chloroethane	AVRG	0.550	10.3
Trichlorofluoromethane	AVRG	0.932	9.1
Acrolein	AVRG	0.099	18.5
112Trichloro122Trifluoroetha	AVRG	0.588	12.7
Acetone	AVRG	0.106	18.2
1,1-Dichloroethene	AVRG	0.547	14.9
Bromoethane	AVRG	0.432	10.6
Iodomethane	AVRG	0.864	9.1
Methylene Chloride	AVRG	0.642	16.4
Acrylonitrile	AVRG	0.192	11.9
Carbon Disulfide	AVRG	2.056	11.0
Trans-1,2-Dichloroethene	AVRG	0.607	12.5
Vinyl Acetate	AVRG	0.665	12.8
1,1-Dichloroethane	AVRG	1.103	10.6
2-Butanone	AVRG	0.246	12.2
2,2-Dichloropropane	AVRG	0.766	10.2
Cis-1,2-Dichloroethene	AVRG	0.622	8.5
Chloroform	AVRG	0.954	9.4
Bromochloromethane	AVRG	0.272	16.6
1,1,1-Trichloroethane	AVRG	0.838	9.6
1,1-Dichloropropene	AVRG	0.489	9.6
Carbon Tetrachloride	AVRG	0.462	12.0
1,2-Dichloroethane	AVRG	0.441	11.6
Benzene	AVRG	1.363	12.0
Trichloroethene	AVRG	0.336	9.6
1,2-Dichloropropane	AVRG	0.348	10.7
Bromodichloromethane	AVRG	0.425	8.2
Dibromomethane	AVRG	0.205	16.1
2-Chloroethyl Vinyl Ether	AVRG	0.176	11.3
4-Methyl-2-Pentanone	AVRG	0.354	13.5
Cis 1,3-dichloropropene	AVRG	0.486	8.6
Toluene	AVRG	0.730	9.0
Trans 1,3-Dichloropropene	AVRG	0.470	10.6
2-Hexanone	AVRG	0.295	12.1

<- Indicates value outside QC limits:
(%RSD < 20% or R^2 > 0.990)

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB AREA

Instrument ID: NT3 Calibration Date: 01/15/13

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R^2
1,1,2-Trichloroethane	AVRG	0.249	9.2
1,3-Dichloropropane	AVRG	0.500	9.2
Tetrachloroethene	AVRG	0.321	10.6
Chlorodibromomethane	AVRG	0.312	9.0
1,2-Dibromoethane	AVRG	0.264	10.8
Chlorobenzene	AVRG	0.890	9.3
Ethyl Benzene	AVRG	1.533	12.7
1,1,1,2-Tetrachloroethane	AVRG	0.333	10.8
m,p-xylene	AVRG	0.564	13.2
o-Xylene	AVRG	0.594	11.3
Styrene	AVRG	0.933	11.2
Bromoform	AVRG	0.373	12.0
1,1,2,2-Tetrachloroethane	AVRG	0.782	12.4
1,2,3-Trichloropropane	AVRG	0.223	7.5
Trans-1,4-Dichloro 2-Butene	AVRG	0.298	11.1
N-Propyl Benzene	AVRG	2.923	12.8
Bromobenzene	AVRG	0.664	7.6
Isopropyl Benzene	AVRG	2.449	12.0
2-Chloro Toluene	AVRG	2.122	8.9
4-Chloro Toluene	AVRG	1.995	8.3
T-Butyl Benzene	AVRG	1.873	10.4
1,3,5-Trimethyl Benzene	AVRG	2.105	11.5
1,2,4-Trimethylbenzene	AVRG	2.119	11.5
S-Butyl Benzene	AVRG	2.769	11.7
4-Isopropyl Toluene	AVRG	2.224	11.5
1,3-Dichlorobenzene	AVRG	1.308	8.2
1,4-Dichlorobenzene	AVRG	1.384	9.0
N-Butyl Benzene	AVRG	2.216	10.5
1,2-Dichlorobenzene	AVRG	1.277	8.2
1,2-Dibromo 3-Chloropropane	AVRG	0.171	18.0
1,2,4-Trichlorobenzene	AVRG	0.782	9.4
Hexachloro 1,3-Butadiene	AVRG	0.371	17.0
Naphthalene	AVRG	1.954	11.8
1,2,3-Trichlorobenzene	AVRG	0.709	10.4
Dichlorodifluoromethane	AVRG	0.619	8.4
Methyl tert butyl ether	AVRG	1.700	8.9

<- Indicates value outside QC limits:
(%RSD < 20% or R^2 > 0.990)

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB AREA

Instrument ID: NT3 Calibration Date: 01/15/13

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R^2
d4-1,2-Dichloroethane	AVRG	0.668	4.4
d8-Toluene	AVRG	1.164	1.1
4-Bromofluorobenzene	AVRG	0.528	2.2
d4-1,2-Dichlorobenzene	AVRG	0.898	1.2
Dibromofluoromethane	AVRG	0.540	3.8

<- Indicates value outside QC limits:
(%RSD < 20% or R^2 > 0.990)

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB AREA

Instrument ID: NT3 Cont. Calib. Date: 01/18/13

Init. Calib. Date: 01/15/13 Cont. Calib. Time: 0905

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Chloromethane	0.736	0.8188	0.100	AVRG	11.2	
Vinyl Chloride	0.830	0.9490	0.010	AVRG	14.3	
Bromomethane	0.467	0.4815	0.010	AVRG	3.1	
Chloroethane	0.550	0.5916	0.010	AVRG	7.6	
Trichlorofluoromethane	0.933	1.0044	0.010	AVRG	7.6	
Acrolein	0.099	0.1087	0.010	AVRG	9.8	
112Trichloro122Trifluoroetha	0.588	0.6854	0.010	AVRG	16.6	
Acetone	0.106	0.1324	0.010	AVRG	24.9	<-
1,1-Dichloroethene	0.547	0.5810	0.010	AVRG	6.2	
Bromoethane	0.432	0.4675	0.010	AVRG	8.2	
Iodomethane	0.864	0.9113	0.010	AVRG	5.5	
Methylene Chloride	0.642	0.6575	0.010	AVRG	2.4	
Acrylonitrile	0.192	0.2086	0.010	AVRG	8.6	
Carbon Disulfide	2.056	2.2449	0.010	AVRG	9.2	
Trans-1,2-Dichloroethene	0.608	0.6249	0.010	AVRG	2.8	
Vinyl Acetate	0.665	0.6671	0.010	AVRG	0.3	
1,1-Dichloroethane	1.103	1.1866	0.100	AVRG	7.6	
2-Butanone	0.246	0.2771	0.010	AVRG	12.6	
2,2-Dichloropropane	0.766	0.7898	0.010	AVRG	3.1	
Cis-1,2-Dichloroethene	0.622	0.6379	0.010	AVRG	2.6	
Chloroform	0.954	1.0636	0.010	AVRG	11.5	
Bromochloromethane	0.272	0.2977	0.010	AVRG	9.4	
1,1,1-Trichloroethane	0.838	0.9220	0.010	AVRG	10.0	
1,1-Dichloropropene	0.489	0.5320	0.010	AVRG	8.8	
Carbon Tetrachloride	0.462	0.4861	0.010	AVRG	5.2	
1,2-Dichloroethane	0.441	0.4868	0.010	AVRG	10.4	
Benzene	1.363	1.5139	0.010	AVRG	11.1	
Trichloroethene	0.336	0.3564	0.010	AVRG	6.1	
1,2-Dichloropropane	0.348	0.3580	0.010	AVRG	2.9	
Bromodichloromethane	0.425	0.4570	0.010	AVRG	7.5	
Dibromomethane	0.205	0.2140	0.010	AVRG	4.4	
2-Chloroethyl Vinyl Ether	0.176	0.1633	0.010	AVRG	-7.2	
4-Methyl-2-Pentanone	0.354	0.3917	0.010	AVRG	10.6	
Cis 1,3-dichloropropene	0.486	0.5049	0.010	AVRG	3.9	
Toluene	0.731	0.7962	0.010	AVRG	8.9	
Trans 1,3-Dichloropropene	0.471	0.4952	0.010	AVRG	5.1	
2-Hexanone	0.295	0.2981	0.010	AVRG	1.0	

<- Exceeds QC limit of 20% D
* RF less than minimum RF

FORM VII VOA

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB AREA

Instrument ID: NT3 Cont. Calib. Date: 01/18/13

Init. Calib. Date: 01/15/13 Cont. Calib. Time: 0905

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
1,1,2-Trichloroethane	0.249	0.2622	0.010	AVRG	5.3
1,3-Dichloropropane	0.500	0.5035	0.010	AVRG	0.7
Tetrachloroethene	0.321	0.3206	0.010	AVRG	-0.1
Chlorodibromomethane	0.312	0.3128	0.010	AVRG	0.2
1,2-Dibromoethane	0.264	0.2769	0.010	AVRG	4.9
Chlorobenzene	0.890	0.9421	0.300	AVRG	5.8
Ethyl Benzene	1.533	1.6459	0.010	AVRG	7.4
1,1,1,2-Tetrachloroethane	0.333	0.3560	0.010	AVRG	6.9
m,p-xylene	0.565	0.6266	0.010	AVRG	10.9
o-Xylene	0.594	0.6278	0.010	AVRG	5.7
Styrene	0.933	1.0215	0.010	AVRG	9.5
Bromoform	0.373	0.3796	0.100	AVRG	1.8
1,1,2,2-Tetrachloroethane	0.782	0.7442	0.300	AVRG	-4.8
1,2,3-Trichloropropane	0.222	0.2167	0.010	AVRG	-2.4
Trans-1,4-Dichloro 2-Butene	0.298	0.2785	0.010	AVRG	-6.5
N-Propyl Benzene	2.923	3.1893	0.010	AVRG	9.1
Bromobenzene	0.664	0.6568	0.010	AVRG	-1.1
Isopropyl Benzene	2.449	2.6643	0.010	AVRG	8.8
2-Chloro Toluene	2.122	2.2352	0.010	AVRG	5.3
4-Chloro Toluene	1.995	2.0598	0.010	AVRG	3.2
T-Butyl Benzene	1.873	1.9869	0.010	AVRG	6.1
1,3,5-Trimethyl Benzene	2.105	2.3413	0.010	AVRG	11.2
1,2,4-Trimethylbenzene	2.119	2.3332	0.010	AVRG	10.1
S-Butyl Benzene	2.769	3.1343	0.010	AVRG	13.2
4-Isopropyl Toluene	2.224	2.4540	0.010	AVRG	10.3
1,3-Dichlorobenzene	1.308	1.3336	0.010	AVRG	2.0
1,4-Dichlorobenzene	1.384	1.4257	0.010	AVRG	3.0
N-Butyl Benzene	2.216	2.3888	0.010	AVRG	7.8
1,2-Dichlorobenzene	1.278	1.3155	0.010	AVRG	2.9
1,2-Dibromo 3-Chloropropane	0.171	0.1546	0.010	AVRG	-9.6
1,2,4-Trichlorobenzene	0.782	0.7655	0.010	AVRG	-2.1
Hexachloro 1,3-Butadiene	0.371	0.3461	0.010	AVRG	-6.7
Naphthalene	1.954	1.9324	0.010	AVRG	-1.1
1,2,3-Trichlorobenzene	0.709	0.6966	0.010	AVRG	-1.7
Dichlorodifluoromethane	0.619	0.7028	0.010	AVRG	13.5
Methyl tert butyl ether	1.700	1.8574	0.010	AVRG	9.2

<- Exceeds QC limit of 20% D
* RF less than minimum RF

FORM VII VOA

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB AREA

Instrument ID: NT3 Cont. Calib. Date: 01/18/13

Init. Calib. Date: 01/15/13 Cont. Calib. Time: 0905

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
d4-1,2-Dichloroethane	0.668	0.6928	0.010	AVRG	3.7
d8-Toluene	1.163	1.1962	0.010	AVRG	2.8
4-Bromofluorobenzene	0.529	0.5317	0.010	AVRG	0.5
d4-1,2-Dichlorobenzene	0.898	0.9204	0.010	AVRG	2.5
Dibromofluoromethane	0.540	0.5641	0.010	AVRG	4.5

<- Exceeds QC limit of 20% D
* RF less than minimum RF

VZ97:00059

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC | Client: ANCHOR QEA

ARI Job No: VZ97 | Project: CHEVRON SUB AREA

Ical Midpoint ID: 1000115 | Ical Date: 01/15/13

Instrument ID: NT3 | Project Run Date: 01/18/13

		IS1(PFB) AREA	#	RT	#	IS2(DFB) AREA	#	RT	#	IS3(CLB) AREA	#	RT	#
	ICAL MIDPT	513917		5.54		821183		5.92		740077		7.98	
	UPPER LIMIT	1027834		6.04		1642366		6.42		1480154		8.48	
	LOWER LIMIT	256958		5.04		410592		5.42		370038		7.48	
	Sample ID												
01	LCS0118	441580		5.54		720053		5.92		696451		7.98	
02	LCS0118	479032		5.54		782659		5.92		752039		7.98	
03	MB0118	435873		5.54		709785		5.92		709144		7.98	
04	TRIP BLANKS	426457		5.54		684055		5.92		674926		7.98	
05	CSIA20130114	395122		5.53		631595		5.93		598278		7.98	
06													
07													
08													
09													
10													
11													
12													
13													
14													
15													
16													
17													
18													
19													
20													
21													
22													

IS1 (PFB) = Pentafluorobenzene
IS2 (DFB) = 1,4-Difluorobenzene
IS3 (CLB) = d5-Chlorobenzene

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

* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC | Client: ANCHOR QEA

ARI Job No: VZ97 | Project: CHEVRON SUB AREA

Ical Midpoint ID: 1000115 | Ical Date: 01/15/13

Instrument ID: NT3 | Project Run Date: 01/18/13

		IS4 (DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	454429	9.67				
	UPPER LIMIT	908858	10.17				
	LOWER LIMIT	227214	9.17				
	Sample ID						
01	LCS0118	429429	9.67				
02	LCS0118	442330	9.67				
03	MB0118	395283	9.67				
04	TRIP BLANKS	396388	9.67				
05	CSIA20130114	375473	9.66				
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS4 (DCB) = d4-1,4-Dichlorobenzene

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

* Values outside of QC limits.

SIM Volatile Analysis
Report and Summary QC Forms

ARI Job ID: VZ97

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: CSIA20130111-001RB**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VZ97T
LIMS ID: 13-1101
Matrix: Water
Data Release Authorized:
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: 01/11/13
Date Received: 01/16/13

Instrument/Analyst: NT7/PKC
Date Analyzed: 01/17/13 21:03

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	0.020	< 0.020	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	98.7%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: Trip Blanks**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VZ97U
LIMS ID: 13-1113
Matrix: Water
Data Release Authorized:
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Cheveron Sub Area Interim Action
12007-01.01TO3.2
Date Sampled: 01/07/13
Date Received: 01/15/13

Instrument/Analyst: NT7/PKC
Date Analyzed: 01/17/13 21:30

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	0.020	< 0.020	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	95.9%

ANALYTICAL RESOURCES INCORPORATED

SW8260-SIM SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2

Client ID	DCE	TOT OUT
MB-011713	91.8%	0
LCS-011713	93.1%	0
LCSD-011713	90.9%	0
CSIA20130111-001RB	98.7%	0
Trip Blanks	95.9%	0

	LCS/MB LIMITS	QC LIMITS
(DCE) = d4-1,2-Dichloroethane	(78-126)	(80-129)

Prep Method: SW5030
Log Number Range: 13-1101 to 13-1113

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: CSIA-20130107-001B**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VZ97A
LIMS ID: 13-1082
Matrix: Soil
Data Release Authorized: MW
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: 01/07/13
Date Received: 01/15/13

Instrument/Analyst: NT9/PKC
Date Analyzed: 01/18/13 19:15

Sample Amount: 383 mg-dry-wt
Purge Volume: 10.0 mL
Moisture: 18.3%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	0.52	< 0.52	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	98.2%

VZ97 00066

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: CSIA-20130107-002B**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VZ97B
LIMS ID: 13-1083
Matrix: Soil
Data Release Authorized: MW
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: 01/07/13
Date Received: 01/16/13

Instrument/Analyst: NT9/PKC
Date Analyzed: 01/18/13 19:39

Sample Amount: 455 mg-dry-wt
Purge Volume: 10.0 mL
Moisture: 21.0%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	0.44	< 0.44	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	100%

VZ97 00067

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: CSIA-20130107-003S+3**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VZ97C
LIMS ID: 13-1084
Matrix: Soil
Data Release Authorized:
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: 01/07/13
Date Received: 01/16/13

Instrument/Analyst: NT9/PKC
Date Analyzed: 01/18/13 20:50

Sample Amount: 334 mg-dry-wt
Purge Volume: 10.0 mL
Moisture: 23.7%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	0.60	< 0.60	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	102%

VZ97 00068

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: CSIA-20130107-004S+6**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VZ97D
LIMS ID: 13-1085
Matrix: Soil
Data Release Authorized: MW
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: 01/07/13
Date Received: 01/16/13

Instrument/Analyst: NT9/PKC
Date Analyzed: 01/18/13 21:14

Sample Amount: 182 mg-dry-wt
Purge Volume: 10.0 mL
Moisture: 35.9%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.1	< 1.1	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	105%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: CSIA-20130107-005S+9**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VZ97E
LIMS ID: 13-1086
Matrix: Soil
Data Release Authorized: MW
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: 01/07/13
Date Received: 01/16/13

Instrument/Analyst: NT9/PKC
Date Analyzed: 01/18/13 21:38

Sample Amount: 287 mg-dry-wt
Purge Volume: 10.0 mL
Moisture: 21.5%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	0.70	< 0.70	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	105%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: CSIA20130109-006B**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VZ97F
LIMS ID: 13-1087
Matrix: Soil
Data Release Authorized: MW
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: 01/09/13
Date Received: 01/16/13

Instrument/Analyst: NT9/PKC
Date Analyzed: 01/18/13 22:01

Sample Amount: 393 mg-dry-wt
Purge Volume: 10.0 mL
Moisture: 19.6%

CAS Number	Analyte	RL	Result	Q
71-43-2	**Benzene**	**0.51**	**0.30**	**J**

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	106%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: CSIA20130109-007B**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VZ97G
LIMS ID: 13-1088
Matrix: Soil
Data Release Authorized:
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: 01/09/13
Date Received: 01/16/13

Instrument/Analyst: NT9/PKC
Date Analyzed: 01/18/13 22:25

Sample Amount: 432 mg-dry-wt
Purge Volume: 10.0 mL
Moisture: 15.4%

CAS Number	Analyte	RL	Result	Q
71-43-2	**Benzene**	**0.46**	**0.45**	**J**

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	105%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: CSIA20130109-008S+3**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VZ97H
LIMS ID: 13-1089
Matrix: Soil
Data Release Authorized: MW
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: 01/09/13
Date Received: 01/16/13

Instrument/Analyst: NT9/PKC
Date Analyzed: 01/18/13 22:49

Sample Amount: 339 mg-dry-wt
Purge Volume: 10.0 mL
Moisture: 23.1%

CAS Number	Analyte	RL	Result	Q
71-43-2	**Benzene**	**0.59**	**0.38**	**J**

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	103%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: CSIA20130109-009S+6**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VZ97I
LIMS ID: 13-1090
Matrix: Soil
Data Release Authorized: MW
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: 01/09/13
Date Received: 01/16/13

Instrument/Analyst: NT9/PKC
Date Analyzed: 01/18/13 23:12

Sample Amount: 454 mg-dry-wt
Purge Volume: 10.0 mL
Moisture: 15.0%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	0.44	< 0.44	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	102%

VZ97 00074

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: CSIA20130109-010S+9**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VZ97J
LIMS ID: 13-1091
Matrix: Soil
Data Release Authorized: MW
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: 01/09/13
Date Received: 01/16/13

Instrument/Analyst: NT9/PKC
Date Analyzed: 01/18/13 23:36

Sample Amount: 537 mg-dry-wt
Purge Volume: 10.0 mL
Moisture: 9.6%

CAS Number	Analyte	RL	Result	Q
71-43-2	**Benzene**	**0.37**	**0.26**	**J**

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	102%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: CSIA20130110-011B**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VZ97K
LIMS ID: 13-1092
Matrix: Soil
Data Release Authorized:
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: 01/10/13
Date Received: 01/16/13

Instrument/Analyst: NT9/PKC
Date Analyzed: 01/21/13 12:04

Sample Amount: 371 mg-dry-wt
Purge Volume: 10.0 mL
Moisture: 16.1%

CAS Number	Analyte	RL	Result	Q
71-43-2	**Benzene**	**0.54**	**2.2**	

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	96.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: CSIA20130110-012B**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VZ97L
LIMS ID: 13-1093
Matrix: Soil
Data Release Authorized: MW
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: 01/10/13
Date Received: 01/16/13

Instrument/Analyst: NT9/PKC
Date Analyzed: 01/21/13 12:28

Sample Amount: 360 mg-dry-wt
Purge Volume: 10.0 mL
Moisture: 21.2%

CAS Number	Analyte	RL	Result	Q
71-43-2	**Benzene**	**0.56**	**3.6**	

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	97.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: CSIA20130110-013S+3**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VZ97M
LIMS ID: 13-1094
Matrix: Soil
Data Release Authorized: MW
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: 01/10/13
Date Received: 01/16/13

Instrument/Analyst: NT9/PKC
Date Analyzed: 01/21/13 12:51

Sample Amount: 289 mg-dry-wt
Purge Volume: 10.0 mL
Moisture: 19.5%

CAS Number	Analyte	RL	Result	Q
71-43-2	**Benzene**	**0.69**	**3.4**	

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	98.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: CSIA20130110-014S+6**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VZ97N
LIMS ID: 13-1095
Matrix: Soil
Data Release Authorized: MW
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: 01/10/13
Date Received: 01/16/13

Instrument/Analyst: NT9/PKC
Date Analyzed: 01/19/13 01:11

Sample Amount: 41.6 mg-dry-wt
Purge Volume: 10.0 mL
Moisture: 12.0%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	4.8	< 4.8	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	107%

VZ97:00079

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: CSIA20130110-015S+9**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VZ97O
LIMS ID: 13-1096
Matrix: Soil
Data Release Authorized: MW
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: 01/10/13
Date Received: 01/16/13

Instrument/Analyst: NT9/PKC
Date Analyzed: 01/19/13 01:35

Sample Amount: 44.8 mg-dry-wt
Purge Volume: 10.0 mL
Moisture: 11.0%

CAS Number	Analyte	RL	Result	Q
71-43-2	**Benzene**	**4.5**	**2.6**	**J**

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	99.2%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: CSIA20130111-016B**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VZ97P
LIMS ID: 13-1097
Matrix: Soil
Data Release Authorized: WW
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: 01/11/13
Date Received: 01/16/13

Instrument/Analyst: NT9/PKC
Date Analyzed: 01/21/13 13:15

Sample Amount: 424 mg-dry-wt
Purge Volume: 10.0 mL
Moisture: 12.4%

CAS Number	Analyte	RL	Result	Q
71-43-2	**Benzene**	**0.47**	**1.4**	

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	95.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM Sample ID: CSIA20130111-017B
Page 1 of 1 **SAMPLE**

Lab Sample ID: VZ97Q
LIMS ID: 13-1098
Matrix: Soil
Data Release Authorized:
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: 01/11/13
Date Received: 01/16/13

Instrument/Analyst: NT9/PKC
Date Analyzed: 01/21/13 13:39

Sample Amount: 434 mg-dry-wt
Purge Volume: 10.0 mL
Moisture: 16.8%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	0.46	< 0.46	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	96.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: CSIA20130111-018S+9**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VZ97R
LIMS ID: 13-1099
Matrix: Soil
Data Release Authorized:
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: 01/11/13
Date Received: 01/16/13

Instrument/Analyst: NT9/PKC
Date Analyzed: 01/19/13 02:46

Sample Amount: 425 mg-dry-wt
Purge Volume: 10.0 mL
Moisture: 12.8%

CAS Number	Analyte	RL	Result	Q
71-43-2	**Benzene**	**0.47**	**0.87**	

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	95.5%

SW8260-SIM SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2

Client ID	DCE	TOT OUT
MB-011813	96.7%	0
LCS-011813	97.4%	0
LCSD-011813	94.7%	0
CSIA-20130107-001B	98.2%	0
CSIA-20130107-002B	100%	0
CSIA-20130107-002B-MS	100%	0
CSIA-20130107-002B-MSD	99.9%	0
CSIA-20130107-003S+3	102%	0
CSIA-20130107-004S+6	105%	0
CSIA-20130107-005S+9	105%	0
CSIA20130109-006B	106%	0
CSIA20130109-007B	105%	0
CSIA20130109-008S+3	103%	0
CSIA20130109-009S+6	102%	0
CSIA20130109-010S+9	102%	0
MB-012113	97.4%	0
LCS-012113	99.5%	0
LCSD-012113	95.2%	0
CSIA20130110-011B	96.4%	0
CSIA20130110-012B	97.0%	0
CSIA20130110-013S+3	98.9%	0
CSIA20130110-014S+6	107%	0
CSIA20130110-015S+9	99.2%	0
CSIA20130111-016B	95.9%	0
CSIA20130111-017B	96.0%	0
CSIA20130111-018S+9	95.5%	0

	LCS/MB LIMITS	QC LIMITS
(DCE) = d4-1,2-Dichloroethane	(75-125)	(75-125)

Prep Method: SW5030
Log Number Range: 13-1082 to 13-1099

FORM-II SW8260-SIM

VZ97 00084

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM Sample ID: CSIA-20130107-002B
Page 1 of 1 **MATRIX SPIKE**

Lab Sample ID: VZ97B
LIMS ID: 13-1083
Matrix: Soil
Data Release Authorized:
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: 01/07/13
Date Received: 01/16/13

Instrument/Analyst MS: NT9/PKC
MSD: NT9/PKC
Date Analyzed MS: 01/18/13 20:03
MSD: 01/18/13 20:26

Sample Amount MS: 455 mg-dry-wt
MSD: 455 mg-dry-wt
Purge Volume MS: 10.0 mL
MSD: 10.0 mL
Moisture: 21.0%

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Benzene	< 0.439 U	23.0	22.0	105%	22.7	22.0	103%	1.3%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: CSIA-20130107-002B**
Page 1 of 1 **MATRIX SPIKE**

Lab Sample ID: VZ97B
LIMS ID: 13-1083
Matrix: Soil
Data Release Authorized: MW
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: 01/07/13
Date Received: 01/16/13

Instrument/Analyst: NT9/PKC
Date Analyzed: 01/18/13 20:03

Sample Amount: 455 mg-dry-wt
Purge Volume: 10.0 mL
Moisture: 21.0%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	0.44	---	

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	100%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: CSIA-20130107-002B**
 MATRIX SPIKE DUP

Lab Sample ID: VZ97B
LIMS ID: 13-1083
Matrix: Soil
Data Release Authorized:
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: 01/07/13
Date Received: 01/16/13

Instrument/Analyst: NT9/PKC
Date Analyzed: 01/18/13 20:26

Sample Amount: 455 mg-dry-wt
Purge Volume: 10.0 mL
Moisture: 21.0%

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	0.44	---	

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	99.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: LCS-011713**

LAB CONTROL SAMPLE

Lab Sample ID: LCS-011713
LIMS ID: 13-1101
Matrix: Water
Data Release Authorized:
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: NT7/PKC
LCSD: NT7/PKC
Date Analyzed LCS: 01/17/13 19:43
LCSD: 01/17/13 20:09

Sample Amount LCS: 10.0 mL
LCSD: 10.0 mL
Purge Volume LCS: 10.0 mL
LCSD: 10.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	0.950	1.00	95.0%	0.978	1.00	97.8%	2.9%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	93.1%	90.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM Sample ID: LCS-011813
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-011813
LIMS ID: 13-1082
Matrix: Soil
Data Release Authorized: MW
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: NT9/PKC
LCSD: NT9/PKC
Date Analyzed LCS: 01/18/13 18:04
LCSD: 01/18/13 18:28

Sample Amount LCS: 200 mg-dry-wt
LCSD: 200 mg-dry-wt
Purge Volume LCS: 10.0 mL
LCSD: 10.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	48.3	50.0	96.6%	50.0	50.0	100%	3.5%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM Sample ID: LCS-012113
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-012113
LIMS ID: 13-1092
Matrix: Soil
Data Release Authorized: MW
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: NT9/PKC
LCSD: NT9/PKC
Date Analyzed LCS: 01/21/13 10:41
LCSD: 01/21/13 11:05

Sample Amount LCS: 200 mg-dry-wt
LCSD: 200 mg-dry-wt
Purge Volume LCS: 10.0 mL
LCSD: 10.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Benzene	51.1	50.0	102%	45.4	50.0	90.8%	11.8%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

4A

VOLATILE METHOD BLANK SUMMARY

Method Blank ID.

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No: VZ97

Project: CHEVRON SUB AREA

Lab File ID: MB0117

Lab Sample ID: MB0117

Date Analyzed: 01/17/13

Time Analyzed: 2036

Instrument ID: NT7

Heated Purge: (Y/N) N

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01		ICV1000	ICV0117	1916
02		LCS0117	LCS0117	1943
03		LCS0117A	LCS0117A	2009
04	CSIA20130111	VZ97T	VZ97T	2103
05	TRIP BLANKS	VZ97U	VZ97U	2130
06				
07				
08				
09				
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30				

COMMENTS:

VZ97:00091

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: MB-011713**
Page 1 of 1 **METHOD BLANK**

Lab Sample ID: MB-011713
LIMS ID: 13-1101
Matrix: Water
Data Release Authorized:
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT7/PKC
Date Analyzed: 01/17/13 20:36

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	0.020	< 0.020	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	91.8%

4A
VOLATILE METHOD BLANK SUMMARY

Method Blank ID.

MB0118

Lab Name: ANALYTICAL RESOURCES INC
Client: ANCHOR QEA

ARI Job No: VZ97
Project: CHEVRON SUB AREA

Lab File ID: MB0118
Lab Sample ID: MB0118

Date Analyzed: 01/18/13
Time Analyzed: 1851

Instrument ID: NT9
Heated Purge: (Y/N) N

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS0118	LCS0118	LCS0118	1804
02	LCS0118	LCS0118	LCS0118A	1828
03	CSIA-2013010	VZ97A	VZ97A2	1915
04	CSIA-2013010	VZ97B	VZ97B2	1939
05	CSIA-2013010	VZ97B	VZ97BMS	2003
06	CSIA-2013010	VZ97B	VZ97BMSD	2026
07	CSIA-2013010	VZ97C	VZ97C2	2050
08	CSIA-2013010	VZ97D	VZ97D2	2114
09	CSIA-2013010	VZ97E	VZ97E2	2138
10	CSIA20130109	VZ97F	VZ97F	2201
11	CSIA20130109	VZ97G	VZ97G	2225
12	CSIA20130109	VZ97H	VZ97H	2249
13	CSIA20130109	VZ97I	VZ97I	2312
14	CSIA20130109	VZ97J	VZ97J	2336
15	CSIA20130110	VZ97N	VZ97N	0111
16	CSIA20130110	VZ97O	VZ97O	0135
17	CSIA20130111	VZ97R	VZ97R	0246
18				
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28				
29				
30				

COMMENTS:

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: MB-011813**
 METHOD BLANK

Lab Sample ID: MB-011813
LIMS ID: 13-1082
Matrix: Soil
Data Release Authorized: MW
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT9/PKC
Date Analyzed: 01/18/13 18:51

Sample Amount: 200 mg-dry-wt
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	96.7%

VZ97 : 00091

4A
VOLATILE METHOD BLANK SUMMARY

Method Blank ID.

MB0121

Lab Name: ANALYTICAL RESOURCES INC
Client: ANCHOR QEA

ARI Job No: VZ97
Project: CHEVRON SUB AREA

Lab File ID: MB0121
Lab Sample ID: MB0121

Date Analyzed: 01/21/13
Time Analyzed: 1129

Instrument ID: NT9
Heated Purge: (Y/N) N

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS0121	LCS0121	LCS0121A	1041
02	LCS0121	LCS0121	LCS0121B	1105
03	CSIA20130110	VZ97K	VZ97K2	1204
04	CSIA20130110	VZ97L	VZ97L2	1228
05	CSIA20130110	VZ97M	VZ97M2	1251
06	CSIA20130111	VZ97P	VZ97P2	1315
07	CSIA20130111	VZ97Q	VZ97Q2	1339
08		RINSE	RB0121	1403
09				
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COMMENTS:

FORM IV VOA

OLM3.2M

VZ97 00005

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C-SIM **Sample ID: MB-012113**
 METHOD BLANK

Lab Sample ID: MB-012113
LIMS ID: 13-1092
Matrix: Soil
Data Release Authorized: MW
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT9/PKC
Date Analyzed: 01/21/13 11:29

Sample Amount: 200 mg-dry-wt
Purge Volume: 10.0 mL

CAS Number	Analyte	RL	Result	Q
71-43-2	Benzene	1.0	< 1.0	U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	97.4%

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ANALYTICAL RESOURCES INC Contract: ANCHOR QEA

Lab Code: ARI Case No.: CHEVRON SUB AREA SDG No.: VZ97

Lab File ID: BFB0117D BFB Injection Date: 01/17/13

Instrument ID: NT7 BFB Injection Time: 1426

GC Column: RTXVMS ID: 0.18 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.6
75	30.0 - 66.0% of mass 95	50.7
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	7.8
173	Less than 2.0% of mass 174	0.5 (0.8)1
174	50.0 - 101.0% of mass 95	64.7
175	4.0 - 9.0% of mass 174	5.1 (7.9)1
176	95.0 - 101.0% of mass 174	64.3 (99.3)1
177	5.0 - 9.0% of mass 176	4.4 (6.9)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	IC5000	IC5000	50000117	01/17/13	1609
02	IC1000	IC1000	10000117	01/17/13	1702
03	IC0500	IC0500	05000117	01/17/13	1728
04	IC0100	IC0100	01000117	01/17/13	1755
05	IC0050	IC0050	00500117	01/17/13	1822
06	IC0020	IC0020	00200117	01/17/13	1849
07		ICV1000	ICV0117	01/17/13	1916
08		LCS0117	LCS0117	01/17/13	1943
09		LCS0117A	LCS0117A	01/17/13	2009
10		MB0117	MB0117	01/17/13	2036
11	CSIA20130111-001	VZ97T	VZ97T	01/17/13	2103
12	TRIP BLANKS	VZ97U	VZ97U	01/17/13	2130
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ANALYTICAL RESOURCES INC Contract: ANCHOR QEA

Lab Code: ARI Case No.: CHEVRON SUB AREA SDG No.: VZ97

Lab File ID: BFB0118 BFB Injection Date: 01/18/13

Instrument ID: NT9 BFB Injection Time: 1205

GC Column: RTXVMS ID: 0.18 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.4
75	30.0 - 66.0% of mass 95	43.6
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.4 (0.5)1
174	50.0 - 101.0% of mass 95	74.9
175	4.0 - 9.0% of mass 174	5.4 (7.2)1
176	95.0 - 101.0% of mass 174	71.7 (95.7)1
177	5.0 - 9.0% of mass 176	4.5 (6.3)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	1C2000	1C2000	20000118A	01/18/13	1412
02	IC1000	IC1000	10000118	01/18/13	1436
03	1C0500	1C0500	05000118	01/18/13	1459
04	IC0100	IC0100	01000118	01/18/13	1523
05	IC0050	IC0050	00500118	01/18/13	1547
06	IC0020	IC0020	00200118	01/18/13	1610
07	ICV1000	ICV1000	ICV0118	01/18/13	1634
08					
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VZ97 · 00095

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ANALYTICAL RESOURCES INC Contract: ANCHOR QEA

Lab Code: ARI Case No.: CHEVRON SUB AREA SDG No.: VZ97

Lab File ID: BFB0118A BFB Injection Date: 01/18/13

Instrument ID: NT9 BFB Injection Time: 1706

GC Column: RTXVMS ID: 0.18 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.8
75	30.0 - 66.0% of mass 95	44.4
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.8
173	Less than 2.0% of mass 174	0.7 (0.9)1
174	50.0 - 101.0% of mass 95	80.0
175	4.0 - 9.0% of mass 174	5.8 (7.3)1
176	95.0 - 101.0% of mass 174	76.8 (96.0)1
177	5.0 - 9.0% of mass 176	4.6 (6.0)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CC0118	CC0118	CC0118	01/18/13	1740
02	LCS0118	LCS0118	LCS0118	01/18/13	1804
03	LCS0118	LCS0118	LCS0118A	01/18/13	1828
04	MB0118	MB0118	MB0118	01/18/13	1851
05	CSIA-20130107-00	VZ97A	VZ97A2	01/18/13	1915
06	CSIA-20130107-00	VZ97B	VZ97B2	01/18/13	1939
07	CSIA-20130107-00	VZ97B	VZ97BMS	01/18/13	2003
08	CSIA-20130107-00	VZ97B	VZ97BMSD	01/18/13	2026
09	CSIA-20130107-00	VZ97C	VZ97C2	01/18/13	2050
10	CSIA-20130107-00	VZ97D	VZ97D2	01/18/13	2114
11	CSIA-20130107-00	VZ97E	VZ97E2	01/18/13	2138
12	CSIA20130109-006	VZ97F	VZ97F	01/18/13	2201
13	CSIA20130109-007	VZ97G	VZ97G	01/18/13	2225
14	CSIA20130109-008	VZ97H	VZ97H	01/18/13	2249
15	CSIA20130109-009	VZ97I	VZ97I	01/18/13	2312
16	CSIA20130109-010	VZ97J	VZ97J	01/18/13	2336
17	CSIA20130110-014	VZ97N	VZ97N	01/19/13	0111
18	CSIA20130110-015	VZ97O	VZ97O	01/19/13	0135
19	CSIA20130111-018	VZ97R	VZ97R	01/19/13	0246
20					
21					
22					

VZ97 00099

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ANALYTICAL RESOURCES INC Contract: ANCHOR QEA

Lab Code: ARI Case No.: CHEVRON SUB AREA SDG No.: VZ97

Lab File ID: BFB0121 BFB Injection Date: 01/21/13

Instrument ID: NT9 BFB Injection Time: 0915

GC Column: RTXVMS ID: 0.18 (mm) Heated Purge: (Y/N) N

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.0
75	30.0 - 66.0% of mass 95	44.9
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.0
173	Less than 2.0% of mass 174	0.2 (0.2)1
174	50.0 - 101.0% of mass 95	84.3
175	4.0 - 9.0% of mass 174	5.4 (6.5)1
176	95.0 - 101.0% of mass 174	80.9 (96.0)1
177	5.0 - 9.0% of mass 176	4.5 (5.5)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CC0121	CC0121	CC0121A	01/21/13	1018
02	LCS0121	LCS0121	LCS0121A	01/21/13	1041
03	LCS0121	LCS0121	LCS0121B	01/21/13	1105
04	MB0121	MB0121	MB0121	01/21/13	1129
05	CSIA20130110-011	VZ97K	VZ97K2	01/21/13	1204
06	CSIA20130110-012	VZ97L	VZ97L2	01/21/13	1228
07	CSIA20130110-013	VZ97M	VZ97M2	01/21/13	1251
08	CSIA20130111-016	VZ97P	VZ97P2	01/21/13	1315
09	CSIA20130111-017	VZ97Q	VZ97Q2	01/21/13	1339
10		RINSE	RB0121	01/21/13	1403
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VZ97:00106

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB AREA

Instrument ID: NT7 Calibration Date: 01/17/13

LAB FILE ID: RF20: 00200117 RF50: 00500117 RF100: 01000117
RF500: 05000117 RF1000: 10000117

COMPOUND	RF20	RF50	RF100	RF500	RF1000
Benzene	1.620	1.573	1.483	1.482	1.504
Toluene	1.844	1.793	1.929	1.875	1.820
Ethyl Benzene	1.607	1.824	2.123	2.138	2.106
m,p xylene	0.768	0.663	0.744	0.796	0.779
o-xylene	1.358	1.611	1.787	1.860	1.689
d4-1,2-Dichloroethane	0.628	0.647	0.706	0.630	0.644
d8-Toluene	1.013	1.033	1.030	1.041	1.056
4-Bromofluorobenzene	0.287	0.284	0.297	0.326	0.326

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB AREA

Instrument ID: NT7 Calibration Date: 01/17/13

LAB FILE ID: RF2000: 20000117 RF5000: 50000117

COMPOUND	TYPE	RF	CURVE OR R^2	AVE	%RSD
Benzene		1.474	AVRG	1.523	3.9
Toluene		1.824	AVRG	1.848	2.6
Ethyl Benzene		2.071	AVRG	1.978	10.9
m,p xylene		0.760	AVRG	0.752	6.2
o-xylene		1.665	AVRG	1.662	10.4
d4-1,2-Dichloroethane		0.632	AVRG	0.648	4.5
d8-Toluene		1.057	AVRG	1.038	1.6
4-Bromofluorobenzene		0.324	AVRG	0.307	6.6

<- Indicates value outside QC limits:
(%RSD < 20% or R^2 > 0.990)

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB AREA

Instrument ID: NT9 Calibration Date: 01/18/13

LAB FILE ID: RF20: 00200118 RF50: 00500118 RF100: 01000118
RF500: 05000118 RF1000: 10000118

COMPOUND	RF20	RF50	RF100	RF500	RF1000
Benzene	1.484	1.312	1.255	1.134	1.099
Toluene	1.538	1.308	1.234	1.091	1.076
Ethyl Benzene	1.359	1.213	1.170	1.134	1.150
m,p xylene	0.472	0.435	0.435	0.445	0.457
o-xylene	0.876	0.804	0.804	0.847	0.870
d4-1,2-Dichloroethane	0.465	0.460	0.502	0.456	0.447
d8-Toluene	1.052	1.047	1.045	1.046	1.041
4-Bromofluorobenzene	0.329	0.336	0.348	0.360	0.363

VZ97 00103

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB AREA

Instrument ID: NT9 Calibration Date: 01/18/13

LAB FILE ID: RF2000: 20000118ARF5000: 50000118A

COMPOUND	TYPE	RF	CURVE OR R^2	AVE	%RSD
Benzene	0.992		AVRG	1.212	14.4
Toluene	0.986		AVRG	1.206	16.6
Ethyl Benzene	1.074		AVRG	1.183	8.2
m,p xylene	0.425		AVRG	0.445	3.9
o-xylene	0.825		AVRG	0.838	3.8
d4-1,2-Dichloroethane	0.441		AVRG	0.462	4.6
d8-Toluene	1.036		AVRG	1.044	0.5
4-Bromofluorobenzene	0.364		AVRG	0.350	4.2

<- Indicates value outside QC limits:
(%RSD < 20% or R^2 > 0.990)

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB AREA

Instrument ID: NT7 Cont. Calib. Date: 01/17/13

Init. Calib. Date: 01/17/13 Cont. Calib. Time: 1702

COMPOUND	CalAmt or ARF	CC Amt 3000	MIN RRF	CURVE TYPE	%D or Drift
Benzene	1.523	1.5046	0.010	AVRG	-1.20
Toluene	1.848	1.8201	0.010	AVRG	-1.49
Ethyl Benzene	1.978	2.1064	0.010	AVRG	6.473
m,p xylene	0.752	0.7794	0.010	AVRG	3.644
o-xylene	1.662	1.6888	0.010	AVRG	1.645
d4-1,2-Dichloroethane	0.648	0.6440	0.010	AVRG	-0.6
d8-Toluene	1.038	1.0560	0.010	AVRG	1.7
4-Bromofluorobenzene	0.307	0.3258	0.010	AVRG	6.1

<- Exceeds QC limit of 20% D

* RF less than minimum RF

7A
VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB AREA

Instrument ID: NT9 Cont. Calib. Date: 01/18/13

Init. Calib. Date: 01/18/13 Cont. Calib. Time: 1740

COMPOUND	CalAmt or ARF	CC Amt 1000	MIN RRF	CURVE TYPE	%D or Drift
Benzene	1.213	1.0639	0.010	AVRG	-12.3
Toluene	1.206	1.1150	0.010	AVRG	-7.5
Ethyl Benzene	1.183	1.1705	0.010	AVRG	-1.0
m,p xylene	0.445	0.4787	0.010	AVRG	7.6
o-xylene	0.838	0.8652	0.010	AVRG	3.2
d4-1,2-Dichloroethane	0.462	0.4529	0.010	AVRG	-2.0
d8-Toluene	1.044	1.0601	0.010	AVRG	1.5
4-Bromofluorobenzene	0.350	0.3601	0.010	AVRG	2.9

<- Exceeds QC limit of 20% D
* RF less than minimum RF

FORM VII VOA

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB AREA

Instrument ID: NT9 Cont. Calib. Date: 01/21/13

Init. Calib. Date: 01/18/13 Cont. Calib. Time: 1018

COMPOUND	CalAmt or ARF	CC Amt 1000	MIN RRF	CURVE TYPE	%D or Drift	
Benzene	1.213	1.1340	0.010	AVRG	-6.5	
Toluene	1.206	1.2595	0.010	AVRG	4.4	
Ethyl Benzene	1.183	1.3751	0.010	AVRG	16.2	
m,p xylene	0.445	0.5575	0.010	AVRG	25.3	<-
o-xylene	0.838	1.0665	0.010	AVRG	27.3	<-
d4-1,2-Dichloroethane	0.462	0.4431	0.010	AVRG	-4.1	
d8-Toluene	1.044	1.0216	0.010	AVRG	-2.1	
4-Bromofluorobenzene	0.350	0.3702	0.010	AVRG	5.8	

<- Exceeds QC limit of 20% D

* RF less than minimum RF

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB AREA

Ical Midpoint ID: 05000117 Ical Date: 01/17/13

Instrument ID: NT7 Project Run Date: 01/17/13

		IS1 AREA #	RT #	IS2(PFB) AREA #	RT #	IS3(DFB) AREA #	RT #
	ICAL MIDPT	389929	8.21	235041	5.32	466925	5.75
	UPPER LIMIT	779858	8.71	470082	5.82	933850	6.25
	LOWER LIMIT	194964	7.71	117520	4.82	233462	5.25
	Sample ID						
01		402706	8.21	237486	5.32	478546	5.75
02		396293	8.21	253994	5.32	486482	5.75
03		391122	8.21	255940	5.32	476852	5.75
04		412423	8.21	257727	5.32	484028	5.75
05	CSIA20130111	414542	8.22	240765	5.32	484171	5.75
06	TRIP BLANKS	408316	8.22	242949	5.32	482485	5.75
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IS1 = d5 -Chlorobenzene
IS2 (PFB) = Pentafluorobenzene
IS3 (DFB) = 1,4-Difluorobenzene

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

* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC | Client: ANCHOR QEA

ARI Job No: VZ97 | Project: CHEVRON SUB AREA

Ical Midpoint ID: 05000118 | Ical Date: 01/18/13

Instrument ID: NT9 | Project Run Date: 01/18/13

		IS1 AREA #	RT #	IS2(PFB) AREA #	RT #	IS3(DFB) AREA #	RT #
	ICAL MIDPT	219653	7.71	112117	5.27	196480	5.64
	UPPER LIMIT	439306	8.21	224234	5.77	392960	6.14
	LOWER LIMIT	109826	7.21	56058	4.77	98240	5.14
	Sample ID						
01	ICV1000	192701	7.71	105522	5.27	179021	5.64
02							
03							
04							
05							
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21							
22							

IS1 = d5 -Chlorobenzene
IS2 (PFB) = Pentafluorobenzene
IS3 (DFB) = 1,4-Difluorobenzene

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

* Values outside of QC limits.

VZ97 08109

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC | Client: ANCHOR QEA

ARI Job No: VZ97 | Project: CHEVRON SUB AREA

Ical Midpoint ID: 05000118 | Ical Date: 01/18/13

Instrument ID: NT9 | Project Run Date: 01/18/13

		IS1 AREA #	IS1 RT #	IS2(PFB) AREA #	IS2(PFB) RT #	IS3(DFB) AREA #	IS3(DFB) RT #
	ICAL MIDPT	219653	7.71	112117	5.27	196480	5.64
	UPPER LIMIT	439306	8.21	224234	5.77	392960	6.14
	LOWER LIMIT	109826	7.21	56058	4.77	98240	5.14
	Sample ID						
01	LCS0118	213241	7.71	116264	5.27	198197	5.64
02	LCS0118	214949	7.71	117248	5.27	197646	5.64
03	MB0118	202159	7.71	115285	5.27	193025	5.64
04	CSIA-2013010	198893	7.71	114732	5.27	188451	5.64
05	CSIA-2013010	184397	7.71	106958	5.27	177184	5.64
06	CSIA-2013010	178411	7.71	104992	5.27	173274	5.64
07	CSIA-2013010	181909	7.71	104546	5.27	174349	5.64
08	CSIA-2013010	188920	7.71	106856	5.27	178340	5.64
09	CSIA-2013010	163236	7.71	94129	5.27	156457	5.64
10	CSIA-2013010	164492	7.71	93487	5.27	155114	5.64
11	CSIA20130109	164791	7.71	91086	5.27	151723	5.64
12	CSIA20130109	162946	7.71	91247	5.27	152260	5.64
13	CSIA20130109	180659	7.71	97331	5.27	165873	5.64
14	CSIA20130109	177392	7.71	98132	5.27	166193	5.64
15	CSIA20130109	179775	7.71	100003	5.27	170586	5.64
16	CSIA20130110	220872	7.71	118926	5.27	204203	5.64
17	CSIA20130110	209772	7.71	113327	5.27	199552	5.64
18	CSIA20130111	221200	7.71	122378	5.27	215891	5.64
19							
20							
21							
22							

IS1 = d5 -Chlorobenzene
IS2 (PFB) = Pentafluorobenzene
IS3 (DFB) = 1,4-Difluorobenzene

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

* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC | Client: ANCHOR QEA

ARI Job No: VZ97 | Project: CHEVRON SUB AREA

Ical Midpoint ID: 05000118 | Ical Date: 01/18/13

Instrument ID: NT9 | Project Run Date: 01/21/13

		IS1 AREA #	RT #	IS2(PFB) AREA #	RT #	IS3(DFB) AREA #	RT #
	ICAL MIDPT	219653	7.71	112117	5.27	196480	5.64
	UPPER LIMIT	439306	8.21	224234	5.77	392960	6.14
	LOWER LIMIT	109826	7.21	56058	4.77	98240	5.14
	Sample ID						
01	LCS0121	196987	7.71	105826	5.27	193736	5.64
02	LCS0121	225152	7.71	118664	5.27	218599	5.64
03	MB0121	222956	7.71	116657	5.27	215950	5.64
04	CSIA20130110	271021	7.71	135573	5.27	256998	5.64
05	CSIA20130110	226594	7.71	115080	5.27	214411	5.64
06	CSIA20130110	210972	7.71	108126	5.27	201758	5.64
07	CSIA20130111	248813	7.71	124334	5.27	238623	5.64
08	CSIA20130111	231639	7.71	117064	5.27	221972	5.64
09		217541	7.71	110586	5.27	209949	5.64
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
22							

IS1 = d5 -Chlorobenzene
IS2 (PFB) = Pentafluorobenzene
IS3 (DFB) = 1,4-Difluorobenzene

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

* Values outside of QC limits.

Semivolatile Analysis
Report and Summary QC Forms

ARI Job ID: VZ97

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3520C

Sample ID: CSIA20130114-001DW
SAMPLE

Lab Sample ID: VZ97S
LIMS ID: 13-1100
Matrix: Water
Data Release Authorized:
Reported: 01/23/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: 01/11/13
Date Received: 01/16/13

Date Extracted: 01/17/13
Date Analyzed: 01/23/13 13:41
Instrument/Analyst: NT6/JZ

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
108-95-2	Phenol	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	1.0	< 1.0 U
95-57-8	2-Chlorophenol	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	2.0	< 2.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
95-48-7	2-Methylphenol	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0	< 1.0 U
106-44-5	4-Methylphenol	2.0	< 2.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	1.0	< 1.0 U
67-72-1	Hexachloroethane	2.0	< 2.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	3.0	< 3.0 U
105-67-9	2,4-Dimethylphenol	3.0	< 3.0 U
65-85-0	Benzoic Acid	20	< 20 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	3.0	< 3.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0	< 1.0 U
91-20-3	Naphthalene	1.0	< 1.0 U
106-47-8	4-Chloroaniline	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	3.0	< 3.0 U
59-50-7	4-Chloro-3-methylphenol	3.0	< 3.0 U
91-57-6	2-Methylnaphthalene	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	3.0	< 3.0 U
95-95-4	2,4,5-Trichlorophenol	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	1.0	< 1.0 U
88-74-4	2-Nitroaniline	3.0	< 3.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	3.0	< 3.0 U
83-32-9	**Acenaphthene**	**1.0**	**1.3**
51-28-5	2,4-Dinitrophenol	20	< 20 U
100-02-7	4-Nitrophenol	10	< 10 U
132-64-9	**Dibenzofuran**	**1.0**	**0.9 J**
606-20-2	2,6-Dinitrotoluene	3.0	< 3.0 U
121-14-2	2,4-Dinitrotoluene	3.0	< 3.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3520C

Sample ID: CSIA20130114-001DW
SAMPLE

Lab Sample ID: VZ97S
LIMS ID: 13-1100
Matrix: Water
Date Analyzed: 01/23/13 13:41

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2

CAS Number	Analyte	RL	Result
84-66-2	Diethylphthalate	1.0	< 1.0 U
7005-72-3	4-Chlorophenyl-phenylether	1.0	< 1.0 U
86-73-7	**Fluorene**	**1.0**	**1.1**
100-01-6	4-Nitroaniline	3.0	< 3.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	1.0	< 1.0 U
87-86-5	Pentachlorophenol	10	< 10 U
85-01-8	Phenanthrene	1.0	< 1.0 U
86-74-8	Carbazole	1.0	< 1.0 U
120-12-7	Anthracene	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	1.0	< 1.0 U
206-44-0	Fluoranthene	1.0	< 1.0 U
129-00-0	Pyrene	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	3.0	< 3.0 U
218-01-9	Chrysene	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0	< 1.0 U
90-12-0	**1-Methylnaphthalene**	**1.0**	**0.6 J**
TOTBFA	Total Benzofluoranthenes	5.0	< 5.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	78.8%	2-Fluorobiphenyl	86.4%
d14-p-Terphenyl	80.8%	d4-1,2-Dichlorobenzene	73.6%
d5-Phenol	64.3%	2-Fluorophenol	61.6%
2,4,6-Tribromophenol	90.9%	d4-2-Chlorophenol	67.2%

ANALYTICAL RESOURCES INCORPORATED

SW8270 SEMIVOLATILES WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
MB-011713	79.6%	78.0%	107%	71.6%	67.2%	61.3%	82.9%	67.5%	0
LCS-011713	79.2%	91.6%	105%	71.2%	64.8%	61.9%	92.8%	65.9%	0
LCSD-011713	76.4%	90.0%	98.8%	66.4%	62.1%	58.7%	91.2%	63.2%	0
CSIA20130114-001DW	78.8%	86.4%	80.8%	73.6%	64.3%	61.6%	90.9%	67.2%	0

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(50-100)	(34-101)
(FBP) = 2-Fluorobiphenyl	(51-100)	(38-100)
(TPH) = d14-p-Terphenyl	(54-117)	(27-122)
(DCB) = d4-1,2-Dichlorobenzene	(40-100)	(27-100)
(PHL) = d5-Phenol	(15-121)	(16-106)
(2FP) = 2-Fluorophenol	(33-100)	(23-100)
(TBP) = 2,4,6-Tribromophenol	(46-125)	(31-128)
(2CP) = d4-2-Chlorophenol	(46-102)	(33-100)

Prep Method: SW3520C
Log Number Range: 13-1100 to 13-1100

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Direct Inject Semivolatiles by SW8015B **Sample ID: CSIA20130114-001DW**
Page 1 of 1 **SAMPLE**

Lab Sample ID: VZ97S
LIMS ID: 13-1100
Matrix: Water
Data Release Authorized:
Reported: 01/24/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action 120007-01.01TO3.2
Date Sampled: 01/11/13
Date Received: 01/16/13

Sample Amount: 1.0 mL
Date Analyzed: 01/18/13 01:30 Final Extract Volume: 1.0 mL
Instrument/Analyst: FID7/JGR Dilution Factor: 1.0

CAS Number	Analyte	RL	Result
64-17-5	Ethanol	10	< 10 U

Reported in mg/L (ppm)

Direct Inject Semivolatile Surrogate Recovery

O-Cresol	100%

FORM I

VZ97:00416

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Direct Inject Semivolatiles by SW8015B **Sample ID: CSIA20130114-001DW**
Page 1 of 1 **REANALYSIS**

Lab Sample ID: VZ97S
LIMS ID: 13-1100
Matrix: Water
Data Release Authorized:
Reported: 01/24/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: 01/11/13
Date Received: 01/16/13

Sample Amount: 1.0 mL
Date Analyzed: 01/22/13 20:35 Final Extract Volume: 1.0 mL
Instrument/Analyst: FID5/JGR Dilution Factor: 1.0

CAS Number	Analyte	RL	Result
64-17-5	Ethanol	10	< 10 U

Reported in mg/L (ppm)

Direct Inject Semivolatile Surrogate Recovery

O-Cresol	101%

FORM I

ANALYTICAL RESOURCES INCORPORATED

DIRECT INJECT SEMIVOLATILE SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2

Client ID	oCRS	TOT OUT
MB-011713	102%	0
LCS-011713	104%	0
LCSD-011713	103%	0
CSIA20130114-001DW	100%	0
CSIA20130114-001DW RE	101%	0
CSIA20130114-001DW MS	99.2%	0
CSIA20130114-001DW MSD	96.8%	0

	LCS/MB LIMITS	QC LIMITS
(oCRS) = O-Cresol	(30-160)	(30-160)

Log Number Range: 13-1100 to 13-1100

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Direct Inject Semivolatiles by SW8015B **Sample ID: CSIA20130114-001DW**
Page 1 of 1 **MS/MSD**

Lab Sample ID: VZ97S
LIMS ID: 13-1100
Matrix: Water
Data Release Authorized:
Reported: 01/24/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: 01/11/13
Date Received: 01/16/13

Date Extracted MS/MSD: 01/17/13

Date Analyzed MS: 01/18/13 01:57
MSD: 01/18/13 02:25
Instrument/Analyst MS: FID7/JGR
MSD: FID7/JGR

Sample Amount MS: 1.0 mL
MSD: 1.0 mL
Final Extract Volume MS: 1.0 mL
MSD: 1.0 mL
Dilution Factor MS: 1.0
MSD: 1.0

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Ethanol	< 10.0	47.5	50.0	95.0%	46.4	50.0	92.8%	2.3%

Results reported in mg/L
RPD calculated using sample concentrations per SW846.

VZ97:00119

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Direct Inject Semivolatiles by SW8015B **Sample ID: CSIA20130114-001DW**
Page 1 of 1 **MATRIX SPIKE**

Lab Sample ID: VZ97S
LIMS ID: 13-1100
Matrix: Water
Data Release Authorized:
Reported: 01/24/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: 01/11/13
Date Received: 01/16/13

Date Analyzed: 01/18/13 01:57
Instrument/Analyst: FID7/JGR

Sample Amount: 1.0 mL
Final Extract Volume: 1.0 mL
Dilution Factor: 1.0

CAS Number	Analyte	RL	Result
64-17-5	Ethanol	10	---

Reported in mg/L (ppm)

Direct Inject Semivolatile Surrogate Recovery

O-Cresol	99.2%

FORM I

VZ97:00120

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Direct Inject Semivolatiles by SW8015B **Sample ID: CSIA20130114-001DW**
Page 1 of 1 **MATRIX SPIKE DUP**

Lab Sample ID: VZ97S
LIMS ID: 13-1100
Matrix: Water
Data Release Authorized:
Reported: 01/24/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action 120007-01.01TO3.2
Date Sampled: 01/11/13
Date Received: 01/16/13

Date Analyzed: 01/18/13 02:25
Instrument/Analyst: FID7/JGR

Sample Amount: 1.0 mL
Final Extract Volume: 1.0 mL
Dilution Factor: 1.0

CAS Number	Analyte	RL	Result
64-17-5	Ethanol	10	---

Reported in mg/L (ppm)

Direct Inject Semivolatile Surrogate Recovery

O-Cresol	96.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: LCS-011713
LCS/LCSD

Lab Sample ID: LCS-011713
LIMS ID: 13-1100
Matrix: Water
Data Release Authorized:
Reported: 01/23/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: 01/11/13
Date Received: 01/16/13

Date Extracted LCS/LCSD: 01/17/13

Date Analyzed LCS: 01/23/13 12:32
LCSD: 01/23/13 13:06
Instrument/Analyst LCS: NT6/JZ
LCSD: NT6/JZ
GPC Cleanup: NO

Sample Amount LCS: 500 mL
LCSD: 500 mL
Final Extract Volume LCS: 0.50 mL
LCSD: 0.50 mL
Dilution Factor LCS: 1.00
LCSD: 1.00

Analyte	LCS		Spike Added-LCS	LCS Recovery	LCSD		Spike Added-LCSD	LCSD Recovery	RPD
Phenol	16.6		25.0	66.4%	16.3		25.0	65.2%	1.8%
Bis-(2-Chloroethyl) Ether	17.7		25.0	70.8%	17.6		25.0	70.4%	0.6%
2-Chlorophenol	18.6		25.0	74.4%	18.2		25.0	72.8%	2.2%
1,3-Dichlorobenzene	16.7		25.0	66.8%	16.3		25.0	65.2%	2.4%
1,4-Dichlorobenzene	16.8		25.0	67.2%	16.8		25.0	67.2%	0.0%
Benzyl Alcohol	19.0		25.0	76.0%	19.0		25.0	76.0%	0.0%
1,2-Dichlorobenzene	17.1		25.0	68.4%	16.8		25.0	67.2%	1.8%
2-Methylphenol	17.2		25.0	68.8%	17.3		25.0	69.2%	0.6%
2,2'-Oxybis(1-Chloropropane)	16.2		25.0	64.8%	16.3		25.0	65.2%	0.6%
4-Methylphenol	34.7		50.0	69.4%	35.3		50.0	70.6%	1.7%
N-Nitroso-Di-N-Propylamine	17.3		25.0	69.2%	17.3		25.0	69.2%	0.0%
Hexachloroethane	15.7		25.0	62.8%	16.0		25.0	64.0%	1.9%
Nitrobenzene	18.2		25.0	72.8%	18.1		25.0	72.4%	0.6%
Isophorone	22.4		25.0	89.6%	23.0		25.0	92.0%	2.6%
2-Nitrophenol	21.5		25.0	86.0%	21.7		25.0	86.8%	0.9%
2,4-Dimethylphenol	41.2		75.0	54.9%	47.9		75.0	63.9%	15.0%
Benzoic Acid	142	Q	138	103%	142	Q	138	103%	0.0%
bis(2-Chloroethoxy) Methane	20.0		25.0	80.0%	20.1		25.0	80.4%	0.5%
2,4-Dichlorophenol	60.8		75.0	81.1%	62.6		75.0	83.5%	2.9%
1,2,4-Trichlorobenzene	19.2		25.0	76.8%	19.1		25.0	76.4%	0.5%
Naphthalene	21.0		25.0	84.0%	20.8		25.0	83.2%	1.0%
4-Chloroaniline	56.4		75.0	75.2%	59.2		75.0	78.9%	4.8%
Hexachlorobutadiene	18.5		25.0	74.0%	18.5		25.0	74.0%	0.0%
4-Chloro-3-methylphenol	62.5		75.0	83.3%	64.3		75.0	85.7%	2.8%
2-Methylnaphthalene	21.1		25.0	84.4%	21.2		25.0	84.8%	0.5%
Hexachlorocyclopentadiene	52.3		75.0	69.7%	52.4		75.0	69.9%	0.2%
2,4,6-Trichlorophenol	69.6		75.0	92.8%	69.6		75.0	92.8%	0.0%
2,4,5-Trichlorophenol	68.2		75.0	90.9%	68.0		75.0	90.7%	0.3%
2-Chloronaphthalene	21.9		25.0	87.6%	21.8		25.0	87.2%	0.5%
2-Nitroaniline	69.1		75.0	92.1%	68.4		75.0	91.2%	1.0%
Dimethylphthalate	23.1		25.0	92.4%	23.2		25.0	92.8%	0.4%
Acenaphthylene	23.9		25.0	95.6%	23.6		25.0	94.4%	1.3%
3-Nitroaniline	71.8		75.0	95.7%	74.2		75.0	98.9%	3.3%
Acenaphthene	23.2		25.0	92.8%	22.9		25.0	91.6%	1.3%
2,4-Dinitrophenol	90.1		138	65.3%	92.3		138	66.9%	2.4%
4-Nitrophenol	64.5		75.0	86.0%	66.6		75.0	88.8%	3.2%
Dibenzofuran	23.9		25.0	95.6%	23.7		25.0	94.8%	0.8%
2,6-Dinitrotoluene	67.8		75.0	90.4%	68.0		75.0	90.7%	0.3%
2,4-Dinitrotoluene	69.4		75.0	92.5%	69.2		75.0	92.3%	0.3%
Diethylphthalate	22.1		25.0	88.4%	22.3		25.0	89.2%	0.9%
4-Chlorophenyl-phenylether	22.6		25.0	90.4%	22.6		25.0	90.4%	0.0%
Fluorene	24.2		25.0	96.8%	23.7		25.0	94.8%	2.1%
4-Nitroaniline	77.4		75.0	103%	84.4		75.0	113%	8.7%
4,6-Dinitro-2-Methylphenol	112		138	81.2%	113		138	81.9%	0.9%
N-Nitrosodiphenylamine	21.9		25.0	87.6%	21.5		25.0	86.0%	1.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: LCS-011713
LCS/LCSD

Lab Sample ID: LCS-011713
LIMS ID: 13-1100
Matrix: Water
Date Analyzed LCS: 01/23/13 12:32
LCSD: 01/23/13 13:06

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
4-Bromophenyl-phenylether	22.7	25.0	90.8%	22.5	25.0	90.0%	0.9%
Hexachlorobenzene	23.2	25.0	92.8%	22.6	25.0	90.4%	2.6%
Pentachlorophenol	67.0	75.0	89.3%	67.2	75.0	89.6%	0.3%
Phenanthrene	24.2	25.0	96.8%	24.1	25.0	96.4%	0.4%
Carbazole	22.6	25.0	90.4%	23.3	25.0	93.2%	3.1%
Anthracene	23.6	25.0	94.4%	23.4	25.0	93.6%	0.9%
Di-n-Butylphthalate	24.4	25.0	97.6%	24.8	25.0	99.2%	1.6%
Fluoranthene	25.8	25.0	103%	26.7	25.0	107%	3.4%
Pyrene	26.0	25.0	104%	25.4	25.0	102%	2.3%
Butylbenzylphthalate	23.2	25.0	92.8%	23.3	25.0	93.2%	0.4%
3,3'-Dichlorobenzidine	53.8	75.0	71.7%	58.2	75.0	77.6%	7.9%
Benzo(a)anthracene	25.0	25.0	100%	25.6	25.0	102%	2.4%
bis(2-Ethylhexyl)phthalate	25.8	25.0	103%	24.8	25.0	99.2%	4.0%
Chrysene	24.3	25.0	97.2%	24.5	25.0	98.0%	0.8%
Di-n-Octyl phthalate	23.0	25.0	92.0%	23.2	25.0	92.8%	0.9%
Benzo(a)pyrene	23.0	25.0	92.0%	23.2	25.0	92.8%	0.9%
Indeno(1,2,3-cd)pyrene	21.7	25.0	86.8%	22.3	25.0	89.2%	2.7%
Dibenz(a,h)anthracene	18.3	25.0	73.2%	20.9	25.0	83.6%	13.3%
Benzo(g,h,i)perylene	23.1	25.0	92.4%	23.9	25.0	95.6%	3.4%
1-Methylnaphthalene	20.9	25.0	83.6%	20.9	25.0	83.6%	0.0%
Total Benzofluoranthenes	47.7	50.0	95.4%	47.8	50.0	95.6%	0.2%

Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	79.2%	76.4%
2-Fluorobiphenyl	91.6%	90.0%
d14-p-Terphenyl	105%	98.8%
d4-1,2-Dichlorobenzene	71.2%	66.4%
d5-Phenol	64.8%	62.1%
2-Fluorophenol	61.9%	58.7%
2,4,6-Tribromophenol	92.8%	91.2%
d4-2-Chlorophenol	65.9%	63.2%

Results reported in µg/L
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Direct Inject Semivolatiles by SW8015B **Sample ID: LCS-011713**
Page 1 of 1 **LCS/LCSD**

Lab Sample ID: LCS-011713
LIMS ID: 13-1100
Matrix: Water
Data Release Authorized: QW
Reported: 01/30/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: NA
Date Received: NA

Date Extracted LCS: 01/17/13
LCSD: 01/17/13
Date Analyzed LCS: 01/18/13 00:34
LCSD: 01/18/13 01:02
Instrument/Analyst LCS: FID7/JGR
LCSD: FID7/JGR

Sample Amount LCS: 1.0 mL
LCSD: 1.0 mL
Final Extract Volume LCS: 1.0 mL
LCSD: 1.0 mL
Dilution Factor LCS: 1.0
LCSD: 1.0

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Ethanol	54.7	50.0	109%	49.2	50.0	98.4%	10.6%

Semivolatile Surrogate Recovery

	LCS	LCSD
O-Cresol	104%	103%

Results reported in mg/L

4B

SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

VZ97MBW1

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

ARI Job No: VZ97

Project: CHEVRON SUB AREA INT

Lab File ID: 01231303

Date Extracted: 01/17/13

Instrument ID: NT6

Date Analyzed: 01/23/13

Matrix: LIQUID

Time Analyzed: 1157

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	VZ97LCSW1	VZ97LCSW1	01231304	01/23/13
02	VZ97LCSDW1	VZ97LCSDW1	01231305	01/23/13
03	CSIA20130114-001	VZ97S	01231306	01/23/13
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FORM IV SV

VZ97 00125

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MB-011713**
Extraction Method: SW3520C **METHOD BLANK**

Lab Sample ID: MB-011713
LIMS ID: 13-1100
Matrix: Water
Data Release Authorized:
Reported: 01/23/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: NA
Date Received: NA

Date Extracted: 01/17/13
Date Analyzed: 01/23/13 11:57
Instrument/Analyst: NT6/JZ

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
108-95-2	Phenol	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	1.0	< 1.0 U
95-57-8	2-Chlorophenol	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	2.0	< 2.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
95-48-7	2-Methylphenol	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0	< 1.0 U
106-44-5	4-Methylphenol	2.0	< 2.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	1.0	< 1.0 U
67-72-1	Hexachloroethane	2.0	< 2.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	3.0	< 3.0 U
105-67-9	2,4-Dimethylphenol	3.0	< 3.0 U
65-85-0	Benzoic Acid	20	< 20 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	3.0	< 3.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0	< 1.0 U
91-20-3	Naphthalene	1.0	< 1.0 U
106-47-8	4-Chloroaniline	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	3.0	< 3.0 U
59-50-7	4-Chloro-3-methylphenol	3.0	< 3.0 U
91-57-6	2-Methylnaphthalene	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	3.0	< 3.0 U
95-95-4	2,4,5-Trichlorophenol	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	1.0	< 1.0 U
88-74-4	2-Nitroaniline	3.0	< 3.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	3.0	< 3.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	20	< 20 U
100-02-7	4-Nitrophenol	10	< 10 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	3.0	< 3.0 U
121-14-2	2,4-Dinitrotoluene	3.0	< 3.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3520C

Sample ID: MB-011713
METHOD BLANK

Lab Sample ID: MB-011713
LIMS ID: 13-1100
Matrix: Water
Date Analyzed: 01/23/13 11:57

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2

CAS Number	Analyte	RL	Result
84-66-2	Diethylphthalate	1.0	< 1.0 U
7005-72-3	4-Chlorophenyl-phenylether	1.0	< 1.0 U
86-73-7	Fluorene	1.0	< 1.0 U
100-01-6	4-Nitroaniline	3.0	< 3.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	1.0	< 1.0 U
87-86-5	Pentachlorophenol	10	< 10 U
85-01-8	Phenanthrene	1.0	< 1.0 U
86-74-8	Carbazole	1.0	< 1.0 U
120-12-7	Anthracene	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	1.0	< 1.0 U
206-44-0	Fluoranthene	1.0	< 1.0 U
129-00-0	Pyrene	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	3.0	< 3.0 U
218-01-9	Chrysene	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0	< 1.0 U
90-12-0	1-Methylnaphthalene	1.0	< 1.0 U
TOTBFA	Total Benzofluoranthenes	5.0	< 5.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	79.6%	2-Fluorobiphenyl	78.0%
d14-p-Terphenyl	107%	d4-1,2-Dichlorobenzene	71.6%
d5-Phenol	67.2%	2-Fluorophenol	61.3%
2,4,6-Tribromophenol	82.9%	d4-2-Chlorophenol	67.5%

4B
SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

VZ97MBW1

Lab Name: ANALYTICAL RESOURCES INC Client:

ARI Job No: VZ97 Project:

Lab File ID: 0117A017 Date Extracted:

Instrument ID: FID7 Date Analyzed: 01/18/13

Matrix: WATER Time Analyzed: 0006

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	VZ97LCSW1	VZ97LCSW1	0117A018	01/18/13
02	VZ97LCSDW1	VZ97LCSDW1	0117A019	01/18/13
03	CSIA20130114-001	VZ97S	0117A020	01/18/13
04	CSIA20130114-001	VZ97SMS	0117A021	01/18/13
05	CSIA20130114-001	VZ97SMSD	0117A022	01/18/13
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FORM IV SV

VZ97 00128

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Direct Inject Semivolatiles by SW8015B **Sample ID: MB-011713**
Page 1 of 1 **METHOD BLANK**

Lab Sample ID: MB-011713
LIMS ID: 13-1100
Matrix: Water
Data Release Authorized:
Reported: 01/24/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: NA
Date Received: NA

Sample Amount: 1.0 mL
Date Analyzed: 01/18/13 00:06 Final Extract Volume: 1.0 mL
Instrument/Analyst: FID7/JGR Dilution Factor: 1.0

CAS Number	Analyte	RL	Result
64-17-5	Ethanol	10	< 10 U

Reported in mg/L (ppm)

Direct Inject Semivolatile Surrogate Recovery

O-Cresol	102%

FORM I

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

Instrument ID: NT6 Project: CHEVRON SUB AREA INT

DFTPP Injection Date: 01/07/13 DFTPP Injection Time: 1330

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	54.7
68	Less than 2.0% of mass 69	0.5 (1.0)1
69	Mass 69 relative abundance	47.1
70	Less than 2.0% of mass 69	0.2 (0.4)1
127	10.0 - 80.0% of mass 198	56.4
197	Less than 2.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.9
275	10.0 - 60.0% of mass 198	21.7
365	Greater than 1.0% of mass 198	3.38
441	0.0 - 24.0% of mass 442	8.7 (13.7)2
442	50.0 - 200.0% of mass 198	63.1
443	15.0 - 24.0% of mass 442	12.1 (19.1)2

1-Value is % mass 69 2-Value is % mass 442

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	IC250107	IC250107	01071301	01/07/13	1330
02	IC020107	IC020107	01071302	01/07/13	1404
03	IC10107	IC10107	01071303	01/07/13	1438
04	IC50107	IC50107	01071304	01/07/13	1512
05	IC100107	IC10107	01071305	01/07/13	1546
06	IC400107	IC40107	01071306	01/07/13	1621
07	IC600107	IC60107	01071307	01/07/13	1655
08	IC800107	IC80107	01071308	01/07/13	1729
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FORM V SV

UZ97 · 00139

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

Instrument ID: NT6 Project: CHEVRON SUB AREA INT

DFTPP Injection Date: 01/23/13 DFTPP Injection Time: 1049

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	57.3
68	Less than 2.0% of mass 69	1.0 (2.0)1
69	Mass 69 relative abundance	50.3
70	Less than 2.0% of mass 69	0.8 (1.6)1
127	10.0 - 80.0% of mass 198	56.2
197	Less than 2.0% of mass 198	0.2
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.0
275	10.0 - 60.0% of mass 198	23.1
365	Greater than 1.0% of mass 198	2.67
441	0.0 - 24.0% of mass 442	9.1 (14.4)2
442	50.0 - 200.0% of mass 198	63.2
443	15.0 - 24.0% of mass 442	12.6 (20.0)2

1-Value is % mass 69 2-Value is % mass 442

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CC0123	CC0123	01231301	01/23/13	1049
02	VZ97MBW1	VZ97MBW1	01231303	01/23/13	1157
03	VZ97LCSW1	VZ97LCSW1	01231304	01/23/13	1232
04	VZ97LCSDW1	VZ97LCSDW1	01231305	01/23/13	1306
05	CSIA20130114-001	VZ97S	01231306	01/23/13	1341
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VZ97:80121

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB AREA INT

Instrument ID: NT6 Calibration Date: 01/07/13

LAB FILE ID: RRF1 =01071303 RRF5 =01071304 RRF10 =01071305
RRF25 =01071301 RRF40 =01071306 RRF60 =01071307
RRF80 =01071308 RRF0.2=01071302

COMPOUND	RRF 1	RRF 5	RRF 10	RRF 25	RRF 40	RRF 60	RRF 80	RRF 0.2	___ RRF	%RSD /R^2
Phenol	2.334	2.090	2.094	1.810	1.760	1.616	1.574		1.897	14.9
Bis(2-Chloroethyl)ether	1.634	1.608	1.548	1.304	1.268	1.220	1.223		1.401	13.4
2-Chlorophenol	1.674	1.457	1.443	1.326	1.314	1.243	1.209		1.381	11.5
1,3-Dichlorobenzene	1.772	1.705	1.701	1.602	1.504	1.452	1.417		1.593	8.7
1,4-Dichlorobenzene	1.635	1.676	1.691	1.632	1.511	1.470	1.398		1.573	7.2
1,2-Dichlorobenzene	1.615	1.553	1.566	1.513	1.422	1.380	1.296		1.478	7.8
Benzyl alcohol	0.965	1.008	1.030	0.952	0.916	0.849	0.832		0.936	8.0
2,2'-oxybis(1-Chloropropane)	2.895	2.724	2.694	2.334	2.205	1.998	1.897		2.392	16.1
2-Methylphenol	1.534	1.393	1.418	1.276	1.288	1.166	1.136		1.316	10.8
Hexachloroethane	0.734	0.704	0.711	0.678	0.637	0.624	0.613		0.672	7.0
N-Nitroso-di-n-propylamine	1.188	1.173	1.198	1.095	1.077	0.989	0.992		1.102	8.1
4-Methylphenol	1.574	1.438	1.482	1.324	1.325	1.223	1.184		1.364	10.3
Nitrobenzene	0.502	0.504	0.512	0.471	0.414	0.396	0.381		0.454	12.3
Isophorone	0.665	0.702	0.718	0.657	0.604	0.567	0.558		0.639	9.9
2-Nitrophenol	0.171	0.185	0.198	0.183	0.185	0.179	0.180		0.183	4.5
2,4-Dimethylphenol	0.417	0.406	0.395	0.354	0.340	0.327	0.321		0.366	10.9
Bis(2-Chloroethoxy)methane	0.505	0.486	0.476	0.398	0.377	0.370	0.369		0.426	14.2
2,4-Dichlorophenol	0.271	0.282	0.284	0.257	0.252	0.253	0.256		0.265	5.2
1,2,4-Trichlorobenzene	0.338	0.332	0.329	0.315	0.294	0.303	0.299		0.316	5.5
Naphthalene	1.092	1.061	1.087	1.005	0.856	0.794	0.712		0.944	16.4
Benzoic acid		0.162	0.210	0.221	0.269	0.269			0.226	19.8
4-Chloroaniline	0.446	0.426	0.429	0.359	0.311	0.329	0.323		0.375	15.3
Hexachlorobutadiene	0.204	0.199	0.202	0.195	0.183	0.192	0.195		0.196	3.6
4-Chloro-3-methylphenol	0.332	0.309	0.311	0.261	0.253	0.246	0.249		0.280	12.8
2-Methylnaphthalene	0.551	0.537	0.548	0.516	0.462	0.457	0.447		0.502	9.1
Hexachlorocyclopentadiene	0.272	0.351	0.380	0.409	0.410	0.449	0.455		0.389	16.3
2,4,6-Trichlorophenol	0.309	0.343	0.358	0.341	0.338	0.361	0.366		0.345	5.6
2,4,5-Trichlorophenol	0.370	0.360	0.367	0.366	0.370	0.385	0.393		0.373	3.1
2-Chloronaphthalene	1.219	1.202	1.241	1.142	0.975	0.973	0.924		1.096	12.3
2-Nitroaniline	0.345	0.392	0.419	0.414	0.370	0.367	0.348		0.379	7.8
Acenaphthylene	1.752	1.826	1.907	1.797	1.545	1.497	1.383		1.672	11.7
Dimethylphthalate	1.189	1.213	1.271	1.207	1.097	1.121	1.072		1.167	6.2
2,6-Dinitrotoluene	0.216	0.263	0.290	0.288	0.268	0.283	0.274		0.269	9.5
Acenaphthene	1.127	1.104	1.151	1.117	1.031	1.009	0.967		1.072	6.5
3-Nitroaniline	0.270	0.283	0.287	0.267	0.238	0.272	0.274		0.270	5.9
2,4-Dinitrophenol		0.085	0.145	0.193	0.214	0.234	0.239		0.185	0.997
Dibenzofuran	1.609	1.496	1.545	1.487	1.311	1.342	1.281		1.439	8.8

<- Outside QC limits: %RSD <20% or R^2 > 0.990

FORM VI SV-1

VZ97 · 001133

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB AREA INT

Instrument ID: NT6 Calibration Date: 01/07/13

LAB FILE ID: RRF1 =01071303 RRF5 =01071304 RRF10 =01071305
RRF25 =01071301 RRF40 =01071306 RRF60 =01071307
RRF80 =01071308 RRF0.2=01071302

COMPOUND	RRF 1	RRF 5	RRF 10	RRF 25	RRF 40	RRF 60	RRF 80	RRF 0.2	___ RRF	%RSD /R^2
4-Nitrophenol	0.184	0.177	0.198	0.201	0.190	0.195	0.180		0.189	4.8
2,4-Dinitrotoluene	0.252	0.332	0.355	0.358	0.352	0.373	0.366		0.341	12.1
Fluorene	1.202	1.170	1.204	1.194	1.051	1.042	0.974		1.120	8.5
4-Chlorophenyl-phenylether	0.632	0.608	0.620	0.616	0.573	0.586	0.575		0.601	3.9
Diethylphthalate	1.354	1.290	1.304	1.250	1.121	1.155	1.113		1.227	7.9
4-Nitroaniline	0.216	0.234	0.248	0.224	0.191	0.218	0.215		0.221	8.1
4,6-Dinitro-2-methylphenol		0.119	0.150	0.156	0.163	0.169	0.174		0.155	12.7
N-Nitrosodiphenylamine (1)	0.652	0.623	0.650	0.601	0.578	0.567	0.554		0.604	6.5
4-Bromophenyl-phenylether	0.227	0.226	0.239	0.231	0.228	0.230	0.231		0.230	1.8
Hexachlorobenzene	0.245	0.226	0.231	0.224	0.221	0.224	0.233		0.229	3.6
Pentachlorophenol		0.103	0.121	0.128	0.135	0.142	0.148		0.130	12.5
Phenanthrene	1.164	1.067	1.095	1.054	0.966	0.922	0.875		1.020	10.1
Anthracene	1.105	1.117	1.134	1.097	0.997	0.943	0.886		1.040	9.4
Carbazole	1.051	1.009	1.032	0.949	0.825	0.807	0.800		0.925	12.1
Di-n-butylphthalate	1.203	1.319	1.377	1.258	1.024	1.006	0.926		1.159	15.0
Fluoranthene	0.994	1.028	1.082	1.074	0.908	0.941	0.882		0.987	8.0
Pyrene	1.304	1.349	1.316	1.221	1.071	1.007	0.943		1.173	14.0
Butylbenzylphthalate	0.538	0.622	0.642	0.628	0.562	0.544	0.519		0.579	8.6
Benzo(a)anthracene	1.062	1.031	1.089	1.058	0.949	0.920	0.896		1.001	7.7
3,3'-Dichlorobenzidine	0.384	0.345	0.366	0.362	0.318	0.343	0.342		0.351	6.1
Chrysene	1.074	1.010	1.032	1.018	0.947	0.912	0.869		0.980	7.4
bis(2-Ethylhexyl)phthalate	0.571	0.628	0.640	0.610	0.565	0.549	0.517		0.583	7.7
Di-n-octylphthalate	1.185	1.130	1.147	1.086	0.962	0.911	0.840		1.037	12.8
Benzo(b)fluoranthene	1.012	1.045	1.110	1.131	1.055	1.110	1.020		1.069	4.5
Benzo(k)fluoranthene	1.117	1.109	1.124	1.115	1.037	1.020	1.030		1.079	4.4
Benzo(a)pyrene	0.935	0.933	0.980	1.008	0.936	0.950	0.913		0.951	3.4
Indeno(1,2,3-cd)pyrene	1.293	1.295	1.325	1.322	1.271	1.309	1.332		1.307	1.7
Dibenzo(a,h)anthracene	1.077	1.061	1.113	1.080	1.029	1.059	1.062		1.069	2.4
Benzo(g,h,i)perylene	1.152	1.147	1.174	1.155	1.094	1.151	1.156		1.147	2.2
N-Nitrosodimethylamine	1.013	1.094	1.082	1.016	1.063	1.012	0.992		1.039	3.9
Aniline	2.432	2.356	2.319	1.942	1.810	1.672	1.628		2.023	16.8
Benzidine										
Pyridine	1.674	1.863	1.869	1.768	1.788	1.644	1.656		1.752	5.4
1-methylnaphthalene	0.577	0.537	0.540	0.517	0.461	0.444	0.431		0.501	11.1
Azobenzene (1,2-DP-Hydrazine	1.600	1.590	1.627	1.505	1.315	1.311	1.234		1.454	11.3
Total Benzofluoranthenes	1.009	1.020	1.059	1.066	0.993	1.005	0.966		1.017	3.5
2-Fluorophenol	1.704	1.749	1.532	1.478	1.516	1.426	1.426		1.547	8.4

(1) Cannot be seperated from Diphenylamine

<- Outside QC limits: %RSD <20% or R^2 > 0.990

FORM VI SV-2

VZ97 00133

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB AREA INT

Instrument ID: NT6 Calibration Date: 01/07/13

LAB FILE ID: RRF1 =01071303 RRF5 =01071304 RRF10 =01071305
RRF25 =01071301 RRF40 =01071306 RRF60 =01071307
RRF80 =01071308 RRF0.2=01071302

COMPOUND	RRF 1	RRF 5	RRF 10	RRF 25	RRF 40	RRF 60	RRF 80	RRF 0.2	___ RRF	%RSD /R^2
Phenol-d5	2.253	2.264	1.971	1.852	1.861	1.735	1.738		1.953	11.4
2-Chlorophenol-d4	1.734	1.689	1.436	1.421	1.482	1.402	1.412		1.511	9.3
1,2-Dichlorobenzene-d4	1.206	1.162	1.028	1.019	1.027	0.992	0.973		1.058	8.4
Nitrobenzene-d5	0.516	0.549	0.494	0.491	0.493	0.456	0.448		0.492	7.0
2-Fluorobiphenyl	1.528	1.548	1.395	1.443	1.362	1.309	1.252		1.405	7.8
2,4,6-Tribromophenol	0.124	0.160	0.149	0.168	0.175	0.186	0.193		0.165	14.3
Terphenyl-d14	0.860	0.893	0.780	0.803	0.783	0.737	0.740		0.799	7.3

<- Outside QC limits: %RSD <20% or R^2 > 0.990

FORM VI SV-3

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB

Instrument ID: FID7 Calibration Date: 01/17/13

LAB FILE ID: RRF10 =0117A009 RRF25 =0117A010 RRF50 =0117A011
RRF100=0117A012 RRF125=0117A013 RRF150=0117A014
RRF200=0117A015

COMPOUND	RRF 10	RRF 25	RRF 50	RRF 100	RRF 125	RRF 150	RRF 200	___ RRF	%RSD /R^2
Ethyl Acetate									
Methanol									
Isopropanol									
Ethanol	0.517	0.365	0.350	0.311	0.317	0.296	0.281	0.348	0.998
n-Butyl Ether									
Isobutyl Acetate									
n-Propanol									
n-Butyl Acetate									
1-Methoxy-2-propanol									
n-Butanol									
Prop-Gly-Me-Ether-Acetate									
2-Methoxyethanol Acetate									
2-Ethoxyethyl Acetate									
Propargyl Alcohol									
2-Butoxyethanol									
Ethylene Glycol									
Diethylene Glycol MonoButyl									
~~o-Cresol~~	~~0.807~~	~~0.791~~	~~0.811~~	~~0.772~~	~~0.820~~	~~0.809~~	~~0.805~~	~~0.802~~	1.9

<- Outside QC limits: %RSD <20% or R^2 > 0.990

VZ97:00135

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC | Client: ANCHOR QEA

ARI Job No: VZ97 | Project: CHEVRON SUB AREA INT

Instrument ID: NT6 | Cont. Calib. Date: 01/23/13

Init. Calib. Date: 01/07/13 | Cont. Calib. Time: 1049

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Phenol	1.897	1.575	0.800	AVRG	-17.0	
Bis(2-Chloroethyl)ether	1.401	1.399	0.700	AVRG	-0.1	
2-Chlorophenol	1.381	1.320	0.800	AVRG	-4.4	
1,3-Dichlorobenzene	1.593	1.622	0.010	AVRG	1.8	
1,4-Dichlorobenzene	1.573	1.604	0.010	AVRG	2.0	
1,2-Dichlorobenzene	1.478	1.524	0.010	AVRG	3.1	
Benzyl alcohol	0.936	0.901	0.010	AVRG	-3.7	
2,2'-oxybis(1-Chloropropane)	2.392	2.263	0.010	AVRG	-5.4	
2-Methylphenol	1.316	1.186	0.700	AVRG	-9.9	
Hexachloroethane	0.672	0.670	0.300	AVRG	-0.3	
N-Nitroso-di-n-propylamine	1.102	1.029	0.500	AVRG	-6.6	
4-Methylphenol	1.364	1.219	0.600	AVRG	-10.6	
Nitrobenzene	0.454	0.477	0.200	AVRG	5.1	
Isophorone	0.639	0.665	0.400	AVRG	4.1	
2-Nitrophenol	0.183	0.195	0.100	AVRG	6.6	
2,4-Dimethylphenol	0.366	0.358	0.200	AVRG	-2.2	
Bis(2-Chloroethoxy)methane	0.426	0.466	0.300	AVRG	9.4	
2,4-Dichlorophenol	0.265	0.290	0.200	AVRG	9.4	
1,2,4-Trichlorobenzene	0.316	0.352	0.010	AVRG	11.4	
Naphthalene	0.944	1.008	0.700	AVRG	6.8	
Benzoic acid	0.226	0.299	0.010	AVRG	32.3	<-
4-Chloroaniline	0.375	0.368	0.010	AVRG	-1.9	
Hexachlorobutadiene	0.196	0.220	0.010	AVRG	12.2	
4-Chloro-3-methylphenol	0.280	0.288	0.200	AVRG	2.8	
2-Methylnaphthalene	0.502	0.534	0.400	AVRG	6.4	
Hexachlorocyclopentadiene	0.389	0.453	0.050	AVRG	16.4	
2,4,6-Trichlorophenol	0.345	0.358	0.200	AVRG	3.8	
2,4,5-Trichlorophenol	0.373	0.378	0.200	AVRG	1.3	
2-Chloronaphthalene	1.096	1.172	0.800	AVRG	6.9	
2-Nitroaniline	0.379	0.396	0.010	AVRG	4.5	
Acenaphthylene	1.672	1.807	0.900	AVRG	8.1	
Dimethylphthalate	1.167	1.222	0.010	AVRG	4.7	
2,6-Dinitrotoluene	0.269	0.294	0.200	AVRG	9.3	
Acenaphthene	1.072	1.120	0.900	AVRG	4.5	
3-Nitroaniline	0.270	0.273	0.010	AVRG	1.1	
2,4-Dinitrophenol	50.00	49.14	0.010	2ORDR	-1.7	
Dibenzofuran	1.439	1.489	0.800	AVRG	3.5	

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII SV-1

VZ97 00136

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB AREA INT

Instrument ID: NT6 Cont. Calib. Date: 01/23/13

Init. Calib. Date: 01/07/13 Cont. Calib. Time: 1049

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
4-Nitrophenol	0.189	0.196	0.010	AVRG	3.7	
2,4-Dinitrotoluene	0.341	0.373	0.200	AVRG	9.4	
Fluorene	1.120	1.168	0.900	AVRG	4.3	
4-Chlorophenyl-phenylether	0.601	0.635	0.400	AVRG	5.6	
Diethylphthalate	1.227	1.254	0.010	AVRG	2.2	
4-Nitroaniline	0.221	0.244	0.010	AVRG	10.4	
4,6-Dinitro-2-methylphenol	0.155	0.157	0.010	AVRG	1.3	
N-Nitrosodiphenylamine(1)	0.604	0.624	0.010	AVRG	3.3	
4-Bromophenyl-phenylether	0.230	0.238	0.100	AVRG	3.5	
Hexachlorobenzene	0.229	0.236	0.100	AVRG	3.0	
Pentachlorophenol	0.130	0.126	0.050	AVRG	-3.1	
Phenanthrene	1.020	1.045	0.700	AVRG	2.4	
Anthracene	1.040	1.053	0.700	AVRG	1.2	
Carbazole	0.925	0.954	0.010	AVRG	3.1	
Di-n-butylphthalate	1.159	1.254	0.010	AVRG	8.2	
Fluoranthene	0.987	1.053	0.600	AVRG	6.7	
Pyrene	1.173	1.266	0.600	AVRG	7.9	
Butylbenzylphthalate	0.579	0.606	0.010	AVRG	4.7	
Benzo(a)anthracene	1.001	1.050	0.800	AVRG	4.9	
3,3'-Dichlorobenzidine	0.351	0.358	0.010	AVRG	2.0	
Chrysene	0.980	1.002	0.700	AVRG	2.2	
bis(2-Ethylhexyl)phthalate	0.583	0.626	0.010	AVRG	7.4	
Di-n-octylphthalate	1.037	1.062	0.010	AVRG	2.4	
Benzo(b)fluoranthene	1.069	1.183	0.700	AVRG	10.7	
Benzo(k)fluoranthene	1.079	1.137	0.700	AVRG	5.4	
Benzo(a)pyrene	0.951	0.998	0.700	AVRG	4.9	
Indeno(1,2,3-cd)pyrene	1.307	1.232	0.500	AVRG	-5.7	
Dibenzo(a,h)anthracene	1.069	1.006	0.400	AVRG	-5.9	
Benzo(g,h,i)perylene	1.147	1.068	0.500	AVRG	-6.9	
N-Nitrosodimethylamine	1.039	0.936	0.010	AVRG	-9.9	
Aniline	2.023	1.520	0.010	AVRG	-24.9	<-
Benzidine			0.010	AVRG		
Pyridine	1.752	1.572	0.010	AVRG	-10.3	
1-methylnaphthalene	0.501	0.527	0.010	AVRG	5.2	
Azobenzene (1,2-DP-Hydrazine	1.454	1.463	0.010	AVRG	0.6	
Total Benzofluoranthenes	1.017	1.098	0.010	AVRG	8.0	

(1) Cannot be separated from Diphenylamine

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII SV-2

VZ97 00137

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB AREA INT

Instrument ID: NT6 Cont. Calib. Date: 01/23/13

Init. Calib. Date: 01/07/13 Cont. Calib. Time: 1049

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
2-Fluorophenol	1.547	1.426	0.010	AVRG	-7.8
Phenol-d5	1.953	1.750	0.010	AVRG	-10.4
2-Chlorophenol-d4	1.511	1.451	0.010	AVRG	-4.0
1,2-Dichlorobenzene-d4	1.058	1.022	0.010	AVRG	-3.4
Nitrobenzene-d5	0.492	0.482	0.010	AVRG	-2.0
2-Fluorobiphenyl	1.405	1.436	0.010	AVRG	2.2
2,4,6-Tribromophenol	0.165	0.170	0.010	AVRG	3.0
Terphenyl-d14	0.799	0.819	0.010	AVRG	2.5

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII SV-3

VZ97 00139

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB

Instrument ID: FID7 Cont. Calib. Date: 01/17/13

Init. Calib. Date: 01/17/13 Cont. Calib. Time: 2339

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Ethyl Acetate			0.010	AVRG	
Methanol			0.010	AVRG	
Isopropanol			0.010	AVRG	
Ethanol	25.000	27.042	0.010	2ORDR	8.2
n-Butyl Ether			0.010	AVRG	
Isobutyl Acetate			0.010	AVRG	
n-Propanol			0.010	AVRG	
n-Butyl Acetate			0.010	AVRG	
1-Methoxy-2-propanol			0.010	AVRG	
n-Butanol			0.010	AVRG	
Prop-Gly-Me-Ether-Acetate			0.010	AVRG	
2-Methoxyethanol Acetate			0.010	AVRG	
2-Ethoxyethyl Acetate			0.010	AVRG	
Propargyl Alcohol			0.010	AVRG	
2-Butoxyethanol			0.010	AVRG	
Ethylene Glycol			0.010	AVRG	
Diethylene Glycol MonoButyl			0.010	AVRG	
o-Cresol	0.802	0.791	0.010	AVRG	-1.4

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII SV-1

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB AREA INT

Ical Midpoint ID: 01071301 Ical Date: 01/07/13

Instrument ID: NT6 Cont. Cal Date: 01/23/13

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	532349	8.39	2007575	10.43	1020441	13.30
	UPPER LIMIT	1064698		4015150		2040882	
	LOWER LIMIT	266174		1003788		510220	
	CCAL	538675	7.75	1855079	9.78	989796	12.62
	UPPER LIMIT		8.25		10.28		13.12
	LOWER LIMIT		7.25		9.28		12.12
01	VZ97MBW1	719895	7.74	2545614	9.78	1473289	12.63
02	VZ97LCSW1	693193	7.75	2364232	9.79	1178046	12.63
03	VZ97LCSDW1	594206	7.74	2001670	9.78	1006292	12.63
04	CSIA20130114	634348	7.75	2190413	9.78	1209618	12.63
05							
06							
07							
08							
09							
10							
11							
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15							
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17							
18							
19							
20							
21							
22							
23							
24							
25							

IS1 = 1,4-Dichlorobenzene-d4
IS2 = Naphthalene-d8
IS3 = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-1

VZ97:0010

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB AREA INT

Ical Midpoint ID: 01071301 Ical Date: 01/07/13

Instrument ID: NT6 Cont. Cal Date: 01/23/13

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	ICAL MIDPT	1546074	15.68	1407005	19.99	1383265	22.14
	UPPER LIMIT	3092148		2814010		2766530	
	LOWER LIMIT	773037		703502		691632	
	CCAL	1466273	14.98	1243387	19.25	1068075	21.38
	UPPER LIMIT		15.48		19.75		21.88
	LOWER LIMIT		14.48		18.75		20.88
01	VZ97MBW1	2360135	14.98	1958391	19.25	1506930	21.39
02	VZ97LCSW1	1744334	14.98	1463395	19.25	1357393	21.38
03	VZ97LCSDW1	1499702	14.98	1322278	19.25	1260397	21.39
04	CSIA20130114	1798315	14.98	1595918	19.25	1608177	21.39
05							
06							
07							
08							
09							
10							
11							
12							
13							
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16							
17							
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19							
20							
21							
22							
23							
24							
25							

IS4 = Phenanthrene-d10
IS5 = Chrysene-d12
IS6 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-2

VZ97:001U1

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB AREA INT

Ical Midpoint ID: 01071301 Ical Date: 01/07/13

Instrument ID: NT6 Cont. Cal Date: 01/23/13

		IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	1928310	21.09				
	UPPER LIMIT	3856620					
	LOWER LIMIT	964155					
	CCAL	1617586	20.43				
	UPPER LIMIT		20.93				
	LOWER LIMIT		19.93				
01	VZ97MBW1	2536534	20.43				
02	VZ97LCSW1	1850683	20.43				
03	VZ97LCSDW1	1704861	20.43				
04	CSIA20130114	2007771	20.43				
05							
06							
07							
08							
09							
10							
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22							
23							
24							
25							

IS7 = Di-n-octylphthalate-d4

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-3

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC | Client: ANCHOR QEA

ARI Job No: VZ97 | Project: CHEVRON SUB

Ical Midpoint ID: 0117A013 | Ical Date: 01/17/13

Instrument ID: FID7 | Cont. Cal Date: 01/17/13

		IS1 AREA #	IS1 RT #	IS2 AREA #	IS2 RT #	AREA #	RT #
	ICAL MIDPT	947000	12.82				
	UPPER LIMIT	1894000					
	LOWER LIMIT	473500					
	CCAL	960708	12.81				
	UPPER LIMIT		13.31				
	LOWER LIMIT		12.31				
01		1051083	12.78				
02		20823*	12.79				
03		12247*	12.86				
04		11012*	12.81				
05		55844*	12.91				
06							
07							
08	IB	932905	12.81				
09	VZ97MBW1	965001	12.82				
10	VZ97LCSW1	957606	12.82				
11	VZ97LCSDW1	973578	12.83				
12	CSIA20130114	975962	12.83				
13	CSIA20130114	972906	12.83				
14	CSIA20130114	997894	12.83				
15		1098378	12.83				
16		20617*	12.77				
17		44556*	12.91				
18		30912*	12.83				
19		30719*	12.88				
20		31765*	12.97				
21							
22							
23							
24							
25							

IS1 = m-cresol
IS2 = Butylene Glycol

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-1

VZ97:00143

SIM PAH Analysis
Report and Summary QC Forms

ARI Job ID: VZ97

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS
Extraction Method: SW3520C
Page 1 of 1

Sample ID: CSIA20130114-001DW
SAMPLE

Lab Sample ID: VZ97S
LIMS ID: 13-1100
Matrix: Water
Data Release Authorized:
Reported: 01/25/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
Event: 120007-01.01TO3.2
Date Sampled: 01/11/13
Date Received: 01/16/13

Date Extracted: 01/17/13
Date Analyzed: 01/23/13 11:57
Instrument/Analyst: NT11/JZ

Sample Amount: 500 mL
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	**Naphthalene**	**0.10**	**0.35**
91-57-6	2-Methylnaphthalene	0.10	< 0.10 U
90-12-0	1-Methylnaphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	**Acenaphthene**	**0.10**	**0.80**
86-73-7	**Fluorene**	**0.10**	**0.90**
85-01-8	**Phenanthrene**	**0.10**	**0.24**
120-12-7	**Anthracene**	**0.10**	**0.08 J**
206-44-0	**Fluoranthene**	**0.10**	**0.17**
129-00-0	**Pyrene**	**0.10**	**0.14**
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.10 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.10 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
132-64-9	Dibenzofuran	0.10	< 0.10 U
TOTBFA	Total Benzofluoranthenes	0.20	< 0.20 U
205-82-3	Benzo(j)fluoranthene	0.10	< 0.10 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	82.3%
d10-2-Methylnaphthalene	79.0%
d14-Dibenzo(a,h)anthracene	79.7%

ANALYTICAL RESOURCES INCORPORATED

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2

Client ID	FLN	MNP	DBA	TOT OUT
MB-011713	98.7%	81.3%	115%	0
LCS-011713	92.0%	75.0%	122%	0
LCSD-011713	94.7%	75.0%	93.0%	0
CSIA20130114-001DW	82.3%	79.0%	79.7%	0

	LCS/MB LIMITS	QC LIMITS
(FLN) = d10-Fluoranthene	(30-160)	(30-160)
(MNP) = d10-2-Methylnaphthalene	(40-110)	(33-107)
(DBA) = d14-Dibenzo(a,h)anthracene	(33-140)	(10-142)

Prep Method: SW3520C
Log Number Range: 13-1100 to 13-1100

FORM-II SIM SW8270

VZ97:00145

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS
Page 1 of 1

Sample ID: LCS-011713
LAB CONTROL SAMPLE

Lab,Sample ID: LCS-011713
LIMS ID: 13-1100
Matrix: Water
Data Release Authorized:
Reported: 01/25/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
Event: 120007-01.01TO3.2
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 01/17/13

Date Analyzed LCS: 01/23/13 10:56
LCSD: 01/23/13 11:27
Instrument/Analyst LCS: NT11/JZ
LCSD: NT11/JZ

Sample Amount LCS: 500 mL
LCSD: 500 mL
Final Extract Volume LCS: 0.50 mL
LCSD: 0.50 mL
Dilution Factor LCS: 1.00
LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Naphthalene	1.55	3.00	51.7%	1.54	3.00	51.3%	0.6%
2-Methylnaphthalene	1.49	3.00	49.7%	1.49	3.00	49.7%	0.0%
1-Methylnaphthalene	1.62	3.00	54.0%	1.64	3.00	54.7%	1.2%
Acenaphthylene	1.57	3.00	52.3%	1.55	3.00	51.7%	1.3%
Acenaphthene	1.59	3.00	53.0%	1.58	3.00	52.7%	0.6%
Fluorene	1.75	3.00	58.3%	1.77	3.00	59.0%	1.1%
Phenanthrene	1.75	3.00	58.3%	1.83	3.00	61.0%	4.5%
Anthracene	1.78	3.00	59.3%	1.82	3.00	60.7%	2.2%
Fluoranthene	1.86	3.00	62.0%	1.94	3.00	64.7%	4.2%
Pyrene	2.02	3.00	67.3%	2.02	3.00	67.3%	0.0%
Benzo(a)anthracene	1.89	3.00	63.0%	1.84	3.00	61.3%	2.7%
Chrysene	1.91	3.00	63.7%	1.98	3.00	66.0%	3.6%
Benzo(b)fluoranthene	2.00	3.00	66.7%	2.03	3.00	67.7%	1.5%
Benzo(k)fluoranthene	1.87	3.00	62.3%	1.88	3.00	62.7%	0.5%
Benzo(a)pyrene	1.68	3.00	56.0%	1.59	3.00	53.0%	5.5%
Indeno(1,2,3-cd)pyrene	2.23	3.00	74.3%	2.12	3.00	70.7%	5.1%
Dibenz(a,h)anthracene	2.20	3.00	73.3%	1.86	3.00	62.0%	16.7%
Benzo(g,h,i)perylene	2.08	3.00	69.3%	1.91	3.00	63.7%	8.5%
Dibenzofuran	1.65	3.00	55.0%	1.62	3.00	54.0%	1.8%
Total Benzofluoranthenes	6.35	9.00	70.6%	6.24	9.00	69.3%	1.7%
Benzo(j)fluoranthene	2.49	3.00	83.0%	2.33	3.00	77.7%	6.6%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

	LCS	LCSD
d10-Fluoranthene	92.0%	94.7%
d10-2-Methylnaphthalene	75.0%	75.0%
d14-Dibenzo(a,h)anthracene	122%	93.0%

4B

SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO. VZ97MBW1

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB AREA INT

Lab File ID: 01231303 Date Extracted: 01/17/13

Instrument ID: NT11 Date Analyzed: 01/23/13

Matrix: LIQUID Time Analyzed: 1027

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	VZ97LCSW1	VZ97LCSW1	01231304	01/23/13
02	VZ97LCSDW1	VZ97LCSDW1	01231305	01/23/13
03	CSIA20130114-001	VZ97S	01231306	01/23/13
04				
05				
06				
07				
08				
09				
10				
11				
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FORM IV SV

VZ97:001U8

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by SW8270D-SIM GC/MS
Extraction Method: SW3520C
Page 1 of 1

Sample ID: MB-011713
METHOD BLANK

Lab Sample ID: MB-011713
LIMS ID: 13-1100
Matrix: Water
Data Release Authorized:
Reported: 01/25/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
Event: 120007-01.01TO3.2
Date Sampled: NA
Date Received: NA

Date Extracted: 01/17/13
Date Analyzed: 01/23/13 10:27
Instrument/Analyst: NT11/JZ

Sample Amount: 500 mL
Final Extract Volume: 0.5 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
91-20-3	Naphthalene	0.10	< 0.10 U
91-57-6	2-Methylnaphthalene	0.10	< 0.10 U
90-12-0	1-Methylnaphthalene	0.10	< 0.10 U
208-96-8	Acenaphthylene	0.10	< 0.10 U
83-32-9	Acenaphthene	0.10	< 0.10 U
86-73-7	Fluorene	0.10	< 0.10 U
85-01-8	Phenanthrene	0.10	< 0.10 U
120-12-7	Anthracene	0.10	< 0.10 U
206-44-0	Fluoranthene	0.10	< 0.10 U
129-00-0	Pyrene	0.10	< 0.10 U
56-55-3	Benzo(a)anthracene	0.10	< 0.10 U
218-01-9	Chrysene	0.10	< 0.10 U
205-99-2	Benzo(b)fluoranthene	0.10	< 0.10 U
207-08-9	Benzo(k)fluoranthene	0.10	< 0.10 U
50-32-8	Benzo(a)pyrene	0.10	< 0.10 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.10	< 0.10 U
53-70-3	Dibenz(a,h)anthracene	0.10	< 0.10 U
191-24-2	Benzo(g,h,i)perylene	0.10	< 0.10 U
132-64-9	Dibenzofuran	0.10	< 0.10 U
TOTBFA	Total Benzofluoranthenes	0.20	< 0.20 U
205-82-3	Benzo(j)fluoranthene	0.10	< 0.10 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	98.7%
d10-2-Methylnaphthalene	81.3%
d14-Dibenzo(a,h)anthracene	115%

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

Instrument ID: NT11 Project: CHEVRON SUB AREA INT

DFTPP Injection Date: 01/17/13 DFTPP Injection Time: 1506

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	32.4
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	37.3
70	Less than 2.0% of mass 69	0.0 (0.1)1
127	10.0 - 80.0% of mass 198	49.6
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 60.0% of mass 198	23.2
365	Greater than 1.0% of mass 198	2.58
441	0.0 - 24.0% of mass 442	12.4 (14.8)2
442	50.0 - 200.0% of mass 198	83.5
443	15.0 - 24.0% of mass 442	15.6 (18.7)2

1-Value is % mass 69 2-Value is % mass 442

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	IC250117	IC250117	01171302	01/17/13	1519
02	IC010117	IC010117	01171303	01/17/13	1550
03	IC050117	IC050117	01171304	01/17/13	1620
04	IC10117	IC10117	01171305	01/17/13	1650
05	IC50117	IC50117	01171306	01/17/13	1719
06	IC100117	IC100117	01171307	01/17/13	1749
07					
08					
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FORM V SV

UZ97:00150

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

Instrument ID: NT11 Project: CHEVRON SUB AREA INT

DFTPP Injection Date: 01/23/13 DFTPP Injection Time: 0931

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	31.1
68	Less than 2.0% of mass 69	0.0 (0.0)1
69	Mass 69 relative abundance	36.3
70	Less than 2.0% of mass 69	0.2 (0.6)1
127	10.0 - 80.0% of mass 198	49.3
197	Less than 2.0% of mass 198	0.0
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	6.6
275	10.0 - 60.0% of mass 198	24.5
365	Greater than 1.0% of mass 198	3.11
441	0.0 - 24.0% of mass 442	14.8 (15.3)2
442	50.0 - 200.0% of mass 198	96.4
443	15.0 - 24.0% of mass 442	18.5 (19.2)2

1-Value is % mass 69 2-Value is % mass 442

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	CC0123	CC0123	01231302	01/23/13	0956
02	VZ97MBW1	VZ97MBW1	01231303	01/23/13	1027
03	VZ97LCSW1	VZ97LCSW1	01231304	01/23/13	1056
04	VZ97LCSDW1	VZ97LCSDW1	01231305	01/23/13	1127
05	CSIA20130114-001	VZ97S	01231306	01/23/13	1157
06					
07					
08					
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FORM V SV

VZ97:00151

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB AREA INT

Instrument ID: NT11 Calibration Date: 01/17/13

LAB FILE ID: RRF0.1=01171303 RRF0.5=01171304 RRF1 =01171305
RRF2.5=01171302 RRF5 =01171306 RRF10 =01171307

COMPOUND	RRF 0.1	RRF 0.5	RRF 1	RRF 2.5	RRF 5	RRF 10	___ RRF	%RSD /R^2
Naphthalene	1.432	1.282	1.326	1.292	1.276	1.137	1.291	7.4
2-Methylnaphthalene	0.829	0.738	0.791	0.777	0.751	0.658	0.757	7.7
Acenaphthylene	2.337	2.134	2.282	2.308	2.220	2.032	2.219	5.3
Acenaphthene	1.723	1.448	1.444	1.400	1.341	1.211	1.428	11.8
Dibenzofuran	2.269	1.991	2.075	2.003	1.956	1.746	2.007	8.5
Fluorene	1.841	1.586	1.634	1.600	1.528	1.385	1.596	9.3
Phenanthrene	1.891	1.523	1.564	1.517	1.423	1.264	1.530	13.5
Anthracene	1.628	1.558	1.516	1.519	1.440	1.287	1.491	7.9
Fluoranthene	1.829	1.570	1.632	1.558	1.471	1.305	1.561	11.1
Pyrene	1.653	1.347	1.441	1.402	1.365	1.216	1.404	10.2
Benzo(a)anthracene	1.559	1.273	1.321	1.294	1.269	1.148	1.311	10.3
Chrysene	1.544	1.242	1.284	1.240	1.215	1.116	1.274	11.3
Benzo(b)fluoranthene	1.250	1.119	1.226	1.343	1.294	1.179	1.235	6.5
Benzo(k)fluoranthene	1.616	1.232	1.359	1.431	1.345	1.238	1.370	10.4
Benzo(j)fluoranthene	0.763	0.878	1.037	1.018	1.040	0.952	0.948	11.6
Benzo(a)pyrene	1.390	1.187	1.308	1.315	1.294	1.211	1.284	5.8
Indeno(1,2,3-cd)pyrene	1.229	1.288	1.447	1.508	1.473	1.386	1.388	7.9
Dibenzo(a,h)anthracene	1.131	1.099	1.166	1.212	1.203	1.127	1.156	3.9
Benzo(g,h,i)perylene	1.392	1.180	1.283	1.283	1.291	1.238	1.278	5.5
1-methylnaphthalene	0.803	0.694	0.750	0.732	0.712	0.630	0.720	8.0
Perylene	1.373	1.178	1.277	1.271	1.248	1.192	1.256	5.6
2-Methylnaphthalene-d10	0.599	0.554	0.597	0.592	0.586	0.528	0.576	5.0
Dibenzo(a,h)anthracene-d14	0.538	0.470	0.570	0.601	0.641	0.706	0.588	14.0
Fluoranthene-d10	1.042	0.948	0.999	1.015	0.983	0.909	0.983	4.9

<- Outside QC limits: %RSD <20% or R^2 > 0.990

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB AREA INT

Instrument ID: NT11 Cont. Calib. Date: 01/23/13

Init. Calib. Date: 01/17/13 Cont. Calib. Time: 0956

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Naphthalene	1.291	1.292	0.700	AVRG	0.1	
2-Methylnaphthalene	0.757	0.770	0.400	AVRG	1.7	
Acenaphthylene	2.219	2.292	0.900	AVRG	3.3	
Acenaphthene	1.428	1.384	0.900	AVRG	-3.1	
Dibenzofuran	2.007	1.996	0.800	AVRG	-0.5	
Fluorene	1.596	1.621	0.900	AVRG	1.6	
Phenanthrene	1.530	1.491	0.700	AVRG	-2.5	
Anthracene	1.491	1.530	0.700	AVRG	2.6	
Fluoranthene	1.561	1.527	0.600	AVRG	-2.2	
Pyrene	1.404	1.533	0.600	AVRG	9.2	
Benzo(a)anthracene	1.311	1.333	0.800	AVRG	1.7	
Chrysene	1.274	1.284	0.700	AVRG	0.8	
Benzo(b)fluoranthene	1.235	1.303	0.700	AVRG	5.5	
Benzo(k)fluoranthene	1.370	1.365	0.700	AVRG	-0.4	
Benzo(j)fluoranthene	0.948	1.019	0.010	AVRG	7.5	
Benzo(a)pyrene	1.284	1.305	0.700	AVRG	1.6	
Indeno(1,2,3-cd)pyrene	1.388	1.577	0.500	AVRG	13.6	
Dibenzo(a,h)anthracene	1.156	1.314	0.400	AVRG	13.7	
Benzo(g,h,i)perylene	1.278	1.321	0.500	AVRG	3.4	
1-methylnaphthalene	0.720	0.724	0.010	AVRG	0.6	
Perylene	1.256	1.290	0.010	AVRG	2.7	
2-Methylnaphthalene-d10	0.576	0.594	0.010	AVRG	3.1	
Dibenzo(a,h)anthracene-d14	0.588	0.784	0.010	AVRG	33.3	<-
Fluoranthene-d10	0.983	0.996	0.010	AVRG	1.3	

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII SV-1

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB AREA INT

Ical Midpoint ID: 01171302 Ical Date: 01/17/13

Instrument ID: NT11 Cont. Cal Date: 01/23/13

		IS1(NPT) AREA #	RT #	IS2(ANT) AREA #	RT #	IS3(PHN) AREA #	RT #
	ICAL MIDPT	608905	5.41	340268	7.68	481898	9.69
	UPPER LIMIT	1217810		680536		963796	
	LOWER LIMIT	304452		170134		240949	
	CCAL	555376	5.36	311902	7.63	436978	9.64
	UPPER LIMIT		5.86		8.13		10.14
	LOWER LIMIT		4.86		7.13		9.14
01	VZ97MBW1	540553	5.35	300866	7.62	438201	9.64
02	VZ97LCSW1	578149	5.35	321937	7.62	465944	9.64
03	VZ97LCSDW1	588486	5.35	331219	7.62	461309	9.64
04	CSIA20130114	566927	5.36	285193	7.63	369923	9.65
05							
06							
07							
08							
09							
10							
11							
12							
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14							
15							
16							
17							
18							
19							
20							
21							
22							
23							
24							
25							

IS1 = Naphthalene-d8
IS2 = Acenaphthene-d10
IS3 = Phenanthrene-d10

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-1

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

ARI Job No: VZ97 Project: CHEVRON SUB AREA INT

Ical Midpoint ID: 01171302 Ical Date: 01/17/13

Instrument ID: NT11 Cont. Cal Date: 01/23/13

		IS4(CRY) AREA #	RT #	IS5(PRY) AREA #	RT #	AREA #	RT #
	ICAL MIDPT	554782	14.26	534043	17.99		
	UPPER LIMIT	1109564		1068086			
	LOWER LIMIT	277391		267022			
	CCAL	451133	14.18	465658	17.91		
	UPPER LIMIT		14.68		18.41		
	LOWER LIMIT		13.68		17.41		
01	VZ97MBW1	486492	14.17	468891	17.89		
02	VZ97LCSW1	482648	14.17	484222	17.89		
03	VZ97LCSDW1	491506	14.17	496258	17.89		
04	CSIA20130114	474803	14.19	465582	17.90		
05							
06							
07							
08							
09							
10							
11							
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20							
21							
22							
23							
24							
25							

IS4 = Chrysene-d12
IS5 = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area from Ical midpoint
AREA LOWER LIMIT = - 50% of internal standard area from Ical midpoint
RT UPPER LIMIT = + 0.50 minutes of internal standard RT from Cont. Cal
RT LOWER LIMIT = - 0.50 minutes of internal standard RT from Cont. Cal

* Values outside of QC limits.

FORM VIII SV-2

TPHD Analysis
Report and Summary QC Forms

ARI Job ID: VZ97

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS

NWTPHD by GC/FID-Silica and Acid Cleaned — QC Report No: VZ97-Anchor QEA
Extraction Method: — Project: Chevron Sub Area Interim Action
 — 120007-01.01TO3.2

Matrix: Water
Data Release Authorized:
Reported: 01/28/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
MB-011713	Method Blank	01/17/13	01/23/13	1.00	Diesel Range	0.10	< 0.10 U
13-1100	HC ID: ---		FID4A	1.0	Motor Oil Range	0.20	< 0.20 U
					o-Terphenyl		104%
VZ97S	CSIA20130114-001DW	01/17/13	01/23/13	1.00	**Diesel Range**	**0.10**	**0.79**
13-1100	HC ID: **DIESEL**		FID4A	1.0	Motor Oil Range	0.20	< 0.20 U
					o-Terphenyl		98.8%
VZ97T	CSIA20130111-001RB	01/17/13	01/23/13	1.00	Diesel Range	0.10	< 0.10 U
13-1101	HC ID: ---		FID4A	1.0	Motor Oil Range	0.20	< 0.20 U
					o-Terphenyl		111%

Reported in mg/L (ppm)

EFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel range quantitation on total peaks in the range from C12 to C24.
Motor Oil range quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

ANALYTICAL RESOURCES INCORPORATED

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2

Client ID	OTER	TOT OUT
MB-011713	104%	0
LCS-011713	97.7%	0
LCSD-011713	102%	0
CSIA20130114-001DW	98.8%	0
CSIA20130111-001RB	111%	0

	LCS/MB LIMITS	QC LIMITS
(OTER) = o-Terphenyl	(50-150)	(50-150)

Prep Method: SW3510C
Log Number Range: 13-1100 to 13-1101

VZ97 00159

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS
NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method: SW3546

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2

Matrix: Soil
Data Release Authorized: hmw
Reported: 01/28/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
VZ97A	CSIA-20130107-001B	01/18/13	01/23/13	1.00	**Diesel Range**	**5.9**	**43**
13-1082	HC ID: **DIESEL/MOTOR OIL**		FID4A	1.0	**Motor Oil Range**	**12**	**54**
					o-Terphenyl		94.7%
VZ97B	CSIA-20130107-002B	01/18/13	01/23/13	1.00	**Diesel Range**	**5.9**	**54**
13-1083	HC ID: **DIESEL/MOTOR OIL**		FID4A	1.0	**Motor Oil Range**	**12**	**68**
					o-Terphenyl		93.7%
VZ97C	CSIA-20130107-003S+3	01/18/13	01/23/13	1.00	**Diesel Range**	**6.1**	**20**
13-1084	HC ID: **DIESEL/MOTOR OIL**		FID4A	1.0	**Motor Oil Range**	**12**	**30**
					o-Terphenyl		95.6%
VZ97D	CSIA-20130107-004S+6	01/18/13	01/24/13	1.00	**Diesel Range**	**37**	**330**
13-1085	HC ID: **DIESEL/MOTOR OIL**		FID4A	5.0	**Motor Oil Range**	**73**	**820**
					o-Terphenyl		92.2%
VZ97E	CSIA-20130107-005S+9	01/18/13	01/24/13	1.00	**Diesel Range**	**5.9**	**43**
13-1086	HC ID: **DIESEL/MOTOR OIL**		FID4A	1.0	**Motor Oil Range**	**12**	**120**
					o-Terphenyl		94.8%
VZ97F	CSIA20130109-006B	01/18/13	01/24/13	1.00	Diesel Range	5.9	< 5.9 U
13-1087	HC ID: ---		FID4A	1.0	Motor Oil Range	12	< 12 U
					o-Terphenyl		106%
VZ97G	CSIA20130109-007B	01/18/13	01/24/13	1.00	**Diesel Range**	**28**	**280**
13-1088	HC ID: **DIESEL/MOTOR OIL**		FID4A	5.0	**Motor Oil Range**	**57**	**130**
					o-Terphenyl		102%
VZ97H	CSIA20130109-008S+3	01/18/13	01/24/13	1.00	Diesel Range	6.0	< 6.0 U
13-1089	HC ID: ---		FID4A	1.0	Motor Oil Range	12	< 12 U
					o-Terphenyl		103%
VZ97I	CSIA20130109-009S+6	01/18/13	01/24/13	1.00	**Diesel Range**	**5.8**	**14**
13-1090	HC ID: **DIESEL/MOTOR OIL**		FID4A	1.0	**Motor Oil Range**	**12**	**30**
					o-Terphenyl		97.1%
MB-011813	Method Blank	01/18/13	01/23/13	1.00	Diesel Range	5.0	< 5.0 U
13-1091	HC ID: ---		FID4A	1.0	Motor Oil Range	10	< 10 U
					o-Terphenyl		106%
VZ97J	CSIA20130109-010S+9	01/18/13	01/24/13	1.00	**Diesel Range**	**5.4**	**160**
13-1091	HC ID: **DIESEL/MOTOR OIL**		FID4A	1.0	**Motor Oil Range**	**11**	**67**
					o-Terphenyl		103%
VZ97K	CSIA20130110-011B	01/18/13	01/25/13	1.00	**Diesel Range**	**29**	**610**
13-1092	HC ID: **DIESEL/MOTOR OIL**		FID4A	5.0	**Motor Oil Range**	**58**	**210**
					o-Terphenyl		96.1%
VZ97L	CSIA20130110-012B	01/18/13	01/25/13	1.00	**Diesel Range**	**6.0**	**170**
13-1093	HC ID: **DIESEL/MOTOR OIL**		FID4A	1.0	**Motor Oil Range**	**12**	**63**
					o-Terphenyl		89.4%

VZ97:00159

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS
NWTPHD by GC/FID-Silica and Acid Cleaned
Extraction Method: SW3546
Page 1 of 1

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2

Matrix: Soil
Data Release Authorized:
Reported: 01/30/13

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
VZ97M	CSIA20130110-013S+3	01/18/13	01/25/13	1.00	**Diesel Range**	**5.8**	**8.1**
13-1094	HC ID: **DRO**		FID4A	1.0	Motor Oil Range	12	< 12 U
					o-Terphenyl		93.1%
VZ97N	CSIA20130110-014S+6	01/18/13	01/25/13	1.00	**Diesel Range**	**270**	**5600**
13-1095	HC ID: **DIESEL/MOTOR OIL**		FID4A	50	**Motor Oil Range**	**540**	**950**
					o-Terphenyl		NR
VZ97O	CSIA20130110-015S+9	01/18/13	01/25/13	1.00	**Diesel Range**	**270**	**4600**
13-1096	HC ID: **DIESEL/MOTOR OIL**		FID4A	50	**Motor Oil Range**	**530**	**860**
					o-Terphenyl		NR
VZ97P	CSIA20130111-016B	01/18/13	01/25/13	1.00	**Diesel Range**	**55**	**1600**
13-1097	HC ID: **DIESEL/MOTOR OIL**		FID4A	10	**Motor Oil Range**	**110**	**300**
					o-Terphenyl		79.6%
VZ97Q	CSIA20130111-017B	01/18/13	01/25/13	1.00	**Diesel Range**	**57**	**1300**
13-1098	HC ID: **DIESEL/MOTOR OIL**		FID4A	10	**Motor Oil Range**	**110**	**240**
					o-Terphenyl		81.8%
VZ97R	CSIA20130111-018S+9	01/18/13	01/25/13	1.00	**Diesel Range**	**5.5**	**240**
13-1099	HC ID: **DIESEL/MOTOR OIL**		FID4A	1.0	**Motor Oil Range**	**11**	**170**
					o-Terphenyl		88.3%

Reported in mg/kg (ppm)

EFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel range quantitation on total peaks in the range from C12 to C24.
Motor Oil range quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicate results of organics or additional hydrocarbons in ranges are not identifiable.

ANALYTICAL RESOURCES INCORPORATED

CLEANED TPHD SURROGATE RECOVERY SUMMARY

Matrix: Soil

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2

Client ID	OTER	TOT OUT
CSIA-20130107-001B	94.7%	0
CSIA-20130107-002B	93.7%	0
CSIA-20130107-003S	95.6%	0
CSIA-20130107-004S	92.2%	0
CSIA-20130107-005S	94.8%	0
CSIA20130109-006B	106%	0
CSIA20130109-007B	102%	0
CSIA20130109-008S+	103%	0
CSIA20130109-009S+	97.1%	0
MB-011813	106%	0
LCS-011813	104%	0
CSIA20130109-010S+	103%	0
CSIA20130109-010S+ MS	108%	0
CSIA20130109-010S+ MSD	111%	0
CSIA20130110-011B	96.1%	0
CSIA20130110-012B	89.4%	0
CSIA20130110-013S+	93.1%	0
CSIA20130110-014S+	NR	0
CSIA20130110-015S+	NR	0
CSIA20130111-016B	79.6%	0
CSIA20130111-017B	81.8%	0
CSIA20130111-018S+	88.3%	0

	LCS/MB LIMITS	QC LIMITS
(OTER) = o-Terphenyl	(50-150)	(50-150)

Prep Method: SW3546
Log Number Range: 13-1082 to 13-1099

FORM-II TPHD

VZ97 001561

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned **Sample ID: CSIA20130109-010S+9**
Page 1 of 1 **MS/MSD**

Lab Sample ID: VZ97J
LIMS ID: 13-1091
Matrix: Soil
Data Release Authorized:
Reported: 01/28/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: 01/09/13
Date Received: 01/16/13

Date Extracted MS/MSD: 01/18/13

Sample Amount MS: 9.56 g-dry-wt
MSD: 9.54 g-dry-wt
Final Extract Volume MS: 1.0 mL
MSD: 1.0 mL
Dilution Factor MS: 1.0
MSD: 1.0
Percent Moisture: 9.6%

Date Analyzed MS: 01/24/13 02:54
MSD: 01/24/13 03:13
Instrument/Analyst MS: FID/VTS
MSD: FID/VTS

Range	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Diesel	160	294	157	85.4%	310	157	95.5%	5.3%

TPHD Surrogate Recovery

	MS	MSD
o-Terphenyl	108%	111%

Results reported in mg/kg
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned **Sample ID: LCS-011713**
Page 1 of 1 **LCS/LCSD**

Lab Sample ID: LCS-011713 QC Report No: VZ97-Anchor QEA
LIMS ID: 13-1100 Project: Chevron Sub Area Interim Action
Matrix: Water 120007-01.01TO3.2
Data Release Authorized: Date Sampled: 01/11/13
Reported: 01/28/13 Date Received: 01/16/13

Date Extracted LCS/LCSD: 01/17/13 Sample Amount LCS: 500 mL
LCSD: 500 mL
Date Analyzed LCS: 01/23/13 14:30 Final Extract Volume LCS: 1.0 mL
LCSD: 01/23/13 14:51 LCSD: 1.0 mL
Instrument/Analyst LCS: FID/VTS Dilution Factor LCS: 1.00
LCSD: FID/VTS LCSD: 1.00

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	2.61	3.00	87.0%	2.69	3.00	89.7%	3.0%

TPHD Surrogate Recovery

	LCS	LCSD
o-Terphenyl	97.7%	102%

Results reported in mg/L
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID-Silica and Acid Cleaned **Sample ID: LCS-011813**
Page 1 of 1 **LAB CONTROL**

Lab Sample ID: LCS-011813 QC Report No: VZ97-Anchor QEA
LIMS ID: 13-1091 Project: Chevron Sub Area Interim Action
Matrix: Soil 120007-01.01TO3.2
Data Release Authorized: Date Sampled: 01/09/13
Reported: 01/28/13 Date Received: 01/16/13

Date Extracted: 01/18/13 Sample Amount: 10.0 g
Date Analyzed: 01/23/13 22:35 Final Extract Volume: 1.0 mL
Instrument/Analyst: FID/VTS Dilution Factor: 1.0

Range	Lab Control	Spike Added	Recovery
Diesel	137	150	91.3%

TPHD Surrogate Recovery

o-Terphenyl	104%

Results reported in mg/kg

VZ97 00164

ANALYTICAL RESOURCES INCORPORATED

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

ARI Job: VZ97
Matrix: Water
Project: Chevron Sub Area Interim Action
Date Received: 01/16/13
120007-01.01TO3.2

ARI ID	Client ID	Samp Amt	Final Vol	Prep Date
13-1100-011713MB1	Method Blank	500 mL	1.00 mL	01/17/13
13-1100-011713LCS1	Lab Control	500 mL	1.00 mL	01/17/13
13-1100-011713LCSD1	Lab Control Dup	500 mL	1.00 mL	01/17/13
13-1100-VZ97S	CSIA20130114-001DW	500 mL	1.00 mL	01/17/13
13-1101-VZ97T	CSIA20130111-001RB	500 mL	1.00 mL	01/17/13

ANALYTICAL RESOURCES INCORPORATED

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

ARI Job: VZ97
Matrix: Soil Project: Chevron Sub Area Interim Action
Date Received: 01/15/13 120007-01.01TO3.2

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-1082-VZ97A	CSIA-20130107-001B	8.49 g	1.00 mL	D	01/18/13
13-1083-VZ97B	CSIA-20130107-002B	8.52 g	1.00 mL	D	01/18/13
13-1084-VZ97C	CSIA-20130107-003S+	8.20 g	1.00 mL	D	01/18/13
13-1085-VZ97D	CSIA-20130107-004S+	6.83 g	1.00 mL	D	01/18/13
13-1086-VZ97E	CSIA-20130107-005S+	8.53 g	1.00 mL	D	01/18/13
13-1087-VZ97F	CSIA20130109-006B	8.43 g	1.00 mL	D	01/18/13
13-1088-VZ97G	CSIA20130109-007B	8.80 g	1.00 mL	D	01/18/13
13-1089-VZ97H	CSIA20130109-008S+	8.30 g	1.00 mL	D	01/18/13
13-1090-VZ97I	CSIA20130109-009S+	6.64 g	1.00 mL	D	01/18/13
13-1091-011813MB1	Method Blank	10.0 g	1.00 mL	-	01/18/13
13-1091-011813LCS1	Lab Control	10.0 g	1.00 mL	-	01/18/13
13-1091-VZ97J	CSIA20130109-010S+	9.24 g	1.00 mL	D	01/18/13
13-1091-VZ97JMS	CSIA20130109-010S+	9.56 g	1.00 mL	D	01/18/13
13-1091-VZ97JMSD	CSIA20130109-010S+	9.54 g	1.00 mL	D	01/18/13
13-1092-VZ97K	CSIA20130110-011B	8.58 g	1.00 mL	D	01/18/13
13-1093-VZ97L	CSIA20130110-012B	8.34 g	1.00 mL	D	01/18/13
13-1094-VZ97M	CSIA20130110-013S+	8.59 g	1.00 mL	D	01/18/13
13-1095-VZ97N	CSIA20130110-014S+	6.30 g	1.00 mL	D	01/18/13
13-1096-VZ97O	CSIA20130110-015S+	9.39 g	1.00 mL	D	01/18/13
13-1097-VZ97P	CSIA20130111-016B	9.02 g	1.00 mL	D	01/18/13
13-1098-VZ97Q	CSIA20130111-017B	8.74 g	1.00 mL	D	01/18/13
13-1099-VZ97R	CSIA20130111-018S+	9.09 g	1.00 mL	D	01/18/13

Basis: D=Dry Weight W=As Received

4

TPH METHOD BLANK SUMMARY

BLANK NO.

VZ97MBW1

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR

SDG No.: VZ97 Project No.: CHEVRON

Date Extracted: 01/17/13 Matrix: LIQUID

Date Analyzed : 01/23/13 Instrument ID : FID4A

Time Analyzed : 1409

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	VZ97LCSW1	VZ97LCSW1	01/23/13
02	VZ97LCSDW1	VZ97LCSDW1	01/23/13
03	CSIA20130114	VZ97S	01/23/13
04	CSIA20130111	VZ97T	01/23/13
05			
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13			
14			
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FORM IV TPH

VZ97 00167

4

TPH METHOD BLANK SUMMARY

BLANK NO.

VZ97MBS1

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR

SDG No.: VZ97 Project No.: CHEVRON

Date Extracted: 01/18/13 Matrix: SOLID

Date Analyzed : 01/23/13 Instrument ID : FID4A

Time Analyzed : 2215

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	VZ97LCSS1	VZ97LCSS1	01/23/13
02	CSIA-2013010	VZ97A	01/23/13
03	CSIA-2013010	VZ97B	01/23/13
04	CSIA-2013010	VZ97C	01/23/13
05	CSIA-2013010	VZ97D	01/24/13
06	CSIA-2013010	VZ97E	01/24/13
07	CSIA20130109	VZ97F	01/24/13
08	CSIA20130109	VZ97G	01/24/13
09	CSIA20130109	VZ97H	01/24/13
10	CSIA20130109	VZ97I	01/24/13
11	CSIA20130109	VZ97J	01/24/13
12	CSIA20130109	VZ97JMS	01/24/13
13	CSIA20130109	VZ97JMSD	01/24/13
14	CSIA20130110	VZ97K	01/25/13
15	CSIA20130110	VZ97L	01/25/13
16	CSIA20130110	VZ97M	01/25/13
17	CSIA20130110	VZ97N	01/25/13
18	CSIA20130110	VZ97O	01/25/13
19	CSIA20130111	VZ97P	01/25/13
20	CSIA20130111	VZ97Q	01/25/13
21	CSIA20130111	VZ97R	01/25/13
22			
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30			

FORM IV TPH

VZ97 : 001682

6a
DIESEL INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: ANCHOR

Instrument: FID4A.I Project:CHEVRON

Calibration Date: 05-JAN-2013 SDG No.: VZ97

Diesel Range	RF1 50	RF2 100	RF3 250	RF4 500	RF5 1000	RF6 2500	Ave RF	%RSD
WA Diesel	11335	10789	10056	10522	9933	10117	10458	5.1
AK Diesel	13067	12501	11657	12220	11622	11749	12136	4.7
OR Diesel	13241	12592	11722	12282	11679	11804	12220	5.0
Cal Diesel	13016	12449	11633	12203	11602	11716	12103	4.7
o-Terph	12713	12144	12109	12921	12751	13461	12683	4.0

<- Indicates %RSD outside limits
Surrogate areas are not included in Diesel RF calculation.

Quant Ranges : WA Diesel C12-C24 (4.052-7.519)
AK Diesel C10-C25 (3.127-7.768)
OR Diesel C10-C28 (3.127-8.466)
Cal Diesel C10-C24 (3.127-7.519)

Calibration Files	Analysis Time
0105a020.d	05-JAN-2013 16:41
0105a021.d	05-JAN-2013 17:01
0105a022.d	05-JAN-2013 17:21
0105a023.d	05-JAN-2013 17:41
0105a024.d	05-JAN-2013 18:01
0105a025.d	05-JAN-2013 18:21

6a
DIESEL INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: ANCHOR

Instrument: FID4A.I Project: CHEVRON

Calibration Date: 24-JAN-2013 SDG No.: VZ97

Diesel Range	RF1 50	RF2 100	RF3 250	RF4 500	RF5 1000	RF6 2500	Ave RF	%RSD
WA Diesel	17473	16709	15845	16052	16444	16410	16489	3.5
AK Diesel	21465	20277	18899	19157	19500	19474	19795	4.8
OR Diesel	21709	20626	19011	19272	19601	19623	19974	5.1
Cal Diesel	21367	20161	18843	19102	19444	19415	19722	4.7
o-Terph	19174	19888	19212	20284	21390	21653	20267	5.2

<- Indicates %RSD outside limits
Surrogate areas are not included in Diesel RF calculation.

Quant Ranges : WA Diesel C12-C24 (3.993-7.466)
AK Diesel C10-C25 (3.071-7.715)
OR Diesel C10-C28 (3.071-8.419)
Cal Diesel C10-C24 (3.071-7.466)

Calibration Files	Analysis Time
0124a005.d	24-JAN-2013 17:03
0124a006.d	24-JAN-2013 17:24
0124a007.d	24-JAN-2013 17:44
0124a008.d	24-JAN-2013 18:05
0124a009.d	24-JAN-2013 18:25
0124a010.d	24-JAN-2013 18:45

6a
NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: ANCHOR

Instrument: FID4A.I Project: CHEVRON

Calibration Date: 05-JAN-2013 SDG No.: VZ97

Product Range	RF1 100	RF2 250	RF3 500	RF4 1000	RF5 2500	RF6 5000	Ave RF	%RSD
WA M.Oil C24-C38	8641	8346	7827	8197	8415	8686	8352	3.8
Triac Surr	9375	9943	9918	11207	11601	12000	10674	10.0

<- Indicates %RSD outside limits
Surrogate areas are not included in Motor Oil RF calculation.

Calibration Files	Analysis Time
0105a027.d	05-JAN-2013 19:00
0105a028.d	05-JAN-2013 19:20
0105a029.d	05-JAN-2013 19:40
0105a030.d	05-JAN-2013 20:00
0105a031.d	05-JAN-2013 20:20
0105a032.d	05-JAN-2013 20:40

6a

NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: ANCHOR

Instrument: FID4A.I Project: CHEVRON

Calibration Date: 24-JAN-2013 SDG No.: VZ97

Product Range	RF1 100	RF2 250	RF3 500	RF4 1000	RF5 2500	RF6 5000	Ave RF	%RSD
WA M.Oil C24-C38	11800	11548	11831	11878	11035	9744	11306	7.3
Triac Surr	18724	18705	18938	19784	18596	17784	18755	3.4

<- Indicates %RSD outside limits
Surrogate areas are not included in Motor Oil RF calculation.

Calibration Files	Analysis Time
0124a012.d	24-JAN-2013 19:25
0124a013.d	24-JAN-2013 19:45
0124a014.d	24-JAN-2013 20:05
0124a015.d	24-JAN-2013 20:25
0124a016.d	24-JAN-2013 20:45
0124a017.d	24-JAN-2013 21:05

7a
DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: ANCHOR

ICal Date: 05-JAN-2013 Project: CHEVRON

CCal Date: 23-JAN-2013 SDG No.: VZ97

Analysis Time: 11:43 Lab ID: DIESEL#1

Instrument: FID4A.I Lab File Name: 0123a004.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D
WADies(C12-C24)	2842657	271.8	250	8.7
AK102 (C10-C25)	3374573	278.1	250	11.2
NASDies(C10-C24)	3367773	278.3	250	11.3
Terphenyl	611608	45.3	45	0.7

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

VZ97:00173

7a

MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: ANCHOR

ICal Date: 05-JAN-2013 Project: CHEVRON

CCal Date: 23-JAN-2013 SDG No.: VZ97

Analysis Time: 12:04 Lab ID: MOIL#1

Instrument: FID4A.I Lab File Name: 0123a005.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D	
WAMoil(C24-C38)	4599109	550.7	500	10.1	
AK103 (C25-C36)	3850496	418.4	500	-16.3	
OR MOIL(C28-C40)	3863715	511.6	500	2.3	
CRUDE(Tol-C40)	5602217	741.7	500	48.3	
n-Triacontane	566409	53.1	45	17.9	<-

* Surrogate areas are subtracted from range areas

<- Indicates a %D outside QC limits

VZ97:00174

7a
DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: ANCHOR

ICal Date: 05-JAN-2013 Project: CHEVRON

CCal Date: 23-JAN-2013 SDG No.: VZ97

Analysis Time: 15:53 Lab ID: DIESEL#2

Instrument: FID4A.I Lab File Name: 0123a016.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D
WADies(C12-C24)	2651154	253.5	250	1.4
AK102 (C10-C25)	3125948	257.6	250	3.0
NASDies(C10-C24)	3119539	257.7	250	3.1
Terphenyl	590406	43.8	45	-2.7

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

VZ97:00175

7a

MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: ANCHOR

ICal Date: 05-JAN-2013 Project: CHEVRON

CCal Date: 23-JAN-2013 SDG No.: VZ97

Analysis Time: 16:13 Lab ID: MOIL#2

Instrument: FID4A.I Lab File Name: 0123a017.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D
WAMoil(C24-C38)	4299942	514.8	500	3.0
AK103 (C25-C36)	3652248	396.9	500	-20.6
OR MOIL(C28-C40)	3630490	480.7	500	-3.9
CRUDE(Tol-C40)	5186718	686.7	500	37.3
n-Triacontane	525625	49.2	45	9.4

* Surrogate areas are subtracted from range areas

<- Indicates a %D outside QC limits

VZ97 00176

7a

DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: ANCHOR

ICal Date: 05-JAN-2013 Project: CHEVRON

CCal Date: 23-JAN-2013 SDG No.: VZ97

Analysis Time: 19:57 Lab ID: DIESEL#3

Instrument: FID4A.I Lab File Name: 0123a028.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D
WADies(C12-C24)	2495911	238.7	250	-4.5
AK102 (C10-C25)	2944012	242.6	250	-3.0
NASDies(C10-C24)	2935574	242.5	250	-3.0
Terphenyl	563474	41.8	45	-7.2

* Surrogate areas are subtracted from range areas

<- Indicates a %D outside QC limits

VZ97 00177

7a

MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: ANCHOR

ICal Date: 05-JAN-2013 Project: CHEVRON

CCal Date: 23-JAN-2013 SDG No.: VZ97

Analysis Time: 20:17 Lab ID: MOIL#3

Instrument: FID4A.I Lab File Name: 0123a029.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D
WAMoil(C24-C38)	4274583	511.8	500	2.4
AK103 (C25-C36)	3623470	393.8	500	-21.2
OR MOIL(C28-C40)	3595657	476.1	500	-4.8
CRUDE(Tol-C40)	5139214	680.4	500	36.1
n-Triacontane	525813	49.3	45	9.5

* Surrogate areas are subtracted from range areas

<- Indicates a %D outside QC limits

VZ97 00179

7a

DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: ANCHOR

ICal Date: 05-JAN-2013 Project: CHEVRON

CCal Date: 23-JAN-2013 SDG No.: VZ97

Analysis Time: 23:55 Lab ID: DIESEL#4

Instrument: FID4A.I Lab File Name: 0123a040.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D
WADies(C12-C24)	2470789	236.2	250	-5.5
AK102 (C10-C25)	2921874	240.8	250	-3.7
NASDies(C10-C24)	2915366	240.9	250	-3.6
Terphenyl	544967	40.4	45	-10.2

* Surrogate areas are subtracted from range areas

<- Indicates a %D outside QC limits

VZ97 : 00179

7a

MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: ANCHOR

ICal Date: 05-JAN-2013 Project: CHEVRON

CCal Date: 24-JAN-2013 SDG No.: VZ97

Analysis Time: 00:15 Lab ID: MOIL#4

Instrument: FID4A.I Lab File Name: 0123a041.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D
WAMoil(C24-C38)	4342040	519.9	500	4.0
AK103 (C25-C36)	3720788	404.3	500	-19.1
OR MOIL(C28-C40)	3623276	479.7	500	-4.1
CRUDE(Tol-C40)	5167079	684.1	500	36.8
n-Triacontane	537316	50.3	45	11.9

* Surrogate areas are subtracted from range areas

<- Indicates a %D outside QC limits

VZ97:00189

7a

DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: ANCHOR

ICal Date: 05-JAN-2013 Project: CHEVRON

CCal Date: 24-JAN-2013 SDG No.: VZ97

Analysis Time: 03:53 Lab ID: DIESEL#5

Instrument: FID4A.I Lab File Name: 0123a052.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D
WADies(C12-C24)	2788616	266.6	250	6.7
AK102 (C10-C25)	3261802	268.8	250	7.5
NASDies(C10-C24)	3251711	268.7	250	7.5
Terphenyl	594790	44.1	45	-2.0

* Surrogate areas are subtracted from range areas

<- Indicates a %D outside QC limits

VZ97 00181

7a
MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: ANCHOR

ICal Date: 05-JAN-2013 Project: CHEVRON

CCal Date: 24-JAN-2013 SDG No.: VZ97

Analysis Time: 04:13 Lab ID: MOIL#5

Instrument: FID4A.I Lab File Name: 0123a053.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D	
WAMoil(C24-C38)	4626535	553.9	500	10.8	
AK103 (C25-C36)	3943186	428.5	500	-14.3	
OR MOIL(C28-C40)	3755664	497.3	500	-0.5	
CRUDE(Tol-C40)	5459474	722.8	500	44.6	
n-Triacontane	592173	55.5	45	23.3	<-

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

VZ97:00192

7a

DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: ANCHOR

ICal Date: 05-JAN-2013 Project: CHEVRON

CCal Date: 25-JAN-2013 SDG No.: VZ97

Analysis Time: 01:25 Lab ID: DIESEL#2

Instrument: FID4A.I Lab File Name: 0124a030.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D	
WADies(C12-C24)	4010975	243.3	250	-2.7	
AK102 (C10-C25)	4773107	241.1	250	-3.6	
NASDies(C10-C24)	4760418	393.3	250	57.3	<-
Terphenyl	906713	44.7	45	-0.6	

* Surrogate areas are subtracted from range areas

<- Indicates a %D outside QC limits

VZ97:00193

7a

MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: ANCHOR

ICal Date: 05-JAN-2013 Project: CHEVRON

CCal Date: 25-JAN-2013 SDG No.: VZ97

Analysis Time: 01:45 Lab ID: MOIL#2

Instrument: FID4A.I Lab File Name: 0124a031.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D
WAMoil(C24-C38)	5830398	515.7	500	3.1
AK103 (C25-C36)	5304101	576.4	500	15.3
OR MOIL(C28-C40)	4132994	547.2	500	9.4
CRUDE(Tol-C40)	6697702	886.8	500	77.4
n-Triacontane	868112	46.3	45	2.9

* Surrogate areas are subtracted from range areas

<- Indicates a %D outside QC limits

7a

DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: ANCHOR

ICal Date: 05-JAN-2013 Project: CHEVRON

CCal Date: 25-JAN-2013 SDG No.: VZ97

Analysis Time: 04:45 Lab ID: DIESEL#3

Instrument: FID4A.I Lab File Name: 0124a040.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D	
WADies(C12-C24)	4075466	247.2	250	-1.1	
AK102 (C10-C25)	4857597	245.4	250	-1.8	
NASDies(C10-C24)	4844667	400.3	250	60.1	<-
Terphenyl	908996	44.9	45	-0.3	

* Surrogate areas are subtracted from range areas

<- Indicates a %D outside QC limits

7a

MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: ANCHOR

ICal Date: 05-JAN-2013 Project: CHEVRON

CCal Date: 25-JAN-2013 SDG No.: VZ97

Analysis Time: 05:06 Lab ID: MOIL#3

Instrument: FID4A.I Lab File Name: 0124a041.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D
WAMoil(C24-C38)	5789941	512.1	500	2.4
AK103 (C25-C36)	5294729	575.4	500	15.1
OR MOIL(C28-C40)	4062024	537.8	500	7.6
CRUDE(Tol-C40)	6656619	881.3	500	76.3
n-Triacontane	861166	45.9	45	2.0

* Surrogate areas are subtracted from range areas

<- Indicates a %D outside QC limits

VZ97:00196

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR

SDG No.: VZ97 Project: CHEVRON

Instrument ID: FID4A GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 6.02 TRIAC: 8.90

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		RT	01/05/13	1602	6.02	8.90
02		IB	01/05/13	1621	6.02	8.89
03		DIES 50	01/05/13	1641	6.02	8.89
04		DIES 100	01/05/13	1701	6.01	8.90
05		DIES250	01/05/13	1721	6.02	8.90
06		DIES500	01/05/13	1741	6.03	8.89
07		DIES1000	01/05/13	1801	6.04	8.91
08		DIES2500	01/05/13	1821	6.06	8.89
09		DIES250-ICV	01/05/13	1840	6.02	8.90
10		MOIL 100	01/05/13	1900	6.03	8.88
11		MOIL 250	01/05/13	1920	6.03	8.88
12		MOIL 500	01/05/13	1940	6.02	8.89
13		MOIL 1000	01/05/13	2000	6.02	8.90
14		MOIL 2500	01/05/13	2020	6.02	8.92
15		MOIL 5000	01/05/13	2040	6.02	8.95*
16		M OIL500-ICV	01/05/13	2101	6.02	8.89

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

FORM VIII TPH

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR

SDG No.: VZ97 Project: CHEVRON

Instrument ID: FID4A GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 5.96 TRIAC: 8.86

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		RT	01/24/13	1621	5.96	8.86
02		IB	01/24/13	1643	5.96	8.85
03		50PPMDIESEL	01/24/13	1703	5.95	8.85
04		100PPMDIESEL	01/24/13	1724	5.95	8.88
05		250PPMDIESEL	01/24/13	1744	5.96	8.84
06		500PPMDIESEL	01/24/13	1805	5.97	8.88
07		1000PPMDIESE	01/24/13	1825	5.98	8.83
08		2500PPMDIESE	01/24/13	1845	6.01*	8.88
09		DIESELICV	01/24/13	1905	5.96	8.86
10		100PPMMOIL	01/24/13	1925	5.96	8.82
11		250PPMMOIL	01/24/13	1945	5.96	8.83
12		500PPMMOIL	01/24/13	2005	5.96	8.84
13		1000PPMMOIL	01/24/13	2025	5.95	8.85
14		2500PPMMOIL	01/24/13	2045	5.95	8.88
15		5000PPMMOIL	01/24/13	2105	5.95	8.91*
16		MOILICV	01/24/13	2125	5.96	8.84

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

FORM VIII TPH

VZ97 : 00199

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR

SDG No.: VZ97 Project: CHEVRON

Instrument ID: FID4A GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 5.98 TRIAC: 8.86

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01	CHEVRON	DIESEL#1	01/23/13	1143	5.97	8.84
02	CHEVRON	MOIL#1	01/23/13	1204	5.97	8.85
03	VZ97MBW1	VZ97MBW1	01/23/13	1409	5.98	8.85
04	VZ97LCSW1	VZ97LCSW1	01/23/13	1430	5.98	8.85
05	VZ97LCSDW1	VZ97LCSDW1	01/23/13	1451	5.98	8.85
06	CSIA20130114	VZ97S	01/23/13	1512	5.98	8.85
07	CSIA20130111	VZ97T	01/23/13	1532	5.98	8.86
08	CHEVRON	DIESEL#2	01/23/13	1553	5.98	8.85
09	CHEVRON	MOIL#2	01/23/13	1613	5.98	8.85
10	CHEVRON	DIESEL#3	01/23/13	1957	5.98	8.84
11	CHEVRON	MOIL#3	01/23/13	2017	5.98	8.85
12	VZ97MBS1	VZ97MBS1	01/23/13	2215	5.98	8.85
13	VZ97LCSS1	VZ97LCSS1	01/23/13	2235	5.99	8.85
14	CSIA-2013010	VZ97A	01/23/13	2255	5.99	8.85
15	CSIA-2013010	VZ97B	01/23/13	2315	5.99	8.85
16	CSIA-2013010	VZ97C	01/23/13	2335	5.98	8.85
17	CHEVRON	DIESEL#4	01/23/13	2355	5.98	8.84
18	CHEVRON	MOIL#4	01/24/13	0015	5.98	8.85
19	CSIA-2013010	VZ97D	01/24/13	0035	5.97	8.84
20	CSIA-2013010	VZ97E	01/24/13	0055	5.98	8.85
21	CSIA20130109	VZ97F	01/24/13	0114	5.98	8.85
22	CSIA20130109	VZ97G	01/24/13	0134	5.97	8.84
23	CSIA20130109	VZ97H	01/24/13	0154	5.98	8.85
24	CSIA20130109	VZ97I	01/24/13	0214	5.98	8.85
25	CSIA20130109	VZ97J	01/24/13	0234	5.98	8.85
26	CSIA20130109	VZ97JMS	01/24/13	0254	5.98	8.85
27	CSIA20130109	VZ97JMSD	01/24/13	0313	5.98	8.85
28	CHEVRON	DIESEL#5	01/24/13	0353	5.98	8.83
29	CHEVRON	MOIL#5	01/24/13	0413	5.97	8.84
30	CHEVRON	DIESEL#2	01/25/13	0125	5.96	8.84
31	CHEVRON	MOIL#2	01/25/13	0145	5.96	8.84
32	CSIA20130110	VZ97K	01/25/13	0205	5.95	8.82

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

FORM VIII TPH

8

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR

SDG No.: VZ97 Project: CHEVRON

Instrument ID: FID4A GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 5.98 TRIAC: 8.86

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01	CSIA20130110	VZ97L	01/25/13	0225	5.96	8.84
02	CSIA20130110	VZ97M	01/25/13	0245	5.96	8.83
03	CSIA20130110	VZ97N	01/25/13	0305	5.97	8.84
04	CSIA20130110	VZ97O	01/25/13	0325	5.97	8.87
05	CSIA20130111	VZ97P	01/25/13	0345	5.95	8.82
06	CSIA20130111	VZ97Q	01/25/13	0405	5.95	8.82
07	CSIA20130111	VZ97R	01/25/13	0425	5.96	8.84
08	CHEVRON	DIESEL#3	01/25/13	0445	5.96	8.87
09	CHEVRON	MOIL#3	01/25/13	0506	5.96	8.84

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

FORM VIII TPH

TPHG Analysis
Report and Summary QC Forms

ARI Job ID: VZ97

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Matrix: Water

Data Release Authorized: MW
Reported: 01/24/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
Event: 120007-01.01TO3.2
Date Sampled: 01/11/13
Date Received: 01/16/13

ARI ID	Client ID	Analysis Date	DL	Range	Result
MB-012113	Method Blank	01/21/13	1.0	Gasoline	< 0.25 U
13-1100		PID1		HC ID	---
				Trifluorotoluene	90.9%
				Bromobenzene	100%
VZ97S	CSIA20130114-001DW	01/21/13	1.0	**Gasoline**	**0.28**
13-1100		PID1		HC ID	GRO
				Trifluorotoluene	90.8%
				Bromobenzene	97.3%
MB-011813	Method Blank	01/18/13	1.0	Gasoline	< 0.25 U
13-1113		PID1		HC ID	---
				Trifluorotoluene	86.8%
				Bromobenzene	95.2%
VZ97U	Trip Blanks	01/18/13	1.0	Gasoline	< 0.25 U
13-1113		PID1		HC ID	---
				Trifluorotoluene	87.0%
				Bromobenzene	93.0%

Gasoline values reported in mg/L (ppm)

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

ANALYTICAL RESOURCES INCORPORATED

TPHG WATER SURROGATE RECOVERY SUMMARY

ARI Job: VZ97
Matrix: Water

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
Event: 120007-01.01TO3.2

Client ID	TFT	BBZ	TOT OUT
MB-012113	90.9%	100%	0
LCS-012113	94.4%	97.5%	0
LCSD-012113	96.3%	99.8%	0
CSIA20130114-001DW	90.8%	97.3%	0
MB-011813	86.8%	95.2%	0
LCS-011813	93.4%	97.2%	0
LCSD-011813	91.7%	95.5%	0
Trip Blanks	87.0%	93.0%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(80-120)
(BBZ) = Bromobenzene	(80-120)	(80-120)

Log Number Range: 13-1100 to 13-1113

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Matrix: Soil

Data Release Authorized: MW
Reported: 01/24/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
Event: 120007-01.01TO3.2
Date Sampled: 01/07/13
Date Received: 01/15/13

ARI ID	Client ID	Analysis Date	Basis	Range	Result
MB-011813	Method Blank	01/18/13	Dry	Gasoline	< 5.0 U
13-1082		PID1		HC ID	---
				Trifluorotoluene	86.8%
				Bromobenzene	95.2%
VZ97A	CSIA-20130107-001B	01/18/13	Dry	Gasoline	< 1.8 U
13-1082		PID1		HC ID	---
				Trifluorotoluene	87.7%
				Bromobenzene	95.0%
VZ97B	CSIA-20130107-002B	01/18/13	Dry	Gasoline	< 2.8 U
13-1083		PID1		HC ID	---
				Trifluorotoluene	86.5%
				Bromobenzene	93.8%
VZ97C	CSIA-20130107-003S+3	01/18/13	Dry	Gasoline	< 3.3 U
13-1084		PID1		HC ID	---
				Trifluorotoluene	84.2%
				Bromobenzene	91.9%
VZ97D	CSIA-20130107-004S+6	01/18/13	Dry	Gasoline	< 5.1 U
13-1085		PID1		HC ID	---
				Trifluorotoluene	86.7%
				Bromobenzene	95.2%
VZ97E	CSIA-20130107-005S+9	01/18/13	Dry	Gasoline	< 3.0 U
13-1086		PID1		HC ID	---
				Trifluorotoluene	83.8%
				Bromobenzene	94.2%
VZ97F	CSIA20130109-006B	01/18/13	Dry	Gasoline	< 2.8 U
13-1087		PID1		HC ID	---
				Trifluorotoluene	83.0%
				Bromobenzene	90.4%
VZ97G	CSIA20130109-007B	01/18/13	Dry	Gasoline	< 2.1 U
13-1088		PID1		HC ID	---
				Trifluorotoluene	82.9%
				Bromobenzene	92.4%
VZ97H	CSIA20130109-008S+3	01/18/13	Dry	Gasoline	< 3.0 U
13-1089		PID1		HC ID	---
				Trifluorotoluene	86.3%
				Bromobenzene	95.7%
VZ97I	CSIA20130109-009S+6	01/18/13	Dry	Gasoline	< 2.4 U
13-1090		PID1		HC ID	---
				Trifluorotoluene	82.9%
				Bromobenzene	94.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Matrix: Soil

Data Release Authorized: MW
Reported: 01/24/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
Event: 120007-01.01TO3.2
Date Sampled: 01/09/13
Date Received: 01/16/13

ARI ID	Client ID	Analysis Date	Basis	Range	Result
VZ97J	CSIA20130109-010S+9	01/18/13	Dry	**Gasoline**	**14**
13-1091		PID1		HC ID	GRO
				Trifluorotoluene	83.9%
				Bromobenzene	96.4%
MB-012113	Method Blank	01/21/13	Dry	Gasoline	< 5.0 U
13-1092		PID1		HC ID	---
				Trifluorotoluene	90.9%
				Bromobenzene	100%
VZ97K	CSIA20130110-011B	01/21/13	Dry	**Gasoline**	**20**
13-1092		PID1		HC ID	GRO
				Trifluorotoluene	85.4%
				Bromobenzene	94.2%
VZ97L	CSIA20130110-012B	01/21/13	Dry	**Gasoline**	**5.6**
13-1093		PID1		HC ID	GRO
				Trifluorotoluene	86.2%
				Bromobenzene	91.1%
VZ97M	CSIA20130110-013S+3	01/21/13	Dry	**Gasoline**	**100**
13-1094		PID1		HC ID	GRO
				Trifluorotoluene	87.8%
				Bromobenzene	116%
VZ97N	CSIA20130110-014S+6	01/18/13	Dry	**Gasoline**	**95**
13-1095		PID1		HC ID	GRO
				Trifluorotoluene	82.8%
				Bromobenzene	92.5%
VZ97O	CSIA20130110-015S+9	01/21/13	Dry	**Gasoline**	**65**
13-1096		PID1		HC ID	GRO
				Trifluorotoluene	84.1%
				Bromobenzene	105%
VZ97P	CSIA20130111-016B	01/21/13	Dry	**Gasoline**	**26**
13-1097		PID1		HC ID	GRO
				Trifluorotoluene	86.4%
				Bromobenzene	98.9%
VZ97Q	CSIA20130111-017B	01/21/13	Dry	**Gasoline**	**8.6**
13-1098		PID1		HC ID	GRO
				Trifluorotoluene	85.6%
				Bromobenzene	96.0%
VZ97R	CSIA20130111-018S+9	01/18/13	Dry	**Gasoline**	**100**
13-1099		PID1		HC ID	GRO
				Trifluorotoluene	82.3%
				Bromobenzene	105%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Matrix: Soil

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
Event: 120007-01.01TO3.2
Date Sampled: 01/11/13
Date Received: 01/16/13

Data Release Authorized:
Reported: 01/24/13

ARI ID	Client ID	Analysis Date	Basis	Range	Result

Gasoline values reported in mg/kg (ppm)

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

Results corrected for soil moisture content per Section 11.10.5 of EPA Method 8000C.

ANALYTICAL RESOURCES INCORPORATED

TPHG SOIL SURROGATE RECOVERY SUMMARY

ARI Job: VZ97
Matrix: Soil

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
Event: 120007-01.01TO3.2

Client ID	BFB	TFT	BBZ	TOT OUT
MB-011813	NA	86.8%	95.2%	0
LCS-011813	NA	93.4%	97.2%	0
LCSD-011813	NA	91.7%	95.5%	0
CSIA-20130107-001B	NA	87.7%	95.0%	0
CSIA-20130107-001B MS	NA	86.1%	94.7%	0
CSIA-20130107-001B MSD	NA	81.0%	92.0%	0
CSIA-20130107-002B	NA	86.5%	93.8%	0
CSIA-20130107-003S+3	NA	84.2%	91.9%	0
CSIA-20130107-004S+6	NA	86.7%	95.2%	0
CSIA-20130107-005S+9	NA	83.8%	94.2%	0
CSIA20130109-006B	NA	83.0%	90.4%	0
CSIA20130109-007B	NA	82.9%	92.4%	0
CSIA20130109-008S+3	NA	86.3%	95.7%	0
CSIA20130109-009S+6	NA	82.9%	94.8%	0
CSIA20130109-010S+9	NA	83.9%	96.4%	0
MB-012113	NA	90.9%	100%	0
LCS-012113	NA	94.4%	97.5%	0
LCSD-012113	NA	96.3%	99.8%	0
CSIA20130110-011B	NA	85.4%	94.2%	0
CSIA20130110-012B	NA	86.2%	91.1%	0
CSIA20130110-013S+3	NA	87.8%	116%	0
CSIA20130110-014S+6	NA	82.8%	92.5%	0
CSIA20130110-015S+9	NA	84.1%	105%	0
CSIA20130111-016B	NA	86.4%	98.9%	0
CSIA20130111-017B	NA	85.6%	96.0%	0
CSIA20130111-018S+9	NA	82.3%	105%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(65-128)
(BBZ) = Bromobenzene	(80-120)	(52-149)

Log Number Range: 13-1082 to 13-1099

FORM II TPHG

VZ97 00197

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Page 1 of 1

Sample ID: CSIA-20130107-001B
MATRIX SPIKE

Lab Sample ID: VZ97A
LIMS ID: 13-1082
Matrix: Soil
Data Release Authorized:
Reported: 01/24/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
Event: 120007-01.01TO3.2
Date Sampled: 01/07/13
Date Received: 01/15/13

Date Analyzed MS: 01/18/13 22:49
MSD: 01/18/13 23:20
Instrument/Analyst MS: PID1/PKC
MSD: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount MS: 271 mg-dry-wt
MSD: 271 mg-dry-wt

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Gasoline Range Hydrocarbons	< 1.85 U	21.1	18.5	114%	17.9	18.5	96.8%	16.4%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	MS	MSD
Trifluorotoluene	86.1%	81.0%
Bromobenzene	94.7%	92.0%

VZ97 00199

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Page 1 of 1

Sample ID: LCS-011813
LAB CONTROL SAMPLE

Lab Sample ID: LCS-011813
LIMS ID: 13-1113
Matrix: Water
Data Release Authorized: MW
Reported: 01/24/13

QC Report No: VZ97-Anchor QEA
Project: Cheveron Sub Area Interim Action
Event: 12007-01.01TO3.2
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 01/18/13 09:46
LCSD: 01/18/13 10:17
Instrument/Analyst LCS: PID1/PKC
LCSD: PID1/PKC

Purge Volume: 5.0 mL

Dilution Factor LCS: 1.0
LCSD: 1.0

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	1.15	1.00	115%	1.08	1.00	108%	6.3%

Reported in mg/L (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	93.4%	91.7%
Bromobenzene	97.2%	95.5%

VZ97:00199

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Page 1 of 1

Sample ID: LCS-011813
LAB CONTROL SAMPLE

Lab Sample ID: LCS-011813
LIMS ID: 13-1082
Matrix: Soil
Data Release Authorized:
Reported: 01/24/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
Event: 120007-01.01TO3.2
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 01/18/13 09:46
LCSD: 01/18/13 10:17
Instrument/Analyst LCS: PID1/PKC
LCSD: PID1/PKC

Purge Volume: 5.0 mL

Sample Amount LCS: 100 mg-dry-wt
LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	57.4	50.0	115%	54.0	50.0	108%	6.1%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	93.4%	91.7%
Bromobenzene	97.2%	95.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Page 1 of 1

Sample ID: LCS-012113
LAB CONTROL SAMPLE

Lab Sample ID: LCS-012113
LIMS ID: 13-1100
Matrix: Water
Data Release Authorized: MW
Reported: 01/24/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
Event: 120007-01.01TO3.2
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 01/21/13 11:04
LCSD: 01/21/13 11:35
Instrument/Analyst LCS: PID1/PKC
LCSD: PID1/PKC

Purge Volume: 5.0 mL

Dilution Factor LCS: 1.0
LCSD: 1.0

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	1.07	1.00	107%	1.03	1.00	103%	3.8%

Reported in mg/L (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	94.4%	96.3%
Bromobenzene	97.5%	99.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG **Sample ID: LCS-012113**
Page 1 of 1 **LAB CONTROL SAMPLE**

Lab Sample ID: LCS-012113 QC Report No: VZ97-Anchor QEA
LIMS ID: 13-1092 Project: Chevron Sub Area Interim Action
Matrix: Soil Event: 120007-01.01TO3.2
Data Release Authorized: Date Sampled: NA
Reported: 01/24/13 Date Received: NA

Date Analyzed LCS: 01/21/13 11:04 Purge Volume: 5.0 mL
LCSD: 01/21/13 11:35
Instrument/Analyst LCS: PID1/PKC Sample Amount LCS: 100 mg-dry-wt
LCSD: PID1/PKC LCSD: 100 mg-dry-wt

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	53.5	50.0	107%	51.3	50.0	103%	4.2%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	94.4%	96.3%
Bromobenzene	97.5%	99.8%

BETX/GAS METHOD BLANK SUMMARY

BLANK NO.

MB011713

Lab Name: ANALYTICAL RESOURCES INC

Client: ANCHOR QEA

SDG No.: VZ97

Project No.: CHEVRON SUB AREA

Date Analyzed : 01/18/13

Matrix: SOIL

Time Analyzed : 1048

Instrument ID : PID1

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	LCS011713	LCS011713	01/18/13
02	LCSD011713	LCSD011713	01/18/13
03	CSIA-2013010	VZ97A	01/18/13
04	CSIA-2013010	VZ97B	01/18/13
05	CSIA-2013010	VZ97C	01/18/13
06	CSIA-2013010	VZ97D	01/18/13
07	CSIA-2013010	VZ97E	01/18/13
08	CSIA20130109	VZ97F	01/18/13
09	CSIA20130109	VZ97G	01/18/13
10	CSIA20130109	VZ97H	01/18/13
11	CSIA20130109	VZ97I	01/18/13
12	CSIA20130109	VZ97J	01/18/13
13	CSIA20130110	VZ97N	01/18/13
14	CSIA20130111	VZ97R	01/18/13
15	CSIA-2013010	VZ97AMS	01/18/13
16	CSIA-2013010	VZ97AMSD	01/18/13
17			
18			
19			
20			
21			
22			
23			
24			
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28			
29			
30			

VZ97 : 00203

4

BETX/GAS METHOD BLANK SUMMARY

BLANK NO.

MB011713

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

SDG No.: VZ97 Project No.: CHEVRON SUB AREA

Date Analyzed : 01/18/13 Matrix: WATER

Time Analyzed : 1048 Instrument ID : PID1

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	LCS011713	LCS011713	01/18/13
02	LCSD011713	LCSD011713	01/18/13
03	TRIP BLANKS	VZ97U	01/18/13
04			
05			
06			
07			
08			
09			
10			
11			
12			
13			
14			
15			
16			
17			
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VZ97 02284

BETX/GAS METHOD BLANK SUMMARY

BLANK NO.

MB0121

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

SDG No.: VZ97 Project No.: CHEVRON SUB AREA

Date Analyzed : 01/21/13 Matrix: SOIL

Time Analyzed : 1206 Instrument ID : PID1

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	LCS0121	LCS0121	01/21/13
02	LCSD0121	LCSD0121	01/21/13
03	CSIA20130110	VZ97K	01/21/13
04	CSIA20130110	VZ97L	01/21/13
05	CSIA20130110	VZ97M	01/21/13
06	CSIA20130110	VZ97O	01/21/13
07	CSIA20130111	VZ97P	01/21/13
08	CSIA20130111	VZ97Q	01/21/13
09			
10			
11			
12			
13			
14			
15			
16			
17			
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20			
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VZ97 00085

BETX/GAS METHOD BLANK SUMMARY

BLANK NO.

MB0121

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

SDG No.: VZ97 Project No.: CHEVRON SUB AREA

Date Analyzed : 01/21/13 Matrix: WATER

Time Analyzed : 1206 Instrument ID : PID1

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES, MS, and MSD:

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	LCS0121	LCS0121	01/21/13
02	LCSD0121	LCSD0121	01/21/13
03	CSIA20130114	VZ97S	01/21/13
04			
05			
06			
07			
08			
09			
10			
11			
12			
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6a

GAS INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: ANCHOR QEA

Instrument/Det: PID1.I/RTX 502-2 FID Project: CHEVRON SUB AREA INTER

Calibration Date: 23-OCT-2012 SDG No.: VZ97

Gas Range	RF1 0.1	RF2 0.25	RF3 1.0	RF4 2.5	RF5 5.0	RF6 10	Ave RF	%RSD
WA Gas	371020	379456	358654	339293	340260	360001	358114	4.5
AK Gas	579135	648986	585010	543304	542244	598628	582885	6.8
NW Gas	394025	395072	376837	353939	355113	375572	375093	4.8
Cal Gas	761375	793504	721427	674216	671666	730795	725497	6.6
8015Gas	742770	796044	725276	674926	670493	732827	723723	6.4
Surrogates Rel. Rec.	RF1	RF2	RF3	RF4	RF5	RF6	Ave RF	%RSD
TFT(Surr)	33.31818	31.81818	+++++	31.61194	31.34000	30.78195		
	30.91573	30.69500					31.49728	2.884
BB(Surr)	22.00000	20.54545	+++++	20.70149	20.31000	19.83459		
	19.84270	18.93000					20.30918	4.677

<- Indicates %RSD outside limits
Surrogate areas are not included in RF calculation.

Quant Ranges :
- WA Gas: Toluene - nC12
- AK Gas: nC6 - nC10
- NW Gas: Toluene - Naphthalene
- Cal Gas: nC6 - nC12
- 8015 Gas: 2-Methylpentane - 1,2,4-Trimethylbenzene

Calibration Files	Analysis Time
1023a013.d	23-OCT-2012 22:13
1023a014.d	23-OCT-2012 22:42
1023a015.d	23-OCT-2012 23:11
1023a016.d	23-OCT-2012 23:40
1023a017.d	24-OCT-2012 00:10
1023a018.d	24-OCT-2012 00:39

Surr Calibration Files	Analysis Time
1023a011.d	23-OCT-2012 21:15
1023a010.d	23-OCT-2012 20:45
1023a009.d	23-OCT-2012 20:16
1023a008.d	23-OCT-2012 19:47
1023a007.d	23-OCT-2012 19:18
1023a006.d	23-OCT-2012 18:49
1023a005.d	23-OCT-2012 18:20
1023a004.d	23-OCT-2012 17:50

7a
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: ANCHOR QEA

ICal Date: 23-OCT-2012
Project: CHEVRON SUB AREA

CCal Date: 18-JAN-2013
SDG No.: VZ97

Lab File Name: 0118a003.d
Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	917574	2.56	2.50	2.5
AKGas (C6-C10)	1454206	2.49	2.50	-0.2
NWGas (Tol-Nap)	970072	2.59	2.50	3.4
8015C (2MP-TMB)	1796898	2.48	2.50	-0.7

* Surrogate areas are subtracted from Total Area
<- Indicates an RPD outside QC limits

7b
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: ANCHOR QEA

ICal Date: 23-OCT-2012
Project: CHEVRON SUB AREA

CCal Date: 18-JAN-2013
SDG No.: VZ97

Lab File Name: 0118a003.d
Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	55629	98.5	100.0	-1.5
Bromobenzene	19456	100.3	100.0	0.3

FORM VII-Surr

VZ97 00289

7a
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: ANCHOR QEA

ICal Date: 23-OCT-2012
Project: CHEVRON SUB AREA

CCal Date: 18-JAN-2013
SDG No.: VZ97

Lab File Name: 0118a014.d
Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	844085	2.36	2.50	-5.7
AKGas (C6-C10)	1373275	2.36	2.50	-5.8
NWGas (Tol-Nap)	885786	2.36	2.50	-5.5
8015C (2MP-TMB)	1696670	2.34	2.50	-6.2

* Surrogate areas are subtracted from Total Area
<- Indicates an RPD outside QC limits

7b
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: ANCHOR QEA

ICal Date: 23-OCT-2012
Project: CHEVRON SUB AREA

CCal Date: 18-JAN-2013
SDG No.: VZ97

Lab File Name: 0118a014.d
Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	54240	96.8	100.0	-3.2
Bromobenzene	18928	96.2	100.0	-3.8

FORM VII-Surr

VZ97 00214

7a
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: ANCHOR QEA

ICal Date: 23-OCT-2012
Project: CHEVRON SUB AREA

CCal Date: 18-JAN-2013
SDG No.: VZ97

Lab File Name: 0118a025.d
Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	824374	2.30	2.50	-7.9
AKGas (C6-C10)	1285246	2.20	2.50	-11.8
NWGas (Tol-Nap)	867882	2.31	2.50	-7.4
8015C (2MP-TMB)	1595084	2.20	2.50	-11.8

* Surrogate areas are subtracted from Total Area
<- Indicates an RPD outside QC limits

7b
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: ANCHOR QEA

ICal Date: 23-OCT-2012
Project: CHEVRON SUB AREA

CCal Date: 18-JAN-2013
SDG No.: VZ97

Lab File Name: 0118a025.d
Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	54064	98.4	100.0	-1.6
Bromobenzene	19599	100.4	100.0	0.4

FORM VII-Surr

VZ97:00213

7a
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: ANCHOR QEA

ICal Date: 23-OCT-2012
Project: CHEVRON SUB AREA

CCal Date: 19-JAN-2013
SDG No.: VZ97

Lab File Name: 0118a036.d
Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	807500	2.25	2.50	-9.8
AKGas (C6-C10)	1253271	2.15	2.50	-14.0
NWGas (Tol-Nap)	848452	2.26	2.50	-9.5
8015C (2MP-TMB)	1561024	2.16	2.50	-13.7

* Surrogate areas are subtracted from Total Area
<- Indicates an RPD outside QC limits

7b
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: ANCHOR QEA

ICal Date: 23-OCT-2012
Project: CHEVRON SUB AREA

CCal Date: 19-JAN-2013
SDG No.: VZ97

Lab File Name: 0118a036.d
Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	54292	98.4	100.0	-1.6
Bromobenzene	19352	101.5	100.0	1.5

FORM VII-Surr

7a
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: ANCHOR QEA

ICal Date: 23-OCT-2012
Project: CHEVRON SUB AREA

CCal Date: 21-JAN-2013
SDG No.: VZ97

Lab File Name: 0121a003.d
Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	885048	2.47	2.50	-1.1
AKGas (C6-C10)	1396526	2.40	2.50	-4.2
NWGas (Tol-Nap)	934771	2.49	2.50	-0.3
8015C (2MP-TMB)	1725464	2.38	2.50	-4.6

* Surrogate areas are subtracted from Total Area
<- Indicates an RPD outside QC limits

7b
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: ANCHOR QEA

ICal Date: 23-OCT-2012
Project: CHEVRON SUB AREA

CCal Date: 21-JAN-2013
SDG No.: VZ97

Lab File Name: 0121a003.d
Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	55483	100.1	100.0	0.1
Bromobenzene	19410	98.7	100.0	-1.3

VZ97 00217

7a
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: ANCHOR QEA

ICal Date: 23-OCT-2012
Project: CHEVRON SUB AREA

CCal Date: 21-JAN-2013
SDG No.: VZ97

Lab File Name: 0121a014.d
Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	832032	2.32	2.50	-7.1
AKGas (C6-C10)	1327206	2.28	2.50	-8.9
NWGas (Tol-Nap)	882512	2.35	2.50	-5.9
8015C (2MP-TMB)	1655721	2.29	2.50	-8.5

* Surrogate areas are subtracted from Total Area
<- Indicates an RPD outside QC limits

7b
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: ANCHOR QEA

ICal Date: 23-OCT-2012
Project: CHEVRON SUB AREA

CCal Date: 21-JAN-2013
SDG No.: VZ97

Lab File Name: 0121a014.d
Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	53853	98.8	100.0	-1.2
Bromobenzene	18784	98.0	100.0	-2.0

VZ97 00219

7a
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: ANCHOR QEA

ICal Date: 23-OCT-2012
Project: CHEVRON SUB AREA

CCal Date: 21-JAN-2013
SDG No.: VZ97

Lab File Name: 0121a025.d
Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	781650	2.18	2.50	-12.7
AKGas (C6-C10)	1201992	2.06	2.50	-17.5
NWGas (Tol-Nap)	823296	2.19	2.50	-12.2
8015C (2MP-TMB)	1497058	2.07	2.50	-17.3

* Surrogate areas are subtracted from Total Area
<- Indicates an RPD outside QC limits

7b
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: ANCHOR QEA

ICal Date: 23-OCT-2012
Project: CHEVRON SUB AREA

CCal Date: 21-JAN-2013
SDG No.: VZ97

Lab File Name: 0121a025.d
Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	52017	93.8	100.0	-6.2
Bromobenzene	18438	98.2	100.0	-1.8

FORM VII-Surr

BETX/GAS ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

SDG No.: VZ97 Project: CHEVRON SUB AREA INTERIM

Instrument ID: PID1 GC Detector: RTX 502-2 FID

Run Date: 10/23/12

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

	METHOD SURROGATE RT S1 : 7.89 S2 : 15.39					
	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01		RINSE	10/23/12	0941		
02		RT1023+BCAL1	10/23/12	1010	7.88	15.39
03		GCAL1	10/23/12	1039	7.88	15.39
04		B 200	10/23/12	1750	7.89	15.39
05		B 100	10/23/12	1820	7.88	15.39
06		B 50	10/23/12	1849	7.88	15.39
07		B 25	10/23/12	1918	7.89	15.39
08		B 5	10/23/12	1947	7.88	15.39
09		B 1	10/23/12	2016	7.88	15.39
10		B 0.5	10/23/12	2045	7.88	15.39
11		B 0.25	10/23/12	2115	7.89	15.39
12		BICV	10/23/12	2144	7.88	15.39
13		G 0.10	10/23/12	2213	7.89	15.39
14		G 0.25	10/23/12	2242	7.89	15.39
15		G 1.0	10/23/12	2311	7.89	15.39
16		G 2.5	10/23/12	2340	7.88	15.39
17		G 5.0	10/24/12	0010	7.88	15.39
18		G 10	10/24/12	0039	7.88	15.39
19		GICV	10/24/12	0108	7.88	15.39

QC LIMITS

S1 = TFT(Surr) (+/- 0.07 MINUTES)

S2 = BB(Surr) (+/- 0.07 MINUTES)

* Values outside of QC limits.

FORM VIII-2 BETX

BETX/GAS ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

SDG No.: VZ97 Project: CHEVRON SUB AREA

Instrument ID: PID1 GC Detector: RTX 502-2 FID

Run Date: 01/18/13

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

METHOD SURROGATE RT
S1 : 7.88 S2 : 15.38

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01	RT/BCAL	RT/BCAL	01/18/13	0843	7.89	15.38
02	CHEVRON SUB	GCAL 1	01/18/13	0915	7.88	15.38
03	LCS011713	LCS011713	01/18/13	0946	7.88	15.38
04	LCSD011713	LCSD011713	01/18/13	1017	7.89	15.38
05	MB011713	MB011713	01/18/13	1048	7.89	15.38
06	TRIP BLANKS	VZ97U	01/18/13	1120	7.89	15.39
07	CSIA-2013010	VZ97A	01/18/13	1223	7.89	15.39
08	CSIA-2013010	VZ97B	01/18/13	1254	7.89	15.39
09	CSIA-2013010	VZ97C	01/18/13	1325	7.89	15.38
10	CSIA-2013010	VZ97D	01/18/13	1356	7.89	15.39
11	CSIA-2013010	VZ97E	01/18/13	1427	7.89	15.39
12	CHEVRON SUB	GCAL 2	01/18/13	1458	7.88	15.39
13	CSIA20130109	VZ97F	01/18/13	1528	7.89	15.38
14	CSIA20130109	VZ97G	01/18/13	1559	7.89	15.39
15	CSIA20130109	VZ97H	01/18/13	1630	7.88	15.38
16	CSIA20130109	VZ97I	01/18/13	1707	7.89	15.39
17	CSIA20130109	VZ97J	01/18/13	1739	7.89	15.38
18	CSIA20130110	VZ97N	01/18/13	1943	7.89	15.39
19	CHEVRON SUB	GCAL 3	01/18/13	2045	7.89	15.39
20	CSIA20130111	VZ97R	01/18/13	2218	7.89	15.38
21	CSIA-2013010	VZ97AMS	01/18/13	2249	7.89	15.39
22	CSIA-2013010	VZ97AMSD	01/18/13	2320	7.89	15.39
23	CHEVRON SUB	GCAL 4	01/19/13	0227	7.88	15.39

QC LIMITS

S1 = TFT(Surr) (+/- 0.07 MINUTES)
S2 = BB(Surr) (+/- 0.07 MINUTES)

* Values outside of QC limits.

FORM VIII-2 BETX

VZ97:00223

BETX/GAS ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: ANCHOR QEA

SDG No.: VZ97 Project: CHEVRON SUB AREA

Instrument ID: PID1 GC Detector: RTX 502-2 FID

Run Date: 01/21/13

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

METHOD SURROGATE RT
S1 : 7.89 S2 : 15.39

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT	S1 #	S2 RT	S2 #
01	RT0121+BCAL	RT0121+BCAL	01/21/13	1003	7.89		15.39	
02	CHEVRON SUB	GCAL 1	01/21/13	1033	7.88		15.39	
03	LCS0121	LCS0121	01/21/13	1104	7.89		15.39	
04	LCSD0121	LCSD0121	01/21/13	1135	7.89		15.38	
05	MB0121	MB0121	01/21/13	1206	7.89		15.39	
06	CSIA20130114	VZ97S	01/21/13	1425	7.89		15.39	
07	CSIA20130110	VZ97K	01/21/13	1628	7.89		15.39	
08	CSIA20130110	VZ97L	01/21/13	1659	7.89		15.39	
09	CHEVRON SUB	GCAL 2	01/21/13	1730	7.89		15.39	
10	CSIA20130110	VZ97M	01/21/13	1801	7.89		15.39	
11	CSIA20130110	VZ97O	01/21/13	1832	7.89		15.39	
12	CSIA20130111	VZ97P	01/21/13	1903	7.89		15.39	
13	CSIA20130111	VZ97Q	01/21/13	1934	7.89		15.39	
14	CHEVRON SUB	GCAL 3	01/21/13	2310	7.89		15.39	

QC LIMITS

S1 = TFT(Surr) (+/- 0.07 MINUTES)

S2 = BB(Surr) (+/- 0.07 MINUTES)

* Values outside of QC limits.

FORM VIII-2 BETX

VZ97 : 00224

Metals Analysis
Report and Summary QC Forms

ARI Job ID: VZ97

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: Chevron Sub Area Int

SDG: VZ97

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
PBW	VZ97MB1	13-1100	
LCSW	VZ97MB1SPK	13-1100	
CSIA20130114-001DW	VZ97S	13-1100	
CSIA20130114-001DWD	VZ97SDUP	13-1100	
CSIA20130114-001DWS	VZ97SSPK	13-1100	

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

Comments: _____

THIS DATA PACKAGE HAS BEEN REVIEWED AND AUTHORIZED FOR RELEASE BY:

Signature: _____ Name: Jay Kuhn

Date: 1/24/13 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: CSIA20130114-001DW
SAMPLE

Lab Sample ID: VZ97S
LIMS ID: 13-1100
Matrix: Water
Data Release Authorized:
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: 01/11/13
Date Received: 01/16/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	01/18/13	6010C	01/21/13	7440-38-2	Arsenic	0.05	0.05	U
3010A	01/18/13	6010C	01/21/13	**7440-39-3**	**Barium**	0.003	**0.249**	
3010A	01/18/13	6010C	01/21/13	**7440-70-2**	**Calcium**	0.05	**228**	
3010A	01/18/13	6010C	01/21/13	7440-47-3	Chromium	0.005	0.005	U
3010A	01/18/13	6010C	01/21/13	**7440-50-8**	**Copper**	0.002	**0.007**	
3010A	01/18/13	6010C	01/21/13	**7439-89-6**	**Iron**	0.05	**1.56**	
3010A	01/18/13	6010C	01/21/13	7439-92-1	Lead	0.02	0.02	U
3010A	01/18/13	6010C	01/21/13	**7439-95-4**	**Magnesium**	0.05	**271**	
3010A	01/18/13	6010C	01/21/13	**7439-96-5**	**Manganese**	0.001	**0.720**	
7470A	01/18/13	7470A	01/18/13	7439-97-6	Mercury	0.0001	0.0001	U
3010A	01/18/13	6010C	01/21/13	**7440-02-0**	**Nickel**	0.01	**0.01**	
3010A	01/18/13	6010C	01/21/13	**7440-09-7**	**Potassium**	0.5	**83.2**	
3010A	01/18/13	6010C	01/21/13	**7440-23-5**	**Sodium**	0.5	**2,260**	
3010A	01/18/13	6010C	01/21/13	**7440-66-6**	**Zinc**	0.01	**0.06**	

U-Analyte undetected at given RL
RL-Reporting Limit

VZ97 : 000027

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: CSIA20130114-001DW
MATRIX SPIKE

Lab Sample ID: VZ97S
LIMS ID: 13-1100
Matrix: Water
Data Release Authorized:
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: 01/11/13
Date Received: 01/16/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Arsenic	6010C	0.05 U	2.21	2.00	110%	
Barium	6010C	0.249	2.16	2.00	95.6%	
Calcium	6010C	228	233	10.0	50.0%	H
Chromium	6010C	0.005 U	0.487	0.500	97.4%	
Copper	6010C	0.007	0.532	0.500	105%	
Iron	6010C	1.56	3.47	2.00	95.5%	
Lead	6010C	0.02 U	1.85	2.00	92.5%	
Magnesium	6010C	271	273	10.0	20.0%	H
Manganese	6010C	0.720	1.17	0.500	90.0%	
Mercury	7470A	0.0001 U	0.0009	0.0010	90.0%	
Nickel	6010C	0.01	0.48	0.50	94.0%	
Potassium	6010C	83.2	91.3	10.0	81.0%	H
Sodium	6010C	2,260	2,190	10.0	-700%	H
Zinc	6010C	0.06	0.52	0.50	92.0%	

Reported in mg/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

VZ97:00228

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: CSIA20130114-001DW
DUPLICATE

Lab Sample ID: VZ97S
LIMS ID: 13-1100
Matrix: Water
Data Release Authorized:
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: 01/11/13
Date Received: 01/16/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Arsenic	6010C	0.05 U	0.05 U	0.0%	+/- 0.05	L
Barium	6010C	0.249	0.250	0.4%	+/- 20%	
Calcium	6010C	228	227	0.4%	+/- 20%	
Chromium	6010C	0.005 U	0.005 U	0.0%	+/- 0.005	L
Copper	6010C	0.007	0.007	0.0%	+/- 0.002	L
Iron	6010C	1.56	1.57	0.6%	+/- 20%	
Lead	6010C	0.02 U	0.02 U	0.0%	+/- 0.02	L
Magnesium	6010C	271	270	0.4%	+/- 20%	
Manganese	6010C	0.720	0.724	0.6%	+/- 20%	
Mercury	7470A	0.0001 U	0.0001 U	0.0%	+/- 0.0001	L
Nickel	6010C	0.01	0.01	0.0%	+/- 0.01	L
Potassium	6010C	83.2	83.0	0.2%	+/- 20%	
Sodium	6010C	2,260	2,250	0.4%	+/- 20%	
Zinc	6010C	0.06	0.06	0.0%	+/- 20%	

Reported in mg/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: LAB CONTROL**

Lab Sample ID: VZ97LCS
LIMS ID: 13-1100
Matrix: Water
Data Release Authorized:
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Arsenic	6010C	2.06	2.00	103%	
Barium	6010C	2.00	2.00	100%	
Calcium	6010C	9.59	10.0	95.9%	
Chromium	6010C	0.506	0.500	101%	
Copper	6010C	0.507	0.500	101%	
Iron	6010C	2.02	2.00	101%	
Lead	6010C	2.00	2.00	100%	
Magnesium	6010C	10.1	10.0	101%	
Manganese	6010C	0.502	0.500	100%	
Mercury	7470A	0.0020	0.0020	100%	
Nickel	6010C	0.50	0.50	100%	
Potassium	6010C	9.7	10.0	97.0%	
Sodium	6010C	10.3	10.0	103%	
Zinc	6010C	0.49	0.50	98.0%	

Reported in mg/L

N-Control limit not met
Control Limits: 80-120%

VZ97 00230

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: METHOD BLANK**

Lab Sample ID: VZ97MB
LIMS ID: 13-1100
Matrix: Water
Data Release Authorized:
Reported: 01/22/13

QC Report No: VZ97-Anchor QEA
Project: Chevron Sub Area Interim Action
120007-01.01TO3.2
Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/L	Q
3010A	01/18/13	6010C	01/21/13	7440-38-2	Arsenic	0.05	0.05	U
3010A	01/18/13	6010C	01/21/13	7440-39-3	Barium	0.003	0.003	U
3010A	01/18/13	6010C	01/21/13	7440-70-2	Calcium	0.05	0.05	U
3010A	01/18/13	6010C	01/21/13	7440-47-3	Chromium	0.005	0.005	U
3010A	01/18/13	6010C	01/21/13	7440-50-8	Copper	0.002	0.002	U
3010A	01/18/13	6010C	01/21/13	7439-89-6	Iron	0.05	0.05	U
3010A	01/18/13	6010C	01/21/13	7439-92-1	Lead	0.02	0.02	U
3010A	01/18/13	6010C	01/21/13	7439-95-4	Magnesium	0.05	0.05	U
3010A	01/18/13	6010C	01/21/13	7439-96-5	Manganese	0.001	0.001	U
7470A	01/18/13	7470A	01/18/13	7439-97-6	Mercury	0.0001	0.0001	U
3010A	01/18/13	6010C	01/21/13	7440-02-0	Nickel	0.01	0.01	U
3010A	01/18/13	6010C	01/21/13	7440-09-7	Potassium	0.5	0.5	U
3010A	01/18/13	6010C	01/21/13	7440-23-5	Sodium	0.5	0.5	U
3010A	01/18/13	6010C	01/21/13	7440-66-6	Zinc	0.01	0.01	U

U-Analyte undetected at given RL
RL-Reporting Limit

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: Chevron Sub Area Int

SDG: VZ97

UNITS: ug/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Arsenic	AS	ICP	IP012171	2000.0	2019.28	**101.0**	2000.0	2024.75	**101.2**	2009.30	**100.5**	2008.77	**100.4**	2010.54	**100.5**	1998.52	**99.9**
Barium	BA	ICP	IP012171	1000.0	1029.79	**103.0**	1000.0	1016.88	**101.7**	1001.51	**100.2**	1013.70	**101.4**	999.84	**100.0**	989.88	**99.0**
Calcium	CA	ICP	IP012171	2000.0	2067.18	**103.4**	2000.0	2035.64	**101.8**	2015.88	**100.8**	2040.50	**102.0**	2018.29	**100.9**	2007.90	**100.4**
Chromium	CR	ICP	IP012171	1000.0	1021.97	**102.2**	1000.0	1011.06	**101.1**	995.57	**99.6**	1007.73	**100.8**	1001.18	**100.1**	996.47	**99.6**
Copper	CU	ICP	IP012171	1000.0	1035.69	**103.6**	1000.0	1025.70	**102.6**	1015.81	**101.6**	1022.16	**102.2**	1023.35	**102.3**	1018.88	**101.9**
Iron	FE	ICP	IP012171	2000.0	2058.79	**102.9**	2000.0	2022.51	**101.1**	2008.39	**100.4**	2037.67	**101.9**	2025.83	**101.3**	2021.29	**101.1**
Lead	PB	ICP	IP012171	2000.0	2012.74	**100.6**	2000.0	2010.83	**100.5**	1994.71	**99.7**	2000.35	**100.0**	2001.83	**100.1**	1990.88	**99.5**
Magnesium	MG	ICP	IP012171	2000.0	2018.29	**100.9**	2000.0	2004.79	**100.2**	1990.01	**99.5**	2004.32	**100.2**	1983.98	**99.2**	1983.96	**99.2**
Manganese	MN	ICP	IP012171	1000.0	1028.70	**102.9**	1000.0	1011.51	**101.2**	999.84	**100.0**	1015.98	**101.6**	1010.31	**101.0**	1007.18	**100.7**
Mercury	HG	CVA	HG011802	8.0	7.74	**96.8**	4.0	3.86	**96.5**	3.87	**96.8**						
Nickel	NI	ICP	IP012171	1000.0	1025.13	**102.5**	1000.0	1018.02	**101.8**	999.75	**100.0**	1013.38	**101.3**	999.08	**99.9**	990.82	**99.1**
Potassium	K	ICP	IP012171	20000.0	20035.22	**100.2**	20000.0	19879.62	**99.4**	19587.88	**97.9**	19804.80	**99.0**	19781.92	**98.9**	19641.00	**98.2**
Sodium	NA	ICP	IP012171	50000.0	52369.25	**104.7**	50000.0	51539.09	**103.1**	50837.20	**101.7**	51257.19	**102.5**	51093.62	**102.2**	51243.82	**102.5**
Zinc	ZN	ICP	IP012171	1000.0	1054.66	**105.5**	1000.0	1038.78	**103.9**	1035.71	**103.6**	1041.06	**104.1**	1033.76	**103.4**	1025.47	**102.5**

Control Limits: Mercury 80-120; Other Metals 90-110

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: Chevron Sub Area Int

SDG: VZ97

UNITS: ug/L

ANALYTE	EL	M	RUN	CRA/I TV	CR-1	%R	CR-2	%R	CR-3	%R	CR-4	%R	CR-5	%R	CR-6	%R
Arsenic	AS	ICP	IP012171	50.0	49.58	**99.2**										
Barium	BA	ICP	IP012171	3.0	2.75	**91.7**										
Calcium	CA	ICP	IP012171	50.0	47.42	**94.8**										
Chromium	CR	ICP	IP012171	5.0	6.23	**124.6**										
Copper	CU	ICP	IP012171	2.0	2.00	**100.0**										
Iron	FE	ICP	IP012171	50.0	49.49	**99.0**										
Lead	PB	ICP	IP012171	20.0	20.00	**100.0**										
Magnesium	MG	ICP	IP012171	50.0	44.10	**88.2**										
Manganese	MN	ICP	IP012171	1.0	1.10	**110.0**										
Mercury	HG	CVA	HG011802	0.1	0.08	**80.0**										
Nickel	NI	ICP	IP012171	10.0	11.23	**112.3**										
Potassium	K	ICP	IP012171	500.0	477.55	**95.5**										
Sodium	NA	ICP	IP012171	500.0	494.08	**98.8**										
Zinc	ZN	ICP	IP012171	10.0	9.29	**92.9**										

Control Limits: no control limits have been established by the EPA at this time.

E3300-1521

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: Chevron Sub Area Int

SDG: VZ97

UNITS:ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Arsenic	AS	ICP	IP012171	10.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Barium	BA	ICP	IP012171	200.0	3.0	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U	3.0	U
Calcium	CA	ICP	IP012171	5000.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Chromium	CR	ICP	IP012171	10.0	5.0	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U	5.0	U
Copper	CU	ICP	IP012171	25.0	2.0	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U	2.0	U
Iron	FE	ICP	IP012171	100.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Lead	PB	ICP	IP012171	3.0	20.0	20.0	U	20.0	U	20.0	U	20.0	U	20.0	U	20.0	U
Magnesium	MG	ICP	IP012171	5000.0	50.0	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U	50.0	U
Manganese	MN	ICP	IP012171	15.0	1.0	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U	1.0	U
Mercury	HG	CVA	HG011802	0.2	0.1	0.1	U	0.1	U	0.1	U						
Nickel	NI	ICP	IP012171	40.0	10.0	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U
Potassium	K	ICP	IP012171	5000.0	500.0	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U
Sodium	NA	ICP	IP012171	5000.0	500.0	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U	500.0	U
Zinc	ZN	ICP	IP012171	20.0	10.0	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U	10.0	U

10290-1527

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: Chevron Sub Area Int

SDG: VZ97

ICS SOURCE: I.V.

RUNID: IP012171

INSTRUMENT ID: OPTIMA ICP 2

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Aluminum	200000	200000	199015.9	199456.6	**99.7**						
Antimony		1000	12.3	1012.9	**101.3**						
Arsenic		1000	15.3	1011.5	**101.2**						
Barium		1000	-3.3	1020.9	**102.1**						
Beryllium		1000	0.1	1000.8	**100.1**						
Boron			-7.9	-7.3							
Cadmium		1000	1.3	1017.6	**101.8**						
Calcium	100000	100000	98373.1	98063.6	**98.1**						
Chromium		1000	2.6	1017.1	**101.7**						
Cobalt		1000	1.9	947.2	**94.7**						
Copper		1000	-0.4	1047.8	**104.8**						
Iron	200000	200000	192623.9	193378.8	**96.7**						
Lead		1000	-5.5	951.1	**95.1**						
Magnesium	100000	100000	102509.8	97820.0	**97.8**						
Manganese		1000	1.2	956.8	**95.7**						
Molybdenum			1.9	2.1							
Nickel		1000	-0.4	982.9	**98.3**						
Potassium			10.0	3.1							
Selenium		1000	-0.4	987.1	**98.7**						
Silicon			-10.9	-8.3							
Silver		1000	-0.9	1070.1	**107.0**						
Sodium			15.9	17.5							
Strontium			4.2	4.1							
Thallium		1000	5.7	947.3	**94.7**						
Tin			-0.2	0.3							
Titanium			2.0	2.1							
Vanadium		1000	2.3	992.0	**99.2**						
Zinc		1000	1.4	965.6	**96.6**						

SDG: VZ97

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: Chevron Sub Area Int

SDG: VZ97 UNITS: ug/L

ANALYTE	EL	METH	INSTRUMENT	WAVELENTH (nm)	GFA BACK-GROUND	CLP CRDL	RL	RL DATE	ICP LINEAR RANGE (ug/L)	ICP LR DATE
Arsenic	AS	ICP	OPTIMA ICP 2	197.20		10	50.0	4/1/2012	30000.0	7/30/2012
Barium	BA	ICP	OPTIMA ICP 2	455.50		200	3.0	4/1/2012	100000.0	7/30/2012
Calcium	CA	ICP	OPTIMA ICP 2	317.93		5000	50.0	4/1/2012	500000.0	7/30/2012
Chromium	CR	ICP	OPTIMA ICP 2	267.72		10	5.0	4/1/2012	100000.0	7/30/2012
Copper	CU	ICP	OPTIMA ICP 2	324.75		25	2.0	4/1/2012	40000.0	7/30/2012
Iron	FE	ICP	OPTIMA ICP 2	259.94		100	50.0	4/1/2012	250000.0	7/30/2012
Lead	PB	ICP	OPTIMA ICP 2	220.35		3	20.0	4/1/2012	300000.0	7/30/2012
Magnesium	MG	ICP	OPTIMA ICP 2	279.08		5000	50.0	4/1/2012	500000.0	7/30/2012
Manganese	MN	ICP	OPTIMA ICP 2	257.61		15	1.0	4/1/2012	30000.0	7/30/2012
Mercury	HG	CVA	CETAC MERCURY	253.70		0.2	0.1	4/1/2012		
Nickel	NI	ICP	OPTIMA ICP 2	231.60		40	10.0	4/1/2012	100000.0	7/30/2012
Potassium	K	ICP	OPTIMA ICP 2	766.49		5000	500.0	4/1/2012	500000.0	7/30/2012
Sodium	NA	ICP	OPTIMA ICP 2	589.00		5000	500.0	4/1/2012	5000000.0	7/30/2012
Zinc	ZN	ICP	OPTIMA ICP 2	213.86		20	10.0	4/1/2012	100000.0	7/30/2012

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: Chevron Sub Area Int

IEC DATE: 12/19/2012

SDG: VZ97

INSTRUMENT ID: OPTIMA ICP 2

ANALYTE	WAVELENGTH	AL	AS	BA	BE	CA	CD	CO	CR	CU	FE
Aluminum	308.22	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	9.1050360	0.0000000	0.0000000
Arsenic	188.98	0.0000000	0.0000000	0.0000000	0.0000000	0.0847130	0.0000000	-0.8953680	1.5607750	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1763230	0.0000000	0.0000000	0.1711100
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.80	0.0000000	6.5458340	0.0000000	0.0000000	0.0000000	0.0000000	0.1152580	0.0000000	0.0000000	0.0095100
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.0000000	0.0000000	0.0295099	0.0000000	0.0105460	0.0000000	-0.0348880	0.0000000	0.0000000	-0.0426720
Cobalt	228.62	0.0000000	0.0000000	0.0788170	0.0000000	0.0000000	0.0000000	0.0000000	-0.0346500	0.0000000	0.0000000
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1608400	0.0000000	0.0000000	-0.0436450
Iron	273.96	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-1.4437390	0.0000000	0.0000000
Lead	220.35	-0.2462920	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1467250	-1.7804540	1.4264890	0.0463670
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.1153240	0.0000000	-1.4396410	-1.1694080	0.0000000	0.5348500
Manganese	257.61	0.0051540	0.0000000	0.0000000	0.0000000	0.0030500	0.0000000	0.0000000	0.0000000	0.0000000	-0.0071270
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0127380	0.0000000	0.0000000	0.0540880	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.1315760	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.4883700	0.0000000	0.0000000	0.0000000
Silicon	288.16	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-3.5902270	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.80	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	5.5577350	0.3891400	0.0000000	-0.1273740
Tin	189.93	0.0000000	0.0000000	0.0000000	0.0000000	-0.1601190	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0660910	0.0000000	0.0000000	0.1988470	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-4.2880510	0.0000000	0.0367630
Zinc	206.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0645950	0.0000000	0.0000000

12355-1527

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: Chevron Sub Area Int

IEC DATE: 12/19/2012

SDG: VZ97

INSTRUMENT ID: OPTIMA ICP 2

ANALYTE	WAVELENGTH	MG	MN	MO	NI	PB	SB	TI	TL	V	ZN
Aluminum	308.22	0.0000000	0.0000000	17.2648390	0.0000000	0.0000000	0.0000000	2.1534780	0.0000000	14.6676620	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	-0.3171320	0.0000000	0.0000000	-1.6488050	0.0000000	-2.7828430	0.0000000
Arsenic	188.98	0.0000000	0.0000000	3.5824010	0.0000000	0.0000000	0.0000000	-28.6279570	0.0000000	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.1006020	0.0000000	0.0000000	0.0000000	0.0000000	0.2160840	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0120420	0.0000000	0.1997240	0.0000000
Cadmium	228.80	0.0000000	0.0000000	0.0000000	-0.9709640	0.0000000	0.0000000	0.0000000	0.0000000	0.6837900	0.0000000
Calcium	317.93	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Chromium	267.72	0.1013650	0.0880780	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.3314250	0.0362000
Cobalt	228.62	0.0000000	0.0000000	-0.1203920	0.1624660	0.0000000	0.0000000	1.9337740	0.0000000	0.0000000	0.0000000
Copper	324.75	0.0068950	0.0000000	0.4010840	0.0000000	0.0000000	0.0000000	0.2064430	0.0000000	0.0000000	0.0000000
Iron	273.96	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	8.4794020	0.0000000
Lead	220.35	0.0000000	0.0000000	-0.4099510	-0.1101090	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	279.08	0.0000000	0.0000000	-5.5537550	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Manganese	257.61	0.0000000	0.0000000	0.0000000	0.0000000	-0.2086980	0.0000000	0.0000000	0.0000000	-0.0242310	0.0000000
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Nickel	231.60	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.5468870	0.0000000	0.4309940	0.0000000	0.0000000
Potassium	766.49	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Selenium	196.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.5703720	0.0000000
Silicon	288.16	-0.1152190	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Silver	328.07	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.0400098	0.0000000	-2.8848200	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Thallium	190.80	0.0000000	-0.8464030	-0.9915990	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	3.4340400	0.0000000
Tin	189.93	0.0000000	0.0000000	0.8648230	0.0000000	-0.0322750	-0.4551870	-0.1436590	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	0.8648230	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	-0.1521530	0.5765370	0.0000000	0.0000000	0.0000000	0.5629710	0.0000000	0.0000000	0.0000000
Zinc	206.20	0.0000000	0.0000000	0.2677330	0.0000000	-0.0519400	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

552398 - 4627

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: Chevron Sub Area Int

SDG: VZ97

ANALYSIS METHOD: ICP

ARI PREP CODE: TWC

PREPDATE: 1/18/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
PBW	VZ97MB1	0.000	50.0	50.0
LCSW	VZ97MB1SPK	0.000	50.0	50.0
CSIA20130114-001DW	VZ97S	0.000	50.0	50.0
CSIA20130114-001DWD	VZ97SDUP	0.000	50.0	50.0
CSIA20130114-001DWS	VZ97SSPK	0.000	50.0	50.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: Chevron Sub Area Int

SDG: VZ97

ANALYSIS METHOD: CVA

ARI PREP CODE: TWM

PREPDATE: 1/18/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
PBW	VZ97MB1	0.000	20.0	20.0
LCSW	VZ97MB1SPK	0.000	20.0	20.0
CSIA20130114-001DW	VZ97S	0.000	20.0	20.0
CSIA20130114-001DWD	VZ97SDUP	0.000	20.0	20.0
CSIA20130114-001DWS	VZ97SSPK	0.000	20.0	20.0

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: Chevron Sub Area Int | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 1/21/2013

SDG: VZ97 | RUNID: IP012171 | METHOD: ICP | END DATE: 1/21/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	11060				X		X		X			X	X	X		X	X	X		X	X	X									X
S2	S2	1.00	11101						X					X	X					X													
S3	S3	1.00	11120				X																X	X									X
S4	S4	1.00	11144																														
S5	S5	1.00	11165								X					X		X	X			X											
ICV	ICV	1.00	11250				X		X		X			X	X	X		X	X	X		X	X	X									X
ICB	ICB	1.00	11281				X		X		X			X	X	X		X	X	X		X	X	X									X
CRI	CRII	1.00	11323				X		X		X			X	X	X		X	X	X		X	X	X									X
ICSA	ICSAI	1.00	11364				X		X		X			X	X	X		X	X	X		X	X	X									X
ICSAB	ICSABI	1.00	11410				X		X		X			X	X	X		X	X	X		X	X	X									X
ZZZZZZ	HiPurQC7M	1.00	11462																														
ZZZZZZ	SPEXQC21	1.00	11504																														
ZZZZZZ	DICHECK	1.00	11550																														
CCV	CCV1	1.00	11591				X		X		X			X	X	X		X	X	X		X	X	X									X
CCB	CCB1	1.00	12023				X		X		X			X	X	X		X	X	X		X	X	X									X
ZZZZZZ	WA22MB2	5.00	12065																														
ZZZZZZ	WA22AtDUP	5.00	12112																														
ZZZZZZ	WA22At	5.00	12160																														
ZZZZZZ	WA22AtSPK	5.00	12203																														
CCV	CCV2	1.00	12245				X		X		X			X	X	X		X	X	X		X	X	X									X
CCB	CCB2	1.00	12281				X		X		X			X	X	X		X	X	X		X	X	X									X
ZZZZZZ	VZ85MB	1.00	12385																														
ZZZZZZ	VZ89MB2	1.00	12430																														
ZZZZZZ	VZ89C	1.00	12472																														
ZZZZZZ	VZ89D	1.00	12514																														
ZZZZZZ	VZ85ADUP	1.00	12554																														
ZZZZZZ	VZ85A	1.00	12594																														
ZZZZZZ	VZ85ASPK	1.00	13034																														
ZZZZZZ	VZ85MBSPK	1.00	13074																														
ZZZZZZ	VZ89MB2SPK	1.00	13114																														
CCV	CCV3	1.00	13154				X		X		X			X	X	X		X	X	X		X	X	X									X
CCB	CCB3	1.00	13190				X		X		X			X	X	X		X	X	X		X	X	X									X
ZZZZZZ	WA20MB	2.00	13245																														
ZZZZZZ	VZ87MB	1.00	13291																														
ZZZZZZ	VZ87ADUP	1.00	13332																														

12350 - 1327

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: Chevron Sub Area Int | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 1/21/2013

SDG: VZ97 | RUNID: IP012171 | METHOD: ICP | END DATE: 1/21/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
ZZZZZZ	VZ87A	1.00	13374																														
ZZZZZZ	VZ87ASPK	1.00	13415																														
ZZZZZZ	WA20ADUP	2.00	13455																														
ZZZZZZ	WA20A	2.00	13495																														
ZZZZZZ	WA20ASPK	2.00	13535																														
ZZZZZZ	WA20MBSPK	2.00	13580																														
ZZZZZZ	VZ87MBSPK	1.00	14020																														
CCV	CCV4	1.00	14060				X		X		X			X	X	X		X	X	X		X	X	X									X
CCB	CCB4	1.00	14092				X		X		X			X	X	X		X	X	X		X	X	X									X
PBW	VZ97MB1	1.00	14133				X		X		X			X	X	X		X	X	X		X	X	X									X
CSIA20130114-001DWD	VZ97SDUP	1.00	14180				X		X		X			X	X	X		X	X	X		X	X	X									X
CSIA20130114-001DW	VZ97S	1.00	14222				X		X		X			X	X	X		X	X	X		X	X	X									X
CSIA20130114-001DWS	VZ97SSPK	1.00	14263				X		X		X			X	X	X		X	X	X		X	X	X									X
LCSW	VZ97MB1SPK	1.00	14304				X		X		X			X	X	X		X	X	X		X	X	X									X
CCV	CCV5	1.00	14344				X		X		X			X	X	X		X	X	X		X	X	X									X
CCB	CCB5	1.00	14380				X		X		X			X	X	X		X	X	X		X	X	X									X

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: Anchor QEA

PROJECT: Chevron Sub Area Int | INSTRUMENT ID: CETAC MERCURY | START DATE: 1/18/2013

SDG: VZ97 | RUNID: HG011802 | METHOD: CVA | END DATE: 1/18/2013

CLIENT ID	ARI ID	DIL.	TIME	%R	AG	AL	AS	B	BA	BE	CA	CD	CO	CR	CU	FE	HG	K	MG	MN	MO	NA	NI	PB	SB	SE	SI	SN	TI	TL	U	V	ZN
S0	S0	1.00	13110														X																
S0.1	S0.1	1.00	13123														X																
S0.5	S0.5	1.00	13141														X																
S1	S1	1.00	13154														X																
S2	S2	1.00	13172														X																
S5	S5	1.00	13190														X																
S10	S10	1.00	13204														X																
ICV	AICV	1.00	13314														X																
ICB	ICB	1.00	13332														X																
CCV	ACCV1	1.00	13350														X																
CCB	CCB1	1.00	13364														X																
CRA	CRA	1.00	13381														X																
PBW	VZ97MB1	1.00	13395														X																
LCSW	VZ97MB1SPK	1.00	13413														X																
CSIA20130114-001DW	VZ97S	1.00	13430														X																
CSIA20130114-001DWD	VZ97SDUP	1.00	13444														X																
CSIA20130114-001DWS	VZ97SSPK	1.00	13461														X																
CCV	ACCV2	1.00	13475														X																
CCB	CCB2	1.00	13493														X																

512556 - 1527

Total Solids

ARI Job ID: VZ97

Extractions Total Solids-extts
Data By: Adam L. Rains
Created: 1/18/13

Worklist: 1267
Analyst: RVR
Comments:

Chromre

Oven ID:_____

Balance ID:_____

Samples In: Date:_____ Time:_____ Temp:_____ Analyst:_____

Samples Out: Date:_____ Time:_____ Temp:_____ Analyst:_____

	ARI ID / CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
1.	VZ97A 13-1082 CSIA-20130107-001B	1.16	13.23	11.02	81.7	NR
2.	VZ97B 13-1083 CSIA-20130107-002B	1.19	11.90	9.65	79.0	NR
3.	VZ97C 13-1084 CSIA-20130107-003S+3	1.15	12.14	9.53	76.3	NR
4.	VZ97D 13-1085 CSIA-20130107-004S+6	1.17	11.87	8.03	64.1	NR
5.	VZ97E 13-1086 CSIA-20130107-005S+9	1.17	13.75	11.05	78.5	NR
6.	VZ97F 13-1087 CSIA20130109-006B	1.17	12.69	10.43	80.4	NR
7.	VZ97G 13-1088 CSIA20130109-007B	1.16	10.33	8.92	84.6	NR
8.	VZ97H 13-1089 CSIA20130109-008S+3	1.16	11.21	8.89	76.9	NR
9.	VZ97I 13-1090 CSIA20130109-009S+6	1.17	12.47	10.78	85.0	NR
10.	VZ97J 13-1091 CSIA20130109-010S+9	1.15	11.87	10.84	90.4	NR
11.	VZ97K 13-1092 CSIA20130110-011B	1.16	13.36	11.40	83.9	NR
12.	VZ97L 13-1093 CSIA20130110-012B	1.16	10.68	8.66	78.8	NR
13.	VZ97M 13-1094 CSIA20130110-013S+3	1.15	10.97	9.06	80.5	NR

VZ97 00245

Extractions Total Solids-extts
Data By: Adam L. Rains
Created: 1/18/13

Worklist: 1267
Analyst: RVR
Comments:

Oven ID:_____

Balance ID:_____

Samples In: Date:_____ Time:_____ Temp:_____ Analyst:_____

Samples Out: Date:_____ Time:_____ Temp:_____ Analyst:_____

	ARI ID CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
14.	VZ97N 13-1095 CSIA20130110-014S+6	1.16	12.31	10.97	88.0	NR
15.	VZ97O 13-1096 CSIA20130110-015S+9	1.16	12.55	11.30	89.0	NR
16.	VZ97P 13-1097 CSIA20130111-016B	1.16	13.13	11.65	87.6	NR
17.	VZ97Q 13-1098 CSIA20130111-017B	1.14	10.68	9.08	83.2	NR
18.	VZ97R 13-1099 CSIA20130111-018S+9	1.16	11.49	10.17	87.2	NR

VZ97 : 00246

Extractions Total Solids-extts
Data By: Adam L. Rains
Created: 1/18/13

Worklist: 1267
Analyst: ALR
Comments:

Oven ID: 015

Balance ID: B139280002

Samples In: Date: 01/18/13 Time: 12:30 Temp: 105°C Analyst: AR

Samples Out: Date: ~~01/21/13~~ Time: ~~06:55~~ Temp: 102° Analyst: RR

	ARI ID / CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
1.	VZ97A 13-1082 CSIA-20130107-001B	1.16	13.23	11.02		NR
2.	VZ97B 13-1083 CSIA-20130107-002B	1.19	11.90	9.65		NR
3.	VZ97C 13-1084 CSIA-20130107-003S+3	1.15	12.14	9.53		NR
4.	VZ97D 13-1085 CSIA-20130107-004S+6	1.17	11.87	8.83		NR
5.	VZ97E 13-1086 CSIA-20130107-005S+9	1.17	13.75	11.85		NR
6.	VZ97F 13-1087 CSIA20130109-006B	1.17	12.69	10.43		NR
7.	VZ97G 13-1088 CSIA20130109-007B	1.16	10.33	8.92		NR
8.	VZ97H 13-1089 CSIA20130109-008S+3	1.16	11.21	8.89		NR
9.	VZ97I 13-1090 CSIA20130109-009S+6	1.17	12.47	10.78		NR
10.	VZ97J 13-1091 CSIA20130109-010S+9	1.15	11.87	10.84		NR
11.	VZ97K 13-1092 CSIA20130110-011B	1.16	13.36	11.46		NR
12.	VZ97L 13-1093 CSIA20130110-012B	1.16	10.68	8.66		NR
13.	VZ97M 13-1094 CSIA20130110-013S+3	1.15	10.97	9.06		NR

VZ97 00247

Extractions Total Solids-extts
Data By: Adam L. Rains
Created: 1/18/13

Worklist: 1267
Analyst: ALR
Comments:

Oven ID: 015

Balance ID: B13929 80012

Samples In: Date: 01/18/13 Time: 12:30 Temp: 105°C Analyst: AR

Samples Out: Date: _____ Time: _____ Temp: _____ Analyst: _____

	ARI ID / CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
14.	VZ97N 13-1095 CSIA20130110-014S+6	1.16	12.31	10.97		NR
15.	VZ97O 13-1096 CSIA20130110-015S+9	1.16	12.55	11.30		NR
16.	VZ97P 13-1097 CSIA20130111-016B	1.16	13.13	11.65		NR
17.	VZ97Q 13-1098 CSIA20130111-017B	1.14	10.68	9.88		NR
18.	VZ97R 13-1099 CSIA20130111-018S+9	1.16	11.49	10.17		NR

VZ97:00249

Volatiles Total Solids-voats
Data By: Paul K. Campbell
Created: 1/21/13

Worklist: 1724
Analyst: PKC
Comments:

Oven ID:_____

Balance ID:_____

Samples In: Date:_____ Time:_____ Temp:_____ Analyst:_____

Samples Out: Date:_____ Time:_____ Temp:_____ Analyst:_____

	ARI ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids
1.	VZ97A 13-1082				$ 81.70
2.	VZ97B 13-1083				$ 79.00
3.	VZ97C 13-1084				$ 76.30
4.	VZ97D 13-1085				$ 64.10
5.	VZ97E 13-1086				$ 78.50
6.	VZ97F 13-1087				$ 80.40
7.	VZ97G 13-1088				$ 84.60
8.	VZ97H 13-1089				$ 76.90
9.	VZ97I 13-1090				$ 85.00
10.	VZ97J 13-1091				$ 90.40
11.	VZ97K 13-1092				$ 83.90
12.	VZ97L 13-1093				$ 78.80
13.	VZ97M 13-1094				$ 80.50
14.	VZ97N 13-1095				$ 88.00
15.	VZ97O 13-1096				$ 89.00
16.	VZ97P 13-1097				$ 87.60
17.	VZ97Q 13-1098				$ 83.20

* - VOA TS Copied From BETX TS
% - VOA TS Copied From Metals TS
$ - VOA TS Copied From Extraction TS

VZ97 00249

Volatiles Total Solids-voats
Data By: Paul K. Campbell
Created: 1/21/13

Worklist: 1724
Analyst: PKC
Comments:

Oven ID:_____

Balance ID:_____

Samples In: Date:_____ Time:_____ Temp:_____ Analyst:_____

Samples Out: Date:_____ Time:_____ Temp:_____ Analyst:_____

ARI ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids
18. VZ97R 13-1099	_____	_____		$ 87.20

Worklist ID: 1724 Page: 2
* - VOA TS Copied From BETX TS
% - VOA TS Copied From Metals TS
$ - VOA TS Copied From Extraction TS

BETX/TPHG Total Solids-betxts
Data By: Paul K. Campbell
Created: 1/23/13

Worklist: 2344
Analyst: PKC
Comments:

Oven ID:_____

Balance ID:_____

Samples In: Date:_____ Time:_____ Temp:_____ Analyst:_____

Samples Out: Date:_____ Time:_____ Temp:_____ Analyst:_____

	ARI ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids
1.	VZ97A 13-1082			*	81.7
2.	VZ97B 13-1083			*	79.0
3.	VZ97C 13-1084			*	76.3
4.	VZ97D 13-1085			*	64.1
5.	VZ97E 13-1086			*	78.5
6.	VZ97F 13-1087			*	80.4
7.	VZ97G 13-1088			*	84.6
8.	VZ97H 13-1089			*	76.9
9.	VZ97I 13-1090			*	85.0
10.	VZ97J 13-1091			*	90.4
11.	VZ97K 13-1092			*	83.9
12.	VZ97L 13-1093			*	78.8
13.	VZ97M 13-1094			*	80.5
14.	VZ97N 13-1095			*	88.0
15.	VZ97O 13-1096			*	89.0
16.	VZ97P 13-1097			*	87.6
17.	VZ97Q 13-1098			*	83.2

* - BETX TS Copied From VOA TS
% - BETX TS Copied From Metals TS
$ - BETX TS Copied From Extraction TS

VZ97 00251

BETX/TPHG Total Solids-betxts
Data By: Paul K. Campbell
Created: 1/23/13

Worklist: 2344
Analyst: PKC
Comments:

Oven ID:_____

Balance ID:_____

Samples In: Date:_____ Time:_____ Temp:_____ Analyst:_____

Samples Out: Date:_____ Time:_____ Temp:_____ Analyst:_____

ARI ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids
18. VZ97R 13-1099	_____	_____	*	87.2

Worklist ID: 2344 Page: 2
* - BETX TS Copied From VOA TS
% - BETX TS Copied From Metals TS
$ - BETX TS Copied From Extraction TS

Volatile Raw Data
Initial Calibration Notes and Raw Data

ARI Job ID: VZ97

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Initial Calibration Notes

ARI SOP: **404S**(Gas) **410S**(BTEX) **430S**(VPH) **700S**(8260C) **703S**(SIM) **706S**(524.3) **710S**(RSK-175)

Instrument: NT-2 NT-3 NT-5 NT-7 NT-9 PID-1 PID-2 PID-3 FID-6

Curve Date(s): 1/15/13 Internal Standard ID WJ775-) Expiration 5/29/13

BFB Tune Meets Criteria?	YES / NO	ICV Exceeding ±20%?	YES / NO
ICal Meets %RSD & r^2 Criteria?	YES / NO	ICV Exceeding ±30%?	YES / NO
Q flag applied?	YES / NO	Linear Fits Used?	YES / NO
Manual Integrations for ICal?	YES / NO	Quadratic Fits Used?	YES / NO
Spectral Library Updated?	YES / NO	Calibration Points Dropped?	YES / NO
Minimum Response Factors Met	YES / NO	Purge Volume (mL)	10

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
ultra	WJ776-L	4/9/13	accustd	WJ767-4	4/9/13
restek	WJ777-)	1/31/13	SPEX	WJ471	11/24/12
absolute	WJ777-L	6/27/13	surplus	L	4
	WJ771-L	1/31/13	ultra	5747	3/31/13

Detail problems, corrective actions and/or other pertinent information below:

all analytes averaged

ICV - acetone 74%2

Analyst: [signature] **Date:** 1/18/13

Reviewer: [signature] **Date:** 1/21/13

U797 0025U

Analytical Resources Inc.: Organics Instrument Log

NT-3 Serial No.: US81221575

Date: 1/15/13 Analysis: BFB Analyst: JB

GC Program: VOA1 Column No: 94/144 Column Type: RTX-VMS

Instrument Tune (.U or .CT.): bfb.u EM Voltage: 1741

Calibration File: b150115x Curve Date: 1/15/13 Injection Vol.: 10

IS/SS	Ical/Ccal	LCS/ICV
w775-3	w774-1	w767-ep
	w774-2	w767-1
		I744-1

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem3/nt3.i/01152013.b

	Time	Filename	LabID	ClientID	Vial#	pH	DF						
1	1430	bfb0115x.d	BFB0115	BFB0115			1						
2	1536	0020115 d	IC0115	VSTD0 2			1	5 54	504718	5 93	766579	7 98	717754	9 67	442888
3	1603	8000115 d	IC0115	VSTD80			1	5 53	577389	5 92	968328	7 98	851809	9 67	493717
4	1630	4000115 d	IC0115	VSTD40			1	5 54	544733	5 92	895474	7 98	802992	9 67	491345
5	1657	2000115 d	IC0115	VSTD20			1	5 54	519566	5 93	852597	7 98	759798	9 67	471075
6	1724	1000115 d	IC0115	VSTD10			1	5 54	513917	5 92	821183	7 98	740077	9 67	454429
7	1750	0200115 d	IC0115	VSTD2			1	5 54	484449	5 93	766859	7 98	721352	9 67	434761
8	1816	0100115.d	IC0115	VSTD1			1	5 54	462085	5 93	727105	7 98	683386	9 67	430317
9	1843	0050115 d	IC0115	VSTD0 5			1	5 54	467687	5 93	731909	7 98	709834	9 67	423594
10	1910	icv0115 d	ICV0115	ICV0115			1	5 53	485131	5 92	793699	7 98	702473	9 66	445268

1/17/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

U797 - 8025E

Data File: /chem3/nt3.i/01152013.b/bfb0115a.d

Date : 15-JAN-2013 12:14

Client ID: BFB0115

Instrument: nt3.i

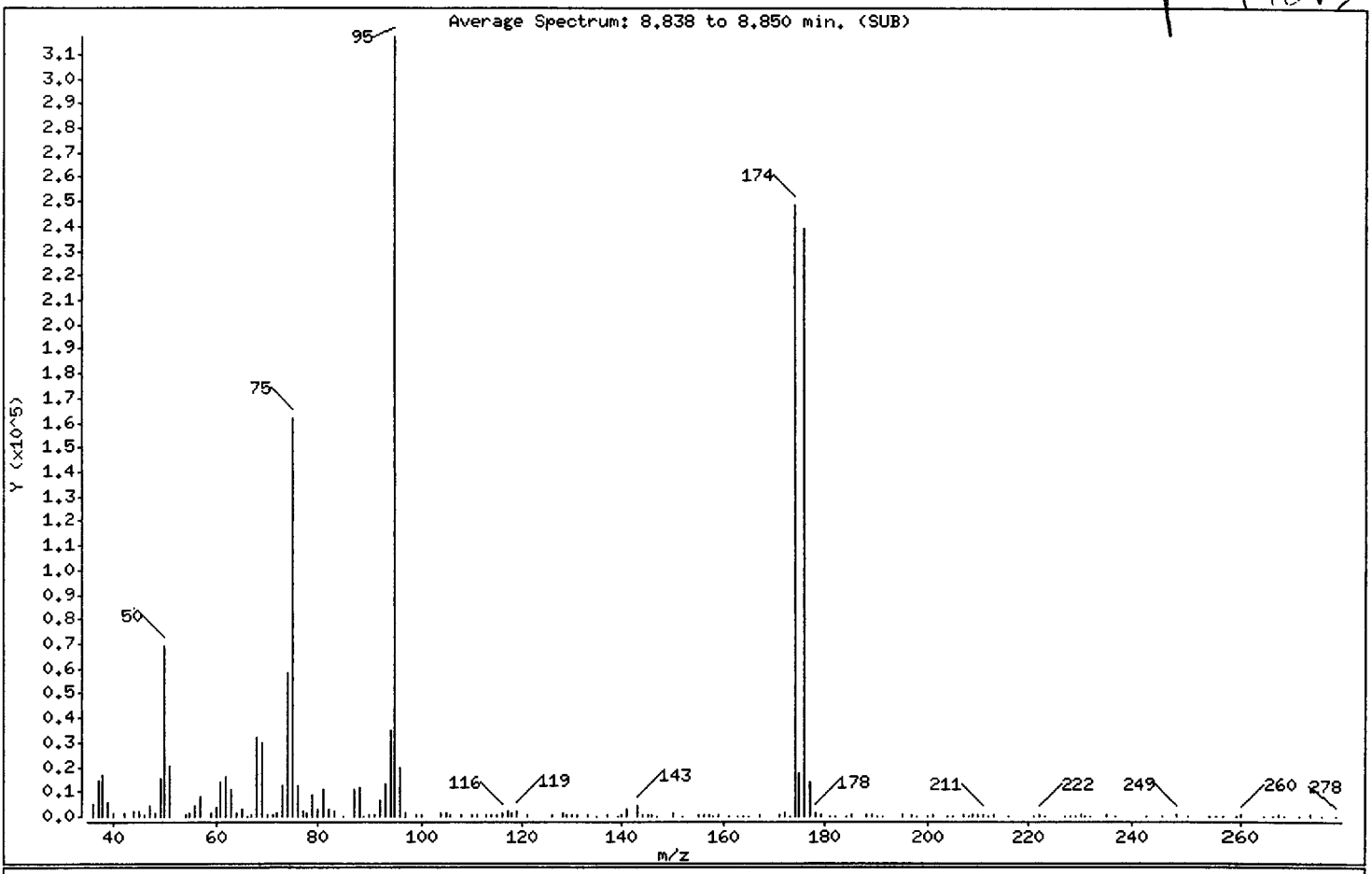
Sample Info: BFB0115,BFB0115,,1,15JAN13,

Operator: PB

Column phase: RTXVMS

Column diameter: 0.18

1 Bromofluorobenzene



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	21.95
75	30.00 - 60.00% of mass 95	51.15
96	5.00 - 9.00% of mass 95	6.15
173	Less than 2.00% of mass 174	0.04 (0.05)
174	50.00 - 100.00% of mass 95	78.31
175	5.00 - 9.00% of mass 174	5.59 (7.14)
176	95.00 - 101.00% of mass 174	75.35 (96.22)
177	5.00 - 9.00% of mass 176	4.26 (5.66)

Data File: /chem3/nt3.i/01152013.b/bfb0115a.d

Date : 15-JAN-2013 12:14

Client ID: BFB0115

Instrument: nt3.i

Sample Info: BFB0115,BFB0115,,1,15JAN13,

Operator: PB

Column phase: RTXVMS

Column diameter: 0.18

Data File: bfb0115a.d

Spectrum: Average Spectrum: 8.838 to 8.850 min. (SUB)

Location of Maximum: 95.00

Number of points: 172

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	5021	86.00	364	145.00	973	210.00	726
37.00	14517	87.00	10707	146.00	585	211.00	950
38.00	16456	88.00	11579	147.00	234	212.00	57
39.00	5962	89.00	236	150.00	1420	213.00	712
40.00	1644	90.00	366	152.00	57	216.00	201
42.00	1493	91.00	894	153.00	239	221.00	195
44.00	1845	92.00	6431	155.00	447	222.00	568
45.00	2122	93.00	13462	156.00	668	223.00	94
46.00	676	94.00	34928	157.00	655	227.00	355
47.00	4185	95.00	317184	158.00	57	228.00	85
48.00	1212	96.00	19504	159.00	671	229.00	329
49.00	15499	97.00	1122	160.00	352	230.00	388
50.00	69624	99.00	986	161.00	308	231.00	288
51.00	20752	100.00	662	163.00	45	232.00	265
54.00	674	104.00	1339	164.00	347	235.00	448
55.00	1765	105.00	1437	165.00	290	237.00	152
56.00	4173	106.00	658	167.00	590	240.00	175
57.00	8240	108.00	484	171.00	373	243.00	58
59.00	1203	110.00	422	172.00	1506	245.00	133
60.00	3470	111.00	509	173.00	128	246.00	51
61.00	14155	113.00	859	174.00	248320	249.00	444
62.00	16022	114.00	619	175.00	17720	251.00	109
63.00	11133	115.00	479	176.00	238976	255.00	198
64.00	1234	116.00	1732	177.00	13517	256.00	115
65.00	2613	117.00	2092	178.00	1408	257.00	261
66.00	29	118.00	1510	179.00	451	259.00	50
67.00	387	119.00	2517	181.00	68	260.00	665
68.00	32328	121.00	668	182.00	86	262.00	302
69.00	29800	122.00	260	184.00	75	264.00	70
70.00	866	125.00	251	185.00	452	265.00	327
71.00	897	126.00	482	188.00	388	266.00	207
72.00	1483	128.00	1216	189.00	392	267.00	371
73.00	12239	129.00	808	190.00	60	268.00	92
74.00	58584	130.00	380	191.00	60	269.00	146
75.00	162176	131.00	808	195.00	603	271.00	313

Data File: /chem3/nt3.i/01152013.b/bfb0115a.d

Date : 15-JAN-2013 12:14

Client ID: BFB0115

Instrument: nt3.i

Sample Info: BFB0115,BFB0115,,1,15JAN13,

Operator: PB

Column phase: RTXVMS

Column diameter: 0.18

Data File: bfb0115a.d

Spectrum: Average Spectrum: 8.838 to 8.850 min. (SUB)

Location of Maximum: 95.00

Number of points: 172

m/z	Y	m/z	Y	m/z	Y	m/z	Y
76.00	12297	132.00	343	197.00	376	273.00	503
77.00	1874	133.00	678	198.00	289	275.00	63
78.00	1573	135.00	13	200.00	338	276.00	179
79.00	8455	137.00	393	201.00	404	277.00	86
80.00	2676	139.00	356	204.00	120	278.00	93
81.00	10752	140.00	369	205.00	41		
82.00	2985	141.00	2884	207.00	595		
83.00	2150	143.00	4160	208.00	93		
85.00	303	144.00	490	209.00	701		

Data File: /chem3/nt3.i/01152013.b/bfb0115a.d

Date : 15-JAN-2013 12:14

Client ID: BFB0115

Sample Info: BFB0115,BFB0115,,1,15JAN13,

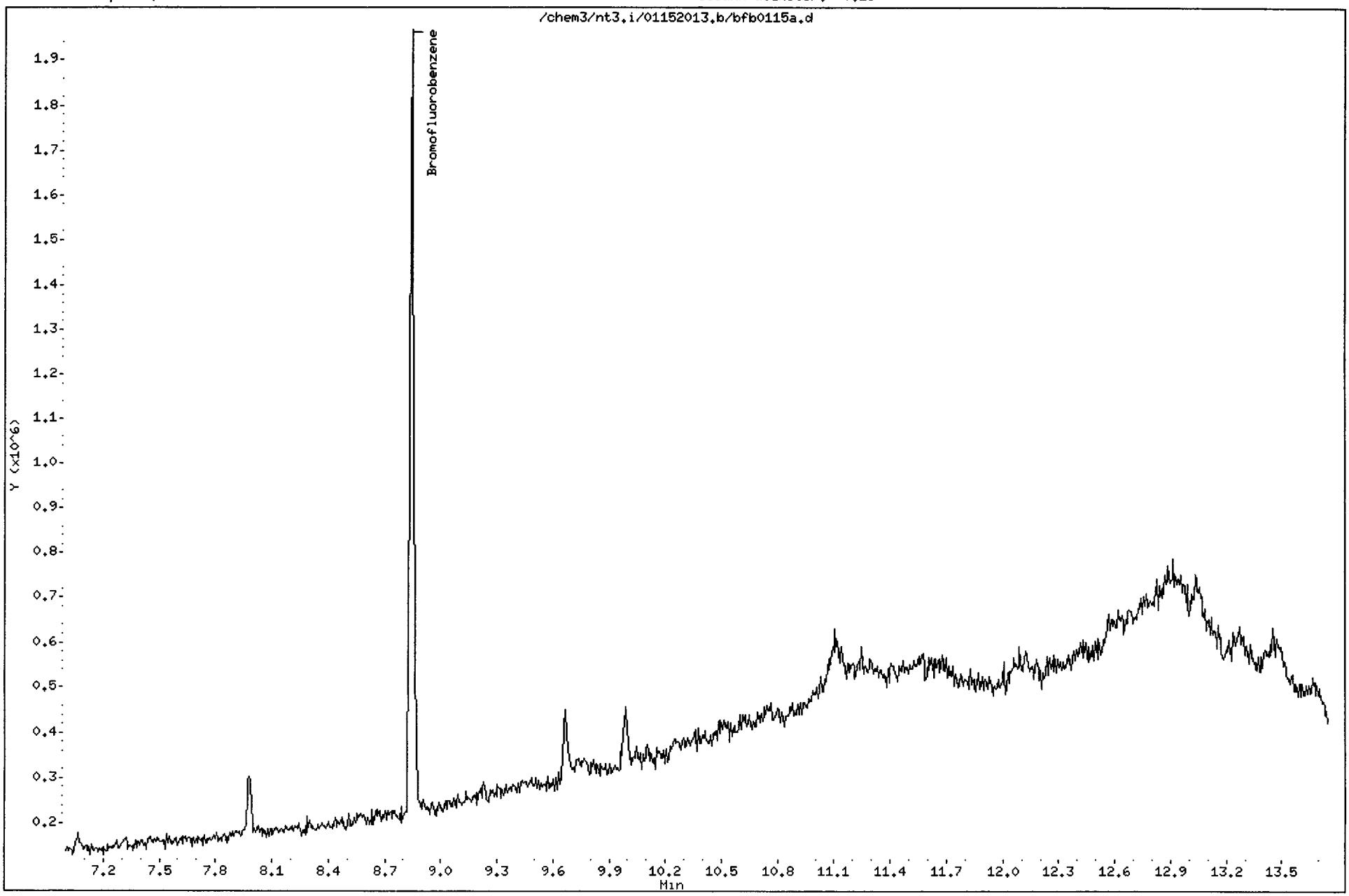
Column phase: RTXVMS

Instrument: nt3.i

Operator: PB

Column diameter: 0.18

0526B 1027



Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-JAN-2013 15:36
End Cal Date : 15-JAN-2013 18:43
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem3/nt3.i/01152013.b/8260C011513L.m
Cal Date : 18-Jan-2013 10:00 patrickb
Curve Type : Average

Calibration File Names:
Level 1: /chem3/nt3.i/01152013.b/0020115.d
Level 2: /chem3/nt3.i/01152013.b/0050115.d
Level 3: /chem3/nt3.i/01152013.b/0100115.d
Level 4: /chem3/nt3.i/01152013.b/0200115.d
Level 5: /chem3/nt3.i/01152013.b/1000115.d
Level 6: /chem3/nt3.i/01152013.b/2000115.d
Level 7: /chem3/nt3.i/01152013.b/4000115.d
Level 8: /chem3/nt3.i/01152013.b/8000115.d

Compound	0.20000 Level 1	0.50000 Level 2	1.000 Level 3	2.000 Level 4	10.000 Level 5	20.000 Level 6	40.000 Level 7	80.000 Level 8	RRF	% RSD
1 Dichlorodifluoromethane	0.61906	0.58133	0.67992	0.52396	0.64910	0.65970	0.65490	0.58587	0.61923	8.438
2 Chloromethane	0.83888	0.79523	0.79717	0.60120	0.73039	0.74710	0.73645	0.63957	0.73575	10.953
3 Vinyl Chloride	0.76013	0.86049	0.93457	0.68289	0.84590	0.88799	0.86774	0.80367	0.83042	9.560
4 Bromomethane	0.54268	0.50474	0.52317	0.36707	0.44193	0.47234	0.46205	0.42194	0.46699	12.276
5 Chloroethane	0.62233	0.50585	0.61103	0.44633	0.53755	0.55350	0.57764	0.54593	0.55002	10.331
6 Trichlorofluoromethane	0.94033	1.01063	0.95954	0.74036	0.89865	0.95976	0.99291	0.95775	0.93249	9.063

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-JAN-2013 15:36
End Cal Date : 15-JAN-2013 18:43
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem3/nt3.i/01152013.b/8260C011513L.m
Cal Date : 18-Jan-2013 10:00 patrickb
Curve Type : Average

Compound	0.20000 Level 1	0.50000 Level 2	1.000 Level 3	2.000 Level 4	10.000 Level 5	20.000 Level 6	40.000 Level 7	80.000 Level 8	___ RRF	% RSD
7 1,1-Dichloroethene	0.42836	0.63119	0.67918	0.46617	0.53075	0.56704	0.54734	0.52530	0.54692	14.871
8 Carbon Disulfide	2.16249	2.34075	2.30265	1.72301	2.01337	2.12554	2.01538	1.76734	2.05632	10.963
9 112Trichloro122Trifluoroethan	0.54813	0.48246	0.68760	0.48852	0.61672	0.64539	0.63522	0.59785	0.58774	12.698
10 Iodomethane	0.85067	0.90462	0.99200	0.71974	0.85941	0.89571	0.87589	0.81142	0.86368	9.070
11 Bromoethane	0.51484	0.45167	0.45667	0.35838	0.41112	0.43988	0.42667	0.39966	0.43236	10.653
12 Acrolein	0.13217	0.07398	0.10689	0.07673	0.10165	0.09751	0.10495	0.09653	0.09880	18.485
13 Methylene Chloride	0.84027	0.64483	0.75432	0.52170	0.59913	0.61715	0.61032	0.55290	0.64258	16.407
14 Acetone	+++++	0.12037	0.12156	0.07062	0.12365	0.09252	0.11151	0.10276	0.10614	18.180
15 Trans-1,2-Dichloroethene	0.75517	0.60245	0.65391	0.49470	0.57891	0.61759	0.60246	0.55460	0.60748	12.514

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-JAN-2013 15:36
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Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem3/nt3.i/01152013.b/8260C011513L.m
Cal Date : 18-Jan-2013 10:00 patrickb
Curve Type : Average

Compound	0.20000 Level 1 / 40.000 Level 7	0.50000 Level 2 / 80.000 Level 8	1.000 Level 3	2.000 Level 4	10.000 Level 5	20.000 Level 6	RRF	% RSD	
173 n-hexane	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
16 Methyl tert butyl ether	1.54799	1.67424	1.84776	1.45220	1.79729	1.85211			
	1.81370	1.61670					1.70025	8.877	
17 1,1-Dichloroethane	1.14371	1.13490	1.30653	0.90662	1.07438	1.14671			
	1.10358	1.00505					1.10269	10.564	
18 Acrylonitrile	+++++	0.16866	0.23249	0.16392	0.20130	0.18639			
	0.19838	0.19108					0.19175	11.915	
19 Vinyl Acetate	0.54575	0.67319	0.68935	0.52210	0.69753	0.72705			
	0.75247	0.71649					0.66549	12.764	
20 Cis-1,2-Dichloroethene	0.66651	0.67361	0.67364	0.52373	0.60506	0.63742			
	0.61827	0.57841					0.62208	8.464	
21 Allyl Chloride	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
22 2,2-Dichloropropane	0.82591	0.84531	0.85082	0.64584	0.70718	0.79597			
	0.77361	0.68150					0.76577	10.243	
23 Bromochloromethane	0.26371	0.22015	0.36541	0.22141	0.27895	0.28242			
	0.28063	0.26446					0.27214	16.626	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-JAN-2013 15:36
End Cal Date : 15-JAN-2013 18:43
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem3/nt3.i/01152013.b/8260C011513L.m
Cal Date : 18-Jan-2013 10:00 patrickb
Curve Type : Average

Compound	0.20000 Level 1	0.50000 Level 2	1.000 Level 3	2.000 Level 4	10.000 Level 5	20.000 Level 6	RRF	% RSD	
	40.000 Level 7	80.000 Level 8							
24 Chloroform	0.96608	0.97086	1.08303	0.78266	0.95614	1.01723			
	0.97711	0.88237					0.95444	9.380	
25 Carbon Tetrachloride	0.49760	0.49126	0.56275	0.38690	0.44729	0.45831			
	0.45236	0.40402					0.46256	12.008	
27 1,1,1-Trichloroethane	0.79876	0.90291	0.95889	0.69320	0.82675	0.87758			
	0.85592	0.79065					0.83808	9.630	
28 2-Butanone	0.27229	0.23250	0.27658	0.18258	0.26280	0.24758			
	0.25551	0.23776					0.24595	12.172	
29 1,1-Dichloropropene	0.49597	0.48604	0.56011	0.39371	0.48436	0.50902			
	0.51471	0.47108					0.48938	9.646	
30 Benzene	1.40820	1.56353	1.52972	1.15223	1.38584	1.41597			
	1.34774	1.10174					1.36312	11.968	
33 1,2-Dichloroethane	0.37237	0.50452	0.49648	0.36855	0.44492	0.46734			
	0.45417	0.42226					0.44132	11.587	
34 Trichloroethene	0.39650	0.34879	0.32438	0.28183	0.33140	0.34473			
	0.34339	0.32162					0.33658	9.561	
35 Methyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-

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Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-JAN-2013 15:36
End Cal Date : 15-JAN-2013 18:43
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem3/nt3.i/01152013.b/8260C011513L.m
Cal Date : 18-Jan-2013 10:00 patrickb
Curve Type : Average

Compound	0.20000 Level 1	0.50000 Level 2	1.000 Level 3	2.000 Level 4	10.000 Level 5	20.000 Level 6	RRF	% RSD	
	40.000 Level 7	80.000 Level 8							
37 Dibromomethane	0.26984	0.22254	0.21531	0.15682	0.19220	0.20124			
	0.19655	0.18360					0.20476	16.140	
38 1,2-Dichloropropane	0.36493	0.38581	0.38939	0.27164	0.33393	0.34947			
	0.35198	0.33354					0.34759	10.701	
39 Bromodichloromethane	0.42827	0.47446	0.45275	0.35919	0.43111	0.42446			
	0.43499	0.39541					0.42508	8.232	
40 2-pentanone	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
41 2-Chloroethyl Vinyl Ether	+++++	0.20967	0.15333	0.15115	0.17542	0.17560			
	0.18251	0.18279					0.17578	11.267	
42 Cis 1,3-dichloropropene	0.47190	0.48208	0.48763	0.39444	0.49210	0.51700			
	0.53195	0.51043					0.48594	8.628	
44 Toluene	0.73508	0.79177	0.75527	0.58584	0.73449	0.77176			
	0.77350	0.69708					0.73060	8.960	
45 Tetrachloroethene	0.27064	0.34135	0.31669	0.26595	0.33419	0.35131			
	0.34442	0.34457					0.32114	10.656	
46 4-Methyl-2-Pentanone	0.34175	0.39316	0.41045	0.31360	0.36874	0.39063			
	0.35095	0.26452					0.35423	13.529	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-JAN-2013 15:36
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Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem3/nt3.i/01152013.b/8260C011513L.m
Cal Date : 18-Jan-2013 10:00 patrickb
Curve Type : Average

Compound	0.20000 Level 1	0.50000 Level 2	1.000 Level 3	2.000 Level 4	10.000 Level 5	20.000 Level 6	RRF	% RSD
	40.000 Level 7	80.000 Level 8						
47 Trans 1,3-Dichloropropene	0.49421	0.53370	0.47637	0.35887	0.46923	0.48460		
	0.48480	0.46297					0.47059	10.629
48 1,1,2-Trichloroethane	0.24942	0.28476	0.26823	0.20475	0.24552	0.25140		
	0.24945	0.24055					0.24926	9.218
49 Chlorodibromomethane	0.32288	0.29861	0.34420	0.25194	0.31088	0.32983		
	0.32731	0.31445					0.31251	8.969
50 1,3-Dichloropropane	0.52407	0.51739	0.53304	0.38801	0.50781	0.51188		
	0.51646	0.50065					0.49991	9.256
51 1,2-Dibromoethane	0.24257	0.30632	0.29821	0.21886	0.27069	0.26771		
	0.26184	0.24904					0.26440	10.834
52 2-Hexanone	0.28568	0.32433	0.33263	0.26529	0.31061	0.32859		
	0.28743	0.22942					0.29550	12.117
54 Chlorobenzene	0.88018	0.88085	1.00909	0.72775	0.91876	0.94762		
	0.91622	0.83659					0.88963	9.344
55 Ethyl Benzene	1.47606	1.66337	1.73501	1.24911	1.65175	1.69000		
	1.55871	1.23972					1.53297	12.742
56 1,1,1,2-Tetrachloroethane	0.30498	0.32067	0.35034	0.26157	0.35014	0.36709		
	0.36654	0.34399					0.33317	10.787

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-JAN-2013 15:36
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Target Version : 3.50
Integrator : HP RTE
Method file : /chem3/nt3.i/01152013.b/8260C011513L.m
Cal Date : 18-Jan-2013 10:00 patrickb
Curve Type : Average

Compound	0.20000 Level 1	0.50000 Level 2	1.000 Level 3	2.000 Level 4	10.000 Level 5	20.000 Level 6	40.000 Level 7	80.000 Level 8	___ RRF	% RSD
57 m,p-xylene	0.48035	0.59868	0.59517	0.43876	0.61357	0.64800	0.61662	0.52546	0.56458	13.156
58 o-Xylene	0.51264	0.58431	0.63177	0.47636	0.62032	0.67042	0.64734	0.60880	0.59399	11.307
59 Styrene	0.88526	0.85172	0.95015	0.75261	1.00804	1.07093	1.03102	0.91163	0.93267	11.204
60 Bromoform	0.29183	0.35010	0.40700	0.32680	0.39602	0.40940	0.39991	0.40472	0.37322	11.977
61 Isopropyl Benzene	2.12492	2.48082	2.57043	2.07516	2.72206	2.83987	2.62013	2.16035	2.44922	11.958
63 Bromobenzene	0.60602	0.71413	0.73042	0.58036	0.65415	0.68722	0.67051	0.67051	0.66416	7.635
64 N-Propyl Benzene	2.82679	3.13659	3.23441	2.41488	3.19403	3.29581	2.96162	2.31986	2.92300	12.851
65 1,1,2,2-Tetrachloroethane	0.99224	0.80903	0.78781	0.65750	0.76526	0.77629	0.74913	0.72219	0.78243	12.357
66 2-Chloro Toluene	2.03720	2.21750	2.29937	1.76415	2.22232	2.30050	2.18370	1.95301	2.12222	8.907

Analytical Resources, Inc.

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Integrator : HP RTE
Method file : /chem3/nt3.i/01152013.b/8260C011513L.m
Cal Date : 18-Jan-2013 10:00 patrickb
Curve Type : Average

Compound	0.20000 Level 1	0.50000 Level 2	1.000 Level 3	2.000 Level 4	10.000 Level 5	20.000 Level 6	RRF	% RSD	
	40.000 Level 7	80.000 Level 8							
67 1,3,5-Trimethyl Benzene	1.90872	2.06750	2.14667	1.73413	2.31205	2.45332			
	2.29241	1.92365					2.10481	11.518	
68 1,2,3-Trichloropropane	+++++	0.22484	0.25054	0.19413	0.22055	0.22988			
	0.22141	0.21858					0.22285	7.487	
70 Trans-1,4-Dichloro 2-Butene	+++++	0.35407	0.29859	0.24012	0.29878	0.30652			
	0.29403	0.29310					0.29789	11.139	
71 4-Chloro Toluene	2.12322	2.11637	2.06350	1.70437	2.07816	2.11044			
	1.99831	1.76699					1.99517	8.313	
69 Cyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
72 T-Butyl Benzene	1.72154	1.89379	1.93653	1.52715	2.02017	2.10523			
	2.03347	1.74426					1.87277	10.388	
73 1,2,4-Trimethylbenzene	2.01947	2.05107	2.17021	1.70221	2.34262	2.44696			
	2.29499	1.92172					2.11866	11.538	
74 S-Butyl Benzene	2.72846	2.88984	2.87583	2.32836	3.05615	3.16254			
	2.86419	2.24994					2.76941	11.722	
75 4-Isopropyl Toluene	2.21015	2.07085	2.32457	1.81333	2.43834	2.56730			
	2.39535	1.97275					2.22408	11.510	

Analytical Resources, Inc.

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Method file : /chem3/nt3.i/01152013.b/8260C011513L.m
Cal Date : 18-Jan-2013 10:00 patrickb
Curve Type : Average

Compound	0.20000 Level 1	0.50000 Level 2	1.000 Level 3	2.000 Level 4	10.000 Level 5	20.000 Level 6	RRF	% RSD
	40.000 Level 7	80.000 Level 8						
76 1,3-Dichlorobenzene	1.26296	1.34653	1.45123	1.09730	1.33936	1.38250		
	1.34306	1.24584					1.30860	8.172
78 1,4-Dichlorobenzene	1.53989	1.42764	1.48955	1.13968	1.41307	1.41632		
	1.36337	1.28283					1.38404	9.040
79 N-Butyl Benzene	2.36380	2.15088	2.35080	1.83723	2.38595	2.45829		
	2.28259	1.89651					2.21576	10.540
81 1,2-Dichlorobenzene	1.31467	1.34530	1.35110	1.05222	1.33520	1.34109		
	1.28959	1.19083					1.27750	8.219
82 1,2-Dibromo 3-Chloropropane	+++++	0.21936	0.20882	0.13689	0.15670	0.16618		
	0.16056	0.14974					0.17118	18.039
83 Hexachloro 1,3-Butadiene	0.49369	0.43088	0.32839	0.29094	0.35279	0.36559		
	0.35288	0.35133					0.37081	17.038
84 1,2,4-Trichlorobenzene	0.71293	0.79916	0.82504	0.62874	0.80383	0.84145		
	0.81553	0.82844					0.78189	9.386
85 Naphthalene	1.61858	1.86084	1.99125	1.70465	2.15158	2.27786		
	2.14952	1.87839					1.95409	11.807
86 1,2,3-Trichlorobenzene	0.64904	0.66786	0.69175	0.58197	0.74497	0.78222		
	0.75888	0.79225					0.70862	10.369

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 15-JAN-2013 15:36
End Cal Date : 15-JAN-2013 18:43
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem3/nt3.i/01152013.b/8260C011513L.m
Cal Date : 18-Jan-2013 10:00 patrickb
Curve Type : Average

Compound	0.20000 Level 1	0.50000 Level 2	1.000 Level 3	2.000 Level 4	10.000 Level 5	20.000 Level 6	RRF	% RSD
	40.000 Level 7	80.000 Level 8						
$ 26 Dibromofluoromethane	0.51867	0.56373	0.55120	0.56678	0.53215	0.53913		
	0.53997	0.50777					0.53992	3.810
$ 32 d4-1,2-Dichloroethane	0.64976	0.70432	0.71126	0.67233	0.65608	0.66775		
	0.66341	0.62040					0.66816	4.371
$ 43 d8-Toluene	1.17334	1.18831	1.15343	1.15189	1.15050	1.16783		
	1.16629	1.15709					1.16358	1.118
$ 62 4-Bromofluorobenzene	0.52892	0.52671	0.54688	0.51951	0.53823	0.53697		
	0.52044	0.51065					0.52854	2.230
$ 80 d4-1,2-Dichlorobenzene	0.89481	0.88368	0.89860	0.88725	0.90319	0.91687		
	0.89778	0.90469					0.89836	1.158

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/nt3.i/01152013.b

ARI Job No.: IC01 Method: 8260C011513L.m Instrument: nt3.i Date: 15-JAN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1536	0020115.d	IC0115	VSTD0.2	1	Bromomethane, Acetone, Iodomethane, 2,2-Dichloropropane, Bromochloromethane, 1,1,1-Trichloroethane, 1,2-Dichloropropane, 4-Methyl-2-Pentanone, Toluene,
1843	0050115.d	IC0115	VSTD0.5	1	Acetone, Acrylonitrile, 4-Methyl-2-Pentanone,
1816	0100115.d	IC0115	VSTD1	1	4-Methyl-2-Pentanone,
1750	0200115.d	IC0115	VSTD2	1	NO MANUAL INTEGRATION
1724	1000115.d	IC0115	VSTD10	1	NO MANUAL INTEGRATION
1657	2000115.d	IC0115	VSTD20	1	NO MANUAL INTEGRATION
1630	4000115.d	IC0115	VSTD40	1	NO MANUAL INTEGRATION
1603	8000115.d	IC0115	VSTD80	1	NO MANUAL INTEGRATION

SL2360 : 1527

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/nt3.i/01152013.b/8260C011513L.m
Batch File: /chem3/nt3.i/01152013.b
Inst ID: nt3.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08
FILENAME:	0020115	8000115	4000115	2000115	1000115	0200115	0100115	0050115
INJ.DATE:	15-JAN-2013	15-JAN-2013	15-JAN-2013	15-JAN-2013	15-JAN-2013	15-JAN-2013	15-JAN-2013	15-JAN-2013
INJ.TIME:	15:36	16:03	16:30	16:57	17:24	17:50	18:16	18:43

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Dichlorodifluoromethan	1.640	1.625	1.635	1.634	1.623	1.634	1.641	1.639	1.623	1.551-1.695	1.634	0.007
2 Chloromethane	1.770	1.772	1.782	1.782	1.764	1.770	1.782	1.781	1.764	1.692-1.836	1.775	0.007
3 Vinyl Chloride	1.855	1.857	1.861	1.861	1.843	1.849	1.861	1.860	1.843	1.771-1.915	1.856	0.007
4 Bromomethane	2.155	2.151	2.155	2.155	2.143	2.149	2.161	2.154	2.143	2.071-2.215	2.153	0.005
5 Chloroethane	2.279	2.264	2.280	2.279	2.268	2.279	2.286	2.284	2.268	2.196-2.340	2.277	0.008
6 Trichlorofluoromethane	2.415	2.411	2.427	2.426	2.420	2.426	2.427	2.431	2.420	2.348-2.492	2.423	0.007
7 1,1-Dichloroethene	2.958	2.943	2.953	2.958	2.946	2.957	2.965	2.969	2.946	2.874-3.018	2.956	0.009
8 Carbon Disulfide	2.964	2.954	2.964	2.964	2.958	2.963	2.970	2.969	2.958	2.886-3.030	2.963	0.005
9 112Trichloro122Trifluo	3.037	3.022	3.032	3.037	3.026	3.031	3.044	3.037	3.026	2.954-3.098	3.033	0.007
10 Iodomethane	3.105	3.090	3.100	3.105	3.088	3.099	3.106	3.099	3.088	3.016-3.160	3.099	0.007
11 Bromoethane	3.247	3.231	3.247	3.247	3.235	3.240	3.247	3.252	3.235	3.163-3.307	3.243	0.007
12 Acrolein	3.337	3.333	3.338	3.337	3.331	3.336	3.344	3.348	3.331	3.259-3.403	3.338	0.005
13 Methylene Chloride	3.597	3.588	3.598	3.597	3.586	3.591	3.598	3.597	3.586	3.514-3.658	3.594	0.005
14 Acetone	3.648	3.650	3.660	3.654	3.648	3.665	3.660	3.665	3.648	3.575-3.719	3.656	0.007
15 Trans-1,2-Dichloroethe	3.767	3.757	3.762	3.767	3.755	3.766	3.768	3.761	3.755	3.683-3.827	3.763	0.005
173 n-hexane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.532	3.460-3.604	+++++	+++++
16 Methyl tert butyl ethe	3.891	3.887	3.892	3.892	3.886	3.885	3.898	3.897	3.886	3.813-3.957	3.891	0.005

Reviewer 1 _____ Date: 1/18/13

Reviewer 2 _____ Date: 01/21/13

F2350

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/nt3.i/01152013.b/8260C011513L.m
Batch File: /chem3/nt3.i/01152013.b
Inst ID: nt3.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	17 1,1-Dichloroethane	4.344	4.334	4.339	4.338	4.332	4.338	4.345	4.338	4.332	4.260-4.404	4.339	0.004
	18 Acrylonitrile	0.000	4.380	4.384	4.384	4.378	4.383	4.390	4.383	4.378	4.306-4.450	3.835	1.550
	19 Vinyl Acetate	4.582	4.578	4.582	4.582	4.576	4.581	4.582	4.581	4.576	4.504-4.648	4.580	0.002
	20 Cis-1,2-Dichloroethene	4.796	4.798	4.803	4.802	4.796	4.802	4.803	4.807	4.796	4.724-4.868	4.801	0.004
	21 Allyl Chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.560	4.488-4.632	+++++	+++++
	22 2,2-Dichloropropane	4.893	4.889	4.888	4.893	4.887	4.892	4.899	4.892	4.887	4.815-4.959	4.891	0.004
	23 Bromochloromethane	4.961	4.957	4.961	4.961	4.960	4.960	4.961	4.960	4.960	4.888-5.032	4.960	0.001
	24 Chloroform	5.028	5.024	5.029	5.029	5.023	5.028	5.029	5.034	5.023	4.951-5.095	5.028	0.003
	25 Carbon Tetrachloride	5.130	5.126	5.131	5.130	5.124	5.130	5.137	5.130	5.124	5.047-5.201	5.130	0.004
$	26 Dibromofluoromethane	5.170	5.166	5.170	5.170	5.164	5.169	5.171	5.169	5.164	5.092-5.236	5.169	0.002
	27 1,1,1-Trichloroethane	5.192	5.183	5.187	5.187	5.181	5.186	5.188	5.181	5.181	5.109-5.253	5.186	0.004
	28 2-Butanone	5.260	5.268	5.267	5.272	5.266	5.271	5.273	5.271	5.266	5.194-5.338	5.268	0.004
	29 1,1-Dichloropropene	5.277	5.279	5.278	5.283	5.277	5.282	5.278	5.277	5.277	5.200-5.354	5.279	0.002
	30 Benzene	5.470	5.466	5.470	5.470	5.464	5.463	5.465	5.463	5.464	5.387-5.541	5.466	0.003
*	31 Pentafluorobenzene	5.538	5.534	5.538	5.538	5.537	5.537	5.538	5.543	5.537	5.465-5.609	5.538	0.002
$	32 d4-1,2-Dichloroethane	5.566	5.562	5.566	5.566	5.566	5.565	5.567	5.571	5.566	5.494-5.638	5.566	0.002
	33 1,2-Dichloroethane	5.611	5.613	5.617	5.617	5.617	5.622	5.618	5.622	5.617	5.540-5.693	5.617	0.004
	34 Trichloroethene	5.905	5.901	5.900	5.900	5.899	5.899	5.900	5.899	5.899	5.822-5.976	5.901	0.002
*	36 1,4-Difluorobenzene	5.928	5.924	5.923	5.928	5.922	5.927	5.929	5.927	5.922	5.845-5.999	5.926	0.003
	35 Methyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.693	5.616-5.770	+++++	+++++
	37 Dibromomethane	6.199	6.195	6.200	6.199	6.199	6.199	6.200	6.193	6.199	6.122-6.276	6.198	0.003
	38 1,2-Dichloropropane	6.273	6.269	6.273	6.273	6.273	6.267	6.274	6.278	6.273	6.196-6.350	6.272	0.003

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Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/nt3.i/01152013.b/8260C011513L.m
Batch File: /chem3/nt3.i/01152013.b
Inst ID: nt3.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	39 Bromodichloromethane	6.318	6.314	6.319	6.318	6.312	6.318	6.319	6.318	6.312	6.235-6.389	6.317	0.002
	40 2-pentanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.327	6.255-6.399	+++++	+++++
	41 2-Chloroethyl Vinyl Et	6.714	6.716	6.720	6.720	6.714	6.714	6.715	6.714	6.714	6.637-6.791	6.716	0.003
	42 Cis 1,3-dichloropropen	6.759	6.761	6.760	6.760	6.759	6.764	6.760	6.765	6.759	6.682-6.836	6.761	0.002
$	43 d8-Toluene	6.895	6.891	6.896	6.895	6.889	6.895	6.896	6.895	6.889	6.812-6.966	6.894	0.002
	44 Toluene	6.929	6.931	6.930	6.929	6.929	6.929	6.930	6.929	6.929	6.852-7.006	6.929	0.001
	45 Tetrachloroethene	7.206	7.197	7.201	7.201	7.200	7.200	7.196	7.200	7.200	7.097-7.304	7.200	0.003
	46 4-Methyl-2-Pentanone	7.189	7.185	7.190	7.189	7.189	7.189	7.190	7.189	7.189	7.112-7.266	7.189	0.001
	47 Trans 1,3-Dichloroprop	7.212	7.214	7.212	7.212	7.212	7.211	7.213	7.217	7.212	7.135-7.289	7.213	0.002
	48 1,1,2-Trichloroethane	7.331	7.327	7.326	7.325	7.325	7.330	7.326	7.325	7.325	7.248-7.402	7.327	0.002
	49 Chlorodibromomethane	7.450	7.451	7.450	7.455	7.449	7.449	7.456	7.455	7.449	7.346-7.553	7.452	0.003
	50 1,3-Dichloropropane	7.512	7.519	7.518	7.518	7.517	7.517	7.524	7.517	7.517	7.414-7.621	7.518	0.003
	51 1,2-Dibromoethane	7.619	7.621	7.620	7.619	7.619	7.619	7.620	7.619	7.619	7.542-7.696	7.619	0.001
	52 2-Hexanone	7.772	7.768	7.767	7.766	7.766	7.766	7.767	7.771	7.766	7.662-7.870	7.768	0.002
*	53 d5-Chlorobenzene	7.976	7.977	7.976	7.976	7.975	7.975	7.976	7.981	7.975	7.872-8.079	7.977	0.002
	54 Chlorobenzene	7.993	7.989	7.987	7.987	7.987	7.986	7.988	7.992	7.987	7.883-8.090	7.989	0.002
	55 Ethyl Benzene	8.010	8.006	8.004	8.004	8.004	8.003	8.005	8.009	8.004	7.900-8.107	8.006	0.002
	56 1,1,1,2-Tetrachloroeth	8.027	8.034	8.033	8.032	8.032	8.032	8.033	8.032	8.032	7.928-8.136	8.032	0.002
	57 m,p-xylene	8.106	8.107	8.106	8.106	8.105	8.105	8.107	8.105	8.105	8.002-8.209	8.106	0.001
	58 o-Xylene	8.417	8.413	8.412	8.411	8.411	8.411	8.412	8.416	8.411	8.307-8.515	8.413	0.002
	59 Styrene	8.451	8.447	8.451	8.451	8.451	8.450	8.446	8.450	8.451	8.347-8.554	8.450	0.002
	60 Bromoform	8.473	8.470	8.474	8.473	8.473	8.467	8.474	8.473	8.473	8.347-8.599	8.472	0.003
	61 Isopropyl Benzene	8.637	8.639	8.638	8.638	8.637	8.637	8.638	8.637	8.637	8.511-8.763	8.638	0.001
$	62 4-Bromofluorobenzene	8.841	8.843	8.842	8.841	8.841	8.841	8.842	8.841	8.841	8.737-8.945	8.841	0.001

22553 1574

Report Date : 18-Jan-2013 10:00

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/nt3.i/01152013.b/8260C011513L.m
Batch File: /chem3/nt3.i/01152013.b
Inst ID: nt3.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
63 Bromobenzene	8.920	8.922	8.926	8.926	8.926	8.920	8.921	8.931	8.926	8.800-9.051	8.924	0.004
64 N-Propyl Benzene	8.937	8.933	8.938	8.937	8.937	8.937	8.938	8.937	8.937	8.811-9.063	8.937	0.001
65 1,1,2,2-Tetrachloroeth	8.977	8.979	8.983	8.983	8.982	8.982	8.983	8.982	8.982	8.857-9.108	8.981	0.002
66 2-Chloro Toluene	9.056	9.052	9.057	9.056	9.056	9.055	9.057	9.056	9.056	8.930-9.181	9.056	0.001
67 1,3,5-Trimethyl Benzen	9.079	9.075	9.074	9.073	9.073	9.078	9.074	9.078	9.073	8.947-9.198	9.075	0.002
68 1,2,3-Trichloropropane	0.000	9.086	9.085	9.084	9.084	9.084	9.085	9.084	9.084	8.958-9.210	7.949	3.212
70 Trans-1,4-Dichloro 2-B	0.000	9.109	9.107	9.113	9.107	9.112	9.114	9.106	9.107	8.981-9.232	7.971	3.221
71 4-Chloro Toluene	9.175	9.177	9.175	9.175	9.175	9.174	9.176	9.174	9.175	9.049-9.300	9.175	0.001
69 Cyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.878	8.774-8.982	+++++	+++++
72 T-Butyl Benzene	9.316	9.312	9.311	9.316	9.310	9.310	9.317	9.316	9.310	9.185-9.436	9.314	0.003
73 1,2,4-Trimethylbenzene	9.362	9.363	9.362	9.362	9.361	9.361	9.362	9.361	9.361	9.236-9.487	9.362	0.001
74 S-Butyl Benzene	9.446	9.448	9.447	9.446	9.446	9.446	9.447	9.446	9.446	9.320-9.572	9.447	0.001
75 4-Isopropyl Toluene	9.548	9.550	9.549	9.548	9.548	9.548	9.549	9.548	9.548	9.422-9.674	9.548	0.001
76 1,3-Dichlorobenzene	9.610	9.612	9.611	9.611	9.616	9.610	9.611	9.616	9.616	9.490-9.742	9.612	0.002
* 77 d4-1,4-Dichlorobenzene	9.667	9.669	9.668	9.667	9.667	9.666	9.668	9.666	9.667	9.541-9.792	9.667	0.001
78 1,4-Dichlorobenzene	9.678	9.680	9.679	9.678	9.678	9.678	9.679	9.678	9.678	9.552-9.804	9.679	0.001
79 N-Butyl Benzene	9.871	9.867	9.866	9.865	9.865	9.864	9.866	9.864	9.865	9.739-9.990	9.866	0.002
$ 80 d4-1,2-Dichlorobenzene	9.989	9.991	9.990	9.990	9.989	9.989	9.990	9.989	9.989	9.863-10.115	9.990	0.001
81 1,2-Dichlorobenzene	10.001	9.997	9.996	9.995	9.995	10.000	9.996	10.000	9.995	9.869-10.120	9.997	0.002
82 1,2-Dibromo 3-Chloropr	0.000	10.608	10.607	10.606	10.606	10.605	10.613	10.605	10.606	10.480-10.731	9.281	3.750
83 Hexachloro 1,3-Butadie	11.109	11.111	11.116	11.110	11.109	11.109	11.110	11.115	11.109	10.984-11.235	11.111	0.003
84 1,2,4-Trichlorobenzene	11.138	11.134	11.138	11.138	11.138	11.137	11.133	11.137	11.138	11.012-11.263	11.137	0.002
85 Naphthalene	11.392	11.394	11.393	11.392	11.392	11.392	11.393	11.392	11.392	11.266-11.518	11.393	0.001

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/nt3.i/01152013.b/8260C011513L.m
Batch File: /chem3/nt3.i/01152013.b
Inst ID: nt3.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
86 1,2,3-Trichlorobenzene	11.534	11.541	11.540	11.539	11.539	11.539	11.540	11.539	11.539	11.413-11.665	11.539	0.002

SW8260 10271

Analytical Resources, Inc.

SW8260C 10 mL Purge

Data file : /chem3/nt3.i/01152013.b/0020115.d
Lab Smp Id: ICO115 Client Smp ID: VSTD0.2
Inj Date : 15-JAN-2013 15:36
Operator : PB Inst ID: nt3.i
Smp Info : ICO115,10,10,0
Misc Info : 12-
Comment :
Method : /chem3/nt3.i/01152013.b/8260C011513L.m
Meth Date : 18-Jan-2013 10:01 patrickb Quant Type: ISTD
Cal Date : 15-JAN-2013 15:36 Cal File: 0020115.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Dichlorodifluoromethane	85	1.640	1.623	(0.296)	6249	0.20000	0.1999
2 Chloromethane	50	1.770	1.764	(0.320)	8468	0.20000	0.2280
3 Vinyl Chloride	62	1.855	1.843	(0.335)	7673	0.20000	0.1831
4 Bromomethane	94	2.155	2.143	(0.389)	5478	0.20000	0.2324 (M)
5 Chloroethane	64	2.279	2.268	(0.412)	6282	0.20000	0.2263
6 Trichlorofluoromethane	101	2.415	2.420	(0.436)	9492	0.20000	0.2017
7 1,1-Dichloroethene	96	2.958	2.946	(0.534)	4324	0.20000	0.1566
8 Carbon Disulfide	76	2.964	2.958	(0.535)	21829	0.20000	0.2103
9 112Trichloro122Trifluoroethane	101	3.037	3.026	(0.548)	5533	0.20000	0.1865
10 Iodomethane	142	3.105	3.088	(0.561)	8587	0.20000	0.1970 (M)
11 Bromoethane	108	3.247	3.235	(0.586)	5197	0.20000	0.2382
12 Acrolein	56	3.337	3.331	(0.603)	6671	1.00000	1.338
13 Methylene Chloride	84	3.597	3.586	(0.650)	8482	0.20000	0.2615
14 Acetone	43	3.648	3.648	(0.659)	8762	1.00000	1.636 (M)
15 Trans-1,2-Dichloroethene	96	3.767	3.755	(0.680)	7623	0.20000	0.2486

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
	16 Methyl tert butyl ether	73	3.891	3.886	(0.703)	15626	0.20000	0.1821
	17 1,1-Dichloroethane	63	4.344	4.332	(0.784)	11545	0.20000	0.2074
	18 Acrylonitrile	53	Compound Not Detected.					
	19 Vinyl Acetate	43	4.582	4.576	(0.827)	5509	0.20000	0.1640
	20 Cis-1,2-Dichloroethene	96	4.796	4.796	(0.866)	6728	0.20000	0.2143
	22 2,2-Dichloropropane	77	4.893	4.887	(0.884)	8337	0.20000	0.2157(TM)
	23 Bromochloromethane	128	4.961	4.960	(0.896)	2662	0.20000	0.1938(M)
	24 Chloroform	83	5.028	5.023	(0.908)	9752	0.20000	0.2024
	25 Carbon Tetrachloride	117	5.130	5.124	(0.865)	7629	0.20000	0.2151
$	26 Dibromofluoromethane	111	5.170	5.164	(0.934)	261781	10.0000	9.606
	27 1,1,1-Trichloroethane	97	5.192	5.181	(0.938)	8063	0.20000	0.1906(M)
	28 2-Butanone	43	5.260	5.266	(0.950)	13743	1.00000	1.107
	29 1,1-Dichloropropene	75	5.277	5.277	(0.890)	7604	0.20000	0.2027
	30 Benzene	78	5.470	5.464	(0.923)	21590	0.20000	0.2066
*	31 Pentafluorobenzene	168	5.538	5.537	(1.000)	504718	10.0000	
$	32 d4-1,2-Dichloroethane	65	5.566	5.566	(1.005)	327945	10.0000	9.725
	33 1,2-Dichloroethane	62	5.611	5.617	(0.947)	5709	0.20000	0.1688
	34 Trichloroethene	130	5.905	5.899	(0.996)	6079	0.20000	0.2356
*	36 1,4-Difluorobenzene	114	5.928	5.922	(1.000)	766579	10.0000	
	37 Dibromomethane	93	6.199	6.199	(1.046)	4137	0.20000	0.2636
	38 1,2-Dichloropropane	63	6.273	6.273	(1.058)	5595	0.20000	0.2100(M)
	39 Bromodichloromethane	83	6.318	6.312	(1.066)	6566	0.20000	0.2015
	41 2-Chloroethyl Vinyl Ether	63	6.714	6.714	(1.133)	2873	0.20000	0.2132
	42 Cis 1,3-dichloropropene	75	6.759	6.759	(1.140)	7235	0.20000	0.1942
$	43 d8-Toluene	98	6.895	6.889	(1.163)	899459	10.0000	10.084
	44 Toluene	92	6.929	6.929	(1.169)	11270	0.20000	0.2012(M)
	45 Tetrachloroethene	166	7.206	7.200	(0.904)	3885	0.20000	0.1685
	46 4-Methyl-2-Pentanone	43	7.189	7.189	(1.213)	26198	1.00000	0.9648(TM)
	47 Trans 1,3-Dichloropropene	75	7.212	7.212	(1.217)	7577	0.20000	0.2100
	48 1,1,2-Trichloroethane	97	7.331	7.325	(1.237)	3824	0.20000	0.2001
	49 Chlorodibromomethane	129	7.450	7.449	(0.934)	4635	0.20000	0.2066
	50 1,3-Dichloropropane	76	7.512	7.517	(0.942)	7523	0.20000	0.2097
	51 1,2-Dibromoethane	107	7.619	7.619	(1.285)	3719	0.20000	0.1835
	52 2-Hexanone	43	7.772	7.766	(0.974)	20505	1.00000	0.9668
*	53 d5-Chlorobenzene	117	7.976	7.975	(1.000)	717754	10.0000	
	54 Chlorobenzene	112	7.993	7.987	(1.002)	12635	0.20000	0.1979
	55 Ethyl Benzene	91	8.010	8.004	(1.004)	21189	0.20000	0.1926
	56 1,1,1,2-Tetrachloroethane	131	8.027	8.032	(1.006)	4378	0.20000	0.1831
	57 m,p-xylene	106	8.106	8.105	(1.016)	13791	0.40000	0.3403
	58 o-Xylene	106	8.417	8.411	(1.055)	7359	0.20000	0.1726
	59 Styrene	104	8.451	8.451	(1.060)	12708	0.20000	0.1898
	60 Bromoform	173	8.473	8.473	(0.877)	2585	0.20000	0.1564
	61 Isopropyl Benzene	105	8.637	8.637	(0.894)	18822	0.20000	0.1735
$	62 4-Bromofluorobenzene	95	8.841	8.841	(1.109)	379632	10.0000	10.007
	63 Bromobenzene	156	8.920	8.926	(0.923)	5368	0.20000	0.1825
	64 N-Propyl Benzene	91	8.937	8.937	(0.924)	25039	0.20000	0.1934
	65 1,1,2,2-Tetrachloroethane	83	8.977	8.982	(0.929)	8789	0.20000	0.2536

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
66	2-Chloro Toluene	91	9.056	9.056	(0.937)	18045	0.20000	0.1920
67	1,3,5-Trimethyl Benzene	105	9.079	9.073	(0.939)	16907	0.20000	0.1814
68	1,2,3-Trichloropropane	110	Compound Not Detected.					
70	Trans-1,4-Dichloro 2-Butene	53	Compound Not Detected.					
71	4-Chloro Toluene	91	9.175	9.175	(0.949)	18807	0.20000	0.2128
72	T-Butyl Benzene	119	9.316	9.310	(0.964)	15249	0.20000	0.1838
73	1,2,4-Trimethylbenzene	105	9.362	9.361	(0.968)	17888	0.20000	0.1906
74	S-Butyl Benzene	105	9.446	9.446	(0.977)	24168	0.20000	0.1970
75	4-Isopropyl Toluene	119	9.548	9.548	(0.988)	19577	0.20000	0.1987
76	1,3-Dichlorobenzene	146	9.610	9.616	(0.994)	11187	0.20000	0.1930
* 77	d4-1,4-Dichlorobenzene	152	9.667	9.667	(1.000)	442888	10.0000	
78	1,4-Dichlorobenzene	146	9.678	9.678	(1.001)	13640	0.20000	0.2225
79	N-Butyl Benzene	91	9.871	9.865	(1.021)	20938	0.20000	0.2134
$ 80	d4-1,2-Dichlorobenzene	152	9.989	9.989	(1.033)	396300	10.0000	9.960
81	1,2-Dichlorobenzene	146	10.001	9.995	(1.035)	11645	0.20000	0.2058
82	1,2-Dibromo 3-Chloropropane	75	Compound Not Detected.					
83	Hexachloro 1,3-Butadiene	225	11.109	11.109	(1.149)	4373	0.20000	0.2663
84	1,2,4-Trichlorobenzene	180	11.138	11.138	(1.152)	6315	0.20000	0.1824
85	Naphthalene	128	11.392	11.392	(1.178)	14337	0.20000	0.1657
86	1,2,3-Trichlorobenzene	180	11.534	11.539	(1.193)	5749	0.20000	0.1832

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt3.i
Lab File ID: 0020115.d
Lab Smp Id: IC0115
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem3/nt3.i/01152013.b/8260C011513L.m
Misc Info: 12-

Calibration Date: 15-JAN-2013
Calibration Time: 17:24
Client Smp ID: VSTD0.2
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	513917	256958	1027834	504718	-1.79
36 1,4-Difluorobenze	821183	410592	1642366	766579	-6.65
53 d5-Chlorobenzene	740077	370038	1480154	717754	-3.02
77 d4-1,4-Dichlorobe	454429	227214	908858	442888	-2.54

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	5.54	5.04	6.04	5.54	0.00
36 1,4-Difluorobenze	5.92	5.42	6.42	5.93	0.10
53 d5-Chlorobenzene	7.98	7.48	8.48	7.98	0.00
77 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

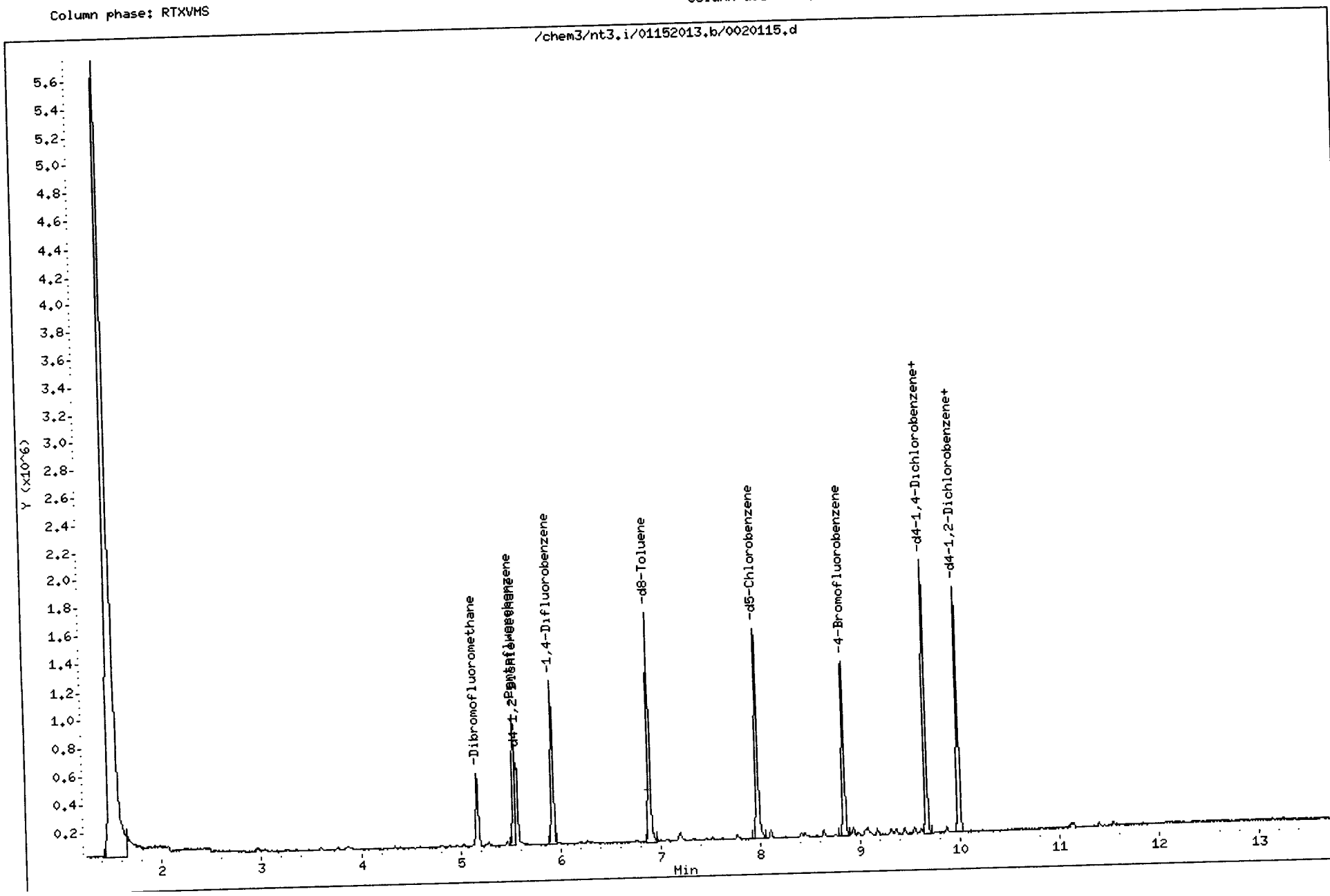
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt3.i/01152013.b/0020115.d
Date : 15-JAN-2013 15:36
Client ID: VSTD0.2
Sample Info: IC0115,10,10,0

Instrument: nt3.i

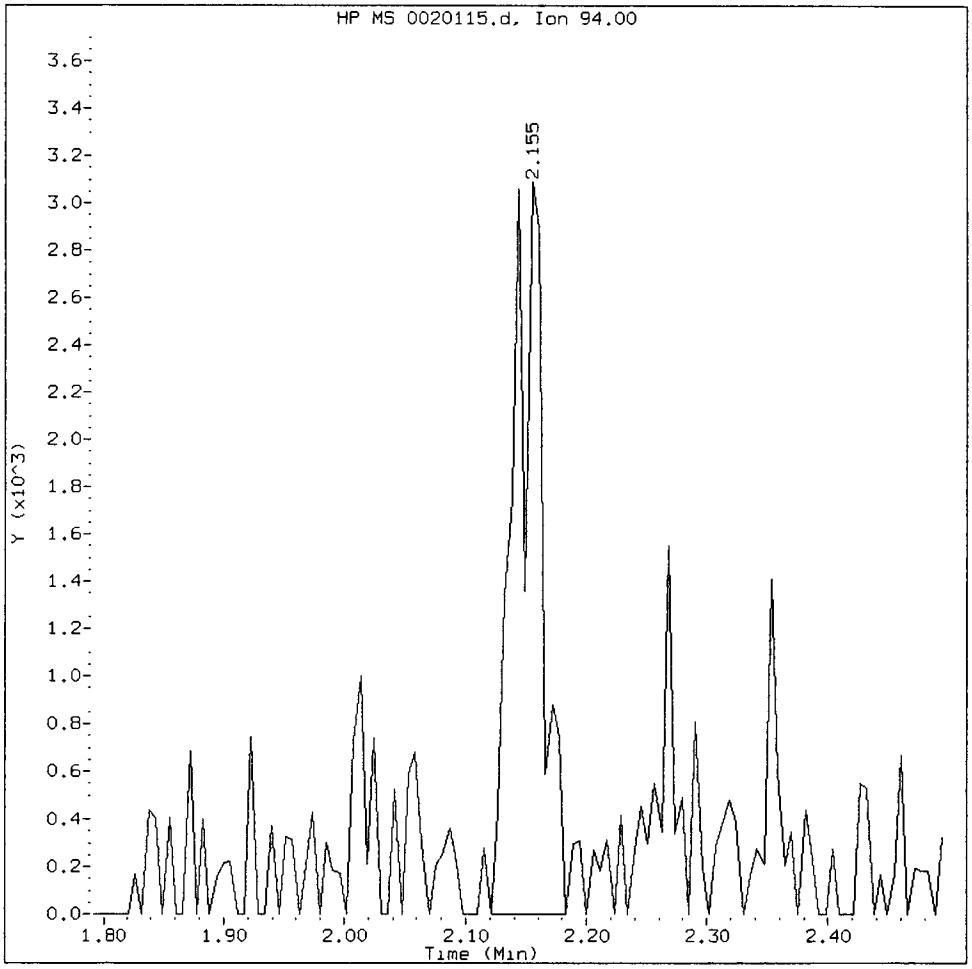
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



IC0115, /chem3/nt3.i/01152013.b/0020115.d

Bromomethane Amount: 0.23 Area: 5478



MANUAL INTEGRATION for Bromomethane

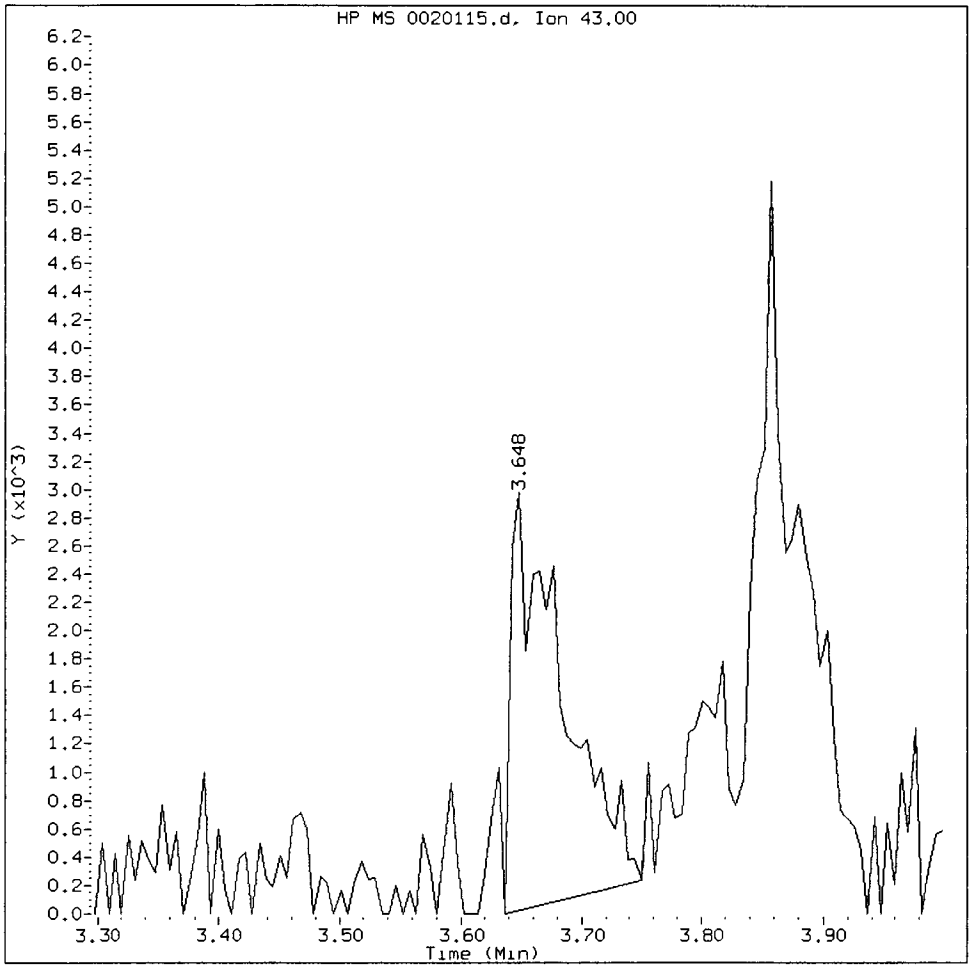
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: _____

IC0115, /chem3/nt3.i/01152013.b/0020115.d

Acetone Amount: 1.64 Area: 8762



MANUAL INTEGRATION for Acetone

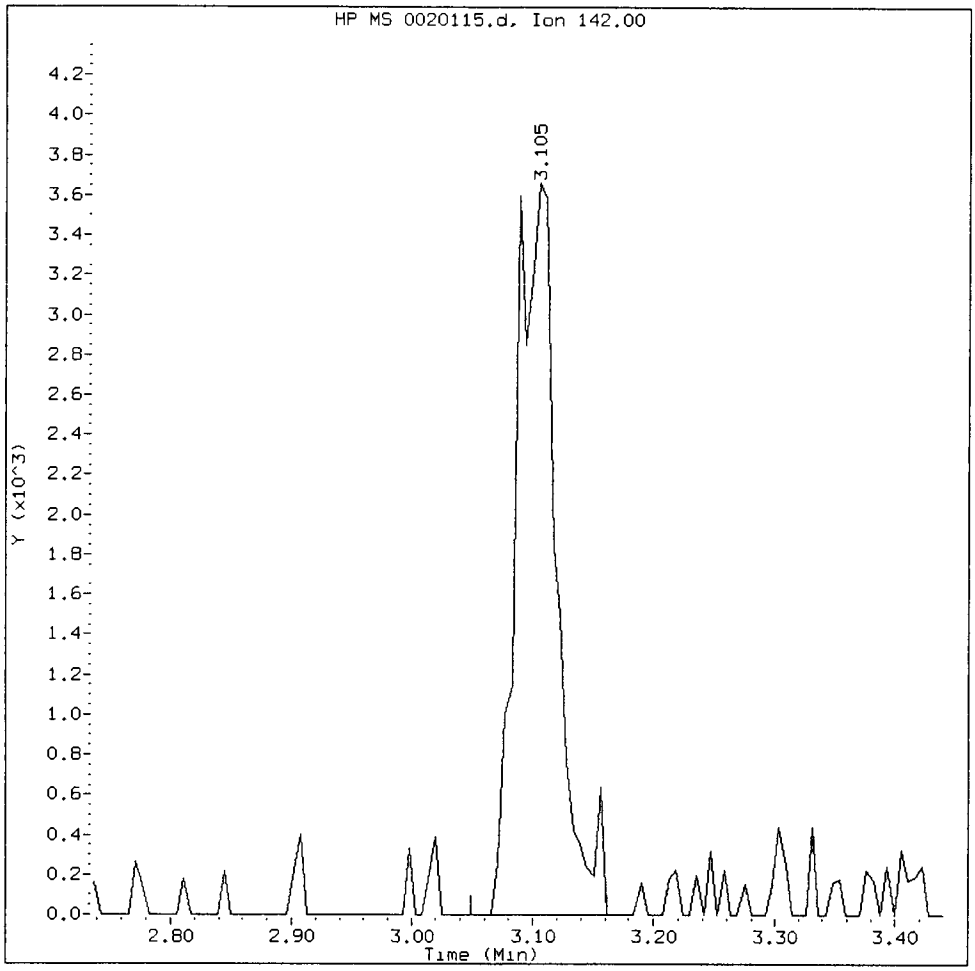
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 1/18/13

IC0115, /chem3/nt3.i/01152013.b/0020115.d

Iodomethane Amount: 0.20 Area: 8587



MANUAL INTEGRATION for Iodomethane

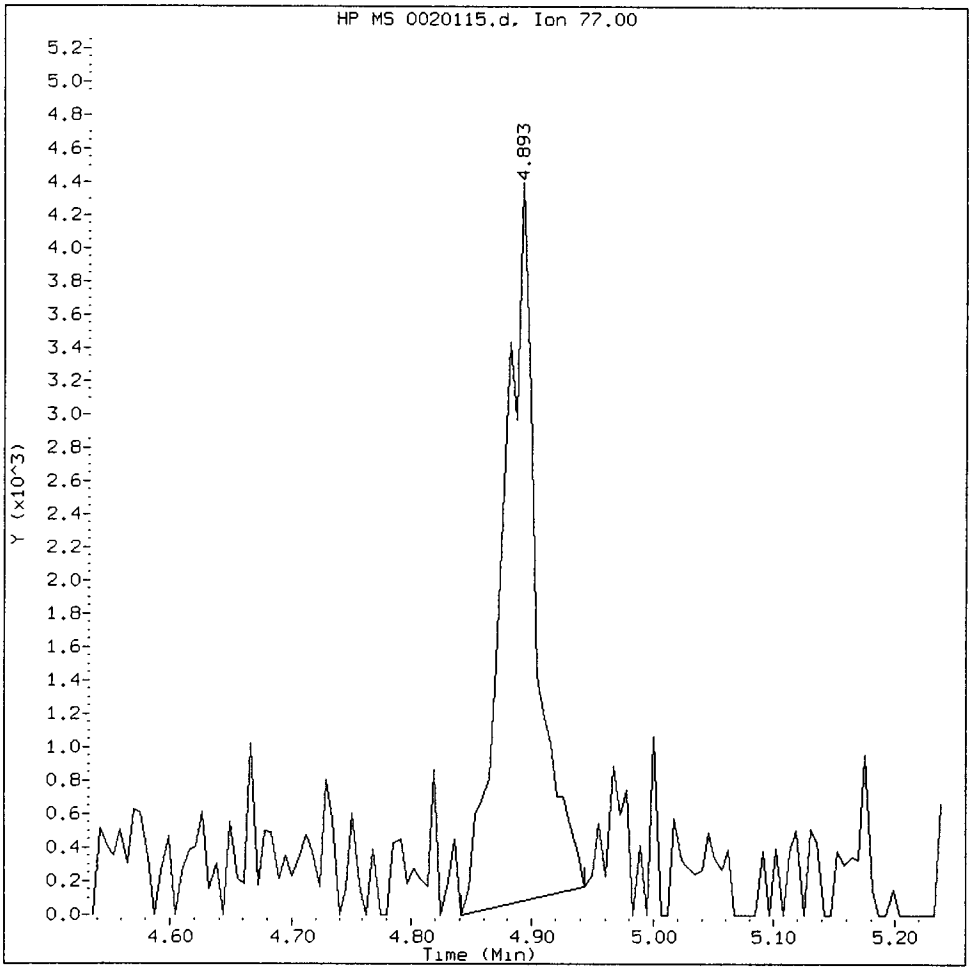
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 1/15/13

IC0115, /chem3/nt3.i/01152013.b/0020115.d

2,2-Dichloropropane Amount: 0.22 Area: 8337



MANUAL INTEGRATION for 2,2-Dichloropropane

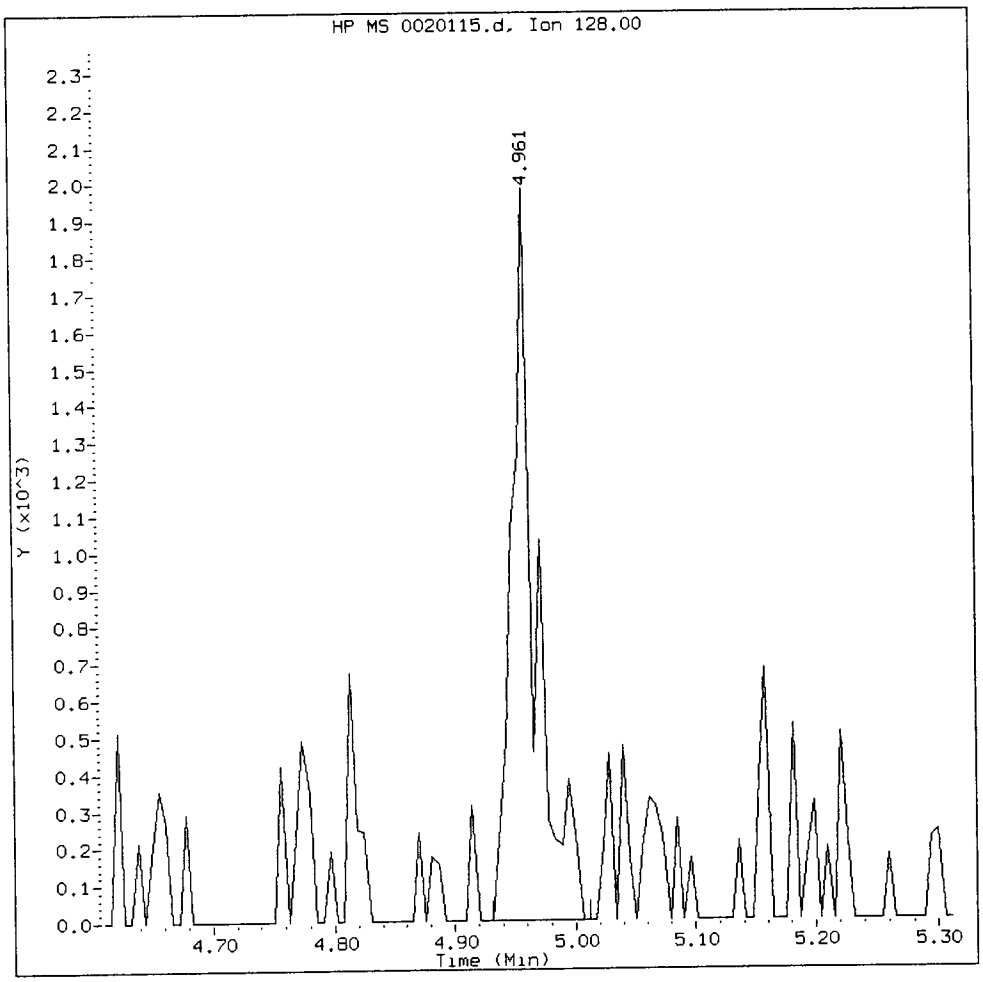
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: _____

IC0115, /chem3/nt3.i/01152013.b/0020115.d

Bromochloromethane Amount: 0.19 Area: 2662



MANUAL INTEGRATION for Bromochloromethane

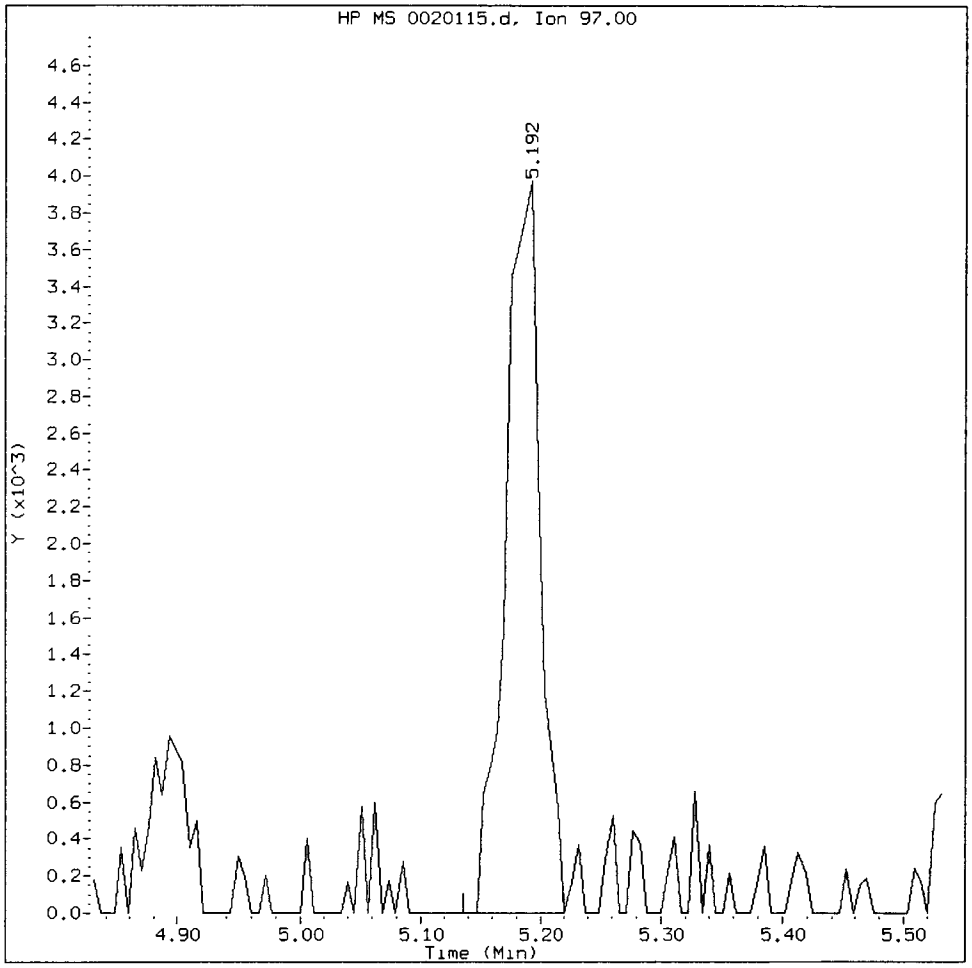
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 1/29/13

IC0115, /chem3/nt3.i/01152013.b/0020115.d

1,1,1-Trichloroethane Amount: 0.19 Area: 8063



MANUAL INTEGRATION for 1,1,1-Trichloroethane

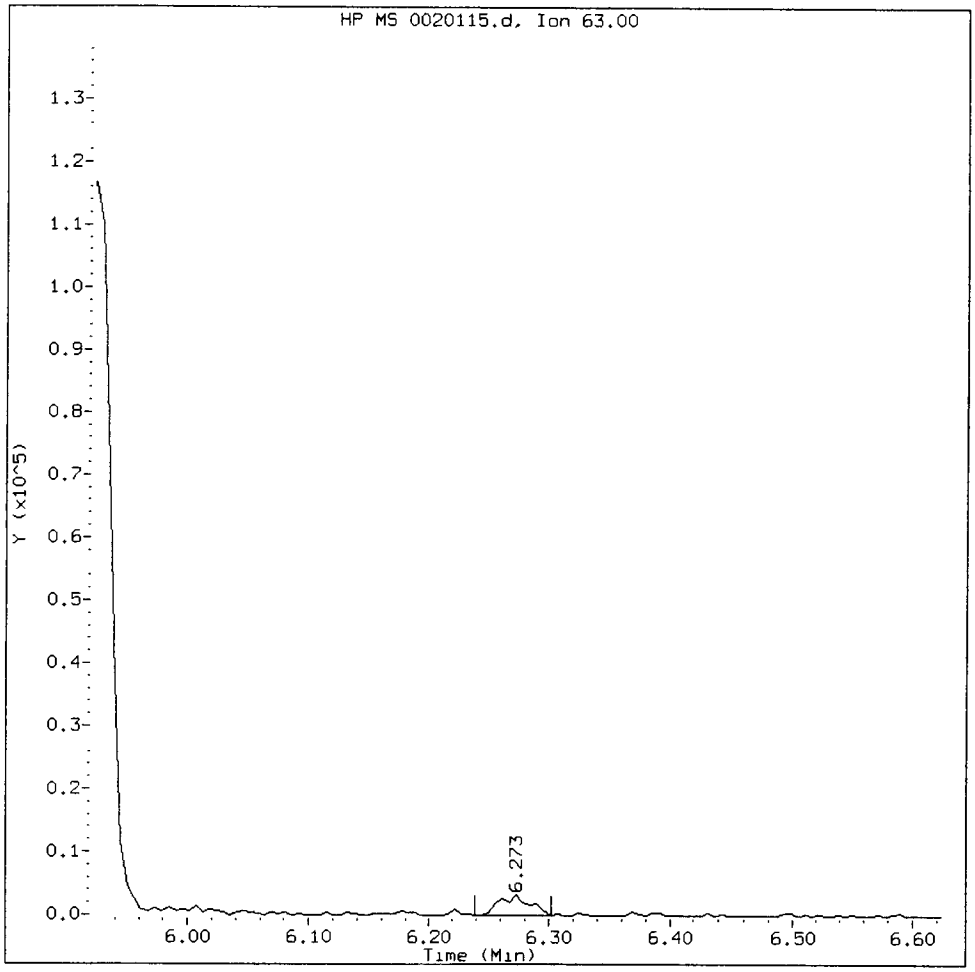
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 1/18/13

IC0115, /chem3/nt3.i/01152013.b/0020115.d

1,2-Dichloropropane Amount: 0.21 Area: 5595



MANUAL INTEGRATION for 1,2-Dichloropropane

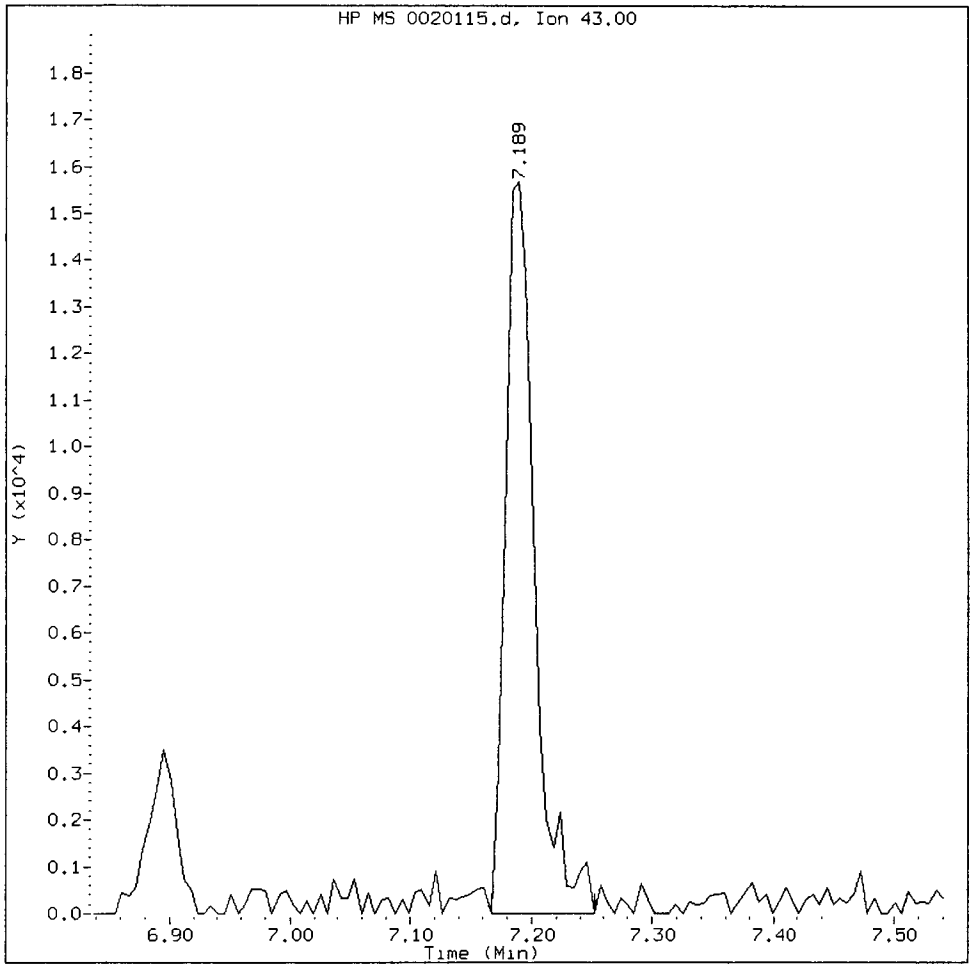
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: _____

IC0115, /chem3/nt3.i/01152013.b/0020115.d

4-Methyl-2-Pentanone Amount: 0.96 Area: 26198



MANUAL INTEGRATION for 4-Methyl-2-Pentanone

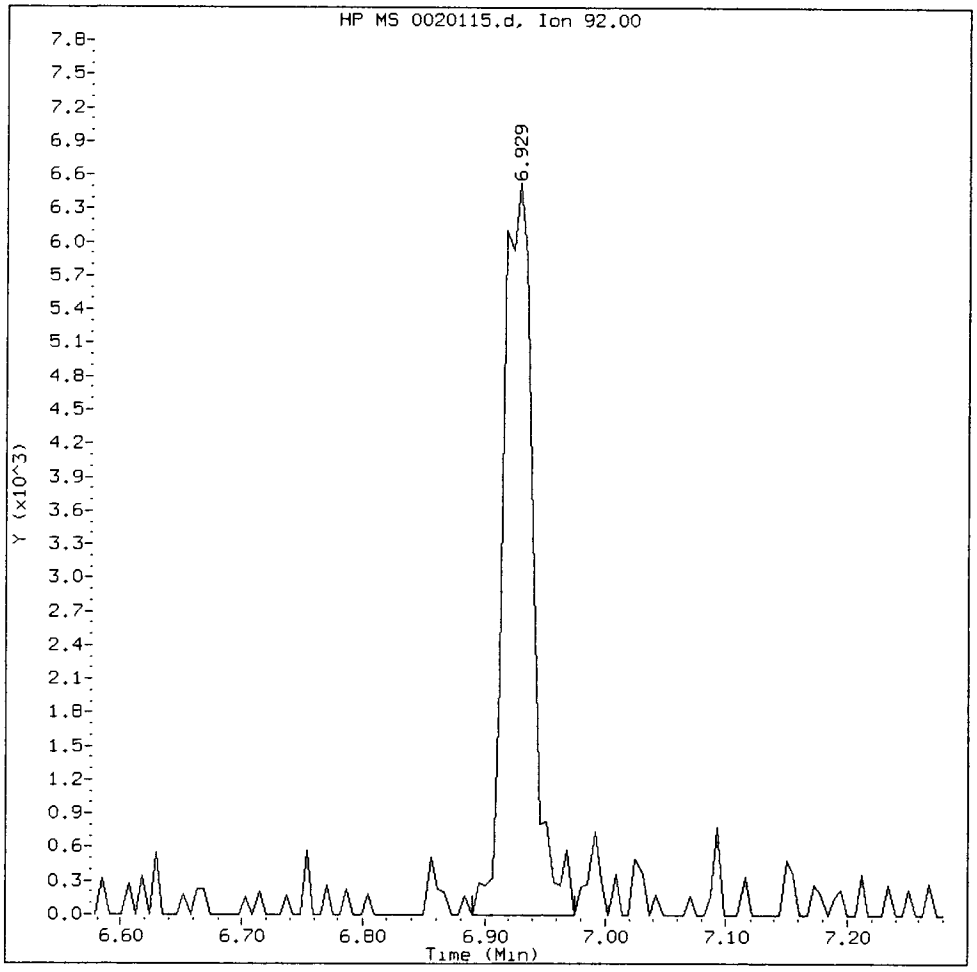
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: _____

IC0115, /chem3/nt3.i/01152013.b/0020115.d

Toluene Amount: 0.20 Area: 11270



MANUAL INTEGRATION for Toluene

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 1/16/13

UZ97 : 00299

CO-ELUTION SUMMARY FOR FILE - 0020115.d

Lab ID: IC0115, Method: 8260C011513L.m, Instrument: nt3.i, Date: 15-JAN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

SW8260C 10 mL Purge

Data file : /chem3/nt3.i/01152013.b/0050115.d
Lab Smp Id: IC0115 Client Smp ID: VSTD0.5
Inj Date : 15-JAN-2013 18:43
Operator : PB Inst ID: nt3.i
Smp Info : IC0115,10,10,0
Misc Info : 12-
Comment :
Method : /chem3/nt3.i/01152013.b/8260C011513L.m
Meth Date : 18-Jan-2013 10:01 patrickb Quant Type: ISTD
Cal Date : 15-JAN-2013 18:43 Cal File: 0050115.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Dichlorodifluoromethane	85	1.639	1.623	(0.296)	13594	0.50000	0.4694
2 Chloromethane	50	1.781	1.764	(0.321)	18596	0.50000	0.5404
3 Vinyl Chloride	62	1.860	1.843	(0.336)	20122	0.50000	0.5181
4 Bromomethane	94	2.154	2.143	(0.389)	11803	0.50000	0.5404
5 Chloroethane	64	2.284	2.268	(0.412)	11829	0.50000	0.4598
6 Trichlorofluoromethane	101	2.431	2.420	(0.439)	23633	0.50000	0.5419
7 1,1-Dichloroethene	96	2.969	2.946	(0.536)	14760	0.50000	0.5770
8 Carbon Disulfide	76	2.969	2.958	(0.536)	54737	0.50000	0.5692
9 112Trichloro122Trifluoroethane	101	3.037	3.026	(0.548)	11282	0.50000	0.4104
10 Iodomethane	142	3.099	3.088	(0.559)	21154	0.50000	0.5237
11 Bromoethane	108	3.252	3.235	(0.587)	10562	0.50000	0.5223
12 Acrolein	56	3.348	3.331	(0.604)	8650	2.50000	1.872
13 Methylene Chloride	84	3.597	3.586	(0.649)	15079	0.50000	0.5018
14 Acetone	43	3.665	3.648	(0.661)	14074	2.50000	2.835(M)
15 Trans-1,2-Dichloroethene	96	3.761	3.755	(0.678)	14088	0.50000	0.4959

Data File: /chem3/nt3.i/01152013.b/0050115.d
Report Date: 18-Jan-2013 10:01

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	16 Methyl tert butyl ether	73	3.897	3.886	(0.703)	39151	0.50000	0.4924
	17 1,1-Dichloroethane	63	4.338	4.332	(0.783)	26539	0.50000	0.5146
	18 Acrylonitrile	53	4.383	4.378	(0.791)	3944	0.50000	0.4398(M)
	19 Vinyl Acetate	43	4.581	4.576	(0.826)	15742	0.50000	0.5058
	20 Cis-1,2-Dichloroethene	96	4.807	4.796	(0.867)	15752	0.50000	0.5414
	22 2,2-Dichloropropane	77	4.892	4.887	(0.883)	19767	0.50000	0.5519
	23 Bromochloromethane	128	4.960	4.960	(0.895)	5148	0.50000	0.4045
	24 Chloroform	83	5.034	5.023	(0.908)	22703	0.50000	0.5086
	25 Carbon Tetrachloride	117	5.130	5.124	(0.865)	17978	0.50000	0.5310
$	26 Dibromofluoromethane	111	5.169	5.164	(0.933)	263649	10.0000	10.441
	27 1,1,1-Trichloroethane	97	5.181	5.181	(0.935)	21114	0.50000	0.5387
	28 2-Butanone	43	5.271	5.266	(0.951)	27184	2.50000	2.363
	29 1,1-Dichloropropene	75	5.277	5.277	(0.890)	17787	0.50000	0.4966
	30 Benzene	78	5.463	5.464	(0.922)	57218	0.50000	0.5735
*	31 Pentafluorobenzene	168	5.543	5.537	(1.000)	467687	10.0000	
$	32 d4-1,2-Dichloroethane	65	5.571	5.566	(1.005)	329401	10.0000	10.541
	33 1,2-Dichloroethane	62	5.622	5.617	(0.948)	18463	0.50000	0.5716
	34 Trichloroethene	130	5.899	5.899	(0.995)	12764	0.50000	0.5181
*	36 1,4-Difluorobenzene	114	5.927	5.922	(1.000)	731909	10.0000	
	37 Dibromomethane	93	6.193	6.199	(1.045)	8144	0.50000	0.5434
	38 1,2-Dichloropropane	63	6.278	6.273	(1.059)	14119	0.50000	0.5550
	39 Bromodichloromethane	83	6.318	6.312	(1.066)	17363	0.50000	0.5581
	41 2-Chloroethyl Vinyl Ether	63	6.714	6.714	(1.133)	7673	0.50000	0.5964
	42 Cis 1,3-dichloropropene	75	6.765	6.759	(1.141)	17642	0.50000	0.4960
$	43 d8-Toluene	98	6.895	6.889	(1.163)	869734	10.0000	10.212
	44 Toluene	92	6.929	6.929	(1.169)	28975	0.50000	0.5419
	45 Tetrachloroethene	166	7.200	7.200	(0.902)	12115	0.50000	0.5315
	46 4-Methyl-2-Pentanone	43	7.189	7.189	(1.213)	71939	2.50000	2.775(M)
	47 Trans 1,3-Dichloropropene	75	7.217	7.212	(1.218)	19531	0.50000	0.5671
	48 1,1,2-Trichloroethane	97	7.325	7.325	(1.236)	10421	0.50000	0.5712
	49 Chlorodibromomethane	129	7.455	7.449	(0.934)	10598	0.50000	0.4778
	50 1,3-Dichloropropane	76	7.517	7.517	(0.942)	18363	0.50000	0.5175
	51 1,2-Dibromoethane	107	7.619	7.619	(1.285)	11210	0.50000	0.5793
	52 2-Hexanone	43	7.771	7.766	(0.974)	57556	2.50000	2.744
*	53 d5-Chlorobenzene	117	7.981	7.975	(1.000)	709834	10.0000	
	54 Chlorobenzene	112	7.992	7.987	(1.001)	31263	0.50000	0.4951
	55 Ethyl Benzene	91	8.009	8.004	(1.004)	59036	0.50000	0.5425
	56 1,1,1,2-Tetrachloroethane	131	8.032	8.032	(1.006)	11381	0.50000	0.4812
	57 m,p-xylene	106	8.105	8.105	(1.016)	42496	1.00000	1.060
	58 o-Xylene	106	8.416	8.411	(1.055)	20738	0.50000	0.4918
	59 Styrene	104	8.450	8.451	(1.059)	30229	0.50000	0.4566
	60 Bromoform	173	8.473	8.473	(0.877)	7415	0.50000	0.4690
	61 Isopropyl Benzene	105	8.637	8.637	(0.893)	52543	0.50000	0.5065
$	62 4-Bromofluorobenzene	95	8.841	8.841	(1.108)	373875	10.0000	9.965
	63 Bromobenzene	156	8.931	8.926	(0.924)	15125	0.50000	0.5376
	64 N-Propyl Benzene	91	8.937	8.937	(0.924)	66432	0.50000	0.5365
	65 1,1,2,2-Tetrachloroethane	83	8.982	8.982	(0.929)	17135	0.50000	0.5170

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
66	2-Chloro Toluene	91	9.056	9.056	(0.937)	46966	0.50000	0.5224
67	1,3,5-Trimethyl Benzene	105	9.078	9.073	(0.939)	43789	0.50000	0.4911
68	1,2,3-Trichloropropane	110	9.084	9.084	(0.940)	4762	0.50000	0.5045
70	Trans-1,4-Dichloro 2-Butene	53	9.106	9.107	(0.942)	7499	0.50000	0.5943
71	4-Chloro Toluene	91	9.174	9.175	(0.949)	44824	0.50000	0.5304
72	T-Butyl Benzene	119	9.316	9.310	(0.964)	40110	0.50000	0.5056
73	1,2,4-Trimethylbenzene	105	9.361	9.361	(0.968)	43441	0.50000	0.4840
74	S-Butyl Benzene	105	9.446	9.446	(0.977)	61206	0.50000	0.5217
75	4-Isopropyl Toluene	119	9.548	9.548	(0.988)	43860	0.50000	0.4656
76	1,3-Dichlorobenzene	146	9.616	9.616	(0.995)	28519	0.50000	0.5145
* 77	d4-1,4-Dichlorobenzene	152	9.666	9.667	(1.000)	423594	10.0000	
78	1,4-Dichlorobenzene	146	9.678	9.678	(1.001)	30237	0.50000	0.5157
79	N-Butyl Benzene	91	9.864	9.865	(1.020)	45555	0.50000	0.4854
$ 80	d4-1,2-Dichlorobenzene	152	9.989	9.989	(1.033)	374322	10.0000	9.837
81	1,2-Dichlorobenzene	146	10.000	9.995	(1.035)	28493	0.50000	0.5265
82	1,2-Dibromo 3-Chloropropane	75	10.605	10.606	(1.097)	4646	0.50000	0.6407
83	Hexachloro 1,3-Butadiene	225	11.115	11.109	(1.150)	9126	0.50000	0.5810
84	1,2,4-Trichlorobenzene	180	11.137	11.138	(1.152)	16926	0.50000	0.5110
85	Naphthalene	128	11.392	11.392	(1.178)	39412	0.50000	0.4761
86	1,2,3-Trichlorobenzene	180	11.539	11.539	(1.194)	14145	0.50000	0.4712

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt3.i
Lab File ID: 0050115.d
Lab Smp Id: IC0115
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem3/nt3.i/01152013.b/8260C011513L.m
Misc Info: 12-

Calibration Date: 15-JAN-2013
Calibration Time: 17:24
Client Smp ID: VSTD0.5
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	513917	256958	1027834	467687	-9.00
36 1,4-Difluorobenze	821183	410592	1642366	731909	-10.87
53 d5-Chlorobenzene	740077	370038	1480154	709834	-4.09
77 d4-1,4-Dichlorobe	454429	227214	908858	423594	-6.79

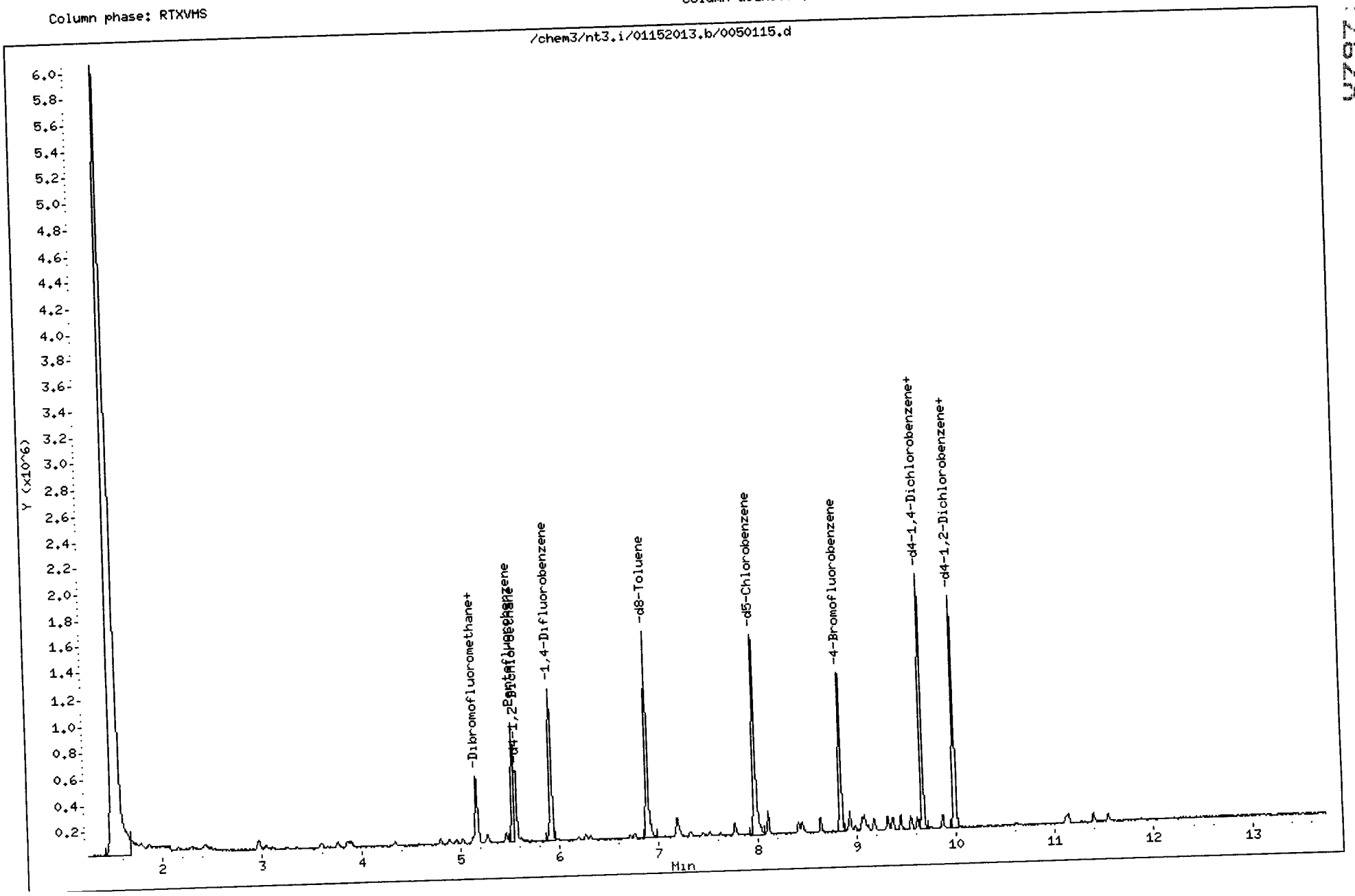
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	5.54	5.04	6.04	5.54	0.10
36 1,4-Difluorobenze	5.92	5.42	6.42	5.93	0.09
53 d5-Chlorobenzene	7.98	7.48	8.48	7.98	0.07
77 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

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.

Data File: /chem3/nt3.i/01152013.b/0050115.d
Date : 15-JAN-2013 18:43
Client ID: VSTD0.5
Sample Info: IC0115,10,10,0

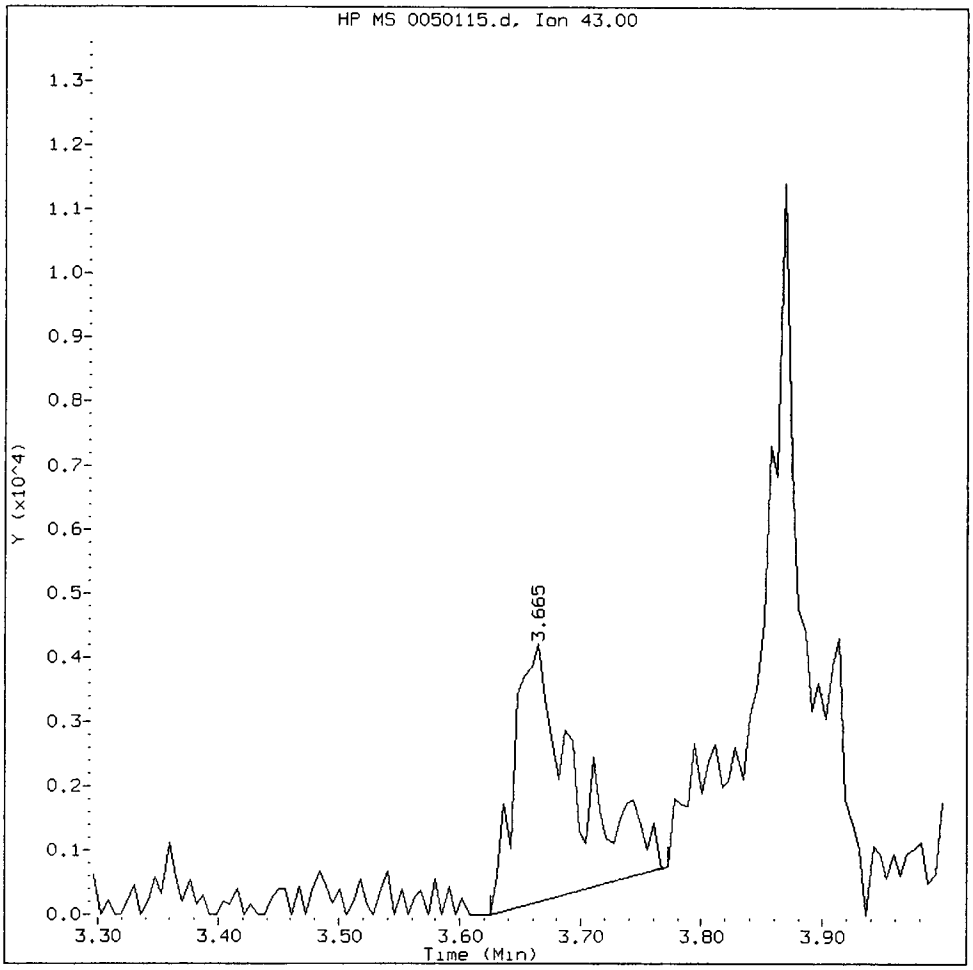
Instrument: nt3.i
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



IC0115, /chem3/nt3.i/01152013.b/0050115.d

Acetone Amount: 2.84 Area: 14074



MANUAL INTEGRATION for Acetone

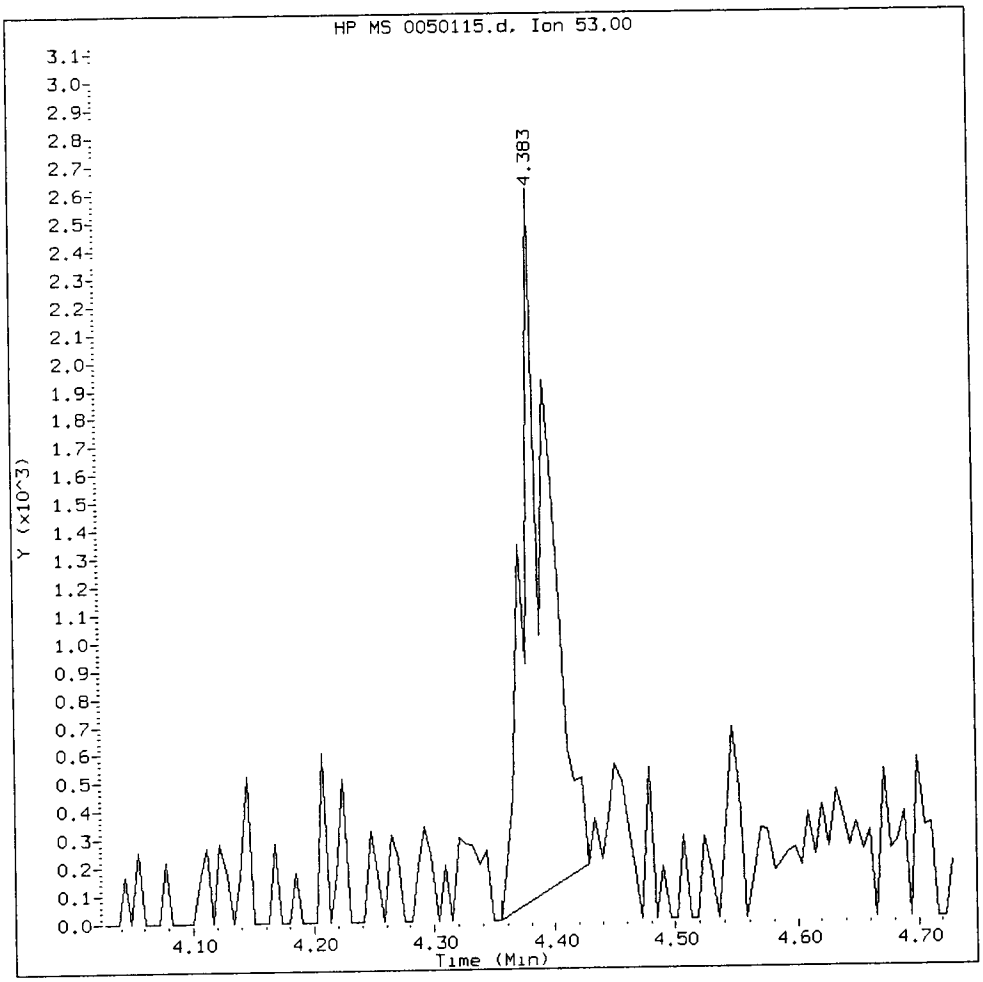
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: _____

IC0115, /chem3/nt3.i/01152013.b/0050115.d

Acrylonitrile Amount: 0.44 Area: 3944



MANUAL INTEGRATION for Acrylonitrile

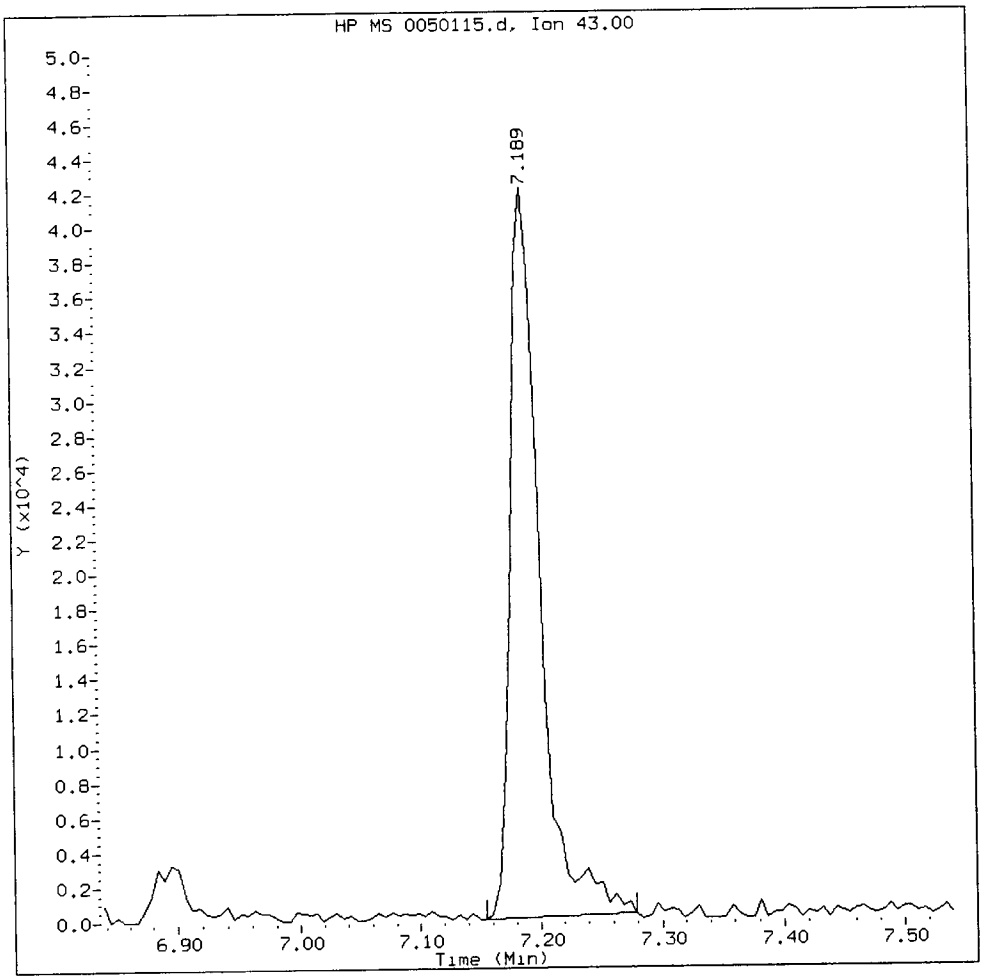
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: _____

IC0115, /chem3/nt3.i/01152013.b/0050115.d

4-Methyl-2-Pentanone Amount: 2.77 Area: 71939



MANUAL INTEGRATION for 4-Methyl-2-Pentanone

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 1/15/13

CO-ELUTION SUMMARY FOR FILE - 0050115.d

Lab ID: IC0115, Method: 8260C011513L.m, Instrument: nt3.i, Date: 15-JAN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

SW8260C 10 mL Purge

Data file : /chem3/nt3.i/01152013.b/0100115.d
Lab Smp Id: IC0115 Client Smp ID: VSTD1
Inj Date : 15-JAN-2013 18:16
Operator : PB Inst ID: nt3.i
Smp Info : IC0115,10,10,0
Misc Info : 12-
Comment :
Method : /chem3/nt3.i/01152013.b/8260C011513L.m
Meth Date : 18-Jan-2013 10:01 patrickb Quant Type: ISTD
Cal Date : 15-JAN-2013 18:16 Cal File: 0100115.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Dichlorodifluoromethane	85	1.641	1.623	(0.296)	31418	1.00000	1.098
2 Chloromethane	50	1.782	1.764	(0.322)	36836	1.00000	1.083
3 Vinyl Chloride	62	1.861	1.843	(0.336)	43185	1.00000	1.125
4 Bromomethane	94	2.161	2.143	(0.390)	24175	1.00000	1.120
5 Chloroethane	64	2.286	2.268	(0.413)	28235	1.00000	1.111
6 Trichlorofluoromethane	101	2.427	2.420	(0.438)	44339	1.00000	1.029
7 1,1-Dichloroethene	96	2.965	2.946	(0.535)	31384	1.00000	1.242
8 Carbon Disulfide	76	2.970	2.958	(0.536)	106402	1.00000	1.120
9 112Trichloro122Trifluoroethane	101	3.044	3.026	(0.550)	31773	1.00000	1.170
10 Iodomethane	142	3.106	3.088	(0.561)	45839	1.00000	1.149
11 Bromoethane	108	3.247	3.235	(0.586)	21102	1.00000	1.056
12 Acrolein	56	3.344	3.331	(0.604)	24697	5.00000	5.410
13 Methylene Chloride	84	3.598	3.586	(0.650)	34856	1.00000	1.174
14 Acetone	43	3.660	3.648	(0.661)	28085	5.00000	5.726
15 Trans-1,2-Dichloroethene	96	3.768	3.755	(0.680)	30216	1.00000	1.076

Data File: /chem3/nt3.i/01152013.b/0100115.d
Report Date: 18-Jan-2013 10:01

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	16 Methyl tert butyl ether	73	3.898	3.886	(0.704)	85382	1.00000	1.087
	17 1,1-Dichloroethane	63	4.345	4.332	(0.784)	60373	1.00000	1.185
	18 Acrylonitrile	53	4.390	4.378	(0.793)	10743	1.00000	1.212
	19 Vinyl Acetate	43	4.582	4.576	(0.827)	31854	1.00000	1.036
	20 Cis-1,2-Dichloroethene	96	4.803	4.796	(0.867)	31128	1.00000	1.083
	22 2,2-Dichloropropane	77	4.899	4.887	(0.885)	39315	1.00000	1.111
	23 Bromochloromethane	128	4.961	4.960	(0.896)	16885	1.00000	1.343
	24 Chloroform	83	5.029	5.023	(0.908)	50045	1.00000	1.135
	25 Carbon Tetrachloride	117	5.137	5.124	(0.866)	40918	1.00000	1.217
$	26 Dibromofluoromethane	111	5.171	5.164	(0.934)	254700	10.0000	10.209
	27 1,1,1-Trichloroethane	97	5.188	5.181	(0.937)	44309	1.00000	1.144
	28 2-Butanone	43	5.273	5.266	(0.952)	63902	5.00000	5.623
	29 1,1-Dichloropropene	75	5.278	5.277	(0.890)	40726	1.00000	1.145
	30 Benzene	78	5.465	5.464	(0.922)	111227	1.00000	1.122
*	31 Pentafluorobenzene	168	5.538	5.537	(1.000)	462085	10.0000	
$	32 d4-1,2-Dichloroethane	65	5.567	5.566	(1.005)	328661	10.0000	10.645
	33 1,2-Dichloroethane	62	5.618	5.617	(0.948)	36099	1.00000	1.125
	34 Trichloroethene	130	5.900	5.899	(0.995)	23586	1.00000	0.9638
*	36 1,4-Difluorobenzene	114	5.929	5.922	(1.000)	727105	10.0000	
	37 Dibromomethane	93	6.200	6.199	(1.046)	15655	1.00000	1.051
	38 1,2-Pichloropropane	63	6.274	6.273	(1.058)	28313	1.00000	1.120
	39 Bromodichloromethane	83	6.319	6.312	(1.066)	32920	1.00000	1.065
	41 2-Chloroethyl Vinyl Ether	63	6.715	6.714	(1.133)	11149	1.00000	0.8723
	42 Cis 1,3-dichloropropene	75	6.760	6.759	(1.140)	35456	1.00000	1.003
$	43 d8-Toluene	98	6.896	6.889	(1.163)	838663	10.0000	9.913
	44 Toluene	92	6.930	6.929	(1.169)	54916	1.00000	1.034
	45 Tetrachloroethene	166	7.196	7.200	(0.902)	21642	1.00000	0.9861
	46 4-Methyl-2-Pentanone	43	7.190	7.189	(1.213)	149219	5.00000	5.794 (M)
	47 Trans 1,3-Dichloropropene	75	7.213	7.212	(1.217)	34637	1.00000	1.012
	48 1,1,2-Trichloroethane	97	7.326	7.325	(1.236)	19503	1.00000	1.076
	49 Chlorodibromomethane	129	7.456	7.449	(0.935)	23522	1.00000	1.101
	50 1,3-Dichloropropane	76	7.524	7.517	(0.943)	36427	1.00000	1.066
	51 1,2-Dibromoethane	107	7.620	7.619	(1.285)	21683	1.00000	1.128
	52 2-Hexanone	43	7.767	7.766	(0.974)	113659	5.00000	5.628
*	53 d5-Chlorobenzene	117	7.976	7.975	(1.000)	683386	10.0000	
	54 Chlorobenzene	112	7.988	7.987	(1.001)	68960	1.00000	1.134
	55 Ethyl Benzene	91	8.005	8.004	(1.004)	118568	1.00000	1.132
	56 1,1,1,2-Tetrachloroethane	131	8.033	8.032	(1.007)	23942	1.00000	1.052
	57 m,p-xylene	106	8.107	8.105	(1.016)	81346	2.00000	2.108
	58 o-Xylene	106	8.412	8.411	(1.055)	43174	1.00000	1.064
	59 Styrene	104	8.446	8.451	(1.059)	64932	1.00000	1.019
	60 Bromoform	173	8.474	8.473	(0.877)	17514	1.00000	1.091
	61 Isopropyl Benzene	105	8.638	8.637	(0.894)	110610	1.00000	1.049
$	62 4-Bromofluorobenzene	95	8.842	8.841	(1.109)	373732	10.0000	10.347
	63 Bromobenzene	156	8.921	8.926	(0.923)	31431	1.00000	1.100
	64 N-Propyl Benzene	91	8.938	8.937	(0.925)	139182	1.00000	1.107
	65 1,1,2,2-Tetrachloroethane	83	8.983	8.982	(0.929)	33901	1.00000	1.007

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
	66 2-Chloro Toluene	91	9.057	9.056	(0.937)	98946	1.00000	1.083
	67 1,3,5-Trimethyl Benzene	105	9.074	9.073	(0.939)	92375	1.00000	1.020
	68 1,2,3-Trichloropropane	110	9.085	9.084	(0.940)	10781	1.00000	1.124
	70 Trans-1,4-Dichloro 2-Butene	53	9.114	9.107	(0.943)	12849	1.00000	1.002
	71 4-Chloro Toluene	91	9.176	9.175	(0.949)	88796	1.00000	1.034
	72 T-Butyl Benzene	119	9.317	9.310	(0.964)	83332	1.00000	1.034
	73 1,2,4-Trimethylbenzene	105	9.362	9.361	(0.968)	93388	1.00000	1.024
	74 S-Butyl Benzene	105	9.447	9.446	(0.977)	123752	1.00000	1.038
	75 4-Isopropyl Toluene	119	9.549	9.548	(0.988)	100030	1.00000	1.045
	76 1,3-Dichlorobenzene	146	9.611	9.616	(0.994)	62449	1.00000	1.109
*	77 d4-1,4-Dichlorobenzene	152	9.668	9.667	(1.000)	430317	10.0000	
	78 1,4-Dichlorobenzene	146	9.679	9.678	(1.001)	64098	1.00000	1.076
	79 N-Butyl Benzene	91	9.866	9.865	(1.020)	101159	1.00000	1.061
$	80 d4-1,2-Dichlorobenzene	152	9.990	9.989	(1.033)	386681	10.0000	10.003
	81 1,2-Dichlorobenzene	146	9.996	9.995	(1.034)	58140	1.00000	1.058
	82 1,2-Dibromo 3-Chloropropane	75	10.613	10.606	(1.098)	8986	1.00000	1.220
	83 Hexachloro 1,3-Butadiene	225	11.110	11.109	(1.149)	14131	1.00000	0.8856
	84 1,2,4-Trichlorobenzene	180	11.133	11.138	(1.152)	35503	1.00000	1.055
	85 Naphthalene	128	11.393	11.392	(1.178)	85687	1.00000	1.019
	86 1,2,3-Trichlorobenzene	180	11.540	11.539	(1.194)	29767	1.00000	0.9762

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem3/nt3.i/01152013.b/0100115.d
Report Date: 18-Jan-2013 10:01

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt3.i
Lab File ID: 0100115.d
Lab Smp Id: IC0115
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem3/nt3.i/01152013.b/8260C011513L.m
Misc Info: 12-

Calibration Date: 15-JAN-2013
Calibration Time: 17:24
Client Smp ID: VSTD1
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	513917	256958	1027834	462085	-10.09
36 1,4-Difluorobenze	821183	410592	1642366	727105	-11.46
53 d5-Chlorobenzene	740077	370038	1480154	683386	-7.66
77 d4-1,4-Dichlorobe	454429	227214	908858	430317	-5.31

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	5.54	5.04	6.04	5.54	0.02
36 1,4-Difluorobenze	5.92	5.42	6.42	5.93	0.11
53 d5-Chlorobenzene	7.98	7.48	8.48	7.98	0.01
77 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.01

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.

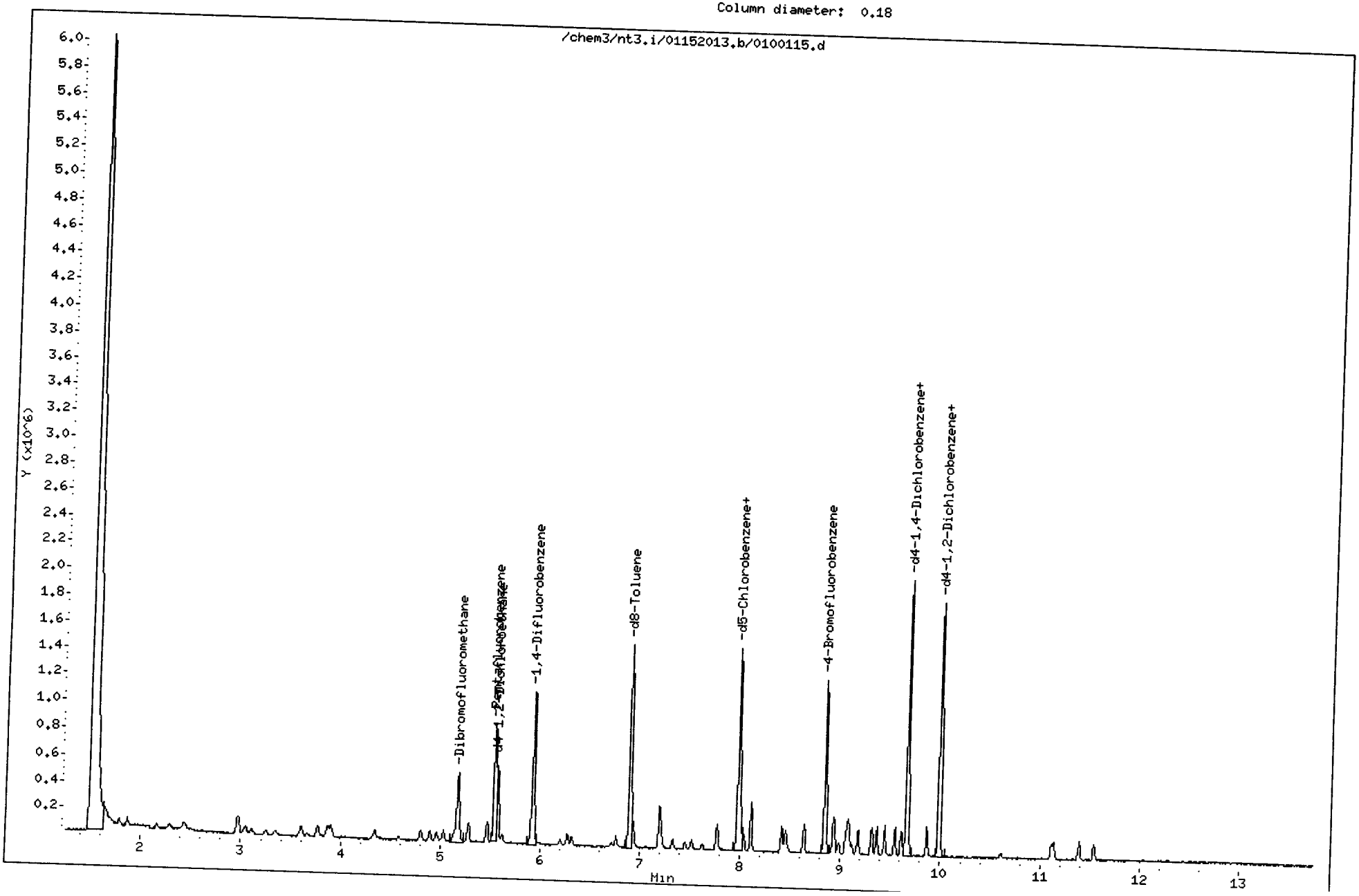
Data File: /chem3/nt3.i/01152013.b/0100115.d
Date : 15-JAN-2013 18:16
Client ID: VSTD1
Sample Info: IC0115,10,10,0

Instrument: nt3.i

Operator: PB
Column diameter: 0.18

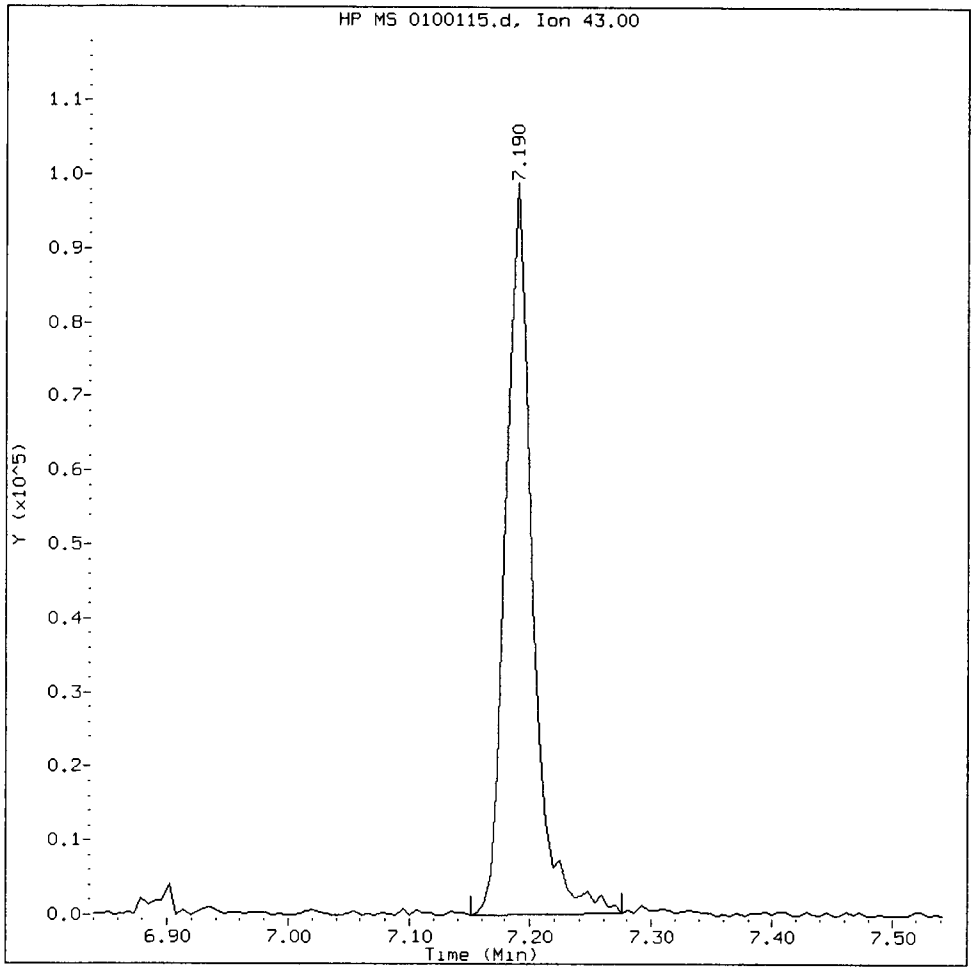
Column phase: RTXVMS

U7907 082201



IC0115, /chem3/nt3.i/01152013.b/0100115.d

4-Methyl-2-Pentanone Amount: 5.79 Area: 149219



MANUAL INTEGRATION for 4-Methyl-2-Pentanone

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 1/18/13

CO-ELUTION SUMMARY FOR FILE - 0100115.d

Lab ID: IC0115, Method: 8260C011513L.m, Instrument: nt3.i, Date: 15-JAN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem3/nt3.i/01152013.b/0200115.d
Report Date: 18-Jan-2013 10:01

Analytical Resources, Inc.

SW8260C 10 mL Purge

Data file : /chem3/nt3.i/01152013.b/0200115.d
Lab Smp Id: IC0115 Client Smp ID: VSTD2
Inj Date : 15-JAN-2013 17:50
Operator : PB Inst ID: nt3.i
Smp Info : IC0115,10,10,0
Misc Info : 12-
Comment :
Method : /chem3/nt3.i/01152013.b/8260C011513L.m
Meth Date : 18-Jan-2013 10:01 patrickb Quant Type: ISTD
Cal Date : 15-JAN-2013 17:50 Cal File: 0200115.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Dichlorodifluoromethane	85	1.634	1.623	(0.295)	50766	2.00000	1.692
2 Chloromethane	50	1.770	1.764	(0.320)	58250	2.00000	1.634
3 Vinyl Chloride	62	1.849	1.843	(0.334)	66165	2.00000	1.645
4 Bromomethane	94	2.149	2.143	(0.388)	35565	2.00000	1.572
5 Chloroethane	64	2.279	2.268	(0.412)	43245	2.00000	1.623
6 Trichlorofluoromethane	101	2.426	2.420	(0.438)	71733	2.00000	1.588
7 1,1-Dichloroethene	96	2.957	2.946	(0.534)	45167	2.00000	1.705
8 Carbon Disulfide	76	2.963	2.958	(0.535)	166942	2.00000	1.676
9 112Trichloro122Trifluoroethane	101	3.031	3.026	(0.547)	47333	2.00000	1.662
10 Iodomethane	142	3.099	3.088	(0.560)	69735	2.00000	1.667
11 Bromoethane	108	3.240	3.235	(0.585)	34723	2.00000	1.658
12 Acrolein	56	3.336	3.331	(0.603)	37173	10.0000	7.766
13 Methylene Chloride	84	3.591	3.586	(0.649)	50547	2.00000	1.624
14 Acetone	43	3.665	3.648	(0.662)	34212	10.0000	6.653
15 Trans-1,2-Dichloroethene	96	3.766	3.755	(0.680)	47931	2.00000	1.629

		QUANT SIG					AMOUNTS CAL-AMT	AMOUNTS ON-COL
Compounds		MASS	RT	EXP RT	REL RT	RESPONSE	(ug/L)	(ug/L)
16	Methyl tert butyl ether	73	3.885	3.886	(0.702)	140703	2.00000	1.708
17	1,1-Dichloroethane	63	4.338	4.332	(0.783)	87842	2.00000	1.644
18	Acrylonitrile	53	4.383	4.378	(0.792)	15882	2.00000	1.710
19	Vinyl Acetate	43	4.581	4.576	(0.827)	50586	2.00000	1.569
20	Cis-1,2-Dichloroethene	96	4.802	4.796	(0.867)	50744	2.00000	1.684
22	2,2-Dichloropropane	77	4.892	4.887	(0.884)	62575	2.00000	1.687
23	Bromochloromethane	128	4.960	4.960	(0.896)	21452	2.00000	1.627
24	Chloroform	83	5.028	5.023	(0.908)	75832	2.00000	1.640
25	Carbon Tetrachloride	117	5.130	5.124	(0.865)	59339	2.00000	1.673
$ 26	Dibromofluoromethane	111	5.169	5.164	(0.934)	274577	10.0000	10.497
27	1,1,1-Trichloroethane	97	5.186	5.181	(0.937)	67164	2.00000	1.654
28	2-Butanone	43	5.271	5.266	(0.952)	88451	10.0000	7.424
29	1,1-Dichloropropene	75	5.282	5.277	(0.891)	60384	2.00000	1.609
30	Benzene	78	5.463	5.464	(0.922)	176720	2.00000	1.691
* 31	Pentafluorobenzene	168	5.537	5.537	(1.000)	484449	10.0000	
$ 32	d4-1,2-Dichloroethane	65	5.565	5.566	(1.005)	325708	10.0000	10.062
33	1,2-Dichloroethane	62	5.622	5.617	(0.948)	56525	2.00000	1.670
34	Trichloroethene	130	5.899	5.899	(0.995)	43225	2.00000	1.675
* 36	1,4-Difluorobenzene	114	5.927	5.922	(1.000)	766859	10.0000	
37	Dibromomethane	93	6.199	6.199	(1.046)	24052	2.00000	1.532
38	1,2-Dichloropropane	63	6.267	6.273	(1.057)	41662	2.00000	1.563
39	Bromodichloromethane	83	6.318	6.312	(1.066)	55090	2.00000	1.690
41	2-Chloroethyl Vinyl Ether	63	6.714	6.714	(1.133)	23182	2.00000	1.720
42	Cis 1,3-dichloropropene	75	6.764	6.759	(1.141)	60496	2.00000	1.623
$ 43	d8-Toluene	98	6.895	6.889	(1.163)	883337	10.0000	9.900
44	Toluene	92	6.929	6.929	(1.169)	89851	2.00000	1.604
45	Tetrachloroethene	166	7.200	7.200	(0.903)	38368	2.00000	1.656
46	4-Methyl-2-Pentanone	43	7.189	7.189	(1.213)	240490	10.0000	8.853
47	Trans 1,3-Dichloropropene	75	7.211	7.212	(1.217)	55041	2.00000	1.525
48	1,1,2-Trichloroethane	97	7.330	7.325	(1.237)	31403	2.00000	1.643
49	Chlorodibromomethane	129	7.449	7.449	(0.934)	36347	2.00000	1.612
50	1,3-Dichloropropane	76	7.517	7.517	(0.943)	55979	2.00000	1.552
51	1,2-Dibromoethane	107	7.619	7.619	(1.285)	33567	2.00000	1.655
52	2-Hexanone	43	7.766	7.766	(0.974)	191371	10.0000	8.978
* 53	d5-Chlorobenzene	117	7.975	7.975	(1.000)	721352	10.0000	
54	Chlorobenzene	112	7.986	7.987	(1.001)	104993	2.00000	1.636
55	Ethyl Benzene	91	8.003	8.004	(1.004)	180210	2.00000	1.630
56	1,1,1,2-Tetrachloroethane	131	8.032	8.032	(1.007)	37737	2.00000	1.570
57	m,p-xylene	106	8.105	8.105	(1.016)	126600	4.00000	3.109
58	o-Xylene	106	8.411	8.411	(1.055)	68724	2.00000	1.604
59	Styrene	104	8.450	8.451	(1.060)	108579	2.00000	1.614
60	Bromoform	173	8.467	8.473	(0.876)	28416	2.00000	1.751
61	Isopropyl Benzene	105	8.637	8.637	(0.893)	180440	2.00000	1.695
$ 62	4-Bromofluorobenzene	95	8.841	8.841	(1.109)	374747	10.0000	9.829
63	Bromobenzene	156	8.920	8.926	(0.923)	50464	2.00000	1.748
64	N-Propyl Benzene	91	8.937	8.937	(0.924)	209979	2.00000	1.652
65	1,1,2,2-Tetrachloroethane	83	8.982	8.982	(0.929)	57171	2.00000	1.681

Data File: /chem3/nt3.i/01152013.b/0200115.d
Report Date: 18-Jan-2013 10:01

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	66 2-Chloro Toluene	91	9.055	9.056	(0.937)	153397	2.00000	1.663
	67 1,3,5-Trimethyl Benzene	105	9.078	9.073	(0.939)	150786	2.00000	1.648
	68 1,2,3-Trichloropropane	110	9.084	9.084	(0.940)	16880	2.00000	1.742
	70 Trans-1,4-Dichloro 2-Butene	53	9.112	9.107	(0.943)	20879	2.00000	1.612
	71 4-Chloro Toluene	91	9.174	9.175	(0.949)	148199	2.00000	1.708
	72 T-Butyl Benzene	119	9.310	9.310	(0.963)	132789	2.00000	1.631
	73 1,2,4-Trimethylbenzene	105	9.361	9.361	(0.968)	148011	2.00000	1.607
	74 S-Butyl Benzene	105	9.446	9.446	(0.977)	202456	2.00000	1.681
	75 4-Isopropyl Toluene	119	9.548	9.548	(0.988)	157673	2.00000	1.631
	76 1,3-Dichlorobenzene	146	9.610	9.616	(0.994)	95413	2.00000	1.677
*	77 d4-1,4-Dichlorobenzene	152	9.666	9.667	(1.000)	434761	10.0000	
	78 1,4-Dichlorobenzene	146	9.678	9.678	(1.001)	99098	2.00000	1.647
	79 N-Butyl Benzene	91	9.864	9.865	(1.020)	159751	2.00000	1.658
$	80 d4-1,2-Dichlorobenzene	152	9.989	9.989	(1.033)	385742	10.0000	9.876
	81 1,2-Dichlorobenzene	146	10.000	9.995	(1.035)	91493	2.00000	1.647
	82 1,2-Dibromo 3-Chloropropane	75	10.605	10.606	(1.097)	11903	2.00000	1.599
	83 Hexachloro 1,3-Butadiene	225	11.109	11.109	(1.149)	25298	2.00000	1.569
	84 1,2,4-Trichlorobenzene	180	11.137	11.138	(1.152)	54670	2.00000	1.608
	85 Naphthalene	128	11.392	11.392	(1.178)	148223	2.00000	1.745
	86 1,2,3-Trichlorobenzene	180	11.539	11.539	(1.194)	50604	2.00000	1.643

Data File: /chem3/nt3.i/01152013.b/0200115.d
Report Date: 18-Jan-2013 10:01

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt3.i
Lab File ID: 0200115.d
Lab Smp Id: IC0115
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem3/nt3.i/01152013.b/8260C011513L.m
Misc Info: 12-

Calibration Date: 15-JAN-2013
Calibration Time: 17:24
Client Smp ID: VSTD2
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	513917	256958	1027834	484449	-5.73
36 1,4-Difluorobenze	821183	410592	1642366	766859	-6.62
53 d5-Chlorobenzene	740077	370038	1480154	721352	-2.53
77 d4-1,4-Dichlorobe	454429	227214	908858	434761	-4.33

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	5.54	5.04	6.04	5.54	-0.01
36 1,4-Difluorobenze	5.92	5.42	6.42	5.93	0.09
53 d5-Chlorobenzene	7.98	7.48	8.48	7.98	0.00
77 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

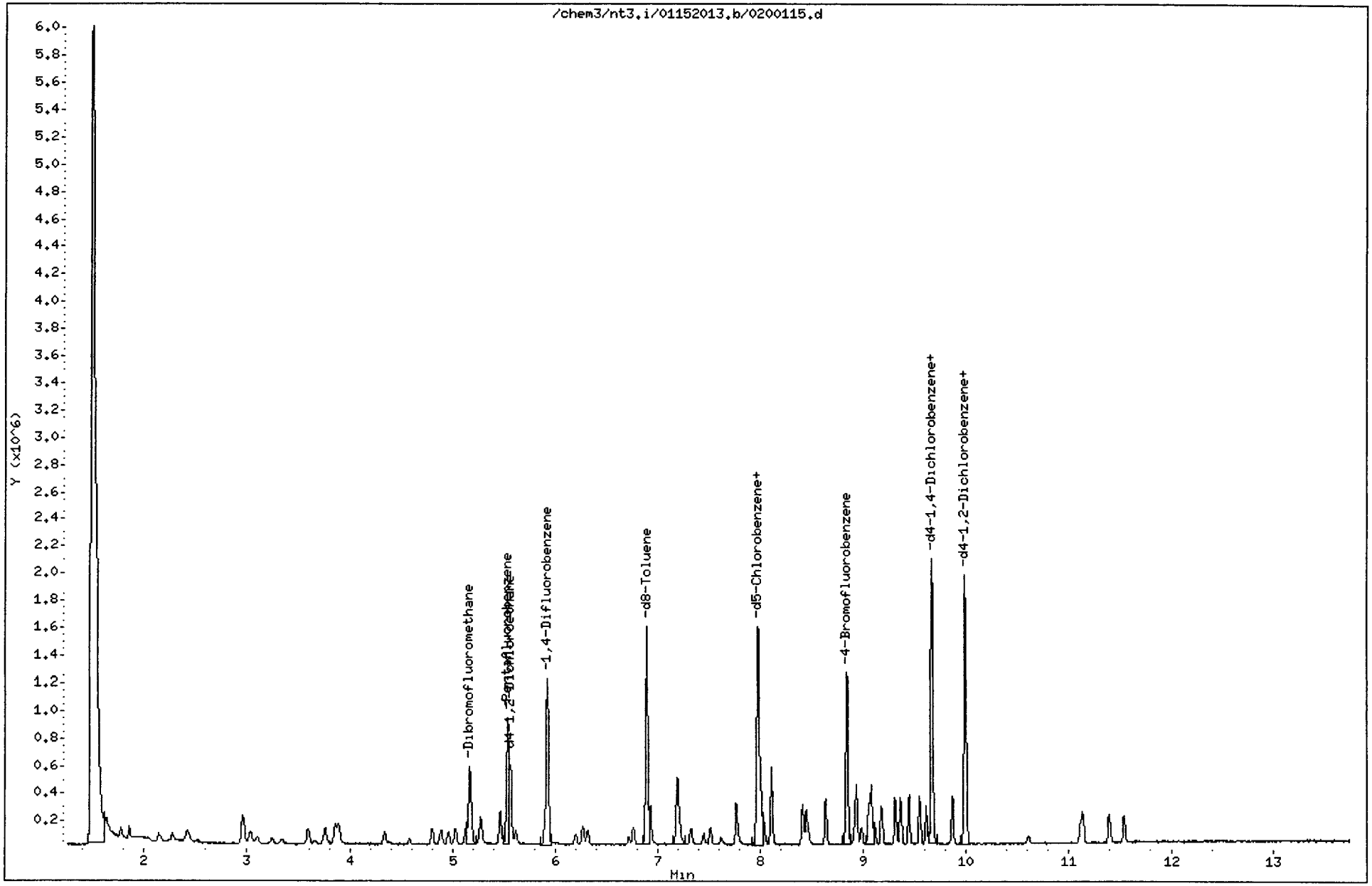
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt3.i/01152013.b/0200115.d
Date : 15-JAN-2013 17:50
Client ID: VSTD2
Sample Info: IC0115,10,10,0

Instrument: nt3.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



V2907, 020411

CO-ELUTION SUMMARY FOR FILE - 0200115.d

Lab ID: IC0115, Method: 8260C011513L.m, Instrument: nt3.i, Date: 15-JAN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

SW8260C 10 mL Purge

Data file : /chem3/nt3.i/01152013.b/1000115.d
Lab Smp Id: IC0115 Client Smp ID: VSTD10
Inj Date : 15-JAN-2013 17:24
Operator : PB Inst ID: nt3.i
Smp Info : IC0115,10,10,0
Misc Info : 12-
Comment :
Method : /chem3/nt3.i/01152013.b/8260C011513L.m
Meth Date : 18-Jan-2013 10:01 patrickb Quant Type: ISTD
Cal Date : 15-JAN-2013 17:24 Cal File: 1000115.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Dichlorodifluoromethane	85	1.623	1.623	(0.293)	333585	10.0000	10.482
2 Chloromethane	50	1.764	1.764	(0.319)	375362	10.0000	9.927
3 Vinyl Chloride	62	1.843	1.843	(0.333)	434722	10.0000	10.186
4 Bromomethane	94	2.143	2.143	(0.387)	227115	10.0000	9.463
5 Chloroethane	64	2.268	2.268	(0.410)	276258	10.0000	9.773
6 Trichlorofluoromethane	101	2.420	2.420	(0.437)	461833	10.0000	9.637
7 1,1-Dichloroethene	96	2.946	2.946	(0.532)	272761	10.0000	9.704
8 Carbon Disulfide	76	2.958	2.958	(0.534)	1034704	10.0000	9.791
9 112Trichloro122Trifluoroethane	101	3.026	3.026	(0.546)	316945	10.0000	10.493
10 Iodomethane	142	3.088	3.088	(0.558)	441666	10.0000	9.951
11 Bromoethane	108	3.235	3.235	(0.584)	211282	10.0000	9.509
12 Acrolein	56	3.331	3.331	(0.602)	261188	50.0000	51.439
13 Methylene Chloride	84	3.586	3.586	(0.648)	307905	10.0000	9.324
14 Acetone	43	3.648	3.648	(0.659)	317728	50.0000	58.248
15 Trans-1,2-Dichloroethene	96	3.755	3.755	(0.678)	297514	10.0000	9.530

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	16 Methyl tert butyl ether	73	3.886	3.886	(0.702)	923658	10.0000	10.571
	17 1,1-Dichloroethane	63	4.332	4.332	(0.782)	552143	10.0000	9.743
	18 Acrylonitrile	53	4.378	4.378	(0.791)	103454	10.0000	10.499
	19 Vinyl Acetate	43	4.576	4.576	(0.826)	358473	10.0000	10.481
	20 Cis-1,2-Dichloroethene	96	4.796	4.796	(0.866)	310952	10.0000	9.726
	22 2,2-Dichloropropane	77	4.887	4.887	(0.883)	363434	10.0000	9.235
	23 Bromochloromethane	128	4.960	4.960	(0.896)	143358	10.0000	10.250
	24 Chloroform	83	5.023	5.023	(0.907)	491378	10.0000	10.018
	25 Carbon Tetrachloride	117	5.124	5.124	(0.865)	367308	10.0000	9.670
$	26 Dibromofluoromethane	111	5.164	5.164	(0.933)	273479	10.0000	9.856
	27 1,1,1-Trichloroethane	97	5.181	5.181	(0.936)	424879	10.0000	9.865
	28 2-Butanone	43	5.266	5.266	(0.951)	675279	50.0000	53.425
	29 1,1-Dichloropropene	75	5.277	5.277	(0.891)	397745	10.0000	9.897
	30 Benzene	78	5.464	5.464	(0.923)	1138031	10.0000	10.167
*	31 Pentafluorobenzene	168	5.537	5.537	(1.000)	513917	10.0000	
$	32 d4-1,2-Dichloroethane	65	5.566	5.566	(1.005)	337170	10.0000	9.819
	33 1,2-Dichloroethane	62	5.617	5.617	(0.948)	365359	10.0000	10.081
	34 Trichloroethene	130	5.899	5.899	(0.996)	272143	10.0000	9.846
*	36 1,4-Difluorobenzene	114	5.922	5.922	(1.000)	821183	10.0000	
	37 Dibromomethane	93	6.199	6.199	(1.047)	157831	10.0000	9.386
	38 1,2-Dichloropropane	63	6.273	6.273	(1.059)	274215	10.0000	9.607
	39 Bromodichloromethane	83	6.312	6.312	(1.066)	354019	10.0000	10.142
	41 2-Chloroethyl Vinyl Ether	63	6.714	6.714	(1.134)	144055	10.0000	9.980
	42 Cis 1,3-dichloropropene	75	6.759	6.759	(1.141)	404102	10.0000	10.127
$	43 d8-Toluene	98	6.889	6.889	(1.163)	944767	10.0000	9.888
	44 Toluene	92	6.929	6.929	(1.170)	603150	10.0000	10.053
	45 Tetrachloroethene	166	7.200	7.200	(0.903)	247327	10.0000	10.406
	46 4-Methyl-2-Pentanone	43	7.189	7.189	(1.214)	1514012	50.0000	52.049
	47 Trans 1,3-Dichloropropene	75	7.212	7.212	(1.218)	385323	10.0000	9.971
	48 1,1,2-Trichloroethane	97	7.325	7.325	(1.237)	201614	10.0000	9.850
	49 Chlorodibromomethane	129	7.449	7.449	(0.934)	230072	10.0000	9.948
	50 1,3-Dichloropropane	76	7.517	7.517	(0.943)	375817	10.0000	10.158
	51 1,2-Dibromoethane	107	7.619	7.619	(1.287)	222282	10.0000	10.238
	52 2-Hexanone	43	7.766	7.766	(0.974)	1149374	50.0000	52.557
*	53 d5-Chlorobenzene	117	7.975	7.975	(1.000)	740077	10.0000	
	54 Chlorobenzene	112	7.987	7.987	(1.001)	679950	10.0000	10.327
	55 Ethyl Benzene	91	8.004	8.004	(1.004)	1222421	10.0000	10.775
	56 1,1,1,2-Tetrachloroethane	131	8.032	8.032	(1.007)	259132	10.0000	10.510
	57 m,p-xylene	106	8.105	8.105	(1.016)	908171	20.0000	21.735
	58 o-Xylene	106	8.411	8.411	(1.055)	459084	10.0000	10.443
	59 Styrene	104	8.451	8.451	(1.060)	746026	10.0000	10.808
	60 Bromoform	173	8.473	8.473	(0.877)	179964	10.0000	10.611
	61 Isopropyl Benzene	105	8.637	8.637	(0.893)	1236985	10.0000	11.114
$	62 4-Bromofluorobenzene	95	8.841	8.841	(1.109)	398329	10.0000	10.183
	63 Bromobenzene	156	8.926	8.926	(0.923)	297265	10.0000	9.849
	64 N-Propyl Benzene	91	8.937	8.937	(0.924)	1451460	10.0000	10.927
	65 1,1,2,2-Tetrachloroethane	83	8.982	8.982	(0.929)	347756	10.0000	9.781

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	66 2-Chloro Toluene	91	9.056	9.056	(0.937)	1009887	10.0000	10.472
	67 1,3,5-Trimethyl Benzene	105	9.073	9.073	(0.939)	1050663	10.0000	10.985
	68 1,2,3-Trichloropropane	110	9.084	9.084	(0.940)	100226	10.0000	9.897
	70 Trans-1,4-Dichloro 2-Butene	53	9.107	9.107	(0.942)	135773	10.0000	10.030
	71 4-Chloro Toluene	91	9.175	9.175	(0.949)	944377	10.0000	10.416
	72 T-Butyl Benzene	119	9.310	9.310	(0.963)	918025	10.0000	10.787
	73 1,2,4-Trimethylbenzene	105	9.361	9.361	(0.968)	1064556	10.0000	11.057
	74 S-Butyl Benzene	105	9.446	9.446	(0.977)	1388803	10.0000	11.035
	75 4-Isopropyl Toluene	119	9.548	9.548	(0.988)	1108054	10.0000	10.963
	76 1,3-Dichlorobenzene	146	9.616	9.616	(0.995)	608645	10.0000	10.235
*	77 d4-1,4-Dichlorobenzene	152	9.667	9.667	(1.000)	454429	10.0000	
	78 1,4-Dichlorobenzene	146	9.678	9.678	(1.001)	642141	10.0000	10.210
	79 N-Butyl Benzene	91	9.865	9.865	(1.020)	1084243	10.0000	10.768
$	80 d4-1,2-Dichlorobenzene	152	9.989	9.989	(1.033)	410438	10.0000	10.054
	81 1,2-Dichlorobenzene	146	9.995	9.995	(1.034)	606752	10.0000	10.452
	82 1,2-Dibromo 3-Chloropropane	75	10.606	10.606	(1.097)	71209	10.0000	9.154
	83 Hexachloro 1,3-Butadiene	225	11.109	11.109	(1.149)	160319	10.0000	9.514
	84 1,2,4-Trichlorobenzene	180	11.138	11.138	(1.152)	365285	10.0000	10.281
	85 Naphthalene	128	11.392	11.392	(1.178)	977742	10.0000	11.011
	86 1,2,3-Trichlorobenzene	180	11.539	11.539	(1.194)	338537	10.0000	10.513

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt3.i
Lab File ID: 1000115.d
Lab Smp Id: IC0115
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem3/nt3.i/01152013.b/8260C011513L.m
Misc Info: 12-

Calibration Date: 15-JAN-2013
Calibration Time: 17:24
Client Smp ID: VSTD10
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	513917	256958	1027834	513917	0.00
36 1,4-Difluorobenze	821183	410592	1642366	821183	0.00
53 d5-Chlorobenzene	740077	370038	1480154	740077	0.00
77 d4-1,4-Dichlorobe	454429	227214	908858	454429	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	5.54	5.04	6.04	5.54	0.00
36 1,4-Difluorobenze	5.92	5.42	6.42	5.92	0.00
53 d5-Chlorobenzene	7.98	7.48	8.48	7.98	0.00
77 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

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.

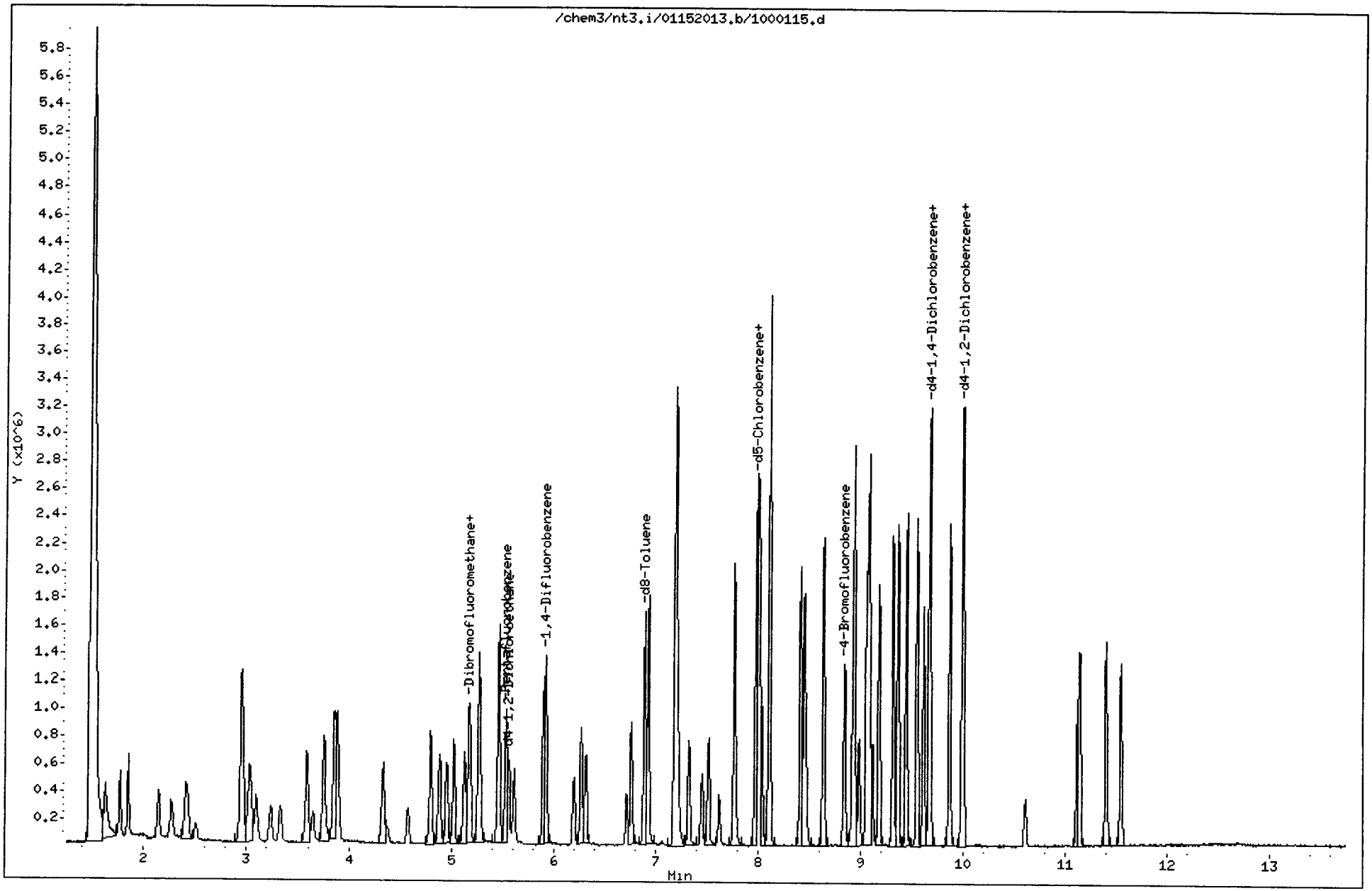
Data File: /chem3/nt3.i/01152013.b/1000115.d
Date : 15-JAN-2013 17:24
Client ID: VSTD10
Sample Info: IC0115,10,10,0

Column phase: RTXVMS

Instrument: nt3.i

Operator: PB
Column diameter: 0.18

U7307 000217



CO-ELUTION SUMMARY FOR FILE - 1000115.d

Lab ID: IC0115, Method: 8260C011513L.m, Instrument: nt3.i, Date: 15-JAN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

SW8260C 10 mL Purge

Data file : /chem3/nt3.i/01152013.b/2000115.d
Lab Smp Id: IC0115 Client Smp ID: VSTD20
Inj Date : 15-JAN-2013 16:57
Operator : PB Inst ID: nt3.i
Smp Info : IC0115,10,10,0
Misc Info : 12-
Comment :
Method : /chem3/nt3.i/01152013.b/8260C011513L.m
Meth Date : 18-Jan-2013 10:01 patrickb Quant Type: ISTD
Cal Date : 15-JAN-2013 16:57 Cal File: 2000115.d
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Dichlorodifluoromethane	85	1.634	1.623	(0.295)	685518	20.0000	21.307
2 Chloromethane	50	1.782	1.764	(0.322)	776335	20.0000	20.309
3 Vinyl Chloride	62	1.861	1.843	(0.336)	922738	20.0000	21.386
4 Bromomethane	94	2.155	2.143	(0.389)	490820	20.0000	20.229
5 Chloroethane	64	2.279	2.268	(0.412)	575155	20.0000	20.126
6 Trichlorofluoromethane	101	2.426	2.420	(0.438)	997316	20.0000	20.585
7 1,1-Dichloroethene	96	2.958	2.946	(0.534)	589227	20.0000	20.736
8 Carbon Disulfide	76	2.964	2.958	(0.535)	2208718	20.0000	20.673
9 112Trichloro122Trifluoroethane	101	3.037	3.026	(0.548)	670645	20.0000	21.962
10 Iodomethane	142	3.105	3.088	(0.561)	930759	20.0000	20.742
11 Bromoethane	108	3.247	3.235	(0.586)	457096	20.0000	20.348
12 Acrolein	56	3.337	3.331	(0.603)	506633	100.000	98.693
13 Methylene Chloride	84	3.597	3.586	(0.650)	641305	20.0000	19.209
14 Acetone	43	3.654	3.648	(0.660)	480704	100.000	87.168
15 Trans-1,2-Dichloroethene	96	3.767	3.755	(0.680)	641757	20.0000	20.333

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	16 Methyl tert butyl ether	73	3.892	3.886	(0.703)	1924584	20.0000	21.786
	17 1,1-Dichloroethane	63	4.338	4.332	(0.783)	1191581	20.0000	20.798
	18 Acrylonitrile	53	4.384	4.378	(0.792)	193686	20.0000	19.442
	19 Vinyl Acetate	43	4.582	4.576	(0.827)	755502	20.0000	21.850
	20 Cis-1,2-Dichloroethene	96	4.802	4.796	(0.867)	662368	20.0000	20.493
	22 2,2-Dichloropropane	77	4.893	4.887	(0.884)	827115	20.0000	20.789
	23 Bromochloromethane	128	4.961	4.960	(0.896)	293471	20.0000	20.755
	24 Chloroform	83	5.029	5.023	(0.908)	1057038	20.0000	21.316
	25 Carbon Tetrachloride	117	5.130	5.124	(0.865)	781513	20.0000	19.816
$	26 Dibromofluoromethane	111	5.170	5.164	(0.934)	280116	10.0000	9.985
	27 1,1,1-Trichloroethane	97	5.187	5.181	(0.937)	911918	20.0000	20.943
	28 2-Butanone	43	5.272	5.266	(0.952)	1286331	100.000	100.66
	29 1,1-Dichloropropene	75	5.283	5.277	(0.891)	867986	20.0000	20.803
	30 Benzene	78	5.470	5.464	(0.923)	2414499	20.0000	20.775
*	31 Pentafluorobenzene	168	5.538	5.537	(1.000)	519566	10.0000	
$	32 d4-1,2-Dichloroethane	65	5.566	5.566	(1.005)	346941	10.0000	9.994
	33 1,2-Dichloroethane	62	5.617	5.617	(0.948)	796905	20.0000	21.179
	34 Trichloroethene	130	5.900	5.899	(0.995)	587828	20.0000	20.484
*	36 1,4-Difluorobenzene	114	5.928	5.922	(1.000)	852597	10.0000	
	37 Dibromomethane	93	6.199	6.199	(1.046)	343151	20.0000	19.656
	38 1,2-Dichloropropane	63	6.273	6.273	(1.058)	595917	20.0000	20.108
	39 Bromodichloromethane	83	6.318	6.312	(1.066)	723793	20.0000	19.971
	41 2-Chloroethyl Vinyl Ether	63	6.720	6.714	(1.134)	299436	20.0000	19.979
	42 Cis 1,3-dichloropropene	75	6.760	6.759	(1.140)	881588	20.0000	21.278
$	43 d8-Toluene	98	6.895	6.889	(1.163)	995687	10.0000	10.036
	44 Toluene	92	6.929	6.929	(1.169)	1316007	20.0000	21.127
	45 Tetrachloroethene	166	7.201	7.200	(0.903)	533855	20.0000	21.879
	46 4-Methyl-2-Pentanone	43	7.189	7.189	(1.213)	3330542	100.000	110.28
	47 Trans 1,3-Dichloropropene	75	7.212	7.212	(1.217)	826343	20.0000	20.595
	48 1,1,2-Trichloroethane	97	7.325	7.325	(1.236)	428693	20.0000	20.172
	49 Chlorodibromomethane	129	7.455	7.449	(0.935)	501205	20.0000	21.108
	50 1,3-Dichloropropane	76	7.518	7.517	(0.943)	777857	20.0000	20.479
	51 1,2-Dibromoethane	107	7.619	7.619	(1.285)	456499	20.0000	20.250
	52 2-Hexanone	43	7.766	7.766	(0.974)	2496631	100.000	111.20
*	53 d5-Chlorobenzene	117	7.976	7.975	(1.000)	759798	10.0000	
	54 Chlorobenzene	112	7.987	7.987	(1.001)	1439998	20.0000	21.304
	55 Ethyl Benzene	91	8.004	8.004	(1.004)	2568115	20.0000	22.049
	56 1,1,1,2-Tetrachloroethane	131	8.032	8.032	(1.007)	557835	20.0000	22.037
	57 m,p-xylene	106	8.106	8.105	(1.016)	1969403	40.0000	45.911
	58 o-Xylene	106	8.411	8.411	(1.055)	1018769	20.0000	22.573
	59 Styrene	104	8.451	8.451	(1.060)	1627382	20.0000	22.965
	60 Bromoform	173	8.473	8.473	(0.877)	385715	20.0000	21.938
	61 Isopropyl Benzene	105	8.638	8.637	(0.894)	2675581	20.0000	23.190
$	62 4-Bromofluorobenzene	95	8.841	8.841	(1.109)	407986	10.0000	10.159
	63 Bromobenzene	156	8.926	8.926	(0.923)	647461	20.0000	20.694
	64 N-Propyl Benzene	91	8.937	8.937	(0.924)	3105152	20.0000	22.551
	65 1,1,2,2-Tetrachloroethane	83	8.983	8.982	(0.929)	731384	20.0000	19.843

Data File: /chem3/nt3.i/01152013.b/2000115.d
Report Date: 18-Jan-2013 10:01

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	66 2-Chloro Toluene	91	9.056	9.056	(0.937)	2167413	20.0000	21.680
	67 1,3,5-Trimethyl Benzene	105	9.073	9.073	(0.939)	2311394	20.0000	23.312
	68 1,2,3-Trichloropropane	110	9.084	9.084	(0.940)	216585	20.0000	20.632
	70 Trans-1,4-Dichloro 2-Butene	53	9.113	9.107	(0.943)	288784	20.0000	20.579
	71 4-Chloro Toluene	91	9.175	9.175	(0.949)	1988349	20.0000	21.155
	72 T-Butyl Benzene	119	9.316	9.310	(0.964)	1983438	20.0000	22.482
	73 1,2,4-Trimethylbenzene	105	9.362	9.361	(0.968)	2305404	20.0000	23.099
	74 S-Butyl Benzene	105	9.446	9.446	(0.977)	2979590	20.0000	22.839
	75 4-Isopropyl Toluene	119	9.548	9.548	(0.988)	2418784	20.0000	23.086
	76 1,3-Dichlorobenzene	146	9.611	9.616	(0.994)	1302527	20.0000	21.130
*	77 d4-1,4-Dichlorobenzene	152	9.667	9.667	(1.000)	471075	10.0000	
	78 1,4-Dichlorobenzene	146	9.678	9.678	(1.001)	1334385	20.0000	20.466
	79 N-Butyl Benzene	91	9.865	9.865	(1.020)	2316078	20.0000	22.189
$	80 d4-1,2-Dichlorobenzene	152	9.990	9.989	(1.033)	431914	10.0000	10.206
	81 1,2-Dichlorobenzene	146	9.995	9.995	(1.034)	1263506	20.0000	20.996
	82 1,2-Dibromo 3-Chloropropane	75	10.606	10.606	(1.097)	156568	20.0000	19.416
	83 Hexachloro 1,3-Butadiene	225	11.110	11.109	(1.149)	344439	20.0000	19.718
	84 1,2,4-Trichlorobenzene	180	11.138	11.138	(1.152)	792772	20.0000	21.523
	85 Naphthalene	128	11.392	11.392	(1.178)	2146084	20.0000	23.314
	86 1,2,3-Trichlorobenzene	180	11.539	11.539	(1.194)	736973	20.0000	22.077

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt3.i
Lab File ID: 2000115.d
Lab Smp Id: IC0115
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem3/nt3.i/01152013.b/8260C011513L.m
Misc Info: 12-

Calibration Date: 15-JAN-2013
Calibration Time: 17:24
Client Smp ID: VSTD20
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	513917	256958	1027834	519566	1.10
36 1,4-Difluorobenze	821183	410592	1642366	852597	3.83
53 d5-Chlorobenzene	740077	370038	1480154	759798	2.66
77 d4-1,4-Dichlorobe	454429	227214	908858	471075	3.66

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	5.54	5.04	6.04	5.54	0.01
36 1,4-Difluorobenze	5.92	5.42	6.42	5.93	0.10
53 d5-Chlorobenzene	7.98	7.48	8.48	7.98	0.00
77 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

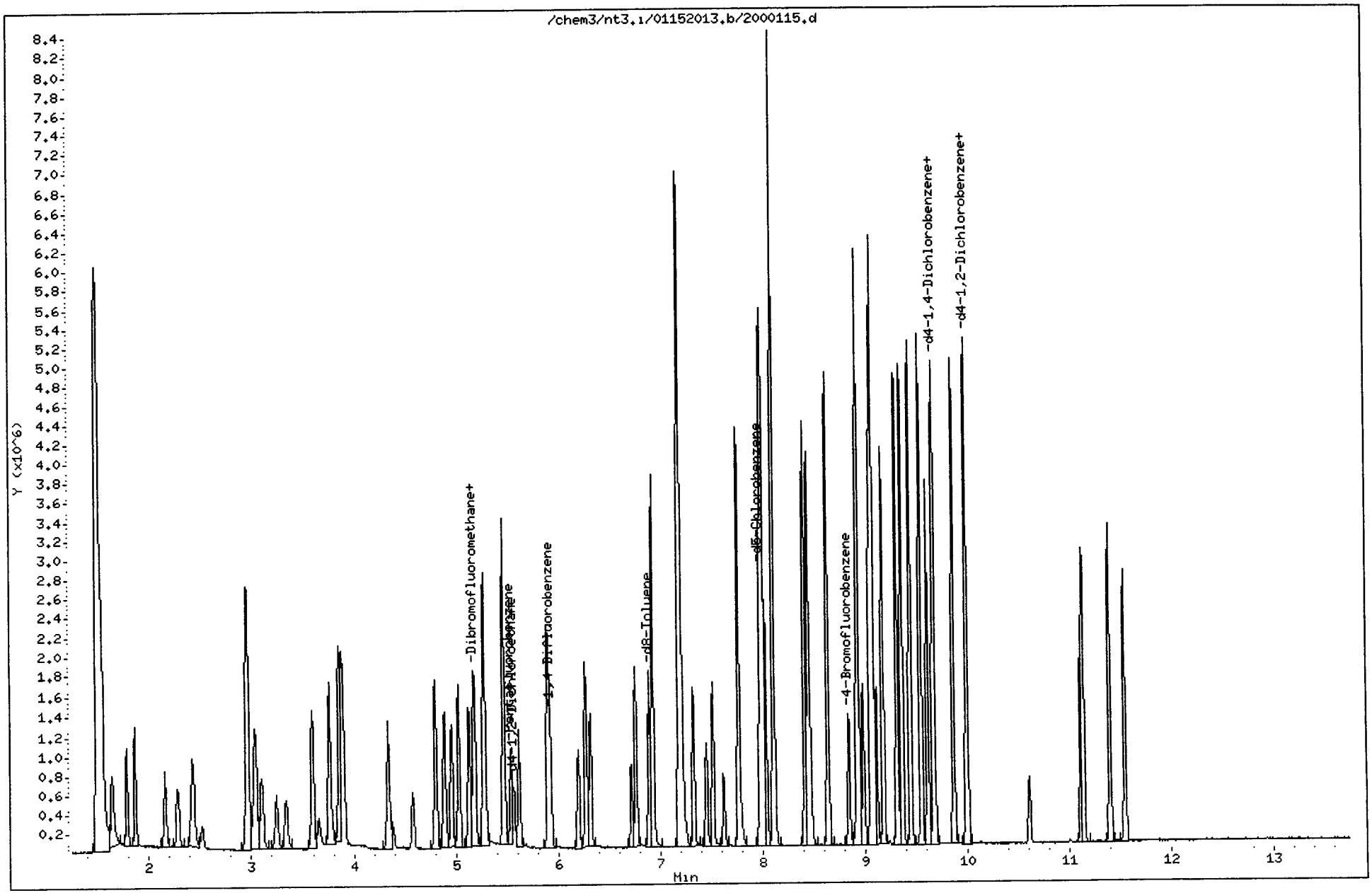
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt3.i/01152013.b/2000115.d
Date : 15-JAN-2013 16:57
Client ID: VSTD20
Sample Info: IC0115,10,10,0

Instrument: nt3.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



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CO-ELUTION SUMMARY FOR FILE - 2000115.d

Lab ID: IC0115, Method: 8260C011513L.m, Instrument: nt3.i, Date: 15-JAN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

SW8260C 10 mL Purge

Data file : /chem3/nt3.i/01152013.b/4000115.d
Lab Smp Id: IC0115 Client Smp ID: VSTD40
Inj Date : 15-JAN-2013 16:30
Operator : PB Inst ID: nt3.i
Smp Info : IC0115,10,10,0
Misc Info : 12-
Comment :
Method : /chem3/nt3.i/01152013.b/8260C011513L.m
Meth Date : 18-Jan-2013 10:01 patrickb Quant Type: ISTD
Cal Date : 15-JAN-2013 16:30 Cal File: 4000115.d
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
1 Dichlorodifluoromethane	85	1.635	1.623	(0.295)	1426972	40.0000	42.304
2 Chloromethane	50	1.782	1.764	(0.322)	1604669	40.0000	40.038
3 Vinyl Chloride	62	1.861	1.843	(0.336)	1890742	40.0000	41.797
4 Bromomethane	94	2.155	2.143	(0.389)	1006780	40.0000	39.577
5 Chloroethane	64	2.280	2.268	(0.412)	1258647	40.0000	42.009
6 Trichlorofluoromethane	101	2.427	2.420	(0.438)	2163483	40.0000	42.592
7 1,1-Dichloroethene	96	2.953	2.946	(0.533)	1192613	40.0000	40.031
8 Carbon Disulfide	76	2.964	2.958	(0.535)	4391379	40.0000	39.204
9 112Trichloro122Trifluoroethane	101	3.032	3.026	(0.548)	1384101	40.0000	43.232
10 Iodomethane	142	3.100	3.088	(0.560)	1908515	40.0000	40.566
11 Bromoethane	108	3.247	3.235	(0.586)	929689	40.0000	39.474
12 Acrolein	56	3.338	3.331	(0.603)	1143395	200.000	212.45
13 Methylene Chloride	84	3.598	3.586	(0.650)	1329841	40.0000	37.992
14 Acetone	43	3.660	3.648	(0.661)	1214815	200.000	210.11
15 Trans-1,2-Dichloroethene	96	3.762	3.755	(0.679)	1312728	40.0000	39.670

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	16 Methyl tert butyl ether	73	3.892	3.886	(0.703)	3951937	40.0000	42.669
	17 1,1-Dichloroethane	63	4.339	4.332	(0.783)	2404635	40.0000	40.033
	18 Acrylonitrile	53	4.384	4.378	(0.792)	432249	40.0000	41.383
	19 Vinyl Acetate	43	4.582	4.576	(0.827)	1639576	40.0000	45.228
	20 Cis-1,2-Dichloroethene	96	4.803	4.796	(0.867)	1347163	40.0000	39.755
	22 2,2-Dichloropropane	77	4.888	4.887	(0.883)	1685636	40.0000	40.410
	23 Bromochloromethane	128	4.961	4.960	(0.896)	611478	40.0000	41.248
	24 Chloroform	83	5.029	5.023	(0.908)	2129059	40.0000	40.950
	25 Carbon Tetrachloride	117	5.131	5.124	(0.866)	1620300	40.0000	39.118
$	26 Dibromofluoromethane	111	5.170	5.164	(0.934)	294141	10.0000	10.001
	27 1,1,1-Trichloroethane	97	5.187	5.181	(0.937)	1864981	40.0000	40.851
	28 2-Butanone	43	5.267	5.266	(0.951)	2783655	200.000	207.77
	29 1,1-Dichloropropene	75	5.278	5.277	(0.891)	1843635	40.0000	42.071
	30 Benzene	78	5.470	5.464	(0.924)	4827473	40.0000	39.549
*	31 Pentafluorobenzene	168	5.538	5.537	(1.000)	544733	10.0000	
$	32 d4-1,2-Dichloroethane	65	5.566	5.566	(1.005)	361379	10.0000	9.929
	33 1,2-Dichloroethane	62	5.617	5.617	(0.948)	1626799	40.0000	41.165
	34 Trichloroethene	130	5.900	5.899	(0.996)	1230001	40.0000	40.810
*	36 1,4-Difluorobenzene	114	5.923	5.922	(1.000)	895474	10.0000	
	37 Dibromomethane	93	6.200	6.199	(1.047)	704035	40.0000	38.397
	38 1,2-Dichloropropane	63	6.273	6.273	(1.059)	1260771	40.0000	40.506
	39 Bromodichloromethane	83	6.319	6.312	(1.067)	1558092	40.0000	40.933
	41 2-Chloroethyl Vinyl Ether	63	6.720	6.714	(1.135)	653717	40.0000	41.530
	42 Cis 1,3-dichloropropene	75	6.760	6.759	(1.141)	1905391	40.0000	43.787
$	43 d8-Toluene	98	6.896	6.889	(1.164)	1044383	10.0000	10.023
	44 Toluene	92	6.930	6.929	(1.170)	2770603	40.0000	42.349
	45 Tetrachloroethene	166	7.201	7.200	(0.903)	1106279	40.0000	42.900
	46 4-Methyl-2-Pentanone	43	7.190	7.189	(1.214)	6285319	200.000	198.15
	47 Trans 1,3-Dichloropropene	75	7.212	7.212	(1.218)	1736498	40.0000	41.207
	48 1,1,2-Trichloroethane	97	7.326	7.325	(1.237)	893489	40.0000	40.030
	49 Chlorodibromomethane	129	7.450	7.449	(0.934)	1051316	40.0000	41.895
	50 1,3-Dichloropropane	76	7.518	7.517	(0.943)	1658848	40.0000	41.324
	51 1,2-Dibromoethane	107	7.620	7.619	(1.287)	937872	40.0000	39.612
	52 2-Hexanone	43	7.767	7.766	(0.974)	4616066	200.000	194.54
*	53 d5-Chlorobenzene	117	7.976	7.975	(1.000)	802992	10.0000	
	54 Chlorobenzene	112	7.987	7.987	(1.001)	2942882	40.0000	41.196
	55 Ethyl Benzene	91	8.004	8.004	(1.004)	5006534	40.0000	40.672
	56 1,1,1,2-Tetrachloroethane	131	8.033	8.032	(1.007)	1177302	40.0000	44.007
	57 m,p-xylene	106	8.106	8.105	(1.016)	3961111	80.0000	87.374
	58 o-Xylene	106	8.412	8.411	(1.055)	2079234	40.0000	43.592
	59 Styrene	104	8.451	8.451	(1.060)	3311590	40.0000	44.218
	60 Bromoform	173	8.474	8.473	(0.877)	785978	40.0000	42.860
	61 Isopropyl Benzene	105	8.638	8.637	(0.894)	5149552	40.0000	42.791
$	62 4-Bromofluorobenzene	95	8.842	8.841	(1.109)	417907	10.0000	9.847
	63 Bromobenzene	156	8.926	8.926	(0.923)	1317805	40.0000	40.382
	64 N-Propyl Benzene	91	8.938	8.937	(0.925)	5820701	40.0000	40.528
	65 1,1,2,2-Tetrachloroethane	83	8.983	8.982	(0.929)	1472322	40.0000	38.297

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
66	2-Chloro Toluene	91	9.057	9.056	(0.937)	4291800	40.0000	41.159
67	1,3,5-Trimethyl Benzene	105	9.074	9.073	(0.939)	4505453	40.0000	43.565
68	1,2,3-Trichloropropane	110	9.085	9.084	(0.940)	435146	40.0000	39.741
70	Trans-1,4-Dichloro 2-Butene	53	9.107	9.107	(0.942)	577874	40.0000	39.482
71	4-Chloro Toluene	91	9.175	9.175	(0.949)	3927444	40.0000	40.063
72	T-Butyl Benzene	119	9.311	9.310	(0.963)	3996546	40.0000	43.432
73	1,2,4-Trimethylbenzene	105	9.362	9.361	(0.968)	4510531	40.0000	43.329
74	S-Butyl Benzene	105	9.447	9.446	(0.977)	5629216	40.0000	41.369
75	4-Isopropyl Toluene	119	9.549	9.548	(0.988)	4707766	40.0000	43.080
76	1,3-Dichlorobenzene	146	9.611	9.616	(0.994)	2639627	40.0000	41.053
* 77	d4-1,4-Dichlorobenzene	152	9.668	9.667	(1.000)	491345	10.0000	
78	1,4-Dichlorobenzene	146	9.679	9.678	(1.001)	2679537	40.0000	39.402
79	N-Butyl Benzene	91	9.866	9.865	(1.020)	4486148	40.0000	41.206
$ 80	d4-1,2-Dichlorobenzene	152	9.990	9.989	(1.033)	441120	10.0000	9.994
81	1,2-Dichlorobenzene	146	9.996	9.995	(1.034)	2534530	40.0000	40.379
82	1,2-Dibromo 3-Chloropropane	75	10.607	10.606	(1.097)	315565	40.0000	37.519
83	Hexachloro 1,3-Butadiene	225	11.116	11.109	(1.150)	693538	40.0000	38.065
84	1,2,4-Trichlorobenzene	180	11.138	11.138	(1.152)	1602824	40.0000	41.721
85	Naphthalene	128	11.393	11.392	(1.178)	4224632	40.0000	44.001
86	1,2,3-Trichlorobenzene	180	11.540	11.539	(1.194)	1491493	40.0000	42.837

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt3.i
Lab File ID: 4000115.d
Lab Smp Id: IC0115
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem3/nt3.i/01152013.b/8260C011513L.m
Misc Info: 12-

Calibration Date: 15-JAN-2013
Calibration Time: 17:24
Client Smp ID: VSTD40
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	513917	256958	1027834	544733	6.00
36 1,4-Difluorobenze	821183	410592	1642366	895474	9.05
53 d5-Chlorobenzene	740077	370038	1480154	802992	8.50
77 d4-1,4-Dichlorobe	454429	227214	908858	491345	8.12

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	5.54	5.04	6.04	5.54	0.01
36 1,4-Difluorobenze	5.92	5.42	6.42	5.92	0.01
53 d5-Chlorobenzene	7.98	7.48	8.48	7.98	0.01
77 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.01

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.

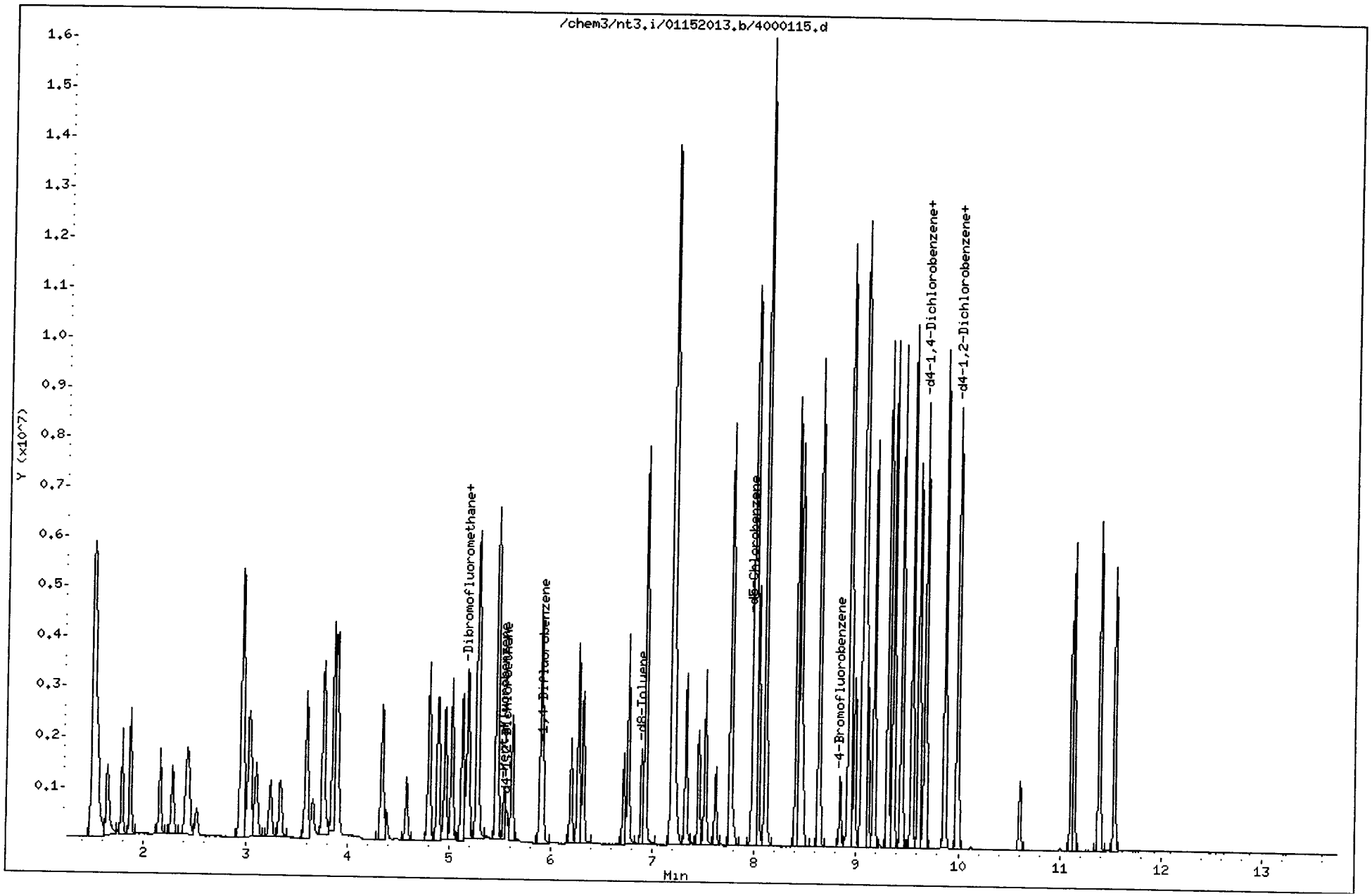
Data File: /chem3/nt3.i/01152013.b/4000115.d
Date : 15-JAN-2013 16:30
Client ID: VSTD40
Sample Info: IC0115,10,10,0

Instrument: nt3.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS

02008727



CO-ELUTION SUMMARY FOR FILE - 4000115.d

Lab ID: IC0115, Method: 8260C011513L.m, Instrument: nt3.i, Date: 15-JAN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

SW8260C 10 mL Purge

Data file : /chem3/nt3.i/01152013.b/8000115.d
Lab Smp Id: IC0115 Client Smp ID: VSTD80
Inj Date : 15-JAN-2013 16:03
Operator : PB Inst ID: nt3.i
Smp Info : IC0115,10,10,0
Misc Info : 12-
Comment :
Method : /chem3/nt3.i/01152013.b/8260C011513L.m
Meth Date : 18-Jan-2013 10:01 patrickb Quant Type: ISTD
Cal Date : 15-JAN-2013 16:03 Cal File: 8000115.d
Als bottle: 1 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Dichlorodifluoromethane	85	1.625	1.623	(0.294)	2706222	80.0000	75.691
2 Chloromethane	50	1.772	1.764	(0.320)	2954258	80.0000	69.542
3 Vinyl Chloride	62	1.857	1.843	(0.336)	3712242	80.0000	77.423
4 Bromomethane	94	2.151	2.143	(0.389)	1948998	80.0000	72.283
5 Chloroethane	64	2.264	2.268	(0.409)	2521720	80.0000	79.405
6 Trichlorofluoromethane	101	2.411	2.420	(0.436)	4423950	80.0000	82.167
7 1,1-Dichloroethene	96	2.943	2.946	(0.532)	2426427	80.0000	76.838
8 Carbon Disulfide	76	2.954	2.958	(0.534)	8163546	80.0000	68.758
9 112Trichloro122Trifluoroethane	101	3.022	3.026	(0.546)	2761530	80.0000	81.376
10 Iodomethane	142	3.090	3.088	(0.558)	3748057	80.0000	75.159
11 Bromoethane	108	3.231	3.235	(0.584)	1846095	80.0000	73.950
12 Acrolein	56	3.333	3.331	(0.602)	2229367	400.000	390.79
13 Methylene Chloride	84	3.588	3.586	(0.648)	2553899	80.0000	68.835
14 Acetone	43	3.650	3.648	(0.660)	2373278	400.000	387.26
15 Trans-1,2-Dichloroethene	96	3.757	3.755	(0.679)	2561780	80.0000	73.037

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)	
	16 Methyl tert butyl ether	73	3.887	3.886	(0.703)	7467696	80.0000	76.069	
	17 1,1-Dichloroethane	63	4.334	4.332	(0.783)	4642442	80.0000	72.917	
	18 Acrylonitrile	53	4.380	4.378	(0.791)	882628	80.0000	79.723	
	19 Vinyl Acetate	43	4.578	4.576	(0.827)	3309560	80.0000	86.131	
	20 Cis-1,2-Dichloroethene	96	4.798	4.796	(0.867)	2671727	80.0000	74.383	
	22 2,2-Dichloropropane	77	4.889	4.887	(0.883)	3147930	80.0000	71.197	
	23 Bromochloromethane	128	4.957	4.960	(0.896)	1221583	80.0000	77.742	
	24 Chloroform	83	5.024	5.023	(0.908)	4075745	80.0000	73.959	
	25 Carbon Tetrachloride	117	5.126	5.124	(0.865)	3129799	80.0000	69.875	
$	26 Dibromofluoromethane	111	5.166	5.164	(0.934)	293180	10.0000	9.404	
	27 1,1,1-Trichloroethane	97	5.183	5.181	(0.937)	3652087	80.0000	75.472	
	28 2-Butanone	43	5.268	5.266	(0.952)	5491090	400.000	386.68	
	29 1,1-Dichloropropene	75	5.279	5.277	(0.891)	3649291	80.0000	77.009	
	30 Benzene	78	5.466	5.464	(0.923)	8534746	80.0000	64.660	
*	31 Pentafluorobenzene	168	5.534	5.537	(1.000)	577389	10.0000	(T)	
$	32 d4-1,2-Dichloroethane	65	5.562	5.566	(1.005)	358213	10.0000	9.285	
	33 1,2-Dichloroethane	62	5.613	5.617	(0.947)	3271061	80.0000	76.543	
	34 Trichloroethene	130	5.901	5.899	(0.996)	2491479	80.0000	76.444	
*	36 1,4-Difluorobenzene	114	5.924	5.922	(1.000)	968328	10.0000		
	37 Dibromomethane	93	6.195	6.199	(1.046)	1422285	80.0000	71.732	
	38 1,2-Dichloropropane	63	6.269	6.273	(1.058)	2583781	80.0000	76.766	
	39 Bromodichloromethane	83	6.314	6.312	(1.066)	3063119	80.0000	74.417	
	41 2-Chloroethyl Vinyl Ether	63	6.716	6.714	(1.134)	1416027	80.0000	83.190	
	42 Cis 1,3-dichloropropene	75	6.761	6.759	(1.141)	3954125	80.0000	84.032	
$	43 d8-Toluene	98	6.891	6.889	(1.163)	1120439	10.0000	9.944	
	44 Toluene	92	6.931	6.929	(1.170)	5400053	80.0000	76.330	
	45 Tetrachloroethene	166	7.197	7.200	(0.902)	2348051	80.0000	85.837	
	46 4-Methyl-2-Pentanone	43	7.185	7.189	(1.213)	10245865	400.000	298.71	
	47 Trans 1,3-Dichloropropene	75	7.214	7.212	(1.218)	3586422	80.0000	78.703	
	48 1,1,2-Trichloroethane	97	7.327	7.325	(1.237)	1863422	80.0000	77.204	
	49 Chlorodibromomethane	129	7.451	7.449	(0.934)	2142782	80.0000	80.495	
	50 1,3-Dichloropropane	76	7.519	7.517	(0.943)	3411663	80.0000	80.118	
	51 1,2-Dibromoethane	107	7.621	7.619	(1.286)	1929228	80.0000	75.351	
	52 2-Hexanone	43	7.768	7.766	(0.974)	7816809	400.000	310.55	
*	53 d5-Chlorobenzene	117	7.977	7.975	(1.000)	851809	10.0000		
	54 Chlorobenzene	112	7.989	7.987	(1.001)	5700893	80.0000	75.230	
	55 Ethyl Benzene	91	8.006	8.004	(1.004)	8448069	80.0000	64.697	
	56 1,1,1,2-Tetrachloroethane	131	8.034	8.032	(1.007)	2344102	80.0000	82.599	
	57 m,p-xylene	106	8.107	8.105	(1.016)	7161459	160.000	148.91	
	58 o-Xylene	106	8.413	8.411	(1.055)	4148639	80.0000	81.994	
	59 Styrene	104	8.447	8.451	(1.059)	6212277	80.0000	78.195	
	60 Bromoform	173	8.470	8.473	(0.876)	1598556	80.0000	86.752	
	61 Isopropyl Benzene	105	8.639	8.637	(0.894)	8532798	80.0000	70.564	
$	62 4-Bromofluorobenzene	95	8.843	8.841	(1.108)	434977	10.0000	9.662	
	63 Bromobenzene	156	8.922	8.926	(0.923)	2648353	80.0000	80.765	
	64 N-Propyl Benzene	91	8.933	8.937	(0.924)	9162847	80.0000	63.493	
	65 1,1,2,2-Tetrachloroethane	83	8.979	8.982	(0.929)	2852459	80.0000	73.841	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
	66 2-Chloro Toluene	91	9.052	9.056	(0.936)	7713891	80.0000	73.622
	67 1,3,5-Trimethyl Benzene	105	9.075	9.073	(0.939)	7597890	80.0000	73.114
	68 1,2,3-Trichloropropane	110	9.086	9.084	(0.940)	863315	80.0000	78.467
	70 Trans-1,4-Dichloro 2-Butene	53	9.109	9.107	(0.942)	1157675	80.0000	78.715
	71 4-Chloro Toluene	91	9.177	9.175	(0.949)	6979159	80.0000	70.851
	72 T-Butyl Benzene	119	9.312	9.310	(0.963)	6889384	80.0000	74.511
	73 1,2,4-Trimethylbenzene	105	9.363	9.361	(0.968)	7590298	80.0000	72.564
	74 S-Butyl Benzene	105	9.448	9.446	(0.977)	8886656	80.0000	64.994
	75 4-Isopropyl Toluene	119	9.550	9.548	(0.988)	7791848	80.0000	70.960
	76 1,3-Dichlorobenzene	146	9.612	9.616	(0.994)	4920750	80.0000	76.163
*	77 d4-1,4-Dichlorobenzene	152	9.669	9.667	(1.000)	493717	10.0000	
	78 1,4-Dichlorobenzene	146	9.680	9.678	(1.001)	5066840	80.0000	74.150
	79 N-Butyl Benzene	91	9.867	9.865	(1.020)	7490712	80.0000	68.474
$	80 d4-1,2-Dichlorobenzene	152	9.991	9.989	(1.033)	446660	10.0000	10.070
	81 1,2-Dichlorobenzene	146	9.997	9.995	(1.034)	4703452	80.0000	74.572
	82 1,2-Dibromo 3-Chloropropane	75	10.608	10.606	(1.097)	591441	80.0000	69.981
	83 Hexachloro 1,3-Butadiene	225	11.111	11.109	(1.149)	1387663	80.0000	75.797
	84 1,2,4-Trichlorobenzene	180	11.134	11.138	(1.152)	3272111	80.0000	84.763
	85 Naphthalene	128	11.394	11.392	(1.178)	7419162	80.0000	76.901
	86 1,2,3-Trichlorobenzene	180	11.541	11.539	(1.194)	3129172	80.0000	89.442

QC Flag Legend

T - Target compound detected outside RT window.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt3.i
Lab File ID: 8000115.d
Lab Smp Id: IC0115
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem3/nt3.i/01152013.b/8260C011513L.m
Misc Info: 12-

Calibration Date: 15-JAN-2013
Calibration Time: 17:24
Client Smp ID: VSTD80
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	513917	256958	1027834	577389	12.35
36 1,4-Difluorobenze	821183	410592	1642366	968328	17.92
53 d5-Chlorobenzene	740077	370038	1480154	851809	15.10
77 d4-1,4-Dichlorobe	454429	227214	908858	493717	8.65

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	5.54	5.04	6.04	5.53	-0.07
36 1,4-Difluorobenze	5.92	5.42	6.42	5.92	0.03
53 d5-Chlorobenzene	7.98	7.48	8.48	7.98	0.02
77 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.02

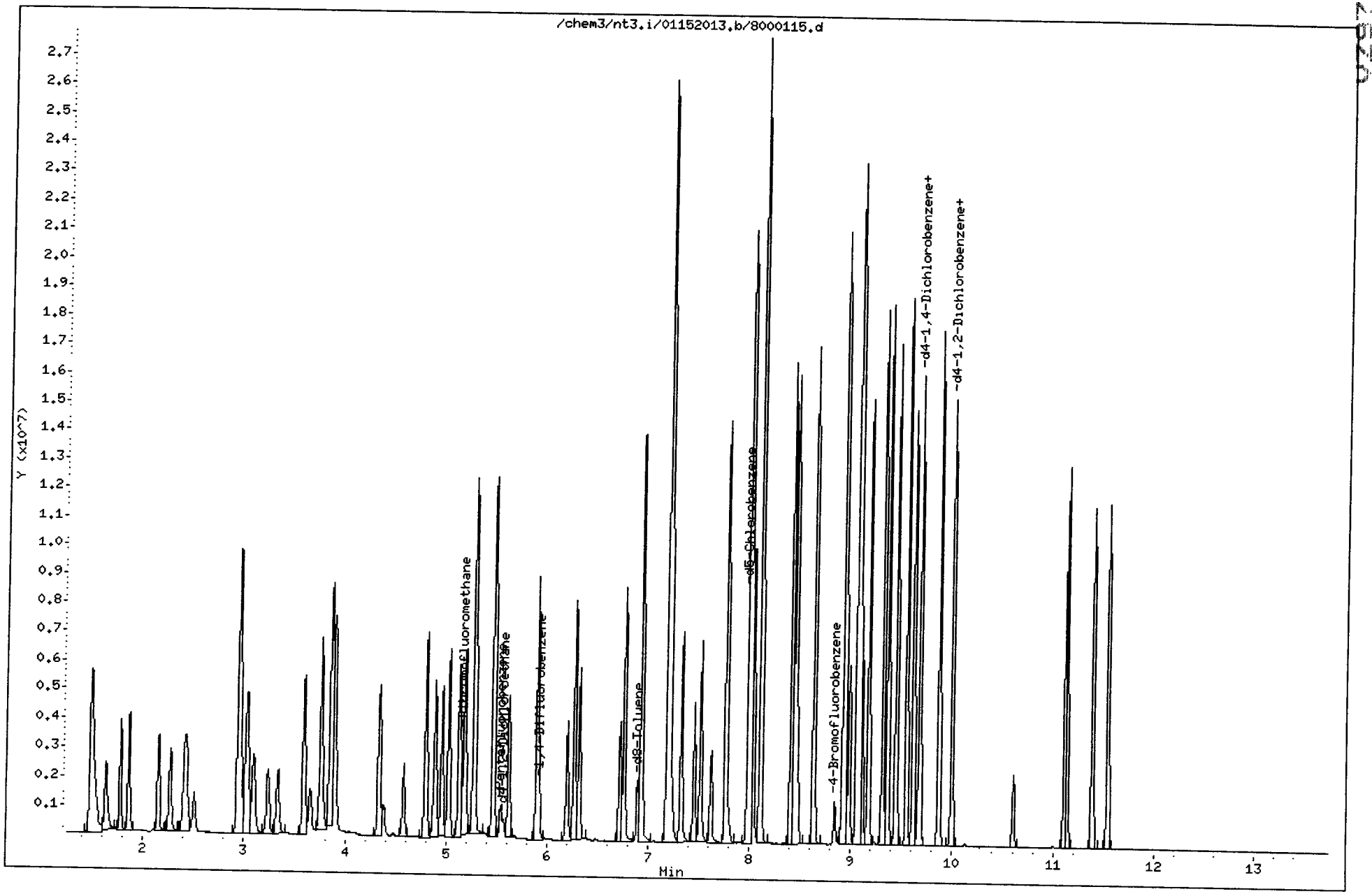
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt3.i/01152013.b/8000115.d
Date : 15-JAN-2013 16:03
Client ID: VSTD80
Sample Info: IC0115,10,10,0

Instrument: nt3.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



CO-ELUTION SUMMARY FOR FILE - 8000115.d

Lab ID: IC0115, Method: 8260C011513L.m, Instrument: nt3.i, Date: 15-JAN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

SW8260C 10 mL Purge

Data file : /chem3/nt3.i/01152013.b/icv0115.d
Lab Smp Id: ICV0115
Inj Date : 15-JAN-2013 19:10 Client Smp ID: ICV0115
Operator : PB
Smp Info : ICV0115,10,10,0 Inst ID: nt3.i
Misc Info : 12-
Comment :
Method : /chem3/nt3.i/01152013.b/8260C011513L.m
Meth Date : 18-Jan-2013 10:01 patrickb Quant Type: ISTD
Cal Date : 15-JAN-2013 16:03 Cal File: 8000115.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE
Target Version: 3.50 Compound Sublist: voa.sub
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable

Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
1 Dichlorodifluoromethane	85	1.620	1.623	(0.293)	320092	10.6553	10.655
2 Chloromethane	50	1.761	1.764	(0.318)	406886	11.3994	11.399
3 Vinyl Chloride	62	1.846	1.843	(0.334)	477010	11.8405	11.840
4 Bromomethane	94	2.140	2.143	(0.387)	257602	11.3706	11.371
5 Chloroethane	64	2.271	2.268	(0.410)	287689	10.7816	10.782
6 Trichlorofluoromethane	101	2.418	2.420	(0.437)	487676	10.7802	10.780
7 1,1-Dichloroethene	96	2.944	2.946	(0.532)	283064	10.6685	10.669
8 Carbon Disulfide	76	2.955	2.958	(0.534)	823817	8.25813	8.258
9 112Trichloro122Trifluoroethane	101	3.029	3.026	(0.547)	292731	10.2666	10.267
10 Iodomethane	142	3.091	3.088	(0.558)	369761	8.82485	8.825
11 Bromoethane	108	3.232	3.235	(0.584)	203473	9.70063	9.701
12 Acrolein	56	3.328	3.331	(0.601)	35233	7.35064	7.351(R)
13 Methylene Chloride	84	3.589	3.586	(0.648)	320656	10.2862	10.286
14 Acetone	43	3.651	3.648	(0.660)	61193	11.8840	11.884
15 Trans-1,2-Dichloroethene	96	3.758	3.755	(0.679)	272916	9.26065	9.261

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
	16 Methyl tert butyl ether	73	3.883	3.886	(0.702)	890563	10.7968	10.797
	17 1,1-Dichloroethane	63	4.335	4.332	(0.783)	550122	10.2837	10.284
	18 Acrylonitrile	53	4.375	4.378	(0.790)	111434	11.9793	11.979
	19 Vinyl Acetate	43	4.573	4.576	(0.826)	296399	9.18069	9.181
	20 Cis-1,2-Dichloroethene	96	4.793	4.796	(0.866)	322438	10.6841	10.684
	22 2,2-Dichloropropane	77	4.884	4.887	(0.882)	346553	9.32856	9.329
	23 Bromochloromethane	128	4.958	4.960	(0.896)	285744	21.6432	21.643
	24 Chloroform	83	5.025	5.023	(0.908)	497987	10.7550	10.755
	25 Carbon Tetrachloride	117	5.127	5.124	(0.865)	365603	9.95827	9.958
$	26 Dibromofluoromethane	111	5.167	5.164	(0.934)	264077	10.0818	10.082
	27 1,1,1-Trichloroethane	97	5.184	5.181	(0.937)	421362	10.3636	10.364
	28 2-Butanone	43	5.263	5.266	(0.951)	138662	11.6213	11.621
	29 1,1-Dichloropropene	75	5.280	5.277	(0.891)	400556	10.3125	10.313
	30 Benzene	78	5.467	5.464	(0.923)	1149172	10.6217	10.622
*	31 Pentafluorobenzene	168	5.535	5.537	(1.000)	485131	10.0000	(Q)
$	32 d4-1,2-Dichloroethane	65	5.563	5.566	(1.005)	333026	10.2739	10.274
	33 1,2-Dichloroethane	62	5.614	5.617	(0.947)	366118	10.4522	10.452
	34 Trichloroethene	130	5.897	5.899	(0.995)	280522	10.5008	10.501
*	36 1,4-Difluorobenzene	114	5.925	5.922	(1.000)	793699	10.0000	
	37 Dibromomethane	93	6.196	6.199	(1.046)	160770	9.89235	9.892
	38 1,2-Dichloropropane	63	6.270	6.273	(1.058)	278221	10.0849	10.085
	39 Bromodichloromethane	83	6.315	6.312	(1.066)	357254	10.5889	10.589
	41 2-Chloroethyl Vinyl Ether	63	6.717	6.714	(1.134)	123454	8.84857	8.849
	42 Cis 1,3-dichloropropene	75	6.762	6.759	(1.141)	383967	9.95528	9.955
$	43 d8-Toluene	98	6.892	6.889	(1.163)	904982	9.79911	9.799
	44 Toluene	92	6.926	6.929	(1.169)	601339	10.3701	10.370 (Q)
	45 Tetrachloroethene	166	7.198	7.200	(0.902)	228157	10.1137	10.114
	46 4-Methyl-2-Pentanone	43	7.186	7.189	(1.213)	300485	10.6878	10.688
	47 Trans 1,3-Dichloropropene	75	7.215	7.212	(1.218)	327176	8.75951	8.760
	48 1,1,2-Trichloroethane	97	7.328	7.325	(1.237)	195986	9.90645	9.906
	49 Chlorodibromomethane	129	7.452	7.449	(0.934)	242505	11.0465	11.047
	50 1,3-Dichloropropane	76	7.514	7.517	(0.942)	360008	10.2515	10.252
	51 1,2-Dibromoethane	107	7.622	7.619	(1.286)	210309	10.0215	10.022
	52 2-Hexanone	43	7.769	7.766	(0.974)	228349	11.0005	11.001
*	53 d5-Chlorobenzene	117	7.978	7.975	(1.000)	702473	10.0000	
	54 Chlorobenzene	112	7.990	7.987	(1.001)	652710	10.4443	10.444
	55 Ethyl Benzene	91	8.007	8.004	(1.004)	1171187	10.8759	10.876
	56 1,1,1,2-Tetrachloroethane	131	8.035	8.032	(1.007)	263261	11.2486	11.249
	57 m,p-xylene	106	8.108	8.105	(1.016)	901068	22.7199	22.720 (Q)
	58 o-Xylene	106	8.414	8.411	(1.055)	457394	10.9617	10.962 (Q)
	59 Styrene	104	8.448	8.451	(1.059)	741474	11.3172	11.317
	60 Bromoform	173	8.470	8.473	(0.876)	175736	10.5747	10.575
	61 Isopropyl Benzene	105	8.634	8.637	(0.893)	1046717	9.59799	9.598
$	62 4-Bromofluorobenzene	95	8.844	8.841	(1.108)	383495	10.3289	10.329
	63 Bromobenzene	156	8.923	8.926	(0.923)	305669	10.3360	10.336
	64 N-Propyl Benzene	91	8.934	8.937	(0.924)	1455012	11.1794	11.179
	65 1,1,2,2-Tetrachloroethane	83	8.979	8.982	(0.929)	343505	9.85974	9.860

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
	66 2-Chloro Toluene	91	9.053	9.056	(0.937)	1004062	10.6255	10.625
	67 1,3,5-Trimethyl Benzene	105	9.076	9.073	(0.939)	1074822	11.4684	11.468
	68 1,2,3-Trichloropropane	110	9.087	9.084	(0.940)	105440	10.6262	10.626
	70 Trans-1,4-Dichloro 2-Butene	53	9.110	9.107	(0.943)	109243	8.23611	8.236(Q)
	71 4-Chloro Toluene	91	9.178	9.175	(0.950)	913580	10.2836	10.284
	72 T-Butyl Benzene	119	9.313	9.310	(0.964)	900537	10.7993	10.799
	73 1,2,4-Trimethylbenzene	105	9.364	9.361	(0.969)	1071238	11.3554	11.355
	74 S-Butyl Benzene	105	9.443	9.446	(0.977)	1389452	11.2677	11.268
	75 4-Isopropyl Toluene	119	9.551	9.548	(0.988)	1066952	10.7739	10.774
	76 1,3-Dichlorobenzene	146	9.613	9.616	(0.995)	611060	10.4871	10.487
*	77 d4-1,4-Dichlorobenzene	152	9.664	9.667	(1.000)	445268	10.0000	(Q)
	78 1,4-Dichlorobenzene	146	9.675	9.678	(1.001)	635816	10.3172	10.317
	79 N-Butyl Benzene	91	9.868	9.865	(1.021)	1046391	10.6060	10.606
$	80 d4-1,2-Dichlorobenzene	152	9.986	9.989	(1.033)	406391	10.1595	10.160(Q)
	81 1,2-Dichlorobenzene	146	9.998	9.995	(1.035)	591011	10.3900	10.390
	82 1,2-Dibromo 3-Chloropropane	75	10.603	10.606	(1.097)	76435	10.0281	10.028
	83 Hexachloro 1,3-Butadiene	225	11.112	11.109	(1.150)	143722	8.70460	8.705
	84 1,2,4-Trichlorobenzene	180	11.135	11.138	(1.152)	331525	9.52245	9.522
	85 Naphthalene	128	11.389	11.392	(1.179)	935179	10.7481	10.748
	86 1,2,3-Trichlorobenzene	180	11.536	11.539	(1.194)	311780	9.88132	9.881

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt3.i
Lab File ID: icv0115.d
Lab Smp Id: ICV0115
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem3/nt3.i/01152013.b/8260C011513L.m
Misc Info: 12-

Calibration Date: 15-JAN-2013
Calibration Time: 17:24
Client Smp ID: ICV0115
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	513917	256958	1027834	485131	-5.60
36 1,4-Difluorobenze	821183	410592	1642366	793699	-3.35
53 d5-Chlorobenzene	740077	370038	1480154	702473	-5.08
77 d4-1,4-Dichlorobe	454429	227214	908858	445268	-2.02

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	5.54	5.04	6.04	5.53	-0.05
36 1,4-Difluorobenze	5.92	5.42	6.42	5.92	0.05
53 d5-Chlorobenzene	7.98	7.48	8.48	7.98	0.04
77 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.66	-0.03

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: ICV0115
Level: LOW
Data Type: MS DATA
SpikeList File: icv.spk
Sublist File: voa.sub
Method File: /chem3/nt3.i/01152013.b/8260C011513L.m
Misc Info: 12-

Client SDG: 01152013
Fraction: VOA
Client Smp ID: ICV0115
Operator: PB
SampleType: LCS
Quant Type: ISTD

	SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1	Dichlorodifluorome	10.000	10.655	106.55	80-120
2	Chloromethane	10.000	11.399	113.99	80-120
3	Vinyl Chloride	10.000	11.840	118.40	80-120
4	Bromomethane	10.000	11.371	113.71	80-120
5	Chloroethane	10.000	10.782	107.82	80-120
6	Trichlorofluoromet	10.000	10.780	107.80	80-120
12	Acrolein	10.000	7.351	73.51*	80-120
9	112Trichloro122Tri	10.000	10.267	102.67	80-120
14	Acetone	10.000	11.884	118.84	80-120
7	1,1-Dichloroethene	10.000	10.669	106.69	80-120
11	Bromoethane	10.000	9.701	97.01	80-120
10	Iodomethane	10.000	8.825	88.25	80-120
13	Methylene Chloride	10.000	10.286	102.86	80-120
18	Acrylonitrile	10.000	11.979	119.79	80-120
8	Carbon Disulfide	10.000	8.258	82.58	80-120
16	Methyl tert butyl	10.000	10.797	107.97	80-120
15	Trans-1,2-Dichloro	10.000	9.261	92.61	80-120
19	Vinyl Acetate	10.000	9.181	91.81	80-120
17	1,1-Dichloroethane	10.000	10.284	102.84	80-120
28	2-Butanone	10.000	11.621	116.21	80-120
22	2,2-Dichloropropan	10.000	9.329	93.29	80-120
20	Cis-1,2-Dichloroet	10.000	10.684	106.84	80-120
24	Chloroform	10.000	10.755	107.55	80-120
23	Bromochloromethane	20.000	21.643	108.22	80-120
27	1,1,1-Trichloroeth	10.000	10.364	103.64	80-120
29	1,1-Dichloropropen	10.000	10.313	103.13	80-120
25	Carbon Tetrachlori	10.000	9.958	99.58	80-120
33	1,2-Dichloroethane	10.000	10.452	104.52	80-120
30	Benzene	10.000	10.622	106.22	80-120
34	Trichloroethene	10.000	10.501	105.01	80-120
38	1,2-Dichloropropan	10.000	10.085	100.85	80-120
39	Bromodichlorometha	10.000	10.589	105.89	80-120
37	Dibromomethane	10.000	9.892	98.92	80-120

U797 : 00341

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
41 2-Chloroethyl Viny	10.000	8.849	88.49	80-120
46 4-Methyl-2-Pentano	10.000	10.688	106.88	80-120
42 Cis 1,3-dichloropr	10.000	9.955	99.55	80-120
44 Toluene	10.000	10.370	103.70	80-120
47 Trans 1,3-Dichloro	10.000	8.760	87.60	80-120
52 2-Hexanone	10.000	11.001	110.01	80-120
48 1,1,2-Trichloroeth	10.000	9.906	99.06	80-120
50 1,3-Dichloropropan	10.000	10.252	102.52	80-120
45 Tetrachloroethene	10.000	10.114	101.14	80-120
49 Chlorodibromometha	10.000	11.047	110.47	80-120
51 1,2-Dibromoethane	10.000	10.022	100.22	80-120
54 Chlorobenzene	10.000	10.444	104.44	80-120
56 1,1,1,2-Tetrachlor	10.000	11.249	112.49	80-120
55 Ethyl Benzene	10.000	10.876	108.76	80-120
57 m,p-xylene	20.000	22.720	113.60	80-120
58 o-Xylene	10.000	10.962	109.62	80-120
59 Styrene	10.000	11.317	113.17	80-120
61 Isopropyl Benzene	10.000	9.598	95.98	80-120
60 Bromoform	10.000	10.575	105.75	80-120
65 1,1,2,2-Tetrachlor	10.000	9.860	98.60	80-120
68 1,2,3-Trichloropro	10.000	10.626	106.26	80-120
70 Trans-1,4-Dichloro	10.000	8.236	82.36	80-120
64 N-Propyl Benzene	10.000	11.179	111.79	80-120
63 Bromobenzene	10.000	10.336	103.36	80-120
67 1,3,5-Trimethyl Be	10.000	11.468	114.68	80-120
66 2-Chloro Toluene	10.000	10.625	106.25	80-120
71 4-Chloro Toluene	10.000	10.284	102.84	80-120
72 T-Butyl Benzene	10.000	10.799	107.99	80-120
73 1,2,4-Trimethylben	10.000	11.355	113.55	80-120
74 S-Butyl Benzene	10.000	11.268	112.68	80-120
75 4-Isopropyl Toluen	10.000	10.774	107.74	80-120
76 1,3-Dichlorobenzen	10.000	10.487	104.87	80-120
78 1,4-Dichlorobenzen	10.000	10.317	103.17	80-120
79 N-Butyl Benzene	10.000	10.606	106.06	80-120
81 1,2-Dichlorobenzen	10.000	10.390	103.90	80-120
82 1,2-Dibromo 3-Chlo	10.000	10.028	100.28	80-120
84 1,2,4-Trichloroben	10.000	9.522	95.22	80-120
83 Hexachloro 1,3-But	10.000	8.705	87.05	80-120
85 Naphthalene	10.000	10.748	107.48	80-120
86 1,2,3-Trichloroben	10.000	9.881	98.81	80-120

SURROGATE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
$ 26 Dibromofluorometha	10.000	10.082	100.82	80-120

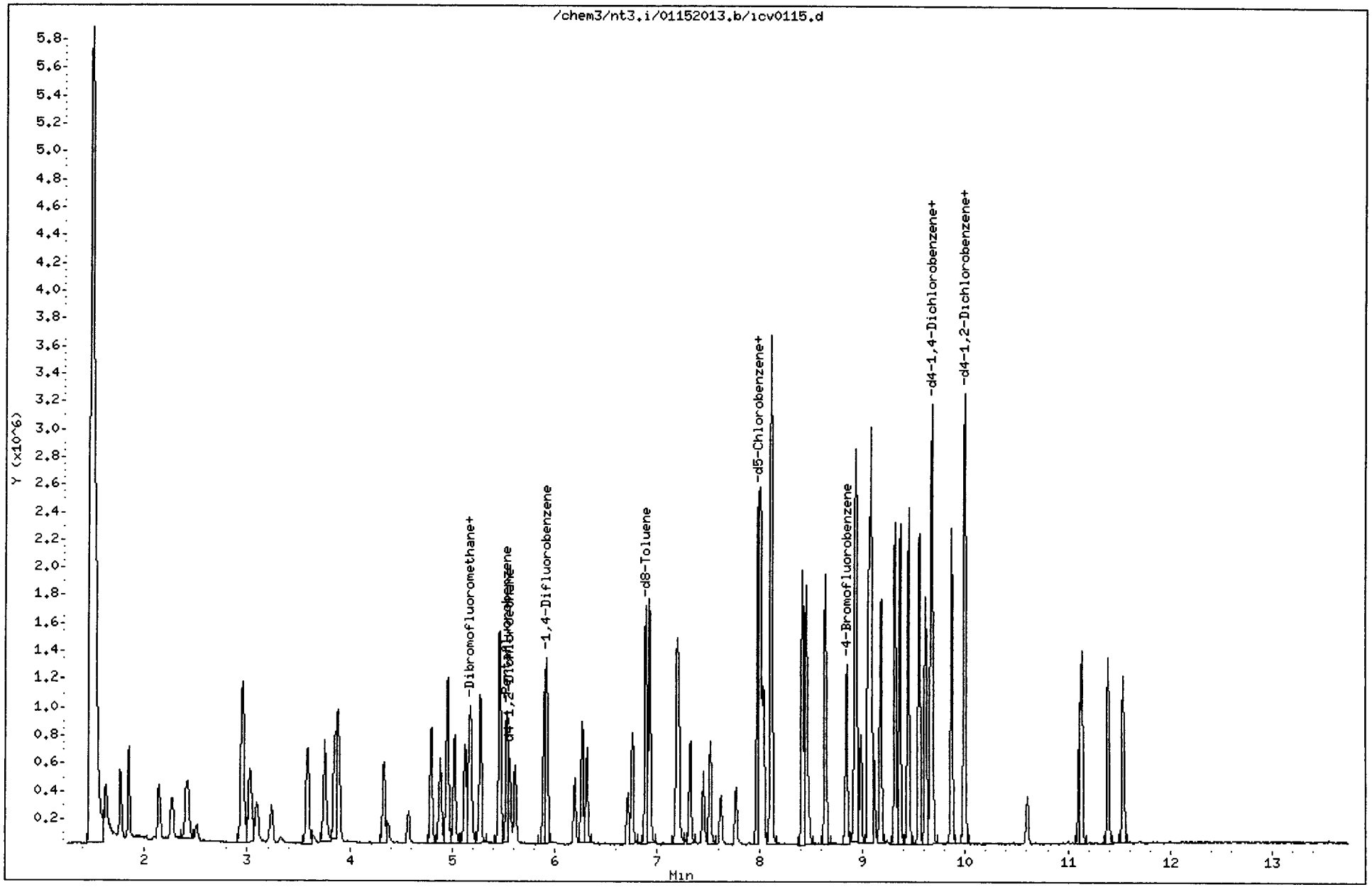
SURROGATE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
$ 32 d4-1,2-Dichloroeth	10.000	10.274	102.74	80-120
$ 43 d8-Toluene	10.000	9.799	97.99	80-120
$ 62 4-Bromofluorobenze	10.000	10.329	103.29	80-120
$ 80 d4-1,2-Dichloroben	10.000	10.160	101.60	80-120

Data File: /chem3/nt3.i/01152013.b/icv0115.d
Date : 15-JAN-2013 19:10
Client ID: ICV0115
Sample Info: ICV0115,10,10,0

Column phase: RTXVMS

Instrument: nt3.i

Operator: PB
Column diameter: 0.18



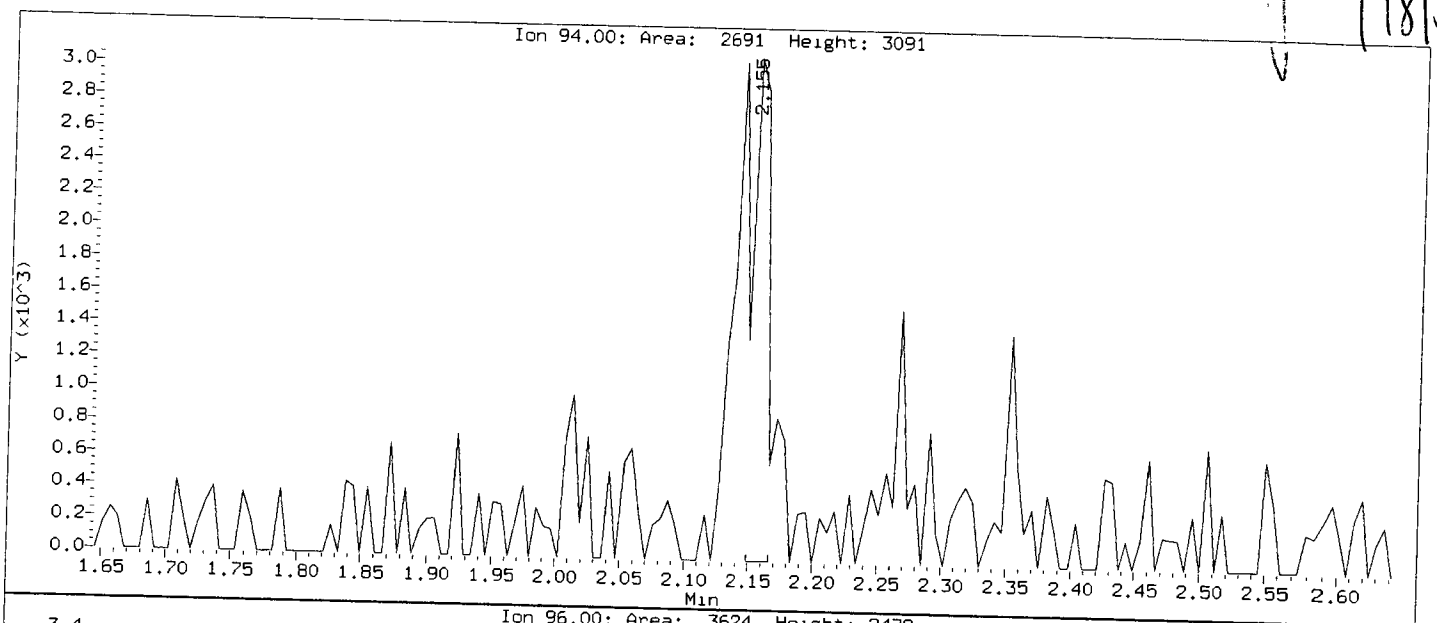
CO-ELUTION SUMMARY FOR FILE - icv0115.d

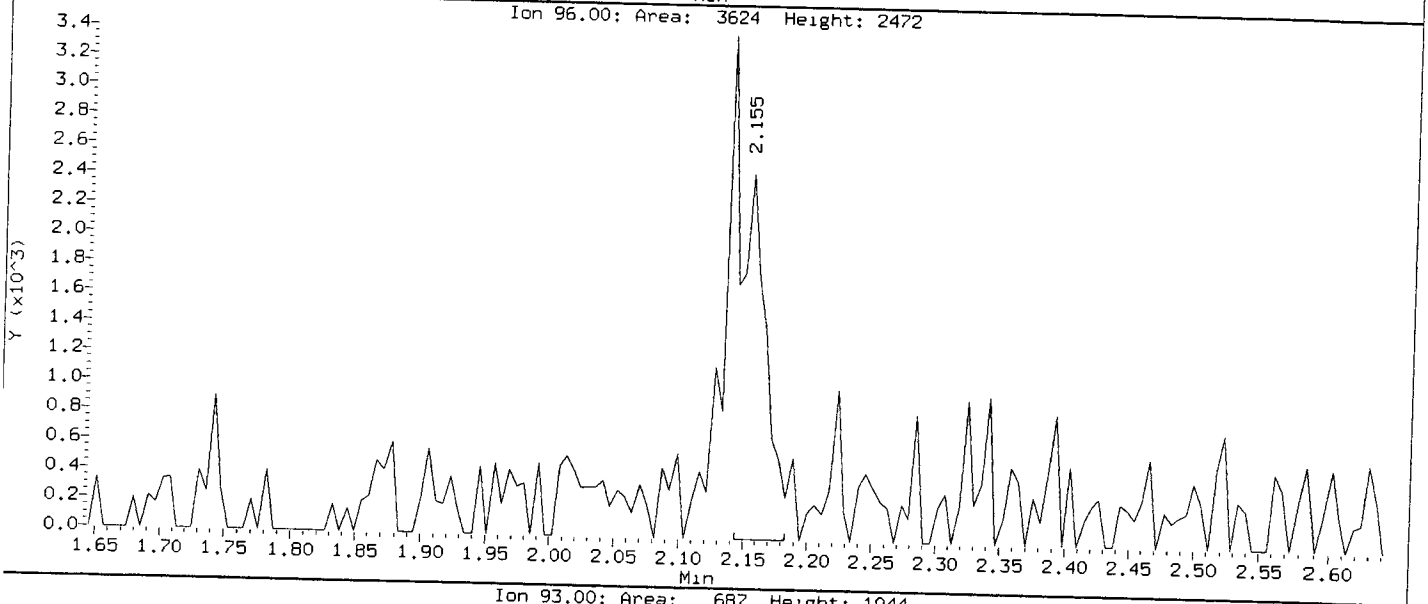
Lab ID: ICV0115, Method: 8260C011513L.m, Instrument: nt3.i, Date: 15-JAN-2013

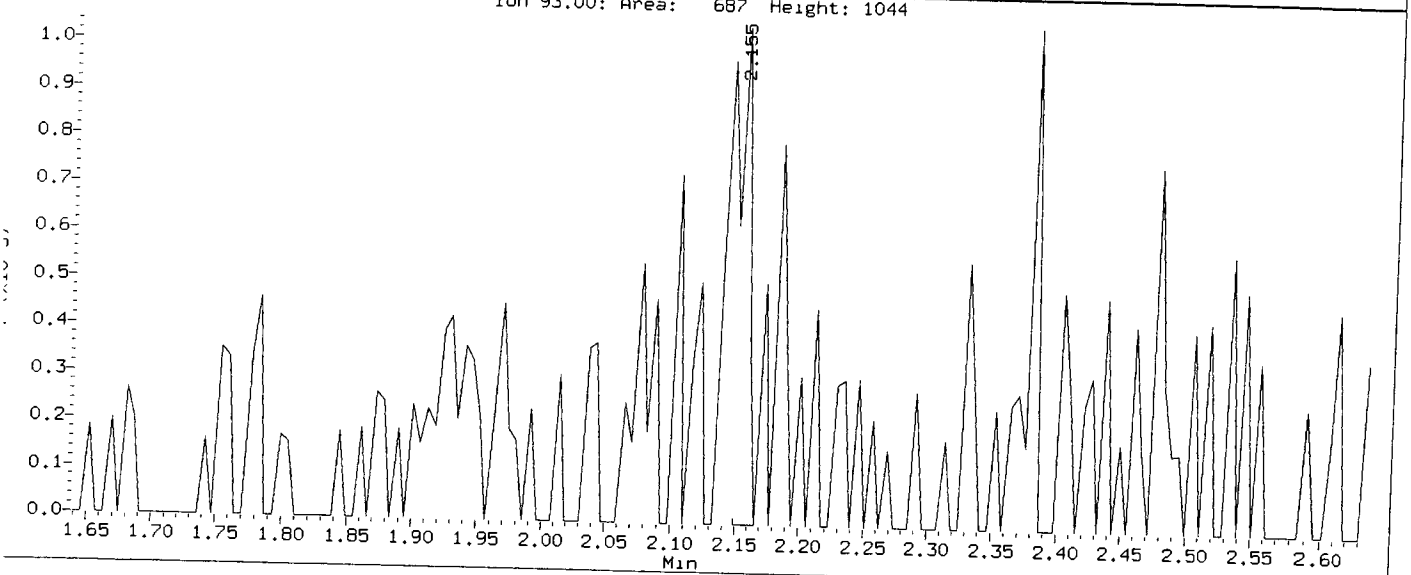
RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Data File: /chem3/nt3.i/01152013.b/0020115.d
Injection Date: 15-JAN-2013 15:36
Instrument: nt3.i
Client Sample ID: VSTD0.2

Compound: Bromomethane
CAS Number:

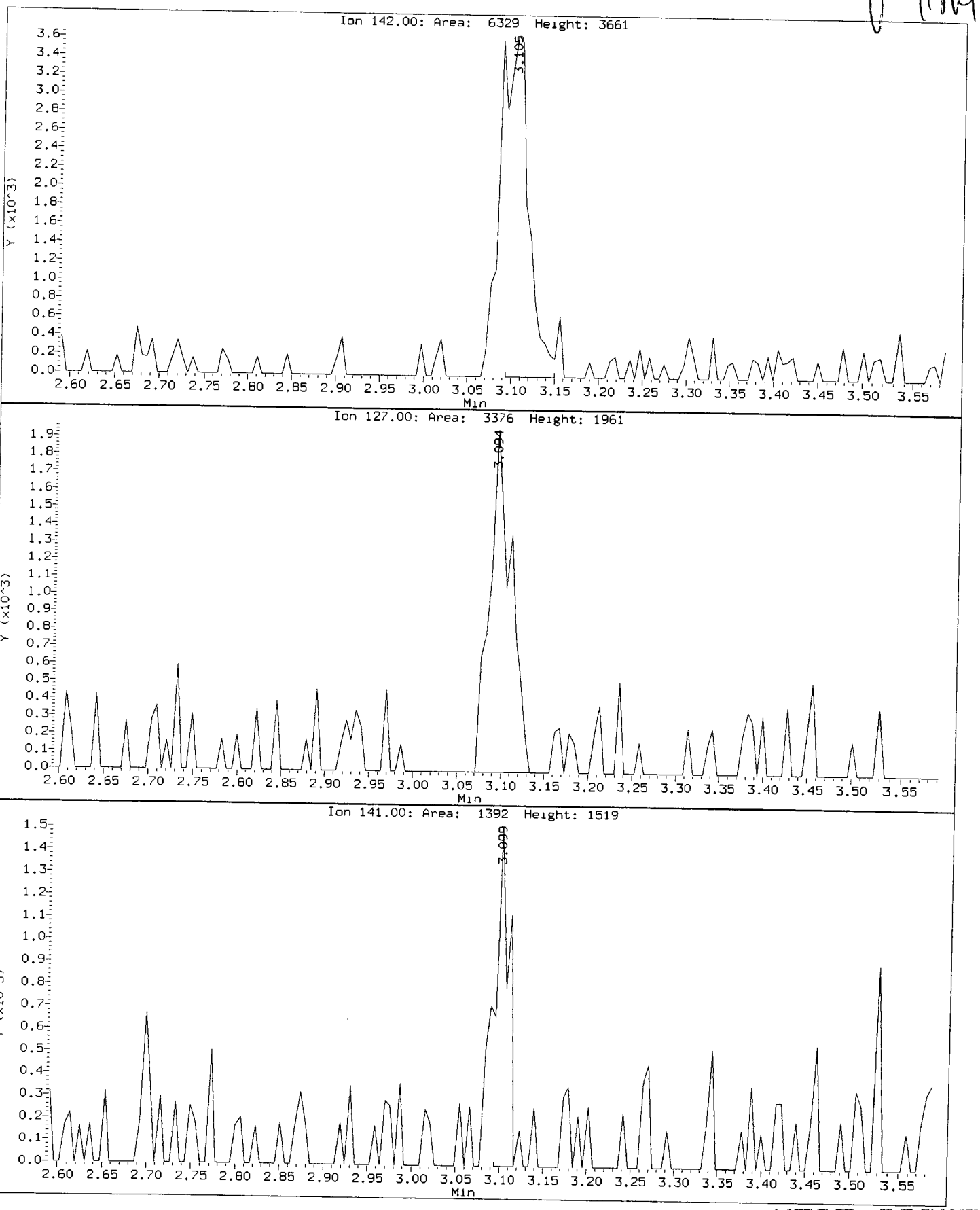






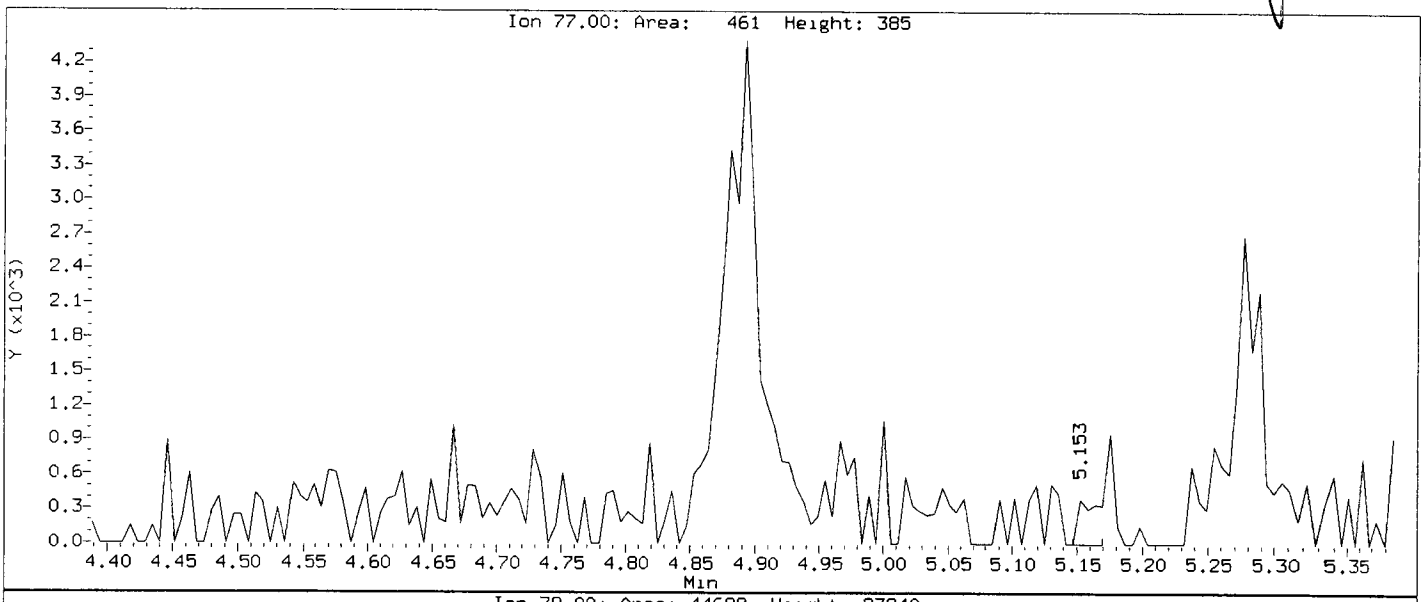
Data File: /chem3/nt3.1/01152013.b/0020115.d
Injection Date: 15-JAN-2013 15:36
Instrument: nt3.1
Client Sample ID: VSTD0.2

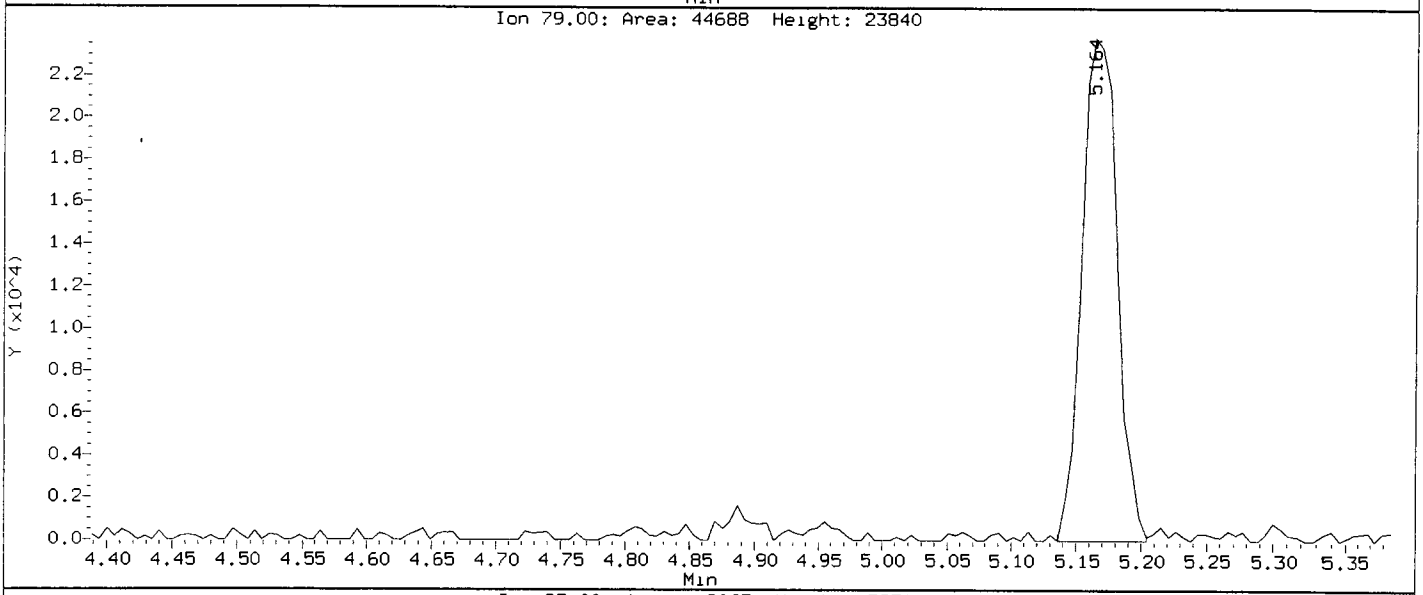
Compound: Iodomethane
CAS Number:

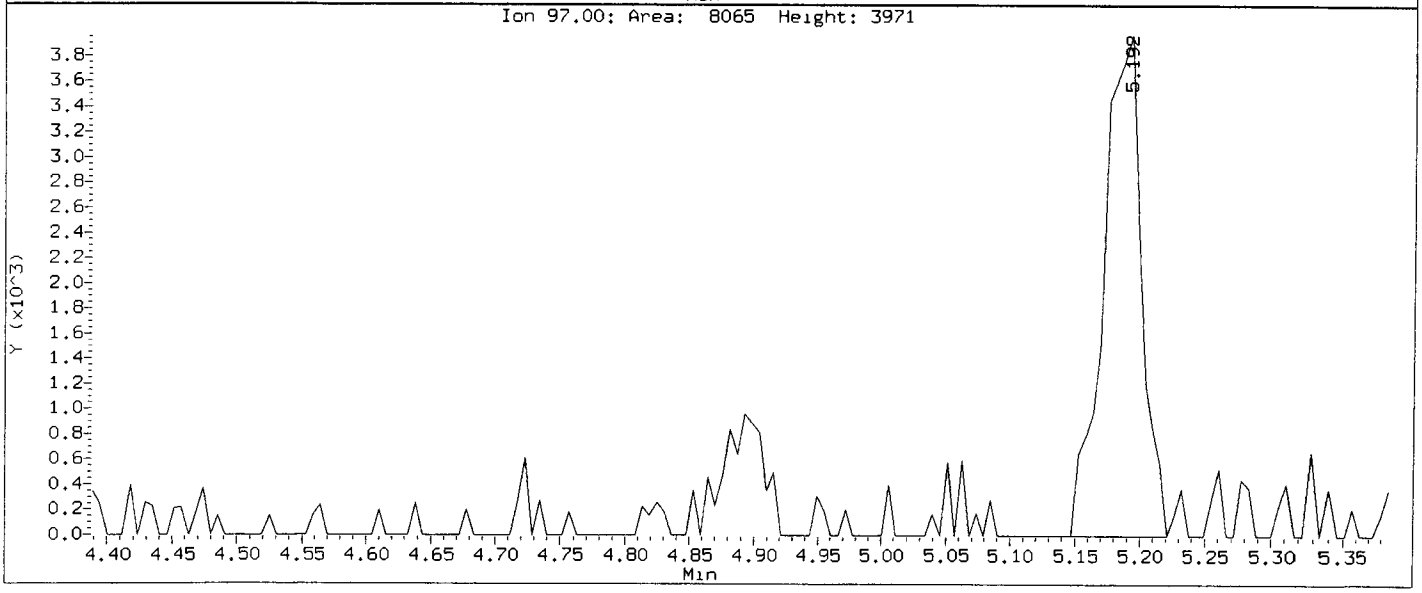


Data File: /chem3/nt3.i/01152013.b/0020115.d
Injection Date: 15-JAN-2013 15:36
Instrument: nt3.i
Client Sample ID: VSTD0.2

Compound: 2,2-Dichloropropane
CAS Number:

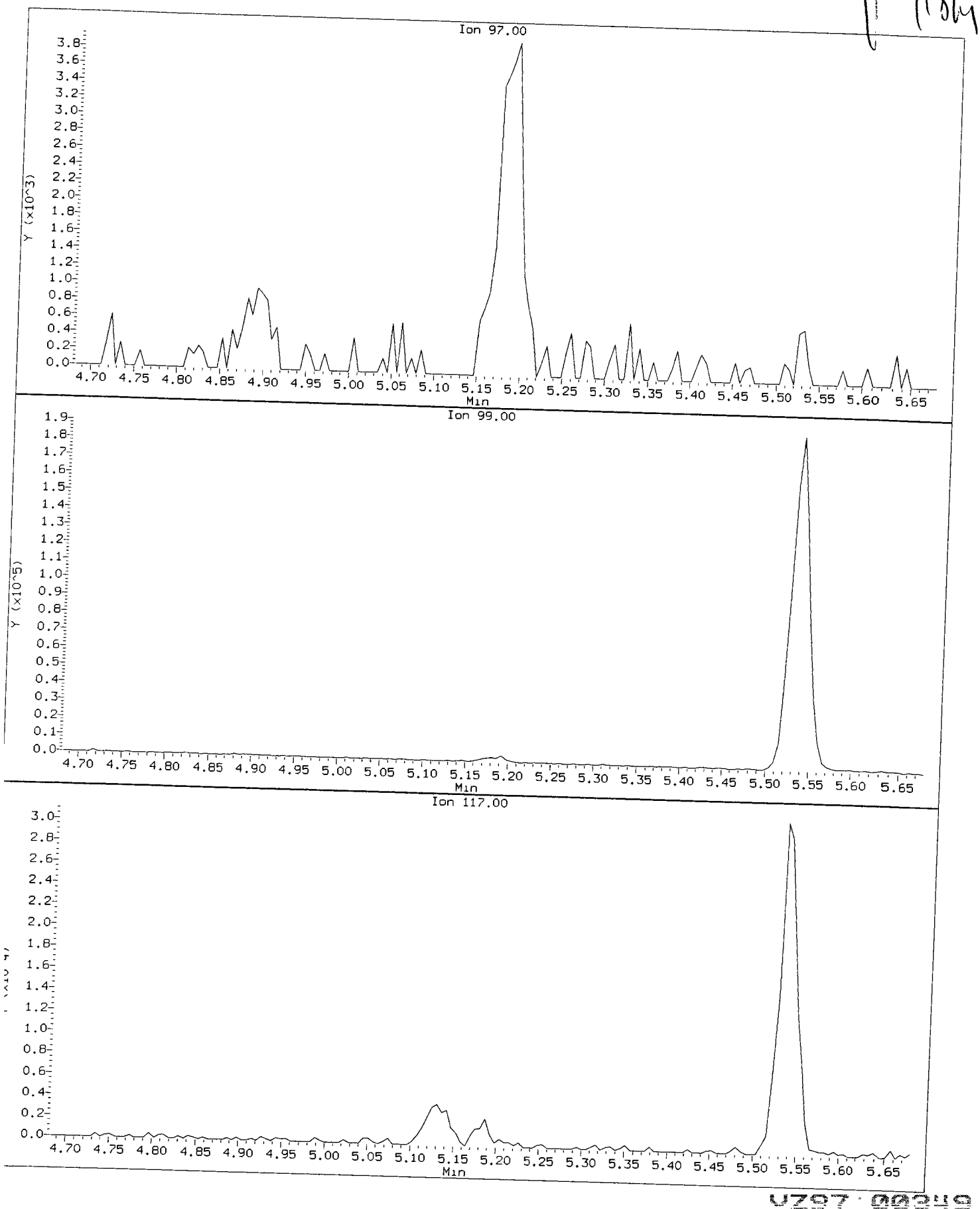






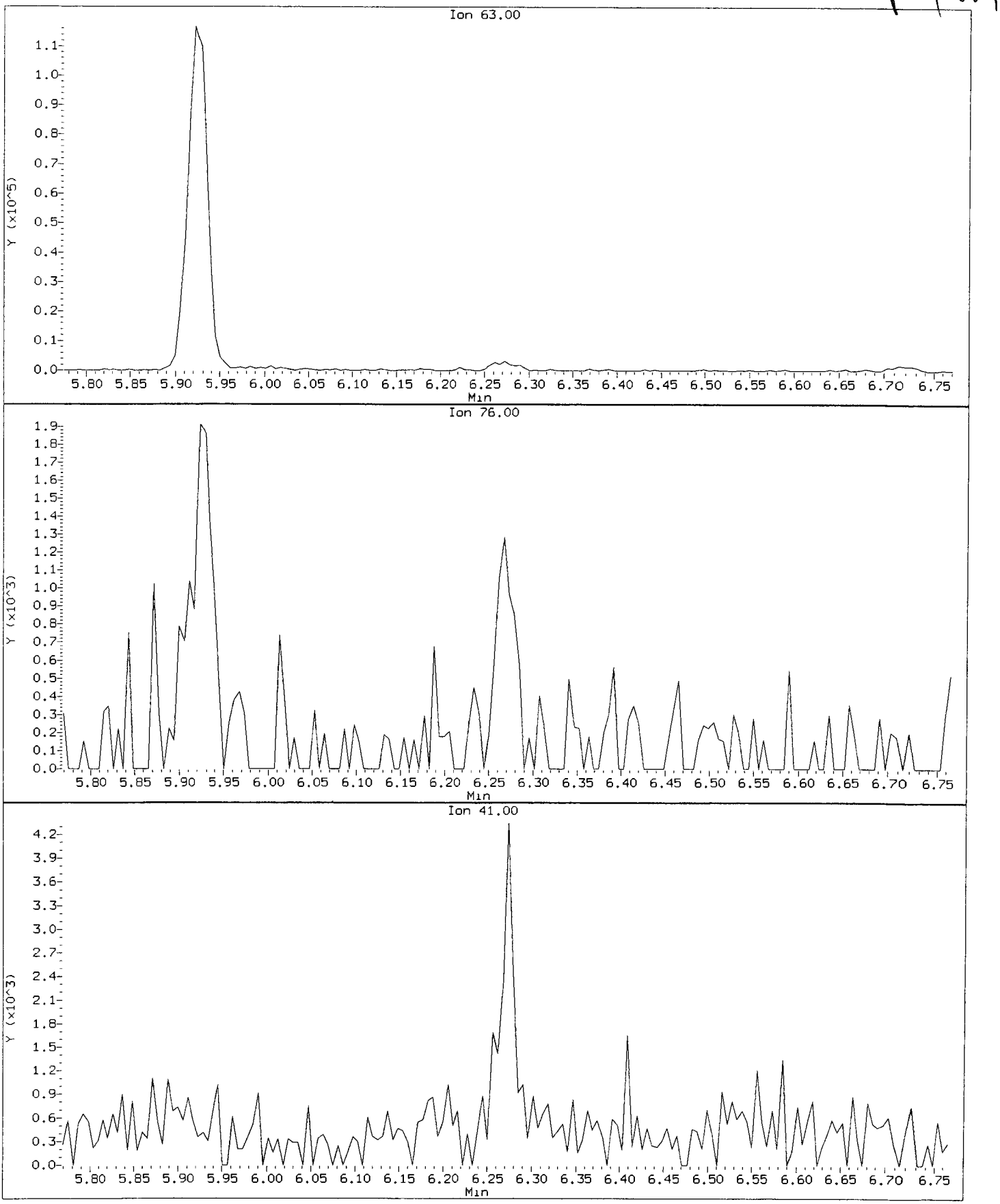
Data File: /chem3/nt3.1/01152013.b/0020115.d
Injection Date: 15-JAN-2013 15:36
Instrument: nt3.1
Client Sample ID: VSTD0.2

Compound: 1,1,1-Trichloroethane
CAS Number:



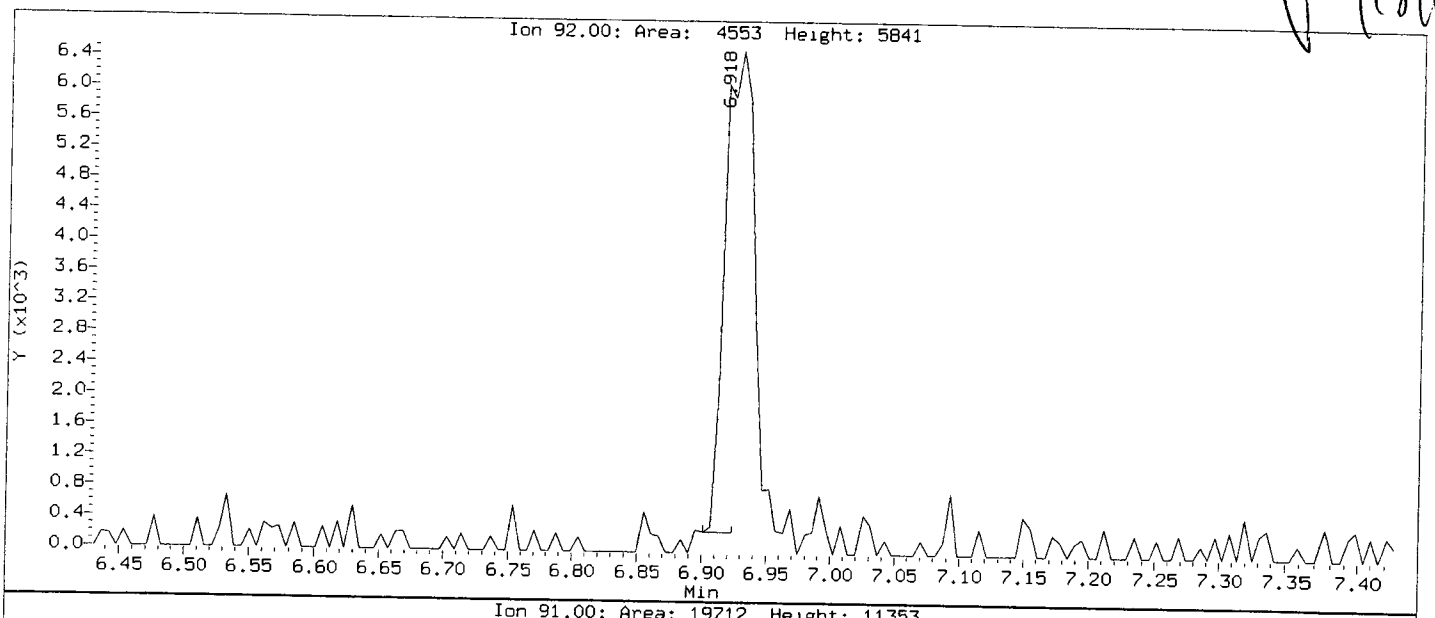
Data File: /chem3/nt3.i/01152013.b/0020115.d
Injection Date: 15-JAN-2013 15:36
Instrument: nt3.i
Client Sample ID: VSTD0.2

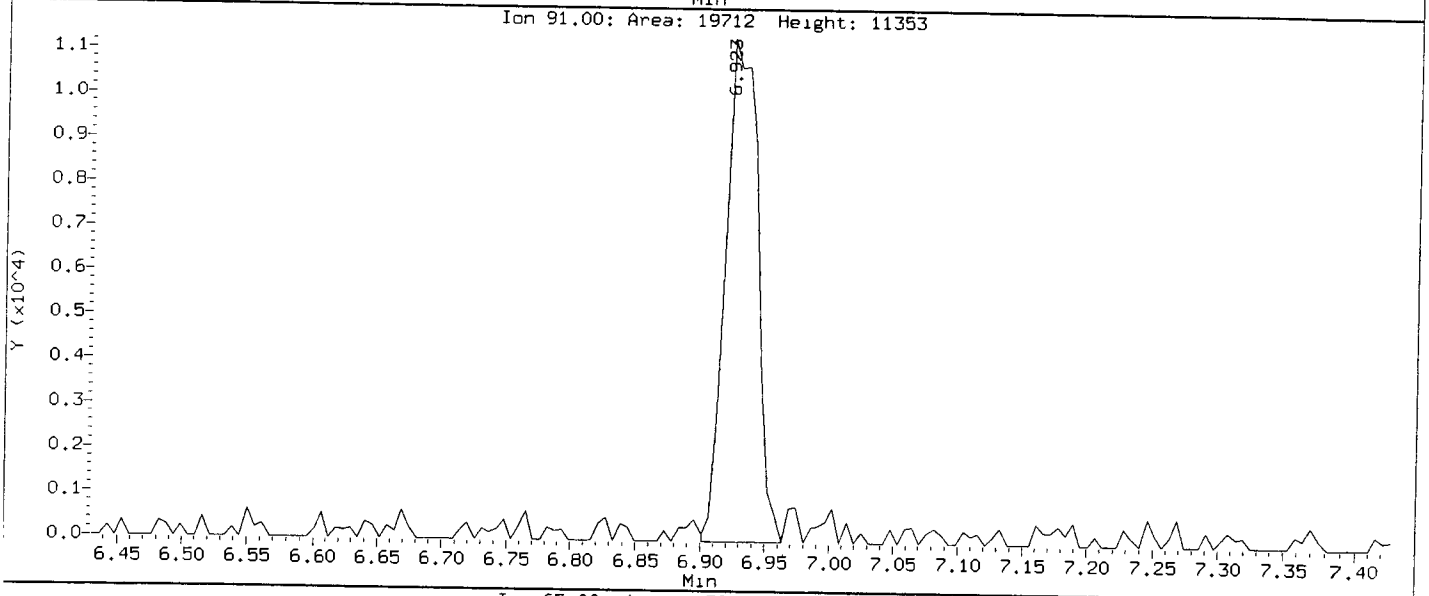
Compound: 1,2-Dichloropropane
CAS Number:

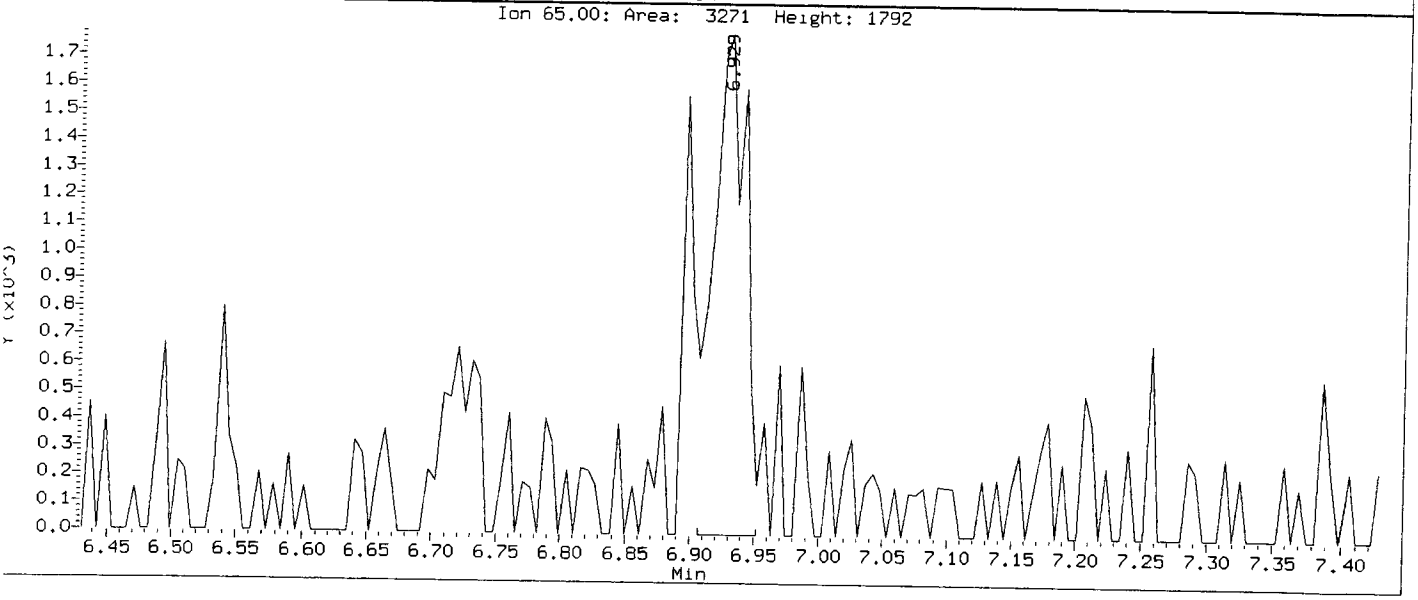


Data File: /chem3/nt3.i/01152013.b/0020115.d
Injection Date: 15-JAN-2013 15:36
Instrument: nt3.i
Client Sample ID: VSTD0.2

Compound: Toluene
CAS Number:

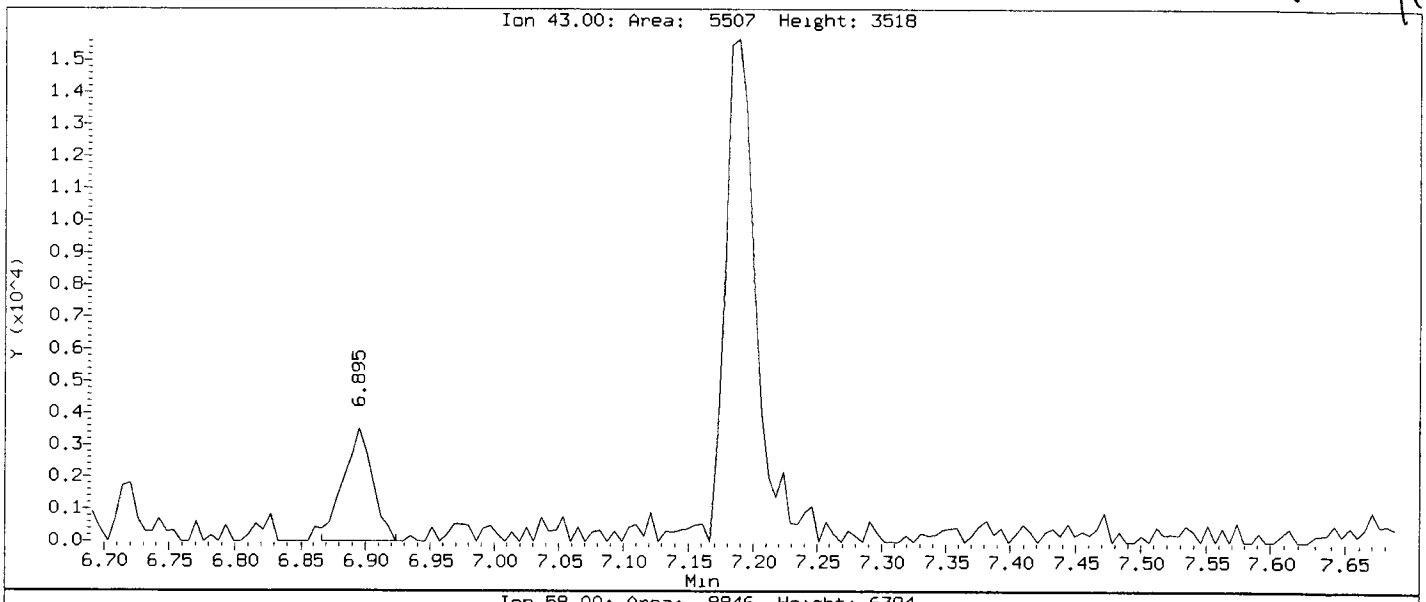


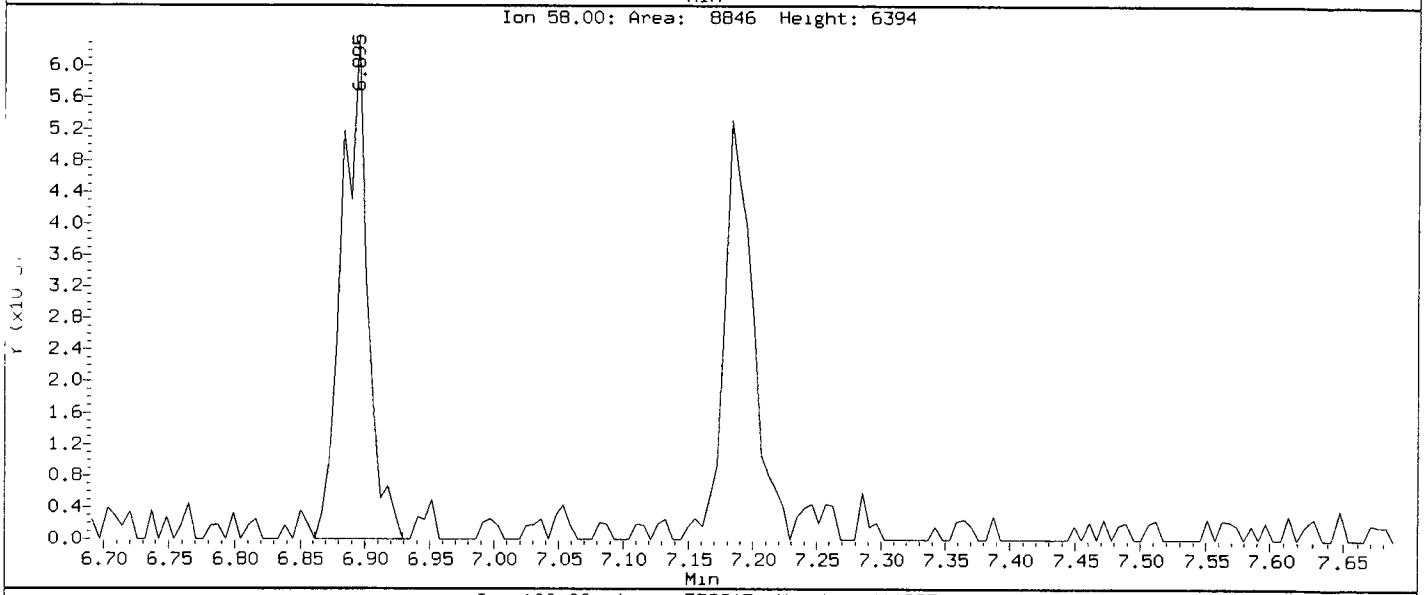


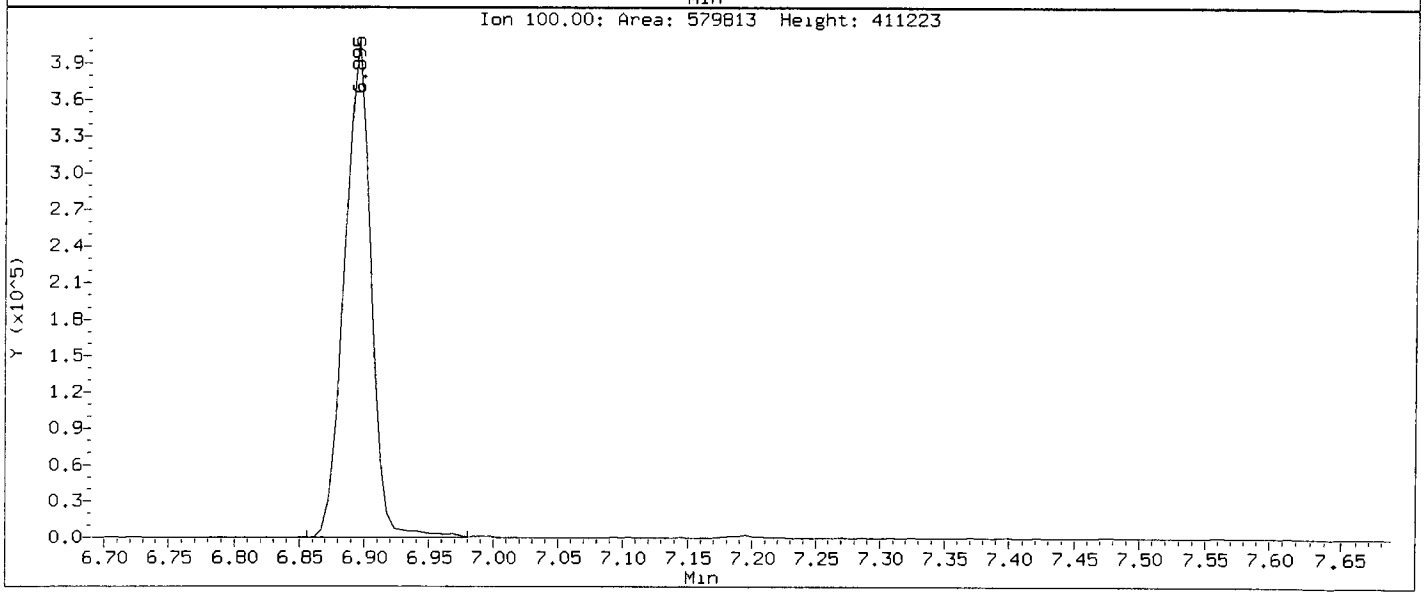


Data File: /chem3/nt3.1/01152013.b/0020115.d
Injection Date: 15-JAN-2013 15:36
Instrument: nt3.1
Client Sample ID: VSTD0.2

Compound: 4-Methyl-2-Pentanone
CAS Number:



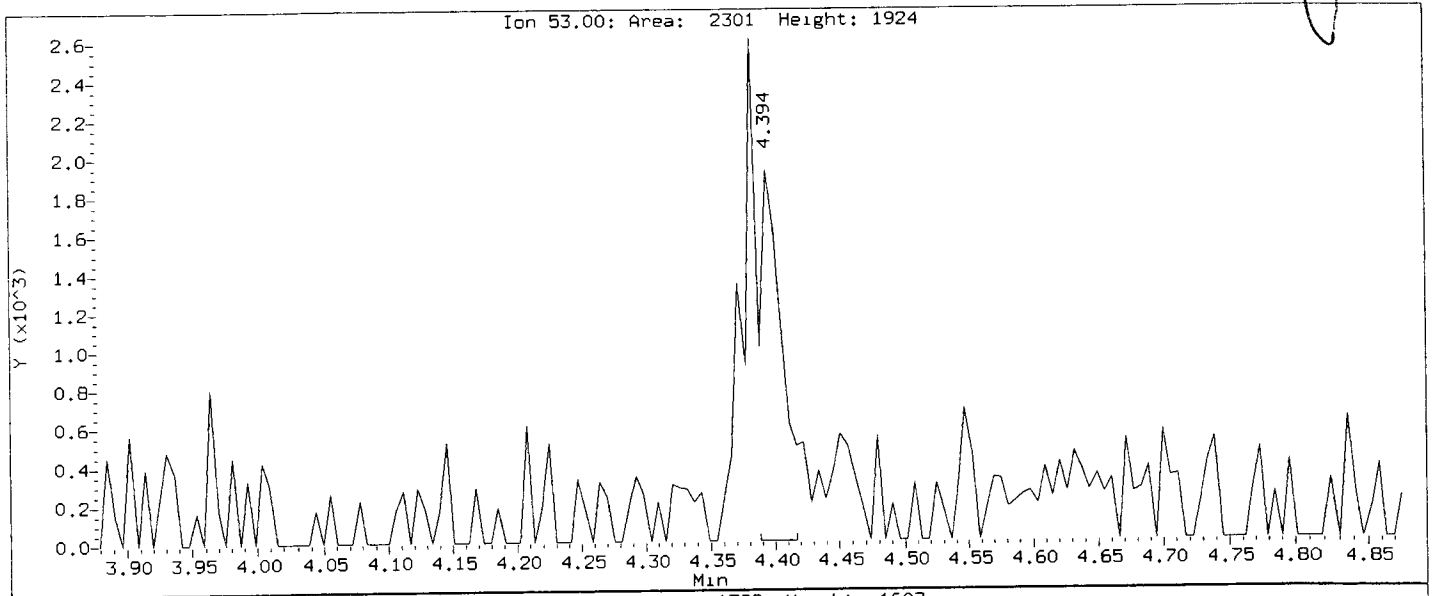


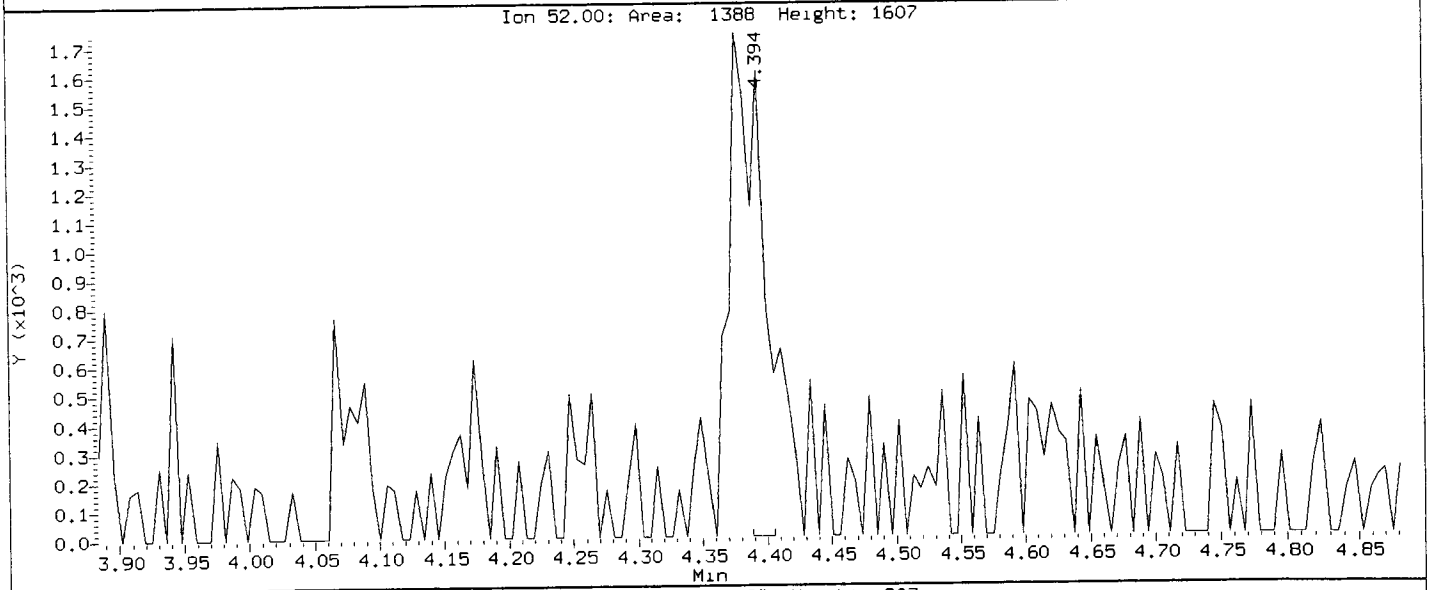


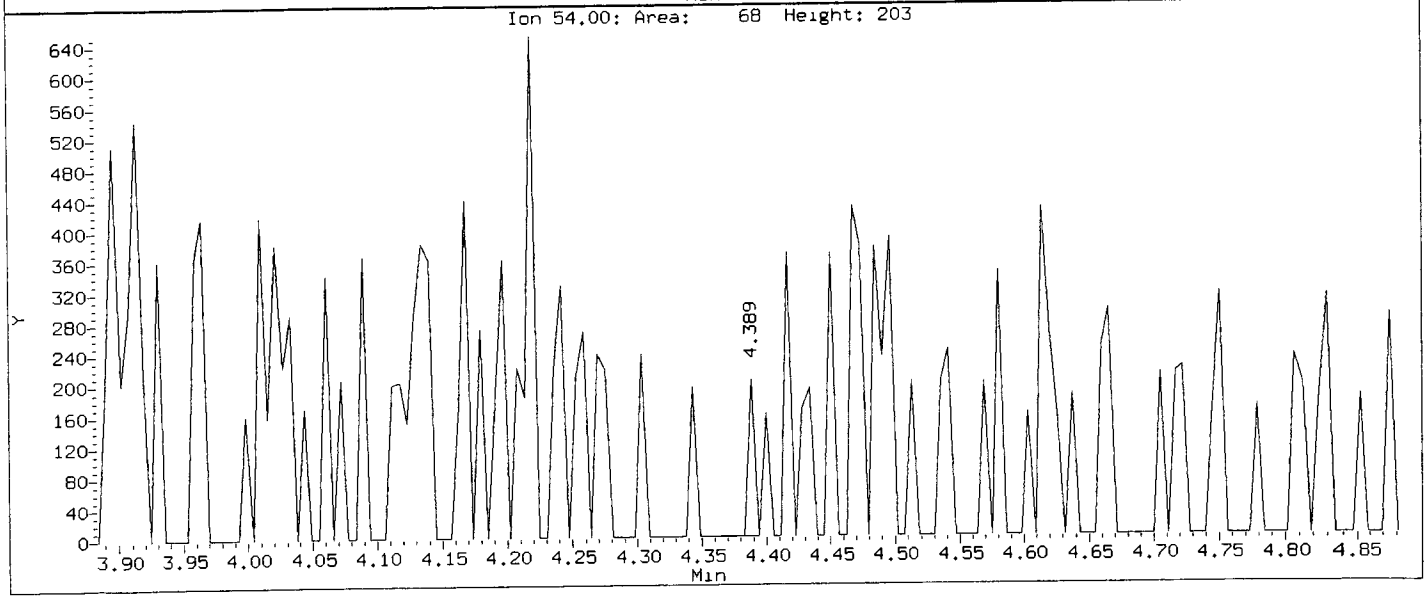
VZ07 00252

Data File: /chem3/nt3.1/01152013.b/0050115.d
Injection Date: 15-JAN-2013 18:43
Instrument: nt3.1
Client Sample ID: VSTD0.5

Compound: Acrylonitrile
CAS Number:

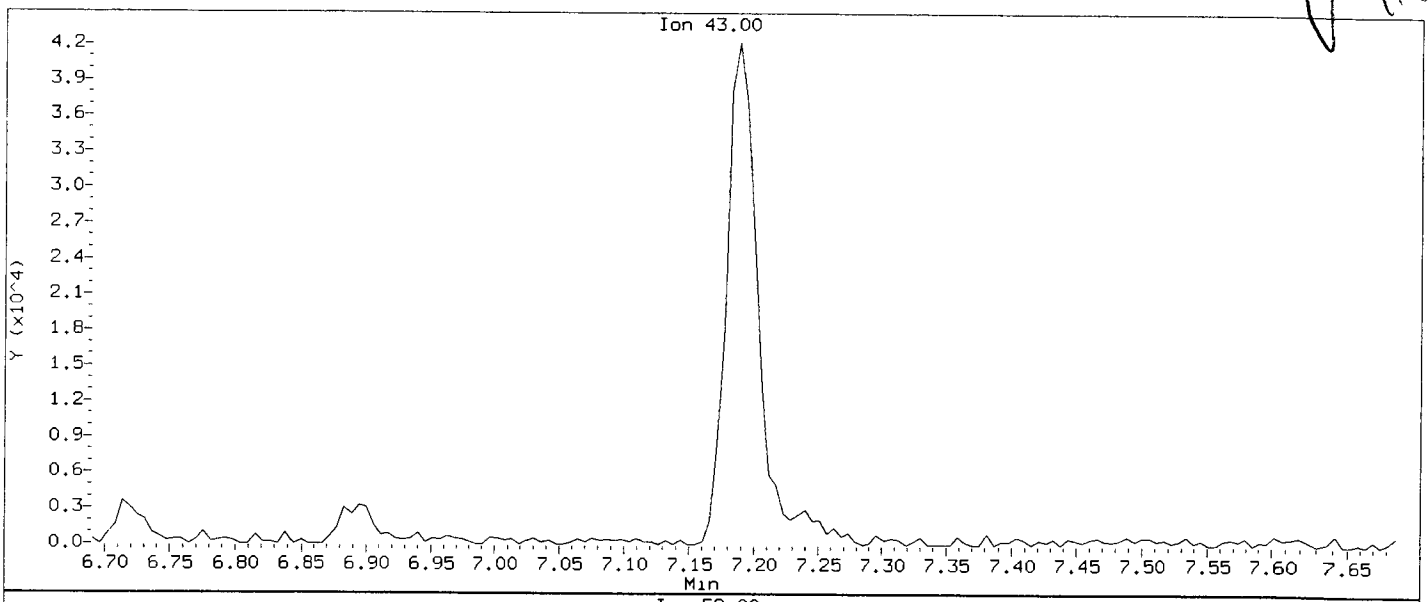


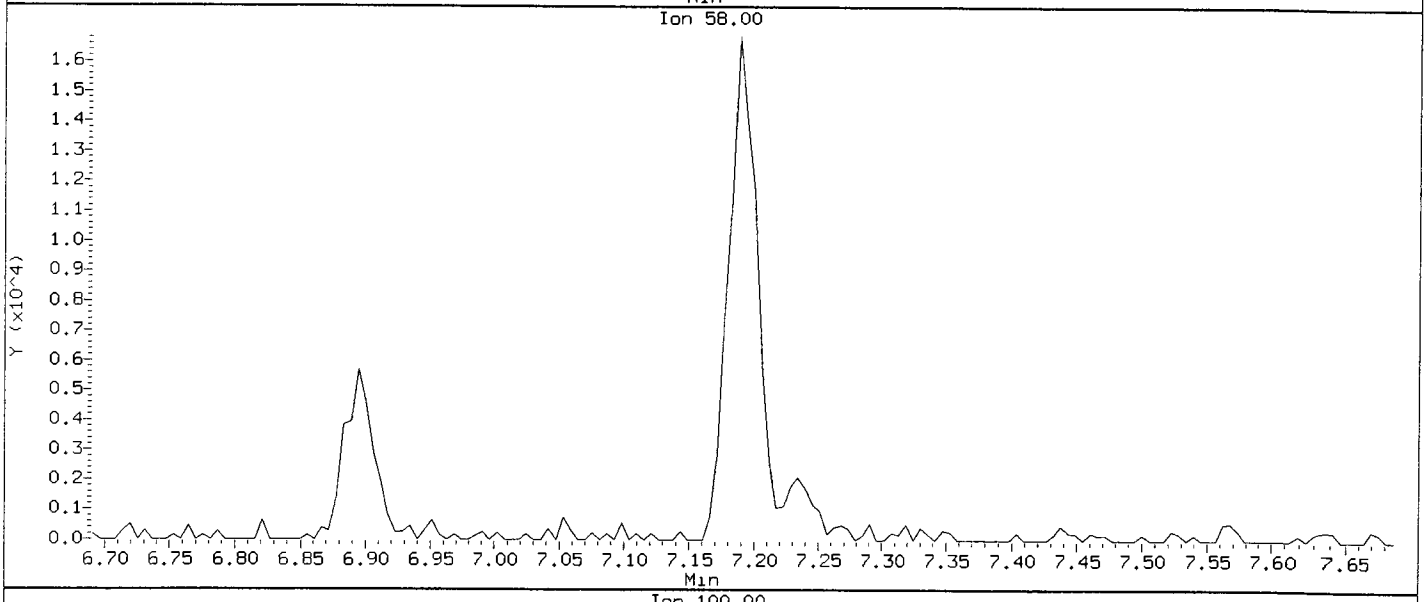


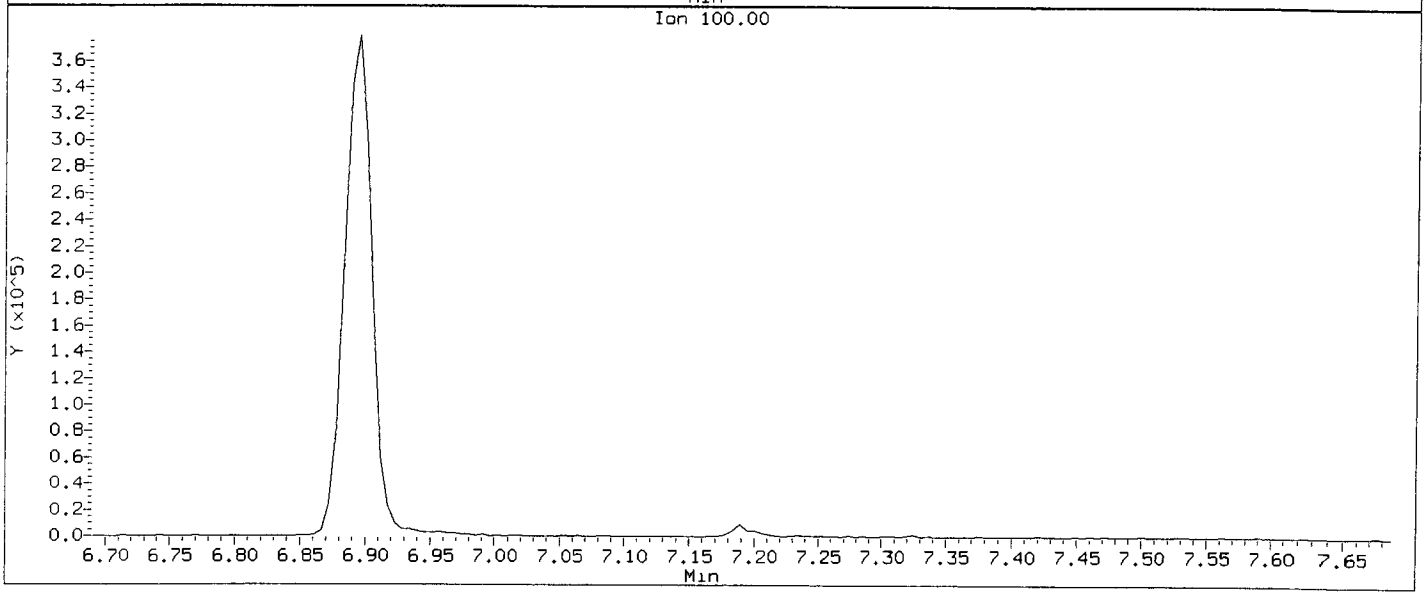


Data File: /chem3/nt3.1/01152013.b/0050115.d
Injection Date: 15-JAN-2013 18:43
Instrument: nt3.1
Client Sample ID: VSTD0.5

Compound: 4-Methyl-2-Pentanone
CAS Number:

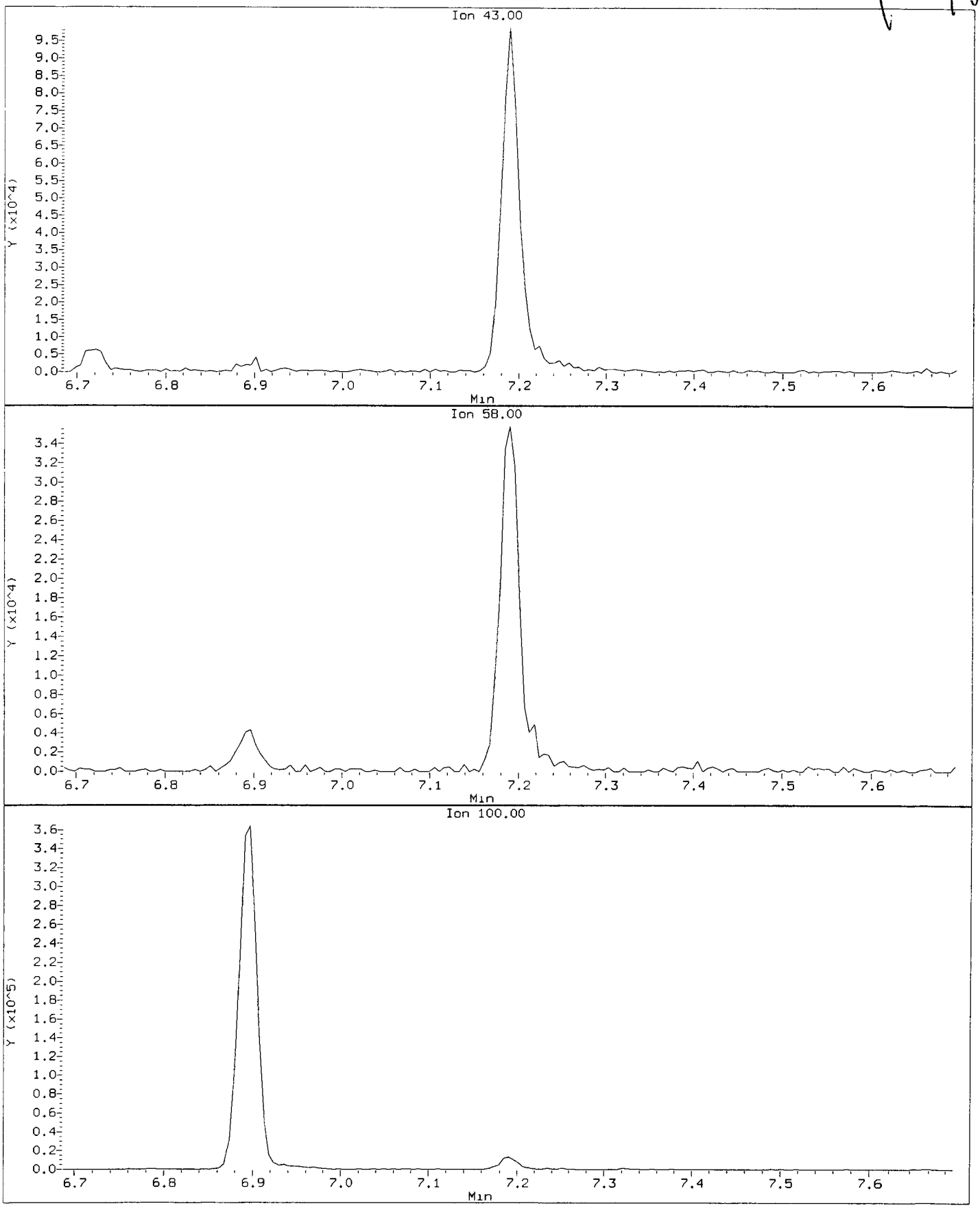






Data File: /chem3/nt3.i/01152013.b/0100115.d
Injection Date: 15-JAN-2013 18:16
Instrument: nt3.i
Client Sample ID: VSTD1

Compound: 4-Methyl-2-Pentanone
CAS Number:



Volatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: VZ97

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Analyst Notes / Corrective Action Log

ARI Project ID: VZ97 Client ID: Anchor QEA

ARI SOP: **404S**(Gas) **410S**(BTEX) **430S**(VPH) **700S**(8260C) **703S**(SIM) **706S**(524.2) **710S**(RSK-175)

Parameter(s): _____

Instrument: NT-2 NT-3 NT-5 NT-7 NT-9 PID-1 PID-2 PID-3 FID-6 FINN-5

Purge Volume (mL) 10 Curve Date: 1/15/17 Analysis Start Date: 1/18/17

pH ≤ 2.0	YES / NO / NA	Method Blank In Control?	YES / NO
BFB Tune Meets Criteria?	YES / NO / NA	LCS / LCSD Recovery In Control?	YES / NO
Internal Standard Meets Criteria?	YES / NO / NA	Surrogate Recovery In Control?	YES / NO
ICal acceptable?	YES / NO	CCal acceptable?	YES / NO
Q flag applied?	YES / NO / NA	Q flag applied?	YES / NO / NA
Manual Integrations for ICal?	YES / NO	Manual Integrations for Samples?	Yes / NO
Special Analysis Criteria Met?	YES / NO / NA		

Bubbles/Headspace: None SM (≤ 2mm •) PB (2-4mm) LG (> 4mm ●) Head Space

Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):

5 - pH 6-8

Additional Details on Reverse: Yes / No

Analyst: _____ **Date:** 1/20/17

Reviewer: _____ **Date:** 1/23

Analytical Resources Inc.: Organics Instrument Log

NT-3 Serial No.: US81221575

Date: 1/18/13 Analysis: 8260 Analyst: JP

GC Program: NA1 Column No: 941844 Column Type: RTX-VMS

Instrument Tune (.U or .CT.): bfb.u EM Voltage: 1741

Calibration File: bfb01186 Curve Date: 1/15/13 Injection Vol.: 10

IS/SS	Ical/Ccal	LCS/ICV
ws775-3	ws779-1	ws779-1

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem3/nt3.i/01182013.b

	Time	Filename	LabID	ClientID	Vial#	pH	DF							
1	0810	bfb0118.d	BFB0118	BFB0118			1							
2	0834	bfb0118a.d	BFB0118	BFB0118			1							
3	0905	cc0118.d	CC0118	VSTD10			1	5.54	447493	5.93	714641	7.98	687771	9.67	435859
4	0932	lcs0118.d	LCS0118	LCS0118			1	5.54	441580	5.92	720053	7.98	696451	9.67	429429
5	1005	lcs0118a.d	LCS0118	LCS0118			1	5.54	479032	5.92	782659	7.98	752039	9.67	442330
6	1032	mb0118.d	MB0118	MB0118			1	5.54	435873	5.92	709785	7.98	709144	9.67	395283
7	1123	vz83a.d	VZ83A	VOA Holding Blank R	1	<2	1	5.54	436813	5.93	701182	7.98	694896	9.67	390398
8	1150	vz97u.d	VZ97U	Trip Blanks	1	↓	1	5.54	426457	5.92	684055	7.98	674926	9.67	396388
9	1216	vz97s0.d	VZ97S	CSIA20130114-001DW	8	6-7	1	5.54	418903	5.92	666999	7.98	646765	9.67	373592
10	1243	vz31l0.d	VZ31L	GP6-120-W	2	<2	1	5.54	425573	5.93	674601	7.98	648824	9.66	374860
11	1310	vz31m0.d	VZ31M	GP601-120-W	2	<2	1	5.54	424193	5.92	675182	7.98	652290	9.67	365196
12	1337	vz40a.d	VZ40A	FF2-13-01-307	1		1	5.54	406057	5.93	647896	7.98	630537	9.66	365792
13	1403	vz40b.d	VZ40B	FF2-13-01-306	6		1	5.54	430655	5.93	694480	7.98	697849	9.66	378031
14	1430	vz40c.d	VZ40C	FF2-13-01-717	6		1	5.54	428496	5.93	684783	7.98	682965	9.67	376141
15	1457	vz40d.d	VZ40D	FF2-13-01-301	3		1	5.54	404944	5.92	656311	7.98	657191	9.67	366206
16	1524	vz41f.d	VZ41F	GWS-52-6	4	↓	1	5.54	414575	5.92	676092	7.98	666248	9.67	374788
17	1551	vz97s.d	VZ97S	CSIA20130114-001DW	9	6-7	1	5.53	395122	5.93	631595	7.98	598278	9.66	375473
18	1618	vz31n.d	VZ31N	Trip Blanks	2	<2	1	5.54	404426	5.93	669708	7.98	669920	9.67	416925
19	1645	wa01h.d	WA01H	GW-03-17297	1,3	6-8	1	5.54	478344	5.93	885369	7.98	746434	9.67	395038
20	1711	wa01i.d	WA01I	GW-03-17298	2,1	↓	1	5.54	418543	5.93	687404	7.98	692347	9.67	380701
21	1738	wa01j.d	WA01J	GW-03-17299	1	<2	1	5.54	498967	5.93	949180	7.98	779385	9.67	435418
22	1804	wa01k.d	WA01K	GW-03-17300	1	↓	1	5.54	393959	5.93	651563	7.98	641813	9.66	347918
23	1831	wa01l.d	WA01L	GW-23-17304	2	<2	1	5.54	393694	5.92	638944	7.98	626478	9.66	351966
24	1858	wa01m.d	WA01M	GW-03-17301	2		1	5.54	407904	5.93	715829	7.98	653762	9.67	352014
25	1925	wa01n.d	WA01N	GW-03-17302	3		1	5.54	428997	5.93	771711	7.98	683655	9.67	388681
26	1952	wa01o.d	WA01O	Trip Blanks	2	↓	1	5.54	382694	5.93	652495	7.98	638410	9.67	357137

Every I
Start a

UZ97 00258

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/nt3.i/01182013.b

ARI Job No.: BFB0 Method: bfb8260.m Instrument: nt3.i Date: 18-JAN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0834	bfb0118a.d	BFB0118	BFB0118	1	NO MANUAL INTEGRATION
0905	cc0118.d	CC0118	VSTD10	1	NO MANUAL INTEGRATION
0932	lcs0118.d	LCS0118	LCS0118	1	NO MANUAL INTEGRATION
1005	lcs0118a.d	LCS0118	LCS0118	1	NO MANUAL INTEGRATION
1032	mb0118.d	MB0118	MB0118	1	NO MANUAL INTEGRATION
1123	vz83a.d	VZ83A	VOA Holdin	1	NO MANUAL INTEGRATION
1150	vz97u.d	VZ97U	Trip Blank	1	NO MANUAL INTEGRATION
1551	vz97s.d	VZ97S	CSIA201301	1	NO MANUAL INTEGRATION

Q-FLAG SUMMARY FOR DATABATCH - /chem3/nt3.i/01182013.b

Instrument: nt3.i Date: 18-JAN-2013 Method: 8260C011513L.m

INITIAL CAL: 15-JAN-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 18-JAN-2013

Compound	%D
Acetone	24.8

Data File: /chem3/nt3.i/01182013.b/bfb0118a.d

Date : 18-JAN-2013 08:34

Client ID: BFB0118

Instrument: nt3.i

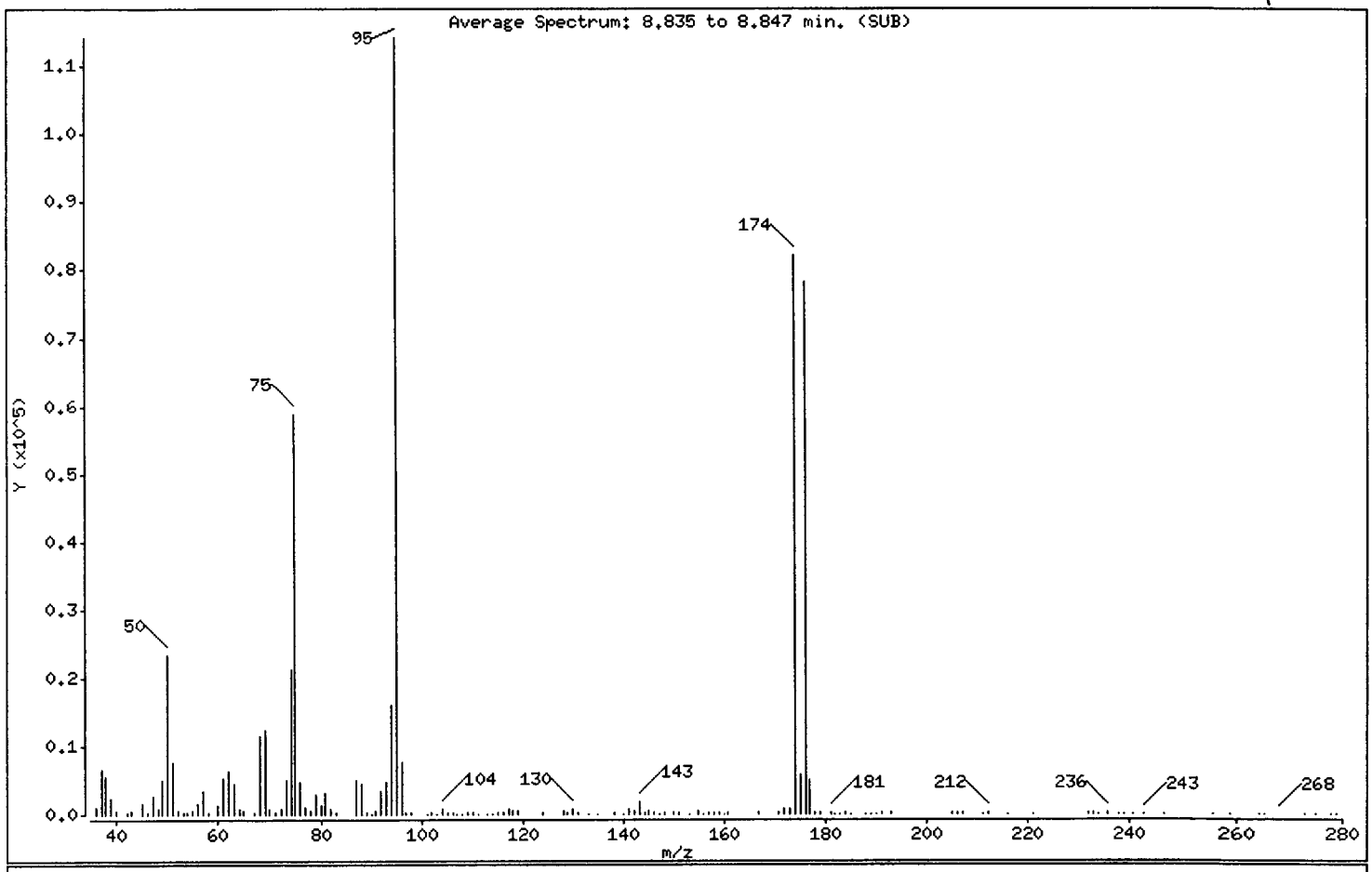
Sample Info: BFB0118,BFB0118,,1,18JAN13,

Operator: PB

Column phase: RTXVMS

Column diameter: 0.18

1 Bromofluorobenzene



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	20.54
75	30.00 - 60.00% of mass 95	51.40
96	5.00 - 9.00% of mass 95	6.56
173	Less than 2.00% of mass 174	0.77 (1.08)
174	50.00 - 100.00% of mass 95	71.86
175	5.00 - 9.00% of mass 174	5.06 (7.04)
176	95.00 - 101.00% of mass 174	68.44 (95.24)
177	5.00 - 9.00% of mass 176	4.44 (6.48)

Data File: /chem3/nt3.i/01182013.b/bfb0118a.d

Date : 18-JAN-2013 08:34

Client ID: BFB0118 Instrument: nt3.i

Sample Info: BFB0118,BFB0118,,1,18JAN13,

Operator: PB

Column phase: RTXVMS Column diameter: 0.18

Data File: bfb0118a.d
Spectrum: Average Spectrum: 8.835 to 8.847 min. (SUB)
Location of Maximum: 95.00
Number of points: 157

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1178	79.00	2988	133.00	64	190.00	61
37.00	6476	80.00	1295	135.00	72	191.00	138
38.00	5557	81.00	3045	138.00	199	193.00	151
39.00	2374	82.00	718	140.00	102	198.00	30
40.00	646	83.00	137	141.00	856	200.00	110
42.00	175	87.00	4866	142.00	476	205.00	161
43.00	506	88.00	4477	143.00	1709	206.00	152
45.00	1499	89.00	134	144.00	180	207.00	134
46.00	172	90.00	70	145.00	426	211.00	56
47.00	2655	91.00	490	146.00	242	212.00	186
48.00	873	92.00	3467	147.00	50	213.00	66
49.00	4972	93.00	4785	148.00	293	215.00	83
50.00	23464	94.00	16058	150.00	277	216.00	56
51.00	7501	95.00	114272	151.00	186	220.00	72
52.00	563	96.00	7494	153.00	127	221.00	58
53.00	159	97.00	220	155.00	423	225.00	63
54.00	334	98.00	134	156.00	116	232.00	164
55.00	588	101.00	88	157.00	243	233.00	160
56.00	1663	102.00	280	158.00	152	234.00	54
57.00	3318	103.00	122	159.00	287	236.00	187
58.00	172	104.00	700	160.00	50	238.00	58
60.00	1317	105.00	165	161.00	172	239.00	67
61.00	5134	106.00	221	164.00	61	241.00	57
62.00	6280	107.00	68	167.00	171	243.00	68
63.00	4503	108.00	115	171.00	271	247.00	54
64.00	685	109.00	241	172.00	875	256.00	51
65.00	627	110.00	152	173.00	885	259.00	55
66.00	68	111.00	112	174.00	82120	263.00	18
67.00	229	113.00	115	175.00	5779	264.00	71
68.00	11635	114.00	73	176.00	78208	265.00	58
69.00	12271	115.00	381	177.00	5071	267.00	75
70.00	729	116.00	215	178.00	158	268.00	127
71.00	275	117.00	694	179.00	145	269.00	72
72.00	883	118.00	650	181.00	179	273.00	96
73.00	4937	119.00	462	182.00	56	275.00	68

Data File: /chem3/nt3.i/01182013.b/bfb0118a.d

Date : 18-JAN-2013 08:34

Client ID: BFB0118

Instrument: nt3.i

Sample Info: BFB0118,BFB0118,,1,18JAN13,

Operator: PB

Column phase: RTXVMS

Column diameter: 0.18

Data File: bfb0118a.d

Spectrum: Average Spectrum: 8.835 to 8.847 min. (SUB)

Location of Maximum: 95.00

Number of points: 157

m/z	Y	m/z	Y	m/z	Y	m/z	Y
74.00	21328	124.00	172	183.00	102	278.00	53
75.00	58736	128.00	621	184.00	168	279.00	62
76.00	4713	129.00	216	185.00	103		
77.00	1122	130.00	776	188.00	53		
78.00	623	131.00	364	189.00	85		

Data File: /chem3/nt3.i/01182013.b/bfb0118a.d

Date : 18-JAN-2013 08:34

Client ID: BFB0118

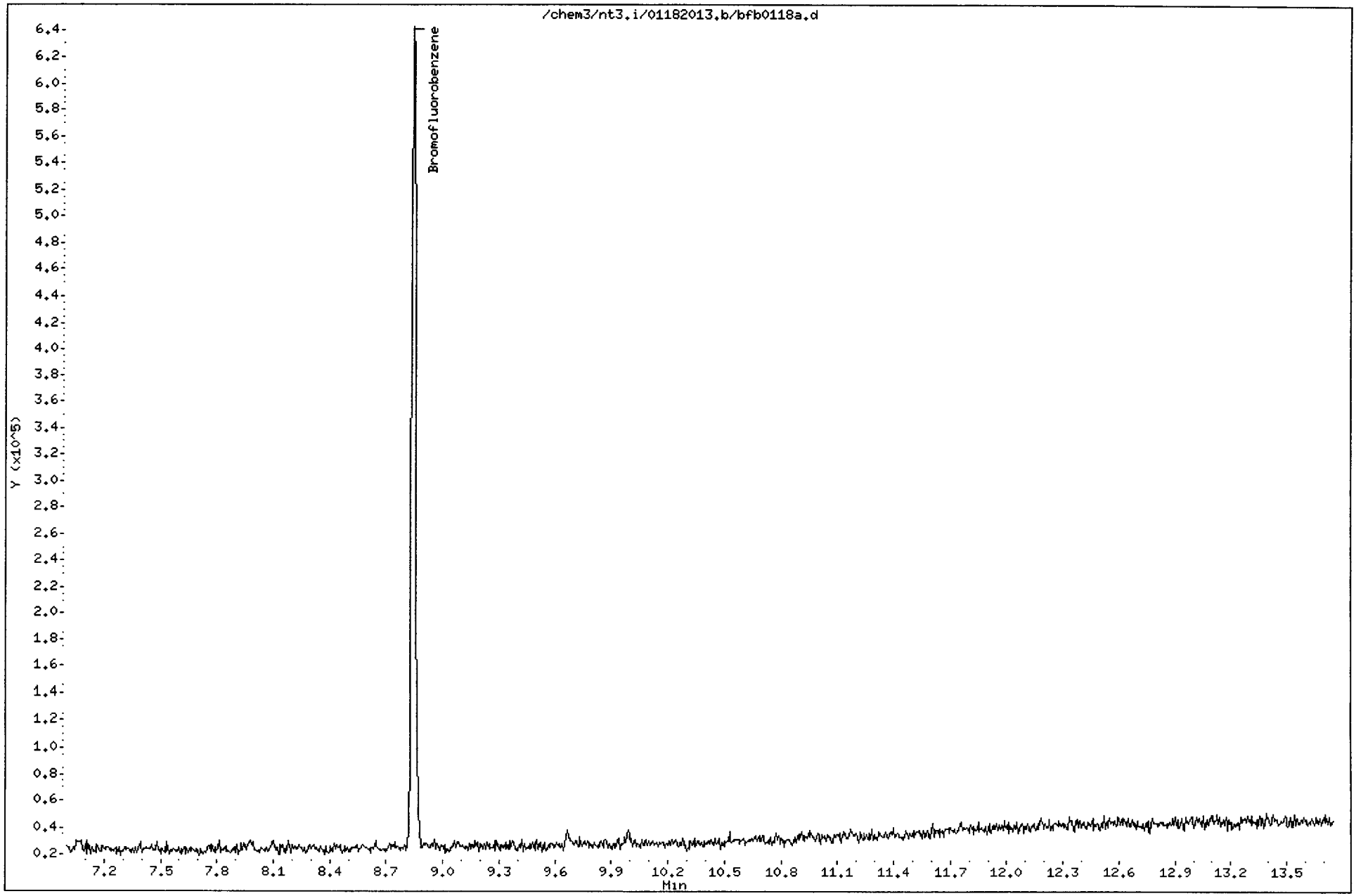
Instrument: nt3.i

Sample Info: BFB0118,BFB0118,,1,18JAN13,

Operator: PB

Column phase: RTXVMS

Column diameter: 0.18



Analytical Resources, Inc.

SW8260C 10 mL Purge

Data file : /chem3/nt3.i/01182013.b/cc0118.d
Lab Smp Id: CC0118 Client Smp ID: VSTD10
Inj Date : 18-JAN-2013 09:05
Operator : PB Inst ID: nt3.i
Smp Info : CC0118,10,10,0,
Misc Info : 12-
Comment :
Method : /chem3/nt3.i/01182013.b/8260C011513L.m
Meth Date : 18-Jan-2013 09:20 patrickb Quant Type: ISTD
Cal Date : 15-JAN-2013 16:03 Cal File: 8000115.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
1 Dichlorodifluoromethane	85	1.634	1.634	(0.295)	314514	10.0000	11.350
2 Chloromethane	50	1.782	1.782	(0.322)	366421	10.0000	11.129
3 Vinyl Chloride	62	1.861	1.861	(0.336)	424676	10.0000	11.428
4 Bromomethane	94	2.155	2.155	(0.389)	215473	10.0000	10.311
5 Chloroethane	64	2.279	2.279	(0.412)	264732	10.0000	10.756
6 Trichlorofluoromethane	101	2.426	2.426	(0.438)	449478	10.0000	10.772
7 1,1-Dichloroethene	96	2.958	2.958	(0.534)	260016	10.0000	10.624
8 Carbon Disulfide	76	2.964	2.964	(0.535)	1004561	10.0000	10.917
9 112Trichloro122Trifluoroethane	101	3.037	3.037	(0.548)	306709	10.0000	11.662
10 Iodomethane	142	3.105	3.105	(0.561)	407789	10.0000	10.551
11 Bromoethane	108	3.247	3.247	(0.586)	209202	10.0000	10.813
12 Acrolein	56	3.337	3.337	(0.603)	243134	50.0000	54.991
13 Methylene Chloride	84	3.597	3.597	(0.650)	294243	10.0000	10.233
14 Acetone	43	3.654	3.654	(0.660)	296291	50.0000	62.381
15 Trans-1,2-Dichloroethene	96	3.767	3.767	(0.680)	279635	10.0000	10.287

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	ON-COL (ug/L)
	16 Methyl tert butyl ether	73	3.891	3.891	(0.703)	831181	10.0000	10.924
	17 1,1-Dichloroethane	63	4.338	4.338	(0.783)	531018	10.0000	10.761
	18 Acrylonitrile	53	4.384	4.384	(0.792)	93362	10.0000	10.881
	19 Vinyl Acetate	43	4.582	4.582	(0.827)	298540	10.0000	10.025
	20 Cis-1,2-Dichloroethene	96	4.802	4.802	(0.867)	285477	10.0000	10.255
	22 2,2-Dichloropropane	77	4.893	4.893	(0.884)	353417	10.0000	10.313
	23 Bromochloromethane	128	4.961	4.961	(0.896)	133237	10.0000	10.941
	24 Chloroform	83	5.029	5.029	(0.908)	475937	10.0000	11.143
	25 Carbon Tetrachloride	117	5.130	5.130	(0.865)	347403	10.0000	10.509
$	26 Dibromofluoromethane	111	5.170	5.170	(0.934)	252446	10.0000	10.448
	27 1,1,1-Trichloroethane	97	5.187	5.187	(0.937)	412588	10.0000	11.001
	28 2-Butanone	43	5.266	5.266	(0.951)	619988	50.0000	56.332
	29 1,1-Dichloropropene	75	5.277	5.277	(0.890)	380199	10.0000	10.871
	30 Benzene	78	5.470	5.470	(0.923)	1081924	10.0000	11.106
*	31 Pentafluorobenzene	168	5.538	5.538	(1.000)	447493	10.0000	
$	32 d4-1,2-Dichloroethane	65	5.566	5.566	(1.005)	310008	10.0000	10.368
	33 1,2-Dichloroethane	62	5.617	5.617	(0.948)	347863	10.0000	11.030
	34 Trichloroethene	130	5.900	5.900	(0.995)	254701	10.0000	10.589
*	36 1,4-Difluorobenzene	114	5.928	5.928	(1.000)	714641	10.0000	
	37 Dibromomethane	93	6.199	6.199	(1.046)	152900	10.0000	10.449
	38 1,2-Dichloropropane	63	6.273	6.273	(1.058)	255807	10.0000	10.298
	39 Bromodichloromethane	83	6.318	6.318	(1.066)	326555	10.0000	10.750
	41 2-Chloroethyl Vinyl Ether	63	6.720	6.720	(1.134)	116675	10.0000	9.288
	42 Cis 1,3-dichloropropene	75	6.759	6.759	(1.140)	360842	10.0000	10.391
$	43 d8-Toluene	98	6.895	6.895	(1.163)	854829	10.0000	10.280
	44 Toluene	92	6.929	6.929	(1.169)	569034	10.0000	10.899
	45 Tetrachloroethene	166	7.201	7.201	(0.903)	220540	10.0000	9.985
	46 4-Methyl-2-Pentanone	43	7.189	7.189	(1.213)	1399541	50.0000	55.286
	47 Trans 1,3-Dichloropropene	75	7.212	7.212	(1.217)	353921	10.0000	10.524
	48 1,1,2-Trichloroethane	97	7.325	7.325	(1.236)	187391	10.0000	10.520
	49 Chlorodibromomethane	129	7.455	7.455	(0.935)	215171	10.0000	10.011
	50 1,3-Dichloropropane	76	7.517	7.517	(0.943)	346283	10.0000	10.071
	51 1,2-Dibromoethane	107	7.619	7.619	(1.285)	197906	10.0000	10.474
	52 2-Hexanone	43	7.766	7.766	(0.974)	1025180	50.0000	50.443
*	53 d5-Chlorobenzene	117	7.976	7.976	(1.000)	687771	10.0000	
	54 Chlorobenzene	112	7.987	7.987	(1.001)	647937	10.0000	10.590
	55 Ethyl Benzene	91	8.004	8.004	(1.004)	1132009	10.0000	10.737
	56 1,1,1,2-Tetrachloroethane	131	8.032	8.032	(1.007)	244857	10.0000	10.686
	57 m,p-xylene	106	8.106	8.106	(1.016)	861983	20.0000	22.199
	58 o-Xylene	106	8.411	8.411	(1.055)	431750	10.0000	10.568
	59 Styrene	104	8.451	8.451	(1.060)	702588	10.0000	10.953
	60 Bromoform	173	8.473	8.473	(0.877)	165440	10.0000	10.170
	61 Isopropyl Benzene	105	8.638	8.638	(0.894)	1161243	10.0000	10.878
$	62 4-Bromofluorobenzene	95	8.841	8.841	(1.109)	365720	10.0000	10.061
	63 Bromobenzene	156	8.926	8.926	(0.923)	286286	10.0000	9.890
	64 N-Propyl Benzene	91	8.937	8.937	(0.924)	1390082	10.0000	10.911
	65 1,1,2,2-Tetrachloroethane	83	8.983	8.983	(0.929)	324380	10.0000	9.512

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/L)	AMOUNTS ON-COL (ug/L)
66	2-Chloro Toluene	91	9.056	9.056	(0.937)	974226	10.0000	10.532
67	1,3,5-Trimethyl Benzene	105	9.079	9.079	(0.939)	1020483	10.0000	11.124
68	1,2,3-Trichloropropane	110	9.084	9.084	(0.940)	94446	10.0000	9.724
70	Trans-1,4-Dichloro 2-Butene	53	9.113	9.113	(0.943)	121406	10.0000	9.351
71	4-Chloro Toluene	91	9.175	9.175	(0.949)	897796	10.0000	10.324
72	T-Butyl Benzene	119	9.316	9.316	(0.964)	866011	10.0000	10.609
73	1,2,4-Trimethylbenzene	105	9.367	9.367	(0.969)	1016928	10.0000	11.012
74	S-Butyl Benzene	105	9.446	9.446	(0.977)	1366114	10.0000	11.318
75	4-Isopropyl Toluene	119	9.548	9.548	(0.988)	1069610	10.0000	11.034
76	1,3-Dichlorobenzene	146	9.610	9.610	(0.994)	581242	10.0000	10.191
* 77	d4-1,4-Dichlorobenzene	152	9.667	9.667	(1.000)	435859	10.0000	
78	1,4-Dichlorobenzene	146	9.678	9.678	(1.001)	621415	10.0000	10.301
79	N-Butyl Benzene	91	9.865	9.865	(1.020)	1041193	10.0000	10.781
$ 80	d4-1,2-Dichlorobenzene	152	9.990	9.990	(1.033)	401154	10.0000	10.245
81	1,2-Dichlorobenzene	146	9.995	9.995	(1.034)	573366	10.0000	10.297
82	1,2-Dibromo 3-Chloropropane	75	10.606	10.606	(1.097)	67410	10.0000	9.035
83	Hexachloro 1,3-Butadiene	225	11.115	11.115	(1.150)	150864	10.0000	9.334
84	1,2,4-Trichlorobenzene	180	11.138	11.138	(1.152)	333647	10.0000	9.790
85	Naphthalene	128	11.392	11.392	(1.178)	842251	10.0000	9.889
86	1,2,3-Trichlorobenzene	180	11.539	11.539	(1.194)	303611	10.0000	9.830

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt3.i
Lab File ID: cc0118.d
Lab Smp Id: CC0118
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem3/nt3.i/01182013.b/8260C011513L.m
Misc Info: 12-

Calibration Date: 18-JAN-2013
Calibration Time: 09:05
Client Smp ID: VSTD10
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	513917	256958	1027834	447493	-12.93
36 1,4-Difluorobenze	821183	410592	1642366	714641	-12.97
53 d5-Chlorobenzene	740077	370038	1480154	687771	-7.07
77 d4-1,4-Dichlorobe	454429	227214	908858	435859	-4.09

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	5.54	5.04	6.04	5.54	0.01
36 1,4-Difluorobenze	5.92	5.42	6.42	5.93	0.10
53 d5-Chlorobenzene	7.98	7.48	8.48	7.98	0.00
77 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

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.

Data File: /chem3/nt3.i/01182013.b/cc0118.d
Report Date: 18-Jan-2013 09:20

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt3.i
Lab File ID: cc0118.d
Analysis Type: WATER
Lab Sample ID: CC0118
Method: /chem3/nt3.i/01182013.b/8260C011513L.m

Injection Date: 18-JAN-2013 09:05
Init. Cal. Date(s): 15-JAN-2013 15-JAN-2013
Init. Cal. Times: 15:36 18:43
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
1 Dichlorodifluoromethane	0.61923	0.70284	0.010	13.50166	20.00000	Averaged	
2 Chloromethane	0.73575	0.81883	0.100	11.29208	20.00000	Averaged	
3 Vinyl Chloride	0.83042	0.94901	0.010	14.28069	20.00000	Averaged	
4 Bromomethane	0.46699	0.48151	0.010	3.11002	20.00000	Averaged	
5 Chloroethane	0.55002	0.59159	0.010	7.55753	20.00000	Averaged	
6 Trichlorofluoromethane	0.93249	1.00444	0.010	7.71530	20.00000	Averaged	
7 1,1-Dichloroethene	0.54692	0.58105	0.010	6.24120	20.00000	Averaged	
8 Carbon Disulfide	2.05632	2.24486	0.010	9.16909	20.00000	Averaged	
9 112Trichloro122Trifluoroeth	0.58774	0.68540	0.010	16.61607	20.00000	Averaged	
10 Iodomethane	0.86368	0.91127	0.010	5.51024	20.00000	Averaged	
11 Bromoethane	0.43236	0.46750	0.010	8.12670	20.00000	Averaged	
12 Acrolein	0.09880	0.10866	0.010	9.98271	20.00000	Averaged	
13 Methylene Chloride	0.64258	0.65754	0.010	2.32796	20.00000	Averaged	
14 Acetone	0.10614	0.13242	0.010	24.76177	20.00000	Averaged	<-
15 Trans-1,2-Dichloroethene	0.60748	0.62489	0.010	2.86708	20.00000	Averaged	
16 Methyl tert butyl ether	1.70025	1.85742	0.010	9.24392	20.00000	Averaged	
17 1,1-Dichloroethane	1.10269	1.18665	0.100	7.61449	20.00000	Averaged	
18 Acrylonitrile	0.19175	0.20864	0.010	8.80807	20.00000	Averaged	
19 Vinyl Acetate	0.66549	0.66714	0.010	0.24773	20.00000	Averaged	
20 Cis-1,2-Dichloroethene	0.62208	0.63795	0.010	2.55035	20.00000	Averaged	
22 2,2-Dichloropropane	0.76577	0.78977	0.010	3.13483	20.00000	Averaged	
23 Bromochloromethane	0.27214	0.29774	0.010	9.40698	20.00000	Averaged	
24 Chloroform	0.95444	1.06356	0.010	11.43362	20.00000	Averaged	
25 Carbon Tetrachloride	0.46256	0.48612	0.010	5.09366	20.00000	Averaged	
$ 26 Dibromofluoromethane	0.53992	0.56414	0.010	4.48410	20.00000	Averaged	
27 1,1,1-Trichloroethane	0.83808	0.92200	0.010	10.01308	20.00000	Averaged	
28 2-Butanone	0.24595	0.27709	0.010	12.66358	20.00000	Averaged	
29 1,1-Dichloropropene	0.48938	0.53201	0.010	8.71281	20.00000	Averaged	
30 Benzene	1.36312	1.51394	0.010	11.06417	20.00000	Averaged	
$ 32 d4-1,2-Dichloroethane	0.66816	0.69277	0.010	3.68243	20.00000	Averaged	
33 1,2-Dichloroethane	0.44132	0.48677	0.010	10.29669	20.00000	Averaged	
34 Trichloroethene	0.33658	0.35640	0.010	5.88961	20.00000	Averaged	
37 Dibromomethane	0.20476	0.21395	0.010	4.48902	20.00000	Averaged	
38 1,2-Dichloropropane	0.34759	0.35795	0.010	2.98201	20.00000	Averaged	
39 Bromodichloromethane	0.42508	0.45695	0.010	7.49719	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt3.i
Lab File ID: cc0118.d
Analysis Type: WATER
Lab Sample ID: CC0118
Method: /chem3/nt3.i/01182013.b/8260C011513L.m

Injection Date: 18-JAN-2013 09:05
Init. Cal. Date(s): 15-JAN-2013 15-JAN-2013
Init. Cal. Times: 15:36 18:43
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
41 2-Chloroethyl Vinyl Ether	0.17578	0.16326	0.010	-7.12146	20.00000	Averaged
42 Cis 1,3-dichloropropene	0.48594	0.50493	0.010	3.90709	20.00000	Averaged
$ 43 d8-Toluene	1.16358	1.19617	0.010	2.80017	20.00000	Averaged
44 Toluene	0.73060	0.79625	0.010	8.98604	20.00000	Averaged
45 Tetrachloroethene	0.32114	0.32066	0.010	-0.14938	20.00000	Averaged
46 4-Methyl-2-Pentanone	0.35423	0.39168	0.010	10.57244	20.00000	Averaged
47 Trans 1,3-Dichloropropene	0.47059	0.49524	0.010	5.23811	20.00000	Averaged
48 1,1,2-Trichloroethane	0.24926	0.26222	0.010	5.19863	20.00000	Averaged
49 Chlorodibromomethane	0.31251	0.31285	0.010	0.10971	20.00000	Averaged
50 1,3-Dichloropropane	0.49991	0.50349	0.010	0.71488	20.00000	Averaged
51 1,2-Dibromoethane	0.26440	0.27693	0.010	4.73771	20.00000	Averaged
52 2-Hexanone	0.29550	0.29812	0.010	0.88572	20.00000	Averaged
54 Chlorobenzene	0.88963	0.94208	0.300	5.89578	20.00000	Averaged
55 Ethyl Benzene	1.53297	1.64591	0.010	7.36757	20.00000	Averaged
56 1,1,1,2-Tetrachloroethane	0.33317	0.35602	0.010	6.85878	20.00000	Averaged
57 m,p-xylene	0.56458	0.62665	0.010	10.99491	20.00000	Averaged
58 o-Xylene	0.59399	0.62775	0.010	5.68351	20.00000	Averaged
59 Styrene	0.93267	1.02154	0.010	9.52907	20.00000	Averaged
60 Bromoform	0.37322	0.37957	0.100	1.70079	20.00000	Averaged
61 Isopropyl Benzene	2.44922	2.66426	0.010	8.78006	20.00000	Averaged
$ 62 4-Bromofluorobenzene	0.52854	0.53175	0.010	0.60750	20.00000	Averaged
63 Bromobenzene	0.66416	0.65683	0.010	-1.10410	20.00000	Averaged
64 N-Propyl Benzene	2.92300	3.18929	0.010	9.11016	20.00000	Averaged
65 1,1,2,2-Tetrachloroethane	0.78243	0.74423	0.010	-4.88216	20.00000	Averaged
66 2-Chloro Toluene	2.12222	2.23518	0.010	5.32288	20.00000	Averaged
67 1,3,5-Trimethyl Benzene	2.10481	2.34131	0.010	11.23649	20.00000	Averaged
68 1,2,3-Trichloropropane	0.22285	0.21669	0.010	-2.76258	20.00000	Averaged
70 Trans-1,4-Dichloro 2-Butene	0.29789	0.27855	0.010	-6.49246	20.00000	Averaged
71 4-Chloro Toluene	1.99517	2.05983	0.010	3.24069	20.00000	Averaged
72 T-Butyl Benzene	1.87277	1.98690	0.010	6.09444	20.00000	Averaged
73 1,2,4-Trimethylbenzene	2.11866	2.33316	0.010	10.12421	20.00000	Averaged
74 S-Butyl Benzene	2.76941	3.13430	0.010	13.17555	20.00000	Averaged
75 4-Isopropyl Toluene	2.22408	2.45403	0.010	10.33887	20.00000	Averaged
76 1,3-Dichlorobenzene	1.30860	1.33355	0.010	1.90706	20.00000	Averaged
78 1,4-Dichlorobenzene	1.38404	1.42572	0.010	3.01137	20.00000	Averaged

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt3.i Injection Date: 18-JAN-2013 09:05
Lab File ID: cc0118.d Init. Cal. Date(s): 15-JAN-2013 15-JAN-2013
Analysis Type: WATER Init. Cal. Times: 15:36 18:43
Lab Sample ID: CC0118 Quant Type: ISTD
Method: /chem3/nt3.i/01182013.b/8260C011513L.m

COMPOUND	RRF / AMOUNT	RF10	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
79 N-Butyl Benzene	2.21576	2.38883	0.010	7.81094	20.00000	Averaged
$ 80 d4-1,2-Dichlorobenzene	0.89836	0.92038	0.010	2.45079	20.00000	Averaged
81 1,2-Dichlorobenzene	1.27750	1.31548	0.010	2.97343	20.00000	Averaged
82 1,2-Dibromo 3-Chloropropane	0.17118	0.15466	0.010	-9.65071	20.00000	Averaged
83 Hexachloro 1,3-Butadiene	0.37081	0.34613	0.010	-6.65577	20.00000	Averaged
84 1,2,4-Trichlorobenzene	0.78189	0.76549	0.010	-2.09707	20.00000	Averaged
85 Naphthalene	1.95409	1.93239	0.010	-1.11019	20.00000	Averaged
86 1,2,3-Trichlorobenzene	0.70862	0.69658	0.010	-1.69880	20.00000	Averaged

Data File: /chem3/nt3.i/01182013.b/cc0118.d

Date : 18-JAN-2013 09:05

Client ID: VSTD10

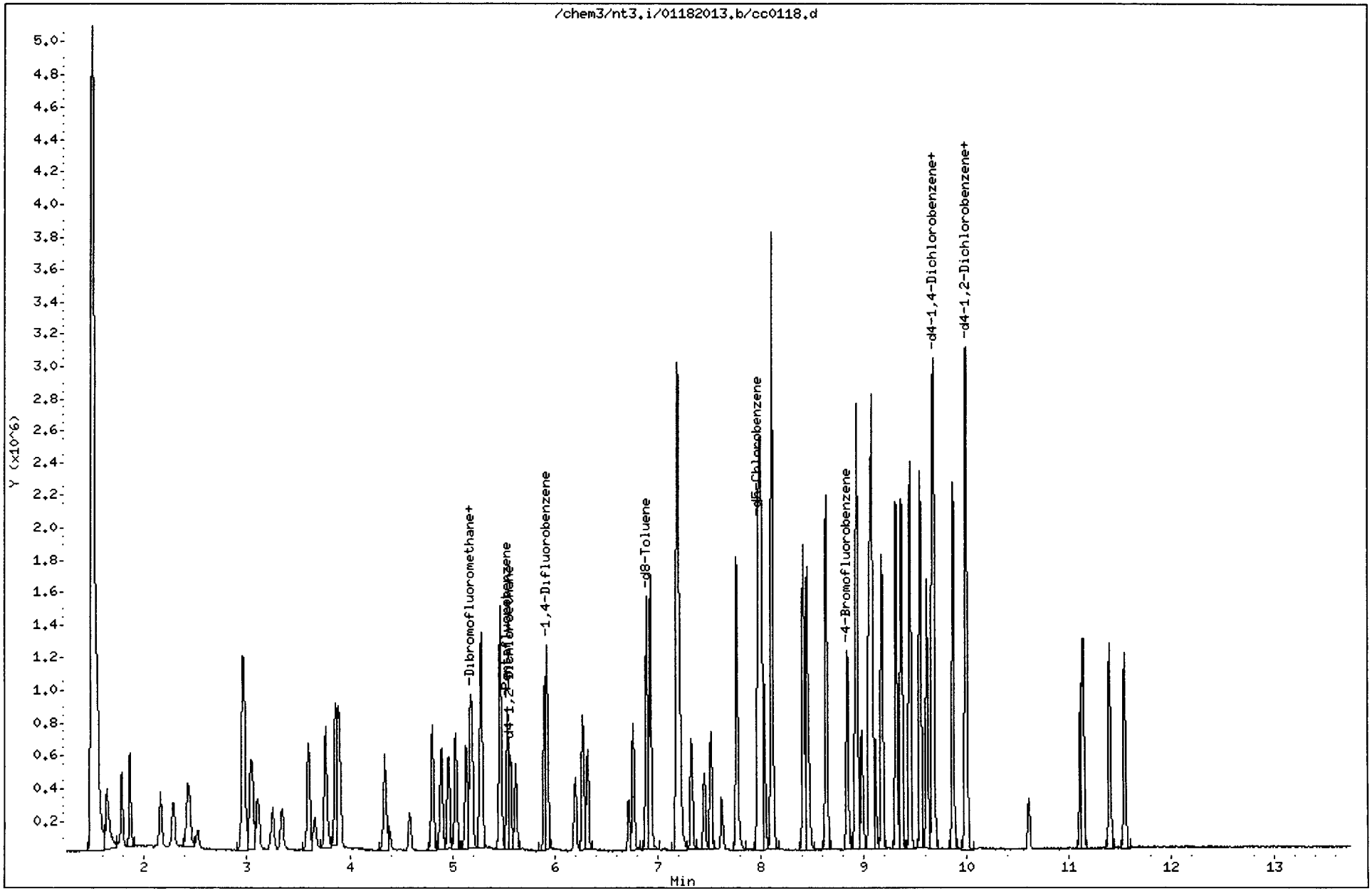
Instrument: nt3.i

Sample Info: CC0118,10,10,0,

Operator: PB

Column phase: RTXVMS

Column diameter: 0.18



Analytical Resources, Inc.

SW8260C 10 mL Purge

Data file : /chem3/nt3.i/01182013.b/mb0118.d
Lab Smp Id: MB0118 Client Smp ID: MB0118
Inj Date : 18-JAN-2013 10:32
Operator : PB Inst ID: nt3.i
Smp Info : MB0118,10,10,0,
Misc Info : 13-765
Comment :
Method : /chem3/nt3.i/01182013.b/8260C011513L.m
Meth Date : 21-Jan-2013 09:23 patrickb Quant Type: ISTD
Cal Date : 15-JAN-2013 16:03 Cal File: 8000115.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
1 Dichlorodifluoromethane	85	Compound Not Detected.					
2 Chloromethane	50	Compound Not Detected.					
3 Vinyl Chloride	62	Compound Not Detected.					
4 Bromomethane	94	Compound Not Detected.					
5 Chloroethane	64	Compound Not Detected.					
6 Trichlorofluoromethane	101	Compound Not Detected.					
7 1,1-Dichloroethene	96	Compound Not Detected.					
8 Carbon Disulfide	76	Compound Not Detected.					
9 112Trichloro122Trifluoroethane	101	Compound Not Detected.					
10 Iodomethane	142	Compound Not Detected.					
11 Bromoethane	108	Compound Not Detected.					
12 Acrolein	56	Compound Not Detected.					
13 Methylene Chloride	84	Compound Not Detected.					
14 Acetone	43	Compound Not Detected.					
15 Trans-1,2-Dichloroethene	96	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
	16 Methyl tert butyl ether	73	Compound Not Detected.					
	17 1,1-Dichloroethane	63	Compound Not Detected.					
	18 Acrylonitrile	53	Compound Not Detected.					
	19 Vinyl Acetate	43	Compound Not Detected.					
	20 Cis-1,2-Dichloroethene	96	Compound Not Detected.					
	22 2,2-Dichloropropane	77	Compound Not Detected.					
	23 Bromochloromethane	128	Compound Not Detected.					
	24 Chloroform	83	Compound Not Detected.					
	25 Carbon Tetrachloride	117	Compound Not Detected.					
$	26 Dibromofluoromethane	111	5.170	5.170	(0.934)	251868	10.7024	10.702
	27 1,1,1-Trichloroethane	97	Compound Not Detected.					
	28 2-Butanone	43	Compound Not Detected.					
	29 1,1-Dichloropropene	75	Compound Not Detected.					
	30 Benzene	78	Compound Not Detected.					
*	31 Pentafluorobenzene	168	5.537	5.538	(1.000)	435873	10.0000	
$	32 d4-1,2-Dichloroethane	65	5.566	5.566	(1.005)	312310	10.7237	10.724
	33 1,2-Dichloroethane	62	Compound Not Detected.					
	34 Trichloroethene	130	Compound Not Detected.					
*	36 1,4-Difluorobenzene	114	5.922	5.928	(1.000)	709785	10.0000	
	37 Dibromomethane	93	Compound Not Detected.					
	38 1,2-Dichloropropane	63	Compound Not Detected.					
	39 Bromodichloromethane	83	Compound Not Detected.					
	41 2-Chloroethyl Vinyl Ether	63	Compound Not Detected.					
	42 Cis 1,3-dichloropropene	75	Compound Not Detected.					
$	43 d8-Toluene	98	6.895	6.895	(1.164)	857362	10.3810	10.381
	44 Toluene	92	Compound Not Detected.					
	45 Tetrachloroethene	166	Compound Not Detected.					
	46 4-Methyl-2-Pentanone	43	Compound Not Detected.					
	47 Trans 1,3-Dichloropropene	75	Compound Not Detected.					
	48 1,1,2-Trichloroethane	97	Compound Not Detected.					
	49 Chlorodibromomethane	129	Compound Not Detected.					
	50 1,3-Dichloropropane	76	Compound Not Detected.					
	51 1,2-Dibromoethane	107	Compound Not Detected.					
	52 2-Hexanone	43	Compound Not Detected.					
*	53 d5-Chlorobenzene	117	7.975	7.976	(1.000)	709144	10.0000	
	54 Chlorobenzene	112	Compound Not Detected.					
	55 Ethyl Benzene	91	Compound Not Detected.					
	56 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
	57 m,p-xylene	106	Compound Not Detected.					
	58 o-Xylene	106	Compound Not Detected.					
	59 Styrene	104	Compound Not Detected.					
	60 Bromoform	173	Compound Not Detected.					
	61 Isopropyl Benzene	105	Compound Not Detected.					
$	62 4-Bromofluorobenzene	95	8.841	8.841	(1.109)	350534	9.35234	9.352
	63 Bromobenzene	156	Compound Not Detected.					
	64 N-Propyl Benzene	91	Compound Not Detected.					
	65 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
66	2-Chloro Toluene	91	Compound Not Detected.					
67	1,3,5-Trimethyl Benzene	105	Compound Not Detected.					
68	1,2,3-Trichloropropane	110	Compound Not Detected.					
70	Trans-1,4-Dichloro 2-Butene	53	Compound Not Detected.					
71	4-Chloro Toluene	91	Compound Not Detected.					
72	T-Butyl Benzene	119	Compound Not Detected.					
73	1,2,4-Trimethylbenzene	105	Compound Not Detected.					
74	S-Butyl Benzene	105	Compound Not Detected.					
75	4-Isopropyl Toluene	119	Compound Not Detected.					
76	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 77	d4-1,4-Dichlorobenzene	152	9.667	9.667	(1.000)	395283	10.0000	
78	1,4-Dichlorobenzene	146	Compound Not Detected.					
79	N-Butyl Benzene	91	Compound Not Detected.					
$ 80	d4-1,2-Dichlorobenzene	152	9.989	9.990	(1.033)	357112	10.0565	10.056
81	1,2-Dichlorobenzene	146	Compound Not Detected.					
82	1,2-Dibromo 3-Chloropropane	75	Compound Not Detected.					
83	Hexachloro 1,3-Butadiene	225	Compound Not Detected.					
84	1,2,4-Trichlorobenzene	180	11.138	11.138	(1.152)	5020	0.16242	0.1624
85	Naphthalene	128	11.392	11.392	(1.178)	18139	0.23483	0.2348
86	1,2,3-Trichlorobenzene	180	11.539	11.539	(1.194)	3180	0.11353	0.1135(Q)

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt3.i
Lab File ID: mb0118.d
Lab Smp Id: MB0118
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem3/nt3.i/01182013.b/8260C011513L.m
Misc Info: 13-765

Calibration Date: 18-JAN-2013
Calibration Time: 09:05
Client Smp ID: MB0118
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	513917	256958	1027834	435873	-15.19
36 1,4-Difluorobenze	821183	410592	1642366	709785	-13.57
53 d5-Chlorobenzene	740077	370038	1480154	709144	-4.18
77 d4-1,4-Dichlorobe	454429	227214	908858	395283	-13.02

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	5.54	5.04	6.04	5.54	-0.01
36 1,4-Difluorobenze	5.93	5.43	6.43	5.92	-0.10
53 d5-Chlorobenzene	7.98	7.48	8.48	7.98	0.00
77 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 01182013
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: MB0118 Client Smp ID: MB0118
Level: LOW Operator: PB
Data Type: MS DATA SampleType: BLANK
SpikeList File: allspike.spk Quant Type: ISTD
Sublist File: voa.sub
Method File: /chem3/nt3.i/01182013.b/8260C011513L.m
Misc Info: 13-765

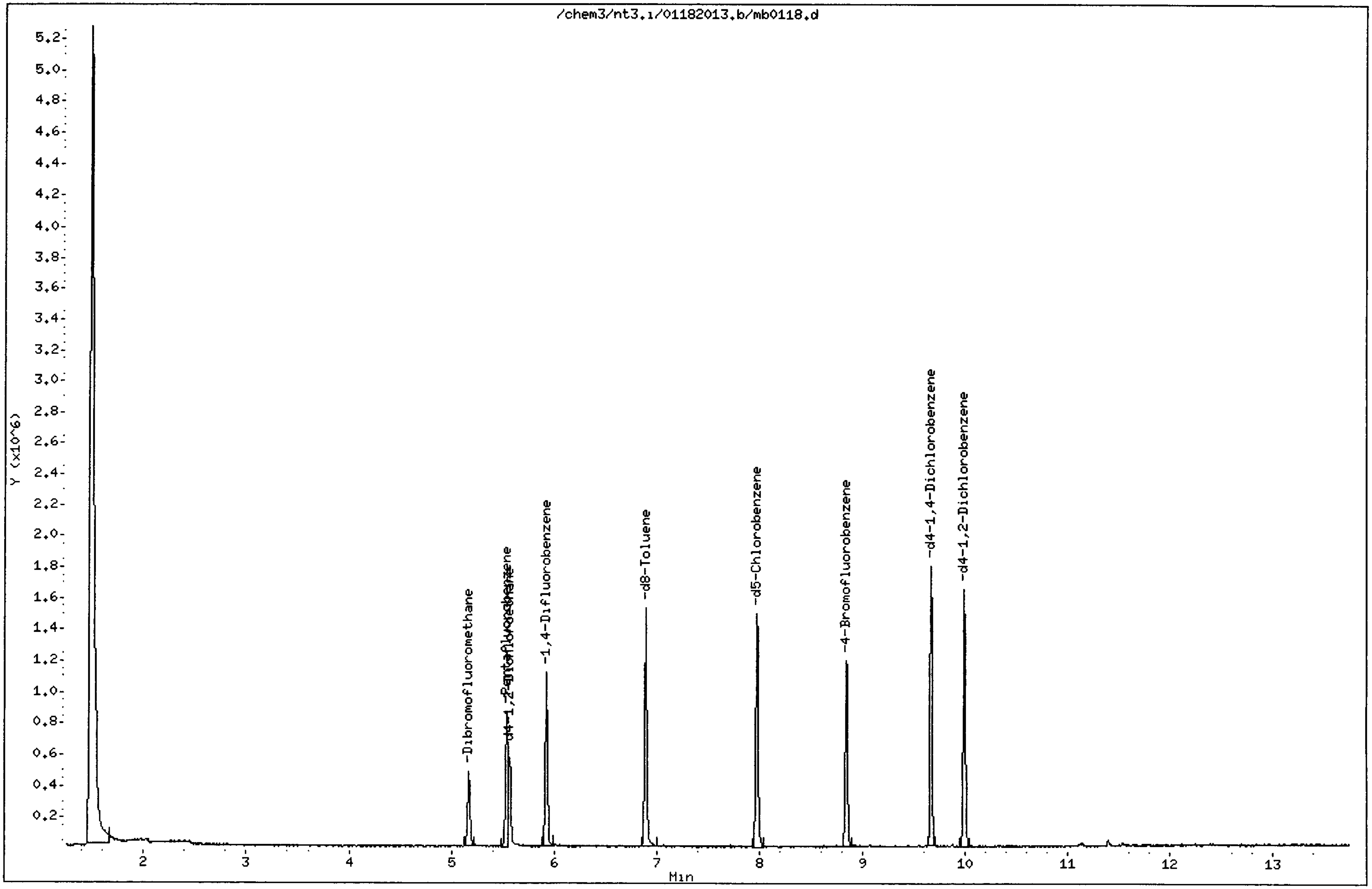
SURROGATE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
$ 26 Dibromofluorometha	10.000	10.702	107.02	80-120
$ 32 d4-1,2-Dichloroeth	10.000	10.724	107.24	80-120
$ 43 d8-Toluene	10.000	10.381	103.81	80-120
$ 62 4-Bromofluorobenze	10.000	9.352	93.52	80-120
$ 80 d4-1,2-Dichloroben	10.000	10.056	100.56	80-120

Data File: /chem3/nt3.i/01182013.b/mb0118.d
Date : 18-JAN-2013 10:32
Client ID: MB0118
Sample Info: MB0118,10,10,0,

Column phase: RTXVMS

Instrument: nt3.i

Operator: PB
Column diameter: 0.18



CO-ELUTION SUMMARY FOR FILE - mb0118.d

Lab ID: MB0118, Method: 8260C011513L.m, Instrument: nt3.i, Date: 18-JAN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

SW8260C 10 mL Purge

Data file : /chem3/nt3.i/01182013.b/lcs0118.d
Lab Smp Id: LCS0118 Client Smp ID: LCS0118
Inj Date : 18-JAN-2013 09:32
Operator : PB Inst ID: nt3.i
Smp Info : LCS0118,10,10,0,
Misc Info : 13-765
Comment :
Method : /chem3/nt3.i/01182013.b/8260C011513L.m
Meth Date : 21-Jan-2013 09:23 patrickb Quant Type: ISTD
Cal Date : 15-JAN-2013 16:03 Cal File: 8000115.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

1/21/13

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
1	Dichlorodifluoromethane	85	1.640	1.634	(0.296)	293389	10.7296	10.730
2	Chloromethane	50	1.782	1.782	(0.322)	345147	10.6234	10.623
3	Vinyl Chloride	62	1.861	1.861	(0.336)	397604	10.8428	10.843
4	Bromomethane	94	2.155	2.155	(0.389)	197204	9.56311	9.563
5	Chloroethane	64	2.285	2.279	(0.413)	246756	10.1597	10.160
6	Trichlorofluoromethane	101	2.427	2.426	(0.438)	420885	10.2214	10.221
7	1,1-Dichloroethene	96	2.958	2.958	(0.534)	247408	10.2443	10.244
8	Carbon Disulfide	76	2.970	2.964	(0.536)	944071	10.3969	10.397
9	112Trichloro122Trifluoroethane	101	3.038	3.037	(0.548)	292650	11.2760	11.276
10	Iodomethane	142	3.106	3.105	(0.561)	386755	10.1408	10.141
11	Bromoethane	108	3.247	3.247	(0.586)	193632	10.1419	10.142
12	Acrolein	56	3.337	3.337	(0.603)	253813	58.1754	58.175
13	Methylene Chloride	84	3.598	3.597	(0.650)	279873	9.86338	9.863
14	Acetone	43	3.660	3.654	(0.661)	290924	62.0710	62.071
15	Trans-1,2-Dichloroethene	96	3.767	3.767	(0.680)	273018	10.1778	10.178

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
	16 Methyl tert butyl ether	73	3.892	3.891	(0.703)	839543	11.1820	11.182
	17 1,1-Dichloroethane	63	4.344	4.338	(0.784)	513154	10.5387	10.539
	18 Acrylonitrile	53	4.390	4.384	(0.793)	98618	11.6472	11.647
	19 Vinyl Acetate	43	4.582	4.582	(0.827)	307994	10.4807	10.481
	20 Cis-1,2-Dichloroethene	96	4.803	4.802	(0.867)	277957	10.1186	10.119
	22 2,2-Dichloropropane	77	4.893	4.893	(0.884)	339975	10.0541	10.054
	23 Bromochloromethane	128	4.961	4.961	(0.896)	128247	10.6719	10.672
	24 Chloroform	83	5.029	5.029	(0.908)	459627	10.9056	10.906
	25 Carbon Tetrachloride	117	5.131	5.130	(0.866)	340798	10.2320	10.232
$	26 Dibromofluoromethane	111	5.170	5.170	(0.934)	253952	10.6515	10.651
	27 1,1,1-Trichloroethane	97	5.187	5.187	(0.937)	393871	10.6429	10.643
	28 2-Butanone	43	5.266	5.266	(0.951)	642160	59.1276	59.128
	29 1,1-Dichloropropene	75	5.278	5.277	(0.891)	369398	10.4830	10.483
	30 Benzene	78	5.470	5.470	(0.924)	1036764	10.5628	10.563
*	31 Pentafluorobenzene	168	5.538	5.538	(1.000)	441580	10.0000	
$	32 d4-1,2-Dichloroethane	65	5.566	5.566	(1.005)	306308	10.3817	10.382
	33 1,2-Dichloroethane	62	5.617	5.617	(0.948)	351596	11.0642	11.064
	34 Trichloroethene	130	5.900	5.900	(0.996)	242868	10.0211	10.021
*	36 1,4-Difluorobenzene	114	5.923	5.928	(1.000)	720053	10.0000	
	37 Dibromomethane	93	6.200	6.199	(1.047)	145855	9.89253	9.893
	38 1,2-Dichloropropane	63	6.273	6.273	(1.059)	250602	10.0128	10.013
	39 Bromodichloromethane	83	6.319	6.318	(1.067)	311752	10.1853	10.185
	41 2-Chloroethyl Vinyl Ether	63	6.720	6.720	(1.135)	121943	9.63422	9.634
	42 Cis 1,3-dichloropropene	75	6.760	6.759	(1.141)	352695	10.0798	10.080
$	43 d8-Toluene	98	6.896	6.895	(1.164)	831695	9.92664	9.927
	44 Toluene	92	6.930	6.929	(1.170)	547844	10.4139	10.414
	45 Tetrachloroethene	166	7.201	7.201	(0.903)	215163	9.62019	9.620
	46 4-Methyl-2-Pentanone	43	7.190	7.189	(1.214)	1459248	57.2116	57.212
	47 Trans 1,3-Dichloropropene	75	7.212	7.212	(1.218)	351473	10.3725	10.372
	48 1,1,2-Trichloroethane	97	7.325	7.325	(1.237)	180862	10.0770	10.077
	49 Chlorodibromomethane	129	7.450	7.455	(0.934)	220486	10.1304	10.130
	50 1,3-Dichloropropane	76	7.518	7.517	(0.943)	338750	9.72958	9.730
	51 1,2-Dibromoethane	107	7.620	7.619	(1.287)	200884	10.5514	10.551
	52 2-Hexanone	43	7.767	7.766	(0.974)	1089734	52.9509	52.951
*	53 d5-Chlorobenzene	117	7.976	7.976	(1.000)	696451	10.0000	
	54 Chlorobenzene	112	7.987	7.987	(1.001)	622233	10.0427	10.043
	55 Ethyl Benzene	91	8.004	8.004	(1.004)	1092525	10.2331	10.233
	56 1,1,1,2-Tetrachloroethane	131	8.033	8.032	(1.007)	246496	10.6233	10.623
	57 m,p-xylene	106	8.106	8.106	(1.016)	831653	21.1510	21.151
	58 o-Xylene	106	8.412	8.411	(1.055)	419722	10.1459	10.146
	59 Styrene	104	8.451	8.451	(1.060)	681217	10.4874	10.487
	60 Bromoform	173	8.474	8.473	(0.877)	160293	10.0012	10.001
	61 Isopropyl Benzene	105	8.638	8.638	(0.894)	1132426	10.7669	10.767
$	62 4-Bromofluorobenzene	95	8.841	8.841	(1.109)	366850	9.96604	9.966
	63 Bromobenzene	156	8.926	8.926	(0.923)	284316	9.96860	9.969
	64 N-Propyl Benzene	91	8.938	8.937	(0.925)	1345471	10.7190	10.719
	65 1,1,2,2-Tetrachloroethane	83	8.983	8.983	(0.929)	324558	9.65950	9.660

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
66	2-Chloro Toluene	91	9.056	9.056	(0.937)	927442	10.1767	10.177
67	1,3,5-Trimethyl Benzene	105	9.073	9.079	(0.939)	986603	10.9154	10.915
68	1,2,3-Trichloropropane	110	9.085	9.084	(0.940)	98599	10.3033	10.303
70	Trans-1,4-Dichloro 2-Butene	53	9.113	9.113	(0.943)	126054	9.85406	9.854(Q)
71	4-Chloro Toluene	91	9.175	9.175	(0.949)	875257	10.2156	10.216
72	T-Butyl Benzene	119	9.311	9.316	(0.963)	830392	10.3254	10.325
73	1,2,4-Trimethylbenzene	105	9.362	9.367	(0.968)	980872	10.7810	10.781
74	S-Butyl Benzene	105	9.447	9.446	(0.977)	1282037	10.7801	10.780
75	4-Isopropyl Toluene	119	9.549	9.548	(0.988)	1021142	10.6916	10.692
76	1,3-Dichlorobenzene	146	9.611	9.610	(0.994)	564825	10.0512	10.051
* 77	d4-1,4-Dichlorobenzene	152	9.667	9.667	(1.000)	429429	10.0000	
78	1,4-Dichlorobenzene	146	9.679	9.678	(1.001)	596637	10.0385	10.038
79	N-Butyl Benzene	91	9.865	9.865	(1.020)	988047	10.3840	10.384
$ 80	d4-1,2-Dichlorobenzene	152	9.990	9.990	(1.033)	386839	10.0274	10.027
81	1,2-Dichlorobenzene	146	9.995	9.995	(1.034)	557030	10.1538	10.154
82	1,2-Dibromo 3-Chloropropane	75	10.606	10.606	(1.097)	70617	9.60649	9.606
83	Hexachloro 1,3-Butadiene	225	11.110	11.115	(1.149)	140083	8.79713	8.797
84	1,2,4-Trichlorobenzene	180	11.138	11.138	(1.152)	312705	9.31317	9.313
85	Naphthalene	128	11.393	11.392	(1.178)	832791	9.92433	9.924
86	1,2,3-Trichlorobenzene	180	11.540	11.539	(1.194)	292006	9.59596	9.596

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt3.i
Lab File ID: lcs0118.d
Lab Smp Id: LCS0118
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem3/nt3.i/01182013.b/8260C011513L.m
Misc Info: 13-765

Calibration Date: 18-JAN-2013
Calibration Time: 09:05
Client Smp ID: LCS0118
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	513917	256958	1027834	441580	-14.08
36 1,4-Difluorobenze	821183	410592	1642366	720053	-12.32
53 d5-Chlorobenzene	740077	370038	1480154	696451	-5.89
77 d4-1,4-Dichlorobe	454429	227214	908858	429429	-5.50

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	5.54	5.04	6.04	5.54	0.01
36 1,4-Difluorobenze	5.93	5.43	6.43	5.92	-0.09
53 d5-Chlorobenzene	7.98	7.48	8.48	7.98	0.00
77 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name:
Client SDG: 01182013
Sample Matrix: LIQUID
Fraction: VOA
Lab Smp Id: LCS0118
Client Smp ID: LCS0118
Level: LOW
Operator: PB
Data Type: MS DATA
SampleType: LCS
SpikeList File: allspike.spk
Quant Type: ISTD
Sublist File: voa.sub
Method File: /chem3/nt3.i/01182013.b/8260C011513L.m
Misc Info: 13-765

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 Dichlorodifluorome	10.000	10.730	107.30	68-133
2 Chloromethane	10.000	10.623	106.23	77-122
3 Vinyl Chloride	10.000	10.843	108.43	74-123
4 Bromomethane	10.000	9.563	95.63	68-130
5 Chloroethane	10.000	10.160	101.60	68-133
6 Trichlorofluoromet	10.000	10.221	102.21	74-135
12 Acrolein	50.000	58.175	116.35	60-124
9 112Trichloro122Tri	10.000	11.276	112.76	76-124
14 Acetone	50.000	62.071	124.14	64-125
7 1,1-Dichloroethene	10.000	10.244	102.44	74-120
11 Bromoethane	10.000	10.142	101.42	77-122
10 Iodomethane	10.000	10.141	101.41	76-123
13 Methylene Chloride	10.000	9.863	98.63	71-125
18 Acrylonitrile	10.000	11.647	116.47	76-123
8 Carbon Disulfide	10.000	10.397	103.97	77-124
16 Methyl tert butyl	10.000	11.182	111.82	79-121
15 Trans-1,2-Dichloro	10.000	10.178	101.78	75-120
19 Vinyl Acetate	10.000	10.481	104.81	74-120
17 1,1-Dichloroethane	10.000	10.539	105.39	80-120
28 2-Butanone	50.000	59.128	118.26	73-123
22 2,2-Dichloropropan	10.000	10.054	100.54	72-133
20 Cis-1,2-Dichloroet	10.000	10.119	101.19	78-120
24 Chloroform	10.000	10.906	109.06	80-120
23 Bromochloromethane	10.000	10.672	106.72	80-120
27 1,1,1-Trichloroeth	10.000	10.643	106.43	79-124
29 1,1-Dichloropropen	10.000	10.483	104.83	80-120
25 Carbon Tetrachlori	10.000	10.232	102.32	71-139
33 1,2-Dichloroethane	10.000	11.064	110.64	80-121
30 Benzene	10.000	10.563	105.63	80-120
34 Trichloroethene	10.000	10.021	100.21	80-120
38 1,2-Dichloropropan	10.000	10.013	100.13	80-120
39 Bromodichlorometha	10.000	10.185	101.85	80-122
37 Dibromomethane	10.000	9.893	98.93	80-120

UZ97:00238U

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
41 2-Chloroethyl Viny	10.000	9.634	96.34	62-130
46 4-Methyl-2-Pentano	50.000	57.212	114.42	80-125
42 Cis 1,3-dichloropr	10.000	10.080	100.80	80-127
44 Toluene	10.000	10.414	104.14	80-120
47 Trans 1,3-Dichloro	10.000	10.372	103.72	79-132
52 2-Hexanone	50.000	52.951	105.90	80-129
48 1,1,2-Trichloroeth	10.000	10.077	100.77	80-120
50 1,3-Dichloropropan	10.000	9.730	97.30	80-120
45 Tetrachloroethene	10.000	9.620	96.20	80-120
49 Chlorodibromometha	10.000	10.130	101.30	80-120
51 1,2-Dibromoethane	10.000	10.551	105.51	80-120
54 Chlorobenzene	10.000	10.043	100.43	80-120
56 1,1,1,2-Tetrachlor	10.000	10.623	106.23	80-128
55 Ethyl Benzene	10.000	10.233	102.33	80-120
57 m,p-xylene	20.000	21.151	105.75	80-120
58 o-Xylene	10.000	10.146	101.46	80-120
59 Styrene	10.000	10.487	104.87	80-121
61 Isopropyl Benzene	10.000	10.767	107.67	80-120
60 Bromoform	10.000	10.001	100.01	62-149
65 1,1,2,2-Tetrachlor	10.000	9.660	96.60	80-120
68 1,2,3-Trichloropro	10.000	10.303	103.03	80-120
70 Trans-1,4-Dichloro	10.000	9.854	98.54	47-147
64 N-Propyl Benzene	10.000	10.719	107.19	80-120
63 Bromobenzene	10.000	9.969	99.69	80-120
67 1,3,5-Trimethyl Be	10.000	10.915	109.15	80-120
66 2-Chloro Toluene	10.000	10.177	101.77	80-120
71 4-Chloro Toluene	10.000	10.216	102.16	80-120
72 T-Butyl Benzene	10.000	10.325	103.25	80-121
73 1,2,4-Trimethylben	10.000	10.781	107.81	80-122
74 S-Butyl Benzene	10.000	10.780	107.80	80-121
75 4-Isopropyl Toluen	10.000	10.692	106.92	80-124
76 1,3-Dichlorobenzen	10.000	10.051	100.51	80-120
78 1,4-Dichlorobenzen	10.000	10.038	100.38	80-120
79 N-Butyl Benzene	10.000	10.384	103.84	80-125
81 1,2-Dichlorobenzen	10.000	10.154	101.54	80-120
82 1,2-Dibromo 3-Chlo	10.000	9.606	96.06	79-129
84 1,2,4-Trichloroben	10.000	9.313	93.13	77-127
83 Hexachloro 1,3-But	10.000	8.797	87.97	80-135
85 Naphthalene	10.000	9.924	99.24	80-128
86 1,2,3-Trichloroben	10.000	9.596	95.96	80-125

SURROGATE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
$ 26 Dibromofluorometha	10.000	10.651	106.51	80-120

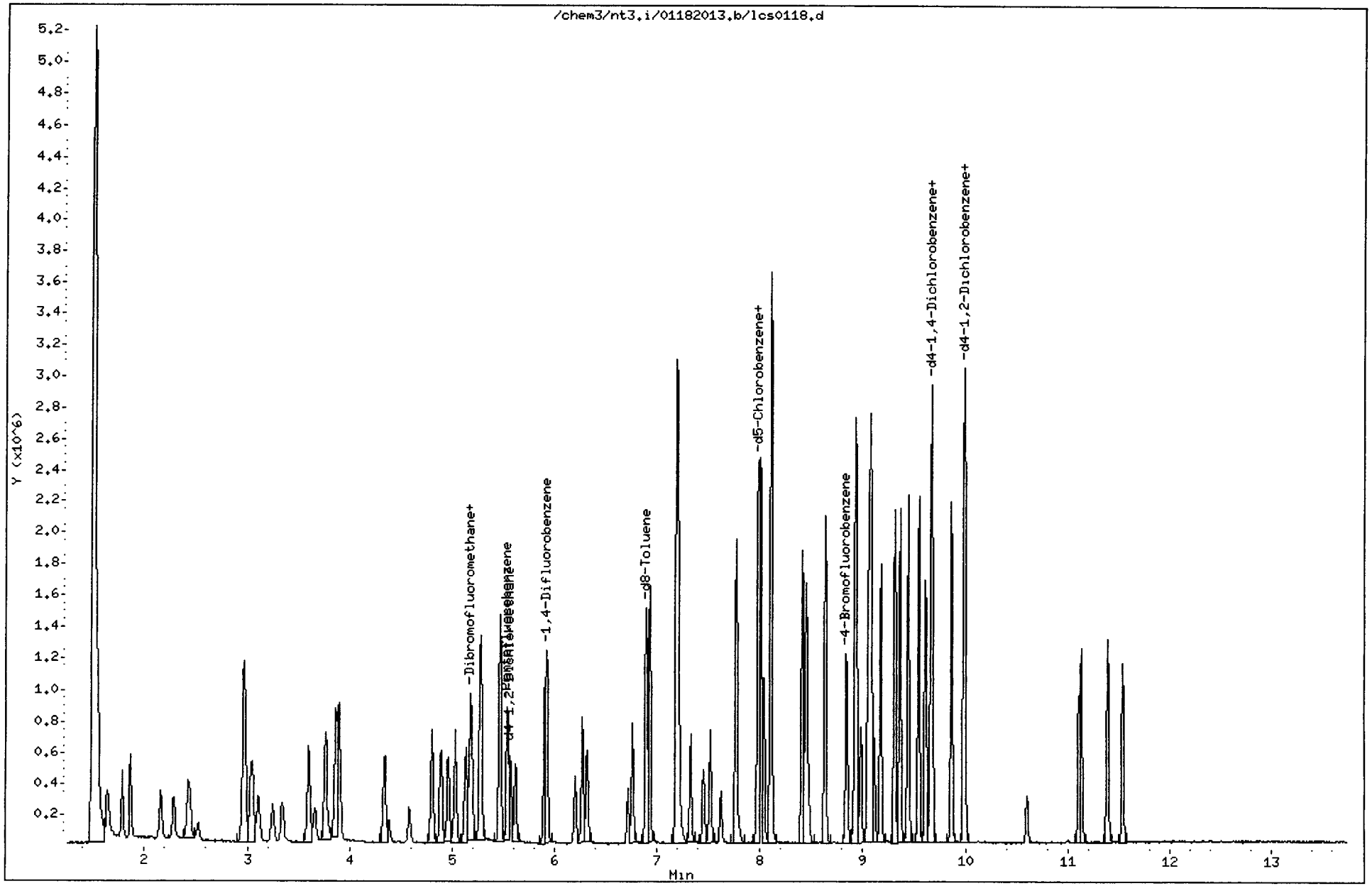
SURROGATE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
$ 32 d4-1,2-Dichloroeth	10.000	10.382	103.82	80-120
$ 43 d8-Toluene	10.000	9.927	99.27	80-120
$ 62 4-Bromofluorobenze	10.000	9.966	99.66	80-120
$ 80 d4-1,2-Dichloroben	10.000	10.027	100.27	80-120

Data File: /chem3/nt3.i/01182013.b/lcs0118.d
Date : 18-JAN-2013 09:32
Client ID: LCS0118
Sample Info: LCS0118,10,10,0,

Instrument: nt3.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



CO-ELUTION SUMMARY FOR FILE - lcs0118.d

Lab ID: LCS0118, Method: 8260C011513L.m, Instrument: nt3.i, Date: 18-JAN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

SW8260C 10 mL Purge

Data file : /chem3/nt3.i/01182013.b/lcs0118a.d
Lab Smp Id: LCS0118 Client Smp ID: LCS0118
Inj Date : 18-JAN-2013 10:05
Operator : PB Inst ID: nt3.i
Smp Info : LCS0118,10,10,0,
Misc Info : 13-765
Comment :
Method : /chem3/nt3.i/01182013.b/8260C011513L.m
Meth Date : 21-Jan-2013 09:23 patrickb Quant Type: ISTD
Cal Date : 15-JAN-2013 16:03 Cal File: 8000115.d
Als bottle: 1 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
1 Dichlorodifluoromethane	85	1.635	1.634	(0.295)	310377	10.4634	10.463
2 Chloromethane	50	1.776	1.782	(0.321)	366797	10.4071	10.407
3 Vinyl Chloride	62	1.855	1.861	(0.335)	422494	10.6208	10.621
4 Bromomethane	94	2.155	2.155	(0.389)	213745	9.55486	9.555
5 Chloroethane	64	2.280	2.279	(0.412)	254926	9.67543	9.675
6 Trichlorofluoromethane	101	2.432	2.426	(0.439)	442555	9.90736	9.907
7 1,1-Dichloroethene	96	2.953	2.958	(0.533)	261524	9.98220	9.982
8 Carbon Disulfide	76	2.964	2.964	(0.535)	1010642	10.2599	10.260
9 112Trichloro122Trifluoroethane	101	3.038	3.037	(0.548)	307722	10.9298	10.930
10 Iodomethane	142	3.100	3.105	(0.560)	415939	10.0533	10.053
11 Bromoethane	108	3.247	3.247	(0.586)	205918	9.94219	9.942
12 Acrolein	56	3.337	3.337	(0.603)	240605	50.8364	50.836
13 Methylene Chloride	84	3.598	3.597	(0.650)	296093	9.61917	9.619
14 Acetone	43	3.654	3.654	(0.660)	282288	55.5196	55.520
15 Trans-1,2-Dichloroethene	96	3.762	3.767	(0.679)	291719	10.0247	10.025

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
	16 Methyl tert butyl ether	73	3.892	3.891	(0.703)	863369	10.6003	10.600
	17 1,1-Dichloroethane	63	4.339	4.338	(0.783)	544822	10.3143	10.314
	18 Acrylonitrile	53	4.384	4.384	(0.792)	99043	10.7828	10.783
	19 Vinyl Acetate	43	4.582	4.582	(0.827)	339177	10.6395	10.639
	20 Cis-1,2-Dichloroethene	96	4.803	4.802	(0.867)	298509	10.0172	10.017
	22 2,2-Dichloropropane	77	4.893	4.893	(0.884)	354666	9.66849	9.668
	23 Bromochloromethane	128	4.955	4.961	(0.895)	140188	10.7535	10.754
	24 Chloroform	83	5.029	5.029	(0.908)	469723	10.2738	10.274
	25 Carbon Tetrachloride	117	5.131	5.130	(0.866)	365792	10.1040	10.104
$	26 Dibromofluoromethane	111	5.170	5.170	(0.934)	264353	10.2208	10.221
	27 1,1,1-Trichloroethane	97	5.182	5.187	(0.936)	417264	10.3935	10.393
	28 2-Butanone	43	5.266	5.266	(0.951)	650925	55.2488	55.249
	29 1,1-Dichloropropene	75	5.278	5.277	(0.891)	392101	10.2372	10.237
	30 Benzene	78	5.464	5.470	(0.923)	1123652	10.5323	10.532
*	31 Pentafluorobenzene	168	5.538	5.538	(1.000)	479032	10.0000	
$	32 d4-1,2-Dichloroethane	65	5.566	5.566	(1.005)	331997	10.3726	10.373
	33 1,2-Dichloroethane	62	5.617	5.617	(0.948)	367260	10.6327	10.633
	34 Trichloroethene	130	5.900	5.900	(0.996)	269631	10.2355	10.235
*	36 1,4-Difluorobenzene	114	5.923	5.928	(1.000)	782659	10.0000	
	37 Dibromomethane	93	6.200	6.199	(1.047)	155044	9.67460	9.675
	38 1,2-Dichloropropane	63	6.273	6.273	(1.059)	276543	10.1654	10.165
	39 Bromodichloromethane	83	6.319	6.318	(1.067)	335306	10.0785	10.079
	41 2-Chloroethyl Vinyl Ether	63	6.720	6.720	(1.135)	134393	9.76850	9.769
	42 Cis 1,3-dichloropropene	75	6.760	6.759	(1.141)	402403	10.5804	10.580
$	43 d8-Toluene	98	6.896	6.895	(1.164)	928677	10.1975	10.198
	44 Toluene	92	6.930	6.929	(1.170)	602555	10.5377	10.538
	45 Tetrachloroethene	166	7.201	7.201	(0.903)	243714	10.0913	10.091
	46 4-Methyl-2-Pentanone	43	7.190	7.189	(1.214)	1540113	55.5520	55.552
	47 Trans 1,3-Dichloropropene	75	7.212	7.212	(1.218)	397753	10.7993	10.799
	48 1,1,2-Trichloroethane	97	7.325	7.325	(1.237)	206092	10.5642	10.564
	49 Chlorodibromomethane	129	7.456	7.455	(0.935)	230973	9.82780	9.828
	50 1,3-Dichloropropane	76	7.518	7.517	(0.943)	377740	10.0475	10.048
	51 1,2-Dibromoethane	107	7.620	7.619	(1.287)	210963	10.1945	10.194
	52 2-Hexanone	43	7.767	7.766	(0.974)	1134703	51.0605	51.061
*	53 d5-Chlorobenzene	117	7.976	7.976	(1.000)	752039	10.0000	
	54 Chlorobenzene	112	7.987	7.987	(1.001)	679137	10.1509	10.151
	55 Ethyl Benzene	91	8.004	8.004	(1.004)	1242216	10.7752	10.775
	56 1,1,1,2-Tetrachloroethane	131	8.033	8.032	(1.007)	255352	10.1915	10.192
	57 m,p-xylene	106	8.106	8.106	(1.016)	917950	21.6201	21.620
	58 o-Xylene	106	8.412	8.411	(1.055)	459975	10.2970	10.297
	59 Styrene	104	8.451	8.451	(1.060)	737508	10.5147	10.515
	60 Bromoform	173	8.474	8.473	(0.877)	174856	10.5917	10.592
	61 Isopropyl Benzene	105	8.638	8.638	(0.894)	1228494	11.3396	11.340
$	62 4-Bromofluorobenzene	95	8.842	8.841	(1.109)	391879	9.85908	9.859
	63 Bromobenzene	156	8.926	8.926	(0.923)	299353	10.1897	10.190
	64 N-Propyl Benzene	91	8.938	8.937	(0.924)	1436206	11.1082	11.108
	65 1,1,2,2-Tetrachloroethane	83	8.983	8.983	(0.929)	341304	9.86163	9.862

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
66	2-Chloro Toluene	91	9.056	9.056	(0.937)	1004163	10.6971	10.697
67	1,3,5-Trimethyl Benzene	105	9.079	9.079	(0.939)	1045660	11.2314	11.231
68	1,2,3-Trichloropropane	110	9.085	9.084	(0.940)	101662	10.3135	10.314
70	Trans-1,4-Dichloro 2-Butene	53	9.113	9.113	(0.943)	132806	10.0791	10.079
71	4-Chloro Toluene	91	9.175	9.175	(0.949)	940988	10.6625	10.662
72	T-Butyl Benzene	119	9.317	9.316	(0.964)	890948	10.7553	10.755
73	1,2,4-Trimethylbenzene	105	9.362	9.367	(0.968)	1044099	11.1413	11.141
74	S-Butyl Benzene	105	9.447	9.446	(0.977)	1386198	11.3160	11.316
75	4-Isopropyl Toluene	119	9.549	9.548	(0.988)	1091237	11.0923	11.092
76	1,3-Dichlorobenzene	146	9.617	9.610	(0.995)	588341	10.1643	10.164
* 77	d4-1,4-Dichlorobenzene	152	9.667	9.667	(1.000)	442330	10.0000	
78	1,4-Dichlorobenzene	146	9.679	9.678	(1.001)	617928	10.0935	10.093
79	N-Butyl Benzene	91	9.865	9.865	(1.020)	1051932	10.7330	10.733
$ 80	d4-1,2-Dichlorobenzene	152	9.990	9.990	(1.033)	393157	9.89395	9.894
81	1,2-Dichlorobenzene	146	9.996	9.995	(1.034)	571106	10.1067	10.107
82	1,2-Dibromo 3-Chloropropane	75	10.606	10.606	(1.097)	67795	8.95361	8.954
83	Hexachloro 1,3-Butadiene	225	11.110	11.115	(1.149)	152787	9.31509	9.315
84	1,2,4-Trichlorobenzene	180	11.138	11.138	(1.152)	339327	9.81129	9.811
85	Naphthalene	128	11.393	11.392	(1.178)	886263	10.2535	10.254
86	1,2,3-Trichlorobenzene	180	11.540	11.539	(1.194)	322768	10.2975	10.298

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt3.i
Lab File ID: lcs0118a.d
Lab Smp Id: LCS0118
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem3/nt3.i/01182013.b/8260C011513L.m
Misc Info: 13-765

Calibration Date: 18-JAN-2013
Calibration Time: 09:05
Client Smp ID: LCS0118
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	513917	256958	1027834	479032	-6.79
36 1,4-Difluorobenze	821183	410592	1642366	782659	-4.69
53 d5-Chlorobenzene	740077	370038	1480154	752039	1.62
77 d4-1,4-Dichlorobe	454429	227214	908858	442330	-2.66

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	5.54	5.04	6.04	5.54	0.01
36 1,4-Difluorobenze	5.93	5.43	6.43	5.92	-0.09
53 d5-Chlorobenzene	7.98	7.48	8.48	7.98	0.00
77 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 01182013
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: LCS0118 Client Smp ID: LCS0118
Level: LOW Operator: PB
Data Type: MS DATA SampleType: LCSD
SpikeList File: allspike.spk Quant Type: ISTD
Sublist File: voa.sub
Method File: /chem3/nt3.i/01182013.b/8260C011513L.m
Misc Info: 13-765

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1 Dichlorodifluorome	10.000	10.463	104.63	68-133
2 Chloromethane	10.000	10.407	104.07	77-122
3 Vinyl Chloride	10.000	10.621	106.21	74-123
4 Bromomethane	10.000	9.555	95.55	68-130
5 Chloroethane	10.000	9.675	96.75	68-133
6 Trichlorofluoromet	10.000	9.907	99.07	74-135
12 Acrolein	50.000	50.836	101.67	60-124
9 112Trichloro122Tri	10.000	10.930	109.30	76-124
14 Acetone	50.000	55.520	111.04	64-125
7 1,1-Dichloroethene	10.000	9.982	99.82	74-120
11 Bromoethane	10.000	9.942	99.42	77-122
10 Iodomethane	10.000	10.053	100.53	76-123
13 Methylene Chloride	10.000	9.619	96.19	71-125
18 Acrylonitrile	10.000	10.783	107.83	76-123
8 Carbon Disulfide	10.000	10.260	102.60	77-124
16 Methyl tert butyl	10.000	10.600	106.00	79-121
15 Trans-1,2-Dichloro	10.000	10.025	100.25	75-120
19 Vinyl Acetate	10.000	10.639	106.39	74-120
17 1,1-Dichloroethane	10.000	10.314	103.14	80-120
28 2-Butanone	50.000	55.249	110.50	73-123
22 2,2-Dichloropropan	10.000	9.668	96.68	72-133
20 Cis-1,2-Dichloroet	10.000	10.017	100.17	78-120
24 Chloroform	10.000	10.274	102.74	80-120
23 Bromochloromethane	10.000	10.754	107.54	80-120
27 1,1,1-Trichloroeth	10.000	10.393	103.93	79-124
29 1,1-Dichloropropen	10.000	10.237	102.37	80-120
25 Carbon Tetrachlori	10.000	10.104	101.04	71-139
33 1,2-Dichloroethane	10.000	10.633	106.33	80-121
30 Benzene	10.000	10.532	105.32	80-120
34 Trichloroethene	10.000	10.235	102.35	80-120
38 1,2-Dichloropropan	10.000	10.165	101.65	80-120
39 Bromodichlorometha	10.000	10.079	100.79	80-122
37 Dibromomethane	10.000	9.675	96.75	80-120

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
41 2-Chloroethyl Viny	10.000	9.769	97.69	62-130
46 4-Methyl-2-Pentano	50.000	55.552	111.10	80-125
42 Cis 1,3-dichloropr	10.000	10.580	105.80	80-127
44 Toluene	10.000	10.538	105.38	80-120
47 Trans 1,3-Dichloro	10.000	10.799	107.99	79-132
52 2-Hexanone	50.000	51.061	102.12	80-129
48 1,1,2-Trichloroeth	10.000	10.564	105.64	80-120
50 1,3-Dichloropropan	10.000	10.048	100.48	80-120
45 Tetrachloroethene	10.000	10.091	100.91	80-120
49 Chlorodibromometha	10.000	9.828	98.28	80-120
51 1,2-Dibromoethane	10.000	10.194	101.94	80-120
54 Chlorobenzene	10.000	10.151	101.51	80-120
56 1,1,1,2-Tetrachlor	10.000	10.192	101.92	80-128
55 Ethyl Benzene	10.000	10.775	107.75	80-120
57 m,p-xylene	20.000	21.620	108.10	80-120
58 o-Xylene	10.000	10.297	102.97	80-120
59 Styrene	10.000	10.515	105.15	80-121
61 Isopropyl Benzene	10.000	11.340	113.40	80-120
60 Bromoform	10.000	10.592	105.92	62-149
65 1,1,2,2-Tetrachlor	10.000	9.862	98.62	80-120
68 1,2,3-Trichloropro	10.000	10.314	103.14	80-120
70 Trans-1,4-Dichloro	10.000	10.079	100.79	47-147
64 N-Propyl Benzene	10.000	11.108	111.08	80-120
63 Bromobenzene	10.000	10.190	101.90	80-120
67 1,3,5-Trimethyl Be	10.000	11.231	112.31	80-120
66 2-Chloro Toluene	10.000	10.697	106.97	80-120
71 4-Chloro Toluene	10.000	10.662	106.62	80-120
72 T-Butyl Benzene	10.000	10.755	107.55	80-121
73 1,2,4-Trimethylben	10.000	11.141	111.41	80-122
74 S-Butyl Benzene	10.000	11.316	113.16	80-121
75 4-Isopropyl Toluen	10.000	11.092	110.92	80-124
76 1,3-Dichlorobenzen	10.000	10.164	101.64	80-120
78 1,4-Dichlorobenzen	10.000	10.093	100.93	80-120
79 N-Butyl Benzene	10.000	10.733	107.33	80-125
81 1,2-Dichlorobenzen	10.000	10.107	101.07	80-120
82 1,2-Dibromo 3-Chlo	10.000	8.954	89.54	79-129
84 1,2,4-Trichloroben	10.000	9.811	98.11	77-127
83 Hexachloro 1,3-But	10.000	9.315	93.15	80-135
85 Naphthalene	10.000	10.254	102.54	80-128
86 1,2,3-Trichloroben	10.000	10.298	102.98	80-125

SURROGATE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
$ 26 Dibromofluorometha	10.000	10.221	102.21	80-120

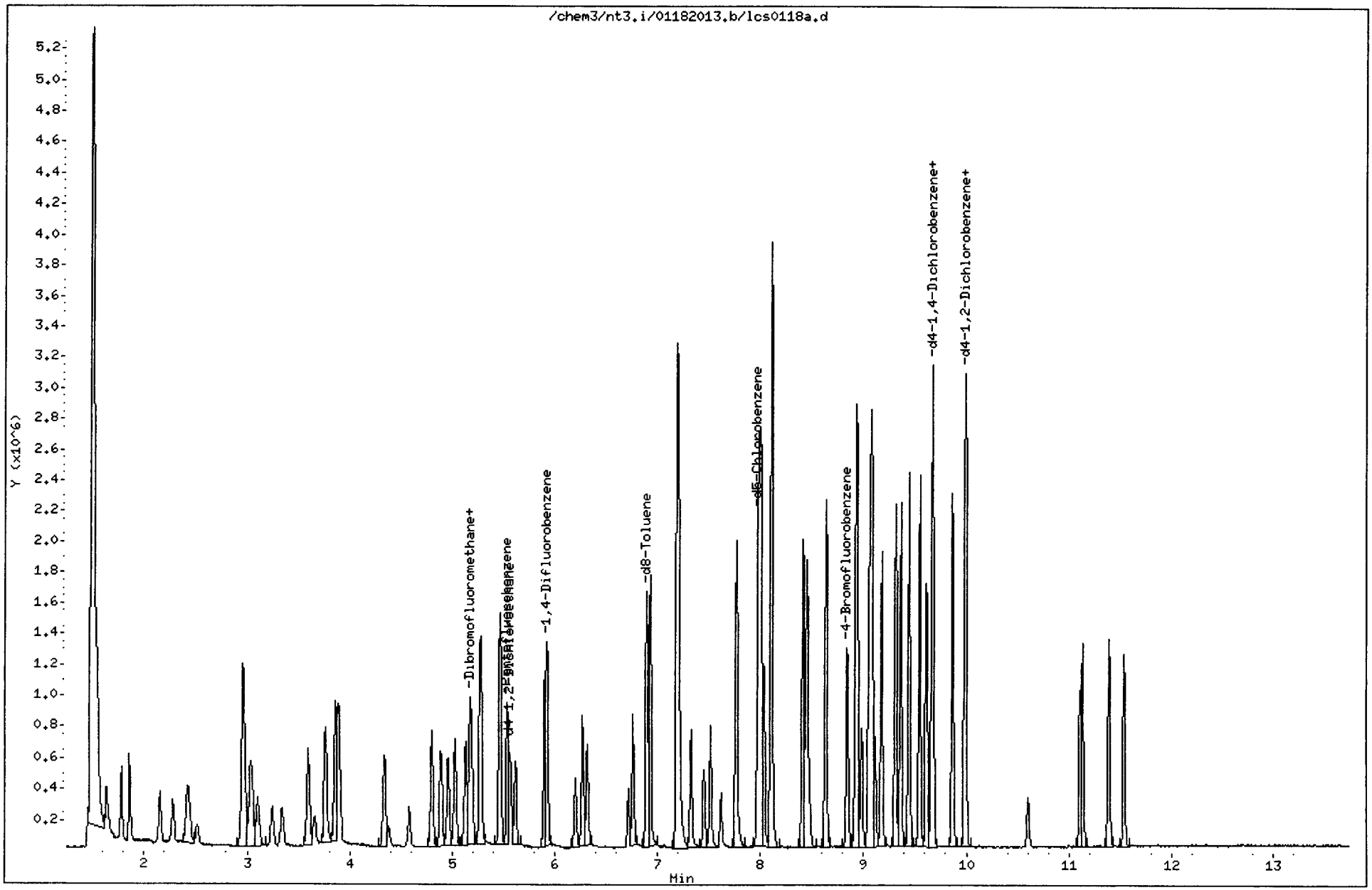
SURROGATE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
$ 32 d4-1,2-Dichloroeth	10.000	10.373	103.73	80-120
$ 43 d8-Toluene	10.000	10.198	101.98	80-120
$ 62 4-Bromofluorobenze	10.000	9.859	98.59	80-120
$ 80 d4-1,2-Dichloroben	10.000	9.894	98.94	80-120

Data File: /chem3/nt3.i/01182013.b/lcs0118a.d
Date : 18-JAN-2013 10:05
Client ID: LCS0118
Sample Info: LCS0118,10,10,0,

Instrument: nt3.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



CO-ELUTION SUMMARY FOR FILE - lcs0118a.d

Lab ID: LCS0118, Method: 8260C011513L.m, Instrument: nt3.i, Date: 18-JAN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

SW8260C 10 mL Purge

Data file : /chem3/nt3.i/01182013.b/vz97s.d
Lab Smp Id: VZ97S Client Smp ID: CSIA20130114-001DW
Inj Date : 18-JAN-2013 15:51
Operator : PB Inst ID: nt3.i
Smp Info : VZ97S,10,10,0
Misc Info : 13-1100
Comment :
Method : /chem3/nt3.i/01182013.b/8260C011513L.m
Meth Date : 23-Jan-2013 12:21 patrickb Quant Type: ISTD
Cal Date : 15-JAN-2013 16:03 Cal File: 8000115.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

1/23/13

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
1 Dichlorodifluoromethane	85	Compound Not Detected.					
2 Chloromethane	50	Compound Not Detected.					
3 Vinyl Chloride	62	Compound Not Detected.					
4 Bromomethane	94	Compound Not Detected.					
5 Chloroethane	64	Compound Not Detected.					
6 Trichlorofluoromethane	101	Compound Not Detected.					
7 1,1-Dichloroethene	96	Compound Not Detected.					
8 Carbon Disulfide	76	Compound Not Detected.					
9 112Trichloro122Trifluoroethane	101	Compound Not Detected.					
10 Iodomethane	142	Compound Not Detected.					
11 Bromoethane	108	Compound Not Detected.					
12 Acrolein	56	Compound Not Detected.					
13 Methylene Chloride	84	Compound Not Detected.					
14 Acetone	43	Compound Not Detected.					
15 Trans-1,2-Dichloroethene	96	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
	16 Methyl tert butyl ether	73	Compound Not Detected.					
	17 1,1-Dichloroethane	63	Compound Not Detected.					
	18 Acrylonitrile	53	Compound Not Detected.					
	19 Vinyl Acetate	43	Compound Not Detected.					
	20 Cis-1,2-Dichloroethene	96	Compound Not Detected.					
	22 2,2-Dichloropropane	77	Compound Not Detected.					
	23 Bromochloromethane	128	Compound Not Detected.					
	24 Chloroform	83	Compound Not Detected.					
	25 Carbon Tetrachloride	117	Compound Not Detected.					
$	26 Dibromofluoromethane	111	5.167	5.170	(0.934)	241291	11.3104	11.310
	27 1,1,1-Trichloroethane	97	Compound Not Detected.					
	28 2-Butanone	43	Compound Not Detected.					
	29 1,1-Dichloropropene	75	Compound Not Detected.					
	30 Benzene	78	Compound Not Detected.					
*	31 Pentafluorobenzene	168	5.535	5.538	(1.000)	395122	10.0000	
$	32 d4-1,2-Dichloroethane	65	5.569	5.566	(1.006)	293476	11.1163	11.116
	33 1,2-Dichloroethane	62	Compound Not Detected.					
	34 Trichloroethene	130	Compound Not Detected.					
*	36 1,4-Difluorobenzene	114	5.925	5.928	(1.000)	631595	10.0000	
	37 Dibromomethane	93	Compound Not Detected.					
	38 1,2-Dichloropropane	63	Compound Not Detected.					
	39 Bromodichloromethane	83	Compound Not Detected.					
	41 2-Chloroethyl Vinyl Ether	63	Compound Not Detected.					
	42 Cis 1,3-dichloropropene	75	Compound Not Detected.					
$	43 d8-Toluene	98	6.892	6.895	(1.163)	725724	9.87496	9.875
	44 Toluene	92	Compound Not Detected.					
	45 Tetrachloroethene	166	Compound Not Detected.					
	46 4-Methyl-2-Pentanone	43	Compound Not Detected.					
	47 Trans 1,3-Dichloropropene	75	Compound Not Detected.					
	48 1,1,2-Trichloroethane	97	Compound Not Detected.					
	49 Chlorodibromomethane	129	Compound Not Detected.					
	50 1,3-Dichloropropane	76	Compound Not Detected.					
	51 1,2-Dibromoethane	107	Compound Not Detected.					
	52 2-Hexanone	43	Compound Not Detected.					
*	53 d5-Chlorobenzene	117	7.978	7.976	(1.000)	598278	10.0000	
	54 Chlorobenzene	112	Compound Not Detected.					
	55 Ethyl Benzene	91	Compound Not Detected.					
	56 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
	57 m,p-xylene	106	Compound Not Detected.					
	58 o-Xylene	106	Compound Not Detected.					
	59 Styrene	104	Compound Not Detected.					
	60 Bromoform	173	Compound Not Detected.					
	61 Isopropyl Benzene	105	Compound Not Detected.					
$	62 4-Bromofluorobenzene	95	8.844	8.841	(1.108)	304823	9.63983	9.640
	63 Bromobenzene	156	Compound Not Detected.					
	64 N-Propyl Benzene	91	Compound Not Detected.					
	65 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
66	2-Chloro Toluene	91	Compound Not Detected.					
67	1,3,5-Trimethyl Benzene	105	Compound Not Detected.					
68	1,2,3-Trichloropropane	110	Compound Not Detected.					
70	Trans-1,4-Dichloro 2-Butene	53	Compound Not Detected.					
71	4-Chloro Toluene	91	Compound Not Detected.					
72	T-Butyl Benzene	119	Compound Not Detected.					
73	1,2,4-Trimethylbenzene	105	Compound Not Detected.					
74	S-Butyl Benzene	105	9.444	9.446	(0.977)	12536	0.12056	0.1206
75	4-Isopropyl Toluene	119	Compound Not Detected.					
76	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 77	d4-1,4-Dichlorobenzene	152	9.664	9.667	(1.000)	375473	10.0000	
78	1,4-Dichlorobenzene	146	Compound Not Detected.					
79	N-Butyl Benzene	91	Compound Not Detected.					
$ 80	d4-1,2-Dichlorobenzene	152	9.987	9.990	(1.033)	364457	10.8048	10.805
81	1,2-Dichlorobenzene	146	Compound Not Detected.					
82	1,2-Dibromo 3-Chloropropane	75	Compound Not Detected.					
83	Hexachloro 1,3-Butadiene	225	Compound Not Detected.					
84	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
85	Naphthalene	128	11.389	11.392	(1.179)	68743	0.93693	0.9369
86	1,2,3-Trichlorobenzene	180	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt3.i
Lab File ID: vz97s.d
Lab Smp Id: VZ97S
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem3/nt3.i/01182013.b/8260C011513L.m
Misc Info: 13-1100

Calibration Date: 18-JAN-2013
Calibration Time: 09:05
Client Smp ID: CSIA20130114-001DW
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	513917	256958	1027834	395122	-23.12
36 1,4-Difluorobenze	821183	410592	1642366	631595	-23.09
53 d5-Chlorobenzene	740077	370038	1480154	598278	-19.16
77 d4-1,4-Dichlorobe	454429	227214	908858	375473	-17.37

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	5.54	5.04	6.04	5.53	-0.05
36 1,4-Difluorobenze	5.93	5.43	6.43	5.93	-0.05
53 d5-Chlorobenzene	7.98	7.48	8.48	7.98	0.03
77 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.66	-0.03

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA
Client SDG: VZ97
Sample Matrix: LIQUID
Fraction: VOA
Lab Smp Id: VZ97S
Client Smp ID: CSIA20130114-001DW
Level: LOW
Operator: PB
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: allspike.spk
Quant Type: ISTD
Sublist File: voa.sub
Method File: /chem3/nt3.i/01182013.b/8260C011513L.m
Misc Info: 13-1100

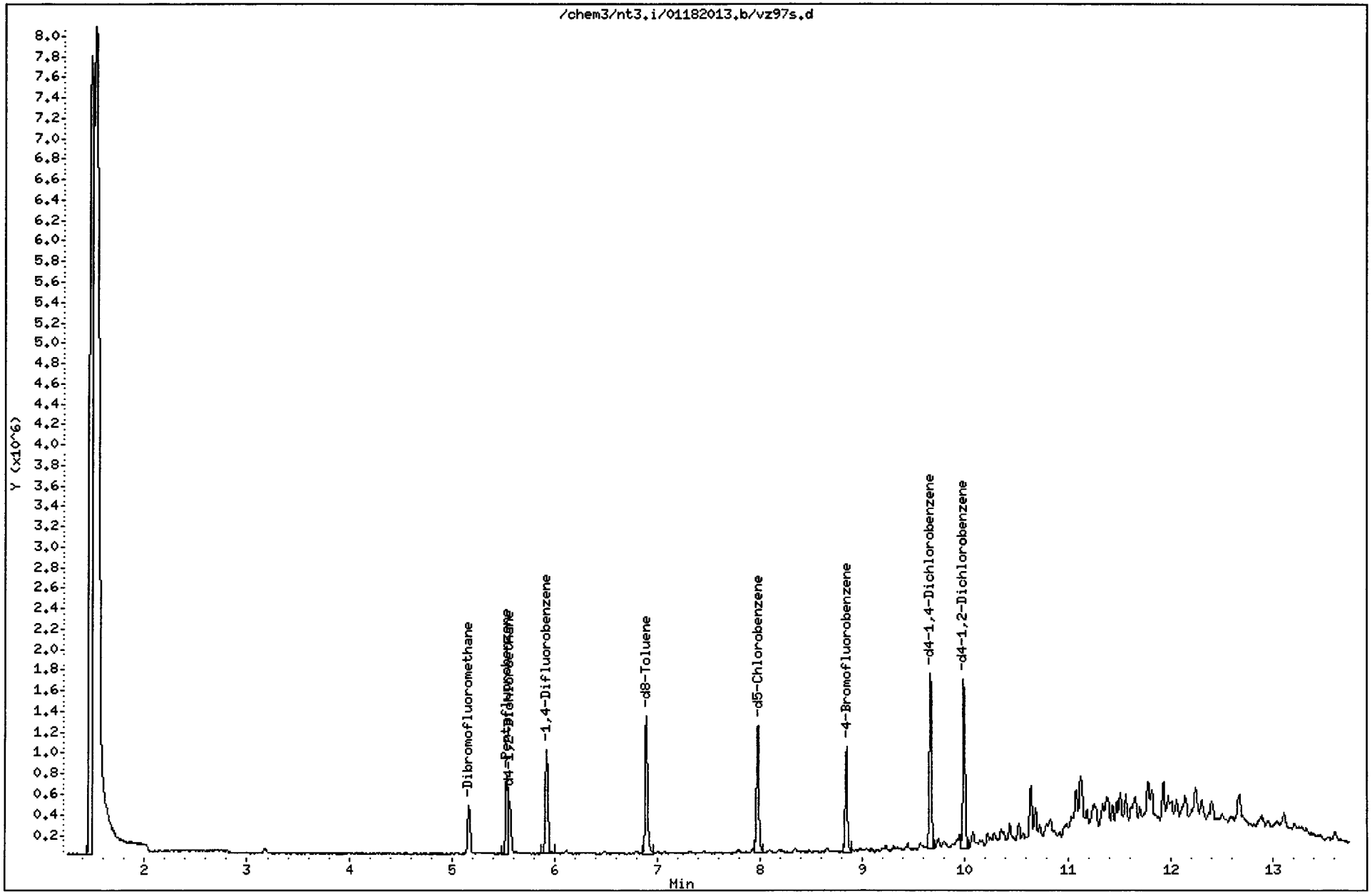
SURROGATE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
$ 26 Dibromofluorometha	10.000	11.310	113.10	80-120
$ 32 d4-1,2-Dichloroeth	10.000	11.116	111.16	80-120
$ 43 d8-Toluene	10.000	9.875	98.75	80-120
$ 62 4-Bromofluorobenze	10.000	9.640	96.40	80-120
$ 80 d4-1,2-Dichloroben	10.000	10.805	108.05	80-120

Data File: /chem3/nt3.i/01182013.b/vz97s.d
Date : 18-JAN-2013 15:51
Client ID: CSIA20130114-001DW
Sample Info: VZ97S,10,10,0

Instrument: nt3.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



Data File: /chem3/nt3.i/01182013.b/vz97s.d

Date : 18-JAN-2013 15:51

Client ID: CSIA20130114-001DW

Instrument: nt3.i

Sample Info: VZ97S,10,10,0

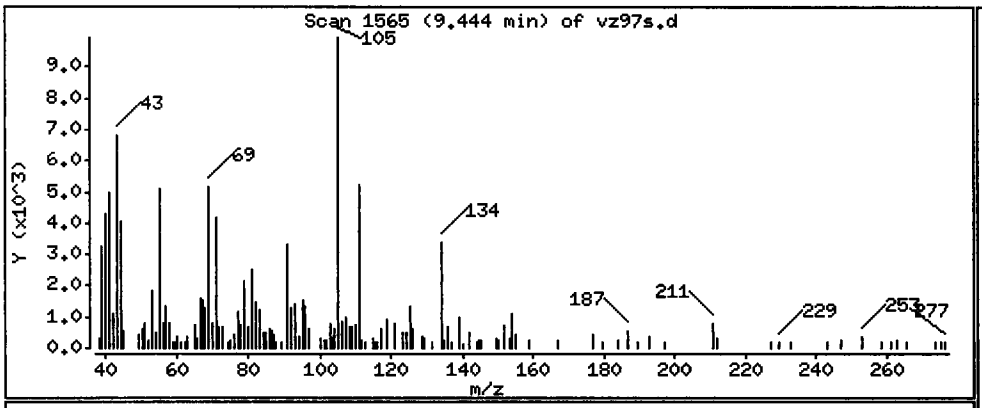
Operator: PB

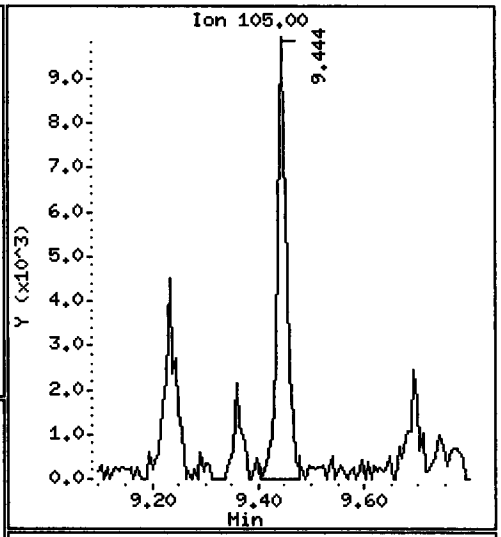
Column phase: RTXVMS

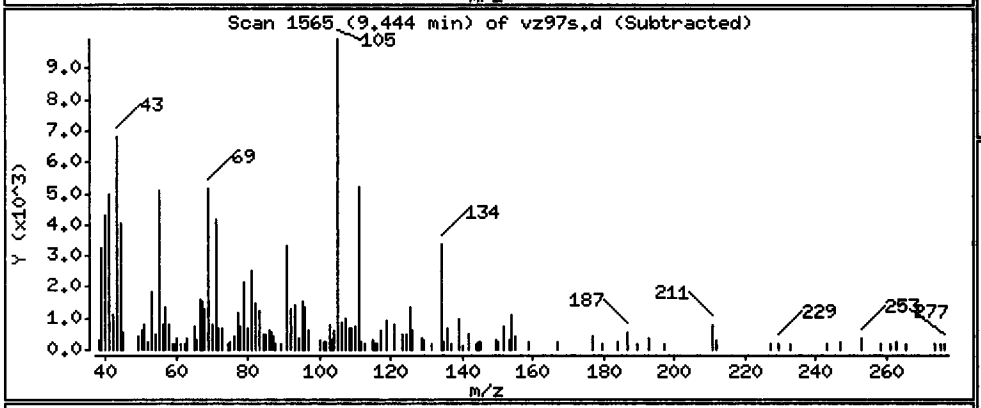
Column diameter: 0.18

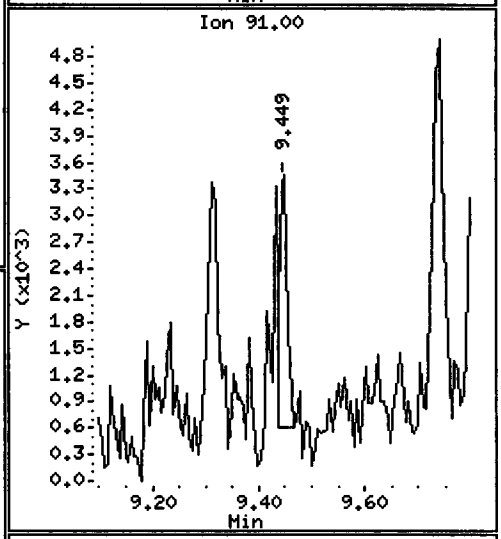
74 S-Butyl Benzene

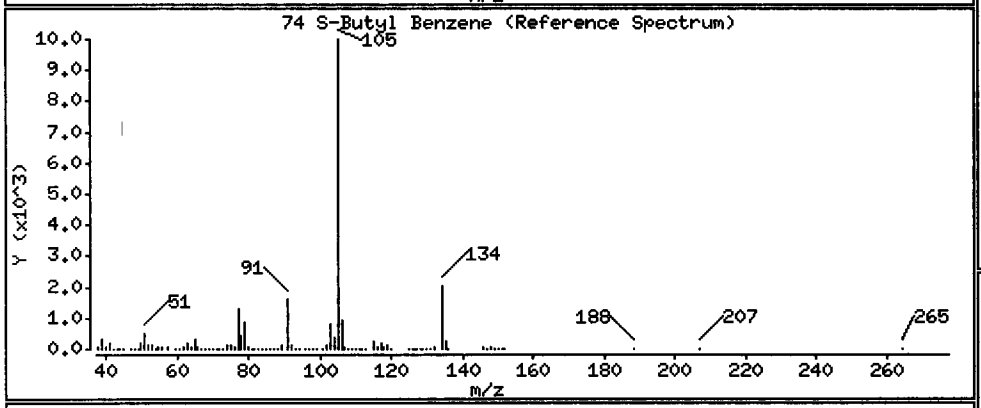
Concentration: 0.1206 ug/L

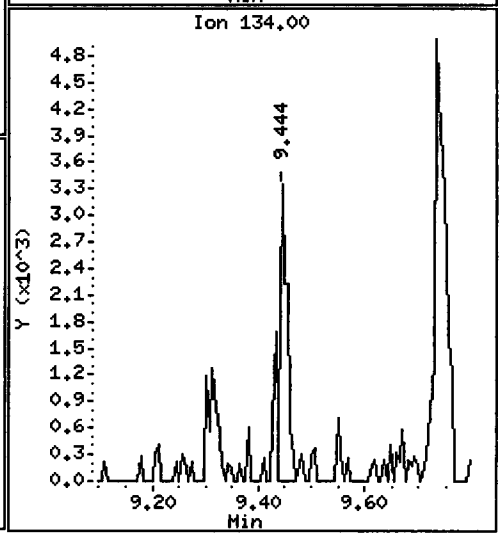


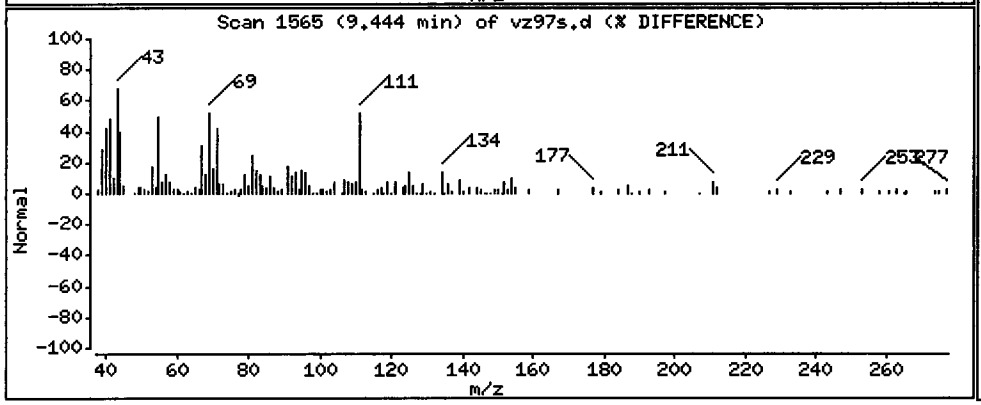












Data File: /chem3/nt3.i/01182013.b/vz97s.d

Date : 18-JAN-2013 15:51

Client ID: CSIA20130114-001DW

Instrument: nt3.i

Sample Info: VZ97S,10,10,0

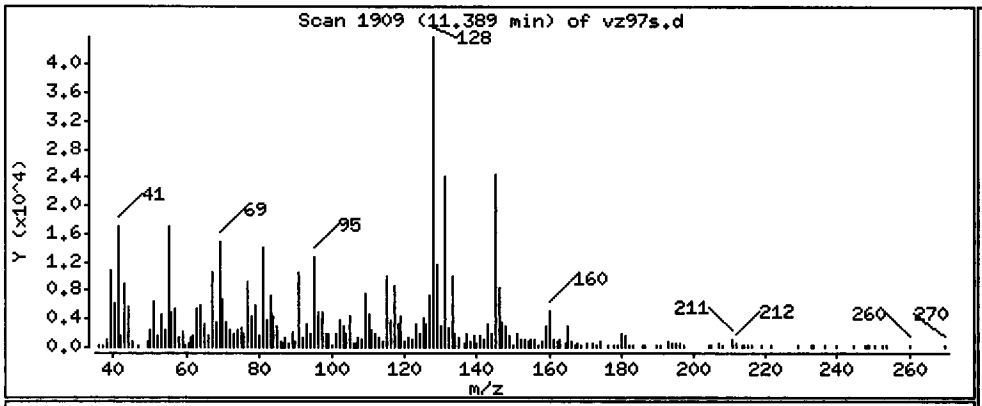
Operator: PB

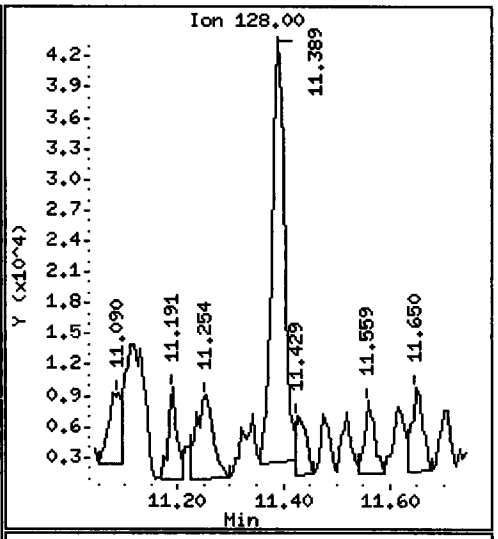
Column phase: RTXVMS

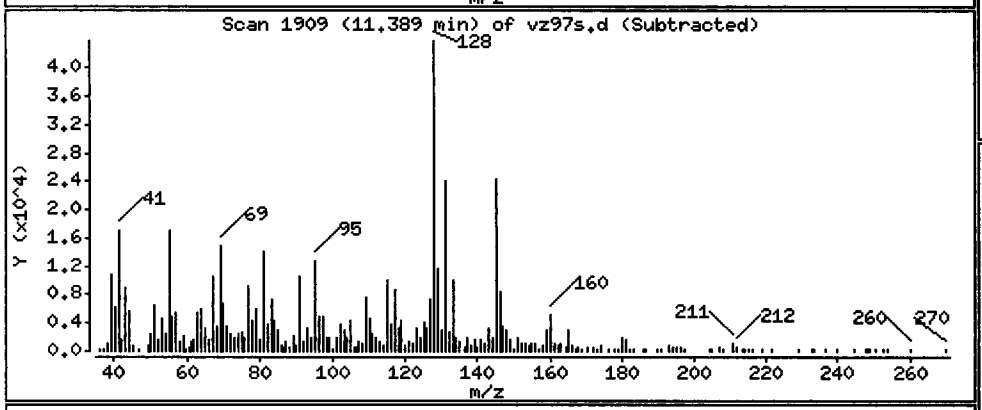
Column diameter: 0.18

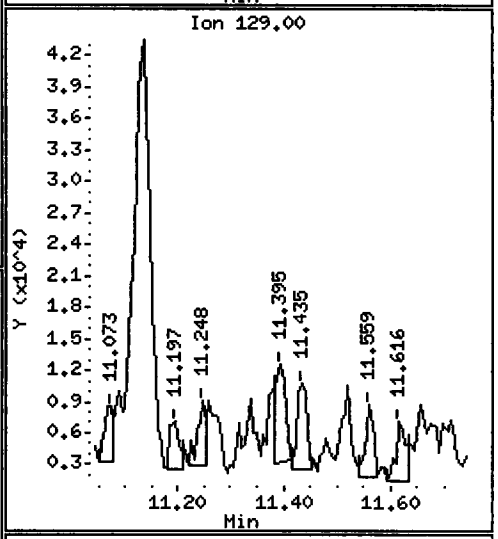
85 Naphthalene

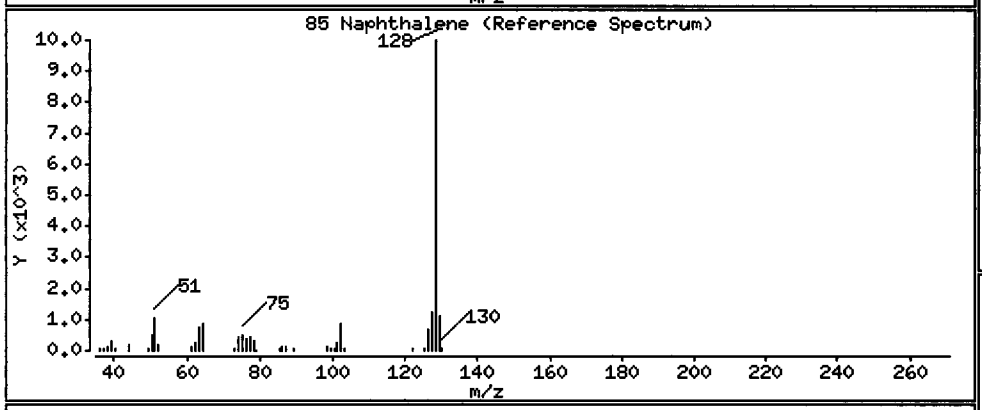
Concentration: 0.9369 ug/L

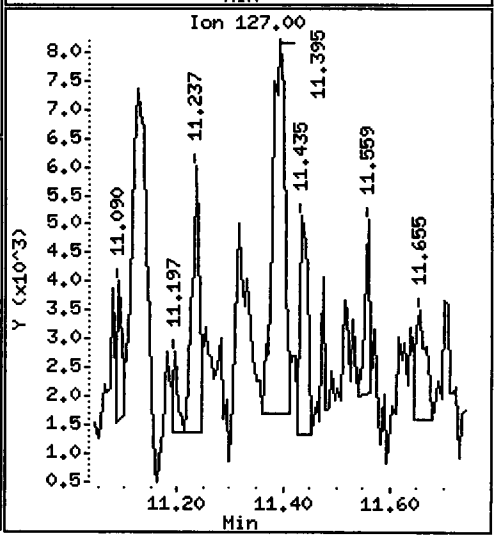


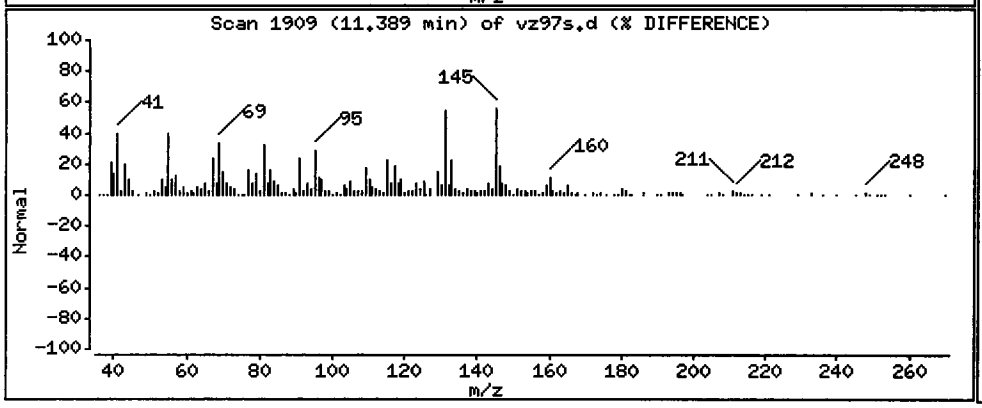












CO-ELUTION SUMMARY FOR FILE - vz97s.d

Lab ID: VZ97S, Method: 8260C011513L.m, Instrument: nt3.i, Date: 18-JAN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

SW8260C 10 mL Purge

Data file : /chem3/nt3.i/01182013.b/vz97u.d
Lab Smp Id: VZ97U Client Smp ID: Trip Blanks
Inj Date : 18-JAN-2013 11:50
Operator : PB Inst ID: nt3.i
Smp Info : VZ97U,10,10,0
Misc Info : 13-1113
Comment :
Method : /chem3/nt3.i/01182013.b/8260C011513L.m
Meth Date : 23-Jan-2013 12:21 patrickb Quant Type: ISTD
Cal Date : 15-JAN-2013 16:03 Cal File: 8000115.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
1 Dichlorodifluoromethane	85	Compound Not Detected.					
2 Chloromethane	50	Compound Not Detected.					
3 Vinyl Chloride	62	Compound Not Detected.					
4 Bromomethane	94	Compound Not Detected.					
5 Chloroethane	64	Compound Not Detected.					
6 Trichlorofluoromethane	101	Compound Not Detected.					
7 1,1-Dichloroethene	96	Compound Not Detected.					
8 Carbon Disulfide	76	Compound Not Detected.					
9 112Trichloro122Trifluoroethane	101	Compound Not Detected.					
10 Iodomethane	142	Compound Not Detected.					
11 Bromoethane	108	Compound Not Detected.					
12 Acrolein	56	Compound Not Detected.					
13 Methylene Chloride	84	Compound Not Detected.					
14 Acetone	43	Compound Not Detected.					
15 Trans-1,2-Dichloroethene	96	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	FINAL (ug/L)
	16 Methyl tert butyl ether	73	Compound Not Detected.					
	17 1,1-Dichloroethane	63	Compound Not Detected.					
	18 Acrylonitrile	53	Compound Not Detected.					
	19 Vinyl Acetate	43	Compound Not Detected.					
	20 Cis-1,2-Dichloroethene	96	Compound Not Detected.					
	22 2,2-Dichloropropane	77	Compound Not Detected.					
	23 Bromochloromethane	128	Compound Not Detected.					
	24 Chloroform	83	Compound Not Detected.					
	25 Carbon Tetrachloride	117	Compound Not Detected.					
$	26 Dibromofluoromethane	111	5.164	5.170	(0.933)	244774	10.6306	10.631
	27 1,1,1-Trichloroethane	97	Compound Not Detected.					
	28 2-Butanone	43	Compound Not Detected.					
	29 1,1-Dichloropropene	75	Compound Not Detected.					
	30 Benzene	78	Compound Not Detected.					
*	31 Pentafluorobenzene	168	5.537	5.538	(1.000)	426457	10.0000	
$	32 d4-1,2-Dichloroethane	65	5.566	5.566	(1.005)	309487	10.8614	10.861
	33 1,2-Dichloroethane	62	Compound Not Detected.					
	34 Trichloroethene	130	Compound Not Detected.					
*	36 1,4-Difluorobenzene	114	5.922	5.928	(1.000)	684055	10.0000	
	37 Dibromomethane	93	Compound Not Detected.					
	38 1,2-Dichloropropane	63	Compound Not Detected.					
	39 Bromodichloromethane	83	Compound Not Detected.					
	41 2-Chloroethyl Vinyl Ether	63	Compound Not Detected.					
	42 Cis 1,3-dichloropropene	75	Compound Not Detected.					
$	43 d8-Toluene	98	6.895	6.895	(1.164)	807573	10.1460	10.146
	44 Toluene	92	Compound Not Detected.					
	45 Tetrachloroethene	166	Compound Not Detected.					
	46 4-Methyl-2-Pentanone	43	Compound Not Detected.					
	47 Trans 1,3-Dichloropropene	75	Compound Not Detected.					
	48 1,1,2-Trichloroethane	97	Compound Not Detected.					
	49 Chlorodibromomethane	129	Compound Not Detected.					
	50 1,3-Dichloropropane	76	Compound Not Detected.					
	51 1,2-Dibromoethane	107	Compound Not Detected.					
	52 2-Hexanone	43	Compound Not Detected.					
*	53 d5-Chlorobenzene	117	7.975	7.976	(1.000)	674926	10.0000	
	54 Chlorobenzene	112	Compound Not Detected.					
	55 Ethyl Benzene	91	Compound Not Detected.					
	56 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
	57 m,p-xylene	106	Compound Not Detected.					
	58 o-Xylene	106	Compound Not Detected.					
	59 Styrene	104	Compound Not Detected.					
	60 Bromoform	173	Compound Not Detected.					
	61 Isopropyl Benzene	105	Compound Not Detected.					
$	62 4-Bromofluorobenzene	95	8.841	8.841	(1.109)	345798	9.69373	9.694
	63 Bromobenzene	156	Compound Not Detected.					
	64 N-Propyl Benzene	91	Compound Not Detected.					
	65 1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/L)	CONCENTRATIONS FINAL (ug/L)
	66 2-Chloro Toluene	91	Compound Not Detected.					
	67 1,3,5-Trimethyl Benzene	105	Compound Not Detected.					
	68 1,2,3-Trichloropropane	110	Compound Not Detected.					
	70 Trans-1,4-Dichloro 2-Butene	53	Compound Not Detected.					
	71 4-Chloro Toluene	91	Compound Not Detected.					
	72 T-Butyl Benzene	119	Compound Not Detected.					
	73 1,2,4-Trimethylbenzene	105	Compound Not Detected.					
	74 S-Butyl Benzene	105	Compound Not Detected.					
	75 4-Isopropyl Toluene	119	Compound Not Detected.					
	76 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	77 d4-1,4-Dichlorobenzene	152	9.667	9.667	(1.000)	396388	10.0000	
	78 1,4-Dichlorobenzene	146	Compound Not Detected.					
	79 N-Butyl Benzene	91	Compound Not Detected.					
$	80 d4-1,2-Dichlorobenzene	152	9.989	9.990	(1.033)	366408	10.2895	10.290
	81 1,2-Dichlorobenzene	146	Compound Not Detected.					
	82 1,2-Dibromo 3-Chloropropane	75	Compound Not Detected.					
	83 Hexachloro 1,3-Butadiene	225	Compound Not Detected.					
	84 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
	85 Naphthalene	128	Compound Not Detected.					
	86 1,2,3-Trichlorobenzene	180	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt3.i
Lab File ID: vz97u.d
Lab Smp Id: VZ97U
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem3/nt3.i/01182013.b/8260C011513L.m
Misc Info: 13-1113

Calibration Date: 18-JAN-2013
Calibration Time: 09:05
Client Smp ID: Trip Blanks
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 5.
If Continuing Cal. use Initial Cal. Level 5

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	513917	256958	1027834	426457	-17.02
36 1,4-Difluorobenze	821183	410592	1642366	684055	-16.70
53 d5-Chlorobenzene	740077	370038	1480154	674926	-8.80
77 d4-1,4-Dichlorobe	454429	227214	908858	396388	-12.77

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	5.54	5.04	6.04	5.54	-0.01
36 1,4-Difluorobenze	5.93	5.43	6.43	5.92	-0.10
53 d5-Chlorobenzene	7.98	7.48	8.48	7.98	0.00
77 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA
Client SDG: VZ97
Sample Matrix: LIQUID
Fraction: VOA
Lab Smp Id: VZ97U
Client Smp ID: Trip Blanks
Level: LOW
Operator: PB
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: allspike.spk
Quant Type: ISTD
Sublist File: voa.sub
Method File: /chem3/nt3.i/01182013.b/8260C011513L.m
Misc Info: 13-1113

SURROGATE COMPOUND	AMOUNT ADDED ug/L	AMOUNT RECOVERED ug/L	% RECOVERED	LIMITS
$ 26 Dibromofluorometha	10.000	10.631	106.31	80-120
$ 32 d4-1,2-Dichloroeth	10.000	10.861	108.61	80-120
$ 43 d8-Toluene	10.000	10.146	101.46	80-120
$ 62 4-Bromofluorobenze	10.000	9.694	96.94	80-120
$ 80 d4-1,2-Dichloroben	10.000	10.290	102.90	80-120

Data File: /chem3/nt3.i/01182013.b/vz97u.d

Date : 18-JAN-2013 11:50

Client ID: Trip Blanks

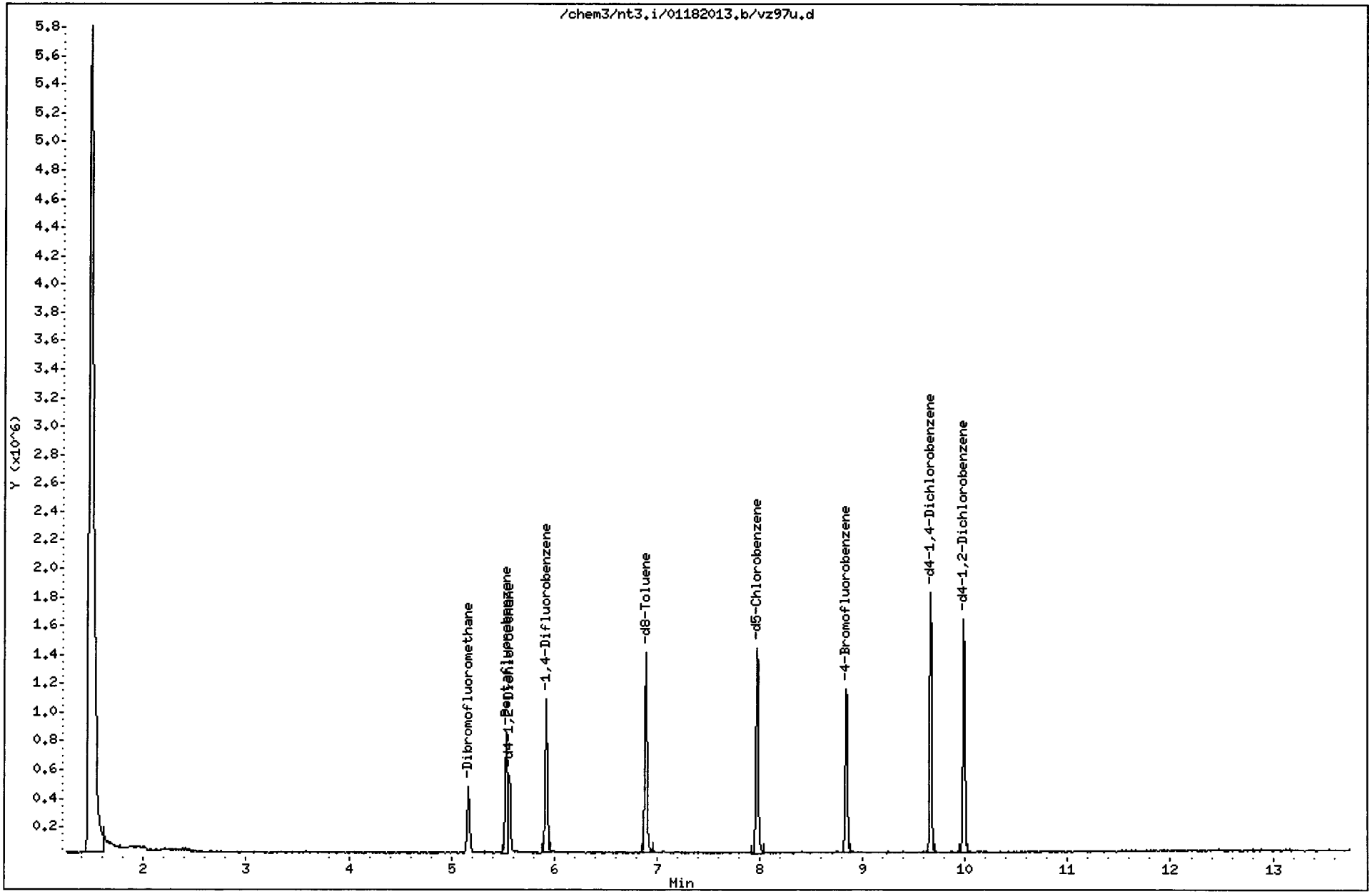
Instrument: nt3.i

Sample Info: VZ97U,10,10,0

Operator: PB

Column phase: RTXVMS

Column diameter: 0.18



CO-ELUTION SUMMARY FOR FILE - vz97u.d

Lab ID: VZ97U, Method: 8260C011513L.m, Instrument: nt3.i, Date: 18-JAN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

SIM Volatile Raw Data
Preparation Log

ARI Job ID: VZ97

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Method 5035 Extraction Bench Sheet

(8260B, 8260B-SIM, 8021, NWTPH-Gx, AK-101, TPH-G, VPH, TCLP-ZHE)

ARI Project No.	Client ID	Prep/Extraction Date	MeOH Lot No.	Analyst
VZ97	Anchor QEA	1/17/13	NA	

Verified 1/18/13

	Lab ID	Vial No.	Preservative			Method 5035 Sample Weight					Comments
			$NaHSO_3$	CH_3OH	Lot #	Vial Weight (g)	Tare (from vial) (g)	Sample Weight (g)	Extract Volume (mL)	MeOH Spilt Volume (µL)	
1	VZ97A	2		X	DE1095	47.98	27.480	20.50	5mL	90µL	90µL 1/18/13
2	B	2		↓	↓	64.03	27.552	36.478	↓	↓	MS/MSD
3	C	3				50.33	27.512	22.818			
4	D	2				42.39	28.029	14.361			
5	E	5				42.49	27.438	15.052			
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											

Balance ID: 400500116 PT120

JMA 1/17/13

VZ97 1/17/13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Method 5035 Extraction Bench Sheet

(8260B, 8260B-SIM, 8021, NWTPH-Gx, AK-101, TPH-G, VPH, TCLP-ZHE)

ARI Project No.: V297 part H | Client ID: | Prep/Extraction Date: 1/18/13 reruns 1/21/13 | MeOH Lot No.: | Analyst: PC

	Lab ID	Vial No.	Preservative			Method 5035 Sample Weight					Comments
			$NaHSO_3$	CH_3OH	Lot #	Vial Weight (g)	Tare (from vial) (g)	Sample Weight (g)	Extract Volume (mL)	MeOH Spilt Volume (µL)	
1	F	5		X	DE695	50.91	27.475	23.435	5	900	
2	G	5				48.50	27.472	21.028			
3	H	~~54~~				49.91	27.454	22.456			
4	I	5				49.76	27.448	22.312			
5	J	5				48.35	27.509	20.841			
6	K	2				44.61	27.404	17.206		10,900	
7	L	5				49.71	27.482	22.228			
8	M	4				41.24	27.477	13.763			
9	N	2				44.03	27.524	16.506			
10	O	5				44.92	27.490	17.43			
11	P	3				44.82	27.554	17.266		,900	
12	Q	4				50.98	27.754	23.226			
13	R	3				45.80	28.063	17.737		900	
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
				Balance ID:							

SIM Volatile Raw Data
Initial Calibration Notes and Raw Data

ARI Job ID: VZ97

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Initial Calibration Notes

ARI SOP: **404S**(Gas) **410S**(BTEX) **430S**(VPH) **700S**(8260C) **703S**(SIM) **706S**(524.3) **710S**(RSK-175)

Instrument: NT-2 NT-3 NT-5 **NT-7** NT-9 PID-1 PID-2 PID-3 FID-6

Curve Date(s): 1/17/13 Internal Standard ID VWI4-1 Expiration 2/13/13

BFB Tune Meets Criteria?	YES / NO	ICV Exceeding ±20%?	YES / NO
ICal Meets %RSD & r^2 Criteria?	YES / NO	ICV Exceeding ±30%?	YES / NO
Q flag applied?	YES / NO	Linear Fits Used?	YES / NO
Manual Integrations for ICal?	YES / NO	Quadratic Fits Used?	YES / NO
Spectral Library Updated?	YES / NO	Calibration Points Dropped?	YES / NO
Minimum Response Factors Met	YES / NO	Purge Volume (mL)	10

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Ultra	VW776-2	4/9/13	accustd	VW1674	4/9/13

Detail problems, corrective actions and/or other pertinent information below:

1000 level mis-spiked - accidentally run as 3000
2000 level not spiked, not used.
VC linear forced.

Analyst: PC **Date:** 1/18/13

Reviewer: VD **Date:** 1/18/13

V297 : 0041 9

Analytical Resources Inc.: Volatile Organics Instrument Log

NT-7 Serial No.:GC=US00024417, MS=US72821196

Date: 1/17/13 Analysis: 826d SIM Analyst: YC

GC Program: SIM VOA7B Column No: 850502 Column Type: RTX-VMS

Instrument Tune (.U or .CT.): 1/17/13 mark.u EM Voltage: 2906

Calibration File: b0117d Curve Date: 1/17/13 Injection Vol.: 10

Solvent(s) used: I7340

IS/SS	Ical/Ccal	LCS/ICV
VW761-1	VW776-2	VW767-4
		VW776-2

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt7.i/20130117.b

	Time	Filename	LabID	ClientID	Vial#	pH	DF						
1	1426	b0b0117d.d	BFB0117	BFB01017			1						
2	1503	tst0117.d	TEST				1						
3	1609	50000117.d	ICS000	ICS000			1	8.21	383795	5.31	232767	8.75	457960
4	1636	20000117.d	IC2000	IC2000		not spiked	1	8.21	407371	5.32	230144	5.75	459462
5	1703	10000117.d	IC1000	IC1000			1	8.21	389100	5.31	228144	5.75	455099
6	1728	05000117.d	IC0500	IC0500			1	8.21	389929	5.32	235041	5.75	466928
7	1755	01000117.d	IC0100	IC0100			1	8.21	386257	5.32	233816	5.75	478754
8	1822	00500117.d	IC0050	IC0050			1	8.21	424833	5.32	261378	5.75	483336
9	1849	00200117.d	IC0020	IC0020			1	8.22	416083	5.32	243969	5.75	479698
10	1916	icv0117.d	ICV1000				1	8.21	402706	5.32	237486	5.75	478546
11	1943	lcs0117.d	LCS0117				1	5.32	253894	5.75	486482	8.21	396293
12	2009	lcs0117a.d	LCS0117A				1	5.32	255940	5.75	476852	8.21	391122
13	2036	mb0117.d	MB0117				1	5.32	257727	5.75	484028	8.21	413423
14	2103	vs97t.d	VS97T	CSIA20130111-0018B		1 cz	1	8.32	240768	5.75	484171	8.22	414562
15	2130	vs97u.d	VS97U	Trip Blanks		4 L	1	5.32	242949	5.75	483685	8.22	408316
16	2157	vs97a.d	VS97A	CSIA-20130107-001B			1	5.32	244833	5.76	490696	8.22	408203
17	2224	vs97b.d	VS97B	CSIA-20130107-002B			1	5.32	237896	5.75	489108	8.22	411823
18	2250	vs97c.d	VS97C	CSIA-20130107-0038+			1	5.32	249900	5.75	478794	8.22	418803
19	2317	vs97d.d	VS97D	CSIA-20130107-0048+			1	5.32	240366	5.76	489897	8.22	414698
20	2344	vs97e.d	VS97E	CSIA-20130107-0058+			1	5.32	239048	5.76	488192	8.22	418401

RC 1/18/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt7.i/20130117.b/sim011713.m
Batch File: /chem1/nt7.i/20130117.b
Inst ID: nt7.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	50000117	10000117	05000117	01000117	00500117	00200117	icv0117
INJ.DATE:	17-JAN-2013	17-JAN-2013	17-JAN-2013	17-JAN-2013	17-JAN-2013	17-JAN-2013	17-JAN-2013
INJ.TIME:	16:09	17:02	17:28	17:55	18:22	18:49	19:16

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Vinyl Chloride	1.531	1.532	1.532	1.534	1.539	1.535	1.536	1.532	1.317-1.742	1.534	0.003
	2 1,1-Dichloroethene	2.492	2.495	2.495	2.494	2.494	2.499	2.497	2.495	2.279-2.704	2.495	0.002
	3 Trans-1,2-Dichloroethe	3.277	3.278	3.279	3.278	3.278	3.284	3.281	3.278	3.061-3.486	3.279	0.002
	4 Acrylonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.980	3.773-4.198	+++++	+++++
	5 cis-1,2-dichloroethene	4.432	4.434	4.434	4.436	4.439	4.439	4.436	4.434	4.215-4.640	4.436	0.003
	6 Benzene	5.202	5.208	5.209	5.210	5.211	5.212	5.210	5.208	4.978-5.439	5.209	0.003
*	7 Pentafluorobenzene	5.314	5.315	5.316	5.316	5.317	5.317	5.316	5.315	5.102-5.528	5.316	0.001
$	8 d4-1,2-Dichloroethane	5.324	5.325	5.326	5.326	5.326	5.327	5.327	5.325	5.112-5.537	5.326	0.001
	9 1,2-Dichloroethane	5.380	5.381	5.382	5.382	5.383	5.386	5.382	5.381	5.168-5.593	5.382	0.002
	10 Trichloroethene	5.709	5.710	5.712	5.718	5.718	5.719	5.716	5.710	5.480-5.940	5.715	0.004
*	11 1,4-Difluorobenzene	5.753	5.754	5.754	5.754	5.754	5.755	5.754	5.754	5.524-5.984	5.754	0.000
$	12 d8-Toluene	6.901	6.901	6.902	6.903	6.903	6.907	6.902	6.901	6.671-7.131	6.903	0.002
	13 Toluene	6.941	6.942	6.944	6.944	6.945	6.946	6.944	6.942	6.612-7.268	6.944	0.002
	14 Tetrachloroethene	7.268	7.268	7.269	7.270	7.273	7.280	7.269	7.268	7.038-7.499	7.271	0.004
*	15 d5 -Chlorobenzene	8.207	8.208	8.212	8.214	8.215	8.216	8.211	8.208	7.880-8.536	8.212	0.003
	16 Ethyl Benzene	8.247	8.248	8.254	8.262	8.267	8.271	8.252	8.248	7.920-8.577	8.257	0.009
	17 m,p xylene	8.379	8.380	8.385	8.394	8.402	8.418	8.383	8.380	8.052-8.708	8.392	0.014

Reviewer 1 PC Date: 1/18/13
Reviewer 2 VD Date: 1/18/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt7.i/20130117.b/sim011713.m
Batch File: /chem1/nt7.i/20130117.b
Inst ID: nt7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
18 o-xylene	8.744	8.745	8.749	8.757	8.765	8.774	8.748	8.745	8.416-9.073	8.755	0.011
$ 19 4-Bromofluorobenzene	9.271	9.272	9.280	9.281	9.282	9.285	9.279	9.272	8.943-9.600	9.278	0.005
20 1,1,2,2-Tetrachloroeth	9.454	9.455	9.457	9.466	9.476	9.475	9.457	9.455	9.126-9.783	9.463	0.009

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt7.i/20130117.b

ARI Job No.: IC00 Method: sim011713.m Instrument: nt7.i Date: 17-JAN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1849	00200117.d	IC0020	IC0020	1	o-xylene, Trans-1,2-Dichloroethene,
1822	00500117.d	IC0050	IC0050	1	Vinyl Chloride, 1,1,2,2-Tetrachloroethane, Trans-1,2-Dichloroethene,
1755	01000117.d	IC0100	IC0100	1	NO MANUAL INTEGRATION
1728	05000117.d	IC0500	IC0500	1	NO MANUAL INTEGRATION
1702	10000117.d	IC1000	IC1000	1	NO MANUAL INTEGRATION
1609	50000117.d	IC5000	IC5000	1	NO MANUAL INTEGRATION
1916	icv0117.d	ICV1000		1	NO MANUAL INTEGRATION

25156 - 1571

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 17-JAN-2013 16:09
End Cal Date : 17-JAN-2013 18:49
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/nt7.i/20130117.b/sim011713.m
Cal Date : 18-Jan-2013 08:29 paul
Curve Type : Average

Calibration File Names:
Level 1: /chem1/nt7.i/20130117.b/00200117.d
Level 2: /chem1/nt7.i/20130117.b/00500117.d
Level 3: /chem1/nt7.i/20130117.b/01000117.d
Level 4: /chem1/nt7.i/20130117.b/05000117.d
Level 5: /chem1/nt7.i/20130117.b/10000117.d
Level 6: /chem1/nt7.i/20130117.b/20000117.d
Level 7: /chem1/nt7.i/20130117.b/50000117.d

3000 rc 1/18/13

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	500.000 Level 4	~~1000.000~~ Level 5	2000.000 Level 6	5000.000 Level 7	RRF	% RSD	
1 Vinyl Chloride	0.56298	0.45307	0.65646	0.72056	0.78270	+++++	0.81444	0.66504	20.688	<-
2 1,1-Dichloroethene	0.62610	0.65656	0.66253	0.61909	0.66152	+++++	0.66050	0.64772	3.039	
3 Trans-1,2-Dichloroethene	0.68759	0.73992	0.74328	0.77169	0.79270	+++++	0.78704	0.75371	5.181	
4 Acrylonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
5 cis-1,2-dichloroethene	0.83084	0.82244	0.73660	0.77562	0.81654	+++++	0.81717	0.79987	4.555	
6 Benzene	1.62039	1.57278	1.48348	1.48206	1.50457	+++++	1.47427	1.52293	3.931	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 17-JAN-2013 16:09
End Cal Date : 17-JAN-2013 18:49
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/nt7.i/20130117.b/sim011713.m
Cal Date : 18-Jan-2013 08:29 paul
Curve Type : Average

3000 PC 1/18/13

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	500.000 Level 4	~~1000.000~~ Level 5	2000.000 Level 6	5000.000 Level 7	RRF	% RSD
9 1,2-Dichloroethane	0.74620	0.74895	0.80657	0.89126	0.90570	+++++	0.88332	0.83033	8.762
10 Trichloroethene	0.35491	0.32721	0.36984	0.39568	0.41964	+++++	0.40835	0.37927	9.238
13 Toluene	1.84446	1.79284	1.92941	1.87506	1.82013	+++++	1.82414	1.84767	2.625
14 Tetrachloroethene	0.30040	0.29704	0.30521	0.32151	0.34120	+++++	0.35661	0.32033	7.546
16 Ethyl Benzene	1.60732	1.82370	2.12338	2.13825	2.10638	+++++	2.07085	1.97831	10.915
17 m,p xylene	0.76832	0.66341	0.74457	0.79582	0.77935	+++++	0.76020	0.75195	6.211
18 o-xylene	1.35780	1.61081	1.78661	1.86004	1.68884	+++++	1.66493	1.66150	10.447
20 1,1,2,2-Tetrachloroethane	0.25997	0.27668	0.30405	0.31783	0.32933	+++++	0.33414	0.30367	9.795
$ 8 d4-1,2-Dichloroethane	0.62807	0.64677	0.70554	0.62987	0.64397	+++++	0.63215	0.64773	4.530

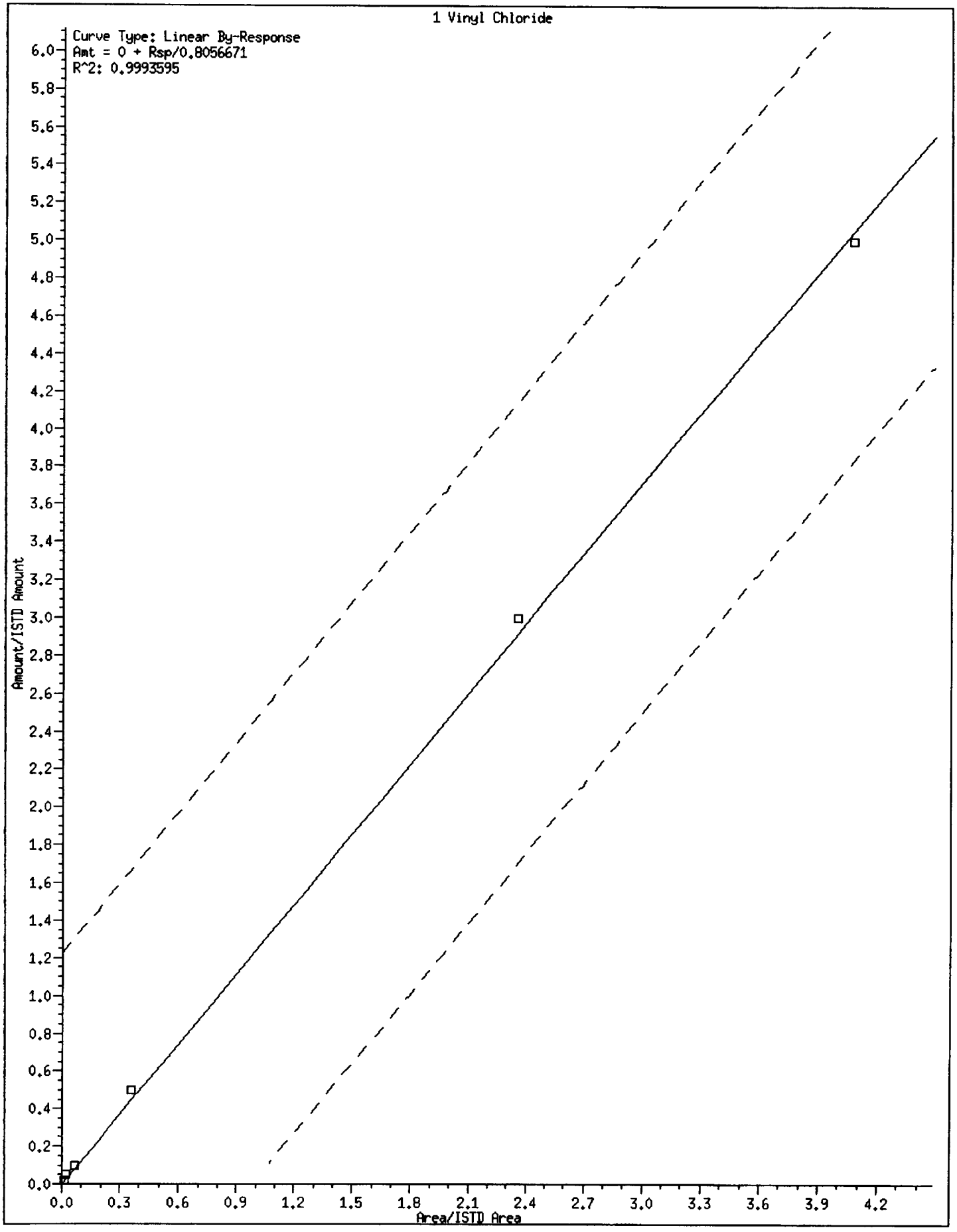
Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 17-JAN-2013 16:09
End Cal Date : 17-JAN-2013 18:49
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/nt7.i/20130117.b/sim011713.m
Cal Date : 18-Jan-2013 08:29 paul
Curve Type : Average

3000 vc 1/18/13

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	500.000 Level 4	~~1000.000~~ Level 5	2000.000 Level 6	5000.000 Level 7	___ RRF	% RSD
$ 12 d8-Toluene	1.01322	1.03279	1.02953	1.04079	1.05573	+++++	1.05704	1.03818	1.610
$ 19 4-Bromofluorobenzene	0.28667	0.28425	0.29747	0.32592	0.32576	+++++	0.32453	0.30743	6.566


1 Vinyl Chloride
Curve Type: Linear By-Response
Amt = 0 + Rsp/0.8056671
R^2: 0.9993595
Amount/ISTD Amount
Area/ISTD Area
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
0.0
0.3
0.6
0.9
1.2
1.5
1.8
2.1
2.4
2.7
3.0
3.3
3.6
3.9
4.2

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 17-JAN-2013 16:09
End Cal Date : 17-JAN-2013 18:49
Quant Method : ISTD
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/nt7.i/20130117.b/sim011713.m
Cal Date : 18-Jan-2013 08:29 paul

Calibration File Names:
Level 1: /chem1/nt7.i/20130117.b/00200117.d
Level 2: /chem1/nt7.i/20130117.b/00500117.d
Level 3: /chem1/nt7.i/20130117.b/01000117.d
Level 4: /chem1/nt7.i/20130117.b/05000117.d
Level 5: /chem1/nt7.i/20130117.b/10000117.d
Level 6: /chem1/nt7.i/20130117.b/20000117.d
Level 7: /chem1/nt7.i/20130117.b/50000117.d

3000 vc 1/18/13

Compound	20 Level 1 / 5000 Level 7	50 Level 2	100 Level 3	500 Level 4	~~1000~~ Level 5	2000 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
1 Vinyl Chloride	2747	5468	15349	84680	538056	+++++					
	947868						LINR	0.000e+00	0.80567		0.99936
2 1,1-Dichloroethene	0.62610	0.65656	0.66253	0.61909	0.66152	+++++					
	0.66050						AVRG		0.64772		3.03950
3 Trans-1,2-Dichloroethene	0.68759	0.73992	0.74328	0.77169	0.79270	+++++					
	0.78704						AVRG		0.75371		5.18074
4 Acrylonitrile	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00 <-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 17-JAN-2013 16:09
End Cal Date : 17-JAN-2013 18:49
Quant Method : ISTD
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/nt7.i/20130117.b/sim011713.m
Cal Date : 18-Jan-2013 08:29 paul

Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Linear	Amt = b + Rsp/m1	Response

SS1303 - 1027

Data File: /chem1/nt7.i/20130117.b/bfb0117d.d

Date : 17-JAN-2013 14:26

Client ID: BFB01017

Instrument: nt7.i

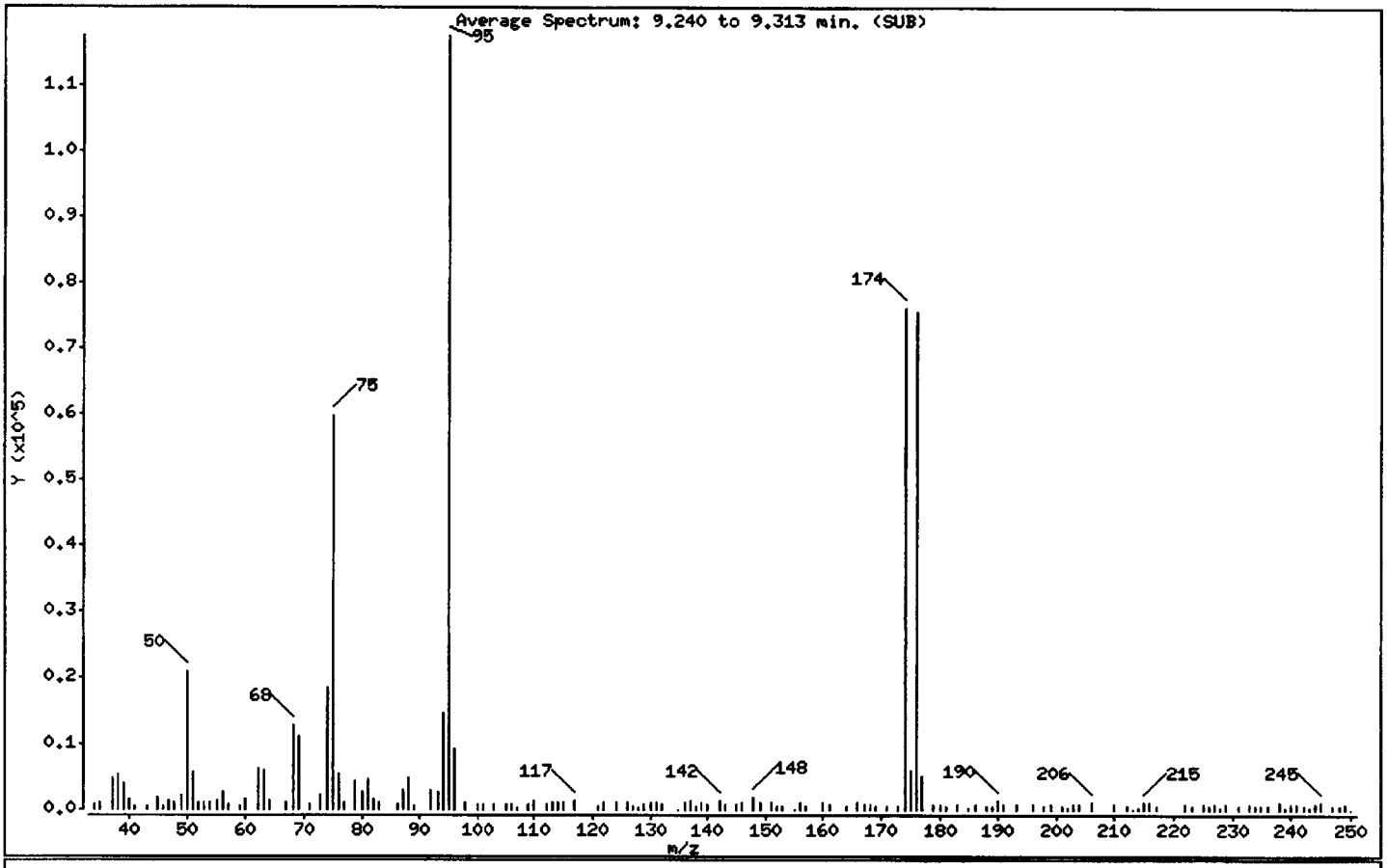
Sample Info: BFB0117,BFB01017,0,1,17jan2013,

Operator: PC

Column phase: RTXVMS

Column diameter: 0.18

1 Bromofluorobenzene



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.61
75	30.00 - 66.00% of mass 95	50.75
96	5.00 - 9.00% of mass 95	7.83
173	Less than 2.00% of mass 174	0.51 (0.78)
174	50.00 - 101.00% of mass 95	64.73
175	4.00 - 9.00% of mass 174	5.13 (7.93)
176	95.00 - 101.00% of mass 174	64.26 (99.27)
177	5.00 - 9.00% of mass 176	4.43 (6.90)

Data File: /chem1/nt7.i/20130117.b/bfb0117d.d

Date : 17-JAN-2013 14:26

Client ID: BFB01017

Instrument: nt7.i

Sample Info: BFB0117,BFB01017,0,1,17jan2013,

Operator: PC

Column phase: RTXVMS

Column diameter: 0.18

Data File: bfb0117d.d

Spectrum: Average Spectrum: 9.240 to 9.313 min. (SUB)

Location of Maximum: 95.00

Number of points: 154

m/z	Y	m/z	Y	m/z	Y	m/z	Y
34.00	686	83.00	1004	140.00	726	199.00	912
35.00	1052	86.00	733	142.00	1359	201.00	491
37.00	4912	87.00	3041	143.00	934	202.00	269
38.00	5279	88.00	4791	145.00	936	203.00	751
39.00	3995	89.00	537	146.00	950	204.00	867
40.00	1705	92.00	3101	148.00	1797	206.00	1183
41.00	431	93.00	2652	149.00	1000	210.00	707
43.00	578	94.00	14716	151.00	977	212.00	522
45.00	1936	95.00	117608	152.00	531	213.00	28
46.00	441	96.00	9207	153.00	489	214.00	151
47.00	1286	98.00	969	155.00	125	215.00	1038
48.00	1171	100.00	800	156.00	1106	216.00	1020
49.00	2246	101.00	696	157.00	511	217.00	480
50.00	20704	103.00	739	160.00	1102	222.00	692
51.00	5752	105.00	854	161.00	813	223.00	451
52.00	1041	106.00	909	164.00	650	225.00	769
53.00	1210	107.00	219	166.00	1118	226.00	636
54.00	964	109.00	812	167.00	727	227.00	695
55.00	1364	110.00	1259	168.00	904	228.00	386
56.00	2801	112.00	777	169.00	502	229.00	740
57.00	933	113.00	1099	171.00	666	231.00	513
59.00	515	114.00	1039	173.00	595	233.00	936
60.00	1629	115.00	1043	174.00	76128	234.00	638
62.00	6345	117.00	1365	175.00	6034	235.00	639
63.00	5951	121.00	617	176.00	75868	236.00	635
64.00	1226	122.00	1178	177.00	5216	238.00	970
67.00	953	124.00	1055	179.00	722	239.00	333
68.00	12800	126.00	1156	180.00	804	240.00	784
69.00	11075	127.00	407	181.00	521	241.00	801
71.00	788	128.00	224	183.00	836	242.00	565
73.00	2222	129.00	875	185.00	188	243.00	328
74.00	18488	130.00	1105	186.00	789	244.00	790
75.00	59680	131.00	1081	188.00	579	245.00	1181
76.00	5343	132.00	766	189.00	492	247.00	651
77.00	1151	135.00	124	190.00	1257	248.00	488

Data File: /chem1/nt7.i/20130117.b/bfb0117d.d

Date : 17-JAN-2013 14:26

Client ID: BFB01017

Instrument: nt7.i

Sample Info: BFB0117,BFB01017,0,1,17jan2013,

Operator: PC

Column phase: RTXVMS

Column diameter: 0.18

Data File: bfb0117d.d

Spectrum: Average Speotrum: 9.240 to 9.313 min. (SUB)

Location of Maximum: 95.00

Number of points: 154

m/z	Y	m/z	Y	m/z	Y	m/z	Y
79.00	4273	136.00	1021	191.00	805	249.00	836
80.00	2594	137.00	1261	193.00	709	250.00	116
81.00	4577	138.00	521	196.00	877		
82.00	1595	139.00	950	198.00	406		

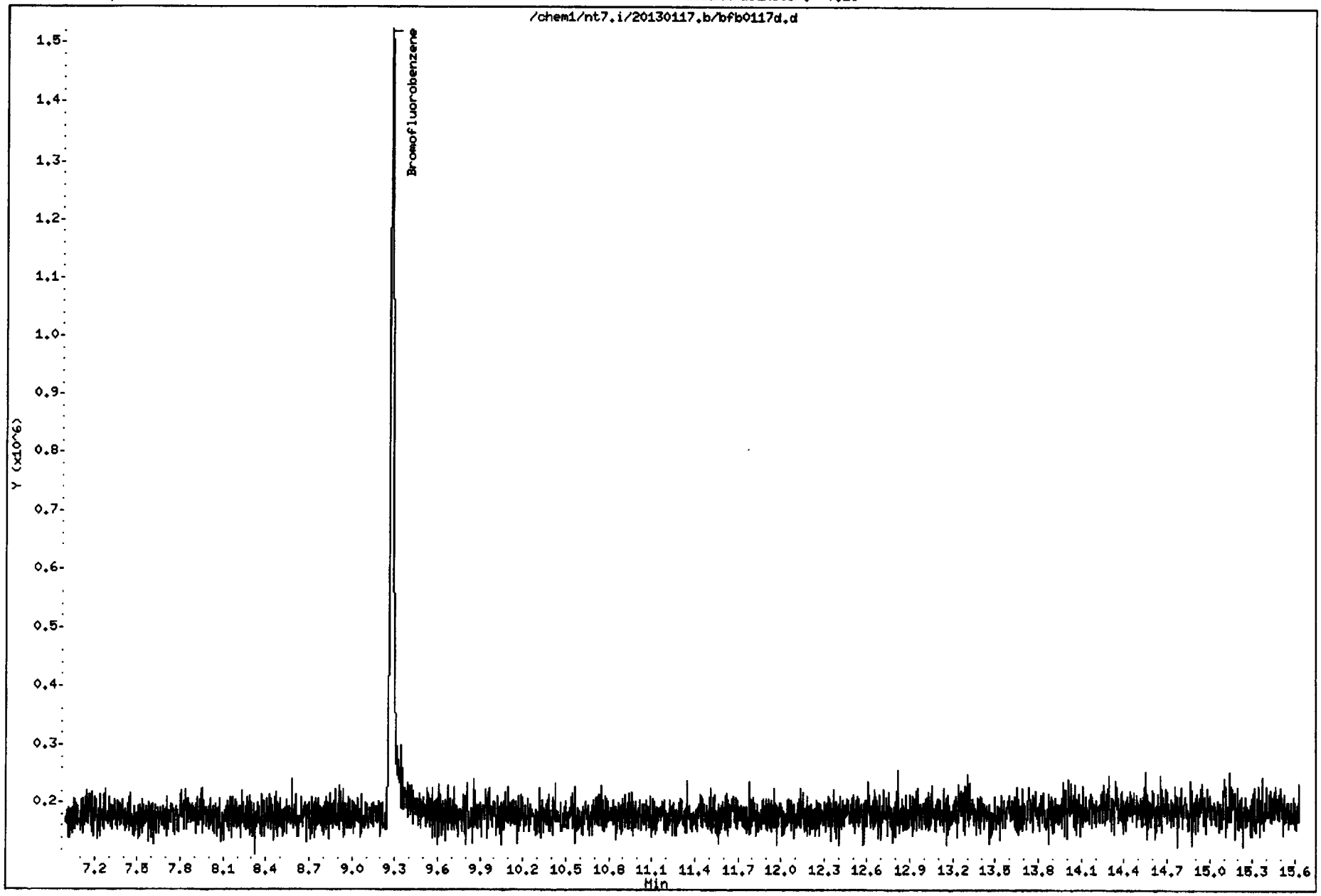
U797:00U21

Data File: /chem1/nt7.i/20130117.b/bfb0117d.d
Date : 17-JAN-2013 14:26
Client ID: BFB01017
Sample Info: BFB0117,BFB01017,0,1,17jan2013,

Column phase: RTXVMS

Instrument: nt7.i

Operator: PC
Column diameter: 0.18



PG 1/28/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/20130117.b/00200117.d
Lab Smp Id: IC0020 Client Smp ID: IC0020
Inj Date : 17-JAN-2013 18:49
Operator : PC Inst ID: nt7.i
Smp Info : IC0020,10,10,0,,
Misc Info : 13-
Comment :
Method : /chem1/nt7.i/20130117.b/sim011713.m
Meth Date : 18-Jan-2013 08:32 paul Quant Type: ISTD
Cal Date : 17-JAN-2013 18:22 Cal File: 00500117.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: chlor+btex.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/L)	ON-COL (ng/L)
	1 Vinyl Chloride	62	1.535	1.532	(0.289)	2747	20.0000	13.976
	2 1,1-Dichloroethene	96	2.499	2.495	(0.470)	3055	20.0000	19.333(Q)
	3 Trans-1,2-Dichloroethene	96	3.284	3.278	(0.618)	3355	20.0000	18.245(QM)
	5 cis-1,2-dichloroethene	96	4.439	4.434	(0.835)	4054	20.0000	20.774
	6 Benzene	78	5.212	5.208	(0.906)	15546	20.0000	21.280
*	7 Pentafluorobenzene	168	5.317	5.315	(1.000)	243969	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.327	5.325	(1.002)	153230	1000.00	969.65
	9 1,2-Dichloroethane	62	5.386	5.381	(1.013)	3641	20.0000	17.974
	10 Trichloroethene	130	5.719	5.710	(0.994)	3405	20.0000	18.715(Q)
*	11 1,4-Difluorobenzene	114	5.755	5.754	(1.000)	479698	1000.00	
$	12 d8-Toluene	98	6.907	6.901	(1.200)	486038	1000.00	975.95
	13 Toluene	91	6.946	6.942	(0.845)	15346	20.0000	19.965
	14 Tetrachloroethene	166	7.280	7.268	(1.265)	2882	20.0000	18.756
*	15 d5 -Chlorobenzene	117	8.216	8.208	(1.000)	416003	1000.00	
	16 Ethyl Benzene	91	8.271	8.248	(1.007)	13373	20.0000	16.249(Q)
	17 m,p xylene	106	8.418	8.380	(1.025)	12785	40.0000	40.871(Q)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/L)	AMOUNTS ON-COL (ng/L)
18 o-xylene	91	8.774	8.745	(1.068)	11297	20.0000	16.344 (M)
$ 19 4-Bromofluorobenzene	174	9.285	9.272	(1.130)	119256	1000.00	932.47
20 1,1,2,2-Tetrachloroethane	83	9.475	9.455	(1.153)	2163	20.0000	17.122

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt7.i
Lab File ID: 00200117.d
Lab Smp Id: IC0020
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/20130117.b/sim011713.m
Misc Info: 13-

Calibration Date: 17-JAN-2013
Calibration Time: 17:02
Client Smp ID: IC0020
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	229144	114572	458288	243969	6.47
11 1,4-Difluorobenze	455099	227550	910198	479698	5.41
15 d5 -Chlorobenzene	389100	194550	778200	416003	6.91

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.31	4.81	5.81	5.32	0.03
11 1,4-Difluorobenze	5.75	5.25	6.25	5.75	0.02
15 d5 -Chlorobenzene	8.21	7.71	8.71	8.22	0.09

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.

Data File: /chem1/nt7.i/20130117.b/00200117.d

Date : 17-JAN-2013 18:49

Client ID: IC0020

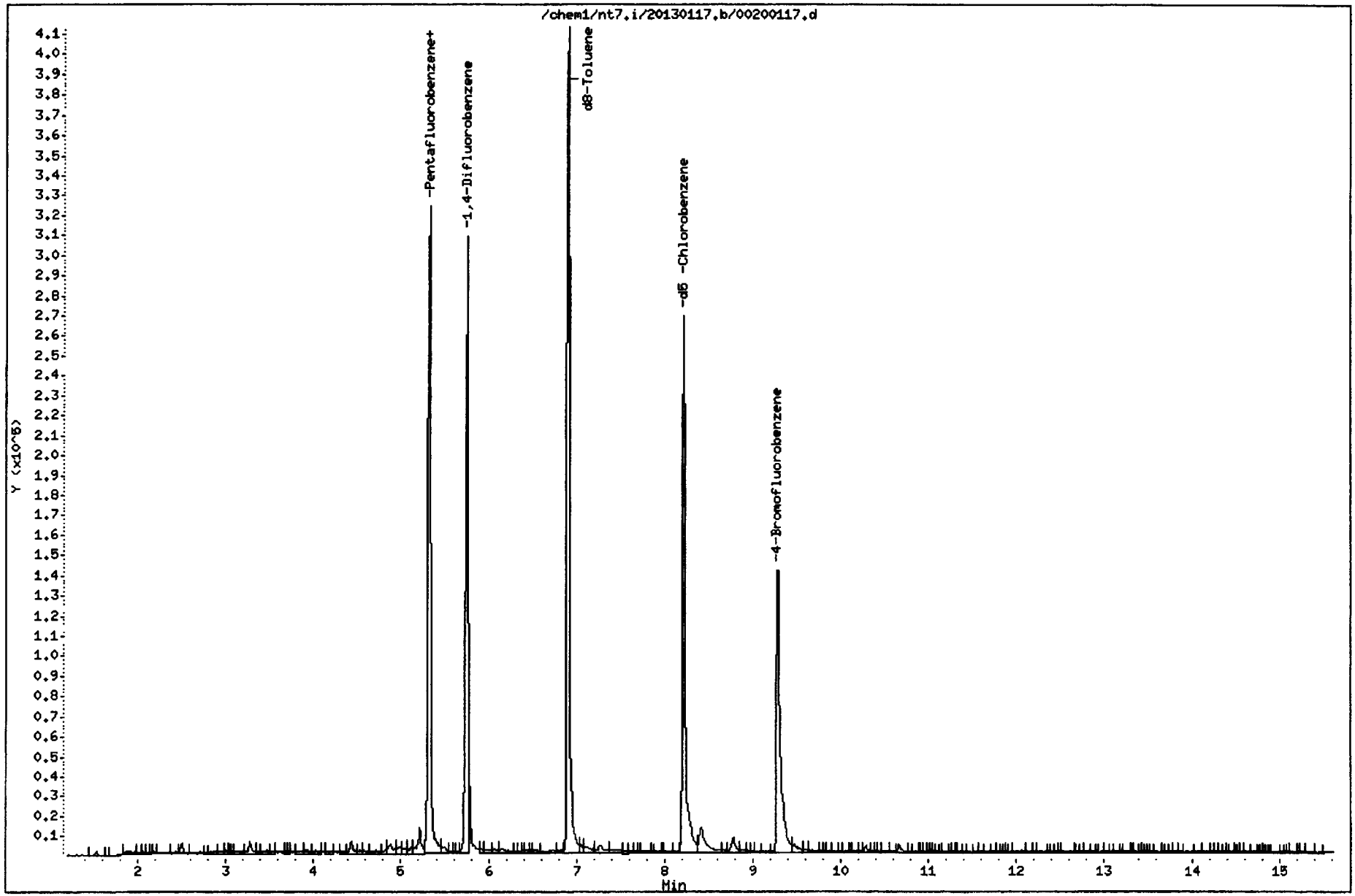
Sample Info: IC0020,10,10,0,,

Column phase: RTXVMS

Instrument: nt7.i

Operator: PC

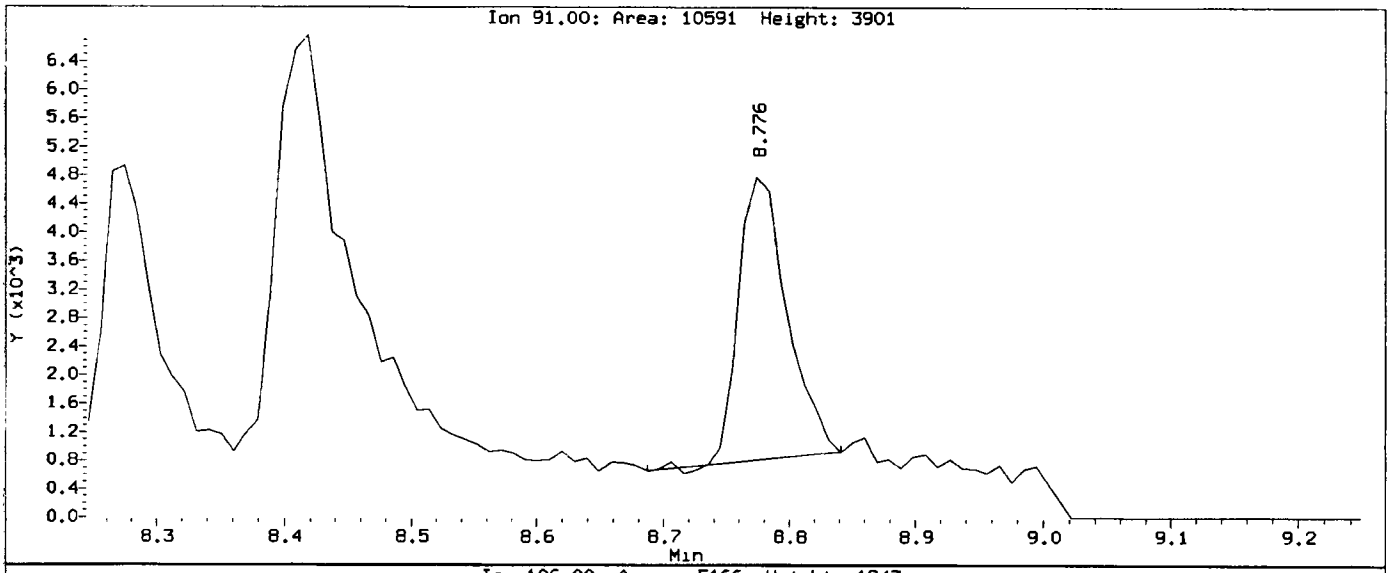
Column diameter: 0.18

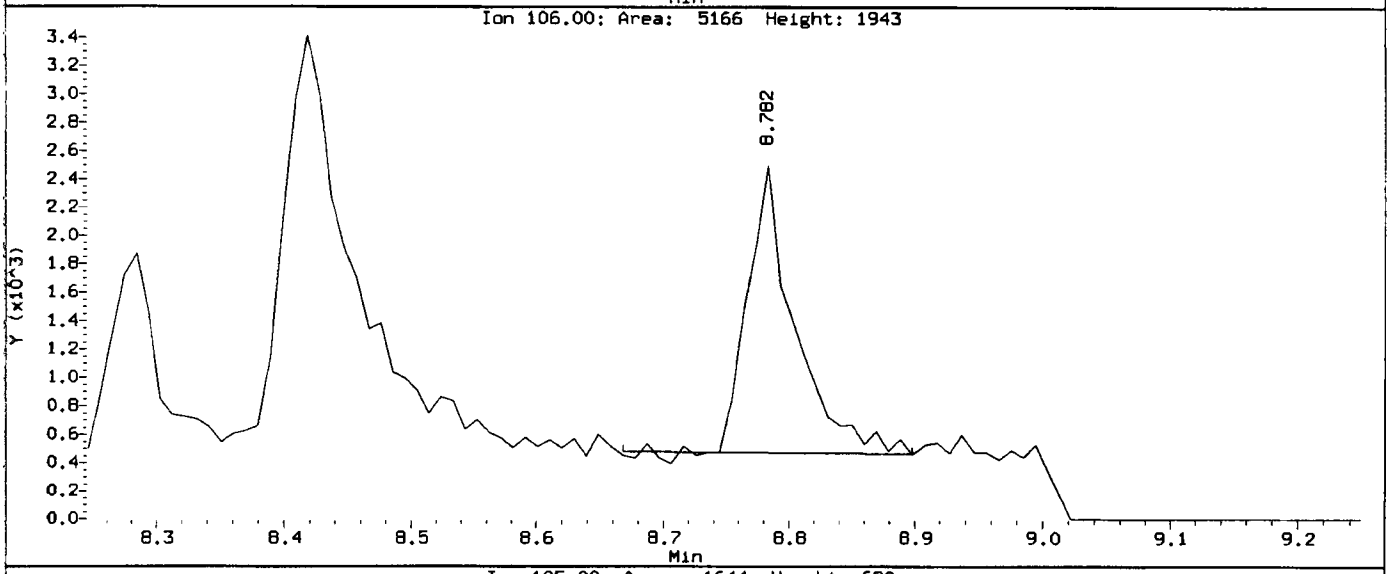


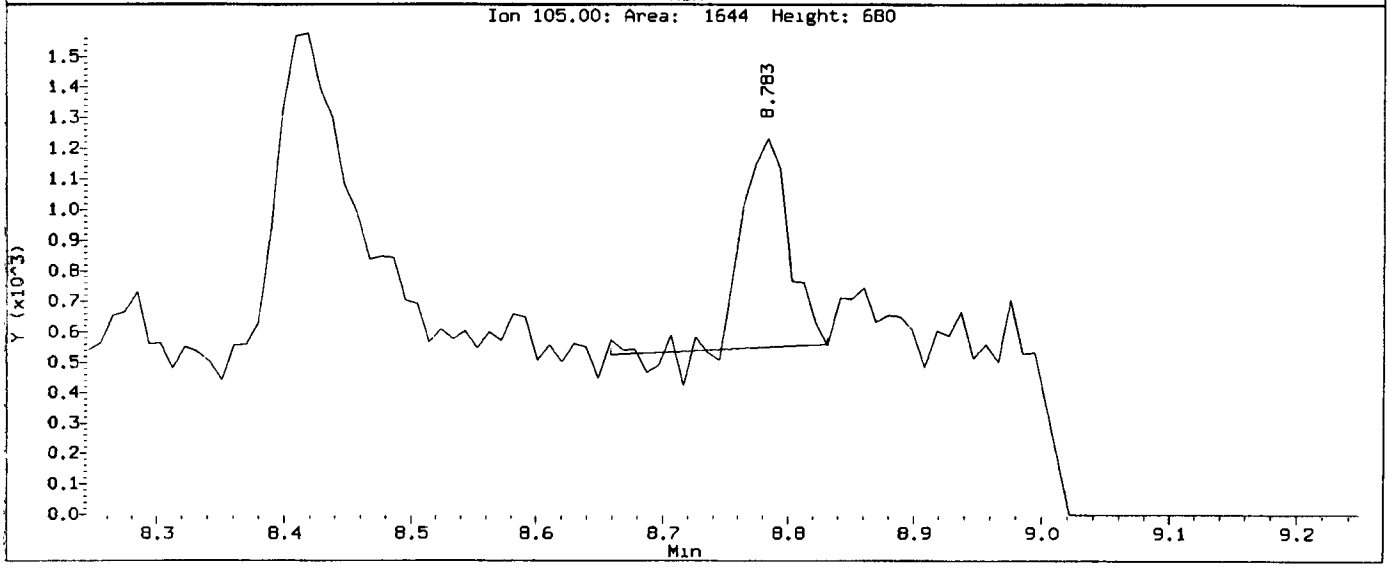
U7017.00135

Data File: /chem1/nt7.i/20130117.b/00200117.d
Injection Date: 17-JAN-2013 18:49
Instrument: nt7.i
Client Sample ID: IC0020

Compound: o-xylene
CAS Number:

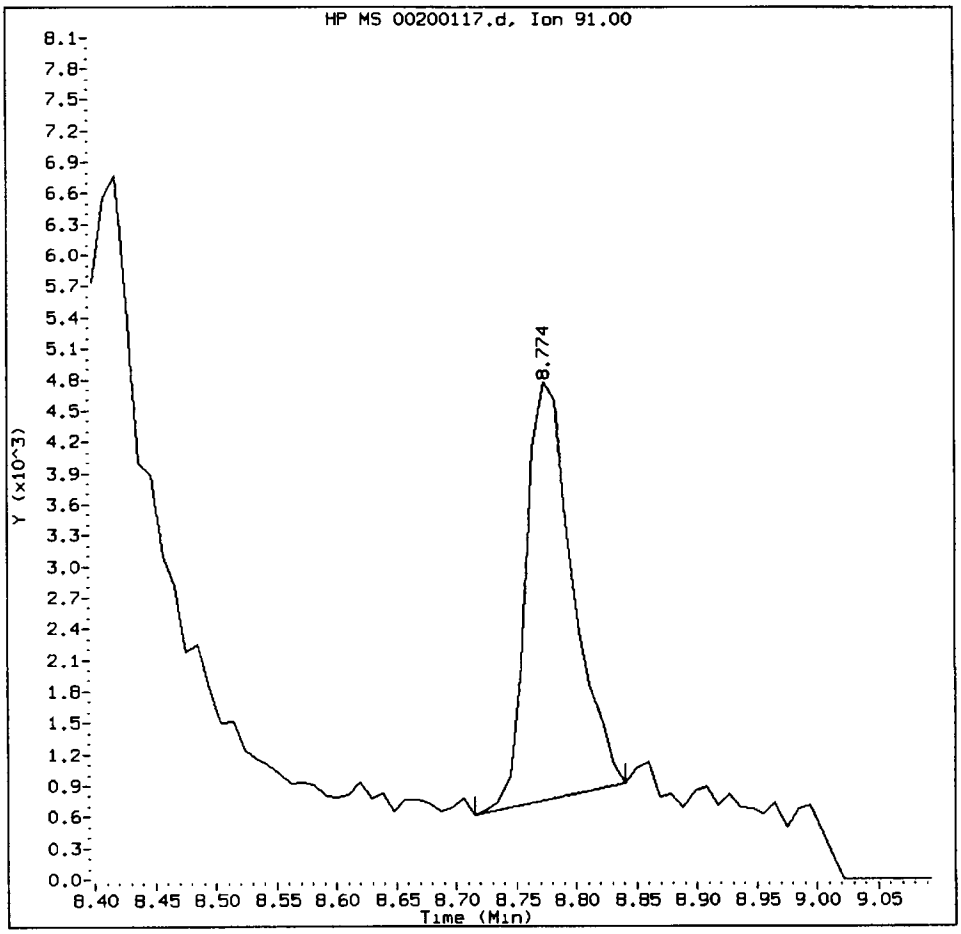






IC0020, /chem1/nt7.i/20130117.b/00200117.d

o-xylene Amount: 16.34 Area: 11297



MANUAL INTEGRATION for o-xylene

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

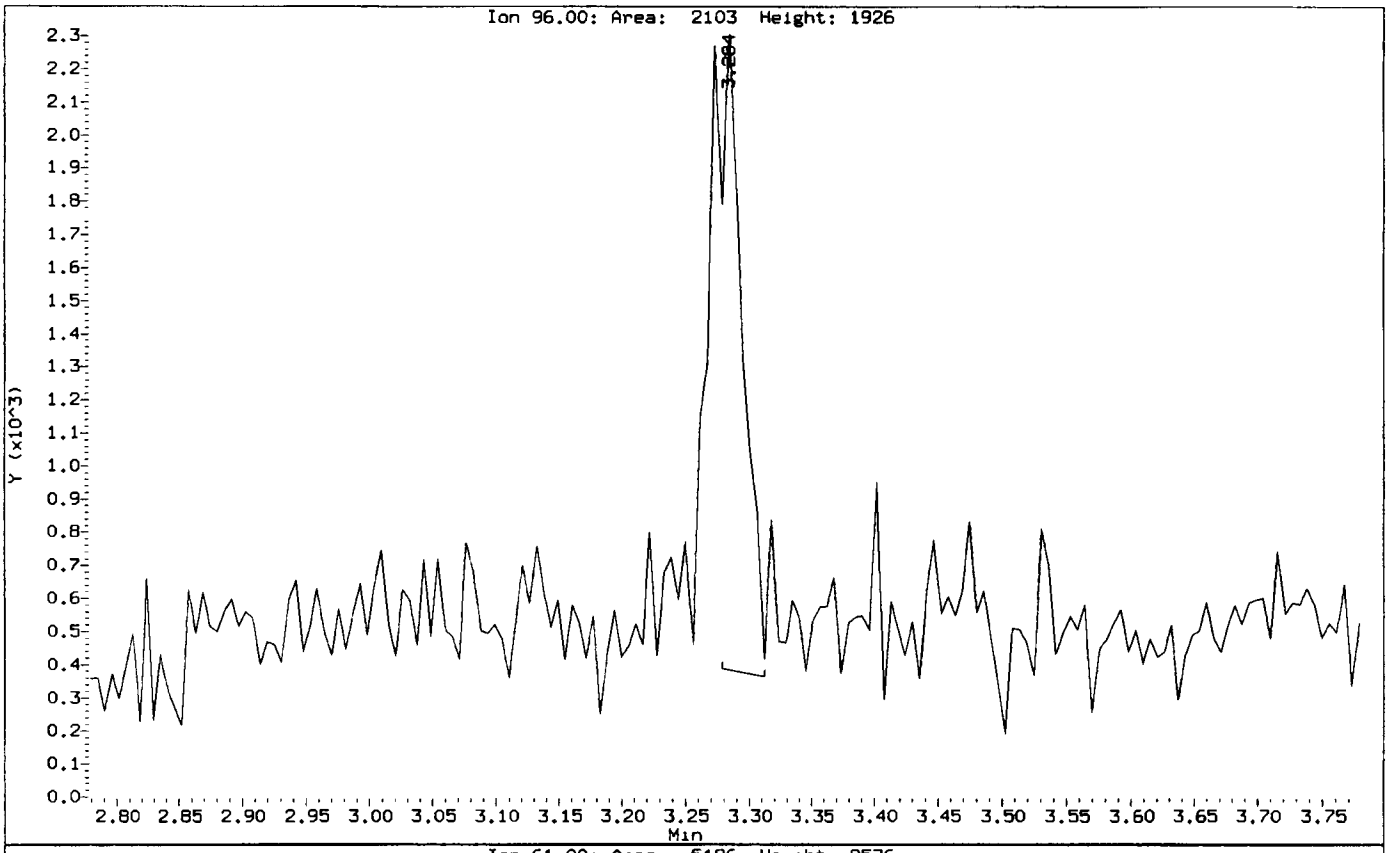
Analyst: PC Date: 1/18/13

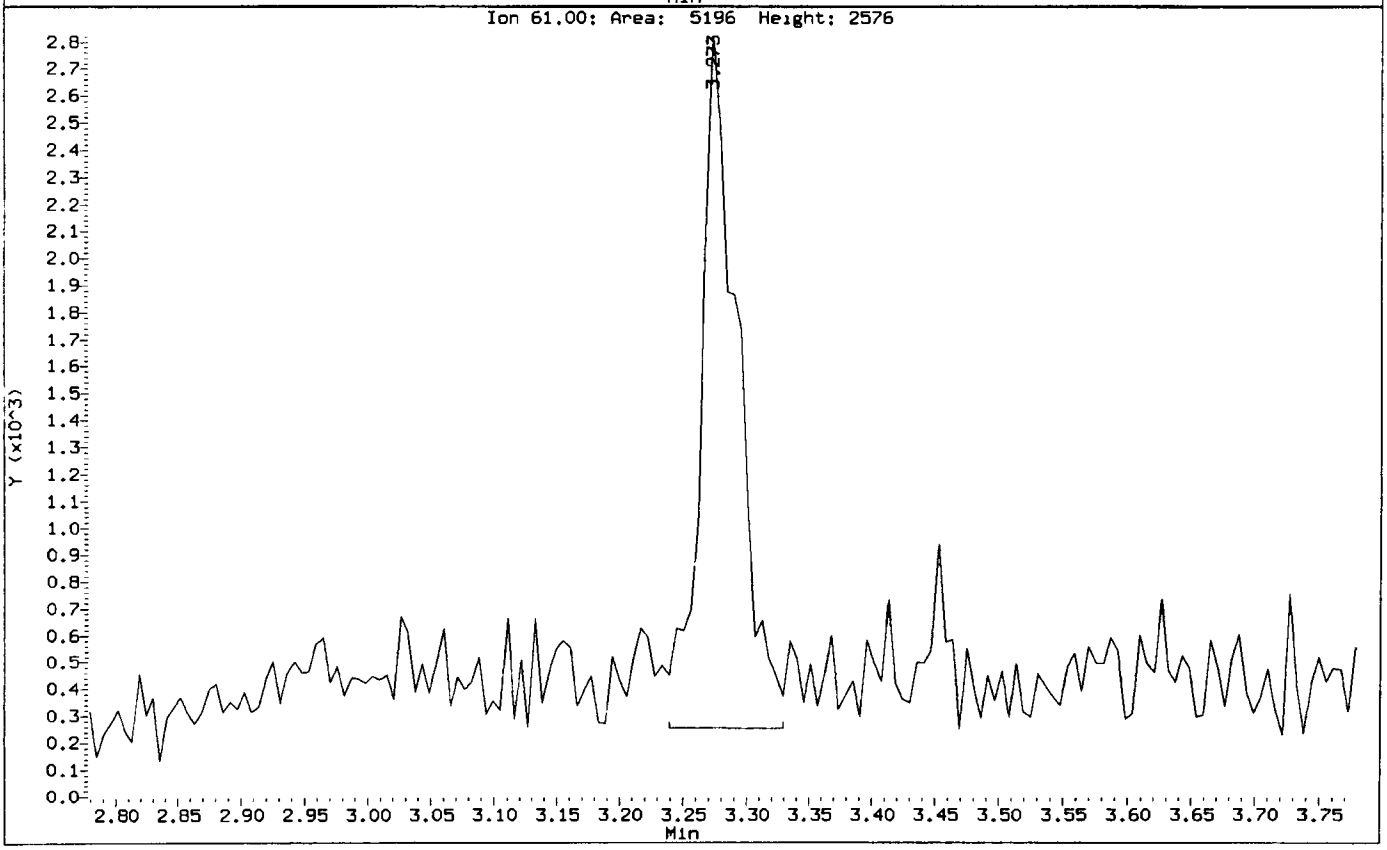
UZ97 00138

Data File: /chem1/nt7.1/20130117.b/00200117.d
Injection Date: 17-JAN-2013 18:49
Instrument: nt7.1
Client Sample ID: IC0020

Compound: Trans-1,2-Dichloroethene
CAS Number:

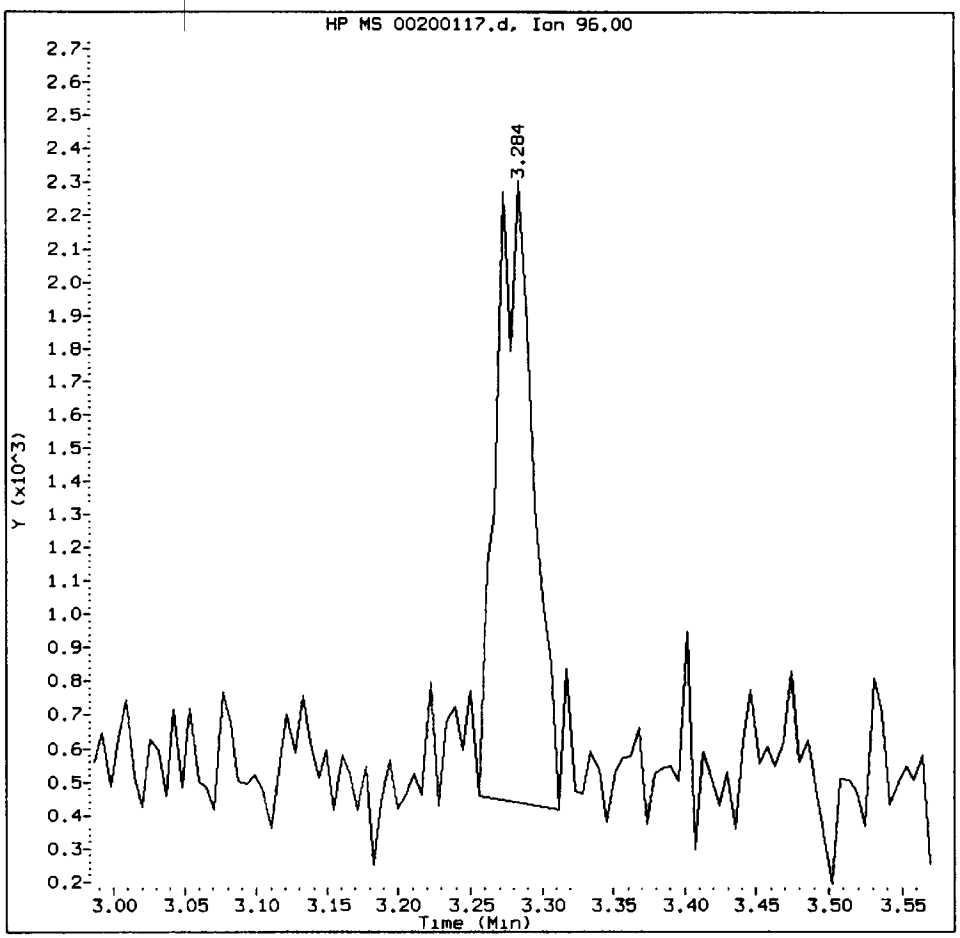
KC 1/18/13





IC0020, /chem1/nt7.i/20130117.b/00200117.d

Trans-1,2-Dichloroethene Amount: 18.25 Area: 3355



MANUAL INTEGRATION for Trans-1,2-Dichloroethene

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: KC Date: 1/18/13

CO-ELUTION SUMMARY FOR FILE - 00200117.d

Lab ID: IC0020, Method: sim011713.m, Instrument: nt7.i, Date: 17-JAN-2013

RT	CO-ELUTION COMPOUNDS

VZ97 : 08UL1

PC 1/18/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/20130117.b/00500117.d
Lab Smp Id: IC0050 Client Smp ID: IC0050
Inj Date : 17-JAN-2013 18:22
Operator : PC Inst ID: nt7.i
Smp Info : IC0050,10,10,0,,
Misc Info : 13-
Comment :
Method : /chem1/nt7.i/20130117.b/sim011713.m
Meth Date : 18-Jan-2013 08:32 paul Quant Type: ISTD
Cal Date : 17-JAN-2013 18:22 Cal File: 00500117.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: chlor+btex.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/L)	ON-COL (ng/L)
	1 Vinyl Chloride	62	1.539	1.532	(0.289)	5468	50.0000	28.117(M)
	2 1,1-Dichloroethene	96	2.494	2.495	(0.469)	7924	50.0000	50.683
	3 Trans-1,2-Dichloroethene	96	3.278	3.278	(0.617)	8930	50.0000	49.085(M)
	5 cis-1,2-dichloroethene	96	4.439	4.434	(0.835)	9926	50.0000	51.411
	6 Benzene	78	5.211	5.208	(0.906)	38001	50.0000	51.637
*	7 Pentafluorobenzene	168	5.317	5.315	(1.000)	241378	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.326	5.325	(1.002)	156115	1000.00	998.51
	9 1,2-Dichloroethane	62	5.383	5.381	(1.012)	9039	50.0000	45.099
	10 Trichloroethene	130	5.718	5.710	(0.994)	7906	50.0000	43.137
*	11 1,4-Difluorobenzene	114	5.754	5.754	(1.000)	483234	1000.00	
$	12 d8-Toluene	98	6.903	6.901	(1.200)	499081	1000.00	994.81
	13 Toluene	91	6.945	6.942	(0.845)	38056	50.0000	48.516
	14 Tetrachloroethene	166	7.273	7.268	(1.264)	7177	50.0000	46.365
*	15 d5 -Chlorobenzene	117	8.215	8.208	(1.000)	424533	1000.00	
	16 Ethyl Benzene	91	8.267	8.248	(1.006)	38711	50.0000	46.092
	17 m,p xylene	106	8.402	8.380	(1.023)	28164	100.000	88.226

UT07-0811

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/L)	AMOUNTS ON-COL (ng/L)
18 o-xylene	91	8.765	8.745	(1.067)	34192	50.0000	48.474
$ 19 4-Bromofluorobenzene	174	9.282	9.272	(1.130)	120674	1000.00	924.60
20 1,1,2,2-Tetrachloroethane	83	9.476	9.455	(1.153)	5873	50.0000	45.556(M)

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt7.i
Lab File ID: 00500117.d
Lab Smp Id: IC0050
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/20130117.b/sim011713.m
Misc Info: 13-

Calibration Date: 17-JAN-2013
Calibration Time: 17:02
Client Smp ID: IC0050
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	229144	114572	458288	241378	5.34
11 1,4-Difluorobenze	455099	227550	910198	483234	6.18
15 d5 -Chlorobenzene	389100	194550	778200	424533	9.11

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.31	4.81	5.81	5.32	0.04
11 1,4-Difluorobenze	5.75	5.25	6.25	5.75	0.01
15 d5 -Chlorobenzene	8.21	7.71	8.71	8.21	0.08

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.

Data File: /chem1/nt7.i/20130117.b/00500117.d

Date : 17-JAN-2013 18:22

Client ID: IC0050

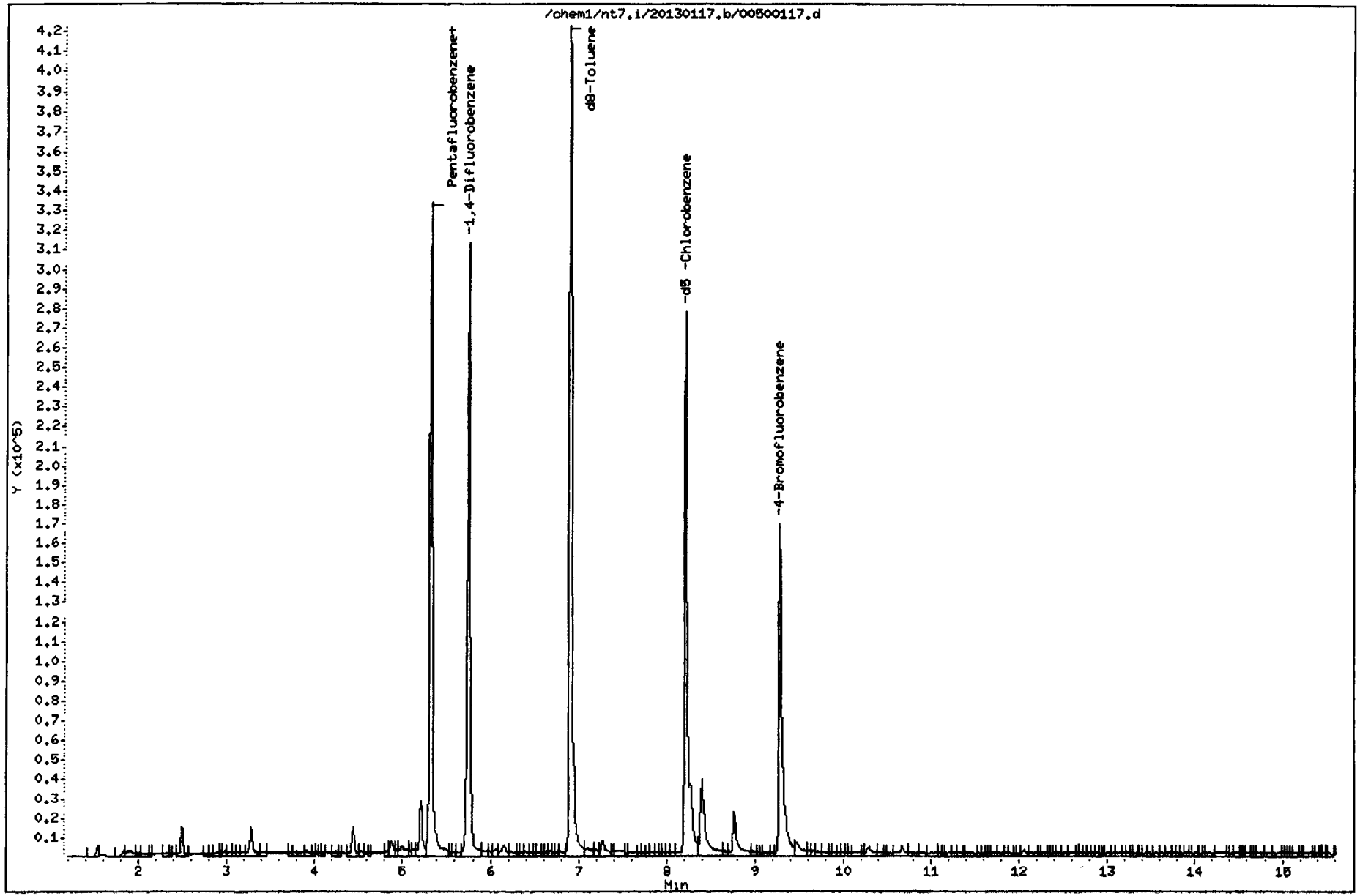
Sample Info: IC0050,10,10,0,,

Column phase: RTXVMS

Instrument: nt7.i

Operator: PC

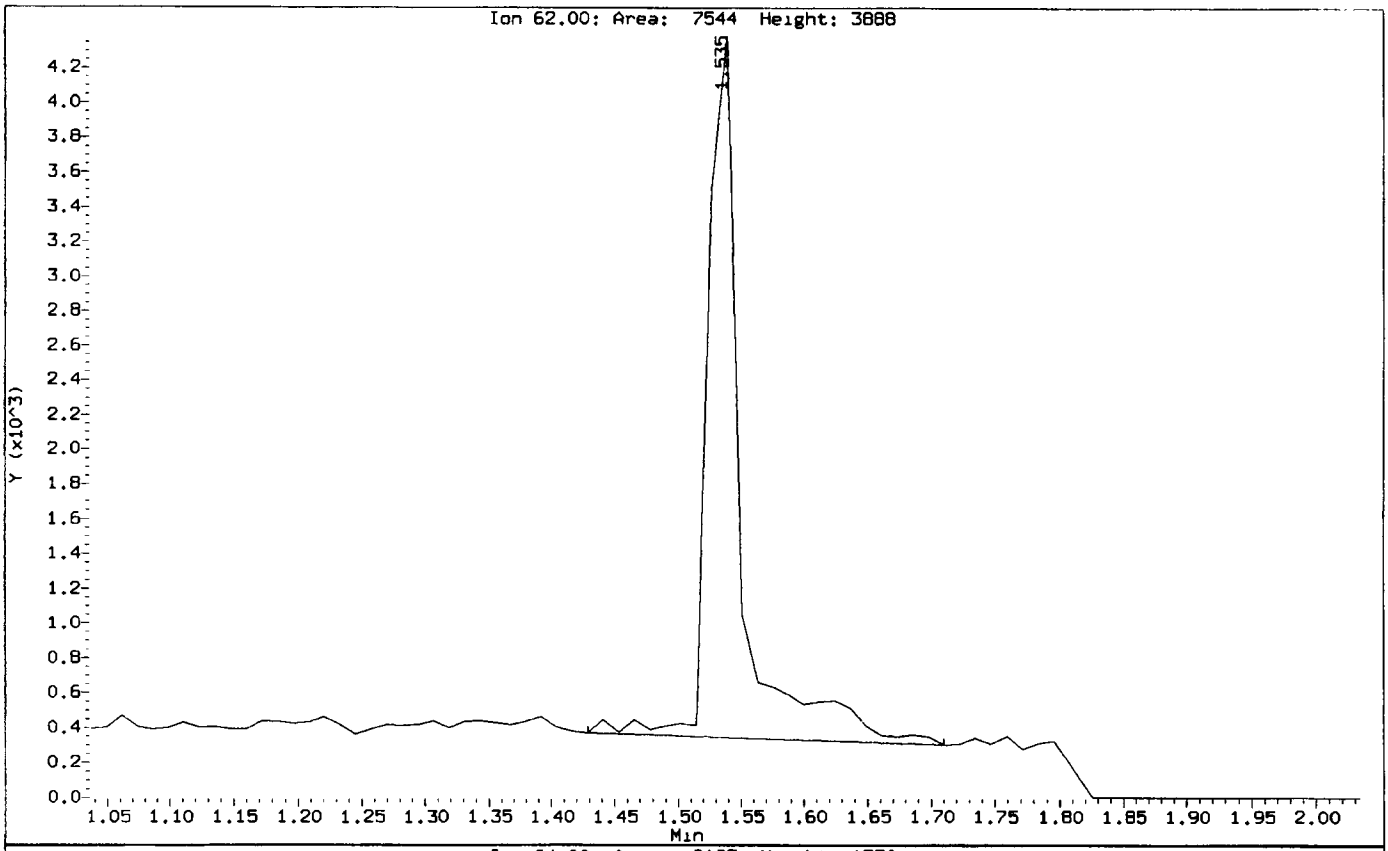
Column diameter: 0.18

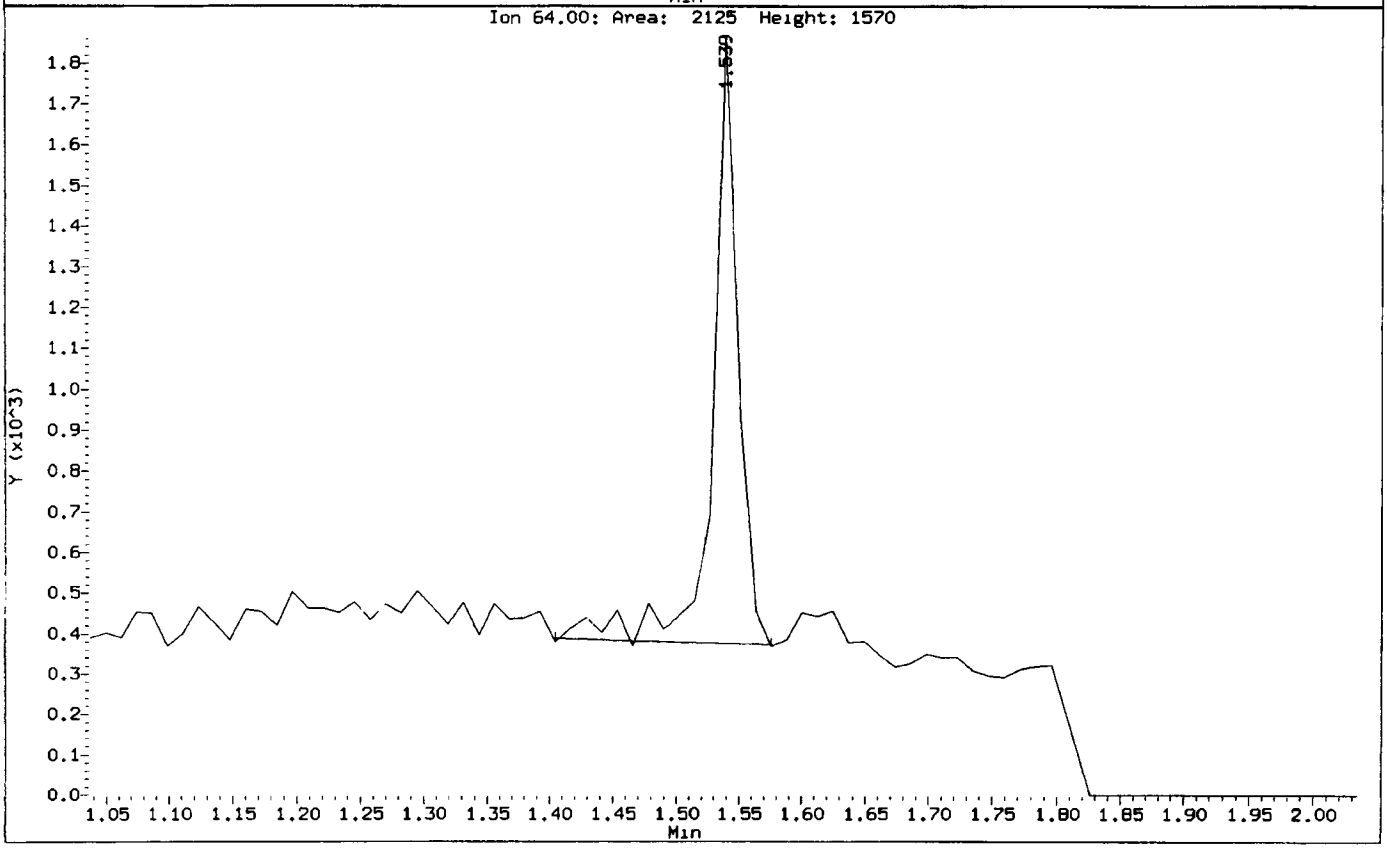


J7207 - 00115

Data File: /chem1/nt7.i/20130117.b/00500117.d
Injection Date: 17-JAN-2013 18:22
Instrument: nt7.i
Client Sample ID: IC0050

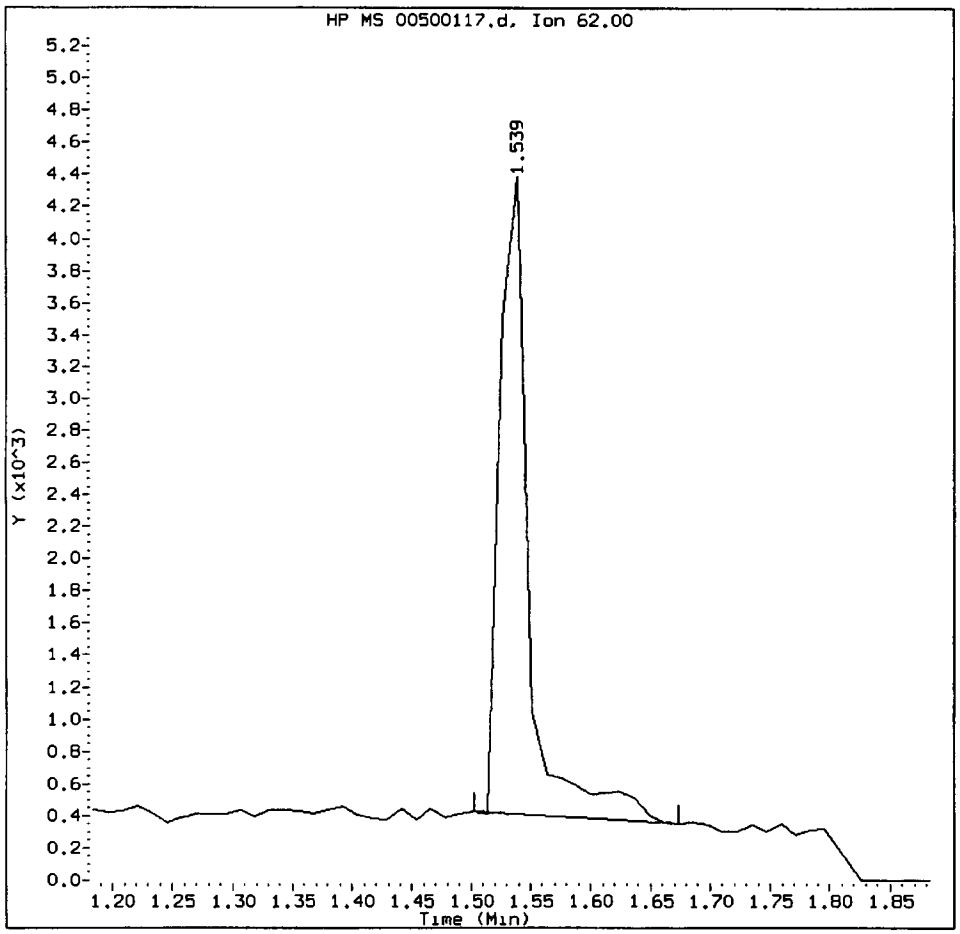
Compound: Vinyl Chloride
CAS Number:





IC0050, /chem1/nt7.i/20130117.b/00500117.d

Vinyl Chloride Amount: 28.12 Area: 5468



MANUAL INTEGRATION for Vinyl Chloride

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

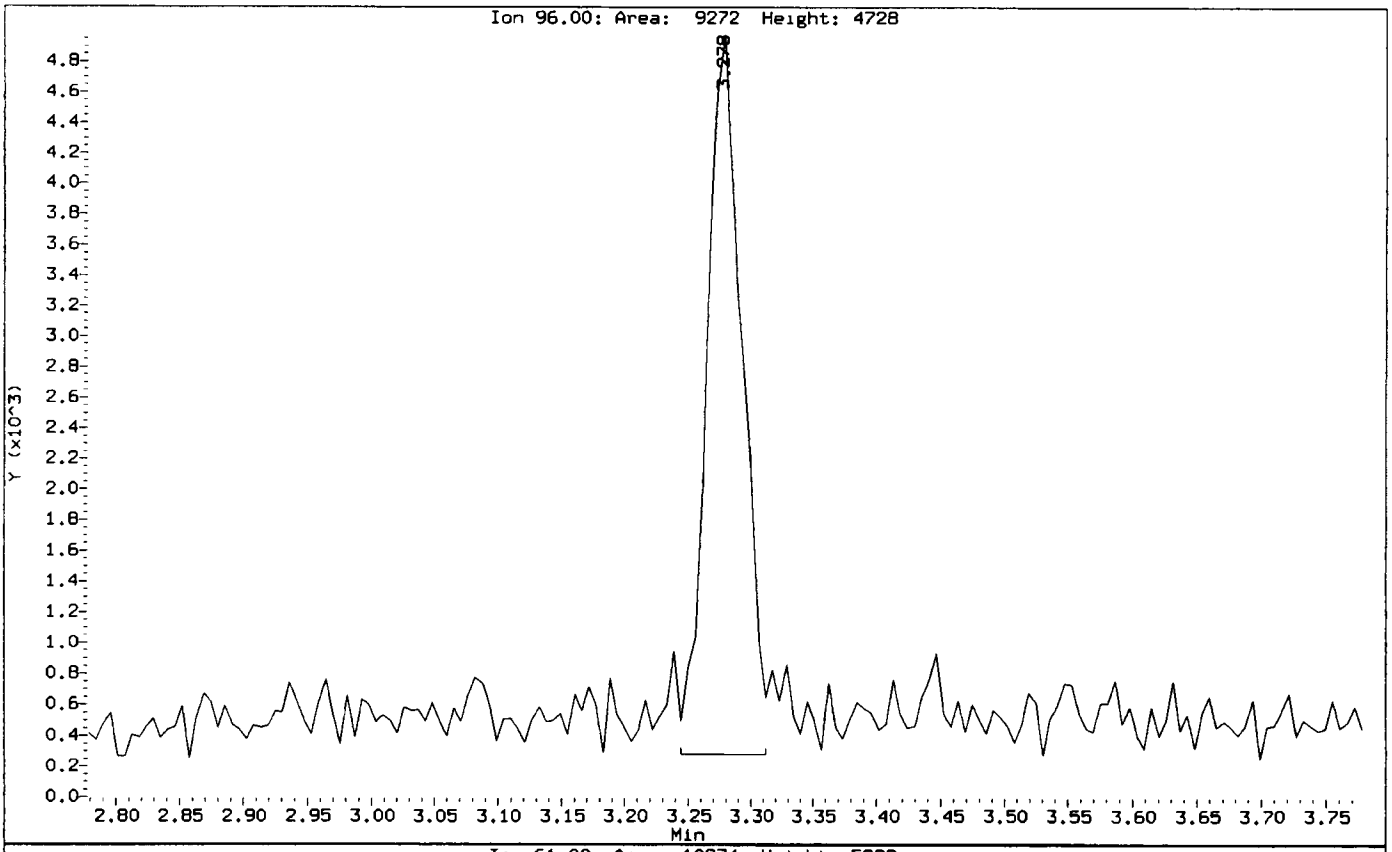
5. Other _____

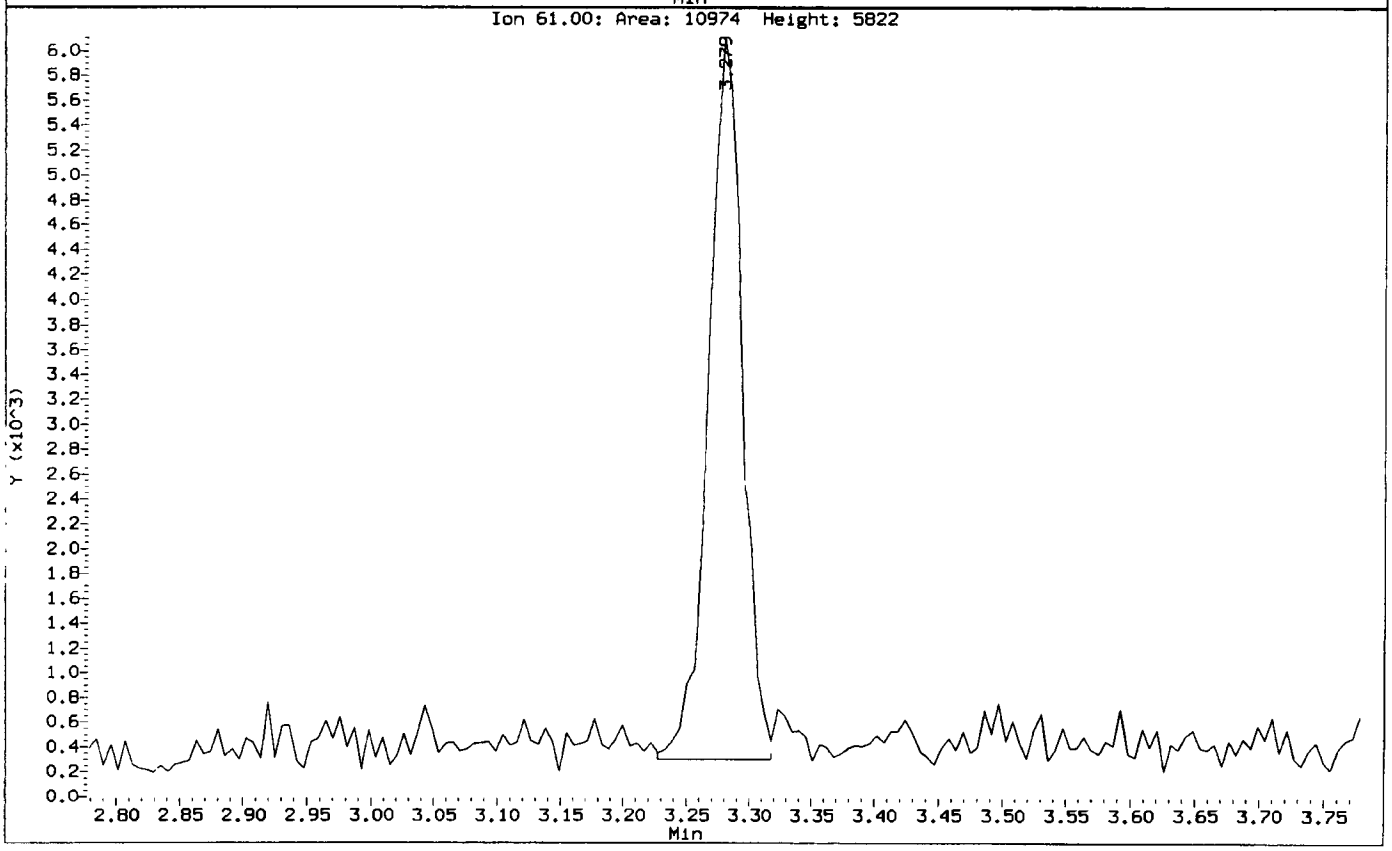
Analyst: RC Date: 1/18/13

0297:00007

Data File: /chem1/nt7.1/20130117.b/00500117.d
Injection Date: 17-JAN-2013 18:22
Instrument: nt7.1
Client Sample ID: IC0050

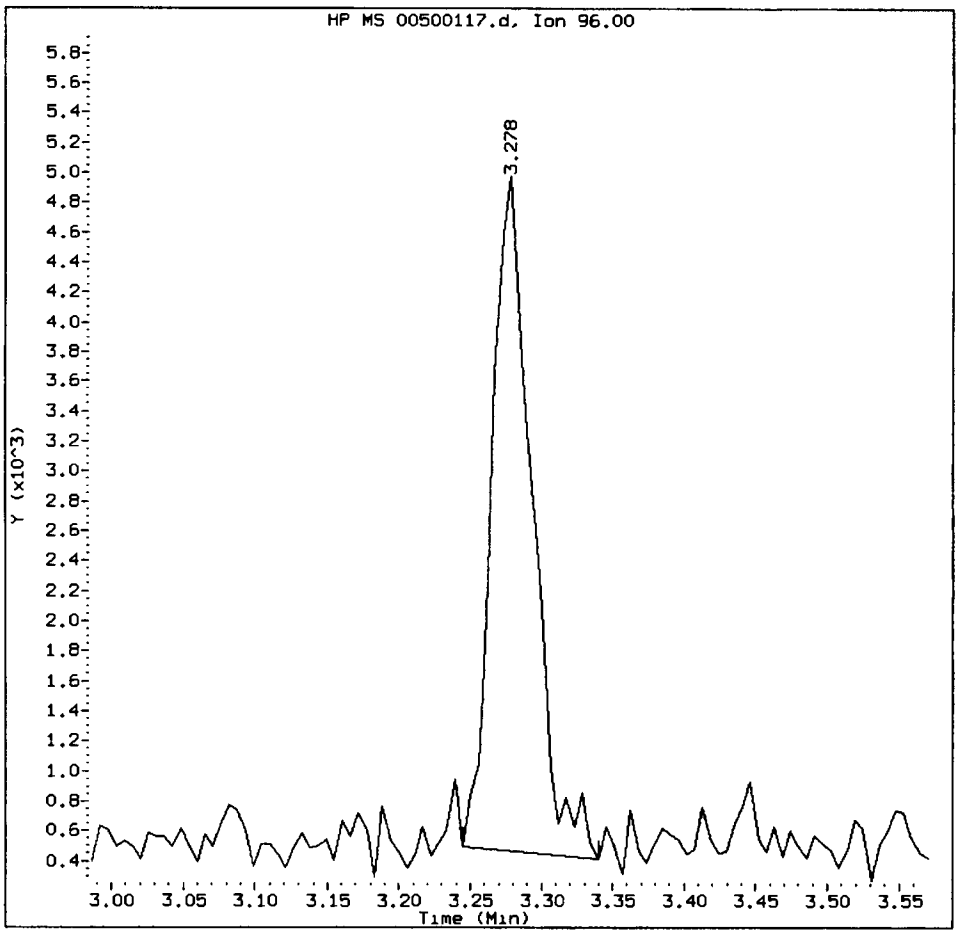
Compound: Trans-1,2-Dichloroethene
CAS Number:





IC0050, /chem1/nt7.i/20130117.b/00500117.d

Trans-1,2-Dichloroethene Amount: 49.08 Area: 8930



MANUAL INTEGRATION for Trans-1,2-Dichloroethene

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

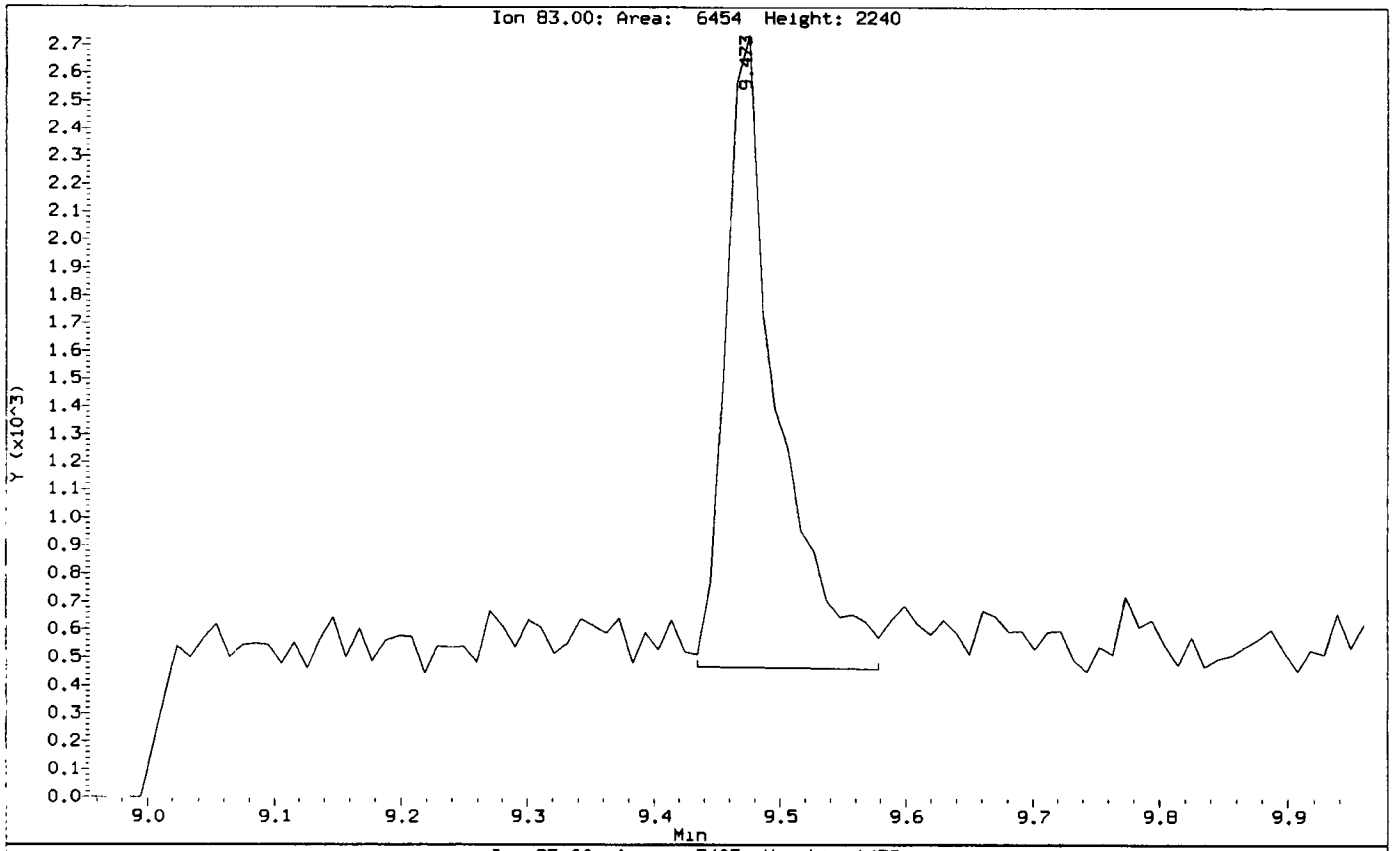
5. Other _____

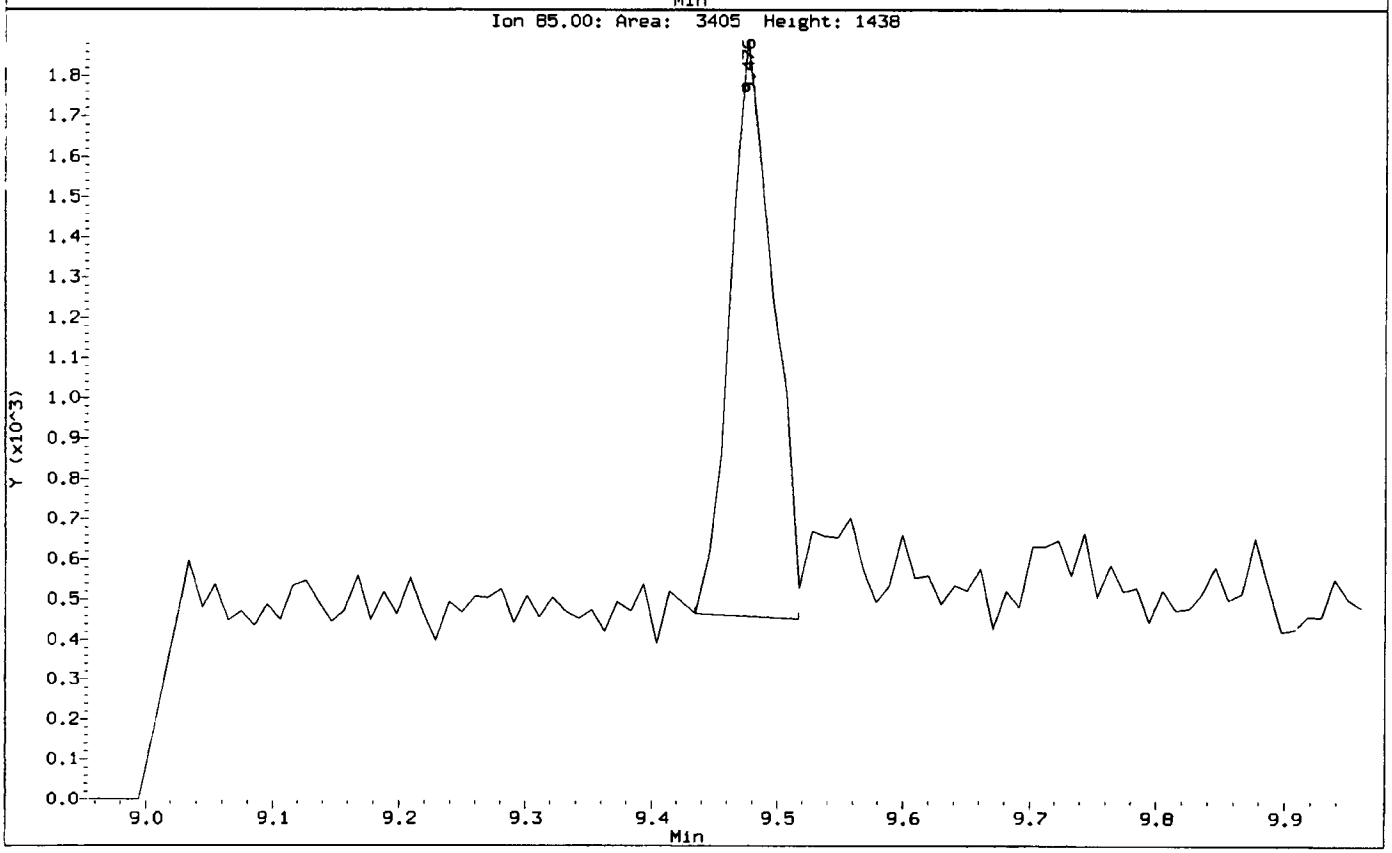
Analyst: YC Date: 1/18/13

RG 1/18/13

Data File: /chem1/nt7.i/20130117.b/00500117.d
Injection Date: 17-JAN-2013 18:22
Instrument: nt7.i
Client Sample ID: IC0050

Compound: 1,1,2,2-Tetrachloroethane
CAS Number:

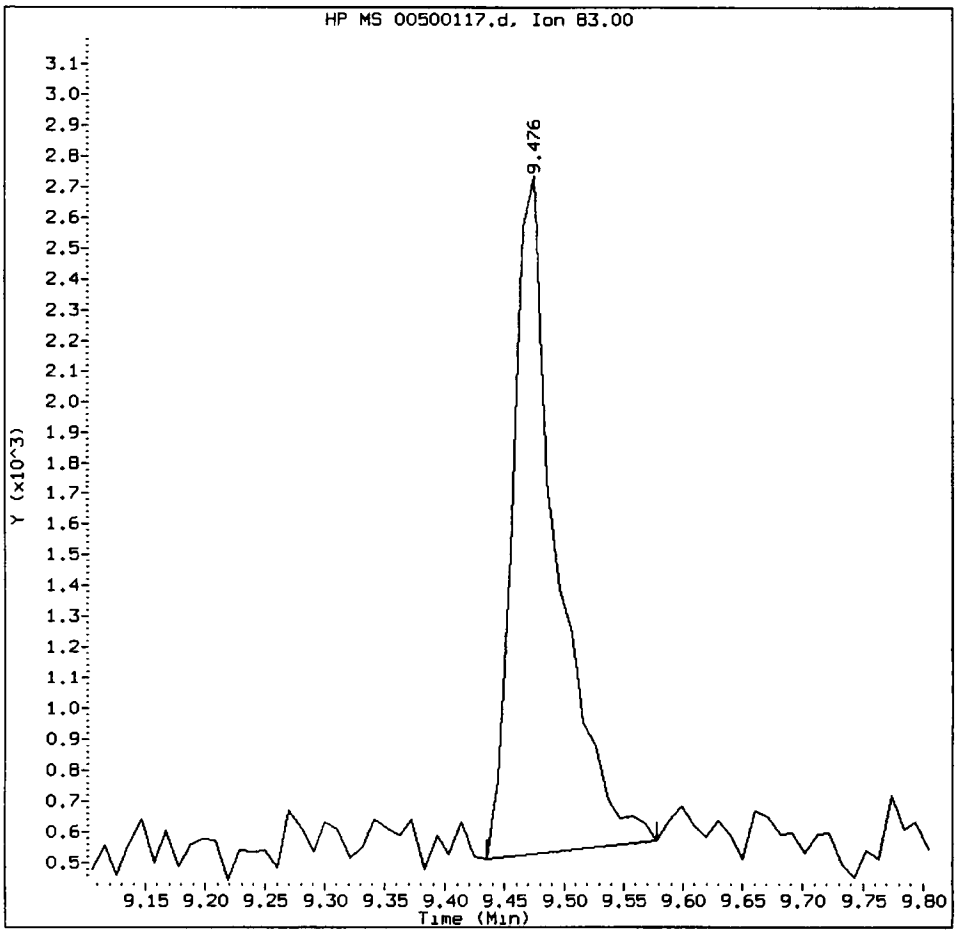




UZ97 · 80450

IC0050, /chem1/nt7.i/20130117.b/00500117.d

1,1,2,2-Tetrachloroethane Amount: 45.56 Area: 5873



MANUAL INTEGRATION for 1,1,2,2-Tetrachloroethane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: KC Date: 1/18/13

U297 · 00051

CO-ELUTION SUMMARY FOR FILE - 00500117.d

Lab ID: IC0050, Method: sim011713.m, Instrument: nt7.i, Date: 17-JAN-2013

RT	CO-ELUTION COMPOUNDS

U297:00052

PG 1/18/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/20130117.b/01000117.d
Lab Smp Id: IC0100 Client Smp ID: IC0100
Inj Date : 17-JAN-2013 17:55
Operator : PC Inst ID: nt7.i
Smp Info : IC0100,10,10,0,,
Misc Info : 13-
Comment :
Method : /chem1/nt7.i/20130117.b/sim011713.m
Meth Date : 18-Jan-2013 08:32 paul Quant Type: ISTD
Cal Date : 17-JAN-2013 18:22 Cal File: 00500117.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: chlor+btex.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/L)	ON-COL (ng/L)
	1 Vinyl Chloride	62	1.534	1.532	(0.289)	15349	100.000	81.480
	2 1,1-Dichloroethene	96	2.494	2.495	(0.469)	15491	100.000	102.29
	3 Trans-1,2-Dichloroethene	96	3.278	3.278	(0.617)	17379	100.000	98.615
	5 cis-1,2-dichloroethene	96	4.436	4.434	(0.834)	17223	100.000	92.091
	6 Benzene	78	5.210	5.208	(0.905)	71022	100.000	97.410
*	7 Pentafluorobenzene	168	5.316	5.315	(1.000)	233816	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.326	5.325	(1.002)	164966	1000.00	1089.2
	9 1,2-Dichloroethane	62	5.382	5.381	(1.012)	18859	100.000	97.139
	10 Trichloroethene	130	5.718	5.710	(0.994)	17706	100.000	97.512
*	11 1,4-Difluorobenzene	114	5.754	5.754	(1.000)	478754	1000.00	
$	12 d8-Toluene	98	6.903	6.901	(1.200)	492892	1000.00	991.66
	13 Toluene	91	6.944	6.942	(0.845)	74525	100.000	104.42
	14 Tetrachloroethene	166	7.270	7.268	(1.263)	14612	100.000	95.281
*	15 d5 -Chlorobenzene	117	8.214	8.208	(1.000)	386257	1000.00	
	16 Ethyl Benzene	91	8.262	8.248	(1.006)	82017	100.000	107.33
	17 m,p xylene	106	8.394	8.380	(1.022)	57519	200.000	198.04

U287 : 00453

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/L)	AMOUNTS ON-COL (ng/L)
18 o-xylene	91	8.757	8.745	(1.066)	69009	100.000	107.53
$ 19 4-Bromofluorobenzene	174	9.281	9.272	(1.130)	114901	1000.00	967.60
20 1,1,2,2-Tetrachloroethane	83	9.466	9.455	(1.152)	11744	100.000	100.12

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt7.i
Lab File ID: 01000117.d
Lab Smp Id: IC0100
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/20130117.b/sim011713.m
Misc Info: 13-

Calibration Date: 17-JAN-2013
Calibration Time: 17:02
Client Smp ID: IC0100
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	229144	114572	458288	233816	2.04
11 1,4-Difluorobenze	455099	227550	910198	478754	5.20
15 d5 -Chlorobenzene	389100	194550	778200	386257	-0.73

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.31	4.81	5.81	5.32	0.03
11 1,4-Difluorobenze	5.75	5.25	6.25	5.75	0.01
15 d5 -Chlorobenzene	8.21	7.71	8.71	8.21	0.07

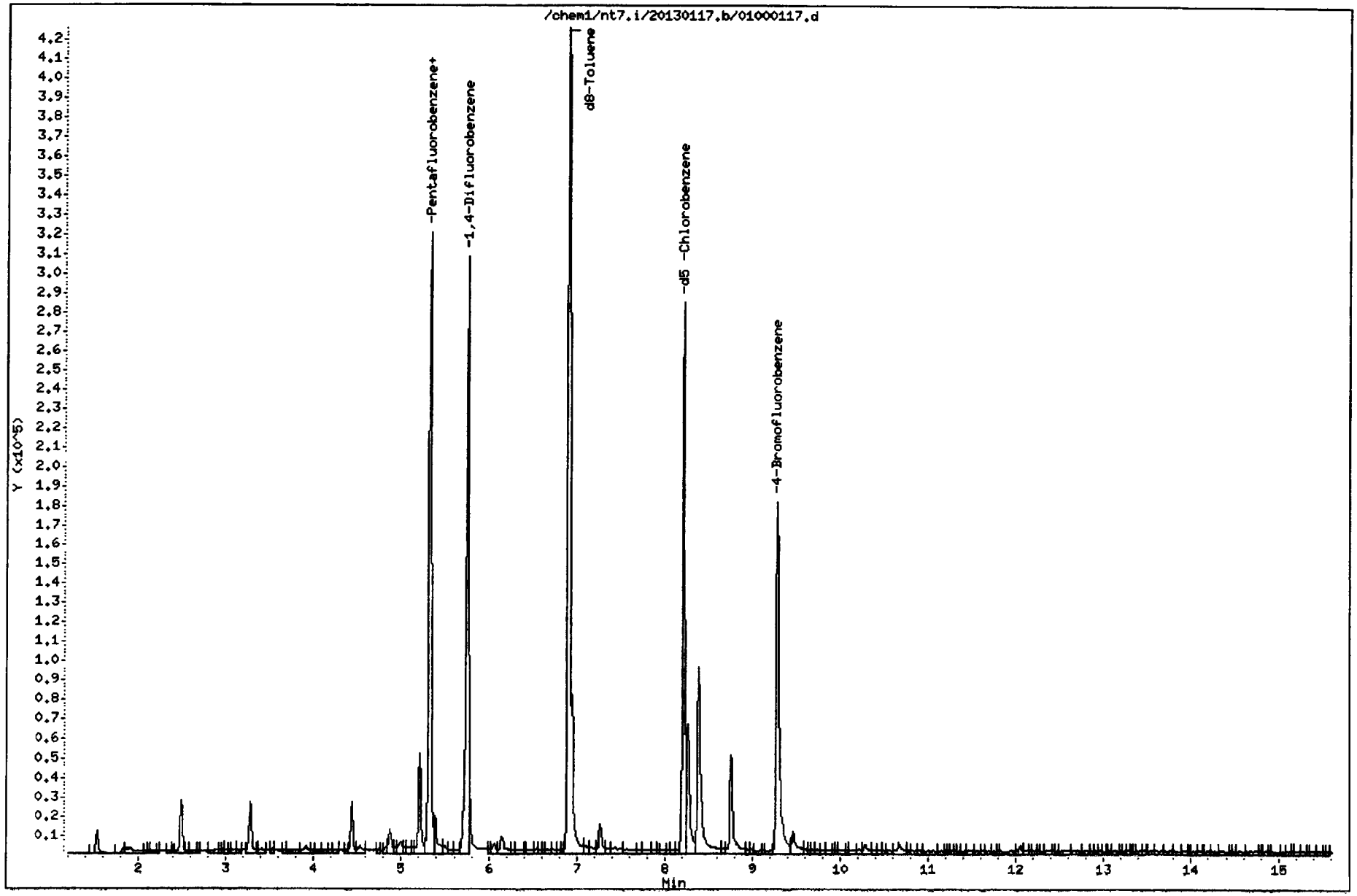
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt7.i/20130117.b/01000117.d
Date : 17-JAN-2013 17:55
Client ID: IC0100
Sample Info: IC0100,10,10,0,,

Instrument: nt7.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS



CO-ELUTION SUMMARY FOR FILE - 01000117.d

Lab ID: IC0100, Method: sim011713.m, Instrument: nt7.i, Date: 17-JAN-2013

RT	CO-ELUTION COMPOUNDS

VG 1/18/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/20130117.b/05000117.d
Lab Smp Id: IC0500 Client Smp ID: IC0500
Inj Date : 17-JAN-2013 17:28
Operator : PC Inst ID: nt7.i
Smp Info : IC0500,10,10,0,,
Misc Info : 13-
Comment :
Method : /chem1/nt7.i/20130117.b/sim011713.m
Meth Date : 18-Jan-2013 08:32 paul Quant Type: ISTD
Cal Date : 17-JAN-2013 18:22 Cal File: 00500117.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: chlor+btex.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/L)	ON-COL (ng/L)
	1 Vinyl Chloride	62	1.532	1.532	(0.288)	84680	500.000	447.18
	2 1,1-Dichloroethene	96	2.495	2.495	(0.469)	72756	500.000	477.90
	3 Trans-1,2-Dichloroethene	96	3.279	3.278	(0.617)	90689	500.000	511.92
	5 cis-1,2-dichloroethene	96	4.434	4.434	(0.834)	91151	500.000	484.84
	6 Benzene	78	5.209	5.208	(0.905)	346006	500.000	486.58
*	7 Pentafluorobenzene	168	5.316	5.315	(1.000)	235041	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.326	5.325	(1.002)	148046	1000.00	972.43
	9 1,2-Dichloroethane	62	5.382	5.381	(1.012)	104741	500.000	536.69
	10 Trichloroethene	130	5.712	5.710	(0.993)	92377	500.000	521.63
*	11 1,4-Difluorobenzene	114	5.754	5.754	(1.000)	466925	1000.00	
$	12 d8-Toluene	98	6.902	6.901	(1.200)	485971	1000.00	1002.5
	13 Toluene	91	6.944	6.942	(0.846)	365570	500.000	507.41
	14 Tetrachloroethene	166	7.269	7.268	(1.263)	75060	500.000	501.84
*	15 d5 -Chlorobenzene	117	8.212	8.208	(1.000)	389929	1000.00	
	16 Ethyl Benzene	91	8.254	8.248	(1.005)	416883	500.000	540.42
	17 m,p xylene	106	8.385	8.380	(1.021)	310315	1000.00	1058.4

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/L)	AMOUNTS ON-COL (ng/L)
18 o-xylene	91	8.749	8.745	(1.065)	362642	500.000	559.75
$ 19 4-Bromofluorobenzene	174	9.280	9.272	(1.130)	127085	1000.00	1060.1
20 1,1,2,2-Tetrachloroethane	83	9.457	9.455	(1.152)	61966	500.000	523.32

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt7.i
Lab File ID: 05000117.d
Lab Smp Id: IC0500
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/20130117.b/sim011713.m
Misc Info: 13-

Calibration Date: 17-JAN-2013
Calibration Time: 17:02
Client Smp ID: IC0500
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	229144	114572	458288	235041	2.57
11 1,4-Difluorobenze	455099	227550	910198	466925	2.60
15 d5 -Chlorobenzene	389100	194550	778200	389929	0.21

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.31	4.81	5.81	5.32	0.02
11 1,4-Difluorobenze	5.75	5.25	6.25	5.75	0.00
15 d5 -Chlorobenzene	8.21	7.71	8.71	8.21	0.05

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.

Data File: /chem1/nt7.i/20130117.b/05000117.d

Date : 17-JAN-2013 17:28

Client ID: IC0500

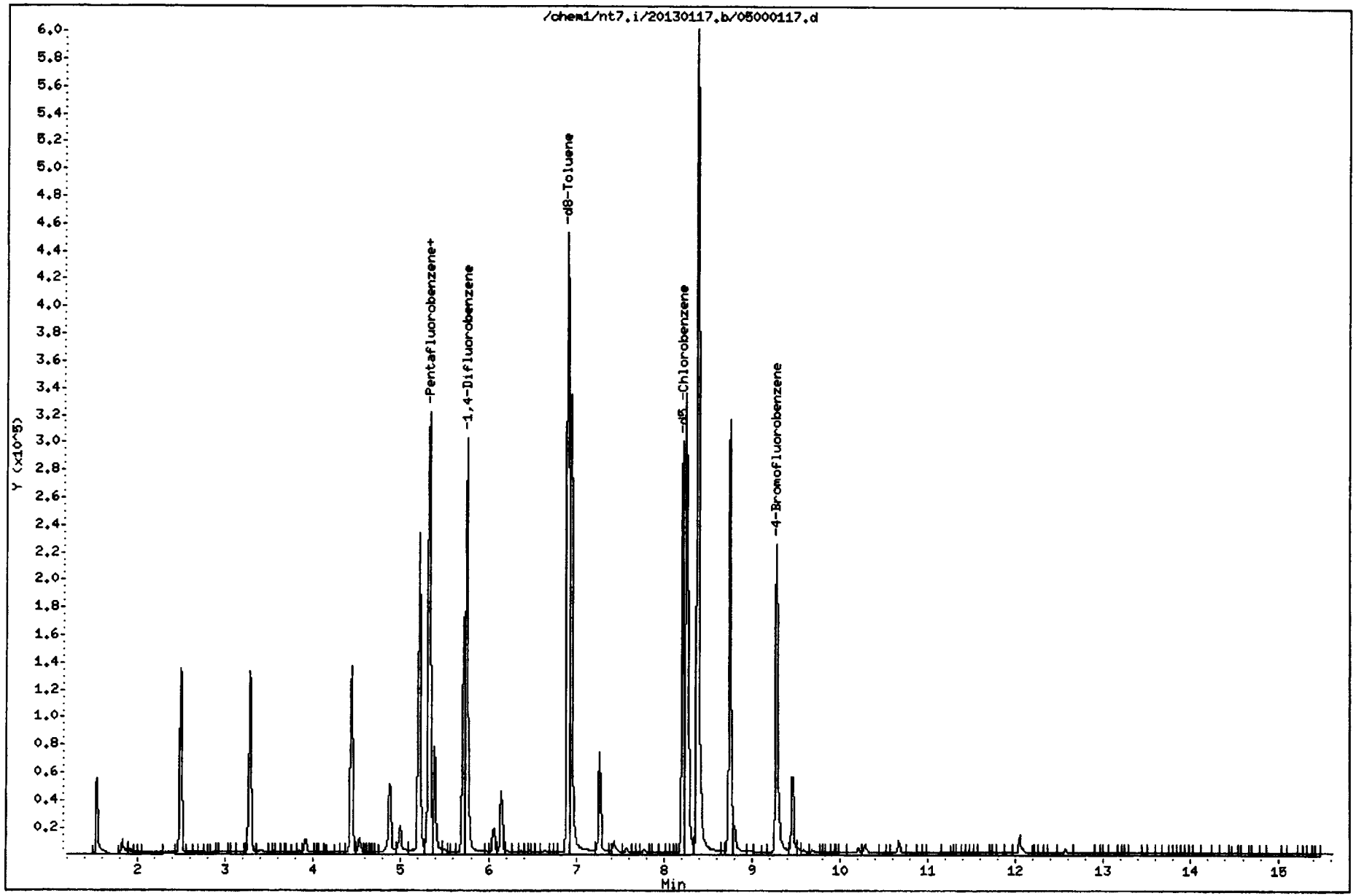
Sample Info: IC0500,10,10,0,,

Column phase: RTXVMS

Instrument: nt7.i

Operator: PC

Column diameter: 0.18



CO-ELUTION SUMMARY FOR FILE - 05000117.d

Lab ID: IC0500, Method: sim011713.m, Instrument: nt7.i, Date: 17-JAN-2013

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/20130117.b/10000117.d
Lab Smp Id: IC1000 Client Smp ID: IC1000
Inj Date : 17-JAN-2013 17:02
Operator : PC Inst ID: nt7.i
Smp Info : IC1000,10,10,0,,
Misc Info : 13-
Comment :
Method : /chem1/nt7.i/20130117.b/sim011713.m
Meth Date : 18-Jan-2013 08:32 paul Quant Type: ISTD
Cal Date : 17-JAN-2013 18:22 Cal File: 00500117.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: chlor+btex.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/L)	ON-COL (ng/L)
	1 Vinyl Chloride	62	1.532	1.532	(0.288)	538056	3000.00	2914.5
	2 1,1-Dichloroethene	96	2.495	2.495	(0.469)	454749	3000.00	3063.9
	3 Trans-1,2-Dichloroethene	96	3.278	3.278	(0.617)	544925	3000.00	3155.2
	5 cis-1,2-dichloroethene	96	4.434	4.434	(0.834)	561313	3000.00	3062.5
	6 Benzene	78	5.208	5.208	(0.905)	2054191	3000.00	2963.9
*	7 Pentafluorobenzene	168	5.315	5.315	(1.000)	229144	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.325	5.325	(1.002)	147562	1000.00	994.20
	9 1,2-Dichloroethane	62	5.381	5.381	(1.012)	622605	3000.00	3272.3
	10 Trichloroethene	130	5.710	5.710	(0.992)	572940	3000.00	3319.3(Q)
*	11 1,4-Difluorobenzene	114	5.754	5.754	(1.000)	455099	1000.00	
$	12 d8-Toluene	98	6.901	6.901	(1.199)	480463	1000.00	1016.9
	13 Toluene	91	6.942	6.942	(0.846)	2124642	3000.00	2955.3
	14 Tetrachloroethene	166	7.268	7.268	(1.263)	465837	3000.00	3195.5
*	15 d5 -Chlorobenzene	117	8.208	8.208	(1.000)	389100	1000.00	
	16 Ethyl Benzene	91	8.248	8.248	(1.005)	2458775	3000.00	3194.2
	17 m,p xylene	106	8.380	8.380	(1.021)	1819472	6000.00	6218.7(Q)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/L)	ON-COL (ng/L)
18 o-xylene	91	8.745	8.745	(1.065)	1971378	3000.00	3049.4
$ 19 4-Bromofluorobenzene	174	9.272	9.272	(1.130)	126752	1000.00	1059.6
20 1,1,2,2-Tetrachloroethane	83	9.455	9.455	(1.152)	384427	3000.00	3253.5

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt7.i
Lab File ID: 10000117.d
Lab Smp Id: IC1000
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/20130117.b/sim011713.m
Misc Info: 13-

Calibration Date: 17-JAN-2013
Calibration Time: 17:02
Client Smp ID: IC1000
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	229144	114572	458288	229144	0.00
11 1,4-Difluorobenze	455099	227550	910198	455099	0.00
15 d5 -Chlorobenzene	389100	194550	778200	389100	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.31	4.81	5.81	5.31	0.00
11 1,4-Difluorobenze	5.75	5.25	6.25	5.75	0.00
15 d5 -Chlorobenzene	8.21	7.71	8.71	8.21	0.00

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.

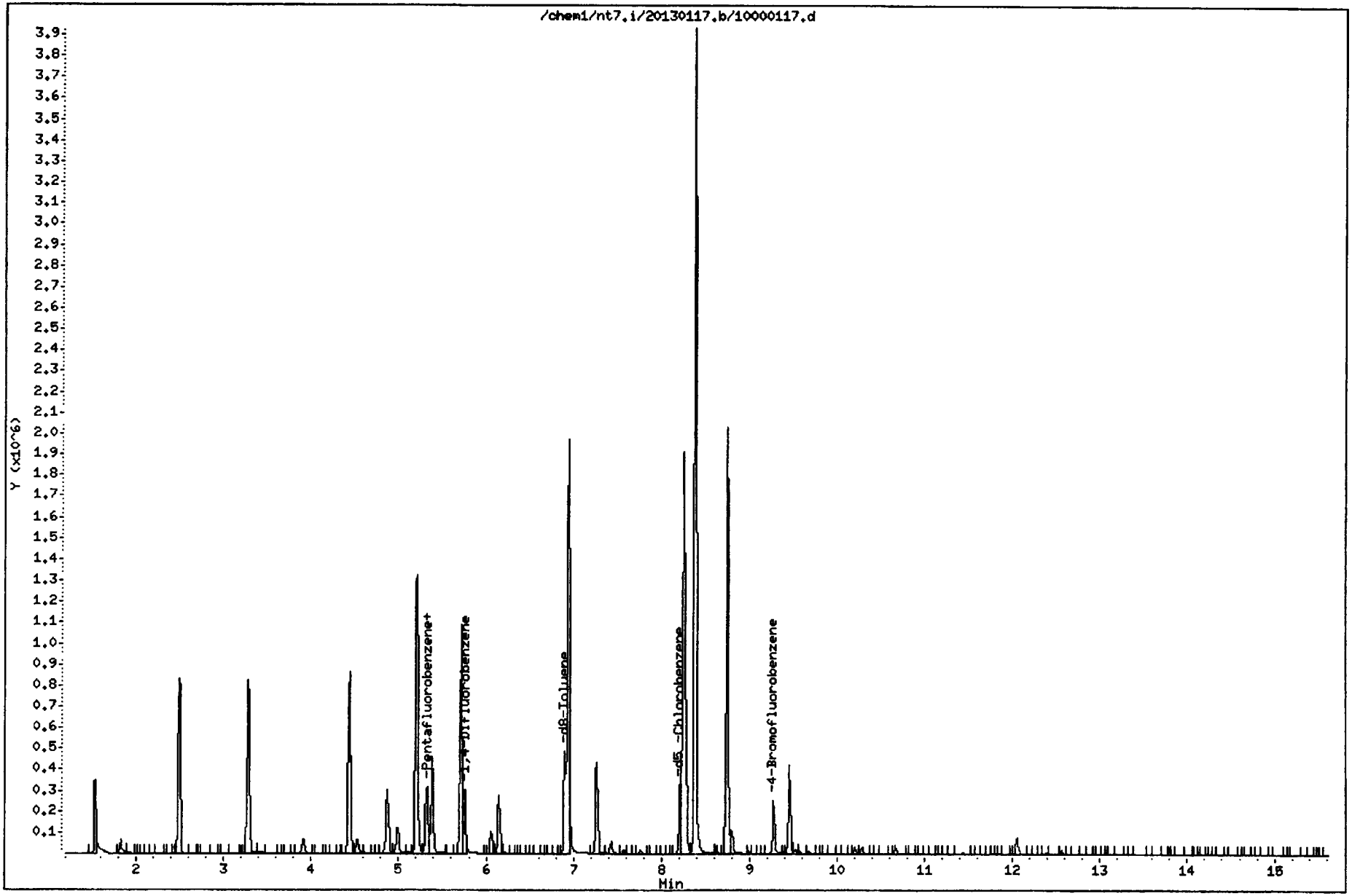
UZ37:00465

Data File: /chem1/nt7.i/20130117.b/10000117.d
Date : 17-JAN-2013 17:02
Client ID: IC1000
Sample Info: IC1000,10,10,0,,

Instrument: nt7.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS



CO-ELUTION SUMMARY FOR FILE - 10000117.d

Lab ID: IC1000, Method: sim011713.m, Instrument: nt7.i, Date: 17-JAN-2013

RT	CO-ELUTION COMPOUNDS

1/18/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/20130117.b/50000117.d
Lab Smp Id: IC5000 Client Smp ID: IC5000
Inj Date : 17-JAN-2013 16:09
Operator : PC Inst ID: nt7.i
Smp Info : IC5000,10,10,0,,
Misc Info : 13-
Comment :
Method : /chem1/nt7.i/20130117.b/sim011713.m
Meth Date : 18-Jan-2013 08:32 paul Quant Type: ISTD
Cal Date : 17-JAN-2013 18:22 Cal File: 00500117.d
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: chlor+btex.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/L)	ON-COL (ng/L)
	1 Vinyl Chloride	62	1.531	1.532	(0.288)	947868	5000.00	5054.4
	2 1,1-Dichloroethene	96	2.492	2.495	(0.469)	768708	5000.00	5098.6
	3 Trans-1,2-Dichloroethene	96	3.277	3.278	(0.617)	915988	5000.00	5221.1
	5 cis-1,2-dichloroethene	96	4.432	4.434	(0.834)	951051	5000.00	5108.1
	6 Benzene	78	5.202	5.208	(0.904)	3372827	5000.00	4840.2
*	7 Pentafluorobenzene	168	5.314	5.315	(1.000)	232767	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.324	5.325	(1.002)	147144	1000.00	975.95
	9 1,2-Dichloroethane	62	5.380	5.381	(1.012)	1028034	5000.00	5319.0
	10 Trichloroethene	130	5.709	5.710	(0.992)	934215	5000.00	5383.3
*	11 1,4-Difluorobenzene	114	5.753	5.754	(1.000)	457560	1000.00	
$	12 d8-Toluene	98	6.901	6.901	(1.199)	483661	1000.00	1018.2
	13 Toluene	91	6.941	6.942	(0.846)	3500480	5000.00	4936.3
	14 Tetrachloroethene	166	7.268	7.268	(1.263)	815843	5000.00	5566.3
*	15 d5 -Chlorobenzene	117	8.207	8.208	(1.000)	383795	1000.00	
	16 Ethyl Benzene	91	8.247	8.248	(1.005)	3973905	5000.00	5233.9
	17 m,p xylene	106	8.379	8.380	(1.021)	2917612	10000.0	10110(Q)

V297 · 00468

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/L)	ON-COL (ng/L)
18 o-xylene	91	8.744	8.745	(1.065)	3194950	5000.00	5010.3
$ 19 4-Bromofluorobenzene	174	9.271	9.272	(1.130)	124552	1000.00	1055.6
20 1,1,2,2-Tetrachloroethane	83	9.454	9.455	(1.152)	641200	5000.00	5501.6

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt7.i
Lab File ID: 50000117.d
Lab Smp Id: IC5000
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/20130117.b/sim011713.m
Misc Info: 13-

Calibration Date: 17-JAN-2013
Calibration Time: 17:02
Client Smp ID: IC5000
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	229144	114572	458288	232767	1.58
11 1,4-Difluorobenze	455099	227550	910198	457560	0.54
15 d5 -Chlorobenzene	389100	194550	778200	383795	-1.36

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.31	4.81	5.81	5.31	-0.01
11 1,4-Difluorobenze	5.75	5.25	6.25	5.75	0.00
15 d5 -Chlorobenzene	8.21	7.71	8.71	8.21	-0.01

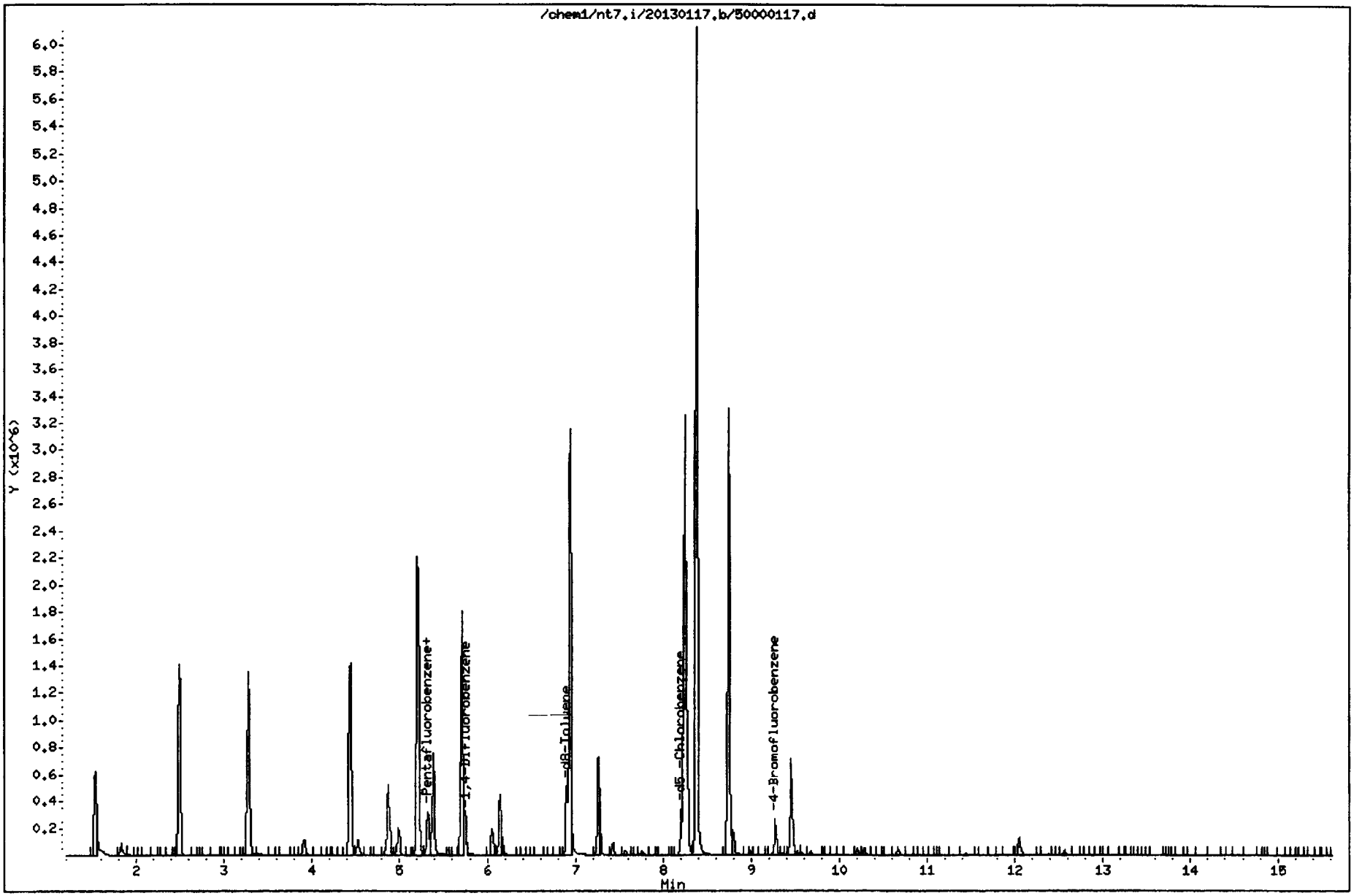
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt7.i/20130117.b/50000117.d
Date : 17-JAN-2013 16:09
Client ID: IC5000
Sample Info: IC5000,10,10,0,,

Instrument: nt7.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS



CO-ELUTION SUMMARY FOR FILE - 50000117.d

Lab ID: IC5000, Method: sim011713.m, Instrument: nt7.i, Date: 17-JAN-2013

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/20130117.b/icv0117.d
Lab Smp Id: ICV1000
Inj Date : 17-JAN-2013 19:16
Operator : PC Inst ID: nt7.i
Smp Info : ICV1000,10,10,0,,
Misc Info : 13-
Comment :
Method : /chem1/nt7.i/20130117.b/sim011713.m
Meth Date : 18-Jan-2013 08:32 paul Quant Type: ISTD
Cal Date : 17-JAN-2013 18:22 Cal File: 00500117.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: chlor+btex.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	FINAL (ug/L)
	1 Vinyl Chloride	62	1.536	1.532	(0.289)	181859	950.478	950.48
	2 1,1-Dichloroethene	96	2.497	2.495	(0.470)	146733	953.906	953.91
	3 Trans-1,2-Dichloroethene	96	3.281	3.278	(0.617)	165843	926.517	926.52
	5 cis-1,2-dichloroethene	96	4.436	4.434	(0.834)	191473	1007.98	1008.0
	6 Benzene	78	5.210	5.208	(0.905)	677860	930.117	930.12
*	7 Pentafluorobenzene	168	5.316	5.315	(1.000)	237486	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.327	5.325	(1.002)	151286	983.487	983.49
	9 1,2-Dichloroethane	62	5.382	5.381	(1.012)	199955	1014.01	1014.0
	10 Trichloroethene	130	5.716	5.710	(0.993)	179103	986.799	986.80
*	11 1,4-Difluorobenzene	114	5.754	5.754	(1.000)	478546	1000.00	
$	12 d8-Toluene	98	6.902	6.901	(1.199)	494647	995.629	995.63
	13 Toluene	91	6.944	6.942	(0.846)	693161	931.580	931.58
	14 Tetrachloroethene	166	7.269	7.268	(1.263)	143999	939.387	939.39
*	15 d5 -Chlorobenzene	117	8.211	8.208	(1.000)	402706	1000.00	
	16 Ethyl Benzene	91	8.252	8.248	(1.005)	806618	1012.47	1012.5
	17 m,p xylene	106	8.383	8.380	(1.021)	601967	1987.91	1987.9(Q)

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	CONCENTRATIONS FINAL (ug/L)
18 o-xylene	91	8.748	8.745	(1.065)	683344	1021.29	1021.3
$ 19 4-Bromofluorobenzene	174	9.279	9.272	(1.130)	127758	1031.93	1031.9
20 1,1,2,2-Tetrachloroethane	83	9.457	9.455	(1.152)	122541	1002.05	1002.1

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt7.i
Lab File ID: icv0117.d
Lab Smp Id: ICV1000
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/20130117.b/sim011713.m
Misc Info: 13-

Calibration Date: 17-JAN-2013
Calibration Time: 17:02

Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	229144	114572	458288	237486	3.64
11 1,4-Difluorobenze	455099	227550	910198	478546	5.15
15 d5 -Chlorobenzene	389100	194550	778200	402706	3.50

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.31	4.81	5.81	5.32	0.03
11 1,4-Difluorobenze	5.75	5.25	6.25	5.75	0.01
15 d5 -Chlorobenzene	8.21	7.71	8.71	8.21	0.03

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 20130117
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: ICV1000
Level: LOW Operator: PC
Data Type: MS DATA SampleType: LCS
SpikeList File: special.spk Quant Type: ISTD
Sublist File: chlor+btex.sub
Method File: /chem1/nt7.i/20130117.b/sim011713.m
Misc Info: 13-

	SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1	Vinyl Chloride	1000.0	950.48	95.05	76-120
9	1,2-Dichloroethane	1000.0	1014.0	101.40	80-128
3	Trans-1,2-Dichloro	1000.0	926.52	92.65	80-120
2	1,1-Dichloroethene	1000.0	953.91	95.39	80-120
5	cis-1,2-dichloroet	1000.0	1008.0	100.80	80-120
6	Benzene	1000.0	930.12	93.01	80-120
10	Trichloroethene	1000.0	986.80	98.68	80-120
14	Tetrachloroethene	1000.0	939.39	93.94	80-122
20	1,1,2,2-Tetrachlor	1000.0	1002.1	100.21	80-128

	SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 8	d4-1,2-Dichloroeth	1000.0	983.49	98.35	80-126
$ 12	d8-Toluene	1000.0	995.63	99.56	80-120
$ 19	4-Bromofluorobenze	1000.0	1031.9	103.19	80-120

Data File: /chem1/nt7.i/20130117.b/icv0117.d

Date : 17-JAN-2013 19:16

Client ID:

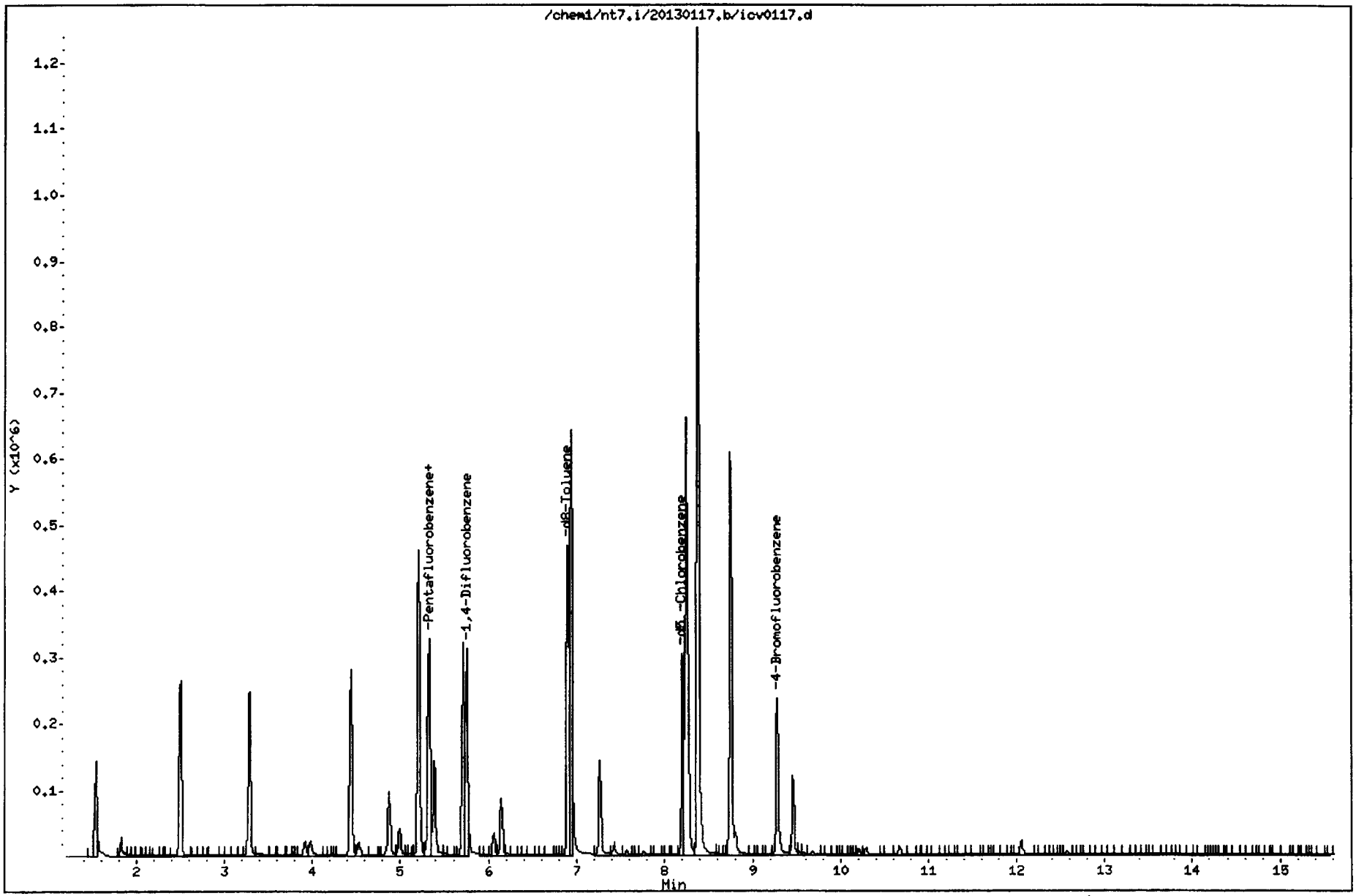
Sample Info: ICV1000,10,10,0,,

Column phase: RTXVMS

Instrument: nt7.i

Operator: PC

Column diameter: 0.18



CO-ELUTION SUMMARY FOR FILE - icv0117.d

Lab ID: ICV1000, Method: sim011713.m, Instrument: nt7.i, Date: 17-JAN-2013

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Initial Calibration Notes

ARI SOP: **404S**(Gas) **410S**(BTEX) **430S**(VPH) **700S**(8260C) **703S**(SIM) **706S**(524.3) **710S**(RSK-175)

Instrument: NT-2 NT-3 NT-5 NT-7 **NT-9** PID-1 PID-2 PID-3 FID-6

Curve Date(s): 1/18/13 Internal Standard ID VWTA-3 Expiration 3/5/13

BFB Tune Meets Criteria?	YES / NO	ICV Exceeding ±20%?	YES / **NO**
ICal Meets %RSD & r^2 Criteria?	YES / NO	ICV Exceeding ±30%?	YES / NO
Q flag applied?	YES / **NO**	Linear Fits Used?	YES / **NO**
Manual Integrations for ICal?	**YES** / NO	Quadratic Fits Used?	YES / **NO**
Spectral Library Updated?	YES / **NO**	Calibration Points Dropped?	**YES** / NO
Minimum Response Factors Met	**YES** / NO	Purge Volume (mL)	10

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
w/bq	VWTA-2	4/9/13	accustd	VW767-4	4/9/13

Detail problems, corrective actions and/or other pertinent information below:

High point removed – saturation,
64 ion has interference for VC, curve used for SIM benzene samples

Analyst: VC **Date:** 1/24/13

Reviewer: [signature] **Date:** 1/24/13

VZ97:00479

Analytical Resources Inc.: Volatile Organics Instrument Log

NT-9 Serial No.:GC=US00021704, MS=US80230047

Date: 11/18/13 Analysis: 5IN 10A Analyst: PC

GC Program: 5IN Column No: 1032714 Column Type: RTX-VMS

Instrument Tune (.U or .CT.): P31128 EM Voltage: 2071

Calibration File: 5E61118 Curve Date: 11/18/13

IS/SS	Ical/Ccal	LCS/ICV
VW7793	VW776-2	VW767-4

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt9.i/18JAN13.b

	Time	Filename	LabID	ClientID	Vial#	pH	DF					
1	1205	bfb0118.d	BFB0118	BFB0118			1					
2	1253	50000118.d	IC5000	IC5000			1 | 7.70	122964||	5.26	52551||	5.65	98890|
3	1316	20000118.d	IC2000				1 | 7.70	107536||	5.26	49888||	5.65	90829|
4	1349	50000118a.d	IC5000	IC5000			1 | 7.71	248388||	5.27	129671||	5.64	226341|
5	1412	20000118a.d	IC2000	IC2000			1 | 7.71	234324||	5.27	116357||	5.64	209851|
6	1436	10000118.d	IC1000	IC1000			1 | 7.71	226394||	5.27	114611||	5.64	202370|
7	1459	05000118.d	IC0500	IC0500			1 | 7.71	219653||	5.27	112117||	5.64	196480|
8	1523	01000118.d	IC0100	IC0100			1 | 7.71	207791||	5.27	107882||	5.64	186823|
9	1547	00500118.d	IC0050	IC0050			1 | 7.71	194155||	5.27	105970||	5.64	181280|
10	1610	00200118.d	IC0020	IC0020			1 | 7.71	190067||	5.27	106458||	5.64	180887|
11	1634	icv0118.d	ICV1000	ICV1000			1 | 7.71	192701||	5.27	105522||	5.64	179021|

VC 11/21/13

Maintenance / Comments

Maintenance Verification (Identify ICal or CCal that demonstrates the instrument is in control):

Every line must contain information or be lined out. Make all entries legible. Start a new page for each QC period.

VZ97 : 80480

Report Date : 21-Jan-2013 15:49

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt9.i/18JAN13.b/sim011713.m
Batch File: /chem1/nt9.i/18JAN13.b
Inst ID: nt9.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08
FILENAME:	50000118a	20000118a	10000118	05000118	01000118	00500118	00200118	icv0118
INJ.DATE:	18-JAN-2013	18-JAN-2013	18-JAN-2013	18-JAN-2013	18-JAN-2013	18-JAN-2013	18-JAN-2013	18-JAN-2013
INJ.TIME:	13:49	14:12	14:36	14:59	15:23	15:47	16:10	16:34

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Vinyl Chloride	1.616	1.610	1.611	1.611	1.606	1.608	1.607	1.611	1.611	1.401-1.822	1.610	0.003
	2 1,1-Dichloroethene	2.635	2.632	2.632	2.632	2.631	2.632	2.634	2.633	2.632	2.424-2.845	2.633	0.001
	3 Trans-1,2-Dichloroethe	3.426	3.422	3.423	3.422	3.420	3.419	3.424	3.423	3.423	3.215-3.636	3.423	0.002
	4 Acrylonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.126	3.767-4.192	+++++	+++++
	5 cis-1,2-dichloroethene	4.497	4.494	4.495	4.495	4.495	4.495	4.495	4.495	4.495	4.287-4.709	4.495	0.001
	6 Benzene	5.180	5.181	5.180	5.181	5.180	5.181	5.181	5.181	5.180	4.946-5.397	5.181	0.000
*	7 Pentafluorobenzene	5.266	5.267	5.267	5.268	5.267	5.267	5.267	5.268	5.267	5.056-5.478	5.267	0.001
$	8 d4-1,2-Dichloroethane	5.286	5.286	5.286	5.287	5.285	5.287	5.287	5.287	5.286	5.076-5.497	5.286	0.001
	9 1,2-Dichloroethane	5.333	5.334	5.334	5.335	5.333	5.334	5.335	5.335	5.334	5.123-5.545	5.334	0.001
	10 Trichloroethene	5.609	5.609	5.610	5.609	5.609	5.610	5.608	5.610	5.610	5.374-5.825	5.609	0.001
*	11 1,4-Difluorobenzene	5.642	5.643	5.643	5.642	5.643	5.644	5.644	5.644	5.643	5.417-5.869	5.643	0.001
$	12 d8-Toluene	6.618	6.619	6.618	6.619	6.619	6.619	6.619	6.619	6.618	6.392-6.844	6.619	0.000
	13 Toluene	6.651	6.651	6.651	6.652	6.651	6.651	6.651	6.652	6.651	6.343-6.959	6.651	0.000
	14 Tetrachloroethene	6.922	6.922	6.922	6.923	6.922	6.922	6.922	6.922	6.922	6.696-7.147	6.922	0.000
*	15 d5 -Chlorobenzene	7.706	7.706	7.706	7.706	7.706	7.706	7.706	7.706	7.706	7.398-8.014	7.706	0.000
	16 Ethyl Benzene	7.734	7.735	7.734	7.734	7.734	7.734	7.734	7.734	7.734	7.426-8.042	7.734	0.000
	17 m,p xylene	7.840	7.841	7.841	7.841	7.841	7.840	7.841	7.841	7.841	7.532-8.149	7.841	0.000

Reviewer 1 YC Date: 1/21/13
Reviewer 2 [signature] Date: 1/21/13

V707 00481

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt9.i/18JAN13.b/sim011713.m
Batch File: /chem1/nt9.i/18JAN13.b
Inst ID: nt9.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
18 o-xylene	8.140	8.141	8.140	8.140	8.140	8.141	8.139	8.141	8.140	7.832-8.448	8.140	0.001
$ 19 4-Bromofluorobenzene	8.573	8.574	8.574	8.575	8.575	8.575	8.575	8.574	8.574	8.266-8.882	8.574	0.001
20 1,1,2,2-Tetrachloroeth	8.711	8.712	8.712	8.712	8.710	8.711	8.710	8.713	8.712	8.403-9.020	8.711	0.001

25756 - 1027

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt9.i/18JAN13.b

ARI Job No.: IC00 Method: sim011713.m Instrument: nt9.i Date: 18-JAN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1610	00200118.d	IC0020	IC0020	1	o-xylene, Vinyl Chloride, 1,1-Dichloroethene, Trichloroethene, 1,1,2,2-Tetrachloroethane,
1547	00500118.d	IC0050	IC0050	1	Vinyl Chloride, 1,1,2,2-Tetrachloroethane, 1,2-Dichloroethane,
1523	01000118.d	IC0100	IC0100	1	Vinyl Chloride, 1,1,2,2-Tetrachloroethane, 1,2-Dichloroethane, d4-1,2-Dichloroethane,
1459	05000118.d	1C0500	1C0500	1	NO MANUAL INTEGRATION
1436	10000118.d	IC1000	IC1000	1	NO MANUAL INTEGRATION
1412	20000118a.d	1C2000	1C2000	1	NO MANUAL INTEGRATION
1349	50000118a.d	IC5000	IC5000	1	NO MANUAL INTEGRATION
1634	icv0118.d	ICV1000	ICV1000	1	NO MANUAL INTEGRATION

27-JAN-2013 09:52

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-JAN-2013 13:49
End Cal Date : 18-JAN-2013 16:10
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/nt9.i/18JAN13.b/sim011713.m
Cal Date : 18-Jan-2013 16:31 paul
Curve Type : Average

Calibration File Names:
Level 1: /chem1/nt9.i/18JAN13.b/00200118.d
Level 2: /chem1/nt9.i/18JAN13.b/00500118.d
Level 3: /chem1/nt9.i/18JAN13.b/01000118.d
Level 4: /chem1/nt9.i/18JAN13.b/05000118.d
Level 5: /chem1/nt9.i/18JAN13.b/10000118.d
Level 6: /chem1/nt9.i/18JAN13.b/20000118a.d
Level 7: /chem1/nt9.i/18JAN13.b/50000118a.d

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	500.000 Level 4	1000.000 Level 5	2000.000 Level 6	5000.000 Level 7	RRF	% RSD	
1 Vinyl Chloride	0.48329	0.46900	0.48201	0.45481	0.44727	0.41664	+++++	0.45884	5.486	
2 1,1-Dichloroethene	0.38889	0.33425	0.33212	0.31396	0.30313	0.27818	+++++	0.32509	11.518	
3 Trans-1,2-Dichloroethene	0.42176	0.40502	0.37801	0.34494	0.33522	0.30730	+++++	0.36538	11.999	
4 Acrylonitrile	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
5 cis-1,2-dichloroethene	0.58192	0.54204	0.57211	0.52319	0.51641	0.47143	+++++	0.53452	7.554	
6 Benzene	1.48352	1.31189	1.25482	1.13370	1.09923	0.99173	+++++	1.21248	14.423	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-JAN-2013 13:49
End Cal Date : 18-JAN-2013 16:10
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/nt9.i/18JAN13.b/sim011713.m
Cal Date : 18-Jan-2013 16:31 paul
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	500.000 Level 4	1000.000 Level 5	2000.000 Level 6	5000.000 Level 7	RRF	% RSD
9 1,2-Dichloroethane	0.53636	0.57356	0.57368	0.52542	0.50771	0.46356	+++++	0.53005	7.905
10 Trichloroethene	0.28277	0.27824	0.27679	0.25124	0.24187	0.21943	+++++	0.25839	9.743
13 Toluene	1.53840	1.30854	1.23437	1.09076	1.07586	0.98613	+++++	1.20568	16.604
14 Tetrachloroethene	0.32009	0.28266	0.27122	0.24685	0.23782	0.21588	+++++	0.26242	14.080
16 Ethyl Benzene	1.35873	1.21346	1.17055	1.13427	1.14952	1.07390	+++++	1.18341	8.224
17 m,p xylene	0.47233	0.43470	0.43486	0.44465	0.45705	0.42520	+++++	0.44480	3.885
18 o-xylene	0.87601	0.80441	0.80432	0.84674	0.86973	0.82520	+++++	0.83774	3.757
20 1,1,2,2-Tetrachloroethane	0.21966	0.21200	0.20790	0.20389	0.20236	0.18122	+++++	0.20450	6.355
$ 8 d4-1,2-Dichloroethane	0.46475	0.46057	0.50167	0.45609	0.44723	0.44106	+++++	0.46190	4.617

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-JAN-2013 13:49
End Cal Date : 18-JAN-2013 16:10
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/nt9.i/18JAN13.b/sim011713.m
Cal Date : 18-Jan-2013 16:31 paul
Curve Type : Average

Calibration File Names:
Level 1: /chem1/nt9.i/18JAN13.b/00200118.d
Level 2: /chem1/nt9.i/18JAN13.b/00500118.d
Level 3: /chem1/nt9.i/18JAN13.b/01000118.d
Level 4: /chem1/nt9.i/18JAN13.b/05000118.d
Level 5: /chem1/nt9.i/18JAN13.b/10000118.d
Level 6: /chem1/nt9.i/18JAN13.b/20000118a.d
Level 7: /chem1/nt9.i/18JAN13.b/50000118a.d

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	500.000 Level 4	1000.000 Level 5	2000.000 Level 6	RRF	% RSD	
	5000.000 Level 7								
1 Vinyl Chloride	0.48329	0.46900	0.48201	0.45481	0.44727	0.41664			
	0.26189						0.43074	18.093	
2 1,1-Dichloroethene	0.38889	0.33425	0.33212	0.31396	0.30313	0.27818			
	0.17580						0.30380	21.736	<-
3 Trans-1,2-Dichloroethene	0.42176	0.40502	0.37801	0.34494	0.33522	0.30730			
	0.18960						0.34027	22.793	<-
4 Acrylonitrile	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++						+++++	+++++	<-
5 cis-1,2-dichloroethene	0.58192	0.54204	0.57211	0.52319	0.51641	0.47143			
	0.29426						0.50019	19.594	
6 Benzene	1.48352	1.31189	1.25482	1.13370	1.09923	0.99173			
	0.64705						1.13171	23.571	<-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-JAN-2013 13:49
End Cal Date : 18-JAN-2013 16:10
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/nt9.i/18JAN13.b/sim011713.m
Cal Date : 18-Jan-2013 16:31 paul
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	500.000 Level 4	1000.000 Level 5	2000.000 Level 6	5000.000 Level 7	RRF	% RSD	
9 1,2-Dichloroethane	0.53636	0.57356	0.57368	0.52542	0.50771	0.46356	0.31154	0.49883	18.246	
10 Trichloroethene	0.28277	0.27824	0.27679	0.25124	0.24187	0.21943	0.14304	0.24192	20.373	<-
13 Toluene	1.53840	1.30854	1.23437	1.09076	1.07586	0.98613	0.65880	1.12755	24.469	<-
14 Tetrachloroethene	0.32009	0.28266	0.27122	0.24685	0.23782	0.21588	0.14147	0.24514	23.175	<-
16 Ethyl Benzene	1.35873	1.21346	1.17055	1.13427	1.14952	1.07390	0.73588	1.11947	17.067	
17 m,p xylene	0.47233	0.43470	0.43486	0.44465	0.45705	0.42520	0.28648	0.42218	14.658	
18 o-xylene	0.87601	0.80441	0.80432	0.84674	0.86973	0.82520	0.57043	0.79957	13.139	
20 1,1,2,2-Tetrachloroethane	0.21966	0.21200	0.20790	0.20389	0.20236	0.18122	0.14949	0.19668	12.192	
$ 8 d4-1,2-Dichloroethane	0.46475	0.46057	0.50167	0.45609	0.44723	0.44106	0.43221	0.45765	4.910	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 18-JAN-2013 13:49
End Cal Date : 18-JAN-2013 16:10
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/nt9.i/18JAN13.b/sim011713.m
Cal Date : 18-Jan-2013 16:31 paul
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	500.000 Level 4	1000.000 Level 5	2000.000 Level 6	5000.000 Level 7	___ RRF	% RSD
$ 12 d8-Toluene	1.05160	1.04718	1.04505	1.04576	1.04094	1.03597	0.98651	1.03615	2.165
$ 19 4-Bromofluorobenzene	0.32915	0.33645	0.34764	0.35990	0.36294	0.36443	0.37416	0.35353	4.611

PG 1/24/13

Data File: /chem1/nt9.i/18JAN13.b/bfb0118.d

Date : 18-JAN-2013 12:05

Client ID: BFB0118

Instrument: nt9.i

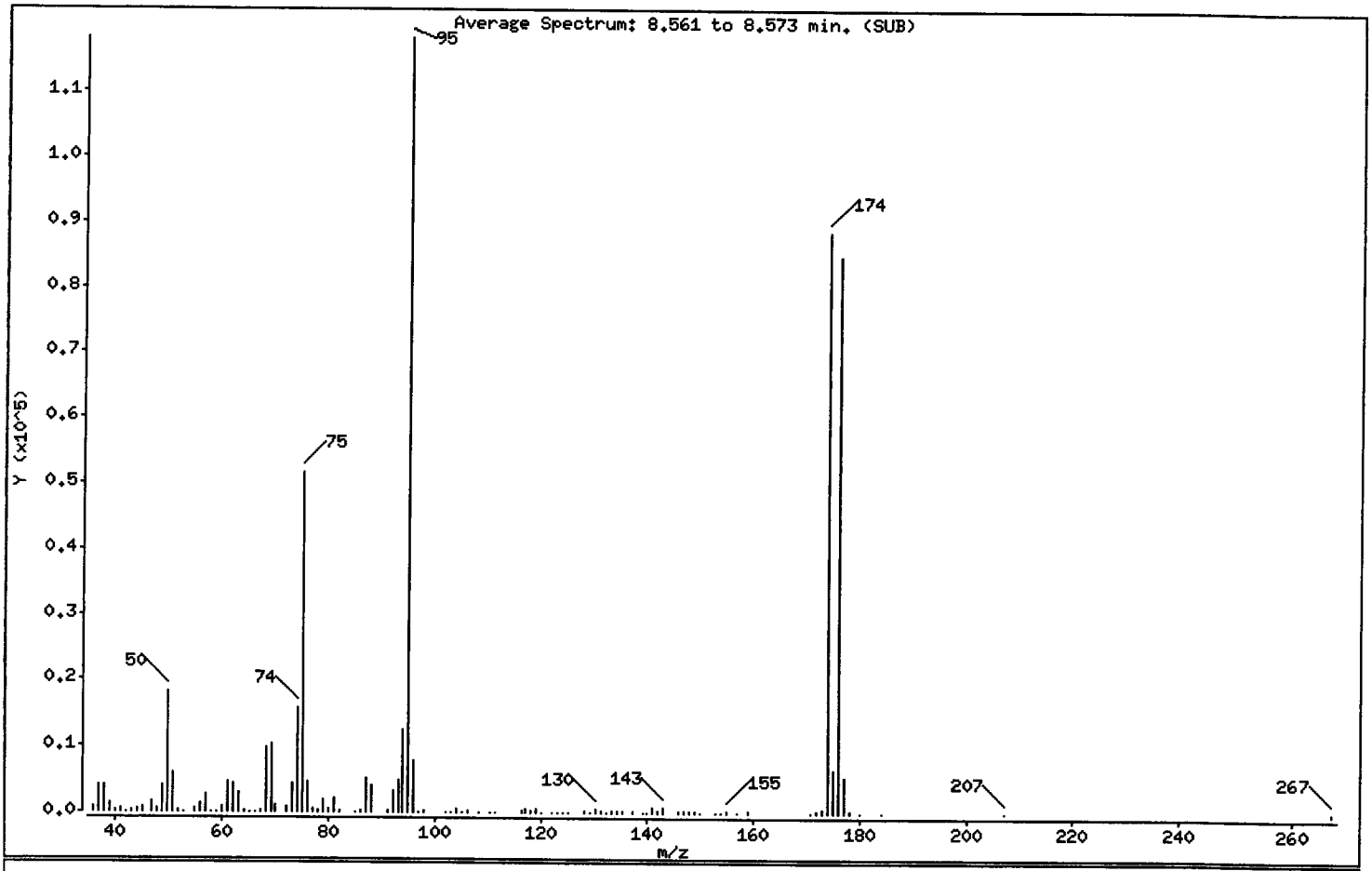
Sample Info: BFB0118,BFB0118,,118JAN2013,,

Operator: PC

Column phase: RTXVMS

Column diameter: 0.18

1 Bromofluorobenzene



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.45
75	30.00 - 66.00% of mass 95	43.61
96	5.00 - 9.00% of mass 95	6.77
173	Less than 2.00% of mass 174	0.36 (0.48)
174	50.00 - 101.00% of mass 95	74.92
175	4.00 - 9.00% of mass 174	5.41 (7.22)
176	95.00 - 101.00% of mass 174	71.69 (95.70)
177	5.00 - 9.00% of mass 176	4.51 (6.28)

Data File: /chem1/nt9.i/18JAN13.b/bfb0118.d

Date : 18-JAN-2013 12:05

Client ID: BFB0118

Instrument: nt9.i

Sample Info: BFB0118,BFB0118,,118JAN2013,,

Operator: PC

Column phase: RTXVMS

Column diameter: 0.18

Data File: bfb0118.d

Spectrum: Average Spectrum: 8.561 to 8.573 min. (SUB)

Location of Maximum: 95.00

Number of points: 109

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	778	66.00	60	102.00	60	141.00	730
37.00	4145	67.00	191	103.00	127	142.00	194
38.00	3941	68.00	9768	104.00	558	143.00	944
39.00	1485	69.00	10264	105.00	124	146.00	143
40.00	247	70.00	1095	106.00	220	147.00	208
41.00	466	72.00	795	108.00	128	148.00	331
42.00	65	73.00	4480	110.00	84	149.00	152
43.00	260	74.00	15669	111.00	5	150.00	54
44.00	506	75.00	51552	116.00	156	153.00	50
45.00	867	76.00	4706	117.00	409	154.00	71
47.00	1540	77.00	496	118.00	303	155.00	348
48.00	577	78.00	350	119.00	462	157.00	55
49.00	3958	79.00	1939	120.00	59	159.00	271
50.00	18264	80.00	613	122.00	127	171.00	53
51.00	5849	81.00	2148	123.00	54	172.00	292
52.00	295	82.00	220	124.00	109	173.00	421
53.00	58	85.00	132	125.00	21	174.00	88568
55.00	588	86.00	287	128.00	251	175.00	6395
56.00	1367	87.00	5048	129.00	35	176.00	84760
57.00	2751	88.00	4132	130.00	483	177.00	5326
58.00	46	91.00	296	131.00	345	178.00	240
59.00	67	92.00	3368	132.00	60	180.00	111
60.00	906	93.00	4787	133.00	163	184.00	131
61.00	4561	94.00	12552	134.00	143	207.00	60
62.00	4405	95.00	118224	135.00	374	267.00	183
63.00	3001	96.00	8004	137.00	252		
64.00	369	97.00	8	139.00	124		
65.00	61	98.00	147	140.00	55		

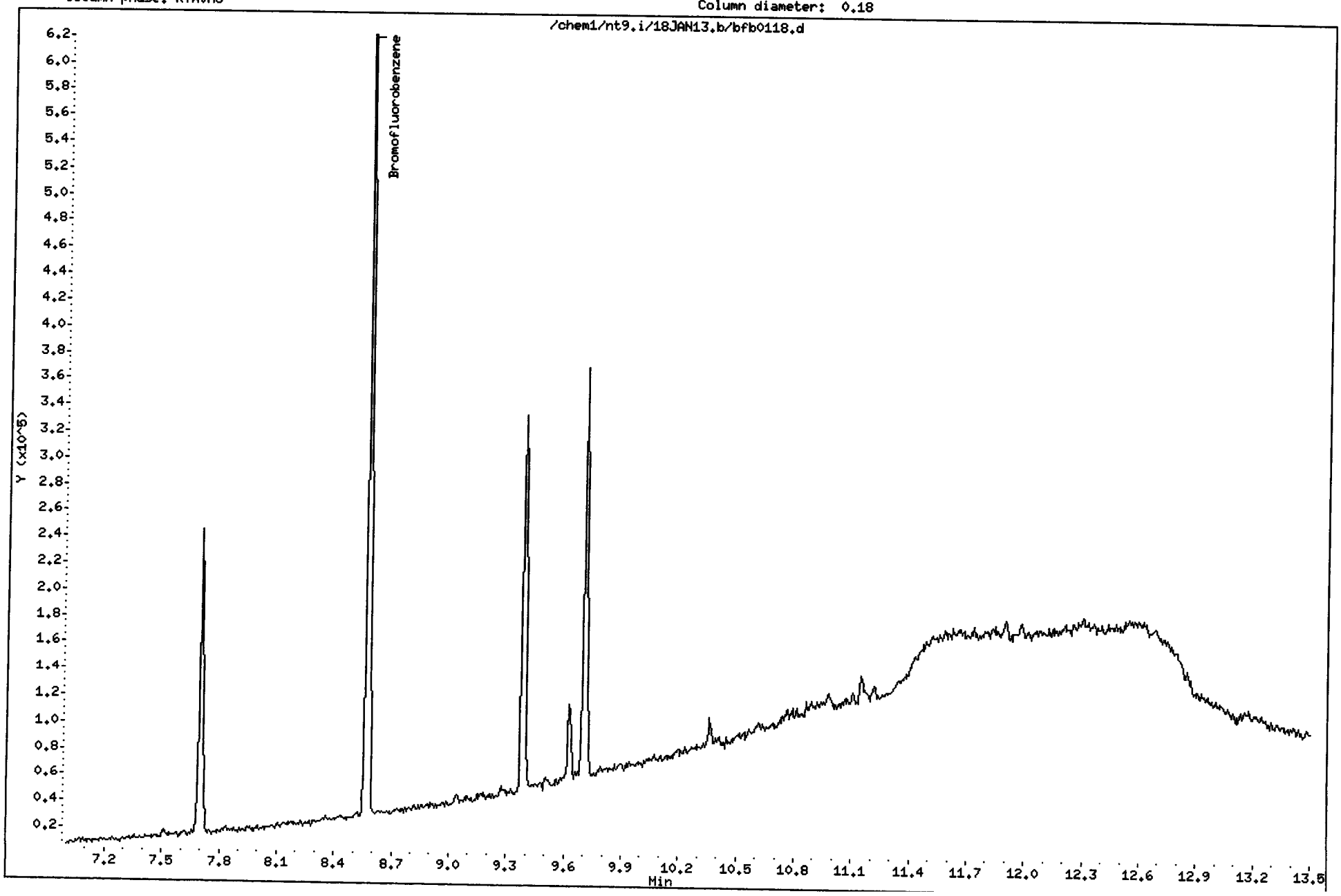
UZ97 00198

Data File: /chem1/nt9.i/18JAN13.b/bfb0118.d
Date : 18-JAN-2013 12:05
Client ID: BFB0118
Sample Info: BFB0118,BFB0118,,118JAN2013,,

Instrument: nt9.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS



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Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/18JAN13.b/50000118a.d
Lab Smp Id: IC5000 Client Smp ID: IC5000
Inj Date : 18-JAN-2013 13:49
Operator : PC Inst ID: nt9.i
Smp Info : IC5000,10,10,0,
Misc Info : 13-
Comment :
Method : /chem1/nt9.i/18JAN13.b/sim011713.m
Meth Date : 21-Jan-2013 08:41 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: chlor+btex.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/L)	ON-COL (ng/L)
	1 Vinyl Chloride	62	1.616	1.611	(0.307)	169797	5000.00	2853.8(Q)
	2 1,1-Dichloroethene	96	2.635	2.632	(0.500)	113981	5000.00	2703.9
	3 Trans-1,2-Dichloroethene	96	3.426	3.423	(0.651)	122931	5000.00	2594.6
	5 cis-1,2-dichloroethene	96	4.497	4.495	(0.854)	190782	5000.00	2752.5
	6 Benzene	78	5.180	5.180	(0.918)	732272	5000.00	2668.3
*	7 Pentafluorobenzene	168	5.266	5.267	(1.000)	129671	1000.00	
§	8 d4-1,2-Dichloroethane	65	5.286	5.286	(1.004)	56045	1000.00	935.73
	9 1,2-Dichloroethane	62	5.333	5.334	(1.013)	201991	5000.00	2938.8(Q)
	10 Trichloroethene	130	5.609	5.610	(0.994)	161881	5000.00	2767.9
*	11 1,4-Difluorobenzene	114	5.642	5.643	(1.000)	226341	1000.00	
§	12 d8-Toluene	98	6.618	6.618	(1.173)	223288	1000.00	944.56
	13 Toluene	91	6.651	6.651	(0.863)	818196	5000.00	2732.1
	14 Tetrachloroethene	166	6.922	6.922	(1.227)	160099	5000.00	2695.4
*	15 d5 -Chlorobenzene	117	7.706	7.706	(1.000)	248388	1000.00	
	16 Ethyl Benzene	91	7.734	7.734	(1.004)	913917	5000.00	3109.2(Q)
	17 m,p xylene	106	7.840	7.841	(1.017)	711575	10000.0	6440.6

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/L)	AMOUNTS ON-COL (ng/L)
18 o-xylene	91	8.140	8.140	(1.056)	708437	5000.00	3404.6
$ 19 4-Bromofluorobenzene	174	8.573	8.574	(1.113)	92937	1000.00	1068.8
20 1,1,2,2-Tetrachloroethane	83	8.711	8.712	(1.130)	185659	5000.00	3655.0

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: 50000118a.d
Lab Smp Id: IC5000
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/18JAN13.b/sim011713.m
Misc Info: 13-

Calibration Date: 18-JAN-2013
Calibration Time: 14:36
Client Smp ID: IC5000
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	129671	13.14
11 1,4-Difluorobenze	202370	101185	404740	226341	11.85
15 d5 -Chlorobenzene	226394	113197	452788	248388	9.71

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	-0.01
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	-0.01
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	-0.01

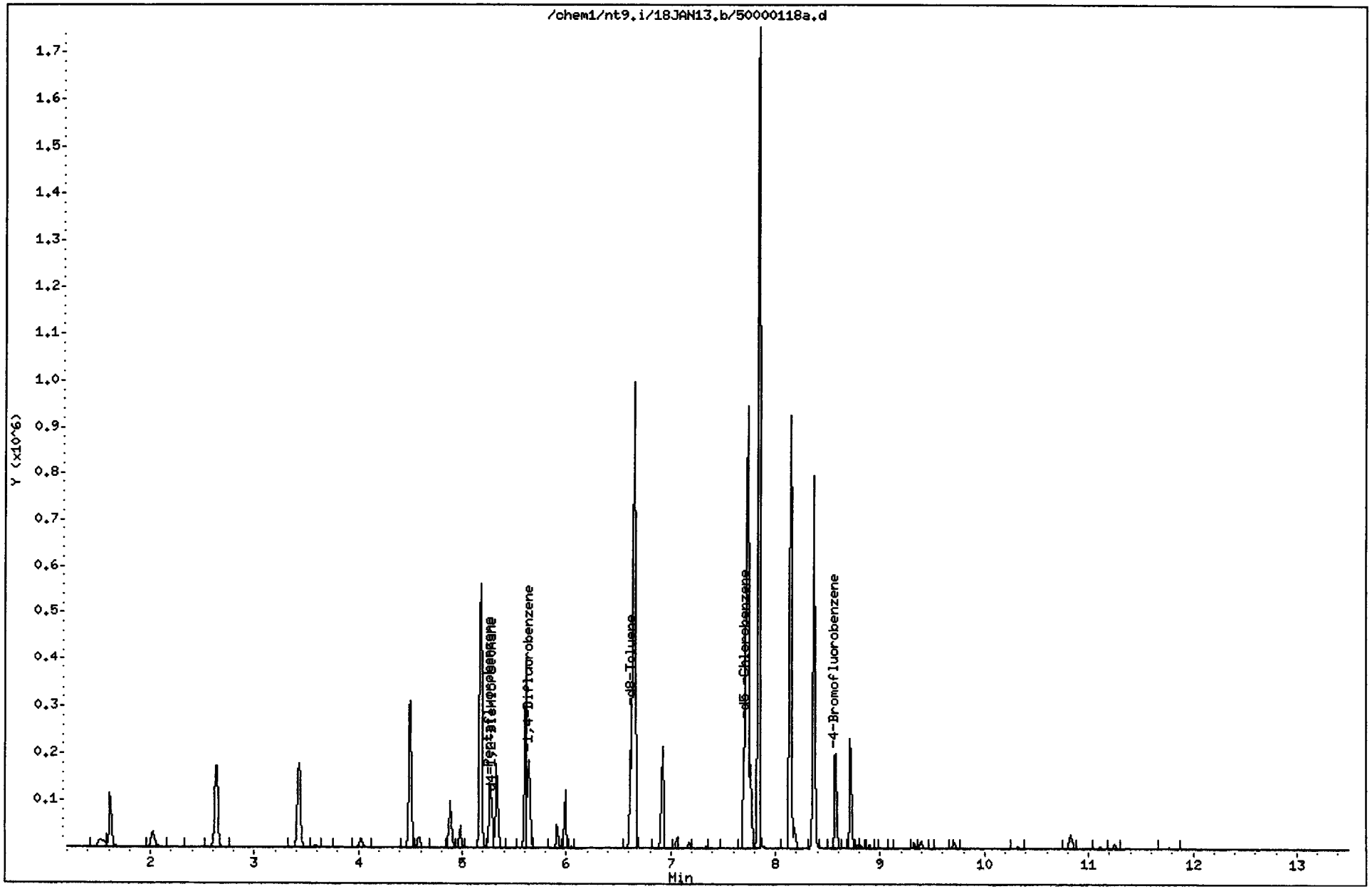
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt9.i/18JAN13.b/50000118a.d
Date : 18-JAN-2013 13:49
Client ID: IC5000
Sample Info: IC5000,10,10,0,

Column phase: RTXVMS

Instrument: nt9.i

Operator: PC
Column diameter: 0.18



CO-ELUTION SUMMARY FOR FILE - 50000118a.d

Lab ID: IC5000, Method: sim011713.m, Instrument: nt9.i, Date: 18-JAN-2013

RT	CO-ELUTION COMPOUNDS

PC 1/21/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/18JAN13.b/20000118a.d
Lab Smp Id: 1C2000 Client Smp ID: 1C2000
Inj Date : 18-JAN-2013 14:12
Operator : PC Inst ID: nt9.i
Smp Info : 1C2000,10,10,0,
Misc Info : 13-
Comment :
Method : /chem1/nt9.i/18JAN13.b/sim011713.m
Meth Date : 21-Jan-2013 08:41 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: chlor+btex.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/L)	ON-COL (ng/L)
	1 Vinyl Chloride	62	1.610	1.611	(0.306)	96959	2000.00	1816.1(Q)
	2 1,1-Dichloroethene	96	2.632	2.632	(0.500)	64736	2000.00	1711.4
	3 Trans-1,2-Dichloroethene	96	3.422	3.423	(0.650)	71514	2000.00	1682.1
	5 cis-1,2-dichloroethene	96	4.494	4.495	(0.853)	109709	2000.00	1764.0
	6 Benzene	78	5.181	5.180	(0.918)	416231	2000.00	1635.9
*	7 Pentafluorobenzene	168	5.267	5.267	(1.000)	116357	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.286	5.286	(1.004)	51321	1000.00	954.90
	9 1,2-Dichloroethane	62	5.334	5.334	(1.013)	107876	2000.00	1749.1(Q)
	10 Trichloroethene	130	5.609	5.610	(0.994)	92095	2000.00	1698.4
*	11 1,4-Difluorobenzene	114	5.643	5.643	(1.000)	209851	1000.00	
$	12 d8-Toluene	98	6.619	6.618	(1.173)	217399	1000.00	991.91
	13 Toluene	91	6.651	6.651	(0.863)	462147	2000.00	1635.8
	14 Tetrachloroethene	166	6.922	6.922	(1.227)	90606	2000.00	1645.3
*	15 d5 -Chlorobenzene	117	7.706	7.706	(1.000)	234324	1000.00	
	16 Ethyl Benzene	91	7.735	7.734	(1.004)	503282	2000.00	1814.9(Q)
	17 m,p xylene	106	7.841	7.841	(1.017)	398542	4000.00	3823.8

UZ97:00497

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/L)	AMOUNTS ON-COL (ng/L)
18 o-xylene	91	8.141	8.140	(1.056)	386730	2000.00	1970.1
$ 19 4-Bromofluorobenzene	174	8.574	8.574	(1.113)	85395	1000.00	1041.0
20 1,1,2,2-Tetrachloroethane	83	8.712	8.712	(1.130)	84927	2000.00	1772.3

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: 20000118a.d
Lab Smp Id: 1C2000
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/18JAN13.b/sim011713.m
Misc Info: 13-

Calibration Date: 18-JAN-2013
Calibration Time: 14:36
Client Smp ID: 1C2000
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	116357	1.52
11 1,4-Difluorobenze	202370	101185	404740	209851	3.70
15 d5 -Chlorobenzene	226394	113197	452788	234324	3.50

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	0.00
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	0.00
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	0.00

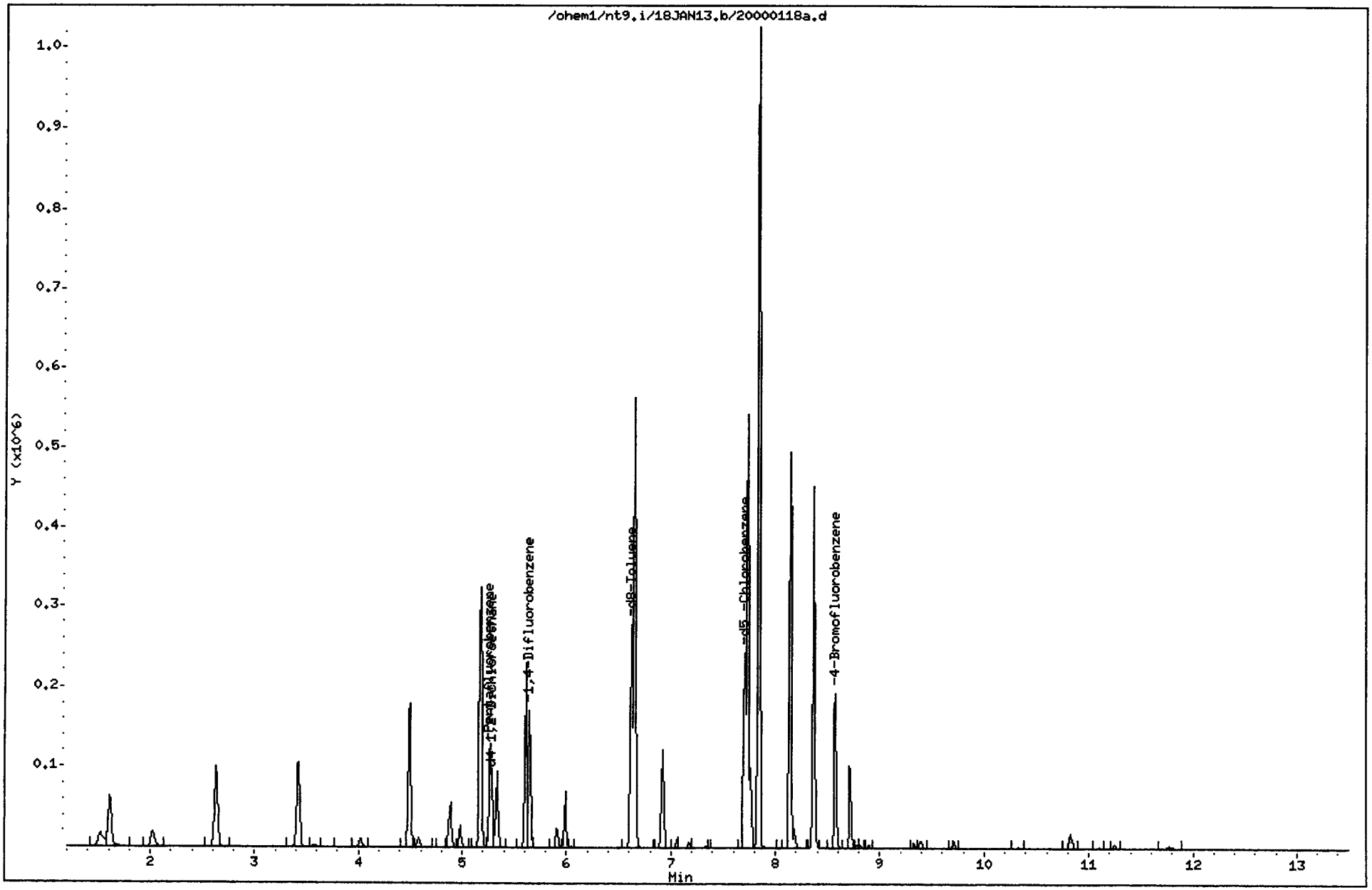
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt9.i/18JAN13.b/20000118a.d
Date : 18-JAN-2013 14:12
Client ID: 1C2000
Sample Info: 1C2000,10,10,0,

Column phase: RTXVMS

Instrument: nt9.i

Operator: PC
Column diameter: 0.18



CO-ELUTION SUMMARY FOR FILE - 20000118a.d

Lab ID: 1C2000, Method: sim011713.m, Instrument: nt9.i, Date: 18-JAN-2013

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/18JAN13.b/10000118.d
Lab Smp Id: IC1000 Client Smp ID: IC1000
Inj Date : 18-JAN-2013 14:36
Operator : PC Inst ID: nt9.i
Smp Info : IC1000,10,10,0,
Misc Info : 13-
Comment :
Method : /chem1/nt9.i/18JAN13.b/sim011713.m
Meth Date : 21-Jan-2013 08:41 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: chlor+btex.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/L)	ON-COL (ng/L)
	1 Vinyl Chloride	62	1.611	1.611	(0.306)	51262	1000.00	974.79(Q)
	2 1,1-Dichloroethene	96	2.632	2.632	(0.500)	34742	1000.00	932.46
	3 Trans-1,2-Dichloroethene	96	3.423	3.423	(0.650)	38420	1000.00	917.47
	5 cis-1,2-dichloroethene	96	4.495	4.495	(0.853)	59186	1000.00	966.12
	6 Benzene	78	5.180	5.180	(0.918)	222451	1000.00	906.59
*	7 Pentafluorobenzene	168	5.267	5.267	(1.000)	114611	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.286	5.286	(1.004)	51258	1000.00	968.26
	9 1,2-Dichloroethane	62	5.334	5.334	(1.013)	58189	1000.00	957.86(Q)
	10 Trichloroethene	130	5.610	5.610	(0.994)	48948	1000.00	936.08
*	11 1,4-Difluorobenzene	114	5.643	5.643	(1.000)	202370	1000.00	
$	12 d8-Toluene	98	6.618	6.618	(1.173)	210656	1000.00	996.68
	13 Toluene	91	6.651	6.651	(0.863)	243569	1000.00	892.33
	14 Tetrachloroethene	166	6.922	6.922	(1.227)	48128	1000.00	906.26
*	15 d5 -Chlorobenzene	117	7.706	7.706	(1.000)	226394	1000.00	
	16 Ethyl Benzene	91	7.734	7.734	(1.004)	260245	1000.00	971.37(Q)
	17 m,p xylene	106	7.841	7.841	(1.017)	206946	2000.00	2055.1

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/L)	AMOUNTS ON-COL (ng/L)
18 o-xylene	91	8.140	8.140	(1.056)	196902	1000.00	1038.2
$ 19 4-Bromofluorobenzene	174	8.574	8.574	(1.113)	82168	1000.00	1036.7
20 1,1,2,2-Tetrachloroethane	83	8.712	8.712	(1.130)	45813	1000.00	989.51

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: 10000118.d
Lab Smp Id: IC1000
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/18JAN13.b/sim011713.m
Misc Info: 13-

Calibration Date: 18-JAN-2013
Calibration Time: 14:36
Client Smp ID: IC1000
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	114611	0.00
11 1,4-Difluorobenze	202370	101185	404740	202370	0.00
15 d5 -Chlorobenzene	226394	113197	452788	226394	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	0.00
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	0.00
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	0.00

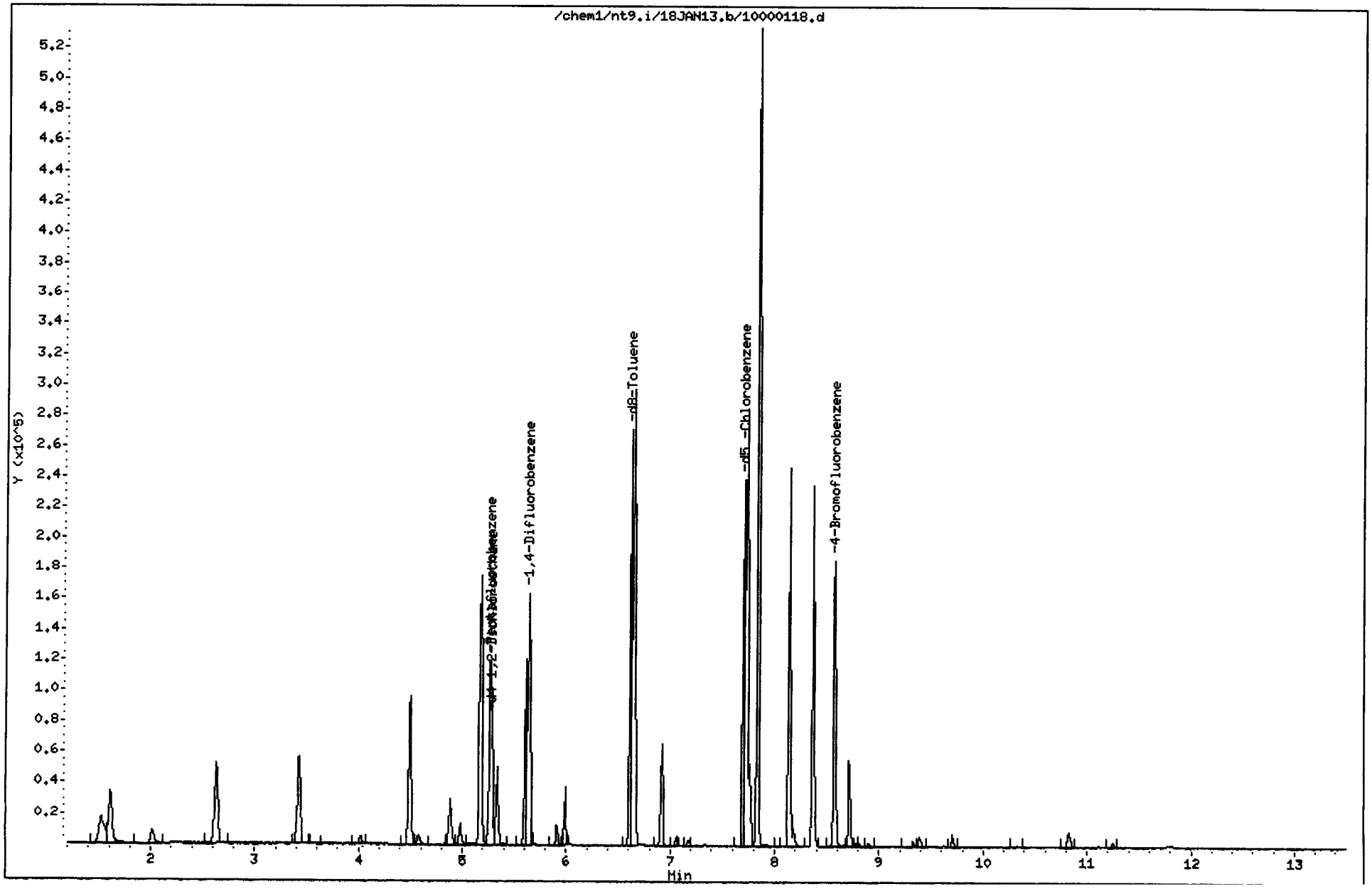
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt9.i/18JAN13.b/10000118.d
Date : 18-JAN-2013 14:36
Client ID: IC1000
Sample Info: IC1000,10,10,0,

Instrument: nt9.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS



CO-ELUTION SUMMARY FOR FILE - 10000118.d

Lab ID: IC1000, Method: sim011713.m, Instrument: nt9.i, Date: 18-JAN-2013

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/18JAN13.b/05000118.d
Lab Smp Id: 1C0500 Client Smp ID: 1C0500
Inj Date : 18-JAN-2013 14:59
Operator : PC Inst ID: nt9.i
Smp Info : 1C0500,10,10,0,
Misc Info : 13-
Comment :
Method : /chem1/nt9.i/18JAN13.b/sim011713.m
Meth Date : 21-Jan-2013 08:41 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: chlor+btex.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/L)	ON-COL (ng/L)
	1 Vinyl Chloride	62	1.611	1.611	(0.306)	25496	500.000	495.61(Q)
	2 1,1-Dichloroethene	96	2.632	2.632	(0.500)	17600	500.000	482.88
	3 Trans-1,2-Dichloroethene	96	3.422	3.423	(0.650)	19337	500.000	472.04
	5 cis-1,2-dichloroethene	96	4.495	4.495	(0.853)	29329	500.000	489.40
	6 Benzene	78	5.181	5.180	(0.918)	111375	500.000	467.51
*	7 Pentafluorobenzene	168	5.268	5.267	(1.000)	112117	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.287	5.286	(1.004)	51135	1000.00	987.42
	9 1,2-Dichloroethane	62	5.335	5.334	(1.013)	29454	500.000	495.63(Q)
	10 Trichloroethene	130	5.609	5.610	(0.994)	24682	500.000	486.17
*	11 1,4-Difluorobenzene	114	5.642	5.643	(1.000)	196480	1000.00	
$	12 d8-Toluene	98	6.619	6.618	(1.173)	205471	1000.00	1001.3
	13 Toluene	91	6.652	6.651	(0.863)	119794	500.000	452.34
	14 Tetrachloroethene	166	6.923	6.922	(1.227)	24251	500.000	470.34
*	15 d5 -Chlorobenzene	117	7.706	7.706	(1.000)	219653	1000.00	
	16 Ethyl Benzene	91	7.734	7.734	(1.004)	124573	500.000	479.24(Q)
	17 m,p xylene	106	7.841	7.841	(1.017)	97668	1000.00	999.66

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/L)	AMOUNTS ON-COL (ng/L)
18 o-xylene	91	8.140	8.140	(1.056)	92995	500.000	505.38
$ 19 4-Bromofluorobenzene	174	8.575	8.574	(1.113)	79054	1000.00	1028.0
20 1,1,2,2-Tetrachloroethane	83	8.712	8.712	(1.131)	22393	500.000	498.51

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: 05000118.d
Lab Smp Id: 1C0500
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/18JAN13.b/sim011713.m
Misc Info: 13-

Calibration Date: 18-JAN-2013
Calibration Time: 14:36
Client Smp ID: 1C0500
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	112117	-2.18
11 1,4-Difluorobenze	202370	101185	404740	196480	-2.91
15 d5 -Chlorobenzene	226394	113197	452788	219653	-2.98

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	0.02
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	-0.02
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	0.00

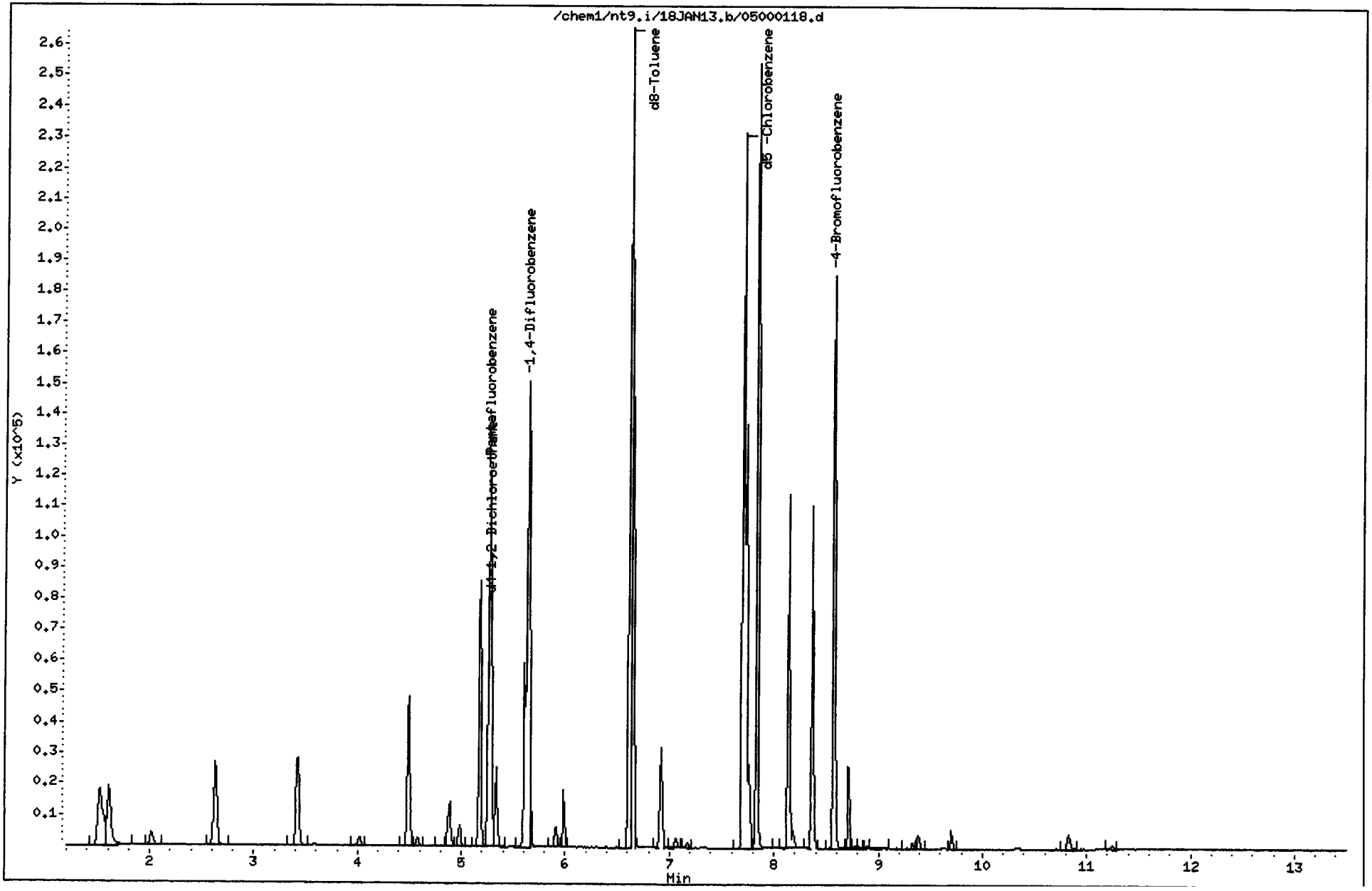
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt9.i/18JAN13.b/05000118.d
Date : 18-JAN-2013 14:59
Client ID: 1C0500
Sample Info: 1C0500,10,10,0,

Instrument: nt9.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVHS



CO-ELUTION SUMMARY FOR FILE - 05000118.d

Lab ID: 1C0500, Method: sim011713.m, Instrument: nt9.i, Date: 18-JAN-2013

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/18JAN13.b/01000118.d
Lab Smp Id: IC0100 Client Smp ID: IC0100
Inj Date : 18-JAN-2013 15:23
Operator : PC Inst ID: nt9.i
Smp Info : IC0100,10,10,0,
Misc Info : 13-
Comment :
Method : /chem1/nt9.i/18JAN13.b/sim011713.m
Meth Date : 21-Jan-2013 08:41 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: chlor+btex.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/L)	AMOUNTS ON-COL (ng/L)
	1 Vinyl Chloride	62	1.606	1.611	(0.305)	5200	100.000	105.05(QM)
	2 1,1-Dichloroethene	96	2.631	2.632	(0.499)	3583	100.000	102.16
	3 Trans-1,2-Dichloroethene	96	3.420	3.423	(0.649)	4078	100.000	103.46
	5 cis-1,2-dichloroethene	96	4.495	4.495	(0.854)	6172	100.000	107.03
	6 Benzene	78	5.180	5.180	(0.918)	23443	100.000	103.49
*	7 Pentafluorobenzene	168	5.267	5.267	(1.000)	107882	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.285	5.286	(1.003)	54121	1000.00	1086.1(M)
	9 1,2-Dichloroethane	62	5.333	5.334	(1.012)	6189	100.000	108.23(QM)
	10 Trichloroethene	130	5.609	5.610	(0.994)	5171	100.000	107.12
*	11 1,4-Difluorobenzene	114	5.643	5.643	(1.000)	186823	1000.00	
$	12 d8-Toluene	98	6.619	6.618	(1.173)	195240	1000.00	1000.6
	13 Toluene	91	6.651	6.651	(0.863)	25649	100.000	102.38
	14 Tetrachloroethene	166	6.922	6.922	(1.227)	5067	100.000	103.35
*	15 d5 -Chlorobenzene	117	7.706	7.706	(1.000)	207791	1000.00	
	16 Ethyl Benzene	91	7.734	7.734	(1.004)	24323	100.000	98.914(Q)
	17 m,p xylene	106	7.841	7.841	(1.017)	18072	200.000	195.53

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/L)	ON-COL (ng/L)
18 o-xylene	91	8.140	8.140	(1.056)	16713	100.000	96.011
$ 19 4-Bromofluorobenzene	174	8.575	8.574	(1.113)	72236	1000.00	993.00
20 1,1,2,2-Tetrachloroethane	83	8.710	8.712	(1.130)	4320	100.000	101.66(M)

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: 01000118.d
Lab Smp Id: IC0100
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/18JAN13.b/sim011713.m
Misc Info: 13-

Calibration Date: 18-JAN-2013
Calibration Time: 14:36
Client Smp ID: IC0100
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	107882	-5.87
11 1,4-Difluorobenze	202370	101185	404740	186823	-7.68
15 d5 -Chlorobenzene	226394	113197	452788	207791	-8.22

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	0.00
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	0.00
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	0.00

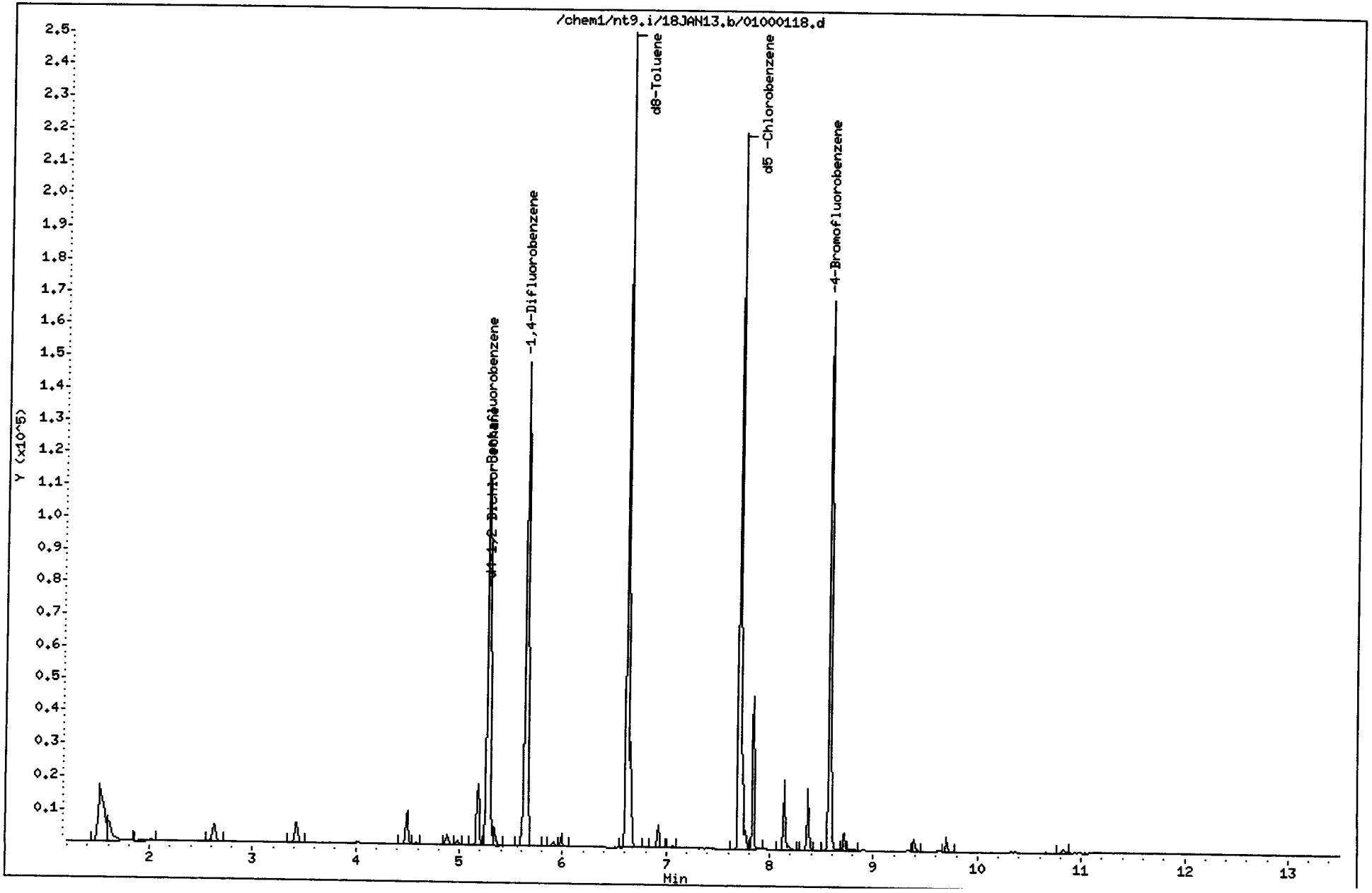
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt9.i/18JAN13.b/01000118.d
Date : 18-JAN-2013 15:23
Client ID: IC0100
Sample Info: IC0100,10,10,0,

Column phase: RTXVMS

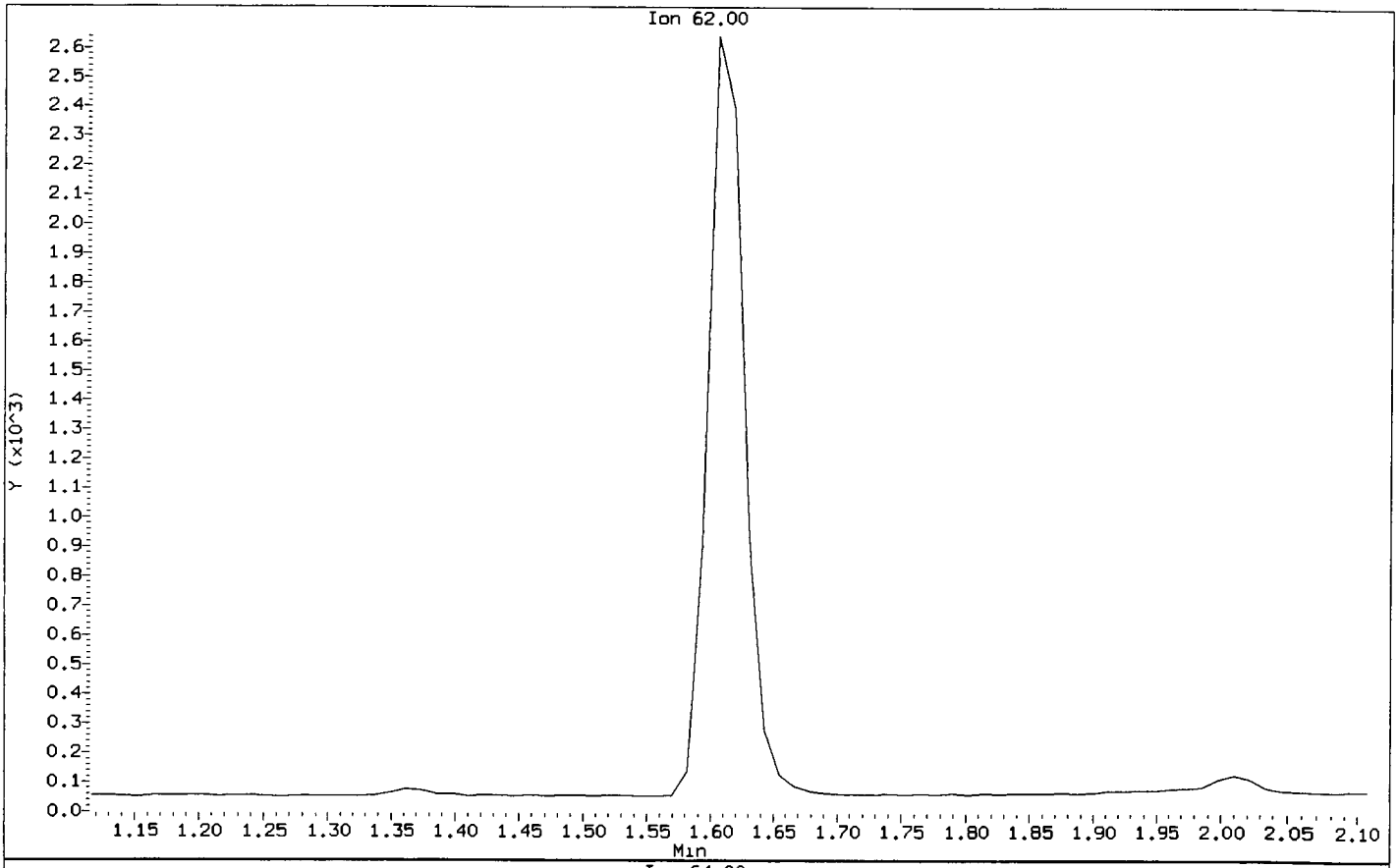
Instrument: nt9.i

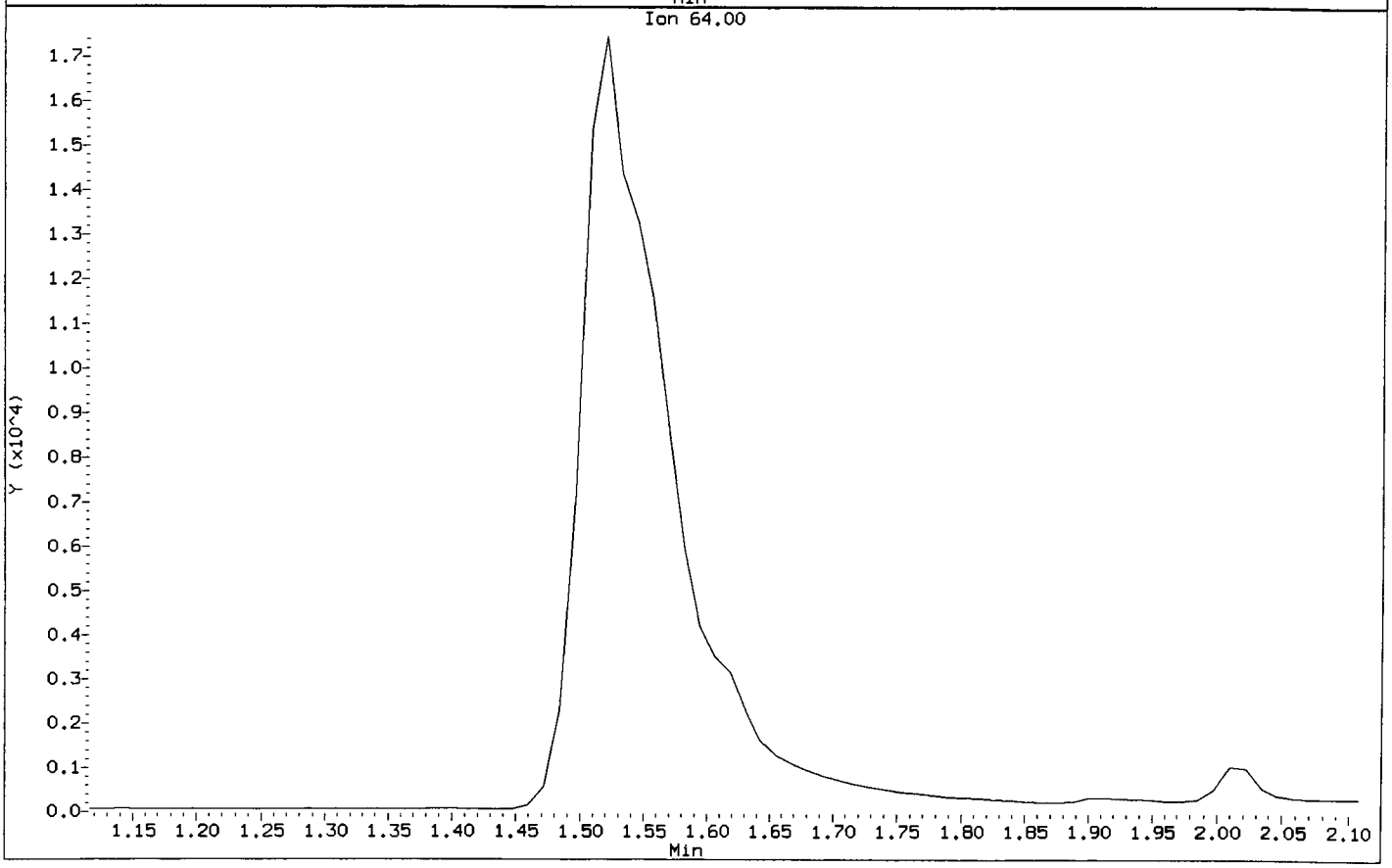
Operator: PC
Column diameter: 0.18



Data File: /chem1/nt9.1/18JAN13.b/01000118.d
Injection Date: 18-JAN-2013 15:23
Instrument: nt9.1
Client Sample ID: IC0100

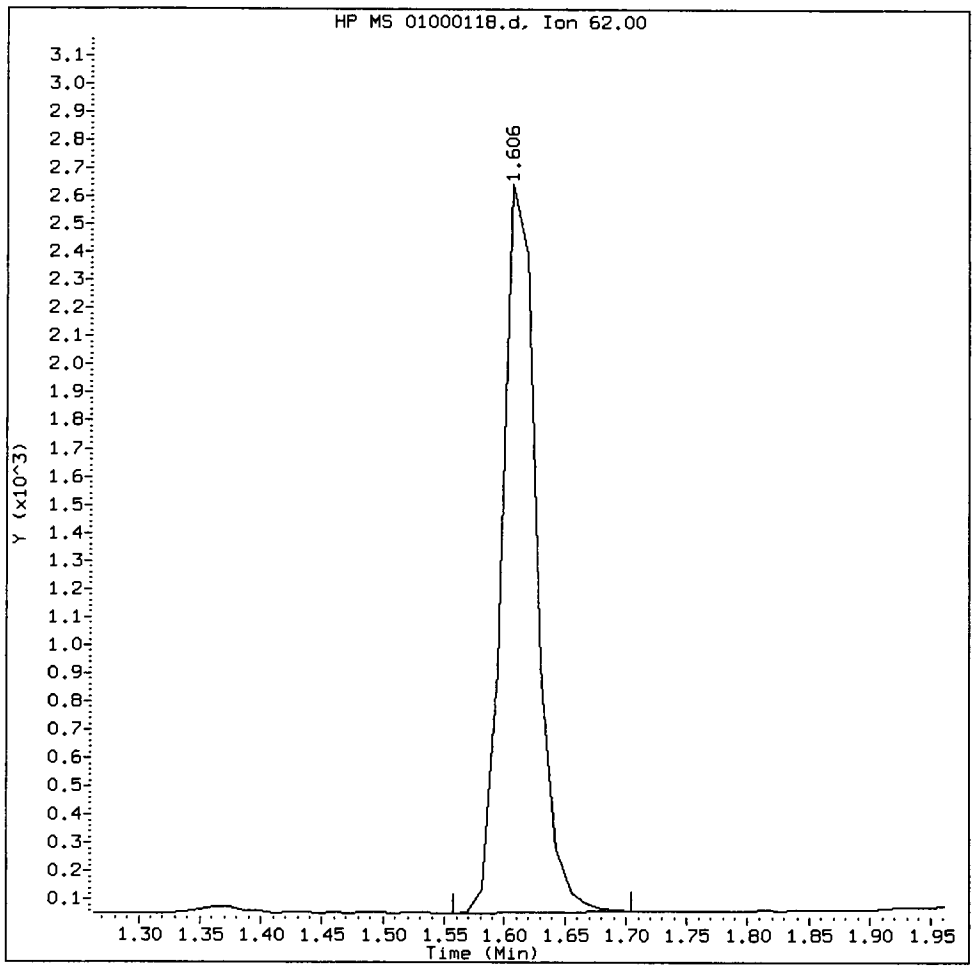
Compound: Vinyl Chloride
CAS Number:





IC0100, /chem1/nt9.i/18JAN13.b/01000118.d

Vinyl Chloride Amount: 105.05 Area: 5200



MANUAL INTEGRATION for Vinyl Chloride

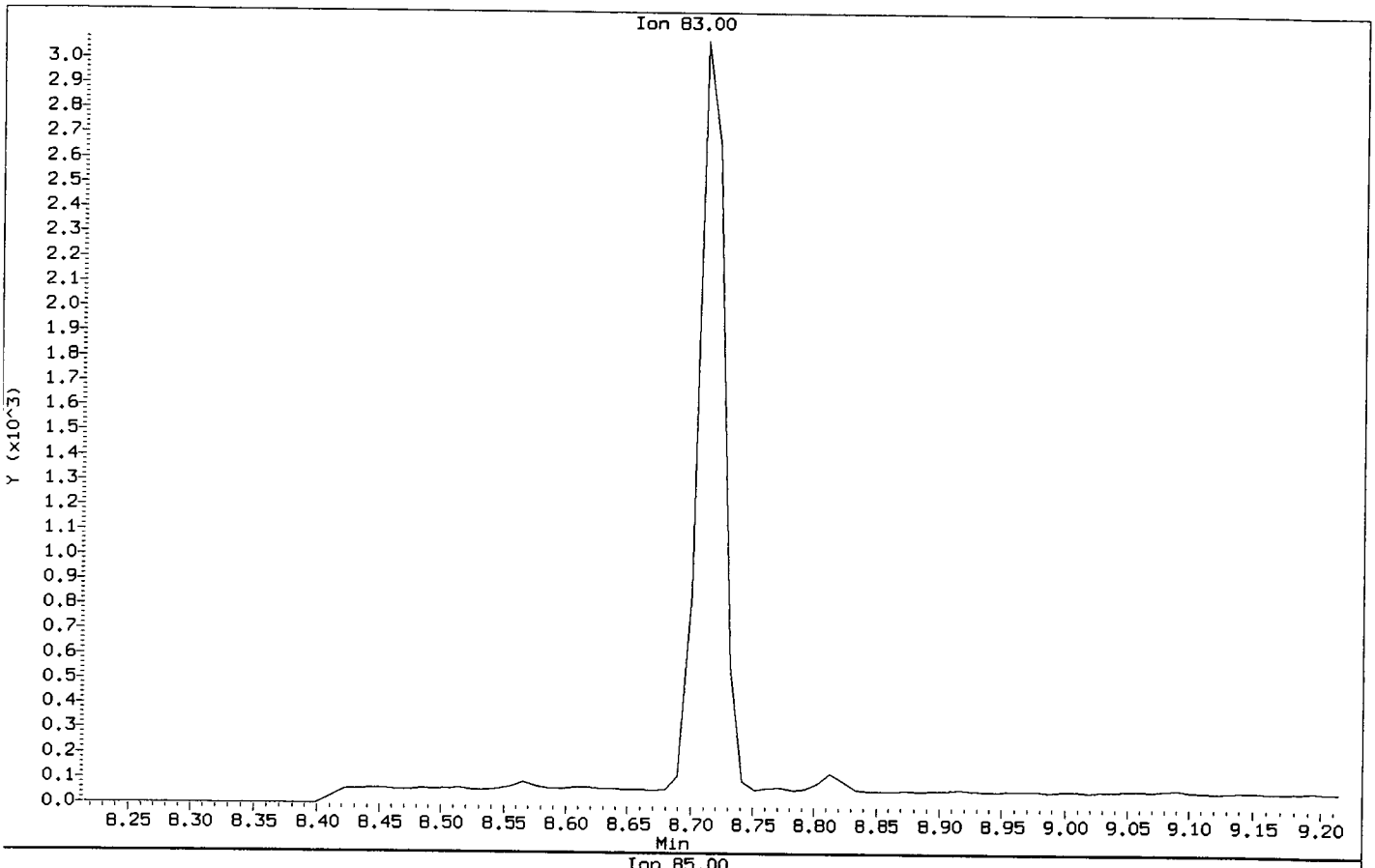
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

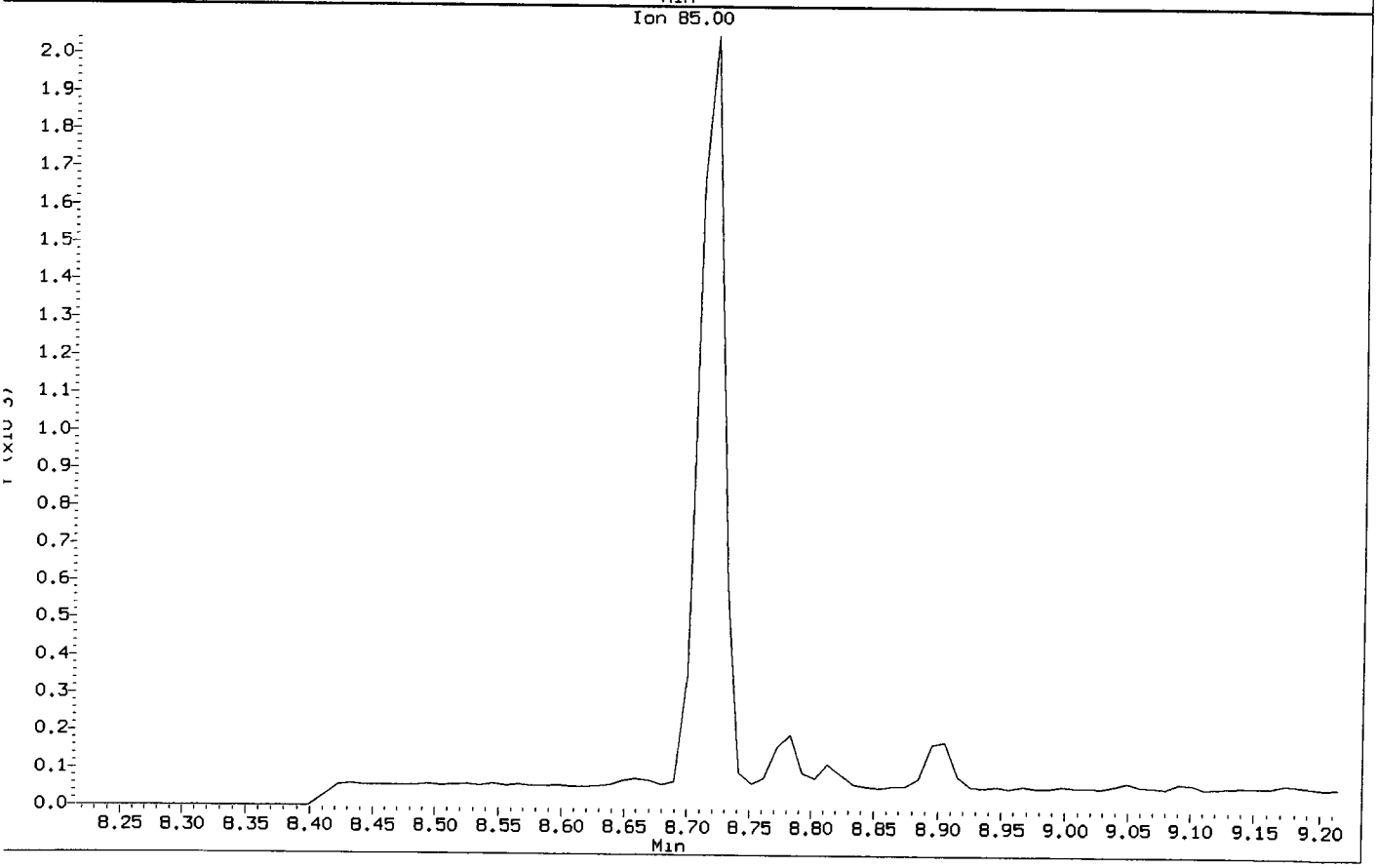
5. Other _____

Analyst: KC Date: 1/21/13

Data File: /chem1/nt9.i/18JAN13.b/01000118.d
Injection Date: 18-JAN-2013 15:23
Instrument: nt9.i
Client Sample ID: IC0100

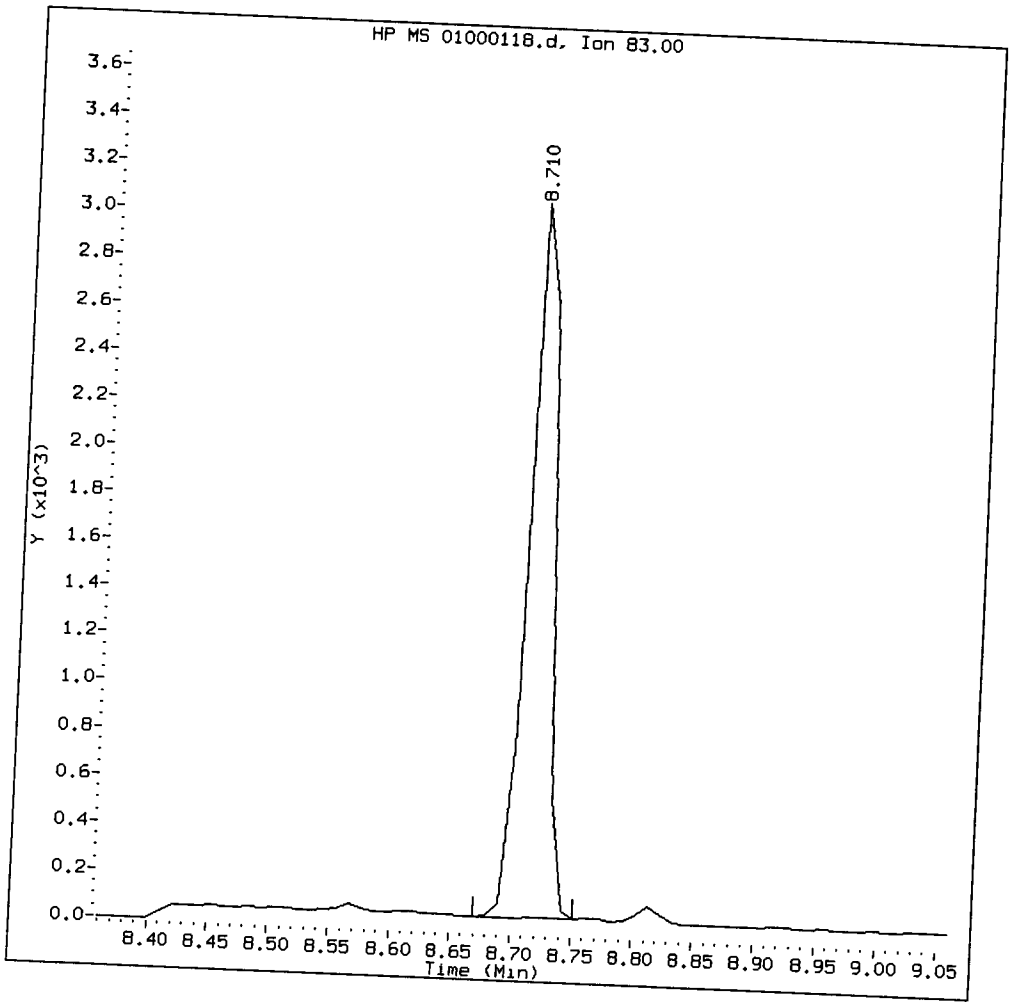
Compound: 1,1,2,2-Tetrachloroethane
CAS Number:





IC0100, /chem1/nt9.i/18JAN13.b/01000118.d

1,1,2,2-Tetrachloroethane Amount: 101.66 Area: 4320



MANUAL INTEGRATION for 1,1,2,2-Tetrachloroethane

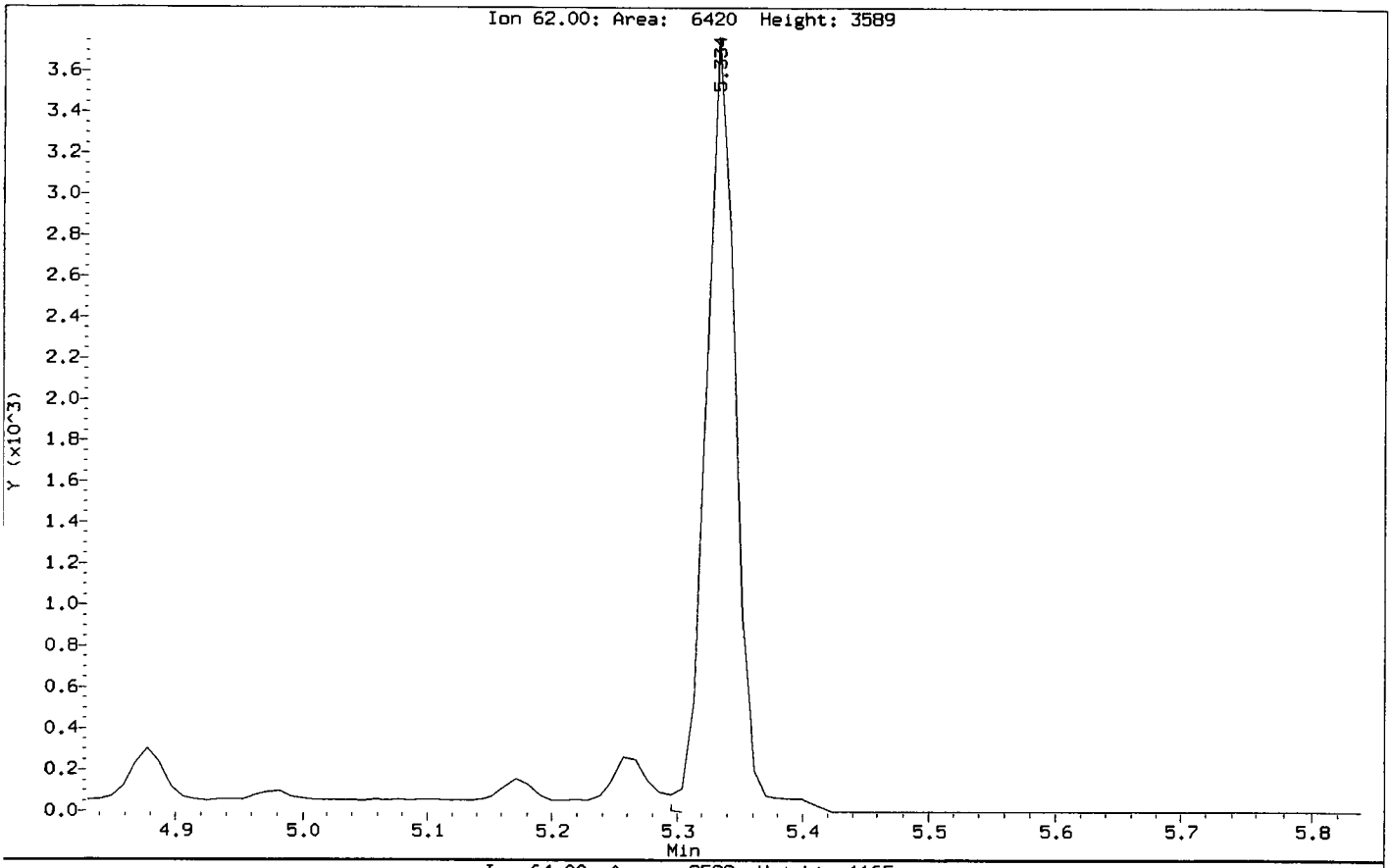
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

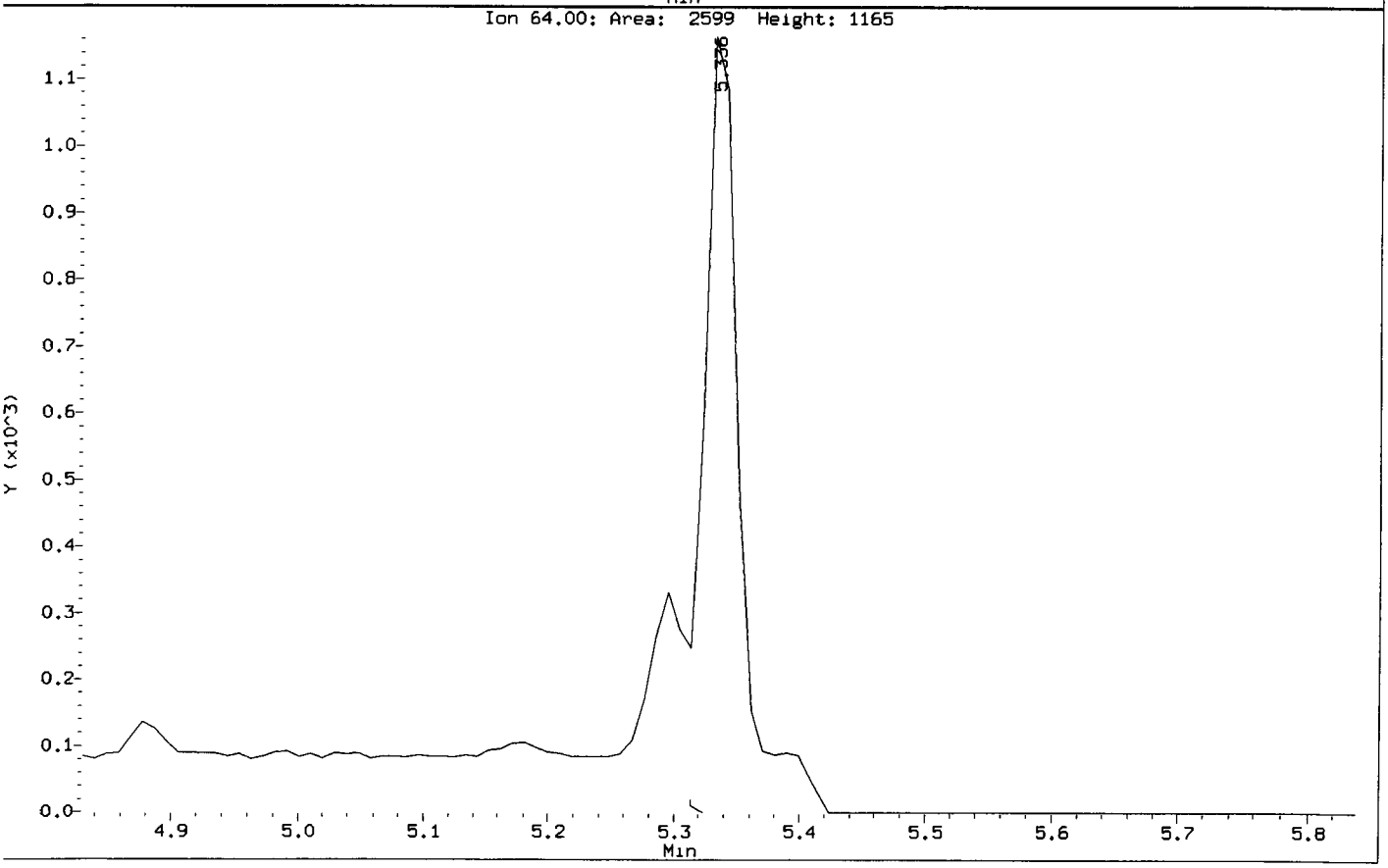
5. Other _____

Analyst: KC Date: 1/21/13

Data File: /chem1/nt9.i/18JAN13.b/0100118.d
Injection Date: 18-JAN-2013 15:23
Instrument: nt9.i
Client Sample ID: IC0100

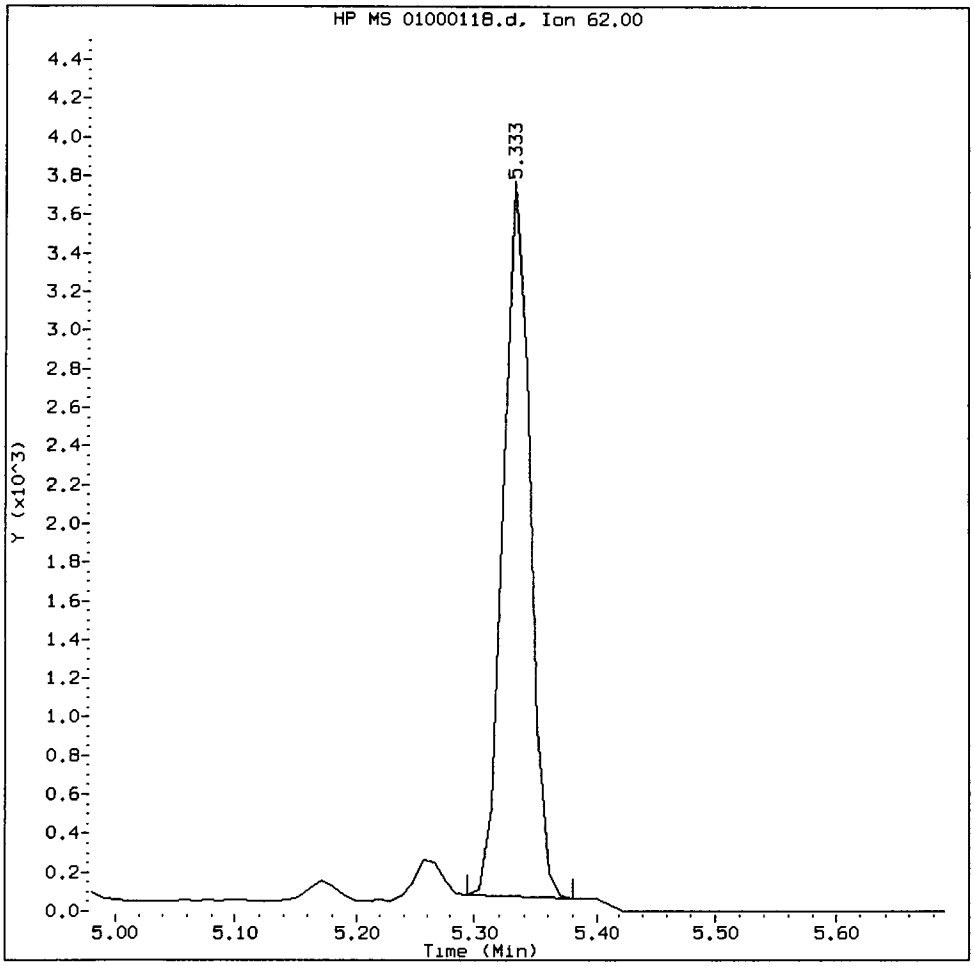
Compound: 1,2-Dichloroethane
CAS Number:





IC0100, /chem1/nt9.i/18JAN13.b/01000118.d

1,2-Dichloroethane Amount: 108.23 Area: 6189



MANUAL INTEGRATION for 1,2-Dichloroethane

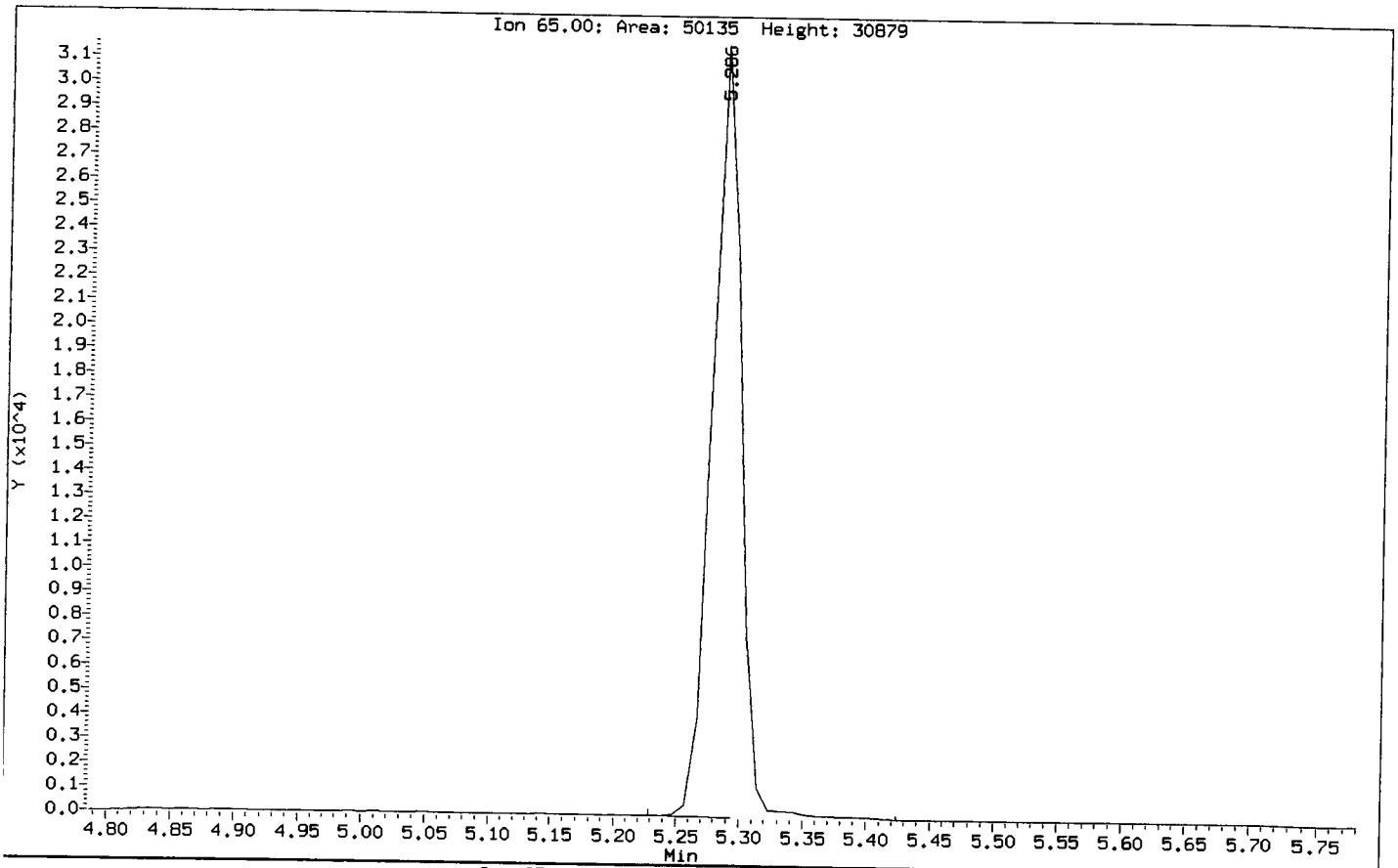
(1) Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

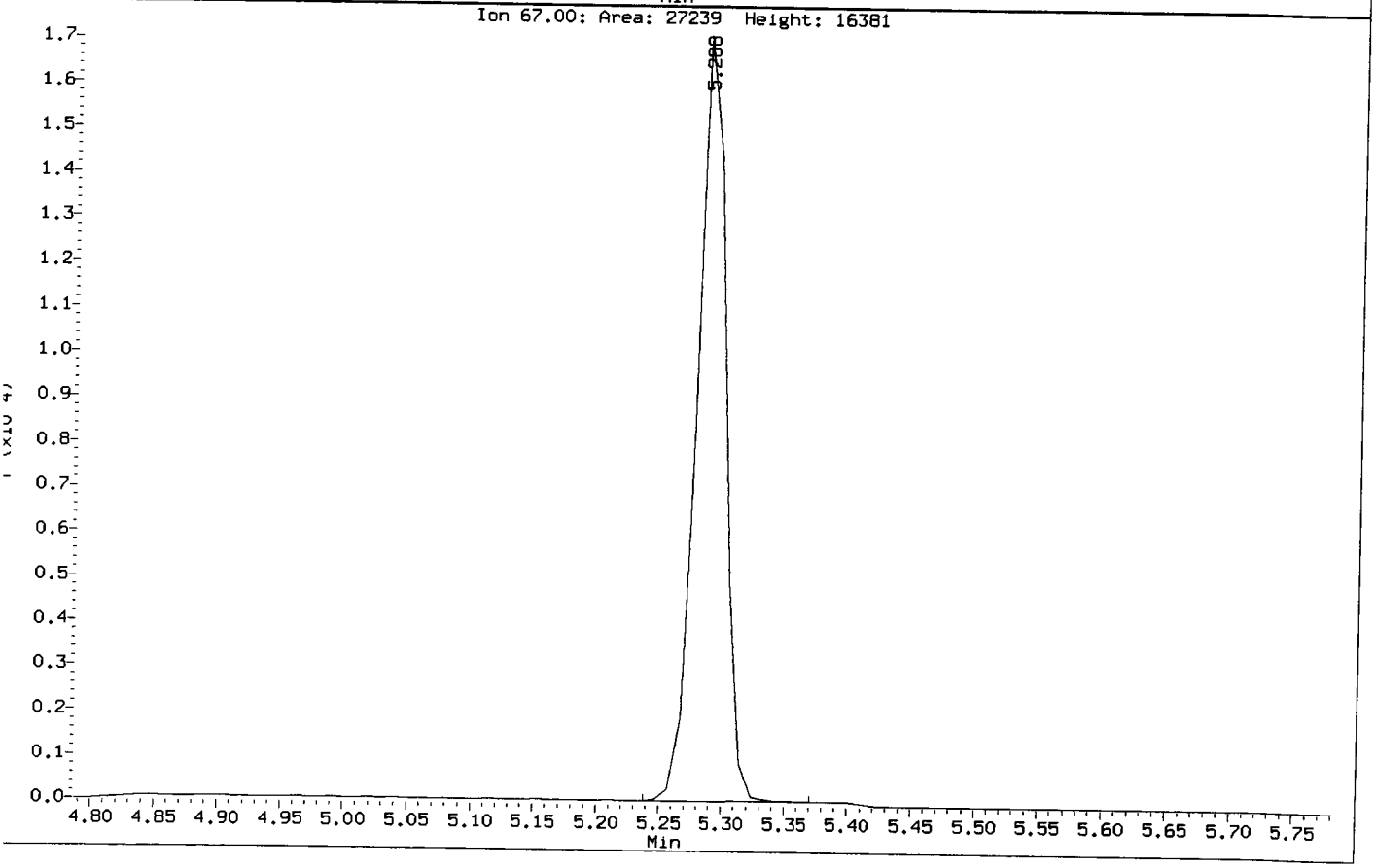
5. Other _____

Analyst: AC Date: 1/21/13

Data File: /chem1/nt9.i/18JAN13.b/01000118.d
Injection Date: 18-JAN-2013 15:23
Instrument: nt9.i
Client Sample ID: IC0100

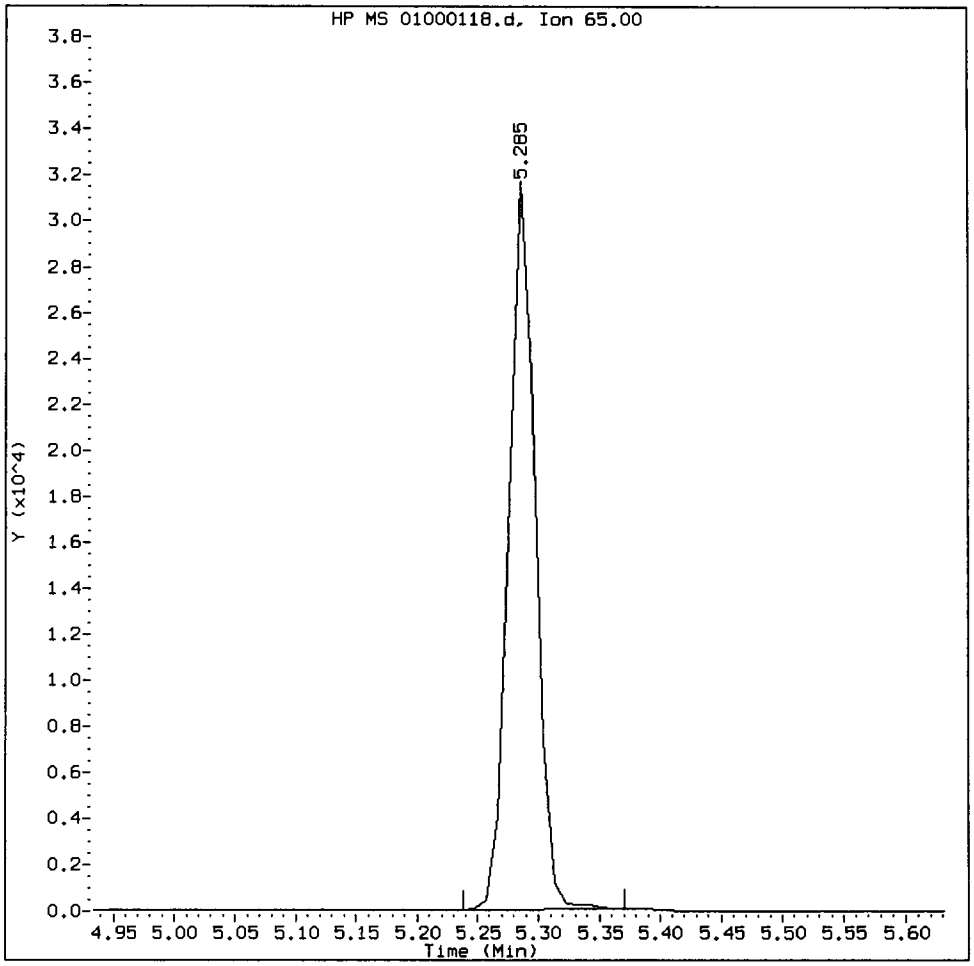
Compound: d4-1,2-Dichloroethane
CAS Number:





IC0100, /chem1/nt9.i/18JAN13.b/01000118.d

d4-1,2-Dichloroethane Amount: 1086.11 Area: 54121



MANUAL INTEGRATION for d4-1,2-Dichloroethane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: VC Date: 1/21/13

CO-ELUTION SUMMARY FOR FILE - 01000118.d

Lab ID: IC0100, Method: sim011713.m, Instrument: nt9.i, Date: 18-JAN-2013

RT	CO-ELUTION COMPOUNDS

UZ97 90524

1/21/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/18JAN13.b/00500118.d
Lab Smp Id: IC0050 Client Smp ID: IC0050
Inj Date : 18-JAN-2013 15:47
Operator : PC Inst ID: nt9.i
Smp Info : IC0050,10,10,0,
Misc Info : 13-
Comment :
Method : /chem1/nt9.i/18JAN13.b/sim011713.m
Meth Date : 21-Jan-2013 08:41 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: chlor+btex.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/L)	ON-COL (ng/L)
	1 Vinyl Chloride	62	1.608	1.611	(0.305)	2485	50.0000	51.108(QM)
	2 1,1-Dichloroethene	96	2.632	2.632	(0.500)	1771	50.0000	51.409
	3 Trans-1,2-Dichloroethene	96	3.419	3.423	(0.649)	2146	50.0000	55.425
	5 cis-1,2-dichloroethene	96	4.495	4.495	(0.853)	2872	50.0000	50.704
	6 Benzene	78	5.181	5.180	(0.918)	11891	50.0000	54.099
*	7 Pentafluorobenzene	168	5.267	5.267	(1.000)	105970	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.287	5.286	(1.004)	48807	1000.00	997.14
	9 1,2-Dichloroethane	62	5.334	5.334	(1.013)	3039	50.0000	54.104(QM)
	10 Trichloroethene	130	5.610	5.610	(0.994)	2522	50.0000	53.842
*	11 1,4-Difluorobenzene	114	5.644	5.643	(1.000)	181280	1000.00	
$	12 d8-Toluene	98	6.619	6.618	(1.173)	189832	1000.00	1002.6
	13 Toluene	91	6.651	6.651	(0.863)	12703	50.0000	54.266
	14 Tetrachloroethene	166	6.922	6.922	(1.227)	2562	50.0000	53.856
*	15 d5 -Chlorobenzene	117	7.706	7.706	(1.000)	194155	1000.00	
	16 Ethyl Benzene	91	7.734	7.734	(1.004)	11780	50.0000	51.270
	17 m,p xylene	106	7.840	7.841	(1.017)	8440	100.000	97.730

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: 00500118.d
Lab Smp Id: IC0050
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/18JAN13.b/sim011713.m
Misc Info: 13-

Calibration Date: 18-JAN-2013
Calibration Time: 14:36
Client Smp ID: IC0050
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	105970	-7.54
11 1,4-Difluorobenze	202370	101185	404740	181280	-10.42
15 d5 -Chlorobenzene	226394	113197	452788	194155	-14.24

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	0.01
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	0.01
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	-0.01

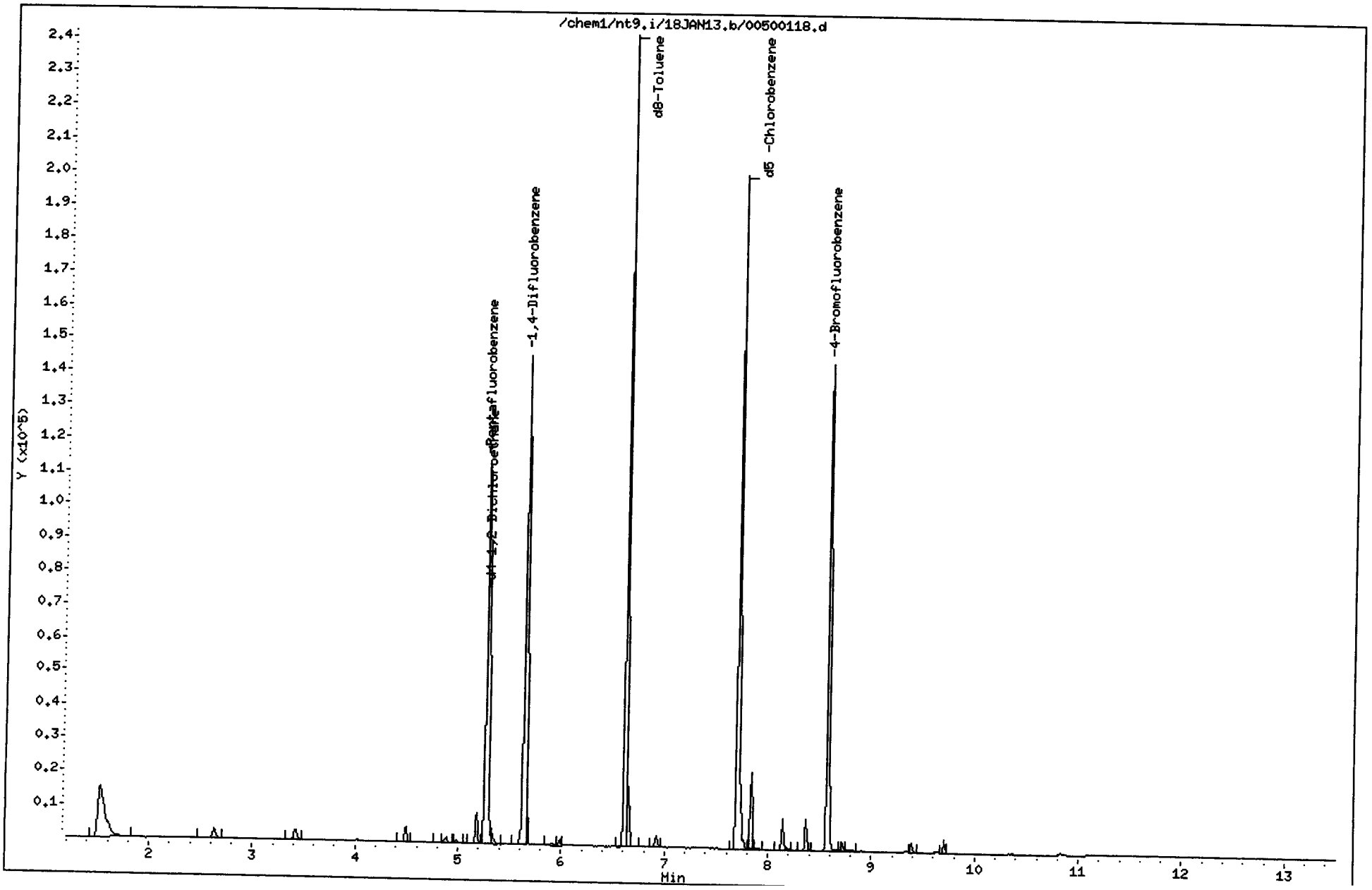
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt9.i/18JAN13.b/00500118.d
Date : 18-JAN-2013 15:47
Client ID: IC0050
Sample Info: IC0050,10,10,0,

Column phase: RTXVMS

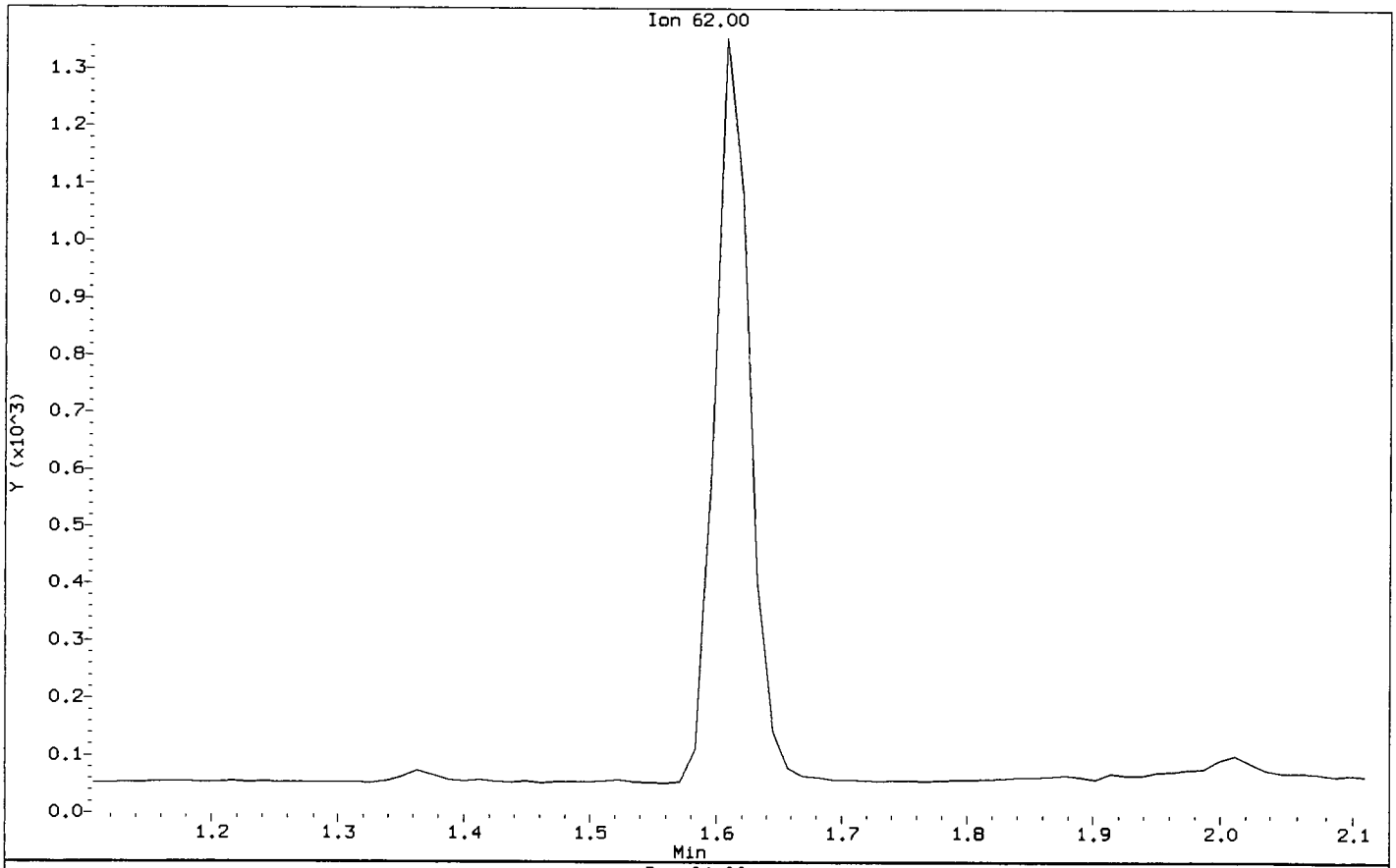
Instrument: nt9.i

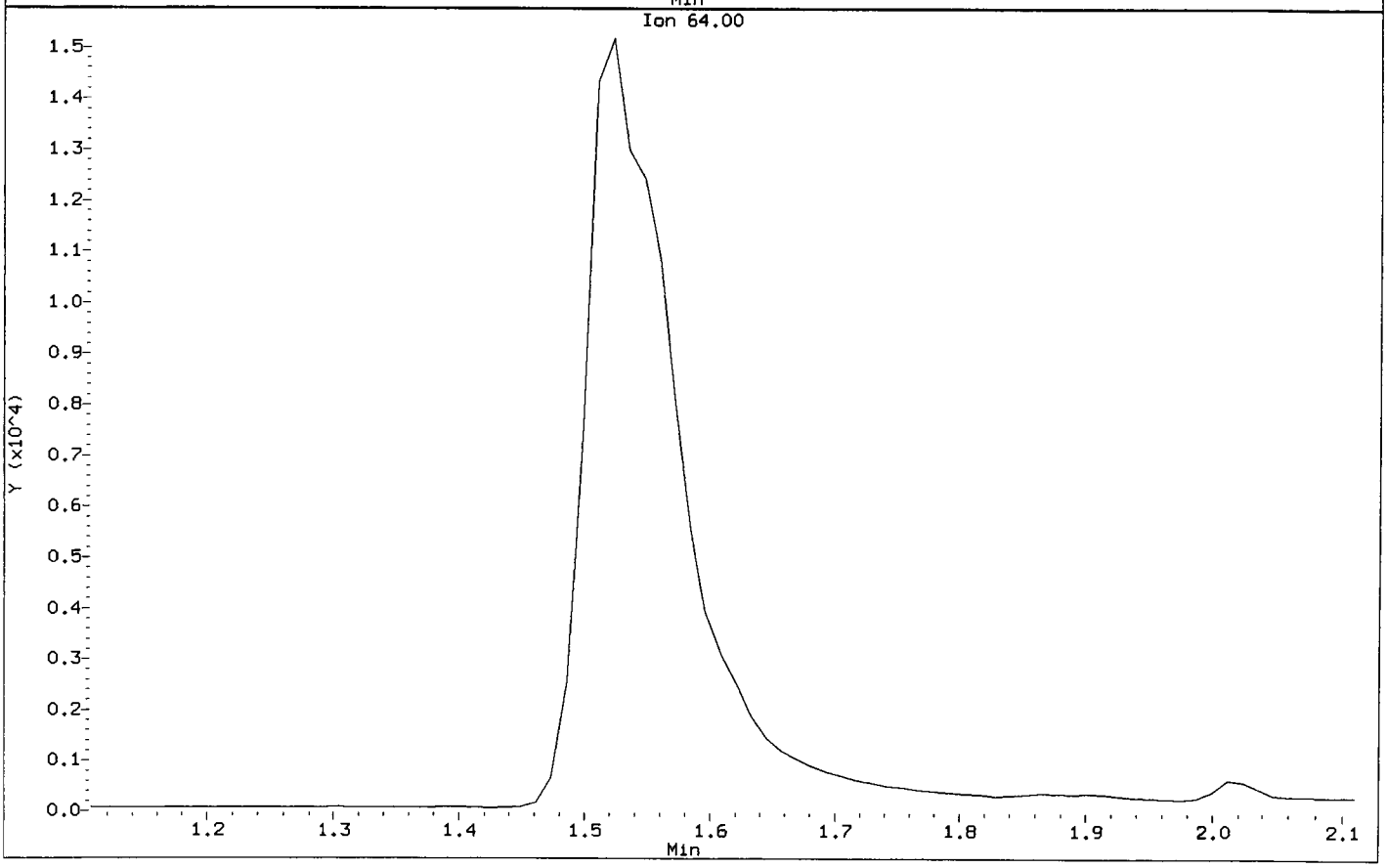
Operator: PC
Column diameter: 0.18



Data File: /chem1/nt9.i/18JAN13.b/00500118.d
Injection Date: 18-JAN-2013 15:47
Instrument: nt9.i
Client Sample ID: IC0050

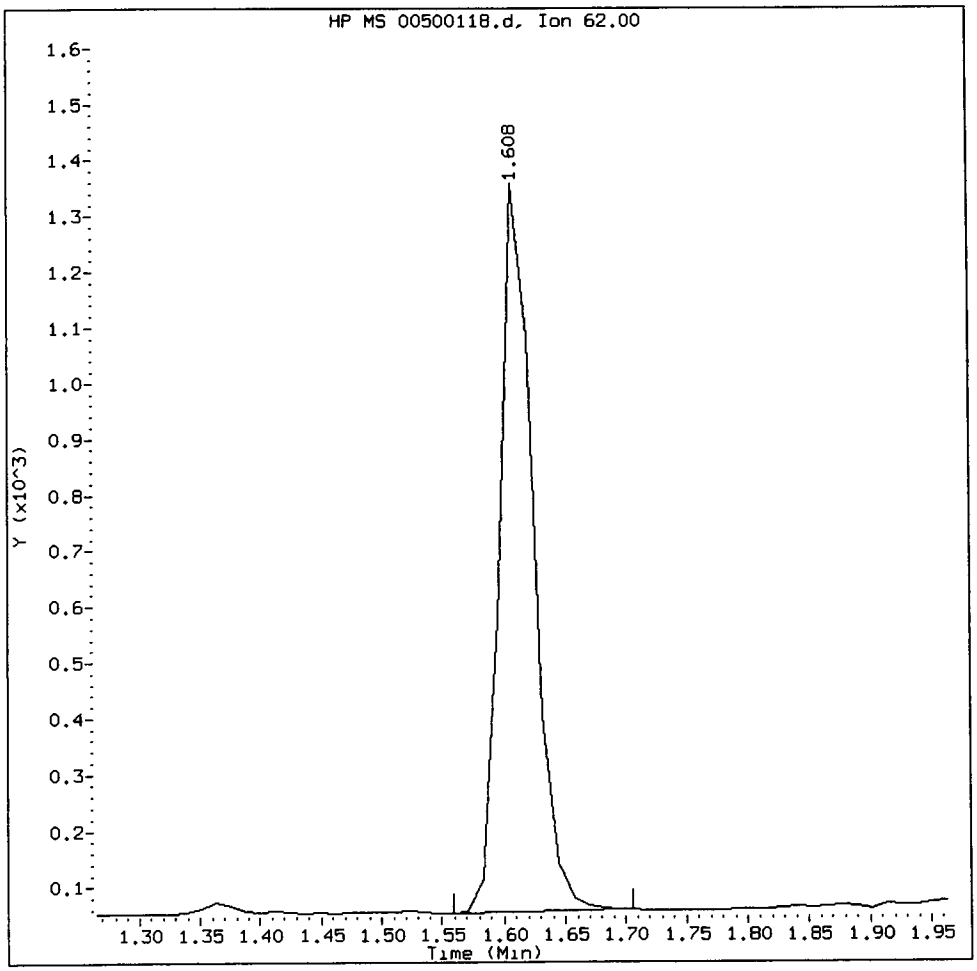
Compound: Vinyl Chloride
CAS Number:





IC0050, /chem1/nt9.i/18JAN13.b/00500118.d

Vinyl Chloride Amount: 51.11 Area: 2485



MANUAL INTEGRATION for Vinyl Chloride

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

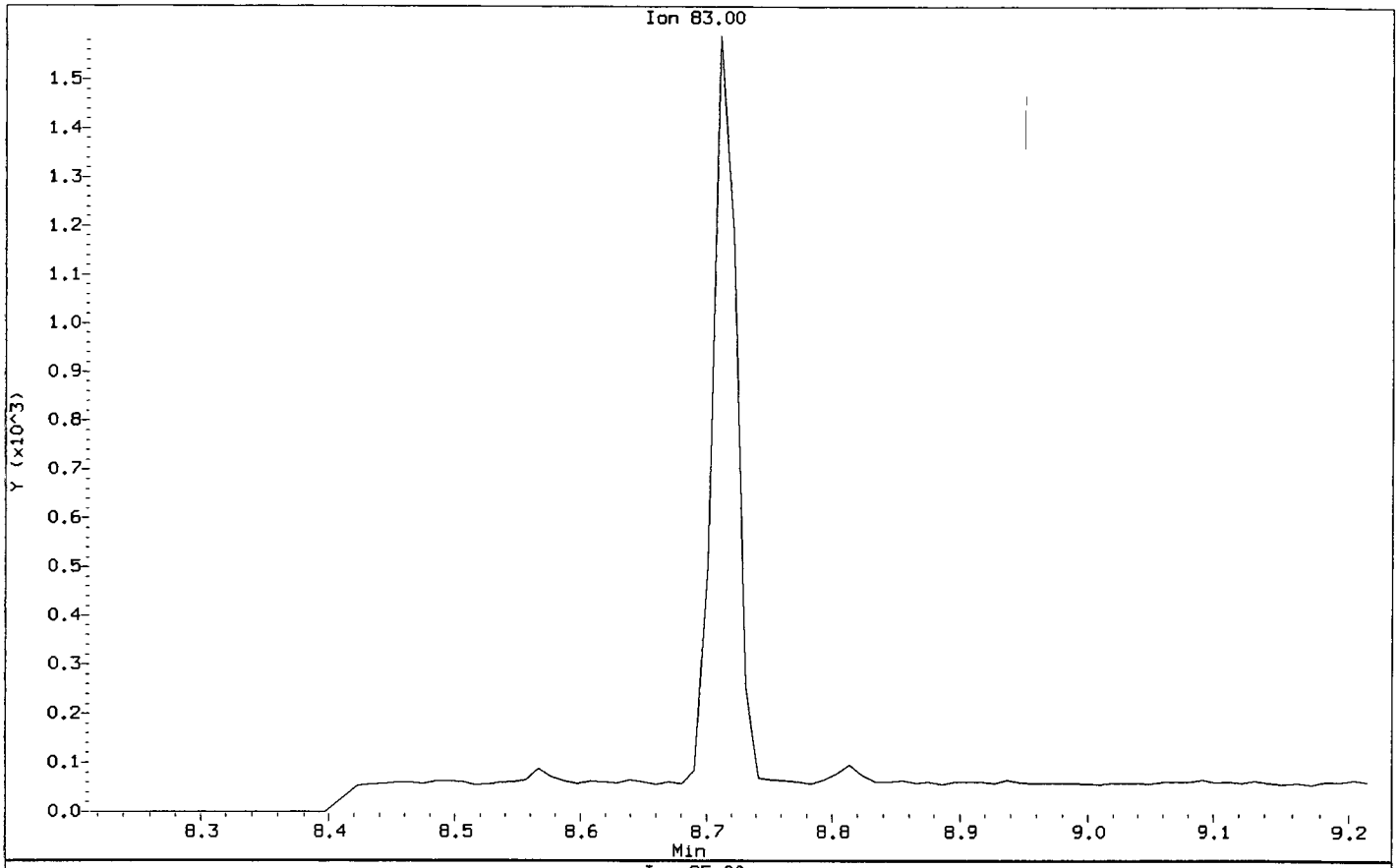
5. Other _____

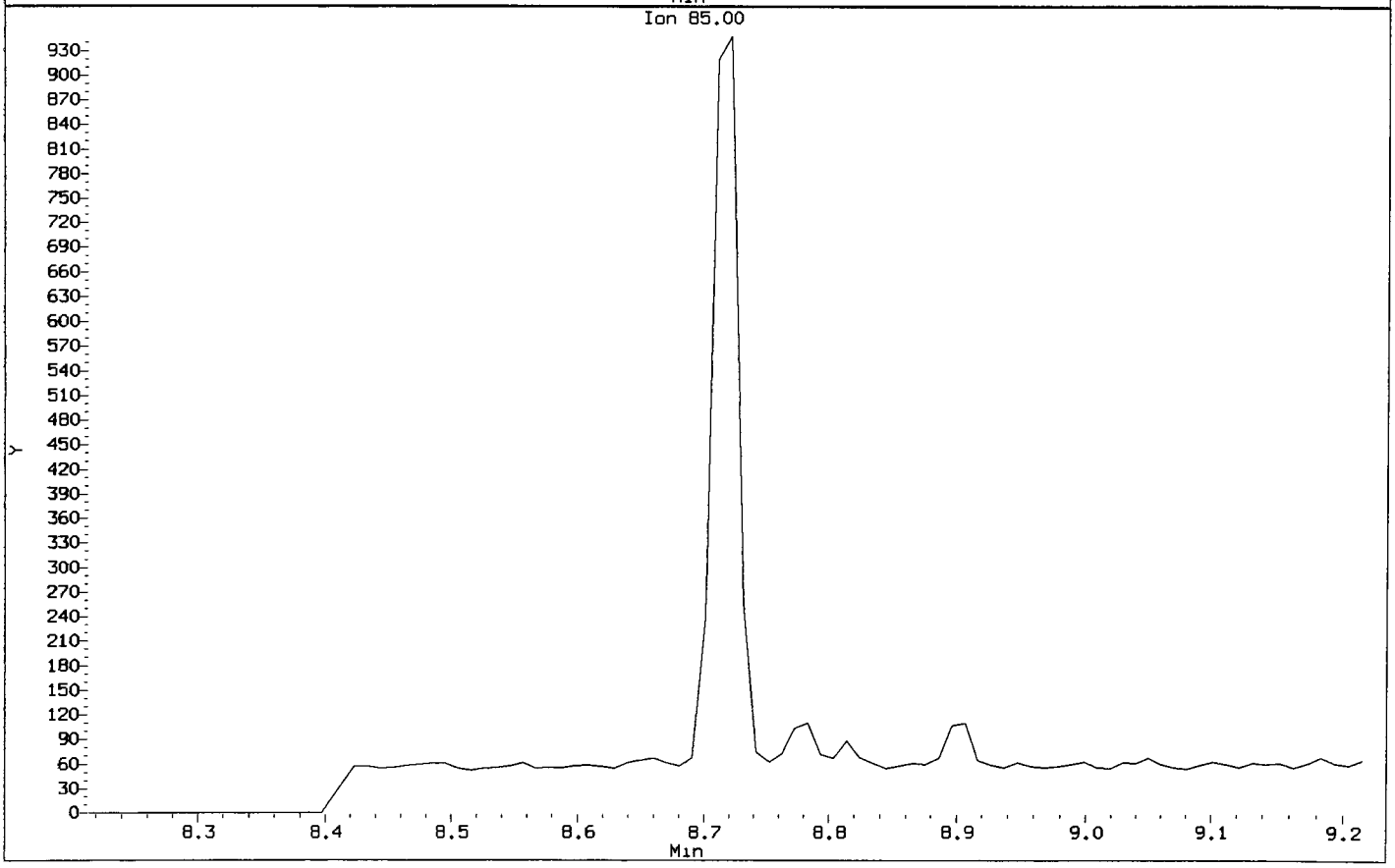
Analyst: YC Date: 1/21/13

Data File: /chem1/nt9.i/18JAN13.b/00500118.d
Injection Date: 18-JAN-2013 15:47
Instrument: nt9.i
Client Sample ID: IC0050

Compound: 1,1,2,2-Tetrachloroethane
CAS Number:

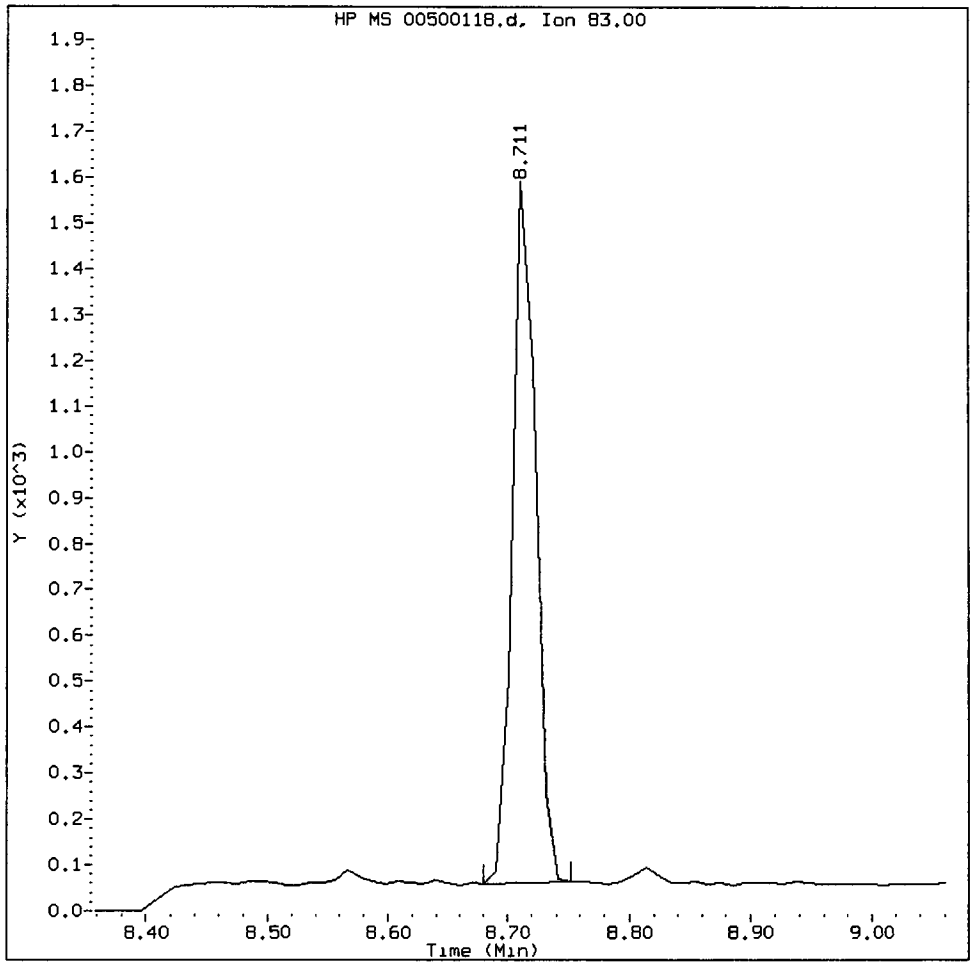
KG 1/21/13





IC0050, /chem1/nt9.i/18JAN13.b/00500118.d

1,1,2,2-Tetrachloroethane Amount: 51.83 Area: 2058



MANUAL INTEGRATION for 1,1,2,2-Tetrachloroethane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

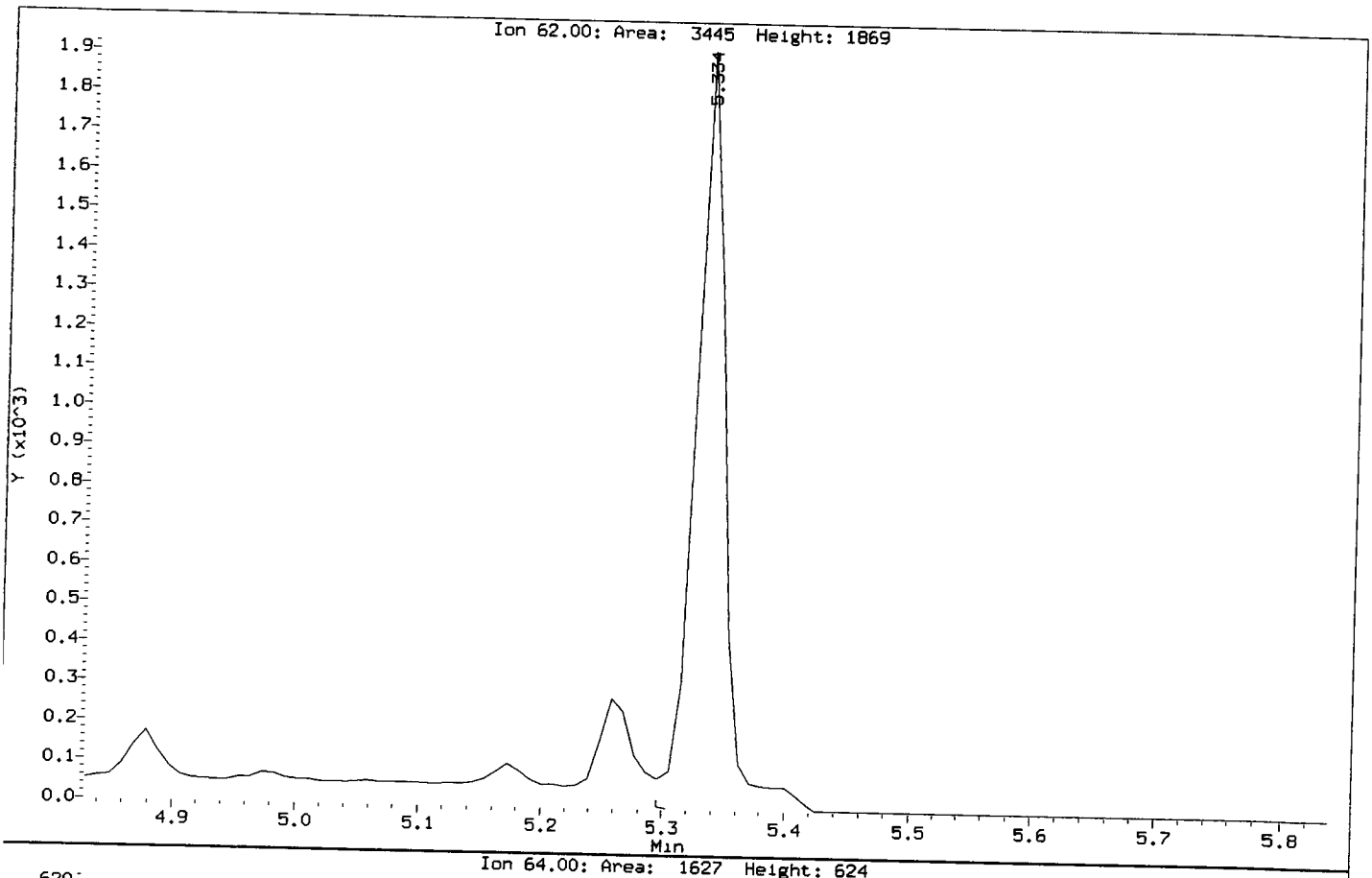
5. Other _____

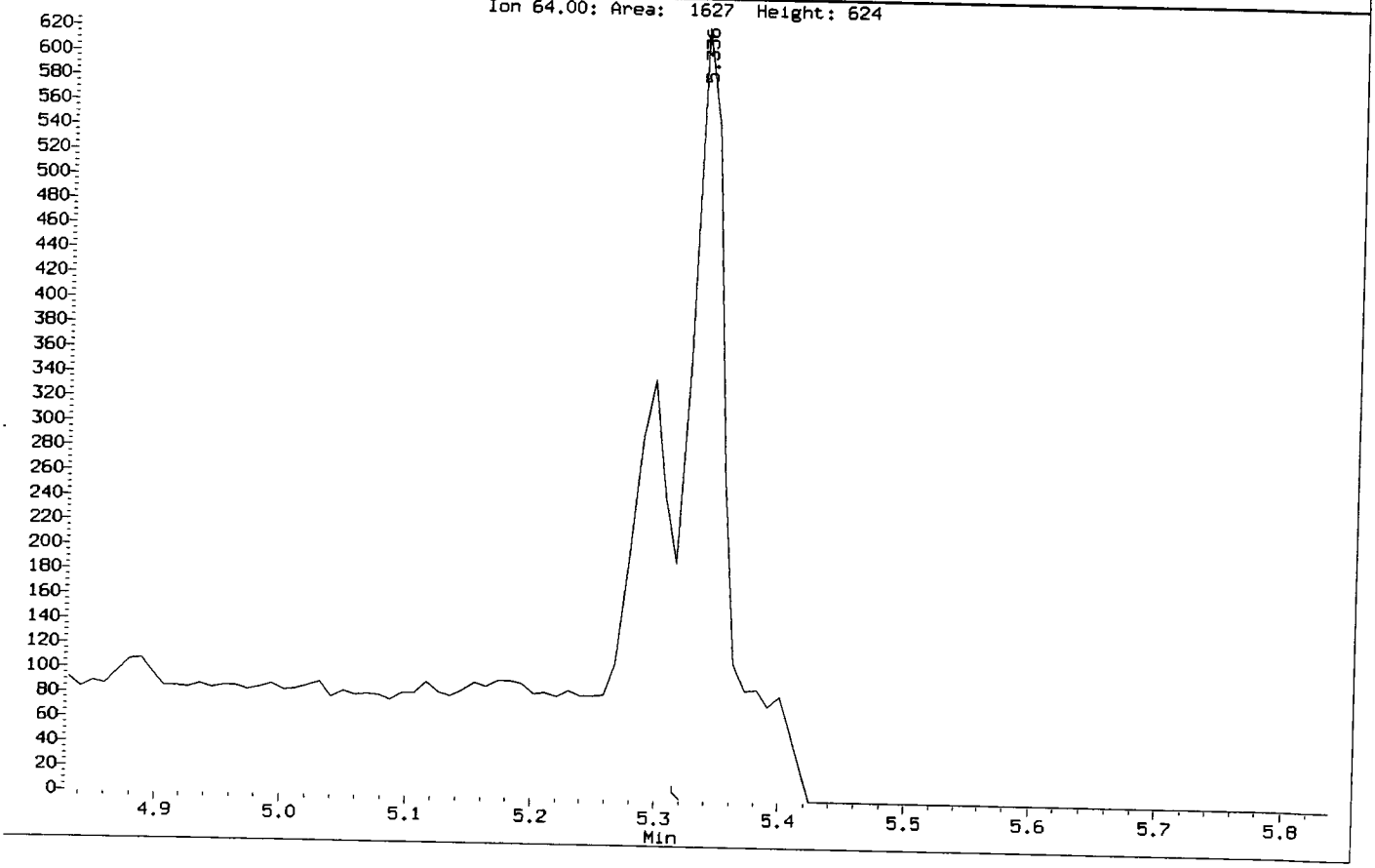
Analyst: PC Date: 1/21/13

Data File: /chem1/nt9.i/18JAN13.b/00500118.d
Injection Date: 18-JAN-2013 15:47
Instrument: nt9.i
Client Sample ID: IC0050

Compound: 1,2-Dichloroethane
CAS Number:

KC
1/21/13

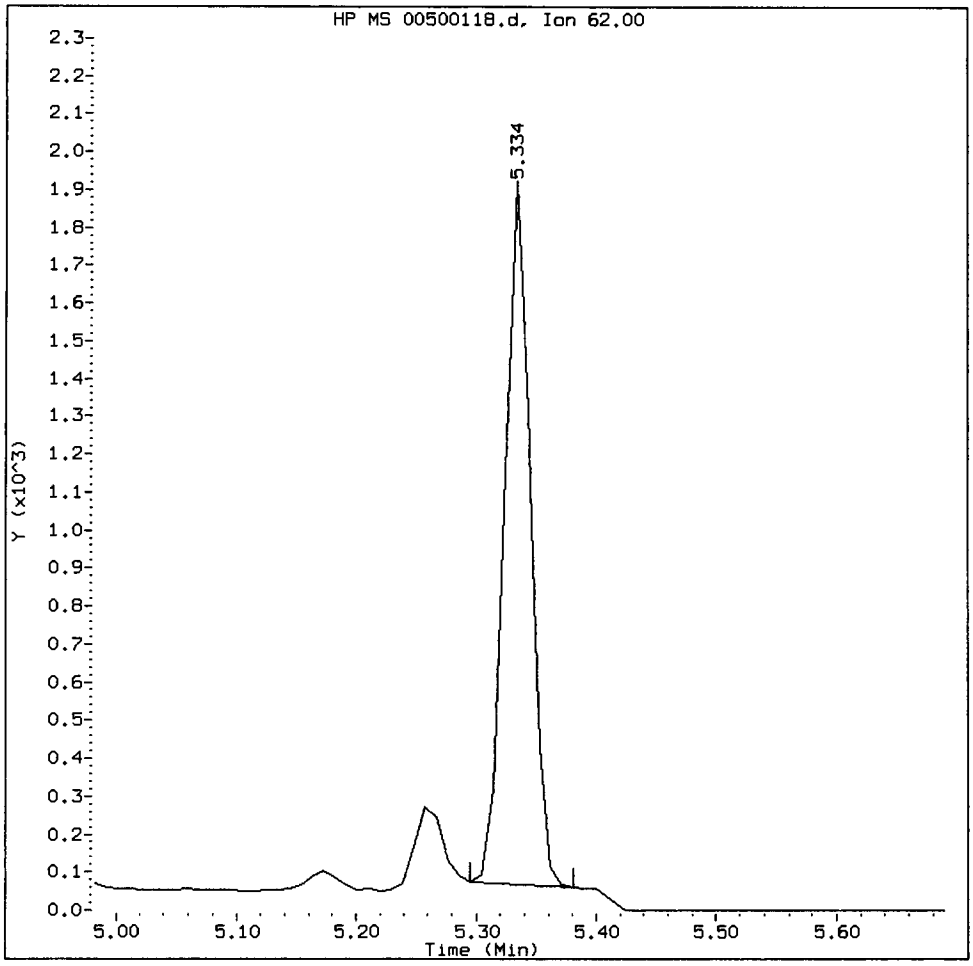




UZ07 · 00522

IC0050, /chem1/nt9.i/18JAN13.b/00500118.d

1,2-Dichloroethane Amount: 54.10 Area: 3039



MANUAL INTEGRATION for 1,2-Dichloroethane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: PC Date: 1/21/13

CO-ELUTION SUMMARY FOR FILE - 00500118.d

Lab ID: IC0050, Method: sim011713.m, Instrument: nt9.i, Date: 18-JAN-2013

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/18JAN13.b/00200118.d
Lab Smp Id: IC0020 Client Smp ID: IC0020
Inj Date : 18-JAN-2013 16:10
Operator : PC Inst ID: nt9.i
Smp Info : IC0020,10,10,0,
Misc Info : 13-
Comment :
Method : /chem1/nt9.i/18JAN13.b/sim011713.m
Meth Date : 21-Jan-2013 08:41 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: chlor+btex.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/L)	ON-COL (ng/L)
	1 Vinyl Chloride	62	1.607	1.611	(0.305)	1029	20.0000	21.066(M)
	2 1,1-Dichloroethene	96	2.634	2.632	(0.500)	828	20.0000	23.925(M)
	3 Trans-1,2-Dichloroethene	96	3.424	3.423	(0.650)	898	20.0000	23.086
	5 cis-1,2-dichloroethene	96	4.495	4.495	(0.853)	1239	20.0000	21.774
	6 Benzene	78	5.181	5.180	(0.918)	5367	20.0000	24.471
*	7 Pentafluorobenzene	168	5.267	5.267	(1.000)	106458	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.287	5.286	(1.004)	49476	1000.00	1006.2
	9 1,2-Dichloroethane	62	5.335	5.334	(1.013)	1142	20.0000	20.238
	10 Trichloroethene	130	5.608	5.610	(0.994)	1023	20.0000	21.887(M)
*	11 1,4-Difluorobenzene	114	5.644	5.643	(1.000)	180887	1000.00	
$	12 d8-Toluene	98	6.619	6.618	(1.173)	190221	1000.00	1006.9
	13 Toluene	91	6.651	6.651	(0.863)	5848	20.0000	25.519
	14 Tetrachloroethene	166	6.922	6.922	(1.227)	1158	20.0000	24.395
*	15 d5 -Chlorobenzene	117	7.706	7.706	(1.000)	190067	1000.00	
	16 Ethyl Benzene	91	7.734	7.734	(1.004)	5165	20.0000	22.963
	17 m,p xylene	106	7.841	7.841	(1.017)	3591	40.0000	42.476

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/L)	AMOUNTS ON-COL (ng/L)
18 o-xylene	91	8.139	8.140	(1.056)	3330	20.0000	20.914(M)
$ 19 4-Bromofluorobenzene	174	8.575	8.574	(1.113)	62561	1000.00	940.20
20 1,1,2,2-Tetrachloroethane	83	8.710	8.712	(1.130)	835	20.0000	21.482(M)

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: 00200118.d
Lab Smp Id: IC0020
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/18JAN13.b/sim011713.m
Misc Info: 13-

Calibration Date: 18-JAN-2013
Calibration Time: 14:36
Client Smp ID: IC0020
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	106458	-7.11
11 1,4-Difluorobenze	202370	101185	404740	180887	-10.62
15 d5 -Chlorobenzene	226394	113197	452788	190067	-16.05

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	0.01
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	0.01
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	0.00

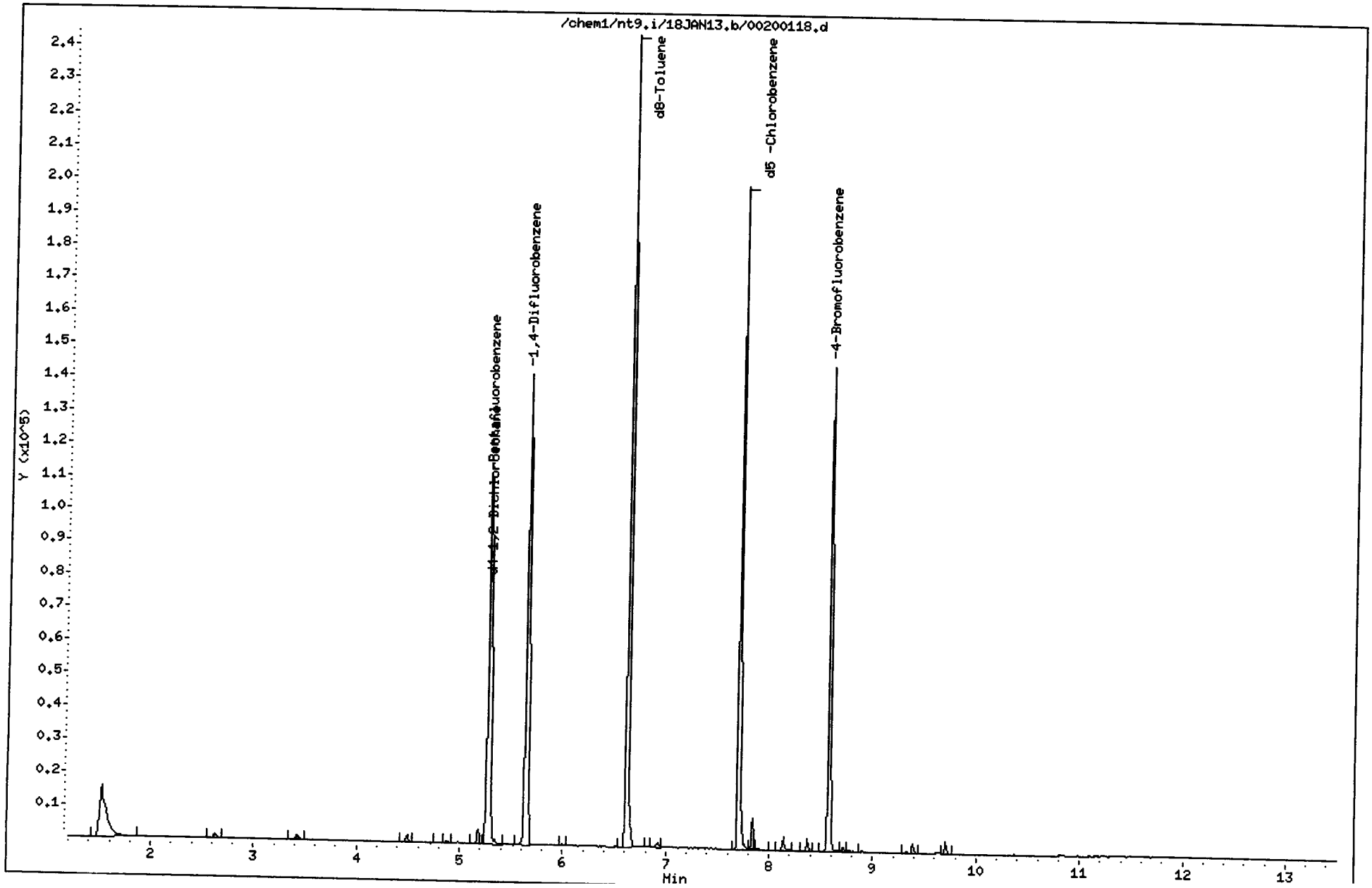
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt9.i/18JAN13.b/00200118.d
Date : 18-JAN-2013 16:10
Client ID: IC0020
Sample Info: IC0020,10,10,0,

Column phase: RTXVMS

Instrument: nt9.i

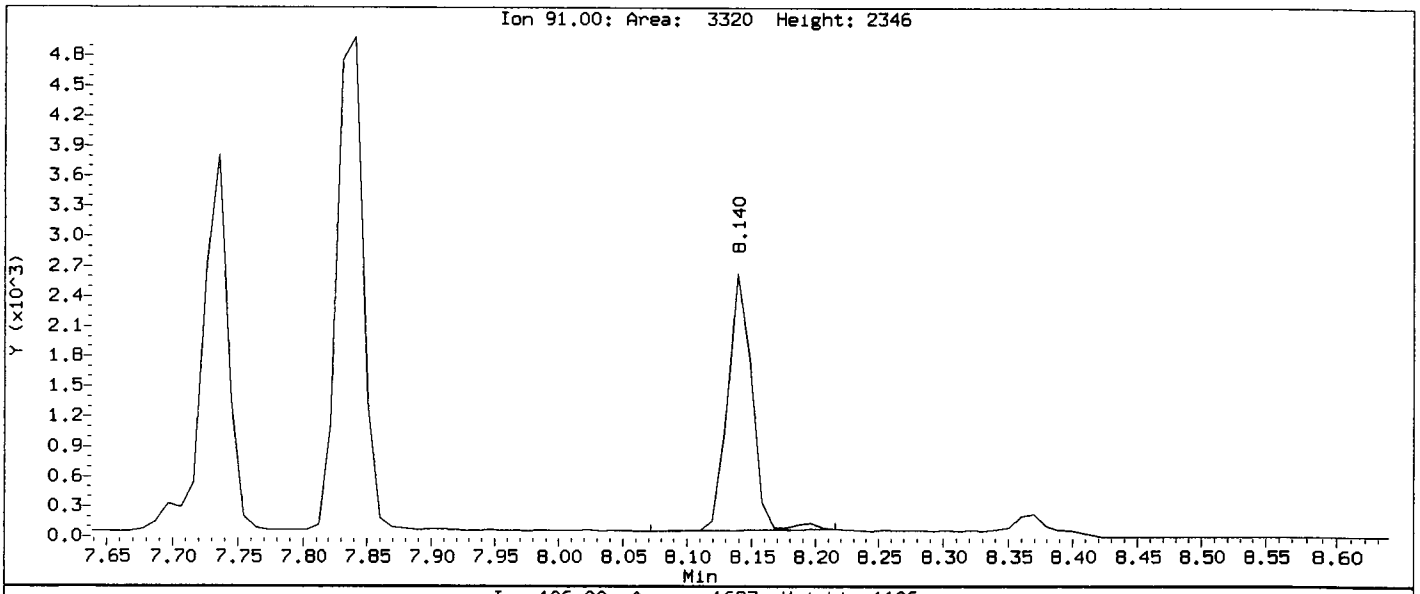
Operator: PC
Column diameter: 0.18

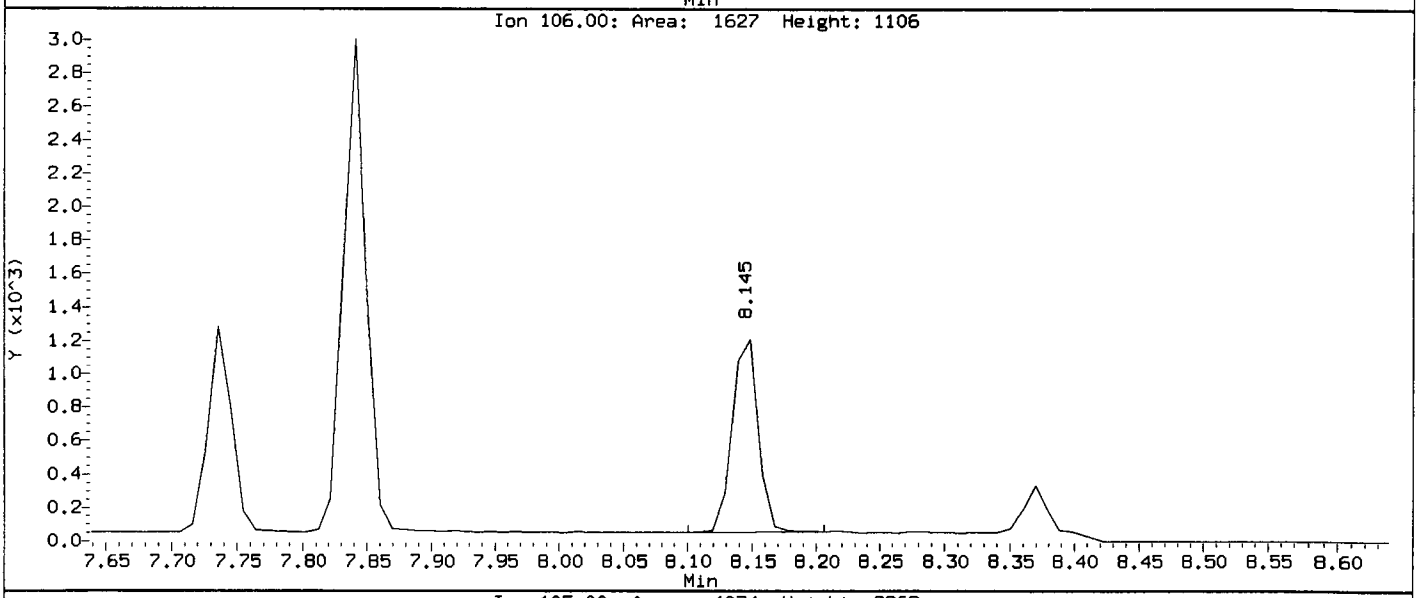


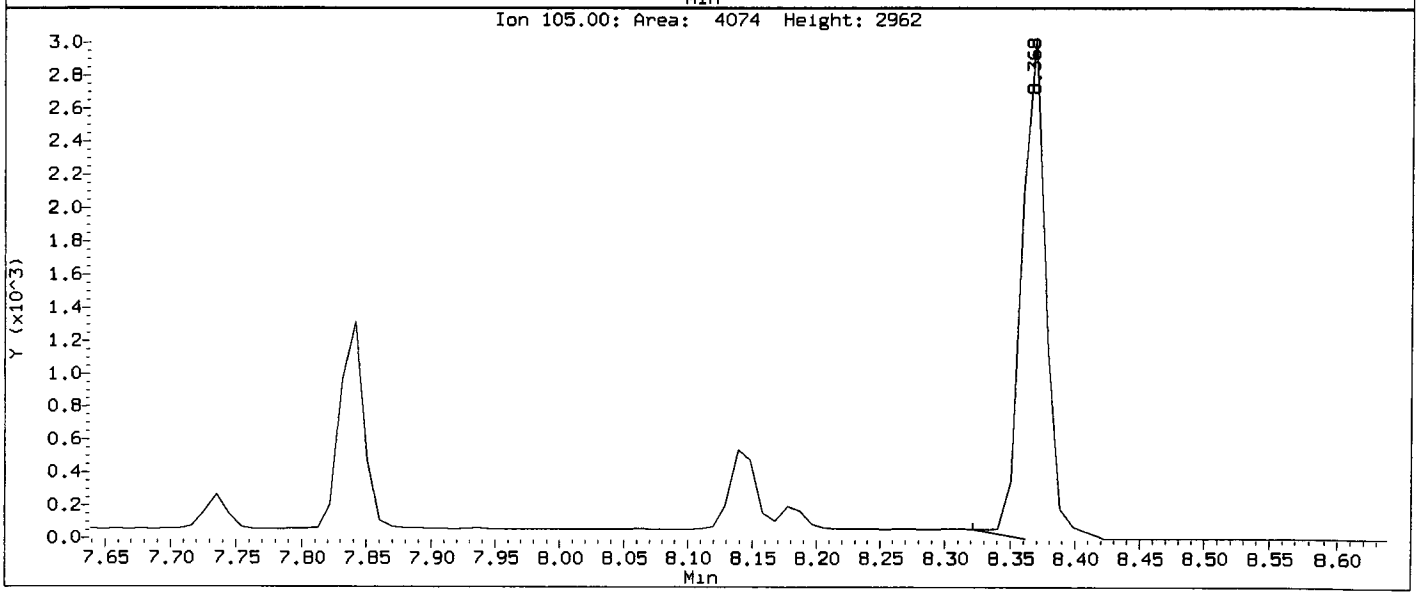
Data File: /chem1/nt9.i/18JAN13.b/00200118.d
Injection Date: 18-JAN-2013 16:10
Instrument: nt9.i
Client Sample ID: IC0020

Compound: o-xylene
CAS Number:

1/21/13



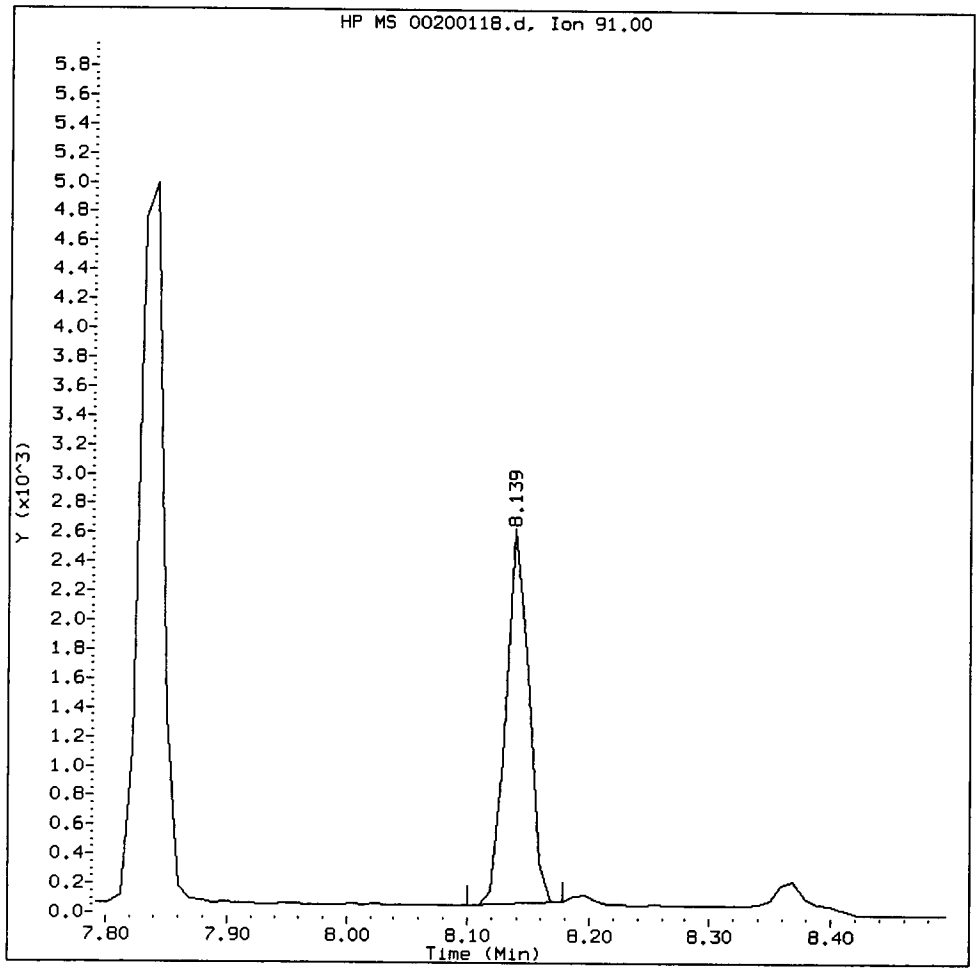




V297 : 00539

IC0020, /chem1/nt9.i/18JAN13.b/00200118.d

o-xylene Amount: 20.91 Area: 3330



MANUAL INTEGRATION for o-xylene

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

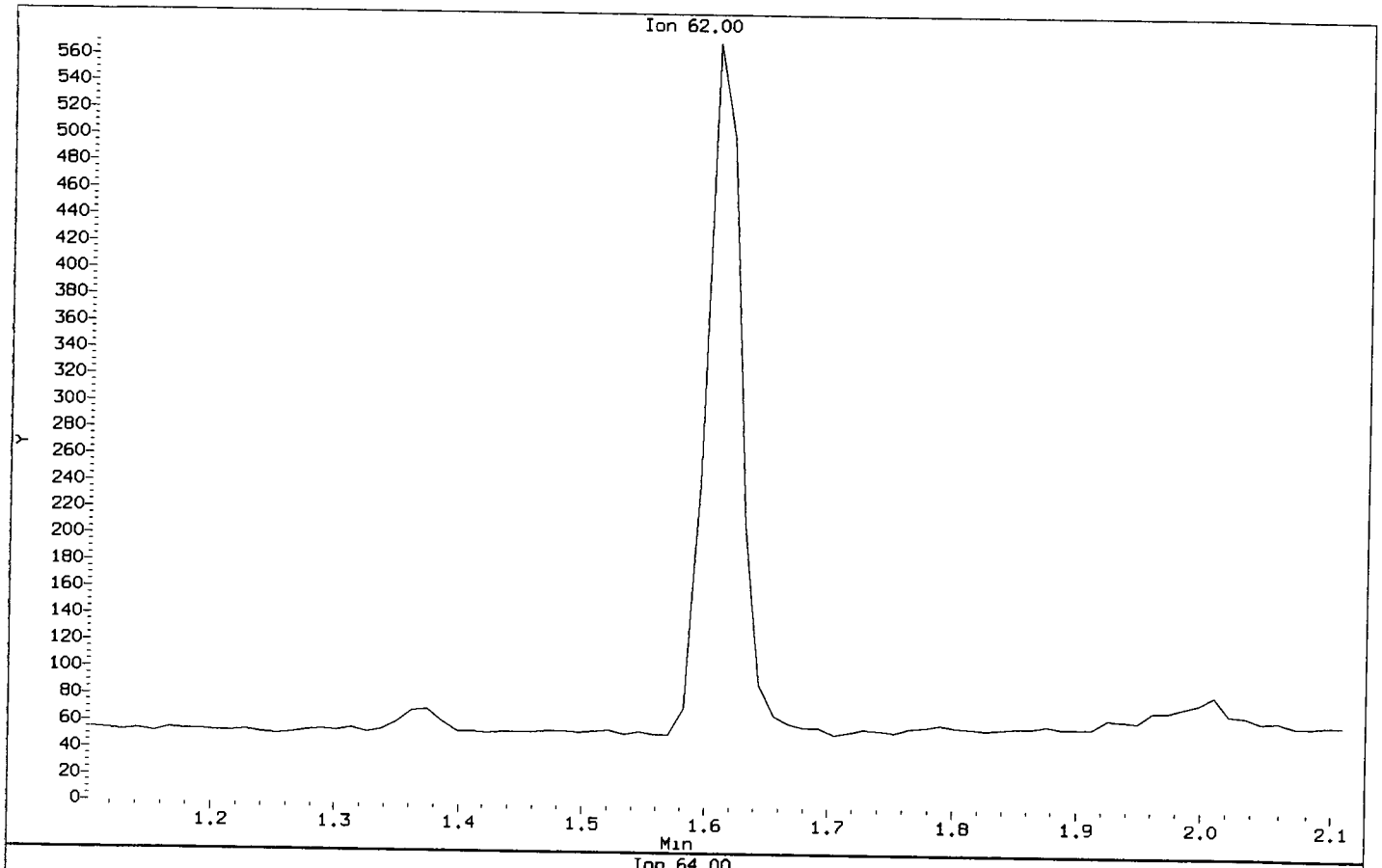
5. Other _____

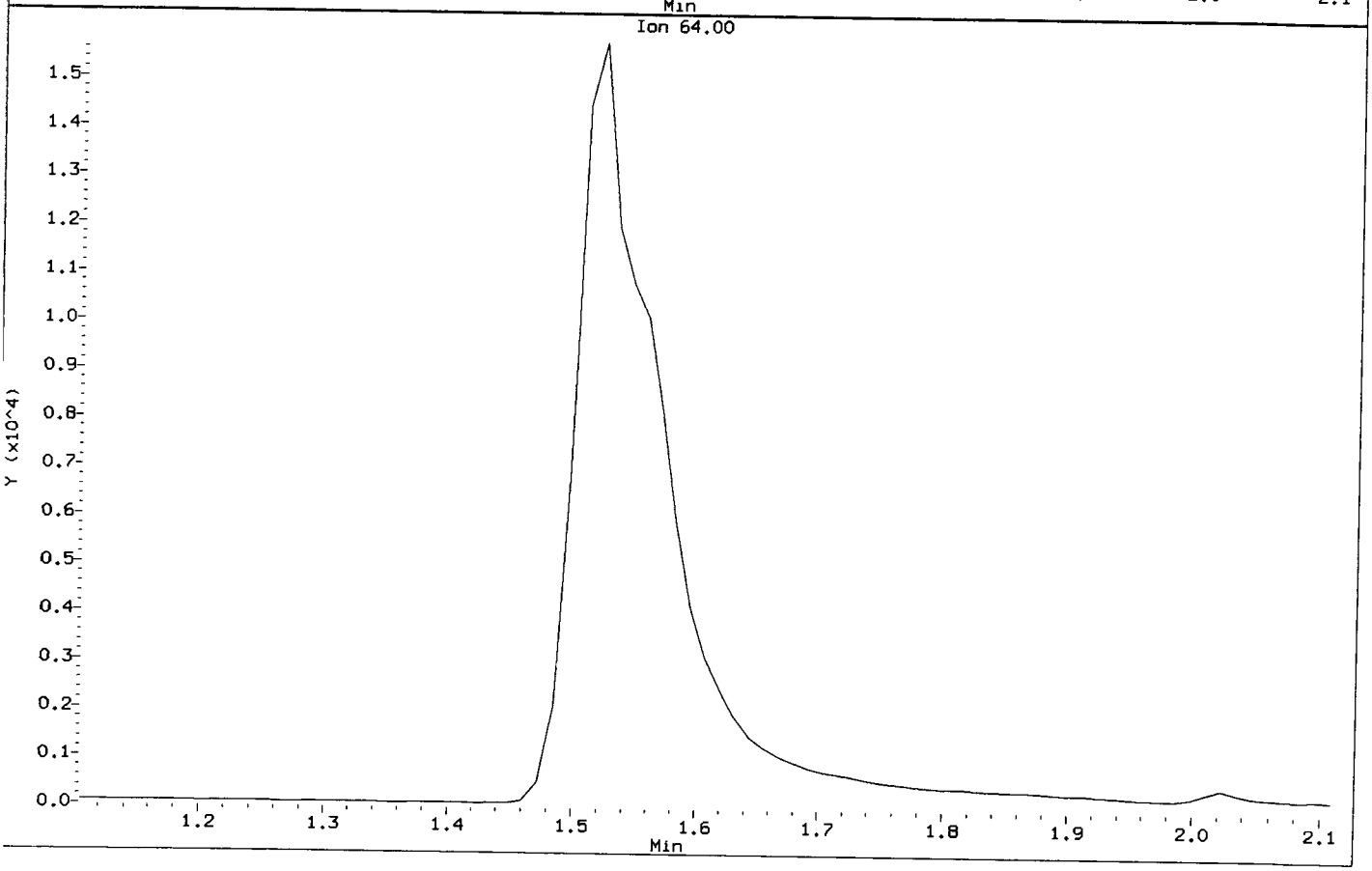
Analyst: PC Date: 1/21/13

Data File: /chem1/nt9.1/18JAN13.b/00200118.d
Injection Date: 18-JAN-2013 16:10
Instrument: nt9.1
Client Sample ID: IC0020

Compound: Vinyl Chloride
CAS Number:

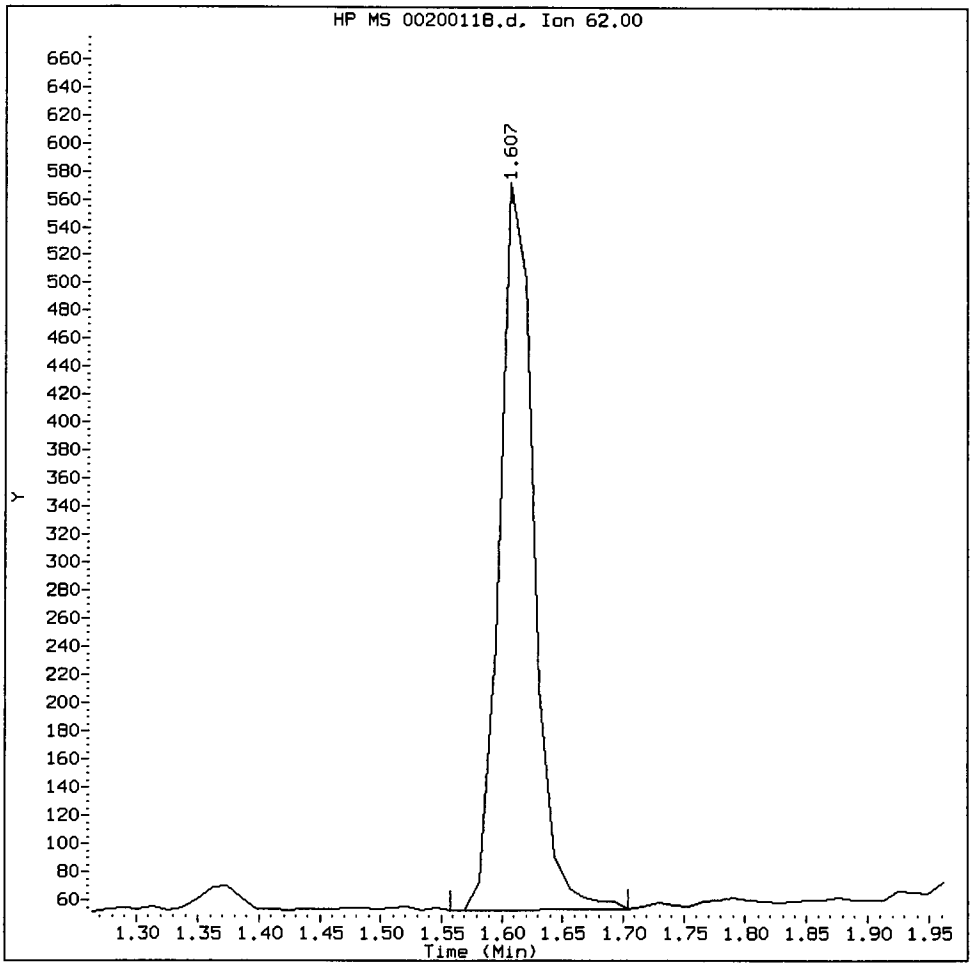
VC 1/21/13





IC0020, /chem1/nt9.i/18JAN13.b/00200118.d

Vinyl Chloride Amount: 21.07 Area: 1029



MANUAL INTEGRATION for Vinyl Chloride

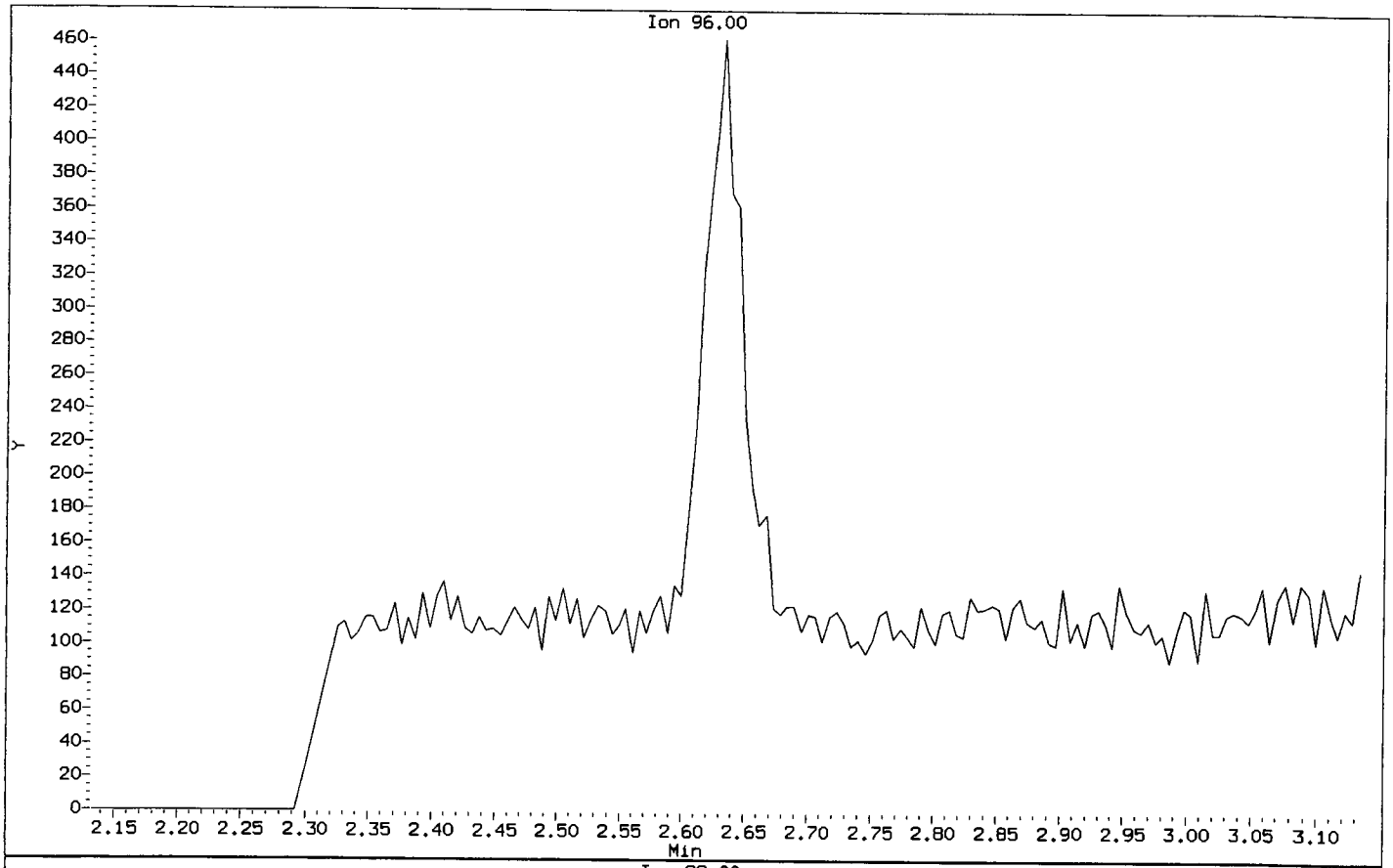
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

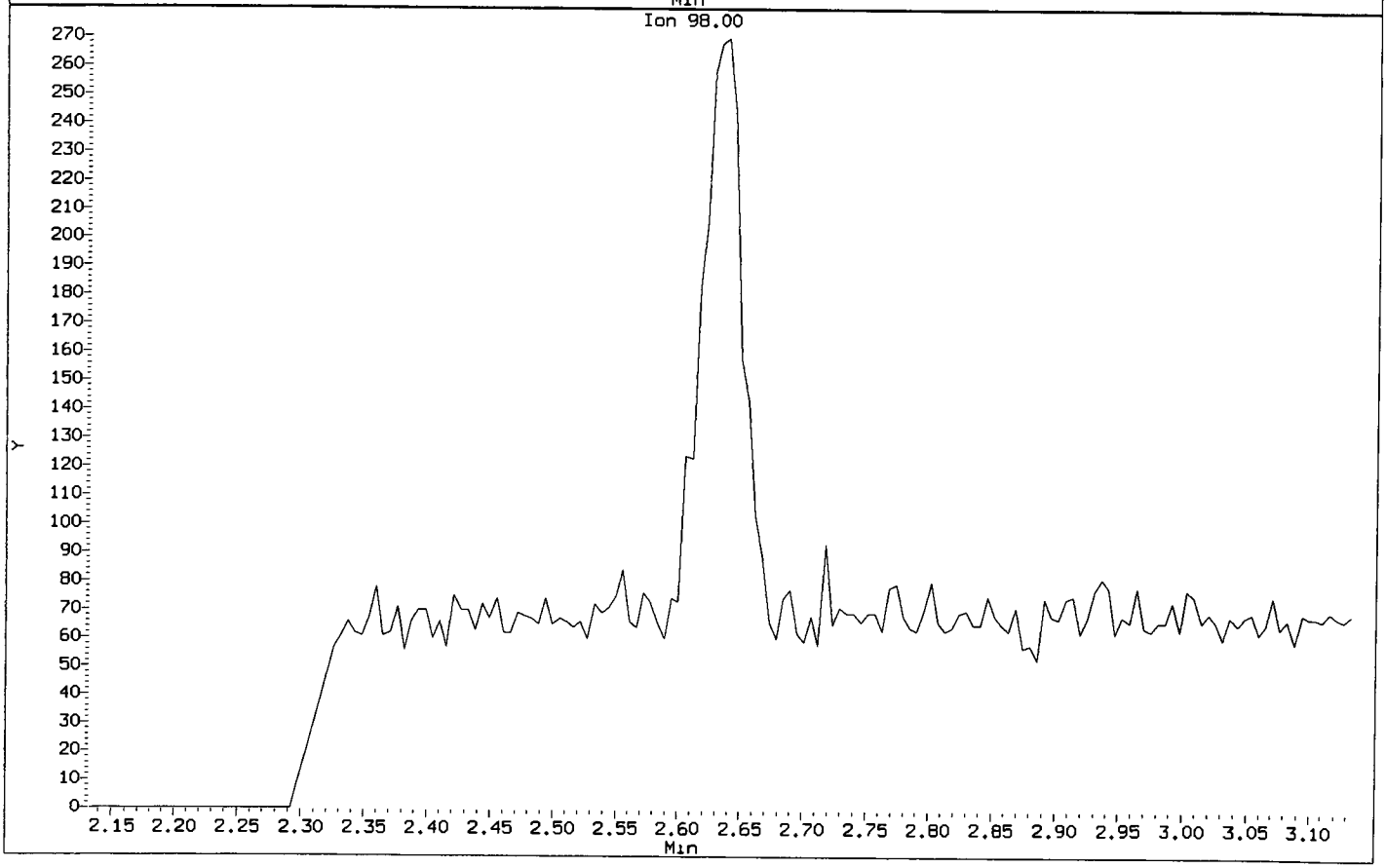
5. Other _____

Analyst: KC Date: 1/21/13

Data File: /chem1/nt9.i/18JAN13.b/00200118.d
Injection Date: 18-JAN-2013 16:10
Instrument: nt9.i
Client Sample ID: IC0020

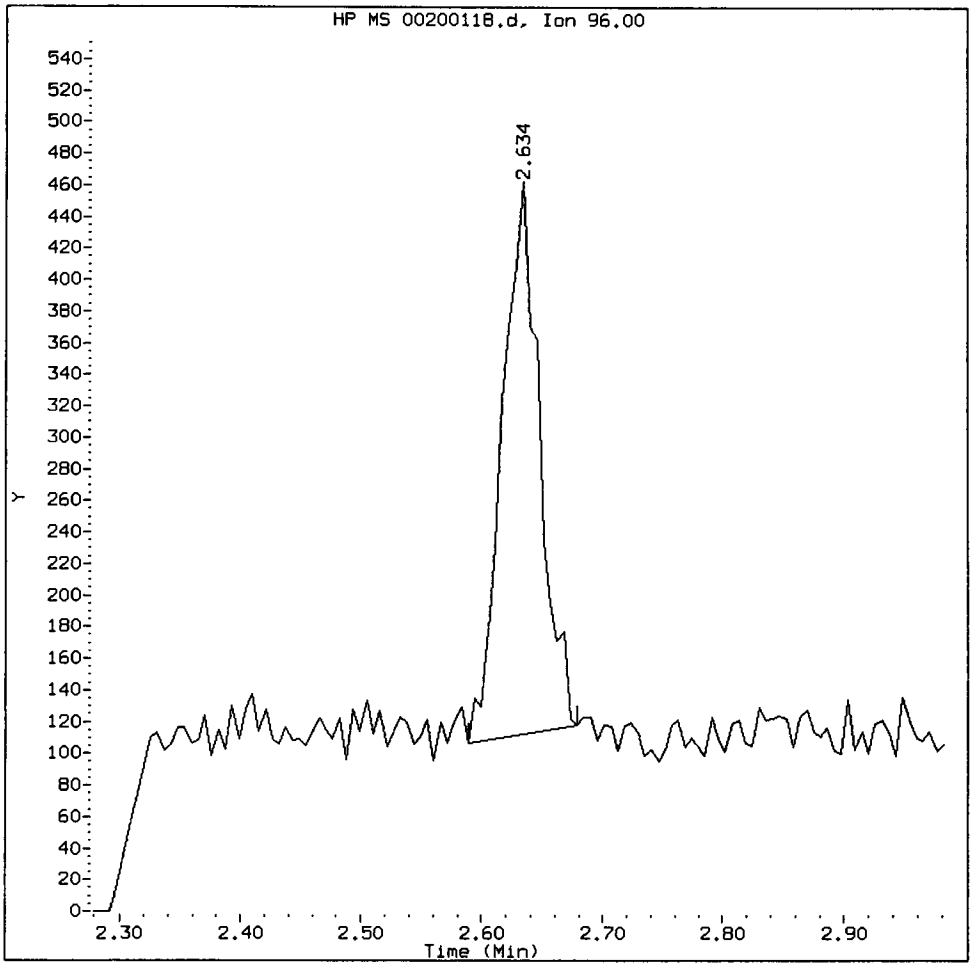
Compound: 1,1-Dichloroethene
CAS Number:





IC0020, /chem1/nt9.i/18JAN13.b/00200118.d

1,1-Dichloroethene Amount: 23.93 Area: 828



MANUAL INTEGRATION for 1,1-Dichloroethene

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

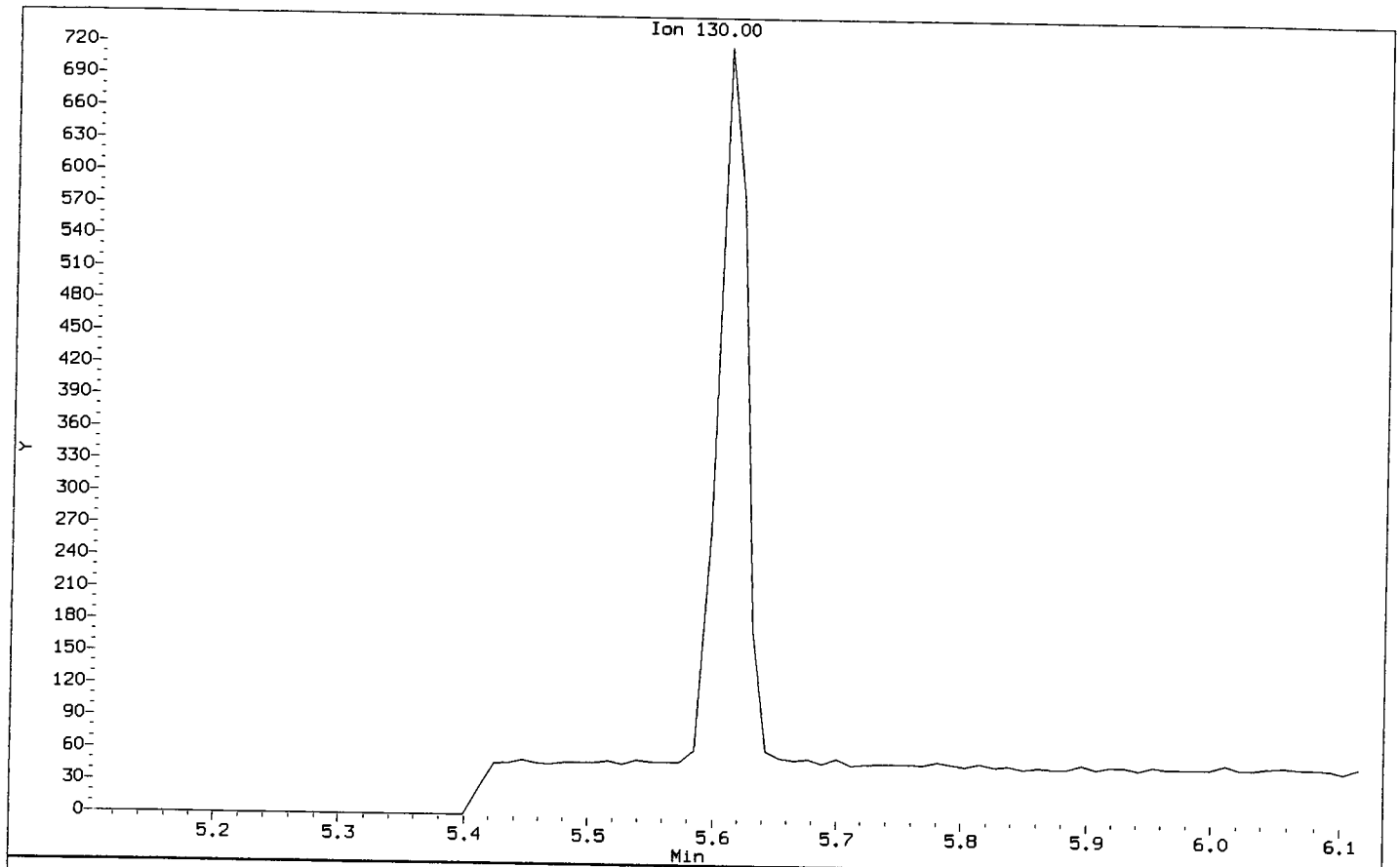
5. Other _____

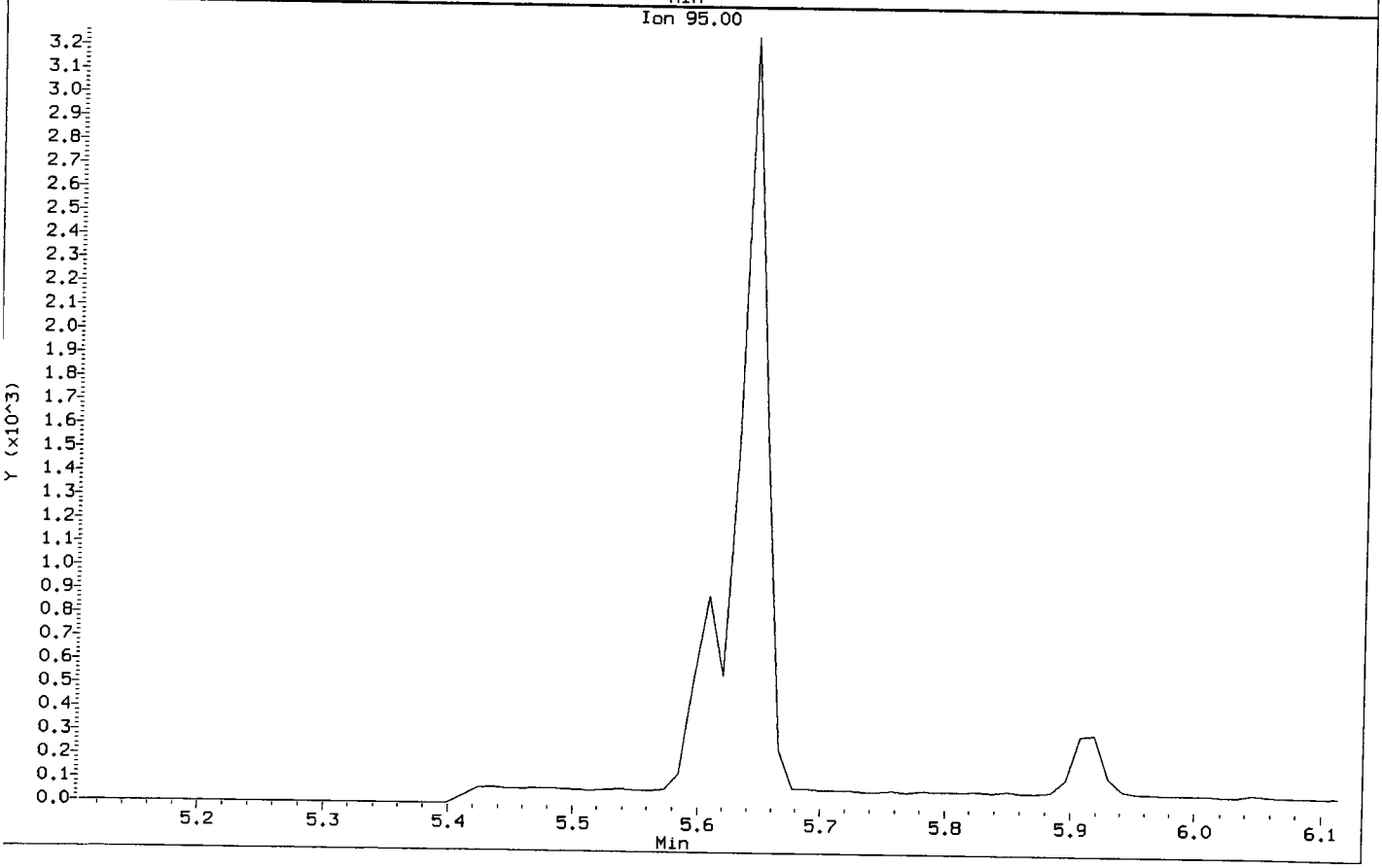
Analyst: YC Date: 1/21/13

Data File: /chem1/nt9.1/18JAN13.b/00200118.d
Injection Date: 18-JAN-2013 16:10
Instrument: nt9.1
Client Sample ID: IC0020

Compound: Trichloroethene
CAS Number:

BC
1/24/13

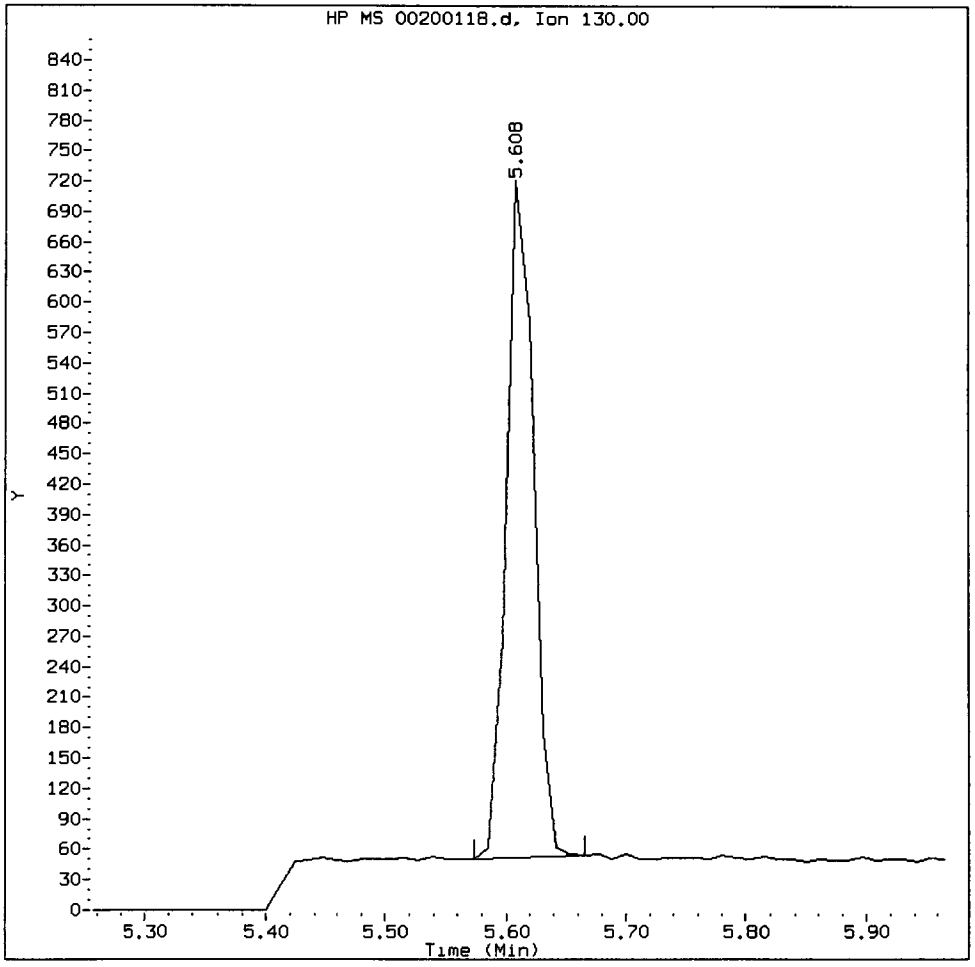




U797 · 005115

IC0020, /chem1/nt9.i/18JAN13.b/00200118.d

Trichloroethene Amount: 21.89 Area: 1023



MANUAL INTEGRATION for Trichloroethene

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

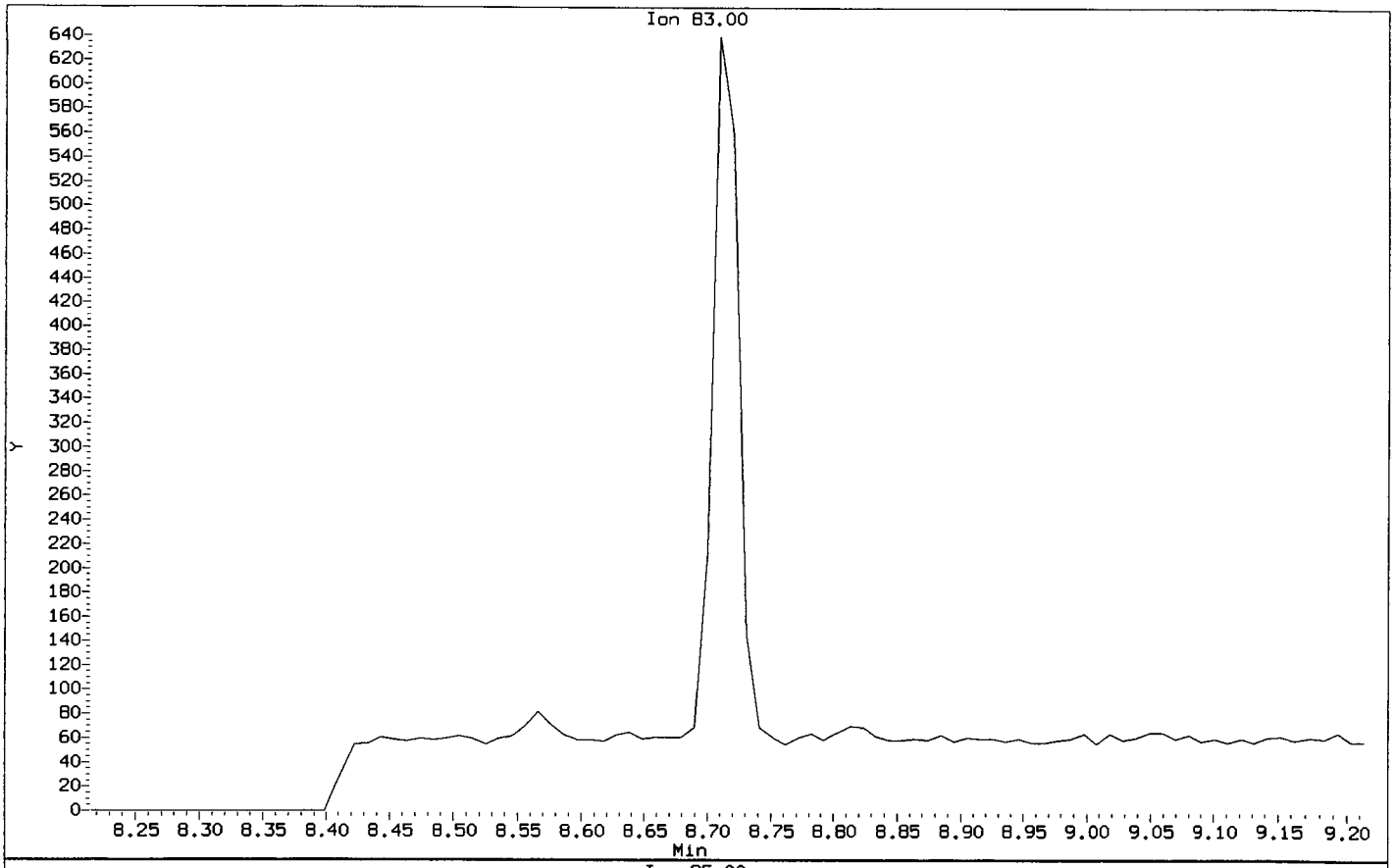
Analyst: PC Date: 1/21/13

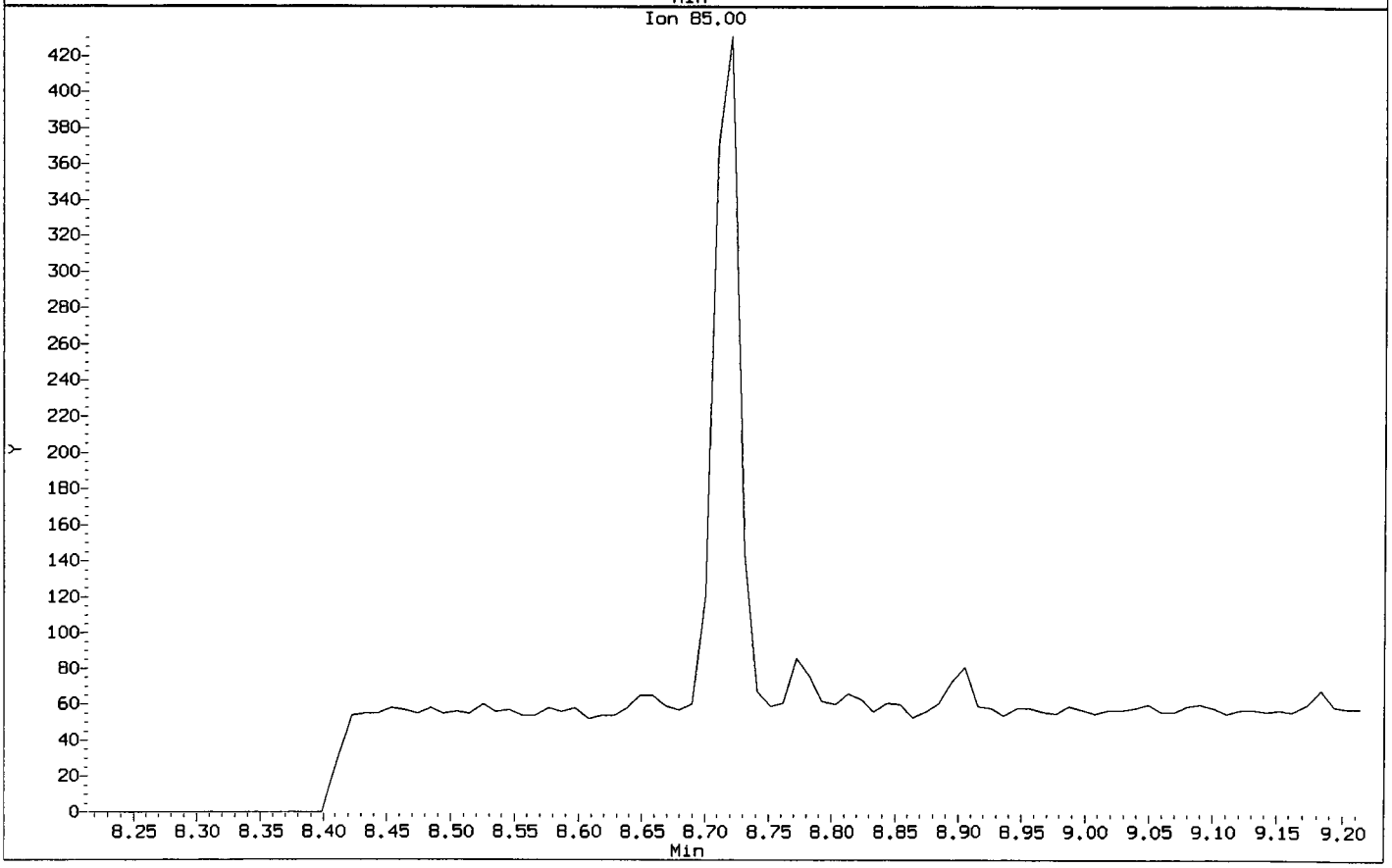
UZ97 · 0851S

Data File: /chem1/nt9.i/18JAN13.b/00200118.d
Injection Date: 18-JAN-2013 16:10
Instrument: nt9.i
Client Sample ID: IC0020

Compound: 1,1,2,2-Tetrachloroethane
CAS Number:

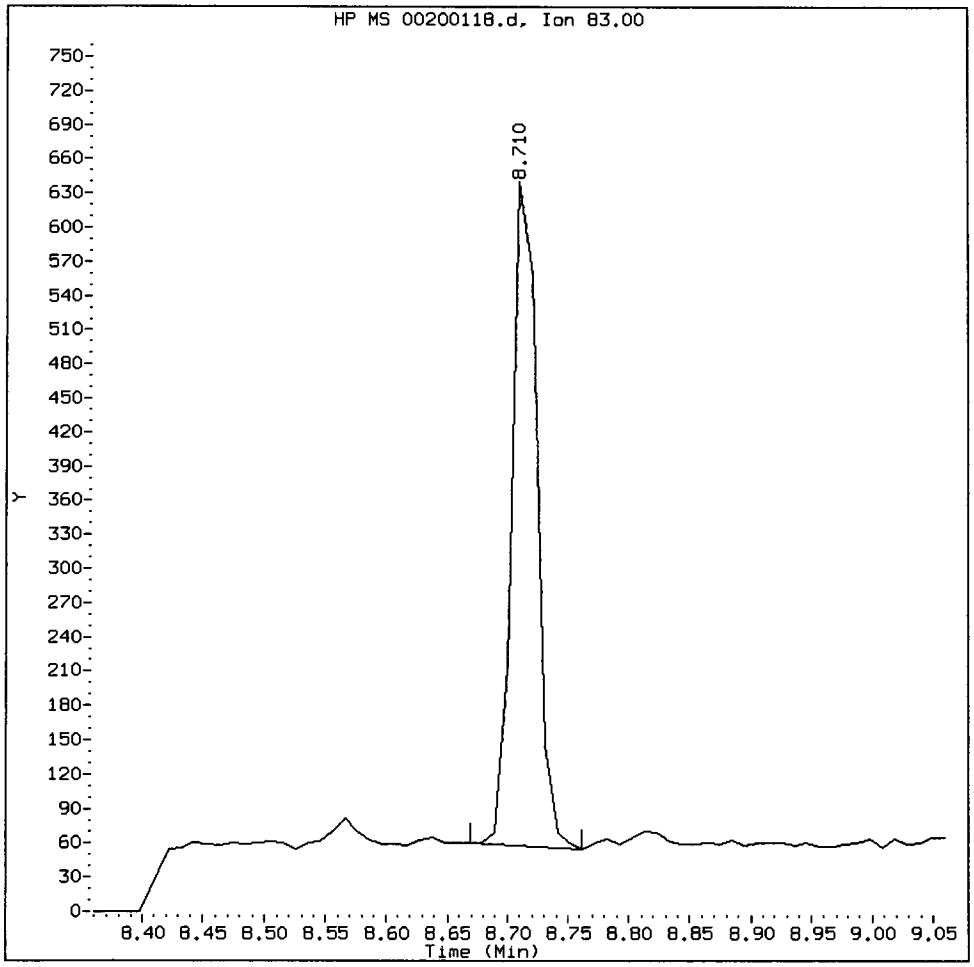
PC
1/21/13





IC0020, /chem1/nt9.i/18JAN13.b/00200118.d

1,1,2,2-Tetrachloroethane Amount: 21.48 Area: 835



MANUAL INTEGRATION for 1,1,2,2-Tetrachloroethane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: PC Date: 1/21/13

CO-ELUTION SUMMARY FOR FILE - 00200118.d

Lab ID: IC0020, Method: sim011713.m, Instrument: nt9.i, Date: 18-JAN-2013

RT	CO-ELUTION COMPOUNDS

PC 1/21/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/18JAN13.b/icv0118.d
Lab Smp Id: ICV1000 Client Smp ID: ICV1000
Inj Date : 18-JAN-2013 16:34
Operator : PC Inst ID: nt9.i
Smp Info : ICV1000,10,10,0,
Misc Info : 13-
Comment :
Method : /chem1/nt9.i/18JAN13.b/sim011713.m
Meth Date : 21-Jan-2013 08:41 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: chlor+btex.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	FINAL (ug/L)
	1 Vinyl Chloride	62	1.611	1.611	(0.306)	54238	1120.22	1120.2(Q)
	2 1,1-Dichloroethene	96	2.633	2.632	(0.500)	34421	1003.42	1003.4
	3 Trans-1,2-Dichloroethene	96	3.423	3.423	(0.650)	35475	920.109	920.11
	5 cis-1,2-dichloroethene	96	4.495	4.495	(0.853)	58090	1029.91	1029.9
	6 Benzene	78	5.181	5.180	(0.918)	210145	968.142	968.14
*	7 Pentafluorobenzene	168	5.268	5.267	(1.000)	105522	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.287	5.286	(1.004)	48671	998.581	998.58
	9 1,2-Dichloroethane	62	5.335	5.334	(1.013)	55426	990.960	990.96(Q)
	10 Trichloroethene	130	5.610	5.610	(0.994)	47381	1024.29	1024.3
*	11 1,4-Difluorobenzene	114	5.644	5.643	(1.000)	179021	1000.00	
$	12 d8-Toluene	98	6.619	6.618	(1.173)	191910	1026.41	1026.4
	13 Toluene	91	6.652	6.651	(0.863)	223474	961.861	961.86
	14 Tetrachloroethene	166	6.922	6.922	(1.227)	44904	955.836	955.84
*	15 d5 -Chlorobenzene	117	7.706	7.706	(1.000)	192701	1000.00	
	16 Ethyl Benzene	91	7.734	7.734	(1.004)	236065	1035.17	1035.2(Q)
	17 m,p xylene	106	7.841	7.841	(1.017)	189843	2214.86	2214.9

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	FINAL (ug/L)
18 o-xylene	91	8.141	8.140	(1.056)	175225	1085.44	1085.4
$ 19 4-Bromofluorobenzene	174	8.574	8.574	(1.113)	69081	1024.00	1024.0
20 1,1,2,2-Tetrachloroethane	83	8.713	8.712	(1.131)	41581	1055.14	1055.1

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: icv0118.d
Lab Smp Id: ICV1000
Analysis Type: VOA
Quant Type: ISTD
Operator: PC

Calibration Date: 18-JAN-2013
Calibration Time: 14:36
Client Smp ID: ICV1000
Level: LOW
Sample Type: WATER

Method File: /chem1/nt9.i/18JAN13.b/sim011713.m
Misc Info: 13-

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	105522	-7.93
11 1,4-Difluorobenze	202370	101185	404740	179021	-11.54
15 d5 -Chlorobenzene	226394	113197	452788	192701	-14.88

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	0.02
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	0.01
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	0.00

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: ICV1000
Level: LOW
Data Type: MS DATA
SpikeList File: chlorbtex.spk
Sublist File: chlor+btex.sub
Method File: /chem1/nt9.i/18JAN13.b/sim011713.m
Misc Info: 13-

Client SDG: 18JAN13
Fraction: VOA
Client Smp ID: ICV1000
Operator: PC
SampleType: LCS
Quant Type: ISTD

	SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
1	Vinyl Chloride	1000.0	1120.2	112.02	76-120
9	1,2-Dichloroethane	1000.0	990.96	99.10	80-128
3	Trans-1,2-Dichloro	1000.0	920.11	92.01	80-120
2	1,1-Dichloroethene	1000.0	1003.4	100.34	80-120
5	cis-1,2-dichloroet	1000.0	1029.9	102.99	80-120
6	Benzene	1000.0	968.14	96.81	80-120
10	Trichloroethene	1000.0	1024.3	102.43	80-120
14	Tetrachloroethene	1000.0	955.84	95.58	80-122
20	1,1,2,2-Tetrachlor	1000.0	1055.1	105.51	80-128
13	Toluene	1000.0	961.86	96.19	70-130
16	Ethyl Benzene	1000.0	1035.2	103.52	70-130
17	m,p xylene	2000.0	2214.9	110.74	70-130
18	o-xylene	1000.0	1085.4	108.54	70-130

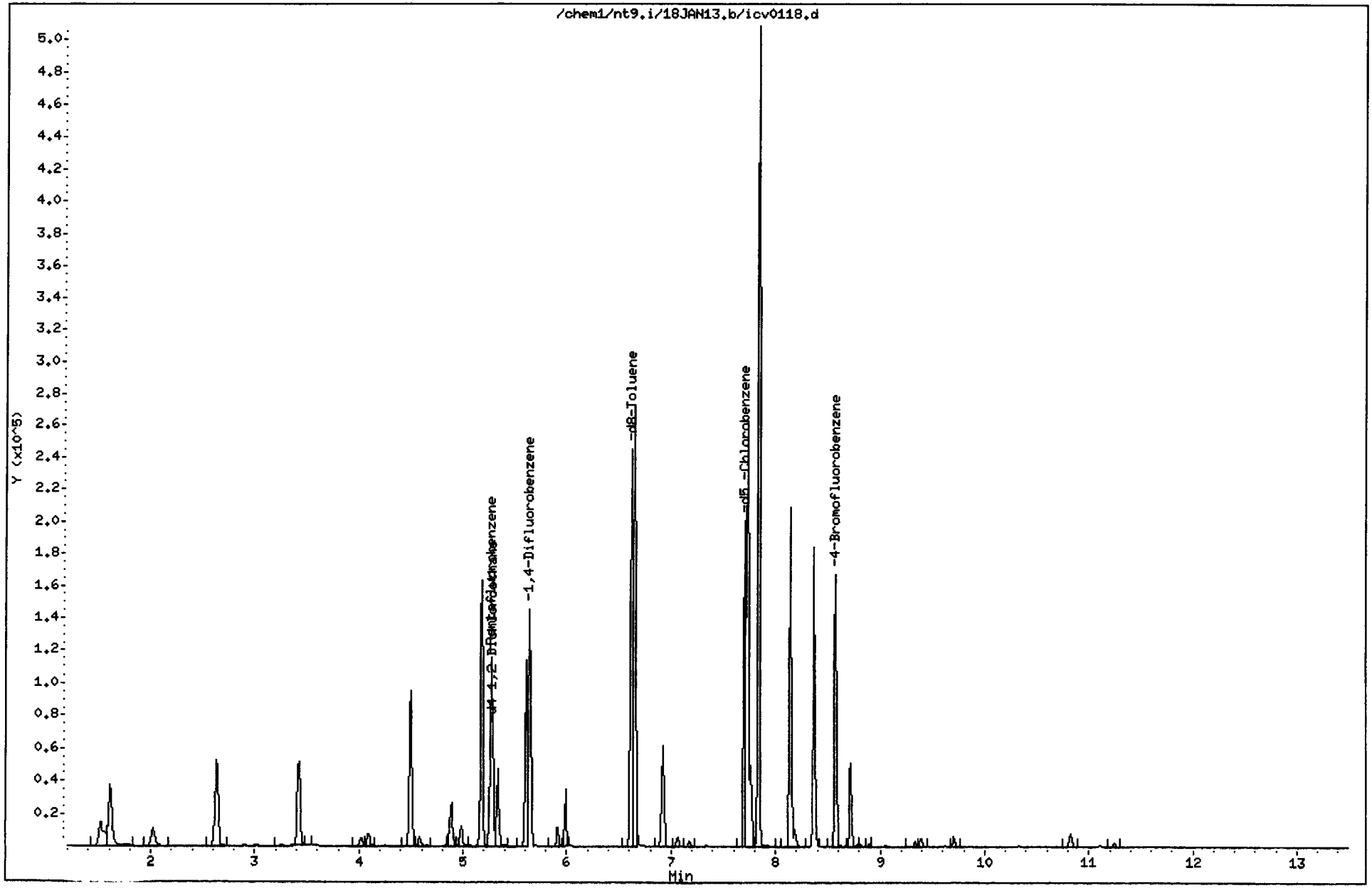
	SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 8	d4-1,2-Dichloroeth	1000.0	998.58	99.86	80-126
$ 12	d8-Toluene	1000.0	1026.4	102.64	80-120
$ 19	4-Bromofluorobenze	1000.0	1024.0	102.40	80-120

Data File: /chem1/nt9.i/18JAN13.b/icv0118.d
Date : 18-JAN-2013 16:34
Client ID: ICV1000
Sample Info: ICV1000,10,10,0,

Instrument: nt9.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS



CO-ELUTION SUMMARY FOR FILE - icv0118.d

Lab ID: ICV1000, Method: sim011713.m, Instrument: nt9.i, Date: 18-JAN-2013

RT	CO-ELUTION COMPOUNDS

SIM Volatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: VZ97

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Analyst Notes / Corrective Action Log

ARI Project ID: V297 Client ID: Anchor

ARI SOP: **404S**(Gas) **410S**(BTEX) **430S**(VPH) **700S**(8260C) **703S**(SIM) **706S**(524.2) **710S**(RSK-175)

Parameter(s): SIM benzene

Instrument: NT-2 NT-3 NT-5 **NT-7** NT-9 PID-1 PID-2 PID-3 FID-6 FINN-5

Purge Volume (mL) 10 Curve Date: 1/8/13 Pc 1/22/13 Analysis Start Date: 1/17/13

pH ≤ 2.0	YES / NO / NA	Method Blank In Control?	YES / NO
BFB Tune Meets Criteria?	YES / NO / NA	LCS / LCSD Recovery In Control?	YES / NO
Internal Standard Meets Criteria?	YES / NO / NA	Surrogate Recovery In Control?	YES / NO
ICal acceptable?	YES / NO	CCal acceptable?	YES / NO
Q flag applied?	YES / NO / NA	Q flag applied?	YES / NO / NA
Manual Integrations for ICal?	YES / NO	Manual Integrations for Samples?	Yes / NO
Special Analysis Criteria Met?	YES / NO / NA		

Bubbles/Headspace: None SM (≤ 2mm •) PB (2-4mm) LG (> 4mm ●) Head Space

Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):

Short list - benzene only
Received with short hold, analyzed on a rush basis, Sampled 1/7, paperwork on 1/17, entered ARI 1/15/13 late,

Additional Details on Reverse: Yes / No

Analyst: PC **Date:** 1/22/13

Reviewer: [signature] **Date:** 1/22/13

Analytical Resources Inc.: Volatile Organics Instrument Log

NT-7 Serial No.:GC=US00024417, MS=US72821196

Date: 1/17/13 Analysis: 8260 S/IVI Analyst: YC

GC Program: SIMVOA01 Column No: 850522 Column Type: RTX-VMS

Instrument Tune (.U or .CT.): 1/18/13 VC bfb mark.u EM Voltage: 1906

Calibration File: bfb0117d Curve Date: 1/17/13 Injection Vol.: 10

Solvent(s) used: J7340

IS/SS	Ical/Ccal	LCS/ICV
VW761-1	VW776-2	VW767-4
		VW776-2

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt7.i/20130117.b

	Time	Filename	LabID	ClientID	Vial#	PH	DF						
1	1426	bfb0117d.d	BFB0117	BFB01017			1						
2	1503	tst0117.d	TEST				1						
3	1609	50000117.d	IC5000	IC5000			1 | 8.21	383795	5.31	232767	5.75	457560	
4	1636	20000117.d	IC2000	IC2000	not spiked		1 | 8.21	407371	5.32	230144	5.75	459462	
5	1702	10000117.d	IC1000	IC1000			1 | 8.21	389100	5.31	229144	5.75	455099	
6	1728	05000117.d	IC0500	IC0500			1 | 8.21	389929	5.32	235041	5.75	466925	
7	1755	01000117.d	IC0100	IC0100			1 | 8.21	386257	5.32	233816	5.75	478754	
8	1822	00500117.d	IC0050	IC0050			1 | 8.21	424533	5.32	241378	5.75	483234	
9	1849	00200117.d	IC0020	IC0020			1 | 8.22	416003	5.32	243969	5.75	479698	
10	1916	icv0117.d	ICV1000				1 | 8.21	402706	5.32	237486	5.75	478546	
11	1943	lcs0117.d	LCS0117				1 | 5.32	253994	5.75	486482	8.21	396293	
12	2009	lcs0117a.d	LCS0117A				1 | 5.32	255940	5.75	476852	8.21	391122	
13	2036	mb0117.d	MB0117				1 | 5.32	257727	5.75	484028	8.21	412423	
14	2103	vz97c.d	VZ97T	CSIA20130111-001RB	1 4		1 | 5.32	240765	5.75	484171	8.22	414542	
15	2130	vz97u.d	VZ97U	Trip Blanks			1 | 5.32	242949	5.75	482485	8.22	408316	
16	2157	vz97a.d	VZ97A	CSIA-20130107-001B			1 | 5.32	244833	5.76	480498	8.22	408203	
17	2224	vz97b.d	VZ97B	CSIA-20130107-002B			1 | 5.32	237896	5.75	489105	8.22	411823	
18	2250	vz97c.d	VZ97C	CSIA-20130107-003S+			1 | 5.32	249900	5.75	478794	8.22	418803	
19	2317	vz97d.d	VZ97D	CSIA-20130107-004S+			1 | 5.32	240366	5.76	489897	8.22	414698	
20	2344	vz97e.d	VZ97E	CSIA-20130107-005S+			1 | 5.32	239048	5.76	488192	8.22	418401	

1/18/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt7.i/20130117.b

ARI Job No.: IC10 Method: sim011713.m Instrument: nt7.i Date: 17-JAN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1702	10000117cc.d	IC1000	IC1000	1	NO MANUAL INTEGRATION
1943	lcs0117.d	LCS0117		1	NO MANUAL INTEGRATION
2009	lcs0117a.d	LCS0117A		1	NO MANUAL INTEGRATION
2036	mb0117.d	MB0117		1	NO MANUAL INTEGRATION
2103	vz97t.d	VZ97T	CSIA201301	1	NO MANUAL INTEGRATION
2130	vz97u.d	VZ97U	Trip Blank	1	NO MANUAL INTEGRATION

0555 - 3675

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt7.i/20130117.b

Instrument: nt7.i Date: 17-JAN-2013 Method: sim011713.m

INITIAL CAL: 17-JAN-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 17-JAN-2013

Compound	%D
NO Q-FLAGS	

PC 1/18/13

Data File: /chem1/nt7.i/20130117.b/bfb0117d.d

Date : 17-JAN-2013 14:26

Client ID: BFB01017

Instrument: nt7.i

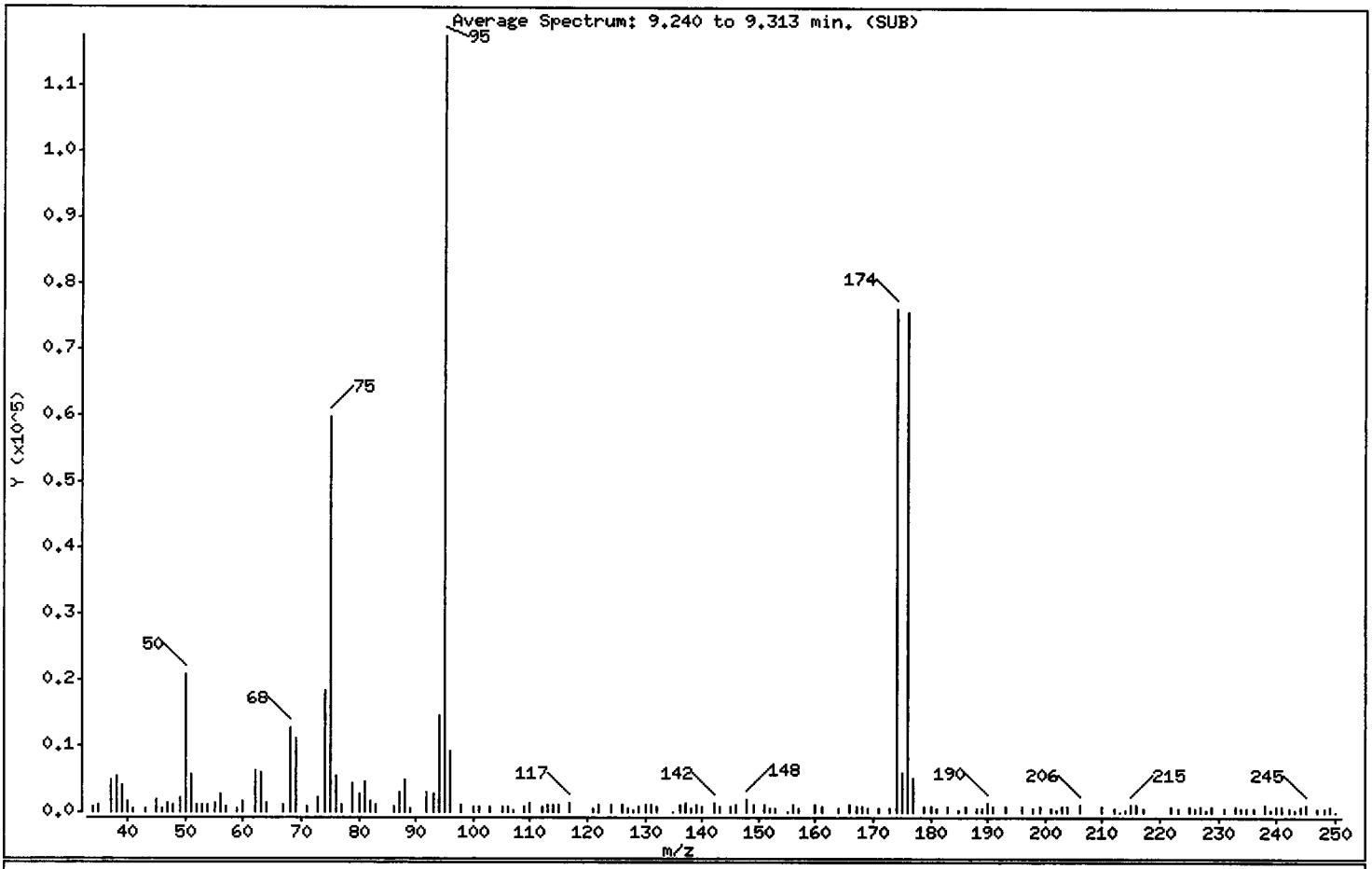
Sample Info: BFB0117,BFB01017,0,1,17jan2013,

Operator: PC

Column phase: RTXVMS

Column diameter: 0.18

1 Bromofluorobenzene



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.61
75	30.00 - 66.00% of mass 95	50.75
96	5.00 - 9.00% of mass 95	7.83
173	Less than 2.00% of mass 174	0.51 (0.78)
174	50.00 - 101.00% of mass 95	64.73
175	4.00 - 9.00% of mass 174	5.13 (7.93)
176	95.00 - 101.00% of mass 174	64.26 (99.27)
177	5.00 - 9.00% of mass 176	4.43 (6.90)

U297 · 00561

Data File: /chem1/nt7.i/20130117.b/bfb0117d.d

Date : 17-JAN-2013 14:26

Client ID: BFB01017

Instrument: nt7.i

Sample Info: BFB0117,BFB01017,0,1,17jan2013,

Operator: PC

Column phase: RTXVMS

Column diameter: 0.18

Data File: bfb0117d.d

Spectrum: Average Spectrum: 9.240 to 9.313 min. (SUB)

Location of Maximum: 95.00

Number of points: 154

m/z	Y	m/z	Y	m/z	Y	m/z	Y
34.00	686	83.00	1004	140.00	726	199.00	912
35.00	1052	86.00	733	142.00	1359	201.00	491
37.00	4912	87.00	3041	143.00	934	202.00	269
38.00	5279	88.00	4791	145.00	936	203.00	751
39.00	3995	89.00	537	146.00	950	204.00	867
40.00	1705	92.00	3101	148.00	1797	206.00	1183
41.00	431	93.00	2652	149.00	1000	210.00	707
43.00	578	94.00	14716	151.00	977	212.00	522
45.00	1936	95.00	117608	152.00	531	213.00	28
46.00	441	96.00	9207	153.00	489	214.00	151
47.00	1286	98.00	969	155.00	125	215.00	1038
48.00	1171	100.00	800	156.00	1106	216.00	1020
49.00	2246	101.00	696	157.00	511	217.00	480
50.00	20704	103.00	739	160.00	1102	222.00	692
51.00	5752	105.00	854	161.00	813	223.00	451
52.00	1041	106.00	909	164.00	650	225.00	769
53.00	1210	107.00	219	166.00	1118	226.00	636
54.00	964	109.00	812	167.00	727	227.00	695
55.00	1364	110.00	1259	168.00	904	228.00	386
56.00	2801	112.00	777	169.00	502	229.00	740
57.00	933	113.00	1099	171.00	666	231.00	513
59.00	515	114.00	1039	173.00	595	233.00	936
60.00	1629	115.00	1043	174.00	76128	234.00	638
62.00	6345	117.00	1365	175.00	6034	235.00	639
63.00	5951	121.00	617	176.00	75568	236.00	635
64.00	1226	122.00	1178	177.00	5216	238.00	970
67.00	953	124.00	1055	179.00	722	239.00	333
68.00	12800	126.00	1156	180.00	804	240.00	784
69.00	11075	127.00	407	181.00	521	241.00	801
71.00	788	128.00	224	183.00	836	242.00	565
73.00	2222	129.00	875	185.00	188	243.00	328
74.00	18488	130.00	1105	186.00	789	244.00	790
75.00	59680	131.00	1081	188.00	579	245.00	1181
76.00	5343	132.00	766	189.00	492	247.00	651
77.00	1151	135.00	124	190.00	1257	248.00	488

UZ97 · 08562

Data File: /chem1/nt7.i/20130117.b/bfb0117d.d

Date : 17-JAN-2013 14:26

Client ID: BFB01017

Instrument: nt7.i

Sample Info: BFB0117,BFB01017,0,1,17jan2013,

Operator: PC

Column phase: RTXVMS

Column diameter: 0.18

Data File: bfb0117d.d

Spectrum: Average Spectrum: 9.240 to 9.313 min. (SUB)

Location of Maximum: 95.00

Number of points: 154

m/z	Y	m/z	Y	m/z	Y	m/z	Y
79.00	4273	136.00	1021	191.00	805	249.00	836
80.00	2594	137.00	1261	193.00	709	250.00	116
81.00	4577	138.00	521	196.00	877		
82.00	1595	139.00	950	198.00	406		

UZ97 00563

Data File: /chem1/nt7.i/20130117.b/bfb0117d.d

Date : 17-JAN-2013 14:26

Client ID: BFB01017

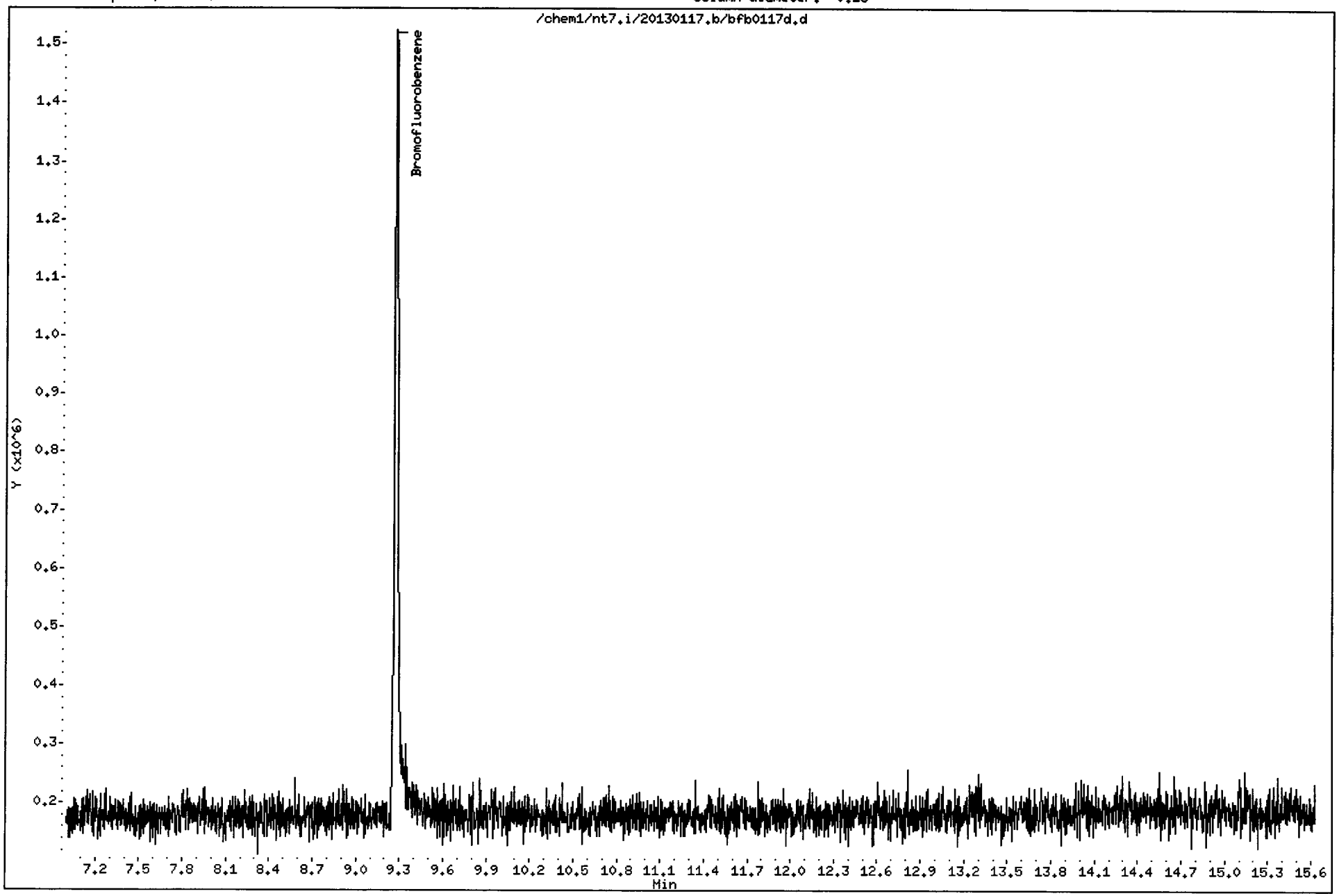
Sample Info: BFB0117,BFB01017,0,1,17jan2013,

Column phase: RTXVMS

Instrument: nt7.i

Operator: PC

Column diameter: 0.18



KG 1/18/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/20130117.b/10000117cc.d
Lab Smp Id: IC1000 Client Smp ID: IC1000
Inj Date : 17-JAN-2013 17:02
Operator : PC Inst ID: nt7.i
Smp Info : IC1000,10,10,0,,
Misc Info : 13-
Comment :
Method : /chem1/nt7.i/20130117.b/sim011713.m
Meth Date : 18-Jan-2013 14:49 paul Quant Type: ISTD
Cal Date : 17-JAN-2013 18:22 Cal File: 00500117.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: chlor+btex.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/L)	ON-COL (ng/L)
	1 Vinyl Chloride	62	1.532	1.532	(0.288)	538056	3000.00	2914.5
	2 1,1-Dichloroethene	96	2.495	2.495	(0.469)	454749	3000.00	3063.9
	3 Trans-1,2-Dichloroethene	96	3.278	3.278	(0.617)	544925	3000.00	3155.2
	5 cis-1,2-dichloroethene	96	4.434	4.434	(0.834)	561313	3000.00	3062.5
	6 Benzene	78	5.208	5.208	(0.905)	2054191	3000.00	2963.9
*	7 Pentafluorobenzene	168	5.315	5.315	(1.000)	229144	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.325	5.325	(1.002)	147562	1000.00	994.20
	9 1,2-Dichloroethane	62	5.381	5.381	(1.012)	622605	3000.00	3272.3
	10 Trichloroethene	130	5.710	5.710	(0.992)	572940	3000.00	3319.3(Q)
*	11 1,4-Difluorobenzene	114	5.754	5.754	(1.000)	455099	1000.00	
$	12 d8-Toluene	98	6.901	6.901	(1.199)	480463	1000.00	1016.9
	13 Toluene	91	6.942	6.942	(0.846)	2124642	3000.00	2955.3
	14 Tetrachloroethene	166	7.268	7.268	(1.263)	465837	3000.00	3195.5
*	15 d5 -Chlorobenzene	117	8.208	8.208	(1.000)	389100	1000.00	
	16 Ethyl Benzene	91	8.248	8.248	(1.005)	2458775	3000.00	3194.2
	17 m,p xylene	106	8.380	8.380	(1.021)	1819472	6000.00	6218.7

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/L)	AMOUNTS ON-COL (ng/L)
18 o-xylene	91	8.745	8.745	(1.065)	1971378	3000.00	3049.4
$ 19 4-Bromofluorobenzene	174	9.272	9.272	(1.130)	126752	1000.00	1059.6
20 1,1,2,2-Tetrachloroethane	83	9.455	9.455	(1.152)	384427	3000.00	3253.5

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt7.i Injection Date: 17-JAN-2013 17:02
Lab File ID: 10000117cc.d Init. Cal. Date(s): 17-JAN-2013 17-JAN-2013
Analysis Type: WATER Init. Cal. Times: 16:09 18:49
Lab Sample ID: IC1000 Quant Type: ISTD
Method: /chem1/nt7.i/20130117.b/sim011713.m

COMPOUND	RRF / AMOUNT	RF1000	CCAL RRF1000	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
1 Vinyl Chloride	2914	3000	0.78270	0.040	-2.85016	20.00000	Linear
2 1,1-Dichloroethene	0.64772	0.66152	0.66152	0.040	2.13076	20.00000	Averaged
3 Trans-1,2-Dichloroethene	0.75371	0.79270	0.79270	0.040	5.17232	20.00000	Averaged
5 cis-1,2-dichloroethene	0.79987	0.81654	0.81654	0.040	2.08367	20.00000	Averaged
6 Benzene	1.52293	1.50457	1.50457	0.040	-1.20498	20.00000	Averaged
$ 8 d4-1,2-Dichloroethane	0.64773	0.64397	0.64397	0.040	-0.58014	20.00000	Averaged
9 1,2-Dichloroethane	0.83033	0.90570	0.90570	0.040	9.07639	20.00000	Averaged
10 Trichloroethene	0.37927	0.41964	0.41964	0.040	10.64487	20.00000	Averaged
$ 12 d8-Toluene	1.03818	1.05573	1.05573	0.040	1.69028	20.00000	Averaged
13 Toluene	1.84767	1.82013	1.82013	0.040	-1.49057	20.00000	Averaged
14 Tetrachloroethene	0.32033	0.34120	0.34120	0.040	6.51581	20.00000	Averaged
16 Ethyl Benzene	1.97831	2.10638	2.10638	0.040	6.47348	20.00000	Averaged
17 m,p xylene	0.75195	0.77935	0.77935	0.040	3.64441	20.00000	Averaged
18 o-xylene	1.66150	1.68884	1.68884	0.040	1.64506	20.00000	Averaged
$ 19 4-Bromofluorobenzene	0.30743	0.32576	0.32576	0.040	5.96030	20.00000	Averaged
20 1,1,2,2-Tetrachloroethane	0.30367	0.32933	0.32933	0.040	8.44953	20.00000	Averaged

UZ97:00567

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt7.i
Lab File ID: 10000117cc.d
Lab Smp Id: IC1000
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/20130117.b/sim011713.m
Misc Info: 13-

Calibration Date: 17-JAN-2013
Calibration Time: 17:02
Client Smp ID: IC1000
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	229144	114572	458288	229144	0.00
11 1,4-Difluorobenze	455099	227550	910198	455099	0.00
15 d5 -Chlorobenzene	389100	194550	778200	389100	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.31	4.81	5.81	5.31	0.00
11 1,4-Difluorobenze	5.75	5.25	6.25	5.75	0.00
15 d5 -Chlorobenzene	8.21	7.71	8.71	8.21	0.00

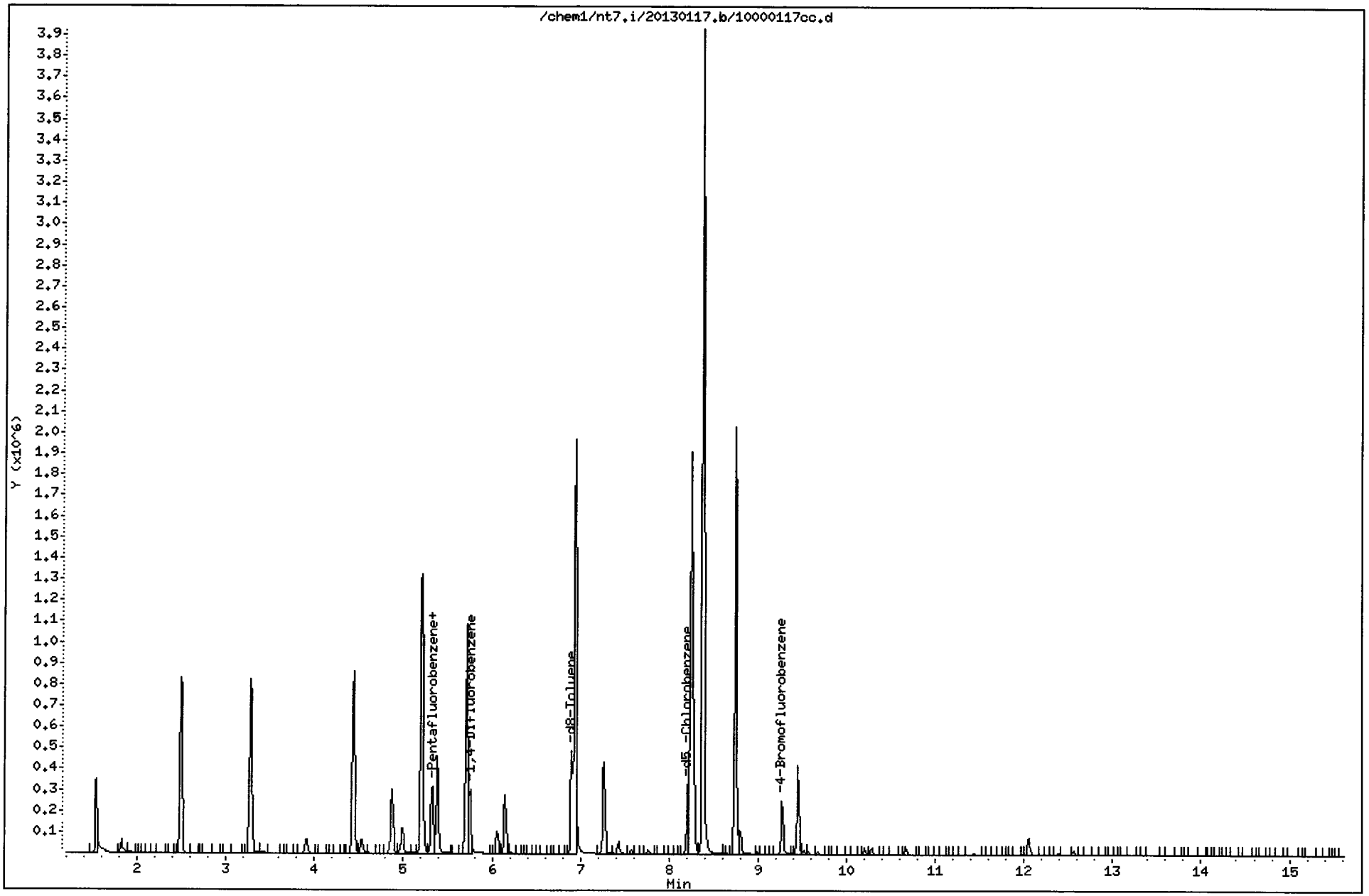
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt7.i/20130117.b/10000117cc.d
Date : 17-JAN-2013 17:02
Client ID: IC1000
Sample Info: IC1000,10,10,0,,

Instrument: nt7.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS



LZ917 08559

CO-ELUTION SUMMARY FOR FILE - 10000117cc.d

Lab ID: IC1000, Method: sim011713.m, Instrument: nt7.i, Date: 17-JAN-2013

RT	CO-ELUTION COMPOUNDS

1/18/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/20130117.b/lcs0117.d
Lab Smp Id: LCS0117
Inj Date : 17-JAN-2013 19:43
Operator : PC Inst ID: nt7.i
Smp Info : LCS0117,10,10,0,,
Misc Info : 13-
Comment :
Method : /chem1/nt7.i/20130117.b/sim011713.m
Meth Date : 18-Jan-2013 14:49 paul Quant Type: ISTD
Cal Date : 17-JAN-2013 18:22 Cal File: 00500117.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: btex.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	FINAL (ug/L)
	6 Benzene	78	5.209	5.208	(0.905)	703939	950.144	950.14
*	7 Pentafluorobenzene	168	5.316	5.315	(1.000)	253994	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.326	5.325	(1.002)	153215	931.293	931.29
*	11 1,4-Difluorobenzene	114	5.754	5.754	(1.000)	486482	1000.00	
$	12 d8-Toluene	98	6.902	6.901	(1.199)	496121	982.305	982.31
	13 Toluene	91	6.944	6.942	(0.846)	751960	1026.96	1027.0
*	15 d5 -Chlorobenzene	117	8.211	8.208	(1.000)	396293	1000.00	
	16 Ethyl Benzene	91	8.252	8.248	(1.005)	834087	1063.90	1063.9
	17 m,p xylene	106	8.383	8.380	(1.021)	635395	2132.26	2132.3(Q)
	18 o-xylene	91	8.748	8.745	(1.065)	712577	1082.22	1082.2
$	19 4-Bromofluorobenzene	174	9.279	9.272	(1.130)	131278	1077.53	1077.5

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt7.i
Lab File ID: lcs0117.d
Lab Smp Id: LCS0117
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/20130117.b/sim011713.m
Misc Info: 13-

Calibration Date: 17-JAN-2013
Calibration Time: 17:02

Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	229144	114572	458288	253994	10.84
11 1,4-Difluorobenze	455099	227550	910198	486482	6.90
15 d5 -Chlorobenzene	389100	194550	778200	396293	1.85

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.31	4.81	5.81	5.32	0.02
11 1,4-Difluorobenze	5.75	5.25	6.25	5.75	0.01
15 d5 -Chlorobenzene	8.21	7.71	8.71	8.21	0.04

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 20130117
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: LCS0117
Level: LOW Operator: PC
Data Type: MS DATA SampleType: LCS
SpikeList File: btex.spk Quant Type: ISTD
Sublist File: btex.sub
Method File: /chem1/nt7.i/20130117.b/sim011713.m
Misc Info: 13-

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
6 Benzene	1000.0	950.14	95.01	80-120
13 Toluene	1000.0	1027.0	102.70	70-130
16 Ethyl Benzene	1000.0	1063.9	106.39	70-130
17 m,p xylene	2000.0	2132.3	106.61	70-130
18 o-xylene	1000.0	1082.2	108.22	70-130

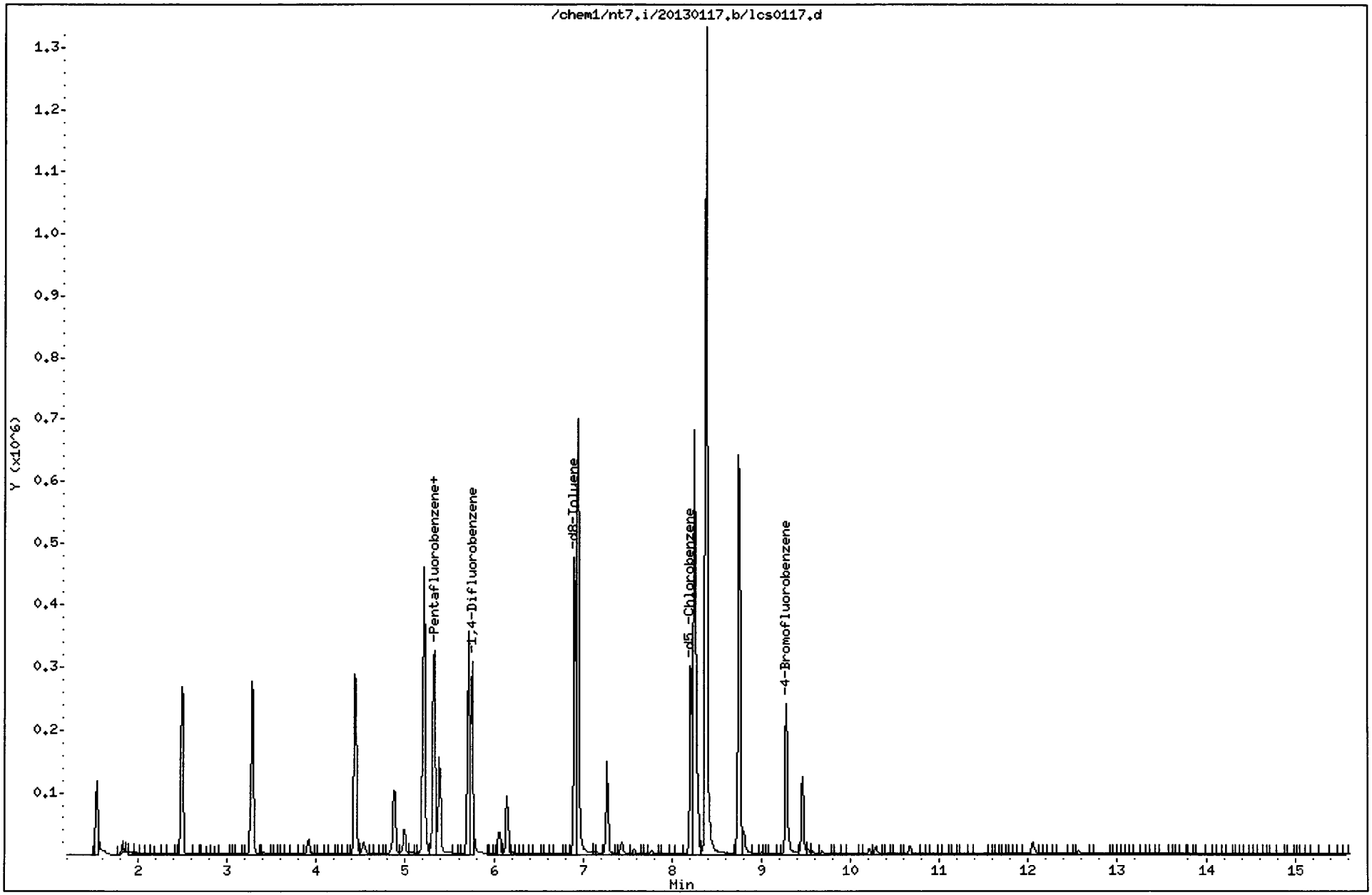
SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 8 d4-1,2-Dichloroeth	1000.0	931.29	93.13	75-125
$ 12 d8-Toluene	1000.0	982.30	98.23	75-125
$ 19 4-Bromofluorobenze	1000.0	1077.5	107.75	75-125

Data File: /chem1/nt7.i/20130117.b/lcs0117.d
Date : 17-JAN-2013 19:43
Client ID:
Sample Info: LCS0117,10,10,0,,

Instrument: nt7.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS



CO-ELUTION SUMMARY FOR FILE - lcs0117.d

Lab ID: LCS0117, Method: sim011713.m, Instrument: nt7.i, Date: 17-JAN-2013

RT	CO-ELUTION COMPOUNDS

PC 1/18/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/20130117.b/lcs0117a.d
Lab Smp Id: LCS0117A
Inj Date : 17-JAN-2013 20:09
Operator : PC Inst ID: nt7.i
Smp Info : LCS0117A,10,10,0,,
Misc Info : 13-
Comment :
Method : /chem1/nt7.i/20130117.b/sim011713.m
Meth Date : 18-Jan-2013 14:49 paul Quant Type: ISTD
Cal Date : 17-JAN-2013 18:22 Cal File: 00500117.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: btex.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	FINAL (ug/L)
	6 Benzene	78	5.209	5.208	(0.905)	709957	977.620	977.62
*	7 Pentafluorobenzene	168	5.316	5.315	(1.000)	255940	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.326	5.325	(1.002)	150634	908.645	908.64
*	11 1,4-Difluorobenzene	114	5.754	5.754	(1.000)	476852	1000.00	
$	12 d8-Toluene	98	6.902	6.901	(1.200)	495868	1001.63	1001.6
	13 Toluene	91	6.944	6.942	(0.846)	740124	1024.16	1024.2
*	15 d5 -Chlorobenzene	117	8.212	8.208	(1.000)	391122	1000.00	
	16 Ethyl Benzene	91	8.253	8.248	(1.005)	843294	1089.86	1089.9
	17 m,p xylene	106	8.384	8.380	(1.021)	630380	2143.40	2143.4(Q)
	18 o-xylene	91	8.748	8.745	(1.065)	713643	1098.16	1098.2
$	19 4-Bromofluorobenzene	174	9.279	9.272	(1.130)	125243	1041.58	1041.6

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt7.i
Lab File ID: lcs0117a.d
Lab Smp Id: LCS0117A
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/20130117.b/sim011713.m
Misc Info: 13-

Calibration Date: 17-JAN-2013
Calibration Time: 17:02

Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	229144	114572	458288	255940	11.69
11 1,4-Difluorobenze	455099	227550	910198	476852	4.78
15 d5 -Chlorobenzene	389100	194550	778200	391122	0.52

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.31	4.81	5.81	5.32	0.02
11 1,4-Difluorobenze	5.75	5.25	6.25	5.75	0.00
15 d5 -Chlorobenzene	8.21	7.71	8.71	8.21	0.05

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 20130117
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: LCS0117A
Level: LOW Operator: PC
Data Type: MS DATA SampleType: LCS
SpikeList File: btex.spk Quant Type: ISTD
Sublist File: btex.sub
Method File: /chem1/nt7.i/20130117.b/sim011713.m
Misc Info: 13-

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
6 Benzene	1000.0	977.62	97.76	80-120
13 Toluene	1000.0	1024.2	102.42	70-130
16 Ethyl Benzene	1000.0	1089.9	108.99	70-130
17 m,p xylene	2000.0	2143.4	107.17	70-130
18 o-xylene	1000.0	1098.2	109.82	70-130

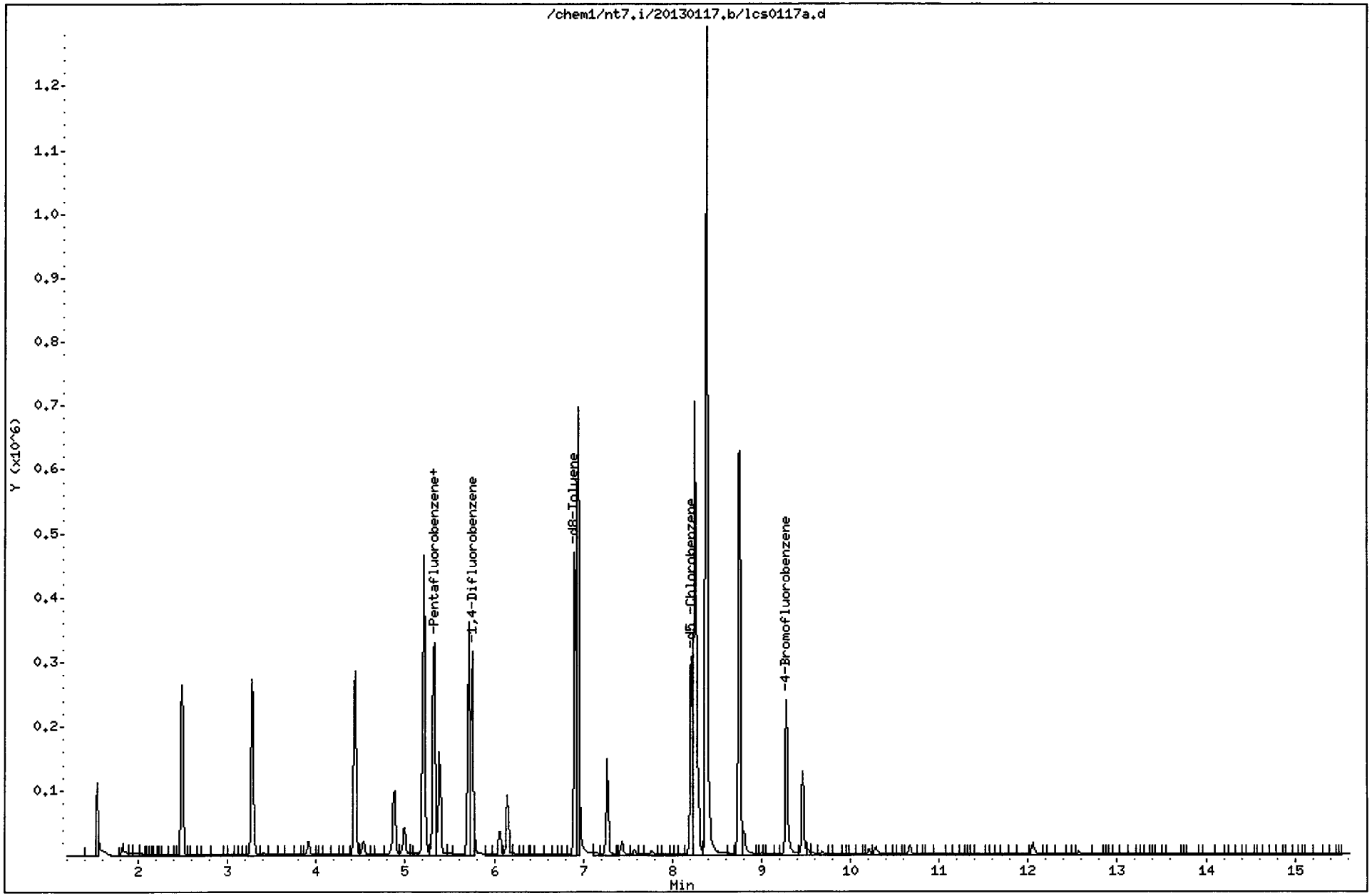
SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 8 d4-1,2-Dichloroeth	1000.0	908.64	90.86	75-125
$ 12 d8-Toluene	1000.0	1001.6	100.16	75-125
$ 19 4-Bromofluorobenze	1000.0	1041.6	104.16	75-125

Data File: /chem1/nt7.i/20130117.b/lcs0117a.d
Date : 17-JAN-2013 20:09
Client ID:
Sample Info: LCS0117A,10,10,0,,

Column phase: RTXVMS

Instrument: nt7.i

Operator: PC
Column diameter: 0.18



UZ587 065779

CO-ELUTION SUMMARY FOR FILE - lcs0117a.d

Lab ID: LCS0117A, Method: sim011713.m, Instrument: nt7.i, Date: 17-JAN-2013

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/20130117.b/mb0117.d
Lab Smp Id: MB0117
Inj Date : 17-JAN-2013 20:36
Operator : PC Inst ID: nt7.i
Smp Info : MB0117,10,10,0,,
Misc Info : 13-
Comment :
Method : /chem1/nt7.i/20130117.b/sim011713.m
Meth Date : 18-Jan-2013 14:50 paul Quant Type: ISTD
Cal Date : 17-JAN-2013 18:22 Cal File: 00500117.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: btex.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	FINAL (ug/L)
	6 Benzene	78	Compound Not Detected.					
*	7 Pentafluorobenzene	168	5.316	5.315	(1.000)	257727	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.326	5.325	(1.002)	153188	917.639	917.64
*	11 1,4-Difluorobenzene	114	5.755	5.754	(1.000)	484028	1000.00	
$	12 d8-Toluene	98	6.903	6.901	(1.200)	501314	997.619	997.62
	13 Toluene	91	6.945	6.942	(0.845)	8933	11.7227	11.723
*	15 d5 -Chlorobenzene	117	8.215	8.208	(1.000)	412423	1000.00	
	16 Ethyl Benzene	91	Compound Not Detected.					
	17 m,p xylene	106	8.456	8.380	(1.029)	3590	11.5762	11.576(Q)
	18 o-xylene	91	8.790	8.745	(1.070)	5635	8.22337	8.223
$	19 4-Bromofluorobenzene	174	9.287	9.272	(1.131)	116117	915.804	915.80

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt7.i
Lab File ID: mb0117.d
Lab Smp Id: MB0117
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/20130117.b/sim011713.m
Misc Info: 13-

Calibration Date: 17-JAN-2013
Calibration Time: 17:02

Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	229144	114572	458288	257727	12.47
11 1,4-Difluorobenze	455099	227550	910198	484028	6.36
15 d5 -Chlorobenzene	389100	194550	778200	412423	5.99

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.31	4.81	5.81	5.32	0.03
11 1,4-Difluorobenze	5.75	5.25	6.25	5.75	0.01
15 d5 -Chlorobenzene	8.21	7.71	8.71	8.21	0.08

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 20130117
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: MB0117
Level: LOW Operator: PC
Data Type: MS DATA SampleType: BLANK
SpikeList File: special.spk Quant Type: ISTD
Sublist File: btex.sub
Method File: /chem1/nt7.i/20130117.b/sim011713.m
Misc Info: 13-

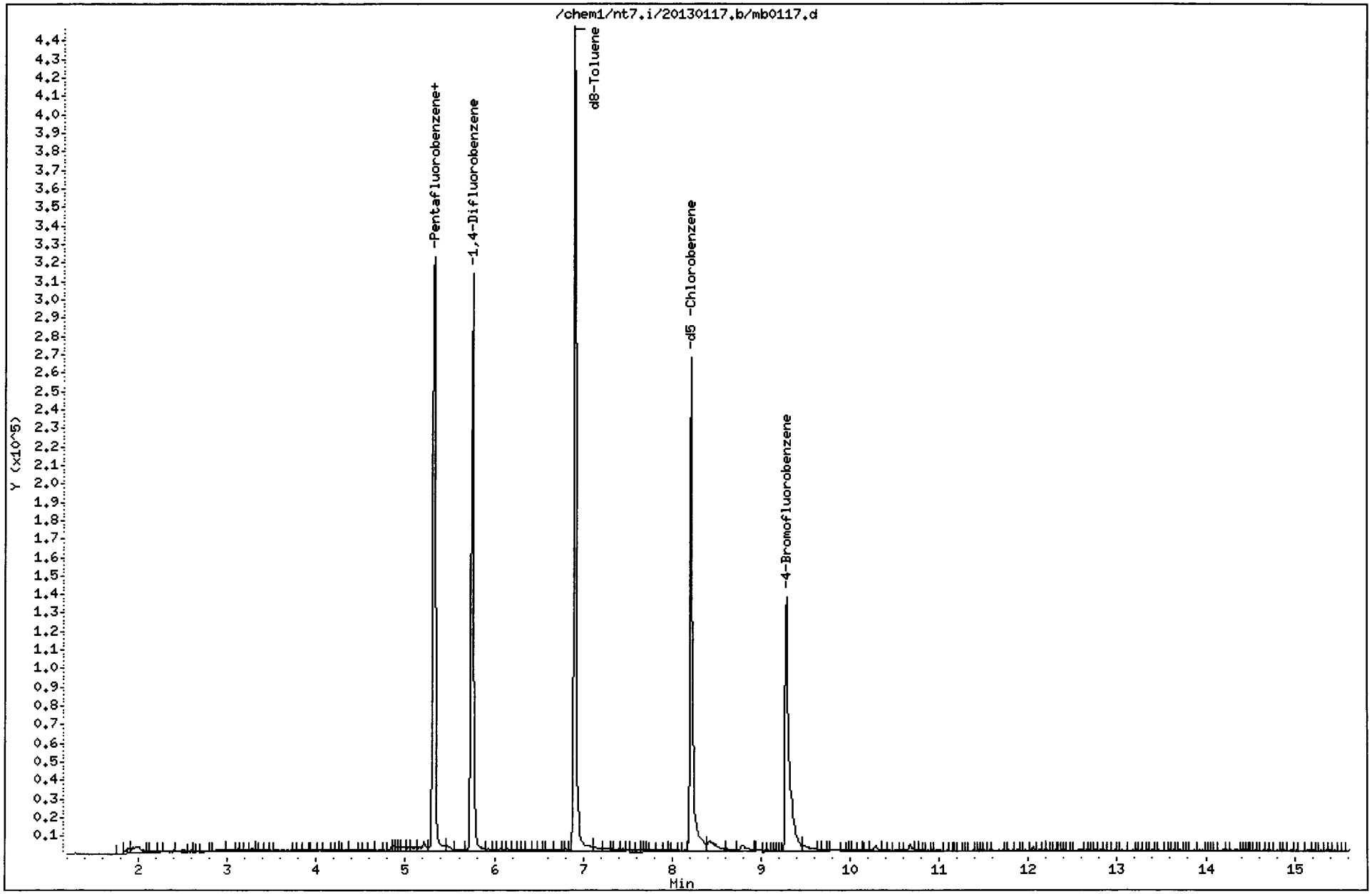
SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 8 d4-1,2-Dichloroeth	1000.0	917.64	91.76	75-125
$ 12 d8-Toluene	1000.0	997.62	99.76	75-125
$ 19 4-Bromofluorobenze	1000.0	915.80	91.58	75-125

Data File: /chem1/nt7.i/20130117.b/mb0117.d
Date : 17-JAN-2013 20:36
Client ID:
Sample Info: MB0117,10,10,0,,

Instrument: nt7.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS



U7967 09501

CO-ELUTION SUMMARY FOR FILE - mb0117.d

Lab ID: MB0117, Method: sim011713.m, Instrument: nt7.i, Date: 17-JAN-2013

RT	CO-ELUTION COMPOUNDS

PG 1/18/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/20130117.b/vz97t.d
Lab Smp Id: VZ97T Client Smp ID: CSIA20130111-001RB
Inj Date : 17-JAN-2013 21:03
Operator : PC Inst ID: nt7.i
Smp Info : VZ97T,10,10,0,,
Misc Info : 13-1101
Comment :
Method : /chem1/nt7.i/20130117.b/sim011713.m
Meth Date : 18-Jan-2013 14:50 paul Quant Type: ISTD
Cal Date : 17-JAN-2013 18:22 Cal File: 00500117.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: btex.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	FINAL (ug/L)
	6 Benzene	78	Compound Not Detected.					
*	7 Pentafluorobenzene	168	5.317	5.315	(1.000)	240765	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.327	5.325	(1.002)	153857	986.577	986.58
*	11 1,4-Difluorobenzene	114	5.755	5.754	(1.000)	484171	1000.00	
$	12 d8-Toluene	98	6.904	6.901	(1.200)	498065	990.860	990.86
	13 Toluene	91	6.945	6.942	(0.845)	24695	32.2416	32.242
*	15 d5 -Chlorobenzene	117	8.216	8.208	(1.000)	414542	1000.00	
	16 Ethyl Benzene	91	Compound Not Detected.					
	17 m,p xylene	106	Compound Not Detected.					
	18 o-xylene	91	Compound Not Detected.					
$	19 4-Bromofluorobenzene	174	9.286	9.272	(1.130)	126308	991.094	991.09

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt7.i
Lab File ID: vz97t.d
Lab Smp Id: VZ97T
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/20130117.b/sim011713.m
Misc Info: 13-1101

Calibration Date: 17-JAN-2013
Calibration Time: 17:02
Client Smp ID: CSIA20130111-001RB
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	229144	114572	458288	240765	5.07
11 1,4-Difluorobenze	455099	227550	910198	484171	6.39
15 d5 -Chlorobenzene	389100	194550	778200	414542	6.54

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.31	4.81	5.81	5.32	0.03
11 1,4-Difluorobenze	5.75	5.25	6.25	5.75	0.02
15 d5 -Chlorobenzene	8.21	7.71	8.71	8.22	0.09

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.

Analytical Resources, Inc.

RECOVERY REPORT

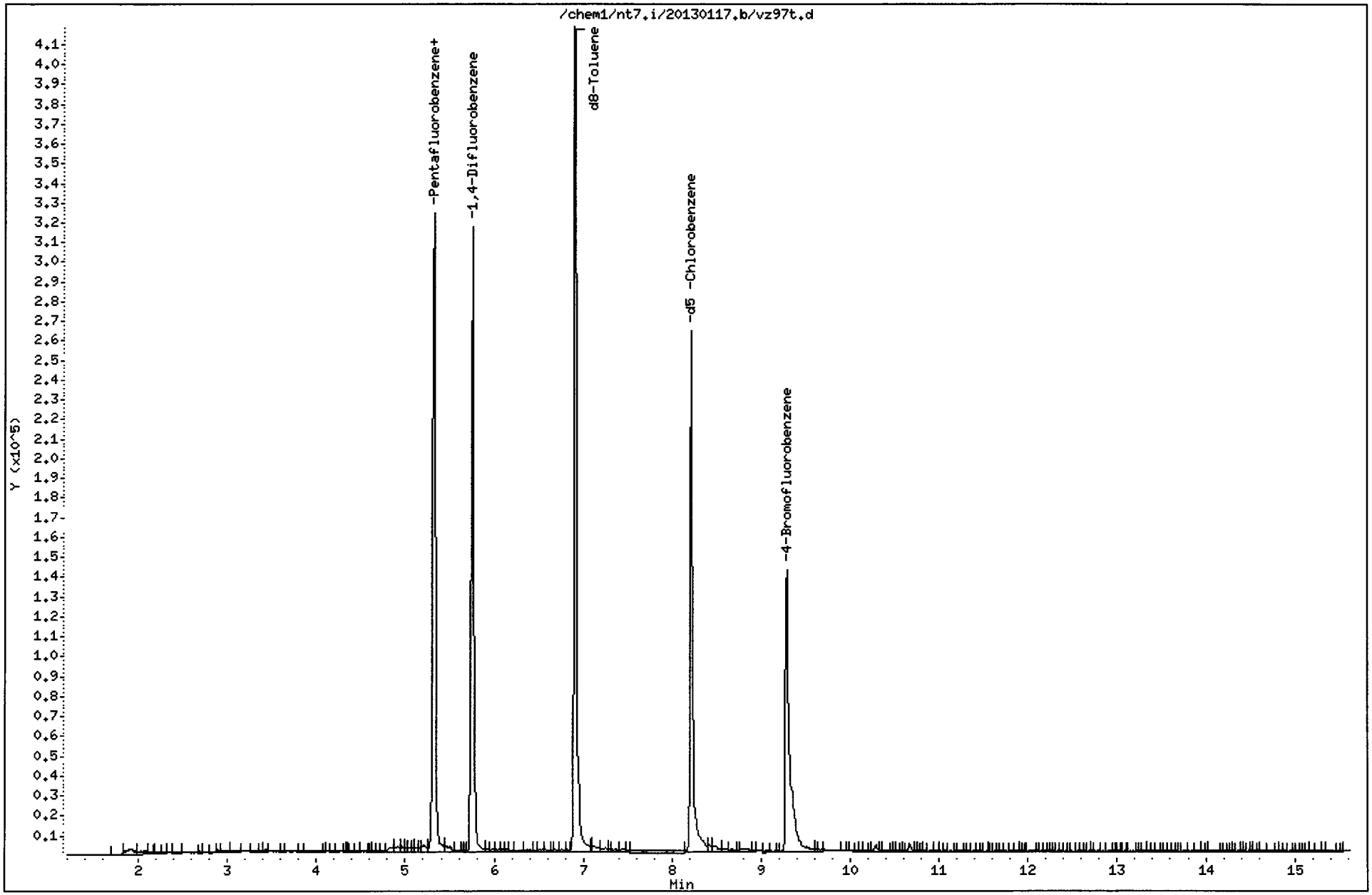
Client Name: Anchor QEA
Client SDG: VZ97
Sample Matrix: LIQUID
Fraction: VOA
Lab Smp Id: VZ97T
Client Smp ID: CSIA20130111-001RB
Level: LOW
Operator: PC
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: special.spk
Quant Type: ISTD
Sublist File: btex.sub
Method File: /chem1/nt7.i/20130117.b/sim011713.m
Misc Info: 13-1101

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 8 d4-1,2-Dichloroeth	1000.0	986.58	98.66	75-125
$ 12 d8-Toluene	1000.0	990.86	99.09	75-125
$ 19 4-Bromofluorobenze	1000.0	991.09	99.11	75-125

Data File: /chem1/nt7.i/20130117.b/vz97t.d
Date : 17-JAN-2013 21:03
Client ID: CSIA20130111-001RB
Sample Info: VZ97T,10,10,0,,

Instrument: nt7.i

Operator: PC
Column phase: RTXVMS
Column diameter: 0.18



VZ97T.D

CO-ELUTION SUMMARY FOR FILE - vz97t.d

Lab ID: VZ97T, Method: sim011713.m, Instrument: nt7.i, Date: 17-JAN-2013

RT	CO-ELUTION COMPOUNDS

PG 1/18/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt7.i/20130117.b/vz97u.d
Lab Smp Id: VZ97U Client Smp ID: Trip Blanks
Inj Date : 17-JAN-2013 21:30
Operator : PC Inst ID: nt7.i
Smp Info : VZ97U,10,10,0,,
Misc Info : 13-1113
Comment :
Method : /chem1/nt7.i/20130117.b/sim011713.m
Meth Date : 18-Jan-2013 14:50 paul Quant Type: ISTD
Cal Date : 17-JAN-2013 18:22 Cal File: 00500117.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: btex.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	FINAL (ug/L)
	6 Benzene	78	Compound Not Detected.					
*	7 Pentafluorobenzene	168	5.317	5.315	(1.000)	242949	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.330	5.325	(1.002)	150868	958.716	958.72
*	11 1,4-Difluorobenzene	114	5.755	5.754	(1.000)	482485	1000.00	
$	12 d8-Toluene	98	6.905	6.901	(1.200)	495248	988.699	988.70
	13 Toluene	91	6.945	6.942	(0.845)	20474	27.1394	27.139
*	15 d5 -Chlorobenzene	117	8.216	8.208	(1.000)	408316	1000.00	
	16 Ethyl Benzene	91	Compound Not Detected.					
	17 m,p xylene	106	Compound Not Detected.					
	18 o-xylene	91	Compound Not Detected.					
$	19 4-Bromofluorobenzene	174	9.288	9.272	(1.130)	118883	947.054	947.05

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt7.i
Lab File ID: vz97u.d
Lab Smp Id: VZ97U
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt7.i/20130117.b/sim011713.m
Misc Info: 13-1113

Calibration Date: 17-JAN-2013
Calibration Time: 17:02
Client Smp ID: Trip Blanks
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	229144	114572	458288	242949	6.02
11 1,4-Difluorobenze	455099	227550	910198	482485	6.02
15 d5 -Chlorobenzene	389100	194550	778200	408316	4.94

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.31	4.81	5.81	5.32	0.04
11 1,4-Difluorobenze	5.75	5.25	6.25	5.75	0.02
15 d5 -Chlorobenzene	8.21	7.71	8.71	8.22	0.09

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA
Client SDG: VZ97
Sample Matrix: LIQUID
Fraction: VOA
Lab Smp Id: VZ97U
Client Smp ID: Trip Blanks
Level: LOW
Operator: PC
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: special.spk
Quant Type: ISTD
Sublist File: btex.sub
Method File: /chem1/nt7.i/20130117.b/sim011713.m
Misc Info: 13-1113

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 8 d4-1,2-Dichloroeth	1000.0	958.72	95.87	75-125
$ 12 d8-Toluene	1000.0	988.70	98.87	75-125
$ 19 4-Bromofluorobenze	1000.0	947.05	94.71	75-125

Data File: /chem1/nt7.i/20130117.b/vz97u.d

Date : 17-JAN-2013 21:30

Client ID: Trip Blanks

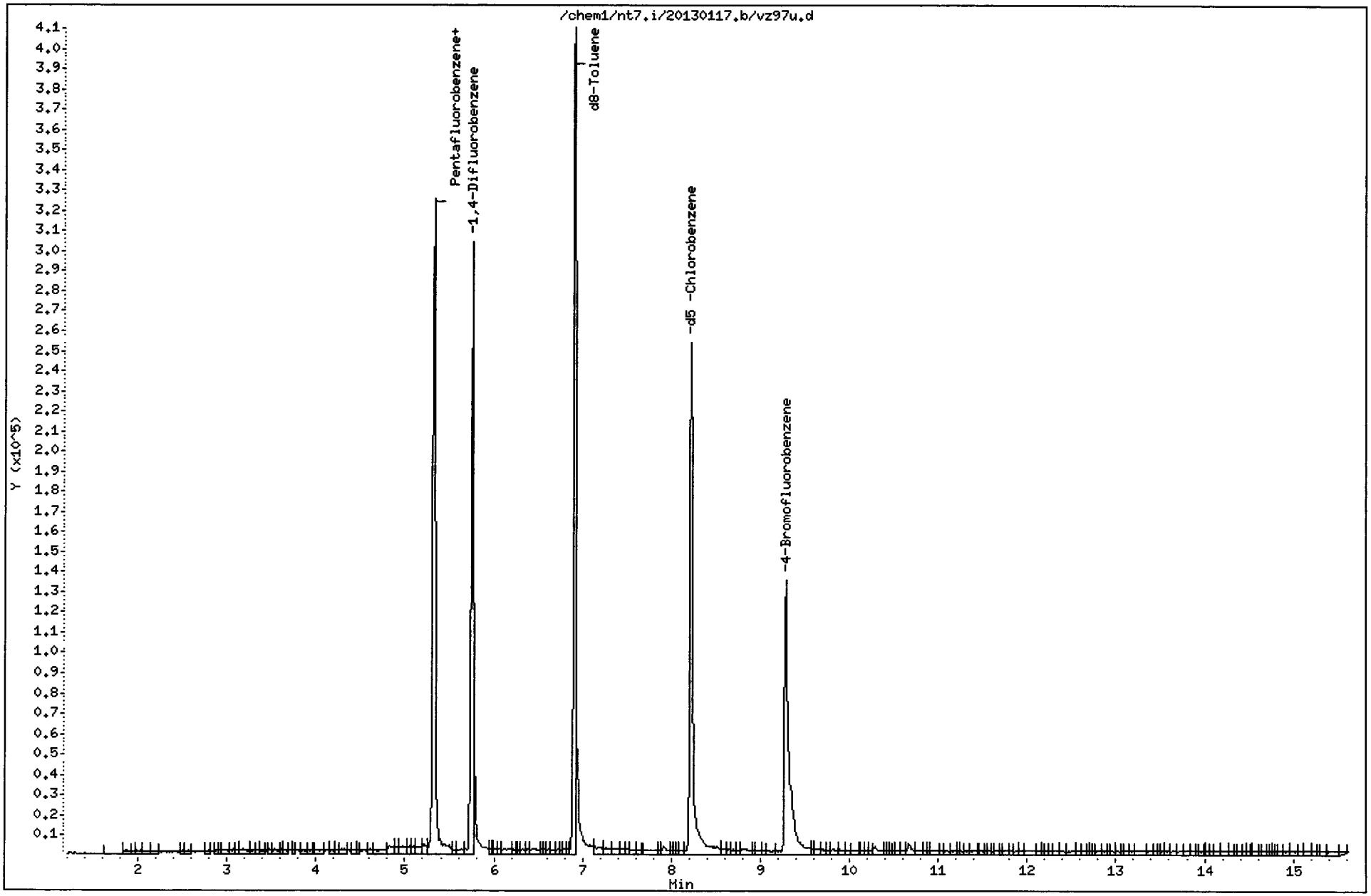
Sample Info: VZ97U,10,10,0,,

Column phase: RTXVMS

Instrument: nt7.i

Operator: PC

Column diameter: 0.18



105568, VZ97U

CO-ELUTION SUMMARY FOR FILE - vz97u.d

Lab ID: VZ97U, Method: sim011713.m, Instrument: nt7.i, Date: 17-JAN-2013

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Analyst Notes / Corrective Action Log

ARI Project ID: V297 Client ID: Andgar

ARI SOP:**404S**(Gas) **410S**(BTEX) **430S**(VPH) **700S**(8260C) **703S**(SIM) **706S**(524.2) **710S**(RSK-175)

Parameter(s): SIM-benzene

Instrument: NT-2 NT-3 NT-5 NT-7 (NT-9) PID-1 PID-2 PID-3 FID-6 FINN-5

Purge Volume (mL) 10 Curve Date: 1/18/13 Analysis Start Date: 1/18/13

pH ≤ 2.0	YES / NO / (NA)	Method Blank In Control?	(YES) / NO
BFB Tune Meets Criteria?	(YES) / NO / NA	LCS / LCSD Recovery In Control?	(YES) / NO
Internal Standard Meets Criteria?	(YES) / NO / NA	Surrogate Recovery In Control?	(YES) / NO
ICal acceptable?	(YES) / NO	CCal acceptable?	(YES) / NO
Q flag applied?	YES / (NO) / NA	Q flag applied?	YES / (NO) / NA
Manual Integrations for ICal?	(YES) / NO	Manual Integrations for Samples?	Yes / (NO)
Special Analysis Criteria Met?	YES / NO / (NA)		

Bubbles/Headspace: None SM (≤ 2mm •) PB (2-4mm) LG (> 4mm ●) Head Space

Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):

Sample B appears to have over 5mL liquid on top of soil in 5035 vial, Very high sample weights - incomplete extraction, likely

Benzene only - no target Q flags

Received with short hold - analyzed on rush basis.

Samples N, O analyzed at reduced split volume due to foul content

Additional Details on Reverse: Yes / No

Analyst: PC **Date:** 1/22/13

Reviewer: MW **Date:** 1/22

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt9.i/18JAN13a.b

ARI Job No.: CC01 Method: sim011713.m Instrument: nt9.i Date: 18-JAN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1740	cc0118.d	CC0118	CC0118	1	NO MANUAL INTEGRATION
1804	lcs0118.d	LCS0118	LCS0118	1	NO MANUAL INTEGRATION
1828	lcs0118a.d	LCS0118	LCS0118	1	NO MANUAL INTEGRATION
1851	mb0118.d	MB0118	MB0118	1	NO MANUAL INTEGRATION
1915	vz97a2.d	VZ97A	CSIA-20130	1	NO MANUAL INTEGRATION
1939	vz97b2.d	VZ97B	CSIA-20130	1	NO MANUAL INTEGRATION
2003	vz97bms.d	VZ97B	CSIA-20130	1	NO MANUAL INTEGRATION
2026	vz97bmsd.d	VZ97B	CSIA-20130	1	NO MANUAL INTEGRATION
2050	vz97c2.d	VZ97C	CSIA-20130	1	NO MANUAL INTEGRATION
2114	vz97d2.d	VZ97D	CSIA-20130	1	NO MANUAL INTEGRATION
2138	vz97e2.d	VZ97E	CSIA-20130	1	NO MANUAL INTEGRATION
2201	vz97f.d	VZ97F	CSIA201301	1	NO MANUAL INTEGRATION
2225	vz97g.d	VZ97G	CSIA201301	1	NO MANUAL INTEGRATION
2249	vz97h.d	VZ97H	CSIA201301	1	NO MANUAL INTEGRATION
2312	vz97i.d	VZ97I	CSIA201301	1	NO MANUAL INTEGRATION
2336	vz97j.d	VZ97J	CSIA201301	1	NO MANUAL INTEGRATION
0111	vz97n.d	VZ97N	CSIA201301	1	NO MANUAL INTEGRATION
0135	vz97o.d	VZ97O	CSIA201301	1	NO MANUAL INTEGRATION
0246	vz97r.d	VZ97R	CSIA201301	1	NO MANUAL INTEGRATION

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt9.i/18JAN13a.b

Instrument: nt9.i Date: 18-JAN-2013 Method: sim011713.m

INITIAL CAL: 18-JAN-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 18-JAN-2013

Compound	%D
NO Q-FLAGS	

Data File: /chem1/nt9.i/18JAN13a.b/bfb0118a.d

Date : 18-JAN-2013 17:06

Client ID: BFB0118

Instrument: nt9.i

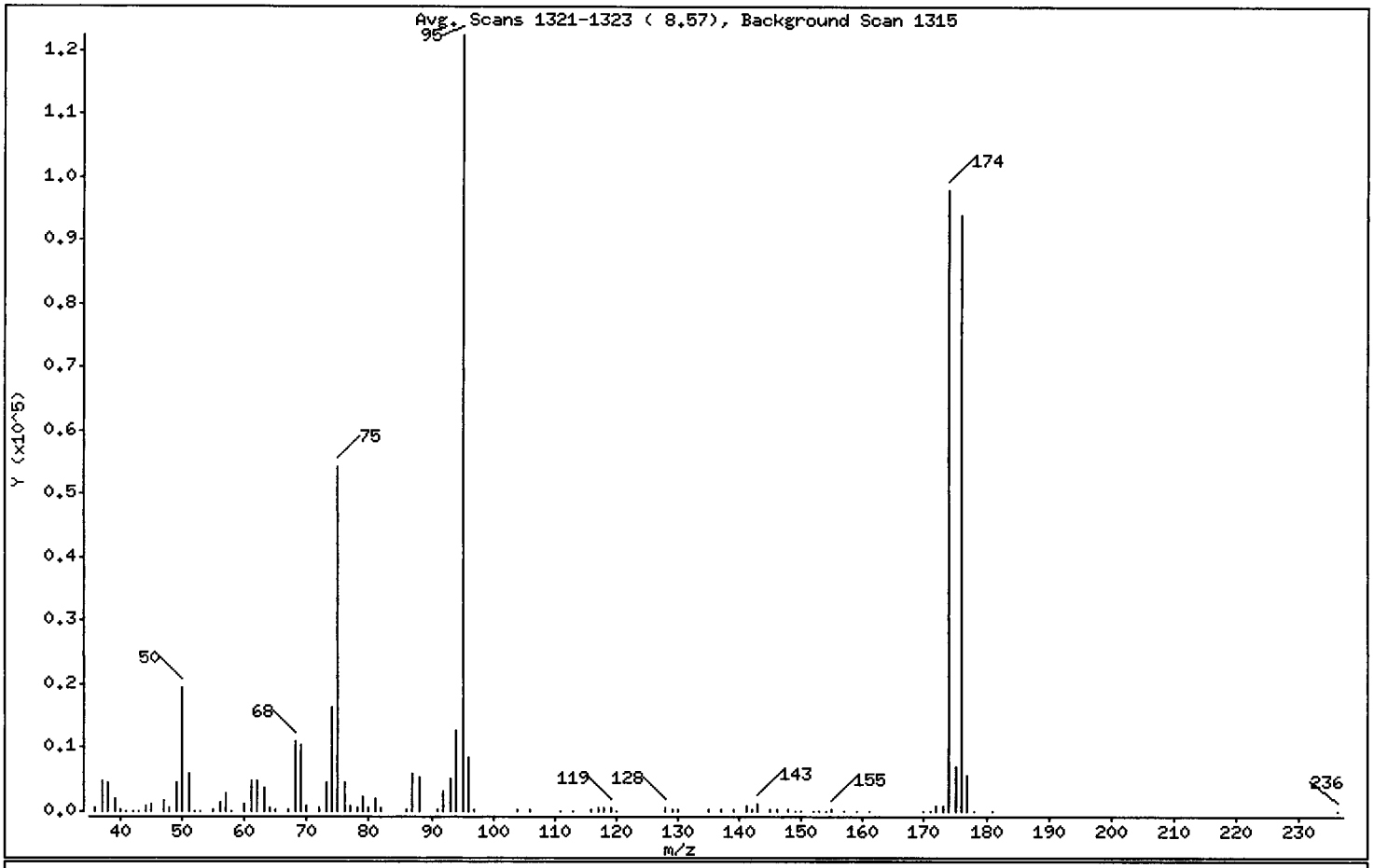
Sample Info: BFB0118,BFB0118,,118JAN2013,,

Operator: PC

Column phase: RTXVMS

Column diameter: 0.18

1 Bromofluorobenzene



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.84
75	30.00 - 66.00% of mass 95	44.37
96	5.00 - 9.00% of mass 95	6.81
173	Less than 2.00% of mass 174	0.69 (0.87)
174	50.00 - 101.00% of mass 95	80.00
175	4.00 - 9.00% of mass 174	5.84 (7.30)
176	95.00 - 101.00% of mass 174	76.79 (95.99)
177	5.00 - 9.00% of mass 176	4.61 (6.01)

VZ97 00599

Data File: /chem1/nt9.i/18JAN13a.b/bfb0118a.d

Date : 18-JAN-2013 17:06

Client ID: BFB0118

Instrument: nt9.i

Sample Info: BFB0118,BFB0118,,118JAN2013,,

Operator: PC

Column phase: RTXVMS

Column diameter: 0.18

Data File: bfb0118a.d

Spectrum: Avg. Scans 1321-1323 (8.57), Background Scan 1315

Location of Maximum: 95.00

Number of points: 94

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	683	63.00	3567	93.00	5053	146.00	149
37.00	4720	64.00	565	94.00	12759	148.00	215
38.00	4636	65.00	385	95.00	122456	149.00	52
39.00	1883	67.00	178	96.00	8338	150.00	52
40.00	329	68.00	10946	97.00	329	152.00	55
41.00	51	69.00	10449	104.00	343	153.00	69
42.00	57	70.00	857	106.00	399	154.00	55
43.00	70	72.00	602	111.00	51	155.00	272
44.00	960	73.00	4475	113.00	55	157.00	85
45.00	990	74.00	16362	116.00	322	159.00	57
47.00	1676	75.00	54328	117.00	499	161.00	62
48.00	480	76.00	4479	118.00	497	170.00	54
49.00	4367	77.00	798	119.00	536	171.00	61
50.00	19392	78.00	598	120.00	52	172.00	796
51.00	6050	79.00	2370	128.00	514	173.00	848
52.00	86	80.00	672	129.00	148	174.00	97960
53.00	56	81.00	2067	130.00	416	175.00	7152
55.00	255	82.00	437	135.00	188	176.00	94032
56.00	1406	83.00	60	137.00	263	177.00	5649
57.00	2679	86.00	199	139.00	152	178.00	110
58.00	70	87.00	5772	141.00	854	181.00	52
60.00	1140	88.00	5256	142.00	192	236.00	74
61.00	4652	91.00	399	143.00	1033		
62.00	4888	92.00	2969	145.00	239		

VZ97 : 00600

Data File: /chem1/nt9.i/18JAN13a.b/bfb0118a.d

Page 1

Date : 18-JAN-2013 17:06

Client ID: BFB0118

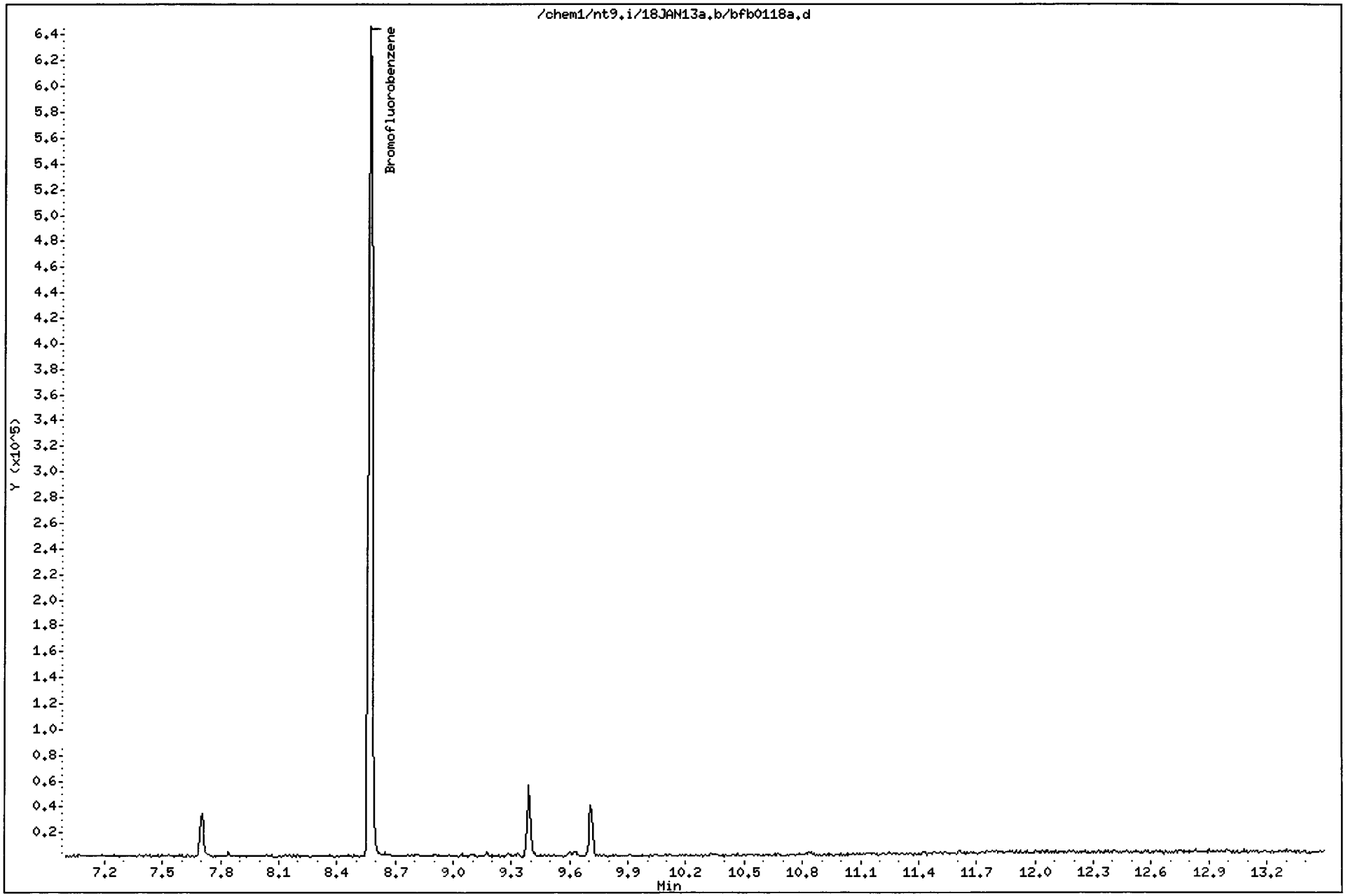
Instrument: nt9.i

Sample Info: BFB0118,BFB0118,,118JAN2013,,

Operator: PC

Column phase: RTXVMS

Column diameter: 0.18



PG 1/21/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/18JAN13a.b/cc0118.d
Lab Smp Id: CC0118 Client Smp ID: CC0118
Inj Date : 18-JAN-2013 17:40
Operator : PC Inst ID: nt9.i
Smp Info : CC0118,10,10,0,
Misc Info : 13-
Comment :
Method : /chem1/nt9.i/18JAN13a.b/sim011713.m
Meth Date : 21-Jan-2013 16:15 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: btex.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/L)	ON-COL (ng/L)
	6 Benzene	78	5.180	5.180	(0.918)	219514	1000.00	877.47
*	7 Pentafluorobenzene	168	5.268	5.268	(1.000)	120731	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.286	5.286	(1.003)	54677	1000.00	980.49
*	11 1,4-Difluorobenzene	114	5.642	5.642	(1.000)	206327	1000.00	
$	12 d8-Toluene	98	6.618	6.618	(1.173)	218734	1000.00	1015.0
	13 Toluene	91	6.651	6.651	(0.863)	236712	1000.00	924.80
*	15 d5 -Chlorobenzene	117	7.706	7.706	(1.000)	212296	1000.00	
	16 Ethyl Benzene	91	7.734	7.734	(1.004)	248490	1000.00	989.08(Q)
	17 m,p xylene	106	7.840	7.840	(1.017)	203273	2000.00	2152.7
	18 o-xylene	91	8.140	8.140	(1.056)	183676	1000.00	1032.8
$	19 4-Bromofluorobenzene	174	8.572	8.572	(1.112)	76458	1000.00	1028.7

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt9.i Injection Date: 18-JAN-2013 17:40
Lab File ID: cc0118.d Init. Cal. Date(s): 18-JAN-2013 18-JAN-2013
Analysis Type: WATER Init. Cal. Times: 13:49 16:10
Lab Sample ID: CC0118 Quant Type: ISTD
Method: /chem1/nt9.i/18JAN13a.b/sim011713.m

COMPOUND	RRF / AMOUNT	RF1000	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
6 Benzene	1.21248	1.06391	0.040	-12.25341	20.00000	Averaged
$ 8 d4-1,2-Dichloroethane	0.46190	0.45288	0.040	-1.95128	20.00000	Averaged
$ 12 d8-Toluene	1.04442	1.06013	0.040	1.50471	20.00000	Averaged
13 Toluene	1.20568	1.11501	0.040	-7.52005	20.00000	Averaged
16 Ethyl Benzene	1.18341	1.17049	0.040	-1.09164	20.00000	Averaged
17 m,p xylene	0.44480	0.47875	0.040	7.63255	20.00000	Averaged
18 o-xylene	0.83774	0.86519	0.040	3.27701	20.00000	Averaged
$ 19 4-Bromofluorobenzene	0.35009	0.36015	0.040	2.87394	20.00000	Averaged

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: cc0118.d
Lab Smp Id: CC0118
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-

Calibration Date: 18-JAN-2013
Calibration Time: 17:40
Client Smp ID: CC0118
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	120731	5.34
11 1,4-Difluorobenze	202370	101185	404740	206327	1.96
15 d5 -Chlorobenzene	226394	113197	452788	212296	-6.23

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	0.00
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	0.00
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	0.00

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.

Data File: /chem1/nt9.i/18JAN13a.b/cc0118.d

Date : 18-JAN-2013 17:40

Client ID: CC0118

Sample Info: CC0118,10,10,0,

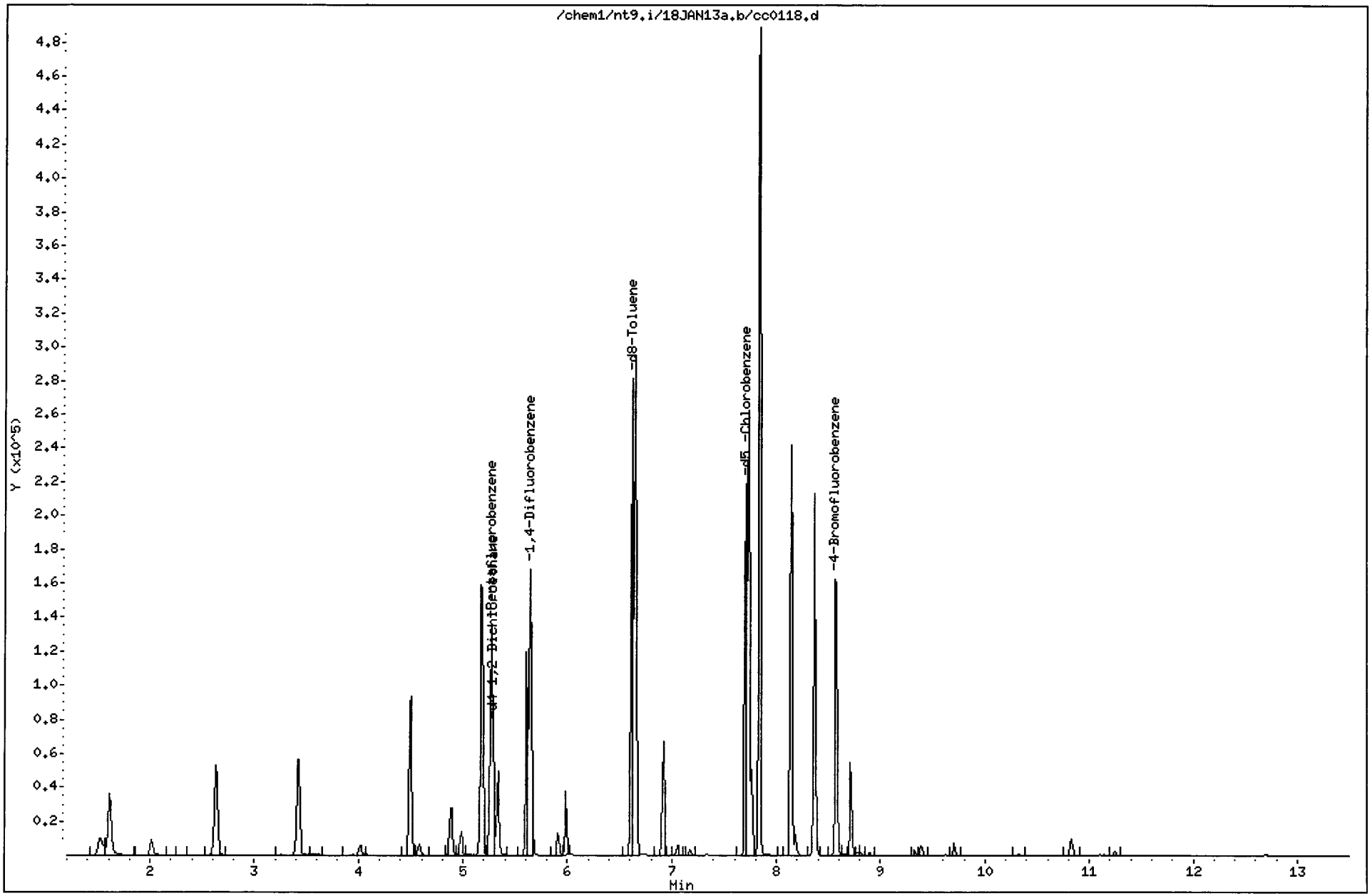
Column phase: RTXVMS

Instrument: nt9.i

Operator: PC

Column diameter: 0.18

SGS 0057677



CO-ELUTION SUMMARY FOR FILE - cc0118.d

Lab ID: CC0118, Method: sim011713.m, Instrument: nt9.i, Date: 18-JAN-2013

RT	CO-ELUTION COMPOUNDS

PG 1/21/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/18JAN13a.b/lcs0118.d
Lab Smp Id: LCS0118 Client Smp ID: LCS0118
Inj Date : 18-JAN-2013 18:04
Operator : PC Inst ID: nt9.i
Smp Info : LCS0118,10,5,1,
Misc Info : 13-
Comment :
Method : /chem1/nt9.i/18JAN13a.b/sim011713.m
Meth Date : 21-Jan-2013 16:15 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: btex.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	FINAL (ug/L)
	6 Benzene	78	5.174	5.180	(0.917)	232316	966.730	966.73
*	7 Pentafluorobenzene	168	5.268	5.268	(1.000)	116264	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.287	5.286	(1.004)	52314	974.163	974.16
*	11 1,4-Difluorobenzene	114	5.642	5.642	(1.000)	198197	1000.00	
$	12 d8-Toluene	98	6.618	6.618	(1.173)	214980	1038.55	1038.5
	13 Toluene	91	6.650	6.651	(0.863)	262329	1020.34	1020.3
*	15 d5 -Chlorobenzene	117	7.706	7.706	(1.000)	213241	1000.00	
	16 Ethyl Benzene	91	7.734	7.734	(1.004)	272723	1080.73	1080.7(Q)
	17 m,p xylene	106	7.840	7.840	(1.017)	225916	2381.84	2381.8
	18 o-xylene	91	8.140	8.140	(1.056)	202849	1135.53	1135.5
$	19 4-Bromofluorobenzene	174	8.574	8.572	(1.113)	79104	1059.63	1059.6

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: lcs0118.d
Lab Smp Id: LCS0118
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-

Calibration Date: 18-JAN-2013
Calibration Time: 17:40
Client Smp ID: LCS0118
Level: MED
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	116264	1.44
11 1,4-Difluorobenze	202370	101185	404740	198197	-2.06
15 d5 -Chlorobenzene	226394	113197	452788	213241	-5.81

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	0.00
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	0.00
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	0.00

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: LCS0118
Level: MED
Data Type: MS DATA
SpikeList File: btex.spk
Sublist File: btex.sub
Client SDG: 18JAN13a
Fraction: VOA
Client Smp ID: LCS0118
Operator: PC
SampleType: LCS
Quant Type: ISTD
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
6 Benzene	1000.0	966.73	96.67	80-120
13 Toluene	1000.0	1020.3	102.03	70-130
16 Ethyl Benzene	1000.0	1080.7	108.07	70-130
17 m,p xylene	2000.0	2381.8	119.09	70-130
18 o-xylene	1000.0	1135.5	113.55	70-130

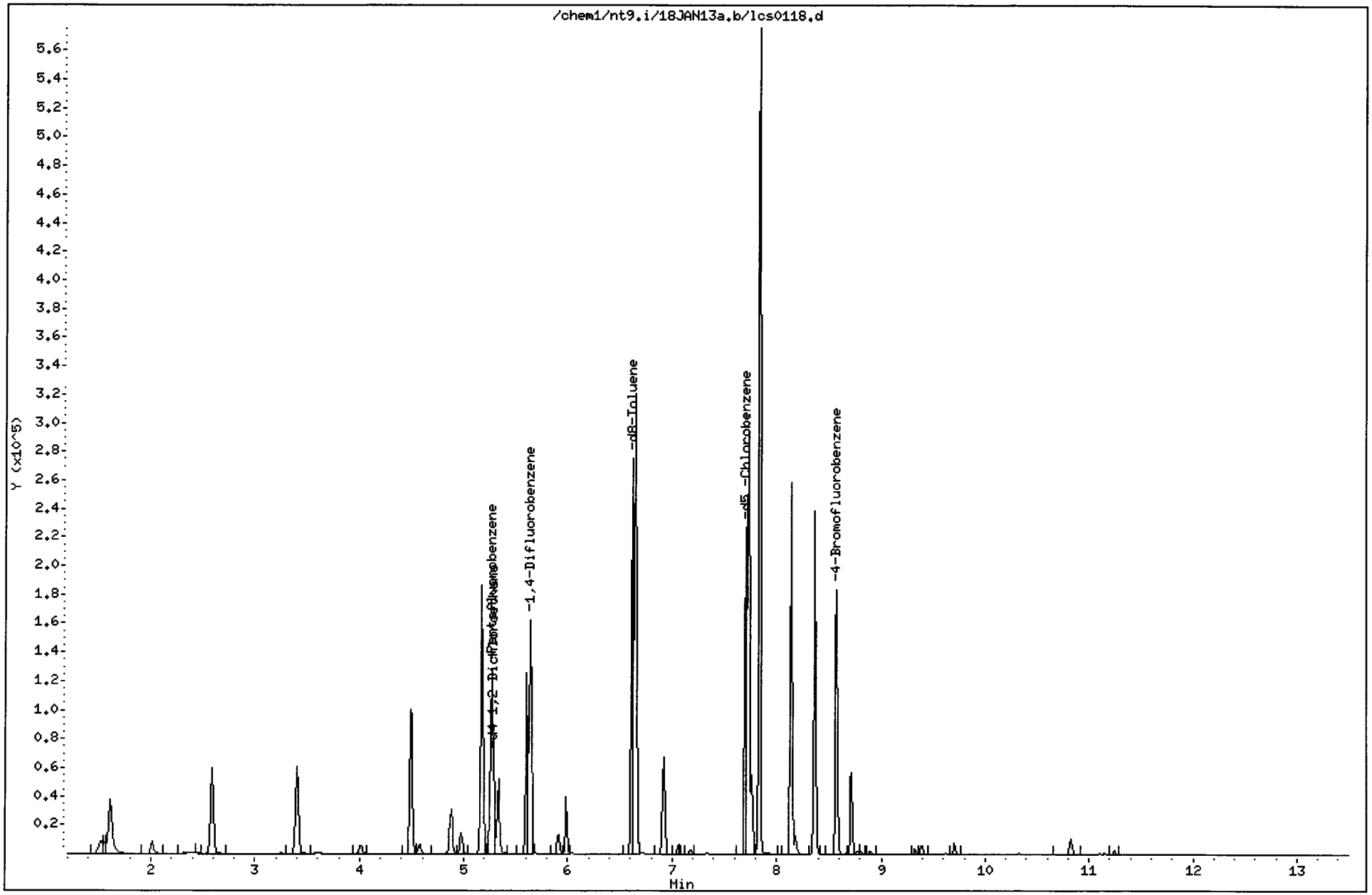
SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 8 d4-1,2-Dichloroeth	1000.0	974.16	97.42	75-125
$ 12 d8-Toluene	1000.0	1038.5	103.85	75-125
$ 19 4-Bromofluorobenze	1000.0	1059.6	105.96	75-125

Data File: /chem1/nt9.i/18JAN13a.b/lcs0118.d
Date : 18-JAN-2013 18:04
Client ID: LCS0118
Sample Info: LCS0118,10,5,1,

Instrument: nt9.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS



USEPA 8260C

CO-ELUTION SUMMARY FOR FILE - lcs0118.d

Lab ID: LCS0118, Method: sim011713.m, Instrument: nt9.i, Date: 18-JAN-2013

RT	CO-ELUTION COMPOUNDS

PC 1/24/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/18JAN13a.b/lcs0118a.d
Lab Smp Id: LCS0118 Client Smp ID: LCS0118
Inj Date : 18-JAN-2013 18:28
Operator : PC Inst ID: nt9.i
Smp Info : LCS0118,10,5,1,
Misc Info : 13-
Comment :
Method : /chem1/nt9.i/18JAN13a.b/sim011713.m
Meth Date : 21-Jan-2013 16:15 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: btex.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	FINAL (ug/L)
	6 Benzene	78	5.173	5.180	(0.917)	239482	999.328	999.33
*	7 Pentafluorobenzene	168	5.267	5.268	(1.000)	117248	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.288	5.286	(1.004)	51283	946.946	946.95
*	11 1,4-Difluorobenzene	114	5.642	5.642	(1.000)	197646	1000.00	
$	12 d8-Toluene	98	6.619	6.618	(1.173)	215660	1044.74	1044.7
	13 Toluene	91	6.651	6.651	(0.863)	271530	1047.74	1047.7
*	15 d5 -Chlorobenzene	117	7.706	7.706	(1.000)	214949	1000.00	
	16 Ethyl Benzene	91	7.734	7.734	(1.004)	284518	1118.51	1118.5(Q)
	17 m,p xylene	106	7.841	7.840	(1.017)	235527	2463.44	2463.4
	18 o-xylene	91	8.141	8.140	(1.056)	213314	1184.62	1184.6
$	19 4-Bromofluorobenzene	174	8.575	8.572	(1.113)	79362	1054.64	1054.6

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: lcs0118a.d
Lab Smp Id: LCS0118
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-

Calibration Date: 18-JAN-2013
Calibration Time: 17:40
Client Smp ID: LCS0118
Level: MED
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	117248	2.30
11 1,4-Difluorobenze	202370	101185	404740	197646	-2.33
15 d5 -Chlorobenzene	226394	113197	452788	214949	-5.06

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	-0.01
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	0.00
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	0.01

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 18JAN13a
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: LCS0118 Client Smp ID: LCS0118
Level: MED Operator: PC
Data Type: MS DATA SampleType: LCS
SpikeList File: btex.spk Quant Type: ISTD
Sublist File: btex.sub
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
6 Benzene	1000.0	999.33	99.93	80-120
13 Toluene	1000.0	1047.7	104.77	70-130
16 Ethyl Benzene	1000.0	1118.5	111.85	70-130
17 m,p xylene	2000.0	2463.4	123.17	70-130
18 o-xylene	1000.0	1184.6	118.46	70-130

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 8 d4-1,2-Dichloroeth	1000.0	946.95	94.69	75-125
$ 12 d8-Toluene	1000.0	1044.7	104.47	75-125
$ 19 4-Bromofluorobenze	1000.0	1054.6	105.46	75-125

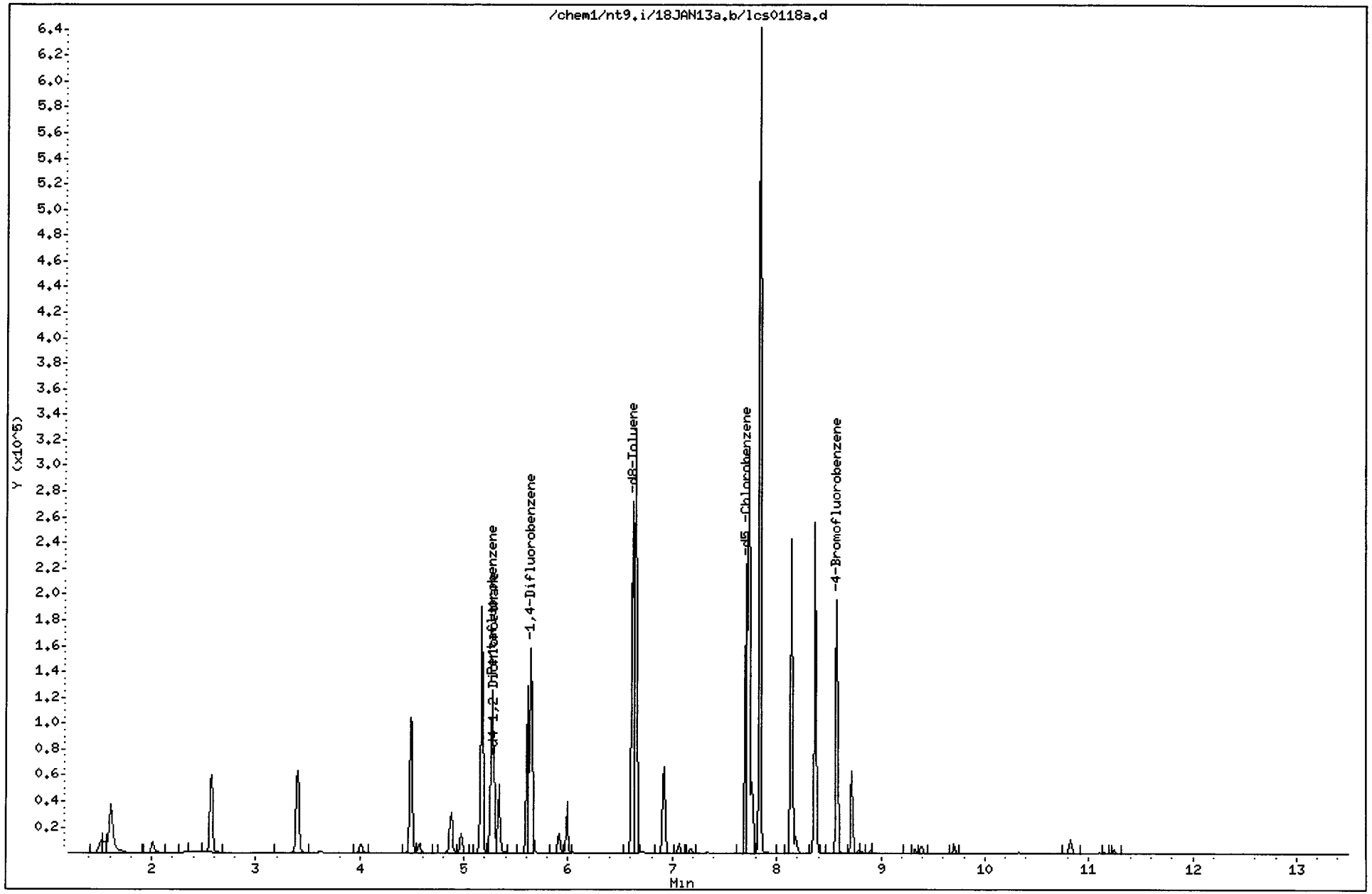
VZ97:00614

Data File: /chem1/nt9.i/18JAN13a.b/lcs0118a.d
Date : 18-JAN-2013 18:28
Client ID: LCS0118
Sample Info: LCS0118,10,5,1,

Instrument: nt9.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS



CO-ELUTION SUMMARY FOR FILE - lcs0118a.d

Lab ID: LCS0118, Method: sim011713.m, Instrument: nt9.i, Date: 18-JAN-2013

RT	CO-ELUTION COMPOUNDS

1/21/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/18JAN13a.b/mb0118.d
Lab Smp Id: MB0118 Client Smp ID: MB0118
Inj Date : 18-JAN-2013 18:51
Operator : PC Inst ID: nt9.i
Smp Info : MB0118,10,5,1,
Misc Info : 13-
Comment :
Method : /chem1/nt9.i/18JAN13a.b/sim011713.m
Meth Date : 21-Jan-2013 16:16 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: btex.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	FINAL (ug/L)
	6 Benzene	78	Compound Not Detected.					
*	7 Pentafluorobenzene	168	5.267	5.268	(1.000)	115285	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.288	5.286	(1.004)	51487	966.910	966.91
*	11 1,4-Difluorobenzene	114	5.644	5.642	(1.000)	193025	1000.00	
$	12 d8-Toluene	98	6.619	6.618	(1.173)	204369	1013.74	1013.7
	13 Toluene	91	6.651	6.651	(0.863)	10960	44.9696	44.970
*	15 d5 -Chlorobenzene	117	7.707	7.706	(1.000)	202159	1000.00	
	16 Ethyl Benzene	91	7.735	7.734	(1.004)	4757	19.8849	19.885
	17 m,p xylene	106	7.841	7.840	(1.017)	5044	56.0970	56.097
	18 o-xylene	91	8.141	8.140	(1.056)	2257	13.3287	13.329(Q)
$	19 4-Bromofluorobenzene	174	8.576	8.572	(1.113)	66564	940.532	940.53

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: mb0118.d
Lab Smp Id: MB0118
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-

Calibration Date: 18-JAN-2013
Calibration Time: 17:40
Client Smp ID: MB0118
Level: MED
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	115285	0.59
11 1,4-Difluorobenze	202370	101185	404740	193025	-4.62
15 d5 -Chlorobenzene	226394	113197	452788	202159	-10.70

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	-0.02
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	0.03
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	0.02

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 18JAN13a
Sample Matrix: LIQUID Fraction: VOA
Lab Smp Id: MB0118 Client Smp ID: MB0118
Level: MED Operator: PC
Data Type: MS DATA SampleType: BLANK
SpikeList File: special.spk Quant Type: ISTD
Sublist File: btex.sub
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-

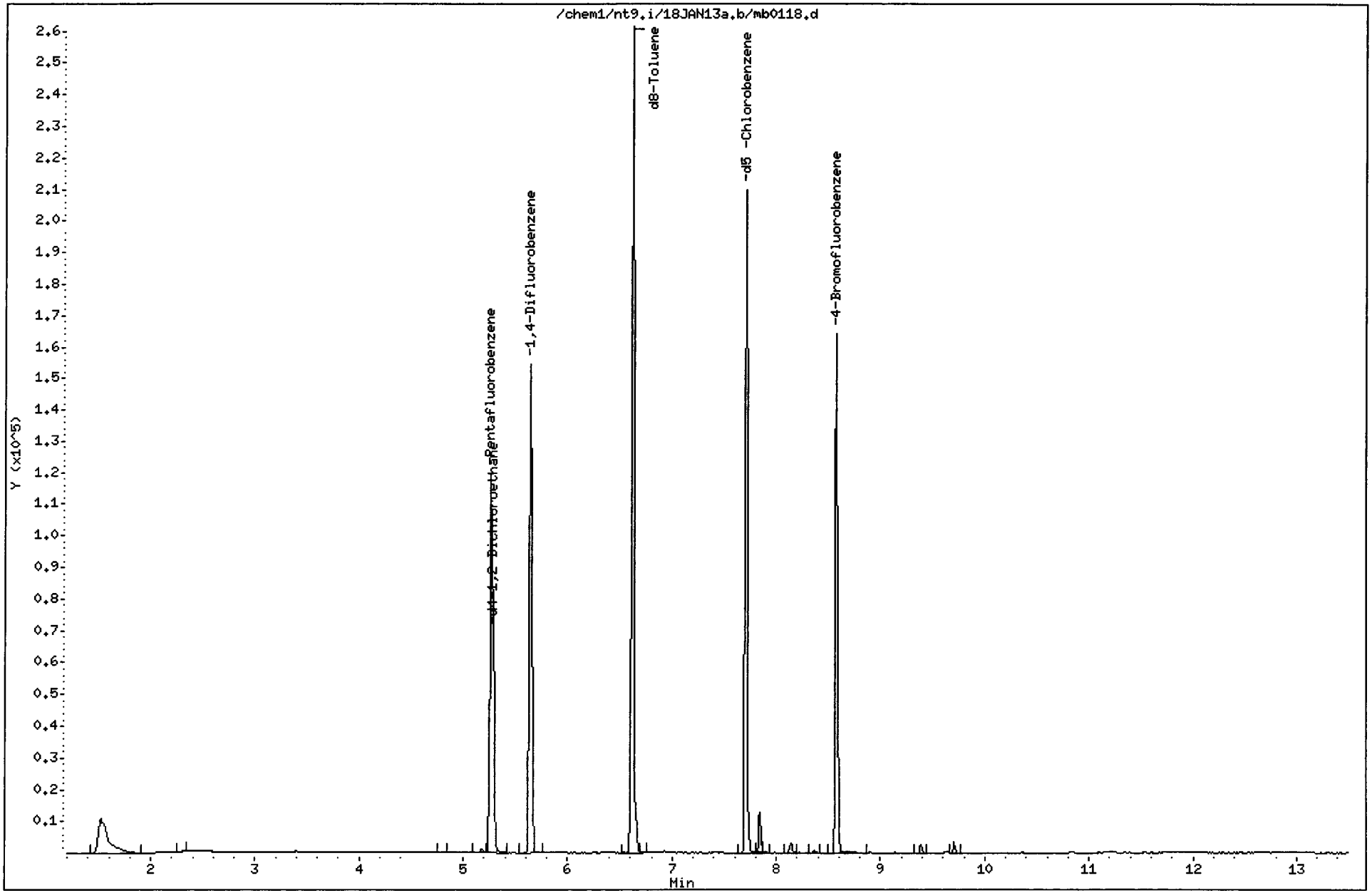
SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 8 d4-1,2-Dichloroeth	1000.0	966.91	96.69	75-125
$ 12 d8-Toluene	1000.0	1013.7	101.37	75-125
$ 19 4-Bromofluorobenze	1000.0	940.53	94.05	75-125

Data File: /chem1/nt9.i/18JAN13a.b/mb0118.d
Date : 18-JAN-2013 18:51
Client ID: MB0118
Sample Info: MB0118,10,5,1,

Column phase: RTXVMS

Instrument: nt9.i

Operator: PC
Column diameter: 0.18



USEPA 8260C

Data File: /chem1/nt9.i/18JAN13a.b/mb0118.d

Date : 18-JAN-2013 18:51

Client ID: MB0118

Instrument: nt9.i

Sample Info: MB0118,10,5,1,

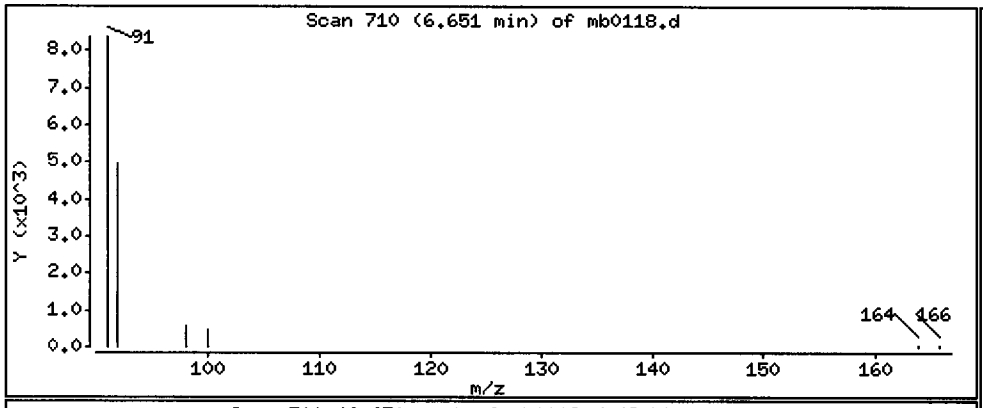
Operator: PC

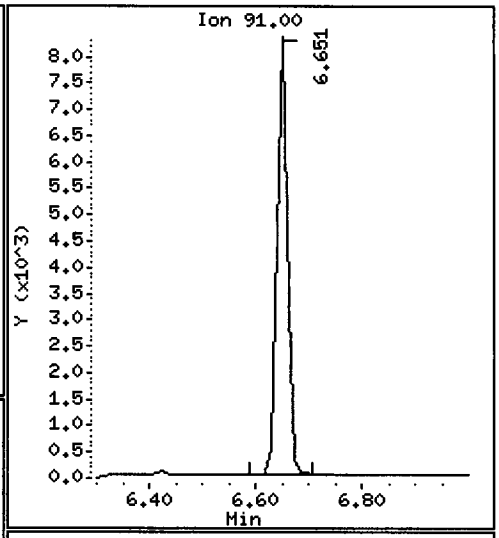
Column phase: RTXVMS

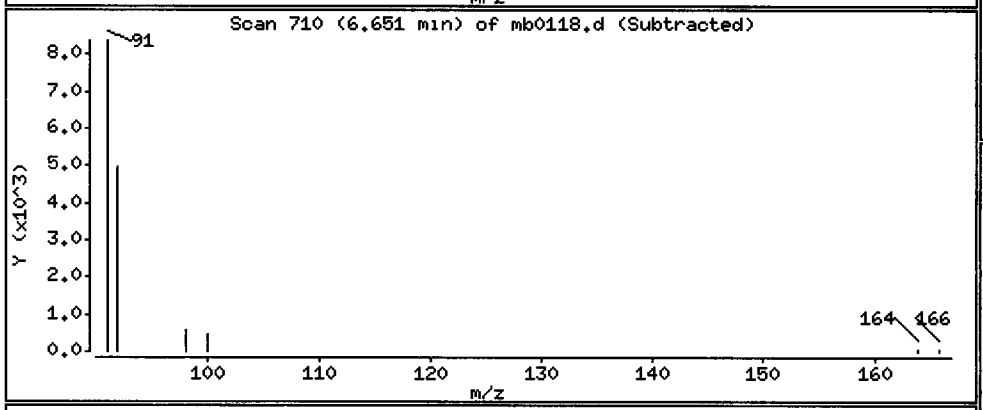
Column diameter: 0.18

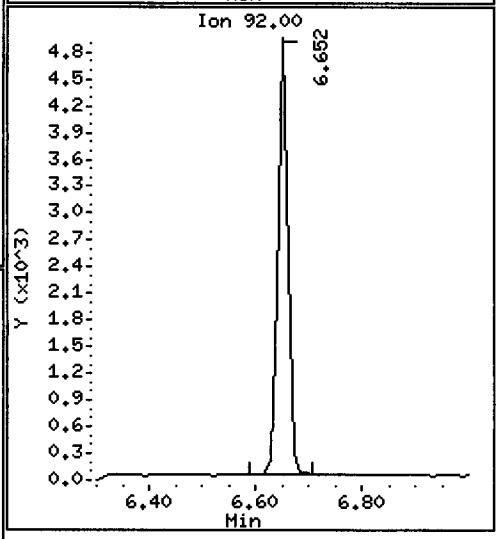
13 Toluene

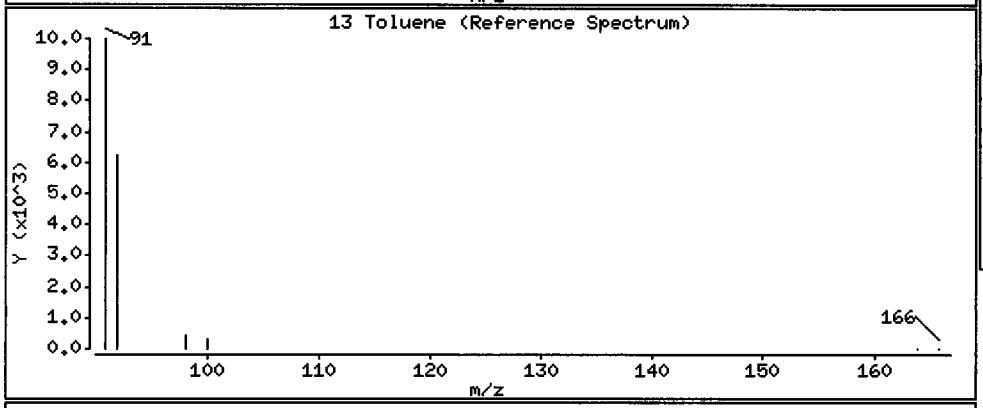
Concentration: 44.970 ug/L

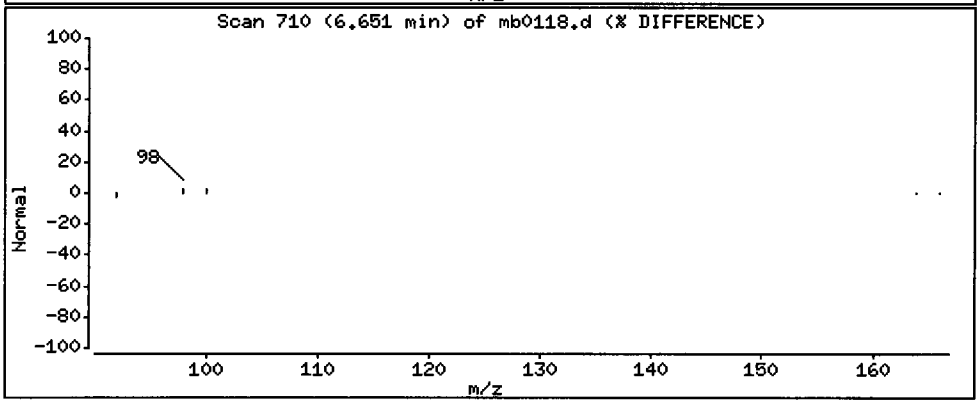












Data File: /chem1/nt9.i/18JAN13a.b/mb0118.d

Date : 18-JAN-2013 18:51

Client ID: MB0118

Instrument: nt9.i

Sample Info: MB0118,10,5,1,

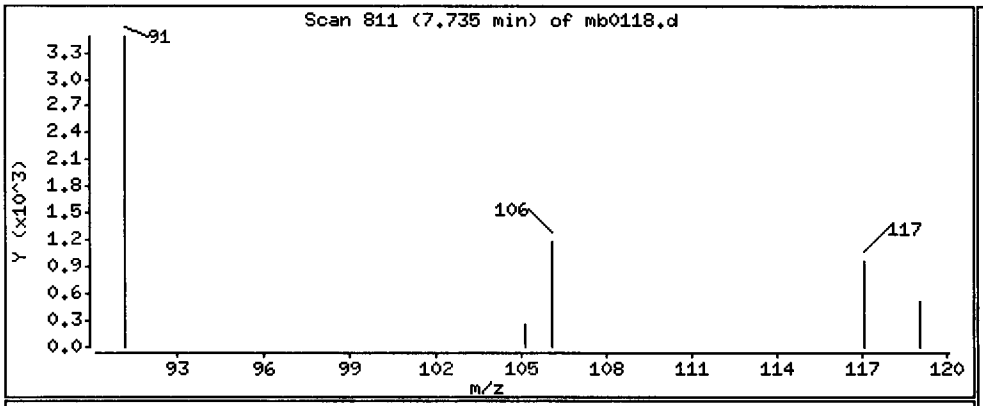
Operator: PC

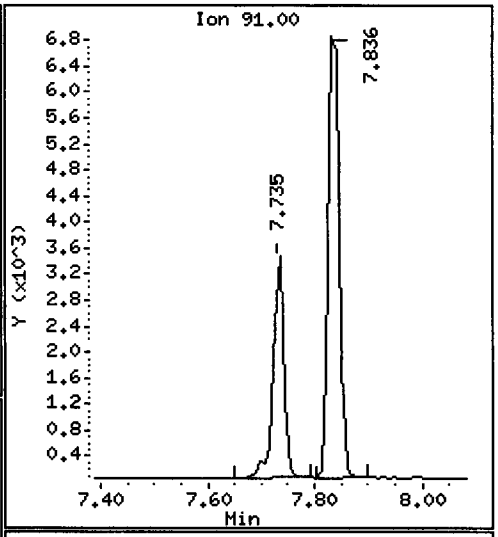
Column phase: RTXVMS

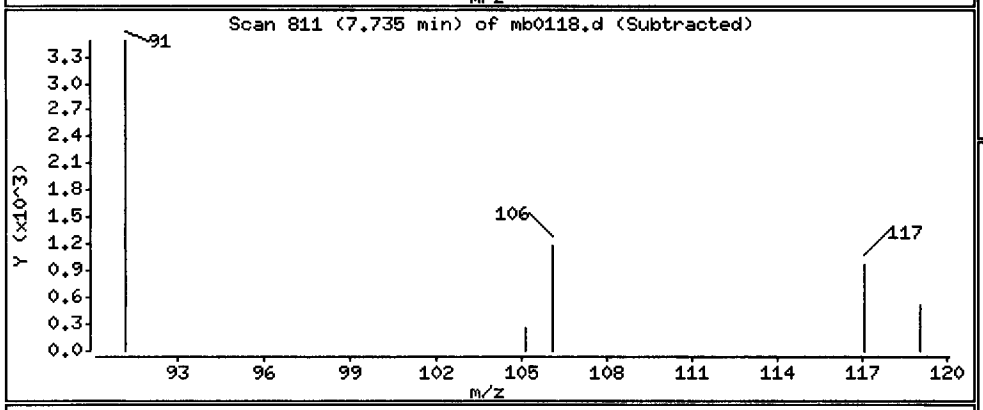
Column diameter: 0.18

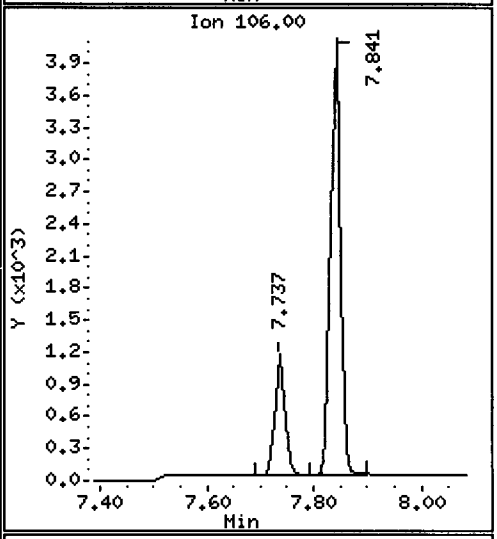
16 Ethyl Benzene

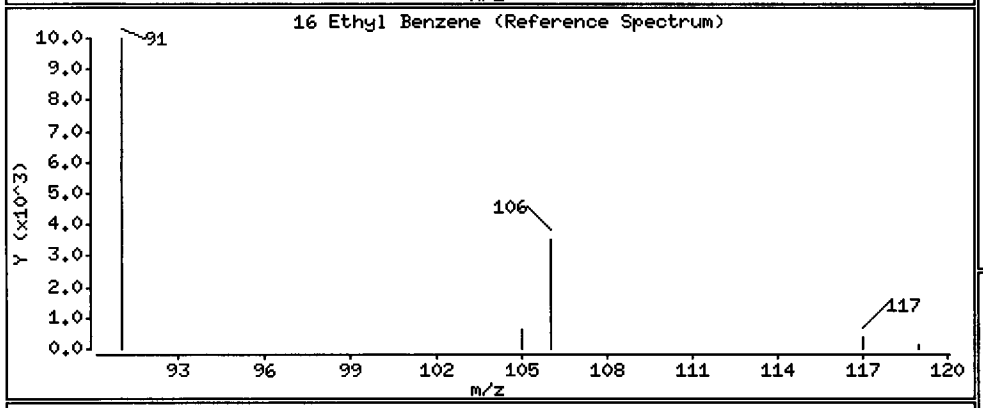
Concentration: 19.885 ug/L

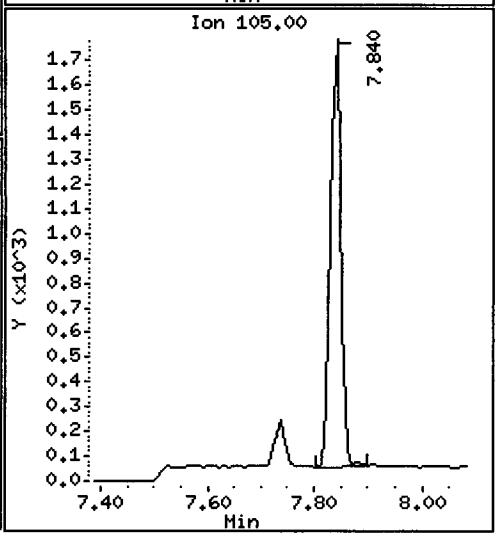


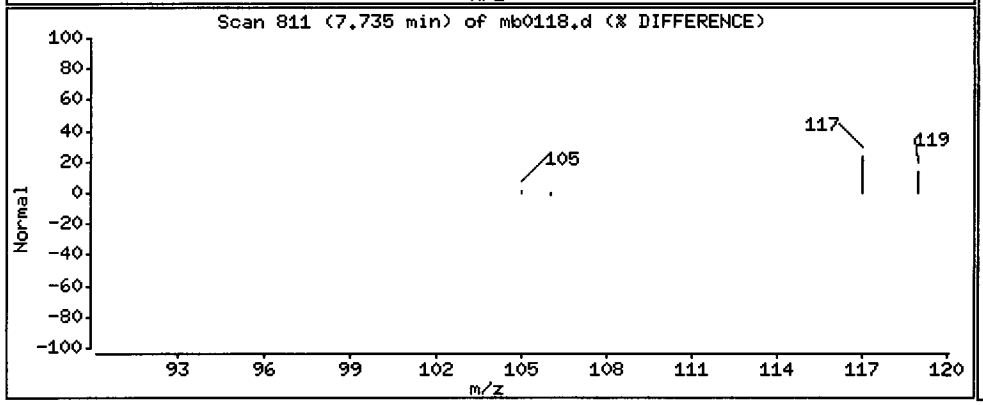












Data File: /chem1/nt9.i/18JAN13a.b/mb0118.d

Date : 18-JAN-2013 18:51

Client ID: MB0118

Instrument: nt9.i

Sample Info: MB0118,10,5,1,

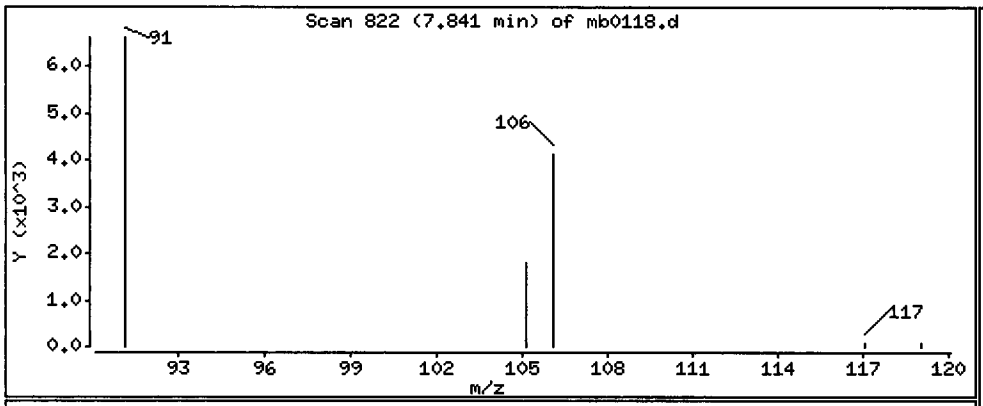
Operator: PC

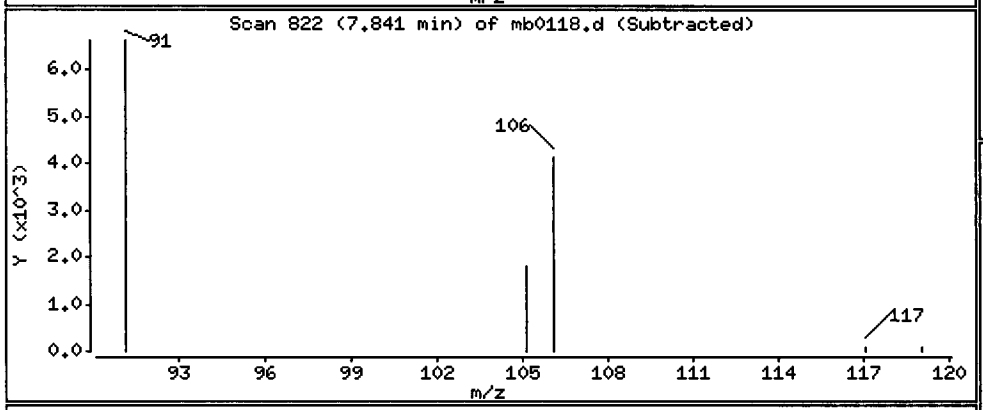
Column phase: RTXVMS

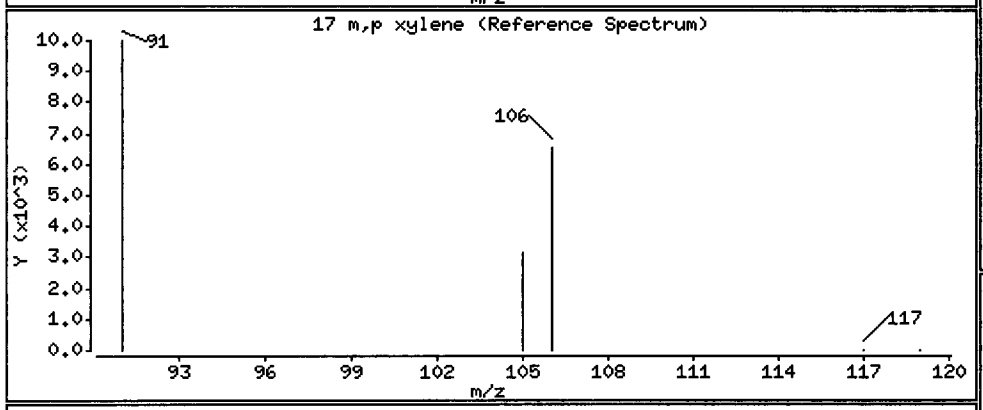
Column diameter: 0.18

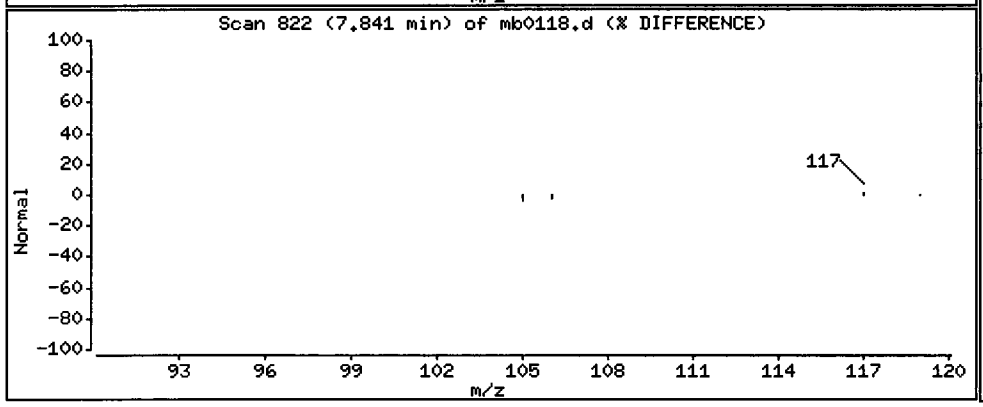
17 m,p xylene

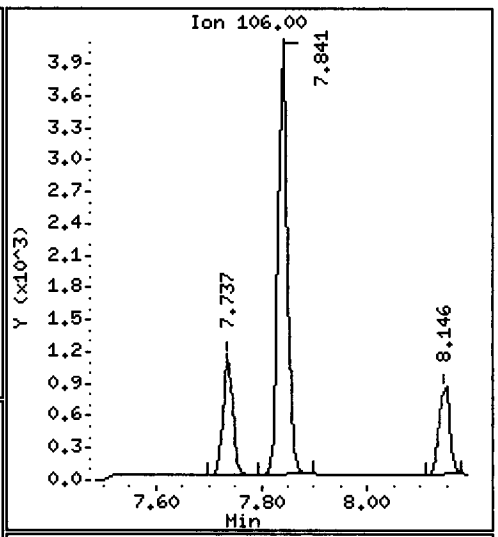
Concentration: 56.097 ug/L

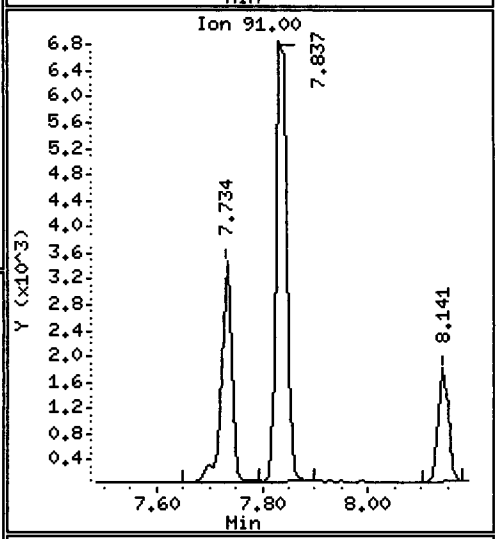


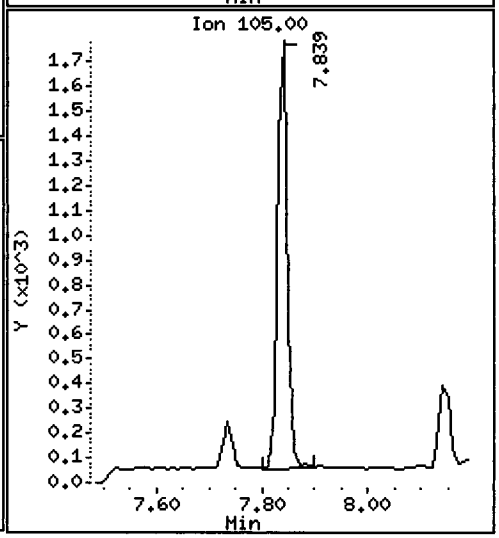












UZ97:00623

Data File: /chem1/nt9.i/18JAN13a.b/mb0118.d

Date : 18-JAN-2013 18:51

Client ID: MB0118

Instrument: nt9.i

Sample Info: MB0118,10,5,1,

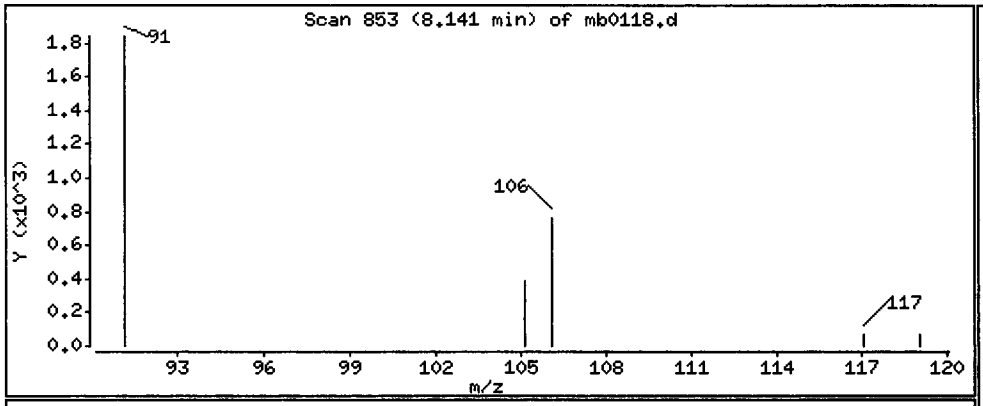
Operator: PC

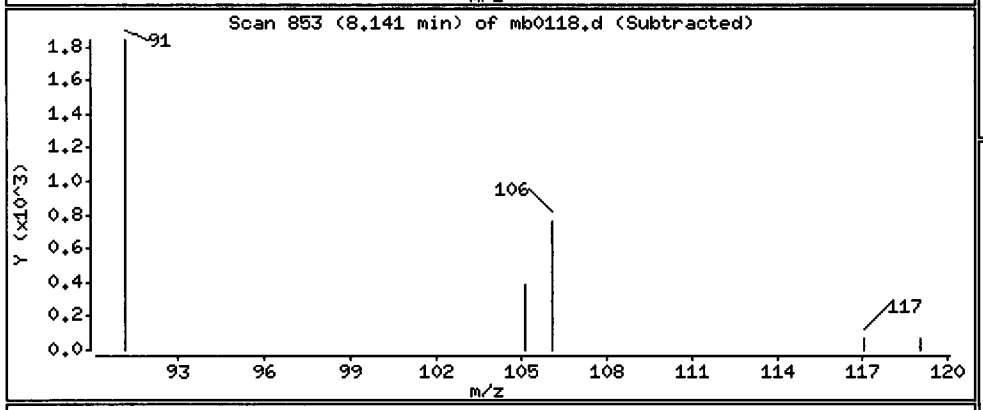
Column phase: RTXVMS

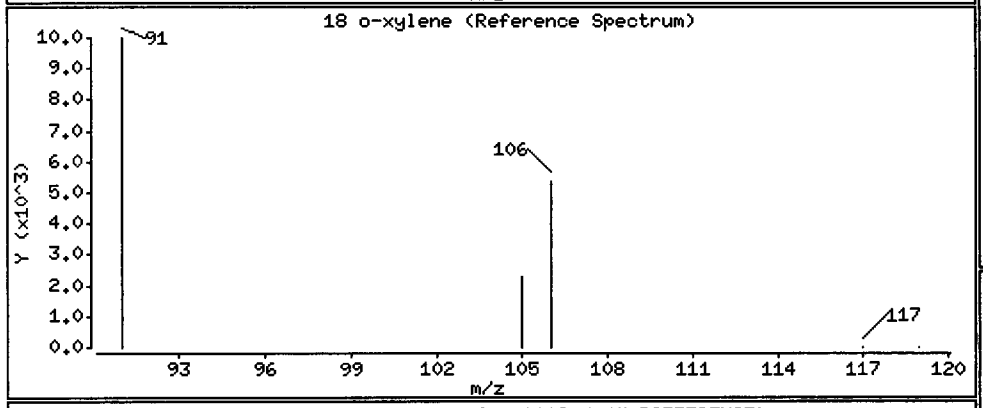
Column diameter: 0.18

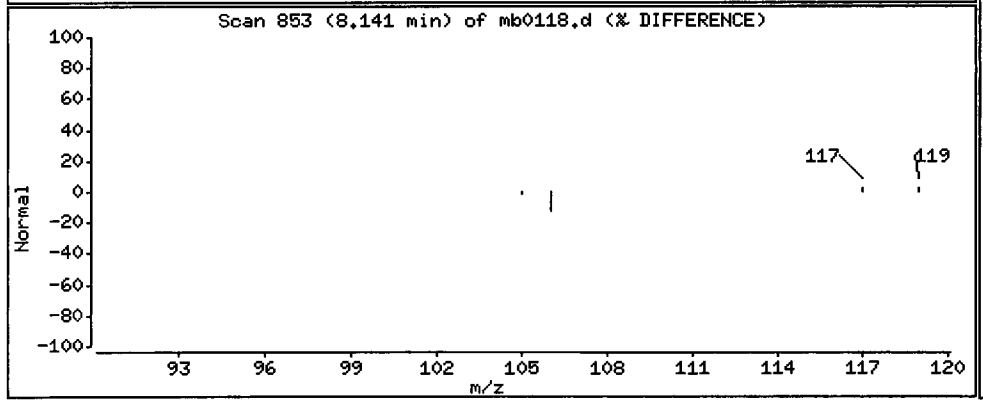
18 o-xylene

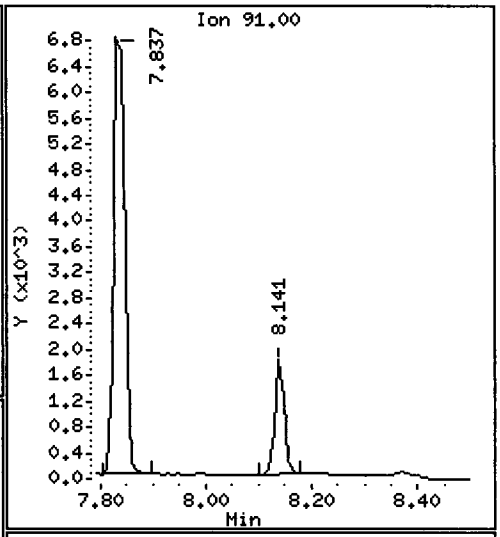
Concentration: 13.329 ug/L

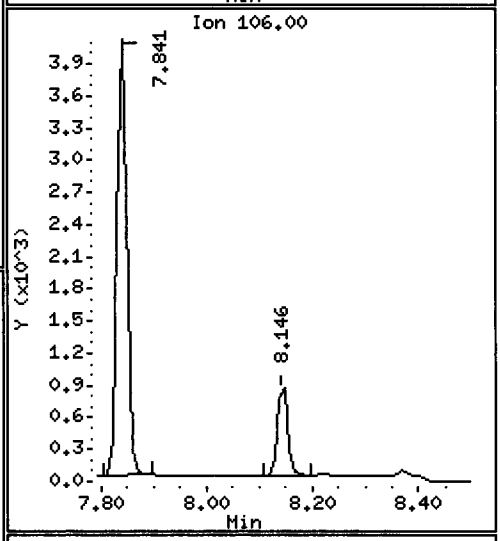


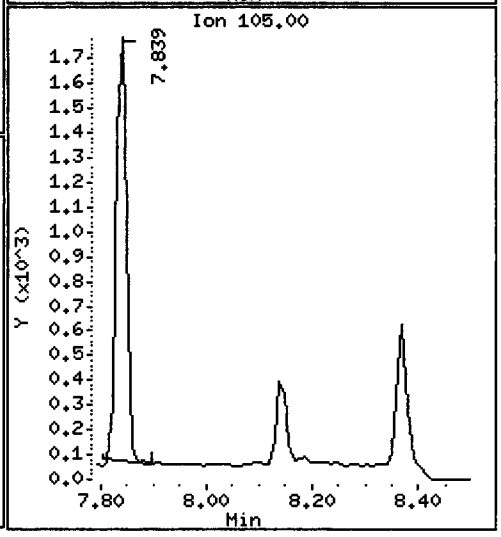












CO-ELUTION SUMMARY FOR FILE - mb0118.d

Lab ID: MB0118, Method: sim011713.m, Instrument: nt9.i, Date: 18-JAN-2013

RT	CO-ELUTION COMPOUNDS

PC 1/24/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/18JAN13a.b/vz97a2.d
Lab Smp Id: VZ97A Client Smp ID: CSIA-20130107-001B
Inj Date : 18-JAN-2013 19:15
Operator : PC Inst ID: nt9.i
Smp Info : VZ97A,10,20.50,1,
Misc Info : 13-1082
Comment :
Method : /chem1/nt9.i/18JAN13a.b/sim011713.m
Meth Date : 21-Jan-2013 16:16 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: btex.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	100.00000	Sample Amount (mg)
M	0.00000	Moisture (%)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	CONCENTRATIONS FINAL (ug/Kg)
	6 Benzene	78	Compound Not Detected.					
*	7 Pentafluorobenzene	168	5.267	5.268	(1.000)	114732	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.288	5.286	(1.004)	52015	981.533	98.153
*	11 1,4-Difluorobenzene	114	5.644	5.642	(1.000)	188451	1000.00	
$	12 d8-Toluene	98	6.619	6.618	(1.173)	202513	1028.92	102.89
	13 Toluene	91	6.651	6.651	(0.863)	10503	43.8021	4.380
*	15 d5 -Chlorobenzene	117	7.706	7.706	(1.000)	198893	1000.00	
	16 Ethyl Benzene	91	7.839	7.734	(1.017)	2246	~~9.54428~~	0.9544
	17 m,p xylene	106	7.841	7.840	(1.017)	1168	13.2079	1.321
	18 o-xylene	91	7.837	8.140	(1.017)	2161	12.9718	1.297
$	19 4-Bromofluorobenzene	174	8.575	8.572	(1.113)	67910	975.300	97.530

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: vz97a2.d
Lab Smp Id: VZ97A
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-1082

Calibration Date: 18-JAN-2013
Calibration Time: 17:40
Client Smp ID: CSIA-20130107-001B
Level: MED
Sample Type: Soil

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	114732	0.11
11 1,4-Difluorobenze	202370	101185	404740	188451	-6.88
15 d5 -Chlorobenzene	226394	113197	452788	198893	-12.15

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	-0.02
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	0.03
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	0.01

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA
Client SDG: VZ97
Sample Matrix: SOLID
Fraction: VOA
Lab Smp Id: VZ97A
Client Smp ID: CSIA-20130107-001B
Level: MED
Operator: PC
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: special.spk
Quant Type: ISTD
Sublist File: btex.sub
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-1082

SURROGATE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 8 d4-1,2-Dichloroeth	100.00	98.153	98.15	75-125
$ 12 d8-Toluene	100.00	102.89	102.89	75-125
$ 19 4-Bromofluorobenze	100.00	97.530	97.53	75-125

Data File: /chem1/nt9.i/18JAN13a.b/vz97a2.d

Date : 18-JAN-2013 19:15

Client ID: CSIA-20130107-001B

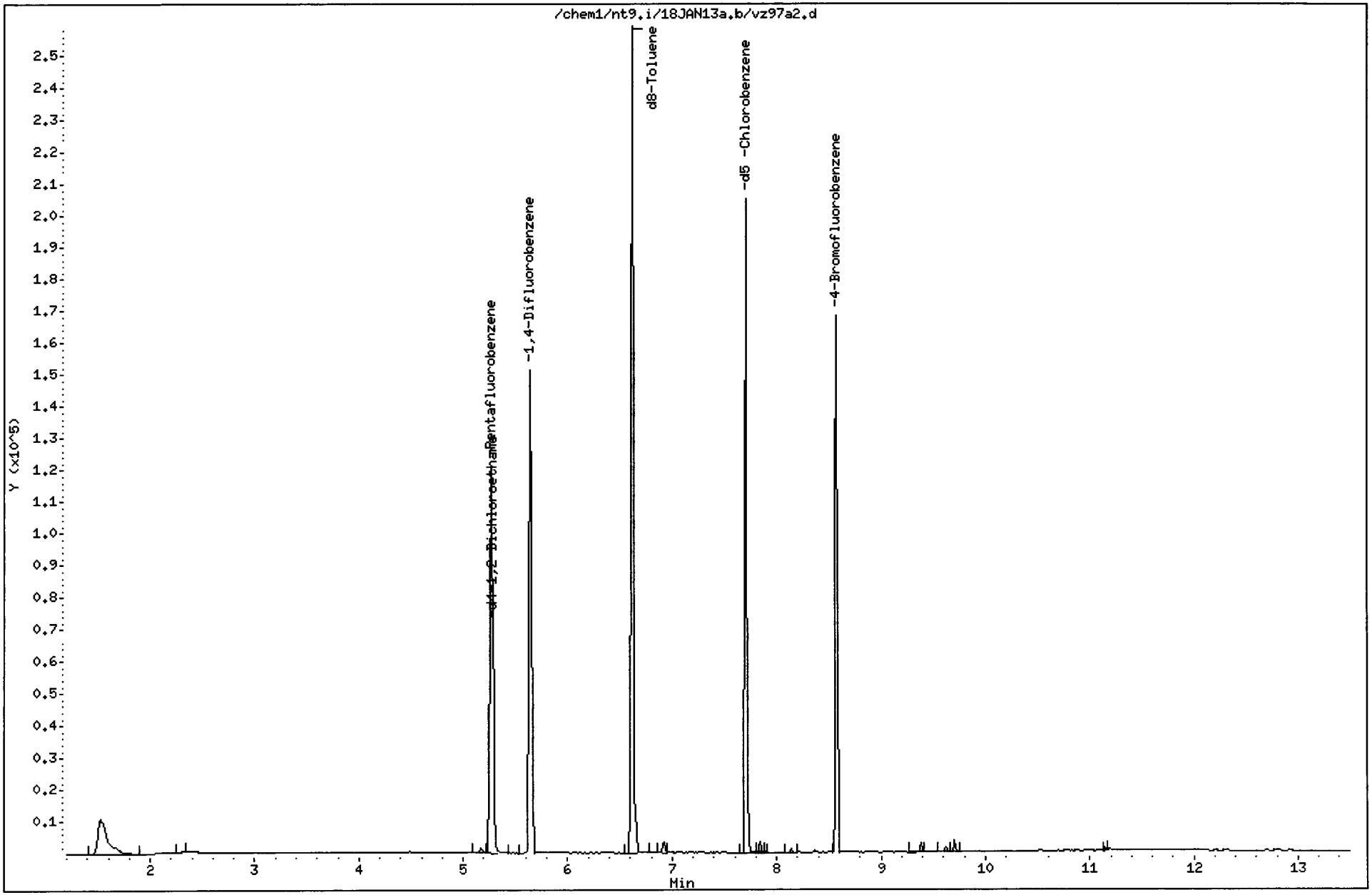
Sample Info: VZ97A,10,20,50,1,

Column phase: RTXVMS

Instrument: nt9.i

Operator: PC

Column diameter: 0.18



Data File: /chem1/nt9.i/18JAN13a.b/vz97a2.d

Date : 18-JAN-2013 19:15

Client ID: CSIA-20130107-001B

Instrument: nt9.i

Sample Info: VZ97A,10,20,50,1,

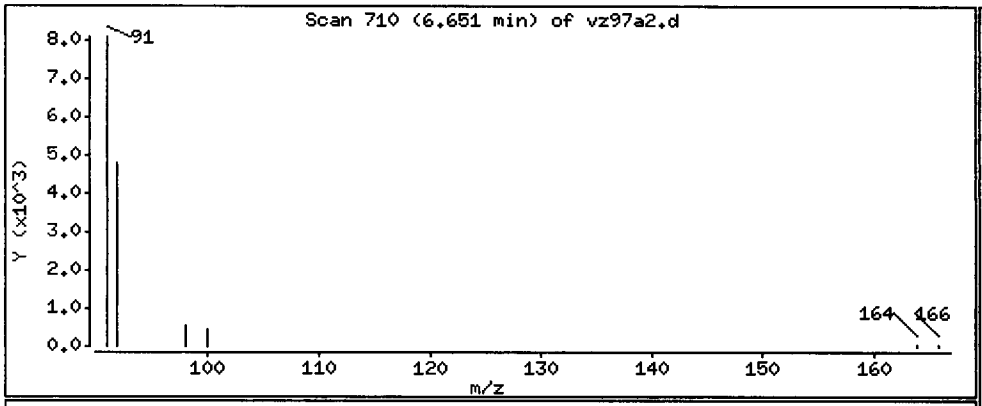
Operator: PC

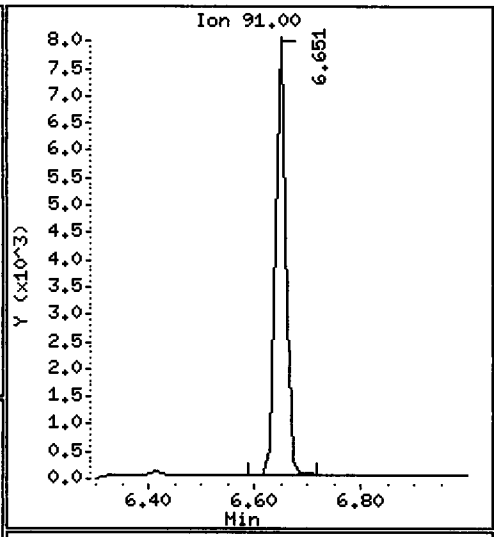
Column phase: RTXVMS

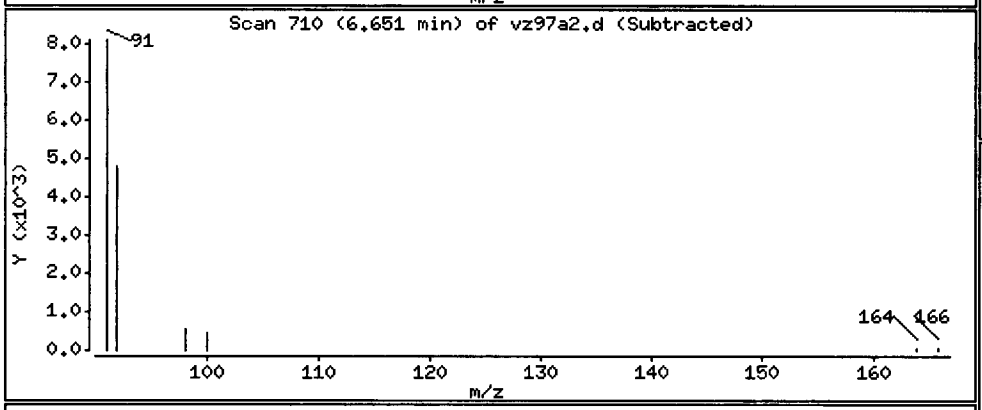
Column diameter: 0.18

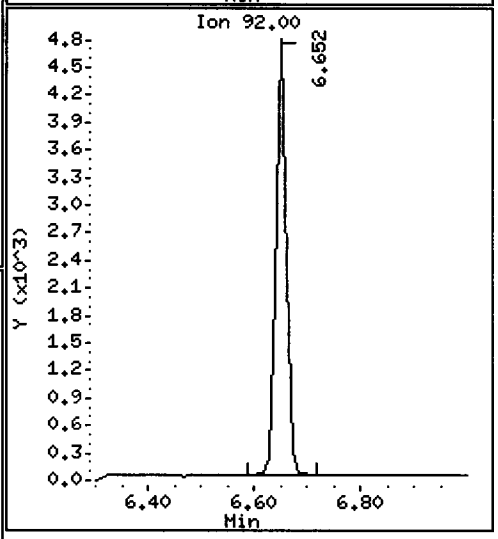
13 Toluene

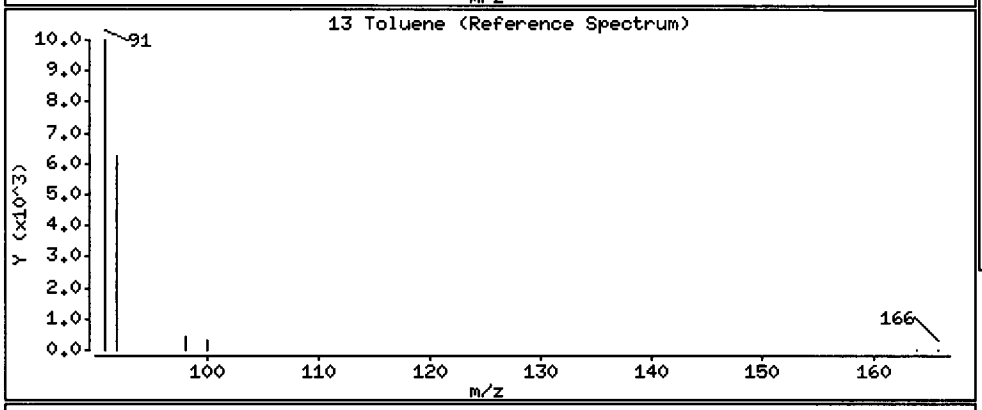
Concentration: 4.380 ug/Kg

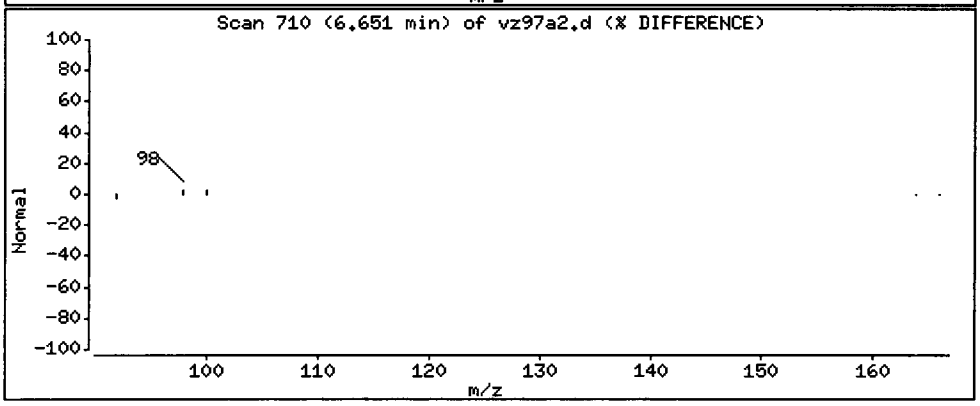












Data File: /chem1/nt9.i/18JAN13a.b/vz97a2.d

Date : 18-JAN-2013 19:15

Client ID: CSIA-20130107-001B

Instrument: nt9.i

Sample Info: VZ97A,10,20.50,1,

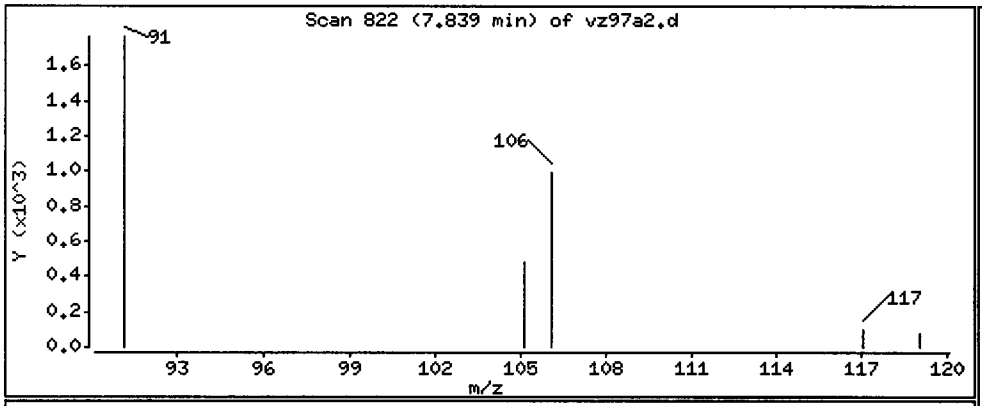
Operator: PC

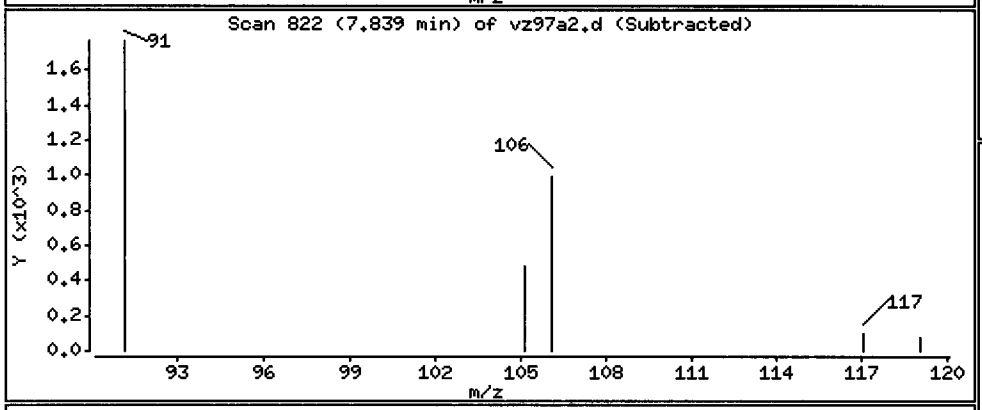
Column phase: RTXVMS

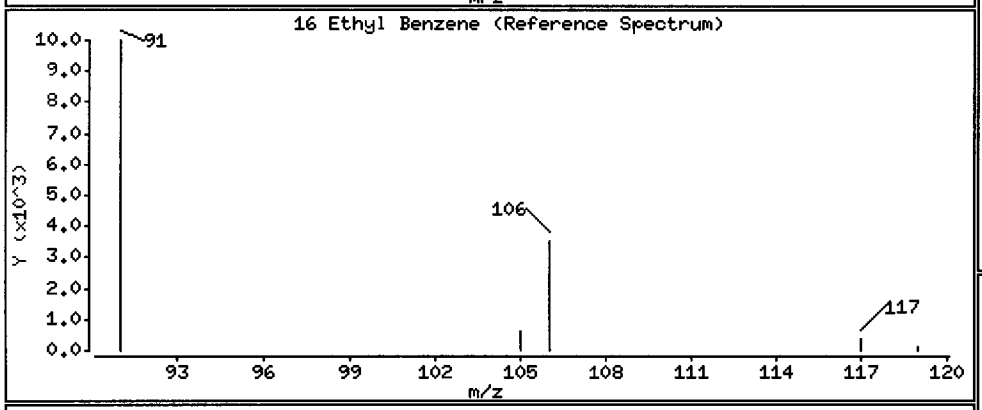
Column diameter: 0.18

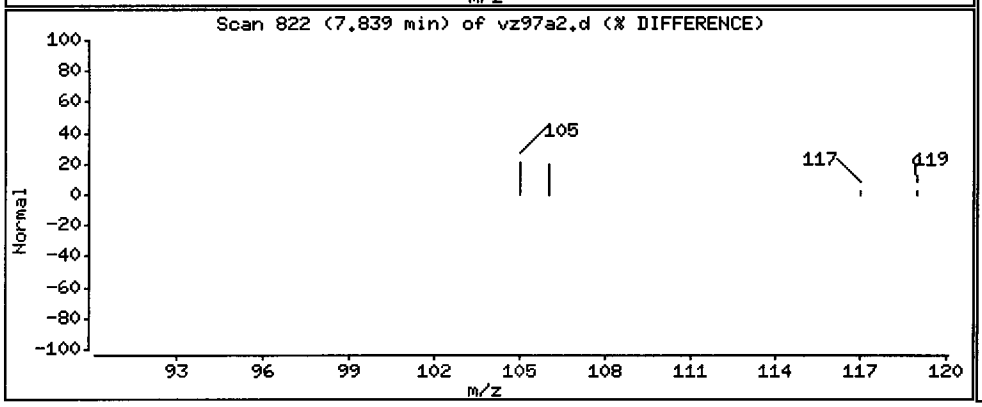
16 Ethyl Benzene

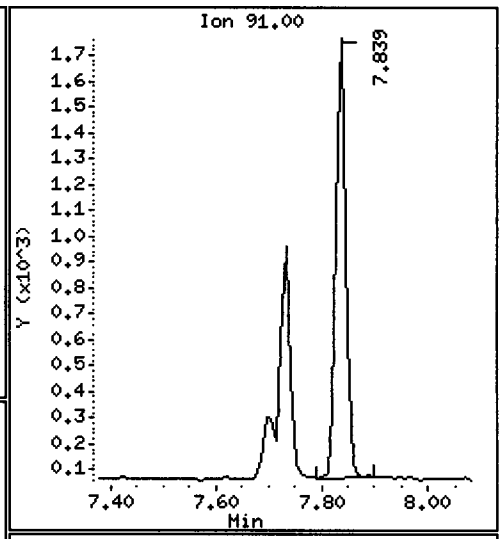
Concentration: 0.9544 ug/Kg

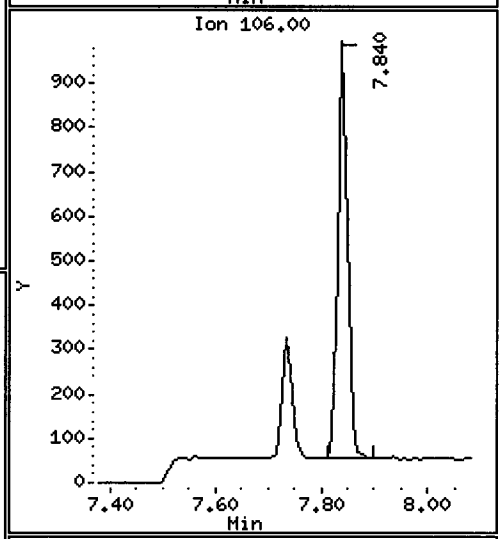


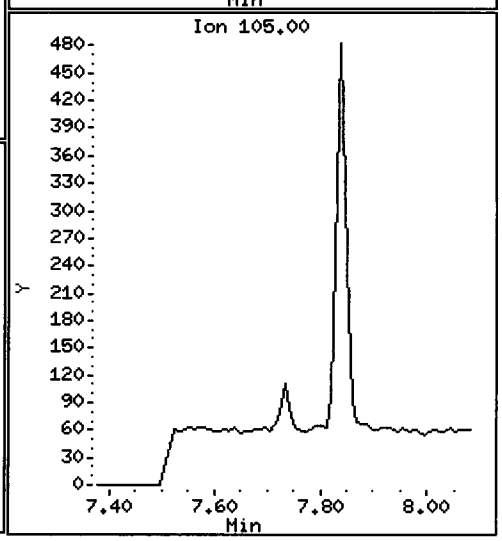












Data File: /chem1/nt9.i/18JAN13a.b/vz97a2.d

Date : 18-JAN-2013 19:15

Client ID: CSIA-20130107-001B

Instrument: nt9.i

Sample Info: VZ97A,10,20.50,1,

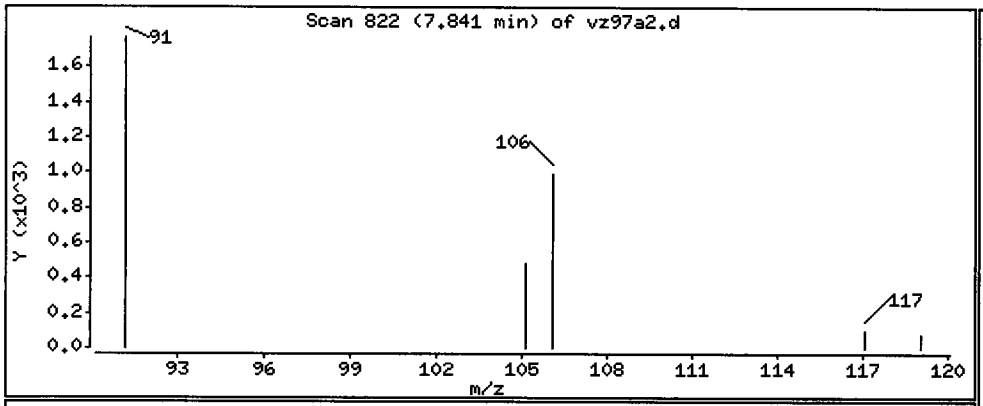
Operator: PC

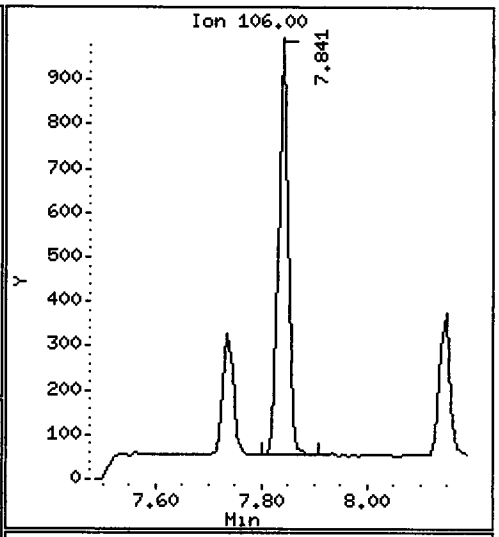
Column phase: RTXVMS

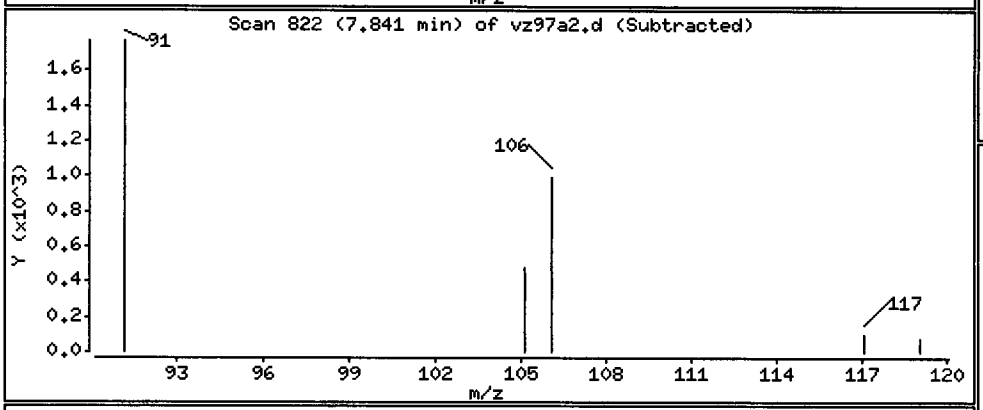
Column diameter: 0.18

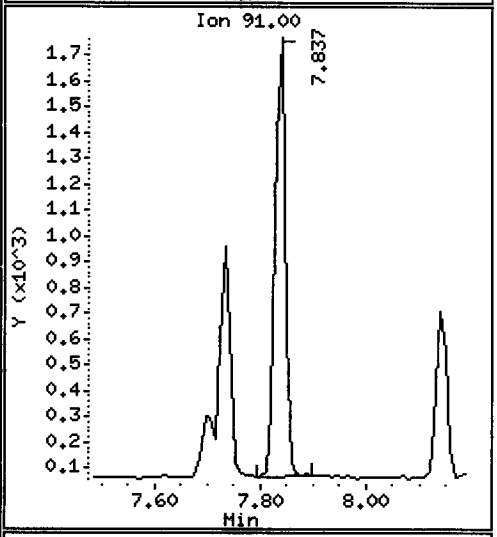
17 m,p xylene

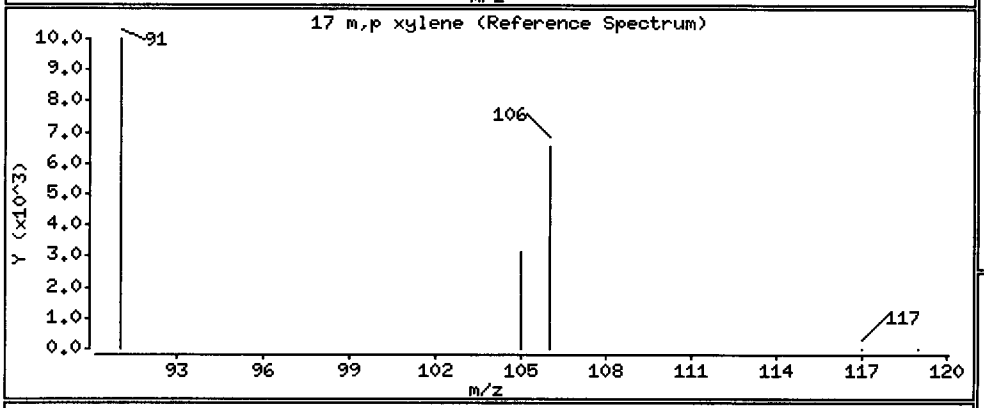
Concentration: 1.321 ug/Kg

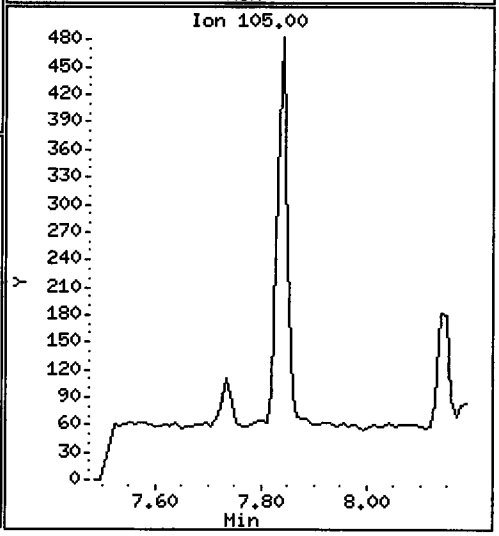


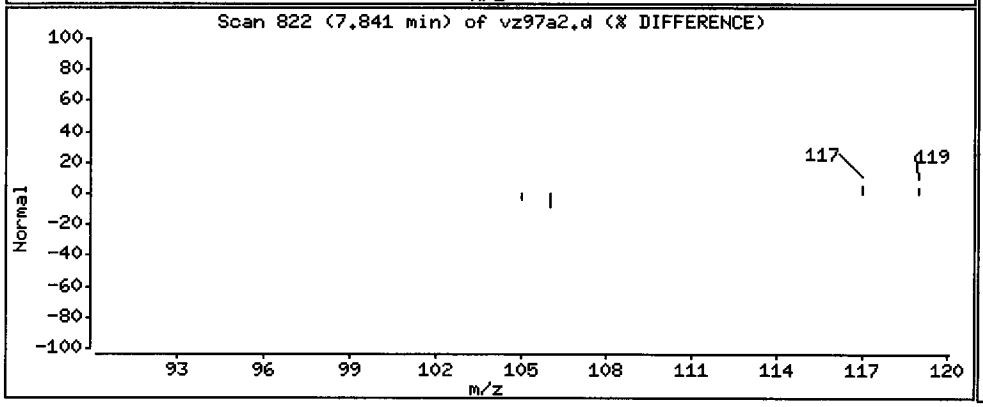












Data File: /chem1/nt9.i/18JAN13a.b/vz97a2.d

Date : 18-JAN-2013 19:15

Client ID: CSIA-20130107-001B

Instrument: nt9.i

Sample Info: VZ97A,10,20.50,1,

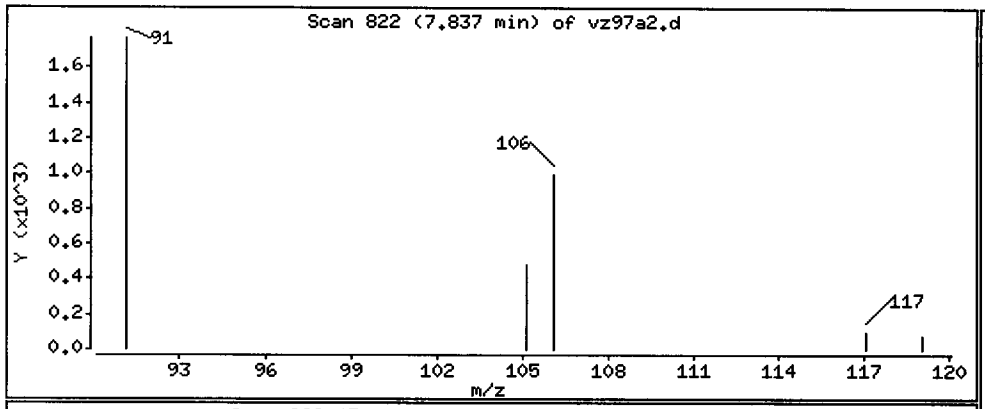
Operator: PC

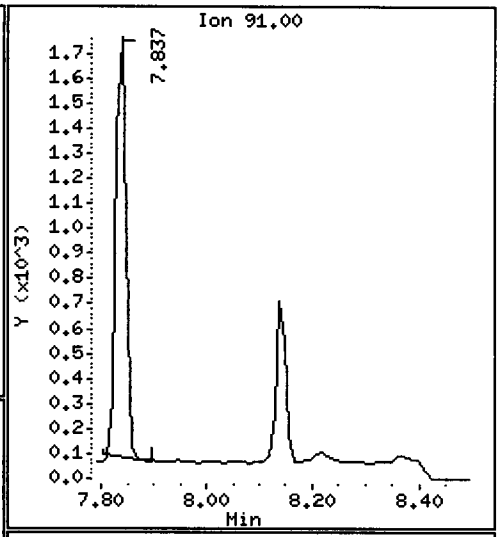
Column phase: RTXVMS

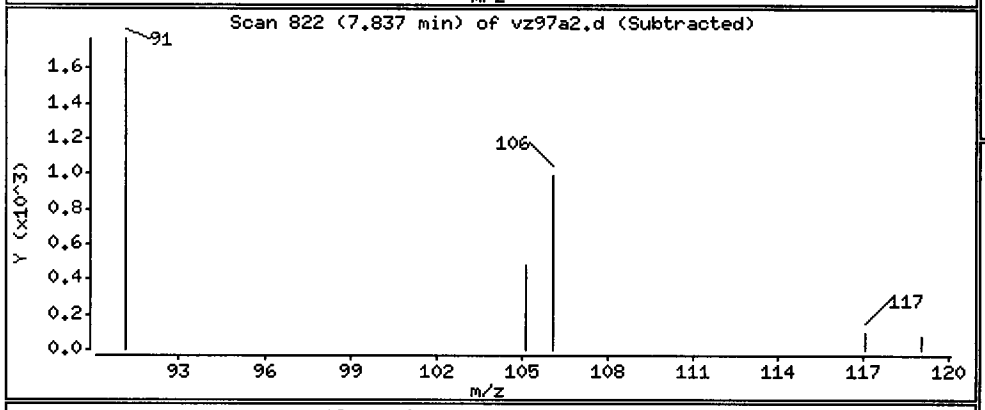
Column diameter: 0.18

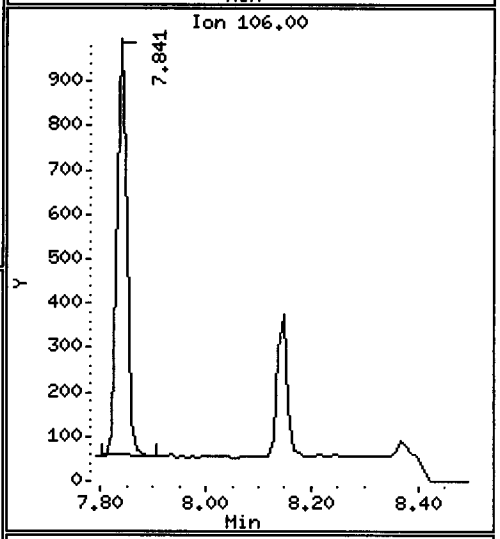
18 o-xylene

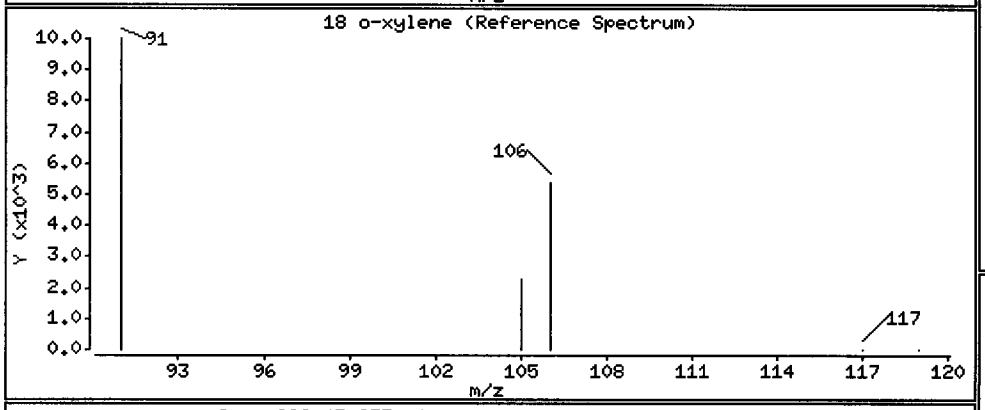
Concentration: 1.297 ug/Kg

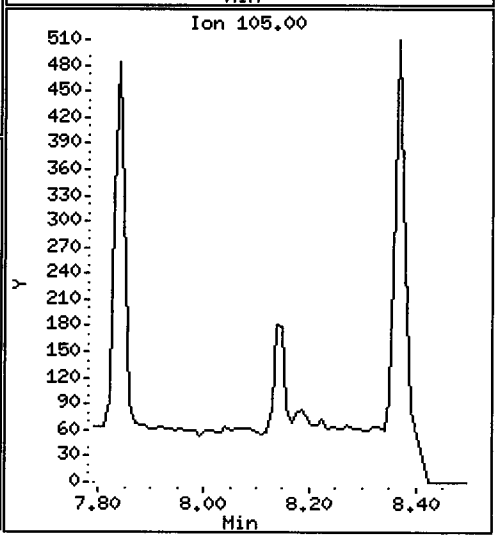


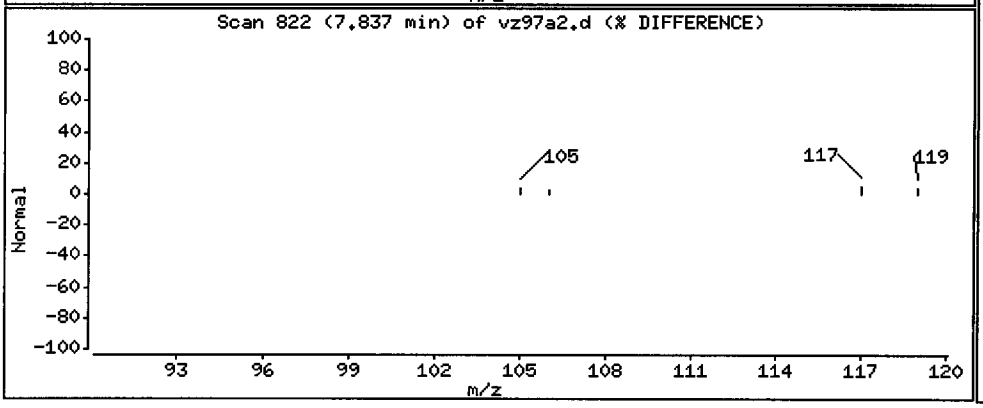












CO-ELUTION SUMMARY FOR FILE - vz97a2.d

Lab ID: VZ97A, Method: sim011713.m, Instrument: nt9.i, Date: 18-JAN-2013

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/18JAN13a.b/vz97b2.d
Lab Smp Id: VZ97B Client Smp ID: CSIA-20130107-002B
Inj Date : 18-JAN-2013 19:39
Operator : PC Inst ID: nt9.i
Smp Info : VZ97B,10,36.478,1,
Misc Info : 13-1083
Comment :
Method : /chem1/nt9.i/18JAN13a.b/sim011713.m
Meth Date : 21-Jan-2013 16:16 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: btex.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	100.00000	Sample Amount (mg)
M	0.00000	Moisture (%)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	CONCENTRATIONS FINAL (ug/Kg)
	6 Benzene	78	Compound Not Detected.					
*	7 Pentafluorobenzene	168	5.267	5.268	(1.000)	106958	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.286	5.286	(1.004)	49475	1001.46	100.15
*	11 1,4-Difluorobenzene	114	5.642	5.642	(1.000)	177184	1000.00	
$	12 d8-Toluene	98	6.619	6.618	(1.173)	189284	1022.86	102.29
	13 Toluene	91	6.651	6.651	(0.863)	3138	14.1179	1.412
*	15 d5 -Chlorobenzene	117	7.706	7.706	(1.000)	184397	1000.00	
	16 Ethyl Benzene	91	Compound Not Detected.					
	17 m,p xylene	106	Compound Not Detected.					
	18 o-xylene	91	Compound Not Detected.					
$	19 4-Bromofluorobenzene	174	8.574	8.572	(1.113)	60436	936.198	93.620

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: vz97b2.d
Lab Smp Id: VZ97B
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-1083

Calibration Date: 18-JAN-2013
Calibration Time: 17:40
Client Smp ID: CSIA-20130107-002B
Level: MED
Sample Type: Soil

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	106958	-6.68
11 1,4-Difluorobenze	202370	101185	404740	177184	-12.45
15 d5 -Chlorobenzene	226394	113197	452788	184397	-18.55

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	-0.02
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	0.00
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	0.00

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA
Client SDG: VZ97
Sample Matrix: SOLID
Fraction: VOA
Lab Smp Id: VZ97B
Client Smp ID: CSIA-20130107-002B
Level: MED
Operator: PC
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: special.spk
Quant Type: ISTD
Sublist File: btex.sub
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-1083

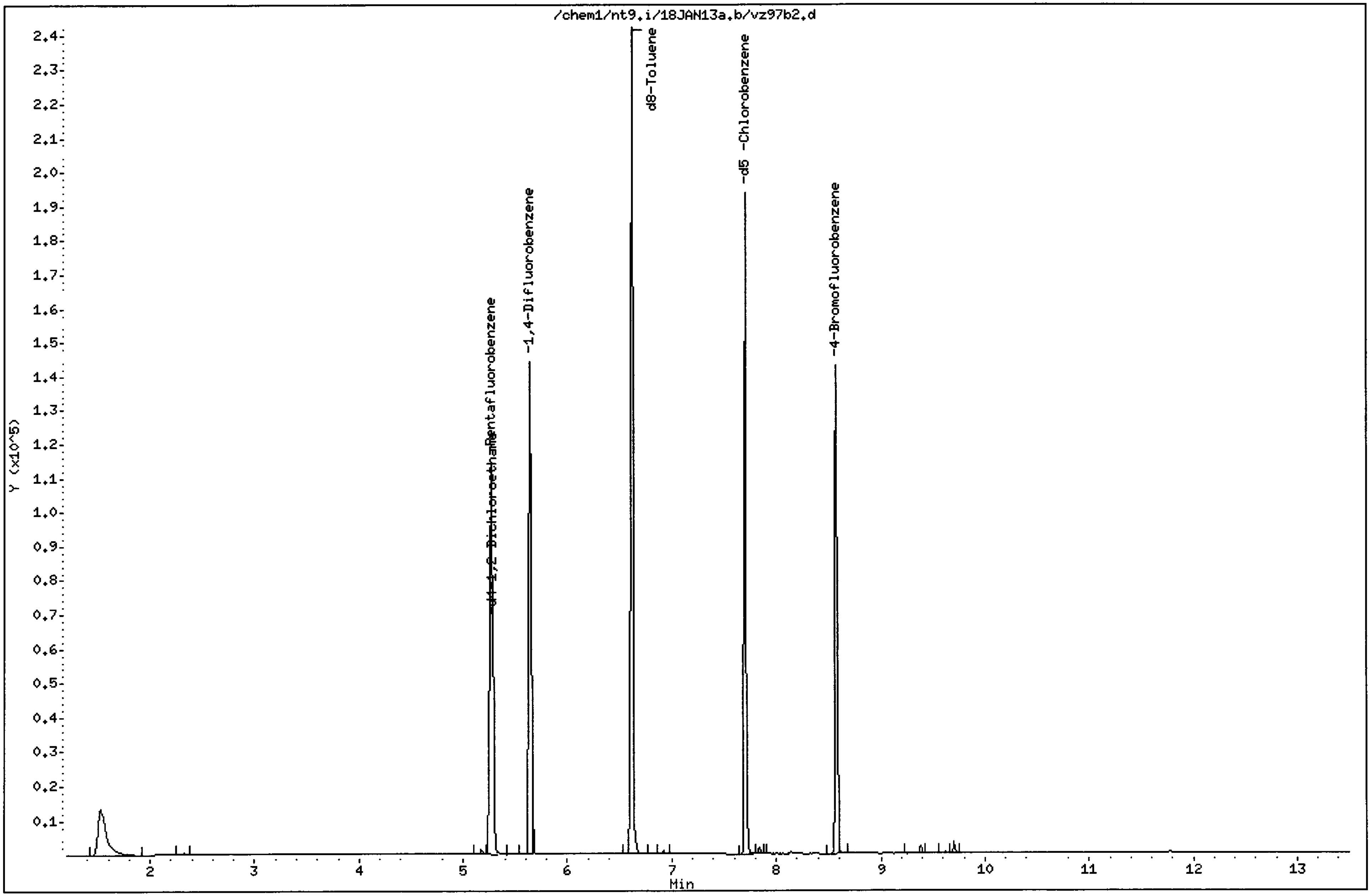
SURROGATE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 8 d4-1,2-Dichloroeth	100.00	100.15	100.15	75-125
$ 12 d8-Toluene	100.00	102.29	102.29	75-125
$ 19 4-Bromofluorobenze	100.00	93.620	93.62	75-125

Data File: /chem1/nt9.i/18JAN13a.b/vz97b2.d
Date : 18-JAN-2013 19:39
Client ID: CSIA-20130107-002B
Sample Info: VZ97B,10,36.478,1,

Column phase: RTXVMS

Instrument: nt9.i

Operator: PC
Column diameter: 0.18



Data File: /chem1/nt9.i/18JAN13a.b/vz97b2.d

Date : 18-JAN-2013 19:39

Client ID: CSIA-20130107-002B

Instrument: nt9.i

Sample Info: VZ97B,10,36.478,1,

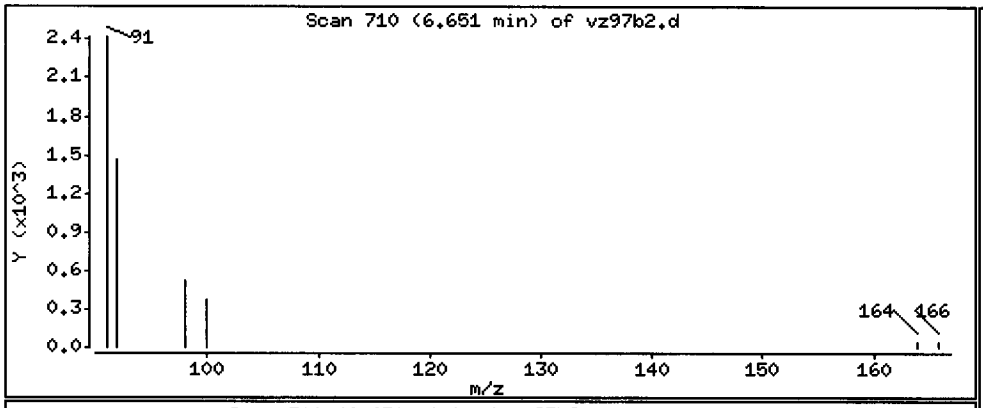
Operator: PC

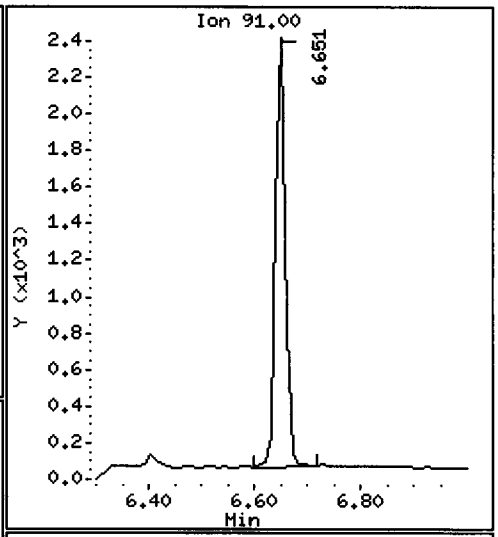
Column phase: RTXVMS

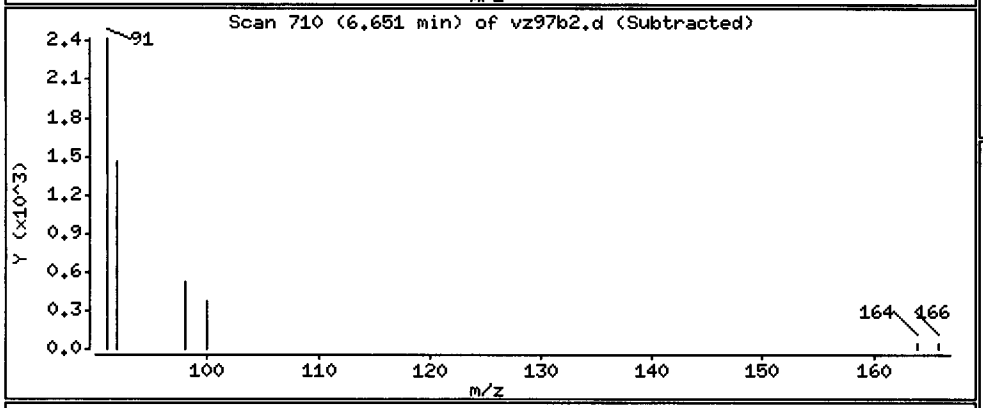
Column diameter: 0.18

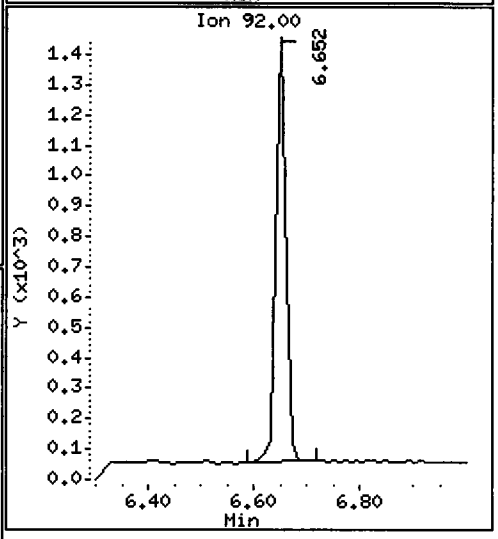
13 Toluene

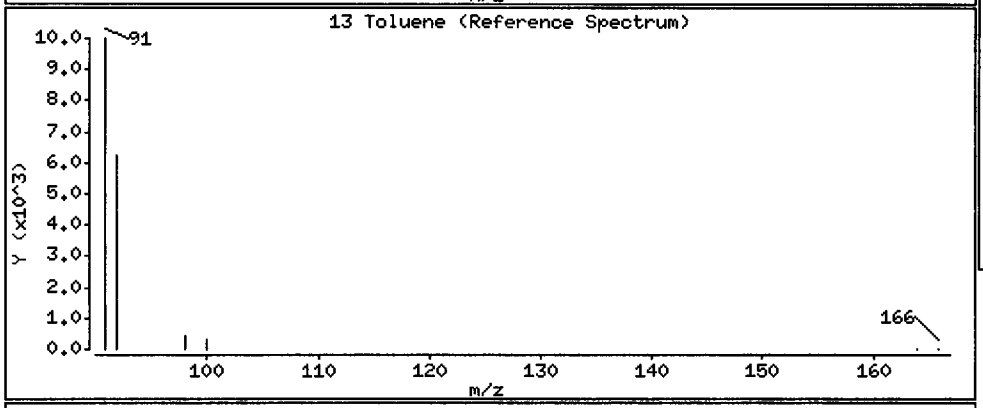
Concentration: 1.412 ug/Kg

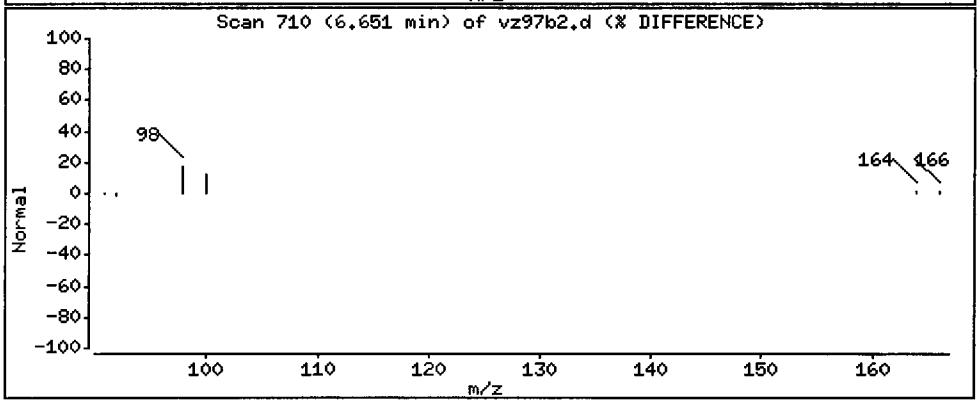












CO-ELUTION SUMMARY FOR FILE - vz97b2.d

Lab ID: VZ97B, Method: sim011713.m, Instrument: nt9.i, Date: 18-JAN-2013

RT	CO-ELUTION COMPOUNDS

PC 1/21/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/18JAN13a.b/vz97c2.d
Lab Smp Id: VZ97C Client Smp ID: CSIA-20130107-003S+
Inj Date : 18-JAN-2013 20:50
Operator : PC Inst ID: nt9.i
Smp Info : VZ97C,10,22.818,1,
Misc Info : 13-1084
Comment :
Method : /chem1/nt9.i/18JAN13a.b/sim011713.m
Meth Date : 21-Jan-2013 16:16 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: btex.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	100.00000	Sample Amount (mg)
M	0.00000	Moisture (%)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	FINAL (ug/Kg)
	6 Benzene	78	Compound Not Detected.					
*	7 Pentafluorobenzene	168	5.267	5.268	(1.000)	106856	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.286	5.286	(1.004)	50401	1021.16	102.12
*	11 1,4-Difluorobenzene	114	5.643	5.642	(1.000)	178340	1000.00	
$	12 d8-Toluene	98	6.618	6.618	(1.173)	191833	1029.91	102.99
	13 Toluene	91	6.651	6.651	(0.863)	6645	29.1750	2.917
*	15 d5 -Chlorobenzene	117	7.706	7.706	(1.000)	188920	1000.00	
	16 Ethyl Benzene	91	7.835	7.734	(1.017)	1917	8.57024	0.8578
	17 m,p xylene	106	7.840	7.840	(1.017)	995	11.8497	1.185
	18 o-xylene	91	7.836	8.140	(1.017)	1884	11.9085	1.191(Q)
$	19 4-Bromofluorobenzene	174	8.575	8.572	(1.113)	62805	949.601	94.960

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: vz97c2.d
Lab Smp Id: VZ97C
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-1084

Calibration Date: 18-JAN-2013
Calibration Time: 17:40
Client Smp ID: CSIA-20130107-003S+
Level: MED
Sample Type: Soil

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	106856	-6.77
11 1,4-Difluorobenze	202370	101185	404740	178340	-11.87
15 d5 -Chlorobenzene	226394	113197	452788	188920	-16.55

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	-0.03
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	0.01
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	0.01

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA
Client SDG: VZ97
Sample Matrix: SOLID
Fraction: VOA
Lab Smp Id: VZ97C
Client Smp ID: CSIA-20130107-003S+
Level: MED
Operator: PC
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: special.spk
Quant Type: ISTD
Sublist File: btex.sub
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-1084

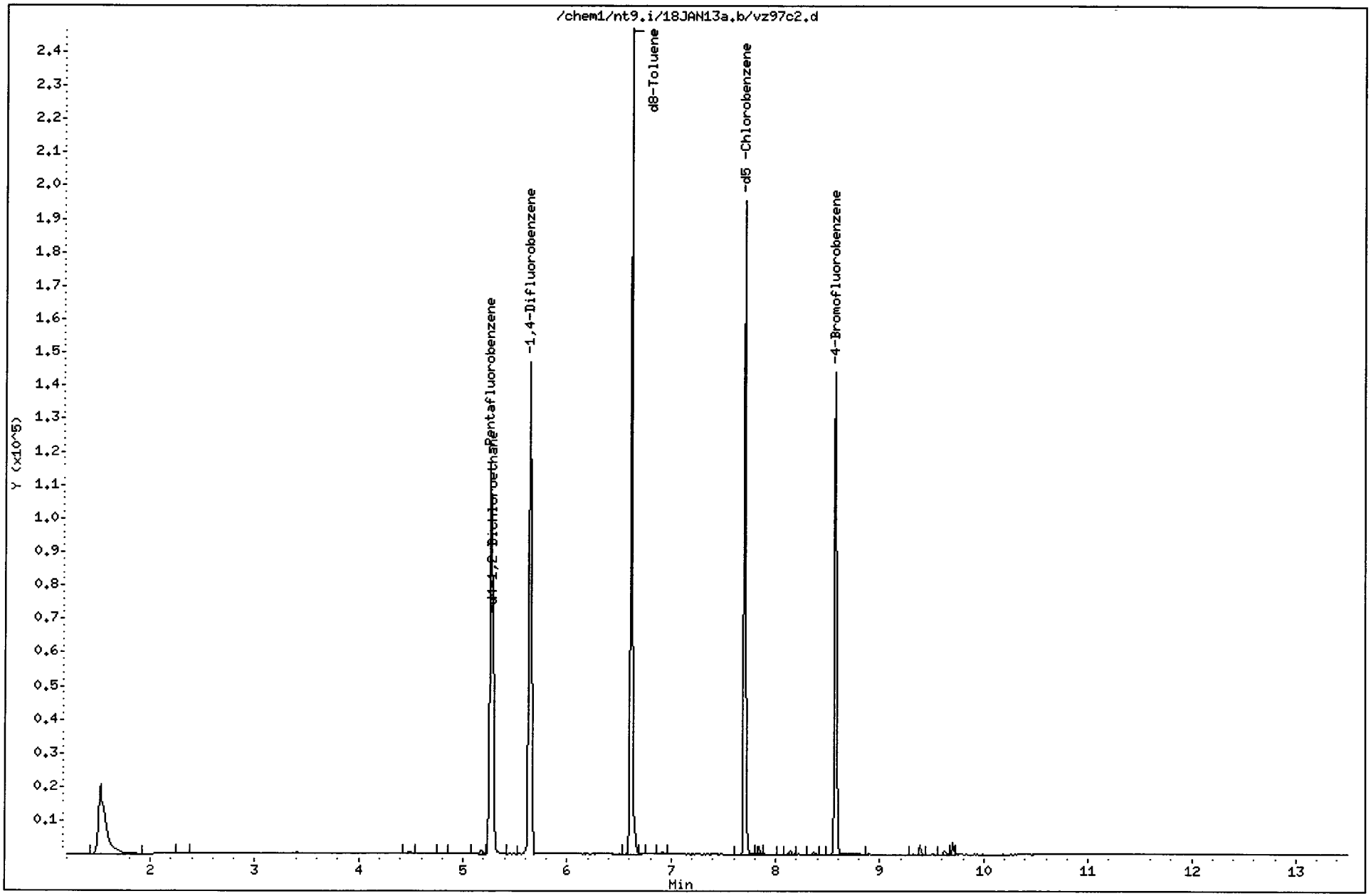
SURROGATE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 8 d4-1,2-Dichloroeth	100.00	102.12	102.12	75-125
$ 12 d8-Toluene	100.00	102.99	102.99	75-125
$ 19 4-Bromofluorobenze	100.00	94.960	94.96	75-125

Data File: /chem1/nt9.i/18JAN13a.b/vz97c2.d
Date : 18-JAN-2013 20:50
Client ID: CSIA-20130107-003S+
Sample Info: VZ97C,10,22.818,1,

Instrument: nt9.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS



VZ97.0005.15

Data File: /chem1/nt9.i/18JAN13a.b/vz97c2.d

Date : 18-JAN-2013 20:50

Client ID: CSIA-20130107-003S+

Instrument: nt9.i

Sample Info: VZ97C,10,22.818,1,

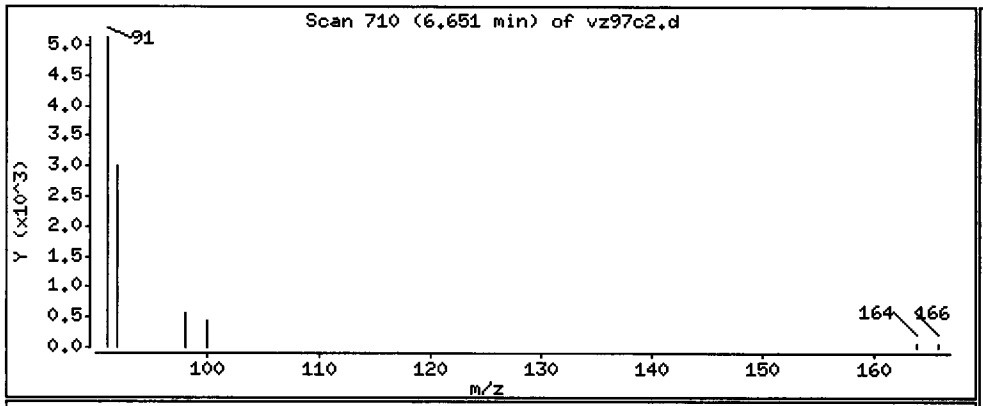
Operator: PC

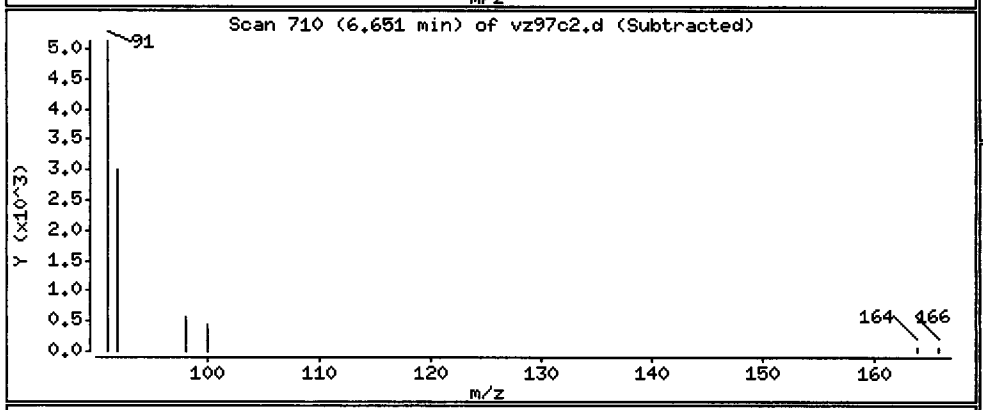
Column phase: RTXVMS

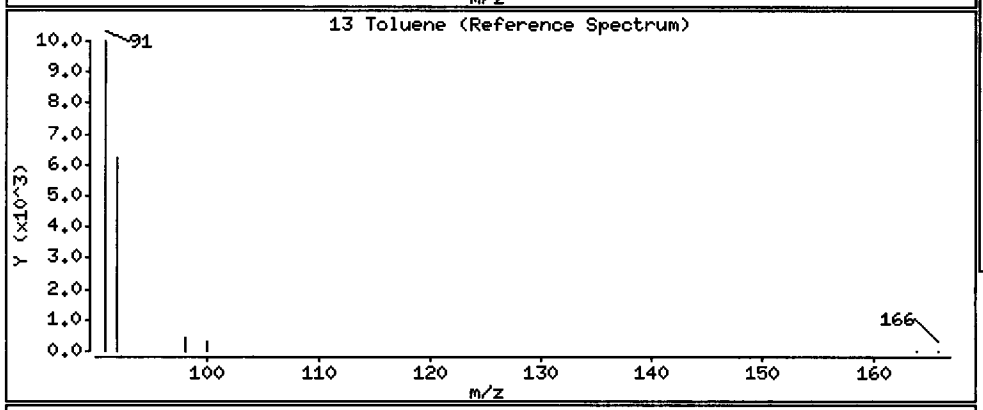
Column diameter: 0.18

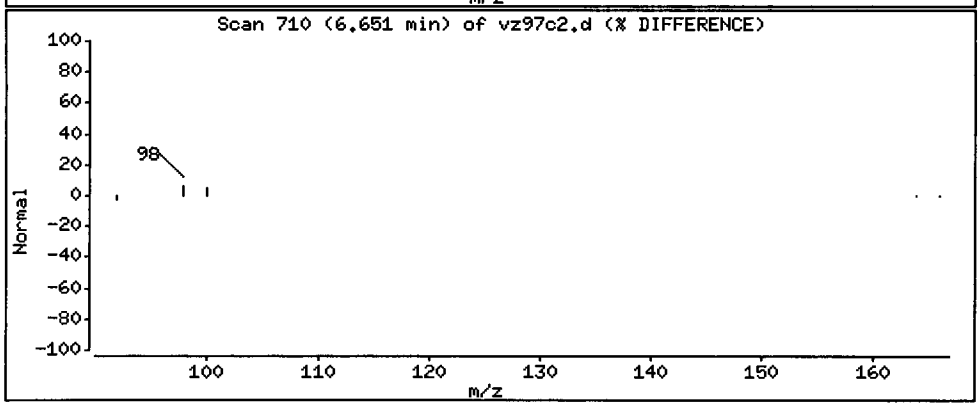
13 Toluene

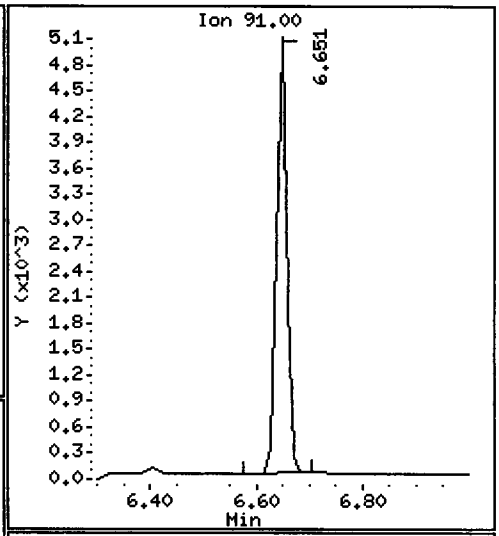
Concentration: 2.917 ug/Kg

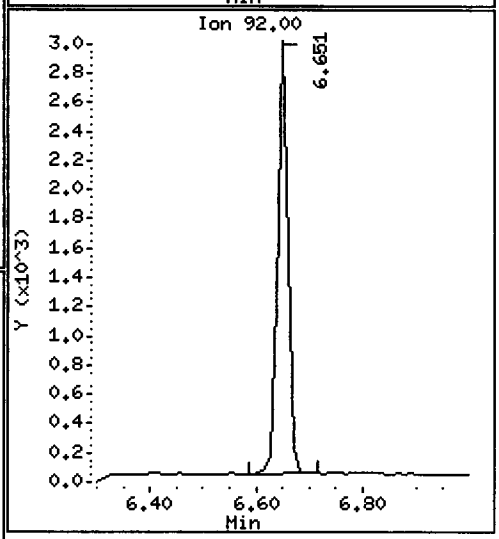












Data File: /chem1/nt9.i/18JAN13a.b/vz97c2.d

Date : 18-JAN-2013 20:50

Client ID: CSIA-20130107-003S+

Instrument: nt9.i

Sample Info: VZ97C,10,22.818,1,

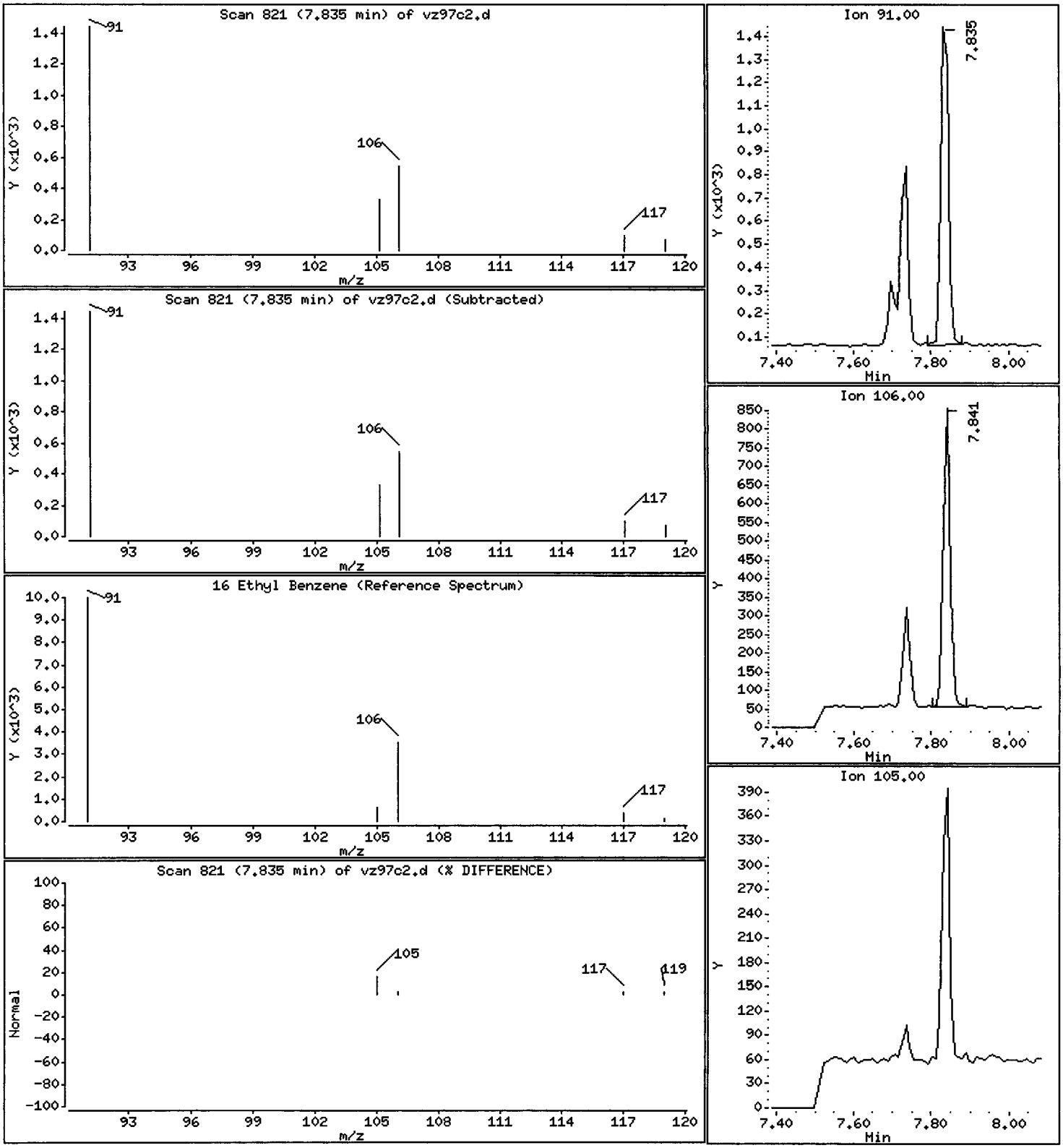
Operator: PC

Column phase: RTXVMS

Column diameter: 0.18

16 Ethyl Benzene

Concentration: 0.8578 ug/Kg



Data File: /chem1/nt9.i/18JAN13a.b/vz97c2.d

Date : 18-JAN-2013 20:50

Client ID: CSIA-20130107-003S+

Instrument: nt9.i

Sample Info: VZ97C,10,22.818,1,

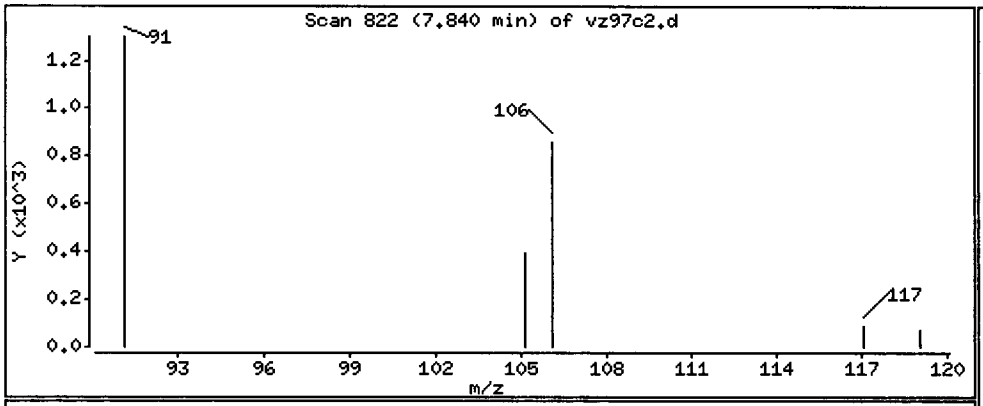
Operator: PC

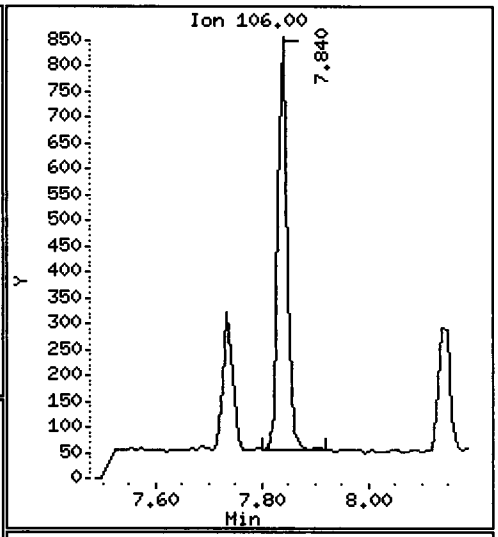
Column phase: RTXVMS

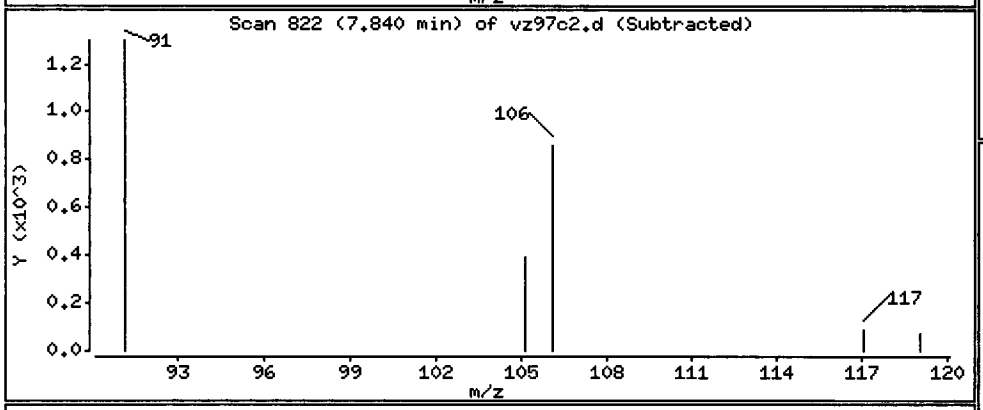
Column diameter: 0.18

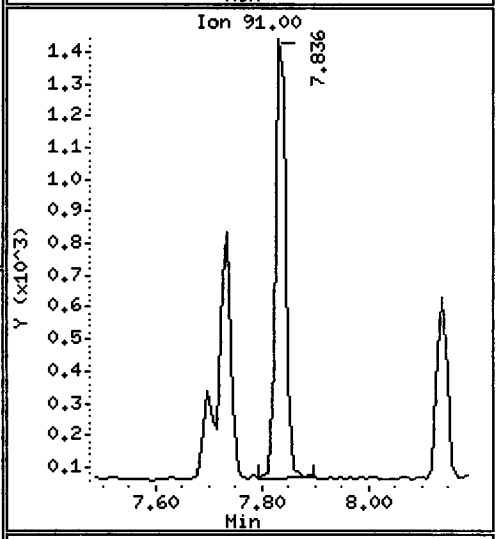
17 m,p xylene

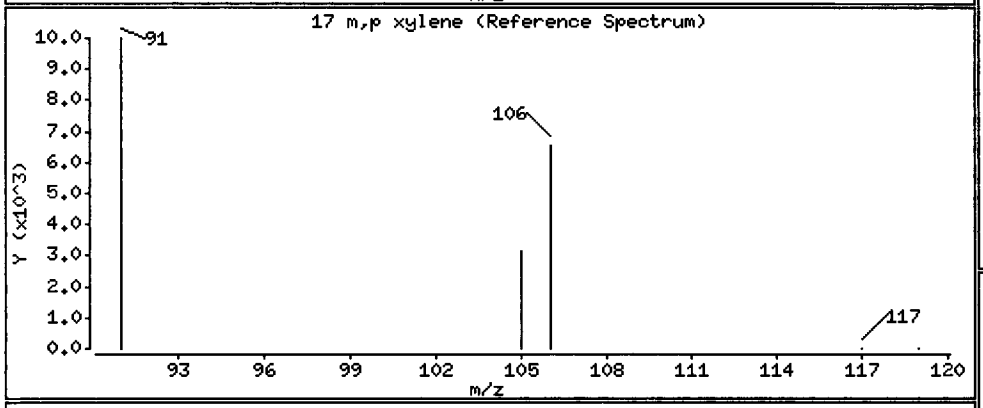
Concentration: 1.185 ug/Kg

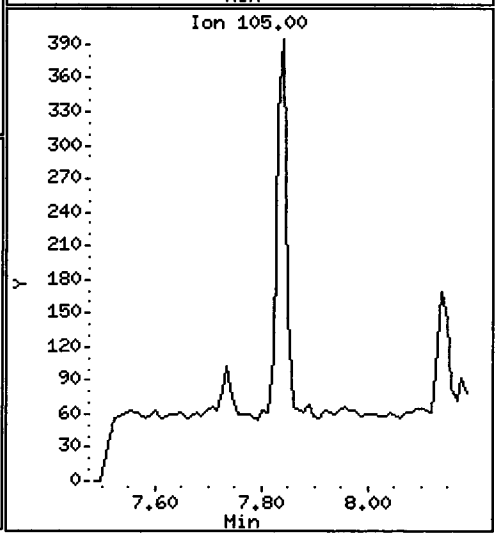


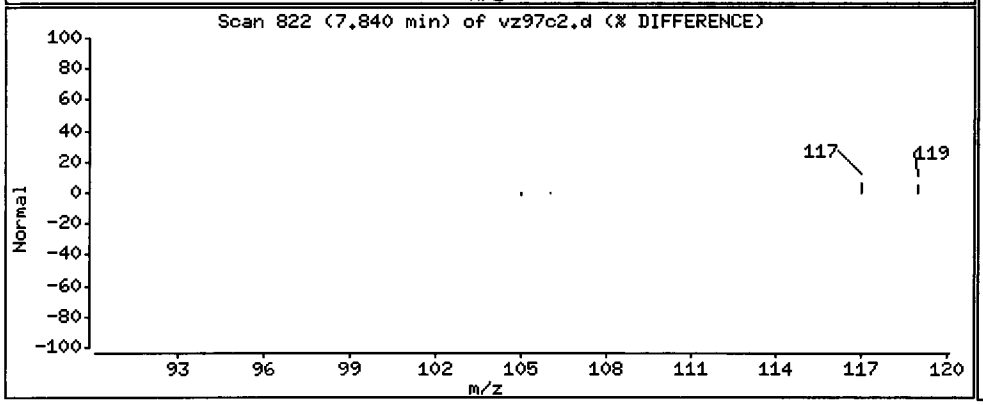












Data File: /chem1/nt9.i/18JAN13a.b/vz97c2.d

Date : 18-JAN-2013 20:50

Client ID: CSIA-20130107-003S+

Instrument: nt9.i

Sample Info: VZ97C,10,22.818,1,

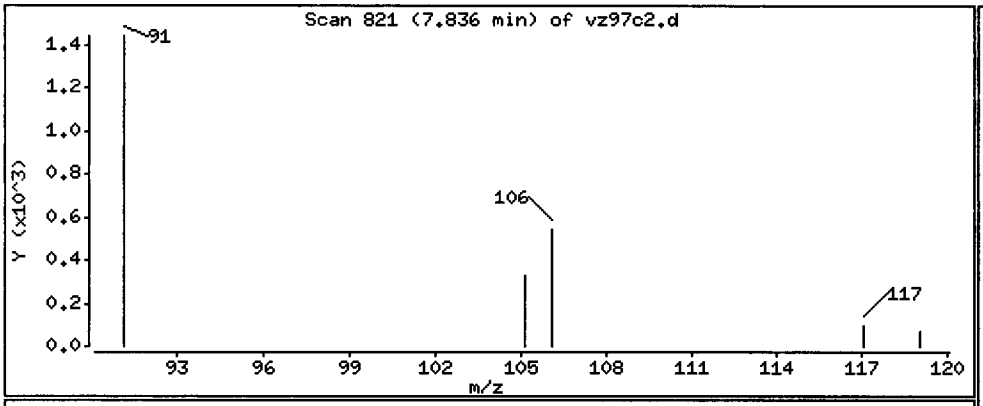
Operator: PC

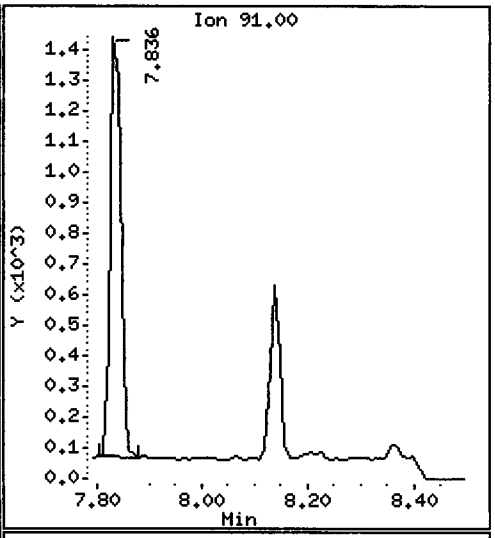
Column phase: RTXVMS

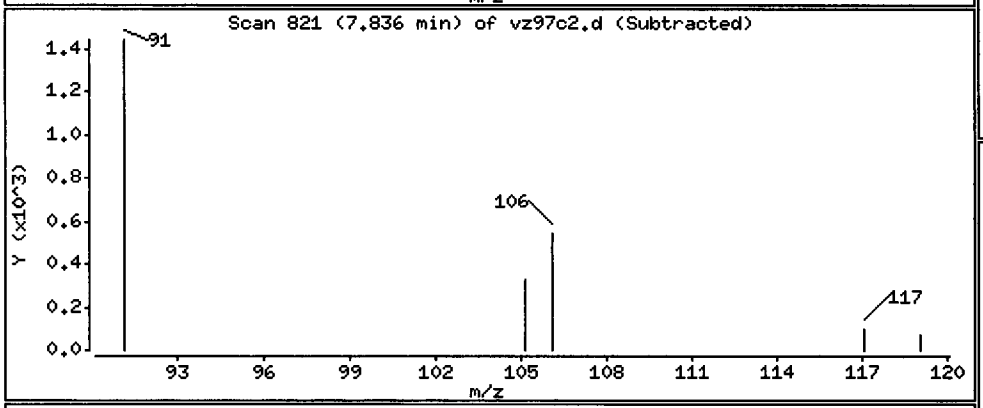
Column diameter: 0.18

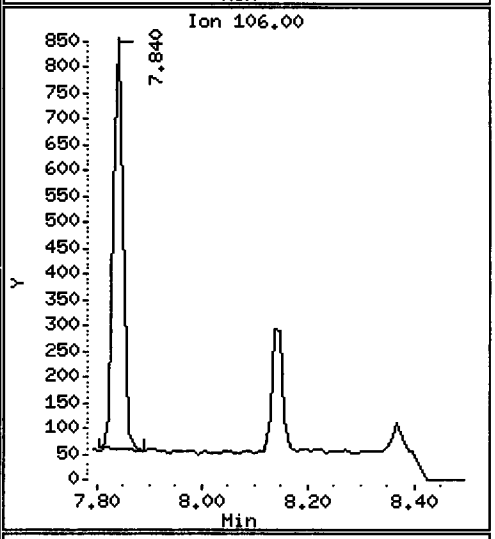
18 o-xylene

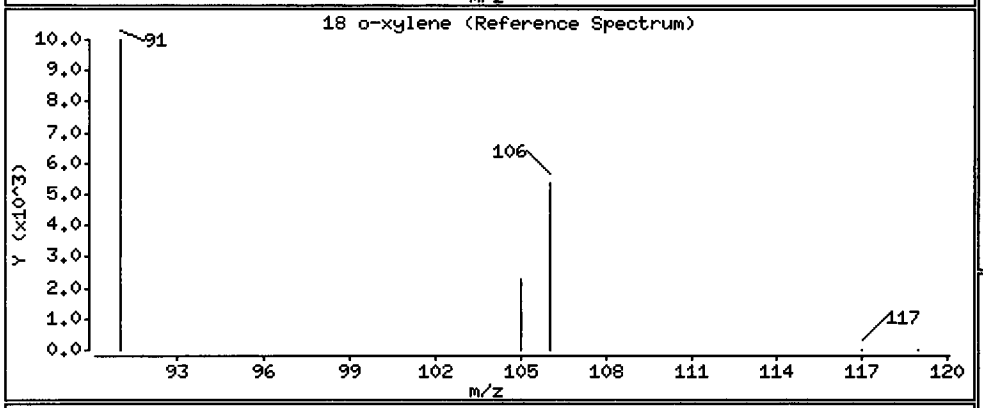
Concentration: 1.191 ug/Kg

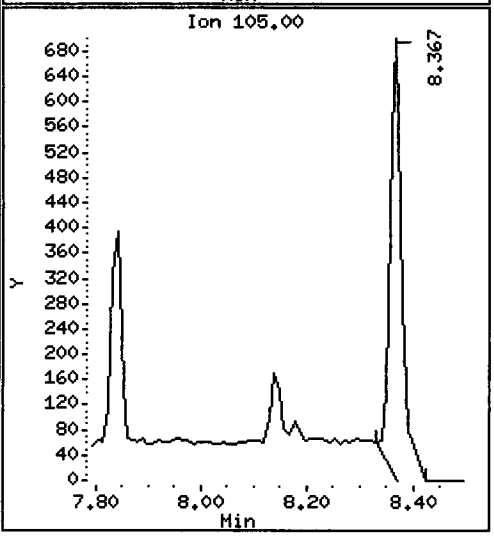


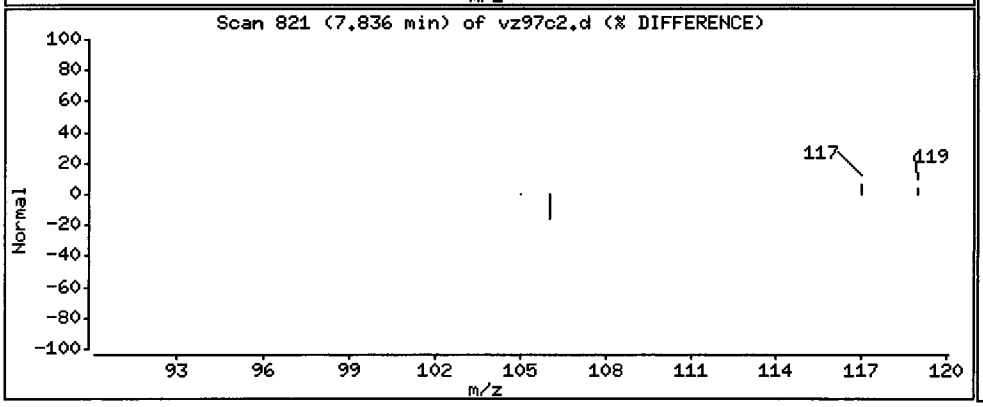












CO-ELUTION SUMMARY FOR FILE - vz97c2.d

Lab ID: VZ97C, Method: sim011713.m, Instrument: nt9.i, Date: 18-JAN-2013

RT	CO-ELUTION COMPOUNDS

kc 1/21/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/18JAN13a.b/vz97d2.d
Lab Smp Id: VZ97D Client Smp ID: CSIA-20130107-004S+
Inj Date : 18-JAN-2013 21:14
Operator : PC Inst ID: nt9.i
Smp Info : VZ97D,10,14.361,1,
Misc Info : 13-1085
Comment :
Method : /chem1/nt9.i/18JAN13a.b/sim011713.m
Meth Date : 21-Jan-2013 16:16 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: btex.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	100.00000	Sample Amount (mg)
M	0.00000	Moisture (%)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	CONCENTRATIONS FINAL (ug/Kg)
	6 Benzene	78	Compound Not Detected.					
*	7 Pentafluorobenzene	168	5.267	5.268	(1.000)	94129	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.286	5.286	(1.004)	45665	1050.31	105.03
*	11 1,4-Difluorobenzene	114	5.641	5.642	(1.000)	156457	1000.00	
$	12 d8-Toluene	98	6.618	6.618	(1.173)	167484	1024.96	102.50
	13 Toluene	91	6.650	6.651	(0.863)	4958	25.1933	2.519
*	15 d5 -Chlorobenzene	117	7.705	7.706	(1.000)	163236	1000.00	
	16 Ethyl Benzene	91	7.835	7.734	(1.017)	4444	23.0073	2.301
	17 m,p xylene	106	7.859	7.840	(1.017)	2290	31.5424	3.154
	18 o-xylene	91	8.139	8.140	(1.056)	1953	14.2843	1.428(Q)
$	19 4-Bromofluorobenzene	174	8.574	8.572	(1.113)	54019	945.280	94.528

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: vz97d2.d
Lab Smp Id: VZ97D
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-1085

Calibration Date: 18-JAN-2013
Calibration Time: 17:40
Client Smp ID: CSIA-20130107-004S+
Level: MED
Sample Type: Soil

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	94129	-17.87
11 1,4-Difluorobenze	202370	101185	404740	156457	-22.69
15 d5 -Chlorobenzene	226394	113197	452788	163236	-27.90

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	-0.01
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	-0.01
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	0.00

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA
Client SDG: VZ97
Sample Matrix: SOLID
Fraction: VOA
Lab Smp Id: VZ97D
Client Smp ID: CSIA-20130107-004S+
Level: MED
Operator: PC
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: special.spk
Quant Type: ISTD
Sublist File: btex.sub
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-1085

SURROGATE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 8 d4-1,2-Dichloroeth	100.00	105.03	105.03	75-125
$ 12 d8-Toluene	100.00	102.50	102.50	75-125
$ 19 4-Bromofluorobenze	100.00	94.528	94.53	75-125

Data File: /chem1/nt9.i/18JAN13a.b/vz97d2.d

Date : 18-JAN-2013 21:14

Client ID: CSIA-20130107-004S+

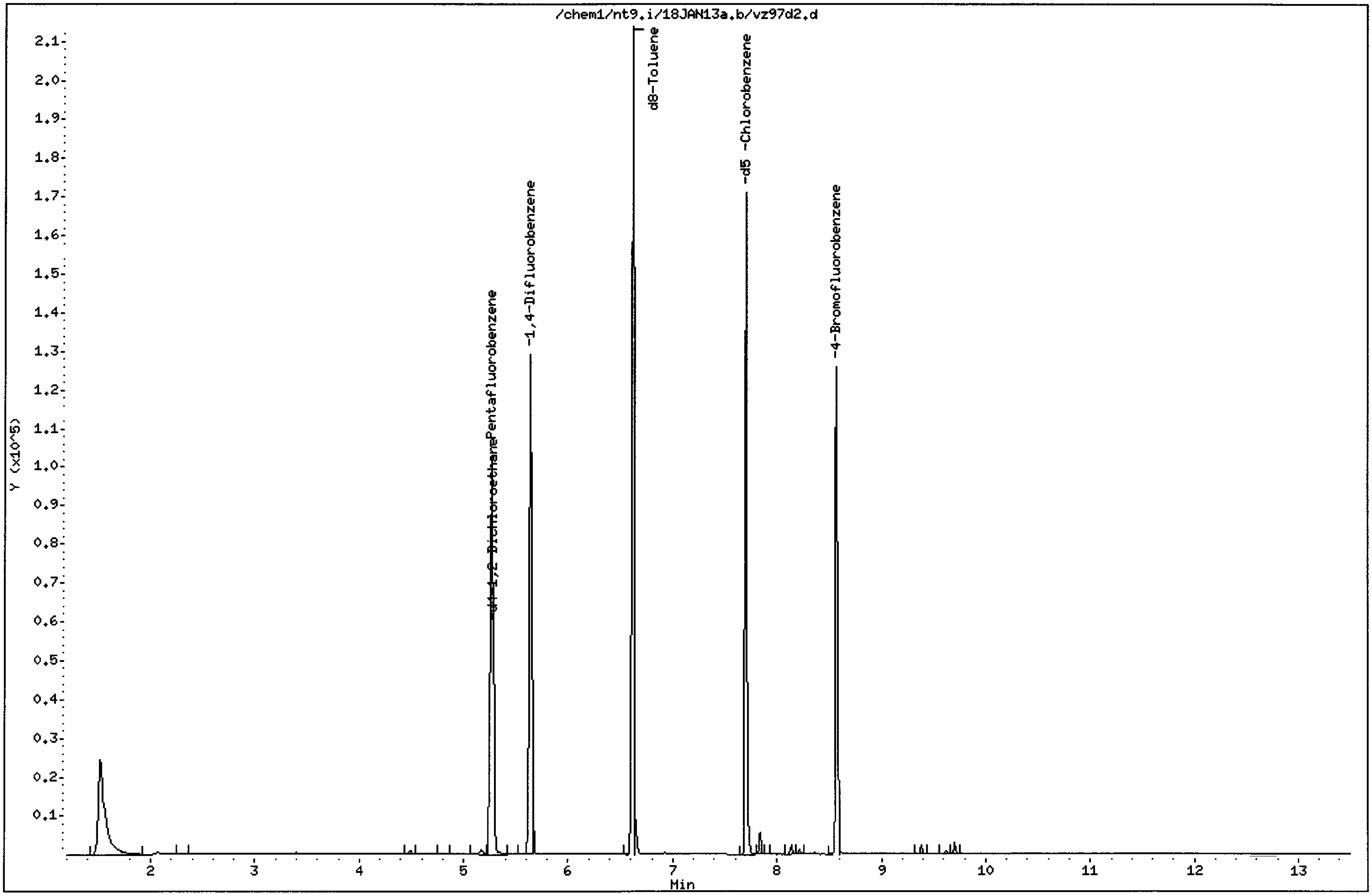
Sample Info: VZ97D,10,14.361,1,

Column phase: RTXVMS

Instrument: nt9.i

Operator: PC

Column diameter: 0.18



Data File: /chem1/nt9.i/18JAN13a.b/vz97d2.d

Date : 18-JAN-2013 21:14

Client ID: CSIA-20130107-004S+

Instrument: nt9.i

Sample Info: VZ97D,10,14.361,1,

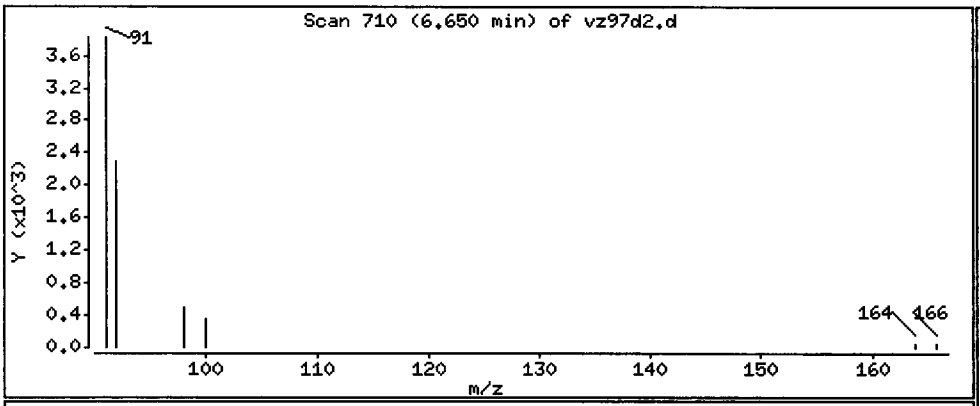
Operator: PC

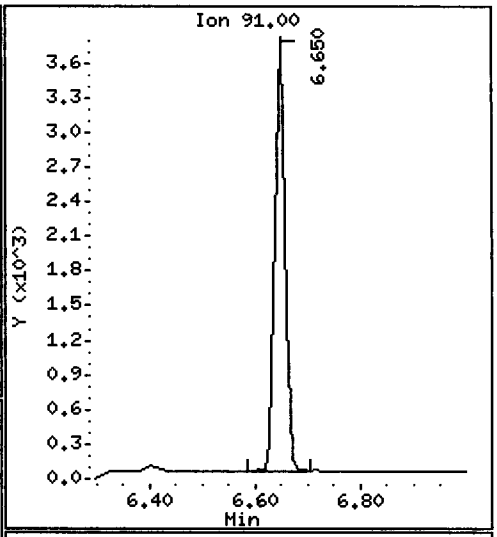
Column phase: RTXVMS

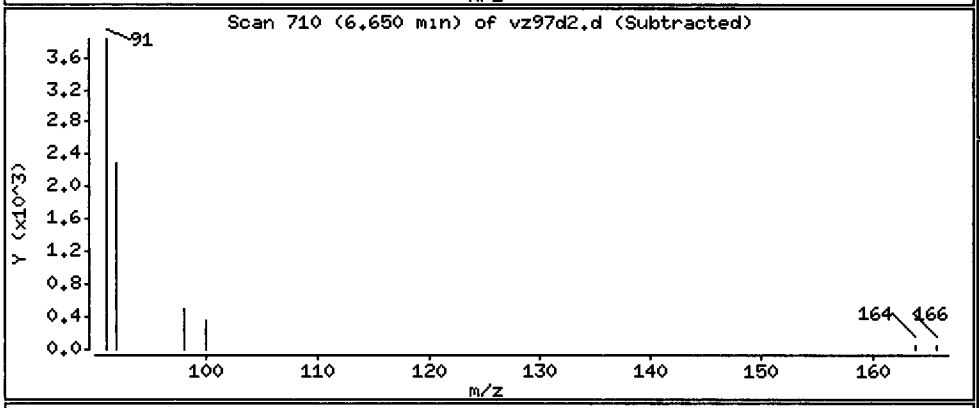
Column diameter: 0.18

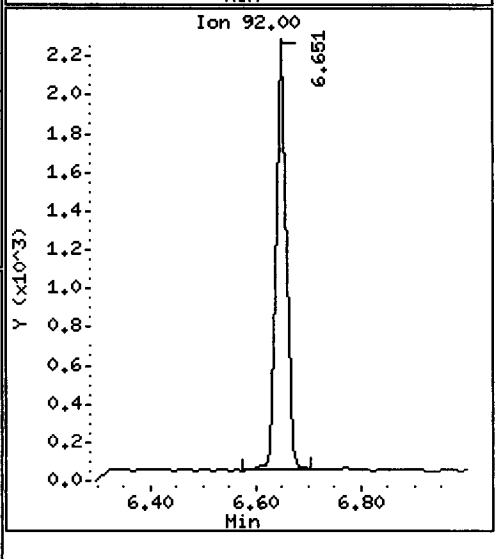
13 Toluene

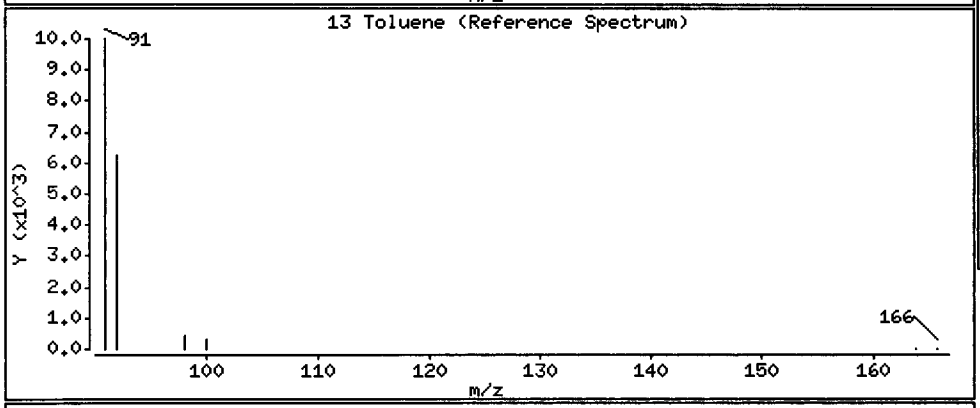
Concentration: 2.519 ug/Kg

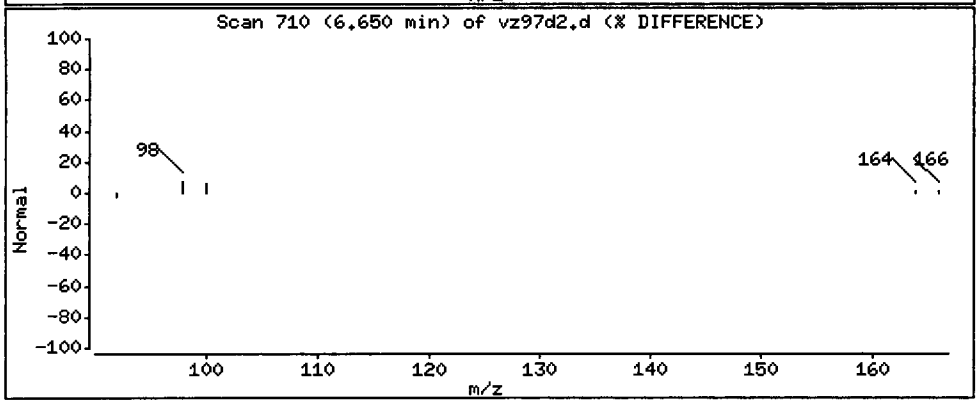












Data File: /chem1/nt9.i/18JAN13a.b/vz97d2.d

Date : 18-JAN-2013 21:14

Client ID: CSIA-20130107-004S+

Instrument: nt9.i

Sample Info: VZ97D,10,14.361,1,

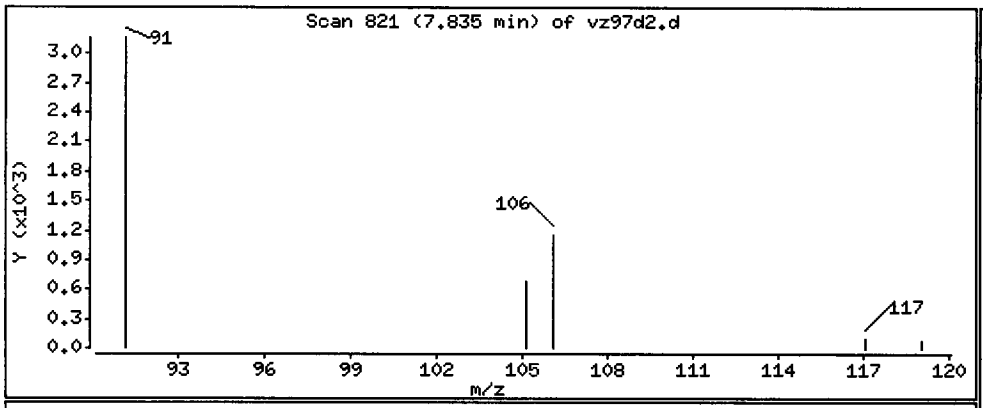
Operator: PC

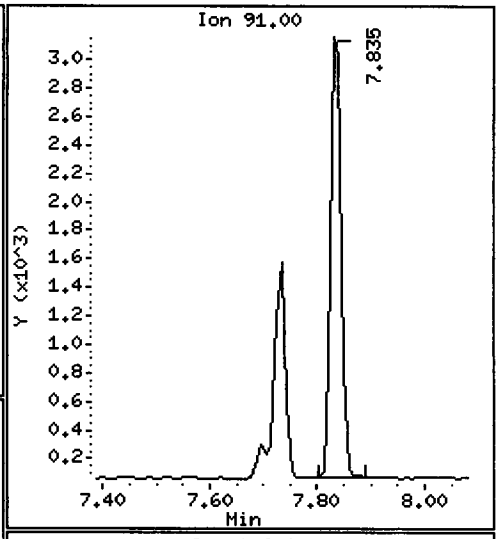
Column phase: RTXVMS

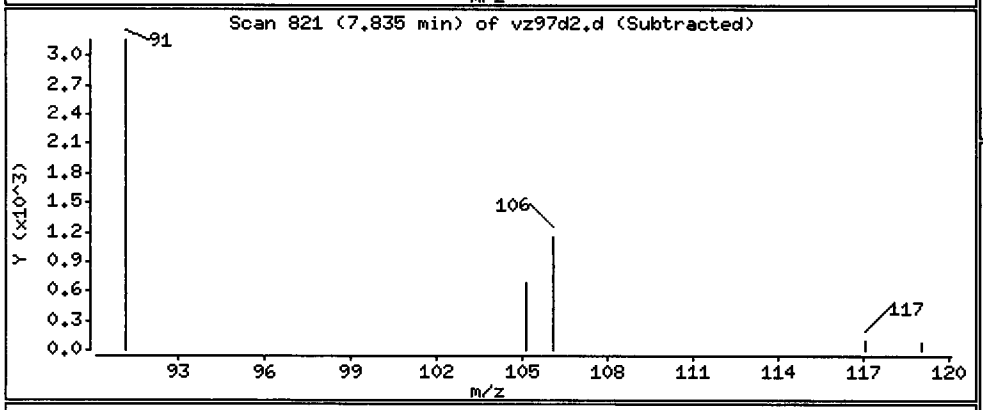
Column diameter: 0.18

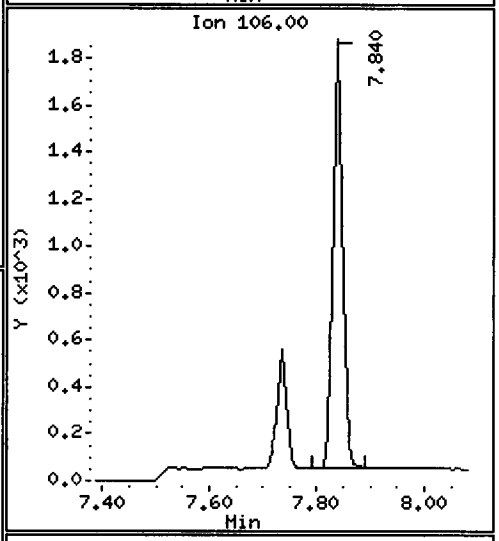
16 Ethyl Benzene

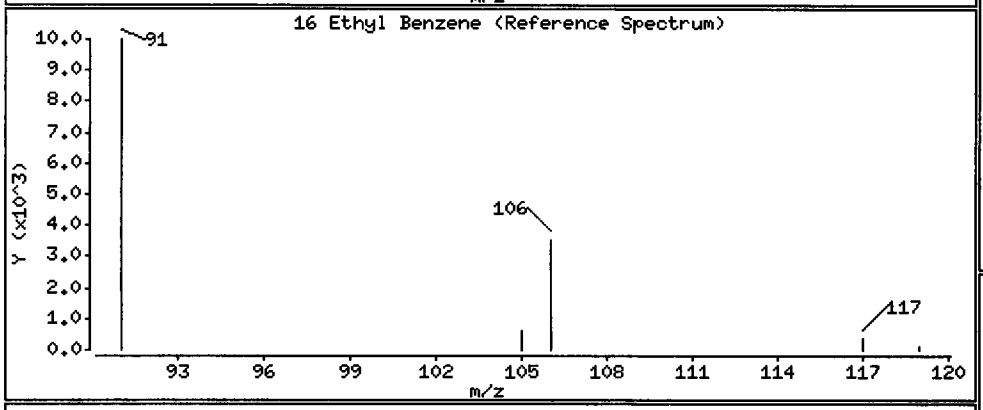
Concentration: 2.301 ug/Kg

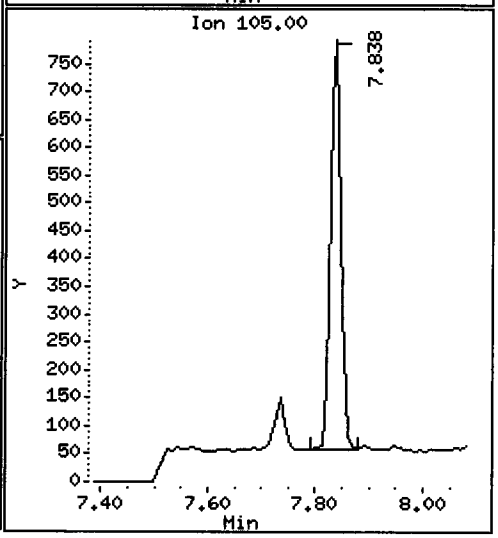


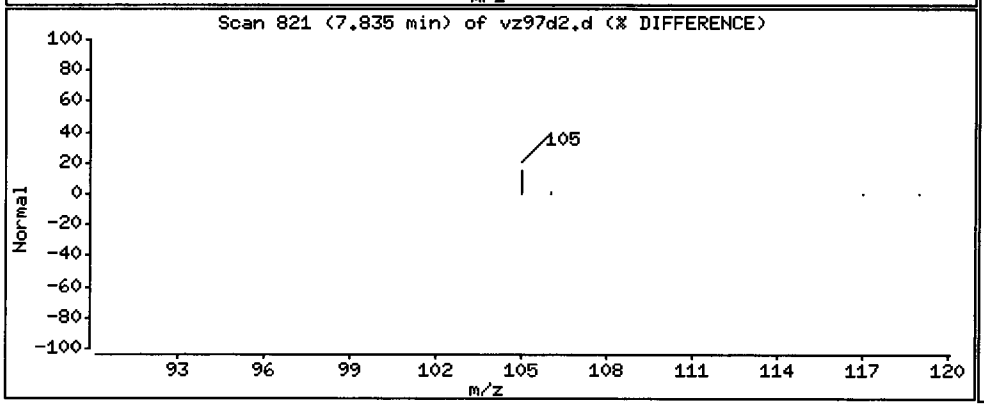












Data File: /chem1/nt9.i/18JAN13a.b/vz97d2.d

Date : 18-JAN-2013 21:14

Client ID: CSIA-20130107-004S+

Instrument: nt9.i

Sample Info: VZ97D,10,14.361,1,

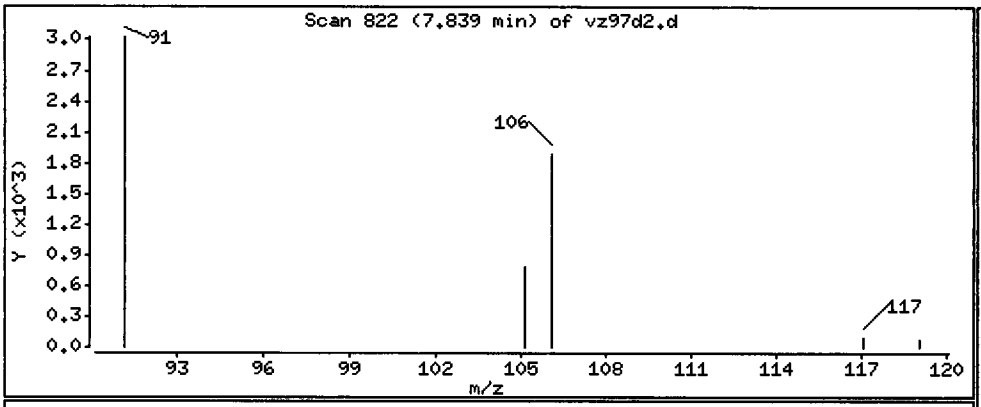
Operator: PC

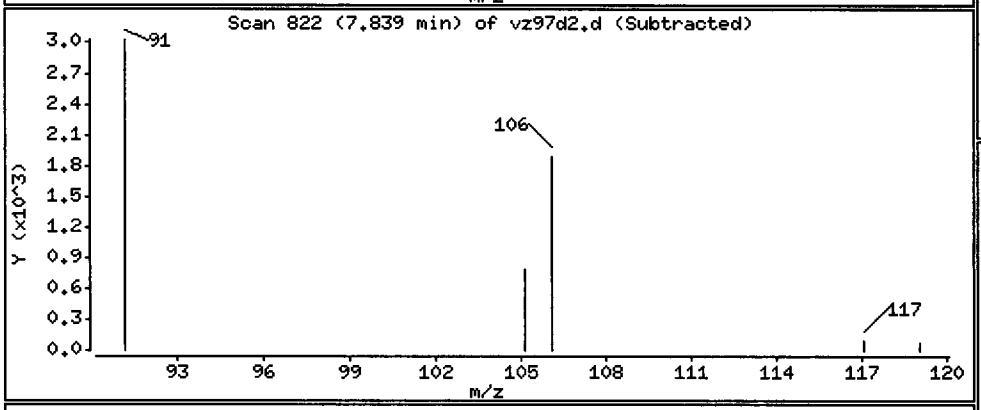
Column phase: RTXVMS

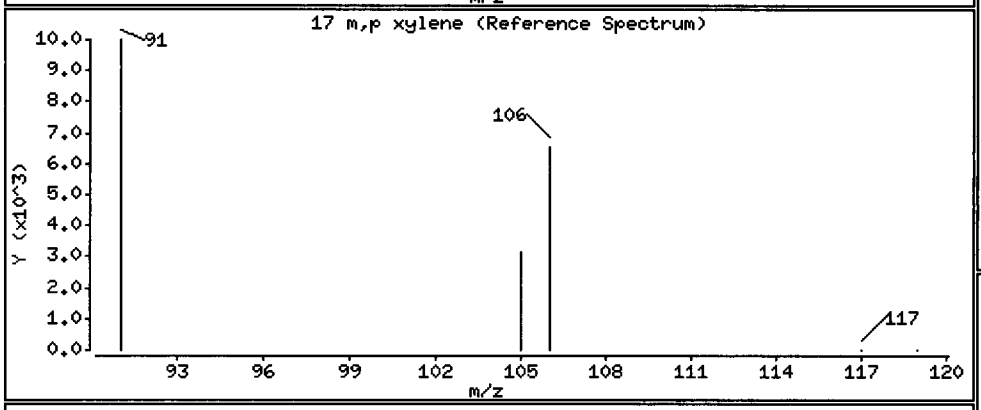
Column diameter: 0.18

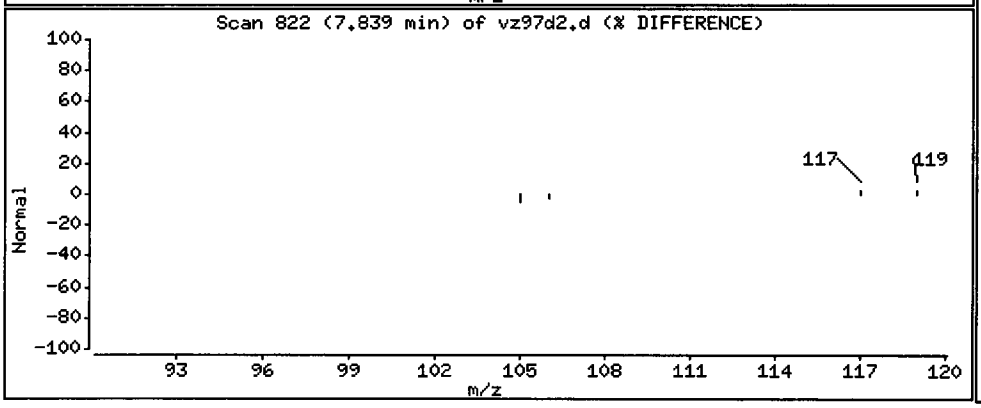
17 m,p xylene

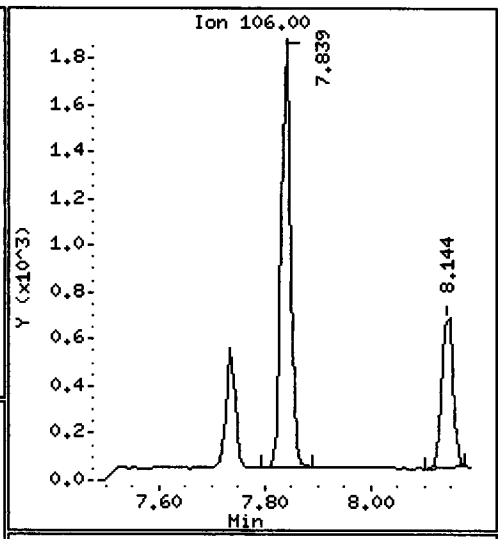
Concentration: 3.154 ug/Kg

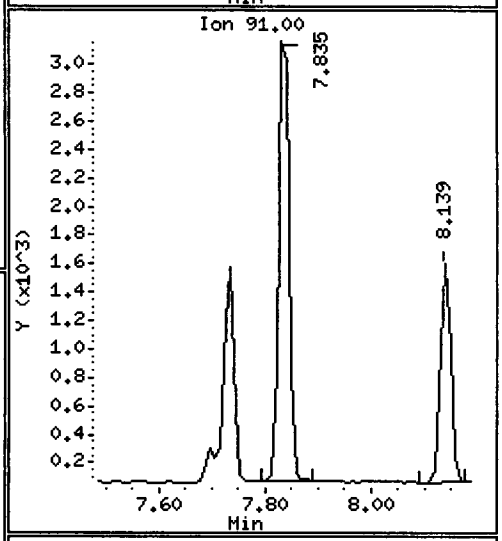


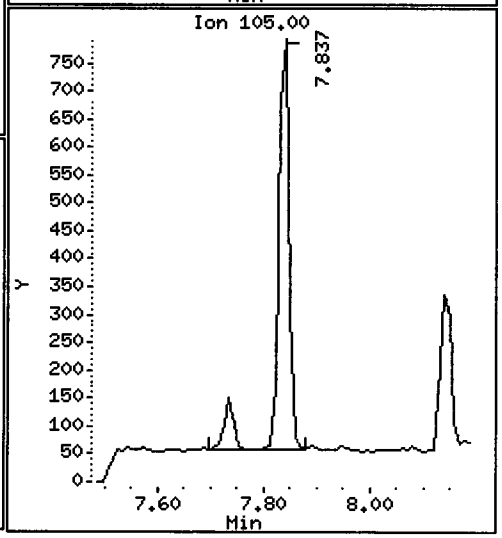












Data File: /chem1/nt9.i/18JAN13a.b/vz97d2.d

Date : 18-JAN-2013 21:14

Client ID: CSIA-20130107-004S+

Instrument: nt9.i

Sample Info: VZ97D,10,14.361,1,

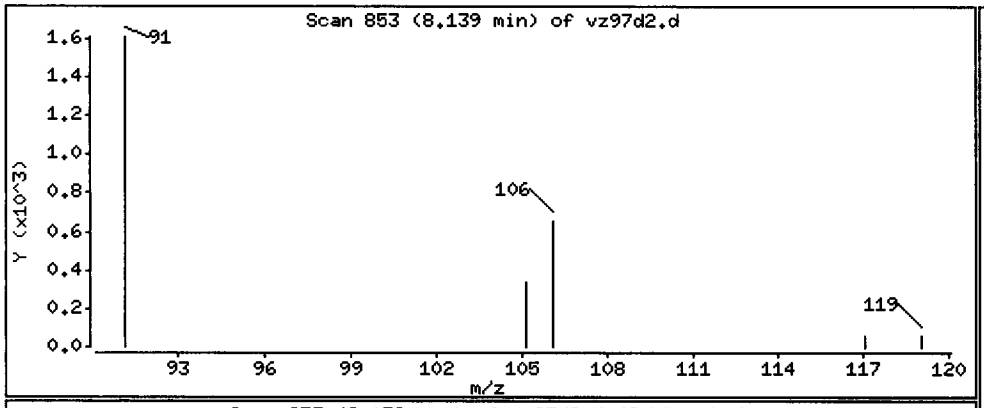
Operator: PC

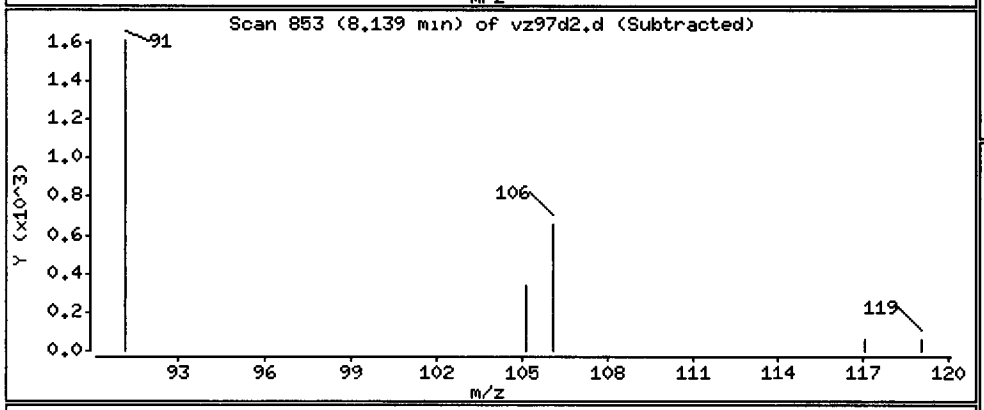
Column phase: RTXVMS

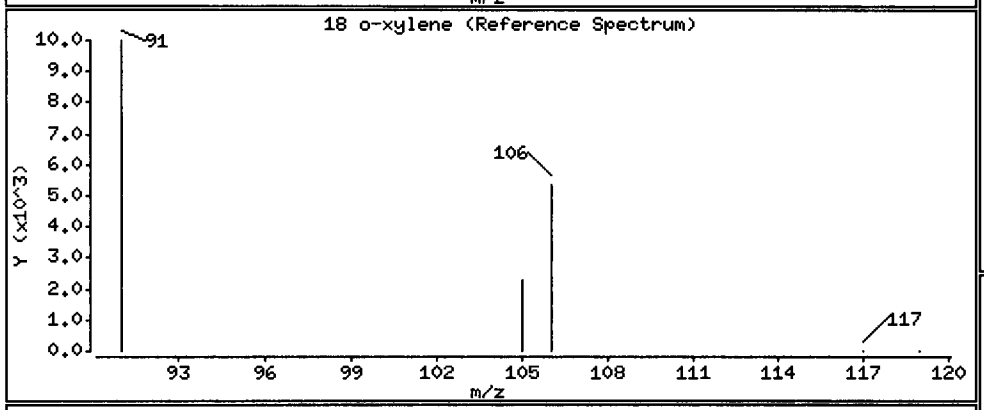
Column diameter: 0.18

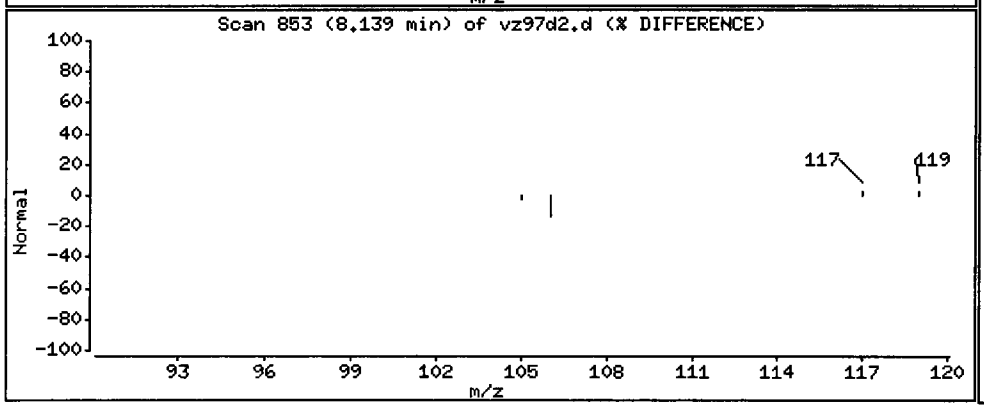
18 o-xylene

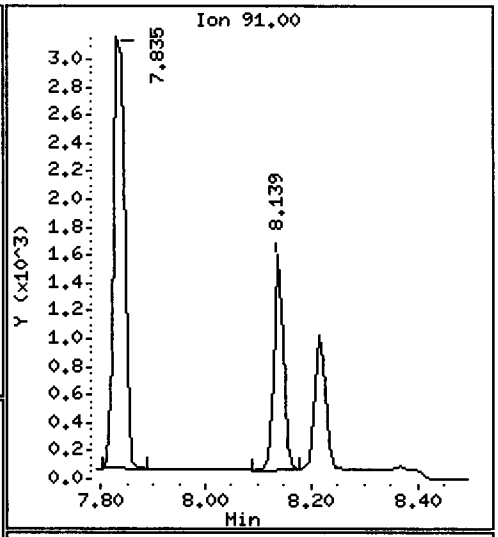
Concentration: 1.428 ug/Kg

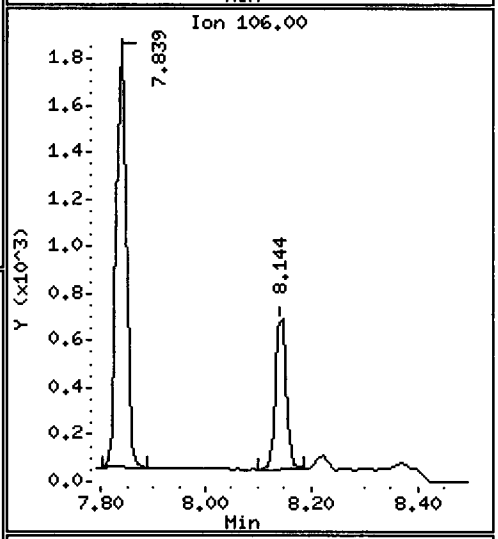


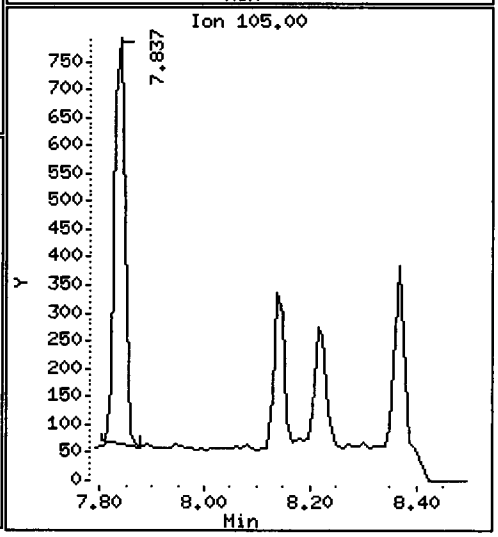












CO-ELUTION SUMMARY FOR FILE - vz97d2.d

Lab ID: VZ97D, Method: sim011713.m, Instrument: nt9.i, Date: 18-JAN-2013

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/18JAN13a.b/vz97e2.d
Lab Smp Id: VZ97E Client Smp ID: CSIA-20130107-005S+
Inj Date : 18-JAN-2013 21:38
Operator : PC Inst ID: nt9.i
Smp Info : VZ97E,10,15.052,1,
Misc Info : 13-1086
Comment :
Method : /chem1/nt9.i/18JAN13a.b/sim011713.m
Meth Date : 21-Jan-2013 16:16 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: btex.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	100.00000	Sample Amount (mg)
M	0.00000	Moisture (%)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	FINAL (ug/Kg)
	6 Benzene	78	Compound Not Detected.					
*	7 Pentafluorobenzene	168	5.267	5.268	(1.000)	93487	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.287	5.286	(1.004)	45446	1052.46	105.25
*	11 1,4-Difluorobenzene	114	5.643	5.642	(1.000)	155114	1000.00	
$	12 d8-Toluene	98	6.619	6.618	(1.173)	167536	1034.15	103.41
	13 Toluene	91	6.651	6.651	(0.863)	11088	55.9093	5.591
*	15 d5 -Chlorobenzene	117	7.706	7.706	(1.000)	164492	1000.00	
	16 Ethyl Benzene	91	7.734	7.734	(1.004)	6376	32.7585	3.276(Q)
	17 m,p xylene	106	7.840	7.840	(1.017)	7553	103.232	10.323
	18 o-xylene	91	8.140	8.140	(1.056)	6200	44.9941	4.499
$	19 4-Bromofluorobenzene	174	8.575	8.572	(1.113)	54910	953.532	95.353

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: vz97e2.d
Lab Smp Id: VZ97E
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-1086

Calibration Date: 18-JAN-2013
Calibration Time: 17:40
Client Smp ID: CSIA-20130107-005S+
Level: MED
Sample Type: Soil

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	93487	-18.43
11 1,4-Difluorobenze	202370	101185	404740	155114	-23.35
15 d5 -Chlorobenzene	226394	113197	452788	164492	-27.34

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	-0.03
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	0.02
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	0.01

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA
Client SDG: VZ97
Sample Matrix: SOLID
Fraction: VOA
Lab Smp Id: VZ97E
Client Smp ID: CSIA-20130107-005S+
Level: MED
Operator: PC
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: special.spk
Quant Type: ISTD
Sublist File: btex.sub
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-1086

SURROGATE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 8 d4-1,2-Dichloroeth	100.00	105.25	105.25	75-125
$ 12 d8-Toluene	100.00	103.41	103.41	75-125
$ 19 4-Bromofluorobenze	100.00	95.353	95.35	75-125

Data File: /chem1/nt9.i/18JAN13a.b/vz97e2.d

Date : 18-JAN-2013 21:38

Client ID: CSIA-20130107-005S+

Sample Info: VZ97E,10,15.052,1,

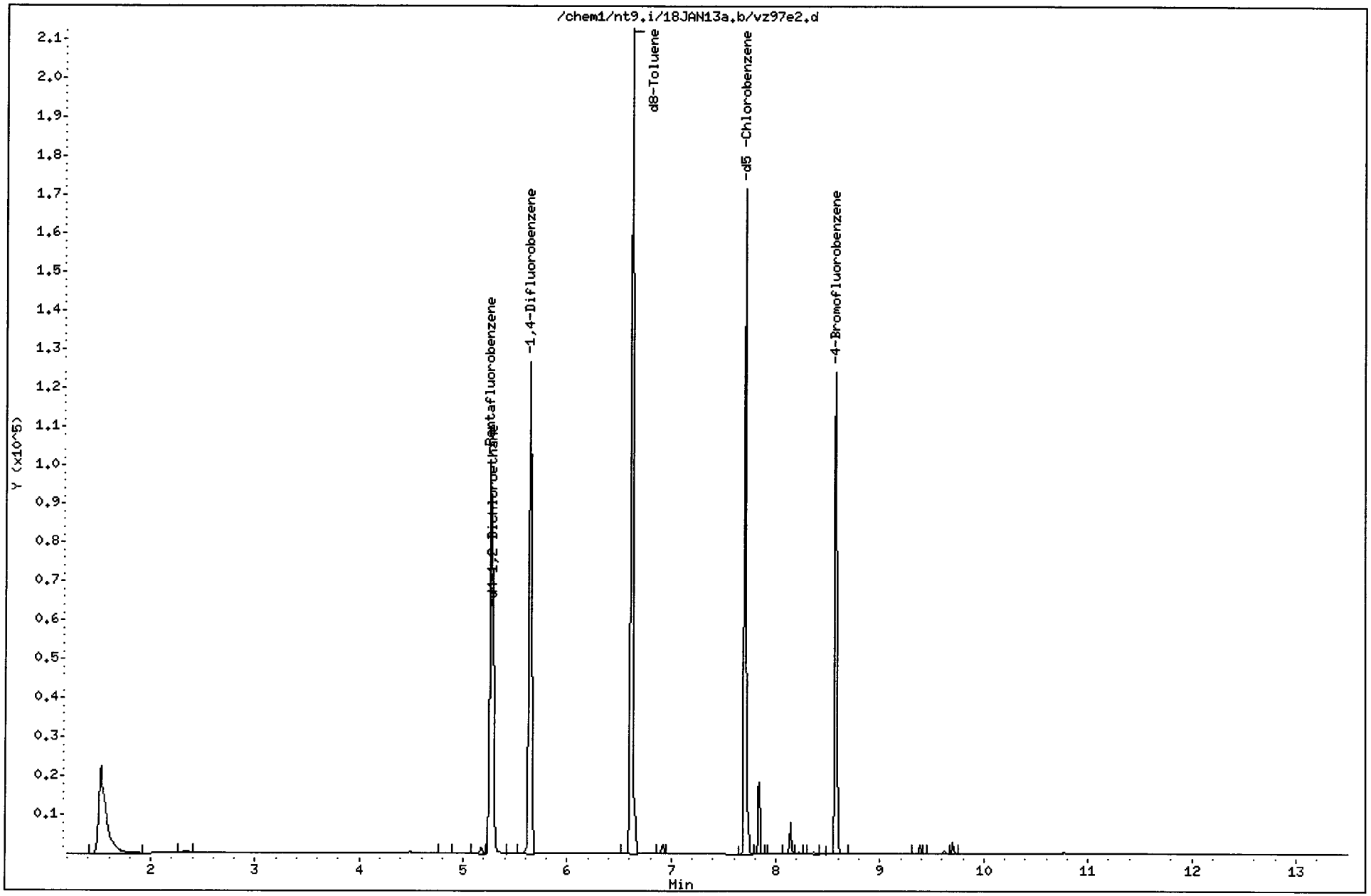
Column phase: RTXVMS

Instrument: nt9.i

Operator: PC

Column diameter: 0.18

VZ97E 005S5



Data File: /chem1/nt9.i/18JAN13a.b/vz97e2.d

Date : 18-JAN-2013 21:38

Client ID: CSIA-20130107-005S+

Instrument: nt9.i

Sample Info: VZ97E,10,15.052,1,

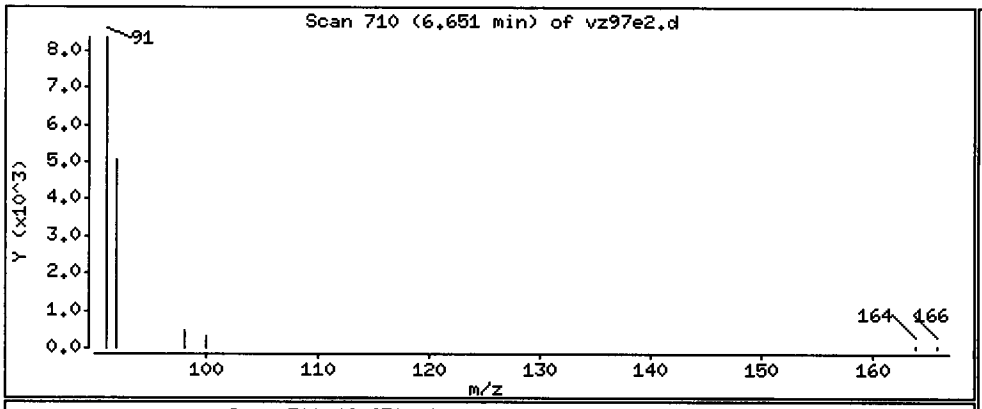
Operator: PC

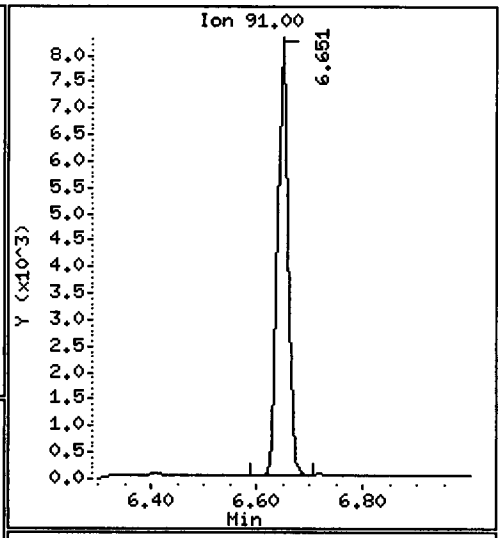
Column phase: RTXVMS

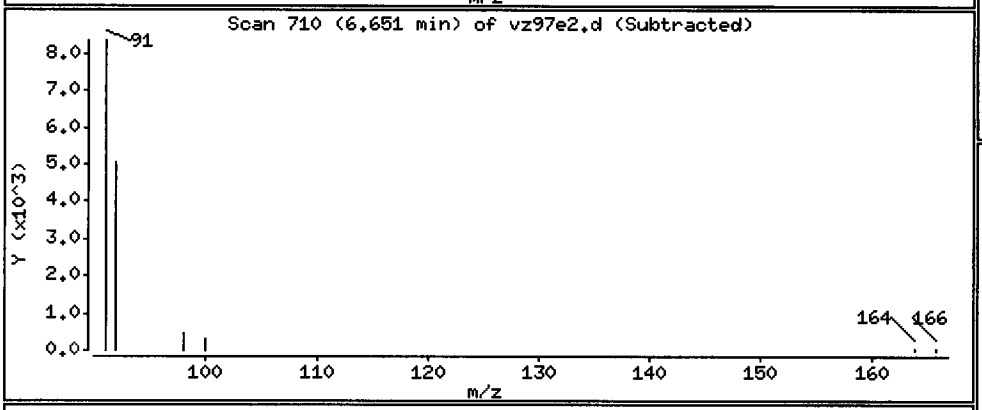
Column diameter: 0.18

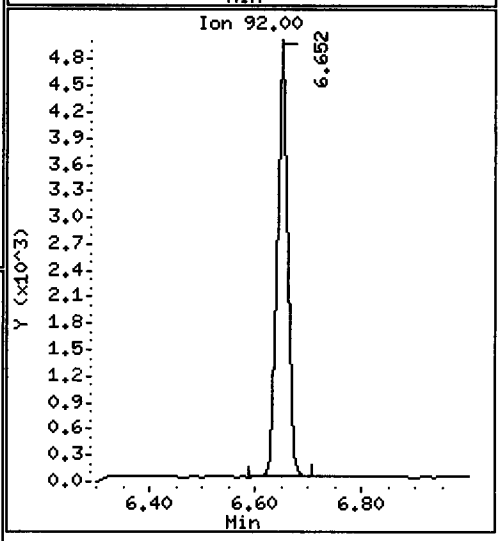
13 Toluene

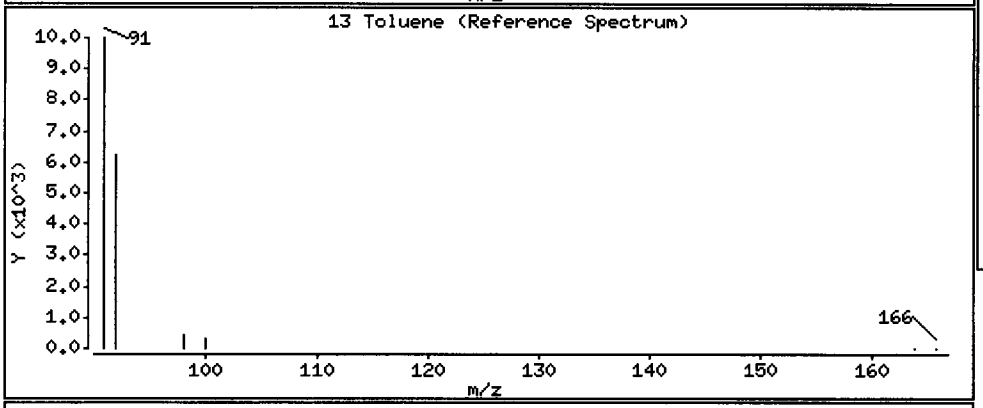
Concentration: 5.591 ug/Kg

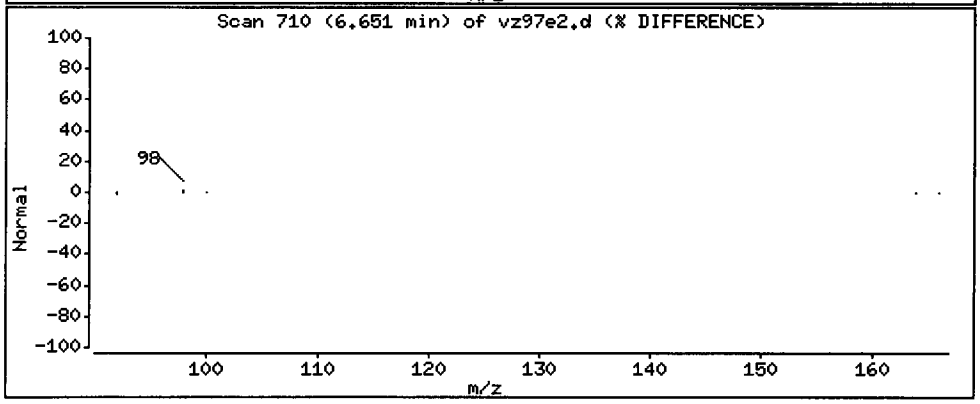












Data File: /chem1/nt9.i/18JAN13a.b/vz97e2.d

Date : 18-JAN-2013 21:38

Client ID: CSIA-20130107-005S+

Instrument: nt9.i

Sample Info: VZ97E,10,15.052,1,

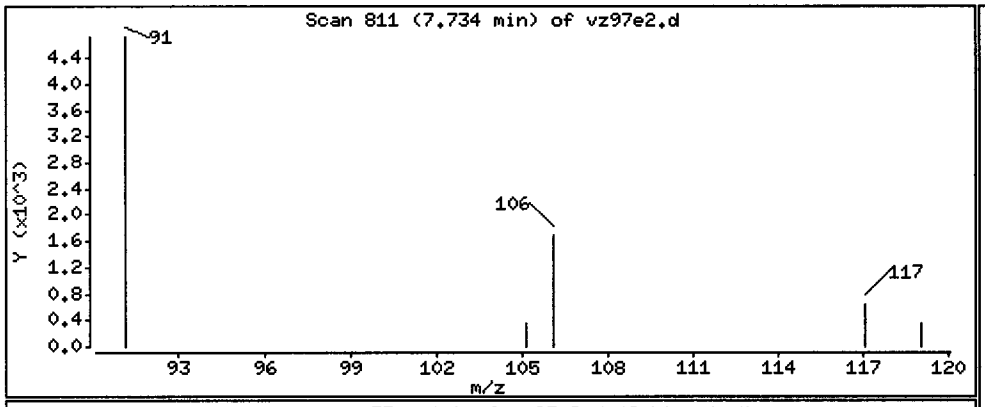
Operator: PC

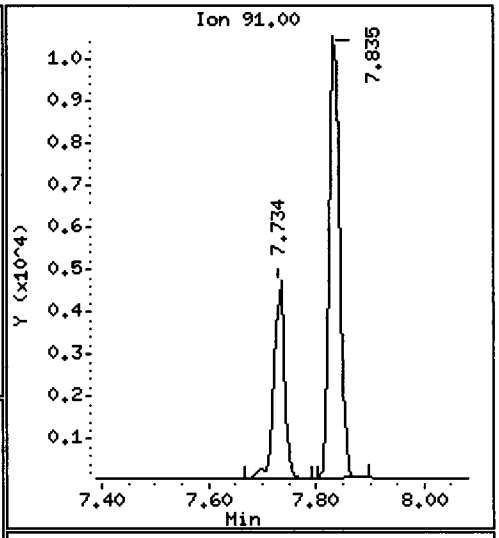
Column phase: RTXVMS

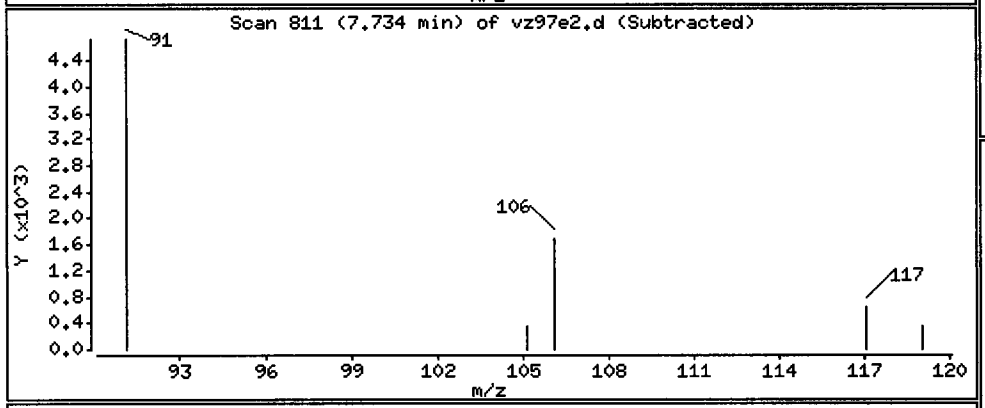
Column diameter: 0.18

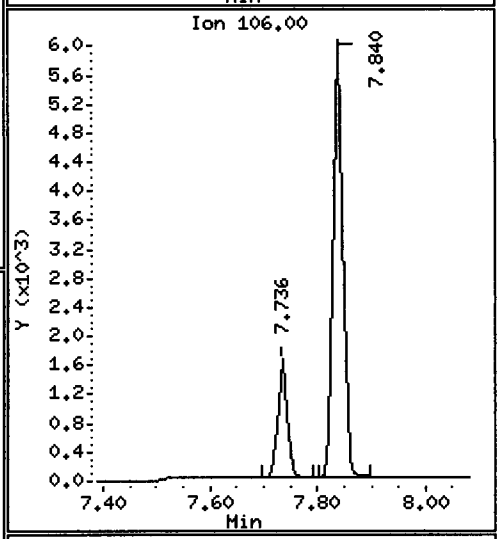
16 Ethyl Benzene

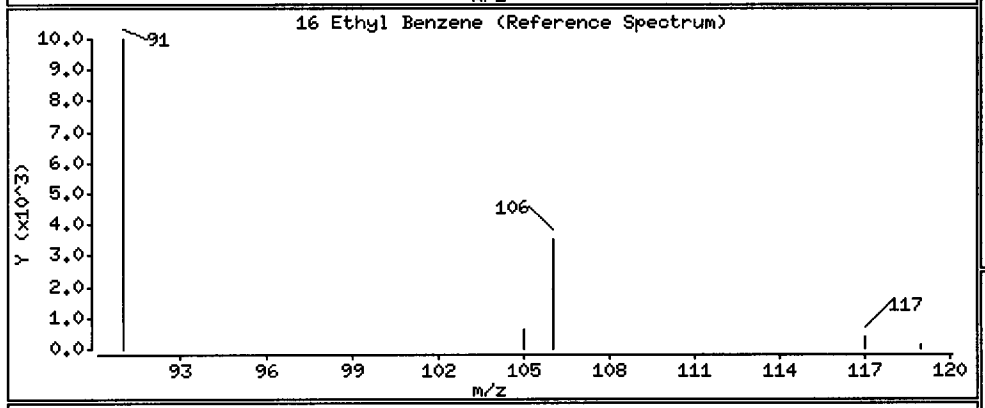
Concentration: 3.276 ug/Kg

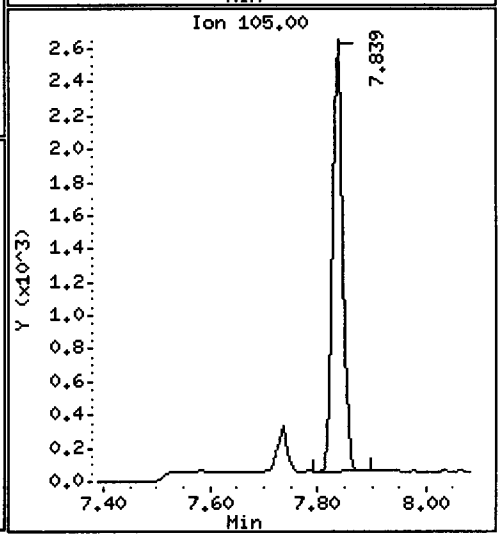


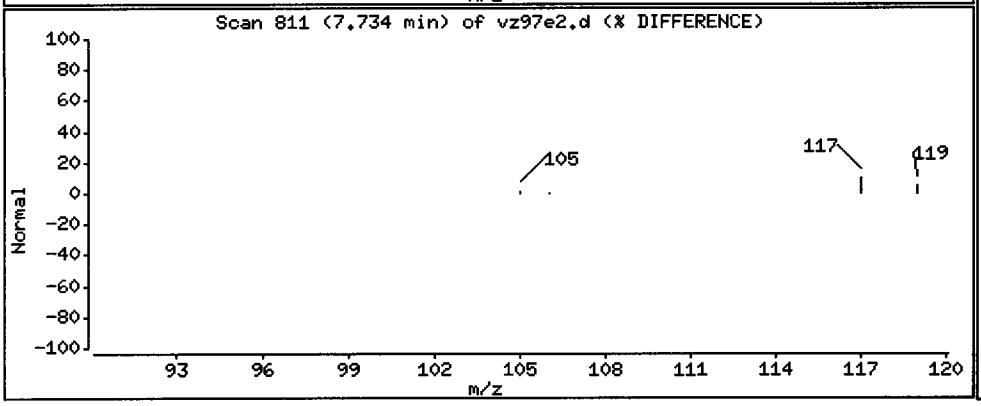












Data File: /chem1/nt9.i/18JAN13a.b/vz97e2.d

Date : 18-JAN-2013 21:38

Client ID: CSIA-20130107-005S+

Instrument: nt9.i

Sample Info: VZ97E,10,15.052,1,

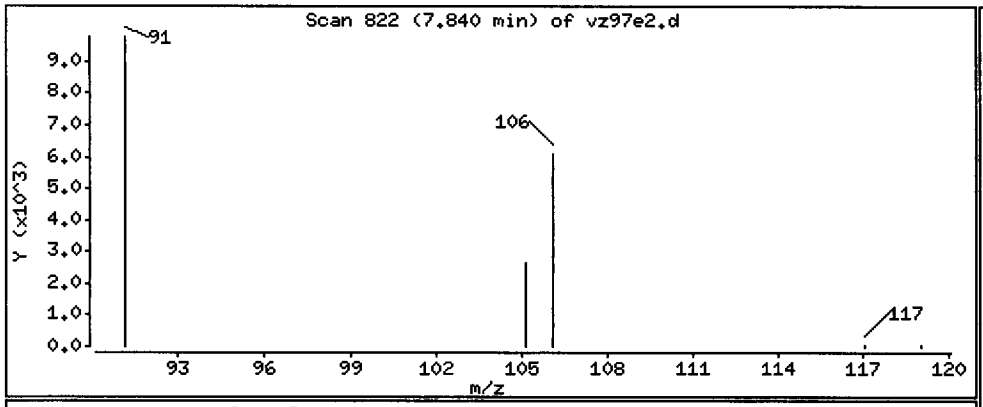
Operator: PC

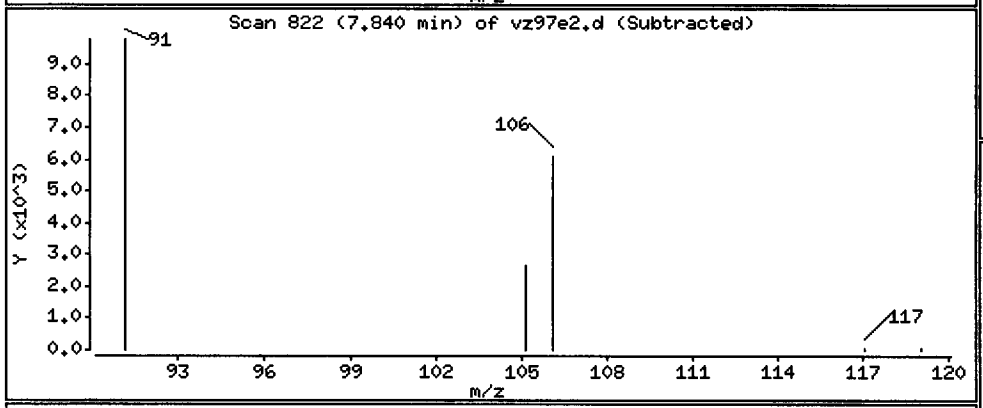
Column phase: RTXVMS

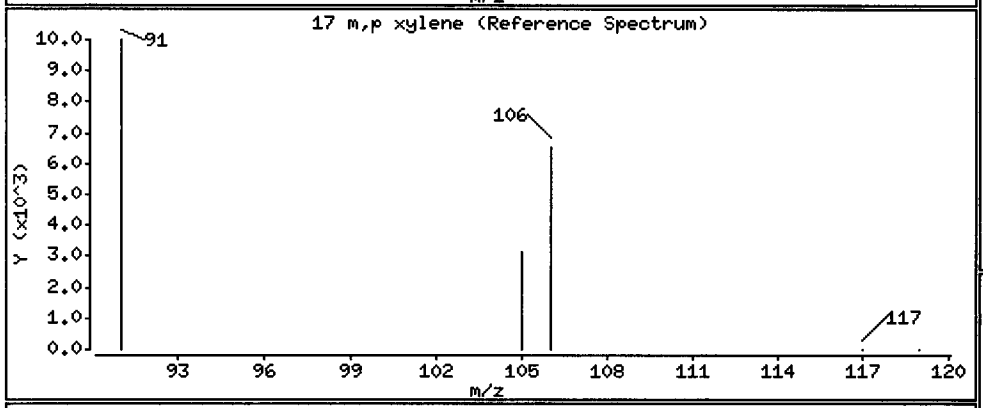
Column diameter: 0.18

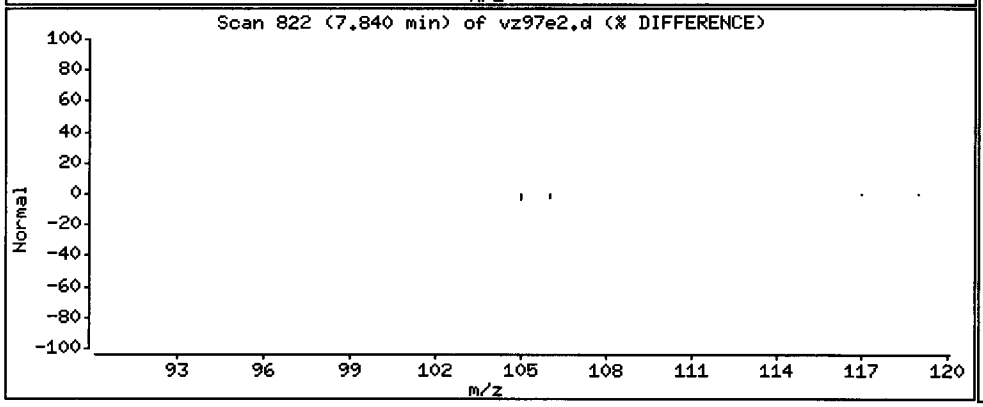
17 m,p xylene

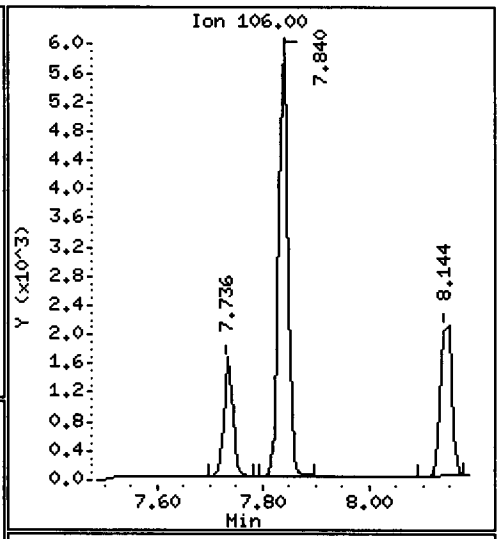
Concentration: 10.323 ug/Kg

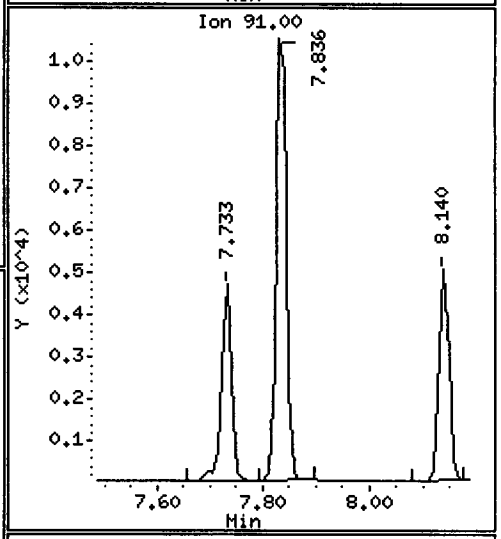


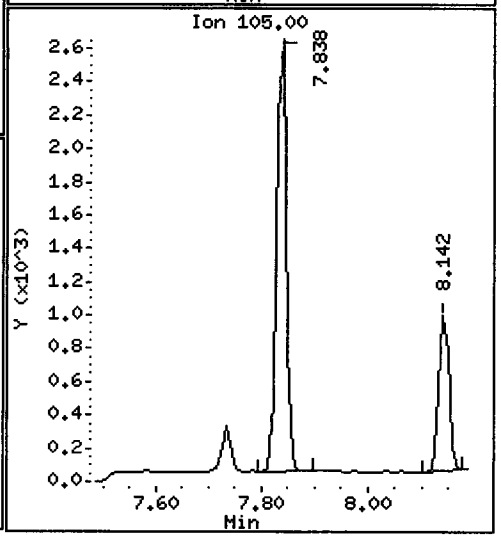












Data File: /chem1/nt9.i/18JAN13a.b/vz97e2.d

Date : 18-JAN-2013 21:38

Client ID: CSIA-20130107-005S+

Instrument: nt9.i

Sample Info: VZ97E,10,15.052,1,

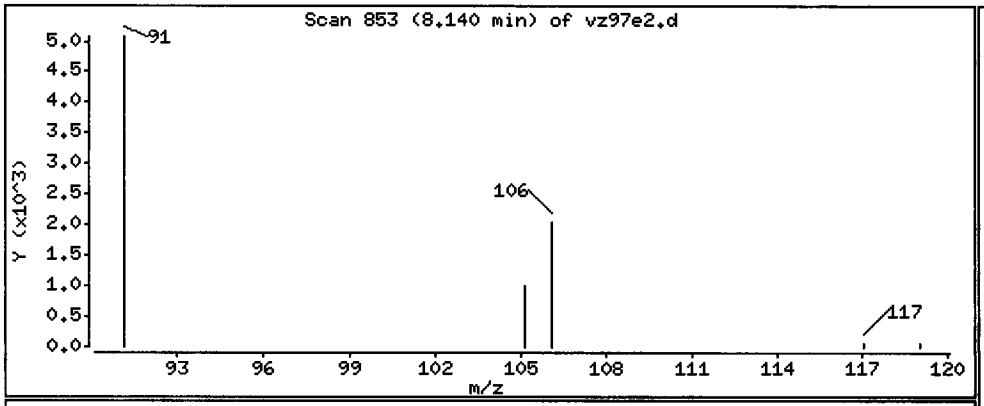
Operator: PC

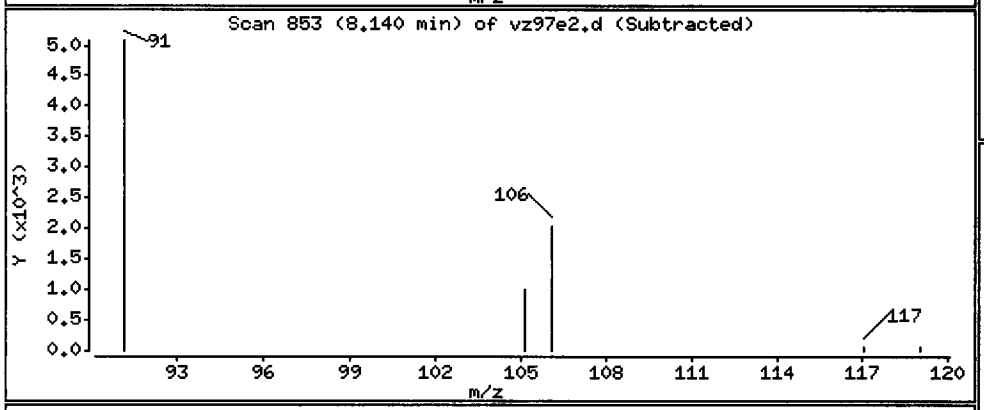
Column phase: RTXVMS

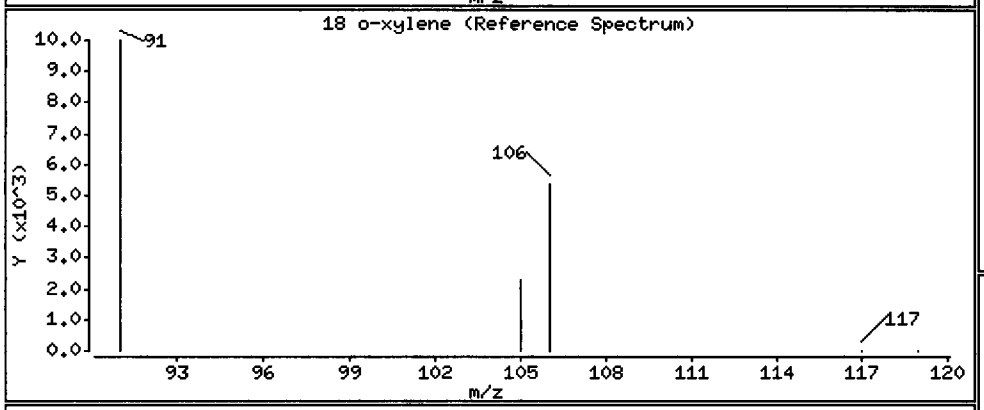
Column diameter: 0.18

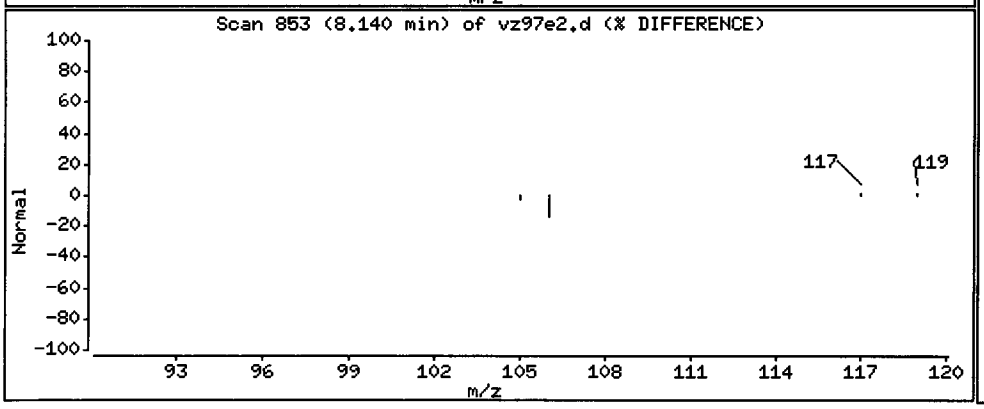
18 o-xylene

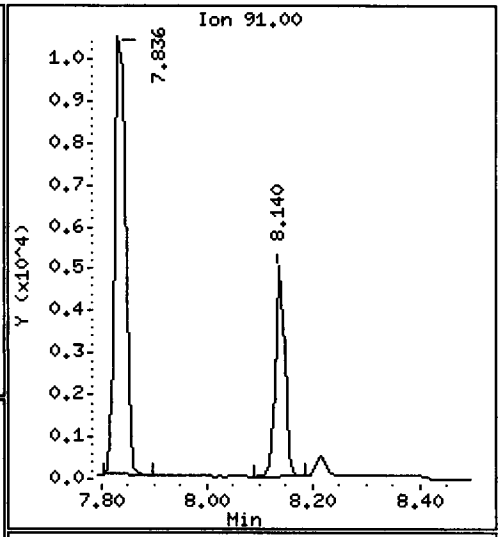
Concentration: 4.499 ug/Kg

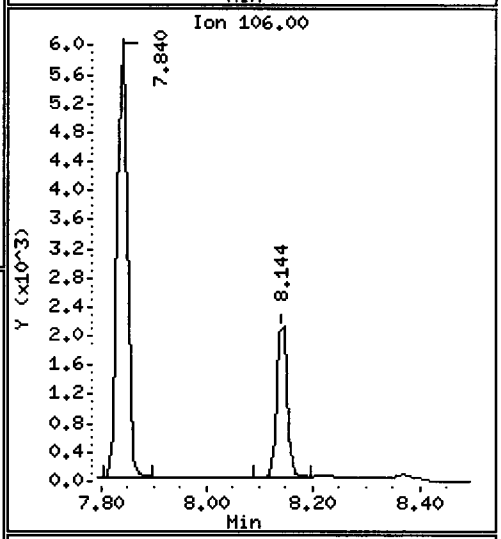


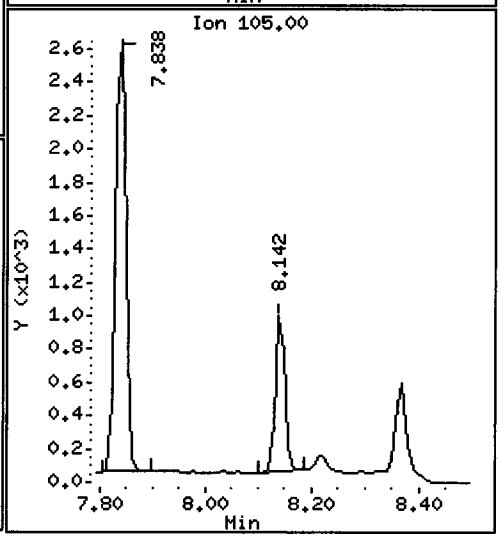












CO-ELUTION SUMMARY FOR FILE - vz97e2.d

Lab ID: VZ97E, Method: sim011713.m, Instrument: nt9.i, Date: 18-JAN-2013

RT	CO-ELUTION COMPOUNDS

PC 1/24/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/18JAN13a.b/vz97f.d
Lab Smp Id: VZ97F Client Smp ID: CSIA20130109-006B
Inj Date : 18-JAN-2013 22:01
Operator : PC Inst ID: nt9.i
Smp Info : VZ97F,10,23.435,1,
Misc Info : 13-1087
Comment :
Method : /chem1/nt9.i/18JAN13a.b/sim011713.m
Meth Date : 21-Jan-2013 16:16 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: btex.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	100.00000	Sample Amount (mg)
M	0.00000	Moisture (%)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	CONCENTRATIONS FINAL (ug/Kg)
	6 Benzene	78	5.174	5.180	(0.917)	2168	11.7862	1.179
*	7 Pentafluorobenzene	168	5.268	5.268	(1.000)	91086	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.287	5.286	(1.004)	44650	1061.28	106.13
*	11 1,4-Difluorobenzene	114	5.642	5.642	(1.000)	151723	1000.00	
$	12 d8-Toluene	98	6.618	6.618	(1.173)	164742	1039.63	103.96
	13 Toluene	91	6.651	6.651	(0.863)	6852	34.4885	3.449
*	15 d5 -Chlorobenzene	117	7.706	7.706	(1.000)	164791	1000.00	
	16 Ethyl Benzene	91	7.836	7.734	(1.017)	2375	12.1793	1.218
	17 m,p xylene	106	7.840	7.840	(1.017)	1148	15.6745	1.567
	18 o-xylene	91	7.836	8.140	(1.017)	2117	15.3393	1.534(Q)
$	19 4-Bromofluorobenzene	174	8.575	8.572	(1.113)	56992	987.883	98.788

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: vz97f.d
Lab Smp Id: VZ97F
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-1087

Calibration Date: 18-JAN-2013
Calibration Time: 17:40
Client Smp ID: CSIA20130109-006B
Level: MED
Sample Type: Soil

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	91086	-20.53
11 1,4-Difluorobenze	202370	101185	404740	151723	-25.03
15 d5 -Chlorobenzene	226394	113197	452788	164791	-27.21

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	0.00
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	0.01
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	0.01

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA
Client SDG: VZ97
Sample Matrix: SOLID
Fraction: VOA
Lab Smp Id: VZ97F
Client Smp ID: CSIA20130109-006B
Level: MED
Operator: PC
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: special.spk
Quant Type: ISTD
Sublist File: btex.sub
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-1087

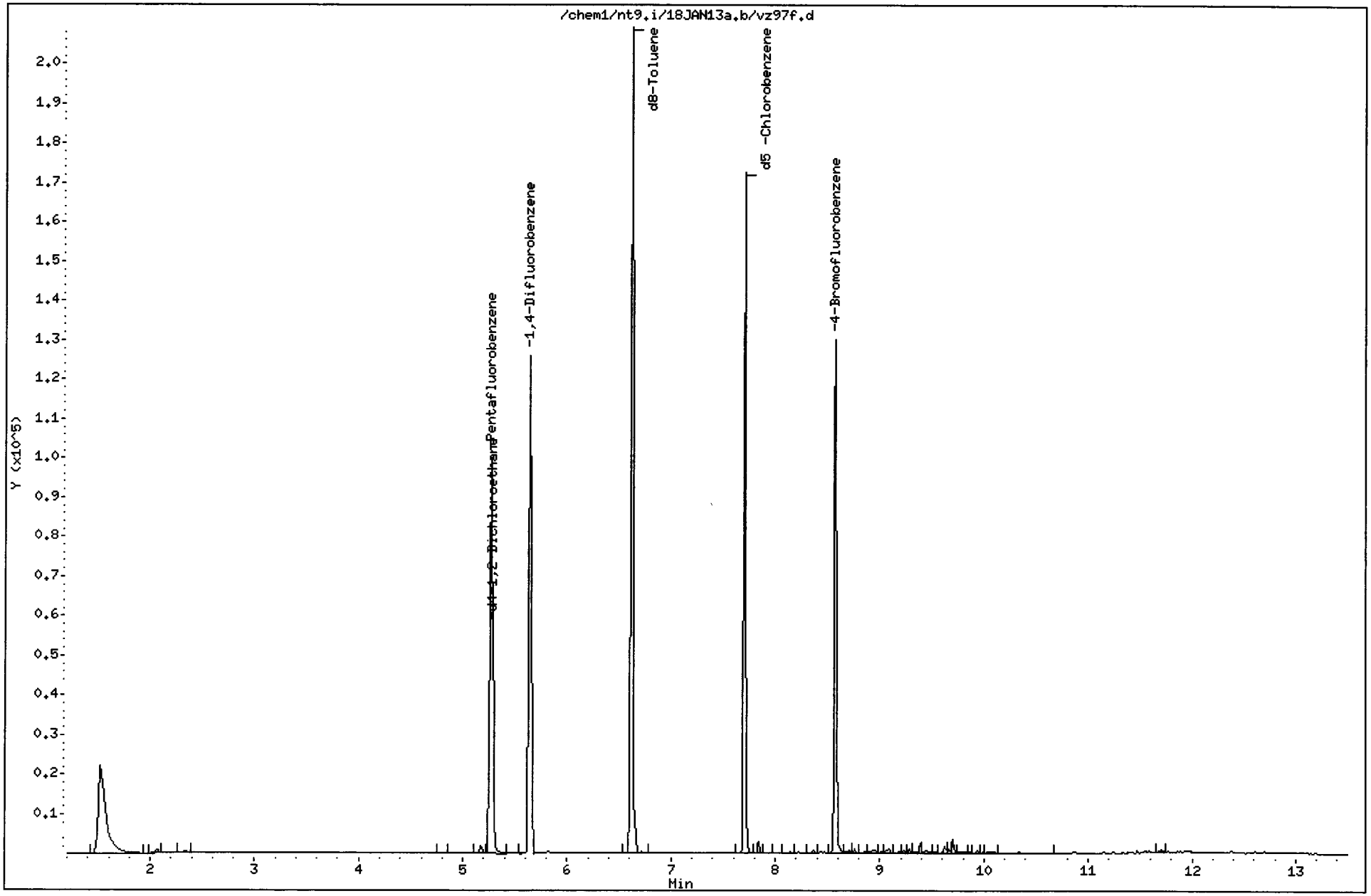
SURROGATE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 8 d4-1,2-Dichloroeth	100.00	106.13	106.13	75-125
$ 12 d8-Toluene	100.00	103.96	103.96	75-125
$ 19 4-Bromofluorobenze	100.00	98.788	98.79	75-125

Data File: /chem1/nt9.i/18JAN13a.b/vz97f.d
Date : 18-JAN-2013 22:01
Client ID: CSIA20130109-006B
Sample Info: VZ97F,10,23.435,1,

Instrument: nt9.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS



VZ97F 88575

Data File: /chem1/nt9.i/18JAN13a.b/vz97f.d

Date : 18-JAN-2013 22:01

Client ID: CSIA20130109-006B

Instrument: nt9.i

Sample Info: VZ97F,10,23.435,1,

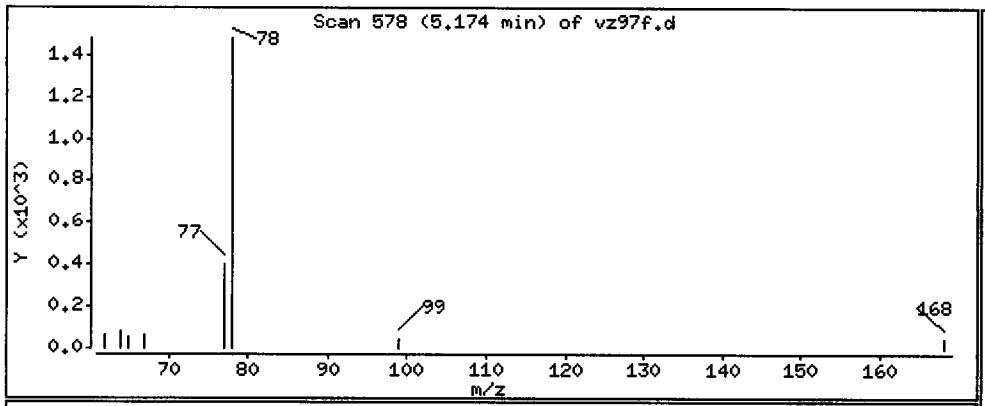
Operator: PC

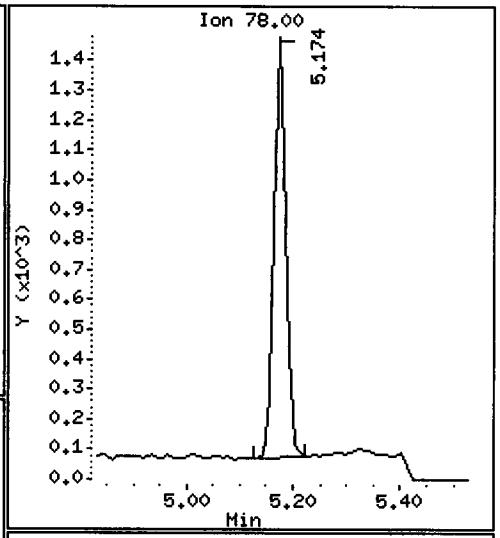
Column phase: RTXVMS

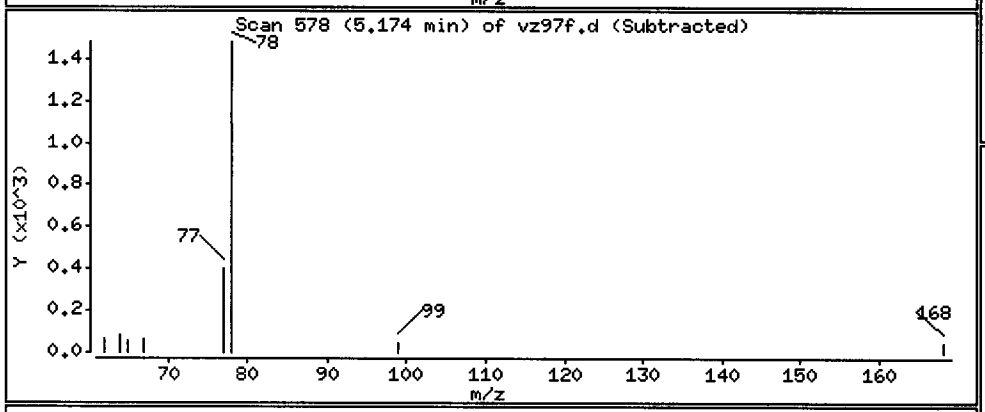
Column diameter: 0.18

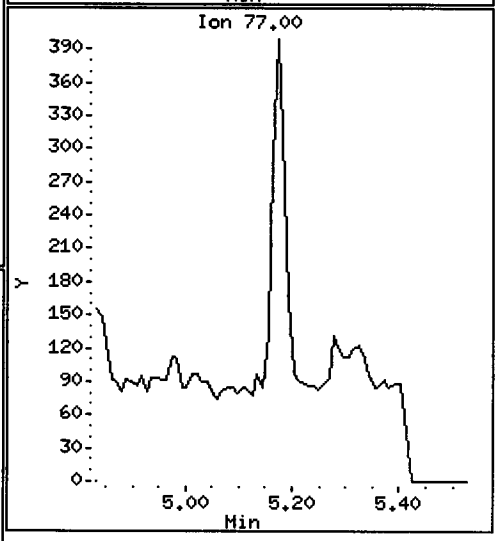
6 Benzene

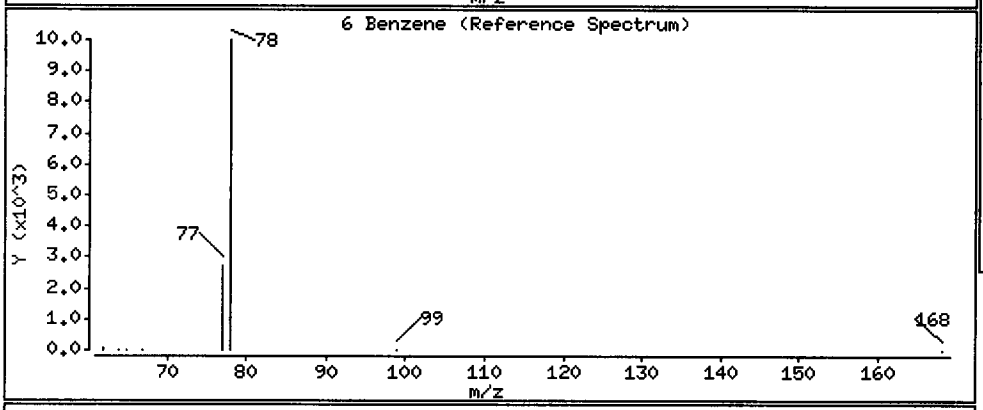
Concentration: 1.179 ug/Kg

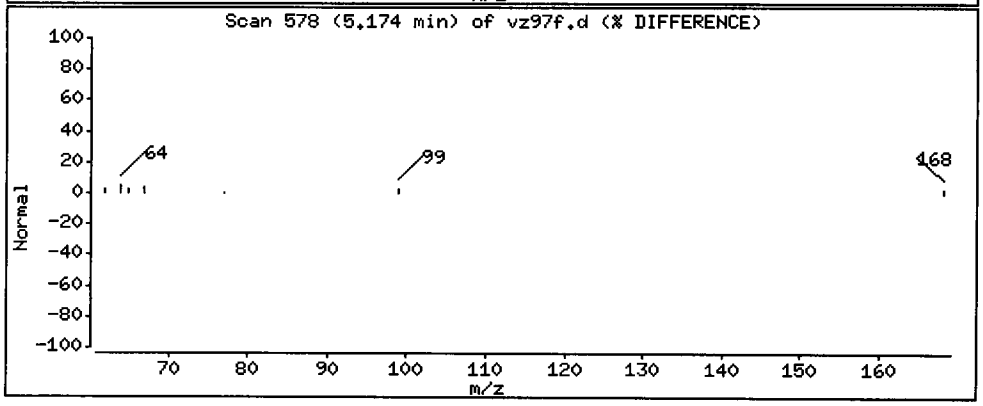












Data File: /chem1/nt9.i/18JAN13a.b/vz97f.d

Date : 18-JAN-2013 22:01

Client ID: CSIA20130109-006B

Instrument: nt9.i

Sample Info: VZ97F,10,23.435,1,

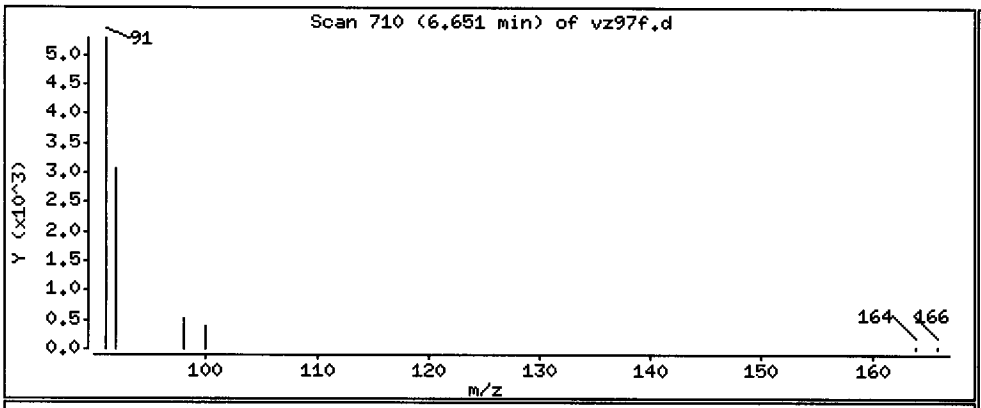
Operator: PC

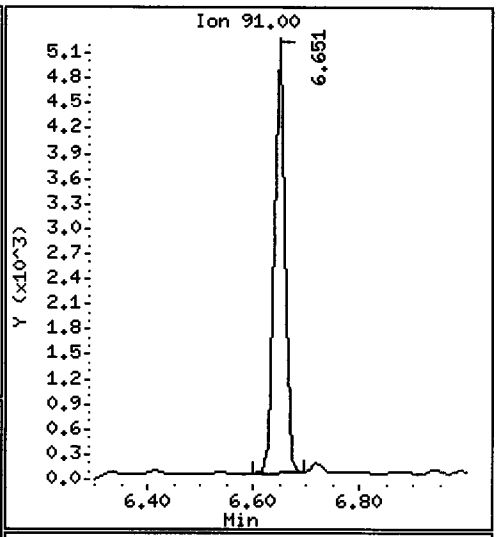
Column phase: RTXVMS

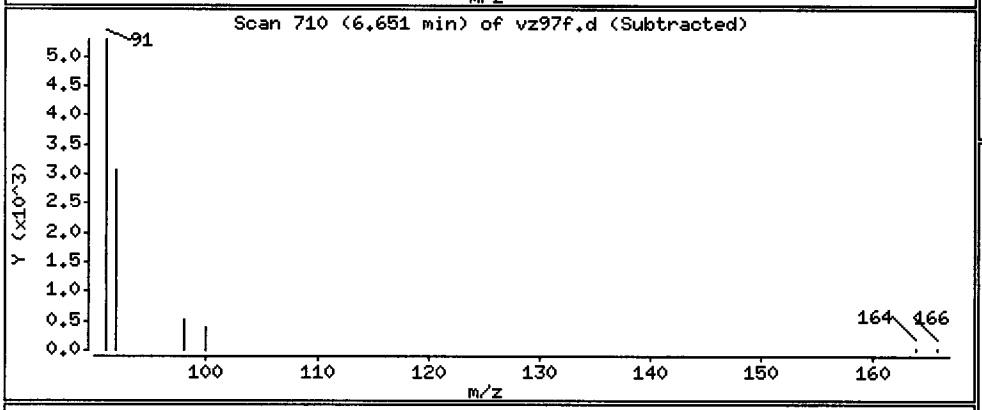
Column diameter: 0.18

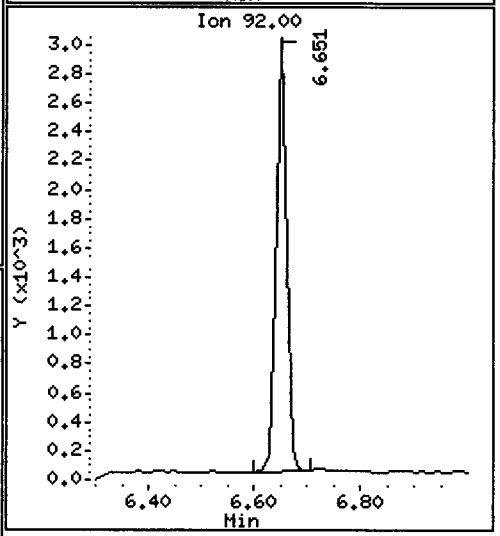
13 Toluene

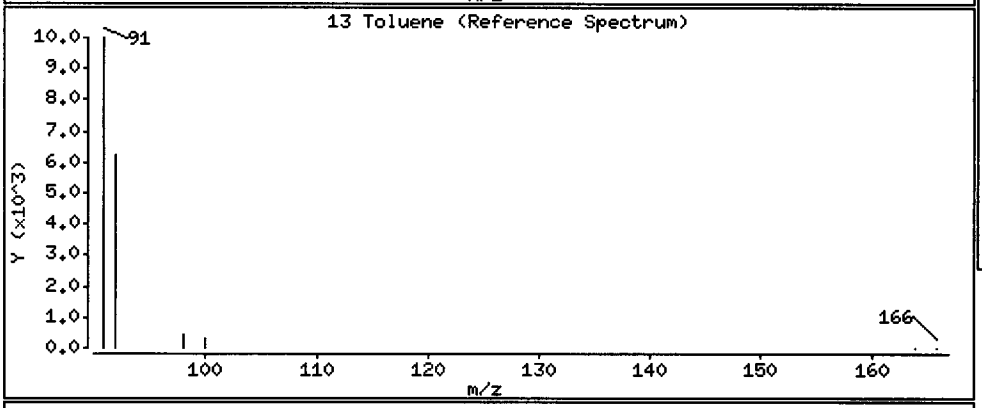
Concentration: 3.449 ug/Kg

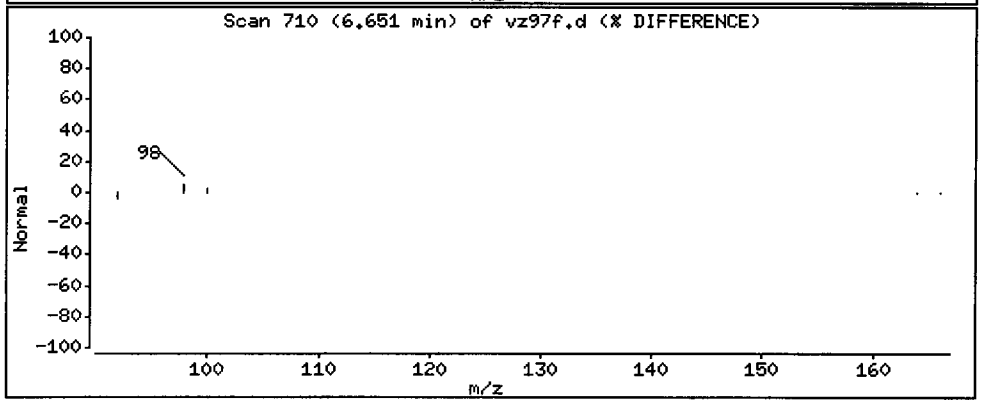












Data File: /chem1/nt9.i/18JAN13a.b/vz97f.d

Date : 18-JAN-2013 22:01

Client ID: CSIA20130109-006B

Instrument: nt9.i

Sample Info: VZ97F,10,23.435,1,

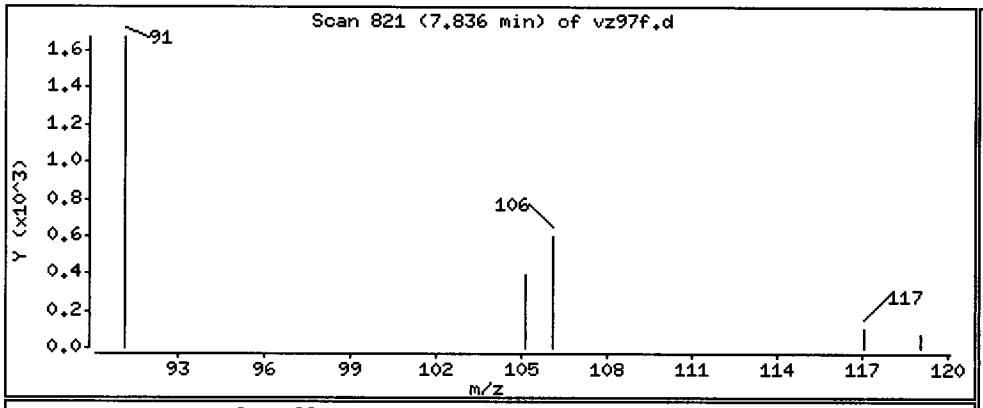
Operator: PC

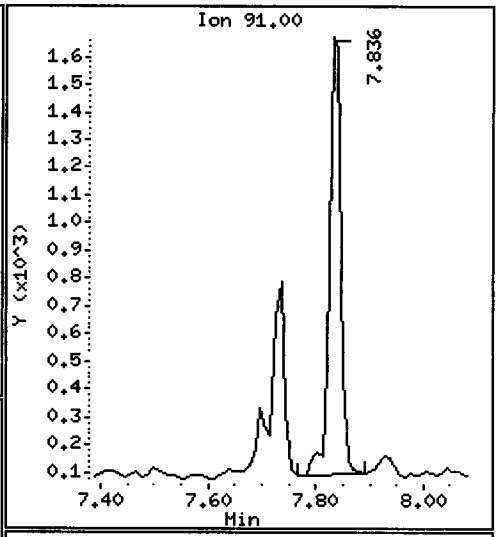
Column phase: RTXVMS

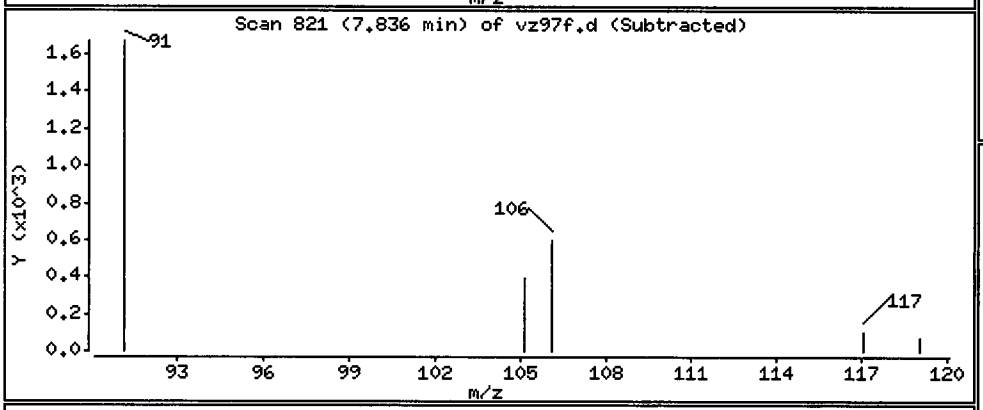
Column diameter: 0.18

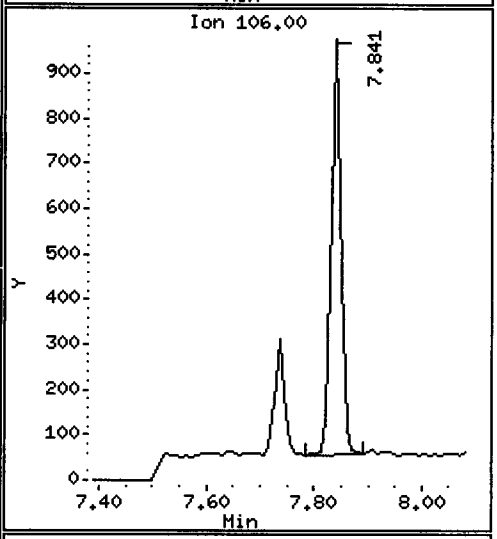
16 Ethyl Benzene

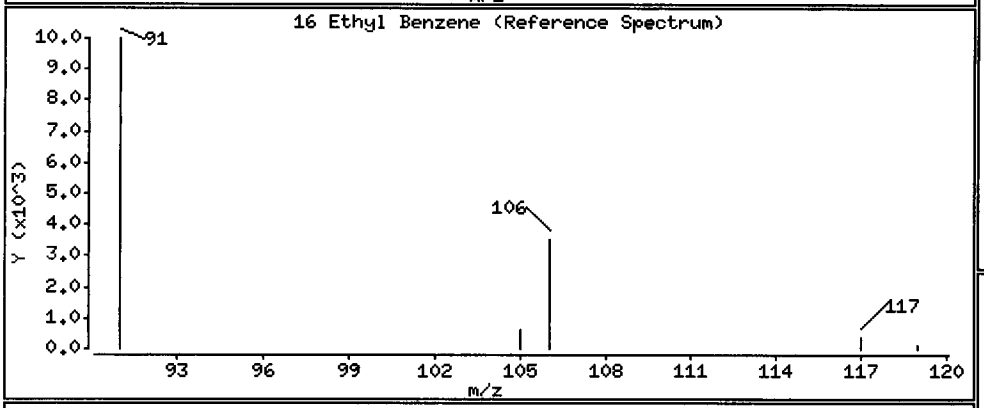
Concentration: 1.218 ug/Kg

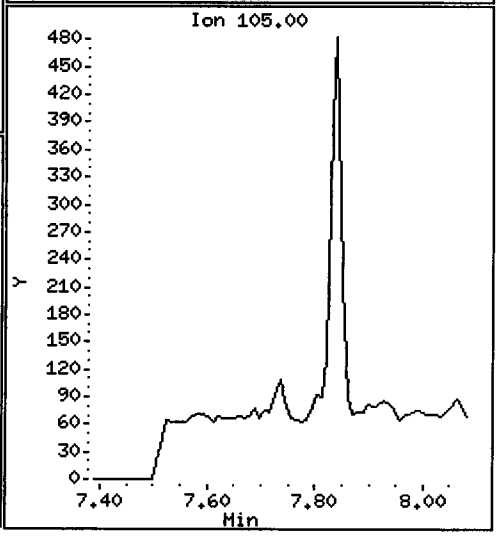


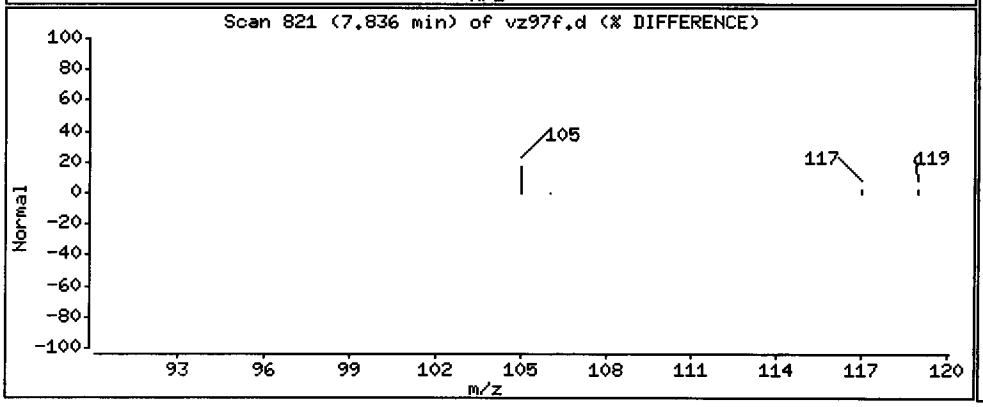












Data File: /chem1/nt9.i/18JAN13a.b/vz97f.d

Date : 18-JAN-2013 22:01

Client ID: CSIA20130109-006B

Instrument: nt9.i

Sample Info: VZ97F,10,23.435,1,

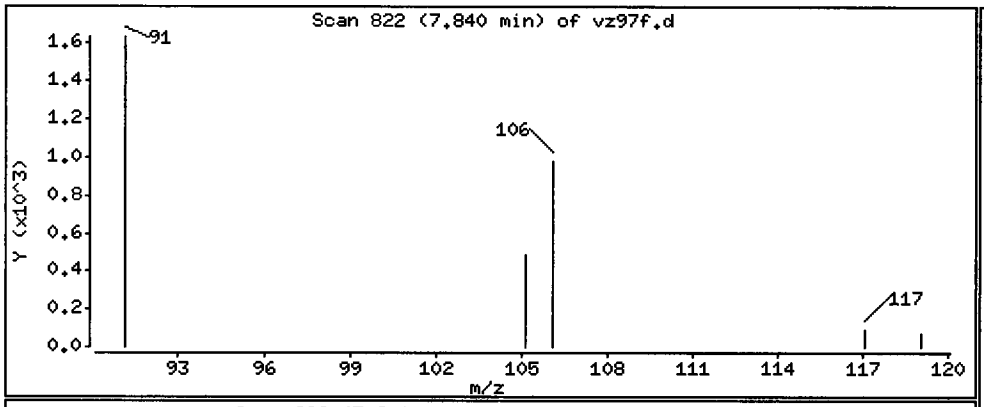
Operator: PC

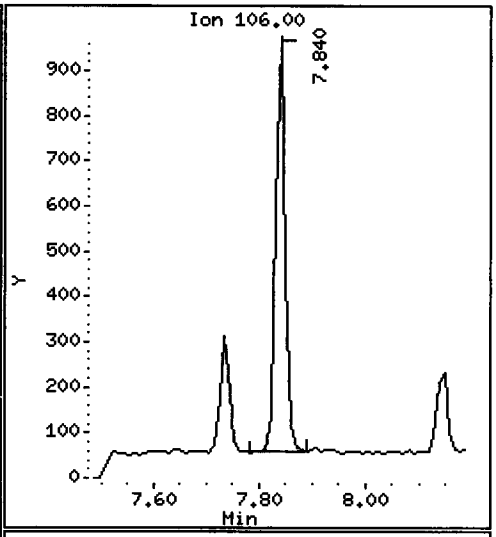
Column phase: RTXVMS

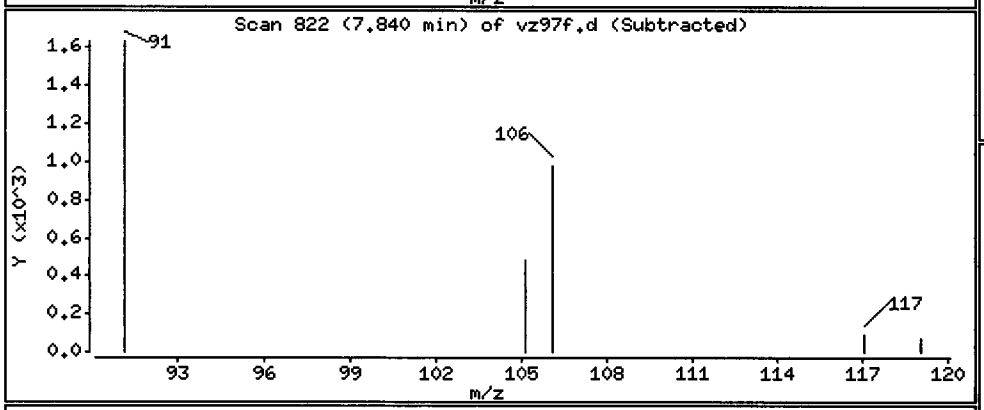
Column diameter: 0.18

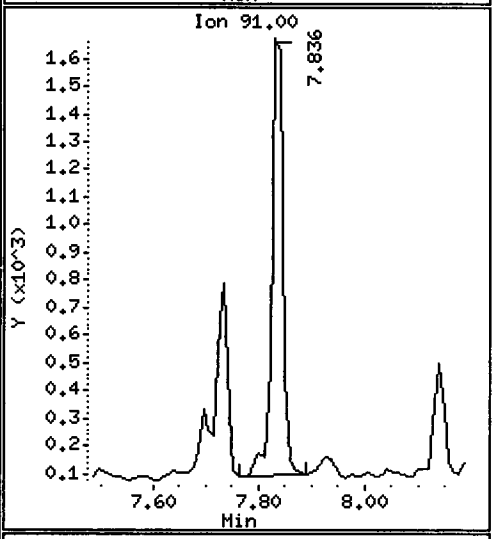
17 m,p xylene

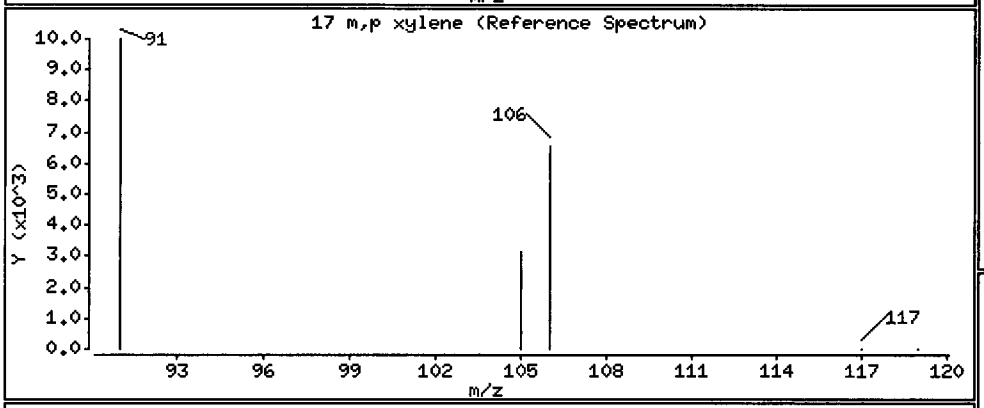
Concentration: 1.567 ug/Kg

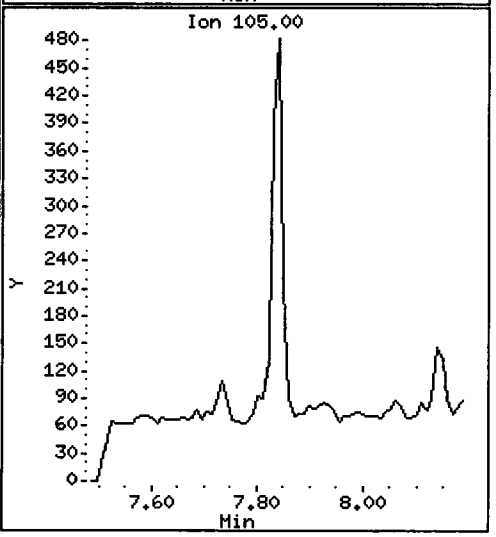


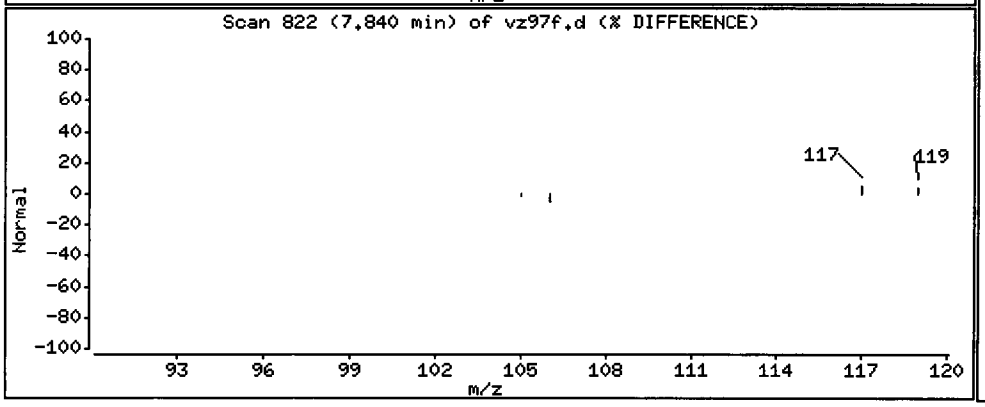












Data File: /chem1/nt9.i/18JAN13a.b/vz97f.d

Date : 18-JAN-2013 22:01

Client ID: CSIA20130109-006B

Instrument: nt9.i

Sample Info: VZ97F,10,23.435,1,

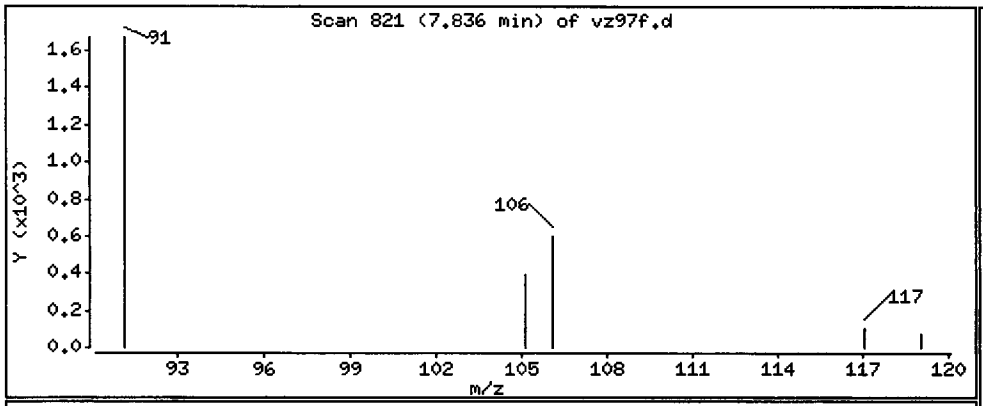
Operator: PC

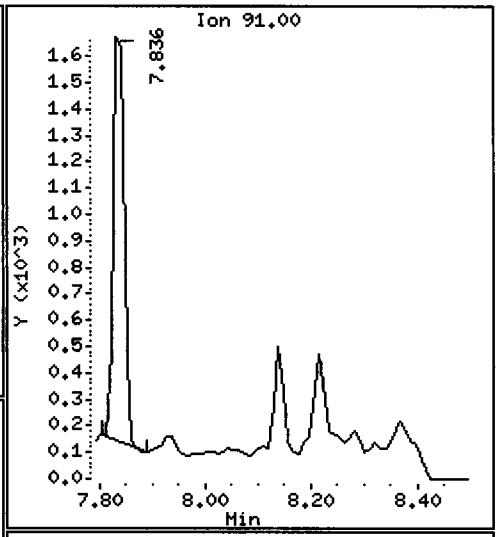
Column phase: RTXVMS

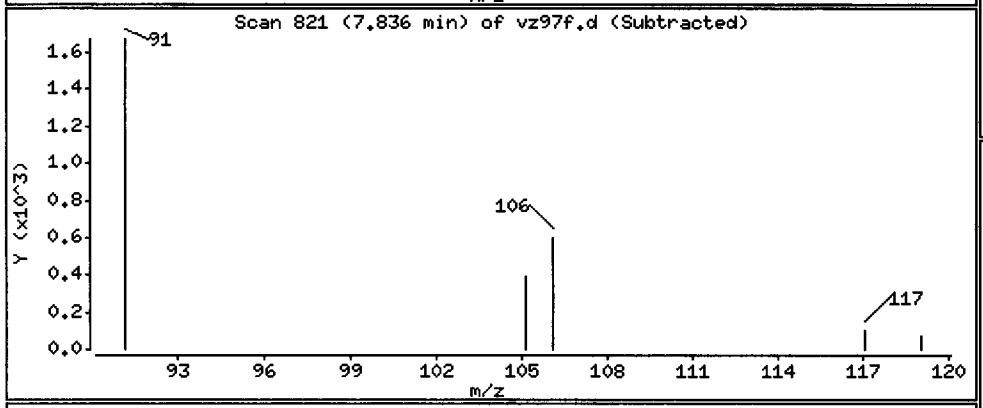
Column diameter: 0.18

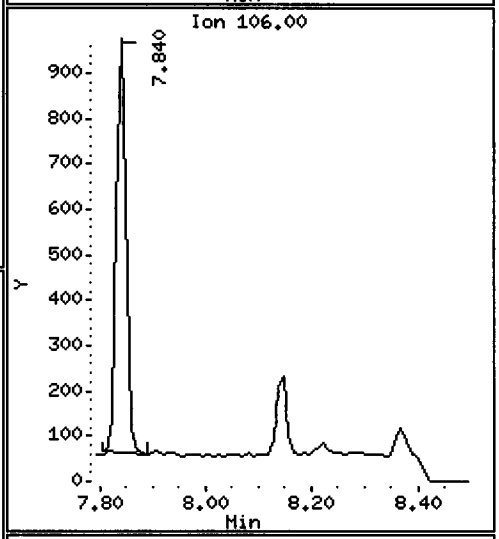
18 o-xylene

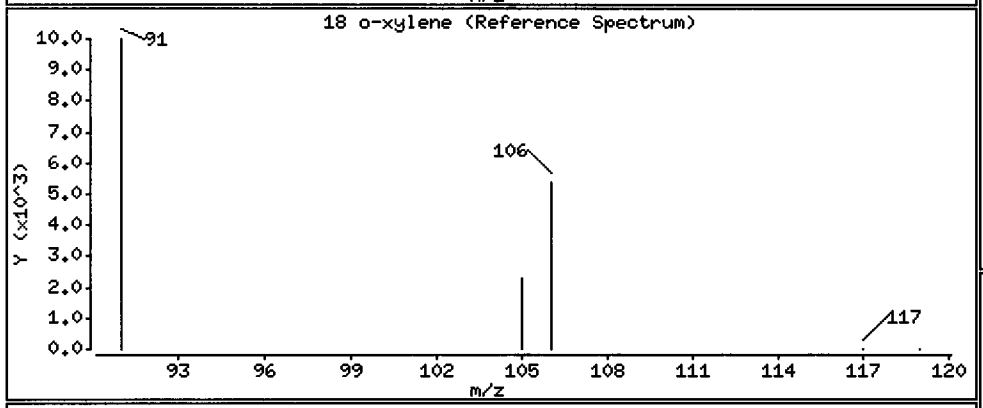
Concentration: 1.534 ug/Kg

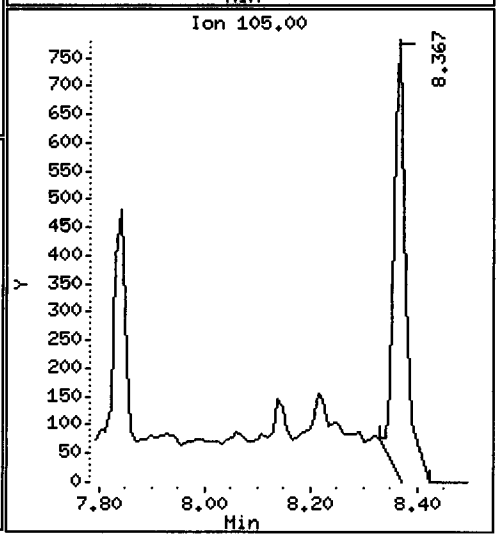


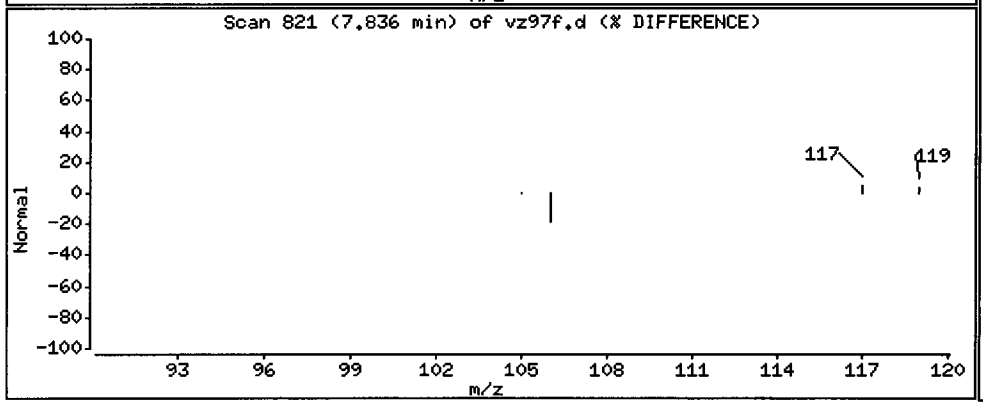












CO-ELUTION SUMMARY FOR FILE - vz97f.d

Lab ID: VZ97F, Method: sim011713.m, Instrument: nt9.i, Date: 18-JAN-2013

RT	CO-ELUTION COMPOUNDS

PC 1/21/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/18JAN13a.b/vz97g.d
Lab Smp Id: VZ97G Client Smp ID: CSIA20130109-007B
Inj Date : 18-JAN-2013 22:25
Operator : PC Inst ID: nt9.i
Smp Info : VZ97G,10,21.028,1,
Misc Info : 13-1088
Comment :
Method : /chem1/nt9.i/18JAN13a.b/sim011713.m
Meth Date : 21-Jan-2013 16:16 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: btex.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	100.00000	Sample Amount (mg)
M	0.00000	Moisture (%)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	CONCENTRATIONS FINAL (ug/Kg)
	6 Benzene	78	5.173	5.180	(0.917)	3570	19.3430	1.934
*	7 Pentafluorobenzene	168	5.267	5.268	(1.000)	91247	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.287	5.286	(1.004)	44235	1049.56	104.96
*	11 1,4-Difluorobenzene	114	5.643	5.642	(1.000)	152260	1000.00	
$	12 d8-Toluene	98	6.619	6.618	(1.173)	165470	1040.54	104.05
	13 Toluene	91	6.651	6.651	(0.863)	14423	73.4157	7.342
*	15 d5 -Chlorobenzene	117	7.706	7.706	(1.000)	162946	1000.00	
	16 Ethyl Benzene	91	7.837	7.734	(1.017)	3228	16.7419	1.674
	17 m,p xylene	106	7.840	7.840	(1.017)	1668	23.0143	2.301
	18 o-xylene	91	7.836	8.140	(1.017)	3087	22.6154	2.262(Q)
$	19 4-Bromofluorobenzene	174	8.575	8.572	(1.113)	57157	1001.97	100.20

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: vz97g.d
Lab Smp Id: VZ97G
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-1088

Calibration Date: 18-JAN-2013
Calibration Time: 17:40
Client Smp ID: CSIA20130109-007B
Level: MED
Sample Type: Soil

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	91247	-20.39
11 1,4-Difluorobenze	202370	101185	404740	152260	-24.76
15 d5 -Chlorobenzene	226394	113197	452788	162946	-28.03

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	-0.02
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	0.02
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	0.01

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA
Client SDG: VZ97
Sample Matrix: SOLID
Fraction: VOA
Lab Smp Id: VZ97G
Client Smp ID: CSIA20130109-007B
Level: MED
Operator: PC
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: special.spk
Quant Type: ISTD
Sublist File: btex.sub
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-1088

SURROGATE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 8 d4-1,2-Dichloroeth	100.00	104.96	104.96	75-125
$ 12 d8-Toluene	100.00	104.05	104.05	75-125
$ 19 4-Bromofluorobenze	100.00	100.20	100.20	75-125

Data File: /chem1/nt9.i/18JAN13a.b/vz97g.d

Date : 18-JAN-2013 22:25

Client ID: CSIA20130109-007B

Sample Info: VZ97G,10,21.028,1,

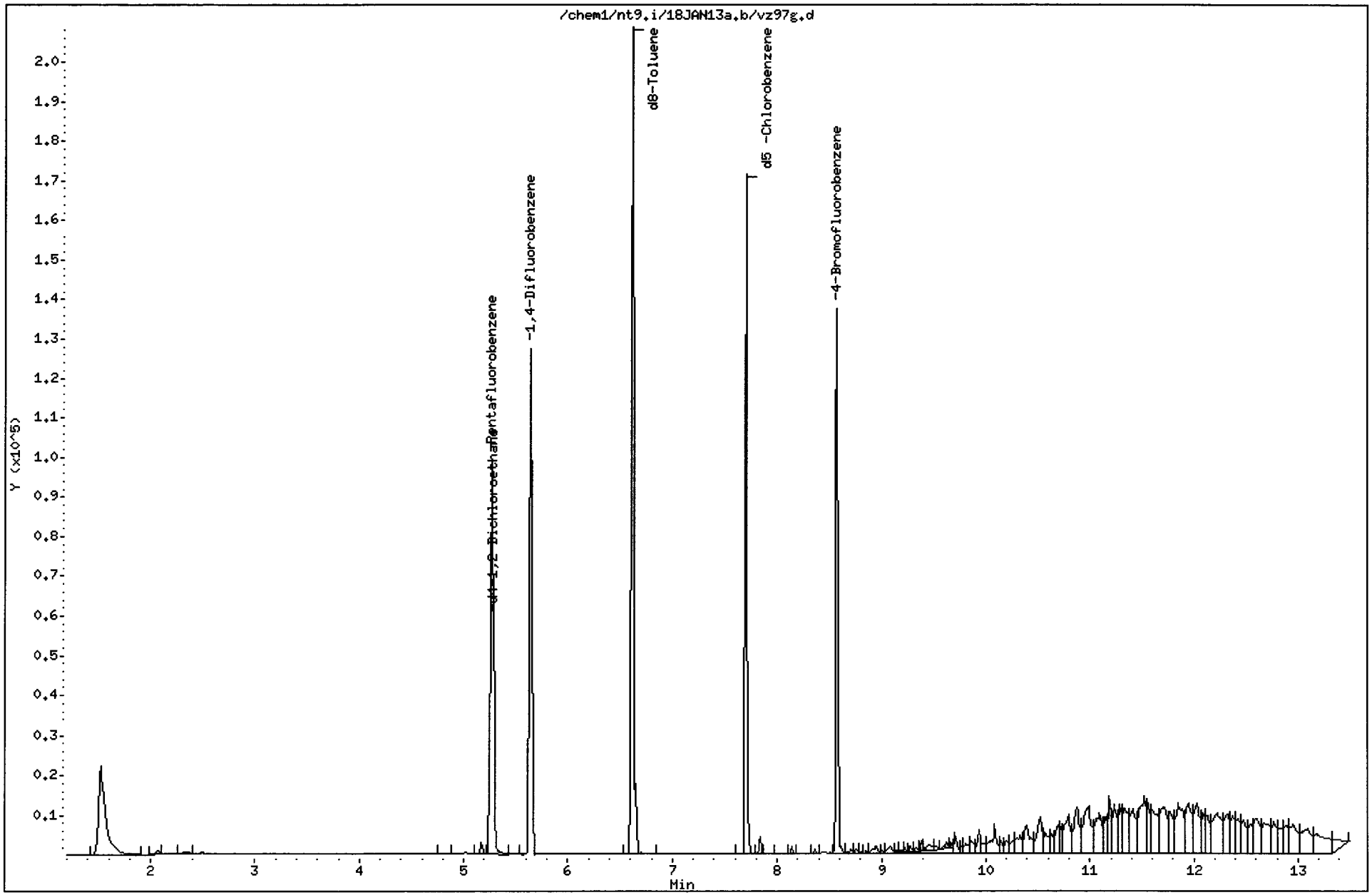
Column phase: RTXVMS

Instrument: nt9.i

Operator: PC

Column diameter: 0.18

VZ97.D 08SEP13



Data File: /chem1/nt9.i/18JAN13a.b/vz97g.d

Date : 18-JAN-2013 22:25

Client ID: CSIA20130109-007B

Instrument: nt9.i

Sample Info: VZ97G,10,21.028,1,

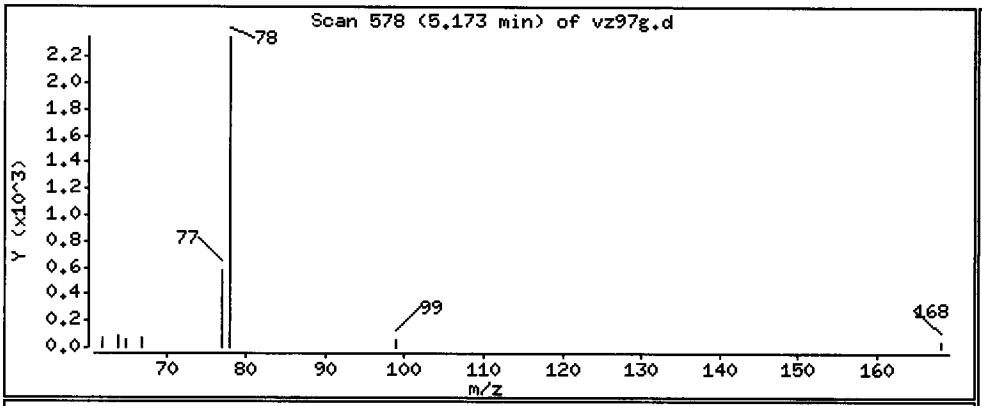
Operator: PC

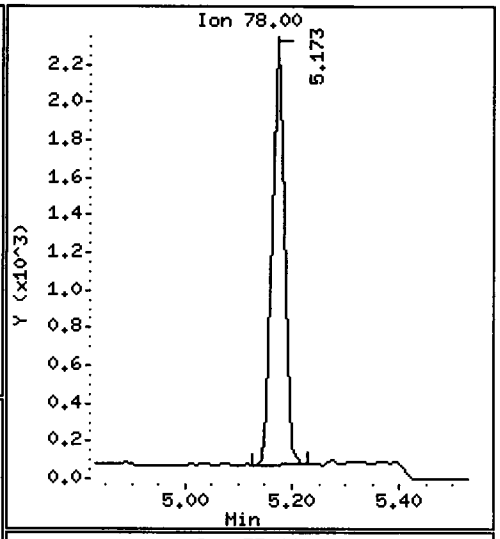
Column phase: RTXVMS

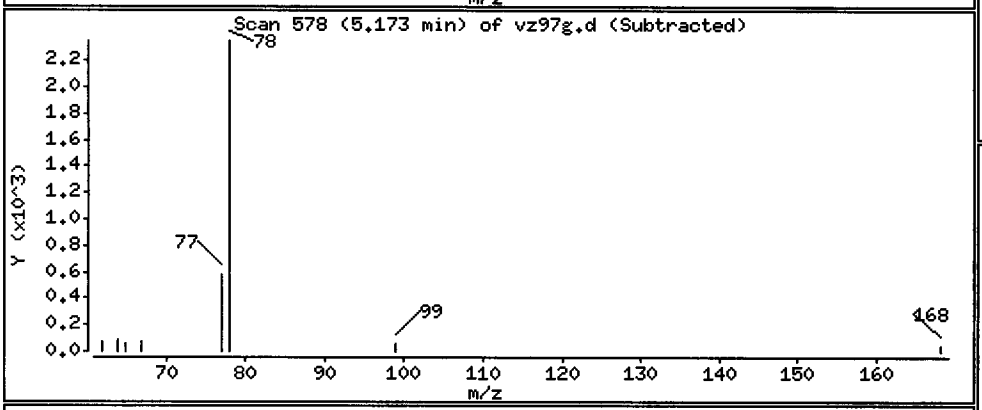
Column diameter: 0.18

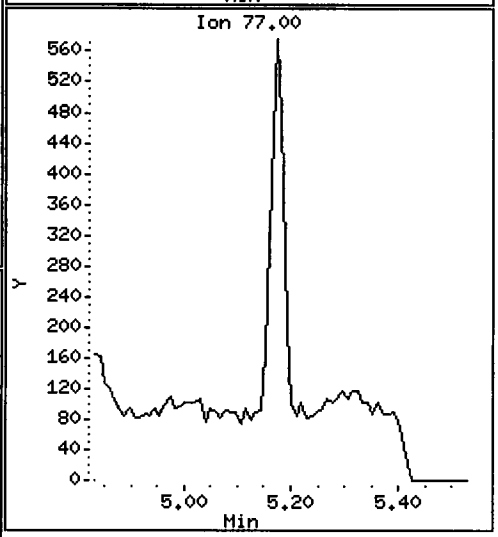
6 Benzene

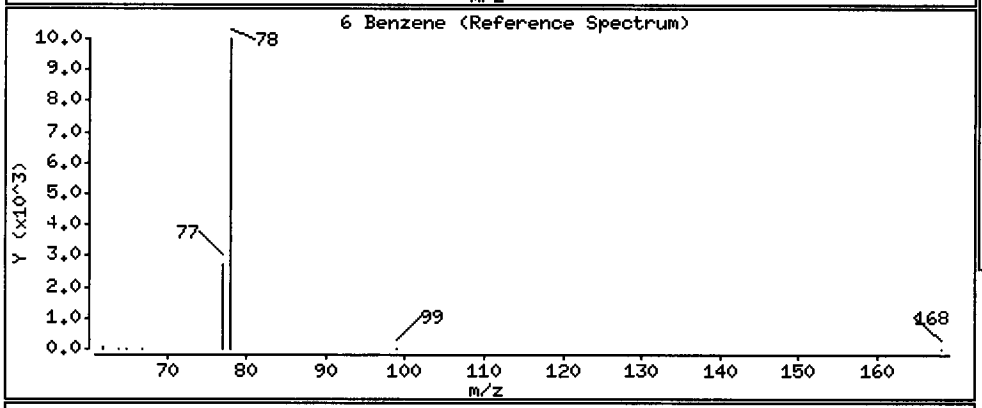
Concentration: 1.934 ug/Kg

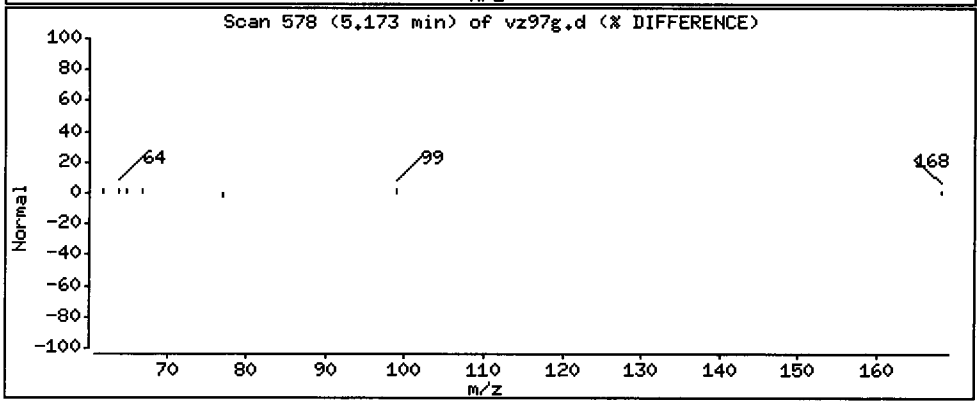












Data File: /chem1/nt9.i/18JAN13a.b/vz97g.d

Date : 18-JAN-2013 22:25

Client ID: CSIA20130109-007B

Instrument: nt9.i

Sample Info: VZ97G,10,21.028,1,

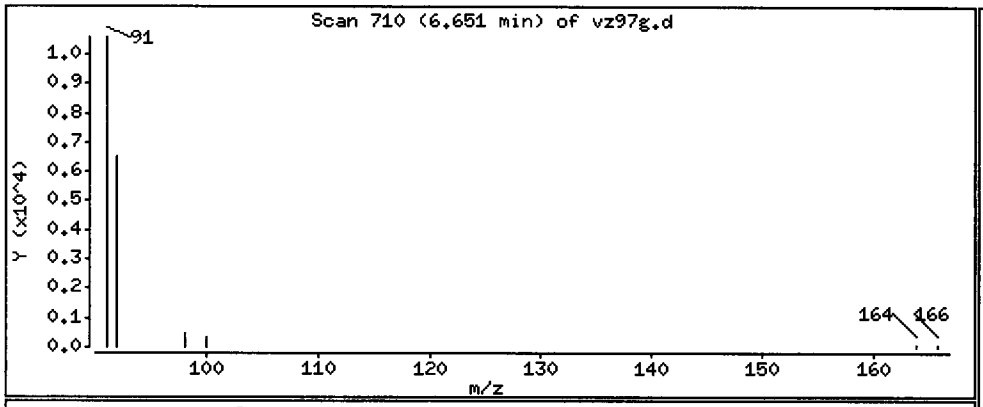
Operator: PC

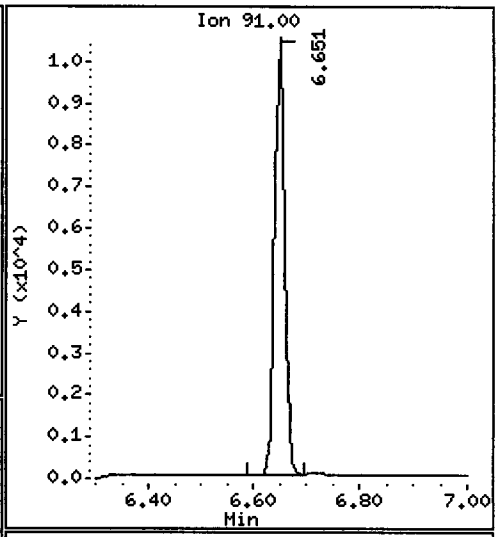
Column phase: RTXVMS

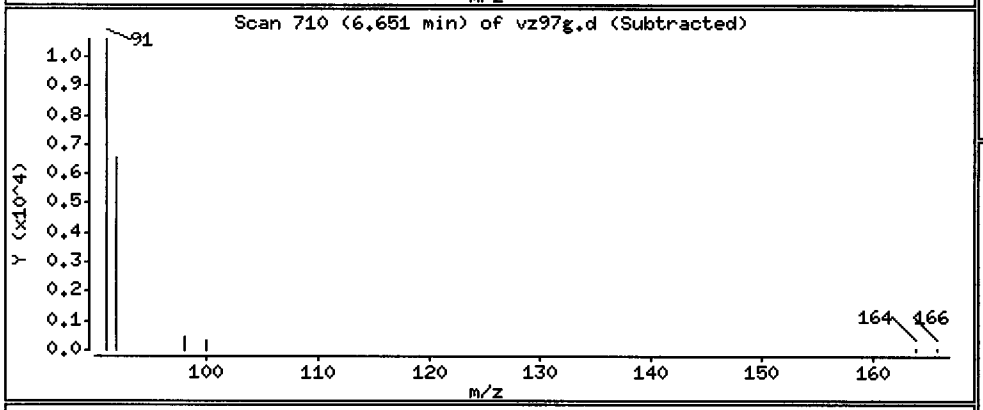
Column diameter: 0.18

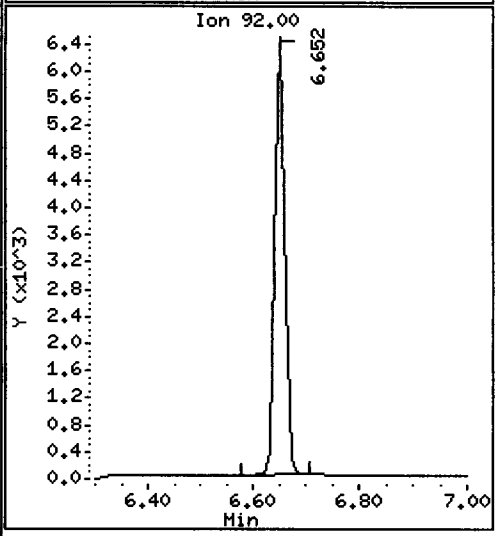
13 Toluene

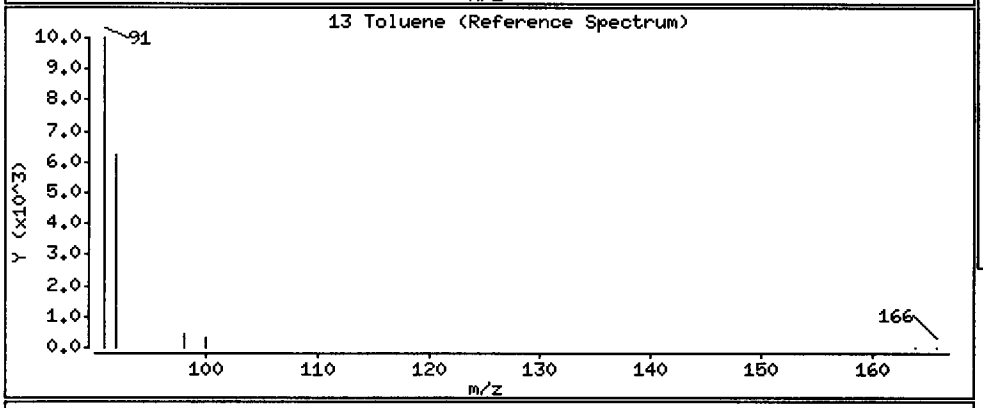
Concentration: 7.342 ug/Kg

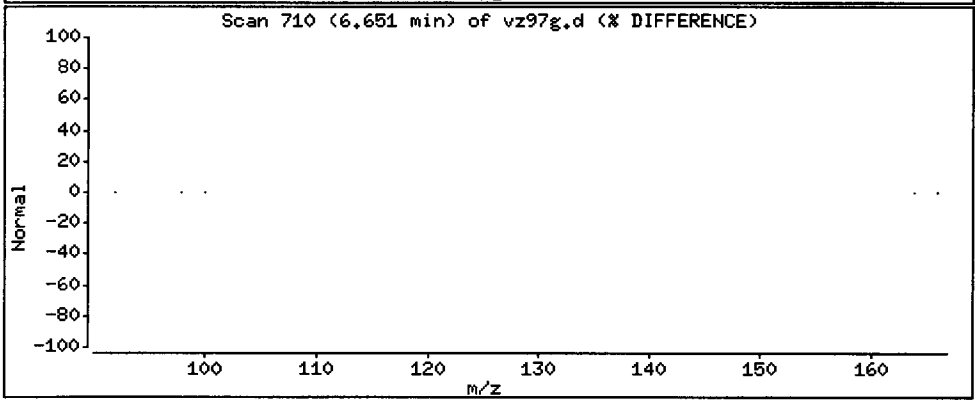












Data File: /chem1/nt9.i/18JAN13a.b/vz97g.d

Date : 18-JAN-2013 22:25

Client ID: CSIA20130109-007B

Instrument: nt9.i

Sample Info: VZ97G,10,21.028,1,

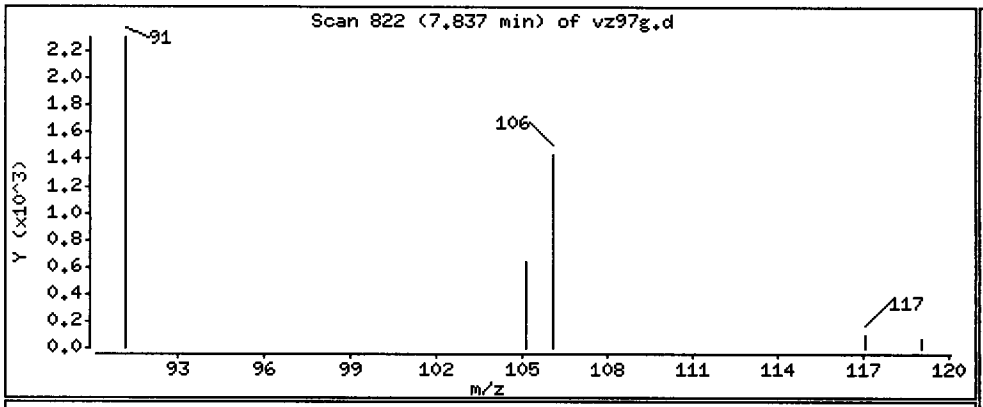
Operator: PC

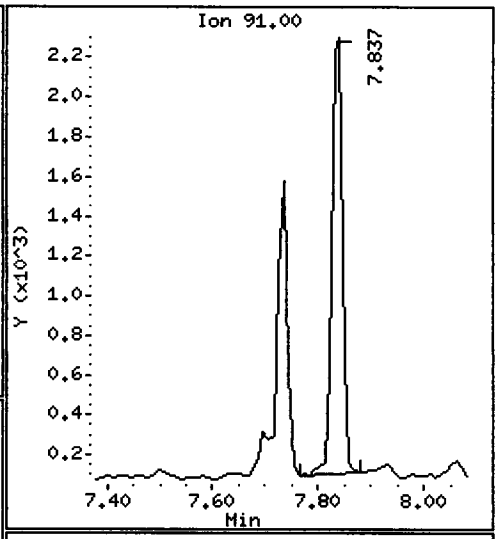
Column phase: RTXVMS

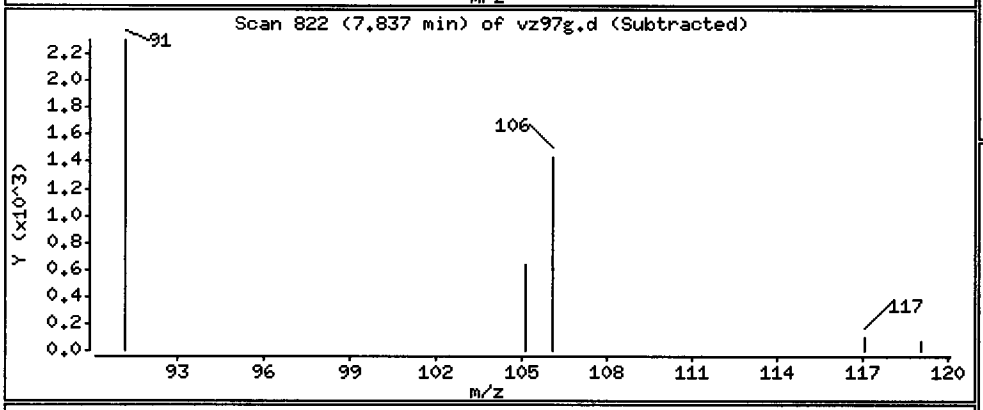
Column diameter: 0.18

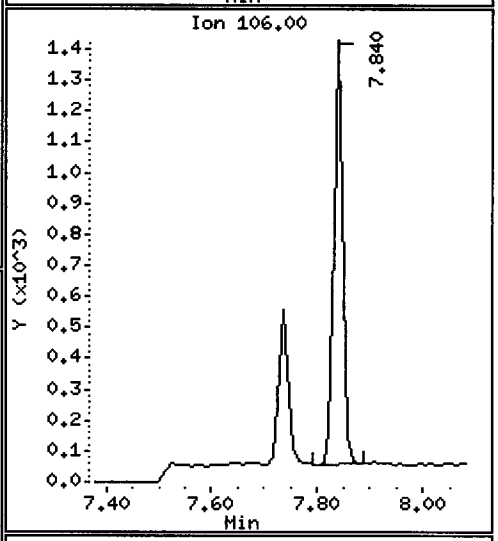
16 Ethyl Benzene

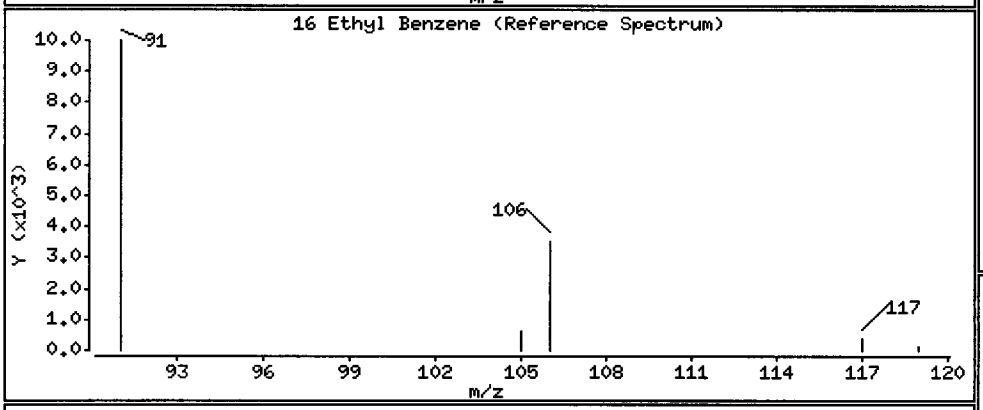
Concentration: 1.674 ug/Kg

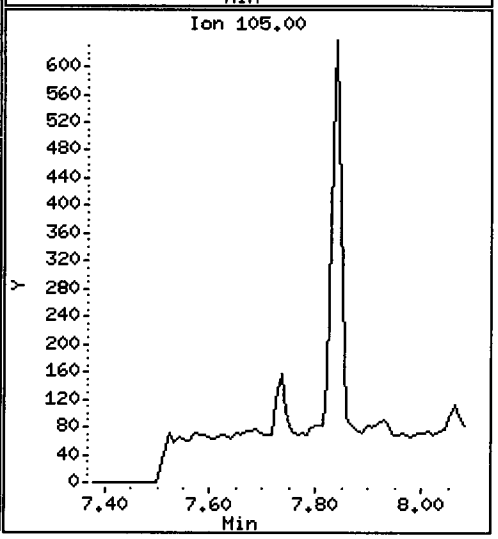


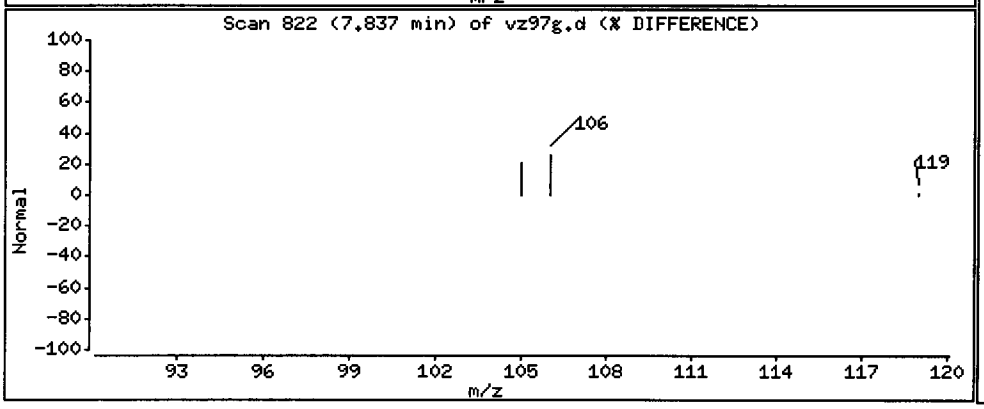












Data File: /chem1/nt9.i/18JAN13a.b/vz97g.d

Date : 18-JAN-2013 22:25

Client ID: CSIA20130109-007B

Instrument: nt9.i

Sample Info: VZ97G,10,21.028,1,

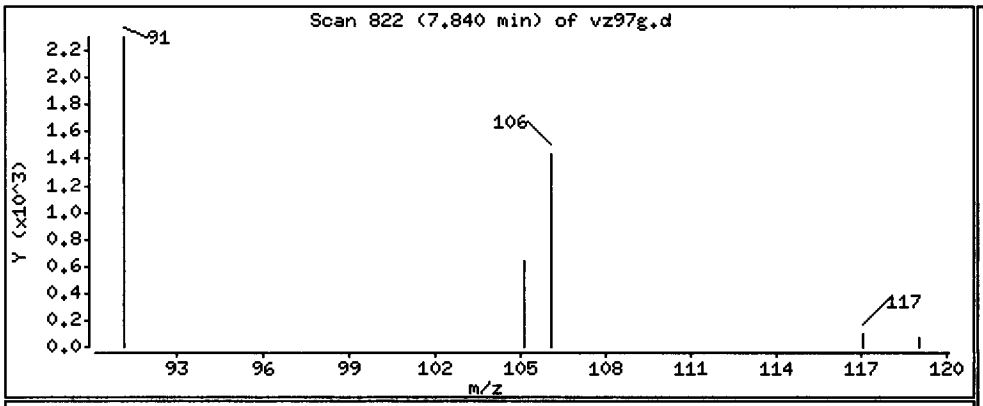
Operator: PC

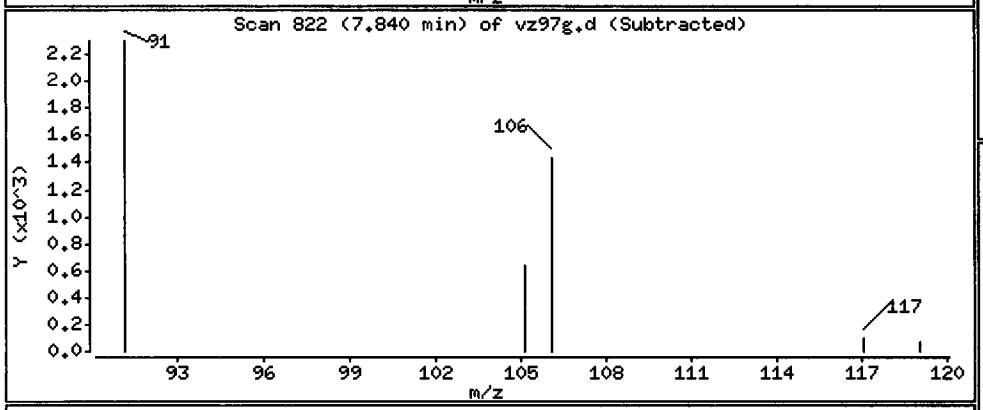
Column phase: RTXVMS

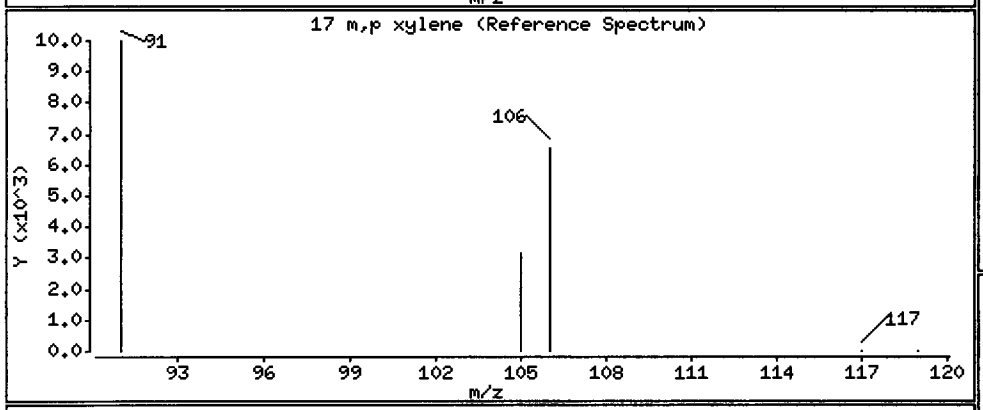
Column diameter: 0.18

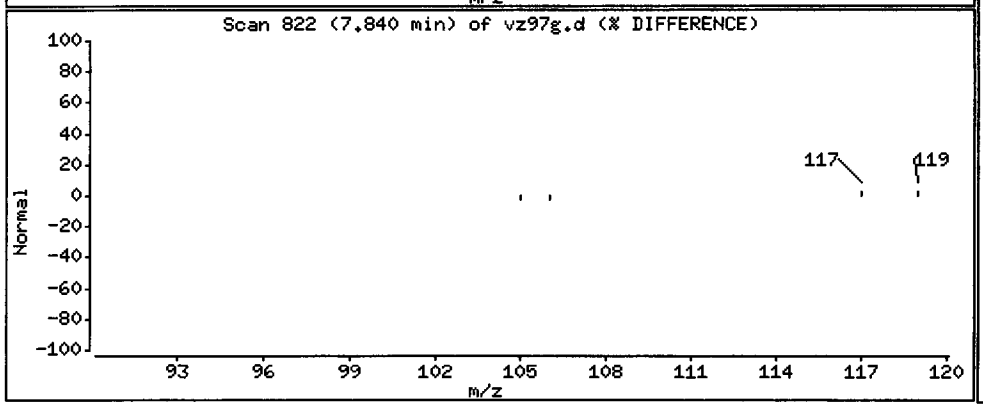
17 m,p xylene

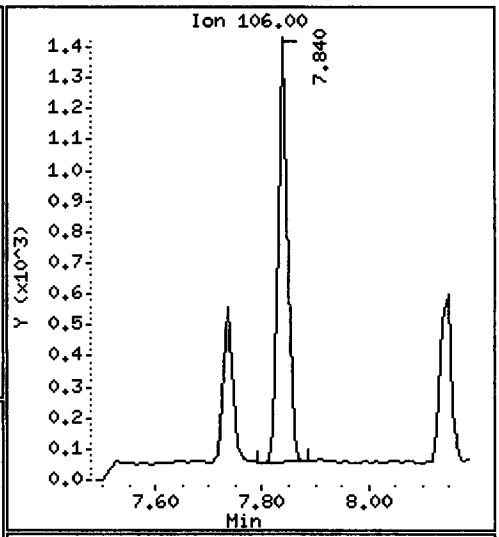
Concentration: 2.301 ug/Kg

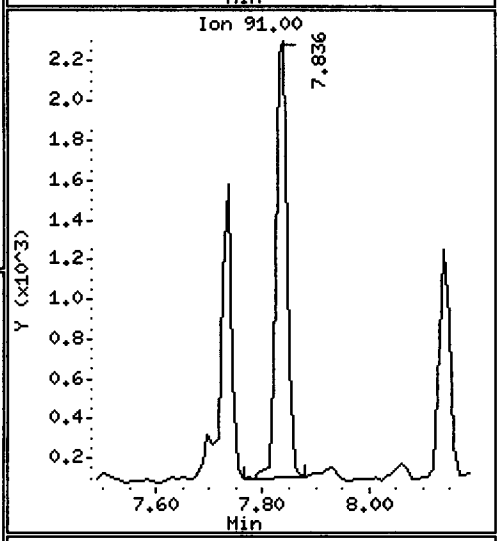


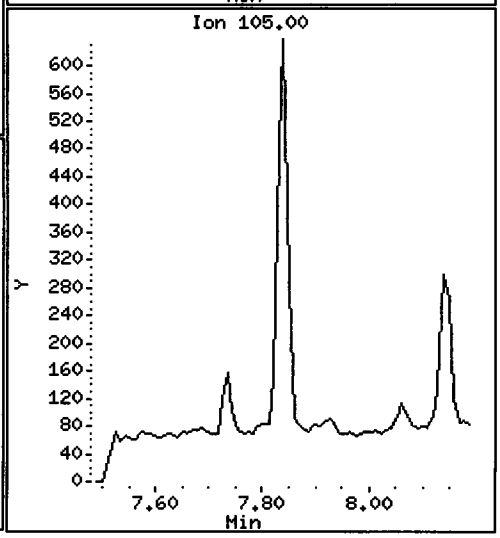












Data File: /chem1/nt9.i/18JAN13a.b/vz97g.d

Date : 18-JAN-2013 22:25

Client ID: CSIA20130109-007B

Instrument: nt9.i

Sample Info: VZ97G,10,21.028,1,

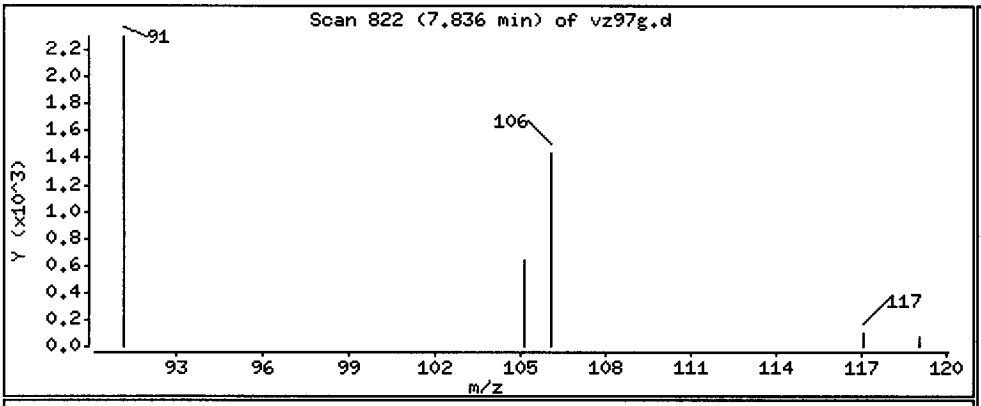
Operator: PC

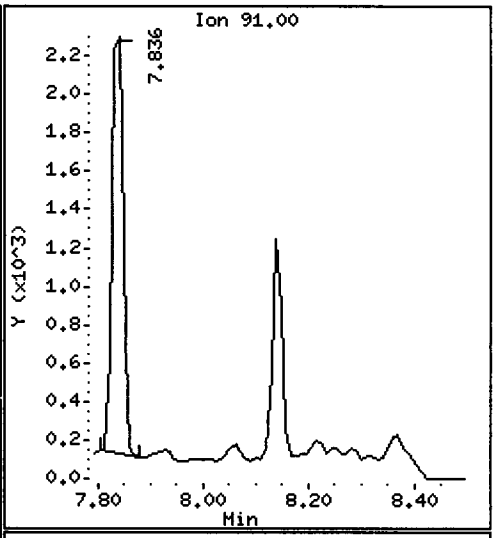
Column phase: RTXVMS

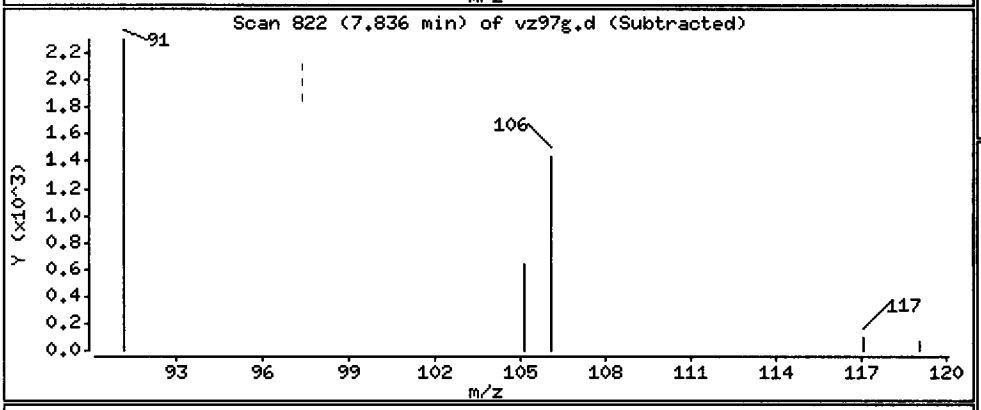
Column diameter: 0.18

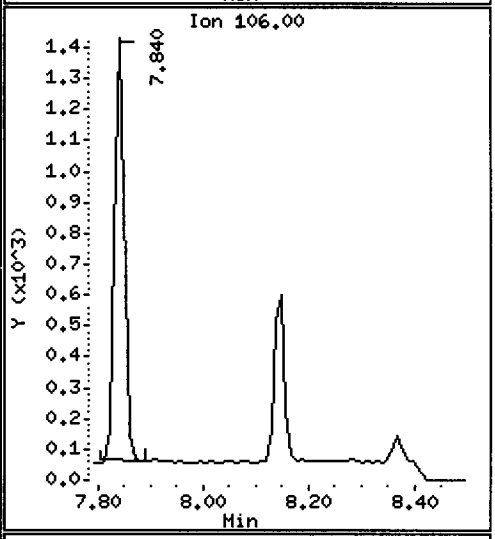
18 o-xylene

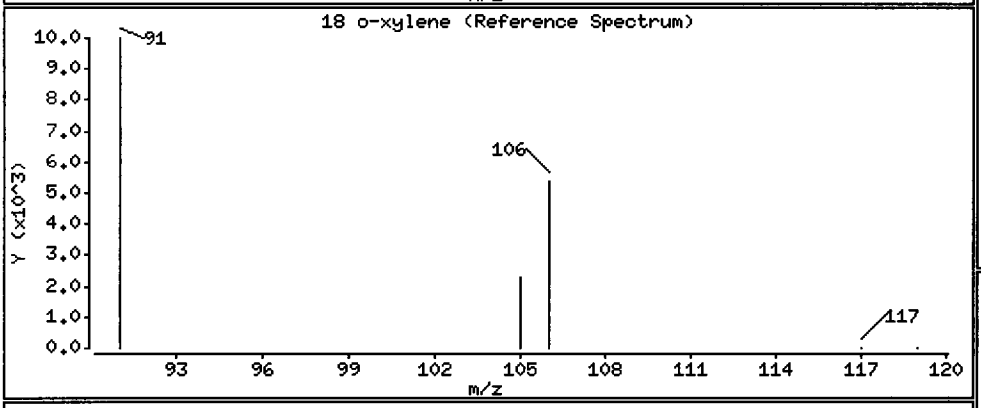
Concentration: 2.262 ug/Kg

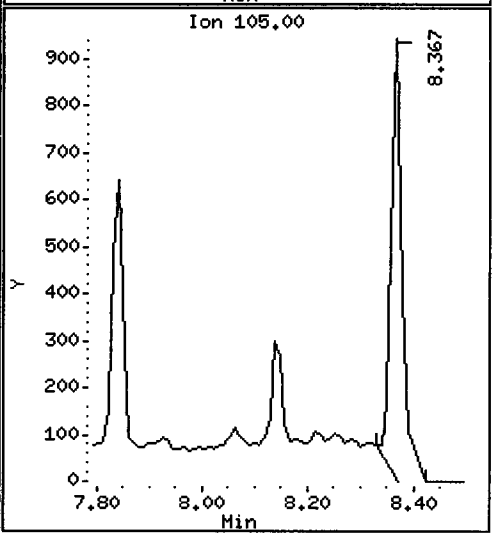


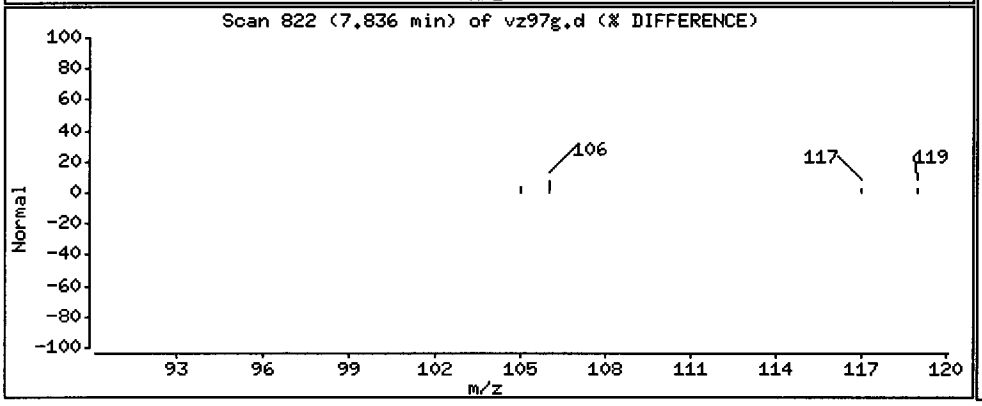












CO-ELUTION SUMMARY FOR FILE - vz97g.d

Lab ID: VZ97G, Method: sim011713.m, Instrument: nt9.i, Date: 18-JAN-2013

RT	CO-ELUTION COMPOUNDS

PC 1/21/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/18JAN13a.b/vz97h.d
Lab Smp Id: VZ97H Client Smp ID: CSIA20130109-008S+3
Inj Date : 18-JAN-2013 22:49
Operator : PC Inst ID: nt9.i
Smp Info : VZ97H,10,22.456,1,
Misc Info : 13-1089
Comment :
Method : /chem1/nt9.i/18JAN13a.b/sim011713.m
Meth Date : 21-Jan-2013 16:16 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: btex.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	100.00000	Sample Amount (mg)
M	0.00000	Moisture (%)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	CONCENTRATIONS FINAL (ug/Kg)
	6 Benzene	78	5.174	5.180	(0.917)	2571	12.7868	1.279
*	7 Pentafluorobenzene	168	5.268	5.268	(1.000)	97331	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.287	5.286	(1.004)	46240	1028.55	102.85
*	11 1,4-Difluorobenzene	114	5.642	5.642	(1.000)	165873	1000.00	
$	12 d8-Toluene	98	6.619	6.618	(1.173)	180811	1043.70	104.37
	13 Toluene	91	6.651	6.651	(0.863)	8665	39.7829	3.978
*	15 d5 -Chlorobenzene	117	7.706	7.706	(1.000)	180659	1000.00	
	16 Ethyl Benzene	91	7.836	7.734	(1.017)	1935	~~9.05400~~	~~0.9054(Q)~~
	17 m,p xylene	106	7.840	7.840	(1.017)	1051	13.0821	1.308
	18 o-xylene	91	7.836	8.140	(1.017)	1808	~~11.9492~~	~~1.195~~
$	19 4-Bromofluorobenzene	174	8.574	8.572	(1.113)	65185	1030.66	103.07

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: vz97h.d
Lab Smp Id: VZ97H
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-1089

Calibration Date: 18-JAN-2013
Calibration Time: 17:40
Client Smp ID: CSIA20130109-008S+3
Level: MED
Sample Type: Soil

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	97331	-15.08
11 1,4-Difluorobenze	202370	101185	404740	165873	-18.03
15 d5 -Chlorobenzene	226394	113197	452788	180659	-20.20

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	-0.01
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	0.00
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	0.00

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA
Client SDG: VZ97
Sample Matrix: SOLID
Fraction: VOA
Lab Smp Id: VZ97H
Client Smp ID: CSIA20130109-008S+3
Level: MED
Operator: PC
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: special.spk
Quant Type: ISTD
Sublist File: btex.sub
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-1089

SURROGATE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 8 d4-1,2-Dichloroeth	100.00	102.85	102.85	75-125
$ 12 d8-Toluene	100.00	104.37	104.37	75-125
$ 19 4-Bromofluorobenze	100.00	103.07	103.07	75-125

Data File: /chem1/nt9.i/18JAN13a.b/vz97h.d

Date : 18-JAN-2013 22:49

Client ID: CSIA20130109-008S+3

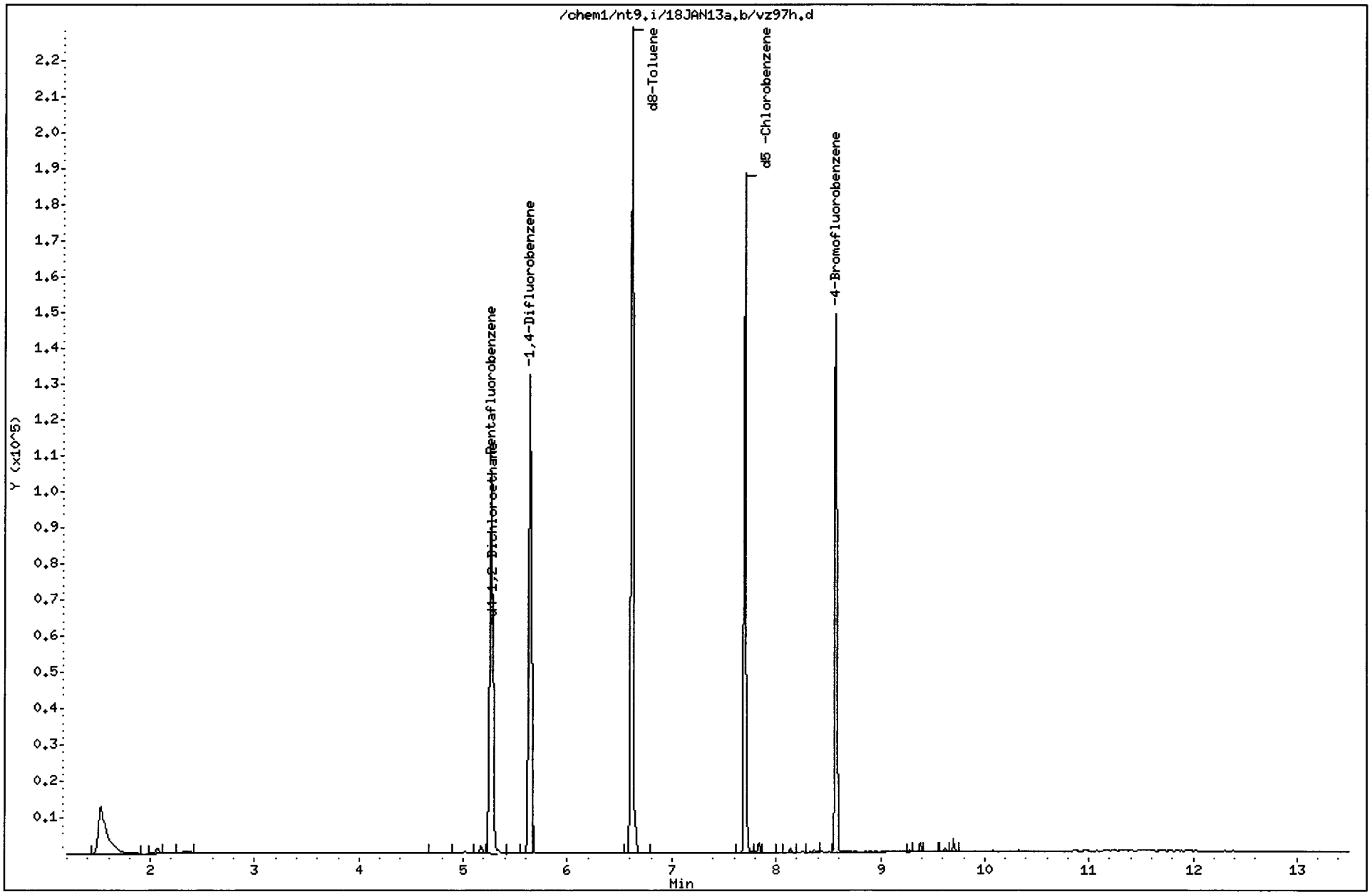
Sample Info: VZ97H,10,22.456,1,

Column phase: RTXVMS

Instrument: nt9.i

Operator: PC

Column diameter: 0.18



Data File: /chem1/nt9.i/18JAN13a.b/vz97h.d

Date : 18-JAN-2013 22:49

Client ID: CSIA20130109-008S+3

Instrument: nt9.i

Sample Info: VZ97H,10,22.456,1,

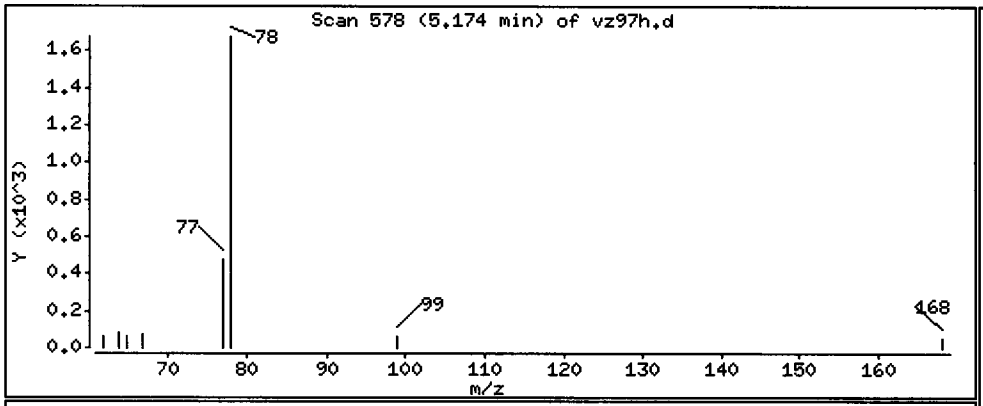
Operator: PC

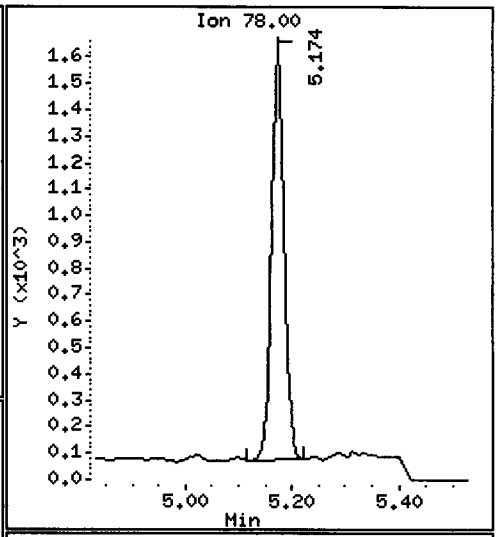
Column phase: RTXVMS

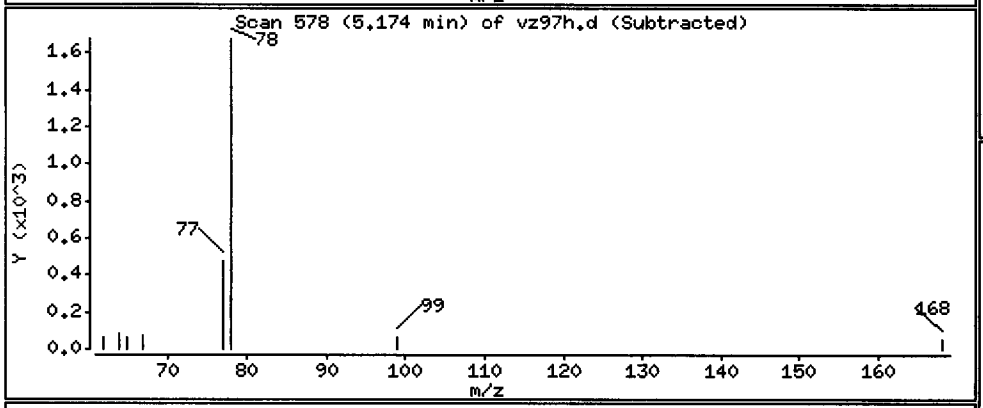
Column diameter: 0.18

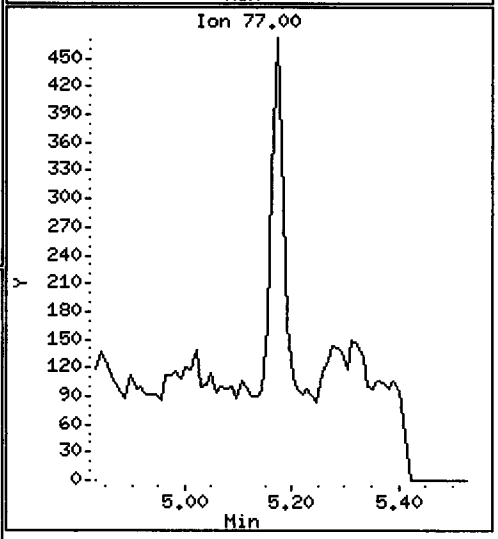
6 Benzene

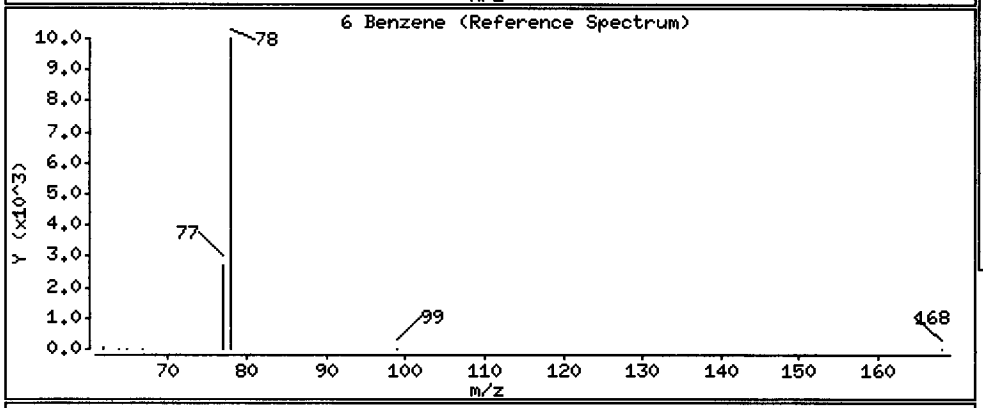
Concentration: 1.279 ug/Kg

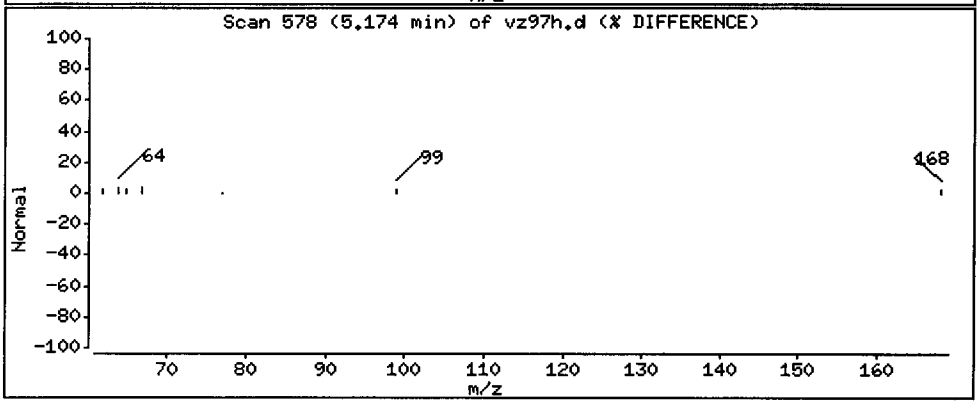












Data File: /chem1/nt9.i/18JAN13a.b/vz97h.d

Date : 18-JAN-2013 22:49

Client ID: CSIA20130109-008S+3

Instrument: nt9.i

Sample Info: VZ97H,10,22.456,1,

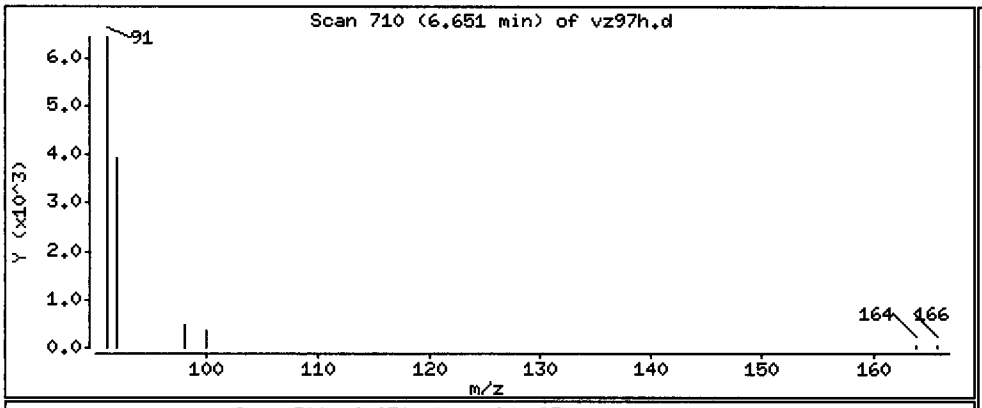
Operator: PC

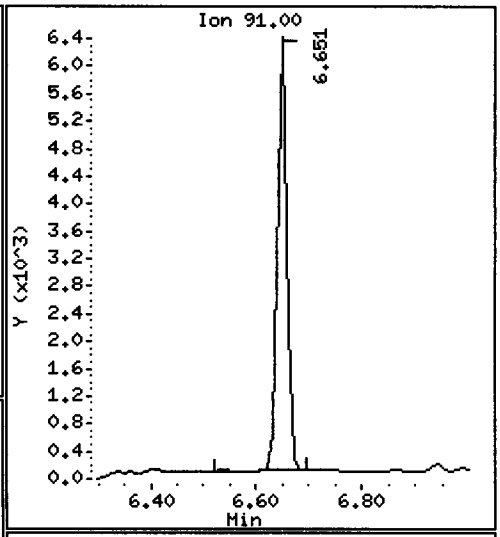
Column phase: RTXVMS

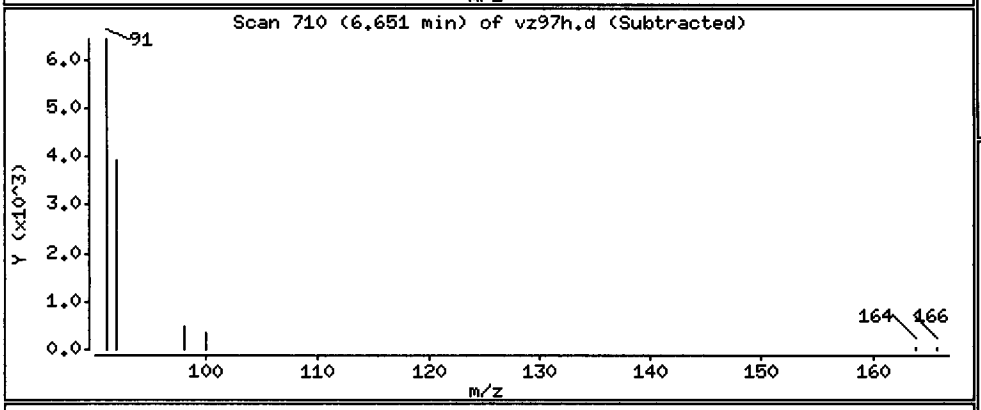
Column diameter: 0.18

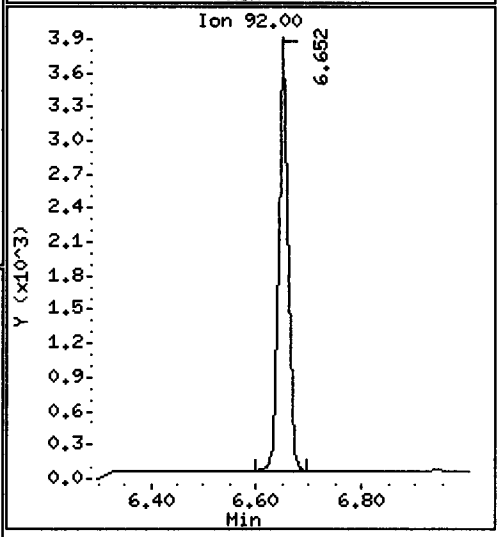
13 Toluene

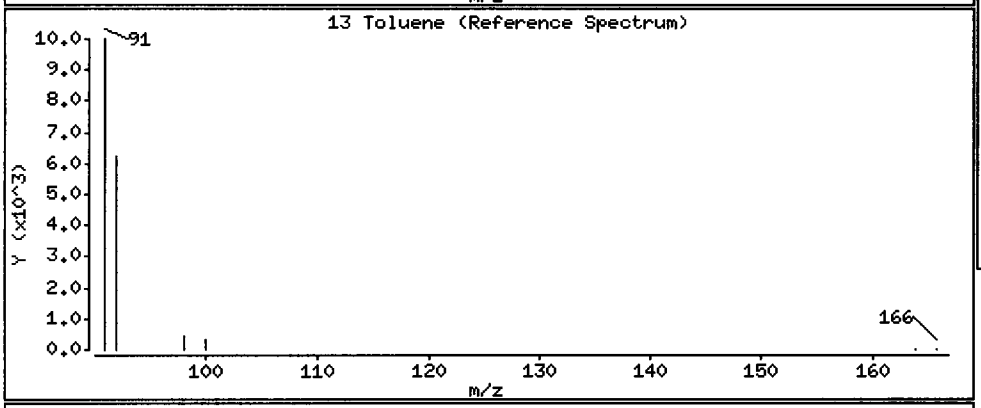
Concentration: 3.978 ug/Kg

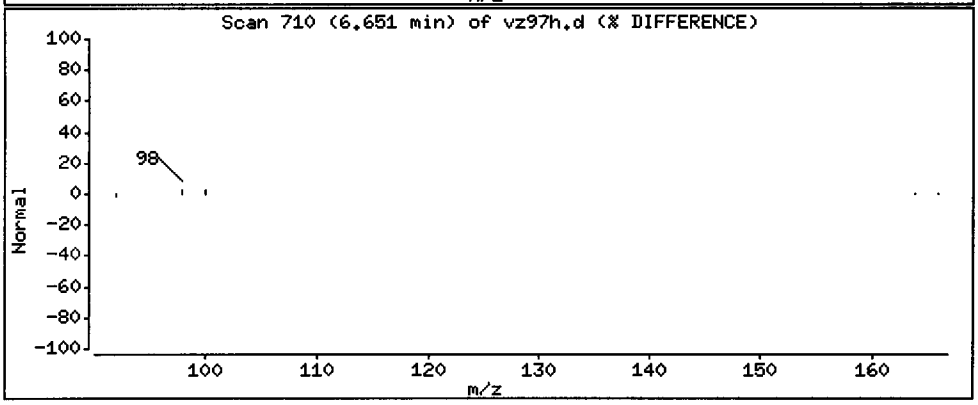












Data File: /chem1/nt9.i/18JAN13a.b/vz97h.d

Date : 18-JAN-2013 22:49

Client ID: CSIA20130109-008S+3

Instrument: nt9.i

Sample Info: VZ97H,10,22.456,1,

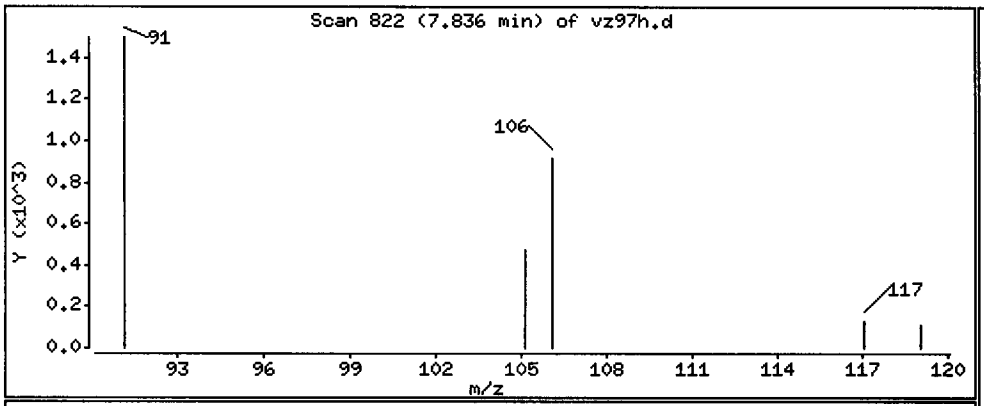
Operator: PC

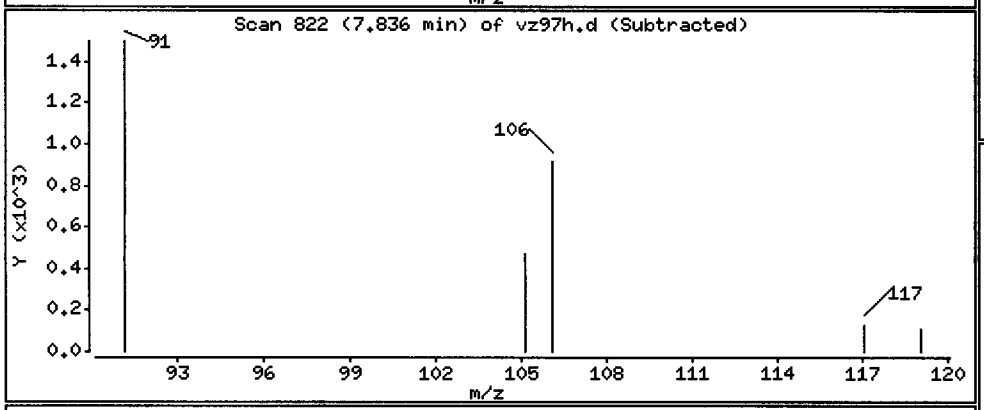
Column phase: RTXVMS

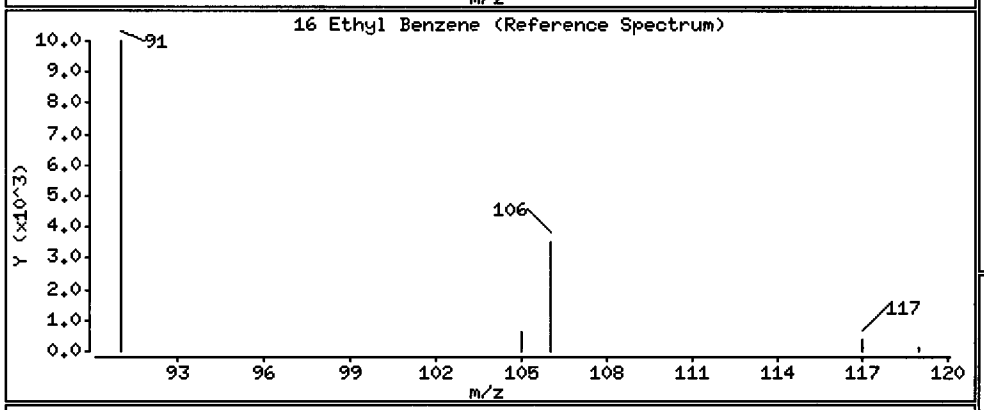
Column diameter: 0.18

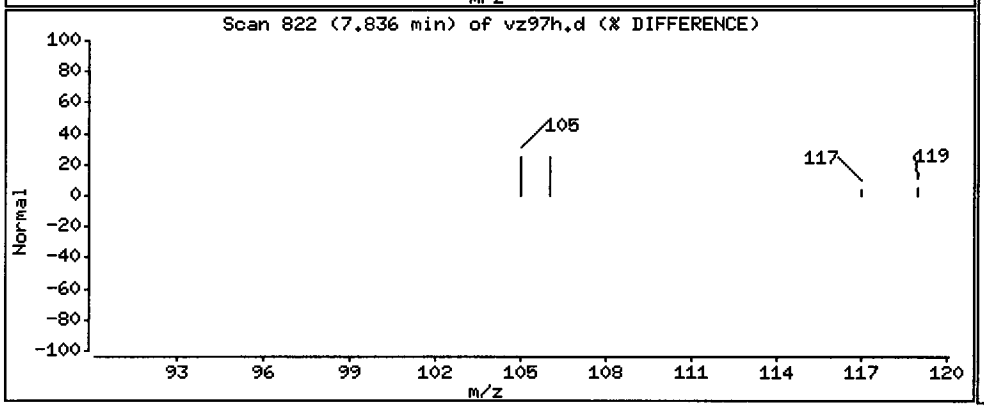
16 Ethyl Benzene

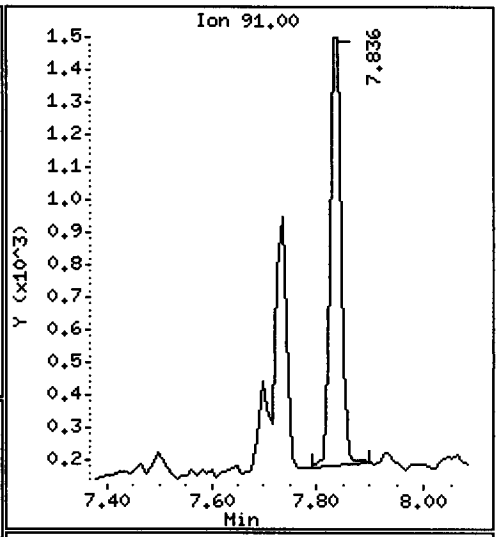
Concentration: 0.9054 ug/Kg

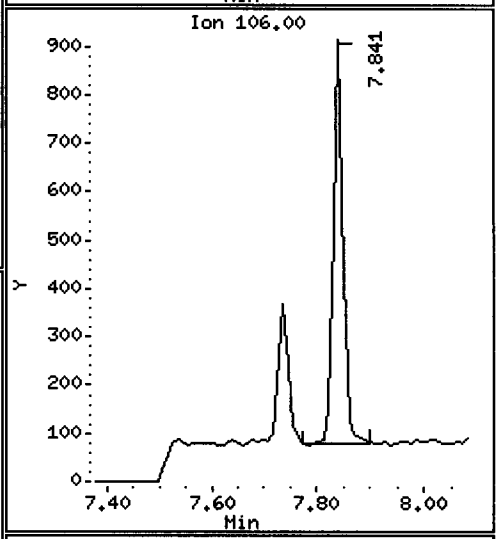


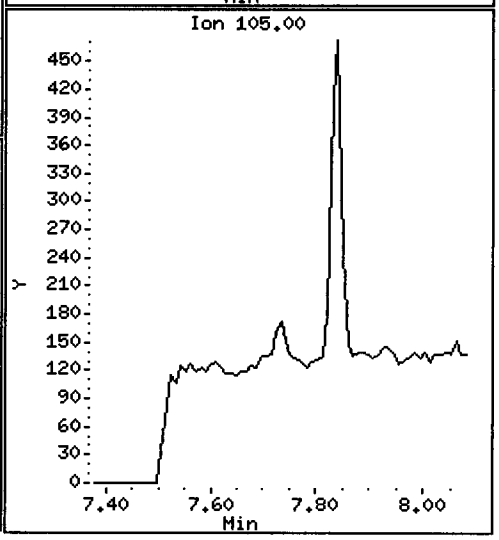












Data File: /chem1/nt9.i/18JAN13a.b/vz97h.d

Date : 18-JAN-2013 22:49

Client ID: CSIA20130109-008S+3

Instrument: nt9.i

Sample Info: VZ97H,10,22.456,1,

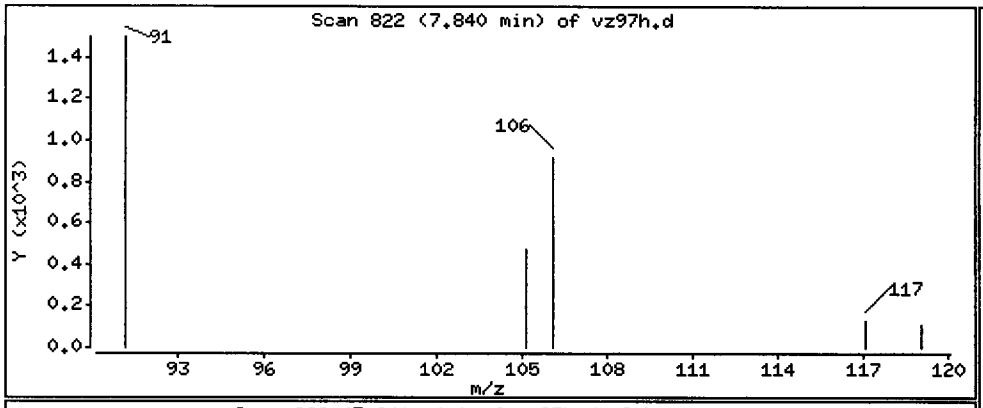
Operator: PC

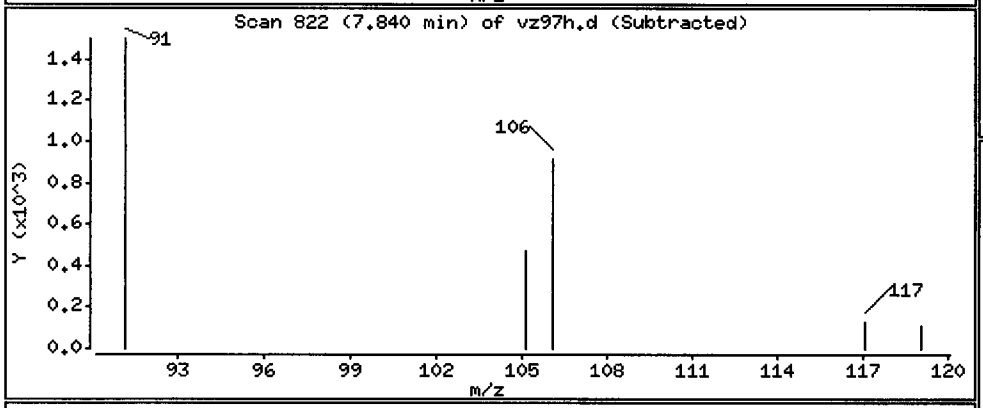
Column phase: RTXVMS

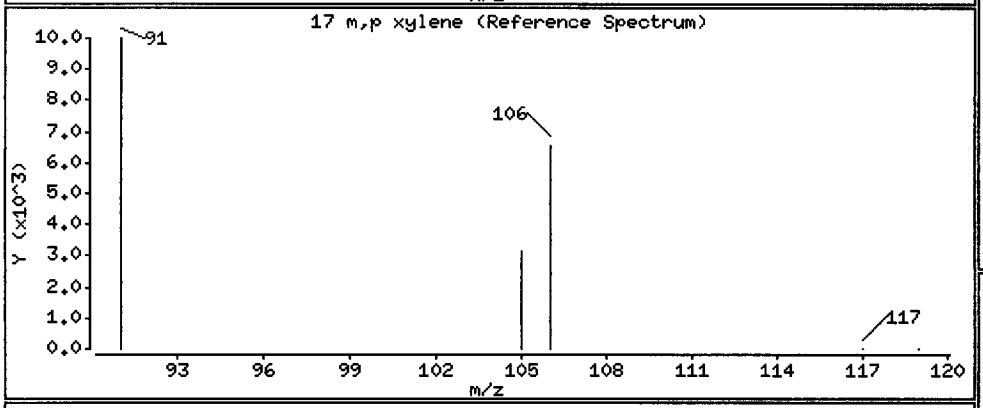
Column diameter: 0.18

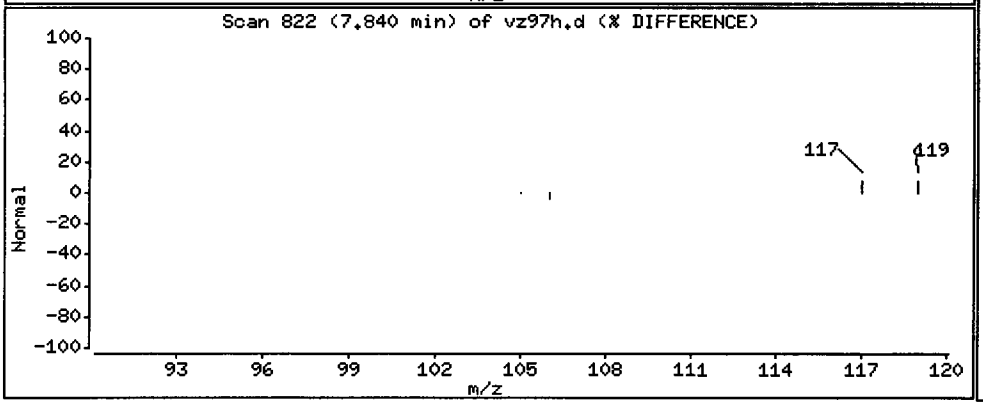
17 m,p xylene

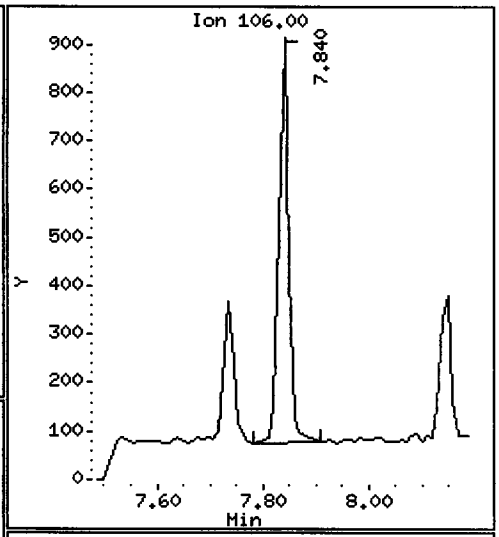
Concentration: 1.308 ug/Kg

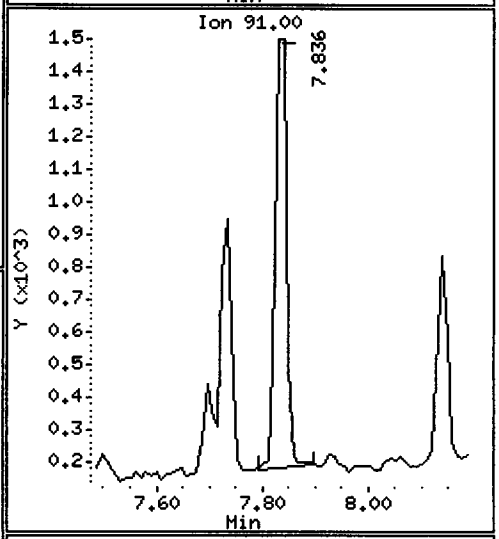


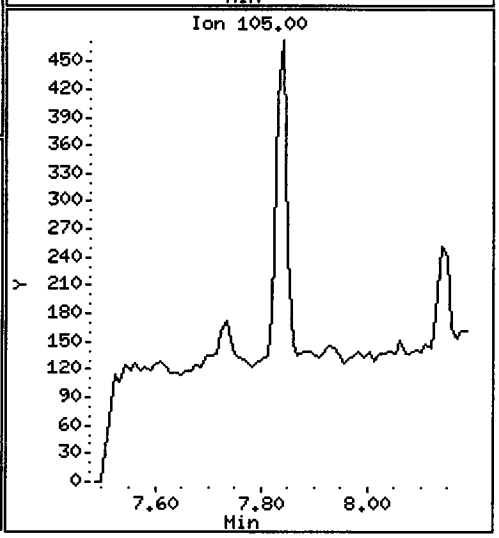












Data File: /chem1/nt9.i/18JAN13a.b/vz97h.d

Date : 18-JAN-2013 22:49

Client ID: CSIA20130109-008S+3

Instrument: nt9.i

Sample Info: VZ97H,10,22.456,1,

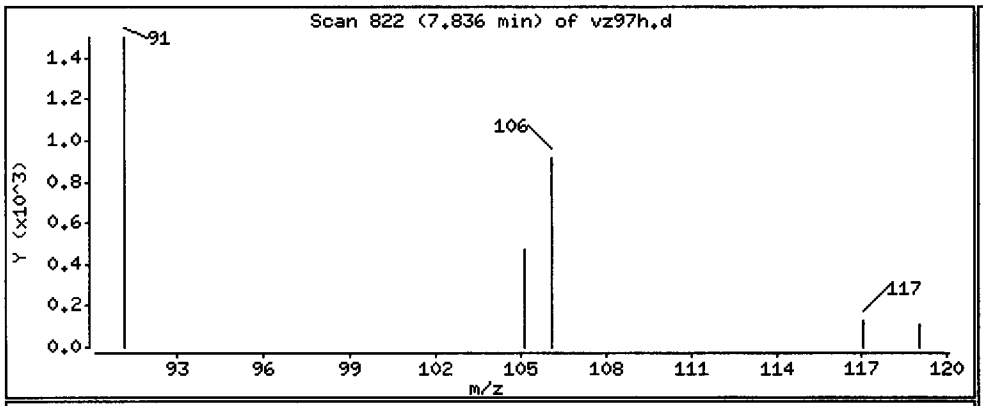
Operator: PC

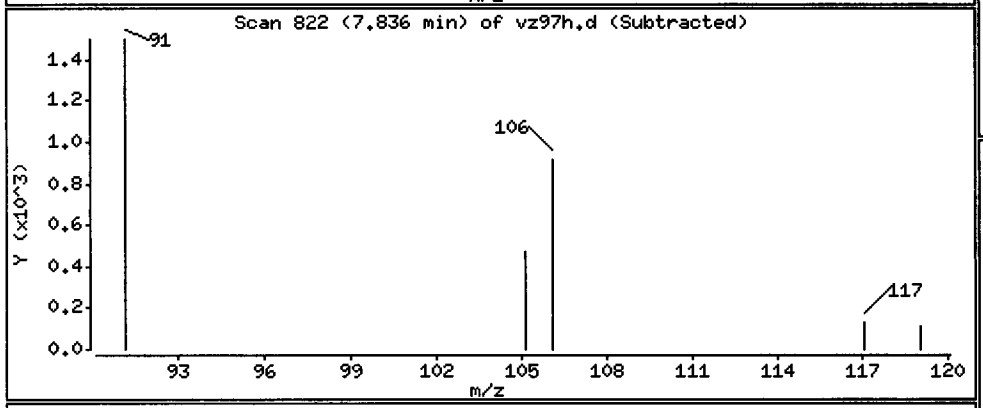
Column phase: RTXVMS

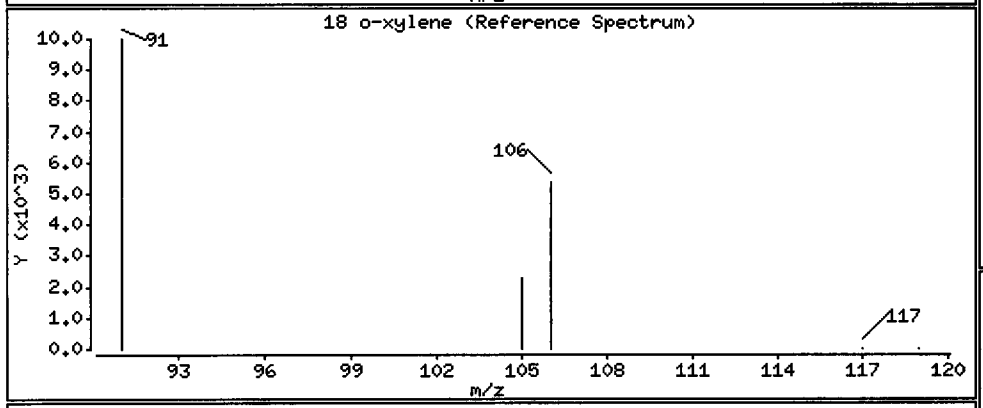
Column diameter: 0.18

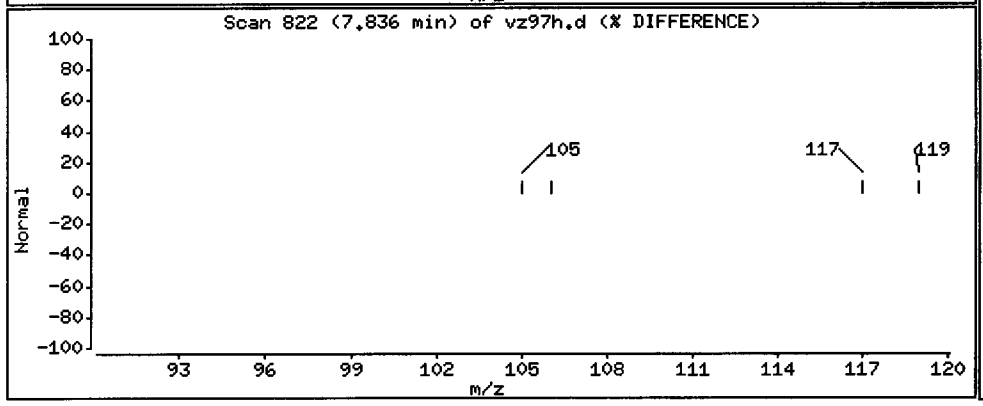
18 o-xylene

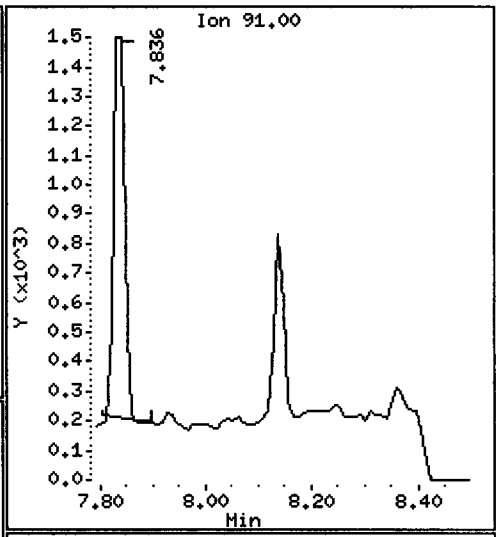
Concentration: 1.195 ug/Kg

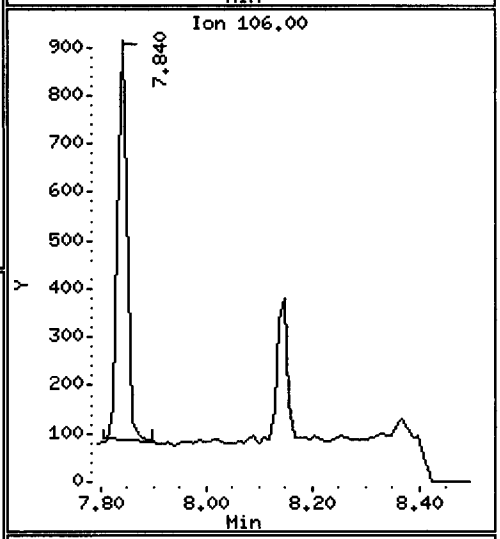


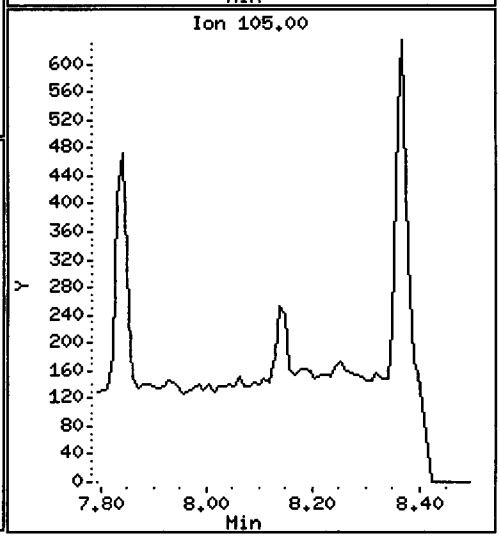












CO-ELUTION SUMMARY FOR FILE - vz97h.d

Lab ID: VZ97H, Method: sim011713.m, Instrument: nt9.i, Date: 18-JAN-2013

RT	CO-ELUTION COMPOUNDS

1/24/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/18JAN13a.b/vz97i.d
Lab Smp Id: VZ97I Client Smp ID: CSIA20130109-009S+6
Inj Date : 18-JAN-2013 23:12
Operator : PC Inst ID: nt9.i
Smp Info : VZ97I,10,22.312,1,
Misc Info : 13-1090
Comment :
Method : /chem1/nt9.i/18JAN13a.b/sim011713.m
Meth Date : 21-Jan-2013 16:16 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: btex.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	100.00000	Sample Amount (mg)
M	0.00000	Moisture (%)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	FINAL (ug/Kg)
	6 Benzene	78	Compound Not Detected.					
*	7 Pentafluorobenzene	168	5.267	5.268	(1.000)	98132	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.286	5.286	(1.004)	46420	1024.12	102.41
*	11 1,4-Difluorobenzene	114	5.643	5.642	(1.000)	166193	1000.00	
$	12 d8-Toluene	98	6.618	6.618	(1.173)	180954	1042.51	104.25
	13 Toluene	91	6.651	6.651	(0.863)	12442	58.1742	5.817
*	15 d5 -Chlorobenzene	117	7.707	7.706	(1.000)	177392	1000.00	
	16 Ethyl Benzene	91	7.836	7.734	(1.017)	3885	~~18.5066~~	~~1.851~~
	17 m,p xylene	106	7.841	7.840	(1.017)	2018	25.5794	2.558
	18 o-xylene	91	8.134	8.140	(1.055)	5655	38.0536	3.805(Q)
$	19 4-Bromofluorobenzene	174	8.575	8.572	(1.113)	67840	1092.39	109.24

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: vz97i.d
Lab Smp Id: VZ97I
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-1090

Calibration Date: 18-JAN-2013
Calibration Time: 17:40
Client Smp ID: CSIA20130109-009S+6
Level: MED
Sample Type: Soil

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	98132	-14.38
11 1,4-Difluorobenze	202370	101185	404740	166193	-17.88
15 d5 -Chlorobenzene	226394	113197	452788	177392	-21.64

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	-0.03
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	0.02
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	0.01

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA
Client SDG: VZ97
Sample Matrix: SOLID
Fraction: VOA
Lab Smp Id: VZ97I
Client Smp ID: CSIA20130109-009S+6
Level: MED
Operator: PC
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: special.spk
Quant Type: ISTD
Sublist File: btex.sub
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-1090

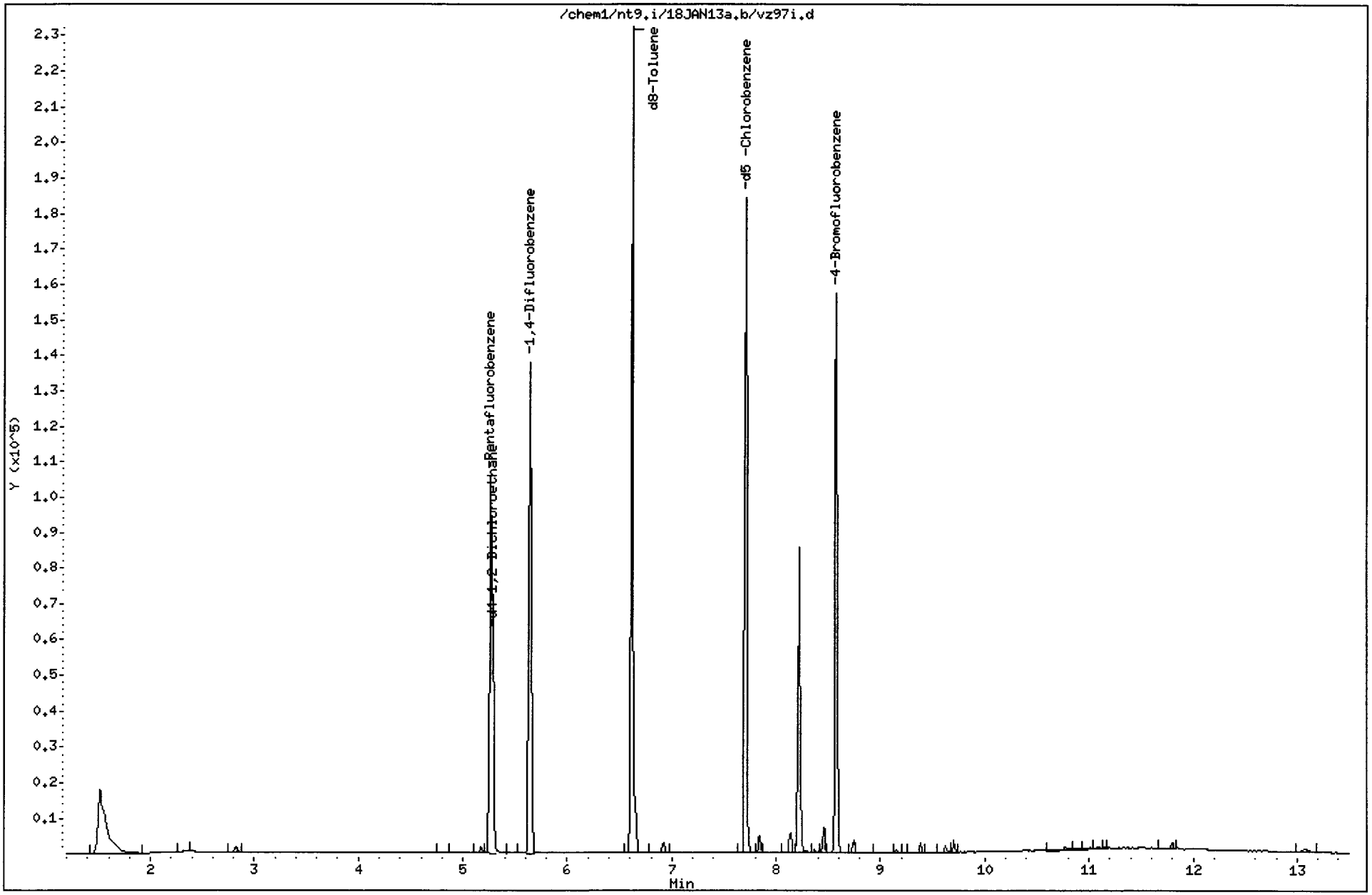
SURROGATE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 8 d4-1,2-Dichloroeth	100.00	102.41	102.41	75-125
$ 12 d8-Toluene	100.00	104.25	104.25	75-125
$ 19 4-Bromofluorobenze	100.00	109.24	109.24	75-125

Data File: /chem1/nt9.i/18JAN13a.b/vz97i.d
Date : 18-JAN-2013 23:12
Client ID: CSIA20130109-009S+6
Sample Info: VZ97I,10,22.312,1,

Instrument: nt9.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS



Data File: /chem1/nt9.i/18JAN13a.b/vz97i.d

Date : 18-JAN-2013 23:12

Client ID: CSIA20130109-009S+6

Instrument: nt9.i

Sample Info: VZ97I,10,22.312,1,

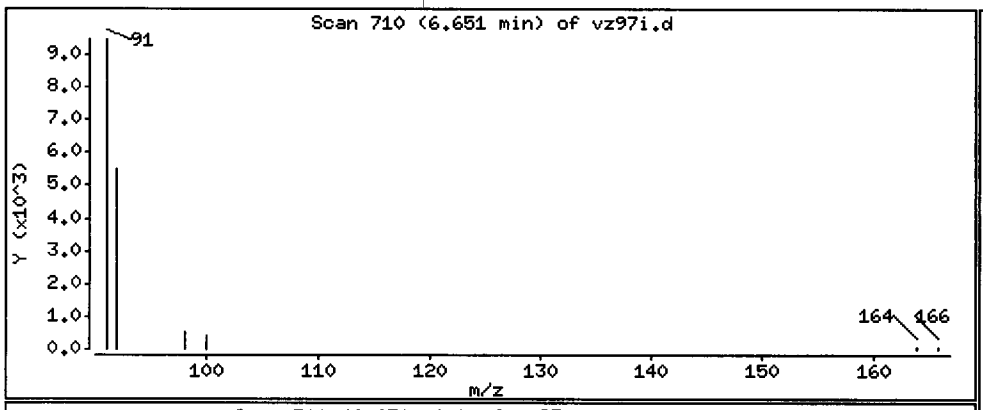
Operator: PC

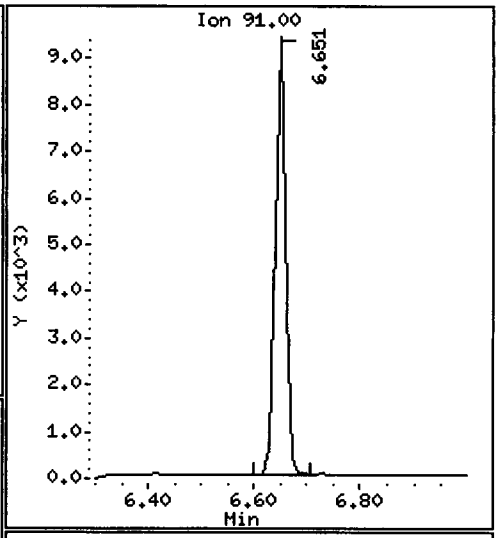
Column phase: RTXVMS

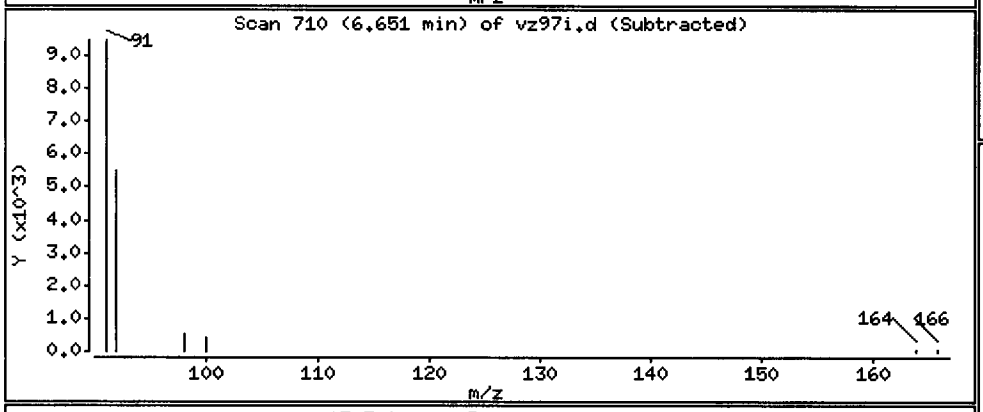
Column diameter: 0.18

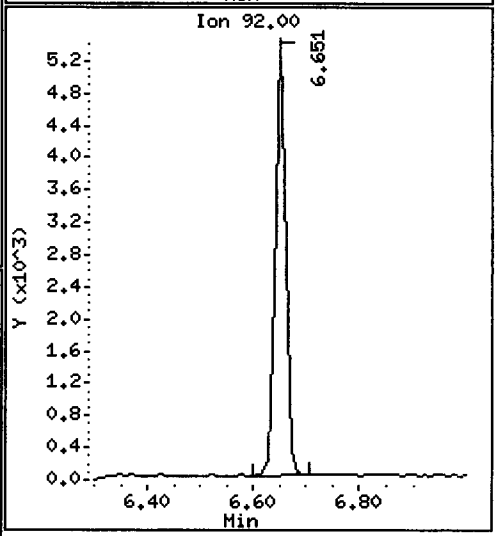
13 Toluene

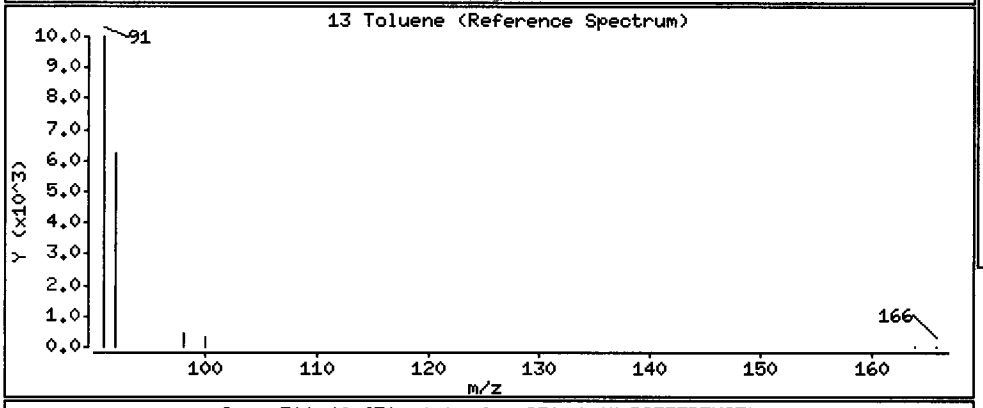
Concentration: 5.817 ug/Kg

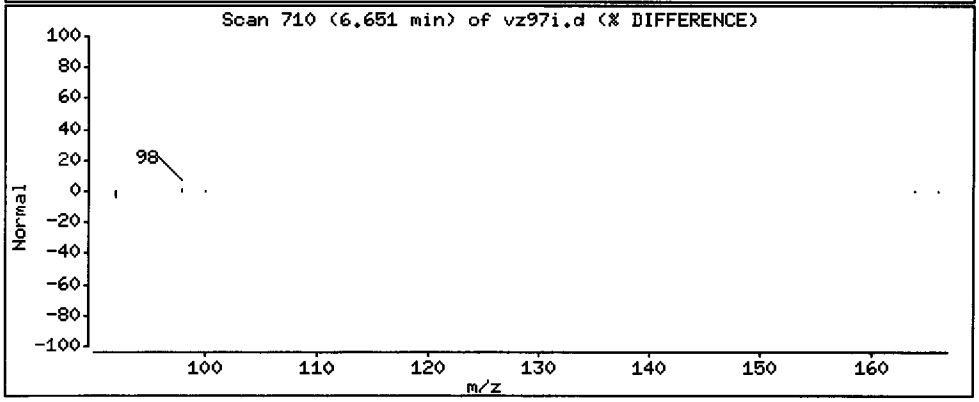












Data File: /chem1/nt9.i/18JAN13a.b/vz97i.d

Date : 18-JAN-2013 23:12

Client ID: CSIA20130109-009S+6

Instrument: nt9.i

Sample Info: VZ97I,10,22.312,1,

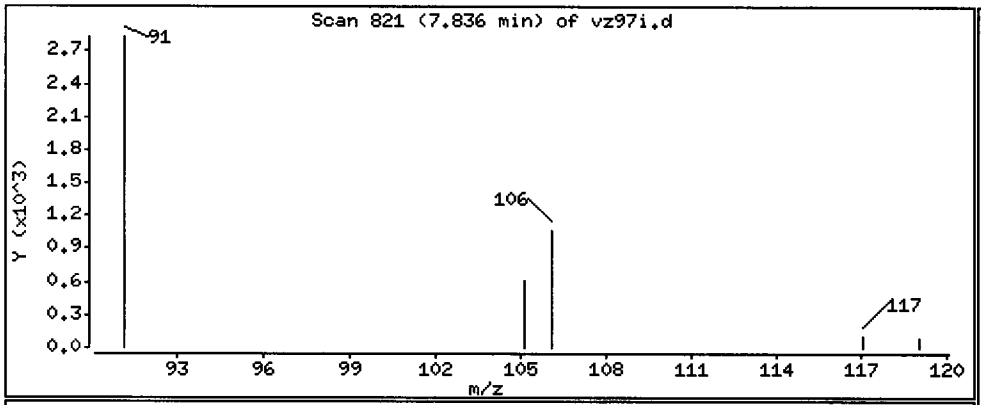
Operator: PC

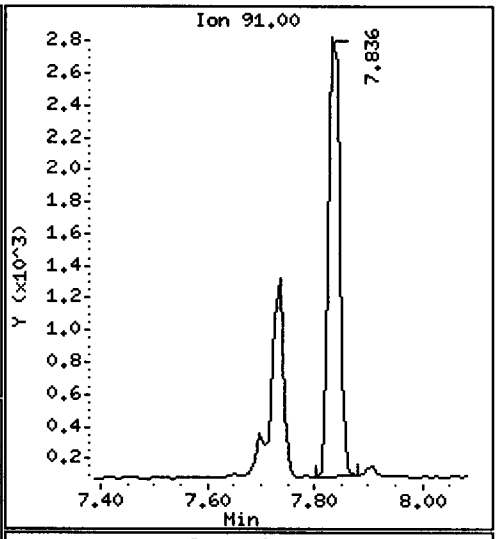
Column phase: RTXVMS

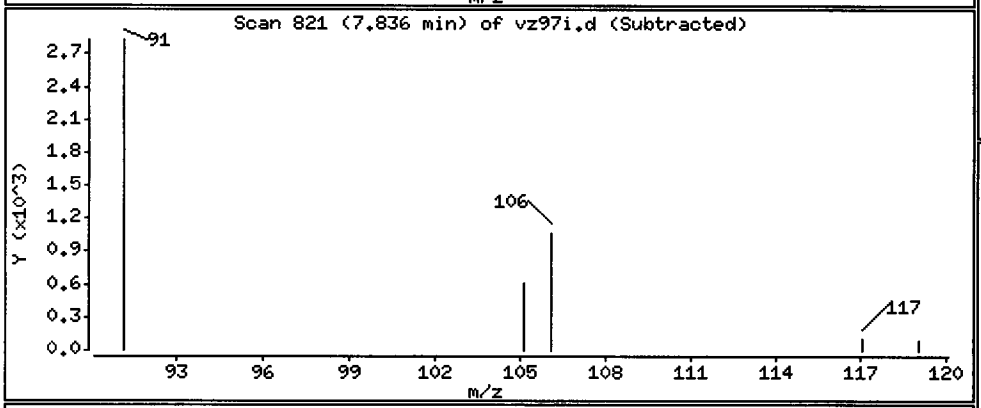
Column diameter: 0.18

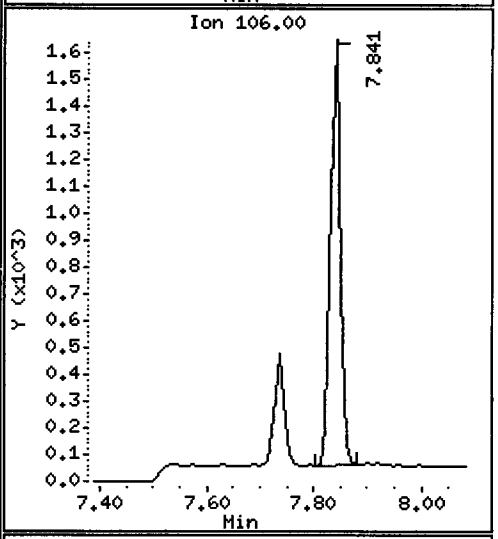
16 Ethyl Benzene

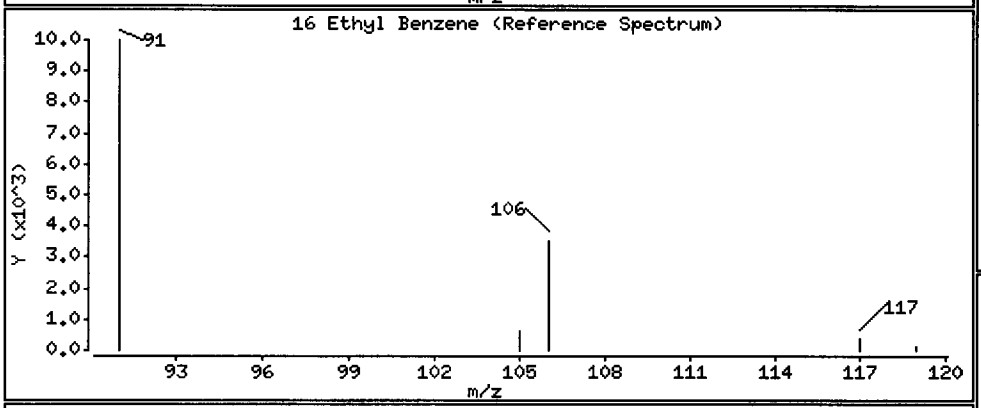
Concentration: 1.851 ug/Kg

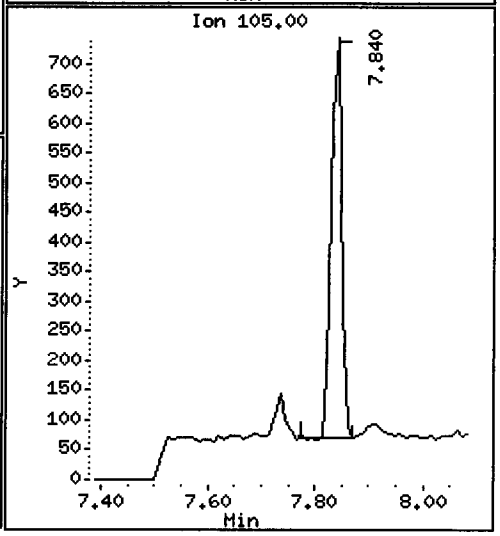


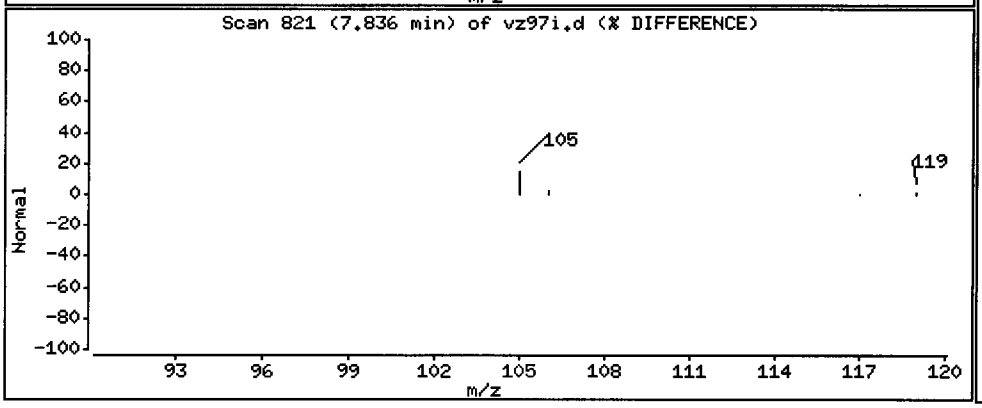












Data File: /chem1/nt9.i/18JAN13a.b/vz97i.d

Date : 18-JAN-2013 23:12

Client ID: CSIA20130109-009S+6

Instrument: nt9.i

Sample Info: VZ97I,10,22.312,1,

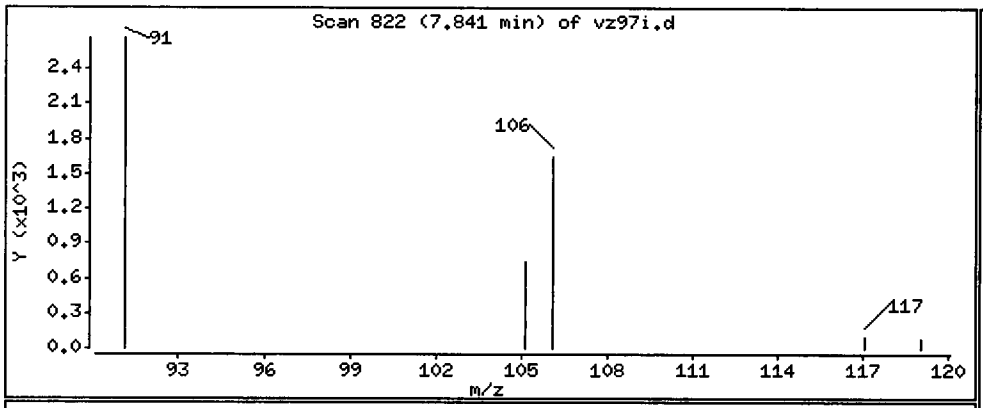
Operator: PC

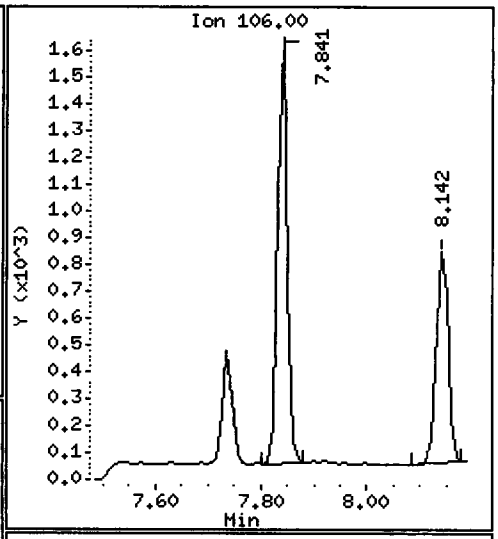
Column phase: RTXVMS

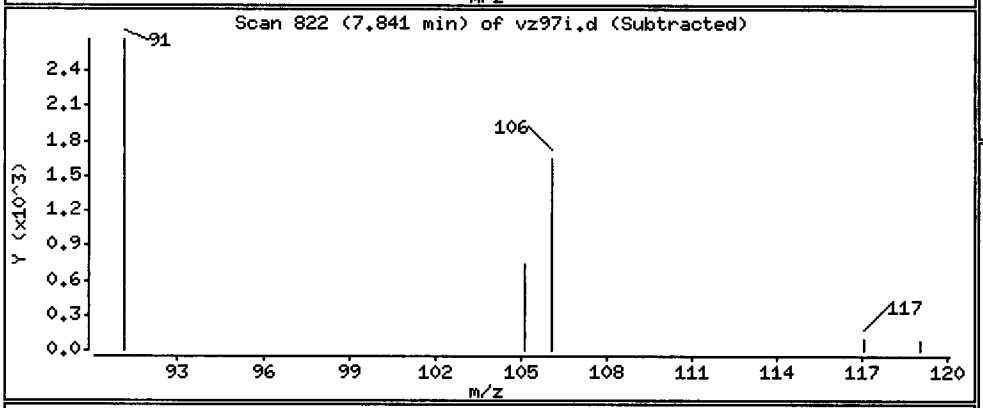
Column diameter: 0.18

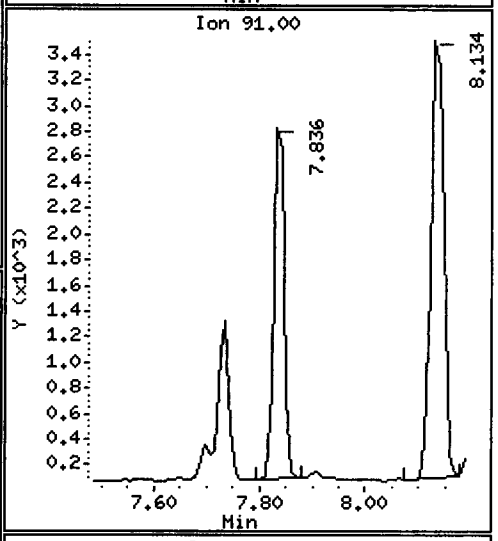
17 m,p xylene

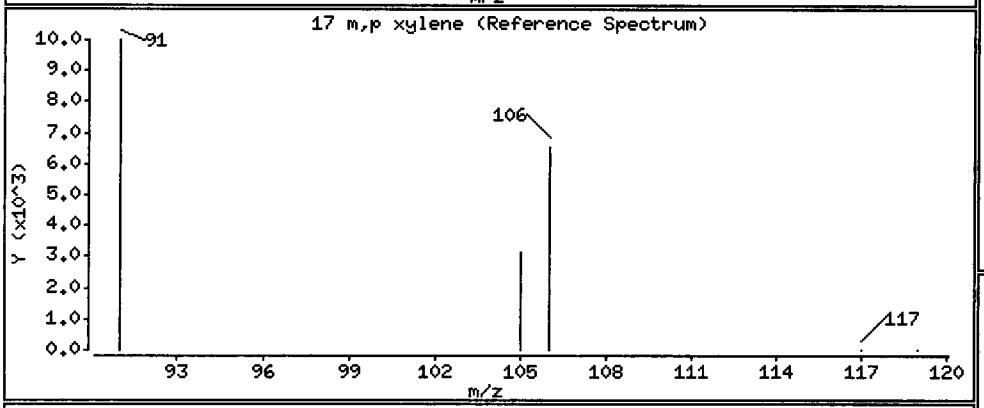
Concentration: 2.558 ug/Kg

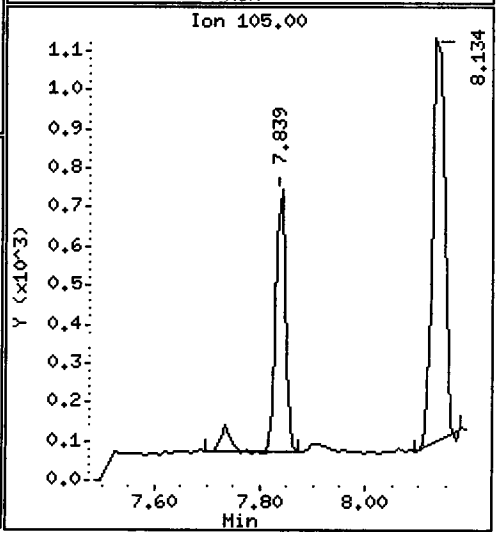


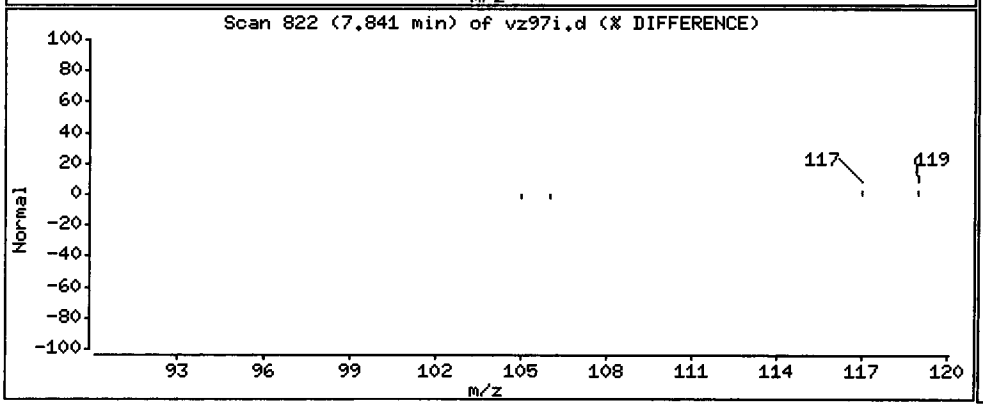












Data File: /chem1/nt9.i/18JAN13a.b/vz97i.d

Date : 18-JAN-2013 23:12

Client ID: CSIA20130109-009S+6

Instrument: nt9.i

Sample Info: VZ97I,10,22.312,1,

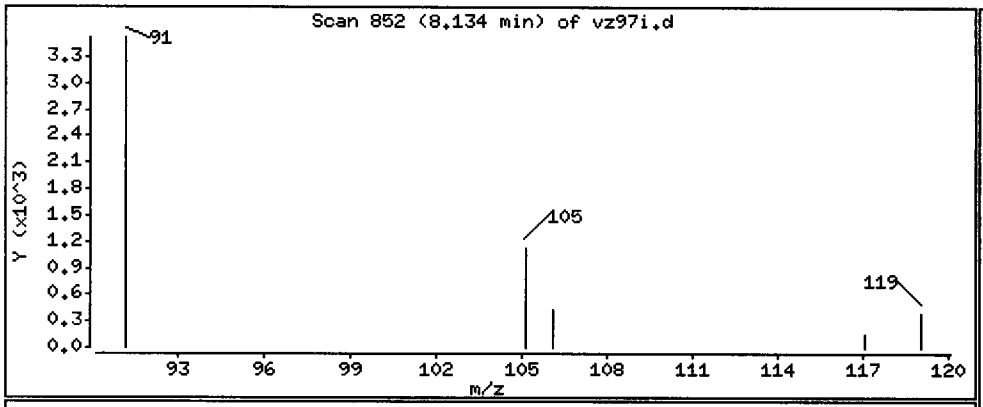
Operator: PC

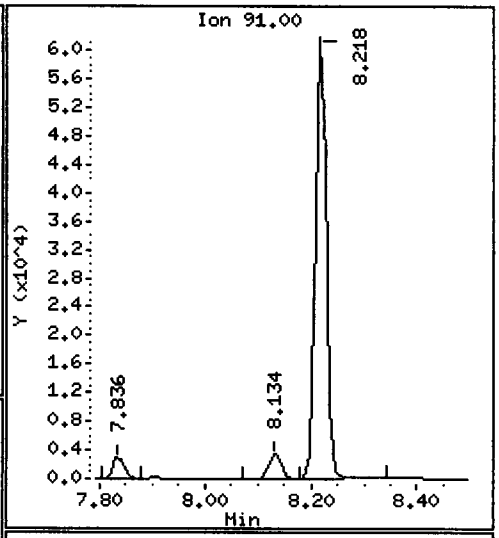
Column phase: RTXVMS

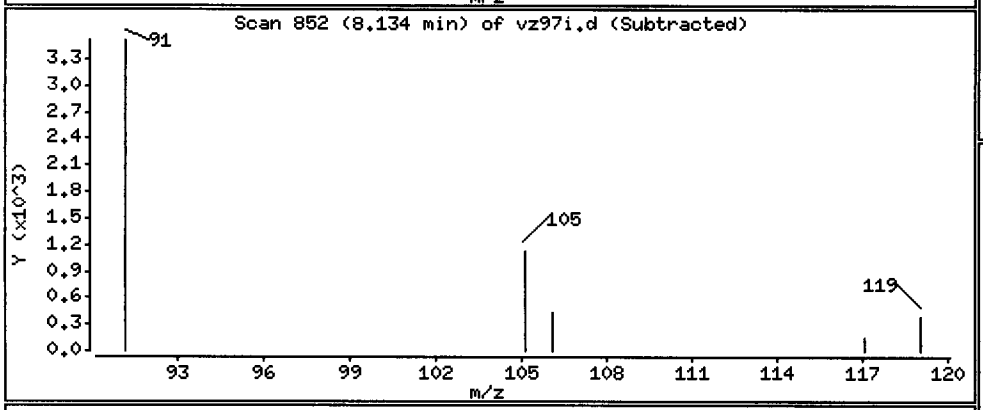
Column diameter: 0.18

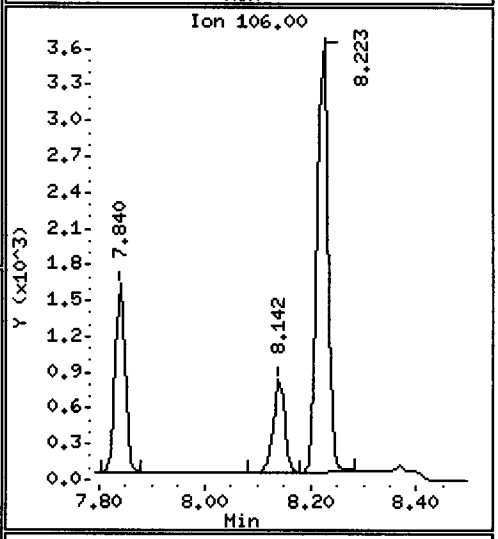
18 o-xylene

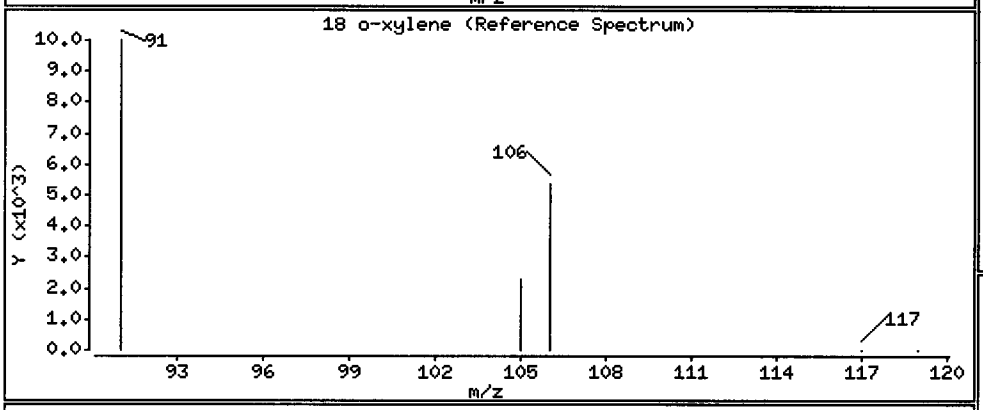
Concentration: 3.805 ug/Kg

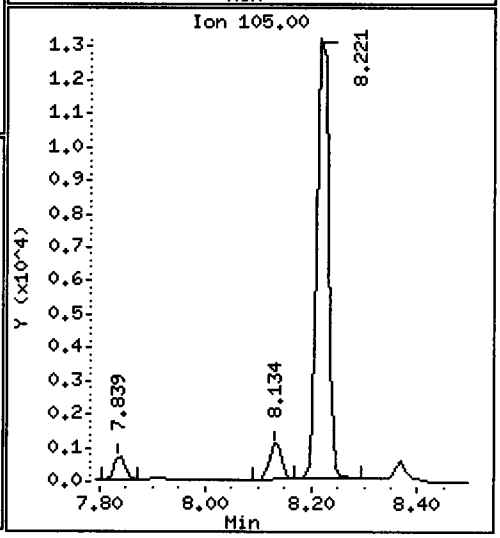


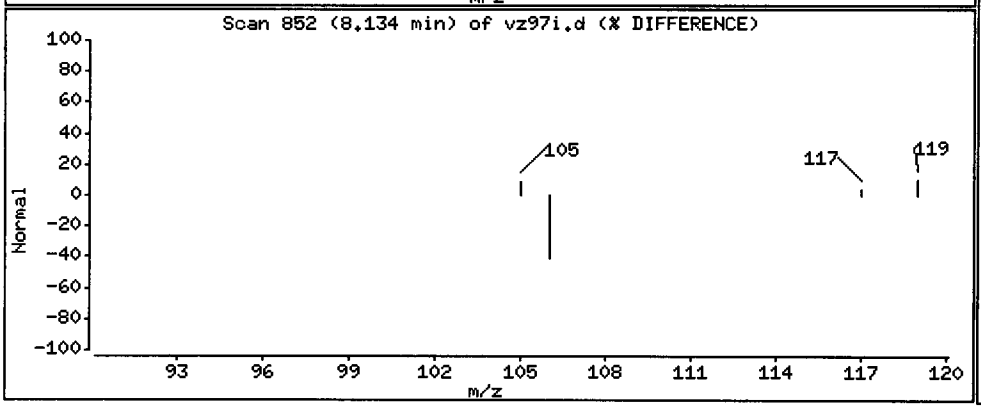












CO-ELUTION SUMMARY FOR FILE - vz97i.d

Lab ID: VZ97I, Method: sim011713.m, Instrument: nt9.i, Date: 18-JAN-2013

RT	CO-ELUTION COMPOUNDS

PC 1/24/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/18JAN13a.b/vz97j.d
Lab Smp Id: VZ97J Client Smp ID: CSIA20130109-010S+9
Inj Date : 18-JAN-2013 23:36
Operator : PC Inst ID: nt9.i
Smp Info : VZ97J,10,20.841,1,
Misc Info : 13-1091
Comment :
Method : /chem1/nt9.i/18JAN13a.b/sim011713.m
Meth Date : 21-Jan-2013 16:16 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: btex.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	100.00000	Sample Amount (mg)
M	0.00000	Moisture (%)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	FINAL (ug/Kg)
	6 Benzene	78	5.173	5.180	(0.917)	2897	14.0096	1.401
*	7 Pentafluorobenzene	168	5.267	5.268	(1.000)	100003	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.287	5.286	(1.004)	47311	1024.24	102.42
*	11 1,4-Difluorobenzene	114	5.643	5.642	(1.000)	170586	1000.00	
$	12 d8-Toluene	98	6.618	6.618	(1.173)	184784	1037.16	103.72
	13 Toluene	91	6.651	6.651	(0.863)	24424	112.685	11.268
*	15 d5 -Chlorobenzene	117	7.707	7.706	(1.000)	179775	1000.00	
	16 Ethyl Benzene	91	7.734	7.734	(1.004)	3530	16.5928	1.659(Q)
	17 m,p xylene	106	7.841	7.840	(1.017)	4831	60.4180	6.042
	18 o-xylene	91	8.140	8.140	(1.056)	4753	31.5616	3.156
$	19 4-Bromofluorobenzene	174	8.575	8.572	(1.113)	70448	1119.35	111.93

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: vz97j.d
Lab Smp Id: VZ97J
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-1091

Calibration Date: 18-JAN-2013
Calibration Time: 17:40
Client Smp ID: CSIA20130109-010S+9
Level: MED
Sample Type: Soil

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	100003	-12.75
11 1,4-Difluorobenze	202370	101185	404740	170586	-15.71
15 d5 -Chlorobenzene	226394	113197	452788	179775	-20.59

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	-0.03
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	0.02
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	0.01

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA
Client SDG: VZ97
Sample Matrix: SOLID
Fraction: VOA
Lab Smp Id: VZ97J
Client Smp ID: CSIA20130109-010S+9
Level: MED
Operator: PC
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: special.spk
Quant Type: ISTD
Sublist File: btex.sub
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-1091

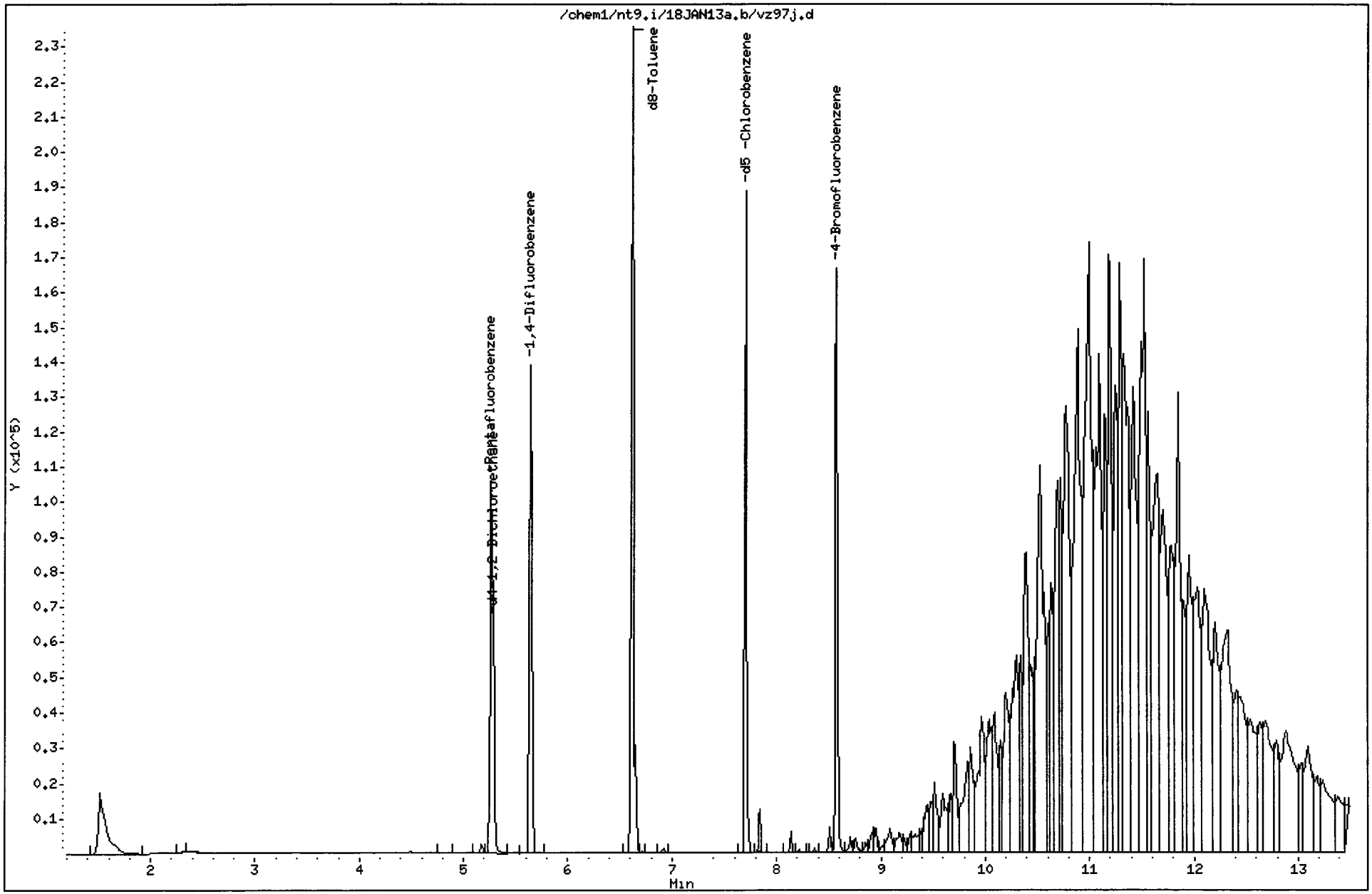
SURROGATE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 8 d4-1,2-Dichloroeth	100.00	102.42	102.42	75-125
$ 12 d8-Toluene	100.00	103.72	103.72	75-125
$ 19 4-Bromofluorobenze	100.00	111.93	111.93	75-125

Data File: /chem1/nt9.i/18JAN13a.b/vz97j.d
Date : 18-JAN-2013 23:36
Client ID: CSIA20130109-010S+9
Sample Info: VZ97J,10,20.841,1,

Instrument: nt9.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS



VZ97J.D 18-JAN-13 23:36

Data File: /chem1/nt9.i/18JAN13a.b/vz97j.d

Date : 18-JAN-2013 23:36

Client ID: CSIA20130109-010S+9

Instrument: nt9.i

Sample Info: VZ97J,10,20.841,1,

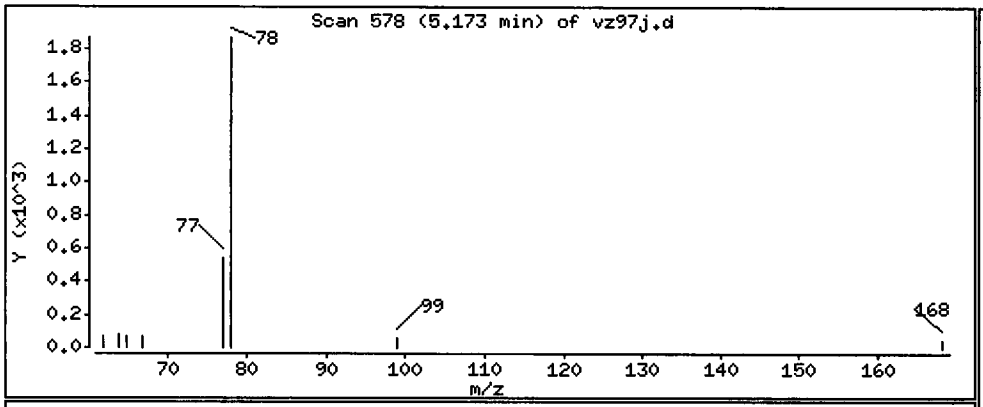
Operator: PC

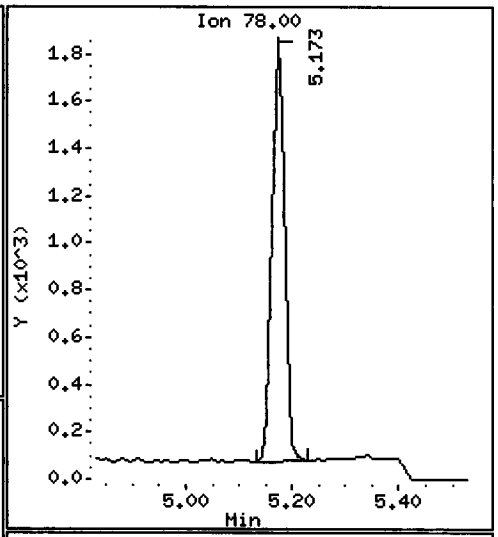
Column phase: RTXVMS

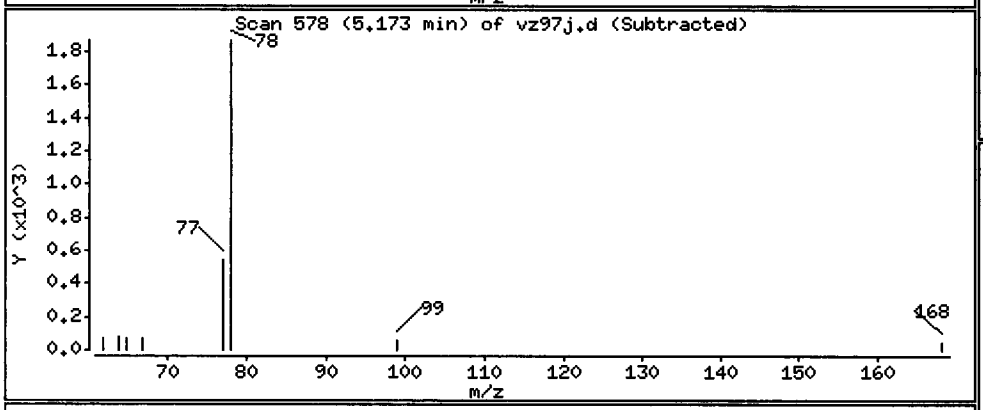
Column diameter: 0.18

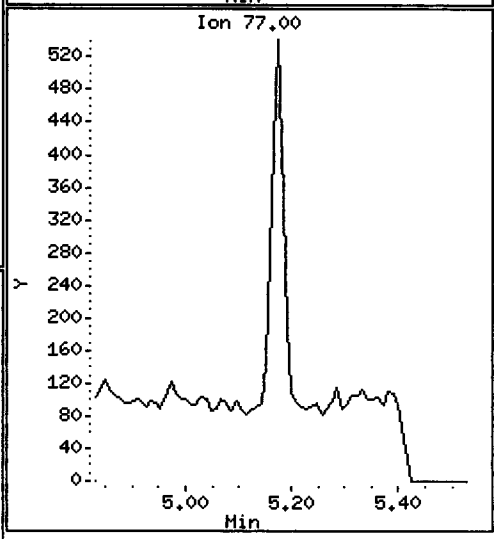
6 Benzene

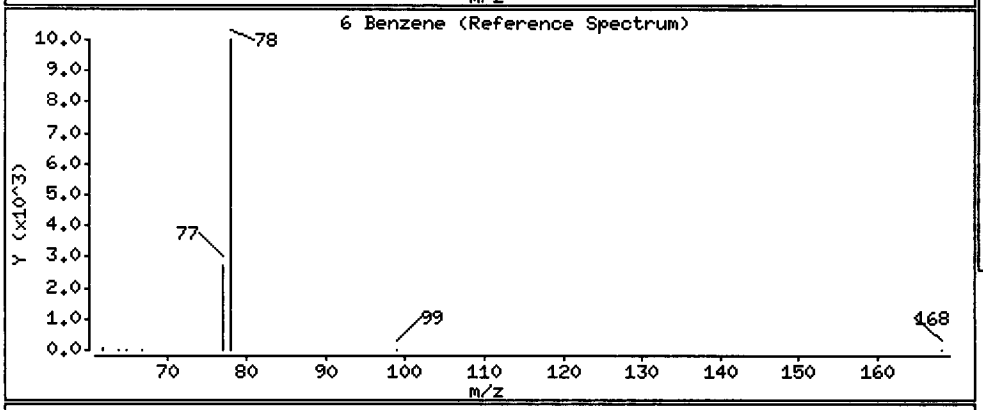
Concentration: 1.401 ug/Kg

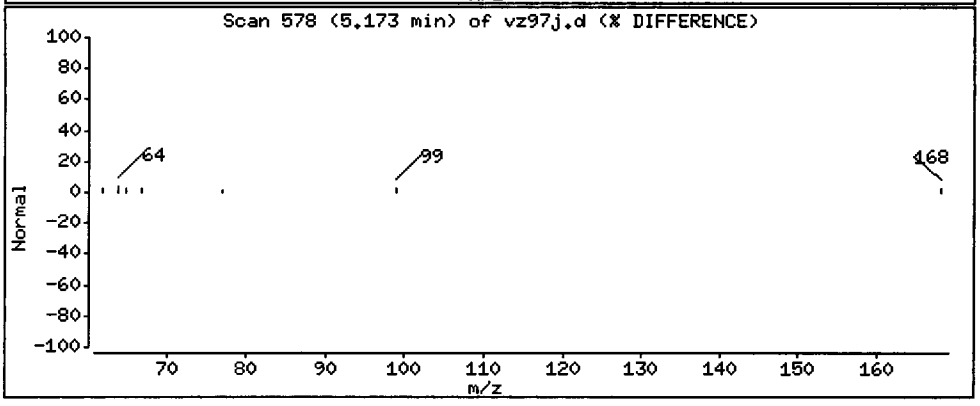












Data File: /chem1/nt9.i/18JAN13a.b/vz97j.d

Date : 18-JAN-2013 23:36

Client ID: CSIA20130109-010S+9

Instrument: nt9.i

Sample Info: VZ97J,10,20.841,1,

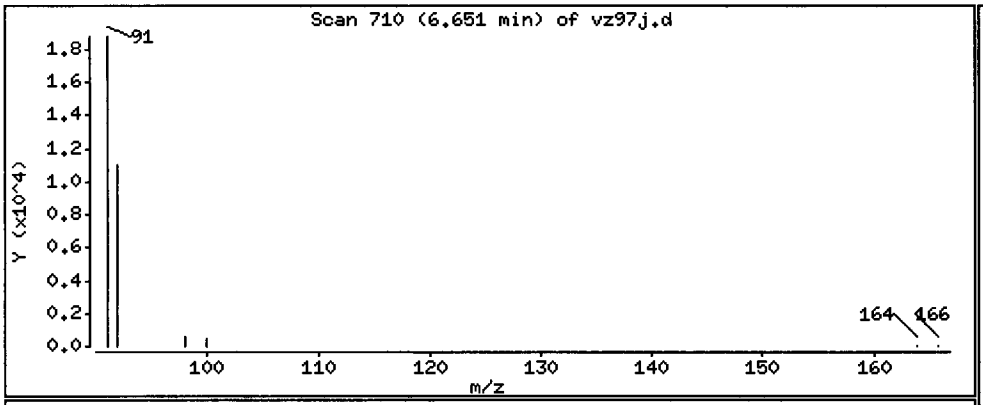
Operator: PC

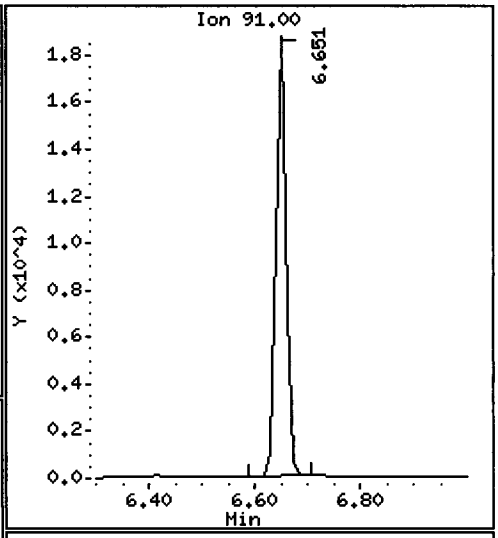
Column phase: RTXVMS

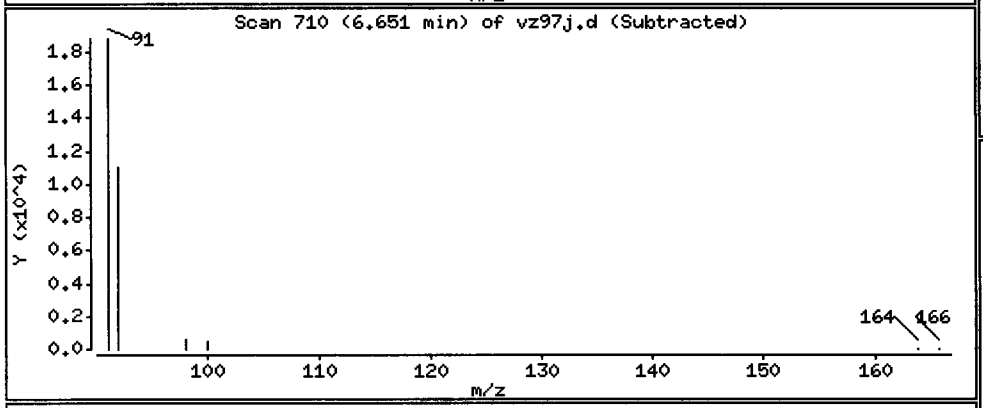
Column diameter: 0.18

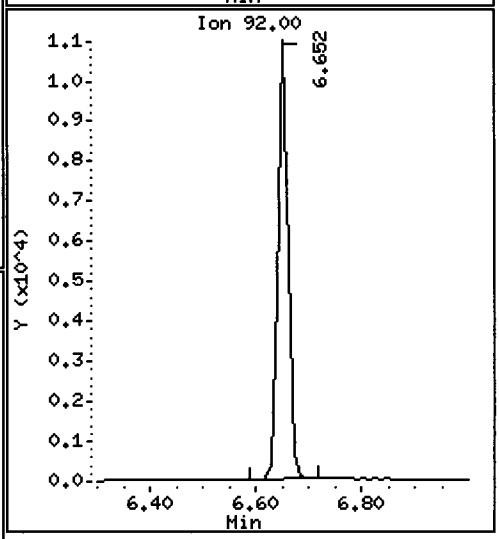
13 Toluene

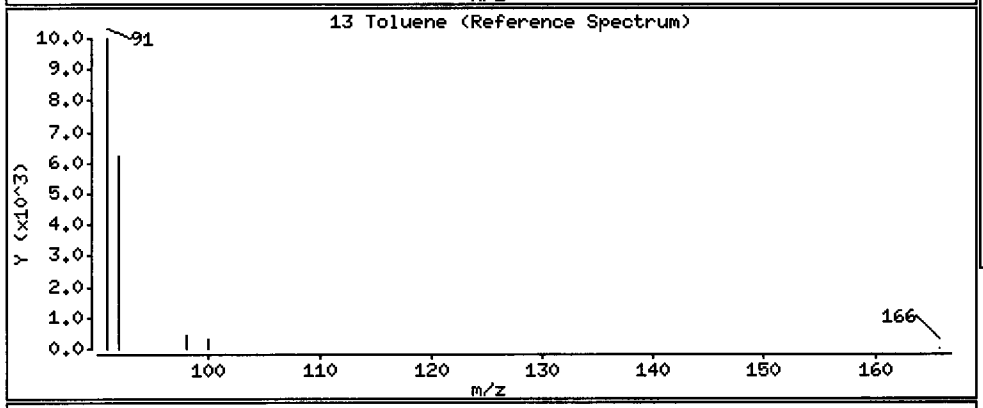
Concentration: 11.268 ug/Kg

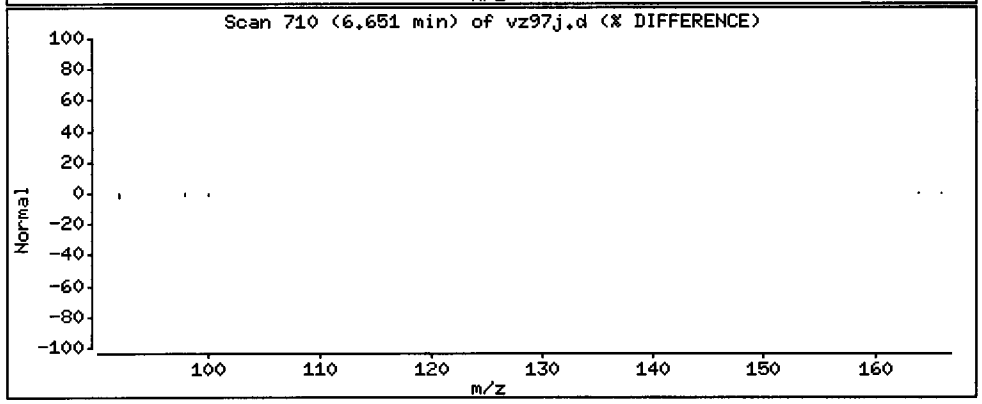












Data File: /chem1/nt9.i/18JAN13a.b/vz97j.d

Date : 18-JAN-2013 23:36

Client ID: CSIA20130109-010S+9

Instrument: nt9.i

Sample Info: VZ97J,10,20.841,1,

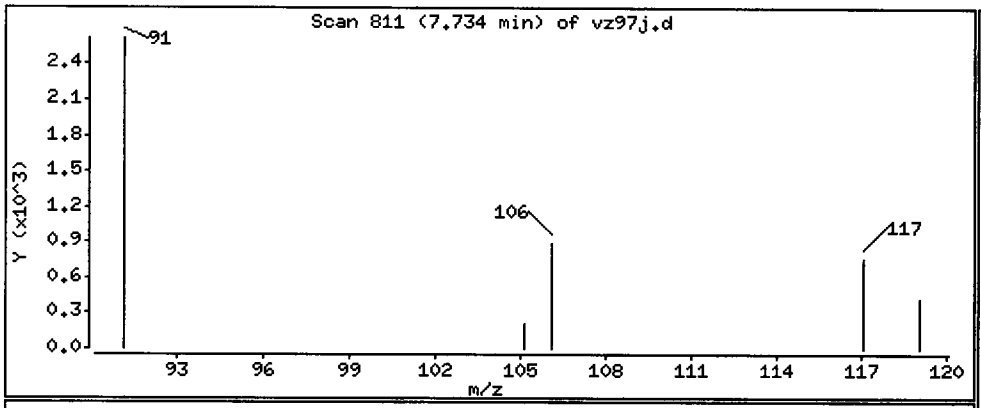
Operator: PC

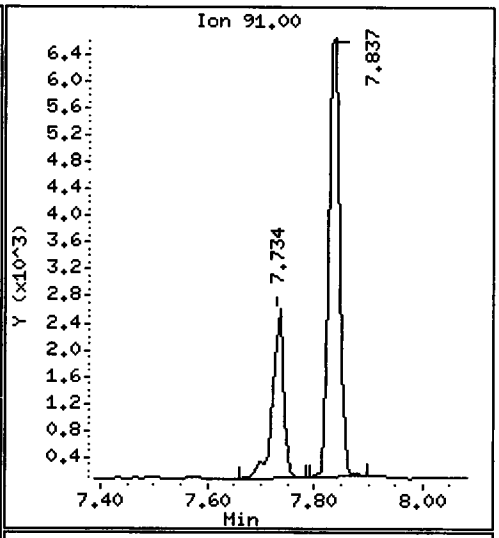
Column phase: RTXVMS

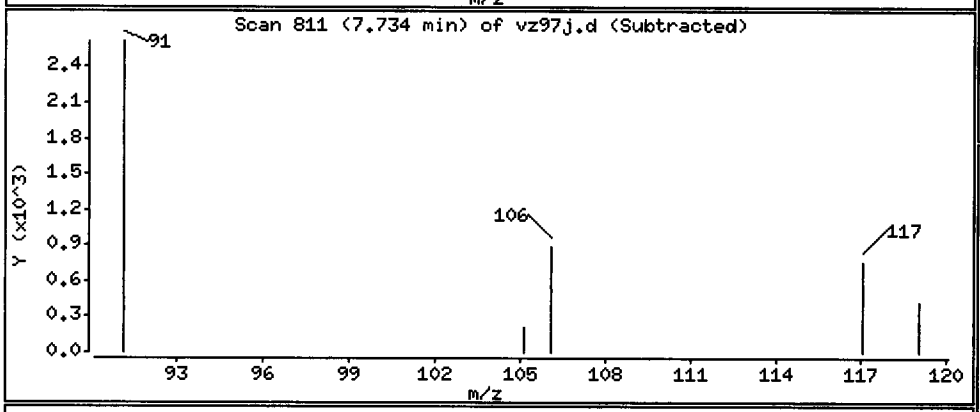
Column diameter: 0.18

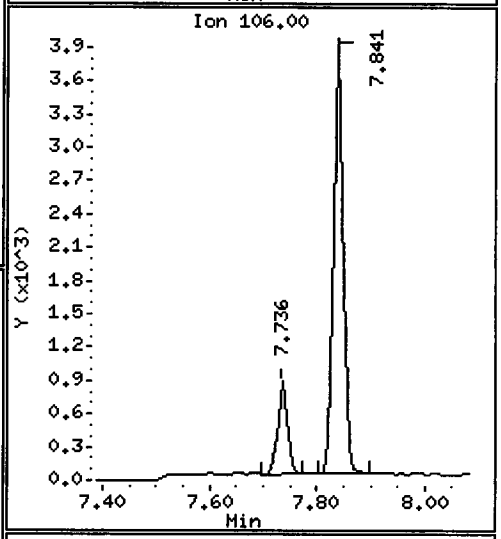
16 Ethyl Benzene

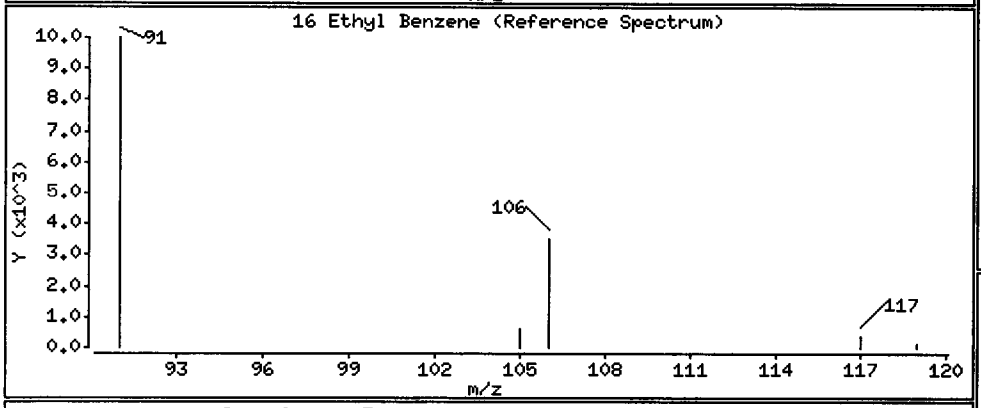
Concentration: 1.659 ug/Kg

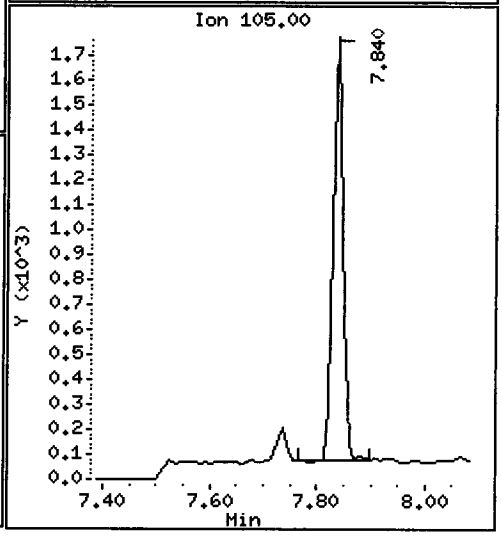


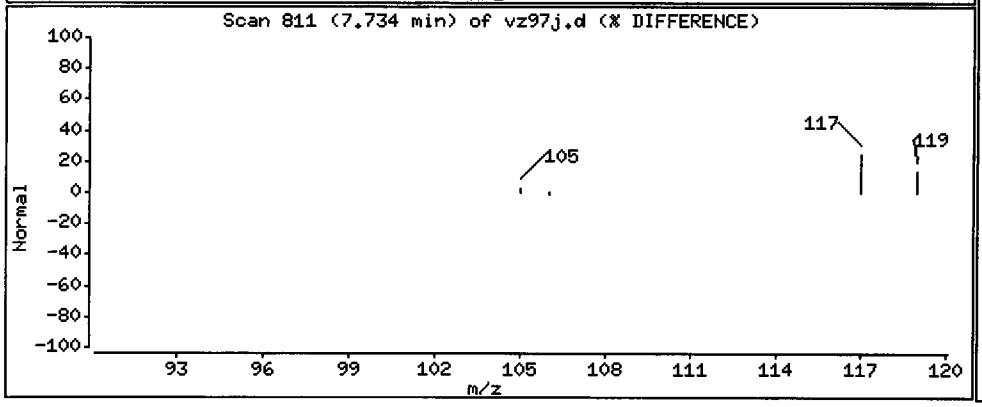












Data File: /chem1/nt9.i/18JAN13a.b/vz97j.d

Date : 18-JAN-2013 23:36

Client ID: CSIA20130109-010S+9

Instrument: nt9.i

Sample Info: VZ97J,10,20.841,1,

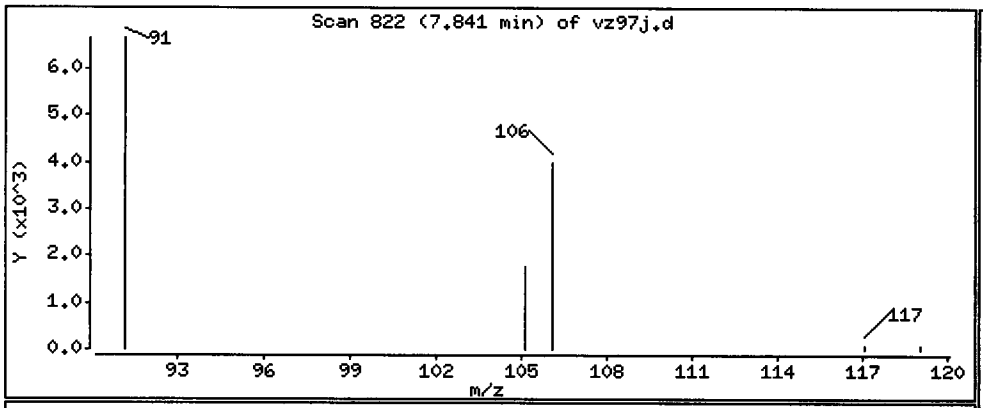
Operator: PC

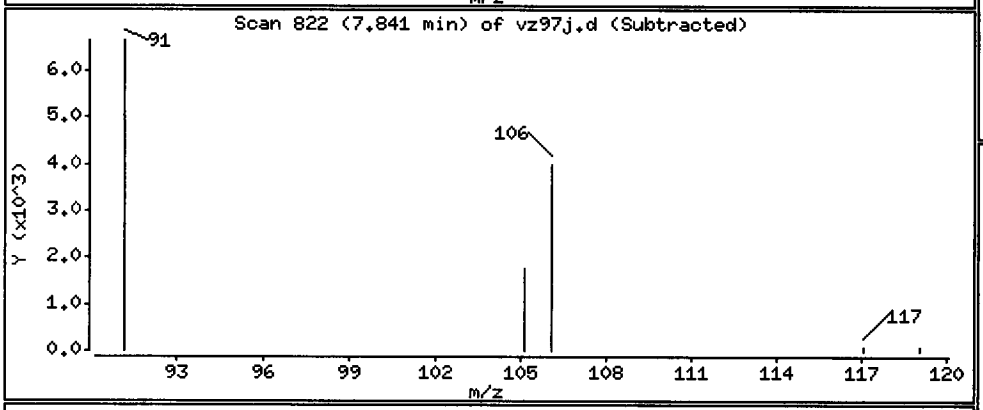
Column phase: RTXVMS

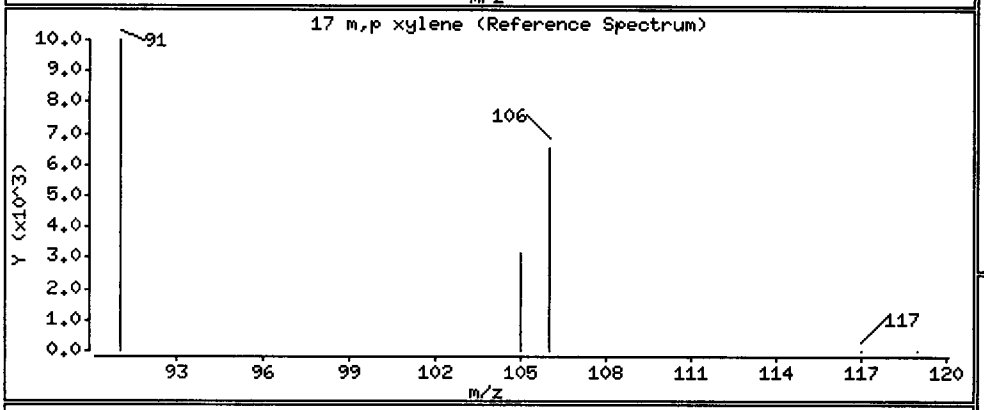
Column diameter: 0.18

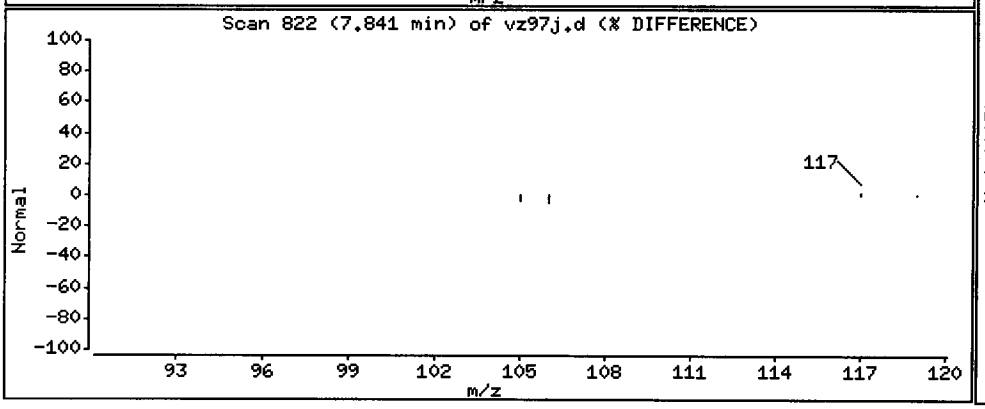
17 m,p xylene

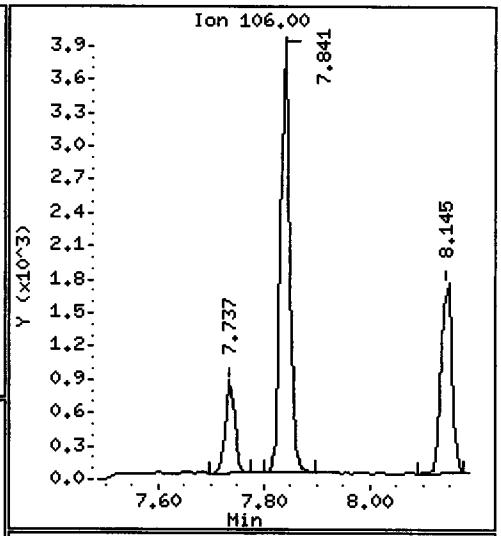
Concentration: 6.042 ug/Kg

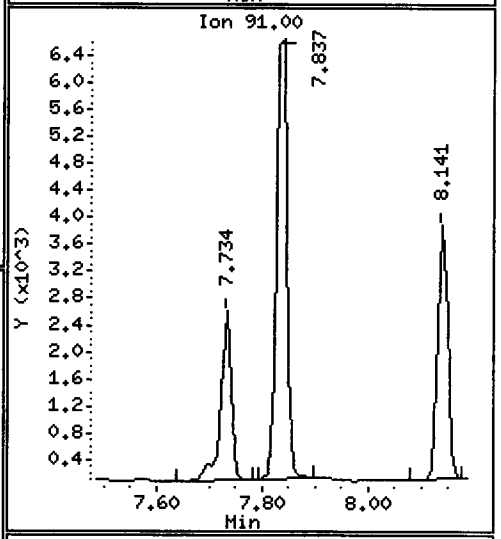


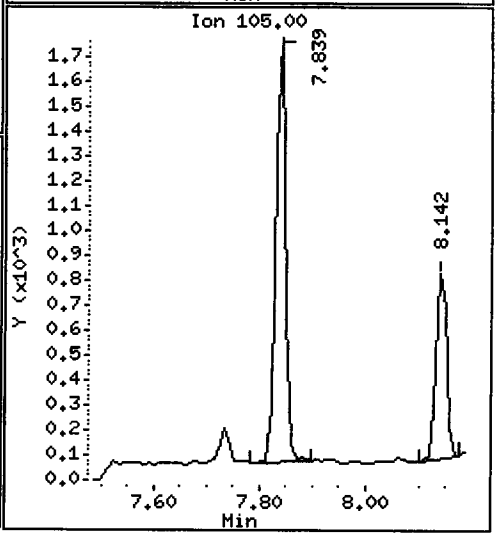












Data File: /chem1/nt9.i/18JAN13a.b/vz97j.d

Date : 18-JAN-2013 23:36

Client ID: CSIA20130109-010S+9

Instrument: nt9.i

Sample Info: VZ97J,10,20.841,1,

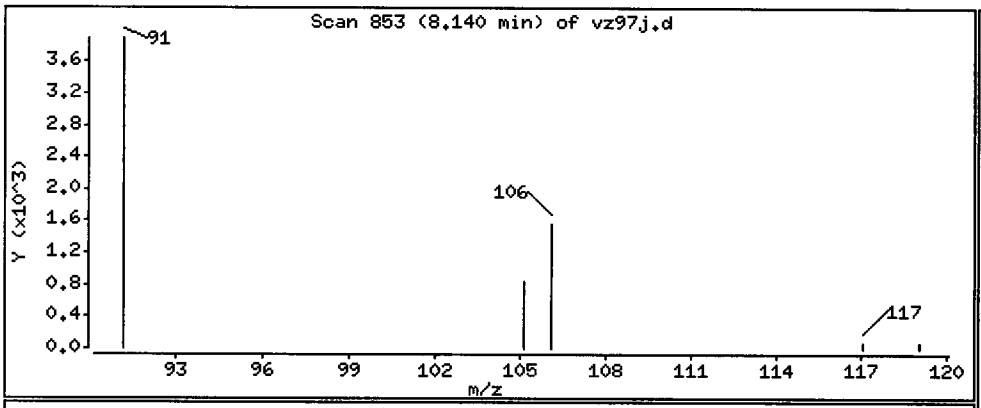
Operator: PC

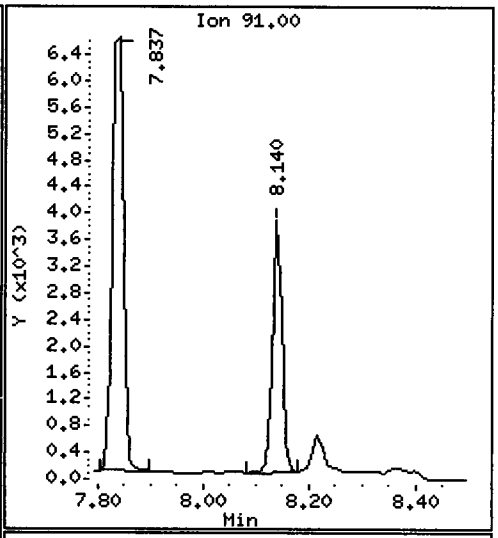
Column phase: RTXVMS

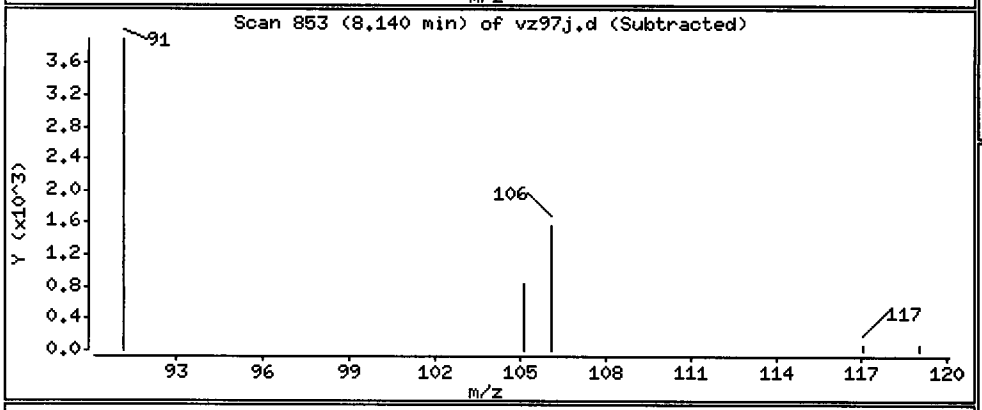
Column diameter: 0.18

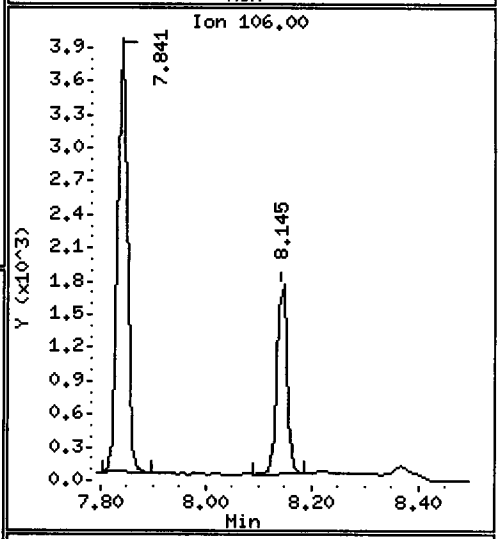
18 o-xylene

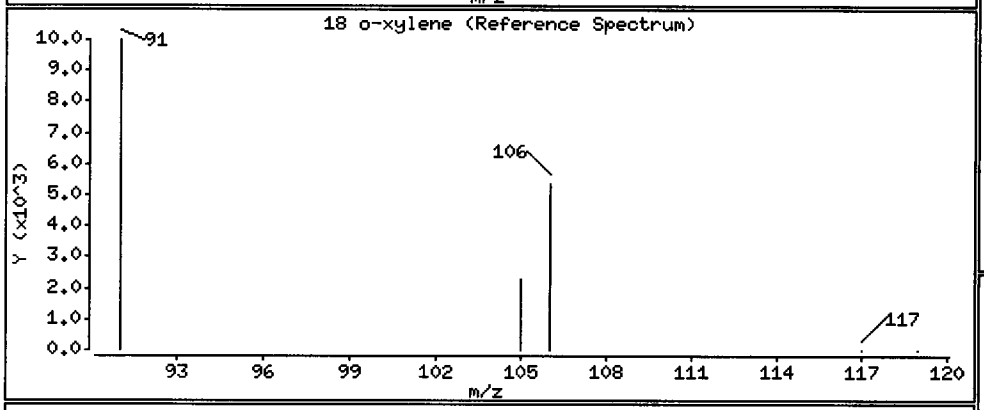
Concentration: 3.156 ug/Kg

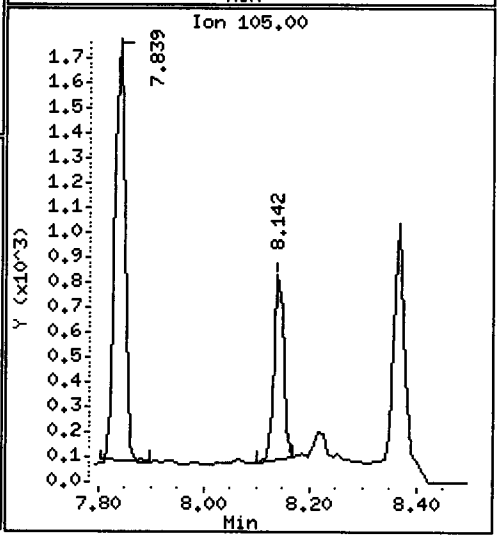


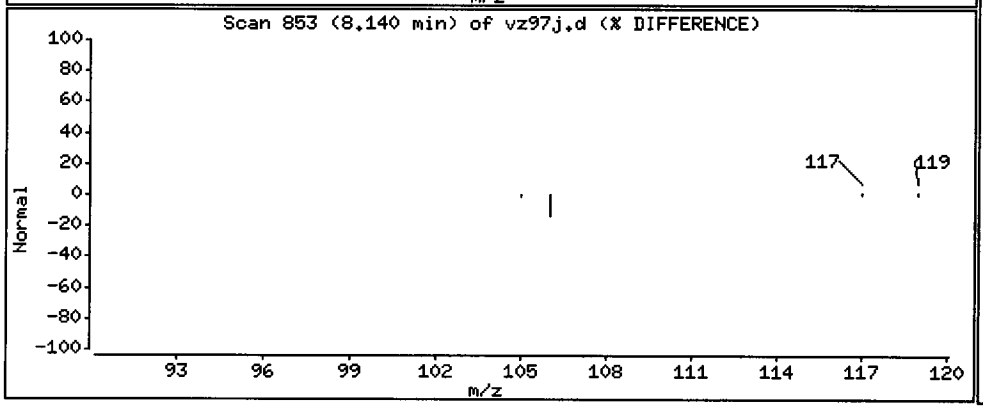












CO-ELUTION SUMMARY FOR FILE - vz97j.d

Lab ID: VZ97J, Method: sim011713.m, Instrument: nt9.i, Date: 18-JAN-2013

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/18JAN13a.b/vz97n.d
Lab Smp Id: VZ97N Client Smp ID: CSIA20130110-014S+6
Inj Date : 19-JAN-2013 01:11
Operator : PC Inst ID: nt9.i
Smp Info : VZ97N,10,16.506,1,
Misc Info : 13-1095
Comment :
Method : /chem1/nt9.i/18JAN13a.b/sim011713.m
Meth Date : 21-Jan-2013 16:16 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: btex.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	100.00000	Sample Amount (mg)
M	0.00000	Moisture (%)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	FINAL (ug/Kg)
	6 Benzene	78	Compound Not Detected.					
*	7 Pentafluorobenzene	168	5.268	5.268	(1.000)	118926	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.287	5.286	(1.004)	58539	1065.68	106.57
*	11 1,4-Difluorobenzene	114	5.643	5.642	(1.000)	204203	1000.00	
$	12 d8-Toluene	98	6.618	6.618	(1.173)	227040	1064.55	106.46
	13 Toluene	91	6.650	6.651	(0.863)	5114	19.2048	1.920
*	15 d5 -Chlorobenzene	117	7.706	7.706	(1.000)	220872	1000.00	
	16 Ethyl Benzene	91	~~7.802~~	7.734	(1.012)	1896	7.25570	0.7256(Q)
	17 m,p xylene	106	7.840	7.840	(1.017)	2132	21.7090	2.171(Q)
	18 o-xylene	91	7.836	8.140	(1.017)	2480	~~13.4083~~	1.341(Q)
$	19 4-Bromofluorobenzene	174	8.574	8.572	(1.113)	82139	1062.27	106.23(Q)

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: vz97n.d
Lab Smp Id: VZ97N
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-1095

Calibration Date: 18-JAN-2013
Calibration Time: 17:40
Client Smp ID: CSIA20130110-014S+6
Level: MED
Sample Type: Soil

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	118926	3.76
11 1,4-Difluorobenze	202370	101185	404740	204203	0.91
15 d5 -Chlorobenzene	226394	113197	452788	220872	-2.44

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	0.00
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	0.01
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	0.00

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA
Client SDG: VZ97
Sample Matrix: SOLID
Fraction: VOA
Lab Smp Id: VZ97N
Client Smp ID: CSIA20130110-014S+6
Level: MED
Operator: PC
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: special.spk
Quant Type: ISTD
Sublist File: btex.sub
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-1095

SURROGATE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 8 d4-1,2-Dichloroeth	100.00	106.57	106.57	75-125
$ 12 d8-Toluene	100.00	106.46	106.46	75-125
$ 19 4-Bromofluorobenze	100.00	106.23	106.23	75-125

Data File: /chem1/nt9.i/18JAN13a.b/vz97n.d

Date : 19-JAN-2013 01:11

Client ID: CSIA20130110-014S+6

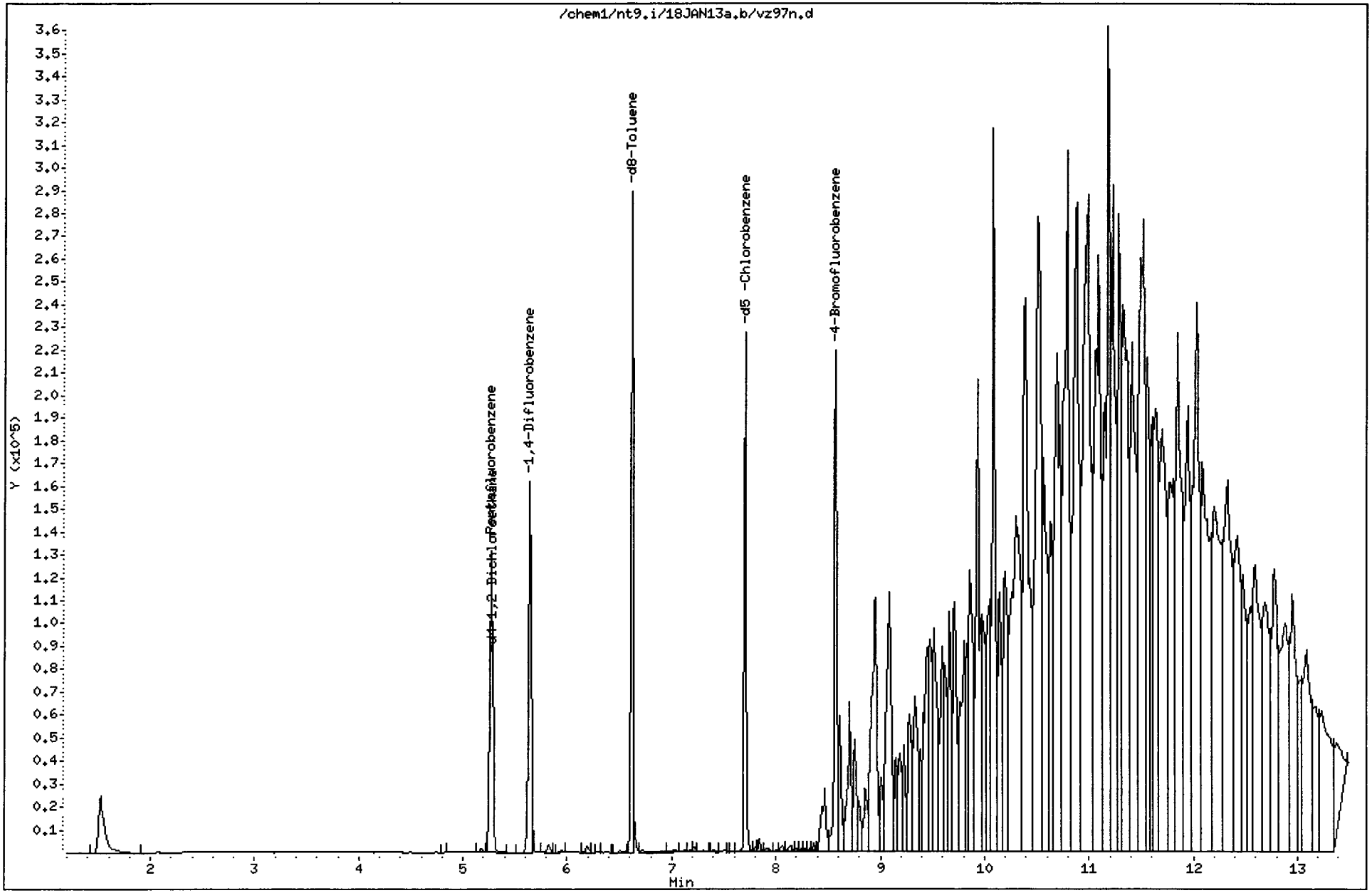
Sample Info: VZ97N,10,16.506,1,

Column phase: RTXVMS

Instrument: nt9.i

Operator: PC

Column diameter: 0.18



Data File: /chem1/nt9.i/18JAN13a.b/vz97n.d

Date : 19-JAN-2013 01:11

Client ID: CSIA20130110-014S+6

Instrument: nt9.i

Sample Info: VZ97N,10,16.506,1,

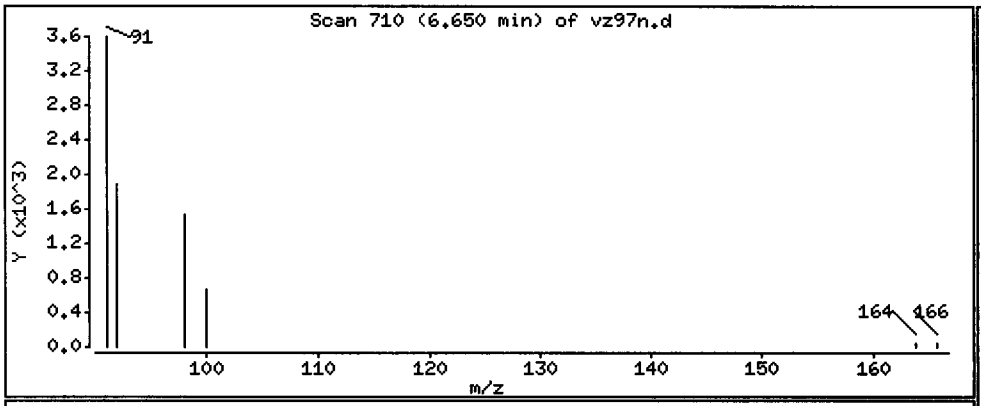
Operator: PC

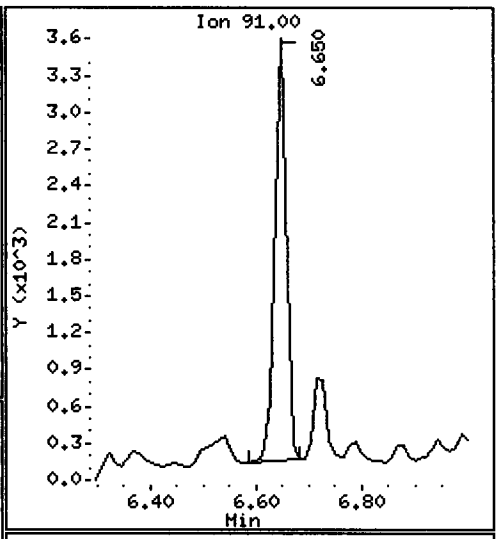
Column phase: RTXVMS

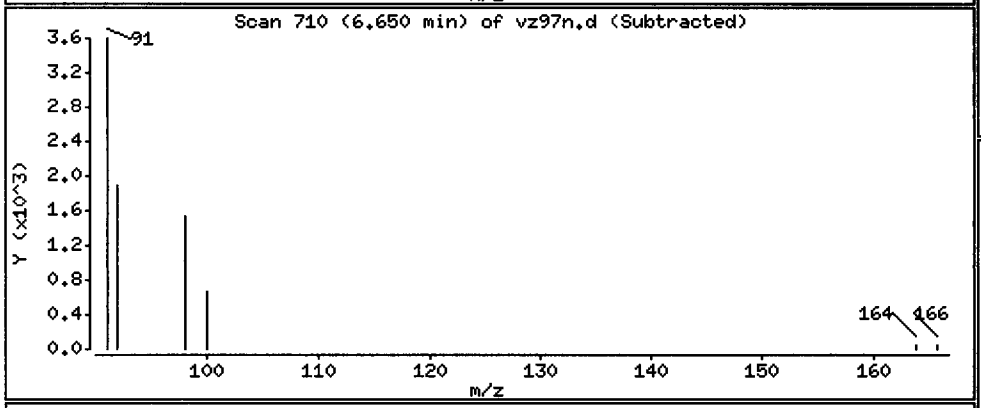
Column diameter: 0.18

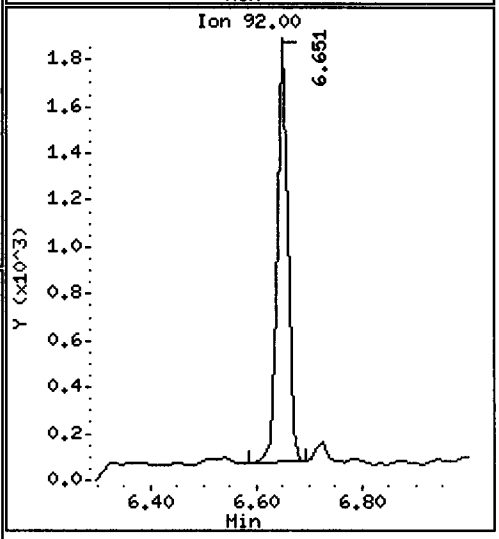
13 Toluene

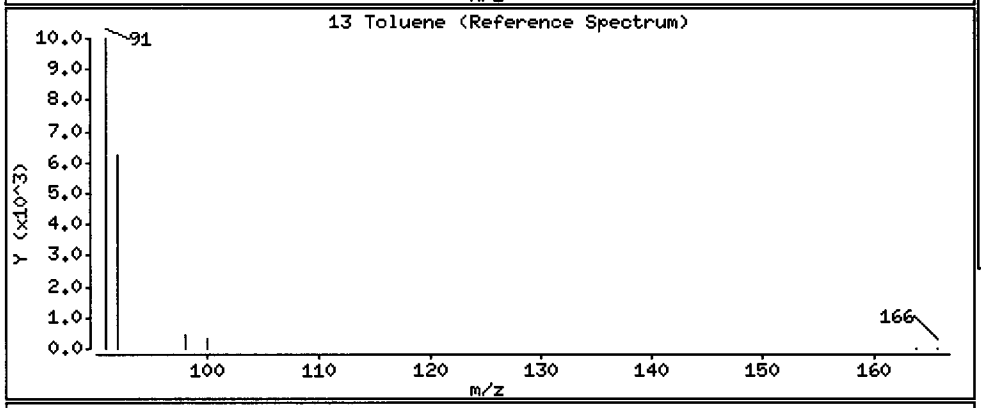
Concentration: 1.920 ug/Kg

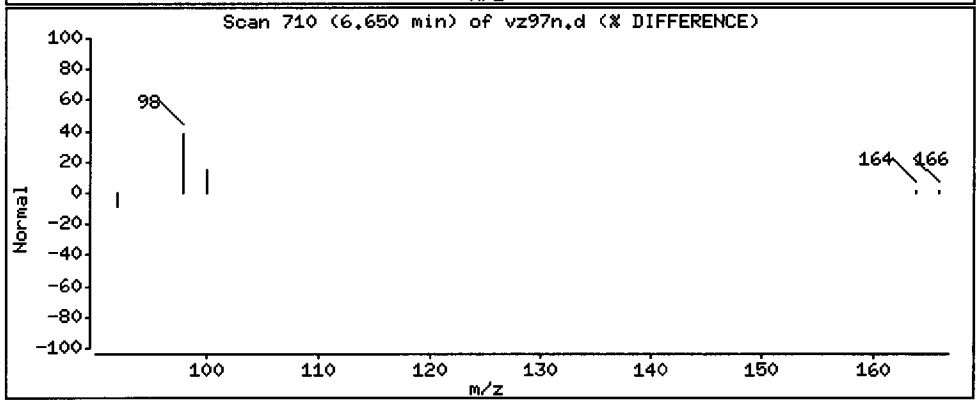












Data File: /chem1/nt9.i/18JAN13a.b/vz97n.d

Date : 19-JAN-2013 01:11

Client ID: CSIA20130110-014S+6

Instrument: nt9.i

Sample Info: VZ97N,10,16.506,1,

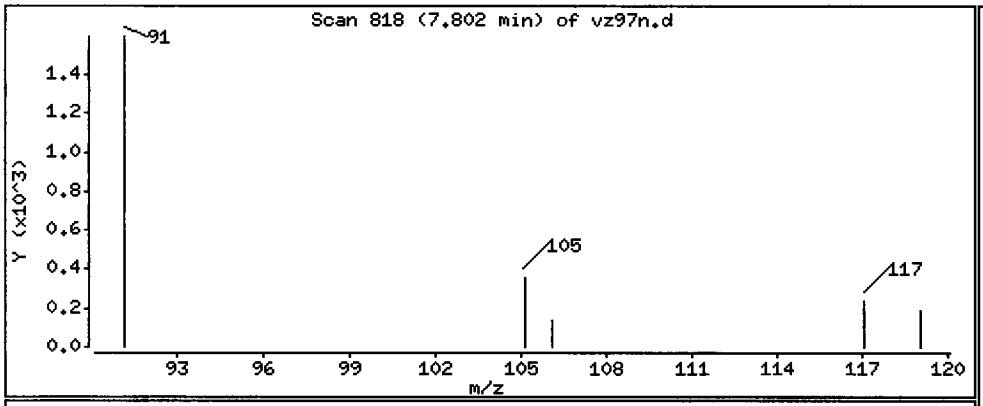
Operator: PC

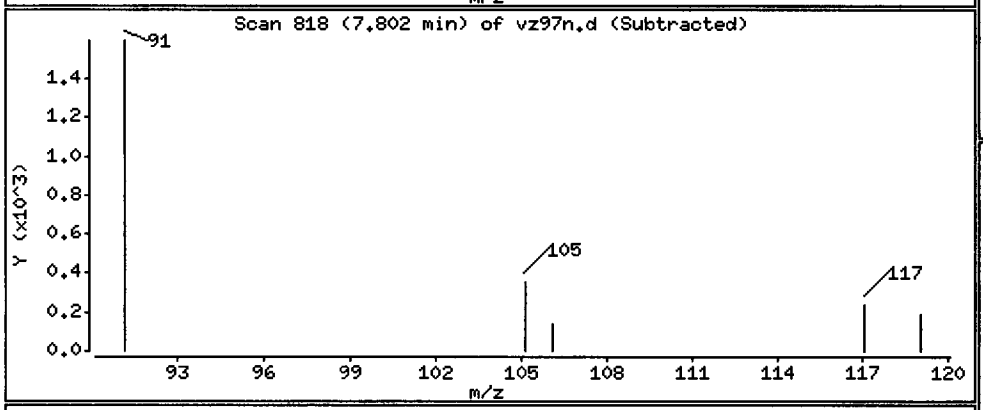
Column phase: RTXVMS

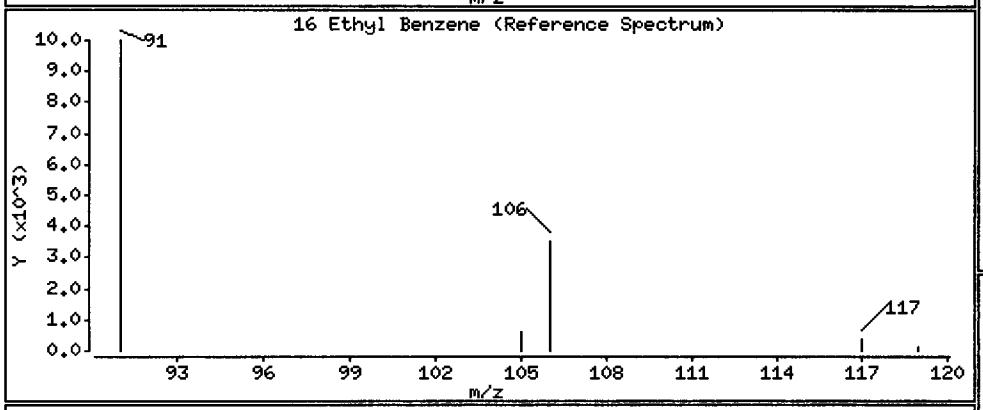
Column diameter: 0.18

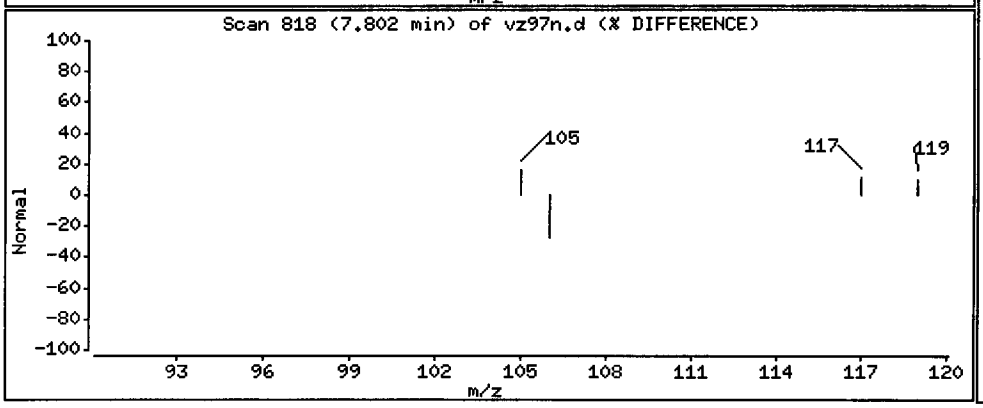
16 Ethyl Benzene

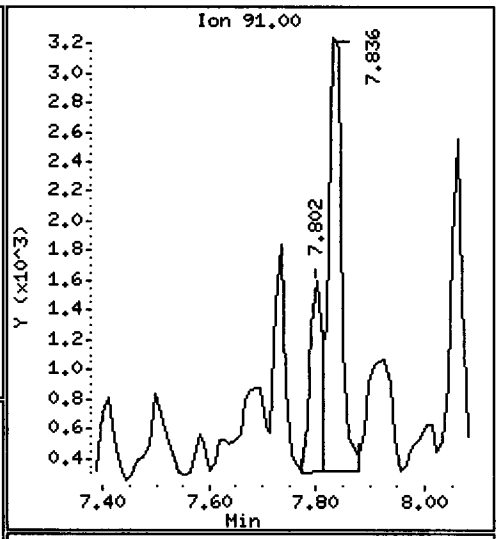
Concentration: 0.7256 ug/Kg

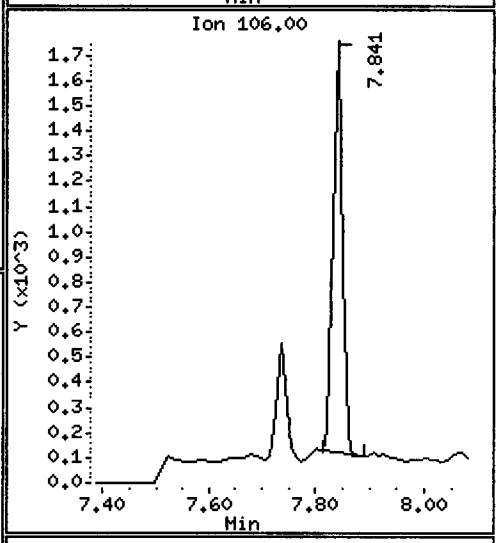


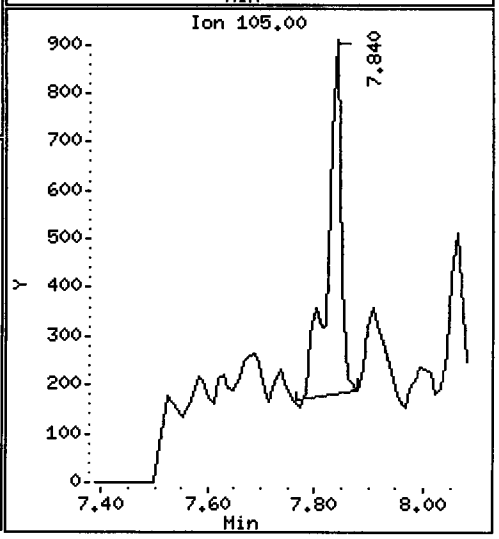












Data File: /chem1/nt9.i/18JAN13a.b/vz97n.d

Date : 19-JAN-2013 01:11

Client ID: CSIA20130110-014S+6

Instrument: nt9.i

Sample Info: VZ97N,10,16.506,1,

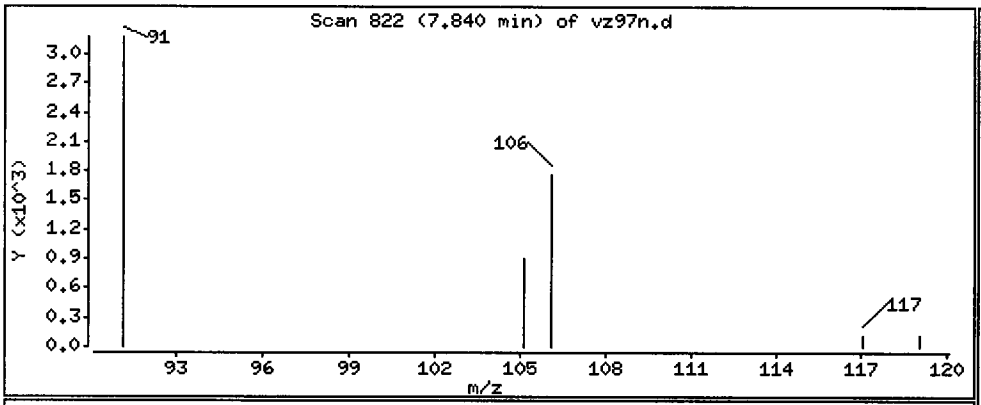
Operator: PC

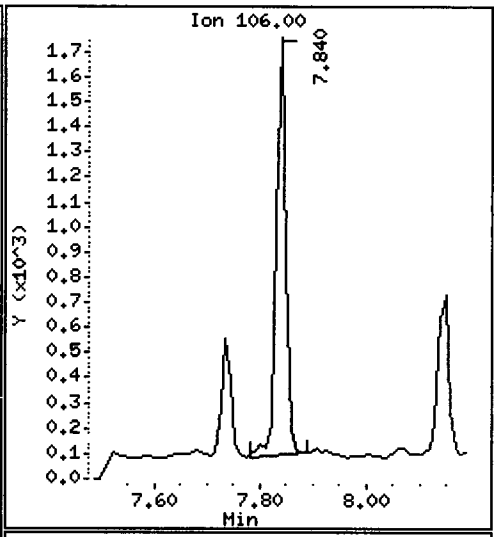
Column phase: RTXVMS

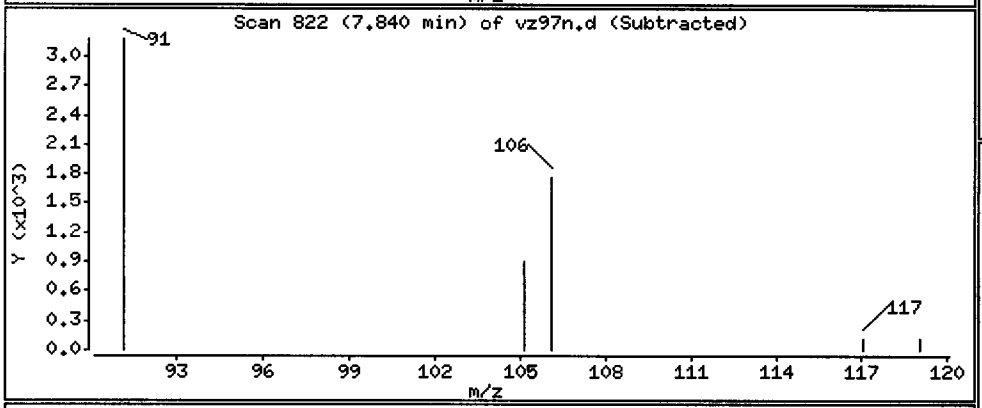
Column diameter: 0.18

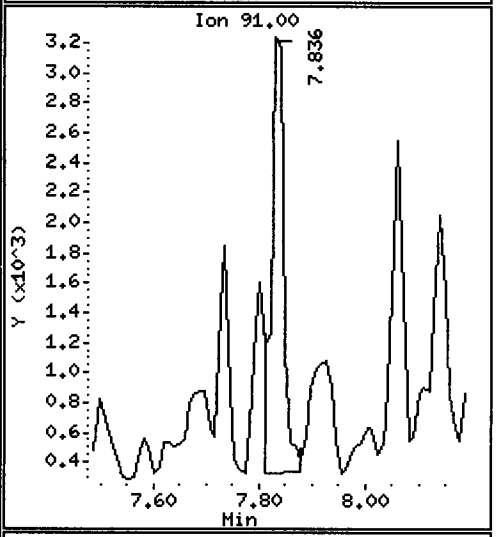
17 m,p xylene

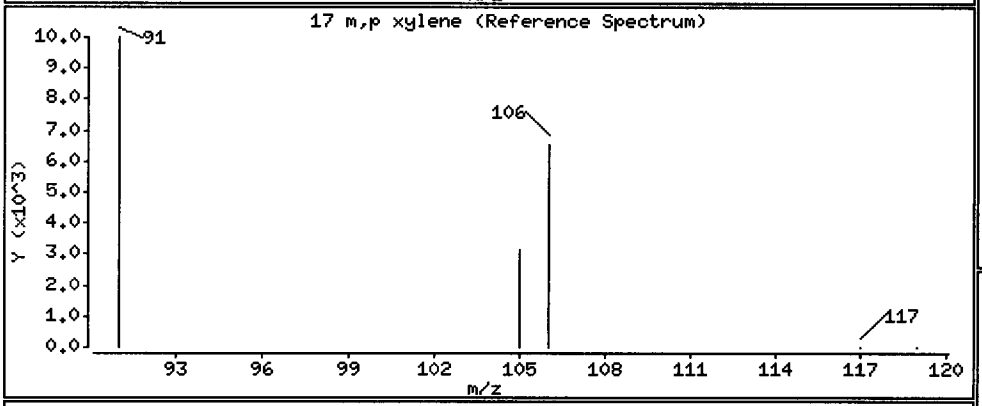
Concentration: 2.171 ug/Kg

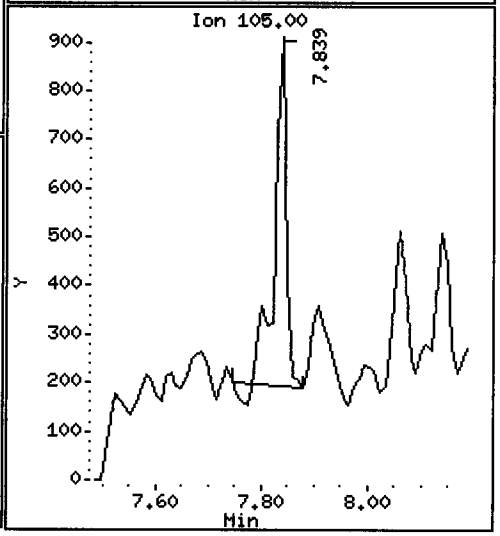


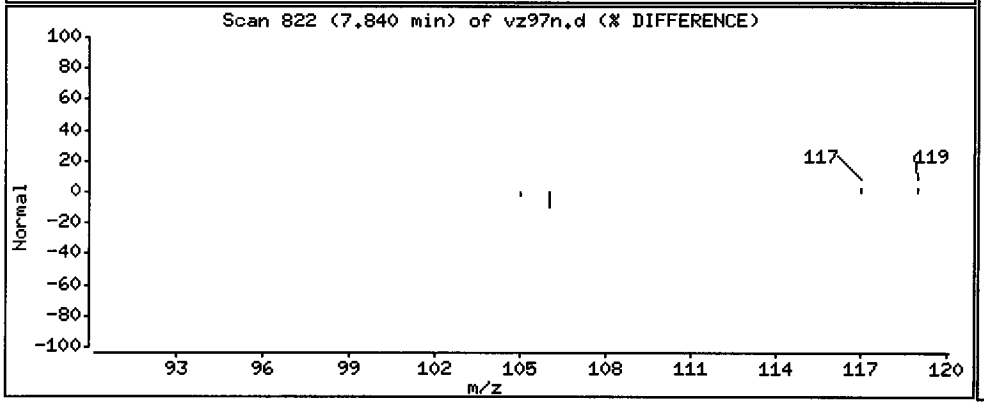












Data File: /chem1/nt9.i/18JAN13a.b/vz97n.d

Date : 19-JAN-2013 01:11

Client ID: CSIA20130110-014S+6

Instrument: nt9.i

Sample Info: VZ97N,10,16.506,1,

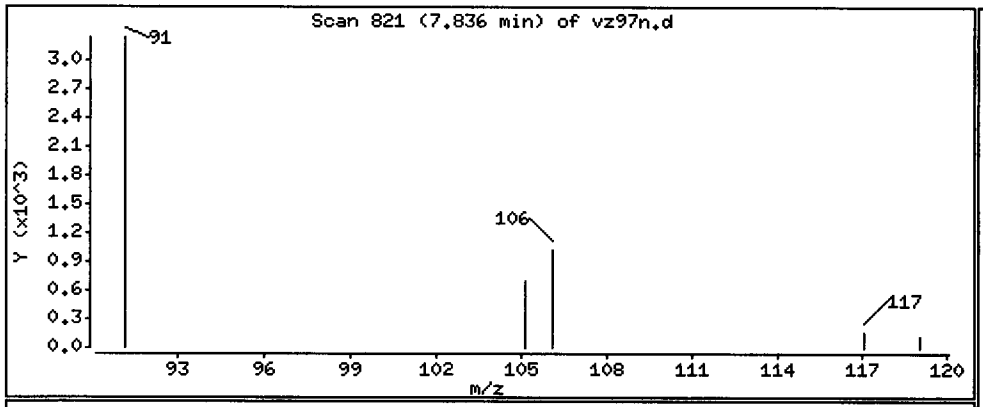
Operator: PC

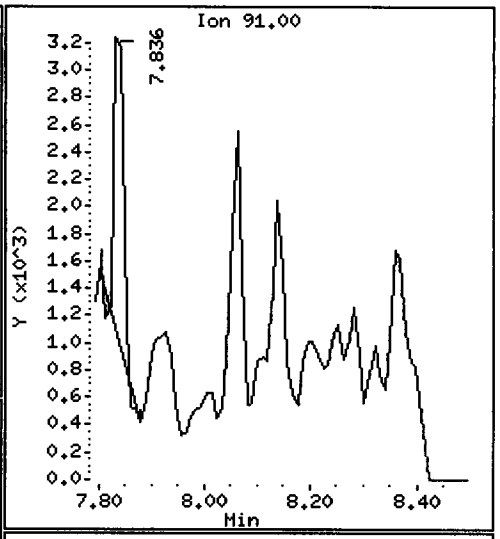
Column phase: RTXVMS

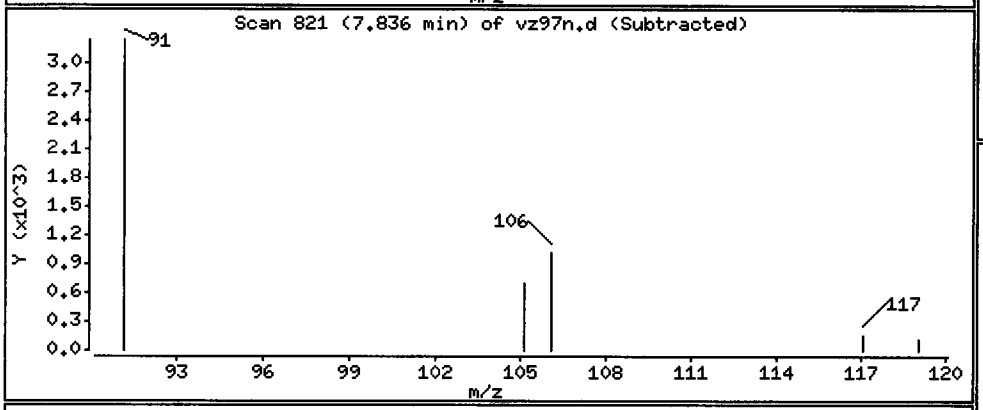
Column diameter: 0.18

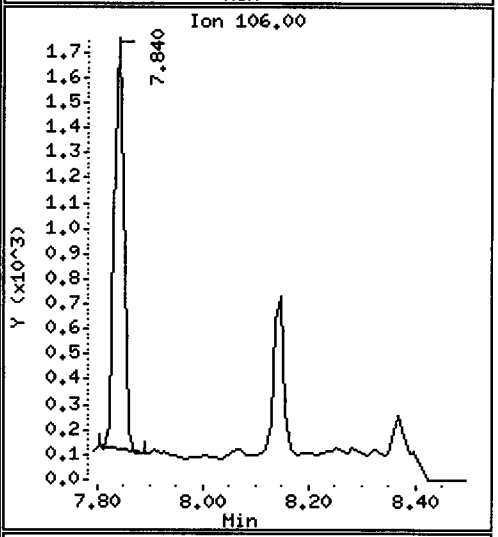
18 o-xylene

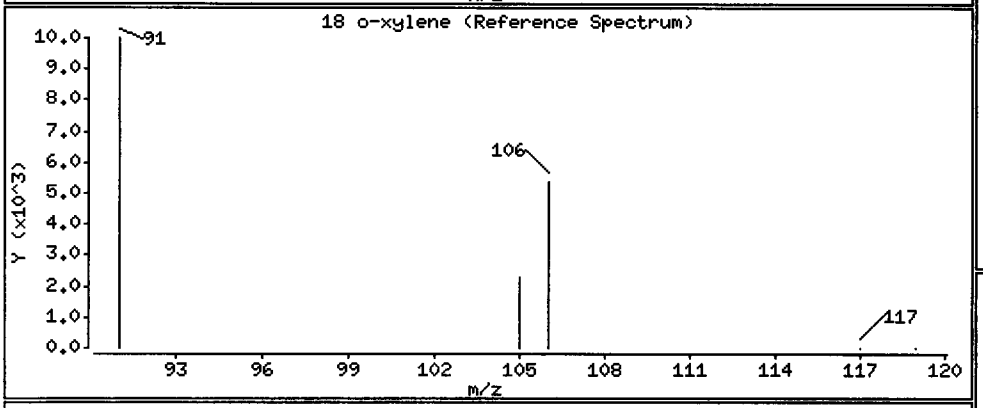
Concentration: 1.341 ug/Kg

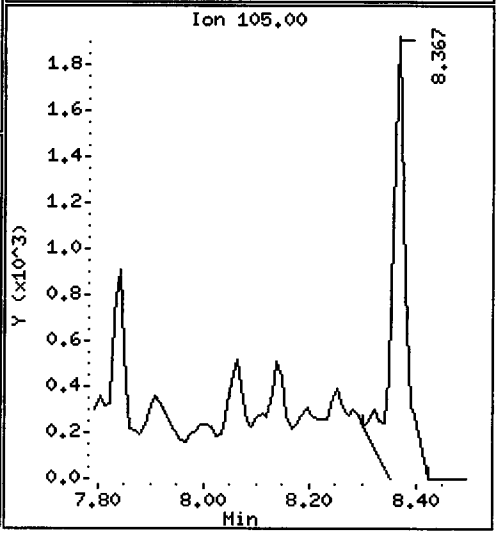


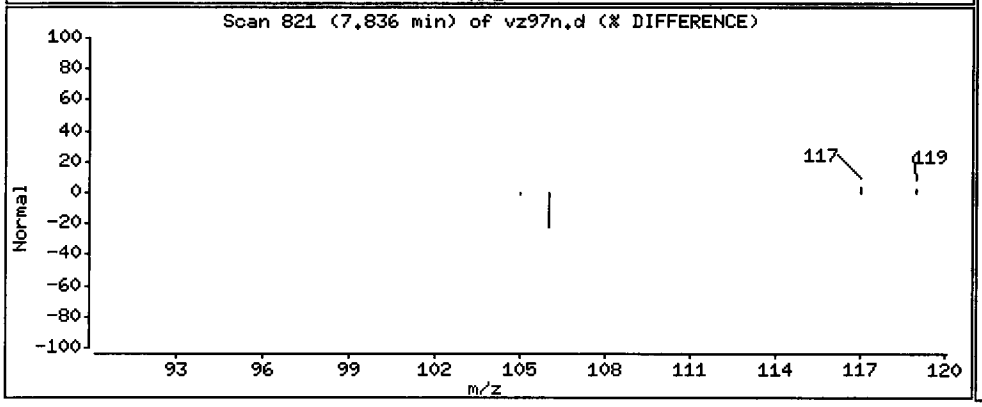












CO-ELUTION SUMMARY FOR FILE - vz97n.d

Lab ID: VZ97N, Method: sim011713.m, Instrument: nt9.i, Date: 19-JAN-2013

RT	CO-ELUTION COMPOUNDS

PC 1/21/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/18JAN13a.b/vz97o.d
Lab Smp Id: VZ97O Client Smp ID: CSIA20130110-015S+9
Inj Date : 19-JAN-2013 01:35
Operator : PC Inst ID: nt9.i
Smp Info : VZ97O,10,17.43,1,
Misc Info : 13-1096
Comment :
Method : /chem1/nt9.i/18JAN13a.b/sim011713.m
Meth Date : 21-Jan-2013 16:16 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: btex.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	100.00000	Sample Amount (mg)
M	0.00000	Moisture (%)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	CONCENTRATIONS FINAL (ug/Kg)
	6 Benzene	78	5.181	5.180	(0.918)	2797	11.5611	1.156
*	7 Pentafluorobenzene	168	5.267	5.268	(1.000)	113327	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.287	5.286	(1.004)	51946	992.369	99.237
*	11 1,4-Difluorobenzene	114	5.644	5.642	(1.000)	199552	1000.00	
$	12 d8-Toluene	98	6.619	6.618	(1.173)	224074	1075.13	107.51
	13 Toluene	91	6.651	6.651	(0.863)	9569	37.8378	3.784
*	15 d5 -Chlorobenzene	117	7.705	7.706	(1.000)	209772	1000.00	
	16 Ethyl Benzene	91	7.734	7.734	(1.004)	6044	24.3481	2.435(Q)
	17 m,p xylene	106	7.840	7.840	(1.017)	6981	74.8221	7.482(Q)
	18 o-xylene	91	8.140	8.140	(1.056)	18664	106.211	10.621(Q)
$	19 4-Bromofluorobenzene	174	8.574	8.572	(1.113)	76307	1039.06	103.91(Q)

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: vz97o.d
Lab Smp Id: VZ97O
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-1096

Calibration Date: 18-JAN-2013
Calibration Time: 17:40
Client Smp ID: CSIA20130110-015S+9
Level: MED
Sample Type: Soil

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	113327	-1.12
11 1,4-Difluorobenze	202370	101185	404740	199552	-1.39
15 d5 -Chlorobenzene	226394	113197	452788	209772	-7.34

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	-0.01
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	0.03
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	0.00

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA
Client SDG: VZ97
Sample Matrix: SOLID
Fraction: VOA
Lab Smp Id: VZ97O
Client Smp ID: CSIA20130110-015S+9
Level: MED
Operator: PC
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: special.spk
Quant Type: ISTD
Sublist File: btex.sub
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-1096

SURROGATE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 8 d4-1,2-Dichloroeth	100.00	99.237	99.24	75-125
$ 12 d8-Toluene	100.00	107.51	107.51	75-125
$ 19 4-Bromofluorobenze	100.00	103.91	103.91	75-125

Data File: /chem1/nt9.i/18JAN13a.b/vz97o.d

Date : 19-JAN-2013 01:35

Client ID: CSIA20130110-015S+9

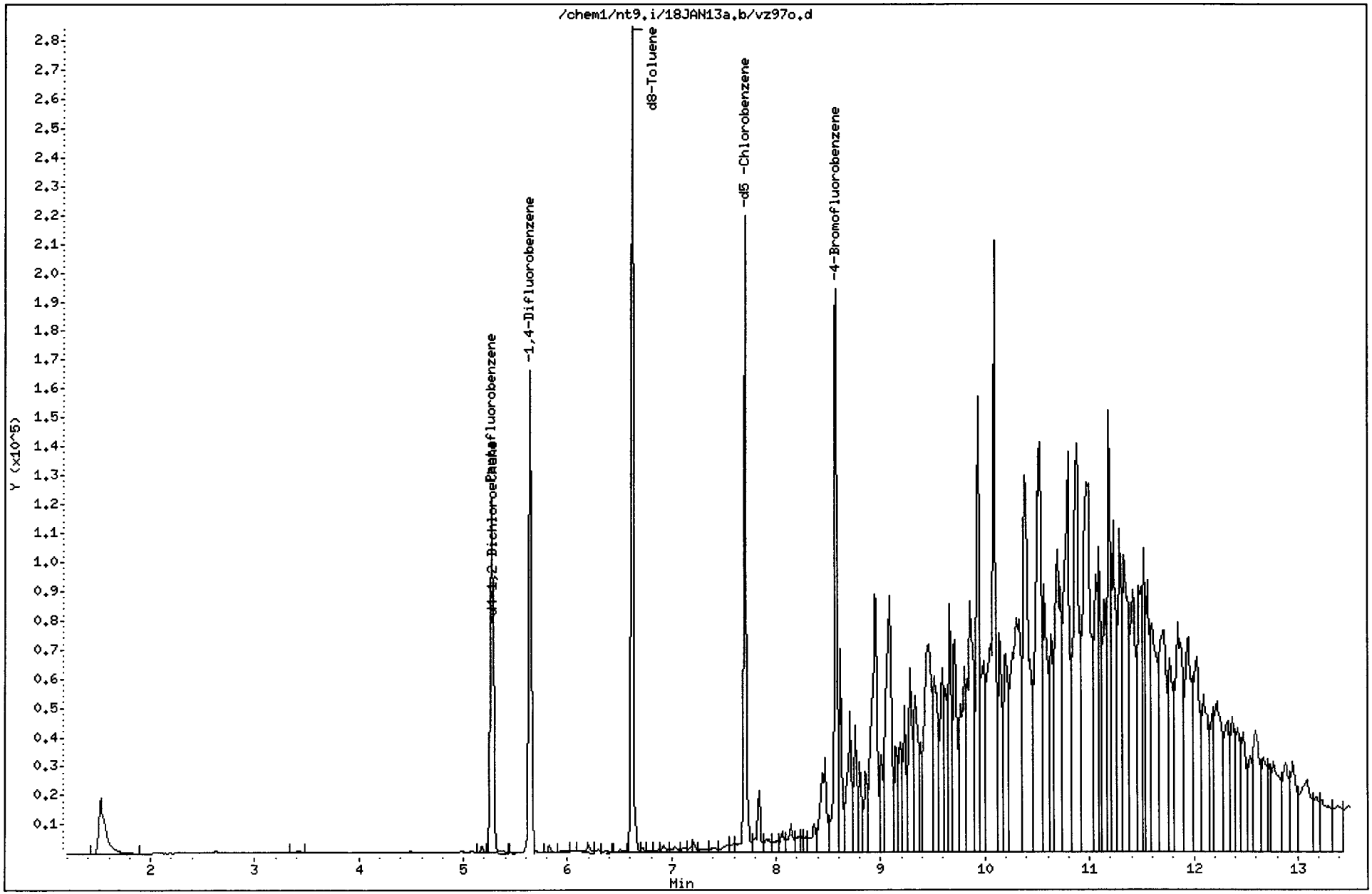
Sample Info: VZ97O,10,17.43,1,

Column phase: RTXVMS

Instrument: nt9.i

Operator: PC

Column diameter: 0.18



Data File: /chem1/nt9.i/18JAN13a.b/vz97o.d

Date : 19-JAN-2013 01:35

Client ID: CSIA20130110-015S+9

Instrument: nt9.i

Sample Info: VZ97O,10,17.43,1,

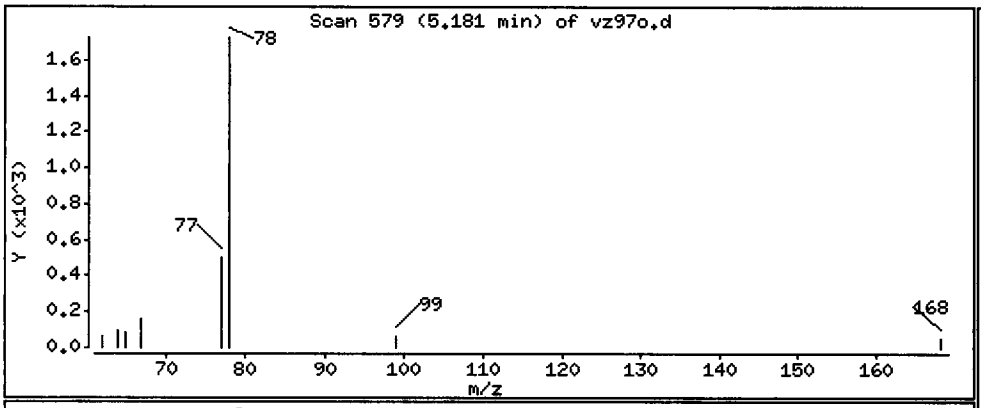
Operator: PC

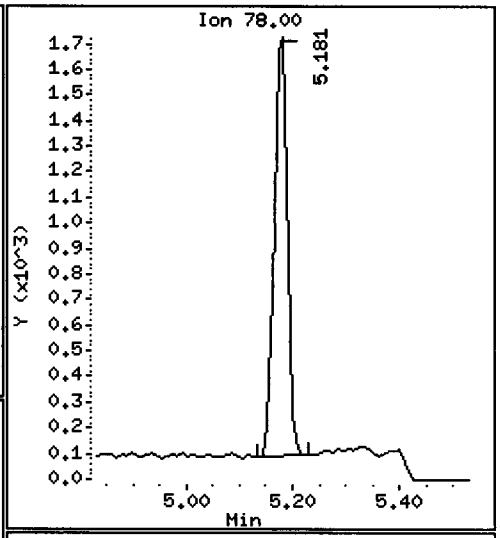
Column phase: RTXVMS

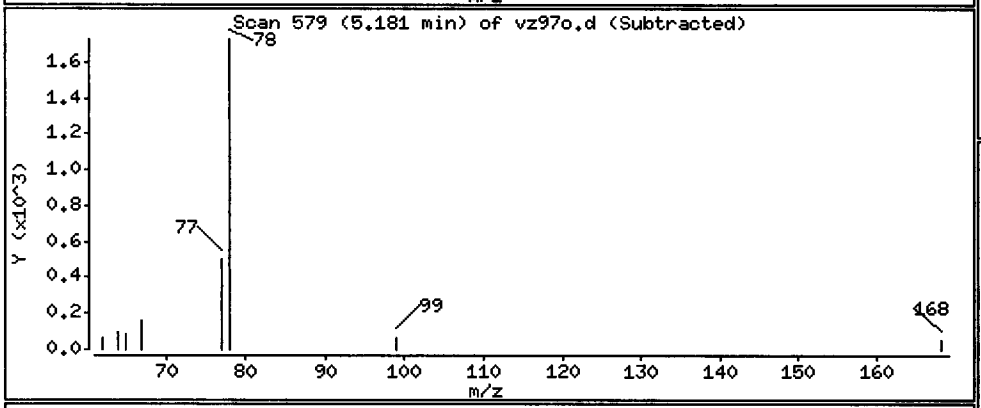
Column diameter: 0.18

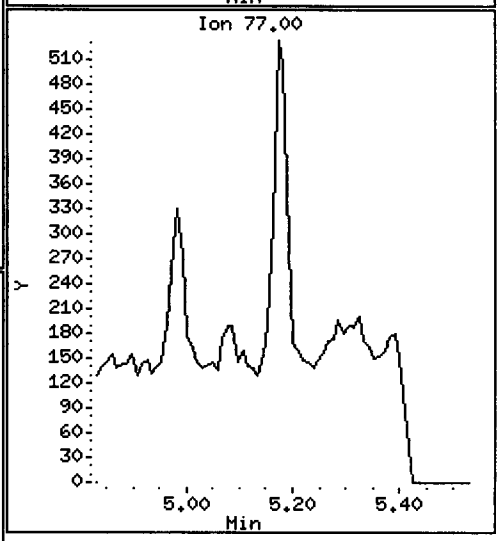
6 Benzene

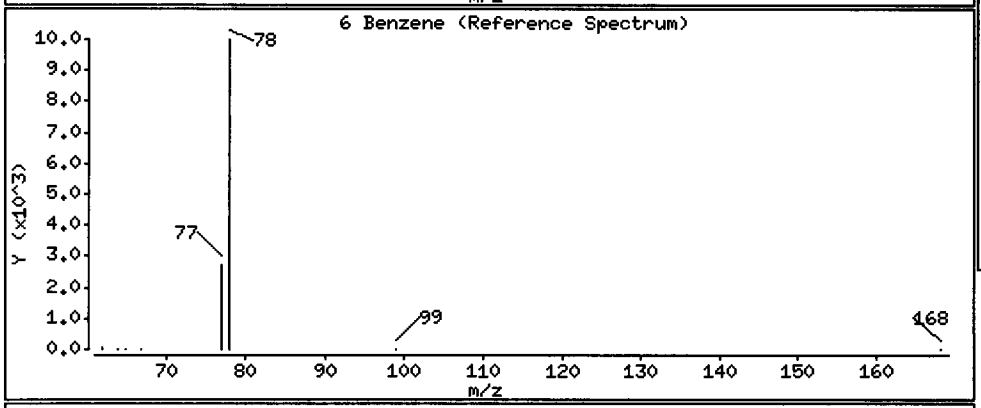
Concentration: 1.156 ug/Kg

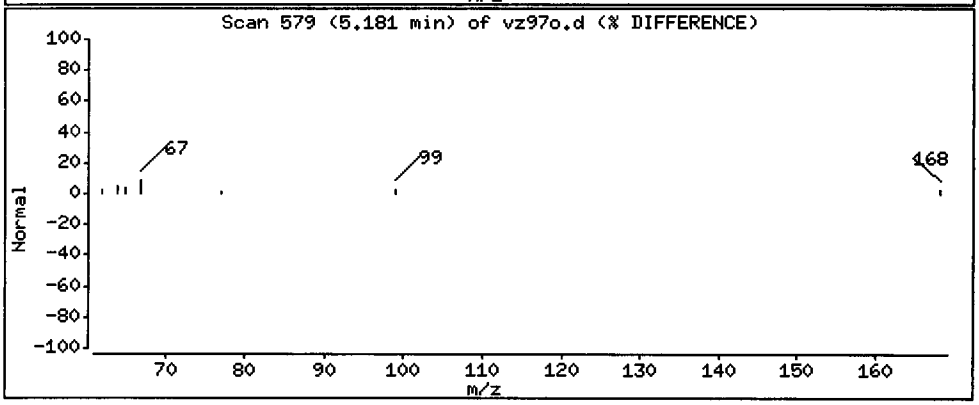












Data File: /chem1/nt9.i/18JAN13a.b/vz97o.d

Date : 19-JAN-2013 01:35

Client ID: CSIA20130110-015S+9

Instrument: nt9.i

Sample Info: VZ97O,10,17.43,1,

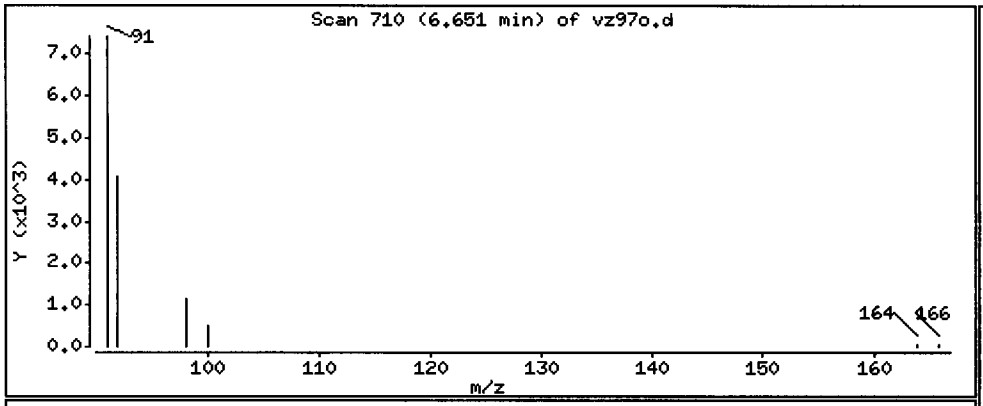
Operator: PC

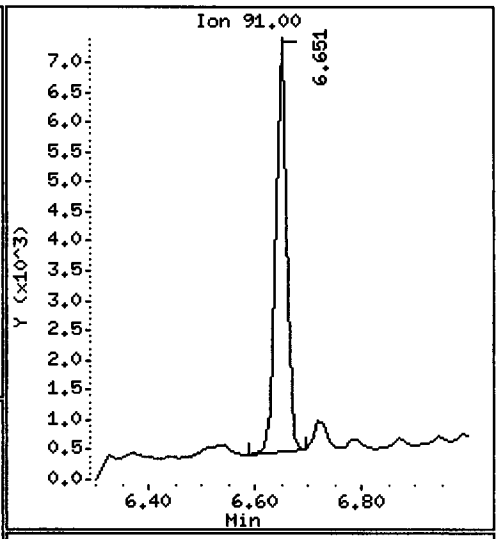
Column phase: RTXVMS

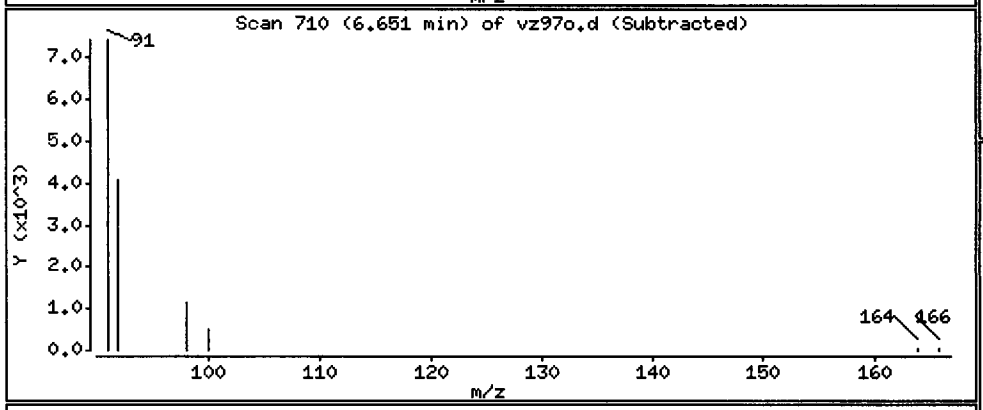
Column diameter: 0.18

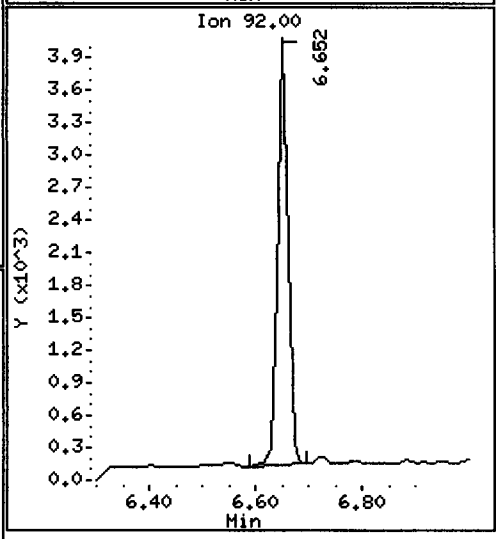
13 Toluene

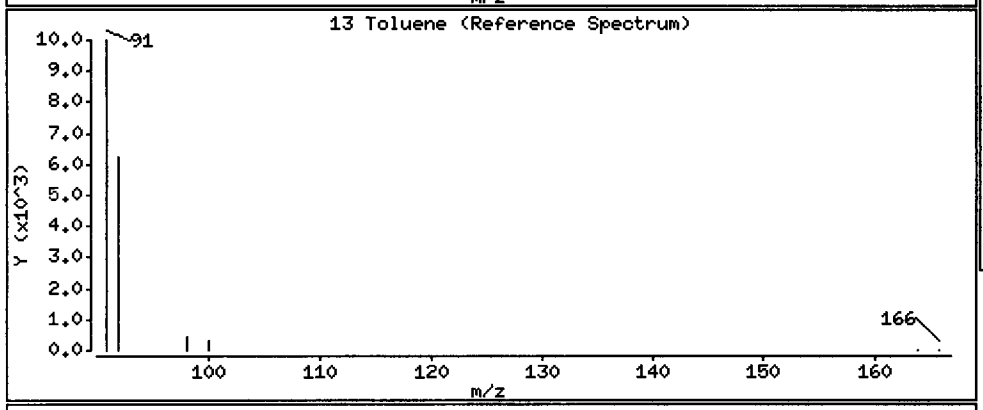
Concentration: 3.784 ug/Kg

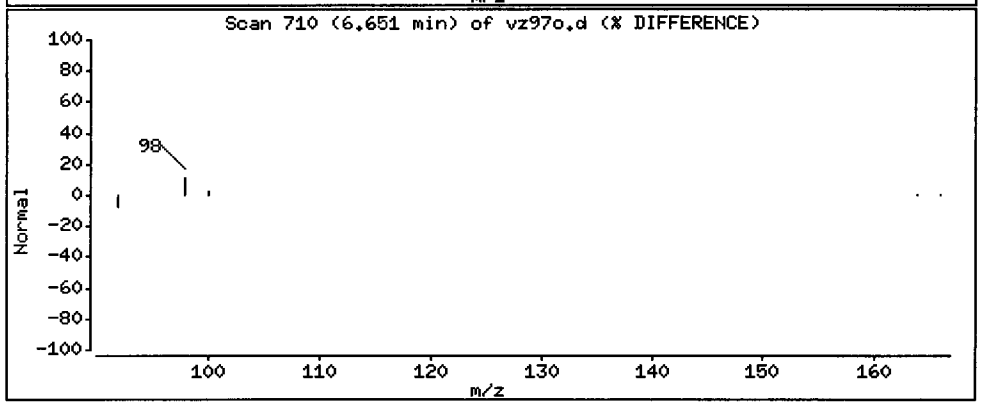












Data File: /chem1/nt9.i/18JAN13a.b/vz97o.d

Date : 19-JAN-2013 01:35

Client ID: CSIA20130110-015S+9

Instrument: nt9.i

Sample Info: VZ97O,10,17.43,1,

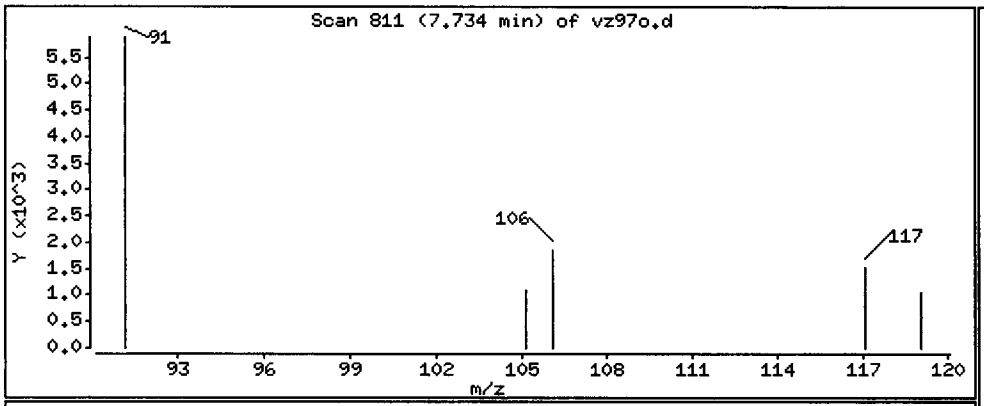
Operator: PC

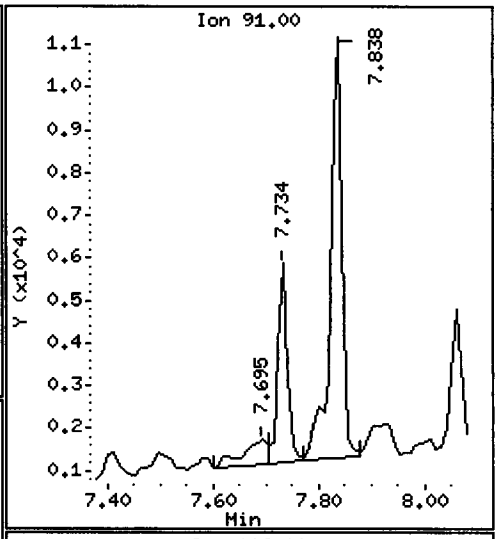
Column phase: RTXVMS

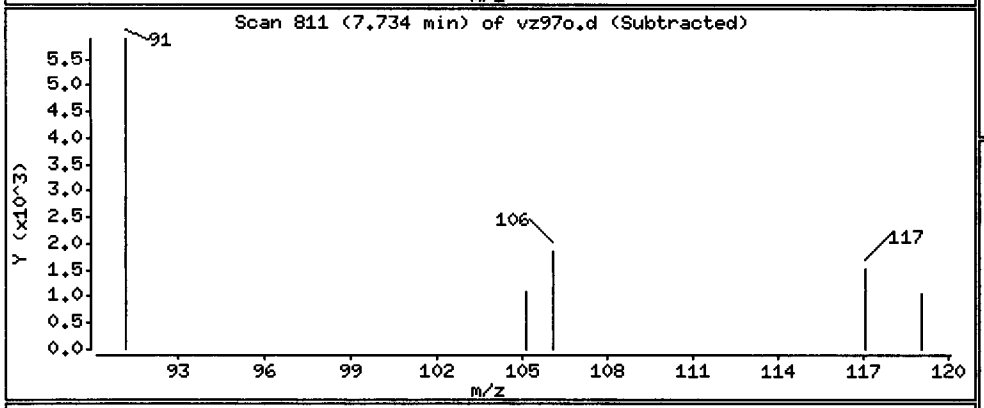
Column diameter: 0.18

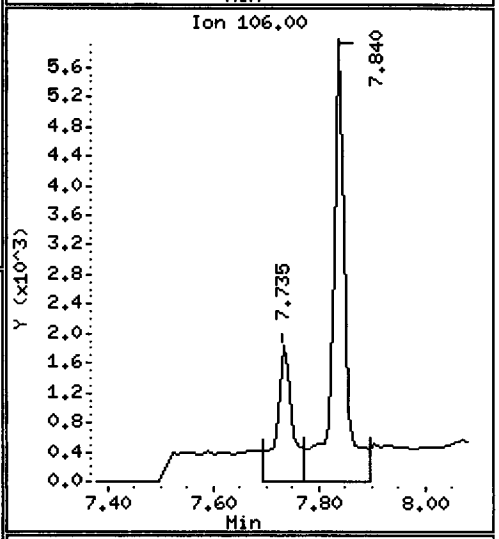
16 Ethyl Benzene

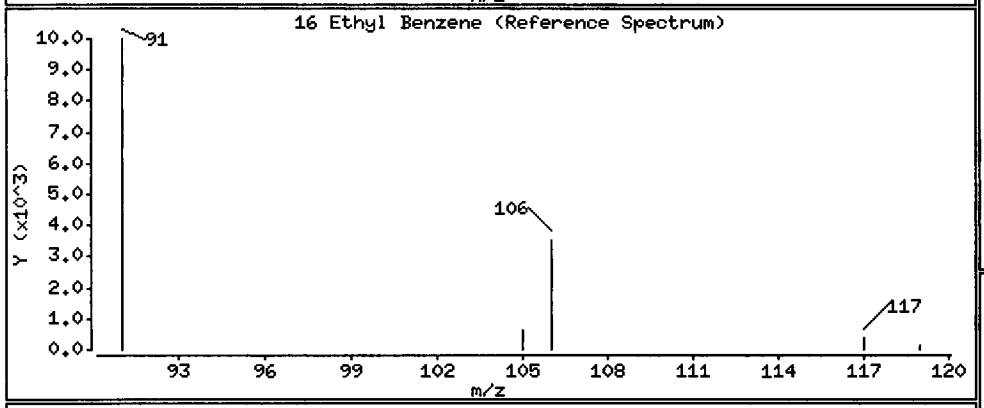
Concentration: 2.435 ug/Kg

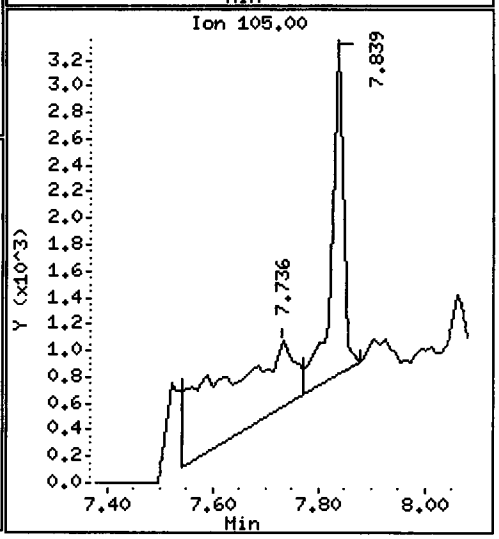


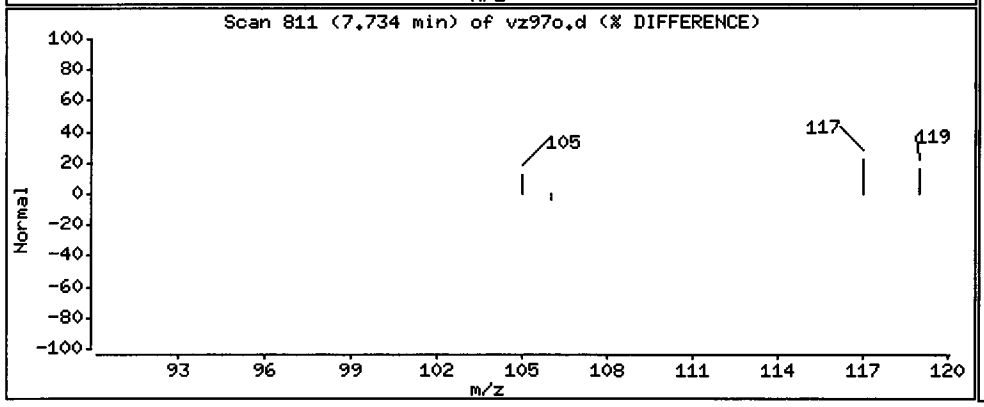












Data File: /chem1/nt9.i/18JAN13a.b/vz97o.d

Date : 19-JAN-2013 01:35

Client ID: CSIA20130110-015S+9

Instrument: nt9.i

Sample Info: VZ97O,10,17.43,1,

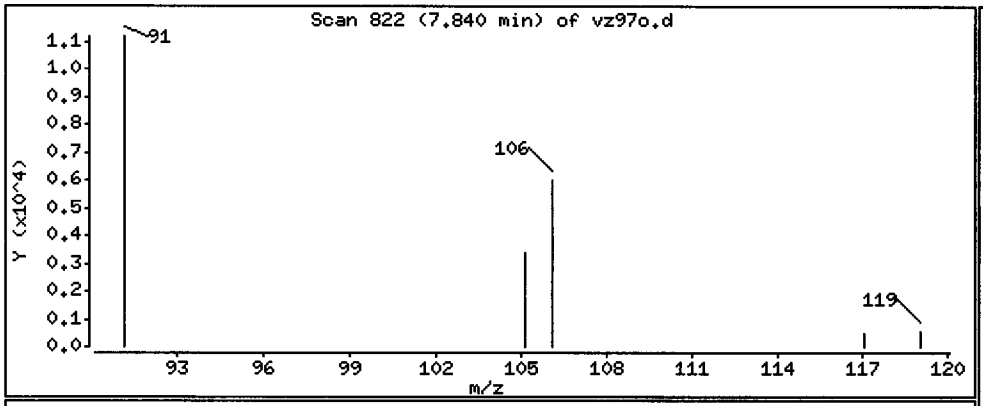
Operator: PC

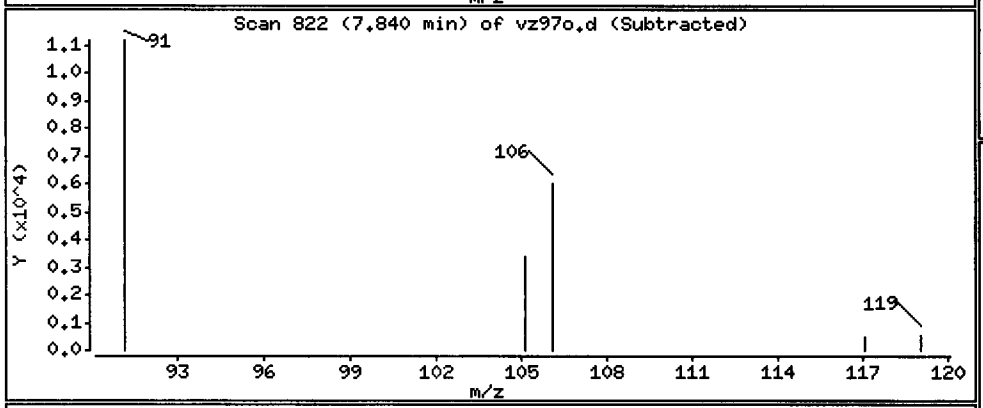
Column phase: RTXVMS

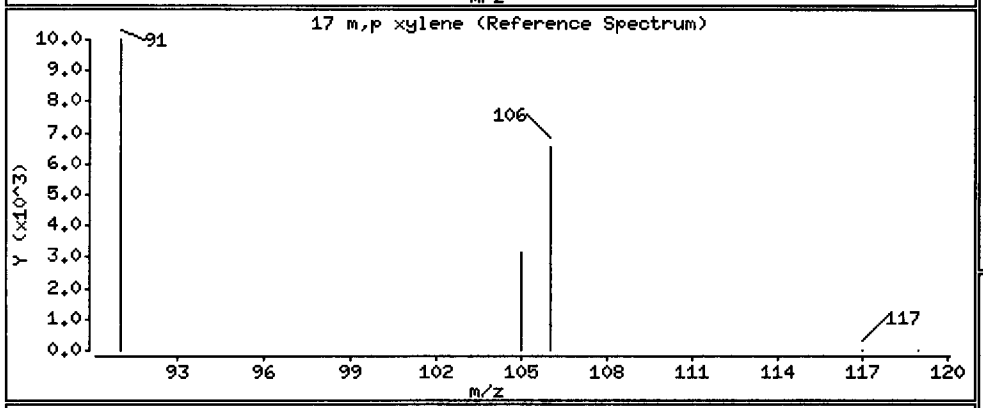
Column diameter: 0.18

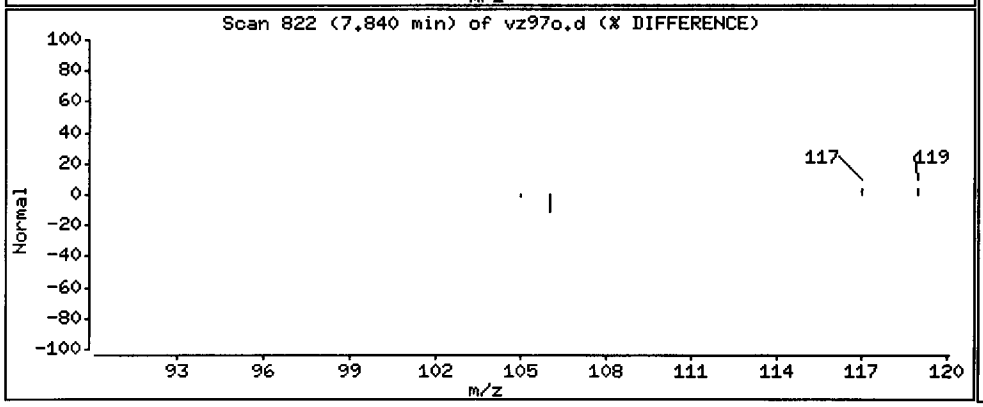
17 m,p xylene

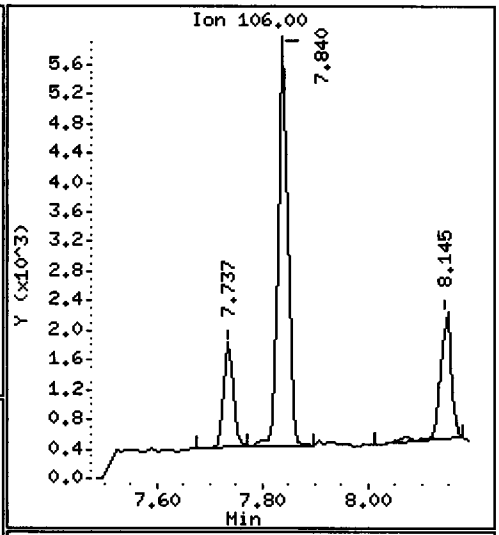
Concentration: 7.482 ug/Kg

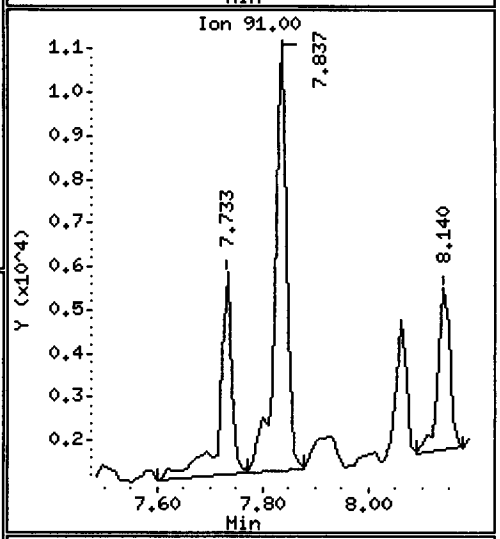


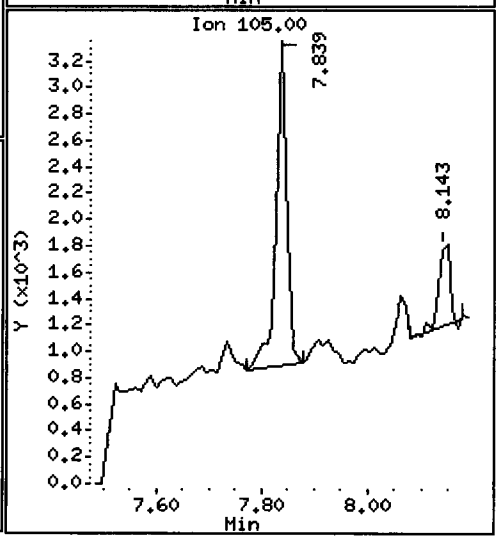












Data File: /chem1/nt9.i/18JAN13a.b/vz97o.d

Date : 19-JAN-2013 01:35

Client ID: CSIA20130110-015S+9

Instrument: nt9.i

Sample Info: VZ970,10,17.43,1,

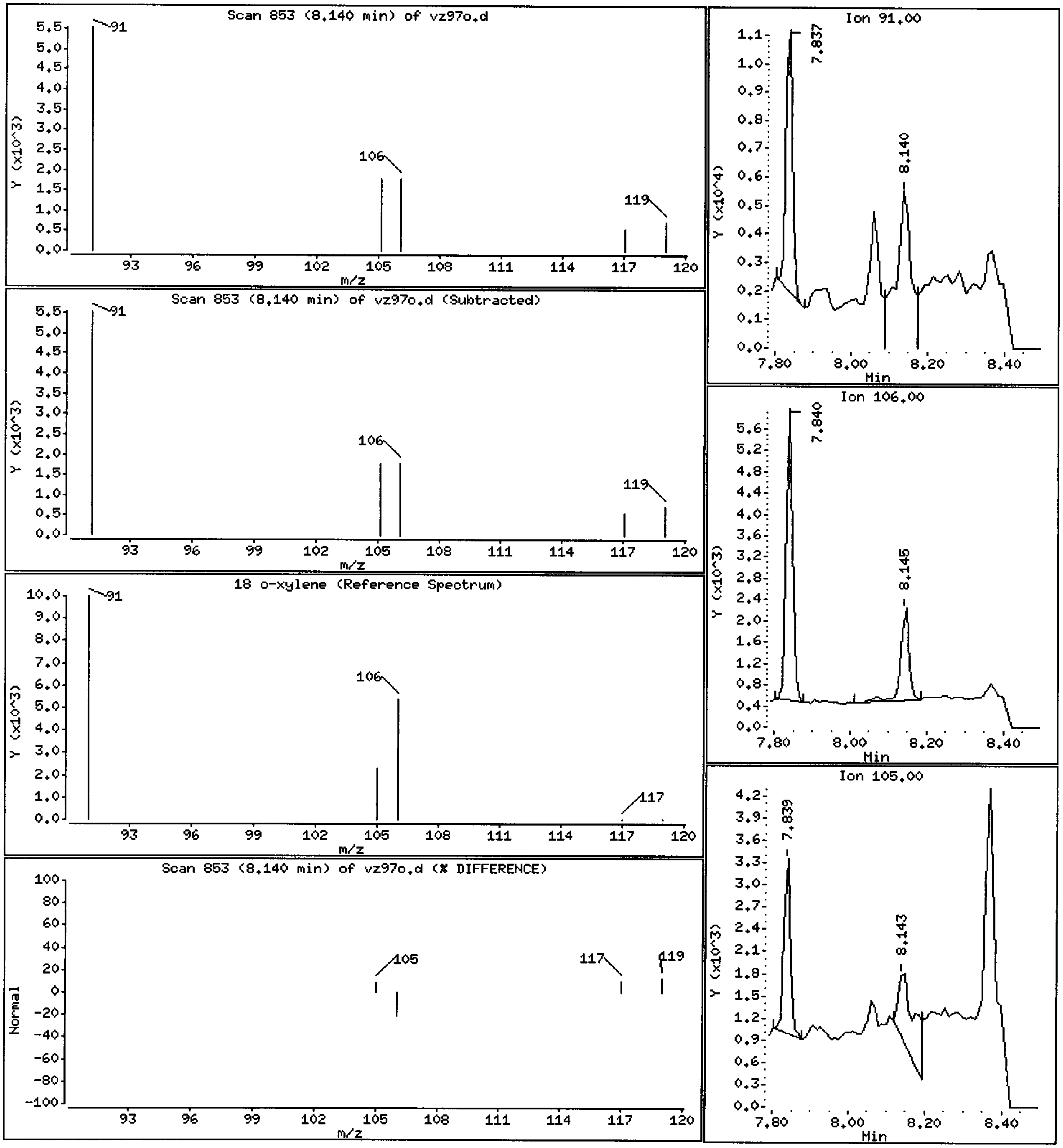
Operator: PC

Column phase: RTXVMS

Column diameter: 0.18

18 o-xylene

Concentration: 10.621 ug/Kg



CO-ELUTION SUMMARY FOR FILE - vz97o.d

Lab ID: VZ97O, Method: sim011713.m, Instrument: nt9.i, Date: 19-JAN-2013

RT	CO-ELUTION COMPOUNDS

PC 1/21/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/18JAN13a.b/vz97r.d
Lab Smp Id: VZ97R Client Smp ID: CSIA20130111-018S+9
Inj Date : 19-JAN-2013 02:46
Operator : PC Inst ID: nt9.i
Smp Info : VZ97R,10,17.737,1,
Misc Info : 13-1099
Comment :
Method : /chem1/nt9.i/18JAN13a.b/sim011713.m
Meth Date : 21-Jan-2013 16:16 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: btex.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	100.00000	Sample Amount (mg)
M	0.00000	Moisture (%)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	CONCENTRATIONS FINAL (ug/Kg)
	6 Benzene	78	5.174	5.180	(0.917)	9711	37.1019	3.710
*	7 Pentafluorobenzene	168	5.268	5.268	(1.000)	122378	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.287	5.286	(1.004)	53994	955.220	95.522
*	11 1,4-Difluorobenzene	114	5.642	5.642	(1.000)	215891	1000.00	
$	12 d8-Toluene	98	6.618	6.618	(1.173)	232270	1030.11	103.01
	13 Toluene	91	6.651	6.651	(0.863)	56083	210.289	21.029
*	15 d5 -Chlorobenzene	117	7.706	7.706	(1.000)	221200	1000.00	
	16 Ethyl Benzene	91	7.734	7.734	(1.004)	22100	84.4270	8.443(Q)
	17 m,p xylene	106	7.841	7.840	(1.017)	34637	352.042	35.204
	18 o-xylene	91	8.140	8.140	(1.056)	38610	208.357	20.836
$	19 4-Bromofluorobenzene	174	8.575	8.572	(1.113)	82615	1066.84	106.68(Q)

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: vz97r.d
Lab Smp Id: VZ97R
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-1099

Calibration Date: 18-JAN-2013
Calibration Time: 17:40
Client Smp ID: CSIA20130111-018S+9
Level: MED
Sample Type: Soil

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	122378	6.78
11 1,4-Difluorobenze	202370	101185	404740	215891	6.68
15 d5 -Chlorobenzene	226394	113197	452788	221200	-2.29

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	-0.01
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	0.01
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	0.01

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.

Analytical Resources, Inc.

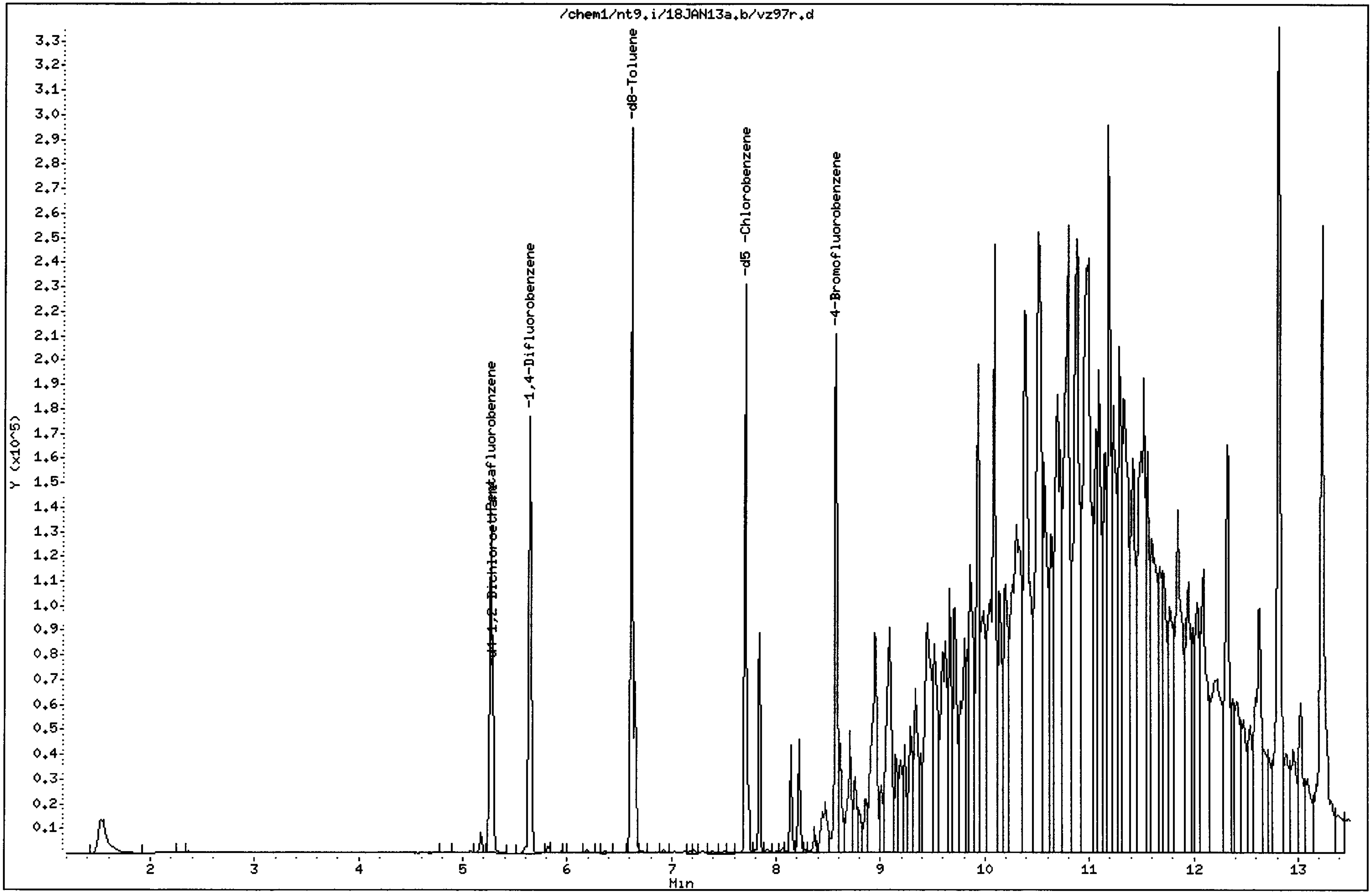
RECOVERY REPORT

Client Name: Anchor QEA
Client SDG: VZ97
Sample Matrix: SOLID
Fraction: VOA
Lab Smp Id: VZ97R
Client Smp ID: CSIA20130111-018S+9
Level: MED
Operator: PC
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: special.spk
Quant Type: ISTD
Sublist File: btex.sub
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-1099

SURROGATE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 8 d4-1,2-Dichloroeth	100.00	95.522	95.52	75-125
$ 12 d8-Toluene	100.00	103.01	103.01	75-125
$ 19 4-Bromofluorobenze	100.00	106.68	106.68	75-125

Data File: /chem1/nt9.i/18JAN13a.b/vz97r.d
Date : 19-JAN-2013 02:46
Client ID: CSIA20130111-018S+9
Sample Info: VZ97R,10,17.737,1,
Column phase: RTXVMS

Instrument: nt9.i
Operator: PC
Column diameter: 0.18



Data File: /chem1/nt9.i/18JAN13a.b/vz97r.d

Date : 19-JAN-2013 02:46

Client ID: CSIA20130111-018S+9

Instrument: nt9.i

Sample Info: VZ97R,10,17.737,1,

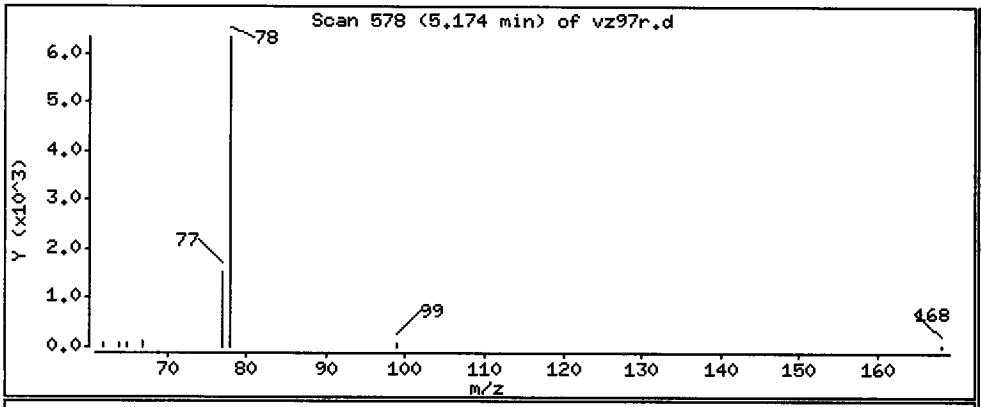
Operator: PC

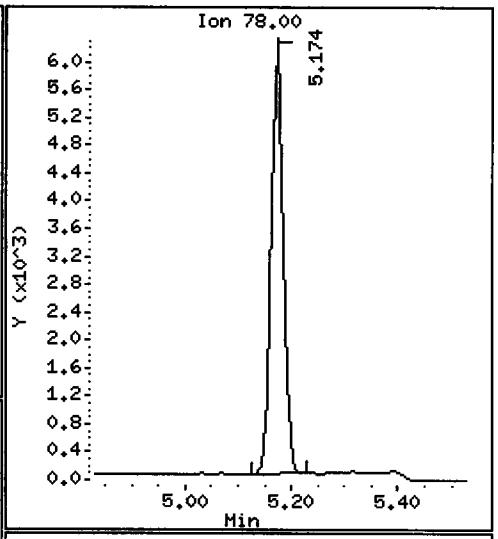
Column phase: RTXVMS

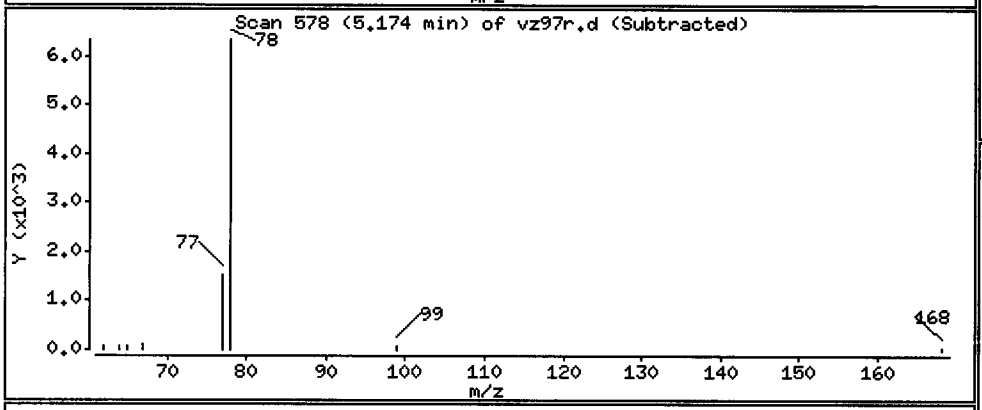
Column diameter: 0.18

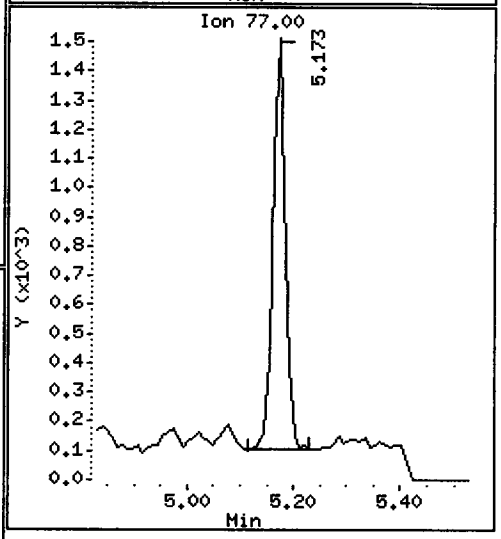
6 Benzene

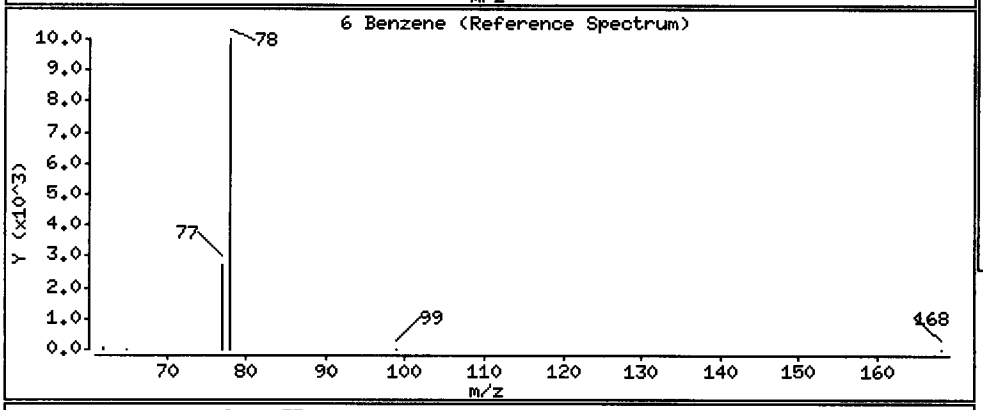
Concentration: 3.710 ug/Kg

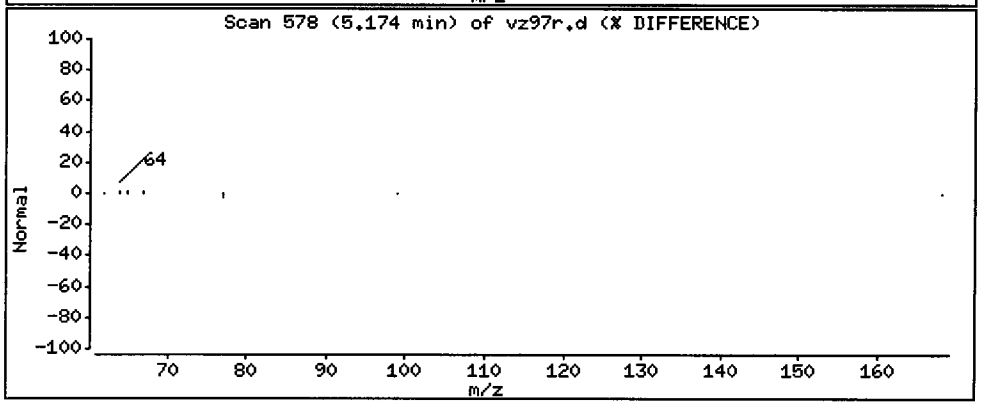












Data File: /chem1/nt9.i/18JAN13a.b/vz97r.d

Date : 19-JAN-2013 02:46

Client ID: CSIA20130111-018S+9

Instrument: nt9.i

Sample Info: VZ97R,10,17.737,1,

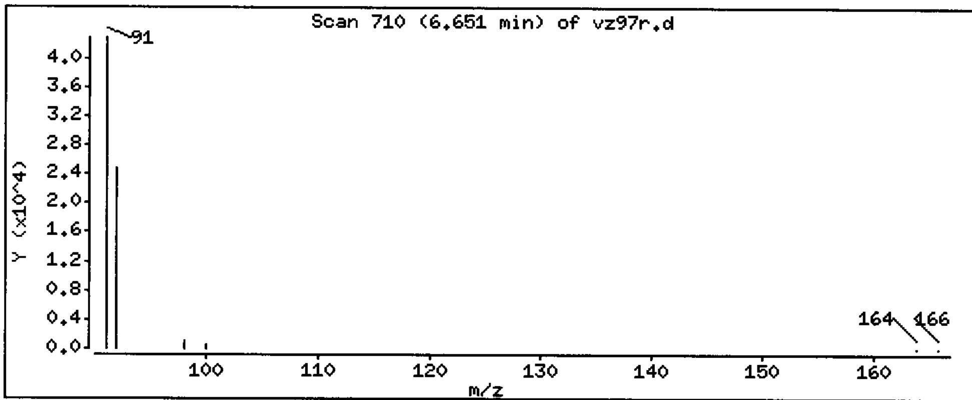
Operator: PC

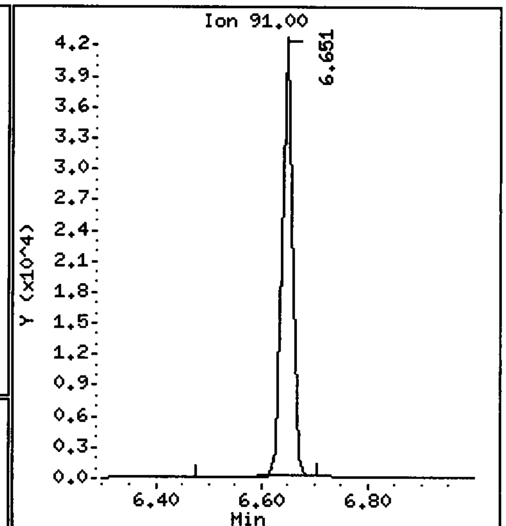
Column phase: RTXVMS

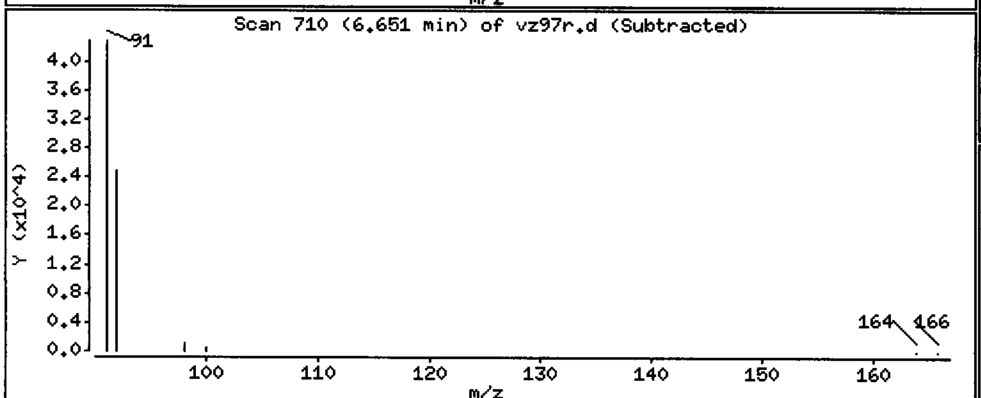
Column diameter: 0.18

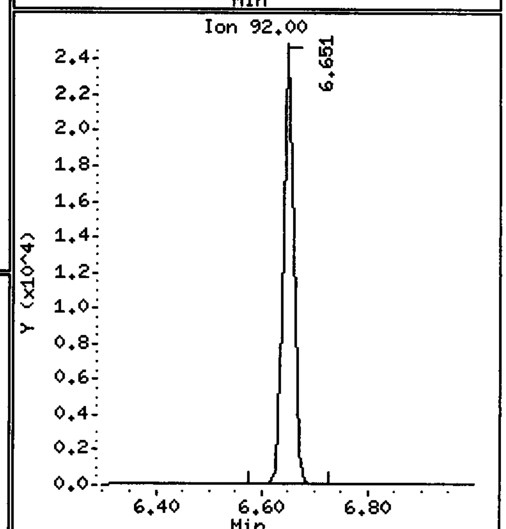
13 Toluene

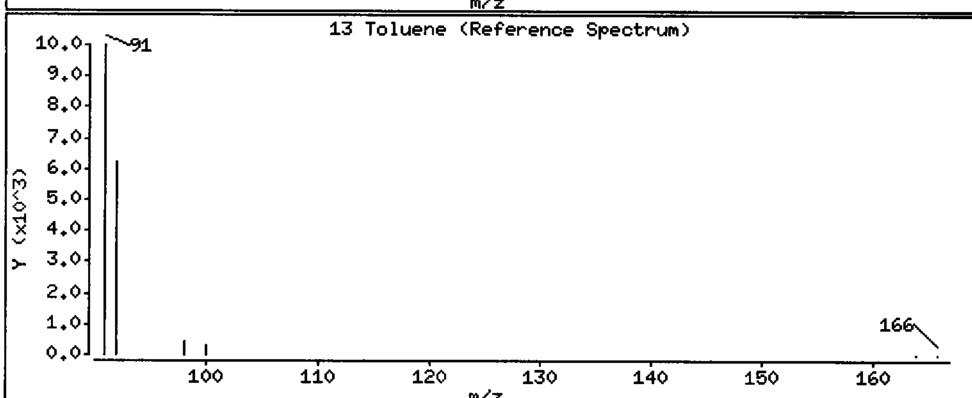
Concentration: 21.029 ug/Kg

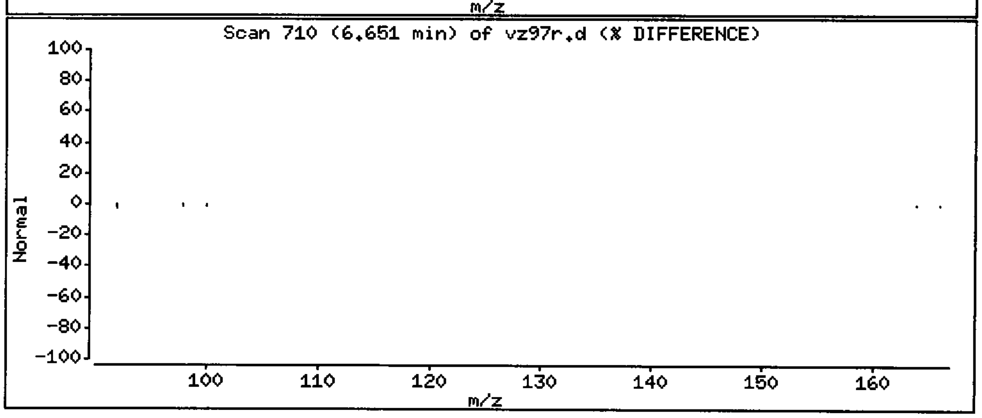












Data File: /chem1/nt9.i/18JAN13a.b/vz97r.d

Date : 19-JAN-2013 02:46

Client ID: CSIA20130111-018S+9

Instrument: nt9.i

Sample Info: VZ97R,10,17.737,1,

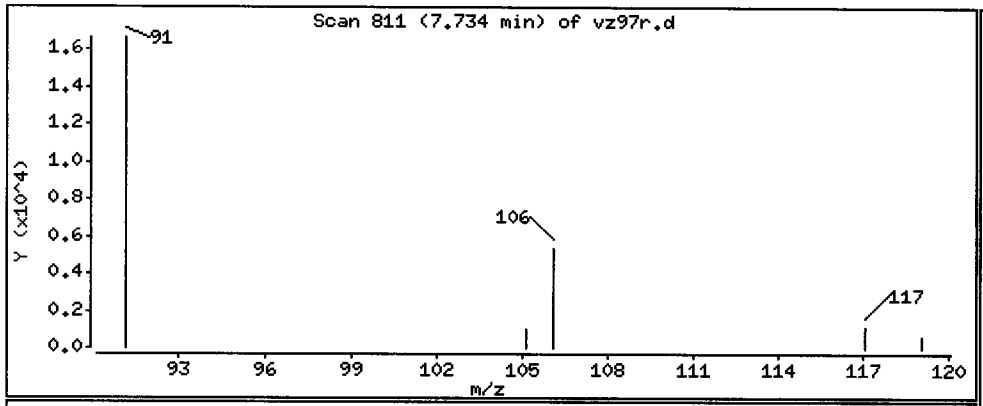
Operator: PC

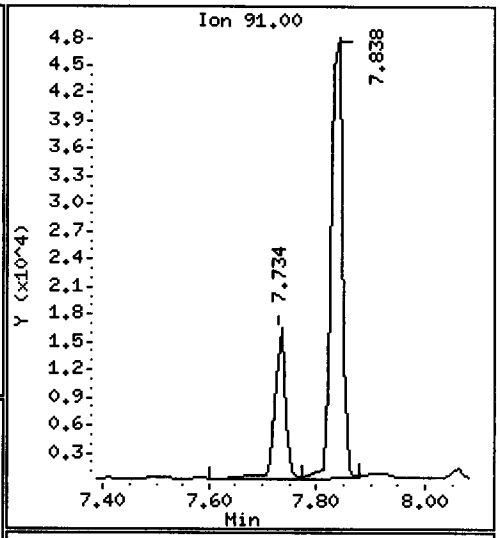
Column phase: RTXVMS

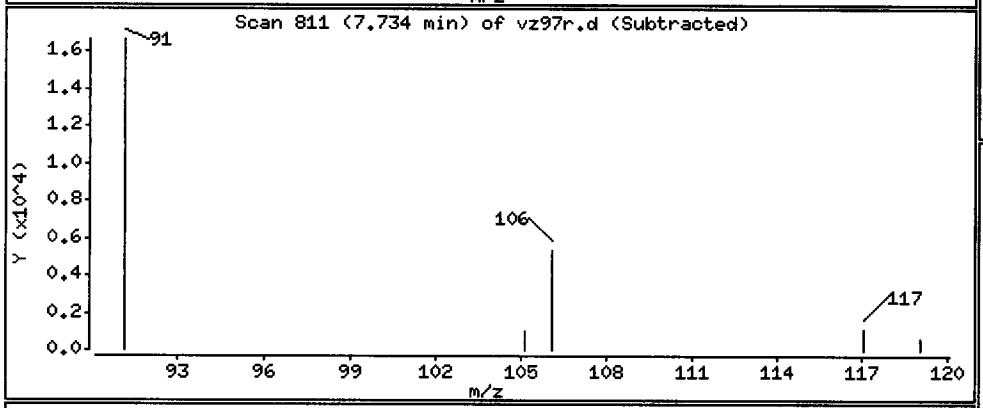
Column diameter: 0.18

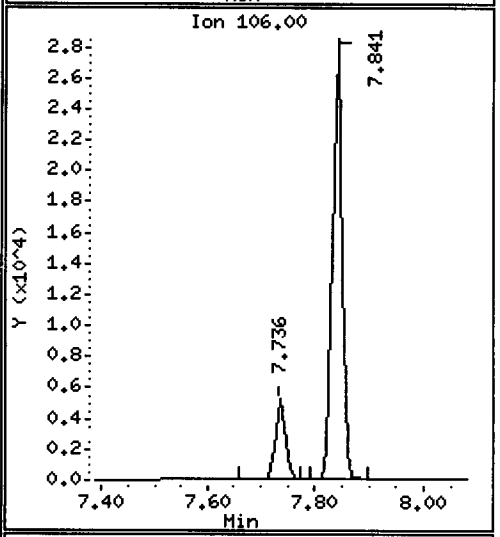
16 Ethyl Benzene

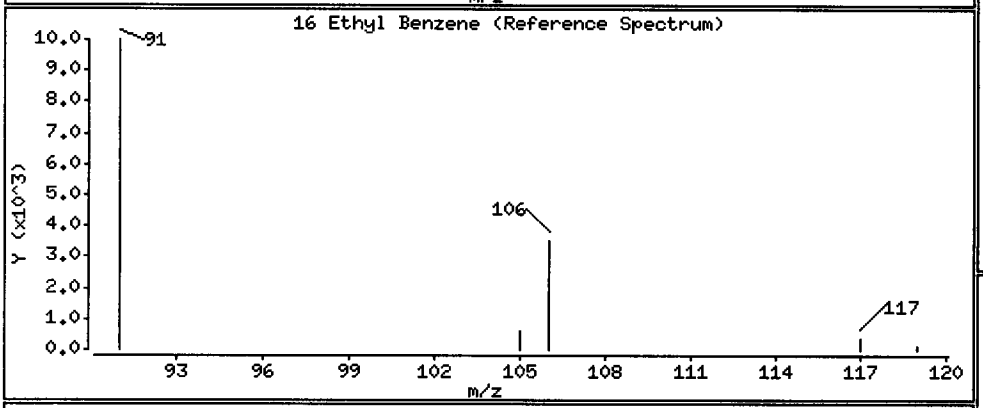
Concentration: 8.443 ug/Kg

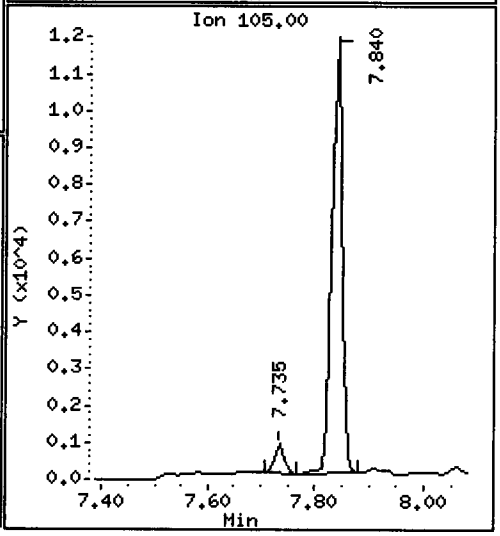


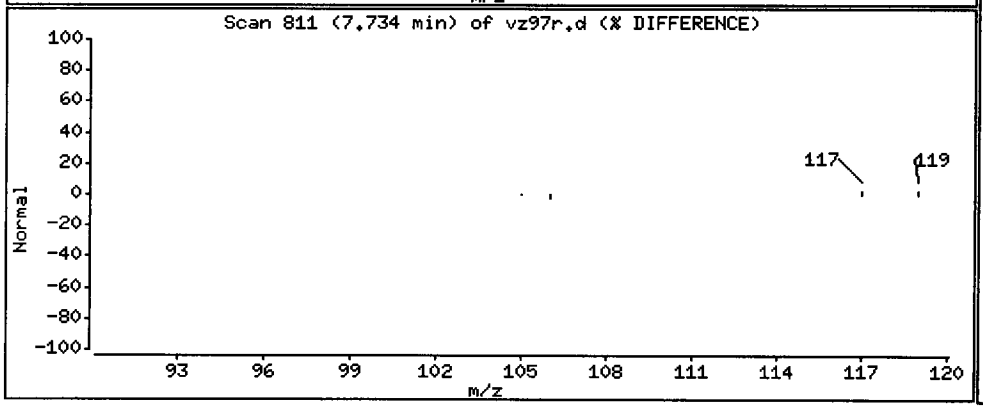












Data File: /chem1/nt9.i/18JAN13a.b/vz97r.d

Date : 19-JAN-2013 02:46

Client ID: CSIA20130111-018S+9

Instrument: nt9.i

Sample Info: VZ97R,10,17.737,1,

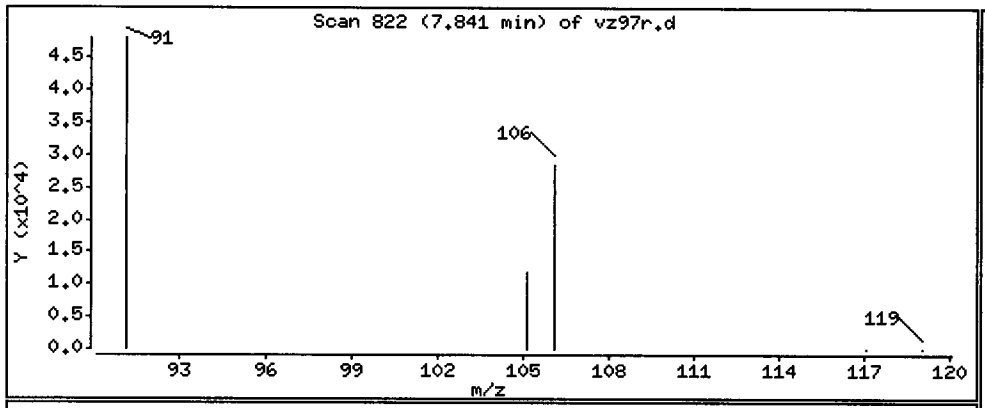
Operator: PC

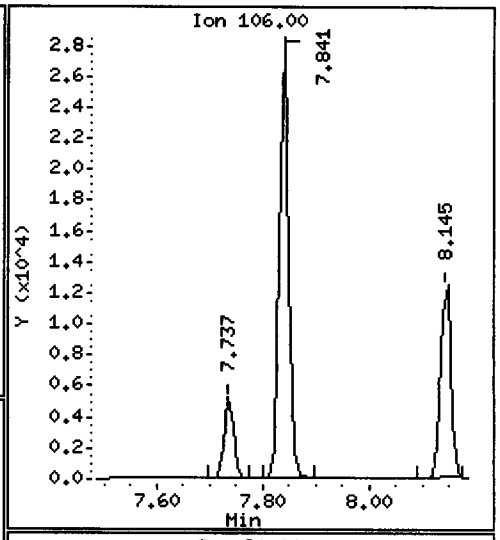
Column phase: RTXVMS

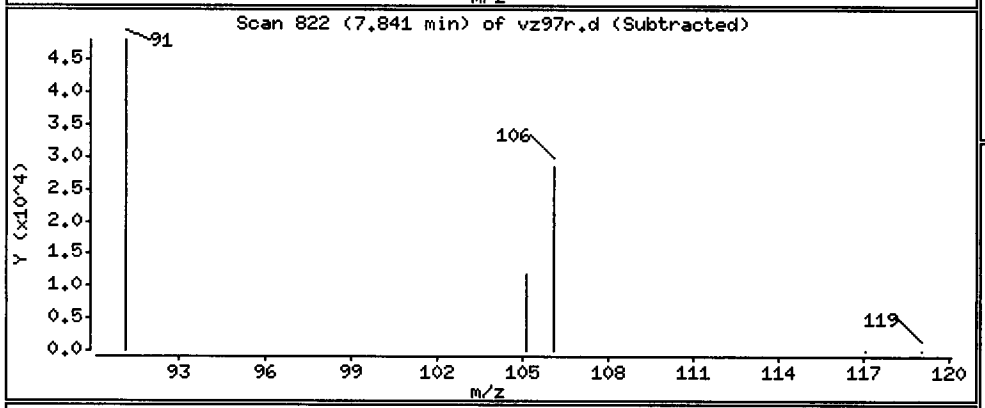
Column diameter: 0.18

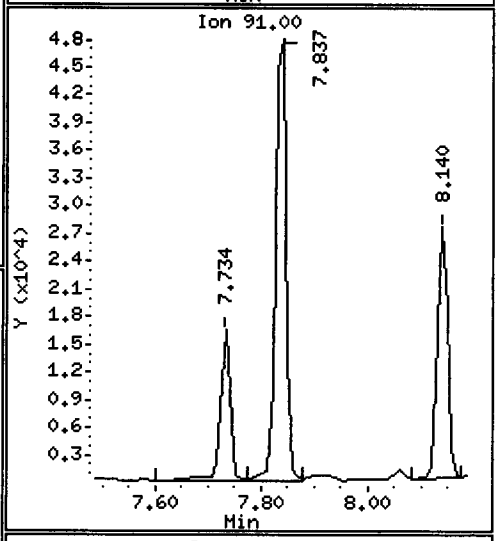
17 m,p xylene

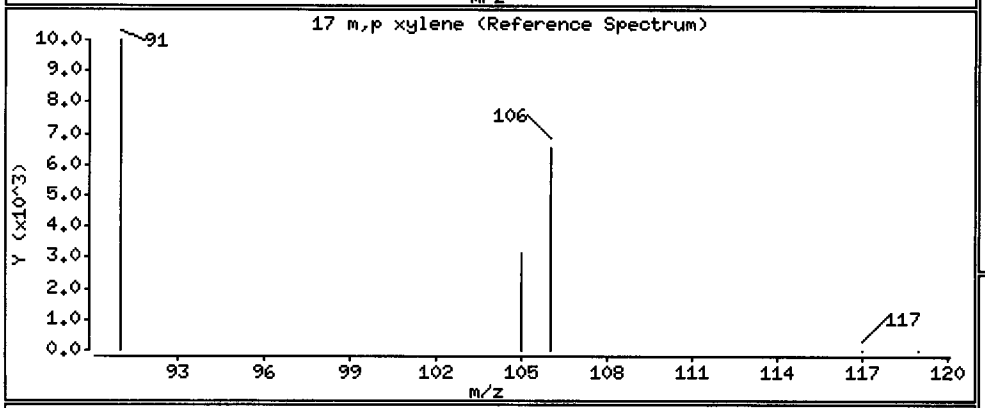
Concentration: 35.204 ug/Kg

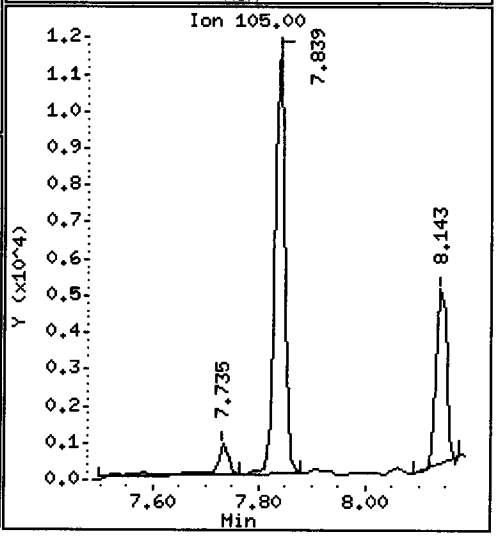


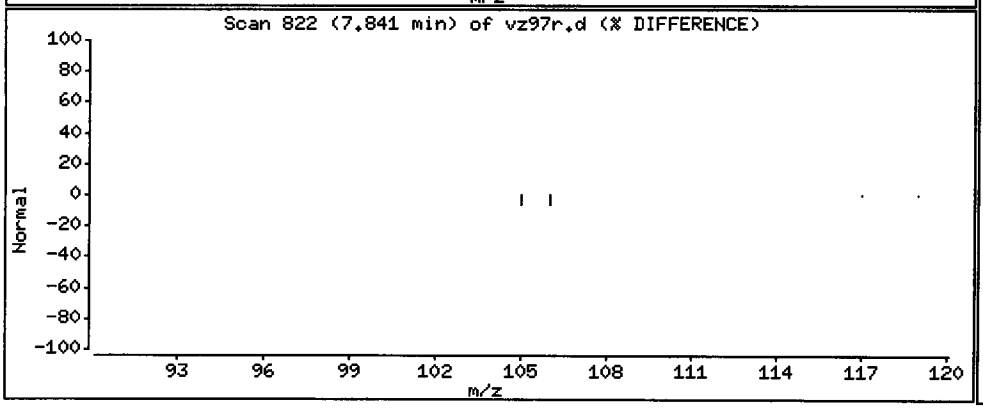












Data File: /chem1/nt9.i/18JAN13a.b/vz97r.d

Date : 19-JAN-2013 02:46

Client ID: CSIA20130111-018S+9

Instrument: nt9.i

Sample Info: VZ97R,10,17.737,1,

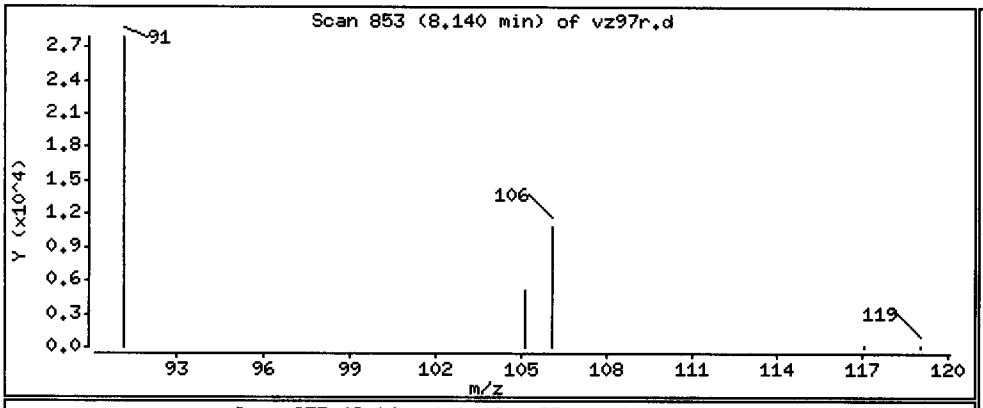
Operator: PC

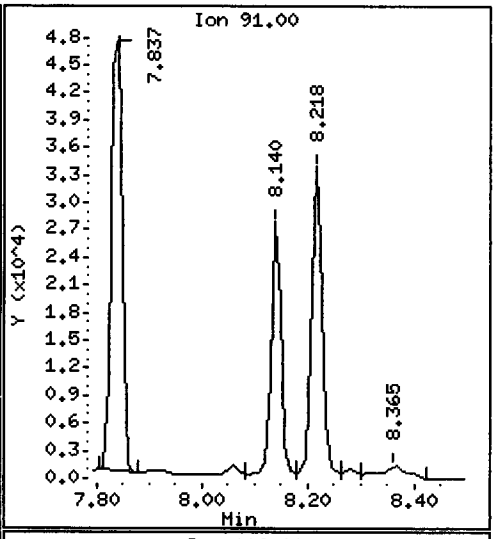
Column phase: RTXVMS

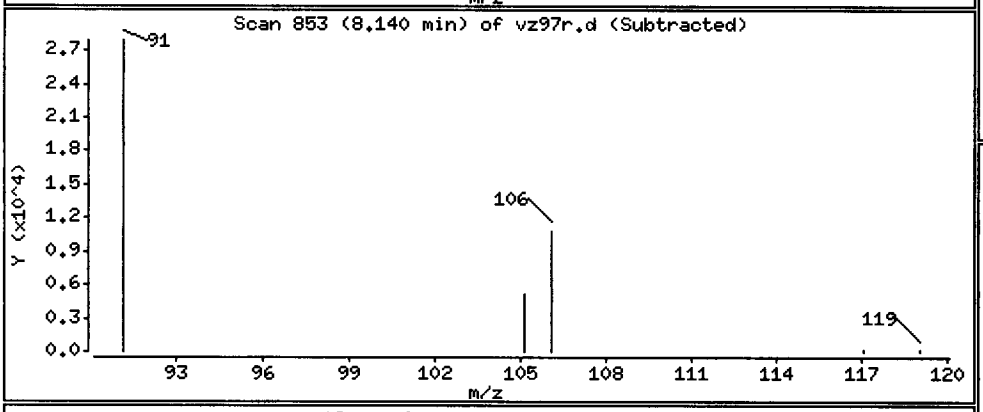
Column diameter: 0.18

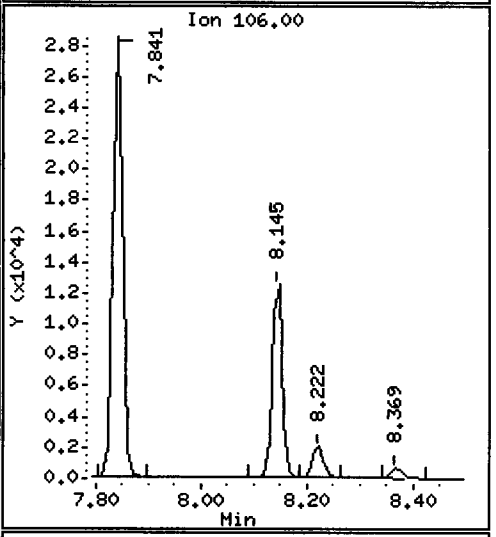
18 o-xylene

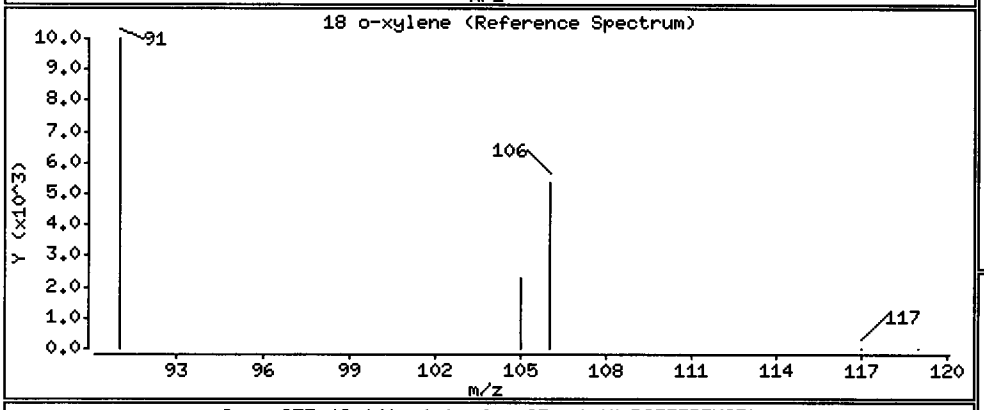
Concentration: 20.836 ug/Kg

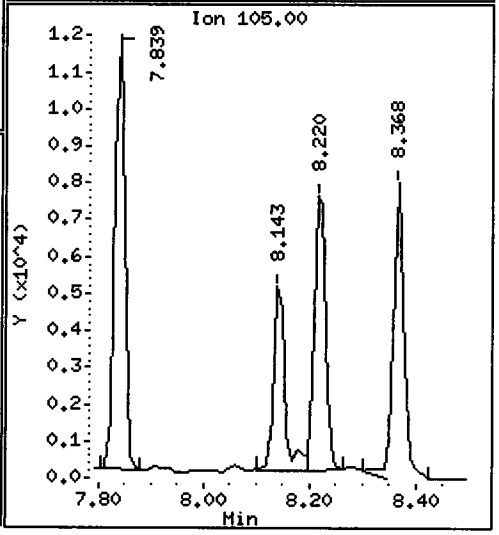


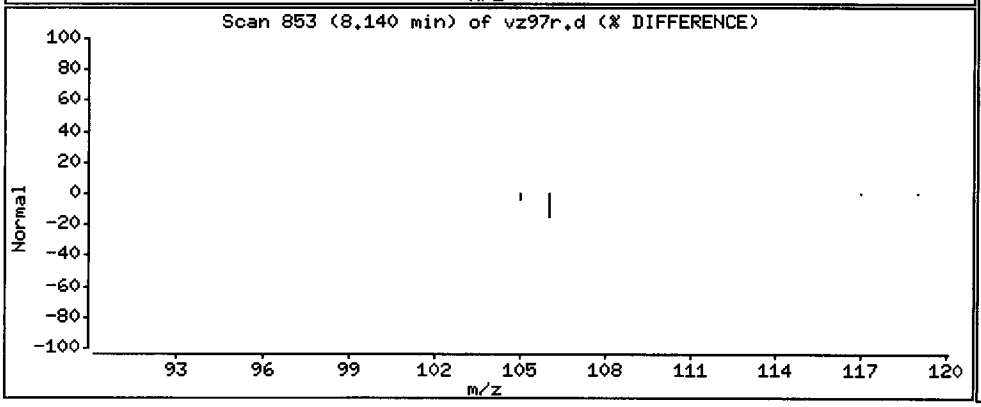












CO-ELUTION SUMMARY FOR FILE - vz97r.d

Lab ID: VZ97R, Method: sim011713.m, Instrument: nt9.i, Date: 19-JAN-2013

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/18JAN13a.b/vz97bms.d
Lab Smp Id: VZ97B Client Smp ID: CSIA-20130107-002B
Inj Date : 18-JAN-2013 20:03
Operator : PC Inst ID: nt9.i
Smp Info : VZ97B,10,36.478,1,
Misc Info : 13-1083
Comment :
Method : /chem1/nt9.i/18JAN13a.b/sim011713.m
Meth Date : 21-Jan-2013 16:15 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: btex.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	100.00000	Sample Amount (mg)
M	0.00000	Moisture (%)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	CONCENTRATIONS FINAL (ug/Kg)
	6 Benzene	78	5.174	5.180	(0.917)	219841	1046.40	104.64
*	7 Pentafluorobenzene	168	5.267	5.268	(1.000)	104992	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.286	5.286	(1.004)	48684	1003.91	100.39
*	11 1,4-Difluorobenzene	114	5.643	5.642	(1.000)	173274	1000.00	
$	12 d8-Toluene	98	6.618	6.618	(1.173)	186619	1031.22	103.12
	13 Toluene	91	6.651	6.651	(0.863)	235868	1096.52	109.65
*	15 d5 -Chlorobenzene	117	7.706	7.706	(1.000)	178411	1000.00	
	16 Ethyl Benzene	91	7.734	7.734	(1.004)	244512	1158.10	115.81(Q)
	17 m,p xylene	106	7.841	7.840	(1.017)	202413	2550.67	255.07
	18 o-xylene	91	8.140	8.140	(1.056)	182750	1222.73	122.27
$	19 4-Bromofluorobenzene	174	8.574	8.572	(1.113)	65959	1056.04	105.60

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: vz97bms.d
Lab Smp Id: VZ97B
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-1083

Calibration Date: 18-JAN-2013
Calibration Time: 17:40
Client Smp ID: CSIA-20130107-002B
Level: MED
Sample Type: Soil

Test Mode:
Use Initial Calibration Level 5.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	104992	-8.39
11 1,4-Difluorobenze	202370	101185	404740	173274	-14.38
15 d5 -Chlorobenzene	226394	113197	452788	178411	-21.19

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	-0.02
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	0.02
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	0.01

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA
Sample Matrix: SOLID
Lab Smp Id: VZ97B
Level: MED
Data Type: MS DATA
SpikeList File: btex.spk
Sublist File: btex.sub
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-1083

Client SDG: VZ97
Fraction: VOA
Client Smp ID: CSIA-20130107-002B
Operator: PC
SampleType: MS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
6 Benzene	100.00	104.64	104.64	80-120
13 Toluene	100.00	109.65	109.65	70-130
16 Ethyl Benzene	100.00	115.81	115.81	70-130
17 m,p xylene	200.00	255.07	127.53	70-130
18 o-xylene	100.00	122.27	122.27	70-130

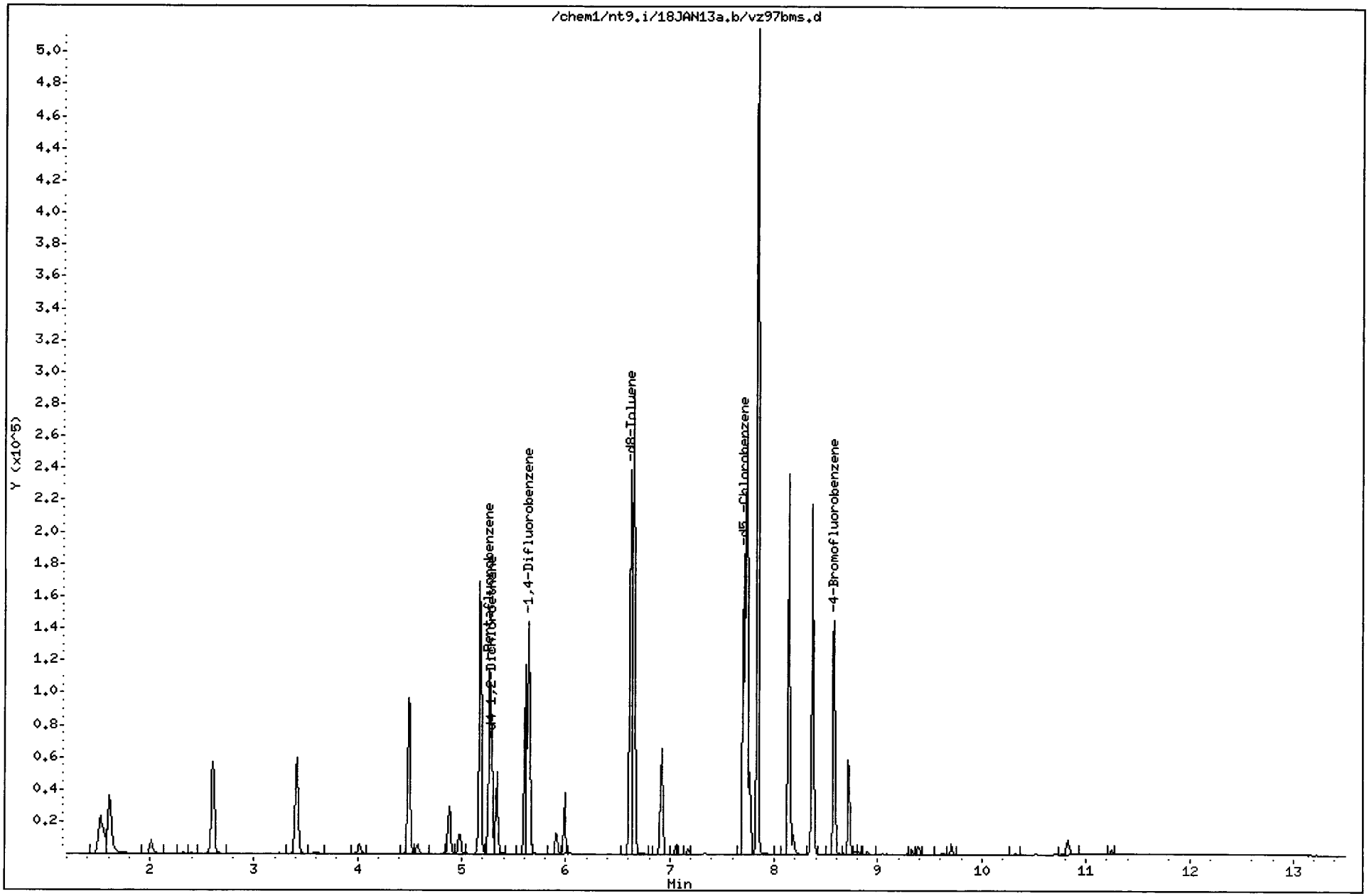
SURROGATE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 8 d4-1,2-Dichloroeth	100.00	100.39	100.39	75-125
$ 12 d8-Toluene	100.00	103.12	103.12	75-125
$ 19 4-Bromofluorobenze	100.00	105.60	105.60	75-125

Data File: /chem1/nt9.i/18JAN13a.b/vz97bms.d
Date : 18-JAN-2013 20:03
Client ID: CSIA-20130107-002B
Sample Info: VZ97B,10,36.478,1,

Column phase: RTXVMS

Instrument: nt9.i

Operator: PC
Column diameter: 0.18



CO-ELUTION SUMMARY FOR FILE - vz97bms.d

Lab ID: VZ97B, Method: sim011713.m, Instrument: nt9.i, Date: 18-JAN-2013

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/18JAN13a.b/vz97bmsd.d
Lab Smp Id: VZ97B Client Smp ID: CSIA-20130107-002B
Inj Date : 18-JAN-2013 20:26
Operator : PC Inst ID: nt9.i
Smp Info : VZ97B,10,36.478,1,
Misc Info : 13-1083
Comment :
Method : /chem1/nt9.i/18JAN13a.b/sim011713.m
Meth Date : 21-Jan-2013 16:15 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: btex.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	100.00000	Sample Amount (mg)
M	0.00000	Moisture (%)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	CONCENTRATIONS FINAL (ug/Kg)
	6 Benzene	78	5.174	5.180	(0.917)	218270	1032.52	103.25
*	7 Pentafluorobenzene	168	5.267	5.268	(1.000)	104546	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.286	5.286	(1.004)	48229	998.760	99.876
*	11 1,4-Difluorobenzene	114	5.642	5.642	(1.000)	174349	1000.00	
$	12 d8-Toluene	98	6.618	6.618	(1.173)	188430	1034.80	103.48
	13 Toluene	91	6.650	6.651	(0.863)	233549	1064.86	106.49
*	15 d5 -Chlorobenzene	117	7.706	7.706	(1.000)	181909	1000.00	
	16 Ethyl Benzene	91	7.734	7.734	(1.004)	242710	1127.46	112.75(Q)
	17 m,p xylene	106	7.840	7.840	(1.017)	200066	2472.61	247.26
	18 o-xylene	91	8.140	8.140	(1.056)	180132	1182.03	118.20
$	19 4-Bromofluorobenzene	174	8.574	8.572	(1.113)	66990	1051.92	105.19

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: vz97bmsd.d
Lab Smp Id: VZ97B
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-1083

Calibration Date: 18-JAN-2013
Calibration Time: 17:40
Client Smp ID: CSIA-20130107-002B
Level: MED
Sample Type: Soil

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	104546	-8.78
11 1,4-Difluorobenze	202370	101185	404740	174349	-13.85
15 d5 -Chlorobenzene	226394	113197	452788	181909	-19.65

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	-0.01
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	0.00
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	0.00

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA
Sample Matrix: SOLID
Lab Smp Id: VZ97B
Level: MED
Data Type: MS DATA
SpikeList File: btex.spk
Sublist File: btex.sub
Method File: /chem1/nt9.i/18JAN13a.b/sim011713.m
Misc Info: 13-1083

Client SDG: VZ97
Fraction: VOA
Client Smp ID: CSIA-20130107-002B
Operator: PC
SampleType: MSD
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
6 Benzene	100.00	103.25	103.25	80-120
13 Toluene	100.00	106.49	106.49	70-130
16 Ethyl Benzene	100.00	112.75	112.75	70-130
17 m,p xylene	200.00	247.26	123.63	70-130
18 o-xylene	100.00	118.20	118.20	70-130

SURROGATE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 8 d4-1,2-Dichloroeth	100.00	99.876	99.88	75-125
$ 12 d8-Toluene	100.00	103.48	103.48	75-125
$ 19 4-Bromofluorobenze	100.00	105.19	105.19	75-125

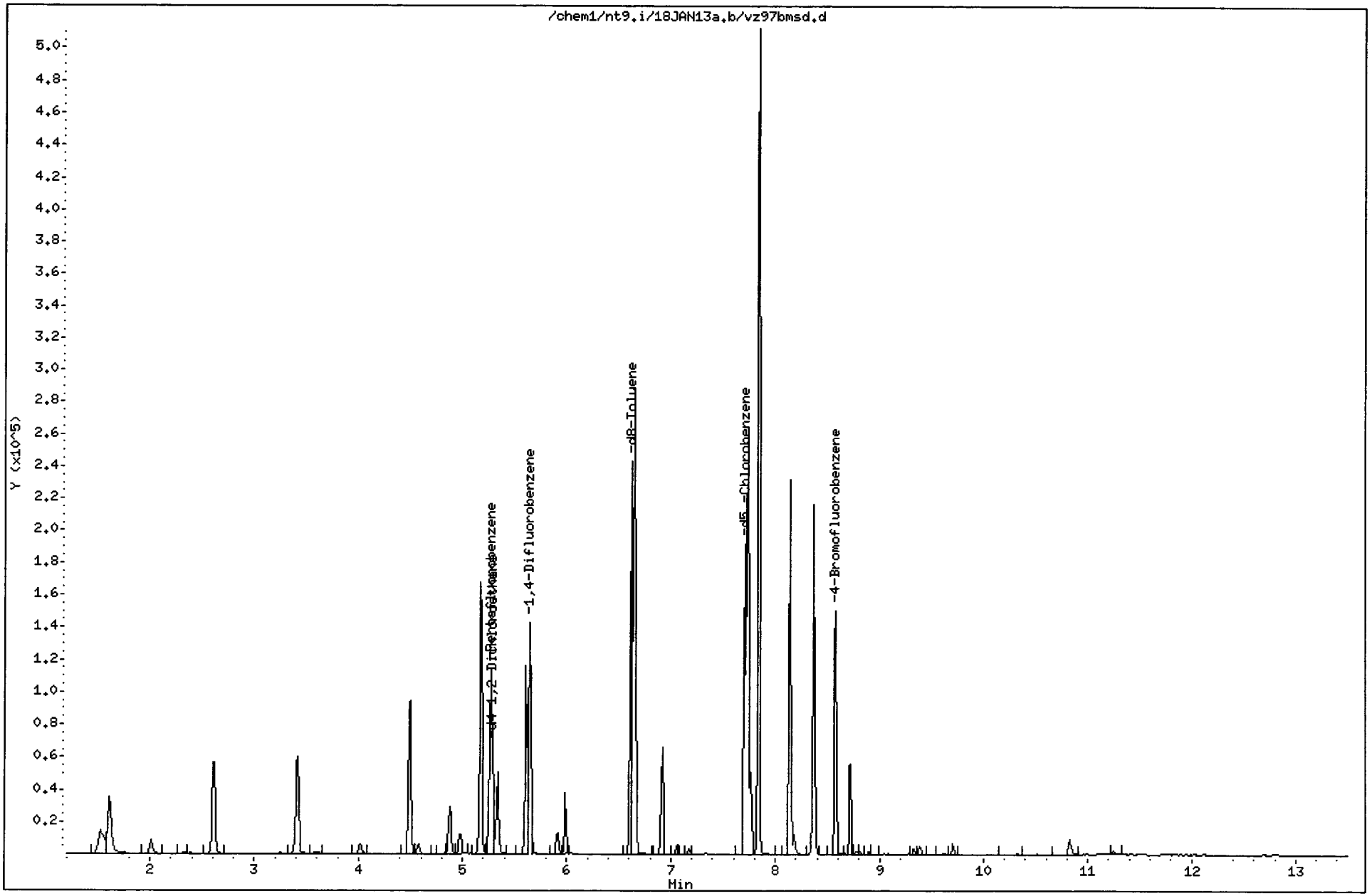
Data File: /chem1/nt9.i/18JAN13a.b/vz97bmsd.d
Date : 18-JAN-2013 20:26
Client ID: CSIA-20130107-002B
Sample Info: VZ97B,10,36.478,1,

Column phase: RTXVMS

Instrument: nt9.i

Operator: PC
Column diameter: 0.18

VZ97-0107



CO-ELUTION SUMMARY FOR FILE - vz97bmsd.d

Lab ID: VZ97B, Method: sim011713.m, Instrument: nt9.i, Date: 18-JAN-2013

RT	CO-ELUTION COMPOUNDS

Analytical Resources Inc.: Volatile Organics Instrument Log

NT-9 Serial No.:GC=US00021704, MS=US80230047

Date: 1/21/13 Analysis: 5 ml VOA Analyst: RC

GC Program: 5ml Column No: 1032714 Column Type: RTXVMS

Instrument Tune (.U or .CT.): bfb1128 EM Voltage: 2071

Calibration File: b80121 Curve Date: 11/18/13

IS/SS	Ical/Ccal	LCS/ICV
vw7793	w7762	vw7762

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt9.i/21JAN13.b

	Time	Filename	LabID	ClientID	Vial#	pH	DF						
1	0915	bfb0121.d	BFB0121	BFB0121			1						
2	0954	cc0121.d	CC0121	CC0121			1	5.27	121555	5.64	229753	7.70	251727
3	1018	cc0121a.d	CC0121	CC0121			1	5.27	113511	5.64	207749	7.71	218587
4	1041	lcs0121a.d	LCS0121	LCS0121			1	5.27	105826	5.64	193736	7.71	196987
5	1105	lcs0121b.d	LCS0121	LCS0121			1	5.27	118664	5.64	218599	7.71	225152
6	1129	mb0121.d	MB0121	MB0121			1	5.27	116657	5.64	215950	7.71	222956
7	1204	vz97k2.d	VZ97K	CSIA20130110-011B			1	5.27	135573	5.64	256998	7.71	271021
8	1228	vz9712.d	VZ97L	CSIA20130110-012B			1	5.27	115080	5.64	214411	7.71	226594
9	1251	vz97m2.d	VZ97M	CSIA20130110-013S+3			1	5.27	108126	5.64	201758	7.71	210972
10	1315	vz97p2.d	VZ97P	CSIA20130111-016B			1	5.27	124334	5.64	238623	7.71	248813
11	1339	vz97q2.d	VZ97Q	CSIA20130111-017B			1	5.27	117064	5.64	221972	7.71	231639
12	1403	rb0121.d	RINSE				1	7.71	217541	5.27	110586	5.64	209949

RC 1/21/13

Maintenance / Comments

Maintenance Verification (Identify ICal or CCal that demonstrates the instrument is in control):

Every line must contain information or be lined out. Make all entries legible. Start a new page for each QC per

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt9.i/21JAN13.b

ARI Job No.: CC01 Method: sim011713.m Instrument: nt9.i Date: 21-JAN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1018	cc0121a.d	CC0121	CC0121	1	NO MANUAL INTEGRATION
1041	lcs0121a.d	LCS0121	LCS0121	1	NO MANUAL INTEGRATION
1105	lcs0121b.d	LCS0121	LCS0121	1	NO MANUAL INTEGRATION
1129	mb0121.d	MB0121	MB0121	1	NO MANUAL INTEGRATION
1204	vz97k2.d	VZ97K	CSIA201301	1	NO MANUAL INTEGRATION
1228	vz97l2.d	VZ97L	CSIA201301	1	NO MANUAL INTEGRATION
1251	vz97m2.d	VZ97M	CSIA201301	1	NO MANUAL INTEGRATION
1315	vz97p2.d	VZ97P	CSIA201301	1	NO MANUAL INTEGRATION
1339	vz97q2.d	VZ97Q	CSIA201301	1	NO MANUAL INTEGRATION

01/30/13

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt9.i/21JAN13.b

Instrument: nt9.i Date: 21-JAN-2013 Method: sim011713.m

INITIAL CAL: 18-JAN-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 21-JAN-2013

Compound	%D
m,p xylene	25.3
o-xylene	27.3

Data File: /chem1/nt9.i/21JAN13.b/bfb0121.d

Date : 21-JAN-2013 09:15

Client ID: BFB0121

Instrument: nt9.i

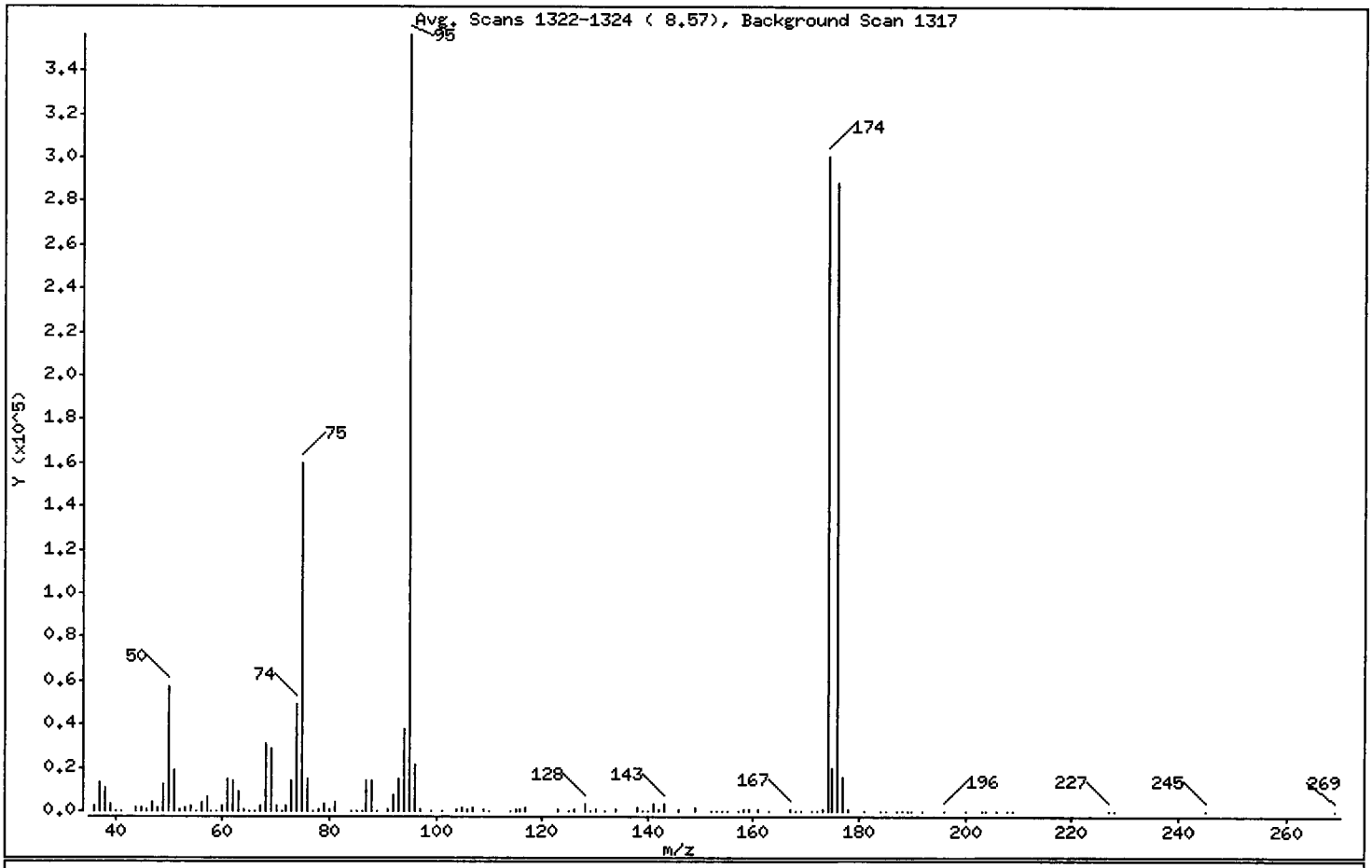
Sample Info: BFB0121,BFB0121,,1,21JAN2013,,

Operator: PC

Column phase: RTXVMS

Column diameter: 0.18

1 Bromofluorobenzene



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.03
75	30.00 - 66.00% of mass 95	44.92
96	5.00 - 9.00% of mass 95	5.98
173	Less than 2.00% of mass 174	0.16 (0.19)
174	50.00 - 101.00% of mass 95	84.28
175	4.00 - 9.00% of mass 174	5.45 (6.46)
176	95.00 - 101.00% of mass 174	80.92 (96.02)
177	5.00 - 9.00% of mass 176	4.47 (5.52)

VZ97 00772

Data File: /chem1/nt9.i/21JAN13.b/bfb0121.d

Date : 21-JAN-2013 09:15

Client ID: BFB0121

Instrument: nt9.i

Sample Info: BFB0121,BFB0121,,1,21JAN2013,,

Operator: PC

Column phase: RTXVMS

Column diameter: 0.18

Data File: bfb0121.d

Spectrum: Avg. Scans 1322-1324 (8.57), Background Scan 1317

Location of Maximum: 95.00

Number of points: 125

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2253	69.00	28952	109.00	653	168.00	155
37.00	12836	70.00	2160	110.00	32	169.00	89
38.00	10958	71.00	60	114.00	338	171.00	284
39.00	3317	72.00	2508	115.00	528	172.00	299
40.00	133	73.00	14336	116.00	921	173.00	564
41.00	26	74.00	49240	117.00	1981	174.00	300544
43.00	258	75.00	160192	123.00	1056	175.00	19424
44.00	1452	76.00	14476	125.00	282	176.00	288576
45.00	2044	77.00	378	126.00	622	177.00	15932
46.00	523	78.00	894	128.00	3162	178.00	619
47.00	4200	79.00	3346	129.00	24	181.00	372
48.00	1814	80.00	660	130.00	1070	184.00	35
49.00	12371	81.00	3981	132.00	181	185.00	275
50.00	57160	84.00	219	134.00	505	187.00	260
51.00	18592	85.00	186	138.00	1504	188.00	239
52.00	1023	86.00	136	139.00	234	189.00	170
53.00	1347	87.00	13847	140.00	113	190.00	89
54.00	2565	88.00	13939	141.00	2884	192.00	228
55.00	117	89.00	209	142.00	764	196.00	402
56.00	3855	91.00	1040	143.00	2992	200.00	63
57.00	6408	92.00	7360	146.00	480	203.00	65
58.00	54	93.00	14362	149.00	1495	204.00	175
59.00	195	94.00	38048	152.00	256	206.00	5
60.00	2560	95.00	356608	153.00	59	208.00	1
61.00	14634	96.00	21312	154.00	287	209.00	138
62.00	14177	97.00	1034	155.00	125	227.00	113
63.00	9079	99.00	224	157.00	52	228.00	50
64.00	823	101.00	296	158.00	424	245.00	74
65.00	78	104.00	1042	159.00	464	269.00	75
66.00	258	105.00	1997	161.00	544		
67.00	2160	106.00	1045	163.00	325		
68.00	30800	107.00	1497	167.00	581		

Data File: /chem1/nt9.i/21JAN13.b/bfb0121.d

Date : 21-JAN-2013 09:15

Client ID: BFB0121

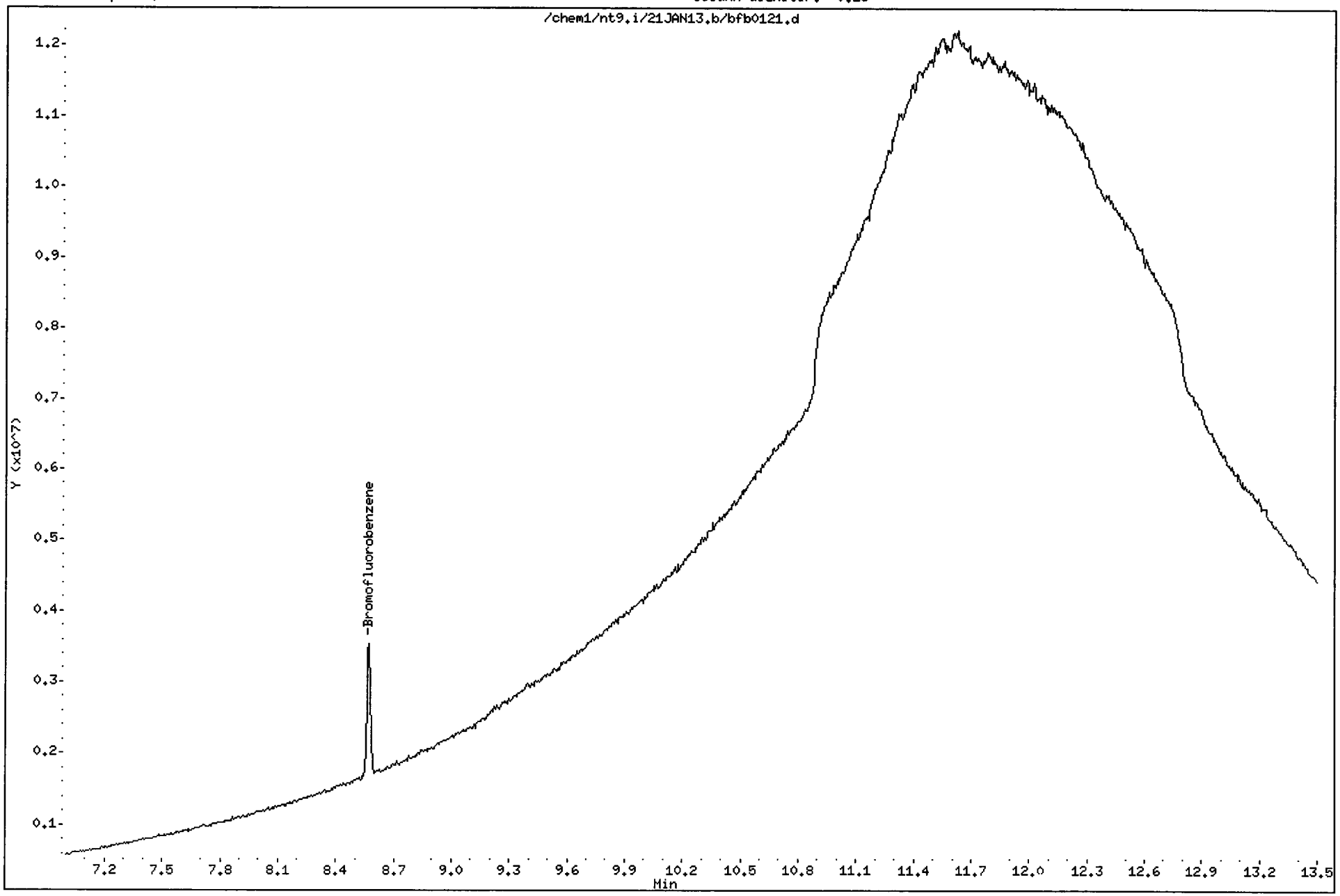
Sample Info: BFB0121,BFB0121,,1,21JAN2013,,

Column phase: RTXVMS

Instrument: nt9.i

Operator: PC

Column diameter: 0.18



PC
1/24/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/21JAN13.b/cc0121a.d
Lab Smp Id: CC0121 Client Smp ID: CC0121
Inj Date : 21-JAN-2013 10:18
Operator : PC Inst ID: nt9.i
Smp Info : CC0121,10,10,0,
Misc Info : 13-
Comment :
Method : /chem1/nt9.i/21JAN13.b/sim011713.m
Meth Date : 21-Jan-2013 16:17 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: btex.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/L)	AMOUNTS ON-COL (ng/L)
	6 Benzene	78	5.173	5.173	(0.917)	235598	1000.00	935.31
*	7 Pentafluorobenzene	168	5.267	5.267	(1.000)	113511	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.287	5.287	(1.004)	50295	1000.00	959.29
*	11 1,4-Difluorobenzene	114	5.642	5.642	(1.000)	207749	1000.00	
$	12 d8-Toluene	98	6.619	6.619	(1.173)	212227	1000.00	978.11
	13 Toluene	91	6.651	6.651	(0.863)	275314	1000.00	1044.7
*	15 d5 -Chlorobenzene	117	7.707	7.707	(1.000)	218587	1000.00	
	16 Ethyl Benzene	91	7.734	7.734	(1.004)	300581	1000.00	1162.0(Q)
	17 m,p xylene	106	7.841	7.841	(1.017)	243743	2000.00	2506.9
	18 o-xylene	91	8.141	8.141	(1.056)	233128	1000.00	1273.1
$	19 4-Bromofluorobenzene	174	8.575	8.575	(1.113)	80918	1000.00	1057.4

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt9.i Injection Date: 21-JAN-2013 10:18
Lab File ID: cc0121a.d Init. Cal. Date(s): 18-JAN-2013 18-JAN-2013
Analysis Type: WATER Init. Cal. Times: 13:49 16:10
Lab Sample ID: CC0121 Quant Type: ISTD
Method: /chem1/nt9.i/21JAN13.b/sim011713.m

COMPOUND	RRF / AMOUNT	RF1000	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
6 Benzene	1.21248	1.13405	0.040	-6.46874	20.00000	Averaged	
$ 8 d4-1,2-Dichloroethane	0.46190	0.44309	0.040	-4.07140	20.00000	Averaged	
$ 12 d8-Toluene	1.04442	1.02156	0.040	-2.18895	20.00000	Averaged	
13 Toluene	1.20568	1.25951	0.040	4.46539	20.00000	Averaged	
16 Ethyl Benzene	1.18341	1.37511	0.040	16.19917	20.00000	Averaged	
17 m,p xylene	0.44480	0.55754	0.040	25.34681	20.00000	Averaged	<-
18 o-xylene	0.83774	1.06652	0.040	27.31039	20.00000	Averaged	<-
$ 19 4-Bromofluorobenzene	0.35009	0.37019	0.040	5.74191	20.00000	Averaged	

UZ97 : 00776

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: cc0121a.d
Lab Smp Id: CC0121
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/21JAN13.b/sim011713.m
Misc Info: 13-

Calibration Date: 21-JAN-2013
Calibration Time: 09:54
Client Smp ID: CC0121
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	113511	-0.96
11 1,4-Difluorobenze	202370	101185	404740	207749	2.66
15 d5 -Chlorobenzene	226394	113197	452788	218587	-3.45

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	0.00
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	0.00
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	0.00

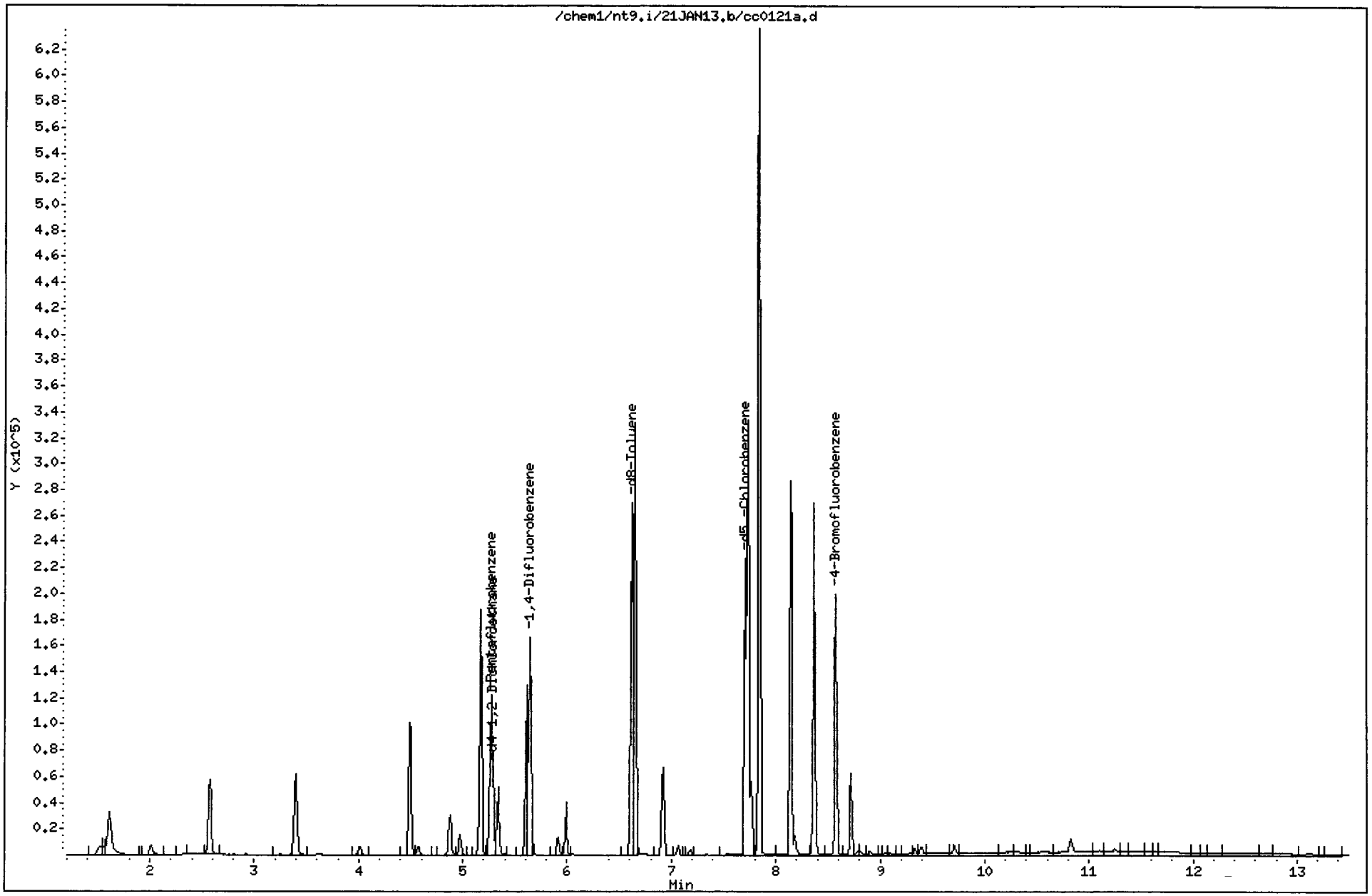
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt9.i/21JAN13.b/cc0121a.d
Date : 21-JAN-2013 10:18
Client ID: CC0121
Sample Info: CC0121,10,10,0,

Instrument: nt9.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS



CO-ELUTION SUMMARY FOR FILE - cc0121a.d

Lab ID: CC0121, Method: sim011713.m, Instrument: nt9.i, Date: 21-JAN-2013

RT	CO-ELUTION COMPOUNDS

PC 1/21/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/21JAN13.b/lcs0121a.d
Lab Smp Id: LCS0121 Client Smp ID: LCS0121
Inj Date : 21-JAN-2013 10:41
Operator : PC Inst ID: nt9.i
Smp Info : LCS0121,10,10,0,
Misc Info : 13-
Comment :
Method : /chem1/nt9.i/21JAN13.b/sim011713.m
Meth Date : 21-Jan-2013 16:17 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: btex.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	FINAL (ug/L)
	6 Benzene	78	5.174	5.173	(0.917)	240000	1021.70	1021.7
*	7 Pentafluorobenzene	168	5.267	5.267	(1.000)	105826	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.286	5.287	(1.004)	48644	995.167	995.17
*	11 1,4-Difluorobenzene	114	5.643	5.642	(1.000)	193736	1000.00	
$	12 d8-Toluene	98	6.618	6.619	(1.173)	198134	979.206	979.21
	13 Toluene	91	6.651	6.651	(0.863)	263192	1108.16	1108.2
*	15 d5 -Chlorobenzene	117	7.706	7.707	(1.000)	196987	1000.00	
	16 Ethyl Benzene	91	7.734	7.734	(1.004)	285208	1223.46	1223.5(Q)
	17 m,p xylene	106	7.841	7.841	(1.017)	232945	2658.59	2658.6(R)
	18 o-xylene	91	8.141	8.141	(1.056)	219921	1332.67	1332.7(R)
$	19 4-Bromofluorobenzene	174	8.575	8.575	(1.113)	73436	1064.87	1064.9

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.

VZ97 00780

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: lcs0121a.d
Lab Smp Id: LCS0121
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/21JAN13.b/sim011713.m
Misc Info: 13-

Calibration Date: 21-JAN-2013
Calibration Time: 10:18
Client Smp ID: LCS0121
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	105826	-7.67
11 1,4-Difluorobenze	202370	101185	404740	193736	-4.27
15 d5 -Chlorobenzene	226394	113197	452788	196987	-12.99

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	-0.01
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	0.02
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	-0.01

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: LCS0121
Level: LOW
Data Type: MS DATA
SpikeList File: btex.spk
Sublist File: btex.sub
Method File: /chem1/nt9.i/21JAN13.b/sim011713.m
Misc Info: 13-

Client SDG: 21JAN13
Fraction: VOA
Client Smp ID: LCS0121
Operator: PC
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
6 Benzene	1000.0	1021.7	102.17	80-120
13 Toluene	1000.0	1108.2	110.82	70-130
16 Ethyl Benzene	1000.0	1223.5	122.35	70-130
17 m,p xylene	2000.0	2658.6	132.93*	70-130
18 o-xylene	1000.0	1332.7	133.27*	70-130

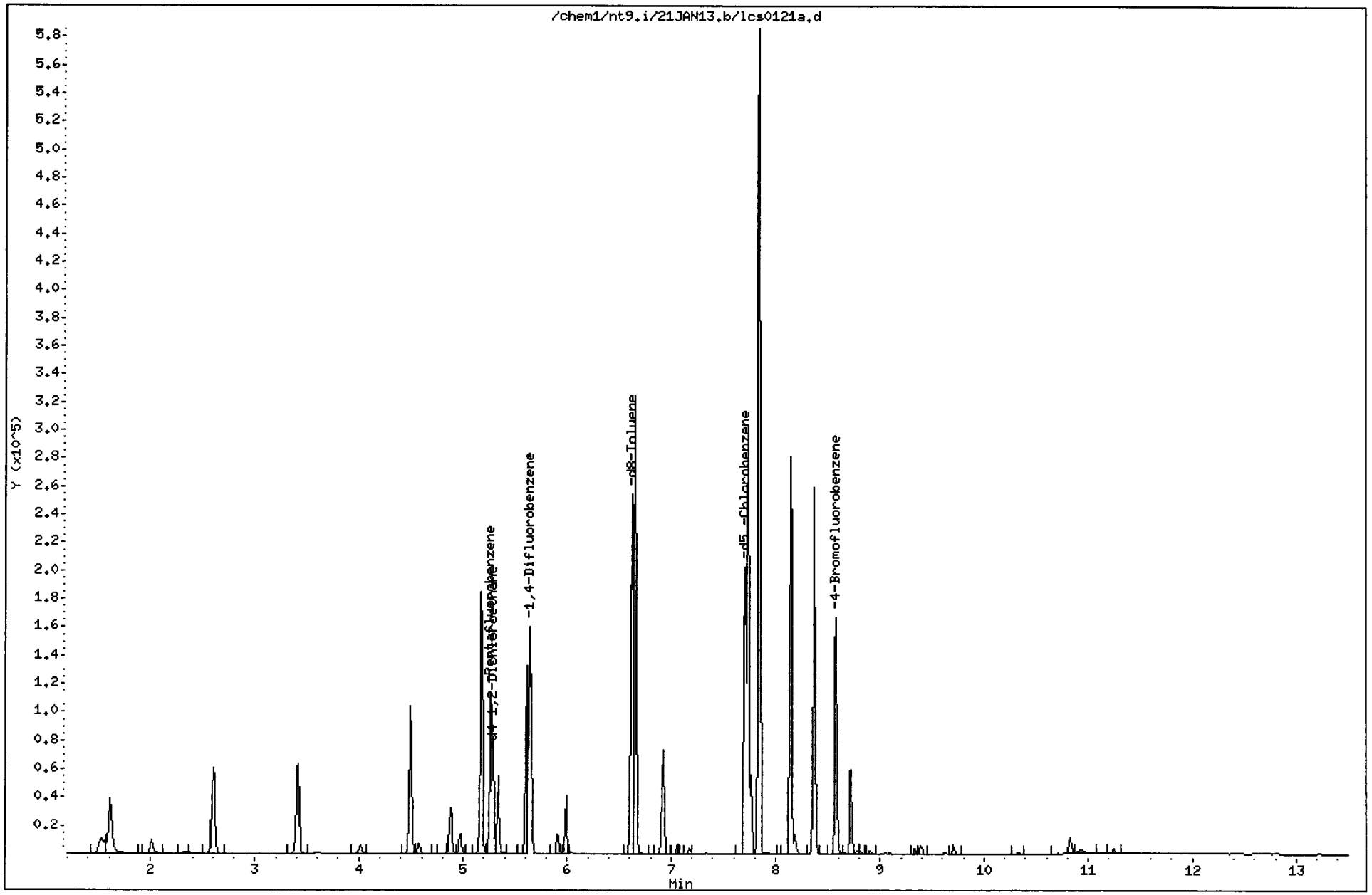
SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 8 d4-1,2-Dichloroeth	1000.0	995.17	99.52	75-125
$ 12 d8-Toluene	1000.0	979.21	97.92	75-125
$ 19 4-Bromofluorobenze	1000.0	1064.9	106.49	75-125

Data File: /chem1/nt9.i/21JAN13.b/lcs0121a.d
Date : 21-JAN-2013 10:41
Client ID: LCS0121
Sample Info: LCS0121,10,10,0,

Instrument: nt9.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS



UZ07 00273

CO-ELUTION SUMMARY FOR FILE - lcs0121a.d

Lab ID: LCS0121, Method: sim011713.m, Instrument: nt9.i, Date: 21-JAN-2013

RT	CO-ELUTION COMPOUNDS

PC 1/21/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/21JAN13.b/lcs0121b.d
Lab Smp Id: LCS0121 Client Smp ID: LCS0121
Inj Date : 21-JAN-2013 11:05
Operator : PC Inst ID: nt9.i
Smp Info : LCS0121,10,10,0,
Misc Info : 13-
Comment :
Method : /chem1/nt9.i/21JAN13.b/sim011713.m
Meth Date : 21-Jan-2013 16:17 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: btex.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	FINAL (ug/L)
	6 Benzene	78	5.173	5.173	(0.917)	240669	908.023	908.02
*	7 Pentafluorobenzene	168	5.267	5.267	(1.000)	118664	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.287	5.287	(1.004)	52176	951.953	951.95
*	11 1,4-Difluorobenzene	114	5.643	5.642	(1.000)	218599	1000.00	
$	12 d8-Toluene	98	6.618	6.619	(1.173)	222411	974.171	974.17
	13 Toluene	91	6.651	6.651	(0.863)	277631	1022.73	1022.7
*	15 d5 -Chlorobenzene	117	7.706	7.707	(1.000)	225152	1000.00	
	16 Ethyl Benzene	91	7.734	7.734	(1.004)	296566	1113.04	1113.0(Q)
	17 m,p xylene	106	7.841	7.841	(1.017)	243046	2426.88	2426.9
	18 o-xylene	91	8.141	8.141	(1.056)	227145	1204.26	1204.3
$	19 4-Bromofluorobenzene	174	8.574	8.575	(1.113)	82994	1052.92	1052.9

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: lcs0121b.d
Lab Smp Id: LCS0121
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/21JAN13.b/sim011713.m
Misc Info: 13-

Calibration Date: 21-JAN-2013
Calibration Time: 10:18
Client Smp ID: LCS0121
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	118664	3.54
11 1,4-Difluorobenze	202370	101185	404740	218599	8.02
15 d5 -Chlorobenzene	226394	113197	452788	225152	-0.55

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	-0.01
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	0.02
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	-0.01

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: LCS0121
Level: LOW
Data Type: MS DATA
SpikeList File: btex.spk
Sublist File: btex.sub
Method File: /chem1/nt9.i/21JAN13.b/sim011713.m
Misc Info: 13-

Client SDG: 21JAN13
Fraction: VOA
Client Smp ID: LCS0121
Operator: PC
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
6 Benzene	1000.0	908.02	90.80	80-120
13 Toluene	1000.0	1022.7	102.27	70-130
16 Ethyl Benzene	1000.0	1113.0	111.30	70-130
17 m,p xylene	2000.0	2426.9	121.34	70-130
18 o-xylene	1000.0	1204.3	120.43	70-130

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 8 d4-1,2-Dichloroeth	1000.0	951.95	95.20	75-125
$ 12 d8-Toluene	1000.0	974.17	97.42	75-125
$ 19 4-Bromofluorobenze	1000.0	1052.9	105.29	75-125

Data File: /chem1/nt9.i/21JAN13.b/lcs0121b.d

Date : 21-JAN-2013 11:05

Client ID: LCS0121

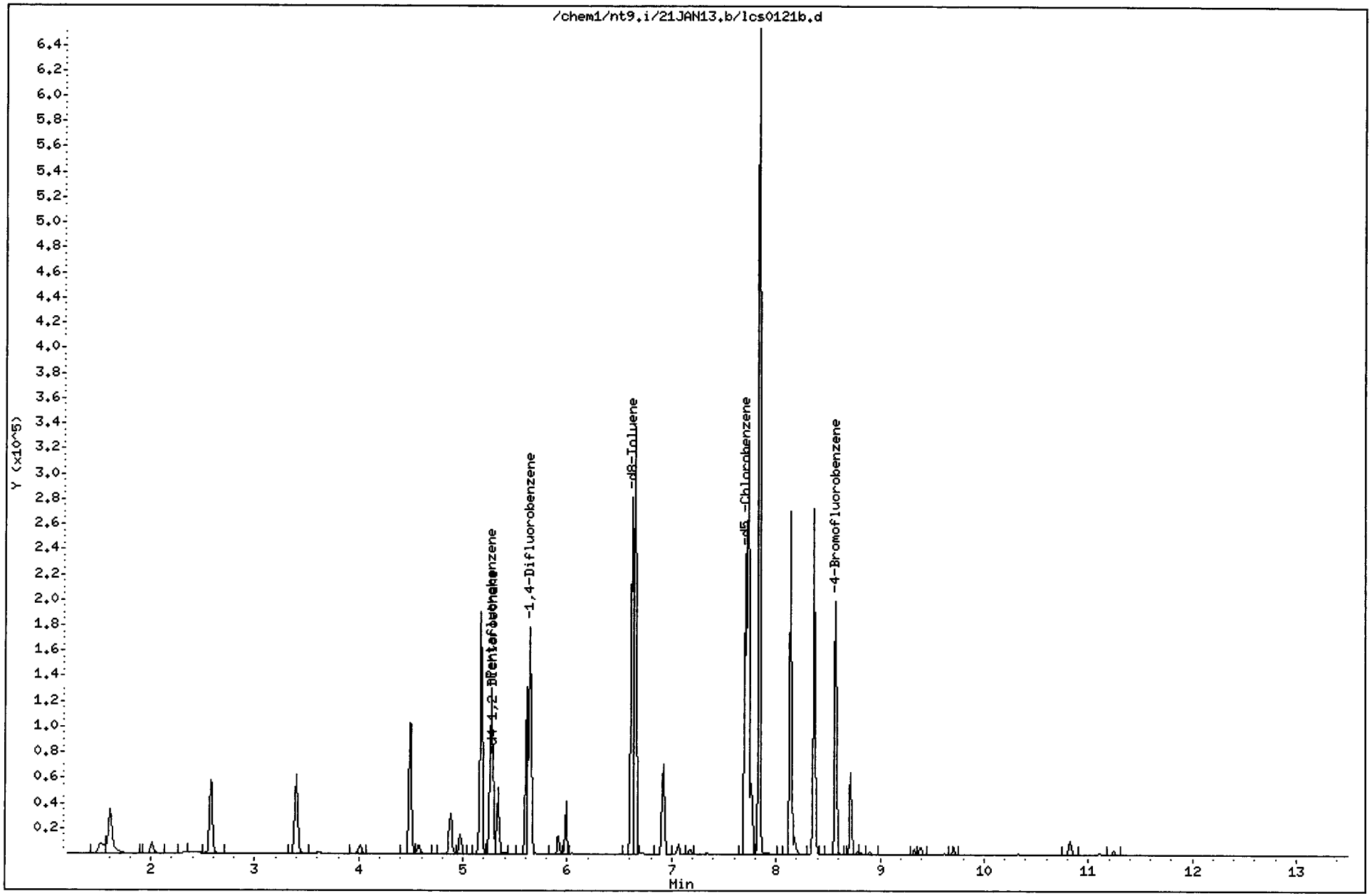
Sample Info: LCS0121,10,10,0,

Column phase: RTXVMS

Instrument: nt9.i

Operator: PC

Column diameter: 0.18



CO-ELUTION SUMMARY FOR FILE - lcs0121b.d

Lab ID: LCS0121, Method: sim011713.m, Instrument: nt9.i, Date: 21-JAN-2013

RT	CO-ELUTION COMPOUNDS

PC 1/21/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/21JAN13.b/mb0121.d
Lab Smp Id: MB0121 Client Smp ID: MB0121
Inj Date : 21-JAN-2013 11:29
Operator : PC Inst ID: nt9.i
Smp Info : MB0121,10,10,0,
Misc Info : 13-
Comment :
Method : /chem1/nt9.i/21JAN13.b/sim011713.m
Meth Date : 21-Jan-2013 16:17 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: btex.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Pv / Sa * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	10.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	FINAL (ug/L)
	6 Benzene	78	Compound Not Detected.					
*	7 Pentafluorobenzene	168	5.267	5.267	(1.000)	116657	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.288	5.287	(1.004)	52504	974.401	974.40
*	11 1,4-Difluorobenzene	114	5.644	5.642	(1.000)	215950	1000.00	
$	12 d8-Toluene	98	6.619	6.619	(1.173)	219219	971.966	971.97
	13 Toluene	91	6.651	6.651	(0.863)	11384	42.3492	42.349
*	15 d5 -Chlorobenzene	117	7.707	7.707	(1.000)	222956	1000.00	
	16 Ethyl Benzene	91	7.735	7.734	(1.004)	5116	19.3900	19.390
	17 m,p xylene	106	7.841	7.841	(1.017)	5610	56.5691	56.569
	18 o-xylene	91	8.141	8.141	(1.056)	2522	13.5026	13.503(Q)
$	19 4-Bromofluorobenzene	174	8.575	8.575	(1.113)	78070	1000.21	1000.2

QC Flag Legend

Q - Qualifier signal failed the ratio test.

UZ97-00790

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: mb0121.d
Lab Smp Id: MB0121
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/21JAN13.b/sim011713.m
Misc Info: 13-

Calibration Date: 21-JAN-2013
Calibration Time: 10:18
Client Smp ID: MB0121
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	116657	1.79
11 1,4-Difluorobenze	202370	101185	404740	215950	6.71
15 d5 -Chlorobenzene	226394	113197	452788	222956	-1.52

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	-0.01
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	0.03
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	0.00

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: MB0121
Level: LOW
Data Type: MS DATA
SpikeList File: special.spk
Sublist File: btex.sub
Method File: /chem1/nt9.i/21JAN13.b/sim011713.m
Misc Info: 13-

Client SDG: 21JAN13
Fraction: VOA
Client Smp ID: MB0121
Operator: PC
SampleType: BLANK
Quant Type: ISTD

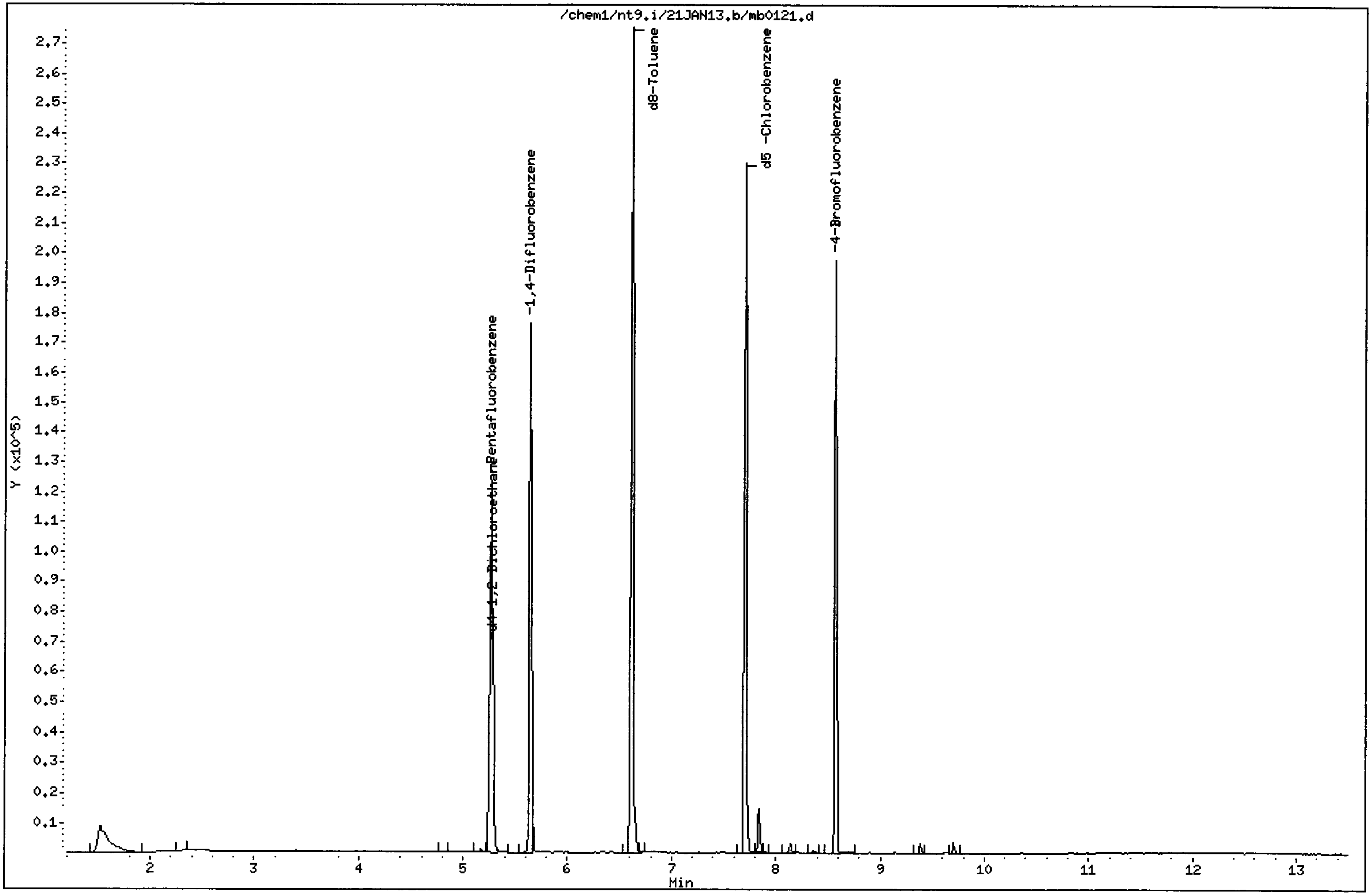
SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 8 d4-1,2-Dichloroeth	1000.0	974.40	97.44	75-125
$ 12 d8-Toluene	1000.0	971.97	97.20	75-125
$ 19 4-Bromofluorobenze	1000.0	1000.2	100.02	75-125

Data File: /chem1/nt9.i/21JAN13.b/mb0121.d
Date : 21-JAN-2013 11:29
Client ID: MB0121
Sample Info: MB0121,10,10,0,

Column phase: RTXVMS

Instrument: nt9.i

Operator: PC
Column diameter: 0.18



Data File: /chem1/nt9.i/21JAN13.b/mb0121.d

Date : 21-JAN-2013 11:29

Client ID: MB0121

Instrument: nt9.i

Sample Info: MB0121,10,10,0,

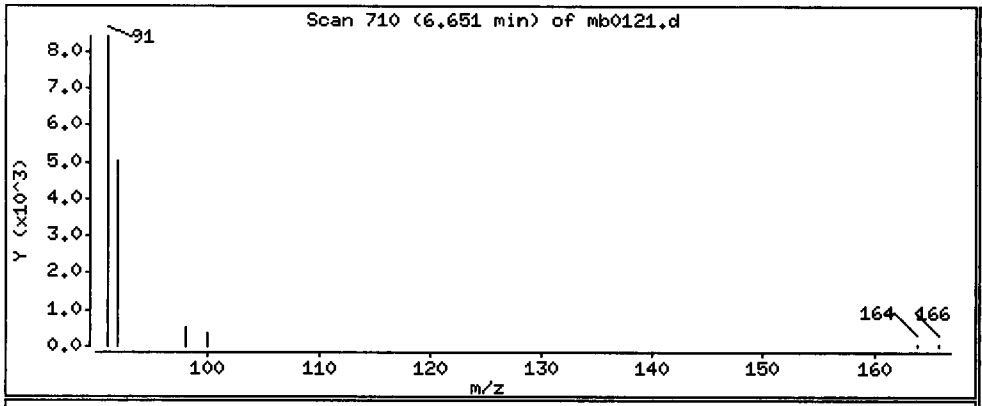
Operator: PC

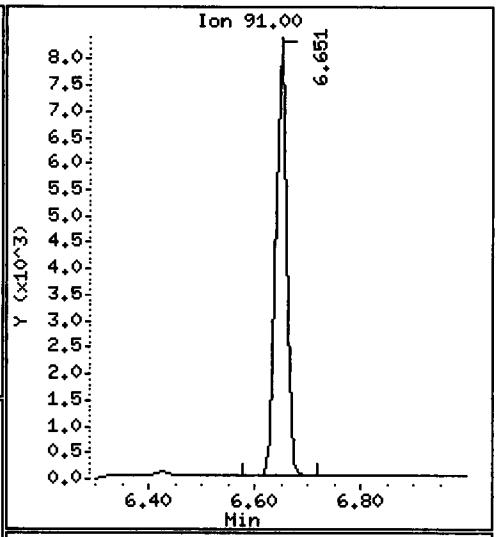
Column phase: RTXVMS

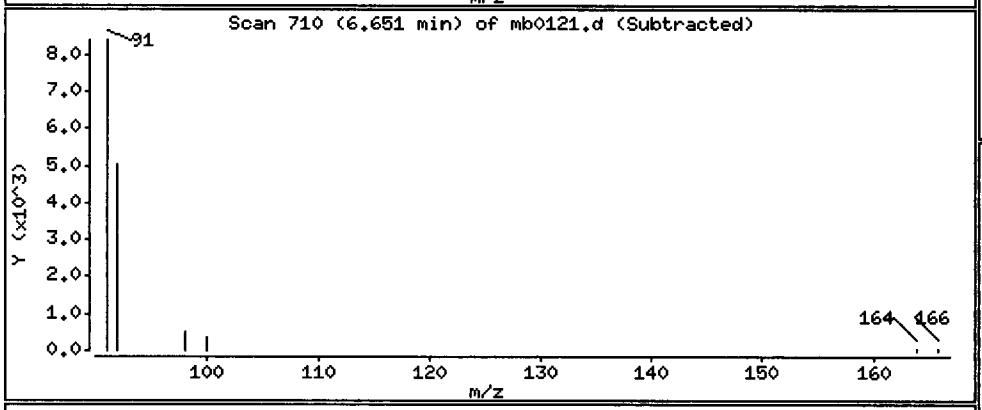
Column diameter: 0.18

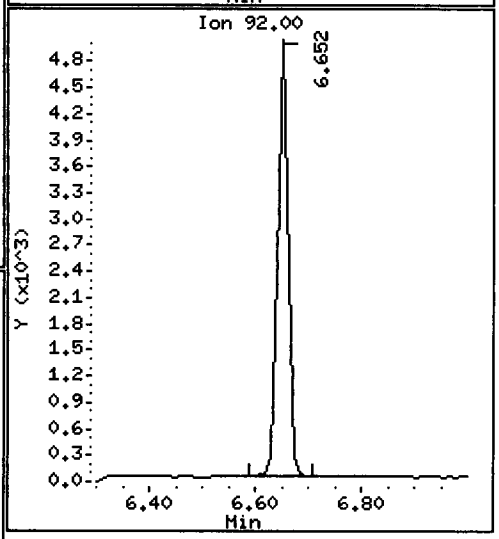
13 Toluene

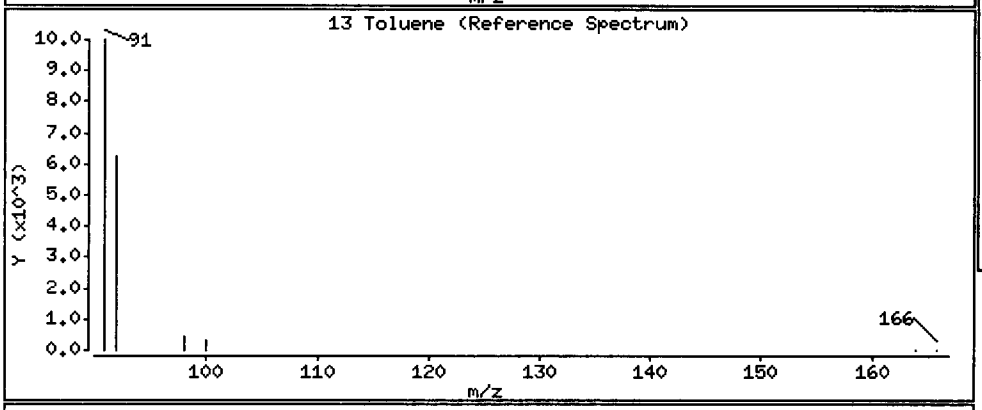
Concentration: 42.349 ug/L

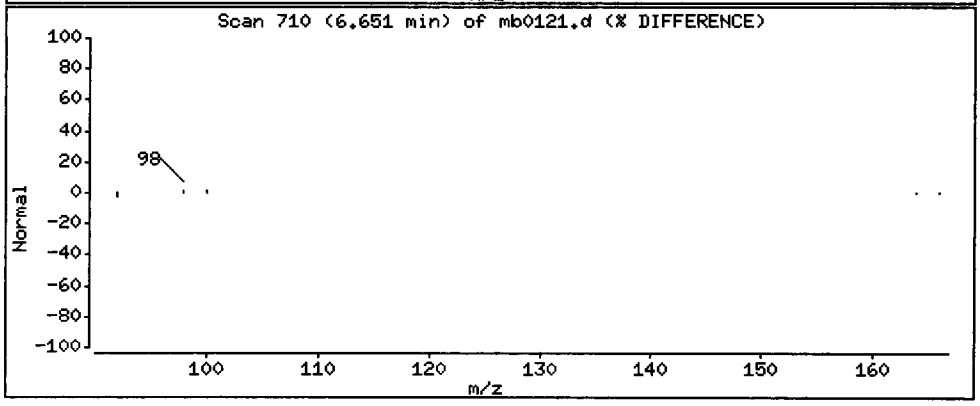












Data File: /chem1/nt9.i/21JAN13.b/mb0121.d

Date : 21-JAN-2013 11:29

Client ID: MB0121

Instrument: nt9.i

Sample Info: MB0121,10,10,0,

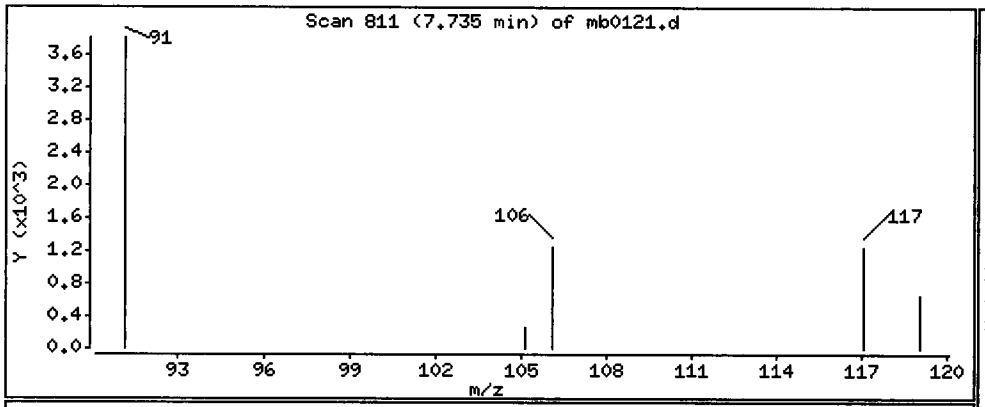
Operator: PC

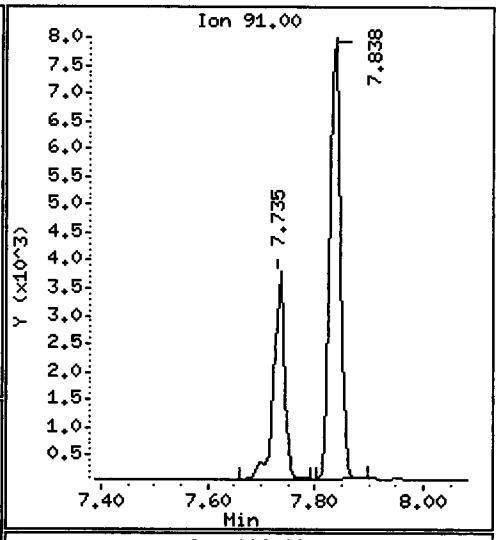
Column phase: RTXVMS

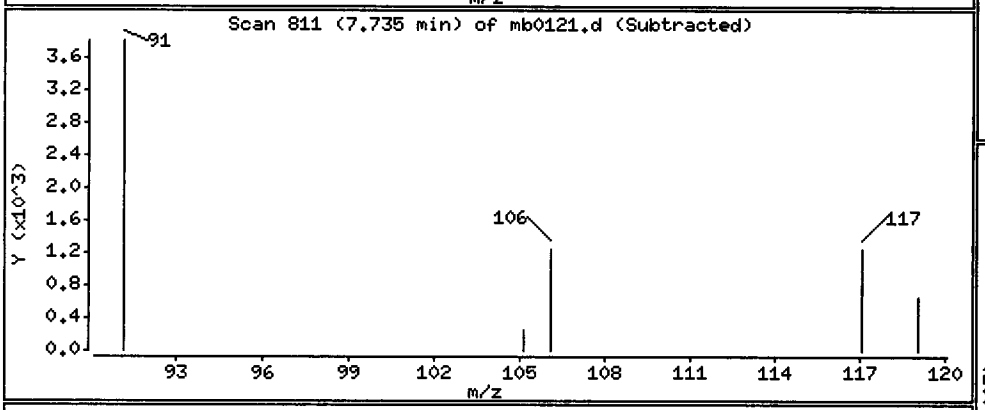
Column diameter: 0.18

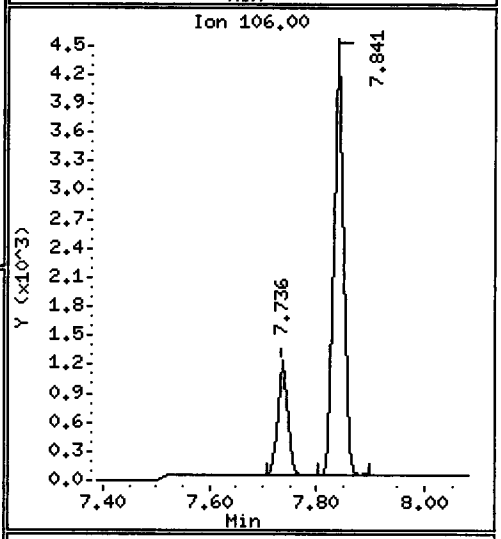
16 Ethyl Benzene

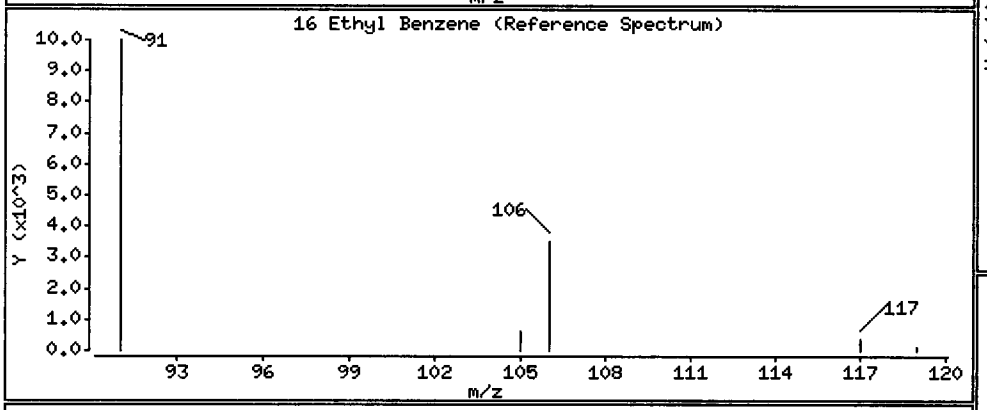
Concentration: 19.390 ug/L

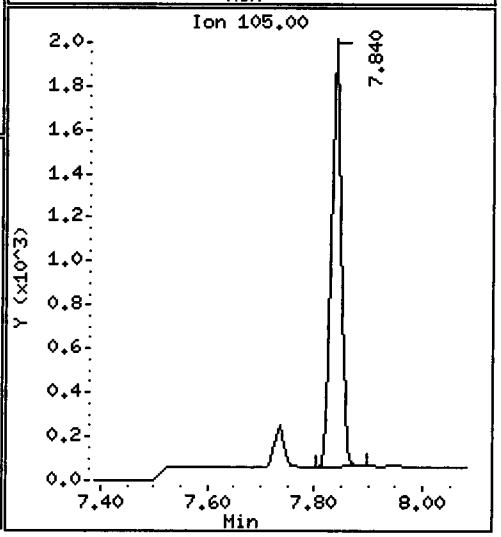


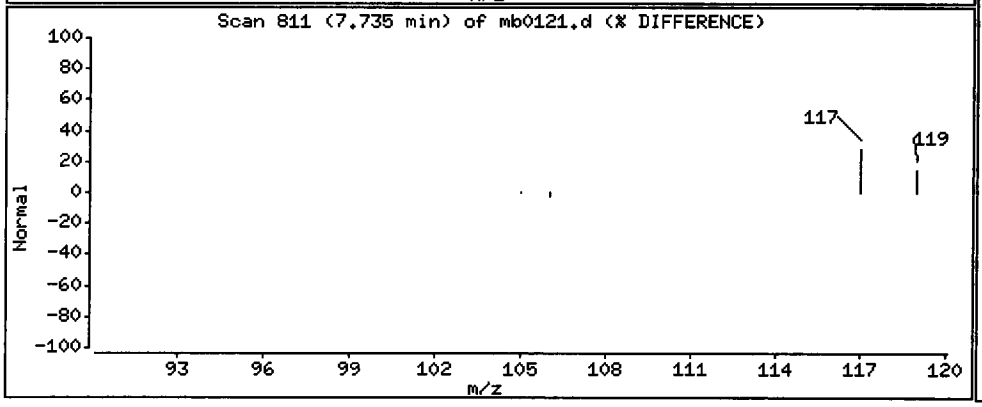












Data File: /chem1/nt9.i/21JAN13.b/mb0121.d

Date : 21-JAN-2013 11:29

Client ID: MB0121

Instrument: nt9.i

Sample Info: MB0121,10,10,0,

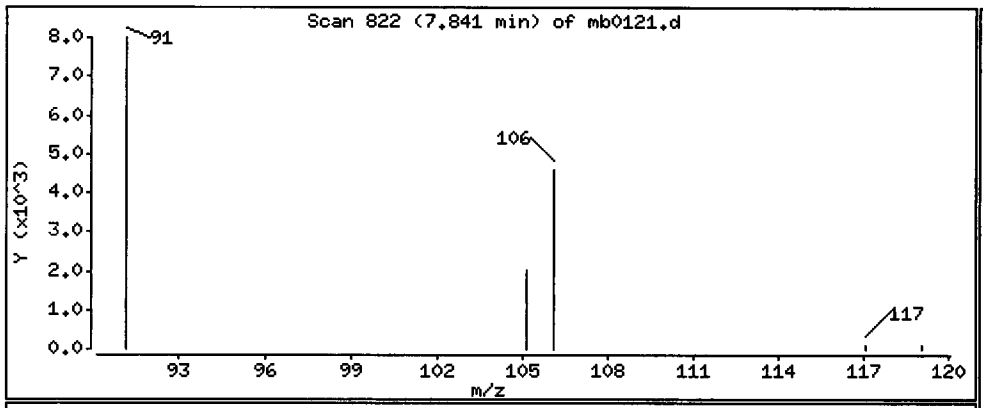
Operator: PC

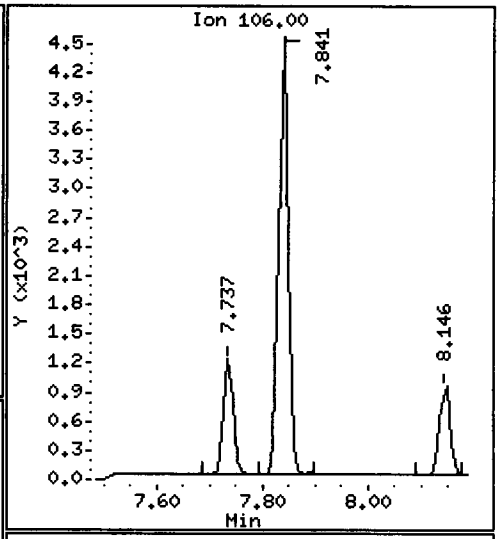
Column phase: RTXVMS

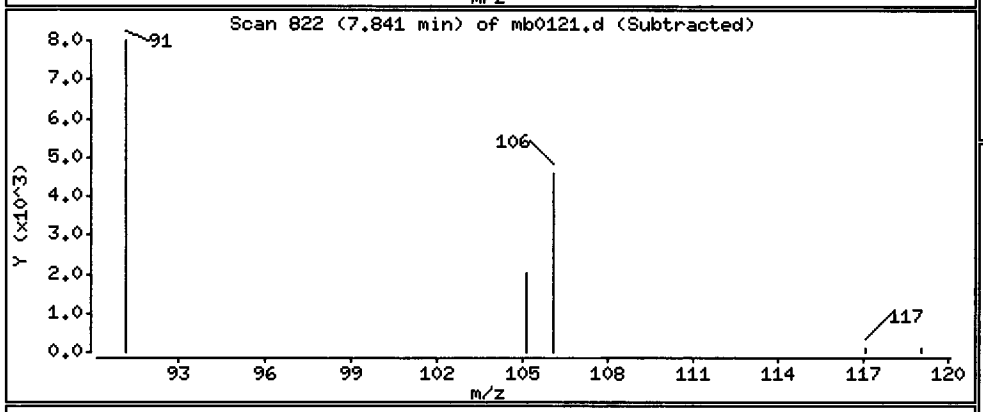
Column diameter: 0.18

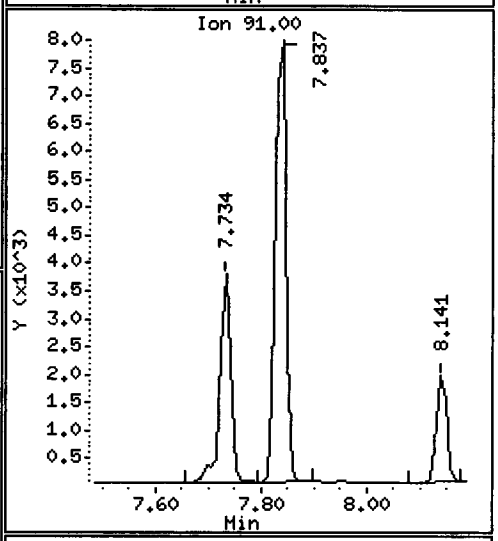
17 m,p xylene

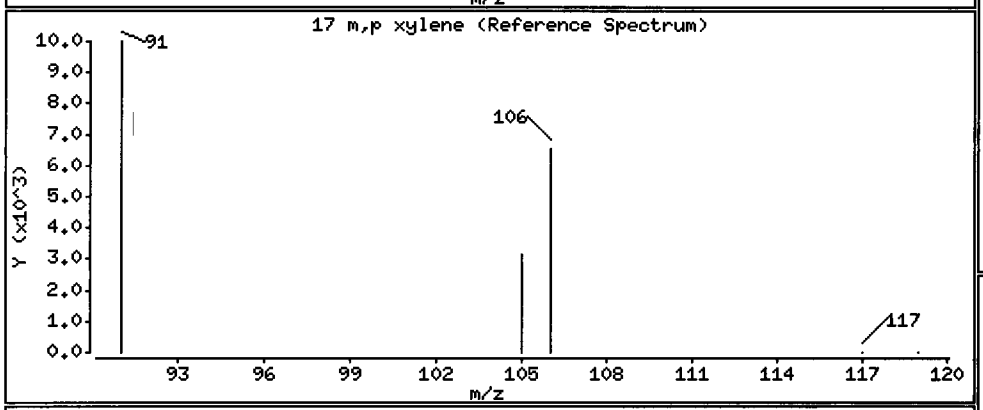
Concentration: 56.569 ug/L

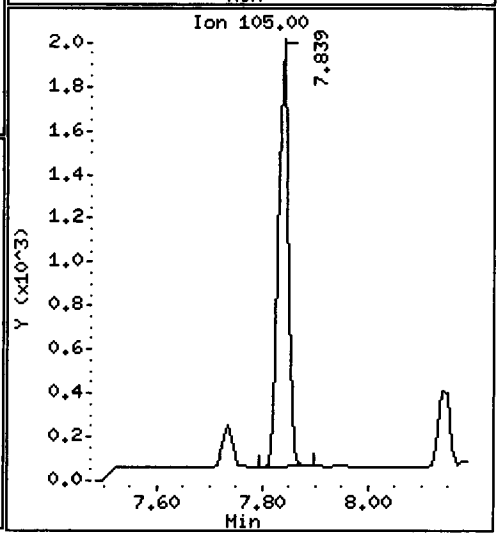


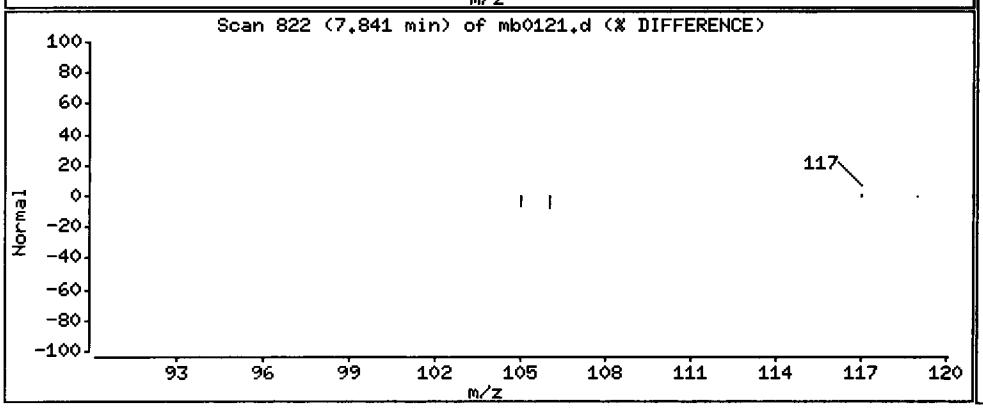












Data File: /chem1/nt9.i/21JAN13.b/mb0121.d

Date : 21-JAN-2013 11:29

Client ID: MB0121

Instrument: nt9.i

Sample Info: MB0121,10,10,0,

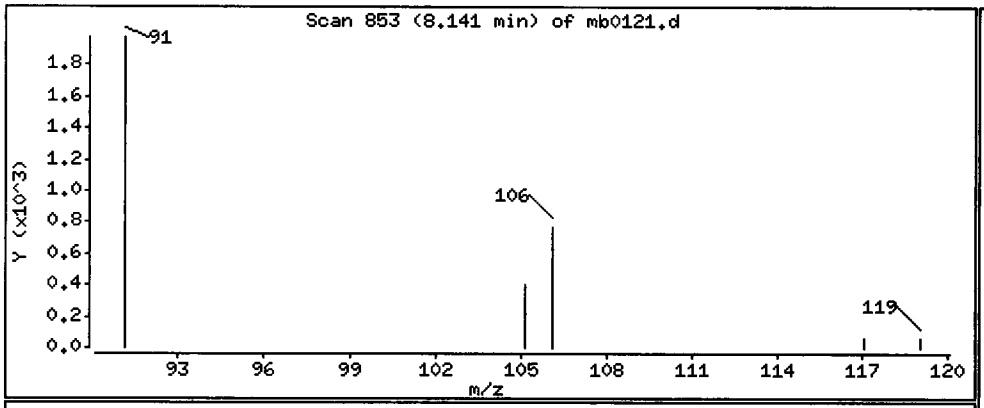
Operator: PC

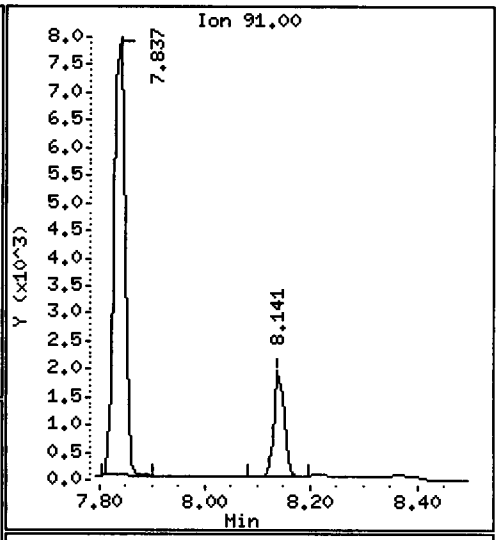
Column phase: RTXVMS

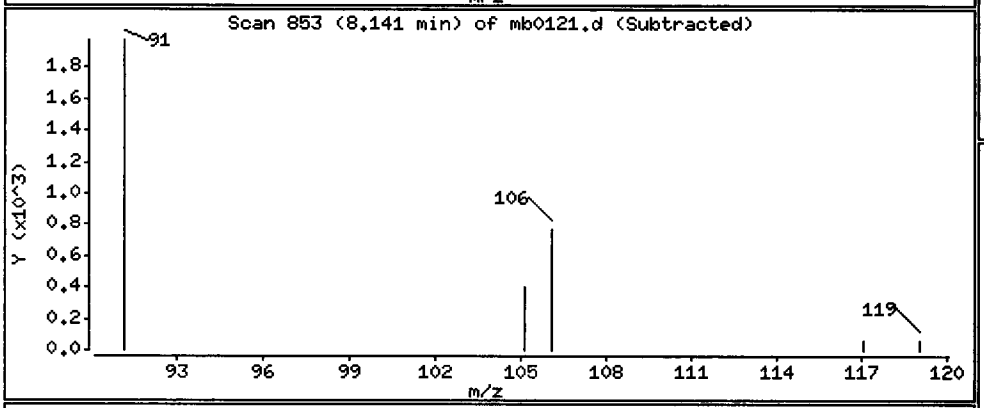
Column diameter: 0.18

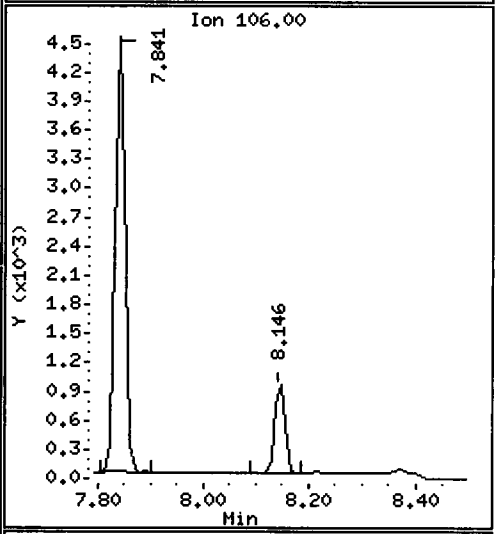
18 o-xylene

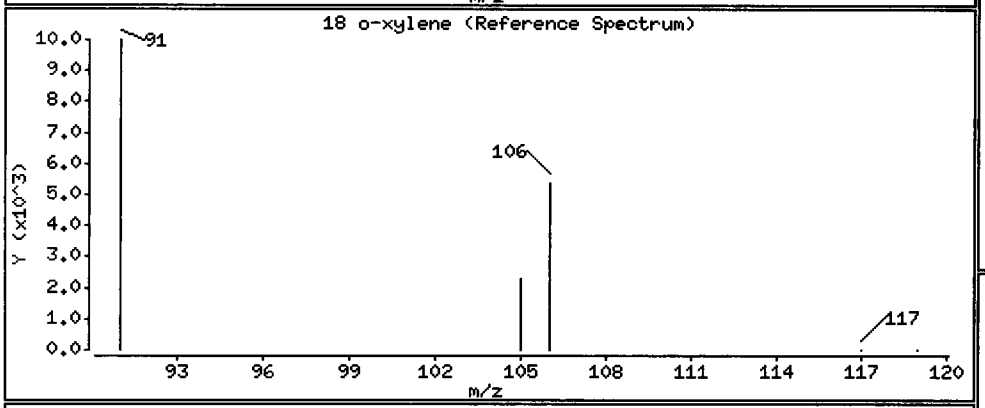
Concentration: 13.503 ug/L

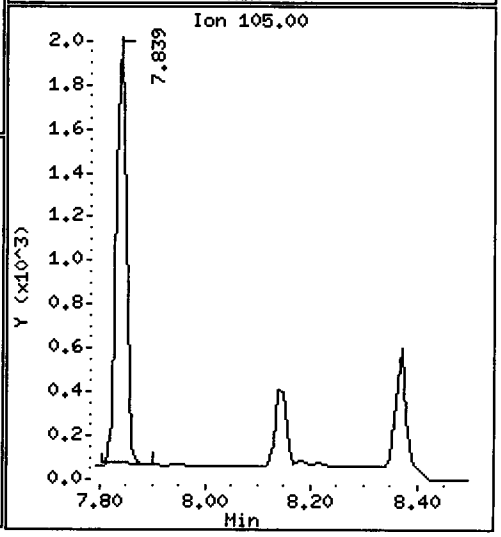


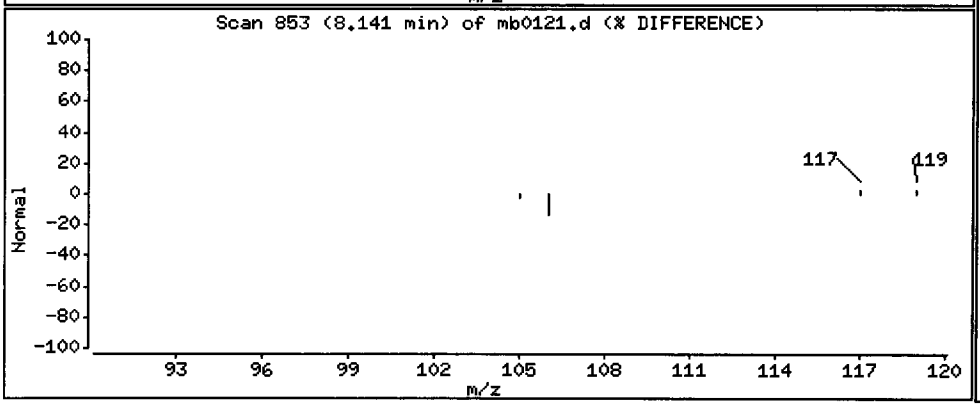












U797 : 00797

CO-ELUTION SUMMARY FOR FILE - mb0121.d

Lab ID: MB0121, Method: sim011713.m, Instrument: nt9.i, Date: 21-JAN-2013

RT	CO-ELUTION COMPOUNDS

PC 1/24/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/21JAN13.b/vz97k2.d
Lab Smp Id: VZ97K Client Smp ID: CSIA20130110-011B
Inj Date : 21-JAN-2013 12:04
Operator : PC Inst ID: nt9.i
Smp Info : VZ97K,10,17.206,1,
Misc Info : 13-1092
Comment :
Method : /chem1/nt9.i/21JAN13.b/sim011713.m
Meth Date : 21-Jan-2013 16:17 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: btex.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	100.00000	Sample Amount (mg)
M	16.10000	Moisture (%)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	CONCENTRATIONS FINAL (ug/Kg)
	6 Benzene	78	5.173	5.173	(0.917)	25204	80.8842	9.641
*	7 Pentafluorobenzene	168	5.267	5.267	(1.000)	135573	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.286	5.287	(1.004)	60378	964.188	114.92
*	11 1,4-Difluorobenzene	114	5.642	5.642	(1.000)	256998	1000.00	
$	12 d8-Toluene	98	6.618	6.619	(1.173)	263066	980.079	116.82
	13 Toluene	91	6.650	6.651	(0.863)	23832	72.9334	8.693
*	15 d5 -Chlorobenzene	117	7.706	7.707	(1.000)	271021	1000.00	
	16 Ethyl Benzene	91	7.734	7.734	(1.004)	10846	33.8168	4.031
	17 m,p xylene	106	7.840	7.841	(1.017)	8720	72.3351	8.622
	18 o-xylene	91	8.139	8.141	(1.056)	9941	43.7845	5.219(Q)
$	19 4-Bromofluorobenzene	174	8.574	8.575	(1.113)	102701	1082.42	129.01(Q)

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: vz97k2.d
Lab Smp Id: VZ97K
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/21JAN13.b/sim011713.m
Misc Info: 13-1092

Calibration Date: 21-JAN-2013
Calibration Time: 10:18
Client Smp ID: CSIA20130110-011B
Level: MED
Sample Type: Soil

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	135573	18.29
11 1,4-Difluorobenze	202370	101185	404740	256998	26.99
15 d5 -Chlorobenzene	226394	113197	452788	271021	19.71

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	0.00
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	-0.01
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	-0.01

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA
Client SDG: VZ97
Sample Matrix: SOLID
Fraction: VOA
Lab Smp Id: VZ97K
Client Smp ID: CSIA20130110-011B
Level: MED
Operator: PC
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: special.spk
Quant Type: ISTD
Sublist File: btex.sub
Method File: /chem1/nt9.i/21JAN13.b/sim011713.m
Misc Info: 13-1092

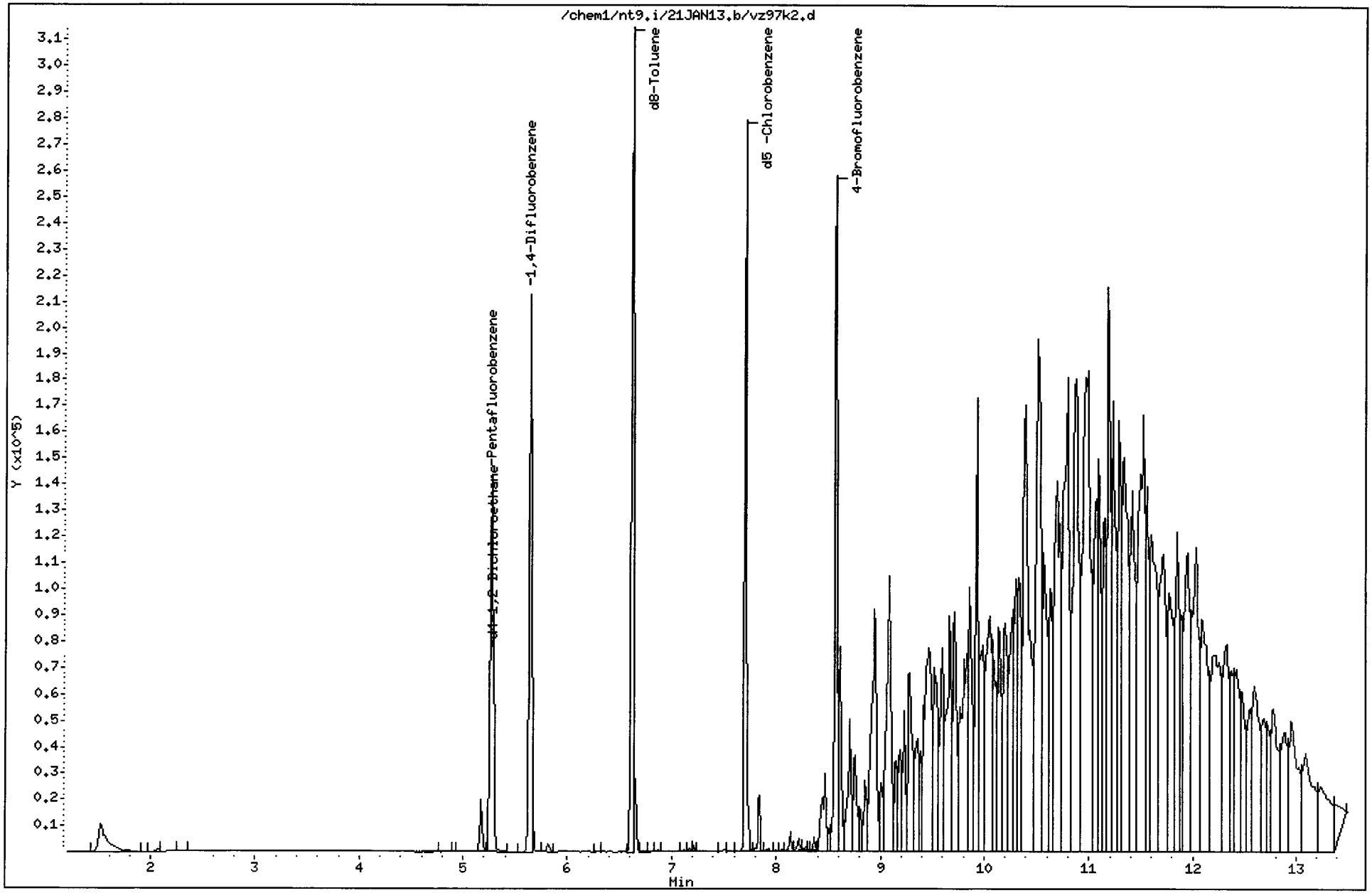
SURROGATE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 8 d4-1,2-Dichloroeth	119.19	114.92	96.42	75-125
$ 12 d8-Toluene	119.19	116.82	98.01	75-125
$ 19 4-Bromofluorobenze	119.19	129.01	108.24	75-125

Data File: /chem1/nt9.i/21JAN13.b/vz97k2.d
Date : 21-JAN-2013 12:04
Client ID: CSIA20130110-011B
Sample Info: VZ97K,10,17.206,1,

Column phase: RTXVMS

Instrument: nt9.i

Operator: PC
Column diameter: 0.18



Data File: /chem1/nt9.i/21JAN13.b/vz97k2.d

Date : 21-JAN-2013 12:04

Client ID: CSIA20130110-011B

Instrument: nt9.i

Sample Info: VZ97K,10,17.206,1,

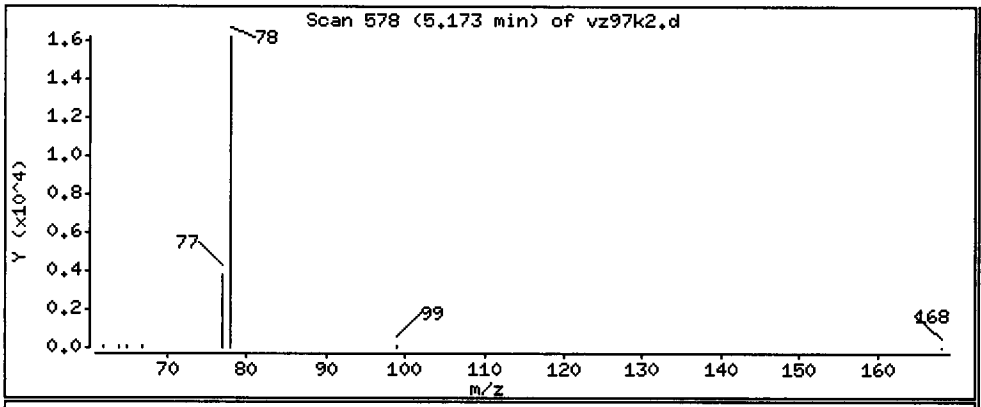
Operator: PC

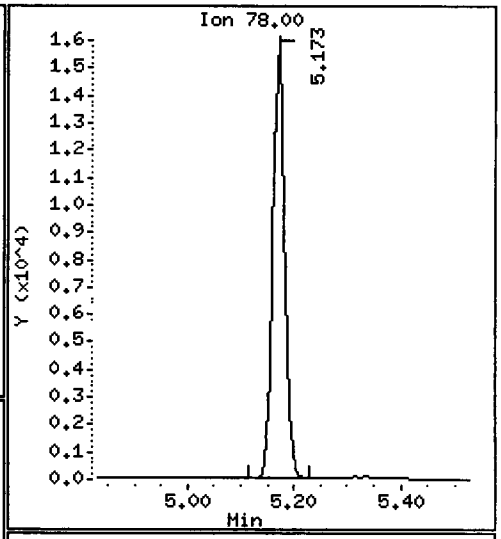
Column phase: RTXVMS

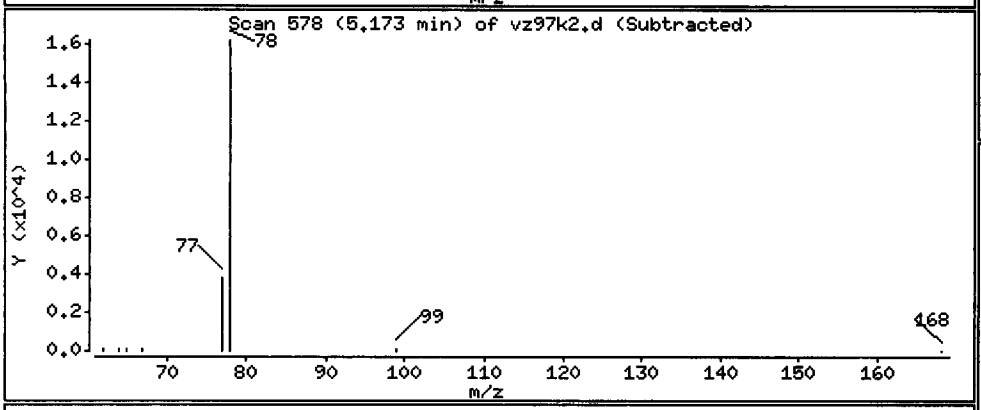
Column diameter: 0.18

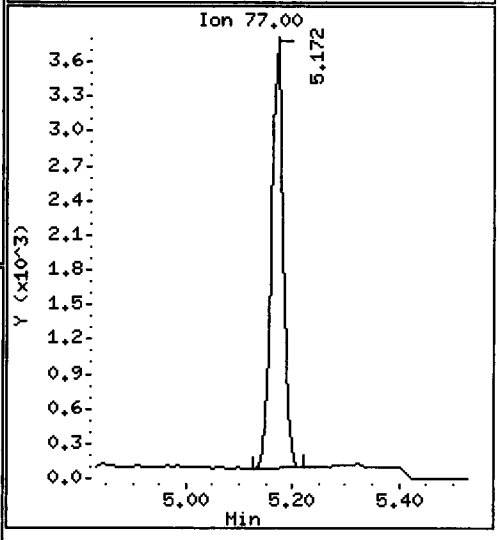
6 Benzene

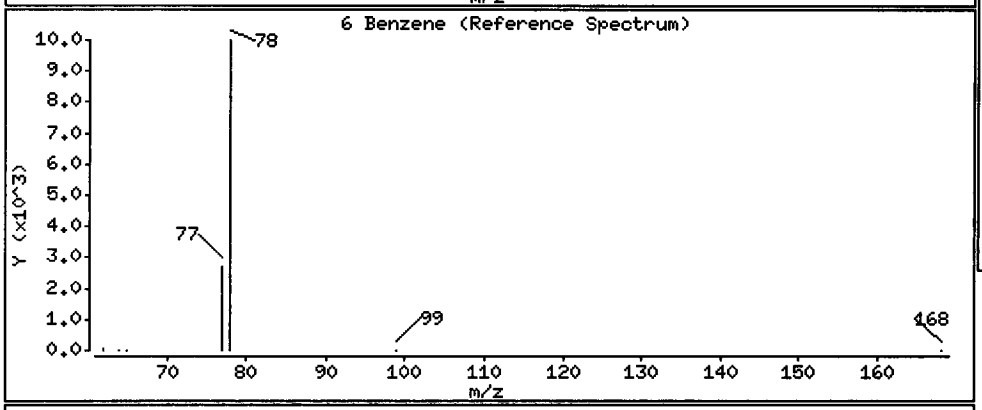
Concentration: 9.641 ug/Kg

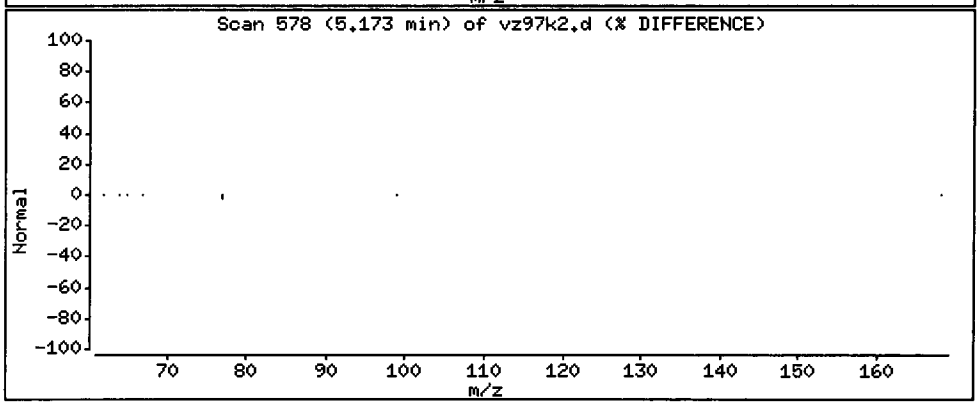












Data File: /chem1/nt9.i/21JAN13.b/vz97k2.d

Date : 21-JAN-2013 12:04

Client ID: CSIA20130110-011B

Instrument: nt9.i

Sample Info: VZ97K,10,17.206,1,

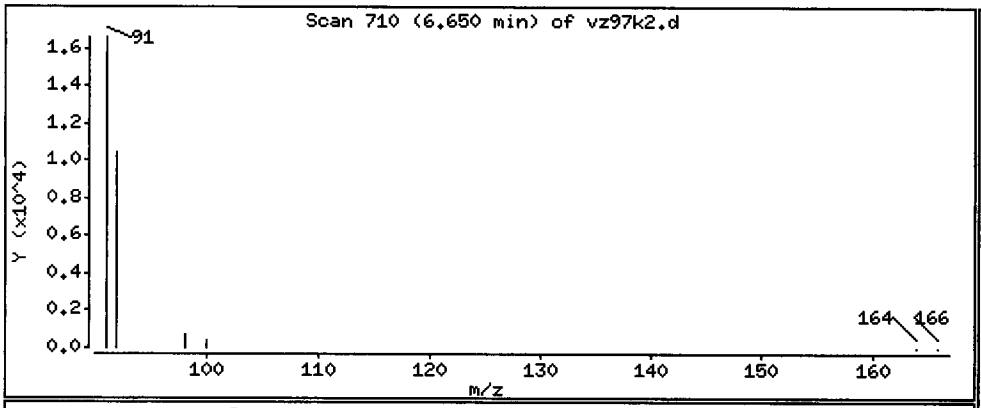
Operator: PC

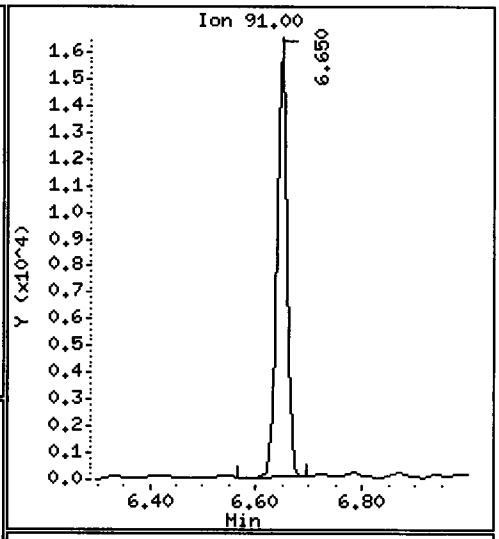
Column phase: RTXVMS

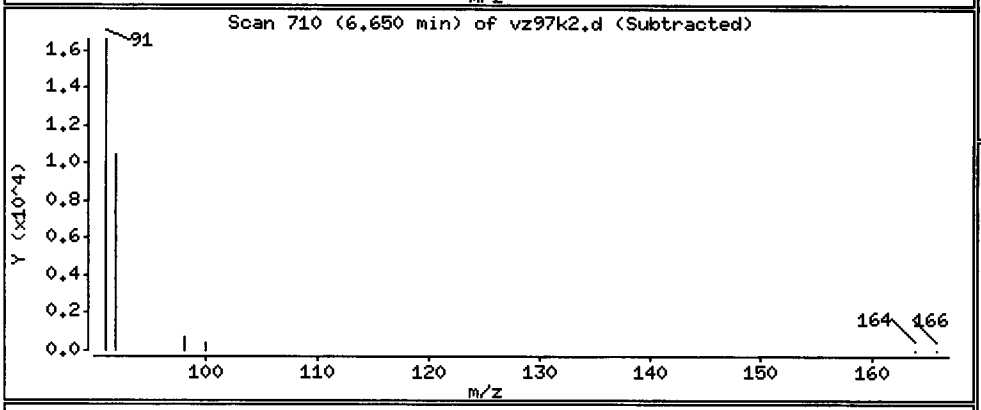
Column diameter: 0.18

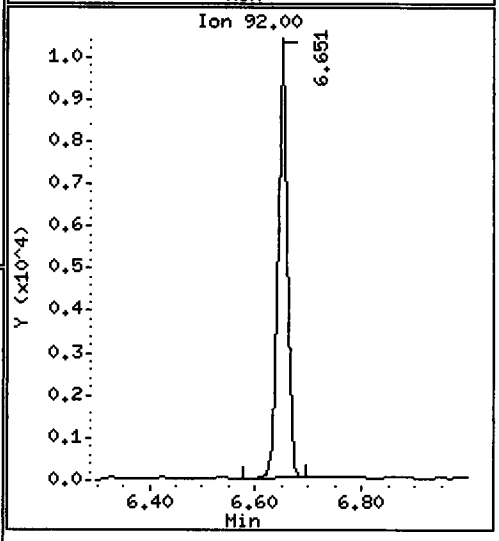
13 Toluene

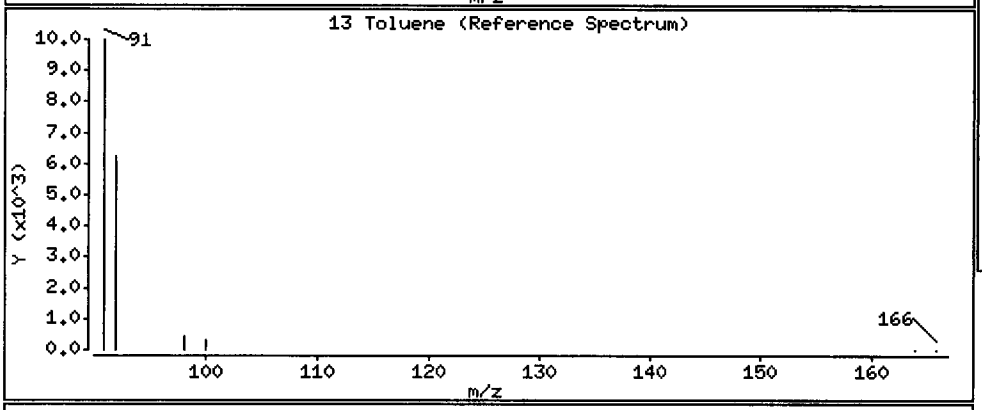
Concentration: 8.693 ug/Kg

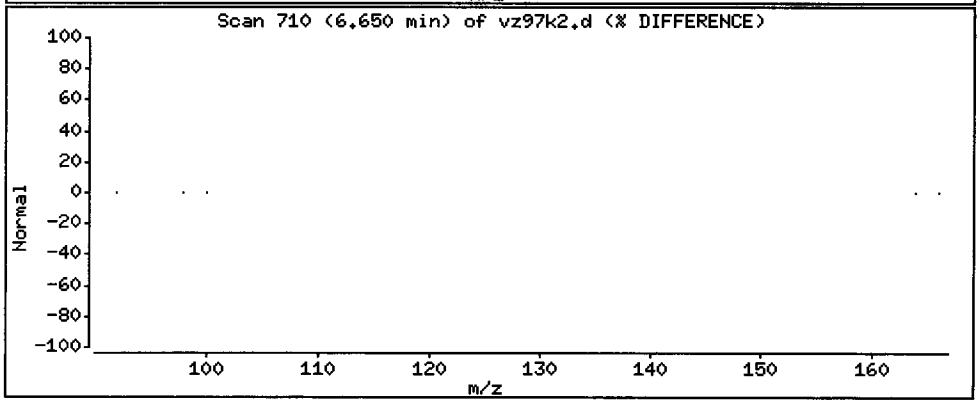












Data File: /chem1/nt9.i/21JAN13.b/vz97k2.d

Date : 21-JAN-2013 12:04

Client ID: CSIA20130110-011B

Instrument: nt9.i

Sample Info: VZ97K,10,17.206,1,

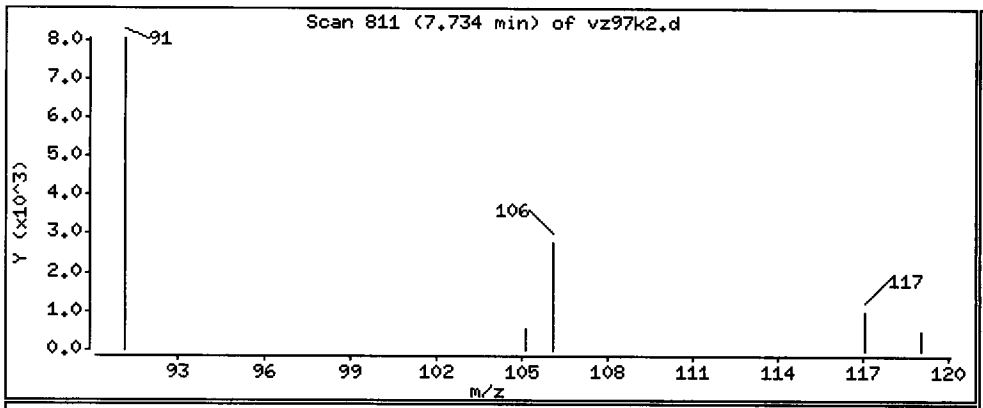
Operator: PC

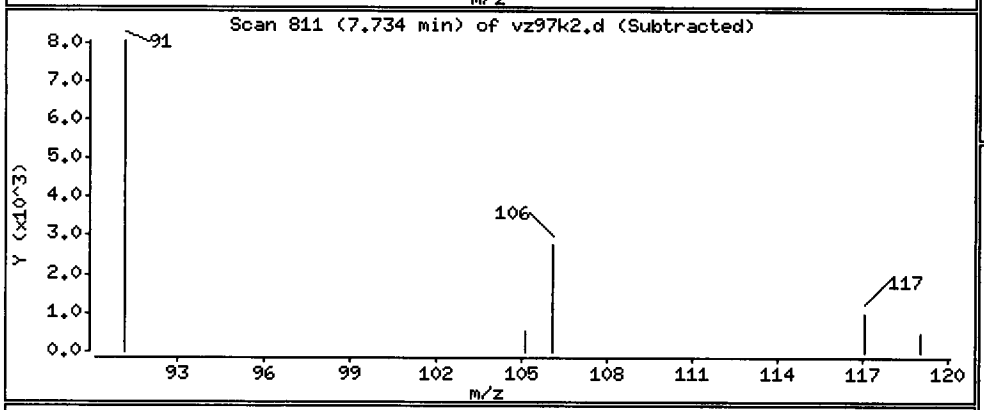
Column phase: RTXVMS

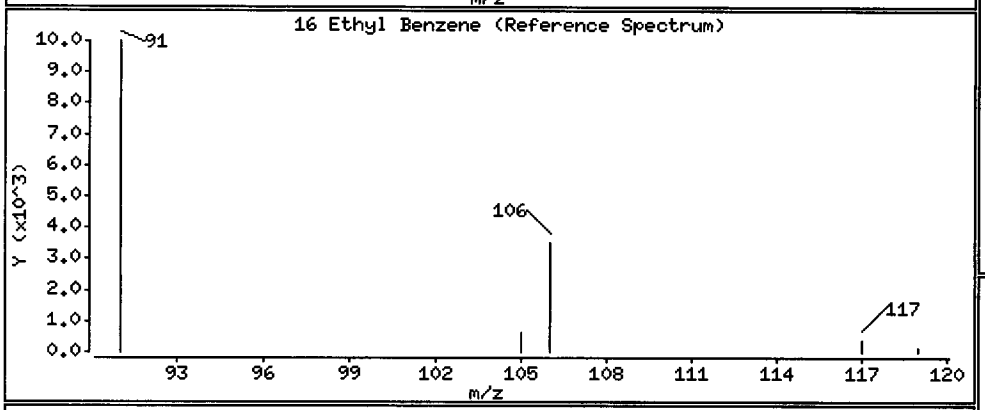
Column diameter: 0.18

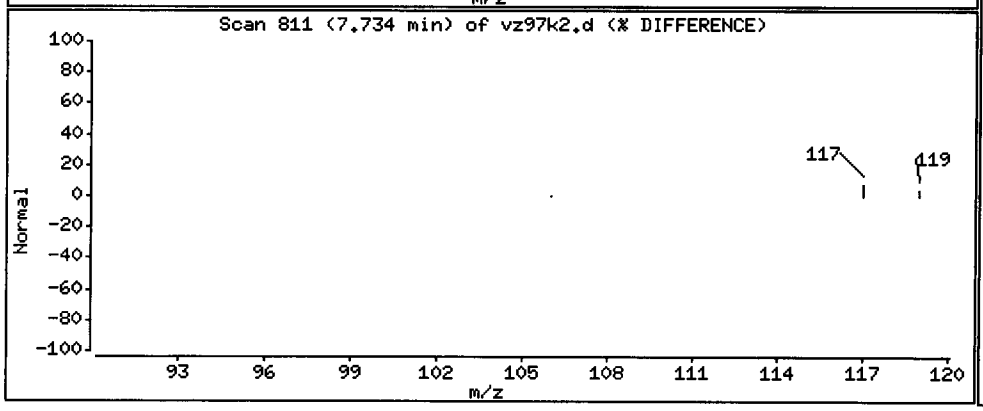
16 Ethyl Benzene

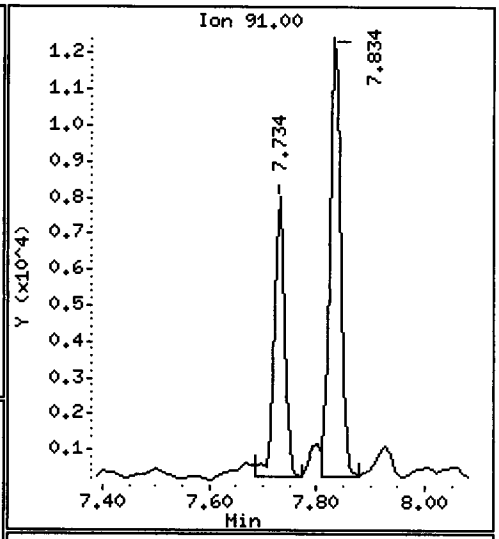
Concentration: 4.031 ug/Kg

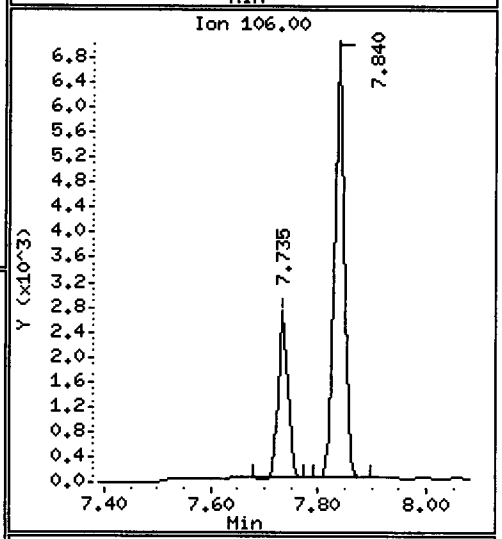


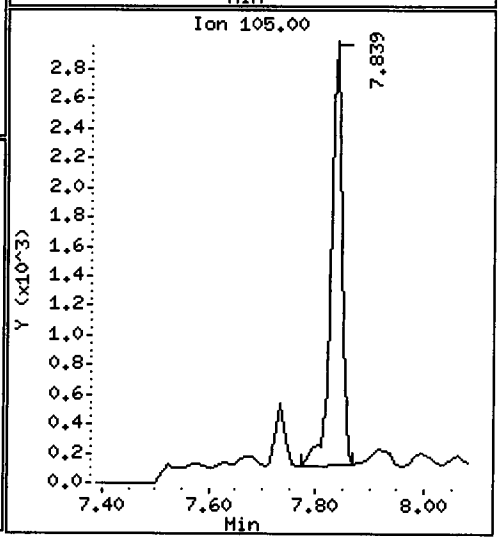












Data File: /chem1/nt9.i/21JAN13.b/vz97k2.d

Date : 21-JAN-2013 12:04

Client ID: CSIA20130110-011B

Instrument: nt9.i

Sample Info: VZ97K,10,17.206,1,

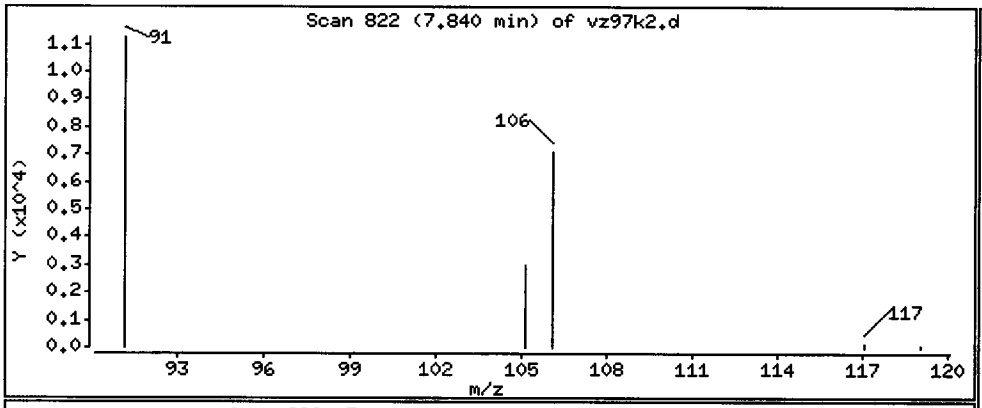
Operator: PC

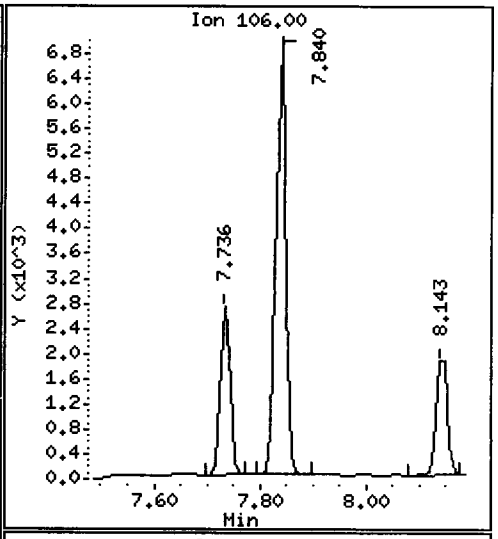
Column phase: RTXVMS

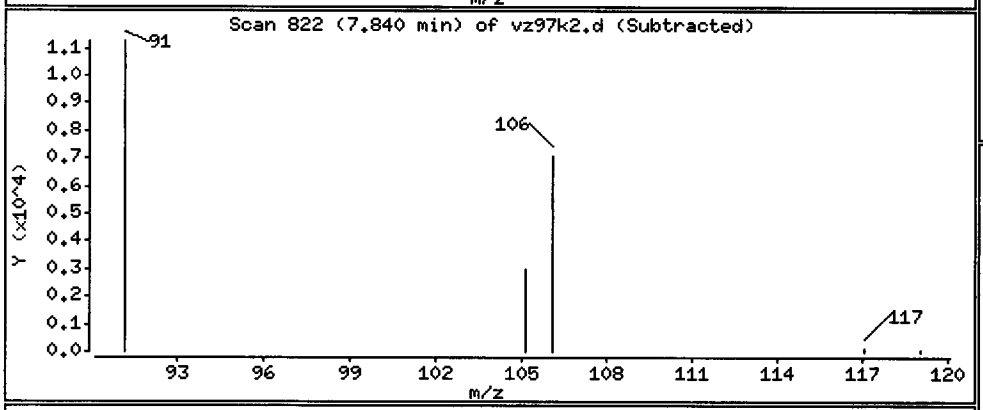
Column diameter: 0.18

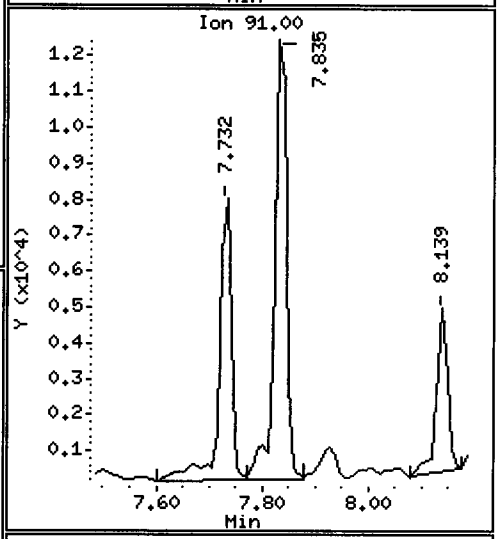
17 m,p xylene

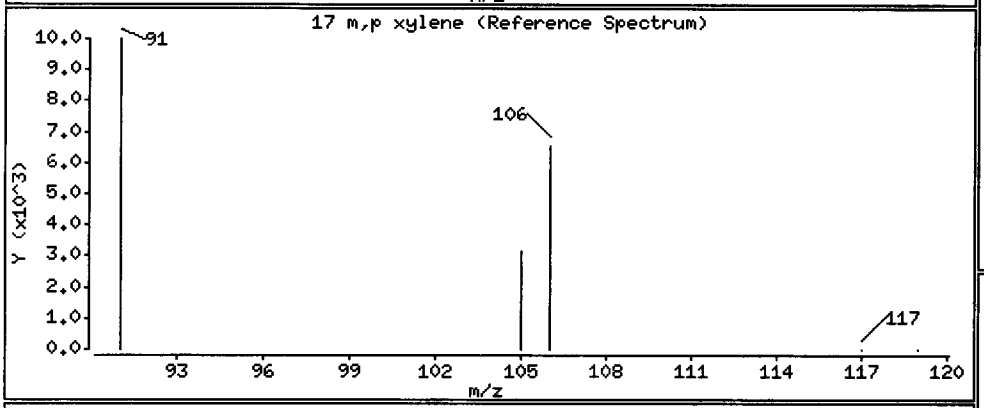
Concentration: 8.622 ug/Kg

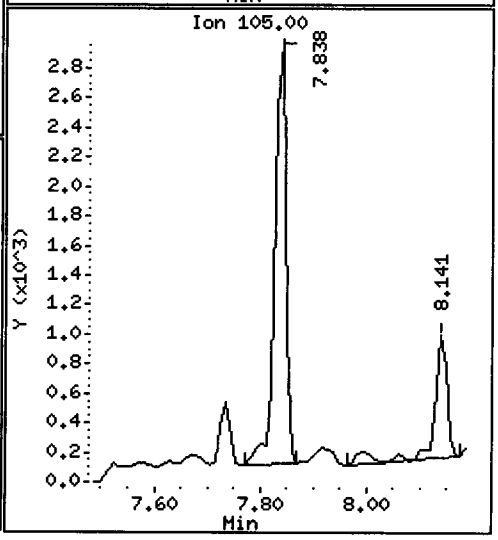


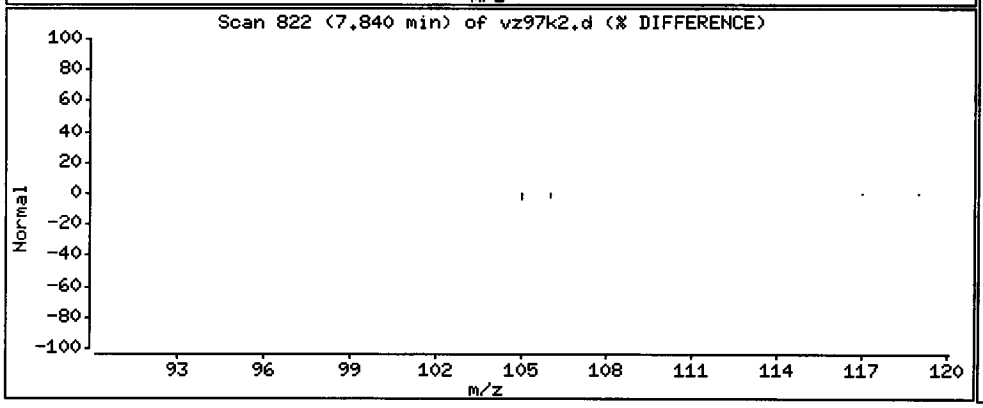












Data File: /chem1/nt9.i/21JAN13.b/vz97k2.d

Date : 21-JAN-2013 12:04

Client ID: CSIA20130110-011B

Instrument: nt9.i

Sample Info: VZ97K,10,17.206,1,

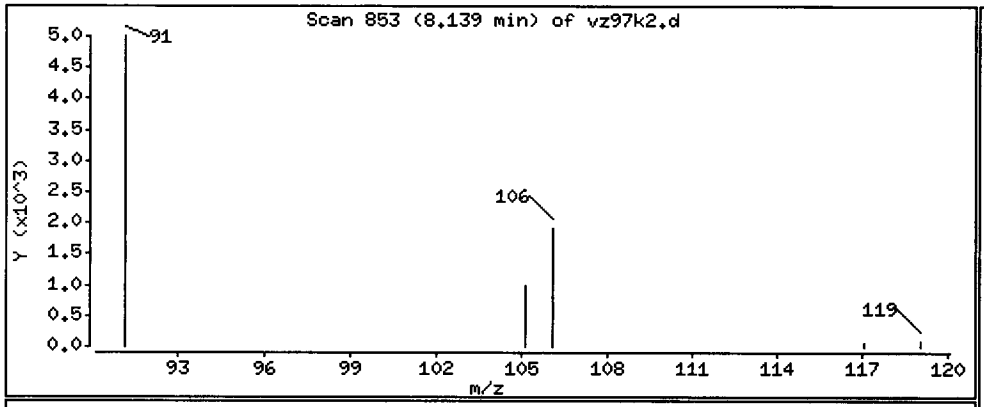
Operator: PC

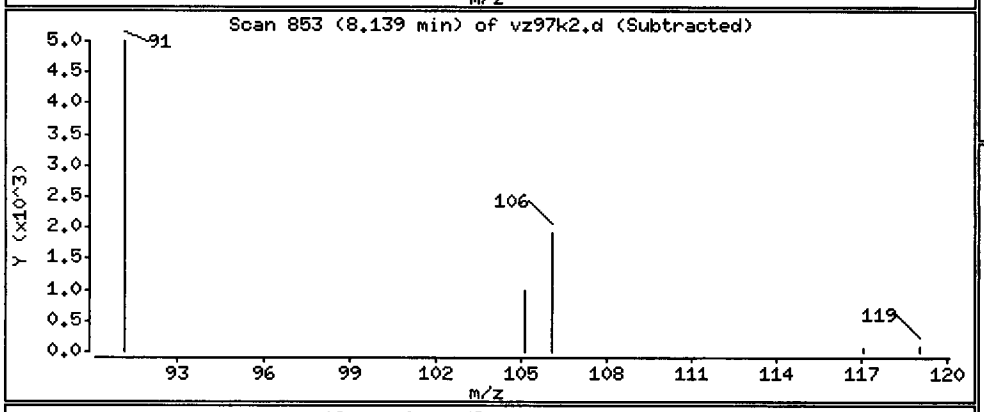
Column phase: RTXVMS

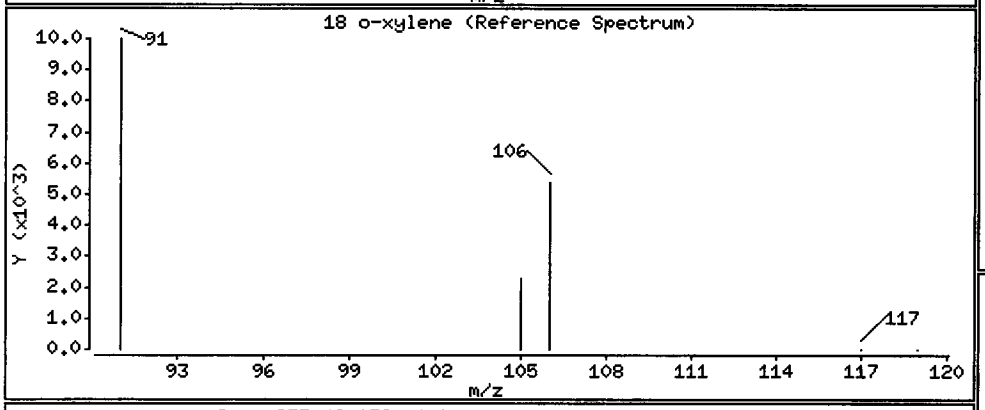
Column diameter: 0.18

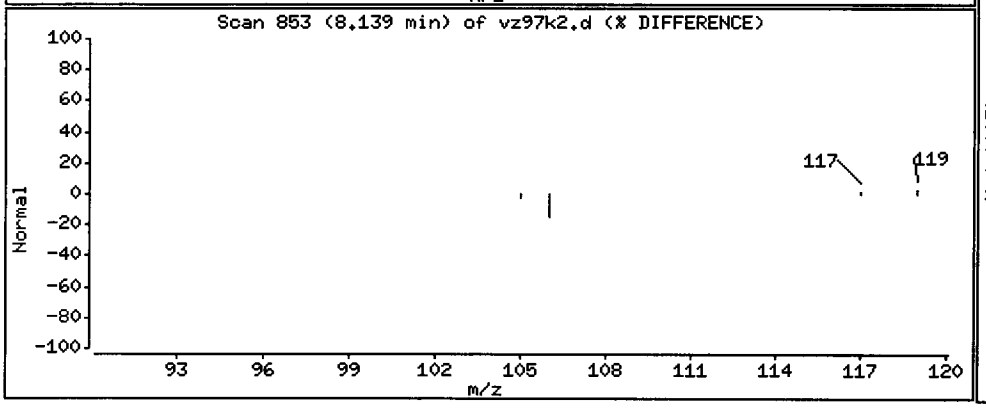
18 o-xylene

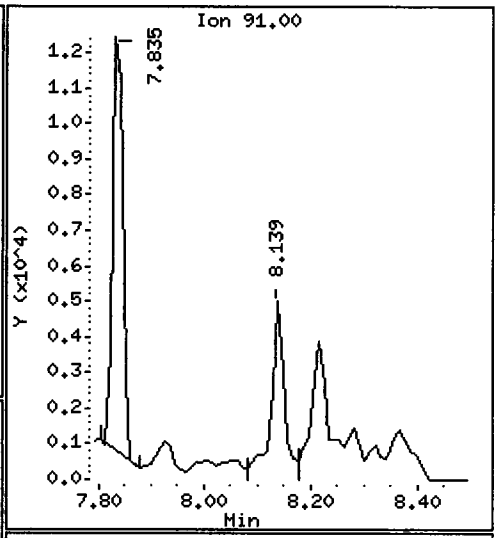
Concentration: 5.219 ug/Kg

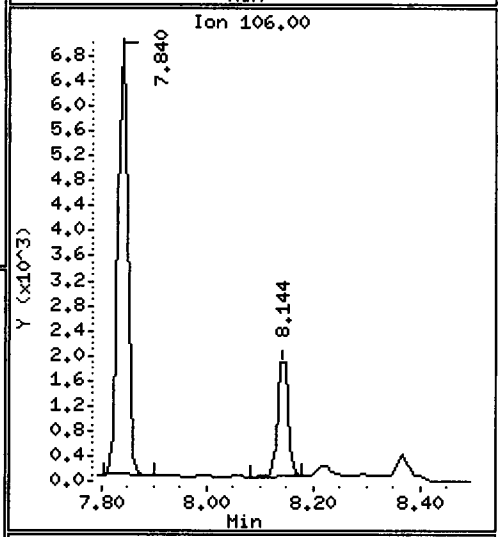


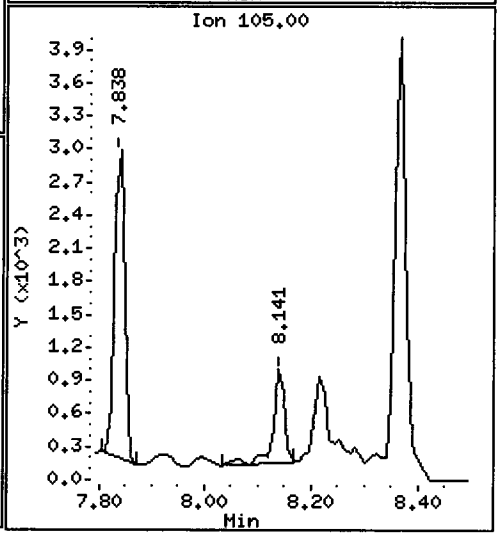












CO-ELUTION SUMMARY FOR FILE - vz97k2.d

Lab ID: VZ97K, Method: sim011713.m, Instrument: nt9.i, Date: 21-JAN-2013

RT	CO-ELUTION COMPOUNDS

PC
1/21/13

Data File: /chem1/nt9.i/21JAN13.b/vz97l2.d
Report Date: 21-Jan-2013 16:18

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/21JAN13.b/vz97l2.d
Lab Smp Id: VZ97L Client Smp ID: CSIA20130110-012B
Inj Date : 21-JAN-2013 12:28
Operator : PC Inst ID: nt9.i
Smp Info : VZ97L,10,22.228,1,
Misc Info : 13-1093
Comment :
Method : /chem1/nt9.i/21JAN13.b/sim011713.m
Meth Date : 21-Jan-2013 16:17 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: btex.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	100.00000	Sample Amount (mg)
M	21.20000	Moisture (%)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	CONCENTRATIONS FINAL (ug/Kg)
	6 Benzene	78	5.173	5.173	(0.917)	34198	131.546	16.694
*	7 Pentafluorobenzene	168	5.267	5.267	(1.000)	115080	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.287	5.287	(1.004)	51550	969.806	123.07
*	11 1,4-Difluorobenzene	114	5.644	5.642	(1.000)	214411	1000.00	
$	12 d8-Toluene	98	6.618	6.619	(1.173)	220135	983.033	124.75
	13 Toluene	91	6.651	6.651	(0.863)	16279	59.5866	7.562
*	15 d5 -Chlorobenzene	117	7.706	7.707	(1.000)	226594	1000.00	
	16 Ethyl Benzene	91	7.734	7.734	(1.004)	6651	24.8030	3.148
	17 m,p xylene	106	7.840	7.841	(1.017)	4890	48.5173	6.157
	18 o-xylene	91	8.140	8.141	(1.056)	12496	65.8288	8.354(Q)
$	19 4-Bromofluorobenzene	174	8.574	8.575	(1.113)	85491	1077.70	136.76

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: vz97l2.d
Lab Smp Id: VZ97L
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/21JAN13.b/sim011713.m
Misc Info: 13-1093

Calibration Date: 21-JAN-2013
Calibration Time: 10:18
Client Smp ID: CSIA20130110-012B
Level: MED
Sample Type: Soil

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	115080	0.41
11 1,4-Difluorobenze	202370	101185	404740	214411	5.95
15 d5 -Chlorobenzene	226394	113197	452788	226594	0.09

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	-0.02
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	0.03
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	-0.01

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA
Sample Matrix: SOLID
Lab Smp Id: VZ97L
Level: MED
Data Type: MS DATA
SpikeList File: special.spk
Sublist File: btex.sub
Method File: /chem1/nt9.i/21JAN13.b/sim011713.m
Misc Info: 13-1093

Client SDG: VZ97
Fraction: VOA
Client Smp ID: CSIA20130110-012B
Operator: PC
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 8 d4-1,2-Dichloroeth	126.90	123.07	96.98	75-125
$ 12 d8-Toluene	126.90	124.75	98.30	75-125
$ 19 4-Bromofluorobenze	126.90	136.76	107.77	75-125

Data File: /chem1/nt9.i/21JAN13.b/vz9712.d

Date : 21-JAN-2013 12:28

Client ID: CSIA20130110-012B

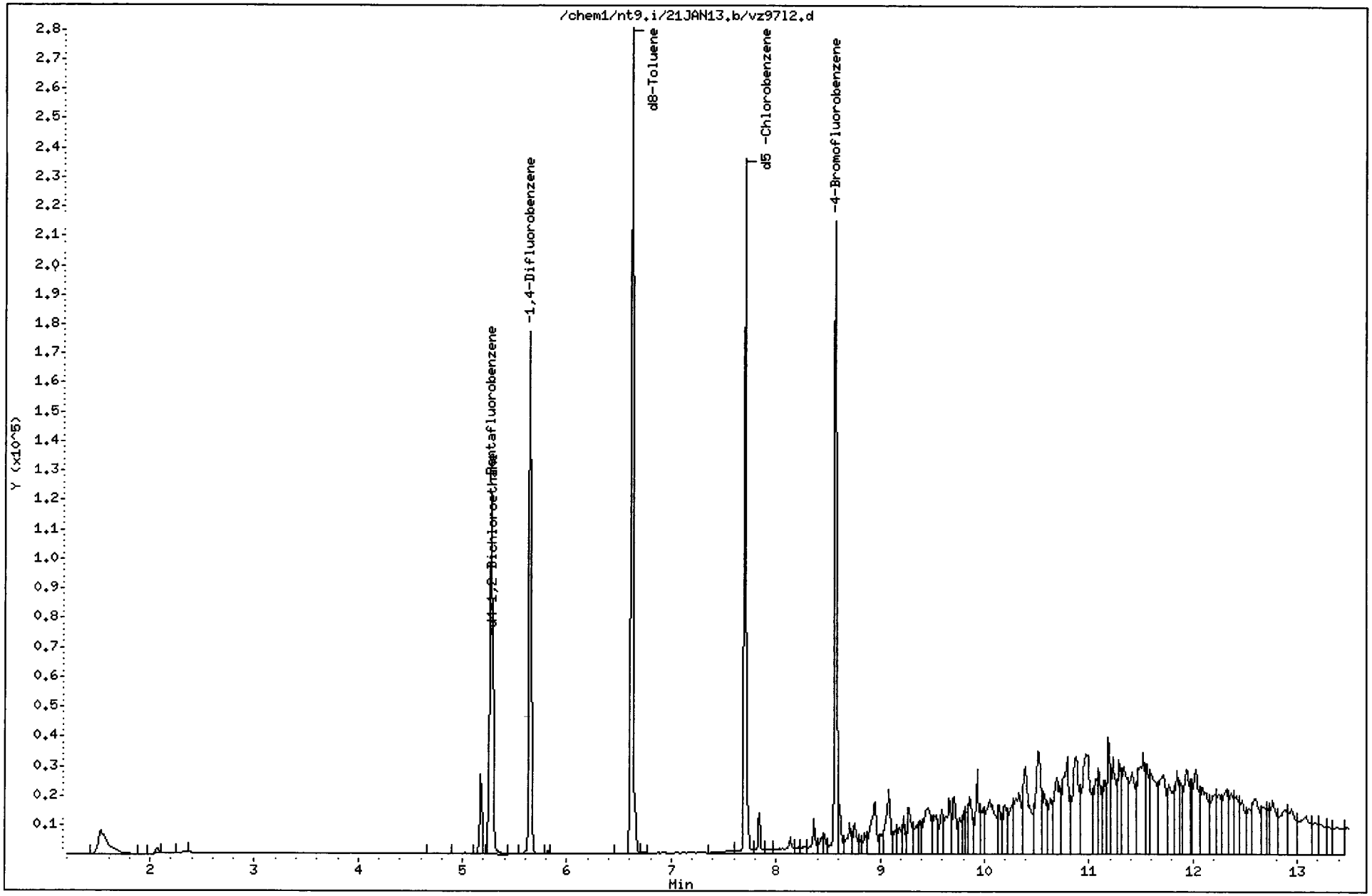
Sample Info: VZ97L,10,22.228,1,

Column phase: RTXVMS

Instrument: nt9.i

Operator: PC

Column diameter: 0.18



Data File: /chem1/nt9.i/21JAN13.b/vz9712.d

Date : 21-JAN-2013 12:28

Client ID: CSIA20130110-012B

Instrument: nt9.i

Sample Info: VZ97L,10,22.228,1,

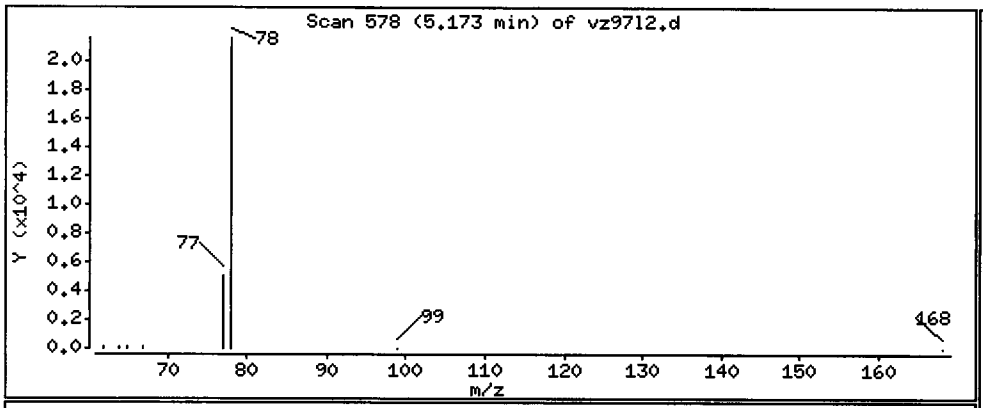
Operator: PC

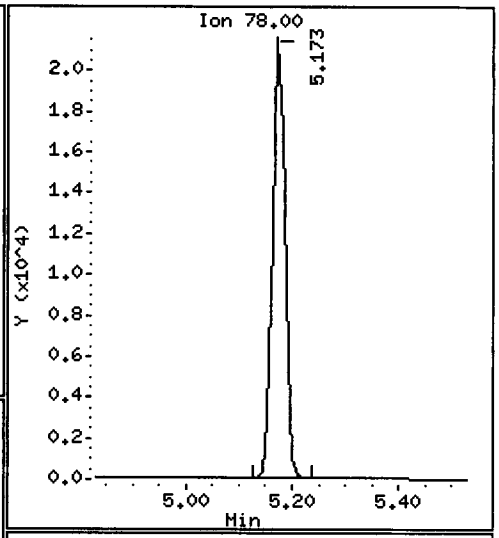
Column phase: RTXVMS

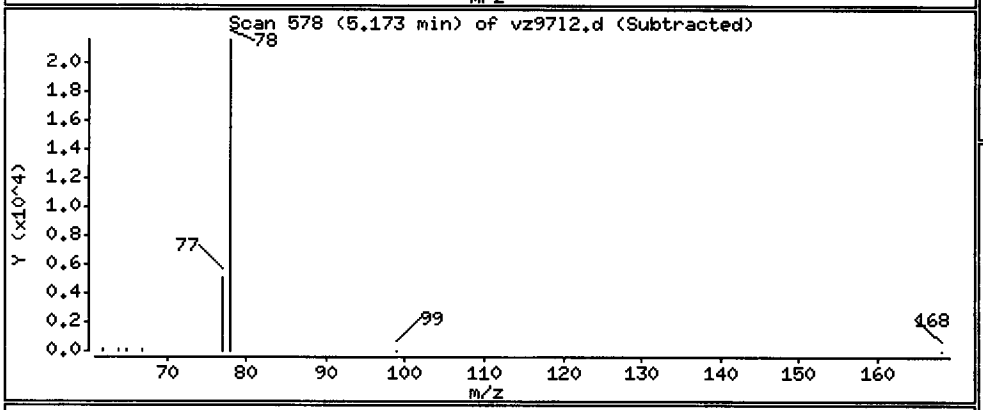
Column diameter: 0.18

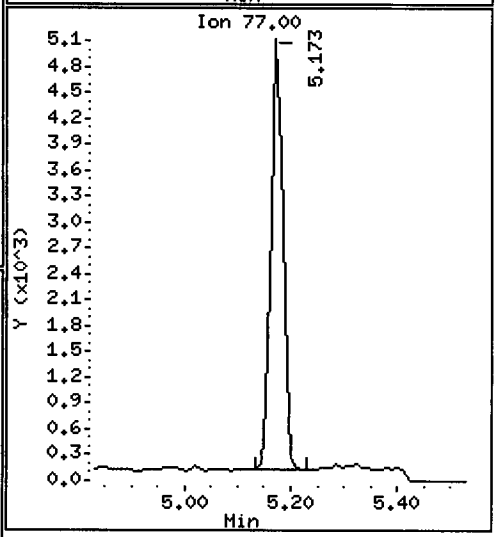
6 Benzene

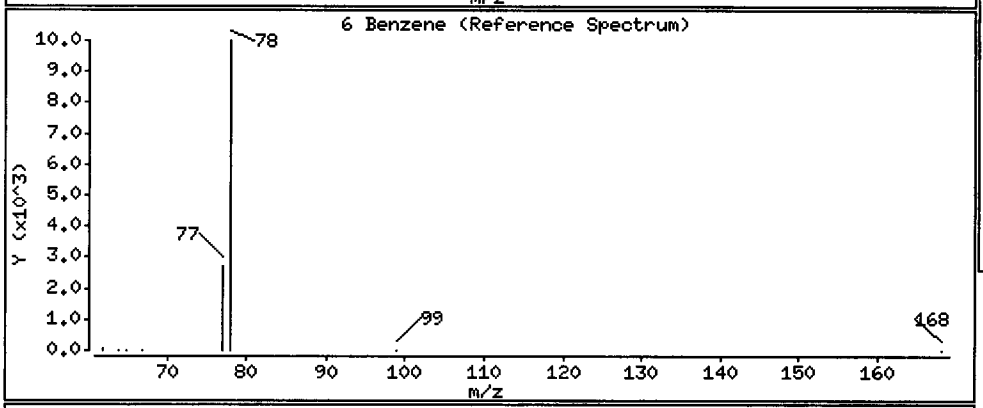
Concentration: 16.694 ug/Kg

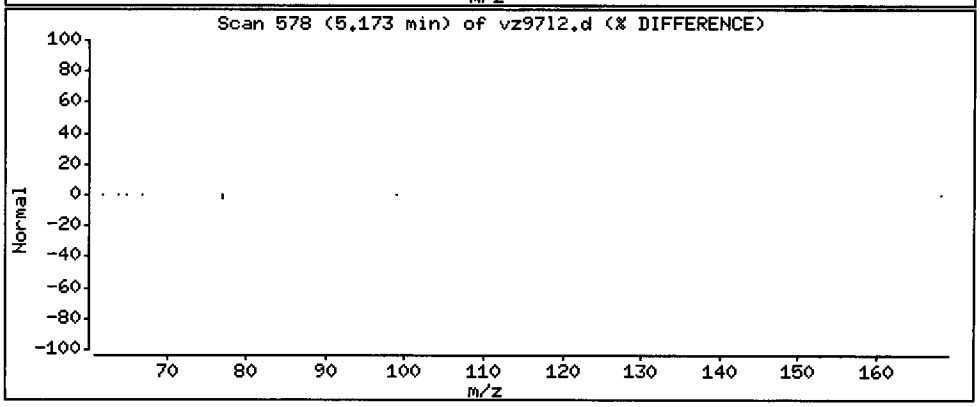












Data File: /chem1/nt9.i/21JAN13.b/vz9712.d

Date : 21-JAN-2013 12:28

Client ID: CSIA20130110-012B

Instrument: nt9.i

Sample Info: VZ97L,10,22.228,1,

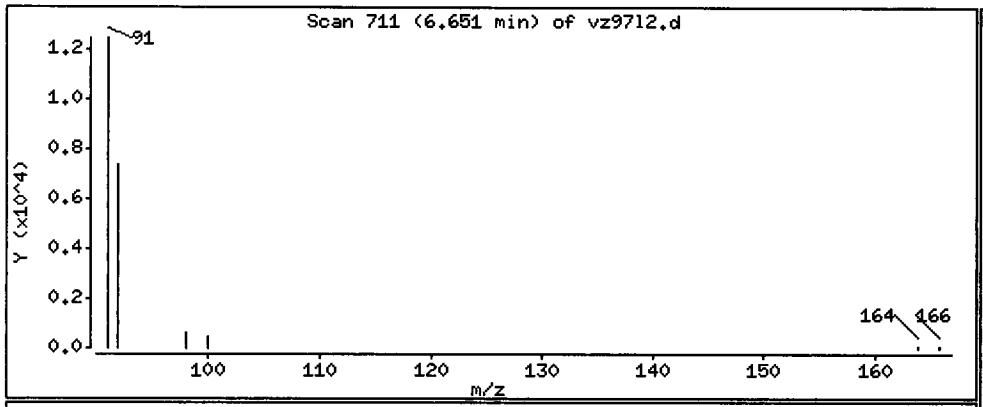
Operator: PC

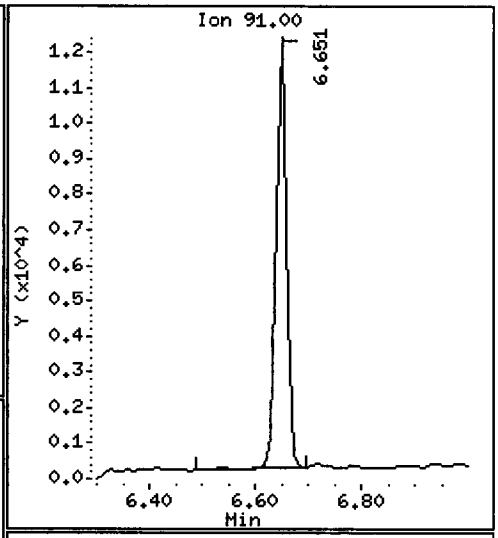
Column phase: RTXVMS

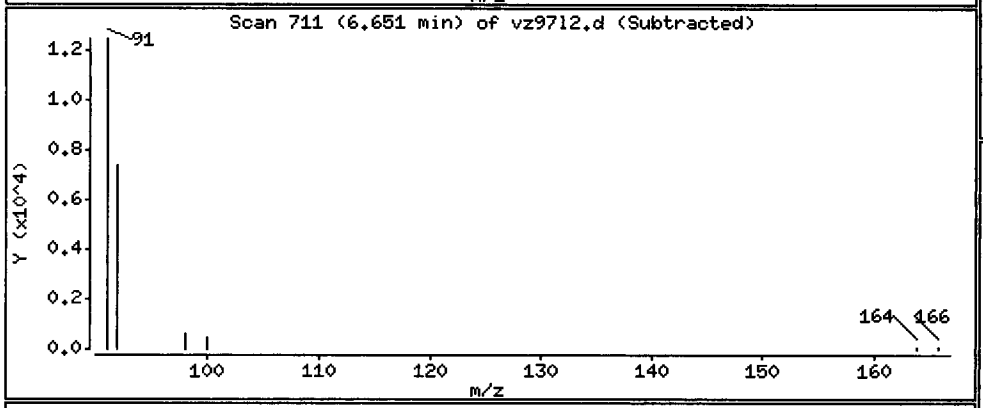
Column diameter: 0.18

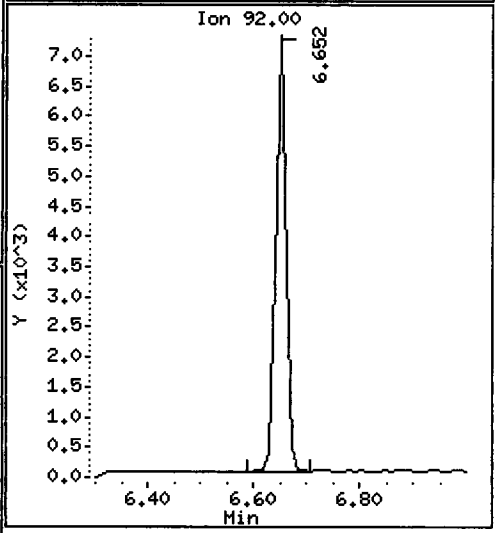
13 Toluene

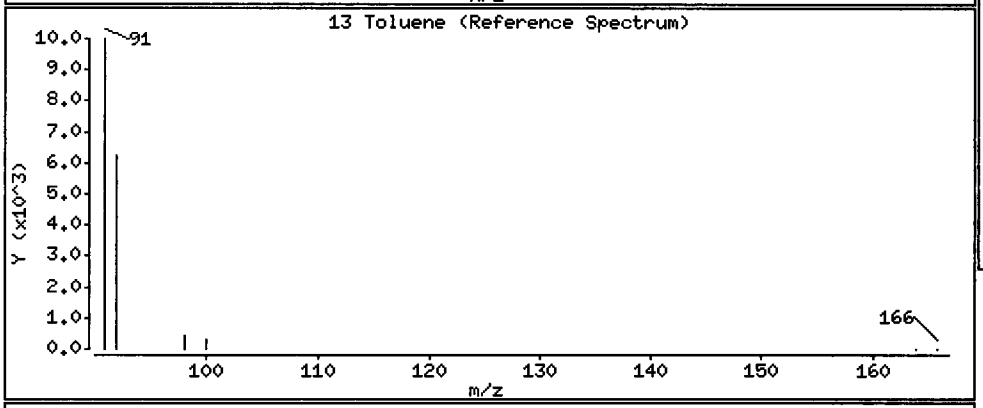
Concentration: 7.562 ug/Kg

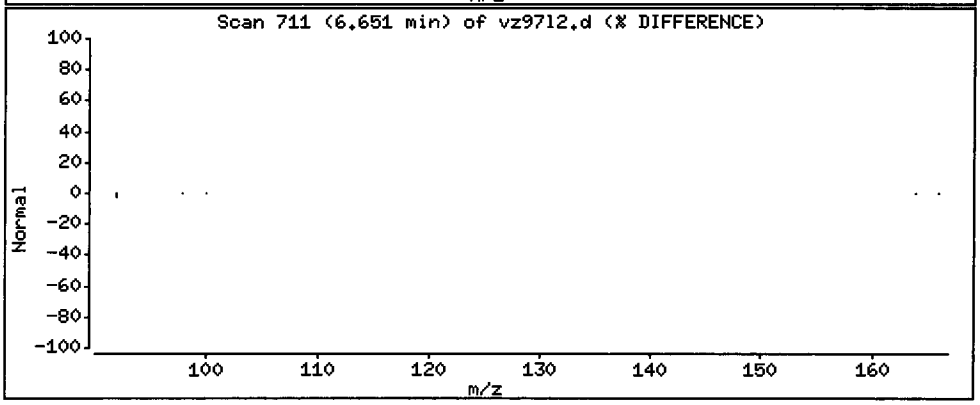












Data File: /chem1/nt9.i/21JAN13.b/vz9712.d

Date : 21-JAN-2013 12:28

Client ID: CSIA20130110-012B

Instrument: nt9.i

Sample Info: VZ97L,10,22.228,1,

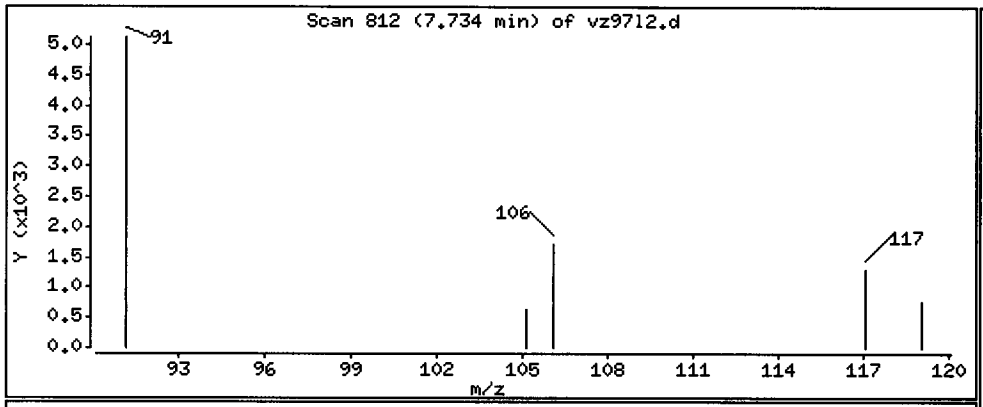
Operator: PC

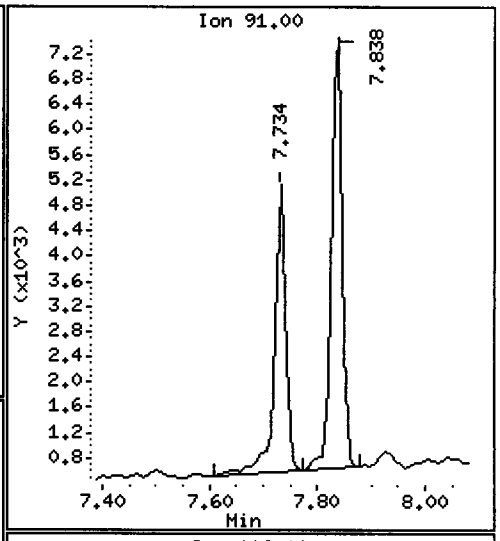
Column phase: RTXVMS

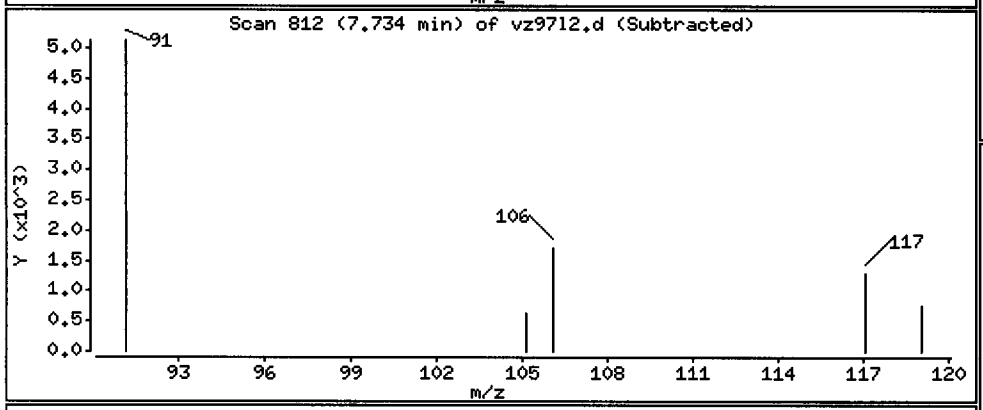
Column diameter: 0.18

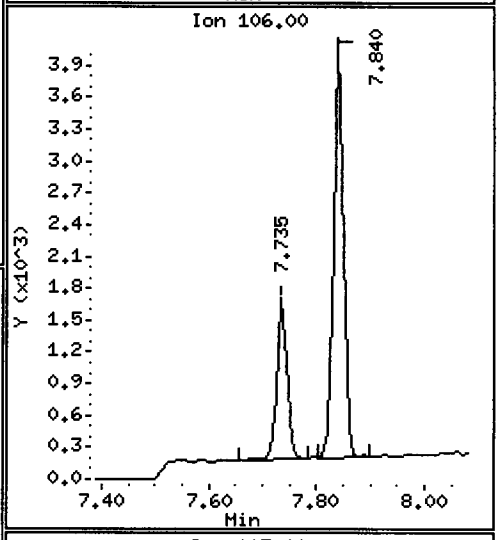
16 Ethyl Benzene

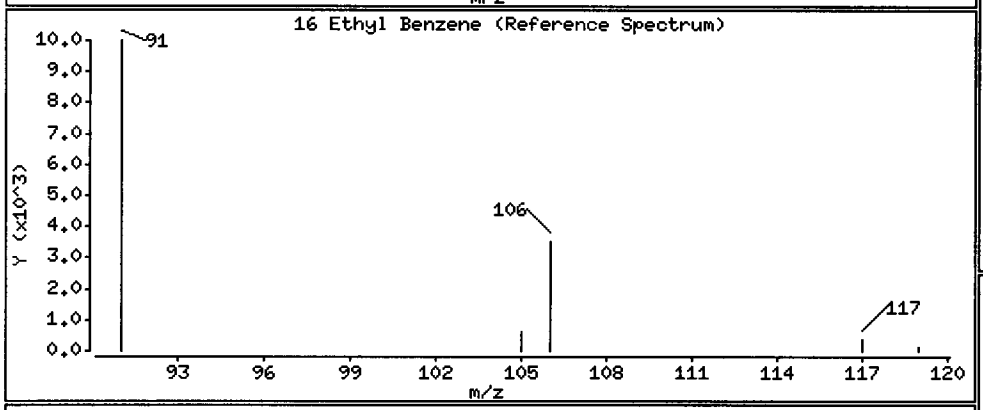
Concentration: 3.148 ug/Kg

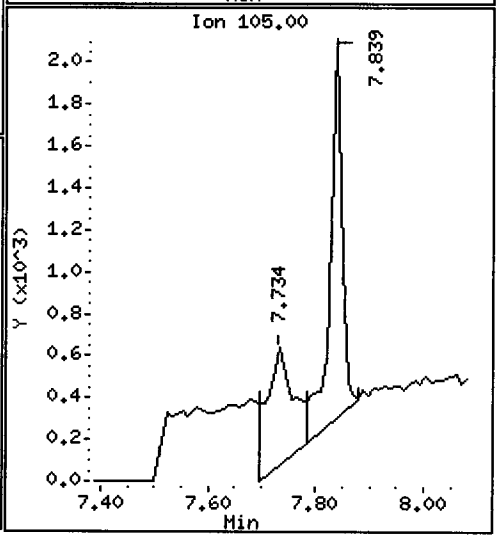


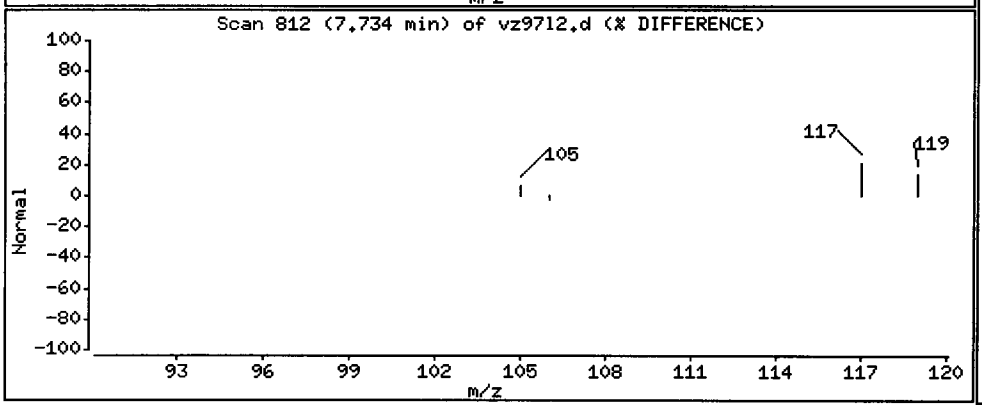












Data File: /chem1/nt9.i/21JAN13.b/vz9712.d

Date : 21-JAN-2013 12:28

Client ID: CSIA20130110-012B

Instrument: nt9.i

Sample Info: VZ97L,10,22.228,1,

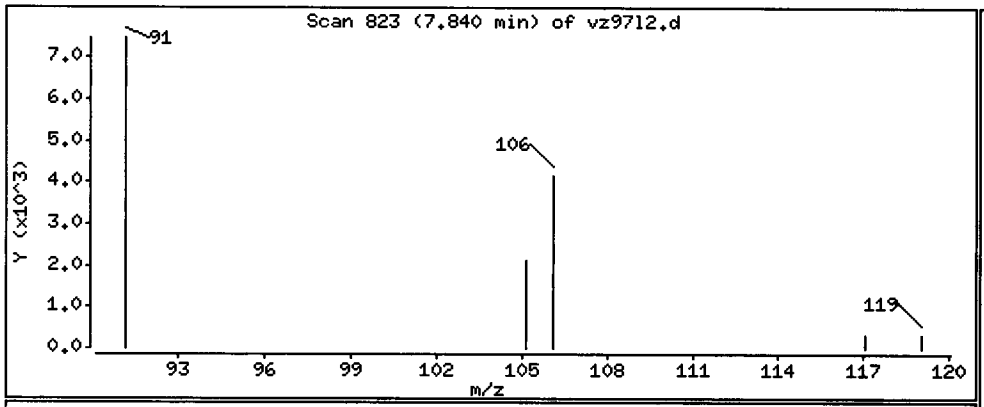
Operator: PC

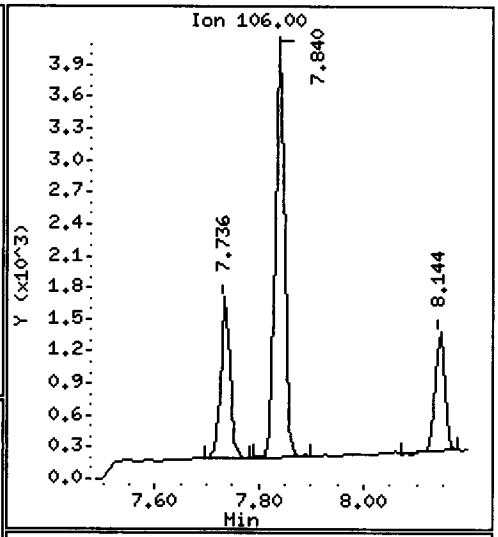
Column phase: RTXVMS

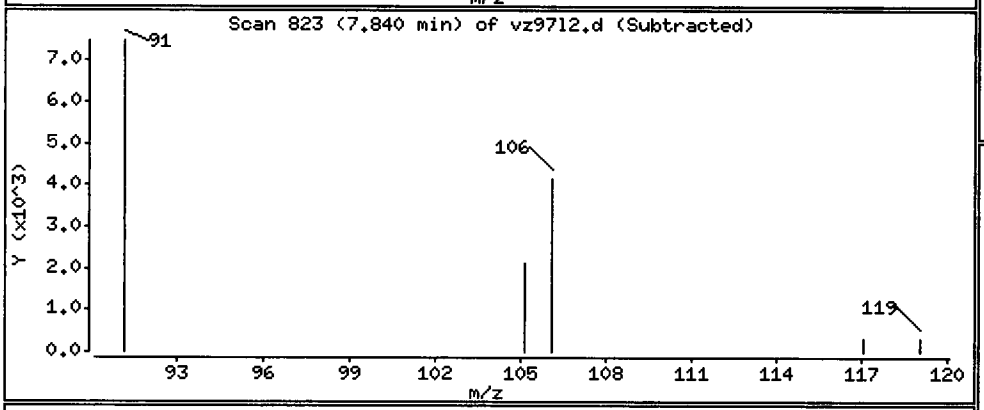
Column diameter: 0.18

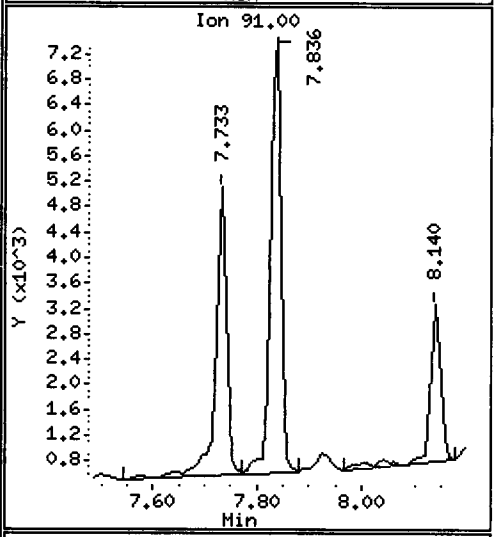
17 m,p xylene

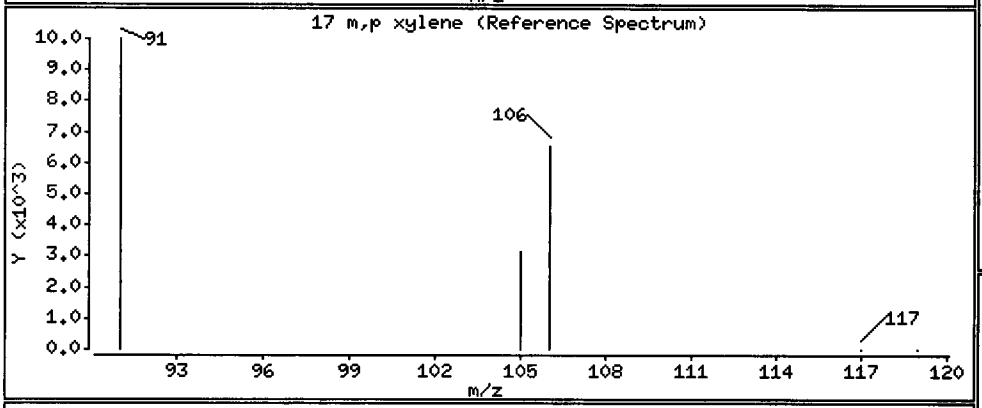
Concentration: 6.157 ug/Kg

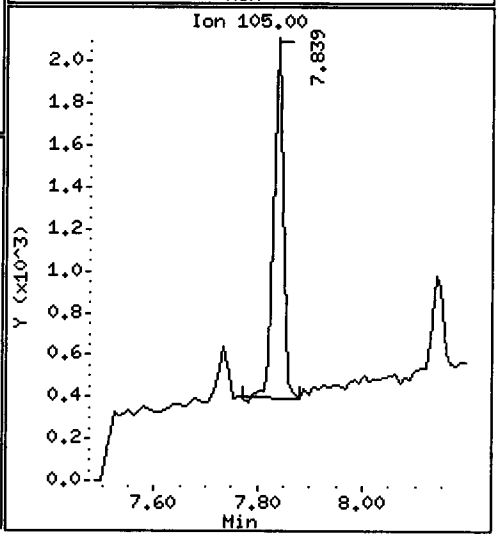


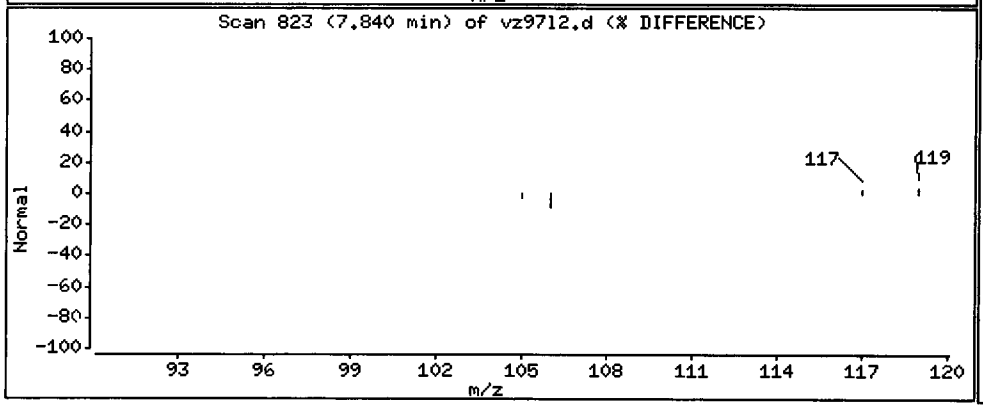












Data File: /chem1/nt9.i/21JAN13.b/vz9712.d

Date : 21-JAN-2013 12:28

Client ID: CSIA20130110-012B

Instrument: nt9.i

Sample Info: VZ97L,10,22.228,1,

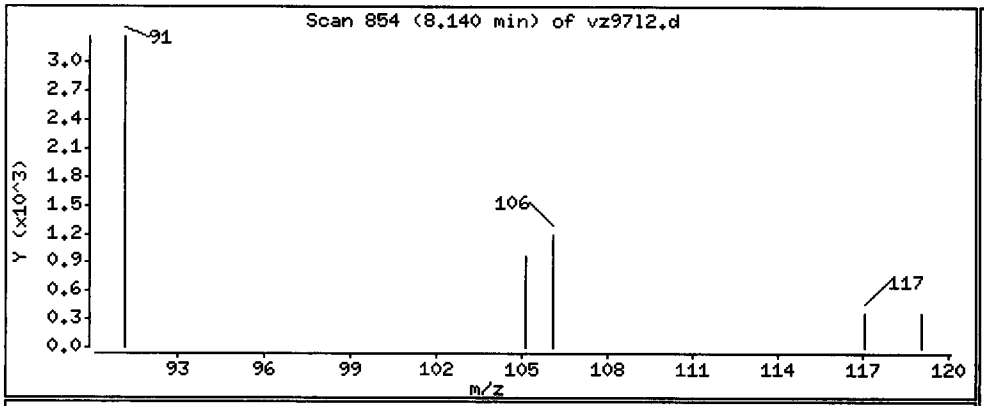
Operator: PC

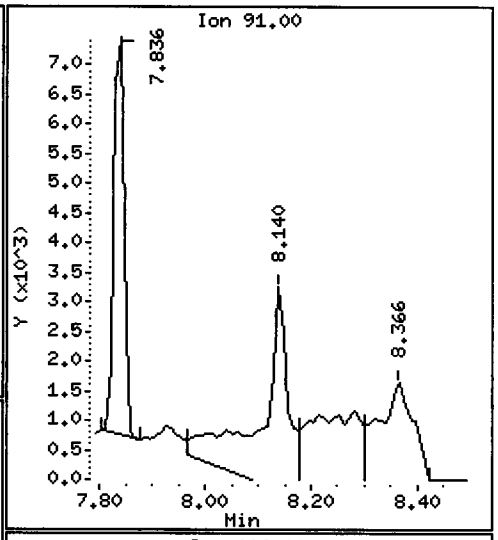
Column phase: RTXVMS

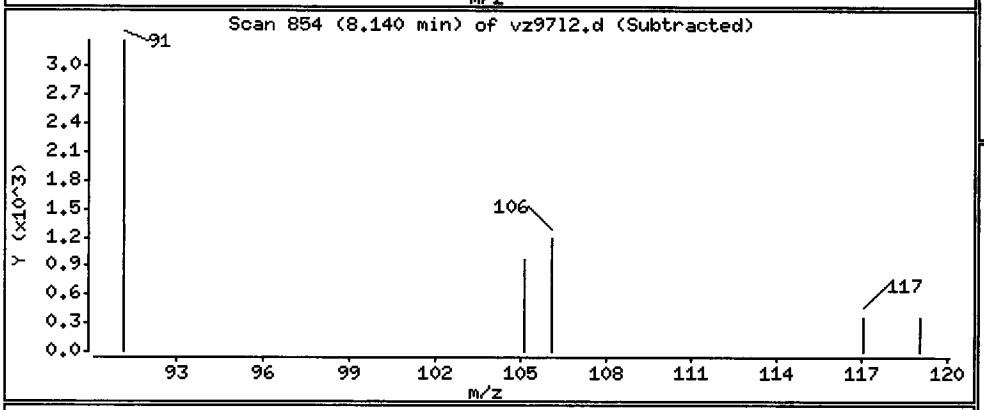
Column diameter: 0.18

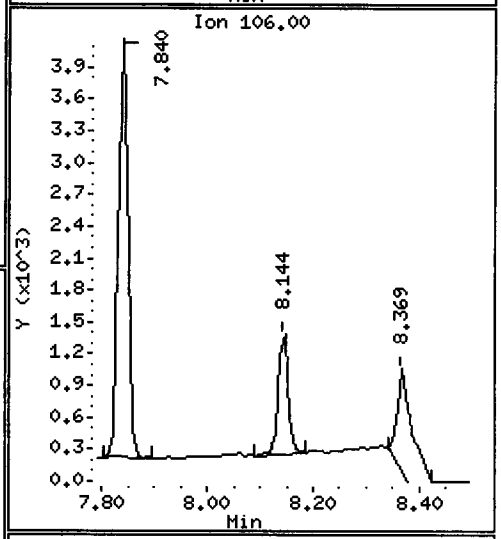
18 o-xylene

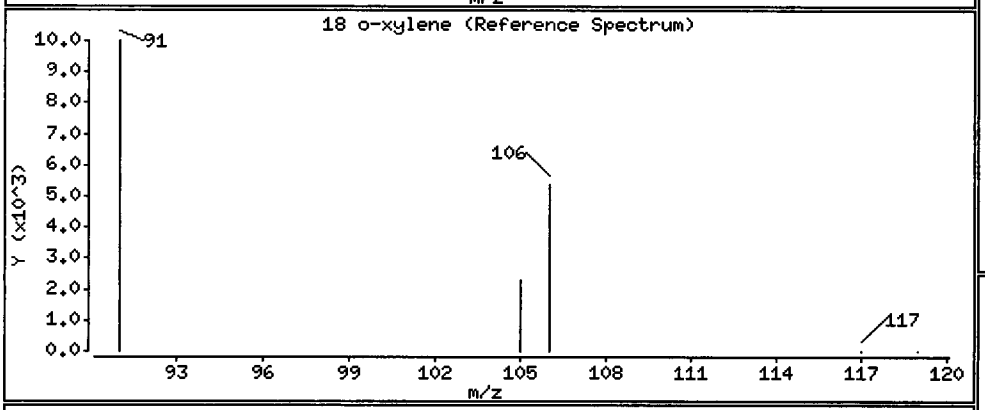
Concentration: 8.354 ug/Kg

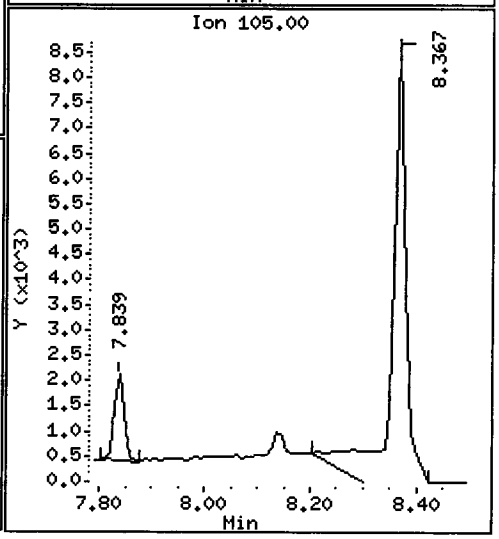


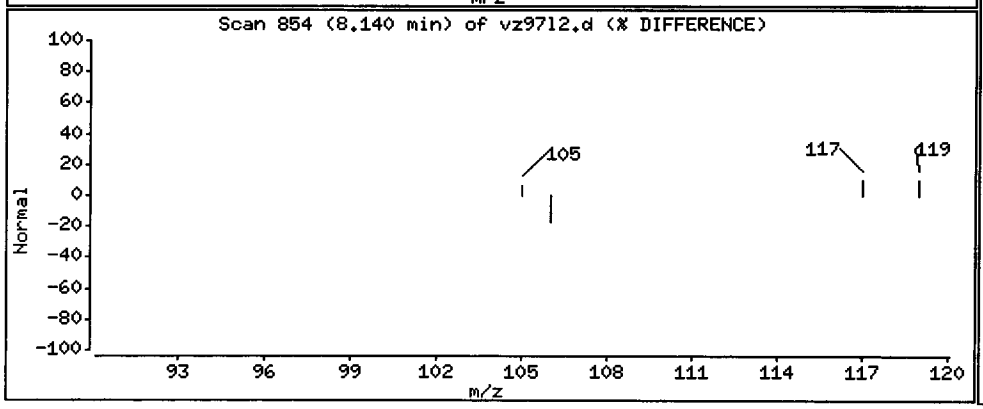












CO-ELUTION SUMMARY FOR FILE - vz97l2.d

Lab ID: VZ97L, Method: sim011713.m, Instrument: nt9.i, Date: 21-JAN-2013

RT	CO-ELUTION COMPOUNDS

PC 1/24/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/21JAN13.b/vz97m2.d
Lab Smp Id: VZ97M Client Smp ID: CSIA20130110-013S+3
Inj Date : 21-JAN-2013 12:51
Operator : PC Inst ID: nt9.i
Smp Info : VZ97M,10,13.763,1,
Misc Info : 13-1094
Comment :
Method : /chem1/nt9.i/21JAN13.b/sim011713.m
Meth Date : 21-Jan-2013 16:17 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: btex.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	100.00000	Sample Amount (mg)
M	19.50000	Moisture (%)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	CONCENTRATIONS FINAL (ug/Kg)
	6 Benzene	78	5.173	5.173	(0.917)	24125	98.6190	12.251
*	7 Pentafluorobenzene	168	5.267	5.267	(1.000)	108126	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.286	5.287	(1.004)	49375	988.628	122.81
*	11 1,4-Difluorobenzene	114	5.643	5.642	(1.000)	201758	1000.00	
$	12 d8-Toluene	98	6.618	6.619	(1.173)	209063	992.139	123.25
	13 Toluene	91	6.651	6.651	(0.863)	15238	59.9063	7.442
*	15 d5 -Chlorobenzene	117	7.706	7.707	(1.000)	210972	1000.00	
	16 Ethyl Benzene	91	7.734	7.734	(1.004)	7044	28.2137	3.505
	17 m,p xylene	106	7.841	7.841	(1.017)	4783	50.9696	6.332
	18 o-xylene	91	8.140	8.141	(1.056)	7798	44.1216	5.481(Q)
$	19 4-Bromofluorobenzene	174	8.575	8.575	(1.113)	79217	1072.55	133.24(Q)

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: vz97m2.d
Lab Smp Id: VZ97M
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/21JAN13.b/sim011713.m
Misc Info: 13-1094

Calibration Date: 21-JAN-2013
Calibration Time: 10:18
Client Smp ID: CSIA20130110-013S+3
Level: MED
Sample Type: Soil

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	108126	-5.66
11 1,4-Difluorobenze	202370	101185	404740	201758	-0.30
15 d5 -Chlorobenzene	226394	113197	452788	210972	-6.81

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	-0.02
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	0.02
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	-0.01

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA
Client SDG: VZ97
Sample Matrix: SOLID
Fraction: VOA
Lab Smp Id: VZ97M
Client Smp ID: CSIA20130110-013S+3
Level: MED
Operator: PC
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: special.spk
Quant Type: ISTD
Sublist File: btex.sub
Method File: /chem1/nt9.i/21JAN13.b/sim011713.m
Misc Info: 13-1094

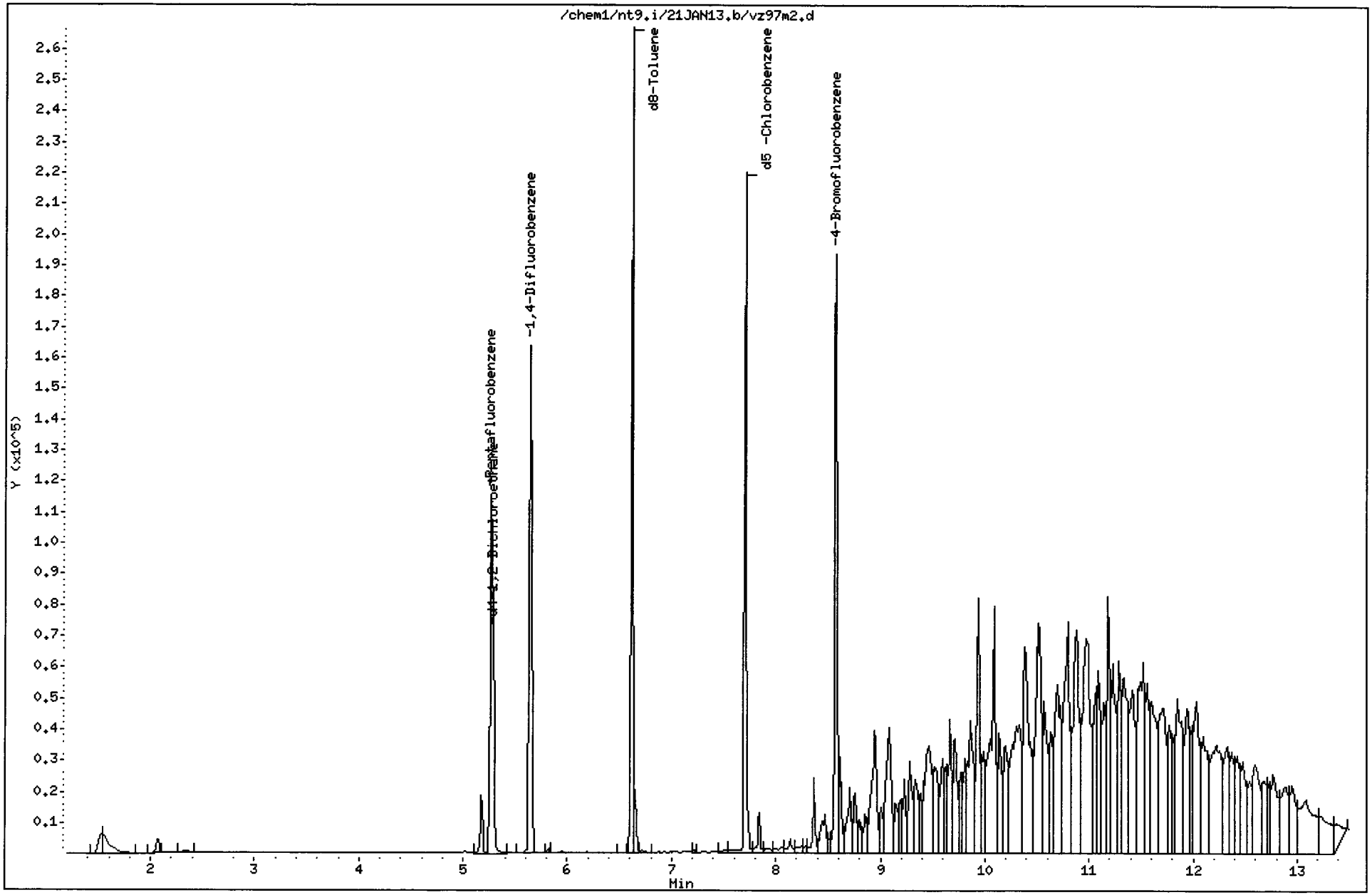
SURROGATE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 8 d4-1,2-Dichloroeth	124.22	122.81	98.86	75-125
$ 12 d8-Toluene	124.22	123.25	99.21	75-125
$ 19 4-Bromofluorobenze	124.22	133.24	107.26	75-125

Data File: /chem1/nt9.i/21JAN13.b/vz97m2.d
Date : 21-JAN-2013 12:51
Client ID: CSIA20130110-013S+3
Sample Info: VZ97M,10,13.763,1,

Instrument: nt9.i

Operator: PC
Column diameter: 0.18

Column phase: RTXVMS



CSIA 00925

Data File: /chem1/nt9.i/21JAN13.b/vz97m2.d

Date : 21-JAN-2013 12:51

Client ID: CSIA20130110-013S+3

Instrument: nt9.i

Sample Info: VZ97M,10,13.763,1,

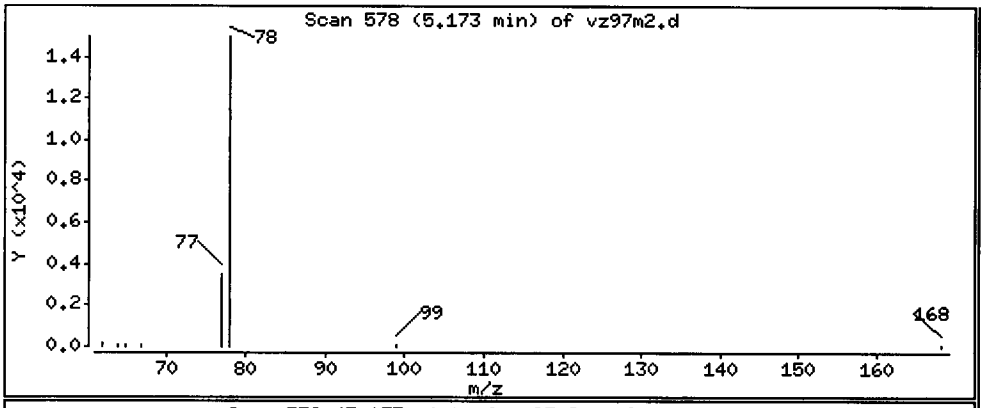
Operator: PC

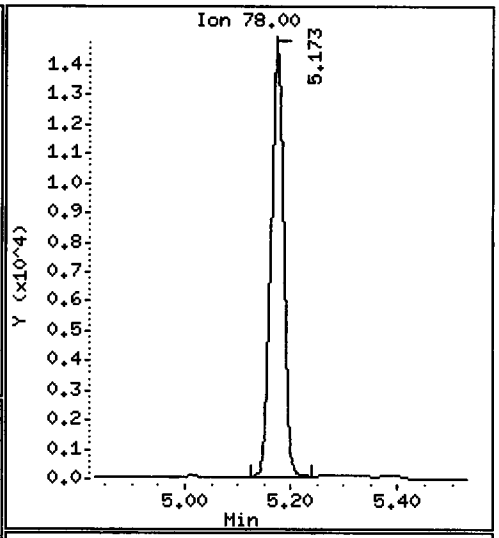
Column phase: RTXVMS

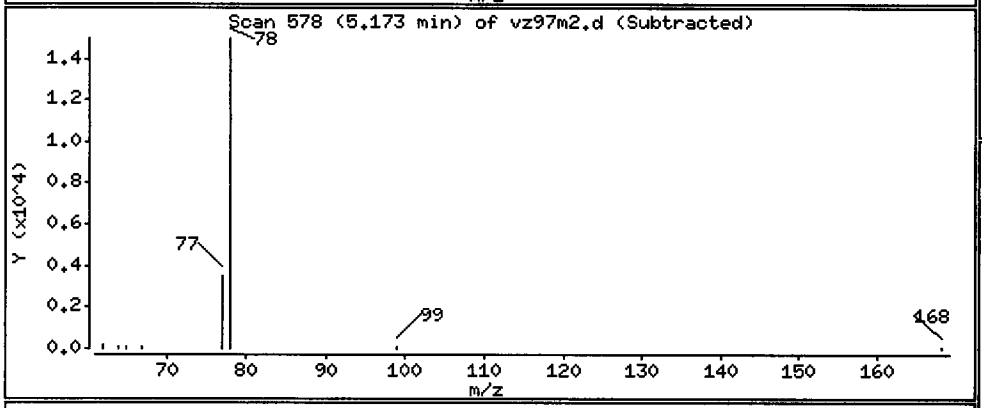
Column diameter: 0.18

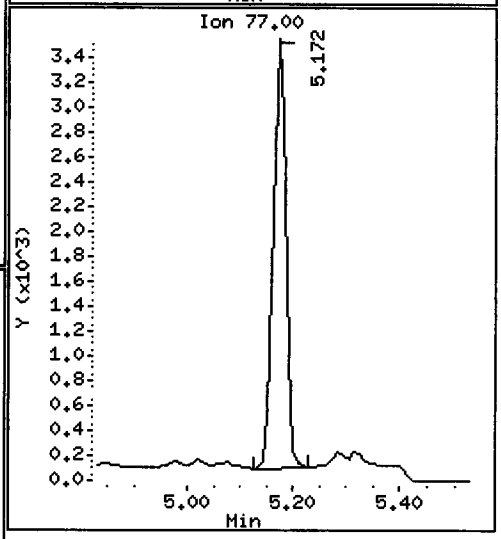
6 Benzene

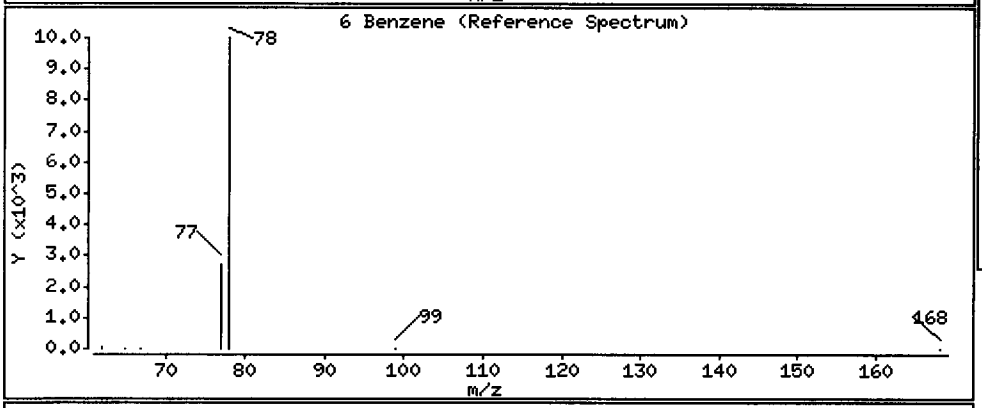
Concentration: 12.251 ug/Kg

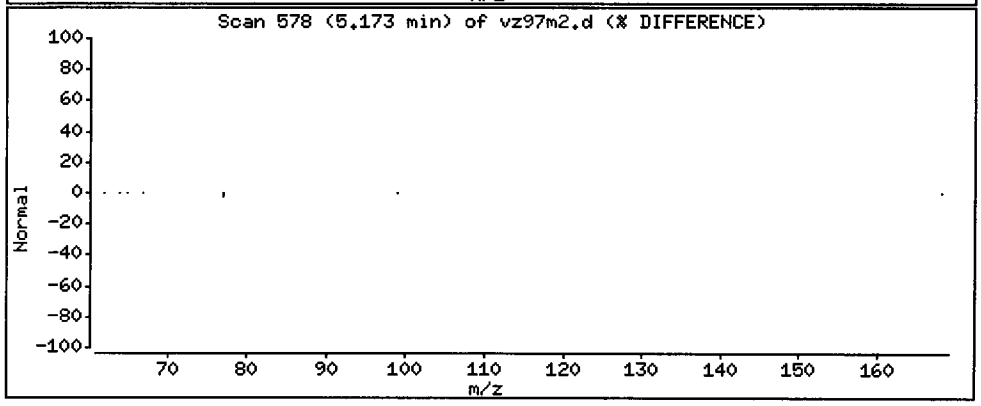












Data File: /chem1/nt9.i/21JAN13.b/vz97m2.d

Date : 21-JAN-2013 12:51

Client ID: CSIA20130110-013S+3

Instrument: nt9.i

Sample Info: VZ97M,10,13.763,1,

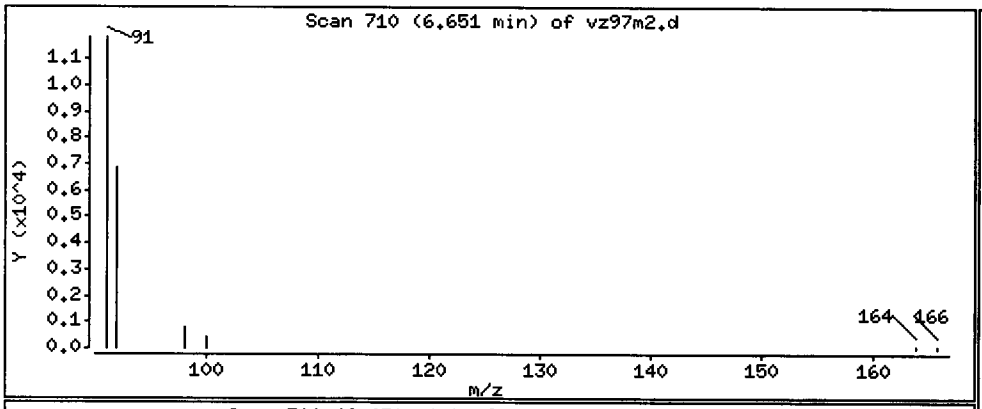
Operator: PC

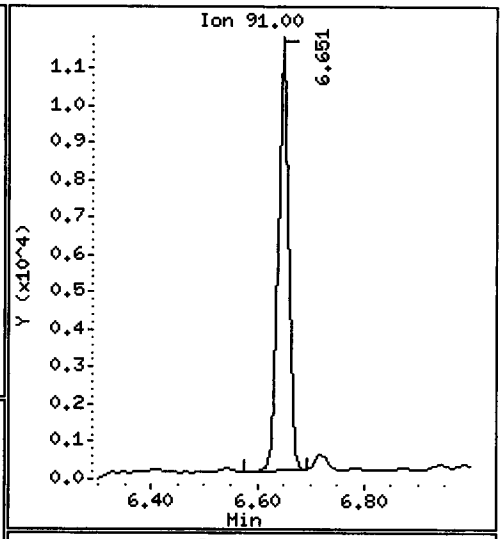
Column phase: RTXVMS

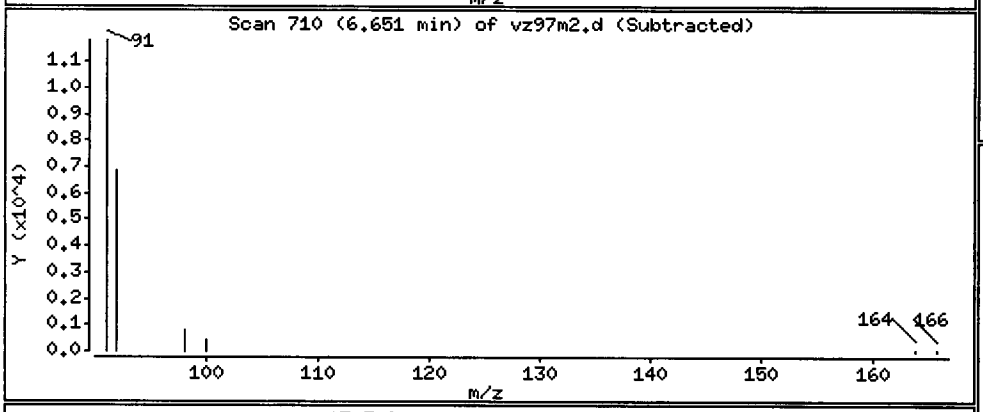
Column diameter: 0.18

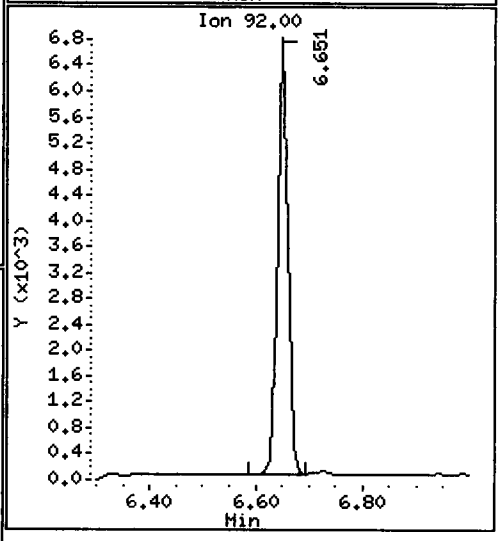
13 Toluene

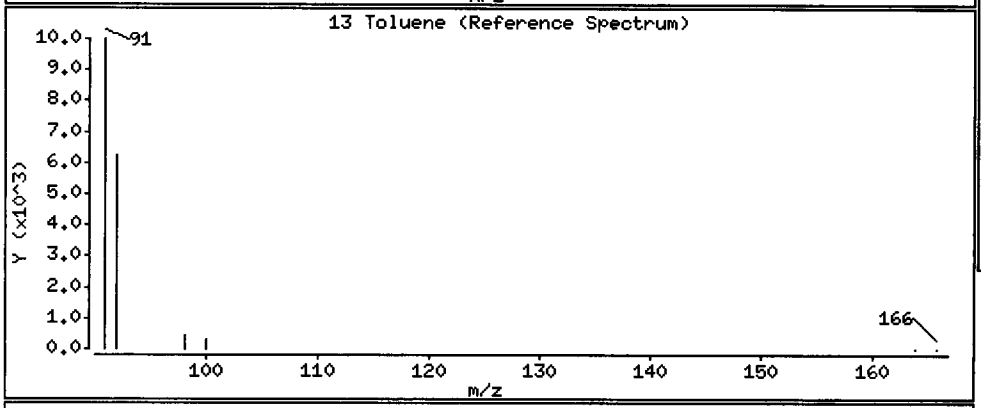
Concentration: 7.442 ug/Kg

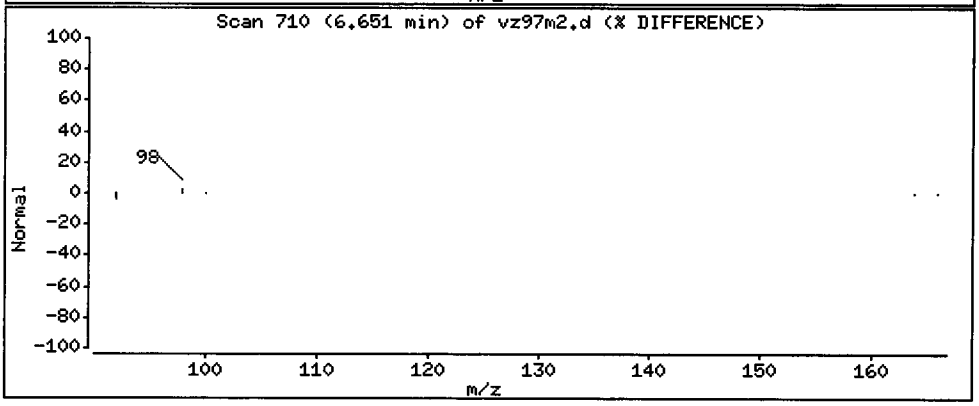












Data File: /chem1/nt9.i/21JAN13.b/vz97m2.d

Date : 21-JAN-2013 12:51

Client ID: CSIA20130110-013S+3

Instrument: nt9.i

Sample Info: VZ97M,10,13.763,1,

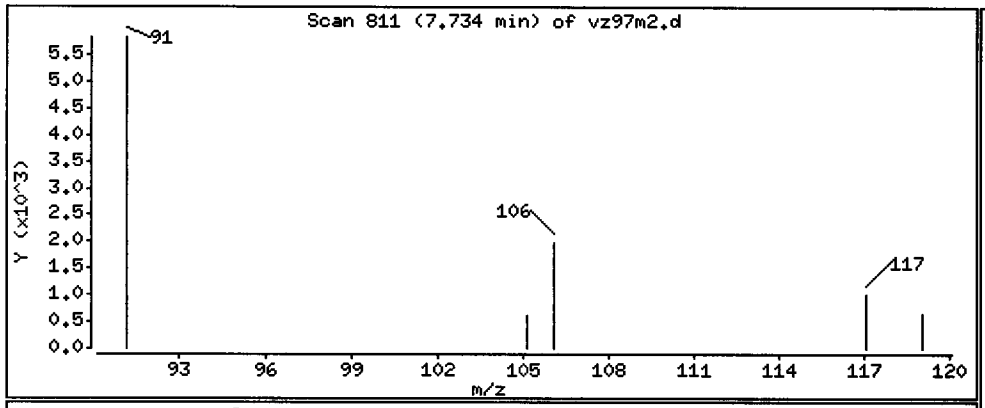
Operator: PC

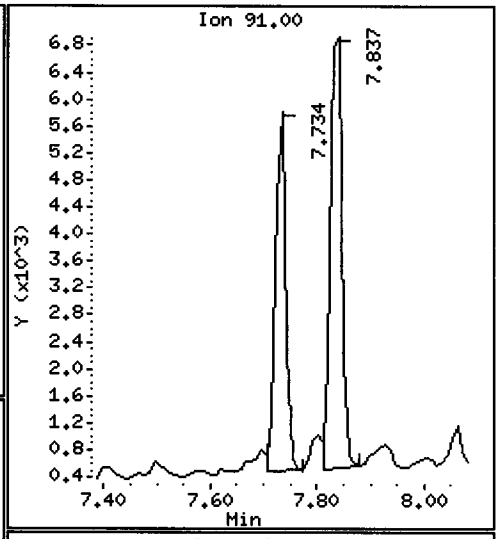
Column phase: RTXVMS

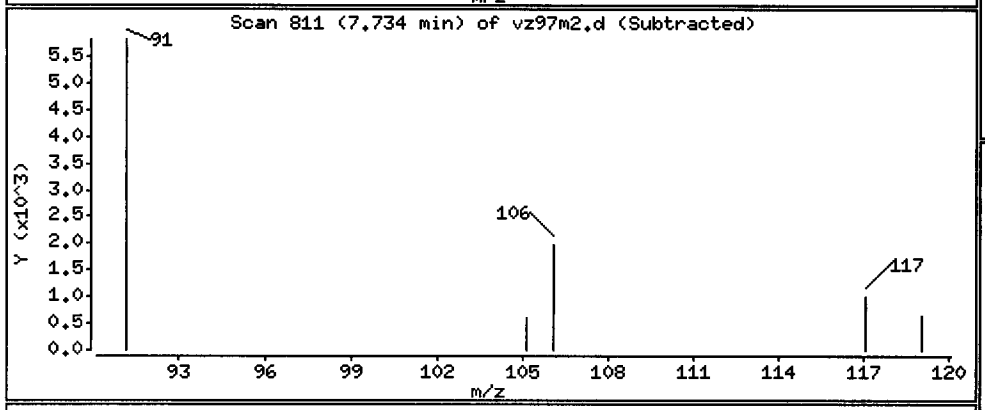
Column diameter: 0.18

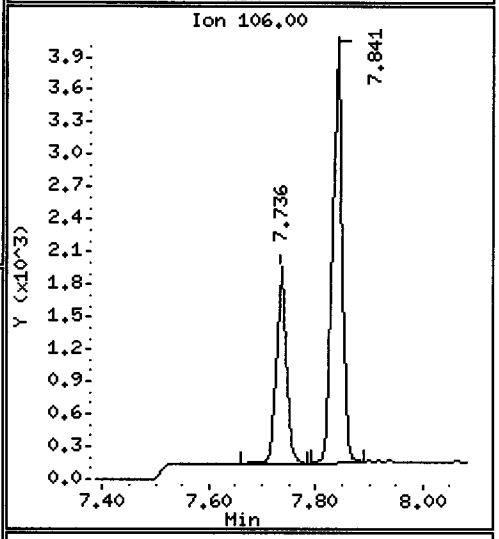
16 Ethyl Benzene

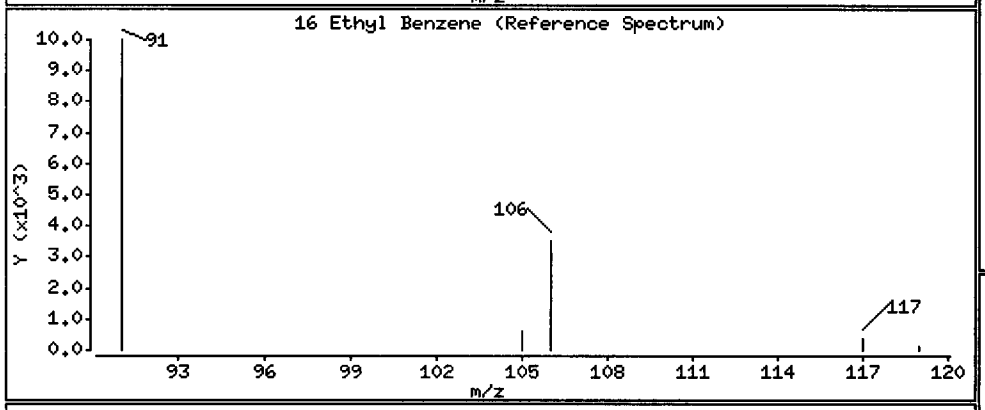
Concentration: 3.505 ug/Kg

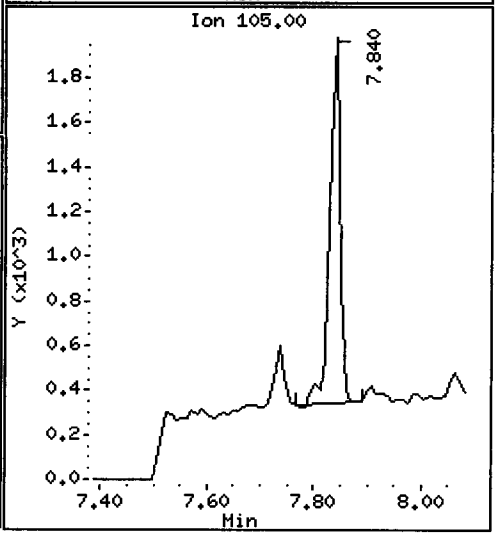


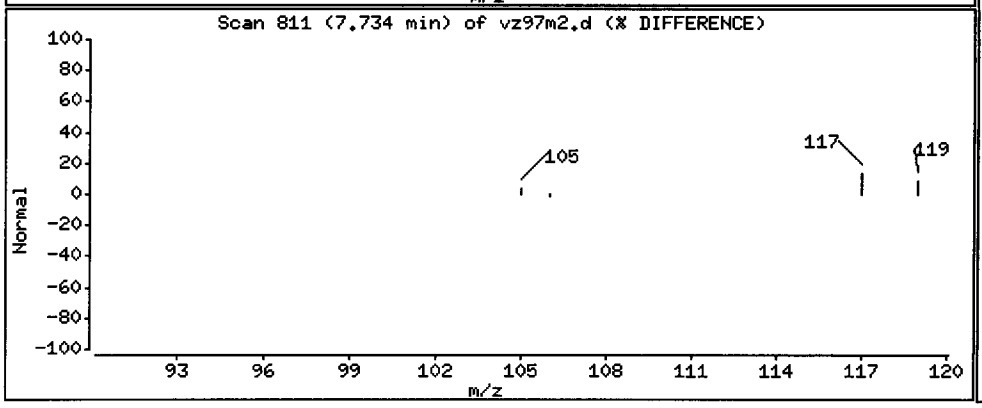












Data File: /chem1/nt9.i/21JAN13.b/vz97m2.d

Date : 21-JAN-2013 12:51

Client ID: CSIA20130110-013S+3

Instrument: nt9.i

Sample Info: VZ97M,10,13.763,1,

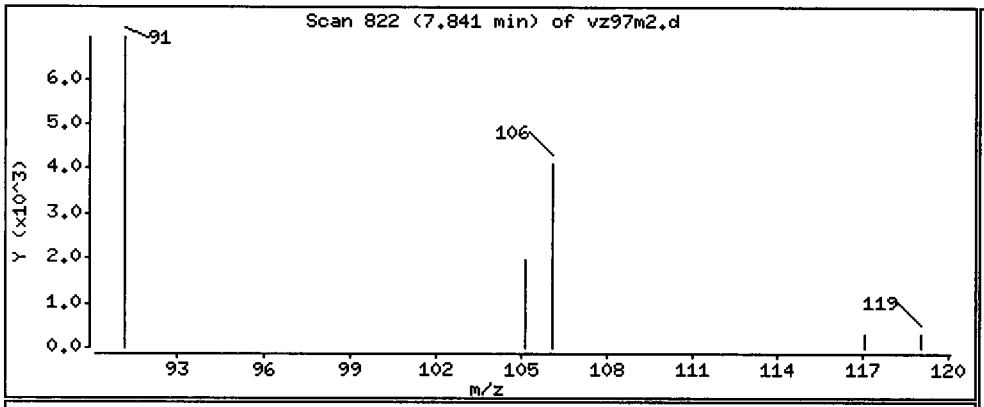
Operator: PC

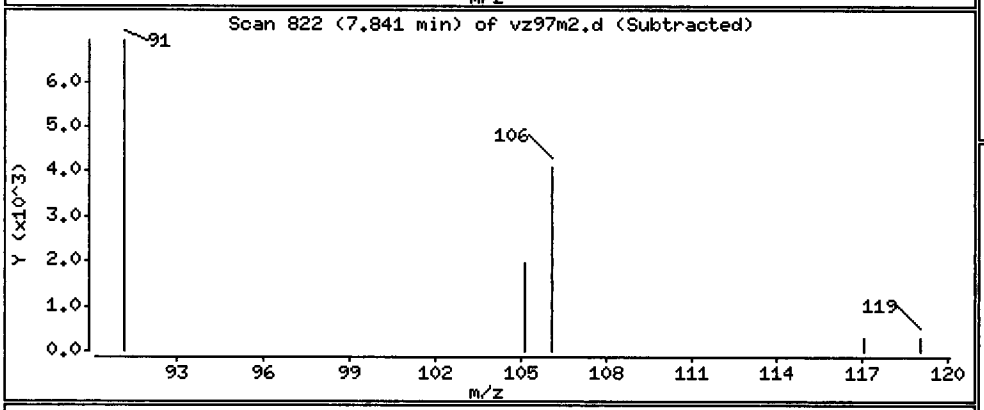
Column phase: RTXVMS

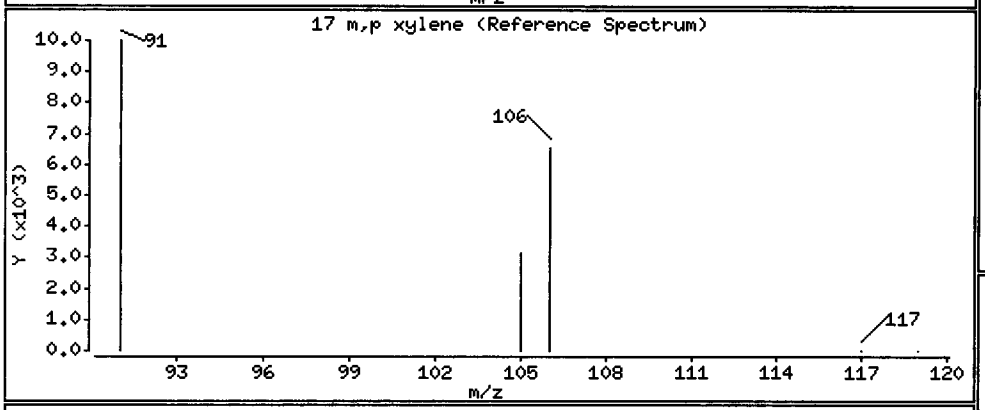
Column diameter: 0.18

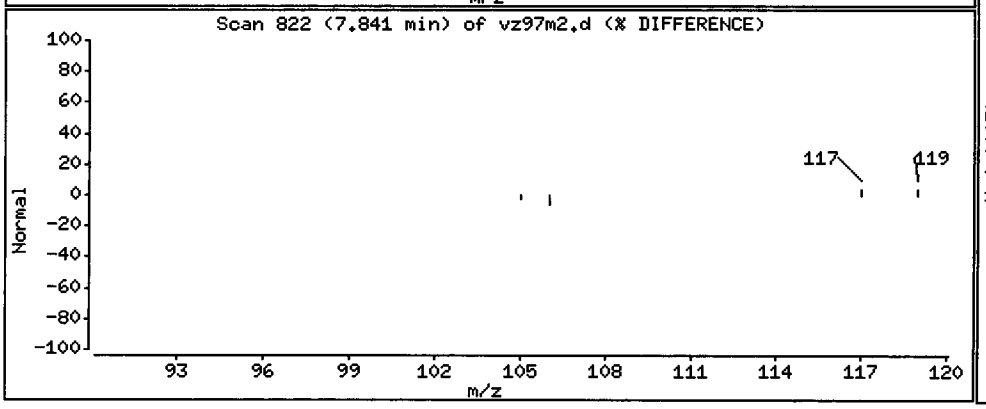
17 m,p xylene

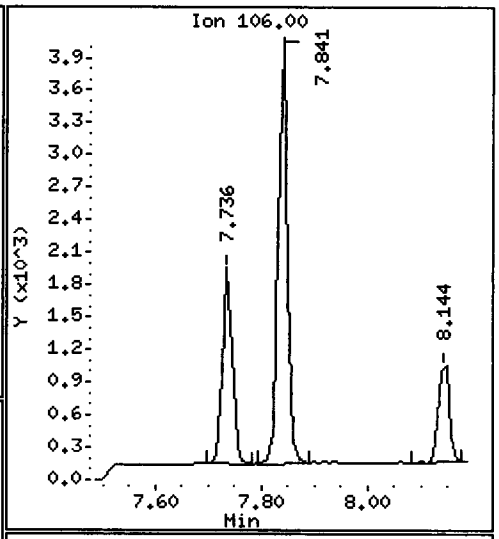
Concentration: 6.332 ug/Kg

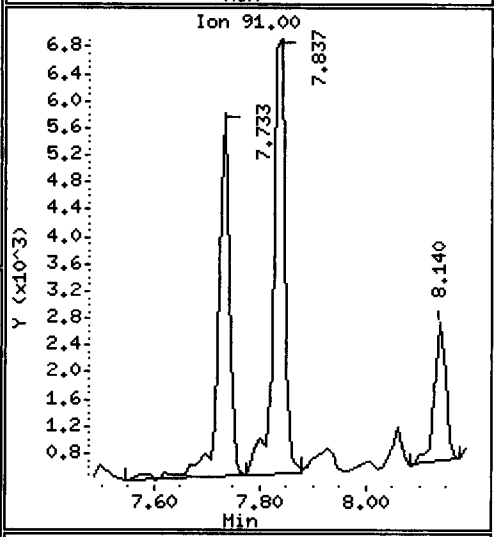


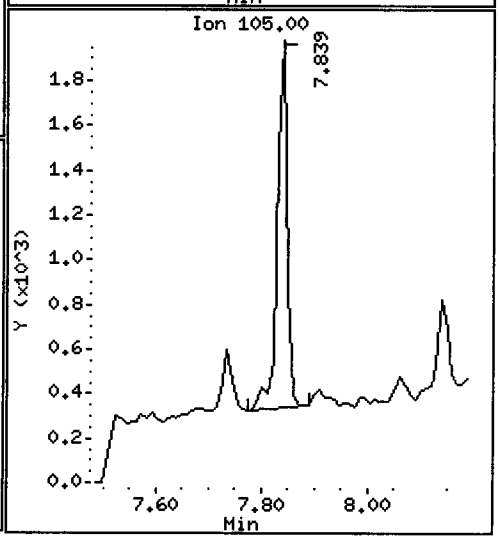












Data File: /chem1/nt9.i/21JAN13.b/vz97m2.d

Date : 21-JAN-2013 12:51

Client ID: CSIA20130110-013S+3

Instrument: nt9.i

Sample Info: VZ97M,10,13.763,1,

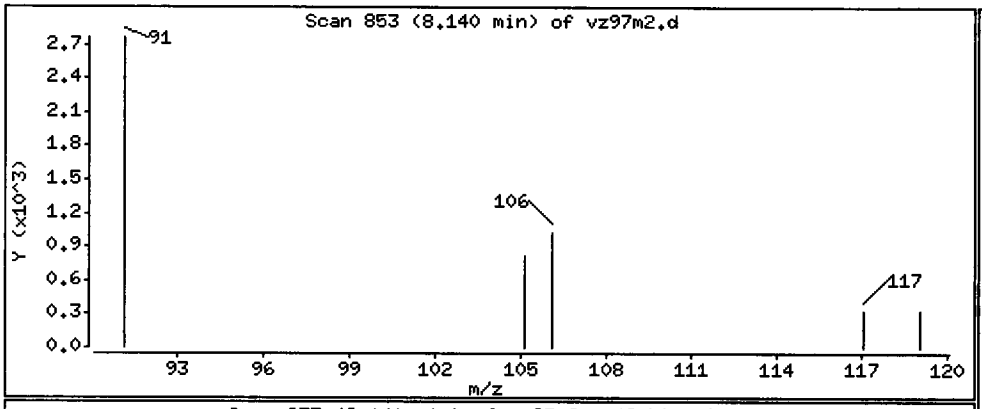
Operator: PC

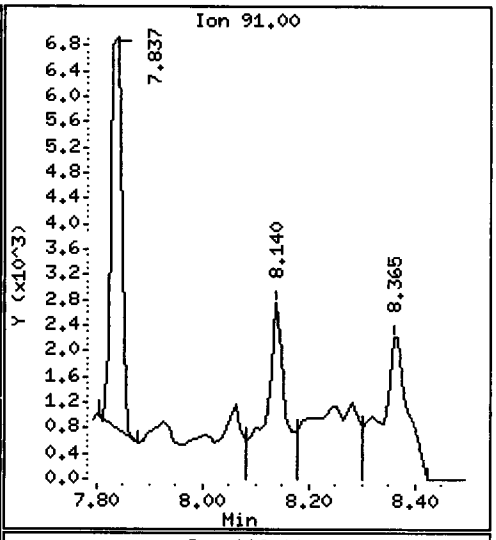
Column phase: RTXVMS

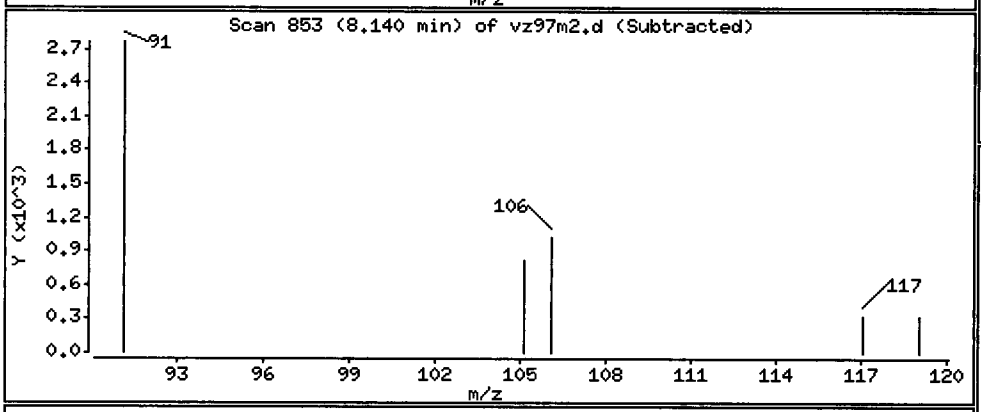
Column diameter: 0.18

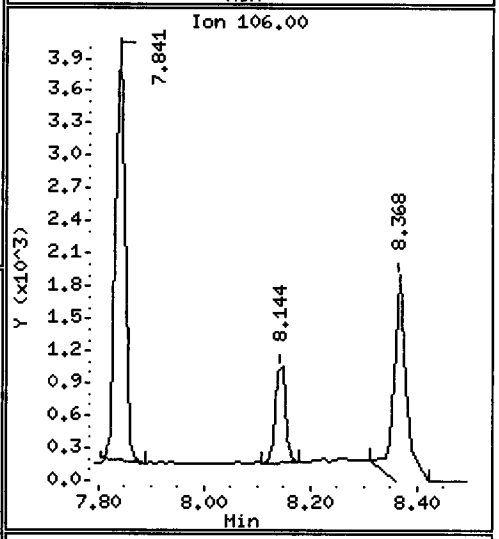
18 o-xylene

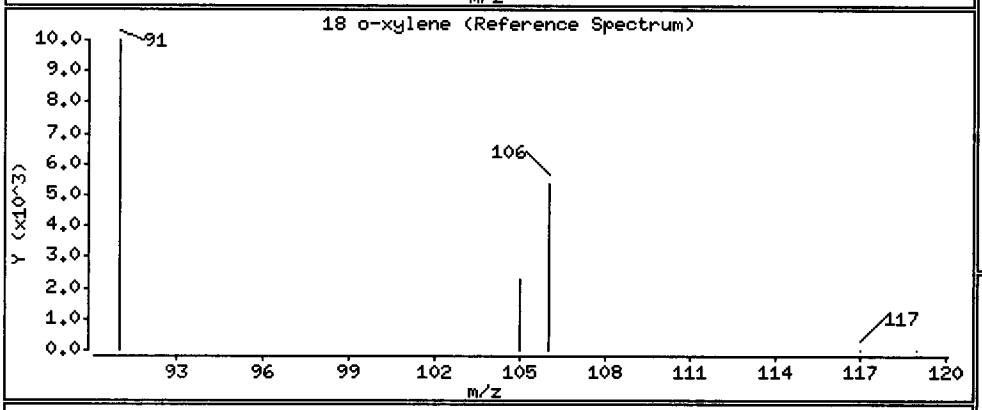
Concentration: 5.481 ug/Kg

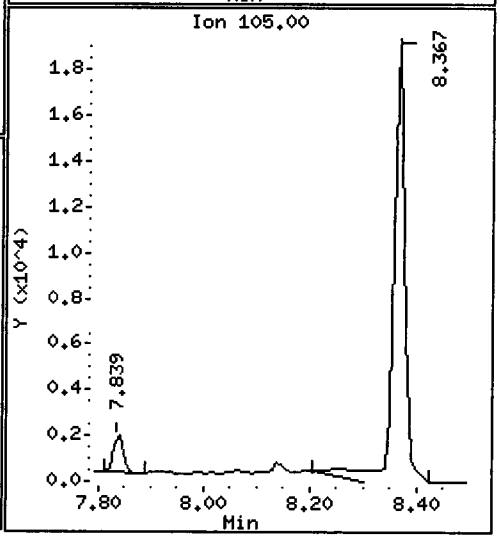


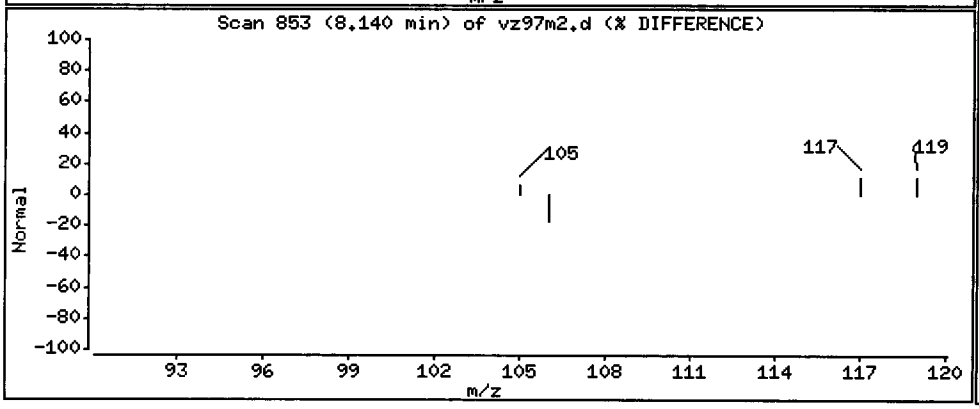












CO-ELUTION SUMMARY FOR FILE - vz97m2.d

Lab ID: VZ97M, Method: sim011713.m, Instrument: nt9.i, Date: 21-JAN-2013

RT	CO-ELUTION COMPOUNDS

PC 1/21/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/21JAN13.b/vz97p2.d
Lab Smp Id: VZ97P Client Smp ID: CSIA20130111-016B
Inj Date : 21-JAN-2013 13:15
Operator : PC Inst ID: nt9.i
Smp Info : VZ97P,10,17.266,1,
Misc Info : 13-1097
Comment :
Method : /chem1/nt9.i/21JAN13.b/sim011713.m
Meth Date : 21-Jan-2013 16:17 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: btex.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	100.00000	Sample Amount (mg)
M	12.40000	Moisture (%)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	CONCENTRATIONS FINAL (ug/Kg)
	6 Benzene	78	5.174	5.173	(0.917)	17304	59.8079	6.827
*	7 Pentafluorobenzene	168	5.268	5.267	(1.000)	124334	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.287	5.287	(1.004)	55059	958.726	109.44
*	11 1,4-Difluorobenzene	114	5.642	5.642	(1.000)	238623	1000.00	
$	12 d8-Toluene	98	6.619	6.619	(1.173)	260727	1046.16	119.43
	13 Toluene	91	6.651	6.651	(0.863)	21743	72.4796	8.274
*	15 d5 -Chlorobenzene	117	7.706	7.707	(1.000)	248813	1000.00	
	16 Ethyl Benzene	91	7.734	7.734	(1.004)	13973	47.4551	5.417
	17 m,p xylene	106	7.841	7.841	(1.017)	5090	45.9918	5.250(Q)
	18 o-xylene	91	8.139	8.141	(1.056)	15841	75.9981	8.676(Q)
$	19 4-Bromofluorobenzene	174	8.575	8.575	(1.113)	92622	1063.32	121.38(Q)

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: vz97p2.d
Lab Smp Id: VZ97P
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/21JAN13.b/sim011713.m
Misc Info: 13-1097

Calibration Date: 21-JAN-2013
Calibration Time: 10:18
Client Smp ID: CSIA20130111-016B
Level: MED
Sample Type: Soil

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	124334	8.48
11 1,4-Difluorobenze	202370	101185	404740	238623	17.91
15 d5 -Chlorobenzene	226394	113197	452788	248813	9.90

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	0.01
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	0.00
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	0.00

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA
Sample Matrix: SOLID
Lab Smp Id: VZ97P
Level: MED
Data Type: MS DATA
SpikeList File: special.spk
Sublist File: btex.sub
Method File: /chem1/nt9.i/21JAN13.b/sim011713.m
Misc Info: 13-1097

Client SDG: VZ97
Fraction: VOA
Client Smp ID: CSIA20130111-016B
Operator: PC
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 8 d4-1,2-Dichloroeth	114.16	109.44	95.87	75-125
$ 12 d8-Toluene	114.16	119.43	104.62	75-125
$ 19 4-Bromofluorobenze	114.16	121.38	106.33	75-125

Data File: /chem1/nt9.i/21JAN13.b/vz97p2.d

Date : 21-JAN-2013 13:15

Client ID: CSIA20130111-016B

Sample Info: VZ97P,10,17.266,1,

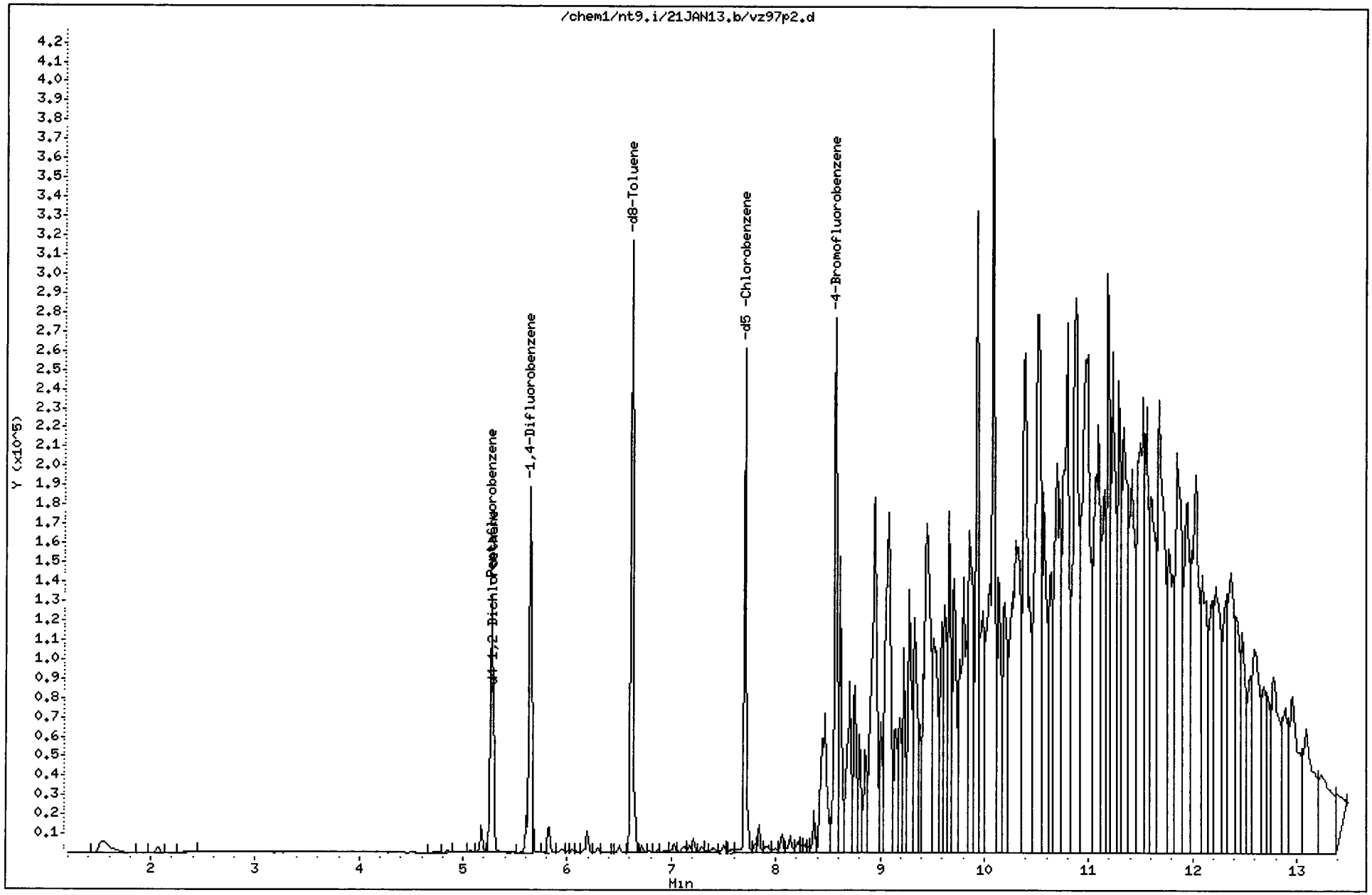
Column phase: RTXVMS

Instrument: nt9.i

Operator: PC

Column diameter: 0.18

VZ97:66995



Data File: /chem1/nt9.i/21JAN13.b/vz97p2.d

Date : 21-JAN-2013 13:15

Client ID: CSIA20130111-016B

Instrument: nt9.i

Sample Info: VZ97P,10,17.266,1,

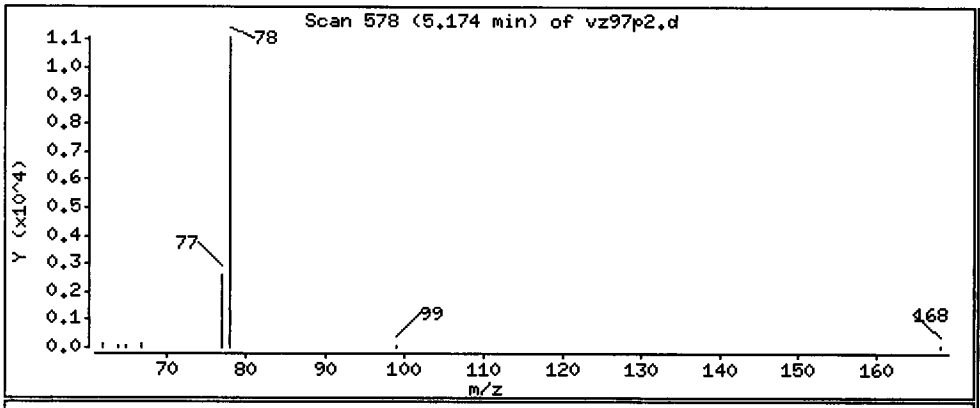
Operator: PC

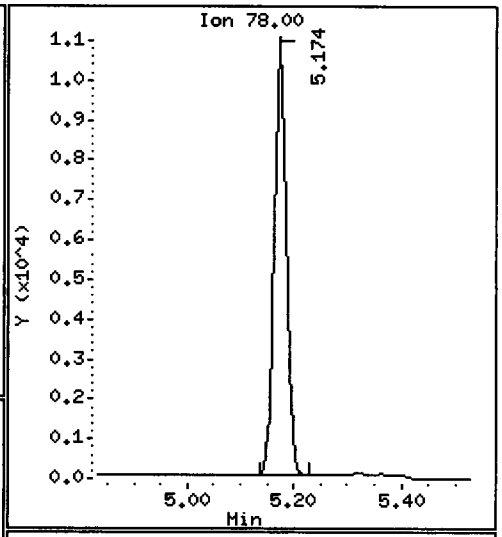
Column phase: RTXVMS

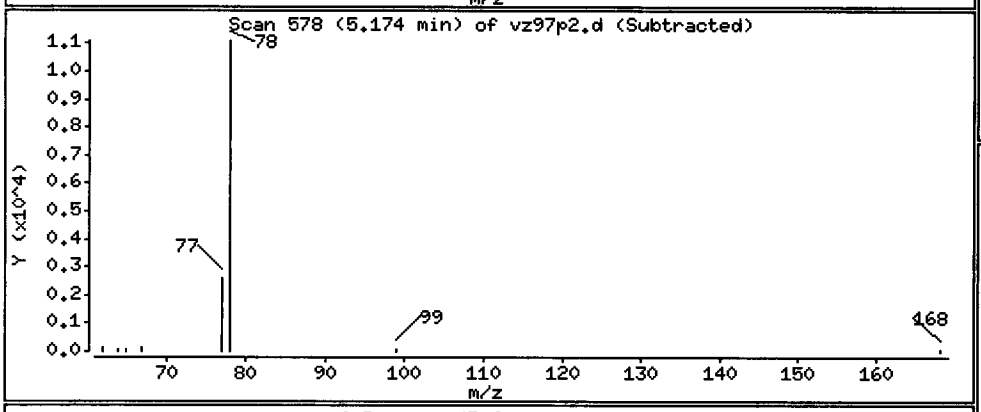
Column diameter: 0.18

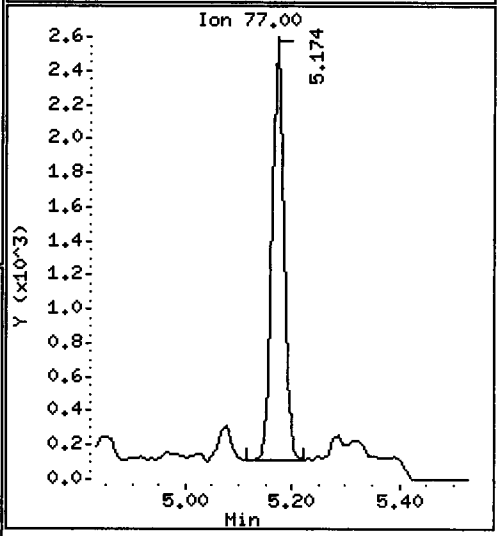
6 Benzene

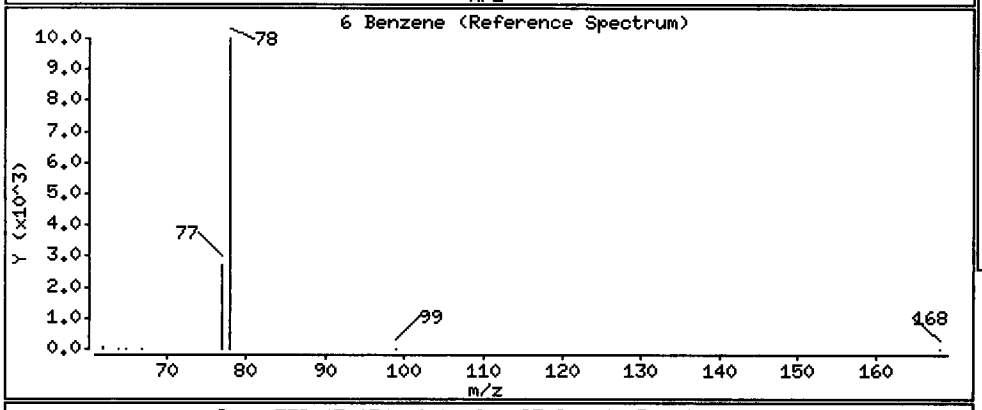
Concentration: 6.827 ug/Kg

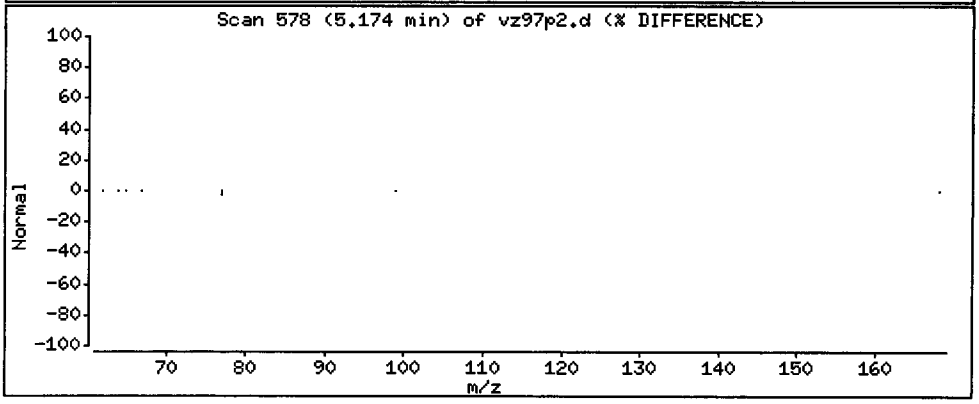












Data File: /chem1/nt9.i/21JAN13.b/vz97p2.d

Date : 21-JAN-2013 13:15

Client ID: CSIA20130111-016B

Instrument: nt9.i

Sample Info: VZ97P,10,17,266,1,

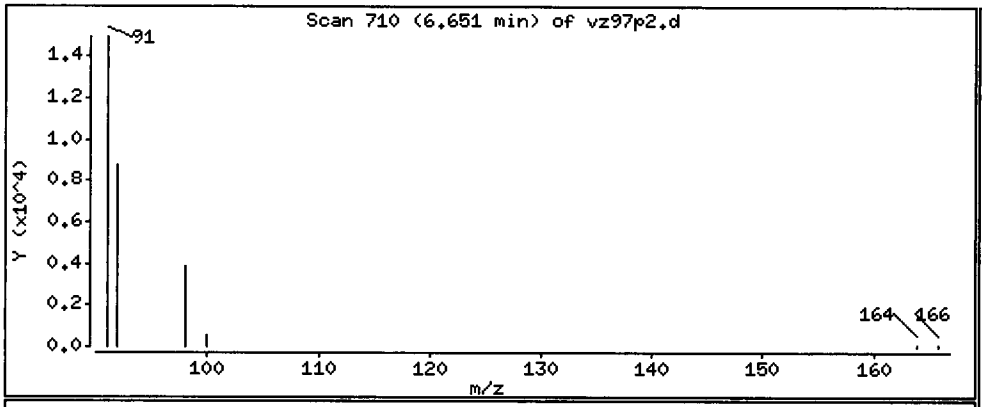
Operator: PC

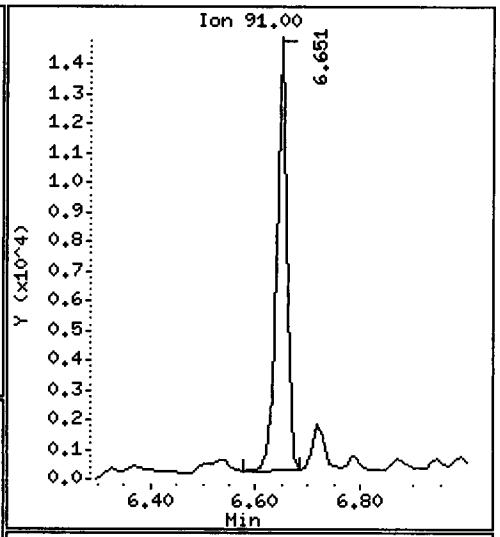
Column phase: RTXVMS

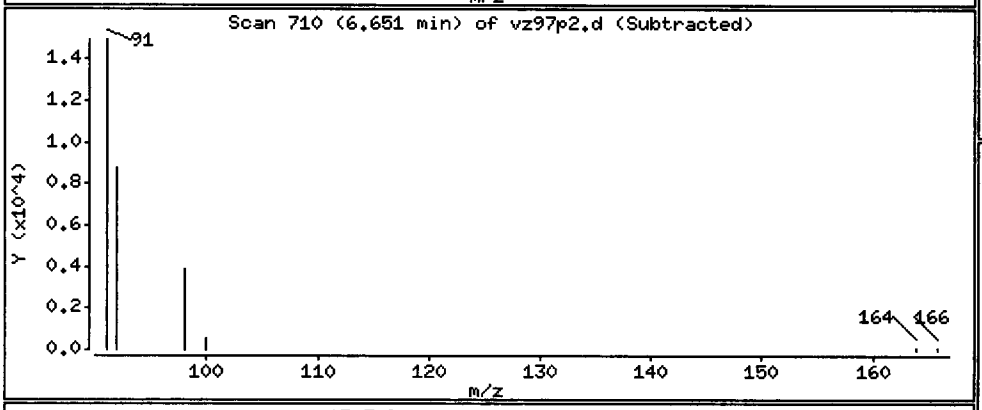
Column diameter: 0.18

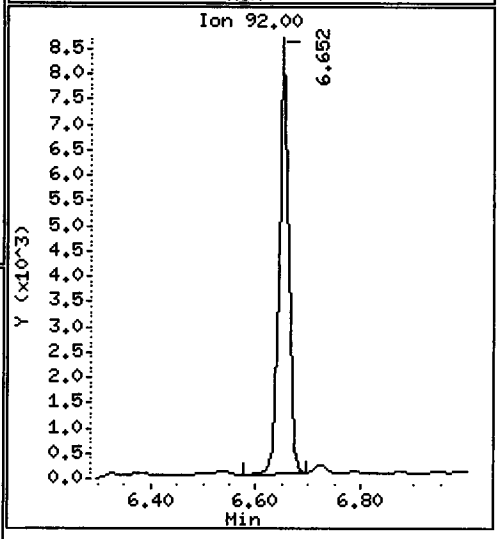
13 Toluene

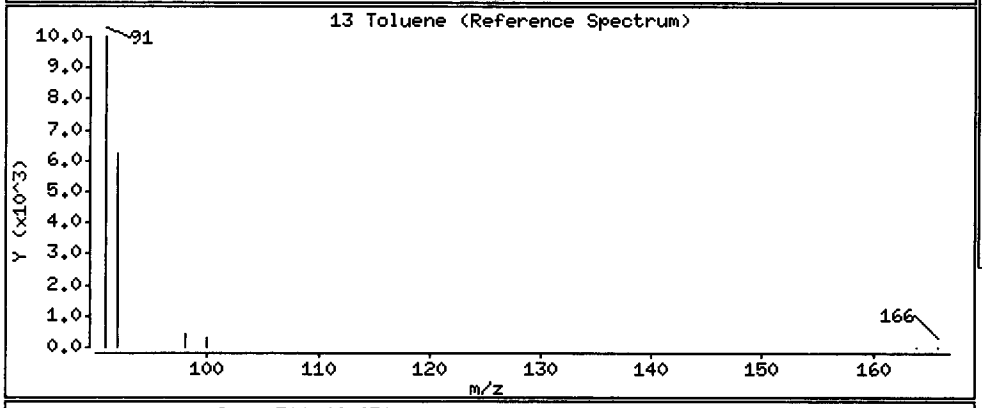
Concentration: 8.274 ug/Kg

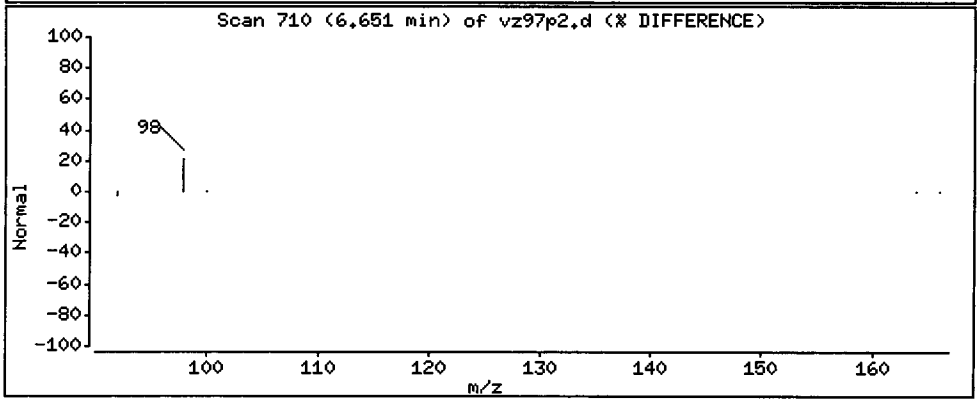












Data File: /chem1/nt9.i/21JAN13.b/vz97p2.d

Date : 21-JAN-2013 13:15

Client ID: CSIA20130111-016B

Instrument: nt9.i

Sample Info: VZ97P,10,17.266,1,

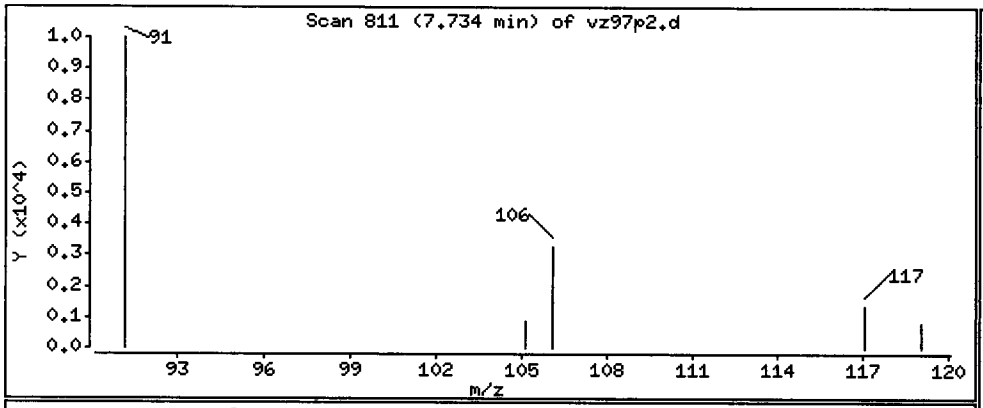
Operator: PC

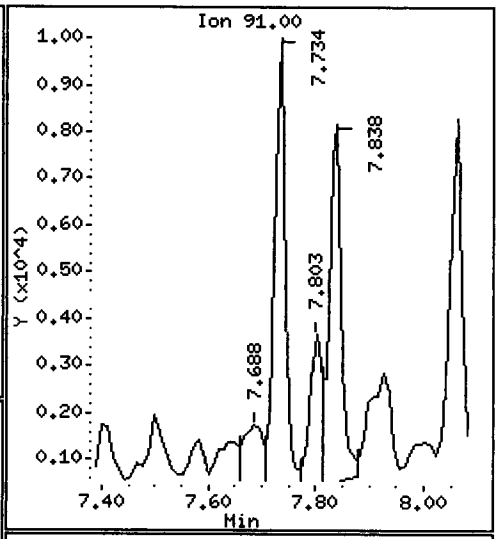
Column phase: RTXVMS

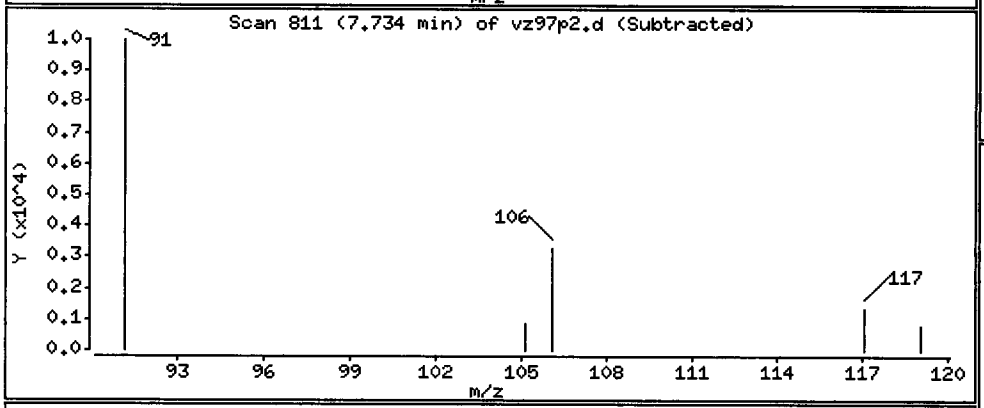
Column diameter: 0.18

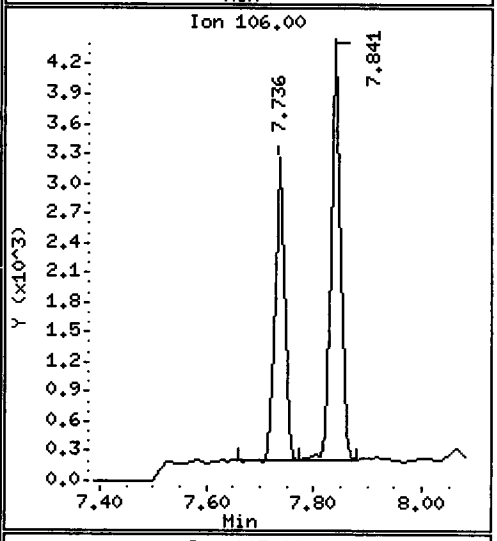
16 Ethyl Benzene

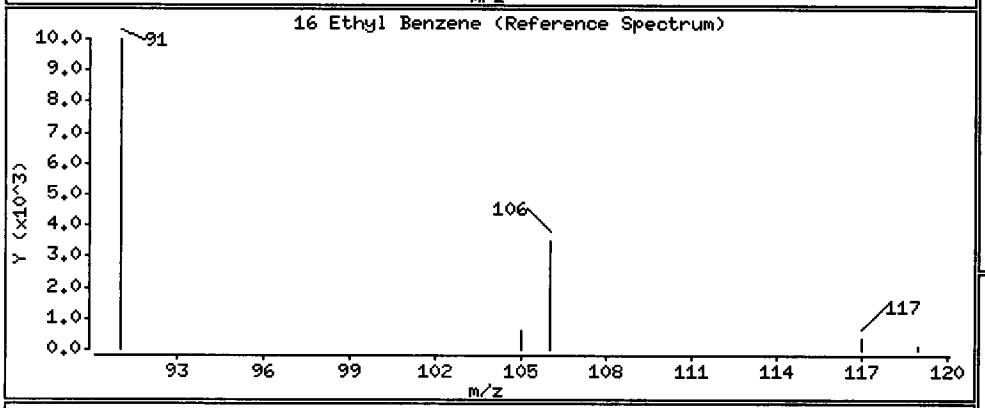
Concentration: 5.417 ug/Kg

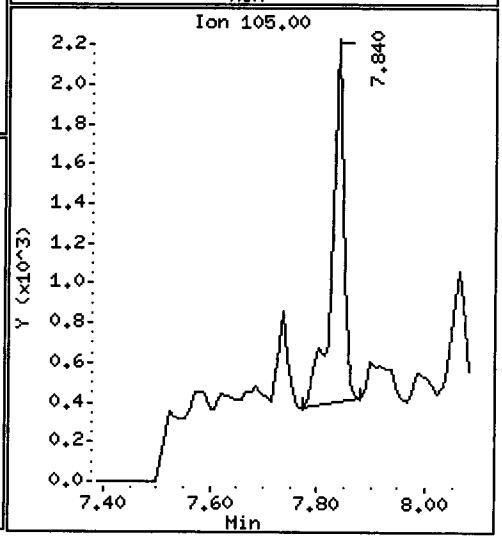


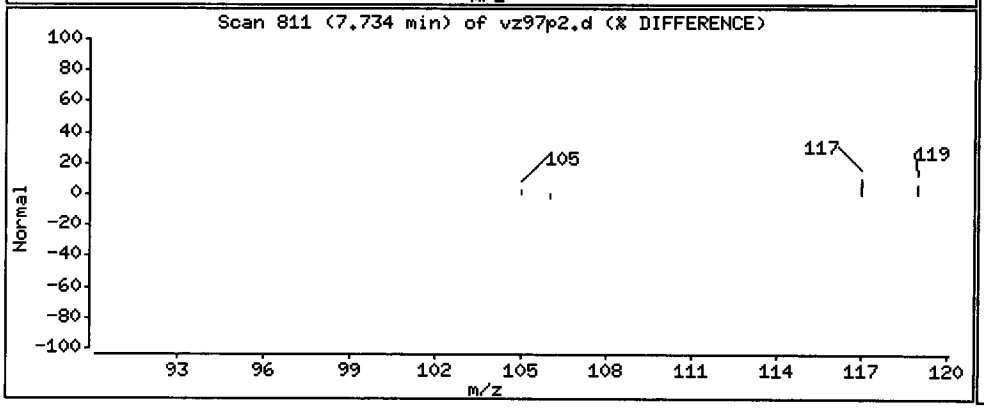












Data File: /chem1/nt9.i/21JAN13.b/vz97p2.d

Date : 21-JAN-2013 13:15

Client ID: CSIA20130111-016B

Instrument: nt9.i

Sample Info: VZ97P,10,17.266,1,

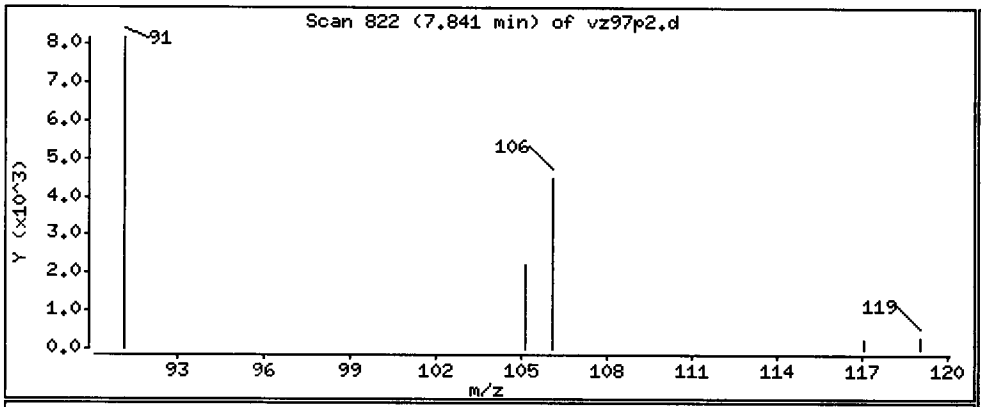
Operator: PC

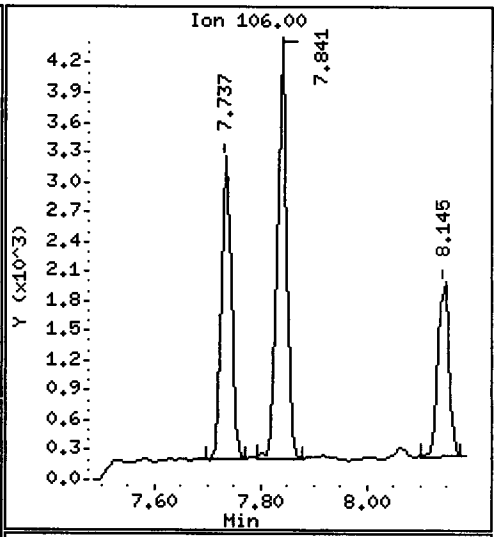
Column phase: RTXVMS

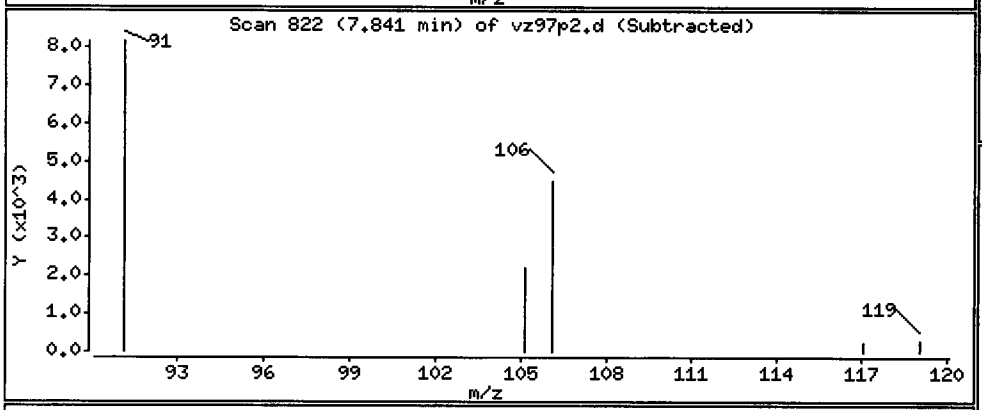
Column diameter: 0.18

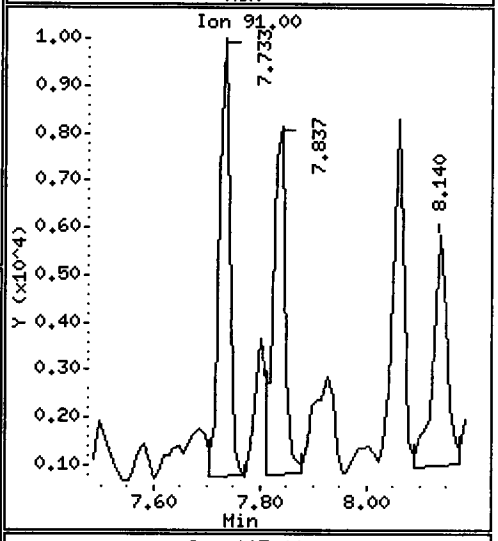
17 m,p xylene

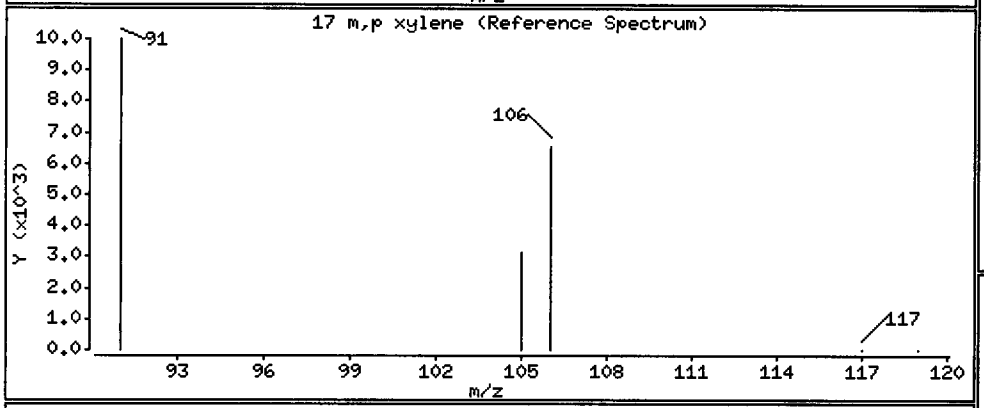
Concentration: 5.250 ug/Kg

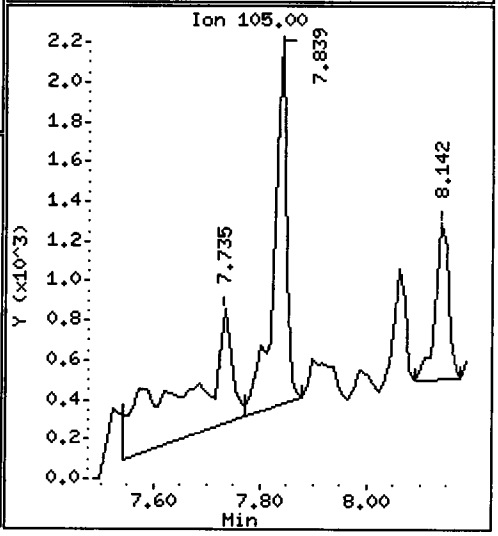


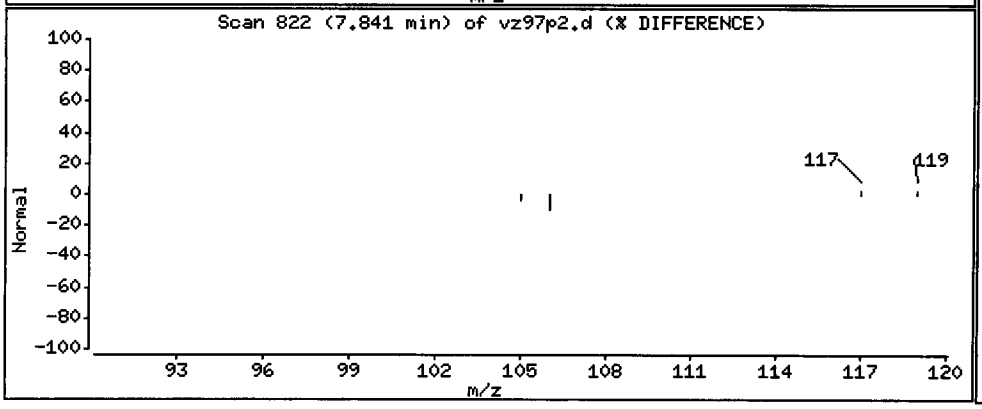












Data File: /chem1/nt9.i/21JAN13.b/vz97p2.d

Date : 21-JAN-2013 13:15

Client ID: CSIA20130111-016B

Instrument: nt9.i

Sample Info: VZ97P,10,17,266,1,

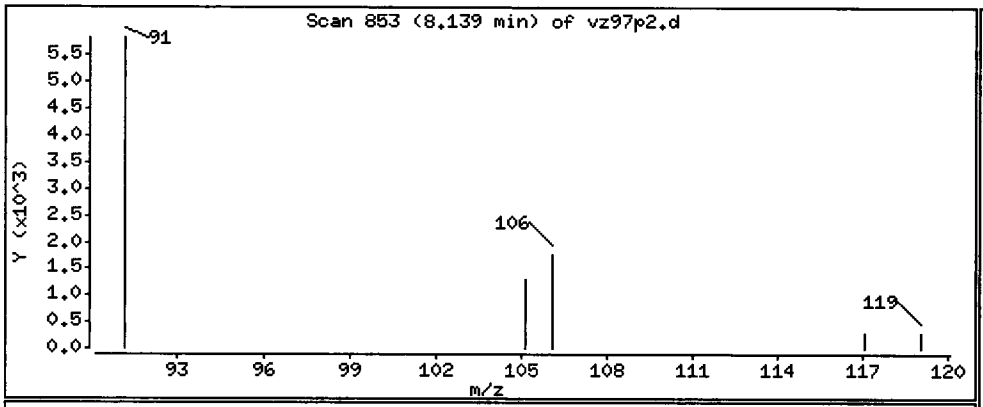
Operator: PC

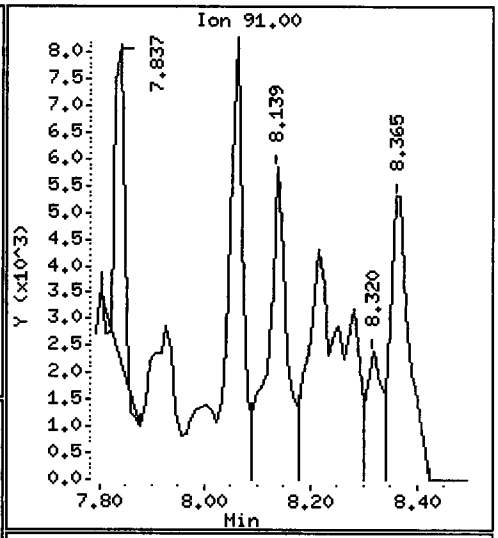
Column phase: RTXVMS

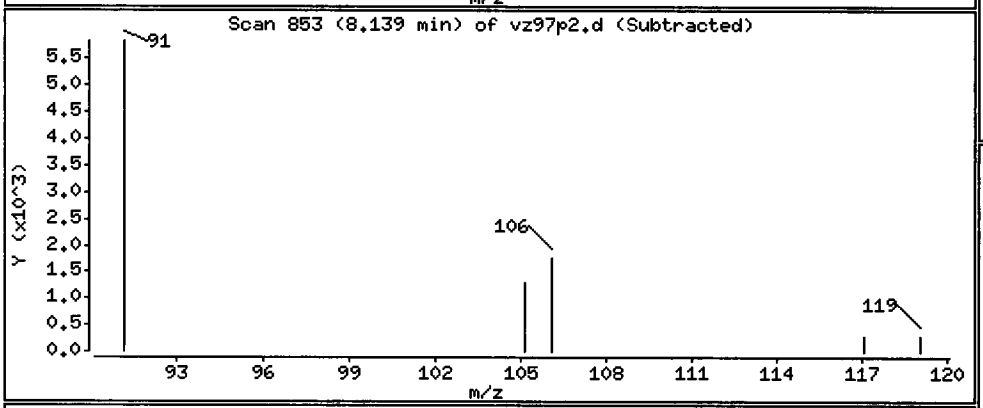
Column diameter: 0.18

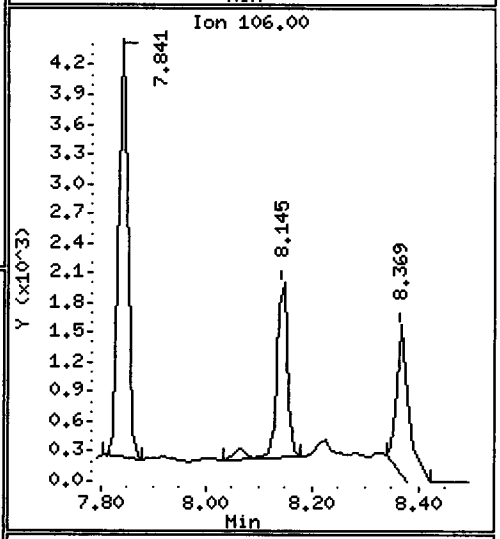
18 o-xylene

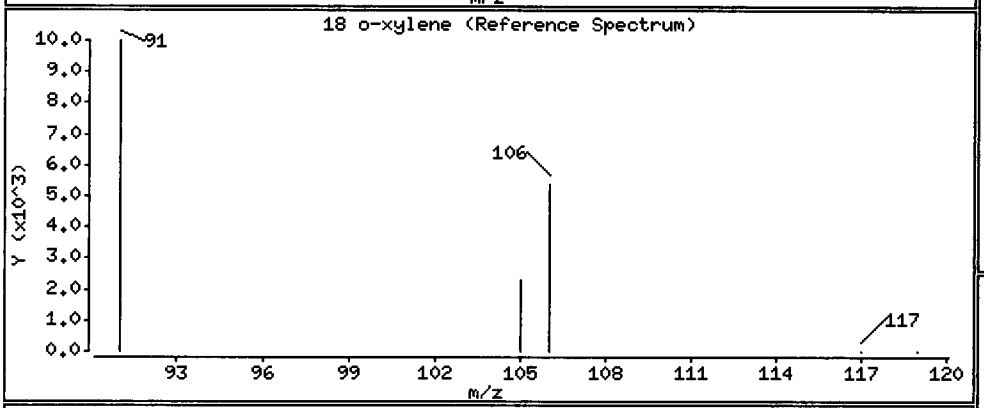
Concentration: 8.676 ug/Kg

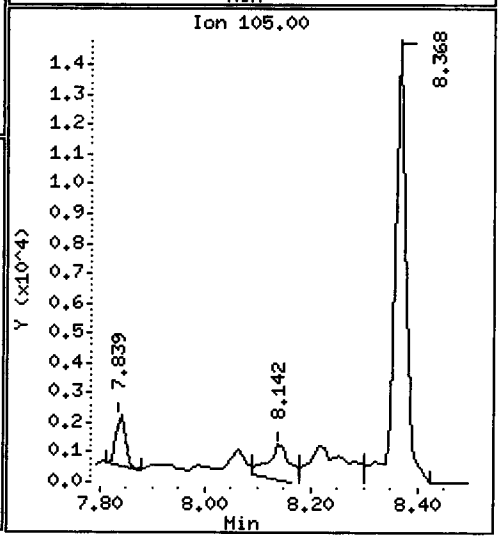


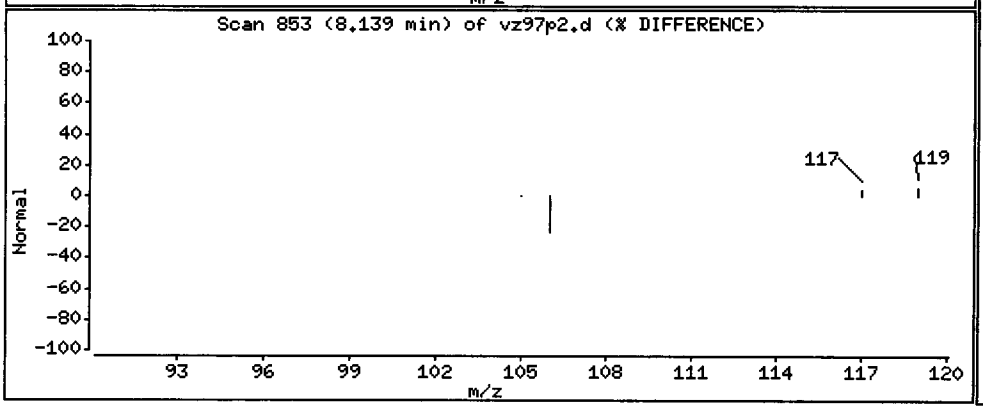












CO-ELUTION SUMMARY FOR FILE - vz97p2.d

Lab ID: VZ97P, Method: sim011713.m, Instrument: nt9.i, Date: 21-JAN-2013

RT	CO-ELUTION COMPOUNDS

PC 1/21/13

Analytical Resources, Inc.

SW8260C SIM

Data file : /chem1/nt9.i/21JAN13.b/vz97q2.d
Lab Smp Id: VZ97Q Client Smp ID: CSIA20130111-017B
Inj Date : 21-JAN-2013 13:39
Operator : PC Inst ID: nt9.i
Smp Info : VZ97Q,10,23.226,1,
Misc Info : 13-1098
Comment :
Method : /chem1/nt9.i/21JAN13.b/sim011713.m
Meth Date : 21-Jan-2013 16:17 paul Quant Type: ISTD
Cal Date : 18-JAN-2013 16:10 Cal File: 00200118.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: btex.sub
Target Version: 3.50

Concentration Formula:
Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	10.00000	Purge Volume (mL)
Sa	100.00000	Sample Amount (mg)
M	16.80000	Moisture (%)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/L)	CONCENTRATIONS FINAL (ug/Kg)
	6 Benzene	78	Compound Not Detected.					
*	7 Pentafluorobenzene	168	5.267	5.267	(1.000)	117064	1000.00	
$	8 d4-1,2-Dichloroethane	65	5.287	5.287	(1.004)	51926	960.323	115.42
*	11 1,4-Difluorobenzene	114	5.644	5.642	(1.000)	221972	1000.00	
$	12 d8-Toluene	98	6.619	6.619	(1.173)	237029	1022.42	122.89
	13 Toluene	91	6.651	6.651	(0.863)	7862	28.1508	3.384
*	15 d5 -Chlorobenzene	117	7.706	7.707	(1.000)	231639	1000.00	
	16 Ethyl Benzene	91	Compound Not Detected.					
	17 m,p xylene	106	7.840	7.841	(1.017)	1174	11.3944	1.370(Q)
	18 o-xylene	91	8.140	8.141	(1.056)	11252	57.9844	6.969(Q)
$	19 4-Bromofluorobenzene	174	8.574	8.575	(1.113)	87018	1073.05	128.97

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt9.i
Lab File ID: vz97q2.d
Lab Smp Id: VZ97Q
Analysis Type: VOA
Quant Type: ISTD
Operator: PC
Method File: /chem1/nt9.i/21JAN13.b/sim011713.m
Misc Info: 13-1098

Calibration Date: 21-JAN-2013
Calibration Time: 10:18
Client Smp ID: CSIA20130111-017B
Level: MED
Sample Type: Soil

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	114611	57306	229222	117064	2.14
11 1,4-Difluorobenze	202370	101185	404740	221972	9.69
15 d5 -Chlorobenzene	226394	113197	452788	231639	2.32

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
7 Pentafluorobenzen	5.27	4.77	5.77	5.27	-0.02
11 1,4-Difluorobenze	5.64	5.14	6.14	5.64	0.03
15 d5 -Chlorobenzene	7.71	7.21	8.21	7.71	-0.01

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA
Client SDG: VZ97
Sample Matrix: SOLID
Fraction: VOA
Lab Smp Id: VZ97Q
Client Smp ID: CSIA20130111-017B
Level: MED
Operator: PC
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: special.spk
Quant Type: ISTD
Sublist File: btex.sub
Method File: /chem1/nt9.i/21JAN13.b/sim011713.m
Misc Info: 13-1098

SURROGATE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 8 d4-1,2-Dichloroeth	120.19	115.42	96.03	75-125
$ 12 d8-Toluene	120.19	122.89	102.24	75-125
$ 19 4-Bromofluorobenze	120.19	128.97	107.31	75-125

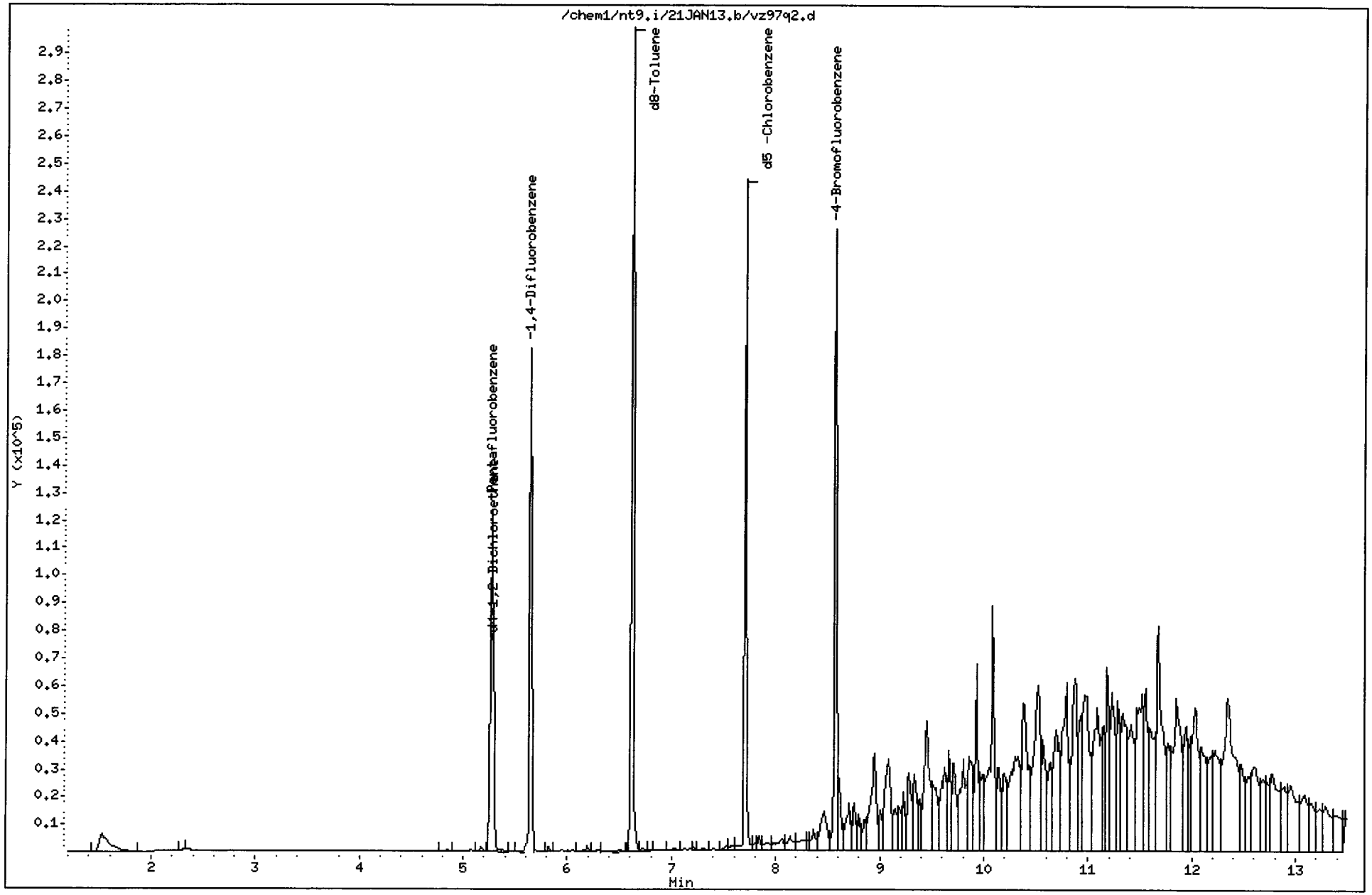
Data File: /chem1/nt9.i/21JAN13.b/vz97q2.d
Date : 21-JAN-2013 13:39
Client ID: CSIA20130111-017B
Sample Info: VZ97Q,10,23,226,1,

Column phase: RTXVMS

Instrument: nt9.i

Operator: PC
Column diameter: 0.18

VZ97Q 0021T



Data File: /chem1/nt9.i/21JAN13.b/vz97q2.d

Date : 21-JAN-2013 13:39

Client ID: CSIA20130111-017B

Instrument: nt9.i

Sample Info: VZ97Q,10,23.226,1,

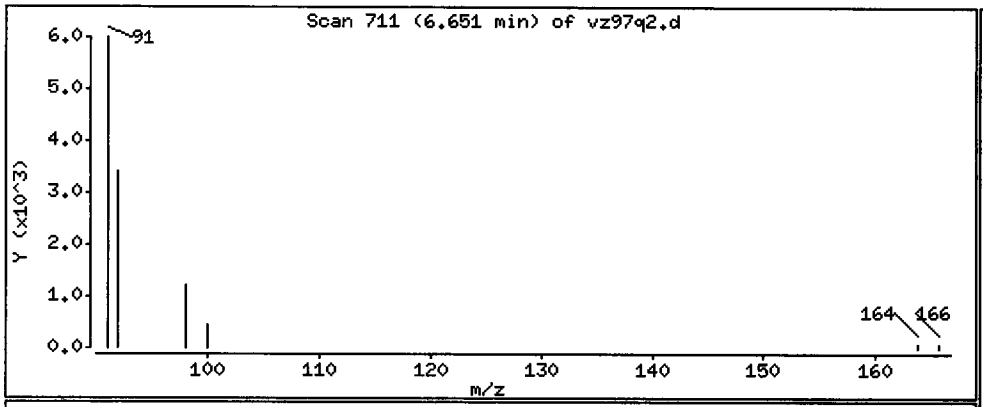
Operator: PC

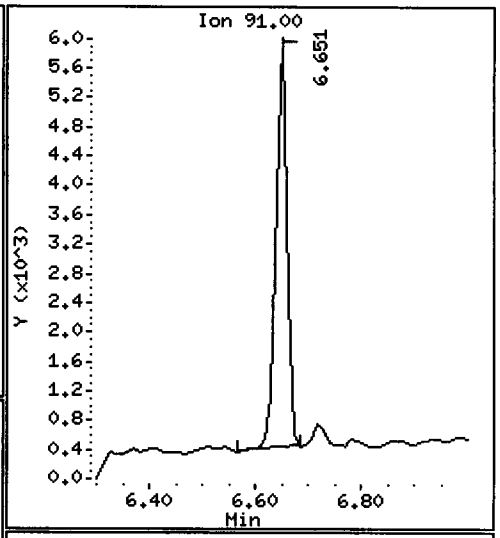
Column phase: RTXVMS

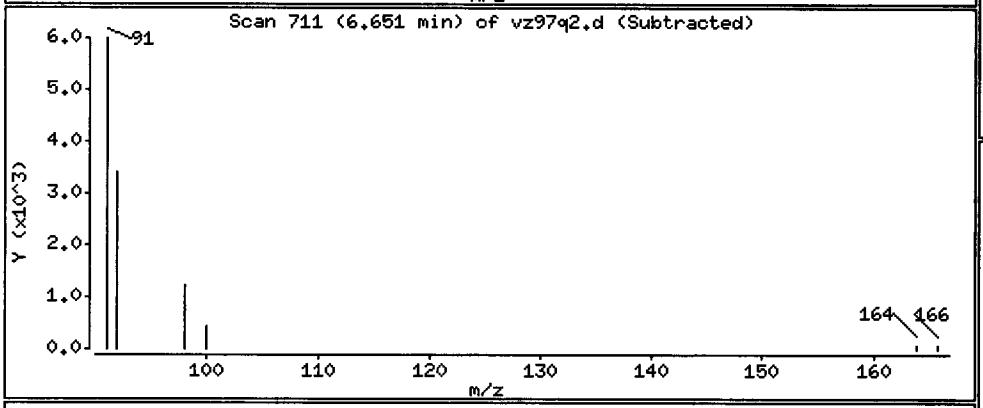
Column diameter: 0.18

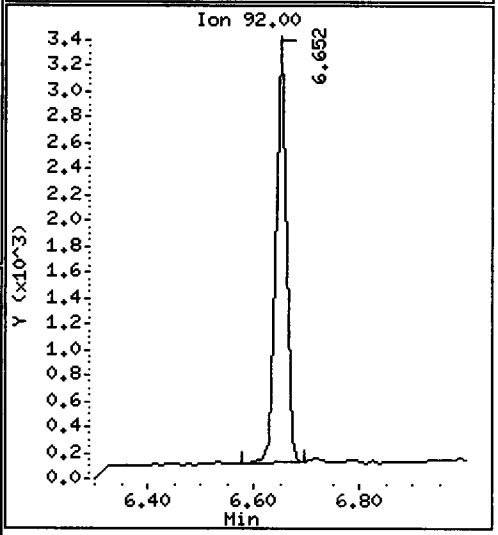
13 Toluene

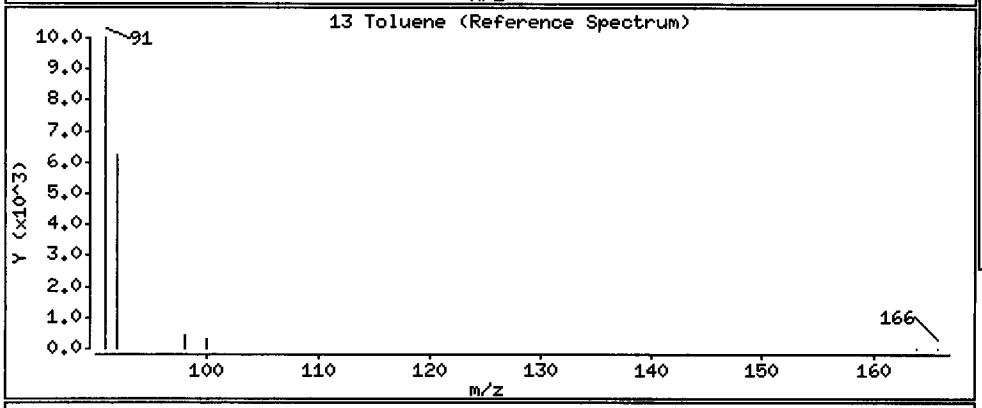
Concentration: 3.384 ug/Kg

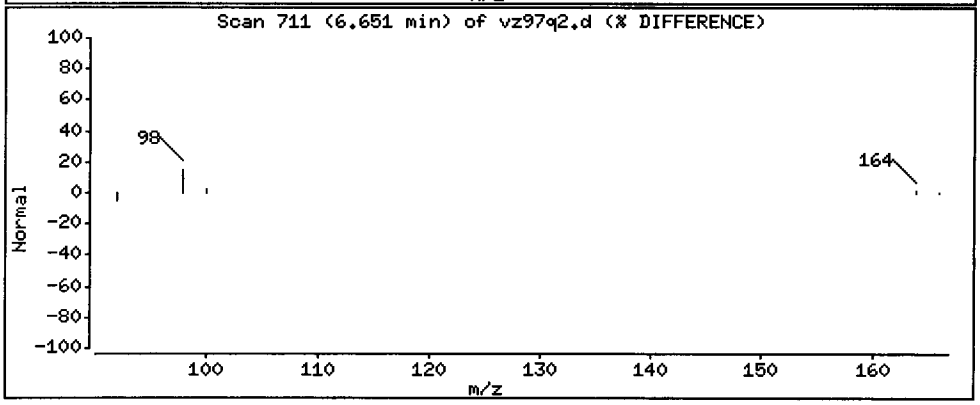












Data File: /chem1/nt9.i/21JAN13.b/vz97q2.d

Date : 21-JAN-2013 13:39

Client ID: CSIA20130111-017B

Instrument: nt9.i

Sample Info: VZ97Q,10,23.226,1,

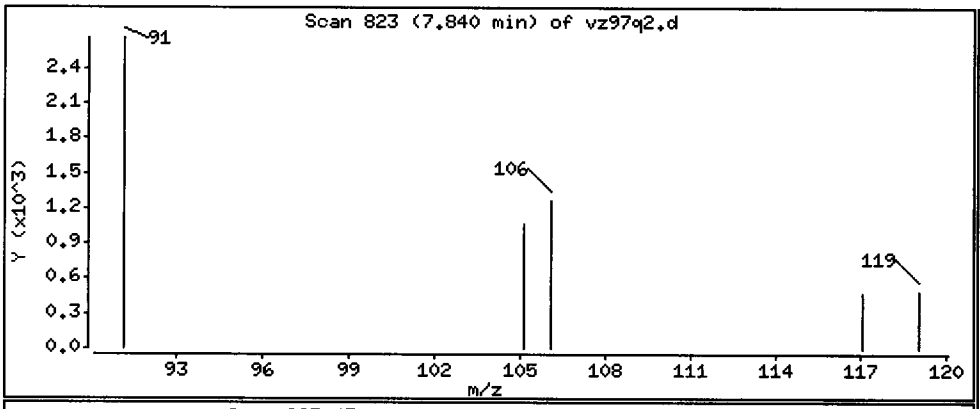
Operator: PC

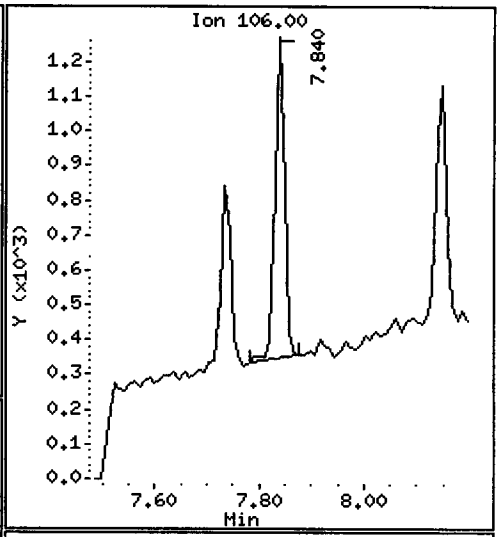
Column phase: RTXVMS

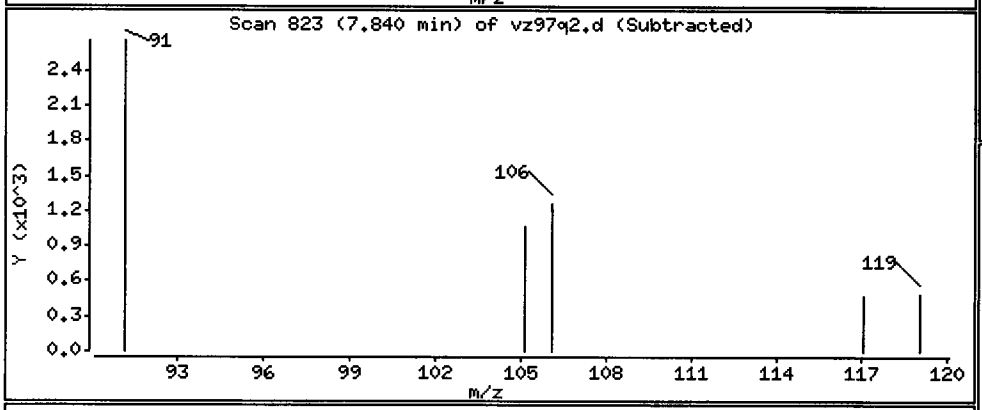
Column diameter: 0.18

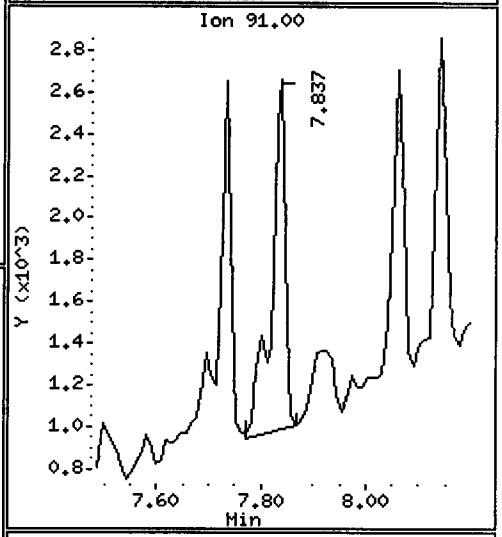
17 m,p xylene

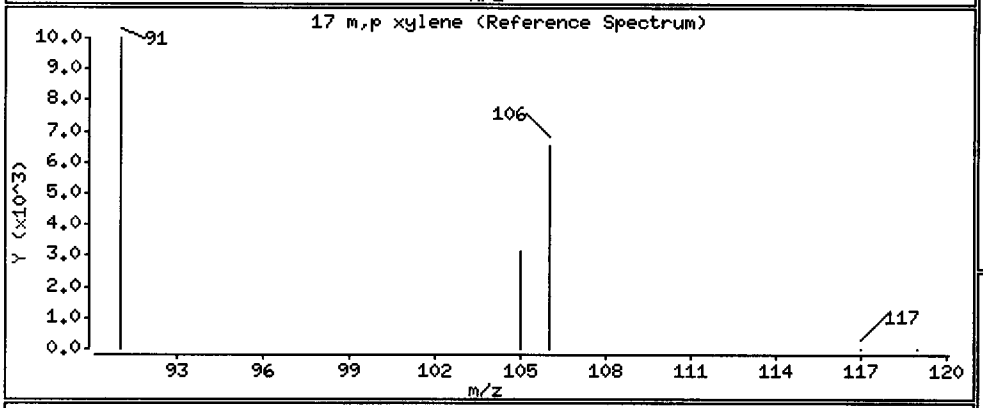
Concentration: 1.370 ug/Kg

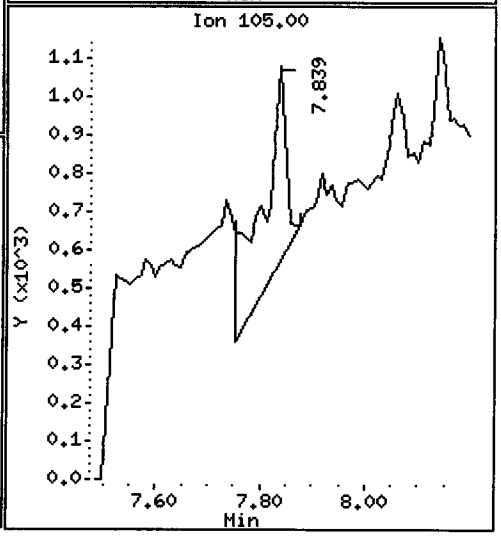


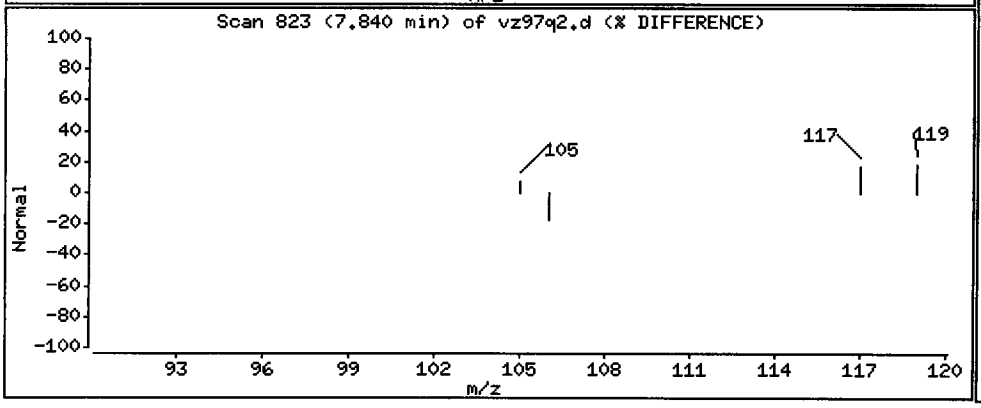












Data File: /chem1/nt9.i/21JAN13.b/vz97q2.d

Date : 21-JAN-2013 13:39

Client ID: CSIA20130111-017B

Instrument: nt9.i

Sample Info: VZ97Q,10,23.226,1,

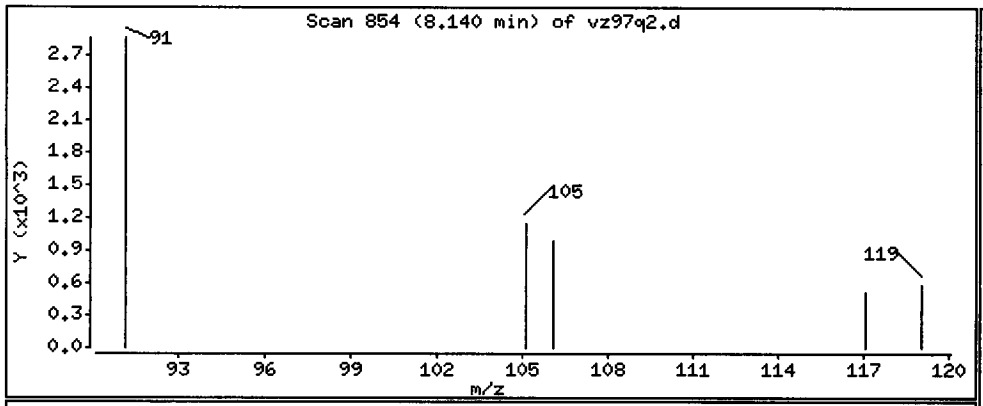
Operator: PC

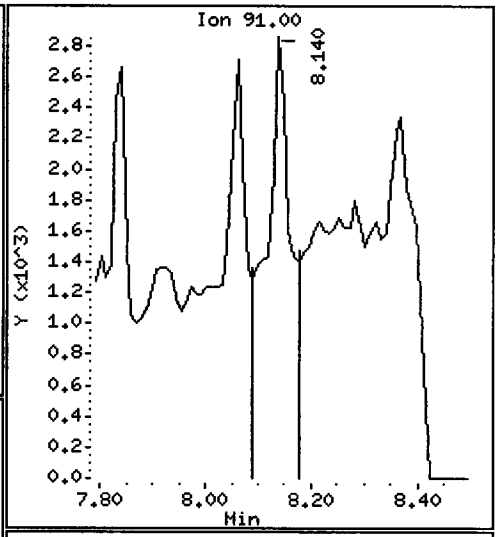
Column phase: RTXVMS

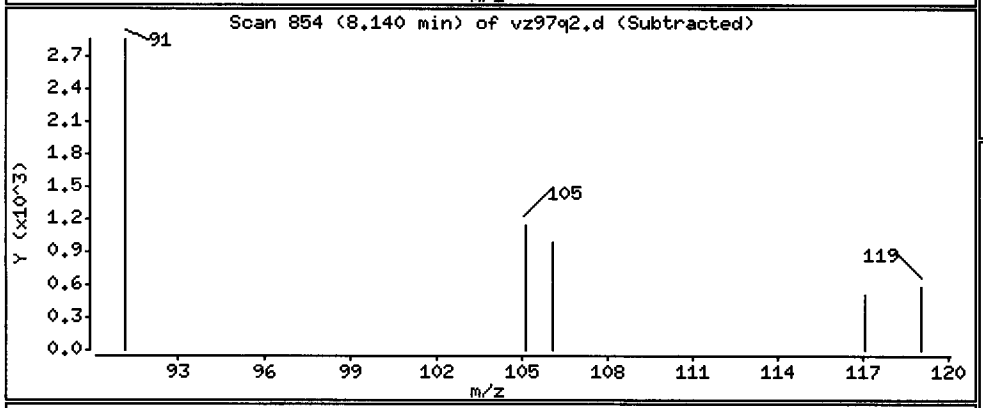
Column diameter: 0.18

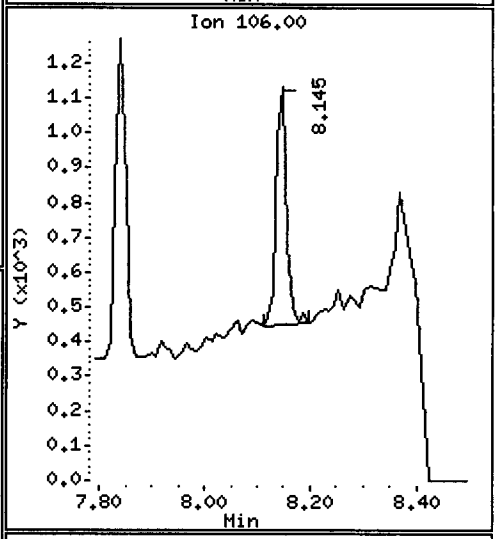
18 o-xylene

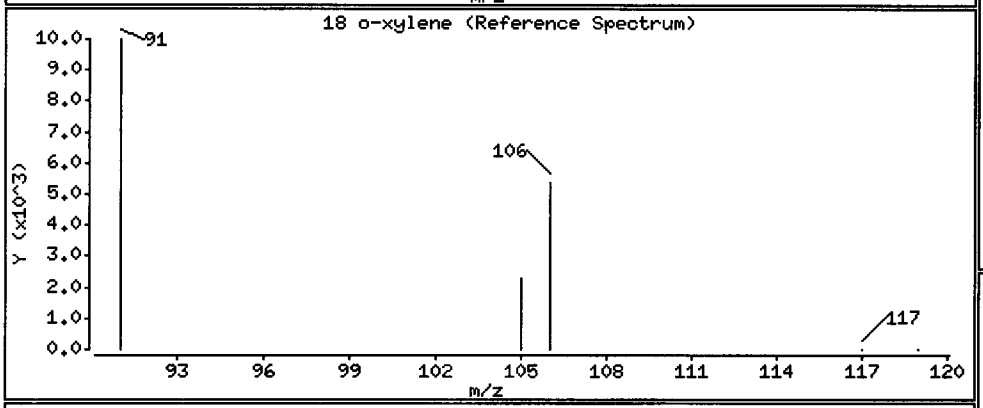
Concentration: 6.969 ug/Kg

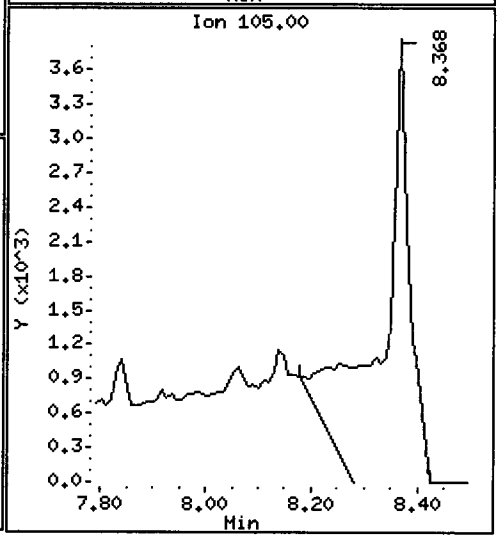


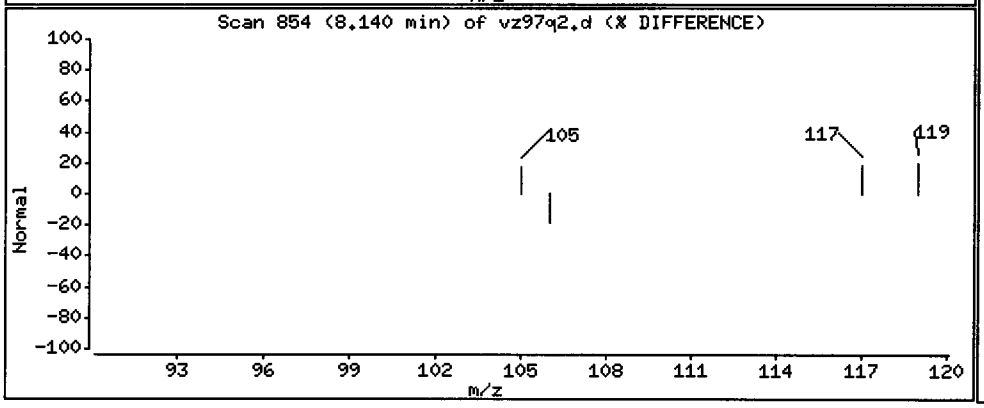












CO-ELUTION SUMMARY FOR FILE - vz97q2.d

Lab ID: VZ97Q, Method: sim011713.m, Instrument: nt9.i, Date: 21-JAN-2013

RT	CO-ELUTION COMPOUNDS

Semivolatile Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: VZ97

Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(8270D) BAN –Water
Liquid/Liquid (3520C) (SOP # 3311S)

Preparation Test BAN # 2 (BANWLI)

ARI Job No(s) VZ97 Page 1 of 1 In-House (1.0-10.0ppb) Batch set up by: JH

Bottle #	Extraction Requirements	Volume Extracted	Disassemble Liq/Liq (Mantle #)	DryVap Module # Y / (N)	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	VZ97 MBW	500mL	1	# Y / (N)	0.5mL	0.5mL		WW 1/17/12
	SBW	500mL	2	# Y / (N)	0.5mL	0.5mL		
	SBW Dup	500mL	3	# Y / (N)	0.5mL	0.5mL		
	~~QLS~~	~~500mL~~		# Y / N	~~0.5mL~~	~~0.5mL~~		
18+19	VZ97 5	500mL	4	# Y / (N)	0.5mL	0.5mL		
		500mL		# Y / N	0.5mL	0.5mL		Analyst/Date
		500mL		# Y / N	0.5mL	0.5mL		KD 80-85°C 1 2 3 4 5 6
		500mL		# Y / N	0.5mL	0.5mL		(Y) N
		500mL		# Y / N	0.5mL	0.5mL		RR 01/18/13
		500mL		# Y / N	0.5mL	0.5mL		
		500mL		# Y / N	0.5mL	0.5mL		
		500mL		# Y / N	0.5mL	0.5mL		
		500mL		# Y / N	0.5mL	0.5mL		Analyst/Date
		500mL		# Y / N	0.5mL	0.5mL		TurboVap 1 2 3
		500mL		# Y / N	0.5mL	0.5mL		RR 01/22/13
		500mL		# Y / N	0.5mL	0.5mL		
		500mL		# Y / N	0.5mL	0.5mL	RR 01/22/13	
		500mL		# Y / N	0.5mL	0.5mL		
Analyst/Date WW 1/17/12			AC 1-18-13		RR 01/22/13	RR 01/22/13		Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	A (2Ø47-2)	100/150µg/mL	125µL	7/Ø2/13	AC	WW
Full List Spike (Freezer)	7 (2Ø17-2)	100µg/mL	125µL	3/14/13	AC	WW
Base Spike	56(2Ø29-4)	200µg/mL	125µL	2/Ø7/13	AC	WW
Acid Spike	38(2Ø24-3)	100/200µg/mL	125µL	4/11/13	AC	WW
~~QLS Spike (Freezer)~~	~~14( )~~	~~10-100µg/mL~~	~~50µL~~			
Extraction Time: 7:50		Liq/Liq Start: 18:10			Liq/Liq Stop: Ø6:42	

SPECIAL INSTRUCTIONS: 1. Add ~200mL DCM to Liq/Liq. 2. Add 500mL sample. 3. Add surr/spk. 4. Adjust Acid (pH <2) using 1:1 Sulfuric Acid. (1/4 pipet for blanks & 1/2 pipet for samples). Stir to mix. Verify pH! Let sit 10 minutes. Verify pH again. 5. Extract minimum 8 hrs. 6. DryVap to 0.5mL or KD (NO drying column) to 5mL at 80°. 7. (If KD)=TurboVap to 0.5mL. 8. Vial in DCM.

A. Archive Y (N)

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: VZ97 Client ID: Anchor QEA

Parameter: BAN Client Project: Chevron Sub Area Interim Action

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☒ Other Notes/Comments= (Note problems, concerns, corrective actions).	
(Centrifuge#1 used for all Centrifugations)	
At KD Sodium Sulfate was added to RB flask due to H2O in Sample prior to pouring into KD. RF 9/18/13	

3056F

Revision 009
08/14/12

VZ97 00851

Semivolatile Raw Data
Initial Calibration

ARI Job ID: VZ97

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS,SVOA Initial Calibration Notes

ARI SOP: **801S**(SIM-PNA) **802S**(Butyl Tins) **804S**(SVOA-8270D) **805S**(op-Pest)

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date(s): 01/07/13 Internal Standard ID 1998-2 Expiration 7/3/13

DFTPP Tune Meets Criteria?	YES / NO	Minimum Response Factors Met/	YES / NO
DDT Breakdown <20%?	YES / NO	ICV Exceeding ±20%?	YES / NO
Peak Tailing Factor ≤2?	YES / NO	ICV Exceeding ±30%?	YES / NO
ICal Meets %RSD & r^2 Criteria?	YES / NO	Linear Fits Used?	YES / NO
Q flag applied?	YES / NO / NA	Quadratic Fits Used?	YES / NO
Manual Integrations for ICal?	YES / NO	Calibration Points Dropped?	YES / NO
Spectral Library Updated?	YES / NO		

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Ultra	2053-2	8/31/13	Supelco	2056-1	8/31/13
↓	2054-1	12/31/13	↓	2057-1	12/31/13
↓	2055-1	12/1/13	↓	2058-1	12/1/13
Aldrich	2004-1	1/16/13	Aldrich	2004-1	1/16/13
Aldrich	2068-2	7/2/13	Aldrich	2068-2	7/2/13

Detail problems, corrective actions and/or other pertinent information below:

First point dropped: Benzoic Acid, 2,4-Dinitrophenol, 4,6-Dinitro-2-methylphenol, Pentachlorophenol.

Last point dropped: Benzoic Acid.

Quadratic curve fit used: 2,4-Dinitrophenol

Analyst: _____ **Date:** 01/09/13

Reviewer: _____ **Date:** 1/9/13

VZ97:00856

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-JAN-2013 13:30
End Cal Date : 07-JAN-2013 17:29
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130107.b/SW846010713.m
Cal Date : 07-Jan-2013 06:34 jianqing
Curve Type : Average

Calibration File Names:
Level 1: /chem2/nt6.i/20130107.b/01071303.D
Level 2: /chem2/nt6.i/20130107.b/01071304.D
Level 3: /chem2/nt6.i/20130107.b/01071305.D
Level 4: /chem2/nt6.i/20130107.b/01071301.D
Level 5: /chem2/nt6.i/20130107.b/01071306.D
Level 6: /chem2/nt6.i/20130107.b/01071307.D
Level 7: /chem2/nt6.i/20130107.b/01071308.D
Level 8: /chem2/nt6.i/20130107.b/01071302.D

01/07/13

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
186 Carbaryl	0.34759	0.44111	0.47518	0.44967	0.41301	0.42660		
	0.41964	+++++					0.42469	9.396
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
170 N,N-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
171 2,3-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

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Cal Date : 07-Jan-2013 06:34 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
172 2,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
173 2,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
174 2,6-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
175 3,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
176 3,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
177 p-Benzoquinone	0.06592	0.09721	0.10217	0.10011	0.10075	0.09210		
	0.06631	+++++					0.08923	18.066
168 Pentachlorobenzene	0.43129	0.41603	0.43162	0.42013	0.40601	0.43734		
	0.43829	+++++					0.42582	2.832
145 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
146 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-JAN-2013 13:30
End Cal Date : 07-JAN-2013 17:29
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130107.b/SW846010713.m
Cal Date : 07-Jan-2013 06:34 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
135 2,3,5,6-Tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
136 2,3,4,5-tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
133 Butylatedhydroxytoluene	1.00940	1.03536	1.03142	1.07974	0.93823	0.92426		
	0.70216	+++++					0.96008	13.161
132 3,6-Dimethylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
127 2-Isopropylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

U797 : 00859

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-JAN-2013 13:30
End Cal Date : 07-JAN-2013 17:29
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130107.b/SW846010713.m
Cal Date : 07-Jan-2013 06:34 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
144 alpha-Terpineol	0.34086	0.31957	0.32098	0.30138	0.27667	0.25995		
	0.25488	+++++					0.29633	11.178
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
123 Acetophenone	2.12163	2.10862	2.18070	2.03112	1.94534	1.80277		
	1.74198	+++++					1.99031	8.408
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
143 1,4-Dioxane	0.82268	0.79179	0.80177	0.79573	0.77702	0.75543		
	0.72113	0.95206					0.80220	8.484
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
120 2,3,4,6-Tetrachlorophenol	0.24935	0.25842	0.27637	0.27405	0.27561	0.29401		
	0.29993	+++++					0.27539	6.492

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

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Integrator : HP RTE
Method file : /chem2/nt6.i/20130107.b/SW846010713.m
Cal Date : 07-Jan-2013 06:34 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
178 2-Benzyl-4-Chlorophenol	0.16396	0.18106	0.19157	0.18896	0.16822	0.18090		
	0.13944	+++++					0.17344	10.410
119 7,12-Dimethylbenz(a)anthracen	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
118 Triphenyl Phosphate	0.14705	0.16487	0.17558	0.19359	0.17871	0.18214		
	0.14128	+++++					0.16903	11.281
117 Butyl Diphenyl Phosphate	0.22561	0.26438	0.26421	0.24844	0.21671	0.20159		
	0.15163	+++++					0.22465	17.839
116 Dibutyl Phenyl Phosphate	0.51118	0.60973	0.64589	0.65486	0.61506	0.61498		
	0.48121	+++++					0.59042	11.365
115 Tributyl Phosphate	0.95899	1.08326	1.10745	1.04094	0.91970	0.84326		
	0.64450	+++++					0.94259	17.115
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
113 Diphenyl Oxide	0.92994	0.92020	0.97054	0.95567	0.86411	0.84359		
	0.64407	+++++					0.87545	12.782
112 Biphenyl	1.53290	1.41465	1.46107	1.35825	1.10507	1.06696		
	0.97730	+++++					1.27374	17.210

Analytical Resources, Inc.

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Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130107.b/SW846010713.m
Cal Date : 07-Jan-2013 06:34 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
111 Azobenzene (1,2-DP-Hydrazine)	1.60023	1.59054	1.62712	1.50528	1.31533	1.31061		
	1.23378	+++++					1.45470	11.257
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
109 3,4,5-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
181 3,4,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
108 4,5,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
184 3,4-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
107 4,5-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
182 4,6-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
185 4-Chloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

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Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
105 1-methylnaphthalene	0.57725	0.53717	0.53996	0.51687	0.46095	0.44446		
	0.43102	+++++					0.50110	11.108
151 1,2,4,5-Tetrachlorobenzene	0.52590	0.50756	0.52065	0.49444	0.47140	0.51750		
	0.52265	+++++					0.50858	3.856
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
156 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
157 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

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	80.000 Level 7	0.20000 Level 8						
167 2,2',4,4',5-Pentabromobipheny	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
3 Phenol	2.33415	2.09000	2.09454	1.80951	1.76039	1.61553		
	1.57387	+++++					1.89686	14.870
4 Bis(2-Chloroethyl)ether	1.63397	1.60806	1.54771	1.30413	1.26752	1.22032		
	1.22311	+++++					1.40069	13.362
6 2-Chlorophenol	1.67413	1.45745	1.44273	1.32609	1.31395	1.24263		
	1.20879	+++++					1.38083	11.523
7 1,3-Dichlorobenzene	1.77187	1.70478	1.70072	1.60203	1.50383	1.45185		
	1.41678	+++++					1.59312	8.694
9 1,4-Dichlorobenzene	1.63538	1.67559	1.69118	1.63187	1.51109	1.47002		
	1.39778	+++++					1.57327	7.200
11 Benzyl alcohol	0.96517	1.00798	1.03015	0.95231	0.91582	0.84929		
	0.83171	+++++					0.93606	8.038
12 1,2-Dichlorobenzene	1.61543	1.55323	1.56617	1.51335	1.42195	1.37970		
	1.29567	+++++					1.47793	7.794
13 2-Methylphenol	1.53388	1.39313	1.41820	1.27615	1.28858	1.16556		
	1.13620	+++++					1.31596	10.799

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	80.000 Level 7	0.20000 Level 8						
14 2,2'-oxybis(1-Chloropropane)	2.89492	2.72449	2.69431	2.33441	2.20489	1.99850		
	1.89697	+++++					2.39264	16.125
15 4-Methylphenol	1.57362	1.43764	1.48171	1.32363	1.32517	1.22286		
	1.18449	+++++					1.36416	10.302
16 N-Nitroso-di-n-propylamine	1.18820	1.17299	1.19846	1.09544	1.07726	0.98919		
	0.99208	+++++					1.10195	8.052
17 Hexachloroethane	0.73392	0.70423	0.71063	0.67803	0.63683	0.62351		
	0.61323	+++++					0.67148	7.049
19 Nitrobenzene	0.50251	0.50365	0.51245	0.47123	0.41361	0.39631		
	0.38083	+++++					0.45437	12.334
20 Isophorone	0.66543	0.70215	0.71780	0.65721	0.60421	0.56720		
	0.55817	+++++					0.63888	9.926
21 2-Nitrophenol	0.17066	0.18488	0.19795	0.18281	0.18524	0.17899		
	0.17998	+++++					0.18293	4.517
22 2,4-Dimethylphenol	0.41739	0.40652	0.39519	0.35404	0.33968	0.32670		
	0.32122	+++++					0.36582	10.888
23 Bis(2-Chloroethoxy)methane	0.50526	0.48552	0.47629	0.39844	0.37689	0.36957		
	0.36898	+++++					0.42585	14.207

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Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
24 Benzoic acid	+++++	0.16187	0.20987	0.22120	0.26864	0.26871		
	+++++	+++++					0.22606	19.831
25 2,4-Dichlorophenol	0.27089	0.28160	0.28431	0.25699	0.25173	0.25342		
	0.25574	+++++					0.26495	5.209
26 1,2,4-Trichlorobenzene	0.33790	0.33178	0.32938	0.31527	0.29438	0.30319		
	0.29934	+++++					0.31589	5.510
28 Naphthalene	1.09158	1.06116	1.08693	1.00486	0.85624	0.79411		
	0.71259	+++++					0.94393	16.376
29 4-Chloroaniline	0.44573	0.42650	0.42888	0.35934	0.31120	0.32937		
	0.32336	+++++					0.37491	15.254
30 Hexachlorobutadiene	0.20366	0.19914	0.20218	0.19520	0.18284	0.19248		
	0.19490	+++++					0.19577	3.575
31 4-Chloro-3-methylphenol	0.33180	0.30944	0.31080	0.26061	0.25348	0.24593		
	0.24899	+++++					0.28015	12.787
32 2-Methylnaphthalene	0.55113	0.53739	0.54785	0.51587	0.46241	0.45696		
	0.44680	+++++					0.50263	9.118
33 Hexachlorocyclopentadiene	0.27158	0.35121	0.37994	0.40927	0.40955	0.44938		
	0.45464	+++++					0.38937	16.271

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Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
34 2,4,6-Trichlorophenol	0.30893	0.34349	0.35857	0.34148	0.33831	0.36140		
	0.36652	+++++					0.34553	5.636
35 2,4,5-Trichlorophenol	0.37033	0.36020	0.36743	0.36579	0.36977	0.38490		
	0.39337	+++++					0.37311	3.135
37 2-Chloronaphthalene	1.21867	1.20152	1.24118	1.14160	0.97483	0.97344		
	0.92433	+++++					1.09651	12.264
38 2-Nitroaniline	0.34520	0.39158	0.41871	0.41390	0.36975	0.36723		
	0.34761	+++++					0.37914	7.843
39 Dimethylphthalate	1.18880	1.21275	1.27124	1.20738	1.09714	1.12140		
	1.07163	+++++					1.16719	6.170
40 Acenaphthylene	1.75233	1.82594	1.90674	1.79683	1.54543	1.49750		
	1.38333	+++++					1.67259	11.722
41 2,6-Dinitrotoluene	0.21634	0.26276	0.29051	0.28851	0.26770	0.28348		
	0.27374	+++++					0.26900	9.465
43 3-Nitroaniline	0.26958	0.28314	0.28681	0.26690	0.23774	0.27240		
	0.27411	+++++					0.27010	5.909
44 Acenaphthene	1.12683	1.10394	1.15097	1.11747	1.03083	1.00903		
	0.96686	+++++					1.07228	6.488

Analytical Resources, Inc.

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Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD	
	80.000 Level 7	0.20000 Level 8							
45 2,4-Dinitrophenol	+++++	0.08485	0.14520	0.19266	0.21409	0.23390			
	0.23888	+++++					0.18493	32.275	<-
46 Dibenzofuran	1.60907	1.49634	1.54548	1.48714	1.31089	1.34250			
	1.28084	+++++					1.43889	8.819	
47 4-Nitrophenol	0.18377	0.17727	0.19801	0.20065	0.19018	0.19463			
	0.18043	+++++					0.18928	4.764	
48 2,4-Dinitrotoluene	0.25256	0.33174	0.35469	0.35848	0.35195	0.37285			
	0.36557	+++++					0.34112	12.051	
49 Fluorene	1.20206	1.16968	1.20457	1.19415	1.05129	1.04180			
	0.97380	+++++					1.11962	8.478	
50 Diethylphthalate	1.35438	1.28992	1.30352	1.25054	1.12093	1.15470			
	1.11260	+++++					1.22666	7.887	
51 4-Chlorophenyl-phenylether	0.63185	0.60844	0.62038	0.61592	0.57290	0.58657			
	0.57465	+++++					0.60153	3.896	
52 4-Nitroaniline	0.21634	0.23434	0.24840	0.22400	0.19084	0.21756			
	0.21487	+++++					0.22091	8.094	
53 4,6-Dinitro-2-methylphenol	+++++	0.11886	0.15009	0.15600	0.16311	0.16874			
	0.17425	+++++					0.15518	12.746	

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Analytical Resources, Inc.

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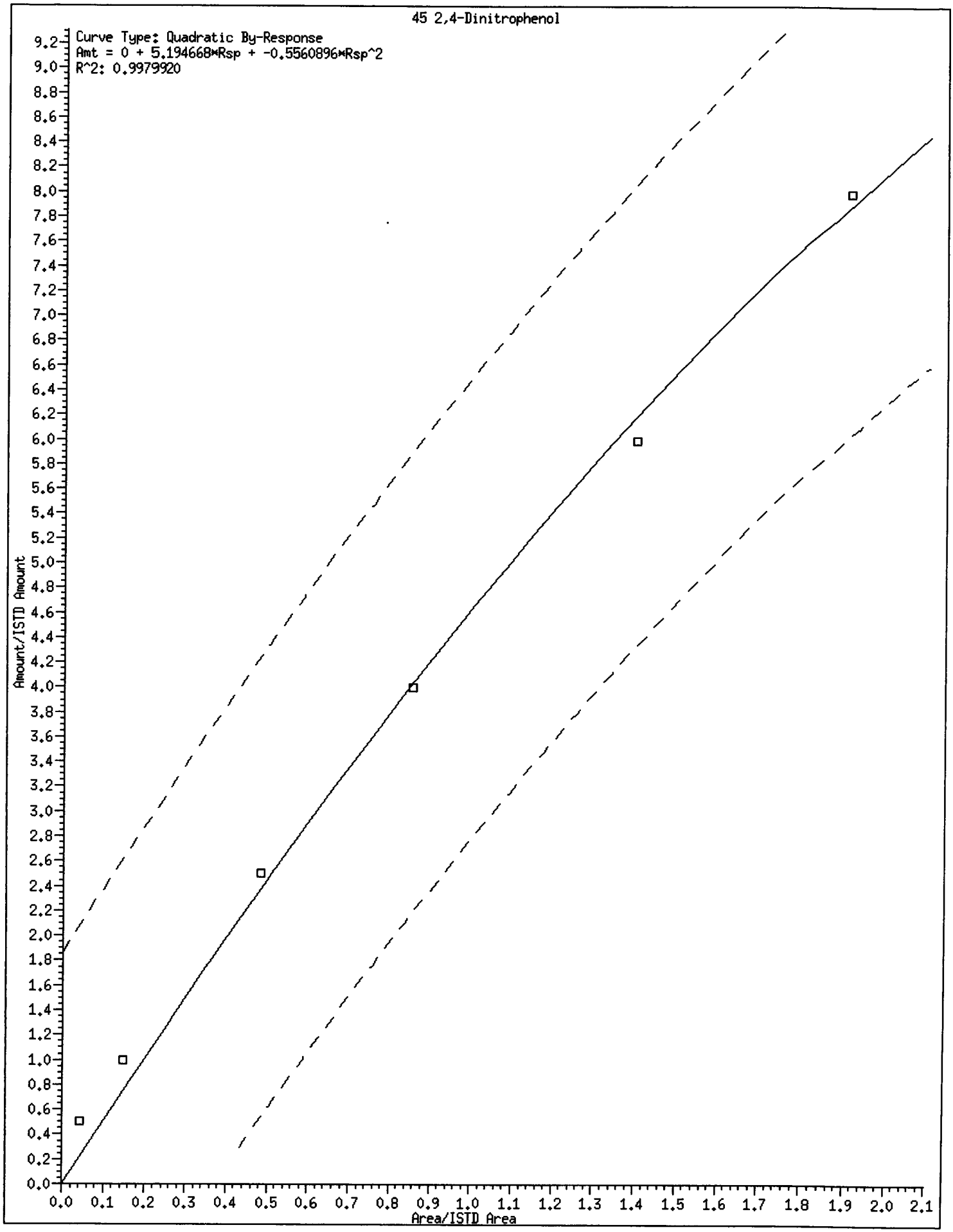
Cal Date : 07-Jan-2013 06:34 jianqing

01/07/13

Compound	1 Level 1	5 Level 2	10 Level 3	25 Level 4	40 Level 5	60 Level 6	Curve	Coefficients b	 m1	 m2	%RSD or R^2	
	80 Level 7	0.2000 Level 8										
38 2-Nitroaniline	0.34520	0.39158	0.41871	0.41390	0.36975	0.36723						
	0.34761	+++++					AVRG		0.37914		7.84295	
39 Dimethylphthalate	1.18880	1.21275	1.27124	1.20738	1.09714	1.12140						
	1.07163	+++++					AVRG		1.16719		6.17022	
40 Acenaphthylene	1.75233	1.82594	1.90674	1.79683	1.54543	1.49750						
	1.38333	+++++					AVRG		1.67259		11.72185	
41 2,6-Dinitrotoluene	0.21634	0.26276	0.29051	0.28851	0.26770	0.28348						
	0.27374	+++++					AVRG		0.26900		9.46476	
43 3-Nitroaniline	0.26958	0.28314	0.28681	0.26690	0.23774	0.27240						
	0.27411	+++++					AVRG		0.27010		5.90904	
44 Acenaphthene	1.12683	1.10394	1.15097	1.11747	1.03083	1.00903						
	0.96686	+++++					AVRG		1.07228		6.48838	
45 2,4-Dinitrophenol	+++++	64184	191515	491505	1243340	1690118						
	2287112	+++++					QUAD	0.000e+00	5.19467	-0.55609	0.99799	<-


45 2,4-Dinitrophenol
Curve Type: Quadratic By-Response
Amt = 0 + 5.194668*Rsp + -0.5560896*Rsp^2
R^2: 0.9979920
Amount/ISTD Amount
Area/ISTD Area

Analytical Resources, Inc.

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	80.000 Level 7	0.20000 Level 8						
54 N-Nitrosodiphenylamine	0.65252	0.62340	0.64954	0.60142	0.57852	0.56744		
	0.55399	+++++					0.60383	6.519
56 4-Bromophenyl-phenylether	0.22714	0.22655	0.23873	0.23082	0.22806	0.23054		
	0.23075	+++++					0.23037	1.778
57 Hexachlorobenzene	0.24526	0.22655	0.23126	0.22387	0.22126	0.22431		
	0.23295	+++++					0.22935	3.554
58 Pentachlorophenol	+++++	0.10305	0.12110	0.12843	0.13488	0.14244		
	0.14803	+++++					0.12966	12.488
60 Phenanthrene	1.16416	1.06702	1.09492	1.05433	0.96569	0.92235		
	0.87539	+++++					1.02055	10.055
61 Anthracene	1.10525	1.11682	1.13424	1.09721	0.99745	0.94275		
	0.88653	+++++					1.04004	9.383
62 Carbazole	1.05101	1.00924	1.03197	0.94944	0.82489	0.80681		
	0.80008	+++++					0.92478	12.058
63 Di-n-butylphthalate	1.20277	1.31939	1.37716	1.25787	1.02448	1.00645		
	0.92567	+++++					1.15911	14.977
64 Fluoranthene	0.99358	1.02797	1.08225	1.07377	0.90832	0.94091		
	0.88240	+++++					0.98703	8.018

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Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
65 Pyrene	1.30388	1.34913	1.31603	1.22068	1.07076	1.00740		
	0.94297	+++++					1.17298	13.994
67 Butylbenzylphthalate	0.53761	0.62189	0.64169	0.62791	0.56153	0.54378		
	0.51929	+++++					0.57910	8.630
68 Benzo(a)anthracene	1.06223	1.03102	1.08864	1.05799	0.94947	0.91959		
	0.89657	+++++					1.00079	7.715
70 3,3'-Dichlorobenzidine	0.38432	0.34479	0.36579	0.36254	0.31821	0.34263		
	0.34179	+++++					0.35144	6.069
71 Chrysene	1.07403	1.00992	1.03205	1.01840	0.94715	0.91242		
	0.86921	+++++					0.98045	7.430
72 bis(2-Ethylhexyl)phthalate	0.57065	0.62774	0.64054	0.61014	0.56529	0.54890		
	0.51732	+++++					0.58294	7.669
73 Di-n-octylphthalate	1.18489	1.12965	1.14661	1.08576	0.96177	0.91074		
	0.84019	+++++					1.03709	12.767
74 Benzo(b)fluoranthene	1.01175	1.04542	1.11037	1.13140	1.05488	1.10974		
	1.02049	+++++					1.06915	4.462
75 Benzo(k)fluoranthene	1.11697	1.10893	1.12410	1.11493	1.03718	1.01971		
	1.03000	+++++					1.07883	4.368

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	80.000 Level 7	0.20000 Level 8						
76 Benzo(a)pyrene	0.93486	0.93275	0.98050	1.00783	0.93659	0.94971		
	0.91346	+++++					0.95081	3.411
78 Indeno(1,2,3-cd)pyrene	1.29298	1.29501	1.32530	1.32253	1.27087	1.30865		
	1.33179	+++++					1.30673	1.664
79 Dibenzo(a,h)anthracene	1.07707	1.06126	1.11305	1.08027	1.02925	1.05910		
	1.06210	+++++					1.06887	2.391
80 Benzo(g,h,i)perylene	1.15185	1.14690	1.17421	1.15528	1.09437	1.15072		
	1.15619	+++++					1.14707	2.165
90 N-Nitrosodimethylamine	1.01269	1.09422	1.08168	1.01639	1.06277	1.01227		
	0.99151	+++++					1.03879	3.852
91 Aniline	2.43227	2.35585	2.31906	1.94200	1.81029	1.67248		
	1.62776	+++++					2.02282	16.847
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
93 Benzidine	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-JAN-2013 13:30
End Cal Date : 07-JAN-2013 17:29
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130107.b/SW846010713.m
Cal Date : 07-Jan-2013 06:34 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
98 Retene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
99 Perylene	1.05902	0.85625	0.87309	0.87162	0.78949	0.80350		
	0.79194	+++++					0.86356	10.846
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
103 Pyridine	1.67394	1.86344	1.86896	1.76789	1.78780	1.64405		
	1.65657	+++++					1.75181	5.440
187 Total Benzofluoranthenes	1.00937	1.01953	1.05917	1.06551	0.99273	1.00536		
	0.96563	+++++					1.01676	3.491
188 2,6-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-JAN-2013 13:30
End Cal Date : 07-JAN-2013 17:29
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130107.b/SW846010713.m
Cal Date : 07-Jan-2013 06:34 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
189 N-Nitrosomethylethylamine	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 1 2-Fluorophenol	1.70389	1.74882	1.53251	1.47756	1.51642	1.42577		
	1.42591	+++++					1.54727	8.372
$ 137 d8-1,4-Dioxane	0.78990	0.77536	0.79746	0.78958	0.76633	0.75168		
	0.71278	+++++					0.76901	3.820
$ 2 Phenol-d5	2.25321	2.26450	1.97087	1.85199	1.86103	1.73517		
	1.73829	+++++					1.95358	11.440
$ 5 2-Chlorophenol-d4	1.73368	1.68886	1.43627	1.42132	1.48241	1.40168		
	1.41244	+++++					1.51095	9.255
$ 10 1,2-Dichlorobenzene-d4	1.20660	1.16210	1.02778	1.01933	1.02721	0.99207		
	0.97284	+++++					1.05828	8.441
$ 18 Nitrobenzene-d5	0.51608	0.54887	0.49457	0.49111	0.49267	0.45617		
	0.44750	+++++					0.49243	6.978
$ 36 2-Fluorobiphenyl	1.52802	1.54761	1.39481	1.44301	1.36249	1.30907		
	1.25168	+++++					1.40524	7.770
$ 55 2,4,6-Tribromophenol	0.12397	0.16009	0.14873	0.16849	0.17519	0.18637		
	0.19304	+++++					0.16513	14.269

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-JAN-2013 13:30
End Cal Date : 07-JAN-2013 17:29
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130107.b/SW846010713.m
Cal Date : 07-Jan-2013 06:34 jianqing
Curve Type : Average

Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD
	80.000 Level 7	0.20000 Level 8						
$ 66 Terphenyl-d14	0.85954	0.89316	0.78032	0.80312	0.78270	0.73674		
	0.73988	+++++					0.79935	7.319
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 88 Dibenz(a,h)anthracene-d14	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 95 D10-1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources Inc.: Organics Instrument Log

NT-6 Serial No.:GC=US00036167, MS=US81221575

Date: 01/07/13 Analysis: 8270D Analyst: R

GC Program: ~~ABN(40.200)~~ Column No: 234462 Column Type: ZB-5MSi

Instrument Tune (.U or .CT.): 121019 EM Voltage: 1906

Calibration File: 01071301 Curve Date: 01/07/13 Injection Vol.: 1µl

IS/SS	Ical/Ccal	LCS/ICV
1948-2	~~2053-2~~, ~~2054-1~~	~~2056-1~~, ~~2057-1~~
	~~2055-1~~ 2004-1	~~2058-1~~ 2004-1
	~~2058-2~~	~~2058-2~~

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem2/nt6.i/20130107.b

	Time	Filename	LabID	ClientId	DF															
1	1330	01071301.D	IC250107	IC250107	1	8.39	532349	10.43	2007575	13.30	1020441	15.68	1546074	19.99	1407005	22.14	1383265	21.09	1928310
2	1404	01071302.D	IC020107	IC020107	1	8.39	696175	10.43	2714867	13.30	1442675	15.67	2121370	19.98	1700414	21.09	2226447	22.14	1717710
3	1438	01071303.D	IC10107	IC10107	1	8.39	749942	10.43	2834485	13.29	1546193	15.67	2224016	19.98	1798420	22.14	1724523	21.09	2365188
4	1512	01071304.D	IC50107	IC50107	1	8.39	769552	10.43	2853857	13.30	1512855	15.67	2142654	19.98	1741144	22.14	1630003	21.09	2258769
5	1546	01071305.D	IC10107	IC100107	1	8.39	682894	10.43	2533797	13.29	1318931	15.67	1898940	19.99	1635752	22.14	1588408	21.09	2185014
6	1621	01071306.D	IC40107	IC400107	1	8.39	739932	10.43	2869187	13.30	1451918	15.68	2129840	19.99	1843018	22.14	1802829	21.09	2425671
7	1655	01071307.D	IC60107	IC600107	1	8.39	652544	10.44	2480153	13.30	1204277	15.68	1885235	19.99	1712755	22.15	1576666	21.09	2210352
8	1729	01071308.D	IC80107	IC800107	1	8.39	640305	10.44	2446507	13.30	1196791	15.68	1842237	20.00	1706728	22.15	1610817	21.09	2225716
9	1803	01071309.D	ICV0107	ICV0107	1	8.39	621584	10.43	2323497	13.30	1260896	15.67	1865579	19.98	1728623	22.14	1716563	21.09	2285843
10	1837	01071310.D	VY09MBW1	VY09MBW1	1	8.38	608698	10.43	2443935	13.29	1324308	15.67	1968200	19.98	1737382	21.09	2187194	22.14	1710094
11	1910	01071311.D	VY09LCSW1	VY09LCSW1	1	8.38	627698	10.43	2433178	13.30	1248921	15.67	1841353	19.98	1772559	21.09	2346108	22.14	1756271
12	1944	01071312.D	VY09LCSDW1	VY09LCSDW1	1	8.38	717413	10.43	2723849	13.30	1392508	15.67	2029501	19.98	1936130	21.09	2520095	22.14	1908345
13	2018	01071313.D	VY09QLS	VY09QLS	1	8.38	675475	10.42	2664199	13.29	1427341	15.67	2070400	19.98	1904944	21.09	2438667	22.14	1879303
14	2051	01071314.D	VY09A	Influent Com	1	8.38	624253	10.43	2401142	13.29	1235762	15.67	1850626	19.98	1998216	21.09	2718622	22.14	2358600
15	2125	01071315.D	VY09B	Effluent Com	1	8.38	689314	10.42	2667269	13.29	1446966	15.67	2123475	19.98	1868407	21.09	2611004	22.14	1898499
16	2159	01071316.D	VY15MBW1	VY15MBW1	1	8.39	764716	10.43	2978545	13.30	1674342	15.67	2449673	19.98	1995906	21.09	2822140	22.14	1942881
17	2232	01071317.D	VY15LCSW1	VY15LCSW1	1	8.39	749550	10.43	2825614	13.30	1468651	15.68	2137406	19.99	1945659	21.09	2588852	22.14	1985230
18	2306	01071318.D	VY15LCSDW1	VY15LCSDW1	1	8.39	766599	10.43	2816021	13.30	1472381	15.67	2195870	19.99	2075278	21.09	2704426	22.14	2104731
19	2339	01071319.D	VY15A	Outfall #001	1	8.39	749243	10.43	2851678	13.29	1540180	15.67	2244698	19.98	1927361	21.09	2572081	22.14	1927450

01/07/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

UZ07:00877

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/nt6.i/20130107.b

ARI Job No.: IC25 Method: SW846010713.m Instrument: nt6.i Date: 07-JAN-2013

01/07/13

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1330	01071301.D	IC250107	IC250107	1	NO MANUAL INTEGRATION
1404	01071302.D	IC020107	IC020107	1	NO MANUAL INTEGRATION
1438	01071303.D	IC10107	IC10107	1	Benzoic acid, 3-Nitroaniline, 4-Nitrophenol, Pentachlorophenol, Total Benzofluoranthenes,
1512	01071304.D	IC50107	IC50107	1	Total Benzofluoranthenes,
1546	01071305.D	IC10107	IC100107	1	Benzoic acid,
1621	01071306.D	IC40107	IC400107	1	4-Nitroaniline,
1655	01071307.D	IC60107	IC600107	1	Benzoic acid,
1729	01071308.D	IC80107	IC800107	1	NO MANUAL INTEGRATION
1803	01071309.D	ICV0107	ICV0107	1	Total Benzofluoranthenes,

SL3555 1527

Data File: /chem2/nt6.i/20130107.b/tune.b/01071301.D

Date : 07-JAN-2013 13:30

Client ID: DFTPP0107

Instrument: nt6.i

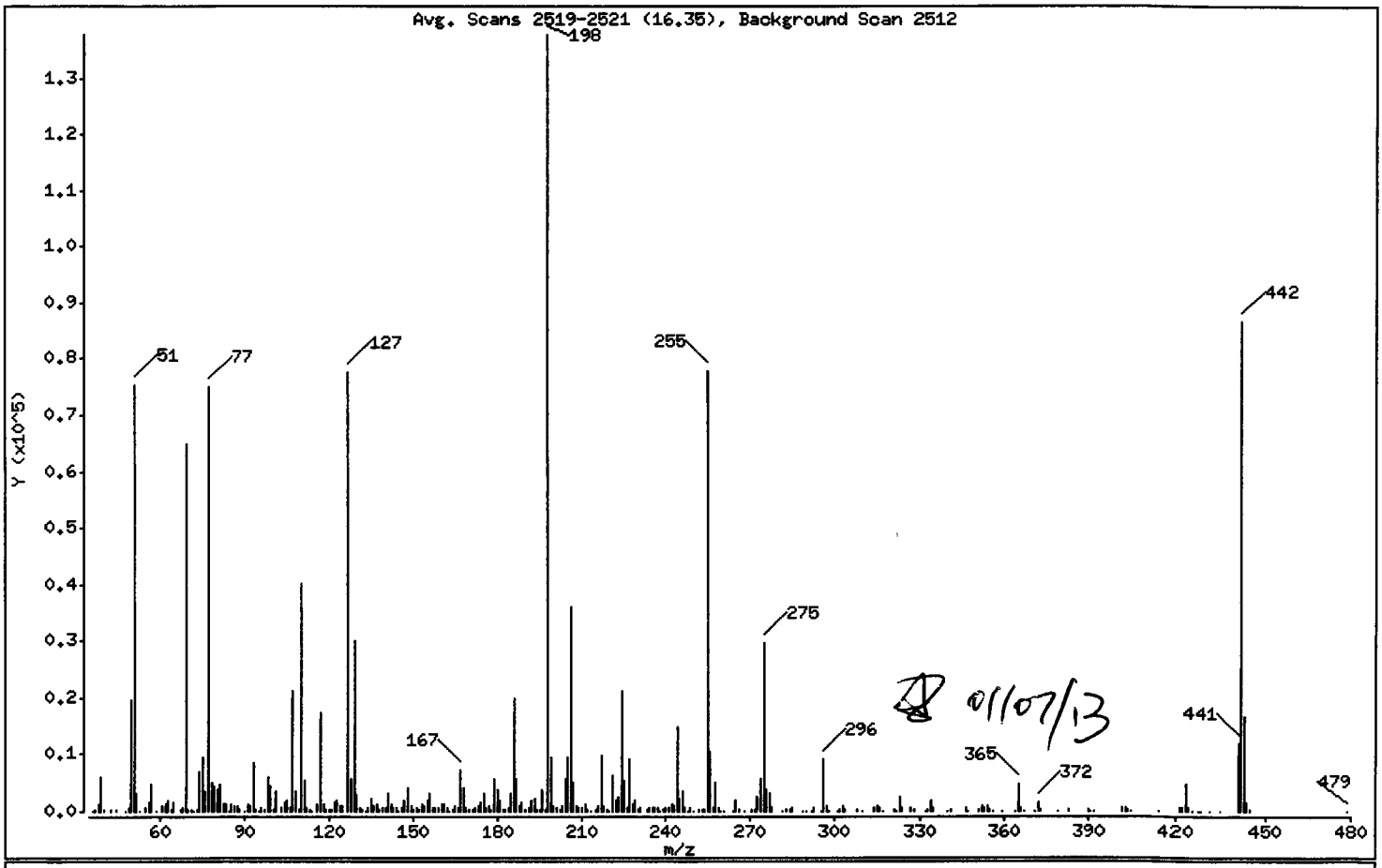
Sample Info: DFTPP0107

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	54.73
68	Less than 2.00% of mass 69	0.49 (1.04)
69	Mass 69 relative abundance	47.10
70	Less than 2.00% of mass 69	0.17 (0.36)
127	10.00 - 80.00% of mass 198	56.38
197	Less than 2.00% of mass 198	0.25
199	5.00 - 9.00% of mass 198	6.90
275	10.00 - 60.00% of mass 198	21.69
365	Greater than 1.00% of mass 198	3.38
441	0.01 - 24.00% of mass 442	8.66 (13.74)
442	50.00 - 200.00% of mass 198	63.08
443	15.00 - 24.00% of mass 442	12.08 (19.14)

Data File: /chem2/nt6.i/20130107.b/tune.b/01071301.D

Date : 07-JAN-2013 13:30

Client ID: DFTPP0107

Instrument: nt6.i

Sample Info: DFTPP0107

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

Data File: 01071301.D
Spectrum: Avg. Scans 2519-2521 (16.35), Background Scan 2512
Location of Maximum: 198.00
Number of points: 297

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	47	123.00	1970	199.00	9501	285.00	509
37.00	172	124.00	894	200.00	850	289.00	61
38.00	1159	125.00	1094	201.00	702	290.00	109
39.00	5863	127.00	77688	202.00	271	292.00	134
40.00	242	128.00	5663	203.00	966	293.00	690
43.00	171	129.00	30064	204.00	5569	295.00	66
45.00	173	130.00	2934	205.00	9351	296.00	9338
48.00	70	131.00	610	206.00	36264	297.00	1100
49.00	521	132.00	261	207.00	5076	298.00	110
50.00	19696	133.00	56	208.00	986	301.00	148
51.00	75416	134.00	784	209.00	524	302.00	319
52.00	3298	135.00	2156	210.00	728	303.00	1065
53.00	33	136.00	851	211.00	1300	304.00	422
55.00	504	137.00	1226	212.00	193	308.00	193
56.00	1730	138.00	363	213.00	133	310.00	87
57.00	4872	139.00	502	215.00	383	314.00	572
59.00	54	140.00	499	216.00	884	315.00	1047
61.00	907	141.00	3180	217.00	9896	316.00	501
62.00	1184	142.00	1188	218.00	1002	317.00	65
63.00	1915	143.00	697	219.00	200	321.00	281
64.00	322	144.00	496	220.00	88	322.00	91
65.00	1534	145.00	96	221.00	6270	323.00	2689
67.00	228	146.00	493	222.00	2053	324.00	774
68.00	678	147.00	1802	223.00	2603	327.00	721
69.00	64904	148.00	4066	224.00	21144	328.00	257
70.00	233	149.00	851	225.00	5235	332.00	156
71.00	179	150.00	239	226.00	578	333.00	361
72.00	51	151.00	530	227.00	9170	334.00	1781
73.00	438	152.00	470	228.00	1260	335.00	678
74.00	6857	153.00	1251	229.00	1799	340.00	53
75.00	9387	154.00	805	230.00	382	341.00	290
76.00	3610	155.00	1978	231.00	615	346.00	600
77.00	75104	156.00	3125	233.00	312	347.00	100
78.00	5110	157.00	492	234.00	565	351.00	206
79.00	4386	158.00	574	235.00	719	352.00	811

UZ97:00800

Date : 07-JAN-2013 13:30

Client ID: DFTPP0107 Instrument: nt6.i

Sample Info: DFTPP0107

Operator: JZ

Column phase: ZB-5msi Column diameter: 0.32

Data File: 01071301.D
Spectrum: Avg. Scans 2519-2521 (16.35), Background Scan 2512
Location of Maximum: 198.00
Number of points: 297

m/z	Y	m/z	Y	m/z	Y	m/z	Y
80.00	3758	159.00	518	236.00	607	353.00	690
81.00	4763	160.00	1153	237.00	771	354.00	816
82.00	1202	161.00	1197	238.00	95	355.00	162
83.00	1355	162.00	513	239.00	330	356.00	60
84.00	14	163.00	79	240.00	477	359.00	120
85.00	1138	164.00	212	241.00	518	364.00	63
86.00	914	165.00	1091	242.00	1126	365.00	4652
87.00	952	166.00	756	243.00	1039	366.00	681
88.00	397	167.00	7368	244.00	14947	367.00	77
90.00	50	168.00	4054	245.00	2312	371.00	97
91.00	1373	169.00	769	246.00	3395	372.00	1570
92.00	1033	170.00	254	247.00	530	373.00	460
93.00	8457	171.00	345	248.00	137	379.00	83
94.00	404	172.00	584	249.00	534	383.00	366
95.00	86	173.00	979	250.00	60	390.00	231
96.00	507	174.00	1438	252.00	218	391.00	113
97.00	232	175.00	3015	253.00	465	392.00	72
98.00	5887	176.00	488	254.00	398	402.00	579
99.00	4580	177.00	948	255.00	77960	403.00	654
100.00	446	178.00	371	256.00	10507	404.00	272
101.00	3486	179.00	5778	257.00	687	405.00	80
103.00	690	180.00	3938	258.00	5130	415.00	58
104.00	1619	181.00	1894	259.00	669	421.00	684
105.00	1993	182.00	297	260.00	93	422.00	677
106.00	558	183.00	309	261.00	51	423.00	4609
107.00	21264	184.00	562	264.00	136	424.00	686
108.00	3575	185.00	3105	265.00	1910	425.00	110
109.00	266	186.00	19840	266.00	368	427.00	53
110.00	40256	187.00	5614	268.00	59	428.00	87
111.00	5466	188.00	907	271.00	292	431.00	116
112.00	689	189.00	1642	272.00	170	435.00	104
113.00	285	190.00	165	273.00	2641	441.00	11939
114.00	73	191.00	620	274.00	5619	442.00	86920
116.00	1131	192.00	1788	275.00	29888	443.00	16640
117.00	17352	193.00	2297	276.00	3754	444.00	1532

Data File: /chem2/nt6.i/20130107.b/tune.b/01071301.D

Date : 07-JAN-2013 13:30

Client ID: DFTPP0107

Instrument: nt6.i

Sample Info: DFTPP0107

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

Data File: 01071301.D
Spectrum: Avg. Scans 2519-2521 (16.35), Background Scan 2512
Location of Maximum: 198.00
Number of points: 297

m/z	Y	m/z	Y	m/z	Y	m/z	Y
118.00	1254	194.00	465	277.00	3054	445.00	159
119.00	262	195.00	296	278.00	554	479.00	89
120.00	316	196.00	3921	282.00	90		
121.00	229	197.00	339	283.00	230		
122.00	1514	198.00	137792	284.00	182		

Data File: /chem2/nt6.i/20130107.b/tune.b/01071301.D

Date : 07-JAN-2013 13:30

Client ID: DFTPP0107

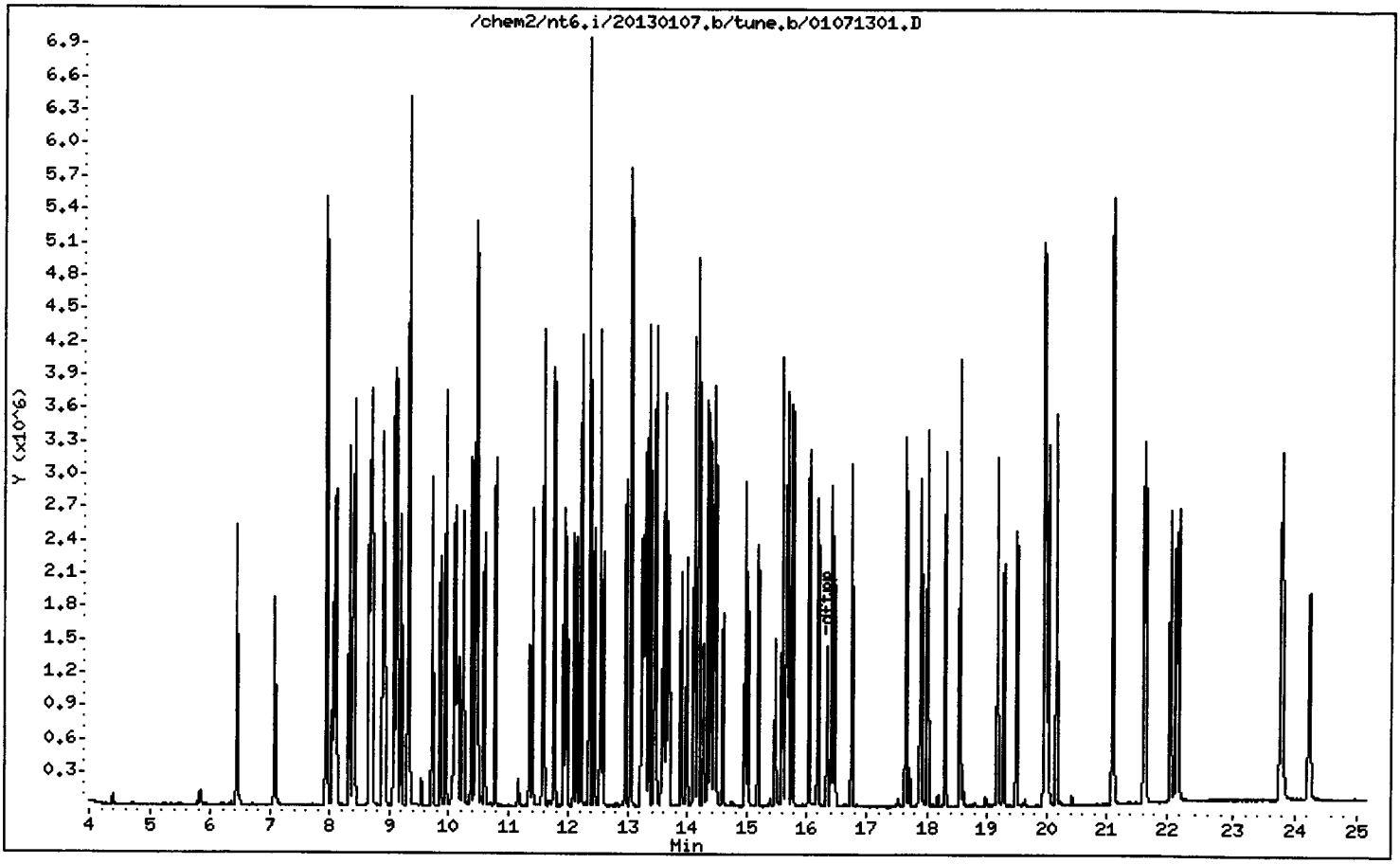
Instrument: nt6.i

Sample Info: DFTPP0107

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem2/nt6.i/20130107.b/ddt.b/01071301.D ARI ID: DDT0107
Method: /chem2/nt6.i/20130107.b/ddt.b/sw846ddt.m Misc: 13-
Analysis Date: 07-JAN-2013 13:30 Instrument: nt6.i

COMPOUND	RT	AREA
Pentachlorophenol	15.488	242622
Benzidine	17.887	342335
4,4'-DDE	----	----
4,4'-DDD	18.806	6855
4,4'-DDT	19.287	596414

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(0 + 6855) * 100}{(0 + 6855 + 596414)}$$

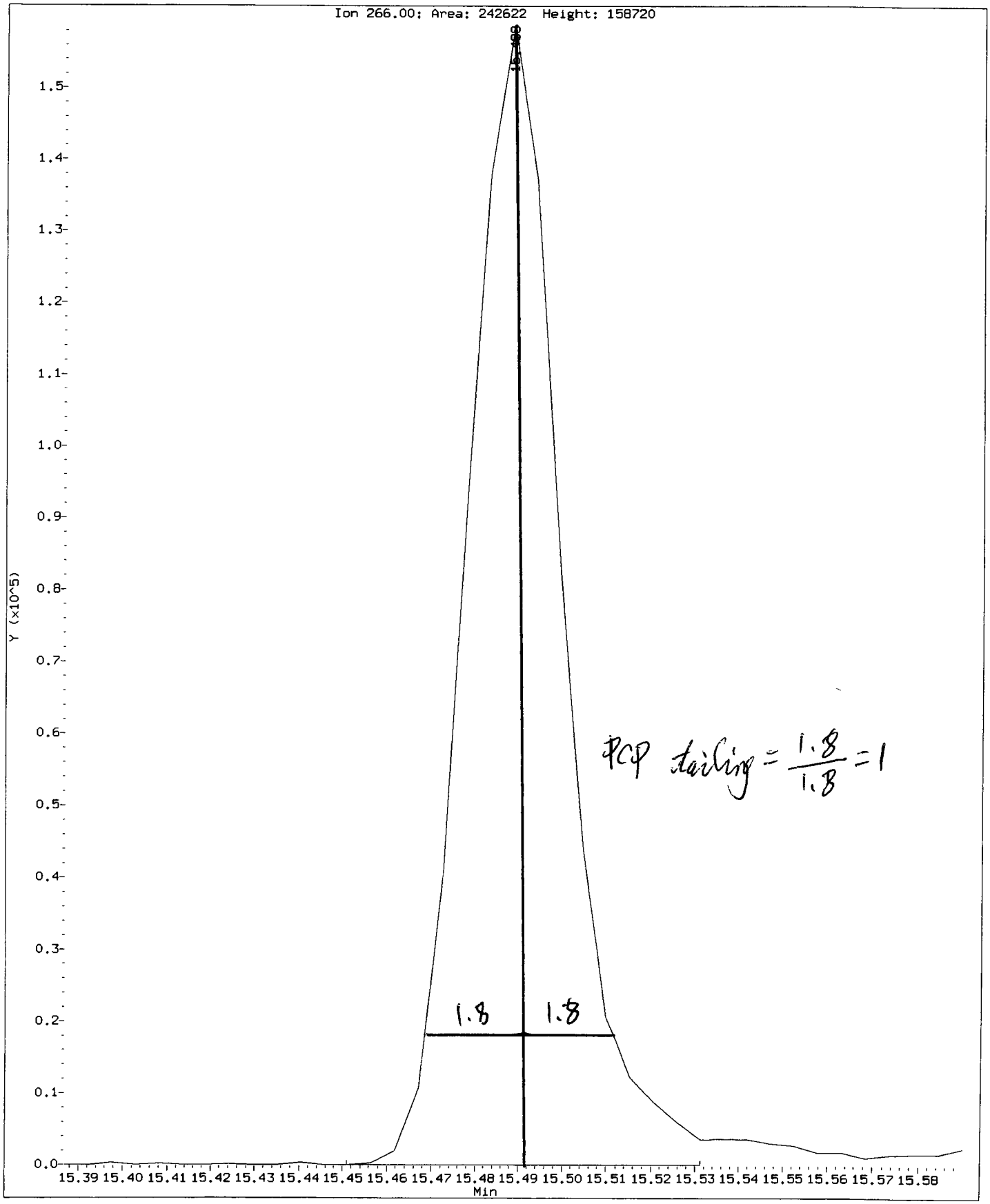
DDT Percent Breakdown = 1.1 %

OK

01/07/13

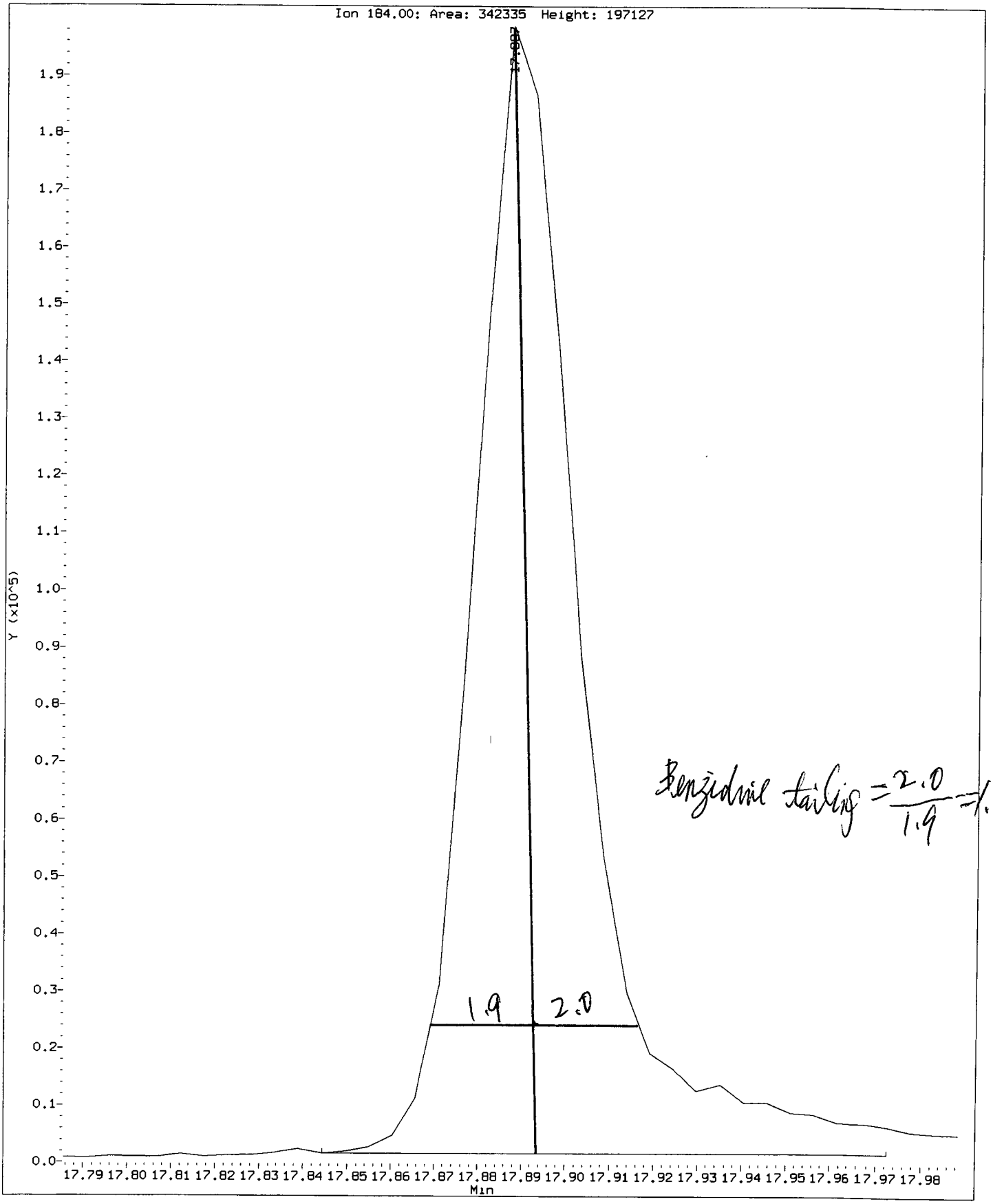
Data File: /chem2/nt6.i/20130107.b/ddt.b/01071301.D
Injection Date: 07-JAN-2013 13:30
Instrument: nt6.i
Client Sample ID: DDT0107

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem2/nt6.i/20130107.b/ddt.b/01071301.D
Injection Date: 07-JAN-2013 13:30
Instrument: nt6.i
Client Sample ID: DDT0107

Compound: Benzidine
CAS Number:



Benzidine tailing = 2.0 / 1.9 = 1.05

U797 : 00886

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130107.b/01071303.D
Lab Smp Id: IC10107 Client Smp ID: IC10107
Inj Date : 07-JAN-2013 14:38
Operator : JZ Inst ID: nt6.i
Smp Info : IC10107
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130107.b/SW846010713.m
Meth Date : 08-Jan-2013 23:32 jianqing Quant Type: ISTD
Cal Date : 07-JAN-2013 14:04 Cal File: 01071302.D
Als bottle: 3 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50
Processing Host: cserv3

01/09/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$ 1	2-Fluorophenol	112	6.430	6.439	(0.767)	63891	1.00000	1.101
$ 2	Phenol-d5	99	7.931	7.961	(0.946)	84489	1.00000	1.153
3	Phenol	94	7.947	7.983	(0.948)	87524	1.00000	1.231
$ 5	2-Chlorophenol-d4	132	8.086	8.100	(0.964)	65008	1.00000	1.147
4	Bis(2-Chloroethyl)ether	93	8.049	8.068	(0.960)	61269	1.00000	1.167
6	2-Chlorophenol	128	8.108	8.122	(0.967)	62775	1.00000	1.212
7	1,3-Dichlorobenzene	146	8.327	8.335	(0.993)	66440	1.00000	1.112
* 8	1,4-Dichlorobenzene-d4	152	8.385	8.387	(1.000)	749942	20.0000	
9	1,4-Dichlorobenzene	146	8.412	8.421	(1.003)	61322	1.00000	1.039
$ 10	1,2-Dichlorobenzene-d4	152	8.684	8.698	(1.036)	45244	1.00000	1.140
12	1,2-Dichlorobenzene	146	8.706	8.720	(1.038)	60574	1.00000	1.093
11	Benzyl alcohol	108	8.652	8.677	(1.032)	36191	1.00000	1.031
14	2,2'-oxybis(1-Chloropropane)	45	8.914	8.928	(1.063)	108551	1.00000	1.210
13	2-Methylphenol	108	8.882	8.901	(1.059)	57516	1.00000	1.166
17	Hexachloroethane	117	9.197	9.201	(1.097)	27520	1.00000	1.093
16	N-Nitroso-di-n-propylamine	70	9.128	9.163	(1.089)	44554	1.00000	1.078
15	4-Methylphenol	108	9.107	9.137	(1.086)	59006	1.00000	1.154
$ 18	Nitrobenzene-d5	82	9.310	9.334	(0.892)	73141	1.00000	1.048
19	Nitrobenzene	77	9.336	9.366	(0.895)	71218	1.00000	1.106
20	Isophorone	82	9.716	9.740	(0.931)	94307	1.00000	1.042
21	2-Nitrophenol	139	9.854	9.868	(0.945)	24187	1.00000	0.9329
22	2,4-Dimethylphenol	107	9.951	9.970	(0.954)	59154	1.00000	1.141
23	Bis(2-Chloroethoxy)methane	93	10.100	10.119	(0.968)	71608	1.00000	1.186
24	Benzoic acid	105	10.057	10.226	(0.964)	16356	2.00000	0.5105 (M)
25	2,4-Dichlorophenol	162	10.234	10.253	(0.981)	38391	1.00000	1.022
26	1,2,4-Trichlorobenzene	180	10.367	10.381	(0.994)	47889	1.00000	1.070

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
*	27 Naphthalene-d8	136	10.431	10.428	(1.000)	2834485	20.0000	
	28 Naphthalene	128	10.458	10.472	(1.003)	154704	1.00000	1.156
	29 4-Chloroaniline	127	10.592	10.611	(1.015)	63171	1.00000	1.189
	30 Hexachlorobutadiene	225	10.779	10.782	(1.033)	28863	1.00000	1.040
	31 4-Chloro-3-methylphenol	107	11.398	11.407	(1.093)	47024	1.00000	1.184
	32 2-Methylnaphthalene	141	11.580	11.589	(1.110)	78108	1.00000	1.096
	33 Hexachlorocyclopentadiene	237	11.959	11.963	(0.900)	20996	1.00000	0.6975
	34 2,4,6-Trichlorophenol	196	12.093	12.101	(0.910)	23883	1.00000	0.8941
	35 2,4,5-Trichlorophenol	196	12.152	12.155	(0.914)	28630	1.00000	0.9925
$	36 2-Fluorobiphenyl	172	12.216	12.230	(0.919)	118131	1.00000	1.087
	37 2-Chloronaphthalene	162	12.360	12.374	(0.930)	94215	1.00000	1.111
	38 2-Nitroaniline	65	12.584	12.604	(0.947)	26687	1.00000	0.9105
	39 Dimethylphthalate	163	12.953	12.972	(0.974)	91906	1.00000	1.019
	40 Acenaphthylene	152	13.044	13.052	(0.981)	135472	1.00000	1.048
	41 2,6-Dinitrotoluene	165	13.049	13.068	(0.982)	16725	1.00000	0.8042
*	42 Acenaphthene-d10	164	13.295	13.297	(1.000)	1546193	20.0000	
	43 3-Nitroaniline	138	13.263	13.287	(0.998)	20841	1.00000	0.9981 (M)
	44 Acenaphthene	153	13.343	13.357	(1.004)	87115	1.00000	1.051
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	13.599	13.619	(1.023)	124397	1.00000	1.118
	47 4-Nitrophenol	109	13.583	13.581	(1.022)	14207	1.00000	0.9709 (M)
	48 2,4-Dinitrotoluene	165	13.679	13.699	(1.029)	19525	1.00000	0.7404
	50 Diethylphthalate	149	14.101	14.126	(1.061)	104707	1.00000	1.104
	49 Fluorene	166	14.160	14.174	(1.065)	92931	1.00000	1.074
	51 4-Chlorophenyl-phenylether	204	14.182	14.190	(1.067)	48848	1.00000	1.050
	52 4-Nitroaniline	138	14.256	14.297	(1.072)	16725	1.00000	0.9793
	53 4,6-Dinitro-2-methylphenol	198	14.342	14.372	(0.915)	9475	2.00000	0.5491
	54 N-Nitrosodiphenylamine	169	14.379	14.404	(0.918)	72561	1.00000	1.081
$	55 2,4,6-Tribromophenol	330	14.582	14.602	(1.097)	9584	1.00000	0.7508
	56 4-Bromophenyl-phenylether	248	14.961	14.970	(0.955)	25258	1.00000	0.9860
	57 Hexachlorobenzene	284	15.191	15.200	(0.969)	27273	1.00000	1.069
	58 Pentachlorophenol	266	15.496	15.499	(0.989)	8926	1.00000	0.6191 (M)
*	59 Phenanthrene-d10	188	15.672	15.674	(1.000)	2224016	20.0000	
	60 Phenanthrene	178	15.704	15.723	(1.002)	129456	1.00000	1.141
	61 Anthracene	178	15.779	15.793	(1.007)	122905	1.00000	1.063
	62 Carbazole	167	16.057	16.071	(1.025)	116873	1.00000	1.137
	63 Di-n-butylphthalate	149	16.756	16.765	(1.069)	133749	1.00000	1.038
	64 Fluoranthene	202	17.649	17.663	(1.126)	110487	1.00000	1.007
	65 Pyrene	202	18.001	18.015	(0.901)	117246	1.00000	1.112
$	66 Terphenyl-d14	244	18.306	18.314	(0.916)	77291	1.00000	1.075
	67 Butylbenzylphthalate	149	19.176	19.185	(0.960)	48342	1.00000	0.9283
	68 Benzo(a)anthracene	228	19.956	19.970	(0.999)	95517	1.00000	1.061
*	69 Chrysene-d12	240	19.983	19.985	(1.000)	1798420	20.0000	
	70 3,3'-Dichlorobenzidine	252	19.962	19.970	(0.999)	34558	1.00000	1.094
	71 Chrysene	228	20.020	20.040	(1.002)	96578	1.00000	1.095
	72 bis(2-Ethylhexyl)phthalate	149	20.159	20.163	(0.956)	67485	1.00000	0.9789
*	134 Di-n-octylphthalate-d4	153	21.089	21.091	(1.000)	2365188	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)	
73	Di-n-octylphthalate	149	21.100	21.108	(1.000)	140124	1.00000	1.143	
74	Benzo(b)fluoranthene	252	21.607	21.632	(0.976)	87239	1.00000	0.9463	
75	Benzo(k)fluoranthene	252	21.639	21.664	(0.977)	96312	1.00000	1.035	
187	Total Benzofluoranthenes	252	21.607	21.664	(0.976)	174069	2.00000	1.985	(M)
76	Benzo(a)pyrene	252	22.061	22.075	(0.996)	80609	1.00000	0.9832	
* 77	Perylene-d12	264	22.141	22.138	(1.000)	1724523	20.0000		
78	Indeno(1,2,3-cd)pyrene	276	23.765	23.801	(1.073)	111489	1.00000	0.9895	
79	Dibenzo(a,h)anthracene	278	23.792	23.822	(1.075)	92872	1.00000	1.008	
80	Benzo(g,h,i)perylene	276	24.219	24.271	(1.094)	99320	1.00000	1.004	
90	N-Nitrosodimethylamine	74	3.882	3.917	(0.463)	37973	1.00000	0.9749	
103	Pyridine	79	3.882	3.853	(0.463)	62768	1.00000	0.9556	
91	Aniline	93	7.937	7.951	(0.946)	91203	1.00000	1.202	
105	1-methylnaphthalene	141	11.751	11.765	(1.126)	81810	1.00000	1.152	
111	Azobenzene (1,2-DP-Hydrazine)	77	14.427	14.447	(1.085)	123713	1.00000	1.100	
143	1,4-Dioxane	88	3.113	3.109	(0.371)	30848	1.00000	1.026	
$ 137	d8-1,4-Dioxane	96	3.059	3.057	(0.365)	29619	1.00000	1.027	
144	alpha-Terpineol	59	10.474	10.493	(1.004)	48308	1.00000	1.150	
177	p-Benzoquinone	82	7.082	7.090	(0.679)	9343	1.00000	0.7388	
99	Perylene	252	22.173	22.193	(1.001)	91315	1.00000	1.226	
133	Butylatedhydroxytoluene	205	13.450	13.464	(1.012)	78036	1.00000	1.051	
115	Tributyl Phosphate	99	14.459	14.484	(0.923)	106641	1.00000	1.017	
116	Dibutyl Phenyl Phosphate	175	16.201	16.209	(1.034)	56844	1.00000	0.8658	
117	Butyl Diphenyl Phosphate	94	17.889	17.898	(0.895)	20287	1.00000	1.004	
118	Triphenyl Phosphate	326	19.492	19.500	(0.975)	13223	1.00000	0.8700	
123	Acetophenone	105	9.074	9.099	(1.082)	79555	1.00000	1.066	
168	Pentachlorobenzene	250	13.647	13.661	(1.027)	33343	1.00000	1.013	
113	Diphenyl Oxide	170	12.541	12.550	(0.943)	71893	1.00000	1.062	
112	Biphenyl	154	12.355	12.363	(0.929)	118508	1.00000	1.203	
120	2,3,4,6-Tetrachlorophenol	232	13.888	13.891	(1.045)	19277	1.00000	0.9054	
151	1,2,4,5-Tetrachlorobenzene	216	11.916	11.925	(0.896)	40657	1.00000	1.034	
186	Carbaryl	144	16.463	16.487	(1.050)	38652	1.00000	0.8185	
178	2-Benzyl-4-Chlorophenol	218	16.420	16.439	(1.048)	18232	1.00000	0.9453	

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 01071303.D
Lab Smp Id: IC10107
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130107.b/SW846010713.m
Misc Info: 13-

Calibration Date: 07-JAN-2013
Calibration Time: 13:30
Client Smp ID: IC10107
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	532349	266174	1064698	749942	40.87
27 Naphthalene-d8	2007575	1003788	4015150	2834485	41.19
42 Acenaphthene-d10	1020441	510220	2040882	1546193	51.52
59 Phenanthrene-d10	1546074	773037	3092148	2224016	43.85
69 Chrysene-d12	1407005	703502	2814010	1798420	27.82
134 Di-n-octylphthala	1928310	964155	3856620	2365188	22.66
77 Perylene-d12	1383265	691632	2766530	1724523	24.67

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.39	-0.04
27 Naphthalene-d8	10.43	9.93	10.93	10.43	0.02
42 Acenaphthene-d10	13.30	12.80	13.80	13.29	-0.03
59 Phenanthrene-d10	15.68	15.18	16.18	15.67	-0.02
69 Chrysene-d12	19.99	19.49	20.49	19.98	-0.02
134 Di-n-octylphthala	21.09	20.59	21.59	21.09	-0.02
77 Perylene-d12	22.14	21.64	22.64	22.14	-0.02

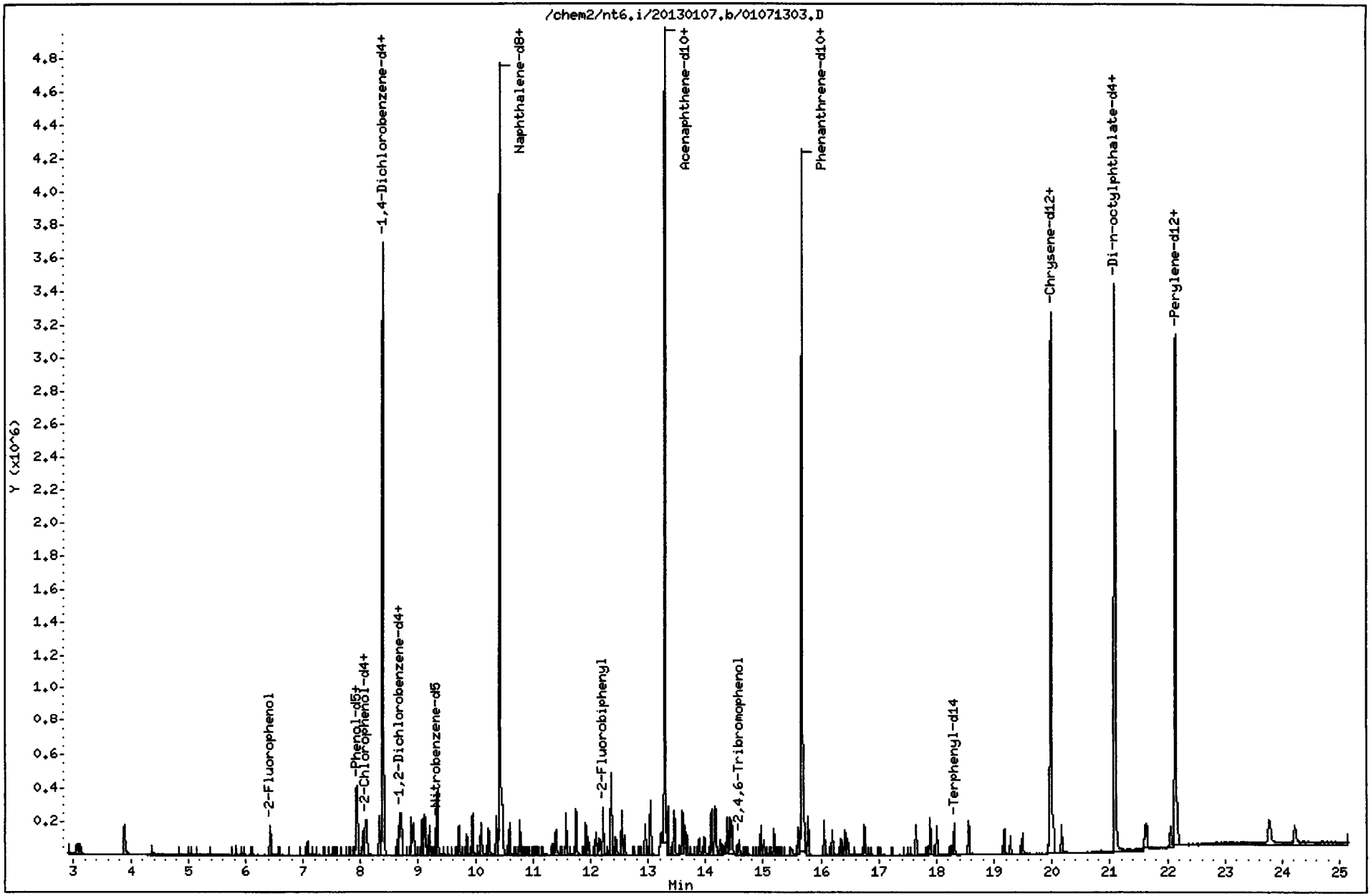
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130107.b/01071303.D
Date : 07-JAN-2013 14:38
Client ID: IC10107
Sample Info: IC10107

Instrument: nt6.i

Operator: JZ
Column diameter: 0.32

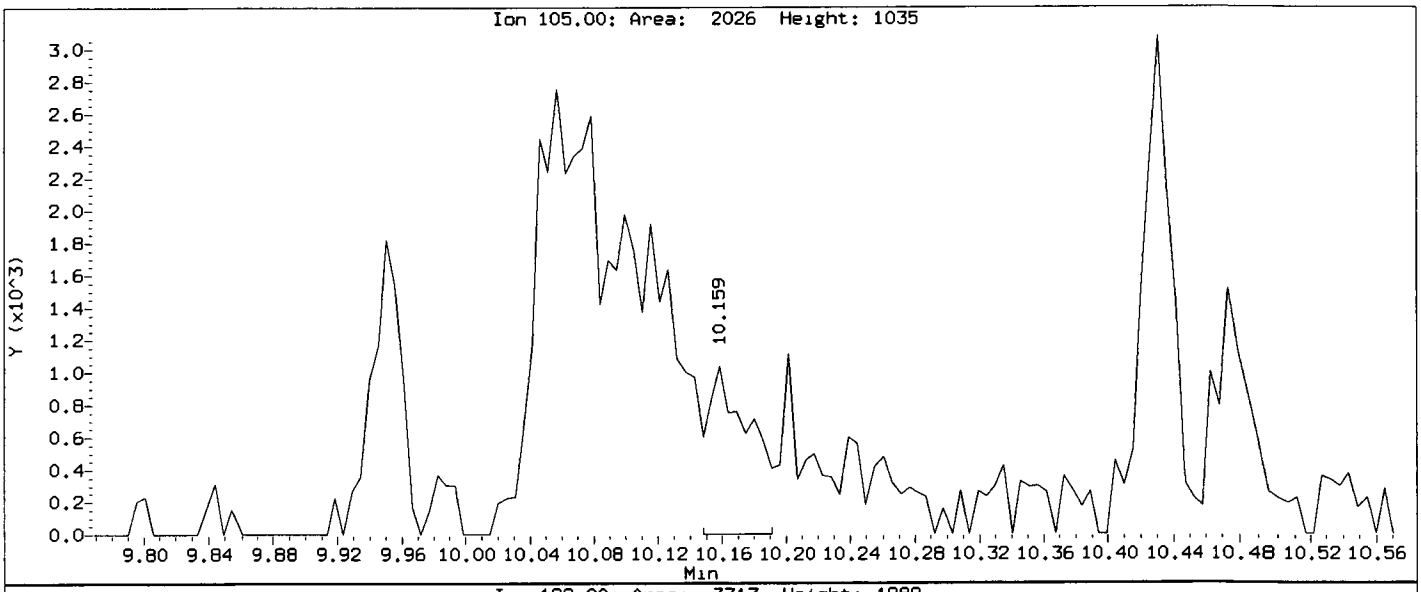
Column phase: ZB-5msi

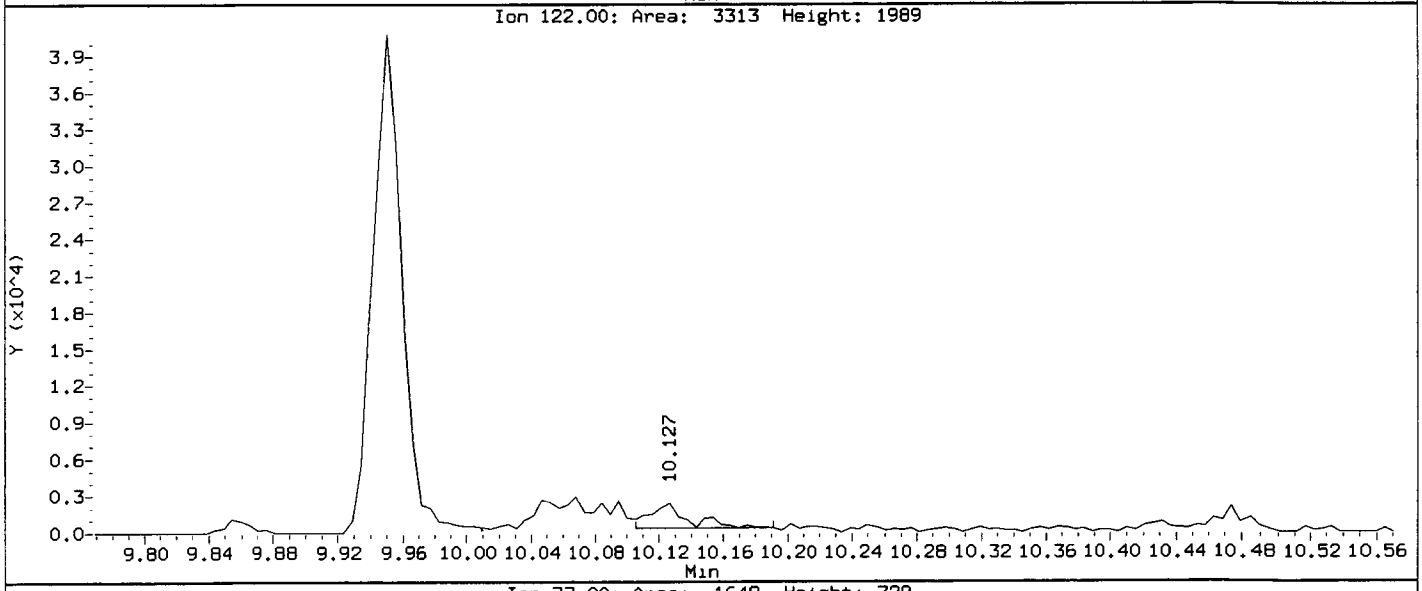


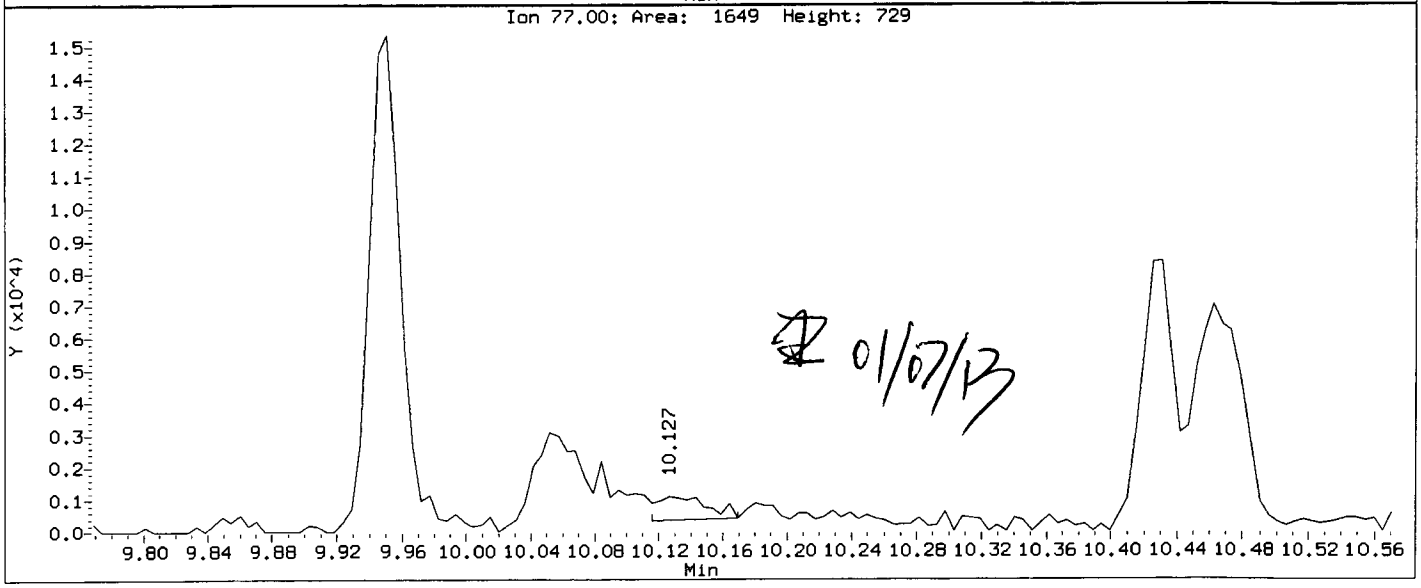
USEPA 8270

Data File: /chem2/nt6.i/20130107.b/01071303.D
Injection Date: 07-JAN-2013 14:38
Instrument: nt6.i
Client Sample ID: IC10107

Compound: Benzoic acid
CAS Number: 65-85-0



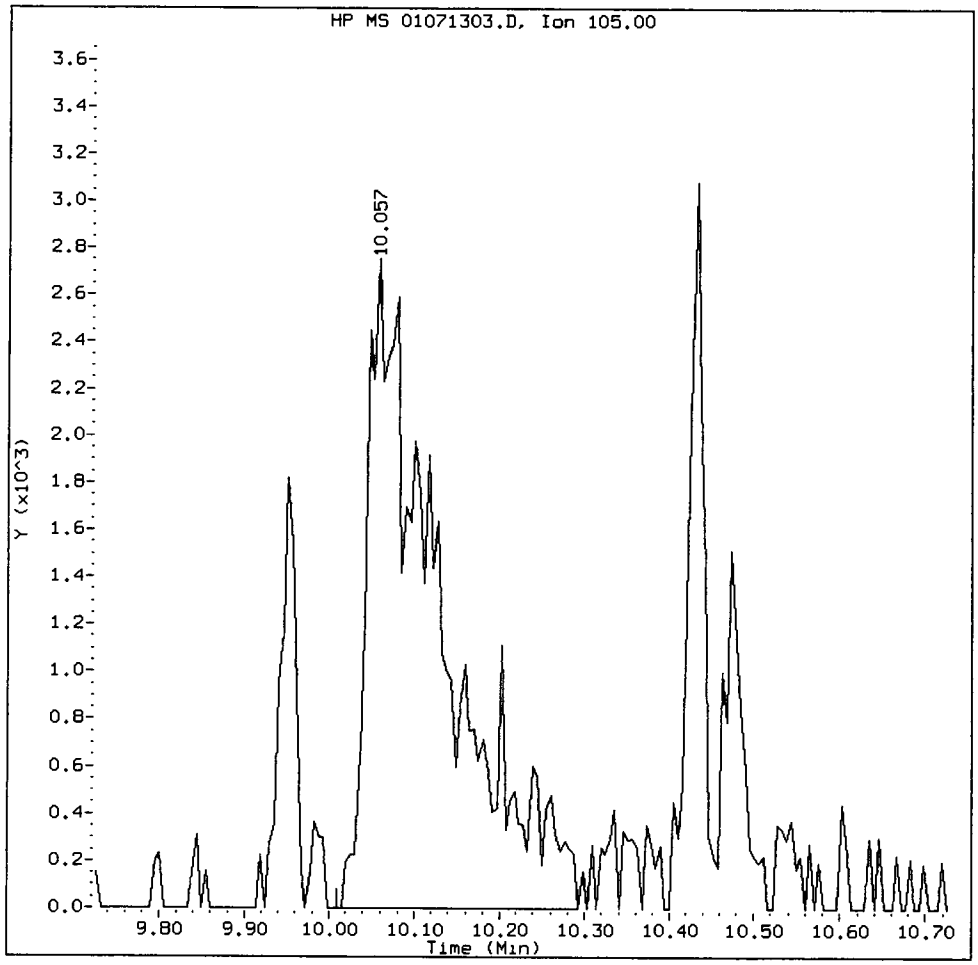




01/07/13

IC10107, /chem2/nt6.i/20130107.b/01071303.D

Benzoic acid Amount: 2.00 Area: 16356



MANUAL INTEGRATION for Benzoic acid

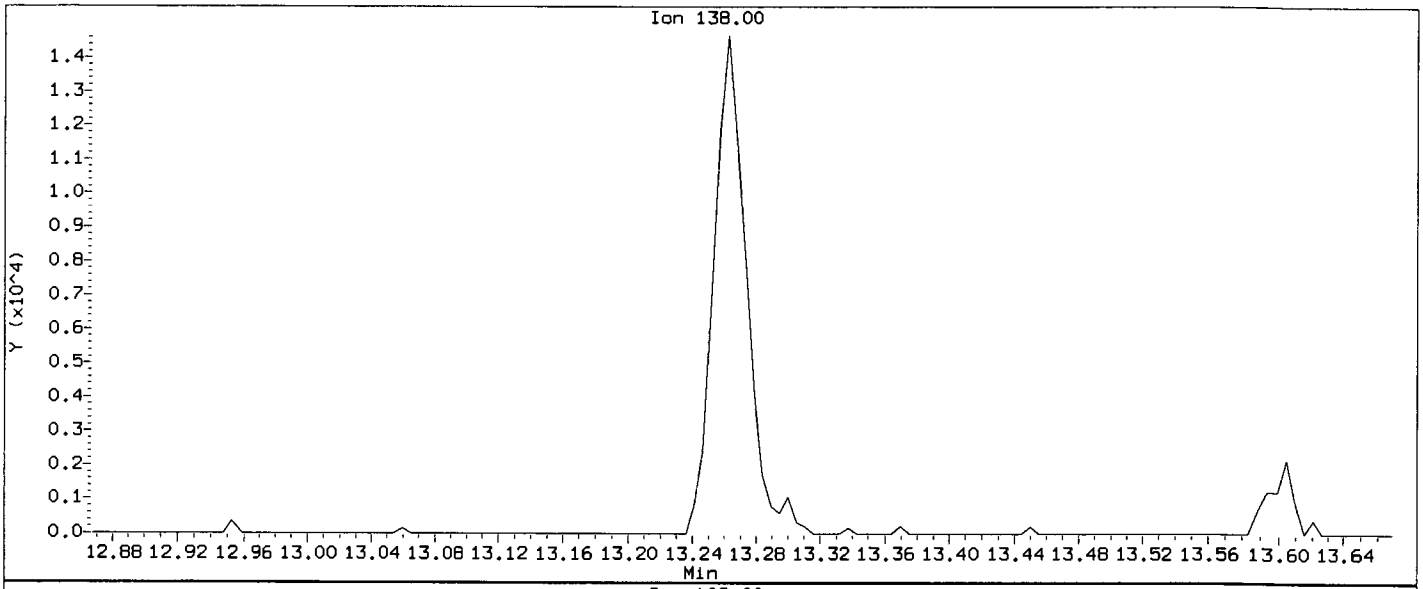
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

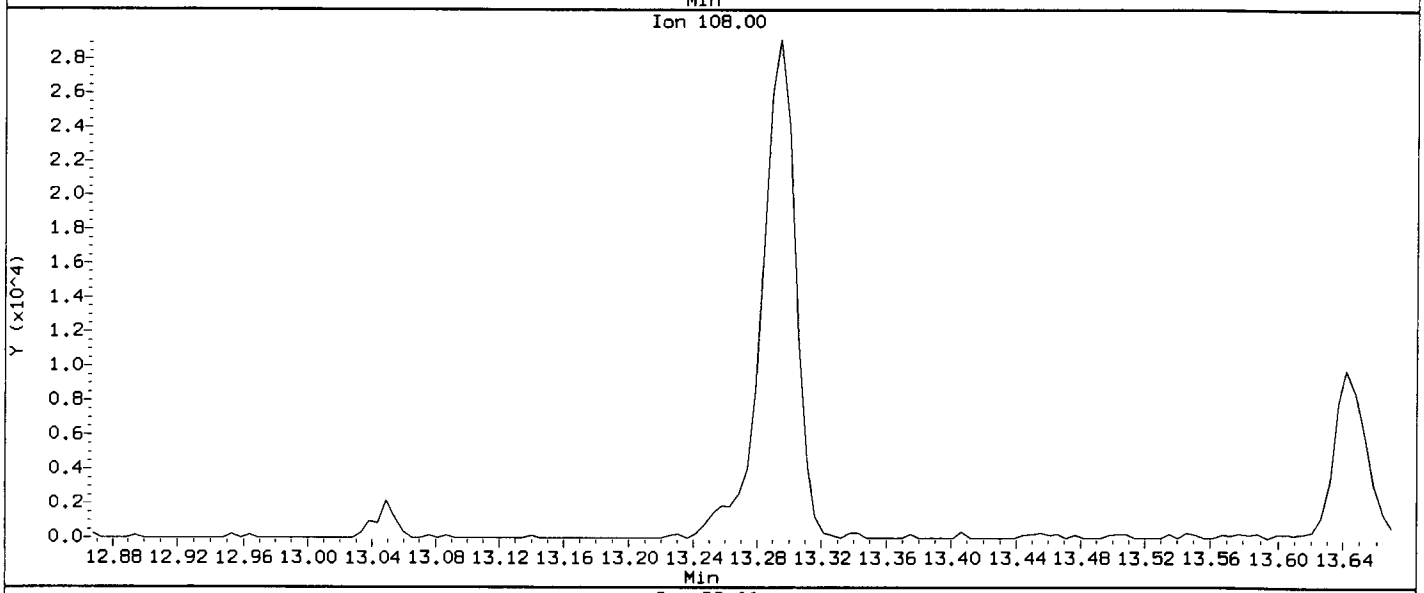
5. Other _____

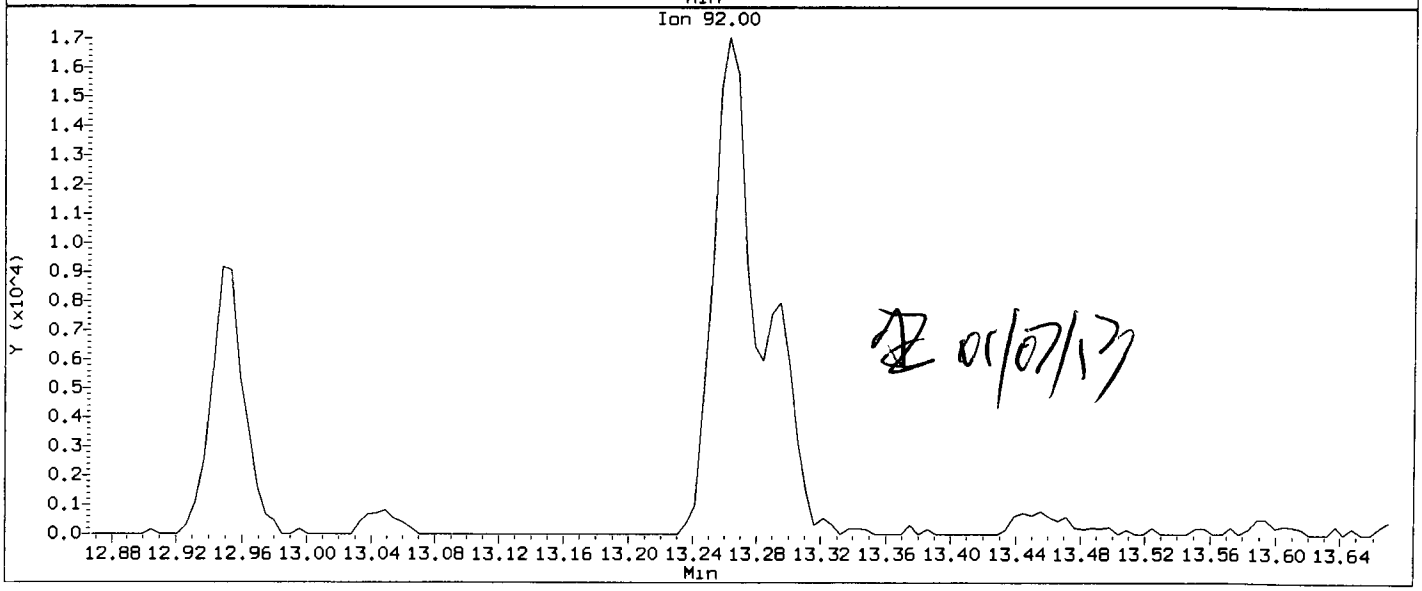
Analyst: _____ Date: 01/07/13

Data File: /chem2/nt6.i/20130107.b/01071303.D
Injection Date: 07-JAN-2013 14:38
Instrument: nt6.i
Client Sample ID: IC10107

Compound: 3-Nitroaniline
CAS Number: 99-09-2



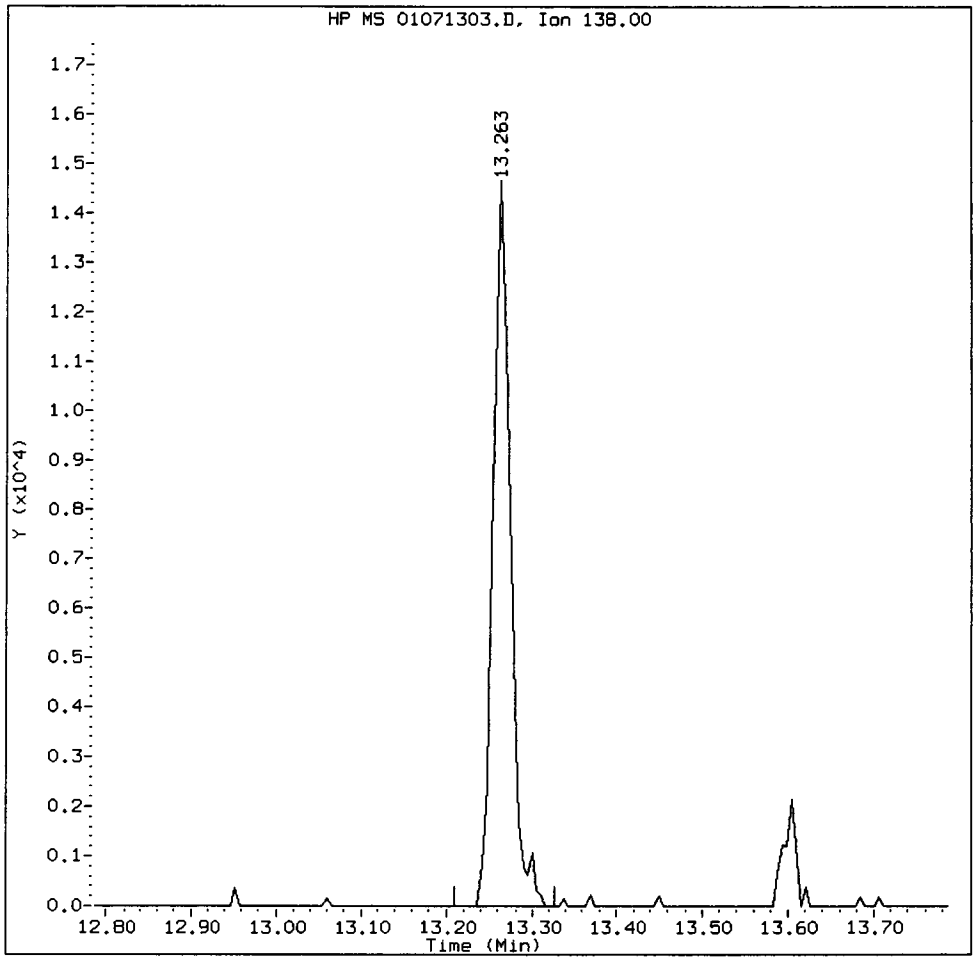




01/07/13

IC10107, /chem2/nt6.i/20130107.b/01071303.D

3-Nitroaniline Amount: 1.00 Area: 20841



MANUAL INTEGRATION for 3-Nitroaniline

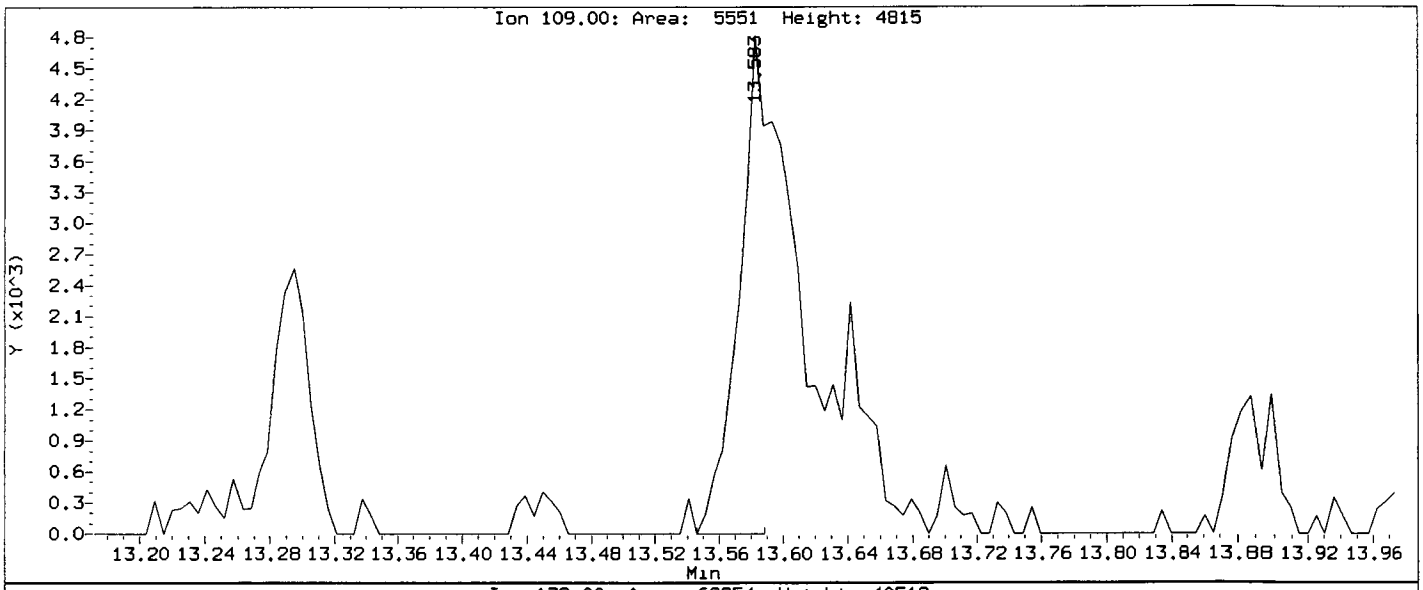
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

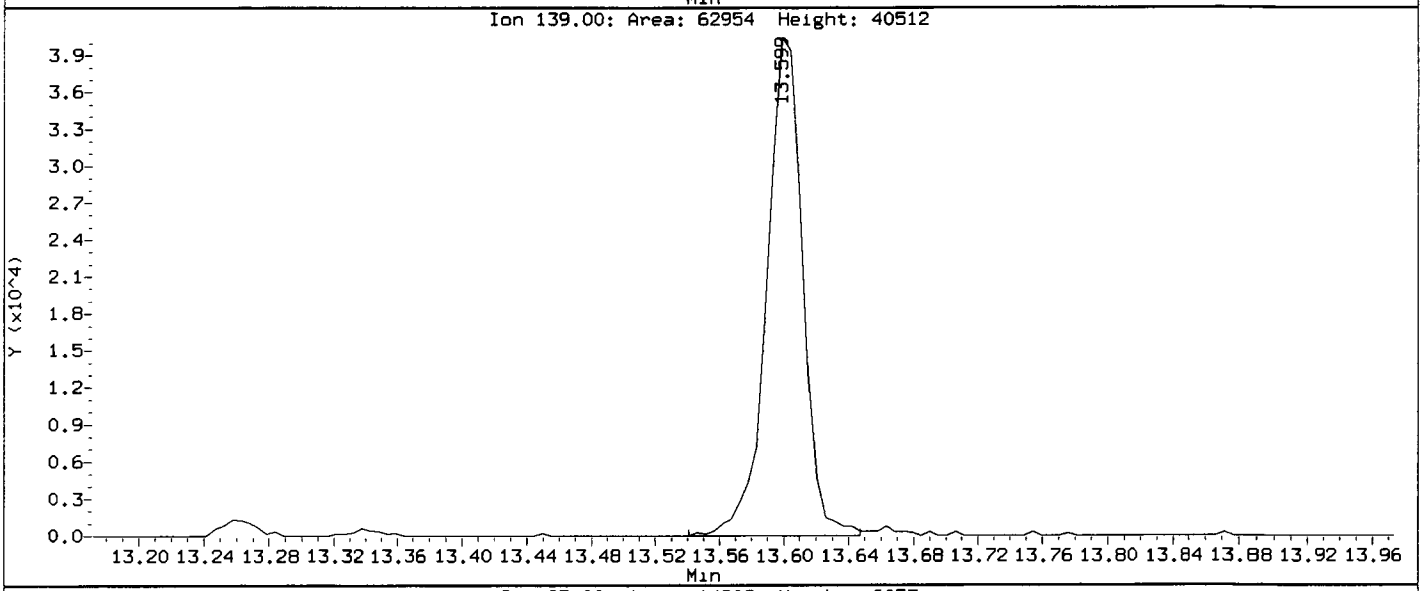
5. Other _____

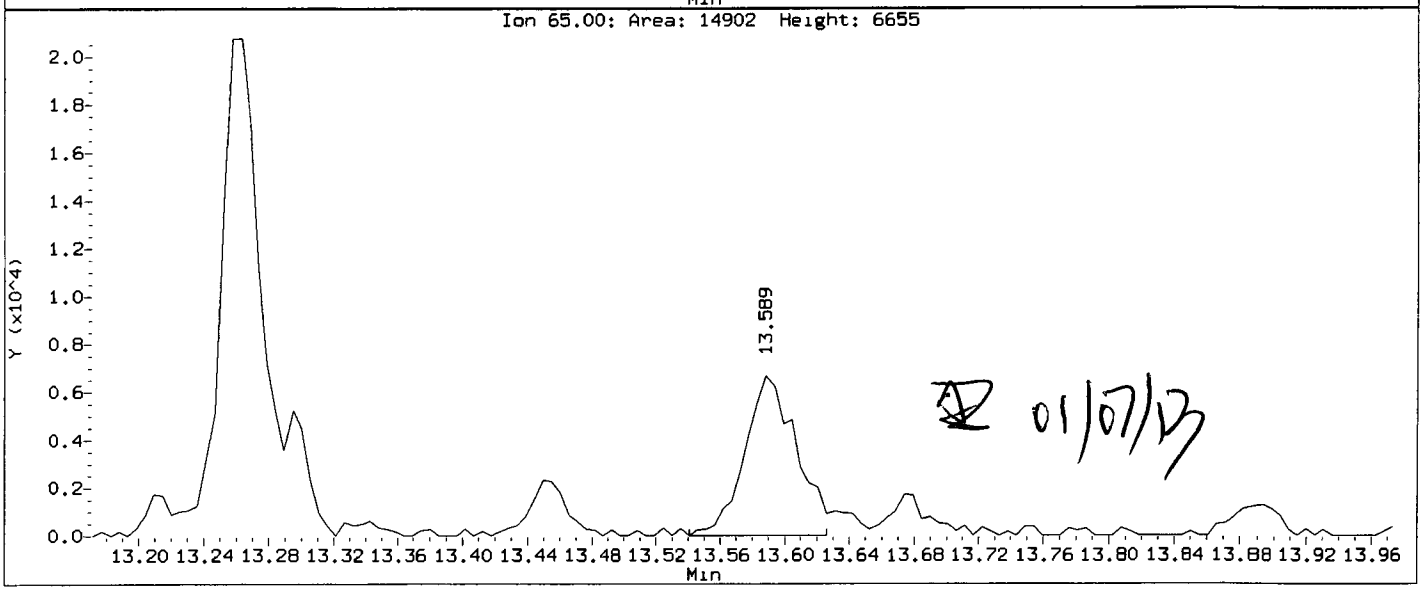
Analyst: _____ Date: 01/07/13

Data File: /chem2/nt6.1/20130107.b/01071303.D
Injection Date: 07-JAN-2013 14:38
Instrument: nt6.1
Client Sample ID: IC10107

Compound: 4-Nitrophenol
CAS Number: 100-02-7



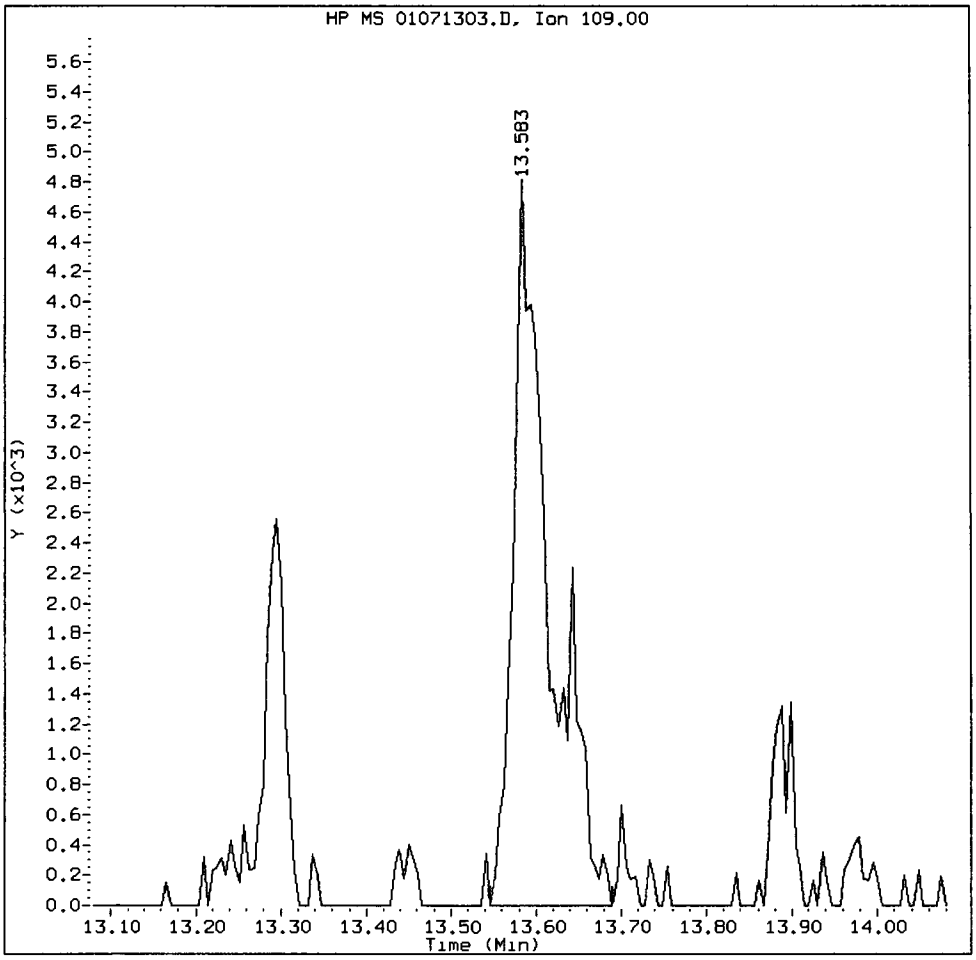




01/07/13

IC10107, /chem2/nt6.i/20130107.b/01071303.D

4-Nitrophenol Amount: 1.00 Area: 14207



MANUAL INTEGRATION for 4-Nitrophenol

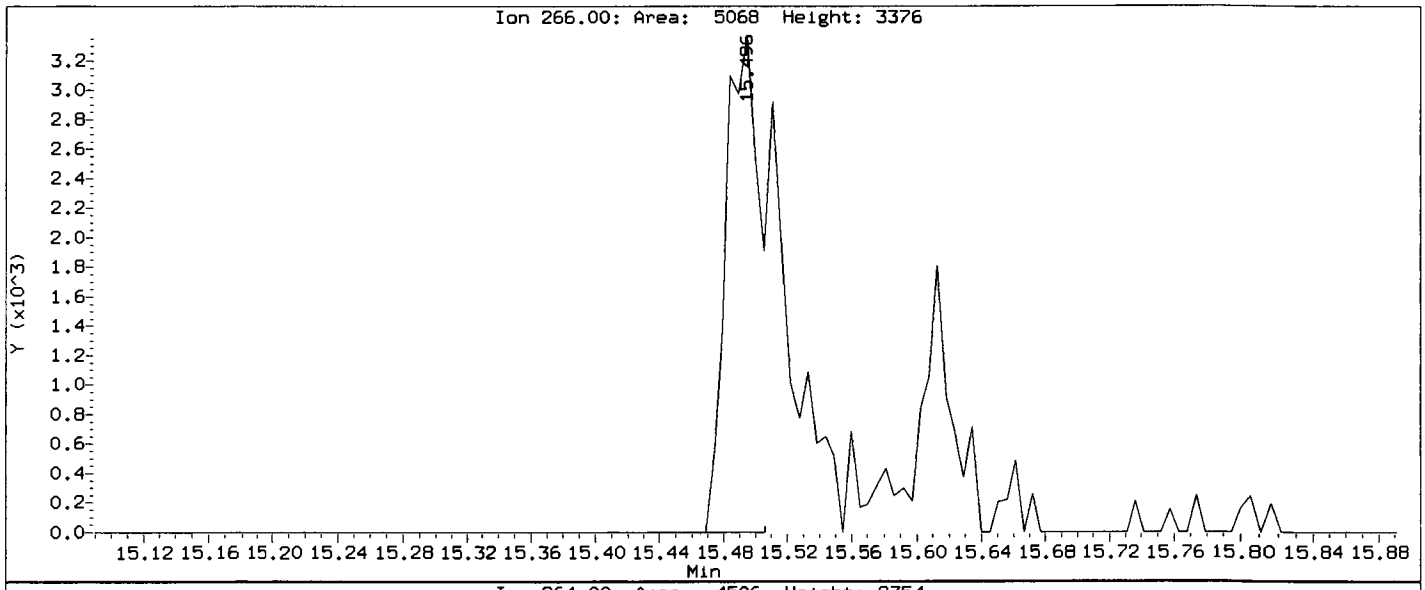
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

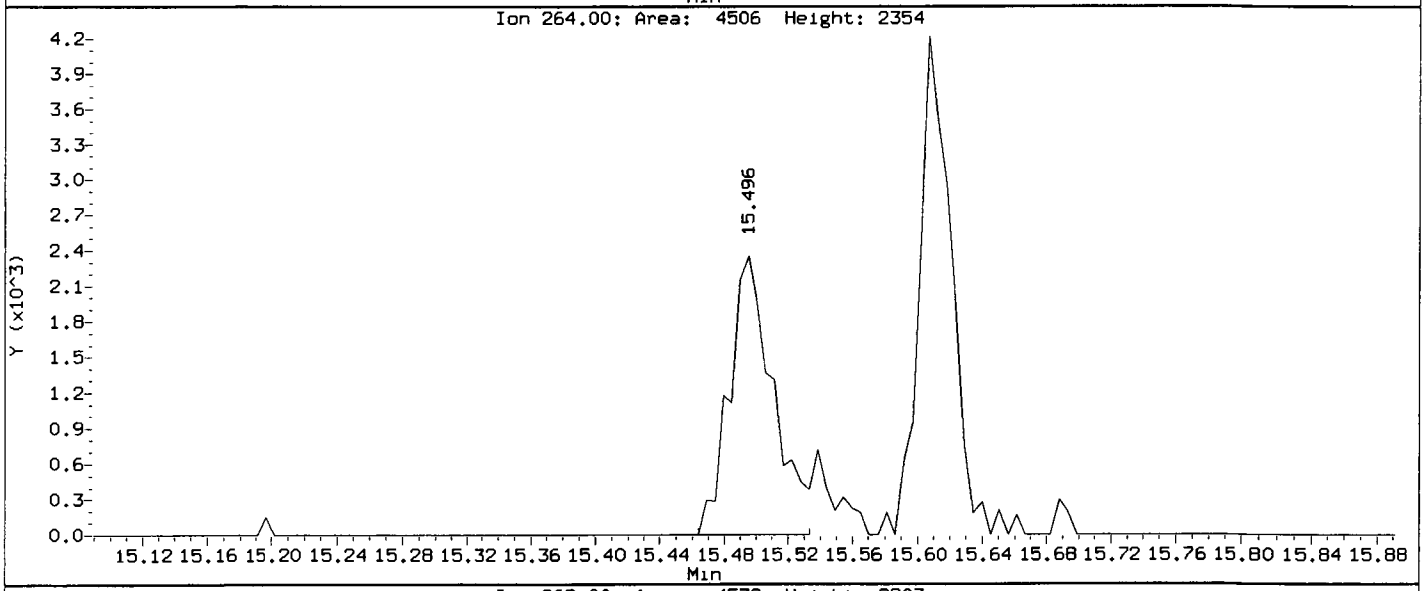
5. Other _____

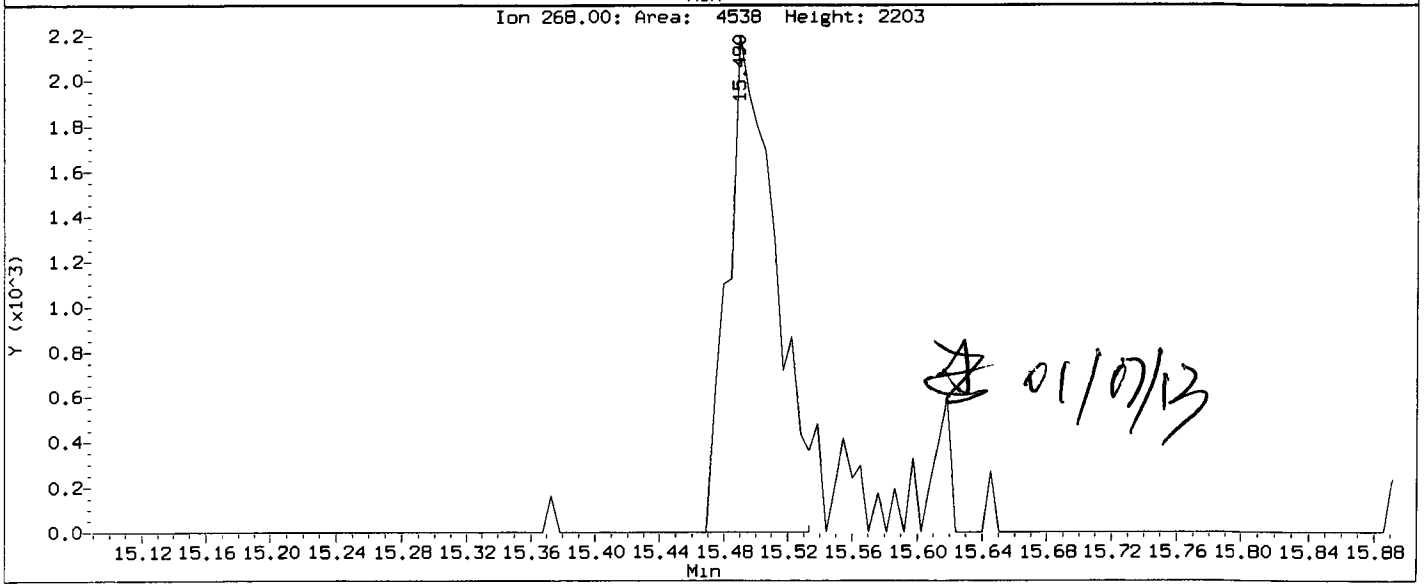
Analyst: _____ Date: 01/07/13

Data File: /chem2/nt6.i/20130107.b/01071303.D
Injection Date: 07-JAN-2013 14:38
Instrument: nt6.i
Client Sample ID: IC10107

Compound: Pentachlorophenol
CAS Number: 87-86-5



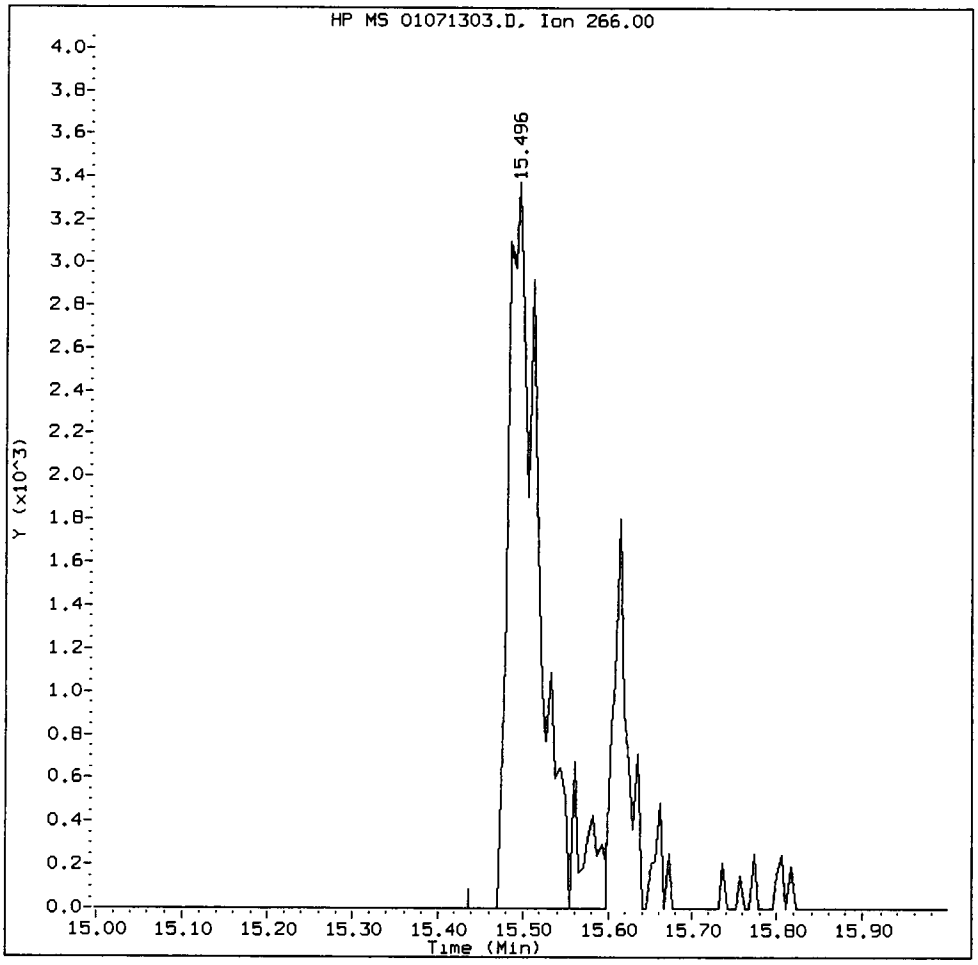




01/07/13

IC10107, /chem2/nt6.i/20130107.b/01071303.D

Pentachlorophenol Amount: 0.00 Area: 8926



MANUAL INTEGRATION for Pentachlorophenol

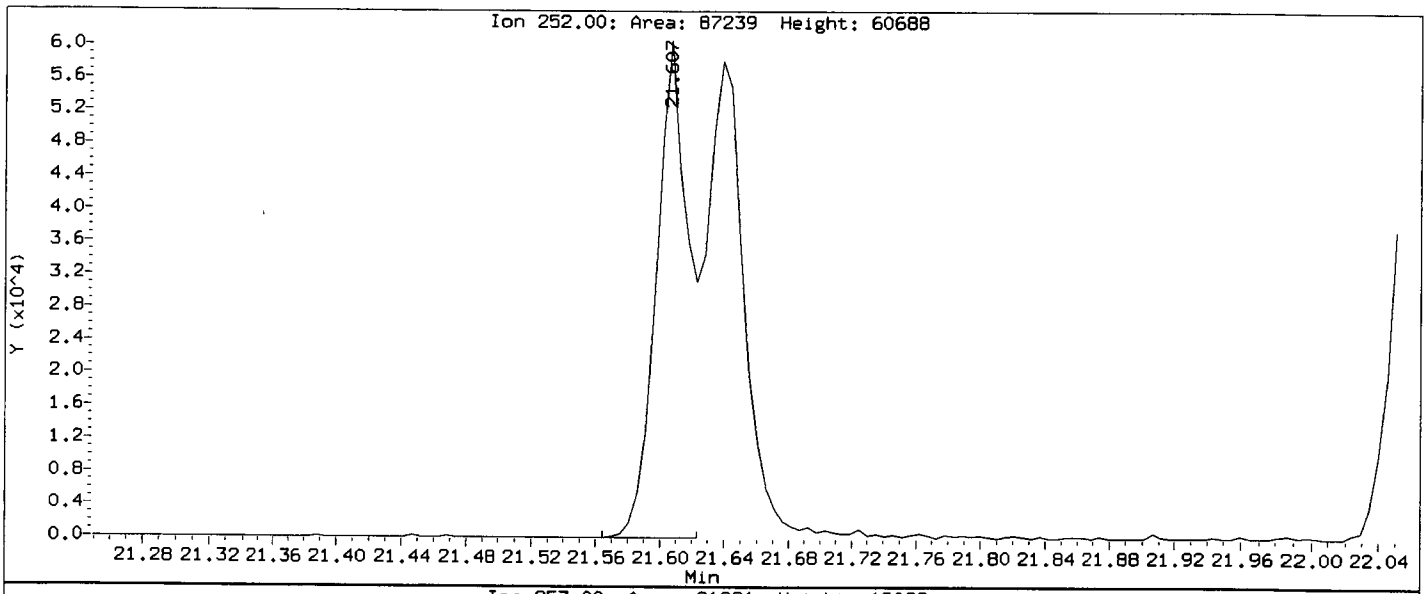
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

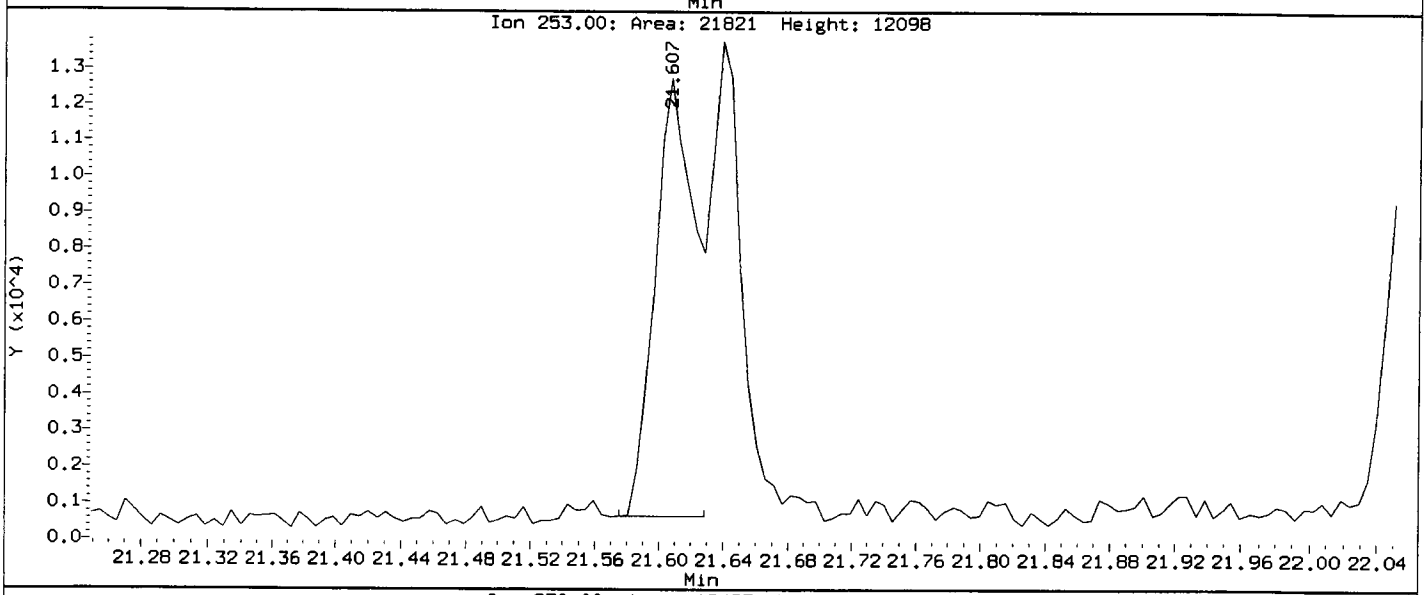
5. Other _____

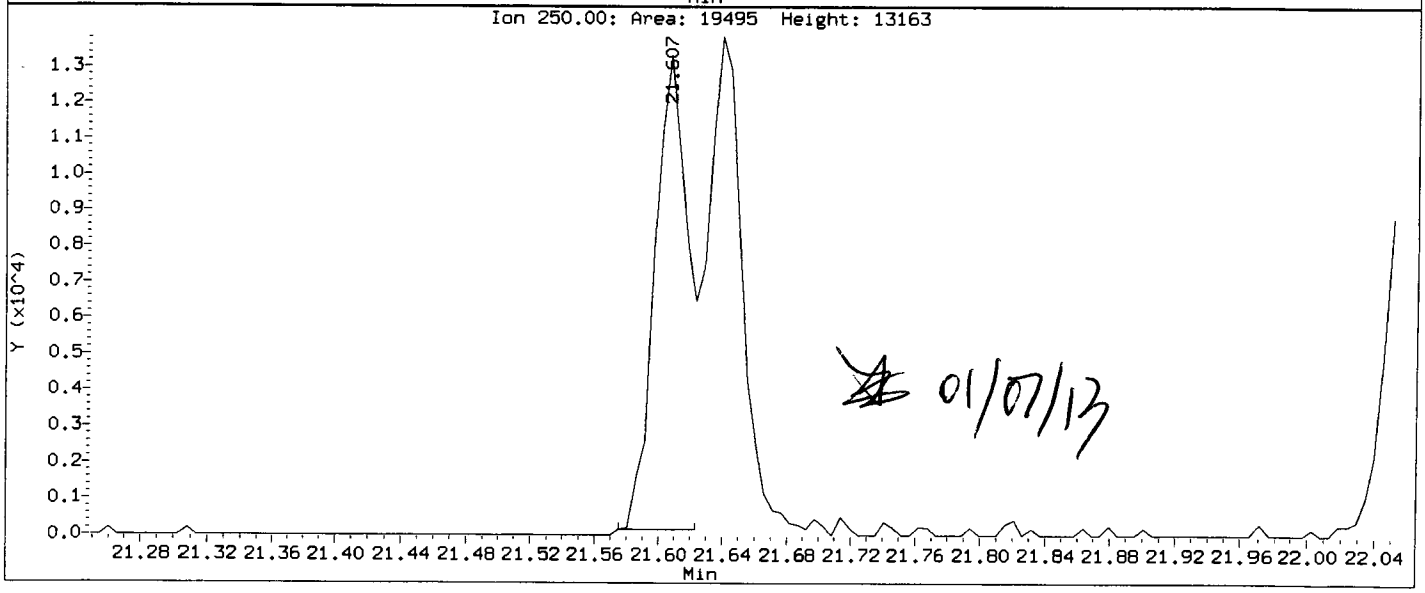
Analyst: _____ Date: 01/07/13

Data File: /chem2/nt6.i/20130107.b/01071303.D
Injection Date: 07-JAN-2013 14:38
Instrument: nt6.i
Client Sample ID: IC10107

Compound: Total Benzofluoranthenes
CAS Number:



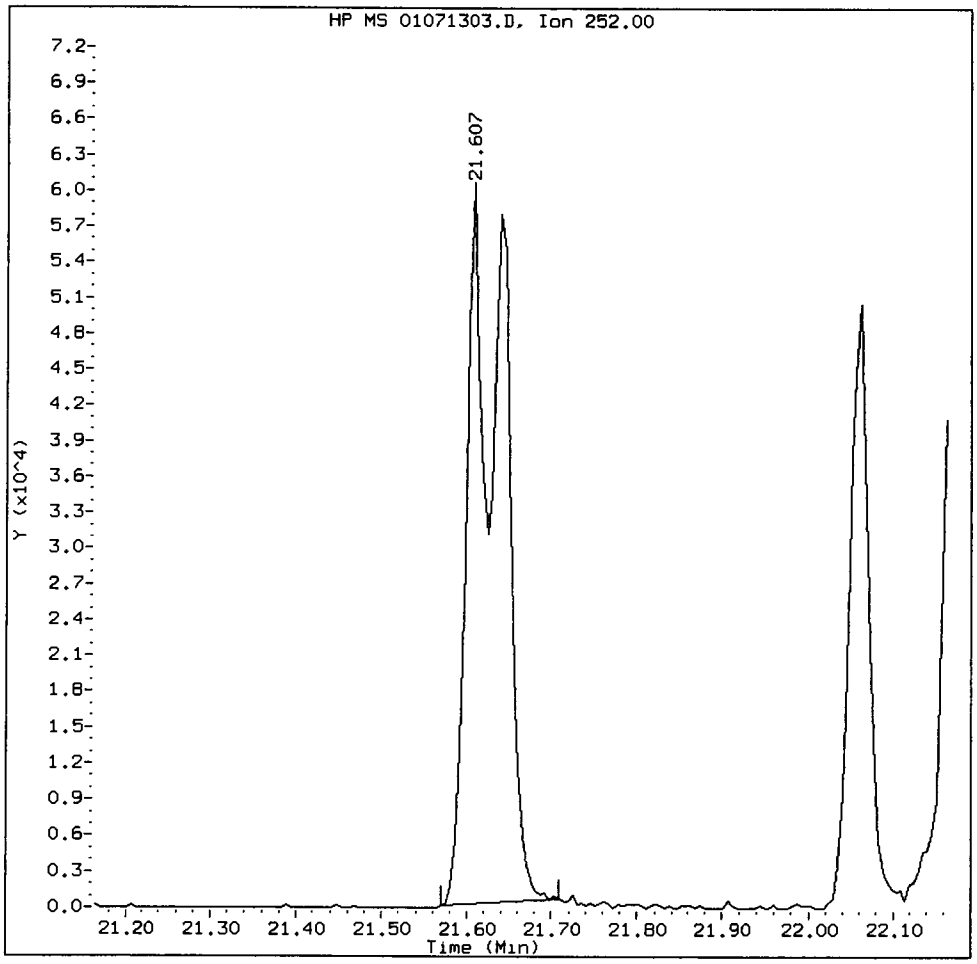




01/07/13

IC10107, /chem2/nt6.i/20130107.b/01071303.D

Total Benzofluoranthenes Amount: 2.00 Area: 174069



MANUAL INTEGRATION for Total Benzofluoranthenes

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 01/07/13

UZ87 : 0090

CO-ELUTION SUMMARY FOR FILE - 01071303.D

Lab ID: IC10107, Method: SW846010713.m, Instrument: nt6.i, Date: 07-JAN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130107.b/01071304.D
Lab Smp Id: IC50107 Client Smp ID: IC50107
Inj Date : 07-JAN-2013 15:12
Operator : JZ Inst ID: nt6.i
Smp Info : IC50107
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130107.b/SW846010713.m
Meth Date : 07-Jan-2013 06:44 jianqing Quant Type: ISTD
Cal Date : 07-JAN-2013 15:12 Cal File: 01071304.D
Als bottle: 4 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

01/07/13

AMOUNTS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.431	6.439	(0.767)	336452	5.00000	5.065
$	2 Phenol-d5	99	7.932	7.961	(0.946)	435662	5.00000	5.012
	3 Phenol	94	7.948	7.983	(0.948)	402090	5.00000	4.724
$	5 2-Chlorophenol-d4	132	8.087	8.100	(0.964)	324917	5.00000	4.935
	4 Bis(2-Chloroethyl)ether	93	8.049	8.068	(0.960)	309371	5.00000	4.960
	6 2-Chlorophenol	128	8.108	8.122	(0.967)	280396	5.00000	4.654
	7 1,3-Dichlorobenzene	146	8.327	8.335	(0.993)	327980	5.00000	4.904
*	8 1,4-Dichlorobenzene-d4	152	8.386	8.387	(1.000)	769552	20.0000	
	9 1,4-Dichlorobenzene	146	8.412	8.421	(1.003)	322363	5.00000	5.061
$	10 1,2-Dichlorobenzene-d4	152	8.685	8.698	(1.036)	223574	5.00000	4.906
	12 1,2-Dichlorobenzene	146	8.706	8.720	(1.038)	298822	5.00000	4.902
	11 Benzyl alcohol	108	8.658	8.677	(1.032)	193924	5.00000	5.108
	14 2,2'-oxybis(1-Chloropropane)	45	8.915	8.928	(1.063)	524159	5.00000	4.848
	13 2-Methylphenol	108	8.883	8.901	(1.059)	268022	5.00000	4.760
	17 Hexachloroethane	117	9.198	9.201	(1.097)	135486	5.00000	4.897
	16 N-Nitroso-di-n-propylamine	70	9.128	9.163	(1.089)	225670	5.00000	4.968
	15 4-Methylphenol	108	9.107	9.137	(1.086)	276584	5.00000	4.774
$	18 Nitrobenzene-d5	82	9.310	9.334	(0.893)	391602	5.00000	5.154
	19 Nitrobenzene	77	9.337	9.366	(0.895)	359335	5.00000	5.006
	20 Isophorone	82	9.716	9.740	(0.932)	500961	5.00000	5.134
	21 2-Nitrophenol	139	9.855	9.868	(0.945)	131905	5.00000	5.200
	22 2,4-Dimethylphenol	107	9.951	9.970	(0.954)	290036	5.00000	4.934
	23 Bis(2-Chloroethoxy)methane	93	10.101	10.119	(0.969)	346402	5.00000	4.900
	24 Benzoic acid	105	10.090	10.226	(0.968)	230977	10.0000	14.74
	25 2,4-Dichlorophenol	162	10.234	10.253	(0.982)	200912	5.00000	5.097
	26 1,2,4-Trichlorobenzene	180	10.368	10.381	(0.994)	236712	5.00000	4.954
*	27 Naphthalene-d8	136	10.426	10.428	(1.000)	2853857	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	10.459	10.472	(1.003)	757102	5.00000	4.929
	29 4-Chloroaniline	127	10.592	10.611	(1.016)	304291	5.00000	4.890
	30 Hexachlorobutadiene	225	10.774	10.782	(1.033)	142079	5.00000	4.944
	31 4-Chloro-3-methylphenol	107	11.393	11.407	(1.093)	220776	5.00000	4.826
	32 2-Methylnaphthalene	141	11.580	11.589	(1.111)	383408	5.00000	4.937
	33 Hexachlorocyclopentadiene	237	11.960	11.963	(0.900)	132831	5.00000	5.639
	34 2,4,6-Trichlorophenol	196	12.088	12.101	(0.909)	129912	5.00000	5.265
	35 2,4,5-Trichlorophenol	196	12.147	12.155	(0.914)	136234	5.00000	4.931
$	36 2-Fluorobiphenyl	172	12.216	12.230	(0.919)	585327	5.00000	5.032
	37 2-Chloronaphthalene	162	12.360	12.374	(0.930)	454432	5.00000	4.965
	38 2-Nitroaniline	65	12.585	12.604	(0.947)	148102	5.00000	5.315
	39 Dimethylphthalate	163	12.948	12.972	(0.974)	458679	5.00000	5.050
	40 Acenaphthylene	152	13.039	13.052	(0.981)	690594	5.00000	5.103
	41 2,6-Dinitrotoluene	165	13.049	13.068	(0.982)	99378	5.00000	5.484
*	42 Acenaphthene-d10	164	13.295	13.297	(1.000)	1512855	20.0000	
	43 3-Nitroaniline	138	13.258	13.287	(0.997)	107089	5.00000	5.123
	44 Acenaphthene	153	13.343	13.357	(1.004)	417526	5.00000	4.949
	45 2,4-Dinitrophenol	184	13.429	13.458	(1.010)	64184	10.0000	10.00
	46 Dibenzofuran	168	13.600	13.619	(1.023)	565936	5.00000	4.818
	47 4-Nitrophenol	109	13.568	13.581	(1.020)	67045	5.00000	4.910
	48 2,4-Dinitrotoluene	165	13.674	13.699	(1.029)	125468	5.00000	5.678
	50 Diethylphthalate	149	14.102	14.126	(1.061)	487867	5.00000	4.878
	49 Fluorene	166	14.161	14.174	(1.065)	442390	5.00000	4.932
	51 4-Chlorophenyl-phenylether	204	14.177	14.190	(1.066)	230122	5.00000	4.906
	52 4-Nitroaniline	138	14.251	14.297	(1.072)	88631	5.00000	5.200
	53 4,6-Dinitro-2-methylphenol	198	14.332	14.372	(0.914)	127341	10.0000	10.00
	54 N-Nitrosodiphenylamine	169	14.380	14.404	(0.918)	333931	5.00000	4.886
$	55 2,4,6-Tribromophenol	330	14.583	14.602	(1.097)	60550	5.00000	5.636
	56 4-Bromophenyl-phenylether	248	14.962	14.970	(0.955)	121356	5.00000	4.994
	57 Hexachlorobenzene	284	15.186	15.200	(0.969)	121353	5.00000	4.802
	58 Pentachlorophenol	266	15.485	15.499	(0.988)	55200	5.00000	5.000
*	59 Phenanthrene-d10	188	15.672	15.674	(1.000)	2142654	20.0000	
	60 Phenanthrene	178	15.704	15.723	(1.002)	571564	5.00000	4.782
	61 Anthracene	178	15.779	15.793	(1.007)	598242	5.00000	5.026
	62 Carbazole	167	16.057	16.071	(1.025)	540615	5.00000	4.899
	63 Di-n-butylphthalate	149	16.752	16.765	(1.069)	706748	5.00000	5.231
	64 Fluoranthene	202	17.644	17.663	(1.126)	550645	5.00000	5.085
	65 Pyrene	202	18.002	18.015	(0.901)	587256	5.00000	5.085
$	66 Terphenyl-d14	244	18.306	18.314	(0.916)	388782	5.00000	5.096
	67 Butylbenzylphthalate	149	19.172	19.185	(0.959)	270702	5.00000	5.363
	68 Benzo(a)anthracene	228	19.957	19.970	(0.999)	448789	5.00000	4.925
*	69 Chrysene-d12	240	19.984	19.985	(1.000)	1741144	20.0000	
	70 3,3'-Dichlorobenzidine	252	19.957	19.970	(0.999)	150081	5.00000	4.729
	71 Chrysene	228	20.021	20.040	(1.002)	439604	5.00000	4.846
	72 bis(2-Ethylhexyl)phthalate	149	20.160	20.163	(0.956)	354482	5.00000	5.238
*	134 Di-n-octylphthalate-d4	153	21.089	21.091	(1.000)	2258769	20.0000	
	73 Di-n-octylphthalate	149	21.095	21.108	(1.000)	637903	5.00000	4.881

VZ97 . 0090U

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	21.608	21.632	(0.976)	426008	5.00000	5.082
75	Benzo(k)fluoranthene	252	21.640	21.664	(0.978)	451888	5.00000	4.982
187	Total Benzofluoranthenes	252	21.640	21.664	(0.978)	830916	10.0000	10.05 (M)
76	Benzo(a)pyrene	252	22.056	22.075	(0.996)	380098	5.00000	4.994
* 77	Perylene-d12	264	22.136	22.138	(1.000)	1630003	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	23.766	23.801	(1.074)	527716	5.00000	5.004
79	Dibenzo(a,h)anthracene	278	23.782	23.822	(1.074)	432463	5.00000	4.963
80	Benzo(g,h,i)perylene	276	24.220	24.271	(1.094)	467361	5.00000	4.989
90	N-Nitrosodimethylamine	74	3.882	3.917	(0.463)	210515	5.00000	5.193
103	Pyridine	79	3.866	3.853	(0.461)	358504	5.00000	5.268
91	Aniline	93	7.937	7.951	(0.946)	453238	5.00000	4.920
105	1-methylnaphthalene	141	11.751	11.765	(1.127)	383254	5.00000	4.820
93	Benzidine	184	17.889	17.892	(0.895)	199489	5.00000	5.000
111	Azobenzene (1,2-DP-Hydrazine)	77	14.428	14.447	(1.085)	601564	5.00000	4.985
143	1,4-Dioxane	88	3.113	3.109	(0.371)	152331	5.00000	4.904
$ 137	d8-1,4-Dioxane	96	3.054	3.057	(0.364)	149170	5.00000	4.954
144	alpha-Terpineol	59	10.475	10.493	(1.005)	228004	5.00000	4.839
177	p-Benzoquinone	82	7.077	7.090	(0.679)	69355	5.00000	5.959
99	Perylene	252	22.168	22.193	(1.001)	348921	5.00000	4.471
133	Butylatedhydroxytoluene	205	13.450	13.464	(1.012)	391587	5.00000	5.063
115	Tributyl Phosphate	99	14.460	14.484	(0.923)	580264	5.00000	5.304
116	Dibutyl Phenyl Phosphate	175	16.196	16.209	(1.033)	326609	5.00000	5.440
117	Butyl Diphenyl Phosphate	94	17.889	17.898	(0.895)	115081	5.00000	5.396
118	Triphenyl Phosphate	326	19.492	19.500	(0.975)	71766	5.00000	5.286
123	Acetophenone	105	9.075	9.099	(1.082)	405673	5.00000	4.985
168	Pentachlorobenzene	250	13.642	13.661	(1.026)	157348	5.00000	4.910
113	Diphenyl Oxide	170	12.542	12.550	(0.943)	348033	5.00000	4.974
112	Biphenyl	154	12.355	12.363	(0.929)	535041	5.00000	4.799
120	2,3,4,6-Tetrachlorophenol	232	13.883	13.891	(1.044)	97738	5.00000	5.089
151	1,2,4,5-Tetrachlorobenzene	216	11.917	11.925	(0.896)	191965	5.00000	4.911
186	Carbaryl	144	16.463	16.487	(1.050)	236287	5.00000	5.593
178	2-Benzyl-4-Chlorophenol	218	16.415	16.439	(1.047)	96987	5.00000	5.248

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 01071304.D
Lab Smp Id: IC50107
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130107.b/SW846010713.m
Misc Info: 13-

Calibration Date: 07-JAN-2013
Calibration Time: 13:30
Client Smp ID: IC50107
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	532349	266174	1064698	769552	44.56
27 Naphthalene-d8	2007575	1003788	4015150	2853857	42.15
42 Acenaphthene-d10	1020441	510220	2040882	1512855	48.26
59 Phenanthrene-d10	1546074	773037	3092148	2142654	38.59
69 Chrysene-d12	1407005	703502	2814010	1741144	23.75
134 Di-n-octylphthala	1928310	964155	3856620	2258769	17.14
77 Perylene-d12	1383265	691632	2766530	1630003	17.84

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.39	-0.04
27 Naphthalene-d8	10.43	9.93	10.93	10.43	-0.03
42 Acenaphthene-d10	13.30	12.80	13.80	13.30	-0.02
59 Phenanthrene-d10	15.68	15.18	16.18	15.67	-0.02
69 Chrysene-d12	19.99	19.49	20.49	19.98	-0.01
134 Di-n-octylphthala	21.09	20.59	21.59	21.09	-0.01
77 Perylene-d12	22.14	21.64	22.64	22.14	-0.04

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.

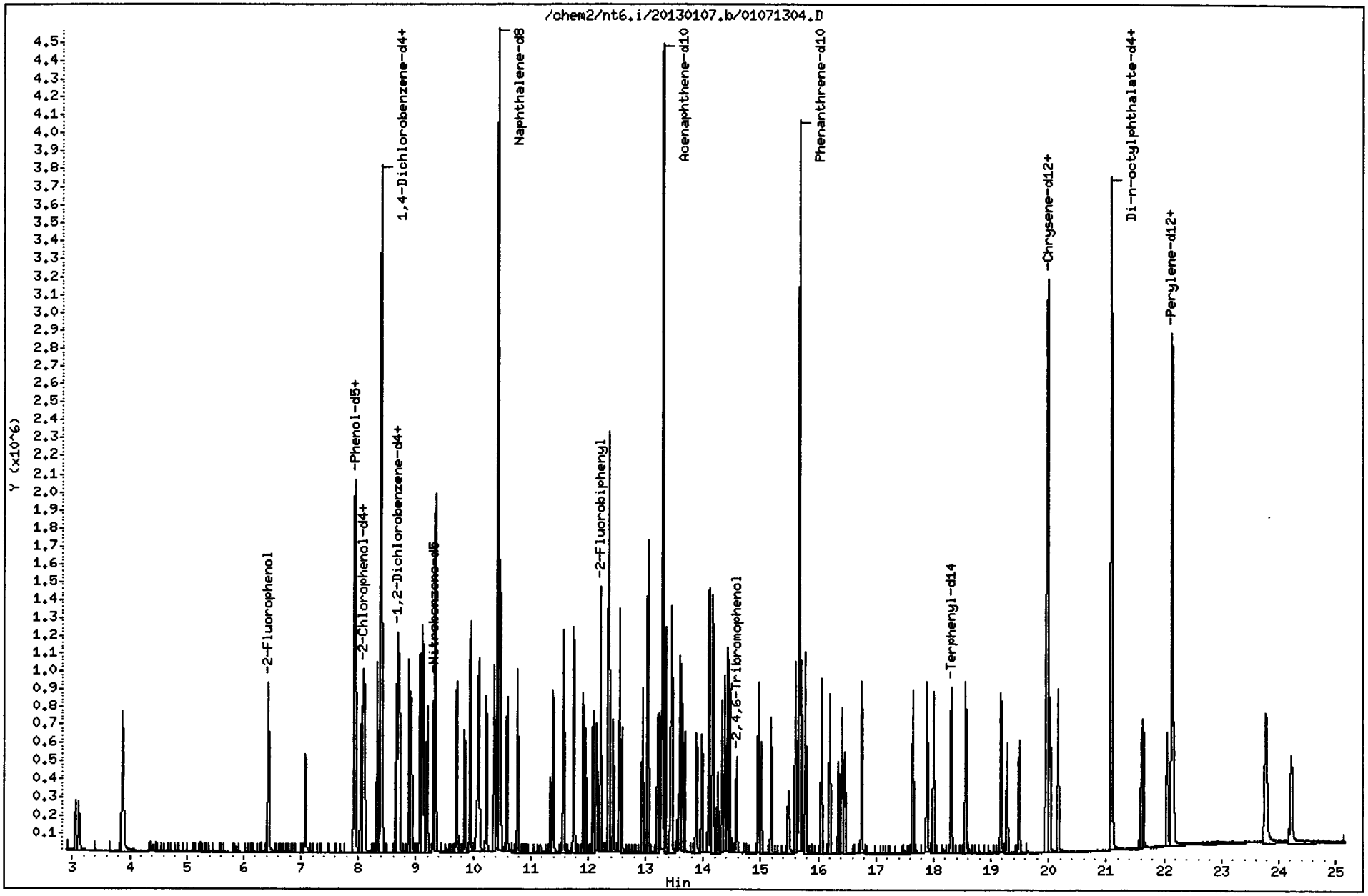
VZ97 · 00906

Data File: /chem2/nt6.i/20130107.b/01071304.D
Date : 07-JAN-2013 15:12
Client ID: IC50107
Sample Info: IC50107

Column phase: ZB-5msi

Instrument: nt6.i

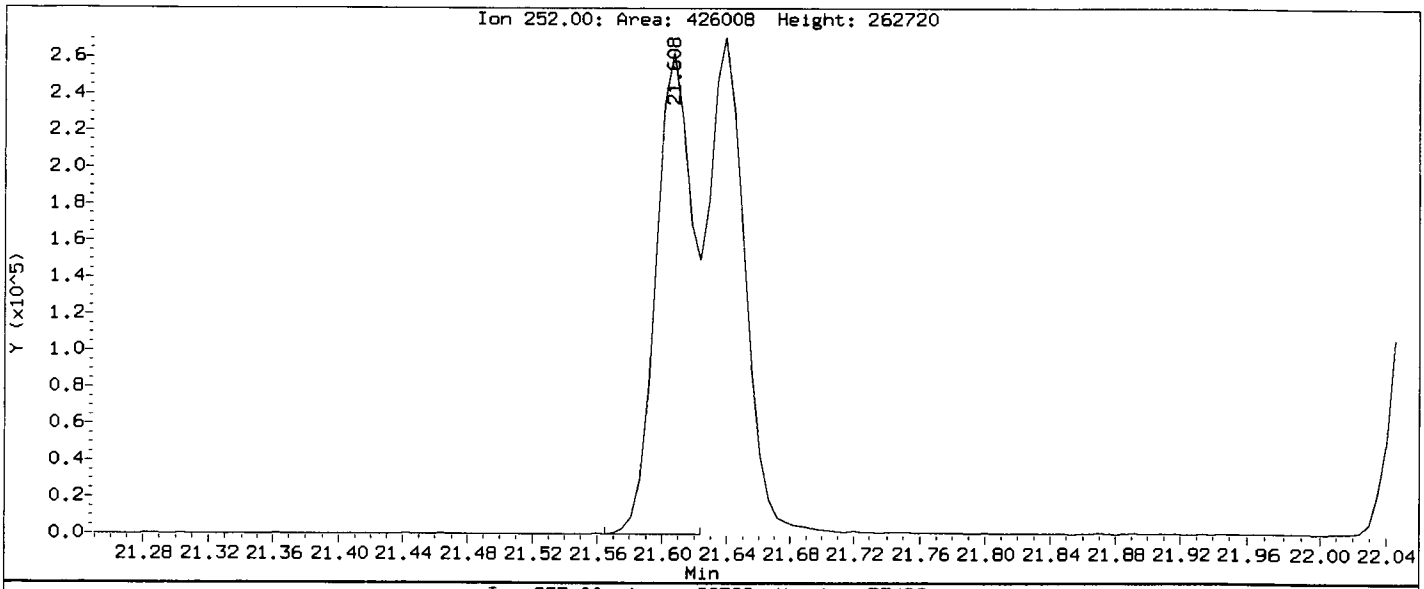
Operator: JZ
Column diameter: 0.32

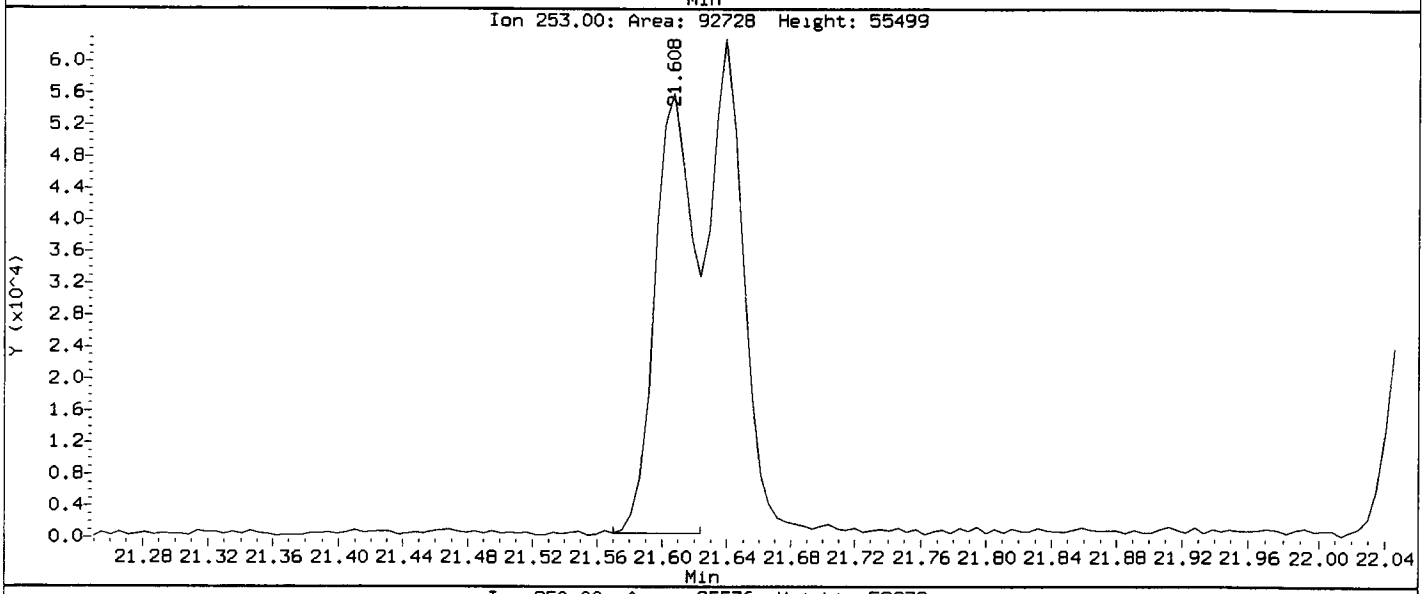


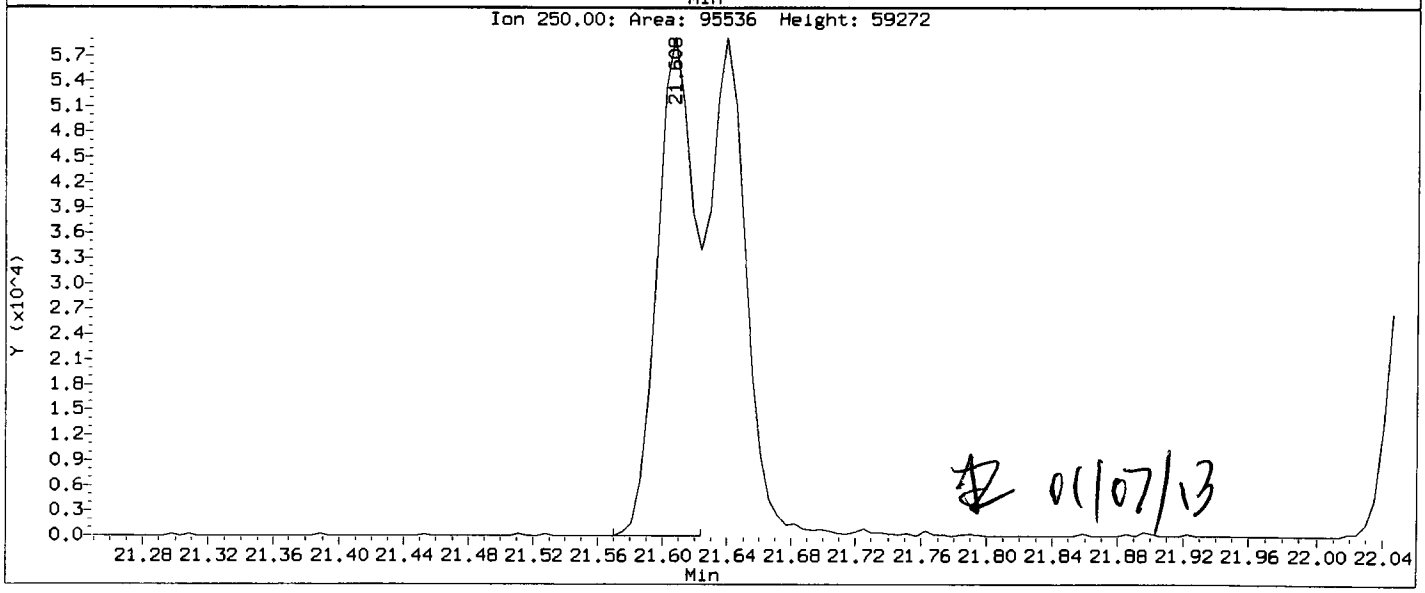
JZ07-00999

Data File: /chem2/nt6.i/20130107.b/01071304.D
Injection Date: 07-JAN-2013 15:12
Instrument: nt6.i
Client Sample ID: IC50107

Compound: Total Benzofluoranthenes
CAS Number:





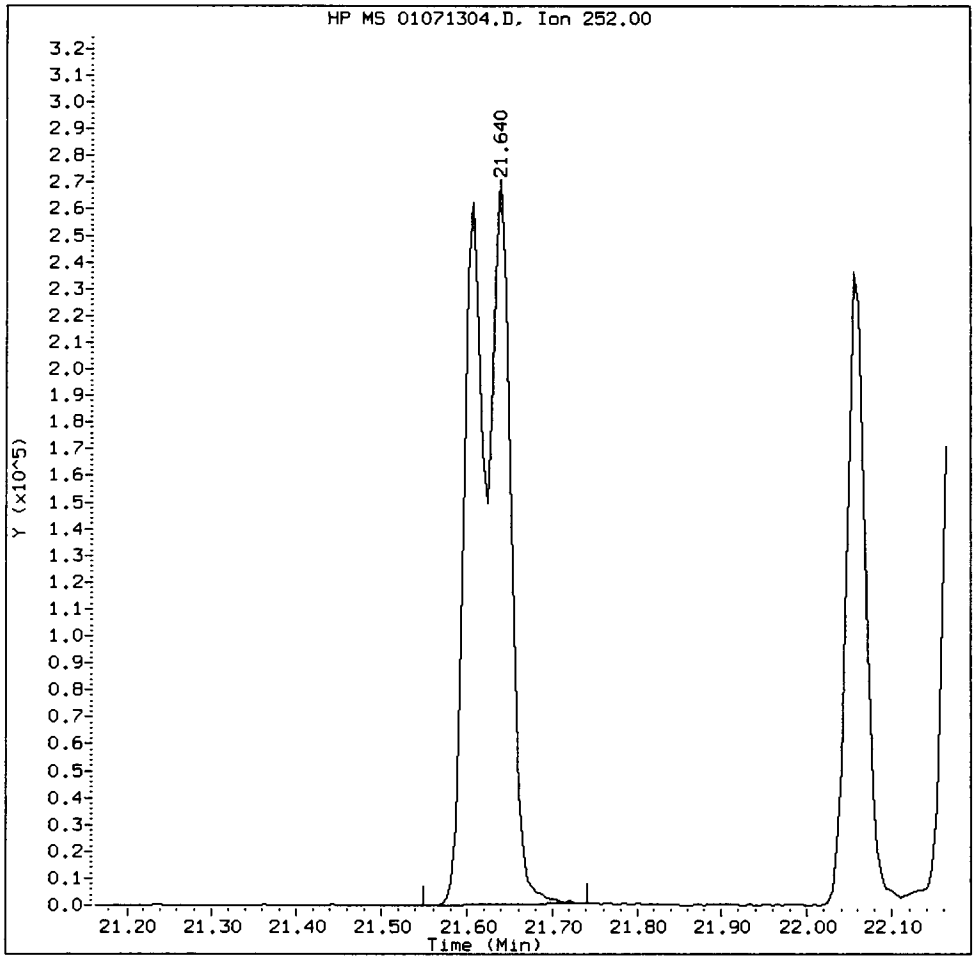


01/07/13

UZ97 · 00908

IC50107, /chem2/nt6.i/20130107.b/01071304.D

Total Benzofluoranthenes Amount: 10.05 Area: 830916



MANUAL INTEGRATION for Total Benzofluoranthenes

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 01/07/13

CO-ELUTION SUMMARY FOR FILE - 01071304.D

Lab ID: IC50107, Method: SW846010713.m, Instrument: nt6.i, Date: 07-JAN-2013

RT	CO-ELUTION COMPOUNDS
19.957	3,3'-Dichlorobenzidine and Benzo(a)anthracene

checked ok

01/07/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130107.b/01071305.D
Lab Smp Id: IC10107 Client Smp ID: IC100107
Inj Date : 07-JAN-2013 15:46
Operator : JZ Inst ID: nt6.i
Smp Info : IC10107
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130107.b/SW846010713.m
Meth Date : 07-Jan-2013 06:44 jianqing Quant Type: ISTD
Cal Date : 07-JAN-2013 15:46 Cal File: 01071305.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

JZ 01/07/13

AMOUNTS

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$ 1 2-Fluorophenol	112	6.432	6.439	(0.767)	523271	10.0000	9.222
$ 2 Phenol-d5	99	7.933	7.961	(0.946)	672946	10.0000	9.112
3 Phenol	94	7.949	7.983	(0.948)	715175	10.0000	9.639
$ 5 2-Chlorophenol-d4	132	8.083	8.100	(0.964)	490409	10.0000	8.868
4 Bis(2-Chloroethyl)ether	93	8.046	8.068	(0.959)	528461	10.0000	9.694
6 2-Chlorophenol	128	8.110	8.122	(0.967)	492617	10.0000	9.462
7 1,3-Dichlorobenzene	146	8.329	8.335	(0.993)	580705	10.0000	9.855
* 8 1,4-Dichlorobenzene-d4	152	8.387	8.387	(1.000)	682894	20.0000	
9 1,4-Dichlorobenzene	146	8.414	8.421	(1.003)	577448	10.0000	10.14
$ 10 1,2-Dichlorobenzene-d4	152	8.687	8.698	(1.036)	350933	10.0000	9.078
12 1,2-Dichlorobenzene	146	8.708	8.720	(1.038)	534763	10.0000	9.923
11 Benzyl alcohol	108	8.655	8.677	(1.032)	351743	10.0000	10.29
14 2,2'-oxybis(1-Chloropropane)	45	8.916	8.928	(1.063)	919963	10.0000	9.722
13 2-Methylphenol	108	8.884	8.901	(1.059)	484239	10.0000	9.791
17 Hexachloroethane	117	9.194	9.201	(1.096)	242644	10.0000	9.921
16 N-Nitroso-di-n-propylamine	70	9.130	9.163	(1.089)	409211	10.0000	10.10
15 4-Methylphenol	108	9.109	9.137	(1.086)	505924	10.0000	9.894
$ 18 Nitrobenzene-d5	82	9.312	9.334	(0.893)	626576	10.0000	9.514
19 Nitrobenzene	77	9.338	9.366	(0.895)	649221	10.0000	10.12
20 Isophorone	82	9.718	9.740	(0.932)	909375	10.0000	10.33
21 2-Nitrophenol	139	9.857	9.868	(0.945)	250788	10.0000	10.73
22 2,4-Dimethylphenol	107	9.953	9.970	(0.954)	500665	10.0000	9.725
23 Bis(2-Chloroethoxy)methane	93	10.102	10.119	(0.969)	603416	10.0000	9.740
24 Benzoic acid	105	10.124	10.226	(0.971)	531771	20.0000	29.32(M)
25 2,4-Dichlorophenol	162	10.230	10.253	(0.981)	360189	10.0000	10.19
26 1,2,4-Trichlorobenzene	180	10.369	10.381	(0.994)	417289	10.0000	9.891
* 27 Naphthalene-d8	136	10.428	10.428	(1.000)	2533797	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	10.460	10.472	(1.003)	1377035	10.0000	10.07
	29 4-Chloroaniline	127	10.594	10.611	(1.016)	543353	10.0000	9.889
	30 Hexachlorobutadiene	225	10.775	10.782	(1.033)	256146	10.0000	10.03
	31 4-Chloro-3-methylphenol	107	11.395	11.407	(1.093)	393751	10.0000	9.794
	32 2-Methylnaphthalene	141	11.582	11.589	(1.111)	694075	10.0000	10.04
	33 Hexachlorocyclopentadiene	237	11.961	11.963	(0.900)	250558	10.0000	11.37
	34 2,4,6-Trichlorophenol	196	12.089	12.101	(0.910)	236467	10.0000	10.64
	35 2,4,5-Trichlorophenol	196	12.148	12.155	(0.914)	242310	10.0000	10.04
$	36 2-Fluorobiphenyl	172	12.218	12.230	(0.919)	919831	10.0000	9.360
	37 2-Chloronaphthalene	162	12.362	12.374	(0.930)	818516	10.0000	10.17
	38 2-Nitroaniline	65	12.586	12.604	(0.947)	276126	10.0000	10.87
	39 Dimethylphthalate	163	12.950	12.972	(0.974)	838341	10.0000	10.38
	40 Acenaphthylene	152	13.040	13.052	(0.981)	1257432	10.0000	10.43
	41 2,6-Dinitrotoluene	165	13.046	13.068	(0.982)	191582	10.0000	11.32
*	42 Acenaphthene-d10	164	13.291	13.297	(1.000)	1318931	20.0000	
	43 3-Nitroaniline	138	13.265	13.287	(0.998)	189144	10.0000	10.25
	44 Acenaphthene	153	13.345	13.357	(1.004)	759022	10.0000	10.21
	45 2,4-Dinitrophenol	184	13.430	13.458	(1.010)	191515	20.0000	25.25
	46 Dibenzofuran	168	13.601	13.619	(1.023)	1019189	10.0000	9.969
	47 4-Nitrophenol	109	13.564	13.581	(1.020)	130579	10.0000	10.63
	48 2,4-Dinitrotoluene	165	13.676	13.699	(1.029)	233905	10.0000	11.33
	50 Diethylphthalate	149	14.103	14.126	(1.061)	859627	10.0000	9.906
	49 Fluorene	166	14.162	14.174	(1.065)	794371	10.0000	10.10
	51 4-Chlorophenyl-phenylether	204	14.178	14.190	(1.067)	409122	10.0000	10.00
	52 4-Nitroaniline	138	14.258	14.297	(1.073)	163812	10.0000	10.66
	53 4,6-Dinitro-2-methylphenol	198	14.333	14.372	(0.915)	285021	20.0000	22.32
	54 N-Nitrosodiphenylamine	169	14.381	14.404	(0.918)	616719	10.0000	10.12
$	55 2,4,6-Tribromophenol	330	14.584	14.602	(1.097)	98084	10.0000	10.31
	56 4-Bromophenyl-phenylether	248	14.964	14.970	(0.955)	226670	10.0000	10.34
	57 Hexachlorobenzene	284	15.188	15.200	(0.969)	219579	10.0000	9.868
	58 Pentachlorophenol	266	15.482	15.499	(0.988)	114983	10.0000	10.81
*	59 Phenanthrene-d10	188	15.669	15.674	(1.000)	1898940	20.0000	
	60 Phenanthrene	178	15.706	15.723	(1.002)	1039590	10.0000	9.876
	61 Anthracene	178	15.781	15.793	(1.007)	1076926	10.0000	10.14
	62 Carbazole	167	16.053	16.071	(1.025)	979826	10.0000	10.01
	63 Di-n-butylphthalate	149	16.753	16.765	(1.069)	1307573	10.0000	10.60
	64 Fluoranthene	202	17.645	17.663	(1.126)	1027564	10.0000	10.46
	65 Pyrene	202	18.003	18.015	(0.901)	1076351	10.0000	9.947
$	66 Terphenyl-d14	244	18.302	18.314	(0.916)	638204	10.0000	9.242
	67 Butylbenzylphthalate	149	19.173	19.185	(0.959)	524822	10.0000	10.69
	68 Benzo(a)anthracene	228	19.953	19.970	(0.998)	890370	10.0000	10.26
*	69 Chrysene-d12	240	19.985	19.985	(1.000)	1635752	20.0000	
	70 3,3'-Dichlorobenzidine	252	19.958	19.970	(0.999)	299170	10.0000	10.02
	71 Chrysene	228	20.023	20.040	(1.002)	844092	10.0000	9.936
	72 bis(2-Ethylhexyl)phthalate	149	20.161	20.163	(0.956)	699793	10.0000	10.45
*	134 Di-n-octylphthalate-d4	153	21.086	21.091	(1.000)	2185014	20.0000	
	73 Di-n-octylphthalate	149	21.096	21.108	(1.000)	1252674	10.0000	9.938

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	21.609	21.632	(0.976)	881864	10.0000	10.52
75	Benzo(k)fluoranthene	252	21.641	21.664	(0.978)	892762	10.0000	10.07
187	Total Benzofluoranthenes	252	21.641	21.664	(0.978)	1682392	20.0000	20.58
76	Benzo(a)pyrene	252	22.058	22.075	(0.996)	778716	10.0000	10.33
* 77	Perylene-d12	264	22.138	22.138	(1.000)	1588408	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	23.762	23.801	(1.073)	1052556	10.0000	10.16
79	Dibenzo(a,h)anthracene	278	23.783	23.822	(1.074)	883992	10.0000	10.27
80	Benzo(g,h,i)perylene	276	24.221	24.271	(1.094)	932561	10.0000	10.14
90	N-Nitrosodimethylamine	74	3.879	3.917	(0.462)	369335	10.0000	10.18
103	Pyridine	79	3.852	3.853	(0.459)	638150	10.0000	10.37
91	Aniline	93	7.939	7.951	(0.946)	791837	10.0000	9.789
105	1-methylnaphthalene	141	11.753	11.765	(1.127)	684074	10.0000	9.791
93	Benzidine	184	17.886	17.892	(0.895)	251342	10.0000	8.028
111	Azobenzene (1,2-DP-Hydrazine)	77	14.429	14.447	(1.086)	1073029	10.0000	10.13
143	1,4-Dioxane	88	3.104	3.109	(0.370)	273761	10.0000	9.955
$ 137	d8-1,4-Dioxane	96	3.045	3.057	(0.363)	272289	10.0000	10.13
144	alpha-Terpineol	59	10.476	10.493	(1.005)	406645	10.0000	9.812
177	p-Benzoquinone	82	7.079	7.090	(0.679)	129439	10.0000	11.55
99	Perylene	252	22.170	22.193	(1.001)	693409	10.0000	9.394
133	Butylatedhydroxytoluene	205	13.452	13.464	(1.012)	680188	10.0000	10.06
115	Tributyl Phosphate	99	14.461	14.484	(0.923)	1051495	10.0000	10.55
116	Dibutyl Phenyl Phosphate	175	16.198	16.209	(1.034)	613251	10.0000	10.97
117	Butyl Diphenyl Phosphate	94	17.886	17.898	(0.895)	216091	10.0000	10.51
118	Triphenyl Phosphate	326	19.494	19.500	(0.975)	143604	10.0000	10.80
123	Acetophenone	105	9.071	9.099	(1.082)	744595	10.0000	10.20
168	Pentachlorobenzene	250	13.644	13.661	(1.027)	284638	10.0000	10.12
113	Diphenyl Oxide	170	12.544	12.550	(0.944)	640040	10.0000	10.32
112	Biphenyl	154	12.357	12.363	(0.930)	963526	10.0000	9.942
120	2,3,4,6-Tetrachlorophenol	232	13.884	13.891	(1.045)	182257	10.0000	10.57
151	1,2,4,5-Tetrachlorobenzene	216	11.919	11.925	(0.897)	343350	10.0000	10.05
186	Carbaryl	144	16.465	16.487	(1.051)	451170	10.0000	11.28
178	2-Benzyl-4-Chlorophenol	218	16.417	16.439	(1.048)	181892	10.0000	10.71

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 01071305.D
Lab Smp Id: IC10107
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130107.b/SW846010713.m
Misc Info: 13-

Calibration Date: 07-JAN-2013
Calibration Time: 13:30
Client Smp ID: IC100107
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	532349	266174	1064698	682894	28.28
27 Naphthalene-d8	2007575	1003788	4015150	2533797	26.21
42 Acenaphthene-d10	1020441	510220	2040882	1318931	29.25
59 Phenanthrene-d10	1546074	773037	3092148	1898940	22.82
69 Chrysene-d12	1407005	703502	2814010	1635752	16.26
134 Di-n-octylphthala	1928310	964155	3856620	2185014	13.31
77 Perylene-d12	1383265	691632	2766530	1588408	14.83

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.39	-0.02
27 Naphthalene-d8	10.43	9.93	10.93	10.43	-0.01
42 Acenaphthene-d10	13.30	12.80	13.80	13.29	-0.05
59 Phenanthrene-d10	15.68	15.18	16.18	15.67	-0.04
69 Chrysene-d12	19.99	19.49	20.49	19.99	-0.01
134 Di-n-octylphthala	21.09	20.59	21.59	21.09	-0.03
77 Perylene-d12	22.14	21.64	22.64	22.14	-0.03

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.

Data File: /chem2/nt6.i/20130107.b/01071305.D

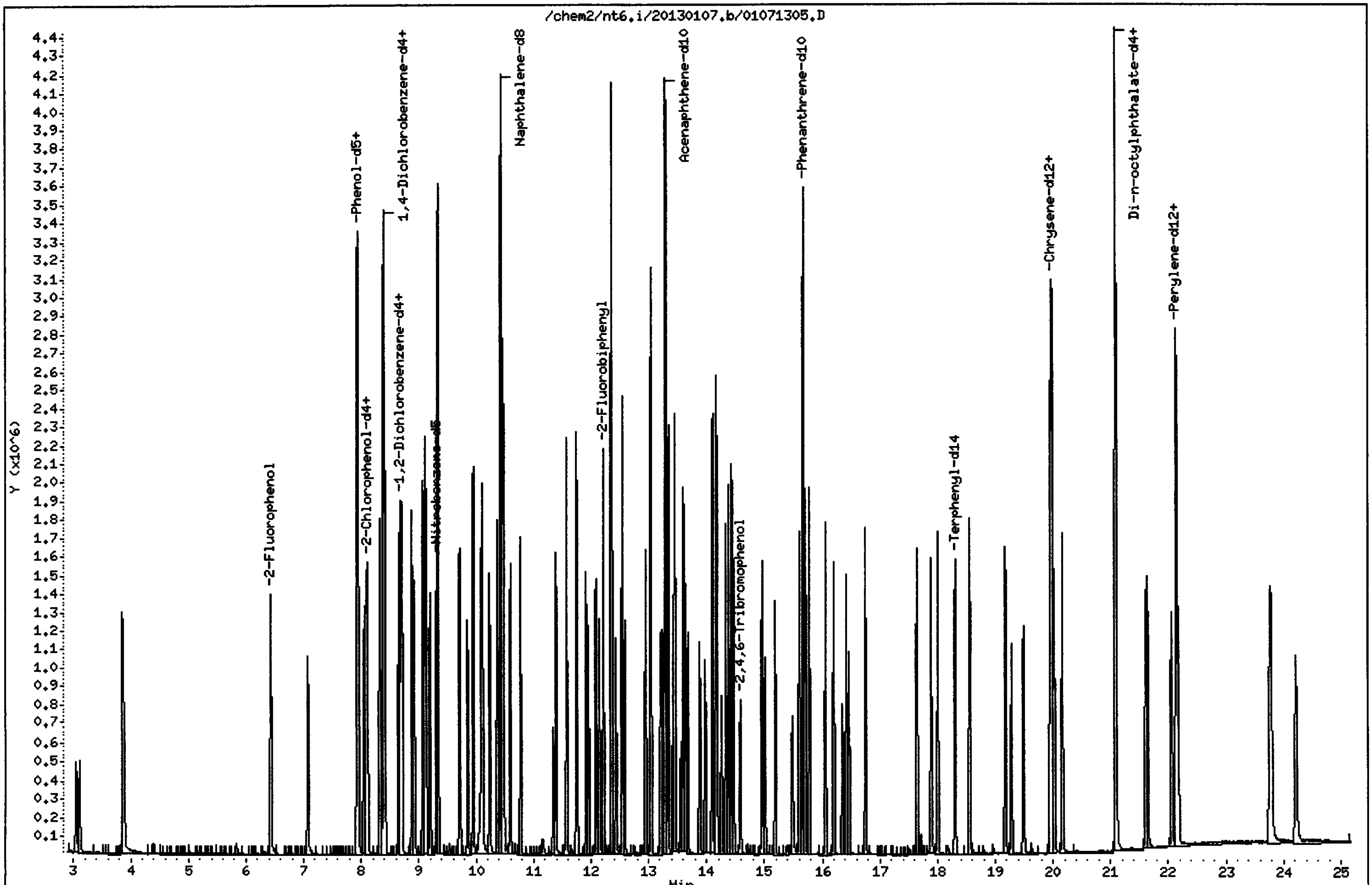
Date : 07-JAN-2013 15:46

Client ID: IC100107 | Instrument: nt6.i

Sample Info: IC10107

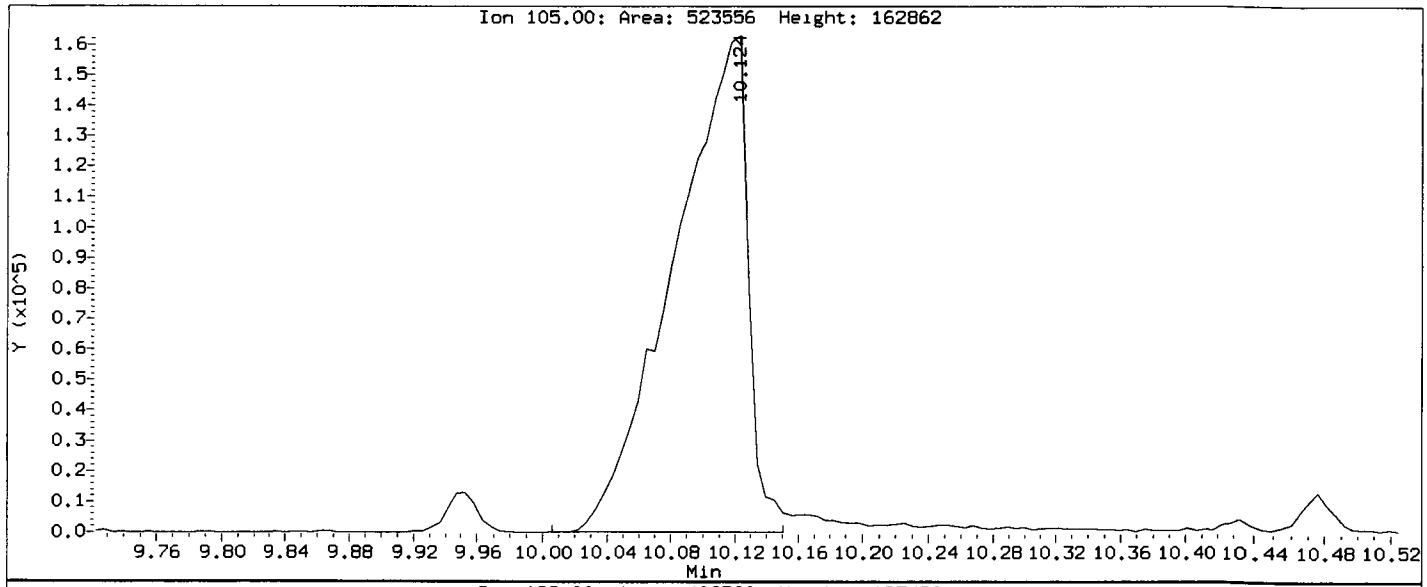
Operator: JZ

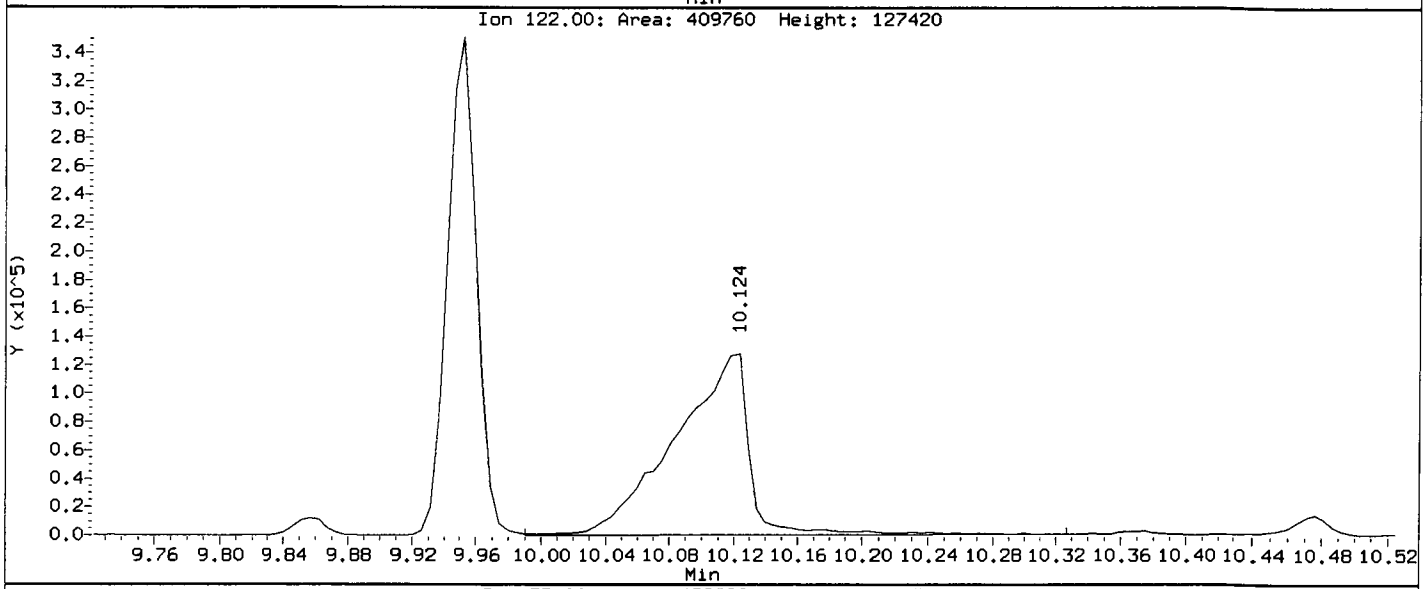
Column phase: ZB-5msi | Column diameter: 0.32

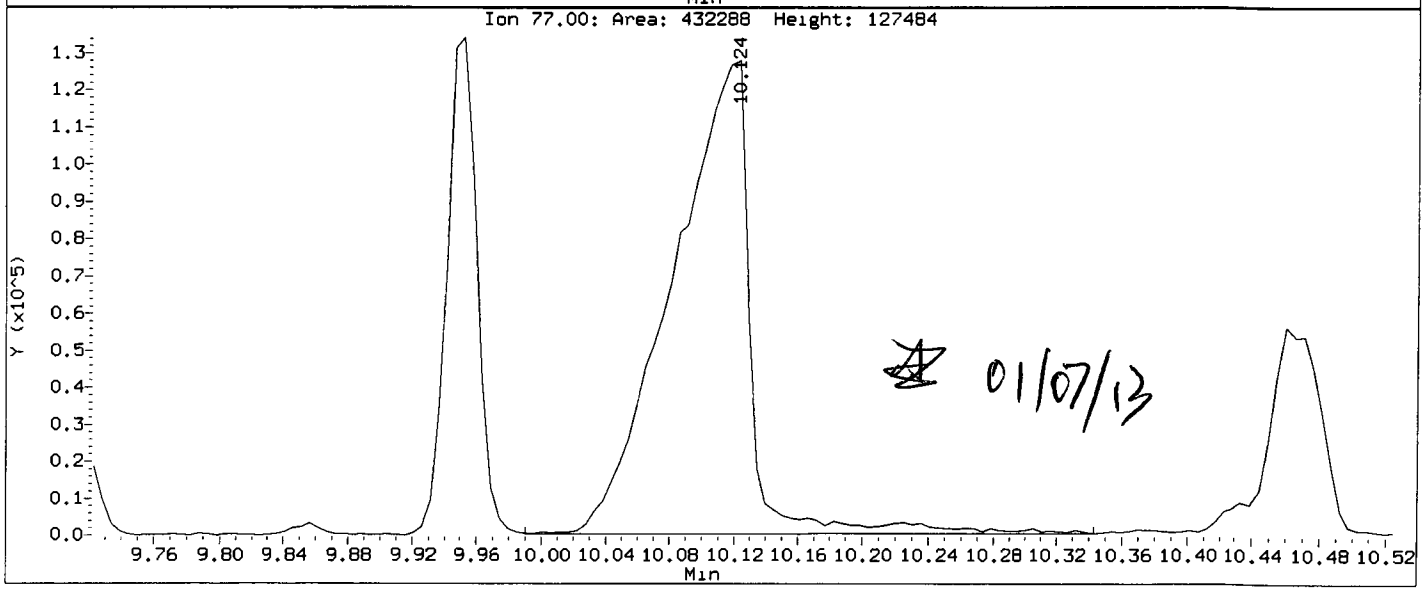


Data File: /chem2/nt6.i/20130107.b/01071305.D
Injection Date: 07-JAN-2013 15:46
Instrument: nt6.i
Client Sample ID: IC100107

Compound: Benzoic acid
CAS Number: 65-85-0



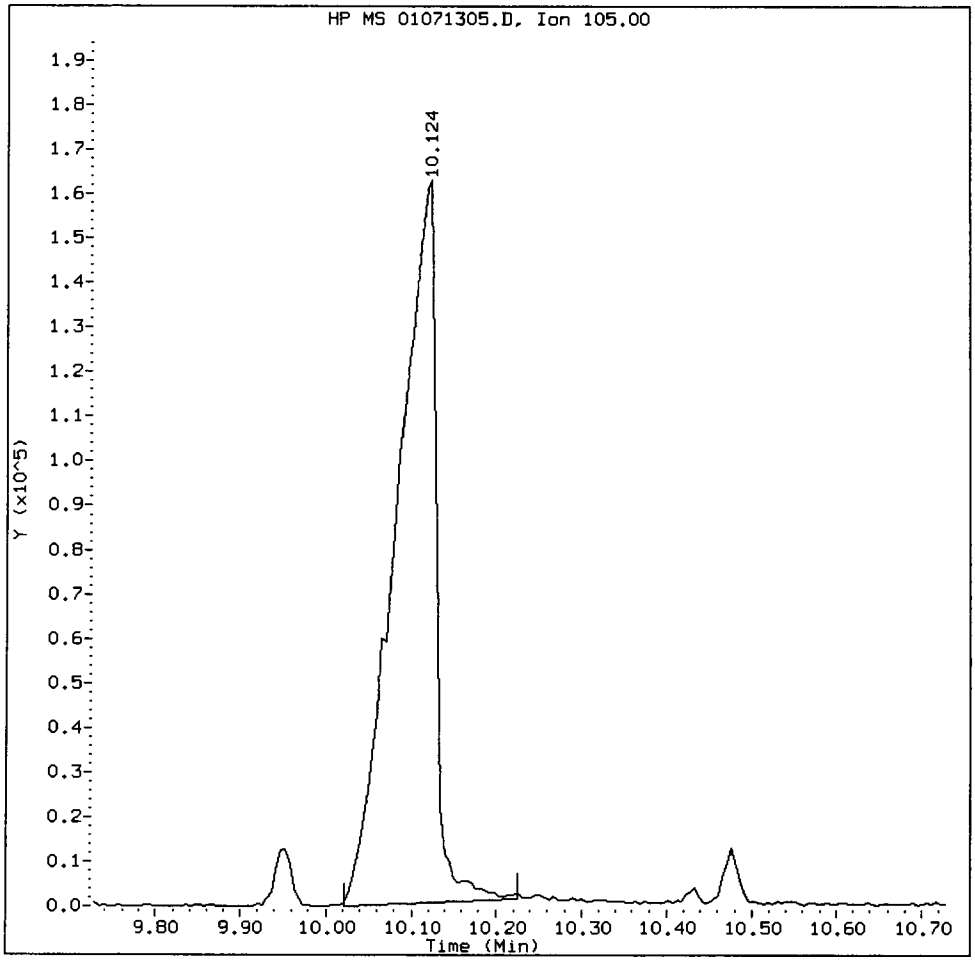




01/07/13

IC10107, /chem2/nt6.i/20130107.b/01071305.D

Benzoic acid Amount: 29.32 Area: 531771



MANUAL INTEGRATION for Benzoic acid

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 01/07/13

CO-ELUTION SUMMARY FOR FILE - 01071305.D

Lab ID: IC10107, Method: SW846010713.m, Instrument: nt6.i, Date: 07-JAN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130107.b/01071301.D
Lab Smp Id: IC250107 Client Smp ID: IC250107
Inj Date : 07-JAN-2013 13:30
Operator : JZ Inst ID: nt6.i
Smp Info : IC250107
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130107.b/SW846010713.m
Meth Date : 07-Jan-2013 06:44 jianqing Quant Type: ISTD
Cal Date : 07-JAN-2013 13:30 Cal File: 01071301.D
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

AMOUNTS 01/07/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$ 1	2-Fluorophenol	112	6.434	6.439	(0.767)	983224	25.0000	22.86
$ 2	Phenol-d5	99	7.940	7.961	(0.946)	1232378	25.0000	22.20
3	Phenol	94	7.956	7.983	(0.948)	1204114	25.0000	21.73
$ 5	2-Chlorophenol-d4	132	8.090	8.100	(0.964)	945798	25.0000	22.63
4	Bis(2-Chloroethyl)ether	93	8.052	8.068	(0.960)	867813	25.0000	21.40
6	2-Chlorophenol	128	8.111	8.122	(0.967)	882431	25.0000	22.47
7	1,3-Dichlorobenzene	146	8.330	8.335	(0.993)	1066051	25.0000	23.63
* 8	1,4-Dichlorobenzene-d4	152	8.389	8.387	(1.000)	532349	20.0000	
9	1,4-Dichlorobenzene	146	8.415	8.421	(1.003)	1085904	25.0000	24.60
$ 10	1,2-Dichlorobenzene-d4	152	8.688	8.698	(1.036)	678300	25.0000	23.08
12	1,2-Dichlorobenzene	146	8.709	8.720	(1.038)	1007039	25.0000	24.22
11	Benzyl alcohol	108	8.661	8.677	(1.032)	633702	25.0000	24.07
14	2,2'-oxybis(1-Chloropropane)	45	8.918	8.928	(1.063)	1553399	25.0000	21.92
13	2-Methylphenol	108	8.886	8.901	(1.059)	849197	25.0000	22.70
17	Hexachloroethane	117	9.201	9.201	(1.097)	451185	25.0000	23.99
16	N-Nitroso-di-n-propylamine	70	9.137	9.163	(1.089)	728948	25.0000	23.53
15	4-Methylphenol	108	9.115	9.137	(1.087)	880794	25.0000	22.76
$ 18	Nitrobenzene-d5	82	9.313	9.334	(0.893)	1232422	25.0000	23.95
19	Nitrobenzene	77	9.345	9.366	(0.896)	1182538	25.0000	23.68
20	Isophorone	82	9.719	9.740	(0.932)	1649253	25.0000	23.96
21	2-Nitrophenol	139	9.858	9.868	(0.945)	458761	25.0000	24.83
22	2,4-Dimethylphenol	107	9.954	9.970	(0.954)	888459	25.0000	22.51
23	Bis(2-Chloroethoxy)methane	93	10.104	10.119	(0.969)	999869	25.0000	21.36
24	Benzoic acid	105	10.168	10.226	(0.975)	1110186	50.0000	67.99
25	2,4-Dichlorophenol	162	10.237	10.253	(0.982)	644914	25.0000	23.50
26	1,2,4-Trichlorobenzene	180	10.376	10.381	(0.995)	791156	25.0000	23.99
* 27	Naphthalene-d8	136	10.429	10.428	(1.000)	2007575	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
28	Naphthalene	128	10.461	10.472	(1.003)	2521655	25.0000	23.67
29	4-Chloroaniline	127	10.595	10.611	(1.016)	901741	25.0000	21.64
30	Hexachlorobutadiene	225	10.777	10.782	(1.033)	489837	25.0000	24.39
31	4-Chloro-3-methylphenol	107	11.396	11.407	(1.093)	653991	25.0000	21.49
32	2-Methylnaphthalene	141	11.583	11.589	(1.111)	1294555	25.0000	23.97
33	Hexachlorocyclopentadiene	237	11.963	11.963	(0.900)	522044	25.0000	28.99
34	2,4,6-Trichlorophenol	196	12.091	12.101	(0.909)	435571	25.0000	25.25
35	2,4,5-Trichlorophenol	196	12.150	12.155	(0.914)	466581	25.0000	24.99
$ 36	2-Fluorobiphenyl	172	12.224	12.230	(0.919)	1840634	25.0000	24.40
37	2-Chloronaphthalene	162	12.363	12.374	(0.930)	1456163	25.0000	23.77
38	2-Nitroaniline	65	12.593	12.604	(0.947)	527957	25.0000	26.37
39	Dimethylphthalate	163	12.956	12.972	(0.974)	1540070	25.0000	24.74
40	Acenaphthylene	152	13.047	13.052	(0.981)	2291955	25.0000	24.68
41	2,6-Dinitrotoluene	165	13.052	13.068	(0.982)	368005	25.0000	27.27
* 42	Acenaphthene-d10	164	13.298	13.297	(1.000)	1020441	20.0000	
43	3-Nitroaniline	138	13.266	13.287	(0.998)	340440	25.0000	24.12
44	Acenaphthene	153	13.346	13.357	(1.004)	1425392	25.0000	24.84
45	2,4-Dinitrophenol	184	13.437	13.458	(1.010)	491505	50.0000	68.37
46	Dibenzofuran	168	13.608	13.619	(1.023)	1896922	25.0000	24.23
47	4-Nitrophenol	109	13.571	13.581	(1.020)	255939	25.0000	26.41
48	2,4-Dinitrotoluene	165	13.683	13.699	(1.029)	457262	25.0000	27.63
50	Diethylphthalate	149	14.110	14.126	(1.061)	1595131	25.0000	24.06
49	Fluorene	166	14.169	14.174	(1.065)	1523195	25.0000	25.03
51	4-Chlorophenyl-phenylether	204	14.180	14.190	(1.066)	785643	25.0000	24.87
52	4-Nitroaniline	138	14.260	14.297	(1.072)	285729	25.0000	24.27
53	4,6-Dinitro-2-methylphenol	198	14.340	14.372	(0.915)	602983	50.0000	55.07
54	N-Nitrosodiphenylamine	169	14.388	14.404	(0.918)	1162308	25.0000	23.80
$ 55	2,4,6-Tribromophenol	330	14.586	14.602	(1.097)	214916	25.0000	28.02
56	4-Bromophenyl-phenylether	248	14.965	14.970	(0.955)	446084	25.0000	25.00
57	Hexachlorobenzene	284	15.195	15.200	(0.969)	432642	25.0000	24.15
58	Pentachlorophenol	266	15.488	15.499	(0.988)	248200	25.0000	27.32
* 59	Phenanthrene-d10	188	15.675	15.674	(1.000)	1546074	20.0000	
60	Phenanthrene	178	15.713	15.723	(1.002)	2037589	25.0000	24.07
61	Anthracene	178	15.782	15.793	(1.007)	2120468	25.0000	24.64
62	Carbazole	167	16.060	16.071	(1.025)	1834871	25.0000	23.49
63	Di-n-butylphthalate	149	16.760	16.765	(1.069)	2430941	25.0000	24.39
64	Fluoranthene	202	17.652	17.663	(1.126)	2075165	25.0000	25.70
65	Pyrene	202	18.005	18.015	(0.901)	2146882	25.0000	23.52
$ 66	Terphenyl-d14	244	18.309	18.314	(0.916)	1412484	25.0000	24.07
67	Butylbenzylphthalate	149	19.180	19.185	(0.960)	1104347	25.0000	25.85
68	Benzo(a)anthracene	228	19.965	19.970	(0.999)	1860747	25.0000	24.95
* 69	Chrysene-d12	240	19.986	19.985	(1.000)	1407005	20.0000	
70	3,3'-Dichlorobenzidine	252	19.960	19.970	(0.999)	637628	25.0000	24.88
71	Chrysene	228	20.029	20.040	(1.002)	1791116	25.0000	24.63
72	bis(2-Ethylhexyl)phthalate	149	20.163	20.163	(0.956)	1470669	25.0000	24.91
* 134	Di-n-octylphthalate-d4	153	21.092	21.091	(1.000)	1928310	20.0000	
73	Di-n-octylphthalate	149	21.103	21.108	(1.000)	2617093	25.0000	23.88

VZ97:00920

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	21.616	21.632	(0.976)	1956286	25.0000	26.32
75	Benzo(k)fluoranthene	252	21.648	21.664	(0.978)	1927803	25.0000	24.97
187	Total Benzofluoranthenes	252	21.648	21.664	(0.978)	3684712	50.0000	51.31
76	Benzo(a)pyrene	252	22.065	22.075	(0.996)	1742612	25.0000	26.14
* 77	Perylene-d12	264	22.145	22.138	(1.000)	1383265	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	23.774	23.801	(1.074)	2286756	25.0000	25.26
79	Dibenzo(a,h)anthracene	278	23.795	23.822	(1.075)	1867877	25.0000	24.94
80	Benzo(g,h,i)perylene	276	24.233	24.271	(1.094)	1997573	25.0000	24.96
90	N-Nitrosodimethylamine	74	3.875	3.917	(0.462)	676344	25.0000	24.17
103	Pyridine	79	3.843	3.853	(0.458)	1176418	25.0000	24.64
91	Aniline	93	7.940	7.951	(0.946)	1292280	25.0000	21.46
105	1-methylnaphthalene	141	11.754	11.765	(1.127)	1297071	25.0000	23.81
93	Benzidine	184	17.887	17.892	(0.895)	347578	25.0000	15.39
111	Azobenzene (1,2-DP-Hydrazine)	77	14.436	14.447	(1.086)	1920057	25.0000	23.81
143	1,4-Dioxane	88	3.095	3.109	(0.369)	529508	25.0000	24.77
$ 137	d8-1,4-Dioxane	96	3.036	3.057	(0.362)	525417	25.0000	25.05
144	alpha-Terpineol	59	10.483	10.493	(1.005)	756303	25.0000	23.49
177	p-Benzoquinone	82	7.080	7.090	(0.679)	251235	25.0000	27.40
99	Perylene	252	22.177	22.193	(1.001)	1507099	25.0000	23.81
133	Butylatedhydroxytoluene	205	13.453	13.464	(1.012)	1377267	25.0000	25.98
115	Tributyl Phosphate	99	14.468	14.484	(0.923)	2011721	25.0000	24.84
116	Dibutyl Phenyl Phosphate	175	16.210	16.209	(1.034)	1265573	25.0000	27.04
117	Butyl Diphenyl Phosphate	94	17.892	17.898	(0.895)	436941	25.0000	24.78
118	Triphenyl Phosphate	326	19.495	19.500	(0.975)	340469	25.0000	28.42
123	Acetophenone	105	9.078	9.099	(1.082)	1351580	25.0000	24.06
168	Pentachlorobenzene	250	13.651	13.661	(1.026)	535901	25.0000	24.73
113	Diphenyl Oxide	170	12.550	12.550	(0.944)	1219004	25.0000	25.31
112	Biphenyl	154	12.358	12.363	(0.929)	1732518	25.0000	23.55
120	2,3,4,6-Tetrachlorophenol	232	13.886	13.891	(1.044)	349560	25.0000	25.90
151	1,2,4,5-Tetrachlorobenzene	216	11.920	11.925	(0.896)	630681	25.0000	24.14
186	Carbaryl	144	16.471	16.487	(1.051)	869031	25.0000	26.24
178	2-Benzyl-4-Chlorophenol	218	16.423	16.439	(1.048)	365175	25.0000	26.04

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 01071301.D
Lab Smp Id: IC250107
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130107.b/SW846010713.m
Misc Info: 13-

Calibration Date: 07-JAN-2013
Calibration Time: 13:30
Client Smp ID: IC250107
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	532349	266174	1064698	532349	0.00
27 Naphthalene-d8	2007575	1003788	4015150	2007575	0.00
42 Acenaphthene-d10	1020441	510220	2040882	1020441	0.00
59 Phenanthrene-d10	1546074	773037	3092148	1546074	0.00
69 Chrysene-d12	1407005	703502	2814010	1407005	0.00
134 Di-n-octylphthala	1928310	964155	3856620	1928310	0.00
77 Perylene-d12	1383265	691632	2766530	1383265	0.00

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.39	0.00
27 Naphthalene-d8	10.43	9.93	10.93	10.43	0.00
42 Acenaphthene-d10	13.30	12.80	13.80	13.30	0.00
59 Phenanthrene-d10	15.68	15.18	16.18	15.68	0.00
69 Chrysene-d12	19.99	19.49	20.49	19.99	0.00
134 Di-n-octylphthala	21.09	20.59	21.59	21.09	0.00
77 Perylene-d12	22.14	21.64	22.64	22.14	0.00

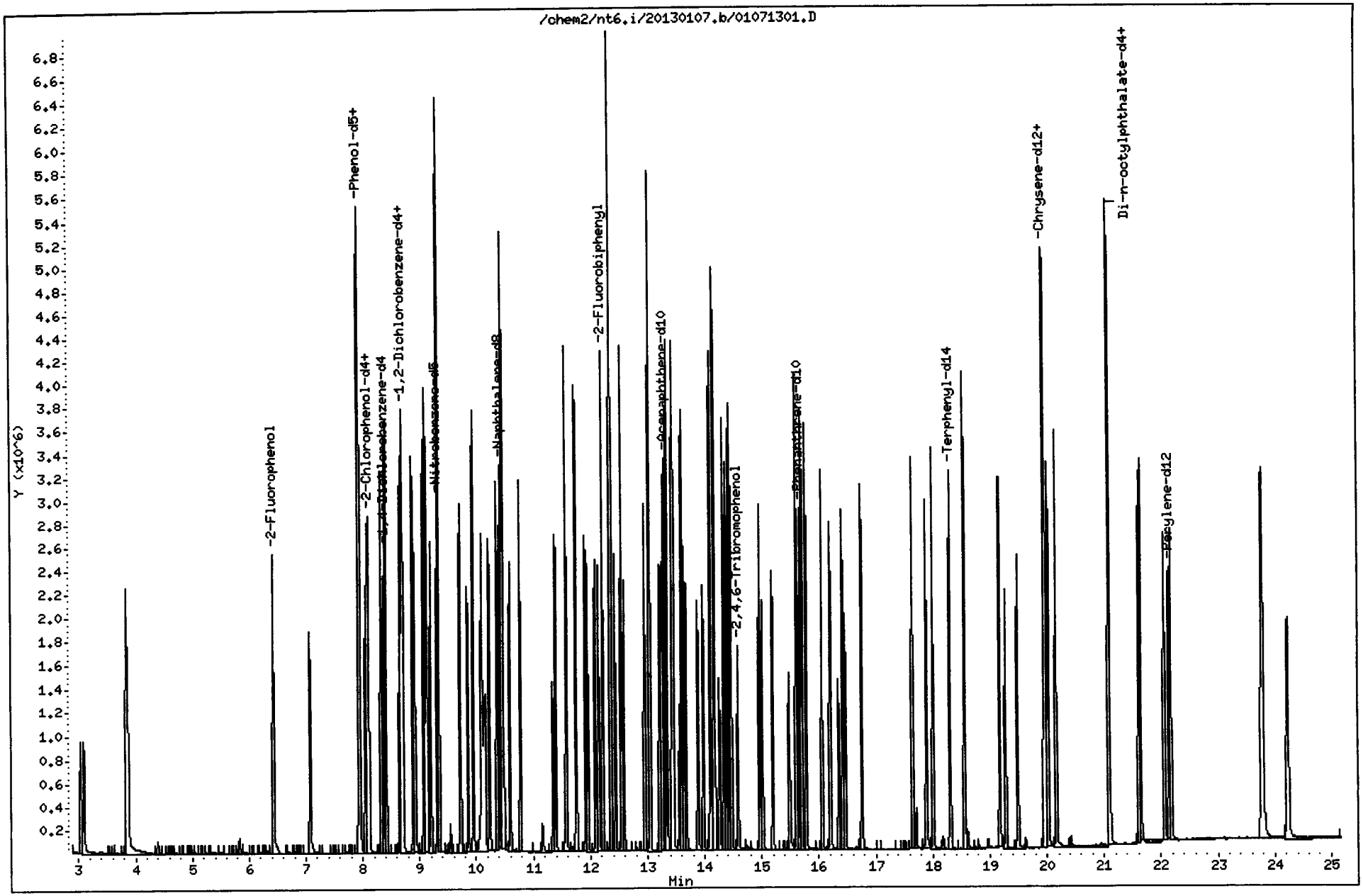
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130107.b/01071301.D
Date : 07-JAN-2013 13:30
Client ID: IC250107
Sample Info: IC250107

Instrument: nt6.i

Operator: JZ
Column diameter: 0.32

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - 01071301.D

Lab ID: IC250107, Method: SW846010713.m, Instrument: nt6.i, Date: 07-JAN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130107.b/01071306.D
Lab Smp Id: IC40107 Client Smp ID: IC400107
Inj Date : 07-JAN-2013 16:21
Operator : JZ Inst ID: nt6.i
Smp Info : IC40107
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130107.b/SW846010713.m
Meth Date : 07-Jan-2013 06:44 jianqing Quant Type: ISTD
Cal Date : 07-JAN-2013 16:21 Cal File: 01071306.D
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

01/07/13

AMOUNTS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$ 1	2-Fluorophenol	112	6.436	6.439	(0.767)	2244099	40.0000	38.01
$ 2	Phenol-d5	99	7.942	7.961	(0.947)	2754075	40.0000	36.49
3	Phenol	94	7.963	7.983	(0.949)	2605142	40.0000	34.90
$ 5	2-Chlorophenol-d4	132	8.092	8.100	(0.964)	2193769	40.0000	38.19
4	Bis(2-Chloroethyl)ether	93	8.054	8.068	(0.960)	1875761	40.0000	34.44
6	2-Chlorophenol	128	8.113	8.122	(0.967)	1944465	40.0000	36.43
7	1,3-Dichlorobenzene	146	8.332	8.335	(0.993)	2225460	40.0000	36.31
* 8	1,4-Dichlorobenzene-d4	152	8.391	8.387	(1.000)	739932	20.0000	
9	1,4-Dichlorobenzene	146	8.417	8.421	(1.003)	2236212	40.0000	37.10
$ 10	1,2-Dichlorobenzene-d4	152	8.690	8.698	(1.036)	1520132	40.0000	37.74
12	1,2-Dichlorobenzene	146	8.711	8.720	(1.038)	2104295	40.0000	37.08
11	Benzyl alcohol	108	8.663	8.677	(1.032)	1355288	40.0000	37.60
14	2,2'-oxybis(1-Chloropropane)	45	8.920	8.928	(1.063)	3262938	40.0000	34.31
13	2-Methylphenol	108	8.893	8.901	(1.060)	1906918	40.0000	37.30
17	Hexachloroethane	117	9.197	9.201	(1.096)	942419	40.0000	36.77
16	N-Nitroso-di-n-propylamine	70	9.144	9.163	(1.090)	1594199	40.0000	37.59
15	4-Methylphenol	108	9.123	9.137	(1.087)	1961075	40.0000	37.11
$ 18	Nitrobenzene-d5	82	9.320	9.334	(0.893)	2827105	40.0000	38.74
19	Nitrobenzene	77	9.352	9.366	(0.897)	2373430	40.0000	34.42
20	Isophorone	82	9.726	9.740	(0.932)	3467180	40.0000	36.11
21	2-Nitrophenol	139	9.860	9.868	(0.945)	1062948	40.0000	40.20
22	2,4-Dimethylphenol	107	9.961	9.970	(0.955)	1949221	40.0000	35.52
23	Bis(2-Chloroethoxy)methane	93	10.111	10.119	(0.969)	2162742	40.0000	33.61
24	Benzoic acid	105	10.223	10.226	(0.980)	3083145	80.0000	116.9
25	2,4-Dichlorophenol	162	10.239	10.253	(0.982)	1444545	40.0000	37.42
26	1,2,4-Trichlorobenzene	180	10.373	10.381	(0.994)	1689239	40.0000	36.60
* 27	Naphthalene-d8	136	10.431	10.428	(1.000)	2869187	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	10.464	10.472	(1.003)	4913445	40.0000	33.57
	29 4-Chloroaniline	127	10.597	10.611	(1.016)	1785787	40.0000	31.57
	30 Hexachlorobutadiene	225	10.779	10.782	(1.033)	1049179	40.0000	37.20
	31 4-Chloro-3-methylphenol	107	11.398	11.407	(1.093)	1454561	40.0000	34.58
	32 2-Methylnaphthalene	141	11.585	11.589	(1.111)	2653501	40.0000	35.37
	33 Hexachlorocyclopentadiene	237	11.965	11.963	(0.900)	1189269	40.0000	44.97
	34 2,4,6-Trichlorophenol	196	12.093	12.101	(0.909)	982406	40.0000	40.02
	35 2,4,5-Trichlorophenol	196	12.152	12.155	(0.914)	1073747	40.0000	40.33
$	36 2-Fluorobiphenyl	172	12.226	12.230	(0.919)	3956433	40.0000	37.45
	37 2-Chloronaphthalene	162	12.371	12.374	(0.930)	2830754	40.0000	33.74
	38 2-Nitroaniline	65	12.595	12.604	(0.947)	1073689	40.0000	38.14
	39 Dimethylphthalate	163	12.964	12.972	(0.975)	3185918	40.0000	36.71
	40 Acenaphthylene	152	13.044	13.052	(0.981)	4487678	40.0000	35.01
	41 2,6-Dinitrotoluene	165	13.060	13.068	(0.982)	777343	40.0000	40.38
*	42 Acenaphthene-d10	164	13.300	13.297	(1.000)	1451918	20.0000	
	43 3-Nitroaniline	138	13.279	13.287	(0.998)	690368	40.0000	35.37
	44 Acenaphthene	153	13.348	13.357	(1.004)	2993373	40.0000	37.28
	45 2,4-Dinitrophenol	184	13.444	13.458	(1.011)	1243340	80.0000	107.6
	46 Dibenzofuran	168	13.610	13.619	(1.023)	3806599	40.0000	35.20
	47 4-Nitrophenol	109	13.567	13.581	(1.020)	552253	40.0000	40.04
	48 2,4-Dinitrotoluene	165	13.685	13.699	(1.029)	1022008	40.0000	42.68
	50 Diethylphthalate	149	14.118	14.126	(1.061)	3254991	40.0000	35.48
	49 Fluorene	166	14.171	14.174	(1.065)	3052773	40.0000	36.12
	51 4-Chlorophenyl-phenylether	204	14.187	14.190	(1.067)	1663620	40.0000	37.57
	52 4-Nitroaniline	138	14.272	14.297	(1.073)	554171	40.0000	34.26 (M)
	53 4,6-Dinitro-2-methylphenol	198	14.347	14.372	(0.915)	1389612	80.0000	88.76
	54 N-Nitrosodiphenylamine	169	14.390	14.404	(0.918)	2464306	40.0000	37.26
$	55 2,4,6-Tribromophenol	330	14.593	14.602	(1.097)	508721	40.0000	45.12
	56 4-Bromophenyl-phenylether	248	14.967	14.970	(0.955)	971481	40.0000	39.62
	57 Hexachlorobenzene	284	15.197	15.200	(0.969)	942477	40.0000	38.54
	58 Pentachlorophenol	266	15.490	15.499	(0.988)	574566	40.0000	44.27
*	59 Phenanthrene-d10	188	15.677	15.674	(1.000)	2129840	20.0000	
	60 Phenanthrene	178	15.715	15.723	(1.002)	4113551	40.0000	36.13
	61 Anthracene	178	15.784	15.793	(1.007)	4248809	40.0000	36.60
	62 Carbazole	167	16.062	16.071	(1.025)	3513770	40.0000	33.90
	63 Di-n-butylphthalate	149	16.757	16.765	(1.069)	4363972	40.0000	33.15
	64 Fluoranthene	202	17.649	17.663	(1.126)	3869137	40.0000	35.72
	65 Pyrene	202	18.012	18.015	(0.901)	3946878	40.0000	34.21
$	66 Terphenyl-d14	244	18.311	18.314	(0.916)	2885055	40.0000	38.01
	67 Butylbenzylphthalate	149	19.177	19.185	(0.959)	2069832	40.0000	37.55
	68 Benzo(a)anthracene	228	19.962	19.970	(0.999)	3499791	40.0000	36.59
*	69 Chrysene-d12	240	19.989	19.985	(1.000)	1843018	20.0000	
	70 3,3'-Dichlorobenzidine	252	19.962	19.970	(0.999)	1172948	40.0000	35.84
	71 Chrysene	228	20.031	20.040	(1.002)	3491213	40.0000	37.28
	72 bis(2-Ethylhexyl)phthalate	149	20.160	20.163	(0.956)	2742405	40.0000	37.51
*	134 Di-n-octylphthalate-d4	153	21.089	21.091	(1.000)	2425671	20.0000	
	73 Di-n-octylphthalate	149	21.100	21.108	(1.000)	4665892	40.0000	34.92

VZ97 · 00926

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	21.618	21.632	(0.976)	3803552	40.0000	39.41
75	Benzo(k)fluoranthene	252	21.655	21.664	(0.978)	3739720	40.0000	37.70
187	Total Benzofluoranthenes	252	21.655	21.664	(0.978)	7158858	80.0000	77.16
76	Benzo(a)pyrene	252	22.067	22.075	(0.997)	3377032	40.0000	39.09
* 77	Perylene-d12	264	22.141	22.138	(1.000)	1802829	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	23.787	23.801	(1.074)	4582326	40.0000	39.06
79	Dibenzo(a,h)anthracene	278	23.803	23.822	(1.075)	3711117	40.0000	38.40
80	Benzo(g,h,i)perylene	276	24.246	24.271	(1.095)	3945934	40.0000	38.25
90	N-Nitrosodimethylamine	74	3.903	3.917	(0.465)	1572749	40.0000	40.35
103	Pyridine	79	3.861	3.853	(0.460)	2645694	40.0000	39.90
91	Aniline	93	7.942	7.951	(0.947)	2678988	40.0000	33.34
105	1-methylnaphthalene	141	11.756	11.765	(1.127)	2645114	40.0000	35.02
93	Benzidine	184	17.889	17.892	(0.895)	550438	40.0000	21.48
111	Azobenzene (1,2-DP-Hydrazine)	77	14.438	14.447	(1.086)	3819501	40.0000	34.44
143	1,4-Dioxane	88	3.118	3.109	(0.372)	1149879	40.0000	38.96
$ 137	d8-1,4-Dioxane	96	3.059	3.057	(0.365)	1134067	40.0000	39.11
144	alpha-Terpineol	59	10.480	10.493	(1.005)	1587658	40.0000	35.48
177	p-Benzoquinone	82	7.082	7.090	(0.679)	578165	40.0000	43.23
99	Perylene	252	22.179	22.193	(1.002)	2846629	40.0000	35.49
133	Butylatedhydroxytoluene	205	13.455	13.464	(1.012)	2724455	40.0000	36.84
115	Tributyl Phosphate	99	14.475	14.484	(0.923)	3917634	40.0000	35.99
116	Dibutyl Phenyl Phosphate	175	16.206	16.209	(1.034)	2619949	40.0000	40.51
117	Butyl Diphenyl Phosphate	94	17.889	17.898	(0.895)	798819	40.0000	35.55
118	Triphenyl Phosphate	326	19.497	19.500	(0.975)	658743	40.0000	41.57
123	Acetophenone	105	9.085	9.099	(1.083)	2878833	40.0000	37.46
168	Pentachlorobenzene	250	13.653	13.661	(1.026)	1178999	40.0000	38.57
113	Diphenyl Oxide	170	12.552	12.550	(0.944)	2509236	40.0000	37.24
112	Biphenyl	154	12.360	12.363	(0.929)	3208939	40.0000	32.16
120	2,3,4,6-Tetrachlorophenol	232	13.888	13.891	(1.044)	800319	40.0000	41.33
151	1,2,4,5-Tetrachlorobenzene	216	11.922	11.925	(0.896)	1368854	40.0000	37.41
186	Carbaryl	144	16.473	16.487	(1.051)	1759290	40.0000	38.84
178	2-Benzyl-4-Chlorophenol	218	16.431	16.439	(1.048)	716572	40.0000	37.64

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 01071306.D
Lab Smp Id: IC40107
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130107.b/SW846010713.m
Misc Info: 13-

Calibration Date: 07-JAN-2013
Calibration Time: 13:30
Client Smp ID: IC400107
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	532349	266174	1064698	739932	38.99
27 Naphthalene-d8	2007575	1003788	4015150	2869187	42.92
42 Acenaphthene-d10	1020441	510220	2040882	1451918	42.28
59 Phenanthrene-d10	1546074	773037	3092148	2129840	37.76
69 Chrysene-d12	1407005	703502	2814010	1843018	30.99
134 Di-n-octylphthala	1928310	964155	3856620	2425671	25.79
77 Perylene-d12	1383265	691632	2766530	1802829	30.33

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.39	0.02
27 Naphthalene-d8	10.43	9.93	10.93	10.43	0.02
42 Acenaphthene-d10	13.30	12.80	13.80	13.30	0.02
59 Phenanthrene-d10	15.68	15.18	16.18	15.68	0.01
69 Chrysene-d12	19.99	19.49	20.49	19.99	0.01
134 Di-n-octylphthala	21.09	20.59	21.59	21.09	-0.02
77 Perylene-d12	22.14	21.64	22.64	22.14	-0.01

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.

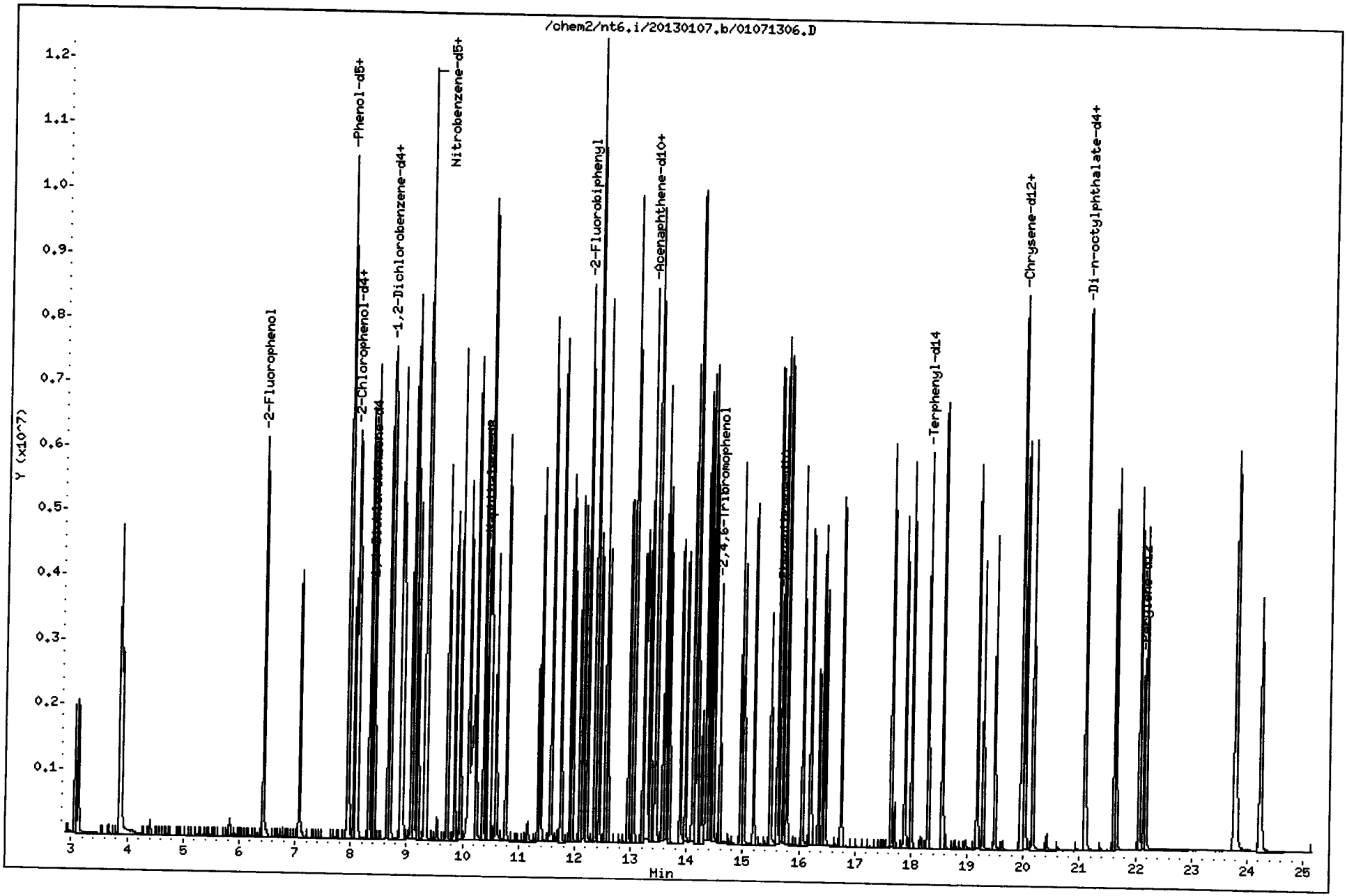
Data File: /chem2/nt6.i/20130107.b/01071306.D
Date : 07-JAN-2013 16:21
Client ID: IC400107
Sample Info: IC40107

Column phase: ZB-5msi

Instrument: nt6.i

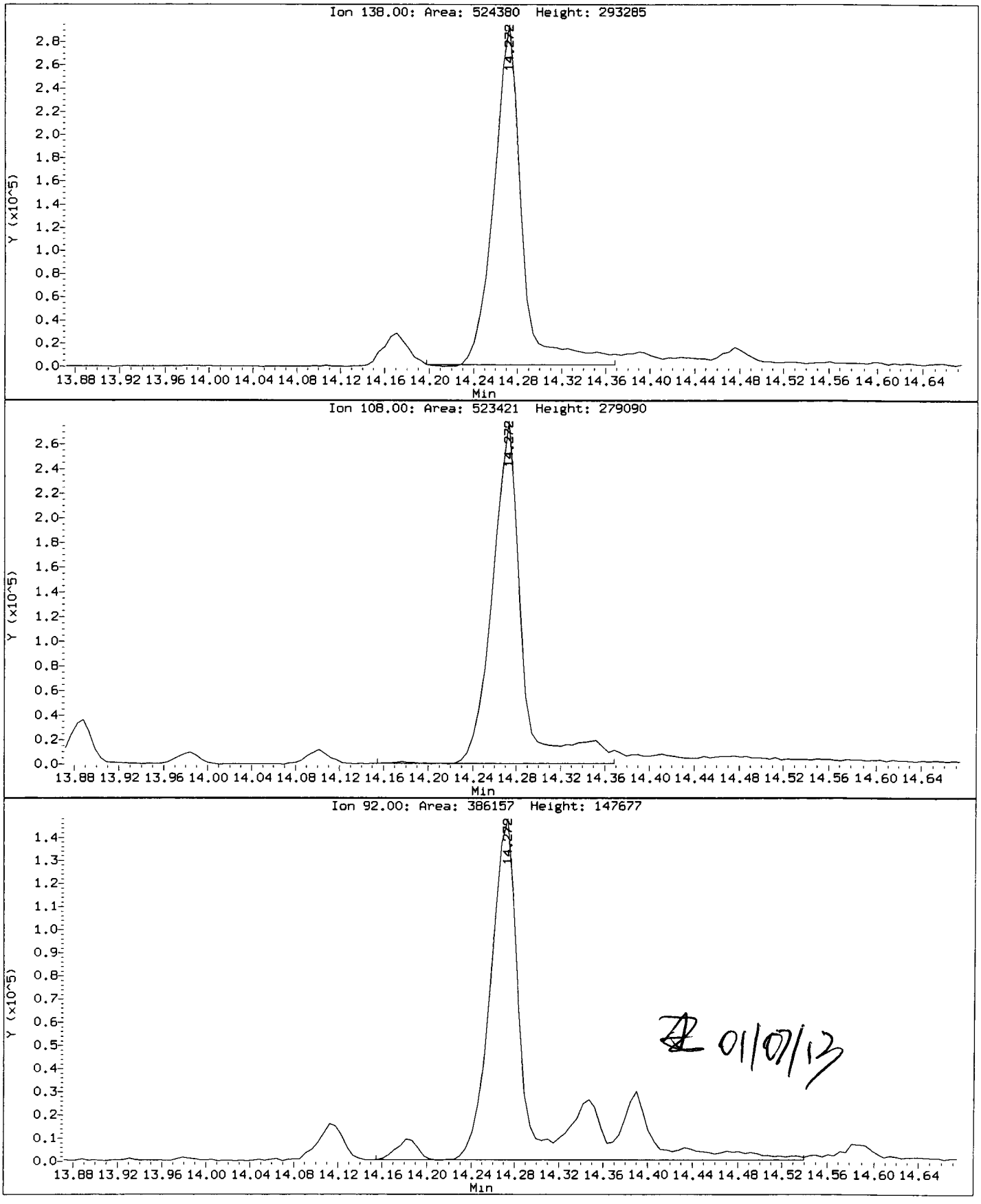
Operator: JZ
Column diameter: 0.32

52868 1527



Data File: /chem2/nt6.1/20130107.b/01071306.D
Injection Date: 07-JAN-2013 16:21
Instrument: nt6.1
Client Sample ID: IC400107

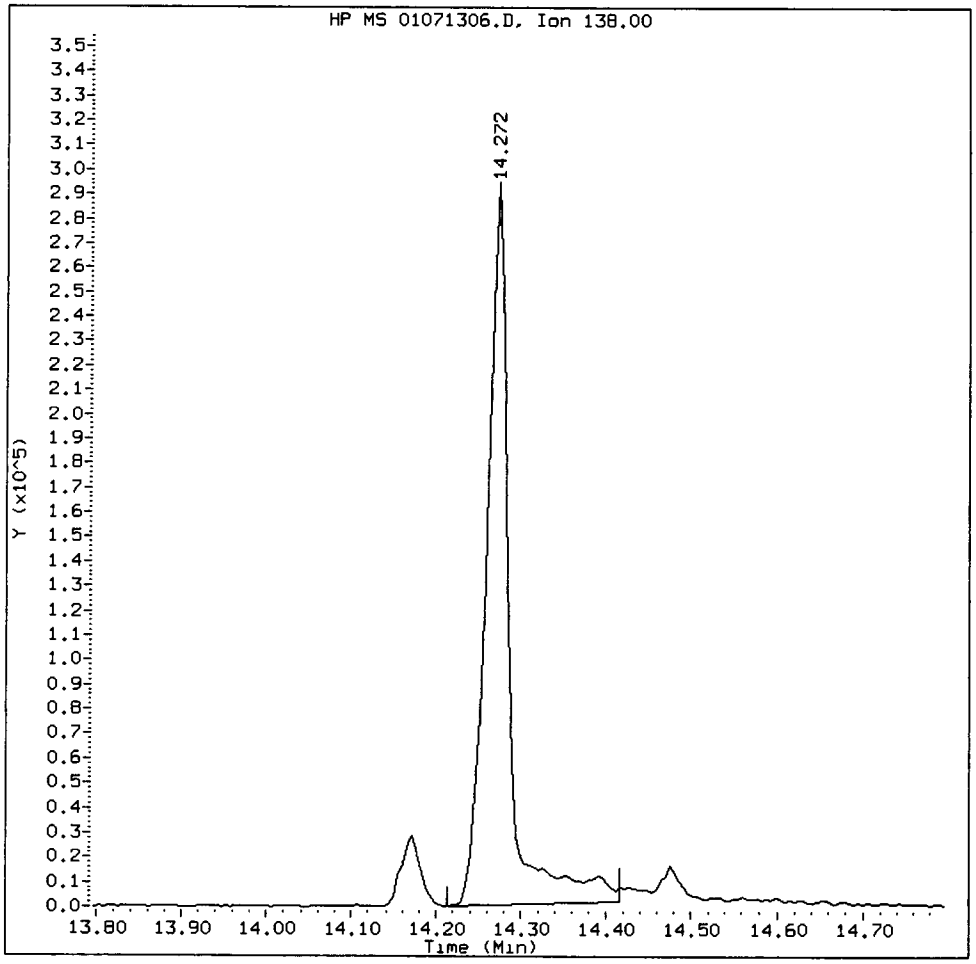
Compound: 4-Nitroaniline
CAS Number: 100-01-6



01/07/13

IC40107, /chem2/nt6.i/20130107.b/01071306.D

4-Nitroaniline Amount: 34.26 Area: 554171



MANUAL INTEGRATION for 4-Nitroaniline

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 01/07/13

UZ97:00931

CO-ELUTION SUMMARY FOR FILE - 01071306.D

Lab ID: IC40107, Method: SW846010713.m, Instrument: nt6.i, Date: 07-JAN-2013

RT	CO-ELUTION COMPOUNDS
19.962	3,3'-Dichlorobenzidine and Benzo(a)anthracene

checked ok

01/07/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130107.b/01071307.D
Lab Smp Id: IC60107 Client Smp ID: IC600107
Inj Date : 07-JAN-2013 16:55
Operator : JZ Inst ID: nt6.i
Smp Info : IC60107
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130107.b/SW846010713.m
Meth Date : 07-Jan-2013 06:44 jianqing Quant Type: ISTD
Cal Date : 07-JAN-2013 16:55 Cal File: 01071307.D
Als bottle: 7 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

01/07/13

AMOUNTS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$ 1	2-Fluorophenol	112	6.436	6.439	(0.767)	2791142	60.0000	54.58
$ 2	Phenol-d5	99	7.953	7.961	(0.948)	3396816	60.0000	52.33
3	Phenol	94	7.969	7.983	(0.950)	3162608	60.0000	49.69
$ 5	2-Chlorophenol-d4	132	8.098	8.100	(0.965)	2743974	60.0000	55.06
4	Bis(2-Chloroethyl)ether	93	8.060	8.068	(0.961)	2388942	60.0000	51.19
6	2-Chlorophenol	128	8.119	8.122	(0.968)	2432609	60.0000	52.90
7	1,3-Dichlorobenzene	146	8.333	8.335	(0.993)	2842188	60.0000	53.69
* 8	1,4-Dichlorobenzene-d4	152	8.391	8.387	(1.000)	652544	20.0000	
9	1,4-Dichlorobenzene	146	8.418	8.421	(1.003)	2877756	60.0000	55.04
$ 10	1,2-Dichlorobenzene-d4	152	8.696	8.698	(1.036)	1942109	60.0000	55.50
12	1,2-Dichlorobenzene	146	8.717	8.720	(1.039)	2700954	60.0000	54.88
11	Benzyl alcohol	108	8.669	8.677	(1.033)	1662605	60.0000	53.45
14	2,2'-oxybis(1-Chloropropane)	45	8.926	8.928	(1.064)	3912323	60.0000	48.44
13	2-Methylphenol	108	8.899	8.901	(1.060)	2281731	60.0000	51.96
17	Hexachloroethane	117	9.203	9.201	(1.097)	1220606	60.0000	54.92
16	N-Nitroso-di-n-propylamine	70	9.150	9.163	(1.090)	1936468	60.0000	52.98
15	4-Methylphenol	108	9.129	9.137	(1.088)	2393913	60.0000	52.63
$ 18	Nitrobenzene-d5	82	9.326	9.334	(0.894)	3394113	60.0000	54.75
19	Nitrobenzene	77	9.358	9.366	(0.897)	2948758	60.0000	50.96
20	Isophorone	82	9.732	9.740	(0.932)	4220212	60.0000	52.17
21	2-Nitrophenol	139	9.866	9.868	(0.945)	1331744	60.0000	58.55
22	2,4-Dimethylphenol	107	9.962	9.970	(0.954)	2430829	60.0000	52.52
23	Bis(2-Chloroethoxy)methane	93	10.112	10.119	(0.969)	2749746	60.0000	50.94
24	Benzoic acid	105	10.277	10.226	(0.985)	3998685	120.000	162.9(M)
25	2,4-Dichlorophenol	162	10.245	10.253	(0.982)	1885593	60.0000	57.06
26	1,2,4-Trichlorobenzene	180	10.379	10.381	(0.994)	2255888	60.0000	57.09
* 27	Naphthalene-d8	136	10.437	10.428	(1.000)	2480153	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
28	Naphthalene	128	10.470	10.472	(1.003)	5908541	60.0000	48.50
29	4-Chloroaniline	127	10.603	10.611	(1.016)	2450652	60.0000	51.53
30	Hexachlorobutadiene	225	10.779	10.782	(1.033)	1432176	60.0000	58.95
31	4-Chloro-3-methylphenol	107	11.404	11.407	(1.093)	1829850	60.0000	51.71
32	2-Methylnaphthalene	141	11.586	11.589	(1.110)	3400003	60.0000	53.56
33	Hexachlorocyclopentadiene	237	11.965	11.963	(0.900)	1623533	60.0000	71.24
34	2,4,6-Trichlorophenol	196	12.099	12.101	(0.910)	1305681	60.0000	63.40
35	2,4,5-Trichlorophenol	196	12.152	12.155	(0.914)	1390568	60.0000	62.46
$ 36	2-Fluorobiphenyl	172	12.227	12.230	(0.919)	4729437	60.0000	54.89
37	2-Chloronaphthalene	162	12.371	12.374	(0.930)	3516884	60.0000	51.91
38	2-Nitroaniline	65	12.601	12.604	(0.947)	1326751	60.0000	57.32
39	Dimethylphthalate	163	12.964	12.972	(0.975)	4051432	60.0000	56.87
40	Acenaphthylene	152	13.050	13.052	(0.981)	5410214	60.0000	52.21
41	2,6-Dinitrotoluene	165	13.060	13.068	(0.982)	1024177	60.0000	63.42
* 42	Acenaphthene-d10	164	13.301	13.297	(1.000)	1204277	20.0000	
43	3-Nitroaniline	138	13.279	13.287	(0.998)	984118	60.0000	60.66
44	Acenaphthene	153	13.354	13.357	(1.004)	3645470	60.0000	55.55
45	2,4-Dinitrophenol	184	13.450	13.458	(1.011)	1690118	120.000	161.2
46	Dibenzofuran	168	13.616	13.619	(1.024)	4850232	60.0000	54.97
47	4-Nitrophenol	109	13.573	13.581	(1.020)	703178	60.0000	61.22
48	2,4-Dinitrotoluene	165	13.691	13.699	(1.029)	1347033	60.0000	66.37
50	Diethylphthalate	149	14.118	14.126	(1.061)	4171728	60.0000	55.62
49	Fluorene	166	14.172	14.174	(1.065)	3763853	60.0000	54.64
51	4-Chlorophenyl-phenylether	204	14.188	14.190	(1.067)	2119187	60.0000	58.08
52	4-Nitroaniline	138	14.284	14.297	(1.074)	786006	60.0000	58.82
53	4,6-Dinitro-2-methylphenol	198	14.359	14.372	(0.916)	1908696	120.000	133.8
54	N-Nitrosodiphenylamine	169	14.396	14.404	(0.918)	3209297	60.0000	55.62
$ 55	2,4,6-Tribromophenol	330	14.594	14.602	(1.097)	673307	60.0000	69.68
56	4-Bromophenyl-phenylether	248	14.968	14.970	(0.955)	1303866	60.0000	60.06
57	Hexachlorobenzene	284	15.197	15.200	(0.969)	1268622	60.0000	58.83
58	Pentachlorophenol	266	15.491	15.499	(0.988)	805592	60.0000	67.84
* 59	Phenanthrene-d10	188	15.678	15.674	(1.000)	1885235	20.0000	
60	Phenanthrene	178	15.715	15.723	(1.002)	5216557	60.0000	52.97
61	Anthracene	178	15.790	15.793	(1.007)	5331901	60.0000	53.08
62	Carbazole	167	16.068	16.071	(1.025)	4563079	60.0000	51.20
63	Di-n-butylphthalate	149	16.763	16.765	(1.069)	5692181	60.0000	50.41
64	Fluoranthene	202	17.655	17.663	(1.126)	5321504	60.0000	56.20
65	Pyrene	202	18.013	18.015	(0.901)	5176291	60.0000	49.90
$ 66	Terphenyl-d14	244	18.312	18.314	(0.916)	3785560	60.0000	54.62
67	Butylbenzylphthalate	149	19.183	19.185	(0.959)	2794100	60.0000	55.39
68	Benzo(a)anthracene	228	19.968	19.970	(0.999)	4725096	60.0000	54.19
* 69	Chrysene-d12	240	19.995	19.985	(1.000)	1712755	20.0000	
70	3,3'-Dichlorobenzidine	252	19.968	19.970	(0.999)	1760513	60.0000	58.23
71	Chrysene	228	20.037	20.040	(1.002)	4688238	60.0000	54.80
72	bis(2-Ethylhexyl)phthalate	149	20.165	20.163	(0.956)	3639801	60.0000	55.46
* 134	Di-n-octylphthalate-d4	153	21.095	21.091	(1.000)	2210352	20.0000	
73	Di-n-octylphthalate	149	21.106	21.108	(1.000)	6039177	60.0000	51.07

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	21.624	21.632	(0.976)	5249081	60.0000	61.81
75	Benzo(k)fluoranthene	252	21.656	21.664	(0.978)	4823237	60.0000	56.29
187	Total Benzofluoranthenes	252	21.656	21.664	(0.978)	9510674	120.000	117.7
76	Benzo(a)pyrene	252	22.073	22.075	(0.997)	4492112	60.0000	59.54
* 77	Perylene-d12	264	22.147	22.138	(1.000)	1576666	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	23.793	23.801	(1.074)	6189902	60.0000	60.28
79	Dibenzo(a,h)anthracene	278	23.809	23.822	(1.075)	5009520	60.0000	59.39
80	Benzo(g,h,i)perylene	276	24.258	24.271	(1.095)	5442904	60.0000	60.27
90	N-Nitrosodimethylamine	74	3.904	3.917	(0.465)	1981658	60.0000	58.03
103	Pyridine	79	3.851	3.853	(0.459)	3218444	60.0000	55.80
91	Aniline	93	7.948	7.951	(0.947)	3274107	60.0000	48.04
105	1-methylnaphthalene	141	11.762	11.765	(1.127)	3306984	60.0000	52.01
93	Benzidine	184	17.895	17.892	(0.895)	656859	60.0000	30.92
111	Azobenzene (1,2-DP-Hydrazine)	77	14.444	14.447	(1.086)	4735001	60.0000	52.72
143	1,4-Dioxane	88	3.113	3.109	(0.371)	1478854	60.0000	57.32
$ 137	d8-1,4-Dioxane	96	3.049	3.057	(0.363)	1471518	60.0000	57.94
144	alpha-Terpineol	59	10.486	10.493	(1.005)	1934183	60.0000	51.44
177	p-Benzoquinone	82	7.083	7.090	(0.679)	685236	60.0000	59.39
99	Perylene	252	22.185	22.193	(1.002)	3800556	60.0000	55.07
133	Butylatedhydroxytoluene	205	13.461	13.464	(1.012)	3339200	60.0000	55.29
115	Tributyl Phosphate	99	14.476	14.484	(0.923)	4769237	60.0000	50.99
116	Dibutyl Phenyl Phosphate	175	16.207	16.209	(1.034)	3478150	60.0000	60.63
117	Butyl Diphenyl Phosphate	94	17.895	17.898	(0.895)	1035809	60.0000	51.07
118	Triphenyl Phosphate	326	19.498	19.500	(0.975)	935907	60.0000	62.93
123	Acetophenone	105	9.091	9.099	(1.083)	3529161	60.0000	53.24
168	Pentachlorobenzene	250	13.653	13.661	(1.026)	1580048	60.0000	61.93
113	Diphenyl Oxide	170	12.553	12.550	(0.944)	3047755	60.0000	55.38
112	Biphenyl	154	12.361	12.363	(0.929)	3854754	60.0000	48.38
120	2,3,4,6-Tetrachlorophenol	232	13.888	13.891	(1.044)	1062226	60.0000	65.02
151	1,2,4,5-Tetrachlorobenzene	216	11.923	11.925	(0.896)	1869646	60.0000	61.33
186	Carbaryl	144	16.479	16.487	(1.051)	2412738	60.0000	60.15
178	2-Benzyl-4-Chlorophenol	218	16.431	16.439	(1.048)	1023120	60.0000	60.60

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 01071307.D
Lab Smp Id: IC60107
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130107.b/SW846010713.m
Misc Info: 13-

Calibration Date: 07-JAN-2013
Calibration Time: 13:30
Client Smp ID: IC600107
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	532349	266174	1064698	652544	22.58
27 Naphthalene-d8	2007575	1003788	4015150	2480153	23.54
42 Acenaphthene-d10	1020441	510220	2040882	1204277	18.02
59 Phenanthrene-d10	1546074	773037	3092148	1885235	21.94
69 Chrysene-d12	1407005	703502	2814010	1712755	21.73
134 Di-n-octylphthala	1928310	964155	3856620	2210352	14.63
77 Perylene-d12	1383265	691632	2766530	1576666	13.98

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.39	0.03
27 Naphthalene-d8	10.43	9.93	10.93	10.44	0.08
42 Acenaphthene-d10	13.30	12.80	13.80	13.30	0.02
59 Phenanthrene-d10	15.68	15.18	16.18	15.68	0.02
69 Chrysene-d12	19.99	19.49	20.49	19.99	0.04
134 Di-n-octylphthala	21.09	20.59	21.59	21.09	0.01
77 Perylene-d12	22.14	21.64	22.64	22.15	0.01

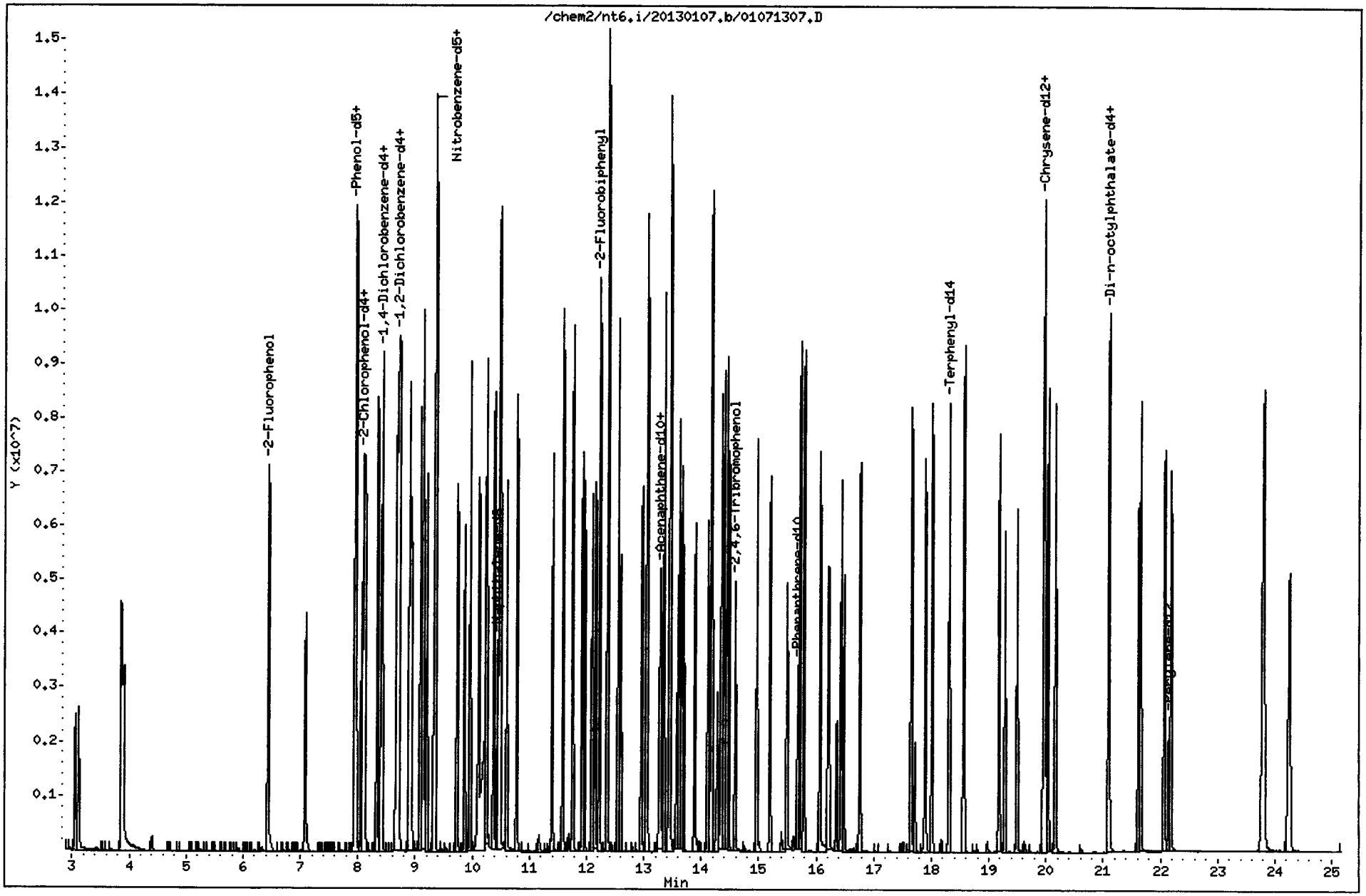
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130107.b/01071307.D
Date : 07-JAN-2013 16:55
Client ID: IC600107
Sample Info: IC60107

Instrument: nt6.i

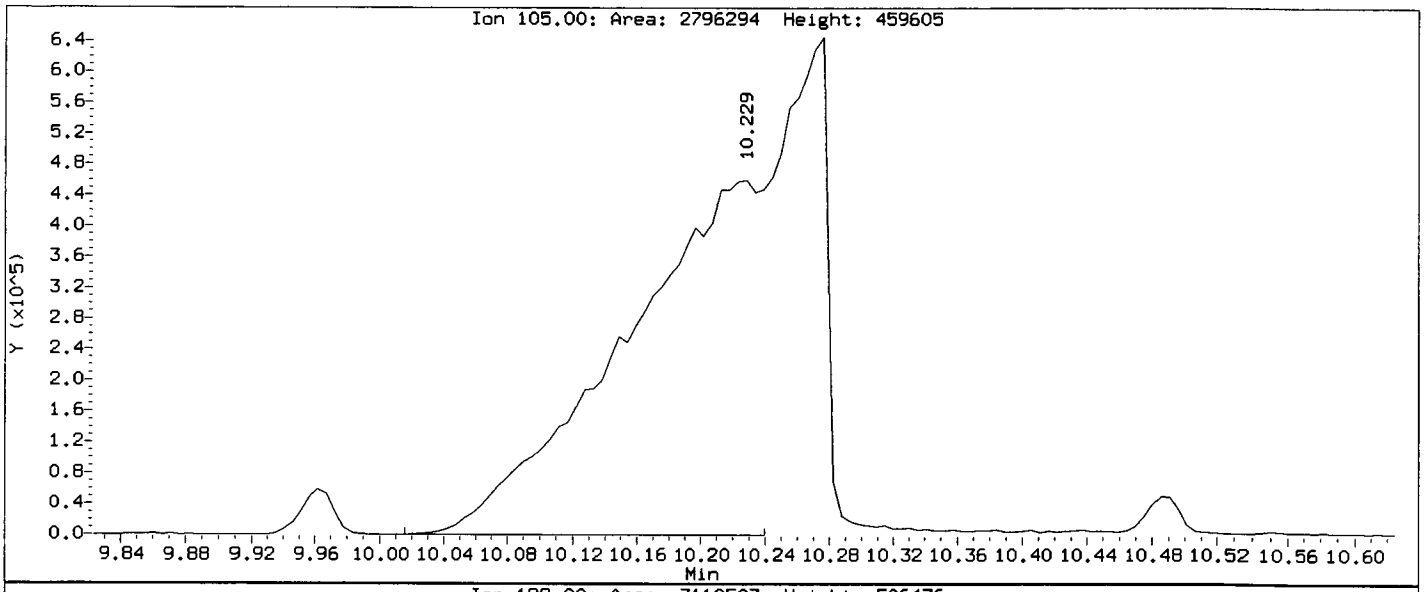
Operator: JZ
Column diameter: 0.32

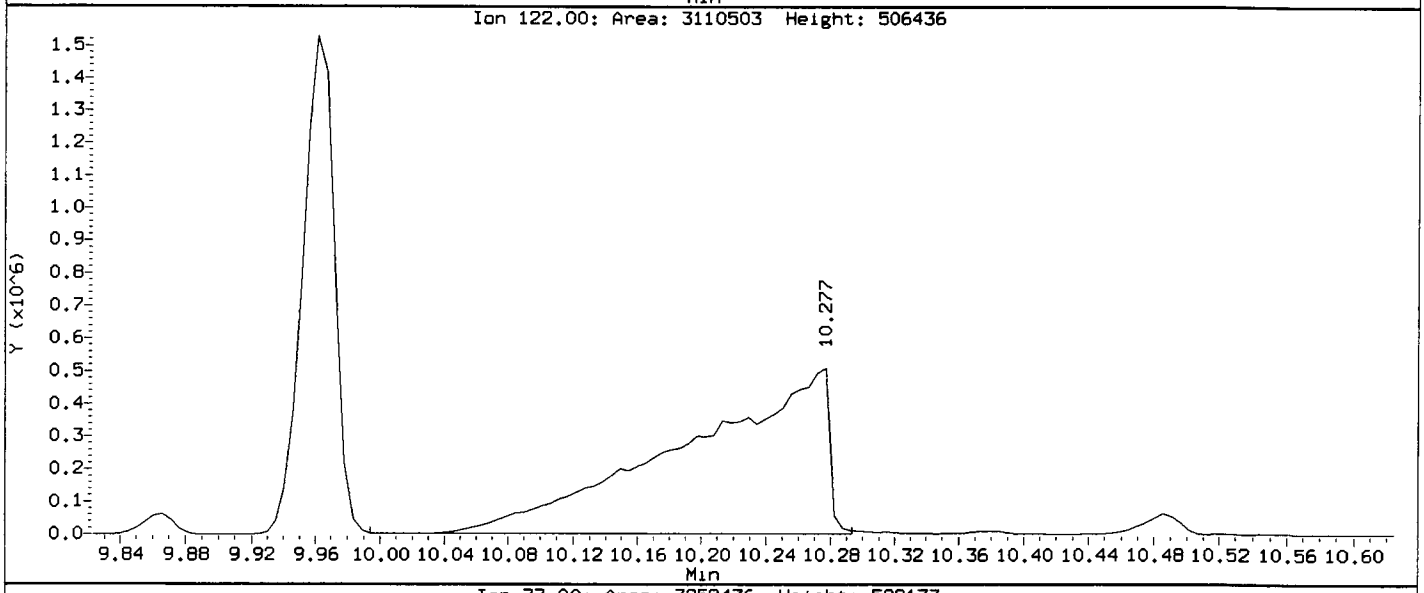
Column phase: ZB-5msi

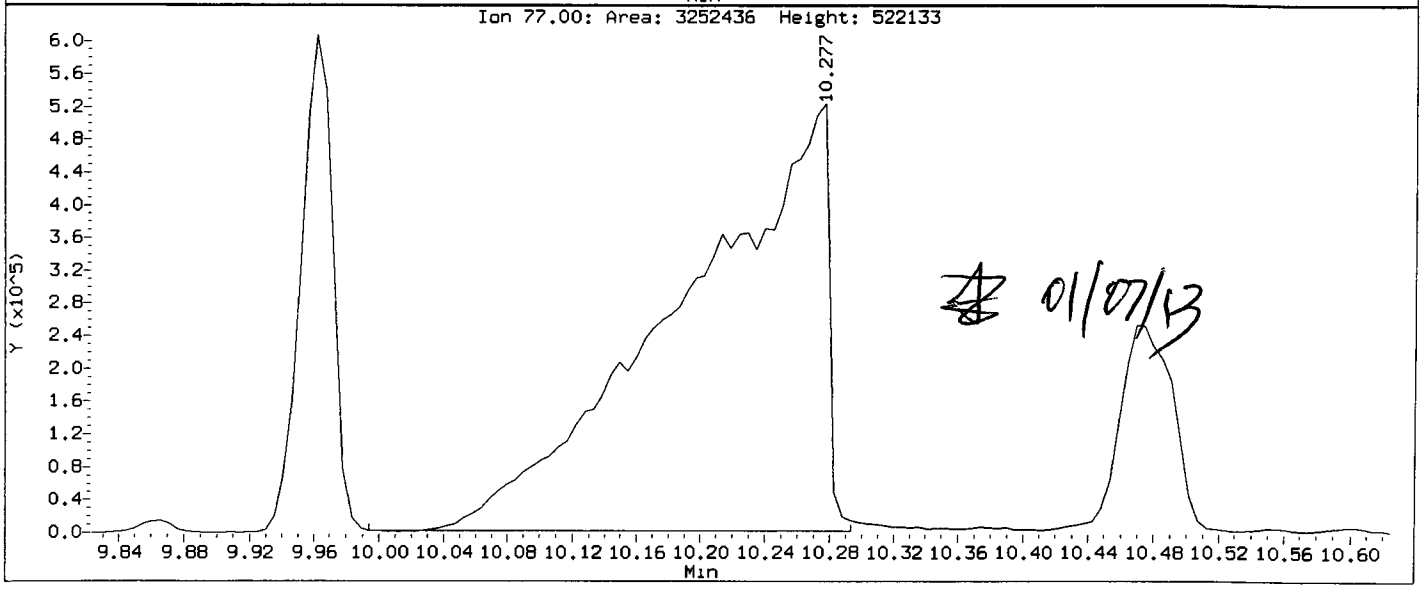


Data File: /chem2/nt6.i/20130107.b/01071307.D
Injection Date: 07-JAN-2013 16:55
Instrument: nt6.i
Client Sample ID: IC600107

Compound: Benzoic acid
CAS Number: 65-85-0





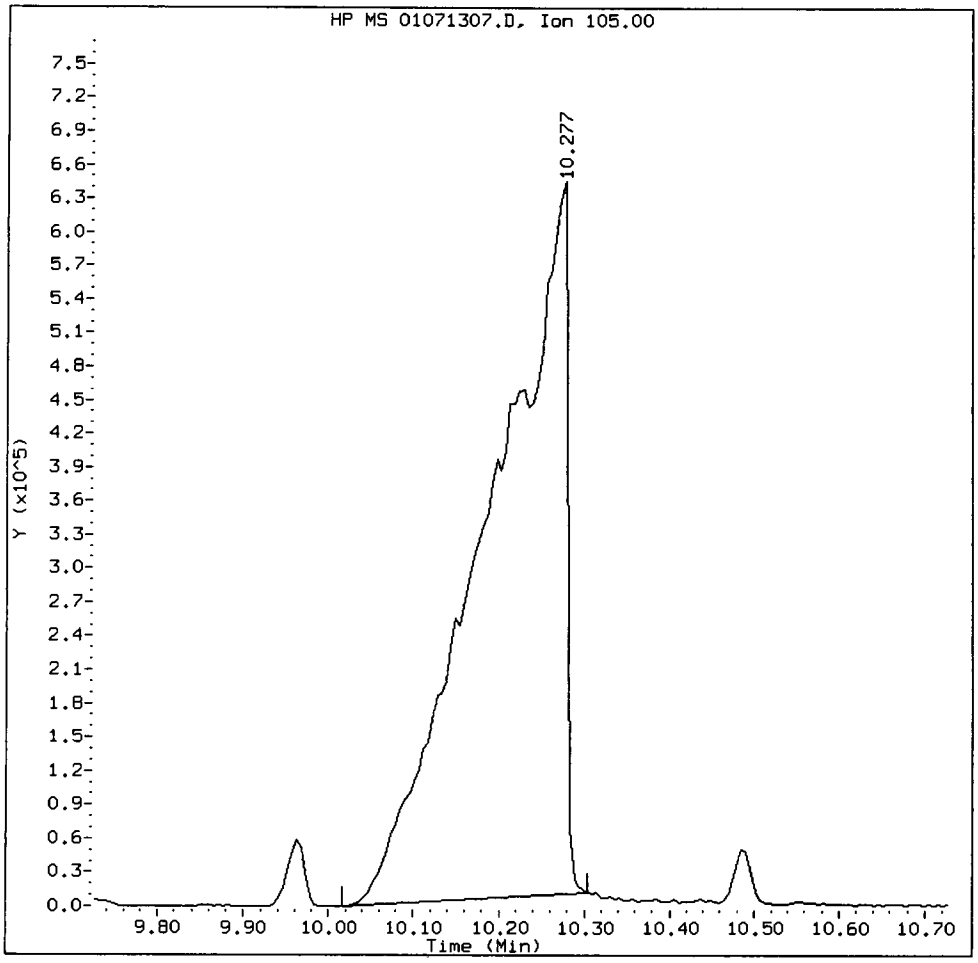


01/07/13

VZ97 : 00938

IC60107, /chem2/nt6.i/20130107.b/01071307.D

Benzoic acid Amount: 162.86 Area: 3998685



MANUAL INTEGRATION for Benzoic acid

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 01/07/13

CO-ELUTION SUMMARY FOR FILE - 01071307.D

Lab ID: IC60107, Method: SW846010713.m, Instrument: nt6.i, Date: 07-JAN-2013

RT	CO-ELUTION COMPOUNDS
19.968	3,3'-Dichlorobenzidine and Benzo(a)anthracene

checked ok

01/07/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130107.b/01071308.D
Lab Smp Id: IC80107 Client Smp ID: IC800107
Inj Date : 07-JAN-2013 17:29
Operator : JZ Inst ID: nt6.i
Smp Info : IC80107
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130107.b/SW846010713.m
Meth Date : 07-Jan-2013 06:44 jianqing Quant Type: ISTD
Cal Date : 07-JAN-2013 17:29 Cal File: 01071308.D
Als bottle: 8 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

01/07/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.439	6.439	(0.767)	3652072	80.0000	73.73
$	2 Phenol-d5	99	7.961	7.961	(0.948)	4452142	80.0000	71.18
	3 Phenol	94	7.983	7.983	(0.951)	4031031	80.0000	66.38
$	5 2-Chlorophenol-d4	132	8.100	8.100	(0.965)	3617581	80.0000	74.78
	4 Bis(2-Chloroethyl)ether	93	8.068	8.068	(0.961)	3132644	80.0000	69.86
	6 2-Chlorophenol	128	8.122	8.122	(0.968)	3095987	80.0000	70.03
	7 1,3-Dichlorobenzene	146	8.335	8.335	(0.993)	3628681	80.0000	71.14
*	8 1,4-Dichlorobenzene-d4	152	8.394	8.387	(1.000)	640305	20.0000	
	9 1,4-Dichlorobenzene	146	8.421	8.421	(1.003)	3580027	80.0000	71.08
$	10 1,2-Dichlorobenzene-d4	152	8.698	8.698	(1.036)	2491649	80.0000	73.54
	12 1,2-Dichlorobenzene	146	8.720	8.720	(1.039)	3318502	80.0000	70.13
	11 Benzyl alcohol	108	8.677	8.677	(1.034)	2130194	80.0000	71.08
	14 2,2'-oxybis(1-Chloropropane)	45	8.928	8.928	(1.064)	4858554	80.0000	63.43
	13 2-Methylphenol	108	8.901	8.901	(1.060)	2910065	80.0000	69.07
	17 Hexachloroethane	117	9.201	9.201	(1.096)	1570622	80.0000	73.06
	16 N-Nitroso-di-n-propylamine	70	9.163	9.163	(1.092)	2540945	80.0000	72.02
	15 4-Methylphenol	108	9.137	9.137	(1.088)	3033727	80.0000	69.46
$	18 Nitrobenzene-d5	82	9.334	9.334	(0.894)	4379294	80.0000	72.70
	19 Nitrobenzene	77	9.366	9.366	(0.897)	3726846	80.0000	67.05
	20 Isophorone	82	9.740	9.740	(0.933)	5462245	80.0000	69.89
	21 2-Nitrophenol	139	9.868	9.868	(0.945)	1761303	80.0000	78.71
	22 2,4-Dimethylphenol	107	9.970	9.970	(0.955)	3143438	80.0000	70.25
	23 Bis(2-Chloroethoxy)methane	93	10.119	10.119	(0.969)	3610824	80.0000	69.32
	24 Benzoic acid	105	10.226	10.226	(0.980)	2669528	160.000	110.2
	25 2,4-Dichlorophenol	162	10.253	10.253	(0.982)	2502665	80.0000	77.22
	26 1,2,4-Trichlorobenzene	180	10.381	10.381	(0.994)	2929327	80.0000	75.81
*	27 Naphthalene-d8	136	10.440	10.428	(1.000)	2446507	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	10.472	10.472	(1.003)	6973398	80.0000	60.39
	29 4-Chloroaniline	127	10.611	10.611	(1.016)	3164385	80.0000	69.00
	30 Hexachlorobutadiene	225	10.782	10.782	(1.033)	1907314	80.0000	79.64
	31 4-Chloro-3-methylphenol	107	11.407	11.407	(1.093)	2436624	80.0000	71.10
	32 2-Methylnaphthalene	141	11.589	11.589	(1.110)	4372369	80.0000	71.11
	33 Hexachlorocyclopentadiene	237	11.963	11.963	(0.900)	2176417	80.0000	93.41
	34 2,4,6-Trichlorophenol	196	12.101	12.101	(0.910)	1754583	80.0000	84.86
	35 2,4,5-Trichlorophenol	196	12.155	12.155	(0.914)	1883124	80.0000	84.34
$	36 2-Fluorobiphenyl	172	12.230	12.230	(0.920)	5991983	80.0000	71.26
	37 2-Chloronaphthalene	162	12.374	12.374	(0.930)	4424914	80.0000	67.44
	38 2-Nitroaniline	65	12.604	12.604	(0.948)	1664090	80.0000	73.35
	39 Dimethylphthalate	163	12.972	12.972	(0.975)	5130076	80.0000	73.45
	40 Acenaphthylene	152	13.052	13.052	(0.982)	6622250	80.0000	66.17
	41 2,6-Dinitrotoluene	165	13.068	13.068	(0.983)	1310433	80.0000	81.41
*	42 Acenaphthene-d10	164	13.298	13.297	(1.000)	1196791	20.0000	
	43 3-Nitroaniline	138	13.287	13.287	(0.999)	1312226	80.0000	81.19
	44 Acenaphthene	153	13.357	13.357	(1.004)	4628529	80.0000	72.14
	45 2,4-Dinitrophenol	184	13.458	13.458	(1.012)	2287112	160.000	206.7
	46 Dibenzofuran	168	13.619	13.619	(1.024)	6131580	80.0000	71.21
	47 4-Nitrophenol	109	13.581	13.581	(1.021)	863743	80.0000	76.26
	48 2,4-Dinitrotoluene	165	13.699	13.699	(1.030)	1750024	80.0000	85.73
	50 Diethylphthalate	149	14.126	14.126	(1.062)	5326216	80.0000	72.56
	49 Fluorene	166	14.174	14.174	(1.066)	4661737	80.0000	69.58
	51 4-Chlorophenyl-phenylether	204	14.190	14.190	(1.067)	2750950	80.0000	76.42
	52 4-Nitroaniline	138	14.297	14.297	(1.075)	1028638	80.0000	77.81
	53 4,6-Dinitro-2-methylphenol	198	14.372	14.372	(0.917)	2568087	160.000	179.7
	54 N-Nitrosodiphenylamine	169	14.404	14.404	(0.919)	4082322	80.0000	73.40
$	55 2,4,6-Tribromophenol	330	14.602	14.602	(1.098)	924120	80.0000	93.52
	56 4-Bromophenyl-phenylether	248	14.970	14.970	(0.955)	1700359	80.0000	80.13
	57 Hexachlorobenzene	284	15.200	15.200	(0.969)	1716606	80.0000	81.26
	58 Pentachlorophenol	266	15.499	15.499	(0.988)	1090812	80.0000	91.34
*	59 Phenanthrene-d10	188	15.681	15.674	(1.000)	1842237	20.0000	
	60 Phenanthrene	178	15.723	15.723	(1.003)	6450695	80.0000	68.62
	61 Anthracene	178	15.793	15.793	(1.007)	6532767	80.0000	68.19
	62 Carbazole	167	16.071	16.071	(1.025)	5895714	80.0000	69.21
	63 Di-n-butylphthalate	149	16.765	16.765	(1.069)	6821209	80.0000	63.89
	64 Fluoranthene	202	17.663	17.663	(1.126)	6502342	80.0000	71.52
	65 Pyrene	202	18.015	18.015	(0.901)	6437556	80.0000	64.31
$	66 Terphenyl-d14	244	18.314	18.314	(0.916)	5051124	80.0000	74.05
	67 Butylbenzylphthalate	149	19.185	19.185	(0.959)	3545171	80.0000	71.74
	68 Benzo(a)anthracene	228	19.970	19.970	(0.999)	6120825	80.0000	71.67
*	69 Chrysene-d12	240	19.997	19.985	(1.000)	1706728	20.0000	
	70 3,3'-Dichlorobenzidine	252	19.970	19.970	(0.999)	2333348	80.0000	77.80
	71 Chrysene	228	20.040	20.040	(1.002)	5934003	80.0000	70.92
	72 bis(2-Ethylhexyl)phthalate	149	20.163	20.163	(0.956)	4605670	80.0000	71.00
*	134 Di-n-octylphthalate-d4	153	21.092	21.091	(1.000)	2225716	20.0000	
	73 Di-n-octylphthalate	149	21.108	21.108	(1.001)	7480098	80.0000	64.81

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	21.632	21.632	(0.977)	6575298	80.0000	76.36
75	Benzo(k)fluoranthene	252	21.664	21.664	(0.978)	6636557	80.0000	76.38
187	Total Benzofluoranthenes	252	21.664	21.664	(0.978)	12443681	160.000	152.0
76	Benzo(a)pyrene	252	22.075	22.075	(0.997)	5885689	80.0000	76.86
* 77	Perylene-d12	264	22.150	22.138	(1.000)	1610817	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	23.801	23.801	(1.075)	8581051	80.0000	81.53
79	Dibenzo(a,h)anthracene	278	23.822	23.822	(1.075)	6843363	80.0000	79.49
80	Benzo(g,h,i)perylene	276	24.271	24.271	(1.096)	7449634	80.0000	80.64
90	N-Nitrosodimethylamine	74	3.917	3.917	(0.467)	2539488	80.0000	76.36
103	Pyridine	79	3.853	3.853	(0.459)	4242828	80.0000	75.65
91	Aniline	93	7.951	7.951	(0.947)	4169039	80.0000	64.38
105	1-methylnaphthalene	141	11.765	11.765	(1.127)	4217940	80.0000	68.81
93	Benzidine	184	17.892	17.892	(0.895)	876419	80.0000	41.40
111	Azobenzene (1,2-DP-Hydrazine)	77	14.447	14.447	(1.086)	5906315	80.0000	67.85
143	1,4-Dioxane	88	3.116	3.109	(0.371)	1846977	80.0000	73.89
$ 137	d8-1,4-Dioxane	96	3.057	3.057	(0.364)	1825599	80.0000	74.15
144	alpha-Terpineol	59	10.493	10.493	(1.005)	2494277	80.0000	68.81
177	p-Benzoquinone	82	7.090	7.090	(0.679)	648931	80.0000	59.46
99	Perylene	252	22.193	22.193	(1.002)	5102664	80.0000	73.37
133	Butylatedhydroxytoluene	205	13.464	13.464	(1.012)	3361368	80.0000	58.51
115	Tributyl Phosphate	99	14.484	14.484	(0.924)	4749315	80.0000	54.70
116	Dibutyl Phenyl Phosphate	175	16.209	16.209	(1.034)	3546028	80.0000	65.20
117	Butyl Diphenyl Phosphate	94	17.898	17.898	(0.895)	1035171	80.0000	54.00
118	Triphenyl Phosphate	326	19.500	19.500	(0.975)	964535	80.0000	66.87
123	Acetophenone	105	9.099	9.099	(1.084)	4461589	80.0000	70.02
168	Pentachlorobenzene	250	13.661	13.661	(1.027)	2098175	80.0000	82.34
113	Diphenyl Oxide	170	12.550	12.550	(0.944)	3083251	80.0000	58.86
112	Biphenyl	154	12.363	12.363	(0.930)	4678517	80.0000	61.38
120	2,3,4,6-Tetrachlorophenol	232	13.891	13.891	(1.045)	1435801	80.0000	87.13
151	1,2,4,5-Tetrachlorobenzene	216	11.925	11.925	(0.897)	2502035	80.0000	82.21
186	Carbaryl	144	16.487	16.487	(1.051)	3092287	80.0000	79.05
178	2-Benzyl-4-Chlorophenol	218	16.439	16.439	(1.048)	1027558	80.0000	64.32

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 01071308.D
Lab Smp Id: IC80107
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130107.b/SW846010713.m
Misc Info: 13-

Calibration Date: 07-JAN-2013
Calibration Time: 13:30
Client Smp ID: IC800107
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	532349	266174	1064698	640305	20.28
27 Naphthalene-d8	2007575	1003788	4015150	2446507	21.86
42 Acenaphthene-d10	1020441	510220	2040882	1196791	17.28
59 Phenanthrene-d10	1546074	773037	3092148	1842237	19.16
69 Chrysene-d12	1407005	703502	2814010	1706728	21.30
134 Di-n-octylphthala	1928310	964155	3856620	2225716	15.42
77 Perylene-d12	1383265	691632	2766530	1610817	16.45

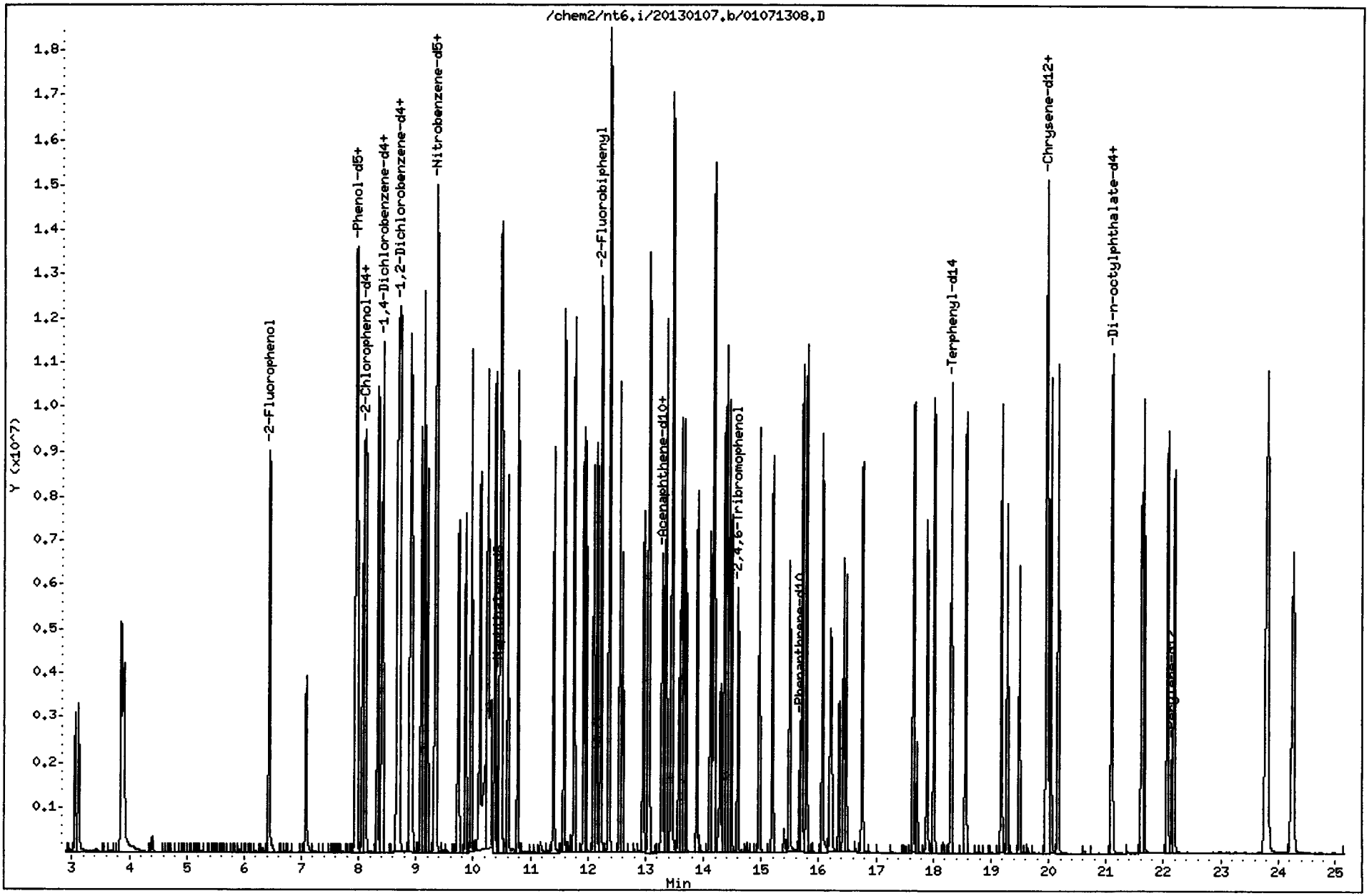
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.39	0.06
27 Naphthalene-d8	10.43	9.93	10.93	10.44	0.10
42 Acenaphthene-d10	13.30	12.80	13.80	13.30	0.00
59 Phenanthrene-d10	15.68	15.18	16.18	15.68	0.03
69 Chrysene-d12	19.99	19.49	20.49	20.00	0.05
134 Di-n-octylphthala	21.09	20.59	21.59	21.09	0.00
77 Perylene-d12	22.14	21.64	22.64	22.15	0.02

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.

Data File: /chem2/nt6.i/20130107.b/01071308.D
Date : 07-JAN-2013 17:29
Client ID: IC800107
Sample Info: IC80107

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - 01071308.D

Lab ID: IC80107, Method: SW846010713.m, Instrument: nt6.i, Date: 07-JAN-2013

RT	CO-ELUTION COMPOUNDS
19.970	3,3'-Dichlorobenzidine and Benzo(a)anthracene

Michael OK.

01/07/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130107.b/01071302.D
Lab Smp Id: IC020107 Client Smp ID: IC020107
Inj Date : 07-JAN-2013 14:04
Operator : JZ Inst ID: nt6.i
Smp Info : IC020107
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130107.b/SW846010713.m
Meth Date : 07-Jan-2013 06:57 jianqing Quant Type: ISTD
Cal Date : 07-JAN-2013 14:04 Cal File: 01071302.D
Als bottle: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DIOX.sub
Target Version: 3.50

01/07/13

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Vo	500.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
* 8 1,4-Dichlorobenzene-d4	152	8.387	8.387	(1.000)	696175	20.0000	
* 27 Naphthalene-d8	136	10.428	10.428	(1.000)	2714867	20.0000	
* 42 Acenaphthene-d10	164	13.297	13.297	(1.000)	1442675	20.0000	
* 59 Phenanthrene-d10	188	15.674	15.674	(1.000)	2121370	20.0000	
* 69 Chrysene-d12	240	19.985	19.985	(1.000)	1700414	20.0000	
* 134 Di-n-octylphthalate-d4	153	21.091	21.091	(1.000)	2226447	20.0000	
* 77 Perylene-d12	264	22.138	22.138	(1.000)	1717710	20.0000	
$ 137 d8-1,4-Dioxane	96	Compound Not Detected.					
143 1,4-Dioxane	88	3.109	3.109	(0.371)	6628	0.23737	0.2374

01/09/13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 01071302.D
Lab Smp Id: IC020107
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130107.b/SW846010713.m
Misc Info: 13-

Calibration Date: 07-JAN-2013
Calibration Time: 13:30
Client Smp ID: IC020107
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	532349	266174	1064698	696175	30.77
27 Naphthalene-d8	2007575	1003788	4015150	2714867	35.23
42 Acenaphthene-d10	1020441	510220	2040882	1442675	41.38
59 Phenanthrene-d10	1546074	773037	3092148	2121370	37.21
69 Chrysene-d12	1407005	703502	2814010	1700414	20.85
134 Di-n-octylphthala	1928310	964155	3856620	2226447	15.46
77 Perylene-d12	1383265	691632	2766530	1717710	24.18

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.39	-0.02
27 Naphthalene-d8	10.43	9.93	10.93	10.43	-0.01
42 Acenaphthene-d10	13.30	12.80	13.80	13.30	-0.01
59 Phenanthrene-d10	15.68	15.18	16.18	15.67	-0.01
69 Chrysene-d12	19.99	19.49	20.49	19.98	-0.01
134 Di-n-octylphthala	21.09	20.59	21.59	21.09	-0.01
77 Perylene-d12	22.14	21.64	22.64	22.14	-0.03

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.

Analytical Resources, Inc.

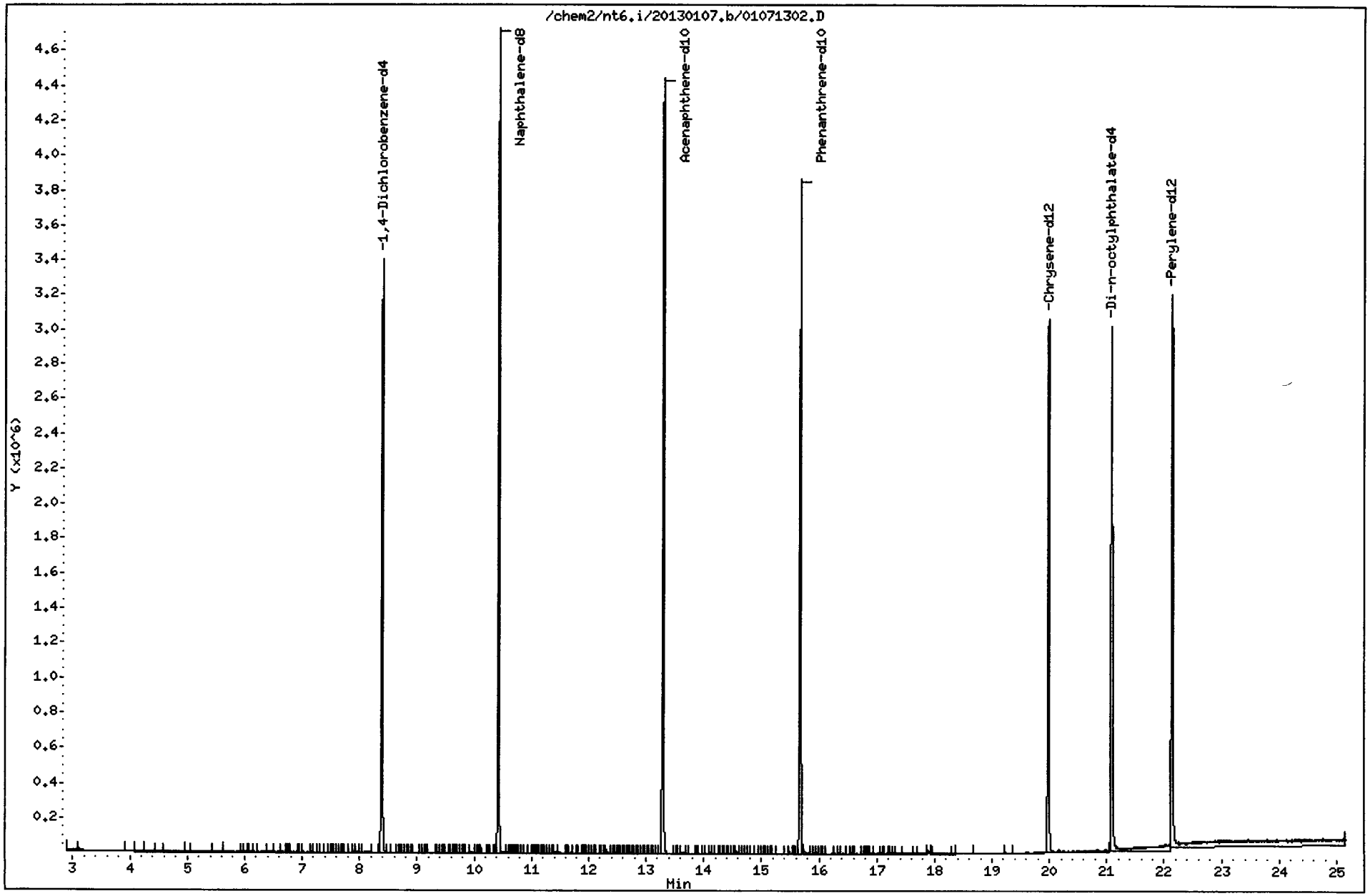
RECOVERY REPORT

Client Name: Client SDG: 20130107
Sample Matrix: LIQUID Fraction: SV
Lab Smp Id: IC020107 Client Smp ID: IC020107
Level: LOW Operator: JZ
Data Type: MS DATA SampleType: SAMPLE
SpikeList File: MicrowaveLCS.spk Quant Type: ISTD
Sublist File: DIOX.sub
Method File: /chem2/nt6.i/20130107.b/SW846010713.m
Misc Info: 13-

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 137 d8-1,4-Dioxane	25.00	0.000	*	32-100

Data File: /chem2/nt6.i/20130107.b/01071302.D
Date : 07-JAN-2013 14:04
Client ID: IC020107
Sample Info: IC020107
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32



CO-ELUTION SUMMARY FOR FILE - 01071302.D

Lab ID: IC020107, Method: SW846010713.m, Instrument: nt6.i, Date: 07-JAN-2013

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130107.b/01071309.D
Lab Smp Id: ICV0107 Client Smp ID: ICV0107
Inj Date : 07-JAN-2013 18:03
Operator : JZ Inst ID: nt6.i
Smp Info : ICV0107
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130107.b/SW846010713.m
Meth Date : 07-Jan-2013 06:57 jianqing Quant Type: ISTD
Cal Date : 07-JAN-2013 14:04 Cal File: 01071302.D
Als bottle: 9 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Vo	500.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
$ 1	2-Fluorophenol	112	6.431	6.439	(0.767)	981989	20.4207	20.42
$ 2	Phenol-d5	99	7.937	7.961	(0.946)	1247977	20.5545	20.55
3	Phenol	94	7.958	7.983	(0.949)	1429016	24.2400	24.24
$ 5	2-Chlorophenol-d4	132	8.087	8.100	(0.964)	959882	20.4408	20.44
4	Bis(2-Chloroethyl)ether	93	8.049	8.068	(0.960)	924146	21.2290	21.23
6	2-Chlorophenol	128	8.113	8.122	(0.968)	1029983	24.0006	24.00
7	1,3-Dichlorobenzene	146	8.327	8.335	(0.993)	1113832	22.4958	22.50
* 8	1,4-Dichlorobenzene-d4	152	8.386	8.387	(1.000)	621584	20.0000	
9	1,4-Dichlorobenzene	146	8.413	8.421	(1.003)	1156989	23.6622	23.66
$ 10	1,2-Dichlorobenzene-d4	152	8.690	8.698	(1.036)	677526	20.5995	20.60
12	1,2-Dichlorobenzene	146	8.712	8.720	(1.039)	1080262	23.5183	23.52
11	Benzyl alcohol	108	8.658	8.677	(1.032)	644226	22.1444	22.14
14	2,2'-oxybis(1-Chloropropane)	45	8.920	8.928	(1.064)	1604457	21.5765	21.58
13	2-Methylphenol	108	8.888	8.901	(1.060)	1042662	25.4937	25.49
17	Hexachloroethane	117	9.198	9.201	(1.097)	467803	22.4160	22.42
16	N-Nitroso-di-n-propylamine	70	9.134	9.163	(1.089)	744507	21.7389	21.74

			QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	15	4-Methylphenol	108	9.118	9.137	(1.087)	1081258	25.5032	25.50
$	18	Nitrobenzene-d5	82	9.315	9.334	(0.893)	1231800	21.5322	21.53
	19	Nitrobenzene	77	9.342	9.366	(0.896)	1220895	23.1290	23.13
	20	Isophorone	82	9.721	9.740	(0.932)	1958969	26.3934	26.39
	21	2-Nitrophenol	139	9.860	9.868	(0.945)	566793	26.6702	26.67
	22	2,4-Dimethylphenol	107	9.956	9.970	(0.954)	1089879	25.6448	25.64
	23	Bis(2-Chloroethoxy)methane	93	10.101	10.119	(0.968)	1038931	20.9999	21.00
	24	Benzoic acid	105	10.191	10.226	(0.977)	1529612	58.2435	58.24
	25	2,4-Dichlorophenol	162	10.240	10.253	(0.982)	774257	25.1537	25.15
	26	1,2,4-Trichlorobenzene	180	10.373	10.381	(0.994)	853513	23.2574	23.26
*	27	Naphthalene-d8	136	10.432	10.428	(1.000)	2323497	20.0000	
	28	Naphthalene	128	10.464	10.472	(1.003)	2911062	26.5462	26.55
	29	4-Chloroaniline	127	10.597	10.611	(1.016)	1016541	23.3391	23.34
	30	Hexachlorobutadiene	225	10.774	10.782	(1.033)	545665	23.9920	23.99
	31	4-Chloro-3-methylphenol	107	11.399	11.407	(1.093)	809024	24.8575	24.86
	32	2-Methylnaphthalene	141	11.580	11.589	(1.110)	1353183	23.1737	23.17
	33	Hexachlorocyclopentadiene	237	11.960	11.963	(0.900)	583537	23.7717	23.77
	34	2,4,6-Trichlorophenol	196	12.088	12.101	(0.909)	546565	25.0905	25.09
	35	2,4,5-Trichlorophenol	196	12.147	12.155	(0.914)	601291	25.5620	25.56
$	36	2-Fluorobiphenyl	172	12.221	12.230	(0.919)	1890084	21.3344	21.33
	37	2-Chloronaphthalene	162	12.366	12.374	(0.930)	1555170	22.4965	22.50
	38	2-Nitroaniline	65	12.590	12.604	(0.947)	538775	22.5401	22.54
	39	Dimethylphthalate	163	12.953	12.972	(0.974)	1674909	22.7614	22.76
	40	Acenaphthylene	152	13.044	13.052	(0.981)	2762113	26.1941	26.19
	41	2,6-Dinitrotoluene	165	13.049	13.068	(0.982)	399991	23.5853	23.59
*	42	Acenaphthene-d10	164	13.295	13.297	(1.000)	1260896	20.0000	
	43	3-Nitroaniline	138	13.269	13.287	(0.998)	383136	22.5000	22.50
	44	Acenaphthene	153	13.343	13.357	(1.004)	1676468	24.7993	24.80
	45	2,4-Dinitrophenol	184	13.434	13.458	(1.010)	616789	48.1600	48.16
	46	Dibenzofuran	168	13.605	13.619	(1.023)	2065310	22.7671	22.77
	47	4-Nitrophenol	109	13.562	13.581	(1.020)	309350	25.9241	25.92
	48	2,4-Dinitrotoluene	165	13.680	13.699	(1.029)	510071	23.7179	23.72
	50	Diethylphthalate	149	14.107	14.126	(1.061)	1715836	22.1872	22.19
	49	Fluorene	166	14.166	14.174	(1.065)	1811936	25.6698	25.67
	51	4-Chlorophenyl-phenylether	204	14.182	14.190	(1.067)	831361	21.9220	21.92
	52	4-Nitroaniline	138	14.262	14.297	(1.073)	267287	19.1918	19.19
	53	4,6-Dinitro-2-methylphenol	198	14.337	14.372	(0.915)	717555	49.5727	49.57
	54	N-Nitrosodiphenylamine	169	14.385	14.404	(0.918)	1208954	21.4639	21.46
$	55	2,4,6-Tribromophenol	330	14.588	14.602	(1.097)	226417	21.7493	21.75
	56	4-Bromophenyl-phenylether	248	14.962	14.970	(0.955)	483410	22.4959	22.50
	57	Hexachlorobenzene	284	15.192	15.200	(0.969)	475214	22.2130	22.21
	58	Pentachlorophenol	266	15.486	15.499	(0.988)	307866	25.4558	25.46
*	59	Phenanthrene-d10	188	15.672	15.674	(1.000)	1865579	20.0000	
	60	Phenanthrene	178	15.710	15.723	(1.002)	2317306	24.3425	24.34
	61	Anthracene	178	15.785	15.793	(1.007)	2462166	25.3796	25.38
	62	Carbazole	167	16.057	16.071	(1.025)	1906525	22.1015	22.10
	63	Di-n-butylphthalate	149	16.757	16.765	(1.069)	2649091	24.5012	24.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	64 Fluoranthene	202	17.649	17.663	(1.126)	2588750	28.1175	28.12
	65 Pyrene	202	18.007	18.015	(0.901)	2647456	26.1137	26.11
$	66 Terphenyl-d14	244	18.306	18.314	(0.916)	1487074	21.5241	21.52
	67 Butylbenzylphthalate	149	19.172	19.185	(0.959)	1165190	23.2794	23.28
	68 Benzo(a)anthracene	228	19.962	19.970	(0.999)	2295502	26.5378	26.54
*	69 Chrysene-d12	240	19.984	19.985	(1.000)	1728623	20.0000	
	70 3,3'-Dichlorobenzidine	252	19.957	19.970	(0.999)	720676	23.7258	23.73
	71 Chrysene	228	20.026	20.040	(1.002)	2204332	26.0124	26.01
	72 bis(2-Ethylhexyl)phthalate	149	20.160	20.163	(0.956)	1551583	23.2881	23.29
*	134 Di-n-octylphthalate-d4	153	21.089	21.091	(1.000)	2285843	20.0000	
	73 Di-n-octylphthalate	149	21.100	21.108	(1.000)	2594720	21.8907	21.89
	74 Benzo(b)fluoranthene	252	21.613	21.632	(0.976)	2315310	25.2313	25.23 (H)
	75 Benzo(k)fluoranthene	252	21.645	21.664	(0.978)	2325212	25.1119	25.11
	187 Total Benzofluoranthenes	252	21.645	21.664	(0.978)	4402531	50.4493	50.45 (M)
	76 Benzo(a)pyrene	252	22.062	22.075	(0.996)	2106174	25.8089	25.81
*	77 Perylene-d12	264	22.142	22.138	(1.000)	1716563	20.0000	
	78 Indeno(1,2,3-cd)pyrene	276	23.771	23.801	(1.074)	2800736	24.9722	24.97
	79 Dibenzo(a,h)anthracene	278	23.793	23.822	(1.075)	2276522	24.8151	24.82
	80 Benzo(g,h,i)perylene	276	24.231	24.271	(1.094)	2415651	24.5365	24.54
	90 N-Nitrosodimethylamine	74	3.882	3.917	(0.463)	663838	20.5619	20.56
	103 Pyridine	79	3.845	3.853	(0.458)	1024635	18.8197	18.82
	91 Aniline	93	7.942	7.951	(0.947)	1532719	24.3801	24.38
	105 1-methylnaphthalene	141	11.757	11.765	(1.127)	1404726	24.1300	24.13
	111 Azobenzene (1,2-DP-Hydrazine)	77	14.433	14.447	(1.086)	2070838	22.5800	22.58
	143 1,4-Dioxane	88	3.102	3.109	(0.370)	551955	22.1386	22.14
$	137 d8-1,4-Dioxane	96	3.044	3.057	(0.363)	510376	21.3543	21.35
	144 alpha-Terpineol	59	10.480	10.493	(1.005)	843340	24.4972	24.50
	177 p-Benzoquinone	82	7.077	7.090	(0.678)	295027	28.4616	28.46
	99 Perylene	252	22.179	22.193	(1.002)	1759421	23.7383	23.74
	133 Butylatedhydroxytoluene	205	13.450	13.464	(1.012)	1614624	26.6756	26.68
	115 Tributyl Phosphate	99	14.465	14.484	(0.923)	2155657	24.5174	24.52
	116 Dibutyl Phenyl Phosphate	175	16.207	16.209	(1.034)	1407619	25.5590	25.56
	117 Butyl Diphenyl Phosphate	94	17.889	17.898	(0.895)	493101	25.3953	25.40
	118 Triphenyl Phosphate	326	19.492	19.500	(0.975)	378706	25.9215	25.92
	123 Acetophenone	105	9.080	9.099	(1.083)	1463154	23.6537	23.65
	168 Pentachlorobenzene	250	13.648	13.661	(1.027)	701131	26.1172	26.12
	113 Diphenyl Oxide	170	12.547	12.550	(0.944)	1369021	24.8046	24.80
	112 Biphenyl	154	12.355	12.363	(0.929)	1810330	22.5438	22.54
	120 2,3,4,6-Tetrachlorophenol	232	13.883	13.891	(1.044)	422146	24.3144	24.31
	151 1,2,4,5-Tetrachlorobenzene	216	11.922	11.925	(0.897)	829163	25.8599	25.86
	186 Carbaryl	144	16.468	16.487	(1.051)	1057890	26.7048	26.70
	178 2-Benzyl-4-Chlorophenol	218	16.420	16.439	(1.048)	423378	26.1688	26.17

QC Flag Legend

M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 01071309.D
Lab Smp Id: ICV0107
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130107.b/SW846010713.m
Misc Info: 13-

Calibration Date: 07-JAN-2013
Calibration Time: 13:30
Client Smp ID: ICV0107
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	532349	266174	1064698	621584	16.76
27 Naphthalene-d8	2007575	1003788	4015150	2323497	15.74
42 Acenaphthene-d10	1020441	510220	2040882	1260896	23.56
59 Phenanthrene-d10	1546074	773037	3092148	1865579	20.67
69 Chrysene-d12	1407005	703502	2814010	1728623	22.86
134 Di-n-octylphthala	1928310	964155	3856620	2285843	18.54
77 Perylene-d12	1383265	691632	2766530	1716563	24.10

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.39	7.89	8.89	8.39	-0.03
27 Naphthalene-d8	10.43	9.93	10.93	10.43	0.02
42 Acenaphthene-d10	13.30	12.80	13.80	13.30	-0.02
59 Phenanthrene-d10	15.68	15.18	16.18	15.67	-0.02
69 Chrysene-d12	19.99	19.49	20.49	19.98	-0.01
134 Di-n-octylphthala	21.09	20.59	21.59	21.09	-0.01
77 Perylene-d12	22.14	21.64	22.64	22.14	-0.01

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name:
Sample Matrix: LIQUID
Lab Smp Id: ICV0107
Level: LOW
Data Type: MS DATA
SpikeList File: ICVS.spk
Sublist File: ICALS.sub
Method File: /chem2/nt6.i/20130107.b/SW846010713.m
Misc Info: 13-

Client SDG: 20130107
Fraction: SV
Client Smp ID: ICV0107
Operator: JZ
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
3 Phenol	25.00	24.24	96.96	70-130
4 Bis(2-Chloroethyl)	25.00	21.23	84.92	70-130
6 2-Chlorophenol	25.00	24.00	96.00	70-130
7 1,3-Dichlorobenzen	25.00	22.50	89.98	70-130
9 1,4-Dichlorobenzen	25.00	23.66	94.65	70-130
11 Benzyl alcohol	25.00	22.14	88.58	70-130
12 1,2-Dichlorobenzen	25.00	23.52	94.07	70-130
13 2-Methylphenol	25.00	25.49	101.97	70-130
14 2,2'-oxybis(1-Chlo	25.00	21.58	86.31	70-130
15 4-Methylphenol	25.00	25.50	102.01	70-130
16 N-Nitroso-di-n-pro	25.00	21.74	86.96	70-130
17 Hexachloroethane	25.00	22.42	89.66	70-130
19 Nitrobenzene	25.00	23.13	92.52	70-130
20 Isophorone	25.00	26.39	105.57	70-130
21 2-Nitrophenol	25.00	26.67	106.68	70-130
22 2,4-Dimethylphenol	25.00	25.64	102.58	70-130
23 Bis(2-Chloroethoxy	25.00	21.00	84.00	70-130
24 Benzoic acid	50.00	58.24	116.49	70-130
25 2,4-Dichlorophenol	25.00	25.15	100.61	70-130
26 1,2,4-Trichloroben	25.00	23.26	93.03	70-130
28 Naphthalene	25.00	26.55	106.18	70-130
29 4-Chloroaniline	25.00	23.34	93.36	70-130
30 Hexachlorobutadien	25.00	23.99	95.97	70-130
31 4-Chloro-3-methylp	25.00	24.86	99.43	70-130
32 2-Methylnaphthalen	25.00	23.17	92.69	70-130
33 Hexachlorocyclopen	25.00	23.77	95.09	70-130
34 2,4,6-Trichlorophe	25.00	25.09	100.36	70-130
35 2,4,5-Trichlorophe	25.00	25.56	102.25	70-130
37 2-Chloronaphthalen	25.00	22.50	89.99	70-130
38 2-Nitroaniline	25.00	22.54	90.16	70-130
39 Dimethylphthalate	25.00	22.76	91.05	70-130
40 Acenaphthylene	25.00	26.19	104.78	70-130
41 2,6-Dinitrotoluene	25.00	23.59	94.34	70-130

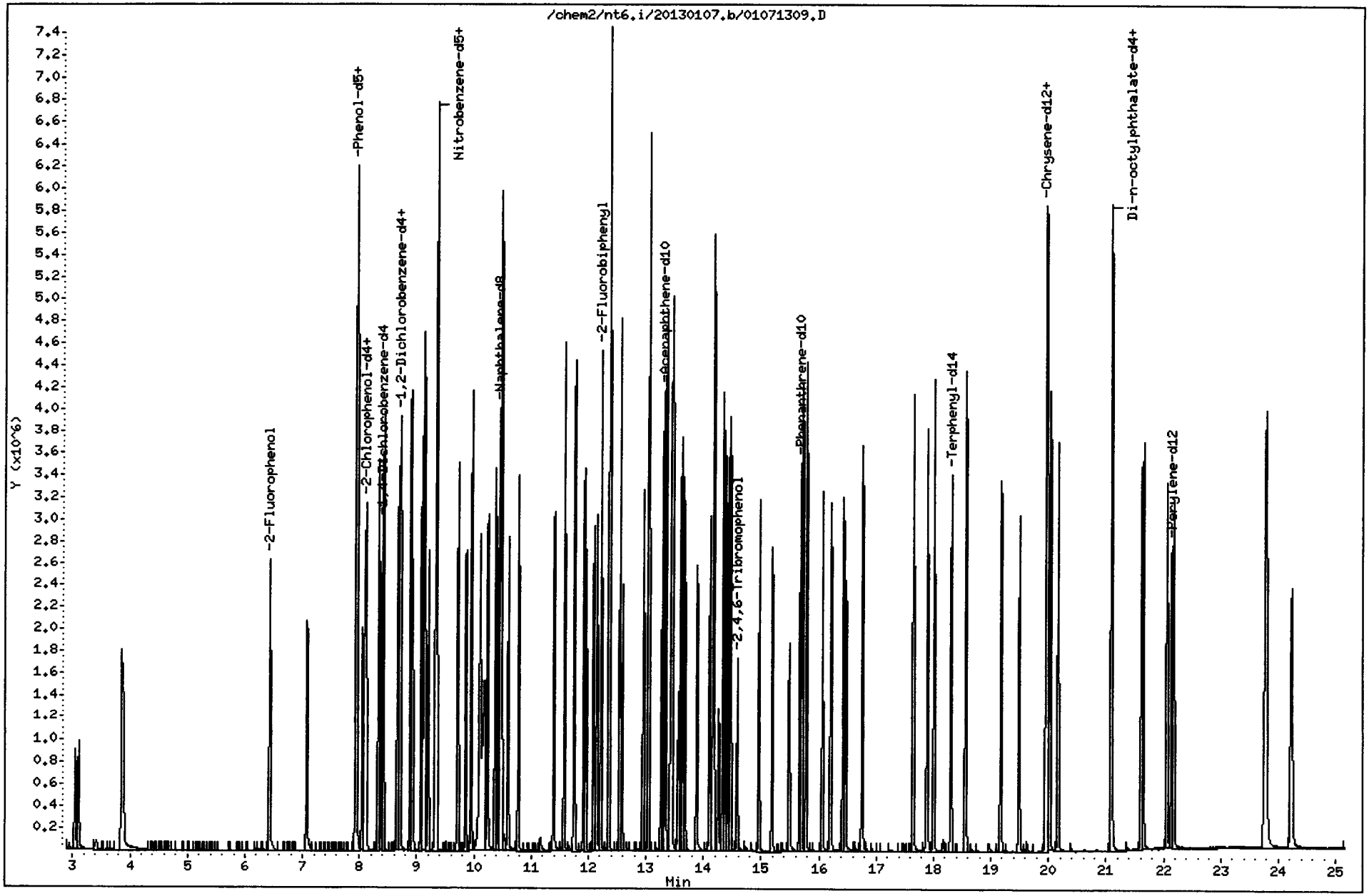
SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
43	3-Nitroaniline	25.00	22.50	90.00	70-130
44	Acenaphthene	25.00	24.80	99.20	70-130
45	2,4-Dinitrophenol	50.00	48.16	96.32	70-130
46	Dibenzofuran	25.00	22.77	91.07	70-130
47	4-Nitrophenol	25.00	25.92	103.70	70-130
48	2,4-Dinitrotoluene	25.00	23.72	94.87	70-130
49	Fluorene	25.00	25.67	102.68	70-130
50	Diethylphthalate	25.00	22.19	88.75	70-130
51	4-Chlorophenyl-phe	25.00	21.92	87.69	70-130
52	4-Nitroaniline	25.00	19.19	76.77	70-130
53	4,6-Dinitro-2-meth	50.00	49.57	99.15	70-130
54	N-Nitrosodiphenyla	25.00	21.46	85.86	70-130
56	4-Bromophenyl-phen	25.00	22.50	89.98	70-130
57	Hexachlorobenzene	25.00	22.21	88.85	70-130
58	Pentachlorophenol	25.00	25.46	101.82	70-130
60	Phenanthrene	25.00	24.34	97.37	70-130
61	Anthracene	25.00	25.38	101.52	70-130
62	Carbazole	25.00	22.10	88.41	70-130
63	Di-n-butylphthalat	25.00	24.50	98.00	70-130
64	Fluoranthene	25.00	28.12	112.47	70-130
65	Pyrene	25.00	26.11	104.45	70-130
67	Butylbenzylphthala	25.00	23.28	93.12	70-130
68	Benzo(a)anthracene	25.00	26.54	106.15	70-130
70	3,3'-Dichlorobenzi	25.00	23.73	94.90	70-130
71	Chrysene	25.00	26.01	104.05	70-130
72	bis(2-Ethylhexyl)p	25.00	23.29	93.15	70-130
73	Di-n-octylphthalat	25.00	21.89	87.56	70-130
74	Benzo(b)fluoranthe	25.00	25.23	100.93	70-130
75	Benzo(k)fluoranthe	25.00	25.11	100.45	70-130
187	Total Benzofluoran	50.00	50.45	100.90	70-130
76	Benzo(a)pyrene	25.00	25.81	103.24	70-130
78	Indeno(1,2,3-cd)py	25.00	24.97	99.89	70-130
79	Dibenzo(a,h)anthra	25.00	24.82	99.26	70-130
80	Benzo(g,h,i)peryle	25.00	24.54	98.15	70-130
90	N-Nitrosodimethyla	25.00	20.56	82.25	70-130
103	Pyridine	25.00	18.82	75.28	70-130
91	Aniline	25.00	24.38	97.52	70-130
105	1-methylnaphthalen	25.00	24.13	96.52	70-130
111	Azobenzene (1,2-DP	25.00	22.58	90.32	70-130
143	1,4-Dioxane	25.00	22.14	88.55	70-130
177	p-Benzoquinone	25.00	28.46	113.85	70-130
99	Perylene	25.00	23.74	94.95	70-130
133	Butylatedhydroxyto	25.00	26.68	106.70	70-130
115	Tributyl Phosphate	25.00	24.52	98.07	70-130
116	Dibutyl Phenyl Pho	25.00	25.56	102.24	70-130
117	Butyl Diphenyl Pho	25.00	25.40	101.58	70-130
118	Triphenyl Phosphat	25.00	25.92	103.69	70-130

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
123 Acetophenone	25.00	23.65	94.61	70-130
168 Pentachlorobenzene	25.00	26.12	104.47	70-130
113 Diphenyl Oxide	25.00	24.80	99.22	70-130
112 Biphenyl	25.00	22.54	90.18	70-130
120 2,3,4,6-Tetrachlor	25.00	24.31	97.26	70-130
151 1,2,4,5-Tetrachlor	25.00	25.86	103.44	70-130
186 Carbaryl	25.00	26.70	106.82	70-130
178 2-Benzyl-4-Chlorop	25.00	26.17	104.68	70-130

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	25.00	20.42	81.68	75-125
$ 2 Phenol-d5	25.00	20.55	82.22	75-125
$ 5 2-Chlorophenol-d4	25.00	20.44	81.76	75-125
$ 10 1,2-Dichlorobenzen	25.00	20.60	82.40	75-125
$ 18 Nitrobenzene-d5	25.00	21.53	86.13	75-125
$ 36 2-Fluorobiphenyl	25.00	21.33	85.34	75-125
$ 55 2,4,6-Tribromophen	25.00	21.75	87.00	75-125
$ 66 Terphenyl-d14	25.00	21.52	86.10	75-125
$ 137 d8-1,4-Dioxane	25.00	21.35	85.42	75-125

Data File: /chem2/nt6.i/20130107.b/01071309.D
Date : 07-JAN-2013 18:03
Client ID: ICV0107
Sample Info: ICV0107
Volume Injected (uL): 1.0
Column phase: ZB-5msi

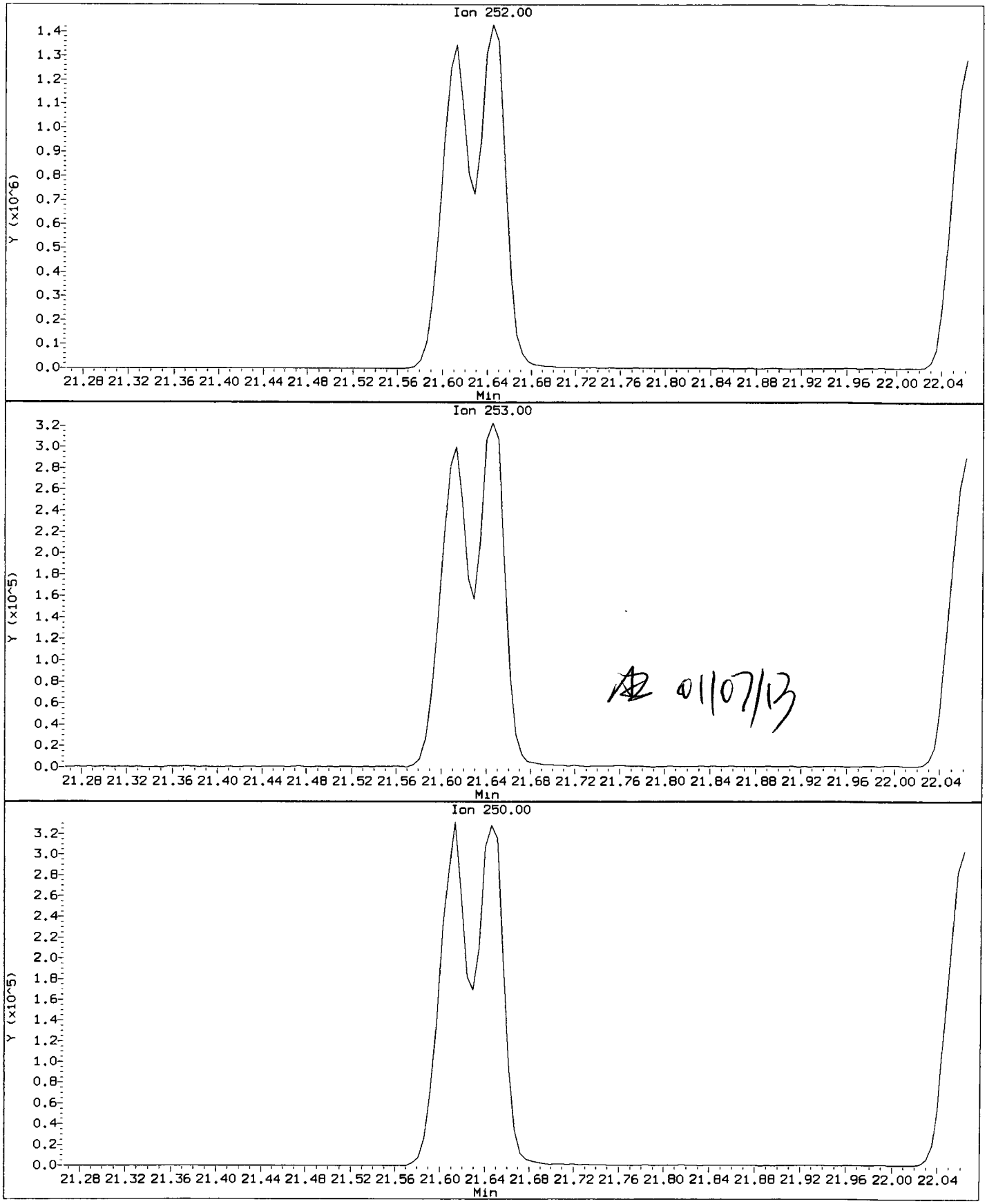
Instrument: nt6.i
Operator: JZ
Column diameter: 0.32



JZ07.08059

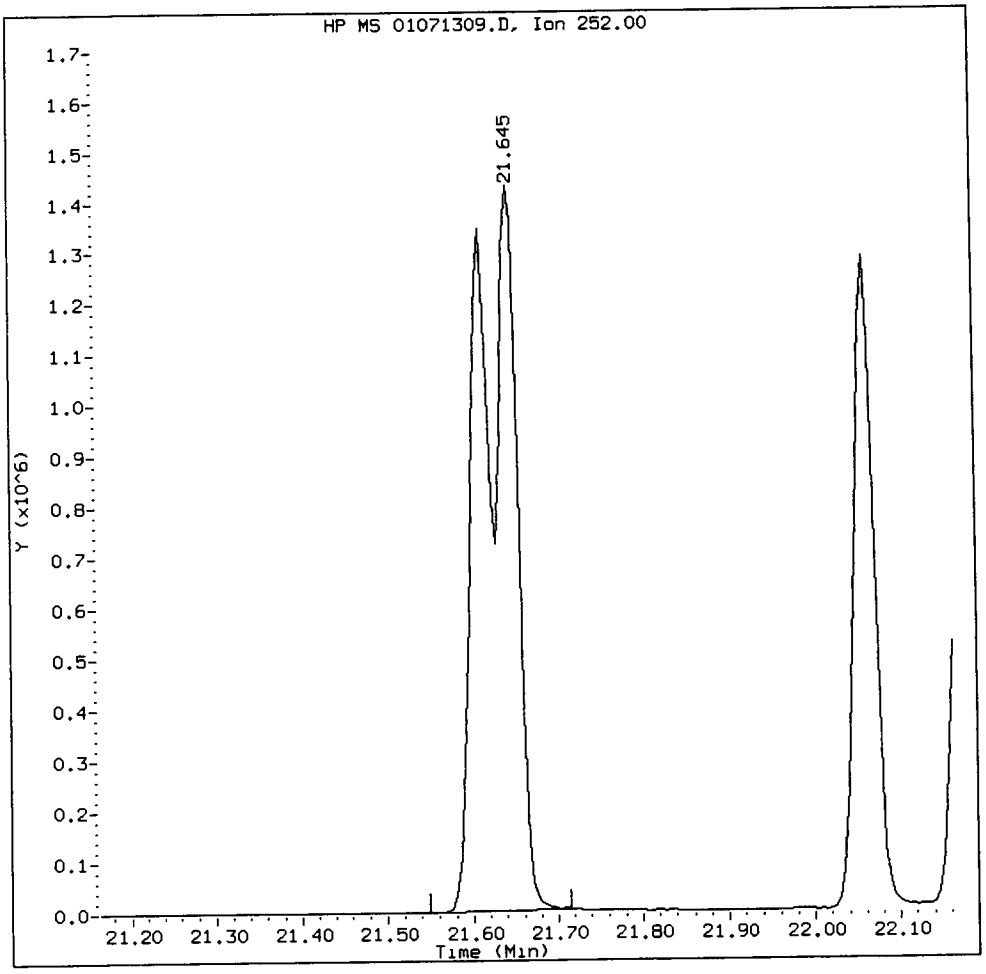
Data File: /chem2/nt6.i/20130107.b/01071309.D
Injection Date: 07-JAN-2013 18:03
Instrument: nt6.i
Client Sample ID: ICV0107

Compound: Total Benzofluoranthenes
CAS Number:



ICV0107, /chem2/nt6.i/20130107.b/01071309.D

Total Benzofluoranthenes Amount: 50.45 Area: 4402531



MANUAL INTEGRATION for Total Benzofluoranthenes

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 01/07/13

CO-ELUTION SUMMARY FOR FILE - 01071309.D

Lab ID: ICV0107, Method: SW846010713.m, Instrument: nt6.i, Date: 07-JAN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Initial Calibration Notes

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest)
427S(Dir Inj) **428S**(EPH) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date(s): 01/17/13 Internal Standard ID S850-4 Expiration 01/17/14

Endrin/DDT Breakdown <15%? YES / NO / NA
ICal Meets %RSD & r^2 Criteria YES / NO
Manual Integrations for ICal? YES / NO
Minimum Response S/N Met YES / NO

ICV Exceeding ±20%? YES / NO
ICV Exceeding ±30%? YES / NO
Linear Fits Used? YES / NO
Quadratic Fits Used? YES / NO
Calibration Points Dropped? YES / NO

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
ethanol	S850-2				
o-Cresol	S850-3				

NA

01/23/13

01/23/13

Detail problems, corrective actions and/or other pertinent information below:

Analyst: _____ **Date:** 01/23/13

Reviewer: _____ **Date:** _____

VZ97 · 00963

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 17-JAN-2013 20:24
End Cal Date : 17-JAN-2013 23:11
Quant Method : ISTD
Target Version : 3.50
Integrator : Falcon
Method file : /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Cal Date : 23-Jan-2013 14:36 jrains

Calibration File Names:
Level 1: /chem2/fid7.i/20130117ETHANOL.B/0117A009.D
Level 2: /chem2/fid7.i/20130117ETHANOL.B/0117A010.D
Level 3: /chem2/fid7.i/20130117ETHANOL.B/0117A011.D
Level 4: /chem2/fid7.i/20130117ETHANOL.B/0117A012.D
Level 5: /chem2/fid7.i/20130117ETHANOL.B/0117A013.D
Level 6: /chem2/fid7.i/20130117ETHANOL.B/0117A014.D
Level 7: /chem2/fid7.i/20130117ETHANOL.B/0117A015.D

Compound	10 Level 1	25 Level 2	50 Level 3	100 Level 4	125 Level 5	150 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	200 Level 7											
1 Ethyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
2 Methanol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
3 Isopropanol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
4 Ethanol	197866	350852	688410	1243551	1503326	1683783						
	2127372						QUAD	0.000e+00	2.54105	0.45237	0.99846	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 17-JAN-2013 20:24
End Cal Date : 17-JAN-2013 23:11
Quant Method : ISTD
Target Version : 3.50
Integrator : Falcon
Method file : /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Cal Date : 23-Jan-2013 14:36 jrains

Compound	10 Level 1	25 Level 2	50 Level 3	100 Level 4	125 Level 5	150 Level 6	200 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2	
5 n-Butyl Ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
6 Isobutyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
7 n-Propanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
8 n-Butyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
9 1-Methoxy-2-propanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
10 n-Butanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
11 Prop-Gly-Me-Ether-Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-

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Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 17-JAN-2013 20:24
End Cal Date : 17-JAN-2013 23:11
Quant Method : ISTD
Target Version : 3.50
Integrator : Falcon
Method file : /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Cal Date : 23-Jan-2013 14:36 jrains

Compound	10 Level 1	25 Level 2	50 Level 3	100 Level 4	125 Level 5	150 Level 6	200 Level 7	Curve	Coefficients b	Coefficients m1	Coefficients m2	%RSD or R^2	
12 2-Methoxyethanol Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
13 2-Ethoxyethyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
14 Propargyl Alcohol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
15 2-Butoxyethanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
16 Ethylene Glycol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
17 Diethylene Glycol MonoButyl E	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-

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Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 17-JAN-2013 20:24
End Cal Date : 17-JAN-2013 23:11
Quant Method : ISTD
Target Version : 3.50
Integrator : Falcon
Method file : /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Cal Date : 23-Jan-2013 14:36 jrains

Compound	10 Level 1	25 Level 2	50 Level 3	100 Level 4	125 Level 5	150 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	200 Level 7										
$ 19 o-Cresol	0.80688	0.79132	0.81129	0.77260	0.81974	0.80889					
	0.80493						AVRG		0.80224		1.94393

L3559 : 1527

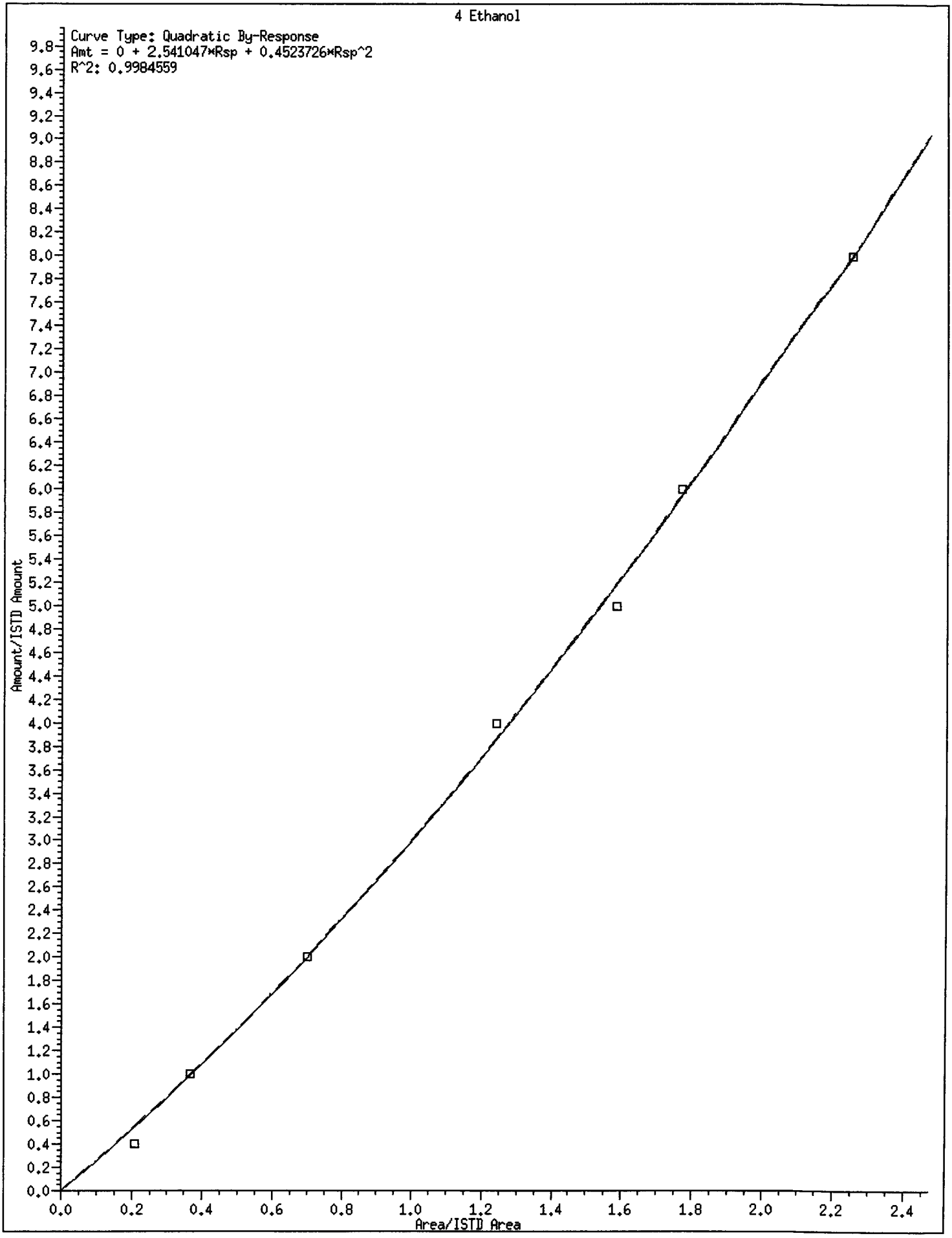
Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 17-JAN-2013 20:24
End Cal Date : 17-JAN-2013 23:11
Quant Method : ISTD
Target Version : 3.50
Integrator : Falcon
Method file : /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Cal Date : 23-Jan-2013 14:36 jrains

Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response

85558 4327


4 Ethanol
Curve Type: Quadratic By-Response
Amt = 0 + 2.541047*Rsp + 0.4523726*Rsp^2
R^2: 0.9984559
Amount/ISTD Amount
Area/ISTD Area
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
9.8
9.6
9.4
9.2
9.0
8.8
8.6
8.4
8.2
8.0
7.8
7.6
7.4
7.2
7.0
6.8
6.6
6.4
6.2
6.0
5.8
5.6
5.4
5.2
5.0
4.8
4.6
4.4
4.2
4.0
3.8
3.6
3.4
3.2
3.0
2.8
2.6
2.4
2.2
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0

VZ97:00969

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/fid7.i/20130117ETHANOL.B

ARI Job No.: RINS Method: flistglycolswtrs.m Instrument: fid7.i Date: 17-JAN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1640	0117A001.D	RINSE		1	NO MANUAL INTEGRATION
1708	0117A002.D	RINSE		1	NO MANUAL INTEGRATION
1736	0117A003.D	RINSE		1	NO MANUAL INTEGRATION
1805	0117A004.D	RINSE		1	NO MANUAL INTEGRATION
1833	0117A005.D	RINSE		1	NO MANUAL INTEGRATION
1901	0117A006.D	RINSE		1	NO MANUAL INTEGRATION
1929	0117A007.D	RINSE		1	NO MANUAL INTEGRATION
1956	0117A008.D	IB		1	NO MANUAL INTEGRATION
2024	0117A009.D	10PPMETHANOL		1	Ethanol,
2052	0117A010.D	25PPMETHANOL		1	Ethanol,
2120	0117A011.D	50PPMETHANOL		1	NO MANUAL INTEGRATION
2148	0117A012.D	100PPMETHANOL		1	NO MANUAL INTEGRATION
2215	0117A013.D	125PPMETHANOL		1	NO MANUAL INTEGRATION
2243	0117A014.D	150PPMETHANOL		1	Ethanol,
2311	0117A015.D	200PPMETHANOL		1	NO MANUAL INTEGRATION
2339	0117A016.D	ETHANOL#1		1	Ethanol,
0006	0117A017.D	VZ97MBW1		1	NO MANUAL INTEGRATION
0034	0117A018.D	VZ97LCSW1		1	Ethanol,
0102	0117A019.D	VZ97LCSDW1		1	Ethanol,
0130	0117A020.D	VZ97A		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/fid7.i/20130117ETHANOL.B

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0225	0117A022.D	VZ97AMSD		1	Ethanol,
0253	0117A023.D	VZ97A		10	NO MANUAL INTEGRATION
0320	0117A024.D	VZ97A		100	NO MANUAL INTEGRATION
0348	0117A025.D	ETHANOL#2		1	NO MANUAL INTEGRATION
0416	0117A026.D	RINSE		1	NO MANUAL INTEGRATION
0443	0117A027.D	RINSE		1	NO MANUAL INTEGRATION
0511	0117A028.D	RINSE		1	NO MANUAL INTEGRATION

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Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Batch File: /chem2/fid7.i/20130117ETHANOL.B
Inst ID: fid7.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0117A009	0117A010	0117A011	0117A012	0117A013	0117A014	0117A015
INJ.DATE:	17-JAN-2013	17-JAN-2013	17-JAN-2013	17-JAN-2013	17-JAN-2013	17-JAN-2013	17-JAN-2013
INJ.TIME:	20:24	20:52	21:20	21:48	22:15	22:43	23:11

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Ethyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.648	3.575-3.721	+++++	+++++
2 Methanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.179	4.095-4.262	+++++	+++++
3 Isopropanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.891	4.793-4.989	+++++	+++++
4 Ethanol	2.227	2.233	2.258	2.250	2.241	2.260	2.256	2.227	2.183-2.272	2.246	0.013
5 n-Butyl Ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.578	5.466-5.689	+++++	+++++
6 Isobutyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.439	7.290-7.588	+++++	+++++
7 n-Propanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.781	8.606-8.957	+++++	+++++
8 n-Butyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.923	9.724-10.121	+++++	+++++
9 1-Methoxy-2-propanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.983	12.723-13.243	+++++	+++++
10 n-Butanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.819	13.542-14.095	+++++	+++++
11 Prop-Gly-Me-Ether-Acet	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.194	16.850-17.538	+++++	+++++
12 2-Methoxyethanol Aceta	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.700	18.326-19.074	+++++	+++++
13 2-Ethoxyethyl Acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.639	20.226-21.052	+++++	+++++
14 Propargyl Alcohol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.437	21.988-22.886	+++++	+++++
15 2-Butoxyethanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.410	22.942-23.879	+++++	+++++
16 Ethylene Glycol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.004	25.484-26.524	+++++	+++++
17 Diethylene Glycol Mono	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.373	26.825-27.920	+++++	+++++

Reviewer 1 _____ Date: 01/24/13
Reviewer 2 _____ Date: _____

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Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Batch File: /chem2/fid7.i/20130117ETHANOL.B
Inst ID: fid7.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 18 m-cresol	12.808	12.809	12.811	12.813	12.816	12.817	12.820	12.808	12.552-13.064	12.814	0.004
$ 19 o-Cresol	12.329	12.331	12.333	12.334	12.337	12.337	12.339	12.329	12.082-12.576	12.334	0.004
* 20 Butylene Glycol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	28.371	27.804-28.938	+++++	+++++

EJ1595.1527

Analytical Resources, Inc.

Data file : /chem2/fid7.i/20130117ETHANOL.B/0117A008.D
Lab Smp Id: IB
Inj Date : 17-JAN-2013 19:56
Operator : MS Inst ID: fid7.i
Smp Info : IB
Misc Info :
Comment :
Method : /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Meth Date : 23-Jan-2013 14:36 jrains Quant Type: ISTD
Cal Date : 17-JAN-2013 20:52 Cal File: 0117A010.D
Als bottle: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (mg/L)
1	Ethyl Acetate	Compound Not Detected.					
2	Methanol	Compound Not Detected.					
3	Isopropanol	Compound Not Detected.					
4	Ethanol	Compound Not Detected.					
5	n-Butyl Ether	Compound Not Detected.					
6	Isobutyl Acetate	Compound Not Detected.					
7	n-Propanol	Compound Not Detected.					
8	n-Butyl Acetate	Compound Not Detected.					
9	1-Methoxy-2-propanol	Compound Not Detected.					
10	n-Butanol	Compound Not Detected.					
11	Prop-Gly-Me-Ether-Acetate	Compound Not Detected.					
12	2-Methoxyethanol Acetate	Compound Not Detected.					
13	2-Ethoxyethyl Acetate	Compound Not Detected.					
14	Propargyl Alcohol	Compound Not Detected.					
15	2-Butoxyethanol	Compound Not Detected.					
16	Ethylene Glycol	Compound Not Detected.					
17	Diethylene Glycol MonoButyl Et	Compound Not Detected.					
18	m-cresol	12.809	12.820	(1.000)	932905	25.0000	
19	o-Cresol	12.328	12.339	(0.963)	802932	27.1912	27.191
20	Butylene Glycol	Compound Not Detected.					

01/23/13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: fid7.i
Lab File ID: 0117A008.D
Lab Smp Id: IB
Analysis Type: OTHER
Quant Type: ISTD
Operator: MS
Method File: /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Misc Info:

Calibration Date: 17-JAN-2013
Calibration Time: 20:52

Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 2.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF	
18 m-cresol	960708	480354	1921416	932905	-2.89	
20 Butylene Glycol	0	0	0	0	+++++++	*

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF	
18 m-cresol	12.81	12.31	13.31	12.81	-0.01	*
20 Butylene Glycol	0.00	-0.50	0.50	0.00	+++++++	

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.

* JL 01/24/13 not spiked

Analytical Resources, Inc.

RECOVERY REPORT

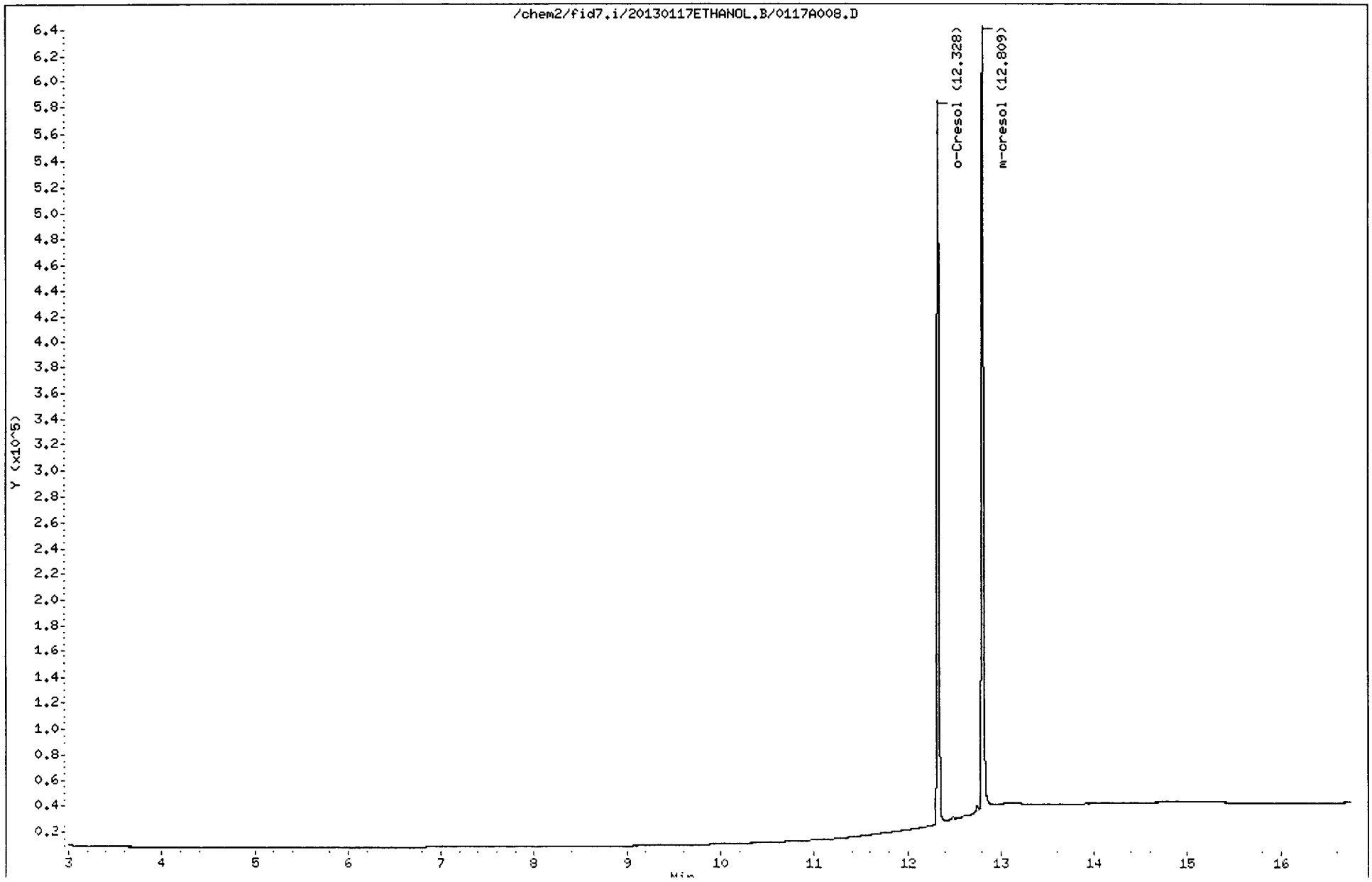
Client Name: Client SDG: 20100113glycolwater
Sample Matrix: LIQUID Fraction: OTHER
Lab Smp Id: IB
Level: LOW Operator: MS
Data Type: GC DATA SampleType: SAMPLE
SpikeList File: Quant Type: ISTD
Sublist File: all.sub
Method File: /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Misc Info:

SURROGATE COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
$ 19 o-Cresol	25.000	27.191	108.76	0-150

Data File: /chem2/fid7.i/20130117ETHANOL.B/0117A008.D
Date : 17-JAN-2013 19:56
Client ID:
Sample Info: IB

Instrument: fid7.i
Operator: MS
Column diameter: 0.53

Column phase: ZB5waxplus



Analytical Resources, Inc.

Data file : /chem2/fid7.i/20130117ETHANOL.B/0117A009.D
Lab Smp Id: 10PPMETHANOL
Inj Date : 17-JAN-2013 20:24
Operator : MS Inst ID: fid7.i
Smp Info : 10PPMETHANOL
Misc Info :
Comment :
Method : /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Meth Date : 23-Jan-2013 14:36 jrains Quant Type: ISTD
Cal Date : 17-JAN-2013 20:52 Cal File: 0117A010.D
Als bottle: 3 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
1	Ethyl Acetate	Compound Not Detected.					
2	Methanol	Compound Not Detected.					
3	Isopropanol	Compound Not Detected.					
4	Ethanol	2.227	2.256	(0.163)	197866	10.0000	13.624(M)
5	n-Butyl Ether	Compound Not Detected.					
6	Isobutyl Acetate	Compound Not Detected.					
7	n-Propanol	Compound Not Detected.					
8	n-Butyl Acetate	Compound Not Detected.					
9	1-Methoxy-2-propanol	Compound Not Detected.					
10	n-Butanol	Compound Not Detected.					
11	Prop-Gly-Me-Ether-Acetate	Compound Not Detected.					
12	2-Methoxyethanol Acetate	Compound Not Detected.					
13	2-Ethoxyethyl Acetate	Compound Not Detected.					
14	Propargyl Alcohol	Compound Not Detected.					
15	2-Butoxyethanol	Compound Not Detected.					
16	Ethylene Glycol	Compound Not Detected.					
17	Diethylene Glycol MonoButyl Et	Compound Not Detected.					
* 18	m-cresol	12.808	12.820	(1.000)	956534	25.0000	
$ 19	o-Cresol	12.329	12.339	(0.963)	771812	25.0000	25.144
* 20	Butylene Glycol	Compound Not Detected.					

JR 01/23/13

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

:nstrument ID: fid7.i
.ab File ID: 0117A009.D
.ab Smp Id: 10PPMETHANOL
.nalysis Type: OTHER
)uant Type: ISTD
)perator: MS
:ethod File: /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
:isc Info:

Calibration Date: 17-JAN-2013
Calibration Time: 20:52

Level: LOW
Sample Type: WATER

:est Mode:
Use Initial Calibration Level 2.

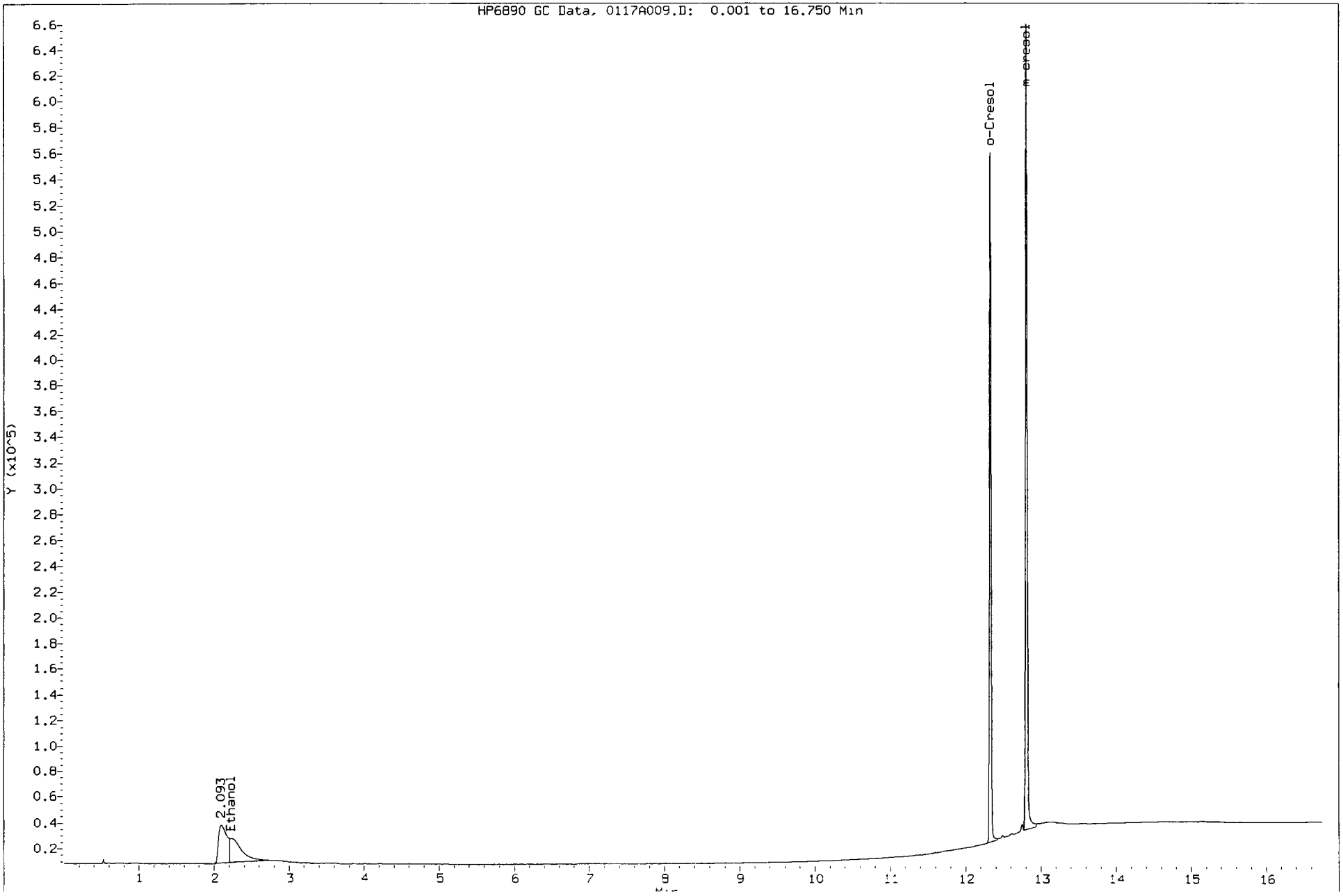
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF	
18 m-cresol	960708	480354	1921416	956534	-0.43	
20 Butylene Glycol	0	0	0	0	++++++	*

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF	
18 m-cresol	12.81	12.31	13.31	12.81	-0.01	
20 Butylene Glycol	0.00	-0.50	0.50	0.00	++++++	*

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.

* not spiked

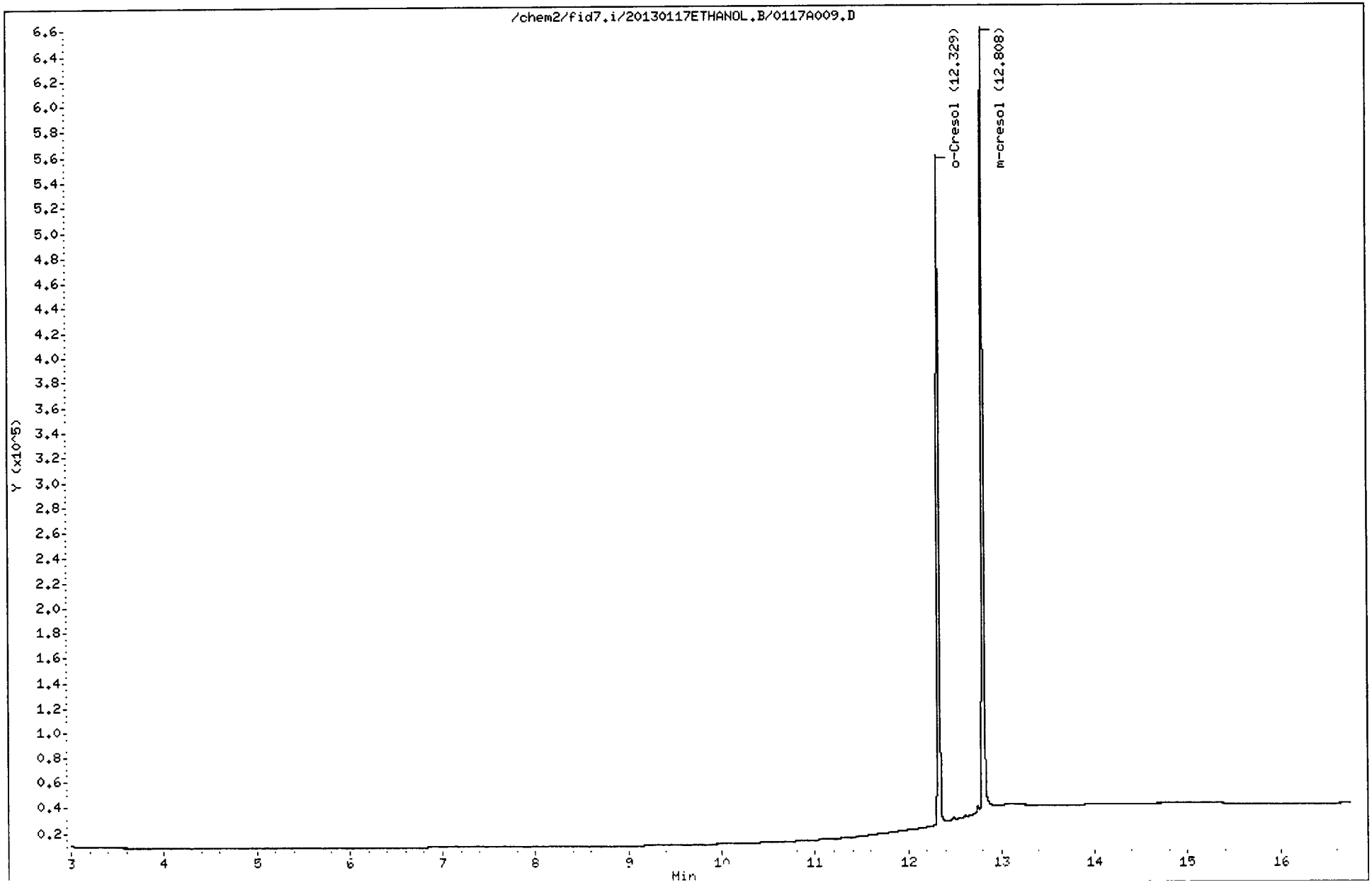
Data File: /chem2/fid7.i/20130117ETHANOL.B/0117A009.D
Injection Date: 17-JAN-2013 20:24
Instrument: fid7.i
Client Sample ID:



Data File: /chem2/fid7.i/20130117ETHANOL.B/0117A009.D
Date : 17-JAN-2013 20:24
Client ID:
Sample Info: 10PPMETHANOL

Instrument: fid7.i
Operator: MS
Column diameter: 0.53

Column phase: ZB5waxplus



USGS-000022

Analytical Resources, Inc.

Data file : /chem2/fid7.i/20130117ETHANOL.B/0117A010.D
Lab Smp Id: 25PPMETHANOL
Inj Date : 17-JAN-2013 20:52
Operator : MS Inst ID: fid7.i
Smp Info : 25PPMETHANOL
Misc Info :
Comment :
Method : /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Meth Date : 23-Jan-2013 14:36 jrains Quant Type: ISTD
Cal Date : 17-JAN-2013 20:52 Cal File: 0117A010.D
Als bottle: 4 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
1	Ethyl Acetate	Compound Not Detected.					
2	Methanol	Compound Not Detected.					
3	Isopropanol	Compound Not Detected.					
4	Ethanol	2.233	2.256	(0.163)	350852	25.0000	24.708(M)
5	n-Butyl Ether	Compound Not Detected.					
6	Isobutyl Acetate	Compound Not Detected.					
7	n-Propanol	Compound Not Detected.					
8	n-Butyl Acetate	Compound Not Detected.					
9	1-Methoxy-2-propanol	Compound Not Detected.					
10	n-Butanol	Compound Not Detected.					
11	Prop-Gly-Me-Ether-Acetate	Compound Not Detected.					
12	2-Methoxyethanol Acetate	Compound Not Detected.					
13	2-Ethoxyethyl Acetate	Compound Not Detected.					
14	Propargyl Alcohol	Compound Not Detected.					
15	2-Butoxyethanol	Compound Not Detected.					
16	Ethylene Glycol	Compound Not Detected.					
17	Diethylene Glycol MonoButyl Et	Compound Not Detected.					
* 18	m-cresol	12.809	12.820	(1.000)	960708	25.0000	
$ 19	o-Cresol	12.331	12.339	(0.963)	760229	25.0000	24.659
* 20	Butylene Glycol	Compound Not Detected.					

01/23/13

)C Flag Legend

I - Compound response manually integrated.

UZ97 · 00984

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: fid7.i
Lab File ID: 0117A010.D
Lab Smp Id: 25PPMETHANOL
Analysis Type: OTHER
Quant Type: ISTD
Operator: MS
Method File: /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Misc Info:

Calibration Date: 17-JAN-2013
Calibration Time: 20:52

Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 2.

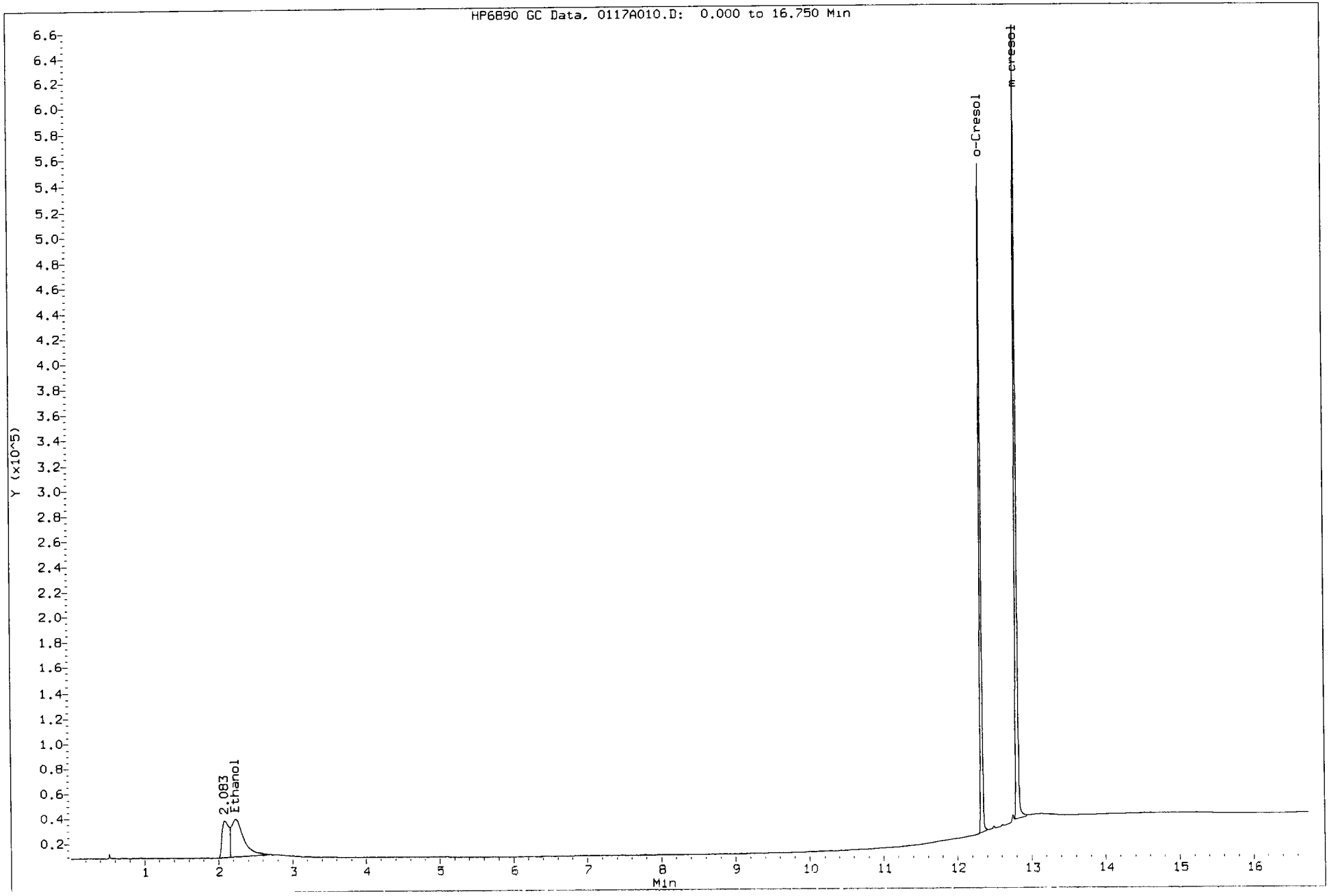
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF	
18 m-cresol	960708	480354	1921416	960708	0.00	*
20 Butylene Glycol	0	0	0	0	+++++++	

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF	
18 m-cresol	12.81	12.31	13.31	12.81	0.00	*
20 Butylene Glycol	0.00	-0.50	0.50	0.00	+++++++	

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.

* not Spiked

Data File: /chem2/fid7.i/20130117ETHANOL.B/0117A010.D
Injection Date: 17-JAN-2013 20:52
Instrument: fid7.i
Client Sample ID:



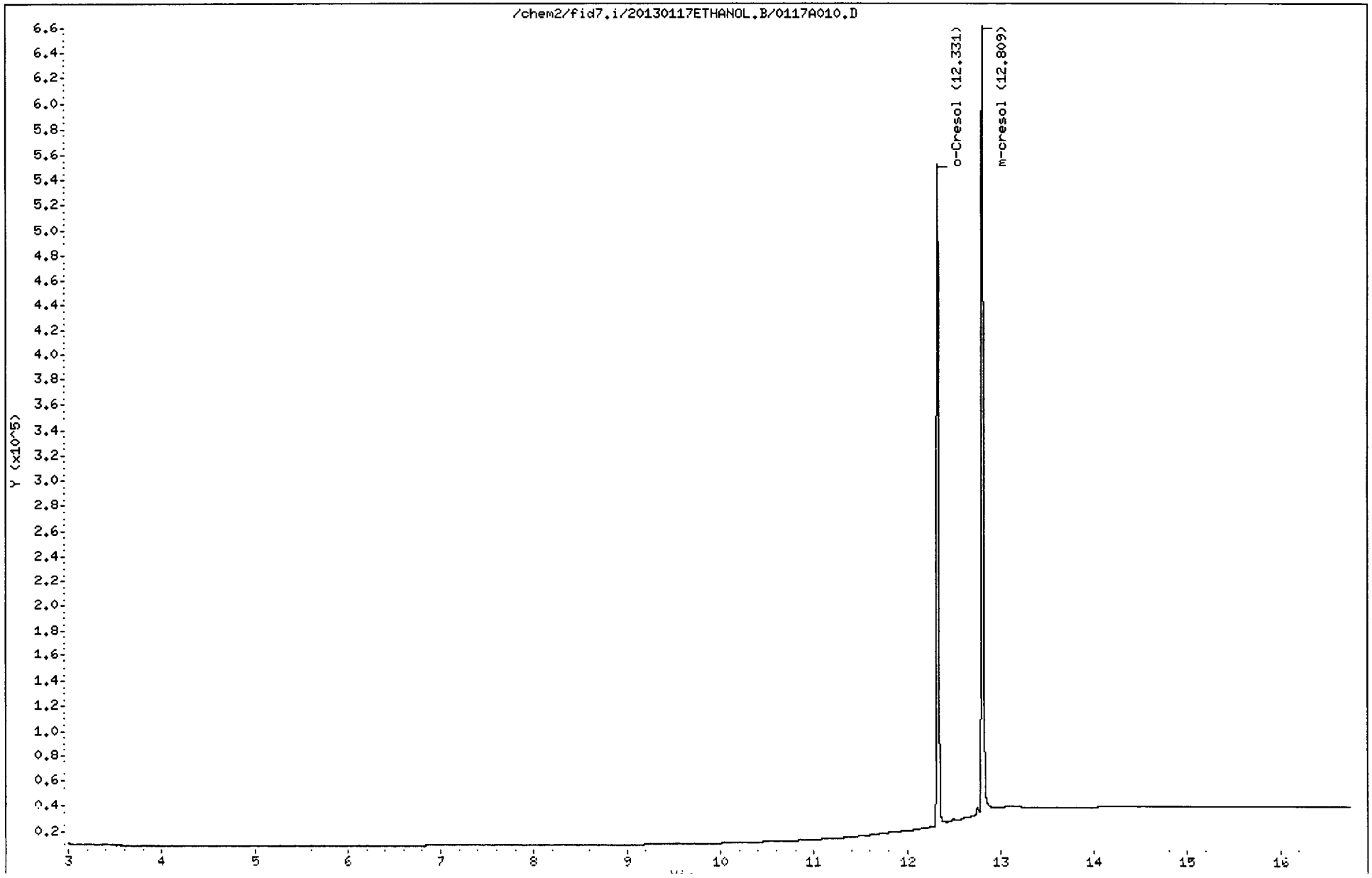
U7917 99999

Data File: /chem2/fid7.i/20130117ETHANOL.B/0117A010.D
Date : 17-JAN-2013 20:52
Client ID:
Sample Info: 25PPMETHANOL

Instrument: fid7.i

Operator: MS
Column diameter: 0.53

Column phase: ZB5waxplus



Analytical Resources, Inc.

Data file : /chem2/fid7.i/20130117ETHANOL.B/0117A011.D
Lab Smp Id: 50PPMETHANOL
Inj Date : 17-JAN-2013 21:20
Operator : MS Inst ID: fid7.i
Smp Info : 50PPMETHANOL
Misc Info :
Comment :
Method : /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Meth Date : 23-Jan-2013 14:36 jrains Quant Type: ISTD
Cal Date : 17-JAN-2013 20:52 Cal File: 0117A010.D
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
1	Ethyl Acetate	Compound Not Detected.					
2	Methanol	Compound Not Detected.					
3	Isopropanol	Compound Not Detected.					
4	Ethanol	2.258	2.256	(0.176)	688410	50.0000	49.961
5	n-Butyl Ether	Compound Not Detected.					
6	Isobutyl Acetate	Compound Not Detected.					
7	n-Propanol	Compound Not Detected.					
8	n-Butyl Acetate	Compound Not Detected.					
9	1-Methoxy-2-propanol	Compound Not Detected.					
10	n-Butanol	Compound Not Detected.					
11	Prop-Gly-Me-Ether-Acetate	Compound Not Detected.					
12	2-Methoxyethanol Acetate	Compound Not Detected.					
13	2-Ethoxyethyl Acetate	Compound Not Detected.					
14	Propargyl Alcohol	Compound Not Detected.					
15	2-Butoxyethanol	Compound Not Detected.					
16	Ethylene Glycol	Compound Not Detected.					
17	Diethylene Glycol MonoButyl Et	Compound Not Detected.					
* 18	m-cresol	12.811	12.820	(1.000)	984292	25.0000	
$ 19	o-Cresol	12.333	12.339	(0.963)	798549	25.0000	25.282
* 20	Butylene Glycol	Compound Not Detected.					

JR 01/23/13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: fid7.i
Lab File ID: 0117A011.D
Lab Smp Id: 50PPMETHANOL
Analysis Type: OTHER
Quant Type: ISTD
Operator: MS
Method File: /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Misc Info:

Calibration Date: 17-JAN-2013
Calibration Time: 20:52

Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 2.

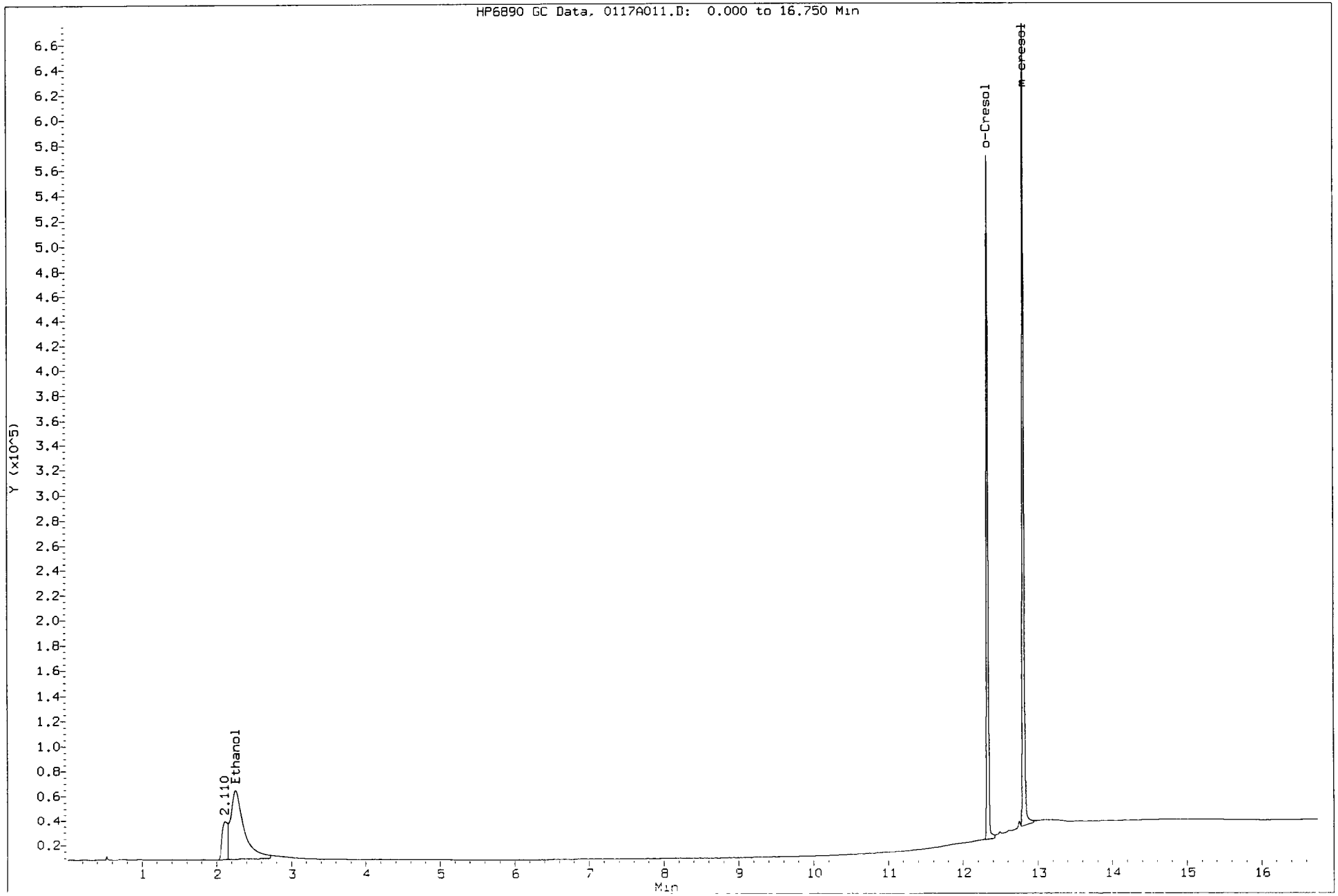
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF	
18 m-cresol	960708	480354	1921416	984292	2.45	
20 Butylene Glycol	0	0	0	0	++++++	*

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF	
18 m-cresol	12.81	12.31	13.31	12.81	0.01	
20 Butylene Glycol	0.00	-0.50	0.50	0.00	++++++	*

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.

* not spiked

Data File: /chem2/fid7.i/20130117ETHANOL.B/0117A011.D
Injection Date: 17-JAN-2013 21:20
Instrument: fid7.i
Client Sample ID:



US7855059

Data File: /chem2/fid7.i/20130117ETHANOL.B/0117A011.D

Date : 17-JAN-2013 21:20

Client ID:

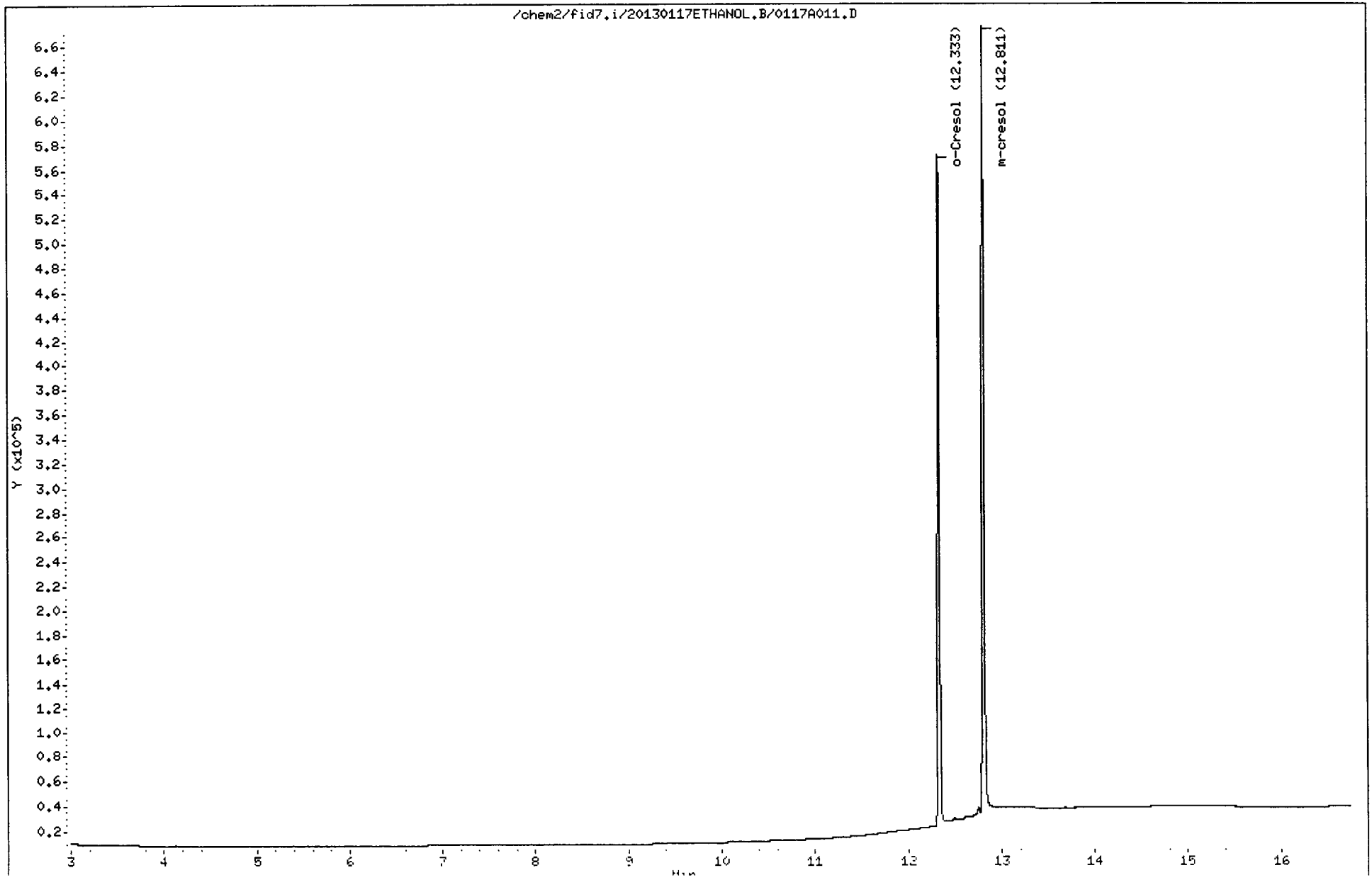
Sample Info: 50PPMETHANOL

Column phase: ZB5waxplus

Instrument: fid7.i

Operator: MS

Column diameter: 0.53



Analytical Resources, Inc.

Data file : /chem2/fid7.i/20130117ETHANOL.B/0117A012.D
Lab Smp Id: 100PPMETHANOL
Inj Date : 17-JAN-2013 21:48
Operator : MS Inst ID: fid7.i
Smp Info : 100PPMETHANOL
Misc Info :
Comment :
Method : /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Meth Date : 23-Jan-2013 14:36 jrains Quant Type: ISTD
Cal Date : 17-JAN-2013 20:52 Cal File: 0117A010.D
Als bottle: 6 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

				AMOUNTS	
				CAL-AMT	ON-COL
Compounds	RT	EXP RT REL RT	RESPONSE	(ug/mL)	(ug/mL)
1 Ethyl Acetate	Compound Not Detected.				
2 Methanol	Compound Not Detected.				
3 Isopropanol	Compound Not Detected.				
4 Ethanol	2.250	2.256 (0.176)	1243551	100.000	96.462
5 n-Butyl Ether	Compound Not Detected.				
6 Isobutyl Acetate	Compound Not Detected.				
7 n-Propanol	Compound Not Detected.				
8 n-Butyl Acetate	Compound Not Detected.				
9 1-Methoxy-2-propanol	Compound Not Detected.				
10 n-Butanol	Compound Not Detected.				
11 Prop-Gly-Me-Ether-Acetate	Compound Not Detected.				
12 2-Methoxyethanol Acetate	Compound Not Detected.				
13 2-Ethoxyethyl Acetate	Compound Not Detected.				
14 Propargyl Alcohol	Compound Not Detected.				
15 2-Butoxyethanol	Compound Not Detected.				
16 Ethylene Glycol	Compound Not Detected.				
17 Diethylene Glycol MonoButyl Et	Compound Not Detected.				
18 m-cresol	12.813	12.820 (1.000)	1000219	25.0000	
19 o-Cresol	12.334	12.339 (0.963)	772765	25.0000	24.076
20 Butylene Glycol	Compound Not Detected.				

01/23/13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: fid7.i
Lab File ID: 0117A012.D
Lab Smp Id: 100PPMETHANOL
Analysis Type: OTHER
Quant Type: ISTD
Operator: MS
Method File: /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Misc Info:

Calibration Date: 17-JAN-2013
Calibration Time: 20:52

Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 2.

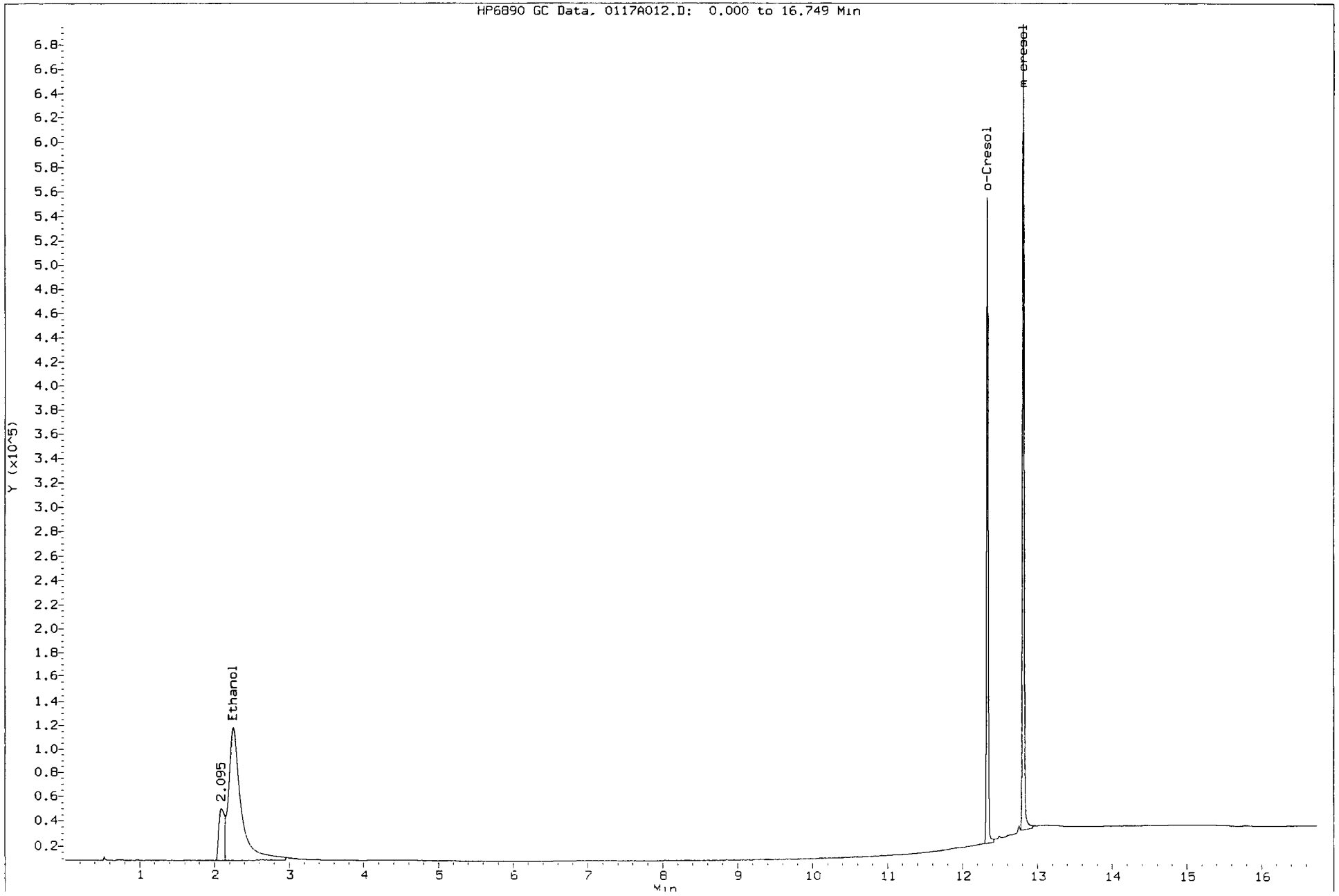
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF	
18 m-cresol	960708	480354	1921416	1000219	4.11	
20 Butylene Glycol	0	0	0	0	+++++++	*

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF	
18 m-cresol	12.81	12.31	13.31	12.81	0.03	
20 Butylene Glycol	0.00	-0.50	0.50	0.00	+++++++	*

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.

* not spiked

Data File: /chem2/fid7.i/20130117ETHANOL.B/0117A012.D
Injection Date: 17-JAN-2013 21:48
Instrument: fid7.i
Client Sample ID:

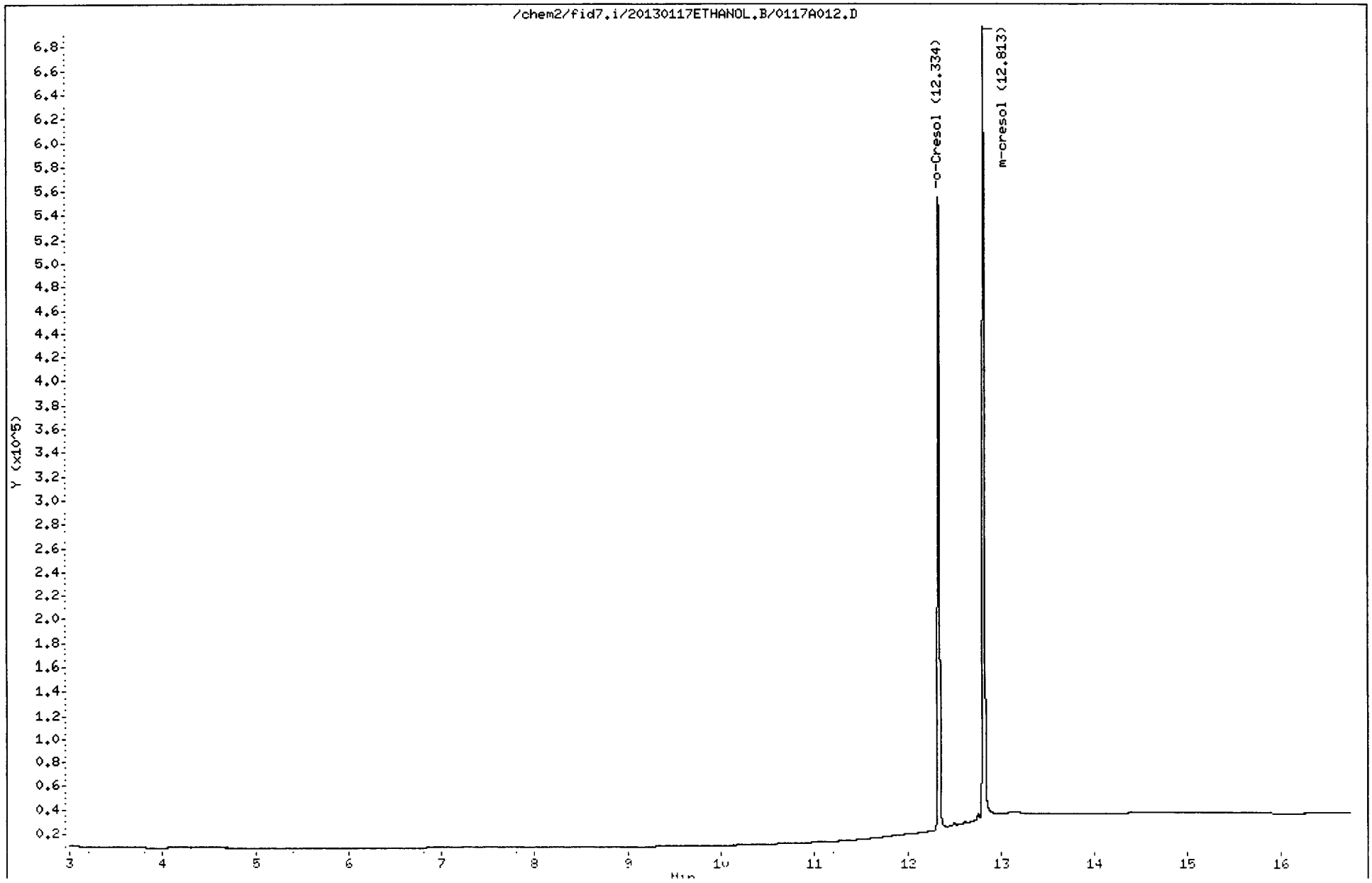


Data File: /chem2/fid7.i/20130117ETHANOL.B/0117A012.D
Date : 17-JAN-2013 21:48
Client ID:
Sample Info: 100PPMETHANOL

Instrument: fid7.i

Operator: MS
Column diameter: 0.53

Column phase: ZB5waxplus



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Analytical Resources, Inc.

Data file : /chem2/fid7.i/20130117ETHANOL.B/0117A013.D
Lab Smp Id: 125PPMETHANOL
Inj Date : 17-JAN-2013 22:15
Operator : MS Inst ID: fid7.i
Smp Info : 125PPMETHANOL
Misc Info :
Comment :
Method : /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Meth Date : 23-Jan-2013 14:36 jrains Quant Type: ISTD
Cal Date : 17-JAN-2013 20:52 Cal File: 0117A010.D
Als bottle: 7 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
1 Ethyl Acetate	Compound Not Detected.					
2 Methanol	Compound Not Detected.					
3 Isopropanol	Compound Not Detected.					
4 Ethanol	2.241	2.256	(0.175)	1503326	125.000	129.345
5 n-Butyl Ether	Compound Not Detected.					
6 Isobutyl Acetate	Compound Not Detected.					
7 n-Propanol	Compound Not Detected.					
8 n-Butyl Acetate	Compound Not Detected.					
9 1-Methoxy-2-propanol	Compound Not Detected.					
10 n-Butanol	Compound Not Detected.					
11 Prop-Gly-Me-Ether-Acetate	Compound Not Detected.					
12 2-Methoxyethanol Acetate	Compound Not Detected.					
13 2-Ethoxyethyl Acetate	Compound Not Detected.					
14 Propargyl Alcohol	Compound Not Detected.					
15 2-Butoxyethanol	Compound Not Detected.					
16 Ethylene Glycol	Compound Not Detected.					
17 Diethylene Glycol MonoButyl Et	Compound Not Detected.					
18 m-cresol	12.816	12.820	(1.000)	947000	25.0000	
19 o-Cresol	12.337	12.339	(0.963)	776295	25.0000	25.545
20 Butylene Glycol	Compound Not Detected.					

01/29/13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: fid7.i
Lab File ID: 0117A013.D
Lab Smp Id: 125PPMETHANOL
Analysis Type: OTHER
Quant Type: ISTD
Operator: MS
Method File: /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Misc Info:

Calibration Date: 17-JAN-2013
Calibration Time: 20:52

Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 2.

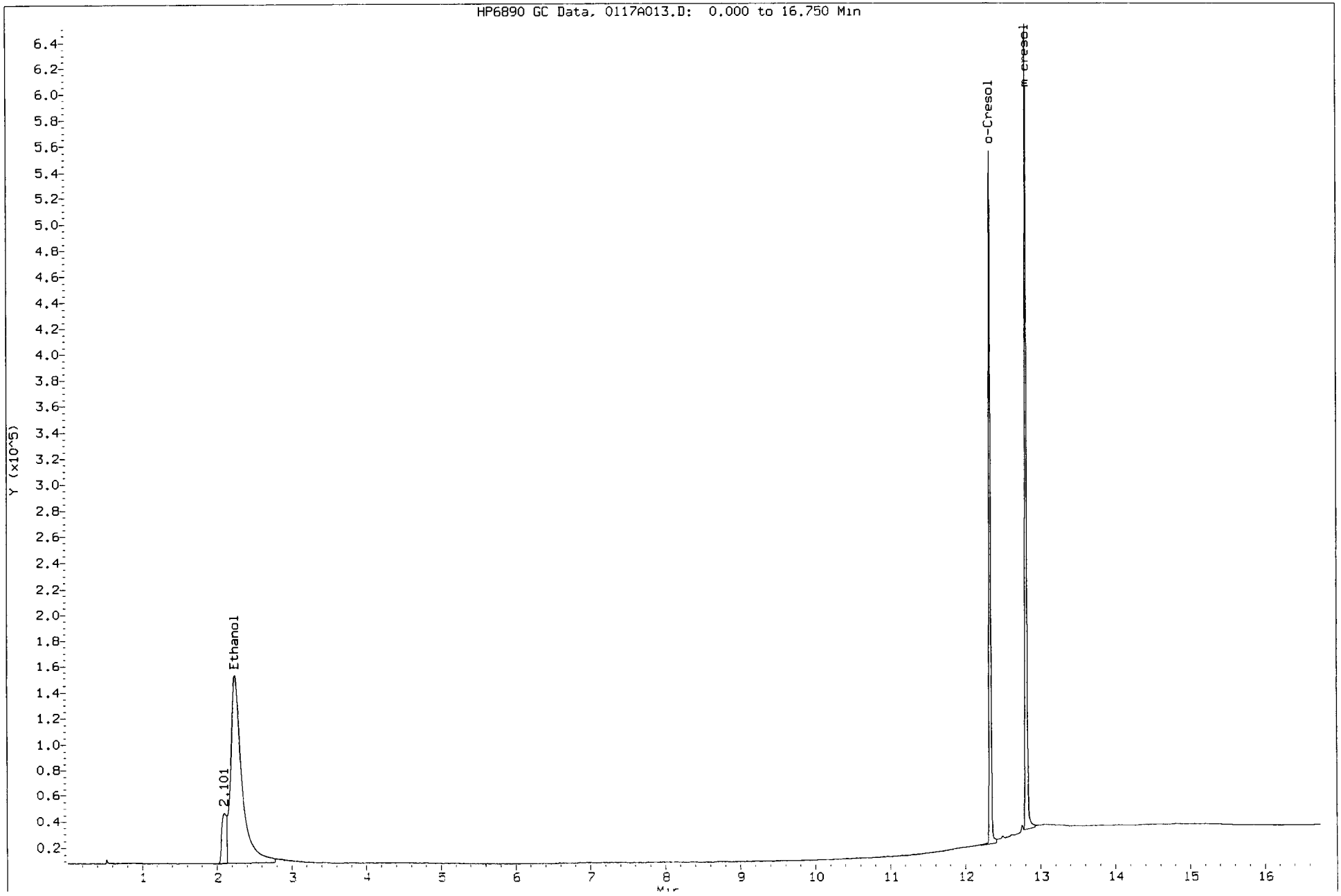
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF	
18 m-cresol	960708	480354	1921416	947000	-1.43	*
20 Butylene Glycol	0	0	0	0	+++++++	

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF	
18 m-cresol	12.81	12.31	13.31	12.82	0.05	*
20 Butylene Glycol	0.00	0.50	0.50	0.00	+++++++	

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.

* not spiked

Data File: /chem2/fid7.1/20130117ETHANOL.B/0117A013.D
Injection Date: 17-JAN-2013 22:15
Instrument: fid7.1
Client Sample ID:

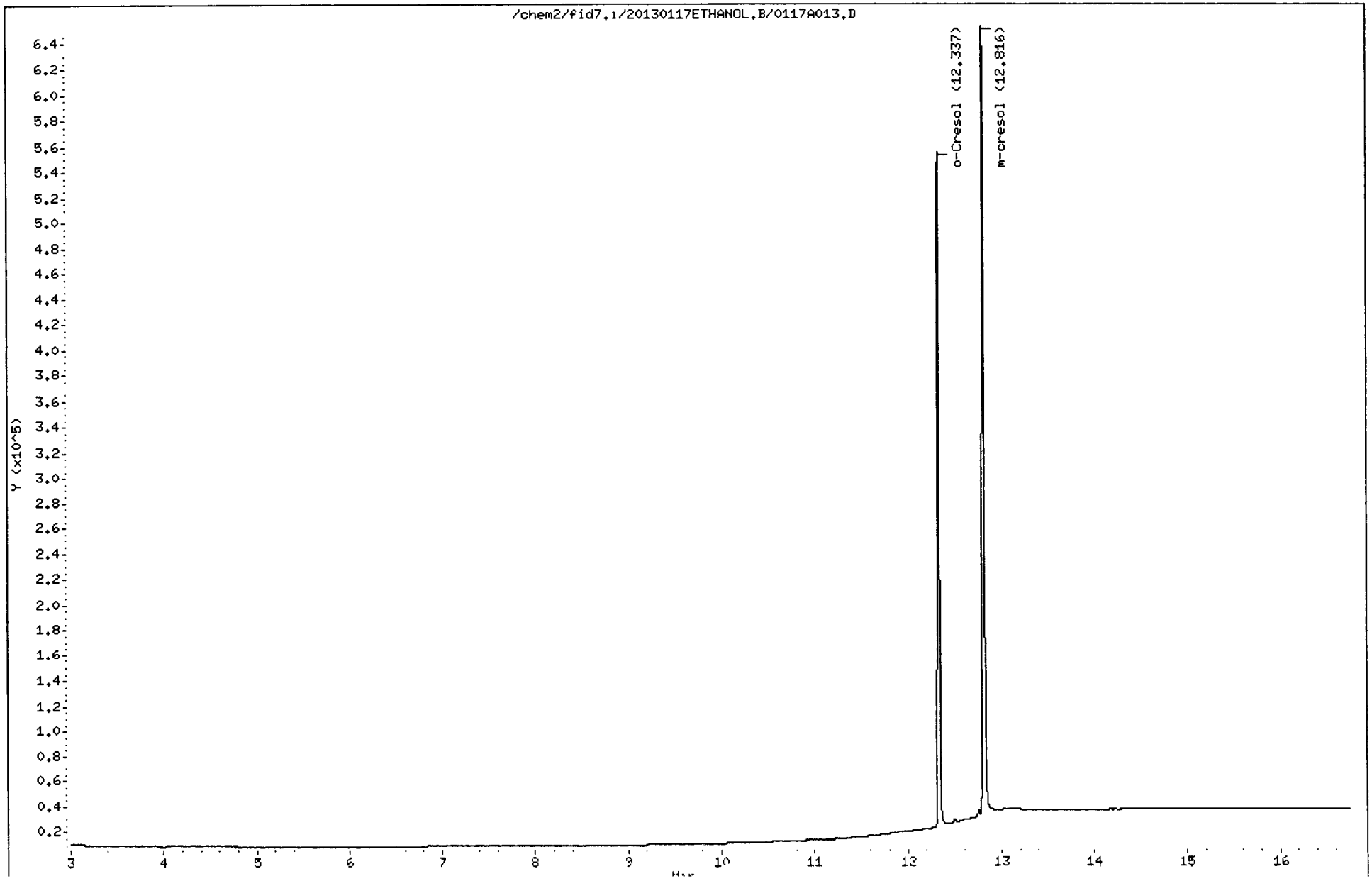


Data File: /chem2/fid7.i/20130117ETHANOL.B/0117A013.D
Date : 17-JAN-2013 22:15
Client ID:
Sample Info: 125PPMETHANOL

Instrument: fid7.i

Operator: MS
Column diameter: 0.53

Column phase: ZB5waxplus



55568.7827

Analytical Resources, Inc.

Data file : /chem2/fid7.i/20130117ETHANOL.B/0117A014.D
Lab Smp Id: 150PPMETHANOL
Inj Date : 17-JAN-2013 22:43
Operator : MS Inst ID: fid7.i
Smp Info : 150PPMETHANOL
Misc Info :
Comment :
Method : /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Meth Date : 23-Jan-2013 14:36 jrains Quant Type: ISTD
Cal Date : 17-JAN-2013 20:52 Cal File: 0117A010.D
Als bottle: 8 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	1 Ethyl Acetate	Compound Not Detected.					
	2 Methanol	Compound Not Detected.					
	3 Isopropanol	Compound Not Detected.					
	4 Ethanol	2.260	2.256	(0.169)	1683783	150.000	148.304(M)
	5 n-Butyl Ether	Compound Not Detected.					
	6 Isobutyl Acetate	Compound Not Detected.					
	7 n-Propanol	Compound Not Detected.					
	8 n-Butyl Acetate	Compound Not Detected.					
	9 1-Methoxy-2-propanol	Compound Not Detected.					
	10 n-Butanol	Compound Not Detected.					
	11 Prop-Gly-Me-Ether-Acetate	Compound Not Detected.					
	12 2-Methoxyethanol Acetate	Compound Not Detected.					
	13 2-Ethoxyethyl Acetate	Compound Not Detected.					
	14 Propargyl Alcohol	Compound Not Detected.					
	15 2-Butoxyethanol	Compound Not Detected.					
	16 Ethylene Glycol	Compound Not Detected.					
	17 Diethylene Glycol MonoButyl Et	Compound Not Detected.					
*	18 m-cresol	12.817	12.820	(1.000)	949054	25.0000	
$	19 o-Cresol	12.337	12.339	(0.963)	767677	25.0000	25.207
*	20 Butylene Glycol	Compound Not Detected.					

pc 01/23/13

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

:nstrument ID: fid7.i
.ab File ID: 0117A014.D
.ab Smp Id: 150PPMETHANOL
.nalysis Type: OTHER
)uant Type: ISTD
)perator: MS
Calibration Date: 17-JAN-2013
Calibration Time: 20:52
Level: LOW
Sample Type: WATER
Method File: /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Misc Info:

Test Mode:
Use Initial Calibration Level 2.

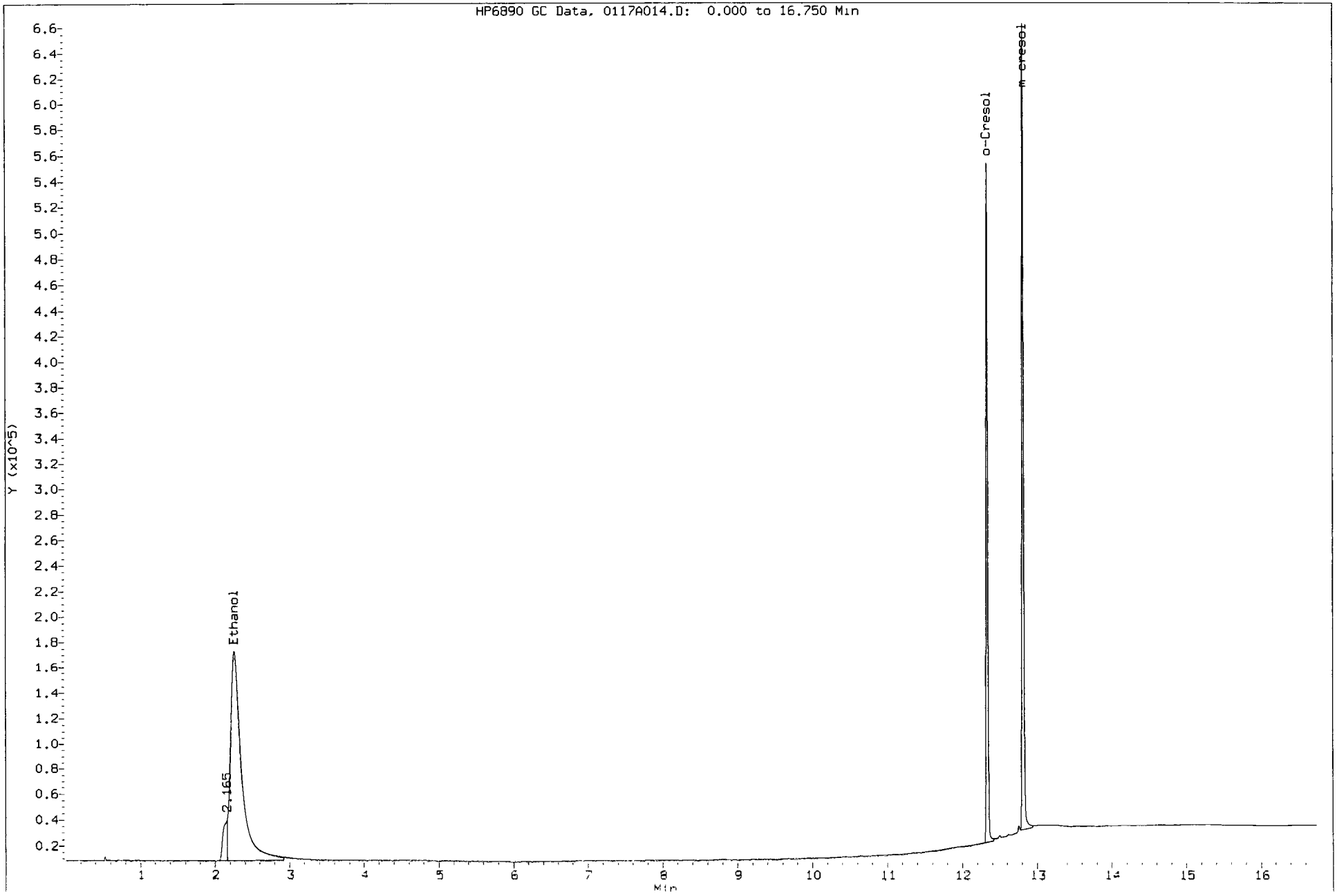
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF	
18 m-cresol	960708	480354	1921416	949054	-1.21	*
20 Butylene Glycol	0	0	0	0	+++++++	

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF	
18 m-cresol	12.81	12.31	13.31	12.82	0.06	*
20 Butylene Glycol	0.00	-0.50	0.50	0.00	+++++++	

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.

* not spiked

Data File: /chem2/fid7.i/20130117ETHANOL.B/0117A014.D
Injection Date: 17-JAN-2013 22:43
Instrument: fid7.i
Client Sample ID:



Data File: /chem2/fid7.i/20130117ETHANOL.B/0117A014.D

Page 4

Date : 17-JAN-2013 22:43

Client ID:

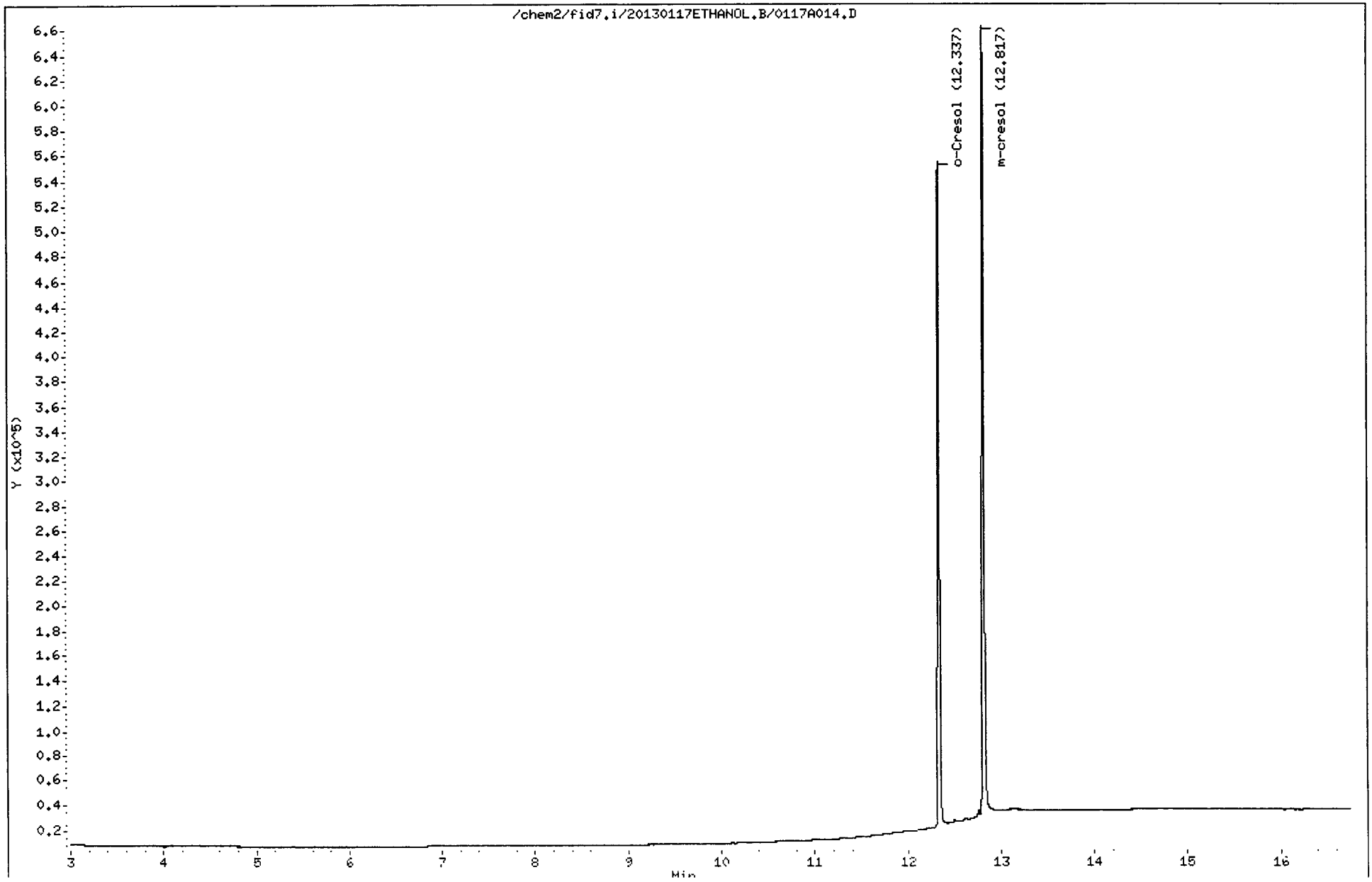
Instrument: fid7.i

Sample Info: 150PPMETHANOL

Operator: MS

Column phase: ZB5waxplus

Column diameter: 0.53



150 ppm ethanol

Analytical Resources, Inc.

Data file : /chem2/fid7.i/20130117ETHANOL.B/0117A015.D
Lab Smp Id: 200PPMETHANOL
Inj Date : 17-JAN-2013 23:11
Operator : MS Inst ID: fid7.i
Smp Info : 200PPMETHANOL
Misc Info :
Comment :
Method : /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Meth Date : 23-Jan-2013 14:36 jrains Quant Type: ISTD
Cal Date : 17-JAN-2013 20:52 Cal File: 0117A010.D
Als bottle: 9 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
1	Ethyl Acetate	Compound Not Detected.					
2	Methanol	Compound Not Detected.					
3	Isopropanol	Compound Not Detected.					
4	Ethanol	2.256	2.256	(0.176)	2127372	200.000	199.952
5	n-Butyl Ether	Compound Not Detected.					
6	Isobutyl Acetate	Compound Not Detected.					
7	n-Propanol	Compound Not Detected.					
8	n-Butyl Acetate	Compound Not Detected.					
9	1-Methoxy-2-propanol	Compound Not Detected.					
10	n-Butanol	Compound Not Detected.					
11	Prop-Gly-Me-Ether-Acetate	Compound Not Detected.					
12	2-Methoxyethanol Acetate	Compound Not Detected.					
13	2-Ethoxyethyl Acetate	Compound Not Detected.					
14	Propargyl Alcohol	Compound Not Detected.					
15	2-Butoxyethanol	Compound Not Detected.					
16	Ethylene Glycol	Compound Not Detected.					
17	Diethylene Glycol MonoButyl Et	Compound Not Detected.					
* 18	m-cresol	12.820	12.820	(1.000)	946363	25.0000	
$ 19	o-Cresol	12.339	12.339	(0.962)	761755	25.0000	25.083
* 20	Butylene Glycol	Compound Not Detected.					

01/23/13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: fid7.i
Lab File ID: 0117A015.D
Lab Smp Id: 200PPMETHANOL
Analysis Type: OTHER
Quant Type: ISTD
Operator: MS
Method File: /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Misc Info:

Calibration Date: 17-JAN-2013
Calibration Time: 20:52

Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 2.

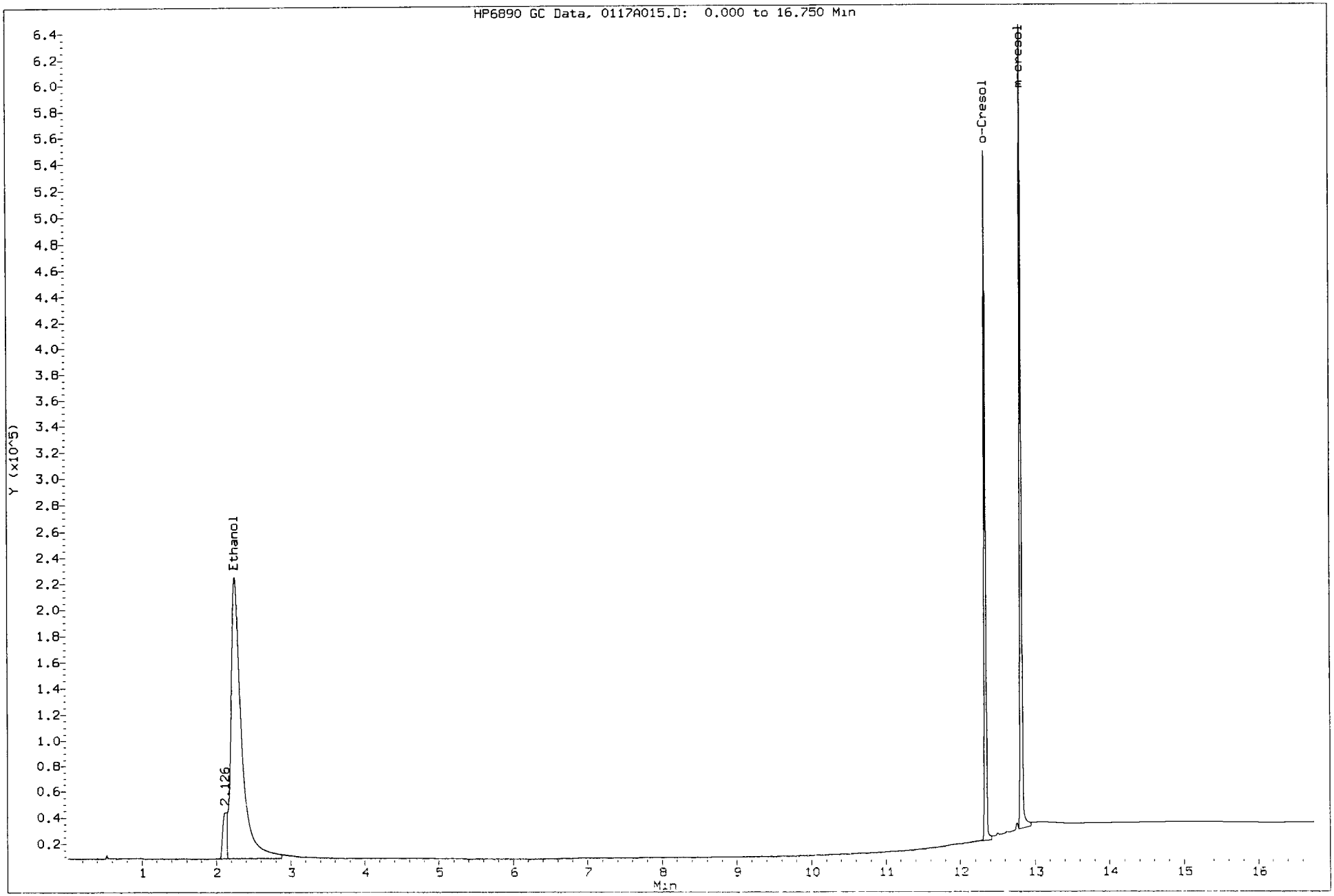
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF	
18 m-cresol	960708	480354	1921416	946363	-1.49	
20 Butylene Glycol	0	0	0	0	+++++++	*

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF	
18 m-cresol	12.81	12.31	13.31	12.82	0.08	
20 Butylene Glycol	0.00	-0.50	0.50	0.00	++++++	*

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.

* JL 01/23/13 not spiked

Data File: /chem2/fid7.1/20130117ETHANOL.B/0117A015.D
Injection Date: 17-JAN-2013 23:11
Instrument: fid7.1
Client Sample ID:

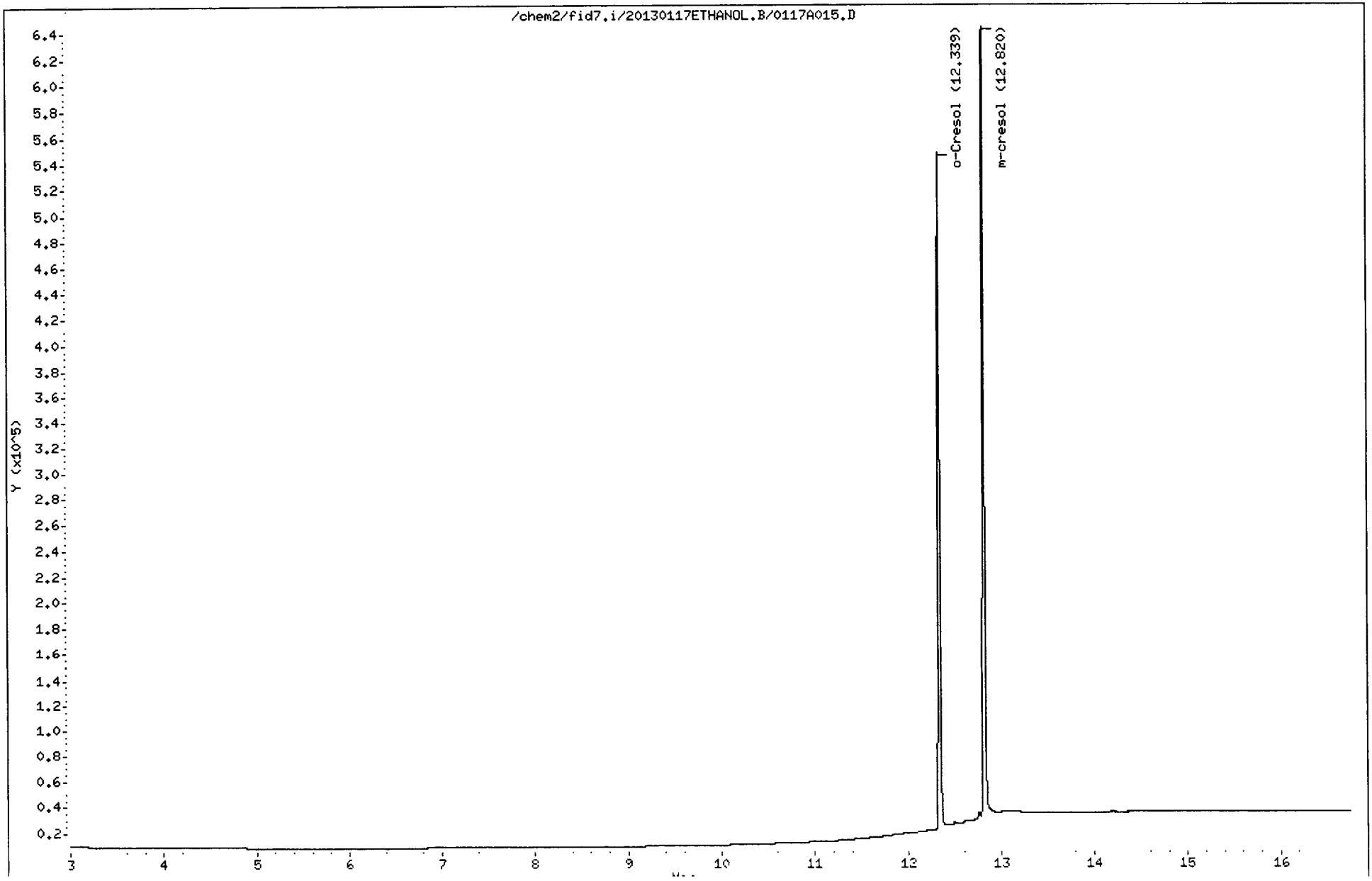


Data File: /chem2/fid7.i/20130117ETHANOL.B/0117A015.D
Date : 17-JAN-2013 23:11
Client ID:
Sample Info: 200PPMETHANOL

Instrument: fid7.i

Operator: MS
Column diameter: 0.53

Column phase: ZB5waxplus



USEPA SSD

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Initial Calibration Notes

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest)
427S(Dir Inj) **428S**(EPH) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date(s): 01/22/13 Internal Standard ID S850-4 Expiration 01/17/14

Endrin/DDT Breakdown <15%? YES / NO / NA
ICal Meets %RSD & r^2 Criteria YES / NO
Manual Integrations for ICal? YES / NO
Minimum Response S/N Met YES / NO

ICV Exceeding ±20%? YES / NO / NA
ICV Exceeding ±30%? YES / NO / NA
Linear Fits Used? YES / NO
Quadratic Fits Used? YES / NO
Calibration Points Dropped? YES / NO

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
~~S850-2~~	~~pr 01/23/13~~				
ethanol	S850-2	01/17/14			
o-Cresol	S850-3	01/17/14			

No ICV used

Detail problems, corrective actions and/or other pertinent information below:
spiked ccals / lcs / lcsd / ms / msd @ 50 ppm ethanol

Analyst: _____ **Date:** 01/23/13

Reviewer: _____ **Date:** 1/23/13

VZ97 : 01009

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid5.i/20130122ethanol.b/ethanol.m
Batch File: /chem3/fid5.i/20130122ethanol.b
Inst ID: fid5.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0122a006	0122a008	0122a010	0122a012	0122a014	0122a016	0122a018
INJ.DATE:	22-JAN-2013	22-JAN-2013	22-JAN-2013	22-JAN-2013	22-JAN-2013	22-JAN-2013	22-JAN-2013
INJ.TIME:	11:34	12:19	13:05	13:50	14:36	15:21	16:07

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
8 mecl2	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.063	1.041-1.084	+++++	+++++
2 isopropyl alcohol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.447	1.418-1.476	+++++	+++++
1 methanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.484	1.454-1.514	+++++	+++++
3 ethanol	4.480	4.475	4.471	4.465	4.455	4.451	4.452	4.471	4.382-4.560	4.464	0.012
4 ethyl acetate	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.500	1.470-1.530	0.000	0.000
5 ethylene glycol	+++++	0.000	+++++	0.000	0.000	+++++	+++++	5.073	4.972-5.175	0.000	0.000
9 propylene glycol	+++++	+++++	0.000	+++++	+++++	+++++	+++++	4.773	4.678-4.868	0.000	0.000
7 isobutyl alcohol	+++++	+++++	0.000	+++++	0.000	0.000	+++++	6.144	6.021-6.267	0.000	0.000
* 11 I.S. butylene glycol	+++++	0.000	+++++	0.000	0.000	0.000	0.000	6.926	6.787-7.064	0.000	0.000
$ 6 o-cresol	14.420	14.419	14.411	14.408	14.398	14.393	14.395	14.411	14.123-14.699	14.406	0.011
* 10 I.S. m-cresol	15.280	15.275	15.268	15.263	15.254	15.248	15.250	15.268	14.963-15.574	15.263	0.013

Reviewer 1 _____ Date: 01/23/13
Reviewer 2 _____ Date: 1/23/13

5757.4574

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid5.i/20130122ethanol.b

ARI Job No.: 10PP Method: ethanol.m Instrument: fid5.i Date: 22-JAN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0942	0122a001.d	10PPMETHANOL		1	NO MANUAL INTEGRATION
1004	0122a002.d	50PPMETHANOL		1	NO MANUAL INTEGRATION
1027	0122a003.d	RINSE		1	NO MANUAL INTEGRATION
1049	0122a004.d	IB		1	NO MANUAL INTEGRATION
1112	0122a005.d	RINSE		1	NO MANUAL INTEGRATION
1134	0122a006.d	10PPMETHANOL		1	NO MANUAL INTEGRATION
1157	0122a007.d	RINSE		1	NO MANUAL INTEGRATION
1219	0122a008.d	25PPMETHANOL		1	NO MANUAL INTEGRATION
1242	0122a009.d	RINSE		1	NO MANUAL INTEGRATION
1305	0122a010.d	50PPMETHANOL		1	NO MANUAL INTEGRATION
1327	0122a011.d	RINSE		1	NO MANUAL INTEGRATION
1350	0122a012.d	100PPMETHANOL		1	NO MANUAL INTEGRATION
1413	0122a013.d	RINSE		1	NO MANUAL INTEGRATION
1436	0122a014.d	125PPMETHANOL		1	NO MANUAL INTEGRATION
1458	0122a015.d	RINSE		1	NO MANUAL INTEGRATION
1521	0122a016.d	150PPMETHANOL		1	NO MANUAL INTEGRATION
1544	0122a017.d	RINSE		1	NO MANUAL INTEGRATION
1607	0122a018.d	200PPMETHANOL		1	NO MANUAL INTEGRATION
1629	0122a019.d	RINSE		1	NO MANUAL INTEGRATION
1652	0122a020.d	IB		1	NO MANUAL INTEGRATION

Page 1 of 1

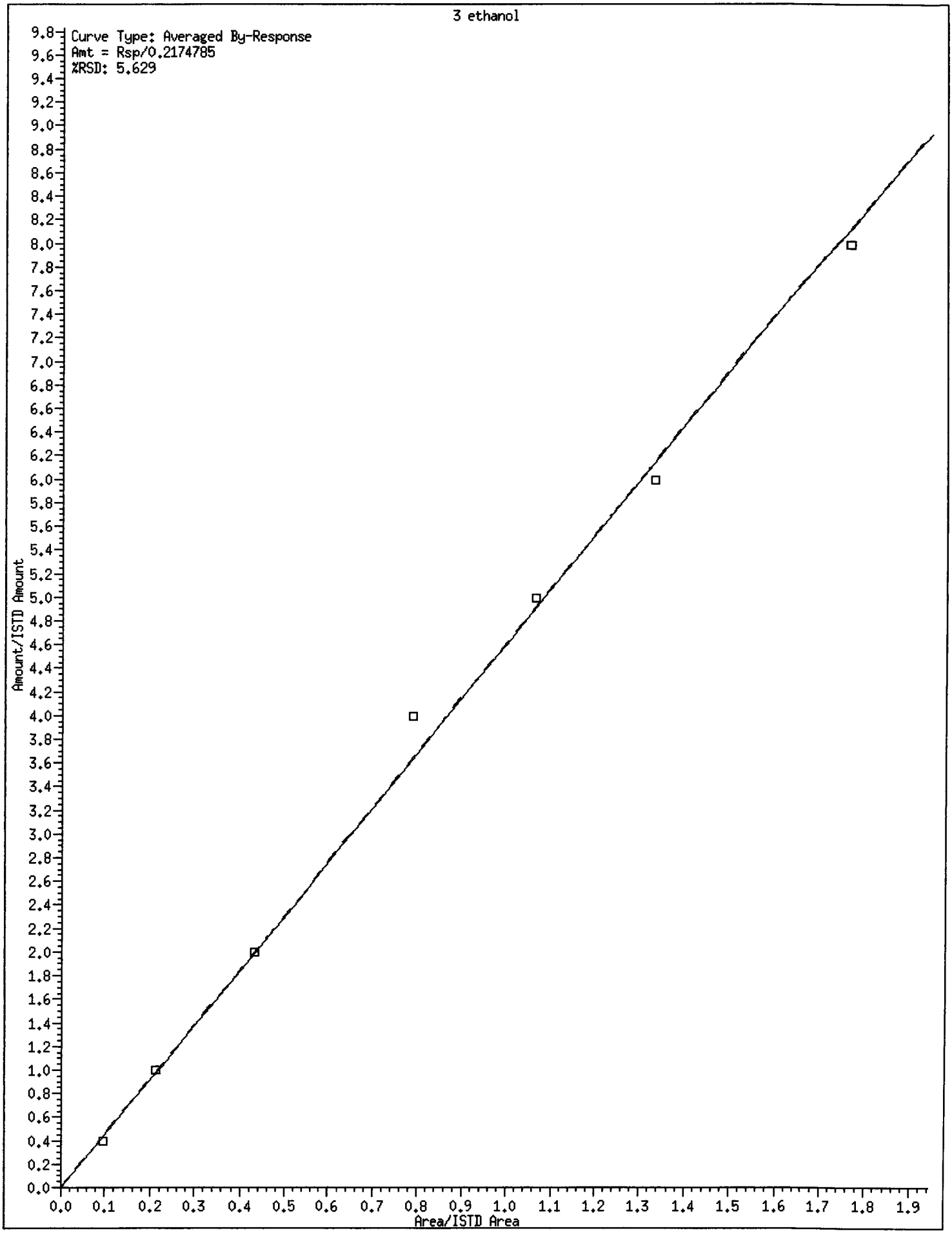
1715 0122a021.d RINSE 1 NO MANUAL INTEGRATION

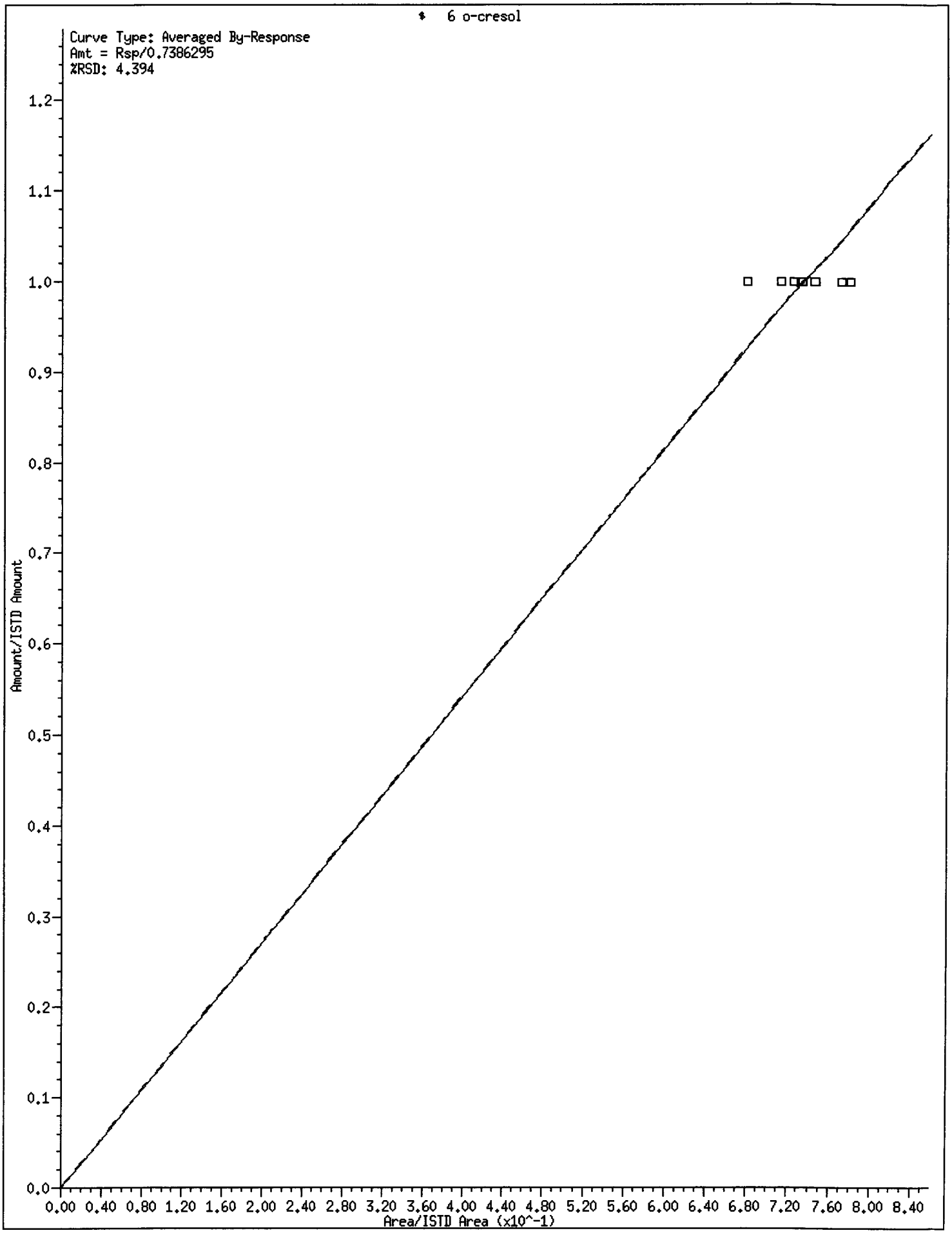
2159712

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid5.i/20130122ethanol.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1737	0122a022.d	ETHANOL#1		1	NO MANUAL INTEGRATION
1800	0122a023.d	RINSE		1	NO MANUAL INTEGRATION
1822	0122a024.d	VZ97MBW1		1	NO MANUAL INTEGRATION
1844	0122a025.d	RINSE		1	NO MANUAL INTEGRATION
1907	0122a026.d	VZ97LCSW1		1	NO MANUAL INTEGRATION
1929	0122a027.d	RINSE		1	NO MANUAL INTEGRATION
1951	0122a028.d	VZ97LCSDW1		1	NO MANUAL INTEGRATION
2013	0122a029.d	RINSE		1	NO MANUAL INTEGRATION
2035	0122a030.d	VZ97S		1	NO MANUAL INTEGRATION
2057	0122a031.d	RINSE		1	NO MANUAL INTEGRATION
2119	0122a032.d	VZ97SMS		1	NO MANUAL INTEGRATION
2141	0122a033.d	RINSE		1	NO MANUAL INTEGRATION
2203	0122a034.d	VZ97SMSD		1	NO MANUAL INTEGRATION
2225	0122a035.d	RINSE		1	NO MANUAL INTEGRATION
2248	0122a036.d	ETHANOL#2		1	NO MANUAL INTEGRATION
2310	0122a037.d	RINSE		1	NO MANUAL INTEGRATION
2332	0122a038.d	RINSE		1	NO MANUAL INTEGRATION

5955 - 1527


3 ethanol
Curve Type: Averaged By-Response
Amt = Rsp/0.2174785
%RSD: 5.629
Amount/ISTD Amount
Area/ISTD Area
0.0 0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0 2.2 2.4 2.6 2.8 3.0 3.2 3.4 3.6 3.8 4.0 4.2 4.4 4.6 4.8 5.0 5.2 5.4 5.6 5.8 6.0 6.2 6.4 6.6 6.8 7.0 7.2 7.4 7.6 7.8 8.0 8.2 8.4 8.6 8.8 9.0 9.2 9.4 9.6 9.8
0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9


6 o-cresol
Curve Type: Averaged By-Response
Amt = Rsp/0.7386295
%RSD: 4.394
Amount/ISTD Amount
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
0.00 0.40 0.80 1.20 1.60 2.00 2.40 2.80 3.20 3.60 4.00 4.40 4.80 5.20 5.60 6.00 6.40 6.80 7.20 7.60 8.00 8.40
Area/ISTD Area (x10^-1)

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-JAN-2013 11:34
End Cal Date : 22-JAN-2013 16:07
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/fid5.i/20130122ethanol.b/ethanol.m
Cal Date : 23-Jan-2013 07:18 jrains
Curve Type : Average

Calibration File Names:
Level 1: /chem3/fid5.i/20130122ethanol.b/0122a006.d
Level 2: /chem3/fid5.i/20130122ethanol.b/0122a008.d
Level 3: /chem3/fid5.i/20130122ethanol.b/0122a010.d
Level 4: /chem3/fid5.i/20130122ethanol.b/0122a012.d
Level 5: /chem3/fid5.i/20130122ethanol.b/0122a014.d
Level 6: /chem3/fid5.i/20130122ethanol.b/0122a016.d
Level 7: /chem3/fid5.i/20130122ethanol.b/0122a018.d

Compound	5.000 Level 1	10.000 Level 2	25.000 Level 3	50.000 Level 4	100.000 Level 5	150.000 Level 6	200.000 Level 7	RRF	% RSD	
8 mecl2	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
2 isopropyl alcohol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
1 methanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
3 ethanol	0.23844	0.21306	0.21570	0.19794	0.21356	0.22285	0.22080	0.21748	5.629	
4 ethyl acetate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
5 ethylene glycol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-

VZ97 : 01016

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-JAN-2013 11:34
End Cal Date : 22-JAN-2013 16:07
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/fid5.i/20130122ethanol.b/ethanol.m
Cal Date : 23-Jan-2013 07:18 jrains
Curve Type : Average

Compound	5.000 Level 1	10.000 Level 2	25.000 Level 3	50.000 Level 4	100.000 Level 5	150.000 Level 6	200.000 Level 7	___ RRF	% RSD	
9 propylene glycol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
7 isobutyl alcohol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	
$ 6 o-cresol	0.68472	0.73644	0.74831	0.71808	0.73096	0.77105	0.78085	0.73863	4.394	

Analytical Resources, Inc.

)ata file : /chem3/fid5.i/20130122ethanol.b/0122a004.d
,ab Smp Id: IB
.nj Date : 22-JAN-2013 10:49
)perator : JR Inst ID: fid5.i
;mp Info : IB
Iisc Info : 12-
:omment :
Iethod : /chem3/fid5.i/20130122ethanol.b/ethanol.m
Ieth Date : 23-Jan-2013 11:28 jrains Quant Type: ISTD
:al Date : 22-JAN-2013 16:07 Cal File: 0122a018.d
,ls bottle: 9
)il Factor: 1.00000
:ntegrator: HP Genie Compound Sublist: lims.sub
'arget Version: 3.50

:oncentration Formula: Amt * DF * CpndVariable

:pnd Variable Local Compound Variable

ompounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/Kg)
4 ethyl acetate	1.502	1.500	(0.098)	4062		
1 methanol	Compound Not Detected.					
2 isopropyl alcohol	Compound Not Detected.					
3 ethanol	Compound Not Detected.					
7 isobutyl alcohol	Compound Not Detected.					
5 ethylene glycol	Compound Not Detected.					
9 propylene glycol	Compound Not Detected.					
6 o-cresol	14.420	14.411	(0.944)	258291	26.1146	26.114
10 I S m-cresol	15.279	15.268	(1.000)	334765	25.0000	
11 I.S. butylene glycol	Compound Not Detected.					

01/23/13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

:nstrument ID: fid5.i
.ab File ID: 0122a004.d
.ab Smp Id: IB
Analysis Type: OTHER
)uant Type: ISTD
)perator: JR
Method File: /chem3/fid5.i/20130122ethanol.b/ethanol.m
Misc Info: 12-

Calibration Date: 22-JAN-2013
Calibration Time: 13:05

Level: LOW
Sample Type: SOIL

:est Mode:
Use Initial Calibration Level 3.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF	
10 I.S. m-cresol	354601	177300	709202	334765	-5.59	
~~11 I.S. butylene gly~~	~~0~~	~~0~~	~~0~~	~~0~~	~~++++++~~	*

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF	
10 I.S. m-cresol	15.27	14.77	15.77	15.28	0.07	
~~11 I.S. butylene gly~~	~~6.93~~	~~6.43~~	~~7.43~~	~~0.00~~	~~-100.00~~	*

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.

* not spiked

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 20130122ethanol
Sample Matrix: SOLID Fraction: OTHER
Lab Smp Id: IB
Level: LOW Operator: JR
Data Type: GC DATA SampleType: SAMPLE
SpikeList File: Quant Type: ISTD
Sublist File: lims.sub
Method File: /chem3/fid5.i/20130122ethanol.b/ethanol.m
Misc Info: 12-

SURROGATE COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
$ 6 o-cresol	25.000	26.114	104.46	30-150

VZ97:01020

Data File: /chem3/fid5.i/20130122ethanol.b/0122a004.d

Page 4

Date : 22-JAN-2013 10:49

Client ID:

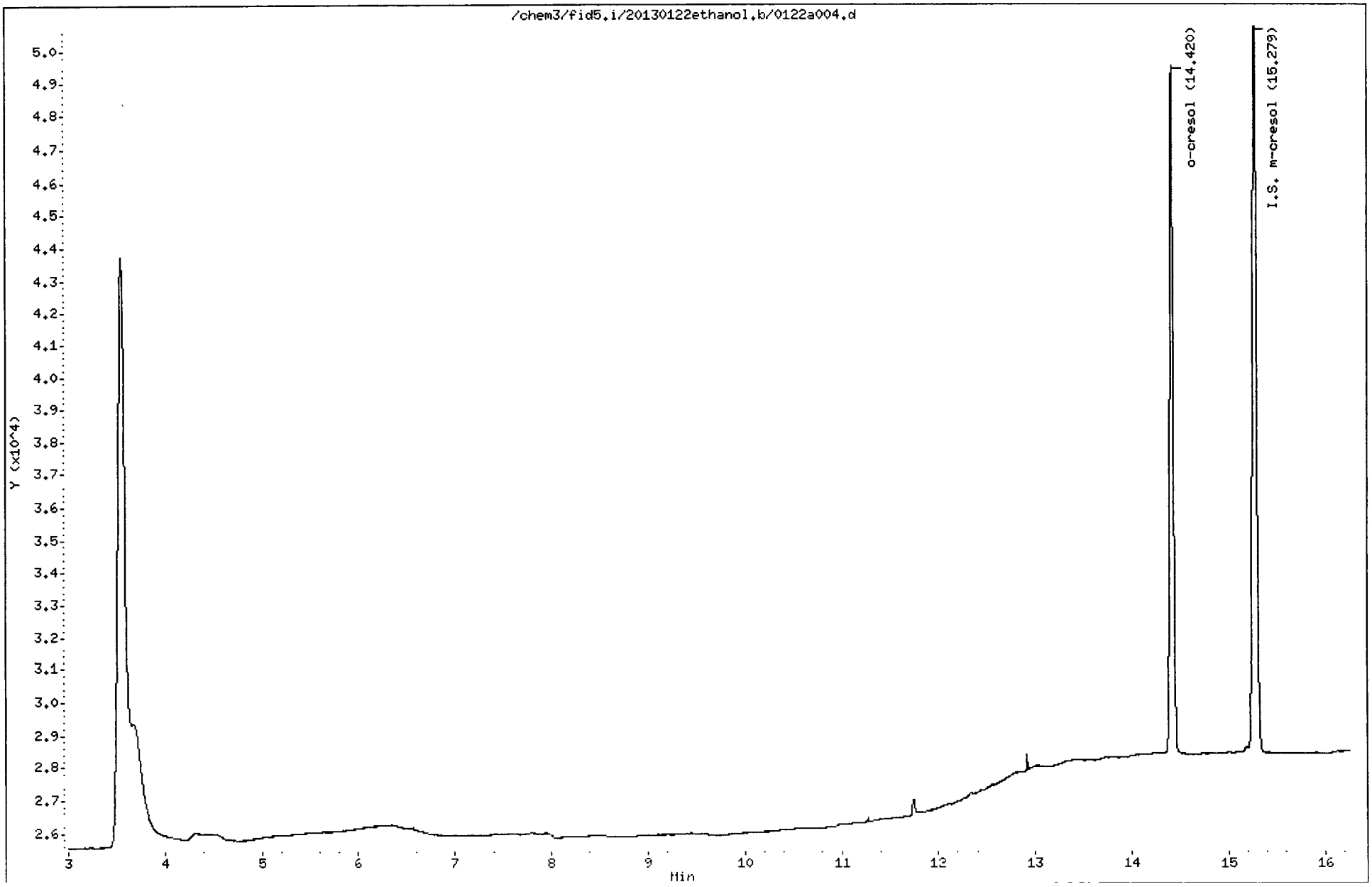
Instrument: fid5.i

Sample Info: IB

Operator: JR

Column phase:

Column diameter: 0.32



USEPA 8151A

Analytical Resources, Inc.

)ata file : /chem3/fid5.i/20130122ethanol.b/0122a006.d
Lab Smp Id: 10PPMETHANOL
Inj Date : 22-JAN-2013 11:34
)perator : JR Inst ID: fid5.i
Smp Info : 10PPMETHANOL
Misc Info : 12-
Comment :
Method : /chem3/fid5.i/20130122ethanol.b/ethanol.m
Meth Date : 23-Jan-2013 11:28 jrains Quant Type: ISTD
Cal Date : 22-JAN-2013 11:34 Cal File: 0122a006.d
Als bottle: 2 Calibration Sample, Level: 1
)il Factor: 1.00000
Integrator: HP Genie Compound Sublist: lims.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
ompounds	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
4 ethyl acetate	Compound Not Detected.					
1 methanol	Compound Not Detected.					
2 isopropyl alcohol	Compound Not Detected.					
3 ethanol	4.480	4.471	(0.293)	36201	10.0000	10.963
7 isobutyl alcohol	Compound Not Detected.					
5 ethylene glycol	Compound Not Detected.					
9 propylene glycol	Compound Not Detected					
6 o-cresol	14.420	14.411	(0.944)	259889	25.0000	23.175
10 I.S. m-cresol	15.280	15.268	(1.000)	379556	25.0000	
11 I.S. butylene glycol	Compound Not Detected.					

01/23/13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: fid5.i
Lab File ID: 0122a006.d
Lab Smp Id: 10PPMETHANOL
Analysis Type: OTHER
Quant Type: ISTD
Operator: JR
Method File: /chem3/fid5.i/20130122ethanol.b/ethanol.m
Misc Info: 12-

Calibration Date: 22-JAN-2013
Calibration Time: 13:05

Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 3.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
10 I.S. m-cresol	354601	177300	709202	379556	7.04
~~11 I.S. butylene gly~~	~~0~~	~~0~~	~~0~~	~~0~~	~~++++++~~ *

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
10 I.S. m-cresol	15.27	14.77	15.77	15.28	0.07
~~11 I.S. butylene gly~~	~~6.93~~	~~6.43~~	~~7.43~~	~~0.00~~	~~-100.00~~ *

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.

* not spiked

Data File: /chem3/fid5.i/20130122ethanol.b/0122a006.d

Date : 22-JAN-2013 11:34

Client ID:

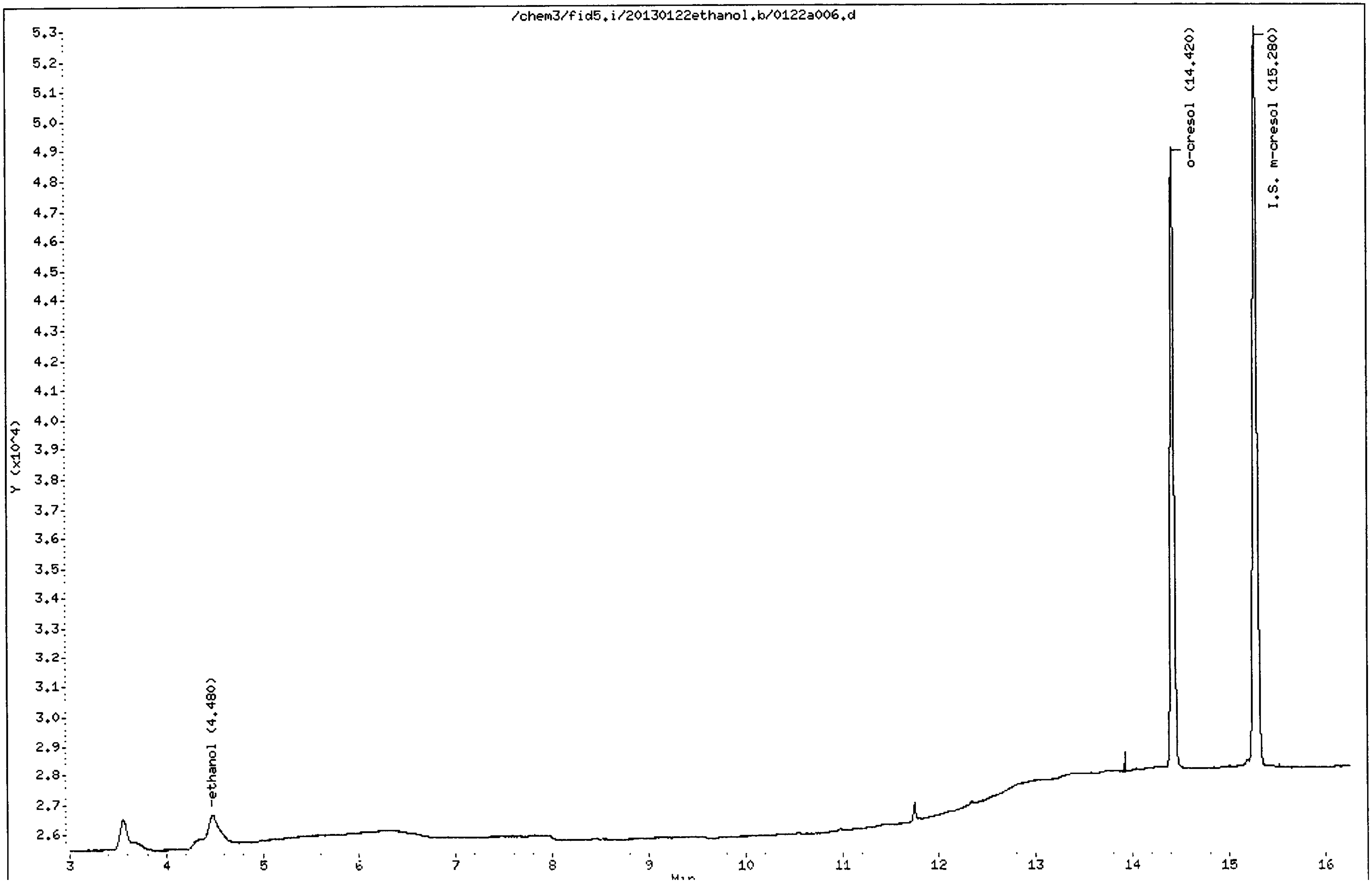
Instrument: fid5.i

Sample Info: 10PPMETHANOL

Operator: JR

Column phase:

Column diameter: 0.32



Data File: /chem3/fid5.i/20130122ethanol.b/0122a008.d
Report Date: 23-Jan-2013 11:37

Analytical Resources, Inc.

Data file : /chem3/fid5.i/20130122ethanol.b/0122a008.d
Lab Smp Id: 25PPMETHANOL
Inj Date : 22-JAN-2013 12:19
Operator : JR Inst ID: fid5.i
Smp Info : 25PPMETHANOL
Misc Info : 12-
Comment :
Method : /chem3/fid5.i/20130122ethanol.b/ethanol.m
Meth Date : 23-Jan-2013 11:28 jrains Quant Type: ISTD
Cal Date : 22-JAN-2013 12:19 Cal File: 0122a008.d
Als bottle: 3 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: lims.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)	
4	ethyl acetate	Compound Not Detected.						
1	methanol	Compound Not Detected.						
2	isopropyl alcohol	Compound Not Detected.						
3	ethanol	4.475	4.471	(0.293)	78428	25.0000	23.594	✓
7	isobutyl alcohol	Compound Not Detected.						
5	ethylene glycol	Compound Not Detected.						
9	propylene glycol	Compound Not Detected.						
$ 6	o-cresol	14.419	14.411	(0.944)	271088	25.0000	25.909	✓
* 10	I.S. m-cresol	15.275	15.268	(1.000)	368106	25.0000		
* 11	I.S. butylene glycol	Compound Not Detected.						

01/23/13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: fid5.i
Lab File ID: 0122a008.d
Lab Smp Id: 25PPMETHANOL
Analysis Type: OTHER
Quant Type: ISTD
Operator: JR
Method File: /chem3/fid5.i/20130122ethanol.b/ethanol.m
Misc Info: 12-

Calibration Date: 22-JAN-2013
Calibration Time: 13:05

Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 3.

		AREA LIMIT				
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF	
10 I.S. m-cresol	354601	177300	709202	368106	3.81	
~~11 I.S. butylene gly~~	~~0~~	~~0~~	~~0~~	~~0~~	~~++++++~~	*

		RT LIMIT				
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF	
10 I.S. m-cresol	15.27	14.77	15.77	15.28	0.05	
~~11 I.S. butylene gly~~	~~6.93~~	~~6.43~~	~~7.43~~	~~0.00~~	~~-100.00~~	*

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.

* not spiked

Data File: /chem3/fid5.i/20130122ethanol.b/0122a008.d

Date : 22-JAN-2013 12:19

Client ID:

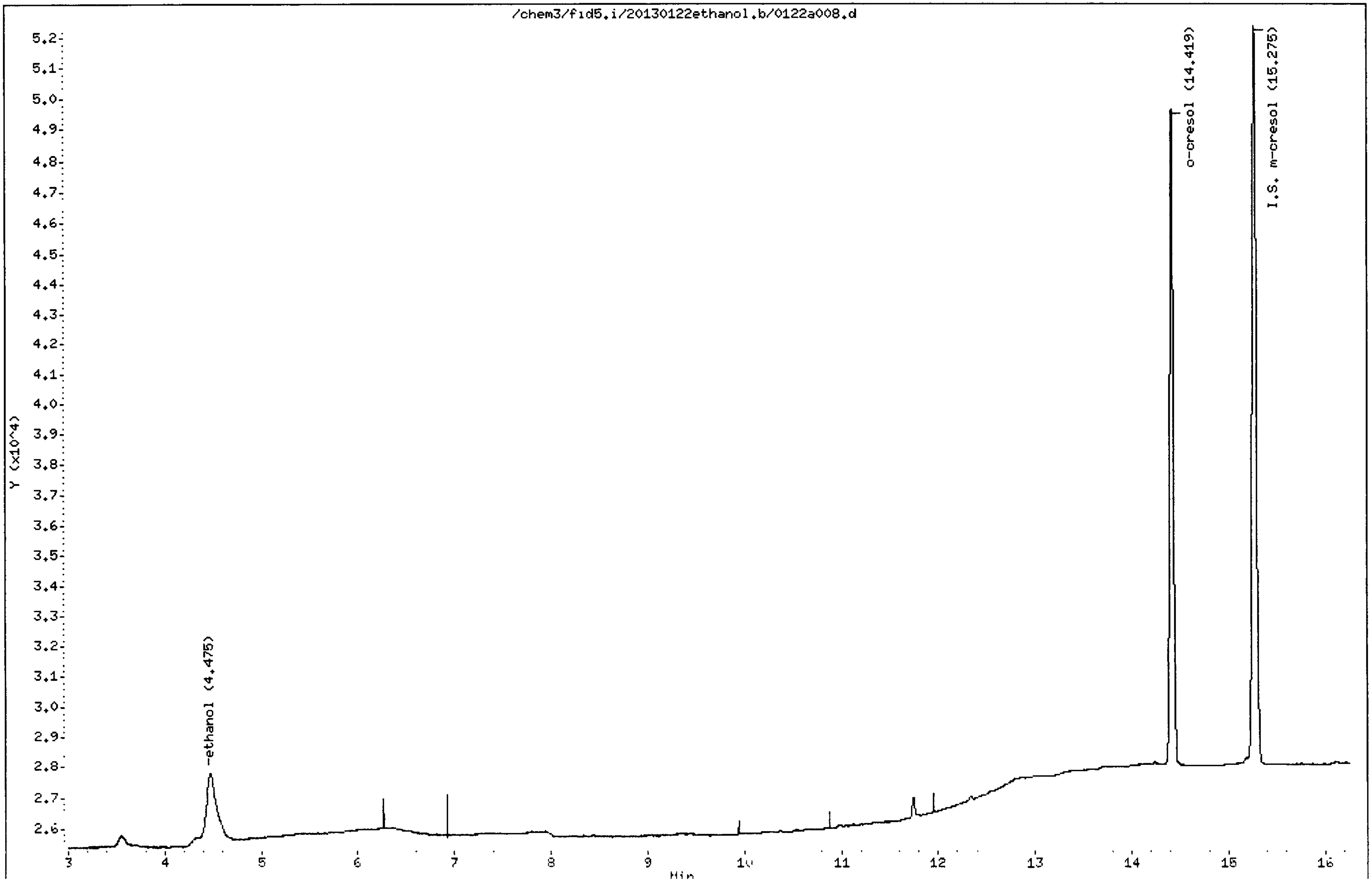
Instrument: fid5.i

Sample Info: 25PPMETHANOL

Operator: JR

Column phase:

Column diameter: 0.32



Analytical Resources, Inc.

Data file : /chem3/fid5.i/20130122ethanol.b/0122a010.d
Lab Smp Id: 50PPMETHANOL
Inj Date : 22-JAN-2013 13:05
Operator : JR Inst ID: fid5.i
Smp Info : 50PPMETHANOL
Misc Info : 12-
Comment :
Method : /chem3/fid5.i/20130122ethanol.b/ethanol.m
Meth Date : 23-Jan-2013 11:28 jrains Quant Type: ISTD
Cal Date : 22-JAN-2013 13:05 Cal File: 0122a010.d
Als bottle: 4 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: lims.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)	
4 ethyl acetate	Compound Not Detected.						
1 methanol	Compound Not Detected.						
2 isopropyl alcohol	Compound Not Detected.						
3 ethanol	4.471	4.471	(0.293)	152977	50.0000	48.494	✓
7 isobutyl alcohol	Compound Not Detected.						
5 ethylene glycol	Compound Not Detected.						
9 propylene glycol	Compound Not Detected.						
6 o-cresol	14.411	14.411	(0.944)	265353	25.0000	25.869	✓
10 I.S m-cresol	15.268	15.268	(1.000)	354601	25.0000		
11 I.S. butylene glycol	Compound Not Detected.						

01/23/13
01/23/13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: fid5.i
Lab File ID: 0122a010.d
Lab Smp Id: 50PPMETHANOL
Analysis Type: OTHER
Quant Type: ISTD
Operator: JR
Method File: /chem3/fid5.i/20130122ethanol.b/ethanol.m
Misc Info: 12-

Calibration Date: 22-JAN-2013
Calibration Time: 13:05

Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 3.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF	
10 I.S. m-cresol	354601	177300	709202	354601	0.00	
~~11 I.S. butylene gly~~	~~0~~	~~0~~	~~0~~	~~0~~	~~+++++~~	*

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF	
10 I.S. m-cresol	15.27	14.77	15.77	15.27	0.00	
~~11 I.S. butylene gly~~	~~6.93~~	~~6.43~~	~~7.43~~	~~0.00~~	~~-100.00~~	*

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.

*not spiked

Data File: /chem3/fid5.i/20130122ethanol.b/0122a010.d

Date : 22-JAN-2013 13:05

Client ID:

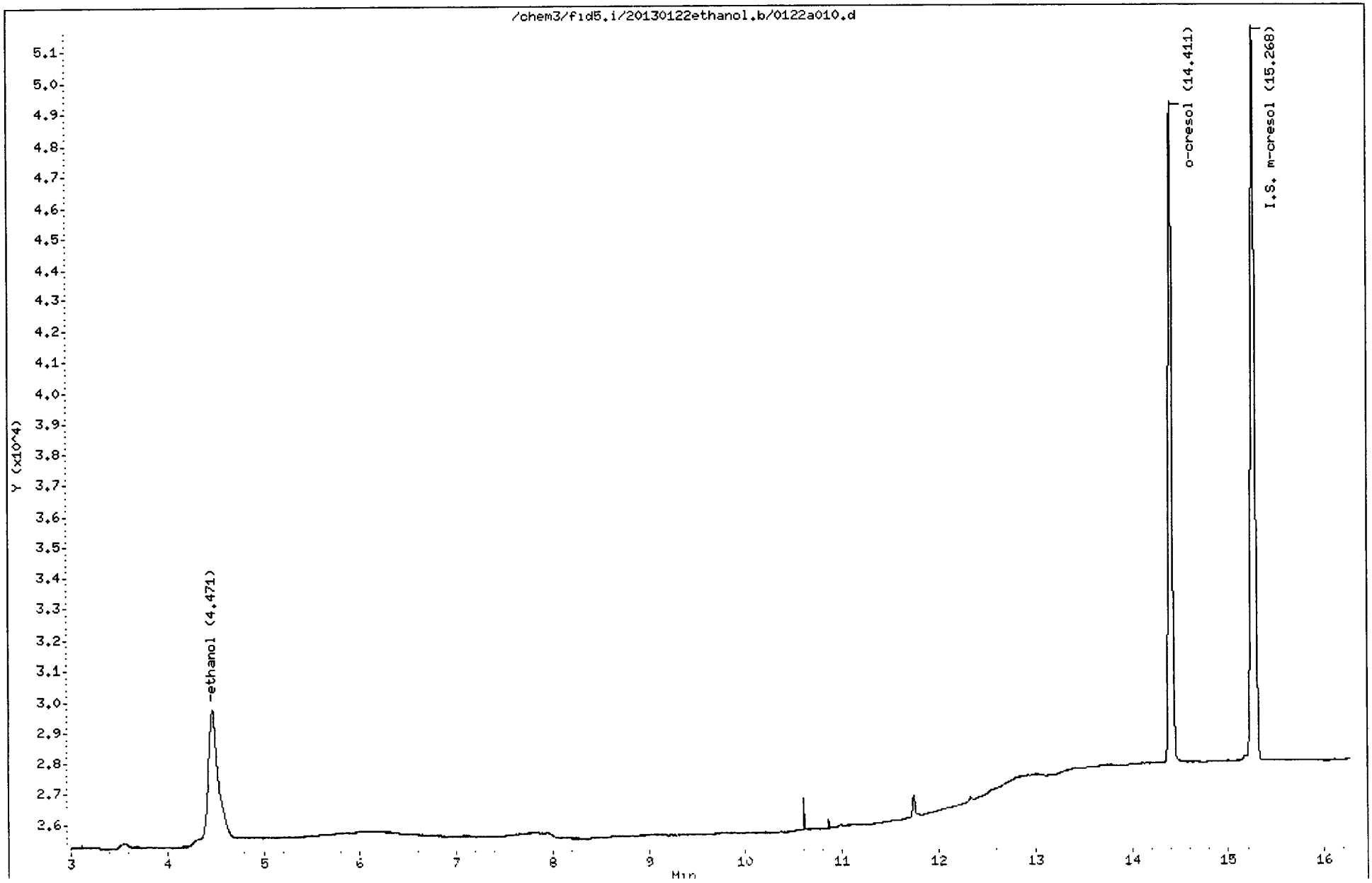
Instrument: fid5.i

Sample Info: 50PPMETHANOL

Operator: JR

Column phase:

Column diameter: 0.32



US7376139

Analytical Resources, Inc.

Data file : /chem3/fid5.i/20130122ethanol.b/0122a012.d
Lab Smp Id: 100PPMETHANOL
Inj Date : 22-JAN-2013 13:50
Operator : JR Inst ID: fid5.i
Smp Info : 100PPMETHANOL
Misc Info : 12-
Comment :
Method : /chem3/fid5.i/20130122ethanol.b/ethanol.m
Meth Date : 23-Jan-2013 11:28 jrains Quant Type: ISTD
Cal Date : 22-JAN-2013 13:50 Cal File: 0122a012.d
Als bottle: 5 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: lims.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
4 ethyl acetate	Compound Not Detected.					
1 methanol	Compound Not Detected.					
2 isopropyl alcohol	Compound Not Detected.					
3 ethanol	4.465	4.471	(0 293)	293170	100.000	91 517
7 isobutyl alcohol	Compound Not Detected.					
5 ethylene glycol	Compound Not Detected.					
9 propylene glycol	Compound Not Detected.					
6 o-cresol	14.408	14.411	(0.944)	265887	25.0000	24.868
10 I.S. m-cresol	15.263	15.268	(1.000)	370277	25.0000	
11 I.S. butylene glycol	Compound Not Detected.					

JR 01/23/13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: fid5.i
Lab File ID: 0122a012.d
Lab Smp Id: 100PPMETHANOL
Analysis Type: OTHER
Quant Type: ISTD
Operator: JR
Method File: /chem3/fid5.i/20130122ethanol.b/ethanol.m
Misc Info: 12-

Calibration Date: 22-JAN-2013
Calibration Time: 13:05

Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 3.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF	
10 I.S. m-cresol	354601	177300	709202	370277	4.42	
11 I.S. butylene gly	0	0	0	0	++++++	*

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF	
10 I.S. m-cresol	15.27	14.77	15.77	15.26	-0.03	
11 I.S. butylene gly	6.93	6.43	7.43	0.00	100.00	*

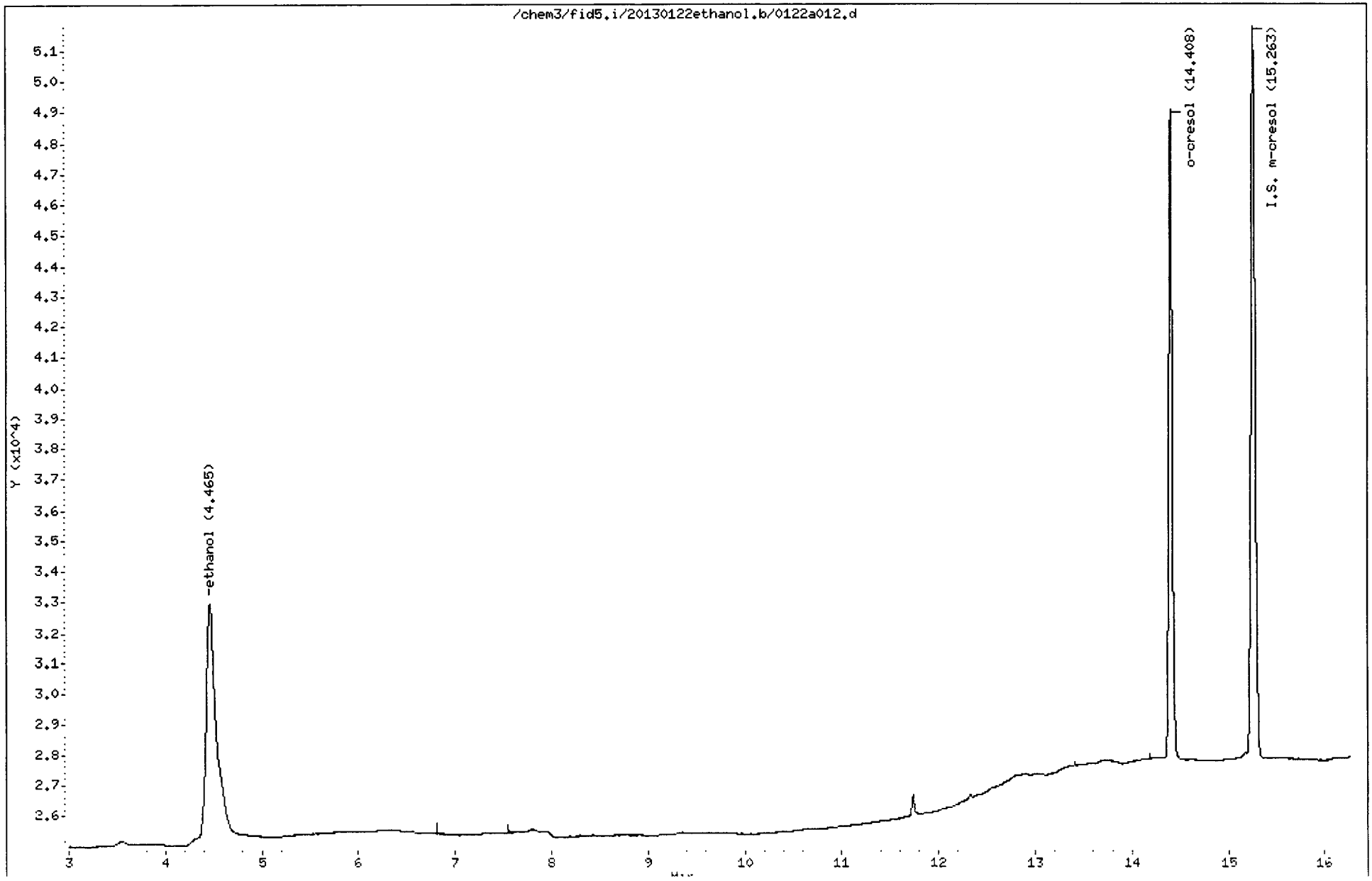
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

* not spiked

Data File: /chem3/fid5.i/20130122ethanol.b/0122a012.d
Date : 22-JAN-2013 13:50
Client ID:
Sample Info: 100PPMETHANOL

Instrument: fid5.i
Operator: JR
Column diameter: 0.32

Column phase:



EE515-1967

Analytical Resources, Inc.

Data file : /chem3/fid5.i/20130122ethanol.b/0122a014.d
Lab Smp Id: 125PPMETHANOL
Inj Date : 22-JAN-2013 14:36
Operator : JR Inst ID: fid5.i
Smp Info : 125PPMETHANOL
Misc Info : 12-
Comment :
Method : /chem3/fid5.i/20130122ethanol.b/ethanol.m
Meth Date : 23-Jan-2013 11:28 jrains Quant Type: ISTD
Cal Date : 22-JAN-2013 14:36 Cal File: 0122a014.d
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: lims.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
4 ethyl acetate	Compound Not Detected.					
1 methanol	Compound Not Detected.					
2 isopropyl alcohol	Compound Not Detected.					
3 ethanol	4.455	4.471	(0.292)	400086	125.000	123.735
7 isobutyl alcohol	Compound Not Detected.					
5 ethylene glycol	Compound Not Detected.					
9 propylene glycol	Compound Not Detected.					
6 o-cresol	14.398	14.411	(0.944)	273879	25.0000	25.250
10 I S m-cresol	15.254	15.268	(1.000)	374686	25.0000	
11 I.S. butylene glycol	Compound Not Detected.					

01/23/13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: fid5.i
Lab File ID: 0122a014.d
Lab Smp Id: 125PPMETHANOL
Analysis Type: OTHER
Quant Type: ISTD
Operator: JR
Method File: /chem3/fid5.i/20130122ethanol.b/ethanol.m
Misc Info: 12-

Calibration Date: 22-JAN-2013
Calibration Time: 13:05

Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 3.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF	
10 I.S. m-cresol	354601	177300	709202	374686	5.66	
11 I.S. butylene gly	0	0	0	0	++++++	*

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF	
10 I.S. m-cresol	15.27	14.77	15.77	15.25	-0.10	
11 I.S. butylene gly	6.93	6.43	7.43	0.00	-100.00	*

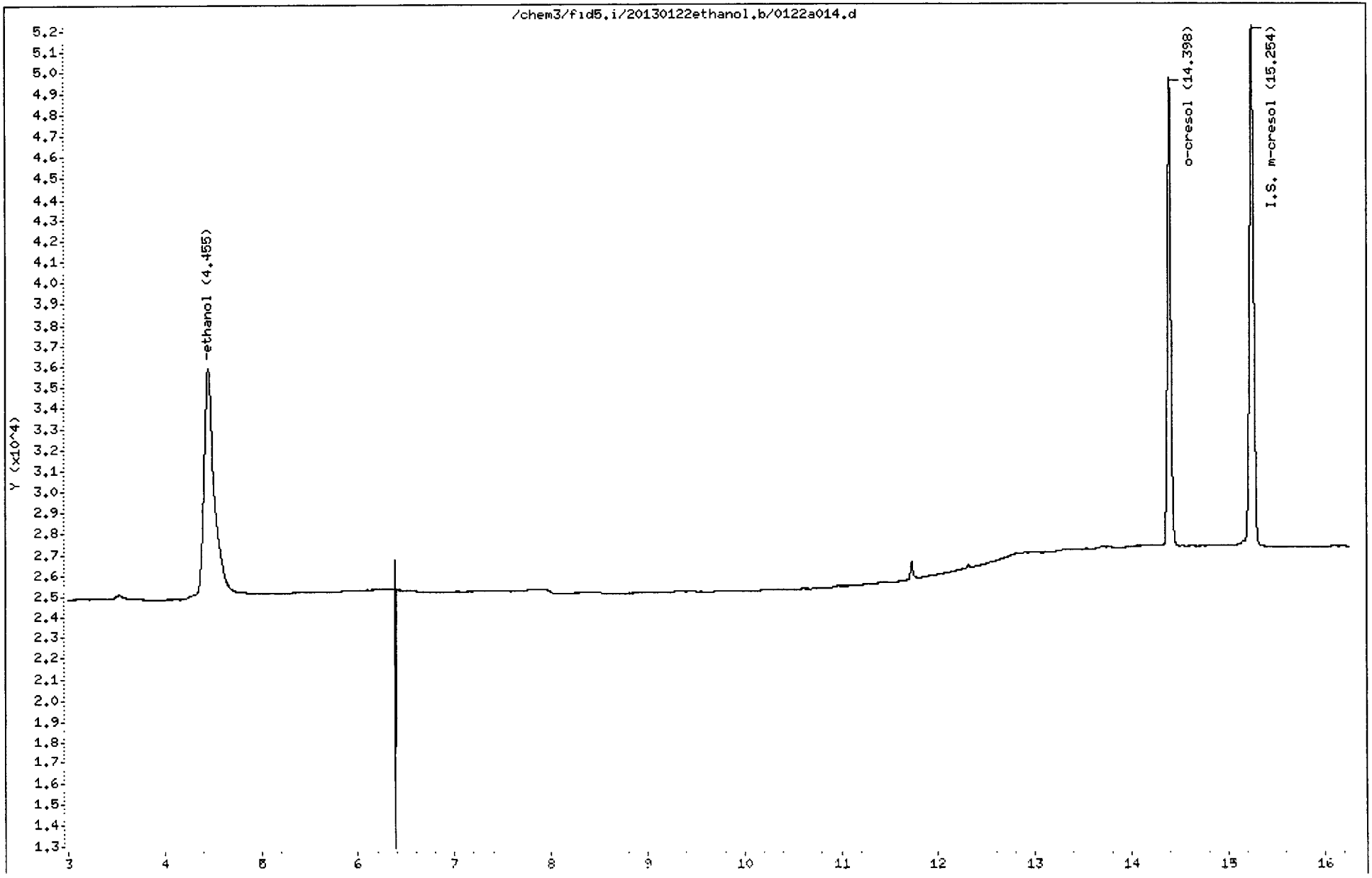
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

* not spiked

Data File: /chem3/fid5.i/20130122ethanol.b/0122a014.d
Date : 22-JAN-2013 14:36
Client ID:
Sample Info: 125PPMETHANOL

Instrument: fid5.i
Operator: JR
Column diameter: 0.32

Column phase:



U7517 - 94535

Analytical Resources, Inc.

Data file : /chem3/fid5.i/20130122ethanol.b/0122a016.d
Lab Smp Id: 150PPMETHANOL
Inj Date : 22-JAN-2013 15:21 Inst ID: fid5.i
Operator : JR
Smp Info : 150PPMETHANOL
Misc Info : 12-
Comment :
Method : /chem3/fid5.i/20130122ethanol.b/ethanol.m
Meth Date : 23-Jan-2013 11:28 jrains Quant Type: ISTD
Cal Date : 22-JAN-2013 15:21 Cal File: 0122a016.d
Als bottle: 7 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: lims.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
4 ethyl acetate	Compound Not Detected.					
1 methanol	Compound Not Detected.					
2 isopropyl alcohol	Compound Not Detected.					
3 ethanol	4.451	4.471	(0.292)	496298	150.000	154.098
7 isobutyl alcohol	Compound Not Detected.					
5 ethylene glycol	Compound Not Detected.					
9 propylene glycol	Compound Not Detected.					
$ 6 o-cresol	14.393	14.411	(0.944)	286191	25.0000	26.348
* 10 I.S. m-cresol	15.248	15.268	(1.000)	371171	25.0000	
* 11 I.S. butylene glycol	Compound Not Detected.					

01/23/13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

:nstrument ID: fid5.i
.ab File ID: 0122a016.d
.ab Smp Id: 150PPMETHANOL
.nalysis Type: OTHER
)uant Type: ISTD
)perator: JR
.ethod File: /chem3/fid5.i/20130122ethanol.b/ethanol.m
.isc Info: 12-

Calibration Date: 22-JAN-2013
Calibration Time: 13:05

Level: LOW
Sample Type: SOIL

:est Mode:
Use Initial Calibration Level 3.

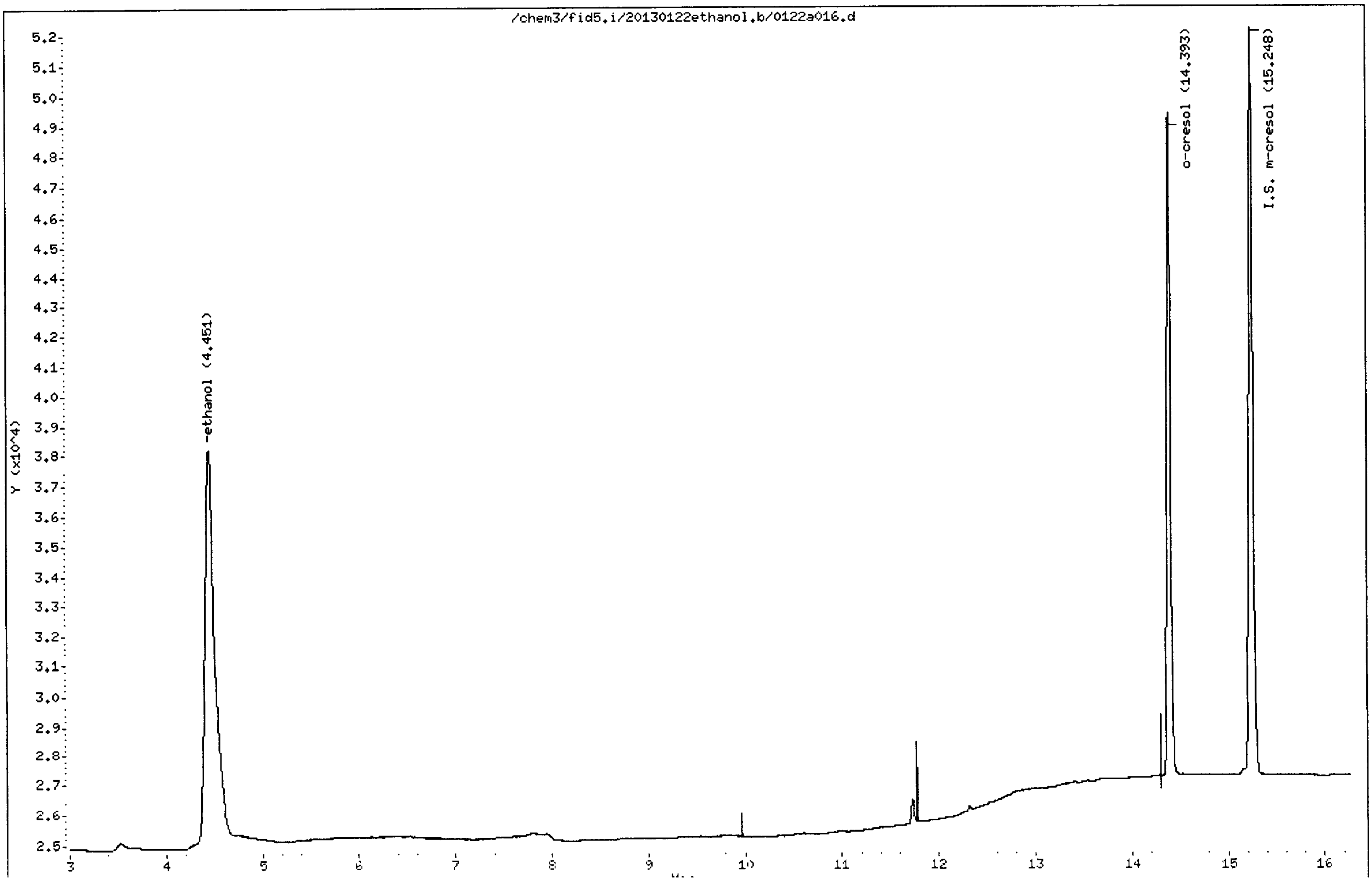
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF	
10 I.S. m-cresol	354601	177300	709202	371171	4.67	*
11 I.S. butylene gly	0	0	0	0	++++++	*

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF	
10 I.S. m-cresol	15.27	14.77	15.77	15.25	-0.14	*
11 I.S. butylene gly	6.93	6.43	7.43	0.00	100.00	*

\REA UPPER LIMIT = +100% of internal standard area.
\REA LOWER LIMIT = - 50% of internal standard area.
?T UPPER LIMIT = + 0.50 minutes of internal standard RT.
?T LOWER LIMIT = - 0.50 minutes of internal standard RT.

* JR 01/23/13 not spiked

Data File: /chem3/fid5.i/20130122ethanol.b/0122a016.d
Date : 22-JAN-2013 15:21
Client ID:
Instrument: fid5.i
Sample Info: 150PPMETHANOL
Operator: JR
Column phase:
Column diameter: 0.32



Analytical Resources, Inc.

Data file : /chem3/fid5.i/20130122ethanol.b/0122a018.d
Lab Smp Id: 200PPMETHANOL
Inj Date : 22-JAN-2013 16:07
Operator : JR Inst ID: fid5.i
Smp Info : 200PPMETHANOL
Misc Info : 12-
Comment :
Method : /chem3/fid5.i/20130122ethanol.b/ethanol.m
Meth Date : 23-Jan-2013 11:28 jrains Quant Type: ISTD
Cal Date : 22-JAN-2013 16:07 Cal File: 0122a018.d
Als bottle: 8 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: lims.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	4 ethyl acetate	Compound Not Detected.					
	1 methanol	Compound Not Detected.					
	2 isopropyl alcohol	Compound Not Detected.					
	3 ethanol	4.452	4.471	(0.292)	637413	200.000	203.050
	7 isobutyl alcohol	Compound Not Detected.					
	5 ethylene glycol	Compound Not Detected.					
	9 propylene glycol	Compound Not Detected.					
$	6 o-cresol	14.395	14.411	(0.944)	281780	25.0000	26.429
*	10 I.S. m-cresol	15.250	15.268	(1.000)	360862	25.0000	
*	11 I.S butylene glycol	Compound Not Detected.					

JK 01/23/13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: fid5.i
Lab File ID: 0122a018.d
Lab Smp Id: 200PPMETHANOL
Analysis Type: OTHER
Quant Type: ISTD
Operator: JR
Method File: /chem3/fid5.i/20130122ethanol.b/ethanol.m
Misc Info: 12-

Calibration Date: 22-JAN-2013
Calibration Time: 13:05

Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 3.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF	
10 I.S. m-cresol	354601	177300	709202	360862	1.77	
11 I.S. butylene gly	0	0	0	0	++++++	*

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF	
10 I.S. m-cresol	15.27	14.77	15.77	15.25	-0.12	
11 I.S. butylene gly	6.93	6.43	7.43	0.00	-100.00	*

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.

* gc 01/29/13 not spiked

Data File: /chem3/fid5.i/20130122ethanol.b/0122a018.d

Date : 22-JAN-2013 16:07

Client ID:

Sample Info: 200PPMETHANOL

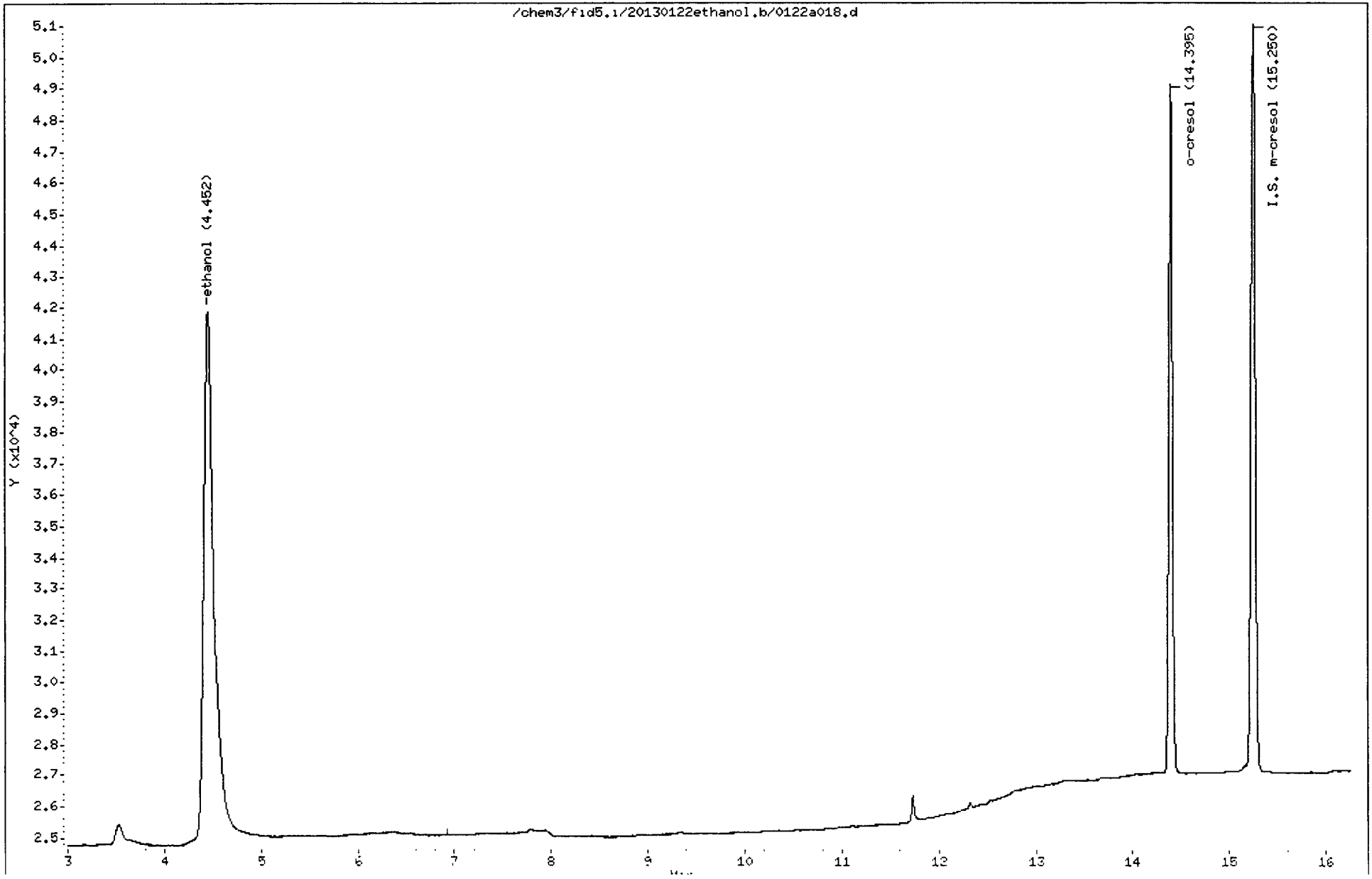
Column phase:

Instrument: fid5.i

Operator: JP

Column diameter: 0.32

UZ907 61912



Analytical Resources, Inc.

Data file : /chem2/fid7.i/20130117ETHANOL.B/0117A016.D
Lab Smp Id: ETHANOL#1
Inj Date : 17-JAN-2013 23:39
Operator : MS Inst ID: fid7.i
Smp Info : ETHANOL#1
Misc Info :
Comment :
Method : /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Meth Date : 24-Jan-2013 10:03 jrains Quant Type: ISTD
Cal Date : 17-JAN-2013 20:52 Cal File: 0117A010.D
Als bottle: 4
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (mg/L)
1	Ethyl Acetate	Compound Not Detected					
2	Methanol	Compound Not Detected					
3	Isopropanol	Compound Not Detected.					
4	Ethanol	2.310	2.256	(0.000)	387816	27.0426	27.042(M)
5	n-Butyl Ether	Compound Not Detected					
6	Isobutyl Acetate	Compound Not Detected.					
7	n-Propanol	Compound Not Detected.					
8	n-Butyl Acetate	Compound Not Detected.					
9	1-Methoxy-2-propanol	Compound Not Detected.					
10	n-Butanol	Compound Not Detected.					
11	Prop-Gly-Me-Ether-Acetate	Compound Not Detected.					
12	2-Methoxyethanol Acetate	Compound Not Detected.					
13	2-Ethoxyethyl Acetate	Compound Not Detected.					
14	Propargyl Alcohol	Compound Not Detected.					
15	2-Butoxyethanol	Compound Not Detected					
16	Ethylene Glycol	Compound Not Detected.					
17	Diethylene Glycol MonoButyl Et	Compound Not Detected					
* 18	m-cresol	12.820	12.820	(1.000)	981717	25.0000	
19	o-Cresol	12.340	12.339	(0 963)	763771	24.5790	24.578
* 20	Butylene Glycol	Compound Not Detected.					

01/24/13

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: fid7.i
Lab File ID: 0117A016.D
Lab Smp Id: ETHANOL#1
Analysis Type: OTHER
Quant Type: ISTD
Operator: MS
Method File: /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Misc Info:

Calibration Date: 17-JAN-2013
Calibration Time: 20:52

Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 2.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
18 m-cresol	960708	480354	1921416	981717	2.19
20 Butylene Glycol	0	0	0	0	+++++++

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
18 m-cresol	12.81	12.31	13.31	12.82	0.09
20 Butylene Glycol	0.00	-0.50	0.50	0.00	+++++++

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 20100113glycolwater
Sample Matrix: LIQUID Fraction: OTHER
Lab Smp Id: ETHANOL#1
Level: LOW Operator: MS
Data Type: GC DATA SampleType: SAMPLE
SpikeList File: Quant Type: ISTD
Sublist File: all.sub
Method File: /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Misc Info:

SURROGATE COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
$ 19 o-Cresol	25.000	24.578	98.32	0-150

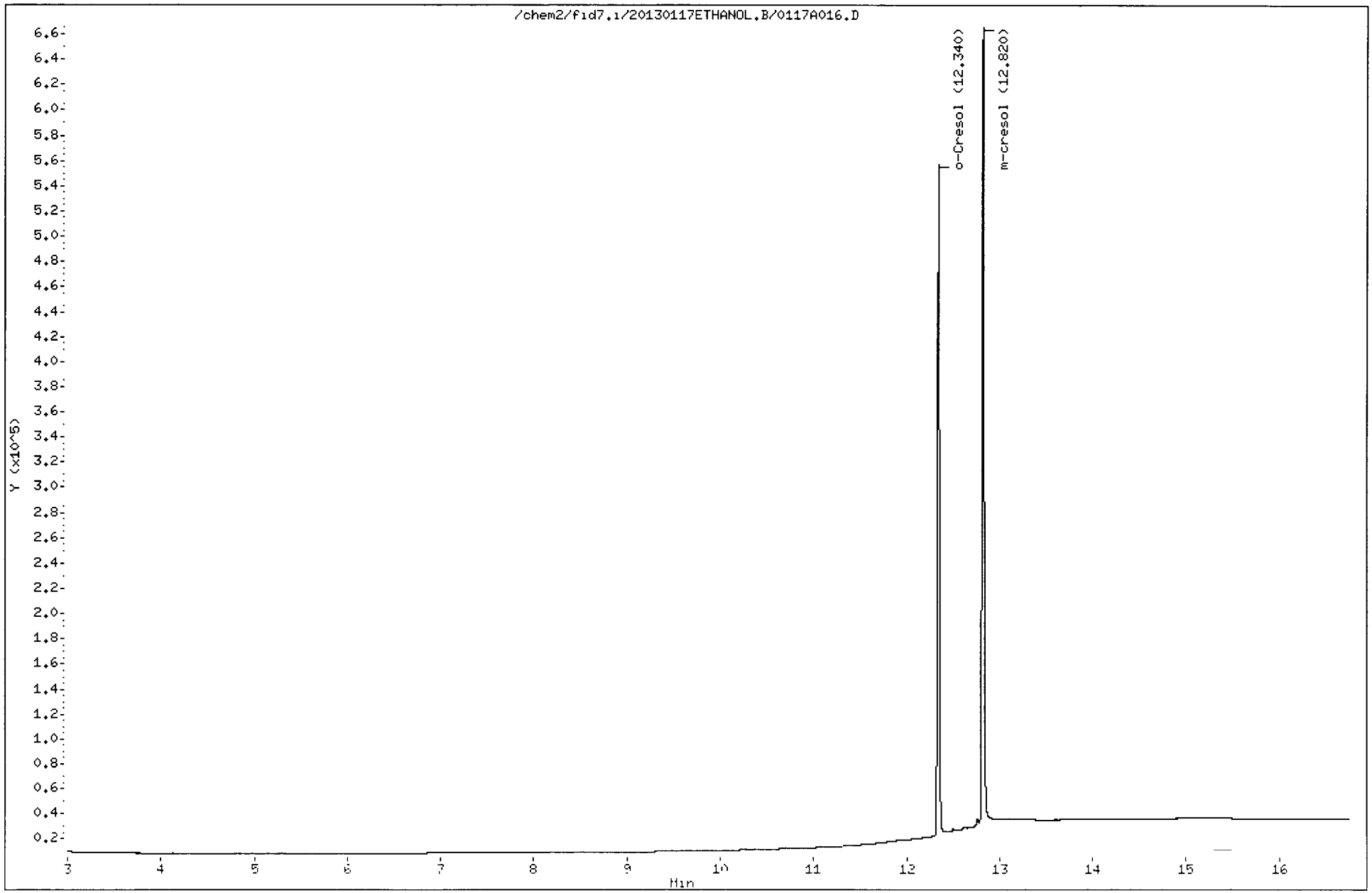
Data File: /chem2/fid7.i/20130117ETHANOL.B/0117A016.D
Date : 17-JAN-2013 23:39
Client ID:
Sample Info: ETHANOL#1

Instrument: fid7.i

Operator: MS

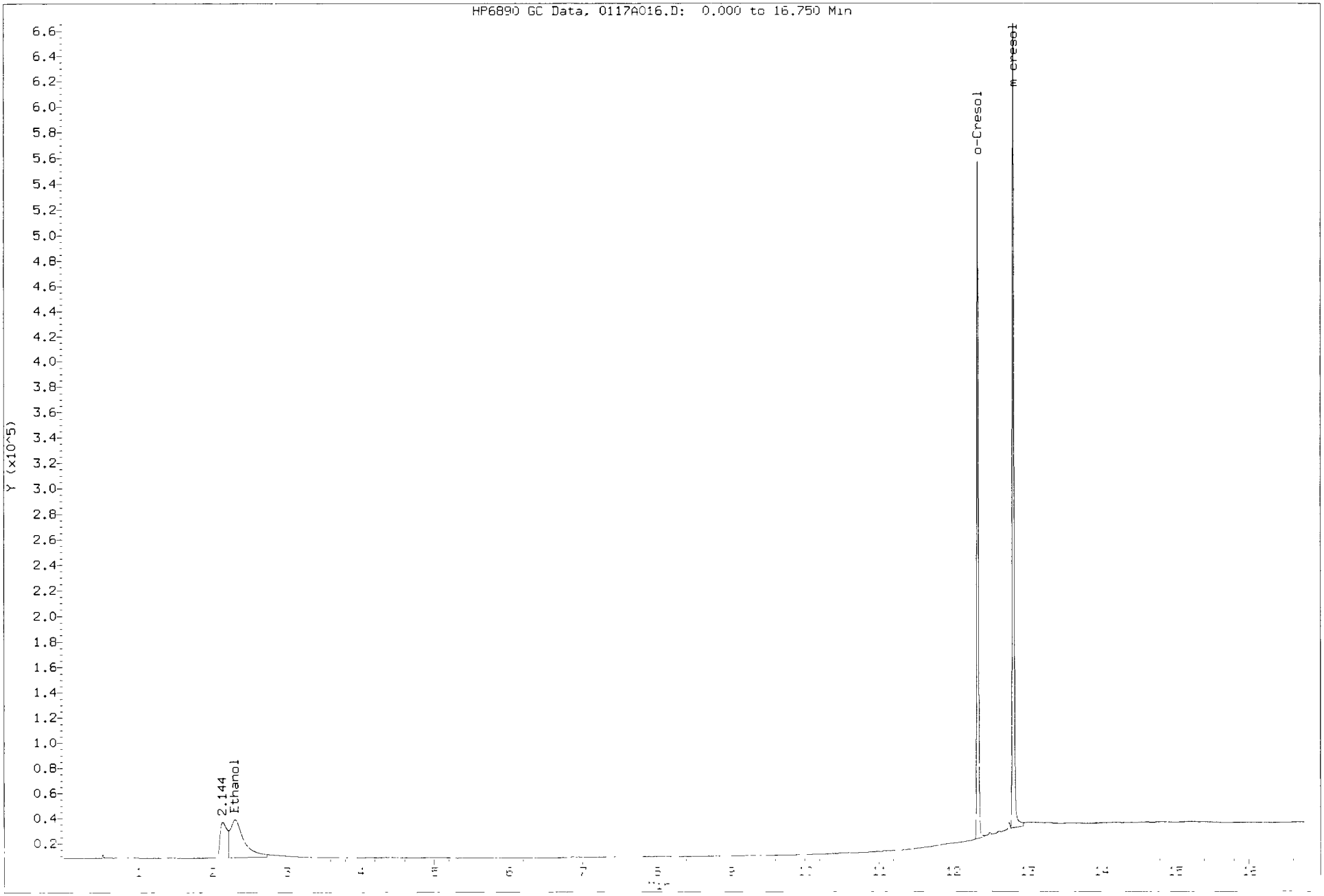
Column phase: ZB5waxplus

Column diameter: 0.53



USGS 1517

Data File: /chem2/fid7.i/20130117ETHANOL.B/0117A016.D
Injection Date: 17-JAN-2013 23:39
Instrument: fid7.i
Client Sample ID:



Semivolatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: VZ97

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS SVOA Analyst Notes / Corrective Action Log

ARI Project ID: VZ97 Client ID: Anchor QEA

ARI SOP: **801S**(SIM-PNA) **802S**(Butyl Tins) **804S**(SVOA-8270D) **805S**(op-Pest)

Parameter(s): 8270D

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date: 1/7/13 Analysis Start Date: 1/23/13

DFTPP Tune Meets Criteria?	YES / NO	Internal Standard Meets Criteria?	YES / NO
DDT Breakdown <20%?	YES / NO / NA	Method Blank In Control?	YES / NO
Peak Tailing Factor ≤2?	YES / NO / NA	LCS / LCSD Recovery In Control?	YES / NO
ICal acceptable?	YES / NO	CCal acceptable?	YES / NO
Q flag applied?	YES / NO	Q flag applied?	YES / NO
Surrogate Recovery in Control?	YES / NO	Special Analysis Criteria Met?	YES / NO / NA
Manual Integrations for ICal?	YES / NO	Manual Integrations for Samples?	Yes / NO

Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):

Sample 5 MB/LCS/LCSD.

Additional Details on Reverse: Yes / No

Analyst: _____ **Date:** 1/23/13

Reviewer: _____ **Date:** 1/23/13

Analytical Resources Inc.: Organics Instrument Log

NT-6 Serial No.:GC=US00036167, MS=US81221575

Date: 1/23/13 Analysis: 8270D Analyst: [illegible]

GC Program: [illegible] Column No: 234f2 Column Type: ZB-5MSi

Instrument Tune (.U or .CT.): 121019 EM Voltage: 1871

Calibration File: 0123130 Curve Date: 01/07/13 Injection Vol.: 1µL

IS/SS	Ical/Ccal	LCS/ICV
1998-2	2013-2, 2014-1	
	2015-1, 2004-1	
	2018-2	

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem2/nt6.i/20130123.b

	Time	Filename	LabID	ClientId	DF														
1	1049	01231301.D	CC0123	CC0123	1	7.75	538675	9.78	1855079	12.62	989796	14.98	1466273	19.25	1243387	21.38	1068075	20.43	1617586
2	1:23	01231302.D	VZ34A	Digestor #3	3	7.74	543533	9.78	1892245	12.62	1002137	14.98	1467186	19.25	1573630	20.43	2130933	21.39	2077453
3	1157	01231303.D	VZ97MBW1	VZ97MBW1	1	7.74	719895	9.78	2545614	12.63	1473289	14.98	2360135	19.25	1958391	20.43	2536534	21.39	1506930
4	1232	01231304.D	VZ97LCSW1	VZ97LCSW1	1	7.75	693193	9.79	2364232	12.63	1178046	14.98	1744334	19.25	1463395	20.43	1850683	21.38	1357393
5	1306	01231305.D	VZ97LCSDW1	VZ97LCSDW1	1	7.74	594206	9.78	2001670	12.63	1006292	14.98	1499702	19.25	1322278	20.43	1704861	21.39	1260397
6	1341	01231306.D	VZ97S	CSIA20130114	1	7.75	634348	9.78	2190413	12.63	1209618	14.98	1798315	19.25	1595918	20.43	2007771	21.39	1608177

01/23/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/nt6.i/20130123.b

ARI Job No.: CC01 Method: SW846010713.m Instrument: nt6.i Date: 23-JAN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1049	01231301.D	CC0123	CC0123	1	NO MANUAL INTEGRATION
1157	01231303.D	VZ97MBW1	VZ97MBW1	1	NO MANUAL INTEGRATION
1232	01231304.D	VZ97LCSW1	VZ97LCSW1	1	NO MANUAL INTEGRATION
1306	01231305.D	VZ97LCSDW1	VZ97LCSDW1	1	NO MANUAL INTEGRATION
1341	01231306.D	VZ97S	CSIA201301	1	NO MANUAL INTEGRATION

01/23/13

25918 - 1624

Q-FLAG SUMMARY FOR DATABATCH - /chem2/nt6.i/20130123.b

Instrument: nt6.i Date: 23-JAN-2013 Method: SW846010713.m

INITIAL CAL: 07-JAN-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 23-JAN-2013

Compound	%D
Benzoic acid	32.3
Aniline	-24.9

Sample "ND"
NLC

01/23/13

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt6.i Injection Date: 23-JAN-2013 10:49
Lab File ID: 01231301.D Init. Cal. Date(s): 07-JAN-2013 07-JAN-2013
Analysis Type: Init. Cal. Times: 13:30 17:29
Lab Sample ID: CC0123 Quant Type: ISTD
Method: /chem2/nt6.i/20130123.b/SW846010713.m

9/13/12

COMPOUND	RRF / AMOUNT	RF25	CCAL RRF25	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
$ 1 2-Fluorophenol	1.54727	1.42597	1.42597	0.010	-7.83937	20.00000	Averaged	
$ 2 Phenol-d5	1.95358	1.74962	1.74962	0.010	-10.44013	20.00000	Averaged	
3 Phenol	1.89686	1.57461	1.57461	0.010	-16.98860	20.00000	Averaged	
$ 5 2-Chlorophenol-d4	1.51095	1.45103	1.45103	0.010	-3.96620	20.00000	Averaged	
4 Bis(2-Chloroethyl)ether	1.40069	1.39904	1.39904	0.010	-0.11744	20.00000	Averaged	
6 2-Chlorophenol	1.38083	1.32020	1.32020	0.010	-4.39071	20.00000	Averaged	
7 1,3-Dichlorobenzene	1.59312	1.62161	1.62161	0.010	1.78829	20.00000	Averaged	
9 1,4-Dichlorobenzene	1.57327	1.60410	1.60410	0.010	1.95936	20.00000	Averaged	
$ 10 1,2-Dichlorobenzene-d4	1.05828	1.02216	1.02216	0.010	-3.41224	20.00000	Averaged	
12 1,2-Dichlorobenzene	1.47793	1.52401	1.52401	0.010	3.11817	20.00000	Averaged	
11 Benzyl alcohol	0.93606	0.90097	0.90097	0.010	-3.74849	20.00000	Averaged	
14 2,2'-oxybis(1-Chloropropane	2.39264	2.26277	2.26277	0.010	-5.42796	20.00000	Averaged	
13 2-Methylphenol	1.31596	1.18583	1.18583	0.010	-9.88806	20.00000	Averaged	
17 Hexachloroethane	0.67148	0.67008	0.67008	0.010	-0.20969	20.00000	Averaged	
16 N-Nitroso-di-n-propylamine	1.10195	1.02897	1.02897	0.005	-6.62303	20.00000	Averaged	
15 4-Methylphenol	1.36416	1.21885	1.21885	0.010	-10.65217	20.00000	Averaged	
$ 18 Nitrobenzene-d5	0.49243	0.48247	0.48247	0.010	-2.02132	20.00000	Averaged	
19 Nitrobenzene	0.45437	0.47683	0.47683	0.010	4.94347	20.00000	Averaged	
20 Isophorone	0.63888	0.66545	0.66545	0.010	4.15878	20.00000	Averaged	
21 2-Nitrophenol	0.18293	0.19538	0.19538	0.010	6.80735	20.00000	Averaged	
22 2,4-Dimethylphenol	0.36582	0.35812	0.35812	0.010	-2.10509	20.00000	Averaged	
23 Bis(2-Chloroethoxy)methane	0.42585	0.46615	0.46615	0.010	9.46446	20.00000	Averaged	
24 Benzoic acid	0.22606	0.29908	0.29908	0.010	32.30337	20.00000	Averaged	<-
25 2,4-Dichlorophenol	0.26495	0.28981	0.28981	0.010	9.38266	20.00000	Averaged	
26 1,2,4-Trichlorobenzene	0.31589	0.35238	0.35238	0.010	11.55143	20.00000	Averaged	
28 Naphthalene	0.94393	1.00811	1.00811	0.010	6.79956	20.00000	Averaged	
29 4-Chloroaniline	0.37491	0.36768	0.36768	0.010	-1.92752	20.00000	Averaged	
30 Hexachlorobutadiene	0.19577	0.21998	0.21998	0.010	12.36480	20.00000	Averaged	
31 4-Chloro-3-methylphenol	0.28015	0.28776	0.28776	0.010	2.71641	20.00000	Averaged	
32 2-Methylnaphthalene	0.50263	0.53415	0.53415	0.010	6.27156	20.00000	Averaged	
33 Hexachlorocyclopentadiene	0.38937	0.45290	0.45290	0.010	16.31714	20.00000	Averaged	
34 2,4,6-Trichlorophenol	0.34553	0.35779	0.35779	0.010	3.54793	20.00000	Averaged	
35 2,4,5-Trichlorophenol	0.37311	0.37847	0.37847	0.010	1.43565	20.00000	Averaged	
$ 36 2-Fluorobiphenyl	1.40524	1.43643	1.43643	0.010	2.21954	20.00000	Averaged	
37 2-Chloronaphthalene	1.09651	1.17224	1.17224	0.010	6.90667	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt6.i Injection Date: 23-JAN-2013 10:49
Lab File ID: 01231301.D Init. Cal. Date(s): 07-JAN-2013 07-JAN-2013
Analysis Type: Init. Cal. Times: 13:30 17:29
Lab Sample ID: CC0123 Quant Type: ISTD
Method: /chem2/nt6.i/20130123.b/SW846010713.m

COMPOUND	RRF / AMOUNT	RF25	CCAL RRF25	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
38 2-Nitroaniline	0.37914	0.39607	0.39607	0.010	4.46435	20.00000	Averaged
39 Dimethylphthalate	1.16719	1.22191	1.22191	0.010	4.68768	20.00000	Averaged
40 Acenaphthylene	1.67259	1.80679	1.80679	0.010	8.02367	20.00000	Averaged
41 2,6-Dinitrotoluene	0.26900	0.29434	0.29434	0.010	9.42020	20.00000	Averaged
43 3-Nitroaniline	0.27010	0.27331	0.27331	0.010	1.18941	20.00000	Averaged
44 Acenaphthene	1.07228	1.11951	1.11951	0.010	4.40461	20.00000	Averaged
45 2,4-Dinitrophenol	49.13951	50.00000	0.19988	0.010	-1.72097	20.00000	Quadratic
46 Dibenzofuran	1.43889	1.48897	1.48897	0.010	3.48029	20.00000	Averaged
47 4-Nitrophenol	0.18928	0.19637	0.19637	0.010	3.74733	20.00000	Averaged
48 2,4-Dinitrotoluene	0.34112	0.37287	0.37287	0.010	9.30760	20.00000	Averaged
50 Diethylphthalate	1.22666	1.25366	1.25366	0.010	2.20113	20.00000	Averaged
49 Fluorene	1.11962	1.16857	1.16857	0.010	4.37178	20.00000	Averaged
51 4-Chlorophenyl-phenylether	0.60153	0.63512	0.63512	0.010	5.58287	20.00000	Averaged
52 4-Nitroaniline	0.22091	0.24413	0.24413	0.010	10.51293	20.00000	Averaged
53 4,6-Dinitro-2-methylphenol	0.15518	0.15682	0.15682	0.010	1.06039	20.00000	Averaged
54 N-Nitrosodiphenylamine	0.60383	0.62399	0.62399	0.010	3.33840	20.00000	Averaged
$ 55 2,4,6-Tribromophenol	0.16513	0.16967	0.16967	0.010	2.75307	20.00000	Averaged
56 4-Bromophenyl-phenylether	0.23037	0.23851	0.23851	0.010	3.53431	20.00000	Averaged
57 Hexachlorobenzene	0.22935	0.23627	0.23627	0.010	3.01841	20.00000	Averaged
58 Pentachlorophenol	0.12966	0.12582	0.12582	0.010	-2.95758	20.00000	Averaged
60 Phenanthrene	1.02055	1.04462	1.04462	0.010	2.35795	20.00000	Averaged
61 Anthracene	1.04004	1.05296	1.05296	0.010	1.24228	20.00000	Averaged
62 Carbazole	0.92478	0.95434	0.95434	0.010	3.19707	20.00000	Averaged
63 Di-n-butylphthalate	1.15911	1.25407	1.25407	0.010	8.19252	20.00000	Averaged
64 Fluoranthene	0.98703	1.05327	1.05327	0.010	6.71122	20.00000	Averaged
65 Pyrene	1.17298	1.26650	1.26650	0.010	7.97281	20.00000	Averaged
$ 66 Terphenyl-d14	0.79935	0.81936	0.81936	0.010	2.50311	20.00000	Averaged
67 Butylbenzylphthalate	0.57910	0.60622	0.60622	0.010	4.68242	20.00000	Averaged
68 Benzo(a)anthracene	1.00079	1.05045	1.05045	0.010	4.96202	20.00000	Averaged
70 3,3'-Dichlorobenzidine	0.35144	0.35771	0.35771	0.010	1.78605	20.00000	Averaged
71 Chrysene	0.98045	1.00165	1.00165	0.010	2.16207	20.00000	Averaged
72 bis(2-Ethylhexyl)phthalate	0.58294	0.62569	0.62569	0.010	7.33313	20.00000	Averaged
73 Di-n-octylphthalate	1.03709	1.06150	1.06150	0.010	2.35458	20.00000	Averaged
74 Benzo(b)fluoranthene	1.06915	1.18279	1.18279	0.010	10.62893	20.00000	Averaged
75 Benzo(k)fluoranthene	1.07883	1.13664	1.13664	0.010	5.35880	20.00000	Averaged

VZ97 : 01055

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt6.i Injection Date: 23-JAN-2013 10:49
Lab File ID: 01231301.D Init. Cal. Date(s): 07-JAN-2013 07-JAN-2013
Analysis Type: Init. Cal. Times: 13:30 17:29
Lab Sample ID: CC0123 Quant Type: ISTD
Method: /chem2/nt6.i/20130123.b/SW846010713.m

COMPOUND	RRF / AMOUNT	RF25	CCAL RRF25	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
187 Total Benzofluoranthenes	1.01676	1.09843	1.09843	0.010	8.03295	20.00000	Averaged	
76 Benzo(a)pyrene	0.95081	0.99767	0.99767	0.010	4.92848	20.00000	Averaged	
78 Indeno(1,2,3-cd)pyrene	1.30673	1.23216	1.23216	0.010	-5.70633	20.00000	Averaged	
79 Dibenzo(a,h)anthracene	1.06887	1.00566	1.00566	0.010	-5.91421	20.00000	Averaged	
80 Benzo(g,h,i)perylene	1.14707	1.06766	1.06766	0.010	-6.92278	20.00000	Averaged	
90 N-Nitrosodimethylamine	1.03879	0.93651	0.93651	0.010	-9.84598	20.00000	Averaged	
103 Pyridine	1.75181	1.57235	1.57235	0.010	-10.24412	20.00000	Averaged	
91 Aniline	2.02282	1.51953	1.51953	0.010	-24.88044	20.00000	Averaged	<-
105 1-methylnaphthalene	0.50110	0.52741	0.52741	0.010	5.25118	20.00000	Averaged	
111 Azobenzene (1,2-DP-Hydrazin	1.45470	1.46294	1.46294	0.010	0.56676	20.00000	Averaged	
144 alpha-Terpineol	0.29633	0.30317	0.30317	0.010	2.31041	20.00000	Averaged	
99 Perylene	0.86356	0.88333	0.88333	0.010	2.28996	20.00000	Averaged	
133 Butylatedhydroxytoluene	0.96008	1.04201	1.04201	0.010	8.53335	20.00000	Averaged	
115 Tributyl Phosphate	0.94259	1.01491	1.01491	0.010	7.67308	20.00000	Averaged	
116 Dibutyl Phenyl Phosphate	0.59042	0.62287	0.62287	0.010	5.49637	20.00000	Averaged	
117 Butyl Diphenyl Phosphate	0.22465	0.25118	0.25118	0.010	11.80635	20.00000	Averaged	
118 Triphenyl Phosphate	0.16903	0.18927	0.18927	0.010	11.97393	20.00000	Averaged	
123 Acetophenone	1.99031	1.85240	1.85240	0.010	-6.92905	20.00000	Averaged	
168 Pentachlorobenzene	0.42582	0.45829	0.45829	0.010	7.62656	20.00000	Averaged	
113 Diphenyl Oxide	0.87545	0.96260	0.96260	0.010	9.95541	20.00000	Averaged	
112 Biphenyl	1.27374	1.37830	1.37830	0.010	8.20839	20.00000	Averaged	

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130123.b/01231301.D
Lab Smp Id: CC0123 Client Smp ID: CC0123
Inj Date : 23-JAN-2013 10:49
Operator : JZ Inst ID: nt6.i
Smp Info : CC0123
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130123.b/SW846010713.m
Meth Date : 23-Jan-2013 12:45 jianqing Quant Type: ISTD
Cal Date : 07-JAN-2013 14:04 Cal File: 01071302.D
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALA.sub
Target Version: 3.50

01/23/13

AMOUNTS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$ 1	2-Fluorophenol	112	5.785	5.785	(0.747)	960171	25.0000	23.04
$ 2	Phenol-d5	99	7.356	7.356	(0.950)	1178097	25.0000	22.39
3	Phenol	94	7.372	7.372	(0.952)	1060252	25.0000	20.75
$ 5	2-Chlorophenol-d4	132	7.452	7.452	(0.962)	977039	25.0000	24.01
4	Bis(2-Chloroethyl)ether	93	7.431	7.431	(0.959)	942036	25.0000	24.97
6	2-Chlorophenol	128	7.473	7.473	(0.965)	888947	25.0000	23.90
7	1,3-Dichlorobenzene	146	7.682	7.682	(0.992)	1091903	25.0000	25.45
* 8	1,4-Dichlorobenzene-d4	152	7.746	7.746	(1.000)	538675	20.0000	
9	1,4-Dichlorobenzene	146	7.767	7.767	(1.003)	1080110	25.0000	25.49
$ 10	1,2-Dichlorobenzene-d4	152	8.040	8.040	(1.038)	688268	25.0000	24.15
12	1,2-Dichlorobenzene	146	8.061	8.061	(1.041)	1026185	25.0000	25.78
11	Benzyl alcohol	108	8.045	8.045	(1.039)	606665	25.0000	24.06
14	2,2'-oxybis(1-Chloropropane)	45	8.301	8.301	(1.072)	1523621	25.0000	23.64
13	2-Methylphenol	108	8.296	8.296	(1.071)	798474	25.0000	22.53
17	Hexachloroethane	117	8.547	8.547	(1.103)	451192	25.0000	24.95
16	N-Nitroso-di-n-propylamine	70	8.515	8.515	(1.099)	692847	25.0000	23.34
15	4-Methylphenol	108	8.531	8.531	(1.101)	820702	25.0000	22.34
$ 18	Nitrobenzene-d5	82	8.681	8.681	(0.887)	1118779	25.0000	24.49
19	Nitrobenzene	77	8.707	8.707	(0.890)	1105701	25.0000	26.24
20	Isophorone	82	9.087	9.087	(0.929)	1543078	25.0000	26.04
21	2-Nitrophenol	139	9.220	9.220	(0.943)	453063	25.0000	26.70
22	2,4-Dimethylphenol	107	9.359	9.359	(0.957)	830424	25.0000	24.47
23	Bis(2-Chloroethoxy)methane	93	9.493	9.493	(0.970)	1080942	25.0000	27.37
24	Benzoic acid	105	9.600	9.600	(0.981)	1387060	50.0000	66.15
25	2,4-Dichlorophenol	162	9.610	9.610	(0.983)	672036	25.0000	27.35
26	1,2,4-Trichlorobenzene	180	9.728	9.728	(0.995)	817116	25.0000	27.89
* 27	Naphthalene-d8	136	9.781	9.781	(1.000)	1855079	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	9.813	9.813	(1.003)	2337651	25.0000	26.70
	29 4-Chloroaniline	127	9.968	9.968	(1.019)	852604	25.0000	24.52
	30 Hexachlorobutadiene	225	10.139	10.139	(1.037)	510095	25.0000	28.09
	31 4-Chloro-3-methylphenol	107	10.796	10.796	(1.104)	667272	25.0000	25.68
	32 2-Methylnaphthalene	141	10.930	10.930	(1.117)	1238619	25.0000	26.57
	33 Hexachlorocyclopentadiene	237	11.314	11.314	(0.896)	560348	25.0000	29.08
	34 2,4,6-Trichlorophenol	196	11.453	11.453	(0.907)	442670	25.0000	25.89
	35 2,4,5-Trichlorophenol	196	11.512	11.512	(0.912)	468259	25.0000	25.36
$	36 2-Fluorobiphenyl	172	11.582	11.582	(0.917)	1777217	25.0000	25.55
	37 2-Chloronaphthalene	162	11.704	11.704	(0.927)	1450351	25.0000	26.73
	38 2-Nitroaniline	65	11.945	11.945	(0.946)	490033	25.0000	26.12
	39 Dimethylphthalate	163	12.324	12.324	(0.976)	1511798	25.0000	26.17
	40 Acenaphthylene	152	12.372	12.372	(0.980)	2235442	25.0000	27.01
	41 2,6-Dinitrotoluene	165	12.410	12.410	(0.983)	364176	25.0000	27.36
*	42 Acenaphthene-d10	164	12.623	12.623	(1.000)	989796	20.0000	
	43 3-Nitroaniline	138	12.623	12.623	(1.000)	338152	25.0000	25.30
	44 Acenaphthene	153	12.677	12.677	(1.004)	1385104	25.0000	26.10
	45 2,4-Dinitrophenol	184	12.784	12.784	(1.013)	494613	50.0000	49.14
	46 Dibenzofuran	168	12.938	12.938	(1.025)	1842223	25.0000	25.87
	47 4-Nitrophenol	109	12.954	12.954	(1.026)	242956	25.0000	25.94
	48 2,4-Dinitrotoluene	165	13.029	13.029	(1.032)	461329	25.0000	27.33
	50 Diethylphthalate	149	13.473	13.473	(1.067)	1551082	25.0000	25.55
	49 Fluorene	166	13.489	13.489	(1.069)	1445806	25.0000	26.09
	51 4-Chlorophenyl-phenylether	204	13.521	13.521	(1.071)	785793	25.0000	26.40
	52 4-Nitroaniline	138	13.606	13.606	(1.078)	302051	25.0000	27.63
	53 4,6-Dinitro-2-methylphenol	198	13.676	13.676	(0.913)	574863	50.0000	50.53
	54 N-Nitrosodiphenylamine	169	13.729	13.729	(0.917)	1143678	25.0000	25.83
$	55 2,4,6-Tribromophenol	330	13.911	13.911	(1.102)	209925	25.0000	25.69
	56 4-Bromophenyl-phenylether	248	14.295	14.295	(0.954)	437156	25.0000	25.88
	57 Hexachlorobenzene	284	14.504	14.504	(0.968)	433050	25.0000	25.75
	58 Pentachlorophenol	266	14.808	14.808	(0.989)	230609	25.0000	24.26
*	59 Phenanthrene-d10	188	14.979	14.979	(1.000)	1466273	20.0000	
	60 Phenanthrene	178	15.017	15.017	(1.002)	1914616	25.0000	25.59
	61 Anthracene	178	15.086	15.086	(1.007)	1929901	25.0000	25.31
	62 Carbazole	167	15.380	15.380	(1.027)	1749157	25.0000	25.80
	63 Di-n-butylphthalate	149	16.112	16.112	(1.076)	2298516	25.0000	27.05
	64 Fluoranthene	202	16.934	16.934	(1.131)	1930475	25.0000	26.68
	65 Pyrene	202	17.282	17.282	(0.898)	1968435	25.0000	26.99
$	66 Terphenyl-d14	244	17.613	17.613	(0.915)	1273478	25.0000	25.63
	67 Butylbenzylphthalate	149	18.500	18.500	(0.961)	942204	25.0000	26.17
	68 Benzo(a)anthracene	228	19.226	19.226	(0.999)	1632641	25.0000	26.24
*	69 Chrysene-d12	240	19.247	19.247	(1.000)	1243387	20.0000	
	70 3,3'-Dichlorobenzidine	252	19.253	19.253	(1.000)	555972	25.0000	25.45
	71 Chrysene	228	19.290	19.290	(1.002)	1556801	25.0000	25.54
	72 bis(2-Ethylhexyl)phthalate	149	19.504	19.504	(0.955)	1265132	25.0000	26.83
*	134 Di-n-octylphthalate-d4	153	20.428	20.428	(1.000)	1617586	20.0000	
	73 Di-n-octylphthalate	149	20.439	20.439	(1.001)	2146344	25.0000	25.59

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	20.861	20.861	(0.976)	1579136	25.0000	27.66
75	Benzo(k)fluoranthene	252	20.898	20.898	(0.977)	1517525	25.0000	26.34
187	Total Benzofluoranthenes	252	20.898	20.898	(0.977)	2933021	50.0000	54.02
76	Benzo(a)pyrene	252	21.304	21.304	(0.996)	1331989	25.0000	26.23
* 77	Perylene-d12	264	21.384	21.384	(1.000)	1068075	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	22.773	22.773	(1.065)	1645055	25.0000	23.57
79	Dibenzo(a,h)anthracene	278	22.800	22.800	(1.066)	1342644	25.0000	23.52
80	Benzo(g,h,i)perylene	276	23.137	23.137	(1.082)	1425433	25.0000	23.27
90	N-Nitrosodimethylamine	74	2.954	2.954	(0.381)	630594	25.0000	22.54
103	Pyridine	79	2.927	2.927	(0.378)	1058731	25.0000	22.44
91	Aniline	93	7.302	7.302	(0.943)	1023167	25.0000	18.78
105	1-methylnaphthalene	141	11.101	11.101	(1.135)	1222985	25.0000	26.31
111	Azobenzene (1,2-DP-Hydrazine)	77	13.772	13.772	(1.091)	1810018	25.0000	25.14
144	alpha-Terpineol	59	9.856	9.856	(1.008)	703016	25.0000	25.58
99	Perylene	252	21.416	21.416	(1.001)	1179330	25.0000	25.57
133	Butylatedhydroxytoluene	205	12.821	12.821	(1.016)	1289220	25.0000	27.13
115	Tributyl Phosphate	99	13.847	13.847	(0.924)	1860177	25.0000	26.92
116	Dibutyl Phenyl Phosphate	175	15.567	15.567	(1.039)	1141615	25.0000	26.37
117	Butyl Diphenyl Phosphate	94	17.228	17.228	(0.895)	390386	25.0000	27.95
118	Triphenyl Phosphate	326	18.809	18.809	(0.977)	294174	25.0000	27.99
123	Acetophenone	105	8.446	8.446	(1.090)	1247301	25.0000	23.27
168	Pentachlorobenzene	250	12.981	12.981	(1.028)	567020	25.0000	26.91
113	Diphenyl Oxide	170	11.902	11.902	(0.943)	1190972	25.0000	27.49
112	Biphenyl	154	11.710	11.710	(0.928)	1705293	25.0000	27.05

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 01231301.D
Lab Smp Id: CC0123
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130123.b/SW846010713.m
Misc Info: 13-

Calibration Date: 23-JAN-2013
Calibration Time: 09:34
Client Smp ID: CC0123
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	532349	266174	1064698	538675	1.19
27 Naphthalene-d8	2007575	1003788	4015150	1855079	-7.60
42 Acenaphthene-d10	1020441	510220	2040882	989796	-3.00
59 Phenanthrene-d10	1546074	773037	3092148	1466273	-5.16
69 Chrysene-d12	1407005	703502	2814010	1243387	-11.63
134 Di-n-octylphthala	1928310	964155	3856620	1617586	-16.11
77 Perylene-d12	1383265	691632	2766530	1068075	-22.79

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.75	7.25	8.25	7.75	0.00
27 Naphthalene-d8	9.78	9.28	10.28	9.78	0.00
42 Acenaphthene-d10	12.62	12.12	13.12	12.62	0.00
59 Phenanthrene-d10	14.98	14.48	15.48	14.98	0.00
69 Chrysene-d12	19.25	18.75	19.75	19.25	0.00
134 Di-n-octylphthala	20.43	19.93	20.93	20.43	0.00
77 Perylene-d12	21.38	20.88	21.88	21.38	0.00

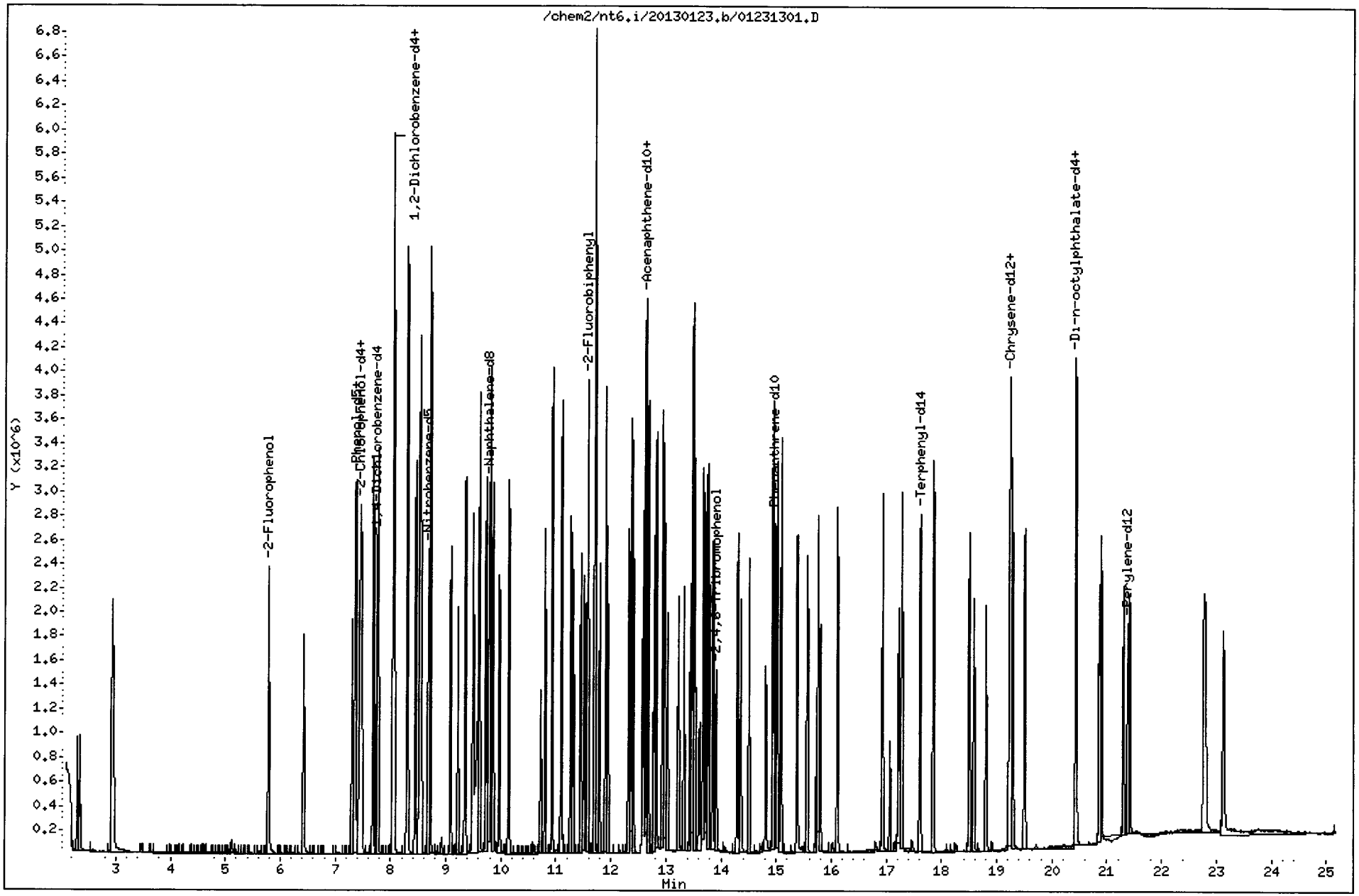
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130123.b/01231301.D
Date : 23-JAN-2013 10:49
Client ID: CC0123
Sample Info: CC0123

Instrument: nt6.i

Operator: JZ
Column diameter: 0.32

Column phase: ZB-5msi



UZ97.01951

CO-ELUTION SUMMARY FOR FILE - 01231301.D

Lab ID: CC0123, Method: SW846010713.m, Instrument: nt6.i, Date: 23-JAN-2013

RT	CO-ELUTION COMPOUNDS
12.623	Acenaphthene-d10 and 3-Nitroaniline

Data File: /chem2/nt6.i/20130123.b/tune.b/01231301.D

Date : 23-JAN-2013 10:49

Client ID: DFTPP0123

Instrument: nt6.i

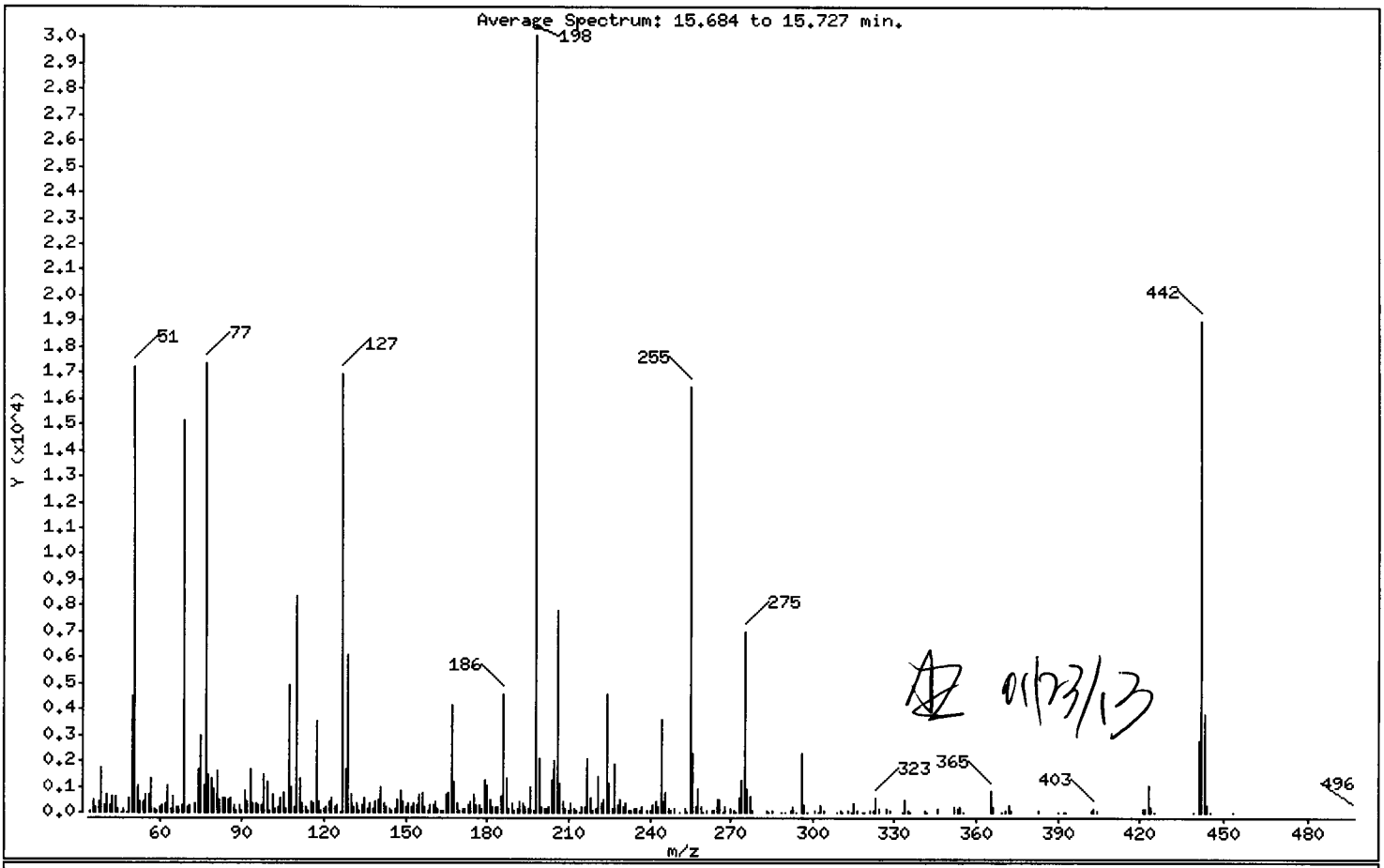
Sample Info: DFTPP0123

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	57.29
68	Less than 2.00% of mass 69	0.98 (1.96)
69	Mass 69 relative abundance	50.25
70	Less than 2.00% of mass 69	0.78 (1.56)
127	10.00 - 80.00% of mass 198	56.24
197	Less than 2.00% of mass 198	0.23
199	5.00 - 9.00% of mass 198	6.97
275	10.00 - 60.00% of mass 198	23.15
365	Greater than 1.00% of mass 198	2.67
441	0.01 - 24.00% of mass 442	9.10 (14.40)
442	50.00 - 200.00% of mass 198	63.17
443	15.00 - 24.00% of mass 442	12.63 (19.99)

Data File: /chem2/nt6.i/20130123.b/tune.b/01231301.D

Date : 23-JAN-2013 10:49

Client ID: DFTPP0123 Instrument: nt6.i

Sample Info: DFTPP0123

Operator: JZ

Column phase: ZB-5msi Column diameter: 0.32

Data File: 01231301.D
Spectrum: Average Spectrum: 15.684 to 15.727 min.
Location of Maximum: 198.00
Number of points: 306

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	70	113.00	212	190.00	94	272.00	22
36.00	460	114.00	81	191.00	170	273.00	569
37.00	208	115.00	418	192.00	438	274.00	1271
38.00	418	116.00	361	193.00	360	275.00	6968
39.00	1730	117.00	3562	194.00	216	276.00	902
40.00	276	118.00	413	195.00	118	277.00	601
41.00	667	119.00	95	196.00	945	278.00	60
42.00	279	120.00	138	197.00	70	283.00	66
43.00	637	121.00	239	198.00	30096	284.00	24
44.00	619	122.00	430	199.00	2098	285.00	71
45.00	168	123.00	535	200.00	215	289.00	19
46.00	21	124.00	208	201.00	153	290.00	23
47.00	145	125.00	299	202.00	138	292.00	35
48.00	21	126.00	20	203.00	236	293.00	201
49.00	526	127.00	16928	204.00	1214	294.00	27
50.00	4472	128.00	1679	205.00	2025	296.00	2306
51.00	17240	129.00	6109	206.00	7798	297.00	301
52.00	1048	130.00	710	207.00	1092	298.00	19
53.00	447	131.00	216	208.00	393	301.00	68
54.00	393	132.00	319	209.00	167	302.00	29
55.00	661	133.00	80	210.00	98	303.00	295
56.00	712	134.00	252	211.00	353	304.00	39
57.00	1334	135.00	578	212.00	120	309.00	21
58.00	111	136.00	160	213.00	79	310.00	42
59.00	84	137.00	326	214.00	18	311.00	17
60.00	189	138.00	137	215.00	190	313.00	42
61.00	311	139.00	385	216.00	196	314.00	31
62.00	358	140.00	509	217.00	2096	315.00	354
63.00	1032	141.00	990	218.00	541	316.00	51
64.00	115	142.00	338	219.00	81	318.00	18
65.00	606	143.00	190	220.00	162	319.00	20
66.00	204	144.00	150	221.00	1412	321.00	52
67.00	213	145.00	78	222.00	352	322.00	41
68.00	296	146.00	132	223.00	496	323.00	580
69.00	15128	147.00	489	224.00	4533	324.00	112

VZ97:01064

Data File: /chem2/nt6.i/20130123.b/tune.b/01231301.D

Date : 23-JAN-2013 10:49

Client ID: DFTPP0123 Instrument: nt6.i

Sample Info: DFTPP0123

Operator: JZ

Column phase: ZB-5msi Column diameter: 0.32

Data File: 01231301.D
Spectrum: Average Spectrum: 15.684 to 15.727 min.
Location of Maximum: 198.00
Number of points: 306

m/z	Y	m/z	Y	m/z	Y	m/z	Y
70.00	236	148.00	864	225.00	1077	327.00	123
71.00	272	149.00	418	226.00	132	328.00	49
73.00	348	150.00	241	227.00	1872	333.00	17
74.00	1667	151.00	360	228.00	262	334.00	476
75.00	2982	152.00	211	229.00	477	335.00	89
76.00	1008	153.00	362	230.00	185	336.00	18
77.00	17336	154.00	268	231.00	328	341.00	49
78.00	1436	155.00	690	232.00	58	342.00	34
79.00	1316	156.00	729	233.00	61	346.00	113
80.00	920	157.00	198	234.00	151	352.00	216
81.00	1615	158.00	102	235.00	124	353.00	109
82.00	475	159.00	276	236.00	45	354.00	217
83.00	521	160.00	284	237.00	209	355.00	18
84.00	537	161.00	383	239.00	96	365.00	803
85.00	474	162.00	160	240.00	71	366.00	178
86.00	578	163.00	50	241.00	284	369.00	17
87.00	261	164.00	80	242.00	382	371.00	64
88.00	78	165.00	707	243.00	229	372.00	277
89.00	257	166.00	792	244.00	3611	373.00	48
90.00	64	167.00	4155	245.00	432	383.00	84
91.00	809	168.00	1205	246.00	732	390.00	17
92.00	383	169.00	327	247.00	135	392.00	23
93.00	1632	170.00	48	248.00	45	393.00	18
94.00	328	171.00	108	249.00	110	402.00	71
95.00	313	172.00	133	251.00	28	403.00	152
96.00	252	173.00	311	253.00	120	404.00	43
97.00	295	174.00	446	254.00	24	421.00	134
98.00	1484	175.00	697	255.00	16480	422.00	131
99.00	1149	176.00	267	256.00	2259	423.00	1067
100.00	101	177.00	263	257.00	186	424.00	199
101.00	675	178.00	158	258.00	865	425.00	23
102.00	163	179.00	1265	259.00	194	428.00	17
103.00	223	180.00	1008	260.00	34	439.00	16
104.00	562	181.00	499	261.00	39	441.00	2738
105.00	733	182.00	173	263.00	52	442.00	19008

Date : 23-JAN-2013 10:49

Client ID: DFTPP0123 Instrument: nt6.i

Sample Info: DFTPP0123

Operator: JZ

Column phase: ZB-5msi Column diameter: 0.32

Data File: 01231301.D
Spectrum: Average Spectrum: 15.684 to 15.727 min.
Location of Maximum: 198.00
Number of points: 306

m/z	Y	m/z	Y	m/z	Y	m/z	Y
106.00	124	183.00	205	264.00	91	443.00	3801
107.00	4927	184.00	187	265.00	478	444.00	309
108.00	971	185.00	590	266.00	466	445.00	16
109.00	217	186.00	4551	267.00	23	453.00	30
110.00	8404	187.00	1298	268.00	177	496.00	18
111.00	1293	188.00	166	270.00	112		
112.00	357	189.00	339	271.00	44		

Data File: /chem2/nt6.i/20130123.b/tune.b/01231301.D

Date : 23-JAN-2013 10:49

Client ID: DFTPP0123

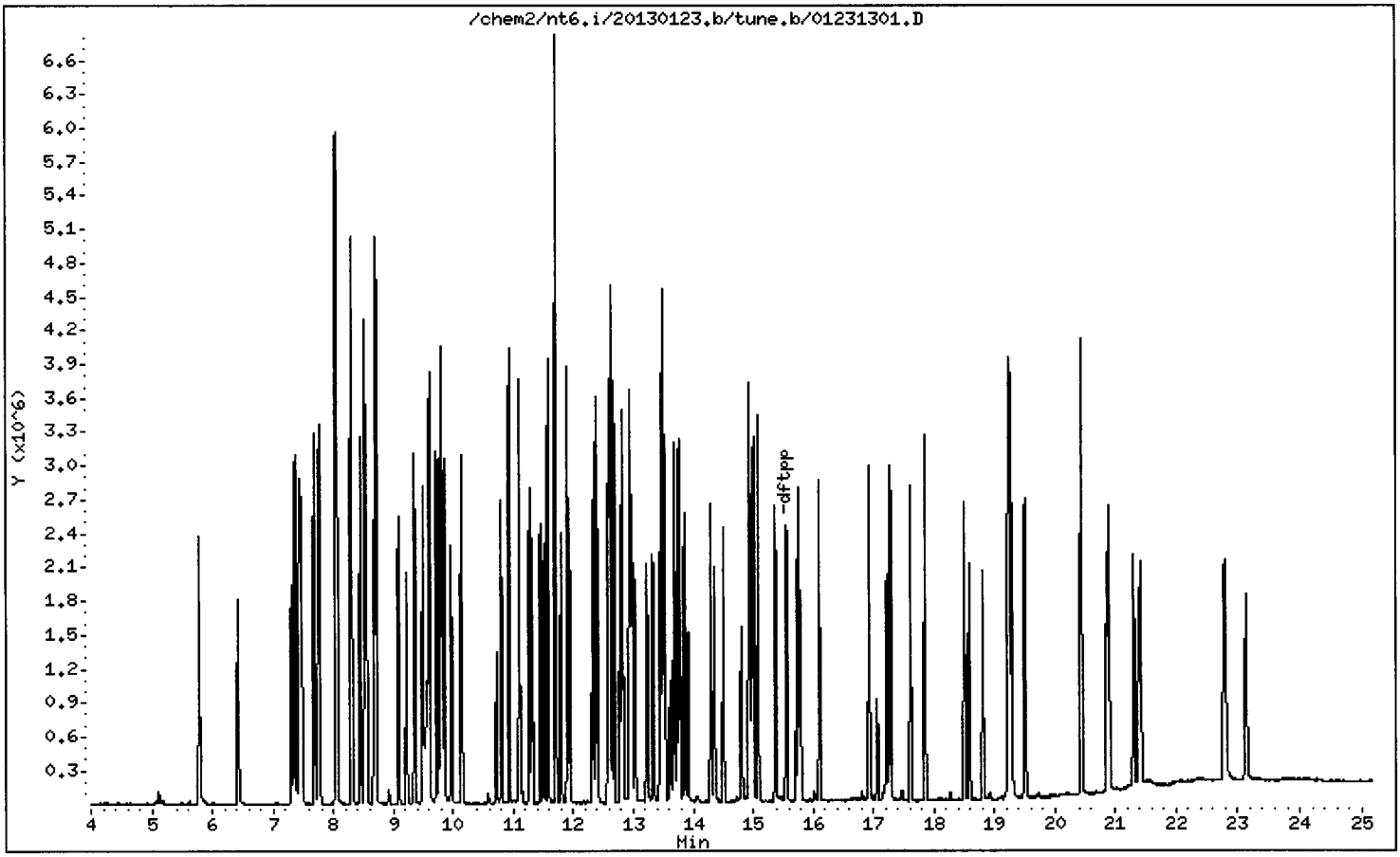
Instrument: nt6.i

Sample Info: DFTPP0123

Operator: JZ

Column phase: ZB-5ms1

Column diameter: 0.32



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem2/nt6.i/20130123.b/ddt.b/01231301.D ARI ID: DDT0123
Method: /chem2/nt6.i/20130123.b/ddt.b/sw846ddt.m Misc: 13-
Analysis Date: 23-JAN-2013 10:49 Instrument: nt6.i

COMPOUND	RT	AREA
Pentachlorophenol	14.808	228188
Benzidine	17.201	77177
4,4'-DDE	----	----
4,4'-DDD	18.120	3605
4,4'-DDT	18.585	588675

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

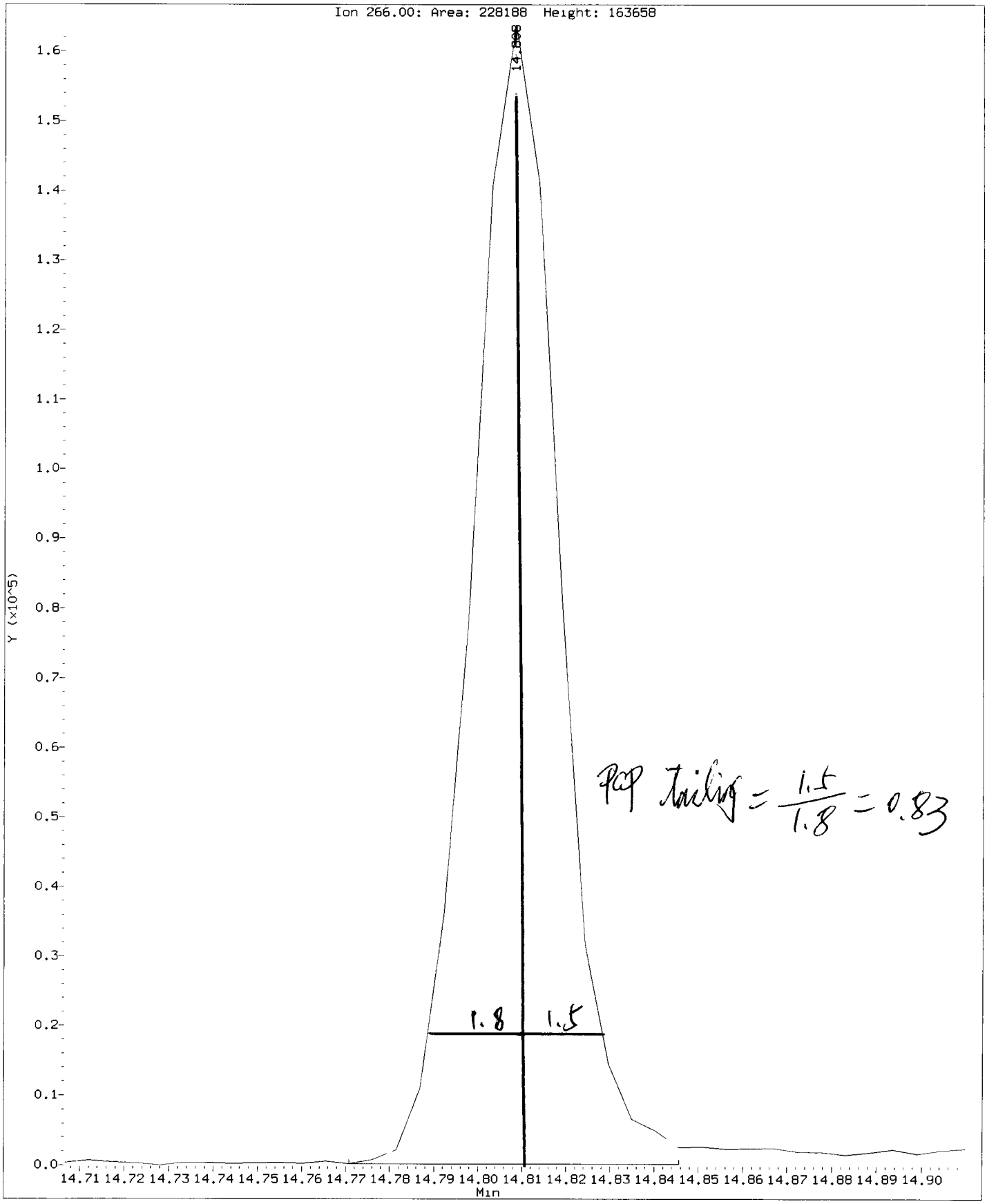
$$\text{DDT Percent Breakdown} = \frac{(\ 0 + 3605) * 100}{(\ 0 + 3605 + 588675)}$$

DDT Percent Breakdown = 0.6 %

ok 01/23/13

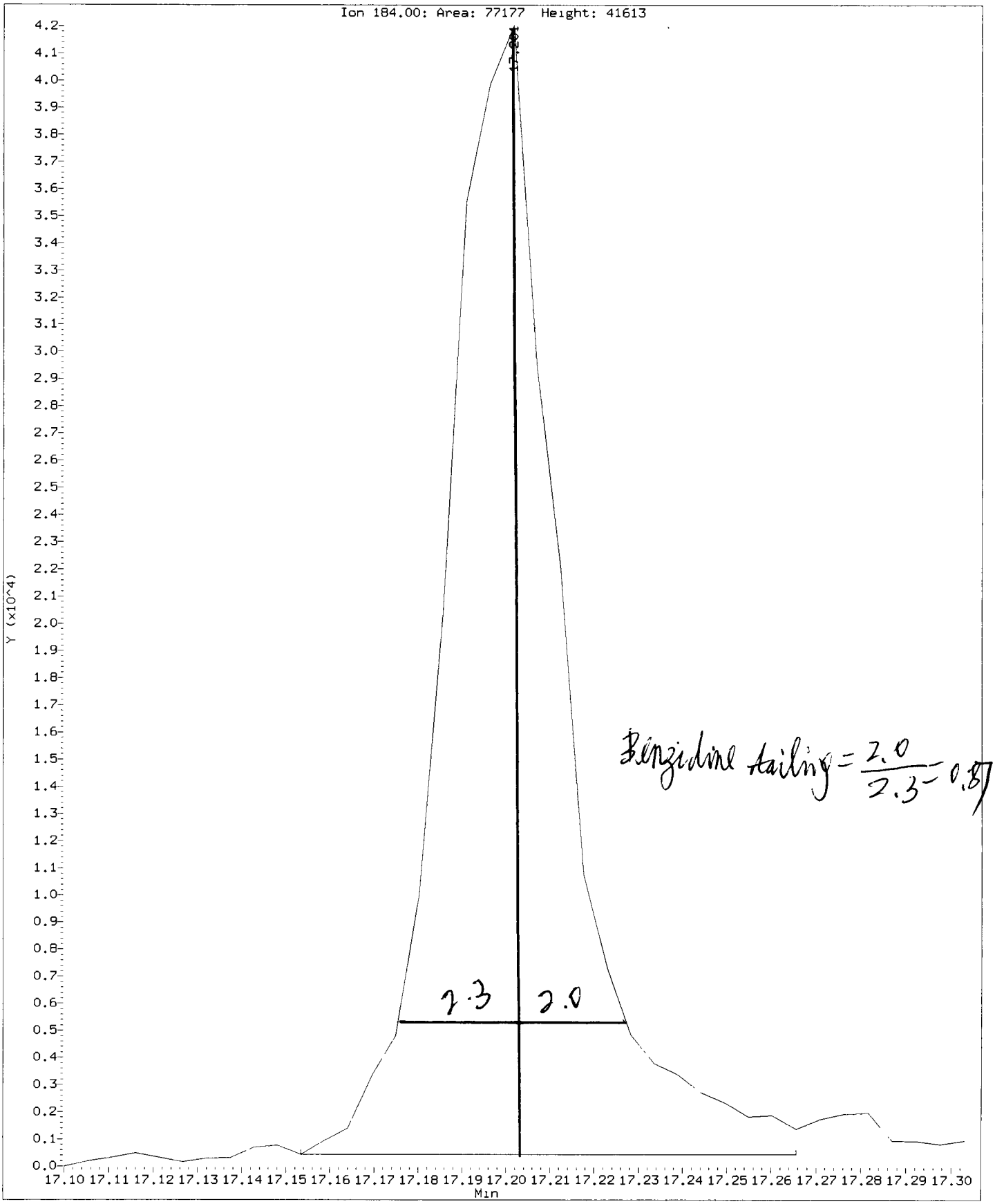
Data File: /chem2/nt6.1/20130123.b/ddt.b/01231301.D
Injection Date: 23-JAN-2013 10:49
Instrument: nt6.1
Client Sample ID: DDT0123

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem2/nt6.1/20130123.b/ddt.b/01231301.D
Injection Date: 23-JAN-2013 10:49
Instrument: nt6.1
Client Sample ID: DDT0123

Compound: Benzidine
CAS Number:



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130123.b/01231306.D
Lab Smp Id: VZ97S Client Smp ID: CSIA20130114-001DW
Inj Date : 23-JAN-2013 13:41
Operator : JZ Inst ID: nt6.i
Smp Info : VZ97S
Misc Info : 13-1100
Comment : 1ul Injection
Method : /chem2/nt6.i/20130123.b/SW846010713.m
Meth Date : 23-Jan-2013 14:36 jianqing Quant Type: ISTD
Cal Date : 07-JAN-2013 14:04 Cal File: 01071302.D
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LL.sub
Target Version: 3.50

01/23/13

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Vo	500.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
$	1 2-Fluorophenol	112	5.785	5.785	(0.747)	1135712	23.1422	23.14
$	2 Phenol-d5	99	7.356	7.356	(0.950)	1492026	24.0795	24.08
	3 Phenol	94	Compound Not Detected.					
$	5 2-Chlorophenol-d4	132	7.452	7.452	(0.962)	1206780	25.1814	25.18
	4 Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6 2-Chlorophenol	128	Compound Not Detected.					
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	7.746	7.746	(1.000)	634348	20.0000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	8.039	8.040	(1.038)	616208	18.3582	18.36
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	Compound Not Detected.					
	14 2,2'-oxybis(1-Chloropropane)	45	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
	15 4-Methylphenol	108	Compound Not Detected.					
$	18 Nitrobenzene-d5	82	8.675	8.681	(0.887)	1064620	19.7405	19.74
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	9.781	9.781	(1.000)	2190413	20.0000	
	28 Naphthalene	128	Compound Not Detected.					
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	141	Compound Not Detected.					
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	11.581	11.582	(0.917)	1838005	21.6261	21.63
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	Compound Not Detected.					
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	12.628	12.623	(1.000)	1209618	20.0000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	12.671	12.677	(1.003)	82808	1.27687	1.277
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	12.933	12.938	(1.024)	74597	0.85718	0.8572
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	13.488	13.489	(1.068)	71858	1.06117	1.061
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	13.916	13.911	(1.102)	340401	34.0845	34.08
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	14.979	14.979	(1.000)	1798315	20.0000	
	60 Phenanthrene	178	Compound Not Detected.					
	61 Anthracene	178	Compound Not Detected.					
	62 Carbazole	167	Compound Not Detected.					
	63 Di-n-butylphthalate	149	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	64 Fluoranthene	202	Compound Not Detected.					
	65 Pyrene	202	Compound Not Detected.					
$	66 Terphenyl-d14	244	17.618	17.613	(0.915)	1291481	20.2474	20.25
	67 Butylbenzylphthalate	149	Compound Not Detected.					
	68 Benzo(a)anthracene	228	Compound Not Detected.					
*	69 Chrysene-d12	240	19.253	19.247	(1.000)	1595918	20.0000	
	70 3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71 Chrysene	228	Compound Not Detected.					
	72 bis(2-Ethylhexyl)phthalate	149	Compound Not Detected.					
*	134 Di-n-octylphthalate-d4	153	20.433	20.428	(1.000)	2007771	20.0000	
	73 Di-n-octylphthalate	149	Compound Not Detected.					
	74 Benzo(b)fluoranthene	252	Compound Not Detected.					
	75 Benzo(k)fluoranthene	252	Compound Not Detected.					
	76 Benzo(a)pyrene	252	Compound Not Detected.					
*	77 Perylene-d12	264	21.389	21.384	(1.000)	1608177	20.0000	
	78 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	80 Benzo(g,h,i)perylene	276	Compound Not Detected.					
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					
	91 Aniline	93	Compound Not Detected.					
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	Compound Not Detected.					
	105 1-methylnaphthalene	141	11.100	11.101	(1.135)	33416	0.60889	0.6089
	111 Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
	187 Total Benzofluoranthenes	252	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 01231306.D
Lab Smp Id: VZ97S
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130123.b/SW846010713.m
Misc Info: 13-1100

Calibration Date: 23-JAN-2013
Calibration Time: 10:49
Client Smp ID: CSIA20130114-001
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	532349	266174	1064698	634348	19.16
27 Naphthalene-d8	2007575	1003788	4015150	2190413	9.11
42 Acenaphthene-d10	1020441	510220	2040882	1209618	18.54
59 Phenanthrene-d10	1546074	773037	3092148	1798315	16.31
69 Chrysene-d12	1407005	703502	2814010	1595918	13.43
134 Di-n-octylphthala	1928310	964155	3856620	2007771	4.12
77 Perylene-d12	1383265	691632	2766530	1608177	16.26

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.75	7.25	8.25	7.75	0.00
27 Naphthalene-d8	9.78	9.28	10.28	9.78	0.00
42 Acenaphthene-d10	12.62	12.12	13.12	12.63	0.04
59 Phenanthrene-d10	14.98	14.48	15.48	14.98	0.00
69 Chrysene-d12	19.25	18.75	19.75	19.25	0.03
134 Di-n-octylphthala	20.43	19.93	20.93	20.43	0.02
77 Perylene-d12	21.38	20.88	21.88	21.39	0.02

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA
Sample Matrix: LIQUID
Lab Smp Id: VZ97S
Level: LOW
Data Type: MS DATA
SpikeList File: LLLCS.spk
Sublist File: LL.sub
Method File: /chem2/nt6.i/20130123.b/SW846010713.m
Misc Info: 13-1100

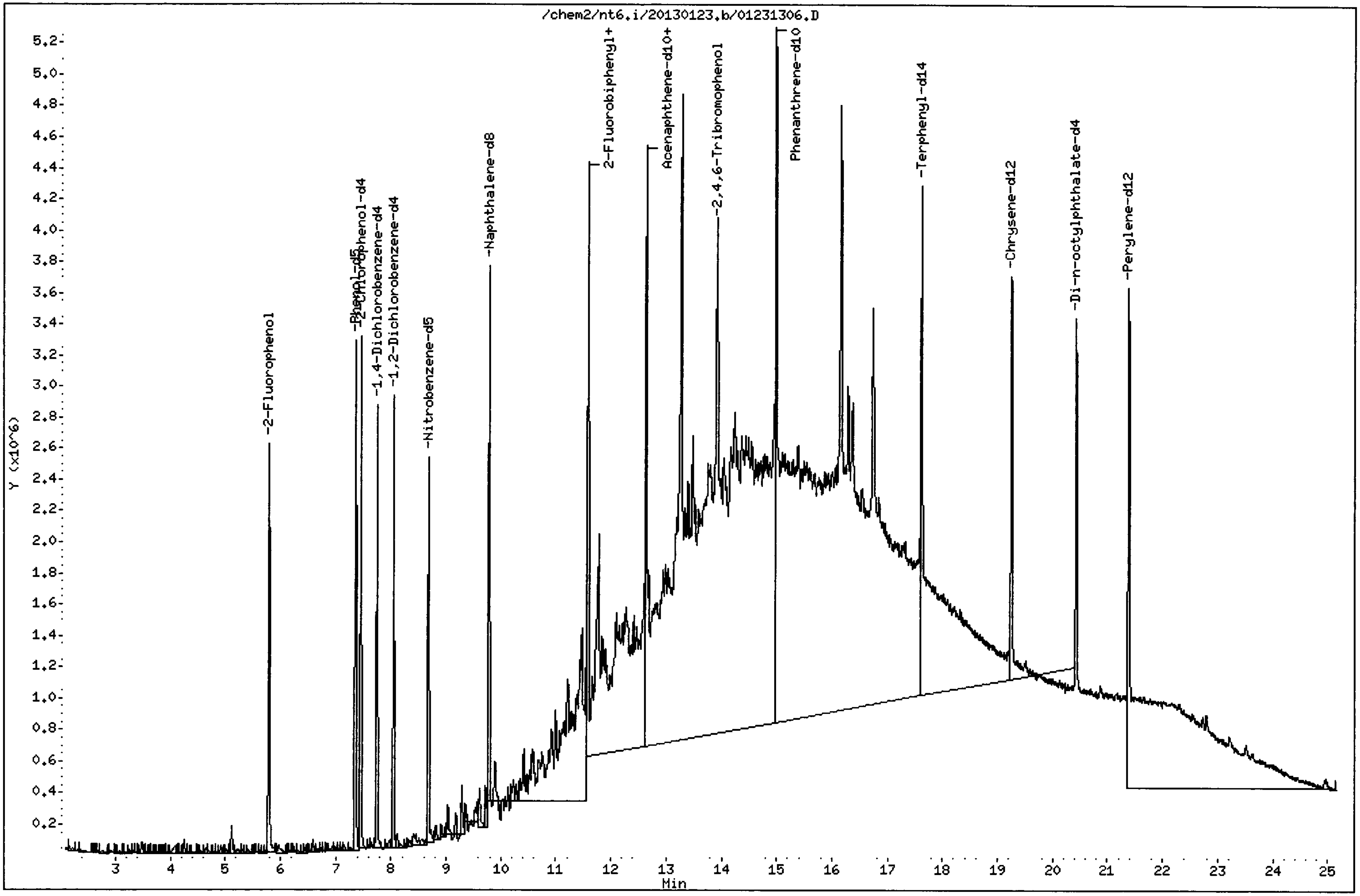
Client SDG: VZ97
Fraction: SV
Client Smp ID: CSIA20130114-001DW
Operator: JZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	37.50	23.14	61.71	23-100
$ 2 Phenol-d5	37.50	24.08	64.21	16-100
$ 5 2-Chlorophenol-d4	37.50	25.18	67.15	33-100
$ 10 1,2-Dichlorobenzen	25.00	18.36	73.43	27-100
$ 18 Nitrobenzene-d5	25.00	19.74	78.96	34-101
$ 36 2-Fluorobiphenyl	25.00	21.63	86.50	38-100
$ 55 2,4,6-Tribromophen	37.50	34.08	90.89	31-128
$ 66 Terphenyl-d14	25.00	20.25	80.99	27-122

Data File: /chem2/nt6.i/20130123.b/01231306.D
Date : 23-JAN-2013 13:41
Client ID: CSIA20130114-001DW
Sample Info: VZ97S
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt6.i

Operator: JZ
Column diameter: 0.32



Data File: /chem2/nt6.i/20130123.b/01231306.D

Date : 23-JAN-2013 13:41

Client ID: CSIA20130114-001DW

Instrument: nt6.i

Sample Info: VZ97S

Volume Injected (uL): 1.0

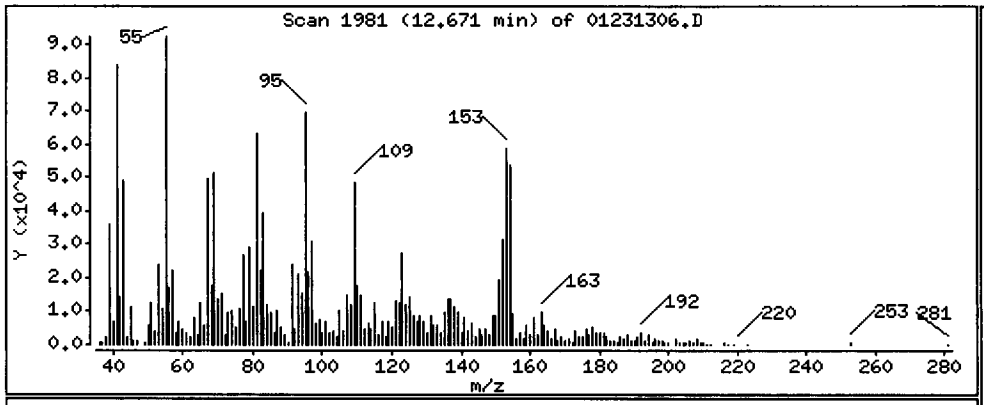
Operator: JZ

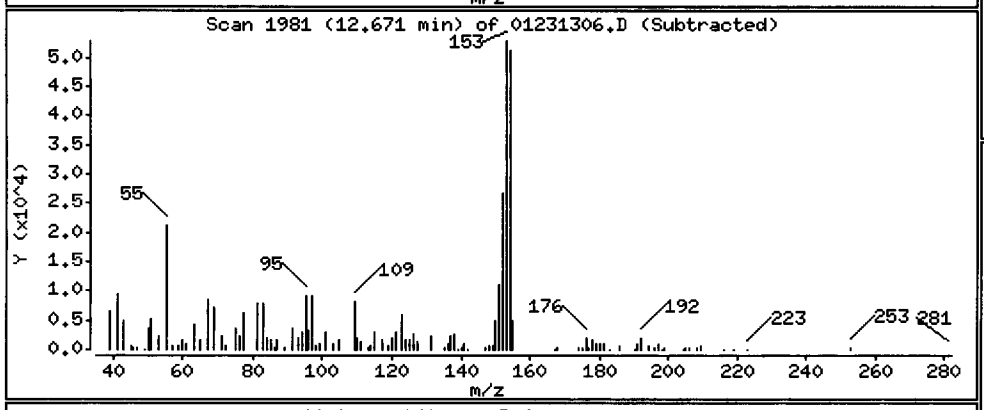
Column phase: ZB-5msi

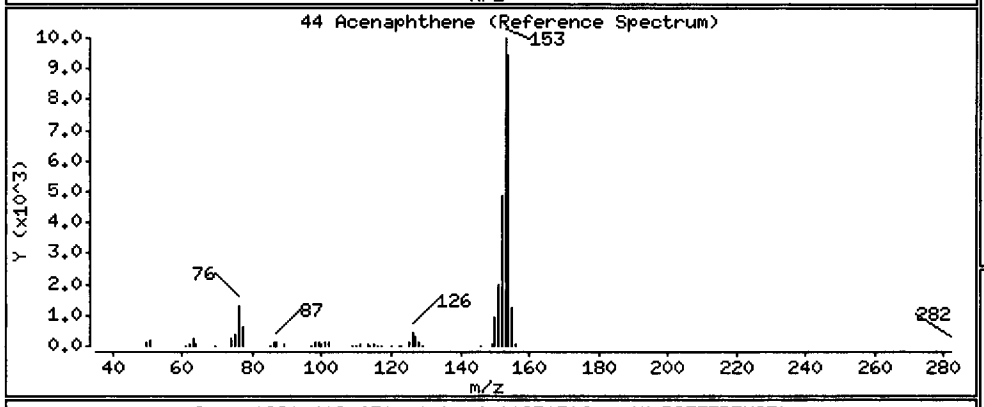
Column diameter: 0.32

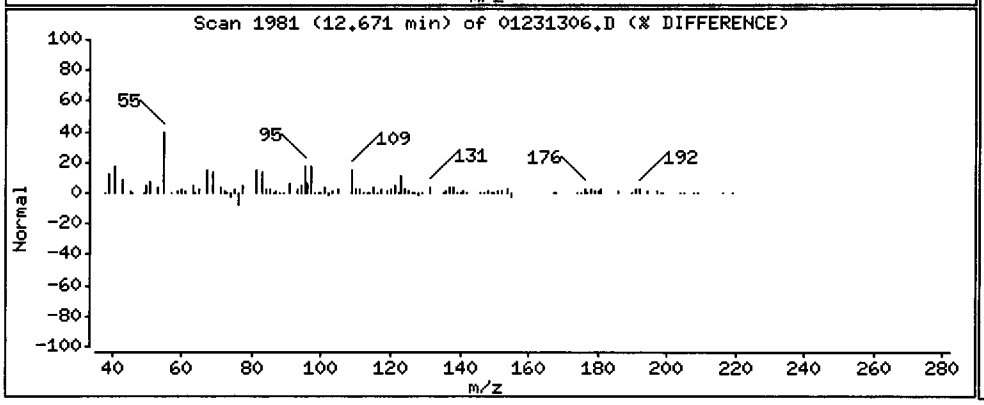
44 Acenaphthene

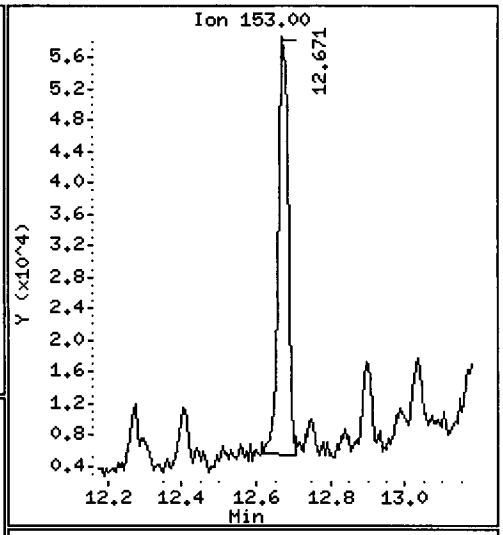
Concentration: 1.277 ug/L

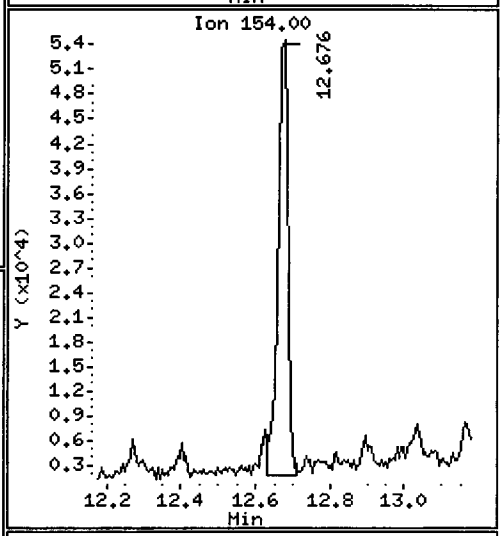


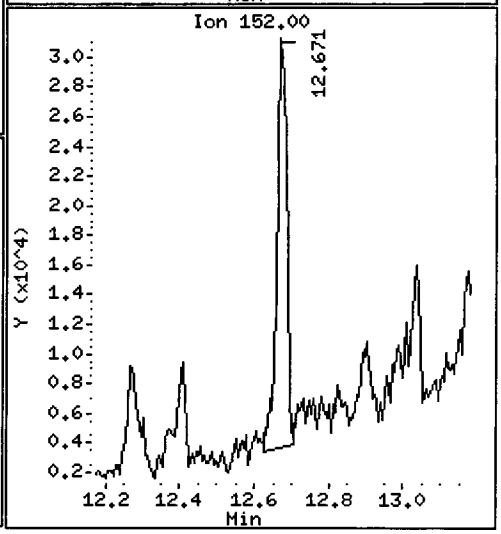












Data File: /chem2/nt6.i/20130123.b/01231306.D

Date : 23-JAN-2013 13:41

Client ID: CSIA20130114-001DW

Instrument: nt6.i

Sample Info: VZ97S

Volume Injected (uL): 1.0

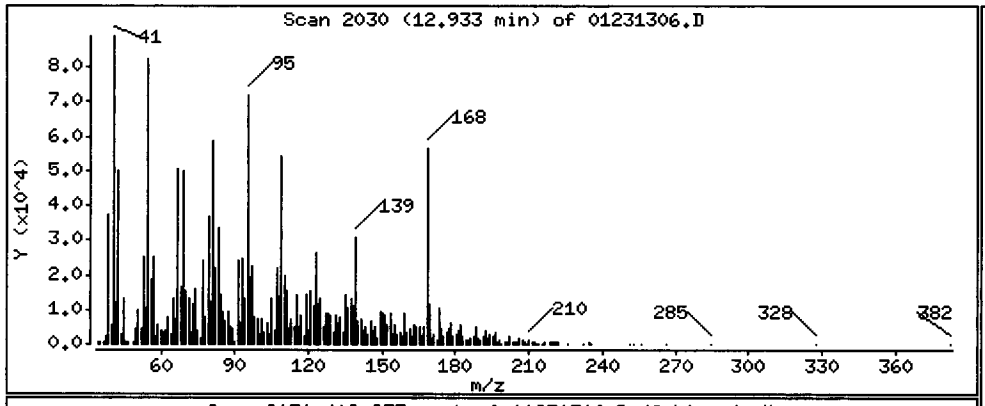
Operator: JZ

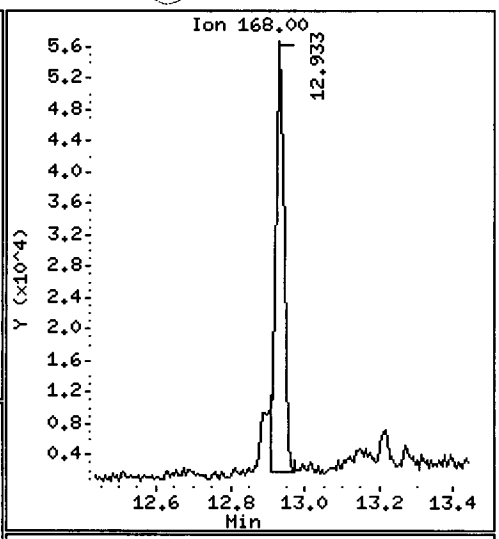
Column phase: ZB-5msi

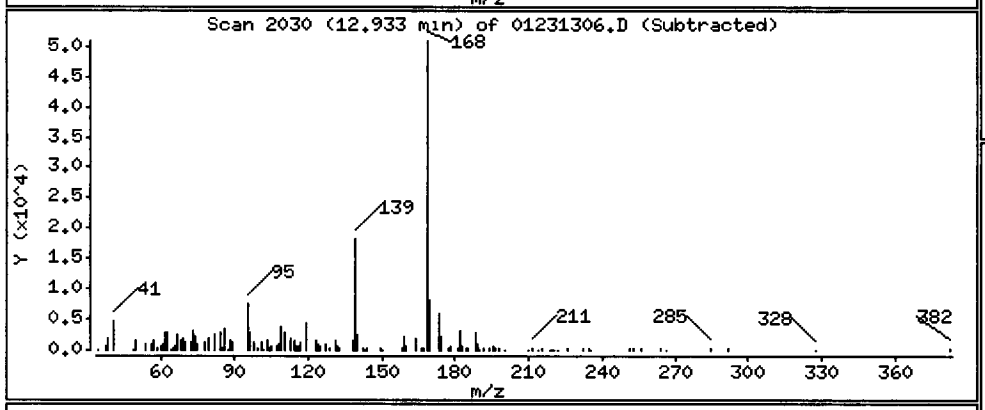
Column diameter: 0.32

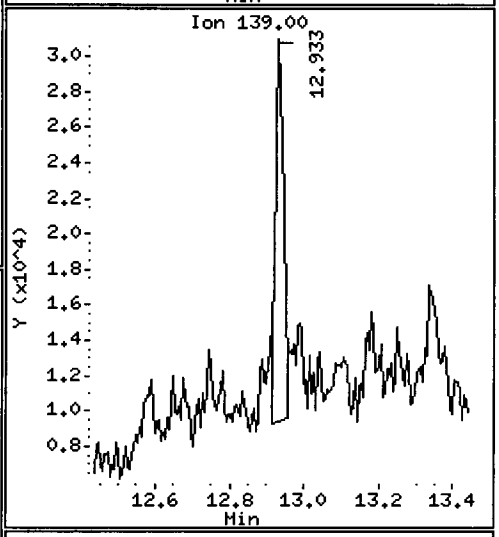
46 Dibenzofuran

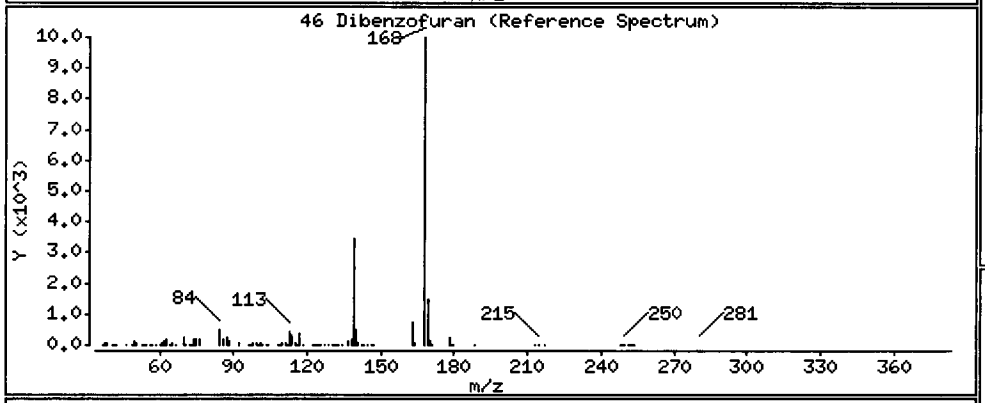
Concentration: 0.8572 ug/L

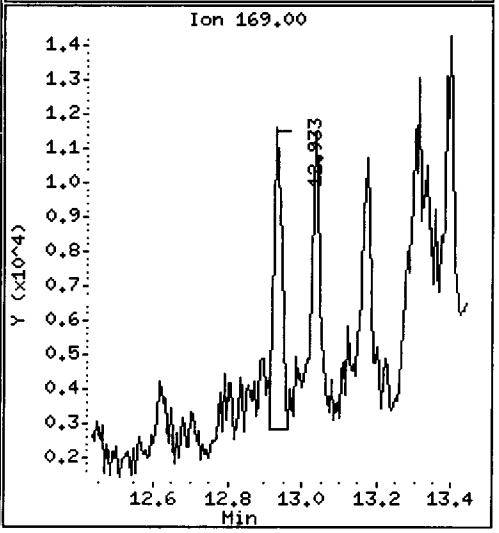


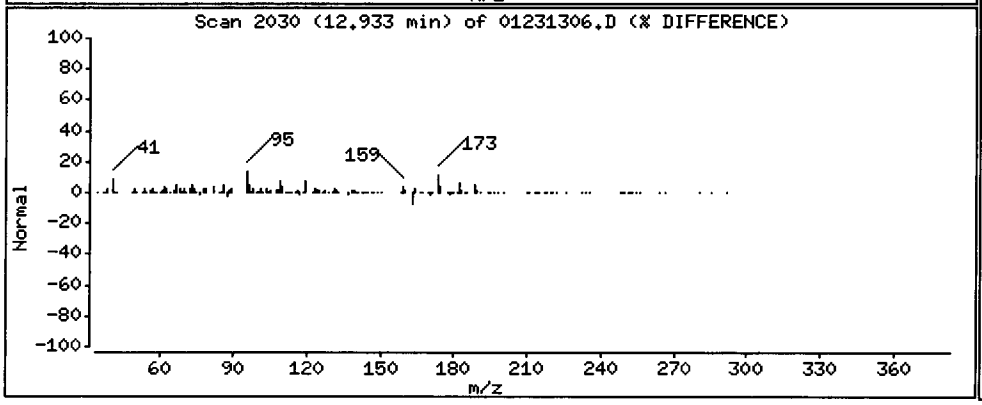












Data File: /chem2/nt6.i/20130123.b/01231306.D

Date : 23-JAN-2013 13:41

Client ID: CSIA20130114-001DW

Instrument: nt6.i

Sample Info: VZ97S

Volume Injected (uL): 1.0

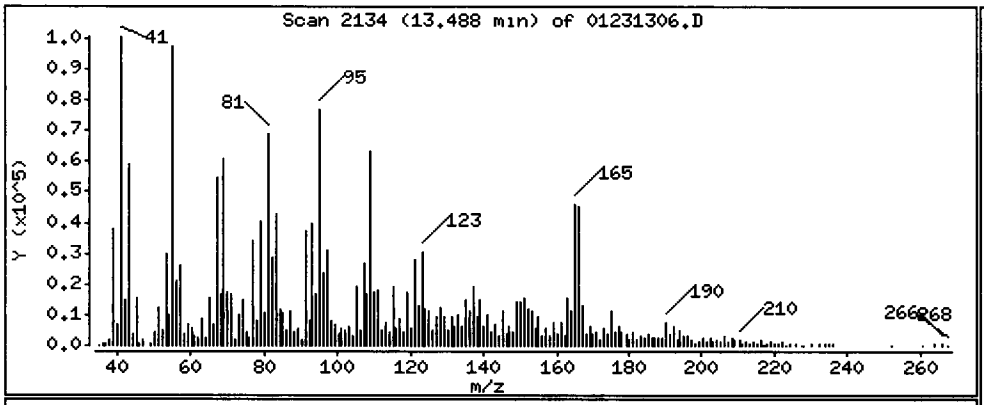
Operator: JZ

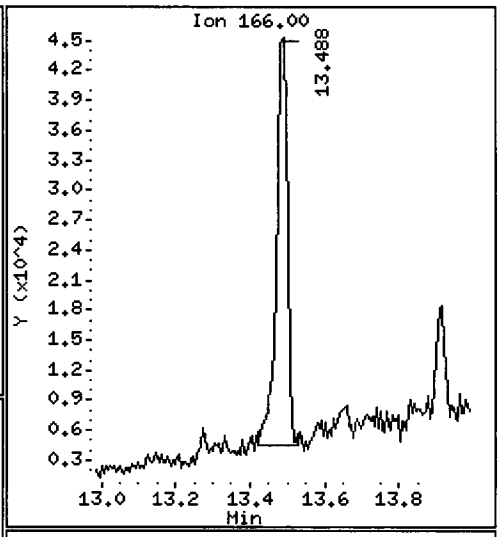
Column phase: ZB-5msi

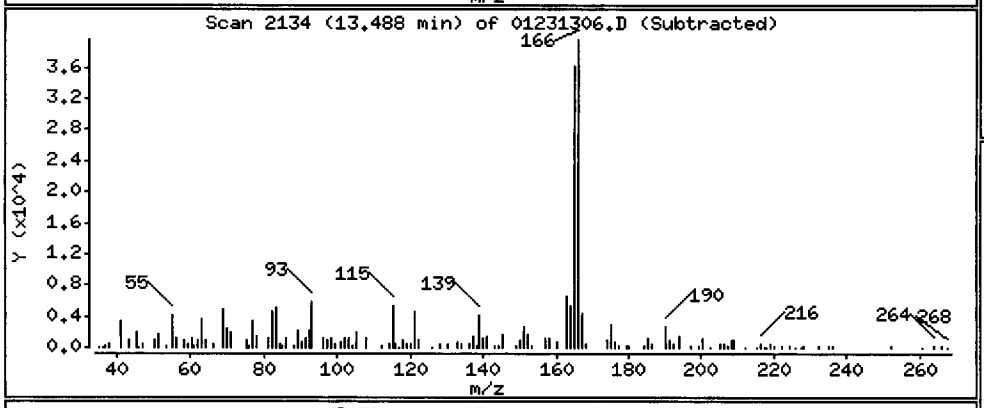
Column diameter: 0.32

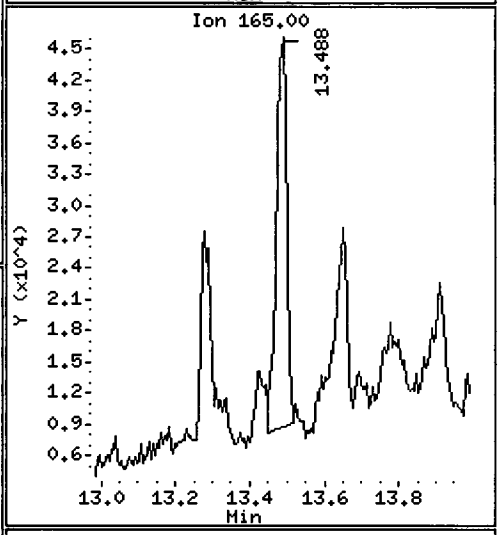
49 Fluorene

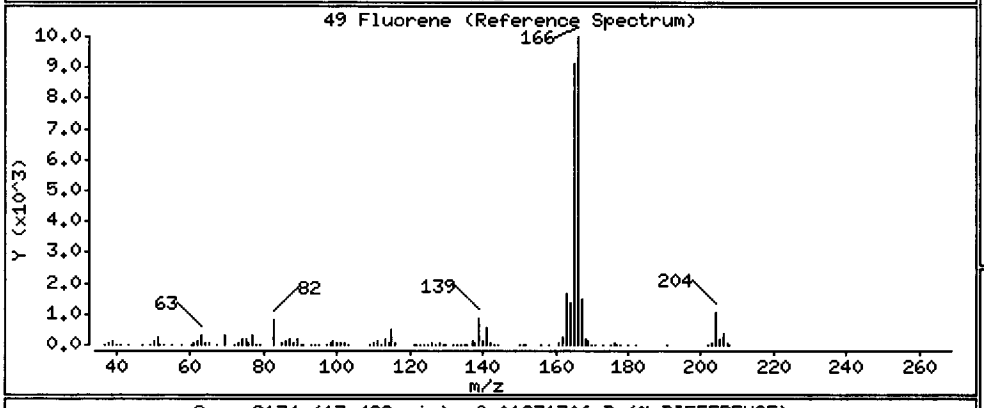
Concentration: 1.061 ug/L

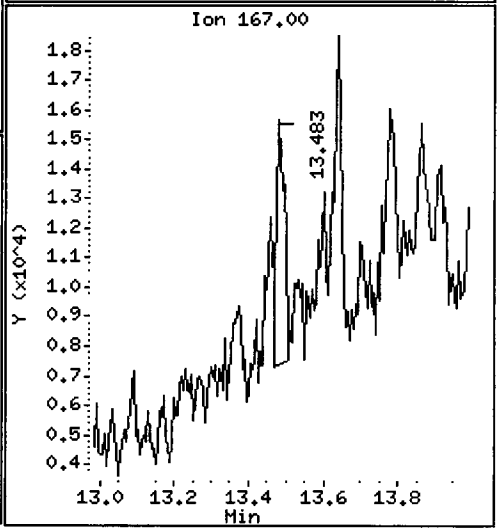


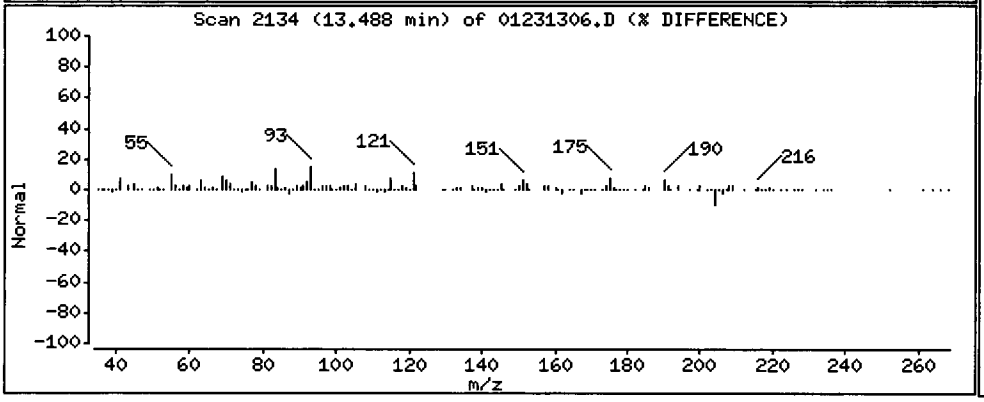












Data File: /chem2/nt6.i/20130123.b/01231306.D

Date : 23-JAN-2013 13:41

Client ID: CSIA20130114-001DW

Instrument: nt6.i

Sample Info: VZ97S

Volume Injected (uL): 1.0

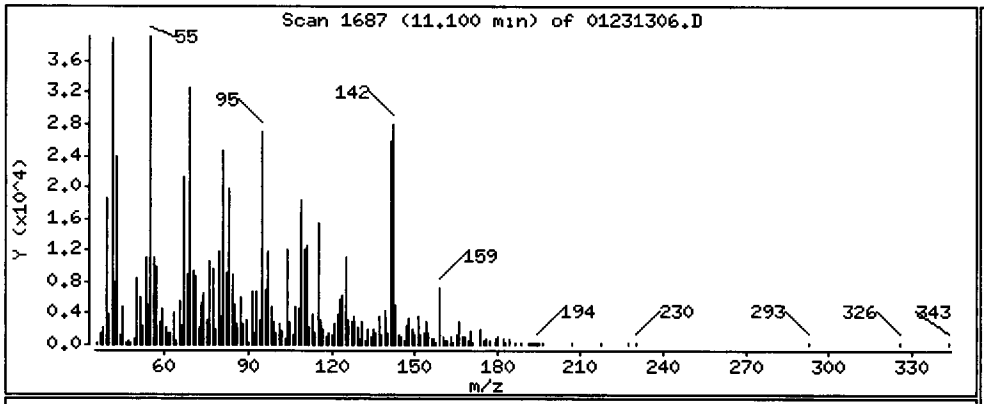
Operator: JZ

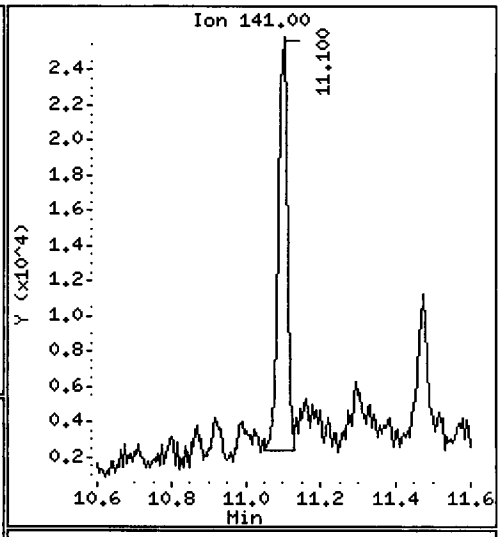
Column phase: ZB-5msi

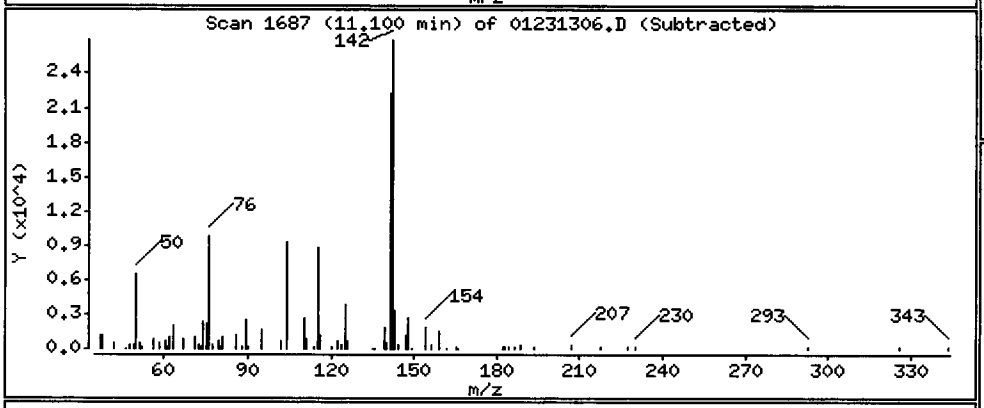
Column diameter: 0.32

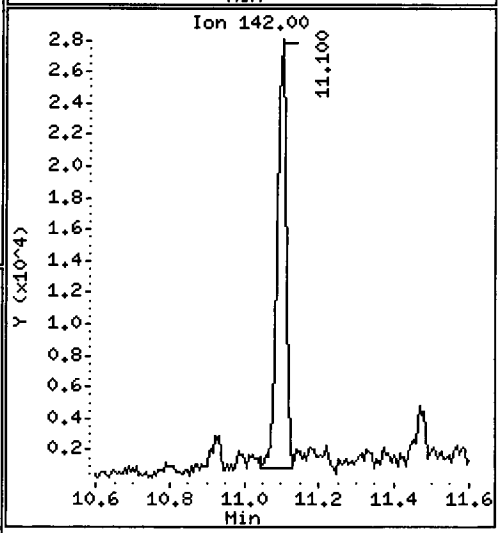
105 1-methylnaphthalene

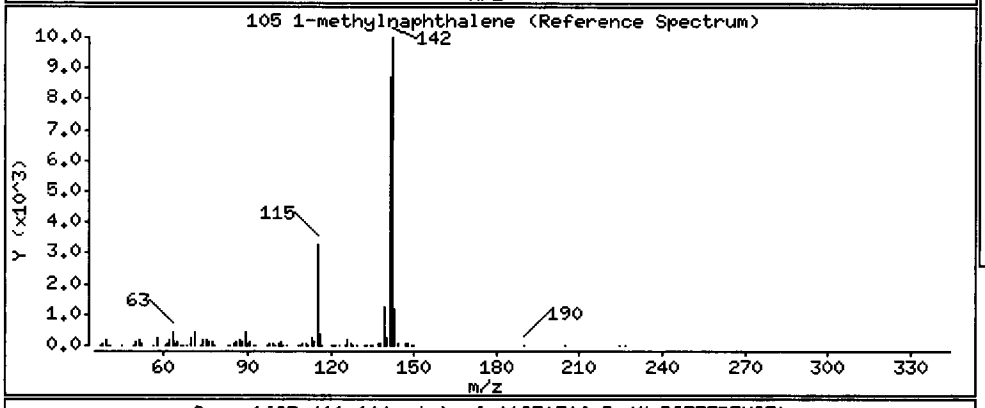
Concentration: 0.6089 ug/L

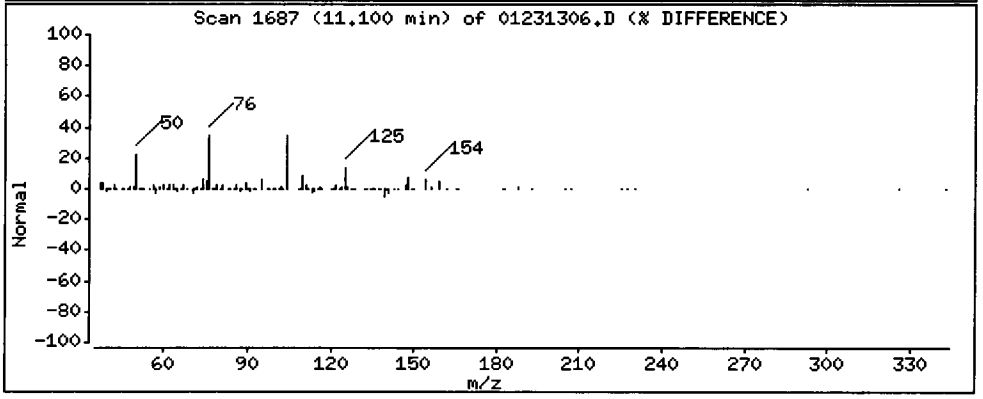












CO-ELUTION SUMMARY FOR FILE - 01231306.D

Lab ID: VZ97S, Method: SW846010713.m, Instrument: nt6.i, Date: 23-JAN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130123.b/01231303.D
Lab Smp Id: VZ97MBW1 Client Smp ID: VZ97MBW1
Inj Date : 23-JAN-2013 11:57
Operator : JZ Inst ID: nt6.i
Smp Info : VZ97MBW1,
Misc Info : 13-1100
Comment : 1ul Injection
Method : /chem2/nt6.i/20130123.b/SW846010713.m
Meth Date : 23-Jan-2013 14:36 jianqing Quant Type: ISTD
Cal Date : 07-JAN-2013 14:04 Cal File: 01071302.D
Als bottle: 3 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LLMBLCS.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable 01/23/13

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Vo	500.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
$	1	2-Fluorophenol	112	5.783	5.785	(0.747)	1278898	22.9631	22.96
$	2	Phenol-d5	99	7.353	7.356	(0.950)	1772008	25.1997	25.20
	3	Phenol	94	Compound Not Detected.					
$	5	2-Chlorophenol-d4	132	7.449	7.452	(0.962)	1377435	25.3268	25.33
	4	Bis(2-Chloroethyl)ether	93	Compound Not Detected.					
	6	2-Chlorophenol	128	Compound Not Detected.					
	7	1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8	1,4-Dichlorobenzene-d4	152	7.743	7.746	(1.000)	719895	20.0000	
	9	1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10	1,2-Dichlorobenzene-d4	152	8.042	8.040	(1.039)	683012	17.9304	17.93
	12	1,2-Dichlorobenzene	146	Compound Not Detected.					
	11	Benzyl alcohol	108	Compound Not Detected.					
	14	2,2'-oxybis(1-Chloropropane)	45	Compound Not Detected.					
	13	2-Methylphenol	108	Compound Not Detected.					
	17	Hexachloroethane	117	Compound Not Detected.					
	16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	15 4-Methylphenol	108	Compound Not Detected.					
$	18 Nitrobenzene-d5	82	8.673	8.681	(0.886)	1250223	19.9473	19.95
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	23 Bis(2-Chloroethoxy)methane	93	Compound Not Detected.					
	24 Benzoic acid	105	Compound Not Detected.					
	25 2,4-Dichlorophenol	162	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	9.784	9.781	(1.000)	2545614	20.0000	
	28 Naphthalene	128	Compound Not Detected.					
	29 4-Chloroaniline	127	Compound Not Detected.					
	30 Hexachlorobutadiene	225	Compound Not Detected.					
	31 4-Chloro-3-methylphenol	107	Compound Not Detected.					
	32 2-Methylnaphthalene	141	Compound Not Detected.					
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					
	34 2,4,6-Trichlorophenol	196	Compound Not Detected.					
	35 2,4,5-Trichlorophenol	196	Compound Not Detected.					
$	36 2-Fluorobiphenyl	172	11.579	11.582	(0.917)	2022211	19.5352	19.54
	37 2-Chloronaphthalene	162	Compound Not Detected.					
	38 2-Nitroaniline	65	Compound Not Detected.					
	39 Dimethylphthalate	163	Compound Not Detected.					
	40 Acenaphthylene	152	Compound Not Detected.					
	41 2,6-Dinitrotoluene	165	Compound Not Detected.					
*	42 Acenaphthene-d10	164	12.626	12.623	(1.000)	1473289	20.0000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	Compound Not Detected.					
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	Compound Not Detected.					
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	Compound Not Detected.					
	49 Fluorene	166	Compound Not Detected.					
	51 4-Chlorophenyl-phenylether	204	Compound Not Detected.					
	52 4-Nitroaniline	138	Compound Not Detected.					
	53 4,6-Dinitro-2-methylphenol	198	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
$	55 2,4,6-Tribromophenol	330	13.908	13.911	(1.102)	378257	31.0967	31.10
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	14.976	14.979	(1.000)	2360135	20.0000	
	60 Phenanthrene	178	Compound Not Detected.					
	61 Anthracene	178	Compound Not Detected.					
	62 Carbazole	167	Compound Not Detected.					
	63 Di-n-butylphthalate	149	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	64 Fluoranthene	202	Compound Not Detected.					
	65 Pyrene	202	Compound Not Detected.					
$	66 Terphenyl-d14	244	17.615	17.613	(0.915)	2098340	26.8082	26.81
	67 Butylbenzylphthalate	149	Compound Not Detected.					
	68 Benzo(a)anthracene	228	Compound Not Detected.					
*	69 Chrysene-d12	240	19.250	19.247	(1.000)	1958391	20.0000	
	70 3,3'-Dichlorobenzidine	252	Compound Not Detected.					
	71 Chrysene	228	Compound Not Detected.					
	72 bis(2-Ethylhexyl)phthalate	149	19.507	19.504	(0.955)	37538	0.50773	0.5077
*	134 Di-n-octylphthalate-d4	153	20.425	20.428	(1.000)	2536534	20.0000	
	73 Di-n-octylphthalate	149	Compound Not Detected.					
	74 Benzo(b)fluoranthene	252	Compound Not Detected.					
	75 Benzo(k)fluoranthene	252	Compound Not Detected.					
	76 Benzo(a)pyrene	252	Compound Not Detected.					
*	77 Perylene-d12	264	21.387	21.384	(1.000)	1506930	20.0000	
	78 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	80 Benzo(g,h,i)perylene	276	Compound Not Detected.					
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					
	91 Aniline	93	Compound Not Detected.					
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	Compound Not Detected.					
	105 1-methylnaphthalene	141	Compound Not Detected.					
	111 Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
	187 Total Benzofluoranthenes	252	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 01231303.D
Lab Smp Id: VZ97MBW1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130123.b/SW846010713.m
Misc Info: 13-1100

Calibration Date: 23-JAN-2013
Calibration Time: 10:49
Client Smp ID: VZ97MBW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	532349	266174	1064698	719895	35.23
27 Naphthalene-d8	2007575	1003788	4015150	2545614	26.80
42 Acenaphthene-d10	1020441	510220	2040882	1473289	44.38
59 Phenanthrene-d10	1546074	773037	3092148	2360135	52.65
69 Chrysene-d12	1407005	703502	2814010	1958391	39.19
134 Di-n-octylphthala	1928310	964155	3856620	2536534	31.54
77 Perylene-d12	1383265	691632	2766530	1506930	8.94

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.75	7.25	8.25	7.74	-0.03
27 Naphthalene-d8	9.78	9.28	10.28	9.78	0.03
42 Acenaphthene-d10	12.62	12.12	13.12	12.63	0.02
59 Phenanthrene-d10	14.98	14.48	15.48	14.98	-0.02
69 Chrysene-d12	19.25	18.75	19.75	19.25	0.01
134 Di-n-octylphthala	20.43	19.93	20.93	20.43	-0.01
77 Perylene-d12	21.38	20.88	21.88	21.39	0.01

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA
Client SDG: VZ97
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: VZ97MBW1
Client Smp ID: VZ97MBW1
Level: LOW
Operator: JZ
Data Type: MS DATA
SampleType: BLANK
SpikeList File: LLLCS.spk
Quant Type: ISTD
Sublist File: LLMBLCS.sub
Method File: /chem2/nt6.i/20130123.b/SW846010713.m
Misc Info: 13-1100

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	37.50	22.96	61.23	33-100
$ 2 Phenol-d5	37.50	25.20	67.20	15-121
$ 5 2-Chlorophenol-d4	37.50	25.33	67.54	46-102
$ 10 1,2-Dichlorobenzen	25.00	17.93	71.72	40-100
$ 18 Nitrobenzene-d5	25.00	19.95	79.79	50-100
$ 36 2-Fluorobiphenyl	25.00	19.54	78.14	51-100
$ 55 2,4,6-Tribromophen	37.50	31.10	82.92	46-125
$ 66 Terphenyl-d14	25.00	26.81	107.23	54-117

Data File: /chem2/nt6.i/20130123.b/01231303.D

Date : 23-JAN-2013 11:57

Client ID: VZ97MBW1

Sample Info: VZ97MBW1,

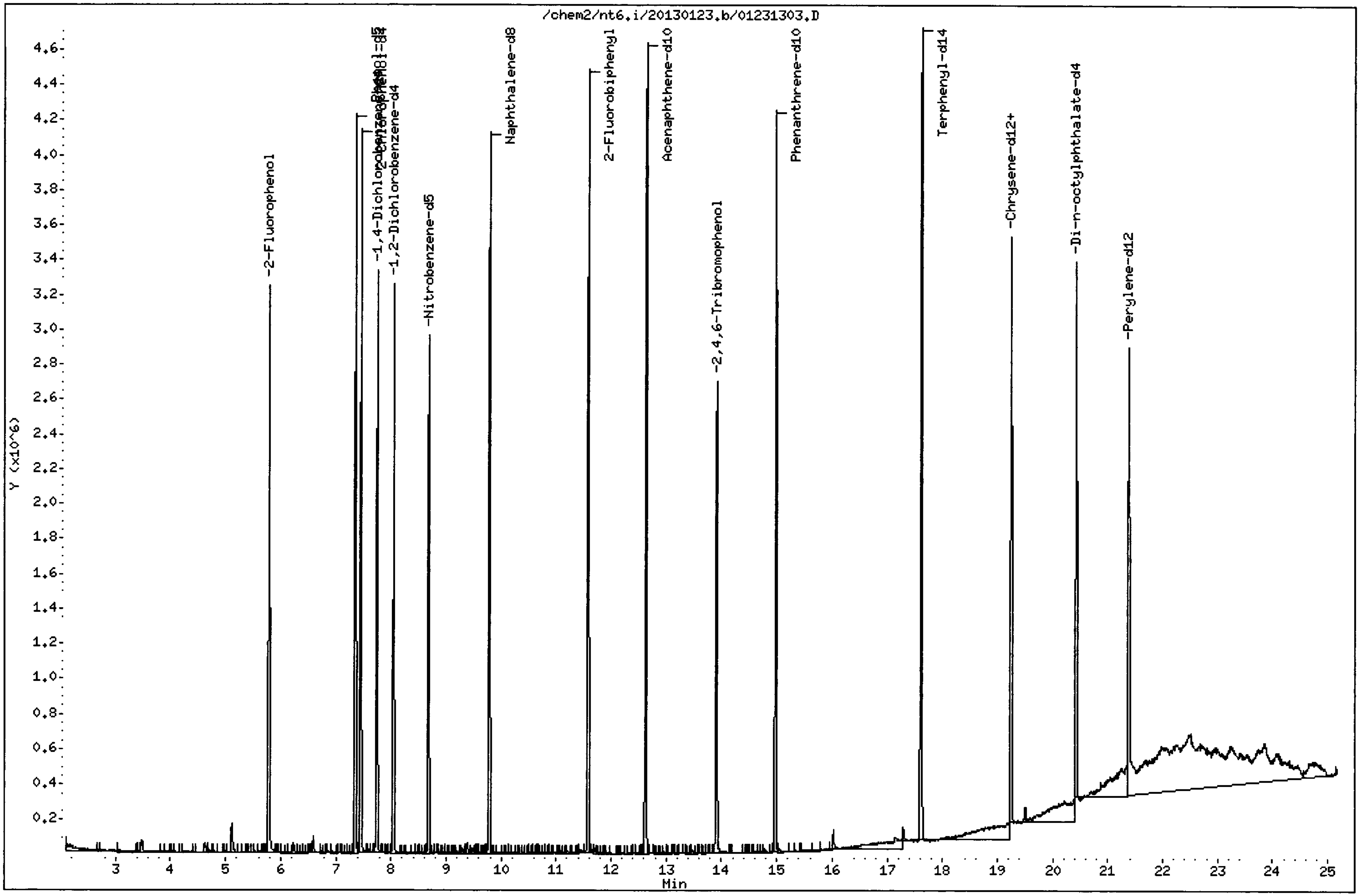
Volume Injected (uL): 1.0

Column phase: ZB-5msi

Instrument: nt6.i

Operator: JZ

Column diameter: 0.32



Data File: /chem2/nt6.i/20130123.b/01231303.D

Date : 23-JAN-2013 11:57

Client ID: VZ97MBW1

Instrument: nt6.i

Sample Info: VZ97MBW1,

Volume Injected (uL): 1.0

Operator: JZ

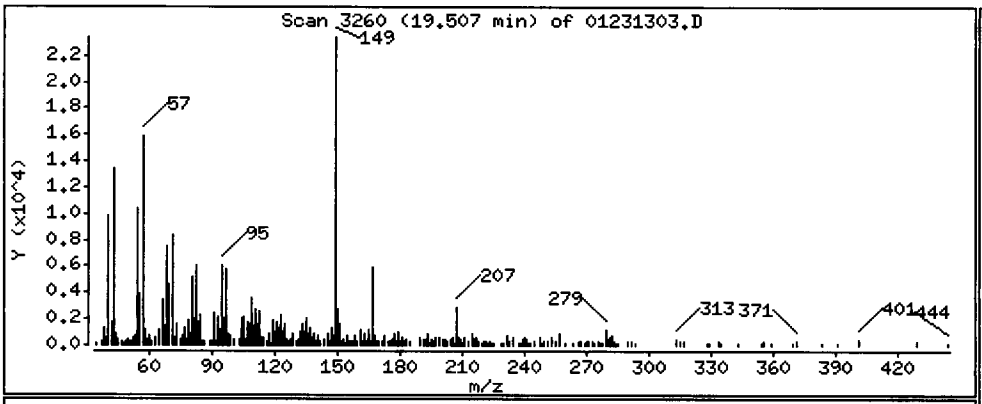
Column phase: ZB-5msi

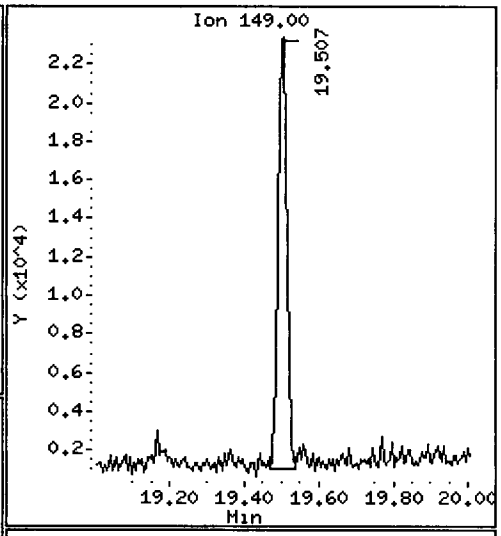
Column diameter: 0.32

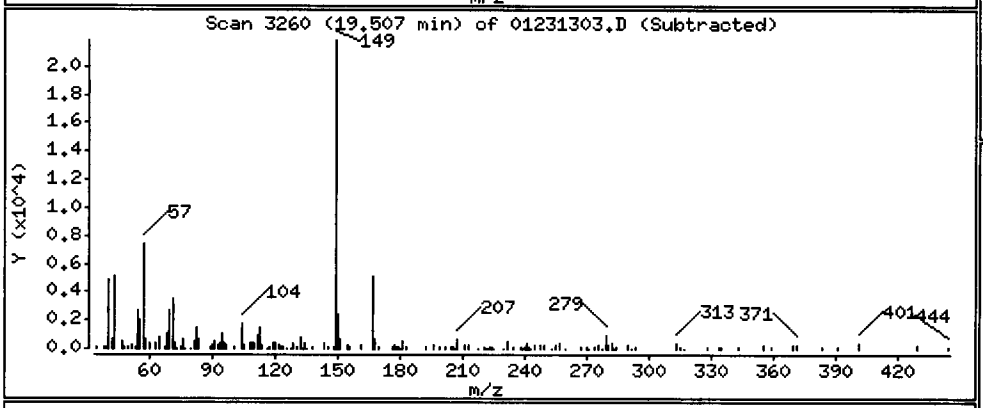
72 bis(2-Ethylhexyl)phthalate

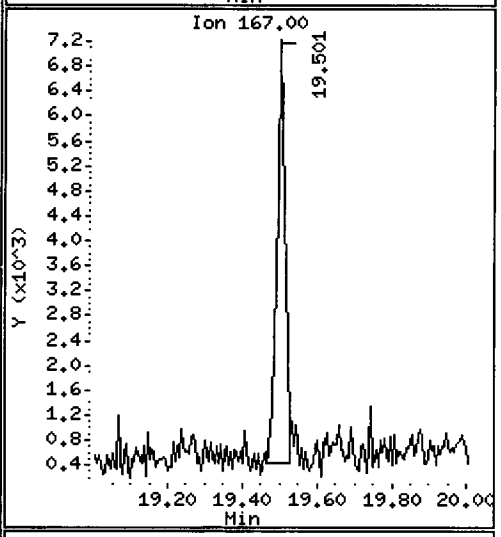
Concentration: 0.5077 ug/L

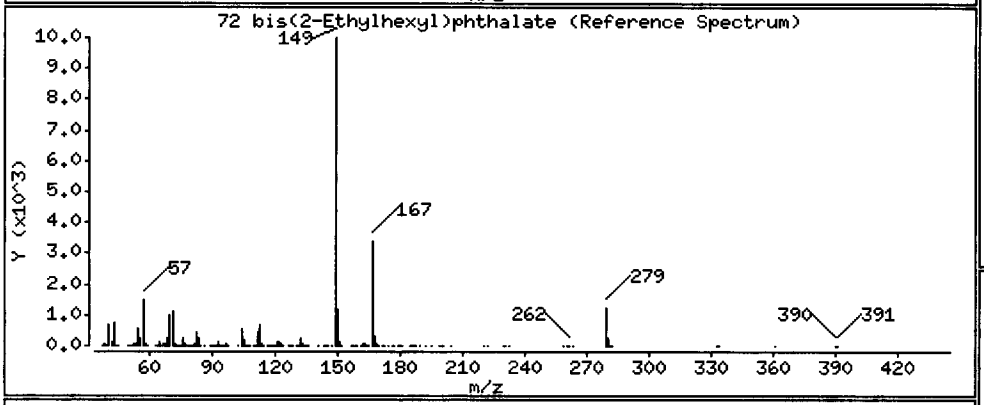
CMM

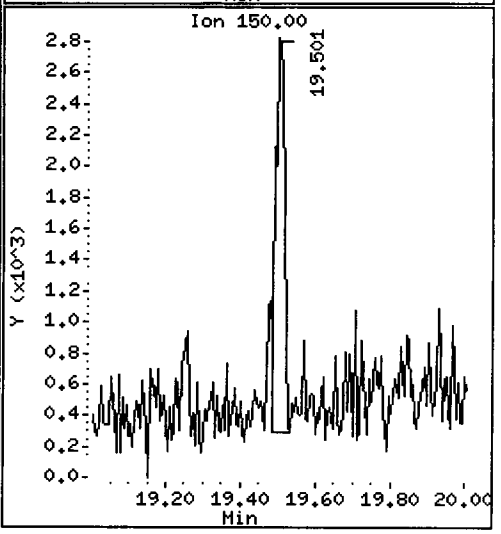


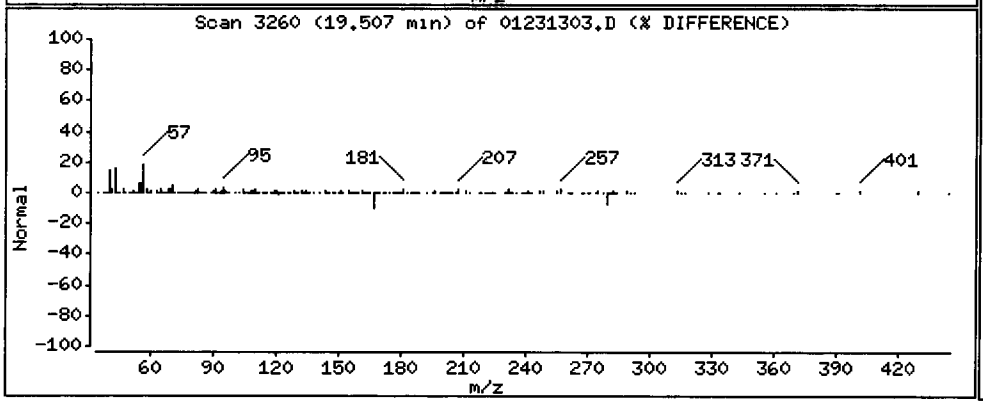












VZ97 : 01088

CO-ELUTION SUMMARY FOR FILE - 01231303.D

Lab ID: VZ97MBW1, Method: SW846010713.m, Instrument: nt6.i, Date: 23-JAN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130123.b/01231304.D
Lab Smp Id: VZ97LCSW1 Client Smp ID: VZ97LCSW1
Inj Date : 23-JAN-2013 12:32
Operator : JZ Inst ID: nt6.i
Smp Info : VZ97LCSW1,
Misc Info : 13-1100
Comment : 1ul Injection
Method : /chem2/nt6.i/20130123.b/SW846010713.m
Meth Date : 23-Jan-2013 14:37 jianqing Quant Type: ISTD
Cal Date : 07-JAN-2013 14:04 Cal File: 01071302.D
Als bottle: 4 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LLMBLCS.sub
Target Version: 3.50

JZ 01/23/13

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Vo	500.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
$ 1	2-Fluorophenol	112	5.785	5.785	(0.747)	1245774	23.2300	23.23
$ 2	Phenol-d5	99	7.356	7.356	(0.950)	1642722	24.2610	24.26
3	Phenol	94	7.372	7.372	(0.952)	1091132	16.5966	16.60
$ 5	2-Chlorophenol-d4	132	7.452	7.452	(0.962)	1294428	24.7174	24.72
4	Bis(2-Chloroethyl)ether	93	7.430	7.431	(0.959)	858383	17.6814	17.68
6	2-Chlorophenol	128	7.479	7.473	(0.966)	890255	18.6017	18.60
7	1,3-Dichlorobenzene	146	7.682	7.682	(0.992)	921052	16.6806	16.68
* 8	1,4-Dichlorobenzene-d4	152	7.746	7.746	(1.000)	693193	20.0000	
9	1,4-Dichlorobenzene	146	7.767	7.767	(1.003)	916070	16.7997	16.80
$ 10	1,2-Dichlorobenzene-d4	152	8.040	8.040	(1.038)	653756	17.8235	17.82
12	1,2-Dichlorobenzene	146	8.066	8.061	(1.041)	878037	17.1410	17.14
11	Benzyl alcohol	108	8.045	8.045	(1.039)	614905	18.9530	18.95
14	2,2'-oxybis(1-Chloropropane)	45	8.301	8.301	(1.072)	1346762	16.2401	16.24
13	2-Methylphenol	108	8.296	8.296	(1.071)	786305	17.2395	17.24
17	Hexachloroethane	117	8.547	8.547	(1.103)	365240	15.6934	15.69
16	N-Nitroso-di-n-propylamine	70	8.515	8.515	(1.099)	660215	17.2862	17.29

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	15 4-Methylphenol	108	8.536	8.531	(1.102)	1640632	34.6994	34.70
$	18 Nitrobenzene-d5	82	8.681	8.681	(0.887)	1154970	19.8413	19.84
	19 Nitrobenzene	77	8.707	8.707	(0.890)	977186	18.1931	18.19
	20 Isophorone	82	9.097	9.087	(0.930)	1687981	22.3505	22.35
	21 2-Nitrophenol	139	9.220	9.220	(0.942)	464375	21.4745	21.47
	22 2,4-Dimethylphenol	107	9.359	9.359	(0.956)	1779710	41.1549	41.15
	23 Bis(2-Chloroethoxy)methane	93	9.498	9.493	(0.971)	1008425	20.0321	20.03
	24 Benzoic acid	105	9.680	9.600	(0.989)	3793754	141.967	142.0
	25 2,4-Dichlorophenol	162	9.615	9.610	(0.983)	1903992	60.7902	60.79
	26 1,2,4-Trichlorobenzene	180	9.733	9.728	(0.995)	718189	19.2328	19.23
*	27 Naphthalene-d8	136	9.786	9.781	(1.000)	2364232	20.0000	
	28 Naphthalene	128	9.813	9.813	(1.003)	2337478	20.9483	20.95
	29 4-Chloroaniline	127	9.973	9.968	(1.019)	2501544	56.4443	56.44
	30 Hexachlorobutadiene	225	10.139	10.139	(1.036)	428969	18.5361	18.54
	31 4-Chloro-3-methylphenol	107	10.801	10.796	(1.104)	2070233	62.5127	62.51
	32 2-Methylnaphthalene	141	10.930	10.930	(1.117)	1255640	21.1328	21.13
	33 Hexachlorocyclopentadiene	237	11.314	11.314	(0.896)	1200161	52.3297	52.33
	34 2,4,6-Trichlorophenol	196	11.458	11.453	(0.907)	1417125	69.6294	69.63
	35 2,4,5-Trichlorophenol	196	11.512	11.512	(0.912)	1499604	68.2345	68.23
$	36 2-Fluorobiphenyl	172	11.581	11.582	(0.917)	1895499	22.9003	22.90
	37 2-Chloronaphthalene	162	11.704	11.704	(0.927)	1411620	21.8561	21.86
	38 2-Nitroaniline	65	11.955	11.945	(0.947)	1542899	69.0882	69.09
	39 Dimethylphthalate	163	12.329	12.324	(0.976)	1585882	23.0673	23.07
	40 Acenaphthylene	152	12.377	12.372	(0.980)	2355499	23.9090	23.91
	41 2,6-Dinitrotoluene	165	12.420	12.410	(0.984)	1074987	67.8441	67.84
*	42 Acenaphthene-d10	164	12.628	12.623	(1.000)	1178046	20.0000	
	43 3-Nitroaniline	138	12.628	12.623	(1.000)	1142666	71.8234	71.82
	44 Acenaphthene	153	12.682	12.677	(1.004)	1463619	23.1733	23.17
	45 2,4-Dinitrophenol	184	12.794	12.784	(1.013)	1139583	90.0939	90.09
	46 Dibenzofuran	168	12.938	12.938	(1.025)	2028282	23.9314	23.93
	47 4-Nitrophenol	109	12.960	12.954	(1.026)	719477	64.5339	64.53
	48 2,4-Dinitrotoluene	165	13.040	13.029	(1.033)	1394083	69.3827	69.38
	50 Diethylphthalate	149	13.483	13.473	(1.068)	1599937	22.1436	22.14
	49 Fluorene	166	13.488	13.489	(1.068)	1593822	24.1678	24.17
	51 4-Chlorophenyl-phenylether	204	13.526	13.521	(1.071)	799925	22.5766	22.58
	52 4-Nitroaniline	138	13.622	13.606	(1.079)	1006760	77.3716	77.37
	53 4,6-Dinitro-2-methylphenol	198	13.691	13.676	(0.914)	1518122	112.170	112.2
	54 N-Nitrosodiphenylamine	169	13.734	13.729	(0.917)	1154900	21.9294	21.93
$	55 2,4,6-Tribromophenol	330	13.911	13.911	(1.102)	338608	34.8137	34.81
	56 4-Bromophenyl-phenylether	248	14.300	14.295	(0.955)	455283	22.6597	22.66
	57 Hexachlorobenzene	284	14.509	14.504	(0.969)	464216	23.2071	23.21
	58 Pentachlorophenol	266	14.813	14.808	(0.989)	758175	67.0470	67.05
*	59 Phenanthrene-d10	188	14.979	14.979	(1.000)	1744334	20.0000	
	60 Phenanthrene	178	15.016	15.017	(1.002)	2153580	24.1950	24.20
	61 Anthracene	178	15.086	15.086	(1.007)	2143436	23.6299	23.63
	62 Carbazole	167	15.380	15.380	(1.027)	1822948	22.6015	22.60
	63 Di-n-butylphthalate	149	16.111	16.112	(1.076)	2471973	24.4522	24.45

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	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
	64 Fluoranthene	202	16.934	16.934	(1.131)	2222060	25.8123	25.81
	65 Pyrene	202	17.287	17.282	(0.898)	2236046	26.0531	26.05
$	66 Terphenyl-d14	244	17.613	17.613	(0.915)	1538293	26.3008	26.30
	67 Butylbenzylphthalate	149	18.505	18.500	(0.961)	983404	23.2084	23.21
	68 Benzo(a)anthracene	228	19.226	19.226	(0.999)	1833507	25.0385	25.04
*	69 Chrysene-d12	240	19.253	19.247	(1.000)	1463395	20.0000	
	70 3,3'-Dichlorobenzidine	252	19.258	19.253	(1.000)	1383550	53.8040	53.80
	71 Chrysene	228	19.290	19.290	(1.002)	1744821	24.3216	24.32
	72 bis(2-Ethylhexyl)phthalate	149	19.504	19.504	(0.955)	1390664	25.7807	25.78
*	134 Di-n-octylphthalate-d4	153	20.428	20.428	(1.000)	1850683	20.0000	
	73 Di-n-octylphthalate	149	20.439	20.439	(1.001)	2207393	23.0019	23.00
	74 Benzo(b)fluoranthene	252	20.866	20.861	(0.976)	1689812	23.2875	23.29
	75 Benzo(k)fluoranthene	252	20.898	20.898	(0.977)	1783485	24.3579	24.36
	76 Benzo(a)pyrene	252	21.304	21.304	(0.996)	1486236	23.0312	23.03
*	77 Perylene-d12	264	21.384	21.384	(1.000)	1357393	20.0000	
	78 Indeno(1,2,3-cd)pyrene	276	22.773	22.773	(1.065)	1924856	21.7038	21.70
	79 Dibenzo(a,h)anthracene	278	22.800	22.800	(1.066)	1328049	18.3068	18.31
	80 Benzo(g,h,i)perylene	276	23.142	23.137	(1.082)	1800218	23.1237	23.12
	90 N-Nitrosodimethylamine	74	2.970	2.954	(0.383)	1577743	43.8212	43.82
	91 Aniline	93	7.308	7.302	(0.943)	923007	13.1651	13.17
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	Compound Not Detected.					
	105 1-methylnaphthalene	141	11.101	11.101	(1.134)	1238167	20.9025	20.90
	111 Azobenzene (1,2-DP-Hydrazine)	77	13.777	13.772	(1.091)	1848059	21.5681	21.57
	187 Total Benzofluoranthenes	252	20.898	20.898	(0.977)	3289444	47.6683	47.67

> NTC

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Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 01231304.D
Lab Smp Id: VZ97LCSW1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130123.b/SW846010713.m
Misc Info: 13-1100

Calibration Date: 23-JAN-2013
Calibration Time: 10:49
Client Smp ID: VZ97LCSW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	532349	266174	1064698	693193	30.21
27 Naphthalene-d8	2007575	1003788	4015150	2364232	17.77
42 Acenaphthene-d10	1020441	510220	2040882	1178046	15.44
59 Phenanthrene-d10	1546074	773037	3092148	1744334	12.82
69 Chrysene-d12	1407005	703502	2814010	1463395	4.01
134 Di-n-octylphthala	1928310	964155	3856620	1850683	-4.03
77 Perylene-d12	1383265	691632	2766530	1357393	-1.87

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.75	7.25	8.25	7.75	0.00
27 Naphthalene-d8	9.78	9.28	10.28	9.79	0.05
42 Acenaphthene-d10	12.62	12.12	13.12	12.63	0.04
59 Phenanthrene-d10	14.98	14.48	15.48	14.98	0.00
69 Chrysene-d12	19.25	18.75	19.75	19.25	0.03
134 Di-n-octylphthala	20.43	19.93	20.93	20.43	0.00
77 Perylene-d12	21.38	20.88	21.88	21.38	0.00

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA
Client SDG: VZ97
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: VZ97LCSW1
Client Smp ID: VZ97LCSW1
Level: LOW
Operator: JZ
Data Type: MS DATA
SampleType: LCS
SpikeList File: LLLCS.spk
Quant Type: ISTD
Sublist File: LLMBLCS.sub
Method File: /chem2/nt6.i/20130123.b/SW846010713.m
Misc Info: 13-1100

	SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
3	Phenol	25.00	16.60	66.39	50-100
4	Bis(2-Chloroethyl)	25.00	17.68	70.73	52-100
6	2-Chlorophenol	25.00	18.60	74.41	56-100
7	1,3-Dichlorobenzen	25.00	16.68	66.72	23-100
9	1,4-Dichlorobenzen	25.00	16.80	67.20	25-100
11	Benzyl alcohol	25.00	18.95	75.81	19-100
12	1,2-Dichlorobenzen	25.00	17.14	68.56	30-100
13	2-Methylphenol	25.00	17.24	68.96	52-100
14	2,2'-oxybis(1-Chlo	25.00	16.24	64.96	32-111
15	4-Methylphenol	50.00	34.70	69.40	53-102
16	N-Nitroso-di-n-pro	25.00	17.29	69.14	43-104
17	Hexachloroethane	25.00	15.69	62.77	12-100
19	Nitrobenzene	25.00	18.19	72.77	33-125
20	Isophorone	25.00	22.35	89.40	57-115
21	2-Nitrophenol	25.00	21.47	85.90	56-102
22	2,4-Dimethylphenol	75.00	41.15	54.87	29-100
23	Bis(2-Chloroethoxy	25.00	20.03	80.13	54-101
24	Benzoic acid	137.5	142.0	103.25	10-131
25	2,4-Dichlorophenol	75.00	60.79	81.05	56-104
26	1,2,4-Trichloroben	25.00	19.23	76.93	27-100
28	Naphthalene	25.00	20.95	83.79	45-100
29	4-Chloroaniline	75.00	56.44	75.26	10-139
30	Hexachlorobutadien	25.00	18.54	74.14	10-100
31	4-Chloro-3-methylp	75.00	62.51	83.35	53-109
32	2-Methylnaphthalen	25.00	21.13	84.53	46-100
33	Hexachlorocyclopen	75.00	52.33	69.77	10-100
34	2,4,6-Trichlorophe	75.00	69.63	92.84	58-108
35	2,4,5-Trichlorophe	75.00	68.23	90.98	58-107
37	2-Chloronaphthalen	25.00	21.86	87.42	56-104
38	2-Nitroaniline	75.00	69.09	92.12	50-107
39	Dimethylphthalate	25.00	23.07	92.27	58-107
40	Acenaphthylene	25.00	23.91	95.64	57-100
41	2,6-Dinitrotoluene	75.00	67.84	90.46	58-112

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
43 3-Nitroaniline	75.00	71.82	95.76	21-150
44 Acenaphthene	25.00	23.17	92.69	51-100
45 2,4-Dinitrophenol	137.5	90.09	65.52	12-169
46 Dibenzofuran	25.00	23.93	95.73	57-100
47 4-Nitrophenol	75.00	64.53	86.05	35-119
48 2,4-Dinitrotoluene	75.00	69.38	92.51	58-117
49 Fluorene	25.00	24.17	96.67	56-104
50 Diethylphthalate	25.00	22.14	88.57	52-111
51 4-Chlorophenyl-phe	25.00	22.58	90.31	55-104
52 4-Nitroaniline	75.00	77.37	103.16	49-112
53 4,6-Dinitro-2-meth	137.5	112.2	81.58	13-139
54 N-Nitrosodiphenyla	25.00	21.93	87.72	60-136
56 4-Bromophenyl-phen	25.00	22.66	90.64	50-103
57 Hexachlorobenzene	25.00	23.21	92.83	54-106
58 Pentachlorophenol	75.00	67.05	89.40	46-114
60 Phenanthrene	25.00	24.20	96.78	56-102
61 Anthracene	25.00	23.63	94.52	56-101
62 Carbazole	25.00	22.60	90.41	60-108
63 Di-n-butylphthalat	25.00	24.45	97.81	56-112
64 Fluoranthene	25.00	25.81	103.25	57-110
65 Pyrene	25.00	26.05	104.21	48-119
67 Butylbenzylphthala	25.00	23.21	92.83	51-114
68 Benzo(a)anthracene	25.00	25.04	100.15	55-105
70 3,3'-Dichlorobenzi	75.00	53.80	71.74	10-128
71 Chrysene	25.00	24.32	97.29	55-104
72 bis(2-Ethylhexyl)p	25.00	25.78	103.12	28-164
73 Di-n-octylphthalat	25.00	23.00	92.01	57-107
74 Benzo(b)fluoranthe	25.00	23.29	93.15	53-112
75 Benzo(k)fluoranthe	25.00	24.36	97.43	50-116
76 Benzo(a)pyrene	25.00	23.03	92.12	45-103
78 Indeno(1,2,3-cd)py	25.00	21.70	86.82	35-118
79 Dibenzo(a,h)anthra	25.00	18.31	73.23	42-119
80 Benzo(g,h,i)peryle	25.00	23.12	92.49	39-123
91 Aniline	75.00	13.17	17.55	10-100
111 Azobenzene (1,2-DP	25.00	21.57	86.27	57-109
90 N-Nitrosodimethyla	75.00	43.82	58.43	49-100
105 1-methylnaphthalen	25.00	20.90	83.61	46-100
144 alpha-Terpineol	25.00	0.000	NK *	30-160
187 Total Benzofluoran	50.00	47.67	95.34	30-160

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	37.50	23.23	61.95	33-100

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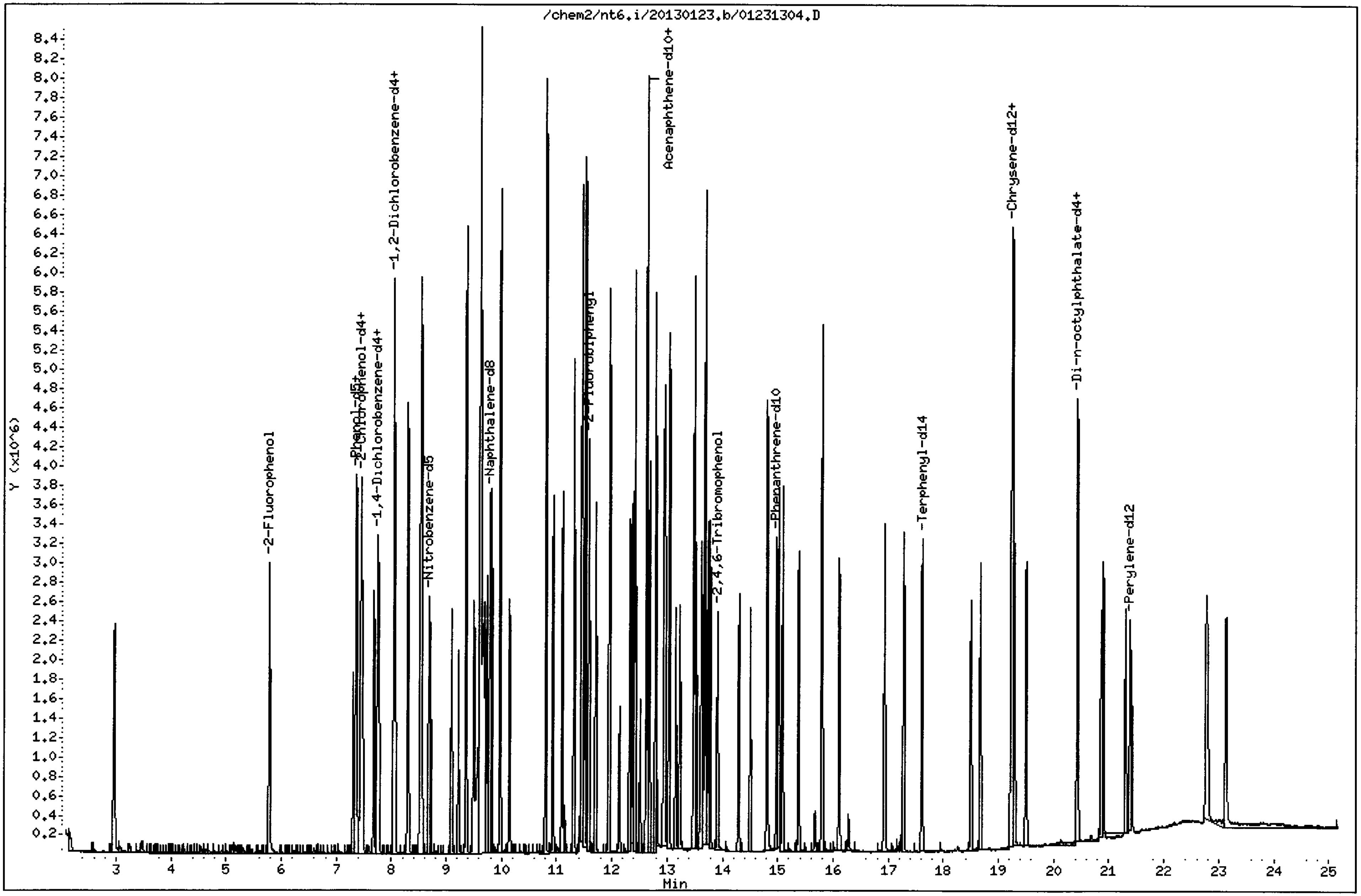
SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 2 Phenol-d5	37.50	24.26	64.70	15-121
$ 5 2-Chlorophenol-d4	37.50	24.72	65.91	46-102
$ 10 1,2-Dichlorobenzen	25.00	17.82	71.29	40-100
$ 18 Nitrobenzene-d5	25.00	19.84	79.37	50-100
$ 36 2-Fluorobiphenyl	25.00	22.90	91.60	51-100
$ 55 2,4,6-Tribromophen	37.50	34.81	92.84	46-125
$ 66 Terphenyl-d14	25.00	26.30	105.20	54-117

Data File: /chem2/nt6.i/20130123.b/01231304.D
Date : 23-JAN-2013 12:32
Client ID: VZ97LCSW1 Instrument: nt6.i
Sample Info: VZ97LCSW1,
Volume Injected (uL): 1.0 Operator: JZ
Column phase: ZB-5msi Column diameter: 0.32



CO-ELUTION SUMMARY FOR FILE - 01231304.D

Lab ID: VZ97LCSW1, Method: SW846010713.m, Instrument: nt6.i, Date: 23-JAN-201

RT	CO-ELUTION COMPOUNDS
12.628	Acenaphthene-d10 and 3-Nitroaniline

checked ok

01/23/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130123.b/01231305.D
Lab Smp Id: VZ97LCSDW1 Client Smp ID: VZ97LCSDW1
Inj Date : 23-JAN-2013 13:06
Operator : JZ Inst ID: nt6.i
Smp Info : VZ97LCSDW1,
Misc Info : 13-1100
Comment : 1ul Injection
Method : /chem2/nt6.i/20130123.b/SW846010713.m
Meth Date : 23-Jan-2013 14:37 jianqing Quant Type: ISTD
Cal Date : 07-JAN-2013 14:04 Cal File: 01071302.D
Als bottle: 5 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: LLMBLCS.sub
Target Version: 3.50

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Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Vo	500.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
$ 1	2-Fluorophenol	112	5.783	5.785	(0.747)	1012763	22.0310	22.03
$ 2	Phenol-d5	99	7.353	7.356	(0.950)	1353164	23.3138	23.31
3	Phenol	94	7.375	7.372	(0.952)	918381	16.2960	16.30
$ 5	2-Chlorophenol-d4	132	7.449	7.452	(0.962)	1065659	23.7389	23.74
4	Bis(2-Chloroethyl)ether	93	7.428	7.431	(0.959)	733565	17.6275	17.63
6	2-Chlorophenol	128	7.476	7.473	(0.966)	746148	18.1878	18.19
7	1,3-Dichlorobenzene	146	7.679	7.682	(0.992)	771682	16.3035	16.30
* 8	1,4-Dichlorobenzene-d4	152	7.743	7.746	(1.000)	594206	20.0000	
9	1,4-Dichlorobenzene	146	7.770	7.767	(1.003)	786252	16.8210	16.82
$ 10	1,2-Dichlorobenzene-d4	152	8.042	8.040	(1.039)	523126	16.6380	16.64
12	1,2-Dichlorobenzene	146	8.064	8.061	(1.041)	737561	16.7972	16.80
11	Benzyl alcohol	108	8.042	8.045	(1.039)	529590	19.0427	19.04
14	2,2'-oxybis(1-Chloropropane)	45	8.299	8.301	(1.072)	1159494	16.3111	16.31
13	2-Methylphenol	108	8.294	8.296	(1.071)	675521	17.2779	17.28
17	Hexachloroethane	117	8.550	8.547	(1.104)	318590	15.9694	15.97
16	N-Nitroso-di-n-propylamine	70	8.518	8.515	(1.100)	566563	17.3053	17.31

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	15 4-Methylphenol	108	8.534	8.531	(1.102)	1431946	35.3309	35.33
$	18 Nitrobenzene-d5	82	8.678	8.681	(0.887)	942855	19.1312	19.13
	19 Nitrobenzene	77	8.705	8.707	(0.890)	824363	18.1278	18.13
	20 Isophorone	82	9.095	9.087	(0.930)	1473211	23.0400	23.04
	21 2-Nitrophenol	139	9.223	9.220	(0.943)	397332	21.7023	21.70
	22 2,4-Dimethylphenol	107	9.357	9.359	(0.956)	1753200	47.8852	47.89
	23 Bis(2-Chloroethoxy)methane	93	9.495	9.493	(0.970)	857237	20.1132	20.11
	24 Benzoic acid	105	9.677	9.600	(0.989)	3204630	141.642	141.6
	25 2,4-Dichlorophenol	162	9.613	9.610	(0.983)	1659816	62.5930	62.59
	26 1,2,4-Trichlorobenzene	180	9.731	9.728	(0.995)	605188	19.1422	19.14
*	27 Naphthalene-d8	136	9.784	9.781	(1.000)	2001670	20.0000	
	28 Naphthalene	128	9.816	9.813	(1.003)	1963755	20.7868	20.79
	29 4-Chloroaniline	127	9.971	9.968	(1.019)	2221856	59.2141	59.21
	30 Hexachlorobutadiene	225	10.142	10.139	(1.037)	361985	18.4748	18.47
	31 4-Chloro-3-methylphenol	107	10.804	10.796	(1.104)	1803469	64.3213	64.32
	32 2-Methylnaphthalene	141	10.933	10.930	(1.117)	1065079	21.1724	21.17
	33 Hexachlorocyclopentadiene	237	11.317	11.314	(0.896)	1026489	52.3964	52.40
	34 2,4,6-Trichlorophenol	196	11.456	11.453	(0.907)	1210039	69.6020	69.60
	35 2,4,5-Trichlorophenol	196	11.515	11.512	(0.912)	1276991	68.0227	68.02
$	36 2-Fluorobiphenyl	172	11.579	11.582	(0.917)	1592006	22.5165	22.52
	37 2-Chloronaphthalene	162	11.702	11.704	(0.927)	1204384	21.8302	21.83
	38 2-Nitroaniline	65	11.953	11.945	(0.947)	1305438	68.4322	68.43
	39 Dimethylphthalate	163	12.327	12.324	(0.976)	1364820	23.2401	23.24
	40 Acenaphthylene	152	12.375	12.372	(0.980)	1983423	23.5685	23.57
	41 2,6-Dinitrotoluene	165	12.418	12.410	(0.983)	920167	67.9851	67.99
*	42 Acenaphthene-d10	164	12.626	12.623	(1.000)	1006292	20.0000	
	43 3-Nitroaniline	138	12.626	12.623	(1.000)	1009079	74.2523	74.25
	44 Acenaphthene	153	12.679	12.677	(1.004)	1237630	22.9398	22.94
	45 2,4-Dinitrophenol	184	12.786	12.784	(1.013)	1000087	92.2677	92.27
	46 Dibenzofuran	168	12.936	12.938	(1.025)	1716560	23.7103	23.71
	47 4-Nitrophenol	109	12.957	12.954	(1.026)	634329	66.6076	66.61
	48 2,4-Dinitrotoluene	165	13.037	13.029	(1.033)	1186856	69.1511	69.15
	50 Diethylphthalate	149	13.481	13.473	(1.068)	1378696	22.3384	22.34
	49 Fluorene	166	13.486	13.489	(1.068)	1335600	23.7089	23.71
	51 4-Chlorophenyl-phenylether	204	13.523	13.521	(1.071)	683223	22.5740	22.57
	52 4-Nitroaniline	138	13.620	13.606	(1.079)	937506	84.3466	84.35(R)
	53 4,6-Dinitro-2-methylphenol	198	13.689	13.676	(0.914)	1319828	113.426	113.4
	54 N-Nitrosodiphenylamine	169	13.732	13.729	(0.917)	974353	21.5191	21.52
$	55 2,4,6-Tribromophenol	330	13.913	13.911	(1.102)	284370	34.2275	34.23
	56 4-Bromophenyl-phenylether	248	14.298	14.295	(0.954)	388243	22.4751	22.48
	57 Hexachlorobenzene	284	14.506	14.504	(0.968)	388227	22.5742	22.57
	58 Pentachlorophenol	266	14.811	14.808	(0.989)	653472	67.2143	67.21
*	59 Phenanthrene-d10	188	14.982	14.979	(1.000)	1499702	20.0000	
	60 Phenanthrene	178	15.014	15.017	(1.002)	1841026	24.0575	24.06
	61 Anthracene	178	15.083	15.086	(1.007)	1826248	23.4173	23.42
	62 Carbazole	167	15.377	15.380	(1.026)	1618589	23.3413	23.34
	63 Di-n-butylphthalate	149	16.109	16.112	(1.075)	2154582	24.7892	24.79

01/23/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
	64 Fluoranthene	202	16.932	16.934	(1.130)	1972799	26.6550	26.65
	65 Pyrene	202	17.279	17.282	(0.898)	1970994	25.4157	25.42
$	66 Terphenyl-d14	244	17.616	17.613	(0.915)	1305399	24.7009	24.70
	67 Butylbenzylphthalate	149	18.502	18.500	(0.961)	891046	23.2730	23.27
	68 Benzo(a)anthracene	228	19.229	19.226	(0.999)	1695865	25.6305	25.63
*	69 Chrysene-d12	240	19.250	19.247	(1.000)	1322278	20.0000	
	70 3,3'-Dichlorobenzidine	252	19.256	19.253	(1.000)	1351708	58.1757	58.18
	71 Chrysene	228	19.293	19.290	(1.002)	1587759	24.4943	24.49
	72 bis(2-Ethylhexyl)phthalate	149	19.501	19.504	(0.954)	1230914	24.7710	24.77
*	134 Di-n-octylphthalate-d4	153	20.431	20.428	(1.000)	1704861	20.0000	
	73 Di-n-octylphthalate	149	20.436	20.439	(1.000)	2052513	23.2173	23.22
	74 Benzo(b)fluoranthene	252	20.864	20.861	(0.976)	1696537	25.1795	25.18
	75 Benzo(k)fluoranthene	252	20.901	20.898	(0.977)	1539897	22.6496	22.65
	76 Benzo(a)pyrene	252	21.307	21.304	(0.996)	1393060	23.2486	23.25
*	77 Perylene-d12	264	21.387	21.384	(1.000)	1260397	20.0000	
	78 Indeno(1,2,3-cd)pyrene	276	22.781	22.773	(1.065)	1836290	22.2986	22.30
	79 Dibenzo(a,h)anthracene	278	22.803	22.800	(1.066)	1410207	20.9354	20.94
	80 Benzo(g,h,i)perylene	276	23.139	23.137	(1.082)	1727814	23.9017	23.90
	90 N-Nitrosodimethylamine	74	2.957	2.954	(0.382)	1307687	42.3710	42.37
	91 Aniline	93	7.305	7.302	(0.943)	903798	15.0386	15.04
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	Compound Not Detected.					
	105 1-methylnaphthalene	141	11.098	11.101	(1.134)	1047267	20.8820	20.88
	111 Azobenzene (1,2-DP-Hydrazine)	77	13.775	13.772	(1.091)	1577116	21.5475	21.55
	187 Total Benzofluoranthenes	252	20.901	20.898	(0.977)	3064803	47.8308	47.83

> NTC

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

01/23/13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 01231305.D
Lab Smp Id: VZ97LCSDW1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130123.b/SW846010713.m
Misc Info: 13-1100

Calibration Date: 23-JAN-2013
Calibration Time: 10:49
Client Smp ID: VZ97LCSDW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	532349	266174	1064698	594206	11.62
27 Naphthalene-d8	2007575	1003788	4015150	2001670	-0.29
42 Acenaphthene-d10	1020441	510220	2040882	1006292	-1.39
59 Phenanthrene-d10	1546074	773037	3092148	1499702	-3.00
69 Chrysene-d12	1407005	703502	2814010	1322278	-6.02
134 Di-n-octylphthala	1928310	964155	3856620	1704861	-11.59
77 Perylene-d12	1383265	691632	2766530	1260397	-8.88

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	7.75	7.25	8.25	7.74	-0.03
27 Naphthalene-d8	9.78	9.28	10.28	9.78	0.03
42 Acenaphthene-d10	12.62	12.12	13.12	12.63	0.02
59 Phenanthrene-d10	14.98	14.48	15.48	14.98	0.02
69 Chrysene-d12	19.25	18.75	19.75	19.25	0.01
134 Di-n-octylphthala	20.43	19.93	20.93	20.43	0.01
77 Perylene-d12	21.38	20.88	21.88	21.39	0.01

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA
Client SDG: VZ97
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: VZ97LCSDW1
Client Smp ID: VZ97LCSDW1
Level: LOW
Operator: JZ
Data Type: MS DATA
SampleType: LCSD
SpikeList File: LLLCS.spk
Quant Type: ISTD
Sublist File: LLMBLCS.sub
Method File: /chem2/nt6.i/20130123.b/SW846010713.m
Misc Info: 13-1100

SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
3	Phenol	25.00	16.30	65.18	50-100
4	Bis(2-Chloroethyl)	25.00	17.63	70.51	52-100
6	2-Chlorophenol	25.00	18.19	72.75	56-100
7	1,3-Dichlorobenzen	25.00	16.30	65.21	23-100
9	1,4-Dichlorobenzen	25.00	16.82	67.28	25-100
11	Benzyl alcohol	25.00	19.04	76.17	19-100
12	1,2-Dichlorobenzen	25.00	16.80	67.19	30-100
13	2-Methylphenol	25.00	17.28	69.11	52-100
14	2,2'-oxybis(1-Chlo	25.00	16.31	65.24	32-111
15	4-Methylphenol	50.00	35.33	70.66	53-102
16	N-Nitroso-di-n-pro	25.00	17.31	69.22	43-104
17	Hexachloroethane	25.00	15.97	63.88	12-100
19	Nitrobenzene	25.00	18.13	72.51	33-125
20	Isophorone	25.00	23.04	92.16	57-115
21	2-Nitrophenol	25.00	21.70	86.81	56-102
22	2,4-Dimethylphenol	75.00	47.89	63.85	29-100
23	Bis(2-Chloroethoxy	25.00	20.11	80.45	54-101
24	Benzoic acid	137.5	141.6	103.01	10-131
25	2,4-Dichlorophenol	75.00	62.59	83.46	56-104
26	1,2,4-Trichloroben	25.00	19.14	76.57	27-100
28	Naphthalene	25.00	20.79	83.15	45-100
29	4-Chloroaniline	75.00	59.21	78.95	10-139
30	Hexachlorobutadien	25.00	18.47	73.90	10-100
31	4-Chloro-3-methylp	75.00	64.32	85.76	53-109
32	2-Methylnaphthalen	25.00	21.17	84.69	46-100
33	Hexachlorocyclopen	75.00	52.40	69.86	10-100
34	2,4,6-Trichlorophe	75.00	69.60	92.80	58-108
35	2,4,5-Trichlorophe	75.00	68.02	90.70	58-107
37	2-Chloronaphthalen	25.00	21.83	87.32	56-104
38	2-Nitroaniline	75.00	68.43	91.24	50-107
39	Dimethylphthalate	25.00	23.24	92.96	58-107
40	Acenaphthylene	25.00	23.57	94.27	57-100
41	2,6-Dinitrotoluene	75.00	67.99	90.65	58-112

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
43 3-Nitroaniline	75.00	74.25	99.00	21-150
44 Acenaphthene	25.00	22.94	91.76	51-100
45 2,4-Dinitrophenol	137.5	92.27	67.10	12-169
46 Dibenzofuran	25.00	23.71	94.84	57-100
47 4-Nitrophenol	75.00	66.61	88.81	35-119
48 2,4-Dinitrotoluene	75.00	69.15	92.20	58-117
49 Fluorene	25.00	23.71	94.84	56-104
50 Diethylphthalate	25.00	22.34	89.35	52-111
51 4-Chlorophenyl-phe	25.00	22.57	90.30	55-104
52 4-Nitroaniline	75.00	84.35	112.46*	49-112
53 4,6-Dinitro-2-meth	137.5	113.4	82.49	13-139
54 N-Nitrosodiphenyla	25.00	21.52	86.08	60-136
56 4-Bromophenyl-phen	25.00	22.48	89.90	50-103
57 Hexachlorobenzene	25.00	22.57	90.30	54-106
58 Pentachlorophenol	75.00	67.21	89.62	46-114
60 Phenanthrene	25.00	24.06	96.23	56-102
61 Anthracene	25.00	23.42	93.67	56-101
62 Carbazole	25.00	23.34	93.37	60-108
63 Di-n-butylphthalat	25.00	24.79	99.16	56-112
64 Fluoranthene	25.00	26.65	106.62	57-110
65 Pyrene	25.00	25.42	101.66	48-119
67 Butylbenzylphthala	25.00	23.27	93.09	51-114
68 Benzo(a)anthracene	25.00	25.63	102.52	55-105
70 3,3'-Dichlorobenzi	75.00	58.18	77.57	10-128
71 Chrysene	25.00	24.49	97.98	55-104
72 bis(2-Ethylhexyl)p	25.00	24.77	99.08	28-164
73 Di-n-octylphthalat	25.00	23.22	92.87	57-107
74 Benzo(b)fluoranthe	25.00	25.18	100.72	53-112
75 Benzo(k)fluoranthe	25.00	22.65	90.60	50-116
76 Benzo(a)pyrene	25.00	23.25	92.99	45-103
78 Indeno(1,2,3-cd)py	25.00	22.30	89.19	35-118
79 Dibenzo(a,h)anthra	25.00	20.94	83.74	42-119
80 Benzo(g,h,i)peryle	25.00	23.90	95.61	39-123
91 Aniline	75.00	15.04	20.05	10-100
111 Azobenzene (1,2-DP	25.00	21.55	86.19	57-109
90 N-Nitrosodimethyla	75.00	42.37	56.49	49-100
105 1-methylnaphthalen	25.00	20.88	83.53	46-100
144 alpha-Terpineol	25.00	0.000	NC *	30-160
187 Total Benzofluoran	50.00	47.83	95.66	30-160

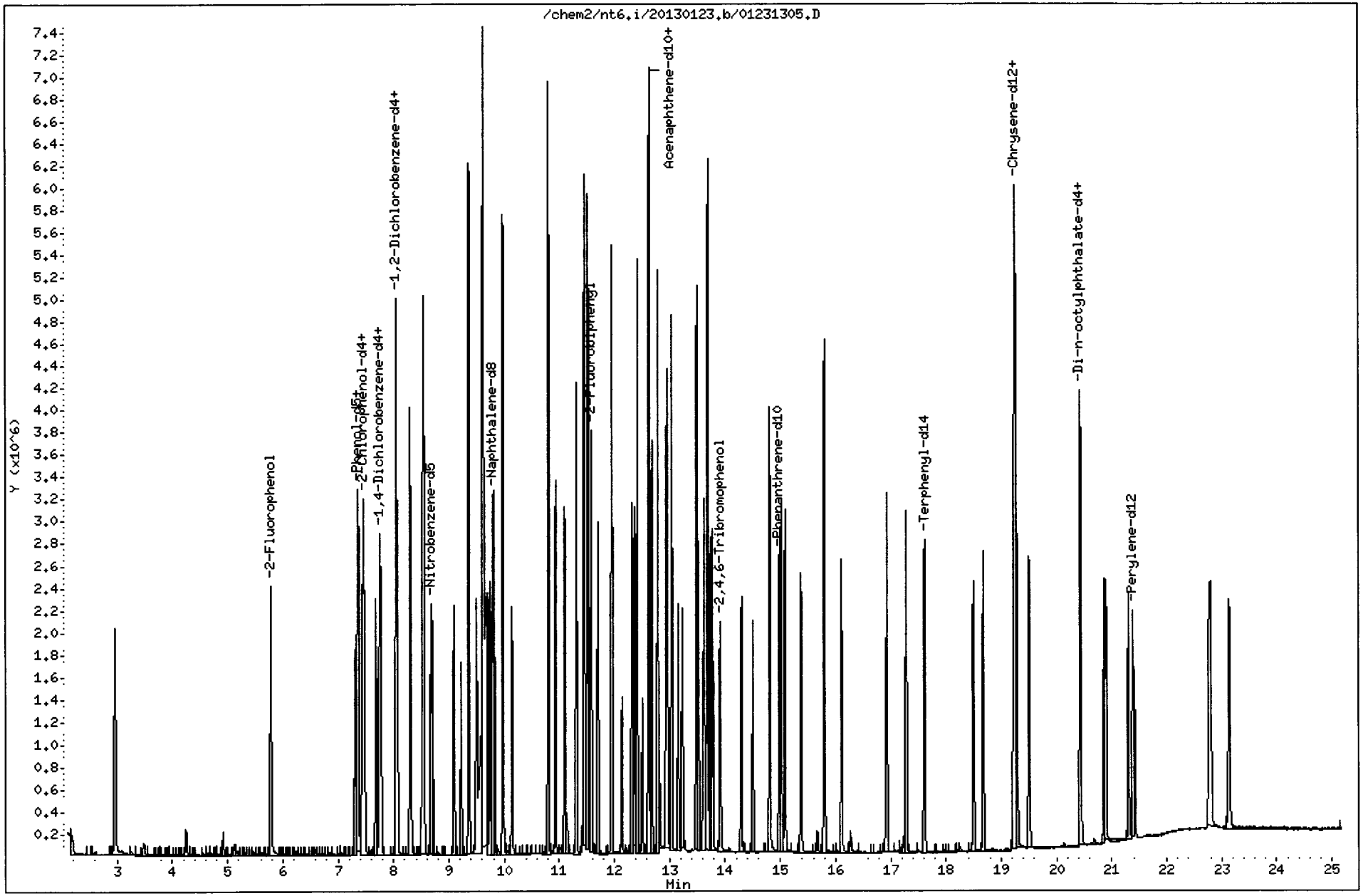
SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	37.50	22.03	58.75	33-100

01/23/13

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 2 Phenol-d5	37.50	23.31	62.17	15-121
$ 5 2-Chlorophenol-d4	37.50	23.74	63.30	46-102
$ 10 1,2-Dichlorobenzen	25.00	16.64	66.55	40-100
$ 18 Nitrobenzene-d5	25.00	19.13	76.52	50-100
$ 36 2-Fluorobiphenyl	25.00	22.52	90.07	51-100
$ 55 2,4,6-Tribromophen	37.50	34.23	91.27	46-125
$ 66 Terphenyl-d14	25.00	24.70	98.80	54-117

Data File: /chem2/nt6.i/20130123.b/01231305.D
Date : 23-JAN-2013 13:06
Client ID: VZ97LCSDW1
Sample Info: VZ97LCSDW1,
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32



CO-ELUTION SUMMARY FOR FILE - 01231305.D

Lab ID: VZ97LCSDW1, Method: SW846010713.m, Instrument: nt6.i, Date: 23-JAN-20

RT	CO-ELUTION COMPOUNDS
12.626	Acenaphthene-d10 and 3-Nitroaniline
8.042	1,2-Dichlorobenzene-d4 and Benzyl alcohol

checked OK

01/23/13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Analyst Notes / Corrective Action Log

ARI Project ID: VZ97 Client ID: chev. sub

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest) **427S**(Dir Inj) **428S**(EPH) **432S**(EDB) **Other**

Parameter(s): ethanol o-cresol m-cresol

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8 FID-9 ECD-1 ECD-5 ECD-6 ECD-7

Dates: Curve: 01/17 & 01/22/13 Analysis Start: 01/17/13

Endrin/DDT Breakdown <15%?	YES / NO / NA	Method Blank In Control?	YES / NO
ICal Meets RF & %RSD Criteria?	YES / NO	LCS/LCSD Recovery In Control?	YES / NO
CCal Meets RF & %RSD Criteria?	YES / NO	Surrogate Recovery In Control?	YES / NO
Manual Integrations for ICal?	YES / NO	Manual Integrations for Samples?	YES / NO
Internal Standard Meets Criteria?	YES / NO / NA	Special Analysis Criteria Met?	YES / NO / NA

Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary): Samples ran 1st on 01/17/13, on fid 7, curved quadratic due to misc peak almost co-eluting (possibly a peak from D.I.W) w/ analyte, malfunctioned, not injecting the closing ccal, also syringe had to curve quad due to RSD failing high for all samples reran and curved for on fid 5. 01/25/13

ran on 01/18, 01/21 and 01/22/13. 01/18/13 the curve failed due to high RSD ~33% and failed I.S 7100%. 01/21/13 curve passed and ccals meet but the ethanol analyte peak elutes between two contamination peaks giving very poor chrom. (low column and a new liner and on 01/22/13 installed instrument curved ave & no peaks interfering w/ analyte sample, is a non-detect for all runs reporting 01/17/13 & 01/22/13 runs

Additional Details on Reverse: Yes / No

Analyst: [signature] **Date:** 01/23/13

Reviewer: [signature] **Date:** 1/29/13

Analytical Resources Inc.: Organics Instrument Log

FID-5 - HP 5890 Series II - Serial No.: 336A55145

Date: 01/17/13 Analysis: 9/4013 Analyst: JK

Column 1 Serial No.: 147376 Column Type: DB wax plus

Column 2 Serial No.: — Column Type: —

GC Method: 9/4013 ICal Date: 01/03/13 Injection Volume: 1 µL

IS

S814-5

Ical/Ccal

S817-1

S826-3

ICV

S827-1

Document All Maintenance Tasks In StarLIMS

	Inject Date/Time	Filename	DF	LabID
1	17-JAN-2013 11:39	0117a001.d	1	MEOH RINSE
2	17-JAN-2013 11:53	0117a002.d	1	MEOH RINSE
3	17-JAN-2013 12:07	0117a003.d	1	MEOH RINSE
4	17-JAN-2013 12:21	0117a004.d	1	IB
5	17-JAN-2013 12:35	0117a005.d	1	MEOH RINSE
6	17-JAN-2013 12:49	0117a006.d	1	GLYCOL#1
7	17-JAN-2013 13:03	0117a007.d	1	MEOH RINSE
8	17-JAN-2013 13:17	0117a008.d	1	WA03MBW1
9	17-JAN-2013 13:31	0117a009.d	1	MEOH RINSE
10	17-JAN-2013 13:46	0117a010.d	1	WA03LCSW1
11	17-JAN-2013 14:00	0117a011.d	1	MEOH RINSE
12	17-JAN-2013 14:14	0117a012.d	1	WA03LCSDW1
13	17-JAN-2013 14:28	0117a013.d	1	MEOH RINSE
	17-JAN-2013 14:42	0117a014.d	1	WA03A
	17-JAN-2013 14:56	0117a015.d	1	MEOH RINSE
	17-JAN-2013 15:10	0117a016.d	1	WA03AMS
	17-JAN-2013 15:24	0117a017.d	1	MEOH RINSE
	17-JAN-2013 15:38	0117a018.d	1	WA03AMSD
	17-JAN-2013 15:53	0117a019.d	1	MEOH RINSE
	17-JAN-2013 16:07	0117a020.d	1	WA03B
	17-JAN-2013 16:21	0117a021.d	1	MEOH RINSE
	17-JAN-2013 16:35	0117a022.d	1	GLYCOL#2
	17-JAN-2013 16:49	0117a023.d	1	MEOH RINSE
	17-JAN-2013 17:03	0117a024.d	1	MEOH RINSE
	17-JAN-2013 17:17	0117a025.d	1	MEOH RINSE

contain information or be lined out. Make all entries legible!
for each QC period. Document All Maintenance T...

1/31/13

UZ97 : 01109

Analytical Resources Inc.: Organics Instrument Log

FID-5 - HP 5890 Series II - Serial No.: 336A55145

Date: 01/22/13 Analysis: ethanol Analyst: JL

Column 1 Serial No.: 174535 Column Type: ZB wax plus

Column 2 Serial No.: — Column Type: —

GC Method: glycol5b ICal Date: 01/22/13 Injection Volume: 1 µl

IS	Ical/Ccal	ICV
~~5850-5~~ 01/31/13	~~5850-1~~ 01/31/13	~~5827-1~~
	~~5850-3~~	01/31/13
5850-4	5850-2	~~5850-4~~
	5836-3	

Document All Maintenance Tasks In StarLIMS

	Inject Date/Time	Filename	DF	LabID
1	22-JAN-2013 09:42	0122a001.d	1	10PPMETHANOL
2	22-JAN-2013 10:04	0122a002.d	1	50PPMETHANOL
3	22-JAN-2013 10:27	0122a003.d	1	RINSE
4	22-JAN-2013 10:49	0122a004.d	1	IB
5	22-JAN-2013 11:12	0122a005.d	1	RINSE
6	22-JAN-2013 11:34	0122a006.d	1	10PPMETHANOL
7	22-JAN-2013 11:57	0122a007.d	1	RINSE
8	22-JAN-2013 12:19	0122a008.d	1	25PPMETHANOL
9	22-JAN-2013 12:42	0122a009.d	1	RINSE
10	22-JAN-2013 13:05	0122a010.d	1	50PPMETHANOL
11	22-JAN-2013 13:27	0122a011.d	1	RINSE
12	22-JAN-2013 13:50	0122a012.d	1	100PPMETHANOL
13	22-JAN-2013 14:13	0122a013.d	1	RINSE
14	22-JAN-2013 14:36	0122a014.d	1	125PPMETHANOL
15	22-JAN-2013 14:58	0122a015.d	1	RINSE
16	22-JAN-2013 15:21	0122a016.d	1	150PPMETHANOL
17	22-JAN-2013 15:44	0122a017.d	1	RINSE
18	22-JAN-2013 16:07	0122a018.d	1	200PPMETHANOL
19	22-JAN-2013 16:29	0122a019.d	1	RINSE
20	22-JAN-2013 16:52	0122a020.d	1	IB
21	22-JAN-2013 17:15	0122a021.d	1	RINSE
22	22-JAN-2013 17:37	0122a022.d	1	ETHANOL#1
23	22-JAN-2013 18:00	0122a023.d	1	RINSE
24	22-JAN-2013 18:22	0122a024.d	1	VZ97MBW1
25	22-JAN-2013 18:44	0122a025.d	1	RINSE
26	22-JAN-2013 19:07	0122a026.d	1	VZ97LCSW1
27	22-JAN-2013 19:29	0122a027.d	1	RINSE
28	22-JAN-2013 19:51	0122a028.d	1	VZ97LCSDW1
29	22-JAN-2013 20:13	0122a029.d	1	RINSE
30	22-JAN-2013 20:35	0122a030.d	1	VZ97A
31	22-JAN-2013 20:57	0122a031.d	1	RINSE
32	22-JAN-2013 21:19	0122a032.d	1	VZ97AMS
33	22-JAN-2013 21:41	0122a033.d	1	RINSE
34	22-JAN-2013 22:03	0122a034.d	1	VZ97AMSD
35	22-JAN-2013 22:25	0122a035.d	1	RINSE
36	22-JAN-2013 22:48	0122a036.d	1	ETHANOL#2
37	22-JAN-2013 23:10	0122a037.d	1	RINSE
38	22-JAN-2013 23:32	0122a038.d	1	RINSE

01/31/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Analytical Resources, Inc.

Data file : /chem3/fid5.i/20130122ethanol.b/0122a030.d
Lab Smp Id: VZ97S
Inj Date : 22-JAN-2013 20:35
Operator : JR Inst ID: fid5.i
Smp Info : VZ97S
Misc Info : 12-
Comment :
Method : /chem3/fid5.i/20130122ethanol.b/ethanol.m
Meth Date : 23-Jan-2013 07:22 jrains Quant Type: ISTD
Cal Date : 22-JAN-2013 16:07 Cal File: 0122a018.d
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: lims.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (mg/Kg)
	4 ethyl acetate	1.500	1.500	(0.098)	26957		
	1 methanol	Compound Not Detected.					
	2 isopropyl alcohol	Compound Not Detected.					
	3 ethanol	4.480	4.471	(0.293)	1167	0 37683	0 376
	7 isobutyl alcohol	6.173	6.144	(0.404)	9250		
	5 ethylene glycol	Compound Not Detected.					
	9 propylene glycol	4.832	4.773	(0.701)	918		
$	6 o-cresol	14.419	14.411	(0.944)	266630	25.3497	25.349
*	10 I.S. m-cresol	15.280	15.268	(1.000)	356000	25.0000	
*	11 I S. butylene glycol	6.894	6.926	(1.000)	1030	25.0000	

01/23/13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: fid5.i
Lab File ID: 0122a030.d
Lab Smp Id: VZ97S
Analysis Type: OTHER
Quant Type: ISTD
Operator: JR
Method File: /chem3/fid5.i/20130122ethanol.b/ethanol.m
Misc Info: 12-

Calibration Date: 22-JAN-2013
Calibration Time: 13:05

Level: LOW
Sample Type: SOIL

Test Mode:
Use Initial Calibration Level 3.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF	
10 I.S. m-cresol	354601	177300	709202	356000	0.39	*
~~11 I.S. butylene gly~~	~~0~~	~~0~~	~~0~~	~~1030~~	~~++++++~~	

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF	
10 I.S. m-cresol	15.27	14.77	15.77	15.28	0.08	*
~~11 I.S. butylene gly~~	~~6.93~~	~~6.43~~	~~7.43~~	~~6.89~~	~~-0.46~~	

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.

* not spiked

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 20130122ethanol
Sample Matrix: SOLID Fraction: OTHER
Lab Smp Id: VZ97S
Level: LOW Operator: JR
Data Type: GC DATA SampleType: SAMPLE
SpikeList File: Quant Type: ISTD
Sublist File: lims.sub
Method File: /chem3/fid5.i/20130122ethanol.b/ethanol.m
Misc Info: 12-

SURROGATE COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
$ 6 o-cresol	25.000	25.349	101.40	30-150

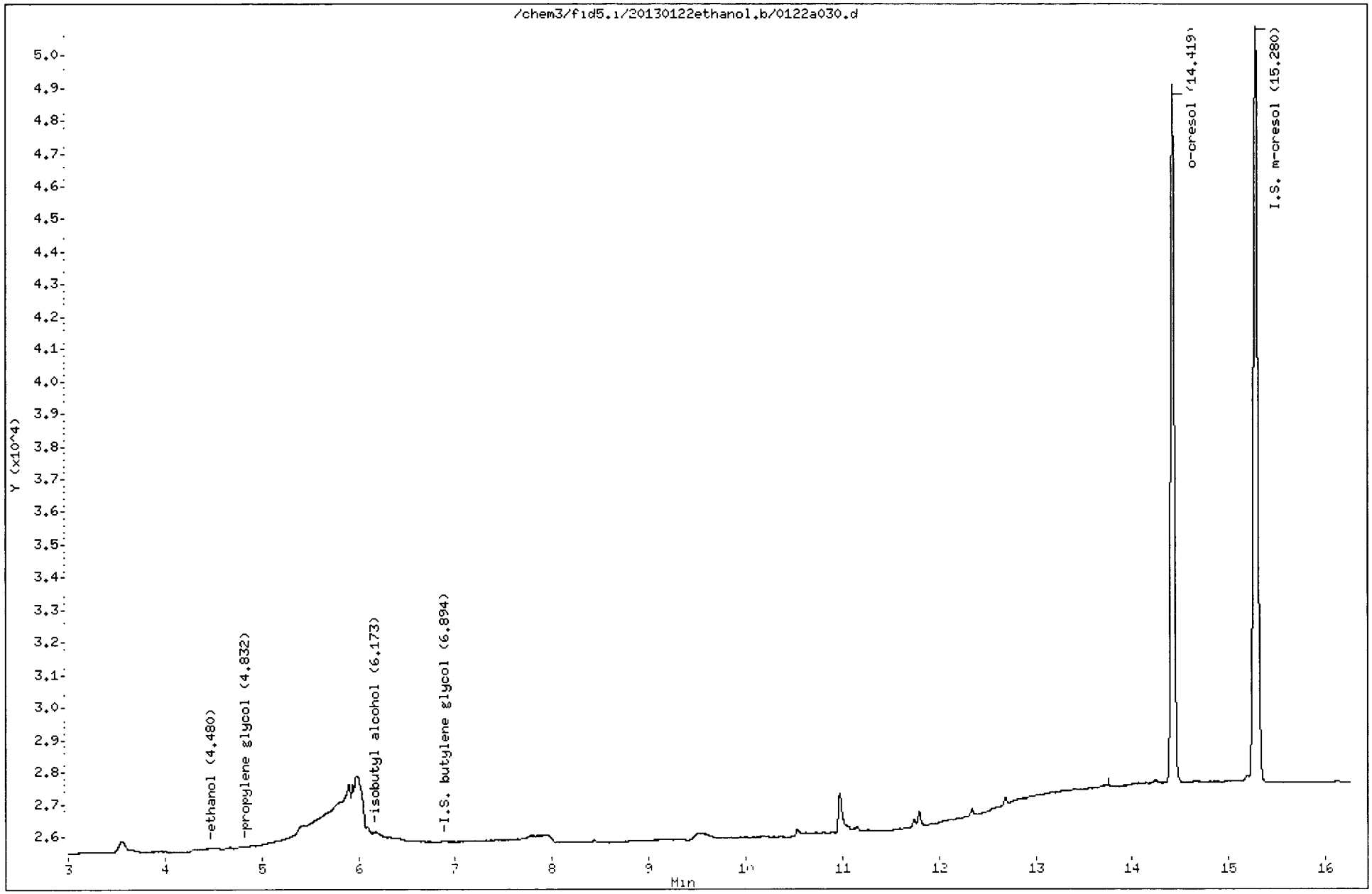
Data File: /chem3/fid5.i/20130122ethanol.b/0122a030.d
Date : 22-JAN-2013 20:35
Client ID:
Sample Info: WZ97S

Instrument: fid5.1

Operator: JR
Column diameter: 0.32

Column phase:

WZ97 91111



Analytical Resources, Inc.

Data file : /chem2/fid7.i/20130117ETHANOL.B/0117A017.D
Lab Smp Id: VZ97MBW1
Inj Date : 18-JAN-2013 00:06
Operator : MS Inst ID: fid7.i
Smp Info : VZ97MBW1
Misc Info :
Comment :
Method : /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Meth Date : 24-Jan-2013 10:03 jrains Quant Type: ISTD
Cal Date : 17-JAN-2013 20:52 Cal File: 0117A010.D
Als bottle: 10
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (mg/L)
	1 Ethyl Acetate	Compound Not Detected.					
	2 Methanol	Compound Not Detected.					
	3 Isopropanol	Compound Not Detected.					
	4 Ethanol	Compound Not Detected.					
	5 n-Butyl Ether	Compound Not Detected.					
	6 Isobutyl Acetate	Compound Not Detected.					
	7 n-Propanol	Compound Not Detected.					
	8 n-Butyl Acetate	Compound Not Detected.					
	9 1-Methoxy-2-propanol	Compound Not Detected.					
	10 n-Butanol	Compound Not Detected.					
	11 Prop-Gly-Me-Ether-Acetate	Compound Not Detected.					
	12 2-Methoxyethanol Acetate	Compound Not Detected.					
	13 2-Ethoxyethyl Acetate	Compound Not Detected					
	14 Propargyl Alcohol	Compound Not Detected.					
	15 2-Butoxyethanol	Compound Not Detected					
	16 Ethylene Glycol	Compound Not Detected					
	17 Diethylene Glycol MonoButyl Et	Compound Not Detected					
*	18 m-cresol	12.824	12.820	(1.000)	965001	25.0000	
$	19 o-Cresol	12 343	12.339	(0.962)	776784	25.4308	25.430
*	20 Butylene Glycol	Compound Not Detected.					

01/24/13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: fid7.i
Lab File ID: 0117A017.D
Lab Smp Id: VZ97MBW1
Analysis Type: OTHER
Quant Type: ISTD
Operator: MS
Method File: /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Misc Info:

Calibration Date: 17-JAN-2013
Calibration Time: 20:52

Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 2.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF	
18 m-cresol	960708	480354	1921416	965001	0.45	*
20 ~~Butylene Glycol~~	~~0~~	~~0~~	~~0~~	~~0~~	~~++++++~~	

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF	
18 m-cresol	12.81	12.31	13.31	12.82	0.11	*
20 ~~Butylene Glycol~~	~~0.00~~	~~-0.50~~	~~0.50~~	~~0.00~~	~~++++++~~	

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.

* mf spiked

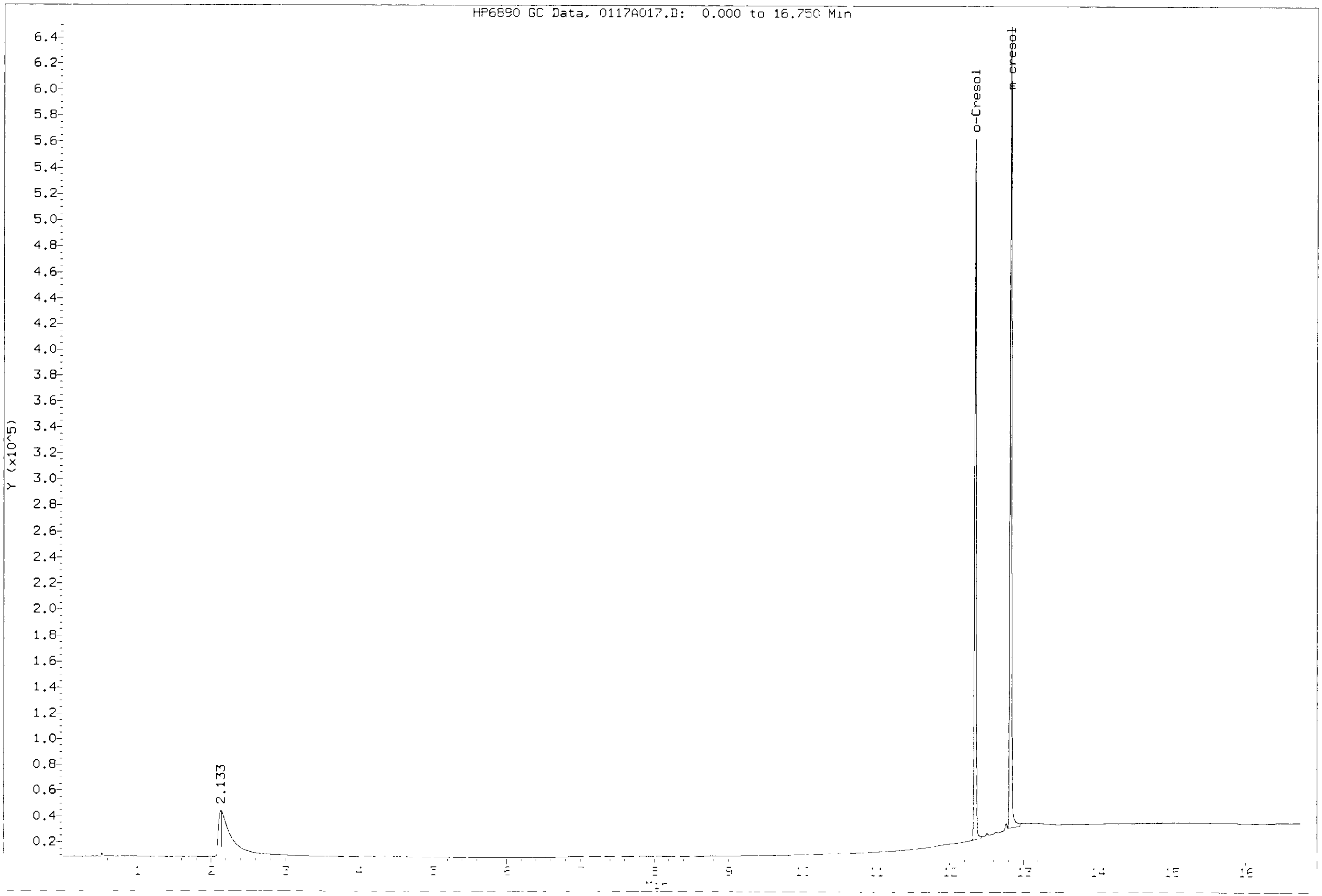
Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 20100113glycolwater
Sample Matrix: LIQUID Fraction: OTHER
Lab Smp Id: VZ97MBW1
Level: LOW Operator: MS
Data Type: GC DATA SampleType: SAMPLE
SpikeList File: Quant Type: ISTD
Sublist File: all.sub
Method File: /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Misc Info:

SURROGATE COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
$ 19 o-Cresol	25.000	25.430	101.72	0-150

Data File: /chem2/fid7.i/20130117ETHANOL.B/0117A017.D
Injection Date: 18-JAN-2013 00:06
Instrument: fid7.i
Client Sample ID:



Analytical Resources, Inc.

Data file : /chem2/fid7.i/20130117ETHANOL.B/0117A018.D
Lab Smp Id: VZ97LCSW1
Inj Date : 18-JAN-2013 00:34
Operator : MS Inst ID: fid7.i
Smp Info : VZ97LCSW1
Misc Info :
Comment :
Method : /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Meth Date : 24-Jan-2013 10:03 jrains Quant Type: ISTD
Cal Date : 17-JAN-2013 20:52 Cal File: 0117A010.D
Als bottle: 11
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/L)
1	Ethyl Acetate	Compound Not Detected.					
2	Methanol	Compound Not Detected.					
3	Isopropanol	Compound Not Detected.					
4	Ethanol	2.330	2.256	(0.000)	765219	54.7026	54.702(M)
5	n-Butyl Ether	Compound Not Detected.					
6	Isobutyl Acetate	Compound Not Detected.					
7	n-Propanol	Compound Not Detected.					
8	n-Butyl Acetate	Compound Not Detected.					
9	1-Methoxy-2-propanol	Compound Not Detected.					
10	n-Butanol	Compound Not Detected.					
11	Prop-Gly-Me-Ether-Acetate	Compound Not Detected					
12	2-Methoxyethanol Acetate	Compound Not Detected					
13	2-Ethoxyethyl Acetate	Compound Not Detected.					
14	Propargyl Alcohol	Compound Not Detected					
15	2-Butoxyethanol	Compound Not Detected.					
16	Ethylene Glycol	Compound Not Detected.					
17	Diethylene Glycol MonoButyl Et	Compound Not Detected.					
* 18	m-cresol	12.824	12.820	(1.000)	957606	25.0000	
$ 19	o-Cresol	12.344	12.339	(0.963)	785344	25.9096	25.909
* 20	Butylene Glycol	Compound Not Detected.					

JR 01/24/13

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: fid7.i
Lab File ID: 0117A018.D
Lab Smp Id: VZ97LCSW1
Analysis Type: OTHER
Quant Type: ISTD
Operator: MS
Method File: /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Misc Info:

Calibration Date: 17-JAN-2013
Calibration Time: 20:52

Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 2.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF	
18 m-cresol	960708	480354	1921416	957606	-0.32	
20 Butylene Glycol	0	0	0	0	++++++	*

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF	
18 m-cresol	12.81	12.31	13.31	12.82	0.12	
20 Butylene Glycol	0.00	-0.50	0.50	0.00	+++++++	*

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.

* not spiked

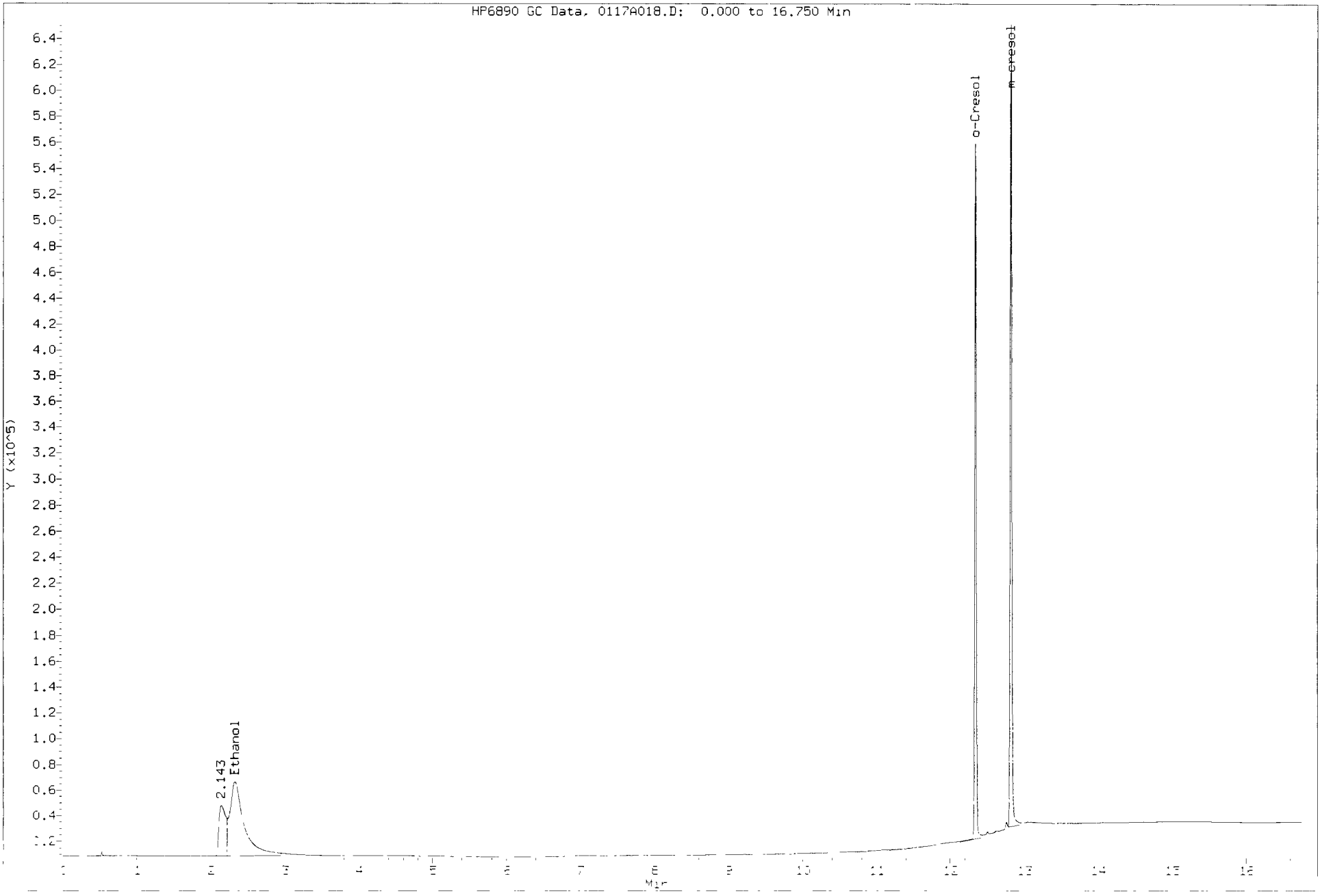
Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 20100113glycolwater
Sample Matrix: LIQUID Fraction: OTHER
Lab Smp Id: VZ97LCSW1
Level: LOW Operator: MS
Data Type: GC DATA SampleType: SAMPLE
SpikeList File: Quant Type: ISTD
Sublist File: all.sub
Method File: /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Misc Info:

SURROGATE COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
$ 19 o-Cresol	25.000	25.909	103.64	0-150

Data File: /chem2/fid7.i/20130117ETHANOL.B/0117A018.D
Injection Date: 18-JAN-2013 00:34
Instrument: fid7.i
Client Sample ID:



82416-197

Analytical Resources, Inc.

Data file : /chem2/fid7.i/20130117ETHANOL.B/0117A019.D
Lab Smp Id: VZ97LCSDW1
Inj Date : 18-JAN-2013 01:02
Operator : MS Inst ID: fid7.i
Smp Info : VZ97LCSDW1
Misc Info :
Comment :
Method : /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Meth Date : 24-Jan-2013 10:03 jrains Quant Type: ISTD
Cal Date : 17-JAN-2013 20:52 Cal File: 0117A010.D
Als bottle: 12
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/L)
1	Ethyl Acetate	Compound Not Detected					
2	Methanol	Compound Not Detected.					
3	Isopropanol	Compound Not Detected					
4	Ethanol	2.311	2.256	(0.000)	699137	49.1587	49.158(M)
5	n-Butyl Ether	Compound Not Detected					
6	Isobutyl Acetate	Compound Not Detected.					
7	n-Propanol	Compound Not Detected.					
8	n-Butyl Acetate	Compound Not Detected.					
9	1-Methoxy-2-propanol	Compound Not Detected.					
10	n-Butanol	Compound Not Detected.					
11	Prop-Gly-Me-Ether-Acetate	Compound Not Detected.					
12	2-Methoxyethanol Acetate	Compound Not Detected.					
13	2-Ethoxyethyl Acetate	Compound Not Detected.					
14	Propargyl Alcohol	Compound Not Detected.					
15	2-Butoxyethanol	Compound Not Detected.					
16	Ethylene Glycol	Compound Not Detected.					
17	Diethylene Glycol MonoButyl Et	Compound Not Detected.					
* 18	m-cresol	12.826	12.820	(1.000)	973578	25.0000	
$ 19	o-Cresol	12.347	12.339	(0 963)	792045	25.7020	25 701
* 20	Butylene Glycol	Compound Not Detected.					

01/24/13

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: fid7.i
Lab File ID: 0117A019.D
Lab Smp Id: VZ97LCSDW1
Analysis Type: OTHER
Quant Type: ISTD
Operator: MS
Method File: /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Misc Info:

Calibration Date: 17-JAN-2013
Calibration Time: 20:52

Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 2.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF	
18 m-cresol	960708	480354	1921416	973578	1.34	*
~~20 Butylene Glycol~~	~~0~~	~~0~~	~~0~~	~~0~~	~~+++++++~~	~~*~~

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF	
18 m-cresol	12.81	12.31	13.31	12.83	0.13	*
~~20 Butylene Glycol~~	~~0.00~~	~~0.50~~	~~0.50~~	~~0.00~~	~~+++++++~~	

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.

* not spiked

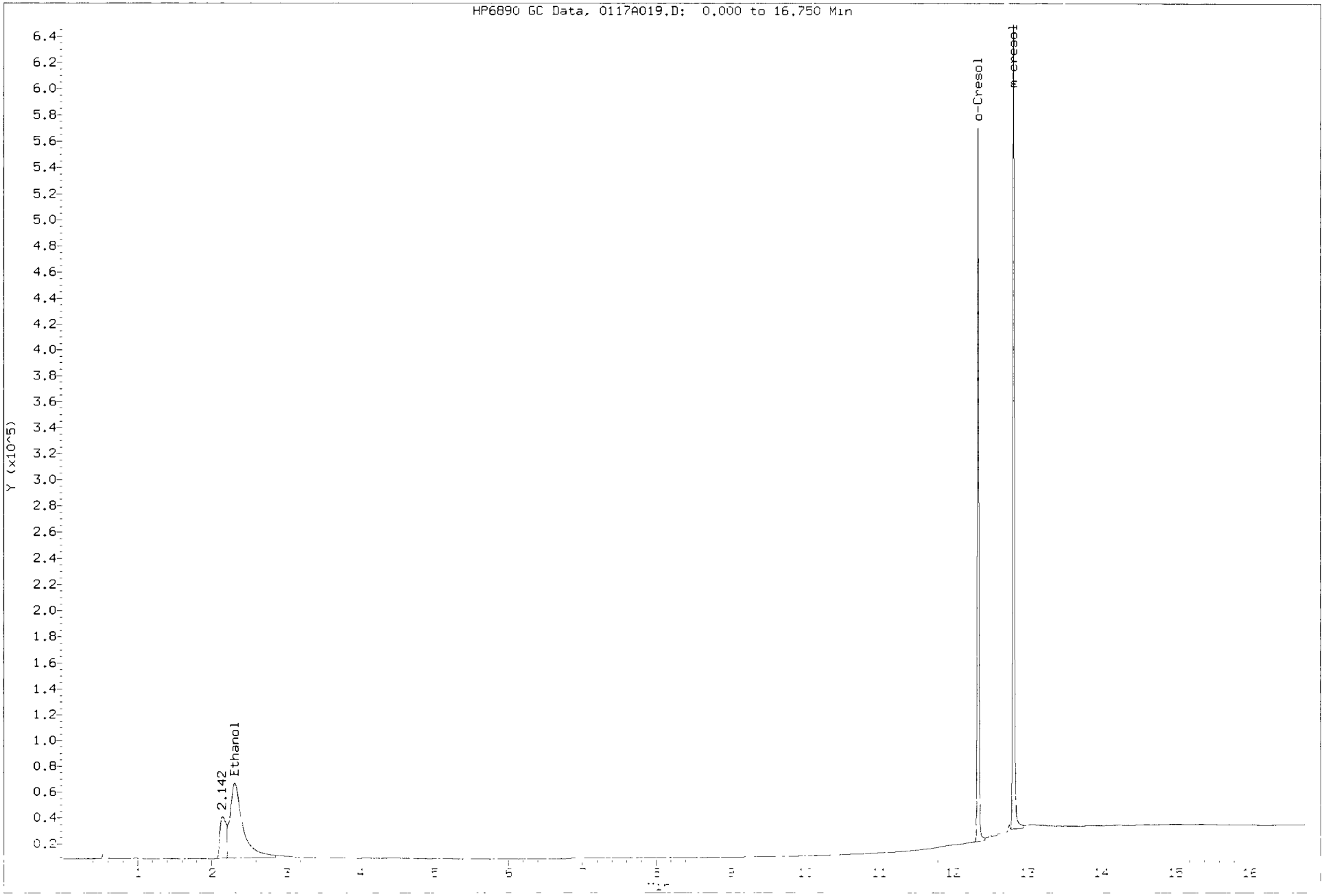
Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 20100113glycolwater
Sample Matrix: LIQUID Fraction: OTHER
Lab Smp Id: VZ97LCSDW1
Level: LOW Operator: MS
Data Type: GC DATA SampleType: SAMPLE
SpikeList File: Quant Type: ISTD
Sublist File: all.sub
Method File: /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Misc Info:

SURROGATE COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
$ 19 o-Cresol	25.000	25.701	102.81	0-150

Data File: /chem2/fid7.i/20130117ETHANOL.B/0117A019.D
Injection Date: 18-JAN-2013 01:02
Instrument: fid7.i
Client Sample ID:



Analytical Resources, Inc.

Data file : /chem2/fid7.i/20130117ETHANOL.B/0117A020.D
Lab Smp Id: VZ97S
Inj Date : 18-JAN-2013 01:30
Operator : MS Inst ID: fid7.i
Smp Info : VZ97S
Misc Info :
Comment :
Method : /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Meth Date : 24-Jan-2013 10:03 jrains Quant Type: ISTD
Cal Date : 17-JAN-2013 20:52 Cal File: 0117A010.D
Als bottle: 13
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

						CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/L)
	Compounds	RT	EXP RT	REL RT	RESPONSE		
1	Ethyl Acetate	Compound Not Detected.					
2	Methanol	Compound Not Detected					
3	Isopropanol	Compound Not Detected.					
4	Ethanol	Compound Not Detected.					
5	n-Butyl Ether	Compound Not Detected.					
6	Isobutyl Acetate	Compound Not Detected.					
7	n-Propanol	Compound Not Detected.					
8	n-Butyl Acetate	Compound Not Detected.					
9	1-Methoxy-2-propanol	Compound Not Detected.					
10	n-Butanol	Compound Not Detected					
11	Prop-Gly-Me-Ether-Acetate	Compound Not Detected					
12	2-Methoxyethanol Acetate	Compound Not Detected.					
13	2-Ethoxyethyl Acetate	Compound Not Detected.					
14	Propargyl Alcohol	Compound Not Detected.					
15	2-Butoxyethanol	Compound Not Detected.					
16	Ethylene Glycol	Compound Not Detected.					
17	Diethylene Glycol MonoButyl Et	Compound Not Detected.					
* 18	m-cresol	12.827	12.820	(1.000)	975962	25.0000	
$ 19	o-Cresol	12.348	12.339	(0.963)	776450	25.1343	25.134
* 20	Butylene Glycol	Compound Not Detected					

01/24/13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: fid7.i
Lab File ID: 0117A020.D
Lab Smp Id: VZ97S
Analysis Type: OTHER
Quant Type: ISTD
Operator: MS
Method File: /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Misc Info:

Calibration Date: 17-JAN-2013
Calibration Time: 20:52

Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 2.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF	
18 m-cresol	960708	480354	1921416	975962	1.59	
20 Butylene Glycol	0	0	0	0	++++++	*

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF	
18 m-cresol	12.81	12.31	13.31	12.83	0.14	*
20 Butylene Glycol	0.00	-0.50	0.50	0.00	++++++	

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.

* not spiked

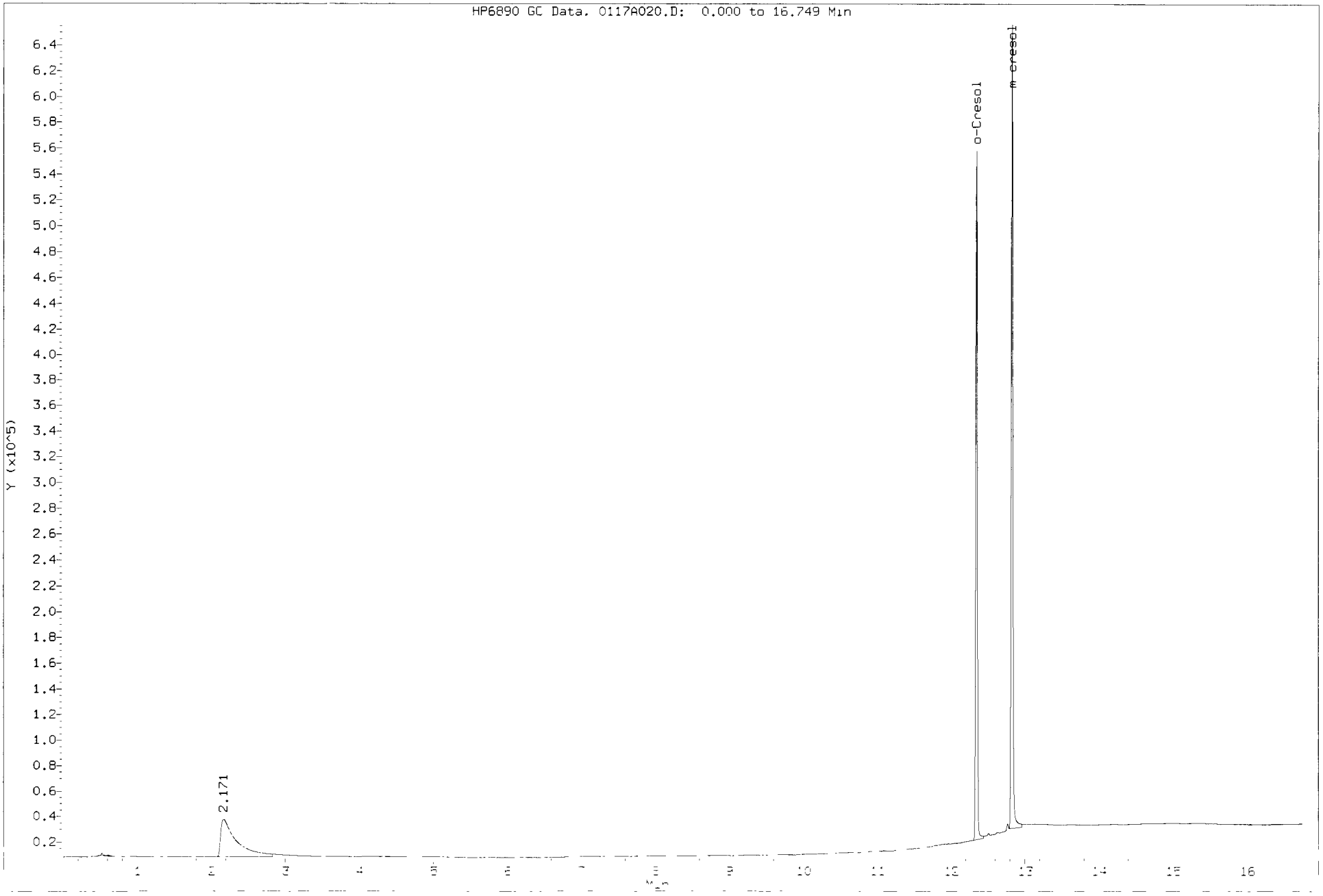
Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 20100113glycolwater
Sample Matrix: LIQUID Fraction: OTHER
Lab Smp Id: VZ97S
Level: LOW Operator: MS
Data Type: GC DATA SampleType: SAMPLE
SpikeList File: Quant Type: ISTD
Sublist File: all.sub
Method File: /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Misc Info:

SURROGATE COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
$ 19 o-Cresol	25.000	25.134	100.54	0-150

Data File: /chem2/fid7.i/20130117ETHANOL.B/0117A020.D
Injection Date: 18-JAN-2013 01:30
Instrument: fid7.i
Client Sample ID:



Analytical Resources, Inc.

Data file : /chem2/fid7.i/20130117ETHANOL.B/0117A021.D
Lab Smp Id: VZ97SMS
Inj Date : 18-JAN-2013 01:57
Operator : MS Inst ID: fid7.i
Smp Info : VZ97SMS
Misc Info :
Comment :
Method : /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Meth Date : 24-Jan-2013 10:03 jrains Quant Type: ISTD
Cal Date : 17-JAN-2013 20:52 Cal File: 0117A010.D
Als bottle: 14
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (mg/L)
1	Ethyl Acetate	Compound Not Detected.					
2	Methanol	Compound Not Detected.					
3	Isopropanol	Compound Not Detected.					
4	Ethanol	2.333	2.256	(0.000)	675748	47.5470	47 547(M)
5	n-Butyl Ether	Compound Not Detected.					
6	Isobutyl Acetate	Compound Not Detected.					
7	n-Propanol	Compound Not Detected.					
8	n-Butyl Acetate	Compound Not Detected.					
9	1-Methoxy-2-propanol	Compound Not Detected.					
10	n-Butanol	Compound Not Detected					
11	Prop-Gly-Me-Ether-Acetate	Compound Not Detected.					
12	2-Methoxyethanol Acetate	Compound Not Detected.					
13	2-Ethoxyethyl Acetate	Compound Not Detected					
14	Propargyl Alcohol	Compound Not Detected.					
15	2-Butoxyethanol	Compound Not Detected.					
16	Ethylene Glycol	Compound Not Detected.					
17	Diethylene Glycol MonoButyl Et	Compound Not Detected.					
* 18	m-cresol	12.829	12.820	(1.000)	972906	25.0000	
$ 19	o-Cresol	12.348	12.339	(0.963)	765175	24.8472	24.847
* 20	Butylene Glycol	Compound Not Detected.					

JR 01/24/13

QC Flag Legend

M - Compound response manually integrated.

VZ97 01134

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: fid7.i
Lab File ID: 0117A021.D
Lab Smp Id: VZ97SMS
Analysis Type: OTHER
Quant Type: ISTD
Operator: MS
Method File: /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Misc Info:

Calibration Date: 17-JAN-2013
Calibration Time: 20:52

Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 2.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF	
18 m-cresol	960708	480354	1921416	972906	1.27	
20 Butylene Glycol	0	0	0	0	+++++++	*

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF	
18 m-cresol	12.81	12.31	13.31	12.83	0.15	
20 Butylene Glycol	0.00	-0.50	0.50	0.00	+++++++	*

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.

* not spiked

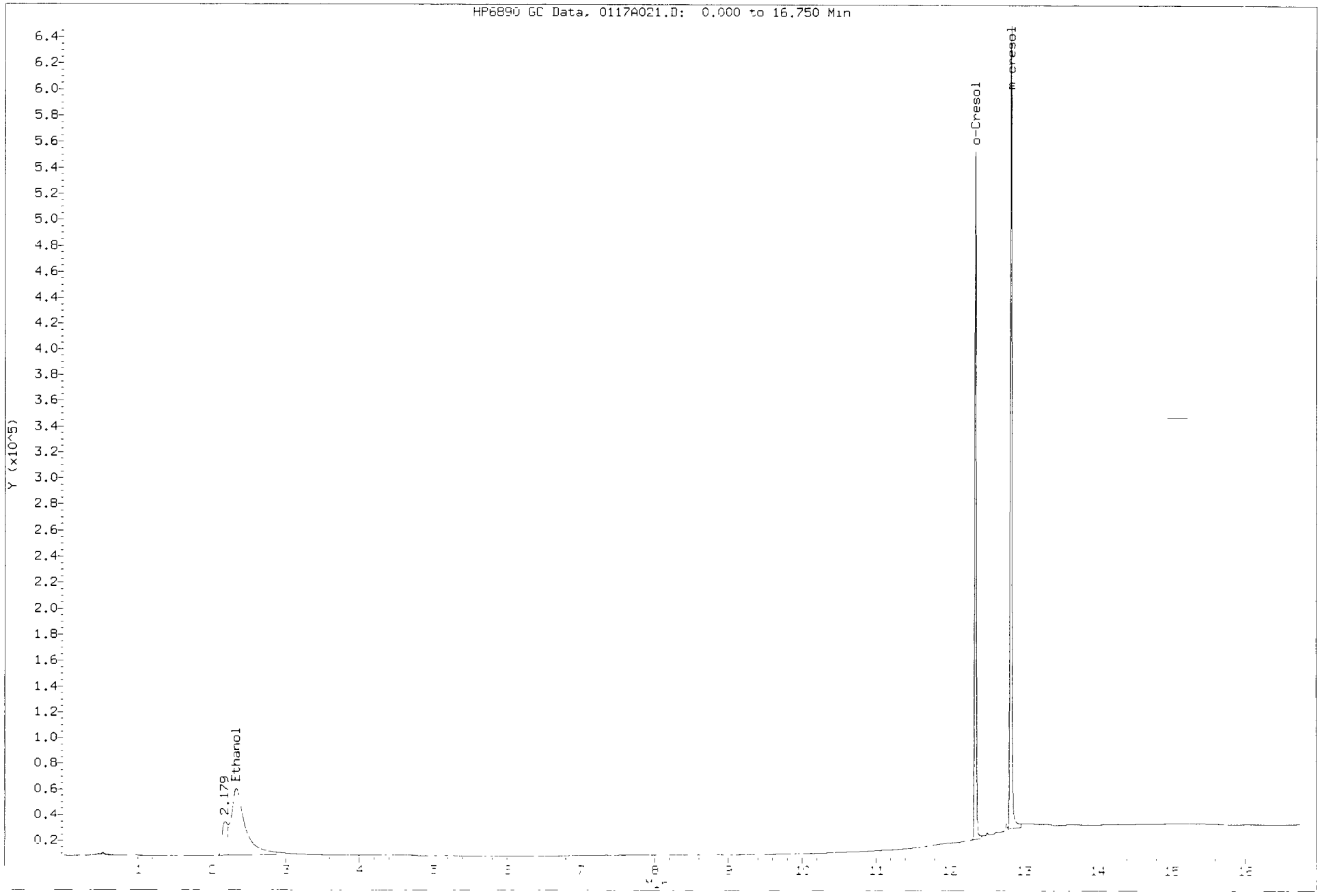
Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 20100113glycolwater
Sample Matrix: LIQUID Fraction: OTHER
Lab Smp Id: VZ97SMS
Level: LOW Operator: MS
Data Type: GC DATA SampleType: SAMPLE
SpikeList File: Quant Type: ISTD
Sublist File: all.sub
Method File: /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Misc Info:

SURROGATE COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
$ 19 o-Cresol	25.000	24.847	99.39	0-150

Data File: /chem2/fid7.i/20130117ETHANOL.B/0117A021.D
Injection Date: 18-JAN-2013 01:57
Instrument: fid7.i
Client Sample ID:



Analytical Resources, Inc.

Data file : /chem2/fid7.i/20130117ETHANOL.B/0117A022.D
Lab Smp Id: VZ97SMSD
Inj Date : 18-JAN-2013 02:25
Operator : MS Inst ID: fid7.i
Smp Info : VZ97SMSD
Misc Info :
Comment :
Method : /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Meth Date : 24-Jan-2013 10:03 jrains Quant Type: ISTD
Cal Date : 17-JAN-2013 20:52 Cal File: 0117A010.D
Als bottle: 15
Dil Factor: 1.00000
Integrator: Falcon Compound Sublist: all.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

		Compounds	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (mg/L)
	1	Ethyl Acetate	Compound Not Detected.					
	2	Methanol	Compound Not Detected.					
	3	Isopropanol	Compound Not Detected.					
	4	Ethanol	2.333	2.256	(0.000)	676907	46.4359	46 435(M)
	5	n-Butyl Ether	Compound Not Detected.					
	6	Isobutyl Acetate	Compound Not Detected.					
	7	n-Propanol	Compound Not Detected.					
	8	n-Butyl Acetate	Compound Not Detected.					
	9	1-Methoxy-2-propanol	Compound Not Detected					
	10	n-Butanol	Compound Not Detected					
	11	Prop-Gly-Me-Ether-Acetate	Compound Not Detected					
	12	2-Methoxyethanol Acetate	Compound Not Detected					
	13	2-Ethoxyethyl Acetate	Compound Not Detected.					
	14	Propargyl Alcohol	Compound Not Detected.					
	15	2-Butoxyethanol	Compound Not Detected.					
	16	Ethylene Glycol	Compound Not Detected.					
	17	Diethylene Glycol MonoButyl Et	Compound Not Detected.					
*	18	m-cresol	12 829	12.820	(1.000)	997894	25.0000	
$	19	o-Cresol	12.349	12.339	(0.963)	764193	24.1939	24.193
*	20	Butylene Glycol	Compound Not Detected.					

01/24/13

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: fid7.i
Lab File ID: 0117A022.D
Lab Smp Id: VZ97SMSD
Analysis Type: OTHER
Quant Type: ISTD
Operator: MS
Method File: /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Misc Info:

Calibration Date: 17-JAN-2013
Calibration Time: 20:52

Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 2.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF	
18 m-cresol	960708	480354	1921416	997894	3.87	
20 Butylene Glycol	0	0	0	0	++++++	*

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF	
18 m-cresol	12.81	12.31	13.31	12.83	0.15	
20 Butylene Glycol	0.00	-0.50	0.50	0.00	++++++	*

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.

* not spiked

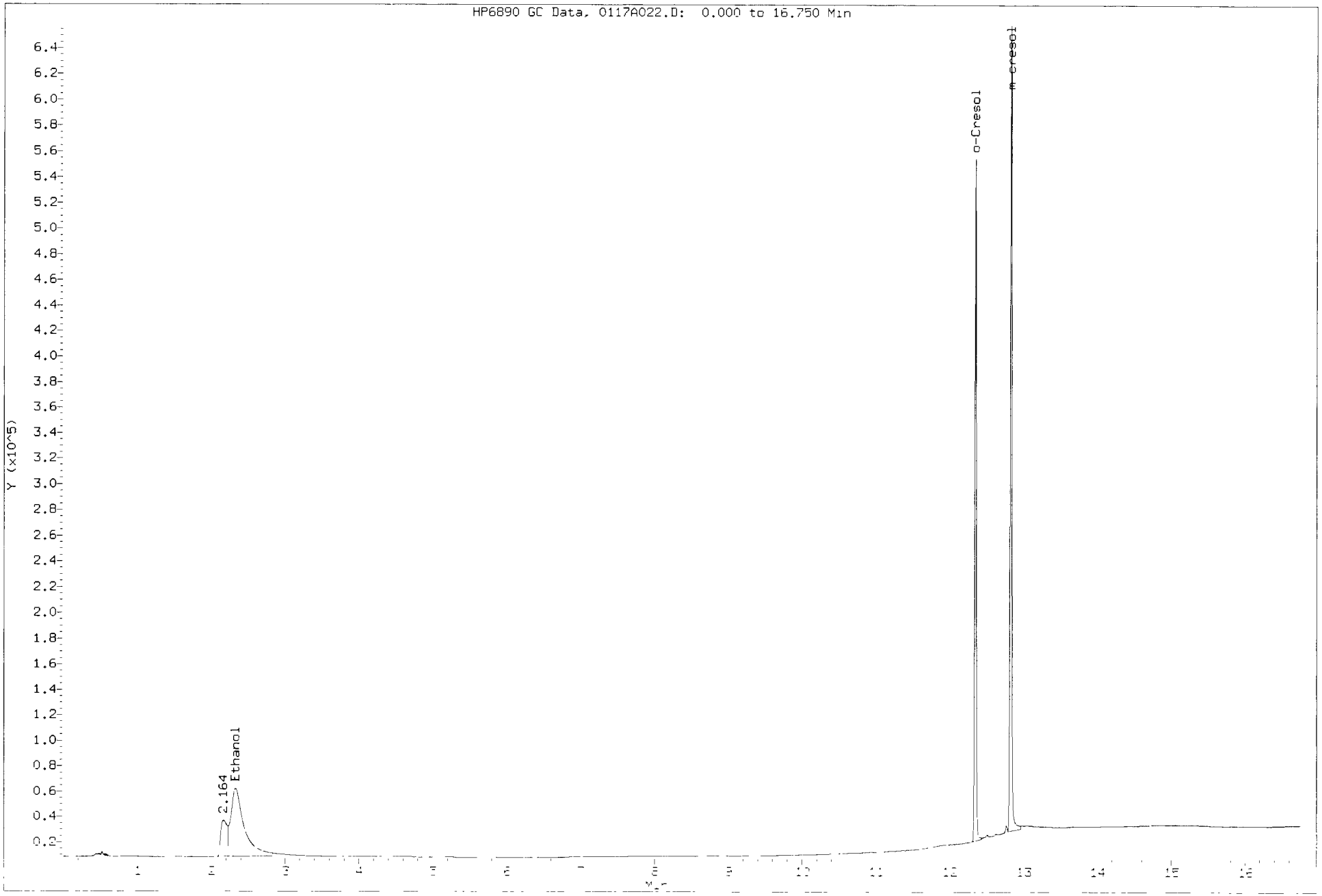
Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Client SDG: 20100113glycolwater
Sample Matrix: LIQUID Fraction: OTHER
Lab Smp Id: VZ97SMSD
Level: LOW Operator: MS
Data Type: GC DATA SampleType: SAMPLE
SpikeList File: Quant Type: ISTD
Sublist File: all.sub
Method File: /chem2/fid7.i/20130117ETHANOL.B/flistglycolswtrs.m
Misc Info:

SURROGATE COMPOUND	AMOUNT ADDED ug/mL	AMOUNT RECOVERED ug/mL	% RECOVERED	LIMITS
$ 19 o-Cresol	25.000	24.193	96.78	0-150

Data File: /chem2/fid7.i/20130117ETHANOL.B/0117A022.D
Injection Date: 18-JAN-2013 02:25
Instrument: fid7.i
Client Sample ID:



SIM PAH Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: VZ97

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(8270D) SIM PNA-Water Liquid/Liquid (3520C) (SOP # 3311S)

Preparation Test SIM PNA # 3 (SPNAWLL) In-House (0.1ppb)

ARI Job No(s) VZ97 Page 1 of 1 Batch set up by: ~~SK~~

Bottle #	Extraction Requirements	Volume Extracted	Disassemble Liq/Liq (Mantle #)	(Opt) Silica Gel Clean (1:1) Y / N	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	VZ97 MBW	500mL	13	(1:1) Y / N	0.5mL	0.5mL		ww 1/17/12
	SBW	500mL	14	(1:1) Y / N	0.5mL	0.5mL		
	SBW Dup.	500mL	15	(1:1) Y / N	0.5mL	0.5mL		Analyst/Date
	~~QLS~~	~~500mL~~		(1:1) Y / N	~~0.5mL~~	~~0.5mL~~		KD 80-85°C
12+13	VZ97 5	500mL	16	(1:1) Y / N	0.5mL	0.5mL		Hexane Exchange (2 X 10mL) 100°C 1 2 3 4 5 6
		~~500mL~~		(1:1) Y / N	~~0.5mL~~	~~0.5mL~~		
		500mL		(1:1) Y / N	0.5mL	0.5mL		
		500mL		(1:1) Y / N	0.5mL	0.5mL		
		500mL		(1:1) Y / N	0.5mL	0.5mL		
		500mL		(1:1) Y / N	0.5mL	0.5mL		01/18/13 Analyst/Date
		500mL		(1:1) Y / N	0.5mL	0.5mL		TurboVap 1 2 3 Pre-Silica Gel Clean
		500mL		(1:1) Y / N	0.5mL	0.5mL	ww 1/22/13	
		500mL		(1:1) Y / N	0.5mL	0.5mL		
		500mL		(1:1) Y / N	0.5mL	0.5mL		
		500mL		(1:1) Y / N	0.5mL	0.5mL		
		500mL		(1:1) Y / N	0.5mL	0.5mL		Analyst/Date
		500mL		(1:1) Y / N	0.5mL	0.5mL		TurboVap 1 2 3 ~~Post Silica Gel Clean~~
		500mL		(1:1) Y / N	0.5mL	0.5mL		ww 1/22/13
		500mL		(1:1) Y / N	0.5mL	0.5mL		
Analyst/Date	ww 1/17/12		AC 1-18-13		ww 1/22/13	ww 1/22/13		Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	B (2ϕ29-3)	15/75µg/mL	100µL	9/11/13	AC	ww
Spike (2ϕ52-1)	15 (~~2ϕ38-1~~)	15/75µg/mL	100µL	~~2/27/13~~ 9/11/13	AC	ww
~~QLS Spike~~	~~4 ( )~~	~~1µg/mL~~	~~50µL~~			

Extraction Time: 12:10 Liq/Liq Start: 18:00 Liq/Liq Stop: 06:42

SPECIAL INSTRUCTIONS: 1. Use 500mL Liq/Liq Body 2. Add 20-25mL Hexane. 3. Add ~200mL DCM to Liq/Liq.
4. Add surr/spik. 5. Extract minimum 8 hrs. 6. KD (no drying column) to 5mL at 80°.
7. Exchange (2 X with 10mL) to Hexane at 100°. 8. TurboVap. 9. Silica Clean-up Opt-Any Color=REQ (All or none).
10. TurboVap (if Silica Clean). 11. Vial in DCM.

A. Archive (Y) N

VZ97 · 0114

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: VZ97 Client ID: Anchor QEA

Parameter: SIM PNA Client Project: Chevron Sub Area Interim Action

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☒ Other Notes/Comments= (Note problems, concerns, corrective actions).	
(Centrifuge#1 used for all Centrifugations)	
Sample "SBLV" at KD Station was added sulfate to sample due to H_2S in RB flask prior to pouring to KD. RR 9/18/13	

3056F

Revision 009
08/14/12

VZ97 · 01105

SIM PAH Raw Data
Initial Calibration

ARI Job ID: VZ97

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS,SVOA Initial Calibration Notes

ARI SOP: **801S**(SIM-PNA) **802S**(Butyl Tins) **804S**(SVOA-8270D) **805S**(op-Pest)

Instrument: NT-4 NT-6 NT-8 NT-10 (NT11) NT12

Curve Date(s): 1/17/13 Internal Standard ID 1998-3 Expiration 7/3/13

DFTPP Tune Meets Criteria?	(YES) / NO	Minimum Response Factors Met/	(YES) / NO
DDT Breakdown <20%?	(YES) / NO	ICV Exceeding ±20%?	YES / (NO)
Peak Tailing Factor ≤2?	(YES) / NO	ICV Exceeding ±30%?	YES / (NO)
ICal Meets %RSD & r^2 Criteria?	(YES) / NO	Linear Fits Used?	YES / (NO)
Q flag applied?	YES / (NO) (NA)	Quadratic Fits Used?	YES / (NO)
Manual Integrations for ICal?	(YES) / NO	Calibration Points Dropped?	YES / (NO)
Spectral Library Updated?	(YES) / NO		

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Absolute	2014-4	9/11/13	Supelco	2062-2	9/11/13

Detail problems, corrective actions and/or other pertinent information below:

Analyst: _____ **Date:** 01/18/13

Reviewer: _____ **Date:** 1/18/13

VZ97:01147

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/nt11.i/20130117A.b

ARI Job No.: DFTP Method: tune.b/DF8270.m Instrument: nt11.i Date: 17-JAN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1506	01171301.d	DFTPP0117	DFTPP0117	1	NO MANUAL INTEGRATION
1519	01171302.d	IC250117	IC250117	1	NO MANUAL INTEGRATION
1550	01171303.d	IC010117	IC010117	1	Dibenzo(a,h)anthracene-d14,
1620	01171304.d	IC050117	IC050117	1	Dibenzo(a,h)anthracene-d14,
1650	01171305.d	IC10117	IC10117	1	Dibenzo(a,h)anthracene-d14,
1719	01171306.d	IC50117	IC50117	1	NO MANUAL INTEGRATION
1749	01171307.d	IC100117	IC100117	1	NO MANUAL INTEGRATION
1819	01171308.d	ICV0117	ICV0117	1	NO MANUAL INTEGRATION

AB 01/18/13

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 17-JAN-2013 15:19
End Cal Date : 17-JAN-2013 17:49
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem3/nt11.i/20130117A.b/FSIMPNA011713.m
Cal Date : 18-Jan-2013 09:41 jianqing
Curve Type : Average

Calibration File Names:
Level 1: /chem3/nt11.i/20130117A.b/01171303.d
Level 2: /chem3/nt11.i/20130117A.b/01171304.d
Level 3: /chem3/nt11.i/20130117A.b/01171305.d
Level 4: /chem3/nt11.i/20130117A.b/01171302.d
Level 5: /chem3/nt11.i/20130117A.b/01171306.d
Level 6: /chem3/nt11.i/20130117A.b/01171307.d

01/18/13

Compound	0.10000 Level 1	0.50000 Level 2	1.000 Level 3	2.500 Level 4	5.000 Level 5	10.000 Level 6	RRF	% RSD
1 trans-Decalin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
2 cis-Decalin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
3 Benzo(b)thiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
7 Naphthalene	1.43214	1.28215	1.32638	1.29214	1.27616	1.13742	1.29106	7.353
14 2-Methylnaphthalene	0.82926	0.73849	0.79105	0.77739	0.75121	0.65759	0.75750	7.710
15 1-methylnaphthalene	0.80297	0.69438	0.75050	0.73163	0.71179	0 63043	0.72028	8.022
19 Biphenyl	2.13240	1.78634	1.84684	1.80587	1.71228	1.56594	1.80828	10.345
20 2,6-Dimethylnaphthalene	1.39146	1.29096	1.34190	1.30530	1.25583	1.13805	1.28725	6.722
21 Acenaphthylene	2.33724	2.13380	2.28202	2.30759	2.21976	2.03171	2.21869	5.261
23 Acenaphthene	1.72295	1.44804	1.44418	1.39974	1.34086	1.21117	1.42782	11.847
11 Dibenzofuran	2.26916	1.99128	2.07496	2.00332	1.95621	1.74634	2.00688	8.460
24 1,6,7-Trimethylnaphthalene	1.31405	1.26939	1.30872	1.27531	1.21307	1.07687	1.24290	7.160
4 C1-Decalin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
25 Fluorene	1.84070	1.58559	1.63412	1.60045	1.52825	1.38509	1.59570	9.318
5 C2-Naphthalenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
8 C3-Decalin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
27 Dibenzothiophene	1.54938	1.40902	1.41835	1.39423	1.30713	1.16851	1.37444	9.264
30 Phenanthrene	1.89103	1.52350	1.56452	1.51721	1.42339	1.26389	1.53059	13.514
9 C2-Decalin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
10 C1-Naphthalenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
31 Anthracene	1.62793	1.55813	1.51624	1.51882	1.44002	1.28736	1.49142	7.861

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 17-JAN-2013 15:19
End Cal Date : 17-JAN-2013 17:49
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem3/nt11.i/20130117A.b/FSIMPNA011713.m
Cal Date : 18-Jan-2013 09:41 jianqing
Curve Type : Average

	Compound	0.10000 Level 1	0.50000 Level 2	1.000 Level 3	2.500 Level 4	5.000 Level 5	10.000 Level 6	___ RRF	% RSD
26	Carbazole	1.66005	1.46493	1.52432	1.49096	1.43475	1.28863	1.47727	8.199
13	C3_Benzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
33	1-Methylphenanthrene	1.25596	1.09258	1.16155	1.12869	1.08493	0.94423	1.11132	9.239
16	C3-Naphthalenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
17	C1-Benzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
18	C2-Benzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
36	Fluoranthene	1.82875	1.56971	1.63194	1.55770	1.47093	1.30517	1.56070	11.112
39	Pyrene	1.65284	1.34696	1.44077	1.40150	1.36503	1.21595	1.40384	10.244
46	Benzo(a)anthracene	1.55945	1.27326	1.32069	1.29357	1.26869	1.14799	1.31061	10.345
48	Chrysene	1.54366	1.24241	1.28353	1.23996	1.21542	1.11638	1.27356	11.283
32	C4-Naphthalenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
34	C1-Fluorenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
35	C2-Dibenzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
51	Benzo(b)fluoranthene	1.25020	1.11903	1.22560	1.34318	1.29368	1.17902	1.23512	6.482
52	Benzo(k)fluoranthene	1.61606	1.23190	1.35937	1.43145	1.34493	1.23801	1.37029	10.400
64	Total Benzofluoranthenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
251	Benzo(j)fluoranthene	0.76330	0.87821	1.03666	1.01765	1.04035	0.95239	0.94809	11.578
37	C2-Phenanthrenes/Anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
55	Benzo(e)pyrene	1.38681	1.19120	1.28645	1.28164	1.25915	1.18132	1.26443	5.924
54	Benzo(a)pyrene	1.39034	1.18717	1.30806	1.31538	1.29361	1.21085	1.28423	5.795
57	Perylene	1.37286	1.17759	1.27669	1.27132	1.24859	1.19151	1.25643	5.592
40	C3-Phenanthrenes/Anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
41	C3-Fluorenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
42	Retene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
43	C1-Dibenzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
44	C1-Phenanthrenes/Anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
45	C1-Fluoranthenes/Pyrenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
63	Indeno(1,2,3-cd)pyrene	1.22939	1.28827	1.44740	1.50756	1.47349	1.38623	1.38872	7.904
62	Dibenzo(a,h)anthracene	1.13087	1.09880	1.16588	1.21183	1.20334	1.12739	1.15635	3.901

UZ97:01150

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 17-JAN-2013 15:19
End Cal Date : 17-JAN-2013 17:49
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem3/nt11.i/20130117A.b/FSIMPNA011713.m
Cal Date : 18-Jan-2013 09:41 jianqing
Curve Type : Average

Compound	0.10000 Level 1	0.50000 Level 2	1.000 Level 3	2.500 Level 4	5.000 Level 5	10.000 Level 6	___ RRF	% RSD
49 Naphthobenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
61 Benzo(g,h,i)perylene	1.39171	1.17991	1.28273	1.28298	1.29146	1.23760	1.27773	5.469
50 C3-Dibenzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
53 C4-Phenanthrenes/Anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
58 C4-Dibenzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
59 C3-Fluoranthenes/Pyrenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
66 C1-Naphthobenzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
67 C2-Fluoranthenes/Pyrenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
68 C1-Benzo(a)anthracenes/Chryse	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
69 C2-Benzo(a)anthracenes/Chryse	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
70 C2-Fluorenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
71 C2-Naphthobenzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
72 C3-Benzo(a)anthracenes/Chryse	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
73 C3-Naphthobenzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
74 C1-Dibenzo(a)anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
75 C2-Dibenzo(a)anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
76 C3-Dibenzo(a)anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
77 C4-Benzo(a)anthracenes/Chryse	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$ 12 2-Methylnaphthalene-d10	0.59913	0.55427	0.59749	0.59207	0.58609	0.52850	0.57626	4.960
$ 253 Fluoranthene-d10	1.04193	0.94808	0.99893	1.01463	0.98273	0.90917	0.98258	4.859
$ 60 Dibenzo(a,h)anthracene-d14	0.53777	0.46997	0.56979	0.60062	0.64122	0.70589	0.58754	13.968

Report Date : 18-Jan-2013 09:48

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/nt11.i/20130117A.b/FSIMPNA011713.m
Batch File: /chem3/nt11.i/20130117A.b
Inst ID: nt11.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	01171302	01171303	01171304	01171305	01171306	01171307
INJ.DATE:	17-JAN-2013	17-JAN-2013	17-JAN-2013	17-JAN-2013	17-JAN-2013	17-JAN-2013
INJ.TIME:	15:19	15:50	16:20	16:50	17:19	17:49

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 trans-Decalin	+++++	+++++	+++++	+++++	+++++	+++++	4.243	1.243-7.243	+++++	+++++
	2 cis-Decalin	+++++	+++++	+++++	+++++	+++++	+++++	4.856	1.856-7.856	+++++	+++++
	3 Benzo(b)thiophene	+++++	+++++	+++++	+++++	+++++	+++++	6.193	3.193-9.193	+++++	+++++
*	6 Naphthalene-d8	5.407	5.407	5.407	5.407	5.407	5.407	5.407	2.407-8.407	5.407	0.000
	7 Naphthalene	5.435	5.435	5.435	5.435	5.435	5.438	5.435	2.435-8.435	5.436	0.001
$	12 2-Methylnaphthalene-d1	6.142	6.145	6.142	6.142	6.142	6.145	6.142	3.142-9.142	6.143	0.002
	14 2-Methylnaphthalene	6.189	6.192	6.189	6.189	6.189	6.192	6.189	3.189-9.189	6.190	0.002
	15 1-methylnaphthalene	6.382	6.382	6.378	6.382	6.382	6.382	6.382	3.382-9.382	6.381	0.001
	19 Biphenyl	6.846	6.849	6.846	6.846	6.849	6.852	6.846	3.846-9.846	6.848	0.003
	20 2,6-Dimethylnaphthalen	6.890	6.887	6.887	6.887	6.890	6.893	6.890	3.890-9.890	6.889	0.003
	21 Acenaphthylene	7.562	7.562	7.562	7.562	7.562	7.565	7.562	4.562-10.562	7.562	0.001
*	22 Acenaphthene-d10	7.676	7.675	7.672	7.673	7.672	7.676	7.676	4.676-10.676	7.674	0.002
	23 Acenaphthene	7.723	7.720	7.723	7.720	7.723	7.726	7.723	4.723-10.723	7.722	0.002
	11 Dibenzofuran	7.875	7.877	7.874	7.874	7.874	7.877	7.875	4.875-10.874	7.875	0.002
	24 1,6,7-Trimethylnaphtha	7.950	7.947	7.947	7.947	7.950	7.953	7.950	4.950-10.950	7.949	0.003
	4 C1-Decalin	+++++	+++++	+++++	+++++	+++++	+++++	8.826	5.826-11.826	+++++	+++++
	25 Fluorene	8.348	8.351	8.348	8.348	8.348	8.351	8.348	5.348-11.348	8.349	0.002

01/18/13

Reviewer 1 _____ Date: 1/18/13
Reviewer 2 _____ Date: _____

25139-2576

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/nt11.i/20130117A.b/FSIMPNA011713.m
Batch File: /chem3/nt11.i/20130117A.b
Inst ID: nt11.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
5 C2-Naphthalenes	+++++	+++++	+++++	+++++	+++++	+++++	10.000	7.000-13.000	+++++	+++++
8 C3-Decalin	+++++	+++++	+++++	+++++	+++++	+++++	10.296	7.296-13.296	+++++	+++++
27 Dibenzothiophene	9.566	9.562	9.562	9.563	9.566	9.569	9.566	6.566-12.566	9.565	0.003
* 28 Phenanthrene-d10	9.689	9.692	9.689	9.689	9.689	9.692	9.689	6.689-12.689	9.690	0.002
30 Phenanthrene	9.727	9.723	9.723	9.724	9.727	9.730	9.727	6.727-12.727	9.726	0.003
9 C2-Decalin	+++++	+++++	+++++	+++++	+++++	+++++	10.453	7.453-13.453	+++++	+++++
10 C1-Naphthalenes	+++++	+++++	+++++	+++++	+++++	+++++	10.453	7.453-13.453	+++++	+++++
31 Anthracene	9.768	9.768	9.764	9.765	9.768	9.771	9.768	6.768-12.768	9.767	0.002
26 Carbazole	10.276	10.279	10.276	10.276	10.276	10.282	10.276	7.276-13.276	10.277	0.003
13 C3_Benzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	11.200	8.200-14.200	+++++	+++++
33 1-Methylphenanthrene	10.475	10.474	10.474	10.472	10.474	10.481	10.475	7.475-13.475	10.475	0.003
16 C3-Naphthalenes	+++++	+++++	+++++	+++++	+++++	+++++	11.600	8.600-14.600	+++++	+++++
17 C1-Benzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	11.769	8.769-14.769	+++++	+++++
18 C2-Benzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	11.842	8.842-14.842	+++++	+++++
36 Fluoranthene	11.368	11.367	11.364	11.365	11.371	11.377	11.368	8.368-14.368	11.369	0.005
$ 253 Fluoranthene-d10	11.333	11.330	11.330	11.333	11.336	11.339	11.333	8.333-14.333	11.333	0.004
39 Pyrene	11.828	11.828	11.825	11.825	11.828	11.835	11.828	8.828-14.828	11.828	0.003
46 Benzo(a)anthracene	14.138	14.132	14.135	14.135	14.141	14.151	14.138	11.138-17.138	14.139	0.007
* 47 Chrysene-d12	14.255	14.258	14.252	14.255	14.255	14.261	14.255	11.255-17.255	14.256	0.003
48 Chrysene	14.328	14.324	14.318	14.321	14.331	14.337	14.328	11.328-17.328	14.326	0.007
~~* 29 Fluorene-d10~~	~~11.680~~	~~11.678~~	~~11.676~~	~~11.676~~	~~11.680~~	~~11.685~~	~~11.828~~	~~8.828-14.828~~	~~11.752~~	~~0.187~~
32 C4-Naphthalenes	+++++	+++++	+++++	+++++	+++++	+++++	15.983	12.983-18.983	+++++	+++++

NR

01/18/13

ESTD : 25270

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/nt11.i/20130117A.b/FSIMPNA011713.m
Batch File: /chem3/nt11.i/20130117A.b
Inst ID: nt11.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	34 C1-Fluorenes	+++++	+++++	+++++	+++++	+++++	+++++	16.962	13.962-19.962	+++++	+++++
	35 C2-Dibenzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	17.000	14.000-20.000	+++++	+++++
	51 Benzo(b)fluoranthene	16.757	16.751	16.748	16.751	16.760	16.776	16.757	13.757-19.757	16.757	0.010
	52 Benzo(k)fluoranthene	16.814	16.801	16.805	16.808	16.823	16.839	16.814	13.814-19.814	16.815	0.014
	64 Total Benzofluoranthen	+++++	+++++	+++++	+++++	+++++	+++++	17.174	14.174-20.174	+++++	+++++
	251 Benzo(j)fluoranthene	16.887	16.880	16.880	16.880	16.893	16.912	16.887	13.887-19.887	16.889	0.012
*	38 Pyrene-d10	16.890	+++++	16.874	16.827	16.899	16.912	16.890	13.890-19.890	16.880	0.033
	37 C2-Phenanthrenes/Anthr	+++++	+++++	+++++	+++++	+++++	+++++	17.500	14.500-20.500	+++++	+++++
	55 Benzo(e)pyrene	17.644	17.634	17.634	17.638	17.650	17.663	17.644	14.644-20.644	17.644	0.011
	54 Benzo(a)pyrene	17.767	17.758	17.761	17.761	17.773	17.789	17.767	14.767-20.767	17.768	0.012
*	56 Perylene-d12	17.994	17.988	17.988	17.991	17.994	18.001	17.994	14.994-20.994	17.993	0.005
	57 Perylene	18.067	18.057	18.057	18.061	18.073	18.089	18.067	15.067-21.067	18.067	0.012
	40 C3-Phenanthrenes/Anthr	+++++	+++++	+++++	+++++	+++++	+++++	18.800	15.800-21.800	+++++	+++++
	41 C3-Fluorenes	+++++	+++++	+++++	+++++	+++++	+++++	18.831	15.831-21.831	+++++	+++++
	42 Retene	+++++	+++++	+++++	+++++	+++++	+++++	18.831	15.831-21.831	+++++	+++++
	43 C1-Dibenzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	18.997	15.997-21.997	+++++	+++++
	44 C1-Phenanthrenes/Anthr	+++++	+++++	+++++	+++++	+++++	+++++	19.008	16.008-22.008	+++++	+++++
	45 C1-Fluoranthenes/Pyren	+++++	+++++	+++++	+++++	+++++	+++++	19.500	16.500-22.500	+++++	+++++
$	60 Dibenzo(a,h)anthracene	20.216	20.213	20.209	20.203	20.219	20.235	20.216	17.216-23.216	20.216	0.011
	63 Indeno(1,2,3-cd)pyrene	20.301	20.301	20.295	20.292	20.314	20.336	20.301	17.301-23.301	20.306	0.016
	62 Dibenzo(a,h)anthracene	20.301	20.295	20.291	20.292	20.314	20.333	20.301	17.301-23.301	20.304	0.016
	49 Naphthobenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	20.438	17.438-23.438	+++++	+++++
	61 Benzo(g,h,i)perylene	21.150	21.150	21.137	21.141	21.159	21.185	21.150	18.150-24.150	21.154	0.017
	50 C3-Dibenzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	21.254	18.254-24.254	+++++	+++++

nt11.19.4570

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/nt11.i/20130117A.b/FSIMPNA011713.m
Batch File: /chem3/nt11.i/20130117A.b
Inst ID: nt11.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	53 C4-Phenanthrenes/Anthr	+++++	+++++	+++++	+++++	+++++	+++++	21.403	18.403-24.403	+++++	+++++
	58 C4-Dibenzothiophenes	+++++	+++++	+++++	+++++	+++++	+++++	22.001	19.001-25.001	+++++	+++++
	59 C3-Fluoranthenes/Pyren	+++++	+++++	+++++	+++++	+++++	+++++	22.500	19.500-25.500	+++++	+++++
*	65 Benzo(a)pyrene-d12	+++++	+++++	+++++	+++++	24.794	+++++	24.712	21.712-27.712	24.794	0.000
	66 C1-Naphthobenzothiophe	+++++	+++++	+++++	+++++	+++++	+++++	24.564	21.564-27.564	+++++	+++++
	67 C2-Fluoranthenes/Pyren	+++++	+++++	+++++	+++++	+++++	+++++	24.611	21.611-27.611	+++++	+++++
	68 C1-Benzo(a)anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	25.122	22.122-28.122	+++++	+++++
	69 C2-Benzo(a)anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	26.122	23.122-29.122	+++++	+++++
	70 C2-Fluorenes	+++++	+++++	+++++	+++++	+++++	+++++	26.436	23.436-29.436	+++++	+++++
	71 C2-Naphthobenzothiophe	+++++	+++++	+++++	+++++	+++++	+++++	26.660	23.660-29.660	+++++	+++++
	72 C3-Benzo(a)anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	27.203	24.203-30.203	+++++	+++++
	73 C3-Naphthobenzothiophe	+++++	+++++	+++++	+++++	+++++	+++++	27.491	24.491-30.491	+++++	+++++
	74 C1-Dibenzo(a)anthracen	+++++	+++++	+++++	+++++	+++++	+++++	28.000	25.000-31.000	+++++	+++++
	75 C2-Dibenzo(a)anthracen	+++++	+++++	+++++	+++++	+++++	+++++	29.000	26.000-32.000	+++++	+++++
	76 C3-Dibenzo(a)anthracen	+++++	+++++	+++++	+++++	+++++	+++++	29.500	26.500-32.500	+++++	+++++
	77 C4-Benzo(a)anthracenes	+++++	+++++	+++++	+++++	+++++	+++++	30.777	27.777-33.777	+++++	+++++

SS1159-2527A

Data File: /chem3/nt11.i/20130117A.b/tune.b/01171301.d

Date : 17-JAN-2013 15:06

Client ID: DFTPP0117

Instrument: nt11.i

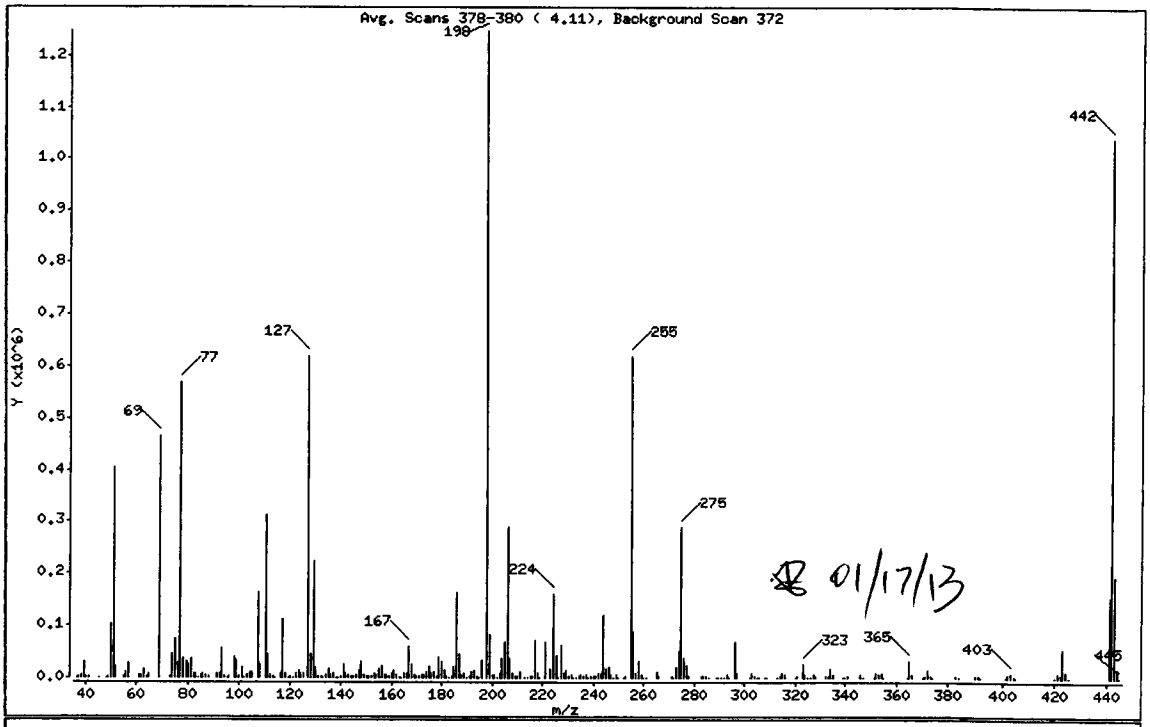
Sample Info: DFTPP0117

Operator: JZ

Column phase: Rxi-17silms

Column diameter: 0.25

1 dftpp



01/17/13

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	32.40
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	37.35
70	Less than 2.00% of mass 69	0.05 (0.12)
127	10.00 - 80.00% of mass 198	49.63
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.56
275	10.00 - 60.00% of mass 198	23.18
365	Greater than 1.00% of mass 198	2.58
441	0.01 - 24.00% of mass 442	12.35 (14.79)
442	50.00 - 200.00% of mass 198	83.52
443	15.00 - 24.00% of mass 442	15.61 (18.69)

Data File: /chem3/nt11.1/20130117A.b/tune.b/01171301.d

Date : 17-JAN-2013 15:06

Client ID: DFTPP0117 Instrument: nt11.1

Sample Info: DFTPP0117

Operator: JZ

Column phase: Rxi-17silms Column diameter: 0.25

Data File: 01171301.d
Spectrum: Avg. Scans 378-380 (4.11), Background Scan 372
Location of Maximum: 198.00
Number of points: 309

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	192	128.00	45328	207.00	36360	298.00	822
37.00	1706	129.00	223872	208.00	8474	301.00	1286
38.00	5537	130.00	20192	209.00	2802	302.00	1407
39.00	31200	131.00	3151	210.00	3880	303.00	8887
40.00	1636	132.00	2009	211.00	11242	304.00	2493
41.00	1525	133.00	585	213.00	747	305.00	178
43.00	265	134.00	5770	214.00	493	306.00	188
44.00	700	135.00	18168	215.00	2869	308.00	1260
45.00	941	136.00	6944	216.00	3462	309.00	832
48.00	435	137.00	9603	217.00	72752	310.00	1112
49.00	1510	138.00	1304	218.00	8346	313.00	1002
50.00	102192	139.00	1182	219.00	882	314.00	4146
51.00	404224	140.00	2938	221.00	67744	315.00	7272
52.00	23408	141.00	26376	223.00	16784	316.00	5113
53.00	1106	142.00	9343	224.00	160256	317.00	948
55.00	1937	143.00	6113	225.00	43600	320.00	204
56.00	11767	144.00	1724	226.00	1099	321.00	3005
57.00	27824	145.00	1652	227.00	62104	322.00	854
58.00	1140	146.00	4500	228.00	8088	323.00	25168
61.00	5665	147.00	13730	229.00	12960	324.00	4936
62.00	4991	148.00	30736	230.00	1695	325.00	226
63.00	17240	149.00	5197	231.00	5988	326.00	198
64.00	2342	150.00	1538	232.00	1258	327.00	4717
65.00	9483	151.00	3317	233.00	1114	328.00	2609
66.00	721	152.00	2979	234.00	3615	329.00	179
67.00	300	153.00	8364	235.00	4974	332.00	1792
69.00	465984	154.00	7095	236.00	2520	333.00	2381
70.00	579	155.00	16624	237.00	4695	334.00	18608
73.00	2974	156.00	24136	238.00	959	335.00	4450
74.00	47168	157.00	5184	239.00	1913	336.00	541
75.00	73928	158.00	5074	240.00	1667	339.00	427
76.00	27816	159.00	3629	241.00	3504	340.00	387
77.00	566720	160.00	8232	242.00	8321	341.00	2811
78.00	38624	161.00	12969	243.00	9112	342.00	1365
79.00	32968	162.00	4703	244.00	121528	346.00	5243

UZ97:01157

Data File: /chem3/nt11.i/20130117A.b/tune.b/01171301.d

Date : 17-JAN-2013 15:06

Client ID: DFTPP0117 Instrument: nt11.i

Sample Info: DFTPP0117

Operator: JZ

Column phase: Rxi-17silms Column diameter: 0.25

Data File: 01171301.d
Spectrum: Avg. Scans 378-380 (4.11), Background Scan 372
Location of Maximum: 198.00
Number of points: 309

m/z	Y	m/z	Y	m/z	Y	m/z	Y
80.00	25000	163.00	1248	245.00	16121	347.00	931
81.00	36704	164.00	1165	246.00	19376	351.00	180
82.00	9209	165.00	9766	247.00	4369	352.00	7370
83.00	9047	166.00	8180	248.00	1044	353.00	5765
84.00	194	167.00	58992	249.00	4563	354.00	8048
85.00	6607	168.00	26336	250.00	1026	355.00	1263
86.00	8940	169.00	4966	251.00	947	359.00	531
87.00	5016	170.00	1696	252.00	1137	364.00	189
88.00	2065	171.00	2676	253.00	2489	365.00	32168
89.00	932	172.00	5068	255.00	620160	366.00	4760
91.00	8205	173.00	6004	256.00	88600	370.00	1078
92.00	8269	174.00	11078	257.00	7358	371.00	2254
93.00	56664	175.00	21784	258.00	30944	372.00	15332
94.00	4023	176.00	7211	259.00	5520	373.00	3872
95.00	828	177.00	10693	260.00	1013	374.00	195
96.00	3494	178.00	3986	261.00	1055	377.00	520
98.00	39840	179.00	39936	263.00	219	383.00	3571
99.00	34192	180.00	31040	264.00	433	384.00	1203
100.00	3744	181.00	13440	265.00	11805	390.00	2117
101.00	21504	182.00	2432	266.00	2338	391.00	1686
102.00	806	183.00	1112	270.00	794	392.00	1185
103.00	6634	184.00	3659	271.00	1562	401.00	945
104.00	12385	185.00	20184	272.00	1130	402.00	5959
105.00	11696	186.00	162368	273.00	18816	403.00	8270
107.00	164096	187.00	45616	274.00	52992	404.00	2864
108.00	25112	188.00	4575	275.00	289216	405.00	194
110.00	311232	189.00	9362	276.00	37752	415.00	614
111.00	46984	190.00	1291	277.00	24088	420.00	231
112.00	4747	191.00	3648	278.00	3341	421.00	7517
113.00	1797	192.00	12426	279.00	780	422.00	7012
114.00	233	193.00	14726	282.00	184	423.00	55312
115.00	603	194.00	3169	283.00	2250	424.00	11934
116.00	9049	195.00	1413	284.00	1997	425.00	1042
117.00	110784	196.00	35376	285.00	3874	438.00	230
118.00	8225	198.00	1247744	286.00	499	440.00	275

Data File: /chem3/nt11.i/20130117A.b/tune.b/01171301.d

Date : 17-JAN-2013 15:06

Client ID: DFTPP0117 Instrument: nt11.i

Sample Info: DFTPP0117

Operator: JZ

Column phase: Rxi-17silms Column diameter: 0.25

Data File: 01171301.d
Spectrum: Avg. Scans 378-380 (4.11), Background Scan 372
Location of Maximum: 198.00
Number of points: 309

m/z	Y	m/z	Y	m/z	Y	m/z	Y
119.00	1385	199.00	81792	289.00	1216	441.00	154112
120.00	1854	200.00	5669	290.00	570	442.00	1042176
121.00	730	201.00	4317	291.00	492	443.00	194752
122.00	9890	202.00	1336	292.00	1138	444.00	18240
123.00	15541	203.00	8226	293.00	5286	445.00	375
124.00	7272	204.00	38536	294.00	1413		
125.00	7384	205.00	67776	296.00	68304		
127.00	619264	206.00	288512	297.00	9852		

VZ97:01159

Data File: /chem3/nt11.1/20130117A.b/tune.b/01171301.d

Date : 17-JAN-2013 15:06

Client ID: DFTPP0117

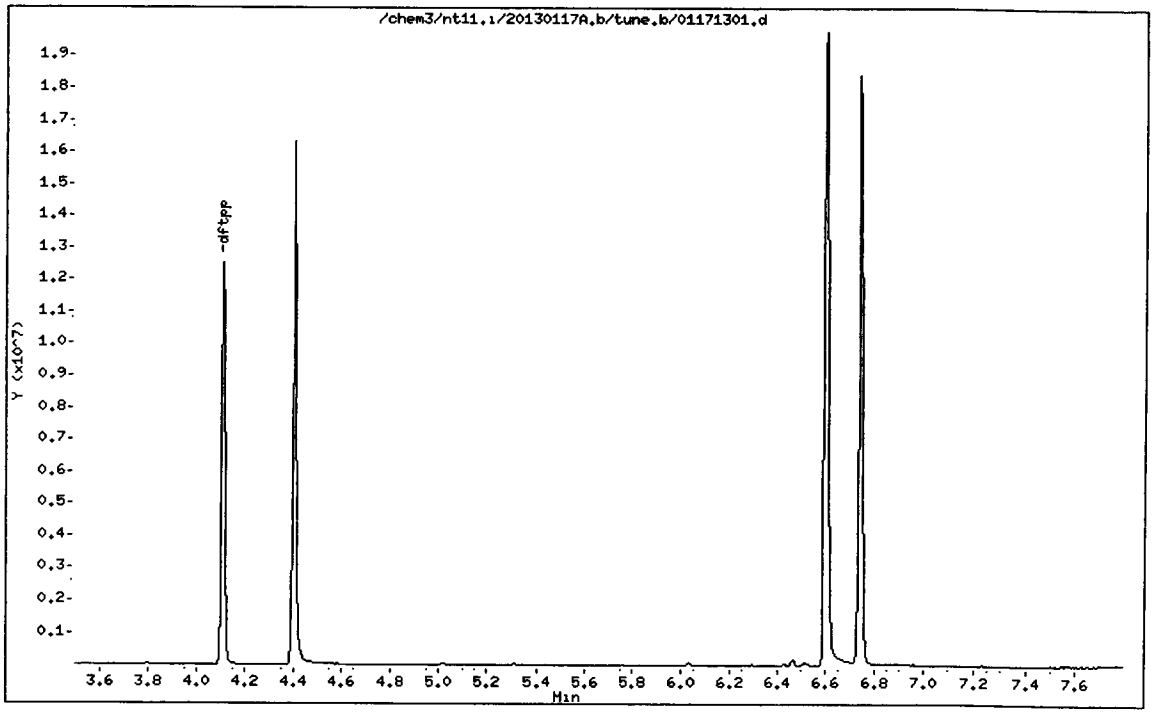
Instrument: nt11.1

Sample Info: DFTPP0117

Operator: JZ

Column phase: Rx1-17silms

Column diameter: 0.25



VZ97:01160

Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem3/nt11.i/20130117A.b/ddt.b/01171301.d ARI ID: DDT0117
Method: /chem3/nt11.i/20130117A.b/ddt.b/sw846ddt.m Misc: 13-
Analysis Date: 17-JAN-2013 15:06 Instrument: nt11.i

COMPOUND	RT	AREA
Pentachlorophenol	4.401	1886396
Benzidine	6.607	8367984
4,4'-DDE	6.035	11708
4,4'-DDD	6.468	32008
4,4'-DDT	6.741	3601304

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

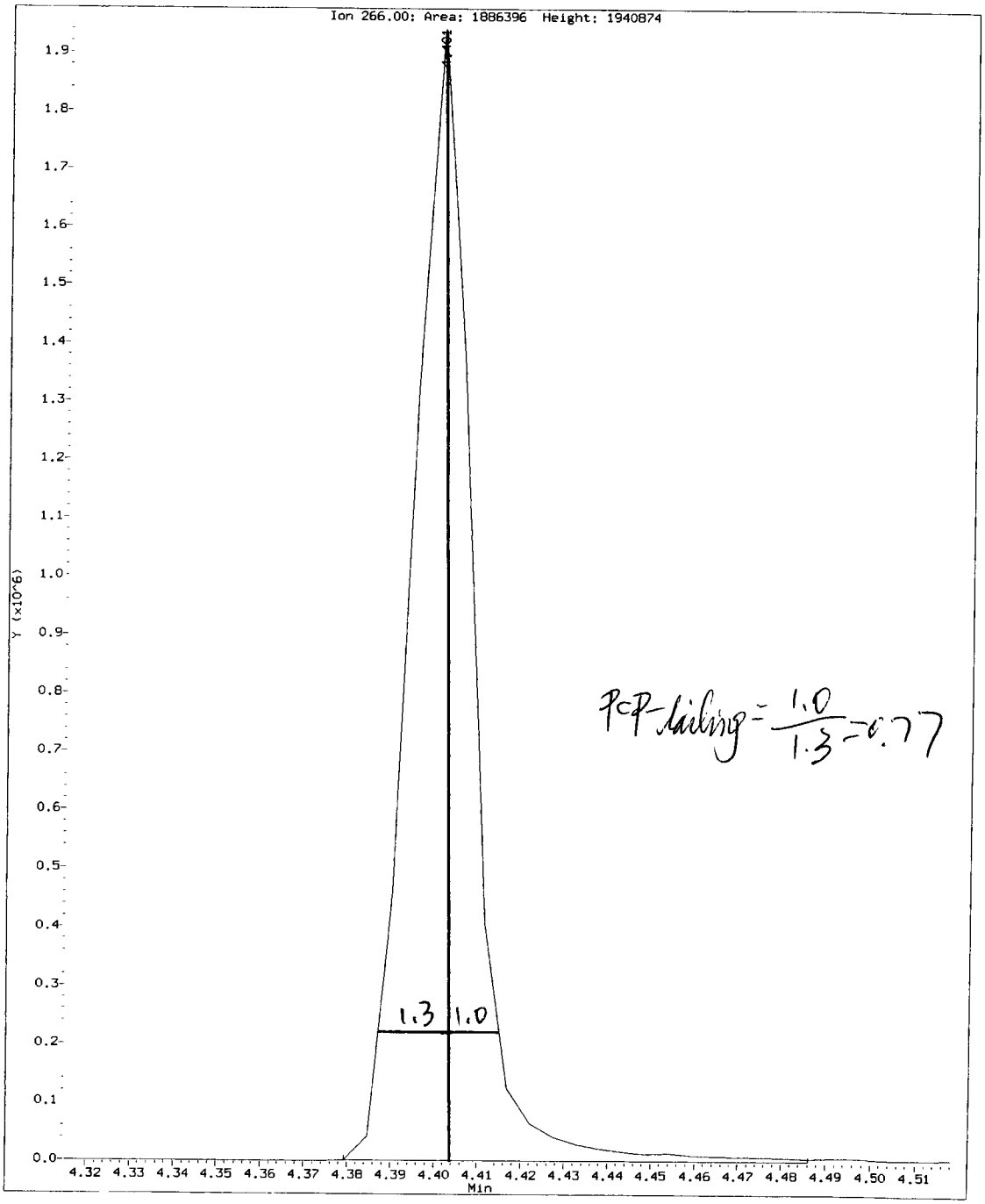
$$\text{DDT Percent Breakdown} = \frac{(\ 11708 + 32008) * 100}{(\ 11708 + 32008 + 3601304)}$$

DDT Percent Breakdown = 1.2 %

OK 01/17/13

Data File: /chem3/nt11.i/20130117A.b/ddt.b/01171301.d
Injection Date: 17-JAN-2013 15:06
Instrument: nt11.i
Client Sample ID: DDT0117

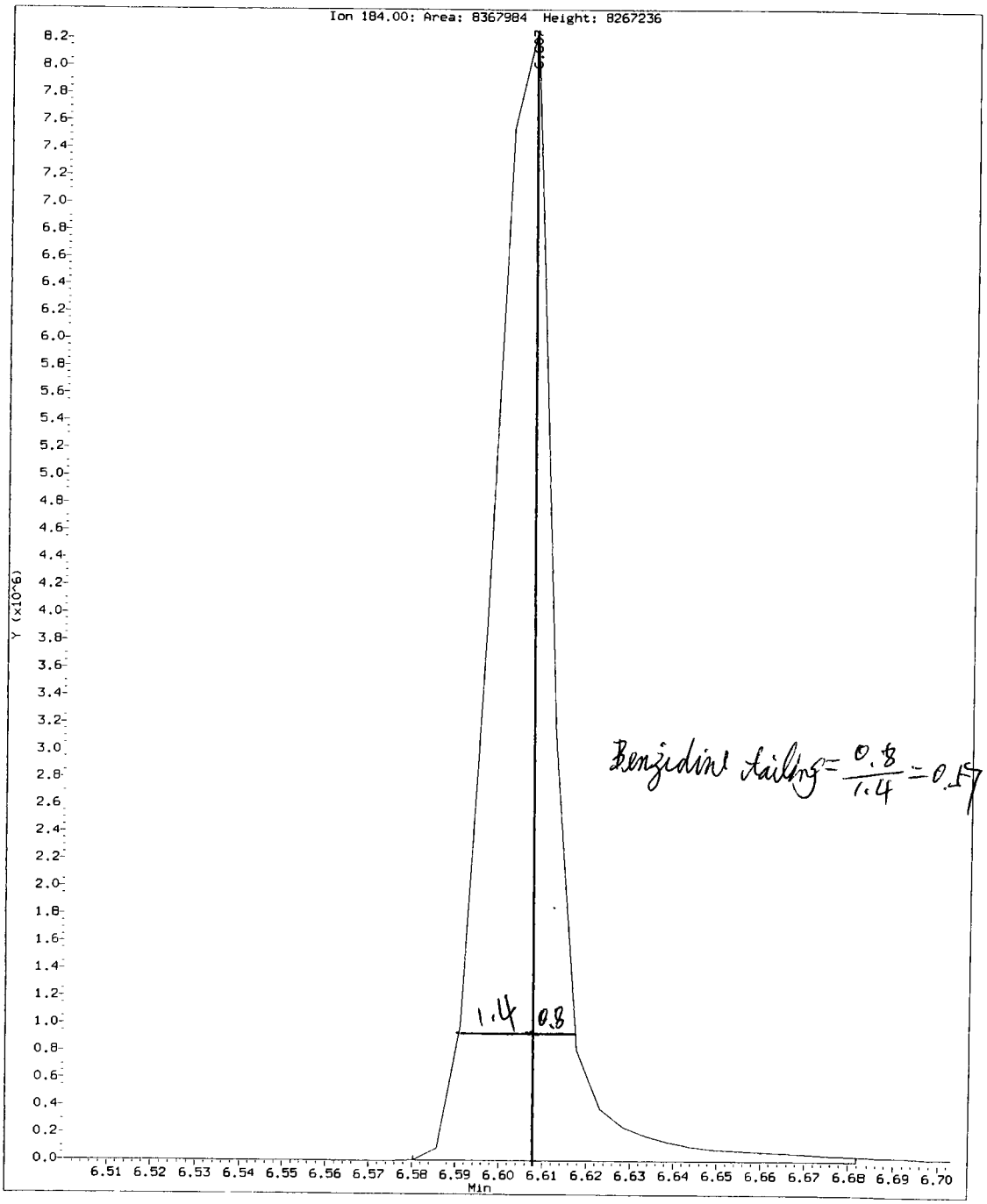
Compound: Pentachlorophenol
CAS Number: 87-86-5



PCP-dilution = $\frac{1.0}{1.3} = 0.77$

Data File: /chem3/nt11.i/20130117A.b/ddt.b/01171301.d
Injection Date: 17-JAN-2013 15:06
Instrument: nt11.i
Client Sample ID: DDT0117

Compound: Benzidine
CAS Number:



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt11.i/20130117A.b/01171302.d
Lab Smp Id: IC250117 Client Smp ID: IC250117
Inj Date : 17-JAN-2013 15:19
Operator : JZ Inst ID: nt11.i
Smp Info : IC250117
Misc Info : 13-
Comment : 1ul Injection
Method : /chem3/nt11.i/20130117A.b/FSIMPNA011713.m
Meth Date : 18-Jan-2013 09:41 jianqing Quant Type: ISTD
Cal Date : 17-JAN-2013 15:19 Cal File: 01171302.d
Als bottle: 2 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: NEWSIMPNAICL.sub
Target Version: 3.50

01/18/13

AMOUNTS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
*	6 Naphthalene-d8	136	5.407	5.407	(1.000)	608905	2.00000	
	7 Naphthalene	128	5.435	5.435	(1.005)	983486	2.50000	2.423
$	12 2-Methylnaphthalene-d10	152	6.142	6.142	(1.136)	450644	2.50000	2.527
	14 2-Methylnaphthalene	141	6.189	6.189	(1.145)	591693	2.50000	2.479
	15 1-methylnaphthalene	141	6.382	6.382	(1.180)	556864	2.50000	2.456
	19 Biphenyl	154	6.846	6.846	(0.892)	768101	2.50000	2.385
	20 2,6-Dimethylnaphthalene	156	6.890	6.887	(0.898)	555191	2.50000	2.449
	21 Acenaphthylene	152	7.562	7.562	(0.985)	981497	2.50000	2.547
*	22 Acenaphthene-d10	164	7.676	7.673	(1.000)	340268	2.00000	
	23 Acenaphthene	153	7.723	7.720	(1.006)	595357	2.50000	2.327
	11 Dibenzofuran	168	7.875	7.874	(1.026)	852084	2.50000	2.402
	24 1,6,7-Trimethylnaphthalene	170	7.950	7.947	(1.036)	542435	2.50000	2.468
	25 Fluorene	166	8.348	8.348	(1.088)	680728	2.50000	2.403
	27 Dibenzothiophene	184	9.566	9.563	(0.987)	839847	2.50000	2.416
*	28 Phenanthrene-d10	188	9.689	9.689	(1.000)	481898	2.00000	
	30 Phenanthrene	178	9.727	9.724	(1.004)	913923	2.50000	2.336
	31 Anthracene	178	9.768	9.765	(1.008)	914898	2.50000	2.441
	26 Carbazole	167	10.276	10.276	(1.061)	898112	2.50000	2.428
	33 1-Methylphenanthrene	192	10.475	10.472	(1.081)	679889	2.50000	2.433
	36 Fluoranthene	202	11.368	11.365	(1.173)	938316	2.50000	2.364
$	253 Fluoranthene-d10	212	11.333	11.333	(1.170)	611184	2.50000	2.534
	39 Pyrene	202	11.828	11.825	(0.830)	971912	2.50000	2.399
	46 Benzo(a)anthracene	228	14.138	14.135	(0.992)	897059	2.50000	2.375
*	47 Chrysene-d12	240	14.255	14.255	(1.000)	554782	2.00000	
	48 Chrysene	228	14.328	14.321	(1.005)	859883	2.50000	2.335
	51 Benzo(b)fluoranthene	252	16.757	16.751	(0.931)	896642	2.50000	2.720
	52 Benzo(k)fluoranthene	252	16.814	16.808	(0.934)	955573	2.50000	2.539

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
251	Benzo(j)fluoranthene	252	16.887	16.880	(0.938)	679339	2.50000	2.754
55	Benzo(e)pyrene	252	17.644	17.638	(0.981)	855565	2.50000	2.491
54	Benzo(a)pyrene	252	17.767	17.761	(0.987)	878084	2.50000	2.529
* 56	Perylene-d12	264	17.994	17.991	(1.000)	534043	2.00000	
57	Perylene	252	18.067	18.061	(1.004)	848675	2.50000	2.494
$ 60	Dibenzo(a,h)anthracene-d14	292	20.216	20.203	(1.123)	400948	2.50000	2.853
63	Indeno(1,2,3-cd)pyrene	276	20.301	20.292	(1.128)	1006379	2.50000	2.755
62	Dibenzo(a,h)anthracene	278	20.301	20.292	(1.128)	808961	2.50000	2.630
61	Benzo(g,h,i)perylene	276	21.150	21.141	(1.175)	856457	2.50000	2.497

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 01171302.d
Lab Smp Id: IC250117
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem3/nt11.i/20130117A.b/FSIMPNA011713.m
Misc Info: 13-

Calibration Date: 17-JAN-2013
Calibration Time: 15:19
Client Smp ID: IC250117
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
6 Naphthalene-d8	608905	304452	1217810	608905	0.00
22 Acenaphthene-d10	340268	170134	680536	340268	0.00
28 Phenanthrene-d10	481898	240949	963796	481898	0.00
47 Chrysene-d12	554782	277391	1109564	554782	0.00
56 Perylene-d12	534043	267022	1068086	534043	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
6 Naphthalene-d8	5.41	4.91	5.91	5.41	0.00
22 Acenaphthene-d10	7.68	7.18	8.18	7.68	0.00
28 Phenanthrene-d10	9.69	9.19	10.19	9.69	0.00
47 Chrysene-d12	14.26	13.76	14.76	14.26	0.00
56 Perylene-d12	17.99	17.49	18.49	17.99	0.00

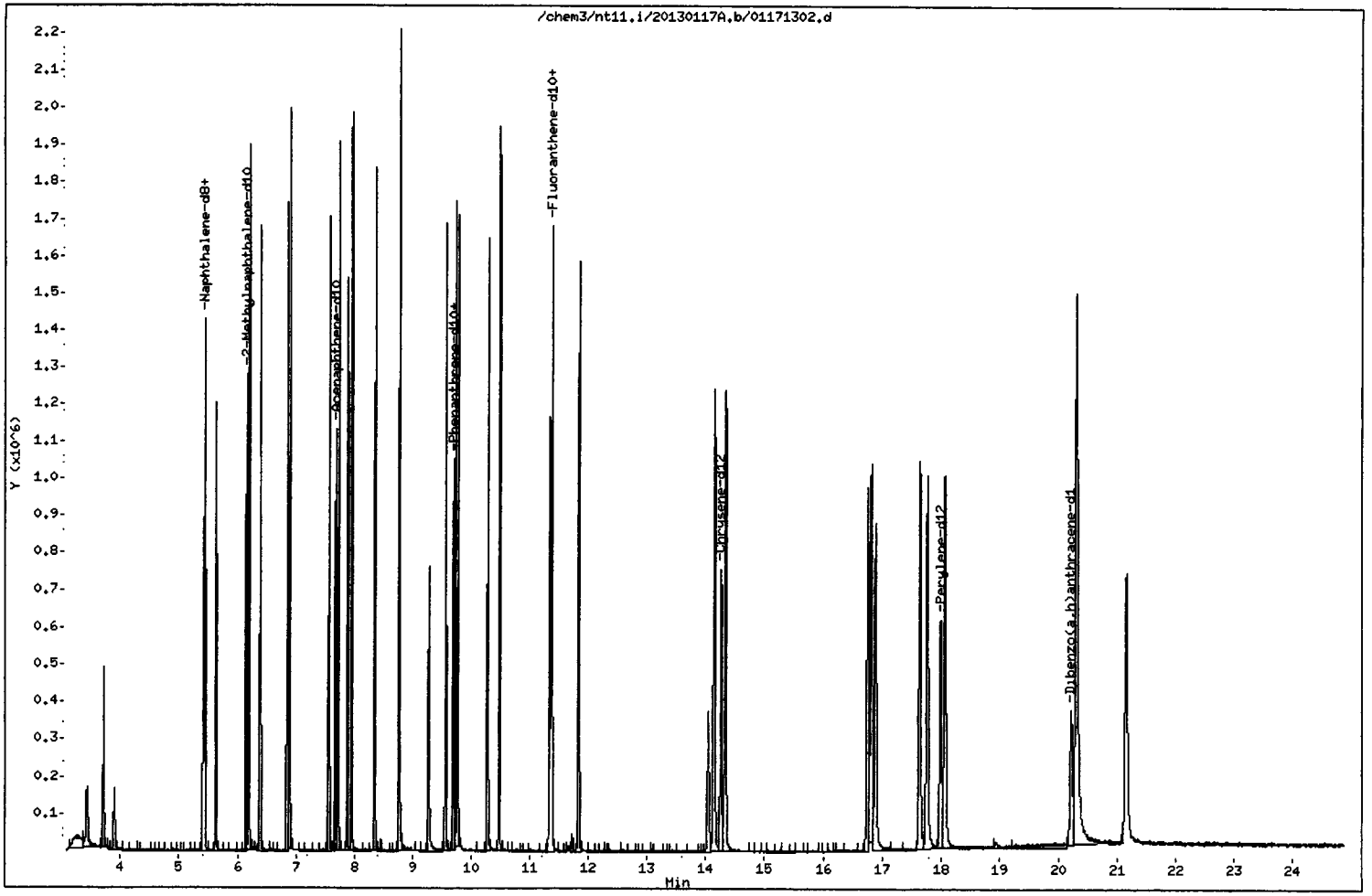
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.i/20130117A.b/01171302.d
Date : 17-JAN-2013 15:19
Client ID: IC250117
Sample Info: IC250117

Instrument: nt11.i

Operator: JZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - 01171302.d

Lab ID: IC250117, Method: FSIMPNA011713.m, Instrument: nt11.i, Date: 17-JAN-2

RT	CO-ELUTION COMPOUNDS
20.301	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.301	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

checked ok

01/18/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt11.i/20130117A.b/01171303.d
Lab Smp Id: IC010117 Client Smp ID: IC010117
Inj Date : 17-JAN-2013 15:50
Operator : JZ Inst ID: nt11.i
Smp Info : IC010117,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem3/nt11.i/20130117A.b/FSIMPNA011713.m
Meth Date : 18-Jan-2013 09:41 jianqing Quant Type: ISTD
Cal Date : 17-JAN-2013 15:50 Cal File: 01171303.d
Als bottle: 3 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: NEWSIMPNAICL.sub
Target Version: 3.50

JB 01/18/13

AMOUNTS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
*	6 Naphthalene-d8	136	5.407	5.407	(1.000)	597134	2.00000	
	7 Naphthalene	128	5.435	5.435	(1.005)	42759	0.10000	0.1109
$	12 2-Methylnaphthalene-d10	152	6.145	6.142	(1.137)	17888	0.10000	0.1040
	14 2-Methylnaphthalene	141	6.192	6.189	(1.145)	24759	0.10000	0.1095
	15 1-methylnaphthalene	141	6.382	6.382	(1.180)	23974	0.10000	0.1115
	19 Biphenyl	154	6.849	6.846	(0.892)	35206	0.10000	0.1179
	20 2,6-Dimethylnaphthalene	156	6.887	6.887	(0.897)	22973	0.10000	0.1081
	21 Acenaphthylene	152	7.562	7.562	(0.985)	38588	0.10000	0.1053
*	22 Acenaphthene-d10	164	7.675	7.673	(1.000)	330201	2.00000	
	23 Acenaphthene	153	7.720	7.720	(1.006)	28446	0.10000	0.1207
	11 Dibenzofuran	168	7.877	7.874	(1.026)	37464	0.10000	0.1131
	24 1,6,7-Trimethylnaphthalene	170	7.947	7.947	(1.035)	21695	0.10000	0.1057
	25 Fluorene	166	8.351	8.348	(1.088)	30390	0.10000	0.1154
	27 Dibenzothiophene	184	9.562	9.563	(0.987)	34734	0.10000	0.1127
*	28 Phenanthrene-d10	188	9.692	9.689	(1.000)	448360	2.00000	
	30 Phenanthrene	178	9.723	9.724	(1.003)	42393	0.10000	0.1235
	31 Anthracene	178	9.768	9.765	(1.008)	36495	0.10000	0.1092
	26 Carbazole	167	10.279	10.276	(1.061)	37215	0.10000	0.1124
	33 1-Methylphenanthrene	192	10.474	10.472	(1.081)	28156	0.10000	0.1130
	36 Fluoranthene	202	11.367	11.365	(1.173)	40997	0.10000	0.1172
$	253 Fluoranthene-d10	212	11.330	11.333	(1.169)	23358	0.10000	0.1060
	39 Pyrene	202	11.828	11.825	(0.830)	43644	0.10000	0.1177
	46 Benzo(a)anthracene	228	14.132	14.135	(0.991)	41178	0.10000	0.1190
*	47 Chrysene-d12	240	14.258	14.255	(1.000)	528109	2.00000	
	48 Chrysene	228	14.324	14.321	(1.005)	40761	0.10000	0.1212
	51 Benzo(b)fluoranthene	252	16.751	16.751	(0.931)	31903	0.10000	0.1012
	52 Benzo(k)fluoranthene	252	16.801	16.808	(0.934)	41239	0.10000	0.1179

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 01171303.d
Lab Smp Id: IC010117
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem3/nt11.i/20130117A.b/FSIMPNA011713.m
Misc Info: 13-

Calibration Date: 17-JAN-2013
Calibration Time: 15:19
Client Smp ID: IC010117
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
6 Naphthalene-d8	608905	304452	1217810	597134	-1.93
22 Acenaphthene-d10	340268	170134	680536	330201	-2.96
28 Phenanthrene-d10	481898	240949	963796	448360	-6.96
47 Chrysene-d12	554782	277391	1109564	528109	-4.81
56 Perylene-d12	534043	267022	1068086	510366	-4.43

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
6 Naphthalene-d8	5.41	4.91	5.91	5.41	-0.01
22 Acenaphthene-d10	7.68	7.18	8.18	7.68	0.00
28 Phenanthrene-d10	9.69	9.19	10.19	9.69	0.03
47 Chrysene-d12	14.26	13.76	14.76	14.26	0.02
56 Perylene-d12	17.99	17.49	18.49	17.99	-0.04

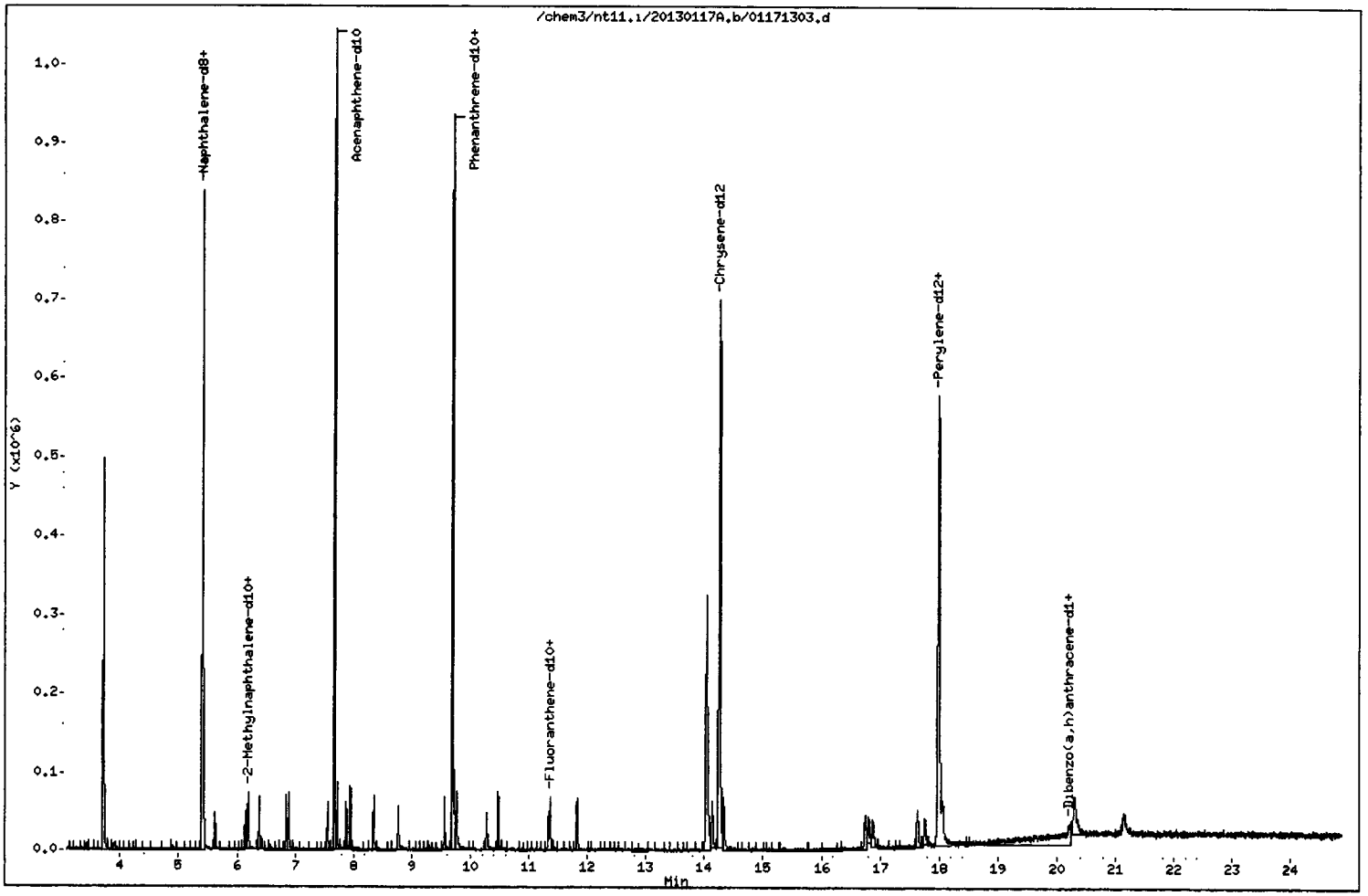
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.1/20130117A.b/01171303.d
Date : 17-JAN-2013 15:50
Client ID: IC010117
Sample Info: IC010117,

Instrument: nt11.1

Operator: JZ
Column diameter: 0.25

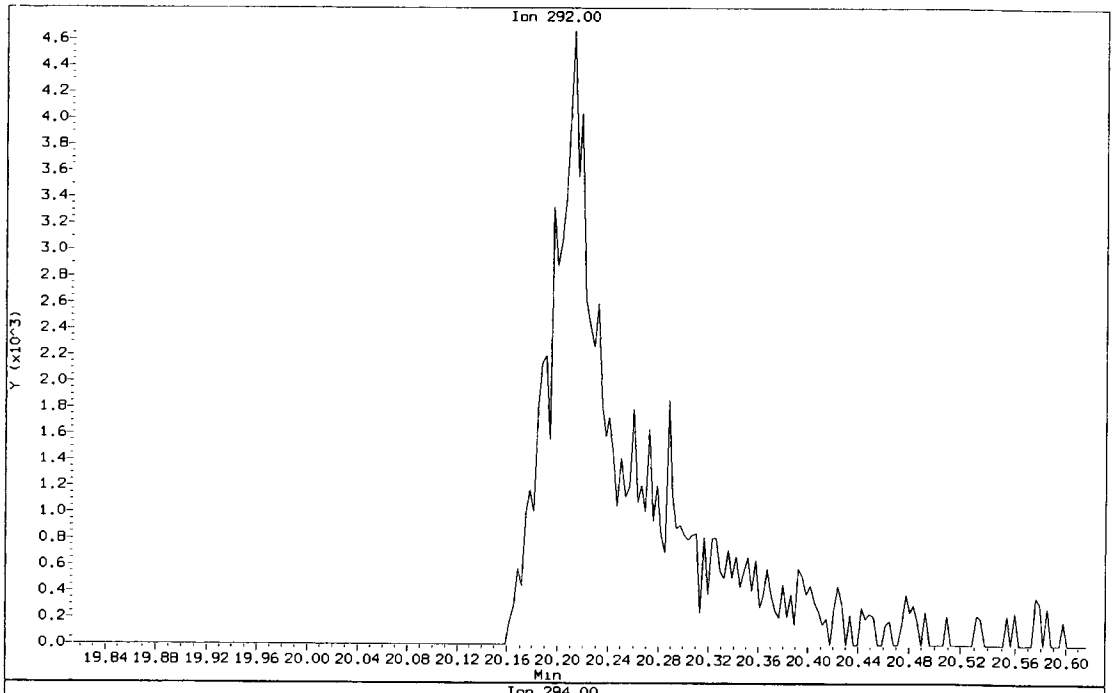
Column phase: ZB-5msi

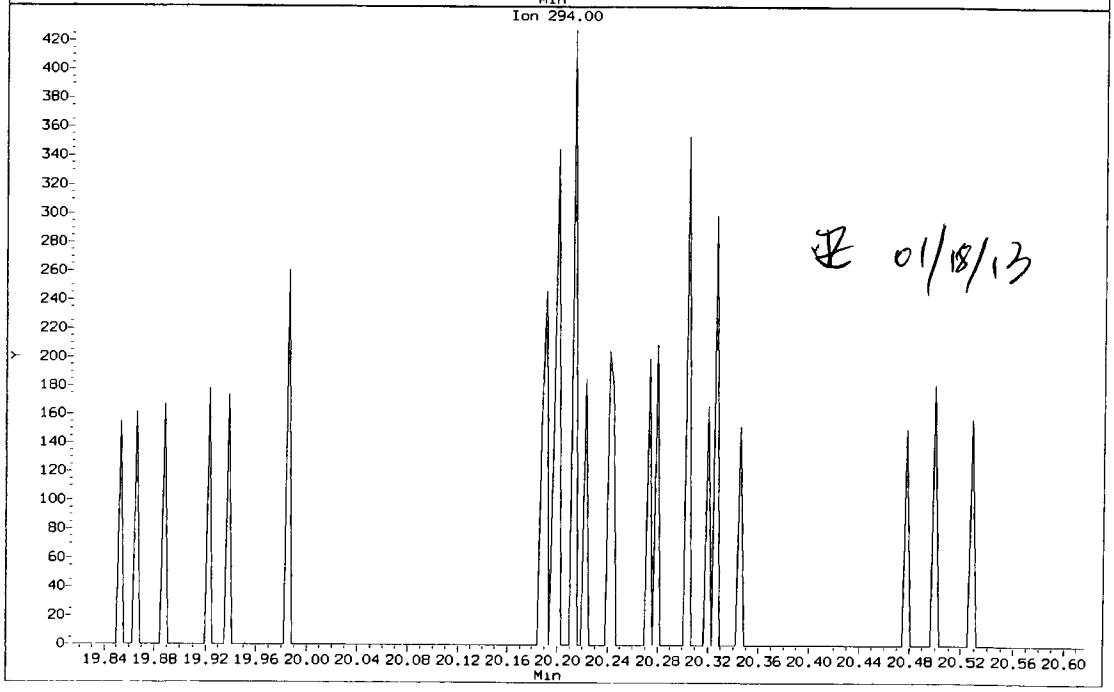


JZ01303 01171

Data File: /chem3/nt11.i/20130117A.b/01171303.d
Injection Date: 17-JAN-2013 15:50
Instrument: nt11.i
Client Sample ID: IC010117

Compound: Dibenzo(a,h)anthracene-d14
CAS Number:

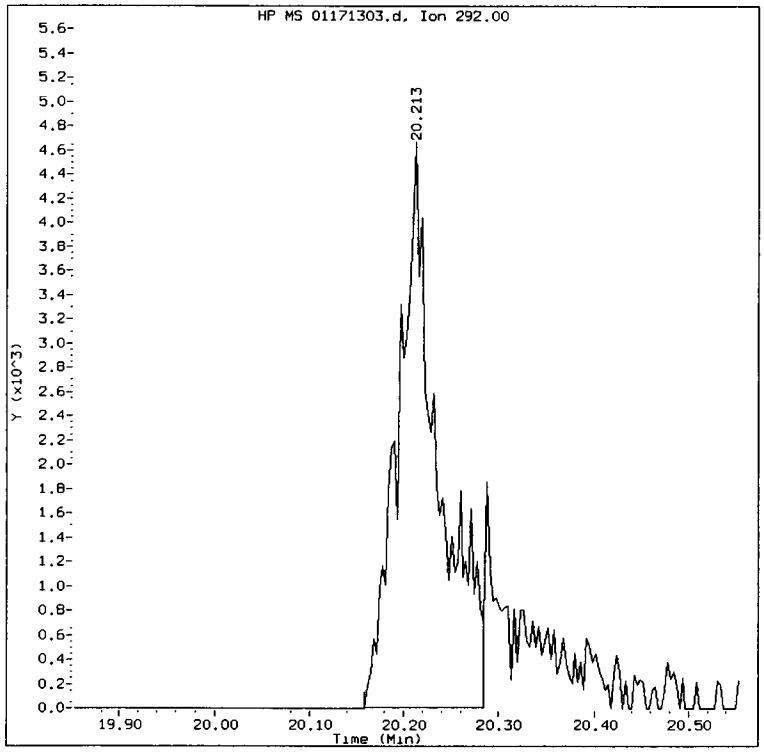




JE 01/18/13

IC010117, /chem3/nt11.i/20130117A.b/01171303.d

Dibenzo(a,h)anthracene-d14 Amount: 0.09 Area: 13723



MANUAL INTEGRATION for Dibenzo(a,h)anthracene-d14

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: AZ Date: 01/18/13

CO-ELUTION SUMMARY FOR FILE - 01171303.d

Lab ID: IC010117, Method: FSIMPNA011713.m, Instrument: nt11.i, Date: 17-JAN-2

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt11.i/20130117A.b/01171304.d
Lab Smp Id: IC050117 Client Smp ID: IC050117
Inj Date : 17-JAN-2013 16:20
Operator : JZ Inst ID: nt11.i
Smp Info : IC050117,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem3/nt11.i/20130117A.b/FSIMPNA011713.m
Meth Date : 18-Jan-2013 09:41 jianqing Quant Type: ISTD
Cal Date : 17-JAN-2013 16:20 Cal File: 01171304.d
Als bottle: 4 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: NEWSIMPNAICL.sub
Target Version: 3.50

01/18/13

AMOUNTS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
*	6 Naphthalene-d8	136	5.407	5.407	(1.000)	644031	2.00000	
	7 Naphthalene	128	5.435	5.435	(1.005)	206436	0.50000	0.4965
$	12 2-Methylnaphthalene-d10	152	6.142	6.142	(1.136)	89241	0.50000	0.4809
	14 2-Methylnaphthalene	141	6.189	6.189	(1.145)	118903	0.50000	0.4875
	15 1-methylnaphthalene	141	6.378	6.382	(1.180)	111801	0.50000	0.4820
	19 Biphenyl	154	6.846	6.846	(0.892)	157139	0.50000	0.4939
	20 2,6-Dimethylnaphthalene	156	6.887	6.887	(0.898)	113562	0.50000	0.5014
	21 Acenaphthylene	152	7.562	7.562	(0.986)	187704	0.50000	0.4809
*	22 Acenaphthene-d10	164	7.672	7.673	(1.000)	351868	2.00000	
	23 Acenaphthene	153	7.723	7.720	(1.007)	127380	0.50000	0.5071
	11 Dibenzofuran	168	7.874	7.874	(1.026)	175167	0.50000	0.4961
	24 1,6,7-Trimethylnaphthalene	170	7.947	7.947	(1.036)	111664	0.50000	0.5107
	25 Fluorene	166	8.348	8.348	(1.088)	139480	0.50000	0.4968
	27 Dibenzothiophene	184	9.562	9.563	(0.987)	175942	0.50000	0.5126
*	28 Phenanthrene-d10	188	9.689	9.689	(1.000)	499472	2.00000	
	30 Phenanthrene	178	9.723	9.724	(1.004)	190236	0.50000	0.4977
	31 Anthracene	178	9.764	9.765	(1.008)	194561	0.50000	0.5224
	26 Carbazole	167	10.276	10.276	(1.061)	182923	0.50000	0.4958
	33 1-Methylphenanthrene	192	10.474	10.472	(1.081)	136428	0.50000	0.4916
	36 Fluoranthene	202	11.364	11.365	(1.173)	196007	0.50000	0.5029
$	253 Fluoranthene-d10	212	11.330	11.333	(1.169)	118385	0.50000	0.4824
	39 Pyrene	202	11.825	11.825	(0.830)	195172	0.50000	0.4797
	46 Benzo(a)anthracene	228	14.135	14.135	(0.992)	184493	0.50000	0.4858
*	47 Chrysene-d12	240	14.252	14.255	(1.000)	579591	2.00000	
	48 Chrysene	228	14.318	14.321	(1.005)	180023	0.50000	0.4878
	51 Benzo(b)fluoranthene	252	16.748	16.751	(0.931)	157307	0.50000	0.4530
	52 Benzo(k)fluoranthene	252	16 805	16.808	(0.934)	173173	0.50000	0.4495

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
251	Benzo(j)fluoranthene	252	16.880	16.880	(0.938)	123453	0.50000	0.4631
55	Benzo(e)pyrene	252	17.634	17.638	(0.980)	167452	0.50000	0.4710
54	Benzo(a)pyrene	252	17.761	17.761	(0.987)	166885	0.50000	0.4622
* 56	Perylene-d12	264	17.988	17.991	(1.000)	562296	2.00000	
57	Perylene	252	18.057	18.061	(1.004)	165538	0.50000	0.4686
$ 60	Dibenzo(a,h)anthracene-d14	292	20.209	20.203	(1.123)	66065	0.50000	0.4084 (M)
63	Indeno(1,2,3-cd)pyrene	276	20.295	20.292	(1.128)	181097	0.50000	0.4638
62	Dibenzo(a,h)anthracene	278	20.291	20.292	(1.128)	154463	0.50000	0.4751
61	Benzo(g,h,i)perylene	276	21.137	21.141	(1.175)	165864	0.50000	0.4617

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 01171304.d
Lab Smp Id: IC050117
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem3/nt11.i/20130117A.b/FSIMPNA011713.m
Misc Info: 13-

Calibration Date: 17-JAN-2013
Calibration Time: 15:19
Client Smp ID: IC050117
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
6 Naphthalene-d8	608905	304452	1217810	644031	5.77
22 Acenaphthene-d10	340268	170134	680536	351868	3.41
28 Phenanthrene-d10	481898	240949	963796	499472	3.65
47 Chrysene-d12	554782	277391	1109564	579591	4.47
56 Perylene-d12	534043	267022	1068086	562296	5.29

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
6 Naphthalene-d8	5.41	4.91	5.91	5.41	-0.01
22 Acenaphthene-d10	7.68	7.18	8.18	7.67	-0.04
28 Phenanthrene-d10	9.69	9.19	10.19	9.69	0.00
47 Chrysene-d12	14.26	13.76	14.76	14.25	-0.02
56 Perylene-d12	17.99	17.49	18.49	17.99	-0.04

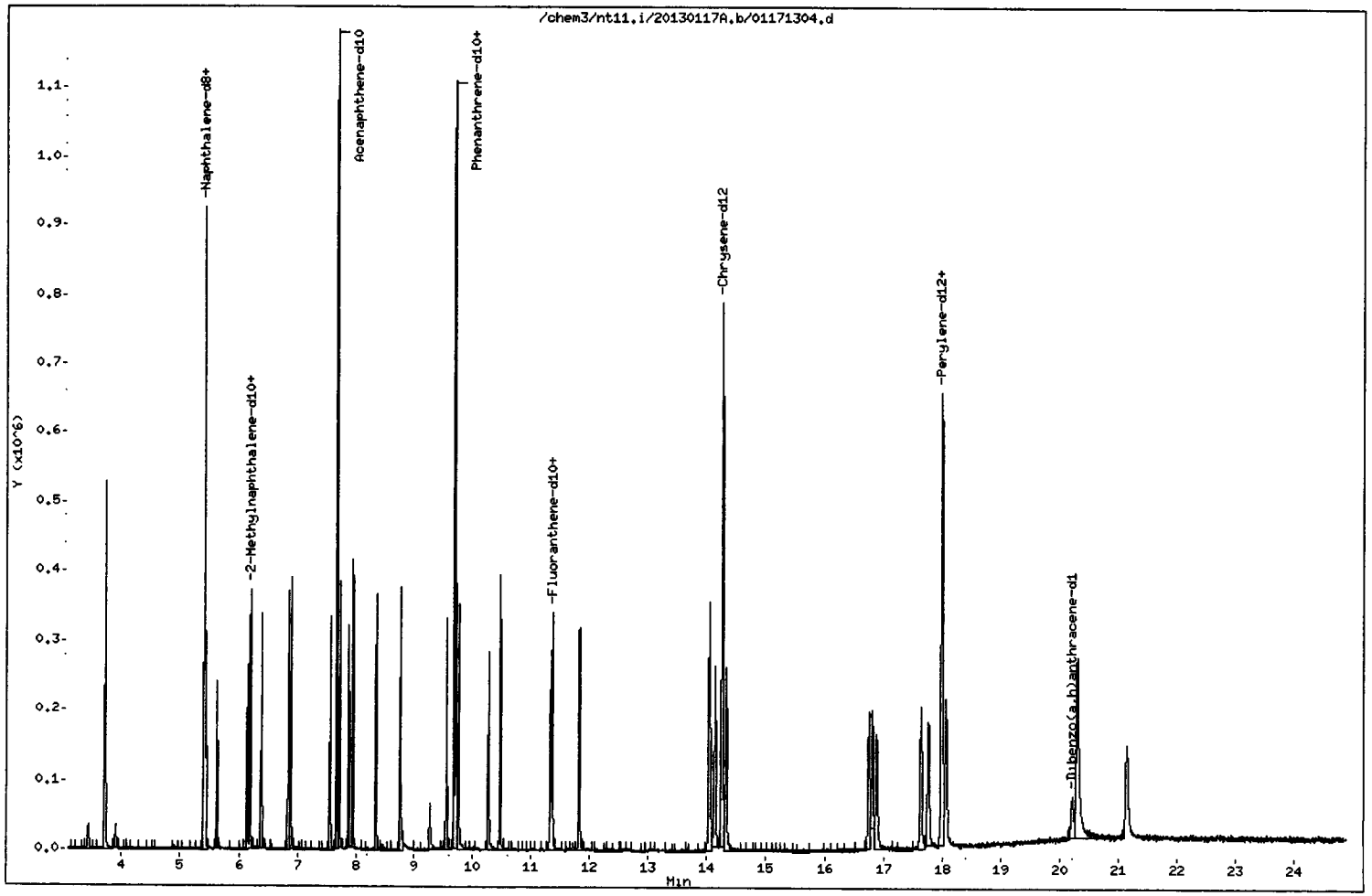
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.i/20130117A.b/01171304.d
Date : 17-JAN-2013 16:20
Client ID: IC050117
Sample Info: IC050117,

Instrument: nt11.i

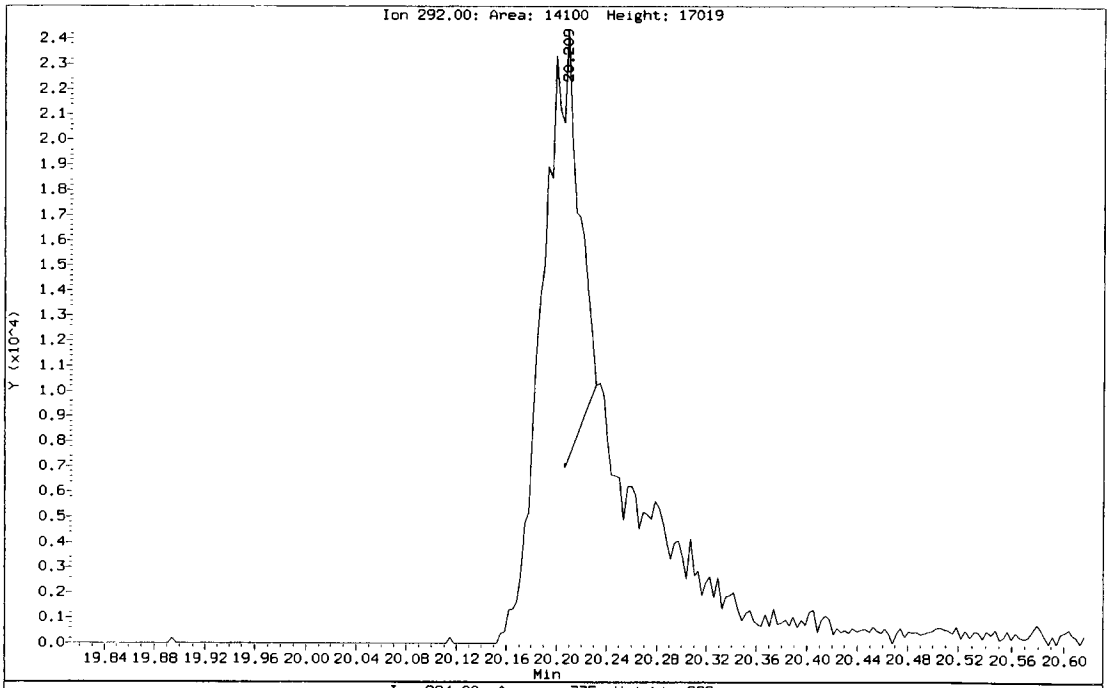
Operator: JZ
Column diameter: 0.25

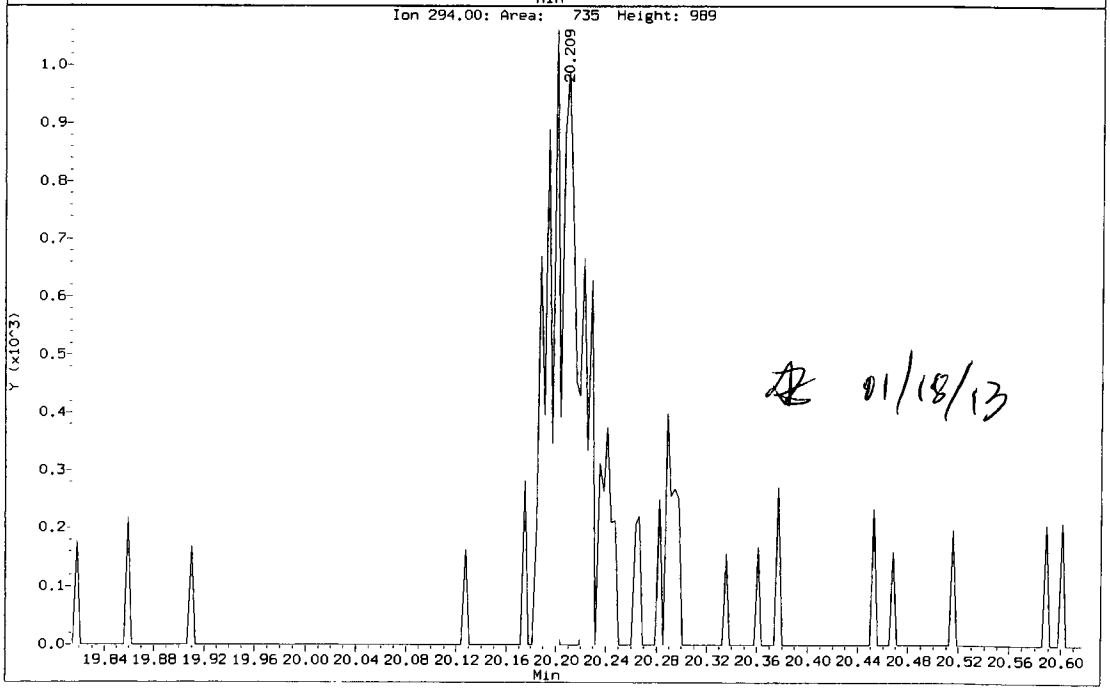
Column phase: ZB-5msi



Data File: /chem3/nt11.i/20130117A.b/01171304.d
Injection Date: 17-JAN-2013 16:20
Instrument: nt11.i
Client Sample ID: IC050117

Compound: Dibenzo(a,h)anthracene-d14
CAS Number:

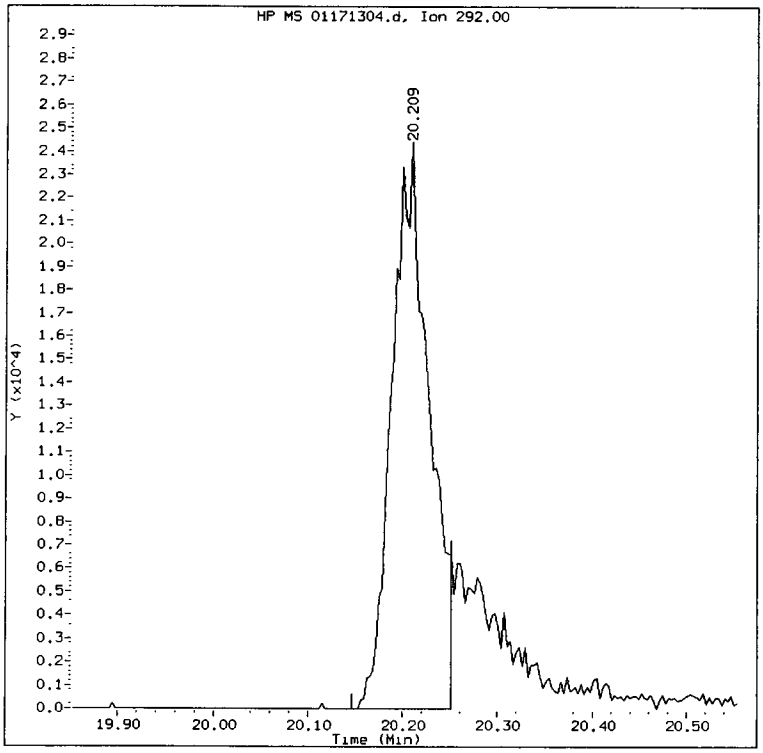




01/18/13

IC050117, /chem3/nt11.i/20130117A.b/01171304.d

Dibenzo(a,h)anthracene-d14 Amount: 0.41 Area: 66065



MANUAL INTEGRATION for Dibenzo(a,h)anthracene-d14

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 01/18/13

CO-ELUTION SUMMARY FOR FILE - 01171304.d

Lab ID: IC050117, Method: FSIMPNA011713.m, Instrument: nt11.i, Date: 17-JAN-2

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt11.i/20130117A.b/01171305.d
Lab Smp Id: IC10117 Client Smp ID: IC10117
Inj Date : 17-JAN-2013 16:50
Operator : JZ Inst ID: nt11.i
Smp Info : IC10117,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem3/nt11.i/20130117A.b/FSIMPNA011713.m
Meth Date : 18-Jan-2013 09:41 jianqing Quant Type: ISTD
Cal Date : 17-JAN-2013 16:50 Cal File: 01171305.d
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: NEWSIMPNAICL.sub
Target Version: 3.50

JZ 01/18/13

AMOUNTS

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
* 6 Naphthalene-d8	136	5.407	5.407	(1.000)	646517	2.00000	
7 Naphthalene	128	5.435	5.435	(1.005)	428763	1.00000	1.027
$ 12 2-Methylnaphthalene-d10	152	6.142	6.142	(1.136)	193145	1.00000	1.037
14 2-Methylnaphthalene	141	6.189	6.189	(1.145)	255715	1.00000	1.044
15 1-methylnaphthalene	141	6.382	6.382	(1.180)	242607	1.00000	1.042
19 Biphenyl	154	6.846	6.846	(0.892)	333016	1.00000	1.021
20 2,6-Dimethylnaphthalene	156	6.887	6.887	(0.898)	241966	1.00000	1.042
21 Acenaphthylene	152	7.562	7.562	(0.986)	411485	1.00000	1.029
* 22 Acenaphthene-d10	164	7.673	7.673	(1.000)	360633	2.00000	
23 Acenaphthene	153	7.720	7.720	(1.006)	260409	1.00000	1.011
11 Dibenzofuran	168	7.874	7.874	(1.026)	374149	1.00000	1.034
24 1,6,7-Trimethylnaphthalene	170	7.947	7.947	(1.036)	235984	1.00000	1.053
25 Fluorene	166	8.348	8.348	(1.088)	294658	1.00000	1.024
27 Dibenzothiophene	184	9.563	9.563	(0.987)	361507	1.00000	1.032
* 28 Phenanthrene-d10	188	9.689	9.689	(1.000)	509758	2.00000	
30 Phenanthrene	178	9.724	9.724	(1.004)	398764	1.00000	1.022
31 Anthracene	178	9.765	9.765	(1.008)	386459	1.00000	1.017
26 Carbazole	167	10.276	10.276	(1.061)	388516	1.00000	1.032
33 1-Methylphenanthrene	192	10.472	10.472	(1.081)	296055	1.00000	1.045
36 Fluoranthene	202	11.365	11.365	(1.173)	415948	1.00000	1.046
$ 253 Fluoranthene-d10	212	11.333	11.333	(1.170)	254607	1.00000	1.017
39 Pyrene	202	11.825	11.825	(0.830)	422150	1.00000	1.026
46 Benzo(a)anthracene	228	14.135	14.135	(0.992)	386968	1.00000	1.008
* 47 Chrysene-d12	240	14.255	14.255	(1.000)	586007	2.00000	
48 Chrysene	228	14.321	14.321	(1.005)	376080	1.00000	1.008
51 Benzo(b)fluoranthene	252	16.751	16.751	(0.931)	344861	1.00000	0.9923
52 Benzo(k)fluoranthene	252	16.808	16.808	(0.934)	382502	1.00000	0.9920

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
251	Benzo(j)fluoranthene	252	16.880	16.880	(0.938)	291698	1.00000	1.093
55	Benzo(e)pyrene	252	17.638	17.638	(0.980)	361984	1.00000	1.017
54	Benzo(a)pyrene	252	17.761	17.761	(0.987)	368066	1.00000	1.019
* 56	Perylene-d12	264	17.991	17.991	(1.000)	562765	2.00000	
57	Perylene	252	18.061	18.061	(1.004)	359237	1.00000	1.016
$ 60	Dibenzo(a,h)anthracene-d14	292	20.203	20.203	(1.123)	160328	1.00000	0.9698(M)
63	Indeno(1,2,3-cd)pyrene	276	20.292	20.292	(1.128)	407274	1.00000	1.042
62	Dibenzo(a,h)anthracene	278	20.292	20.292	(1.128)	328057	1.00000	1.008
61	Benzo(g,h,i)perylene	276	21.141	21.141	(1.175)	360937	1.00000	1.004

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 01171305.d
Lab Smp Id: IC10117
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem3/nt11.i/20130117A.b/FSIMPNA011713.m
Misc Info: 13-

Calibration Date: 17-JAN-2013
Calibration Time: 15:19
Client Smp ID: IC10117
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
6 Naphthalene-d8	608905	304452	1217810	646517	6.18
22 Acenaphthene-d10	340268	170134	680536	360633	5.98
28 Phenanthrene-d10	481898	240949	963796	509758	5.78
47 Chrysene-d12	554782	277391	1109564	586007	5.63
56 Perylene-d12	534043	267022	1068086	562765	5.38

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
6 Naphthalene-d8	5.41	4.91	5.91	5.41	0.00
22 Acenaphthene-d10	7.68	7.18	8.18	7.67	-0.04
28 Phenanthrene-d10	9.69	9.19	10.19	9.69	0.00
47 Chrysene-d12	14.26	13.76	14.76	14.26	0.00
56 Perylene-d12	17.99	17.49	18.49	17.99	-0.02

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.

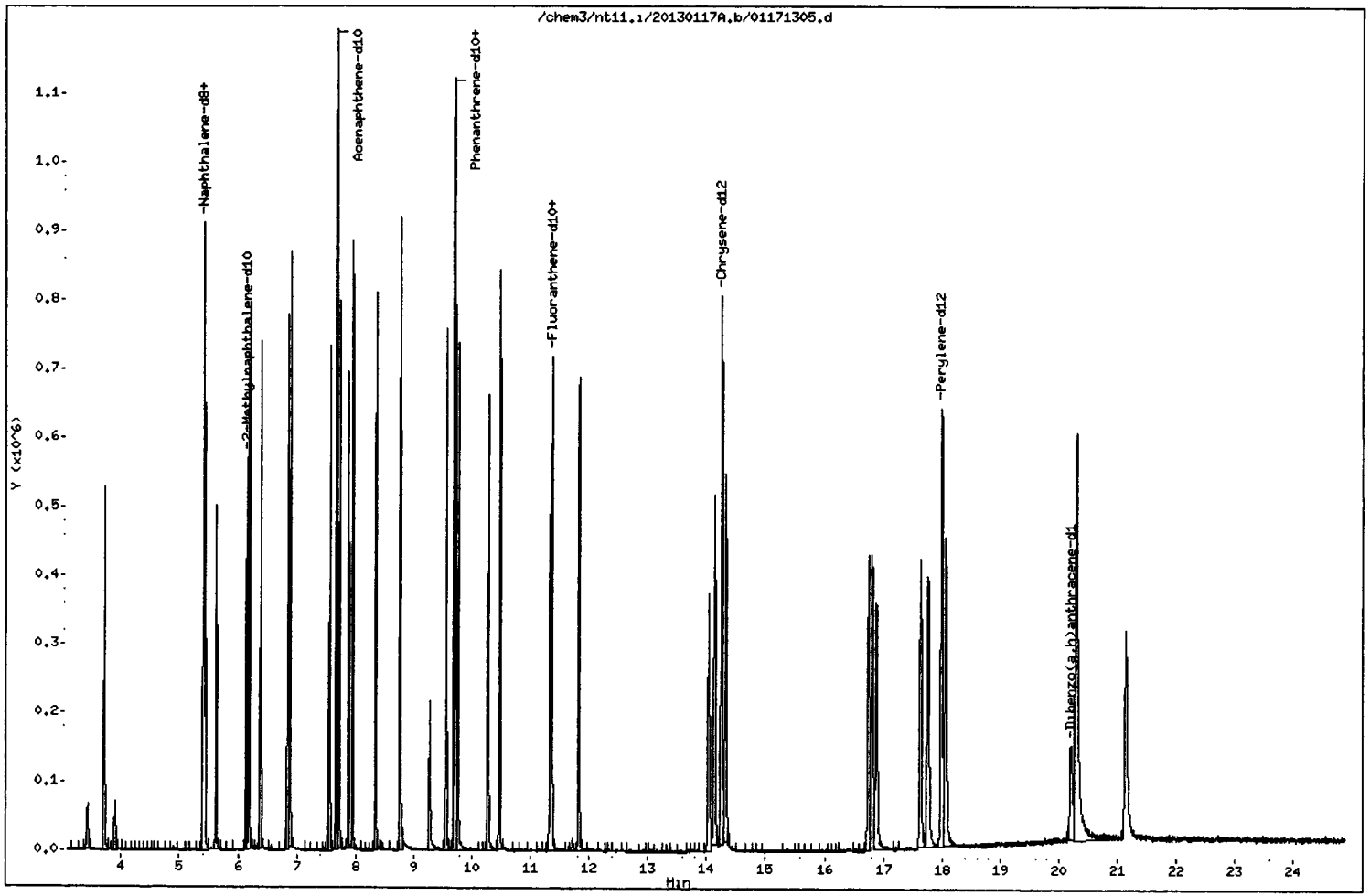
VZ87:01184

Data File: /chem3/nt11.1/20130117A.b/01171305.d
Date : 17-JAN-2013 16:50
Client ID: IC10117
Sample Info: IC10117,

Instrument: nt11.1

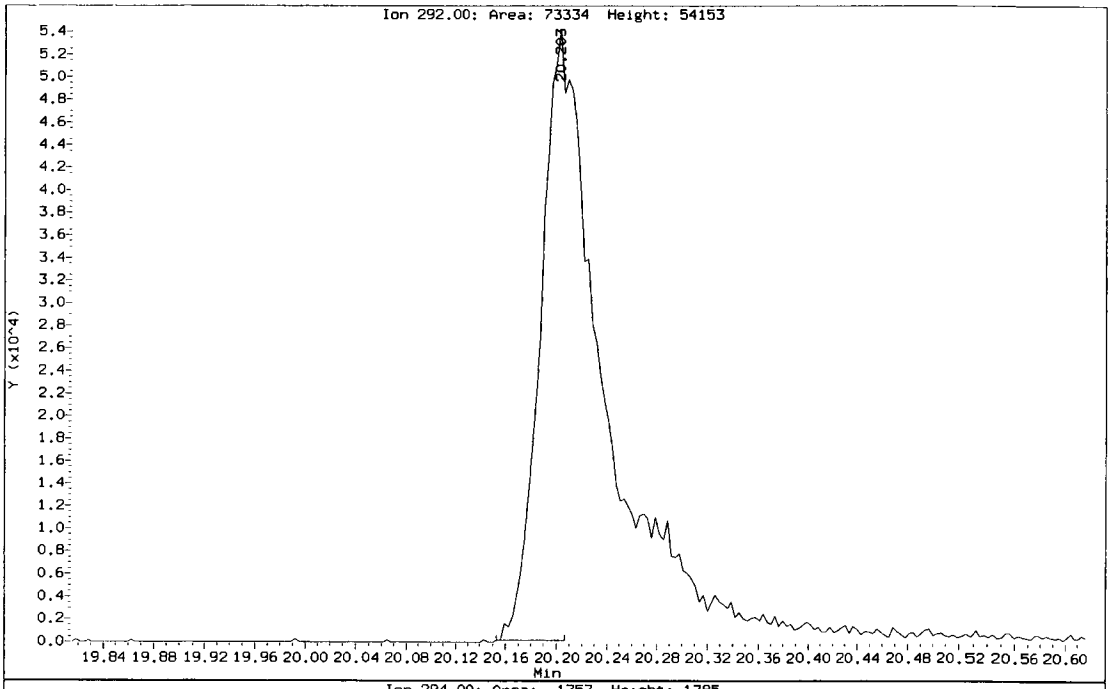
Operator: JZ
Column diameter: 0.25

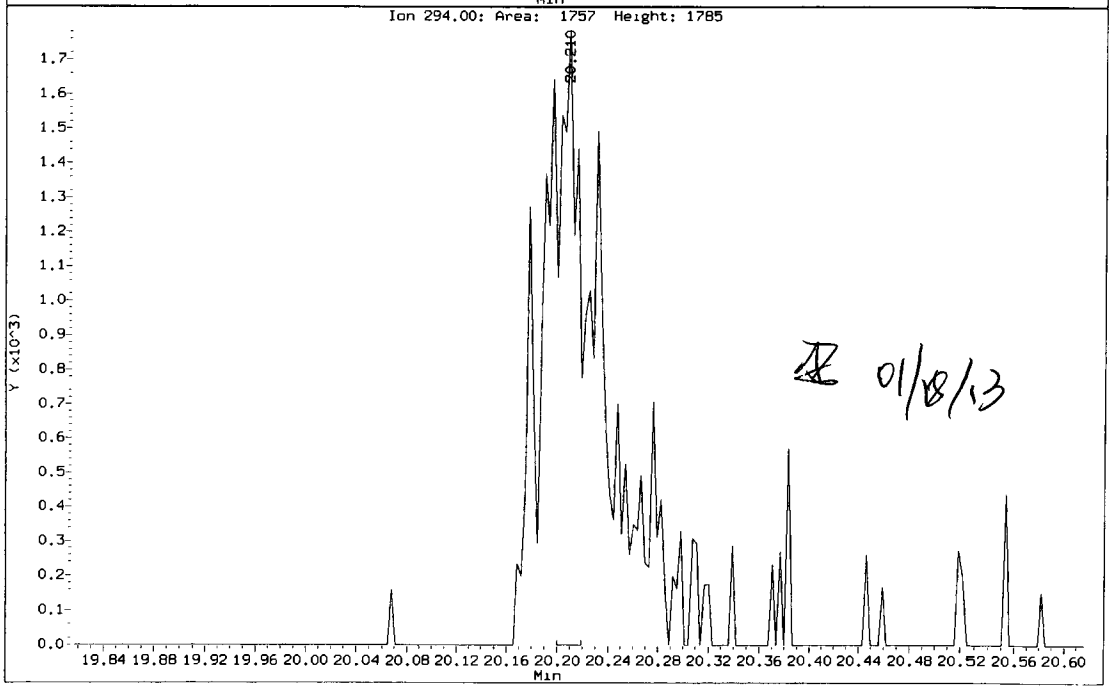
Column phase: ZB-5msi



Data File: /chem3/nt11.i/20130117A.b/01171305.d
Injection Date: 17-JAN-2013 16:50
Instrument: nt11.i
Client Sample ID: IC10117

Compound: Dibenzo(a,h)anthracene-d14
CAS Number:

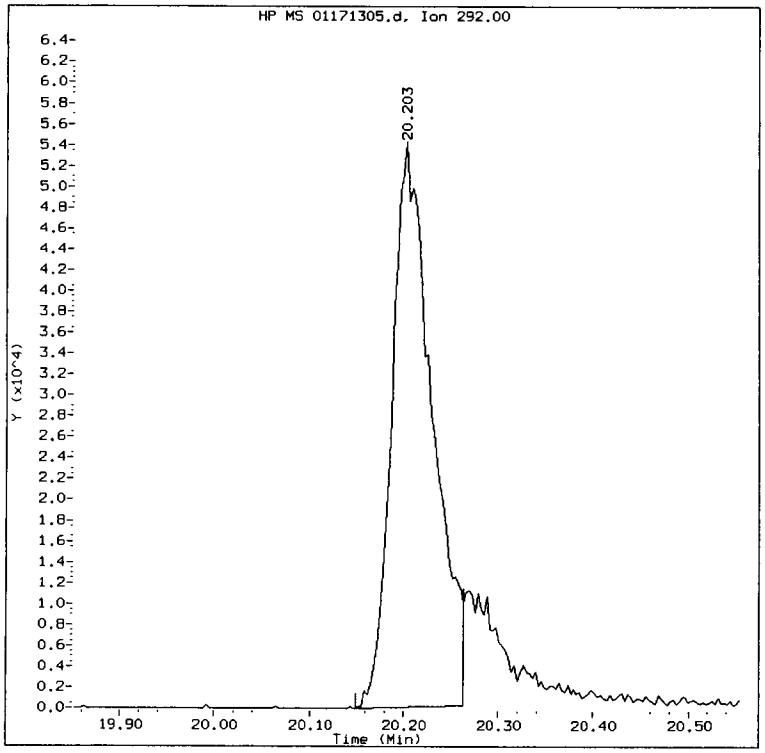




01/18/13

IC10117, /chem3/nt11.i/20130117A.b/01171305.d

Dibenzo(a,h)anthracene-d14 Amount: 0.97 Area: 160328



MANUAL INTEGRATION for Dibenzo(a,h)anthracene-d14

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: AZ Date: 01/18/13

CO-ELUTION SUMMARY FOR FILE - 01171305.d

Lab ID: IC10117, Method: FSIMPNA011713.m, Instrument: nt11.i, Date: 17-JAN-20

RT	CO-ELUTION COMPOUNDS
20.292	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.292	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

checked ok

01/18/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt11.i/20130117A.b/01171306.d
Lab Smp Id: IC50117 Client Smp ID: IC50117
Inj Date : 17-JAN-2013 17:19
Operator : JZ Inst ID: nt11.i
Smp Info : IC50117,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem3/nt11.i/20130117A.b/FSIMPNA011713.m
Meth Date : 18-Jan-2013 09:41 jianqing Quant Type: ISTD
Cal Date : 17-JAN-2013 17:19 Cal File: 01171306.d
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: NEWSIMPNAICL.sub
Target Version: 3.50

JZ 01/18/13

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
* 6 Naphthalene-d8	136	5.407	5.407	(1.000)	646295	2.00000	
7 Naphthalene	128	5.435	5.435	(1.005)	2061941	5.00000	4.942
$ 12 2-Methylnaphthalene-d10	152	6.142	6.142	(1.136)	946961	5.00000	5.085
14 2-Methylnaphthalene	141	6.189	6.189	(1.145)	1213763	5.00000	4.959
15 1-methylnaphthalene	141	6.382	6.382	(1.180)	1150058	5.00000	4.941
19 Biphenyl	154	6.849	6.846	(0.893)	1547364	5.00000	4.735
20 2,6-Dimethylnaphthalene	156	6.890	6.887	(0.898)	1134876	5.00000	4.878
21 Acenaphthylene	152	7.562	7.562	(0.986)	2005966	5.00000	5.002
* 22 Acenaphthene-d10	164	7.672	7.673	(1.000)	361474	2.00000	
23 Acenaphthene	153	7.723	7.720	(1.007)	1211716	5.00000	4.695
11 Dibenzofuran	168	7.874	7.874	(1.026)	1767795	5.00000	4.874
24 1,6,7-Trimethylnaphthalene	170	7.950	7.947	(1.036)	1096235	5.00000	4.880
25 Fluorene	166	8.348	8.348	(1.088)	1381054	5.00000	4.789
27 Dibenzothiophene	184	9.566	9.563	(0.987)	1683756	5.00000	4.755
* 28 Phenanthrene-d10	188	9.689	9.689	(1.000)	515253	2.00000	
30 Phenanthrene	178	9.727	9.724	(1.004)	1833517	5.00000	4.650
31 Anthracene	178	9.768	9.765	(1.008)	1854942	5.00000	4.828
26 Carbazole	167	10.276	10.276	(1.061)	1848153	5.00000	4.856
33 1-Methylphenanthrene	192	10.474	10.472	(1.081)	1397535	5.00000	4.881
36 Fluoranthene	202	11.371	11.365	(1.174)	1894747	5.00000	4.712
$ 253 Fluoranthene-d10	212	11.336	11.333	(1.170)	1265885	5.00000	5.001
39 Pyrene	202	11.828	11.825	(0.830)	1989917	5.00000	4.862
46 Benzo(a)anthracene	228	14.141	14.135	(0.992)	1849470	5.00000	4.840
* 47 Chrysene-d12	240	14.255	14.255	(1.000)	583112	2.00000	
48 Chrysene	228	14.331	14.321	(1.005)	1771822	5.00000	4.772
51 Benzo(b)fluoranthene	252	16.760	16.751	(0.931)	1848377	5.00000	5.237
52 Benzo(k)fluoranthene	252	16.823	16.808	(0.935)	1921607	5.00000	4.907

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	251 Benzo(j)fluoranthene	252	16.893	16.880	(0.939)	1486433	5.00000	5.487
	55 Benzo(e)pyrene	252	17.650	17.638	(0.981)	1799046	5.00000	4.979
	54 Benzo(a)pyrene	252	17.773	17.761	(0.988)	1848288	5.00000	5.037
*	56 Perylene-d12	264	17.994	17.991	(1.000)	571511	2.00000	
	57 Perylene	252	18.073	18.061	(1.004)	1783959	5.00000	4.969
$	60 Dibenzo(a,h)anthracene-d14	292	20.219	20.203	(1.124)	916155	5.00000	5.571
	63 Indeno(1,2,3-cd)pyrene	276	20.314	20.292	(1.129)	2105290	5.00000	5.305
	62 Dibenzo(a,h)anthracene	278	20.314	20.292	(1.129)	1719305	5.00000	5.203
	61 Benzo(g,h,i)perylene	276	21.159	21.141	(1.176)	1845213	5.00000	5.054

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 01171306.d
Lab Smp Id: IC50117
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem3/nt11.i/20130117A.b/FSIMPNA011713.m
Misc Info: 13-

Calibration Date: 17-JAN-2013
Calibration Time: 15:19
Client Smp ID: IC50117
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
6 Naphthalene-d8	608905	304452	1217810	646295	6.14
22 Acenaphthene-d10	340268	170134	680536	361474	6.23
28 Phenanthrene-d10	481898	240949	963796	515253	6.92
47 Chrysene-d12	554782	277391	1109564	583112	5.11
56 Perylene-d12	534043	267022	1068086	571511	7.02

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
6 Naphthalene-d8	5.41	4.91	5.91	5.41	0.00
22 Acenaphthene-d10	7.68	7.18	8.18	7.67	-0.04
28 Phenanthrene-d10	9.69	9.19	10.19	9.69	0.00
47 Chrysene-d12	14.26	13.76	14.76	14.25	0.00
56 Perylene-d12	17.99	17.49	18.49	17.99	0.00

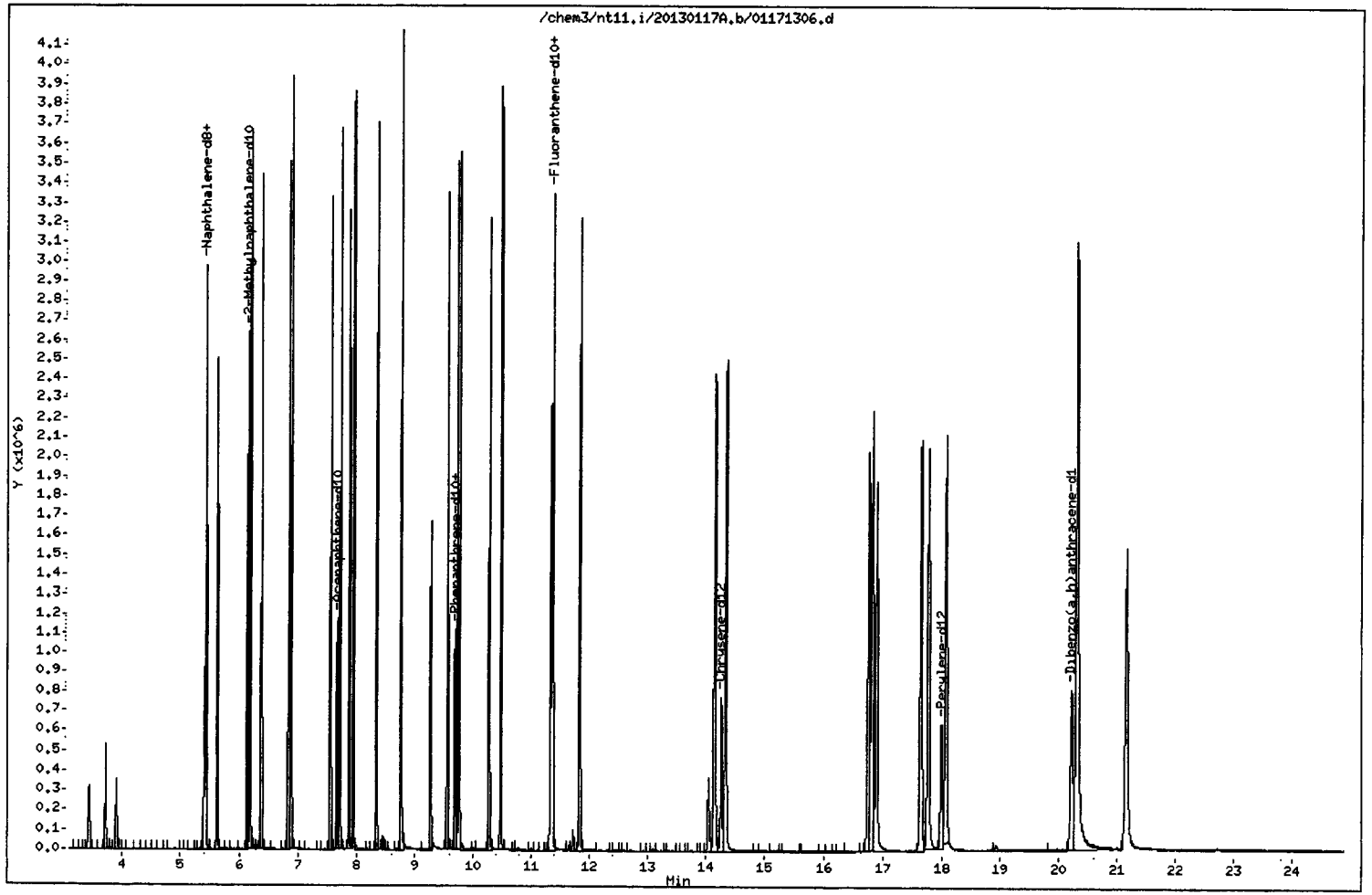
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.i/20130117A.b/01171306.d
Date : 17-JAN-2013 17:19
Client ID: IC50117
Sample Info: IC50117,

Instrument: nt11.i

Operator: JZ
Column diameter: 0.25

Column phase: ZB-5ms1



CO-ELUTION SUMMARY FOR FILE - 01171306.d

Lab ID: IC50117, Method: FSIMPNA011713.m, Instrument: nt11.i, Date: 17-JAN-20

RT	CO-ELUTION COMPOUNDS
20.314	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.314	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

checked ok

9/18/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt11.i/20130117A.b/01171307.d
Lab Smp Id: IC100117 Client Smp ID: IC100117
Inj Date : 17-JAN-2013 17:49
Operator : JZ Inst ID: nt11.i
Smp Info : IC100117,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem3/nt11.i/20130117A.b/FSIMPNA011713.m
Meth Date : 18-Jan-2013 09:41 jianqing Quant Type: ISTD
Cal Date : 17-JAN-2013 17:49 Cal File: 01171307.d
Als bottle: 7 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: NEWSIMPNAICL.sub
Target Version: 3.50

01/18/13

AMOUNTS

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
* 6 Naphthalene-d8	136	5.407	5.407	(1.000)	689847	2.00000	
7 Naphthalene	128	5.438	5.435	(1.006)	3923223	10.0000	8.810
$ 12 2-Methylnaphthalene-d10	152	6.145	6.142	(1.137)	1822915	10.0000	9.171
14 2-Methylnaphthalene	141	6.192	6.189	(1.145)	2268191	10.0000	8.681
15 1-methylnaphthalene	141	6.382	6.382	(1.180)	2174518	10.0000	8.753
19 Biphenyl	154	6.852	6.846	(0.893)	2951193	10.0000	8.660
20 2,6-Dimethylnaphthalene	156	6.893	6.887	(0.898)	2144790	10.0000	8.841
21 Acenaphthylene	152	7.565	7.562	(0.986)	3828995	10.0000	9.157
* 22 Acenaphthene-d10	164	7.676	7.673	(1.000)	376923	2.00000	
23 Acenaphthene	153	7.726	7.720	(1.007)	2282590	10.0000	8.483
11 Dibenzofuran	168	7.877	7.874	(1.026)	3291183	10.0000	8.702
24 1,6,7-Trimethylnaphthalene	170	7.953	7.947	(1.036)	2029486	10.0000	8.664
25 Fluorene	166	8.351	8.348	(1.088)	2610361	10.0000	8.680
27 Dibenzothiophene	184	9.569	9.563	(0.987)	3177056	10.0000	8.502
* 28 Phenanthrene-d10	188	9.692	9.689	(1.000)	543777	2.00000	
30 Phenanthrene	178	9.730	9.724	(1.004)	3436385	10.0000	8.258
31 Anthracene	178	9.771	9.765	(1.008)	3500197	10.0000	8.632
26 Carbazole	167	10 282	10.276	(1.061)	3503632	10.0000	8.723
33 1-Methylphenanthrene	192	10.481	10.472	(1.081)	2567261	10.0000	8.496
36 Fluoranthene	202	11.377	11.365	(1.174)	3548607	10.0000	8.363
$ 253 Fluoranthene-d10	212	11.339	11.333	(1.170)	2471922	10.0000	9.253
39 Pyrene	202	11.835	11.825	(0.830)	3761047	10.0000	8.662
46 Benzo(a)anthracene	228	14.151	14.135	(0.992)	3550842	10.0000	8.759
* 47 Chrysene-d12	240	14.261	14.255	(1.000)	618618	2.00000	
48 Chrysene	228	14.337	14.321	(1.005)	3453066	10.0000	8.766
51 Benzo(b)fluoranthene	252	16.776	16.751	(0.932)	3488630	10.0000	9.546
52 Benzo(k)fluoranthene	252	16.839	16.808	(0.935)	3663179	10.0000	9.035

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	251 Benzo(j)fluoranthene	252	16.912	16.880	(0.940)	2818044	10.0000	10.05
	55 Benzo(e)pyrene	252	17.663	17.638	(0.981)	3495417	10.0000	9.343
	54 Benzo(a)pyrene	252	17.789	17.761	(0.988)	3582814	10.0000	9.429
*	56 Perylene-d12	264	18.001	17.991	(1.000)	591784	2.00000	
	57 Perylene	252	18.089	18.061	(1.005)	3525582	10.0000	9.483
$	60 Dibenzo(a,h)anthracene-d14	292	20.235	20.203	(1.124)	2088666	10.0000	12.27
	63 Indeno(1,2,3-cd)pyrene	276	20.336	20.292	(1.130)	4101738	10.0000	9.982
	62 Dibenzo(a,h)anthracene	278	20.333	20.292	(1.130)	3335863	10.0000	9.750
	61 Benzo(g,h,i)perylene	276	21.185	21.141	(1.177)	3661973	10.0000	9.686

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 01171307.d
Lab Smp Id: IC100117
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem3/nt11.i/20130117A.b/FSIMPNA011713.m
Misc Info: 13-

Calibration Date: 17-JAN-2013
Calibration Time: 15:19
Client Smp ID: IC100117
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
6 Naphthalene-d8	608905	304452	1217810	689847	13.29
22 Acenaphthene-d10	340268	170134	680536	376923	10.77
28 Phenanthrene-d10	481898	240949	963796	543777	12.84
47 Chrysene-d12	554782	277391	1109564	618618	11.51
56 Perylene-d12	534043	267022	1068086	591784	10.81

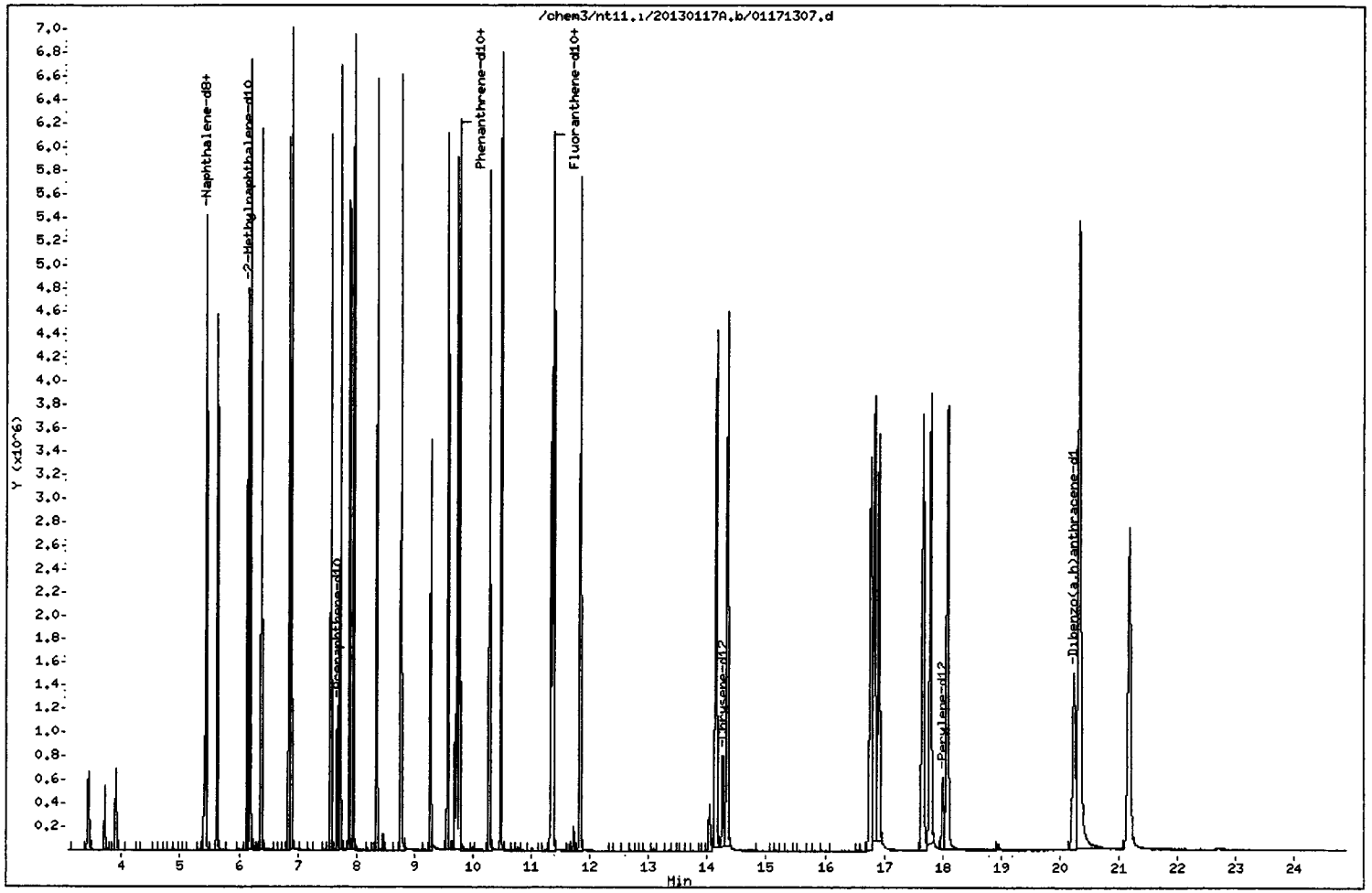
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
6 Naphthalene-d8	5.41	4.91	5.91	5.41	0.00
22 Acenaphthene-d10	7.68	7.18	8.18	7.68	0.00
28 Phenanthrene-d10	9.69	9.19	10.19	9.69	0.03
47 Chrysene-d12	14.26	13.76	14.76	14.26	0.04
56 Perylene-d12	17.99	17.49	18.49	18.00	0.03

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.

Data File: /chem3/nt11.i/20130117A.b/01171307.d
Date : 17-JAN-2013 17:49
Client ID: IC100117
Sample Info: IC100117,

Instrument: nt11.i

Operator: JZ
Column phase: ZB-5ms1
Column diameter: 0.25



JZ5139-257

CO-ELUTION SUMMARY FOR FILE - 01171307.d

Lab ID: IC100117, Method: FSIMPNA011713.m, Instrument: nt11.i, Date: 17-JAN-2

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt11.i/20130117A.b/01171308.d
Lab Smp Id: ICV0117 Client Smp ID: ICV0117
Inj Date : 17-JAN-2013 18:19
Operator : JZ Inst ID: nt11.i
Smp Info : ICV0117,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem3/nt11.i/20130117A.b/FSIMPNA011713.m
Meth Date : 18-Jan-2013 09:41 jianqing Quant Type: ISTD
Cal Date : 17-JAN-2013 16:50 Cal File: 01171305.d
Als bottle: 8 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SIMPNAICV.sub
Target Version: 3.50

01/18/13

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Vo	500.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
* 6 Naphthalene-d8	136	5.407	5.407	(1.000)	627912	2.00000	
7 Naphthalene	128	5.435	5.435	(1.005)	1007608	2.48585	2.486
$ 12 2-Methylnaphthalene-d10	152	6.142	6.142	(1.136)	550269	3.04151	3.042
14 2-Methylnaphthalene	141	6.186	6.189	(1.144)	557433	2.34391	2.344
15 1-methylnaphthalene	141	6.379	6.382	(1.180)	578577	2.55852	2.559
21 Acenaphthylene	152	7.562	7.562	(0.986)	982830	2.52655	2.527
* 22 Acenaphthene-d10	164	7.672	7.673	(1.000)	350658	2.00000	
23 Acenaphthene	153	7.723	7.720	(1.007)	599854	2.39617	2.396
25 Fluorene	166	8.348	8.348	(1.088)	686265	2.45294	2.453
* 28 Phenanthrene-d10	188	9.689	9.689	(1.000)	495781	2.00000	
30 Phenanthrene	178	9.723	9.724	(1.004)	927070	2.44340	2.443
31 Anthracene	178	9.765	9.765	(1.008)	934716	2.52825	2.528
36 Fluoranthene	202	11.364	11.365	(1.173)	969774	2.50663	2.507
$ 253 Fluoranthene-d10	212	11.333	11.333	(1.170)	735309	3.01886	3.019
39 Pyrene	202	11.825	11.825	(0.830)	980807	2.46641	2.466
46 Benzo(a)anthracene	228	14.135	14 135	(0.992)	902856	2.43190	2.432

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
* 47 Chrysene-d12	240	14.255	14.255	(1.000)	566539	2.00000	
48 Chrysene	228	14.324	14.321	(1.005)	874431	2.42385	2.424
51 Benzo(b)fluoranthene	252	16.754	16.751	(0.931)	883901	2.64965	2.650
52 Benzo(k)fluoranthene	252	16.814	16.808	(0.935)	917293	2.47850	2.479
54 Benzo(a)pyrene	252	17.764	17.761	(0.988)	793289	2.28707	2.287
* 56 Perylene-d12	264	17.988	17.991	(1.000)	540179	2.00000	
57 Perylene	252	17.764	18.061	(0.988)	755778	2.22715	2.227
$ 60 Dibenzo(a,h)anthracene-d14	292	20.213	20.203	(1.124)	504365	3.17833	3.178
63 Indeno(1,2,3-cd)pyrene	276	20.298	20.292	(1.128)	1018212	2.71465	2.715
62 Dibenzo(a,h)anthracene	278	20.298	20.292	(1.128)	819044	2.62246	2.622
61 Benzo(g,h,i)perylene	276	21.144	21.141	(1.175)	876304	2.53926	2.539

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 01171308.d
Lab Smp Id: ICV0117
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Calibration Date: 17-JAN-2013
Calibration Time: 15:19
Client Smp ID: ICV0117
Level: LOW
Sample Type: WATER
Method File: /chem3/nt11.i/20130117A.b/FSIMPNA011713.m
Misc Info: 13-

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
6 Naphthalene-d8	608905	304452	1217810	627912	3.12
22 Acenaphthene-d10	340268	170134	680536	350658	3.05
28 Phenanthrene-d10	481898	240949	963796	495781	2.88
47 Chrysene-d12	554782	277391	1109564	566539	2.12
56 Perylene-d12	534043	267022	1068086	540179	1.15

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
6 Naphthalene-d8	5.41	4.91	5.91	5.41	0.00
22 Acenaphthene-d10	7.68	7.18	8.18	7.67	-0.04
28 Phenanthrene-d10	9.69	9.19	10.19	9.69	0.00
47 Chrysene-d12	14.26	13.76	14.76	14.25	0.00
56 Perylene-d12	17.99	17.49	18.49	17.99	-0.04

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.

Analytical Resources, Inc.

RECOVERY REPORT

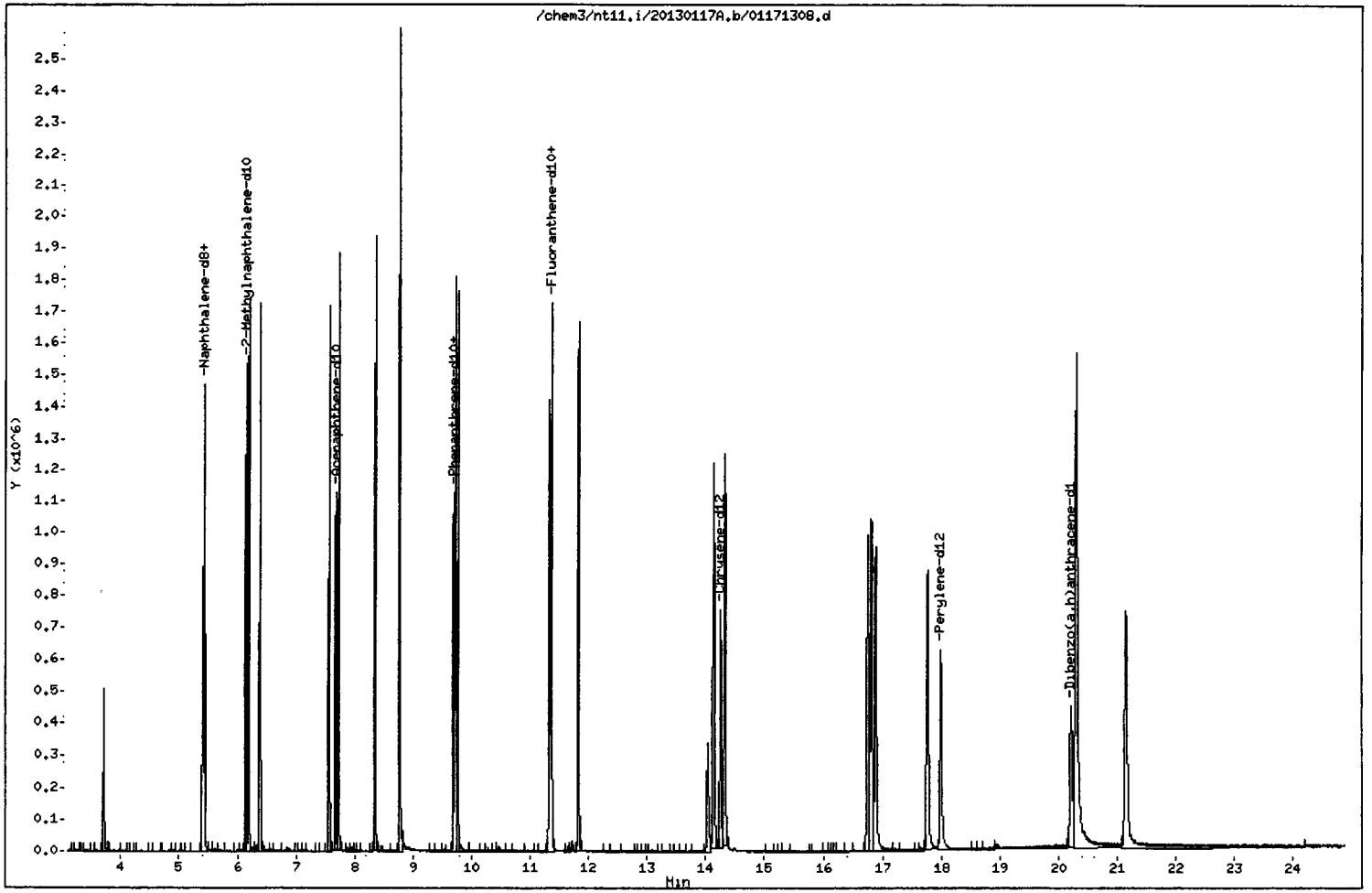
Client Name:
Sample Matrix: LIQUID
Lab Smp Id: ICV0117
Level: LOW
Data Type: MS DATA
SpikeList File: Simpnaicv.spk
Sublist File: SIMPNAICV.sub
Client SDG: 20130117A
Fraction: SV
Client Smp ID: ICV0117
Operator: JZ
SampleType: LCS
Quant Type: ISTD
Method File: /chem3/nt11.i/20130117A.b/FSIMPNA011713.m
Misc Info: 13-

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
7 Naphthalene	2.500	2.486	99.43	75-125
14 2-Methylnaphthalen	2.500	2.344	93.76	75-125
15 1-methylnaphthalen	2.500	2.559	102.34	75-125
21 Acenaphthylene	2.500	2.527	101.06	75-125
23 Acenaphthene	2.500	2.396	95.85	75-125
25 Fluorene	2.500	2.453	98.12	75-125
30 Phenanthrene	2.500	2.443	97.74	75-125
31 Anthracene	2.500	2.528	101.13	75-125
36 Fluoranthene	2.500	2.507	100.27	75-125
39 Pyrene	2.500	2.466	98.66	75-125
46 Benzo(a)anthracene	2.500	2.432	97.28	75-125
48 Chrysene	2.500	2.424	96.95	75-125
51 Benzo(b)fluoranthe	2.500	2.650	105.99	75-125
52 Benzo(k)fluoranthe	2.500	2.479	99.14	75-125
54 Benzo(a)pyrene	2.500	2.287	91.48	75-125
63 Indeno(1,2,3-cd)py	2.500	2.715	108.59	75-125
62 Dibenzo(a,h)anthra	2.500	2.622	104.90	75-125
61 Benzo(g,h,i)peryle	2.500	2.539	101.57	75-125
57 Perylene	2.500	2.227	89.09	30-130

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 12 2-Methylnaphthalen	2.502	3.042	121.56	70-130
$ 253 Fluoranthene-d10	2.502	3.019	120.66	70-130
$ 60 Dibenzo(a,h)anthra	2.502	3.178	127.03	70-130

Data File: /chem3/nt11.i/20130117A.b/01171308.d
Date : 17-JAN-2013 18:19
Client ID: ICV0117
Sample Info: ICV0117,
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt11.i
Operator: JZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - 01171308.d

Lab ID: ICV0117, Method: FSIMPNA011713.m, Instrument: nt11.i, Date: 17-JAN-20

RT	CO-ELUTION COMPOUNDS

SIM PAH Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: VZ97

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS SVOA Analyst Notes / Corrective Action Log

ARI Project ID: VZ97 Client ID: Anchor QEA

ARI SOP: **801S**(SIM-PNA) **802S**(Butyl Tins) **804S**(SVOA-8270D) **805S**(op-Pest)

Parameter(s): SimPAH

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date: 1/17/13 Analysis Start Date: 1/23/13

DFTPP Tune Meets Criteria?	YES / NO	Internal Standard Meets Criteria?	YES / NO
DDT Breakdown <20%?	YES / NO / NA	Method Blank In Control?	YES / NO
Peak Tailing Factor ≤2?	YES / NO / NA	LCS / LCSD Recovery In Control?	YES / NO
ICal acceptable?	YES / NO	CCal acceptable?	YES / NO
Q flag applied?	YES / NO	Q flag applied?	YES / NO
Surrogate Recovery in Control?	YES / NO	Special Analysis Criteria Met?	YES / NO / NA
Manual Integrations for ICal?	YES / NO	Manual Integrations for Samples?	Yes /NO

Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):

Sample S + MB/LCS/LCSD

C-Cal: SS, Dibenzo(a,h)anthracene-d14, recovery out of QC limit (a) high bias

Forms included.

Additional Details on Reverse: Yes / No

Analyst: _____ **Date:** 01/24/13

Reviewer: _____ **Date:** 1/25/13

Analytical Resources Inc.: Organics Instrument Log

NT-11 Serial No.:GC=US10140004, MS=US10481502

Date: 1/23/13 Analysis: SIM PAH Analyst: AB

GC Program: SIMPAH35 Column No: 114123 Column Type: RXI-17Sil MS

Instrument Tune (.U or .CT.): 120327 EM Voltage: 2341

Calibration File: 01231302 Curve Date: 1/17/13 Injection Vol.: 1 µl

IS/SS	Ical/Ccal	LCS/ICV
1998-3	2059-4	

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem3/nt11.i/20130123.b

	Time	Filename	LabID	ClientId	DF								
1	0931	01231301.d	DFTPP0123	DFTPP0123	1	NO ISTDS FOUND							
2	0956	01231302.d	CC0123	CC0123	1	5.36	555376	7.63	311902	9.64	436978	14.18	451133	17.91	465658
3	1027	01231303.d	VZ97MBW1	VZ97MBW1	1	5.35	540553	7.62	300866	9.64	438201	14.17	486492	17.89	468891
4	1056	01231304.d	VZ97LCSW1	VZ97LCSW1	1	5.35	578149	7.62	321937	9.64	465944	14.17	482648	17.89	484222
5	1127	01231305.d	VZ97LCSDW1	VZ97LCSDW1	1	5.35	588486	7.62	331219	9.64	461309	14.17	491506	17.89	496258
6	1157	01231306.d	VZ97S	CSIA20130114	1	5.36	566927	7.63	285193	9.65	369923	14.19	474803	17.90	465582

AB 01/24/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/nt11.i/20130123.b

ARI Job No.: CC01 Method: FSIMPNA011713.m Instrument: nt11.i Date: 23-JAN-2013

01/24/13

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0956	01231302.d	CC0123	CC0123	1	NO MANUAL INTEGRATION
1027	01231303.d	VZ97MBW1	VZ97MBW1	1	NO MANUAL INTEGRATION
1056	01231304.d	VZ97LCSW1	VZ97LCSW1	1	NO MANUAL INTEGRATION
1127	01231305.d	VZ97LCSDW1	VZ97LCSDW1	1	NO MANUAL INTEGRATION
1157	01231306.d	VZ97S	CSIA201301	1	Fluorene, Anthracene, Fluoranthene, Pyrene,

VZ97 01259

Q-FLAG SUMMARY FOR DATABATCH - /chem3/nt11.i/20130123.b

Instrument: nt11.i Date: 23-JAN-2013 Method: FSIMPNA011713.m

INITIAL CAL: 17-JAN-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 23-JAN-2013

Compound	%D
Dibenzo(a,h)anthracene-d14	33.5

01/23/13

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt11.i Injection Date: 23-JAN-2013 09:56
Lab File ID: 01231302.d Init. Cal. Date(s): 17-JAN-2013 17-JAN-2013
Analysis Type: Init. Cal. Times: 15:19 17:49
Lab Sample ID: CC0123 Quant Type: ISTD
Method: /chem3/nt11.i/20130123.b/FSIMPNA011713.m

01/23/13

COMPOUND	RRF / AMOUNT	RF2	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
7 Naphthalene	1.29106	1.29230	0.100	0.09598	20.00000	Averaged	
$ 12 2-Methylnaphthalene-d10	0.57626	0.59412	0.100	3.09978	20.00000	Averaged	
14 2-Methylnaphthalene	0.75750	0.77033	0.100	1.69418	20.00000	Averaged	
15 1-methylnaphthalene	0.72028	0.72363	0.100	0.46525	20.00000	Averaged	
21 Acenaphthylene	2.21869	2.29192	0.100	3.30054	20.00000	Averaged	
23 Acenaphthene	1.42782	1.38360	0.100	-3.09722	20.00000	Averaged	
11 Dibenzofuran	2.00688	1.99581	0.100	-0.55161	20.00000	Averaged	
25 Fluorene	1.59570	1.62090	0.100	1.57946	20.00000	Averaged	
30 Phenanthrene	1.53059	1.49103	0.100	-2.58454	20.00000	Averaged	
31 Anthracene	1.49142	1.52981	0.100	2.57390	20.00000	Averaged	
36 Fluoranthene	1.56070	1.52724	0.100	-2.14405	20.00000	Averaged	
$ 253 Fluoranthene-d10	0.98258	0.99579	0.100	1.34488	20.00000	Averaged	
39 Pyrene	1.40384	1.53313	0.100	9.20918	20.00000	Averaged	
46 Benzo(a)anthracene	1.31061	1.33276	0.100	1.68978	20.00000	Averaged	
48 Chrysene	1.27356	1.28419	0.100	0.83428	20.00000	Averaged	
51 Benzo(b)fluoranthene	1.23512	1.30297	0.100	5.49395	20.00000	Averaged	
52 Benzo(k)fluoranthene	1.37029	1.36510	0.100	-0.37882	20.00000	Averaged	
251 Benzo(j)fluoranthene	0.94809	1.01947	0.100	7.52867	20.00000	Averaged	
54 Benzo(a)pyrene	1.28423	1.30475	0.100	1.59757	20.00000	Averaged	
63 Indeno(1,2,3-cd)pyrene	1.38872	1.57720	0.100	13.57161	20.00000	Averaged	
$ 60 Dibenzo(a,h)anthracene-d14	0.58754	0.78415	0.100	33.46238	20.00000	Averaged	<-
62 Dibenzo(a,h)anthracene	1.15635	1.31404	0.100	13.63668	20.00000	Averaged	
61 Benzo(g,h,i)perylene	1.27773	1.32079	0.100	3.36987	20.00000	Averaged	
57 Perylene	1.25643	1.29014	0.100	2.68373	20.00000	Averaged	

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt11.i/20130123.b/01231302.d
Lab Smp Id: CC0123 Client Smp ID: CC0123
Inj Date : 23-JAN-2013 09:56
Operator : JZ Inst ID: nt11.i
Smp Info : CC0123
Misc Info : 13-
Comment : 1ul Injection
Method : /chem3/nt11.i/20130123.b/FSIMPNA011713.m
Meth Date : 23-Jan-2013 10:29 jianqing Quant Type: ISTD
Cal Date : 17-JAN-2013 16:50 Cal File: 01171305.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pnax.sub
Target Version: 3.50

JZ 01/23/13

AMOUNTS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
*	6 Naphthalene-d8	136	5.359	5.359	(1.000)	555376	2.00000	
	7 Naphthalene	128	5.388	5.388	(1.005)	897143	2.50000	2.502
$	12 2-Methylnaphthalene-d10	152	6.098	6.098	(1.138)	412450	2.50000	2.577
	14 2-Methylnaphthalene	141	6.142	6.142	(1.146)	534781	2.50000	2.542
	15 1-methylnaphthalene	141	6.335	6.335	(1.182)	502362	2.50000	2.512
	21 Acenaphthylene	152	7.518	7.518	(0.986)	893566	2.50000	2.583
*	22 Acenaphthene-d10	164	7.628	7.628	(1.000)	311902	2.00000	
	23 Acenaphthene	153	7.679	7.679	(1.007)	539434	2.50000	2.423
	11 Dibenzofuran	168	7.830	7.830	(1.026)	778121	2.50000	2.486
	25 Fluorene	166	8.304	8.304	(1.089)	631953	2.50000	2.539
*	28 Phenanthrene-d10	188	9.645	9.645	(1.000)	436978	2.00000	
	30 Phenanthrene	178	9.679	9.679	(1.004)	814434	2.50000	2.435
	31 Anthracene	178	9.720	9.720	(1.008)	835615	2.50000	2.564
	36 Fluoranthene	202	11.314	11.314	(1.173)	834212	2.50000	2.446
$	253 Fluoranthene-d10	212	11.279	11.279	(1.169)	543924	2.50000	2.534
	39 Pyrene	202	11.772	11.772	(0.830)	864554	2.50000	2.730
	46 Benzo(a)anthracene	228	14.063	14.063	(0.992)	751562	2.50000	2.542
*	47 Chrysene-d12	240	14.182	14.182	(1.000)	451133	2.00000	
	48 Chrysene	228	14.252	14.252	(1.005)	724173	2.50000	2.521
	51 Benzo(b)fluoranthene	252	16.672	16.672	(0.931)	758425	2.50000	2.637
	52 Benzo(k)fluoranthene	252	16.729	16.729	(0.934)	794584	2.50000	2.491
	251 Benzo(j)fluoranthene	252	16.805	16.805	(0.938)	593406	2.50000	2.688
	54 Benzo(a)pyrene	252	17.679	17.679	(0.987)	759459	2.50000	2.540
*	56 Perylene-d12	264	17.906	17.906	(1.000)	465658	2.00000	
	63 Indeno(1,2,3-cd)pyrene	276	20.203	20.203	(1.128)	918042	2.50000	2.839
$	60 Dibenzo(a,h)anthracene-d14	292	20.115	20.115	(1.123)	456430	2.50000	3.337
	62 Dibenzo(a,h)anthracene	278	20.203	20.203	(1.128)	764866	2.50000	2.841

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
61 Benzo(g,h,i)perylene	276	21.036	21.036	(1.175)	768794	2.50000	2.584
57 Perylene	252	17.979	17.979	(1.004)	750957	2.50000	2.567

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 01231302.d
Lab Smp Id: CC0123
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem3/nt11.i/20130123.b/FSIMPNA011713.m
Misc Info: 13-

Calibration Date: 23-JAN-2013
Calibration Time: 09:56
Client Smp ID: CC0123
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

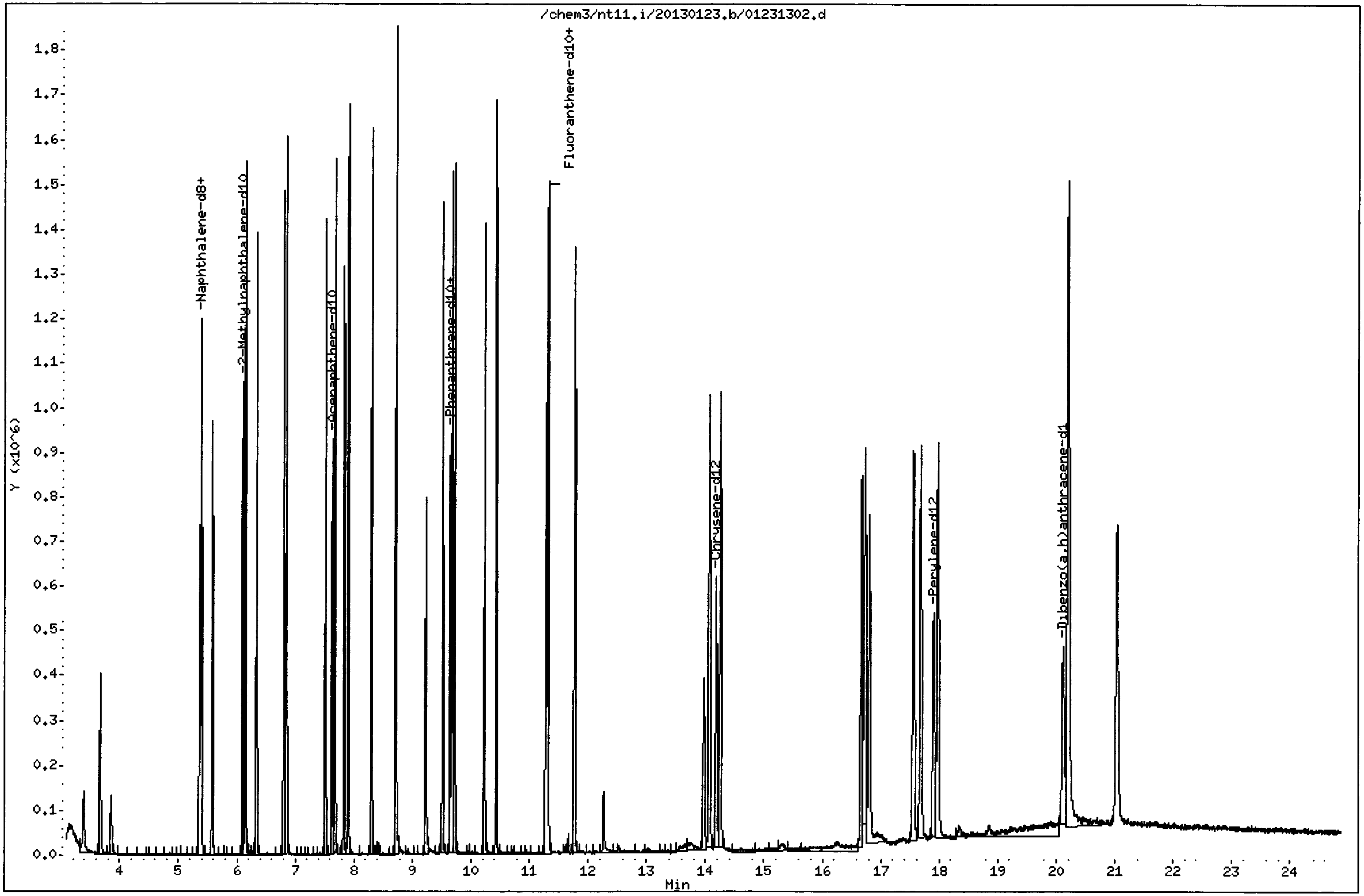
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
6 Naphthalene-d8	608905	304452	1217810	555376	-8.79
22 Acenaphthene-d10	340268	170134	680536	311902	-8.34
28 Phenanthrene-d10	481898	240949	963796	436978	-9.32
47 Chrysene-d12	554782	277391	1109564	451133	-18.68
56 Perylene-d12	534043	267022	1068086	465658	-12.81

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
6 Naphthalene-d8	5.36	4.86	5.86	5.36	0.00
22 Acenaphthene-d10	7.63	7.13	8.13	7.63	0.00
28 Phenanthrene-d10	9.64	9.14	10.14	9.64	0.00
47 Chrysene-d12	14.18	13.68	14.68	14.18	0.00
56 Perylene-d12	17.91	17.41	18.41	17.91	0.00

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.

Data File: /chem3/nt11.i/20130123.b/01231302.d
Date : 23-JAN-2013 09:56
Client ID: CC0123
Sample Info: CC0123
Column phase: ZB-5msi

Instrument: nt11.i
Operator: JZ
Column diameter: 0.25



UZ97 : 0121U

CO-ELUTION SUMMARY FOR FILE - 01231302.d

Lab ID: CC0123, Method: FSIMPNA011713.m, Instrument: nt11.i, Date: 23-JAN-201

RT	CO-ELUTION COMPOUNDS
20.203	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.203	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

checked ok

01/23/13

Data File: /chem3/nt11.i/20130123.b/tune.b/01231301.d

Date : 23-JAN-2013 09:31

Client ID: DFTPP0123

Instrument: nt11.i

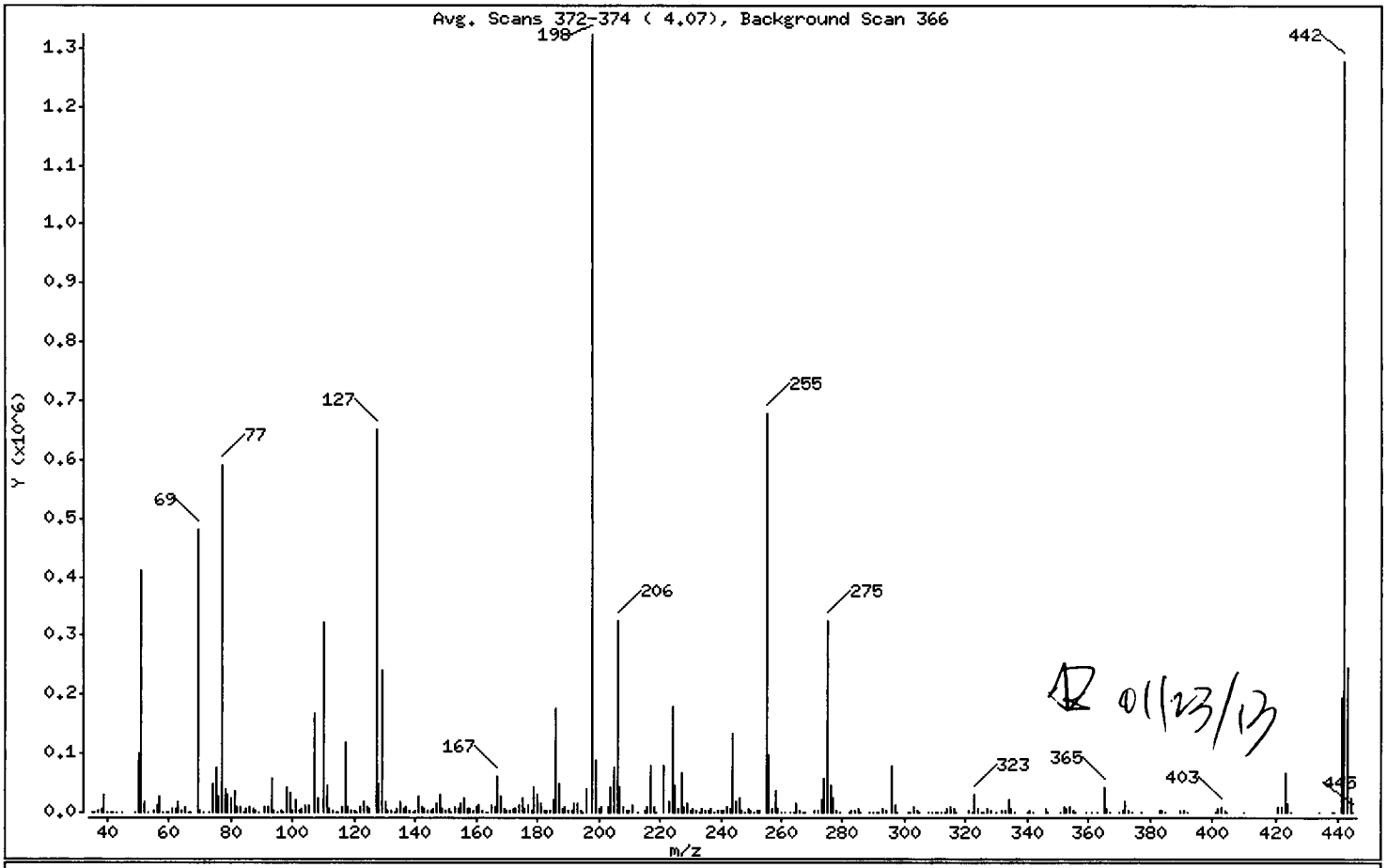
Sample Info: DFTPP0123

Operator: JZ

Column phase: Rxi-17silms

Column diameter: 0.25

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	31.09
68	Less than 2.00% of mass 69	0.00 (0.00)
69	Mass 69 relative abundance	36.34
70	Less than 2.00% of mass 69	0.20 (0.56)
127	10.00 - 80.00% of mass 198	49.25
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.60
275	10.00 - 60.00% of mass 198	24.51
365	Greater than 1.00% of mass 198	3.11
441	0.01 - 24.00% of mass 442	14.80 (15.35)
442	50.00 - 200.00% of mass 198	96.44
443	15.00 - 24.00% of mass 442	18.51 (19.20)

VZ97 01216

Date : 23-JAN-2013 09:31

Client ID: DFTPP0123 Instrument: nt11.i

Sample Info: DFTPP0123

Operator: JZ

Column phase: Rxi-17silms Column diameter: 0.25

Data File: 01231301.d
Spectrum: Avg. Scans 372-374 (4.07), Background Scan 366
Location of Maximum: 198.00
Number of points: 317

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	1500	125.00	7407	208.00	10073	303.00	9867
36.00	823	127.00	652096	209.00	2960	304.00	3138
37.00	2058	128.00	49904	210.00	2148	305.00	409
38.00	4573	129.00	241408	211.00	13028	308.00	1482
39.00	30640	130.00	19680	213.00	625	309.00	1030
40.00	895	131.00	3953	215.00	3149	310.00	953
41.00	923	132.00	2447	216.00	7710	311.00	258
42.00	184	133.00	1069	217.00	78712	312.00	170
43.00	228	134.00	5782	218.00	10289	313.00	549
45.00	802	135.00	18280	219.00	1079	314.00	4958
49.00	403	136.00	7461	221.00	77984	315.00	8218
50.00	101912	137.00	8411	223.00	18864	316.00	5388
51.00	411648	138.00	1927	224.00	179136	317.00	1172
52.00	19456	139.00	1001	225.00	44240	321.00	2565
53.00	1094	140.00	2876	226.00	5432	322.00	1099
55.00	2086	141.00	28272	227.00	67008	323.00	30128
56.00	10860	142.00	9548	228.00	9243	324.00	5791
57.00	27552	143.00	6403	229.00	14350	325.00	436
58.00	1455	144.00	2079	230.00	2164	326.00	457
59.00	441	145.00	1802	231.00	6376	327.00	5356
60.00	171	146.00	5134	232.00	1743	328.00	3057
61.00	5008	147.00	14064	233.00	1506	330.00	192
62.00	6022	148.00	31496	234.00	4717	332.00	1969
63.00	17976	149.00	5797	235.00	4562	333.00	2857
64.00	2438	150.00	2283	236.00	4416	334.00	20512
65.00	10582	151.00	5529	237.00	5764	335.00	5198
66.00	285	152.00	1255	238.00	948	336.00	170
67.00	645	153.00	8888	239.00	2699	340.00	264
69.00	481152	154.00	7367	240.00	1773	341.00	4093
70.00	2695	155.00	16029	241.00	3373	342.00	1354
71.00	404	156.00	25840	242.00	8995	346.00	6736
73.00	1478	157.00	4818	243.00	5874	347.00	1237
74.00	47584	158.00	5844	244.00	134080	351.00	273
75.00	77520	159.00	3662	245.00	18544	352.00	9918
76.00	28624	160.00	9155	246.00	23680	353.00	6954

VZ97:01217

Data File: /chem3/nt11.i/20130123.b/tune.b/01231301.d

Date : 23-JAN-2013 09:31

Client ID: DFTPP0123 Instrument: nt11.i

Sample Info: DFTPP0123

Operator: JZ

Column phase: Rxi-17silms Column diameter: 0.25

Data File: 01231301.d
Spectrum: Avg. Scans 372-374 (4.07), Background Scan 366
Location of Maximum: 198.00
Number of points: 317

m/z	Y	m/z	Y	m/z	Y	m/z	Y
77.00	591104	161.00	13614	247.00	4451	354.00	9530
78.00	38352	162.00	4246	248.00	1417	355.00	1939
79.00	31352	163.00	922	249.00	4779	356.00	192
80.00	23744	164.00	990	250.00	1678	359.00	929
81.00	36488	165.00	10818	251.00	912	361.00	171
82.00	10151	166.00	9012	252.00	2306	363.00	176
83.00	9309	167.00	60128	253.00	3701	365.00	41136
84.00	414	168.00	27184	255.00	677376	366.00	5310
85.00	6623	169.00	5673	256.00	97176	367.00	469
86.00	8945	170.00	1834	257.00	7542	370.00	1134
87.00	5215	171.00	2402	258.00	35824	371.00	2544
88.00	2023	172.00	4994	259.00	5644	372.00	17256
89.00	1249	173.00	7070	260.00	1137	373.00	4276
91.00	8633	174.00	12550	261.00	1093	374.00	793
92.00	9322	175.00	23784	263.00	184	377.00	770
93.00	56840	176.00	7155	264.00	677	383.00	4314
94.00	3899	177.00	11449	265.00	14196	384.00	1909
95.00	1407	178.00	3155	266.00	2072	385.00	183
96.00	3399	179.00	43672	267.00	225	390.00	2440
97.00	868	180.00	29656	268.00	379	391.00	2227
98.00	42736	181.00	15099	271.00	1667	392.00	1344
99.00	32728	182.00	2443	272.00	2568	401.00	785
100.00	3610	183.00	1791	273.00	22448	402.00	6240
101.00	21760	184.00	3126	274.00	57536	403.00	9851
102.00	1907	185.00	22248	275.00	324544	404.00	3334
103.00	6153	186.00	175872	276.00	44984	405.00	852
104.00	13618	187.00	48568	277.00	25232	410.00	348
105.00	12208	188.00	4982	278.00	4102	415.00	461
107.00	168448	189.00	10047	279.00	1002	421.00	9387
108.00	25816	190.00	1581	282.00	482	422.00	10057
110.00	322176	191.00	4309	283.00	2947	423.00	66032
111.00	45456	192.00	14306	284.00	2025	424.00	13714
112.00	5723	193.00	15335	285.00	5340	425.00	1262
113.00	2303	194.00	3703	286.00	1057	434.00	197
114.00	515	195.00	1459	289.00	1032	436.00	185

Data File: /chem3/nt11.i/20130123.b/tune.b/01231301.d

Date : 23-JAN-2013 09:31

Client ID: DFTPP0123 Instrument: nt11.i

Sample Info: DFTPP0123

Operator: JZ

Column phase: Rxi-17silms Column diameter: 0.25

Data File: 01231301.d
Spectrum: Avg. Scans 372-374 (4.07), Background Scan 366
Location of Maximum: 198.00
Number of points: 317

m/z	Y	m/z	Y	m/z	Y	m/z	Y
115.00	1146	196.00	38544	290.00	675	438.00	269
116.00	9283	198.00	1324032	291.00	869	439.00	612
117.00	118368	199.00	87384	292.00	918	441.00	195968
118.00	9549	200.00	6658	293.00	6501	442.00	1276928
119.00	1693	201.00	7732	294.00	1573	443.00	245120
120.00	2174	203.00	8059	296.00	79680	444.00	23016
121.00	1020	204.00	43544	297.00	10910	445.00	1412
122.00	10335	205.00	75912	298.00	746		
123.00	17248	206.00	324672	301.00	1452		
124.00	8316	207.00	41304	302.00	441		

UZ97 : 01219

Data File: /chem3/nt11.i/20130123.b/tune.b/01231301.d

Date : 23-JAN-2013 09:31

Client ID: DFTPP0123

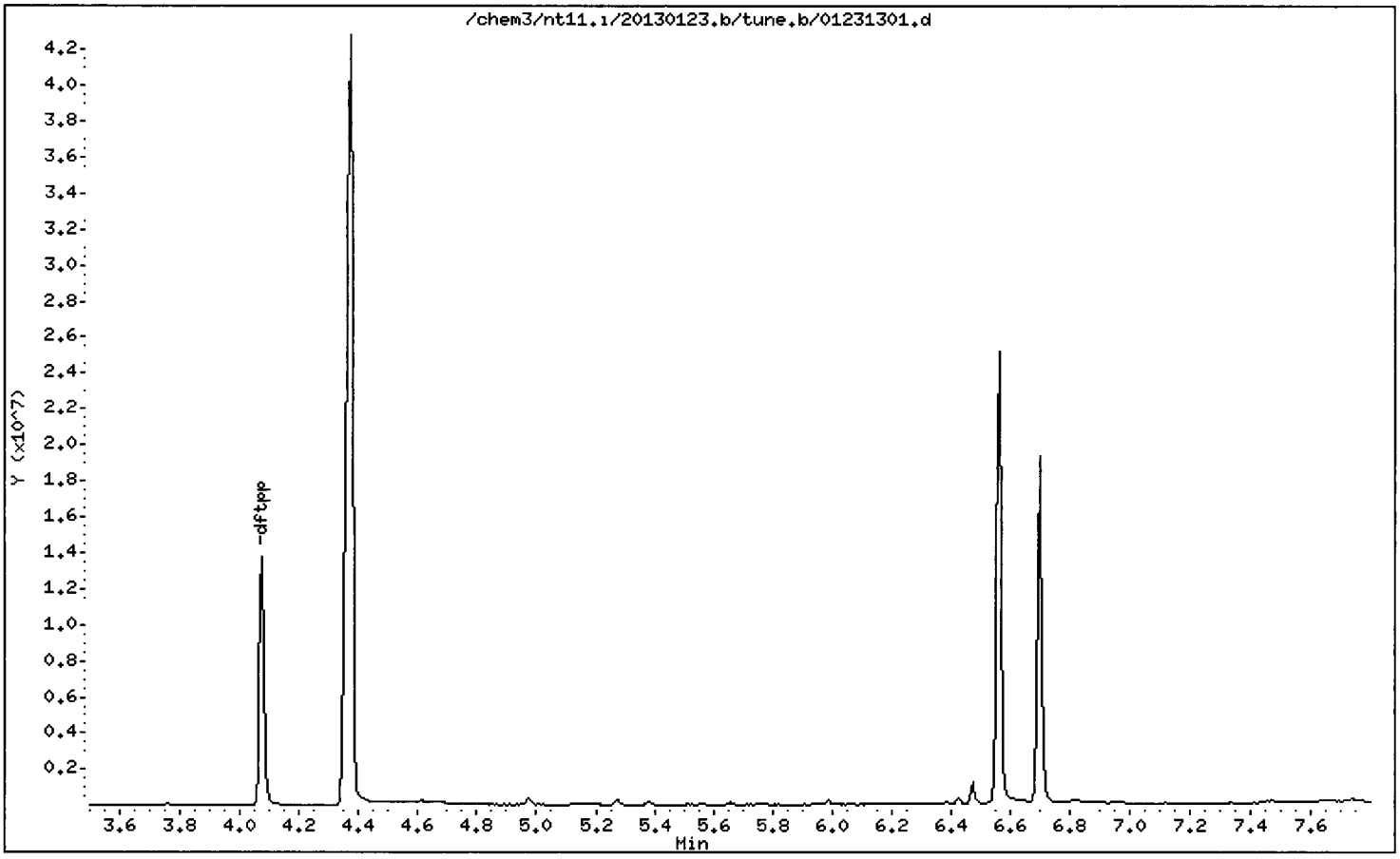
Instrument: nt11.i

Sample Info: DFTPP0123

Operator: JZ

Column phase: Rxi-17silms

Column diameter: 0.25



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem3/nt11.i/20130123.b/ddt.b/01231301.d ARI ID: DDT0123
Method: /chem3/nt11.i/20130123.b/ddt.b/sw846ddt.m Misc: 13-
Analysis Date: 23-JAN-2013 09:31 Instrument: nt11.i

COMPOUND	RT	AREA
Pentachlorophenol	4.374	8452154
Benzidine	6.564	10243274
4,4'-DDE	5.987	29931
4,4'-DDD	6.473	254876
4,4'-DDT	6.698	4166358

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(\ 29931 + 254876) * 100}{(\ 29931 + 254876 + 4166358)}$$

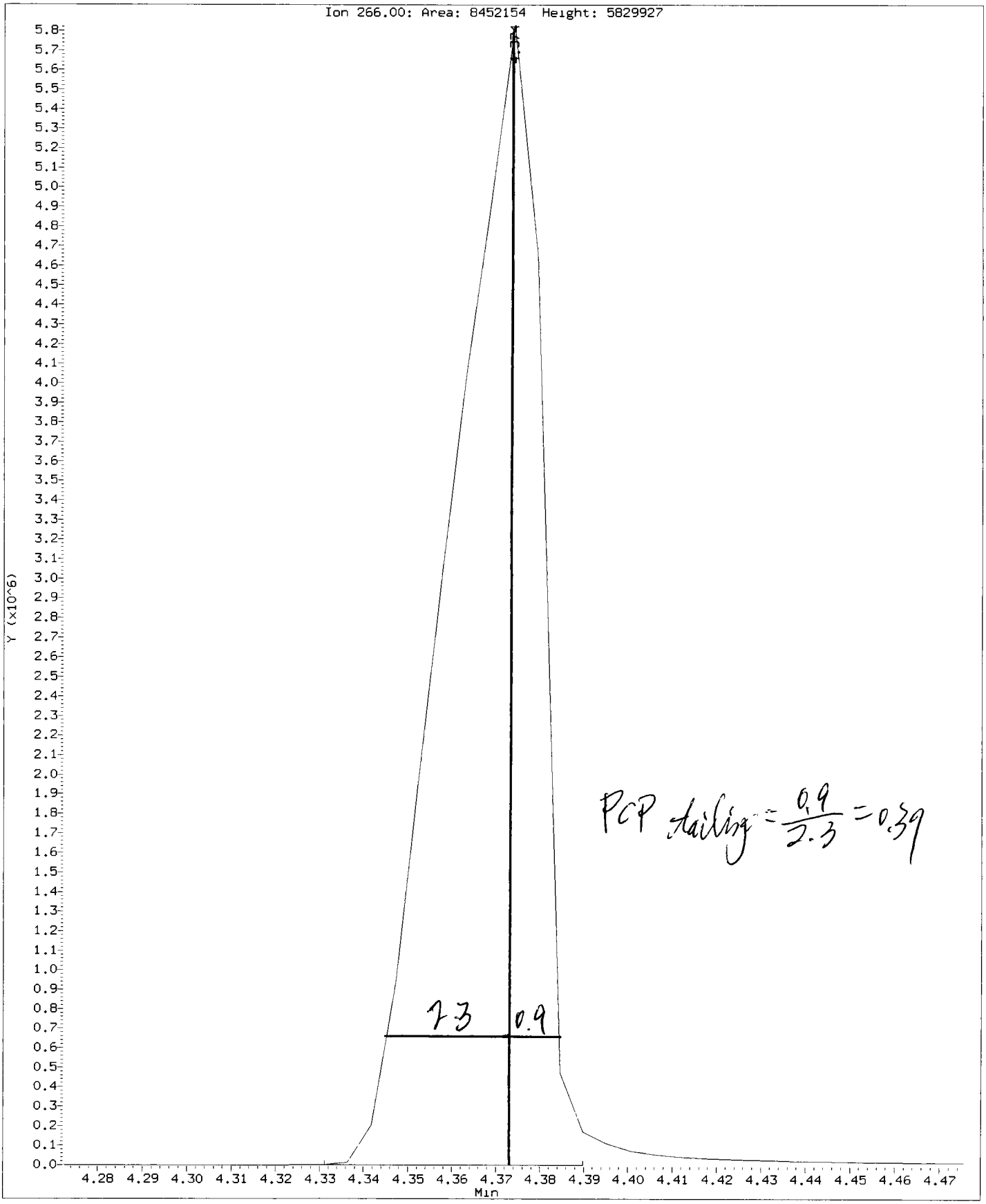
DDT Percent Breakdown = 6.4 %

OK

KB 01/23/13

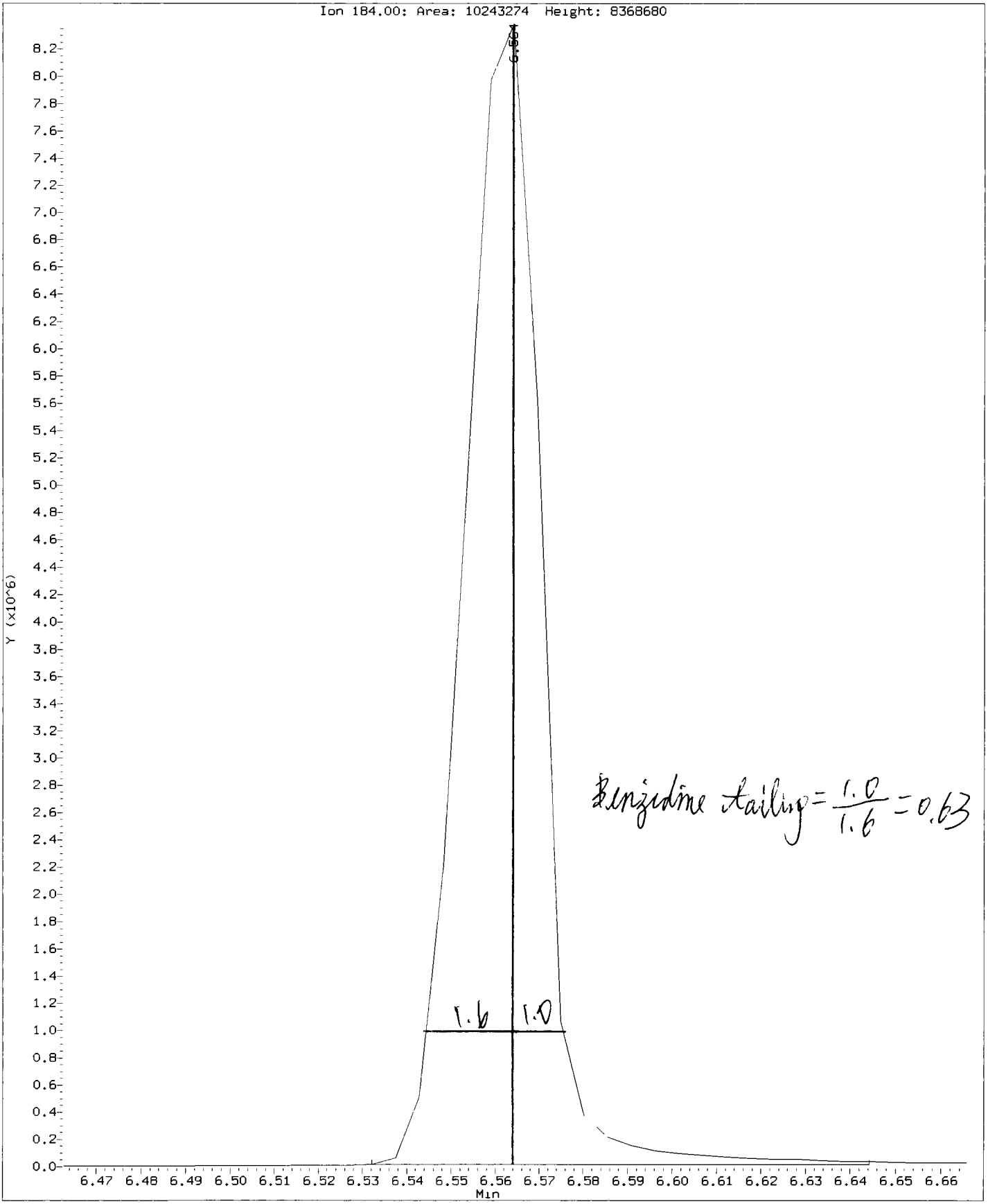
Data File: /chem3/nt11.i/20130123.b/ddt.b/01231301.d
Injection Date: 23-JAN-2013 09:31
Instrument: nt11.i
Client Sample ID: DDT0123

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem3/nt11.1/20130123.b/ddt.b/01231301.d
Injection Date: 23-JAN-2013 09:31
Instrument: nt11.1
Client Sample ID: DDT0123

Compound: Benzidine
CAS Number:



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt11.i/20130123.b/01231303.d
Lab Smp Id: VZ97MBW1 Client Smp ID: VZ97MBW1
Inj Date : 23-JAN-2013 10:27
Operator : JZ Inst ID: nt11.i
Smp Info : VZ97MBW1,
Misc Info : 13-1100
Comment : 1ul Injection
Method : /chem3/nt11.i/20130123.b/FSIMPNA011713.m
Meth Date : 23-Jan-2013 12:39 jianqing Quant Type: ISTD
Cal Date : 17-JAN-2013 16:50 Cal File: 01171305.d
Als bottle: 3 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pnax.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Vo	500.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
*	6 Naphthalene-d8	136	5.353	5.359	(1.000)	540553	2.00000	
	7 Naphthalene	128	Compound Not Detected.					
$	12 2-Methylnaphthalene-d10	152	6.091	6.098	(1.138)	380293	2.44171	2.442
	14 2-Methylnaphthalene	141	Compound Not Detected.					
	15 1-methylnaphthalene	141	Compound Not Detected.					
	21 Acenaphthylene	152	Compound Not Detected.					
*	22 Acenaphthene-d10	164	7.622	7.628	(1.000)	300866	2.00000	
	23 Acenaphthene	153	Compound Not Detected.					
	11 Dibenzofuran	168	Compound Not Detected.					
	25 Fluorene	166	Compound Not Detected.					
*	28 Phenanthrene-d10	188	9.638	9.645	(1.000)	438201	2.00000	
	30 Phenanthrene	178	Compound Not Detected.					
	31 Anthracene	178	Compound Not Detected.					
	36 Fluoranthene	202	Compound Not Detected.					
$	253 Fluoranthene-d10	212	11.273	11.279	(1.170)	636629	2.95717	2.957
	39 Pyrene	202	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	46 Benzo(a)anthracene	228	Compound Not Detected.					
*	47 Chrysene-d12	240	14.170	14.182	(1.000)	486492	2.00000	
	48 Chrysene	228	Compound Not Detected.					
	51 Benzo(b)fluoranthene	252	Compound Not Detected.					
	52 Benzo(k)fluoranthene	252	Compound Not Detected.					
	251 Benzo(j)fluoranthene	252	Compound Not Detected.					
	54 Benzo(a)pyrene	252	Compound Not Detected.					
*	56 Perylene-d12	264	17.890	17.906	(1.000)	468891	2.00000	
	63 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
$	60 Dibenzo(a,h)anthracene-d14	292	20.096	20.115	(1.123)	473218	3.43543	3.435
	62 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	61 Benzo(g,h,i)perylene	276	Compound Not Detected.					
	57 Perylene	252	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 01231303.d
Lab Smp Id: VZ97MBW1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem3/nt11.i/20130123.b/FSIMPNA011713.m
Misc Info: 13-1100

Calibration Date: 23-JAN-2013
Calibration Time: 09:56
Client Smp ID: VZ97MBW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
6 Naphthalene-d8	608905	304452	1217810	540553	-11.23
22 Acenaphthene-d10	340268	170134	680536	300866	-11.58
28 Phenanthrene-d10	481898	240949	963796	438201	-9.07
47 Chrysene-d12	554782	277391	1109564	486492	-12.31
56 Perylene-d12	534043	267022	1068086	468891	-12.20

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
6 Naphthalene-d8	5.36	4.86	5.86	5.35	-0.12
22 Acenaphthene-d10	7.63	7.13	8.13	7.62	-0.08
28 Phenanthrene-d10	9.64	9.14	10.14	9.64	-0.07
47 Chrysene-d12	14.18	13.68	14.68	14.17	-0.09
56 Perylene-d12	17.91	17.41	18.41	17.89	-0.09

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.

Analytical Resources, Inc.

RECOVERY REPORT

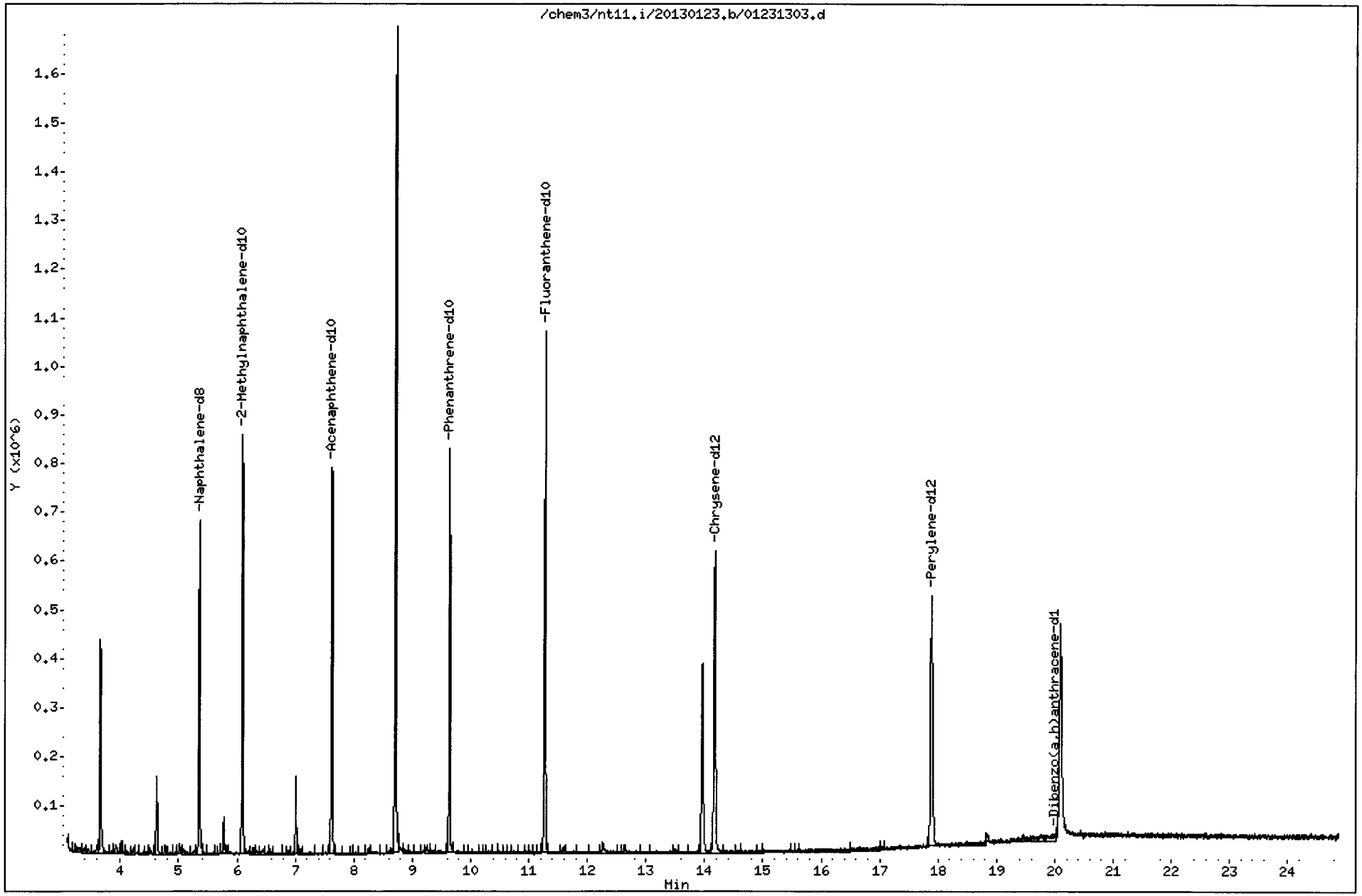
Client Name: Anchor QEA
Client SDG: VZ97
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: VZ97MBW1
Client Smp ID: VZ97MBW1
Level: LOW
Operator: JZ
Data Type: MS DATA
SampleType: BLANK
SpikeList File: pnalcsw.spk
Quant Type: ISTD
Sublist File: pnax.sub
Method File: /chem3/nt11.i/20130123.b/FSIMPNA011713.m
Misc Info: 13-1100

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 12 2-Methylnaphthalen	3.000	2.442	81.39	33-107
$ 253 Fluoranthene-d10	3.000	2.957	98.57	70-130
$ 60 Dibenzo(a,h)anthra	3.000	3.435	114.51	10-142

Data File: /chem3/nt11.i/20130123.b/01231303.d
Date : 23-JAN-2013 10:27
Client ID: VZ97MBW1
Sample Info: VZ97MBW1,
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt11.i
Operator: JZ
Column diameter: 0.25

VZ97.61229



CO-ELUTION SUMMARY FOR FILE - 01231303.d

Lab ID: VZ97MBW1, Method: FSIMPNA011713.m, Instrument: nt11.i, Date: 23-JAN-2

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt11.i/20130123.b/01231304.d
Lab Smp Id: VZ97LCSW1 Client Smp ID: VZ97LCSW1
Inj Date : 23-JAN-2013 10:56
Operator : JZ Inst ID: nt11.i
Smp Info : VZ97LCSW1,
Misc Info : 13-1100
Comment : 1ul Injection
Method : /chem3/nt11.i/20130123.b/FSIMPNA011713.m
Meth Date : 25-Jan-2013 12:51 jianqing Quant Type: ISTD
Cal Date : 17-JAN-2013 16:50 Cal File: 01171305.d
Als bottle: 4 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pnax.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Vo	500.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
* 6 Naphthalene-d8	136	5.353	5.359	(1.000)	578149	2.00000	
7 Naphthalene	128	5.381	5.388	(1.005)	577580	1.54758	1.548
$ 12 2-Methylnaphthalene-d10	152	6.091	6.098	(1.138)	374940	2.25079	2.251
14 2-Methylnaphthalene	141	6.139	6.142	(1.147)	326302	1.49014	1.490
15 1-methylnaphthalene	141	6.328	6.335	(1.182)	336259	1.61496	1.615
21 Acenaphthylene	152	7.511	7.518	(0.986)	561270	1.57157	1.572
* 22 Acenaphthene-d10	164	7.622	7.628	(1.000)	321937	2.00000	
23 Acenaphthene	153	7.672	7.679	(1.007)	366298	1.59374	1.594
11 Dibenzofuran	168	7.824	7.830	(1.026)	531736	1.64601	1.646
25 Fluorene	166	8.297	8.304	(1.089)	450341	1.75327	1.753
* 28 Phenanthrene-d10	188	9.638	9.645	(1.000)	465944	2.00000	
30 Phenanthrene	178	9.673	9.679	(1.004)	625181	1.75325	1.753
31 Anthracene	178	9.714	9.720	(1.008)	618583	1.78030	1.780
36 Fluoranthene	202	11.308	11.314	(1.173)	677682	1.86381	1.864
$ 253 Fluoranthene-d10	212	11.273	11.279	(1.170)	631742	2.75974	2.760
39 Pyrene	202	11.762	11.772	(0.830)	683916	2.01875	2.019

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	46 Benzo(a)anthracene	228	14.053	14.063	(0.992)	596865	1.88713	1.887
*	47 Chrysene-d12	240	14.170	14.182	(1.000)	482648	2.00000	
	48 Chrysene	228	14.236	14.252	(1.005)	586509	1.90833	1.908
	51 Benzo(b)fluoranthene	252	16.656	16.672	(0.931)	597380	1.99769	1.998
	52 Benzo(k)fluoranthene	252	16.716	16.729	(0.934)	620064	1.86900	1.869
	251 Benzo(j)fluoranthene	252	16.789	16.805	(0.938)	570572	2.48568	2.486
	54 Benzo(a)pyrene	252	17.660	17.679	(0.987)	522812	1.68146	1.681
*	56 Perylene-d12	264	17.890	17.906	(1.000)	484222	2.00000	
	63 Indeno(1,2,3-cd)pyrene	276	20.187	20.203	(1.128)	750841	2.23314	2.233
$	60 Dibenzo(a,h)anthracene-d14	292	20.102	20.115	(1.124)	522410	3.67247	3.672
	62 Dibenzo(a,h)anthracene	278	20.191	20.203	(1.129)	616745	2.20293	2.203
	61 Benzo(g,h,i)perylene	276	21.020	21.036	(1.175)	642266	2.07616	2.076
	57 Perylene	252	17.963	17.979	(1.004)	483902	1.59076	1.591

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 01231304.d
Lab Smp Id: VZ97LCSW1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem3/nt11.i/20130123.b/FSIMPNA011713.m
Misc Info: 13-1100

Calibration Date: 23-JAN-2013
Calibration Time: 09:56
Client Smp ID: VZ97LCSW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
6 Naphthalene-d8	608905	304452	1217810	578149	-5.05
22 Acenaphthene-d10	340268	170134	680536	321937	-5.39
28 Phenanthrene-d10	481898	240949	963796	465944	-3.31
47 Chrysene-d12	554782	277391	1109564	482648	-13.00
56 Perylene-d12	534043	267022	1068086	484222	-9.33

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
6 Naphthalene-d8	5.36	4.86	5.86	5.35	-0.12
22 Acenaphthene-d10	7.63	7.13	8.13	7.62	-0.09
28 Phenanthrene-d10	9.64	9.14	10.14	9.64	-0.07
47 Chrysene-d12	14.18	13.68	14.68	14.17	-0.09
56 Perylene-d12	17.91	17.41	18.41	17.89	-0.09

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA
Client SDG: VZ97
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: VZ97LCSW1
Client Smp ID: VZ97LCSW1
Level: LOW
Operator: JZ
Data Type: MS DATA
SampleType: LCS
SpikeList File: pnalcsw.spk
Quant Type: ISTD
Sublist File: pnax.sub
Method File: /chem3/nt11.i/20130123.b/FSIMPNA011713.m
Misc Info: 13-1100

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
7 Naphthalene	3.000	1.548	51.59	37-100
14 2-Methylnaphthalen	3.000	1.490	49.67	34-107
15 1-methylnaphthalen	3.000	1.615	53.83	30-160
21 Acenaphthylene	3.000	1.572	52.39	32-104
23 Acenaphthene	3.000	1.594	53.12	40-102
11 Dibenzofuran	3.000	1.646	54.87	44-104
25 Fluorene	3.000	1.753	58.44	43-114
30 Phenanthrene	3.000	1.753	58.44	43-116
31 Anthracene	3.000	1.780	59.34	30-121
36 Fluoranthene	3.000	1.864	62.13	46-138
39 Pyrene	3.000	2.019	67.29	47-124
46 Benzo(a)anthracene	3.000	1.887	62.90	38-134
48 Chrysene	3.000	1.908	63.61	52-112
51 Benzo(b)fluoranthe	3.000	1.998	66.59	49-123
52 Benzo(k)fluoranthe	3.000	1.869	62.30	50-127
54 Benzo(a)pyrene	3.000	1.681	56.05	24-118
63 Indeno(1,2,3-cd)py	3.000	2.233	74.44	32-123
62 Dibenzo(a,h)anthra	3.000	2.203	73.43	30-127
61 Benzo(g,h,i)peryle	3.000	2.076	69.21	26-124
57 Perylene	3.000	1.591	53.03	30-160

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 12 2-Methylnaphthalen	3.000	2.251	75.03	33-107
$ 253 Fluoranthene-d10	3.000	2.760	91.99	70-130
$ 60 Dibenzo(a,h)anthra	3.000	3.672	122.42	10-142

Data File: /chem3/nt11.i/20130123.b/01231304.d

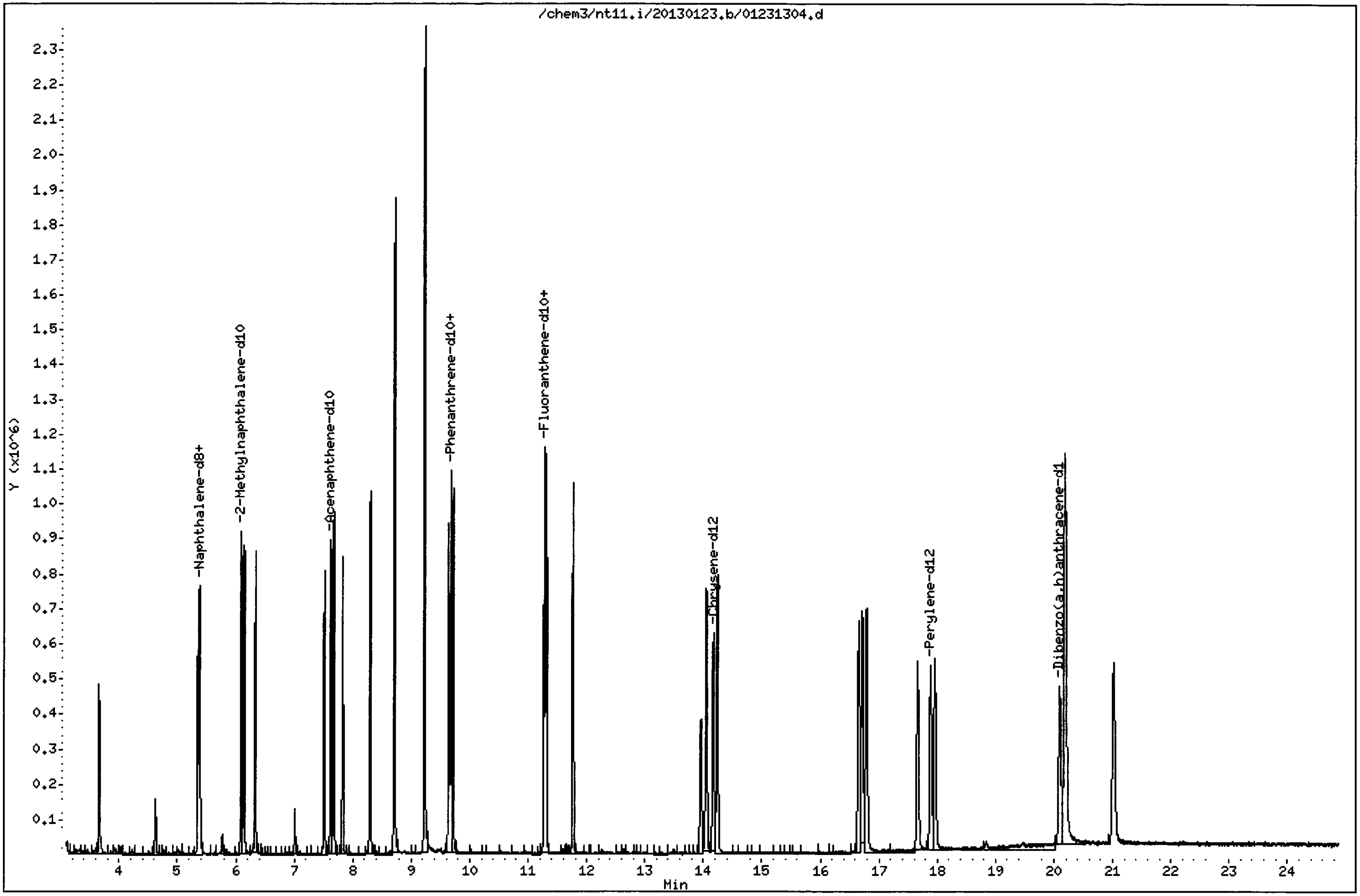
Date : 23-JAN-2013 10:56

Client ID: VZ97LCSW1 Instrument: nt11.i

Sample Info: VZ97LCSW1,

Volume Injected (uL): 1.0 Operator: JZ

Column phase: ZB-5msi Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - 01231304.d

Lab ID: VZ97LCSW1, Method: FSIMPNA011713.m, Instrument: nt11.i, Date: 23-JAN-

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt11.i/20130123.b/01231305.d
Lab Smp Id: VZ97LCSDW1 Client Smp ID: VZ97LCSDW1
Inj Date : 23-JAN-2013 11:27
Operator : JZ Inst ID: nt11.i
Smp Info : VZ97LCSDW1,
Misc Info : 13-1100
Comment : 1ul Injection
Method : /chem3/nt11.i/20130123.b/FSIMPNA011713.m
Meth Date : 25-Jan-2013 12:51 jianqing Quant Type: ISTD
Cal Date : 17-JAN-2013 16:50 Cal File: 01171305.d
Als bottle: 5 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pnax.sub
Target Version: 3.50

JZ 01/24/13

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Vo	500.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
*	6 Naphthalene-d8	136	5.353	5.359	(1.000)	588486	2.00000	
	7 Naphthalene	128	5.382	5.388	(1.005)	586372	1.54355	1.544
$	12 2-Methylnaphthalene-d10	152	6.088	6.098	(1.137)	381932	2.25249	2.252
	14 2-Methylnaphthalene	141	6.136	6.142	(1.146)	331144	1.48569	1.486
	15 1-methylnaphthalene	141	6.328	6.335	(1.182)	347491	1.63959	1.640
	21 Acenaphthylene	152	7.512	7.518	(0.986)	568168	1.54630	1.546
*	22 Acenaphthene-d10	164	7.622	7.628	(1.000)	331219	2.00000	
	23 Acenaphthene	153	7.669	7.679	(1.006)	374682	1.58454	1.585
	11 Dibenzofuran	168	7.824	7.830	(1.026)	537786	1.61809	1.618
	25 Fluorene	166	8.297	8.304	(1.089)	468620	1.77331	1.773
*	28 Phenanthrene-d10	188	9.638	9.645	(1.000)	461309	2.00000	
	30 Phenanthrene	178	9.673	9.679	(1.004)	645468	1.82833	1.828
	31 Anthracene	178	9.714	9.720	(1.008)	626576	1.82142	1.821
	36 Fluoranthene	202	11.308	11.314	(1.173)	699385	1.94283	1.943
$	253 Fluoranthene-d10	212	11.273	11.279	(1.170)	643112	2.83764	2.838
	39 Pyrene	202	11.759	11.772	(0.830)	695296	2.01536	2.015

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	46 Benzo(a)anthracene	228	14.053	14.063	(0.992)	591037	1.83503	1.835
*	47 Chrysene-d12	240	14.170	14.182	(1.000)	491506	2.00000	
	48 Chrysene	228	14.239	14.252	(1.005)	618073	1.97479	1.975
	51 Benzo(b)fluoranthene	252	16.657	16.672	(0.931)	620760	2.02553	2.026
	52 Benzo(k)fluoranthene	252	16.713	16.729	(0.934)	639486	1.88080	1.881
	251 Benzo(j)fluoranthene	252	16.789	16.805	(0.938)	548518	2.33164	2.332
	54 Benzo(a)pyrene	252	17.663	17.679	(0.987)	507105	1.59139	1.591
*	56 Perylene-d12	264	17.890	17.906	(1.000)	496258	2.00000	
	63 Indeno(1,2,3-cd)pyrene	276	20.191	20.203	(1.129)	731839	2.12384	2.124
$	60 Dibenzo(a,h)anthracene-d14	292	20.099	20.115	(1.123)	407231	2.79334	2.793
	62 Dibenzo(a,h)anthracene	278	20.191	20.203	(1.129)	532918	1.85735	1.857
	61 Benzo(g,h,i)perylene	276	21.014	21.036	(1.175)	604705	1.90733	1.907
	57 Perylene	252	17.957	17.979	(1.004)	466268	1.49562	1.496

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 01231305.d
Lab Smp Id: VZ97LCSDW1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem3/nt11.i/20130123.b/FSIMPNA011713.m
Misc Info: 13-1100

Calibration Date: 23-JAN-2013
Calibration Time: 09:56
Client Smp ID: VZ97LCSDW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
6 Naphthalene-d8	608905	304452	1217810	588486	-3.35
22 Acenaphthene-d10	340268	170134	680536	331219	-2.66
28 Phenanthrene-d10	481898	240949	963796	461309	-4.27
47 Chrysene-d12	554782	277391	1109564	491506	-11.41
56 Perylene-d12	534043	267022	1068086	496258	-7.08

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
6 Naphthalene-d8	5.36	4.86	5.86	5.35	-0.12
22 Acenaphthene-d10	7.63	7.13	8.13	7.62	-0.08
28 Phenanthrene-d10	9.64	9.14	10.14	9.64	-0.07
47 Chrysene-d12	14.18	13.68	14.68	14.17	-0.09
56 Perylene-d12	17.91	17.41	18.41	17.89	-0.09

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA
Client SDG: VZ97
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: VZ97LCSDW1
Client Smp ID: VZ97LCSDW1
Level: LOW
Operator: JZ
Data Type: MS DATA
SampleType: LCSD
SpikeList File: pnalcsw.spk
Quant Type: ISTD
Sublist File: pnax.sub
Method File: /chem3/nt11.i/20130123.b/FSIMPNA011713.m
Misc Info: 13-1100

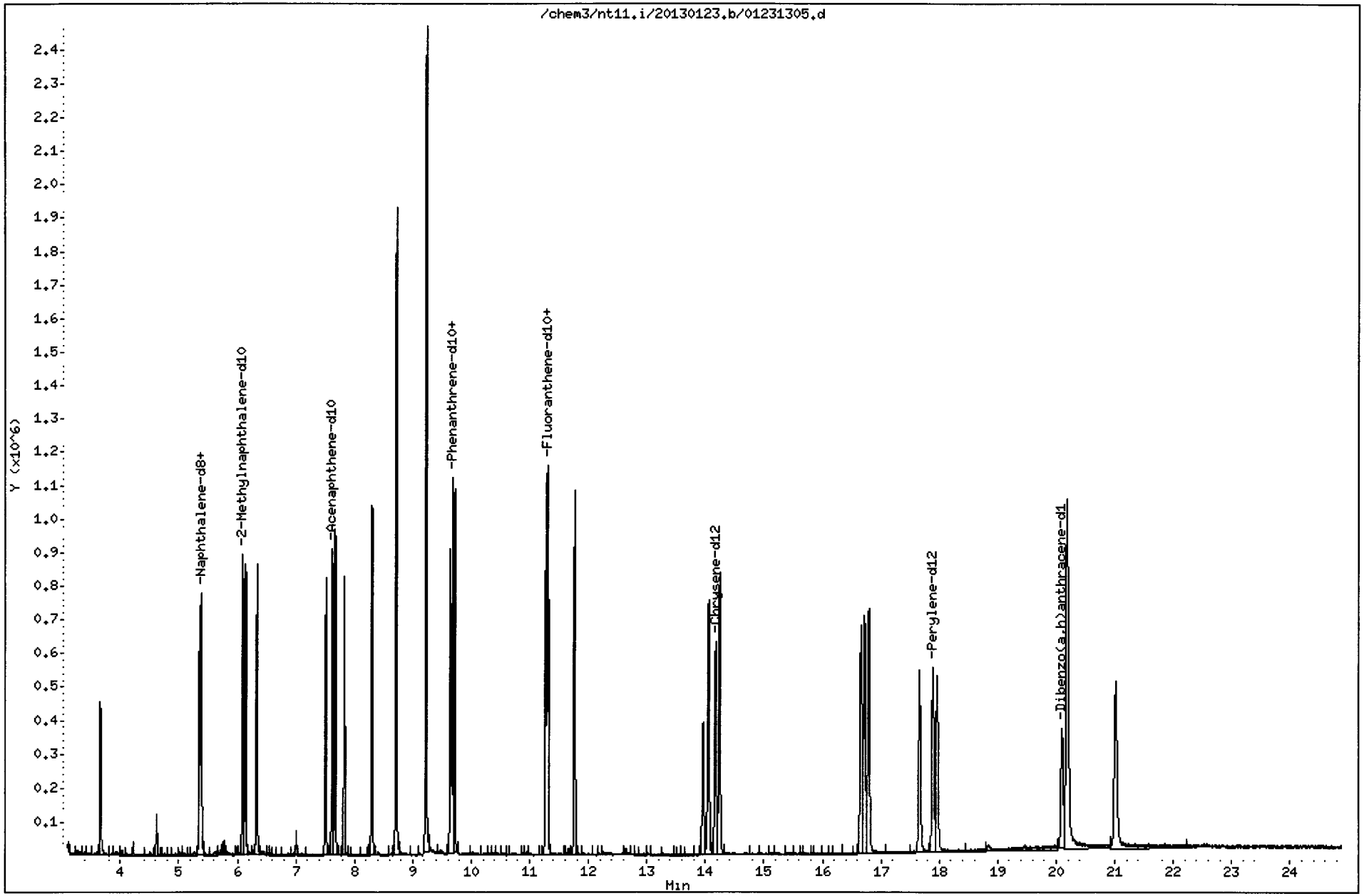
SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
7 Naphthalene	3.000	1.544	51.45	37-100
14 2-Methylnaphthalen	3.000	1.486	49.52	34-107
15 1-methylnaphthalen	3.000	1.640	54.65	30-160
21 Acenaphthylene	3.000	1.546	51.54	32-104
23 Acenaphthene	3.000	1.585	52.82	40-102
11 Dibenzofuran	3.000	1.618	53.94	44-104
25 Fluorene	3.000	1.773	59.11	43-114
30 Phenanthrene	3.000	1.828	60.94	43-116
31 Anthracene	3.000	1.821	60.71	30-121
36 Fluoranthene	3.000	1.943	64.76	46-138
39 Pyrene	3.000	2.015	67.18	47-124
46 Benzo(a)anthracene	3.000	1.835	61.17	38-134
48 Chrysene	3.000	1.975	65.83	52-112
51 Benzo(b)fluoranthe	3.000	2.026	67.52	49-123
52 Benzo(k)fluoranthe	3.000	1.881	62.69	50-127
54 Benzo(a)pyrene	3.000	1.591	53.05	24-118
63 Indeno(1,2,3-cd)py	3.000	2.124	70.79	32-123
62 Dibenzo(a,h)anthra	3.000	1.857	61.91	30-127
61 Benzo(g,h,i)peryle	3.000	1.907	63.58	26-124
57 Perylene	3.000	1.496	49.85	30-160

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 12 2-Methylnaphthalen	3.000	2.252	75.08	33-107
$ 253 Fluoranthene-d10	3.000	2.838	94.59	70-130
$ 60 Dibenzo(a,h)anthra	3.000	2.793	93.11	10-142

Data File: /chem3/nt11.i/20130123.b/01231305.d
Date : 23-JAN-2013 11:27
Client ID: VZ97LCSDW1
Sample Info: VZ97LCSDW1,
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt11.i
Operator: JZ
Column diameter: 0.25

VZ97-91249



CO-ELUTION SUMMARY FOR FILE - 01231305.d

Lab ID: VZ97LCSDW1, Method: FSIMPNA011713.m, Instrument: nt11.i, Date: 23-JAN

RT	CO-ELUTION COMPOUNDS
20.191	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.191	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

checked OK

01/25/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem3/nt11.i/20130123.b/01231306.d
Lab Smp Id: VZ97S Client Smp ID: CSIA20130114-001DW
Inj Date : 23-JAN-2013 11:57
Operator : JZ Inst ID: nt11.i
Smp Info : VZ97S
Misc Info : 13-1100
Comment : 1ul Injection
Method : /chem3/nt11.i/20130123.b/FSIMPNA011713.m
Meth Date : 23-Jan-2013 12:39 jianqing Quant Type: ISTD
Cal Date : 17-JAN-2013 16:50 Cal File: 01171305.d
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: pnax.sub
Target Version: 3.50

01/23/13

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Volume of final extract (uL)
Vo	500.00000	Volume of sample extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
*	6 Naphthalene-d8	136	5.356	5.359	(1.000)	566927	2.00000	
	7 Naphthalene	128	5.385	5.388	(1.005)	128791	0.35192	0.3519
$	12 2-Methylnaphthalene-d10	152	6.095	6.098	(1.138)	386424	2.36565	2.366
	14 2-Methylnaphthalene	141	Compound Not Detected.					
	15 1-methylnaphthalene	141	Compound Not Detected.					
	21 Acenaphthylene	152	Compound Not Detected.					
*	22 Acenaphthene-d10	164	7.628	7.628	(1.000)	285193	2.00000	
	23 Acenaphthene	153	7.679	7.679	(1.007)	163633	0.80369	0.8037
	11 Dibenzofuran	168	Compound Not Detected.					
	25 Fluorene	166	8.307	8.304	(1.089)	203748	0.89544	0.8954(M)
*	28 Phenanthrene-d10	188	9.651	9.645	(1.000)	369923	2.00000	
	30 Phenanthrene	178	9.686	9.679	(1.004)	66962	0.23653	0.2365
	31 Anthracene	178	9.727	9.720	(1.008)	23320	0.08454	0.08454(M)
	36 Fluoranthene	202	11.320	11.314	(1.173)	48338	0.16745	0.1675(M)
$	253 Fluoranthene-d10	212	11.292	11.279	(1.170)	449328	2.47238	2.472
	39 Pyrene	202	11.778	11.772	(0.830)	46228	0.13871	0.1387(M)
	46 Benzo(a)anthracene	228	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
* 47 Chrysene-d12	240	14.186	14.182	(1.000)	474803	2.00000	
48 Chrysene	228	Compound Not Detected.					
51 Benzo(b)fluoranthene	252	Compound Not Detected.					
52 Benzo(k)fluoranthene	252	Compound Not Detected.					
251 Benzo(j)fluoranthene	252	Compound Not Detected.					
54 Benzo(a)pyrene	252	Compound Not Detected.					
* 56 Perylene-d12	264	17.900	17.906	(1.000)	465582	2.00000	
63 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
$ 60 Dibenzo(a,h)anthracene-d14	292	20.105	20.115	(1.123)	326429	2.38662	2.387
62 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
61 Benzo(g,h,i)perylene	276	Compound Not Detected.					
57 Perylene	252	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: 01231306.d
Lab Smp Id: VZ97S
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem3/nt11.i/20130123.b/FSIMPNA011713.m
Misc Info: 13-1100

Calibration Date: 23-JAN-2013
Calibration Time: 09:56
Client Smp ID: CSIA20130114-001
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
6 Naphthalene-d8	608905	304452	1217810	566927	-6.89
22 Acenaphthene-d10	340268	170134	680536	285193	-16.19
28 Phenanthrene-d10	481898	240949	963796	369923	-23.24
47 Chrysene-d12	554782	277391	1109564	474803	-14.42
56 Perylene-d12	534043	267022	1068086	465582	-12.82

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
6 Naphthalene-d8	5.36	4.86	5.86	5.36	-0.06
22 Acenaphthene-d10	7.63	7.13	8.13	7.63	0.00
28 Phenanthrene-d10	9.64	9.14	10.14	9.65	0.07
47 Chrysene-d12	14.18	13.68	14.68	14.19	0.02
56 Perylene-d12	17.91	17.41	18.41	17.90	-0.04

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.

Analytical Resources, Inc.

RECOVERY REPORT

Client Name: Anchor QEA
Client SDG: VZ97
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: VZ97S
Client Smp ID: CSIA20130114-001DW
Level: LOW
Operator: JZ
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: pnalcsw.spk
Quant Type: ISTD
Sublist File: pnax.sub
Method File: /chem3/nt11.i/20130123.b/FSIMPNA011713.m
Misc Info: 13-1100

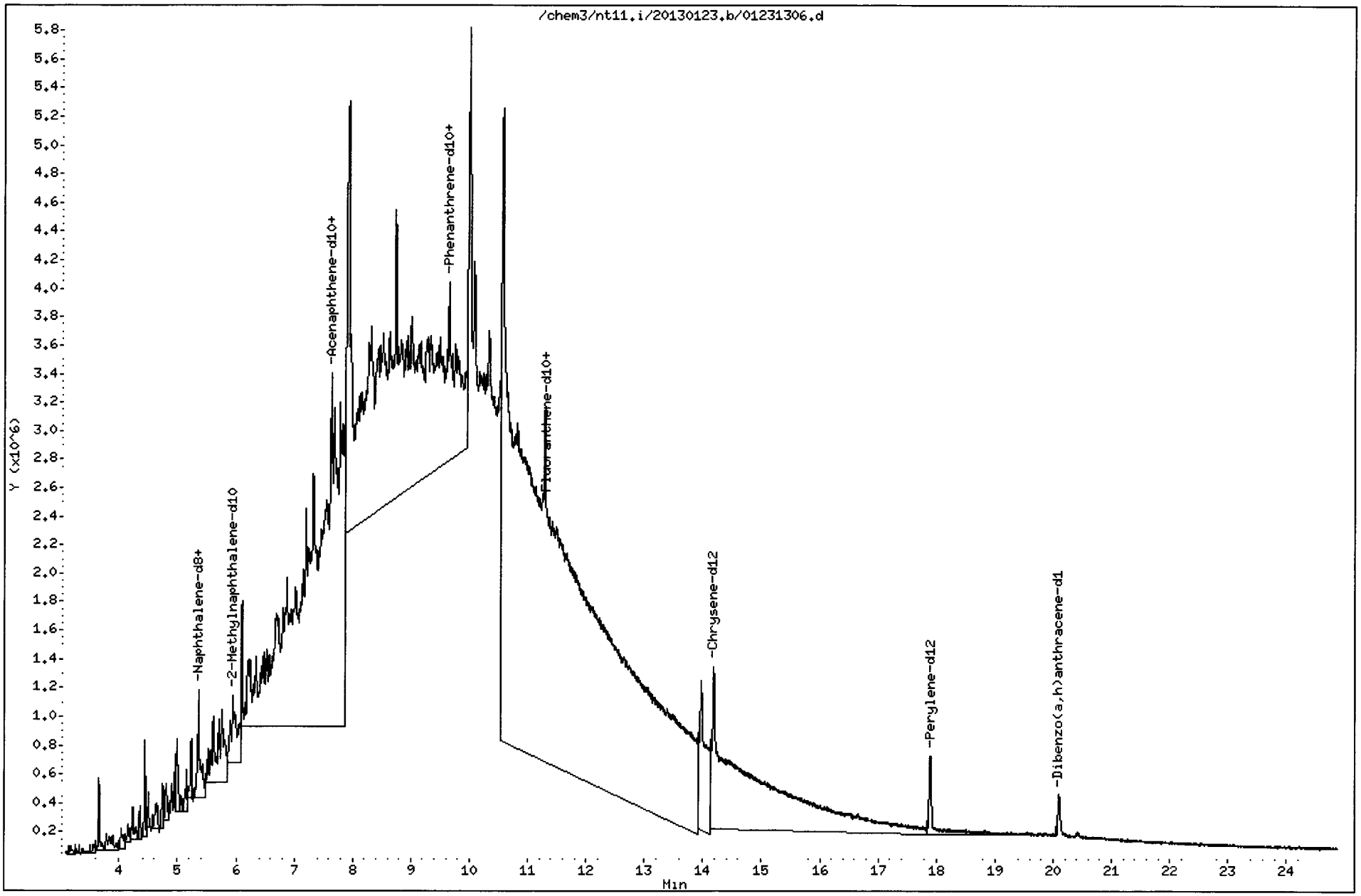
SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 12 2-Methylnaphthalen	3.000	2.366	78.86	33-107
$ 253 Fluoranthene-d10	3.000	2.472	82.41	70-130
$ 60 Dibenzo(a,h)anthra	3.000	2.387	79.55	10-142

Data File: /chem3/nt11.i/20130123.b/01231306.d
Date : 23-JAN-2013 11:57
Client ID: CSIA20130114-001DW
Sample Info: VZ97S
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt11.i

Operator: JZ
Column diameter: 0.25

VZ97S 01231306



Data File: /chem3/nt11.i/20130123.b/01231306.d

Date : 23-JAN-2013 11:57

Client ID: CSIA20130114-001DW

Instrument: nt11.i

Sample Info: VZ97S

Volume Injected (uL): 1.0

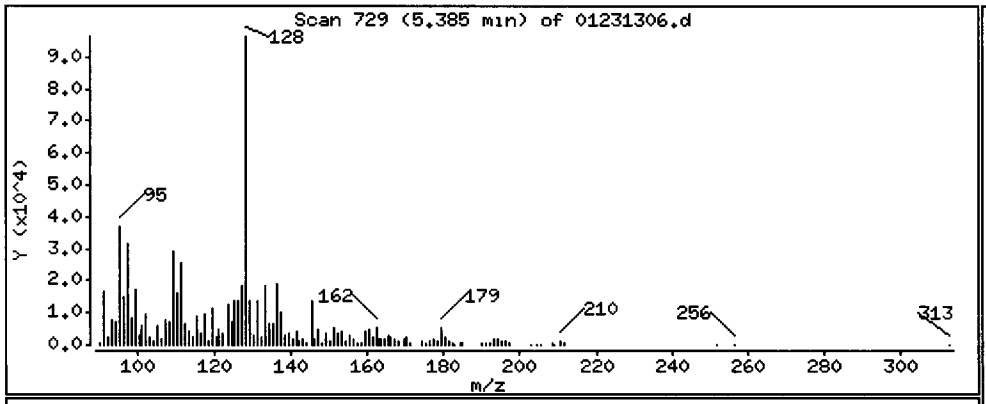
Operator: JZ

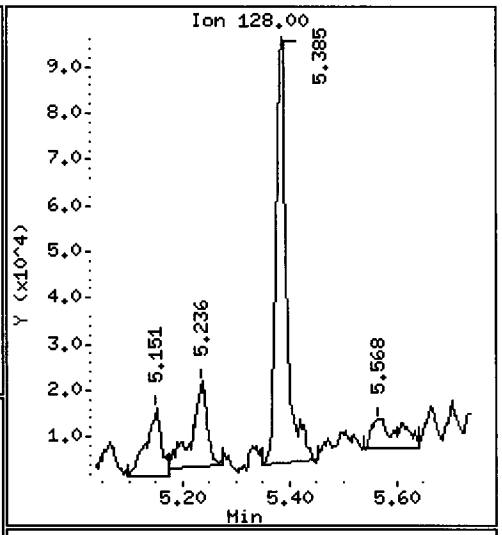
Column phase: ZB-5msi

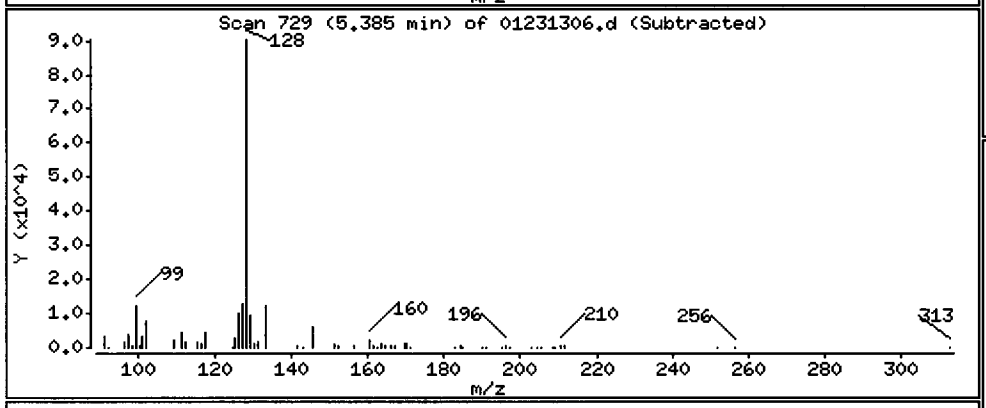
Column diameter: 0.25

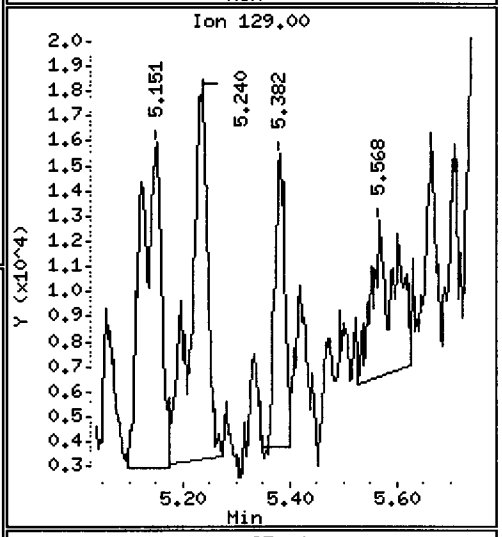
7 Naphthalene

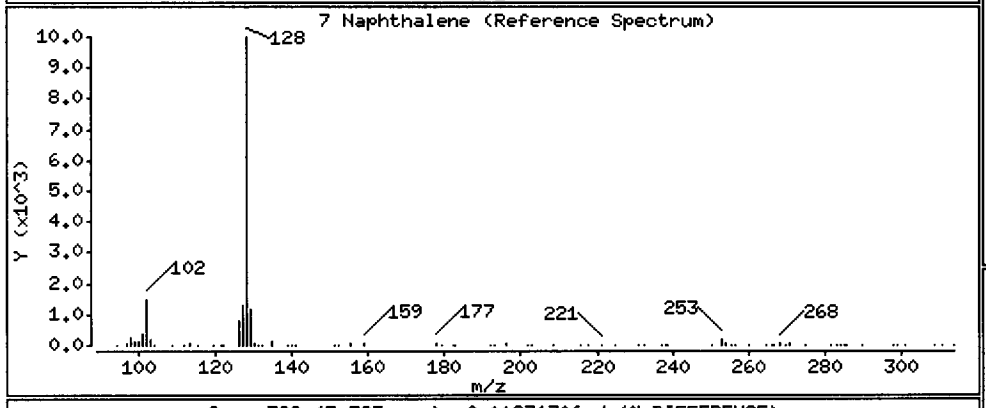
Concentration: 0.3519 ug/L

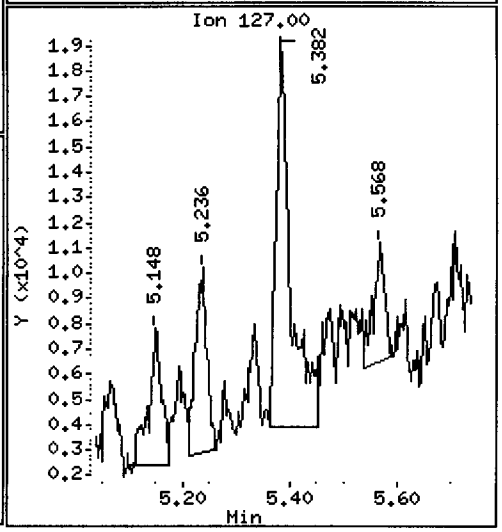


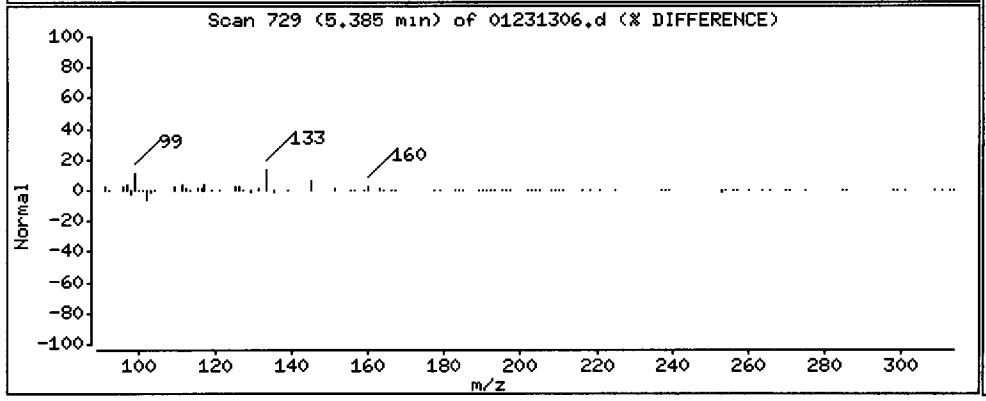












Data File: /chem3/nt11.i/20130123.b/01231306.d

Date : 23-JAN-2013 11:57

Client ID: CSIA20130114-001DW

Instrument: nt11.i

Sample Info: VZ97S

Volume Injected (uL): 1.0

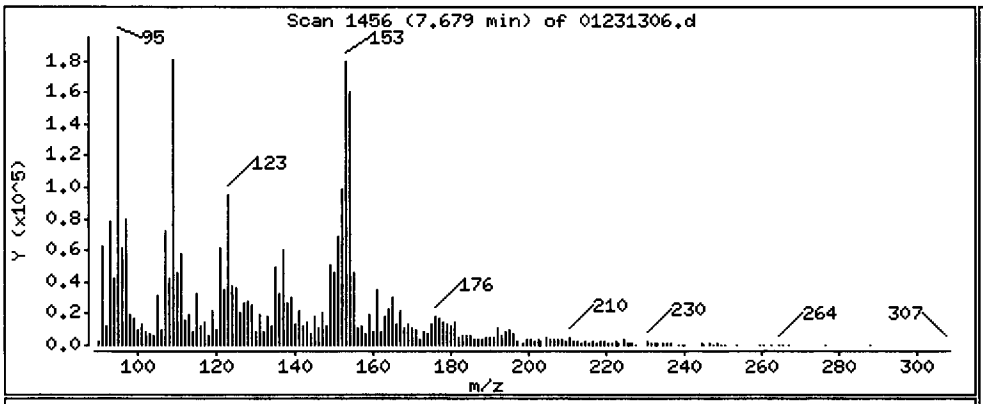
Operator: JZ

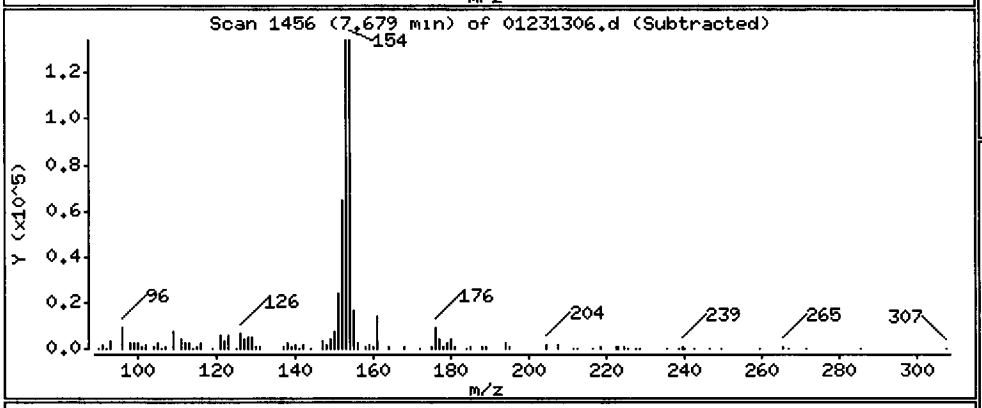
Column phase: ZB-5msi

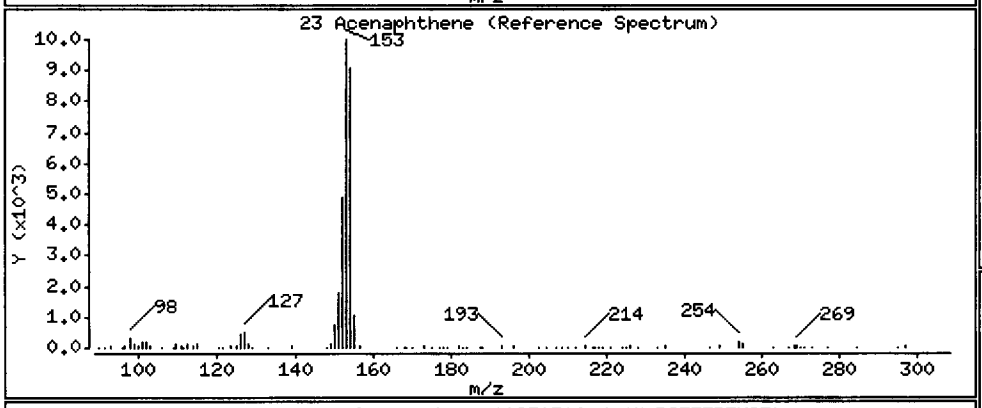
Column diameter: 0.25

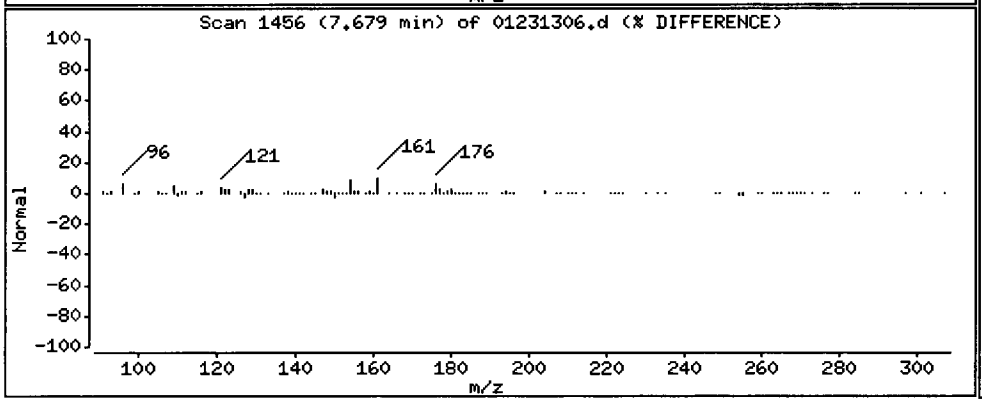
23 Acenaphthene

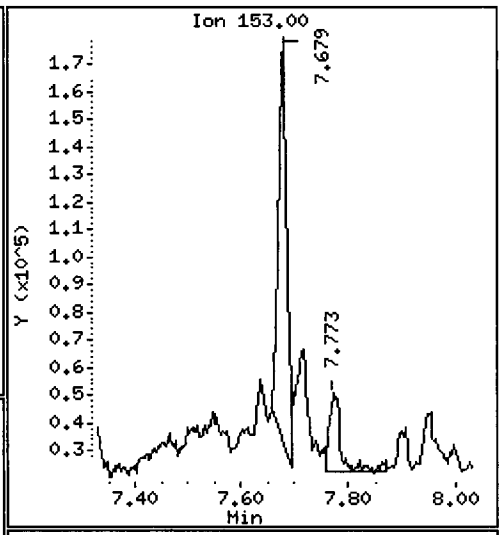
Concentration: 0.8037 ug/L

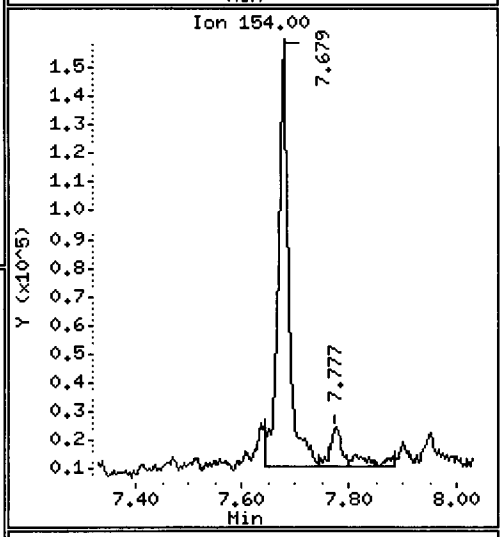


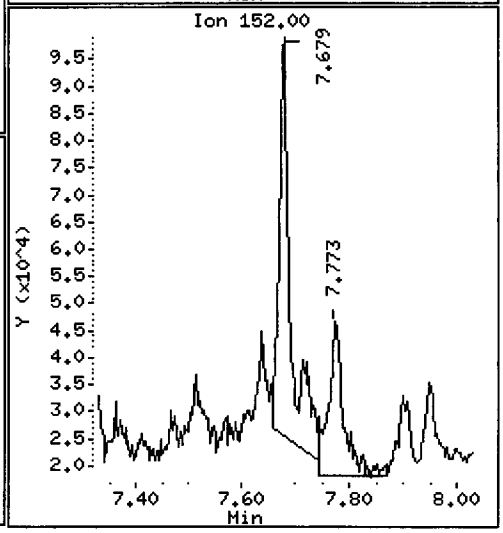






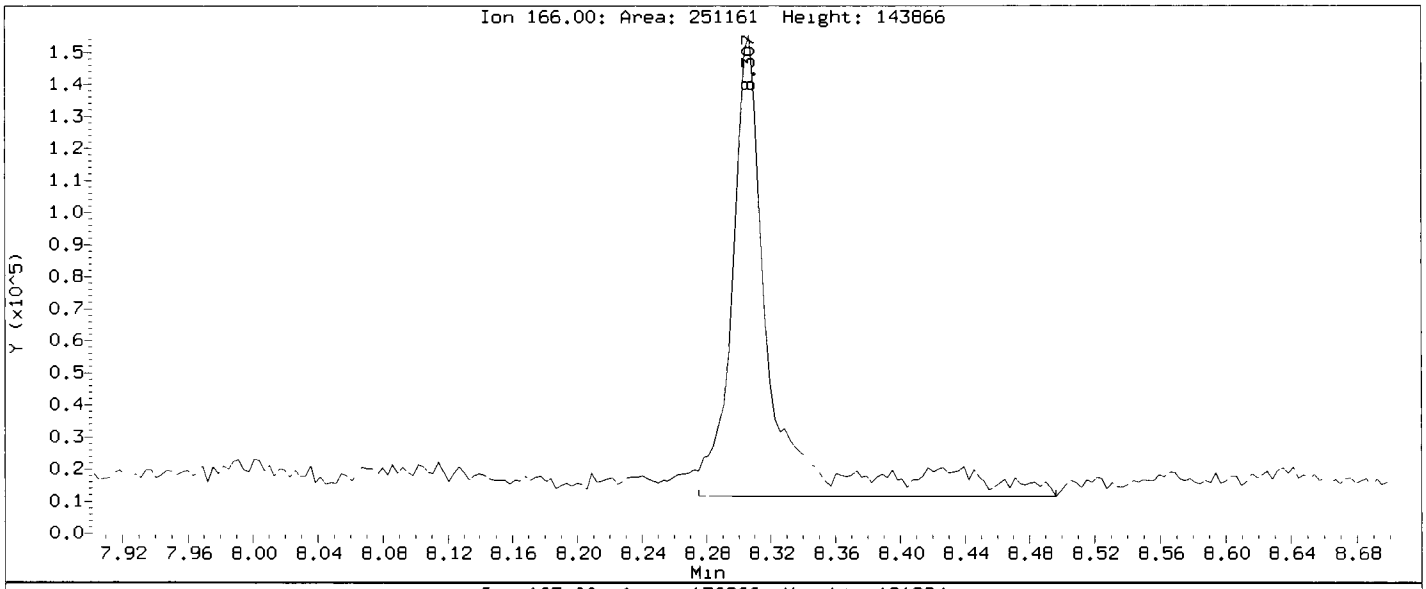


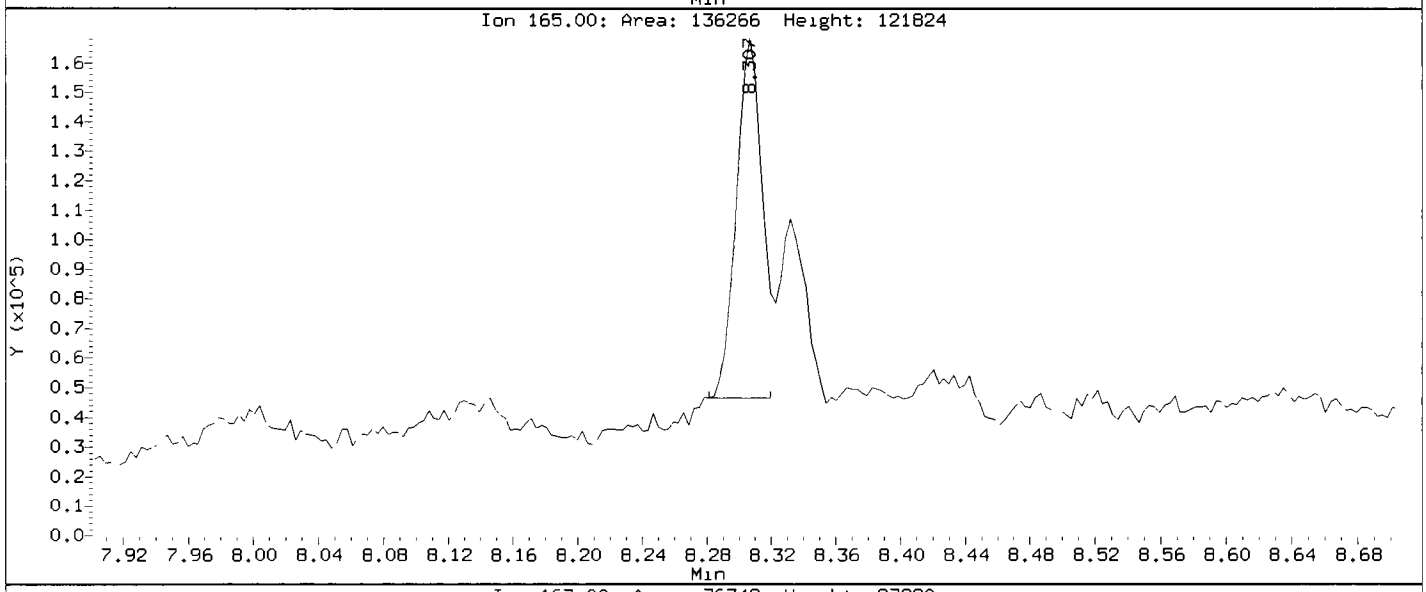


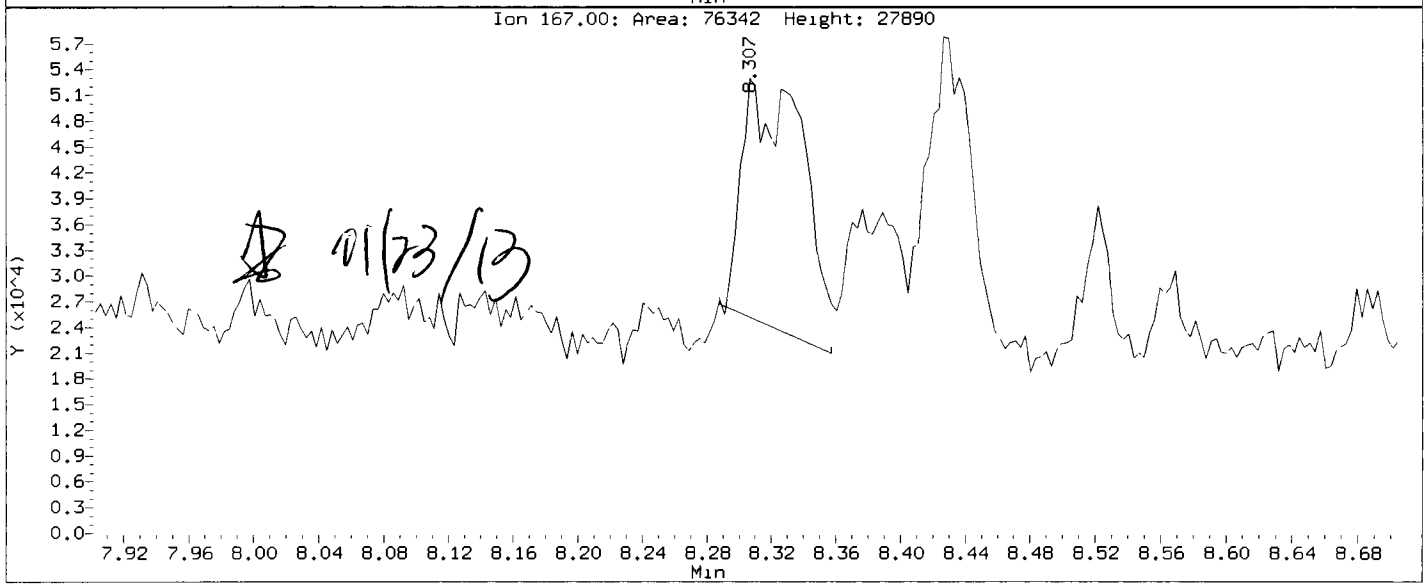


Data File: /chem3/nt11.i/20130123.b/01231306.d
Injection Date: 23-JAN-2013 11:57
Instrument: nt11.i
Client Sample ID: CSIA20130114-001DW

Compound: Fluorene
CAS Number: 86-73-7



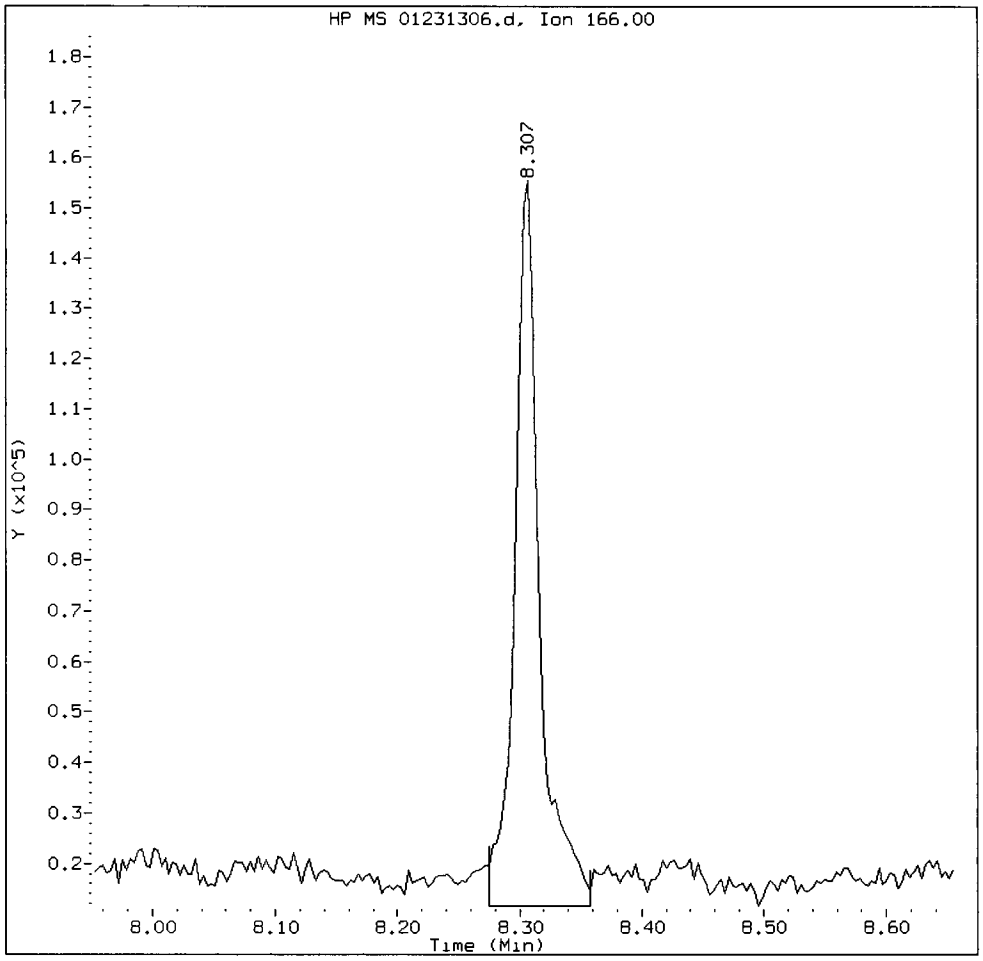




01/23/13

VZ97S, /chem3/nt11.i/20130123.b/01231306.d

Fluorene Amount: 0.90 Area: 203748



MANUAL INTEGRATION for Fluorene

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 04/23/13

Data File: /chem3/nt11.i/20130123.b/01231306.d

Date : 23-JAN-2013 11:57

Client ID: CSIA20130114-001DW

Instrument: nt11.i

Sample Info: VZ97S

Volume Injected (uL): 1.0

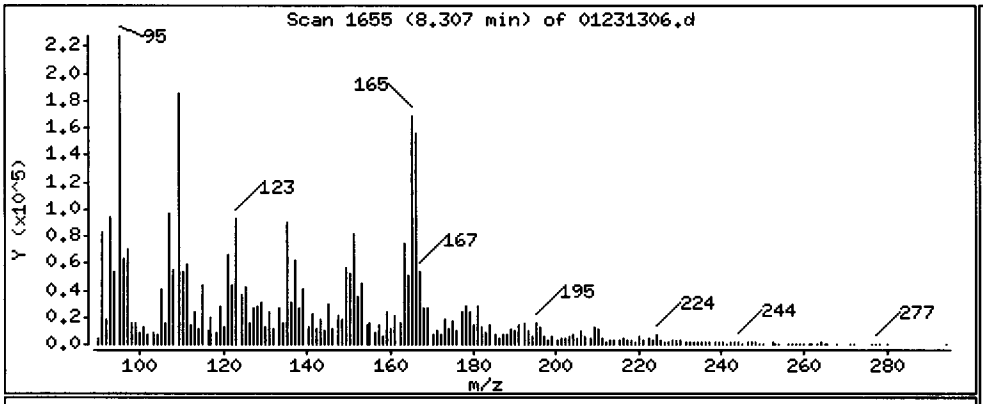
Operator: JZ

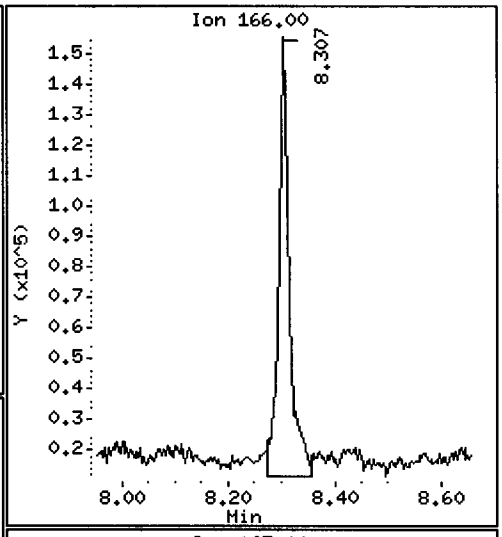
Column phase: ZB-5msi

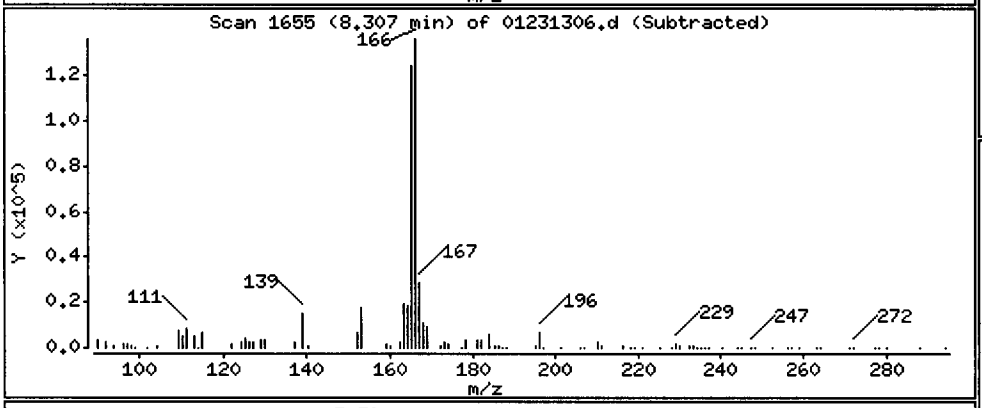
Column diameter: 0.25

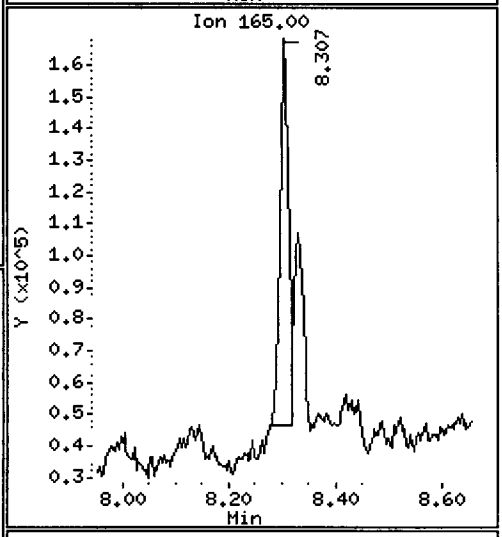
25 Fluorene

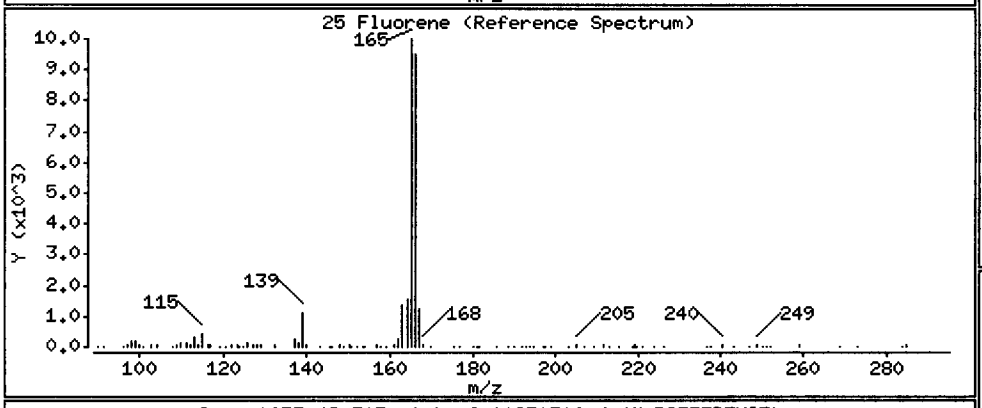
Concentration: 0.8954 ug/L

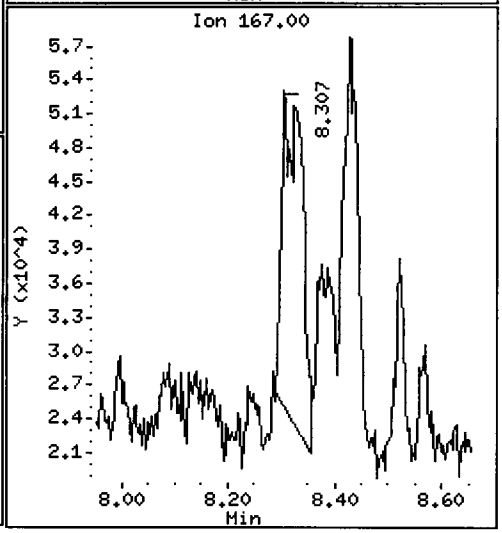


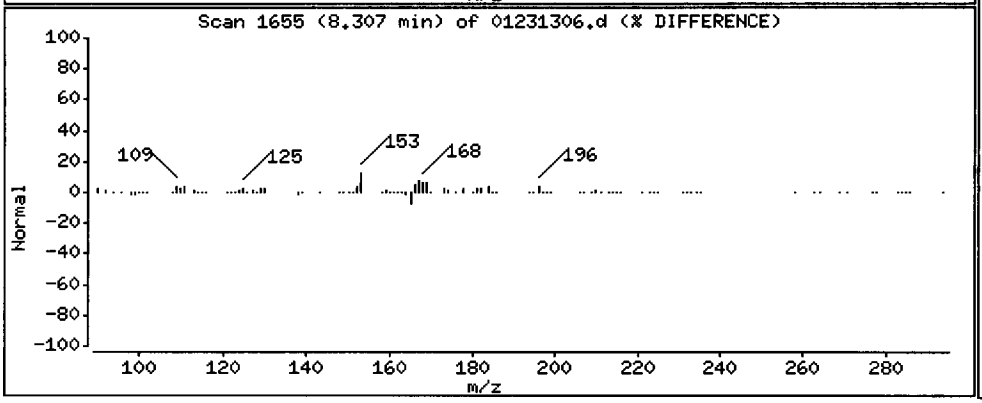












Data File: /chem3/nt11.i/20130123.b/01231306.d

Date : 23-JAN-2013 11:57

Client ID: CSIA20130114-001DW

Instrument: nt11.i

Sample Info: VZ97S

Volume Injected (uL): 1.0

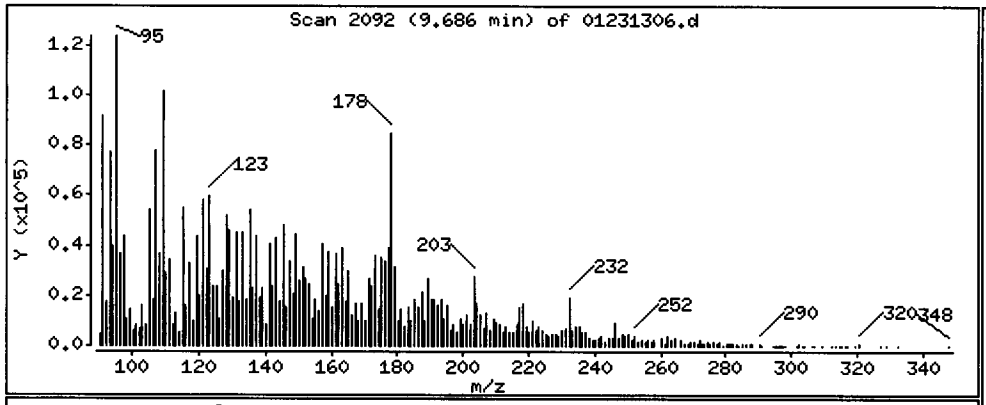
Operator: JZ

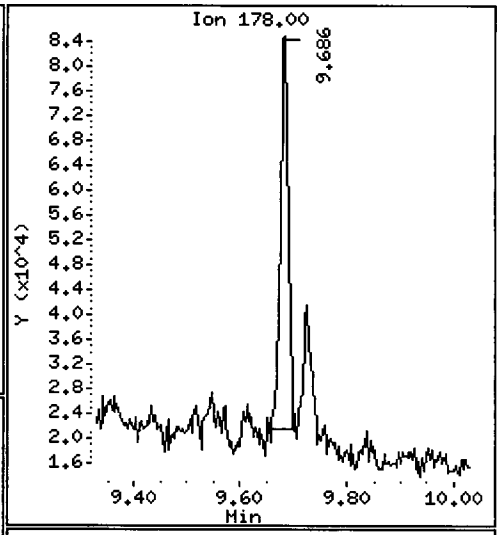
Column phase: ZB-5msi

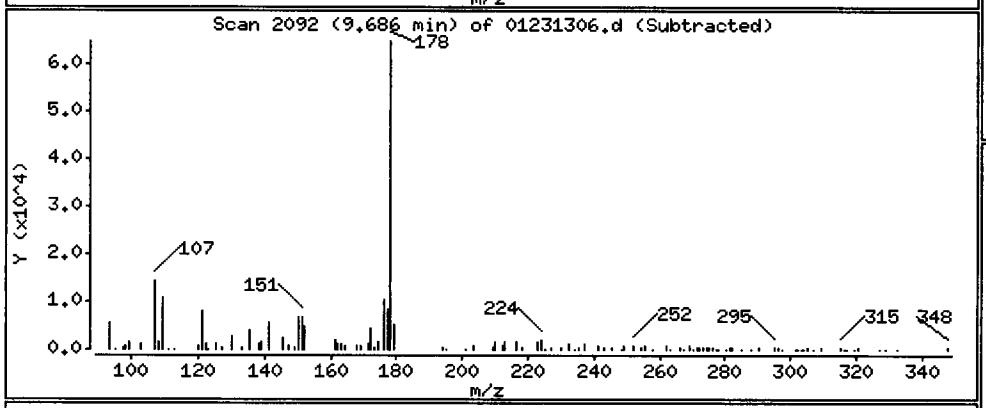
Column diameter: 0.25

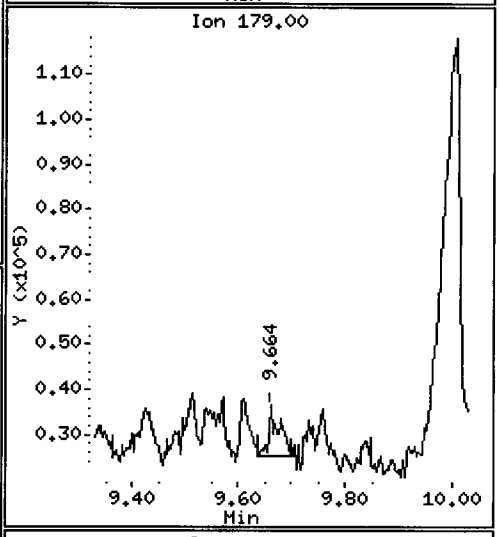
30 Phenanthrene

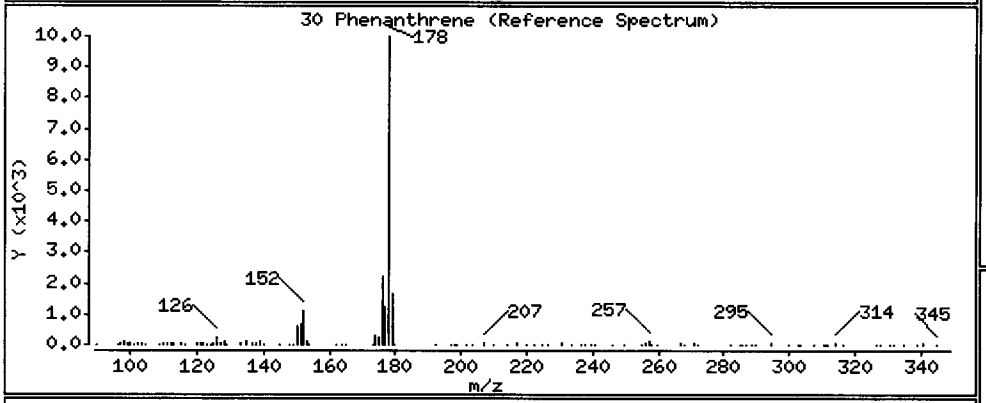
Concentration: 0.2365 ug/L

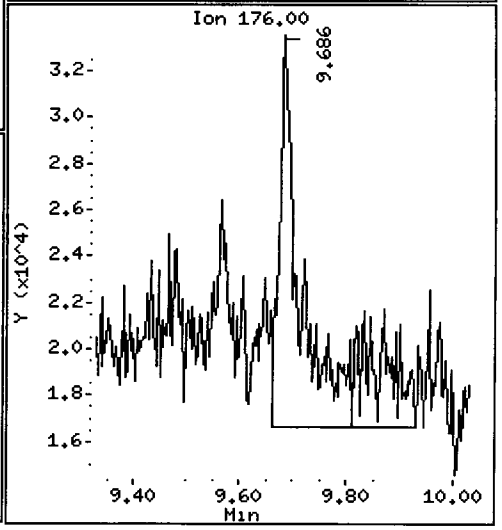


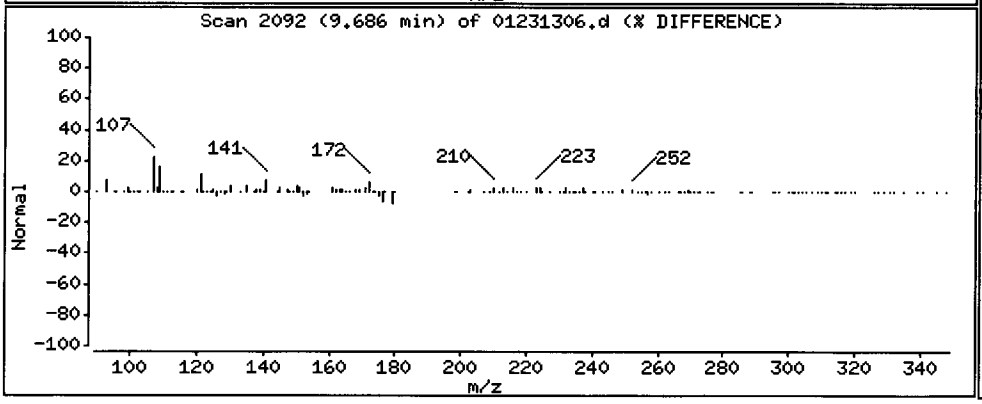






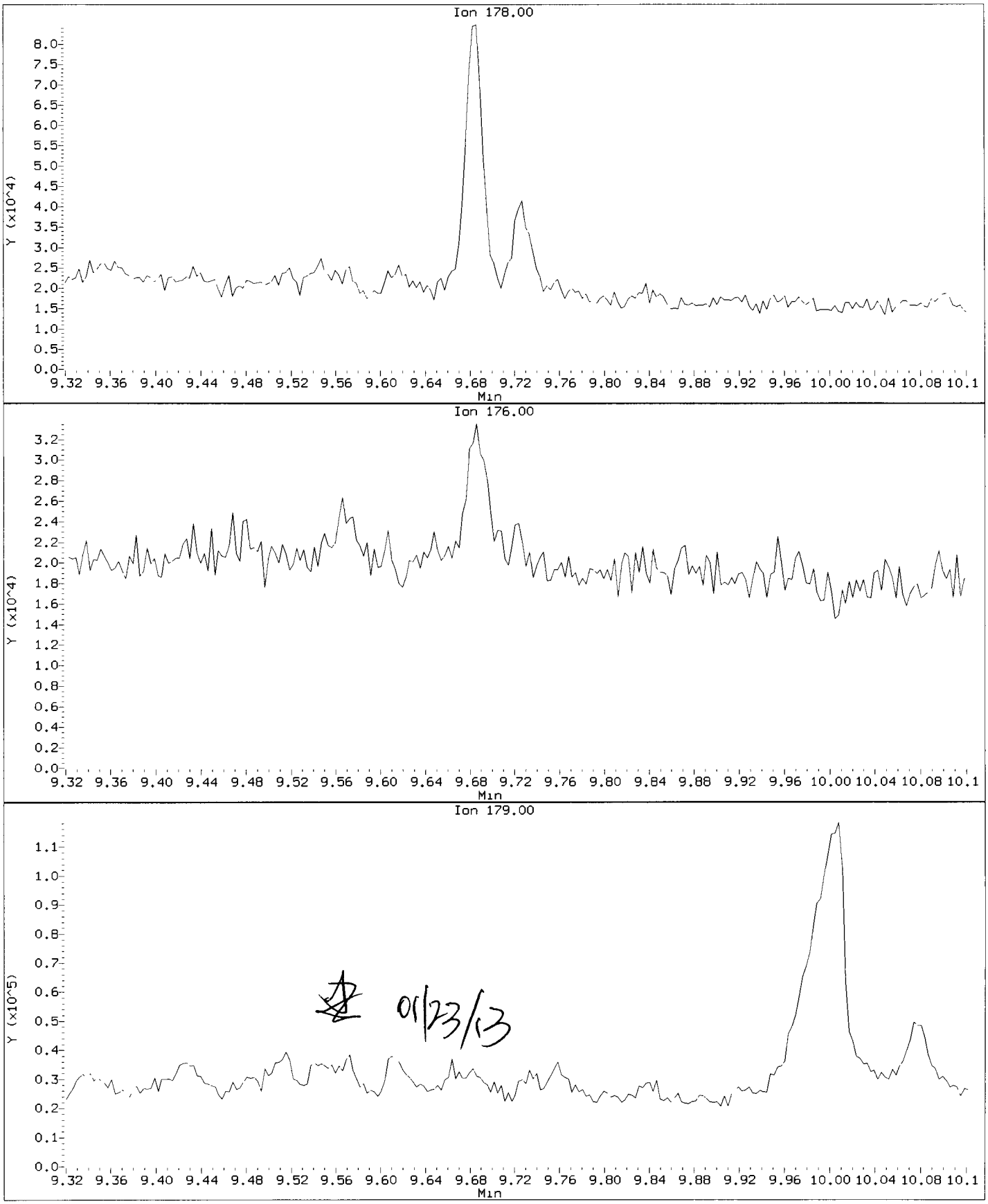






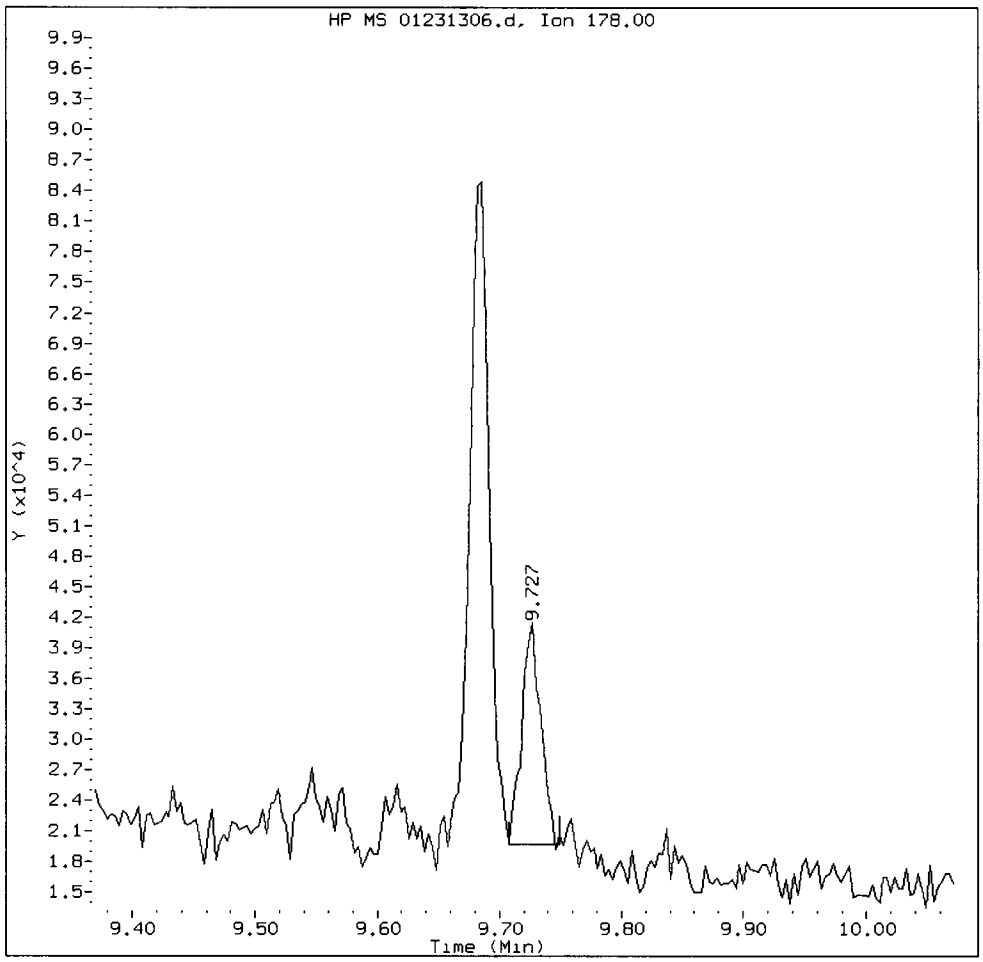
Data File: /chem3/nt11.i/20130123.b/01231306.d
Injection Date: 23-JAN-2013 11:57
Instrument: nt11.i
Client Sample ID: CSIA20130114-001DW

Compound: Anthracene
CAS Number: 120-12-7



VZ97S, /chem3/nt11.i/20130123.b/01231306.d

Anthracene Amount: 0.08 Area: 23320



MANUAL INTEGRATION for Anthracene

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 01/23/13

Data File: /chem3/nt11.i/20130123.b/01231306.d

Date : 23-JAN-2013 11:57

Client ID: CSIA20130114-001DW

Instrument: nt11.i

Sample Info: VZ97S

Volume Injected (uL): 1.0

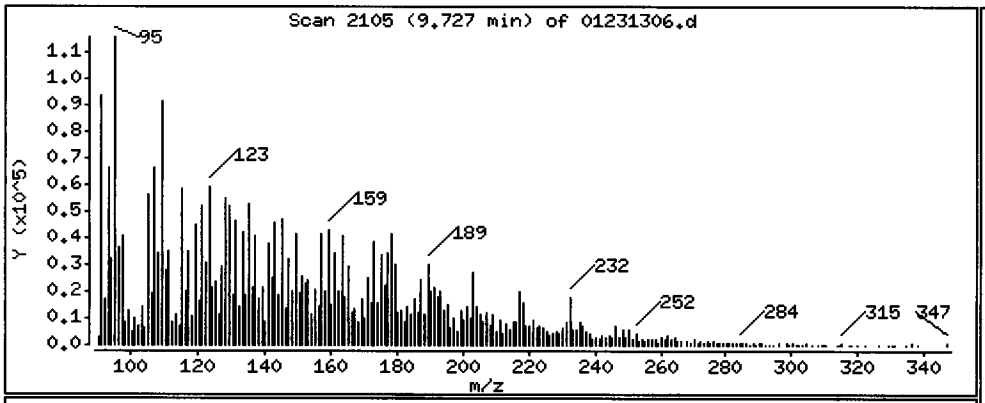
Operator: JZ

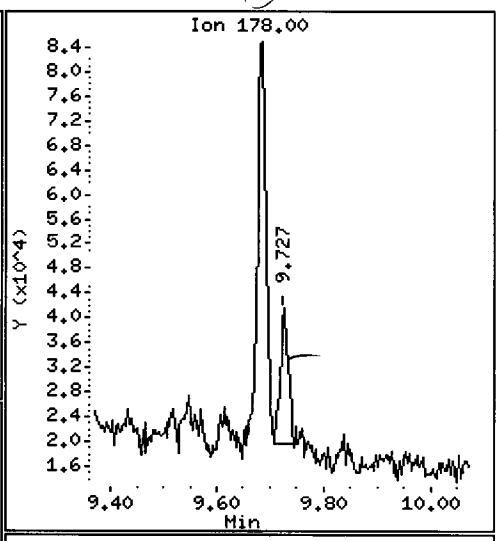
Column phase: ZB-5msi

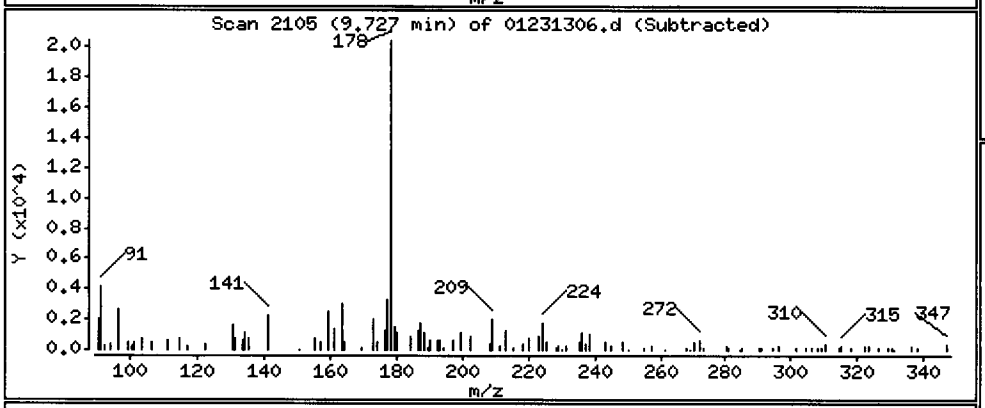
Column diameter: 0.25

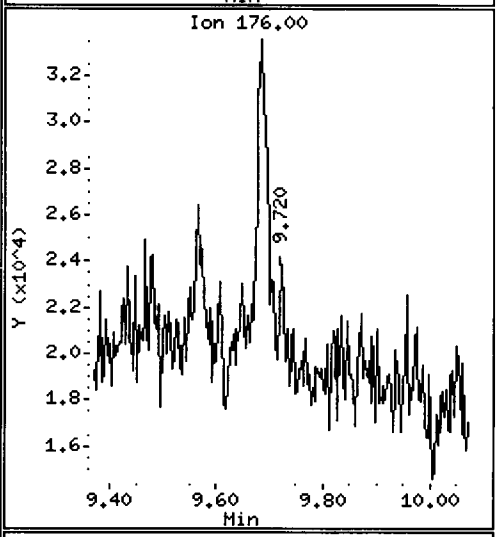
31 Anthracene

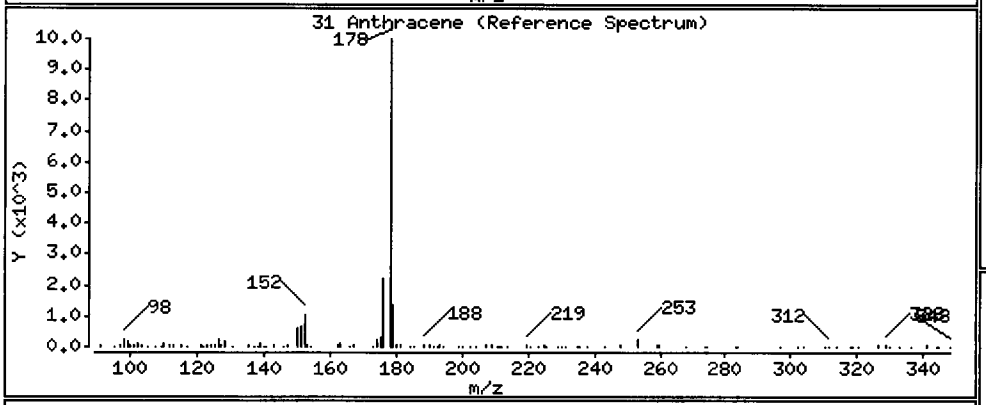
Concentration: 0.08454 ug/L

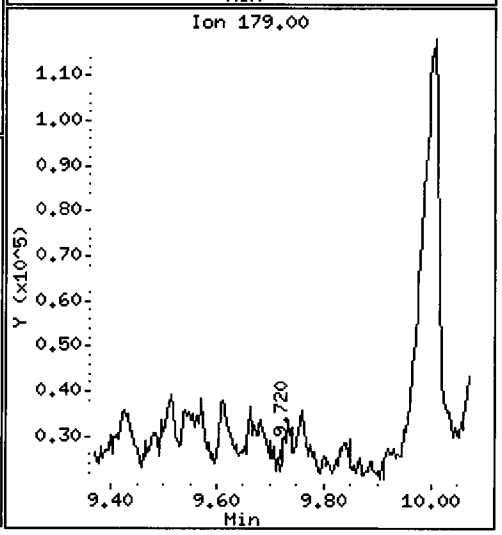


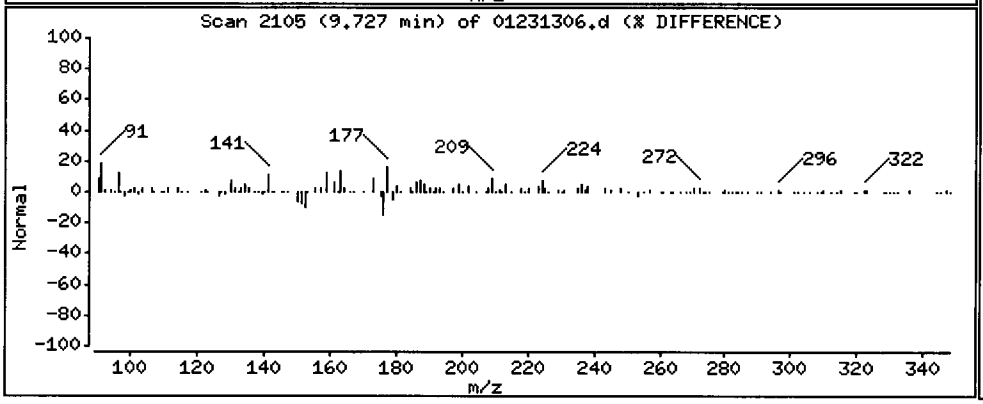






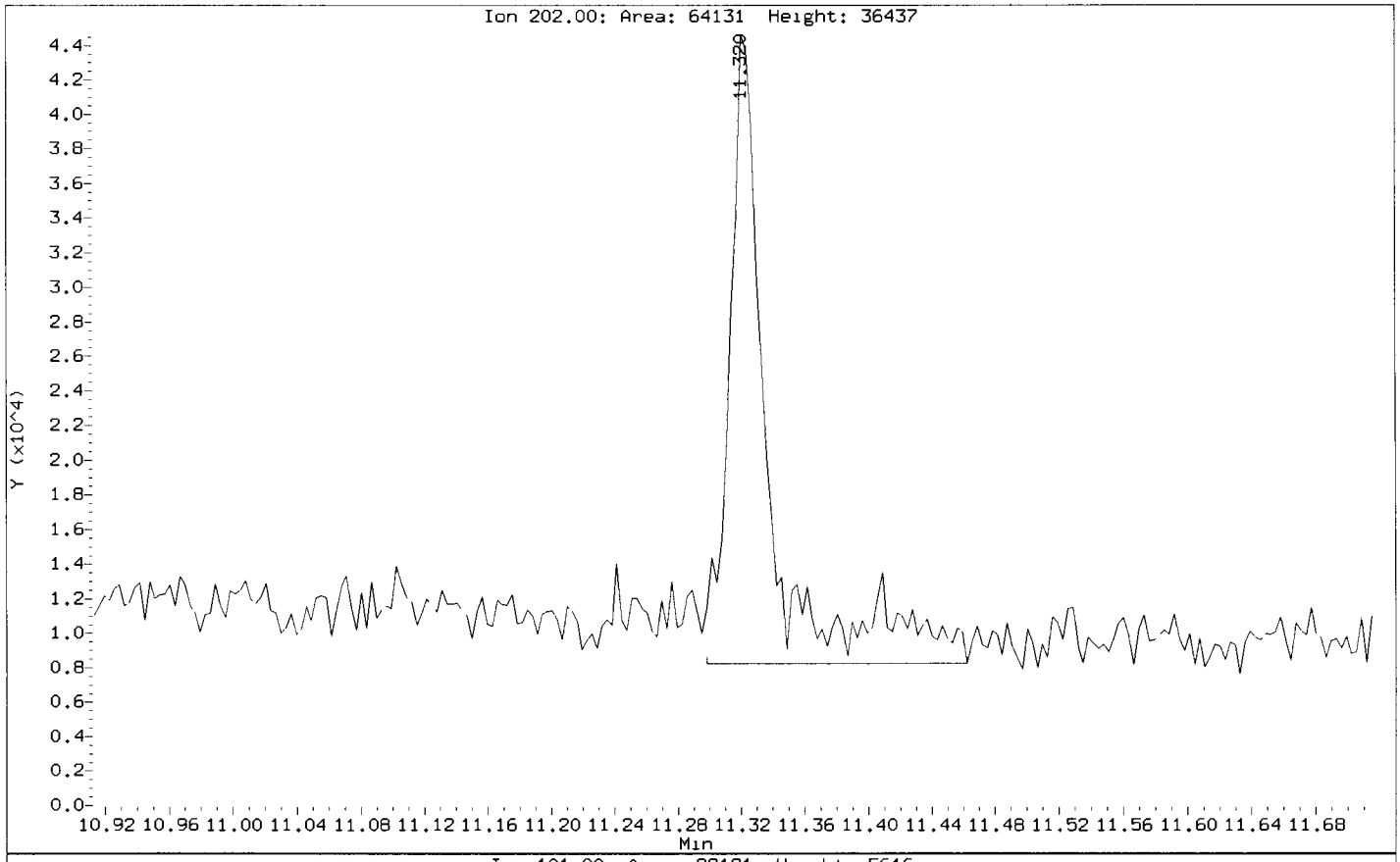


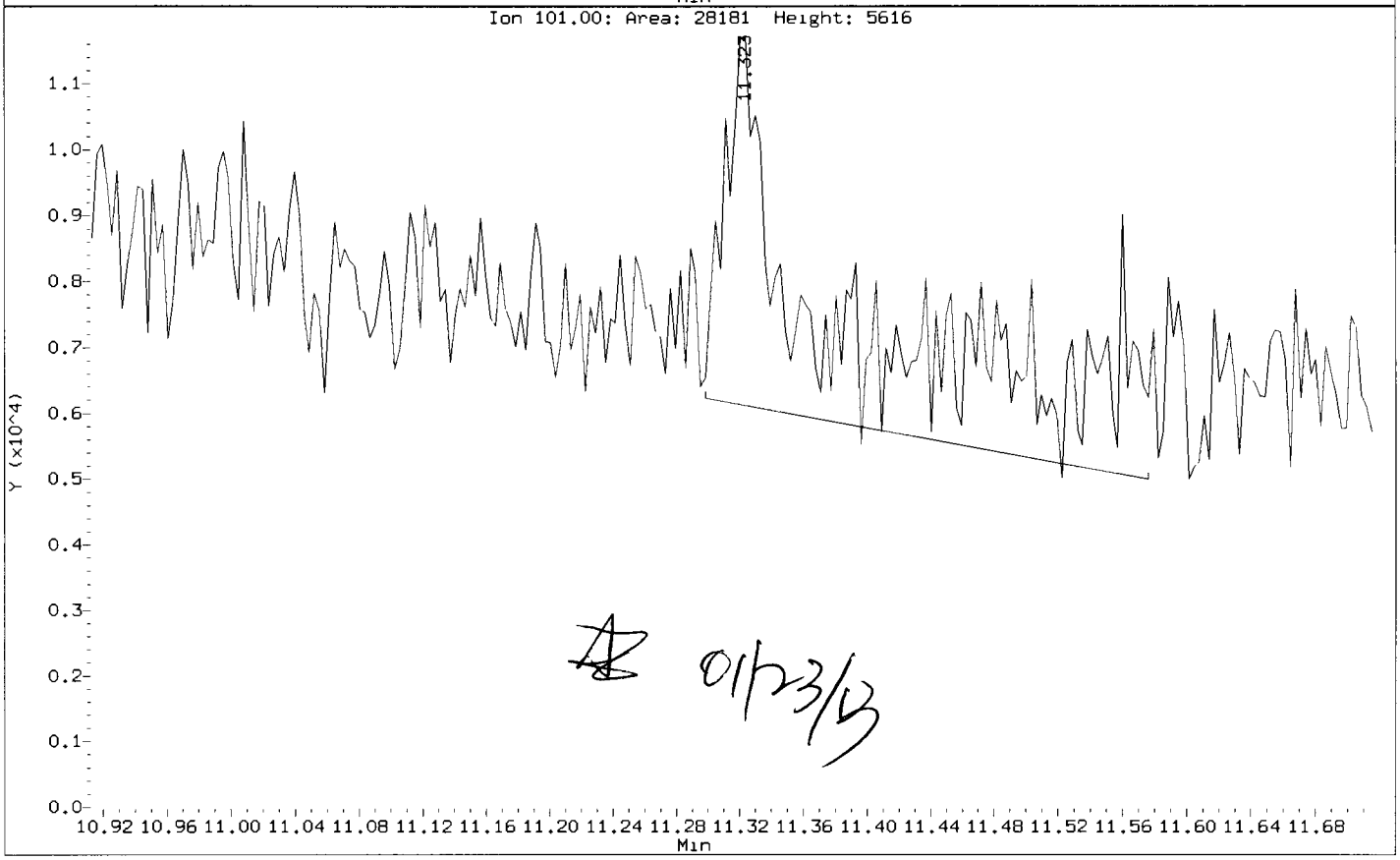




Data File: /chem3/nt11.i/20130123.b/01231306.d
Injection Date: 23-JAN-2013 11:57
Instrument: nt11.i
Client Sample ID: CSIA20130114-001DW

Compound: Fluoranthene
CAS Number: 206-44-0



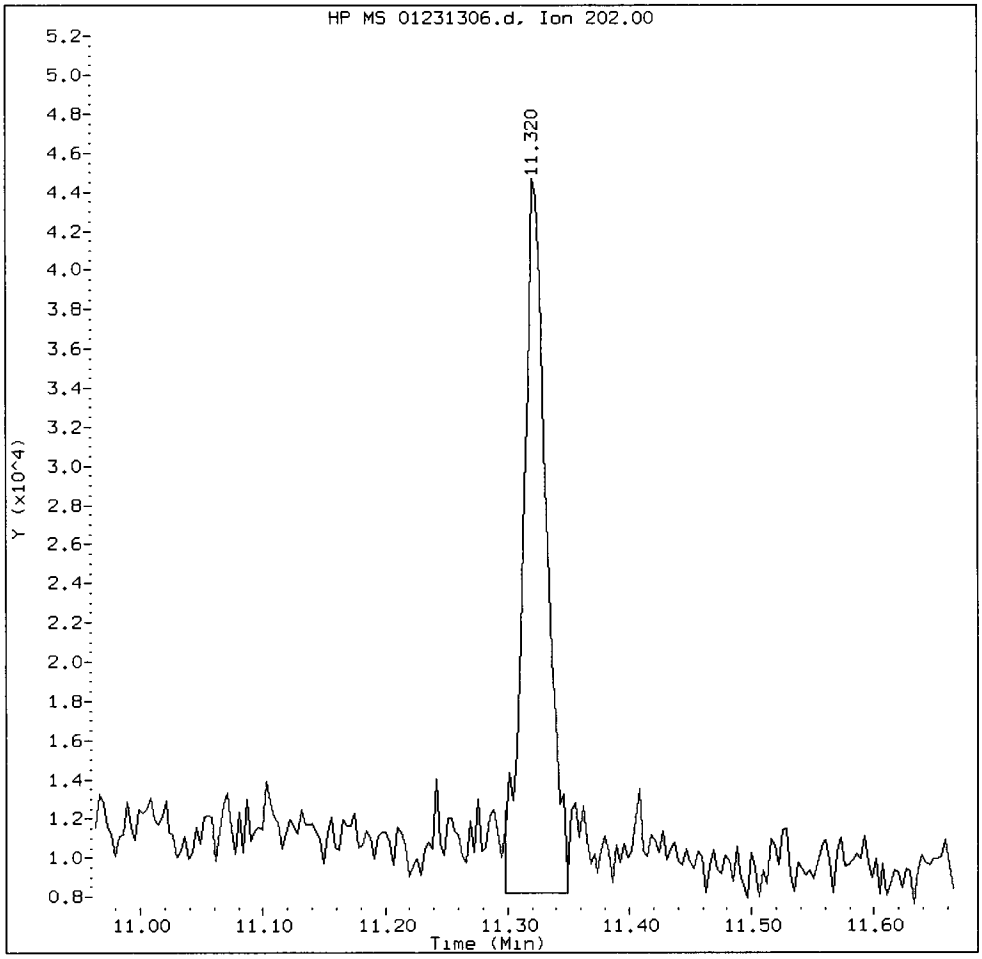


01/23/13

USA97 · 01256

VZ97S, /chem3/nt11.i/20130123.b/01231306.d

Fluoranthene Amount: 0.17 Area: 48338



MANUAL INTEGRATION for Fluoranthene

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 01/23/13

Data File: /chem3/nt11.i/20130123.b/01231306.d

Date : 23-JAN-2013 11:57

Client ID: CSIA20130114-001DW

Instrument: nt11.i

Sample Info: VZ97S

Volume Injected (uL): 1.0

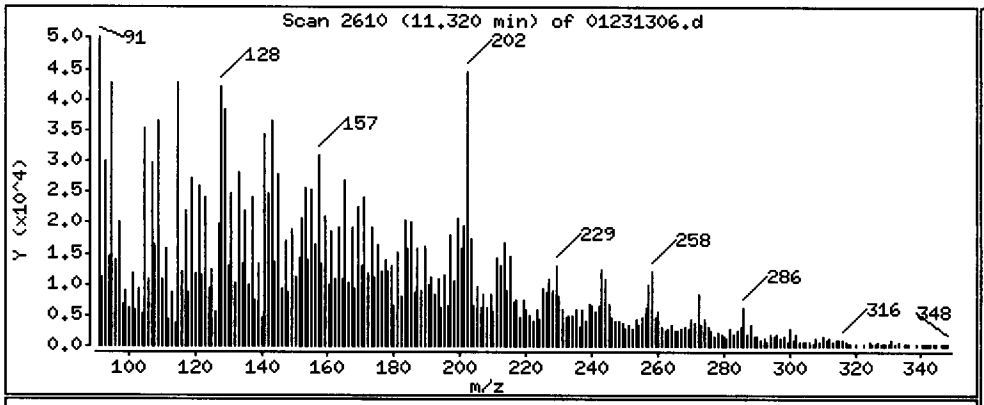
Operator: JZ

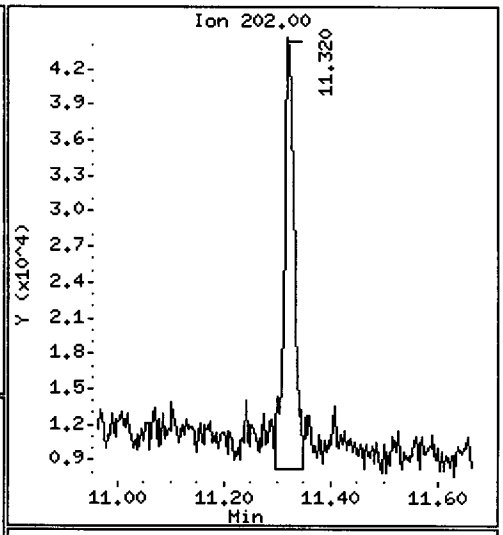
Column phase: ZB-5msi

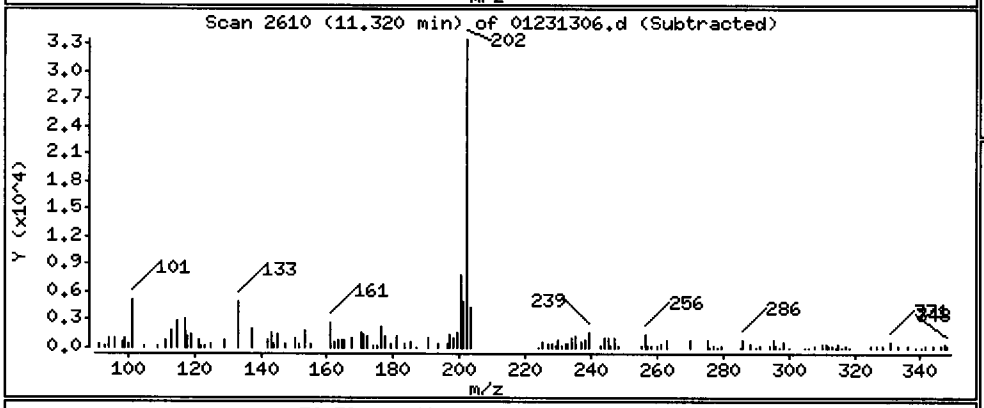
Column diameter: 0.25

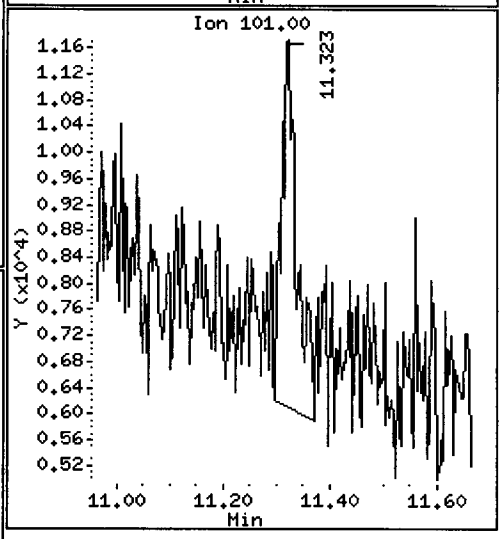
36 Fluoranthene

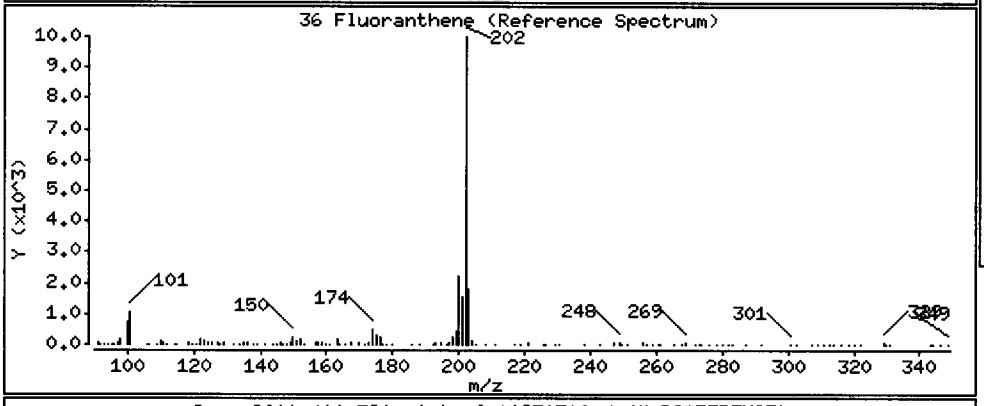
Concentration: 0.1675 ug/L

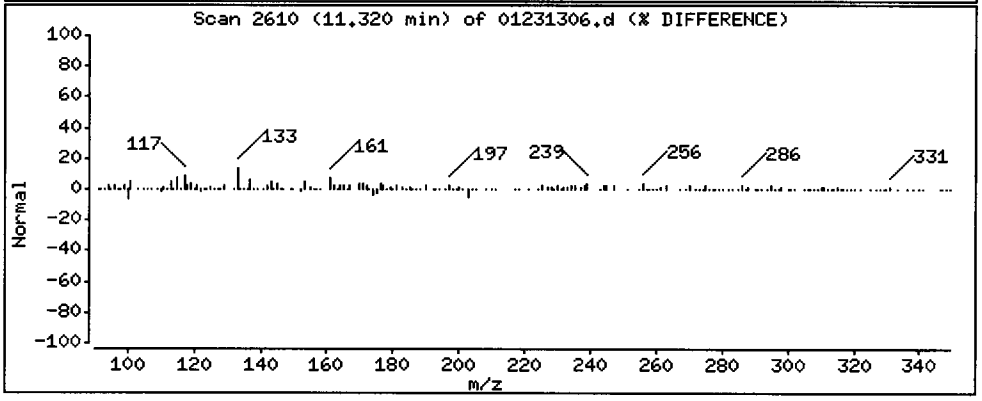






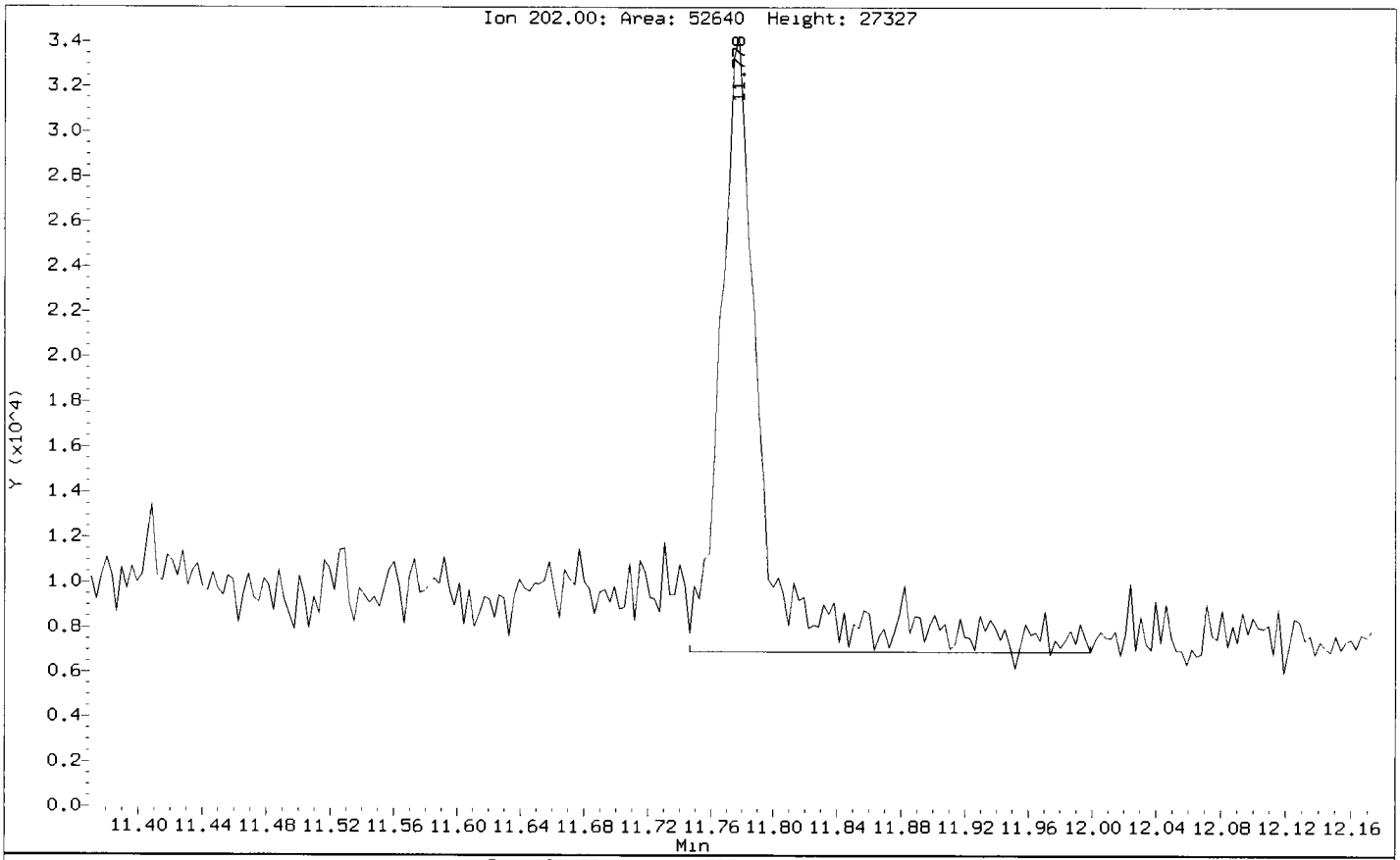


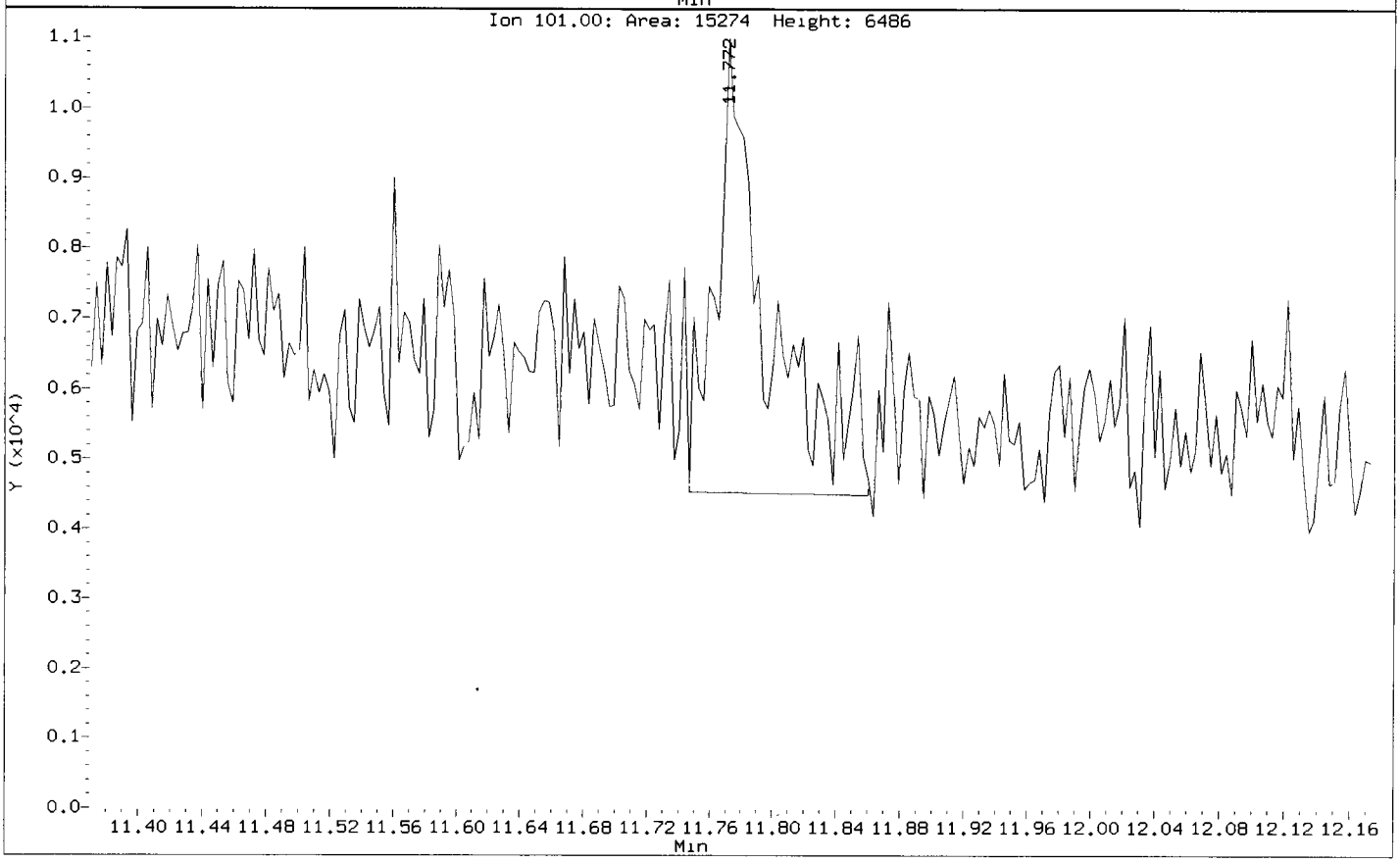




Data File: /chem3/nt11.i/20130123.b/01231306.d
Injection Date: 23-JAN-2013 11:57
Instrument: nt11.i
Client Sample ID: CSIA20130114-001DW

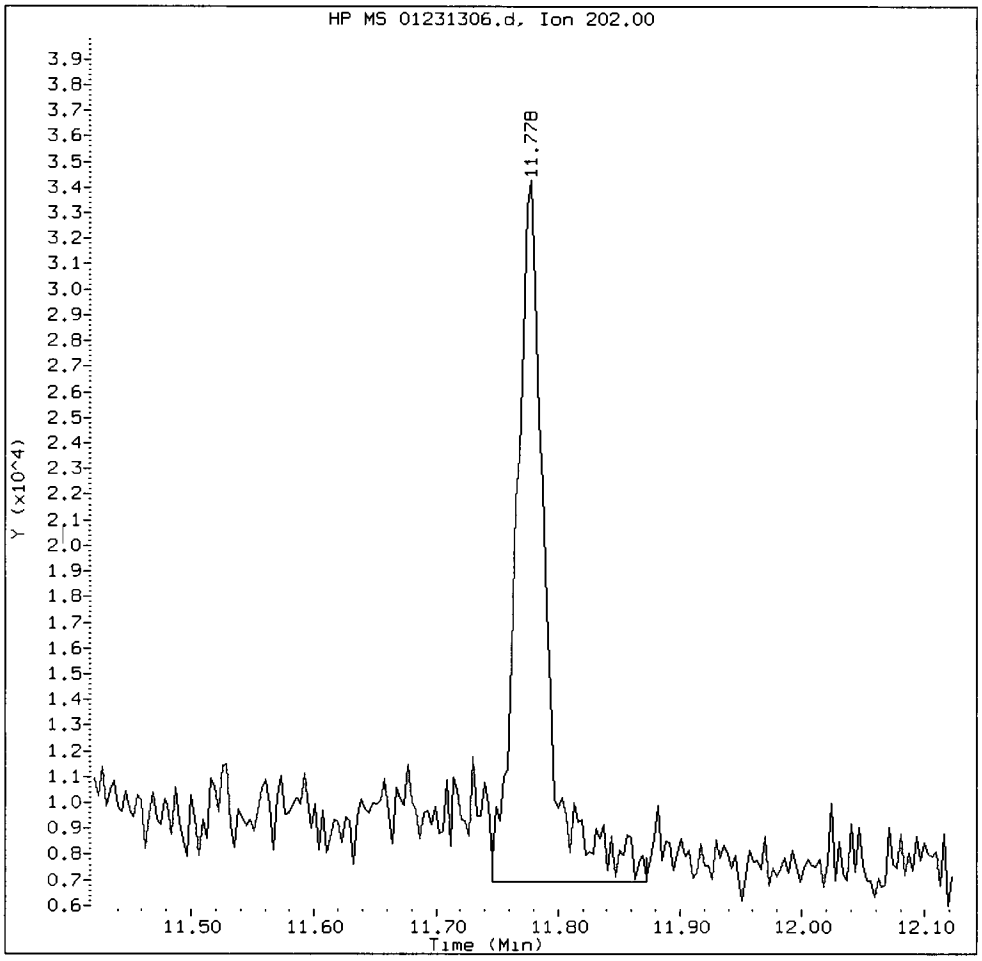
Compound: Pyrene
CAS Number: 129-00-0





VZ97S, /chem3/nt11.i/20130123.b/01231306.d

Pyrene Amount: 0.14 Area: 46228



MANUAL INTEGRATION for Pyrene

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date 01/23/13

Data File: /chem3/nt11.i/20130123.b/01231306.d

Date : 23-JAN-2013 11:57

Client ID: CSIA20130114-001DW

Instrument: nt11.i

Sample Info: VZ97S

Volume Injected (uL): 1.0

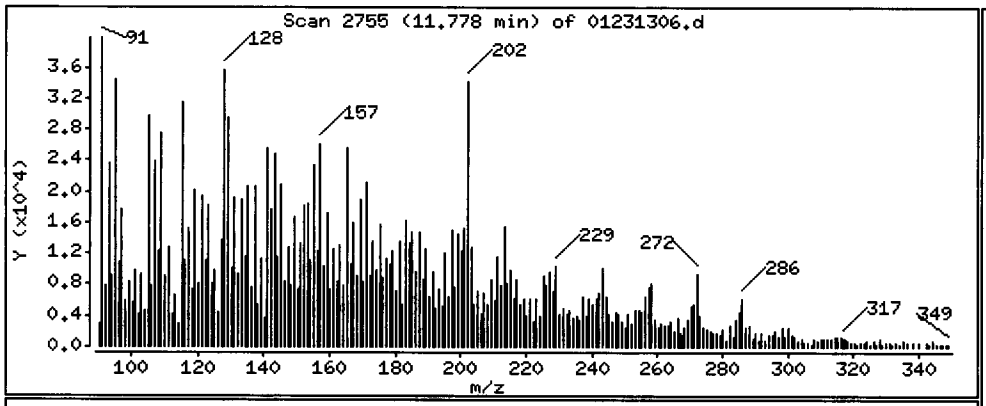
Operator: JZ

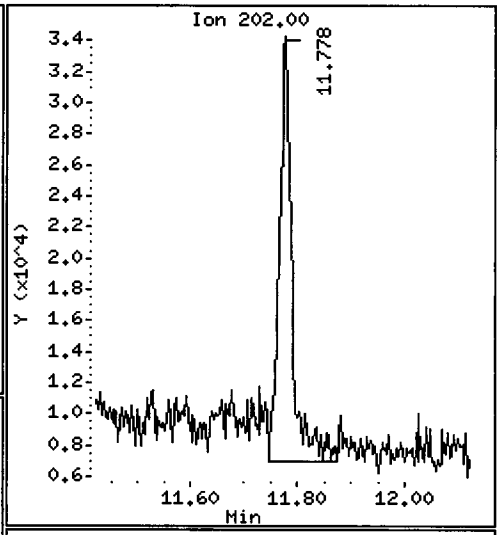
Column phase: ZB-5msi

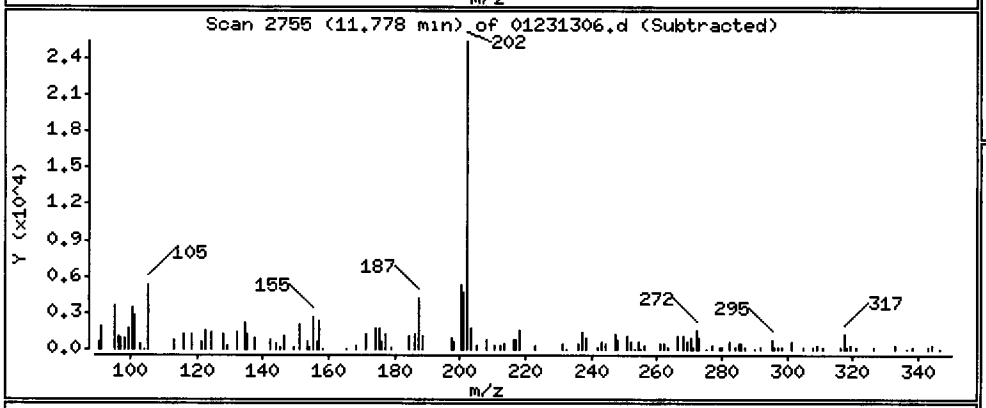
Column diameter: 0.25

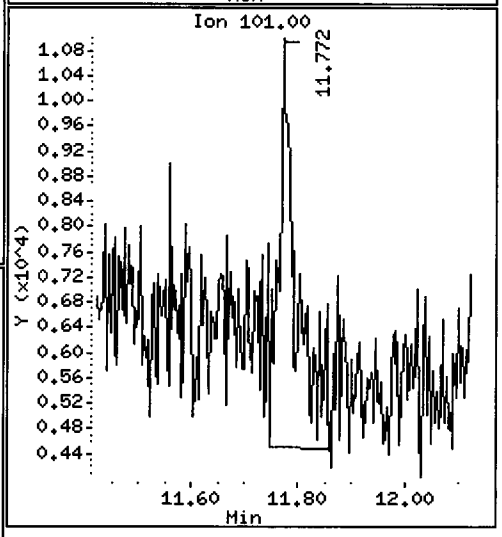
39 Pyrene

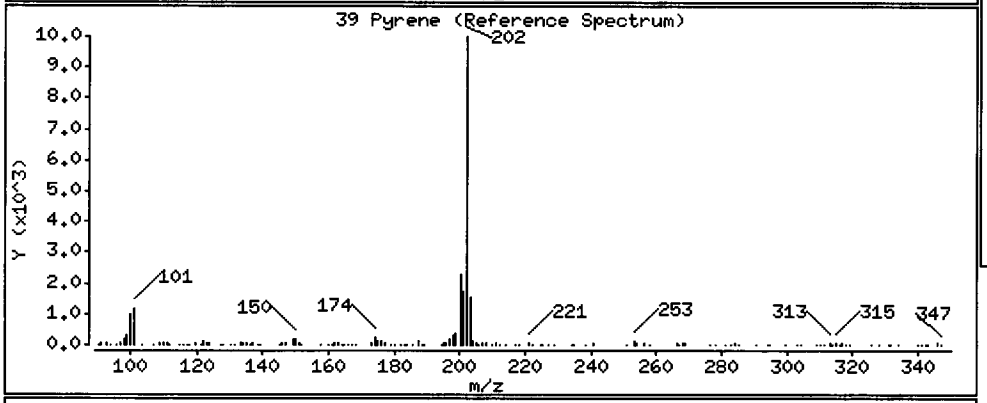
Concentration: 0.1387 ug/L

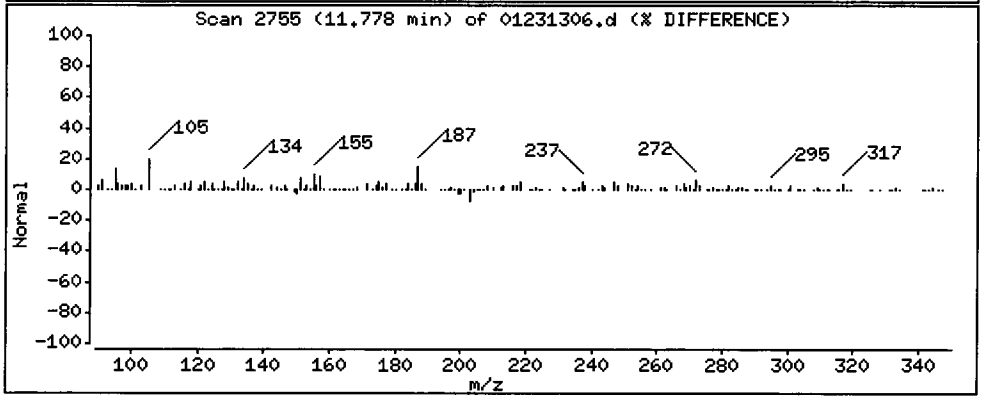












CO-ELUTION SUMMARY FOR FILE - 01231306.d

Lab ID: VZ97S, Method: FSIMPNA011713.m, Instrument: nt11.i, Date: 23-JAN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

TPHD Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: VZ97

Incorporated
Analytical Chemists and Consultants

(8015C) NWTPHD / NWHCID –Water
Separatory Funnel (3510C) (SOP # 3311S)

Preparation Test TPHD/HCID # 1(DIEWSI) In-House (0.25-0.50ppm)
ARI Job No(s) VZ97 Page 1 of 1 Batch set up by: JH

Bottle #	Extraction Requirements	Volume Extracted	DryVap Module # Y/N	Acid/Silica Clean (1:1) (1mL) Y/N	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	VZ97 MBW	500mL	# Y/N	(1:1) Y/N	1mL	1mL		WW 1/17/12 1/17/13 WW
	SBW	500mL	# Y/N	(1:1) Y/N	1mL	1mL		
	SBW Dup.	500mL	# Y/N	(1:1) Y/N	1mL	1mL		
	~~QLS~~	~~500mL~~	# Y/N	(1:1) Y/N	~~1mL~~	~~1mL~~		
14+16	VZ97 5	500mL	# Y/N	(1:1) Y/N	1mL	1mL	See Notes	Analyst/Date
8+9	↓ 7	500mL	# Y/N	(1:1) Y/N	1mL	1mL		KD 80-85°C Y/N
		500mL	# Y/N	(1:1) Y/N	1mL	1mL		1 2 3 4 5 6
		500mL	# Y/N	(1:1) Y/N	1mL	1mL		
		500mL	# Y/N	(1:1) Y/N	1mL	1mL		Q 1/18/13
		500mL	# Y/N	(1:1) Y/N	1mL	1mL		
		500mL	# Y/N	(1:1) Y/N	1mL	1mL		
		500mL	# Y/N	(1:1) Y/N	1mL	1mL		
		500mL	# Y/N	(1:1) Y/N	1mL	1mL		Analyst/Date
		500mL	# Y/N	(1:1) Y/N	1mL	1mL		Turbo Vap
		500mL	# Y/N	(1:1) Y/N	1mL	1mL		1 2 3
		500mL	# Y/N	(1:1) Y/N	1mL	1mL		
		500mL	# Y/N	(1:1) Y/N	1mL	1mL		
		500mL	# Y/N	(1:1) Y/N	1mL	1mL		
		500mL	# Y/N	(1:1) Y/N	1mL	1mL		
		500mL	# Y/N	(1:1) Y/N	1mL	1mL		
		500mL	# Y/N	(1:1) Y/N	1mL	1mL	SP 1/22/13	SP 1/22/13
Analyst/Date WW 1/17/13				SP 1/22/13	SP 1/22/13	SP 1/22/13		Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	O (2037-3)	450µg/mL	100µL	11/19/13	AR	WW
Spike	11 (2028-3)	15000µg/mL	100µL	10/16/13	AR	WW
~~QLS Spike~~	~~18 ( )~~	~~1000µg/mL~~	~~50µL~~			
Extraction Time:	15:45					

SPECIAL INSTRUCTIONS: 1. Add Surr/Spk. 2. Acidify with 1 pipet of 1:1 Sulfuric Acid. 3. Check pH. 4. Extract 2X with 30mL DCM.
5. DryVap or KD at 80°. 6. TurboVap if KD. 7. Acid/Silica Clean-ups? Y / N 8. Vial in DCM.

A. Archive Y/N

13-1100

VZ97 01264

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: VZ97 Client ID: Anchor QEA

Parameter: TPHD W/Acisi Client Project: Chevron Sub Area Interim Actio

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)=	
☐ Standing Water Decanted (Not shared)=	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors=	
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☒ Turbid/Color= S= Lt. Yellow, slighty turbid	WW 1/17/13
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☒ Emulsions (%)= S=50%, Re-poured + sulfated to break, transferred to New flask	WW 1/17/13
☐ Other (Details)=	
☒ Other Notes/Comments= (Note problems, concerns, corrective actions).	
(Centrifuge#1 used for all Centrifugations) Filtered extracts through 0.2 µm PTFE filters	SP 1/22/13

3056F

Revision 009
08/14/12

Incorporated
Analytical Chemists and Consultants

(8015C) NWTPHD-Soil/Sediment
Microwave (3546) (SOP # 3304S)

Preparation Test TPHD # 3 (DIESMI)
ARI Job No(s) VZ97

In-House (5ppm)
Batch set up by: JH

Bottle #	Extraction Requirements	Weight Extracted (wet wt)	Acid Clean (1:1) Y/N	Silica Gel Clean (1:1) Y/N	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	VZ97 MBS	10.00g	(1:1) Y/N	(1:1) Y/N	1mL	1mL		AR 01/18/13
	↓ SBS	10.00g	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
	~~SBS Dup.~~	~~10.00g~~	~~(1:1) Y/N~~	~~(1:1) Y/N~~	~~1mL~~	~~1mL~~	~~—~~	Analyst/Date
	~~QLS~~	~~10.00g~~	~~(1:1) Y/N~~	~~(1:1) Y/N~~	~~1mL~~	~~1mL~~	~~—~~	Microwave 1 2 ⑧
6	VZ97 A	10.39	(1:1) Y/N	(1:1) Y/N	1mL	1mL		Mars AR 01/18/13
6	B	10.79	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
6	C	10.75	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
6	D	10.65	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
6	E	10.87	(1:1) Y/N	(1:1) Y/N	1mL	1mL		Analyst/Date
6	F	10.48	(1:1) Y/N	(1:1) Y/N	1mL	1mL		TurboVap 1 ② 3 Pre-Acid/Silica Clean
6	G	10.40	(1:1) Y/N	(1:1) Y/N	1mL	1mL		ww 1/22/13
6	H	10.79	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
6	I	10.16	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
6	J	10.22	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
6	JMS	10.58	(1:1) Y/N	(1:1) Y/N	1mL	1mL		Analyst/Date
6	~~JMSD~~	10.55	(1:1) Y/N	(1:1) Y/N	1mL	1mL		TurboVap 1 2 ③ Post Acid/Silica Clean
6	K	10.23	(1:1) Y/N	(1:1) Y/N	1mL	1mL		ww 1/22/13
6	L	10.58	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
6	M	10.67	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
6	↓ N	10.57	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
Analyst/Date	AR 01/18/13 →		ww 1/22/13	ww 1/22/13	ww 1/22/13	ww 1/22/13		Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	O (2037-3)	450µg/mL	100µL	11/19/13	AR	AC
Spike	11 (2028-3)	15000µg/mL	100µL	10/16/13	AR	AC
~~QLS Spike~~	~~18 ( )~~	~~1000µg/mL~~	~~50µL~~			
Extraction Time: 14:15				Balance ID: B139298002		

SPECIAL INSTRUCTIONS: 1. Weigh into 100mL beakers-dry with Sodium Sulfate. 2. Transfer to microwave vessel. 3. Add DCM to the vessel until the solvent is 1" above soil layer after homogenization. 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-Re-homogenize while hot then let cool 15 min. in cold water bath. Re-homogenize while cool. 7. Collect into turbo tube with sm. funnel containing glasswool and 1" sodium sulfate. 8. Add (2) 10mL DCM rinses to vessel and transfer to turbo tube. 9. TurboVap. 10. Acid/Silica Clean-up? Y/N. 11. TurboVap (if Silica Clean). 12. Vial in DCM.

A. Need Total Solids Y/N B. ~~Archive~~/Freeze Y/N

13-1091

VZ97 : 91266

Incorporated
Analytical Chemists and
Consultants

Organic Extractions Worksheet

(8015C) NWTPHD-(Soil)/Sediment
Microwave (3546) (SOP # 3304S)

Preparation Test TPHD # 3 (DIESMI)
ARI Job No(s) VZ97

In-House (5ppm)
Batch set up by: SH

Bottle #	Extraction Requirements	Weight Extracted (wet wt)	Acid Clean (1:1) (Y)/N	Silica Gel Clean (1:1) (Y)/N	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	~~MBS~~	~~10.00g~~	~~(1:1) Y/N~~	~~(1:1) Y/N~~	~~1mL~~	~~1mL~~		AR 01/18/13
	~~SBS~~	~~10.00g~~	~~(1:1) Y/N~~	~~(1:1) Y/N~~	~~1mL~~	~~1mL~~		
	~~SBS Dup~~	~~10.00g~~	~~(1:1) Y/N~~	~~(1:1) Y/N~~	~~1mL~~	~~1mL~~		Analyst/Date
	~~QLS~~	~~10.00g~~	~~(1:1) Y/N~~	~~(1:1) Y/N~~	~~1mL~~	~~1mL~~		Microwave 1 2 (3)
6	VZ97 O	10.55	(1:1) (Y)/N	(1:1) (Y)/N	1mL	1mL		
6	P	10.30	(1:1) (Y)/N	(1:1) (Y)/N	1mL	1mL		MWS 01/18/13
6	Q	10.50	(1:1) (Y)/N	(1:1) (Y)/N	1mL	1mL		
6	R	10.42	(1:1) (Y)/N	(1:1) (Y)/N	1mL	1mL		
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		Analyst/Date
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		TurboVap 1 (2) 3 Pre-Acid/Silica Clean
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL	MW 1/22/13	MW 1/22/13
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		Analyst/Date
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		TurboVap 1 2 (3) Post Acid/Silica Clean
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		MW 1/22/13
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
		10.	(1:1) Y/N	(1:1) Y/N	1mL	1mL		
		~~10.~~	~~(1:1) Y/N~~	~~(1:1) Y/N~~	~~1mL~~	~~1mL~~		
Analyst/Date		AR 01/18/13 →	MW 1/22/13	MW 1/22/13	MW 1/22/13	MW 1/22/13		Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	O (2037-3)	450µg/mL	100µL	11/19/13	AR	AC
~~Spike~~	~~11 ( )~~	~~15000µg/mL~~	~~100µL~~			
~~QLS Spike~~	~~18 ( )~~	~~1000µg/mL~~	~~50µL~~			
Extraction Time: 14:15				Balance ID: B139255002		

SPECIAL INSTRUCTIONS: 1. Weigh into 100mL beakers-dry with Sodium Sulfate. 2. Transfer to microwave vessel. 3. Add DCM to the vessel until the solvent is 1" above soil layer after homogenization. 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-Re-homogenize while hot then let cool 15 min. in cold water bath. Re-homogenize while cool. 7. Collect into turbo tube with sm. funnel containing glasswool and 1" sodium sulfate. 8. Add (2) 10mL DCM rinses to vessel and transfer to turbo tube. 9. TurboVap. 10. Acid/Silica Clean-up?= Y / N. 11. TurboVap (if Silica Clean). 12. Vial in DCM.

A. Need Total Solids Y / N B. Archive/Freeze Y / N

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: VZ97 Client ID: Anchor QEA

Parameter: TPHD W/Acid Si Client Project: Chevron Sub Area Interim Action

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)= VZ97 Samples A, B, C, D, E, F, G,	AR 01/18/13
☐ Standing Water Decanted (Not shared)= H, I, J, K, L, M, N, O, P, R	AR 01/18/13
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)?	
☐ Organics (Leaves/sticks/grass)=	
☐ Oily, obvious fuel/sulfur odors= VZ97 Samples A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, R	AR 01/18/13
☐ Other (Details)=	
Aqueous:	
☐ No Anomalies	
☐ Turbid/Color=	
☐ Particulates(%)=(Note: >5%=Notify Supervisor/Lead)	
☐ Emulsions (%)=	
☐ Other (Details)=	
☐ Other Notes/Comments= (Note problems, concerns, corrective actions).	
(Centrifuge#1 used for all Centrifugations)	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Extract Dilution Bench Sheet

ARI Job#: _____ Client ID: _____
Analyst: [illegible] Date: 01/23/13

ARI Sample ID	Primary Dilution				Secondary Dilution			
	Extract Volume (uL)	Diluent/Diluent ID	Diluent Volume (uL)	Dilution Factor	Primary Dilution (uL)	Diluent/Diluent ID	Diluent Volume (uL)	Final Dilution Factor
VZ97D	100	DCM	400	5				
VZ97G	100	DCM	400	5				

VZ97, 5527.19

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Extract Dilution Bench Sheet

ARI Job#: _____ Client ID: _____
Analyst: _____ Date: _____

ARI Sample ID	Primary Dilution				Secondary Dilution			
	Extract Volume (uL)	Diluent/Diluent ID	Diluent Volume (uL)	Dilution Factor	Primary Dilution (uL)	Diluent/Diluent ID	Diluent Volume (uL)	Final Dilution Factor
VE97K	100	DCM	~~900~~ 400 (01/24/13)	5X				
N	20		980	50X				
O	20		980	50X				
P	100		900	10X				
Q	100		900	10X				

TPHD Raw Data
Initial Calibration

ARI Job ID: VZ97

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Analyst Notes / Corrective Action Log

ARI Project ID: _____ Client ID: _____

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest) **427S**(Dir Inj) **428S**(EPH) **432S**(EDB) **Other**

Parameter(s): Diesel AK102 motor o-terph. n-triac.

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8 FID-9 ECD-1 ECD-5 ECD-6 ECD-7

Dates: Curve: 01/05/13 Analysis Start: 01/05/13

Endrin/DDT Breakdown <15%? YES / NO / NA		Method Blank In Control?	YES / NO / NA
ICal Meets RF & %RSD Criteria?	YES / NO	LCS/LCSD Recovery In Control?	YES / NO
CCal Meets RF & %RSD Criteria?	YES / NO	Surrogate Recovery In Control?	YES / NO
Manual Integrations for ICal?	YES / NO	Manual Integrations for Samples?	YES / NO / NA
Internal Standard Meets Criteria?	YES / NO / NA	Special Analysis Criteria Met?	YES / NO / NA

Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary): skimmed surr

Additional Details on Reverse: Yes / No

Analyst: _____ **Date:** 01/07/13

Reviewer: _____ **Date:** 01/07/13

Report Date : 06-Jan-2013 22:05

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid4a.i/20130105.b/ftphfid4a.m
Batch File: /chem3/fid4a.i/20130105.b
Inst ID: fid4a.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0105a020	0105a021	0105a022	0105a023	0105a024	0105a025
INJ.DATE:	05-JAN-2013	05-JAN-2013	05-JAN-2013	05-JAN-2013	05-JAN-2013	05-JAN-2013
INJ.TIME:	16:41	17:01	17:21	17:41	18:01	18:21

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Toluene	1.138	1.140	1.144	1.147	1.153	1.142	1.138	1.038-1.238	1.144	0.005
40 Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
39 Creosote	+++++	+++++	+++++	+++++	+++++	+++++	0.546	0.496-0.596	+++++	+++++
36 JetA	+++++	+++++	+++++	+++++	+++++	+++++	0.787	0.737-0.837	+++++	+++++
37 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.718	0.668-0.768	+++++	+++++
38 Hydraulic Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.148	1.098-1.198	+++++	+++++
2 C8	1.299	1.384	1.395	1.397	1.404	1.376	1.299	1.199-1.399	1.376	0.039
3 C10	3.134	3.133	3.131	3.130	3.131	3.136	3.134	3.084-3.184	3.133	0.002
4 C12	4.058	4.057	4.052	4.050	4.050	4.053	4.058	4.008-4.108	4.053	0.004
5 C14	4.749	4.739	4.735	4.733	4.733	4.737	4.749	4.699-4.799	4.738	0.006
6 C16	5.326	5.322	5.320	5.320	5.322	5.328	5.326	5.276-5.376	5.323	0.003
7 C18	5.885	5.880	5.880	5.882	5.884	5.893	5.885	5.835-5.935	5.884	0.005
$ 8 o-terph	6.016	6.015	6.020	6.029	6.039	6.062	6.016	5.966-6.066	6.030	0.018
9 C20	6.433	6.449	6.444	6.444	6.445	6.452	6.433	6.383-6.483	6.444	0.006
10 C22	7.003	7.016	6.999	6.993	6.992	6.995	7.003	6.953-7.053	7.000	0.009
11 C24	7.518	7.517	7.506	7.525	7.516	7.514	7.518	7.468-7.568	7.516	0.006
12 C25	7.777	7.763	7.760	7.755	7.773	7.764	7.777	7.727-7.827	7.765	0.008

Reviewer 1 ______ Date: 11/07/13
Reviewer 2 ______ Date: 1/7/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid4a.i/20130105.b/ftphfid4a.m
Batch File: /chem3/fid4a.i/20130105.b
Inst ID: fid4a.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
13 C26	8.024	8.027	8.013	8.017	8.019	8.013	8.024	7.974-8.074	8.019	0.006
14 C28	8.458	8.462	8.469	8.466	8.472	8.464	8.458	8.408-8.508	8.465	0.005
$ 15 Triacon Surr	8.889	8.904	8.902	8.890	8.908	8.894	8.889	8.839-8.939	8.898	0.008
16 C32	9.297	9.299	9.303	9.299	9.293	9.291	9.297	9.247-9.347	9.297	0.004
17 C34	9.666	9.656	9.676	9.669	9.669	9.668	9.666	9.616-9.716	9.667	0.007
18 Filter Peak	11.417	11.406	11.409	11.415	11.413	11.408	11.417	11.317-11.517	11.411	0.004
19 C36	10.032	10.039	10.039	10.043	10.031	10.051	10.032	9.982-10.082	10.039	0.007
20 C38	10.405	10.412	10.396	10.400	10.407	10.414	10.405	10.355-10.455	10.406	0.007
21 C40	10.761	10.744	10.750	10.741	10.747	10.746	10.761	10.711-10.811	10.748	0.007
31 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
32 OR Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.687	0.637-0.737	+++++	+++++
42 Cal(IT) Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.500	0.450-0.550	+++++	+++++
33 AK Dies 102	+++++	+++++	+++++	+++++	+++++	+++++	0.660	0.610-0.710	+++++	+++++
30 NW MOil	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 CRUDE	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
35 AK MOil 103	+++++	+++++	+++++	+++++	+++++	+++++	0.612	0.562-0.662	+++++	+++++
41 ABUNKERC	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid4a.i/20130105.b/ftphfid4a.m
Batch File: /chem3/fid4a.i/20130105.b
Inst ID: fid4a.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0105a027	0105a028	0105a029	0105a030	0105a031	0105a032
INJ.DATE:	05-JAN-2013	05-JAN-2013	05-JAN-2013	05-JAN-2013	05-JAN-2013	05-JAN-2013
INJ.TIME:	19:00	19:20	19:40	20:00	20:20	20:40

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1	Toluene	1.170	1.169	1.141	1.139	1.139	1.148	1.170	1.070-1.270	1.151	0.015
40	Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
39	Creosote	+++++	+++++	+++++	+++++	+++++	+++++	0.546	0.496-0.596	+++++	+++++
36	JetA	+++++	+++++	+++++	+++++	+++++	+++++	0.787	0.737-0.837	+++++	+++++
37	Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.718	0.668-0.768	+++++	+++++
38	Hydraulic Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.148	1.098-1.198	+++++	+++++
2	C8	1.402	1.410	1.419	1.397	1.428	1.451	1.402	1.302-1.502	1.418	0.020
3	C10	3.128	3.129	3.129	3.132	3.132	3.134	3.128	3.078-3.178	3.131	0.002
4	C12	4.062	4.058	4.053	4.046	4.054	4.060	4.062	4.012-4.112	4.056	0.006
5	C14	4.736	4.726	4.752	4.752	4.752	4.748	4.736	4.686-4.786	4.745	0.011
6	C16	5.332	5.320	5.338	5.333	5.332	5.325	5.332	5.282-5.382	5.330	0.007
7	C18	5.878	5.871	5.884	5.887	5.886	5.886	5.878	5.828-5.928	5.882	0.006
$ 8	o-terph	6.032	6.025	6.022	6.022	6.017	6.017	6.032	5.982-6.082	6.023	0.006
9	C20	6.430	6.454	6.445	6.453	6.446	6.445	6.430	6.380-6.480	6.446	0.009
10	C22	7.005	6.999	6.997	6.986	6.995	6.997	7.005	6.955-7.055	6.997	0.006
11	C24	7.516	7.518	7.514	7.507	7.518	7.522	7.516	7.466-7.566	7.516	0.005
12	C25	7.761	7.769	7.768	7.764	7.772	7.764	7.761	7.711-7.811	7.766	0.004

Reviewer 1 _____ Date: 01/07/13
Reviewer 2 _____ Date: 01/07/13

UZ27 0127S

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid4a.i/20130105.b/ftphfid4a.m
Batch File: /chem3/fid4a.i/20130105.b
Inst ID: fid4a.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	13 C26	8.014	8.024	8.016	8.024	8.015	8.020	8.014	7.964-8.064	8.019	0.005
	14 C28	8.464	8.470	8.470	8.474	8.459	8.470	8.464	8.414-8.514	8.468	0.006
$	15 Triacon Surr	8.880	8.883	8.886	8.901	8.925	8.946	8.880	8.830-8.930	8.904	0.027
	16 C32	9.288	9.292	9.298	9.278	9.289	9.281	9.288	9.238-9.338	9.288	0.007
	17 C34	9.672	9.671	9.662	9.657	9.669	9.670	9.672	9.622-9.722	9.667	0.006
	18 Filter Peak	11.414	11.416	11.411	11.423	11.418	11.406	11.414	11.314-11.514	11.415	0.006
	19 C36	10.036	10.039	10.038	10.038	10.034	10.033	10.036	9.986-10.086	10.036	0.003
	20 C38	10.400	10.397	10.399	10.404	10.396	10.406	10.400	10.350-10.450	10.400	0.004
	21 C40	10.755	10.749	10.752	10.748	10.761	10.738	10.755	10.705-10.805	10.751	0.008
	31 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
	32 OR Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.687	0.637-0.737	+++++	+++++
	42 Cal(IT) Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.500	0.450-0.550	+++++	+++++
	33 AK Dies 102	+++++	+++++	+++++	+++++	+++++	+++++	0.660	0.610-0.710	+++++	+++++
	30 NW MOil	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
	34 CRUDE	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
	35 AK MOil 103	+++++	+++++	+++++	+++++	+++++	+++++	0.612	0.562-0.662	+++++	+++++
	41 ABUNKERC	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++

52719 - 45271

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-2012 16:47
End Cal Date : 05-JAN-2013 20:40
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem3/fid4a.i/20130105.b/ftphfid4a.m
Cal Date : 06-Jan-2013 22:04 jrains
Curve Type : Average

Compound	0.000e+00 Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	RRF	% RSD
	0.000e+00 Level 7	Level 8	Level 9	Level 10	Level 11	Level 12		
	0.000e+00 Level 13							
$ 8 o-terph	+++++	12713	12144	12109	12921	12751		
	13461	+++++	+++++	+++++	+++++	+++++		
	+++++						12683	4.002
$ 15 Triacon Surr	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	9375	9943	9918	11207	11601		
	12000						10674	9.999

6a
DIESEL INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: 20130105

Instrument: FID4A.I Project:

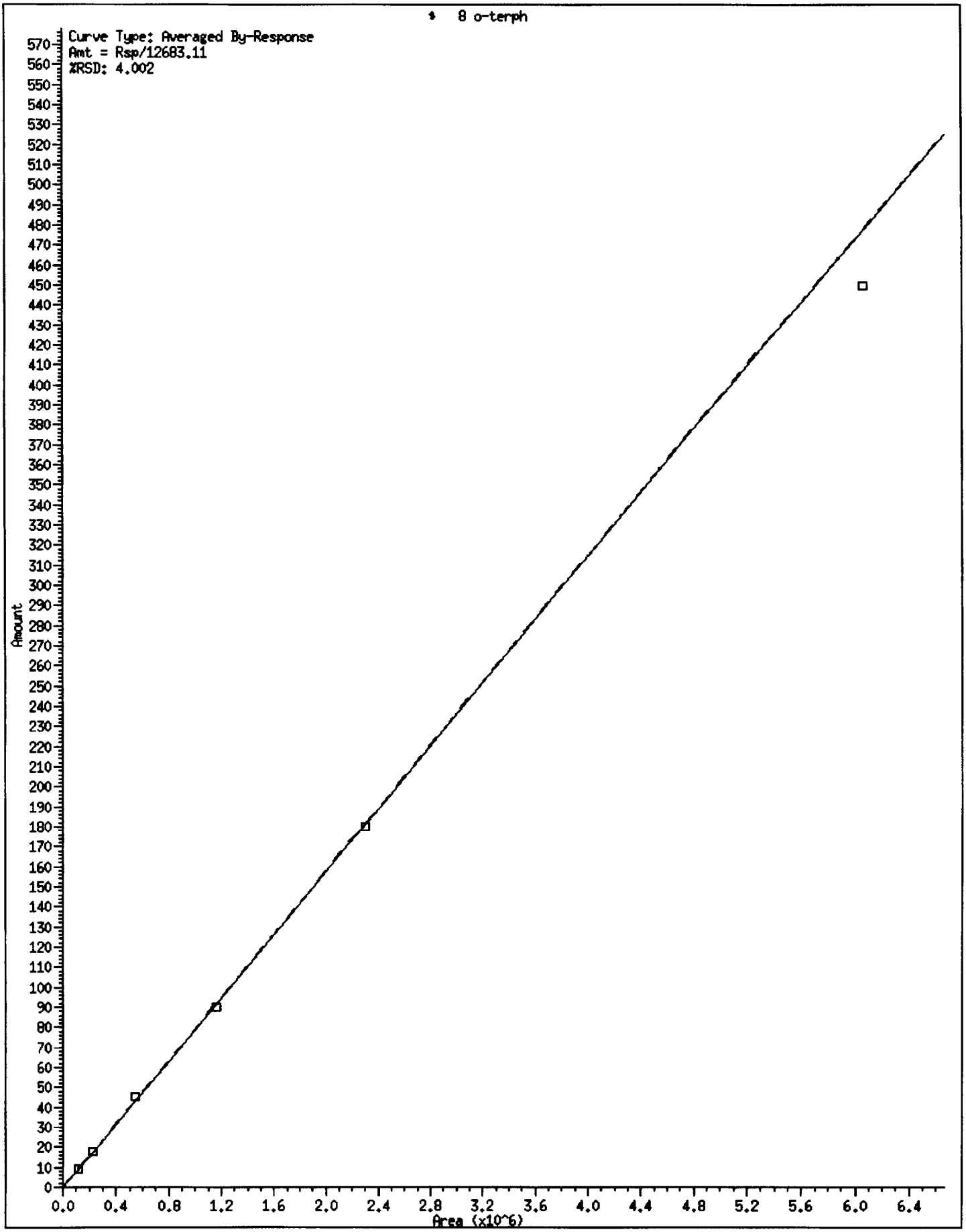
Calibration Date: 05-JAN-2013 SDG No.: 20130105

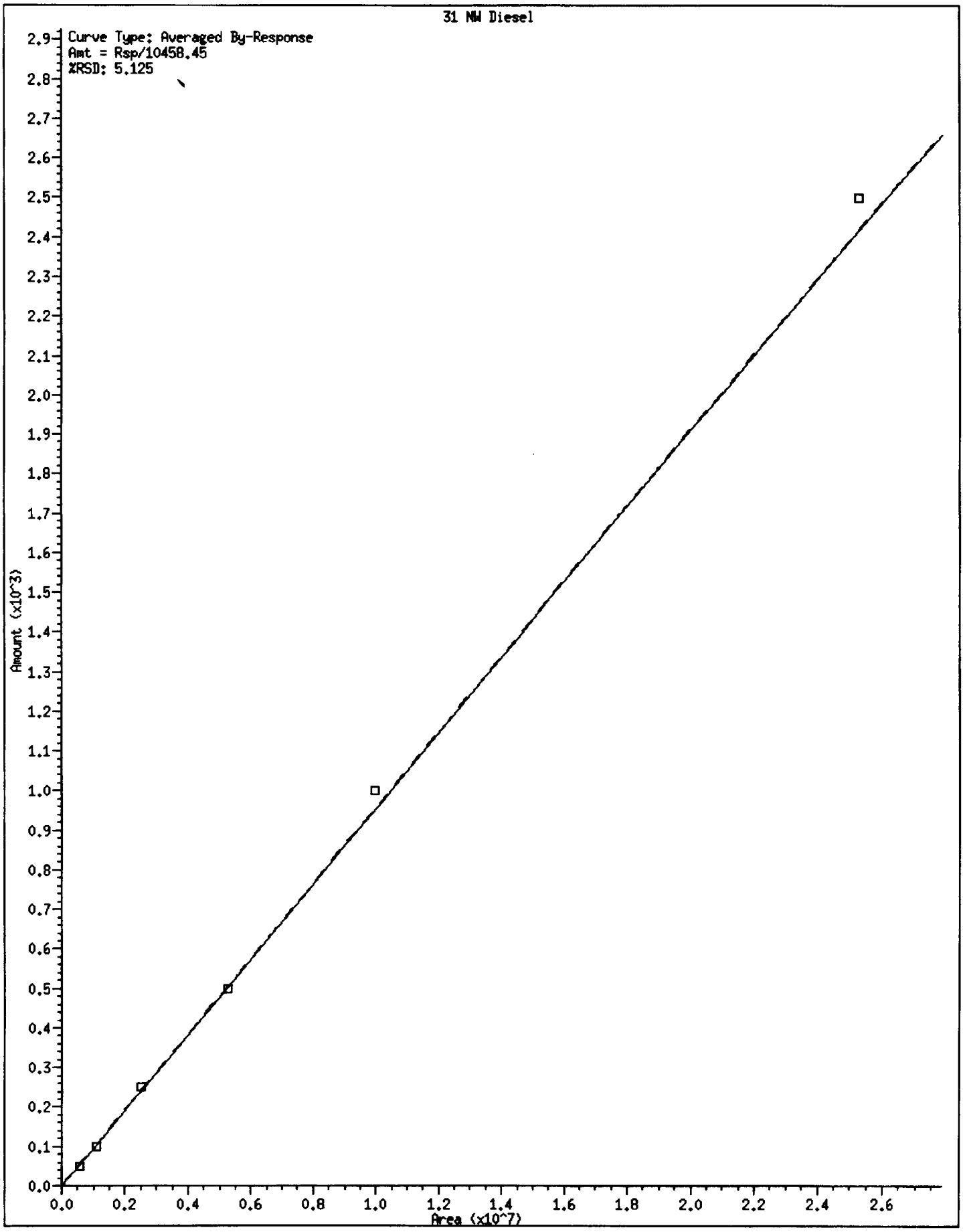
Diesel Range	RF1 50	RF2 100	RF3 250	RF4 500	RF5 1000	RF6 2500	Ave RF	%RSD
WA Diesel	11335	10789	10056	10522	9933	10117	10458	5.1
AK Diesel	13067	12501	11657	12220	11622	11749	12136	4.7
OR Diesel	13241	12592	11722	12282	11679	11804	12220	5.0
Cal Diesel	13016	12449	11633	12203	11602	11716	12103	4.7
o-Terph	12713	12144	12109	12921	12751	13461	12683	4.0

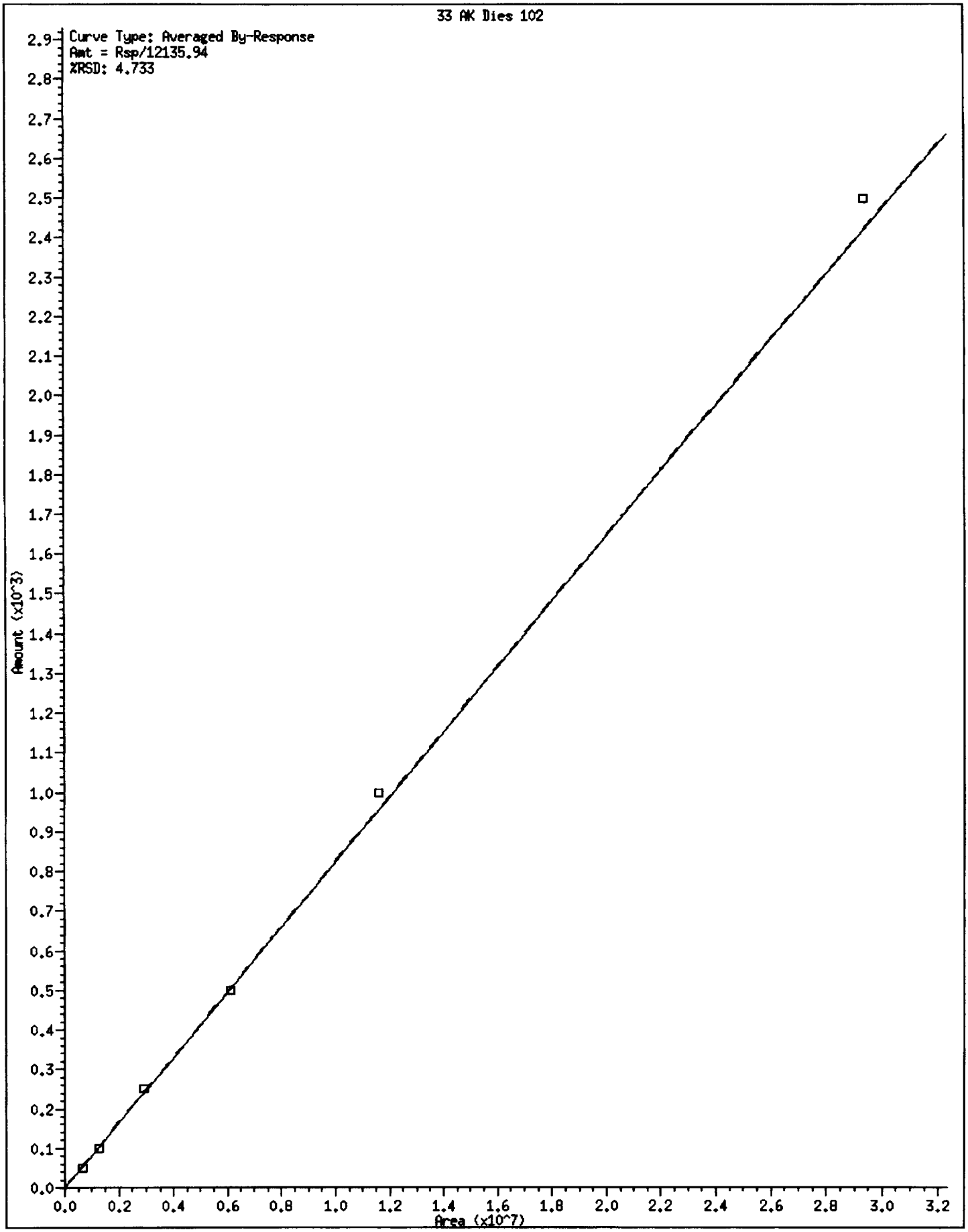
<- Indicates %RSD outside limits
Surrogate areas are not included in Diesel RF calculation.

Quant Ranges : WA Diesel C12-C24 (4.052-7.519)
AK Diesel C10-C25 (3.127-7.768)
OR Diesel C10-C28 (3.127-8.466)
Cal Diesel C10-C24 (3.127-7.519)

Calibration Files	Analysis Time
0105a020.d	05-JAN-2013 16:41
0105a021.d	05-JAN-2013 17:01
0105a022.d	05-JAN-2013 17:21
0105a023.d	05-JAN-2013 17:41
0105a024.d	05-JAN-2013 18:01
0105a025.d	05-JAN-2013 18:21


8 o-terph
Curve Type: Averaged By-Response
Amt = Rsp/12683.11
%RSD: 4.002
Amount
Area (x10^6)
0.0
0.4
0.8
1.2
1.6
2.0
2.4
2.8
3.2
3.6
4.0
4.4
4.8
5.2
5.6
6.0
6.4


31 NW Diesel
Curve Type: Averaged By-Response
Amt = Rsp/10458.45
%RSD: 5.125
Amount (x10^3)
Area (x10^7)
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
0.1
0.3
0.5
0.7
0.9
1.1
1.3
1.5
1.7
1.9
2.1
2.3
2.5
2.7
2.8
2.9


33 AK Dies 102
Curve Type: Averaged By-Response
Amt = Rsp/12135.94
%RSD: 4.733
Amount (x10^3)
Area (x10^7)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3
2.4
2.5
2.6
2.7
2.8
2.9
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2

6a
NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: 20130105

Instrument: FID4A.I Project:

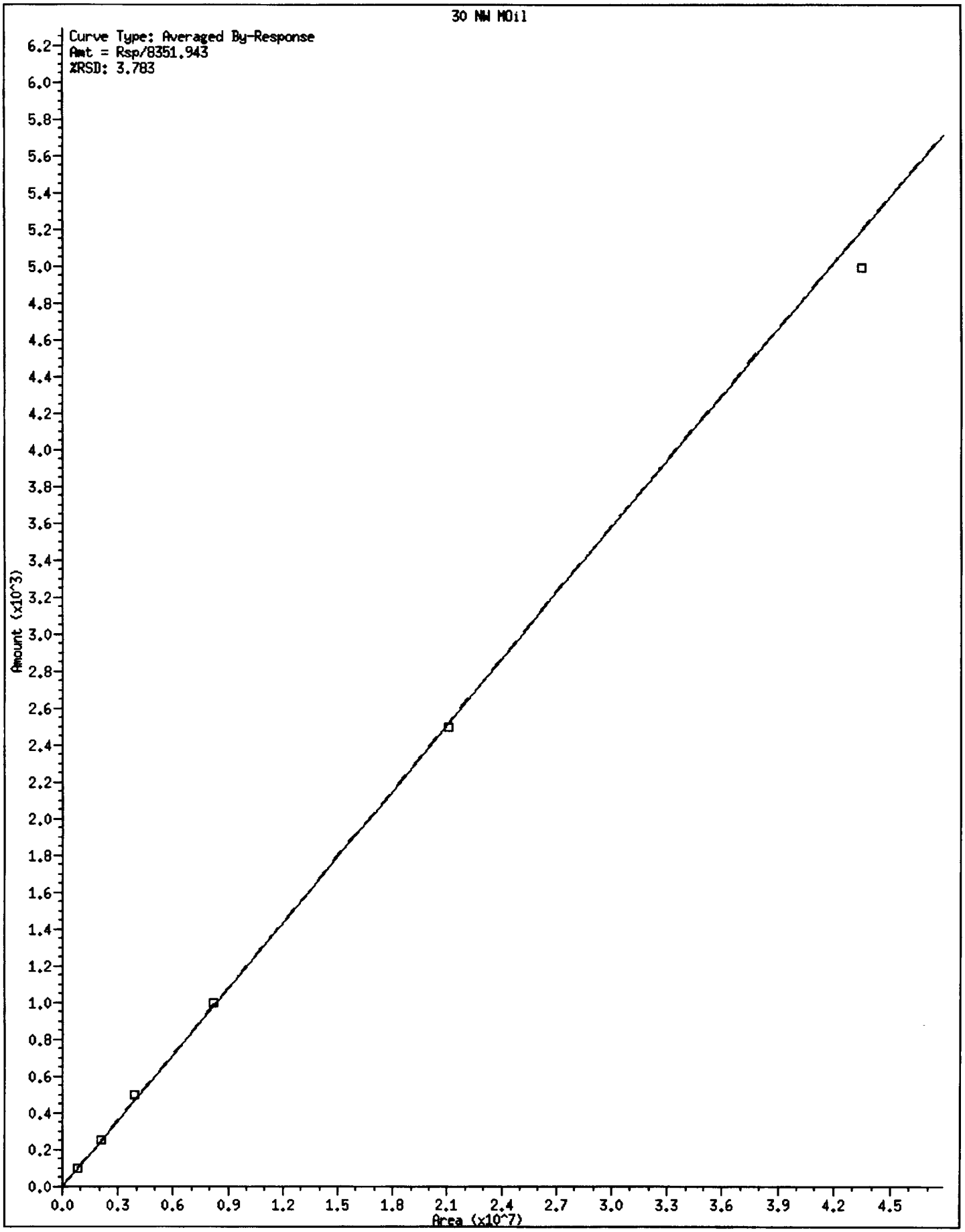
Calibration Date: 05-JAN-2013 SDG No.: 20130105

Product Range	RF1 100	RF2 250	RF3 500	RF4 1000	RF5 2500	RF6 5000	Ave RF	%RSD
WA M.Oil C24-C38	8641	8346	7827	8197	8415	8686	8352	3.8
Triac Surr	9375	9943	9918	11207	11601	12000	10674	10.0

<- Indicates %RSD outside limits
Surrogate areas are not included in Motor Oil RF calculation.

Calibration Files	Analysis Time
0105a027.d	05-JAN-2013 19:00
0105a028.d	05-JAN-2013 19:20
0105a029.d	05-JAN-2013 19:40
0105a030.d	05-JAN-2013 20:00
0105a031.d	05-JAN-2013 20:20
0105a032.d	05-JAN-2013 20:40

VZ97:01282


30 NW MOil
Curve Type: Averaged By-Response
Amt = Rsp/8351.943
%RSD: 3.783
Amount (x10^3)
Area (x10^7)
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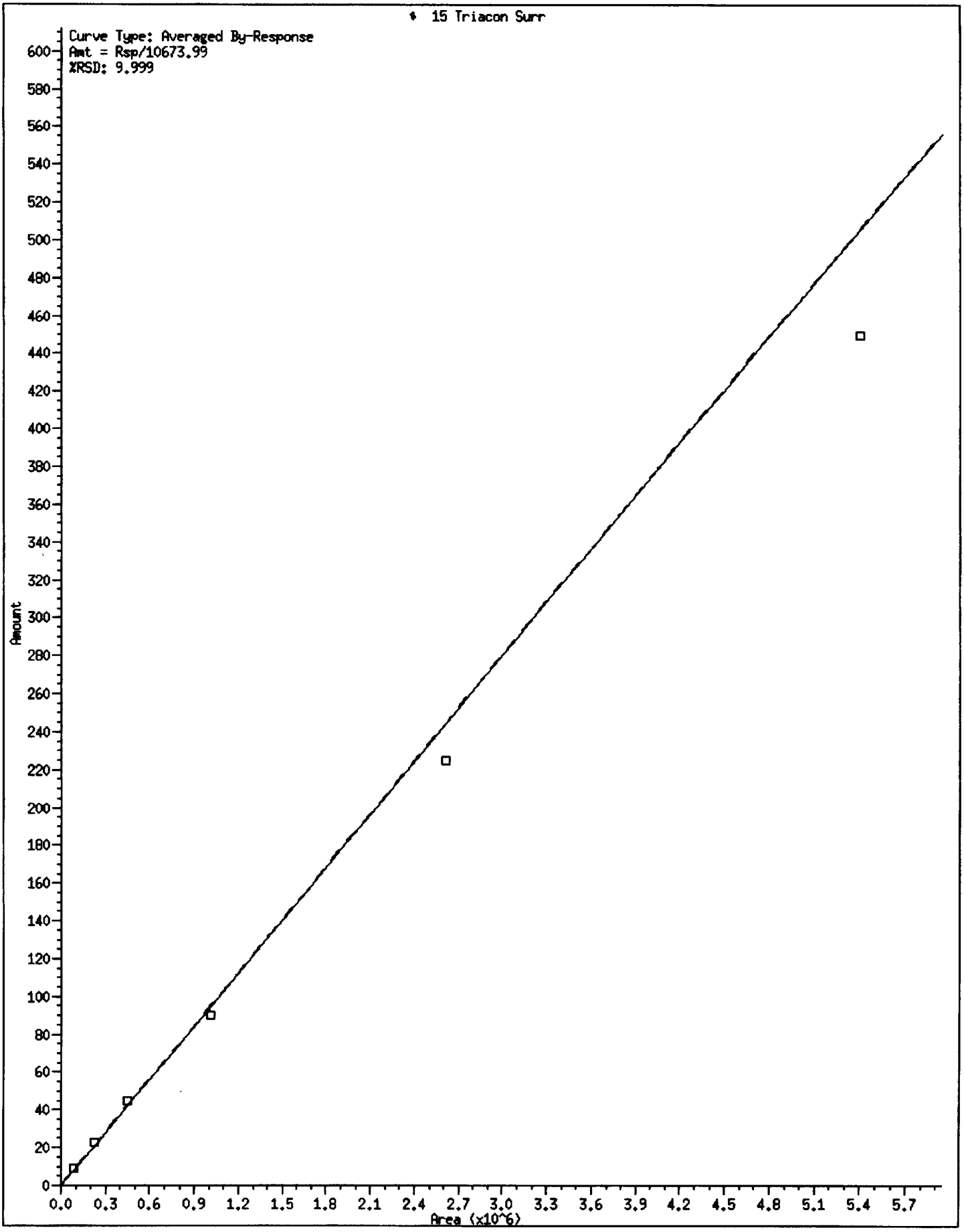
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2
2.4
2.6
2.8
3.0
3.2
3.4
3.6
3.8
4.0
4.2
4.4
4.6
4.8
5.0
5.2
5.4
5.6
5.8
6.0
6.2
0.0
0.3
0.6
0.9
1.2
1.5
1.8
2.1
2.4
2.7
3.0
3.3
3.6
3.9
4.2
4.5

VZ97:01283


15 Triacon Surr
Curve Type: Averaged By-Response
Amt = Rsp/10673.99
%RSD: 9.999
Amount
Area (x10^6)
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
380
400
420
440
460
480
500
520
540
560
580
600
0.0
0.3
0.6
0.9
1.2
1.5
1.8
2.1
2.4
2.7
3.0
3.3
3.6
3.9
4.2
4.5
4.8
5.1
5.4
5.7

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid4a.i/20130105.b

ARI Job No.: RINS   Method: ftphfid4a.m   Instrument: fid4a.i   Date: 05-JAN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0945	0105a001.d	RINSE1		1	NO MANUAL INTEGRATION
1005	0105a002.d	RINSE2		1	NO MANUAL INTEGRATION
1025	0105a003.d	RT		1	NO MANUAL INTEGRATION
1045	0105a004.d	IB		1	NO MANUAL INTEGRATION
1106	0105a005.d	DIESEL#1		1	o-terph,
1126	0105a006.d	MOIL#1		1	Triacon Surr,
1146	0105a007.d	VY23MBS1	VY23MBS1	1	NO MANUAL INTEGRATION
1207	0105a008.d	VY23LCSS1	VY23LCSS1	1	NO MANUAL INTEGRATION
1227	0105a009.d	VY23A	L16-OVEREX	1	NO MANUAL INTEGRATION
1255	0105a010.d	RINSE1		1	NO MANUAL INTEGRATION
1315	0105a011.d	RINSE2		1	NO MANUAL INTEGRATION
1335	0105a012.d	RT		1	NO MANUAL INTEGRATION
1355	0105a013.d	IB		1	NO MANUAL INTEGRATION
1415	0105a014.d	DIESEL#1		1	NO MANUAL INTEGRATION
1435	0105a015.d	MOIL#1		1	NO MANUAL INTEGRATION
1455	0105a016.d	VY23MBS1	VY23MBS1	1	NO MANUAL INTEGRATION
1542	0105a017.d	RINSE1		1	NO MANUAL INTEGRATION
1602	0105a018.d	RT		1	NO MANUAL INTEGRATION
1621	0105a019.d	IB		1	NO MANUAL INTEGRATION
1641	0105a020.d	DIES 50		1	o-terph,

1701 0105a021.d DIES 100 1 o-terph,

5827 : 6127

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid4a.i/20130105.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1721	0105a022.d	DIES250		1	o-terph,
1741	0105a023.d	DIES500		1	o-terph,
1801	0105a024.d	DIES1000		1	o-terph,
1821	0105a025.d	DIES2500		1	o-terph,
1840	0105a026.d	DIES250-ICV		1	o-terph,
1900	0105a027.d	MOIL 100		1	Triacon Surr,
1920	0105a028.d	MOIL 250		1	Triacon Surr,
1940	0105a029.d	MOIL 500		1	Triacon Surr,
2000	0105a030.d	MOIL 1000		1	Triacon Surr,
2020	0105a031.d	MOIL 2500		1	Triacon Surr,
2040	0105a032.d	MOIL 5000		1	Triacon Surr,
2101	0105a033.d	M OIL500-ICV		1	Triacon Surr,
2121	0105a034.d	DIESEL #1		1	o-terph,
2141	0105a035.d	M OIL#1		1	Triacon Surr,
2201	0105a036.d	VY23MBS1	VY23MBS1	1	NO MANUAL INTEGRATION
2221	0105a037.d	VY23LCSS1	VY23LCSS1	1	o-terph,
2241	0105a038.d	VY23A	L16-OVEREX	1	Triacon Surr,
2301	0105a039.d	VY23B	L16-OVEREX	1	Triacon Surr,
2321	0105a040.d	VY23LCSDS1	VY23LCSDS1	1	o-terph,
2341	0105a041.d	DIESEL#2		1	o-terph,
0001	0105a042.d	M OIL#2		1	Triacon Surr,

2787 2787

GC LOG SUMMARY FOR DATABATCH - /chem3/fid4a.i/20130105.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	05-JAN-2013 09:45	0105a001.d	1	RINSE1	
2	05-JAN-2013 10:05	0105a002.d	1	RINSE2	
3	05-JAN-2013 10:25	0105a003.d	1	RT	
4	05-JAN-2013 10:45	0105a004.d	1	IB	
5	05-JAN-2013 11:06	0105a005.d	1	DIESEL#1	
6	05-JAN-2013 11:26	0105a006.d	1	MOIL#1	
7	05-JAN-2013 11:46	0105a007.d	1	VY23MBS1	VY23MBS1
8	05-JAN-2013 12:07	0105a008.d	1	VY23LCSS1	VY23LCSS1
9	05-JAN-2013 12:27	0105a009.d	1	VY23A	L16-OVEREX-1-130103
10	05-JAN-2013 12:55	0105a010.d	1	RINSE1	
11	05-JAN-2013 13:15	0105a011.d	1	RINSE2	
12	05-JAN-2013 13:35	0105a012.d	1	RT	
13	05-JAN-2013 13:55	0105a013.d	1	IB	
14	05-JAN-2013 14:15	0105a014.d	1	DIESEL#1	
15	05-JAN-2013 14:35	0105a015.d	1	MOIL#1	
16	05-JAN-2013 14:55	0105a016.d	1	VY23MBS1	VY23MBS1
17	05-JAN-2013 15:42	0105a017.d	1	RINSE1	
18	05-JAN-2013 16:02	0105a018.d	1	RT	
19	05-JAN-2013 16:21	0105a019.d	1	IB	
20	05-JAN-2013 16:41	0105a020.d	1	DIES 50	
21	05-JAN-2013 17:01	0105a021.d	1	DIES 100	
22	05-JAN-2013 17:21	0105a022.d	1	DIES250	
23	05-JAN-2013 17:41	0105a023.d	1	DIES500	
24	05-JAN-2013 18:01	0105a024.d	1	DIES1000	
25	05-JAN-2013 18:21	0105a025.d	1	DIES2500	
26	05-JAN-2013 18:40	0105a026.d	1	DIES250-ICV	
27	05-JAN-2013 19:00	0105a027.d	1	MOIL 100	
28	05-JAN-2013 19:20	0105a028.d	1	MOIL 250	
29	05-JAN-2013 19:40	0105a029.d	1	MOIL 500	
30	05-JAN-2013 20:00	0105a030.d	1	MOIL 1000	
31	05-JAN-2013 20:20	0105a031.d	1	MOIL 2500	
32	05-JAN-2013 20:40	0105a032.d	1	MOIL 5000	
33	05-JAN-2013 21:01	0105a033.d	1	M OIL500-ICV	
34	05-JAN-2013 21:21	0105a034.d	1	DIESEL #1	
35	05-JAN-2013 21:41	0105a035.d	1	M OIL#1	
36	05-JAN-2013 22:01	0105a036.d	1	VY23MBS1	VY23MBS1
37	05-JAN-2013 22:21	0105a037.d	1	VY23LCSS1	VY23LCSS1
38	05-JAN-2013 22:41	0105a038.d	1	VY23A	L16-OVEREX-1-130103
39	05-JAN-2013 23:01	0105a039.d	1	VY23B	L16-OVEREX-2-130103
40	05-JAN-2013 23:21	0105a040.d	1	VY23LCSDS1	VY23LCSDS1
41	05-JAN-2013 23:41	0105a041.d	1	DIESEL#2	
42	06-JAN-2013 00:01	0105a042.d	1	M OIL#2	

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130105.b/0105a018.d
Method: /chem3/fid4a.i/20130105.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/06/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:04-DEC-2012 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: RT
Client ID:
Injection: 05-JAN-2013 16:02
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.143	0.000	261681	314620	WATPHG	(Tol-C12)	1189429	88.30
C8	1.397	0.000	202503	309797	WATPHD	(C12-C24)	1732844	165.69
C10	3.127	0.000	371311	257475	WATPHM	(C24-C38)	2414343	289.08
C12	4.052	0.000	314365	245340	AK102	(C10-C25)	2273436	187.33
C14	4.737	0.000	380178	270602	AK103	(C25-C36)	2110256	229.32
C16	5.324	0.000	418246	263619				
C18	5.883	0.000	410744	266638				
C20	6.449	0.000	353199	261640	JET-A	(C10-C18)	1387882	256.23
C22	6.997	0.000	367809	264233				
C24	7.519	0.000	355123	261161	MSPIRIT	(Tol-C12)	1189429	89.80
C25	7.768	0.000	331407	246672				
C26	8.020	0.000	775512	729004				
C28	8.466	0.000	322258	243077				
C32	9.286	0.000	318914	243981				
C34	9.668	0.000	298337	254637				
Filter Peak	11.414	0.000	1427	2408	CREOSOT	(C12-C22)	1444748	718.02 M
C36	10.037	0.000	291673	258720				
C38	10.400	0.000	290422	273171				
C40	10.753	0.000	254502	274415				
o-terph	6.021	0.000	793974	603035				
Triacon Surr	8.895	0.000	711017	621491	NAS DIES	(C10-C24)	2261696	143.49

Range Times: NW Diesel(4.052 - 7.519) AK102(3.13 - 7.77) Jet A(3.13 - 5.88)
NW M.Oil(7.52 - 10.40) AK103(7.77 - 10.04) OR Diesel(3.13 - 8.47)

Surrogate	Area	Amount	%Rec
o-Terphenyl	603035	47.5	105.7
Triacontane	621491	58.2	129.4

JA 01/07/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	12683.1	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	13470.3	04-DEC-2012
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	15762.0	04-DEC-2012
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.i/20130105.b/0105a018.d

Date : 05-JAN-2013 16:02

Client ID:

Sample Info: PT

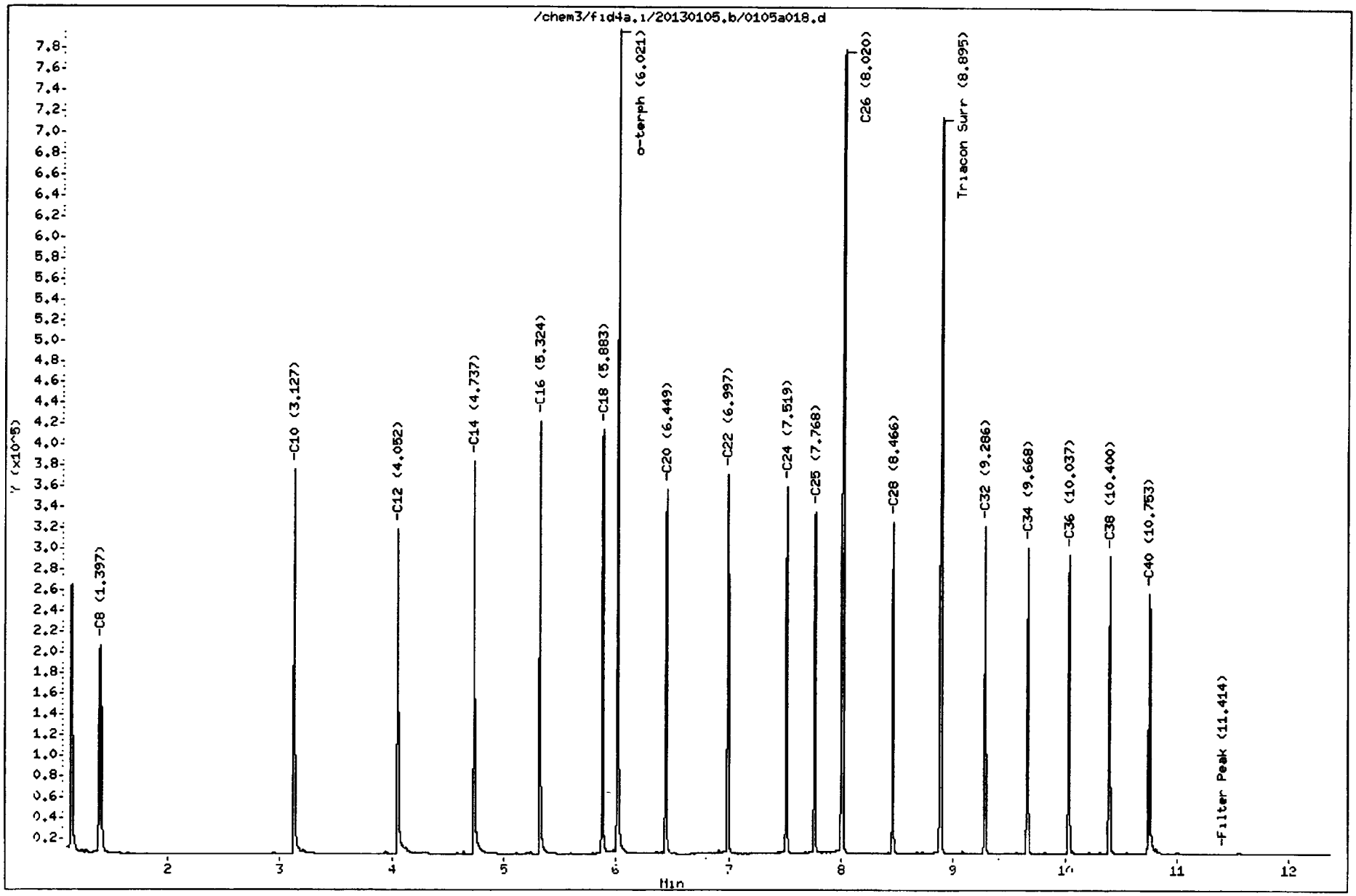
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS

Column diameter: 0.25

UZ97 : 011299



Analytical Resources Inc.
TPH Quantitation Report

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Method: /chem3/fid4a.i/20130105.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/06/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:04-DEC-2012 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: IB
Client ID:
Injection: 05-JAN-2013 16:21
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.140	-0.002	6014	6252	WATPHG	(Tol-C12)	54469	4.04
C8	1.384	-0.012	655	850	WATPHD	(C12-C24)	62087	5.94
C10	3.128	0.000	273	266	WATPHM	(C24-C38)	89877	10.76
C12	4.051	-0.001	309	424	AK102	(C10-C25)	81038	6.68
C14	4.720	-0.017	374	179	AK103	(C25-C36)	73038	7.94
C16	5.316	-0.008	349	800				
C18	5.883	0.000	223	372				
C20	6.443	-0.006	289	513	JET-A	(C10-C18)	49688	9.17
C22	7.002	0.006	227	75				
C24	7.512	-0.006	243	359	MSPIRIT	(Tol-C12)	54469	4.11
C25	7.766	-0.001	214	94				
C26	8.010	-0.010	240	297				
C28	8.462	-0.004	611	1302				
C32	9.294	0.008	1282	1576				
C34	9.671	0.003	544	721				
Filter Peak	11.400	-0.014	1441	2029	CREOSOT	(C12-C22)	55247	27.46 M
C36	10.051	0.014	1014	1980				
C38	10.386	-0.014	798	1381				
C40	10.747	-0.006	1377	2891				
o-terph	6.019	-0.002	794186	607693				
Triacon Surr	8.886	-0.009	519899	499601	NAS DIES	(C10-C24)	79697	5.06

Range Times: NW Diesel(4.052 - 7.519) AK102(3.13 - 7.77) Jet A(3.13 - 5.88)
NW M.Oil(7.52 - 10.40) AK103(7.77 - 10.04) OR Diesel(3.13 - 8.47)

Surrogate	Area	Amount	%Rec
o-Terphenyl	607693	47.9	106.5
Triacontane	499601	46.8	104.0

01/07/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	12683.1	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	13470.3	04-DEC-2012
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	15762.0	04-DEC-2012
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.1/20130105.b/0105a019.d

Date : 05-JAN-2013 16:21

Client ID:

Sample Info: IB

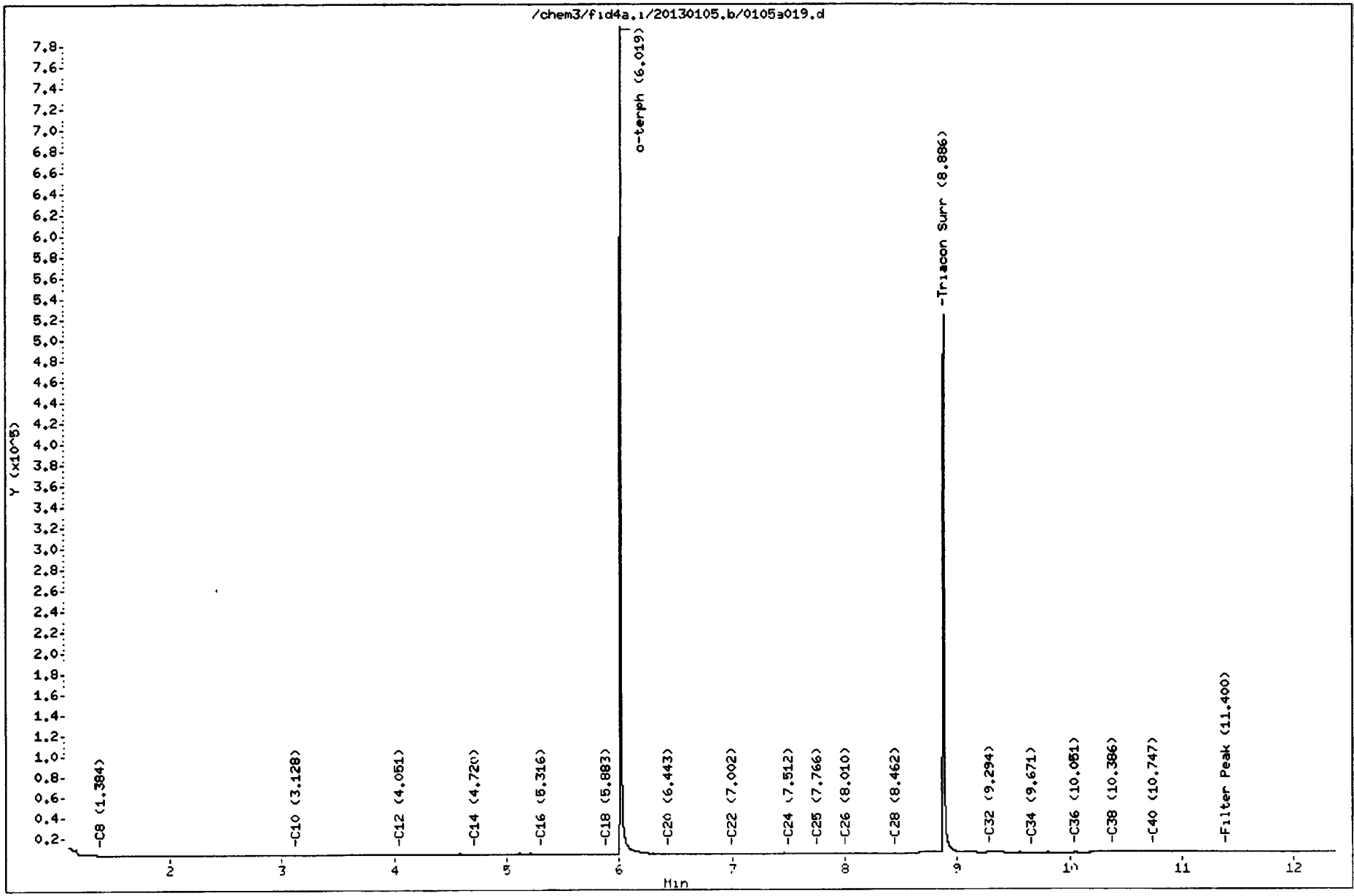
Column phase: RTX-1

Instrument: fid4a.1

Operator: JR/VTS

Column diameter: 0.25

U157 : 91222



Analytical Resources Inc.
TPH Quantitation Report

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Method: /chem3/fid4a.i/20130105.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/06/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:04-DEC-2012 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: DIES 50
Client ID:
Injection: 05-JAN-2013 16:41
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.138	-0.005	1597	4002	WATPHG	(Tol-C12)	153401	11.39
C8	1.299	-0.098	8502	20254	WATPHD	(C12-C24)	566729	54.19
C10	3.134	0.007	1275	1724	WATPHM	(C24-C38)	43641	5.23
C12	4.058	0.007	1977	2436	AK102	(C10-C25)	653334	53.83
C14	4.749	0.012	5122	9673	AK103	(C25-C36)	29887	3.25
C16	5.326	0.002	10031	15284				
C18	5.885	0.001	8038	11786				
C20	6.433	-0.015	2084	661	JET-A	(C10-C18)	483375	89.24
C22	7.003	0.006	1241	1899				
C24	7.518	0.000	520	295	MSPIRIT	(Tol-C12)	153401	11.58
C25	7.777	0.009	310	449				
C26	8.024	0.005	198	87				
C28	8.458	-0.008	136	163				
C32	9.297	0.012	501	754				
C34	9.666	-0.002	298	285				
Filter Peak	11.417	0.003	1187	705	CREOSOT	(C12-C22)	546346	271.53 M
C36	10.032	-0.005	387	251				
C38	10.405	0.005	581	1064				
C40	10.761	0.009	1064	3193				
o-terph	6.016	-0.005	129612	114414				
Triacon Surr	8.889	-0.006	148	139	NAS DIES	(C10-C24)	650796	41.29

Range Times: NW Diesel(4.052 - 7.519) AK102(3.13 - 7.77) Jet A(3.13 - 5.88)
NW M.Oil(7.52 - 10.40) AK103(7.77 - 10.04) OR Diesel(3.13 - 8.47)

Surrogate	Area	Amount	%Rec
o-Terphenyl	114414	9.0	20.0 M
Triacontane	139	0.0	0.0

01/07/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	12683.1	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	13470.3	04-DEC-2012
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	15762.0	04-DEC-2012
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.i/20130105.b/0105a020.d

Date : 05-JAN-2013 16:41

Client ID:

Sample Info: DIES 50

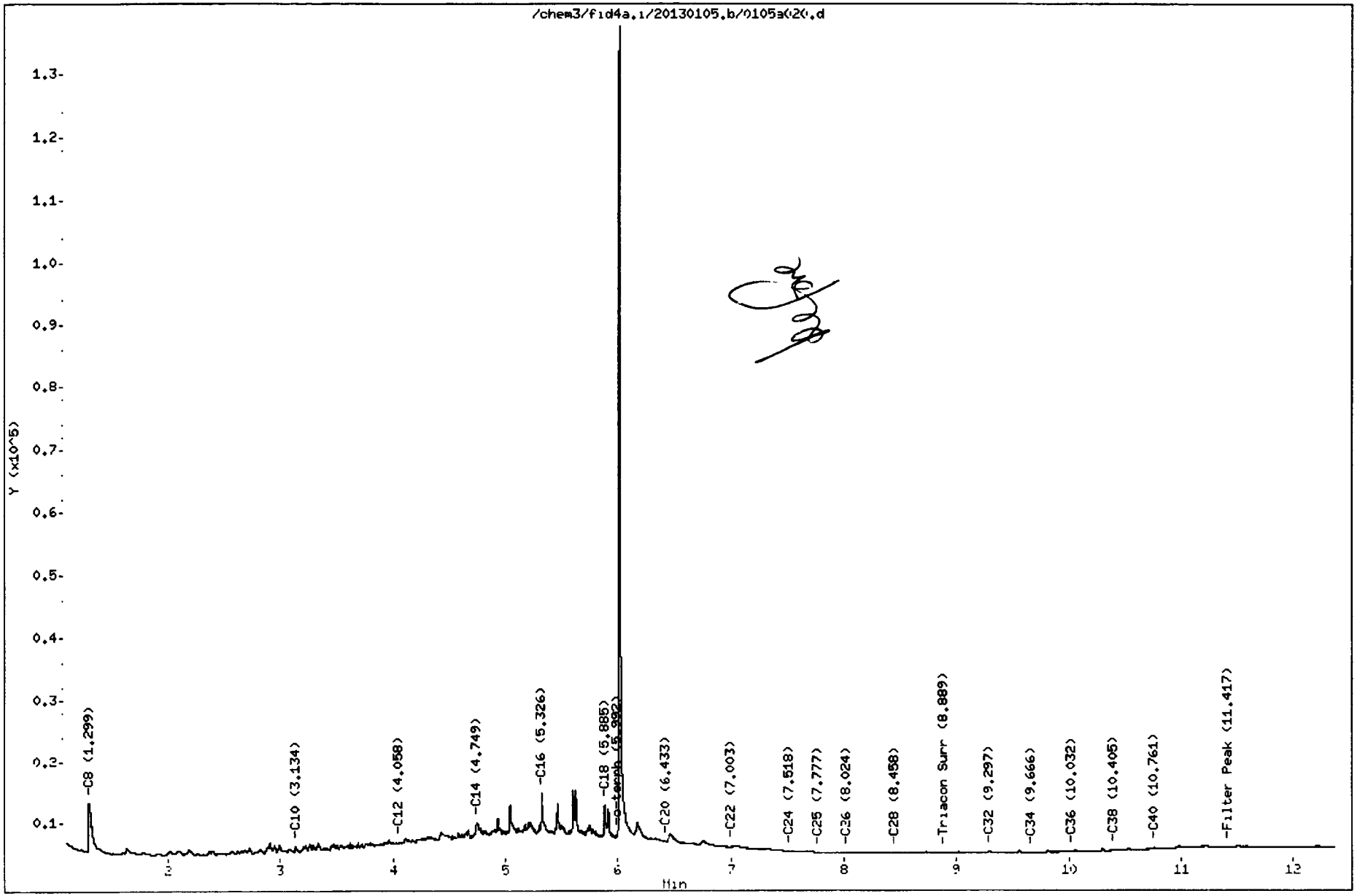
Column phase: RTX-1

Instrument: fid4a.i

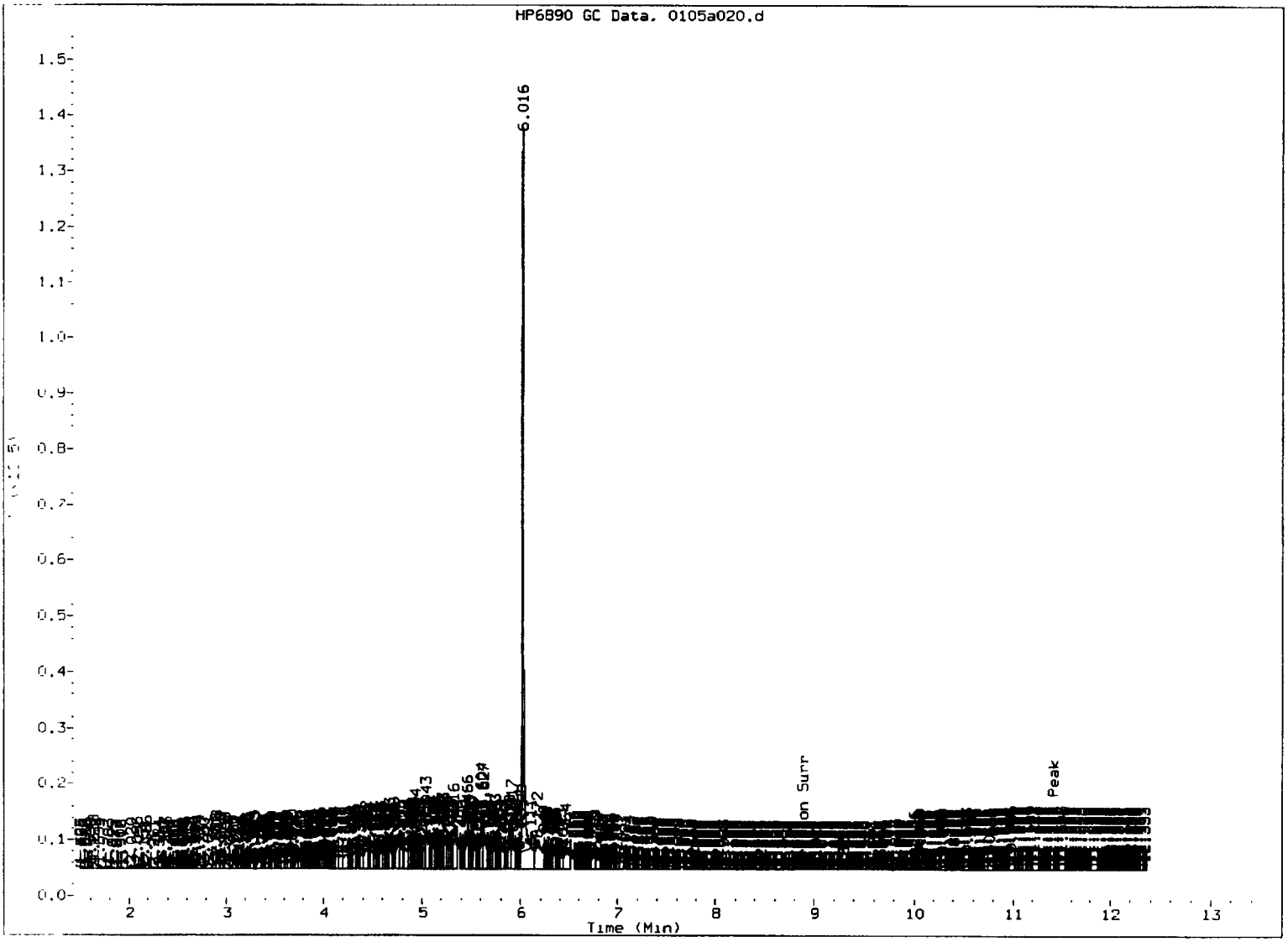
Operator: JR/WTS

Column diameter: 0.25

UZ97 : 01291



FID:4A-2C/RTX-1 DIES 50 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: _____ Date: 01/07/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130105.b/0105a021.d
Method: /chem3/fid4a.i/20130105.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/06/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:04-DEC-2012 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: DIES 100
Client ID:
Injection: 05-JAN-2013 17:01
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.140	-0.003	1721	4365	WATPHG	(Tol-C12)	291248	21.62
C8	1.384	-0.013	1576	2507	WATPHD	(C12-C24)	1078908	103.16
C10	3.133	0.006	3115	3778	WATPHM	(C24-C38)	36062	4.32
C12	4.057	0.005	5139	8778	AK102	(C10-C25)	1250127	103.01
C14	4.739	0.002	13104	21593	AK103	(C25-C36)	22627	2.46
C16	5.322	-0.002	26484	32229				
C18	5.880	-0.003	22596	25909				
C20	6.449	0.000	9560	22164	JET-A	(C10-C18)	927299	171.20
C22	7.016	0.019	3187	11509				
C24	7.517	-0.001	760	682	MSPIRIT	(Tol-C12)	291248	21.99
C25	7.763	-0.004	403	550				
C26	8.027	0.008	205	160				
C28	8.462	-0.005	76	42				
C32	9.299	0.013	674	834				
C34	9.656	-0.012	160	163				
Filter Peak	11.406	-0.008	1029	999	CREOSOT	(C12-C22)	1043738	518.72 M
C36	10.039	0.001	272	144				
C38	10.412	0.011	454	672				
C40	10.744	-0.009	664	560				
o-terph	6.015	-0.006	314322	218593				
Triacon Surr	8.904	0.009	62	27	NAS DIES	(C10-C24)	1244885	78.98

Range Times: NW Diesel(4.052 - 7.519) AK102(3.13 - 7.77) Jet A(3.13 - 5.88)
NW M.Oil(7.52 - 10.40) AK103(7.77 - 10.04) OR Diesel(3.13 - 8.47)

Surrogate	Area	Amount	%Rec
o-Terphenyl	218593	17.2	38.3 M
Triacontane	27	0.0	0.0

1/07/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	12683.1	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	13470.3	04-DEC-2012
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	15762.0	04-DEC-2012
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.1/20130105.b/0105a021.d

Date : 05-JAN-2013 17:01

Client ID:

Sample Info: DIES 100

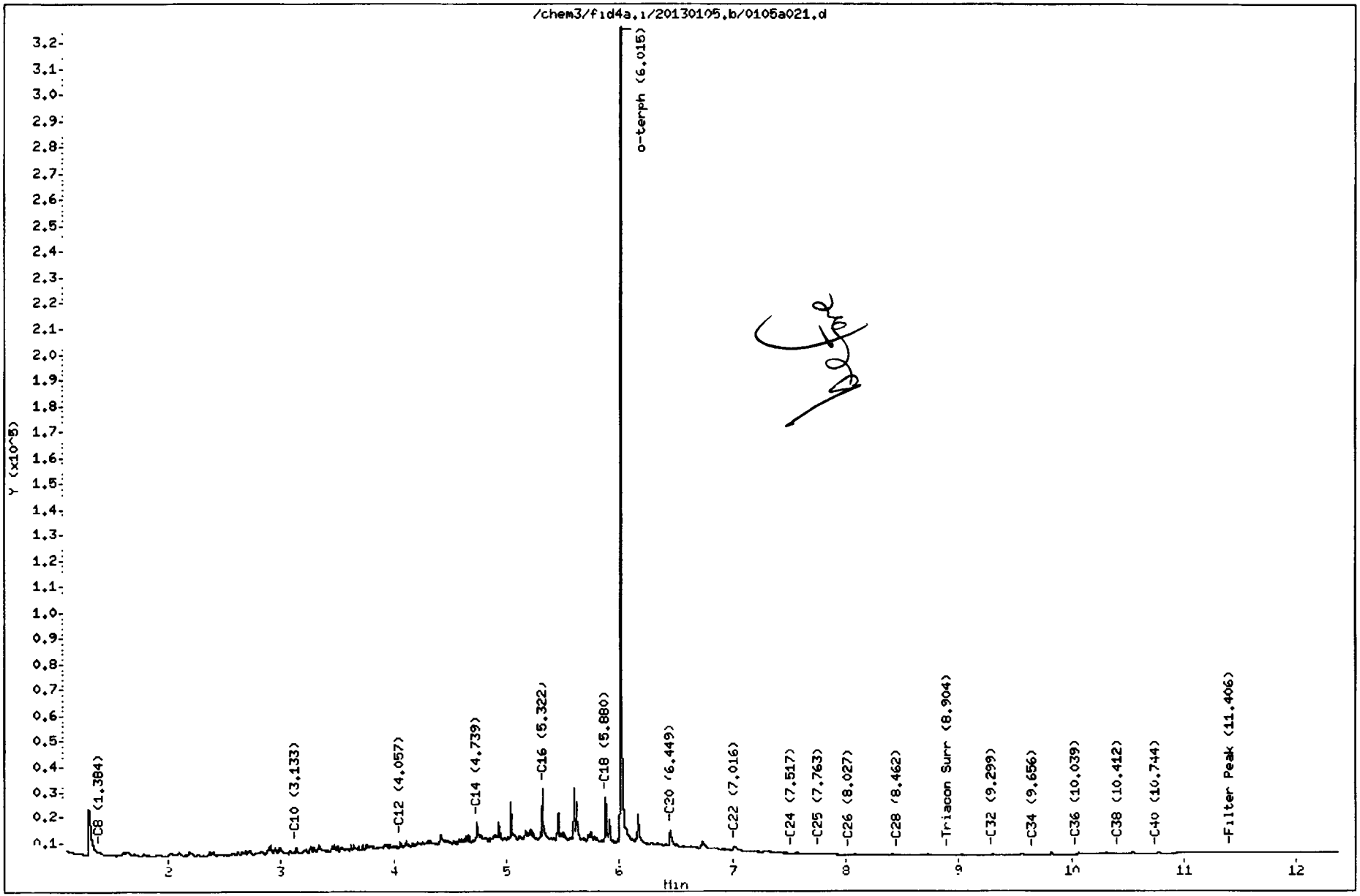
Column phase: RTX-1

Instrument: fid4a.1

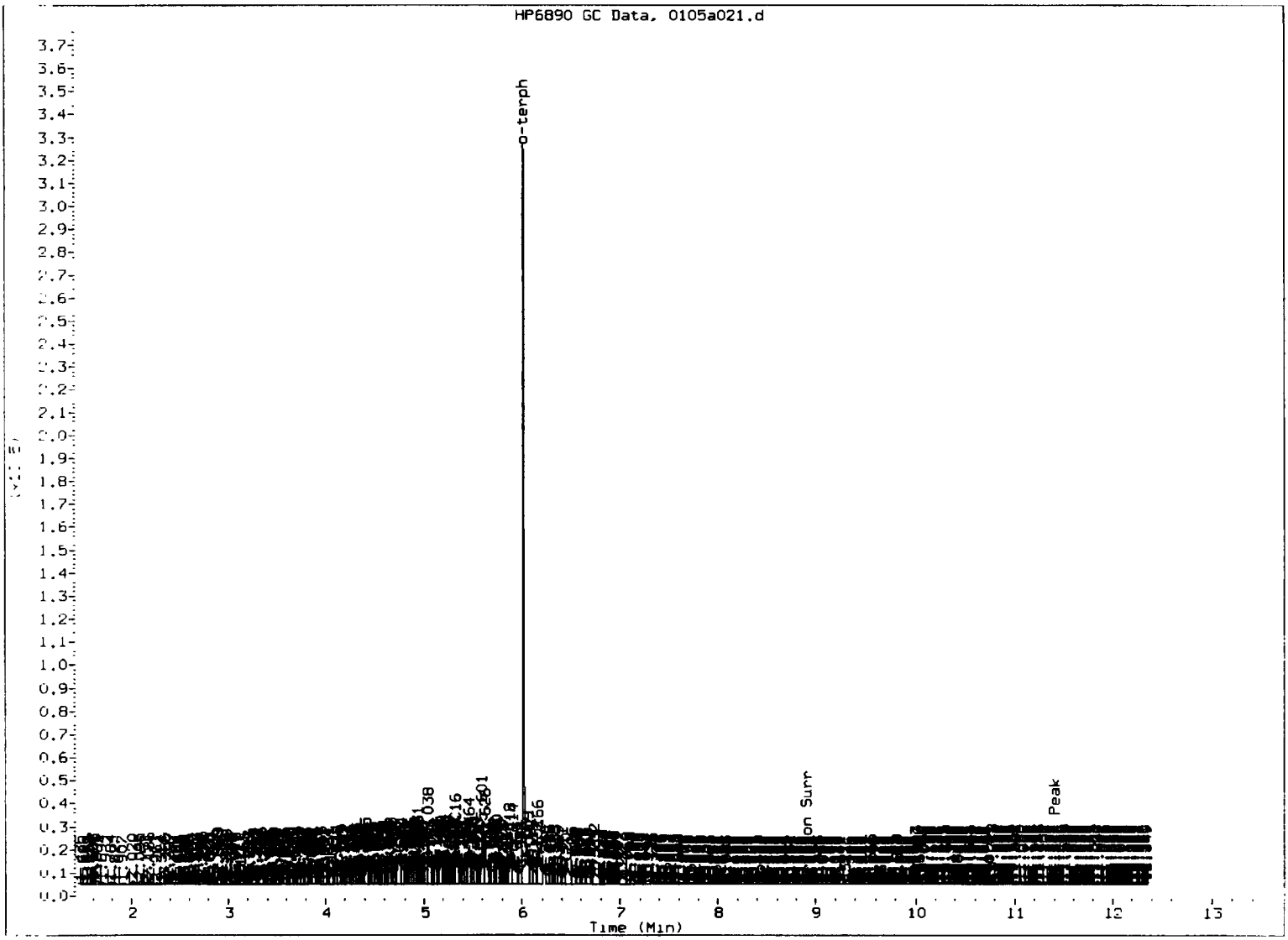
Operator: JP/VTS

Column diameter: 0.25

UZ97:91297



FID:4A-2C/RTX-1 DIES 100 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: _____ Date: 01/07/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130105.b/0105a022.d
Method: /chem3/fid4a.i/20130105.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/06/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:04-DEC-2012 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: DIES250
Client ID:
Injection: 05-JAN-2013 17:21

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.144	0.002	2294	5058	WATPHG	(Tol-C12)	716363	53.18
C8	1.395	-0.001	2654	5743	WATPHD	(C12-C24)	2513926	240.37
C10	3.131	0.004	10660	10954	WATPHM	(C24-C38)	36827	4.41
C12	4.052	0.000	19075	23309	AK102	(C10-C25)	2914241	240.13
C14	4.735	-0.002	42822	52487	AK103	(C25-C36)	24918	2.71
C16	5.320	-0.004	79484	62594				
C18	5.880	-0.004	65211	62347				
C20	6.444	-0.004	35295	52300	JET-A	(C10-C18)	2166081	399.90
C22	6.999	0.003	11124	31820				
C24	7.506	-0.012	1564	946	MSPIRIT	(Tol-C12)	716363	54.08
C25	7.760	-0.008	800	375				
C26	8.013	-0.006	385	420				
C28	8.469	0.003	89	92				
C32	9.303	0.017	594	614				
C34	9.676	0.008	103	107				
Filter Peak	11.409	-0.005	955	1057	CREOSOT	(C12-C22)	2431655	1208.50 M
C36	10.039	0.001	190	102				
C38	10.396	-0.004	330	193				
C40	10.750	-0.002	597	1201				
o-terph	6.020	0.000	800690	544893				
Triacon Surr	8.902	0.007	17	4	NAS DIES	(C10-C24)	2908198	184.51

Range Times: NW Diesel(4.052 - 7.519) AK102(3.13 - 7.77) Jet A(3.13 - 5.88)
NW M.Oil(7.52 - 10.40) AK103(7.77 - 10.04) OR Diesel(3.13 - 8.47)

Surrogate	Area	Amount	%Rec
o-Terphenyl	544893	43.0	95.5 M
Triacontane	4	0.0	0.0

M Indicates the peak was manually integrated

01/07/13

Analyte	RF	Curve Date
o-Terph Surr	12683.1	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	13470.3	04-DEC-2012
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	15762.0	04-DEC-2012
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.1/20130105.b/0105a022.d

Date : 05-JAN-2013 17:21

Client ID:

Sample Info: DIES250

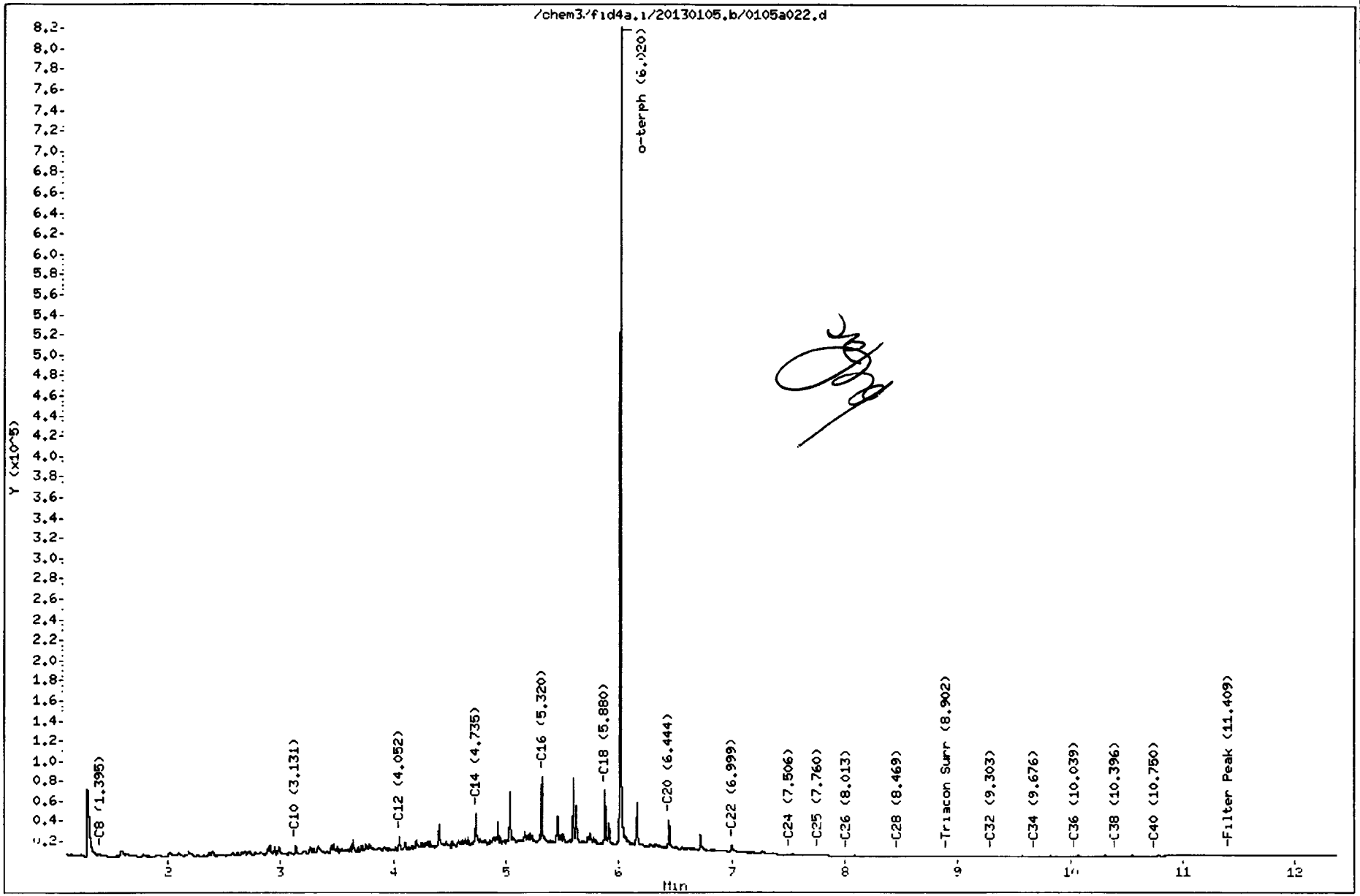
Column phase: RTX-1

Instrument: fid4a.1

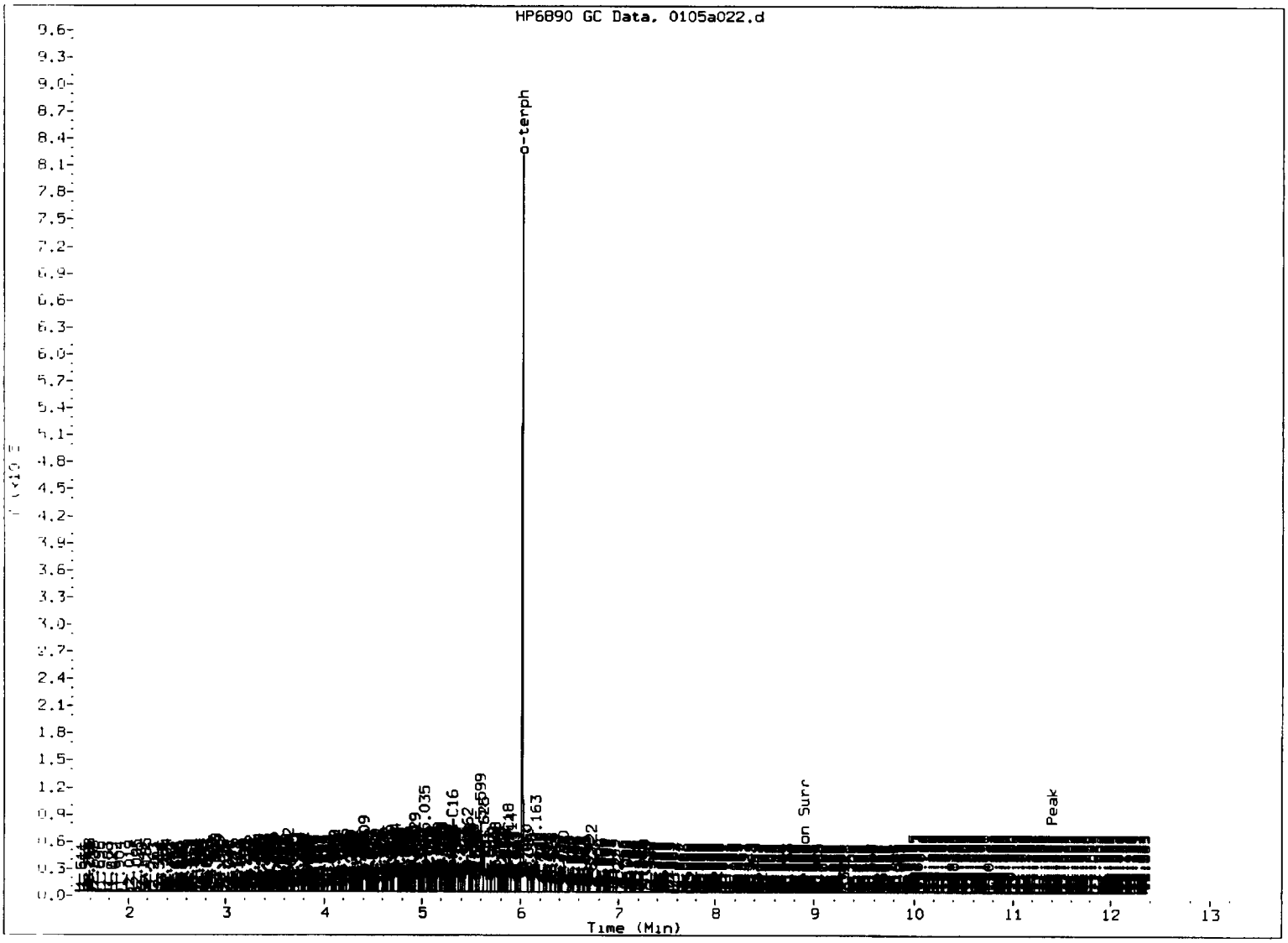
Operator: JR/VTS

Column diameter: 0.25

USEPA - 01396



FID:4A-2C/RTX-1 DIES250 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: _____ Date: 11/27/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130105.b/0105a023.d
Method: /chem3/fid4a.i/20130105.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/06/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:04-DEC-2012 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: DIES500
Client ID:
Injection: 05-JAN-2013 17:41
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.147	0.004	3886	6726	WATPHG	(Tol-C12)	1519539	112.81
C8	1.397	0.001	4681	9922	WATPHD	(C12-C24)	5261049	503.04
C10	3.130	0.003	28938	25469	WATPHM	(C24-C38)	53986	6.46
C12	4.050	-0.002	49374	46627	AK102	(C10-C25)	6109839	503.45
C14	4.733	-0.004	104971	86395	AK103	(C25-C36)	40292	4.38
C16	5.320	-0.003	172712	132692				
C18	5.882	-0.002	145033	129819				
C20	6.444	-0.005	86397	109920	JET-A	(C10-C18)	4549875	840.00
C22	6.993	-0.003	34018	58288				
C24	7.525	0.007	5439	22655	MSPIRIT	(Tol-C12)	1519539	114.72
C25	7.755	-0.012	1551	725				
C26	8.017	-0.002	753	355				
C28	8.466	0.000	163	186				
C32	9.299	0.014	790	673				
C34	9.669	0.002	71	87				
Filter Peak	11.415	0.001	894	264	CREOSOT	(C12-C22)	5083519	2526.44 M
C36	10.043	0.006	170	68				
C38	10.400	0.000	291	332				
C40	10.741	-0.011	500	157				
o-terph	6.029	0.008	1373659	1162893				
Triacon Surr	8.890	-0.005	36	11	NAS DIES	(C10-C24)	6101325	387.09

Range Times: NW Diesel(4.052 - 7.519) AK102(3.13 - 7.77) Jet A(3.13 - 5.88)
NW M.Oil(7.52 - 10.40) AK103(7.77 - 10.04) OR Diesel(3.13 - 8.47)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1162893	91.7	203.8 M
Triacontane	11	0.0	0.0

01/07/13

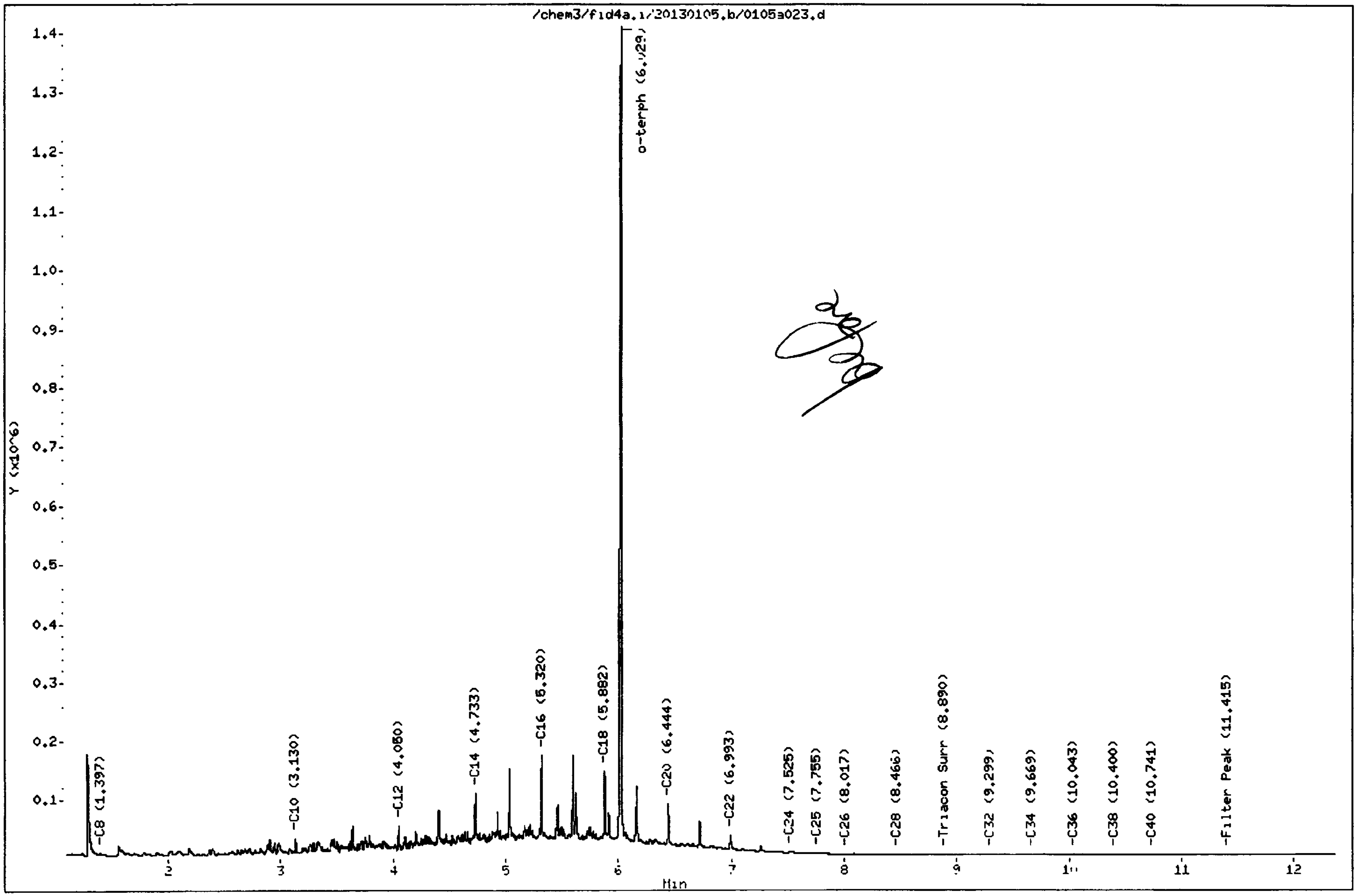
M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	12683.1	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	13470.3	04-DEC-2012
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	15762.0	04-DEC-2012
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.i/20130105.b/0105a023.d
Date : 05-JAN-2013 17:41
Client ID:
Sample Info: DIES5u)
Column phase: PTX-1

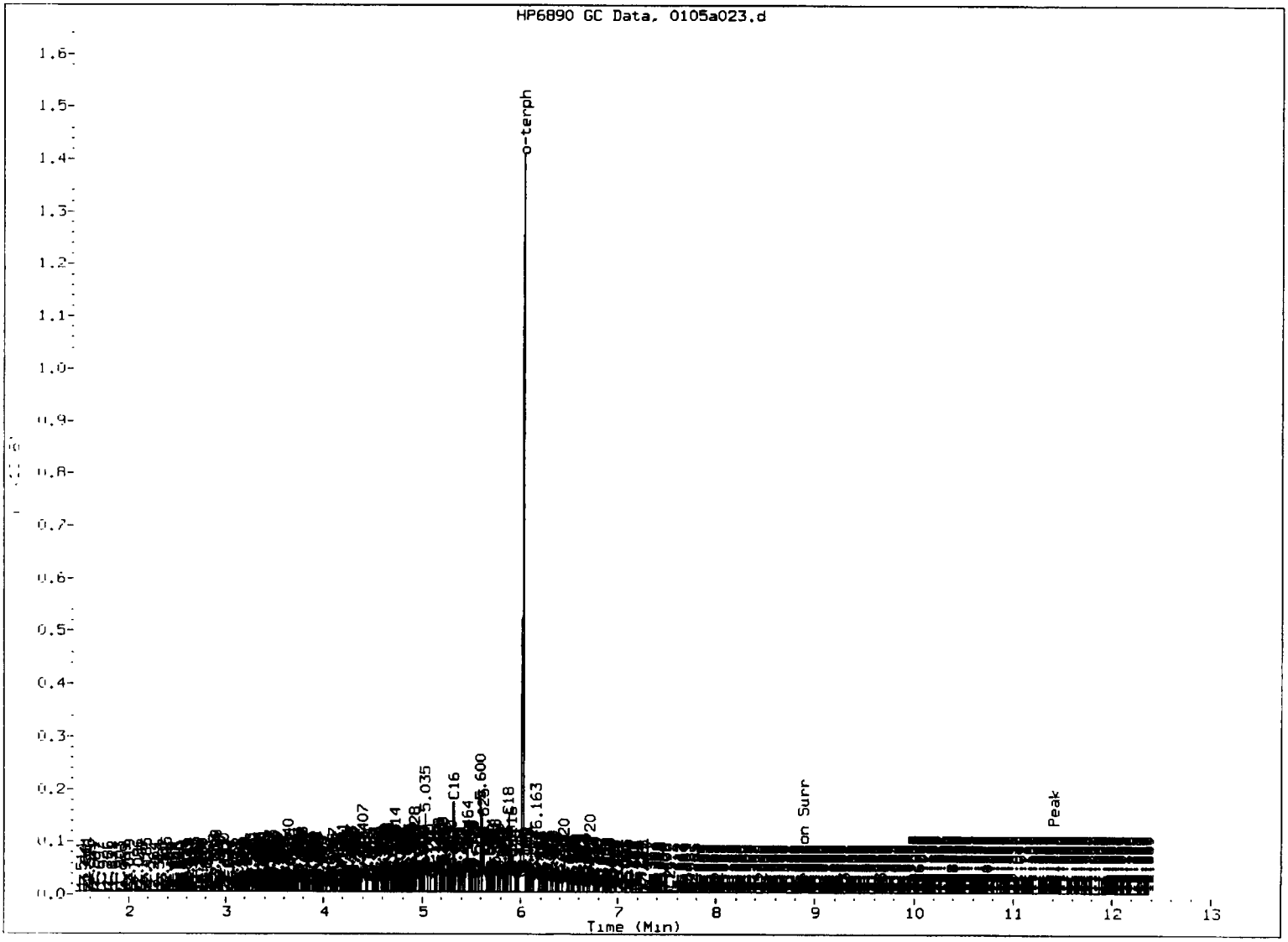
Page 1

Instrument: fid4a.i
Operator: JP/VTS
Column diameter: 0.25



VZ97 : 01303

FID:4A-2C/RTX-1 DIES500 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: _____ Date: 01/07/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130105.b/0105a024.d
Method: /chem3/fid4a.i/20130105.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/06/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:04-DEC-2012 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: DIES1000
Client ID:
Injection: 05-JAN-2013 18:01
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.153	0.010	5831	9178	WATPHG	(Tol-C12)	2889480	214.51
C8	1.404	0.007	7571	16164	WATPHD	(C12-C24)	9932515	949.71
C10	3.131	0.003	61251	51399	WATPHM	(C24-C38)	93922	11.25
C12	4.050	-0.002	93333	83389	AK102	(C10-C25)	11622471	957.69
C14	4.733	-0.004	214765	222247	AK103	(C25-C36)	68101	7.40
C16	5.322	-0.002	346638	306310				
C18	5.884	0.000	262806	263310				
C20	6.445	-0.004	180618	186001	JET-A	(C10-C18)	8667983	1600.29
C22	6.992	-0.005	80392	97520				
C24	7.516	-0.002	14665	37657	MSPIRIT	(Tol-C12)	2889480	218.15
C25	7.773	0.005	5067	14817				
C26	8.019	-0.001	1672	797				
C28	8.472	0.006	334	275				
C32	9.293	0.007	1034	868				
C34	9.669	0.001	57	73				
Filter Peak	11.413	-0.001	830	973	CREOSOT	(C12-C22)	9581894	4762.07 M
C36	10.031	-0.007	146	96				
C38	10.407	0.007	275	161				
C40	10.747	-0.006	1062	1991				
o-terph	6.039	0.018	2026764	2295151				
Triacon Surr	8.908	0.013	70	80	NAS DIES	(C10-C24)	11601947	736.07

Range Times: NW Diesel(4.052 - 7.519) AK102(3.13 - 7.77) Jet A(3.13 - 5.88)
NW M.Oil(7.52 - 10.40) AK103(7.77 - 10.04) OR Diesel(3.13 - 8.47)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2295151	181.0	402.1 M
Triacontane	80	0.0	0.0

M Indicates the peak was manually integrated

01/07/13

Analyte	RF	Curve Date
o-Terph Surr	12683.1	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	13470.3	04-DEC-2012
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	15762.0	04-DEC-2012
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.1/20130105.b/0105a024.d

Date : 05-JAN-2013 18:01

Client ID:

Sample Info: DIES1000

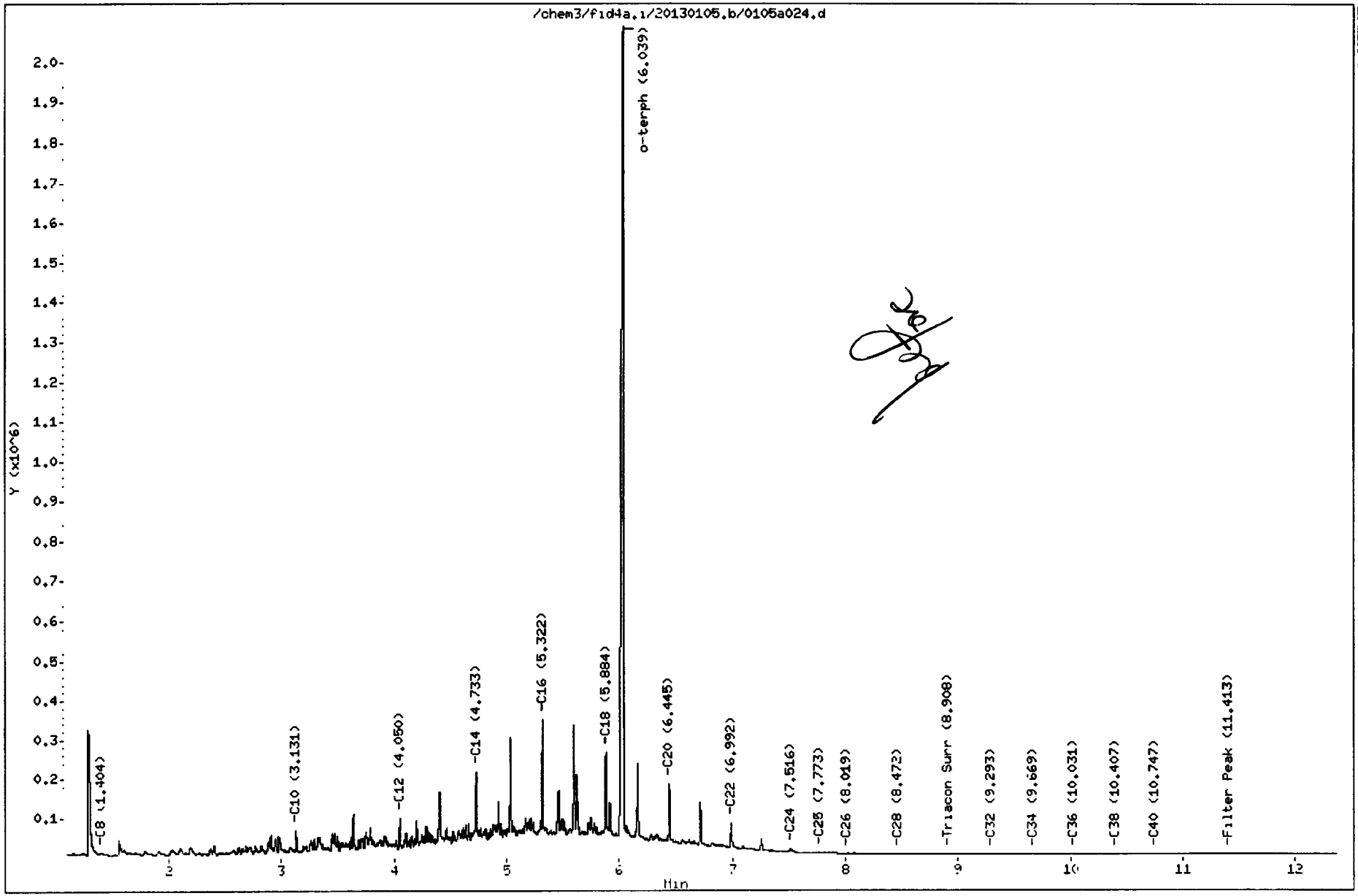
Column phase: PTX-1

Instrument: fid4a.1

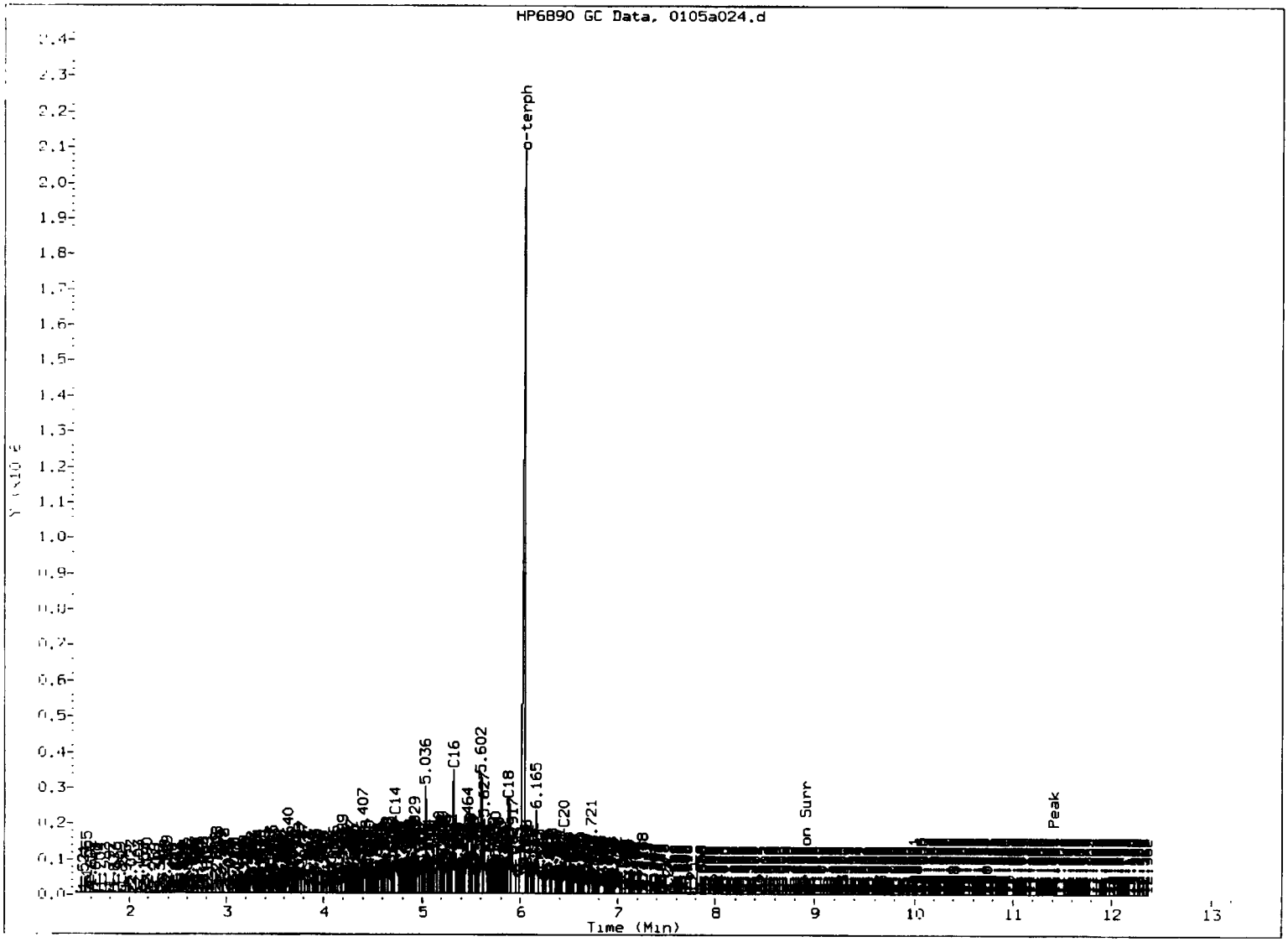
Operator: JR/VTS

Column diameter: 0.25

UZ97 : 61 3559



FID:4A-2C/RTX-1 DIES1000 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: _____ Date: 01/07/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130105.b/0105a025.d
Method: /chem3/fid4a.i/20130105.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/06/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:04-DEC-2012 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: DIES2500
Client ID:
Injection: 05-JAN-2013 18:21
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.142	-0.001	4904	8048	WATPHG	(Tol-C12)	7229968	536.73
C8	1.376	-0.021	14498	18955	WATPHD	(C12-C24)	25291755	2418.31
C10	3.136	0.009	164187	134947	WATPHM	(C24-C38)	244555	29.28
C12	4.053	0.001	260272	236482	AK102	(C10-C25)	29371406	2420.20
C14	4.737	0.000	509040	709286	AK103	(C25-C36)	159004	17.28
C16	5.328	0.004	755117	650804				
C18	5.893	0.009	560355	663952				
C20	6.452	0.003	440356	586597	JET-A	(C10-C18)	22067821	4074.19
C22	6.995	-0.002	228289	215161				
C24	7.514	-0.004	54160	60634	MSPIRIT	(Tol-C12)	7229968	545.84
C25	7.764	-0.004	18230	45946				
C26	8.013	-0.006	6160	17150				
C28	8.464	-0.002	833	453				
C32	9.291	0.005	2163	1795				
C34	9.668	0.000	17	10				
Filter Peak	11.408	-0.006	686	390	CREOSOT	(C12-C22)	24440898	12146.78 M
C36	10.051	0.013	1737	1843				
C38	10.414	0.014	187	153				
C40	10.746	-0.006	1354	2427				
o-terph	6.062	0.041	3427280	6057608				
Triacon Surr	8.894	-0.001	187	54	NAS DIES	(C10-C24)	29290122	1858.27

Range Times: NW Diesel(4.052 - 7.519) AK102(3.13 - 7.77) Jet A(3.13 - 5.88)
NW M.Oil(7.52 - 10.40) AK103(7.77 - 10.04) OR Diesel(3.13 - 8.47)

Surrogate	Area	Amount	%Rec
o-Terphenyl	6057608	477.6	1061.4 M
Triacontane	54	0.0	0.0

01/07/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	12683.1	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	13470.3	04-DEC-2012
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	15762.0	04-DEC-2012
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.1/20130105.b/0105a025.d

Date : 05-JAN-2013 18:21

Client ID:

Sample Info: DIES2500

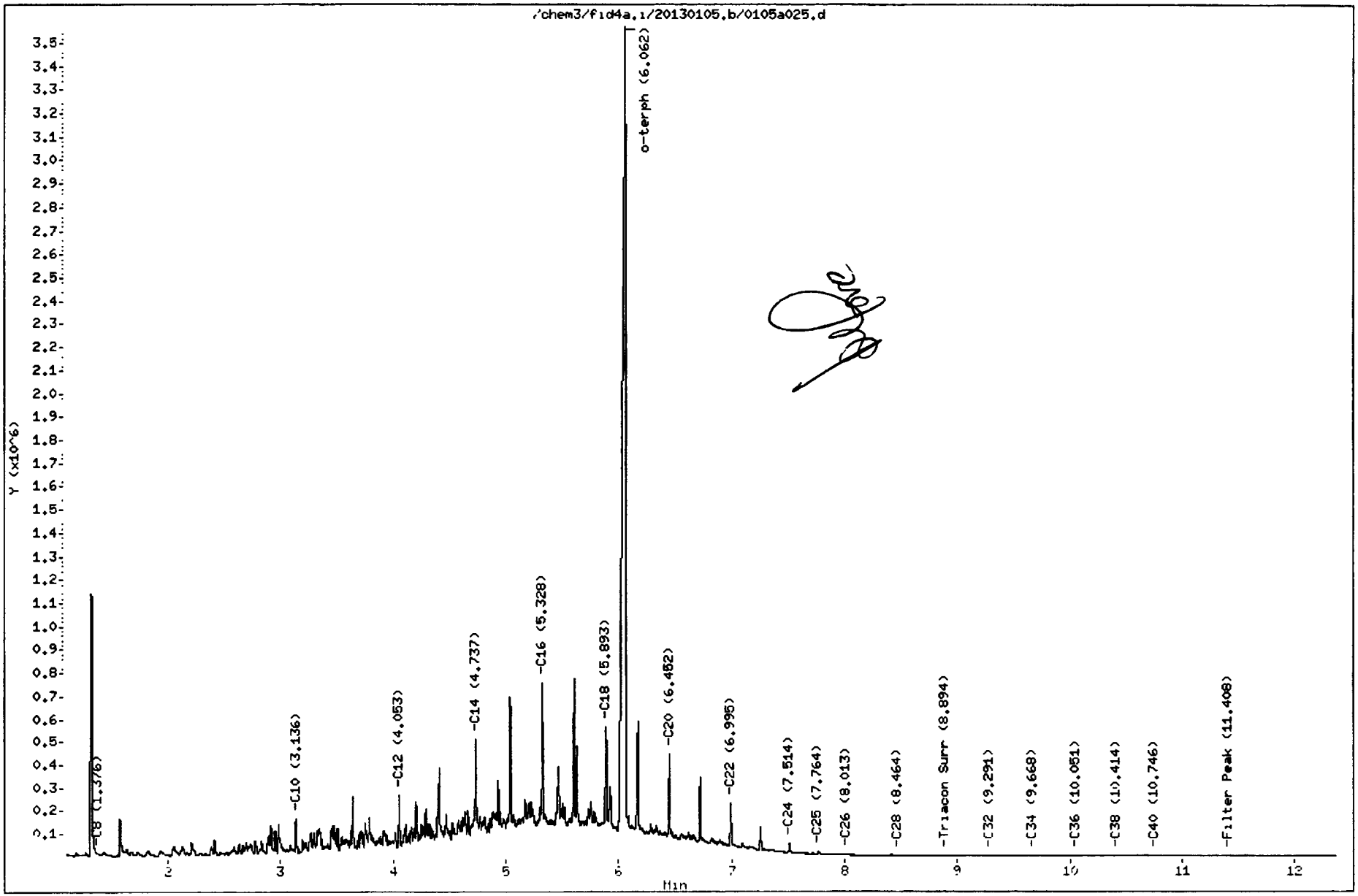
Column phase: RTX-1

Instrument: fid4a.1

Operator: JR/VTS

Column diameter: 0.25

USEPA 8015C



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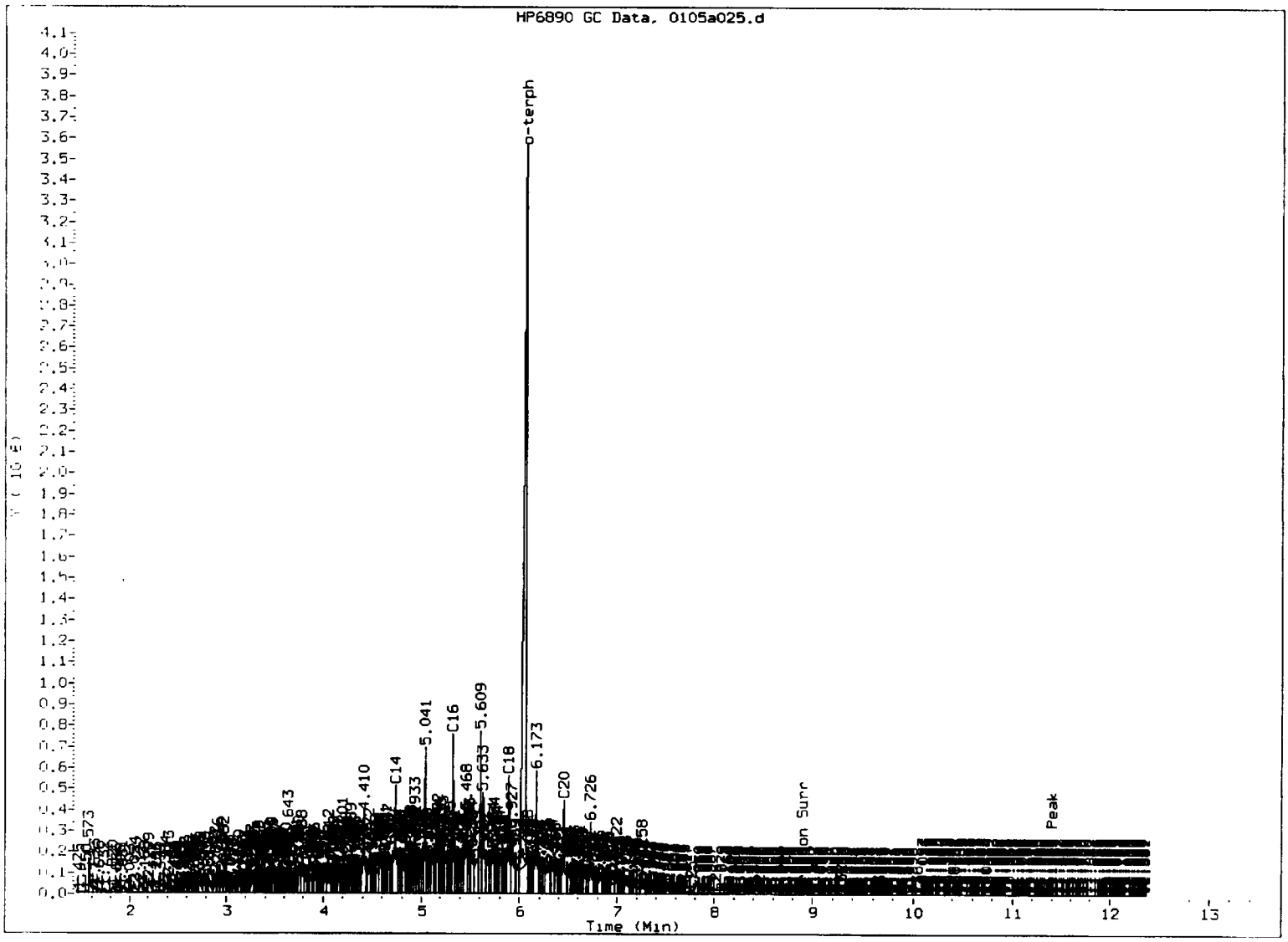


MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: _____ Date: 01/07/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130105.b/0105a026.d
Method: /chem3/fid4a.i/20130105.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/06/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:04-DEC-2012 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: DIES250-ICV
Client ID:
Injection: 05-JAN-2013 18:40
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.144	0.002	2329	4939	WATPHG	(Tol-C12)	808400	60.01
C8	1.393	-0.004	2171	4583	WATPHD	(C12-C24)	2249617	215.10
C10	3.130	0.003	29153	26801	WATPHM	(C24-C38)	43033	5.15
C12	4.049	-0.002	36130	33825	AK102	(C10-C25)	2853352	235.12
C14	4.734	-0.003	50350	63076	AK103	(C25-C36)	31033	3.37
C16	5.320	-0.004	58314	59399				
C18	5.879	-0.004	43651	44571				
C20	6.444	-0.005	24426	35461	JET-A	(C10-C18)	2253273	416.00
C22	6.995	-0.001	6743	17586				
C24	7.513	-0.006	1354	345	MSPIRIT	(Tol-C12)	808400	61.03
C25	7.774	0.007	777	336				
C26	8.030	0.010	446	228				
C28	8.458	-0.008	170	392				
C32	9.294	0.008	494	541				
C34	9.675	0.007	147	134				
Filter Peak	11.420	0.006	886	1698	CREOSOT	(C12-C22)	2192539	1089.66 M
C36	10.031	-0.007	242	225				
C38	10.387	-0.013	349	452				
C40	10.753	0.001	992	1997				
o-terph	6.019	-0.001	795538	563675				
Triacon Surr	8.896	0.001	83	66	NAS DIES	(C10-C24)	2846971	180.62

Range Times: NW Diesel(4.052 - 7.519) AK102(3.13 - 7.77) Jet A(3.13 - 5.88)
NW M.Oil(7.52 - 10.40) AK103(7.77 - 10.04) OR Diesel(3.13 - 8.47)

Surrogate	Area	Amount	%Rec
o-Terphenyl	563675	44.4	98.8 M
Triacontane	66	0.0	0.0

01/07/13

M Indicates the peak was manually integrated

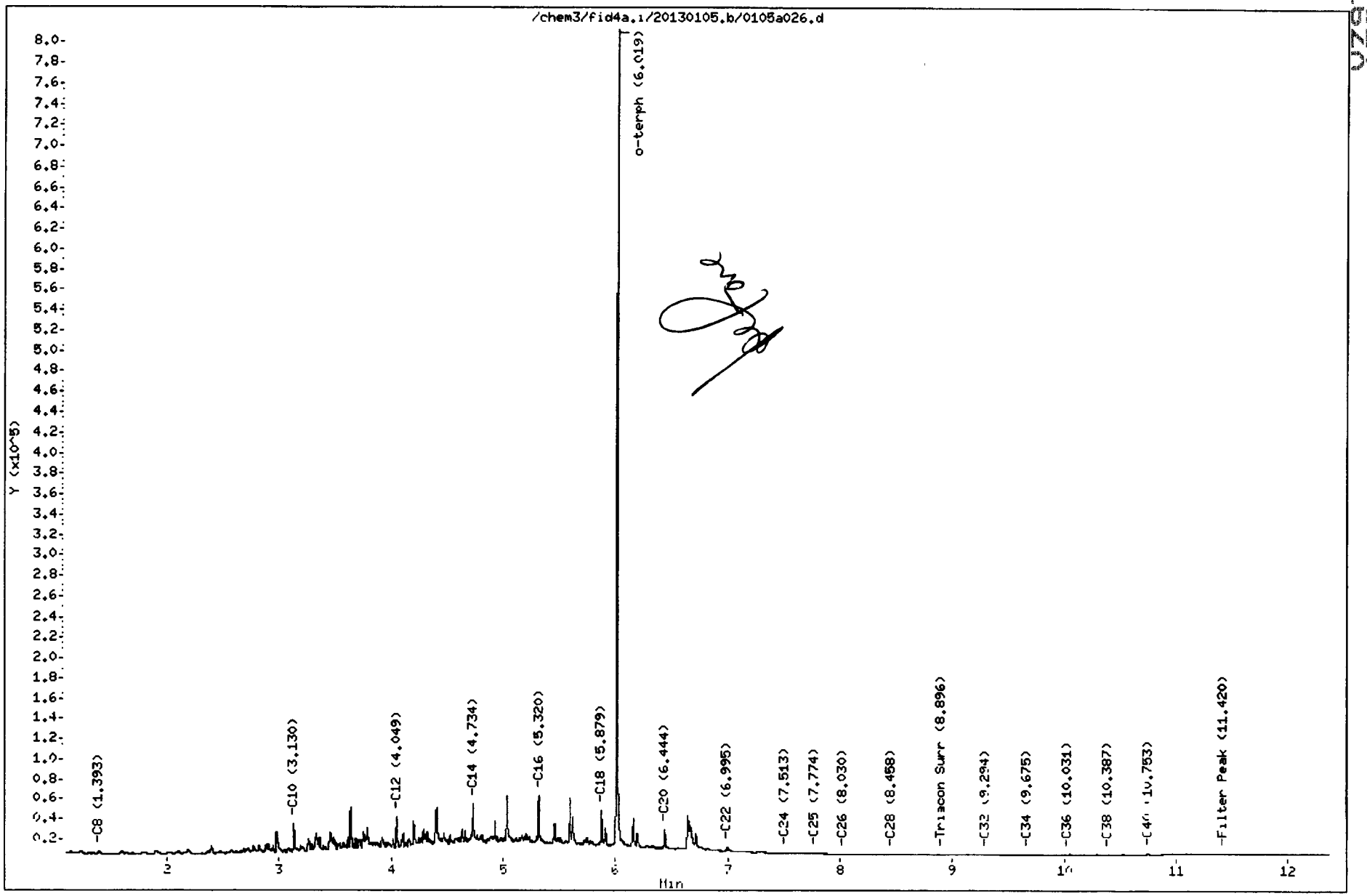
Analyte	RF	Curve Date
o-Terph Surr	12683.1	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	13470.3	04-DEC-2012
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	15762.0	04-DEC-2012
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.1/20130105.b/0105a026.d
Date : 05-JAN-2013 18:40
Client ID:
Sample Info: DIES250-ICV

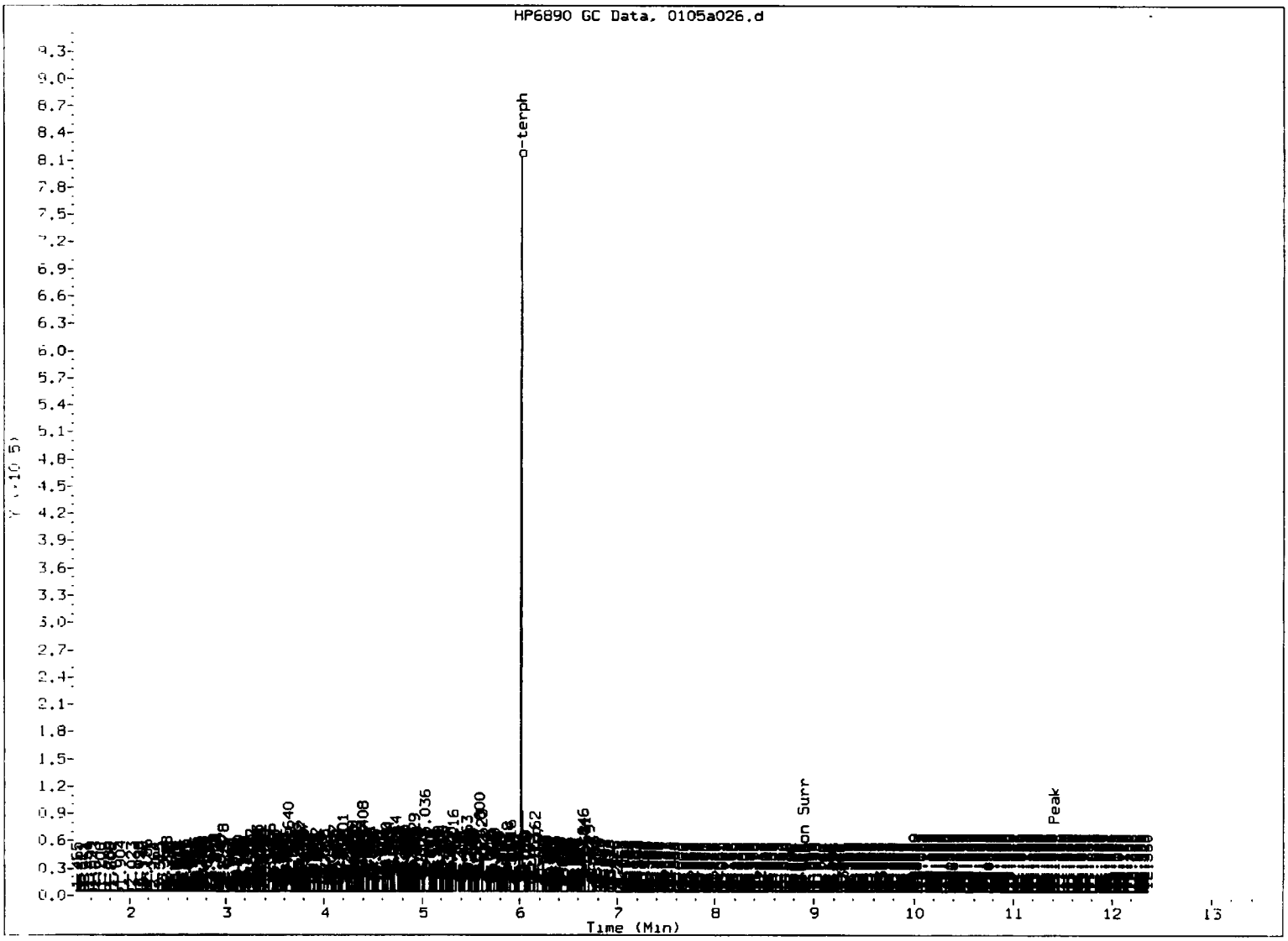
Instrument: fid4a.1

Operator: JR/VTS
Column phase: PTX-1
Column diameter: 0.25

U2547 01312



FID:4A-2C/RTX-1 DIES250-ICV FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: _____ Date: 11/27/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130105.b/0105a027.d
Method: /chem3/fid4a.i/20130105.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/06/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:04-DEC-2012 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: MOIL 100
Client ID:
Injection: 05-JAN-2013 19:00
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.170	0.027	1999	8282	WATPHG	(Tol-C12)	25564	1.90
C8	1.402	0.006	366	478	WATPHD	(C12-C24)	106360	10.17
C10	3.128	0.000	158	122	WATPHM	(C24-C38)	864108	103.46
C12	4.062	0.010	160	144	AK102	(C10-C25)	144054	11.87
C14	4.736	-0.001	209	162	AK103	(C25-C36)	723394	78.61
C16	5.332	0.008	224	299				
C18	5.878	-0.006	201	188				
C20	6.430	-0.018	286	314	JET-A	(C10-C18)	30606	5.65
C22	7.005	0.008	844	829				
C24	7.516	-0.003	2868	2759	MSPIRIT	(Tol-C12)	25564	1.93
C25	7.761	-0.006	3798	3435				
C26	8.014	-0.006	4344	764				
C28	8.464	-0.002	5062	2358				
C32	9.288	0.002	6151	6769				
C34	9.672	0.004	6309	4416				
Filter Peak	11.414	0.000	3109	3183	CREOSOT	(C12-C22)	45616	22.67 M
C36	10.036	-0.002	6068	3372				
C38	10.400	0.000	5615	1832				
C40	10.755	0.002	5356	6443				
o-terph	6.032	0.011	235	398				
Triacon Surr	8.880	-0.016	107493	84374	NAS DIES	(C10-C24)	115655	7.34

Range Times: NW Diesel(4.052 - 7.519) AK102(3.13 - 7.77) Jet A(3.13 - 5.88)
NW M.Oil(7.52 - 10.40) AK103(7.77 - 10.04) OR Diesel(3.13 - 8.47)

Surrogate	Area	Amount	%Rec
o-Terphenyl	398	0.0	0.1
Triacontane	84374	7.9	17.6 M

11/07/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	12683.1	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	13470.3	04-DEC-2012
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	15762.0	04-DEC-2012
Creosote	2012.1	01-NOV-2011

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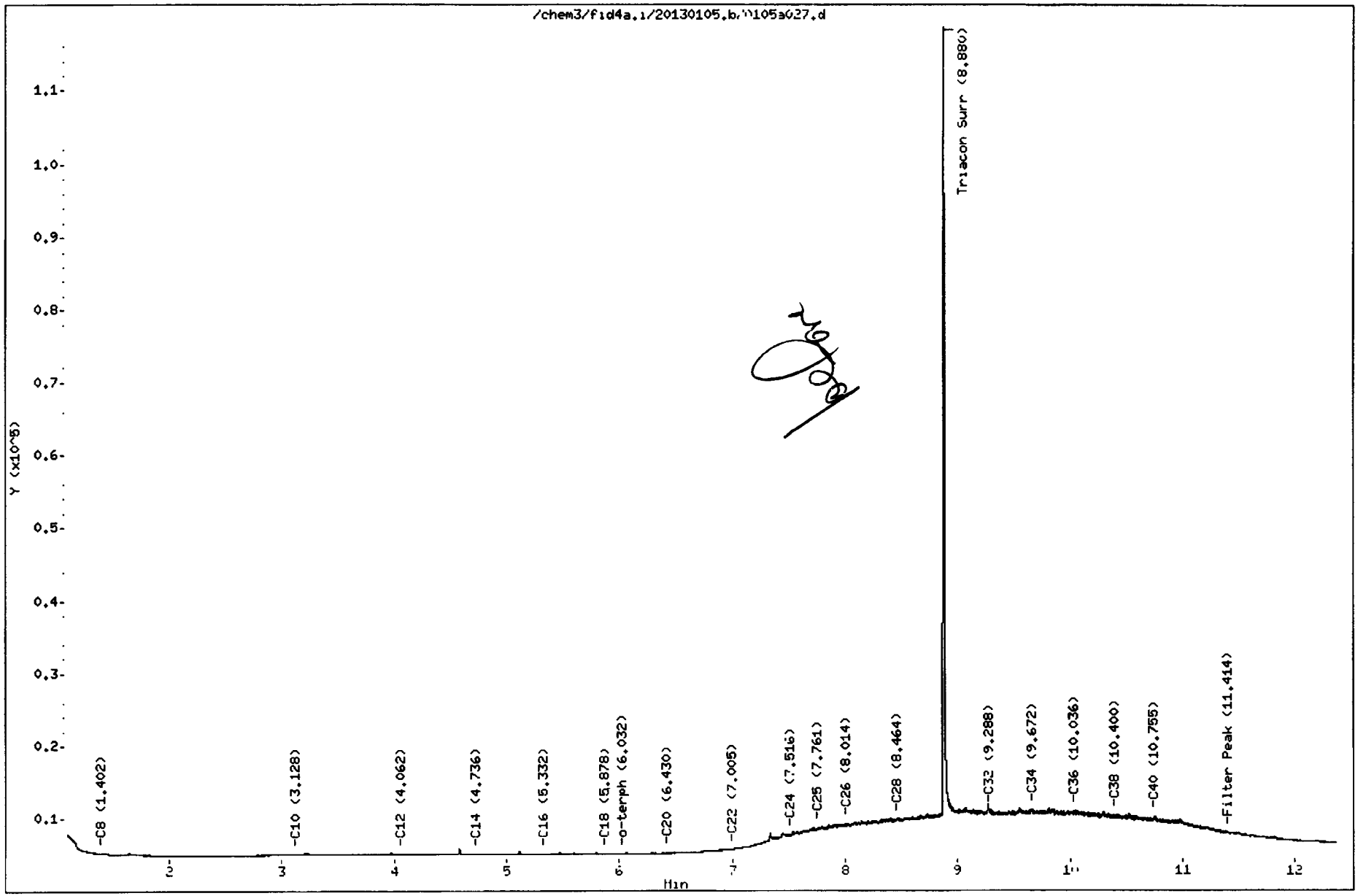
Date : 05-JAN-2013 19:[illegible]
Client ID:
Sample Info: MOIL 1x0

Column phase: RTX-1

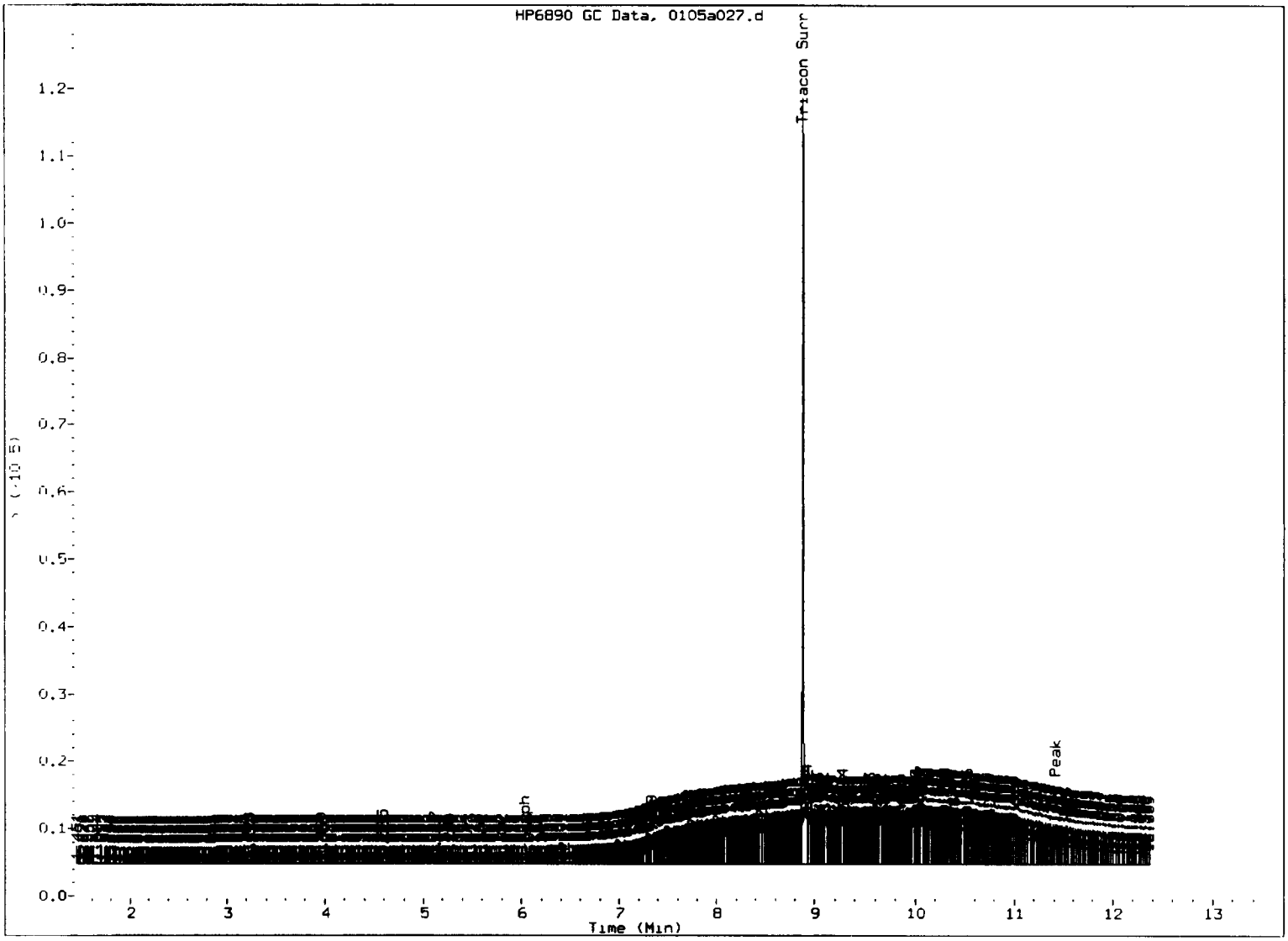
Instrument: fid4a.1

Operator: JR/VTS
Column diameter: 0.25

U797 : 01315



FID:4A-2C/RTX-1 MOIL 100 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: _____ Date: 01/07/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130105.b/0105a028.d
Method: /chem3/fid4a.i/20130105.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/06/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:04-DEC-2012 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: MOIL 250
Client ID:
Injection: 05-JAN-2013 19:20
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.169	0.027	3316	9509	WATPHG	(Tol-C12)	30947	2.30
C8	1.410	0.014	355	467	WATPHD	(C12-C24)	222786	21.30
C10	3.129	0.002	206	136	WATPHM	(C24-C38)	2086555	249.83
C12	4.058	0.007	214	157	AK102	(C10-C25)	307781	25.36
C14	4.726	-0.011	284	218	AK103	(C25-C36)	1742320	189.34
C16	5.320	-0.004	280	355				
C18	5.871	-0.012	247	209				
C20	6.454	0.005	529	495	JET-A	(C10-C18)	38880	7.18
C22	6.999	0.003	1942	1606				
C24	7.518	-0.001	7035	4453	MSPIRIT	(Tol-C12)	30947	2.34
C25	7.769	0.002	9360	4146				
C26	8.024	0.005	10719	9371				
C28	8.470	0.004	12280	11533				
C32	9.292	0.006	14503	7640				
C34	9.671	0.004	14347	7845				
Filter Peak	11.416	0.002	6027	8623	CREOSOT	(C12-C22)	78727	39.13 M
C36	10.039	0.002	14012	5182				
C38	10.397	-0.003	12891	15385				
C40	10.749	-0.004	11168	19649				
o-terph	6.025	0.005	386	833				
Triacon Surr	8.883	-0.012	300265	223711	NAS DIES	(C10-C24)	234913	14.90

Range Times: NW Diesel(4.052 - 7.519) AK102(3.13 - 7.77) Jet A(3.13 - 5.88)
NW M.Oil(7.52 - 10.40) AK103(7.77 - 10.04) OR Diesel(3.13 - 8.47)

Surrogate	Area	Amount	%Rec
o-Terphenyl	833	0.1	0.1
Triacontane	223711	21.0	46.6 M

01/07/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	12683.1	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	13470.3	04-DEC-2012
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	15762.0	04-DEC-2012
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.i/20130105.b/0105a028.d

Date : 05-JAN-2013 19:20

Client ID:

Sample Info: MOIL 250

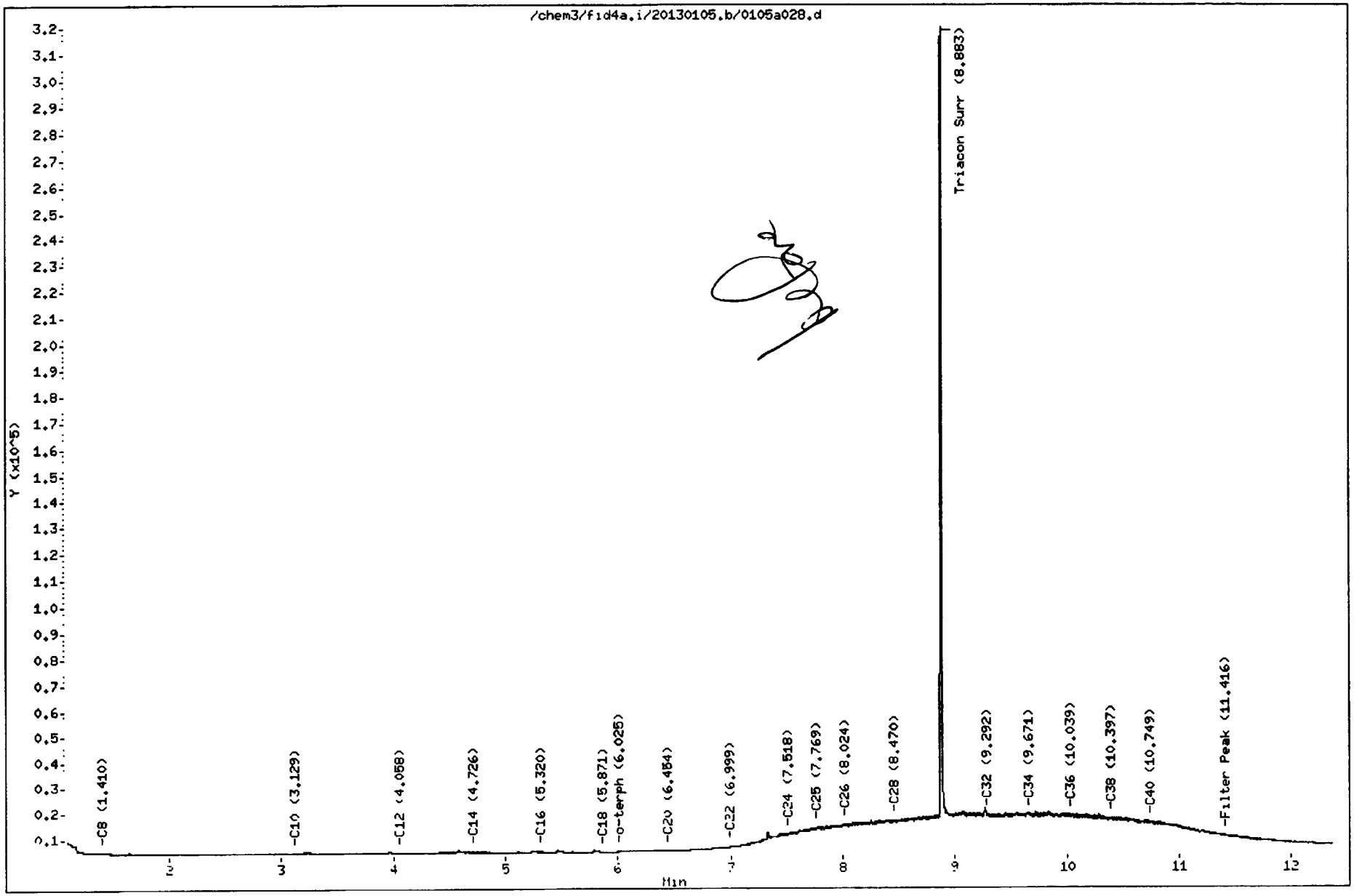
Column phase: RTX-1

Instrument: fid4a.i

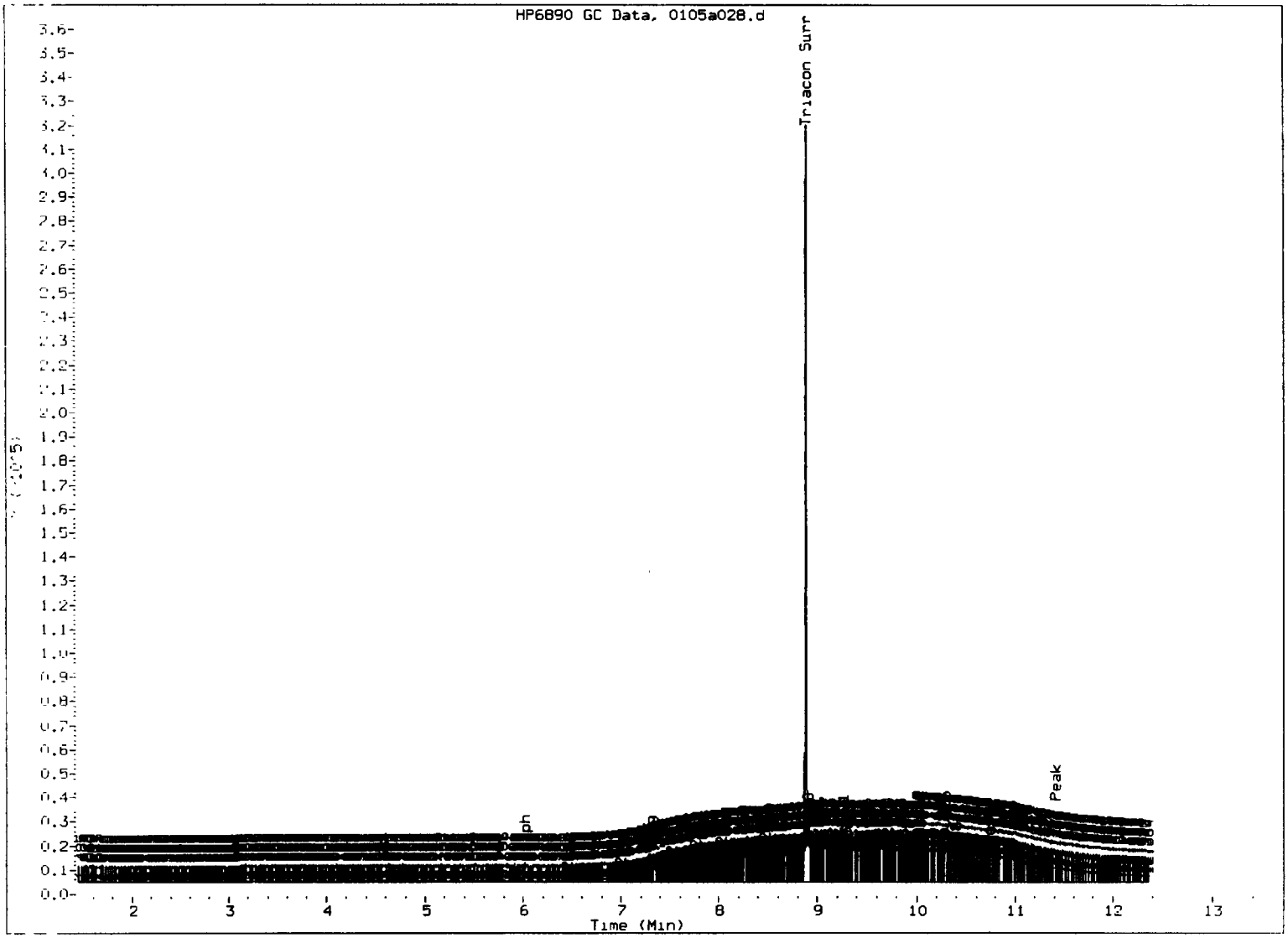
Operator: JR/VTS

Column diameter: 0.25

UZ97 : 01918



FID:4A-2C/RTX-1 MOIL 250 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: _____ Date: 01/07/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130105.b/0105a029.d
Method: /chem3/fid4a.i/20130105.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/06/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:04-DEC-2012 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: MOIL 500
Client ID:
Injection: 05-JAN-2013 19:40
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.141	-0.002	5696	8759	WATPHG	(Tol-C12)	45649	3.39
C8	1.419	0.022	432	152	WATPHD	(C12-C24)	400972	38.34
C10	3.129	0.001	256	341	WATPHM	(C24-C38)	3913339	468.55
C12	4.053	0.001	263	117	AK102	(C10-C25)	534556	44.05
C14	4.752	0.015	340	351	AK103	(C25-C36)	3286021	357.10
C16	5.338	0.014	287	362				
C18	5.884	0.000	326	88				
C20	6.445	-0.003	853	270	JET-A	(C10-C18)	47727	8.81
C22	6.997	0.000	3574	3129				
C24	7.514	-0.004	13035	7190	MSPIRIT	(Tol-C12)	45649	3.45
C25	7.768	0.000	17385	8116				
C26	8.016	-0.003	19929	12276				
C28	8.470	0.004	23012	32235				
C32	9.298	0.012	26714	22272				
C34	9.662	-0.006	27569	30609				
Filter Peak	11.411	-0.003	10376	7500	CREOSOT	(C12-C22)	124825	62.04 M
C36	10.038	0.000	26422	39222				
C38	10.399	-0.002	24209	15404				
C40	10.752	-0.001	19860	7068				
o-terph	6.022	0.001	502	1231				
Triacon Surr	8.886	-0.009	560503	446319	NAS DIES	(C10-C24)	416065	26.40

Range Times: NW Diesel(4.052 - 7.519) AK102(3.13 - 7.77) Jet A(3.13 - 5.88)
NW M.Oil(7.52 - 10.40) AK103(7.77 - 10.04) OR Diesel(3.13 - 8.47)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1231	0.1	0.2
Triacontane	446319	41.8	92.9 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	12683.1	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	13470.3	04-DEC-2012
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	15762.0	04-DEC-2012
Creosote	2012.1	01-NOV-2011

01/07/13

Data File: /chem3/fid4a.i/20130105.b/0105a029.d

Date : 05-JAN-2013 19:40

Client ID:

Sample Info: MOIL 500

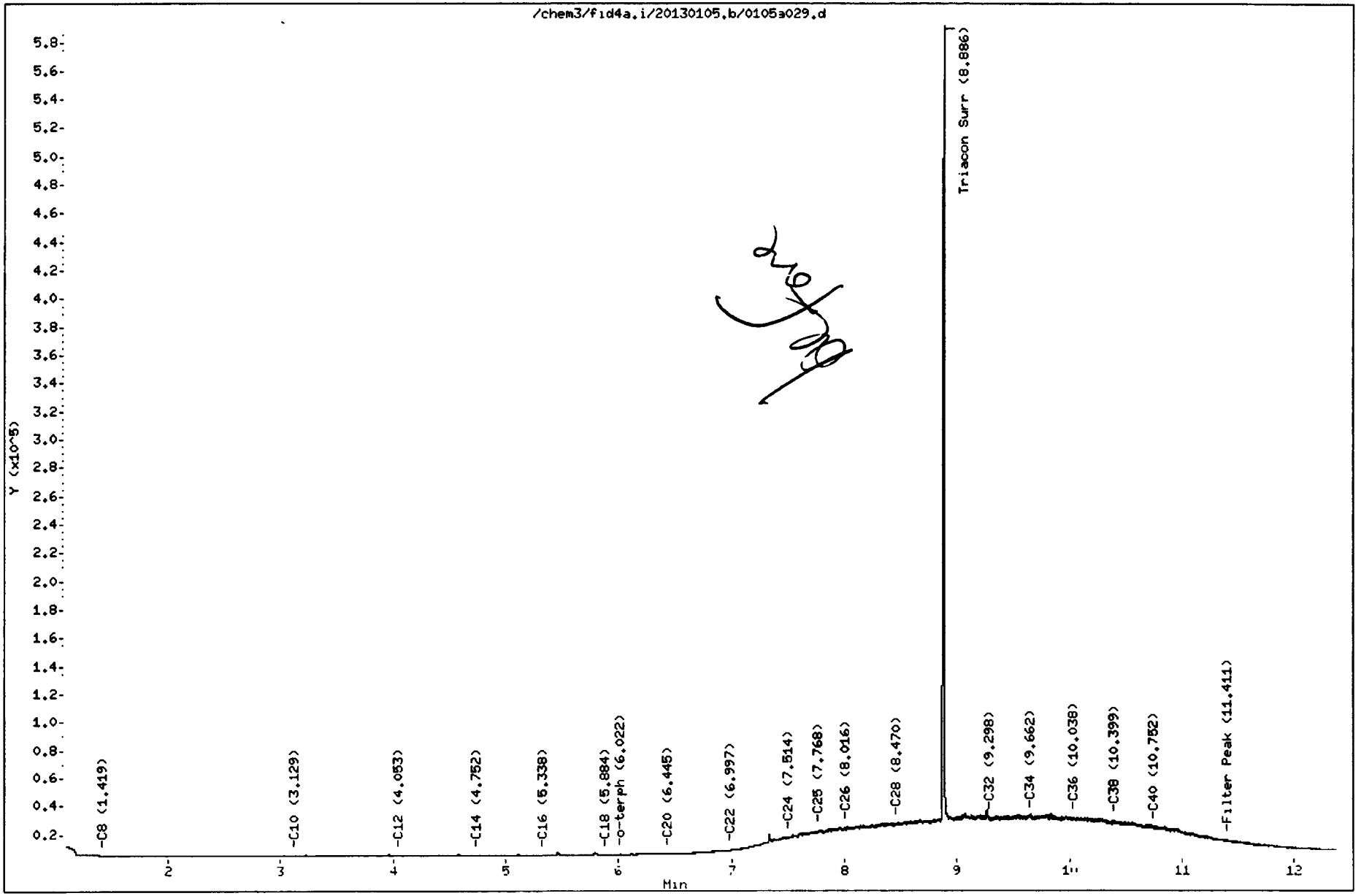
Instrument: fid4a.i

Operator: JP/VTS

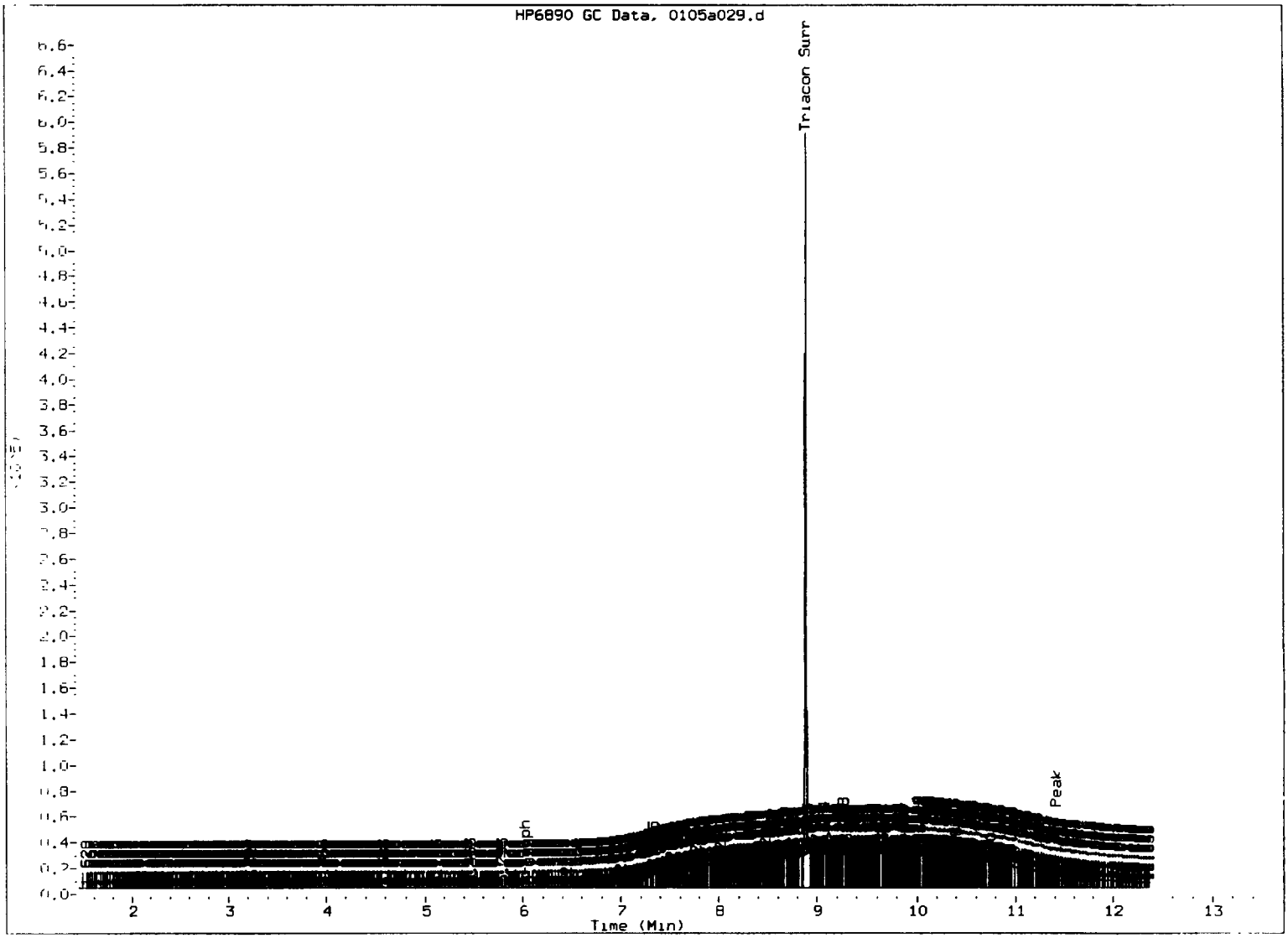
Column phase: RTX-1

Column diameter: 0.25

J7971 01321



FID:4A-2C/RTX-1 MOIL 500 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: _____ Date: 01/07/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130105.b/0105a030.d
Method: /chem3/fid4a.i/20130105.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/06/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:04-DEC-2012 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: MOIL 1000
Client ID:
Injection: 05-JAN-2013 20:00
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.139	-0.003	9710	11625	WATPHG	(Tol-C12)	82915	6.16
C8	1.397	0.000	463	333	WATPHD	(C12-C24)	781332	74.71
C10	3.132	0.005	415	732	WATPHM	(C24-C38)	8196957	981.44
C12	4.046	-0.005	556	738	AK102	(C10-C25)	1106844	91.20
C14	4.752	0.015	547	531	AK103	(C25-C36)	6801094	739.08
C16	5.333	0.010	411	391				
C18	5.887	0.004	625	677				
C20	6.453	0.005	1778	950	JET-A	(C10-C18)	84216	15.55
C22	6.986	-0.010	7276	8955				
C24	7.507	-0.011	27334	31287	MSPIRIT	(Tol-C12)	82915	6.26
C25	7.764	-0.003	36139	32806				
C26	8.024	0.004	42874	71809				
C28	8.474	0.008	48754	56427				
C32	9.278	-0.008	70157	144851				
C34	9.657	-0.010	61175	52526				
Filter Peak	11.423	0.009	19562	14114	CREOSOT	(C12-C22)	240316	119.43 M
C36	10.038	0.000	56987	78432				
C38	10.404	0.004	48009	43954				
C40	10.748	-0.004	42084	53573				
o-terph	6.022	0.001	997	2208				
Triacon Surr	8.901	0.006	971491	1008634	NAS DIES	(C10-C24)	807718	51.24

Range Times: NW Diesel(4.052 - 7.519) AK102(3.13 - 7.77) Jet A(3.13 - 5.88)
NW M.Oil(7.52 - 10.40) AK103(7.77 - 10.04) OR Diesel(3.13 - 8.47)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2208	0.2	0.4
Triacontane	1008634	94.5	210.0 M

M Indicates the peak was manually integrated

2 01/07/13

Analyte	RF	Curve Date
o-Terph Surr	12683.1	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	13470.3	04-DEC-2012
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	15762.0	04-DEC-2012
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.1/20130105.b/0105a030.d

Date : 05-JAN-2013 20:00

Client ID:

Sample Info: MOIL 1000

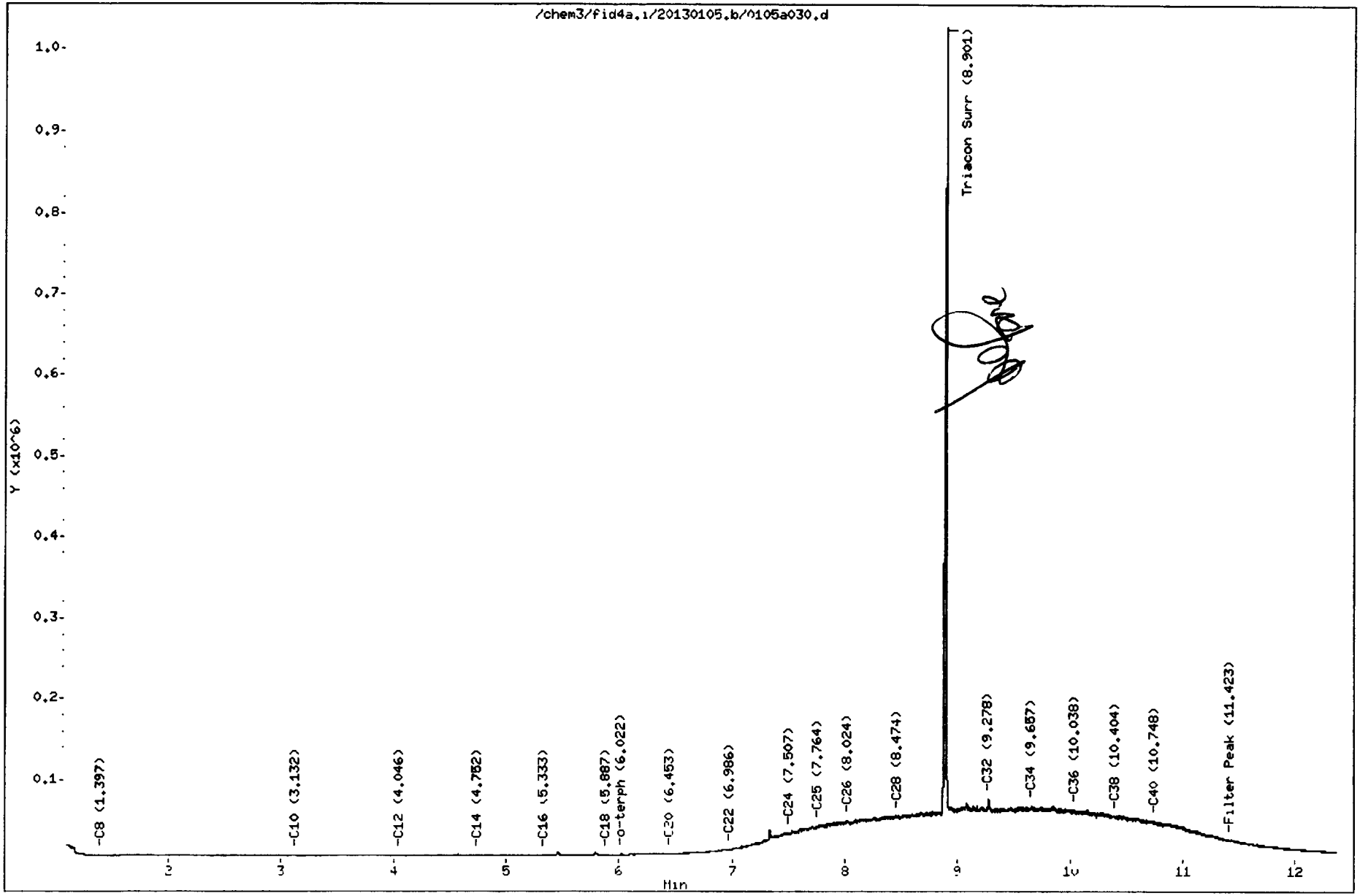
Column phase: RTX-1

Instrument: fid4a.1

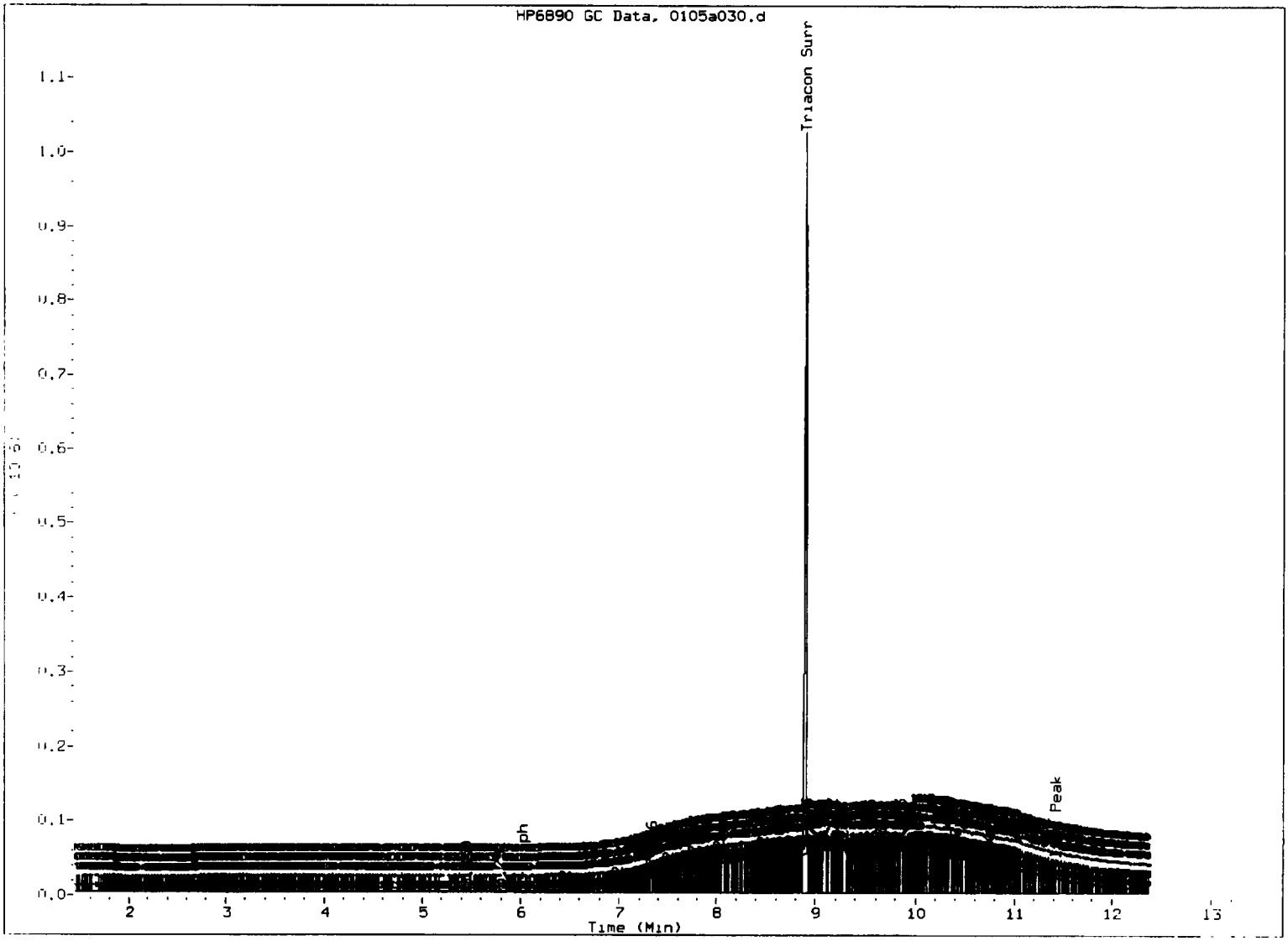
Operator: JR/VTS

Column diameter: 0.25

V7577 · 91324



FID:4A-2C/RTX-1 MOIL 1000 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: _____ Date: 01/07/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130105.b/0105a031.d
Method: /chem3/fid4a.i/20130105.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/06/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:04-DEC-2012 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: MOIL 2500
Client ID:
Injection: 05-JAN-2013 20:20
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.139	-0.003	22613	31400	WATPHG	(Tol-C12)	182179	13.52
C8	1.428	0.032	499	947	WATPHD	(C12-C24)	2015734	192.74
C10	3.132	0.005	676	1675	WATPHM	(C24-C38)	21037028	2518.82
C12	4.054	0.002	771	228	AK102	(C10-C25)	2739252	225.71
C14	4.752	0.015	749	569	AK103	(C25-C36)	17591810	1911.72
C16	5.332	0.008	595	664				
C18	5.886	0.002	1237	2538				
C20	6.446	-0.002	4385	6087	JET-A	(C10-C18)	126695	23.39
C22	6.995	-0.001	18782	16962				
C24	7.518	-0.001	67246	30433	MSPIRIT	(Tol-C12)	182179	13.75
C25	7.772	0.005	90172	59631				
C26	8.015	-0.005	104644	44468				
C28	8.459	-0.008	121921	90660				
C32	9.289	0.003	182127	387521				
C34	9.669	0.001	156975	122641				
Filter Peak	11.418	0.005	18673	17164	CREOSOT	(C12-C22)	534626	265.70 M
C36	10.034	-0.004	135511	197853				
C38	10.396	-0.004	119484	65300				
C40	10.761	0.008	93563	99189				
o-terph	6.017	-0.004	2205	6668				
Triacon Surr	8.925	0.029	1763804	2610232	NAS DIES	(C10-C24)	2055007	130.38

Range Times: NW Diesel(4.052 - 7.519) AK102(3.13 - 7.77) Jet A(3.13 - 5.88)
NW M.Oil(7.52 - 10.40) AK103(7.77 - 10.04) OR Diesel(3.13 - 8.47)

Surrogate	Area	Amount	%Rec
o-Terphenyl	6668	0.5	1.2
Triacontane	2610232	244.5	543.4 M

M Indicates the peak was manually integrated

JR 01/07/13

Analyte	RF	Curve Date
o-Terph Surr	12683.1	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	13470.3	04-DEC-2012
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	15762.0	04-DEC-2012
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.1/20130105.b/0105a031.d

Date : 05-JAN-2013 20:20

Client ID:

Sample Info: MOIL 2500

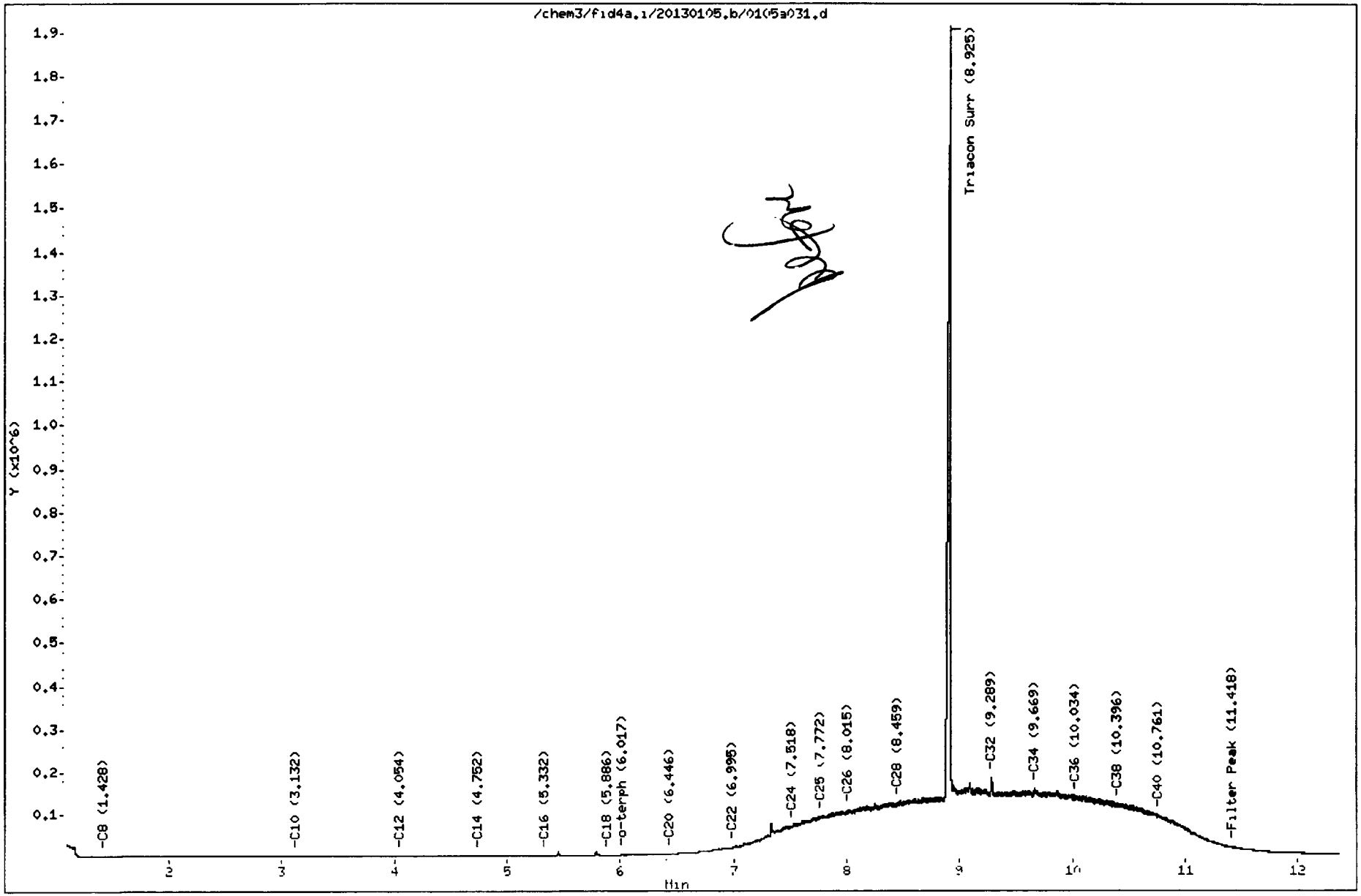
Column phase: RTX-1

Instrument: fid4a.1

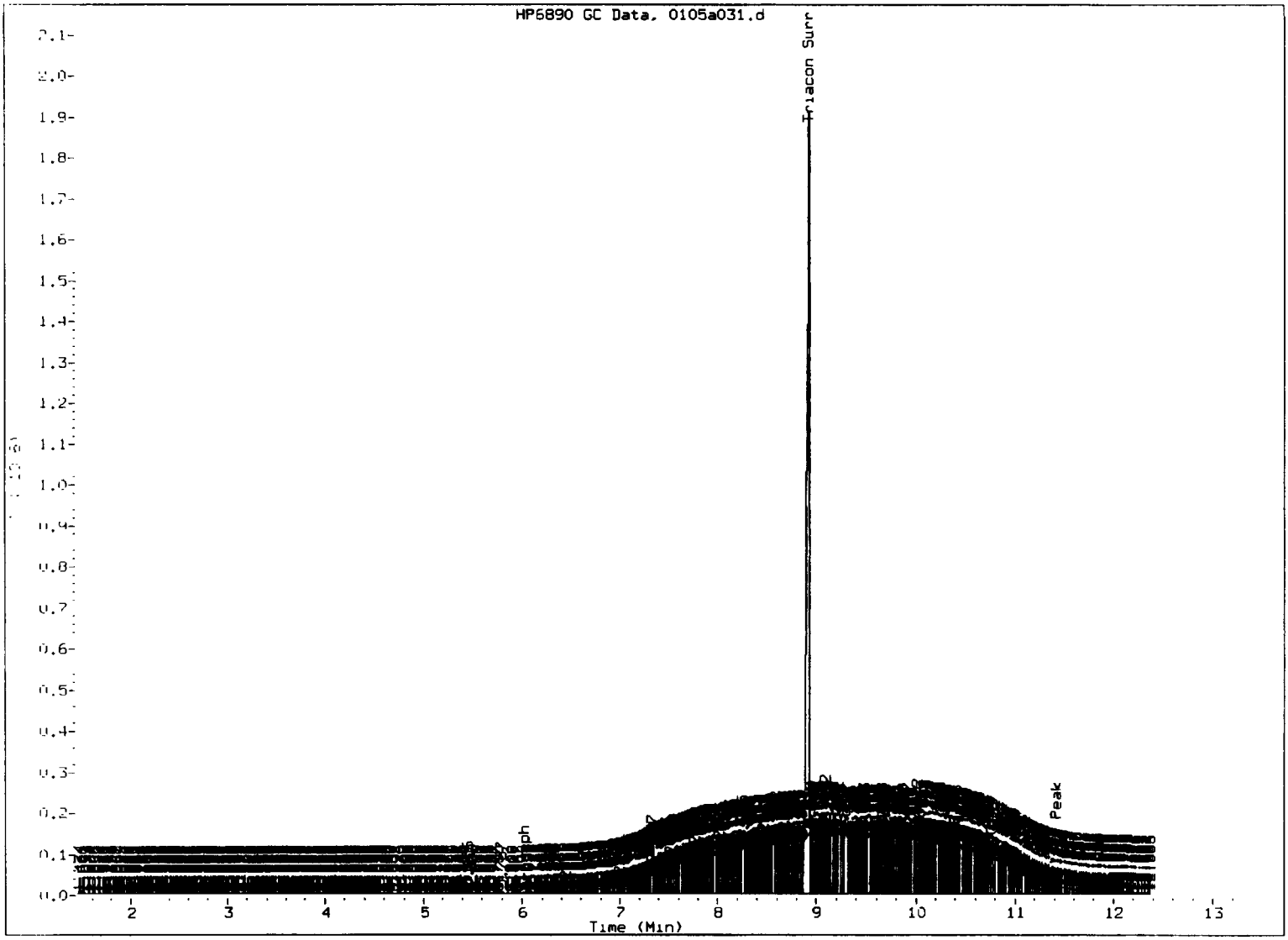
Operator: JP/WTS

Column diameter: 0.25

UZ97 : 01327



FID:4A-2C/RTX-1 MOIL 2500 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: _____ Date: 01/07/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130105.b/0105a032.d
Method: /chem3/fid4a.i/20130105.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/06/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:04-DEC-2012 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: MOIL 5000
Client ID:
Injection: 05-JAN-2013 20:40
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.148	0.005	41551	60509	WATPHG	(Tol-C12)	264069	19.60
C8	1.451	0.054	587	1139	WATPHD	(C12-C24)	3783581	361.77
C10	3.134	0.006	993	2503	WATPHM	(C24-C38)	43429569	5199.94
C12	4.060	0.008	789	375	AK102	(C10-C25)	5432992	447.68
C14	4.748	0.011	954	2158	AK103	(C25-C36)	36978924	4018.54
C16	5.325	0.001	881	1186				
C18	5.886	0.003	2382	5830				
C20	6.445	-0.003	8840	10308	JET-A	(C10-C18)	172026	31.76
C22	6.997	0.000	37769	48064				
C24	7.522	0.004	138357	83782	MSPIRIT	(Tol-C12)	264069	19.94
C25	7.764	-0.004	180322	104920				
C26	8.020	0.000	214619	134123				
C28	8.470	0.004	257343	343041				
C32	9.281	-0.005	311605	158264				
C34	9.670	0.002	314333	212562				
Filter Peak	11.406	-0.008	10960	10994	CREOSOT	(C12-C22)	1008748	501.33 M
C36	10.033	-0.005	280118	244198				
C38	10.406	0.005	195160	287166				
C40	10.738	-0.014	86297	149786				
o-terph	6.017	-0.004	4664	8687				
Triacon Surr	8.946	0.051	2628842	5400026	NAS DIES	(C10-C24)	3828849	242.92

Range Times: NW Diesel(4.052 - 7.519) AK102(3.13 - 7.77) Jet A(3.13 - 5.88)
NW M.Oil(7.52 - 10.40) AK103(7.77 - 10.04) OR Diesel(3.13 - 8.47)

Surrogate	Area	Amount	%Rec
o-Terphenyl	8687	0.7	1.5
Triacontane	5400026	505.9	1124.2 M

JR 01/07/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	12683.1	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	13470.3	04-DEC-2012
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	15762.0	04-DEC-2012
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.i/20130105.b/0105a032.d

Date : 05-JAN-2013 20:40

Client ID:

Sample Info: MOIL 5000

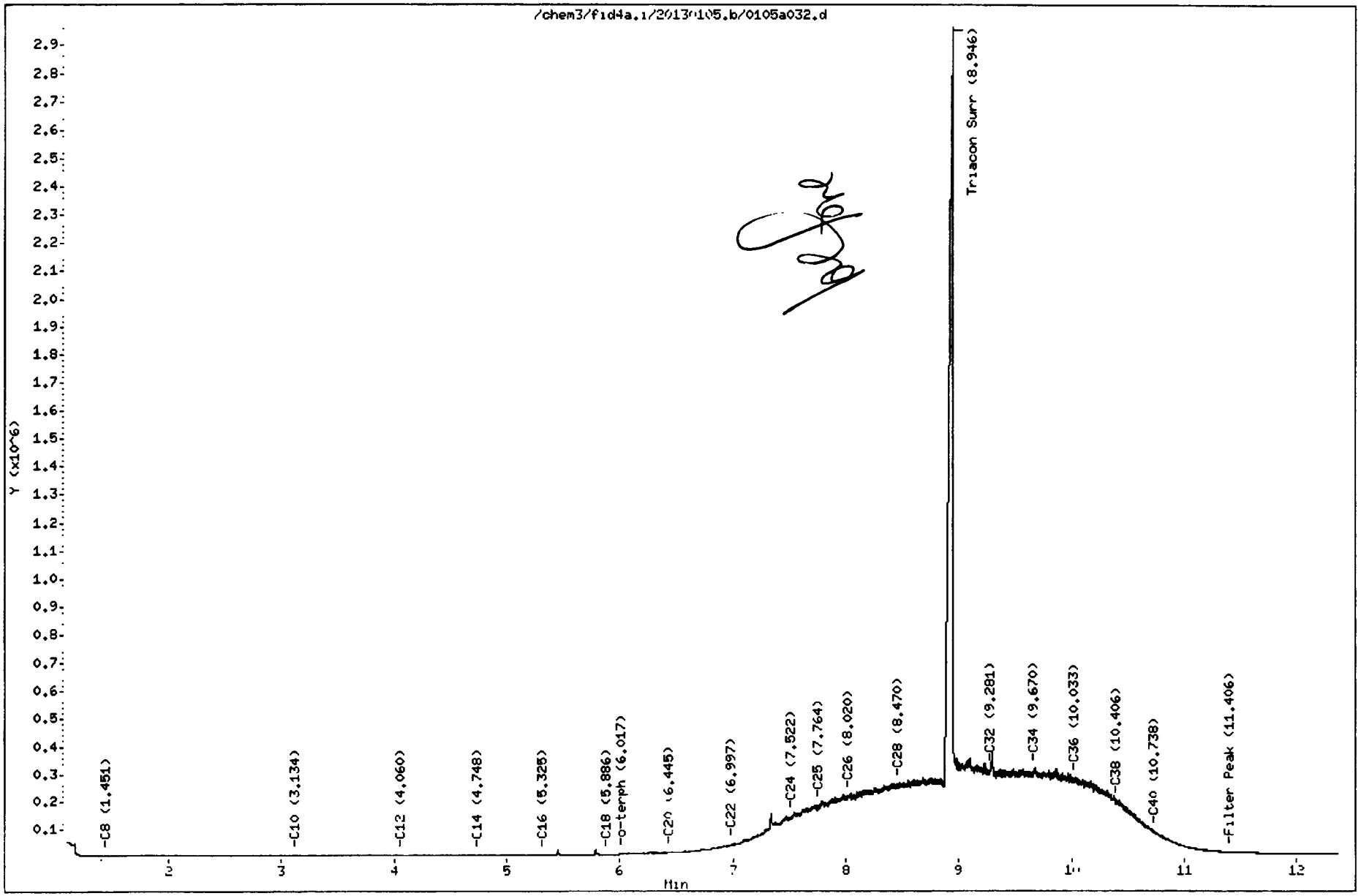
Column phase: RTX-1

Instrument: fid4a.i

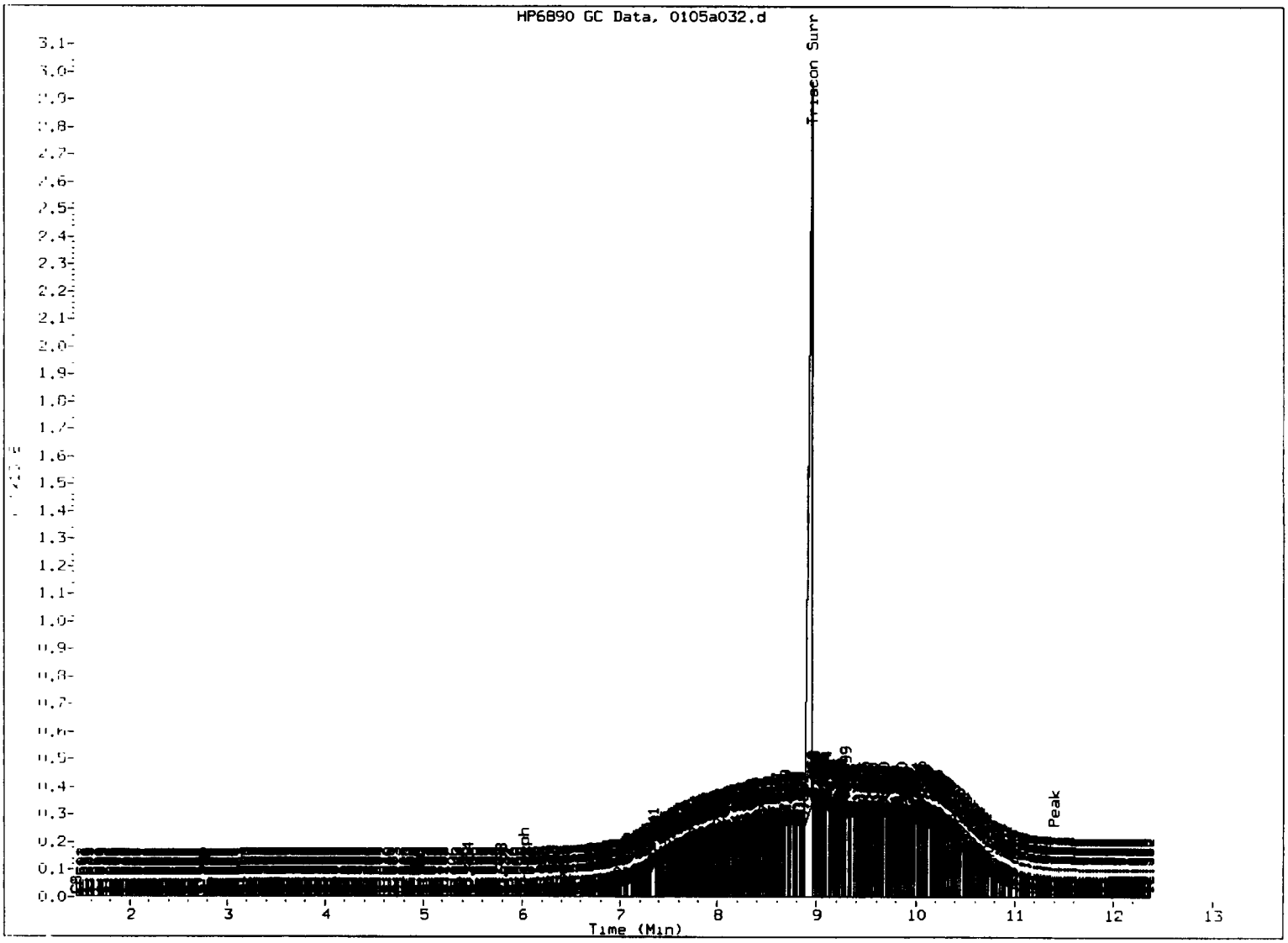
Operator: JR/VTS

Column diameter: 0.25

UZ97 04330



FID:4A-2C/RTX-1 MOIL 5000 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: _____ Date: 01/07/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130105.b/0105a033.d
Method: /chem3/fid4a.i/20130105.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/06/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:04-DEC-2012 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: M OIL500-ICV
Client ID:
Injection: 05-JAN-2013 21:01
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.168	0.026	5969	16403	WATPHG	(Tol-C12)	43269	3.21
C8	1.405	0.009	461	584	WATPHD	(C12-C24)	526932	50.38
C10	3.129	0.002	266	132	WATPHM	(C24-C38)	4093309	490.10
C12	4.058	0.006	314	154	AK102	(C10-C25)	684846	56.43
C14	4.735	-0.002	394	351	AK103	(C25-C36)	3381604	367.48
C16	5.317	-0.006	409	418				
C18	5.888	0.004	546	987				
C20	6.454	0.006	1143	1624	JET-A	(C10-C18)	55539	10.25
C22	6.997	0.001	5477	1796				
C24	7.515	-0.003	14840	6444	MSPIRIT	(Tol-C12)	43269	3.27
C25	7.773	0.005	18606	14477				
C26	8.017	-0.003	20564	30989				
C28	8.466	0.000	23248	11596				
C32	9.301	0.016	27674	16723				
C34	9.665	-0.003	29721	42553				
Filter Peak	11.420	0.006	13203	8791	CREOSOT	(C12-C22)	170125	84.55 M
C36	10.038	0.001	30159	40297				
C38	10.400	0.000	27877	41050				
C40	10.761	0.008	23657	22511				
o-terph	6.020	-0.001	1440	2656				
Triacon Surr	8.887	-0.008	571149	471239	NAS DIES	(C10-C24)	543915	34.51

Range Times: NW Diesel(4.052 - 7.519) AK102(3.13 - 7.77) Jet A(3.13 - 5.88)
NW M.Oil(7.52 - 10.40) AK103(7.77 - 10.04) OR Diesel(3.13 - 8.47)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2656	0.2	0.5
Triacontane	471239	44.1	98.1 M

M Indicates the peak was manually integrated

01/07/13

Analyte	RF	Curve Date
o-Terph Surr	12683.1	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	13470.3	04-DEC-2012
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	15762.0	04-DEC-2012
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.1/20130105.b/0105a033.d

Date : 05-JAN-2013 21:01

Client ID:

Sample Info: M OIL500-ICV

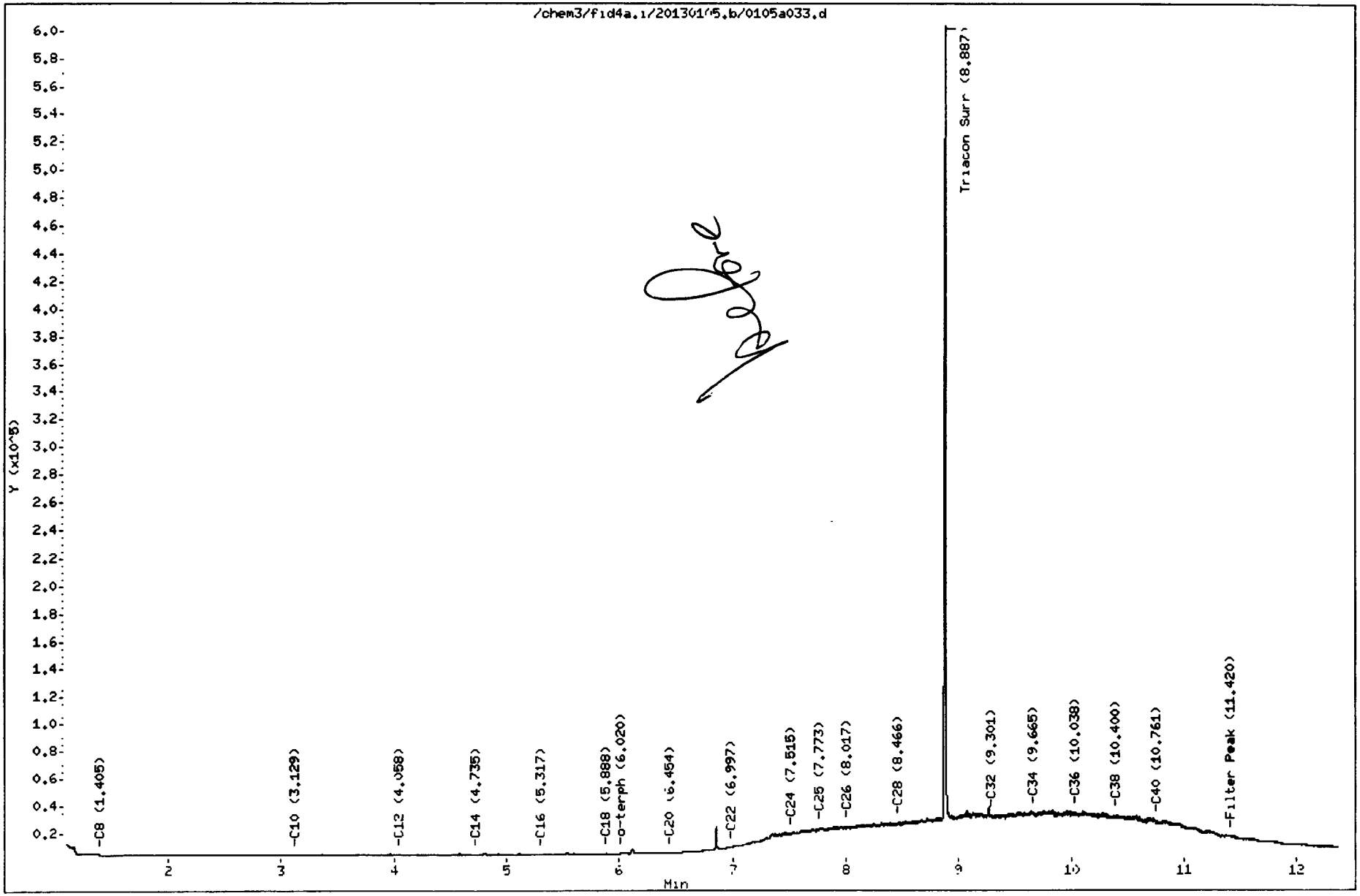
Column phase: RTX-1

Instrument: fid4a.1

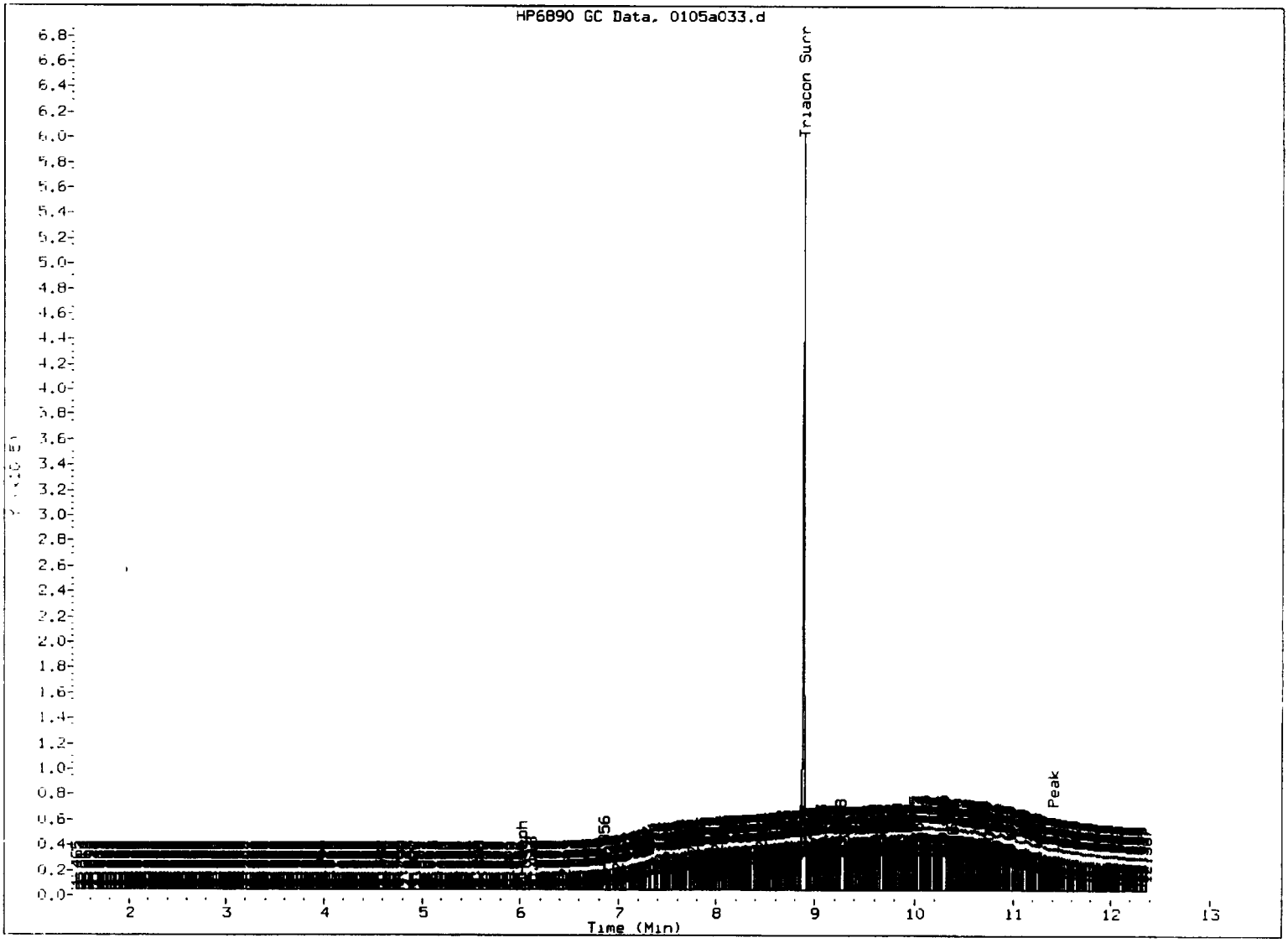
Operator: JR/VTS

Column diameter: 0.25

UZ917:01aaa



FID:4A-2C/RTX-1 M OIL500-ICV FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: _____ Date: 21/07/13

Analytical Resources Inc.: Organics Instrument Log

FID-4A Serial No.: US00003247

Date: 1.5.13 Analysis: TPHd Analyst: VB/JR

Column 1 Serial No.: 977444 Column Type: RTX-1

Column 2 Serial No.: — Column Type: —

GC Method: TPHd ICal Date: 1.5.13 Injection Volume: 1 ul

IS	Ical/Ccal	ICV
	2043-3	2043-1
	2043-4	2043-2
	2021-3	
	2041-4	

Document All Maintenance Tasks In StarLIMS

	Inject Date/Time	Filename	DF	LabID
1	05-JAN-2013 09:45	0105a001.d	1	RINSE1
2	05-JAN-2013 10:05	0105a002.d	1	RINSE2
3	05-JAN-2013 10:25	0105a003.d	1	RT
4	05-JAN-2013 10:45	0105a004.d	1	IB
5	05-JAN-2013 11:06	0105a005.d	1	DIESEL#1
6	05-JAN-2013 11:26	0105a006.d	1	MOIL#1
7	05-JAN-2013 11:46	0105a007.d	1	VY23MBS1
8	05-JAN-2013 12:07	0105a008.d	1	VY23LCSS1
9	05-JAN-2013 12:27	0105a009.d	1	VY23A
10	05-JAN-2013 12:55	0105a010.d	1	RINSE1
11	05-JAN-2013 13:15	0105a011.d	1	RINSE2
12	05-JAN-2013 13:35	0105a012.d	1	RT
13	05-JAN-2013 13:55	0105a013.d	1	IB
14	05-JAN-2013 14:15	0105a014.d	1	DIESEL#1
15	05-JAN-2013 14:35	0105a015.d	1	MOIL#1
16	05-JAN-2013 14:55	0105a016.d	1	VY23MBS1
17	05-JAN-2013 15:42	0105a017.d	1	RINSE1
18	05-JAN-2013 16:02	0105a018.d	1	RT
19	05-JAN-2013 16:21	0105a019.d	1	IB
20	05-JAN-2013 16:41	0105a020.d	1	DIES 50
21	05-JAN-2013 17:01	0105a021.d	1	DIES 100
22	05-JAN-2013 17:21	0105a022.d	1	DIES250
23	05-JAN-2013 17:41	0105a023.d	1	DIES500
24	05-JAN-2013 18:01	0105a024.d	1	DIES1000
25	05-JAN-2013 18:21	0105a025.d	1	DIES2500
26	05-JAN-2013 18:40	0105a026.d	1	DIES250-I
27	05-JAN-2013 19:00	0105a027.d	1	MOIL 100
28	05-JAN-2013 19:20	0105a028.d	1	MOIL 250
29	05-JAN-2013 19:40	0105a029.d	1	MOIL 500
30	05-JAN-2013 20:00	0105a030.d	1	MOIL 1000
31	05-JAN-2013 20:20	0105a031.d	1	MOIL 2500
32	05-JAN-2013 20:40	0105a032.d	1	MOIL 5000
33	05-JAN-2013 21:01	0105a033.d	1	M OIL500-
34	05-JAN-2013 21:21	0105a034.d	1	DIESEL #1
35	05-JAN-2013 21:41	0105a035.d	1	M OIL#1
36	05-JAN-2013 22:01	0105a036.d	1	VY23MBS1
37	05-JAN-2013 22:21	0105a037.d	1	VY23LCSS1
38	05-JAN-2013 22:41	0105a038.d	1	VY23A
39	05-JAN-2013 23:01	0105a039.d	1	VY23B
40	05-JAN-2013 23:21	0105a040.d	1	VY23LCSD8
41	05-JAN-2013 23:41	0105a041.d	1	DIESEL#2
42	06-JAN-2013 00:01	0105a042.d	1	M OIL#2

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

1.16.13 VD

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Initial Calibration Notes

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest)
427S(Dir Inj) **428S**(EPH) **Other**

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7 ECD-8

Curve Date(s): 01/24/13 Internal Standard ID ____ Expiration ____

Endrin/DDT Breakdown <15%? YES / NO / NA		ICV Exceeding ±20%?	YES / NO
ICal Meets %RSD & r^2 Criteria	YES / NO	ICV Exceeding ±30%?	YES / NO
Manual Integrations for ICal?	YES / NO	Linear Fits Used?	YES / NO
Minimum Response S/N Met	YES / NO	Quadratic Fits Used?	YES / NO
		Calibration Points Dropped?	YES / NO

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Union 76	2021-3	4/9/13	Shell	2043-1	10/20/13
Chevron	2041-4	11/27/13	Valvoline	2043-2	11/19/13
RT	2043-4	10/20/13			
IB	2043-3	10/20/13			

Detail problems, corrective actions and/or other pertinent information below:

Analyst: VD **Date:** 1.25.13

Reviewer: [signature] **Date:** 1/25/13

UZ97 01336

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid4a.i/20130124.b/ftphfid4a.m
Batch File: /chem3/fid4a.i/20130124.b
Inst ID: fid4a.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0124a005	0124a006	0124a007	0124a008	0124a009	0124a010
INJ.DATE:	24-JAN-2013	24-JAN-2013	24-JAN-2013	24-JAN-2013	24-JAN-2013	24-JAN-2013
INJ.TIME:	17:03	17:24	17:44	18:05	18:25	18:45

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1	Toluene	1.154	1.153	1.154	1.165	1.174	1.147	1.158	1.058-1.258	1.158	0.010
40	Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
39	Creosote	+++++	+++++	+++++	+++++	+++++	+++++	0.546	0.496-0.596	+++++	+++++
36	JetA	+++++	+++++	+++++	+++++	+++++	+++++	0.787	0.737-0.837	+++++	+++++
37	Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.718	0.668-0.768	+++++	+++++
38	Hydraulic Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.148	1.098-1.198	+++++	+++++
2	C8	1.488	1.413	1.382	1.394	1.403	1.395	1.395	1.295-1.495	1.412	0.039
3	C10	3.070	3.069	3.066	3.068	3.070	3.077	3.071	3.021-3.121	3.070	0.004
4	C12	3.994	3.991	3.989	3.988	3.989	3.994	3.993	3.943-4.043	3.991	0.003
5	C14	4.679	4.676	4.674	4.673	4.675	4.681	4.680	4.630-4.730	4.676	0.003
6	C16	5.264	5.263	5.264	5.263	5.267	5.275	5.270	5.220-5.320	5.266	0.005
7	C18	5.821	5.820	5.821	5.822	5.828	5.839	5.829	5.779-5.879	5.825	0.007
$ 8	o-terph	5.951	5.952	5.962	5.971	5.985	6.014	5.963	5.913-6.013	5.972	0.024
9	C20	6.384	6.382	6.382	6.383	6.386	6.394	6.392	6.342-6.442	6.385	0.005
10	C22	6.932	6.931	6.931	6.930	6.933	6.937	6.941	6.891-6.991	6.932	0.002
11	C24	7.463	7.457	7.455	7.454	7.453	7.455	7.466	7.416-7.516	7.456	0.003
12	C25	7.715	7.710	7.707	7.704	7.704	7.705	7.715	7.665-7.765	7.708	0.004

Reviewer 1 VD Date: 1.25.13

Reviewer 2 [signature] Date: 1/28/13

1257-2527

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid4a.i/20130124.b/ftphfid4a.m
Batch File: /chem3/fid4a.i/20130124.b
Inst ID: fid4a.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
13 C26	7.958	7.984	7.953	7.990	7.946	7.976	7.973	7.923-8.023	7.968	0.018
14 C28	8.414	8.429	8.425	8.422	8.408	8.411	8.419	8.369-8.469	8.418	0.008
$ 15 Triacon Surr	8.846	8.883	8.838	8.879	8.830	8.880	8.855	8.805-8.905	8.859	0.024
16 C32	9.254	9.246	9.239	9.234	9.246	9.242	9.242	9.192-9.292	9.244	0.007
17 C34	9.637	9.624	9.609	9.627	9.622	9.622	9.624	9.574-9.674	9.623	0.009
18 Filter Peak	11.576	11.570	11.568	11.555	11.548	11.555	11.560	11.460-11.660	11.562	0.011
19 C36	9.993	10.013	9.994	9.982	10.008	10.006	9.994	9.944-10.044	9.999	0.012
20 C38	10.361	10.352	10.371	10.347	10.335	10.347	10.351	10.301-10.401	10.352	0.012
21 C40	10.708	10.697	10.683	10.669	10.707	10.709	10.702	10.652-10.752	10.695	0.016
31 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
32 OR Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.687	0.637-0.737	+++++	+++++
42 Cal(IT) Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.500	0.450-0.550	+++++	+++++
33 AK Dies 102	+++++	+++++	+++++	+++++	+++++	+++++	0.660	0.610-0.710	+++++	+++++
30 NW MOil	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 CRUDE	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
35 AK MOil 103	+++++	+++++	+++++	+++++	+++++	+++++	0.612	0.562-0.662	+++++	+++++
41 ABUNKERC	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++

Report Date : 25-Jan-2013 11:22

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid4a.i/20130124.b/ftphfid4a.m
Batch File: /chem3/fid4a.i/20130124.b
Inst ID: fid4a.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0124a012	0124a013	0124a014	0124a015	0124a016	0124a017
INJ.DATE:	24-JAN-2013	24-JAN-2013	24-JAN-2013	24-JAN-2013	24-JAN-2013	24-JAN-2013
INJ.TIME:	19:25	19:45	20:05	20:25	20:45	21:05

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Toluene	+++++	1.151	1.109	1.137	1.137	1.152	1.158	1.058-1.258	1.137	0.017
40 Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
39 Creosote	+++++	+++++	+++++	+++++	+++++	+++++	0.546	0.496-0.596	+++++	+++++
36 JetA	+++++	+++++	+++++	+++++	+++++	+++++	0.787	0.737-0.837	+++++	+++++
37 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.718	0.668-0.768	+++++	+++++
38 Hydraulic Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.148	1.098-1.198	+++++	+++++
2 C8	1.492	1.431	1.442	1.426	1.310	1.376	1.395	1.295-1.495	1.413	0.063
3 C10	3.067	3.065	3.074	3.071	3.070	3.071	3.071	3.021-3.121	3.070	0.003
4 C12	3.998	3.998	3.992	3.981	3.986	4.001	3.993	3.943-4.043	3.993	0.008
5 C14	4.673	4.669	4.684	4.664	4.694	4.689	4.680	4.630-4.730	4.679	0.012
6 C16	5.265	5.263	5.264	5.286	5.267	5.266	5.270	5.220-5.320	5.268	0.009
7 C18	5.829	5.828	5.827	5.826	5.823	5.822	5.829	5.779-5.879	5.826	0.003
$ 8 o-terph	5.960	5.958	5.956	5.954	5.951	5.950	5.963	5.913-6.013	5.955	0.004
9 C20	6.399	6.386	6.383	6.384	6.399	6.399	6.392	6.342-6.442	6.392	0.008
10 C22	6.938	6.941	6.933	6.941	6.945	6.938	6.941	6.891-6.991	6.939	0.004
11 C24	7.462	7.472	7.469	7.461	7.459	7.469	7.466	7.416-7.516	7.465	0.005
12 C25	7.720	7.715	7.709	7.709	7.719	7.712	7.715	7.665-7.765	7.714	0.005

Reviewer 1 VD Date: 1.25.13
Reviewer 2 Date: 4/15/12

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid4a.i/20130124.b/ftphfid4a.m
Batch File: /chem3/fid4a.i/20130124.b
Inst ID: fid4a.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	13 C26	7.968	7.962	7.982	7.981	7.970	7.973	7.973	7.923-8.023	7.973	0.008
	14 C28	8.420	8.421	8.414	8.422	8.417	8.424	8.419	8.369-8.469	8.420	0.004
$	15 Triacon Surr	8.824	8.828	8.837	8.850	8.877	8.910	8.855	8.805-8.905	8.854	0.033
	16 C32	9.234	9.231	9.245	9.241	9.239	9.242	9.242	9.192-9.292	9.239	0.005
	17 C34	9.625	9.631	9.627	9.621	9.629	9.640	9.624	9.574-9.674	9.629	0.007
	18 Filter Peak	11.580	11.570	11.568	11.553	11.557	11.559	11.560	11.460-11.660	11.564	0.010
	19 C36	9.988	9.992	9.989	9.995	9.996	9.992	9.994	9.944-10.044	9.992	0.003
	20 C38	10.354	10.350	10.355	10.347	10.344	10.347	10.351	10.301-10.401	10.349	0.004
	21 C40	10.706	10.702	10.693	10.695	10.709	10.707	10.702	10.652-10.752	10.702	0.007
	31 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
	32 OR Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.687	0.637-0.737	+++++	+++++
	42 Cal(IT) Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.500	0.450-0.550	+++++	+++++
	33 AK Dies 102	+++++	+++++	+++++	+++++	+++++	+++++	0.660	0.610-0.710	+++++	+++++
	30 NW MOil	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
	34 CRUDE	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
	35 AK MOil 103	+++++	+++++	+++++	+++++	+++++	+++++	0.612	0.562-0.662	+++++	+++++
	41 ABUNKERC	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++

SHEEN : 12527

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid4a.i/20130124.b

ARI Job No.: RT Method: ftphfid4a.m Instrument: fid4a.i Date: 24-JAN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1621	0124a003.d	RT		1	NO MANUAL INTEGRATION
1643	0124a004.d	IB		1	NO MANUAL INTEGRATION
1703	0124a005.d	50PPMDIESEL		1	o-terph,
1724	0124a006.d	100PPMDIESEL		1	o-terph,
1744	0124a007.d	250PPMDIESEL		1	o-terph,
1805	0124a008.d	500PPMDIESEL		1	o-terph,
1825	0124a009.d	1000PPMDIESEL		1	o-terph,
1845	0124a010.d	2500PPMDIESEL		1	o-terph,
1905	0124a011.d	DIESELICV		1	o-terph,
1925	0124a012.d	100PPMMOIL		1	Triacon Surr,
1945	0124a013.d	250PPMMOIL		1	Triacon Surr,
2005	0124a014.d	500PPMMOIL		1	Triacon Surr,
2025	0124a015.d	1000PPMMOIL		1	Triacon Surr,
2045	0124a016.d	2500PPMMOIL		1	Triacon Surr,
2105	0124a017.d	5000PPMMOIL		1	Triacon Surr,
2125	0124a018.d	MOILICV		1	Triacon Surr,

FILED - 05137

Analytical Resources Inc.: Organics Instrument Log

FID-4A Serial No.: US00003247

Date: 1·24·13 Analysis: TPHd Analyst: JR/VD

Column 1 Serial No.: 977444 Column Type: RTX-1

Column 2 Serial No.: — Column Type: —

GC Method: TPHd ICal Date: 1·24·13 Injection Volume: 1 uL

IS	Ical/Ccal	ICV
	2043 -3,4	2043-1
	2021-3	2043-2
	2041-4	

GC LOG SUMMARY FOR DATABATCH - /chem3/fid4a.i/20130124.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	24-JAN-2013 15:32	0124a001.d	1	RINSE	
2	24-JAN-2013 15:52	0124a002.d	1	RINSE	
3	24-JAN-2013 16:21	0124a003.d	1	RT	
4	24-JAN-2013 16:43	0124a004.d	1	IB	
5	24-JAN-2013 17:03	0124a005.d	1	50PPMDIESEL	
6	24-JAN-2013 17:24	0124a006.d	1	100PPMDIESEL	
7	24-JAN-2013 17:44	0124a007.d	1	250PPMDIESEL	
8	24-JAN-2013 18:05	0124a008.d	1	500PPMDIESEL	
9	24-JAN-2013 18:25	0124a009.d	1	1000PPMDIESEL	
10	24-JAN-2013 18:45	0124a010.d	1	2500PPMDIESEL	
11	24-JAN-2013 19:05	0124a011.d	1	DIESELICV	
12	24-JAN-2013 19:25	0124a012.d	1	100PPMMOIL	
13	24-JAN-2013 19:45	0124a013.d	1	250PPMMOIL	
14	24-JAN-2013 20:05	0124a014.d	1	500PPMMOIL	
15	24-JAN-2013 20:25	0124a015.d	1	1000PPMMOIL	
16	24-JAN-2013 20:45	0124a016.d	1	2500PPMMOIL	
17	24-JAN-2013 21:05	0124a017.d	1	5000PPMMOIL	
18	24-JAN-2013 21:25	0124a018.d	1	MOILICV	
19	24-JAN-2013 21:45	0124a019.d	1	DIESEL#1	JBLM
20	24-JAN-2013 22:05	0124a020.d	1	MOIL#1	JBLM
21	24-JAN-2013 22:25	0124a021.d	1	WA85MBS1	WA85MBS1
22	24-JAN-2013 22:45	0124a022.d	1	WA85LCSS1	WA85LCSS1
23	24-JAN-2013 23:05	0124a023.d	1	WA85LCSDS1	WA85LCSDS1
24	24-JAN-2013 23:25	0124a024.d	1	WA85A	2492-B-03
25	24-JAN-2013 23:45	0124a025.d	1	WA85B	2492-S-01
26	25-JAN-2013 00:05	0124a026.d	1	WA85C	2492-E-02
27	25-JAN-2013 00:25	0124a027.d	1	WA85D	2492-SP-01
28	25-JAN-2013 00:45	0124a028.d	1	WA85E	2492-SP-02
29	25-JAN-2013 01:05	0124a029.d	1	WA85F	2492-SP-03
30	25-JAN-2013 01:25	0124a030.d	1	DIESEL#2	JBLM
31	25-JAN-2013 01:45	0124a031.d	1	MOIL#2	JBLM
32	25-JAN-2013 02:05	0124a032.d	5	VZ97K	
33	25-JAN-2013 02:25	0124a033.d	1	VZ97L	
34	25-JAN-2013 02:45	0124a034.d	1	VZ97M	
35	25-JAN-2013 03:05	0124a035.d	50	VZ97N	
36	25-JAN-2013 03:25	0124a036.d	50	VZ97O	
37	25-JAN-2013 03:45	0124a037.d	10	VZ97P	
38	25-JAN-2013 04:05	0124a038.d	10	VZ97Q	
39	25-JAN-2013 04:25	0124a039.d	1	VZ97R	
40	25-JAN-2013 04:45	0124a040.d	1	DIESEL#3	
41	25-JAN-2013 05:06	0124a041.d	1	MOIL#3	
42	25-JAN-2013 05:26	0124a042.d	1	WA25MBS1	WA25MBS1
43	25-JAN-2013 05:46	0124a043.d	1	WA25LCSS1	WA25LCSS1
44	25-JAN-2013 06:06	0124a044.d	1	WA25QLS	
Eve 45	25-JAN-2013 06:27	0124a045.d	1	WA25A	1A
Sta 46	25-JAN-2013 06:47	0124a046.d	1	WA25AMS	1A MS
47	25-JAN-2013 07:08	0124a047.d	1	WA25AMSD	1A MSD
48	25-JAN-2013 07:28	0124a048.d	1	WA25B	1B
49	25-JAN-2013 07:49	0124a049.d	1	WA25C	1C
Form 41 50	25-JAN-2013 08:09	0124a050.d	1	WA25D	2A

VD 1.29.13

UX97 01342

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client:

SDG No.: 20130124 Project:

Instrument ID: FID4A GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 5.96 TRIAC: 8.86

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		RT	01/24/13	1621	5.96	8.86
02		IB	01/24/13	1643	5.96	8.85
03		50PPMDIESEL	01/24/13	1703	5.95	8.85
04		100PPMDIESEL	01/24/13	1724	5.95	8.88
05		250PPMDIESEL	01/24/13	1744	5.96	8.84
06		500PPMDIESEL	01/24/13	1805	5.97	8.88
07		1000PPMDIESE	01/24/13	1825	5.98	8.83
08		2500PPMDIESE	01/24/13	1845	6.01*	8.88
09		DIESELICV	01/24/13	1905	5.96	8.86
10		100PPMMOIL	01/24/13	1925	5.96	8.82
11		250PPMMOIL	01/24/13	1945	5.96	8.83
12		500PPMMOIL	01/24/13	2005	5.96	8.84
13		1000PPMMOIL	01/24/13	2025	5.95	8.85
14		2500PPMMOIL	01/24/13	2045	5.95	8.88
15		5000PPMMOIL	01/24/13	2105	5.95	8.91*
16		MOILICV	01/24/13	2125	5.96	8.84

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

VZ97:01343

6a

NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: 20130124

Instrument: FID4A.I Project:

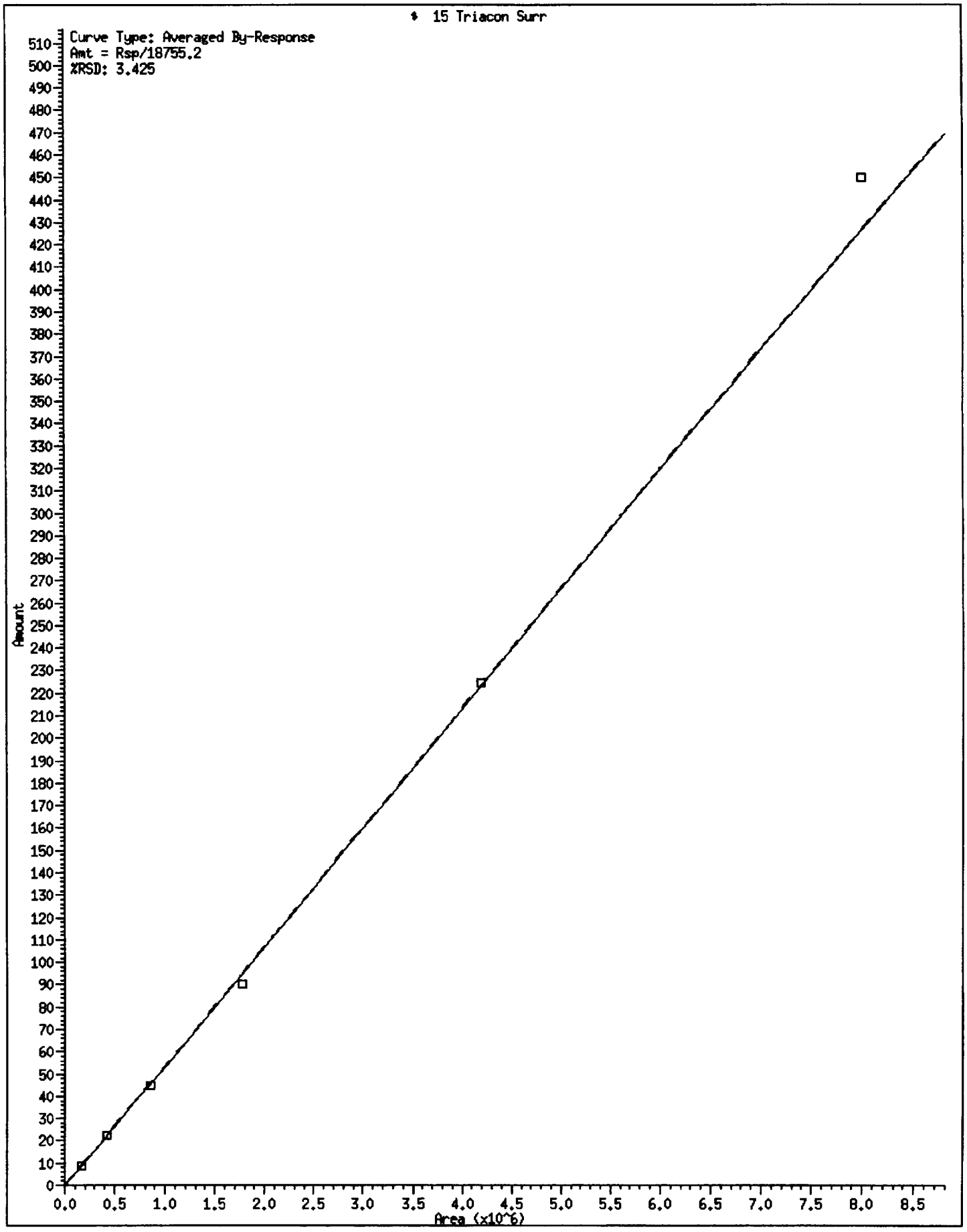
Calibration Date: 24-JAN-2013 SDG No.: 20130124

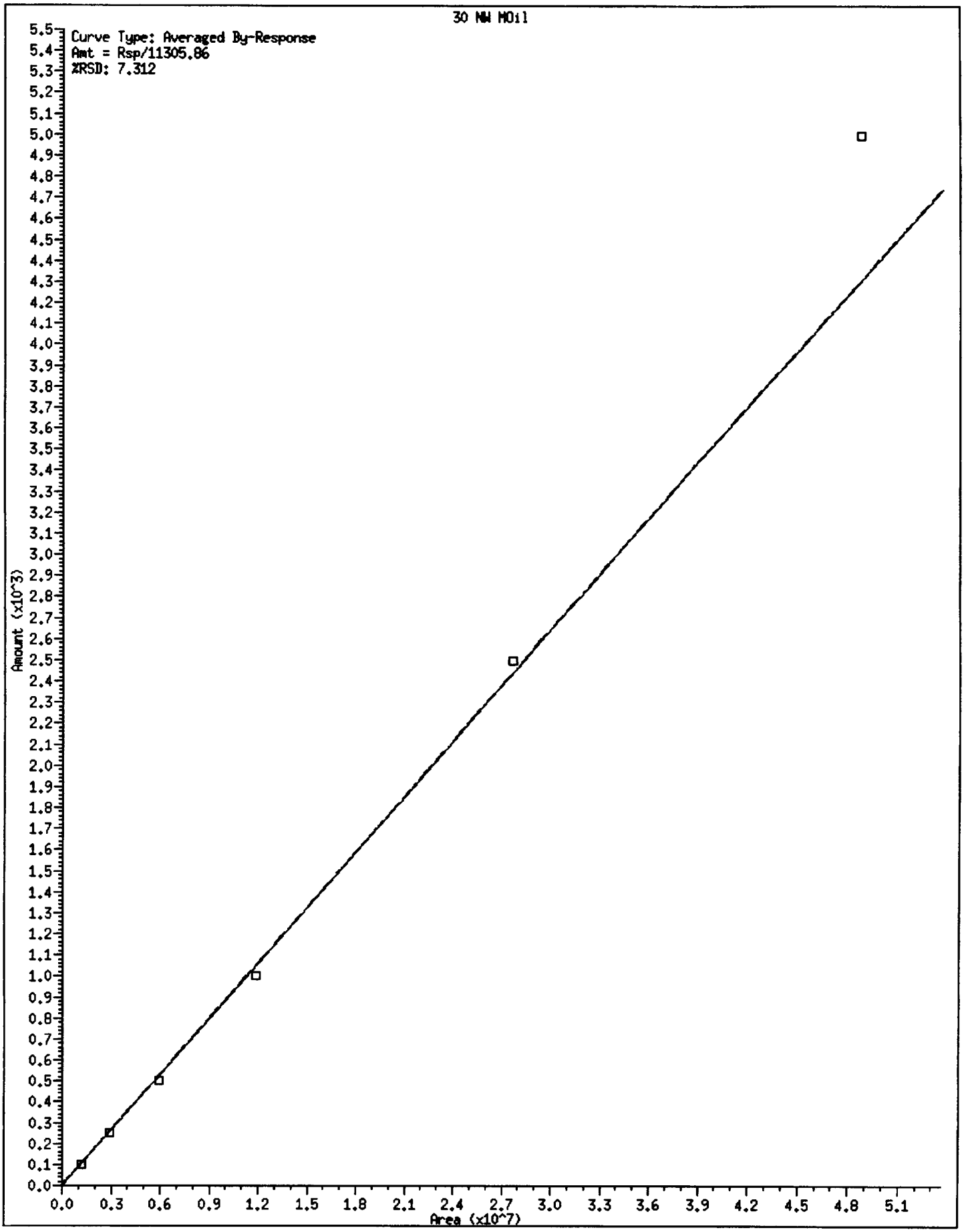
Product Range	RF1 100	RF2 250	RF3 500	RF4 1000	RF5 2500	RF6 5000	Ave RF	%RSD
WA M.Oil C24-C38	11800	11548	11831	11878	11035	9744	11306	7.3
Triac Surr	18724	18705	18938	19784	18596	17784	18755	3.4

<- Indicates %RSD outside limits
Surrogate areas are not included in Motor Oil RF calculation.

Calibration Files	Analysis Time
0124a012.d	24-JAN-2013 19:25
0124a013.d	24-JAN-2013 19:45
0124a014.d	24-JAN-2013 20:05
0124a015.d	24-JAN-2013 20:25
0124a016.d	24-JAN-2013 20:45
0124a017.d	24-JAN-2013 21:05

VZ97:01344


15 Triacon Surr
Curve Type: Averaged By-Response
Amt = Rsp/18755.2
%RSD: 3.425
Amount
Area (x10^6)
0
10
20
30
40
50
60
70
80
90
100
110
120
130
140
150
160
170
180
190
200
210
220
230
240
250
260
270
280
290
300
310
320
330
340
350
360
370
380
390
400
410
420
430
440
450
460
470
480
490
500
510
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
5.5
6.0
6.5
7.0
7.5
8.0
8.5


30 NW MOil
Curve Type: Averaged By-Response
Amt = Rsp/11305.86
%RSD: 7.312
Amount (x10^3)
Area (x10^7)

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 14-DEC-2012 16:47
End Cal Date : 24-JAN-2013 21:05
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : Falcon
Method file : /chem3/fid4a.i/20130124.b/ftphfid4a.m
Cal Date : 25-Jan-2013 07:01 jrains
Curve Type : Average

Compound	0.000e+00 Level 1	0.000e+00 Level 2	0.000e+00 Level 3	0.000e+00 Level 4	0.000e+00 Level 5	0.000e+00 Level 6	RRF	% RSD
	0.000e+00 Level 7	0.000e+00 Level 8	0.000e+00 Level 9	0.000e+00 Level 10	0.000e+00 Level 11	0.000e+00 Level 12		
	0.000e+00 Level 13							
$ 8 o-terph	+++++	19174	19888	19212	20284	21390		
	21653	+++++	+++++	+++++	+++++	+++++		
	+++++						20267	5.237
$ 15 Triacon Surr	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	18724	18705	18938	19784	18596		
	17784						18755	3.425

6a
DIESEL INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: 20130124

Instrument: FID4A.I Project:

Calibration Date: 24-JAN-2013 SDG No.: 20130124

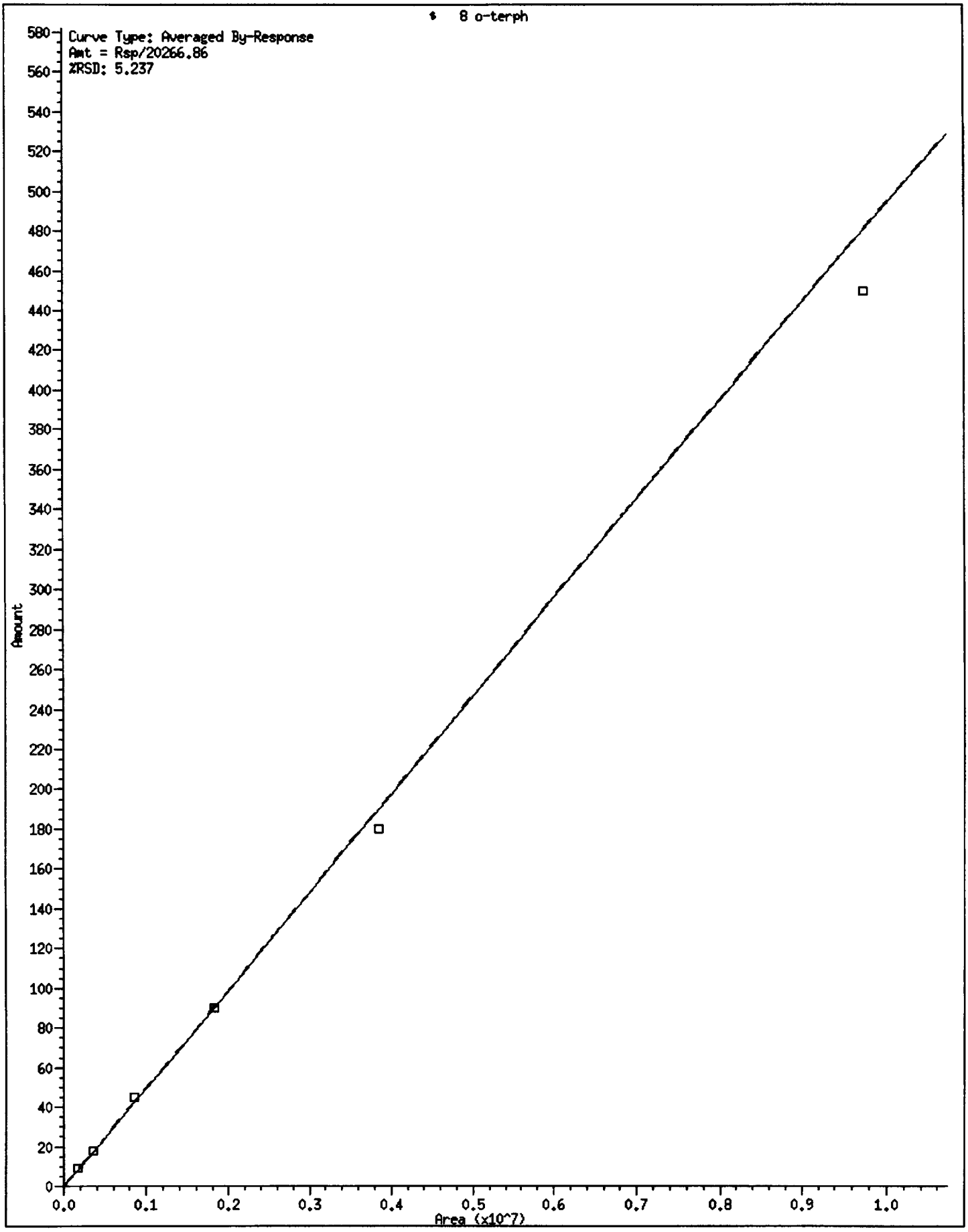
Diesel Range	RF1 50	RF2 100	RF3 250	RF4 500	RF5 1000	RF6 2500	Ave RF	%RSD
WA Diesel	17473	16709	15845	16052	16444	16410	16489	3.5
AK Diesel	21465	20277	18899	19157	19500	19474	19795	4.8
OR Diesel	21709	20626	19011	19272	19601	19623	19974	5.1
Cal Diesel	21367	20161	18843	19102	19444	19415	19722	4.7
o-Terph	19174	19888	19212	20284	21390	21653	20267	5.2

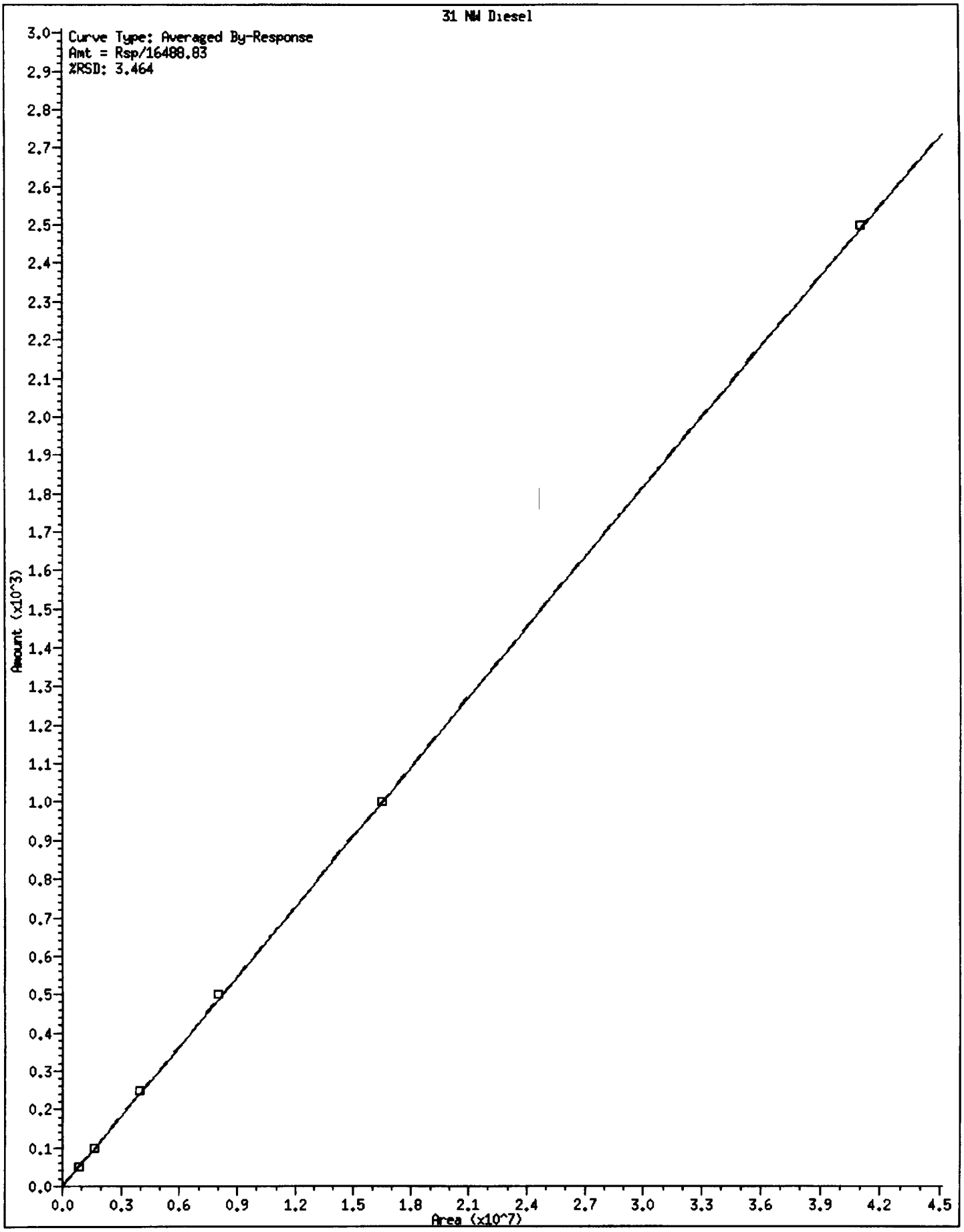
<- Indicates %RSD outside limits
Surrogate areas are not included in Diesel RF calculation.

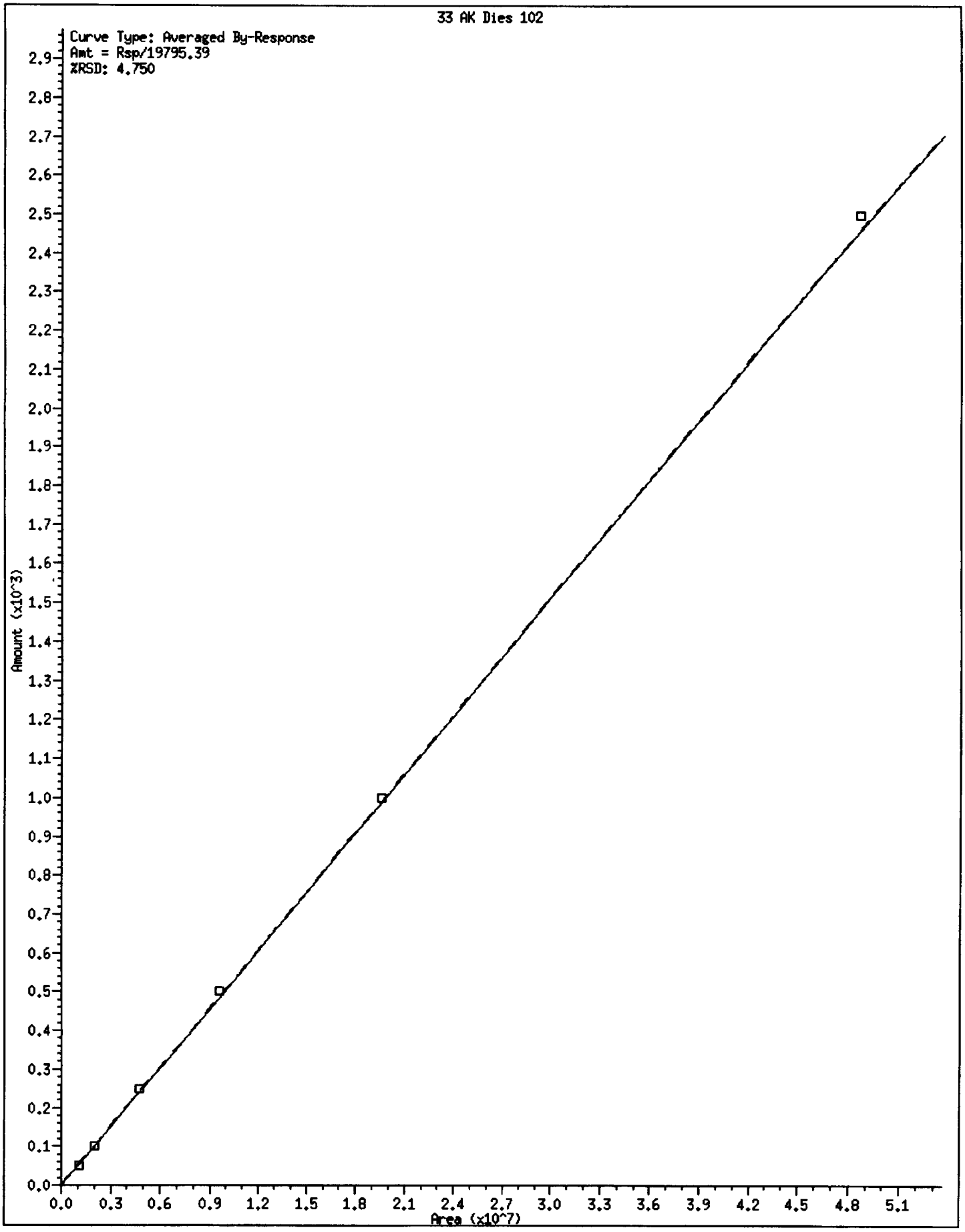
Quant Ranges : WA Diesel C12-C24 (3.993-7.466)
AK Diesel C10-C25 (3.071-7.715)
OR Diesel C10-C28 (3.071-8.419)
Cal Diesel C10-C24 (3.071-7.466)

Calibration Files	Analysis Time
0124a005.d	24-JAN-2013 17:03
0124a006.d	24-JAN-2013 17:24
0124a007.d	24-JAN-2013 17:44
0124a008.d	24-JAN-2013 18:05
0124a009.d	24-JAN-2013 18:25
0124a010.d	24-JAN-2013 18:45

VZ97:01308


8 o-terph
Curve Type: Averaged By-Response
Amt = Rsp/20266.86
%RSD: 5.237
Amount
Area (x10^7)
0
20
40
60
80
100
120
140
160
180
200
220
240
260
280
300
320
340
360
380
400
420
440
460
480
500
520
540
560
580
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0


31 NW Diesel
Curve Type: Averaged By-Response
Amt = Rsp/16488.83
%RSD: 3.464
Amount (x10^3)
Area (x10^7)
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2.0
2.1
2.2
2.3
2.4
2.5
2.6
2.7
2.8
2.9
3.0
0.0
0.3
0.6
0.9
1.2
1.5
1.8
2.1
2.4
2.7
3.0
3.3
3.6
3.9
4.2
4.5


33 AK Dies 102
Curve Type: Averaged By-Response
Amt = Rsp/19795.39
%RSD: 4.750
Amount (x10^3)
Area (x10^7)
0.0 0.3 0.6 0.9 1.2 1.5 1.8 2.1 2.4 2.7 3.0 3.3 3.6 3.9 4.2 4.5 4.8 5.1
0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 1.8 1.9 2.0 2.1 2.2 2.3 2.4 2.5 2.6 2.7 2.8 2.9

Data File: /chem3/fid4a.i/20130124.b/0124a003.d

Date : 24-JAN-2013 16:21

Client ID:

Sample Info: RT

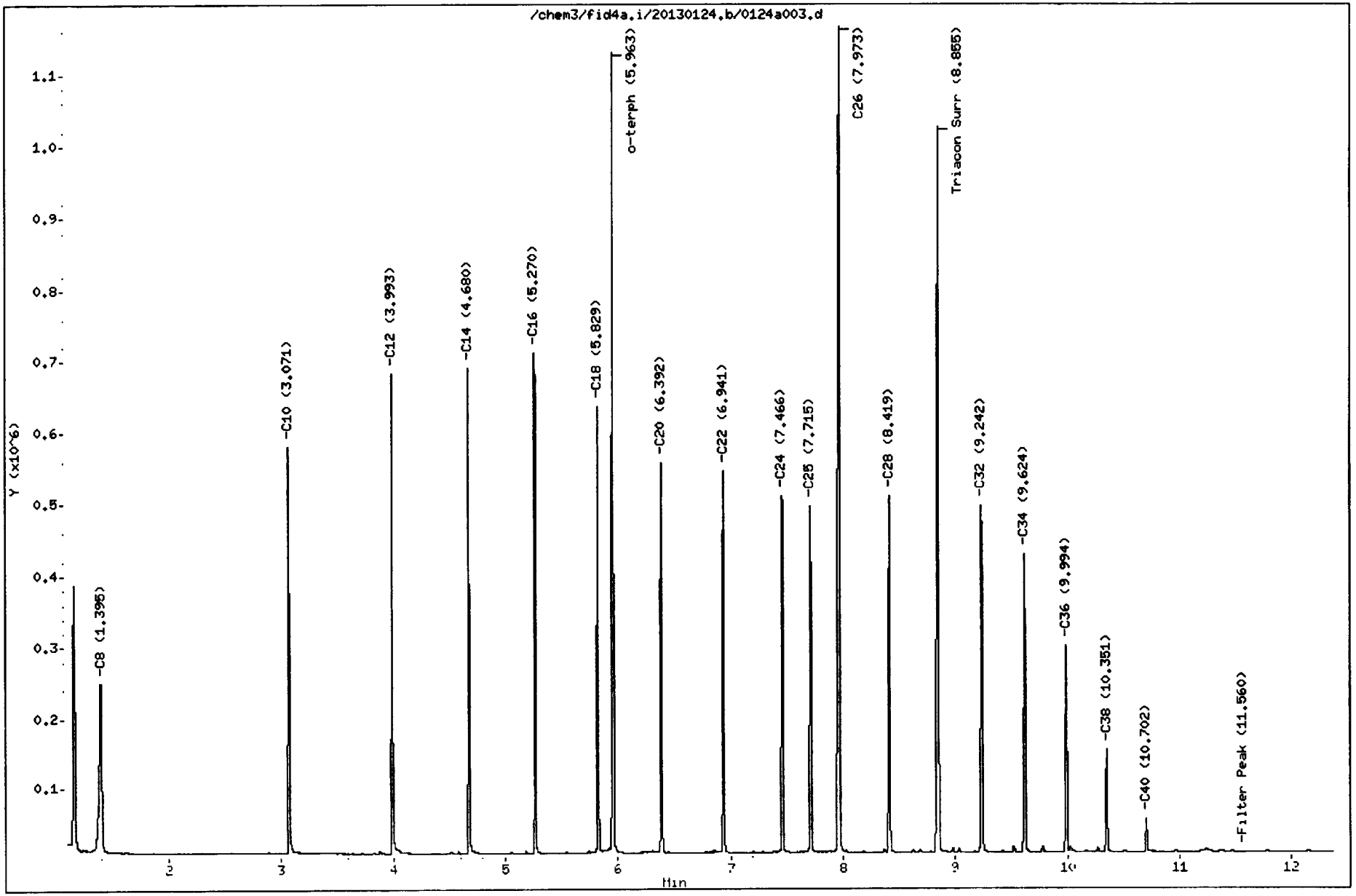
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS

Column diameter: 0.25

UZ917 : 01852



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130124.b/0124a003.d ARI ID: RT
Method: /chem3/fid4a.i/20130124.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 24-JAN-2013 16:21
Operator: JR/VTS
Report Date: 01/25/2013 Dilution Factor: 1
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.158	0.000	380813	442368	WATPHG	(Tol-C12)	1907992	172.04
C8	1.395	0.000	243504	434101	WATPHD	(C12-C24)	2463935	149.43
C10	3.071	0.000	572114	397060	WATPHM	(C24-C38)	3238252	286.42
C12	3.993	0.000	675319	388146	AK102	(C10-C25)	3313308	167.38
C14	4.680	0.000	684448	391333	AK103	(C25-C36)	3095759	336.42
C16	5.270	0.000	704239	385640				
C18	5.829	0.000	629881	390045				
C20	6.392	0.000	550189	375913	JET-A	(C10-C18)	2077216	383.50
C22	6.941	0.000	537132	387841				
C24	7.466	0.000	502971	392212	MSPIRIT	(Tol-C12)	1907992	144.05
C25	7.715	0.000	488611	383334				
C26	7.973	0.000	1157498	1172441				
C28	8.419	0.000	502883	411592				
C32	9.242	0.000	489418	412553				
C34	9.624	0.000	421330	370680				
Filter Peak	11.560	0.000	882	2877	CREOSOT	(C12-C22)	2056826	1022.21 M
C36	9.994	0.000	293837	263846				
C38	10.351	0.000	146411	126847				
C40	10.702	0.000	46097	43704				
o-terph	5.963	0.000	1122869	876755				
Triacon Surr	8.855	0.000	1020005	1088085	NAS DIES	(C10-C24)	3308180	273.34

Range Times: NW Diesel(3.993 - 7.466) AK102(3.07 - 7.71) Jet A(3.07 - 5.83)
NW M.Oil(7.47 - 10.35) AK103(7.71 - 9.99) OR Diesel(3.07 - 8.42)

Surrogate	Area	Amount	%Rec
o-Terphenyl	876755	43.3	96.1
Triacontane	1088085	58.0	128.9

M Indicates the peak was manually integrated

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1.25.13

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	18755.2	24-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	16488.8	05-JAN-2013
Motor Oil	11305.9	05-JAN-2013
AK102	19795.4	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.1/20130124.b/0124a004.d

Date : 24-JAN-2013 16:43

Client ID:

Sample Info: IB

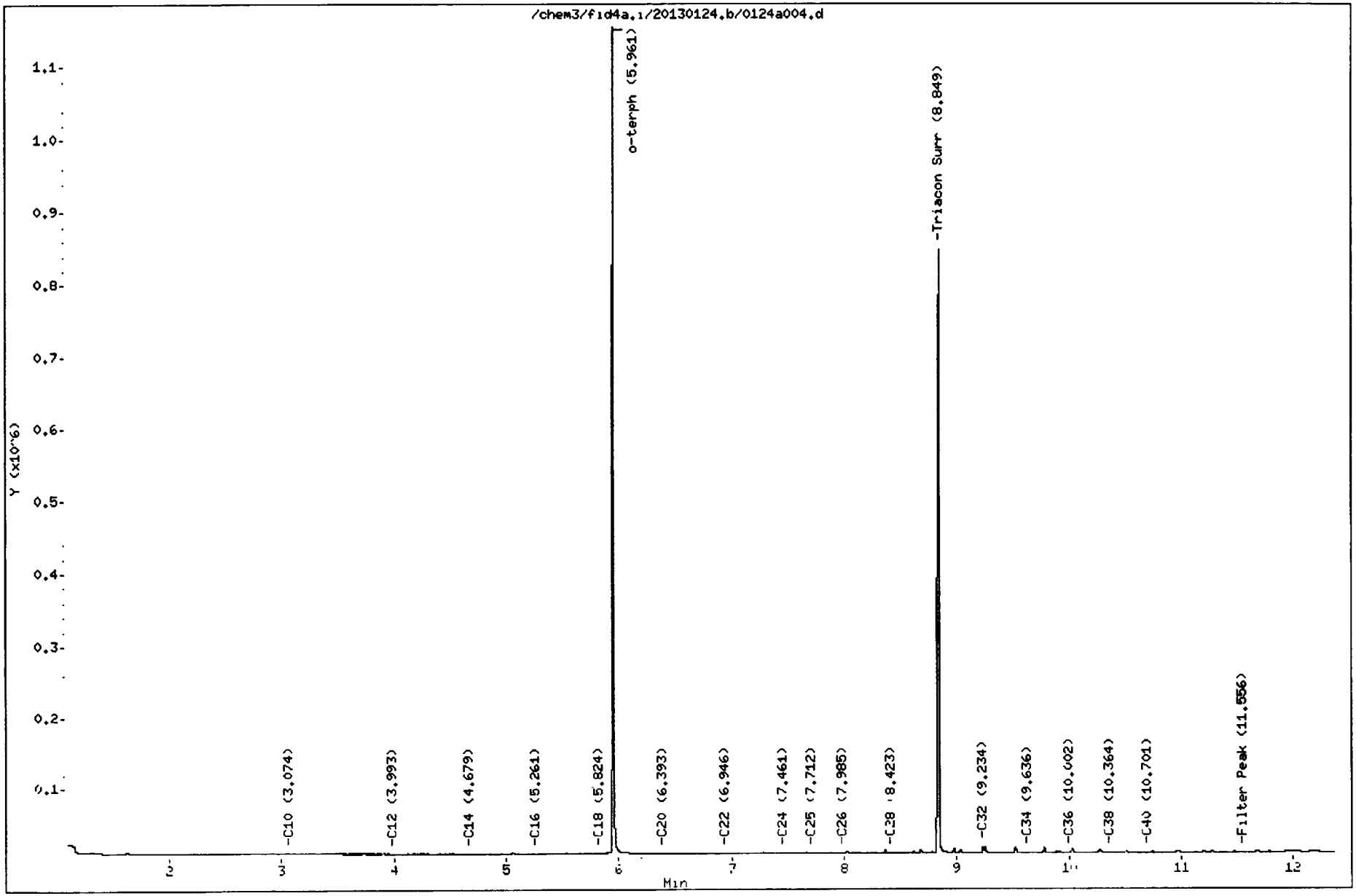
Column phase: RTX-1

Instrument: fid4a.1

Operator: JP/WTS

Column diameter: 0.25

UZ97-01354



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130124.b/0124a004.d
Method: /chem3/fid4a.i/20130124.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: IB
Client ID:
Injection: 24-JAN-2013 16:43
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.153	-0.005	13484	65718	WATPHG	(Tol-C12)	230720	20.80
C8	----				WATPHD	(C12-C24)	88352	5.36
C10	3.074	0.003	1134	1350	WATPHM	(C24-C38)	91669	8.11
C12	3.993	0.000	823	1041	AK102	(C10-C25)	149362	7.55
C14	4.679	0.000	905	273	AK103	(C25-C36)	77868	8.46
C16	5.261	-0.008	590	806				
C18	5.824	-0.005	488	502				
C20	6.393	0.001	318	442	JET-A	(C10-C18)	123445	22.79
C22	6.946	0.005	179	78				
C24	7.461	-0.005	133	169	MSPIRIT	(Tol-C12)	230720	17.42
C25	7.712	-0.003	111	166				
C26	7.985	0.012	71	65				
C28	8.423	0.004	509	466				
C32	9.234	-0.008	8575	7754				
C34	9.636	0.011	259	458				
Filter Peak	11.556	-0.004	647	276	CREOSOT	(C12-C22)	84042	41.77 M
C36	10.002	0.008	661	617				
C38	10.364	0.012	523	1191				
C40	10.701	-0.001	439	416				
o-terph	5.961	-0.003	1147471	898251				
Triacon Surr	8.849	-0.006	841586	855707	NAS DIES	(C10-C24)	147627	12.20

Range Times: NW Diesel(3.993 - 7.466) AK102(3.07 - 7.71) Jet A(3.07 - 5.83)
NW M.Oil(7.47 - 10.35) AK103(7.71 - 9.99) OR Diesel(3.07 - 8.42)

Surrogate	Area	Amount	%Rec
o-Terphenyl	898251	44.3	98.5
Triacontane	855707	45.6	101.4

M Indicates the peak was manually integrated

VJ
1-25-13

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	18755.2	24-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	16488.8	05-JAN-2013
Motor Oil	11305.9	05-JAN-2013
AK102	19795.4	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.i/20130124.b/0124a005.d
Date : 24-JAN-2013 17:03
Client ID:
Sample Info: 50PPMDIESEL

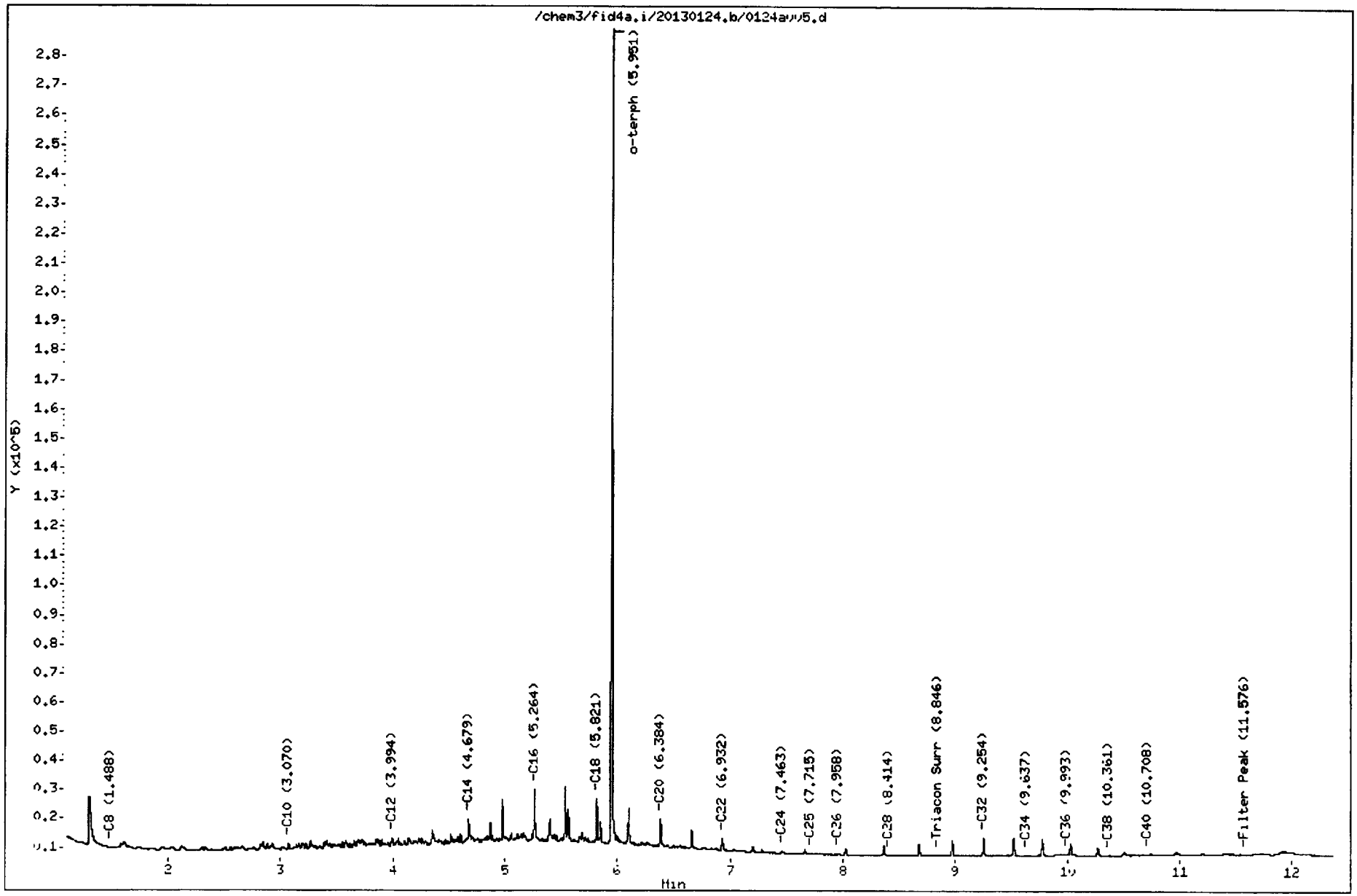
Column phase: RTX-1

Instrument: fid4a.i

Operator: JP/VTS
Column diameter: 0.25

VTS 1.25.13

V797 : 01355



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130124.b/0124a005.d
Method: /chem3/fid4a.i/20130124.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: 50PPMDIESEL
Client ID:
Injection: 24-JAN-2013 17:03
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.154	-0.004	5182	13970	WATPHG	(Tol-C12)	472757	42.63
C8	1.488	0.094	2516	4510	WATPHD	(C12-C24)	873668	52.99
C10	3.070	-0.002	3591	4834	WATPHM	(C24-C38)	59139	5.23
C12	3.994	0.001	5816	9714	AK102	(C10-C25)	1073247	54.22
C14	4.679	-0.001	12535	21296	AK103	(C25-C36)	48665	5.29
C16	5.264	-0.005	22844	27792				
C18	5.821	-0.008	19425	19988				
C20	6.384	-0.007	12311	15892	JET-A	(C10-C18)	821260	151.62
C22	6.932	-0.009	5540	9823				
C24	7.463	-0.003	1348	3687	MSPIRIT	(Tol-C12)	472757	35.69
C25	7.715	0.000	603	1596				
C26	7.958	-0.015	319	452				
C28	8.414	-0.005	93	51				
C32	9.254	0.012	6150	5264				
C34	9.637	0.012	158	279				
Filter Peak	11.576	0.016	652	203	CREOSOT	(C12-C22)	844006	419.46 M
C36	9.993	-0.002	331	157				
C38	10.361	0.009	233	267				
C40	10.708	0.006	304	335				
o-terph	5.951	-0.012	277271	172570				
Triacon Surr	8.846	-0.009	228	326	NAS DIES	(C10-C24)	1068342	88.27

Range Times: NW Diesel(3.993 - 7.466) AK102(3.07 - 7.71) Jet A(3.07 - 5.83)
NW M.Oil(7.47 - 10.35) AK103(7.71 - 9.99) OR Diesel(3.07 - 8.42)

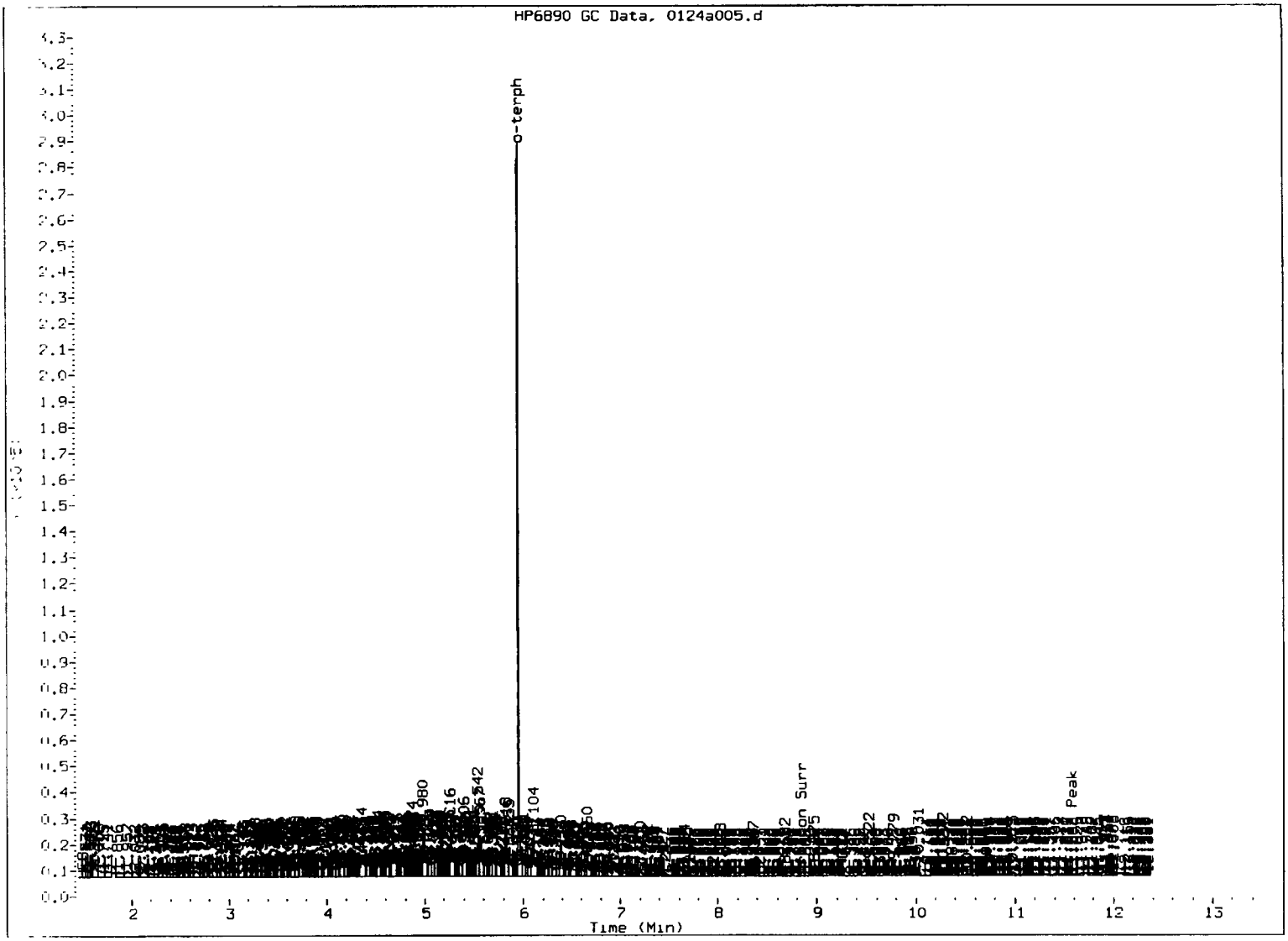
Surrogate	Area	Amount	%Rec
o-Terphenyl	172570	8.5	18.9 M
Triacontane	326	0.0	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	18755.2	24-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	16488.8	05-JAN-2013
Motor Oil	11305.9	05-JAN-2013
AK102	19795.4	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

VZ97 01357

FID:4A-2C/RTX-1 50PPMDIESEL FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5) Skimmed surrogate

Analyst: VD Date: 1-25-13

Data File: /chem3/fid4a.1/20130124.b/0124a006.d
Date : 24-JAN-2013 17:24
Client ID:
Sample Info: 100PPMDIESEL

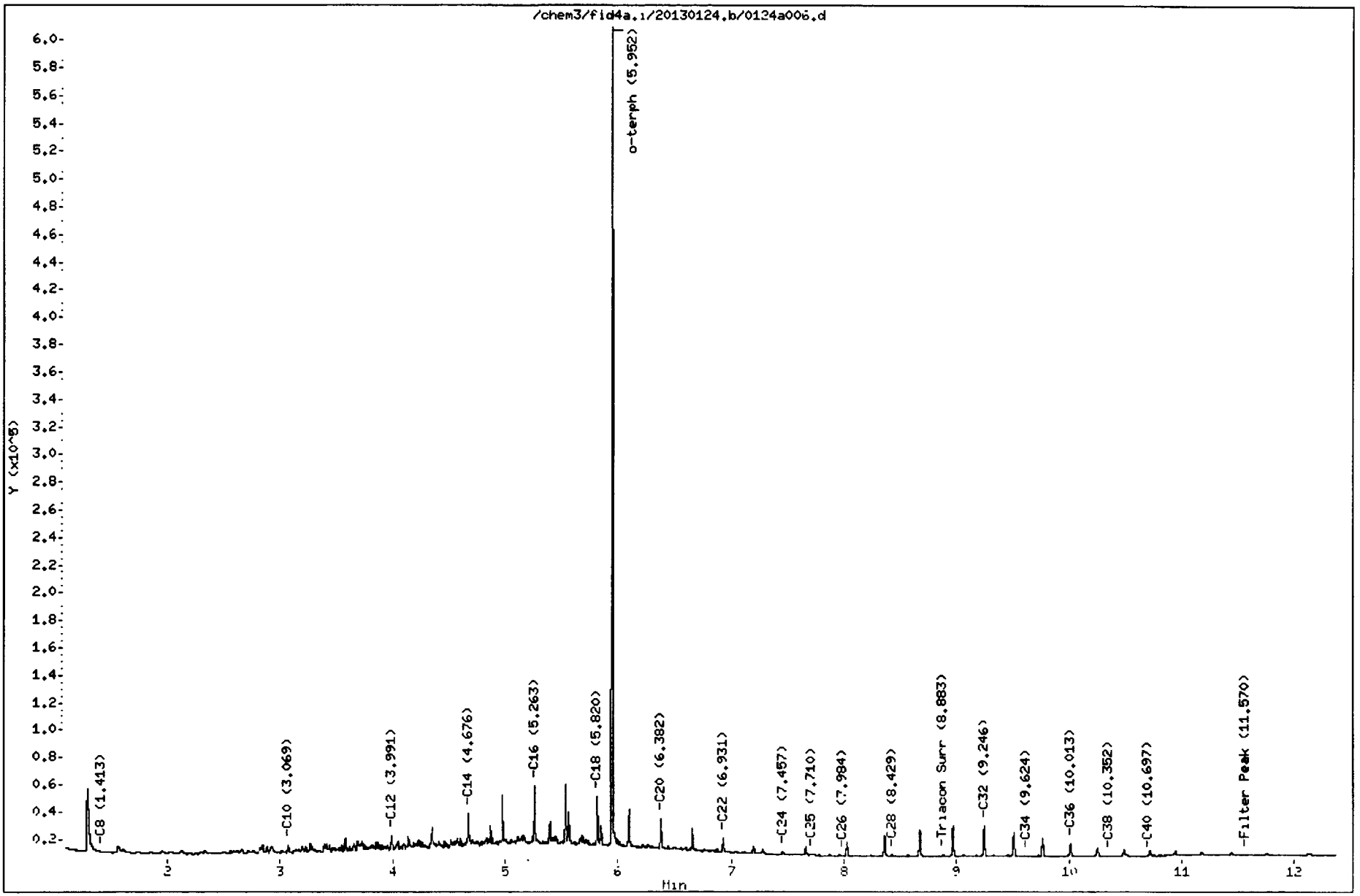
Column phase: RTX-1

Instrument: fid4a.1

Operator: JP/VTS
Column diameter: 0.25

VJ 1.25.13

V7937.01359



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130124.b/0124a006.d
Method: /chem3/fid4a.i/20130124.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: 100PPMDIESEL
Client ID:
Injection: 24-JAN-2013 17:24
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.153	-0.005	5371	15654	WATPHG	(Tol-C12)	732696	66.07
C8	1.413	0.018	3273	14233	WATPHD	(C12-C24)	1670920	101.34
C10	3.069	-0.002	8058	11703	WATPHM	(C24-C38)	158870	14.05
C12	3.991	-0.002	15356	19110	AK102	(C10-C25)	2027729	102.43
C14	4.676	-0.004	31212	38503	AK103	(C25-C36)	137344	14.93
C16	5.263	-0.007	51876	39480				
C18	5.820	-0.009	43720	38879				
C20	6.382	-0.009	27314	34526	JET-A	(C10-C18)	1533561	283.13
C22	6.931	-0.010	12713	17561				
C24	7.457	-0.009	2963	4109	MSPIRIT	(Tol-C12)	732696	55.32
C25	7.710	-0.005	1238	2589				
C26	7.984	0.012	359	358				
C28	8.429	0.009	628	985				
C32	9.246	0.004	21825	18508				
C34	9.624	0.000	266	475				
Filter Peak	11.570	0.010	688	1312	CREOSOT	(C12-C22)	1609181	799.74 M
C36	10.013	0.018	8858	9416				
C38	10.352	0.000	353	390				
C40	10.697	-0.004	408	150				
o-terph	5.952	-0.011	592646	357983				
Triacon Surr	8.883	0.028	747	830	NAS DIES	(C10-C24)	2016135	166.58

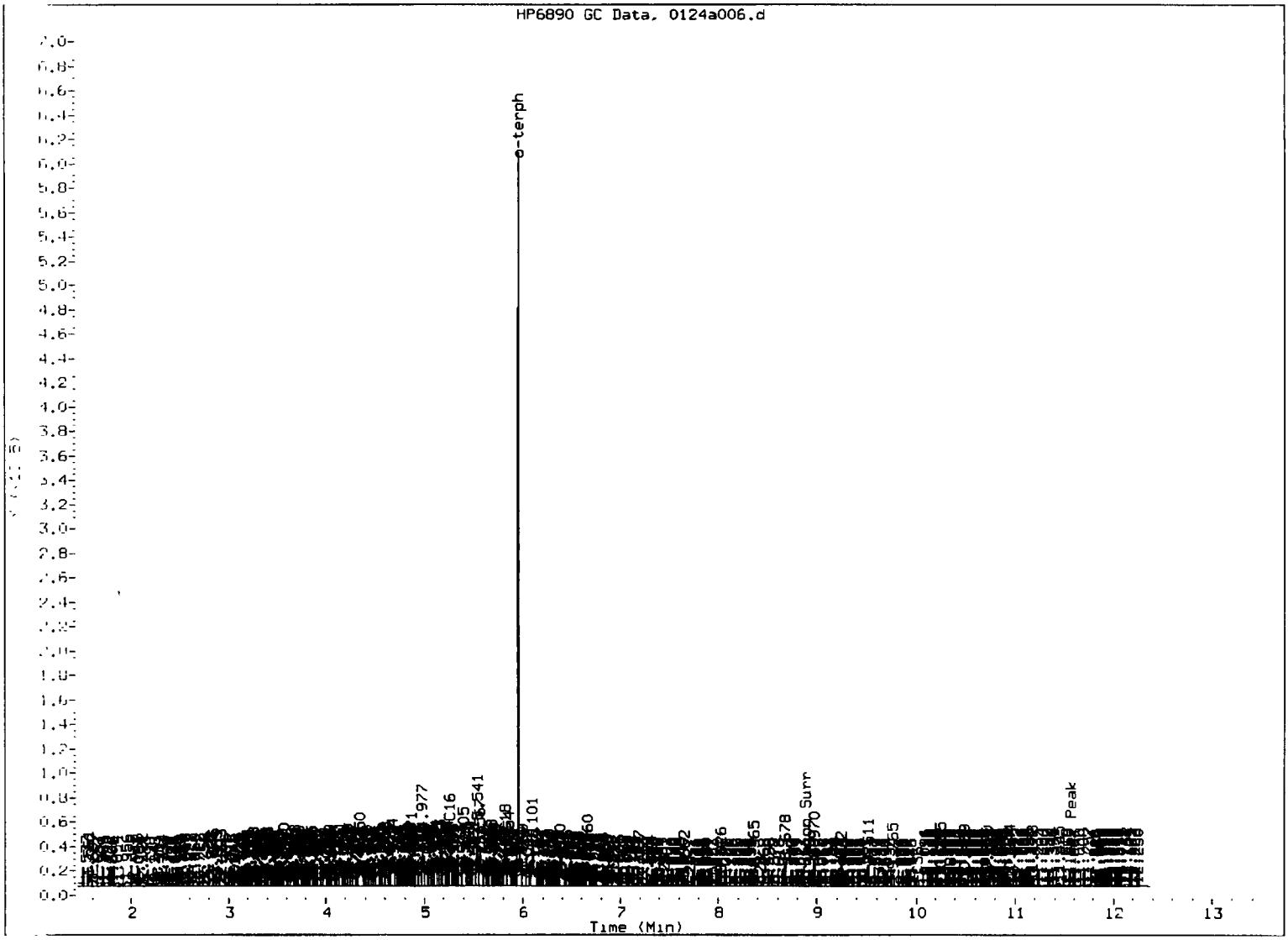
Range Times: NW Diesel(3.993 - 7.466) AK102(3.07 - 7.71) Jet A(3.07 - 5.83)
NW M.Oil(7.47 - 10.35) AK103(7.71 - 9.99) OR Diesel(3.07 - 8.42)

Surrogate	Area	Amount	%Rec
o-Terphenyl	357983	17.7	39.3 M
Triacontane	830	0.0	0.1

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	18755.2	24-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	16488.8	05-JAN-2013
Motor Oil	11305.9	05-JAN-2013
AK102	19795.4	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

FID:4A-2C/RTX-1 100PPMDIESEL FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VT Date: 1.25.13

Data File: /chem3/fid4a.1/20130124.b/0124a007.d
Date : 24-JAN-2013 17:44
Client ID:
Sample Info: 250PPMDIESEL

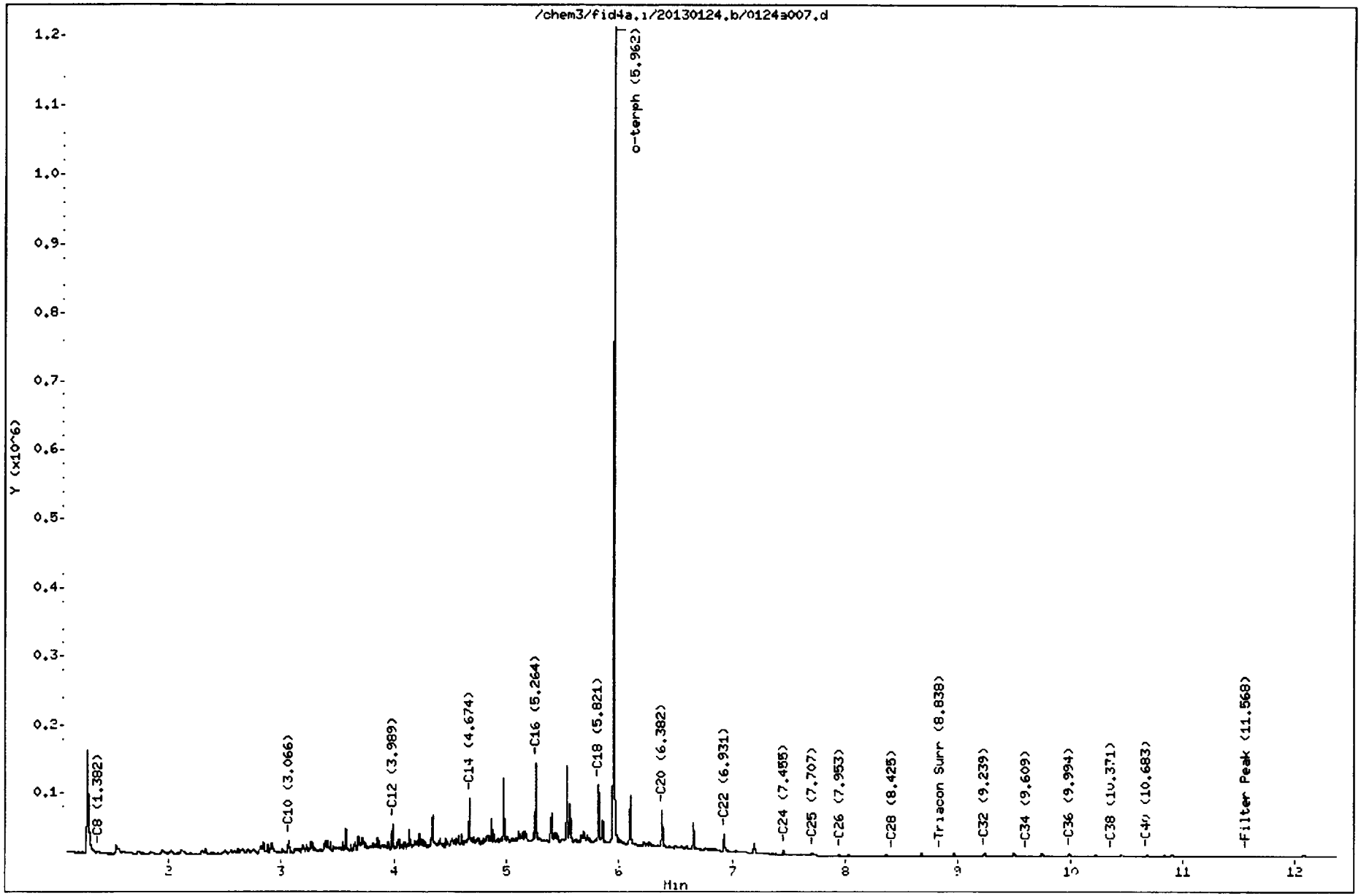
Column phase: RTX-1

Instrument: fid4a.1

Operator: JP/WTS
Column diameter: 0.25

VT 1.25.13

U797:91362



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130124.b/0124a007.d ARI ID: 250PPMDIESEL
Method: /chem3/fid4a.i/20130124.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 24-JAN-2013 17:44
Operator: JR/VTS
Report Date: 01/25/2013 Dilution Factor: 1
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.154	-0.004	6823	15093	WATPHG	(Tol-C12)	1476570	133.14
C8	1.382	-0.013	6278	13485	WATPHD	(C12-C24)	3961220	240.24
C10	3.066	-0.005	22437	21574	WATPHM	(C24-C38)	78541	6.95
C12	3.989	-0.004	46501	45867	AK102	(C10-C25)	4724792	238.68
C14	4.674	-0.005	83992	75745	AK103	(C25-C36)	58836	6.39
C16	5.264	-0.006	138084	99155				
C18	5.821	-0.008	105815	97601				
C20	6.382	-0.009	66748	75311	JET-A	(C10-C18)	3550450	655.49
C22	6.931	-0.010	32945	41402				
C24	7.455	-0.010	8380	10613	MSPIRIT	(Tol-C12)	1476570	111.48
C25	7.707	-0.008	3430	6971				
C26	7.953	-0.019	1306	3138				
C28	8.425	0.006	366	796				
C32	9.239	-0.003	4668	3994				
C34	9.609	-0.015	150	244				
Filter Peak	11.568	0.008	631	446	CREOSOT	(C12-C22)	3825601	1901.27 M
C36	9.994	-0.001	3770	4149				
C38	10.371	0.020	223	184				
C40	10.683	-0.018	1031	1621				
o-terph	5.962	-0.002	1180900	864541				
Triacon Surr	8.838	-0.017	173	298	NAS DIES	(C10-C24)	4710835	389.23

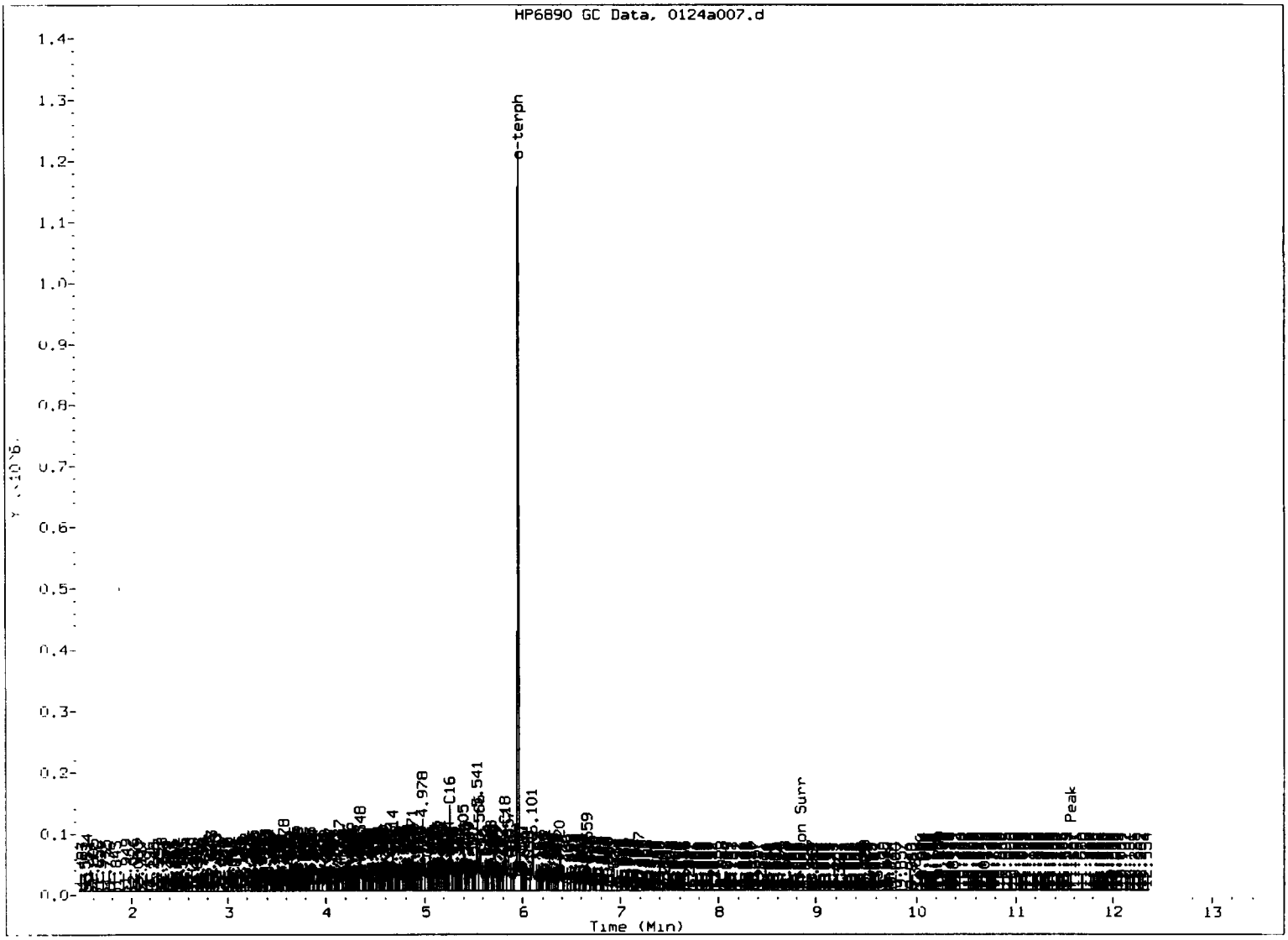
Range Times: NW Diesel(3.993 - 7.466) AK102(3.07 - 7.71) Jet A(3.07 - 5.83)
NW M.Oil(7.47 - 10.35) AK103(7.71 - 9.99) OR Diesel(3.07 - 8.42)

Surrogate	Area	Amount	%Rec
o-Terphenyl	864541	42.7	94.8 M
Triacontane	298	0.0	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	18755.2	24-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	16488.8	05-JAN-2013
Motor Oil	11305.9	05-JAN-2013
AK102	19795.4	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

FID:4A-2C/RTX-1 250PPMDIESEL FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VD Date: 1-25-13

Data File: /chem3/fid4a.i/20130124.b/0124a008.d

Date : 24-JAN-2013 18:05

Client ID:

Sample Info: 500PPMDIESEL

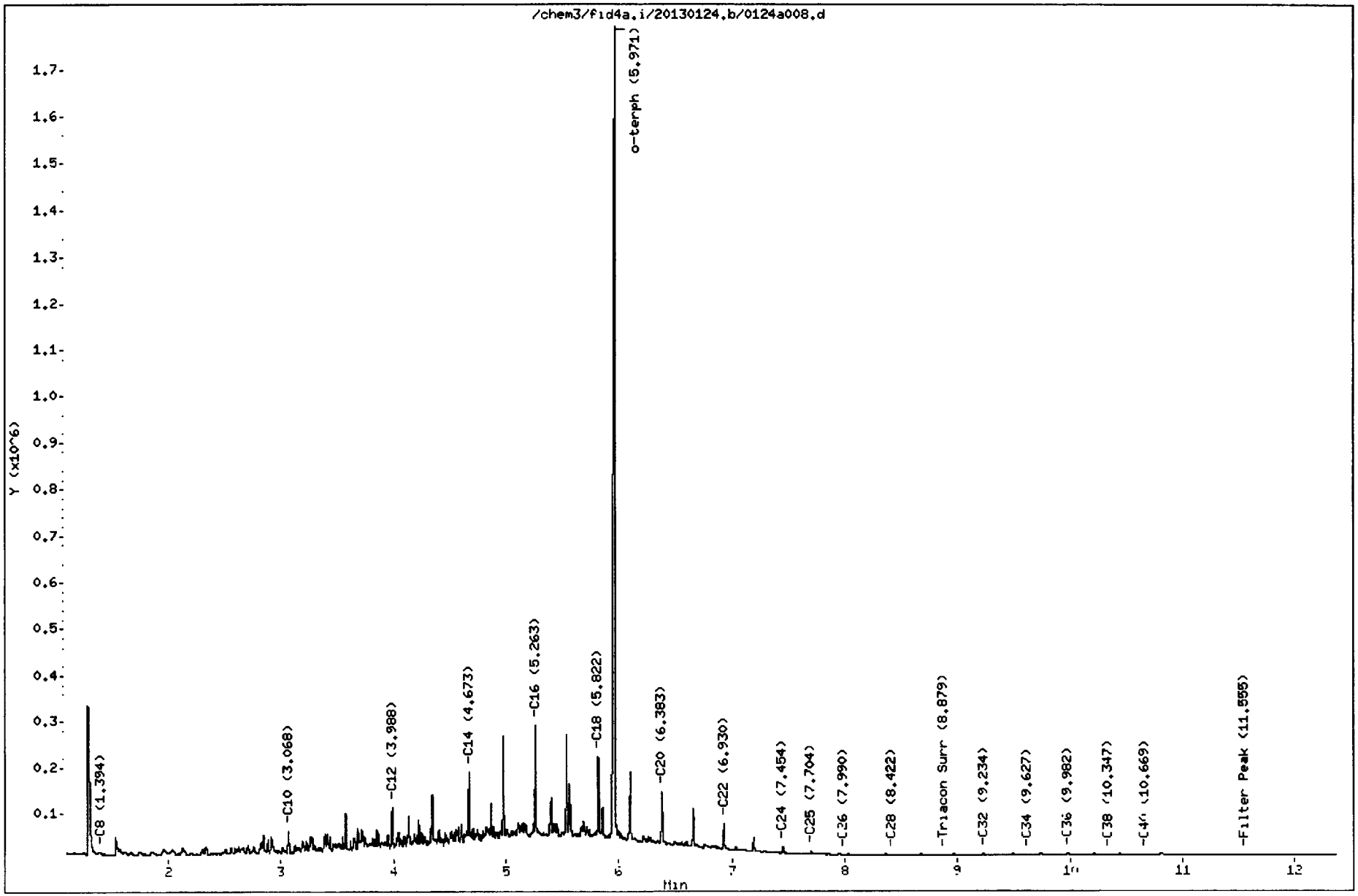
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS

Column diameter: 0.25

VZ97:01355



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130124.b/0124a008.d ARI ID: 500PPMDIESEL
Method: /chem3/fid4a.i/20130124.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 24-JAN-2013 18:05
Operator: JR/VTS
Report Date: 01/25/2013 Dilution Factor: 1
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	1.165	0.008	8629	16370	WATPHG	(Tol-C12)	2833430	255.48	
C8	1.394	-0.001	9004	19975	WATPHD	(C12-C24)	8026018	486.75	
C10	3.068	-0.004	54789	45400	WATPHM	(C24-C38)	117729	10.41	
C12	3.988	-0.005	105132	95150	AK102	(C10-C25)	9578314	483.87	
C14	4.673	-0.007	182018	115344	AK103	(C25-C36)	85565	9.30	
C16	5.263	-0.007	283921	200457					
C18	5.822	-0.007	215885	196724					
C20	6.383	-0.008	137961	162643	JET-A	(C10-C18)	7241191	1336.88	
C22	6.930	-0.011	70193	74666					
C24	7.454	-0.012	18176	20403	MSPIRIT	(Tol-C12)	2833430	213.92	
C25	7.704	-0.011	7651	11346					
C26	7.990	0.017	1042	1271					
C28	8.422	0.003	599	1018					
C32	9.234	-0.008	4050	3439					
C34	9.627	0.002	292	440					
Filter Peak	11.555	-0.005	491	210	CREOSOT	(C12-C22)	7776592	3864.86	M
C36	9.982	-0.012	3693	3715					
C38	10.347	-0.004	158	136					
C40	10.669	-0.033	1160	1529					
o-terph	5.971	0.007	1738709	1825532					
Triacon Surr	8.879	0.024	152	205	NAS DIES	(C10-C24)	9551152	789.16	

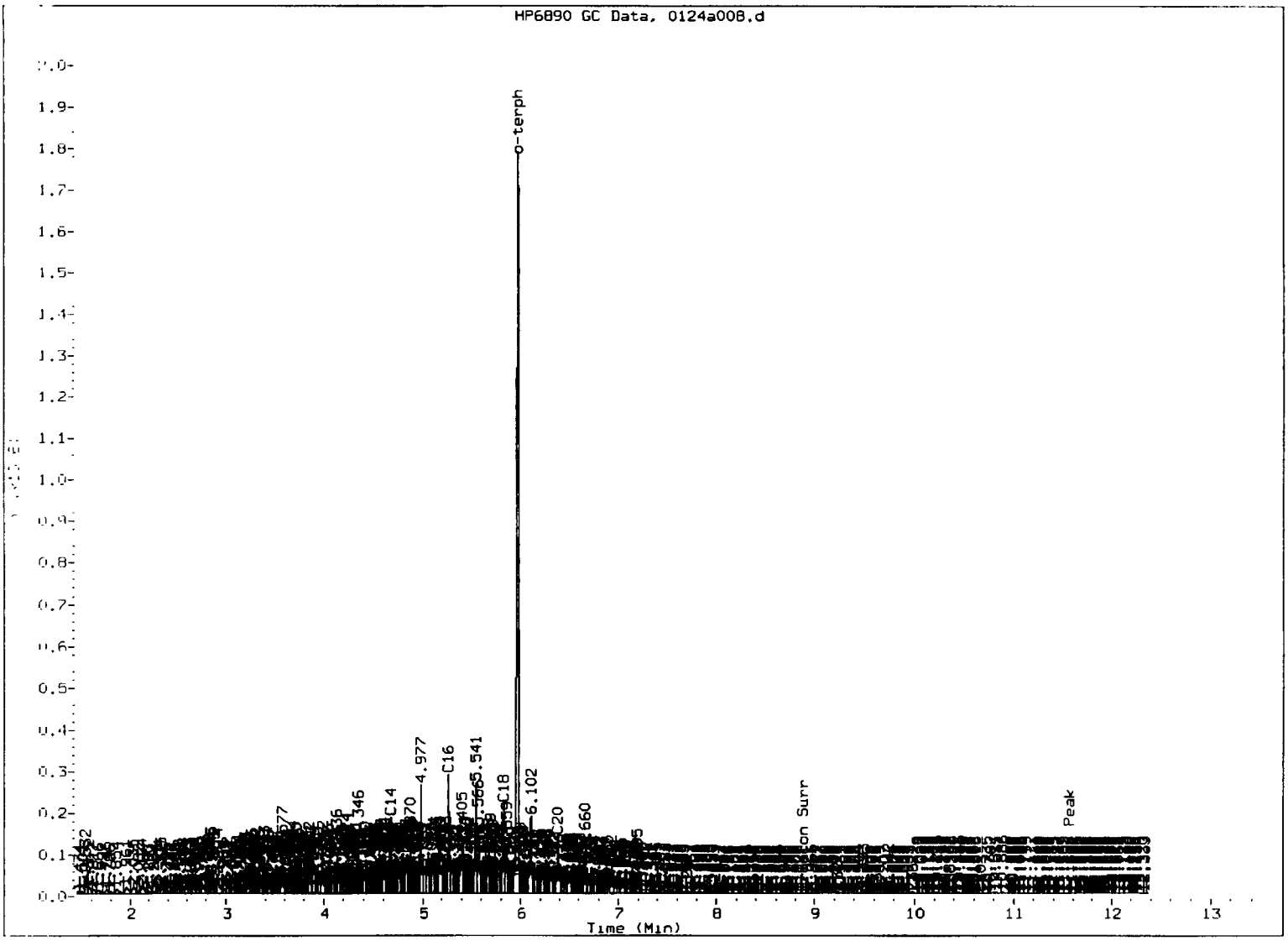
Range Times: NW Diesel(3.993 - 7.466) AK102(3.07 - 7.71) Jet A(3.07 - 5.83)
NW M.Oil(7.47 - 10.35) AK103(7.71 - 9.99) OR Diesel(3.07 - 8.42)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1825532	90.1	200.2 M
Triacontane	205	0.0	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	18755.2	24-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	16488.8	05-JAN-2013
Motor Oil	11305.9	05-JAN-2013
AK102	19795.4	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

FID:4A-2C/RTX-1 500PPMDIESEL FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VD Date: 1-25-13

Data File: /chem3/fid4a.1/20130124.b/0124a009.d

Date : 24-JAN-2013 18:25

Client ID:

Sample Info: 1000PPMDIESEL

Column phase: RTX-1

Instrument: fid4a.1

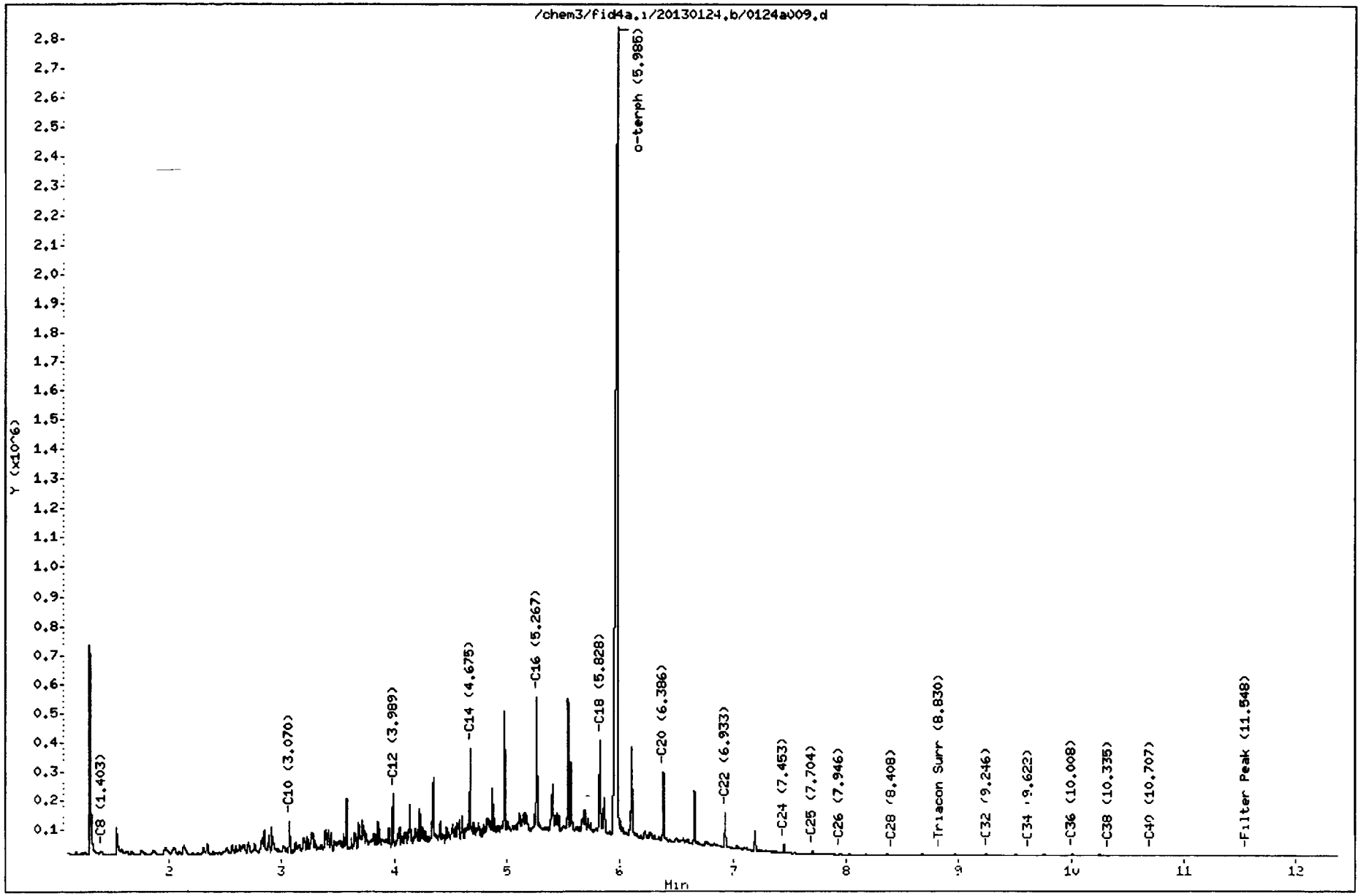
Operator: JR/VTS

Column diameter: 0.25

Page 1

1.25.13

V7297 61358



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130124.b/0124a009.d
Method: /chem3/fid4a.i/20130124.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: 1000PPMDIESEL
Client ID:
Injection: 24-JAN-2013 18:25
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.174	0.017	12930	19774	WATPHG	(Tol-C12)	5397208	486.65
C8	1.403	0.008	13746	29025	WATPHD	(C12-C24)	16443740	997.27
C10	3.070	-0.001	119985	90142	WATPHM	(C24-C38)	193132	17.08
C12	3.989	-0.004	214571	190572	AK102	(C10-C25)	19500309	985.09
C14	4.675	-0.005	370981	237175	AK103	(C25-C36)	132741	14.43
C16	5.267	-0.003	549507	430789				
C18	5.828	-0.001	400944	418512				
C20	6.386	-0.005	289898	281095	JET-A	(C10-C18)	14783200	2729.29
C22	6.933	-0.008	147458	161161				
C24	7.453	-0.012	39248	40298	MSPIRIT	(Tol-C12)	5397208	407.47
C25	7.704	-0.011	16409	24927				
C26	7.946	-0.027	6523	11354				
C28	8.408	-0.011	956	2047				
C32	9.246	0.003	4932	4136				
C34	9.622	-0.003	97	104				
Filter Peak	11.548	-0.012	717	2940	CREOSOT	(C12-C22)	15946171	7925.02 M
C36	10.008	0.014	4422	4395				
C38	10.335	-0.016	99	120				
C40	10.707	0.005	1311	1625				
o-terph	5.985	0.021	2746547	3850239				
Triacon Surr	8.830	-0.025	647	915	NAS DIES	(C10-C24)	19444357	1606.57

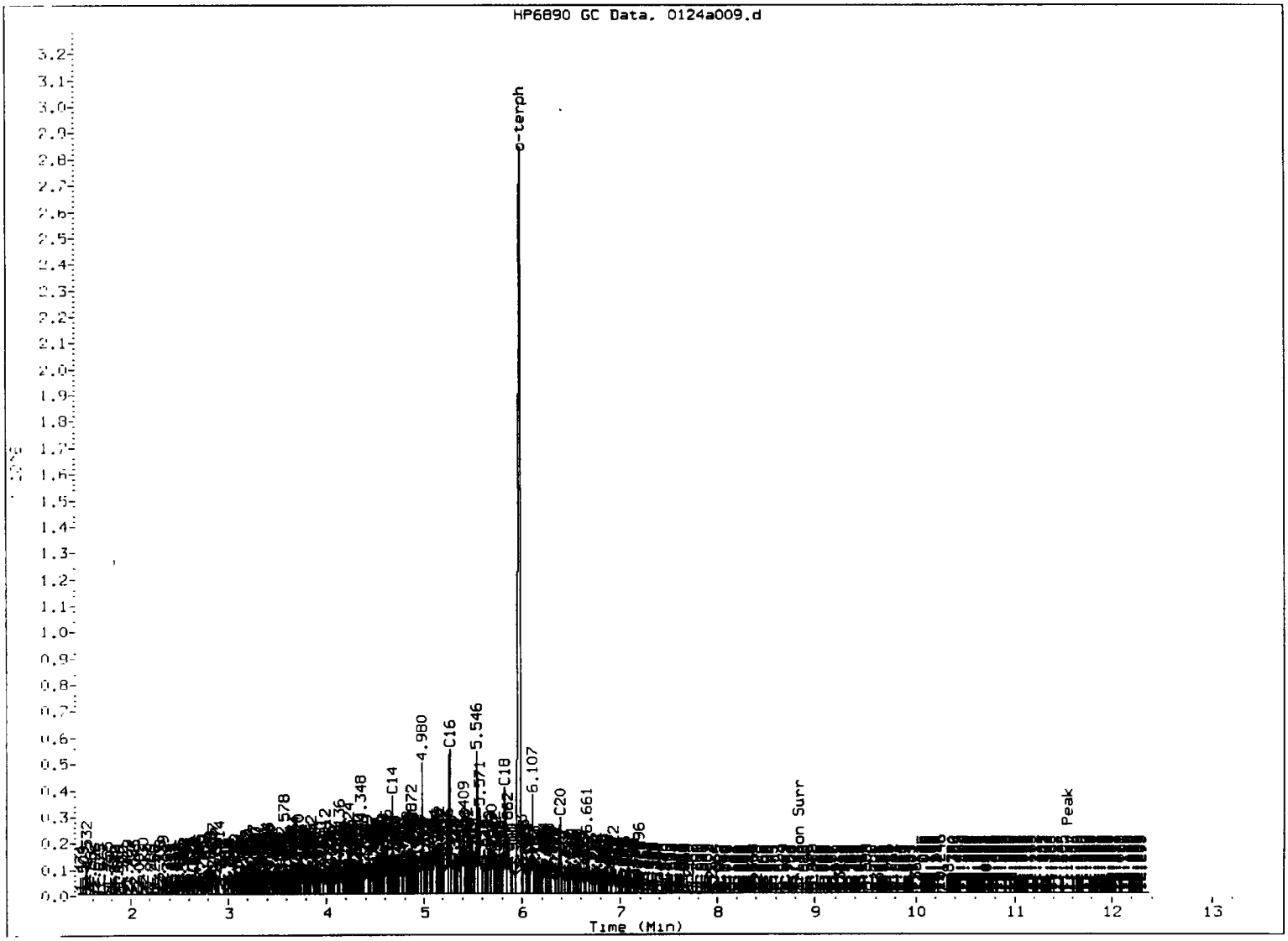
Range Times: NW Diesel(3.993 - 7.466) AK102(3.07 - 7.71) Jet A(3.07 - 5.83)
NW M.Oil(7.47 - 10.35) AK103(7.71 - 9.99) OR Diesel(3.07 - 8.42)

Surrogate	Area	Amount	%Rec
o-Terphenyl	3850239	190.0	422.2 M
Triacontane	915	0.0	0.1

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	18755.2	24-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	16488.8	05-JAN-2013
Motor Oil	11305.9	05-JAN-2013
AK102	19795.4	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

FID:4A-2C/RTX-1 1000PPMDIESEL FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VA Date: 1-25-13

Data File: /chem3/fid4a.1/20130124.b/0124a010.d

Date : 24-JAN-2013 18:45

Client ID:

Sample Info: 2500PPMDIESEL

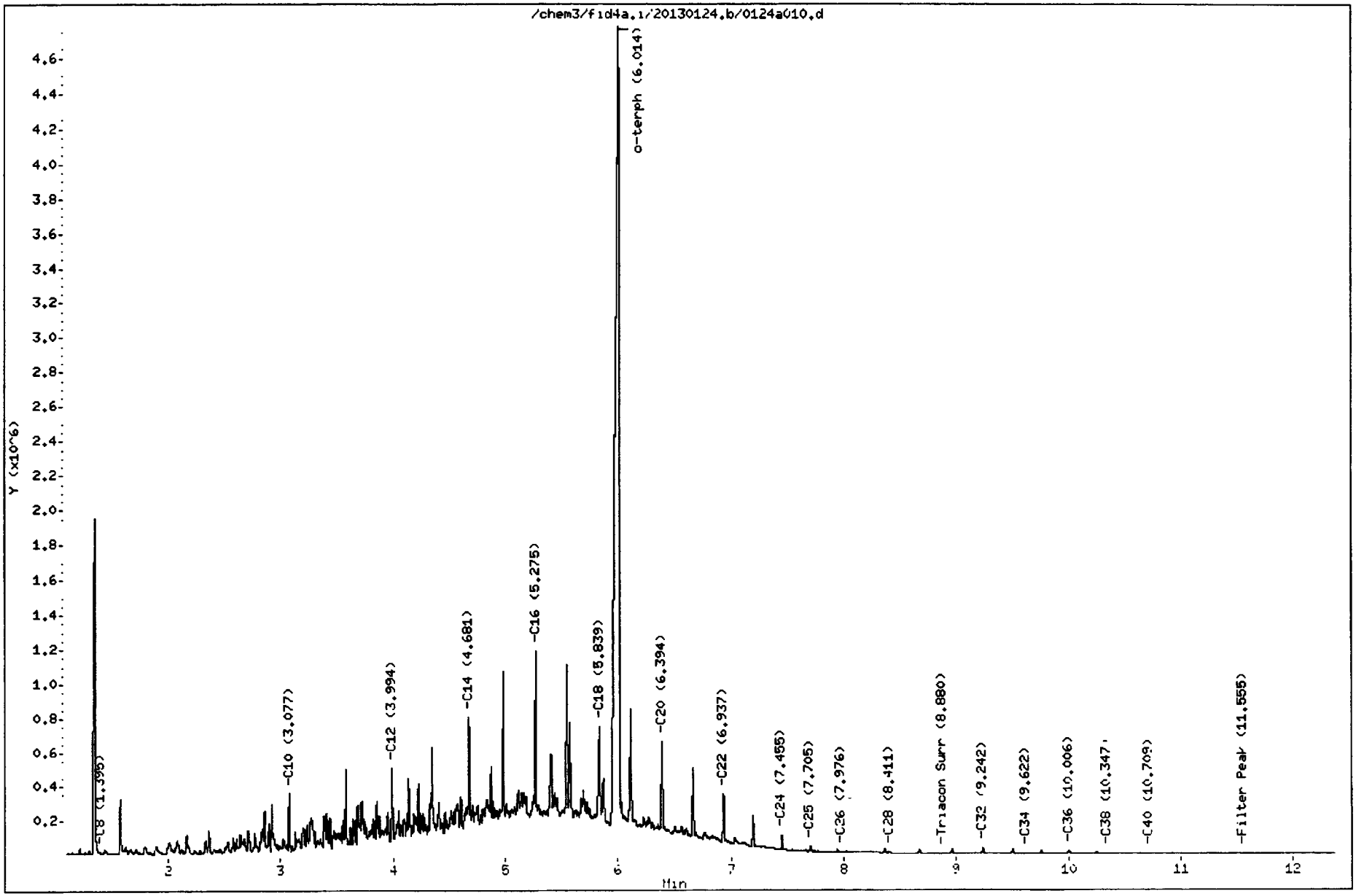
Column phase: PTX-1

Instrument: fid4a.1

Operator: JP/VTS

Column diameter: 0.25

1.25.13



UZ97:01371

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130124.b/0124a010.d
Method: /chem3/fid4a.i/20130124.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: 2500PPMDIESEL
Client ID:
Injection: 24-JAN-2013 18:45
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.147	-0.011	16684	17804	WATPHG	(Tol-C12)	13097984	1181.01
C8	1.395	0.000	19883	26103	WATPHD	(C12-C24)	41024373	2488.01
C10	3.077	0.006	351894	225538	WATPHM	(C24-C38)	705717	62.42
C12	3.994	0.001	504628	477398	AK102	(C10-C25)	48685064	2459.41
C14	4.681	0.002	800170	629451	AK103	(C25-C36)	549210	59.68
C16	5.275	0.006	1188655	1047543				
C18	5.839	0.010	741773	1104756				
C20	6.394	0.003	658370	735402	JET-A	(C10-C18)	36502644	6739.17
C22	6.937	-0.004	345761	403847				
C24	7.455	-0.011	104301	91106	MSPIRIT	(Tol-C12)	13097984	988.86
C25	7.705	-0.010	42352	49662				
C26	7.976	0.003	6239	11911				
C28	8.411	-0.009	4711	8475				
C32	9.242	-0.001	30681	27539				
C34	9.622	-0.002	482	707				
Filter Peak	11.555	-0.005	417	1426	CREOSOT	(C12-C22)	39574272	19667.86 M
C36	10.006	0.011	12219	12349				
C38	10.347	-0.004	105	123				
C40	10.709	0.007	3019	3355				
o-terph	6.014	0.051	4522422	9743784				
Triacon Surr	8.880	0.025	1379	2453	NAS DIES	(C10-C24)	48536414	4010.28

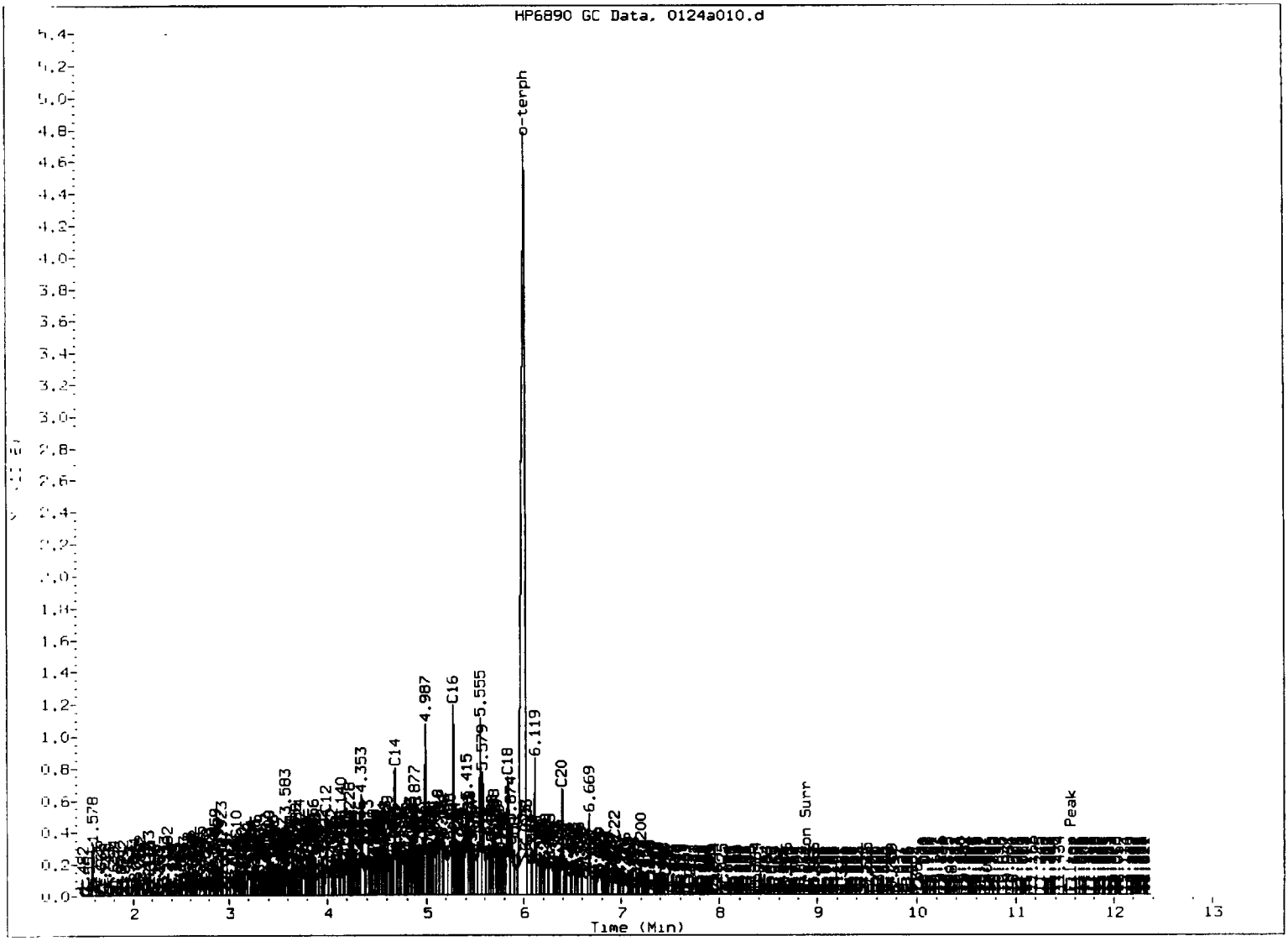
Range Times: NW Diesel(3.993 - 7.466) AK102(3.07 - 7.71) Jet A(3.07 - 5.83)
NW M.Oil(7.47 - 10.35) AK103(7.71 - 9.99) OR Diesel(3.07 - 8.42)

Surrogate	Area	Amount	%Rec
o-Terphenyl	9743784	480.8	1068.4 M
Triacontane	2453	0.1	0.3

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	18755.2	24-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	16488.8	05-JAN-2013
Motor Oil	11305.9	05-JAN-2013
AK102	19795.4	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

FID:4A-2C/RTX-1 2500PPMDIESEL FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VD Date: 1-25-17

Data File: /chem3/fid4a.1/20130124.b/0124a011.d
Date : 24-JAN-2013 19:05
Client ID:
Sample Info: DIESELICV

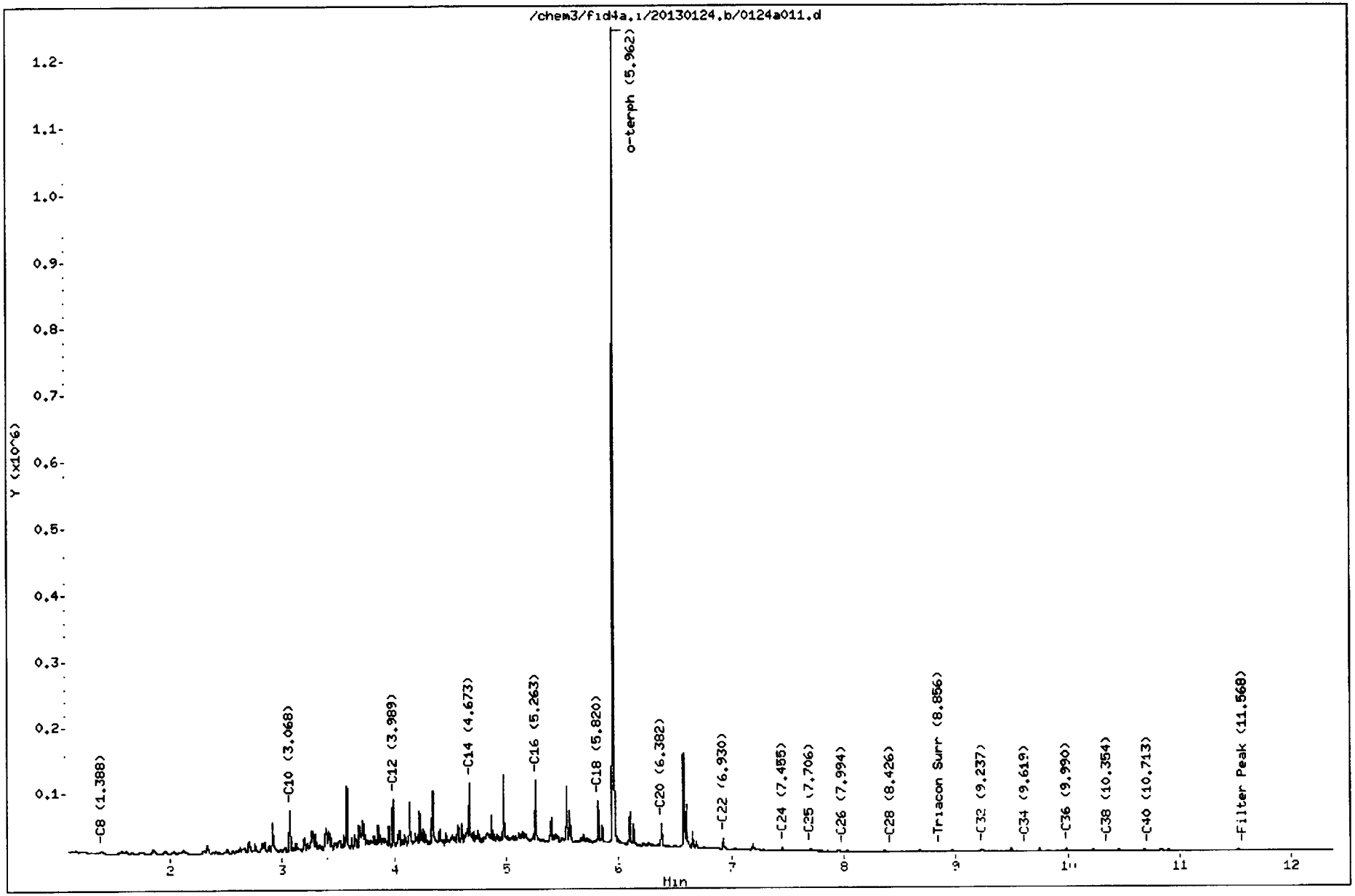
Column phase: RTX-1

Instrument: fid4a.1

Operator: JP/WTS
Column diameter: 0.25

VT 1.25.13

U797.01371



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130124.b/0124a011.d
Method: /chem3/fid4a.i/20130124.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: DIESELICV
Client ID:
Injection: 24-JAN-2013 19:05
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.159	0.001	7336	17676	WATPHG	(Tol-C12)	1721483	155.22
C8	1.388	-0.007	5753	22832	WATPHD	(C12-C24)	3876437	235.09
C10	3.068	-0.004	65589	52156	WATPHM	(C24-C38)	81103	7.17
C12	3.989	-0.004	83085	71545	AK102	(C10-C25)	5054183	255.32
C14	4.673	-0.006	107301	67665	AK103	(C25-C36)	61074	6.64
C16	5.263	-0.007	113216	85699				
C18	5.820	-0.009	79173	75599				
C20	6.382	-0.010	44736	51792	JET-A	(C10-C18)	3989949	736.63
C22	6.930	-0.011	20004	20397				
C24	7.455	-0.011	6546	8975	MSPIRIT	(Tol-C12)	1721483	129.97
C25	7.706	-0.009	3612	4906				
C26	7.994	0.021	746	856				
C28	8.426	0.006	493	907				
C32	9.237	-0.005	2955	2620				
C34	9.619	-0.005	192	76				
Filter Peak	11.568	0.008	714	389	CREOSOT	(C12-C22)	3776641	1876.94 M
C36	9.990	-0.005	3146	3236				
C38	10.354	0.003	223	159				
C40	10.713	0.011	454	269				
o-terph	5.962	-0.001	1216913	939390				
Triacon Surr	8.856	0.001	179	40	NAS DIES	(C10-C24)	5039505	416.38

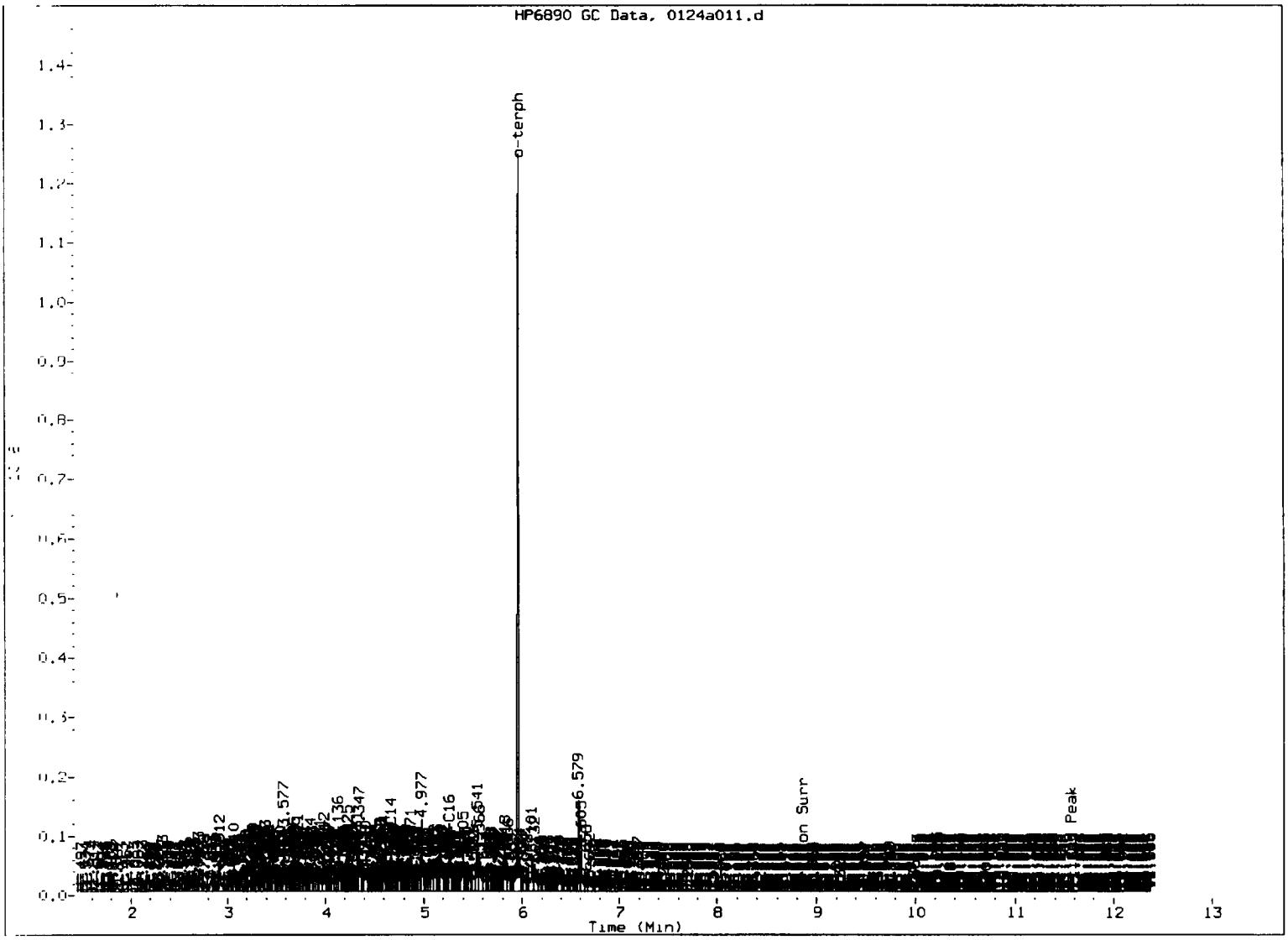
Range Times: NW Diesel(3.993 - 7.466) AK102(3.07 - 7.71) Jet A(3.07 - 5.83)
NW M.Oil(7.47 - 10.35) AK103(7.71 - 9.99) OR Diesel(3.07 - 8.42)

Surrogate	Area	Amount	%Rec
o-Terphenyl	939390	46.4	103.0 M
Triacontane	40	0.0	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	18755.2	24-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	16488.8	05-JAN-2013
Motor Oil	11305.9	05-JAN-2013
AK102	19795.4	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

FID:4A-2C/RTX-1 DIESELICV FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VD Date: 1-25-13

Data File: /chem3/fid4a.1/20130124.b/0124a012.d

Date : 24-JAN-2013 19:25

Client ID:

Sample Info: 100PPMMOIL

Column phase: RTX-1

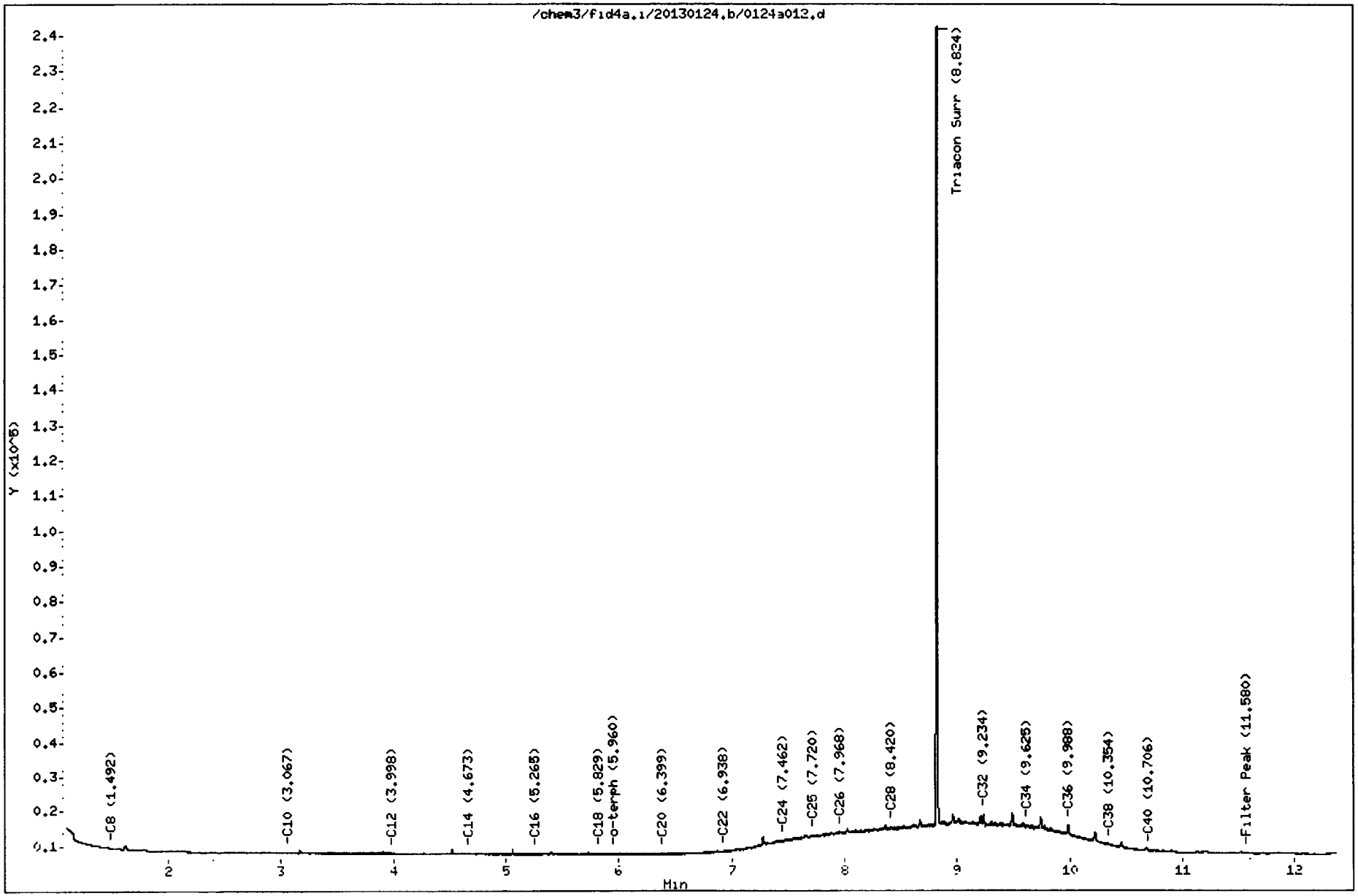
Instrument: fid4a.1

Operator: JR/VTS

Column diameter: 0.25

US 1.25.13

US37:01377



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130124.b/0124a012.d
Method: /chem3/fid4a.i/20130124.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: 100PPMMOIL
Client ID:
Injection: 24-JAN-2013 19:25
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	----				WATPHG	(Tol-C12)	118886	10.72	
C8	1.492	0.097	2107	5520	WATPHD	(C12-C24)	137435	8.34	
C10	3.067	-0.004	709	1148	WATPHM	(C24-C38)	1179956	104.37	
C12	3.998	0.004	492	138	AK102	(C10-C25)	219229	11.07	
C14	4.673	-0.007	414	121	AK103	(C25-C36)	1053867	114.52	
C16	5.265	-0.005	241	293					
C18	5.829	0.000	220	90					
C20	6.399	0.007	319	130	JET-A	(C10-C18)	68926	12.73	
C22	6.938	-0.003	971	508					
C24	7.462	-0.003	4031	2170	MSPIRIT	(Tol-C12)	118886	8.98	
C25	7.720	0.005	5639	6564					
C26	7.968	-0.005	6378	7094					
C28	8.420	0.001	7806	4456					
C32	9.234	-0.009	11483	17086					
C34	9.625	0.000	8122	4462					
Filter Peak	11.580	0.020	291	119	CREOSOT	(C12-C22)	53847	26.76	M
C36	9.988	-0.007	8480	16549					
C38	10.354	0.002	2864	2348					
C40	10.706	0.005	1038	1333					
o-terph	5.960	-0.004	405	253					
Triacon Surr	8.824	-0.031	226022	168517	NAS DIES	(C10-C24)	174628	14.43	

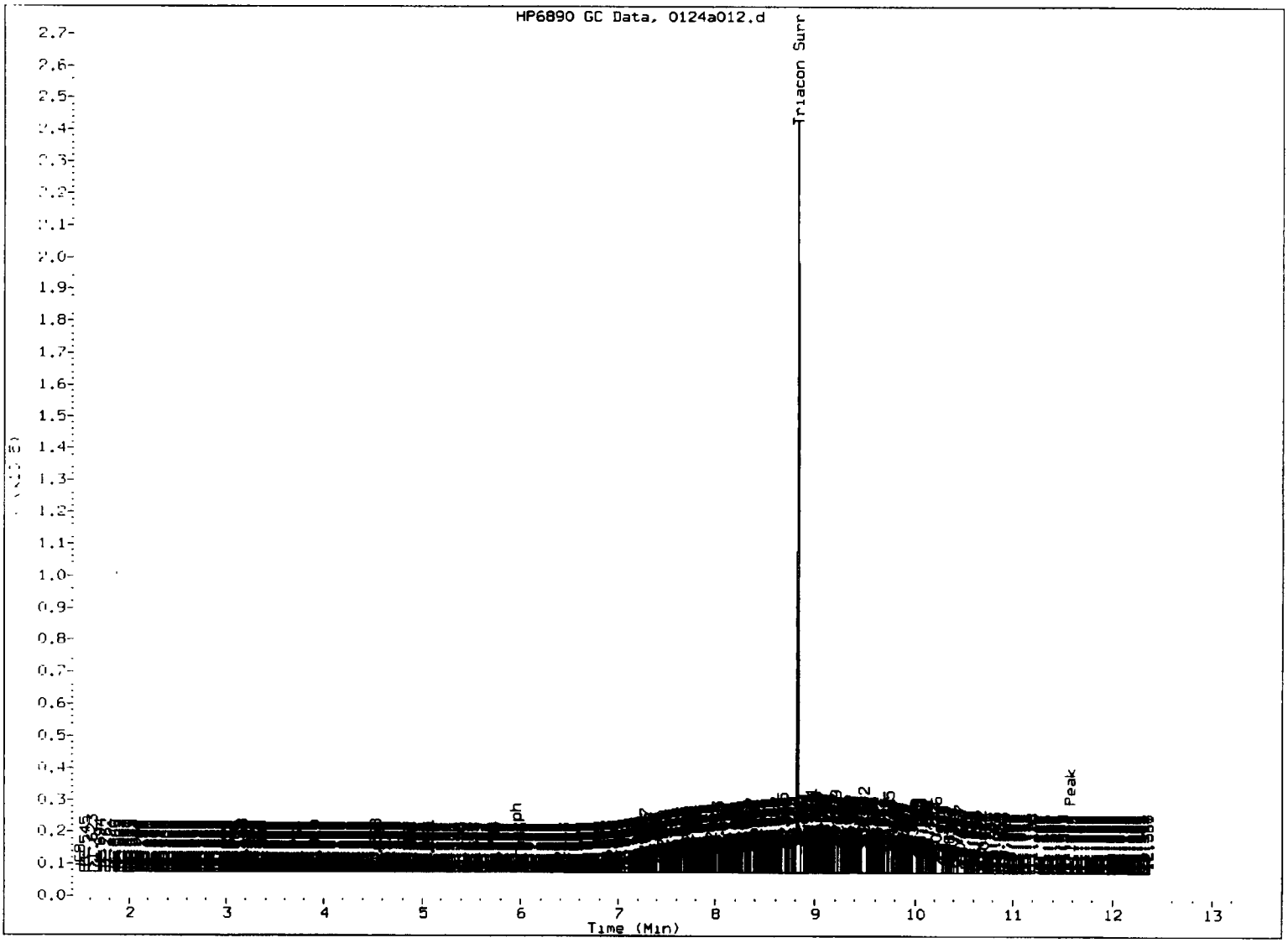
Range Times: NW Diesel(3.993 - 7.466) AK102(3.07 - 7.71) Jet A(3.07 - 5.83)
NW M.Oil(7.47 - 10.35) AK103(7.71 - 9.99) OR Diesel(3.07 - 8.42)

Surrogate	Area	Amount	%Rec
o-Terphenyl	253	0.0	0.0
Triacontane	168517	9.0	20.0 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	18755.2	24-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	16488.8	05-JAN-2013
Motor Oil	11305.9	05-JAN-2013
AK102	19795.4	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

FID:4A-2C/RTX-1 100PPMMOIL FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VD Date: 1-25-13

Data File: /chem3/fid4a.i/20130124.b/0124a013.d

Date : 24-JAN-2013 19:45

Client ID:

Sample Info: 250PPMMOIL

Column phase: RTX-1

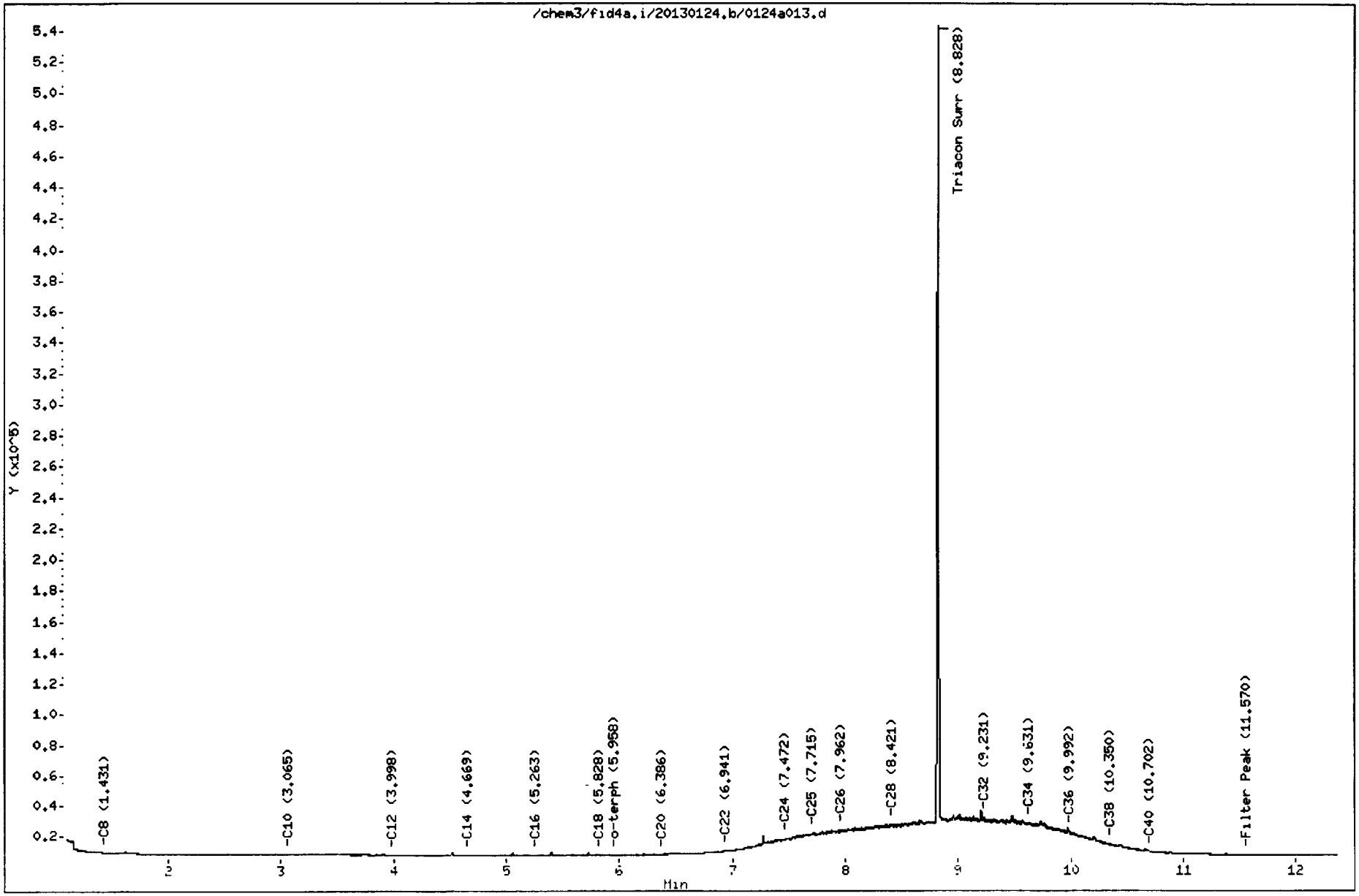
Instrument: fid4a.i

Operator: JR/VTS

Column diameter: 0.25

VB 1.25.13

UZ97:01388



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130124.b/0124a013.d
Method: /chem3/fid4a.i/20130124.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: 250PPMMOIL
Client ID:
Injection: 24-JAN-2013 19:45
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.151	-0.007	9616	60879	WATPHG	(Tol-C12)	169371	15.27
C8	1.431	0.037	2184	8916	WATPHD	(C12-C24)	293319	17.79
C10	3.065	-0.007	600	713	WATPHM	(C24-C38)	2886964	255.35
C12	3.998	0.005	363	532	AK102	(C10-C25)	427094	21.58
C14	4.669	-0.011	224	159	AK103	(C25-C36)	2591305	281.60
C16	5.263	-0.007	130	186				
C18	5.828	-0.001	81	110				
C20	6.386	-0.005	437	397	JET-A	(C10-C18)	48645	8.98
C22	6.941	0.000	2481	3504				
C24	7.472	0.006	10974	7661	MSPIRIT	(Tol-C12)	169371	12.79
C25	7.715	0.000	14106	8488				
C26	7.962	-0.011	16331	19176				
C28	8.421	0.001	19718	24391				
C32	9.231	-0.011	24432	35331				
C34	9.631	0.007	20884	17728				
Filter Peak	11.570	0.009	317	155	CREOSOT	(C12-C22)	73822	36.69 M
C36	9.992	-0.003	14880	6274				
C38	10.350	-0.001	6970	11280				
C40	10.702	0.000	2221	904				
o-terph	5.958	-0.006	269	404				
Triacon Surr	8.828	-0.027	512559	420853	NAS DIES	(C10-C24)	321201	26.54

Range Times: NW Diesel(3.993 - 7.466) AK102(3.07 - 7.71) Jet A(3.07 - 5.83)
NW M.Oil(7.47 - 10.35) AK103(7.71 - 9.99) OR Diesel(3.07 - 8.42)

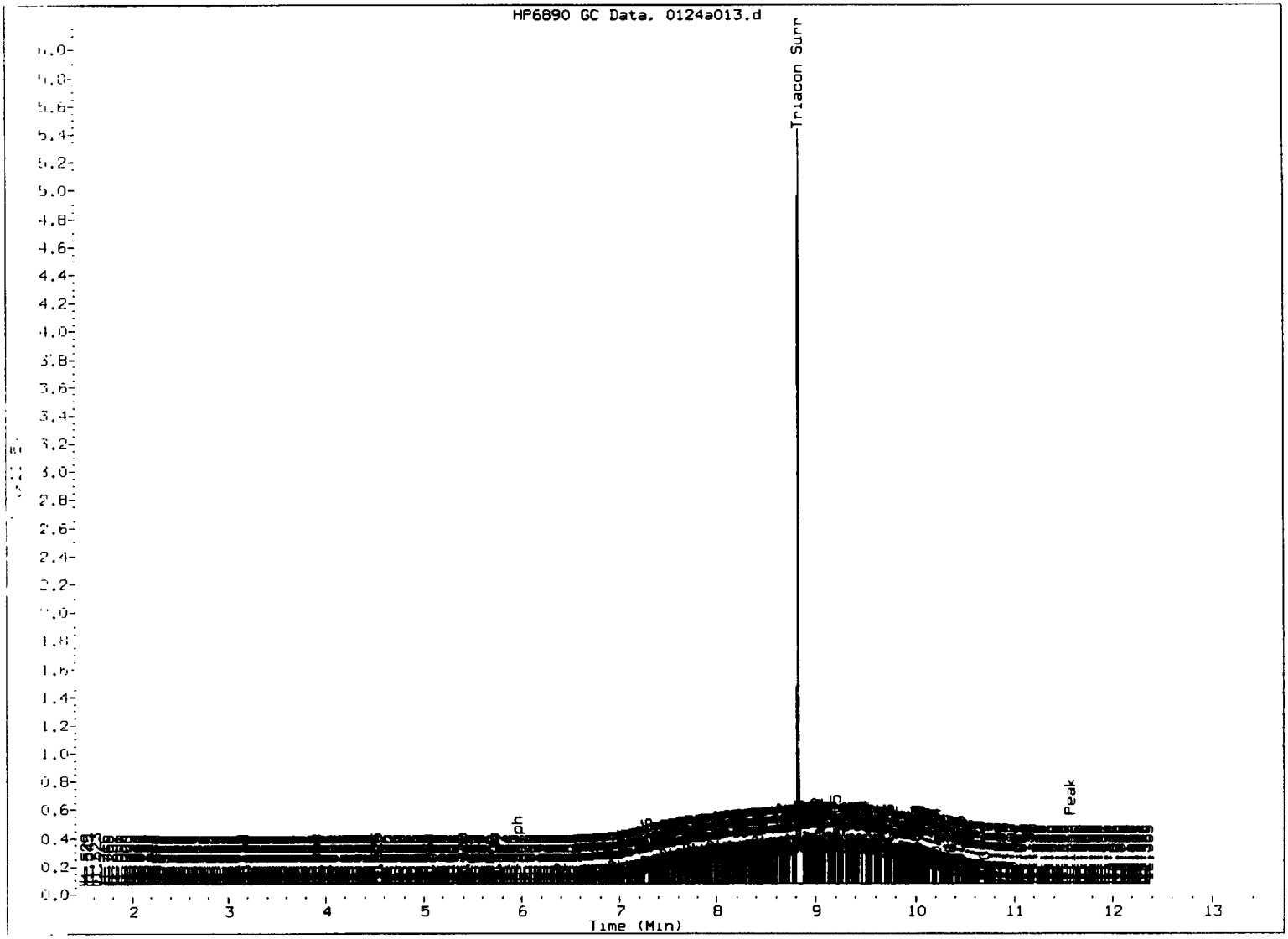
Surrogate	Area	Amount	%Rec
o-Terphenyl	404	0.0	0.0
Triacontane	420853	22.4	49.9 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	18755.2	24-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	16488.8	05-JAN-2013
Motor Oil	11305.9	05-JAN-2013
AK102	19795.4	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

VZ97:01381

FID:4A-2C/RTX-1 250PPMMOIL FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VD Date: 1-25-12

Data File: /chem3/fid4a.i/20130124.b/0124a014.d

Date : 24-JAN-2013 20:05

Client ID:

Sample Info: 500PPMMOIL

Column phase: RTX-1

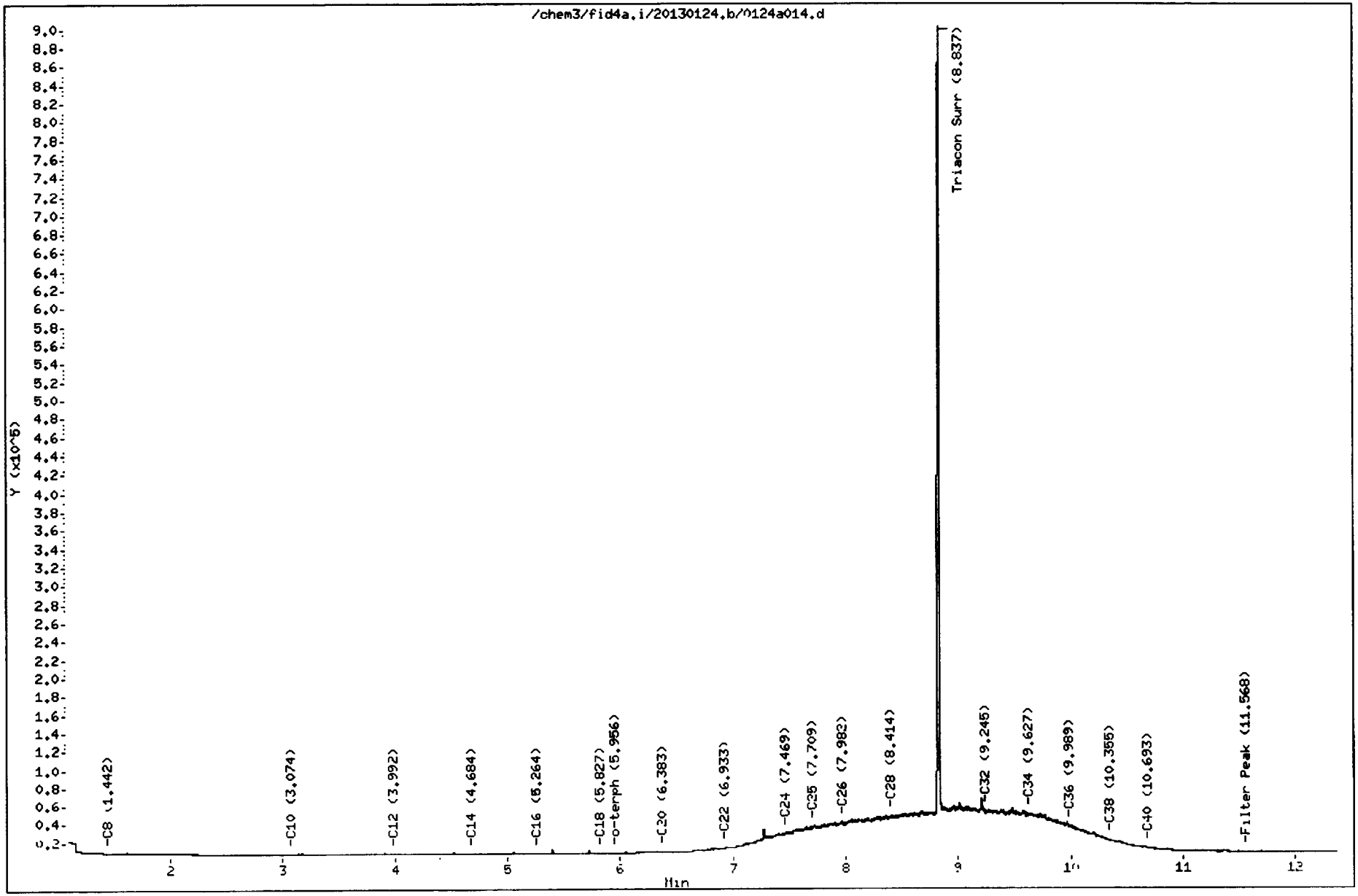
Instrument: fid4a.i

Operator: JR/VTS

Column diameter: 0.25

VT 1.25.13

VZ97:013993



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130124.b/0124a014.d
Method: /chem3/fid4a.i/20130124.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: 500PPMMOIL
Client ID:
Injection: 24-JAN-2013 20:05

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.109	-0.049	15580	93185	WATPHG	(Tol-C12)	188321	16.98
C8	1.442	0.047	2075	4610	WATPHD	(C12-C24)	581765	35.28
C10	3.074	0.003	621	790	WATPHM	(C24-C38)	5915272	523.20
C12	3.992	-0.002	349	211	AK102	(C10-C25)	831908	42.03
C14	4.684	0.005	205	328	AK103	(C25-C36)	5366903	583.23
C16	5.264	-0.006	141	209				
C18	5.827	-0.002	220	225				
C20	6.383	-0.009	1086	1128	JET-A	(C10-C18)	49045	9.05
C22	6.933	-0.008	5297	4991				
C24	7.469	0.004	21659	12987	MSPIRIT	(Tol-C12)	188321	14.22
C25	7.709	-0.006	29194	28666				
C26	7.982	0.010	33706	33703				
C28	8.414	-0.006	40353	66915				
C32	9.245	0.002	45689	36271				
C34	9.627	0.003	42128	70933				
Filter Peak	11.568	0.007	655	560	CREOSOT	(C12-C22)	147673	73.39 M
C36	9.989	-0.006	28617	24686				
C38	10.355	0.004	12854	7718				
C40	10.693	-0.009	4501	6551				
o-terph	5.956	-0.007	533	1144				
Triacon Surr	8.837	-0.018	847811	852205	NAS DIES	(C10-C24)	607753	50.22

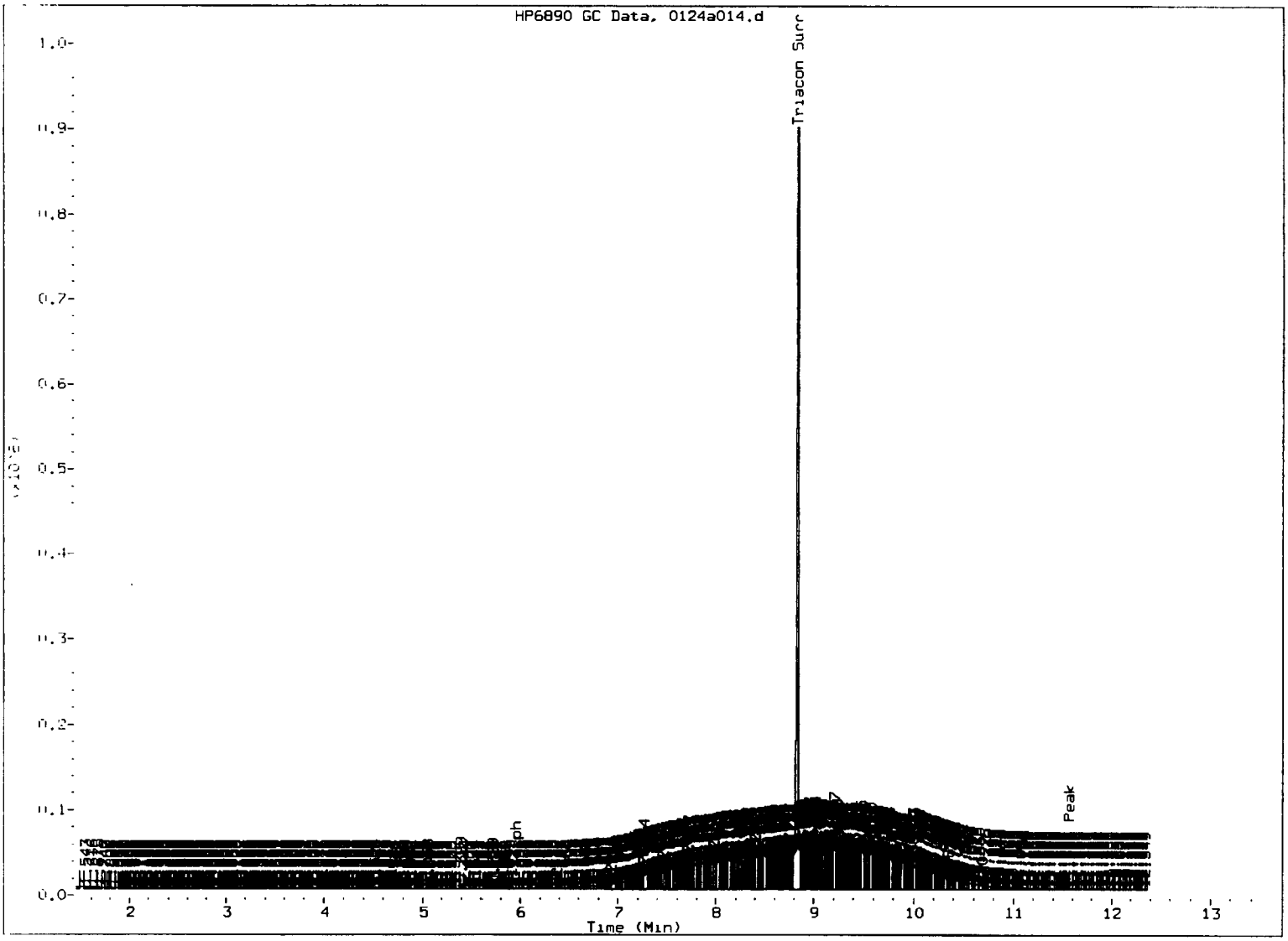
Range Times: NW Diesel(3.993 - 7.466) AK102(3.07 - 7.71) Jet A(3.07 - 5.83)
NW M.Oil(7.47 - 10.35) AK103(7.71 - 9.99) OR Diesel(3.07 - 8.42)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1144	0.1	0.1
Triacontane	852205	45.4	101.0 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	18755.2	24-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	16488.8	05-JAN-2013
Motor Oil	11305.9	05-JAN-2013
AK102	19795.4	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

FID:4A-2C/RTX-1 500PPMMOIL FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VD Date: 1-25-17

Data File: /chem3/fid4a.1/20130124.b/0124a015.d

Date : 24-JAN-2013 20:25

Client ID:

Sample Info: 1000PPMMOIL

Column phase: RTX-1

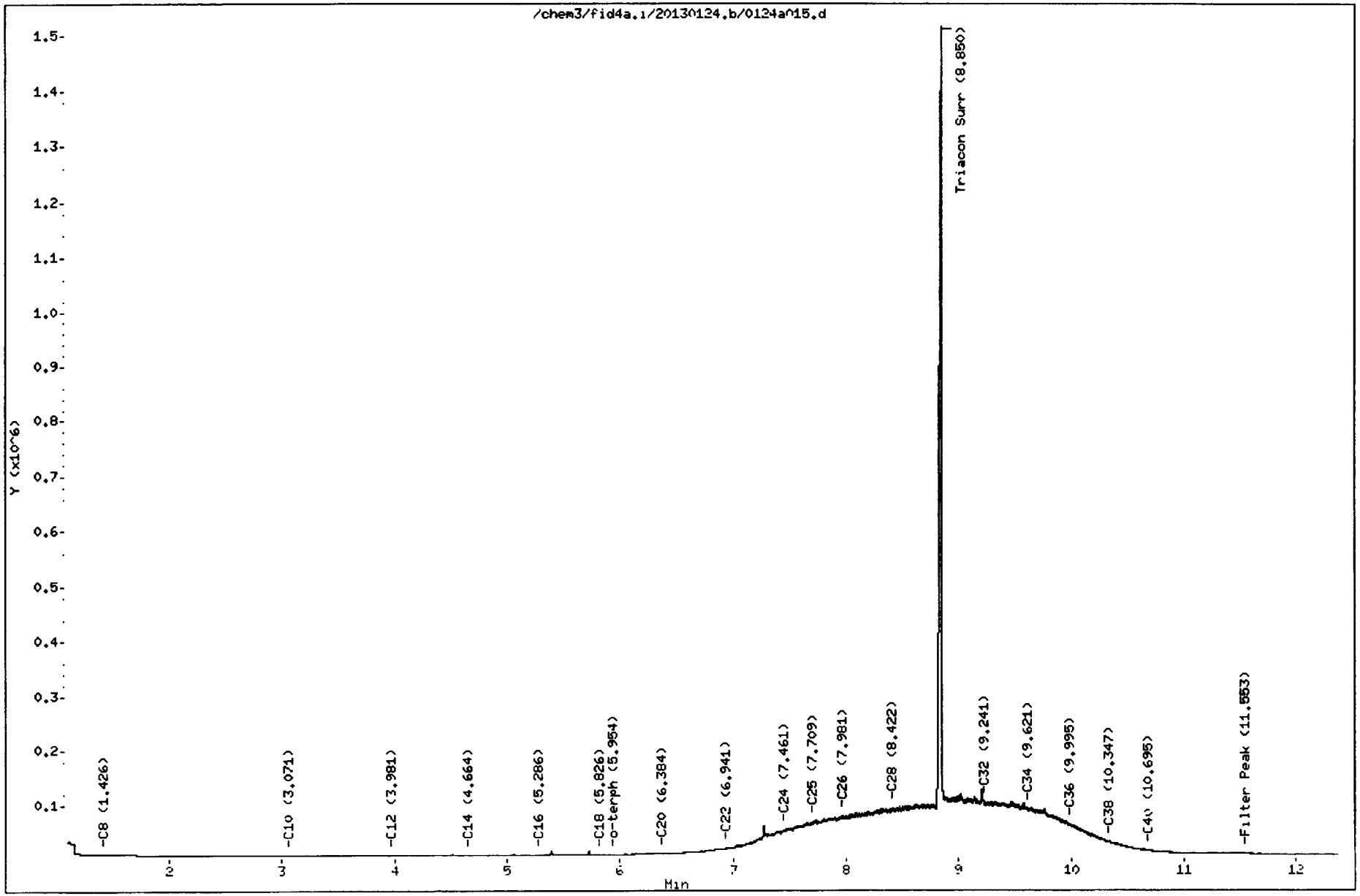
Instrument: fid4a.1

Operator: JR/WTS

Column diameter: 0.25

VP 1.25.13

V7937 01986



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130124.b/0124a015.d ARI ID: 1000PPMMOIL
Method: /chem3/fid4a.i/20130124.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 24-JAN-2013 20:25
Operator: JR/VTS
Report Date: 01/25/2013 Dilution Factor: 1
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.137	-0.020	23301	35466	WATPHG	(Tol-C12)	175465	15.82
C8	1.426	0.032	2125	12139	WATPHD	(C12-C24)	1248075	75.69
C10	3.071	0.000	636	1551	WATPHM	(C24-C38)	11877889	1050.60
C12	3.981	-0.012	302	383	AK102	(C10-C25)	1696024	85.68
C14	4.664	-0.016	189	225	AK103	(C25-C36)	10832968	1177.23
C16	5.286	0.016	81	69				
C18	5.826	-0.003	520	766				
C20	6.384	-0.008	2499	2615	JET-A	(C10-C18)	54736	10.11
C22	6.941	0.000	11537	6792				
C24	7.461	-0.005	44716	27161	MSPIRIT	(Tol-C12)	175465	13.25
C25	7.709	-0.006	60784	52729				
C26	7.981	0.009	70219	46177				
C28	8.422	0.003	86441	89496				
C32	9.241	-0.002	96362	108590				
C34	9.621	-0.003	83393	46086				
Filter Peak	11.553	-0.007	1395	1826	CREOSOT	(C12-C22)	292301	145.27 M
C36	9.995	0.001	56495	100602				
C38	10.347	-0.004	22998	8965				
C40	10.695	-0.007	7242	5899				
o-terph	5.954	-0.009	1221	2901				
Triacon Surr	8.850	-0.005	1412375	1780575	NAS DIES	(C10-C24)	1274857	105.33

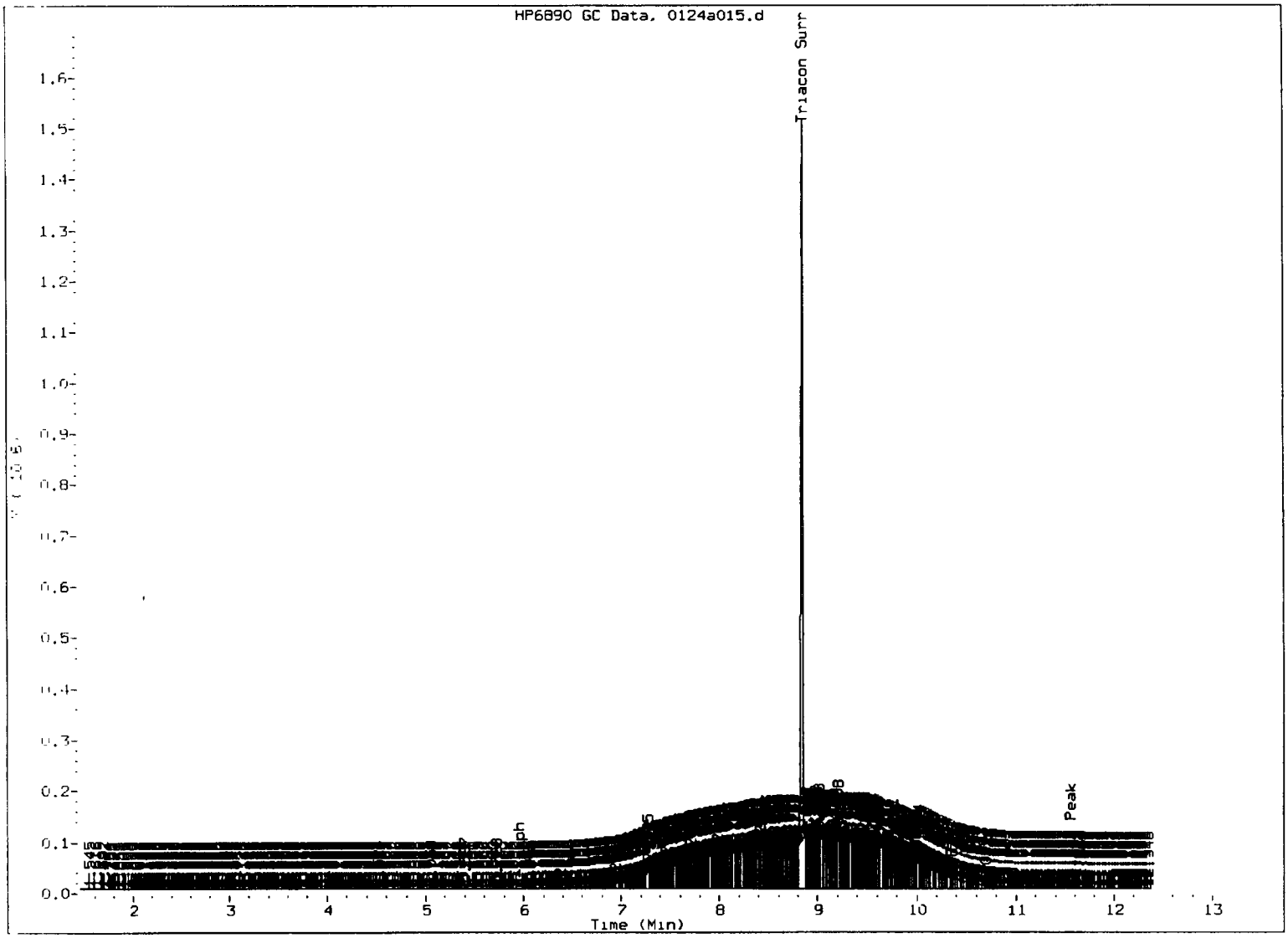
Range Times: NW Diesel(3.993 - 7.466) AK102(3.07 - 7.71) Jet A(3.07 - 5.83)
NW M.Oil(7.47 - 10.35) AK103(7.71 - 9.99) OR Diesel(3.07 - 8.42)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2901	0.1	0.3
Triacontane	1780575	94.9	211.0 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	18755.2	24-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	16488.8	05-JAN-2013
Motor Oil	11305.9	05-JAN-2013
AK102	19795.4	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

FID:4A-2C/RTX-1 1000PPMMOIL FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VD Date: 1/25/13

VZ97:01388

Data File: /chem3/fid4a.i/20130124.b/0124a016.d

Date : 24-JAN-2013 20:45

Client ID:

Sample Info: 2500PPMMOIL

Column phase: RTX-1

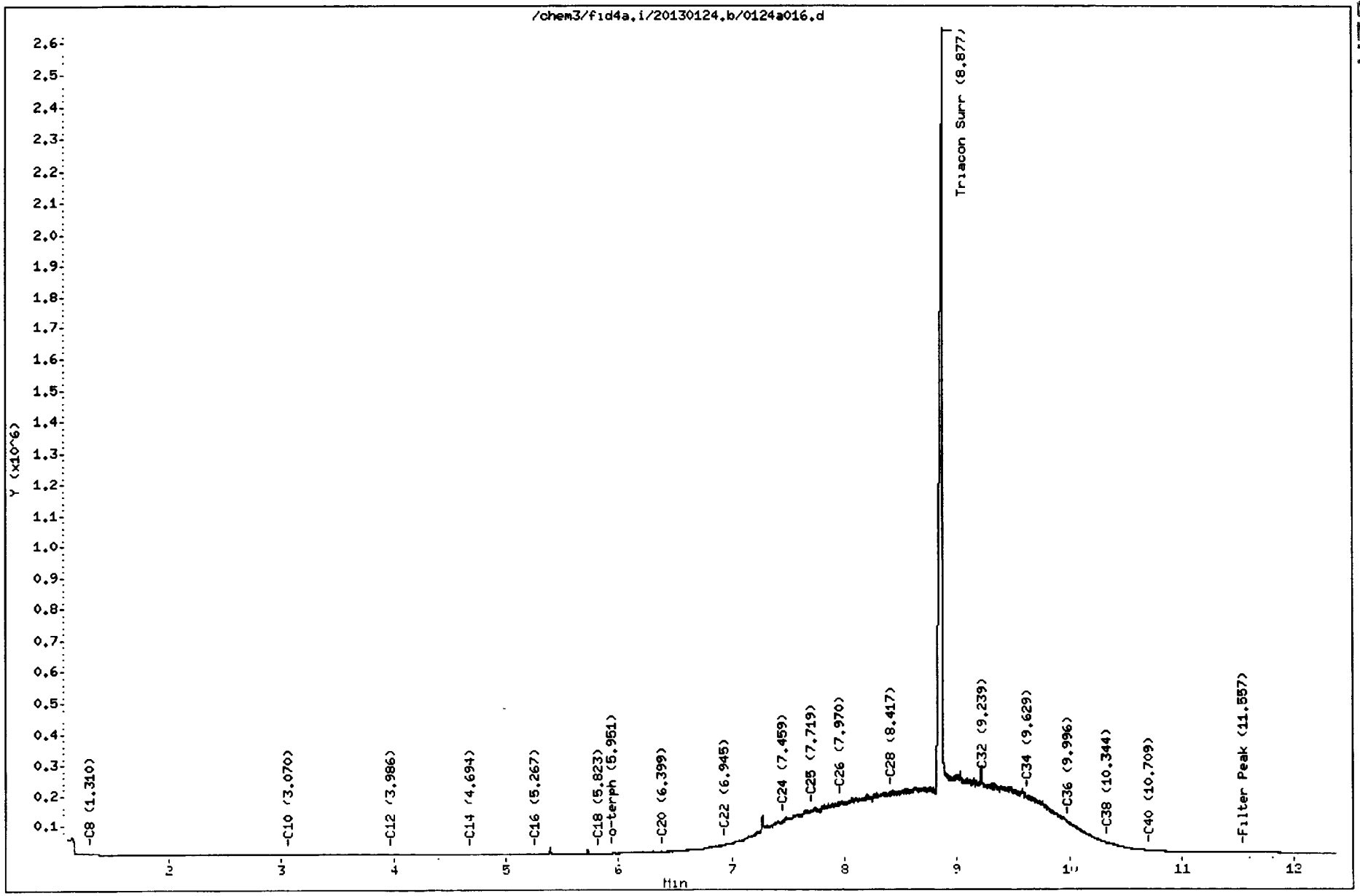
Instrument: fid4a.i

Operator: JR/VTS

Column diameter: 0.25

VT 1.25.13

U7597.01399



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130124.b/0124a016.d
Method: /chem3/fid4a.i/20130124.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: 2500PPMMOIL
Client ID:
Injection: 24-JAN-2013 20:45
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.137	-0.020	55617	132193	WATPHG	(Tol-C12)	271650	24.49
C8	1.310	-0.085	2720	16526	WATPHD	(C12-C24)	3047057	184.80
C10	3.070	-0.001	768	2123	WATPHM	(C24-C38)	27587776	2440.13
C12	3.986	-0.007	237	361	AK102	(C10-C25)	4135458	208.91
C14	4.694	0.014	200	335	AK103	(C25-C36)	25472476	2768.12
C16	5.267	-0.003	391	851				
C18	5.823	-0.006	1617	2034				
C20	6.399	0.007	6506	5154	JET-A	(C10-C18)	79020	14.59
C22	6.945	0.004	29121	23481				
C24	7.459	-0.007	111214	78033	MSPIRIT	(Tol-C12)	271650	20.51
C25	7.719	0.004	141016	75383				
C26	7.970	-0.003	169833	95866				
C28	8.417	-0.003	201016	82943				
C32	9.239	-0.003	225608	335375				
C34	9.629	0.004	189170	170485				
Filter Peak	11.557	-0.003	3063	3598	CREOSOT	(C12-C22)	733532	364.56 M
C36	9.996	0.002	101808	94868				
C38	10.344	-0.007	35374	50475				
C40	10.709	0.007	9673	14690				
o-terph	5.951	-0.012	5073	9426				
Triacon Surr	8.877	0.022	2393275	4184095	NAS DIES	(C10-C24)	3071198	253.76

Range Times: NW Diesel(3.993 - 7.466) AK102(3.07 - 7.71) Jet A(3.07 - 5.83)
NW M.Oil(7.47 - 10.35) AK103(7.71 - 9.99) OR Diesel(3.07 - 8.42)

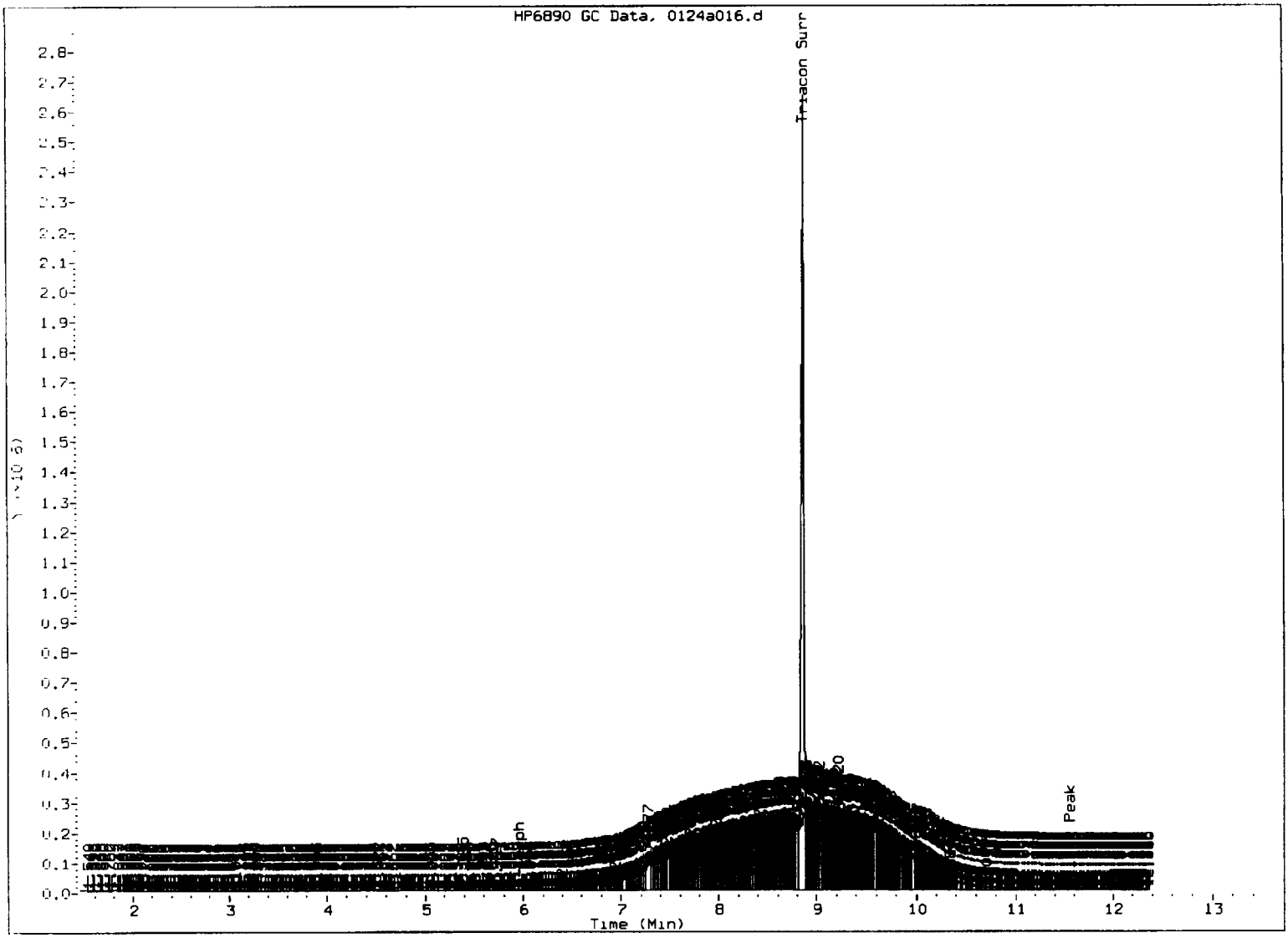
Surrogate	Area	Amount	%Rec
o-Terphenyl	9426	0.5	1.0
Triacontane	4184095	223.1	495.8 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	18755.2	24-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	16488.8	05-JAN-2013
Motor Oil	11305.9	05-JAN-2013
AK102	19795.4	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

UZ97 01390

FID:4A-2C/RTX-1 2500PPMMOIL FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: [illegible] Date: 1-25-12

Data File: /chem3/fid4a.i/20130124.b/0124a017.d

Date : 24-JAN-2013 21:05

Client ID:

Sample Info: 5000PPMHOIL

Column phase: RTX-1

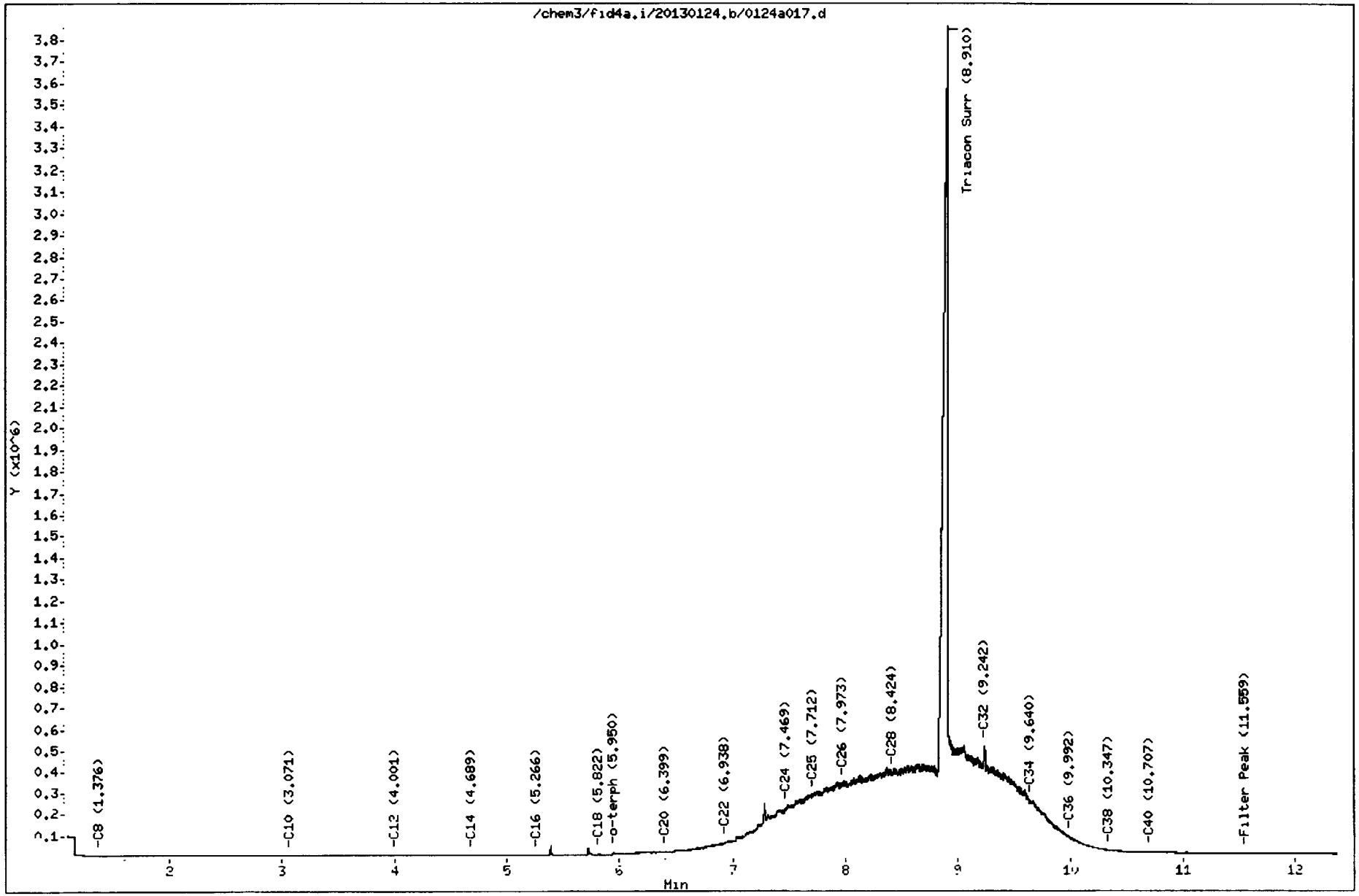
Instrument: fid4a.i

Operator: JR/VTS

Column diameter: 0.25

VD 1.25.13

UZ97-013992



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130124.b/0124a017.d
Method: /chem3/fid4a.i/20130124.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: 5000PPMMOIL
Client ID:
Injection: 24-JAN-2013 21:05
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.152	-0.006	92377	98002	WATPHG	(Tol-C12)	334118	30.13
C8	1.376	-0.018	2112	2430	WATPHD	(C12-C24)	5876651	356.40
C10	3.071	0.000	1211	1971	WATPHM	(C24-C38)	48720922	4309.35
C12	4.001	0.008	221	113	AK102	(C10-C25)	8016295	404.96
C14	4.689	0.010	342	731	AK103	(C25-C36)	45959782	4994.50
C16	5.266	-0.003	1019	1929				
C18	5.822	-0.007	3839	5534				
C20	6.399	0.008	13182	10036	JET-A	(C10-C18)	139261	25.71
C22	6.938	-0.003	56691	61667				
C24	7.469	0.003	219989	168258	MSPIRIT	(Tol-C12)	334118	25.22
C25	7.712	-0.003	280816	193994				
C26	7.973	0.000	339462	314830				
C28	8.424	0.005	389724	200271				
C32	9.242	0.000	512261	738419				
C34	9.640	0.016	255342	272278				
Filter Peak	11.559	-0.001	6551	7983	CREOSOT	(C12-C22)	1449050	720.16 M
C36	9.992	-0.002	84537	99403				
C38	10.347	-0.005	20925	8627				
C40	10.707	0.005	10840	4245				
o-terph	5.950	-0.013	10568	17274				
Triacon Surr	8.910	0.055	3356713	8003019	NAS DIES	(C10-C24)	5901598	487.61

Range Times: NW Diesel(3.993 - 7.466) AK102(3.07 - 7.71) Jet A(3.07 - 5.83)
NW M.Oil(7.47 - 10.35) AK103(7.71 - 9.99) OR Diesel(3.07 - 8.42)

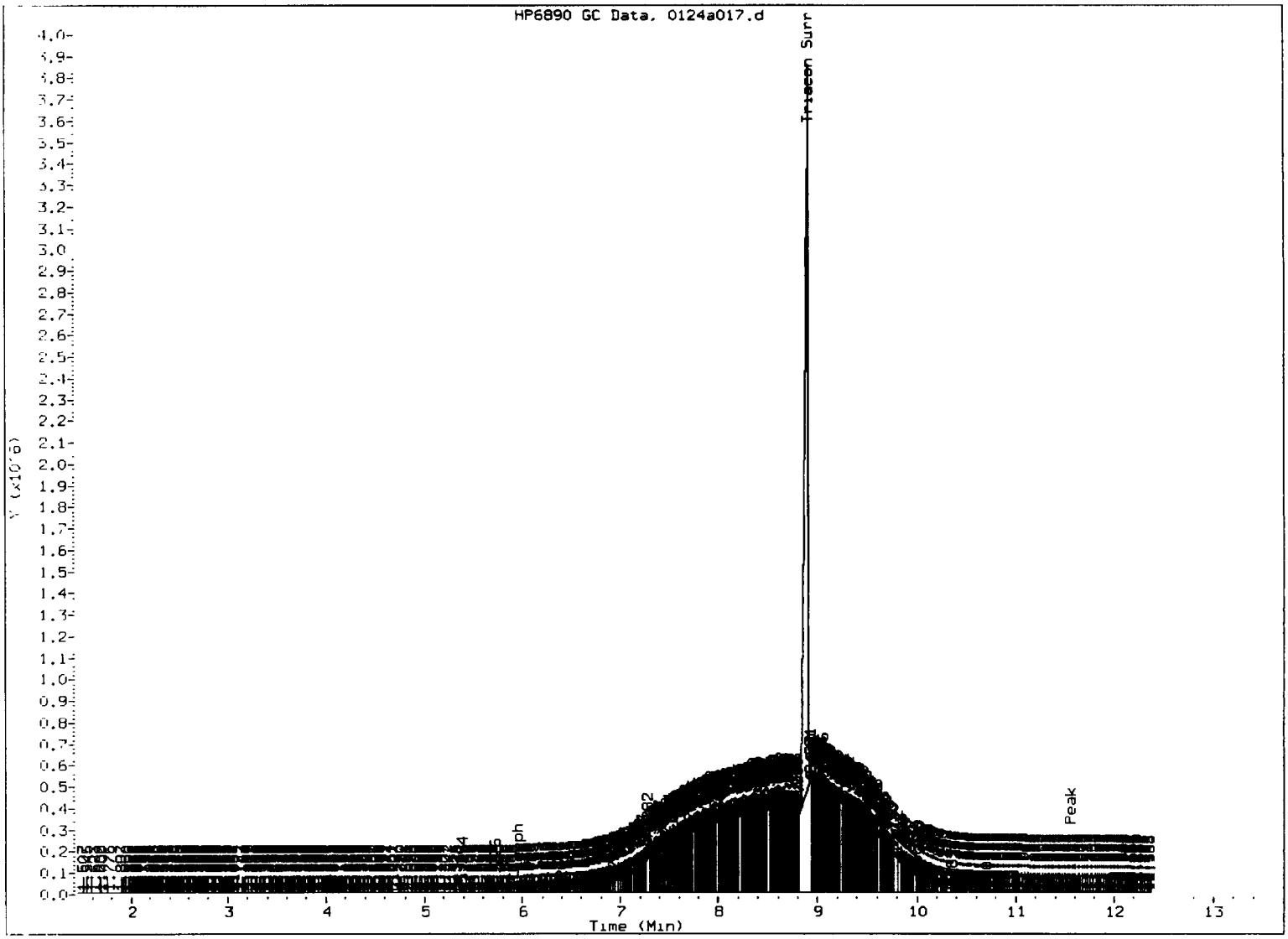
Surrogate	Area	Amount	%Rec
o-Terphenyl	17274	0.9	1.9
Triacontane	8003019	426.7	948.2 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	18755.2	24-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	16488.8	05-JAN-2013
Motor Oil	11305.9	05-JAN-2013
AK102	19795.4	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

VZ97:01393

FID:4A-2C/RTX-1 5000PPMMOIL FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VD Date: 1-25-12

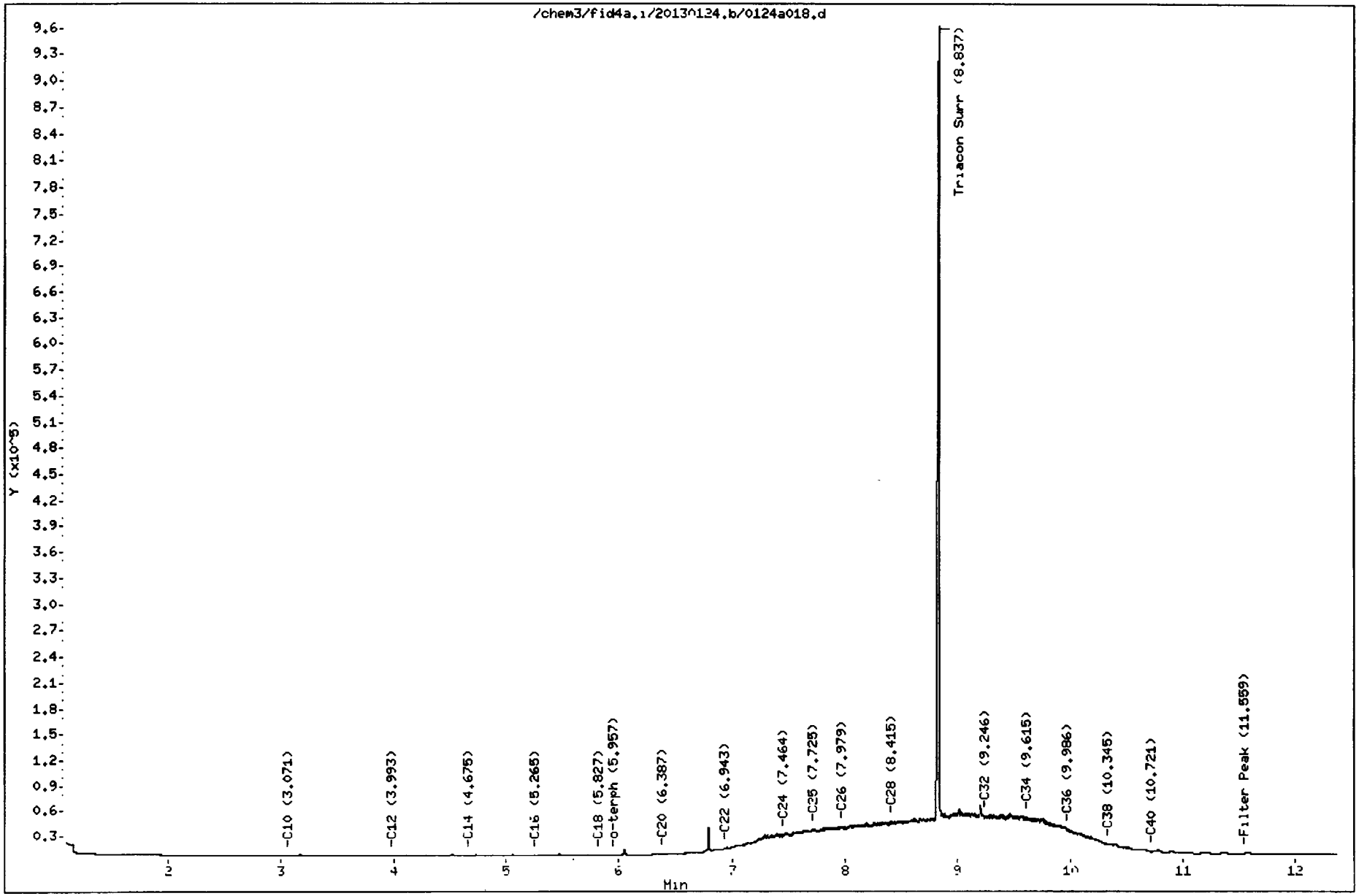
Data File: /chem3/fid4a.1/20130124.b/0124a018.d
Date : 24-JAN-2013 21:25
Client ID:
Sample Info: MOILICV

Column phase: RTX-1

Instrument: fid4a.1

Operator: JP/VTS
Column diameter: 0.25

UZ907 : 01395



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130124.b/0124a018.d
Method: /chem3/fid4a.i/20130124.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: MOILICV
Client ID:
Injection: 24-JAN-2013 21:25
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.152	-0.006	13407	72847	WATPHG	(Tol-C12)	149978	13.52
C8	----				WATPHD	(C12-C24)	741765	44.99
C10	3.071	-0.001	472	619	WATPHM	(C24-C38)	6071370	537.01
C12	3.993	0.000	226	154	AK102	(C10-C25)	995029	50.27
C14	4.675	-0.005	226	356	AK103	(C25-C36)	5478325	595.34
C16	5.265	-0.004	511	498				
C18	5.827	-0.002	335	298				
C20	6.387	-0.005	1276	1515	JET-A	(C10-C18)	36797	6.79
C22	6.943	0.002	8001	3309				
C24	7.464	-0.002	23341	11899	MSPIRIT	(Tol-C12)	149978	11.32
C25	7.725	0.010	30837	44877				
C26	7.979	0.006	33366	15606				
C28	8.415	-0.004	40194	31537				
C32	9.246	0.004	45951	56098				
C34	9.615	-0.009	44468	56078				
Filter Peak	11.559	-0.001	2450	1479	CREOSOT	(C12-C22)	195910	97.36 M
C36	9.986	-0.009	30376	48913				
C38	10.345	-0.006	12814	12996				
C40	10.721	0.020	4137	1618				
o-terph	5.957	-0.007	492	695				
Triacon Surr	8.837	-0.018	908506	889044	NAS DIES	(C10-C24)	761896	62.95

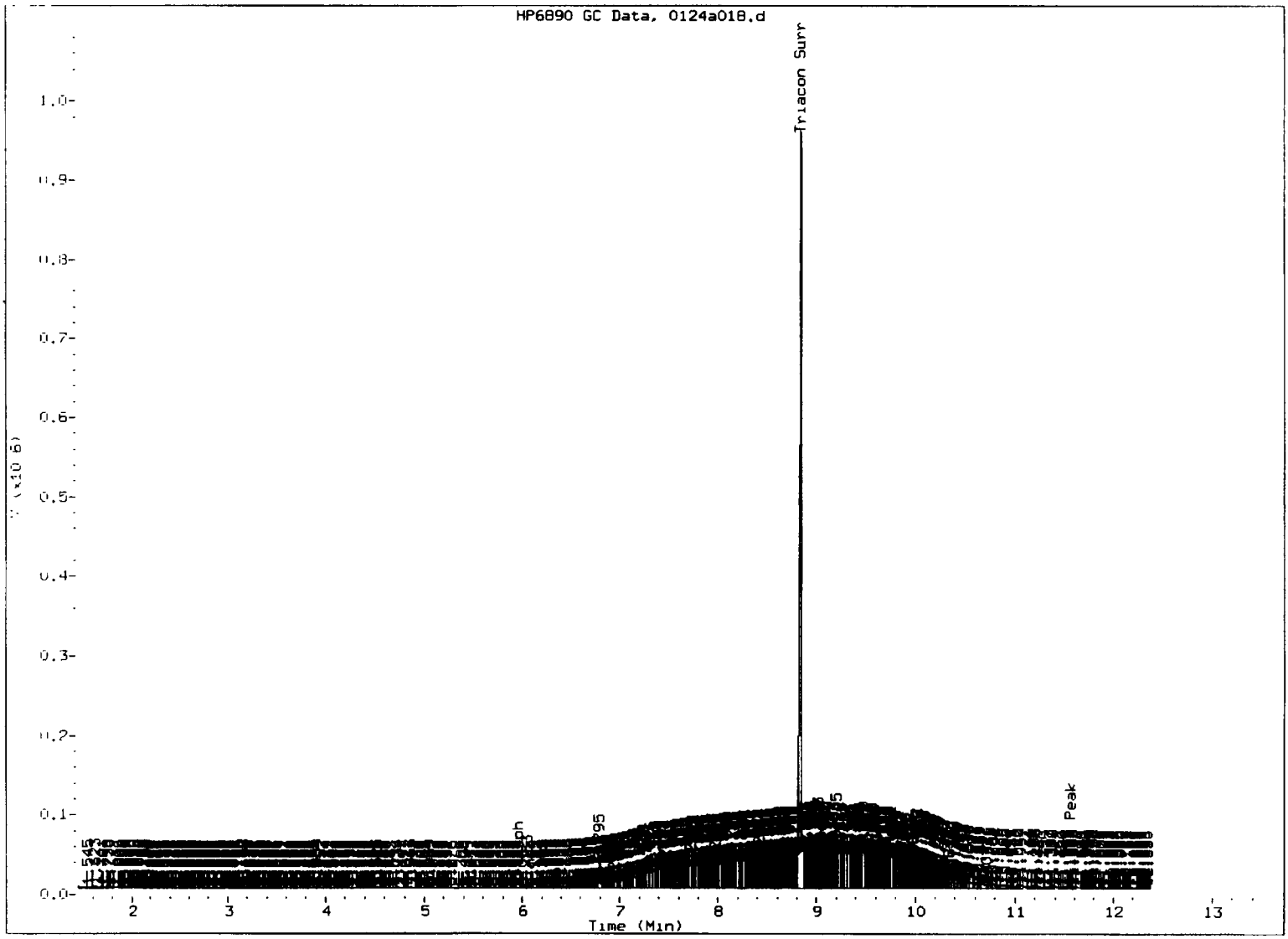
Range Times: NW Diesel(3.993 - 7.466) AK102(3.07 - 7.71) Jet A(3.07 - 5.83)
NW M.Oil(7.47 - 10.35) AK103(7.71 - 9.99) OR Diesel(3.07 - 8.42)

Surrogate	Area	Amount	%Rec
o-Terphenyl	695	0.0	0.1
Triacontane	889044	47.4	105.3 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	18755.2	24-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	16488.8	05-JAN-2013
Motor Oil	11305.9	05-JAN-2013
AK102	19795.4	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

FID:4A-2C/RTX-1 MOILICV FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5) Skimmed surrogate

Analyst: VD Date: 1-25-13

TPHD Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: VZ97

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Analyst Notes / Corrective Action Log

ARI Project ID: 1297 Client ID: Anchor

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) **409S**(HCID) **412S**(PCP) **423S**(Pest)
427S(Dir Inj) **428S**(EPH) **432S**(EDB) **Other**

Parameter(s): TPHd

Instrument: FID-3A FID-3B FID-4A FID-4B FID-5 FID-7 FID-8
FID-9 ECD-1 ECD-5 ECD-6 ECD-7

Dates: Curve: 1.5.13 Analysis Start: 1.23.13

Endrin/DDT Breakdown <15%? YES / NO / NA		Method Blank In Control?	YES / NO
ICal Meets RF & %RSD Criteria?	YES / NO	LCS/LCSD Recovery In Control?	YES / NO
CCal Meets RF & %RSD Criteria?	YES / NO	Surrogate Recovery In Control?	YES / NO
Manual Integrations for ICal?	YES / NO	Manual Integrations for Samples?	YES / NO
Internal Standard Meets Criteria? YES / NO / NA		Special Analysis Criteria Met?	YES / NO / NA

Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):

- level IV sucrose, batched w/ soils

Additional Details on Reverse: Yes / No

Analyst: VD **Date:** 1.26.13

Reviewer: MW **Date:** 1/28

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Analyst Notes / Corrective Action Log

ARI Project ID: VZ97 Client ID: Anchor

ARI SOP: **403S**(PCB) **405S**(Herb) **407S**(TPH-D) (circled) **409S**(HCID) **412S**(PCP) **423S**(Pest) **427S**(Dir Inj) **428S**(EPH) **432S**(EDB) **Other**

Parameter(s): TPH

Instrument: FID-3A FID-3B FID-4A (circled) FID-4B FID-5 FID-7 FID-8 FID-9 ECD-1 ECD-5 ECD-6 ECD-7

Dates: Curve: 1.5.13 1.24.13 Analysis Start: 1.23.13

Endrin/DDT Breakdown <15%? YES / NO / NA (NA circled)

Method Blank In Control? YES / NO (YES circled)

ICal Meets RF & %RSD Criteria? YES / NO (YES circled)

LCS/LCSD Recovery In Control? YES / NO (LCS/LCSD circled; YES circled)

CCal Meets RF & %RSD Criteria? YES / NO (YES circled)

Surrogate Recovery In Control? YES / NO (YES circled)

Manual Integrations for ICal? YES / NO (YES circled)

Manual Integrations for Samples? YES / NO (YES circled)

Internal Standard Meets Criteria? YES / NO / NA (NA circled)

Special Analysis Criteria Met? YES / NO / NA (YES circled)

Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):

- lead IV pickup. Several samples run @ dilution.

- forms include H_2O also.

Additional Details on Reverse: Yes / No

Analyst: VD **Date:** 1.26.13

Reviewer: [signature] **Date:** 1/28

Analytical Resources Inc.: Organics Instrument Log

FID-4A Serial No.: US00003247

Date: 1.23.13 Analysis: TPHd Analyst: IB/JR

Column 1 Serial No.: 977444 Column Type: RTX-1

Column 2 Serial No.: — Column Type: —

GC Method: TPHd ICal Date: 1.5.13 Injection Volume: 1ul

IS

Ical/Ccal

2043,4 2021-3 2041-4

ICV

GC LOG SUMMARY FOR DATABATCH - /chem3/fid4a.i/20130123.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	23-JAN-2013 10:41	0123a001.d	1	RINSE	
2	23-JAN-2013 11:02	0123a002.d	1	RT	
3	23-JAN-2013 11:23	0123a003.d	1	IB	
4	23-JAN-2013 11:43	0123a004.d	1	DIESEL#1	
5	23-JAN-2013 12:04	0123a005.d	1	MOIL#1	
6	23-JAN-2013 12:25	0123a006.d	5	VZ94A	
7	23-JAN-2013 12:46	0123a007.d	5	WA04A	
8	23-JAN-2013 13:07	0123a008.d	1	WA04B	
9	23-JAN-2013 13:28	0123a009.d	1	VZ86F	HC-N910-7-GW
10	23-JAN-2013 13:48	0123a010.d	1	VZ86G	HC-N910-8-GW
11	23-JAN-2013 14:09	0123a011.d	1	VZ97MBW1	
12	23-JAN-2013 14:30	0123a012.d	1	VZ97LCSW1	
13	23-JAN-2013 14:51	0123a013.d	1	VZ97LCSDW1	
14	23-JAN-2013 15:12	0123a014.d	1	VZ97S	
15	23-JAN-2013 15:32	0123a015.d	1	VZ97T	
16	23-JAN-2013 15:53	0123a016.d	1	DIESEL#2	
17	23-JAN-2013 16:13	0123a017.d	1	MOIL#2	
18	23-JAN-2013 16:34	0123a018.d	1	WA24MBS1	
19	23-JAN-2013 16:54	0123a019.d	1	WA24LCSS1	
20	23-JAN-2013 17:15	0123a020.d	1	WA24LCSDS1	
21	23-JAN-2013 17:36	0123a021.d	5	WA24A	
22	23-JAN-2013 17:56	0123a022.d	5	WA24B	
23	23-JAN-2013 18:16	0123a023.d	1	WA24C	
24	23-JAN-2013 18:36	0123a024.d	1	WA24CMS	
25	23-JAN-2013 18:57	0123a025.d	1	WA24CMSD	
26	23-JAN-2013 19:17	0123a026.d	1	WA24D	
27	23-JAN-2013 19:37	0123a027.d	1	WA24E	
28	23-JAN-2013 19:57	0123a028.d	1	DIESEL#3	
29	23-JAN-2013 20:17	0123a029.d	1	MOIL#3	
30	23-JAN-2013 20:36	0123a030.d	1	WA24F	
31	23-JAN-2013 20:56	0123a031.d	10	WA24G	
32	23-JAN-2013 21:16	0123a032.d	1	WA24H	
33	23-JAN-2013 21:36	0123a033.d	1	WA24I	
34	23-JAN-2013 21:56	0123a034.d	1	WA24J	
35	23-JAN-2013 22:15	0123a035.d	1	VZ97MBS1	
36	23-JAN-2013 22:35	0123a036.d	1	VZ97LCSS1	
37	23-JAN-2013 22:55	0123a037.d	1	VZ97A	
38	23-JAN-2013 23:15	0123a038.d	1	VZ97B	
39	23-JAN-2013 23:35	0123a039.d	1	VZ97C	
40	23-JAN-2013 23:55	0123a040.d	1	DIESEL#4	
41	24-JAN-2013 00:15	0123a041.d	1	MOIL#4	
42	24-JAN-2013 00:35	0123a042.d	5	VZ97D	
43	24-JAN-2013 00:55	0123a043.d	1	VZ97E	
44	24-JAN-2013 01:14	0123a044.d	1	VZ97F	
45	24-JAN-2013 01:34	0123a045.d	5	VZ97G	
46	24-JAN-2013 01:54	0123a046.d	1	VZ97H	
47	24-JAN-2013 02:14	0123a047.d	1	VZ97I	
48	24-JAN-2013 02:34	0123a048.d	1	VZ97J	
49	24-JAN-2013 02:54	0123a049.d	1	VZ97JMS	
50	24-JAN-2013 03:13	0123a050.d	1	VZ97JMSD	
51	24-JAN-2013 03:33	0123a051.d	1	VZ97K	
52	24-JAN-2013 03:53	0123a052.d	1	DIESEL#5	
53	24-JAN-2013 04:13	0123a053.d	1	MOIL#5	
54	24-JAN-2013 04:33	0123a054.d	1	VZ97L	
55	24-JAN-2013 04:53	0123a055.d	1	VZ97M	
56	24-JAN-2013 05:13	0123a056.d	1	VZ97N	
57	24-JAN-2013 05:33	0123a057.d	1	VZ97O	
58	24-JAN-2013 05:53	0123a058.d	1	VZ97P	
59	24-JAN-2013 06:14	0123a059.d	1	VZ97Q	
60	24-JAN-2013 06:34	0123a060.d	1	VZ97R	
61	24-JAN-2013 06:55	0123a061.d	1	DIESEL#6	
62	24-JAN-2013 07:15	0123a062.d	1	MOIL#6	

Ever
Star

1.24.13 VZ97 : 01401

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid4a.i/20130123.b

ARI Job No.: RINS Method: ftphfid4a.m Instrument: fid4a.i Date: 23-JAN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1041	0123a001.d	RINSE		1	NO MANUAL INTEGRATION
1102	0123a002.d	RT		1	NO MANUAL INTEGRATION
1123	0123a003.d	IB		1	NO MANUAL INTEGRATION
1143	0123a004.d	DIESEL#1	CHEVRON	1	o-terph,
1204	0123a005.d	MOIL#1	CHEVRON	1	Triacon Surr,
1225	0123a006.d	VZ94A		5	o-terph, Triacon Surr,
1246	0123a007.d	WA04A		5	o-terph, Triacon Surr,
1307	0123a008.d	WA04B		1	o-terph, Triacon Surr,
1328	0123a009.d	VZ86F	HC-N910-7-	1	o-terph,
1348	0123a010.d	VZ86G	HC-N910-8-	1	o-terph,
1409	0123a011.d	VZ97MBW1	VZ97MBW1	1	Filter Peak,
1430	0123a012.d	VZ97LCSW1	VZ97LCSW1	1	Filter Peak, o-terph,
1451	0123a013.d	VZ97LCSDW1	VZ97LCSDW1	1	Filter Peak, o-terph,
1512	0123a014.d	VZ97S	CSIA201301	1	Filter Peak, o-terph, Triacon Surr,
1532	0123a015.d	VZ97T	CSIA201301	1	Filter Peak,
1553	0123a016.d	DIESEL#2	CHEVRON	1	o-terph,
1613	0123a017.d	MOIL#2	CHEVRON	1	Triacon Surr,
1634	0123a018.d	WA24MBS1	WA24MBS1	1	NO MANUAL INTEGRATION
1654	0123a019.d	WA24LCSS1	WA24LCSS1	1	o-terph,
1715	0123a020.d	WA24LCSDS1	WA24LCSDS1	1	o-terph,

1736 0123a021.d WA24A 12314422 5 o-terph, Triacon Surr,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid4a.i/20130123.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1756	0123a022.d	WA24B	12314428	5	o-terph, Triacon Surr,
1816	0123a023.d	WA24C	12314437	1	NO MANUAL INTEGRATION
1836	0123a024.d	WA24CMS	12314437 M	1	o-terph,
1857	0123a025.d	WA24CMSD	12314437 M	1	o-terph,
1917	0123a026.d	WA24D	12314457	1	o-terph, Triacon Surr,
1937	0123a027.d	WA24E	12314458	1	o-terph, Triacon Surr,
1957	0123a028.d	DIESEL#3	CHEVRON	1	o-terph,
2017	0123a029.d	MOIL#3	CHEVRON	1	Triacon Surr,
2036	0123a030.d	WA24F	12314459	1	o-terph, Triacon Surr,
2056	0123a031.d	WA24G	12354416	10	o-terph, Triacon Surr,
2116	0123a032.d	WA24H	12354419	1	o-terph, Triacon Surr,
2136	0123a033.d	WA24I	12354447	1	o-terph, Triacon Surr,
2156	0123a034.d	WA24J	12354451	1	o-terph, Triacon Surr,
2215	0123a035.d	VZ97MBS1	VZ97MBS1	1	NO MANUAL INTEGRATION
2235	0123a036.d	VZ97LCSS1	VZ97LCSS1	1	o-terph,
2255	0123a037.d	VZ97A	CSIA-20130	1	o-terph, Triacon Surr,
2315	0123a038.d	VZ97B	CSIA-20130	1	o-terph, Triacon Surr,
2335	0123a039.d	VZ97C	CSIA-20130	1	o-terph, Triacon Surr,
2355	0123a040.d	DIESEL#4	CHEVRON	1	o-terph,
0015	0123a041.d	MOIL#4	CHEVRON	1	Triacon Surr,
0035	0123a042.d	VZ97D	CSIA-20130	5	o-terph, Triacon Surr,

0055 0123a043.d VZ97E CSIA-20130 1 o-terph, Triacon Surr,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid4a.i/20130123.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0114	0123a044.d VZ97F	CSIA201301		1	o-terph, Triacon Surr,
0134	0123a045.d VZ97G	CSIA201301		5	o-terph, Triacon Surr,
0154	0123a046.d VZ97H	CSIA201301		1	o-terph, Triacon Surr,
0214	0123a047.d VZ97I	CSIA201301		1	o-terph, Triacon Surr,
0234	0123a048.d VZ97J	CSIA201301		1	o-terph, Triacon Surr,
0254	0123a049.d VZ97JMS	CSIA201301		1	o-terph, Triacon Surr,
0313	0123a050.d VZ97JMSD	CSIA201301		1	o-terph, Triacon Surr,
0333	0123a051.d VZ97K	CSIA201301		1	NO MANUAL INTEGRATION
0353	0123a052.d DIESEL#5	CHEVRON		1	o-terph,
0413	0123a053.d MOIL#5	CHEVRON		1	Triacon Surr,
0433	0123a054.d VZ97L			1	NO MANUAL INTEGRATION
0453	0123a055.d VZ97M			1	NO MANUAL INTEGRATION
0513	0123a056.d VZ97N			1	NO MANUAL INTEGRATION
0533	0123a057.d VZ97O			1	NO MANUAL INTEGRATION
0553	0123a058.d VZ97P			1	NO MANUAL INTEGRATION
0614	0123a059.d VZ97Q			1	NO MANUAL INTEGRATION
0634	0123a060.d VZ97R			1	NO MANUAL INTEGRATION
0655	0123a061.d DIESEL#6			1	NO MANUAL INTEGRATION
0715	0123a062.d MOIL#6			1	NO MANUAL INTEGRATION
0735	0123a063.d RT			1	NO MANUAL INTEGRATION
0755	0123a064.d IB			1	NO MANUAL INTEGRATION

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130123.b/0123a002.d
Method: /chem3/fid4a.i/20130123.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: RT
Client ID:
Injection: 23-JAN-2013 11:02

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.112	0.000	355030	329148	WATPHG	(Tol-C12)	1297810	117.02
C8	1.357	0.000	192526	267052	WATPHD	(C12-C24)	2177293	208.19
C10	3.081	0.000	514745	326713	WATPHM	(C24-C38)	3153004	377.52
C12	4.006	0.000	494334	270514	AK102	(C10-C25)	2814142	231.88
C14	4.692	0.000	609067	333751	AK103	(C25-C36)	2783387	302.47
C16	5.282	0.000	642562	339882				
C18	5.841	0.000	554020	346480				
C20	6.405	0.000	501024	334164	JET-A	(C10-C18)	1688319	311.70
C22	6.954	0.000	481656	338878				
C24	7.476	0.000	436054	329392	MSPIRIT	(Tol-C12)	1297810	97.98
C25	7.727	0.000	407870	316323				
C26	7.981	0.000	948204	932645				
C28	8.427	0.000	418668	318496				
C32	9.239	0.000	448603	355078				
C34	9.616	0.000	451374	367660				
Filter Peak	11.564	0.000	258	490	CREOSOT	(C12-C22)	1815415	902.24 M
C36	9.979	0.000	405908	366698				
C38	10.332	0.000	380115	352474				
C40	10.678	0.000	333215	307046				
o-terph	5.976	0.000	1056684	776909				
Triacon Surr	8.856	0.000	843429	871566	NAS DIES	(C10-C24)	2805260	231.78

Range Times: NW Diesel(4.006 - 7.476) AK102(3.08 - 7.73) Jet A(3.08 - 5.84)
NW M.Oil(7.48 - 10.33) AK103(7.73 - 9.98) OR Diesel(3.08 - 8.43)

Surrogate	Area	Amount	%Rec
o-Terphenyl	776909	57.6	128.0
Triacontane	871566	81.7	181.5

M Indicates the peak was manually integrated

VD
1-25-13

Analyte	RF	Curve Date
o-Terph Surr	13490.4	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.i/20130123.b/0123a002.d

Date : 23-JAN-2013 11:02

Client ID:

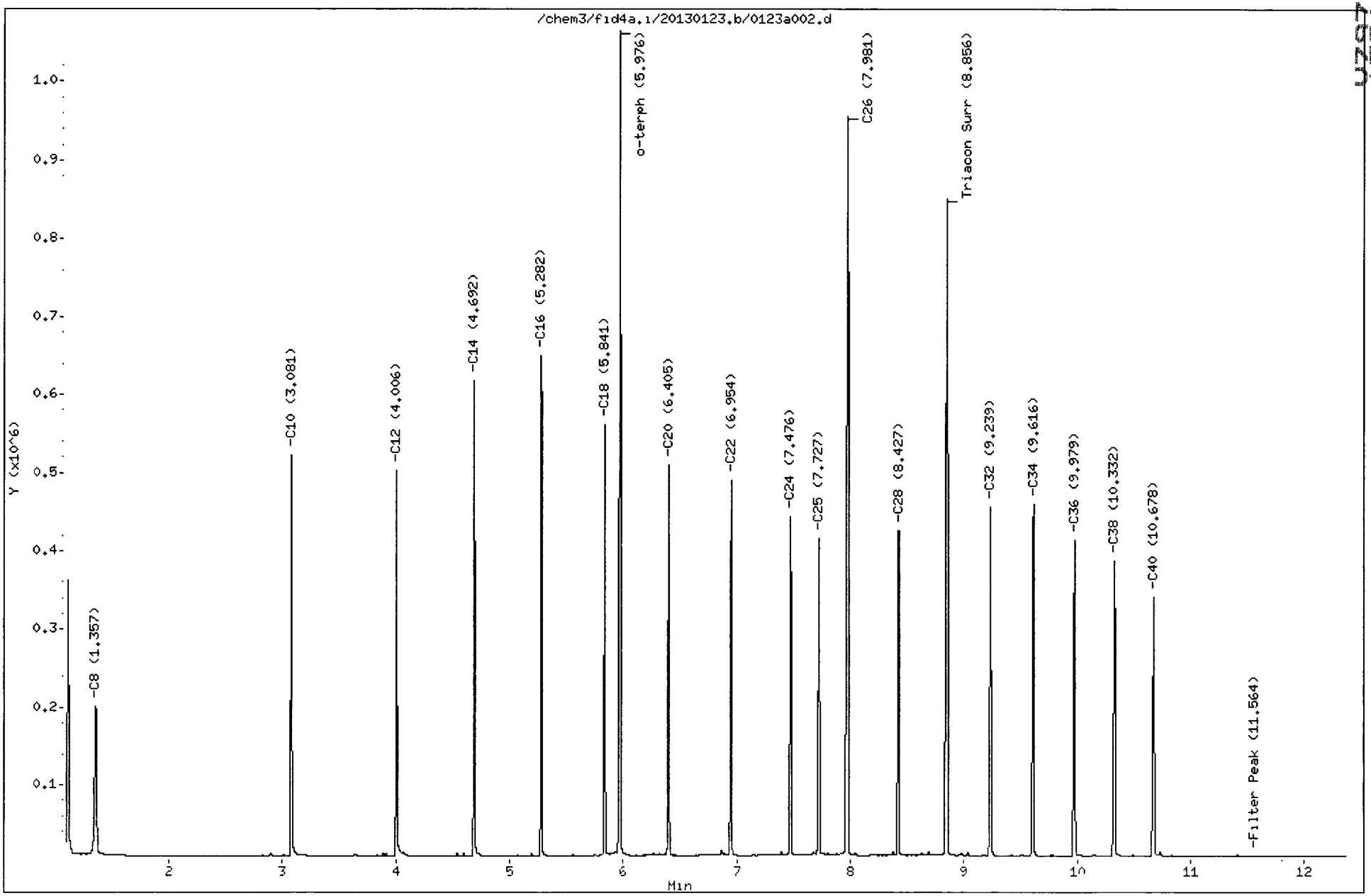
Sample Info: RT

Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130123.b/0123a003.d
Method: /chem3/fid4a.i/20130123.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: IB
Client ID:
Injection: 23-JAN-2013 11:23

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.109	-0.004	8565	52803	WATPHG	(Tol-C12)	219045	19.75
C8	1.421	0.064	1860	812	WATPHD	(C12-C24)	120216	11.49
C10	3.085	0.004	1175	2078	WATPHM	(C24-C38)	53763	6.44
C12	4.002	-0.004	959	1396	AK102	(C10-C25)	179091	14.76
C14	4.703	0.011	840	265	AK103	(C25-C36)	49468	5.38
C16	5.276	-0.006	713	654				
C18	5.836	-0.006	677	998				
C20	6.409	0.004	754	2301	JET-A	(C10-C18)	131891	24.35
C22	6.952	-0.002	548	1007				
C24	7.471	-0.005	276	510	MSPIRIT	(Tol-C12)	219045	16.54
C25	7.734	0.007	1981	2469				
C26	7.981	0.000	171	306				
C28	8.434	0.006	583	597				
C32	9.239	-0.001	7653	7023				
C34	9.624	0.007	389	519				
Filter Peak	11.562	-0.003	699	328	CREOSOT	(C12-C22)	110511	54.92 M
C36	9.987	0.008	200	282				
C38	10.342	0.010	386	674				
C40	10.689	0.011	670	1891				
o-terph	5.975	-0.002	1058650	800173				
Triacon Surr	8.854	-0.002	717801	663152	NAS DIES	(C10-C24)	177737	14.69

Range Times: NW Diesel(4.006 - 7.476) AK102(3.08 - 7.73) Jet A(3.08 - 5.84)
NW M.Oil(7.48 - 10.33) AK103(7.73 - 9.98) OR Diesel(3.08 - 8.43)

Surrogate	Area	Amount	%Rec
o-Terphenyl	800173	59.3	131.8
Triacontane	663152	62.1	138.1

M Indicates the peak was manually integrated

VJ
1-25-13

Analyte	RF	Curve Date
o-Terph Surr	13490.4	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.i/20130123.b/0123a003.d

Date : 23-JAN-2013 11:23

Client ID:

Sample Info: IB

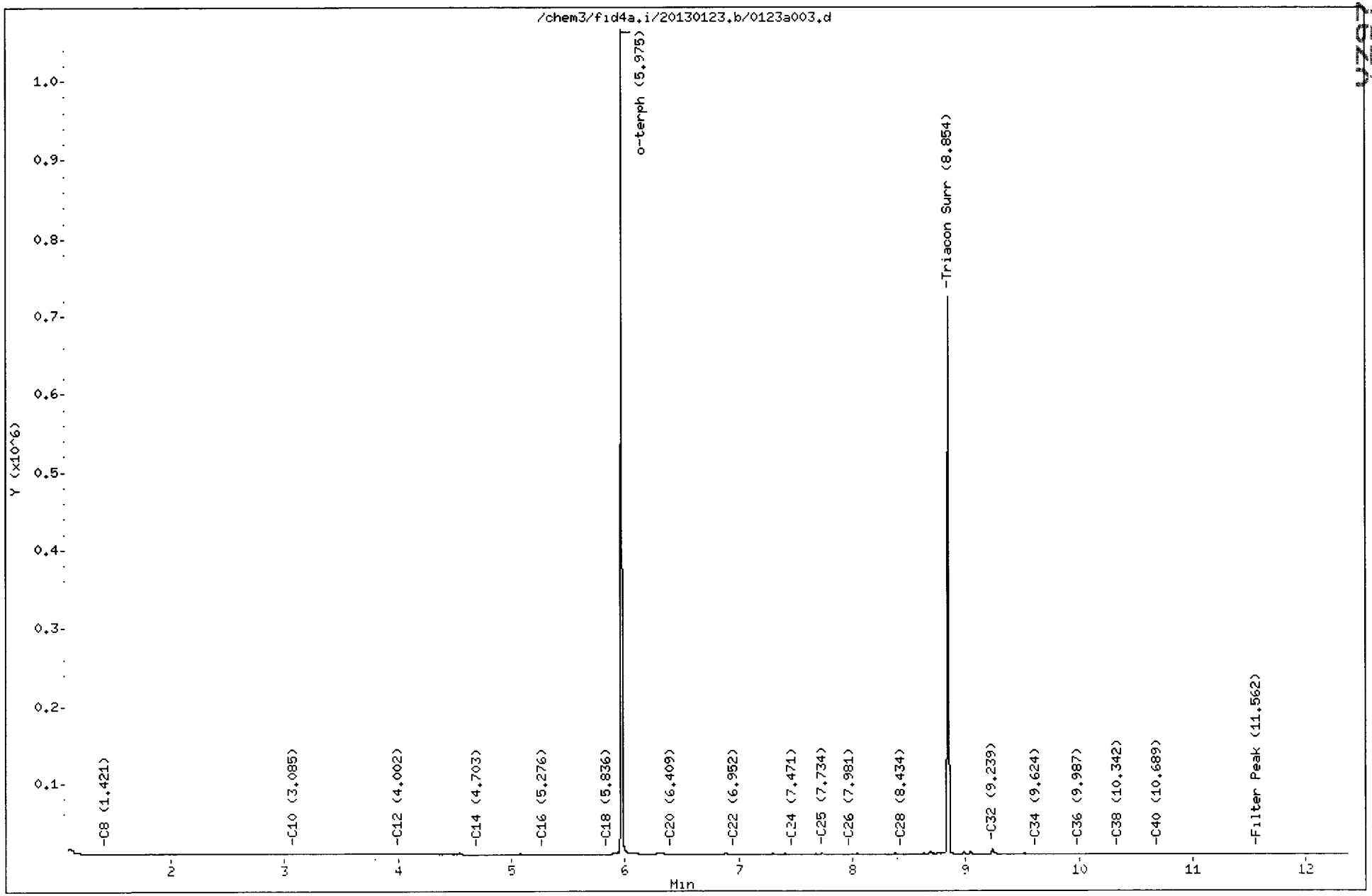
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS

Column diameter: 0.25

U797 : 01119



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130123.b/0123a004.d ARI ID: DIESEL#1
Method: /chem3/fid4a.i/20130123.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 23-JAN-2013 11:43
Operator: JR/VTS
Report Date: 01/25/2013 Dilution Factor: 1
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.122	0.009	5924	12596	WATPHG	(Tol-C12)	1043421	94.08
C8	1.352	-0.005	4218	8988	WATPHD	(C12-C24)	2842657	271.80
C10	3.082	0.001	14834	15407	WATPHM	(C24-C38)	51154	6.12*
C12	4.005	-0.001	26307	27700	AK102	(C10-C25)	3374573	278.06
C14	4.690	-0.002	58675	40530	AK103	(C25-C36)	41033	4.46*
C16	5.279	-0.003	97853	70156				
C18	5.837	-0.005	76608	68316				
C20	6.400	-0.005	45360	55899	JET-A	(C10-C18)	2529183	466.94
C22	6.948	-0.006	23095	21215				
C24	7.472	-0.005	5616	7903	MSPIRIT	(Tol-C12)	1043421	78.78
C25	7.722	-0.005	2181	5415				
C26	7.966	-0.015	921	1710				
C28	8.429	0.001	333	205				
C32	9.255	0.015	3340	3079				
C34	9.612	-0.004	181	204				
Filter Peak	11.562	-0.002	607	1842	CREOSOT	(C12-C22)	2744345	1363.90 M
C36	9.976	-0.004	119	149				
C38	10.335	0.003	210	277				
C40	10.672	-0.006	386	490				
o-terph	5.975	-0.002	862167	611608				
Triacon Surr	8.841	-0.016	568	702	NAS DIES	(C10-C24)	3367773	278.26

* Indicates Filter Peak subtracted

Range Times: NW Diesel(4.006 - 7.476) AK102(3.08 - 7.73) Jet A(3.08 - 5.84)
NW M.Oil(7.48 - 10.33) AK103(7.73 - 9.98) OR Diesel(3.08 - 8.43)

Surrogate	Area	Amount	%Rec
o-Terphenyl	611608	45.3	100.7 M
Triacontane	702	0.1	0.1

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	13490.4	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

VZ97:01411

Data File: /chem3/fid4a.i/20130123.b/0123a004.d
Date : 23-JAN-2013 11:43
Client ID:
Sample Info: DIESEL#1

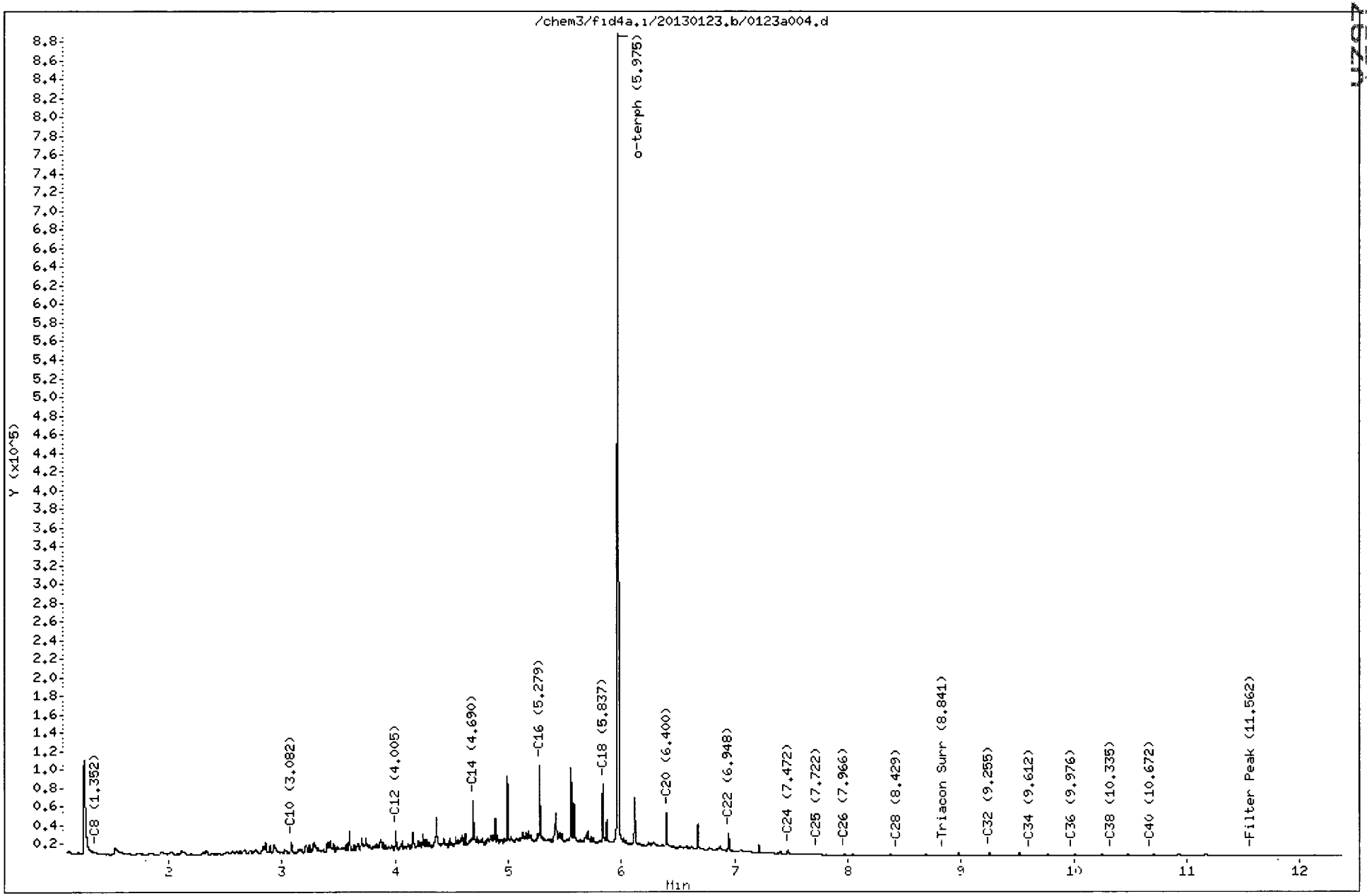
Column phase: RTX-1

Instrument: fid4a.i

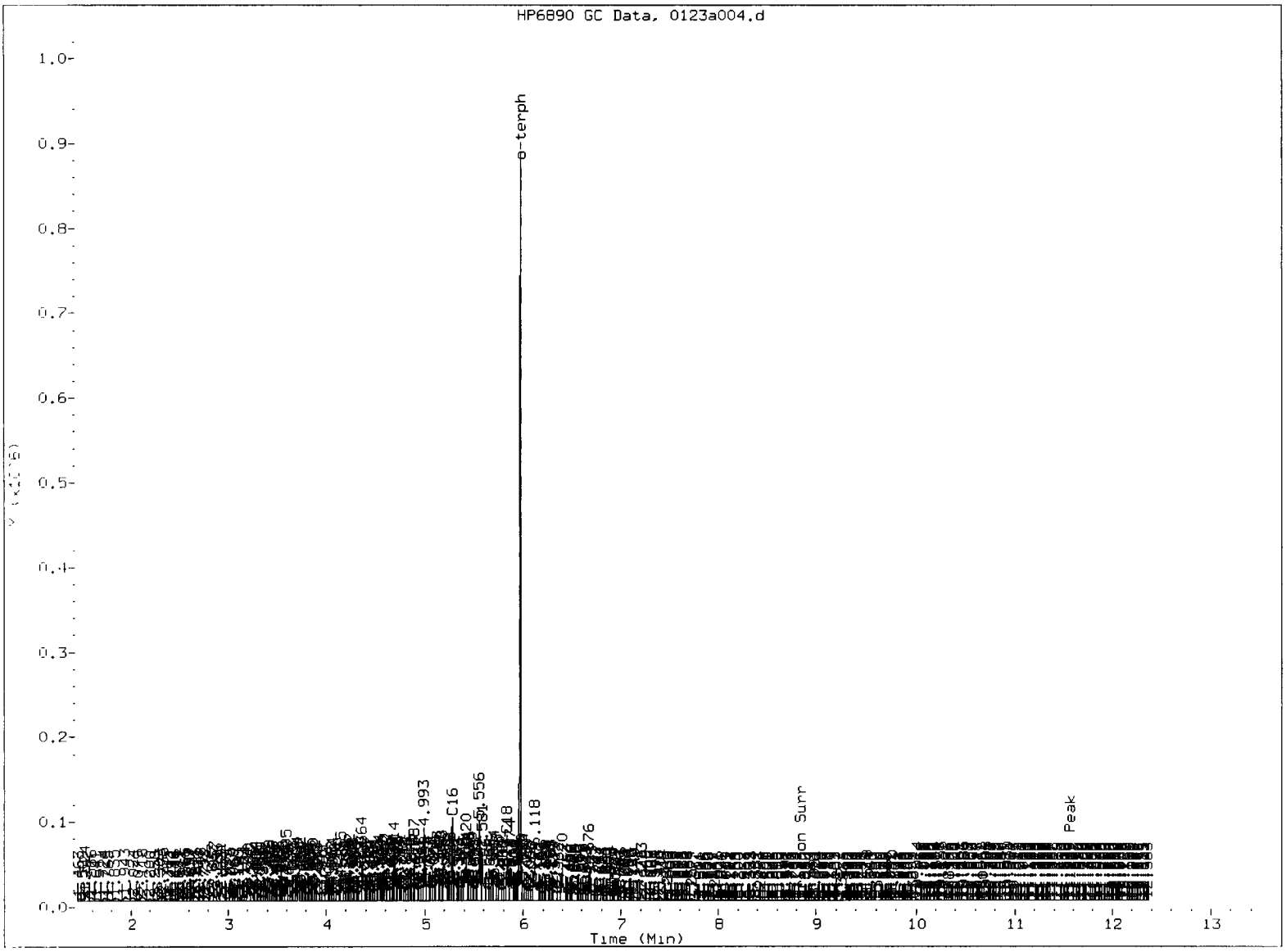
Operator: JR/VTS
Column diameter: 0.25

1.25.13

UZ97 - 01442



FID:4A-2C/RTX-1 DIESEL#1 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VN Date: 1-25-13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130123.b/0123a005.d ARI ID: MOIL#1
Method: /chem3/fid4a.i/20130123.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 23-JAN-2013 12:04
Operator: JR/VTS
Report Date: 01/25/2013 Dilution Factor: 1
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.109	-0.003	6978	29098	WATPHG	(Tol-C12)	107222	9.67
C8	1.384	0.027	1311	1583	WATPHD	(C12-C24)	413059	39.50
C10	3.085	0.004	469	998	WATPHM	(C24-C38)	4596177	550.31*
C12	4.007	0.001	278	120	AK102	(C10-C25)	615357	50.71
C14	4.699	0.007	206	155	AK103	(C25-C36)	3847564	418.12*
C16	5.293	0.011	105	144				
C18	5.847	0.006	167	258				
C20	6.402	-0.003	964	1758	JET-A	(C10-C18)	39480	7.29
C22	6.950	-0.004	3995	1540				
C24	7.480	0.004	15078	8538	MSPIRIT	(Tol-C12)	107222	8.09
C25	7.731	0.004	19958	21669				
C26	7.982	0.002	23282	33855				
C28	8.432	0.005	27202	14569				
C32	9.242	0.003	41538	68332				
C34	9.611	-0.005	33925	41003				
Filter Peak	11.565	0.001	2842	2932	CREOSOT	(C12-C22)	108505	53.93 M
C36	9.982	0.003	35232	12663				
C38	10.334	0.002	26779	24922				
C40	10.673	-0.005	22495	31415				
o-terph	5.973	-0.003	480	723				
Triacon Surr	8.847	-0.009	648369	566409	NAS DIES	(C10-C24)	433870	35.85

* Indicates Filter Peak subtracted

Range Times: NW Diesel(4.006 - 7.476) AK102(3.08 - 7.73) Jet A(3.08 - 5.84)
NW M.Oil(7.48 - 10.33) AK103(7.73 - 9.98) OR Diesel(3.08 - 8.43)

Surrogate	Area	Amount	%Rec
o-Terphenyl	723	0.1	0.1
Triacontane	566409	53.1	117.9 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	13490.4	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

VZ97:01U1U

Data File: /chem3/fid4a.i/20130123.b/0123a005.d
Date : 23-JAN-2013 12:04
Client ID:
Sample Info: MOIL#1

Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS
Column diameter: 0.25

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U207-91415

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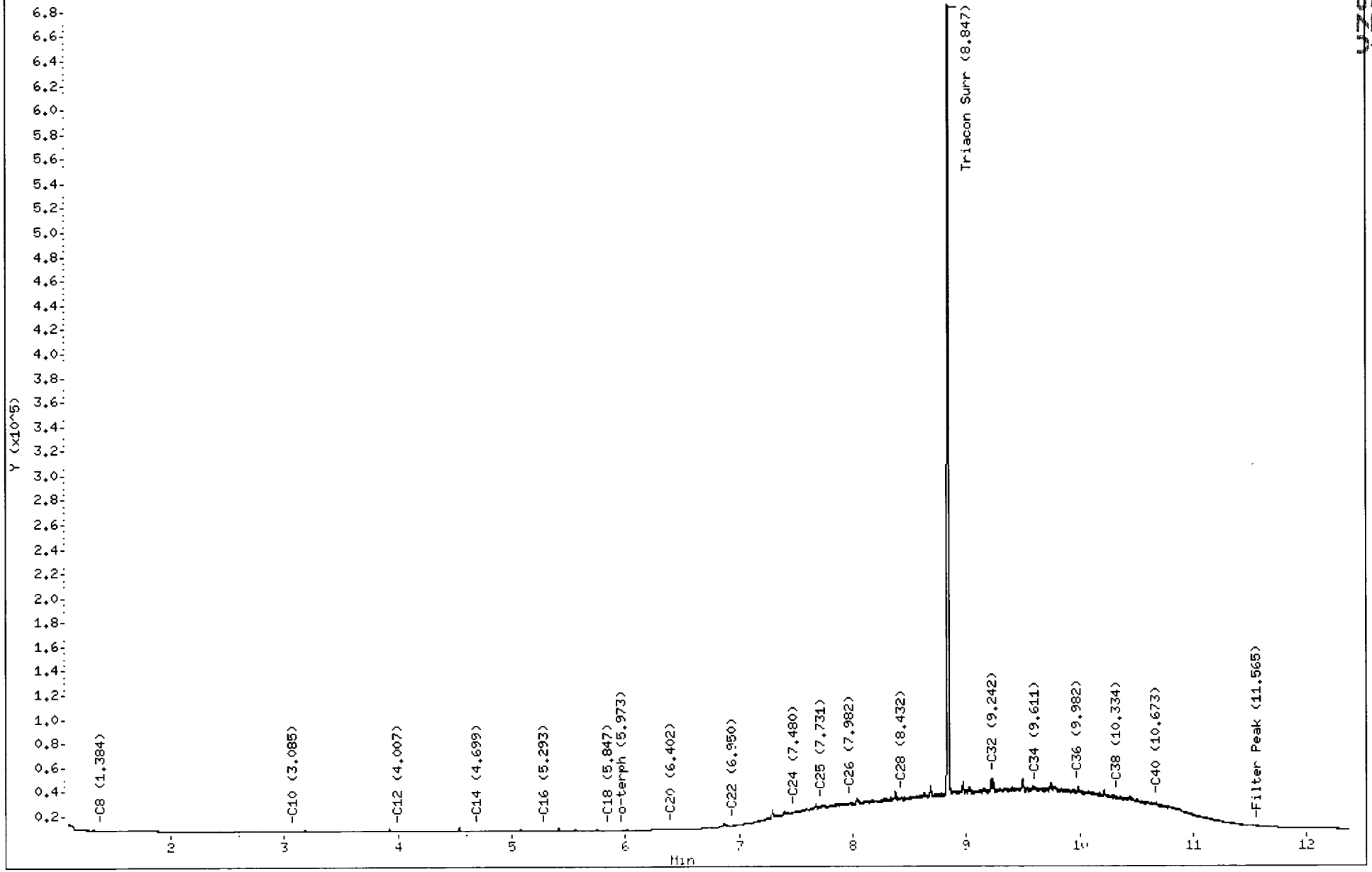
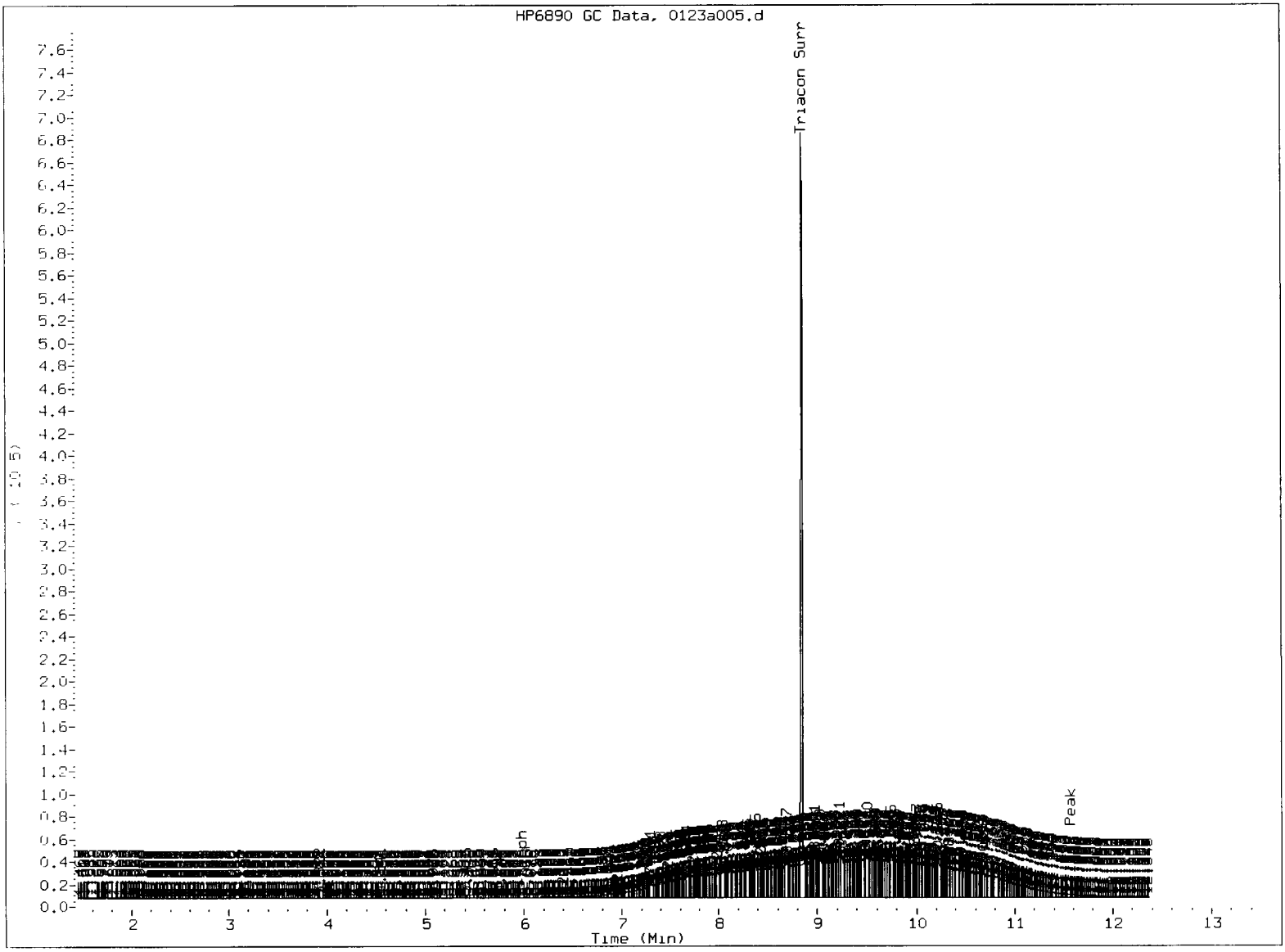


FID:4A-2C/RTX-1 MOIL#1

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VJ Date: 1-25-13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130123.b/0123a011.d
Method: /chem3/fid4a.i/20130123.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: VZ97MBW1
Client ID: VZ97MBW1
Injection: 23-JAN-2013 14:09

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.117	0.005	11865	36931	WATPHG	(Tol-C12)	91094	8.21
C8	1.352	-0.005	1460	3031	WATPHD	(C12-C24)	155690	14.89
C10	3.083	0.002	215	104	WATPHM	(C24-C38)	130509	15.63*
C12	4.034	0.027	179	219	AK102	(C10-C25)	170100	14.02
C14	4.690	-0.001	225	342	AK103	(C25-C36)	108770	11.82*
C16	5.286	0.004	2057	2388				
C18	5.840	-0.001	1065	710				
C20	6.413	0.009	951	746	JET-A	(C10-C18)	103901	19.18
C22	6.955	0.001	1261	1036				
C24	7.473	-0.003	745	739	MSPIRIT	(Tol-C12)	91094	6.88
C25	7.737	0.010	640	837				
C26	7.970	-0.011	387	407				
C28	8.424	-0.003	940	1598				
C32	9.239	-0.001	7988	6325				
C34	9.611	-0.005	18982	15040				
Filter Peak	9.935	-1.629	243157	212519	CREOSOT	(C12-C22)	137398	68.28 M
C36	10.004	0.025	991	523				
C38	10.338	0.006	1166	1618				
C40	10.678	0.000	1196	602				
o-terph	5.979	0.002	873590	633195				
Triacon Surr	8.854	-0.002	610433	550464	NAS DIES	(C10-C24)	165864	13.70

* Indicates Filter Peak subtracted

Range Times: NW Diesel(4.006 - 7.476) AK102(3.08 - 7.73) Jet A(3.08 - 5.84)
NW M.Oil(7.48 - 10.33) AK103(7.73 - 9.98) OR Diesel(3.08 - 8.43)

Surrogate	Area	Amount	%Rec
o-Terphenyl	633195	46.9	104.3
Triacontane	550464	51.6	114.6

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	13490.4	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.i/20130123.b/0123a011.d

Date : 23-JAN-2013 14:09

Client ID: VZ97MBW1

Sample Info: VZ97MBW1

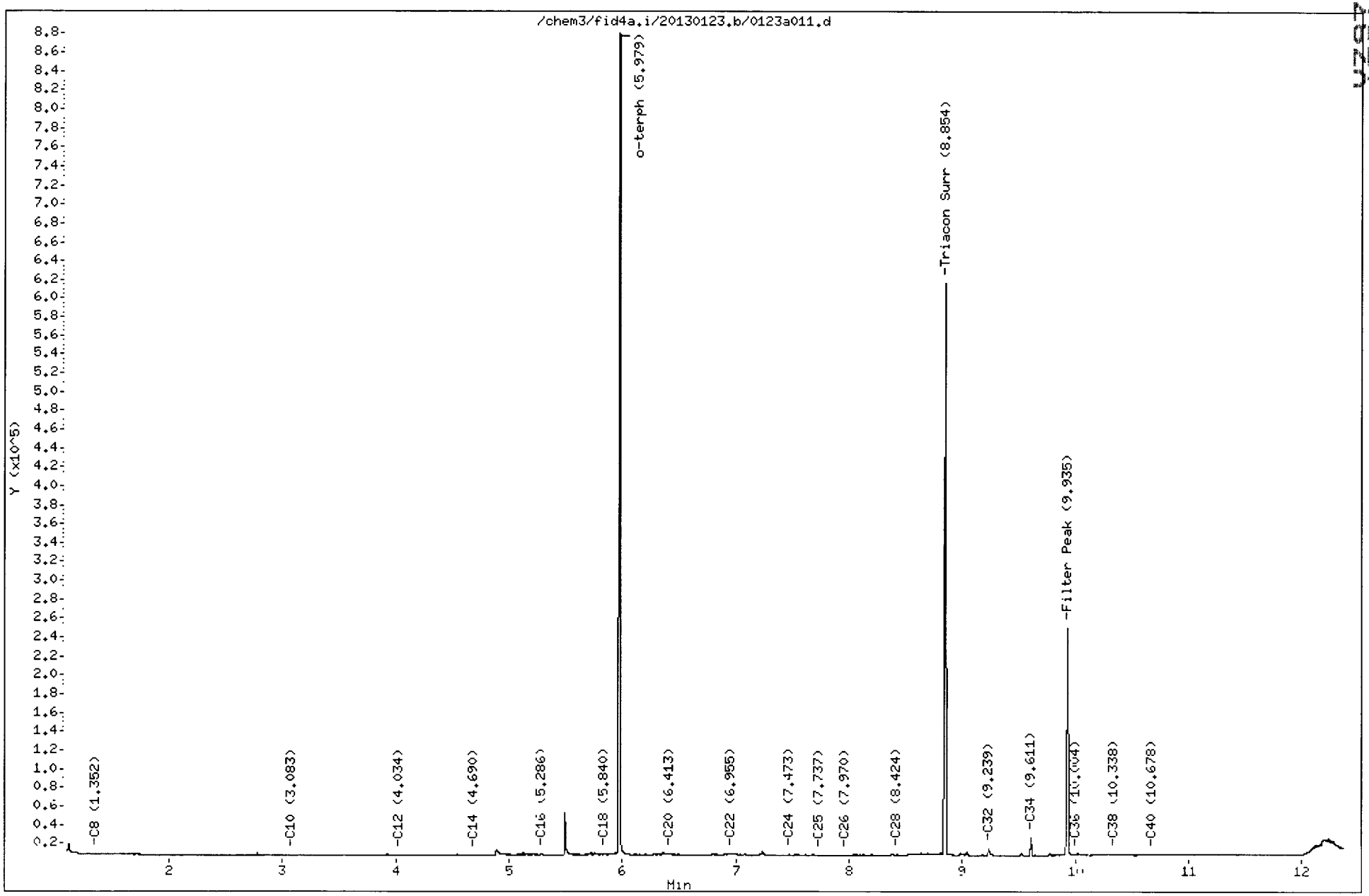
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS

Column diameter: 0.25

VZ97-011413



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130123.b/0123a012.d
Method: /chem3/fid4a.i/20130123.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: VZ97LCSW1
Client ID: VZ97LCSW1
Injection: 23-JAN-2013 14:30
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.112	-0.001	18117	25204	WATPHG	(Tol-C12)	3116573	281.01
C8	1.347	-0.010	5794	11307	WATPHD	(C12-C24)	13671234	1307.20
C10	3.084	0.003	86983	64911	WATPHM	(C24-C38)	250278	29.97*
C12	4.009	0.003	136579	120262	AK102	(C10-C25)	15816754	1303.30
C14	4.694	0.003	320574	195845	AK103	(C25-C36)	139972	15.21*
C16	5.286	0.004	507880	377253				
C18	5.846	0.004	402047	361825				
C20	6.405	0.001	270689	255801	JET-A	(C10-C18)	11526613	2128.06
C22	6.953	-0.001	145031	154878				
C24	7.473	-0.003	36688	34301	MSPIRIT	(Tol-C12)	3116573	235.29
C25	7.722	-0.005	14453	20799				
C26	7.965	-0.016	5533	6421				
C28	8.422	-0.006	1719	2701				
C32	9.235	-0.004	7746	6135				
C34	9.608	-0.008	7542	5465				
Filter Peak	9.938	-1.626	417220	380616	CREOSOT	(C12-C22)	13195368	6557.91 M
C36	10.018	0.039	3140	7107				
C38	10.333	0.002	2676	5918				
C40	10.687	0.008	882	677				
o-terph	5.980	0.004	844878	592920				
Triacon Surr	8.852	-0.004	634661	541208	NAS DIES	(C10-C24)	15770870	1303.05

* Indicates Filter Peak subtracted

Range Times: NW Diesel(4.006 - 7.476) AK102(3.08 - 7.73) Jet A(3.08 - 5.84)
NW M.Oil(7.48 - 10.33) AK103(7.73 - 9.98) OR Diesel(3.08 - 8.43)

Surrogate	Area	Amount	%Rec
o-Terphenyl	592920	44.0	97.7 M
Triacontane	541208	50.7	112.7

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	13490.4	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.1/20130123.b/0123a012.d

Date : 23-JAN-2013 14:30

Client ID: VZ97LCSW1

Sample Info: VZ97LCSW1

Column phase: RTX-1

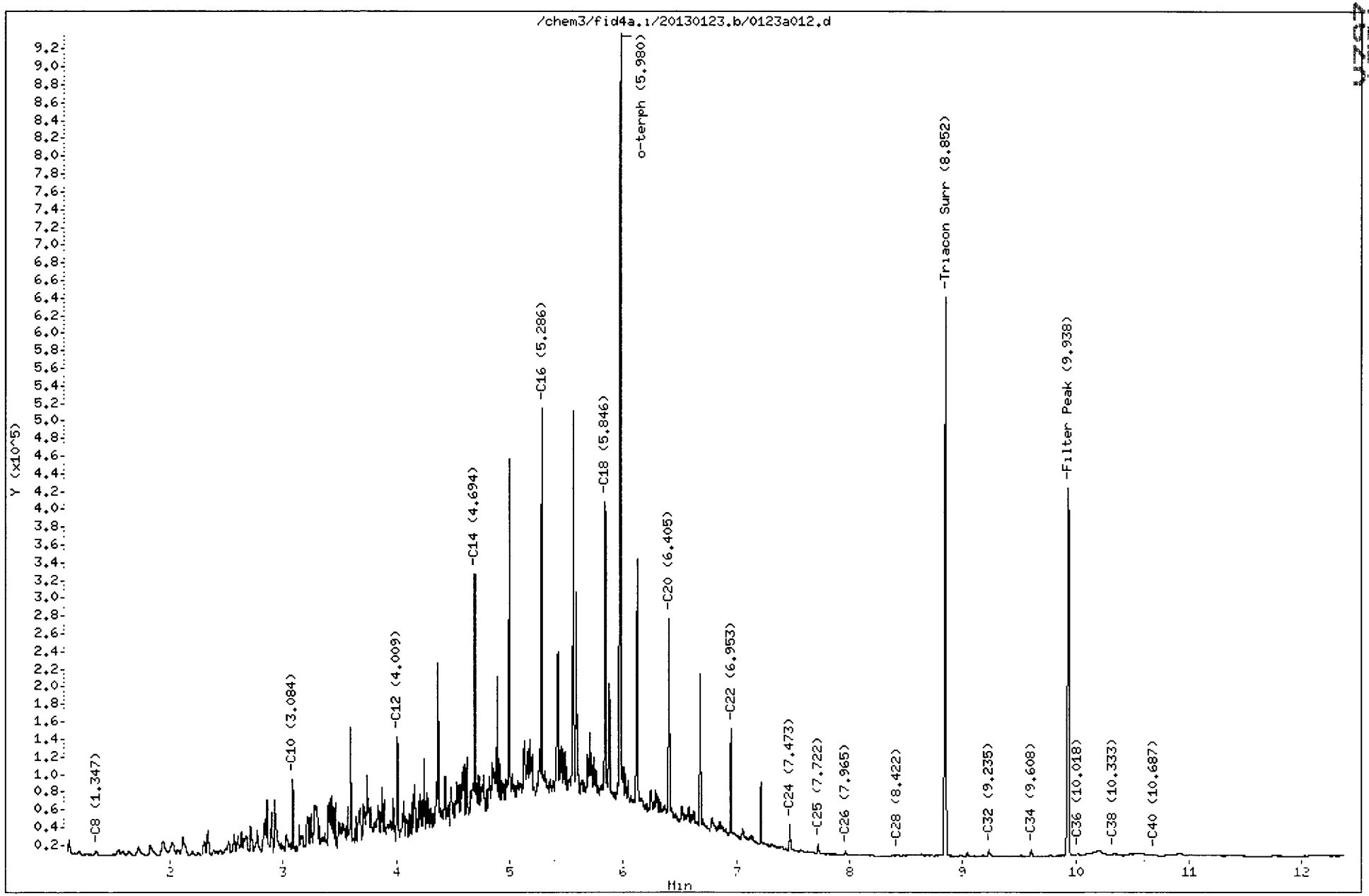
Instrument: fid4a.1

Operator: JR/VTS

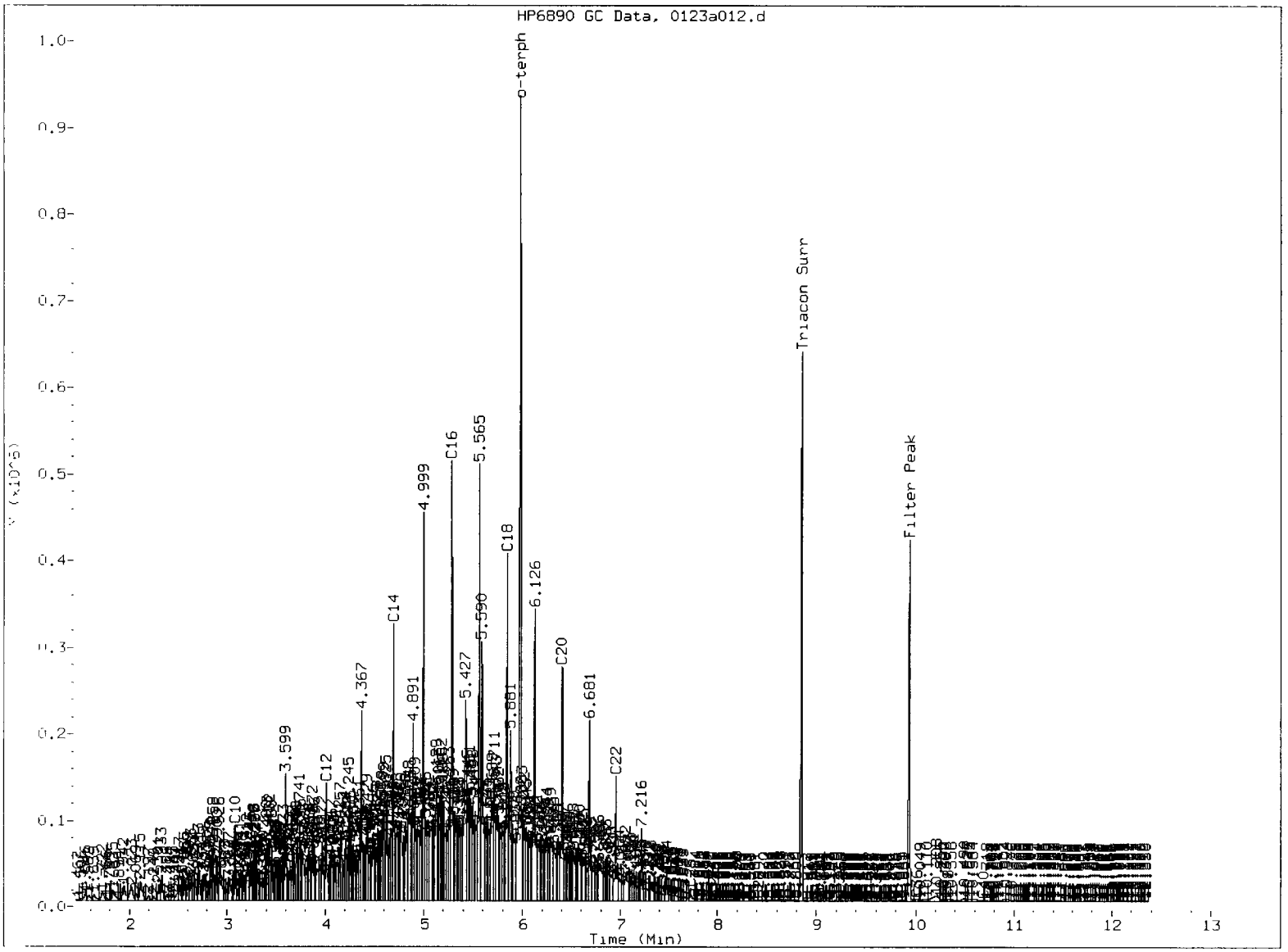
Column diameter: 0.25

VT 1.25.13

VZ97-011425



FID:4A-2C/RTX-1 VZ97LCSW1 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VD Date: 1-25-13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130123.b/0123a013.d
Method: /chem3/fid4a.i/20130123.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: VZ97LCSDW1
Client ID: VZ97LCSDW1
Injection: 23-JAN-2013 14:51

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.107	-0.006	13121	20547	WATPHG	(Tol-C12)	3180884	286.81
C8	1.344	-0.013	5874	11292	WATPHD	(C12-C24)	14088728	1347.11
C10	3.084	0.003	88371	66365	WATPHM	(C24-C38)	182565	21.86*
C12	4.010	0.003	139008	127944	AK102	(C10-C25)	16278839	1341.37
C14	4.695	0.003	316329	196368	AK103	(C25-C36)	130038	14.13*
C16	5.286	0.004	515610	373576				
C18	5.846	0.004	393422	383214				
C20	6.407	0.002	286375	259414	JET-A	(C10-C18)	11891341	2195.40
C22	6.953	-0.001	139948	131269				
C24	7.474	-0.003	35802	35656	MSPIRIT	(Tol-C12)	3180884	240.15
C25	7.722	-0.005	14472	20943				
C26	7.965	-0.016	5846	7144				
C28	8.422	-0.006	1604	2384				
C32	9.250	0.011	1600	1313				
C34	9.594	-0.022	7194	5490				
Filter Peak	9.912	-1.652	230896	202199	CREOSOT	(C12-C22)	13581107	6749.62 M
C36	9.999	0.019	1847	2476				
C38	10.334	0.002	332	430				
C40	10.685	0.007	1128	2057				
o-terph	5.981	0.004	889580	621978				
Triacon Surr	8.850	-0.007	670957	555024	NAS DIES	(C10-C24)	16233375	1341.27

* Indicates Filter Peak subtracted

Range Times: NW Diesel(4.006 - 7.476) AK102(3.08 - 7.73) Jet A(3.08 - 5.84)
NW M.Oil(7.48 - 10.33) AK103(7.73 - 9.98) OR Diesel(3.08 - 8.43)

Surrogate	Area	Amount	%Rec
o-Terphenyl	621978	46.1	102.5 M
Triacontane	555024	52.0	115.6

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	13490.4	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.i/20130123.b/0123a013.d
Date : 23-JAN-2013 14:51
Client ID: VZ97LCSDW1
Sample Info: VZ97LCSDW1

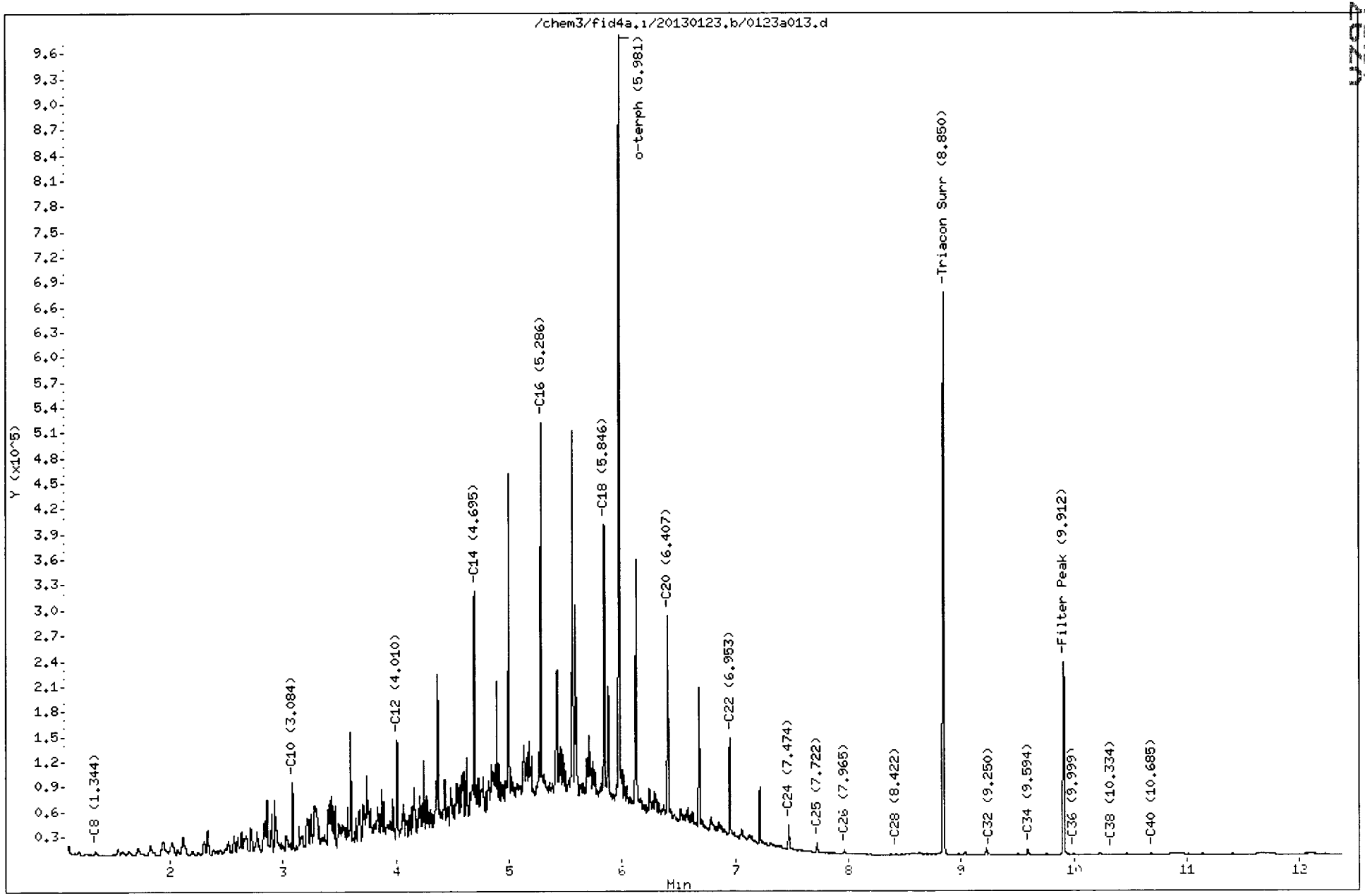
Column phase: RTX-1

Instrument: fid4a.i

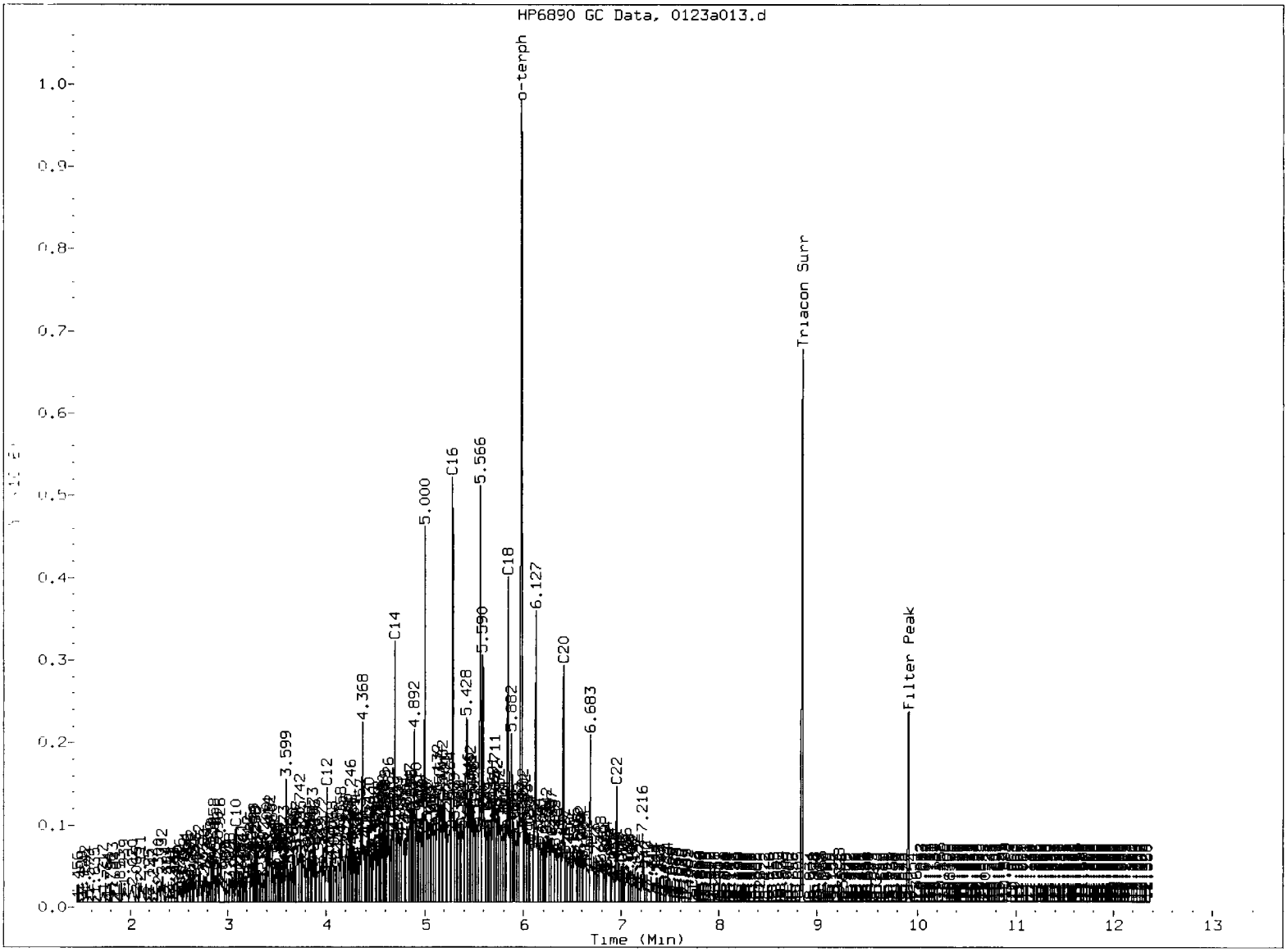
Operator: JR/VTS
Column diameter: 0.25

1.25.13

VZ97 : 01123



FID:4A-2C/RTX-1 VZ97LCSDW1 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VD Date: 1-25-13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130123.b/0123a014.d
Method: /chem3/fid4a.i/20130123.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: VZ97S
Client ID: CSIA20130114-001DW
Injection: 23-JAN-2013 15:12
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.116	0.003	20310	25625	WATPHG	(Tol-C12)	510116	46.00
C8	1.349	-0.008	2771	5224	WATPHD	(C12-C24)	4109455	392.93
C10	3.087	0.006	3225	2859	WATPHM	(C24-C38)	725949	86.92*
C12	4.006	-0.001	15099	19422	AK102	(C10-C25)	4542886	374.33
C14	4.683	-0.009	26319	33854	AK103	(C25-C36)	619646	67.34*
C16	5.281	-0.001	30591	59128				
C18	5.841	-0.001	26063	31805				
C20	6.411	0.006	16901	7646	JET-A	(C10-C18)	3181321	587.34
C22	6.971	0.017	11065	13215				
C24	7.476	0.000	7313	5870	MSPIRIT	(Tol-C12)	510116	38.51
C25	7.733	0.006	6524	7398				
C26	7.971	-0.010	5505	6321				
C28	8.424	-0.003	6247	8914				
C32	9.233	-0.006	10674	10863				
C34	9.606	-0.010	6419	11557				
Filter Peak	9.928	-1.636	327869	291927	CREOSOT	(C12-C22)	3860302	1918.52 M
C36	9.966	-0.014	3266	5159				
C38	10.339	0.007	2258	2882				
C40	10.675	-0.003	1755	1093				
o-terph	5.980	0.004	889835	599817				
Triacon Surr	8.853	-0.003	604176	529171	NAS DIES	(C10-C24)	4485521	370.61

* Indicates Filter Peak subtracted

Range Times: NW Diesel(4.006 - 7.476) AK102(3.08 - 7.73) Jet A(3.08 - 5.84)
NW M.Oil(7.48 - 10.33) AK103(7.73 - 9.98) OR Diesel(3.08 - 8.43)

Surrogate	Area	Amount	%Rec
o-Terphenyl	599817	44.5	98.8 M
Triacontane	529171	49.6	110.2 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	13490.4	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.i/20130123.b/0123a014.d

Date : 23-JAN-2013 15:12

Client ID: CSIA20130114-001DW

Sample Info: VZ97S

Column phase: RTX-1

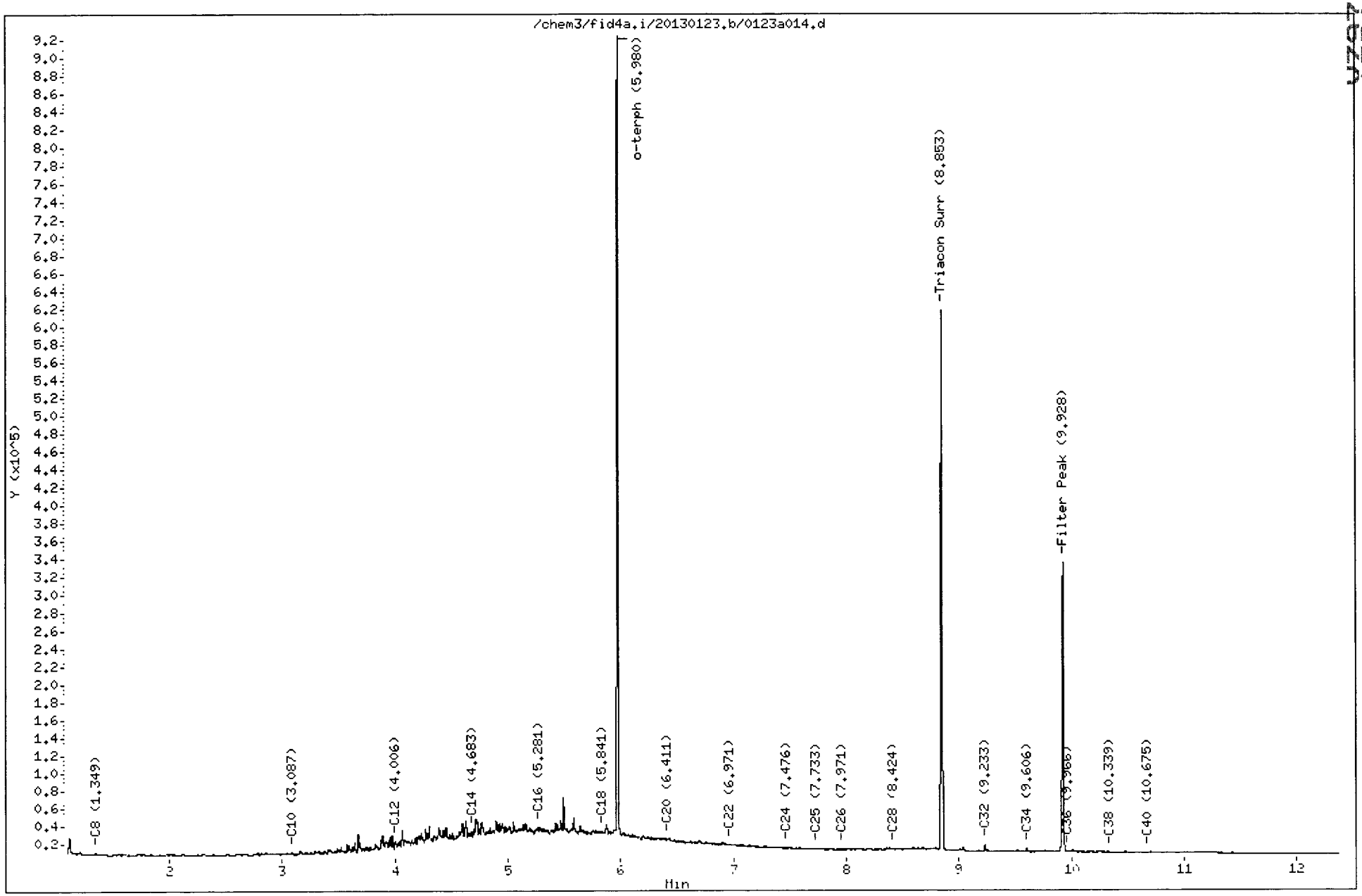
Instrument: fid4a.i

Operator: JR/VTS

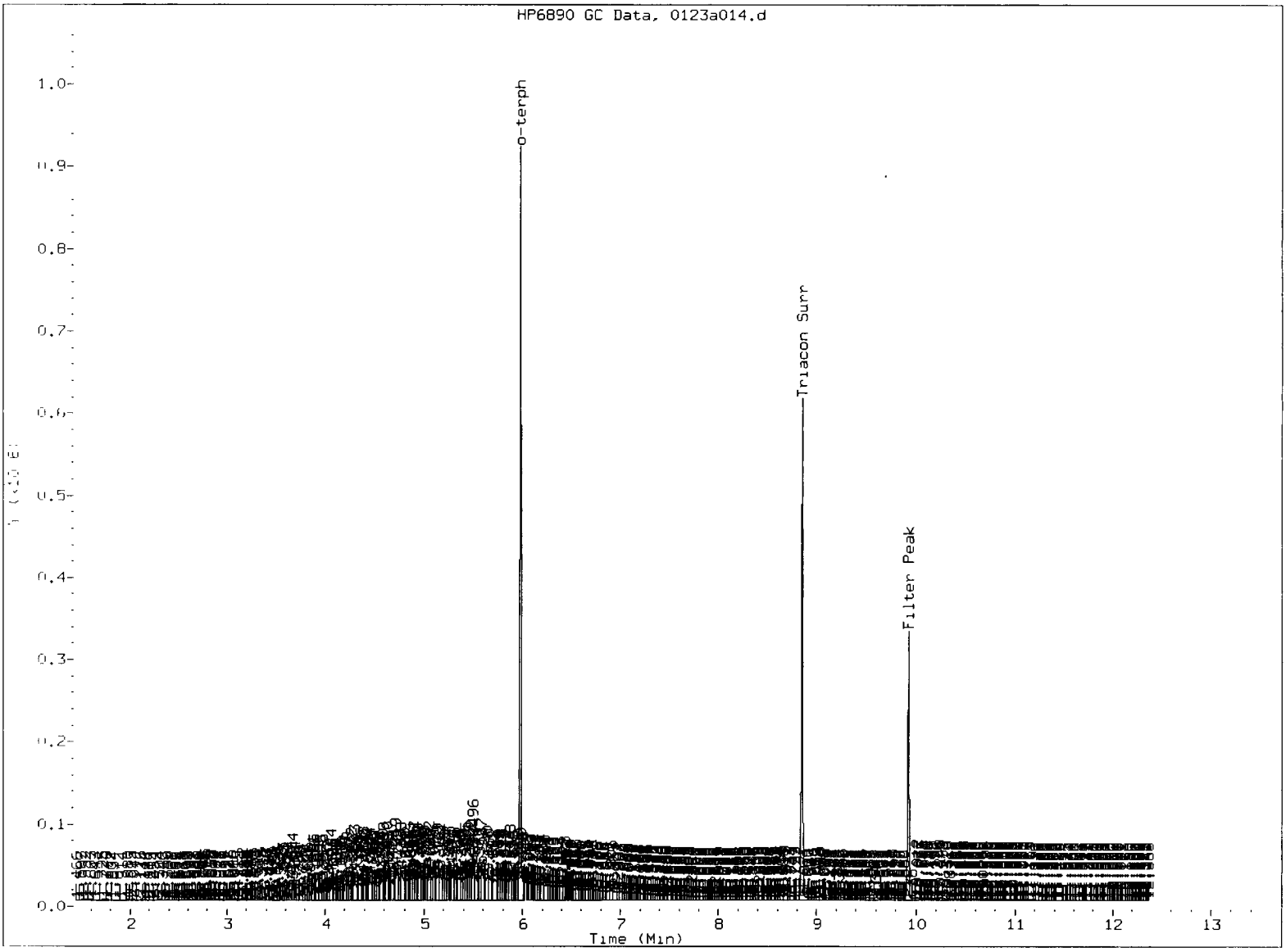
Column diameter: 0.25

VP 1.25.13

VZ97S-04125



FID:4A-2C/RTX-1 VZ97S FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VB Date: 1-25-13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130123.b/0123a015.d
Method: /chem3/fid4a.i/20130123.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: VZ97T
Client ID: CSIA20130111-001RB
Injection: 23-JAN-2013 15:32

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.105	-0.007	23929	54594	WATPHG	(Tol-C12)	133016	11.99
C8	1.389	0.032	1894	5228	WATPHD	(C12-C24)	137519	13.15
C10	3.085	0.004	535	543	WATPHM	(C24-C38)	79111	9.47*
C12	4.003	-0.003	286	151	AK102	(C10-C25)	156086	12.86
C14	4.694	0.002	273	292	AK103	(C25-C36)	67495	7.33*
C16	5.286	0.005	1460	2375				
C18	5.841	0.000	920	719				
C20	6.413	0.008	934	762	JET-A	(C10-C18)	100869	18.62
C22	6.956	0.002	796	635				
C24	7.473	-0.003	420	674	MSPIRIT	(Tol-C12)	133016	10.04
C25	7.738	0.012	1129	1268				
C26	7.970	-0.011	214	191				
C28	8.424	-0.003	723	1241				
C32	9.235	-0.004	8207	6497				
C34	9.606	-0.010	5665	4588				
Filter Peak	9.929	-1.635	267279	230820	CREOSOT	(C12-C22)	128943	64.08 M
C36	10.016	0.036	1731	2260				
C38	10.332	0.000	444	892				
C40	10.679	0.001	607	505				
o-terph	5.980	0.004	945320	675464				
Triacon Surr	8.856	0.000	662300	584497	NAS DIES	(C10-C24)	153494	12.68

* Indicates Filter Peak subtracted

Range Times: NW Diesel(4.006 - 7.476) AK102(3.08 - 7.73) Jet A(3.08 - 5.84)
NW M.Oil(7.48 - 10.33) AK103(7.73 - 9.98) OR Diesel(3.08 - 8.43)

Surrogate	Area	Amount	%Rec
o-Terphenyl	675464	50.1	111.3
Triacontane	584497	54.8	121.7

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	13490.4	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

VZ97 : 01428

Data File: /chem3/fid4a.i/20130123.b/0123a015.d

Date : 23-JAN-2013 15:32

Client ID: CSIA20130111-001RB

Sample Info: VZ97T

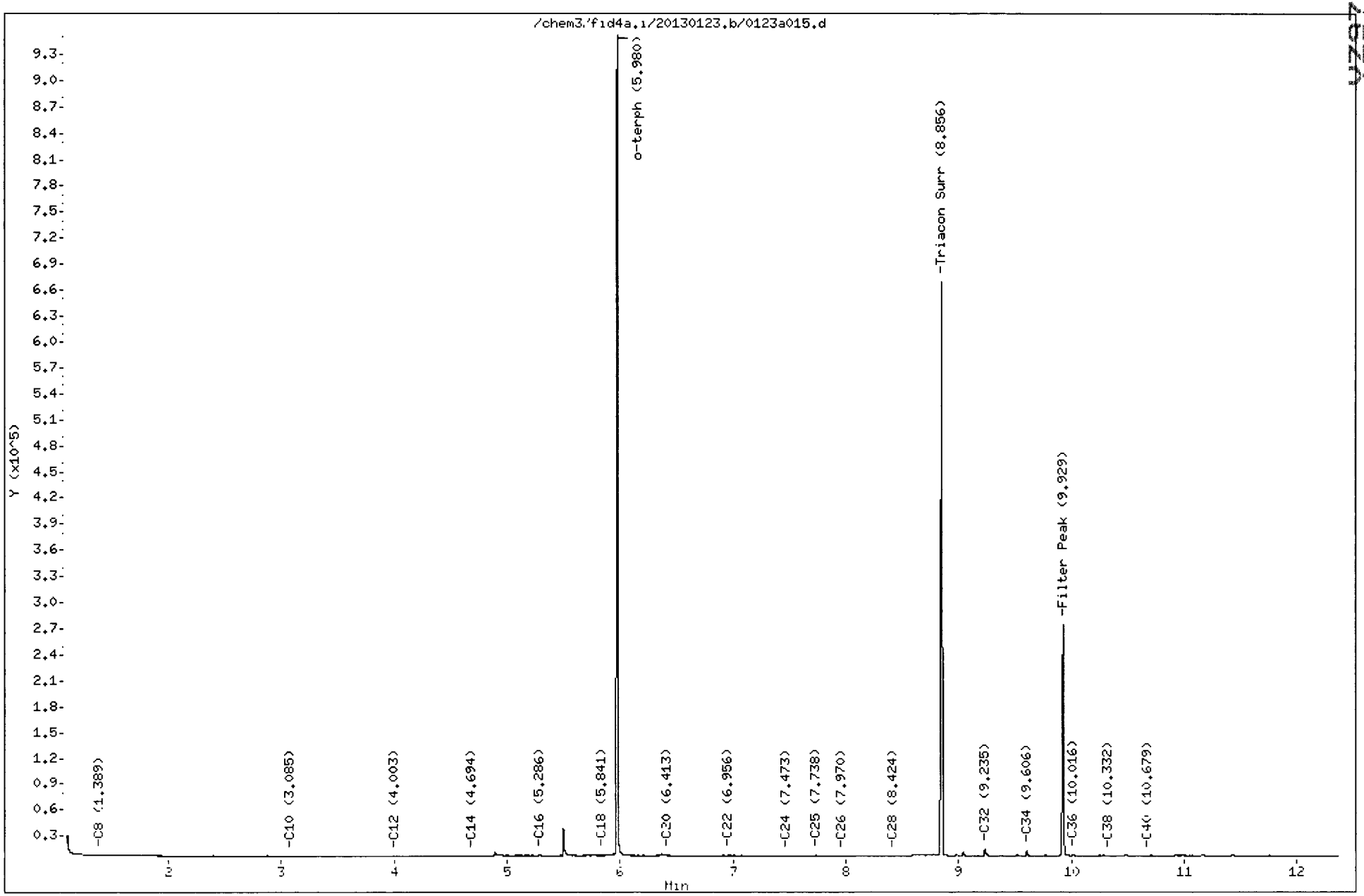
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS

Column diameter: 0.25

VZ97T 01129



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130123.b/0123a016.d ARI ID: DIESEL#2
Method: /chem3/fid4a.i/20130123.b/ftphfid4a.m Client ID: SFP-027A
Instrument: fid4a.i Injection: 23-JAN-2013 15:53
Operator: JR/VTS
Report Date: 01/25/2013 Dilution Factor: 1
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.110	-0.003	5738	11264	WATPHG	(Tol-C12)	915535	82.55
C8	1.374	0.017	2352	2332	WATPHD	(C12-C24)	2651154	253.49
C10	3.086	0.005	13945	13525	WATPHM	(C24-C38)	89889	10.76*
C12	4.011	0.004	15913	20212	AK102	(C10-C25)	3125948	257.58
C14	4.695	0.003	57572	50421	AK103	(C25-C36)	72669	7.90*
C16	5.283	0.001	90185	68222				
C18	5.842	0.001	75842	71351				
C20	6.404	-0.001	47362	56886	JET-A	(C10-C18)	2326027	429.43
C22	6.952	-0.002	22118	29076				
C24	7.476	-0.001	5499	6340	MSPIRIT	(Tol-C12)	915535	69.12
C25	7.728	0.001	2178	4272				
C26	7.971	-0.010	856	1398				
C28	8.443	0.015	462	872				
C32	9.227	-0.012	60	12				
C34	9.621	0.004	270	455				
Filter Peak	11.563	-0.001	911	586	CREOSOT	(C12-C22)	2562161	1273.36 M
C36	9.976	-0.003	171	154				
C38	10.343	0.011	338	243				
C40	10.676	-0.002	465	545				
o-terph	5.980	0.004	869452	590406				
Triacon Surr	8.846	-0.010	826	833	NAS DIES	(C10-C24)	3119539	257.75

* Indicates Filter Peak subtracted

Range Times: NW Diesel(4.006 - 7.476) AK102(3.08 - 7.73) Jet A(3.08 - 5.84)
NW M.Oil(7.48 - 10.33) AK103(7.73 - 9.98) OR Diesel(3.08 - 8.43)

Surrogate	Area	Amount	%Rec
o-Terphenyl	590406	43.8	97.3 M
Triacontane	833	0.1	0.2

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	13490.4	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

VZ97:01430

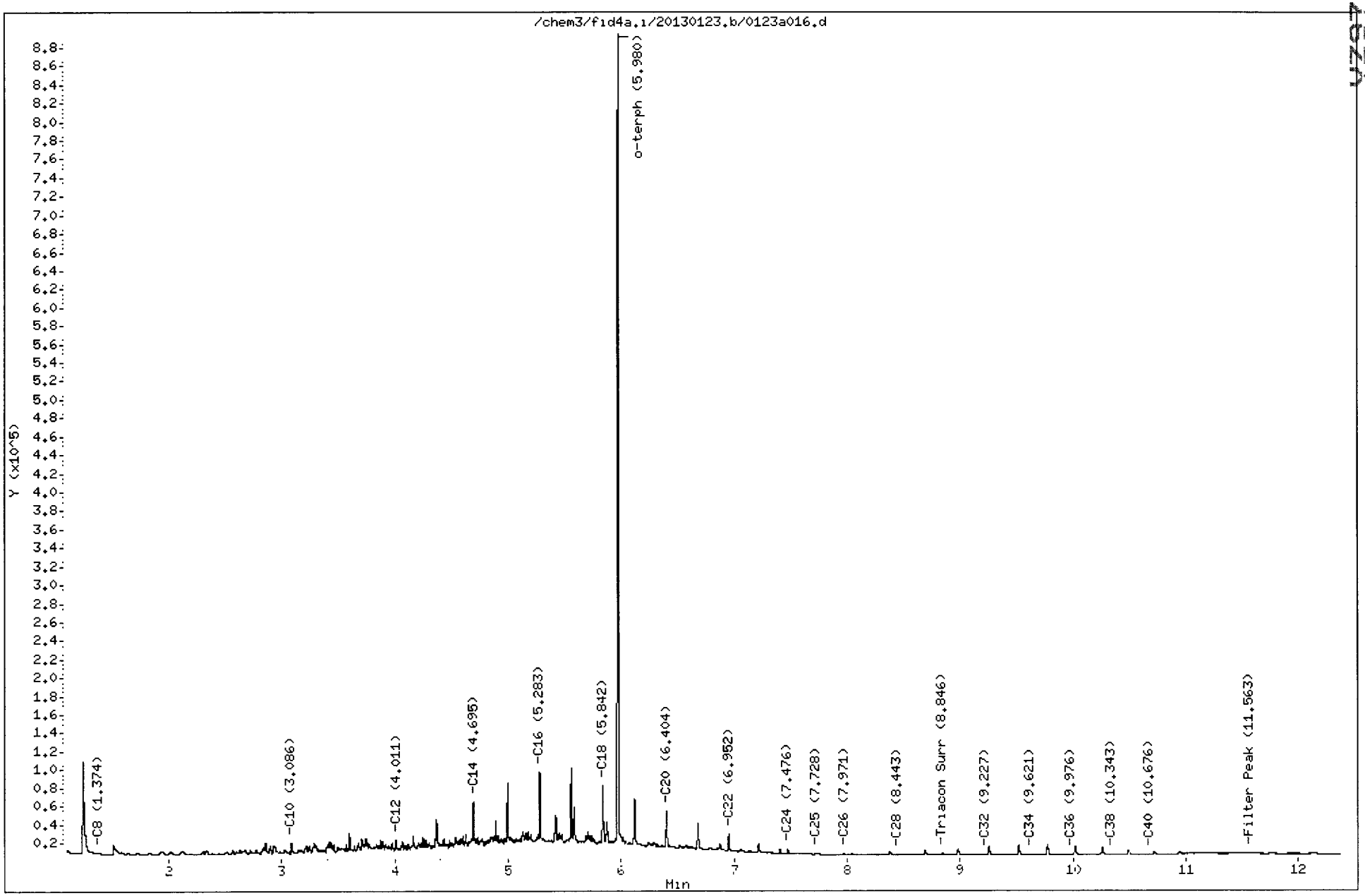
Data File: /chem3/fid4a.i/20130123.b/0123a016.d
Date : 23-JAN-2013 15:53
Client ID: SFP-027A
Sample Info: DIESEL#2

Column phase: RTX-1

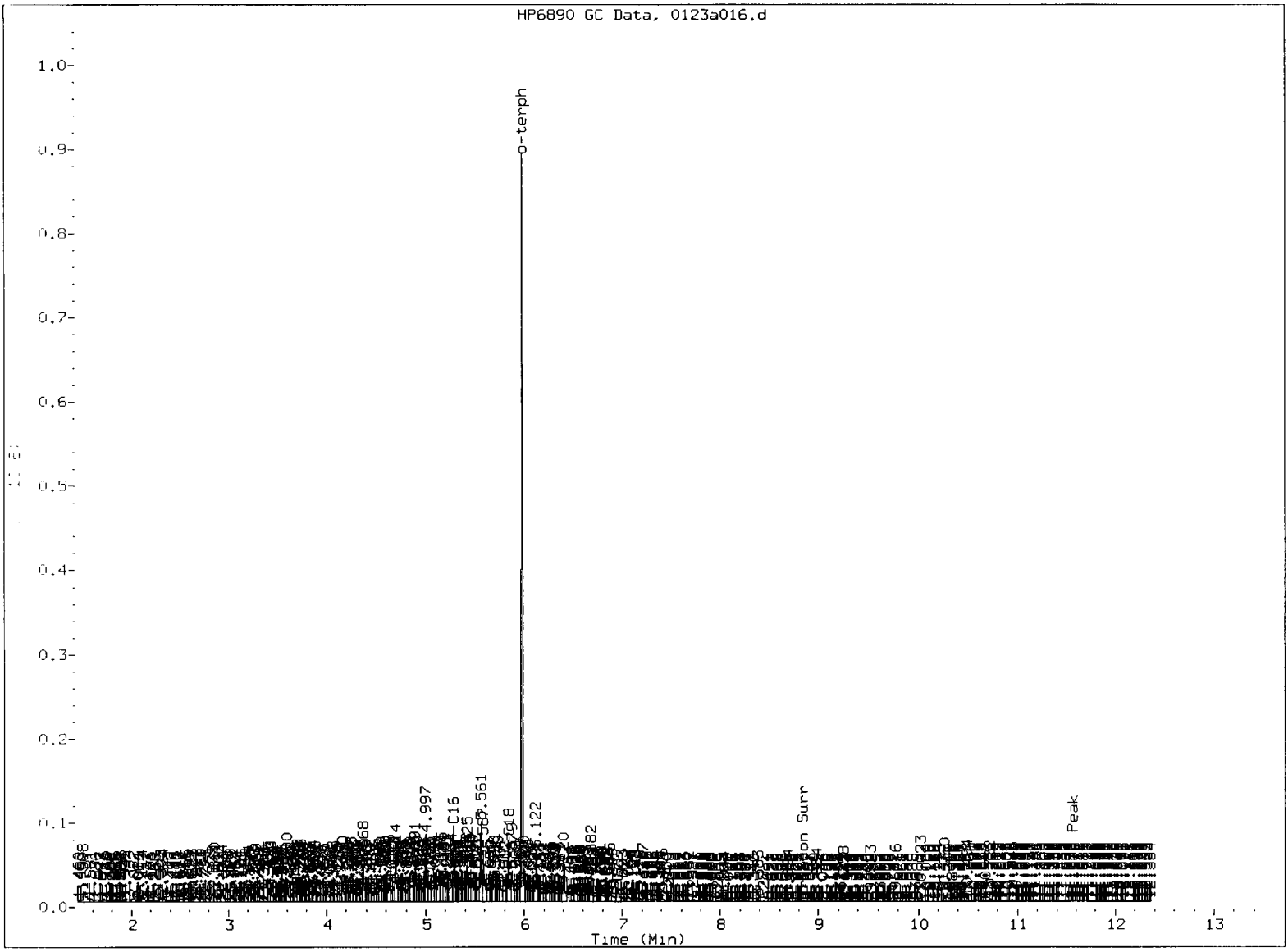
Instrument: fid4a.i

Operator: JR/VTS
Column diameter: 0.25

VD 1.25.13



FID:4A-2C/RTX-1 DIESEL#2 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VJ Date: 1.25.13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130123.b/0123a017.d
Method: /chem3/fid4a.i/20130123.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: MOIL#2
Client ID: SFP-027A
Injection: 23-JAN-2013 16:13
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	66760	6.02
C8	1.385	0.028	1388	4925	WATPHD	(C12-C24)	385761	36.89
C10	3.074	-0.007	406	172	WATPHM	(C24-C38)	4295966	514.37*
C12	4.009	0.003	263	55	AK102	(C10-C25)	530565	43.72
C14	4.690	-0.002	110	69	AK103	(C25-C36)	3648272	396.46*
C16	5.274	-0.008	103	130				
C18	5.848	0.007	215	274				
C20	6.404	-0.001	942	803	JET-A	(C10-C18)	29195	5.39
C22	6.955	0.001	3718	3033				
C24	7.476	-0.001	13905	19351	MSPIRIT	(Tol-C12)	66760	5.04
C25	7.727	0.000	18565	17439				
C26	7.982	0.001	21449	28698				
C28	8.436	0.009	25568	38725				
C32	9.232	-0.008	37572	45676				
C34	9.616	-0.001	34119	54478				
Filter Peak	11.555	-0.010	3344	3976	CREOSOT	(C12-C22)	100655	50.02 M
C36	9.975	-0.004	29499	33833				
C38	10.339	0.007	25473	29224				
C40	10.671	-0.007	20494	25234				
o-terph	5.976	-0.001	1241	1320				
Triacon Surr	8.852	-0.004	596677	525625	NAS DIES	(C10-C24)	399147	32.98

* Indicates Filter Peak subtracted

Range Times: NW Diesel(4.006 - 7.476) AK102(3.08 - 7.73) Jet A(3.08 - 5.84)
NW M.Oil(7.48 - 10.33) AK103(7.73 - 9.98) OR Diesel(3.08 - 8.43)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1320	0.1	0.2
Triacontane	525625	49.2	109.4 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	13490.4	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

VZ97:01433

Data File: /chem3/fid4a.1/20130123.b/0123a017.d
Date : 23-JAN-2013 16:13
Client ID: SFP-927A
Sample Info: MOIL#2

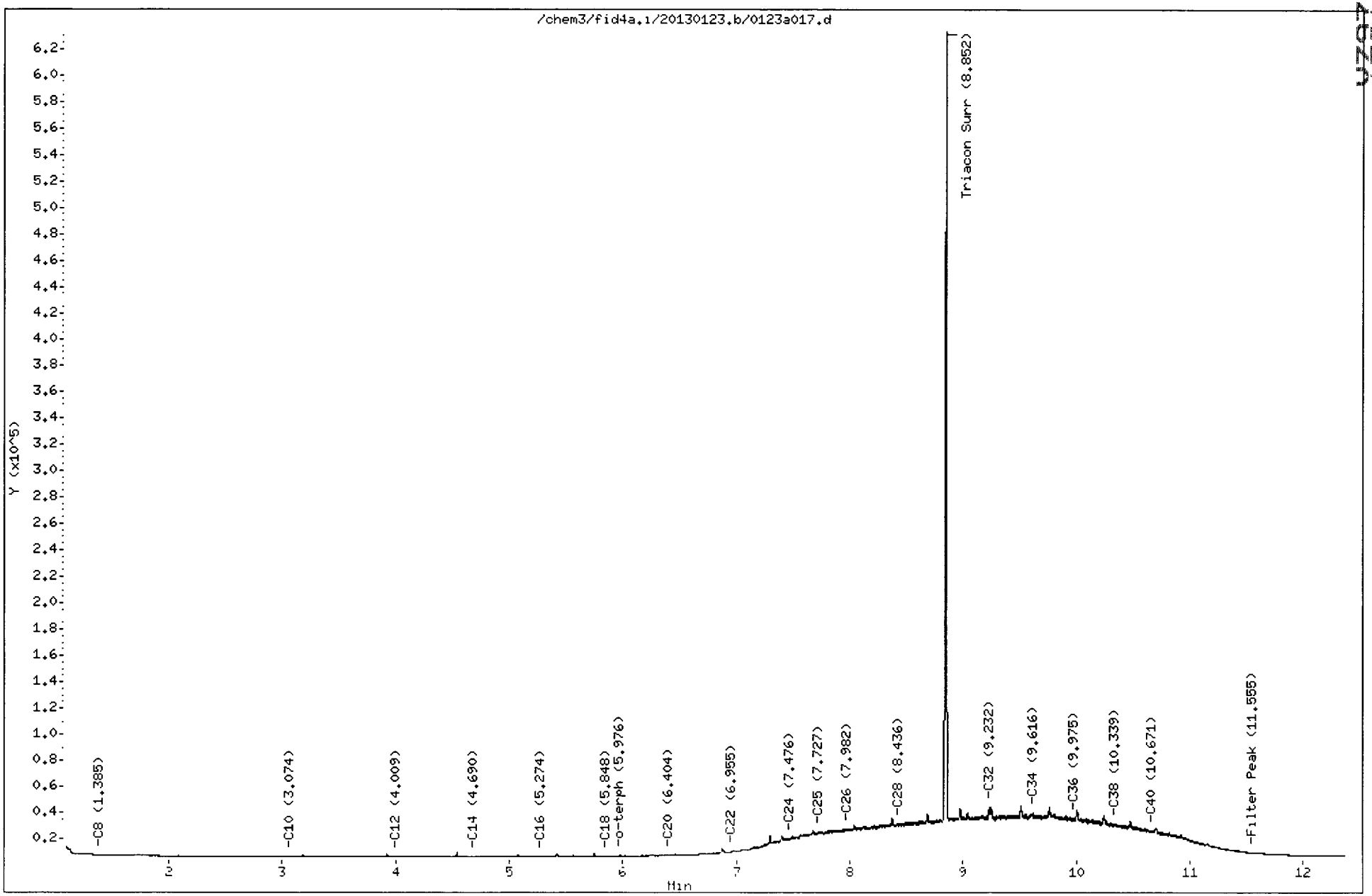
Column phase: RTX-1

Instrument: fid4a.1

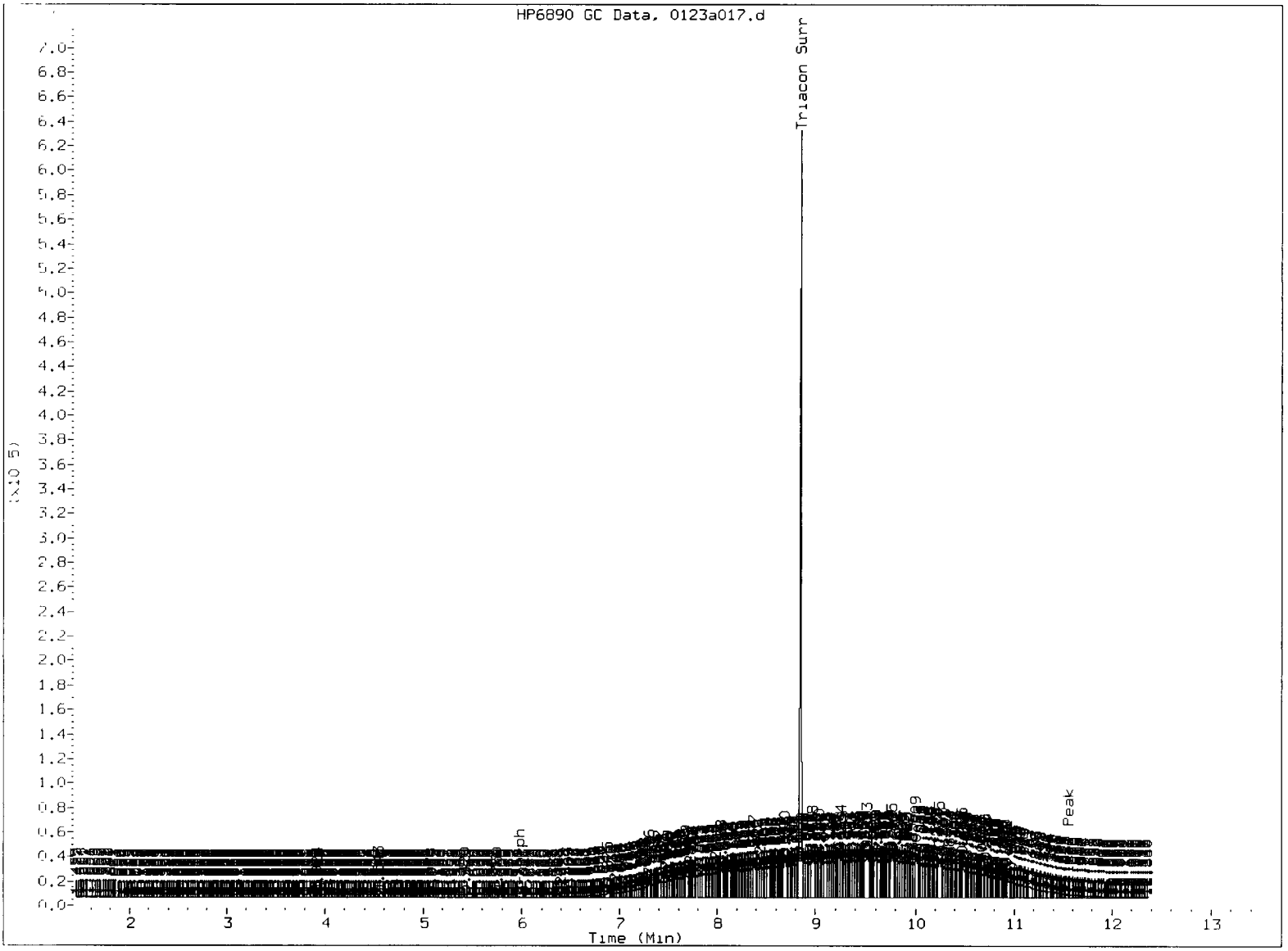
Operator: JR/VTS
Column diameter: 0.25

VT
1.25.13

927-1 9.1.13



FID:4A-2C/RTX-1 MOIL#2 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VJ Date: 1-25-13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130123.b/0123a028.d ARI ID: DIESEL#3
Method: /chem3/fid4a.i/20130123.b/ftphfid4a.m Client ID: SFP-027A
Instrument: fid4a.i Injection: 23-JAN-2013 19:57
Operator: JR/VTS
Report Date: 01/25/2013 Dilution Factor: 1
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.107	-0.006	5211	10138	WATPHG	(Tol-C12)	859452	77.49
C8	1.342	-0.016	3388	7692	WATPHD	(C12-C24)	2495911	238.65
C10	3.087	0.006	13022	12772	WATPHM	(C24-C38)	69311	8.30*
C12	4.012	0.006	20238	22094	AK102	(C10-C25)	2944012	242.59
C14	4.697	0.005	52660	35969	AK103	(C25-C36)	50428	5.48*
C16	5.285	0.003	89084	78069				
C18	5.844	0.002	74880	64739				
C20	6.405	0.000	45481	49434	JET-A	(C10-C18)	2201820	406.50
C22	6.953	-0.001	20584	23100				
C24	7.477	0.001	5104	5733	MSPIRIT	(Tol-C12)	859452	64.89
C25	7.729	0.002	2068	3972				
C26	7.971	-0.010	806	1404				
C28	8.443	0.015	460	793				
C32	9.249	0.009	4783	4295				
C34	9.602	-0.015	246	370				
Filter Peak	11.565	0.000	855	1329	CREOSOT	(C12-C22)	2407491	1196.49 M
C36	9.995	0.015	6246	6127				
C38	10.329	-0.003	357	228				
C40	10.680	0.001	3622	5789				
o-terph	5.981	0.005	848523	563474				
Triacon Surr	8.841	-0.016	2605	2314	NAS DIES	(C10-C24)	2935574	242.55

* Indicates Filter Peak subtracted

Range Times: NW Diesel(4.006 - 7.476) AK102(3.08 - 7.73) Jet A(3.08 - 5.84)
NW M.Oil(7.48 - 10.33) AK103(7.73 - 9.98) OR Diesel(3.08 - 8.43)

Surrogate	Area	Amount	%Rec
o-Terphenyl	563474	41.8	92.8 M
Triacontane	2314	0.2	0.5

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	13490.4	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.i/20130123.b/0123a028.d
Date : 23-JAN-2013 19:57
Client ID: SFP-027A
Sample Info: DIESEL#3

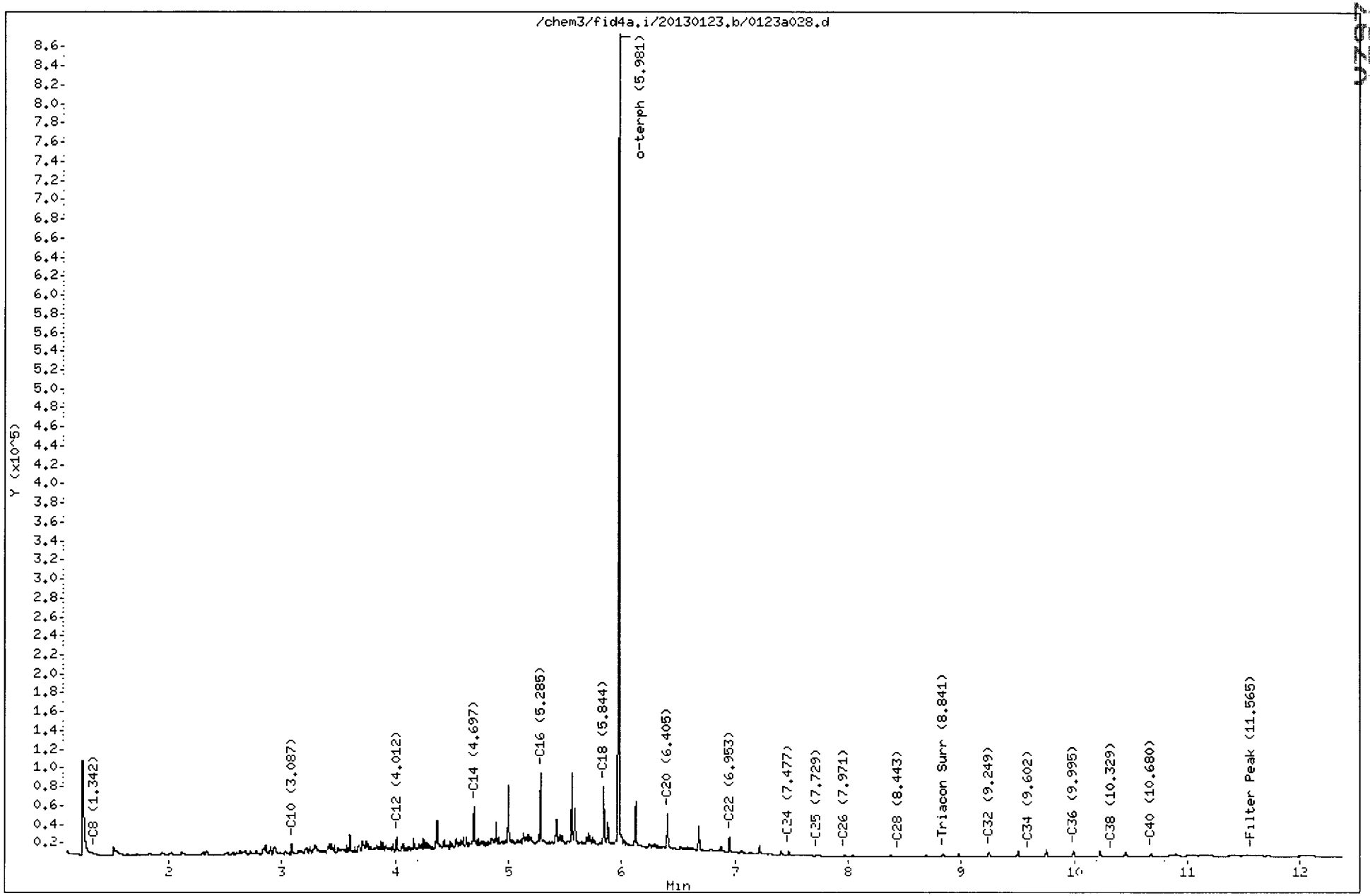
Column phase: RTX-1

Instrument: fid4a.i

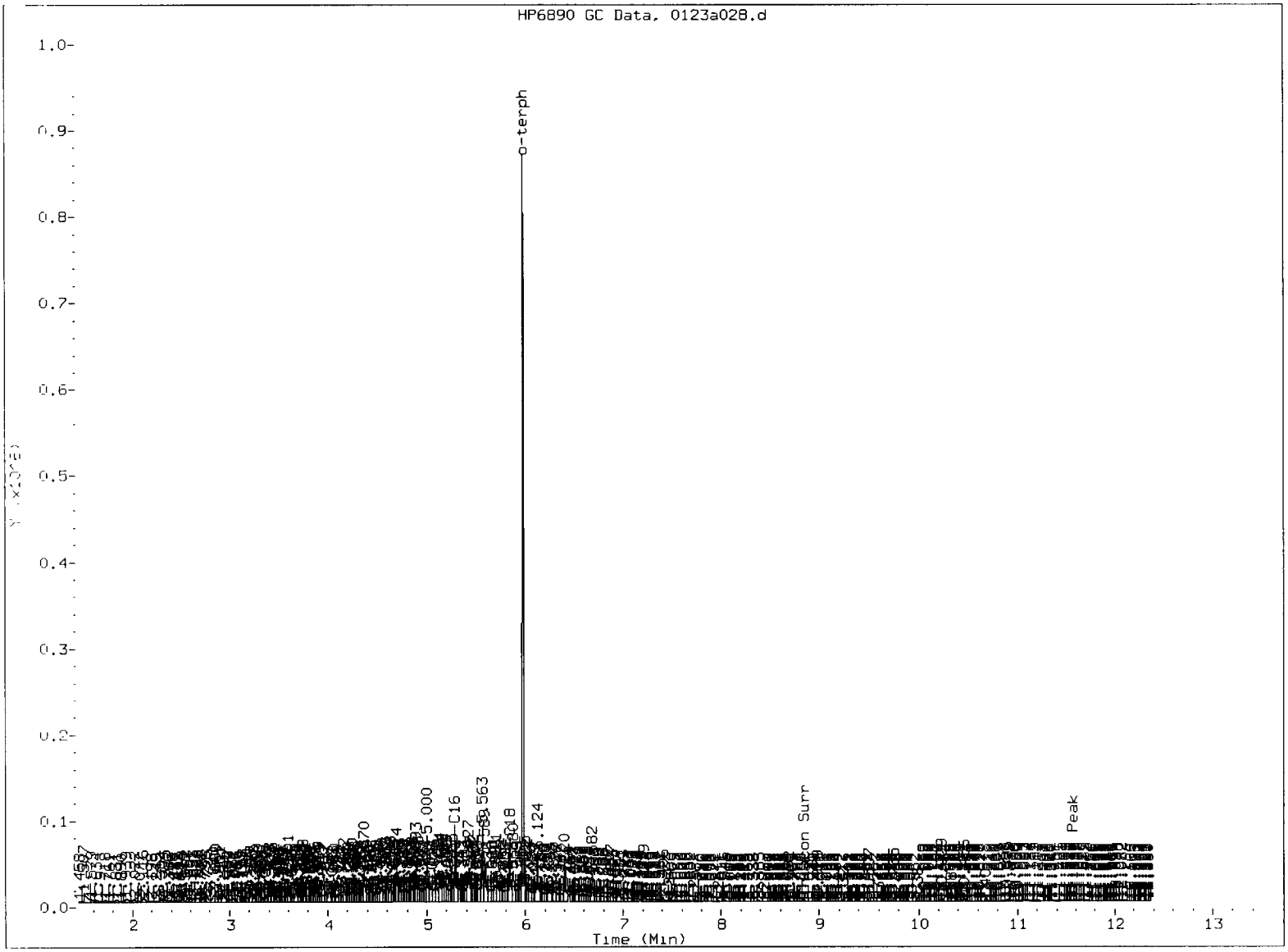
Operator: JR/WTS
Column diameter: 0.25

VD
1.25.13

UFSP-027-01137



FID:4A-2C/RTX-1 DIESEL#3 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VD Date: 1.25.13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130123.b/0123a029.d
Method: /chem3/fid4a.i/20130123.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: MOIL#3
Client ID: SFP-027A
Injection: 23-JAN-2013 20:17
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.156	0.043	2266	9802	WATPHG	(Tol-C12)	62435	5.63
C8	1.371	0.013	1185	233	WATPHD	(C12-C24)	375904	35.94
C10	3.082	0.001	217	74	WATPHM	(C24-C38)	4271025	511.38*
C12	4.002	-0.005	99	56	AK102	(C10-C25)	516155	42.53
C14	4.696	0.004	84	101	AK103	(C25-C36)	3619912	393.38*
C16	5.274	-0.008	88	88				
C18	5.851	0.010	222	342				
C20	6.407	0.002	857	678	JET-A	(C10-C18)	21873	4.04
C22	6.955	0.001	3655	3511				
C24	7.475	-0.002	13656	7736	MSPIRIT	(Tol-C12)	62435	4.71
C25	7.732	0.005	17990	4606				
C26	7.977	-0.004	20626	23532				
C28	8.424	-0.004	24736	16101				
C32	9.245	0.006	37558	40272				
C34	9.620	0.004	30842	27053				
Filter Peak	11.570	0.006	2679	3558	CREOSOT	(C12-C22)	97577	48.49 M
C36	9.984	0.004	31853	27829				
C38	10.326	-0.006	24166	15151				
C40	10.677	-0.001	21443	44090				
o-terph	5.978	0.002	2445	2353				
Triacon Surr	8.853	-0.003	615324	525813	NAS DIES	(C10-C24)	385529	31.85

* Indicates Filter Peak subtracted

Range Times: NW Diesel(4.006 - 7.476) AK102(3.08 - 7.73) Jet A(3.08 - 5.84)
NW M.Oil(7.48 - 10.33) AK103(7.73 - 9.98) OR Diesel(3.08 - 8.43)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2353	0.2	0.4
Triacontane	525813	49.3	109.5 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	13490.4	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.1/20130123.b/0123a029.d
Date : 23-JAN-2013 20:17
Client ID: SFP-027A
Sample Info: MOIL#3

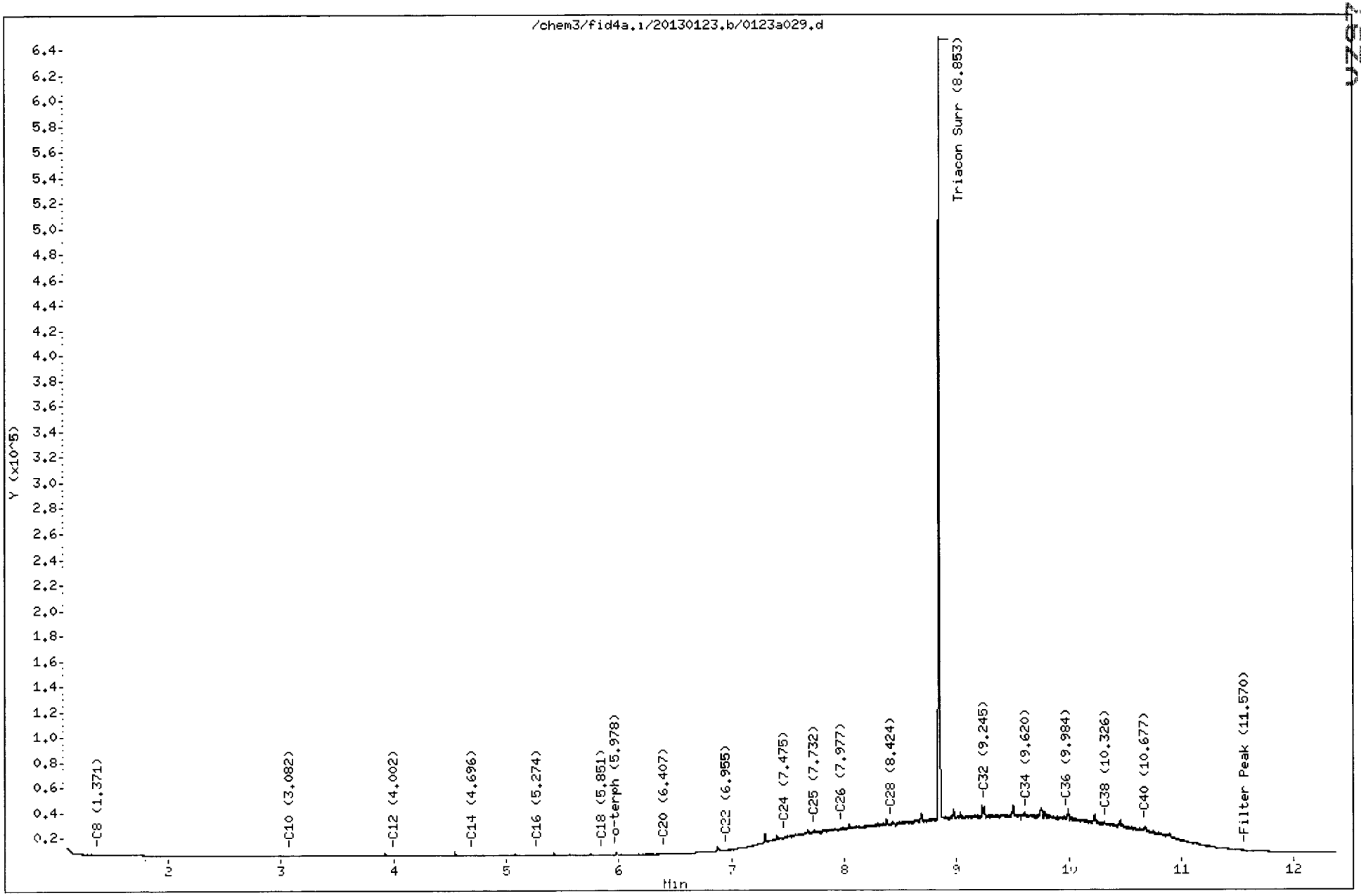
Column phase: RTX-1

Instrument: fid4a.1

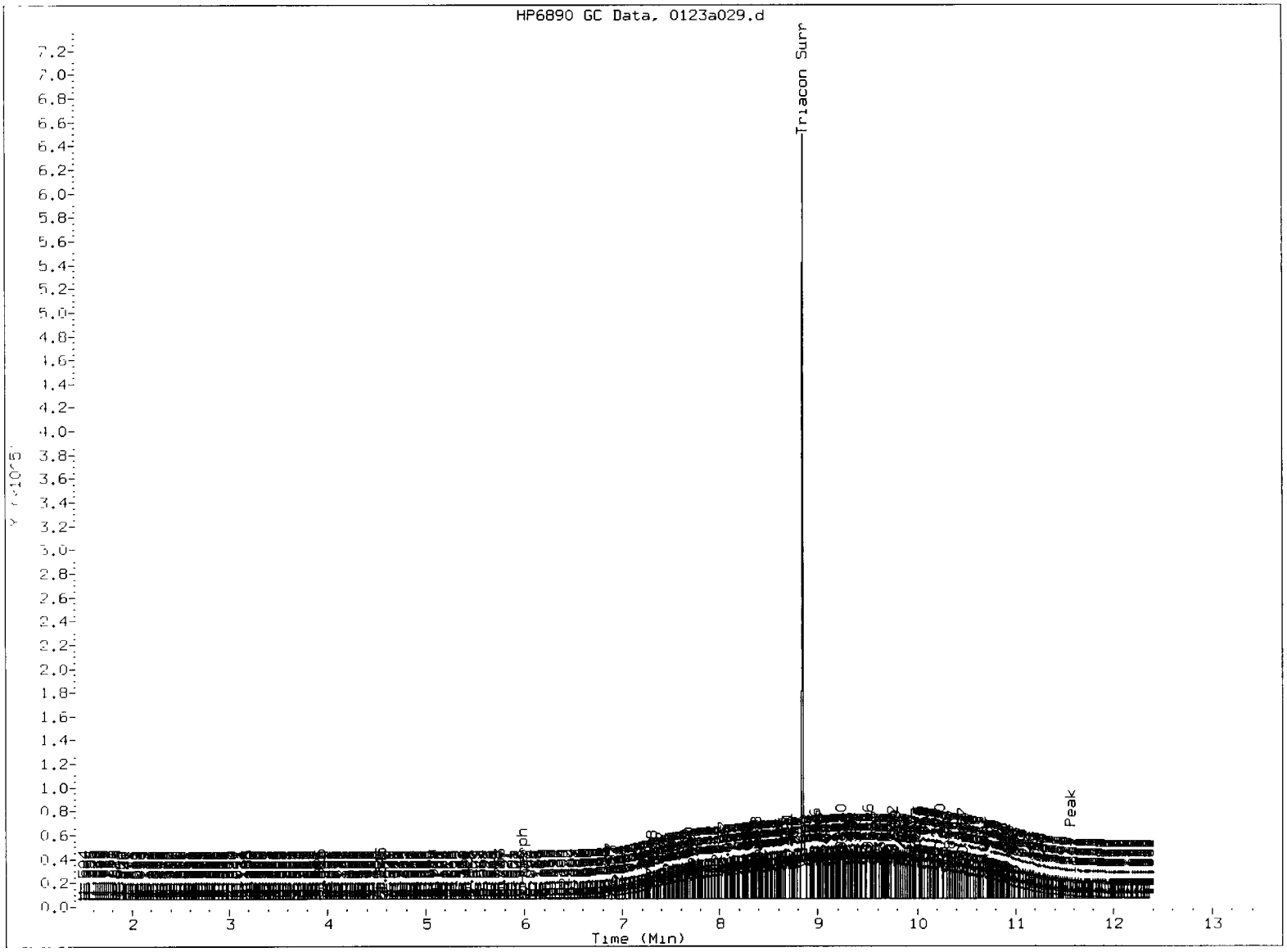
Operator: JR/VTS
Column diameter: 0.25

VD 1.25.13

V727 - 01-LIG



FID:4A-2C/RTX-1 MOIL#3 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VD Date: 1-25-13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130123.b/0123a035.d ARI ID: VZ97MBS1
Method: /chem3/fid4a.i/20130123.b/ftphfid4a.m Client ID: VZ97MBS1
Instrument: fid4a.i Injection: 23-JAN-2013 22:15
Operator: JR/VTS
Report Date: 01/25/2013 Dilution Factor: 1
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.107	-0.006	38859	49540	WATPHG	(Tol-C12)	228243	20.58
C8	1.359	0.001	1589	2521	WATPHD	(C12-C24)	140472	13.43
C10	3.069	-0.012	655	811	WATPHM	(C24-C38)	56002	6.71
C12	3.997	-0.010	599	815	AK102	(C10-C25)	178284	14.69
C14	4.683	-0.009	722	1379	AK103	(C25-C36)	49820	5.41
C16	5.298	0.016	1763	3524				
C18	5.847	0.005	1273	803				
C20	6.413	0.008	946	1212	JET-A	(C10-C18)	133200	24.59
C22	6.962	0.008	707	988				
C24	7.480	0.004	418	635	MSPIRIT	(Tol-C12)	228243	17.23
C25	7.741	0.014	1053	1343				
C26	7.990	0.009	109	99				
C28	8.426	-0.002	878	1139				
C32	9.228	-0.011	7754	7561				
C34	9.624	0.008	112	124				
Filter Peak	11.562	-0.003	445	403	CREOSOT	(C12-C22)	133756	66.47 M
C36	9.991	0.011	1464	1648				
C38	10.337	0.005	241	149				
C40	10.671	-0.007	1197	1931				
o-terph	5.985	0.008	957951	642769				
Triacon Surr	8.853	-0.004	640714	584492	NAS DIES	(C10-C24)	177523	14.67

Range Times: NW Diesel(4.006 - 7.476) AK102(3.08 - 7.73) Jet A(3.08 - 5.84)
NW M.Oil(7.48 - 10.33) AK103(7.73 - 9.98) OR Diesel(3.08 - 8.43)

Surrogate	Area	Amount	%Rec
o-Terphenyl	642769	47.6	105.9
Triacontane	584492	54.8	121.7

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	13490.4	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

1-25-13

Data File: /chem3/fid4a.1/20130123.b/0123a035.d

Date : 23-JAN-2013 22:15

Client ID: VZ97MBS1

Sample Info: VZ97MBS1

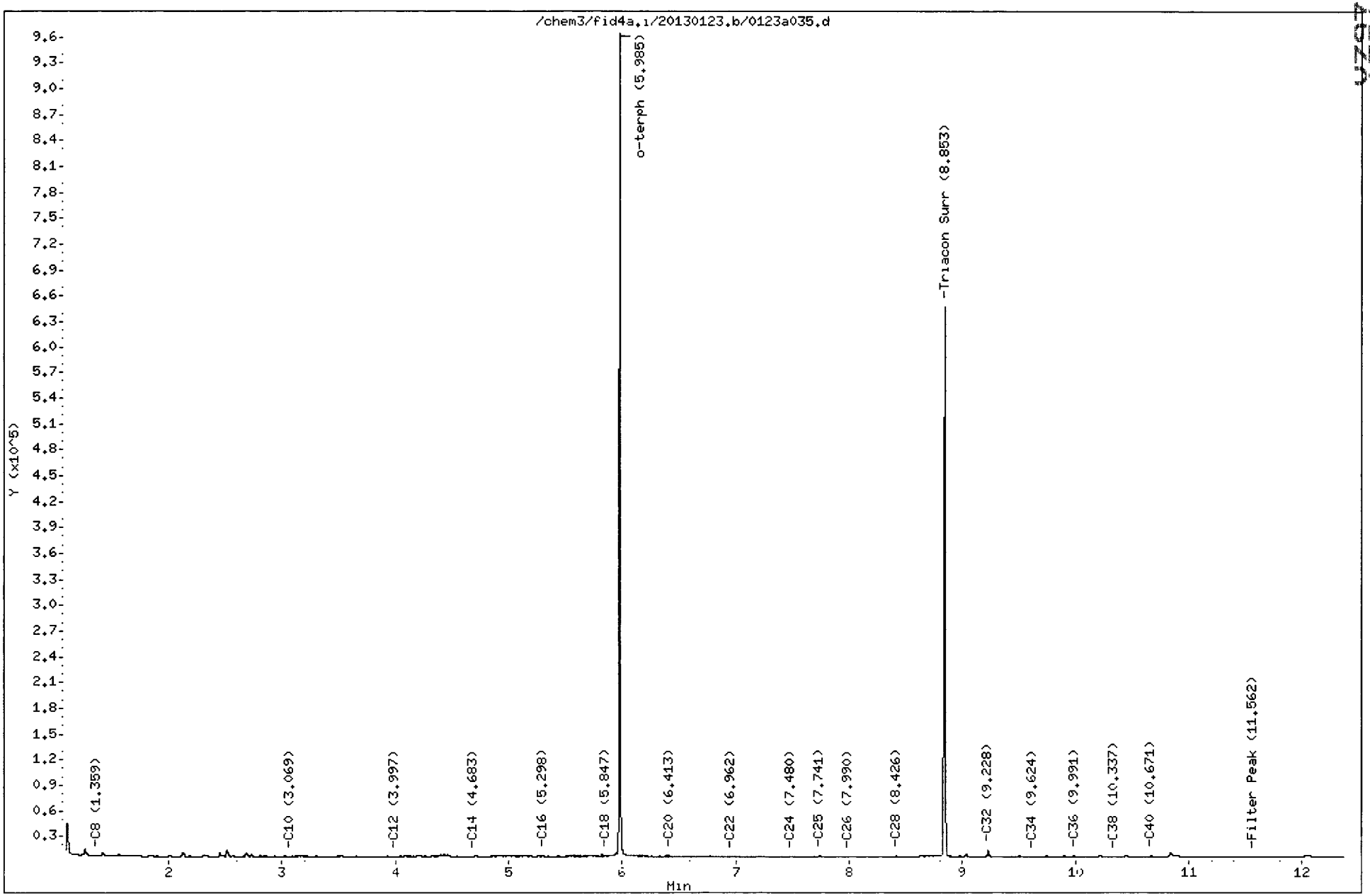
Column phase: RTX-1

Instrument: fid4a.1

Operator: JR/VTS

Column diameter: 0.25

VZ97 01 1113



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130123.b/0123a036.d ARI ID: VZ97LCSS1
Method: /chem3/fid4a.i/20130123.b/ftphfid4a.m Client ID: VZ97LCSS1
Instrument: fid4a.i Injection: 23-JAN-2013 22:35
Operator: JR/VTS
Report Date: 01/25/2013 Dilution Factor: 1
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.150	0.038	4540	6564	WATPHG	(Tol-C12)	3466772	312.59
C8	1.342	-0.015	5967	11370	WATPHD	(C12-C24)	14285756	1365.95
C10	3.087	0.007	100578	72636	WATPHM	(C24-C38)	197709	23.67
C12	4.015	0.009	170505	147194	AK102	(C10-C25)	16674879	1374.01
C14	4.683	-0.008	82103	114272	AK103	(C25-C36)	139966	15.21
C16	5.292	0.010	523900	383896				
C18	5.852	0.010	408259	386364				
C20	6.411	0.006	289698	262387	JET-A	(C10-C18)	12203743	2253.07
C22	6.958	0.004	146644	133571				
C24	7.478	0.002	37864	35826	MSPIRIT	(Tol-C12)	3466772	261.73
C25	7.728	0.001	15494	23049				
C26	7.968	-0.012	6155	8413				
C28	8.426	-0.001	1923	2947				
C32	9.226	-0.014	7917	7158				
C34	9.622	0.006	94	48				
Filter Peak	11.564	-0.001	321	100	CREOSOT	(C12-C22)	13806611	6861.69 M
C36	9.986	0.007	848	939				
C38	10.334	0.002	121	49				
C40	10.664	-0.014	813	1633				
o-terph	5.988	0.012	895484	632756				
Triacon Surr	8.852	-0.004	696317	582138	NAS DIES	(C10-C24)	16620318	1373.24

Range Times: NW Diesel(4.006 - 7.476) AK102(3.08 - 7.73) Jet A(3.08 - 5.84)
NW M.Oil(7.48 - 10.33) AK103(7.73 - 9.98) OR Diesel(3.08 - 8.43)

Surrogate	Area	Amount	%Rec
o-Terphenyl	632756	46.9	104.2 M
Triacontane	582138	54.5	121.2

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	13490.4	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

VZ97:01444

Data File: /chem3/fid4a.i/20130123.b/0123a036.d
Date : 23-JAN-2013 22:35
Client ID: VZ97LCSS1
Sample Info: VZ97LCSS1

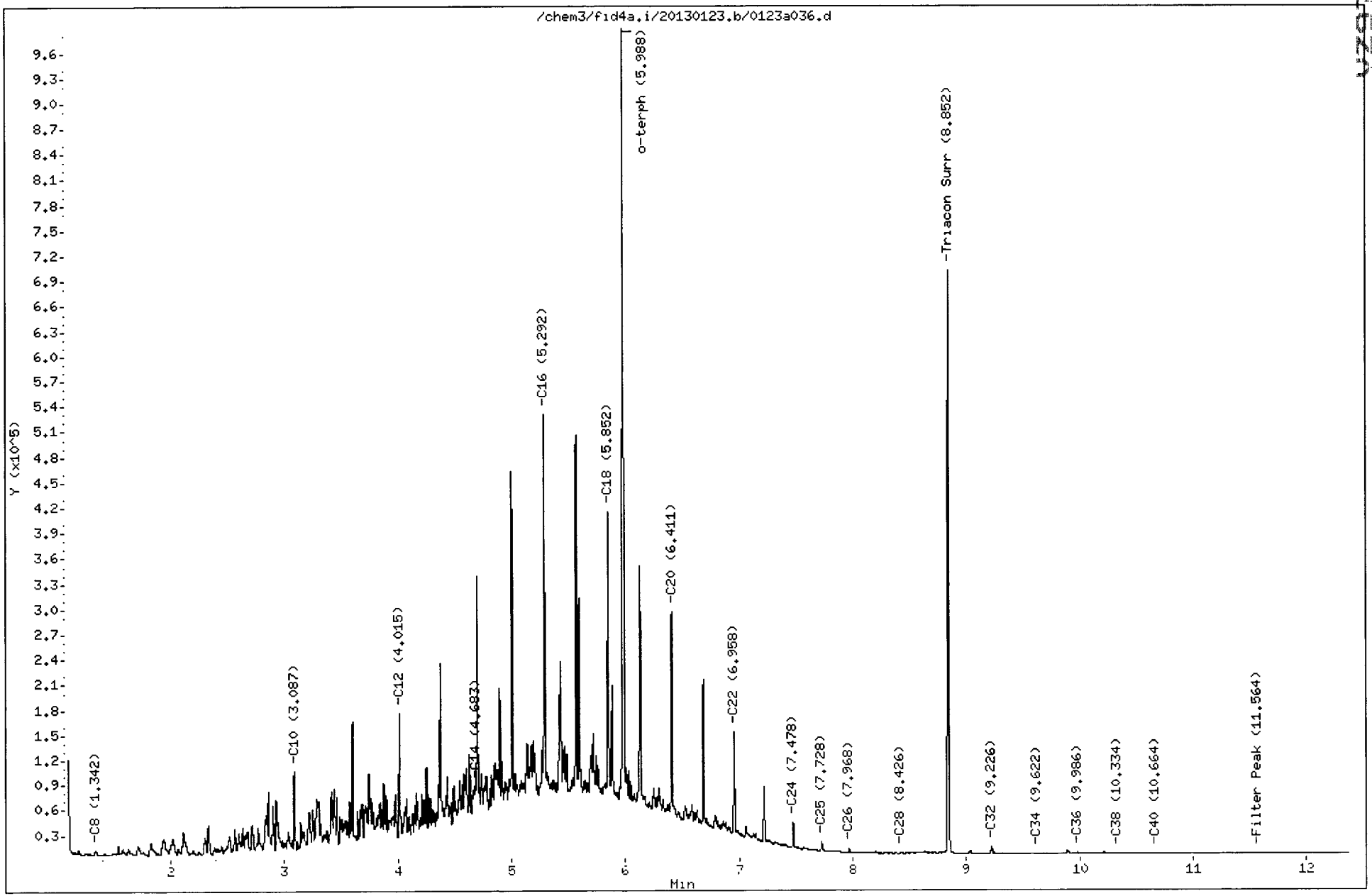
Column phase: RTX-1

VD 1.25.13

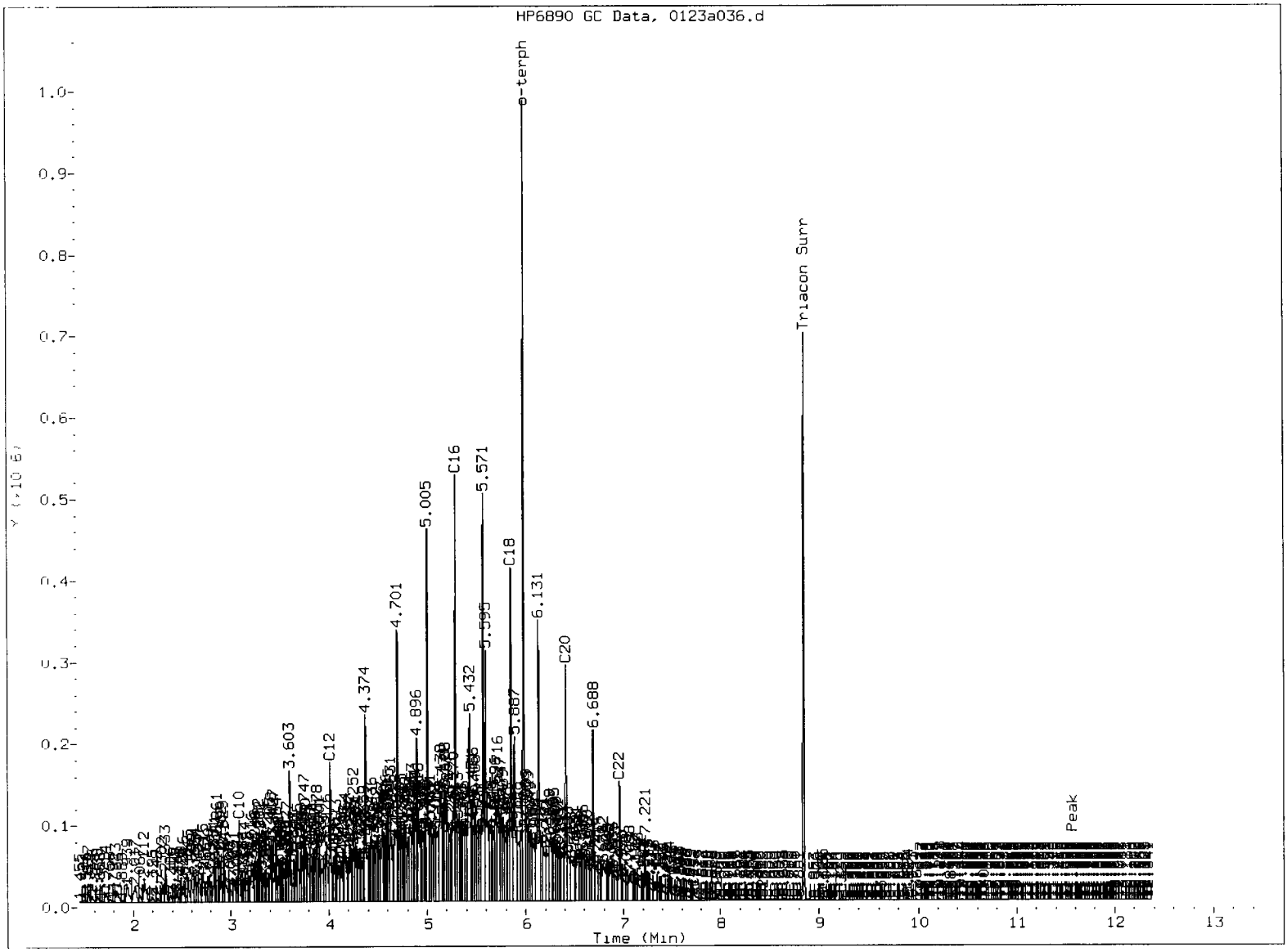
Instrument: fid4a.i

Operator: JR/VTS
Column diameter: 0.25

VZ97LCSS1 01 1115



FID:4A-2C/RTX-1 VZ97LCSS1 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: _____ Date: 1-25-17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130123.b/0123a037.d
Method: /chem3/fid4a.i/20130123.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: VZ97A
Client ID: CSIA-20130107-001B
Injection: 23-JAN-2013 22:55
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.106	-0.006	10529	12945	WATPHG	(Tol-C12)	230838	20.81
C8	1.338	-0.019	2299	6036	WATPHD	(C12-C24)	3791147	362.50
C10	3.091	0.010	2252	2134	WATPHM	(C24-C38)	3822284	457.65
C12	4.020	0.013	2315	2916	AK102	(C10-C25)	4062211	334.73
C14	4.690	-0.002	9060	5595	AK103	(C25-C36)	3330663	361.95
C16	5.288	0.006	24972	41288				
C18	5.847	0.006	34117	36299				
C20	6.408	0.003	26064	26000	JET-A	(C10-C18)	1667756	307.90
C22	6.957	0.003	22658	26945				
C24	7.476	-0.001	22630	30441	MSPIRIT	(Tol-C12)	230838	17.43
C25	7.727	0.000	23250	37661				
C26	7.992	0.011	21800	13078				
C28	8.425	-0.002	33154	41599				
C32	9.246	0.006	23763	9513				
C34	9.613	-0.003	18631	11794				
Filter Peak	11.573	0.008	1396	1066	CREOSOT	(C12-C22)	3154509	1567.75 M
C36	9.982	0.003	18728	7537				
C38	10.323	-0.009	14426	19108				
C40	10.679	0.001	10555	14260				
o-terph	5.986	0.009	854442	574890				
Triacon Surr	8.853	-0.004	684505	574354	NAS DIES	(C10-C24)	3870480	319.80

Range Times: NW Diesel(4.006 - 7.476) AK102(3.08 - 7.73) Jet A(3.08 - 5.84)
NW M.Oil(7.48 - 10.33) AK103(7.73 - 9.98) OR Diesel(3.08 - 8.43)

Surrogate	Area	Amount	%Rec
o-Terphenyl	574890	42.6	94.7 M
Triacontane	574354	53.8	119.6 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	13490.4	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.i/20130123.b/0123a037.d
Date : 23-JAN-2013 22:55
Client ID: CSIA-20130107-001B
Sample Info: VZ97A

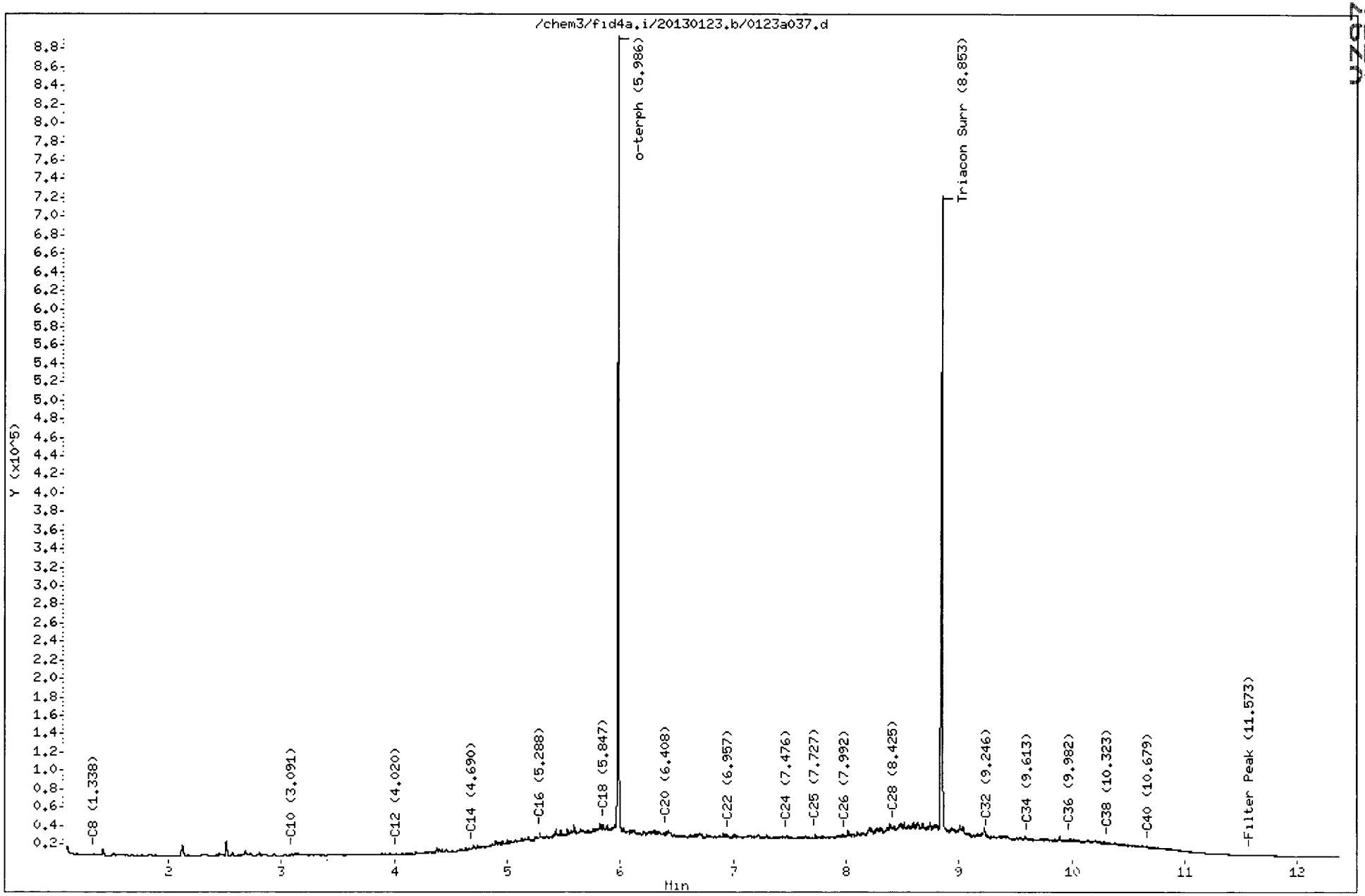
Column phase: RTX-1

Instrument: fid4a.i

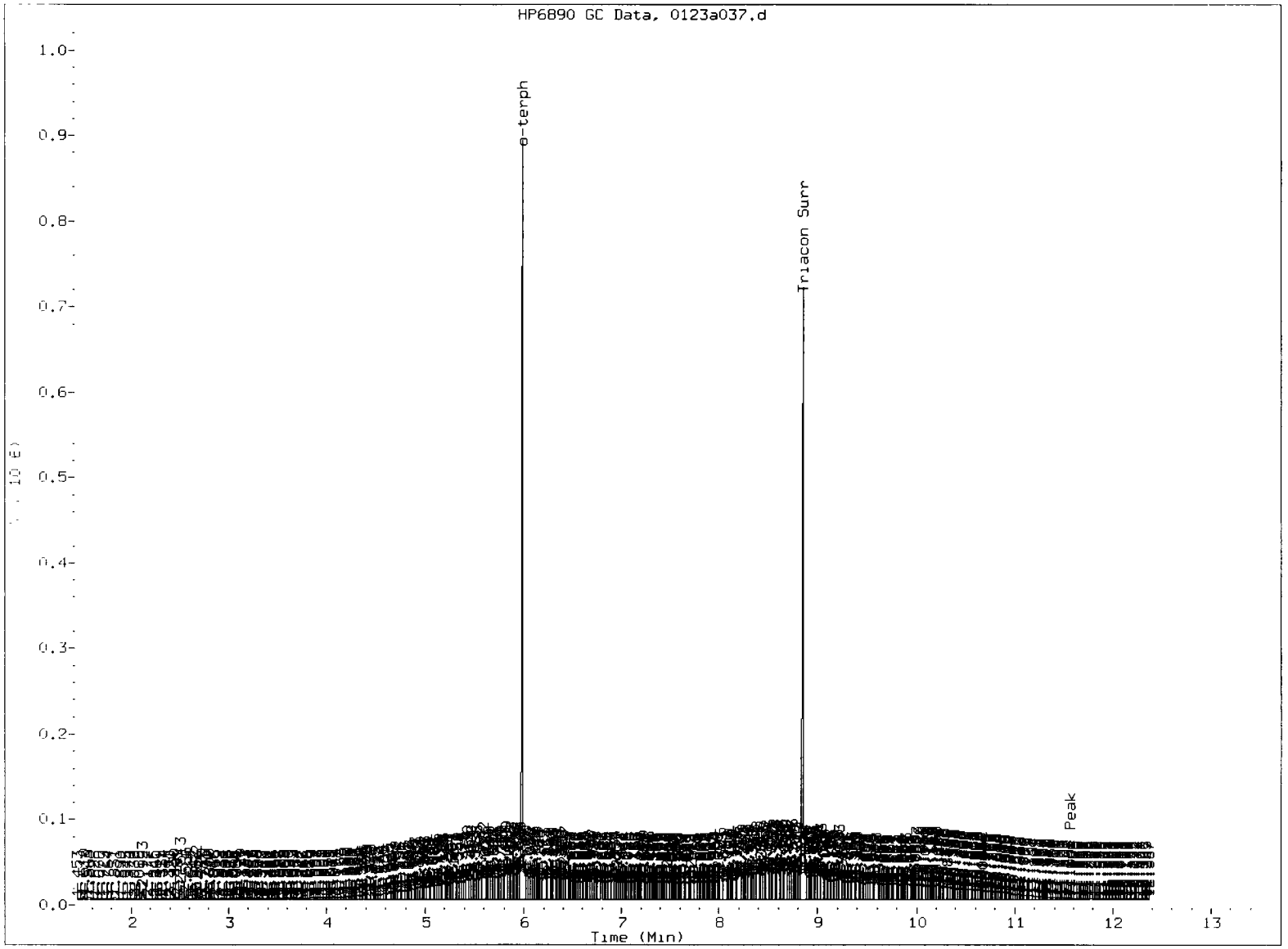
Operator: JR/VTS
Column diameter: 0.25

VD
1.25.D

VZ97 - 01 uL



FID:4A-2C/RTX-1 VZ97A FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VJ Date: 1-25-11

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130123.b/0123a038.d
Method: /chem3/fid4a.i/20130123.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: VZ97B
Client ID: CSIA-20130107-002B
Injection: 23-JAN-2013 23:15
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.106	-0.007	12573	17040	WATPHG	(Tol-C12)	193029	17.40
C8	1.340	-0.017	3276	6273	WATPHD	(C12-C24)	4803059	459.25
C10	3.091	0.010	1763	1656	WATPHM	(C24-C38)	4850376	580.75
C12	4.018	0.011	2705	3190	AK102	(C10-C25)	5114966	421.47
C14	4.689	-0.003	9891	5932	AK103	(C25-C36)	4216577	458.22
C16	5.287	0.005	28586	54153				
C18	5.847	0.005	41595	74590				
C20	6.410	0.005	36465	25379	JET-A	(C10-C18)	1940399	358.24
C22	6.957	0.003	33645	65263				
C24	7.479	0.002	34201	48760	MSPIRIT	(Tol-C12)	193029	14.57
C25	7.726	-0.001	36160	59269				
C26	7.989	0.008	28889	17624				
C28	8.427	0.000	45659	58083				
C32	9.227	-0.012	39800	67262				
C34	9.631	0.014	24713	50383				
Filter Peak	11.569	0.004	1981	1081	CREOSOT	(C12-C22)	3929460	1952.89 M
C36	9.980	0.000	21168	6469				
C38	10.342	0.010	16916	19632				
C40	10.684	0.006	12351	7678				
o-terph	5.986	0.009	826762	569004				
Triacon Surr	8.853	-0.004	668478	568603	NAS DIES	(C10-C24)	4871291	402.49

Range Times: NW Diesel(4.006 - 7.476) AK102(3.08 - 7.73) Jet A(3.08 - 5.84)
NW M.Oil(7.48 - 10.33) AK103(7.73 - 9.98) OR Diesel(3.08 - 8.43)

Surrogate	Area	Amount	%Rec
o-Terphenyl	569004	42.2	93.7 M
Triacontane	568603	53.3	118.4 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	13490.4	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

Data File: /chem3/f1d4a.i/20130123.b/0123a038.d

Date : 23-JAN-2013 23:15

Client ID: CSIA-20130107-002B

Sample Info: VZ97B

Column phase: PTX-1

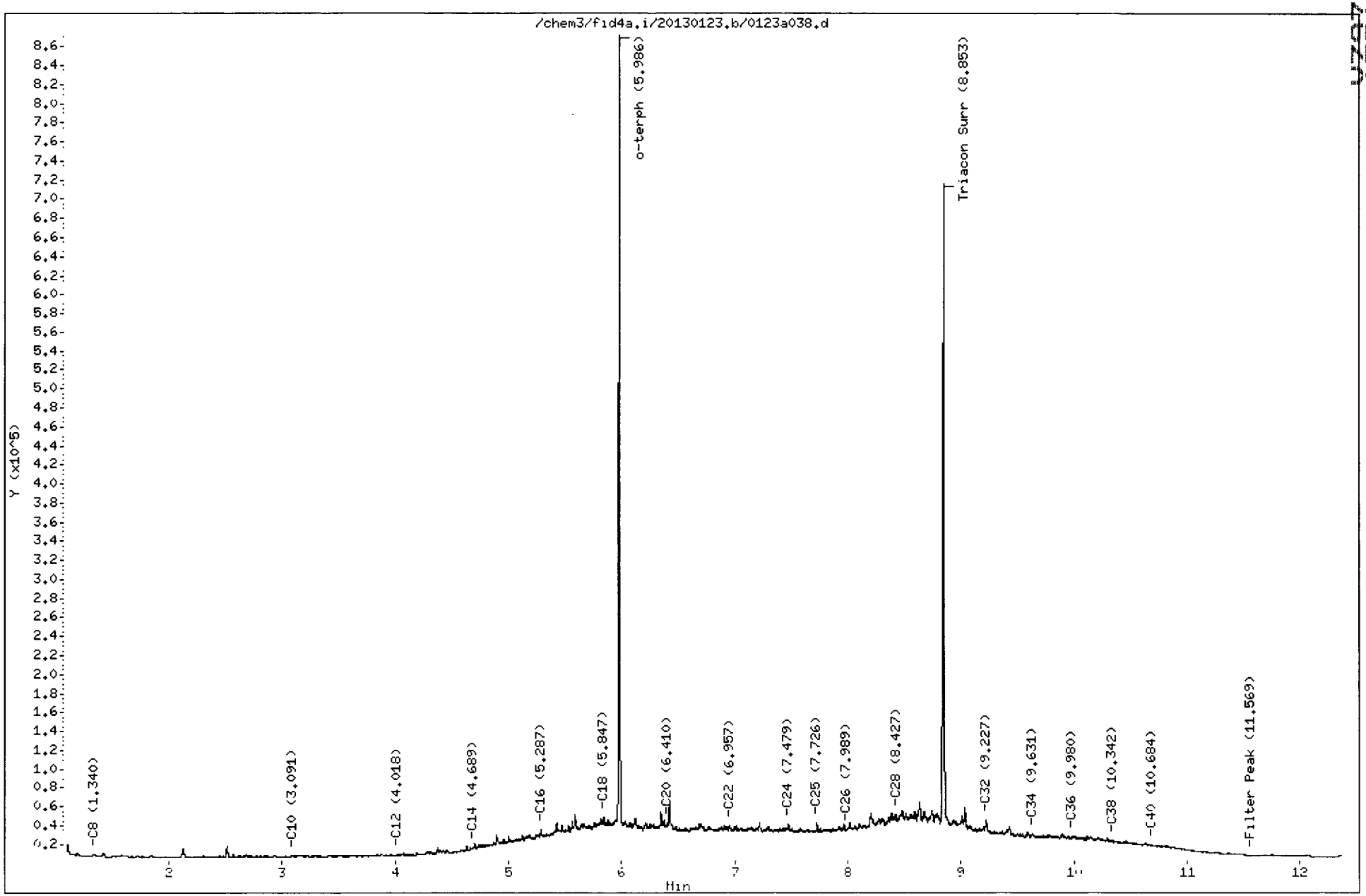
Instrument: f1d4a.i

Operator: JR/VTS

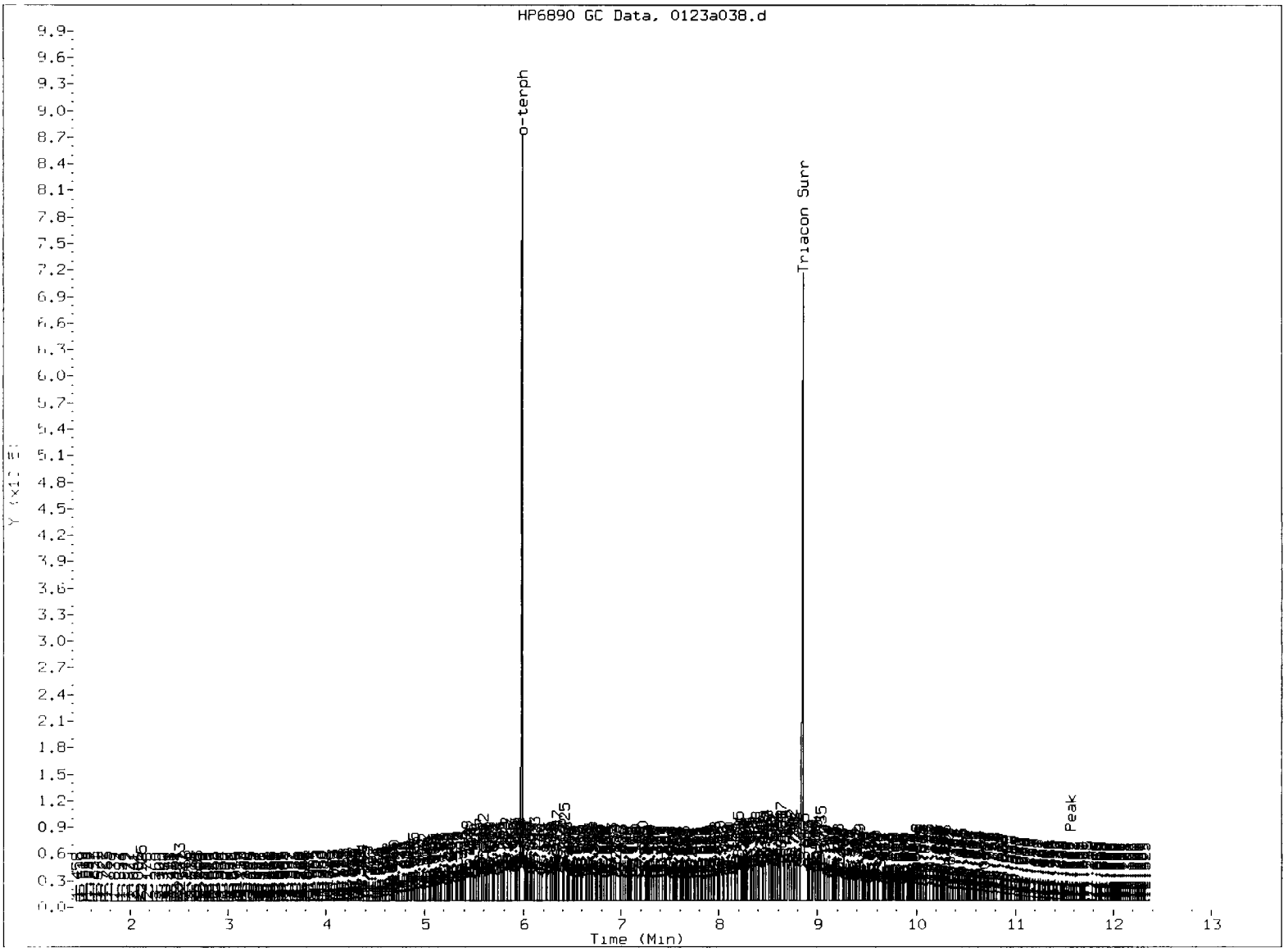
Column diameter: 0.25

VZ97 - 01 HFA

VT 1.25.13



FID:4A-2C/RTX-1 VZ97B FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VD Date: 1-29-13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130123.b/0123a039.d
Method: /chem3/fid4a.i/20130123.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: VZ97C
Client ID: CSIA-20130107-003S+
Injection: 23-JAN-2013 23:35
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.102	-0.010	42510	39733	WATPHG	(Tol-C12)	198036	17.86
C8	1.339	-0.019	1807	4026	WATPHD	(C12-C24)	1757919	168.09
C10	3.091	0.010	1572	1569	WATPHM	(C24-C38)	2056855	246.27
C12	4.004	-0.003	570	216	AK102	(C10-C25)	1897288	156.34
C14	4.679	-0.013	3012	2332	AK103	(C25-C36)	1815834	197.33
C16	5.288	0.006	8388	6030				
C18	5.844	0.003	12061	12468				
C20	6.407	0.002	15288	10399	JET-A	(C10-C18)	567341	104.74
C22	6.954	0.000	13129	17672				
C24	7.476	0.000	14614	29089	MSPIRIT	(Tol-C12)	198036	14.95
C25	7.725	-0.002	17900	30992				
C26	7.970	-0.011	14995	22308				
C28	8.426	-0.002	20520	34137				
C32	9.259	0.019	11217	5082				
C34	9.613	-0.004	8584	4901				
Filter Peak	11.578	0.014	853	729	CREOSOT	(C12-C22)	1402355	696.95 M
C36	9.976	-0.003	9287	12815				
C38	10.335	0.003	6282	3837				
C40	10.690	0.012	4313	3668				
o-terph	5.984	0.007	856744	580525				
Triacon Surr	8.851	-0.006	614039	552158	NAS DIES	(C10-C24)	1800683	148.78

Range Times: NW Diesel(4.006 - 7.476) AK102(3.08 - 7.73) Jet A(3.08 - 5.84)
NW M.Oil(7.48 - 10.33) AK103(7.73 - 9.98) OR Diesel(3.08 - 8.43)

Surrogate	Area	Amount	%Rec
o-Terphenyl	580525	43.0	95.6 M
Triacontane	552158	51.7	115.0 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	13490.4	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

Data File: .'chem3.'fid4a.1/20130123.b/0123a039.d

Date : 23-JAN-2013 23:35

Client ID: CSIA-20130107-003S+

Sample Info: VZ97C

Column phase: RTX-1

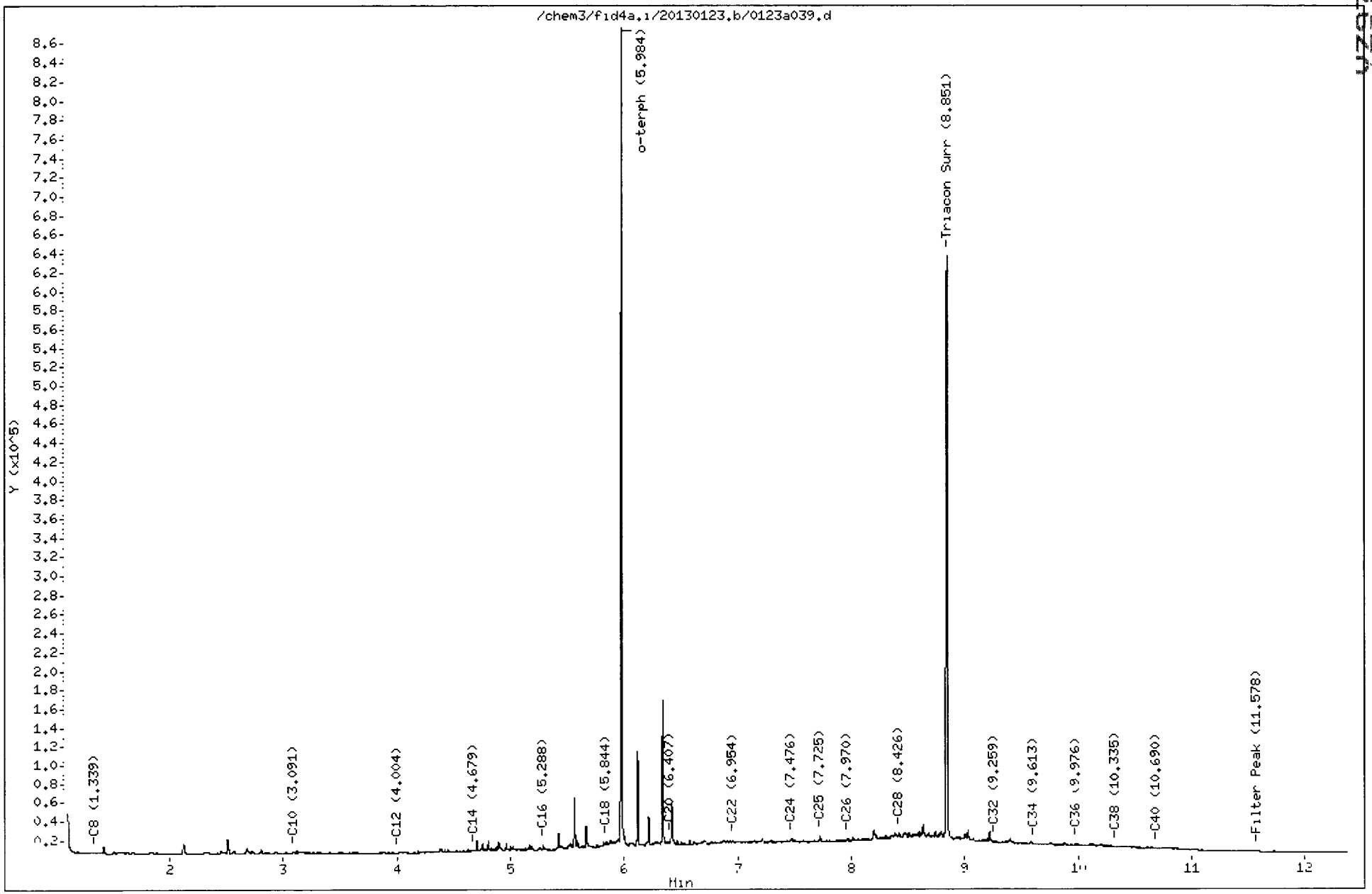
Instrument: fid4a.1

Operator: JR/VTS

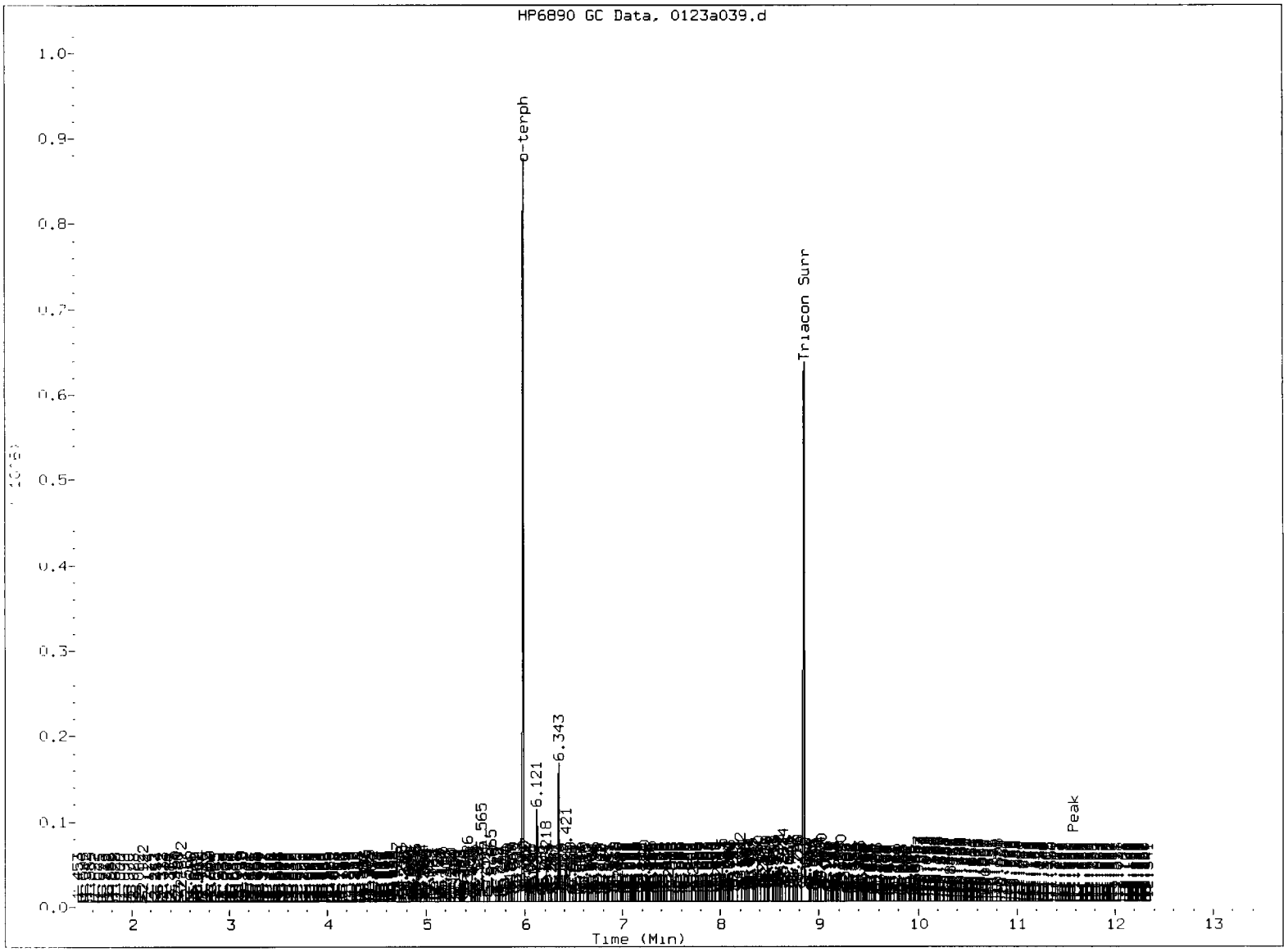
Column diameter: 0.25

VT 1.25.13

VZ97 01.25.13



FID:4A-2C/RTX-1 VZ97C FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5.) Skimmed surrogate

Analyst: VJ Date: 1-25-13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130123.b/0123a040.d ARI ID: DIESEL#4
Method: /chem3/fid4a.i/20130123.b/ftphfid4a.m Client ID: SFP-027A
Instrument: fid4a.i Injection: 23-JAN-2013 23:55
Operator: JR/VTS
Report Date: 01/25/2013 Dilution Factor: 1
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.100	-0.013	4831	9810	WATPHG	(Tol-C12)	837363	75.50
C8	1.338	-0.019	3218	7329	WATPHD	(C12-C24)	2470789	236.25
C10	3.088	0.007	12352	12163	WATPHM	(C24-C38)	75538	9.04
C12	4.015	0.008	23517	24583	AK102	(C10-C25)	2921874	240.76
C14	4.686	-0.006	16364	6710	AK103	(C25-C36)	56205	6.11
C16	5.286	0.004	84944	63029				
C18	5.845	0.004	71684	63004				
C20	6.407	0.002	42765	50035	JET-A	(C10-C18)	2163941	399.51
C22	6.955	0.001	19901	22132				
C24	7.478	0.002	5120	5441	MSPIRIT	(Tol-C12)	837363	63.22
C25	7.730	0.003	2025	4200				
C26	7.973	-0.008	782	1428				
C28	8.445	0.017	440	880				
C32	9.236	-0.003	5693	4899				
C34	9.625	0.008	156	48				
Filter Peak	11.572	0.007	812	1609	CREOSOT	(C12-C22)	2383431	1184.53 M
C36	9.966	-0.014	7602	7077				
C38	10.336	0.004	382	354				
C40	10.718	0.039	582	136				
o-terph	5.983	0.006	812227	544967				
Triacon Surr	8.838	-0.019	1881	1797	NAS DIES	(C10-C24)	2915366	240.88

Range Times: NW Diesel(4.006 - 7.476) AK102(3.08 - 7.73) Jet A(3.08 - 5.84)
NW M.Oil(7.48 - 10.33) AK103(7.73 - 9.98) OR Diesel(3.08 - 8.43)

Surrogate	Area	Amount	%Rec
o-Terphenyl	544967	40.4	89.8 M
Triacontane	1797	0.2	0.4

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	13490.4	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.i/20130123.b/0123a040.d

Date : 23-JAN-2013 23:55

Client ID: SFP-027A

Sample Info: DIESEL#4

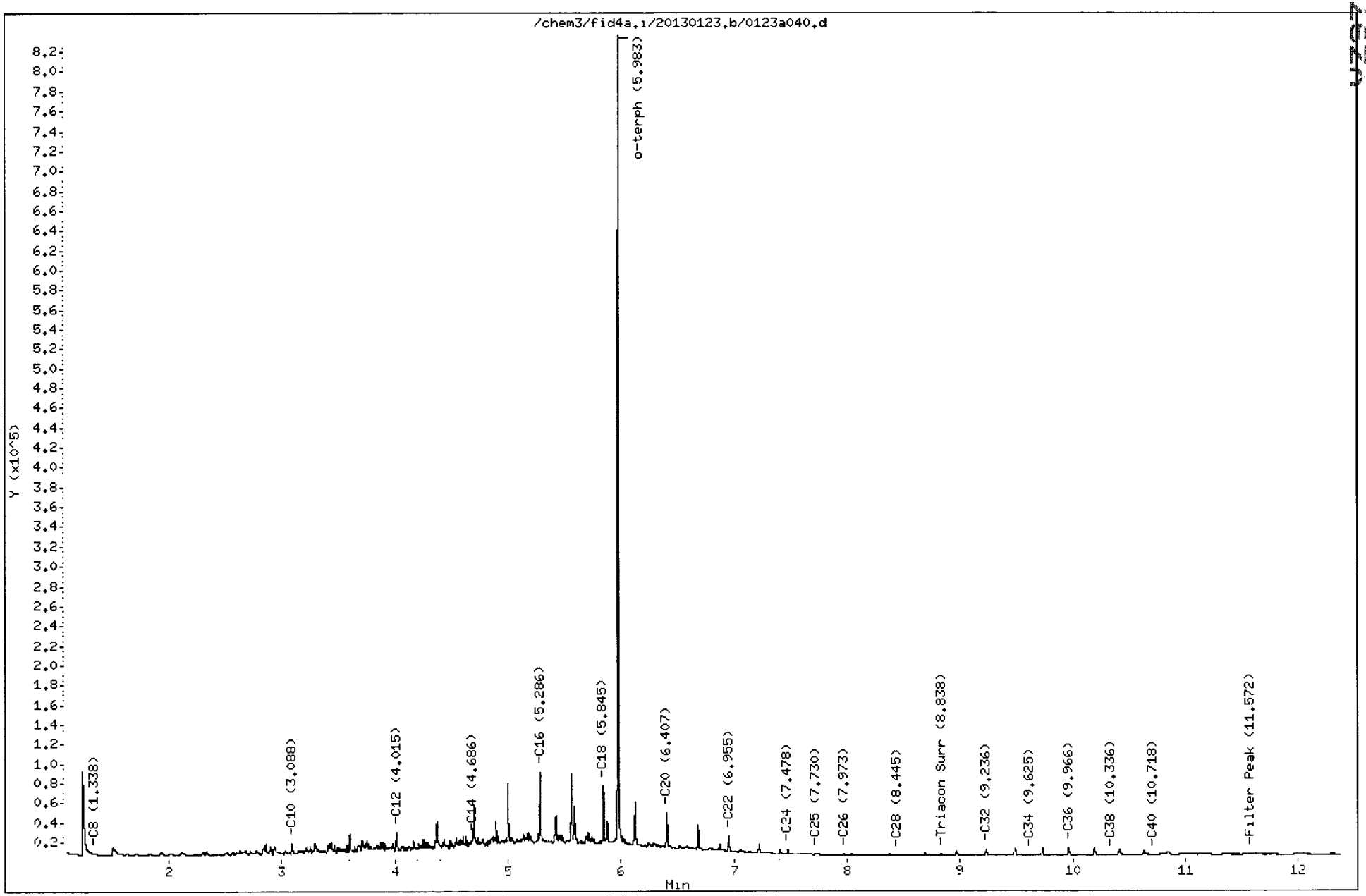
Column phase: RTX-1

Instrument: fid4a.i

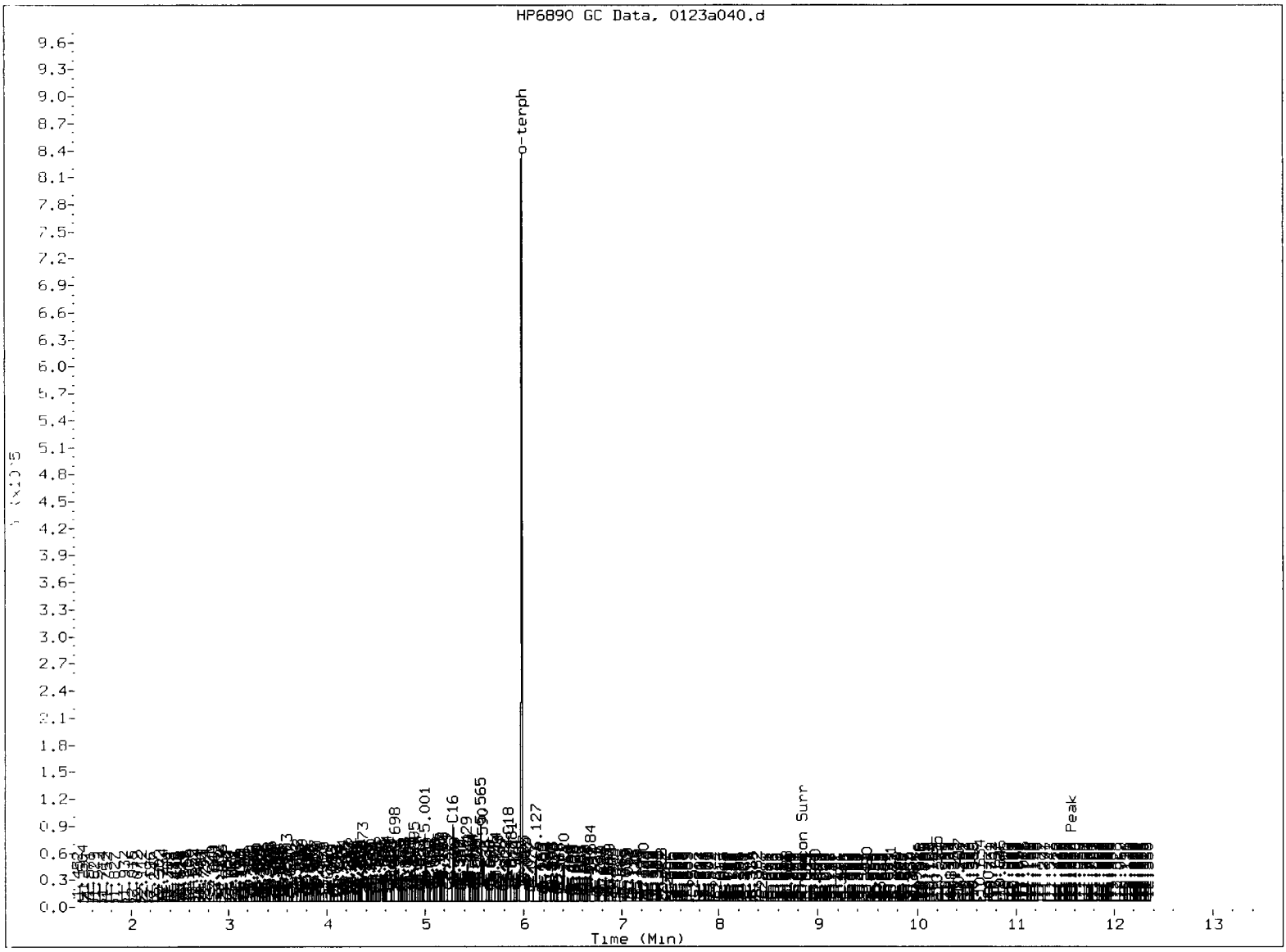
Operator: JR/VTS

Column diameter: 0.25

1.26.13



FID:4A-2C/RTX-1 DIESEL#4 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VD Date: 4-26-13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130123.b/0123a041.d
Method: /chem3/fid4a.i/20130123.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: MOIL#4
Client ID: SFP-027A
Injection: 24-JAN-2013 00:15
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	46260	4.17
C8	1.379	0.022	1053	3495	WATPHD	(C12-C24)	368509	35.24
C10	3.075	-0.006	172	187	WATPHM	(C24-C38)	4342040	519.88
C12	3.999	-0.008	87	83	AK102	(C10-C25)	516020	42.52
C14	4.683	-0.009	90	64	AK103	(C25-C36)	3720788	404.34
C16	5.293	0.011	120	28				
C18	5.837	-0.004	107	81				
C20	6.411	0.006	830	891	JET-A	(C10-C18)	20487	3.78
C22	6.959	0.005	3621	4953				
C24	7.473	-0.003	13305	16762	MSPIRIT	(Tol-C12)	46260	3.49
C25	7.726	-0.001	18274	6989				
C26	7.981	0.000	20855	11028				
C28	8.422	-0.005	24722	19881				
C32	9.232	-0.008	39455	54507				
C34	9.614	-0.002	32242	28154				
Filter Peak	11.565	0.001	1841	1519	CREOSOT	(C12-C22)	93775	46.60 M
C36	9.983	0.003	29217	32589				
C38	10.333	0.001	23663	12446				
C40	10.670	-0.008	17716	25414				
o-terph	5.980	0.003	2489	2329				
Triacon Surr	8.847	-0.010	668349	537316	NAS DIES	(C10-C24)	376781	31.13

Range Times: NW Diesel(4.006 - 7.476) AK102(3.08 - 7.73) Jet A(3.08 - 5.84)
NW M.Oil(7.48 - 10.33) AK103(7.73 - 9.98) OR Diesel(3.08 - 8.43)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2329	0.2	0.4
Triacontane	537316	50.3	111.9 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	13490.4	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

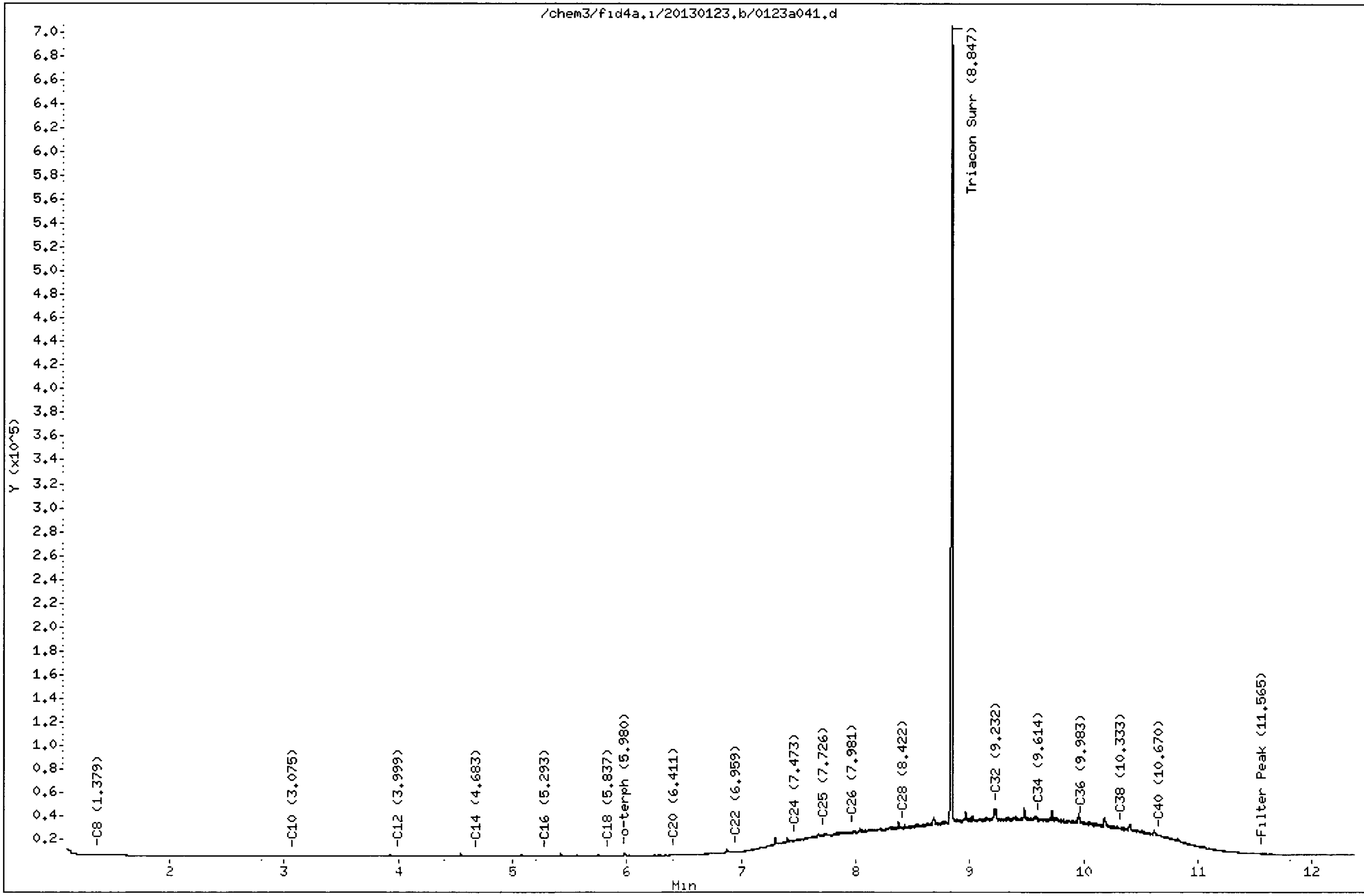
VZ97 · 01459

Data File: /chem3/fid4a.i/20130123.b/0123a041.d
Date : 24-JAN-2013 00:15
Client ID: SFP-027A
Sample Info: MOIL#4

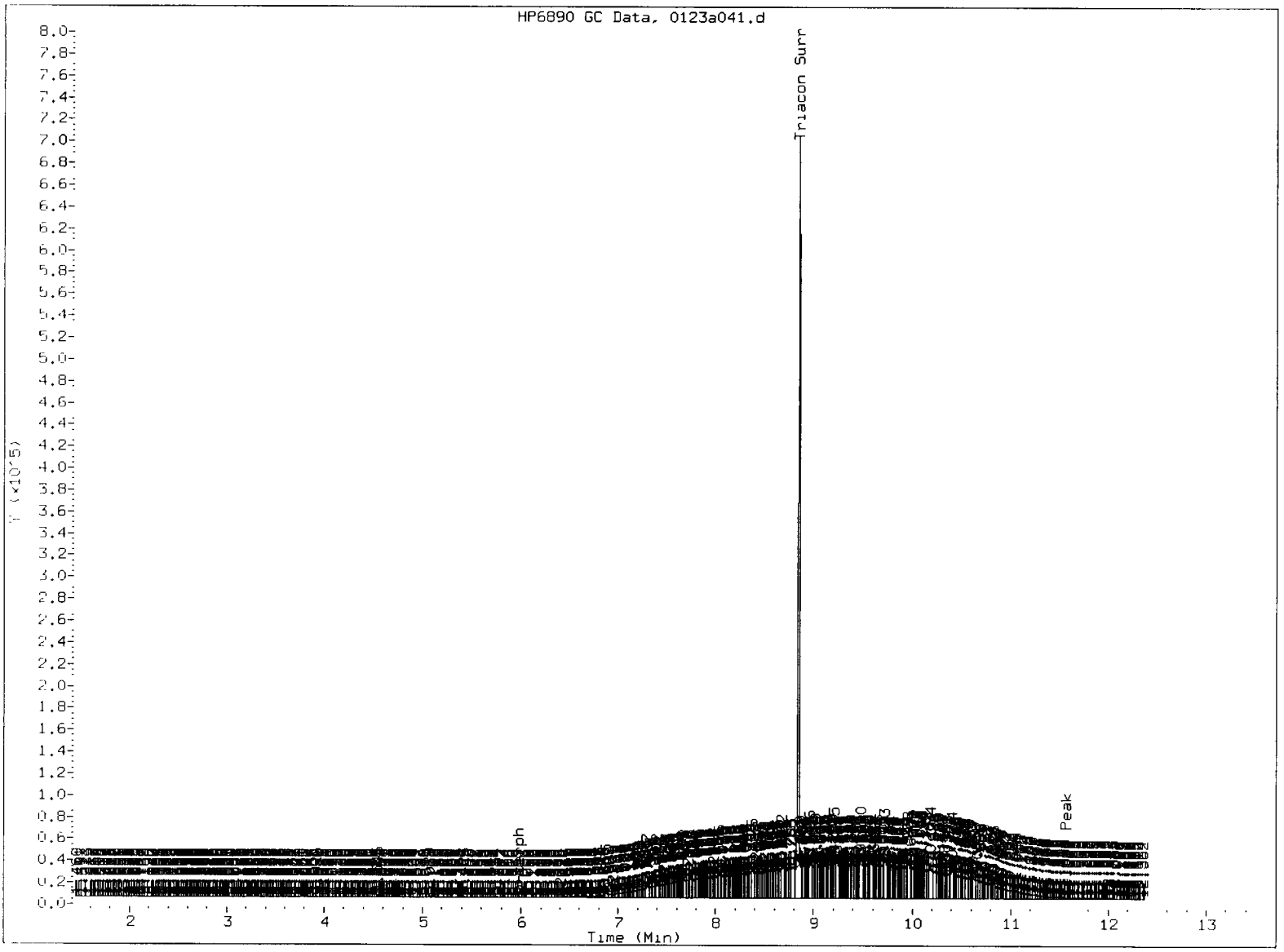
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS
Column diameter: 0.25



FID:4A-2C/RTX-1 MOIL#4 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: ID Date: 1-28-D

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130123.b/0123a042.d
Method: /chem3/fid4a.i/20130123.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: VZ97D
Client ID: CSIA-20130107-004S+
Injection: 24-JAN-2013 00:35

Dilution Factor: 5

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.101	-0.011	3105	7573	WATPHG	(Tol-C12)	158135	14.26
C8	1.333	-0.024	2833	6373	WATPHD	(C12-C24)	4748078	453.99
C10	3.089	0.008	1252	1229	WATPHM	(C24-C38)	9395515	1124.95
C12	4.003	-0.004	2201	1725	AK102	(C10-C25)	5241495	431.90
C14	4.702	0.010	9059	18931	AK103	(C25-C36)	8220084	893.29
C16	5.287	0.005	15618	14247				
C18	5.844	0.003	27092	37359				
C20	6.406	0.001	31453	26449	JET-A	(C10-C18)	1318215	243.37
C22	6.960	0.007	42815	33496				
C24	7.474	-0.002	49382	61841	MSPIRIT	(Tol-C12)	158135	11.94
C25	7.723	-0.004	52164	31275				
C26	7.984	0.003	54776	24586				
C28	8.421	-0.006	79999	111568				
C32	9.243	0.003	56084	58181				
C34	9.613	-0.003	45239	15792				
Filter Peak	11.559	-0.005	2605	2541	CREOSOT	(C12-C22)	3341270	1660.56 M
C36	9.983	0.004	45490	56314				
C38	10.336	0.004	35014	42505				
C40	10.684	0.006	23814	8363				
o-terph	5.974	-0.002	200473	112032				
Triacon Surr	8.841	-0.015	192736	131799	NAS DIES	(C10-C24)	4815353	397.86

Range Times: NW Diesel(4.006 - 7.476) AK102(3.08 - 7.73) Jet A(3.08 - 5.84)
NW M.Oil(7.48 - 10.33) AK103(7.73 - 9.98) OR Diesel(3.08 - 8.43)

Surrogate	Area	Amount	%Rec
o-Terphenyl	112032	8.3	92.3 M
Triacontane	131799	12.3	137.2 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	13490.4	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.i/20130123.b/0123a042.d
Date : 24-JAN-2013 00:35
Client ID: CSIA-20130107-004S+
Sample Info: VZ97D,5

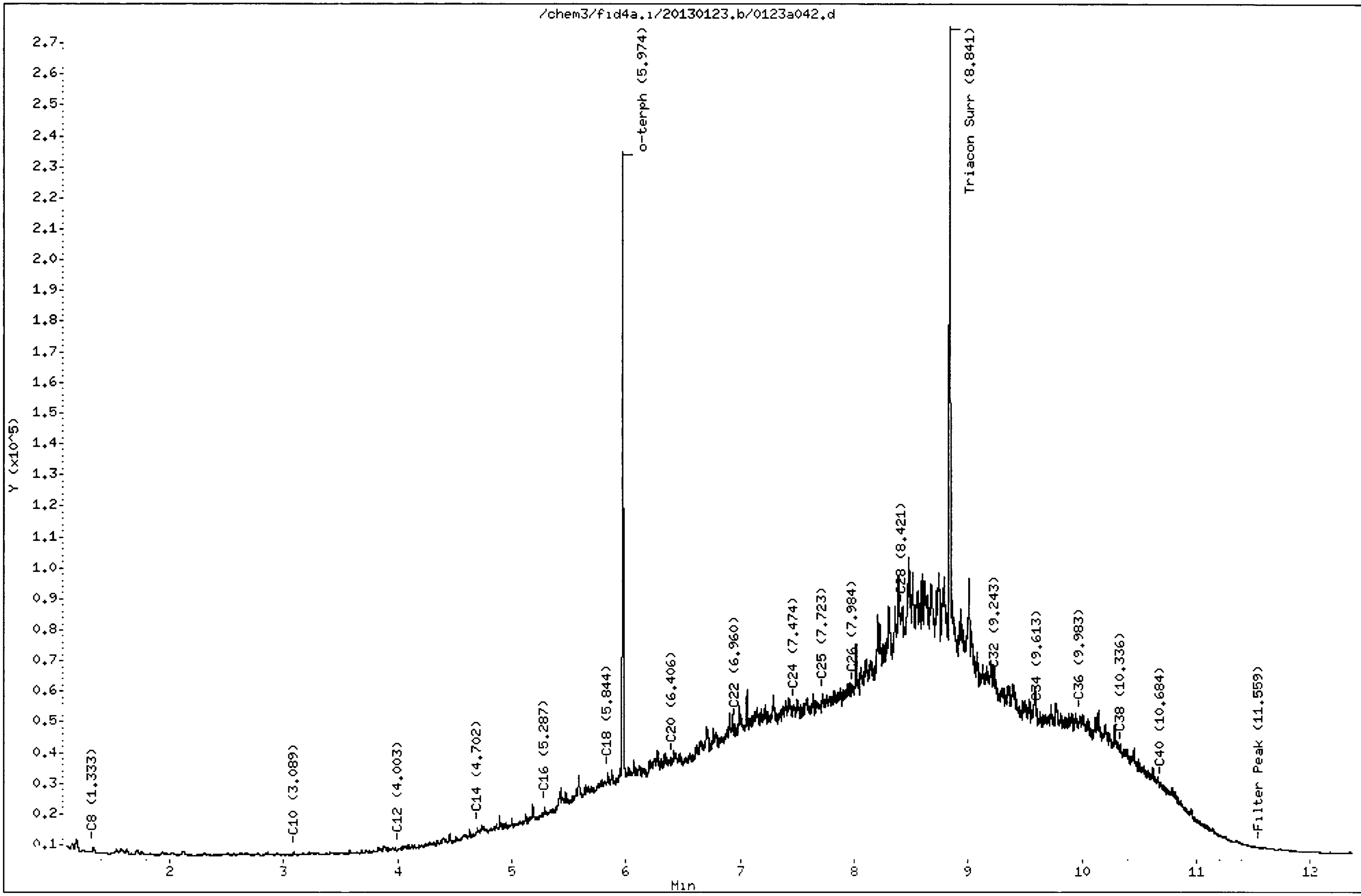
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS
Column diameter: 0.25

VTI 1.25.13

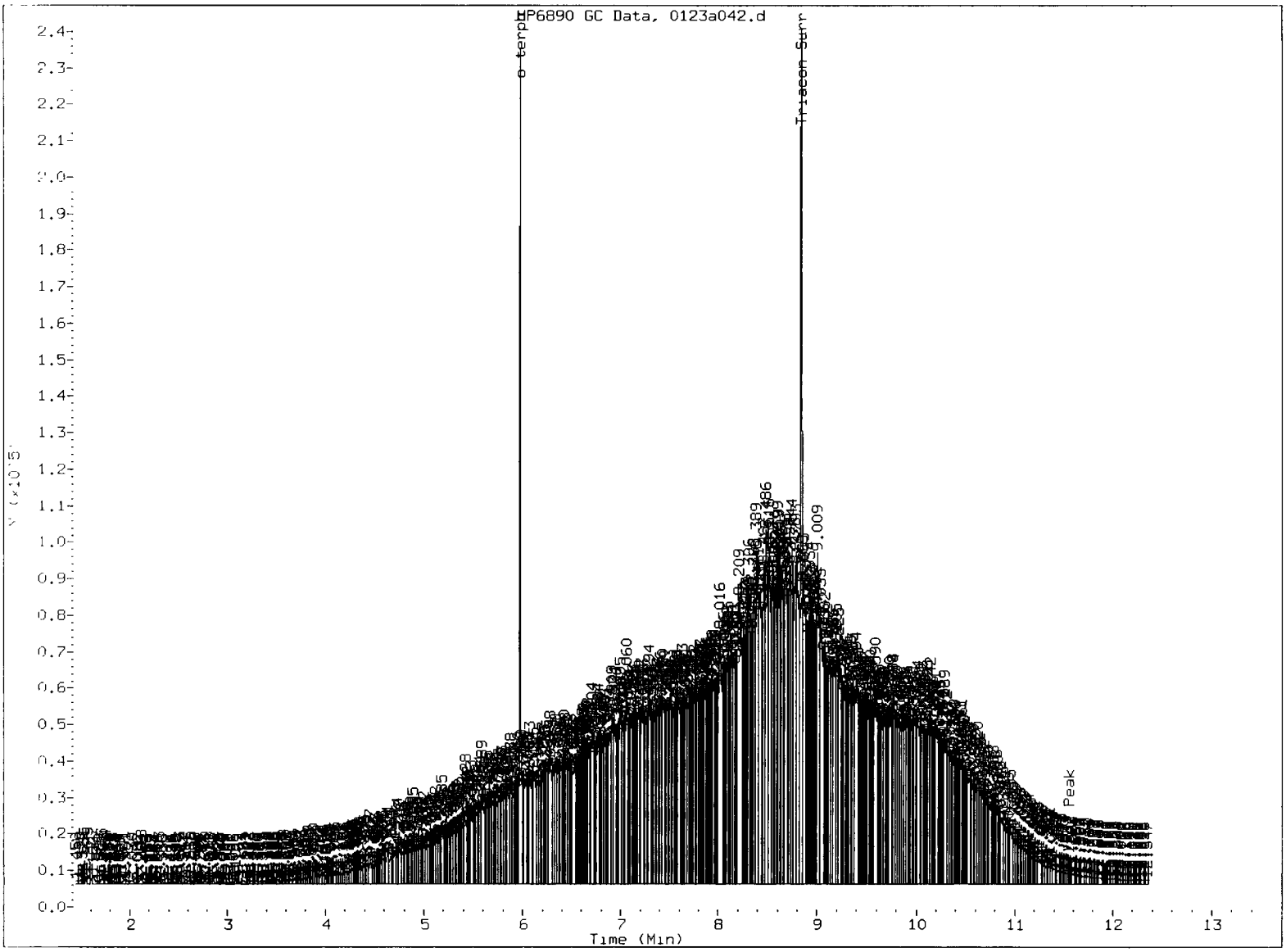
Page 1



VZ97 01463

FID:4A-2C/RTX-1 VZ97D

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VD Date: 1-25-13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130123.b/0123a043.d
Method: /chem3/fid4a.i/20130123.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: VZ97E
Client ID: CSIA-20130107-005S+
Injection: 24-JAN-2013 00:55
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.105	-0.008	33649	36995	WATPHG	(Tol-C12)	229522	20.70
C8	1.339	-0.018	5693	9049	WATPHD	(C12-C24)	3842788	367.43
C10	3.090	0.009	1570	1467	WATPHM	(C24-C38)	8856926	1060.46
C12	3.999	-0.007	1093	574	AK102	(C10-C25)	4243737	349.68
C14	4.705	0.013	14533	15884	AK103	(C25-C36)	7799905	847.62
C16	5.285	0.004	12435	17274				
C18	5.846	0.005	23880	37947				
C20	6.420	0.015	133485	130119	JET-A	(C10-C18)	812689	150.04
C22	6.954	0.000	38217	72443				
C24	7.477	0.001	45877	73702	MSPIRIT	(Tol-C12)	229522	17.33
C25	7.726	-0.001	50883	84706				
C26	7.990	0.009	48780	12306				
C28	8.425	-0.003	85846	150192				
C32	9.224	-0.015	65751	130326				
C34	9.619	0.003	43126	34818				
Filter Peak	11.568	0.003	2561	1348	CREOSOT	(C12-C22)	2565086	1274.81 M
C36	9.985	0.005	40718	27663				
C38	10.332	0.000	30781	14375				
C40	10.682	0.004	20574	15822				
o-terph	5.982	0.006	833967	575505				
Triacon Surr	8.852	-0.004	657957	585194	NAS DIES	(C10-C24)	3899012	322.15

Range Times: NW Diesel(4.006 - 7.476) AK102(3.08 - 7.73) Jet A(3.08 - 5.84)
NW M.Oil(7.48 - 10.33) AK103(7.73 - 9.98) OR Diesel(3.08 - 8.43)

Surrogate	Area	Amount	%Rec
o-Terphenyl	575505	42.7	94.8 M
Triacontane	585194	54.8	121.8 M

M Indicates the peak was manually integrated

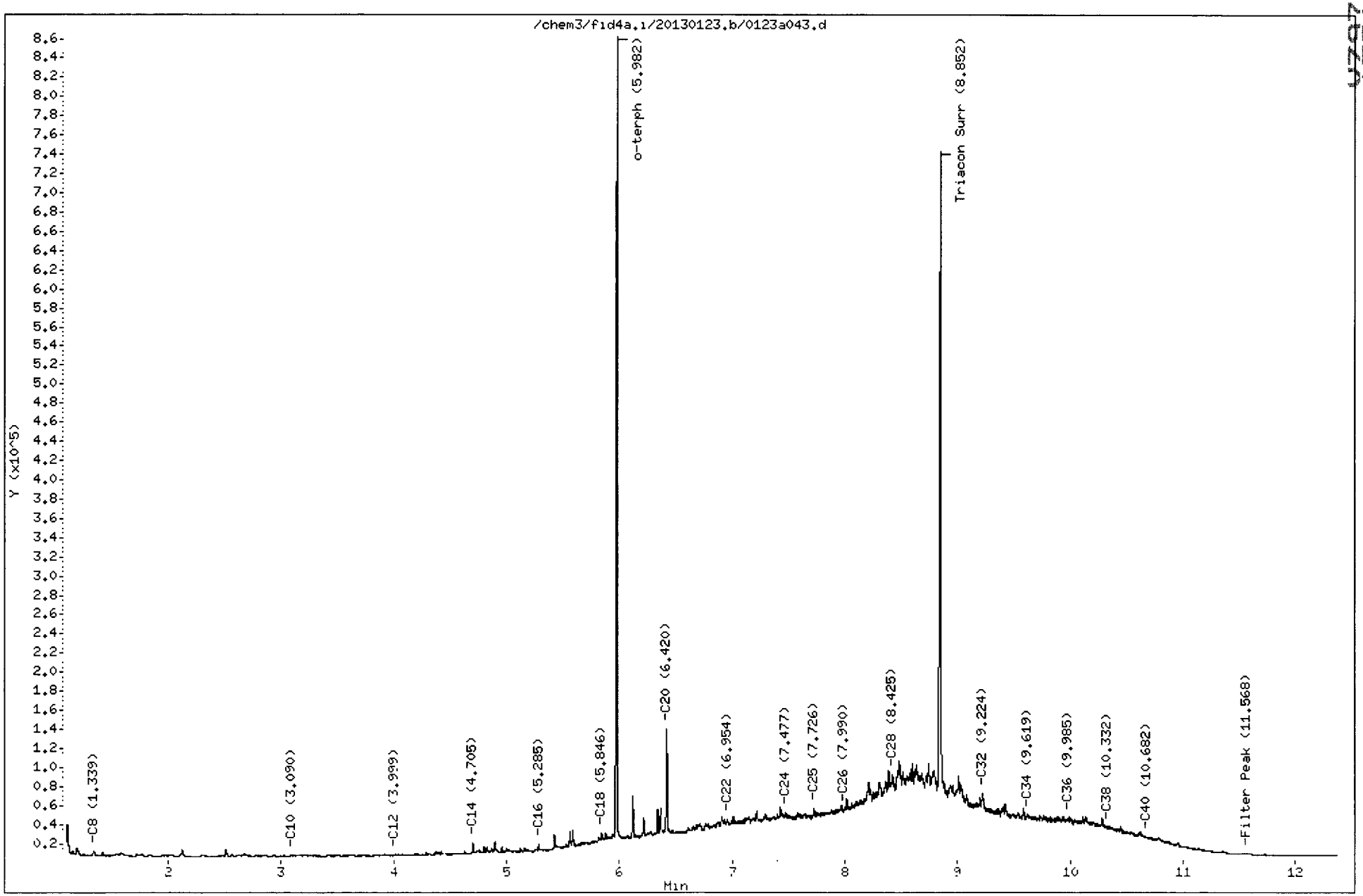
Analyte	RF	Curve Date
o-Terph Surr	13490.4	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.i/20130123.b/0123a043.d
Date : 24-JAN-2013 00:55
Client ID: CSIA-20130107-005S+
Sample Info: VZ97E

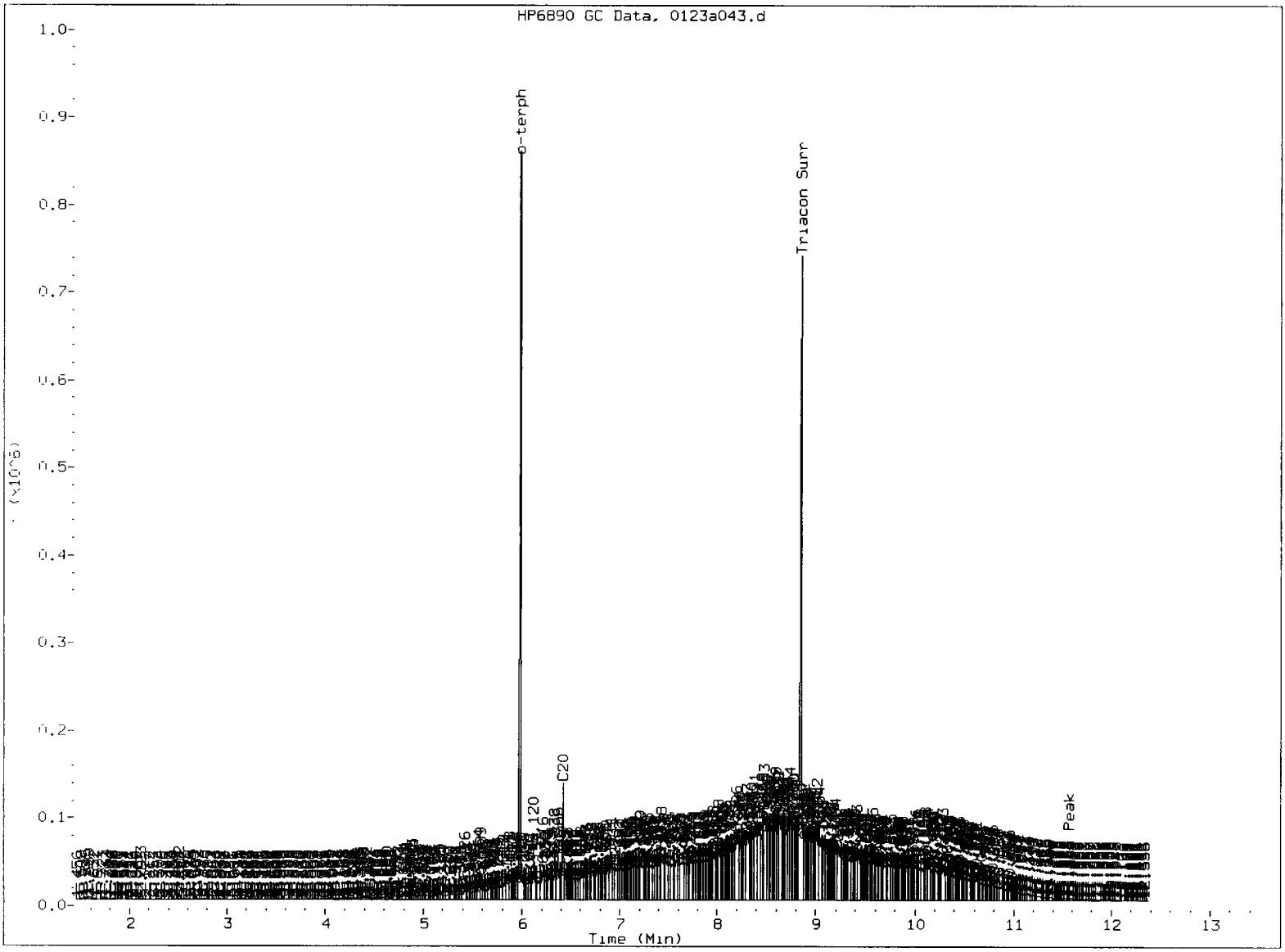
Instrument: fid4a.i
Operator: JR/VTS
Column phase: RTX-1
Column diameter: 0.25

VD 1.25.13

VZ97 · 91 465



FID:4A-2C/RTX-1 VZ97E FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VD Date: 1-29-13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130123.b/0123a044.d
Method: /chem3/fid4a.i/20130123.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: VZ97F
Client ID: CSIA20130109-006B
Injection: 24-JAN-2013 01:14
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.104	-0.009	146194	118795	WATPHG	(Tol-C12)	306293	27.62
C8	1.339	-0.019	1982	4201	WATPHD	(C12-C24)	334851	32.02
C10	3.090	0.009	1796	1690	WATPHM	(C24-C38)	168180	20.14
C12	3.993	-0.013	798	841	AK102	(C10-C25)	390695	32.19
C14	4.703	0.011	3701	6419	AK103	(C25-C36)	149886	16.29
C16	5.287	0.005	4564	6144				
C18	5.842	0.001	4192	3123				
C20	6.405	0.000	3890	2909	JET-A	(C10-C18)	249618	46.08
C22	6.953	-0.001	4013	4132				
C24	7.475	-0.001	2206	2831	MSPIRIT	(Tol-C12)	306293	23.12
C25	7.727	0.000	1918	3910				
C26	7.990	0.009	633	604				
C28	8.422	-0.005	2170	4503				
C32	9.219	-0.021	9547	8135				
C34	9.627	0.010	490	200				
Filter Peak	11.563	-0.002	740	448	CREOSOT	(C12-C22)	307333	152.74 M
C36	9.974	-0.005	1333	1958				
C38	10.337	0.005	717	1325				
C40	10.694	0.016	828	1483				
o-terph	5.983	0.006	912538	643034				
Triacon Surr	8.847	-0.009	684467	595547	NAS DIES	(C10-C24)	385831	31.88

Range Times: NW Diesel(4.006 - 7.476) AK102(3.08 - 7.73) Jet A(3.08 - 5.84)
NW M.Oil(7.48 - 10.33) AK103(7.73 - 9.98) OR Diesel(3.08 - 8.43)

Surrogate	Area	Amount	%Rec
o-Terphenyl	643034	47.7	105.9 M
Triacontane	595547	55.8	124.0 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	13490.4	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.i/20130123.b/0123a044.d

Date : 24-JAN-2013 01:14

Client ID: CSIA20130109-006B

Sample Info: VZ97F

Column phase: RTX-1

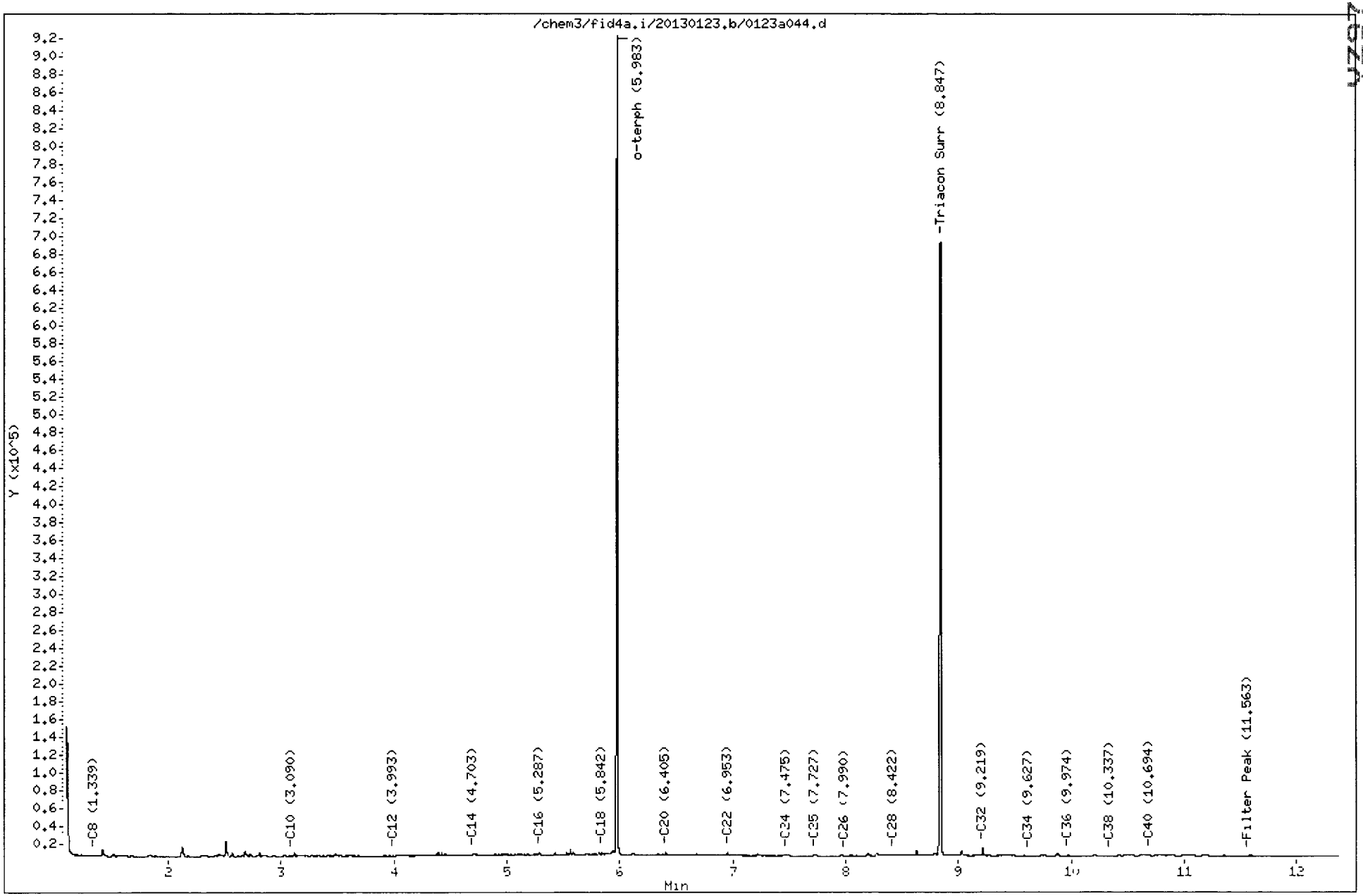
Instrument: fid4a.i

Operator: JR/VTS

Column diameter: 0.25

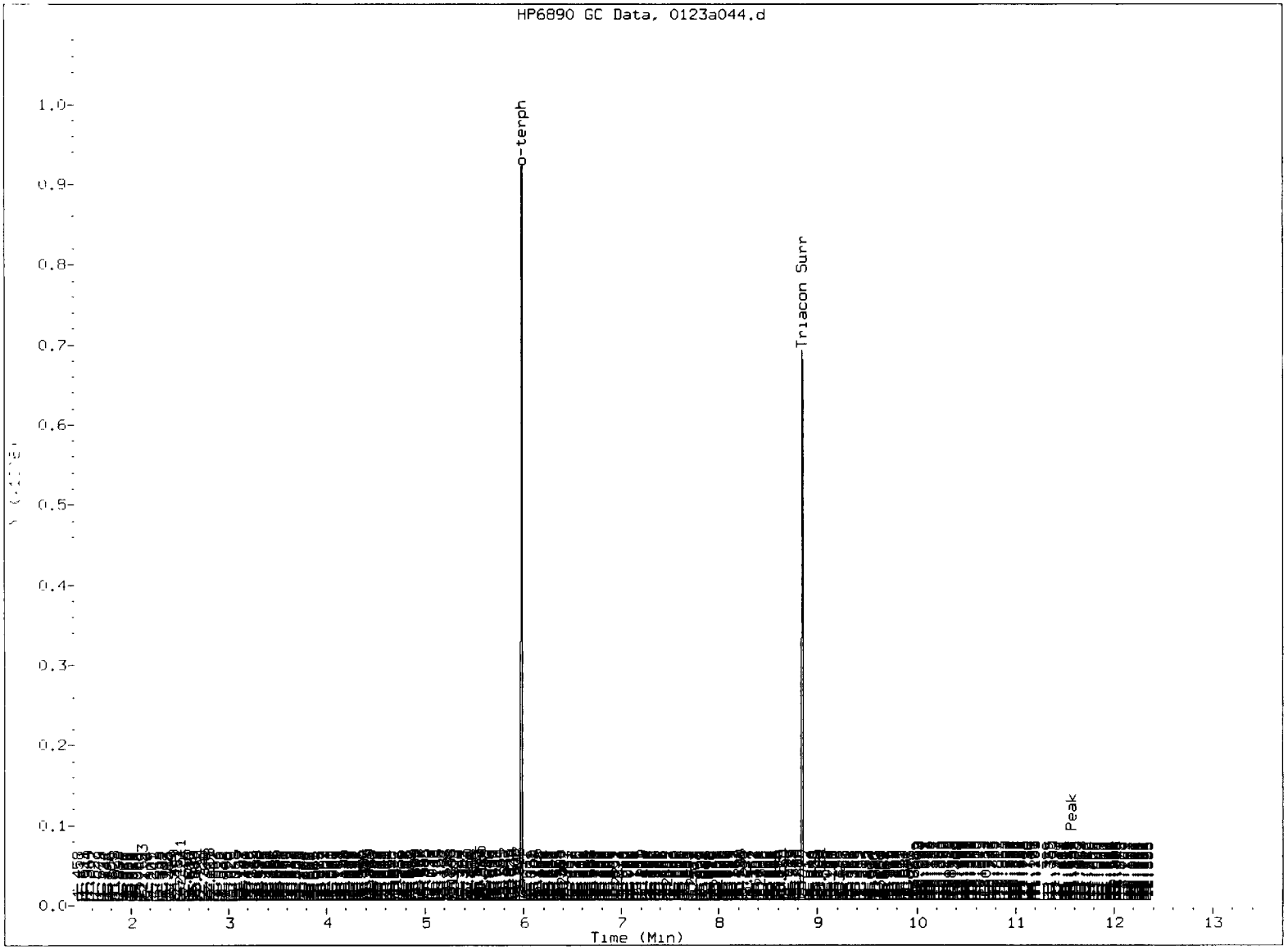
VD 1.25.13

VZ97 - 91 USG



FID:4A-2C/RTX-1 VZ97F

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VD

Date: 1-25-13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130123.b/0123a045.d
Method: /chem3/fid4a.i/20130123.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: VZ97G
Client ID: CSIA20130109-007B
Injection: 24-JAN-2013 01:34
Dilution Factor: 5

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.103	-0.010	4731	10525	WATPHG	(Tol-C12)	102099	9.21
C8	1.372	0.015	933	187	WATPHD	(C12-C24)	5228992	499.98
C10	3.087	0.007	353	333	WATPHM	(C24-C38)	1968464	235.69
C12	4.010	0.003	2784	3405	AK102	(C10-C25)	5404146	445.30
C14	4.687	-0.004	21790	28461	AK103	(C25-C36)	1701289	184.88
C16	5.282	0.001	34901	12191				
C18	5.847	0.005	39346	34250				
C20	6.414	0.010	29777	45316	JET-A	(C10-C18)	2845370	525.32
C22	6.959	0.005	20882	14668				
C24	7.472	-0.004	16670	24108	MSPIRIT	(Tol-C12)	102099	7.71
C25	7.725	-0.002	16667	21148				
C26	7.980	-0.001	13577	8257				
C28	8.419	-0.009	17262	21227				
C32	9.243	0.004	10877	12485				
C34	9.627	0.011	7733	9073				
Filter Peak	11.570	0.006	909	890	CREOSOT	(C12-C22)	4658891	2315.40 M
C36	9.984	0.005	7685	4901				
C38	10.324	-0.007	6280	5538				
C40	10.673	-0.005	5170	6353				
o-terph	5.974	-0.002	230350	123445				
Triacon Surr	8.838	-0.018	186254	127987	NAS DIES	(C10-C24)	5273223	435.70

Range Times: NW Diesel(4.006 - 7.476) AK102(3.08 - 7.73) Jet A(3.08 - 5.84)
NW M.Oil(7.48 - 10.33) AK103(7.73 - 9.98) OR Diesel(3.08 - 8.43)

Surrogate	Area	Amount	%Rec
o-Terphenyl	123445	9.2	101.7 M
Triacontane	127987	12.0	133.2 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	13490.4	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.1/20130123.b/0123a045.d
Date : 24-JAN-2013 01:34
Client ID: CSIA20130109-007B
Sample Info: VZ97G,5

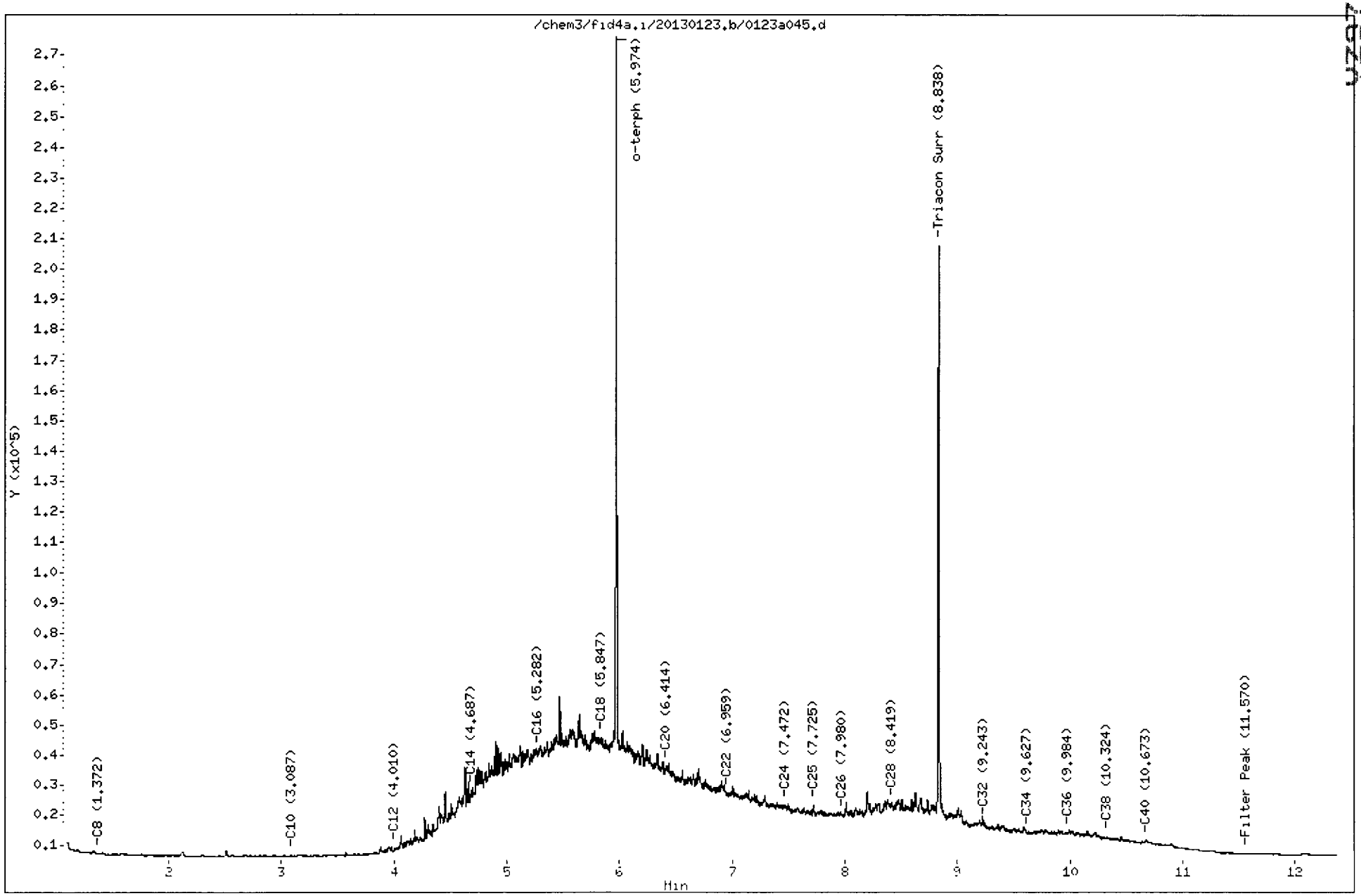
Column phase: RTX-1

Instrument: fid4a.1

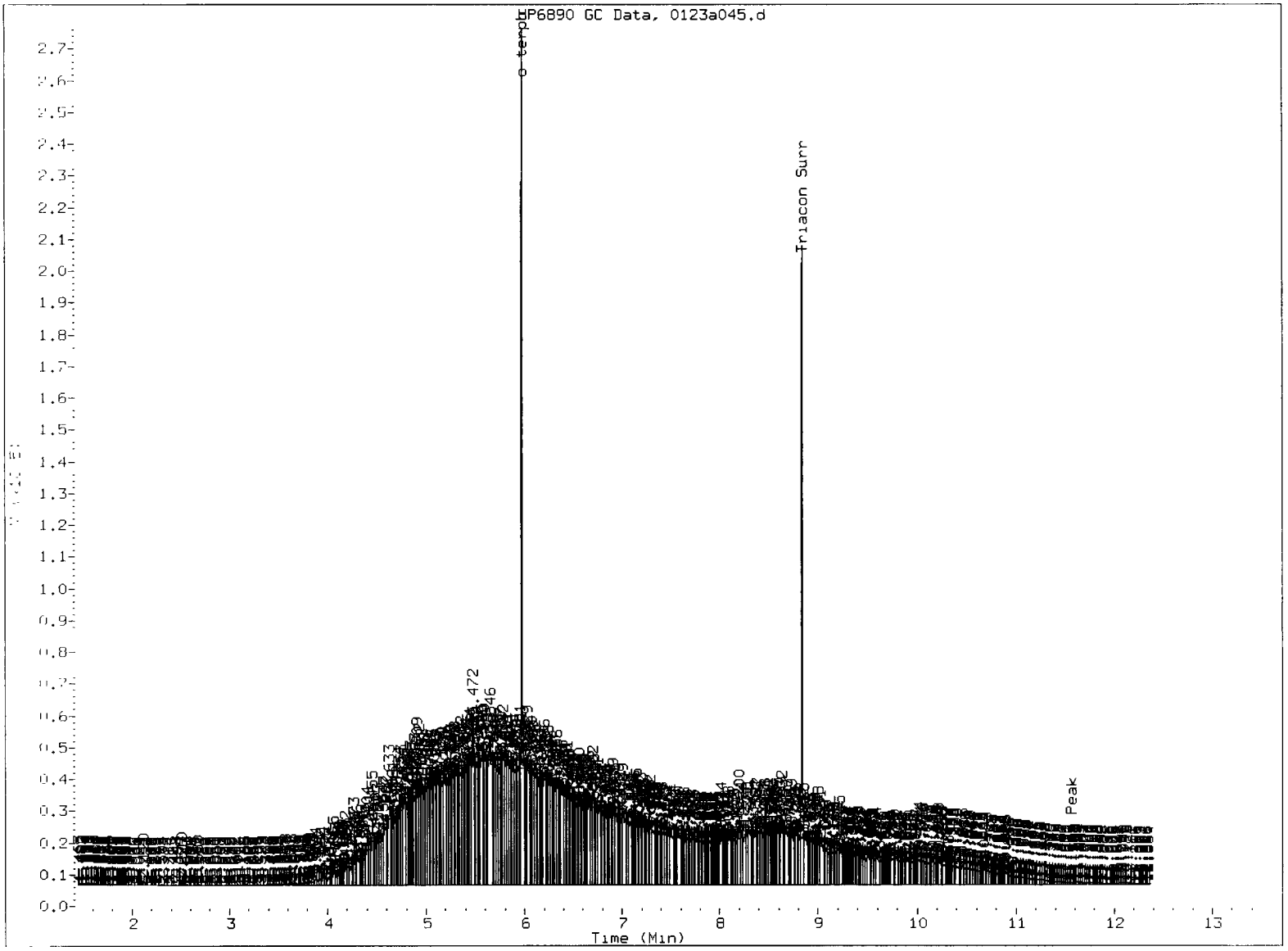
Operator: JR/VTS
Column diameter: 0.25

VT 1.25-1

VZ97 · 91472



FID:4A-2C/RTX-1 VZ97G FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VJ Date: 12-5-17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130123.b/0123a046.d
Method: /chem3/fid4a.i/20130123.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: VZ97H
Client ID: CSIA20130109-008S+3
Injection: 24-JAN-2013 01:54

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.103	-0.010	104033	102769	WATPHG	(Tol-C12)	230783	20.81
C8	1.325	-0.032	1531	2842	WATPHD	(C12-C24)	319470	30.55
C10	3.090	0.009	840	826	WATPHM	(C24-C38)	167825	20.09
C12	3.991	-0.015	413	627	AK102	(C10-C25)	351755	28.98
C14	4.690	-0.002	945	497	AK103	(C25-C36)	155152	16.86
C16	5.287	0.005	3077	2971				
C18	5.843	0.001	3038	2265				
C20	6.405	0.000	6032	4198	JET-A	(C10-C18)	203115	37.50
C22	6.953	-0.001	2467	3654				
C24	7.473	-0.004	2640	2980	MSPIRIT	(Tol-C12)	230783	17.42
C25	7.723	-0.004	4633	4649				
C26	7.965	-0.016	2437	2727				
C28	8.419	-0.008	3247	4203				
C32	9.217	-0.023	10298	9294				
C34	9.634	0.018	532	962				
Filter Peak	11.573	0.008	247	316	CREOSOT	(C12-C22)	293334	145.78 M
C36	9.973	-0.007	1193	1695				
C38	10.331	-0.001	496	750				
C40	10.693	0.015	400	218				
o-terph	5.980	0.004	946654	624365				
Triacon Surr	8.846	-0.010	672417	591929	NAS DIES	(C10-C24)	346936	28.67

Range Times: NW Diesel(4.006 - 7.476) AK102(3.08 - 7.73) Jet A(3.08 - 5.84)
NW M.Oil(7.48 - 10.33) AK103(7.73 - 9.98) OR Diesel(3.08 - 8.43)

Surrogate	Area	Amount	%Rec
o-Terphenyl	624365	46.3	102.8 M
Triacontane	591929	55.5	123.2 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	13490.4	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

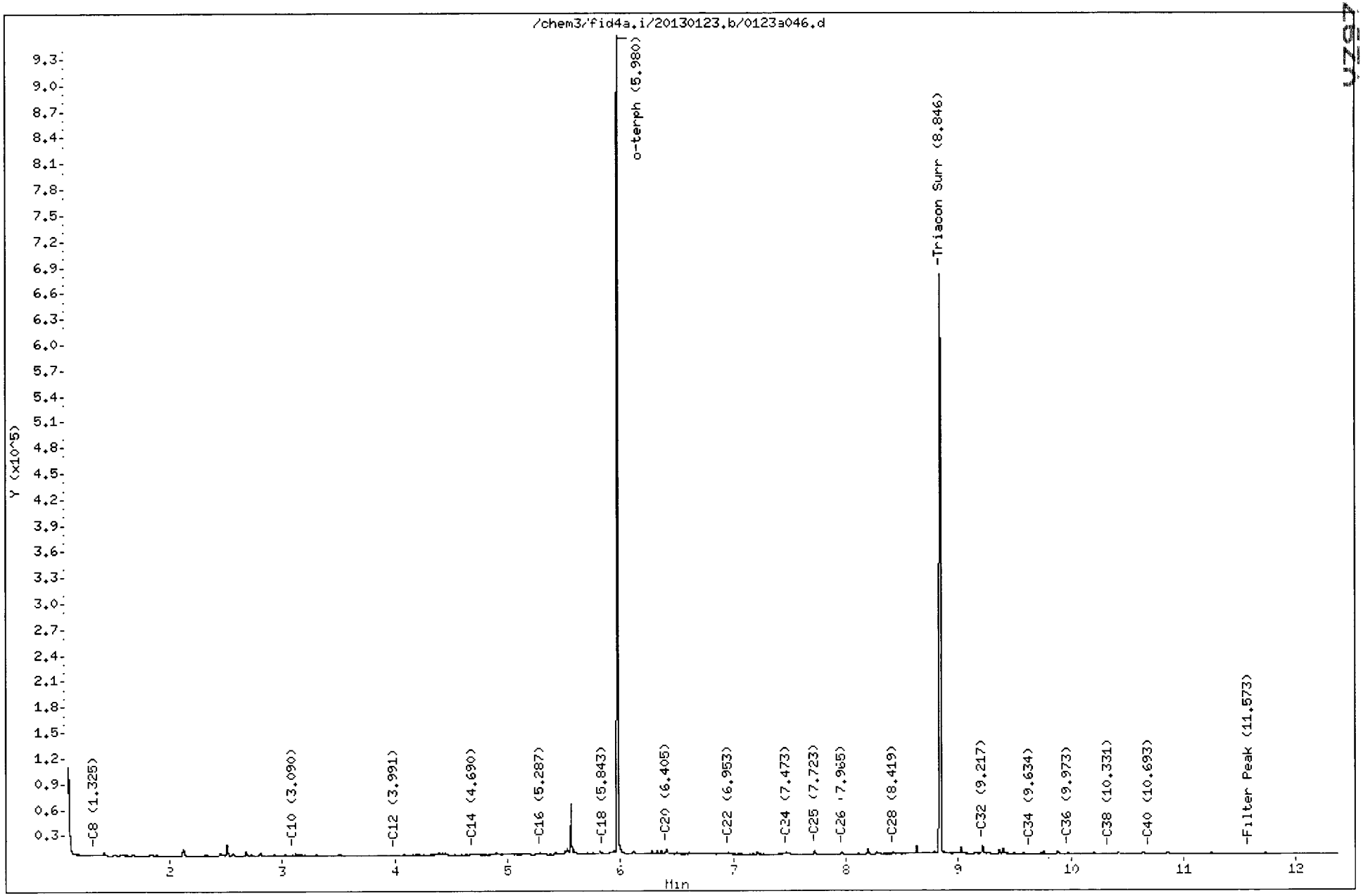
Data File: /chem3/fid4a.i/20130123.b/0123a046.d
Date : 24-JAN-2013 01:54
Client ID: CSIA20130109-008S+3
Sample Info: VZ97H

Column phase: RTX-1

Instrument: fid4a.i

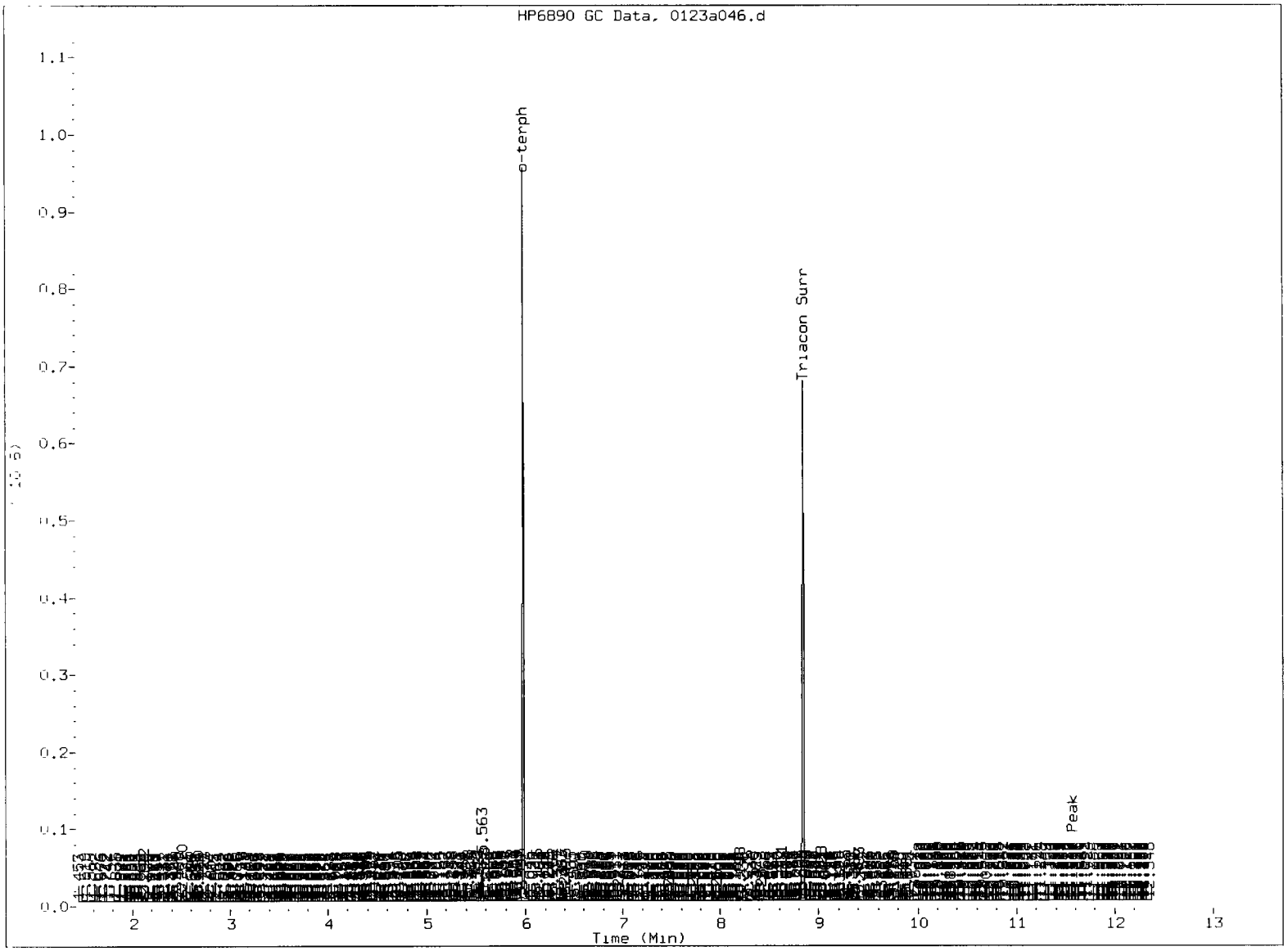
Operator: JR/VTS
Column diameter: 0.25

VZ97 : 41175



FID:4A-2C/RTX-1 VZ97H

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: DS

Date: 1-25-17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130123.b/0123a047.d
Method: /chem3/fid4a.i/20130123.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: VZ97I
Client ID: CSIA20130109-009S+6
Injection: 24-JAN-2013 02:14
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.103	-0.009	61086	58118	WATPHG	(Tol-C12)	215167	19.40
C8	1.340	-0.017	2546	6011	WATPHD	(C12-C24)	1250193	119.54
C10	3.089	0.009	1350	1342	WATPHM	(C24-C38)	2177254	260.69
C12	4.000	-0.006	598	371	AK102	(C10-C25)	1390047	114.54
C14	4.700	0.009	5344	7769	AK103	(C25-C36)	1901794	206.67
C16	5.285	0.003	7652	10278				
C18	5.842	0.000	10869	9645				
C20	6.401	-0.003	12447	20445	JET-A	(C10-C18)	451047	83.27
C22	6.950	-0.004	13406	22389				
C24	7.472	-0.004	15523	34627	MSPIRIT	(Tol-C12)	215167	16.24
C25	7.722	-0.005	17382	29583				
C26	7.985	0.005	11478	5203				
C28	8.419	-0.008	20815	39889				
C32	9.253	0.013	12391	13068				
C34	9.617	0.001	13678	24729				
Filter Peak	11.554	-0.011	734	516	CREOSOT	(C12-C22)	943450	468.88 M
C36	9.986	0.007	10048	4332				
C38	10.321	-0.011	7979	11832				
C40	10.682	0.004	5662	5012				
o-terph	5.979	0.003	856270	589468				
Triacon Surr	8.846	-0.010	681671	577798	NAS DIES	(C10-C24)	1290469	106.62

Range Times: NW Diesel(4.006 - 7.476) AK102(3.08 - 7.73) Jet A(3.08 - 5.84)
NW M.Oil(7.48 - 10.33) AK103(7.73 - 9.98) OR Diesel(3.08 - 8.43)

Surrogate	Area	Amount	%Rec
o-Terphenyl	589468	43.7	97.1 M
Triacontane	577798	54.1	120.3 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	13490.4	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

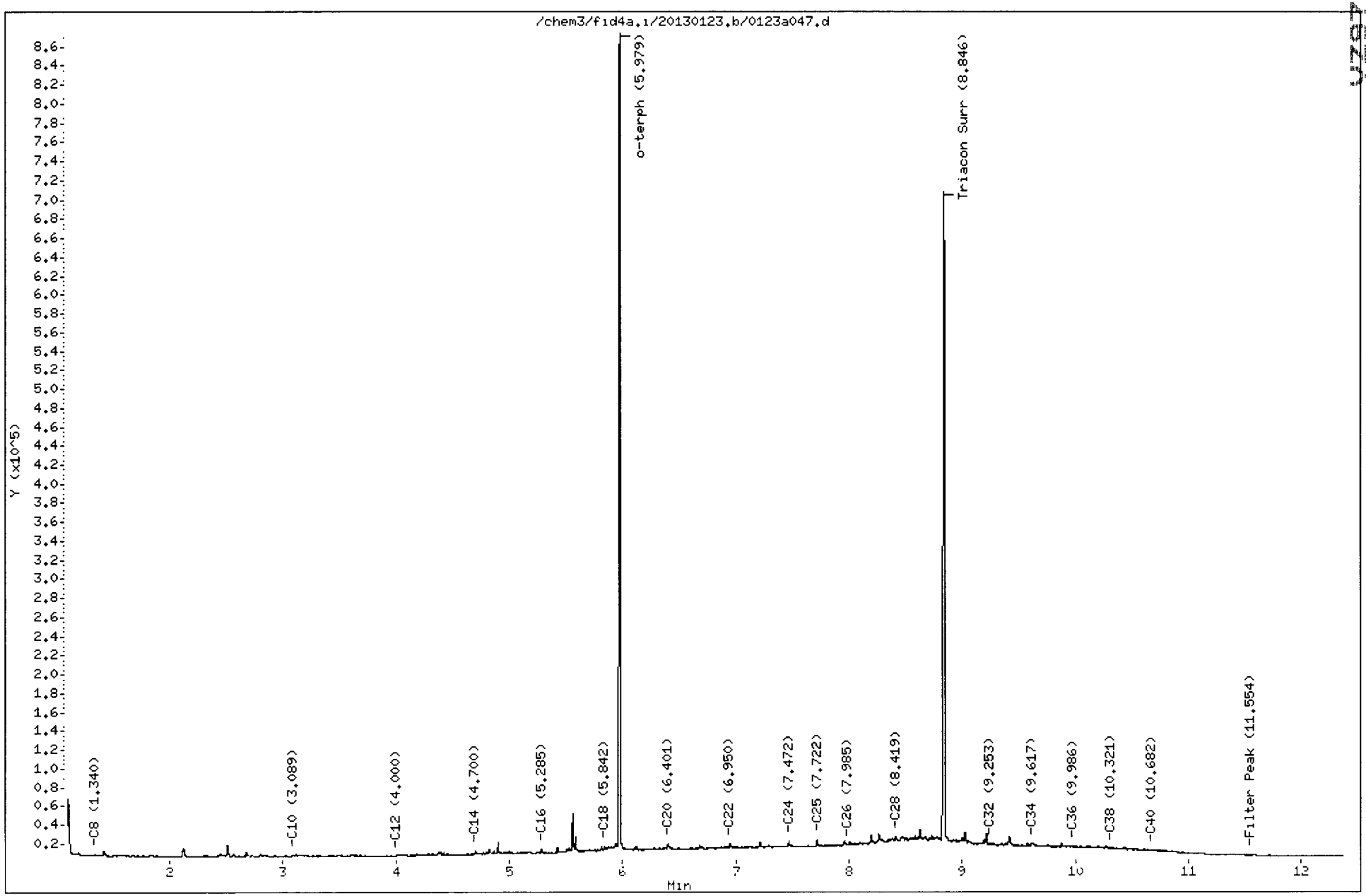
Data File: /chem3/f1d4a.1/20130123.b/0123a047.d
Date : 24-JAN-2013 02:14
Client ID: CSIA20130109-009S+6
Sample Info: VZ97I

Column phase: RTX-1

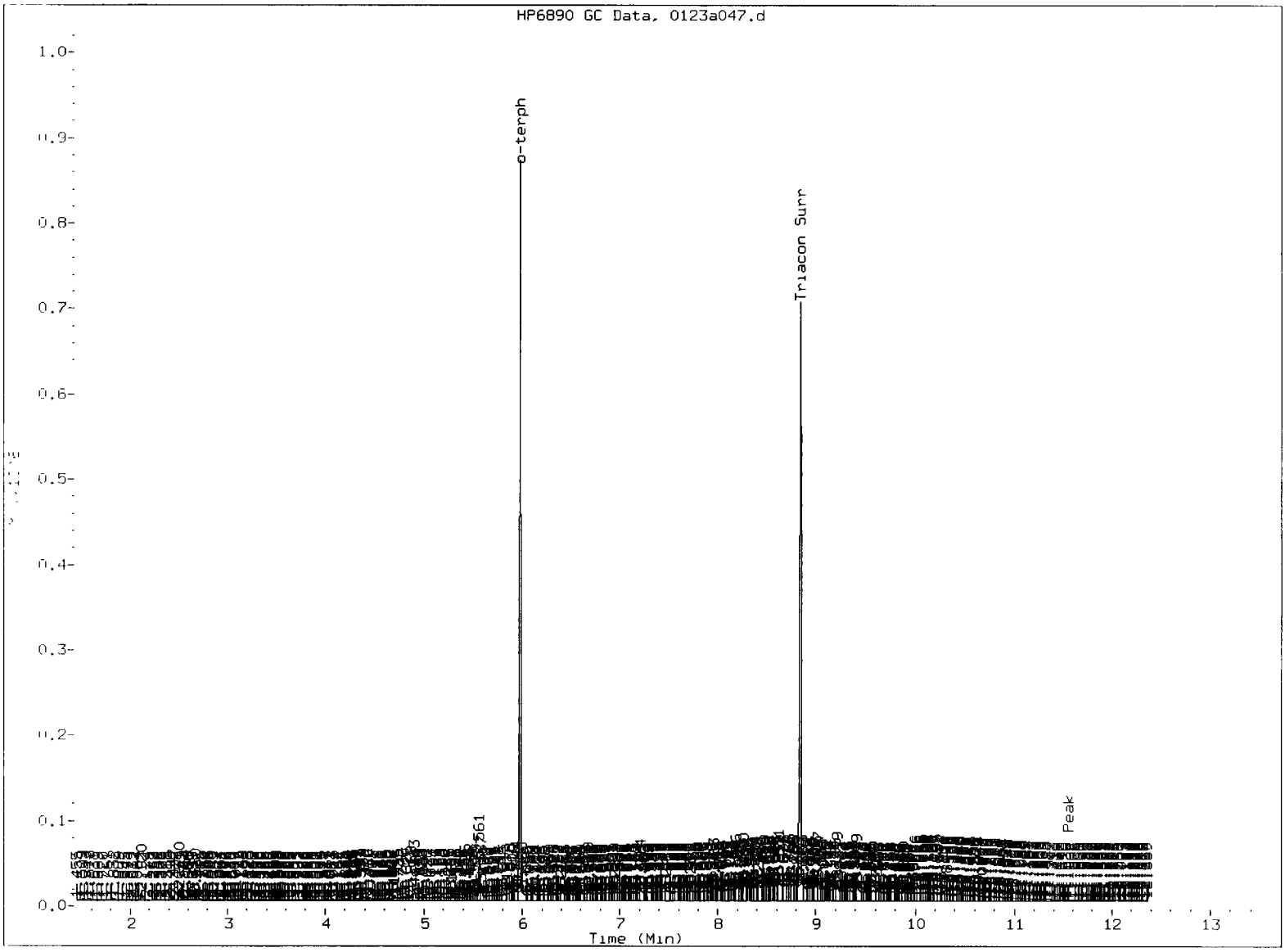
Instrument: f1d4a.1

Operator: JR/VTS
Column diameter: 0.25

VZ97I : 61178



FID:4A-2C/RTX-1 VZ97I FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VB Date: 1-25-13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130123.b/0123a048.d
Method: /chem3/fid4a.i/20130123.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: VZ97J
Client ID: CSIA20130109-010S+9
Injection: 24-JAN-2013 02:34
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.101	-0.011	31864	37706	WATPHG	(Tol-C12)	321073	28.95
C8	1.334	-0.023	3471	7132	WATPHD	(C12-C24)	15985771	1528.50
C10	3.086	0.005	1258	1161	WATPHM	(C24-C38)	5202488	622.91
C12	4.008	0.001	9956	4257	AK102	(C10-C25)	16502799	1359.83
C14	4.686	-0.006	79291	87241	AK103	(C25-C36)	4465125	485.23
C16	5.290	0.008	114190	36147				
C18	5.846	0.005	115713	145788				
C20	6.404	-0.001	77507	49914	JET-A	(C10-C18)	9582222	1769.08
C22	6.946	-0.008	55942	84024				
C24	7.473	-0.003	44381	45777	MSPIRIT	(Tol-C12)	321073	24.24
C25	7.722	-0.005	41569	58944				
C26	7.984	0.003	34004	13208				
C28	8.417	-0.011	47571	101537				
C32	9.238	-0.002	27210	19051				
C34	9.616	0.000	21883	33729				
Filter Peak	11.567	0.002	1563	1817	CREOSOT	(C12-C22)	14579823	7245.97 M
C36	9.980	0.000	21251	9889				
C38	10.331	-0.001	16920	14177				
C40	10.686	0.007	12005	14951				
o-terph	5.981	0.004	932742	625548				
Triacon Surr	8.845	-0.011	715766	645460	NAS DIES	(C10-C24)	16149278	1334.32

Range Times: NW Diesel(4.006 - 7.476) AK102(3.08 - 7.73) Jet A(3.08 - 5.84)
NW M.Oil(7.48 - 10.33) AK103(7.73 - 9.98) OR Diesel(3.08 - 8.43)

Surrogate	Area	Amount	%Rec
o-Terphenyl	625548	46.4	103.0 M
Triacontane	645460	60.5	134.4 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	13490.4	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.i/2v130123.b/0123a048.d
Date : 24-JAN-2013 02:34
Client ID: CSIA20130109-010S+9
Sample Info: VZ97J

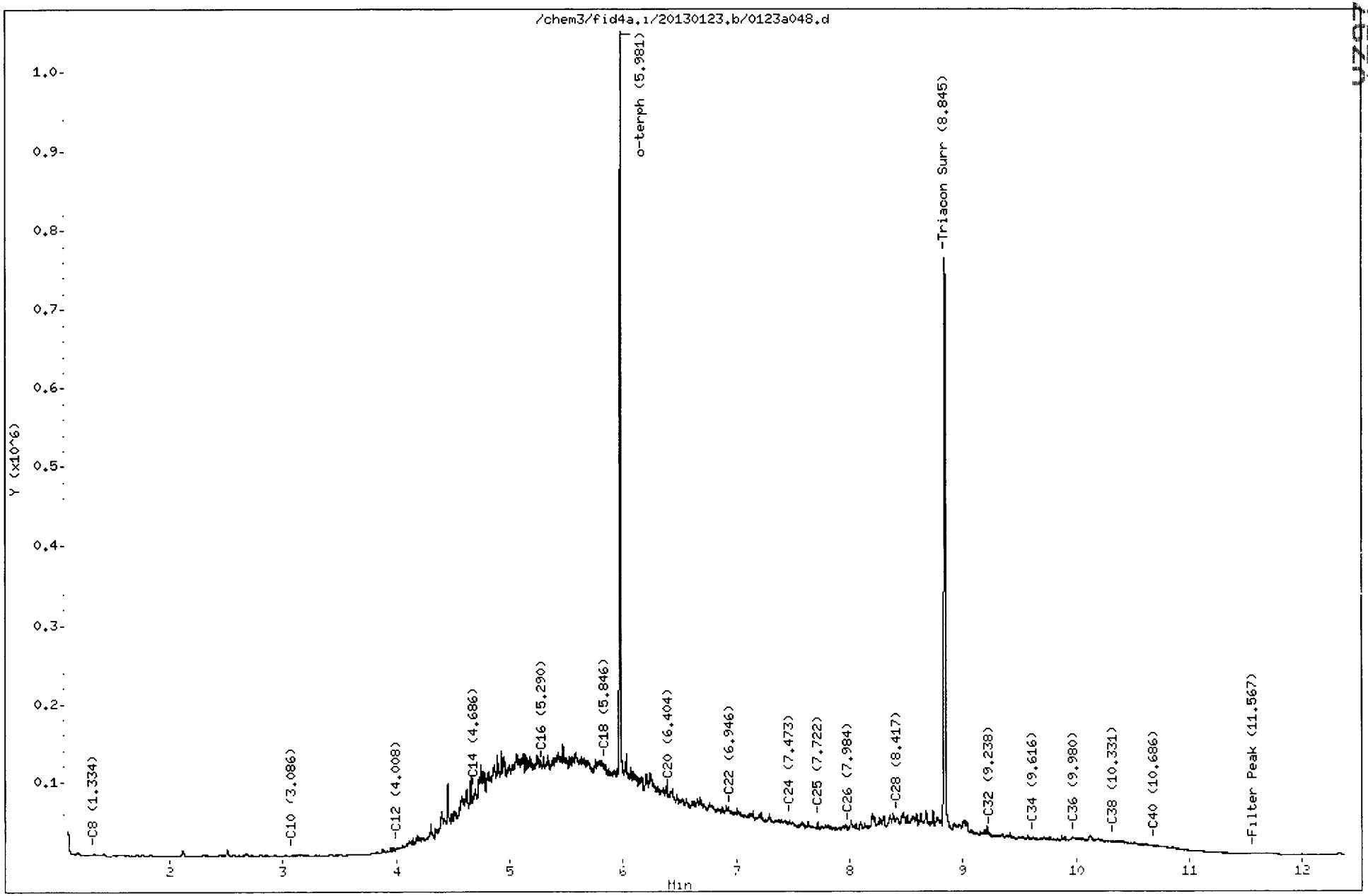
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS
Column diameter: 0.25

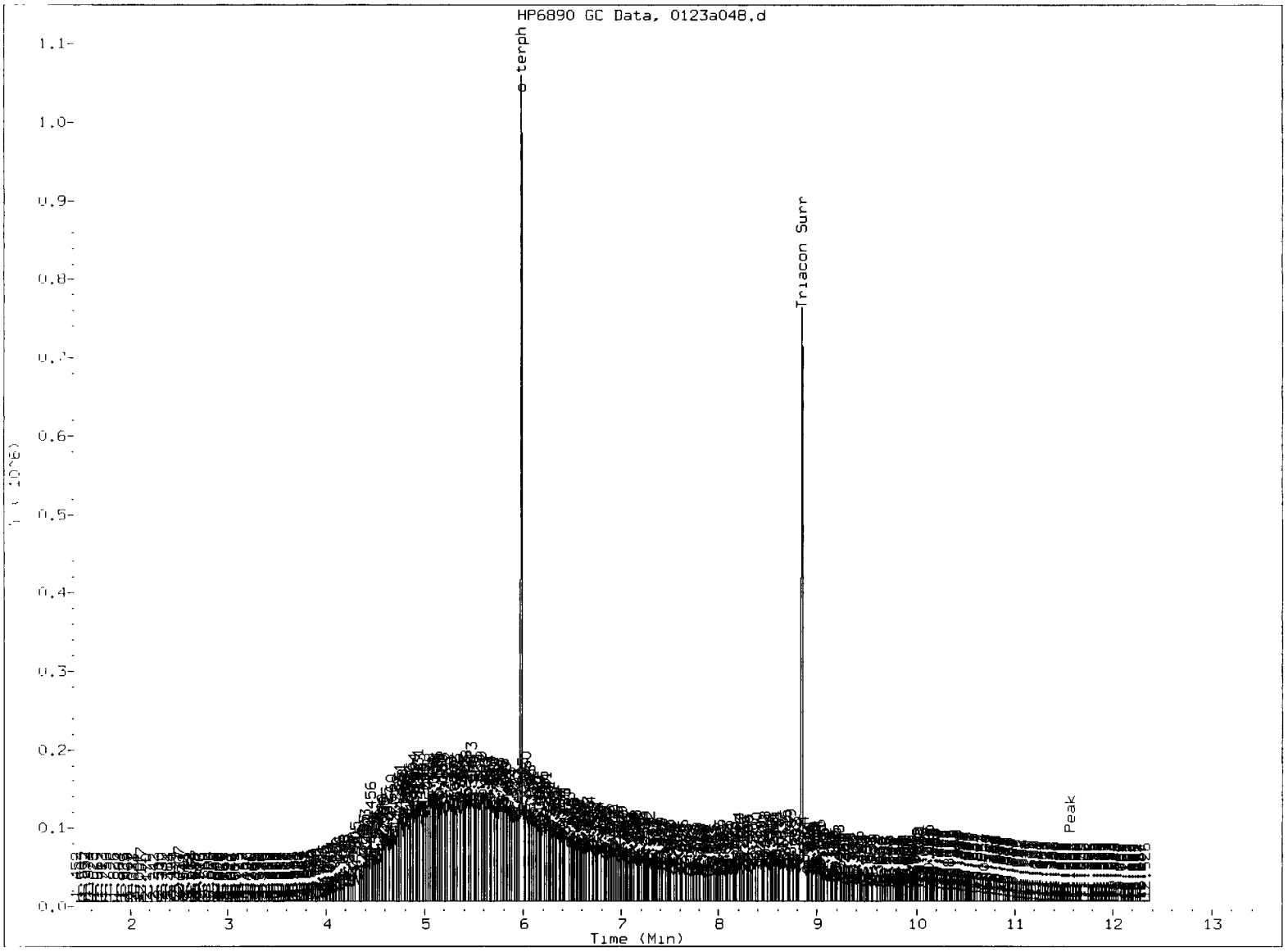
VD 1.25.13

VZ97 : 01181



FID:4A-2C/RTX-1 VZ97J

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VN Date: 12-21-17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130123.b/0123a049.d
Method: /chem3/fid4a.i/20130123.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: VZ97JMS
Client ID: CSIA20130109-01 MS
Injection: 24-JAN-2013 02:54

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.107	-0.006	8168	11863	WATPHG	(Tol-C12)	3138534	282.99
C8	1.339	-0.018	8887	12283	WATPHD	(C12-C24)	29419347	2812.97 E
C10	3.083	0.002	90654	63836	WATPHM	(C24-C38)	6480978	775.98
C12	4.011	0.004	146282	146724	AK102	(C10-C25)	31996099	2636.47
C14	4.698	0.006	372135	421550	AK103	(C25-C36)	5611834	609.84
C16	5.289	0.007	618226	743504				
C18	5.850	0.008	492261	608484				
C20	6.409	0.004	363069	457710	JET-A	(C10-C18)	20696537	3821.02
C22	6.954	0.000	210509	273687				
C24	7.473	-0.004	88970	125458	MSPIRIT	(Tol-C12)	3138534	236.95
C25	7.723	-0.004	64070	85473				
C26	7.984	0.003	42665	49643				
C28	8.435	0.007	52332	29682				
C32	9.240	0.000	32898	46015				
C34	9.616	0.000	26598	15700				
Filter Peak	11.559	-0.005	1399	1126	CREOSOT	(C12-C22)	27367636	13601.33 M
C36	9.978	-0.002	26015	22081				
C38	10.334	0.002	19794	25300				
C40	10.685	0.007	13332	9971				
o-terph	5.984	0.008	875033	655663				
Triacon Surr	8.849	-0.007	687350	648876	NAS DIES	(C10-C24)	31571065	2608.53

Range Times: NW Diesel(4.006 - 7.476) AK102(3.08 - 7.73) Jet A(3.08 - 5.84)
NW M.Oil(7.48 - 10.33) AK103(7.73 - 9.98) OR Diesel(3.08 - 8.43)

Surrogate	Area	Amount	%Rec
o-Terphenyl	655663	48.6	108.0 M
Triacontane	648876	60.8	135.1 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	13490.4	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.i/20130123.b/0123a049.d
Date : 24-JAN-2013 02:54
Client ID: CSIA20130109-01 MS
Sample Info: VZ97JMS

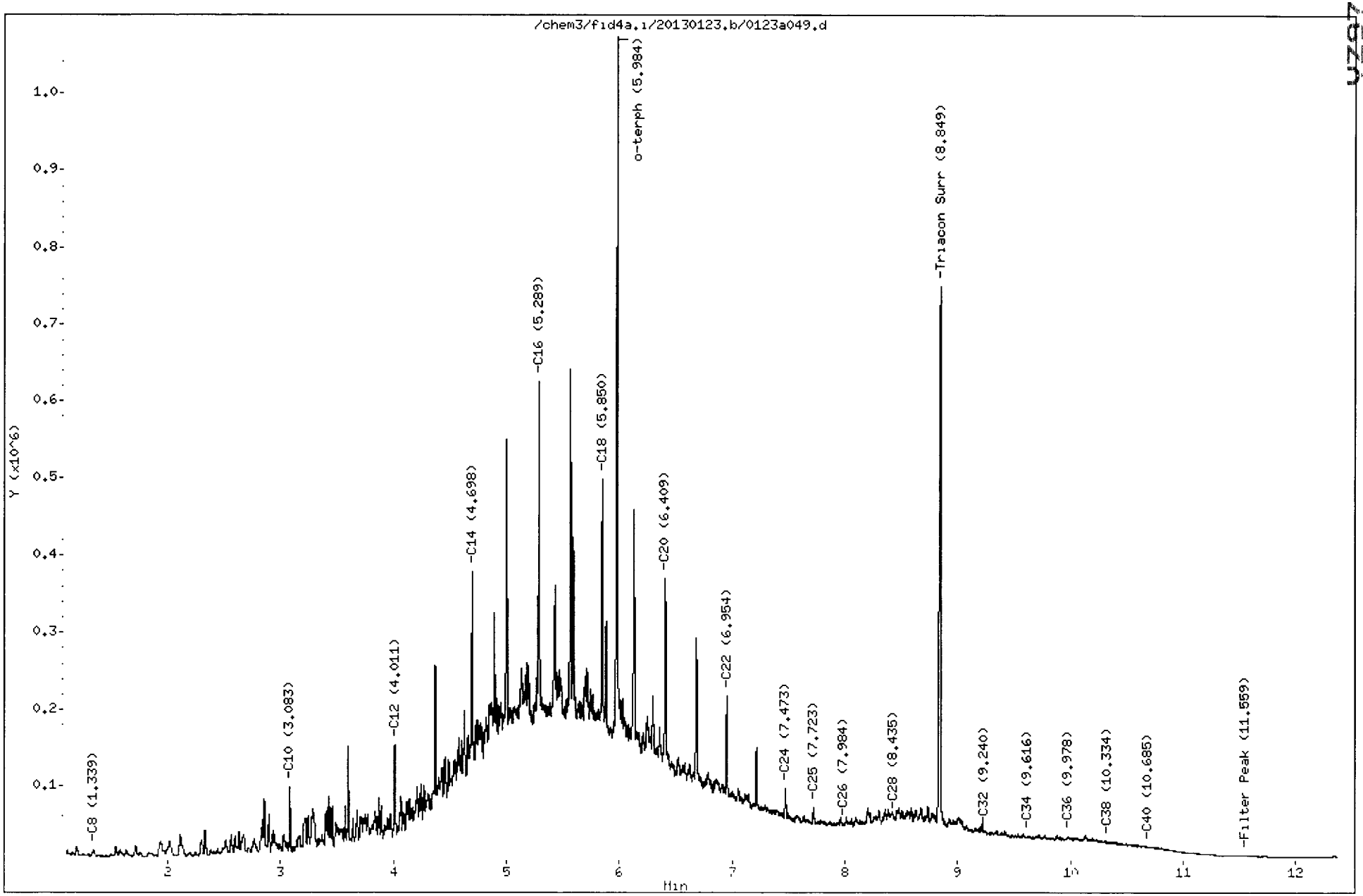
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS
Column diameter: 0.25

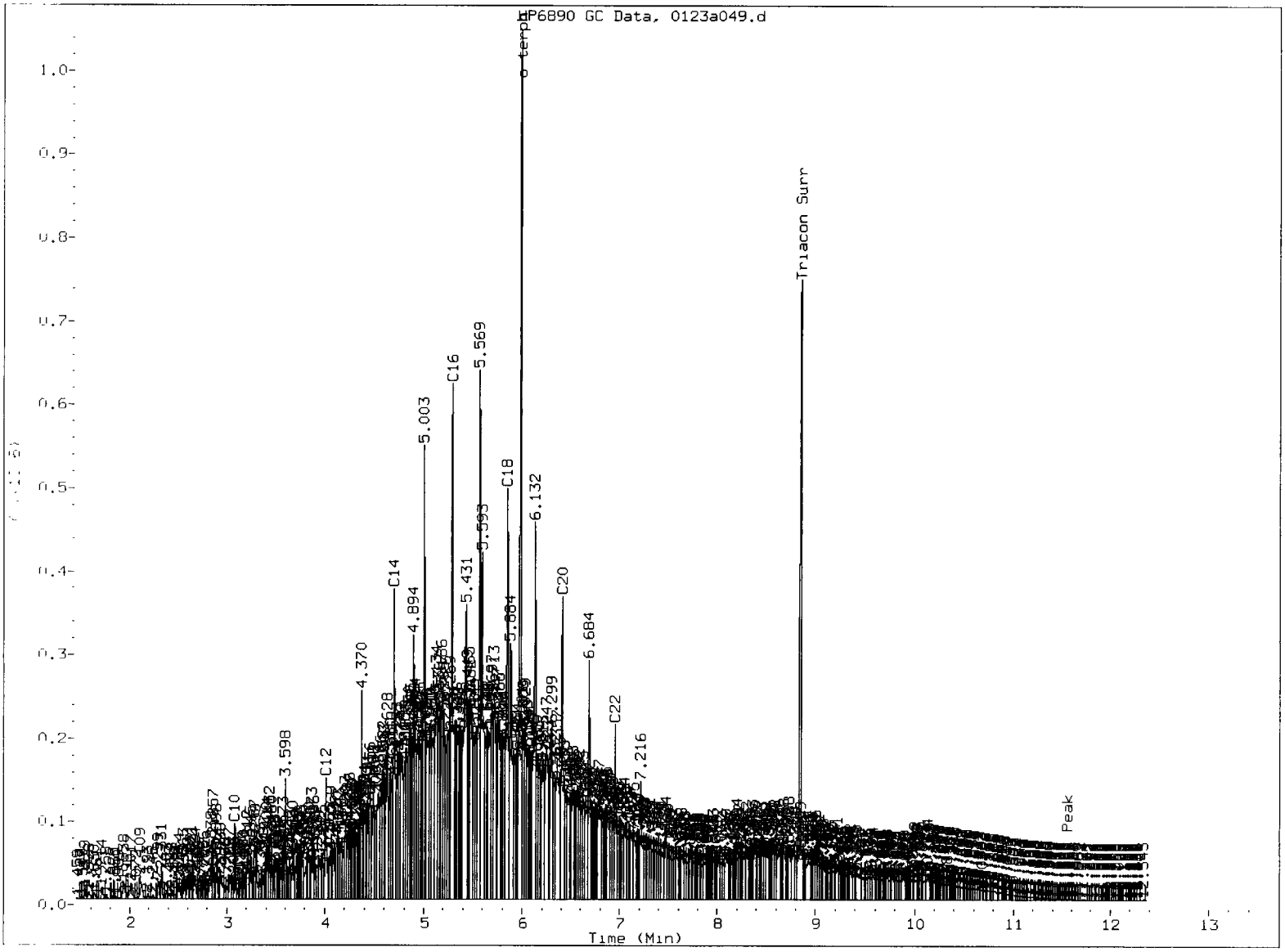
VT
1.25:1

VZ97 · 21494



FID:4A-2C/RTX-1 VZ97JMS

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: LM Date: 1-25-13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130123.b/0123a050.d
Method: /chem3/fid4a.i/20130123.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: VZ97JMSD
Client ID: CSIA20130109-01 MSD
Injection: 24-JAN-2013 03:13

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc	
Toluene	1.102	-0.010	31347	32648	WATPHG	(Tol-C12)	3329674	300.23	
C8	1.336	-0.021	7776	12346	WATPHD	(C12-C24)	30892024	2953.79	E
C10	3.080	0.000	89588	65727	WATPHM	(C24-C38)	5752723	688.79	
C12	4.009	0.003	147970	151537	AK102	(C10-C25)	33594451	2768.18	
C14	4.698	0.006	391476	318246	AK103	(C25-C36)	4944188	537.29	
C16	5.288	0.007	633112	715984					
C18	5.849	0.008	522931	624814					
C20	6.409	0.004	377350	472384	JET-A	(C10-C18)	22025895	4066.45	
C22	6.953	-0.001	210312	281324					
C24	7.473	-0.003	86314	121473	MSPIRIT	(Tol-C12)	3329674	251.38	
C25	7.721	-0.006	59913	95817					
C26	7.990	0.009	39724	29491					
C28	8.419	-0.008	51247	99688					
C32	9.244	0.005	27819	33418					
C34	9.620	0.004	23636	42020					
Filter Peak	11.564	-0.001	1302	1627	CREOSOT.	(C12-C22)	28973812	14399.58	M
C36	9.970	-0.009	25354	45654					
C38	10.339	0.008	17848	15339					
C40	10.671	-0.007	12339	16423					
o-terph	5.982	0.006	872232	672182					
Triacon Surr	8.846	-0.010	759196	667978	NAS DIES	(C10-C24)	33172965	2740.89	

Range Times: NW Diesel(4.006 - 7.476) AK102(3.08 - 7.73) Jet A(3.08 - 5.84)
NW M.Oil(7.48 - 10.33) AK103(7.73 - 9.98) OR Diesel(3.08 - 8.43)

Surrogate	Area	Amount	%Rec
o-Terphenyl	672182	49.8	110.7 M
Triacontane	667978	62.6	139.1 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	13490.4	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.i/20130123.b/0123a050.d
Date : 24-JAN-2013 03:13
Client ID: CSIA20130109-01 MSD
Sample Info: VZ97JMSD

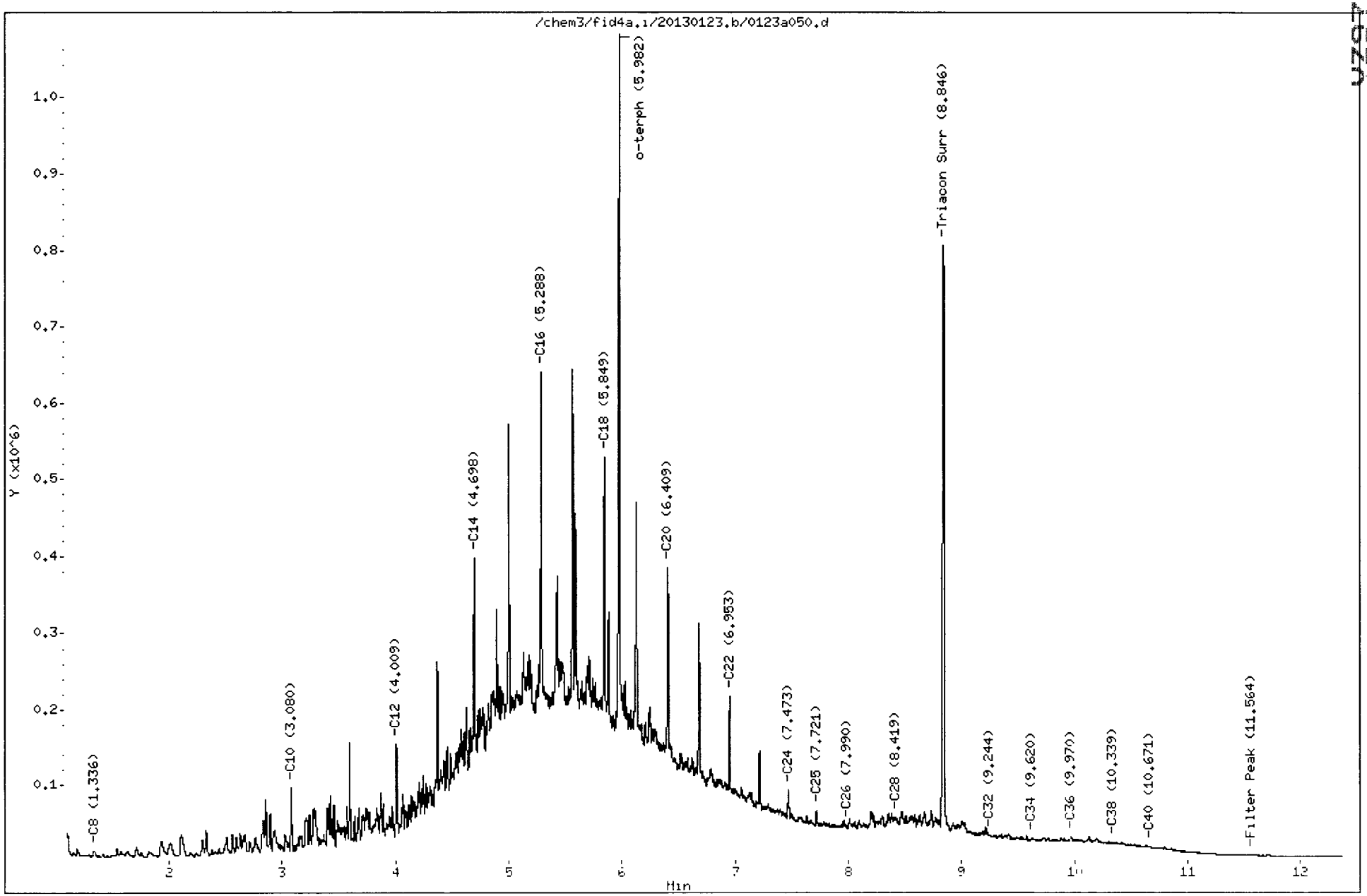
Column phase: RTX-1

Instrument: fid4a.i

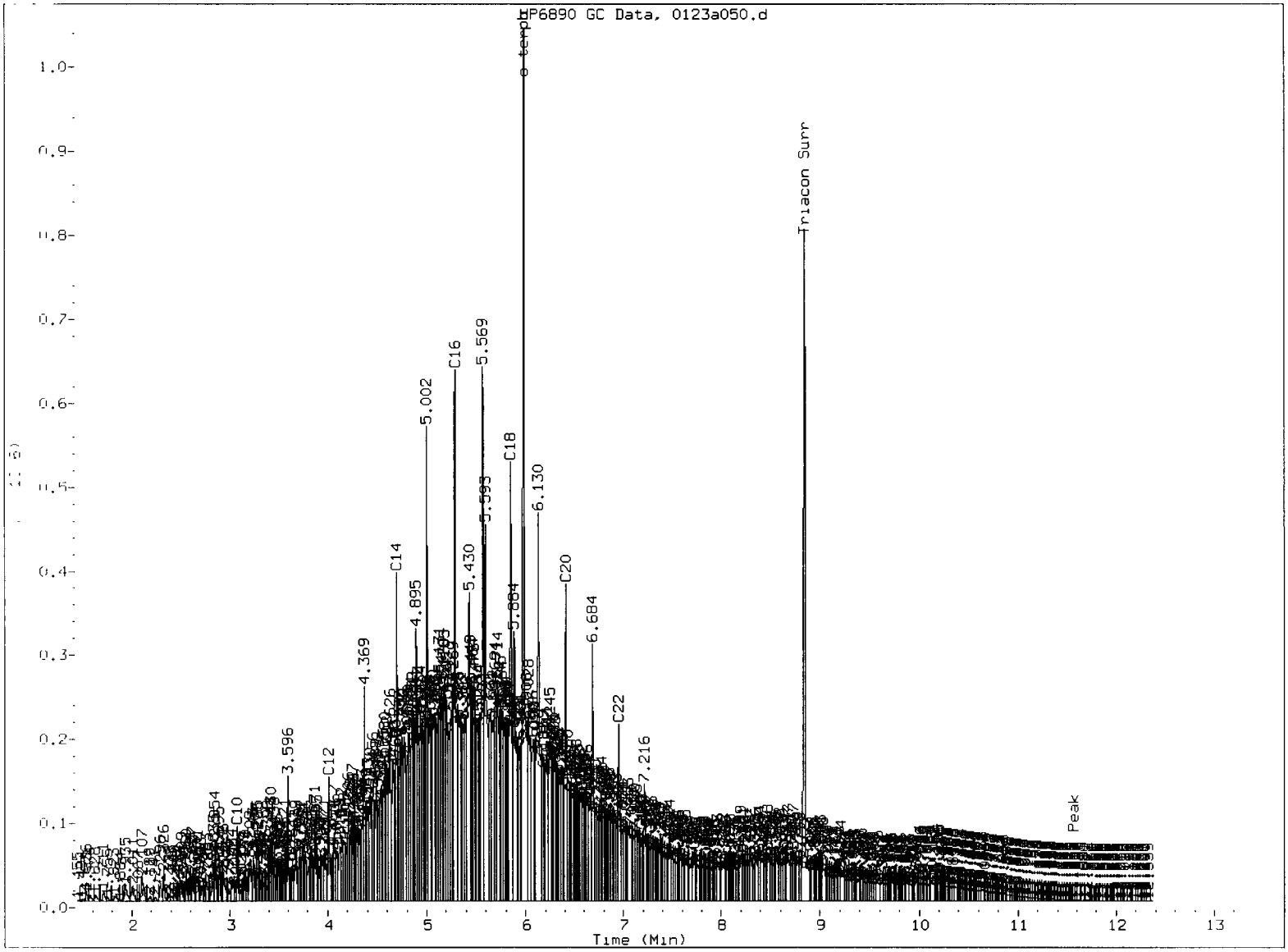
Operator: JR/VTS
Column diameter: 0.25

VD 1.25,1)

VZ97JMSD 01 Ug7



FID:4A-2C/RTX-1 VZ97JMSD FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VJ Date: 12-13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130123.b/0123a052.d
Method: /chem3/fid4a.i/20130123.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: DIESEL#5
Client ID:
Injection: 24-JAN-2013 03:53

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.117	0.004	4828	9737	WATPHG	(Tol-C12)	867778	78.25
C8	1.350	-0.007	3266	6036	WATPHD	(C12-C24)	2788616	266.64
C10	3.082	0.001	13821	12899	WATPHM	(C24-C38)	81171	9.72
C12	4.007	0.001	16849	20953	AK102	(C10-C25)	3261802	268.77
C14	4.691	0.000	55158	38549	AK103	(C25-C36)	56466	6.14
C16	5.279	-0.002	92762	69979				
C18	5.838	-0.003	74726	69518				
C20	6.398	-0.007	47346	50533	JET-A	(C10-C18)	2393405	441.87
C22	6.946	-0.008	23518	22985				
C24	7.468	-0.008	5903	7581	MSPIRIT	(Tol-C12)	867778	65.51
C25	7.719	-0.007	2228	3385				
C26	7.962	-0.019	924	1540				
C28	8.433	0.006	582	787				
C32	9.238	-0.001	5615	4588				
C34	9.617	0.001	91	103				
Filter Peak	11.567	0.002	1096	848	CREOSOT	(C12-C22)	2697977	1340.86 M
C36	9.979	0.000	6654	6690				
C38	10.335	0.004	494	294				
C40	10.658	-0.020	4386	8753				
o-terph	5.975	-0.001	867193	594790				
Triacon Surr	8.831	-0.025	2598	2631	NAS DIES	(C10-C24)	3251711	268.67

Range Times: NW Diesel(4.006 - 7.476) AK102(3.08 - 7.73) Jet A(3.08 - 5.84)
NW M.Oil(7.48 - 10.33) AK103(7.73 - 9.98) OR Diesel(3.08 - 8.43)

Surrogate	Area	Amount	%Rec
o-Terphenyl	594790	44.1	98.0 M
Triacontane	2631	0.2	0.5

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	13490.4	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.i/20130123.b/0123a052.d

Date : 24-JAN-2013 03:53

Client ID:

Sample Info: DIESEL#5

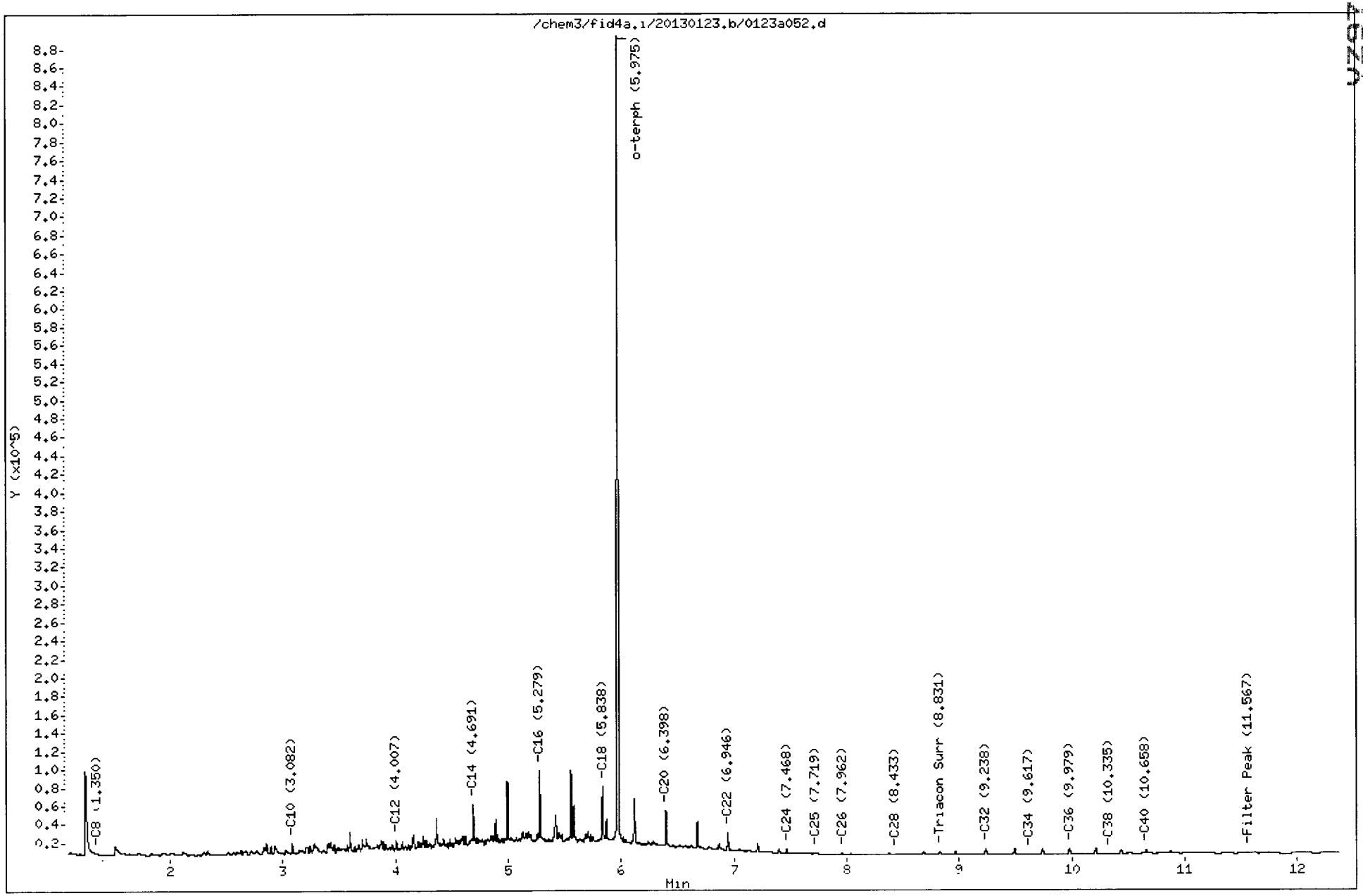
Column phase: RTX-1

Instrument: fid4a.i

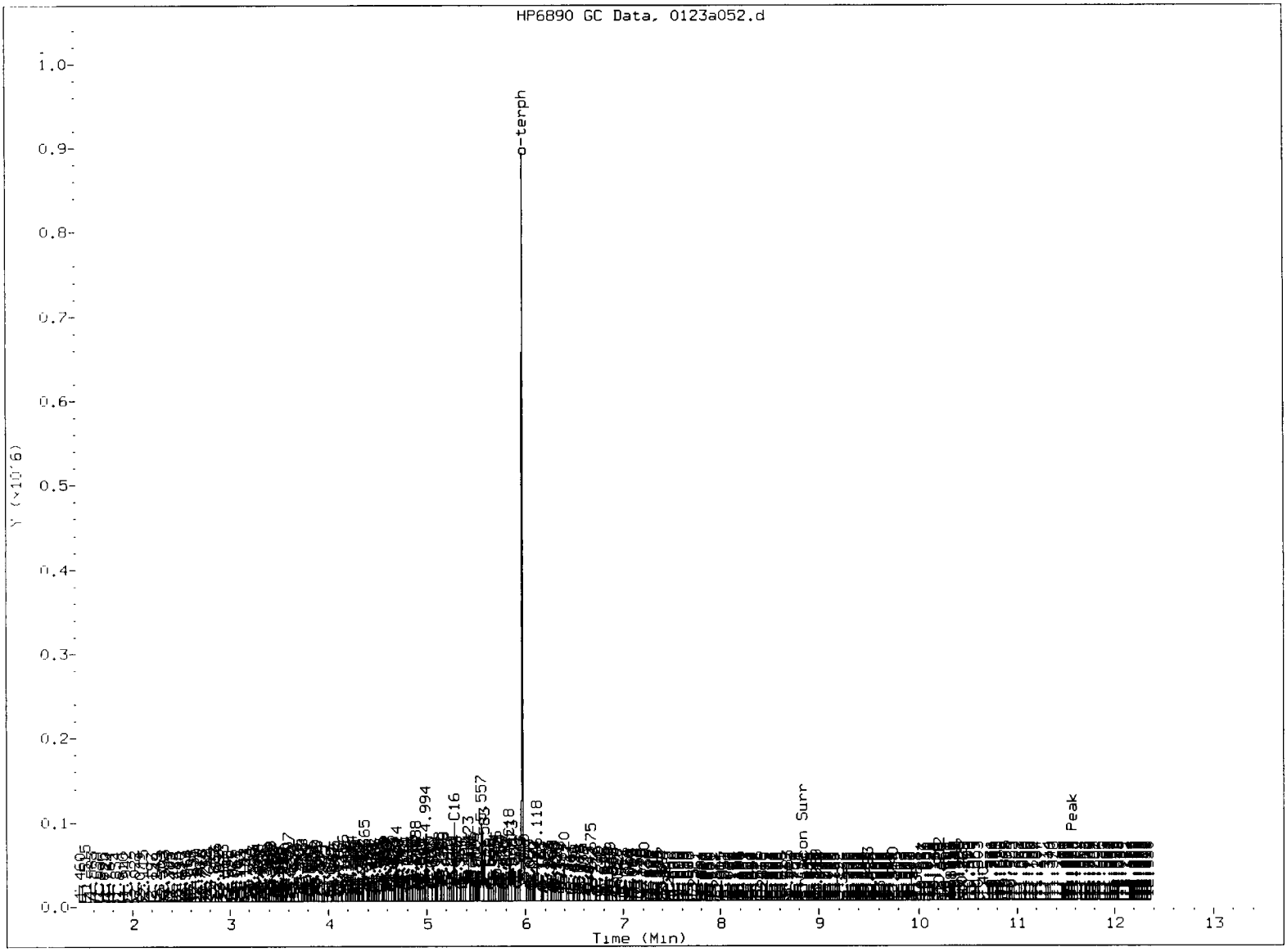
Operator: JR/VTS

Column diameter: 0.25

VT 1.25.13



FID:4A-2C/RTX-1 DIESEL#5 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: DJ Date: 12-5-17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130123.b/0123a053.d
Method: /chem3/fid4a.i/20130123.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: MOIL#5
Client ID:
Injection: 24-JAN-2013 04:13
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.106	-0.007	6536	24309	WATPHG	(Tol-C12)	58088	5.24
C8	1.350	-0.008	1162	1196	WATPHD	(C12-C24)	409422	39.15
C10	3.086	0.006	145	299	WATPHM	(C24-C38)	4626535	553.95
C12	4.007	0.000	26	17	AK102	(C10-C25)	581203	47.89
C14	4.701	0.009	91	66	AK103	(C25-C36)	3943186	428.51
C16	5.292	0.010	147	217				
C18	5.844	0.002	249	381				
C20	6.400	-0.005	907	633	JET-A	(C10-C18)	17626	3.25
C22	6.947	-0.007	3811	4129				
C24	7.472	-0.004	14708	9410	MSPIRIT	(Tol-C12)	58088	4.39
C25	7.728	0.001	20144	26191				
C26	7.982	0.001	22496	19097				
C28	8.431	0.003	27990	14210				
C32	9.227	-0.012	39721	41014				
C34	9.620	0.004	33573	20874				
Filter Peak	11.565	0.000	1709	1380	CREOSOT	(C12-C22)	100551	49.97 M
C36	9.987	0.008	30484	26785				
C38	10.340	0.008	24382	18031				
C40	10.667	-0.011	16621	27009				
o-terph	5.972	-0.005	3174	2879				
Triacon Surr	8.843	-0.013	696734	592173	NAS DIES	(C10-C24)	413850	34.19

Range Times: NW Diesel(4.006 - 7.476) AK102(3.08 - 7.73) Jet A(3.08 - 5.84)
NW M.Oil(7.48 - 10.33) AK103(7.73 - 9.98) OR Diesel(3.08 - 8.43)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2879	0.2	0.5
Triacontane	592173	55.5	123.3 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	13490.4	05-JAN-2013
Triacon Surr	10674.0	05-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	10458.5	05-JAN-2013
Motor Oil	8351.9	05-JAN-2013
AK102	12135.9	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.i/20130123.b/0123a053.d

Date : 24-JAN-2013 04:13

Client ID:

Sample Info: MOIL#5

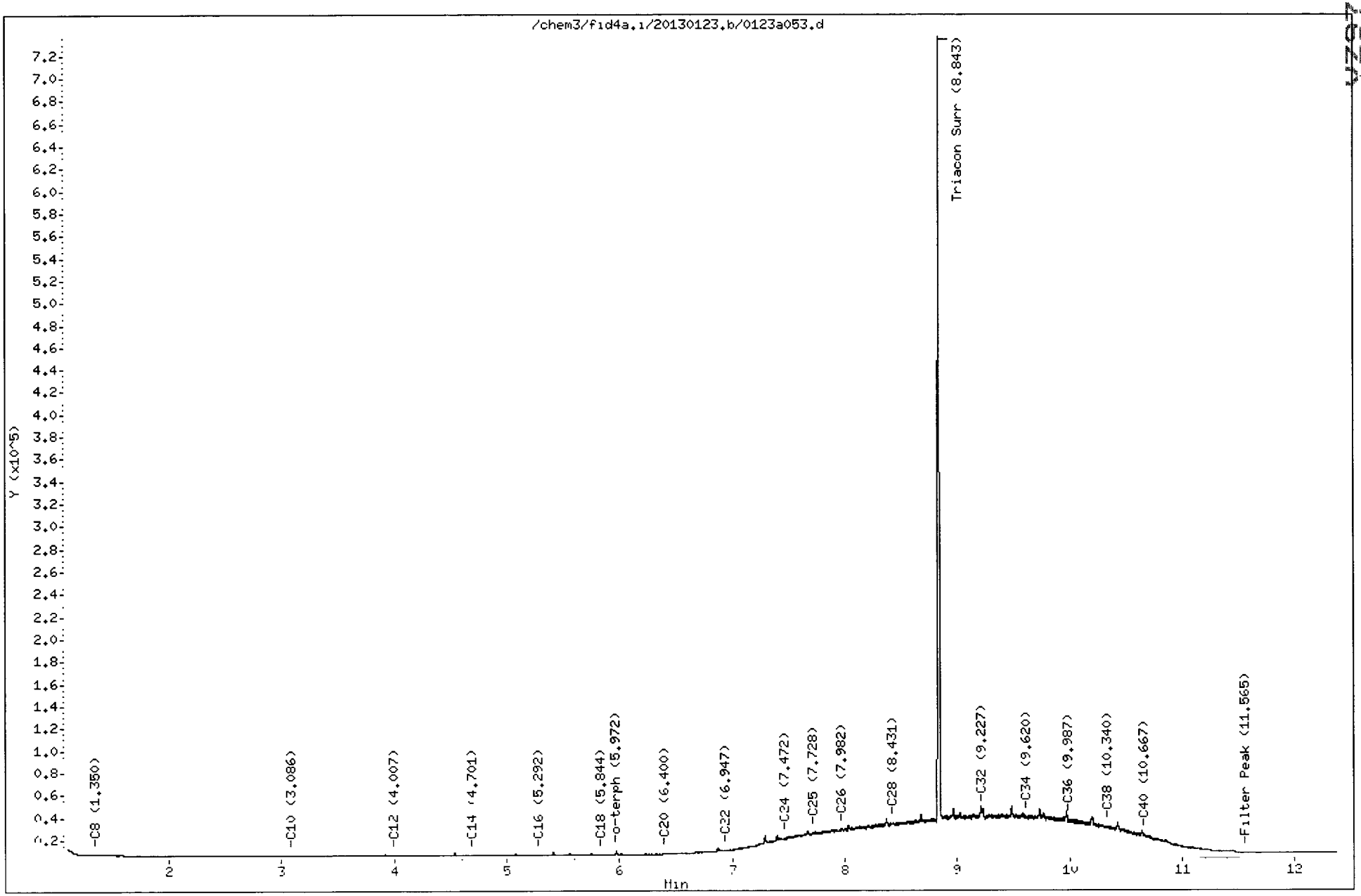
Column phase: RTX-1

Instrument: fid4a.i

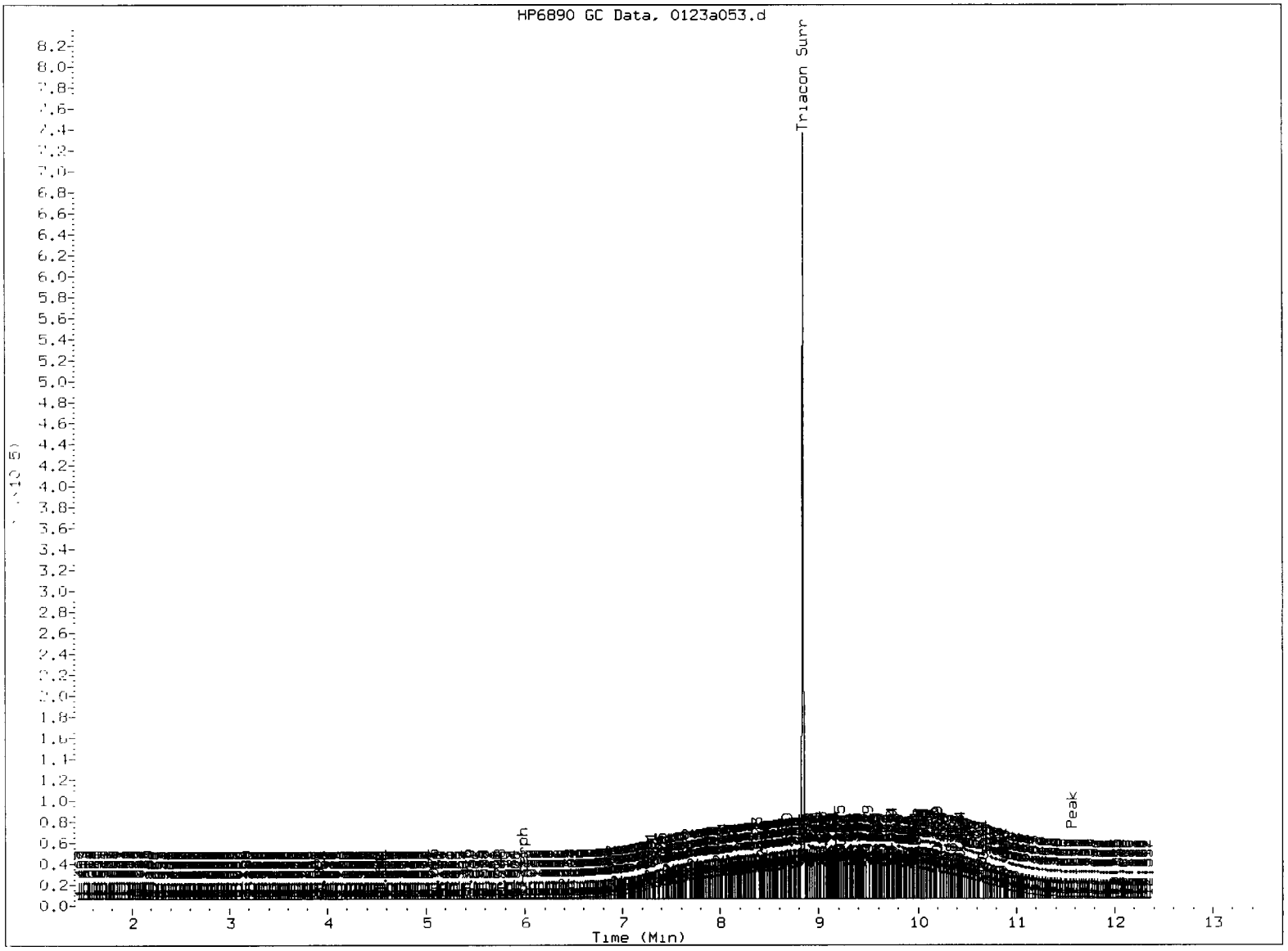
Operator: JR/VTS

Column diameter: 0.25

VD 1.25.13



FID:4A-2C/RTX-1 MOIL#5 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: _____ Date: 1-25-17

Analytical Resources Inc.: Organics Instrument Log

FID-4A Serial No.: US00003247

Date: 1·24·13 Analysis: TPHd Analyst: JR/VD

Column 1 Serial No.: 977444 Column Type: RTX-1

Column 2 Serial No.: — Column Type: —

GC Method: TPHd ICal Date: 1·24·13 Injection Volume: 1 uL

IS	Ical/Ccal	ICV
	2043 -3,4	2043-1
	2021-3	2043-2
	2041-4	

GC LOG SUMMARY FOR DATABATCH - /chem3/fid4a.i/20130124.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	24-JAN-2013 15:32	0124a001.d	1	RINSE	
2	24-JAN-2013 15:52	0124a002.d	1	RINSE	
3	24-JAN-2013 16:21	0124a003.d	1	RT	
4	24-JAN-2013 16:43	0124a004.d	1	IB	
5	24-JAN-2013 17:03	0124a005.d	1	50PPMDIESEL	
6	24-JAN-2013 17:24	0124a006.d	1	100PPMDIESEL	
7	24-JAN-2013 17:44	0124a007.d	1	250PPMDIESEL	
8	24-JAN-2013 18:05	0124a008.d	1	500PPMDIESEL	
9	24-JAN-2013 18:25	0124a009.d	1	1000PPMDIESEL	
10	24-JAN-2013 18:45	0124a010.d	1	2500PPMDIESEL	
11	24-JAN-2013 19:05	0124a011.d	1	DIESELICV	
12	24-JAN-2013 19:25	0124a012.d	1	100PPMMOIL	
13	24-JAN-2013 19:45	0124a013.d	1	250PPMMOIL	
14	24-JAN-2013 20:05	0124a014.d	1	500PPMMOIL	
15	24-JAN-2013 20:25	0124a015.d	1	1000PPMMOIL	
16	24-JAN-2013 20:45	0124a016.d	1	2500PPMMOIL	
17	24-JAN-2013 21:05	0124a017.d	1	5000PPMMOIL	
18	24-JAN-2013 21:25	0124a018.d	1	MOILICV	
19	24-JAN-2013 21:45	0124a019.d	1	DIESEL#1	JBLM
20	24-JAN-2013 22:05	0124a020.d	1	MOIL#1	JBLM
21	24-JAN-2013 22:25	0124a021.d	1	WA85MBS1	WA85MBS1
22	24-JAN-2013 22:45	0124a022.d	1	WA85LCSS1	WA85LCSS1
23	24-JAN-2013 23:05	0124a023.d	1	WA85LCSDS1	WA85LCSDS1
24	24-JAN-2013 23:25	0124a024.d	1	WA85A	2492-B-03
25	24-JAN-2013 23:45	0124a025.d	1	WA85B	2492-S-01
26	25-JAN-2013 00:05	0124a026.d	1	WA85C	2492-E-02
27	25-JAN-2013 00:25	0124a027.d	1	WA85D	2492-SP-01
28	25-JAN-2013 00:45	0124a028.d	1	WA85E	2492-SP-02
29	25-JAN-2013 01:05	0124a029.d	1	WA85F	2492-SP-03
30	25-JAN-2013 01:25	0124a030.d	1	DIESEL#2	JBLM
31	25-JAN-2013 01:45	0124a031.d	1	MOIL#2	JBLM
32	25-JAN-2013 02:05	0124a032.d	5	VZ97K	
33	25-JAN-2013 02:25	0124a033.d	1	VZ97L	
34	25-JAN-2013 02:45	0124a034.d	1	VZ97M	
35	25-JAN-2013 03:05	0124a035.d	50	VZ97N	
36	25-JAN-2013 03:25	0124a036.d	50	VZ97O	
37	25-JAN-2013 03:45	0124a037.d	10	VZ97P	
38	25-JAN-2013 04:05	0124a038.d	10	VZ97Q	
39	25-JAN-2013 04:25	0124a039.d	1	VZ97R	
40	25-JAN-2013 04:45	0124a040.d	1	DIESEL#3	
41	25-JAN-2013 05:06	0124a041.d	1	MOIL#3	
42	25-JAN-2013 05:26	0124a042.d	1	WA25MBS1	WA25MBS1
43	25-JAN-2013 05:46	0124a043.d	1	WA25LCSS1	WA25LCSS1
44	25-JAN-2013 06:06	0124a044.d	1	WA25QLS	
45	25-JAN-2013 06:27	0124a045.d	1	WA25A	1A
46	25-JAN-2013 06:47	0124a046.d	1	WA25AMS	1A MS
47	25-JAN-2013 07:08	0124a047.d	1	WA25AMSD	1A MSD
48	25-JAN-2013 07:28	0124a048.d	1	WA25B	1B
49	25-JAN-2013 07:49	0124a049.d	1	WA25C	1C
50	25-JAN-2013 08:09	0124a050.d	1	WA25D	2A

Eve
Sta

VD
VZ972501495

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid4a.i/20130124.b

ARI Job No.: DIES Method: ftphfid4a.m Instrument: fid4a.i Date: 25-JAN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0125	0124a030.d	DIESEL#2		1	o-terph,
0145	0124a031.d	MOIL#2		1	Triacon Surr,
0205	0124a032.d	VZ97K	CSIA201301	5	o-terph, Triacon Surr,
0225	0124a033.d	VZ97L	CSIA201301	1	o-terph, Triacon Surr,
0245	0124a034.d	VZ97M	CSIA201301	1	o-terph, Triacon Surr,
0305	0124a035.d	VZ97N	CSIA201301	50	NO MANUAL INTEGRATION
0325	0124a036.d	VZ97O	CSIA201301	50	NO MANUAL INTEGRATION
0345	0124a037.d	VZ97P	CSIA201301	10	o-terph, Triacon Surr,
0405	0124a038.d	VZ97Q	CSIA201301	10	o-terph, Triacon Surr,
0425	0124a039.d	VZ97R	CSIA201301	1	o-terph, Triacon Surr,
0445	0124a040.d	DIESEL#3		1	o-terph,
0506	0124a041.d	MOIL#3		1	Triacon Surr,

VZ97P 01/25/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130124.b/0124a003.d
Method: /chem3/fid4a.i/20130124.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: RT
Client ID:
Injection: 24-JAN-2013 16:21

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.158	0.000	380813	442368	WATPHG	(Tol-C12)	1907992	172.04
C8	1.395	0.000	243504	434101	WATPHD	(C12-C24)	2463935	149.43
C10	3.071	0.000	572114	397060	WATPHM	(C24-C38)	3238252	286.42
C12	3.993	0.000	675319	388146	AK102	(C10-C25)	3313308	167.38
C14	4.680	0.000	684448	391333	AK103	(C25-C36)	3095759	336.42
C16	5.270	0.000	704239	385640				
C18	5.829	0.000	629881	390045				
C20	6.392	0.000	550189	375913	JET-A	(C10-C18)	2077216	383.50
C22	6.941	0.000	537132	387841				
C24	7.466	0.000	502971	392212	MSPIRIT	(Tol-C12)	1907992	144.05
C25	7.715	0.000	488611	383334				
C26	7.973	0.000	1157498	1172441				
C28	8.419	0.000	502883	411592				
C32	9.242	0.000	489418	412553				
C34	9.624	0.000	421330	370680				
Filter Peak	11.560	0.000	882	2877	CREOSOT	(C12-C22)	2056826	1022.21 M
C36	9.994	0.000	293837	263846				
C38	10.351	0.000	146411	126847				
C40	10.702	0.000	46097	43704				
o-terph	5.963	0.000	1122869	876755				
Triacon Surr	8.855	0.000	1020005	1088085	NAS DIES	(C10-C24)	3308180	273.34

Range Times: NW Diesel(3.993 - 7.466) AK102(3.07 - 7.71) Jet A(3.07 - 5.83)
NW M.Oil(7.47 - 10.35) AK103(7.71 - 9.99) OR Diesel(3.07 - 8.42)

Surrogate	Area	Amount	%Rec
o-Terphenyl	876755	43.3	96.1
Triacontane	1088085	58.0	128.9

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	18755.2	24-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	16488.8	05-JAN-2013
Motor Oil	11305.9	05-JAN-2013
AK102	19795.4	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

1.26.13

Data File: /chem3/fid4a.i/20130124.b/0124a003.d

Date : 24-JAN-2013 16:21

Client ID:

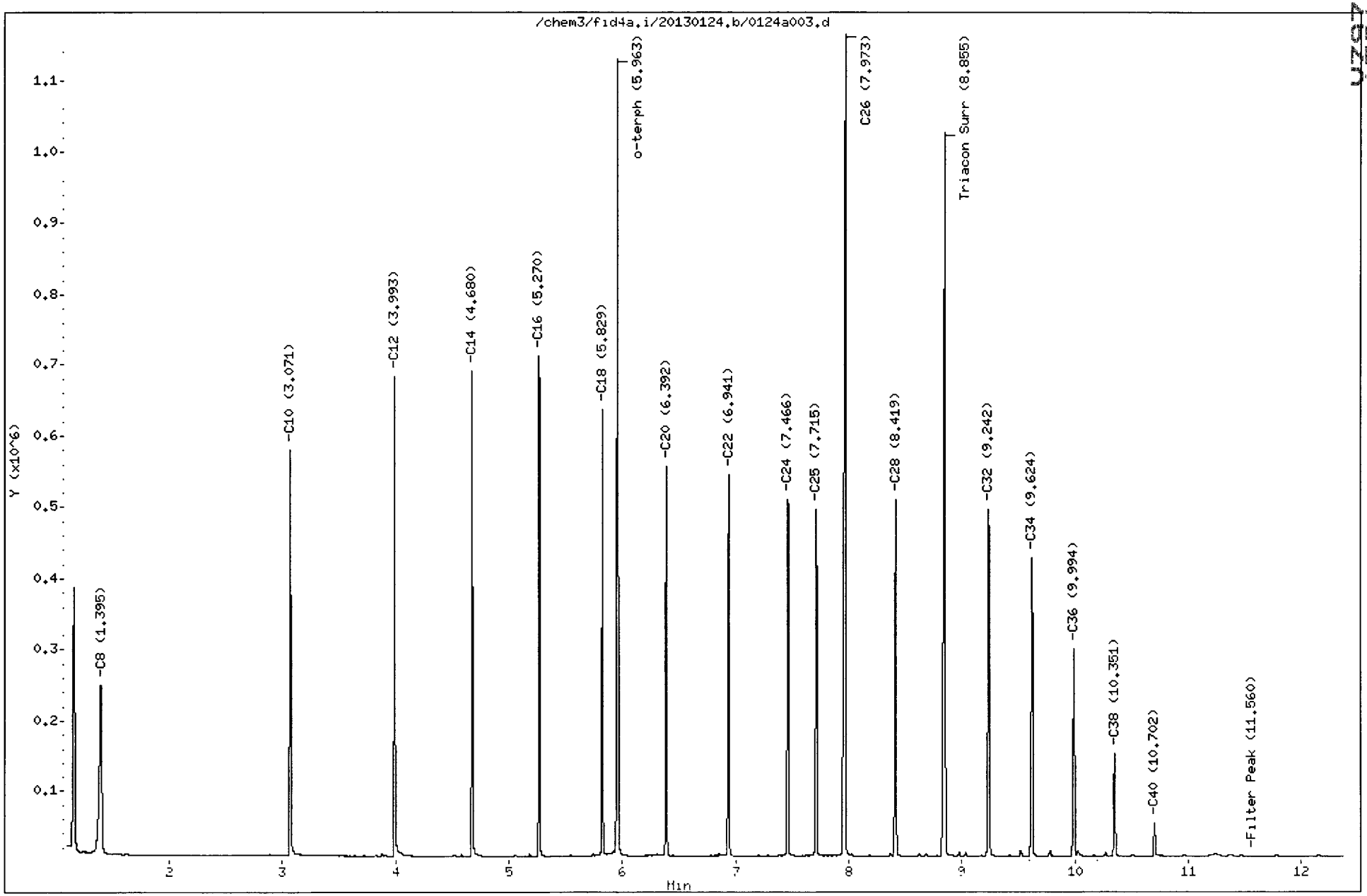
Sample Info: RT

Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130124.b/0124a004.d
Method: /chem3/fid4a.i/20130124.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: IB
Client ID:
Injection: 24-JAN-2013 16:43

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.153	-0.005	13484	65718	WATPHG	(Tol-C12)	230720	20.80
C8	----				WATPHD	(C12-C24)	88352	5.36
C10	3.074	0.003	1134	1350	WATPHM	(C24-C38)	91669	8.11
C12	3.993	0.000	823	1041	AK102	(C10-C25)	149362	7.55
C14	4.679	0.000	905	273	AK103	(C25-C36)	77868	8.46
C16	5.261	-0.008	590	806				
C18	5.824	-0.005	488	502				
C20	6.393	0.001	318	442	JET-A	(C10-C18)	123445	22.79
C22	6.946	0.005	179	78				
C24	7.461	-0.005	133	169	MSPIRIT	(Tol-C12)	230720	17.42
C25	7.712	-0.003	111	166				
C26	7.985	0.012	71	65				
C28	8.423	0.004	509	466				
C32	9.234	-0.008	8575	7754				
C34	9.636	0.011	259	458				
Filter Peak	11.556	-0.004	647	276	CREOSOT	(C12-C22)	84042	41.77 M
C36	10.002	0.008	661	617				
C38	10.364	0.012	523	1191				
C40	10.701	-0.001	439	416				
o-terph	5.961	-0.003	1147471	898251				
Triacon Surr	8.849	-0.006	841586	855707	NAS DIES	(C10-C24)	147627	12.20

Range Times: NW Diesel(3.993 - 7.466) AK102(3.07 - 7.71) Jet A(3.07 - 5.83)
NW M.Oil(7.47 - 10.35) AK103(7.71 - 9.99) OR Diesel(3.07 - 8.42)

Surrogate	Area	Amount	%Rec
o-Terphenyl	898251	44.3	98.5
Triacontane	855707	45.6	101.4

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	18755.2	24-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	16488.8	05-JAN-2013
Motor Oil	11305.9	05-JAN-2013
AK102	19795.4	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

9) 1-28-13

Data File: /chem3/fid4a.i/20130124.b/0124a004.d

Date : 24-JAN-2013 16:43

Client ID:

Sample Info: IB

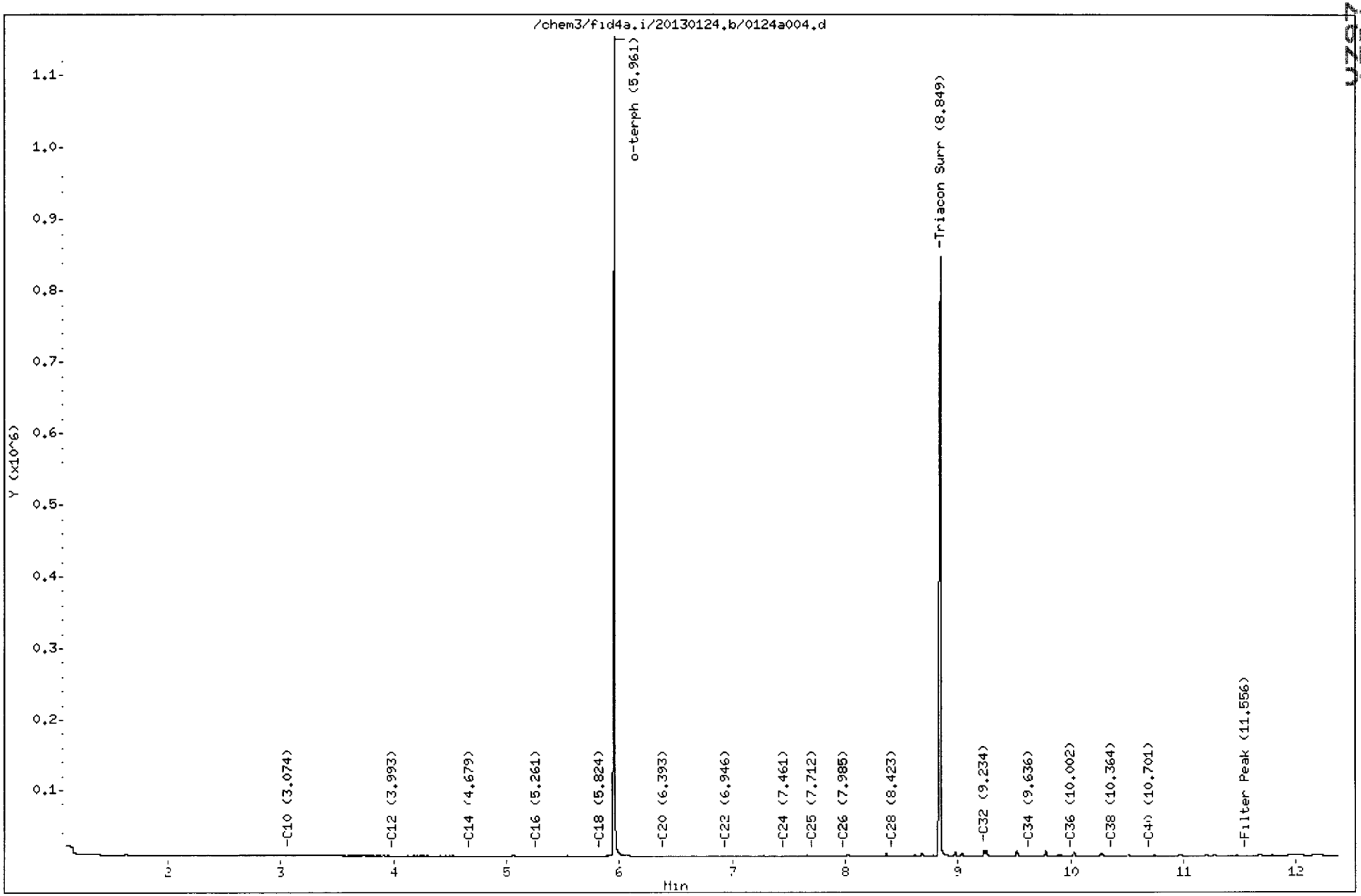
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS

Column diameter: 0.25

UZ517 - 01500



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130124.b/0124a030.d
Method: /chem3/fid4a.i/20130124.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: DIESEL#2
Client ID:
Injection: 25-JAN-2013 01:25
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.168	0.010	5820	10993	WATPHG	(Tol-C12)	1430542	128.99
C8	1.393	-0.001	5487	17864	WATPHD	(C12-C24)	4010975	243.25
C10	3.068	-0.003	23522	22204	WATPHM	(C24-C38)	81452	7.20
C12	3.988	-0.006	50627	46157	AK102	(C10-C25)	4773107	241.12
C14	4.673	-0.007	89243	56355	AK103	(C25-C36)	49878	5.42
C16	5.262	-0.008	146097	101794				
C18	5.820	-0.009	110838	98134				
C20	6.382	-0.010	73642	77401	JET-A	(C10-C18)	3576946	660.38
C22	6.951	0.010	7558	12674				
C24	7.452	-0.013	10028	10306	MSPIRIT	(Tol-C12)	1430542	108.00
C25	7.704	-0.011	4553	6619				
C26	7.992	0.019	348	160				
C28	8.420	0.000	324	258				
C32	9.253	0.011	236	391				
C34	9.630	0.006	236	118				
Filter Peak	11.573	0.013	3432	10504	CREOSOT	(C12-C22)	3871880	1924.27 M
C36	9.997	0.002	543	278				
C38	10.357	0.005	824	454				
C40	10.676	-0.026	1867	6707				
o-terph	5.962	-0.001	1179172	906713				
Triacon Surr	8.843	-0.012	94	132	NAS DIES	(C10-C24)	4760418	393.33

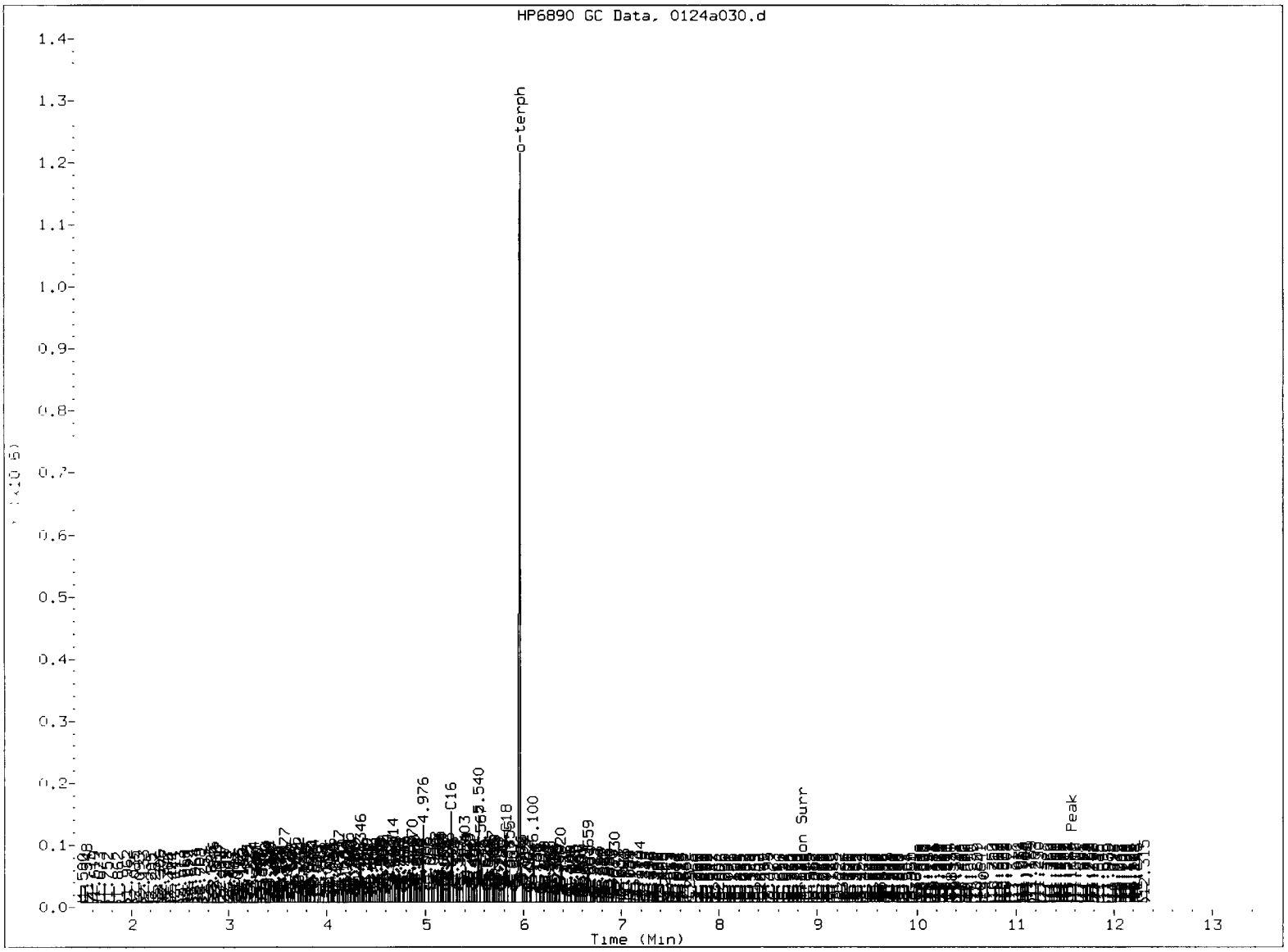
Range Times: NW Diesel(3.993 - 7.466) AK102(3.07 - 7.71) Jet A(3.07 - 5.83)
NW M.Oil(7.47 - 10.35) AK103(7.71 - 9.99) OR Diesel(3.07 - 8.42)

Surrogate	Area	Amount	%Rec
o-Terphenyl	906713	44.7	99.4 M
Triacontane	132	0.0	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	18755.2	24-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	16488.8	05-JAN-2013
Motor Oil	11305.9	05-JAN-2013
AK102	19795.4	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

FID:4A-2C/RTX-1 DIESEL#2 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VD Date: 1-25-11

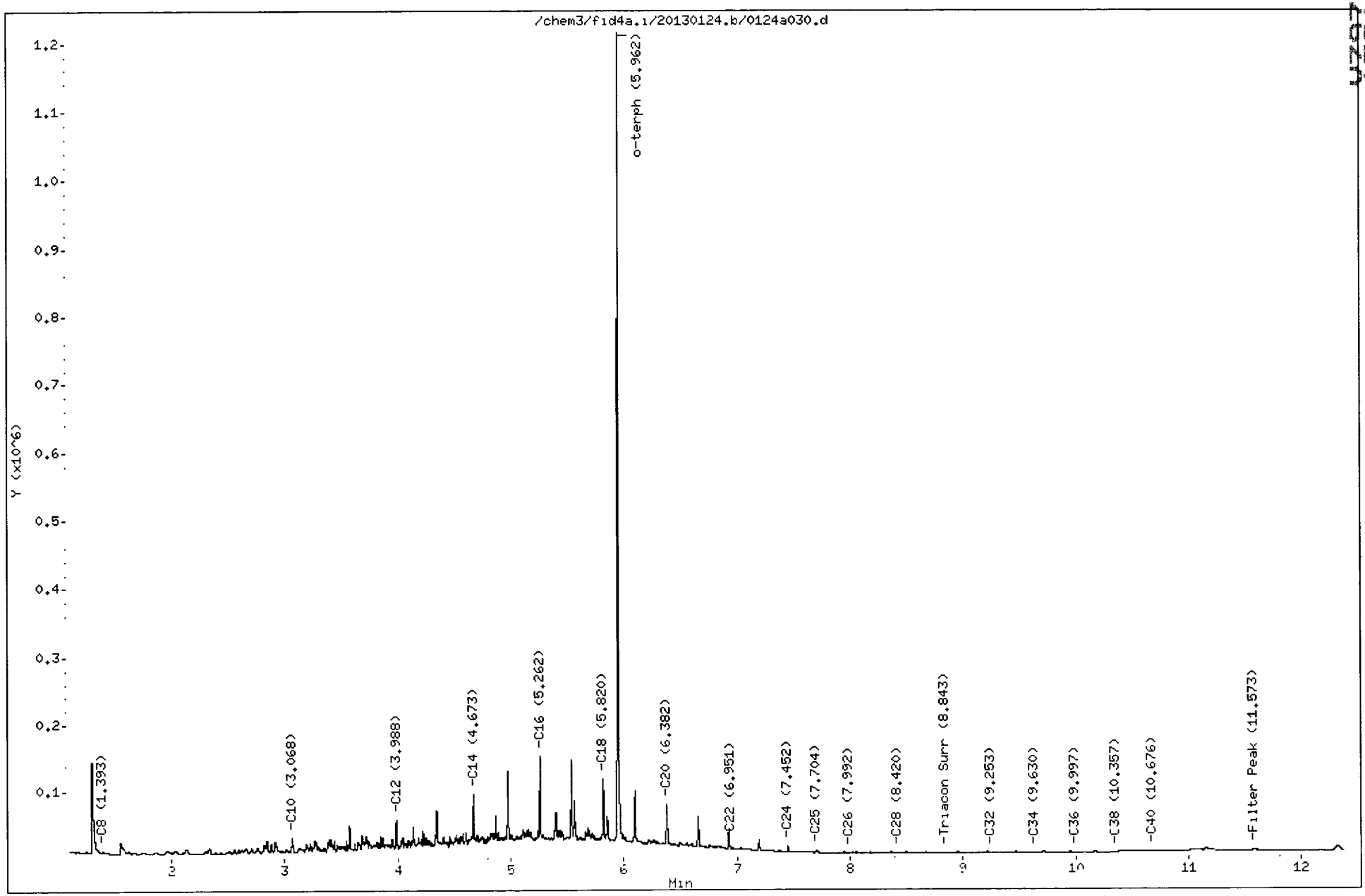
Data File: /chem3/fid4a.i/20130124.b/0124a030.d
Date : 25-JAN-2013 01:25
Client ID:
Sample Info: DIESEL#2

Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS
Column diameter: 0.25

VD 1.25.13



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130124.b/0124a031.d
Method: /chem3/fid4a.i/20130124.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: MOIL#2
Client ID:
Injection: 25-JAN-2013 01:45
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.121	-0.036	15207	87549	WATPHG	(Tol-C12)	169049	15.24
C8	----				WATPHD	(C12-C24)	588971	35.72
C10	3.074	0.003	551	767	WATPHM	(C24-C38)	5830398	515.70
C12	4.003	0.010	278	354	AK102	(C10-C25)	837844	42.33
C14	4.684	0.004	171	102	AK103	(C25-C36)	5304101	576.40
C16	5.259	-0.010	92	123				
C18	5.829	0.000	229	227				
C20	6.384	-0.008	1159	1099	JET-A	(C10-C18)	42912	7.92
C22	6.934	-0.007	5572	2553				
C24	7.479	0.013	23523	25208	MSPIRIT	(Tol-C12)	169049	12.76
C25	7.718	0.003	29021	16635				
C26	7.965	-0.007	34631	31806				
C28	8.417	-0.002	41302	65573				
C32	9.246	0.004	45751	31839				
C34	9.614	-0.010	40185	60045				
Filter Peak	11.554	-0.006	2895	4899	CREOSOT	(C12-C22)	143837	71.49 M
C36	10.001	0.006	23948	12742				
C38	10.338	-0.014	11505	17343				
C40	10.700	-0.001	4227	7987				
o-terph	5.955	-0.008	605	1245				
Triacon Surr	8.836	-0.019	918424	868112	NAS DIES	(C10-C24)	611635	50.54

Range Times: NW Diesel(3.993 - 7.466) AK102(3.07 - 7.71) Jet A(3.07 - 5.83)
NW M.Oil(7.47 - 10.35) AK103(7.71 - 9.99) OR Diesel(3.07 - 8.42)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1245	0.1	0.1
Triacontane	868112	46.3	102.9 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	18755.2	24-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	16488.8	05-JAN-2013
Motor Oil	11305.9	05-JAN-2013
AK102	19795.4	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

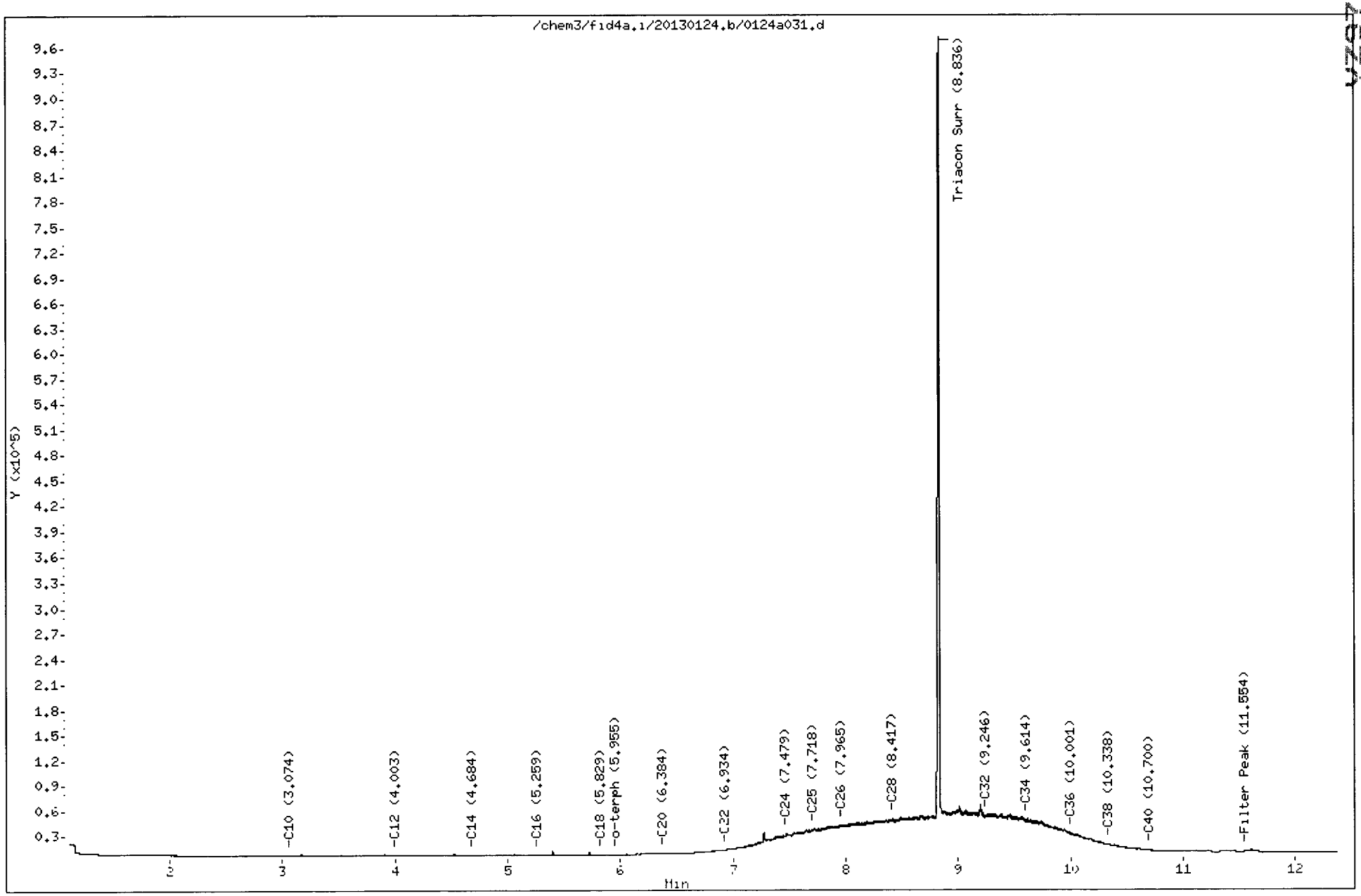
Data File: /chem3/fid4a.i/20130124.b/0124a031.d
Date : 25-JAN-2013 01:45
Client ID:
Sample Info: MOIL#2

Column phase: RTX-1

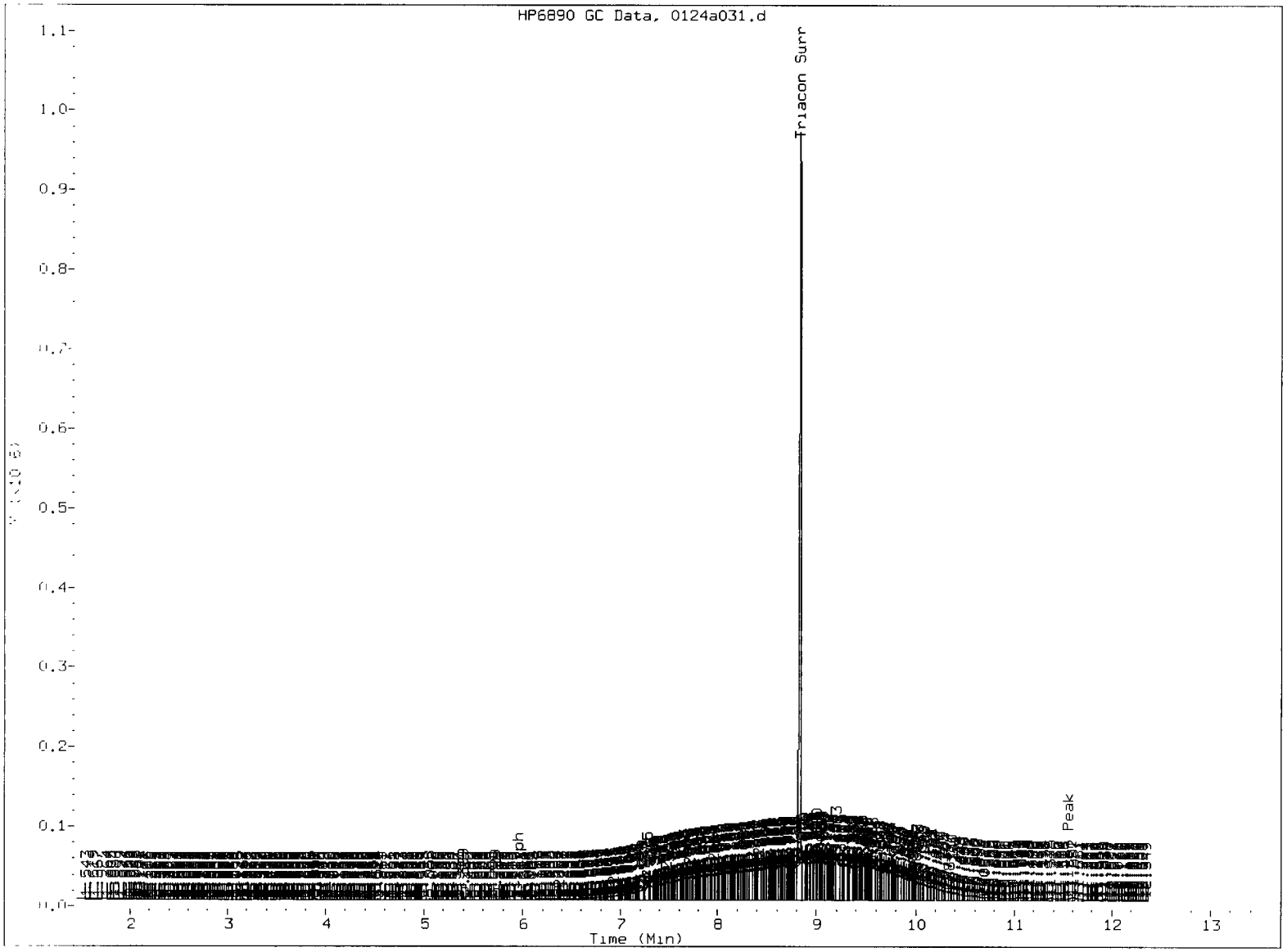
VD 1.25.13

Instrument: fid4a.i

Operator: JR/VTS
Column diameter: 0.25



FID:4A-2C/RTX-1 MOIL#2 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VD Date: 1.29.13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130124.b/0124a032.d
Method: /chem3/fid4a.i/20130124.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: VZ97K
Client ID: CSIA20130110-011B
Injection: 25-JAN-2013 02:05
Dilution Factor: 5

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.158	0.000	4972	9382	WATPHG	(Tol-C12)	702395	63.33
C8	1.381	-0.014	2916	9360	WATPHD	(C12-C24)	17386883	1054.46
C10	3.068	-0.003	2194	1893	WATPHM	(C24-C38)	4054123	358.59
C12	4.000	0.007	32350	25828	AK102	(C10-C25)	18302505	924.58
C14	4.677	-0.002	105564	87626	AK103	(C25-C36)	3624410	393.87
C16	5.264	-0.006	124024	142097				
C18	5.835	0.006	102935	34196				
C20	6.393	0.001	78045	82434	JET-A	(C10-C18)	11839383	2185.80
C22	6.934	-0.007	52208	85116				
C24	7.465	0.000	38299	19227	MSPIRIT	(Tol-C12)	702395	53.03
C25	7.726	0.011	34001	18040				
C26	7.974	0.001	33430	21723				
C28	8.428	0.008	42020	47736				
C32	9.248	0.006	19100	8998				
C34	9.619	-0.005	13746	15362				
Filter Peak	11.561	0.000	715	785	CREOSOT	(C12-C22)	16106703	8004.81 M
C36	9.995	0.000	9117	10490				
C38	10.341	-0.011	3881	5094				
C40	10.689	-0.013	1325	1374				
o-terph	5.953	-0.011	315009	175283				
Triacon Surr	8.822	-0.033	274827	188546	NAS DIES	(C10-C24)	17977817	1485.40

Range Times: NW Diesel(3.993 - 7.466) AK102(3.07 - 7.71) Jet A(3.07 - 5.83)
NW M.Oil(7.47 - 10.35) AK103(7.71 - 9.99) OR Diesel(3.07 - 8.42)

Surrogate	Area	Amount	%Rec
o-Terphenyl	175283	8.6	96.1 M
Triacontane	188546	10.1	111.7 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	18755.2	24-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	16488.8	05-JAN-2013
Motor Oil	11305.9	05-JAN-2013
AK102	19795.4	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.i/20130124.b/0124a032.d
Date : 25-JAN-2013 02:05
Client ID: CSIA20130110-011B
Sample Info: VZ97K,5

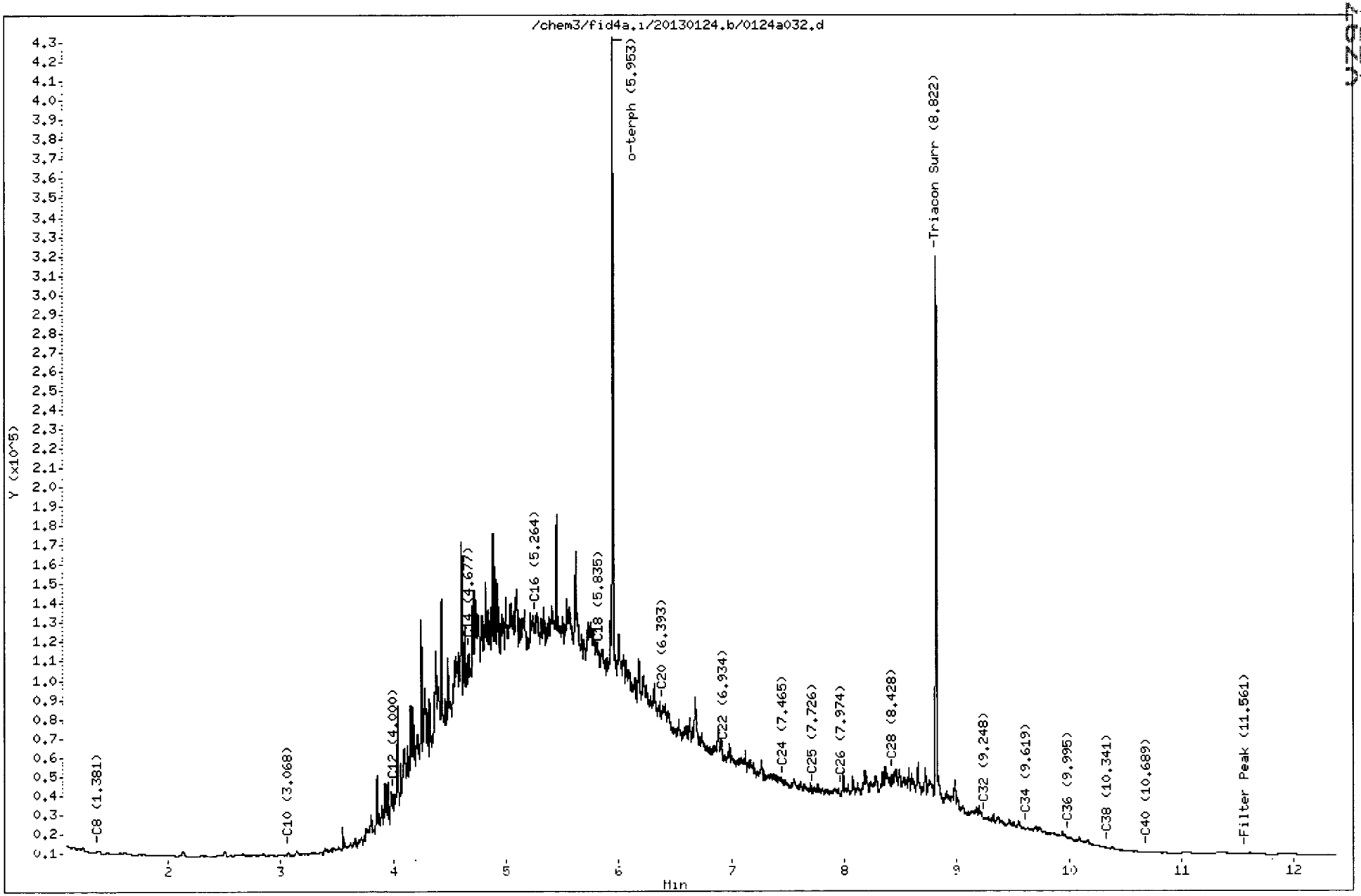
Column phase: RTX-1

Instrument: fid4a.i

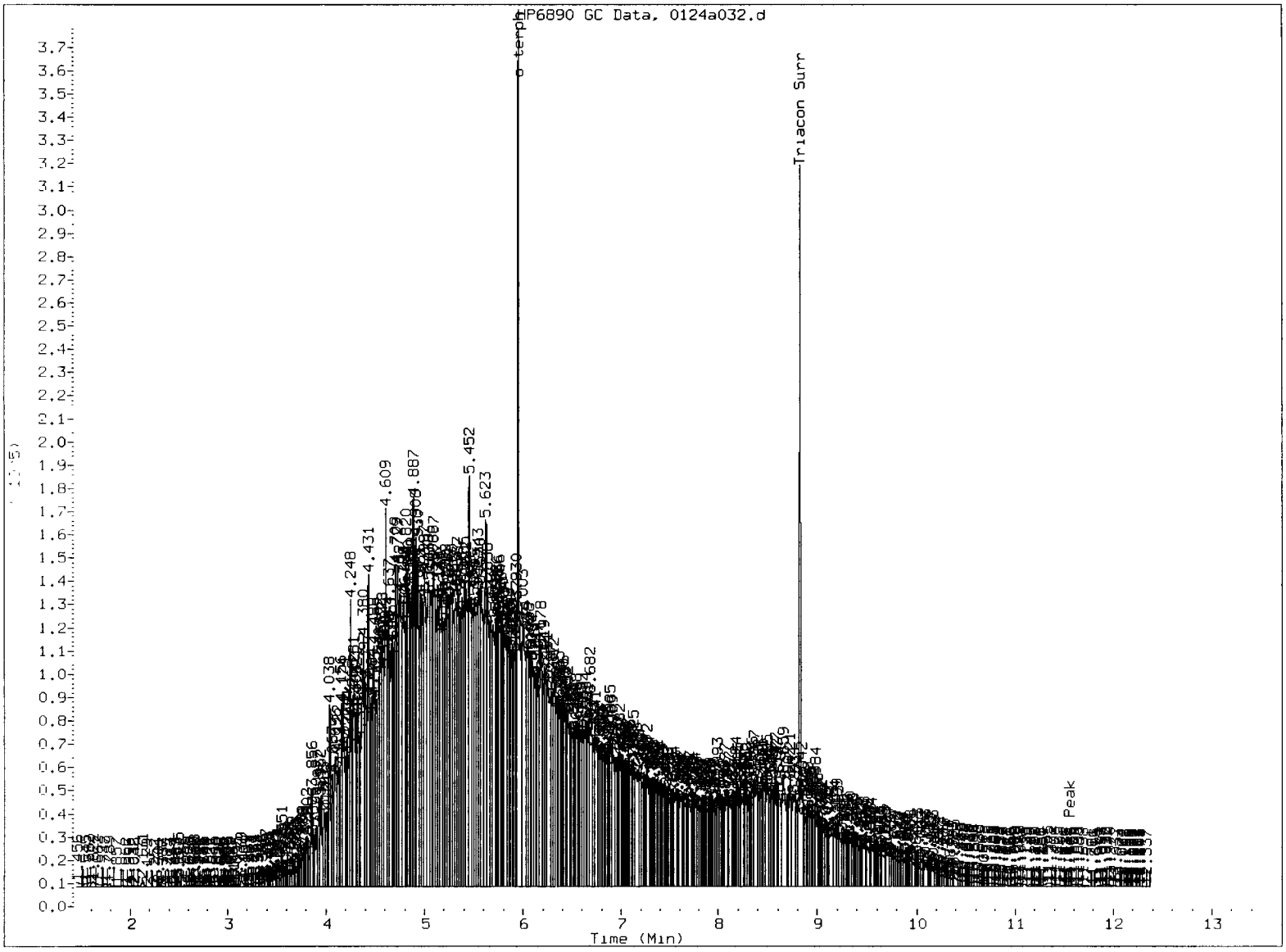
Operator: JR/VTS
Column diameter: 0.25

VD 1.25.13

VZ97-61558



FID:4A-2C/RTX-1 VZ97K FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VD Date: 1-25-13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130124.b/0124a033.d
Method: /chem3/fid4a.i/20130124.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: VZ97L
Client ID: CSIA20130110-012B
Injection: 25-JAN-2013 02:25
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.157	-0.001	58170	51970	WATPHG	(Tol-C12)	782639	70.57
C8	1.381	-0.014	5304	9985	WATPHD	(C12-C24)	23351005	1416.17
C10	3.067	-0.005	5155	4930	WATPHM	(C24-C38)	5982587	529.16
C12	3.999	0.006	24612	19002	AK102	(C10-C25)	24307927	1227.96
C14	4.677	-0.002	127614	114608	AK103	(C25-C36)	5388171	585.54
C16	5.266	-0.004	175947	316952				
C18	5.826	-0.003	162965	228817				
C20	6.396	0.005	121840	63646	JET-A	(C10-C18)	14967773	2763.37
C22	6.943	0.002	79018	94376				
C24	7.478	0.012	58731	38442	MSPIRIT	(Tol-C12)	782639	59.09
C25	7.706	-0.009	58616	88226				
C26	7.971	-0.001	45752	38477				
C28	8.430	0.011	64078	67399				
C32	9.240	-0.003	29951	14742				
C34	9.622	-0.003	20188	9529				
Filter Peak	11.557	-0.003	679	872	CREOSOT	(C12-C22)	21489878	10680.17 M
C36	9.994	0.000	13445	8951				
C38	10.346	-0.006	5709	8970				
C40	10.693	-0.009	1954	2640				
o-terph	5.963	0.000	1087207	815743				
Triacon Surr	8.836	-0.019	881014	804274	NAS DIES	(C10-C24)	23877713	1972.88

Range Times: NW Diesel(3.993 - 7.466) AK102(3.07 - 7.71) Jet A(3.07 - 5.83)
NW M.Oil(7.47 - 10.35) AK103(7.71 - 9.99) OR Diesel(3.07 - 8.42)

Surrogate	Area	Amount	%Rec
o-Terphenyl	815743	40.3	89.4 M
Triacontane	804274	42.9	95.3 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	18755.2	24-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	16488.8	05-JAN-2013
Motor Oil	11305.9	05-JAN-2013
AK102	19795.4	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.1/20130124.b/0124a033.d
Date : 25-JAN-2013 02:25
Client ID: CSIA20130110-012B
Sample Info: VZ97L

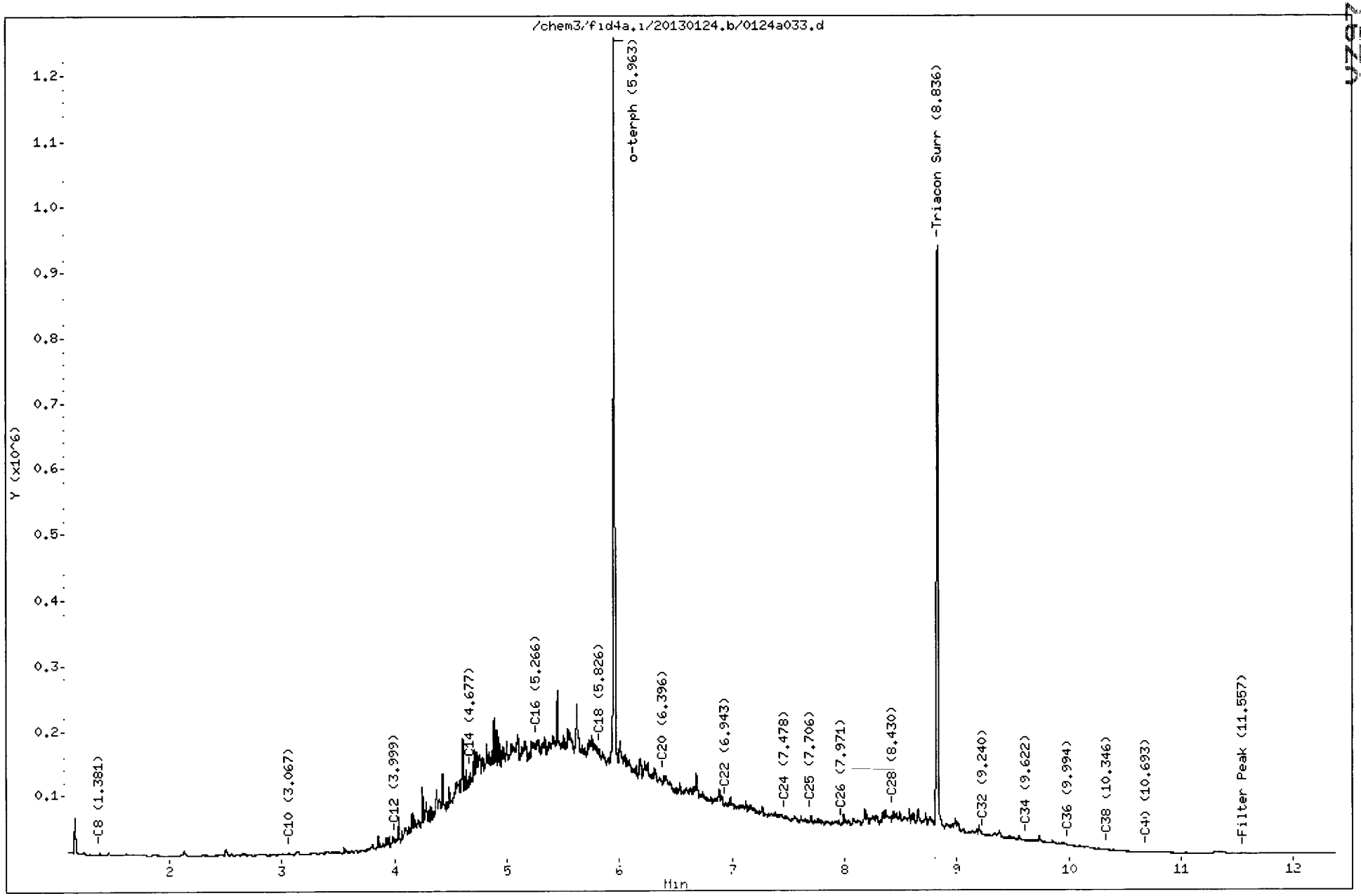
Column phase: RTX-1

Instrument: fid4a.1

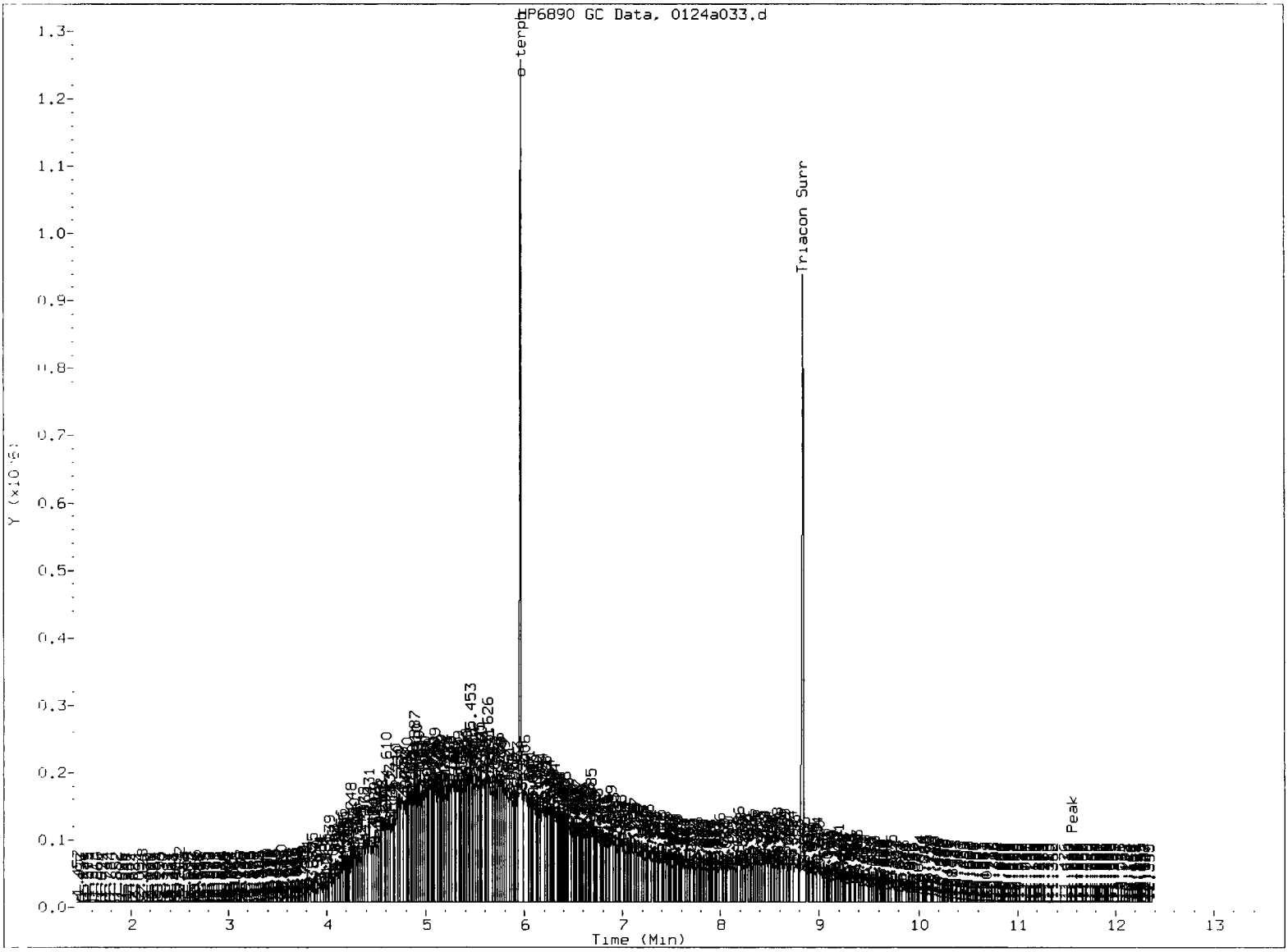
Operator: JR/VTS
Column diameter: 0.25

1.25.13

VZ97-915-1



FID:4A-2C/RTX-1 VZ97L FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VD Date: 1-25-13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130124.b/0124a034.d
Method: /chem3/fid4a.i/20130124.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: VZ97M
Client ID: CSIA20130110-013S+3
Injection: 25-JAN-2013 02:45
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.163	0.006	31268	38619	WATPHG	(Tol-C12)	507322	45.74
C8	1.386	-0.008	4421	10561	WATPHD	(C12-C24)	1147898	69.62
C10	3.070	-0.001	4124	4600	WATPHM	(C24-C38)	535453	47.36
C12	3.992	-0.001	7483	8487	AK102	(C10-C25)	1375402	69.48
C14	4.680	0.000	13647	15437	AK103	(C25-C36)	503745	54.74
C16	5.263	-0.006	9343	8139				
C18	5.832	0.003	5752	3952				
C20	6.393	0.001	220800	150371	JET-A	(C10-C18)	760419	140.39
C22	6.931	-0.010	4746	8589				
C24	7.452	-0.014	6083	9102	MSPIRIT	(Tol-C12)	507322	38.30
C25	7.703	-0.012	23171	21482				
C26	7.976	0.003	2908	5505				
C28	8.403	-0.017	8593	12544				
C32	9.242	0.000	9274	11298				
C34	9.606	-0.019	1150	2002				
Filter Peak	11.567	0.007	397	193	CREOSOT	(C12-C22)	1052150	522.90 M
C36	9.999	0.005	436	425				
C38	10.346	-0.005	147	152				
C40	10.698	-0.003	260	204				
o-terph	5.959	-0.004	1168994	849356				
Triacon Surr	8.833	-0.022	900285	806968	NAS DIES	(C10-C24)	1350095	111.55

Range Times: NW Diesel(3.993 - 7.466) AK102(3.07 - 7.71) Jet A(3.07 - 5.83)
NW M.Oil(7.47 - 10.35) AK103(7.71 - 9.99) OR Diesel(3.07 - 8.42)

Surrogate	Area	Amount	%Rec
o-Terphenyl	849356	41.9	93.1 M
Triacontane	806968	43.0	95.6 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	18755.2	24-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	16488.8	05-JAN-2013
Motor Oil	11305.9	05-JAN-2013
AK102	19795.4	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.1/20130124.b/0124a034.d

Date : 25-JAN-2013 02:45

Client ID: CSIA20130110-013S+3

Sample Info: VZ97M

Column phase: RTX-1

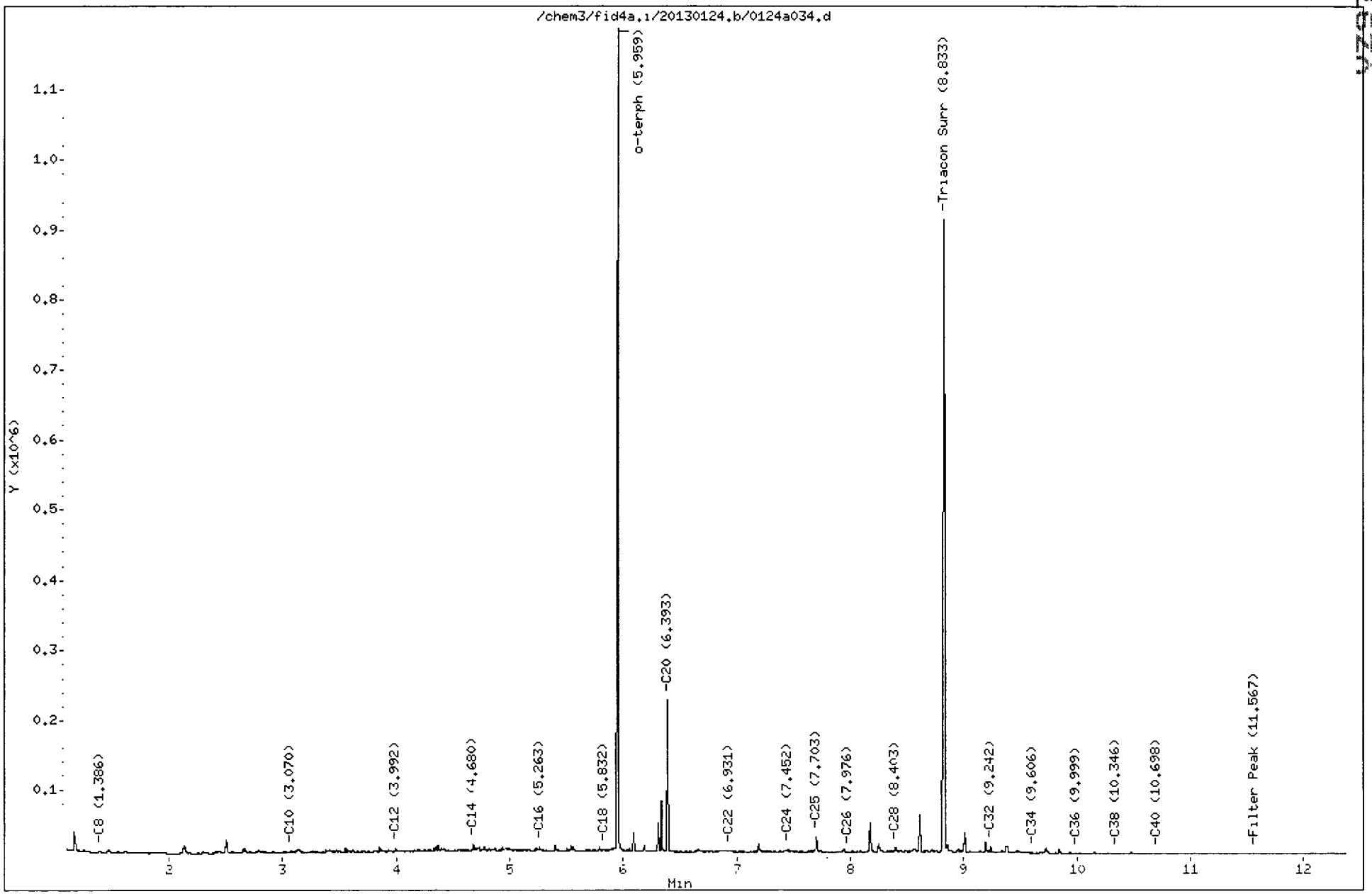
Instrument: fid4a.1

Operator: JR/VTS

Column diameter: 0.25

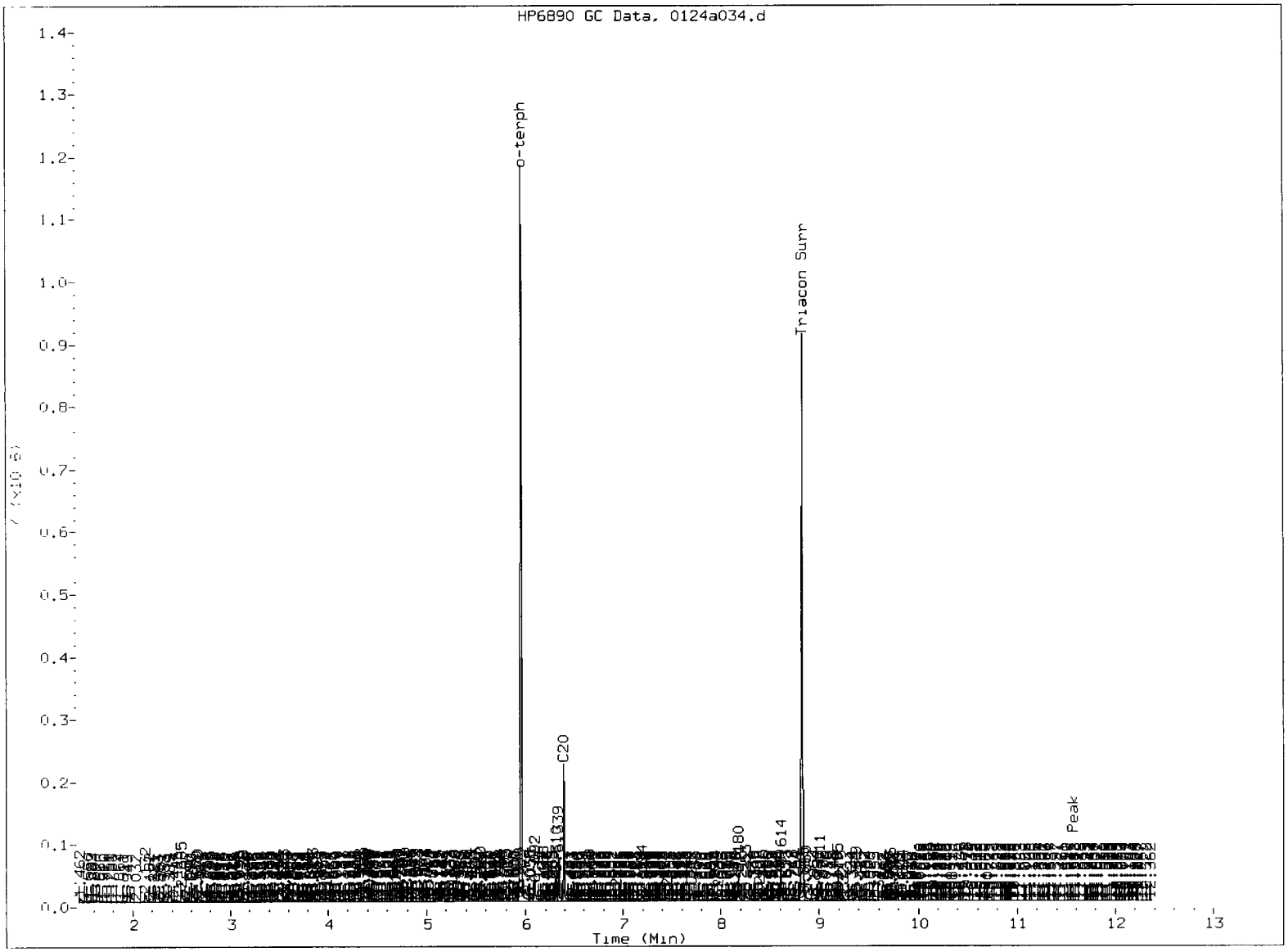
VZ97 : 01514

1-25-13



FID:4A-2C/RTX-1 VZ97M

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VD Date: 1-25-13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130124.b/0124a035.d
Method: /chem3/fid4a.i/20130124.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: VZ97N
Client ID: CSIA20130110-014S+6
Injection: 25-JAN-2013 03:05

Dilution Factor: 50

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.163	0.006	7448	23369	WATPHG	(Tol-C12)	1619958	146.07
C8	1.386	-0.008	2418	13653	WATPHD	(C12-C24)	17316300	1050.18
C10	3.066	-0.005	9261	8692	WATPHM	(C24-C38)	2003285	177.19
C12	4.000	0.007	56963	43115	AK102	(C10-C25)	18989877	959.31
C14	4.679	-0.001	112944	178503	AK103	(C25-C36)	1749802	190.15
C16	5.269	-0.001	126009	158190				
C18	5.840	0.011	99474	98402				
C20	6.393	0.002	68205	89257	JET-A	(C10-C18)	13422239	2478.03
C22	6.942	0.002	41892	29312				
C24	7.473	0.008	28016	49919	MSPIRIT	(Tol-C12)	1619958	122.30
C25	7.720	0.005	22288	10419				
C26	7.970	-0.003	19022	5997				
C28	8.427	0.008	24587	30228				
C32	9.251	0.009	7447	7121				
C34	9.629	0.004	5022	6148				
Filter Peak	11.546	-0.014	225	196	CREOSOT	(C12-C22)	16344516	8123.00 M
C36	9.995	0.001	2947	686				
C38	10.348	-0.003	1228	1749				
C40	10.706	0.004	381	220				
o-terph	5.971	0.008	99558	75652				
Triacon Surr	8.838	-0.017	19356	36905	NAS DIES	(C10-C24)	18774869	1551.26

Range Times: NW Diesel(3.993 - 7.466) AK102(3.07 - 7.71) Jet A(3.07 - 5.83)
NW M.Oil(7.47 - 10.35) AK103(7.71 - 9.99) OR Diesel(3.07 - 8.42)

Surrogate	Area	Amount	%Rec
o-Terphenyl	75652	3.7	414.8
Triacontane	36905	2.0	218.6

JR

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	18755.2	24-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	16488.8	05-JAN-2013
Motor Oil	11305.9	05-JAN-2013
AK102	19795.4	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

JR 1-25-13

Data File: /chem3/fid4a.i/20130124.b/0124a035.d

Date : 25-JAN-2013 03:05

Client ID: CSIA20130110-014S+6

Sample Info: VZ97N,50

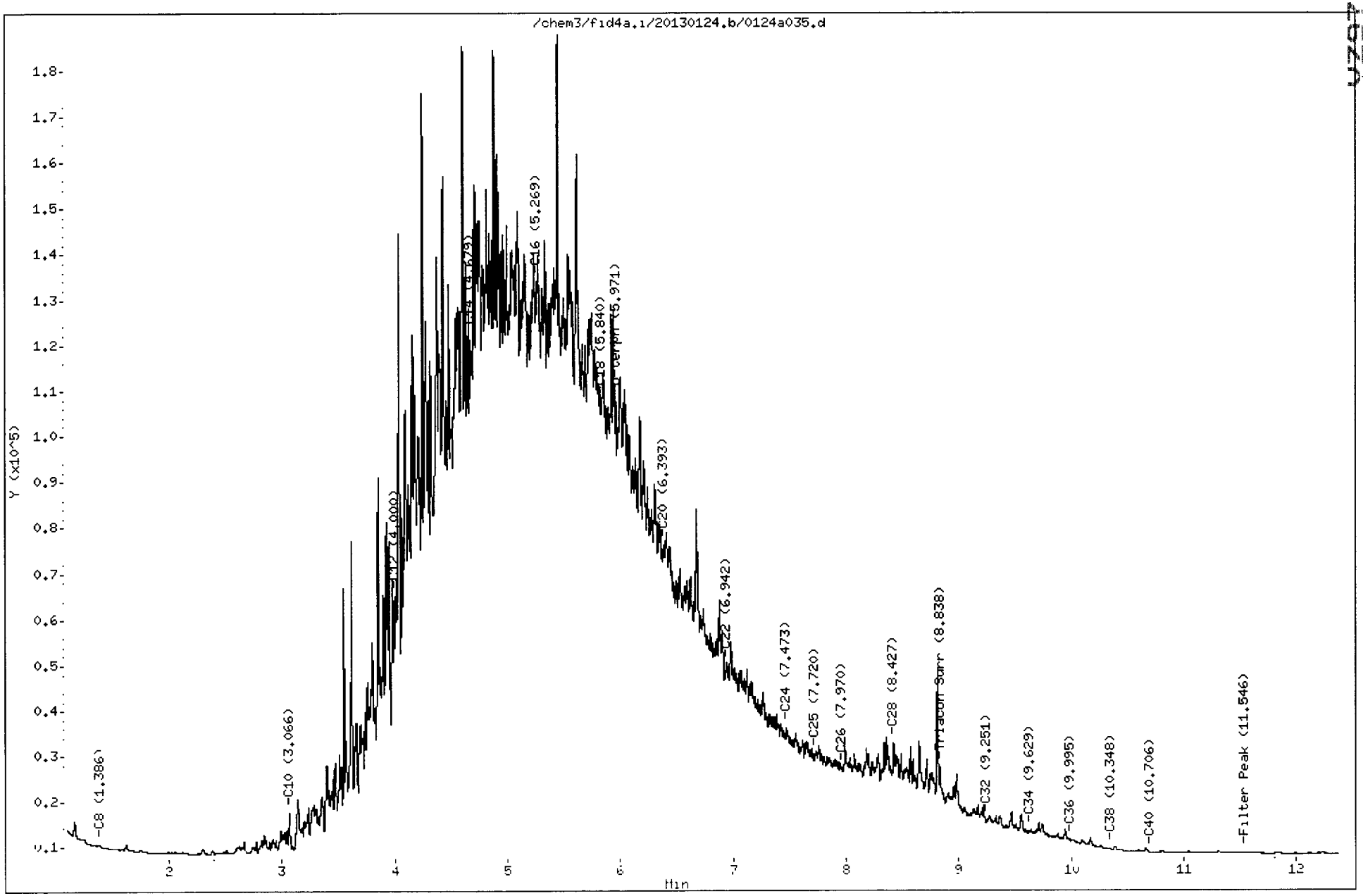
Column phase: RTX-1

Instrument: fid4a.i

Operator: JP/VTS

Column diameter: 0.25

VZ97 : 61547



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130124.b/0124a036.d
Method: /chem3/fid4a.i/20130124.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: VZ970
Client ID: CSIA20130110-015S+9
Injection: 25-JAN-2013 03:25
Dilution Factor: 50

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.155	-0.003	4620	5249	WATPHG	(Tol-C12)	1232202	111.10
C8	1.381	-0.013	2528	17589	WATPHD	(C12-C24)	14161046	858.83
C10	3.065	-0.006	6220	5765	WATPHM	(C24-C38)	1816851	160.70
C12	4.000	0.006	44681	35182	AK102	(C10-C25)	15428104	779.38
C14	4.678	-0.002	91483	85380	AK103	(C25-C36)	1609226	174.88
C16	5.269	-0.001	101894	47738				
C18	5.827	-0.002	82150	67270				
C20	6.392	0.000	56904	72656	JET-A	(C10-C18)	10908518	2013.95
C22	6.944	0.003	35441	44452				
C24	7.463	-0.002	22716	8381	MSPIRIT	(Tol-C12)	1232202	93.03
C25	7.713	-0.002	18929	15181				
C26	7.974	0.002	16535	12313				
C28	8.417	-0.002	16180	6371				
C32	9.246	0.004	6659	5365				
C34	9.626	0.001	4410	2861				
Filter Peak	11.557	-0.003	461	406	CREOSOT	(C12-C22)	13350692	6635.11 M
C36	9.996	0.002	2566	1091				
C38	10.369	0.018	871	298				
C40	10.695	-0.006	350	139				
o-terph	5.971	0.008	80666	57249				
Triacon Surr	8.867	0.011	11262	11550	NAS DIES	(C10-C24)	15255092	1260.44

Range Times: NW Diesel(3.993 - 7.466) AK102(3.07 - 7.71) Jet A(3.07 - 5.83)
NW M.Oil(7.47 - 10.35) AK103(7.71 - 9.99) OR Diesel(3.07 - 8.42)

Surrogate	Area	Amount	%Rec
o-Terphenyl	57249	2.8	313.9
Triacontane	11550	0.6	68.4

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	18755.2	24-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	16488.8	05-JAN-2013
Motor Oil	11305.9	05-JAN-2013
AK102	19795.4	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

1-25-13

Data File: /chem3/fid4a.1/20130124.b/0124a036.d

Date : 25-JAN-2013 03:25

Client ID: CSIA20130110-015S+9

Sample Info: VZ970,50

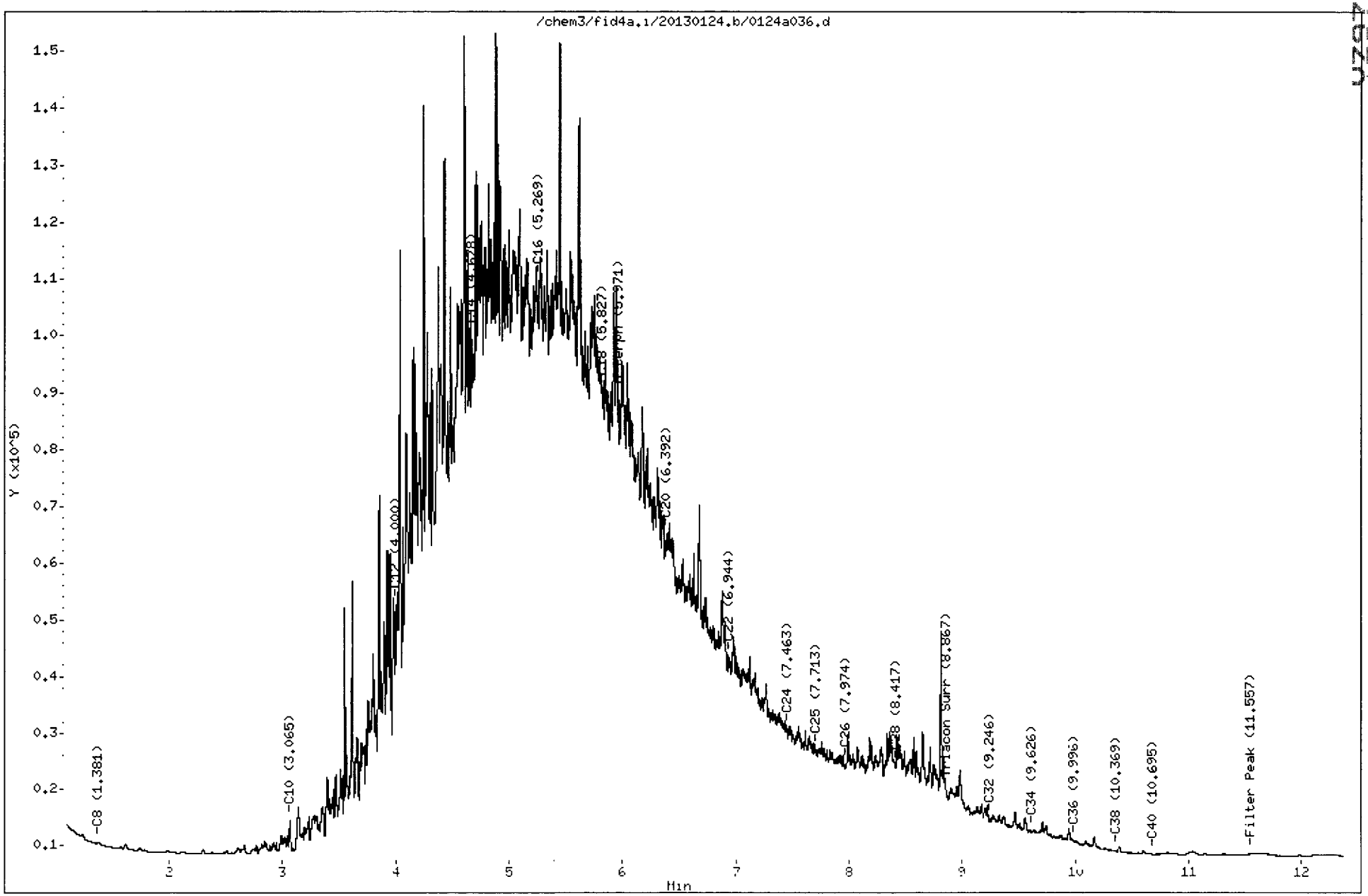
Column phase: RTX-1

Instrument: fid4a.1

Operator: JR/VTS

Column diameter: 0.25

VZ970-015S+9



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130124.b/0124a037.d
Method: /chem3/fid4a.i/20130124.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: VZ97P
Client ID: CSIA20130111-016B
Injection: 25-JAN-2013 03:45

Dilution Factor: 10

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.154	-0.004	6389	6554	WATPHG	(Tol-C12)	1669644	150.55
C8	1.375	-0.020	2629	12052	WATPHD	(C12-C24)	23109964	1401.55
C10	3.066	-0.006	5666	5405	WATPHM	(C24-C38)	3028685	267.89
C12	4.000	0.006	63692	47804	AK102	(C10-C25)	24892590	1257.49
C14	4.678	-0.002	151815	116196	AK103	(C25-C36)	2719110	295.49
C16	5.266	-0.004	170742	147038				
C18	5.833	0.004	131541	49315				
C20	6.395	0.003	94819	55444	JET-A	(C10-C18)	17524031	3235.31
C22	6.943	0.002	57426	87235				
C24	7.463	-0.003	38717	22465	MSPIRIT	(Tol-C12)	1669644	126.05
C25	7.726	0.011	31902	13910				
C26	7.976	0.004	28247	17034				
C28	8.427	0.008	35183	39849				
C32	9.226	-0.017	14654	30588				
C34	9.628	0.003	7988	3610				
Filter Peak	11.566	0.006	181	191	CREOSOT	(C12-C22)	21797846	10833.22 M
C36	9.979	-0.015	5877	10888				
C38	10.352	0.001	2012	2485				
C40	10.715	0.014	610	917				
o-terph	5.950	-0.013	146214	72476				
Triacon Surr	8.818	-0.037	126031	82081	NAS DIES	(C10-C24)	24639861	2035.85

Range Times: NW Diesel(3.993 - 7.466) AK102(3.07 - 7.71) Jet A(3.07 - 5.83)
NW M.Oil(7.47 - 10.35) AK103(7.71 - 9.99) OR Diesel(3.07 - 8.42)

Surrogate	Area	Amount	%Rec
o-Terphenyl	72476	3.6	79.5 M
Triacontane	82081	4.4	97.3 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	18755.2	24-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	16488.8	05-JAN-2013
Motor Oil	11305.9	05-JAN-2013
AK102	19795.4	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.1/20130124.b/0124a037.d

Date : 25-JAN-2013 03:45

Client ID: CSIA20130111-016B

Sample Info: VZ97P,10

Column phase: RTX-1

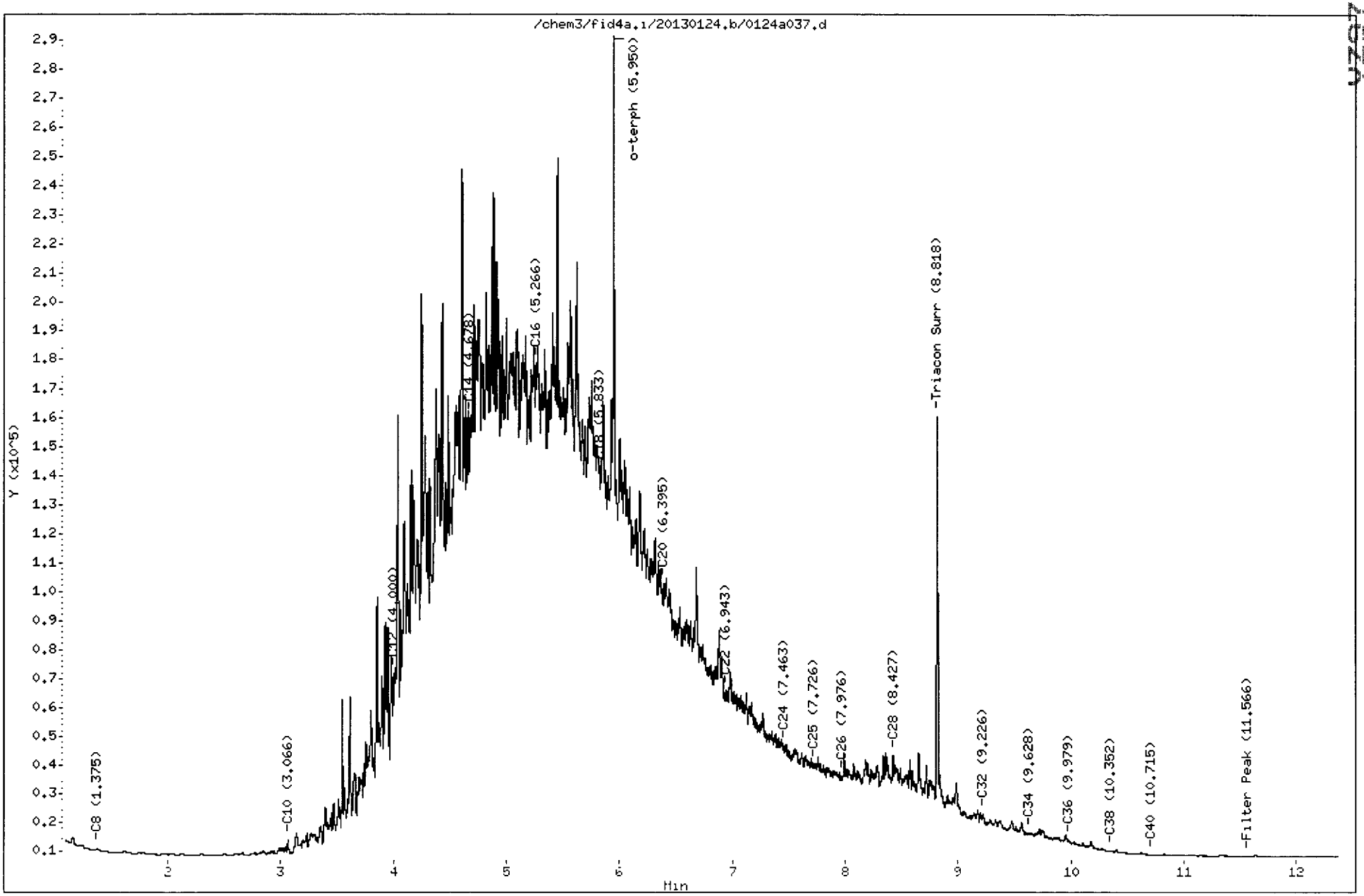
Instrument: fid4a.1

Operator: JR/VTS

Column diameter: 0.25

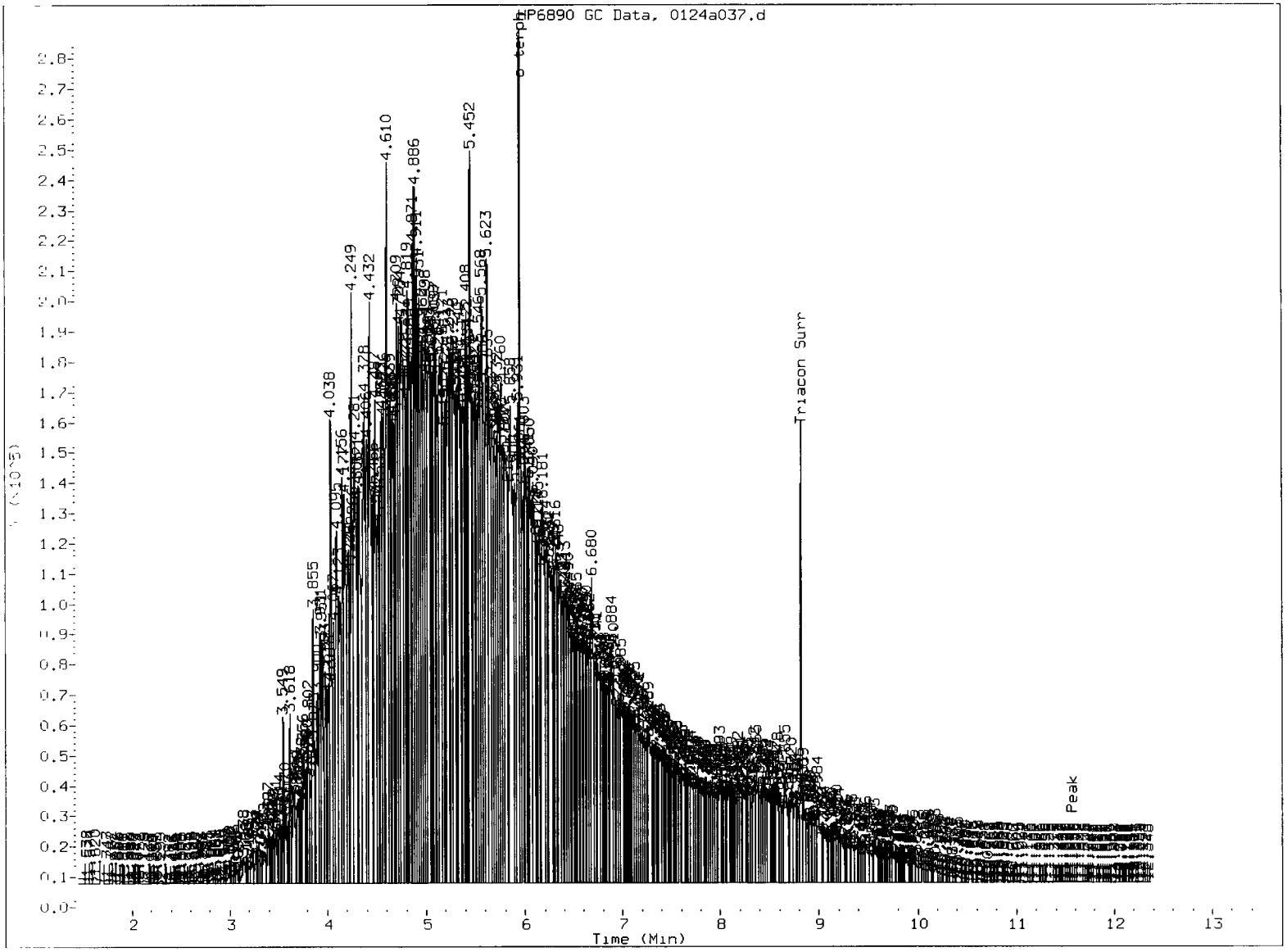
VT 1.20.13

VZ97P 01/24/13



FID:4A-2C/RTX-1 VZ97P

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VV Date: 1-25-11

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130124.b/0124a038.d
Method: /chem3/fid4a.i/20130124.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: VZ97Q
Client ID: CSIA20130111-017B
Injection: 25-JAN-2013 04:05
Dilution Factor: 10

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.157	-0.001	11206	30300	WATPHG	(Tol-C12)	1249118	112.63
C8	1.378	-0.016	2820	9798	WATPHD	(C12-C24)	18727429	1135.76
C10	3.066	-0.005	3515	3494	WATPHM	(C24-C38)	2366460	209.31
C12	4.000	0.007	46436	39767	AK102	(C10-C25)	20074483	1014.10
C14	4.679	0.000	113110	86939	AK103	(C25-C36)	2065632	224.47
C16	5.267	-0.002	132148	209521				
C18	5.824	-0.005	107932	42613				
C20	6.399	0.008	72930	48444	JET-A	(C10-C18)	13941567	2573.91
C22	6.942	0.001	45808	38728				
C24	7.462	-0.004	29433	21777	MSPIRIT	(Tol-C12)	1249118	94.30
C25	7.706	-0.009	27172	26513				
C26	7.959	-0.013	21707	26744				
C28	8.426	0.007	26386	34379				
C32	9.244	0.002	9358	7408				
C34	9.626	0.002	6292	2957				
Filter Peak	11.564	0.004	152	111	CREOSOT	(C12-C22)	17689085	8791.23 M
C36	10.003	0.009	3997	2159				
C38	10.356	0.005	1560	1733				
C40	10.701	-0.001	550	296				
o-terph	5.949	-0.014	142622	74601				
Triacon Surr	8.818	-0.037	122660	84910	NAS DIES	(C10-C24)	19821280	1637.72

Range Times: NW Diesel(3.993 - 7.466) AK102(3.07 - 7.71) Jet A(3.07 - 5.83)
NW M.Oil(7.47 - 10.35) AK103(7.71 - 9.99) OR Diesel(3.07 - 8.42)

Surrogate	Area	Amount	%Rec
o-Terphenyl	74601	3.7	81.8 M
Triacontane	84910	4.5	100.6 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	18755.2	24-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	16488.8	05-JAN-2013
Motor Oil	11305.9	05-JAN-2013
AK102	19795.4	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

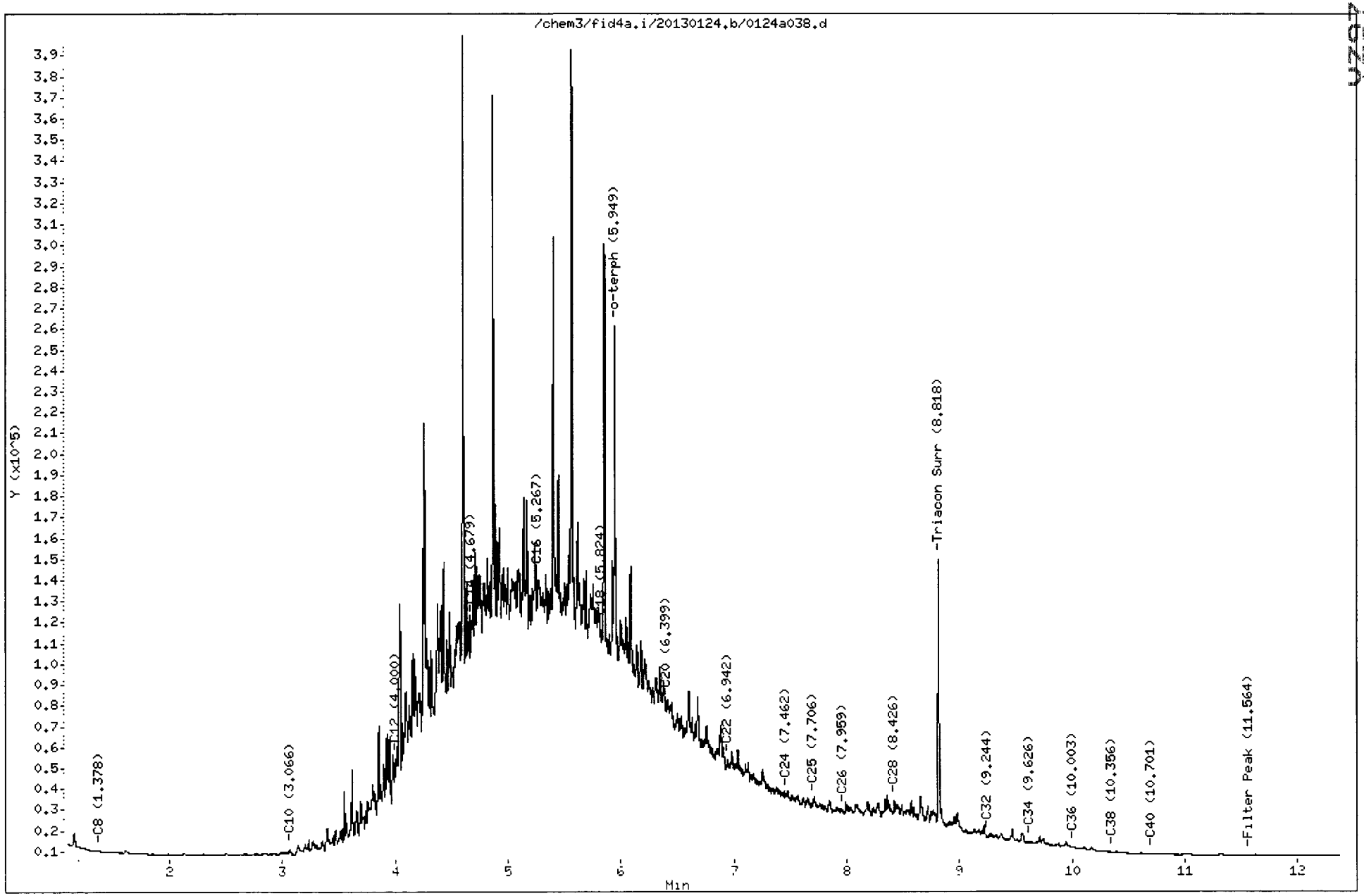
Data File: /chem3/fid4a.i/20130124.b/0124a038.d
Date : 25-JAN-2013 04:05
Client ID: CSIA20130111-017B
Sample Info: VZ97Q,10

Column phase: RTX-1

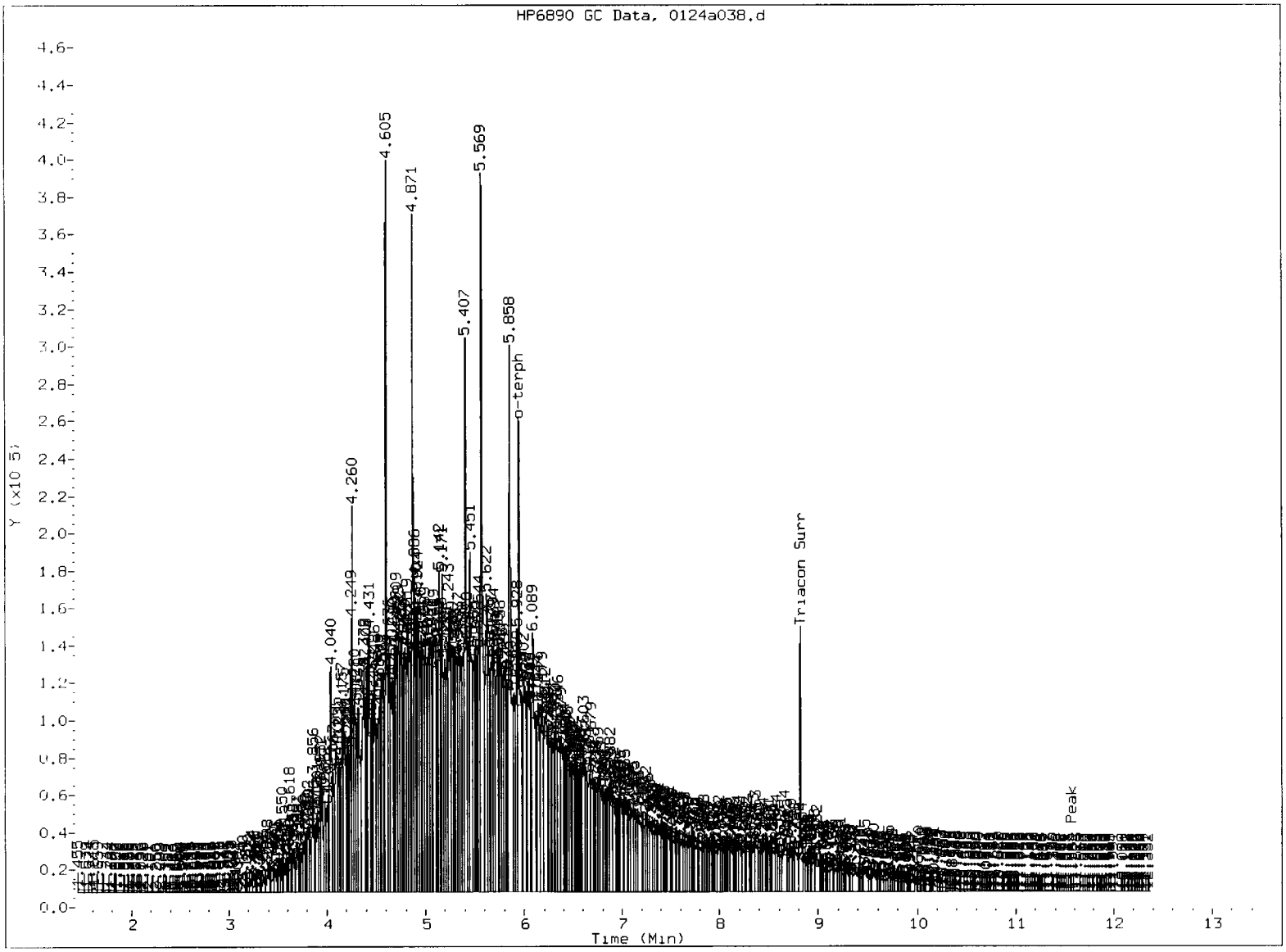
Instrument: fid4a.i

Operator: JR/VTS
Column diameter: 0.25

VZ97 - 01521



FID:4A-2C/RTX-1 VZ97Q FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VD Date: 1-25-17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130124.b/0124a039.d
Method: /chem3/fid4a.i/20130124.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: VZ97R
Client ID: CSIA20130111-018S+9
Injection: 25-JAN-2013 04:25

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.162	0.004	22828	24868	WATPHG	(Tol-C12)	2353949	212.25
C8	1.384	-0.011	16489	19092	WATPHD	(C12-C24)	35400945	2146.97
C10	3.067	-0.005	26225	21376	WATPHM	(C24-C38)	17755049	1570.43
C12	4.000	0.007	70442	49729	AK102	(C10-C25)	38465413	1943.15
C14	4.677	-0.002	182355	171923	AK103	(C25-C36)	16111544	1750.86
C16	5.265	-0.005	234264	216877				
C18	5.818	-0.011	221107	251950				
C20	6.387	-0.005	187339	198239	JET-A	(C10-C18)	22353396	4126.91
C22	6.938	-0.003	145736	147902				
C24	7.463	-0.003	137282	168909	MSPIRIT	(Tol-C12)	2353949	177.72
C25	7.713	-0.002	148310	336841				
C26	7.970	-0.002	126135	73557				
C28	8.417	-0.002	172142	254599				
C32	9.250	0.007	102557	122285				
C34	9.631	0.006	69506	15073				
Filter Peak	11.564	0.003	818	970	CREOSOT	(C12-C22)	31623266	15716.32 M
C36	10.006	0.012	41644	47592				
C38	10.362	0.010	16405	18668				
C40	10.700	-0.001	5304	10705				
o-terph	5.965	0.002	1046525	805271				
Triacon Surr	8.844	-0.011	858006	827007	NAS DIES	(C10-C24)	37293601	3081.35

Range Times: NW Diesel(3.993 - 7.466) AK102(3.07 - 7.71) Jet A(3.07 - 5.83)
NW M.Oil(7.47 - 10.35) AK103(7.71 - 9.99) OR Diesel(3.07 - 8.42)

Surrogate	Area	Amount	%Rec
o-Terphenyl	805271	39.7	88.3 M
Triacontane	827007	44.1	98.0 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	18755.2	24-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	16488.8	05-JAN-2013
Motor Oil	11305.9	05-JAN-2013
AK102	19795.4	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

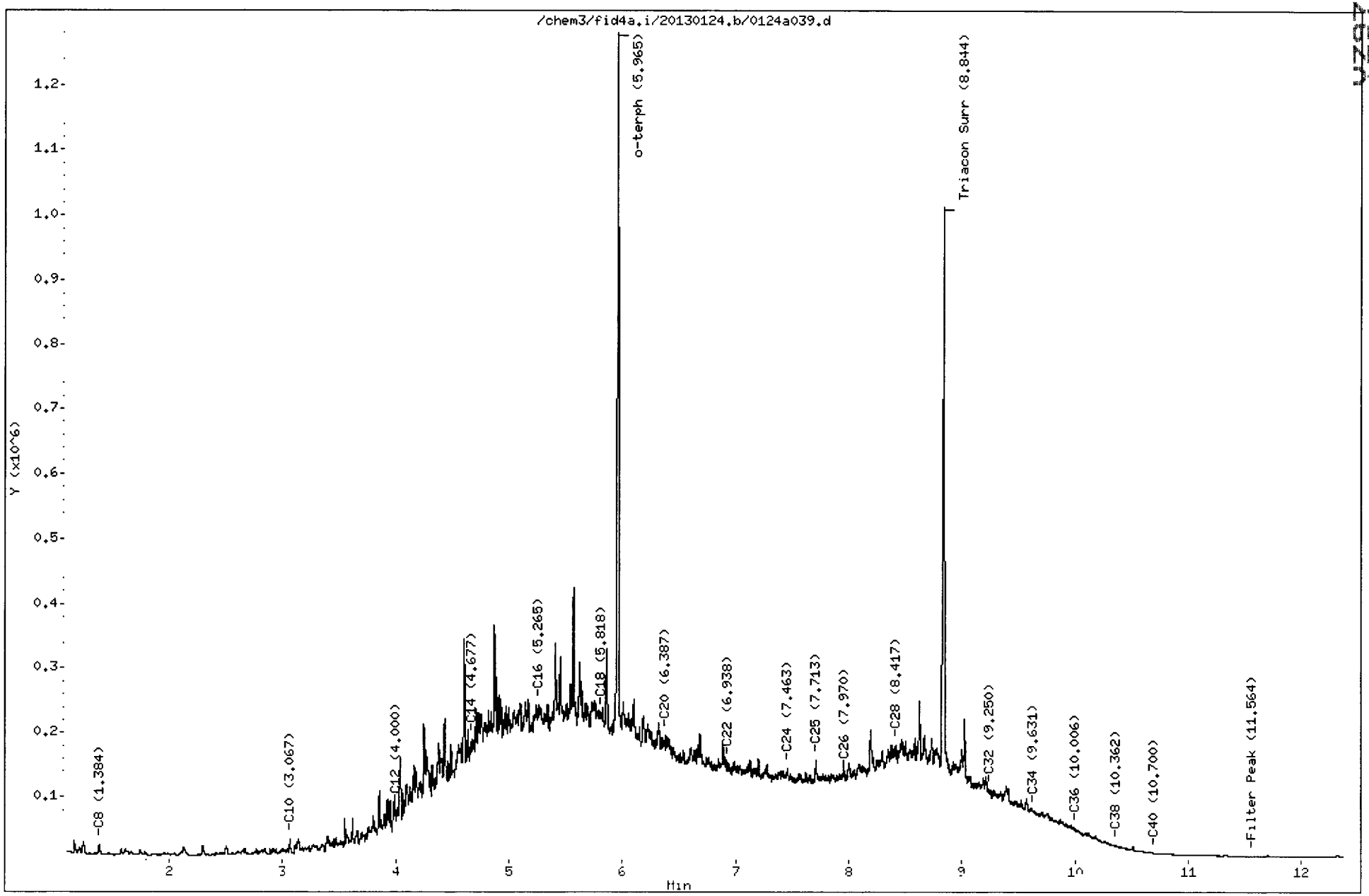
Data File: /chem3/fid4a.i/20130124.b/0124a039.d
Date : 25-JAN-2013 04:25
Client ID: CSIA20130111-018S+9
Sample Info: VZ97P

Column phase: RTX-1

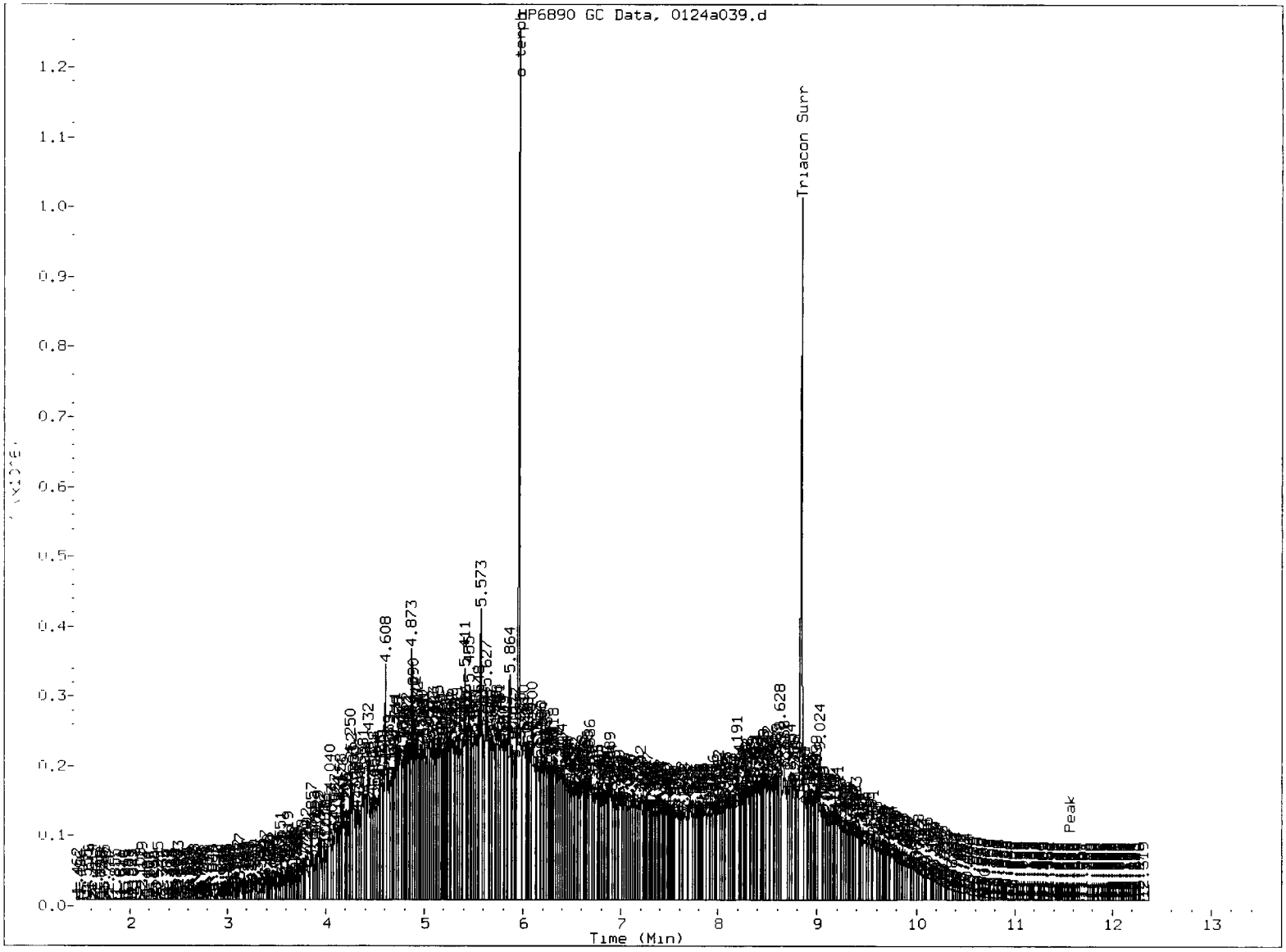
Instrument: fid4a.i

Operator: JR/VTS
Column diameter: 0.25

VJ 1.25.13



FID:4A-2C/RTX-1 VZ97R FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VD Date: 1.25.13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130124.b/0124a040.d
Method: /chem3/fid4a.i/20130124.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: DIESEL#3
Client ID:
Injection: 25-JAN-2013 04:45
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.172	0.015	6278	15675	WATPHG	(Tol-C12)	1502116	135.44
C8	1.389	-0.006	5884	29223	WATPHD	(C12-C24)	4075466	247.17
C10	3.068	-0.004	23442	22421	WATPHM	(C24-C38)	72450	6.41
C12	3.988	-0.006	49632	46887	AK102	(C10-C25)	4857597	245.39
C14	4.672	-0.007	88332	75081	AK103	(C25-C36)	49749	5.41
C16	5.261	-0.009	142791	103114				
C18	5.819	-0.010	112758	96587				
C20	6.380	-0.012	73722	68270	JET-A	(C10-C18)	3661706	676.03
C22	6.930	-0.011	36800	43283				
C24	7.453	-0.013	9486	13562	MSPIRIT	(Tol-C12)	1502116	113.41
C25	7.704	-0.011	3748	6352				
C26	7.991	0.018	466	593				
C28	8.421	0.002	300	542				
C32	9.225	-0.017	3455	3129				
C34	9.624	-0.001	92	67				
Filter Peak	11.565	0.005	1201	885	CREOSOT	(C12-C22)	3939543	1957.90 M
C36	9.989	-0.005	331	188				
C38	10.350	-0.001	573	676				
C40	10.697	-0.004	1037	1819				
o-terph	5.961	-0.002	1185884	908996				
Triacon Surr	8.874	0.019	138	131	NAS DIES	(C10-C24)	4844667	400.29

Range Times: NW Diesel(3.993 - 7.466) AK102(3.07 - 7.71) Jet A(3.07 - 5.83)
NW M.Oil(7.47 - 10.35) AK103(7.71 - 9.99) OR Diesel(3.07 - 8.42)

Surrogate	Area	Amount	%Rec
o-Terphenyl	908996	44.9	99.7 M
Triacontane	131	0.0	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	18755.2	24-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	16488.8	05-JAN-2013
Motor Oil	11305.9	05-JAN-2013
AK102	19795.4	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.1/20130124.b/0124a040.d
Date : 25-JAN-2013 04:45
Client ID:
Sample Info: DIESEL#3

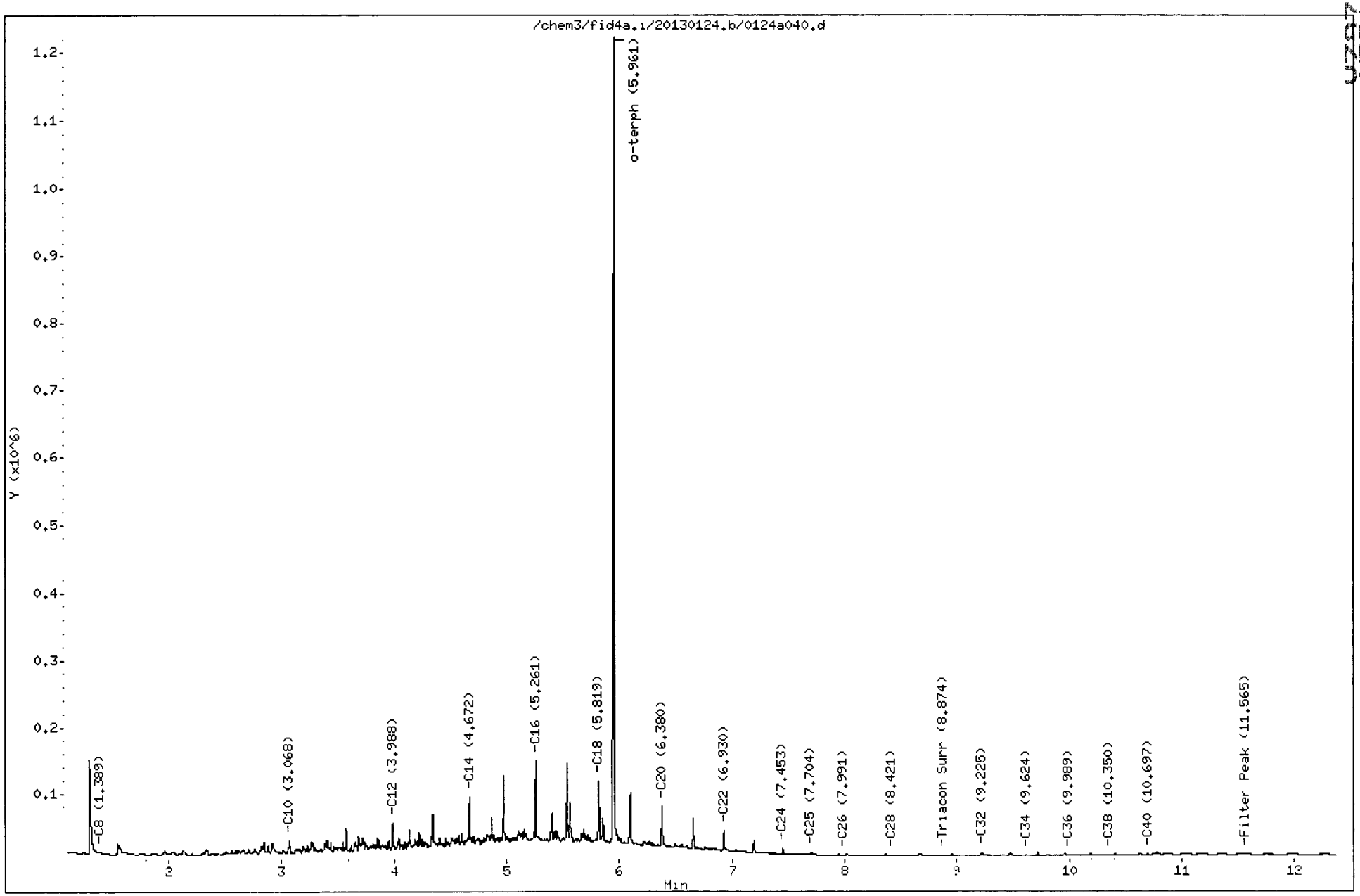
Column phase: RTX-1

Instrument: fid4a.1

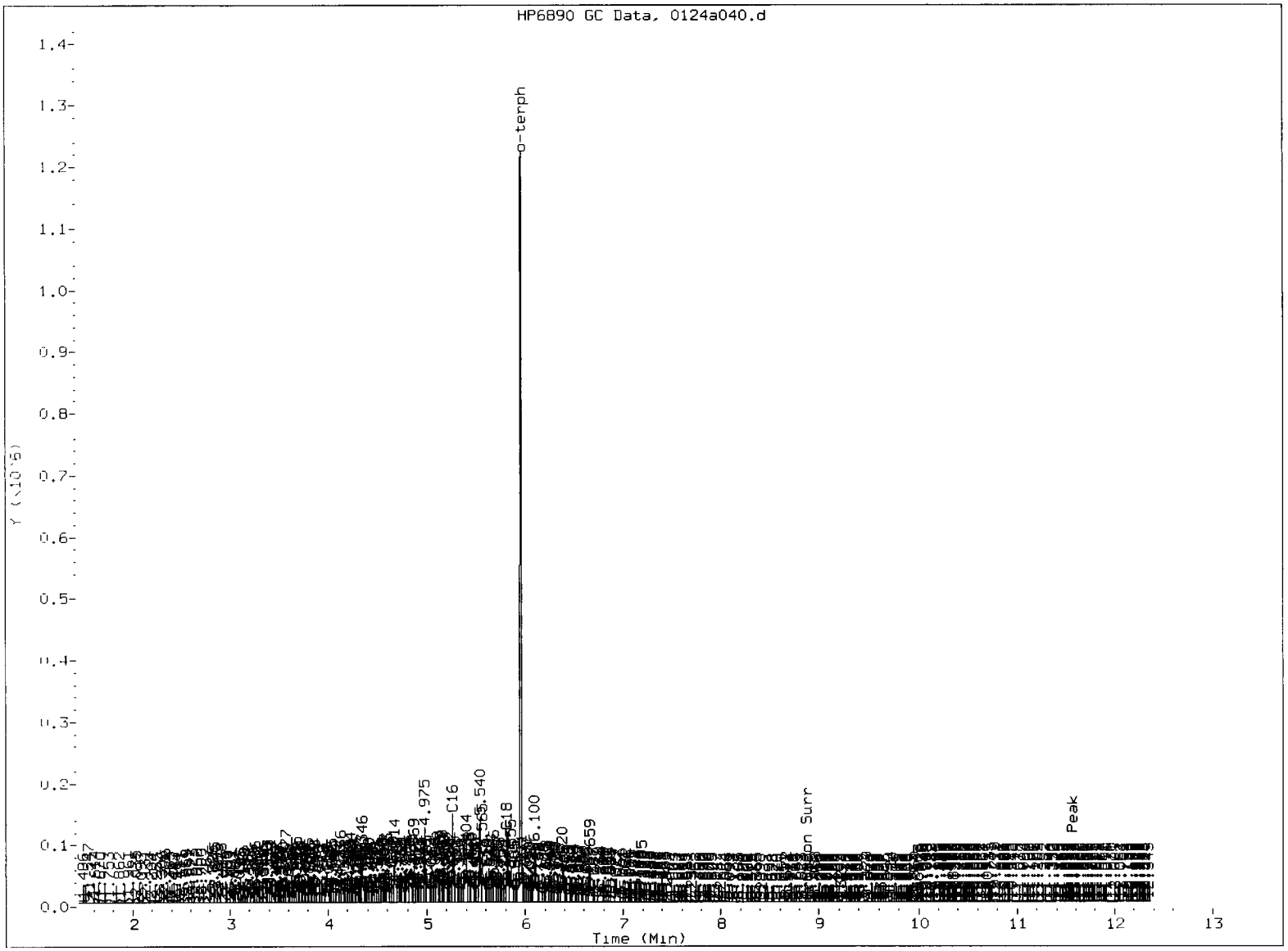
Operator: JP/VTS
Column diameter: 0.25

VT 1.25.13

U237-91539



FID:4A-2C/RTX-1 DIESEL#3 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VJ Date: 1-25-13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130124.b/0124a041.d
Method: /chem3/fid4a.i/20130124.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS
Report Date: 01/25/2013
Macro: 05-JAN-2013
Calibration Dates: Gas:15-JAN-2013 Diesel:05-JAN-2013 M.Oil:05-JAN-2013

ARI ID: MOIL#3
Client ID:
Injection: 25-JAN-2013 05:06
Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.124	-0.033	15177	90499	WATPHG	(Tol-C12)	177824	16.03
C8	----				WATPHD	(C12-C24)	598111	36.27
C10	3.072	0.000	558	1185	WATPHM	(C24-C38)	5789941	512.12
C12	4.003	0.009	288	437	AK102	(C10-C25)	834509	42.16
C14	4.674	-0.005	168	137	AK103	(C25-C36)	5294729	575.38
C16	5.279	0.010	68	45				
C18	5.829	0.000	222	291				
C20	6.401	0.009	1144	811	JET-A	(C10-C18)	42573	7.86
C22	6.938	-0.003	5365	1998				
C24	7.465	0.000	21692	6747	MSPIRIT	(Tol-C12)	177824	13.43
C25	7.718	0.003	29406	23204				
C26	7.979	0.006	33505	39064				
C28	8.419	0.000	41569	25579				
C32	9.239	-0.003	44578	14802				
C34	9.629	0.005	37728	19803				
Filter Peak	11.562	0.002	1153	1077	CREOSOT	(C12-C22)	134262	66.73 M
C36	9.988	-0.006	22918	22023				
C38	10.353	0.002	9836	13232				
C40	10.709	0.007	3482	4463				
o-terph	5.956	-0.008	599	1071				
Triacon Surr	8.836	-0.019	924609	861166	NAS DIES	(C10-C24)	620834	51.30

Range Times: NW Diesel(3.993 - 7.466) AK102(3.07 - 7.71) Jet A(3.07 - 5.83)
NW M.Oil(7.47 - 10.35) AK103(7.71 - 9.99) OR Diesel(3.07 - 8.42)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1071	0.1	0.1
Triacontane	861166	45.9	102.0 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	20266.9	24-JAN-2013
Triacon Surr	18755.2	24-JAN-2013
Gas	11090.5	15-JAN-2013
Diesel	16488.8	05-JAN-2013
Motor Oil	11305.9	05-JAN-2013
AK102	19795.4	05-JAN-2013
AK103	9202.1	25-SEP-2012
JetA	5416.5	11-AUG-2012
Min Spirit	13245.5	15-DEC-2012
NAS Diesel	12103.0	05-JAN-2013
Creosote	2012.1	01-NOV-2011

Data File: /chem3/fid4a.i/20130124.b/0124a041.d
Date : 25-JAN-2013 05:06
Client ID:
Sample Info: MOIL#3

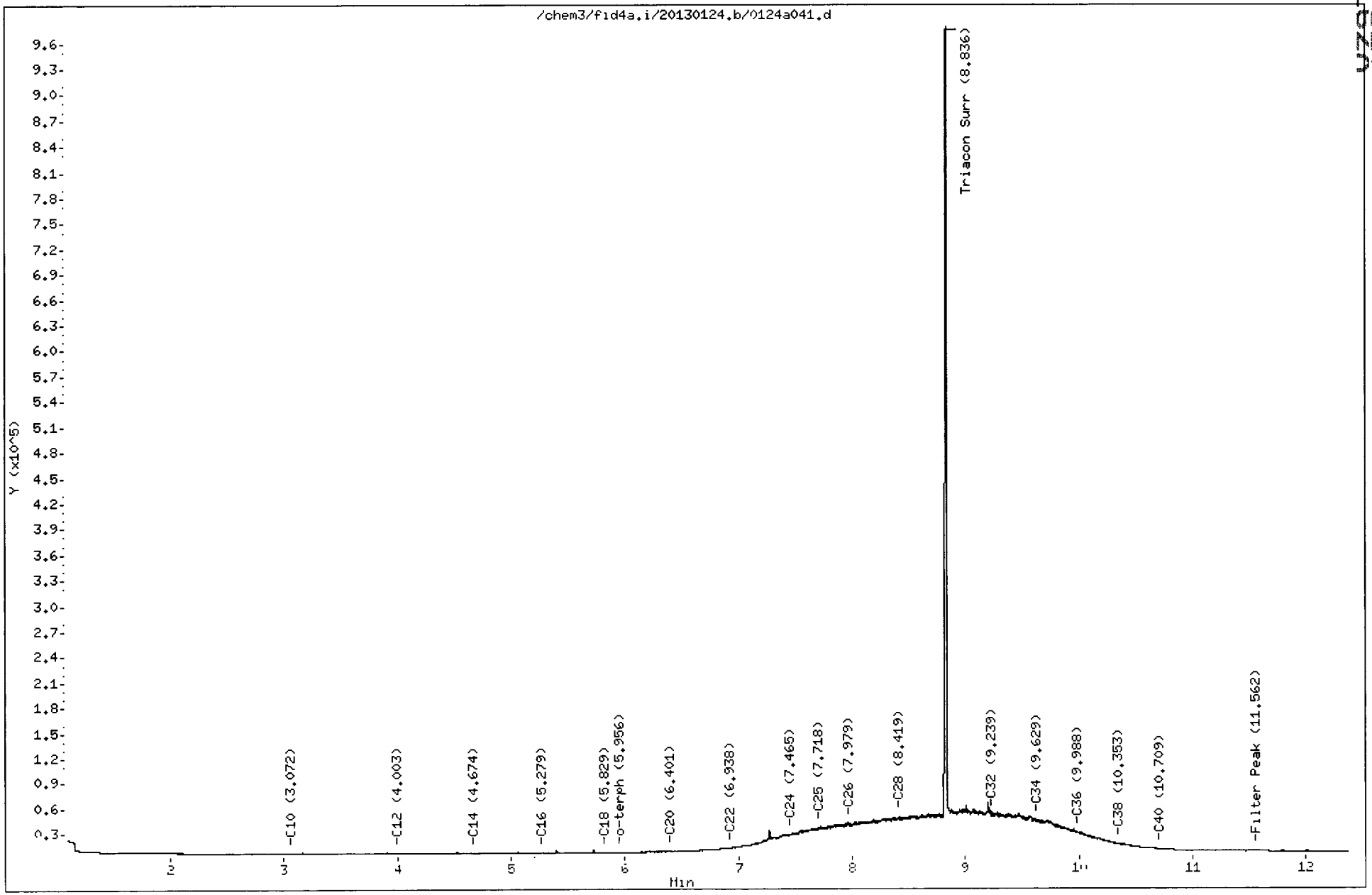
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS
Column diameter: 0.25

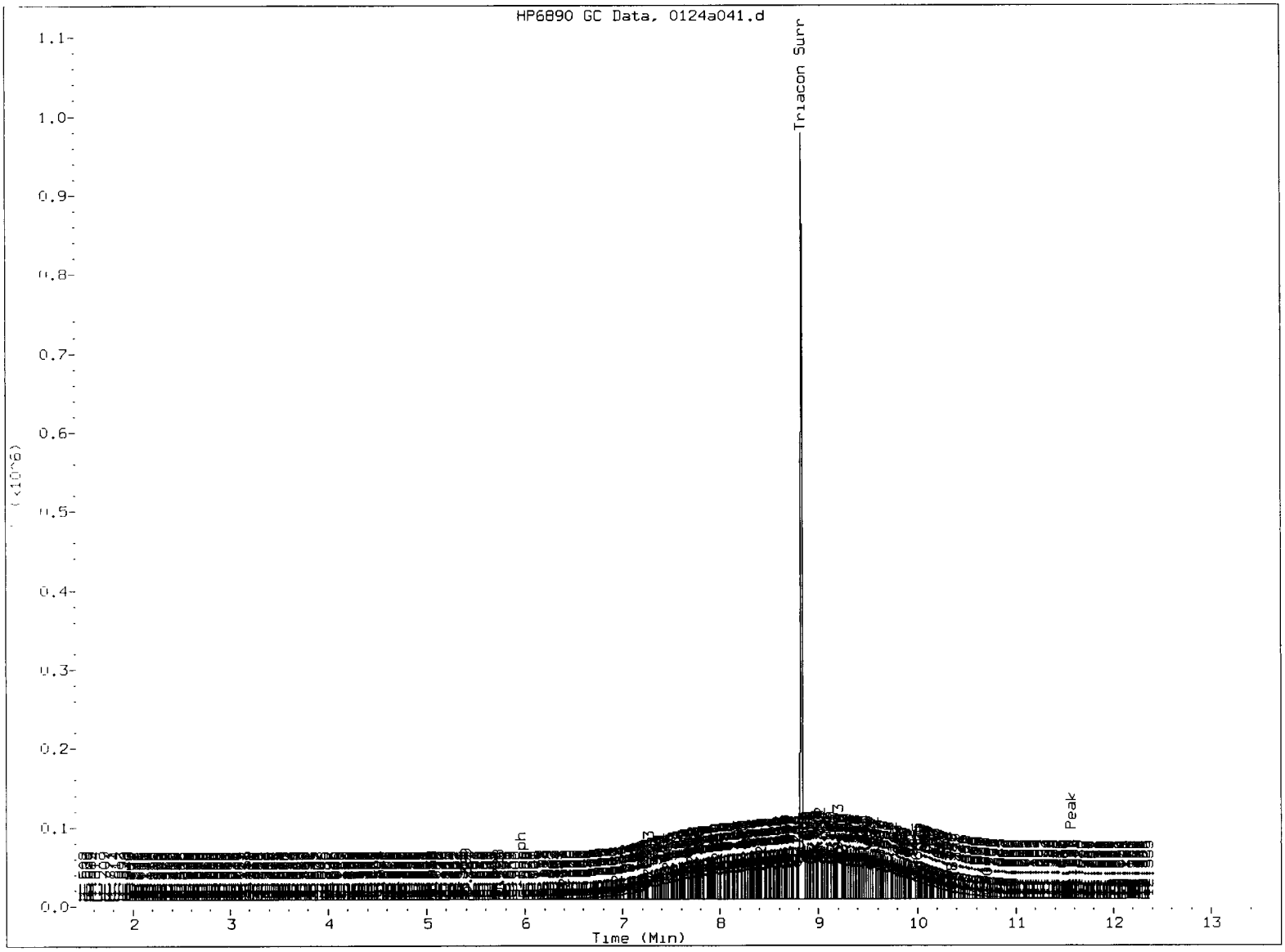
VD 1.25.13

UZ97-015529



FID:4A-2C/RTX-1 MOIL#3

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: VN

Date: 1.25.13

TPHG Raw Data
Preparation Log

ARI Job ID: VZ97

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Method 5035 Extraction Bench Sheet

(8260B, 8260B-SIM, 8021, NWTPH-Gx, AK-101, TPH-G, VPH, TCLP-ZHE)

ARI Project No.	Client ID	Prep/Extraction Date	MeOH Lot No.	Analyst
VZ97	Anchor QEA	1/18/13	NA	

reruns 1/21/13 PC same 5035 vials used

	Lab ID	Vial No.	Preservative			Method 5035 Sample Weight					Comments
			$NaHSO_3$	CH_3OH	Lot #	Vial Weight (g)	Tare (from vial) (g)	Sample Weight (g)	Extract Volume (mL)	MeOH Spilt Volume (µL)	
1	VZ97A	3		X	DE695	69.54	27.474	42.066	5mL	900µl	Appears to be 10 mL NaS/M 50 on A
2	B	4				49.26	27.591	21.669			
3	C	5				46.85	27.600	19.250			
4	D	3				44.27	27.574	16.696			
5	E	3				47.55	27.522	20.028			
6	F	3				47.81	27.461	20.349			
7	G	3				52.02	27.555	24.465			
8	H	3				48.80	27.572	21.228			
9	I	3				46.74	27.647	19.093			
10	J	4				45.83	27.528	18.302			
11	K	4				48.65	27.468	21.182		90µl	rerun 90µL
12	L	4				49.50	27.484	22.016			
13	M	5				45.35	27.550	17.800			
14	N	4				46.47	27.442	19.028		45µl	
15	O	4				48.57	27.573	21.057			rerun 90µL
16	P	4				46.83	27.609	19.221		90µl	
17	Q	5				49.41	27.867	21.543			
18	R	4	done 1/18/13			39.22	28.176	11.044		900µl	
19											
20											
21											
22											
23										1/18/13	
				Balance ID:		40050016 PT120					

8043F – VOA Extraction Log

Version 010 – 9/6/12

TPHG Raw Data
Initial Calibration Notes and Raw Data

ARI Job ID: VZ97

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Initial Calibration Notes

ARI SOP: **404S**(Gas) **410S**(BTEX) **430S**(VPH) **700S**(8260C) **703S**(SIM) **706S**(524.3) **710S**(RSK-175)

Instrument: NT-2 NT-3 NT-5 NT-7 NT-9 **PID-1** PID-2 PID-3 FID-6

Curve Date(s): 10/23/12 Internal Standard ID N/A Expiration N/A

BFB Tune Meets Criteria?	N/A YES / NO	ICV Exceeding ±20%?	YES / NO
ICal Meets %RSD & r^2 Criteria?	YES / NO	ICV Exceeding ±30%?	YES / NO
Q flag applied?	YES / NO	Linear Fits Used?	YES / NO
Manual Integrations for ICal?	YES / NO	Quadratic Fits Used?	YES / NO
Spectral Library Updated?	N/A YES / NO	Calibration Points Dropped?	YES / NO
Minimum Response Factors Met	N/A YES / NO	Purge Volume (mL)	5

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Restek	VW758-3	2/1/13	Ultra Scientific	VW765-1	3/13/12
SPEX	VW754-1	2/2/12	SPEX	VW765-5	3/27/12

Detail problems, corrective actions and/or other pertinent information below:

MI's for peaks not found, baseline corrections.
TFT inflated on high pt of gas curve due to hydrocarbon interference.
MTBE @ 0.25 & 0.5 pts of BETX curve dropped & low pt FID confirmation dropped as well for MTBE

Analyst: JW **Date:** 10/25/12

Reviewer: [signature] **Date:** 10/26/12

VZ97 : 01538

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 23-OCT-2012 17:50
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-2.b/PIDB.m
Cal Date : 24-Oct-2012 10:09 jonw
Curve Type : Average

Calibration File Names:
Level 1: /chem3/pid1.i/20121023-2.b/1023a011.d
Level 2: /chem3/pid1.i/20121023-2.b/1023a010.d
Level 3: /chem3/pid1.i/20121023-2.b/1023a009.d
Level 4: /chem3/pid1.i/20121023-2.b/1023a008.d
Level 5: /chem3/pid1.i/20121023-2.b/1023a007.d
Level 6: /chem3/pid1.i/20121023-2.b/1023a006.d
Level 7: /chem3/pid1.i/20121023-2.b/1023a005.d
Level 8: /chem3/pid1.i/20121023-2.b/1023a004.d

Compound	0.25000 Level 1 / 100.000 Level 7	0.50000 Level 2 / 200.000 Level 8	1.000 Level 3	5.000 Level 4	25.000 Level 5	50.000 Level 6	RRF	% RSD
1 MTBE	+++++ / 72.39000	+++++ / 68.24000	72.00000	75.40000	71.84000	72.14000	72.00167	3.161
2 Benzene	228 / 247	254 / 246	260	255	246	248	248	3.847
4 Toluene	256 / 220	234 / 216	210	224	220	219	225	6.342
5 Ethylbenzene	192 / 199	200 / 193	198	201	196	198	197	1.663
6 M/P-Xylene	216 / 218	208 / 215	212	220	215	217	215	1.653
7 O-Xylene	160 / 173	158 / 170	168	171	172	171	168	3.365

VZ97 : 01539

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 23-OCT-2012 17:50
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-2.b/PIDB.m
Cal Date : 24-Oct-2012 10:09 jonw
Curve Type : Average

Compound	0.25000 Level 1	0.50000 Level 2	1.000 Level 3	5.000 Level 4	25.000 Level 5	50.000 Level 6	100.000 Level 7	200.000 Level 8	___ RRF	% RSD
$ 3 TFT(Surr)	38.86364	37.09091	+++++	37.55224	37.30000	36.97744	38.10674	39.27500	37.88085	2.372
$ 8 BB(Surr)	81.36364	78.68182	+++++	80.38806	80.55000	80.24060	82.00562	79.97000	80.45710	1.310

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 23-OCT-2012 17:50
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-2.b/PIDB.m
Cal Date : 24-Oct-2012 10:09 jonw
Curve Type : Average

Average %RSD Results.
Calculated Average %RSD = 2.96423
Maximun Average %RSD = 20.00000
* Passed Average %RSD Test.

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2012 10:07
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-1.b/FID.m
Cal Date : 24-Oct-2012 10:39 jonw
Curve Type : Average

Calibration File Names:
Level 1: /chem3/pid1.i/20121023-1.b/1023a011.d/1023a011.cdf
Level 2: /chem3/pid1.i/20121023-1.b/1023a010.d/1023a010.cdf
Level 3: /chem3/pid1.i/20121023-1.b/1023a009.d/1023a009.cdf
Level 4: /chem3/pid1.i/20121023-1.b/1023a008.d/1023a008.cdf
Level 5: /chem3/pid1.i/20121023-1.b/1023a007.d/1023a007.cdf
Level 6: /chem3/pid1.i/20121023-1.b/1023a006.d/1023a006.cdf
Level 7: /chem3/pid1.i/20121023-1.b/1023a005.d/1023a005.cdf
Level 8: /chem3/pid1.i/20121023-1.b/1023a004.d/1023a004.cdf

Compound	0.000e+00 Level 1	Level 2	Level 3	Level 4	Level 5	Level 6	Level 7	Level 8	RRF	% RSD	
1 NWTPHG	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
2 WAGAS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
3 AK101	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
4 8015GAS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
5 2-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
6 MTBE	+++++	472	600	610	595	575	561	509	560	9.173	

UZ97 : 01502

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2012 10:07
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-1.b/FID.m
Cal Date : 24-Oct-2012 10:39 jonw
Curve Type : Average

Compound	0.000e+00 Level 1	0.000e+00 Level 2	0.000e+00 Level 3	0.000e+00 Level 4	0.000e+00 Level 5	0.000e+00 Level 6	0.000e+00 Level 7	0.000e+00 Level 8	RRF	% RSD	
7 nC6	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
8 nC7	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
9 BENZENE	1572	1618	1515	1498	1392	1352	1307	1232	1436	9.456	
11 nC8	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
12 Toluene	1464	1522	1397	1472	1356	1326	1283	1207	1378	7.690	
13 nC9	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
14 ETHYLBENZENE	132	126	121	118	109	107	103	95.88000	114	10.830	
15 M/P-XYLENE	1612	1580	1476	1417	1290	1260	1226	1156	1377	12.313	
16 O-XYLENE	1504	1538	1492	1414	1330	1289	1249	1171	1373	9.739	

VZ97:01543

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2012 10:07
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-1.b/FID.m
Cal Date : 24-Oct-2012 10:39 jonw
Curve Type : Average

Compound	0.000e+00 Level 1	0.000e+00 Level 2	0.000e+00 Level 3	0.000e+00 Level 4	0.000e+00 Level 5	0.000e+00 Level 6	0.000e+00 Level 7	0.000e+00 Level 8	___ RRF	% RSD	
17 nC10-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
20 1,2,4-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
21 nc11	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
22 nC12-Dodecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
23 nC13	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
24 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
$ 10 TFT(Surr)	33.31818	31.81818	+++++	31.61194	31.34000	30.78195	30.91573	30.69500	31.49728	2.884	
$ 18 BB(Surr)	22.00000	20.54545	+++++	20.70149	20.31000	19.83459	19.84270	18.93000	20.30918	4.677	
$ 19 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-

VZ97:0154U

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 13-SEP-2012 10:07
End Cal Date : 23-OCT-2012 21:15
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20121023-1.b/FID.m
Cal Date : 24-Oct-2012 10:39 jonw
Curve Type : Average

Average %RSD Results.
Calculated Average %RSD = 10.58832
Maximun Average %RSD = 20.00000
* Passed Average %RSD Test.

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a004.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a004.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 200
Client ID:
Injection Date: 23-OCT-2012 17:50
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.887	0.000	6139	78345	194.1	TFT(Surr)
15.390	0.003	3786	32155	185.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	1708650	4.771 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	1708791	2.361 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	1600978	2.747 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	1713577	4.568 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.896	0.003	7855	207.4	TFT(Surr)
15.397	0.003	15994	198.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.078	0.001	49204	198.42	Benzene
9.910	0.003	43241	192.19N	Toluene
12.793	0.006	38665	196.10	Ethylbenzene
12.957	0.014	85891	399.48	M/P-Xylene
13.900	0.010	34089	203.10N	O-Xylene
4.650	-0.003	13648	189.55	MTBE

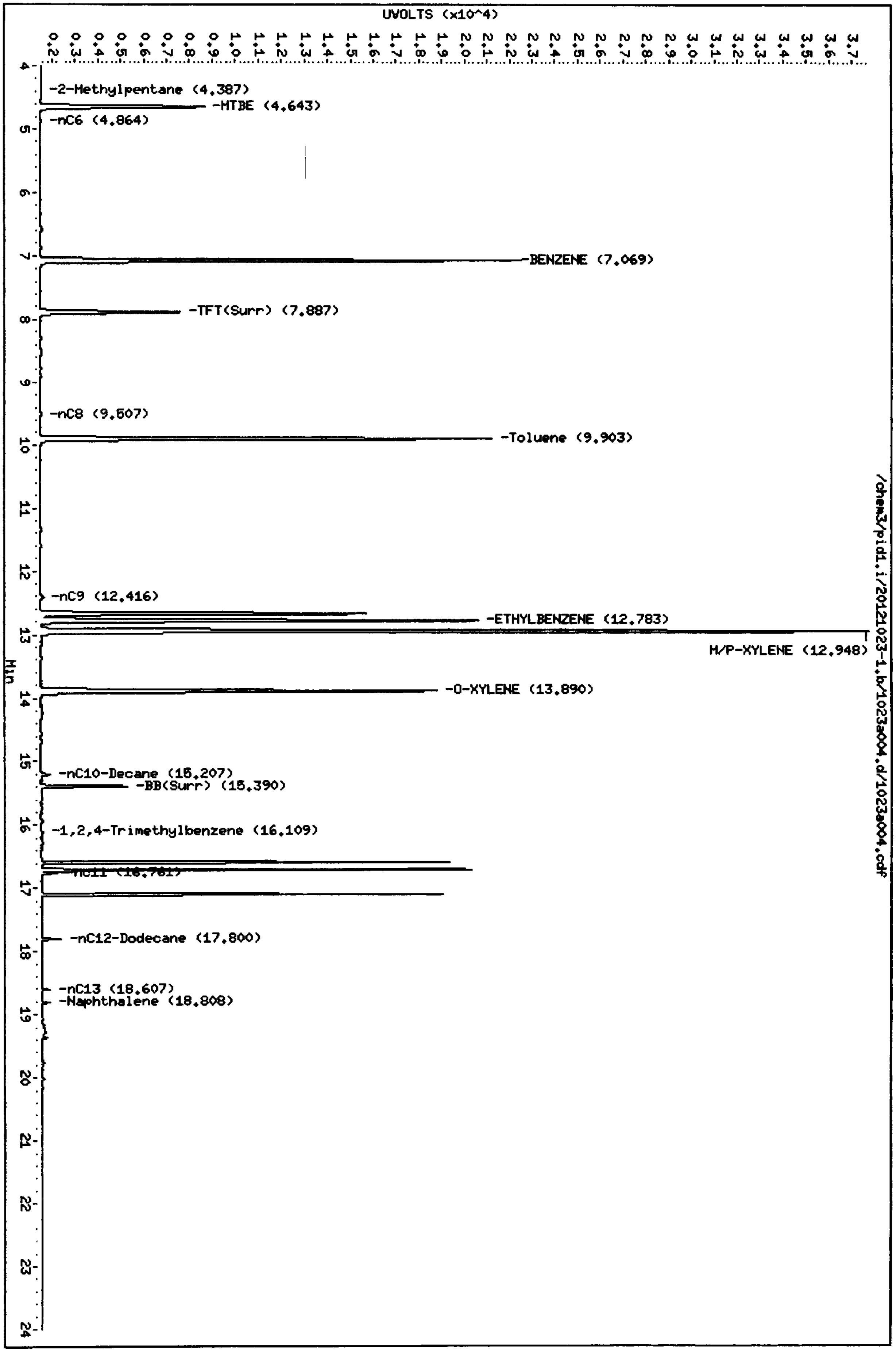
JW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a004.d
Date : 23-OCT-2012 17:50
Client ID:
Sample Info: B 200
Column phase: RTX 502-2 FID

Instrument: pid1.i
Operator: PC/JW
Column diameter: 0.18

Page 1



UZ97 01547

Data File: /chem3/pid1.i/20121023-2.b/1023a004.d

Date : 23-OCT-2012 17:50

Client ID:

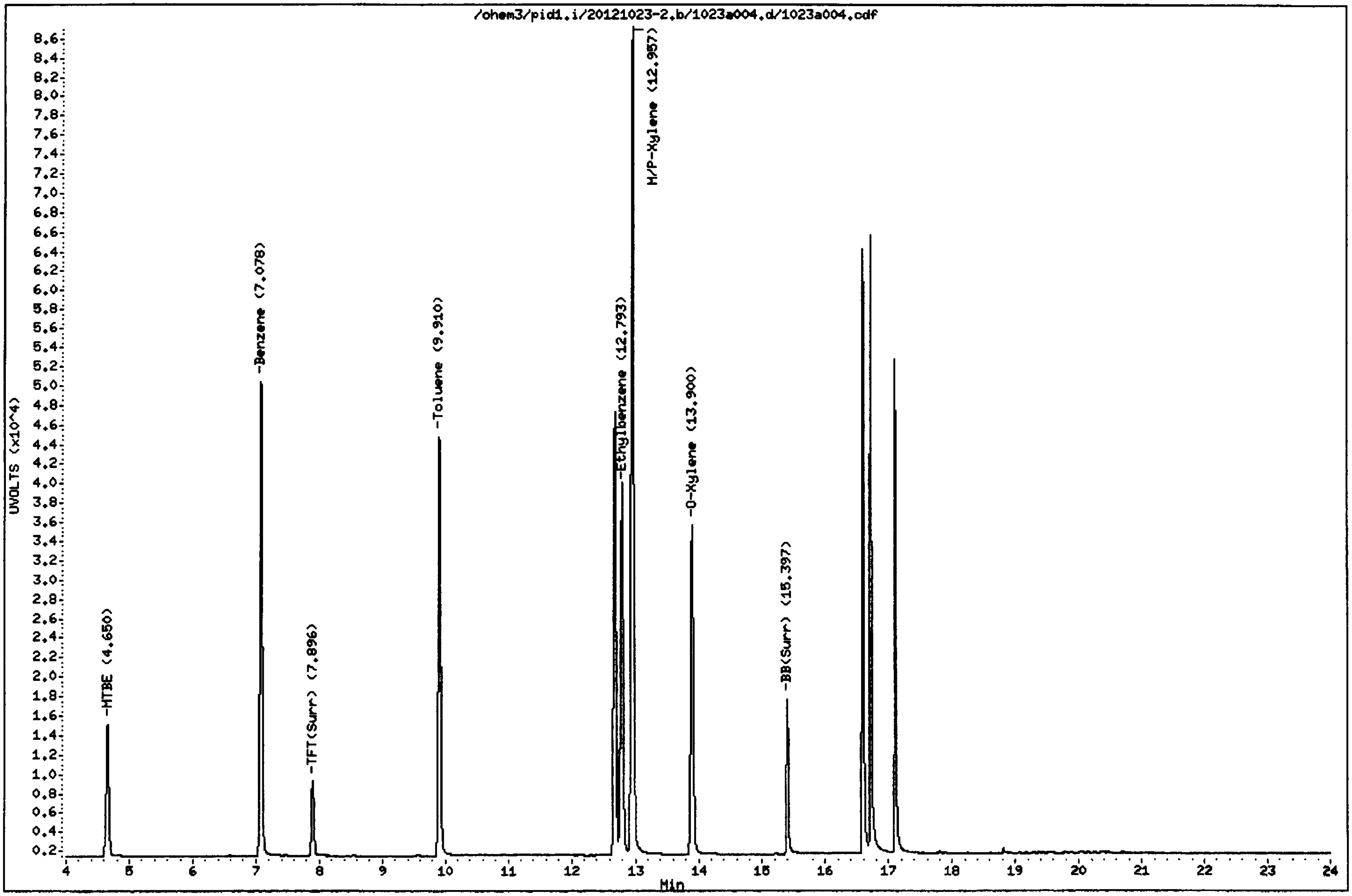
Sample Info: B 200

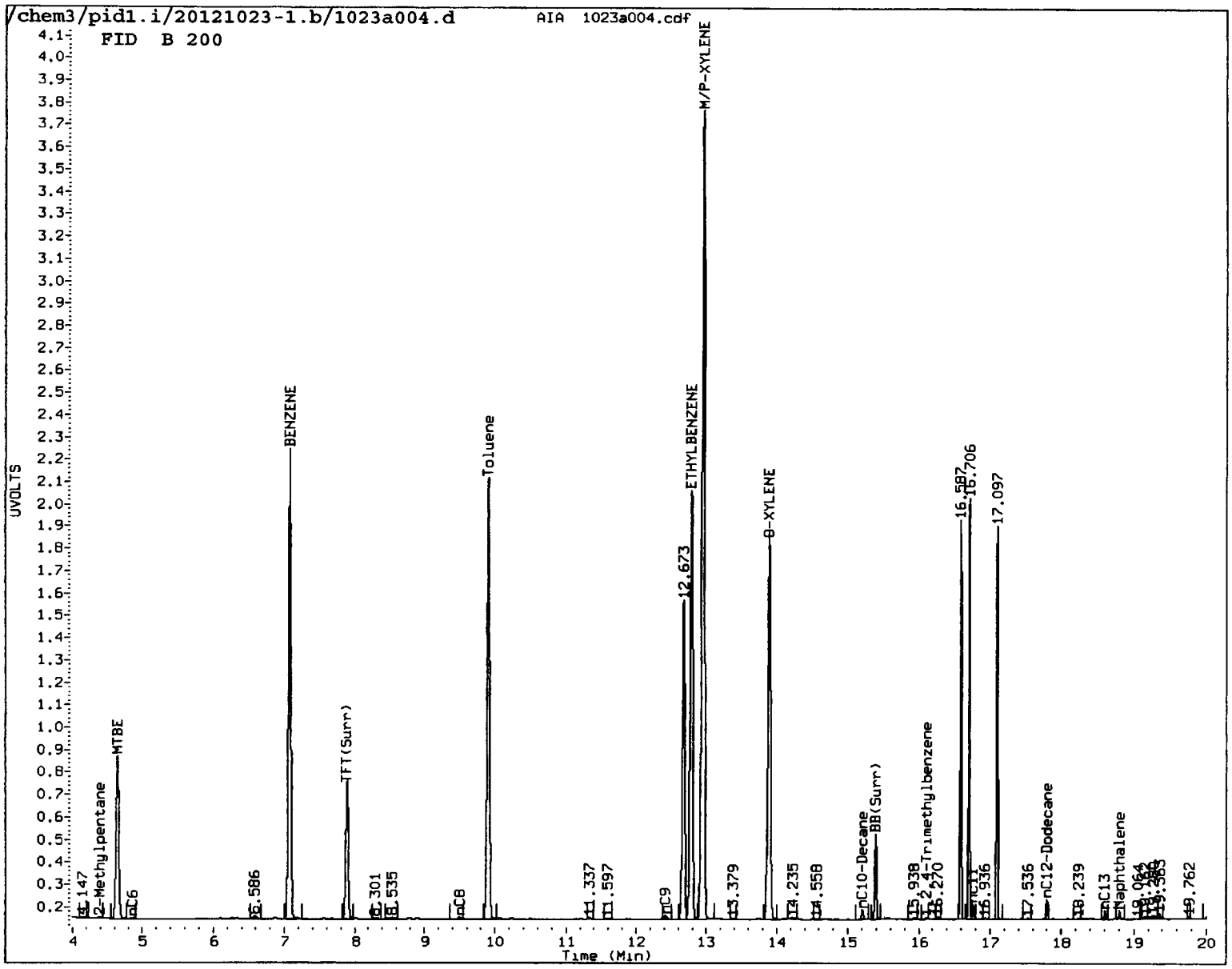
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





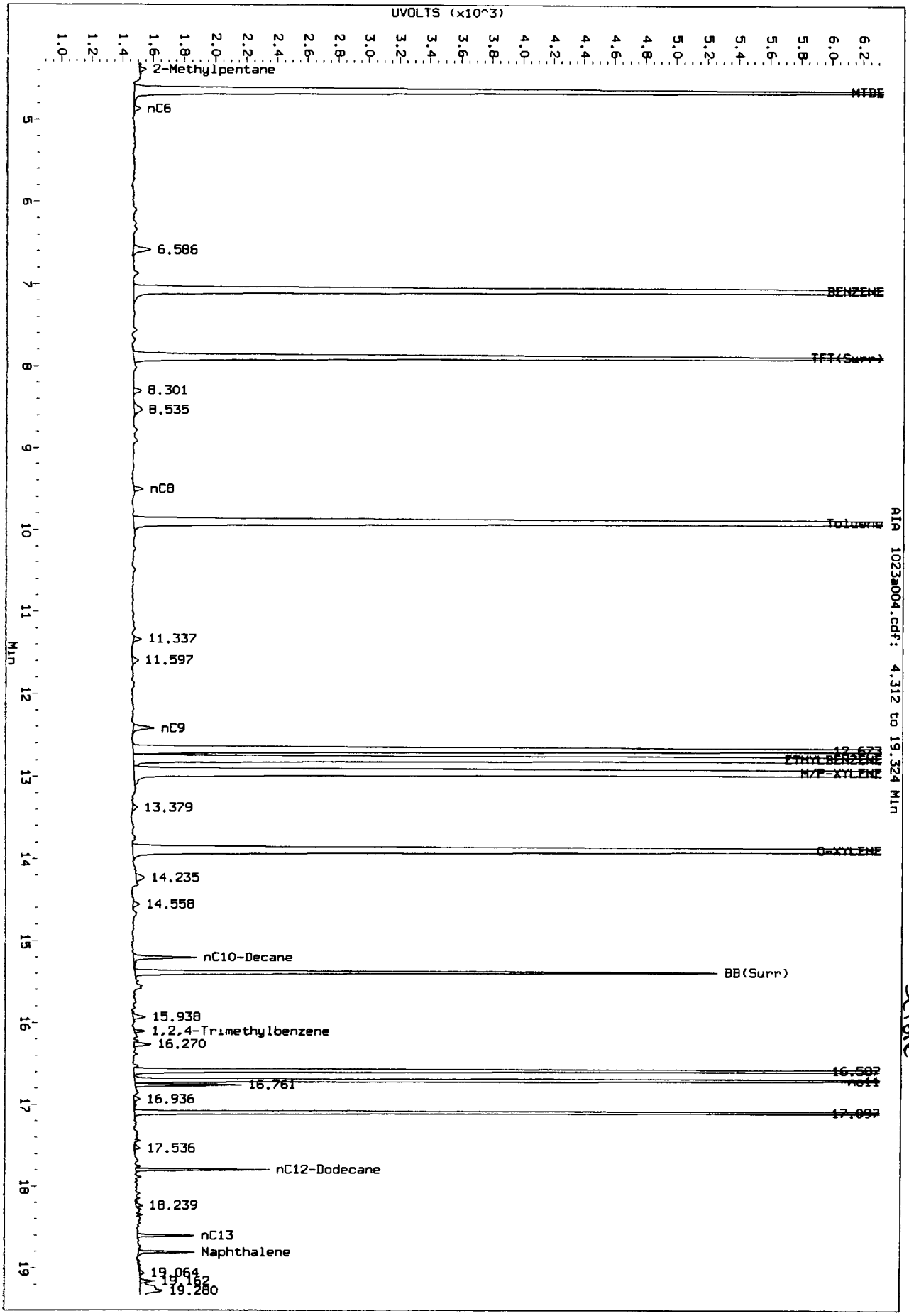
MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JW Date: 10/25/12

0207 : 01548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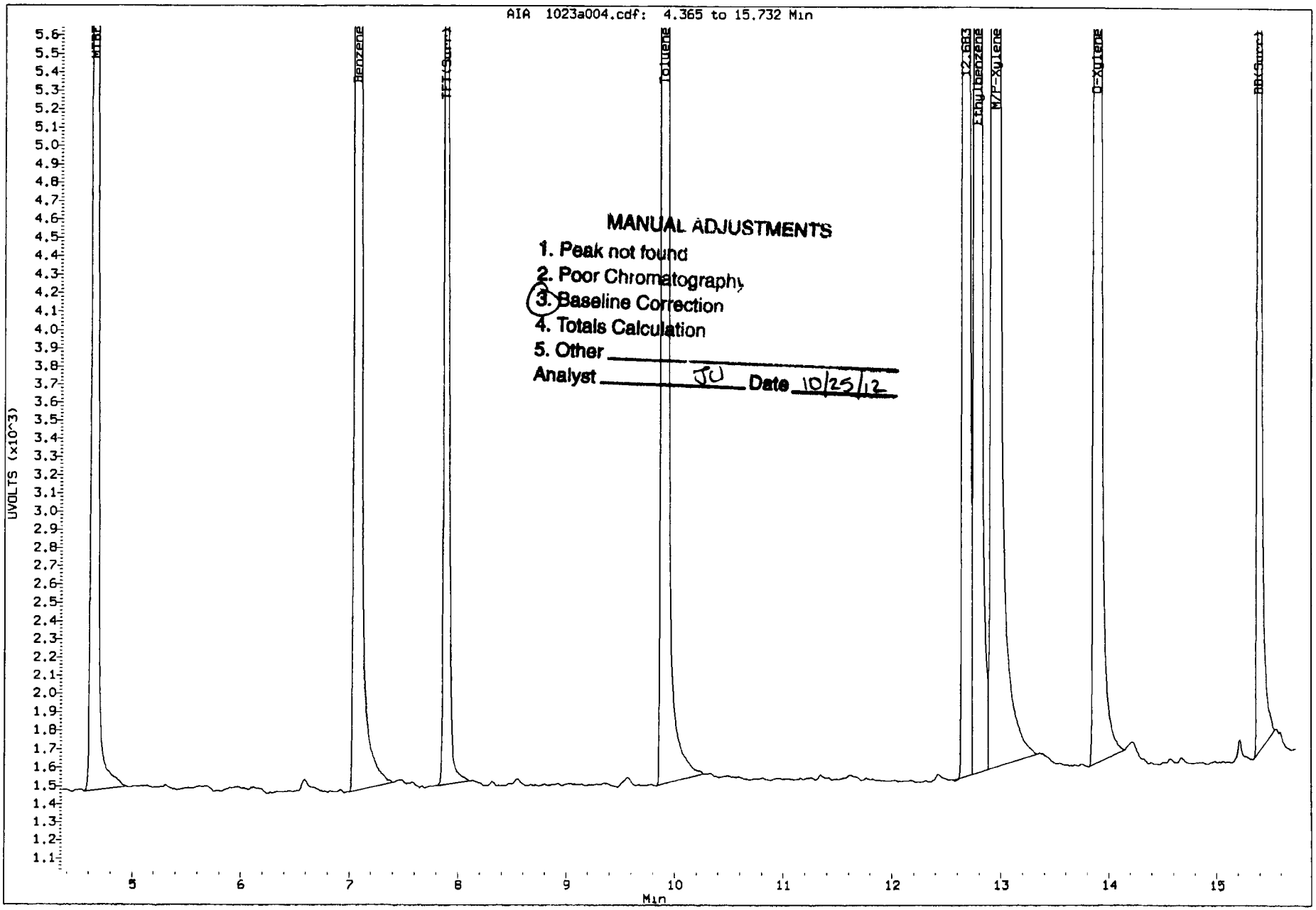
Injection Date: 23-OCT-2012 17:50
Instrument: pid1.i
Client Sample ID:
UVOLTS (x10^3)
Min
AIA 1023a004.cdf: 4.312 to 19.324 Min
2-Methylpentane
MTBE
nC6
6.586
BENZENE
TFT(Surr)
8.301
8.535
nC8
Toluene
11.337
11.597
nC9
12.673
ETHYLBENZENE
M/P-XYLENE
13.379
O-XYLENE
14.235
14.558
nC10-Decane
BB(Surr)
15.938
1,2,4-Trimethylbenzene
16.270
16.502
nC11
16.761
16.936
17.097
17.536
nC12-Dodecane
18.239
nC13
Naphthalene
19.064
19.162
19.280

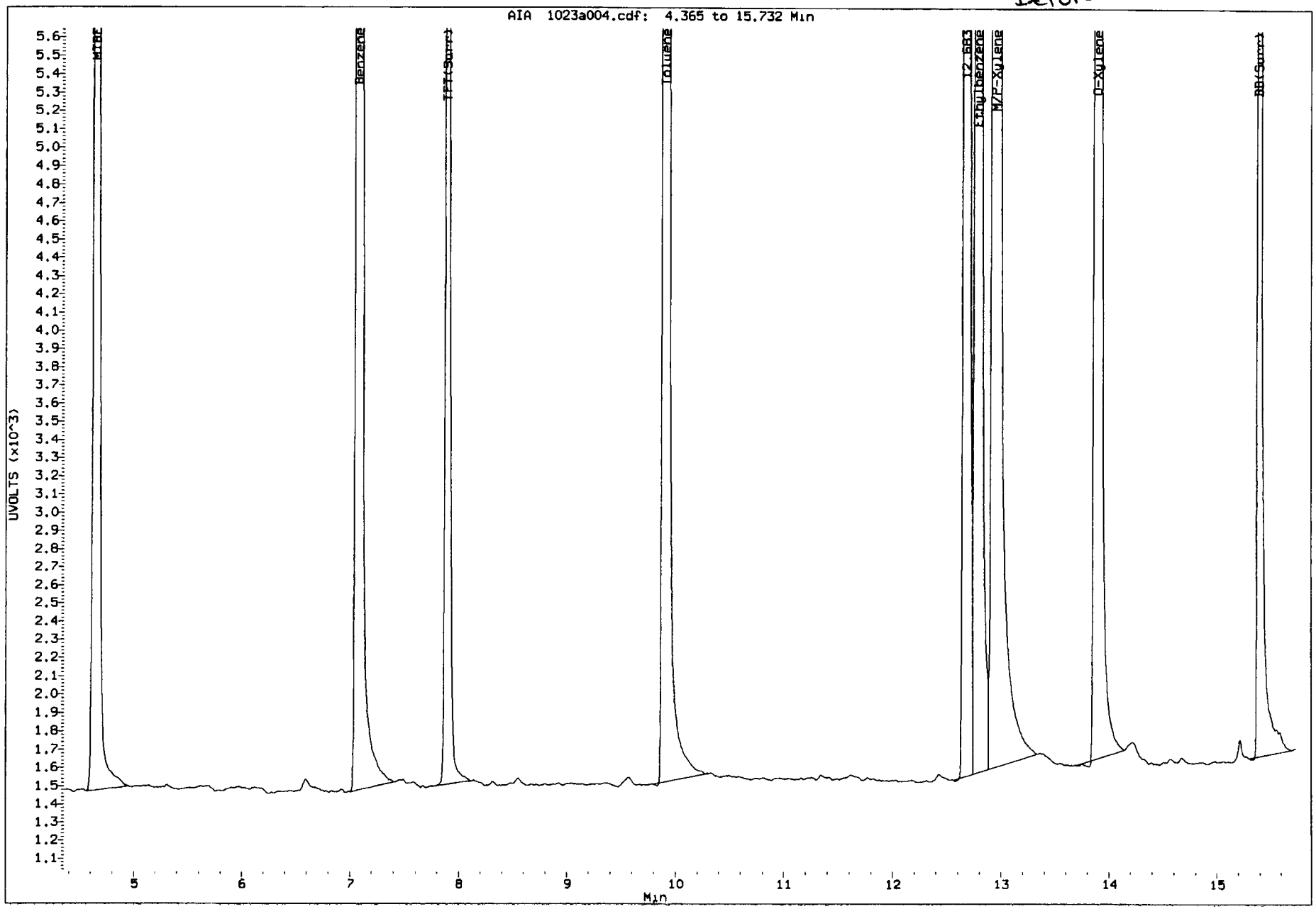
Data File: /chem3/pid1.i/20121023-2.b/1023a004.d/1023a004.cdf
Injection Date: 23-OCT-2012 17:50
Instrument: pid1.i
Client Sample ID:



ESS16-1527

Data File: /chem3/pid1.i/20121023-2.b/1023a004.d/1023a004.cdf
Injection Date: 23-OCT-2012 17:50
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a005.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a005.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 100
Client ID:
Injection Date: 23-OCT-2012 18:20
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.883	-0.004	5503	70111	174.0	TFT(Surr)
15.387	0.000	3532	29720	173.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	905684	2.529 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	901622	1.246 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	845537	1.451 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	906863	2.418 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.890	-0.003	6783	179.1	TFT(Surr)
15.393	0.000	14597	181.4	BB(Surr)

SW8021 (PID)

JW 10/25/12

RT	Shift	Response	Amount	Compound
7.073	-0.003	24688	99.56N	Benzene
9.903	-0.003	22030	97.92N	Toluene
12.785	-0.002	19930	101.08	Ethylbenzene
12.948	0.004	43574	202.66	M/P-Xylene
13.893	0.003	17274	102.92N	O-Xylene
4.650	-0.003	7239	100.54N	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a005.d

Date : 23-OCT-2012 18:20

Client ID:

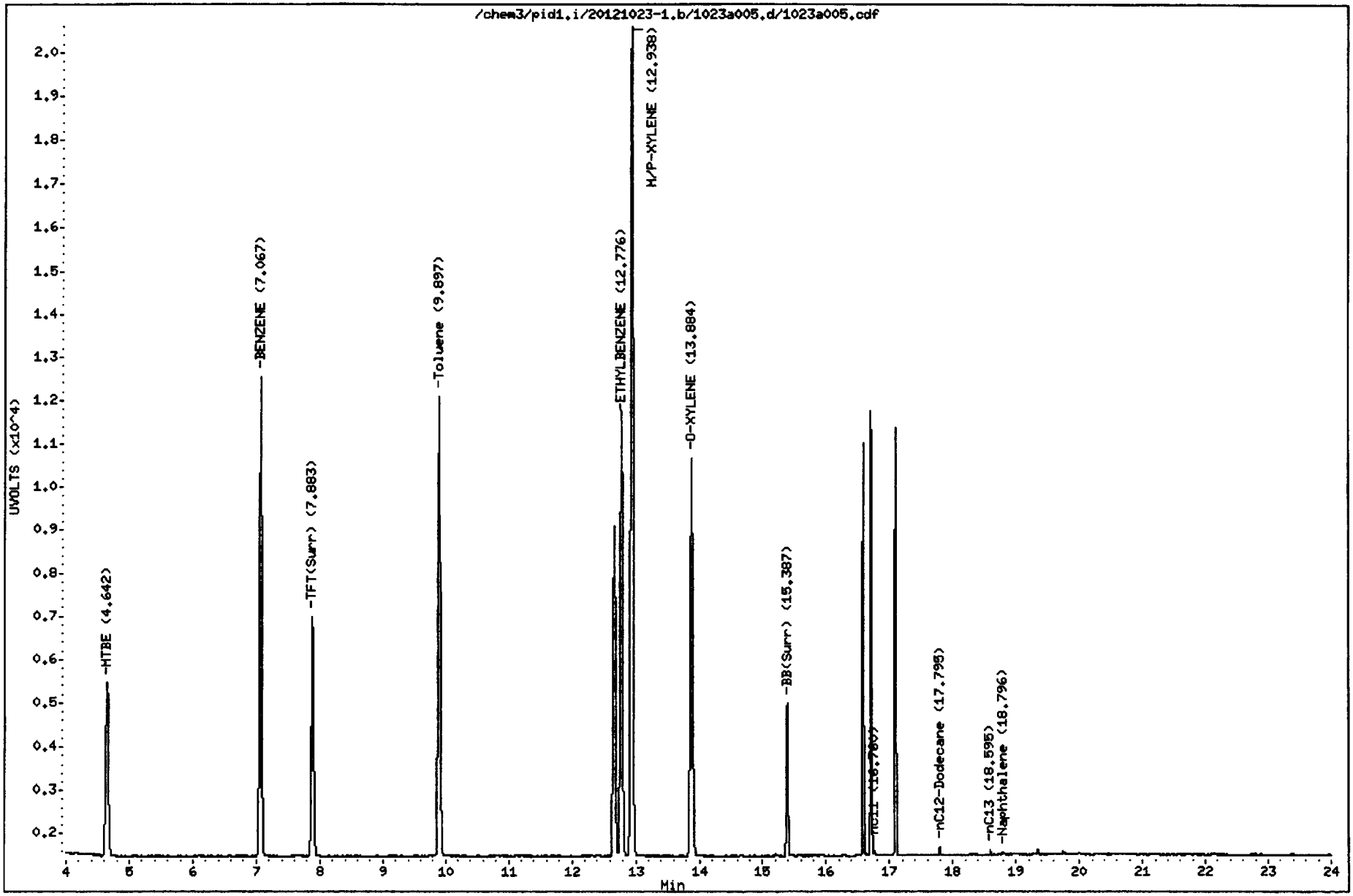
Sample Info: B 100

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a005.d

Date : 23-OCT-2012 18:20

Client ID:

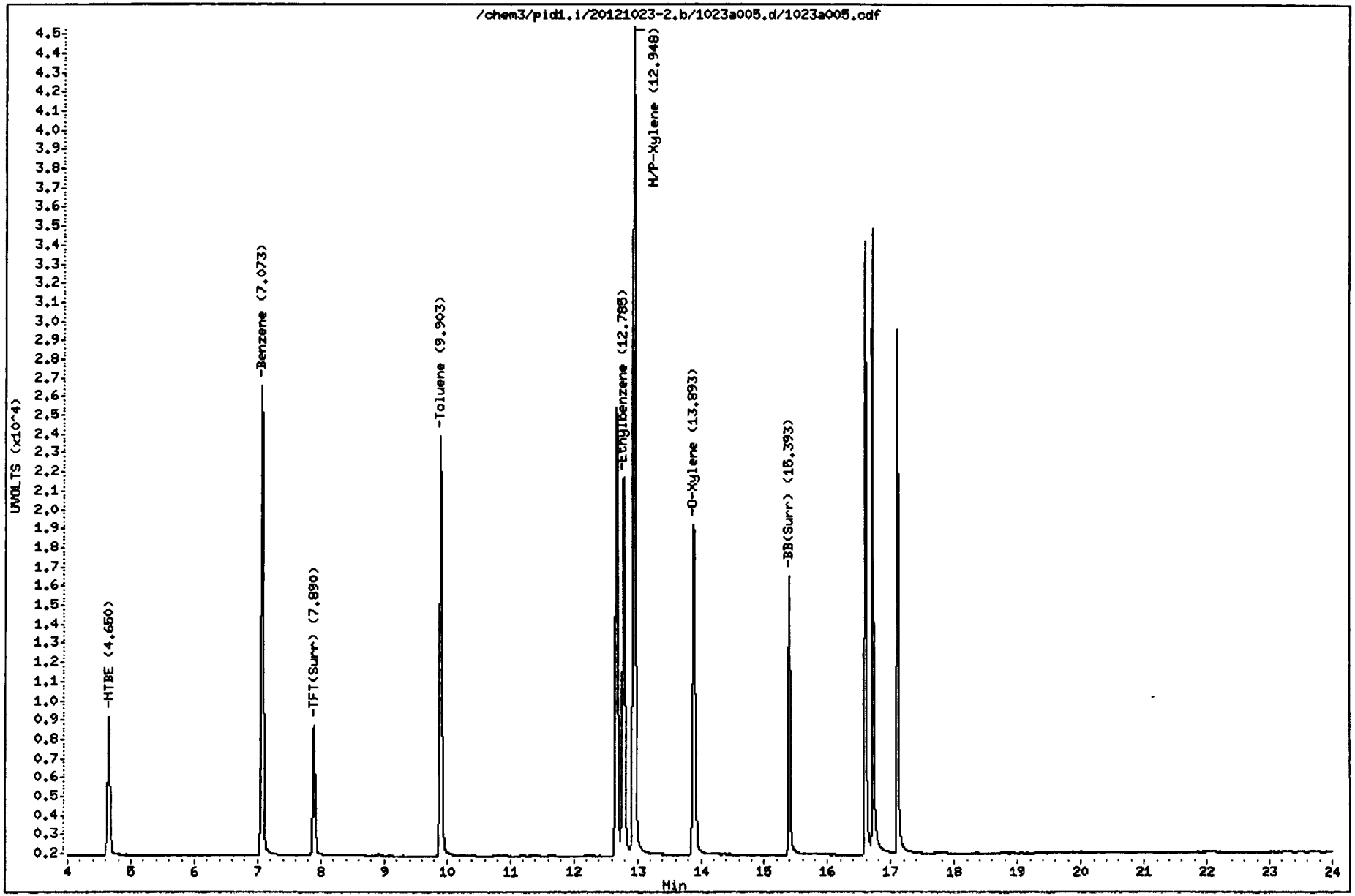
Sample Info: B 100

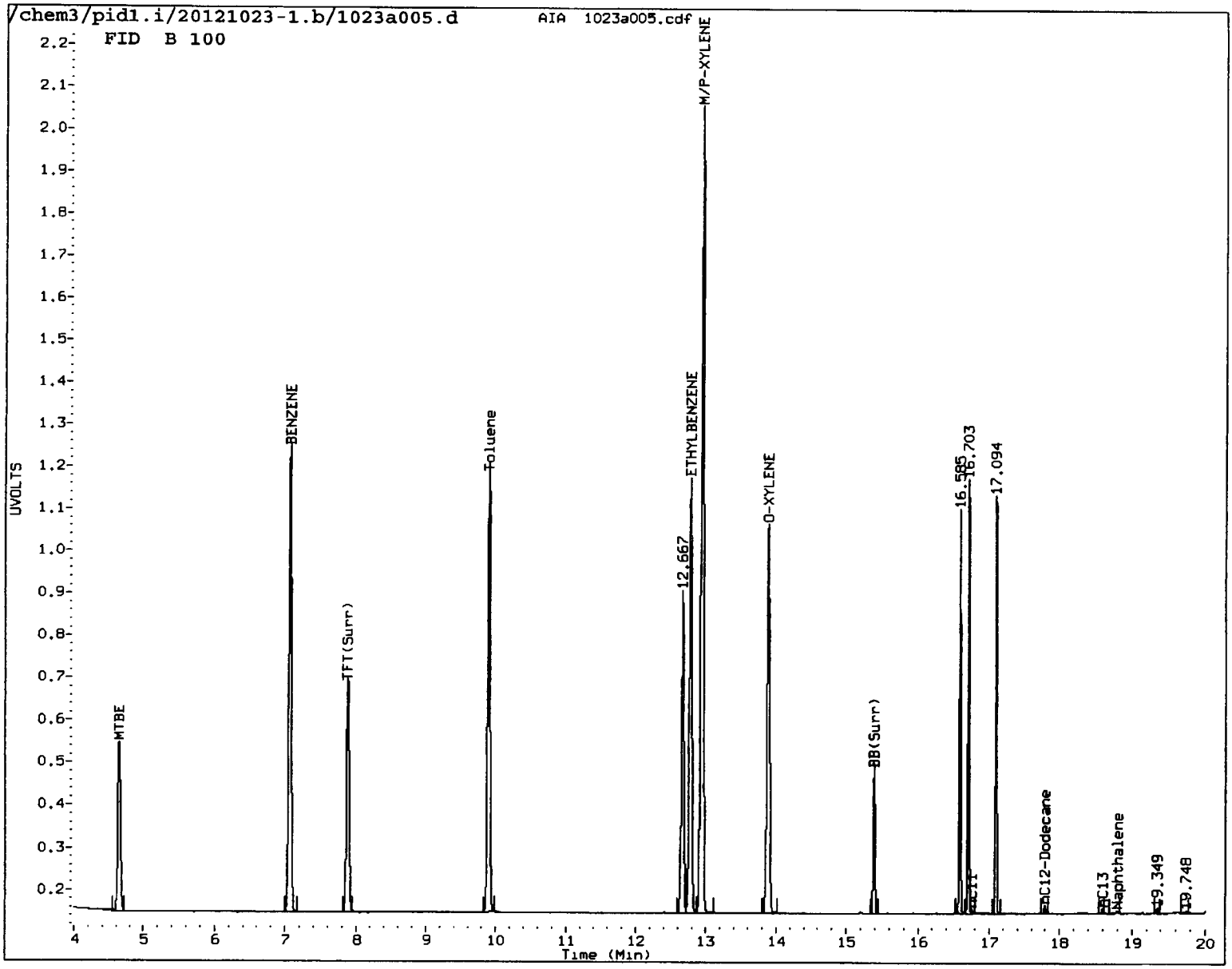
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

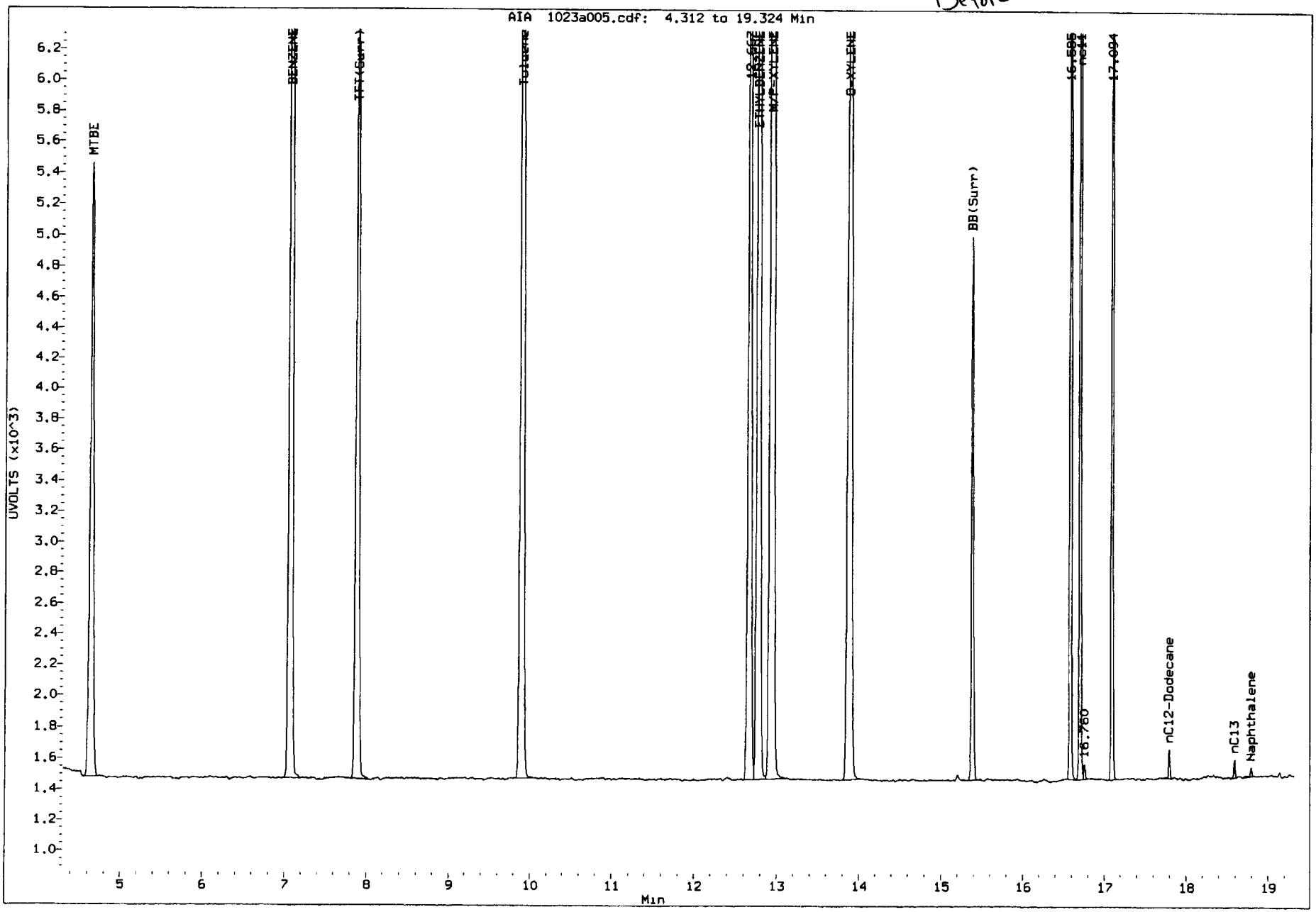
5. Other _____

Analyst: JW Date: 10/25/12

UZ97 : 01556

Data File: /chem3/pid1.i/20121023-1.b/1023a005.d/1023a005.cdf
Injection Date: 23-DCT-2012 18:20
Instrument: pid1.i
Client Sample ID:

Before



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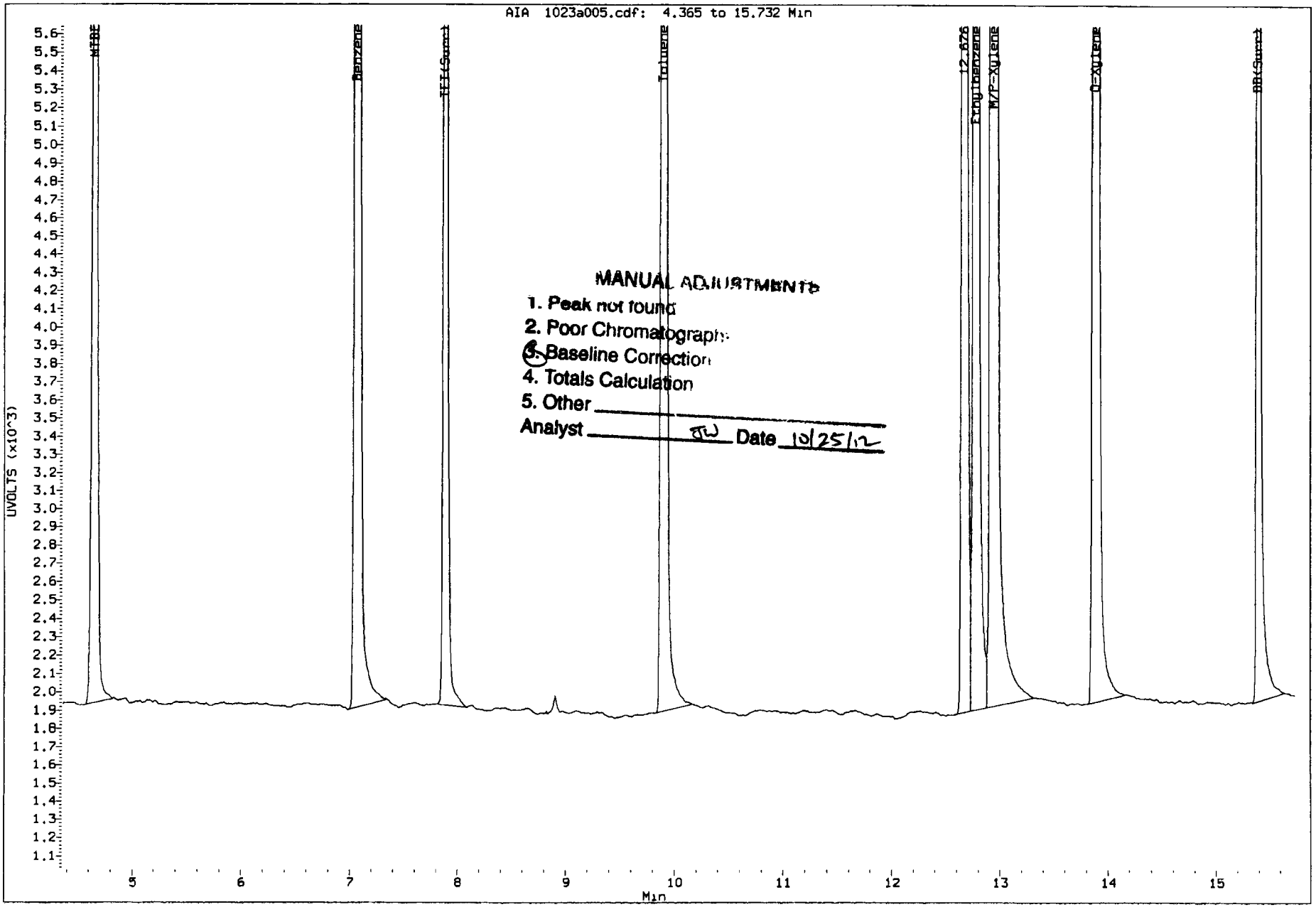
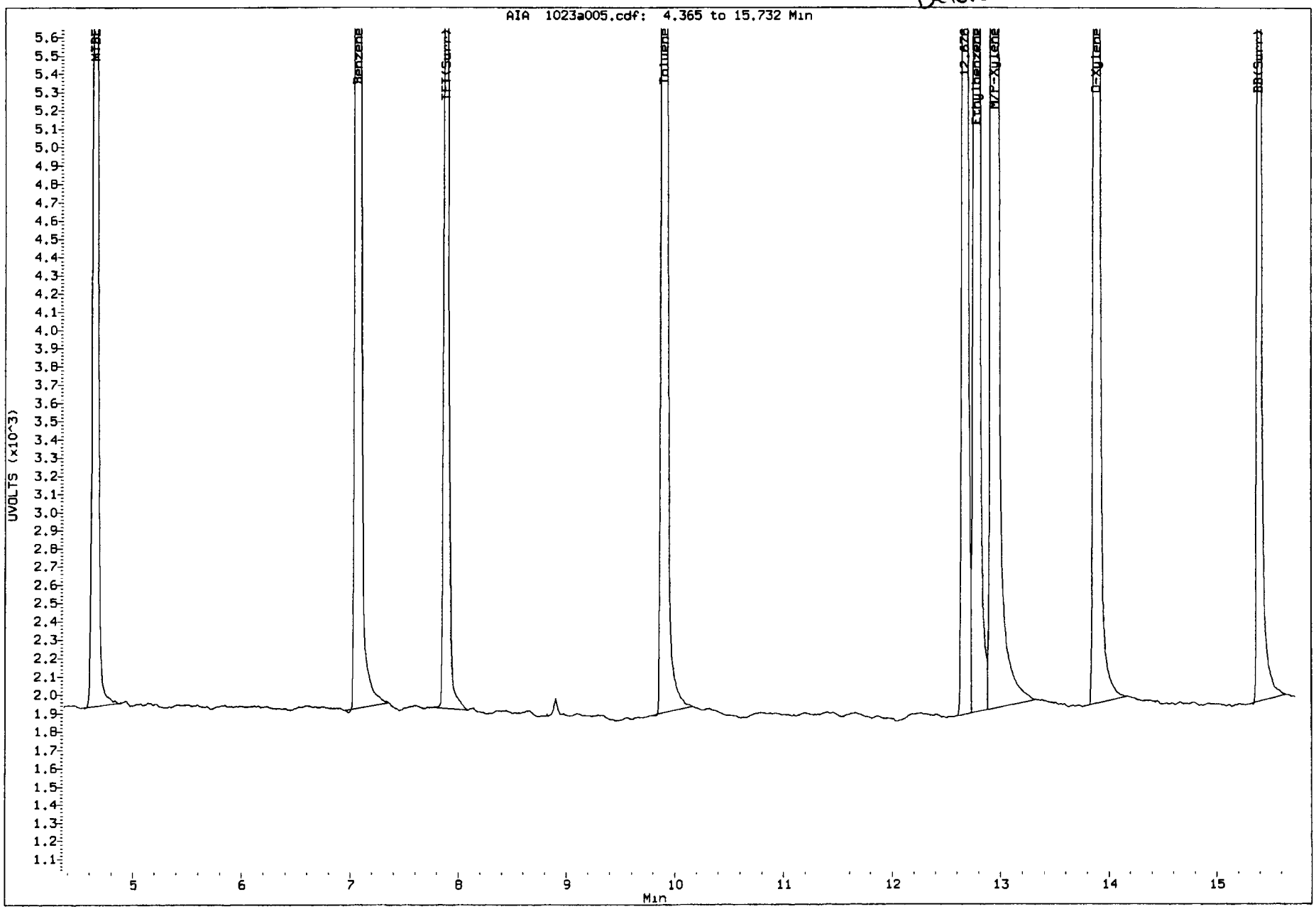
Injection Date: 23-OCT-2012 18:20
Instrument: pid1.1
Client Sample ID:



SCS 10-25-12

Data File: /chem3/pid1.i/20121023-2.b/1023a005.d/1023a005.cdf
Injection Date: 23-OCT-2012 18:20
Instrument: pid1.i
Client Sample ID:

Before



USEPA 8260B

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a006.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a006.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 50
Client ID:
Injection Date: 23-OCT-2012 18:49
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.883	-0.004	4094	52140	129.5	TFT(Surr)
15.387	0.000	2638	22027	129.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	466249	1.302 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	465082	0.643 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	436325	0.749 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	466249	1.243 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	4918	129.8	TFT(Surr)
15.393	0.000	10672	132.6	BB(Surr)

SW8021 (PID)

JW 10/25/12

RT	Shift	Response	Amount	Compound
7.075	-0.002	12380	49.92	Benzene
9.903	-0.003	10965	48.74N	Toluene
12.784	-0.003	9886	50.14	Ethylbenzene
12.946	0.002	21661	100.75	M/P-Xylene
13.890	0.000	8535	50.85N	O-Xylene
4.653	0.000	3607	50.10N	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a006.d

Date : 23-OCT-2012 18:49

Client ID:

Sample Info: B 50

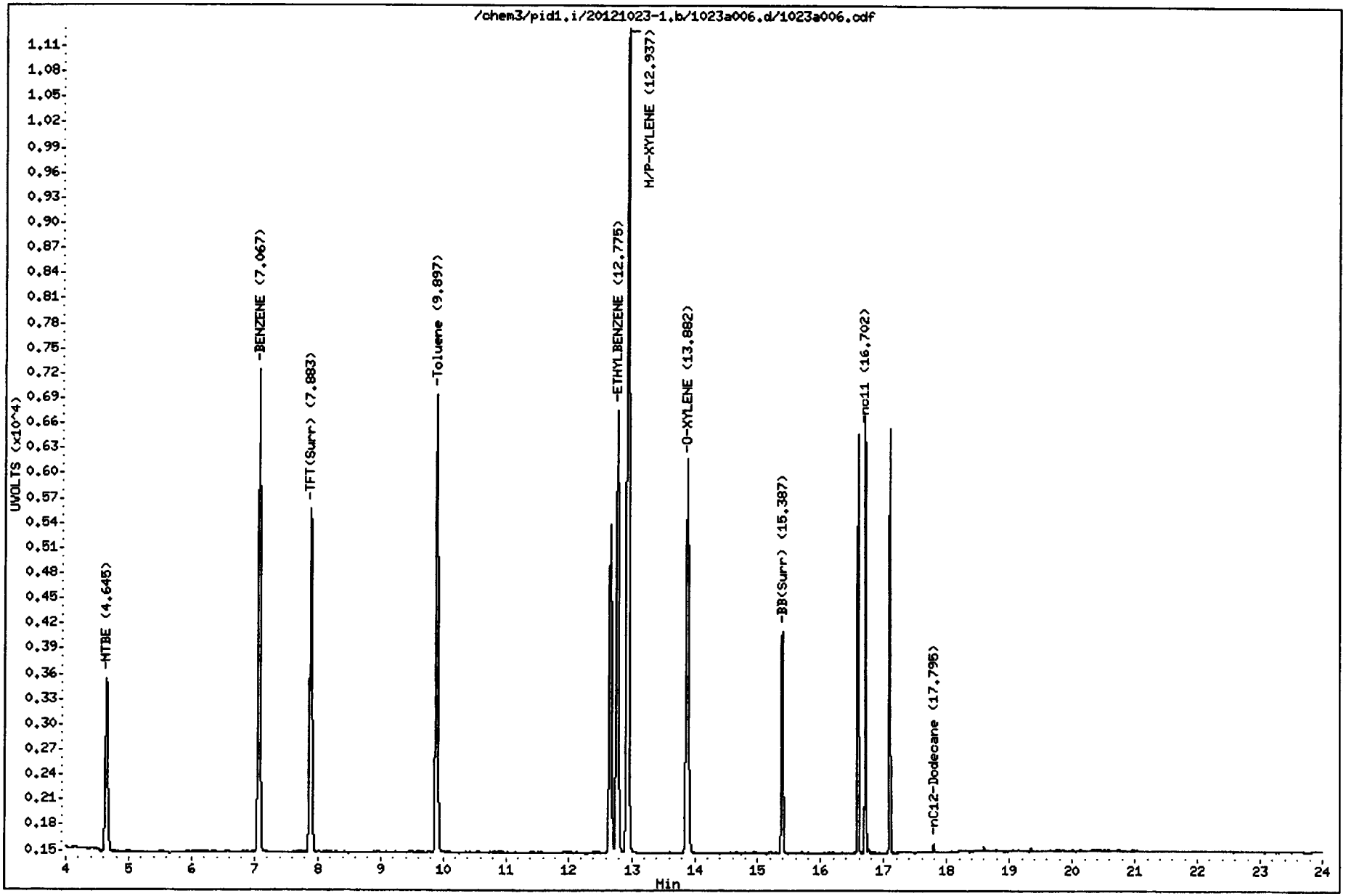
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18

UZ97:01551



Data File: /chem3/pid1.i/20121023-2.b/1023a006.d

Date : 23-OCT-2012 18:49

Client ID:

Sample Info: B 50

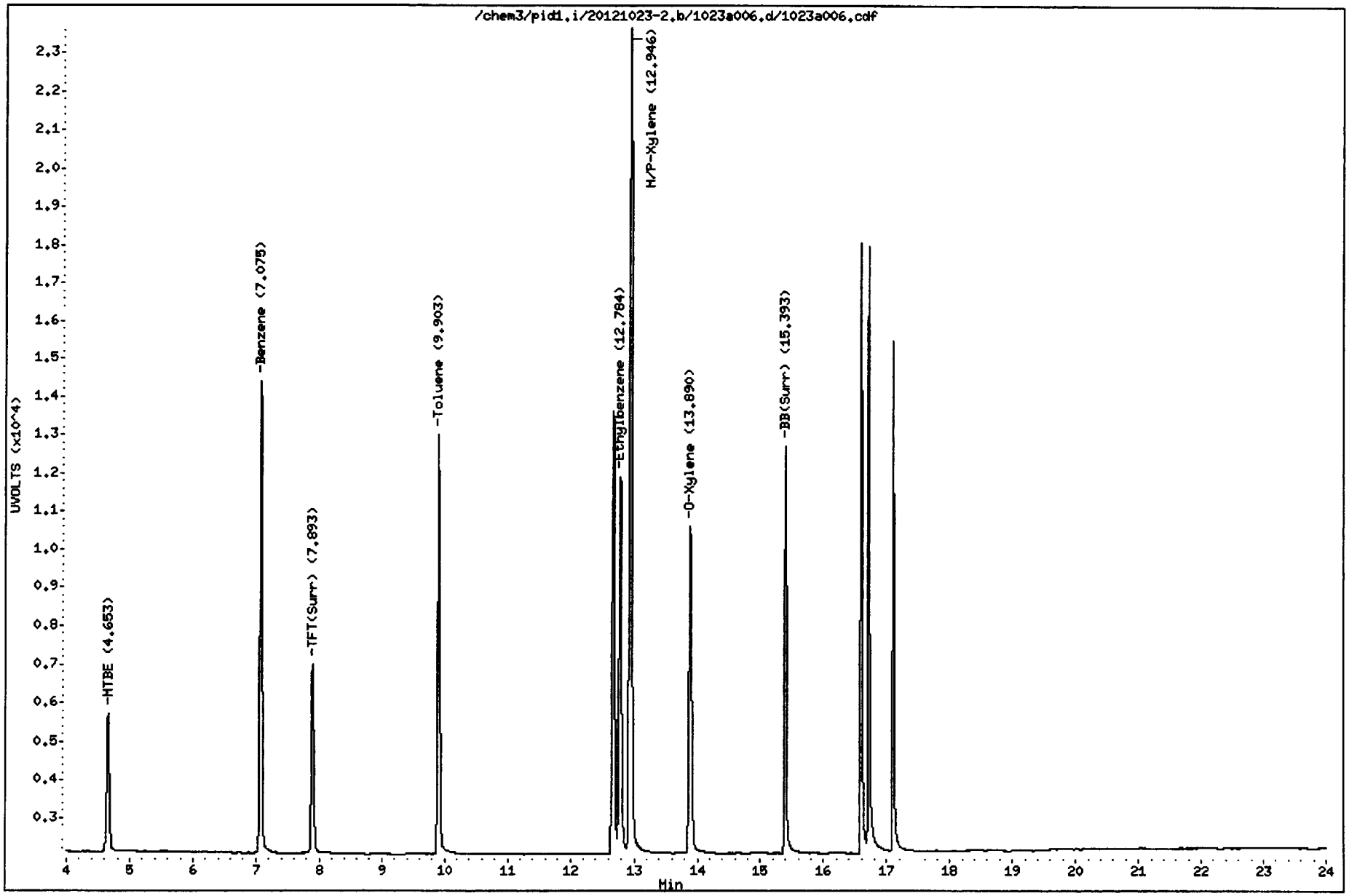
Column phase: RTX 502-2 PID

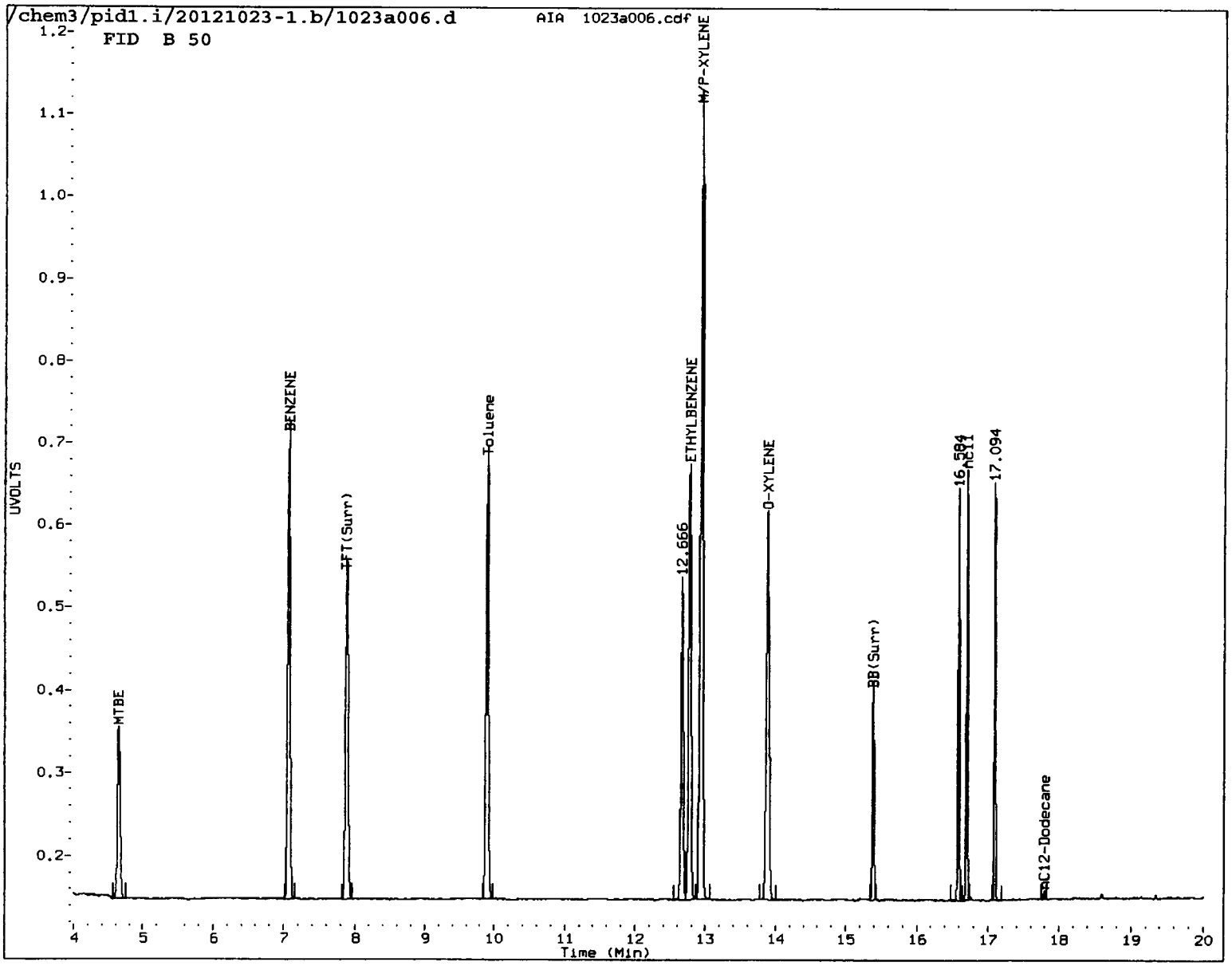
Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18

UZ97-01562





MANUAL INTEGRATION

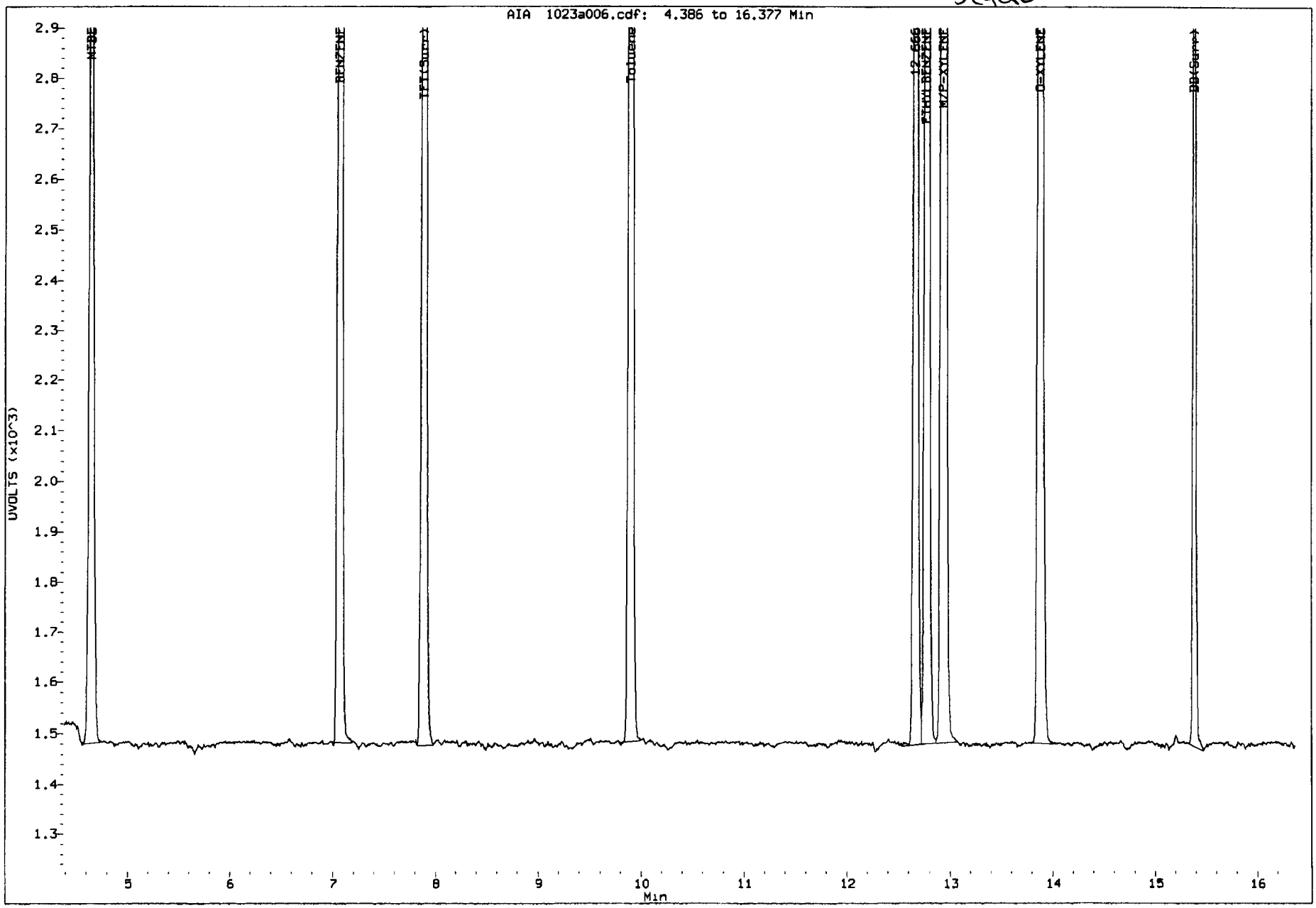
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

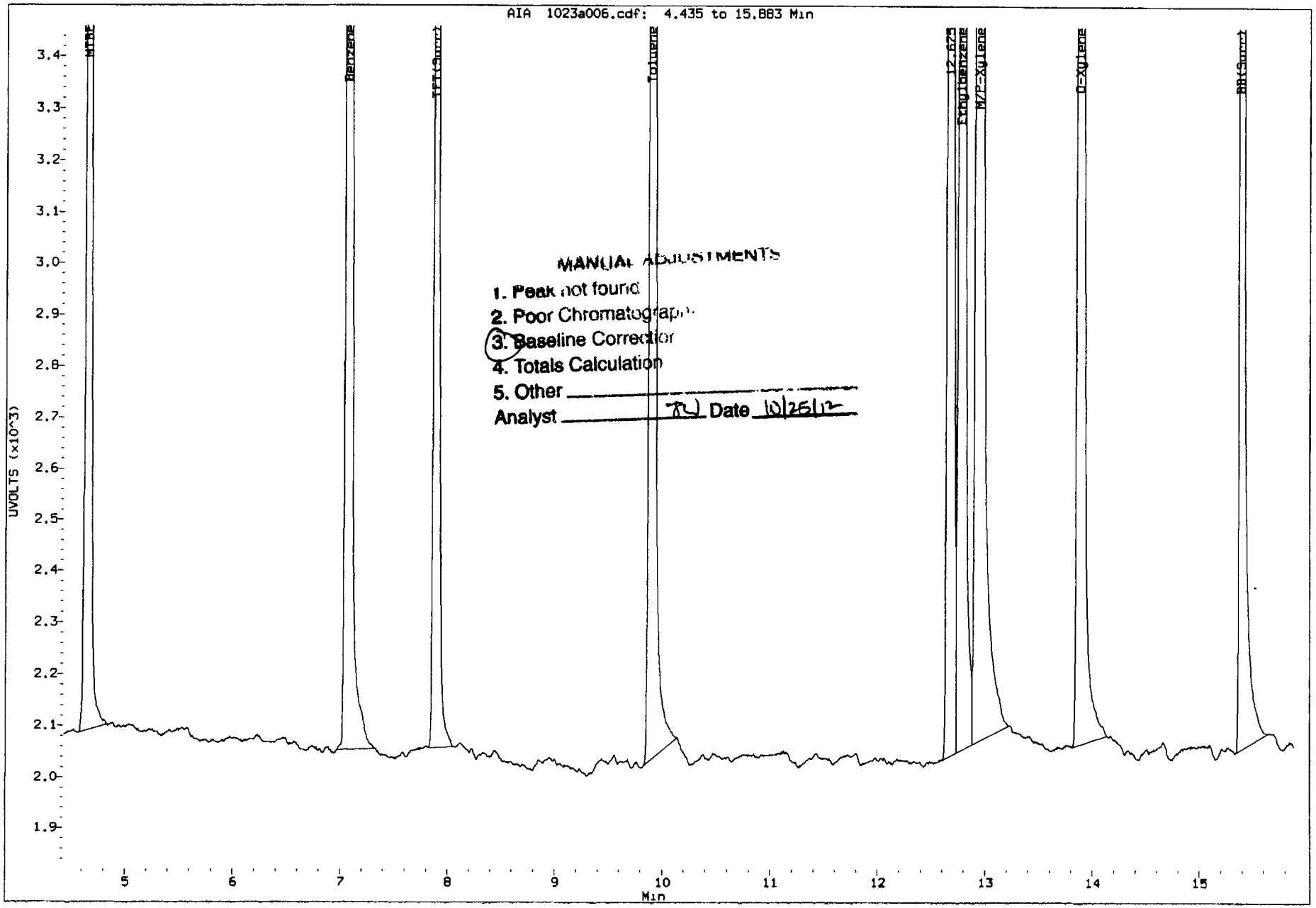
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a006.d/1023a006.cdf
Injection Date: 23-OCT-2012 18:49
Instrument: pid1.i
Client Sample ID:

Before



Data File: /chem3/pid1.i/20121023-2.b/1023a006.d/1023a006.cdf
Injection Date: 23-OCT-2012 18:49
Instrument: pid1.i
Client Sample ID:



MANUAL ADJUSTMENTS

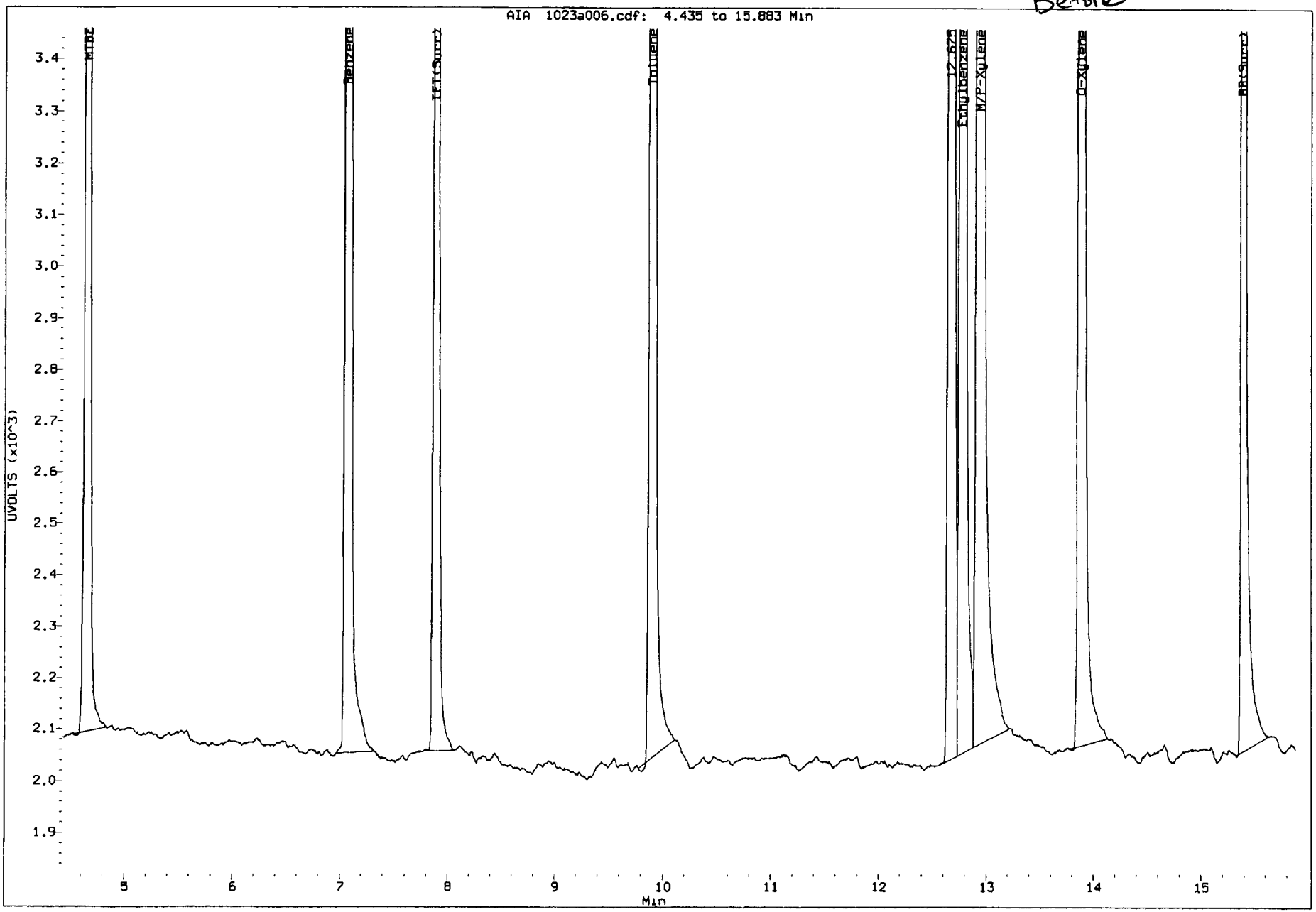
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other _____

Analyst _____ Date 10/25/12

U7977 61565

Data File: /chem3/pid1.i/20121023-2.b/1023a006.d/1023a006.cdf
Injection Date: 23-OCT-2012 18:49
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a007.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a007.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 25
Client ID:
Injection Date: 23-OCT-2012 19:18
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.887	0.000	3134	40267	99.2	TFT(Surr)
15.387	0.000	2031	17131	99.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	239603	0.669 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	238961	0.330 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	224080	0.384 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	239603	0.639 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	3730	98.5	TFT(Surr)
15.397	0.003	8055	100.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.077	0.000	6159	24.84N	Benzene
9.907	0.000	5498	24.44N	Toluene
12.785	-0.002	4891	24.81	Ethylbenzene
12.946	0.003	10737	49.94	M/P-Xylene
13.893	0.003	4292	25.57N	O-Xylene
4.653	0.000	1796	24.94N	MTBE

JW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a007.d

Date : 23-OCT-2012 19:18

Client ID:

Sample Info: B 25

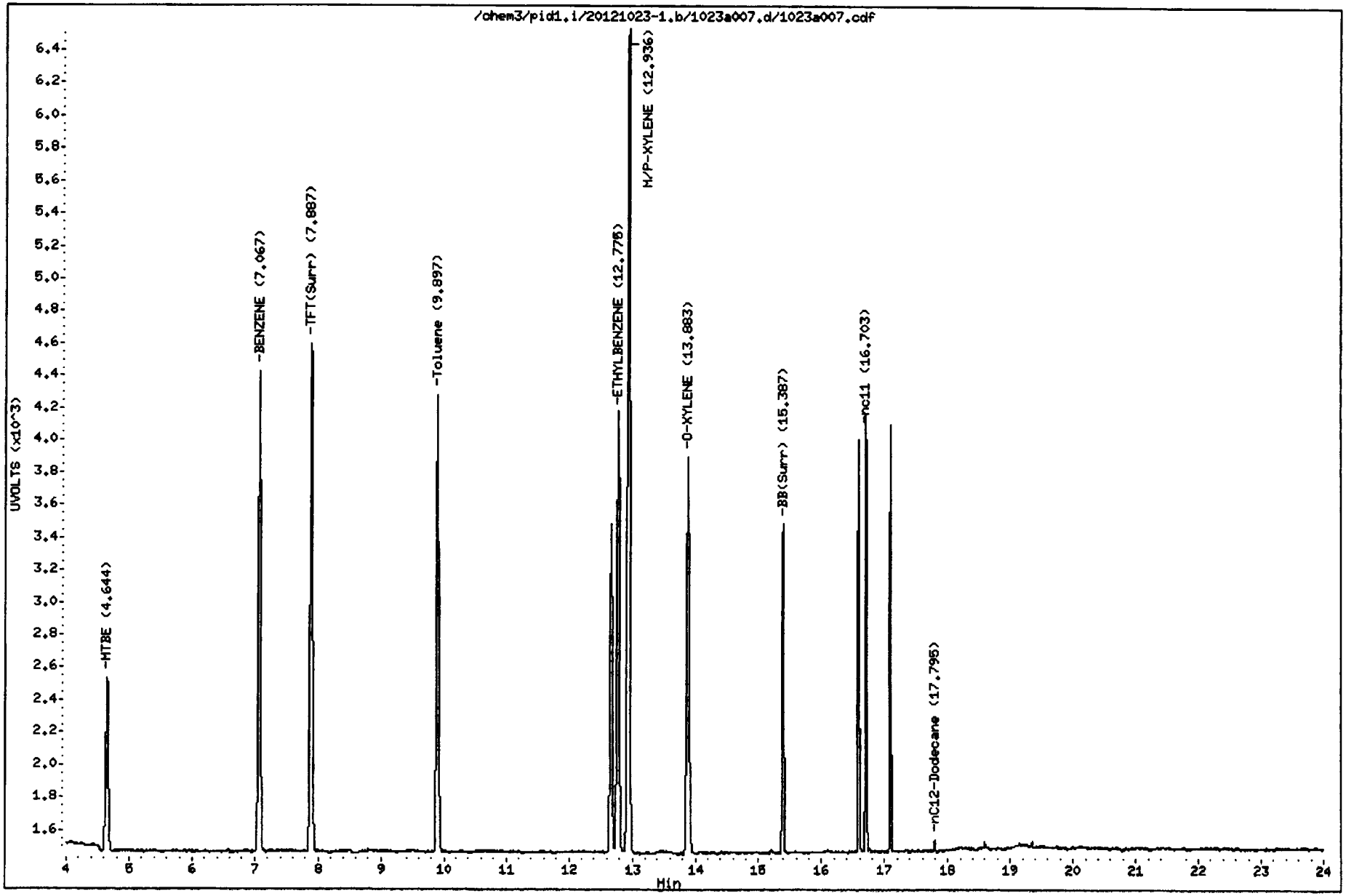
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18

U2917 01559



Data File: /chem3/pid1.i/20121023-2.b/1023a007.d

Date : 23-OCT-2012 19:18

Client ID:

Sample Info: B 25

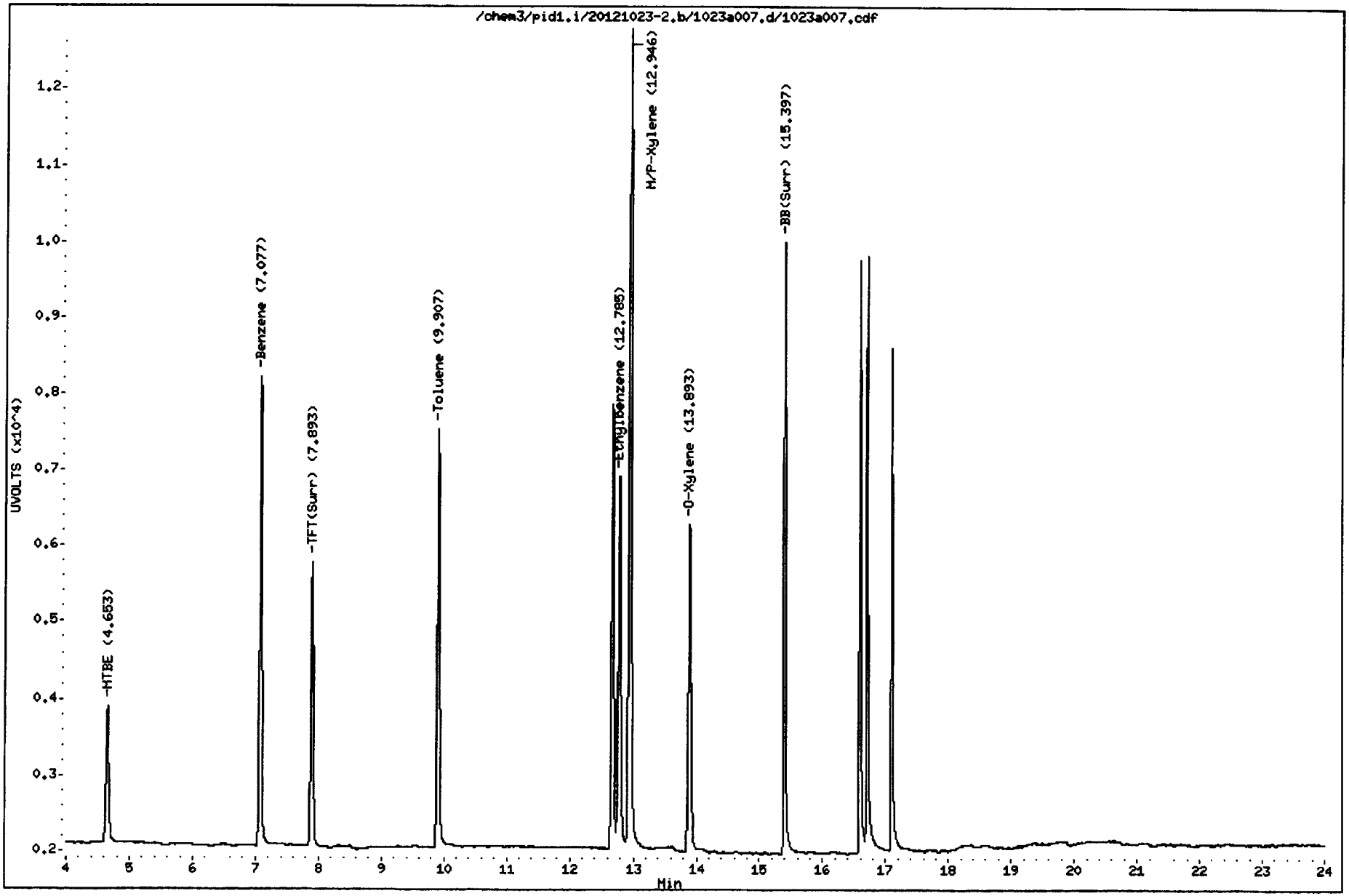
Column phase: RTX 502-2 PID

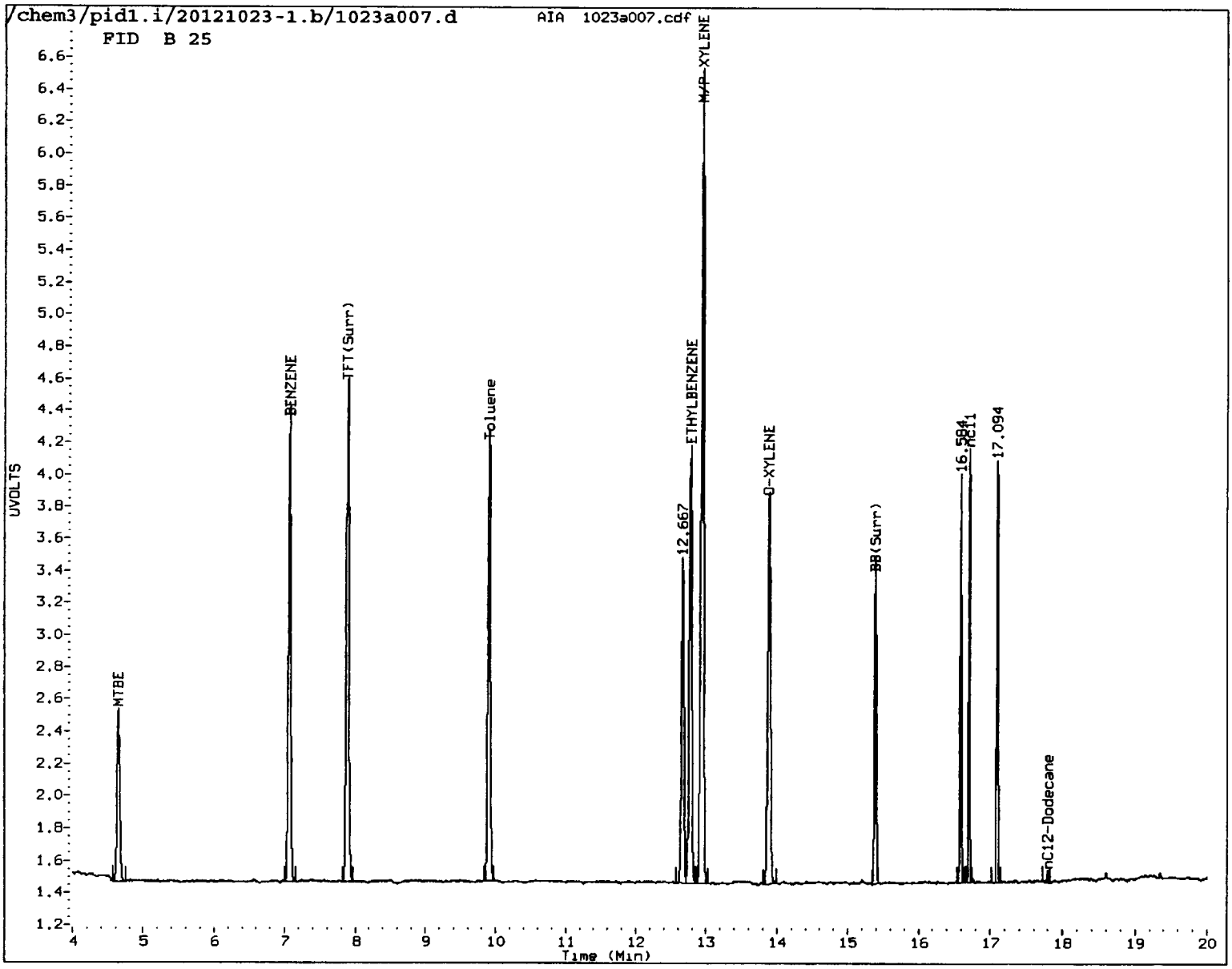
Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18

UZ97-01559





MANUAL INTEGRATION

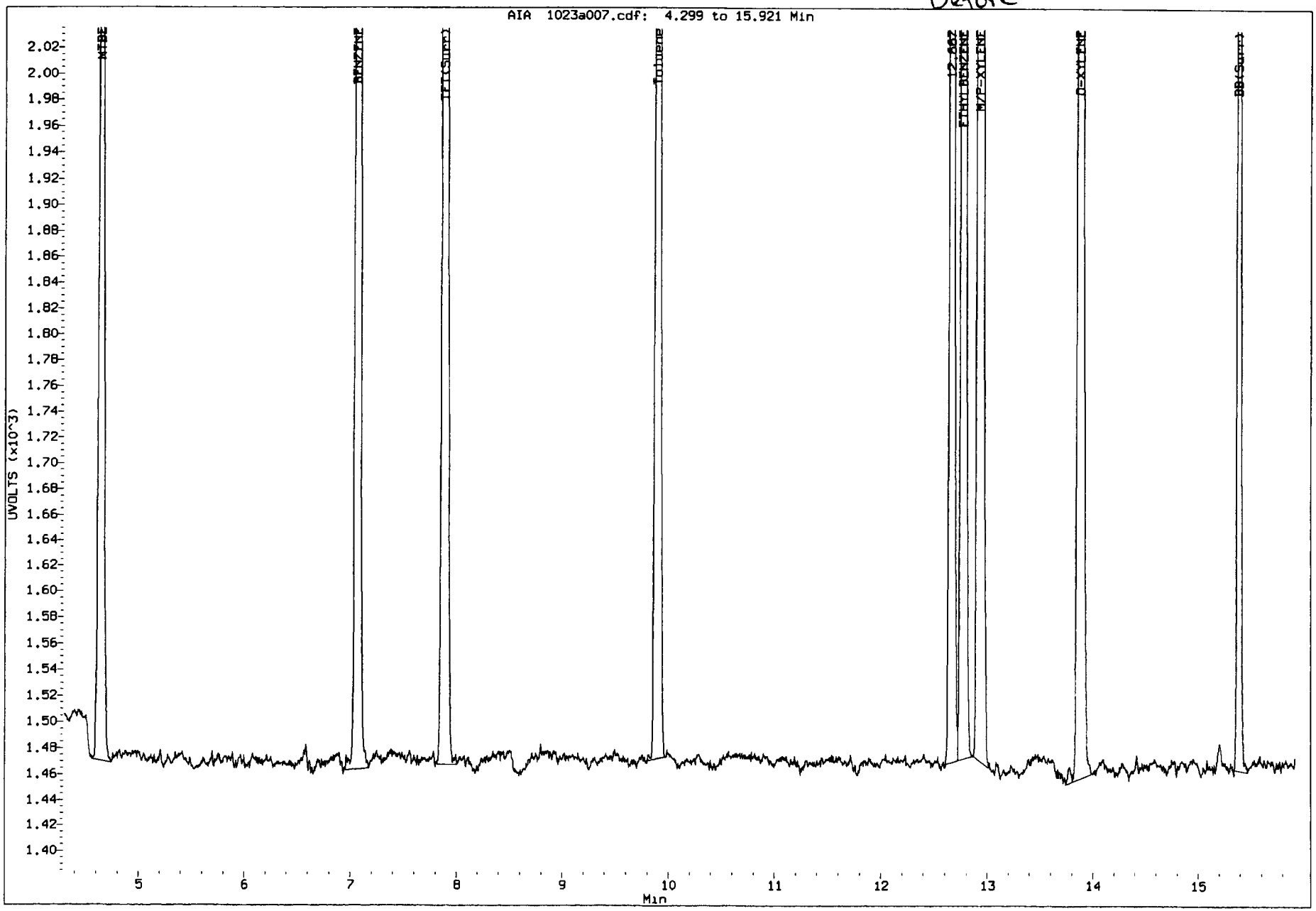
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JU Date: 10/25/12

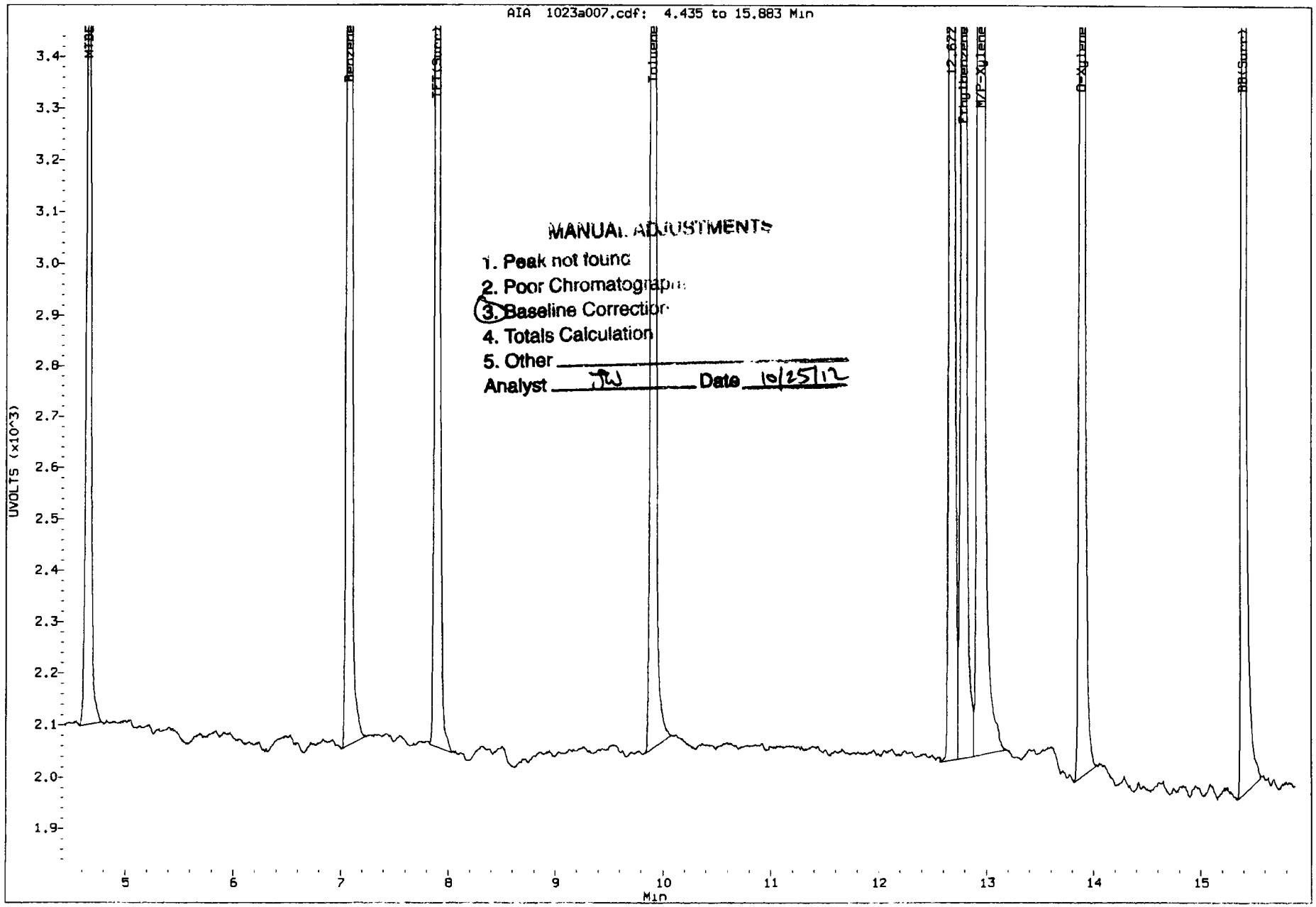
Data File: /chem3/pid1.i/20121023-1.b/1023a007.d/1023a007.cdf
Injection Date: 23-OCT-2012 19:18
Instrument: pid1.i
Client Sample ID:

Before



US7968571

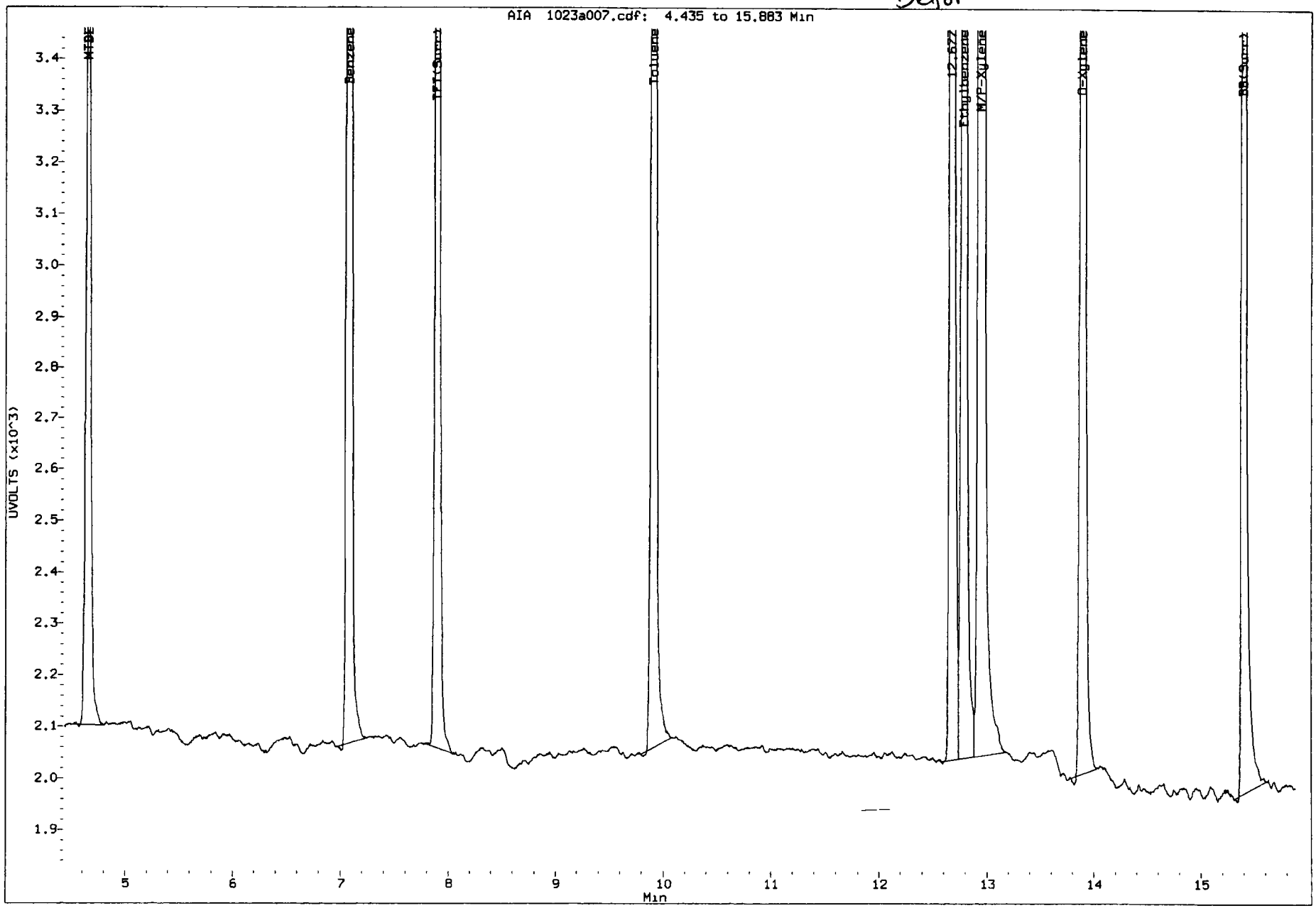
Data File: /chem3/pid1.i/20121023-2.b/1023a007.d/1023a007.cdf
Injection Date: 23-OCT-2012 19:18
Instrument: pid1.i
Client Sample ID:



27515 27520

Data File: /chem3/pid1.i/20121023-2.b/1023a007.d/1023a007.cdf
Injection Date: 23-OCT-2012 19:18
Instrument: pid1.i
Client Sample ID:

Before



UZ507 : 0415573

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a008.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a008.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 5
Client ID:
Injection Date: 23-OCT-2012 19:47
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.883	-0.004	2118	27080	67.0	TFT(Surr)
15.387	0.000	1387	11721	68.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	52469	0.147 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	51824	0.072 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	48775	0.084 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	52469	0.140 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.890	-0.003	2516	66.4	TFT(Surr)
15.393	0.000	5386	66.9	BB(Surr)

JW 10/25/12

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.073	-0.003	1275	5.14N	Benzene
9.903	-0.003	1121	4.98N	Toluene
12.785	-0.002	1007	5.11	Ethylbenzene
12.945	0.002	2196	10.21	M/P-Xylene
13.893	0.003	856	5.10N	O-Xylene
4.647	-0.007	377	5.24N	MTBE

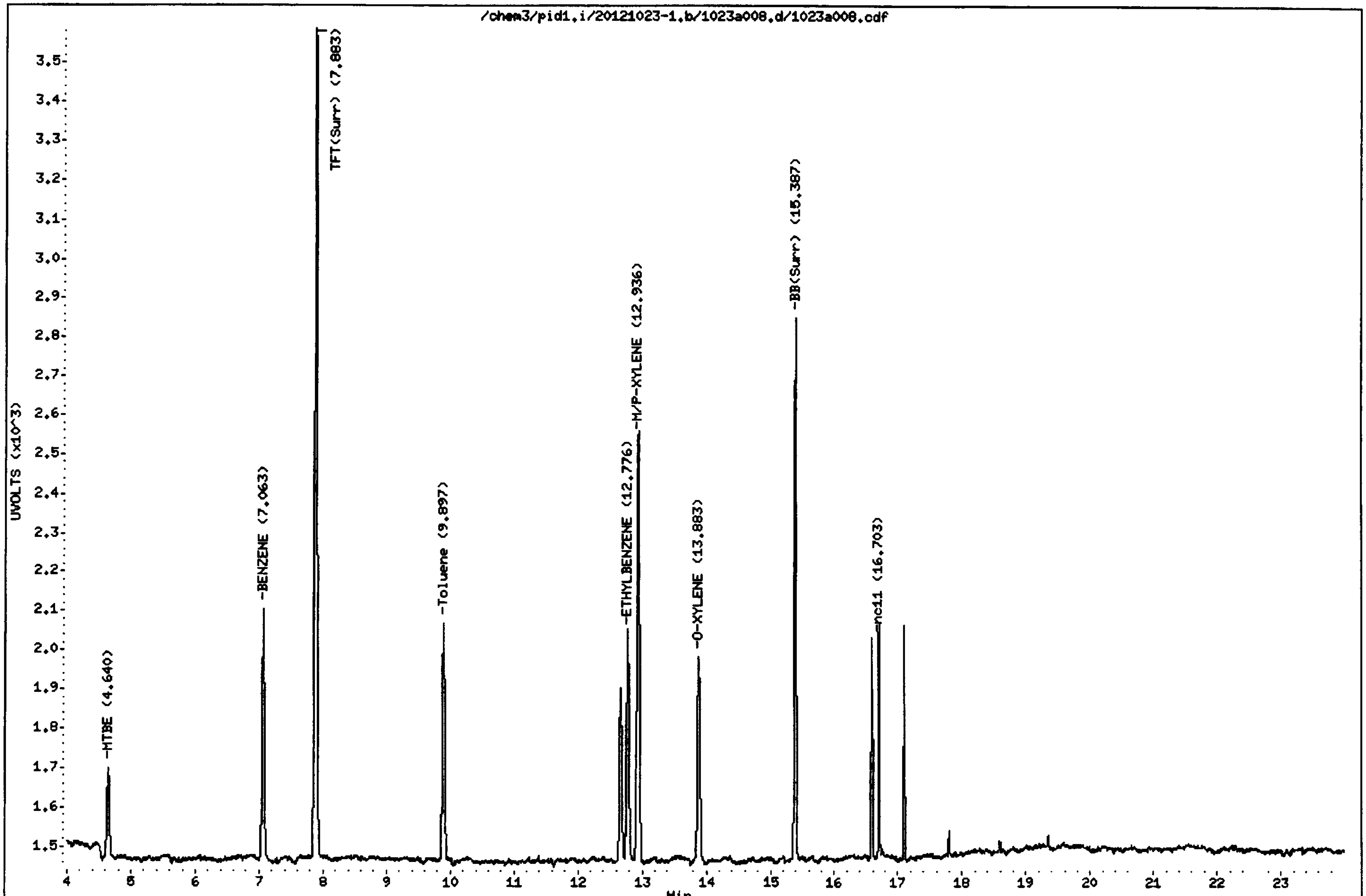
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a008.d
Date : 23-OCT-2012 19:47
Client ID:
Sample Info: B 5

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW
Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a008.d

Date : 23-OCT-2012 19:47

Client ID:

Sample Info: B 5

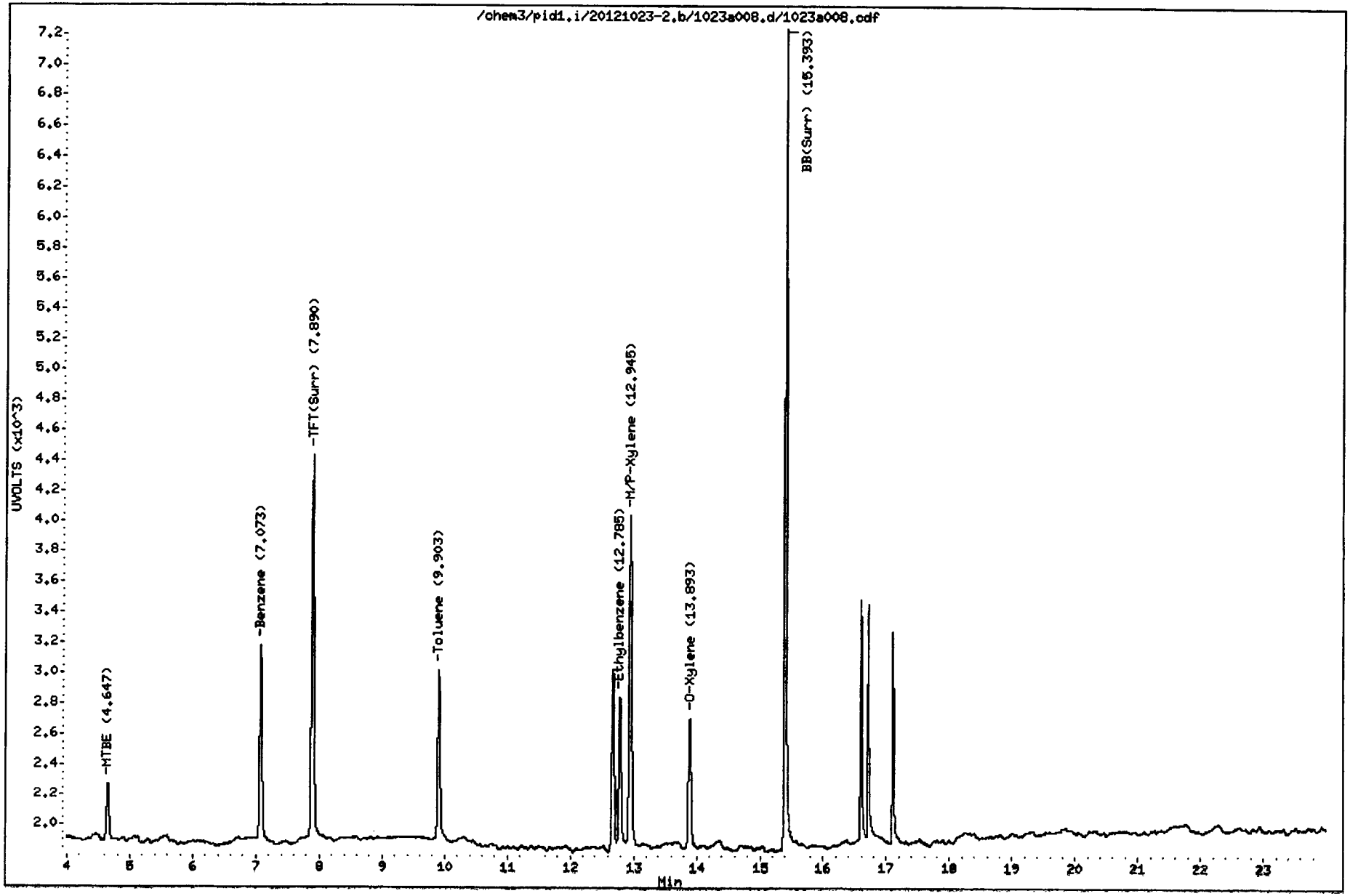
Column phase: RTX 502-2 PID

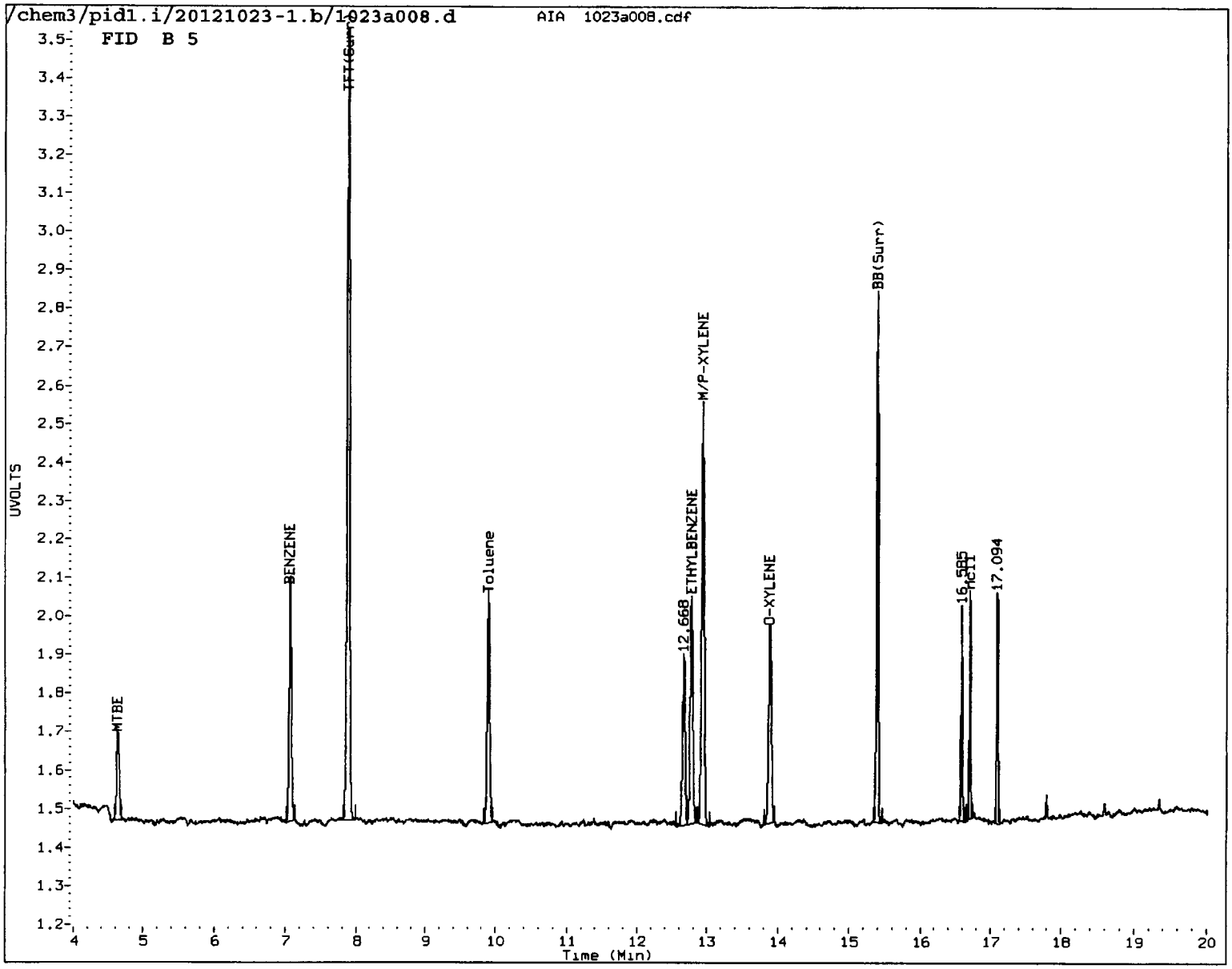
Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18

J7971-015775





MANUAL INTEGRATION

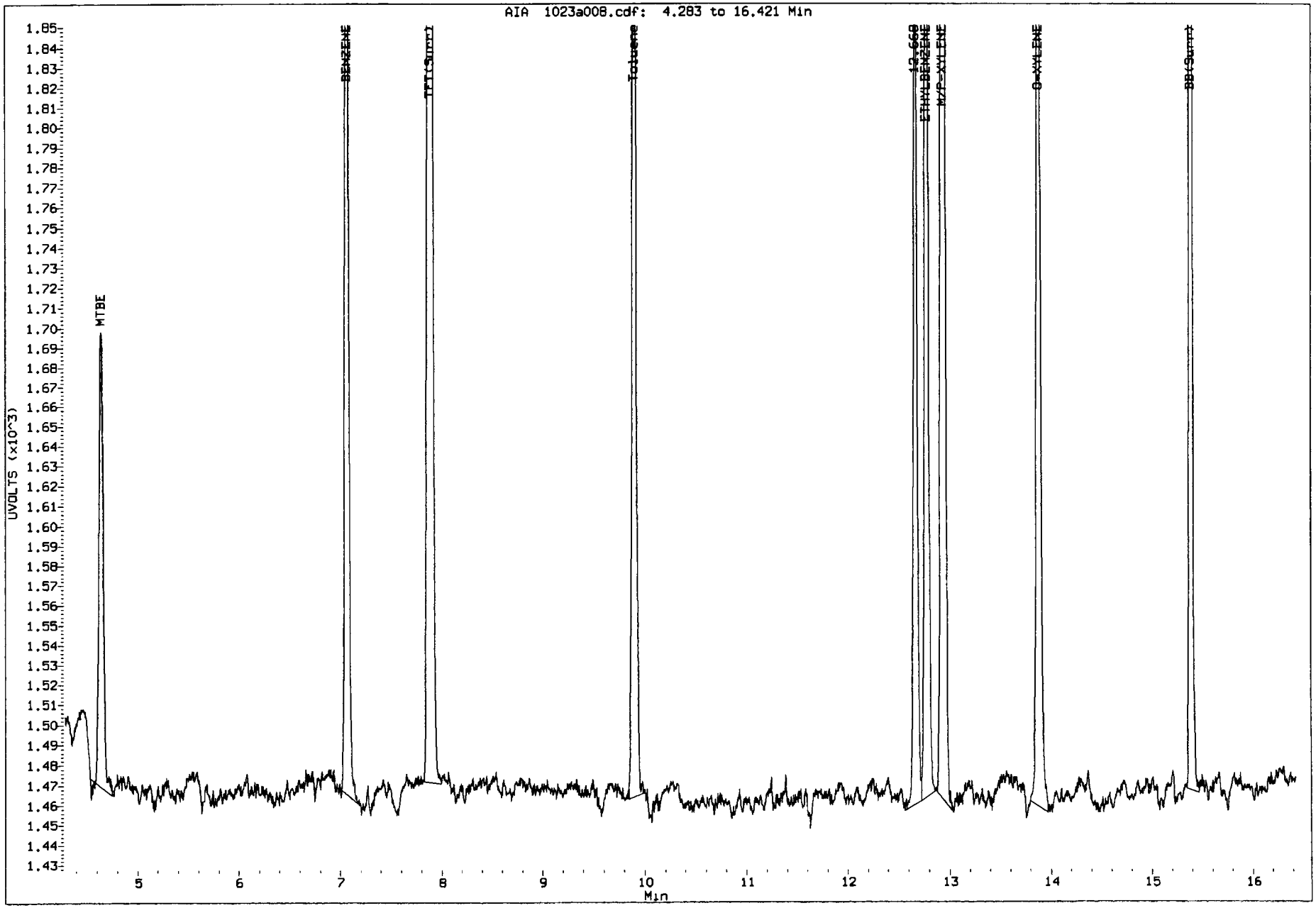
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JW Date: 10/25/12

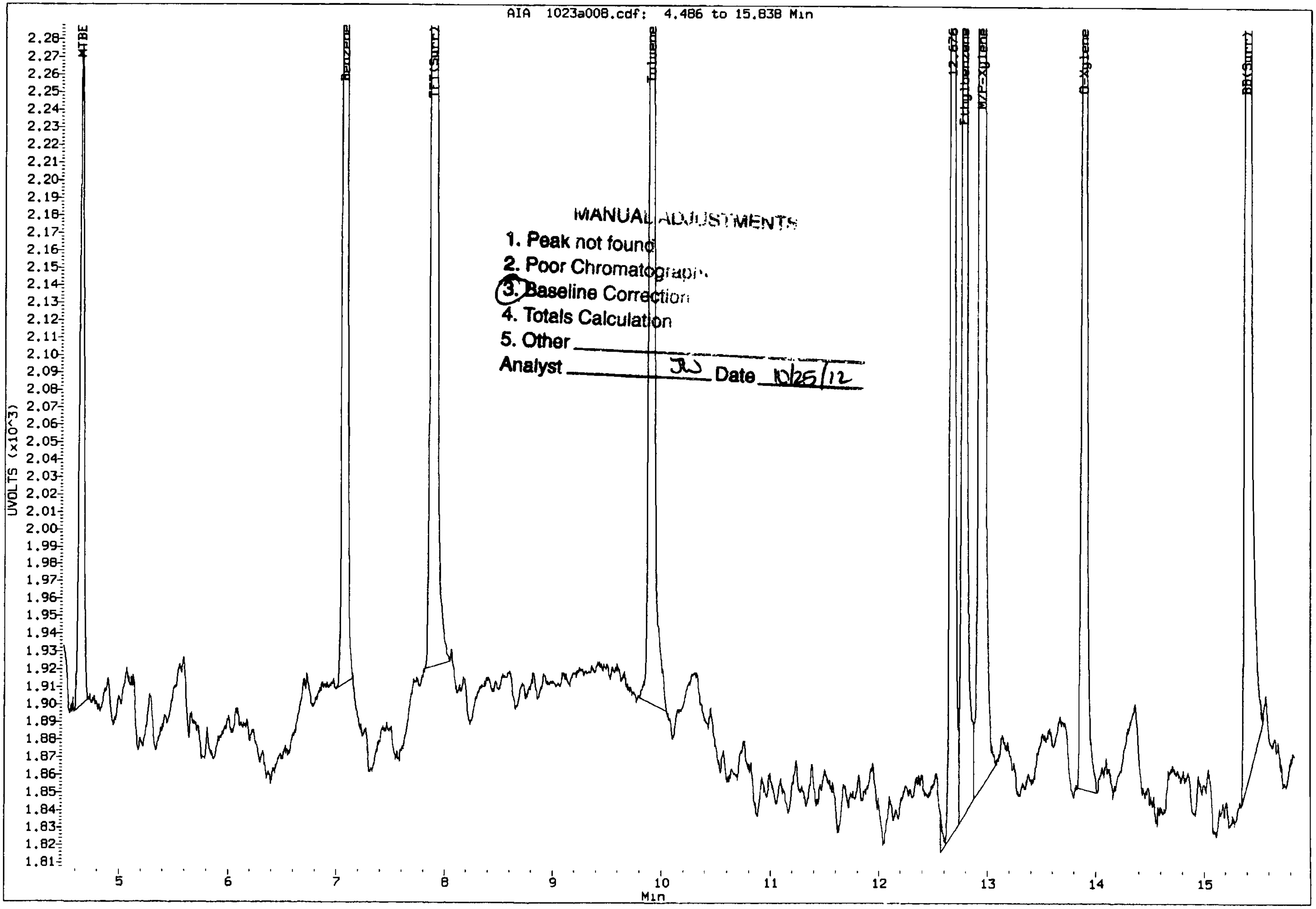
Data File: /chem3/pid1.i/20121023-1.b/1023a008.d/1023a008.cdf
Injection Date: 23-OCT-2012 19:47
Instrument: pid1.i
Client Sample ID:

Before



U2797 615778

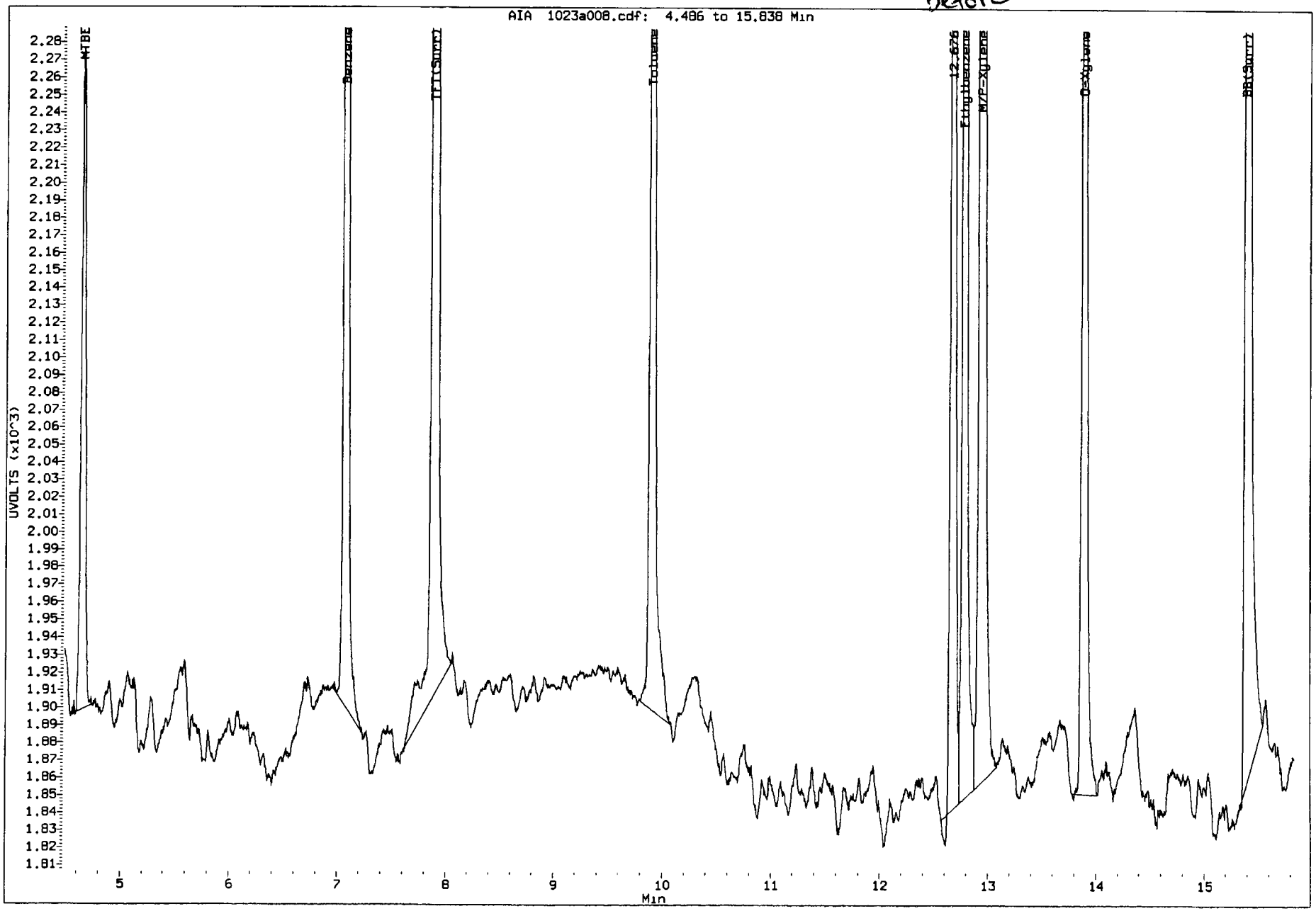
Data File: /chem3/pid1.i/20121023-2.b/1023a008.d/1023a008.cdf
Injection Date: 23-OCT-2012 19:47
Instrument: pid1.i
Client Sample ID:



MANUAL ADJUSTMENTS
1. Peak not found
2. Poor Chromatograph
(3.) Baseline Correction
4. Totals Calculation
5. Other ____
Analyst JW Date 10/25/12

Data File: /chem3/pid1.i/20121023-2.b/1023a008.d/1023a008.cdf
Injection Date: 23-OCT-2012 19:47
Instrument: pid1.1
Client Sample ID:

Before



U2527 01538

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a009.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a009.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 1
Client ID:
Injection Date: 23-OCT-2012 20:16
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.884	-0.003	2094	27117	66.3	TFT(Surr)
15.387	0.000	1385	11445	68.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	10704	0.030 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	10312	0.014 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	9711	0.017 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	10704	0.029 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	2495	65.9	TFT(Surr)
15.393	0.000	5333	66.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.073	-0.003	260	1.05N	Benzene
9.907	0.000	210	0.93N	Toluene
12.785	-0.001	198	1.00	Ethylbenzene
12.946	0.002	425	1.98	M/P-Xylene
13.893	0.003	168	1.00N	O-Xylene
4.647	-0.007	72	1.00N	MTBE

JW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a009.d

Date : 23-OCT-2012 20:16

Client ID:

Sample Info: B 1

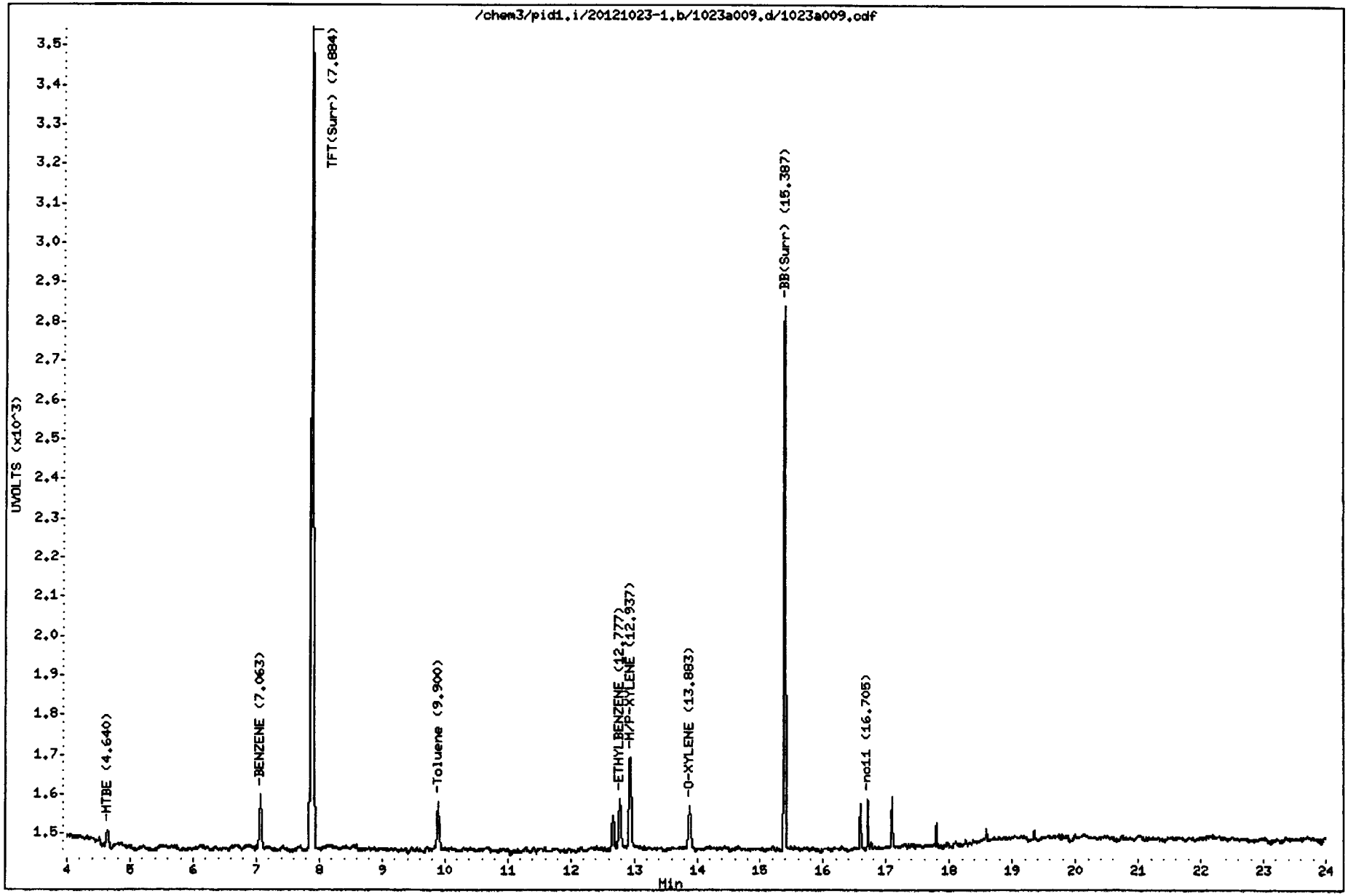
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18

U797-91592



Data File: /chem3/pid1.i/20121023-2.b/1023a009.d

Date : 23-OCT-2012 20:16

Client ID:

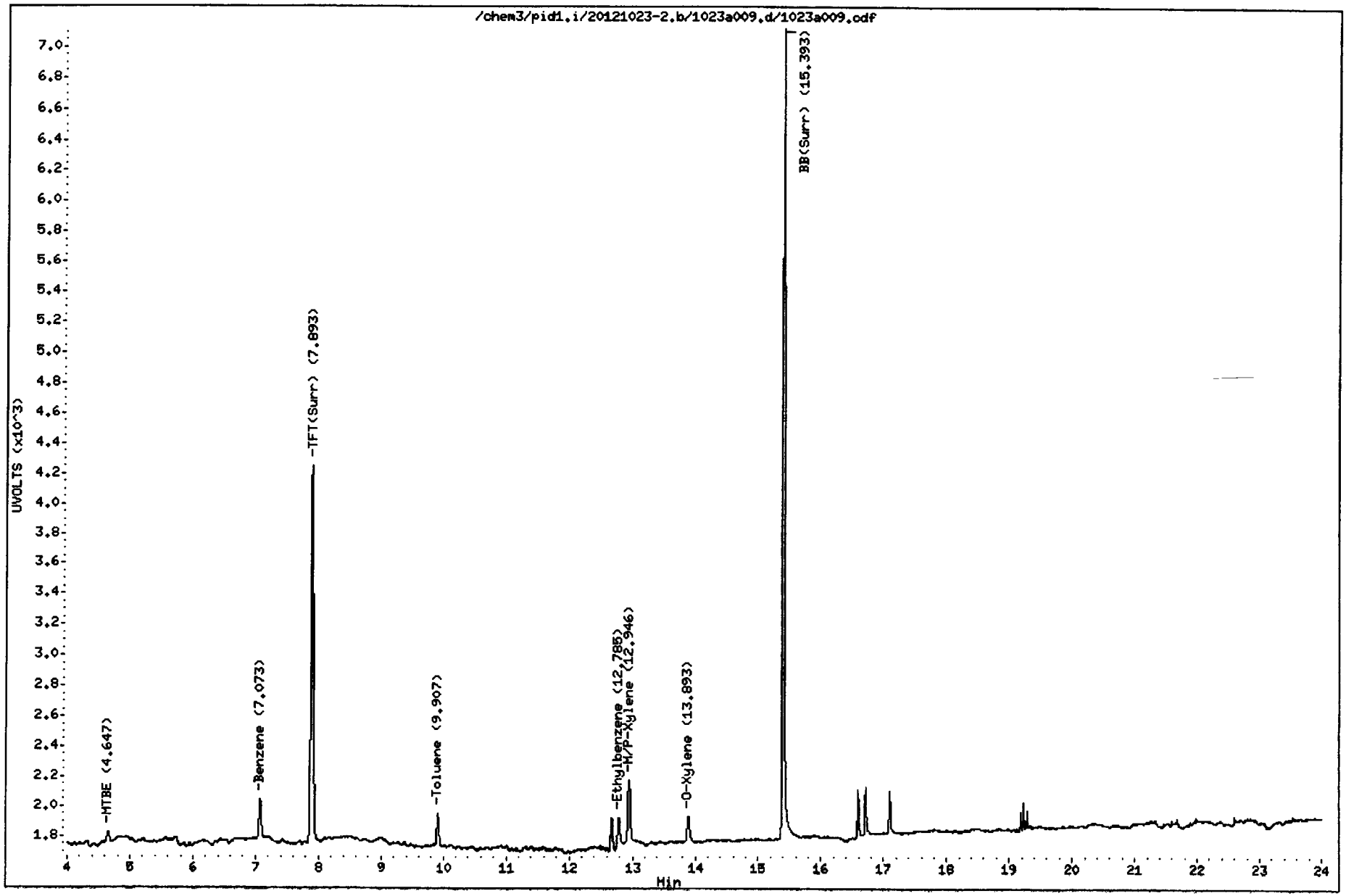
Sample Info: B 1

Column phase: RTX 502-2 PID

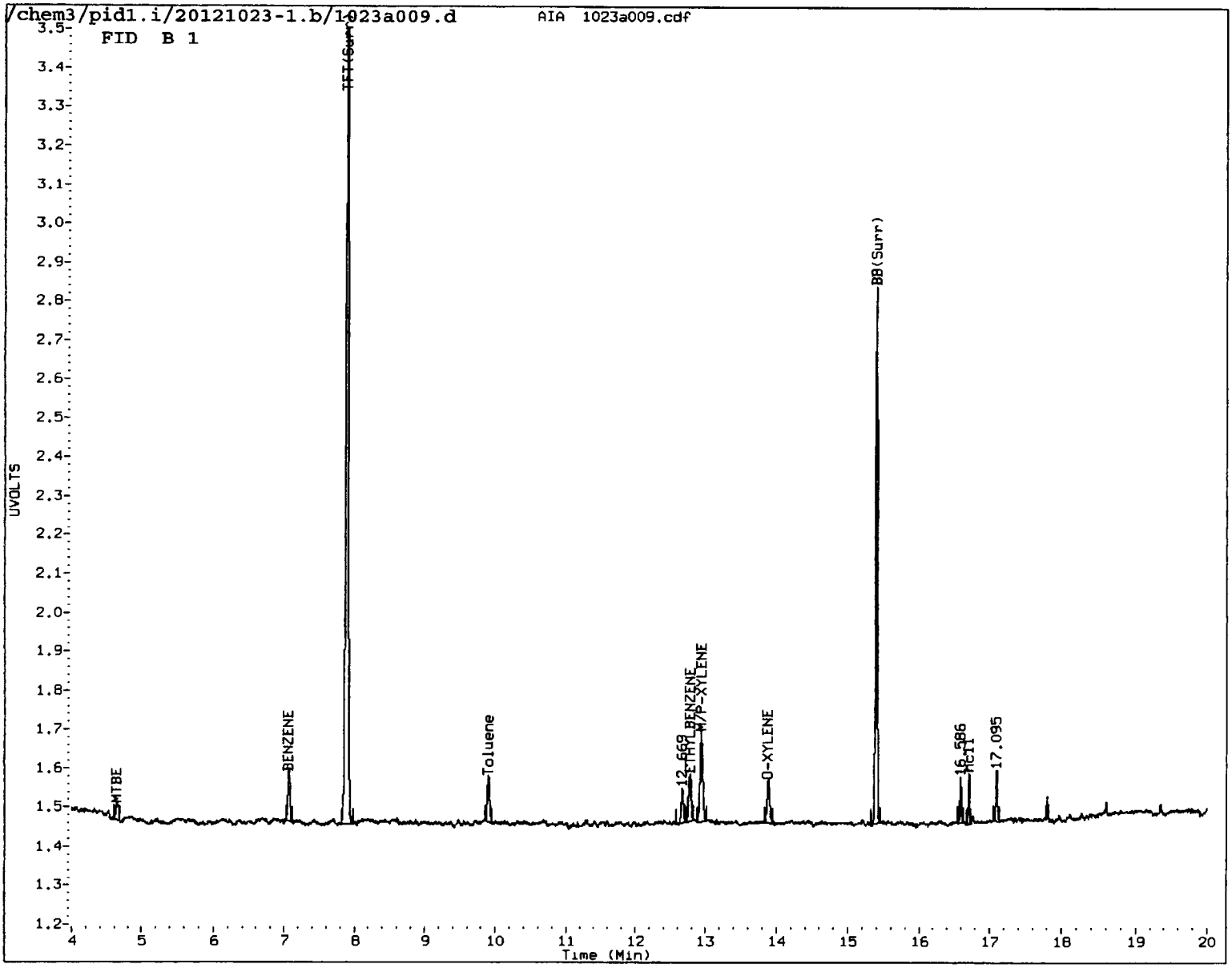
Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



UZ97-01548



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

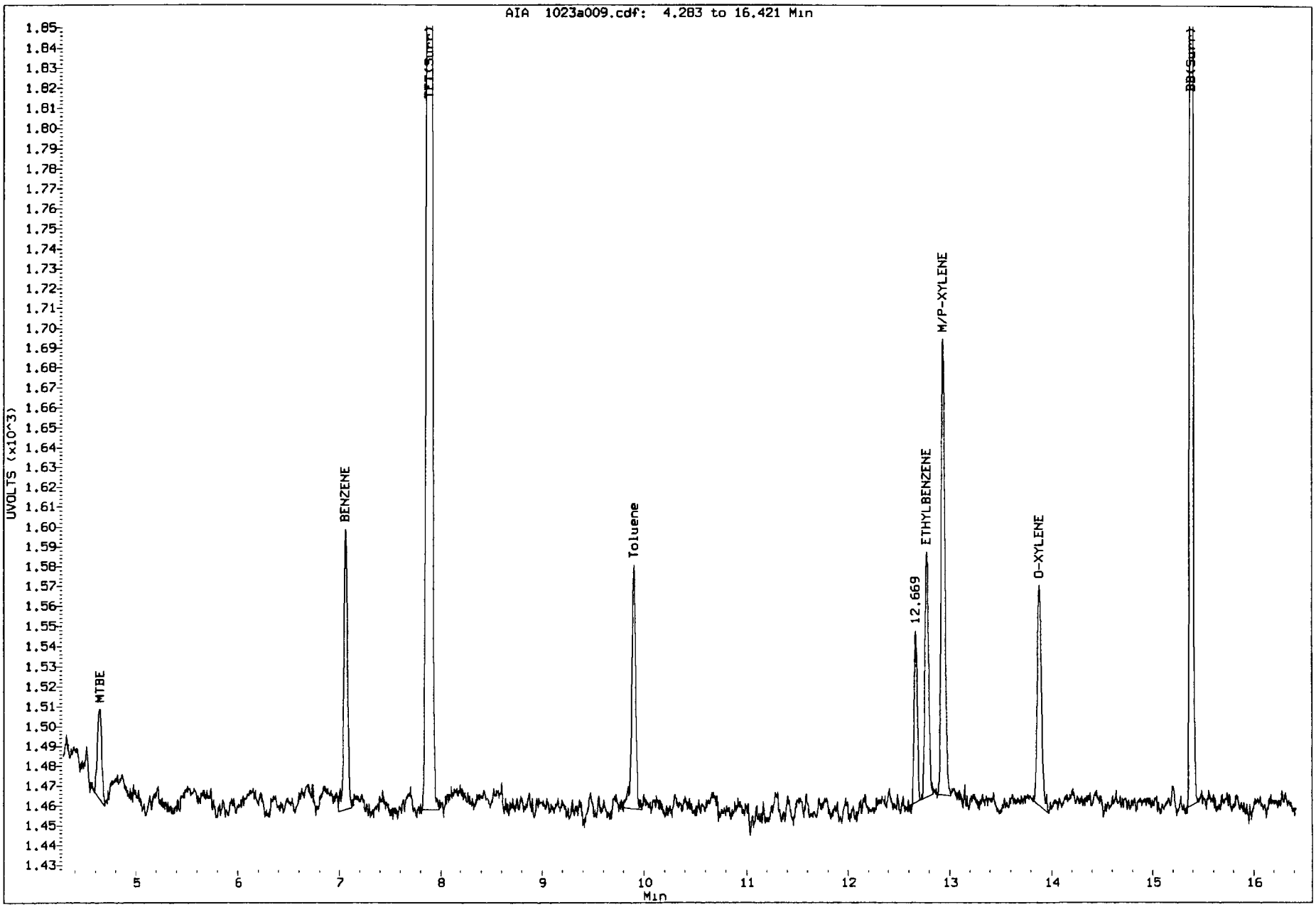
5. Other _____

Analyst: JW Date: 10/25/12

VZ97 0158U

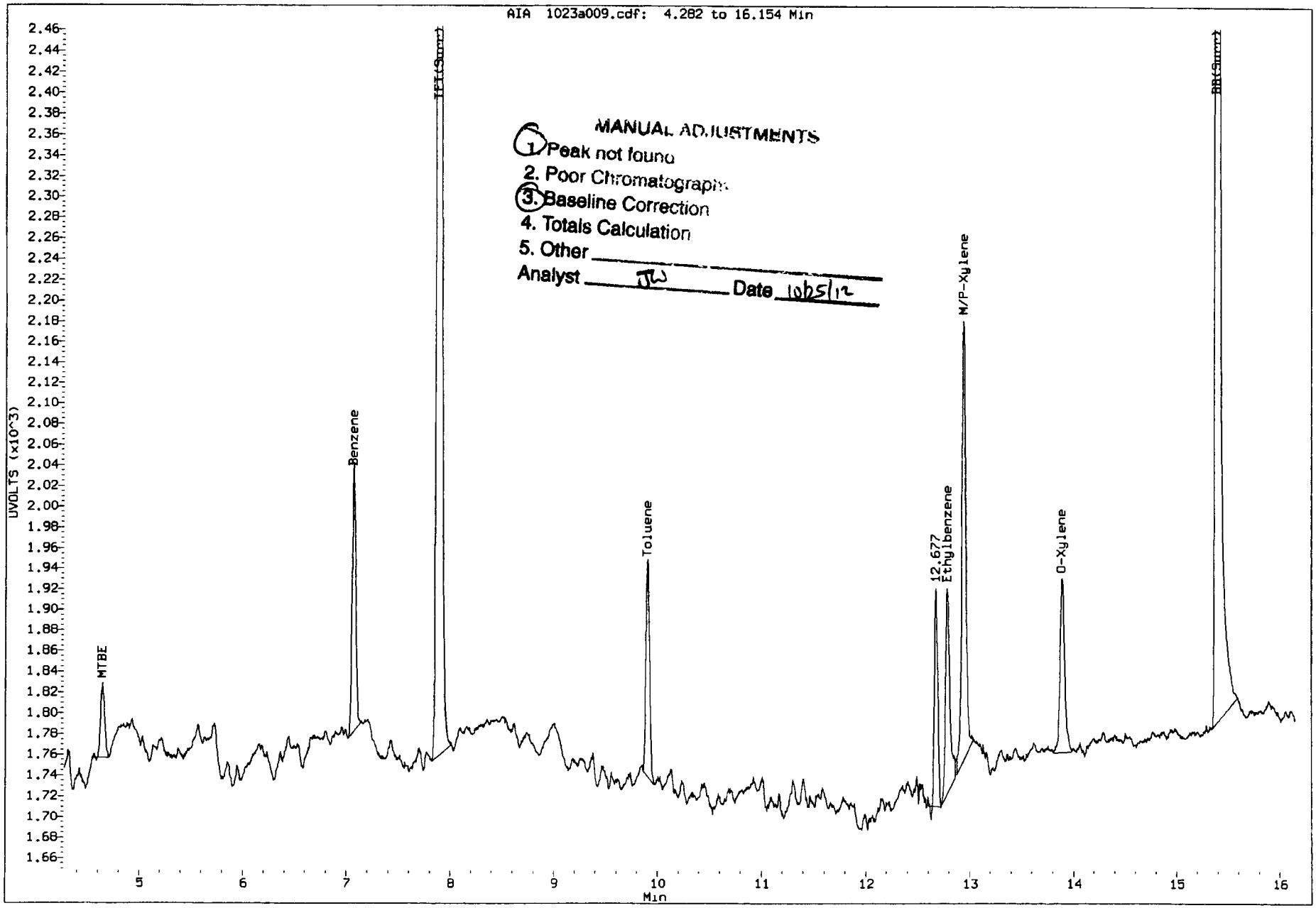
Data File: /chem3/pid1.i/20121023-1.b/1023a009.d/1023a009.cdf
Injection Date: 23-OCT-2012 20:16
Instrument: pid1.i
Client Sample ID:

Before



SGS 16.457

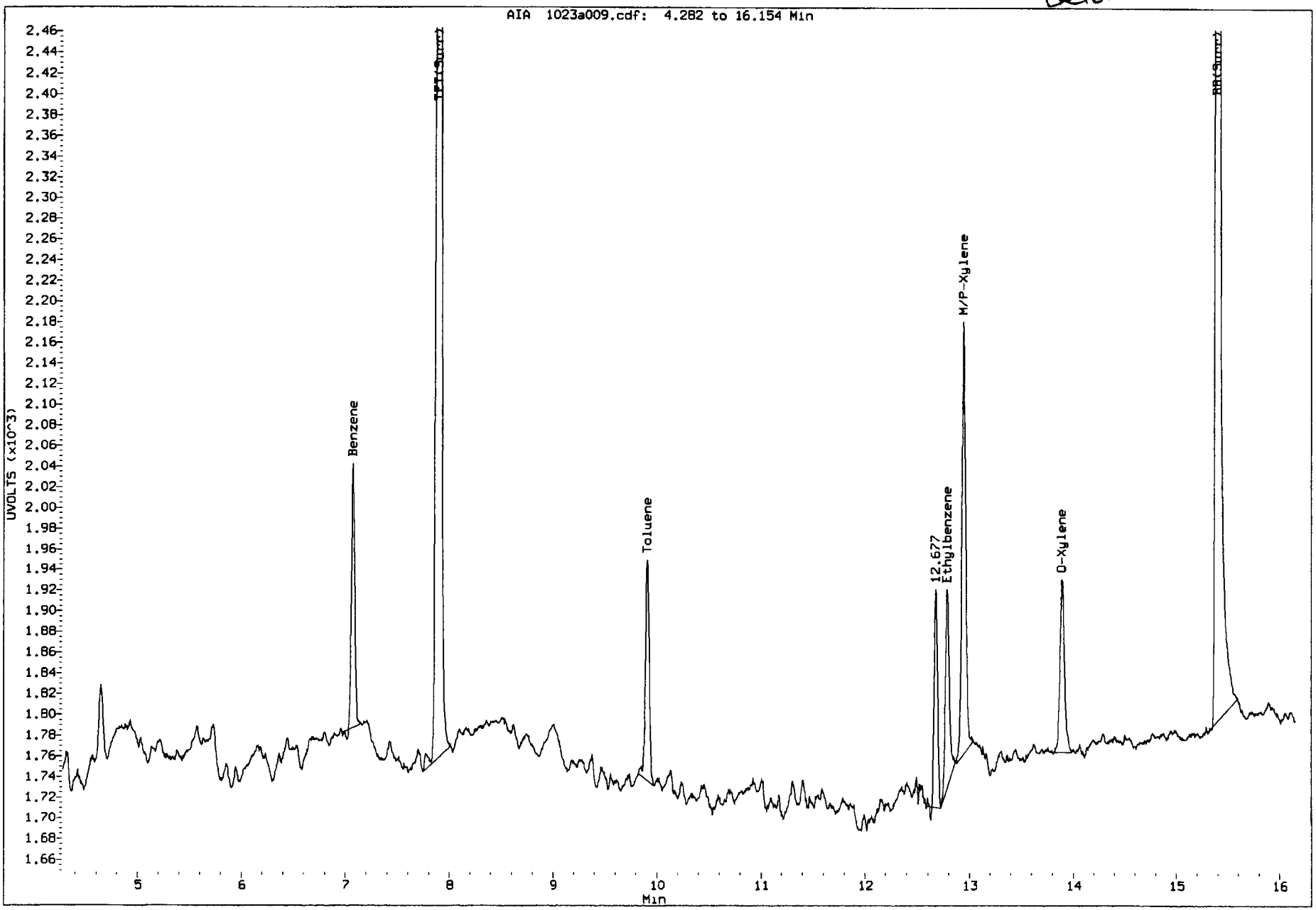
Data File: /chem3/pid1.i/20121023-2.b/1023a009.d/1023a009.cdf
Injection Date: 23-OCT-2012 20:16
Instrument: pid1.i
Client Sample ID:



U2977 01595

Data File: /chem3/pid1.i/20121023-2.b/1023a009.d/1023a009.cdf
Injection Date: 23-OCT-2012 20:16
Instrument: pid1.i
Client Sample ID:

Before



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a010.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a010.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 0.5
Client ID:
Injection Date: 23-OCT-2012 20:45
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.883	-0.004	1400	18008	44.4	TFT(Surr)
15.387	0.000	904	7688	44.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	6242	0.017 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	5520	0.008 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	5284	0.009 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	8749	0.023 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	1632	43.1	TFT(Surr)
15.393	0.000	3462	43.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.073	-0.003	127	0.51N	Benzene
9.907	0.000	117	0.52N	Toluene
12.783	-0.003	100	0.51N	Ethylbenzene
12.947	0.003	208	0.97N	M/P-Xylene
13.893	0.003	79	0.47N	O-Xylene
4.653	0.000	32	0.44N	MTBE

JW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a010.d

Date : 23-OCT-2012 20:45

Client ID:

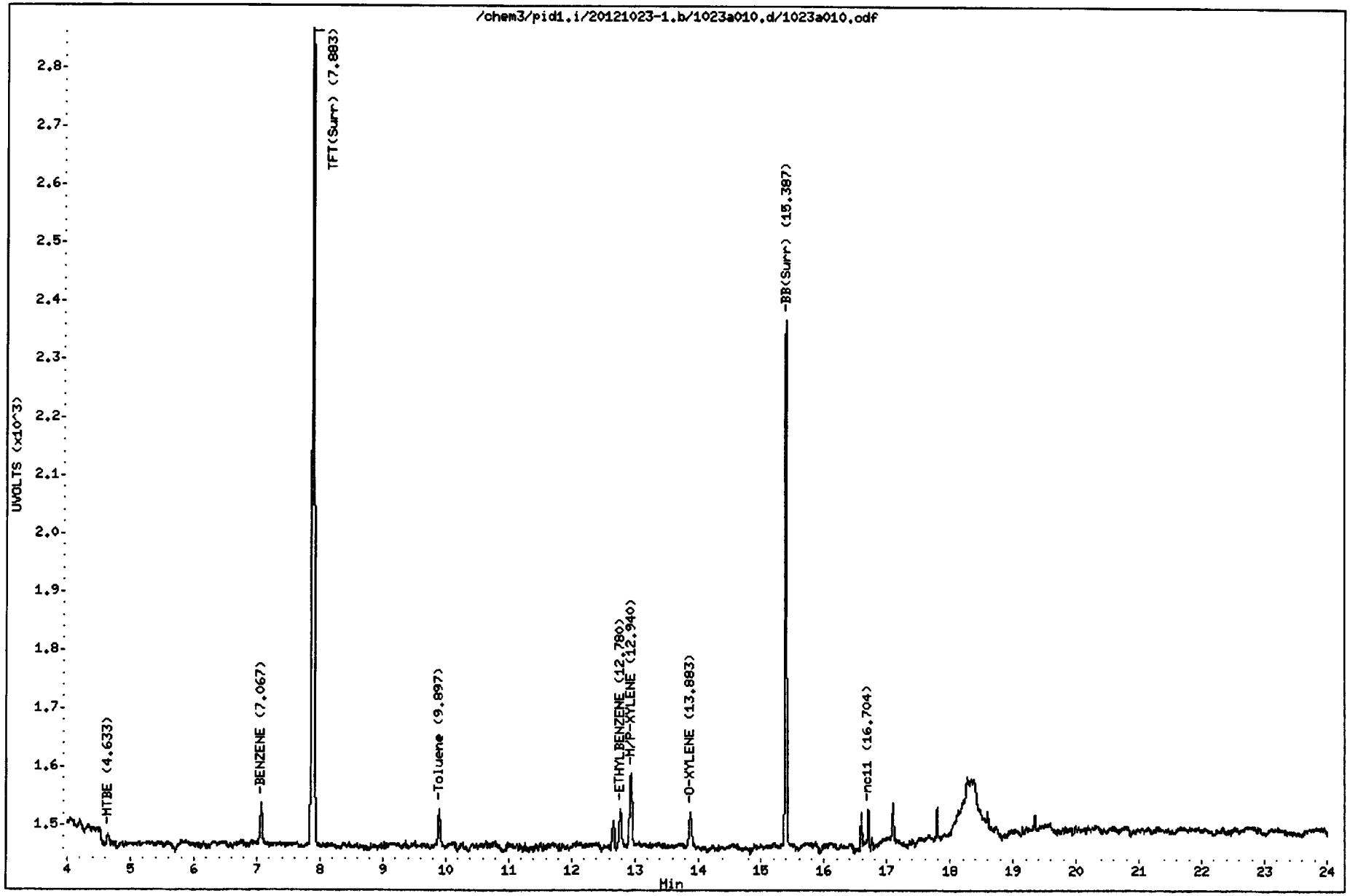
Sample Info: B 0.5

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



US2013015927

Data File: /ohem3/pid1.i/20121023-2.b/1023a010.d

Date : 23-OCT-2012 20:45

Client ID:

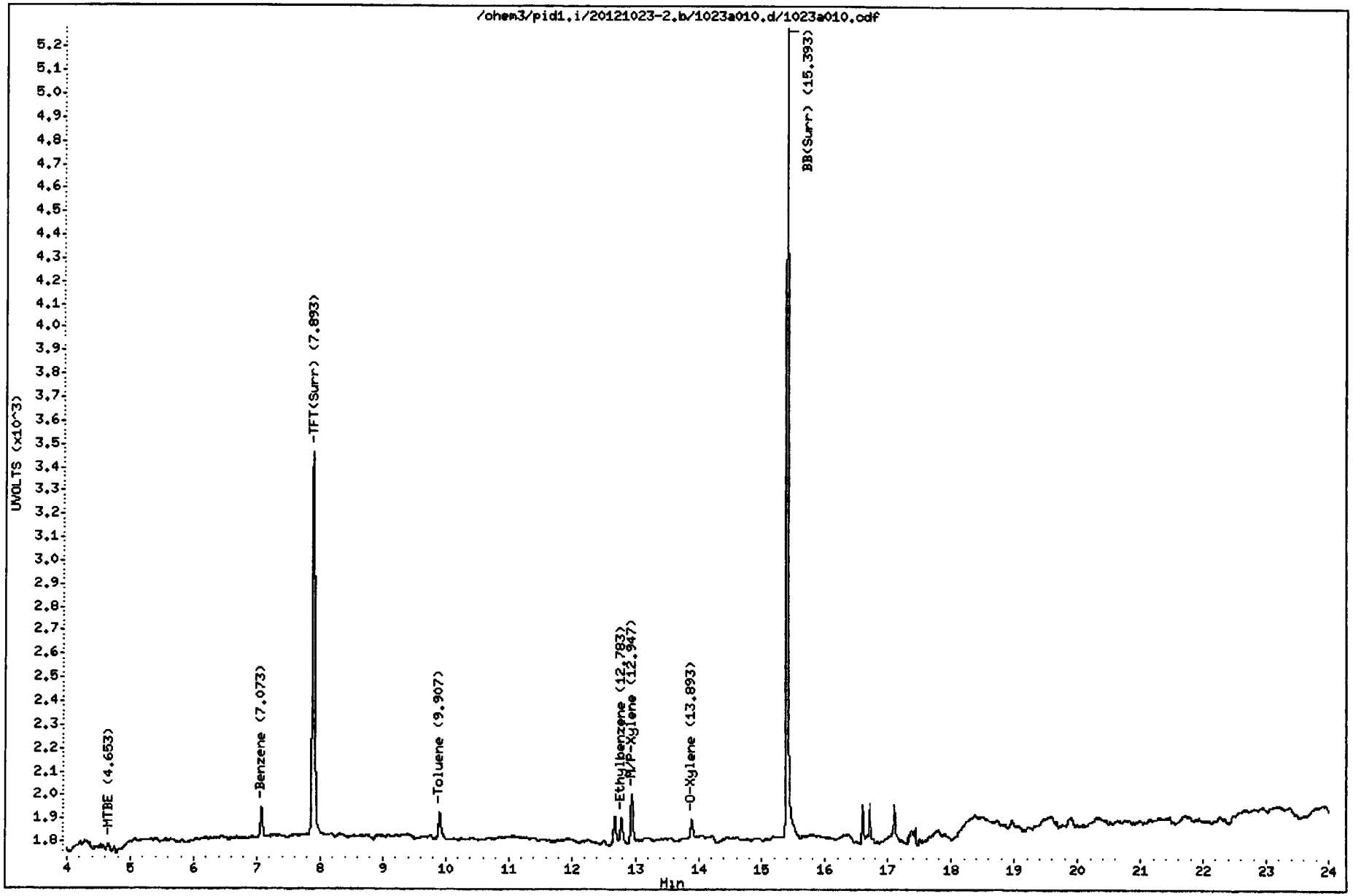
Sample Info: B 0.5

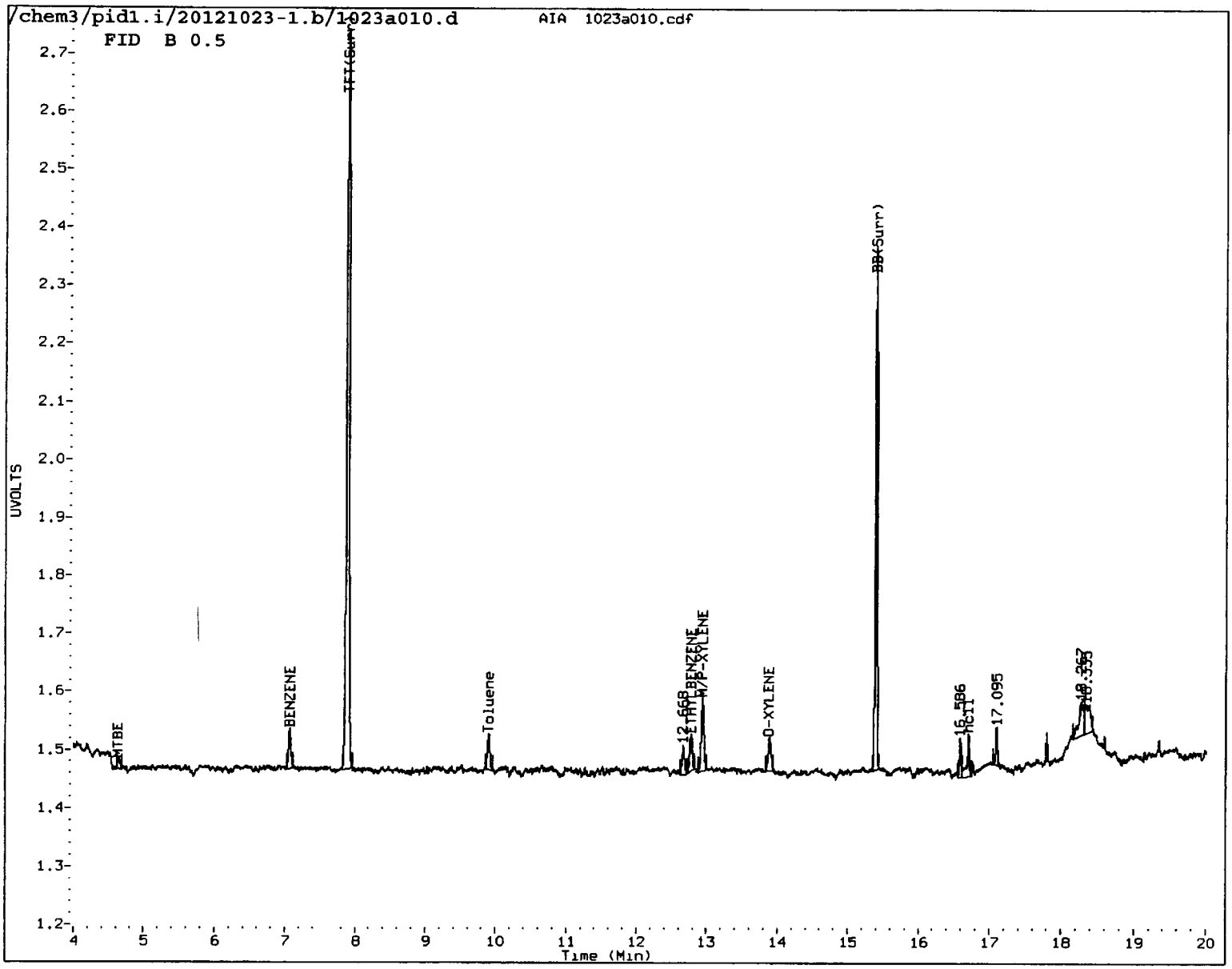
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

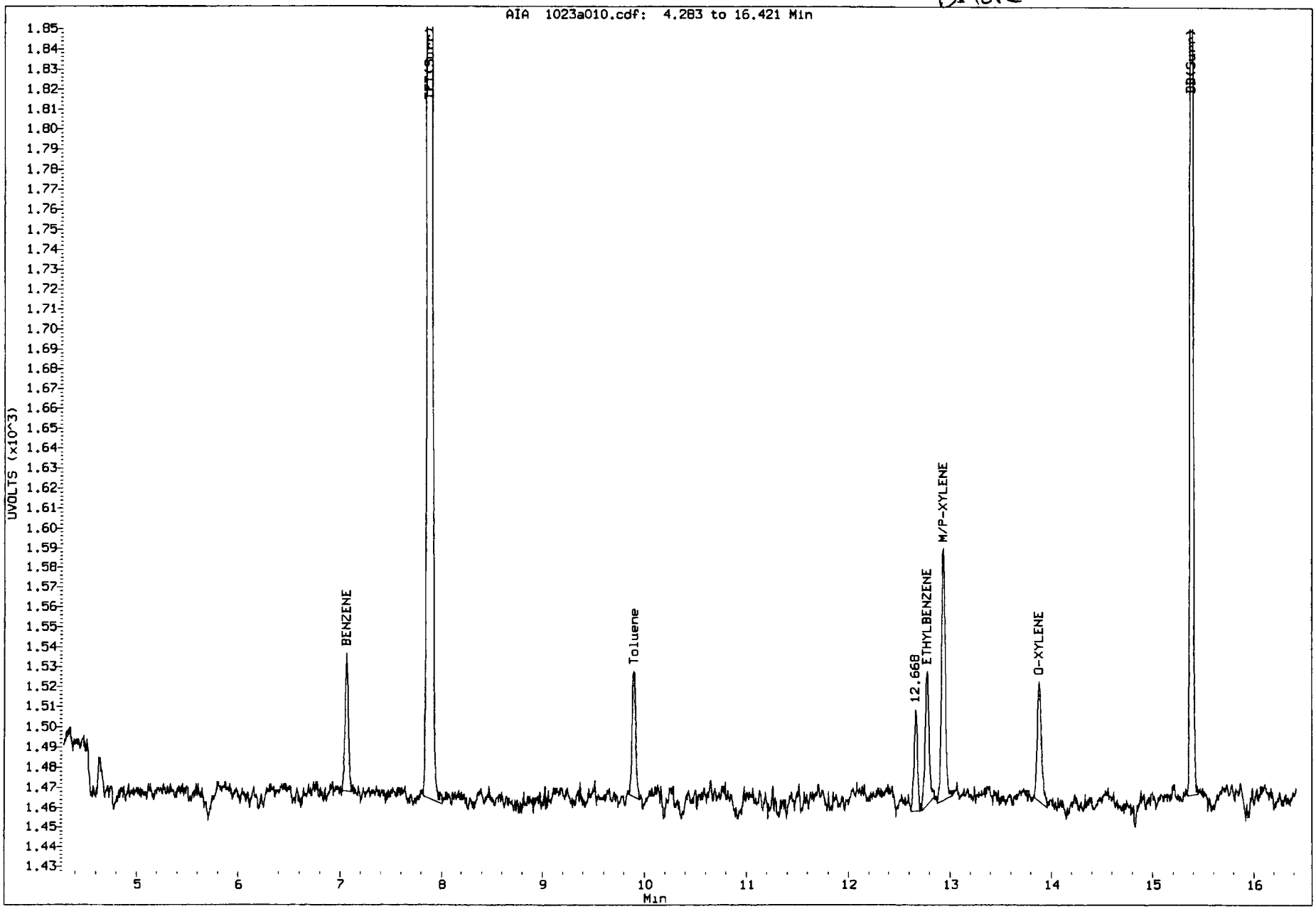
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JW Date: 10/25/12

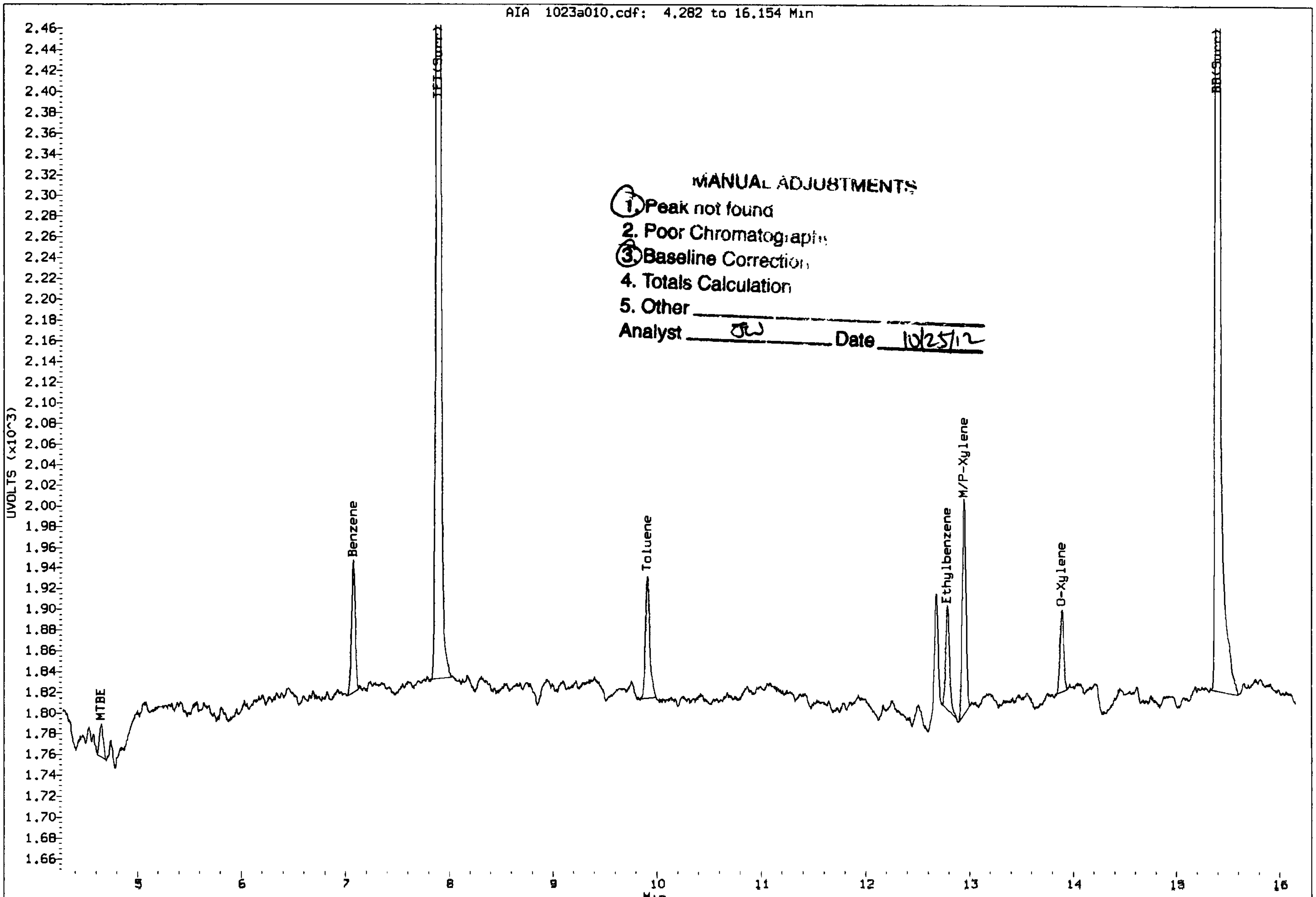
Data File: /chem3/pid1.i/20121023-1.b/1023a010.d/1023a010.cdf
Injection Date: 23-OCT-2012 20:45
Instrument: pid1.i
Client Sample ID:

Before



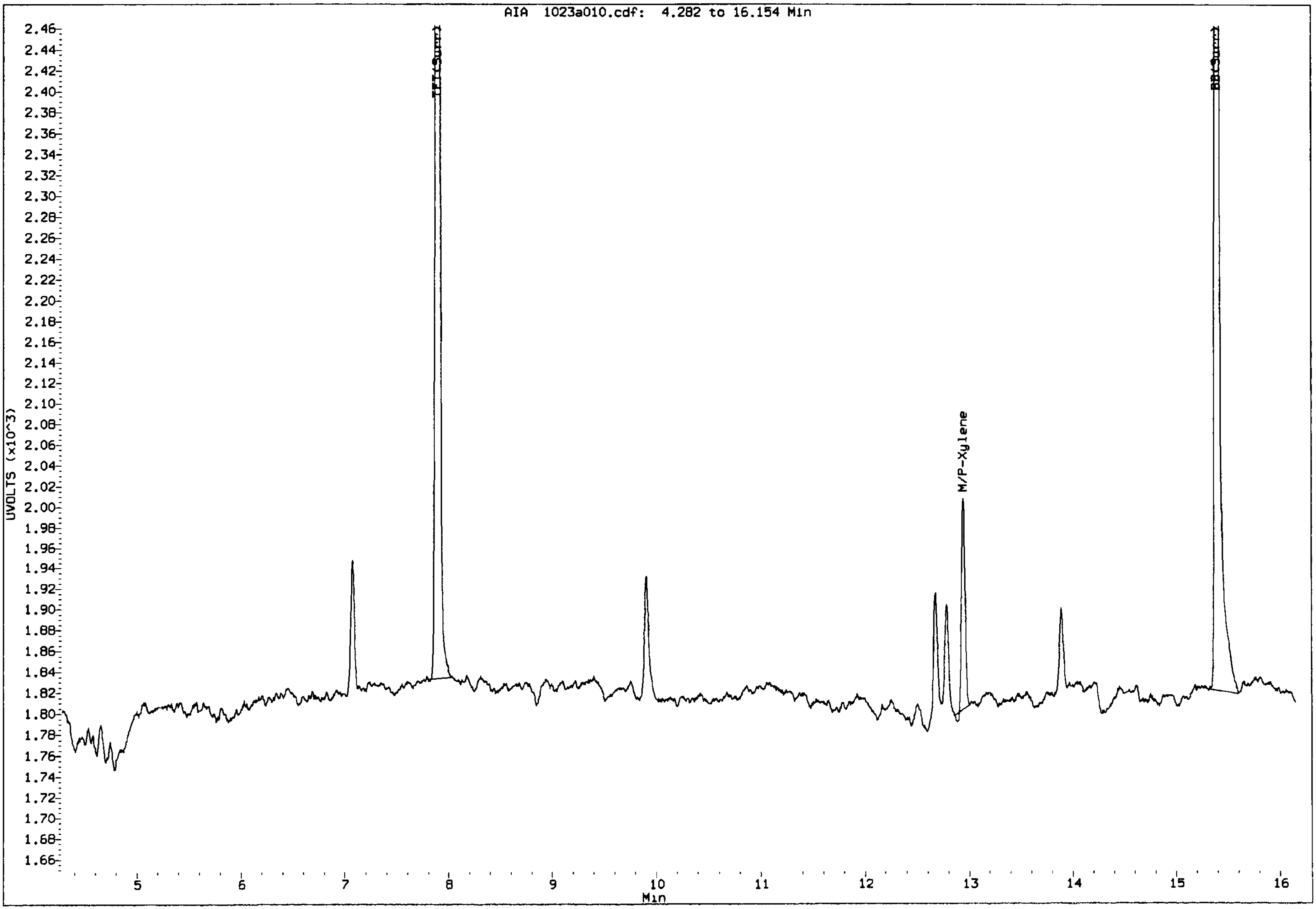
U797 01532

Data File: /chem3/pid1.i/20121023-2.b/1023a010.d/1023a010.cdf
Injection Date: 23-OCT-2012 20:45
Instrument: pid1.i
Client Sample ID:



MANUAL ADJUSTMENTS
1. Peak not found (circled)
2. Poor Chromatography
3. Baseline Correction (circled)
4. Totals Calculation
5. Other ______
Analyst ___ Date 10/25/12

Data File: /chem3/pid1.i/20121023-2.b/1023a010.d/1023a010.cdf
Injection Date: 23-OCT-2012 20:45
Instrument: pid1.i
Client Sample ID:



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a011.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a011.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: B 0.25
Client ID:
Injection Date: 23-OCT-2012 21:15
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.887	0.000	733	9325	23.3	TFT(Surr)
15.387	0.000	484	4042	23.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	2310	0.006 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	2530	0.003 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	2276	0.004 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	2718	0.007 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	855	22.6	TFT(Surr)
15.393	0.000	1790	22.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.077	0.000	57	0.23N	Benzene
9.907	0.000	64	0.28N	Toluene
12.787	0.000	48	0.24N	Ethylbenzene
12.943	0.000	108	0.50N	M/P-Xylene
13.890	0.000	40	0.24N	O-Xylene
ND	---	---	---	MTBE

JW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a011.d

Date : 23-OCT-2012 21:15

Client ID:

Sample Info: B 0.25

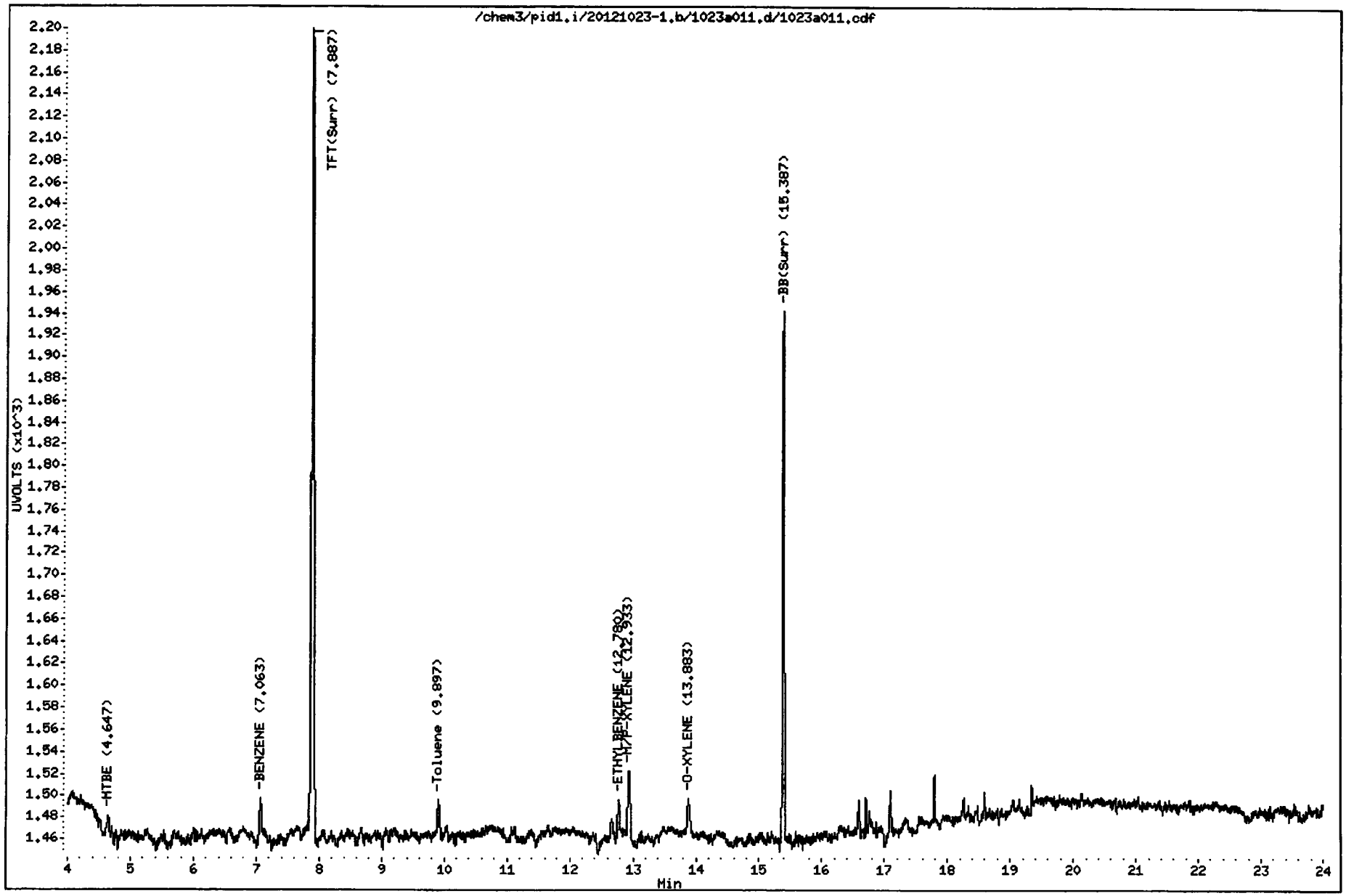
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18

USEPA SW846



Data File: /chem3/pid1.i/20121023-2.b/1023a011.d

Date : 23-OCT-2012 21:15

Client ID:

Sample Info: B 0.25

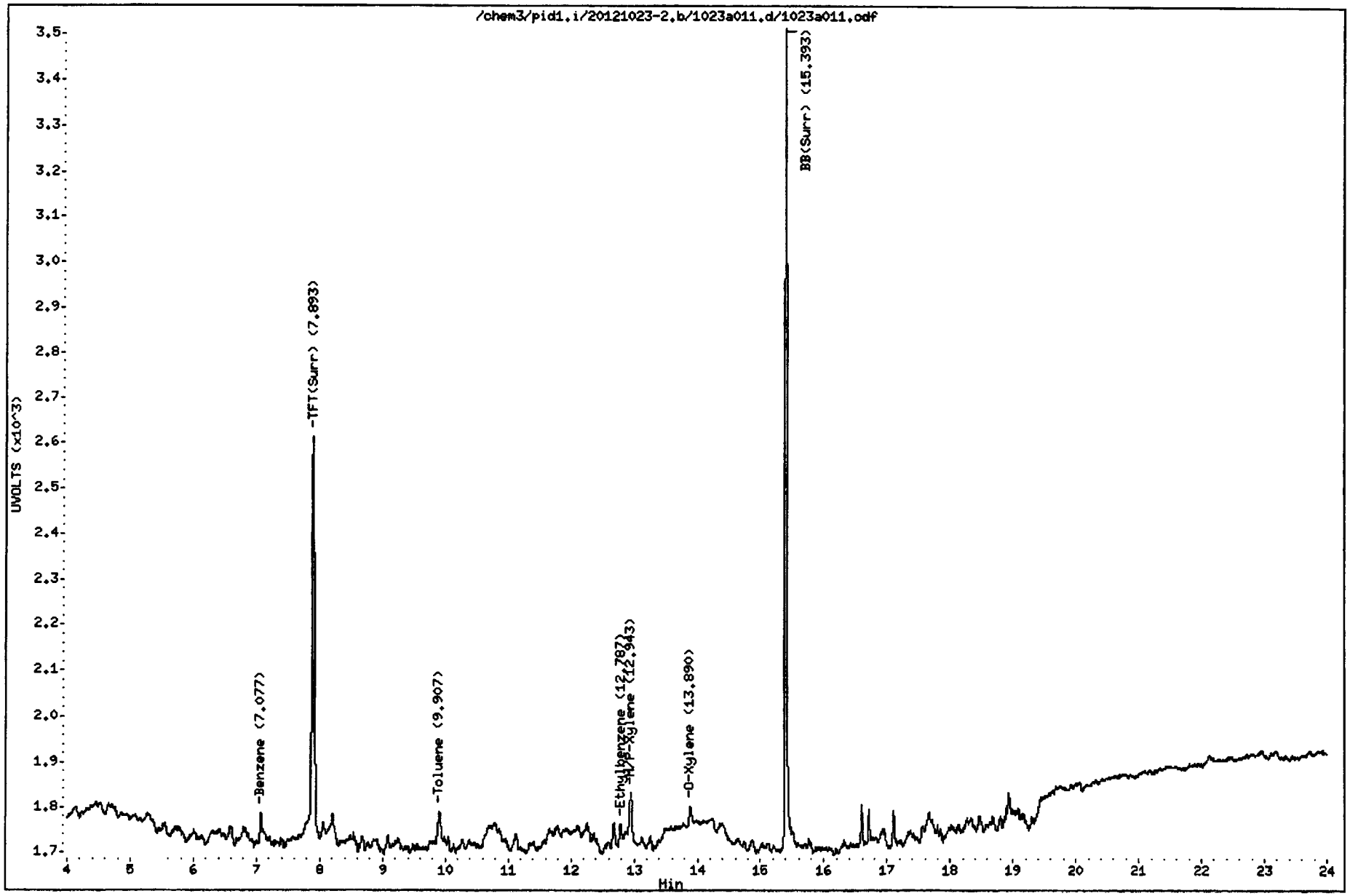
Column phase: RTX 502-2 PID

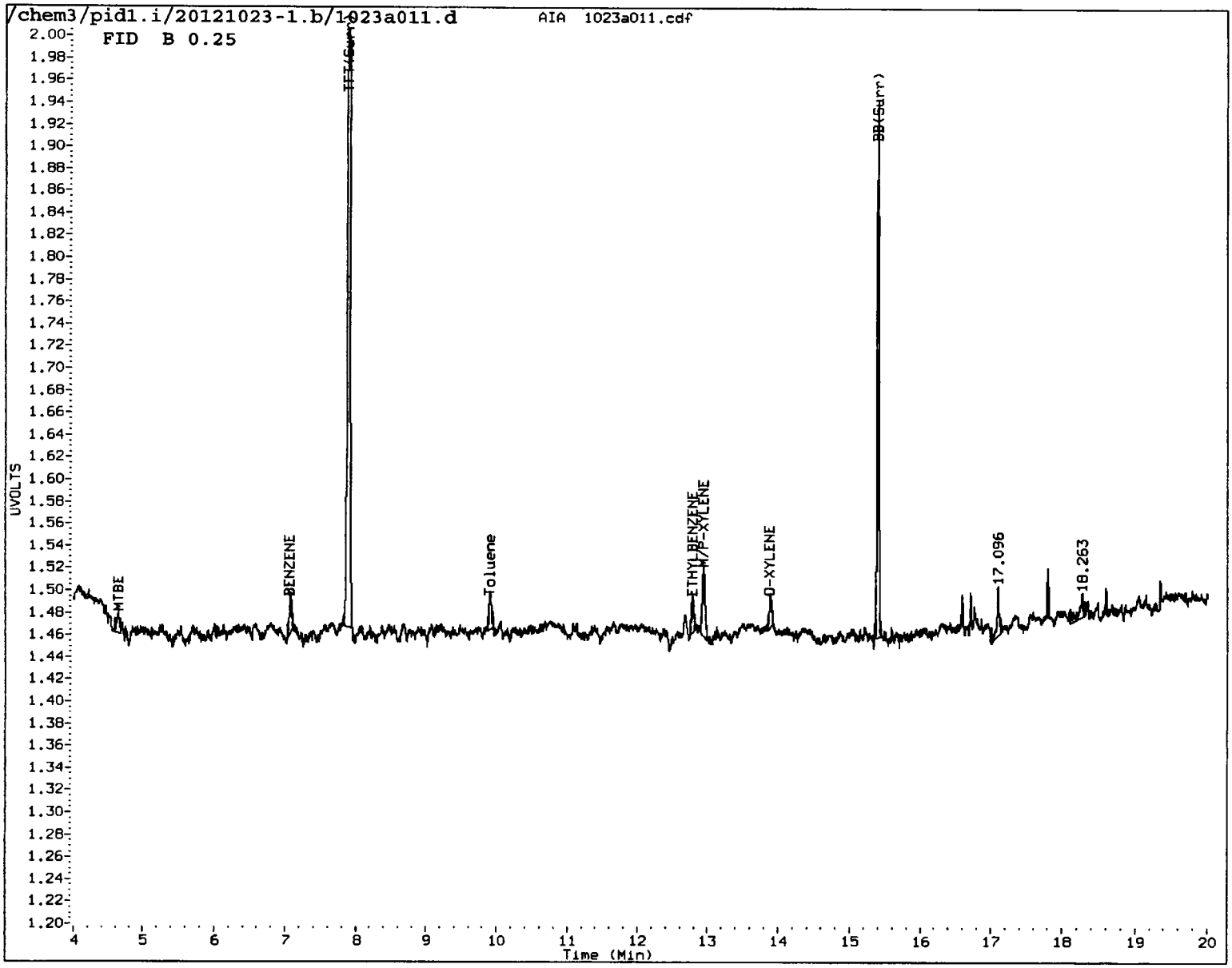
Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18

UZ797 01597





MANUAL INTEGRATION

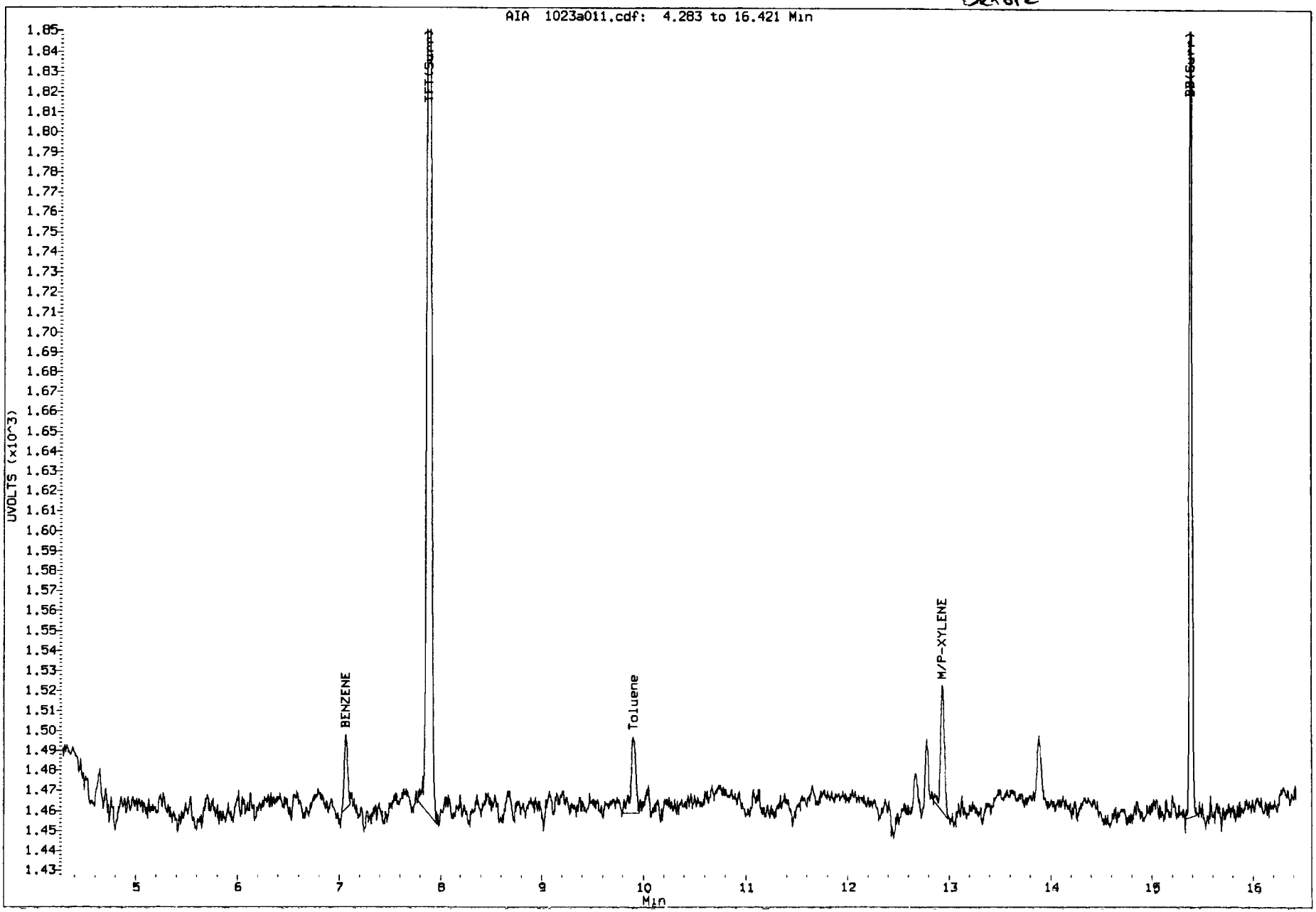
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JW Date: 10/25/12

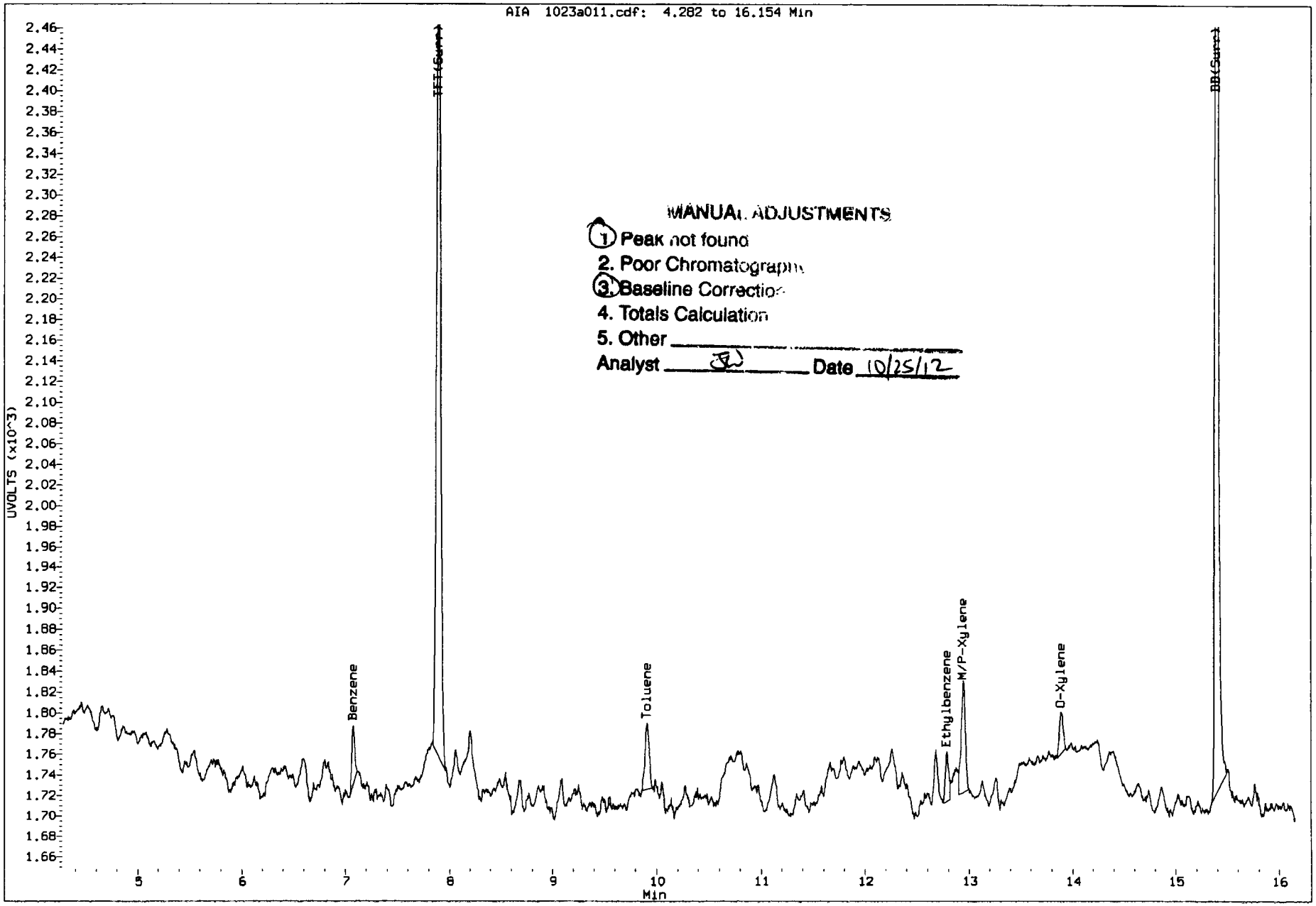
Data File: /chem3/pid1.i/20121023-1.b/1023a011.d/1023a011.cdf
Injection Date: 23-OCT-2012 21:15
Instrument: pid1.i
Client Sample ID:

Before



95575-2527

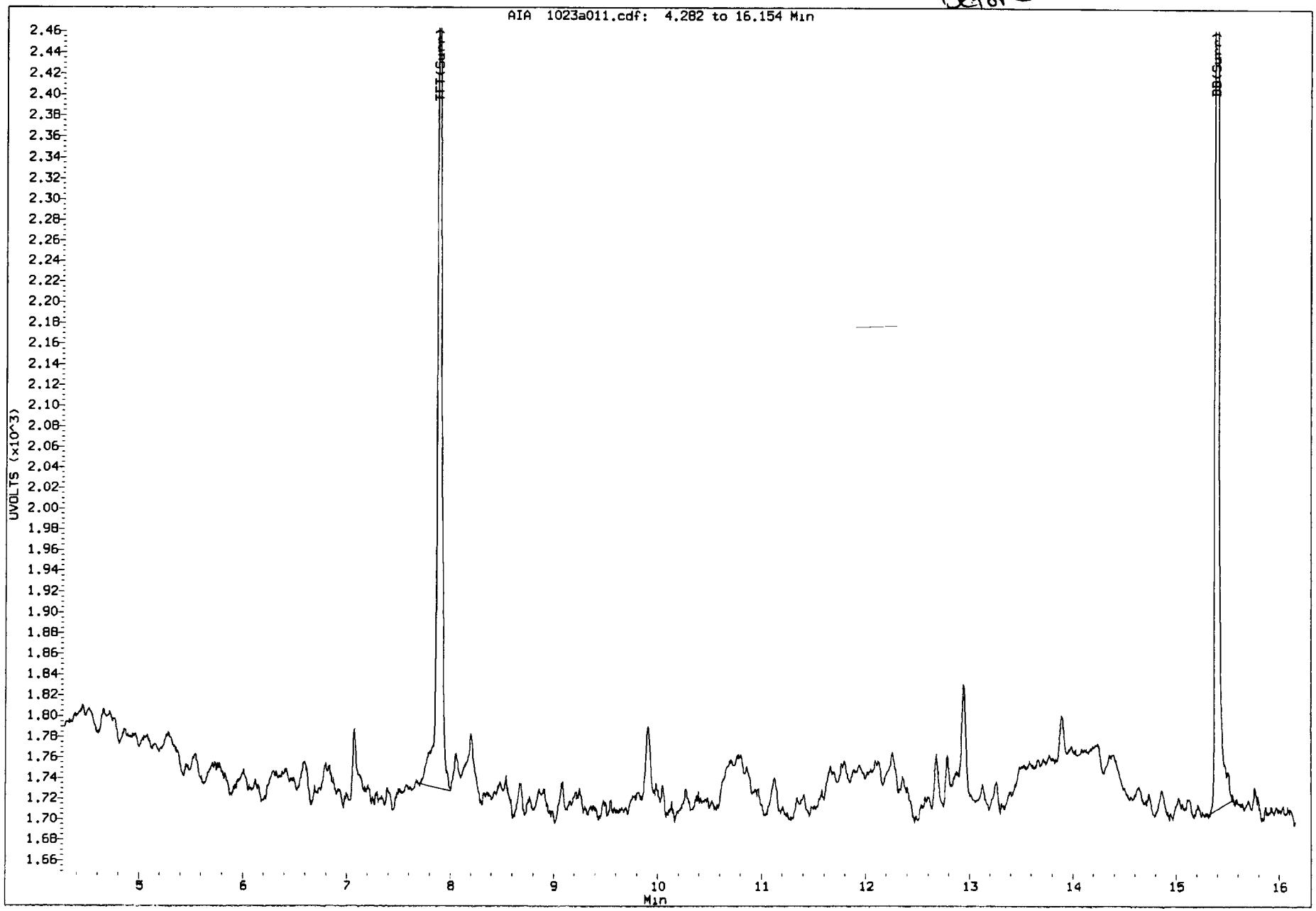
Data File: /chem3/pid1.i/20121023-2.b/1023a011.d/1023a011.cdf
Injection Date: 23-OCT-2012 21:15
Instrument: pid1.i
Client Sample ID:



USEPA - 6569

Data File: /chem3/pid1.i/20121023-2.b/1023a011.d/1023a011.cdf
Injection Date: 23-OCT-2012 21:15
Instrument: pid1.i
Client Sample ID:

Before



USZ7,961,151

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a012.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a012.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: BICV
Client ID:
Injection Date: 23-OCT-2012 21:44
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.884	-0.003	2989	38262	94.9	TFT(Surr)
15.387	0.000	1972	16638	97.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	256090	0.715
8015C 2MP-TMB	(4.29 to 16.21)	723723	256713	0.355
AK101 nC6-nC10	(4.76 to 15.11)	582885	241615	0.415
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	256090	0.683

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.892	-0.001	3638	96.0	TFT(Surr)
15.395	0.002	7931	98.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.073	-0.004	6699	27.01	Benzene
9.905	-0.001	5955	26.47	Toluene
12.785	-0.002	5351	27.14	Ethylbenzene
12.946	0.003	11682	54.33	M/P-Xylene
13.894	0.004	4726	28.16	O-Xylene
4.646	-0.008	1898	26.36	MTBE

JW 10/25/12

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a012.d

Page 1

Date : 23-OCT-2012 21:44

Client ID:

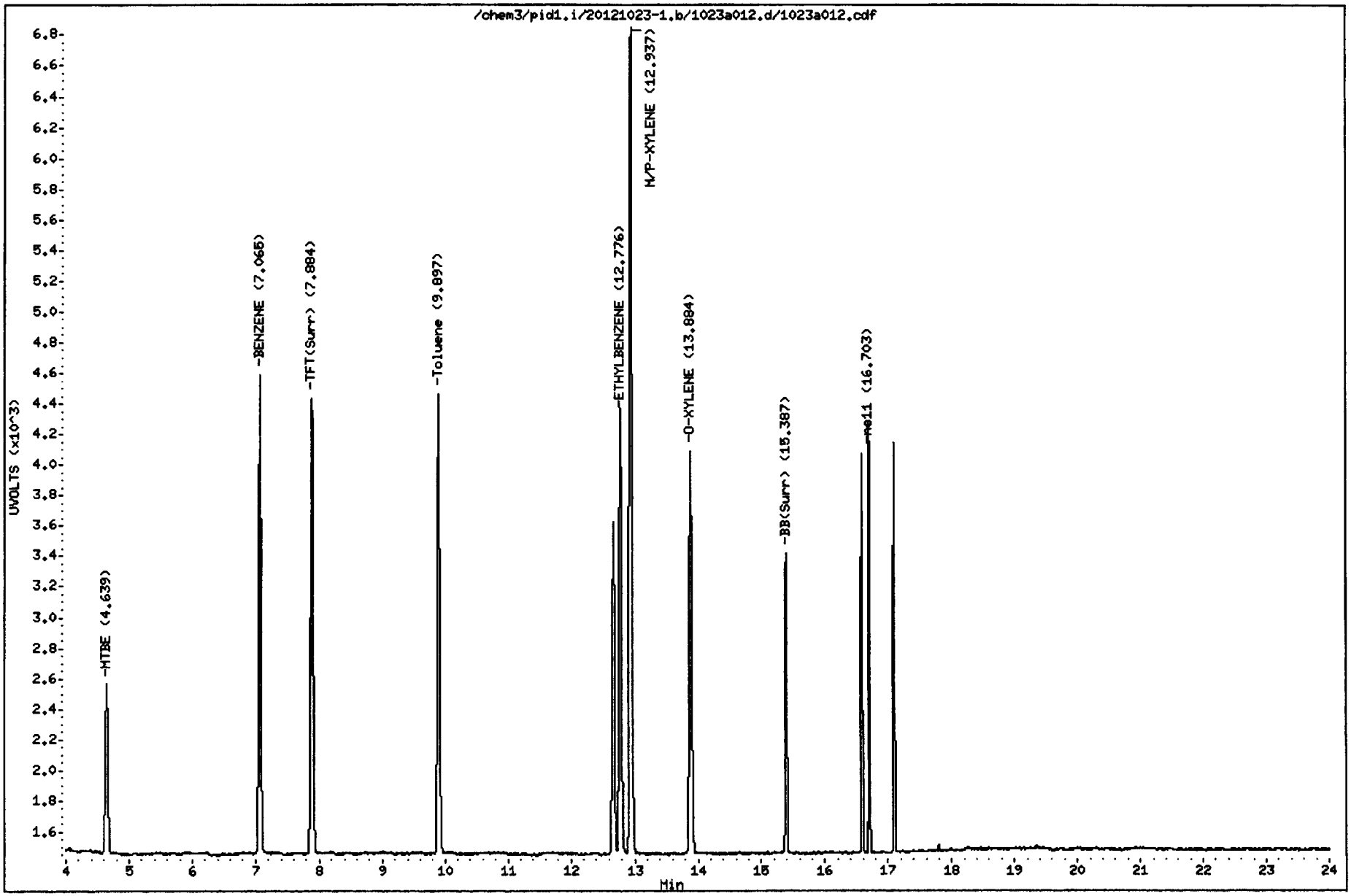
Instrument: pid1.i

Sample Info: BICV

Operator: PC/JW

Column phase: RTX 502-2 FID

Column diameter: 0.18



Data File: /ohem3/pid1.i/20121023-2.b/1023a012.d

Date : 23-OCT-2012 21:44

Client ID:

Sample Info: BICV

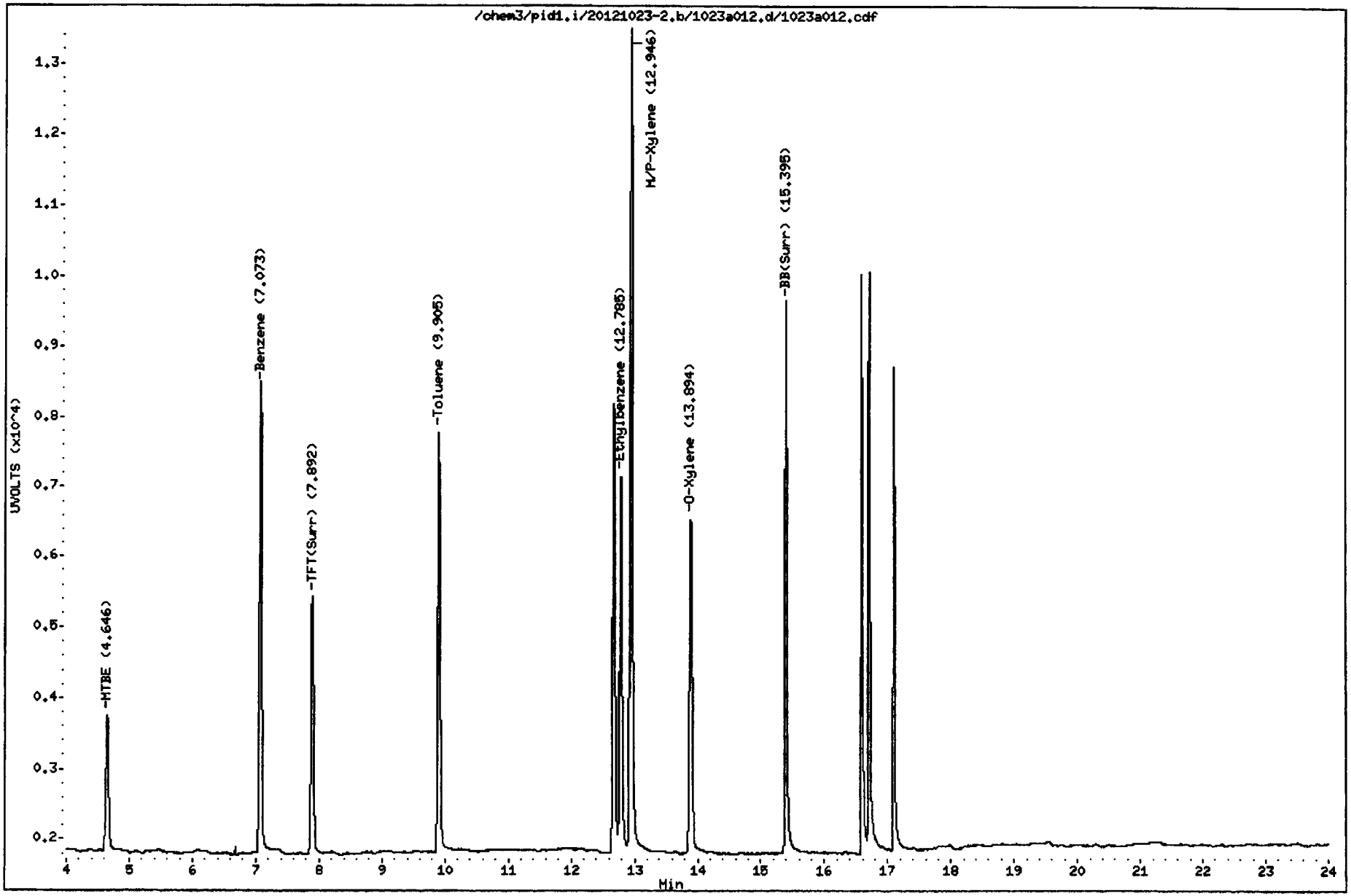
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18

U7297 : 01/30/13



Report Date : 25-Oct-2012 17:27

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-1.b/FID.m
Batch File: /chem3/pid1.i/20121023-1.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08
FILENAME:	1023a004	1023a005	1023a006	1023a007	1023a008	1023a009	1023a010	1023a011
INJ.DATE:	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012
INJ.TIME:	17:50	18:20	18:49	19:18	19:47	20:16	20:45	21:15

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 NWTPHG	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	0.492	0.422-0.562	+++++	+++++
2 WAGAS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	0.937	0.867-1.007	+++++	+++++
3 AK101	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.251	1.181-1.321	+++++	+++++
4 8015GAS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.539	1.469-1.609	+++++	+++++
5 2-Methylpentane	4.387	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.387	4.317-4.457	4.387	0.000
6 MTBE	4.643	4.642	4.645	4.644	4.640	4.640	4.633	4.647	4.643	4.573-4.713	4.642	0.004
7 nC6	4.864	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.864	4.794-4.934	4.864	0.000
8 nC7	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.864	6.794-6.934	+++++	+++++
9 BENZENE	7.069	7.067	7.067	7.067	7.063	7.063	7.067	7.063	7.069	6.999-7.139	7.066	0.002
$ 10 TFT(Surr)	7.887	7.883	7.883	7.887	7.883	7.884	7.883	7.887	7.887	7.817-7.957	7.885	0.002
11 nC8	9.507	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.507	9.437-9.577	9.507	0.000
12 Toluene	9.903	9.897	9.897	9.897	9.897	9.900	9.897	9.897	9.903	9.833-9.973	9.898	0.002
13 nC9	12.416	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.416	12.346-12.486	12.416	0.000
14 ETHYLBENZENE	12.783	12.776	12.775	12.775	12.776	12.777	12.780	12.780	12.783	12.713-12.853	12.778	0.003
15 M/P-XYLENE	12.948	12.938	12.937	12.936	12.936	12.937	12.940	12.933	12.948	12.878-13.018	12.938	0.004
16 O-XYLENE	13.890	13.884	13.882	13.883	13.883	13.883	13.883	13.883	13.890	13.820-13.960	13.884	0.002
17 nC10-Decane	15.207	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.207	15.137-15.277	15.207	0.000

Reviewer 1 ______ Date: 10/25/12
Reviewer 2 ______ Date: 10/26/12

SDG 15927

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-1.b/FID.m
Batch File: /chem3/pid1.i/20121023-1.b
Inst ID: pid1.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 18 BB(Surr)	15.390	15.387	15.387	15.387	15.387	15.387	15.387	15.387	15.390	15.320-15.460	15.387	0.001
$ 19 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.027	15.957-16.097	+++++	+++++
20 1,2,4-Trimethylbenzene	16.109	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.109	16.039-16.179	16.109	0.000
21 nc11	16.761	16.760	16.702	16.703	16.703	16.705	16.704	+++++	16.761	16.691-16.831	16.720	0.028
22 nC12-Dodecane	17.800	17.795	17.795	17.795	+++++	+++++	+++++	+++++	17.800	17.730-17.870	17.796	0.003
23 nC13	18.607	18.595	+++++	+++++	+++++	+++++	+++++	+++++	18.607	18.537-18.677	18.601	0.008
24 Naphthalene	18.808	18.796	+++++	+++++	+++++	+++++	+++++	+++++	18.808	18.738-18.878	18.802	0.009

Report Date : 25-Oct-2012 17:27

25516.2627

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-2.b/PIDB.m
Batch File: /chem3/pid1.i/20121023-2.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08
FILENAME:	1023a004	1023a005	1023a006	1023a007	1023a008	1023a009	1023a010	1023a011
INJ.DATE:	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012
INJ.TIME:	17:50	18:20	18:49	19:18	19:47	20:16	20:45	21:15

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 MTBE	4.650	4.650	4.653	4.653	4.647	4.647	4.653	+++++	4.650	4.600-4.700	4.651	0.003
	2 Benzene	7.078	7.073	7.075	7.077	7.073	7.073	7.073	7.077	7.078	7.028-7.128	7.075	0.002
$	3 TFT(Surr)	7.896	7.890	7.893	7.893	7.890	7.893	7.893	7.893	7.896	7.846-7.946	7.893	0.002
	4 Toluene	9.910	9.903	9.903	9.907	9.903	9.907	9.907	9.907	9.910	9.860-9.960	9.906	0.002
	5 Ethylbenzene	12.793	12.785	12.784	12.785	12.785	12.785	12.783	12.787	12.793	12.743-12.843	12.786	0.003
	6 M/P-Xylene	12.957	12.948	12.946	12.946	12.945	12.946	12.947	12.943	12.957	12.908-13.008	12.947	0.004
	7 O-Xylene	13.900	13.893	13.890	13.893	13.893	13.893	13.893	13.890	13.900	13.870-13.930	13.893	0.003
$	8 BB(Surr)	15.397	15.393	15.393	15.397	15.393	15.393	15.393	15.393	15.397	15.347-15.447	15.394	0.002

Reviewer 1 JW Date: 10/25/12
Reviewer 2 Date: 10/24/12

6a
GAS INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: 20121023-1

Instrument/Det: PID1.I/RTX 502-2 FID Project:

Calibration Date: 23-OCT-2012 SDG No.: 20121023-1

Gas Range	RF1 0.1	RF2 0.25	RF3 1.0	RF4 2.5	RF5 5.0	RF6 10	Ave RF	%RSD
WA Gas	371020	379456	358654	339293	340260	360001	358114	4.5
AK Gas	579135	648986	585010	543304	542244	598628	582885	6.8
NW Gas	394025	395072	376837	353939	355113	375572	375093	4.8
Cal Gas	761375	793504	721427	674216	671666	730795	725497	6.6
8015Gas	742770	796044	725276	674926	670493	732827	723723	6.4

Surrogates Rel. Rec.	RF1 22	RF2 44	RF3 67	RF4 100	RF5 133	RF6 178	Ave RF	%RSD

<- Indicates %RSD outside limits
Surrogate areas are not included in RF calculation.

Quant Ranges :
- WA Gas: Toluene - nC12
- AK Gas: nC6 - nC10
- NW Gas: Toluene - Naphthalene
- Cal Gas: nC6 - nC12
- 8015 Gas: 2-Methylpentane - 1,2,4-Trimethylbenzene

Calibration Files	Analysis Time
1023a013.d	23-OCT-2012 22:13
1023a014.d	23-OCT-2012 22:42
1023a015.d	23-OCT-2012 23:11
1023a016.d	23-OCT-2012 23:40
1023a017.d	24-OCT-2012 00:10
1023a018.d	24-OCT-2012 00:39

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a002.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a002.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: RT1023+BCAL1
Client ID:
Injection Date: 23-OCT-2012 10:10
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.884	-0.003	3182	41284	101.0	TFT(Surr)
15.387	0.000	2019	16909	99.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	475541	1.328
8015C 2MP-TMB	(4.29 to 16.21)	723723	578928	0.800
AK101 nC6-nC10	(4.76 to 15.11)	582885	402341	0.690
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	504301	1.344

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

JW 10/25/12

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.892	-0.002	3856	101.8	TFT(Surr)
15.394	0.001	8138	101.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.074	-0.003	6292	25.37	Benzene
9.904	-0.002	5539	24.62	Toluene
12.784	-0.002	4977	25.24	Ethylbenzene
12.945	0.002	10971	51.03	M/P-Xylene
13.892	0.002	4338	25.85	O-Xylene
4.650	-0.003	1700	23.61	MTBE

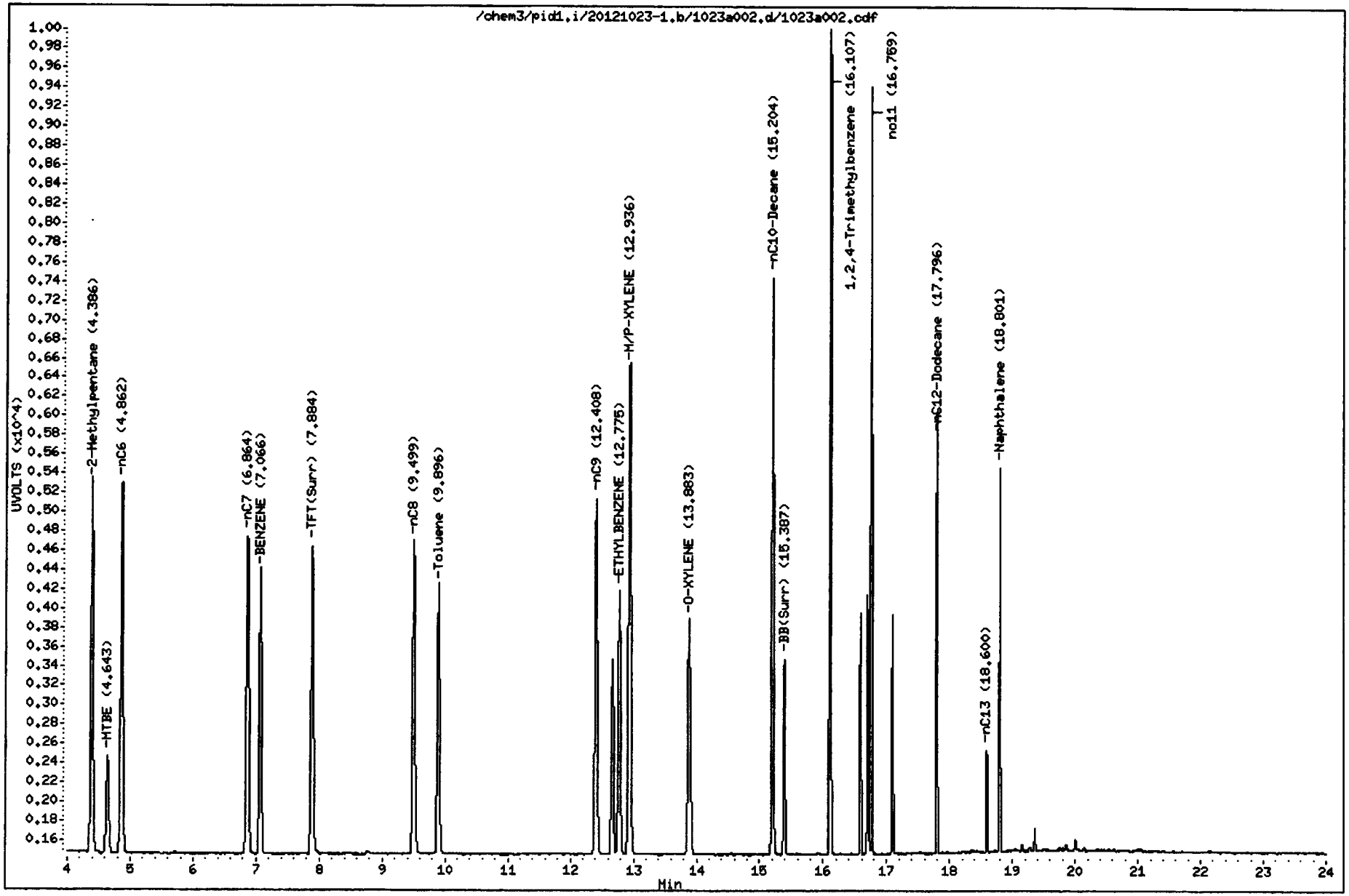
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a002.d
Date : 23-OCT-2012 10:10
Client ID:
Sample Info: RT1023+BCAL1

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW
Column diameter: 0.18



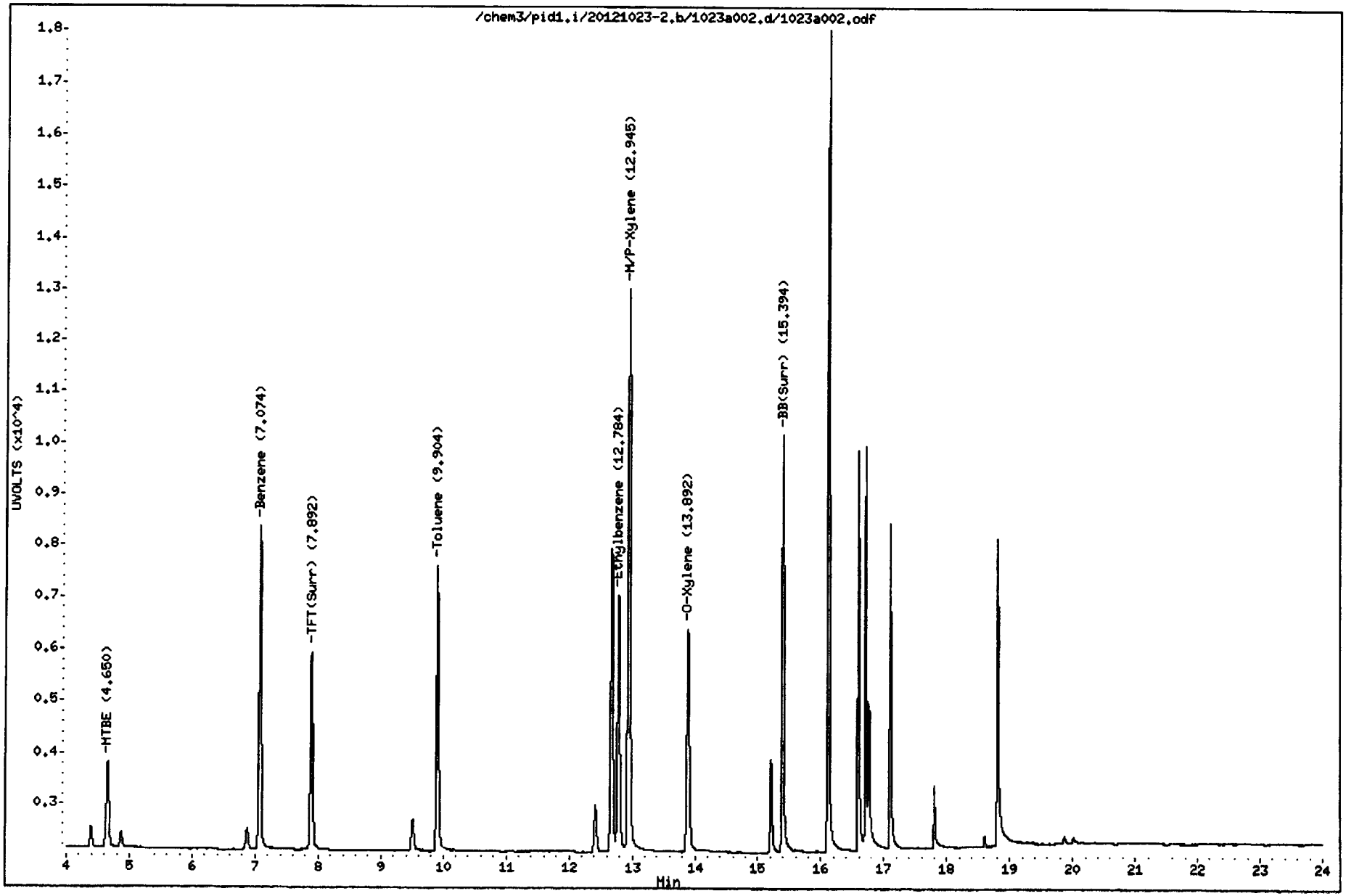
UZ97-0919

Data File: /chem3/pid1.i/20121023-2.b/1023a002.d
Date : 23-OCT-2012 10:10
Client ID:
Sample Info: RT1023+BCAL1

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW
Column diameter: 0.18



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a013.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a013.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: G 0.10
Client ID:
Injection Date: 23-OCT-2012 22:13
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.885	-0.002	2950	38720	93.7	TFT(Surr)
15.387	0.000	1950	16606	96.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	37102	0.104 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	74277	0.103 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	57914	0.099 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	39402	0.105 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

JW 10/25/12

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	3536	93.3	TFT(Surr)
15.395	0.001	7790	96.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
9.907	0.000	902	4.01	Toluene
12.785	-0.001	223	1.13	Ethylbenzene
12.948	0.005	914	4.25	M/P-Xylene
13.893	0.003	346	2.06	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a013.d

Date : 23-OCT-2012 22:13

Client ID:

Sample Info: G 0.10

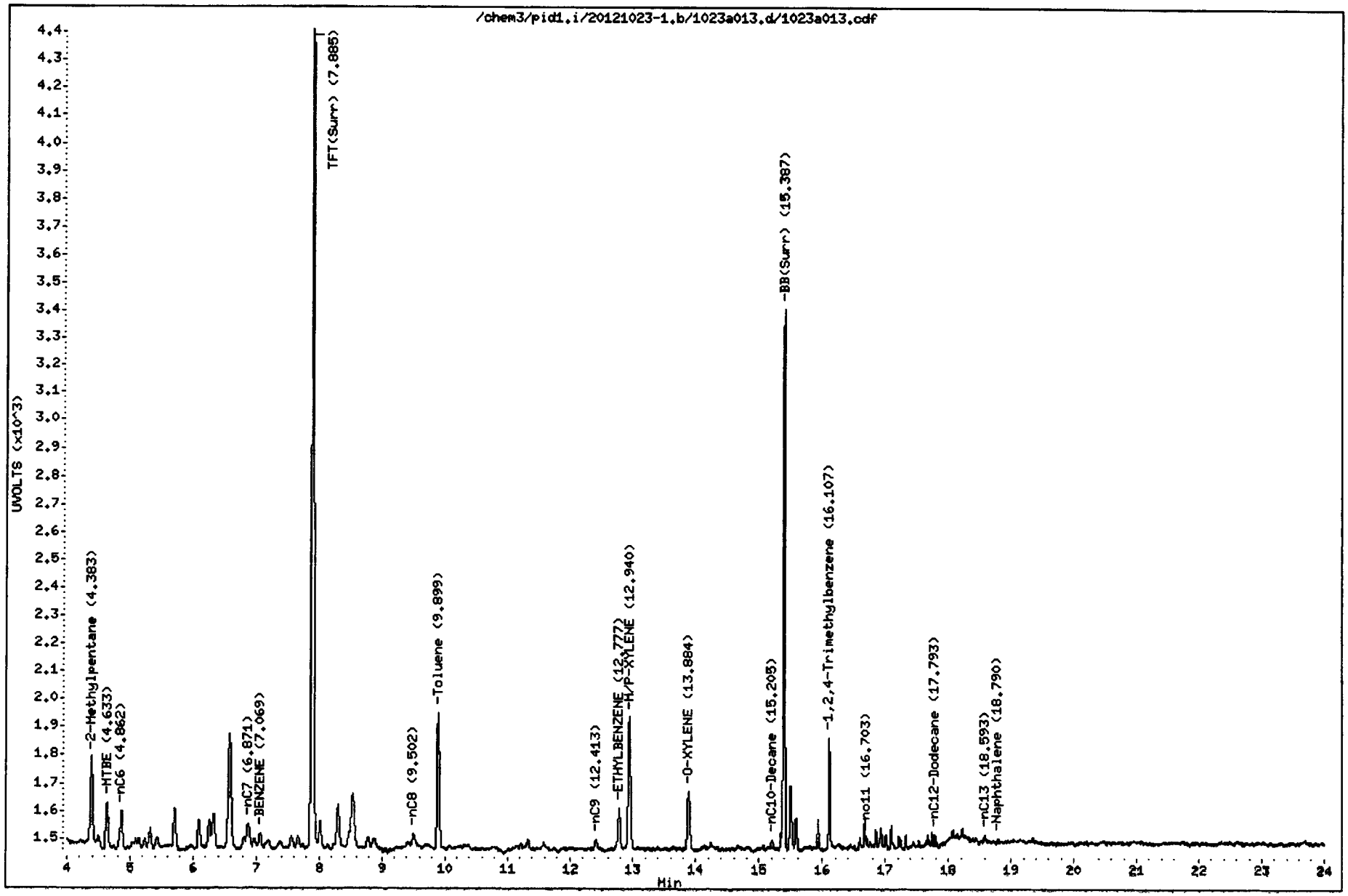
Instrument: pid1.i

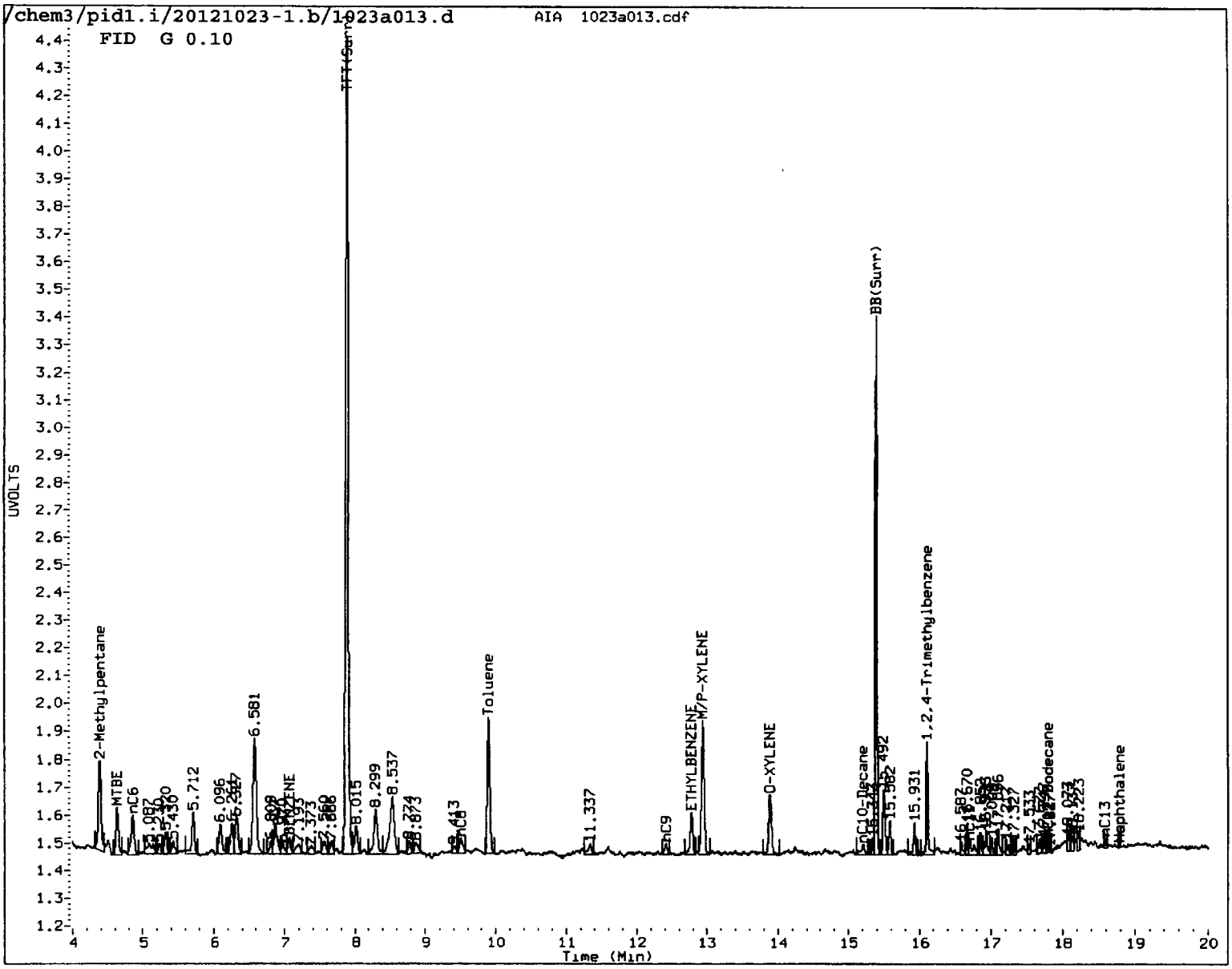
Operator: PC/JW

Column phase: RTX 502-2 FID

Column diameter: 0.18

UZ97 01513



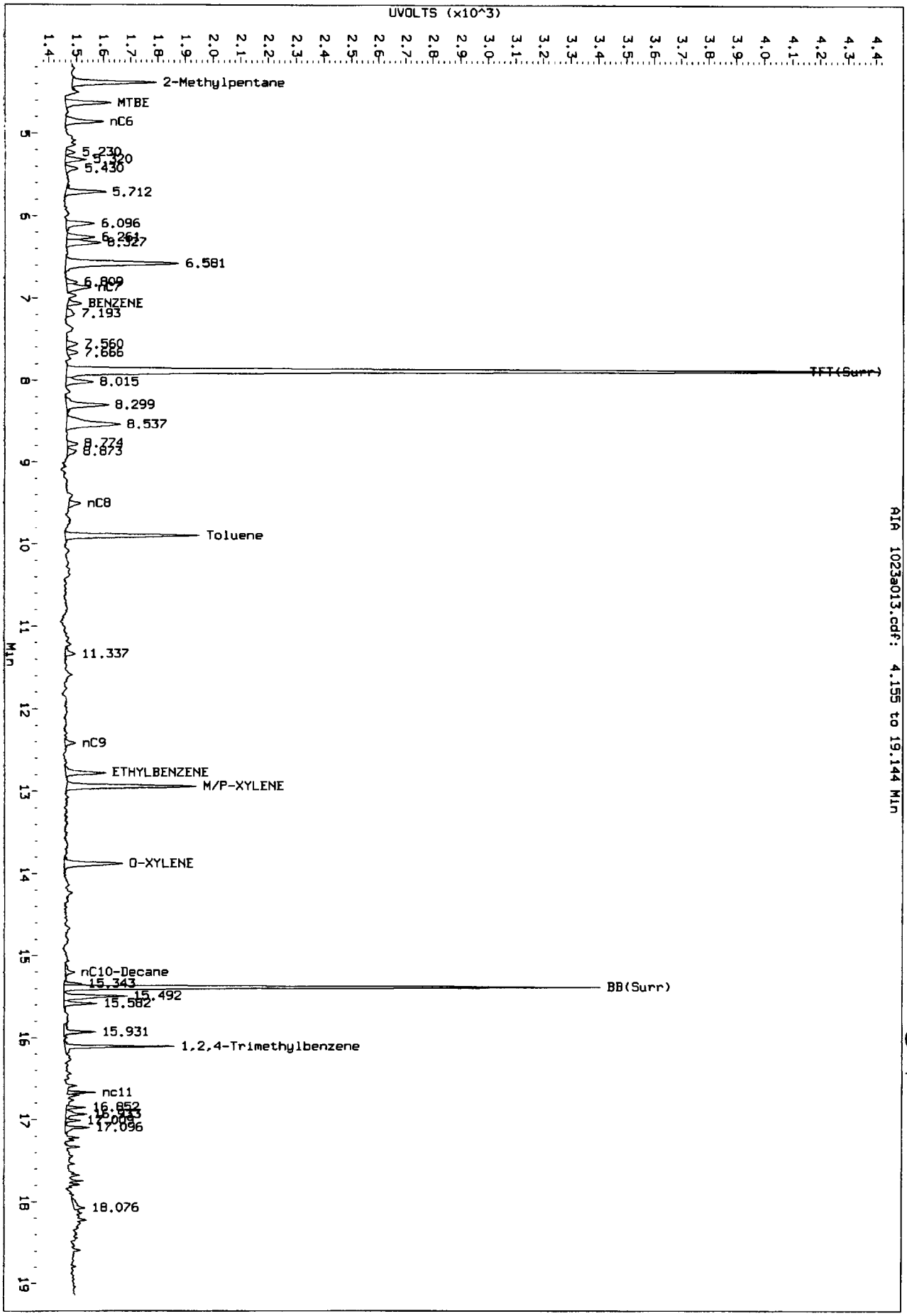


MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JW Date: 10/25/12


Data File: /chem3/pid1.i/20121023-1.b/1023a013.d/1023a013.cdf
Injection Date: 23-OCT-2012 22:13
Instrument: pid1.i
Client Sample ID:
UVOLTS (x10^3)
Min
2-Methylpentane
MTBE
nC6
5.230
5.320
5.430
5.712
6.096
6.261
6.327
6.581
6.809
nC7
BENZENE
7.193
7.560
7.666
TFT(Surr)
8.015
8.299
8.537
8.774
8.873
nC8
Toluene
11.337
nC9
ETHYLBENZENE
M/P-XYLENE
O-XYLENE
nC10-Decane
15.343
BB(Surr)
15.492
15.582
15.931
1,2,4-Trimethylbenzene
nc11
16.852
17.096
18.076
AIA 1023a013.cdf: 4.155 to 19.144 Min
Before

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a014.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a014.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: G 0.25
Client ID:
Injection Date: 23-OCT-2012 22:42
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.886	-0.001	2975	39690	94.5	TFT(Surr)
15.388	0.001	1944	16963	95.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	94864	0.265 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	199011	0.275 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	162246	0.278 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	98768	0.263 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

SW 10/25/12

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.894	0.000	3597	95.0	TFT(Surr)
15.396	0.002	7867	97.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.002	225	0.91	Benzene
9.906	0.000	2188	9.72	Toluene
12.786	-0.001	548	2.78	Ethylbenzene
12.948	0.005	2183	10.15	M/P-Xylene
13.894	0.004	795	4.74	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a014.d

Date : 23-OCT-2012 22:42

Client ID:

Sample Info: G 0.25

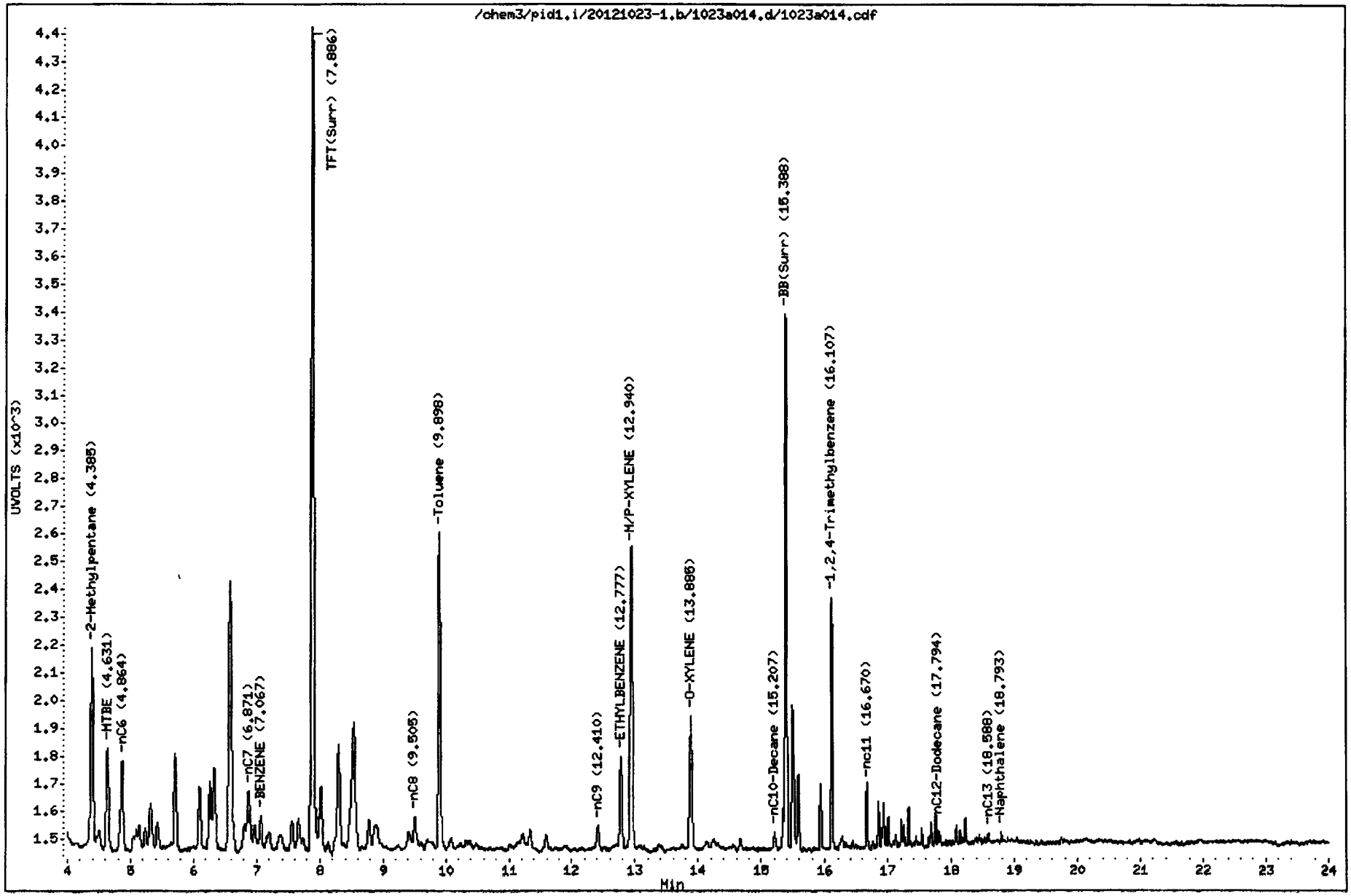
Column phase: RTX 502-2 FID

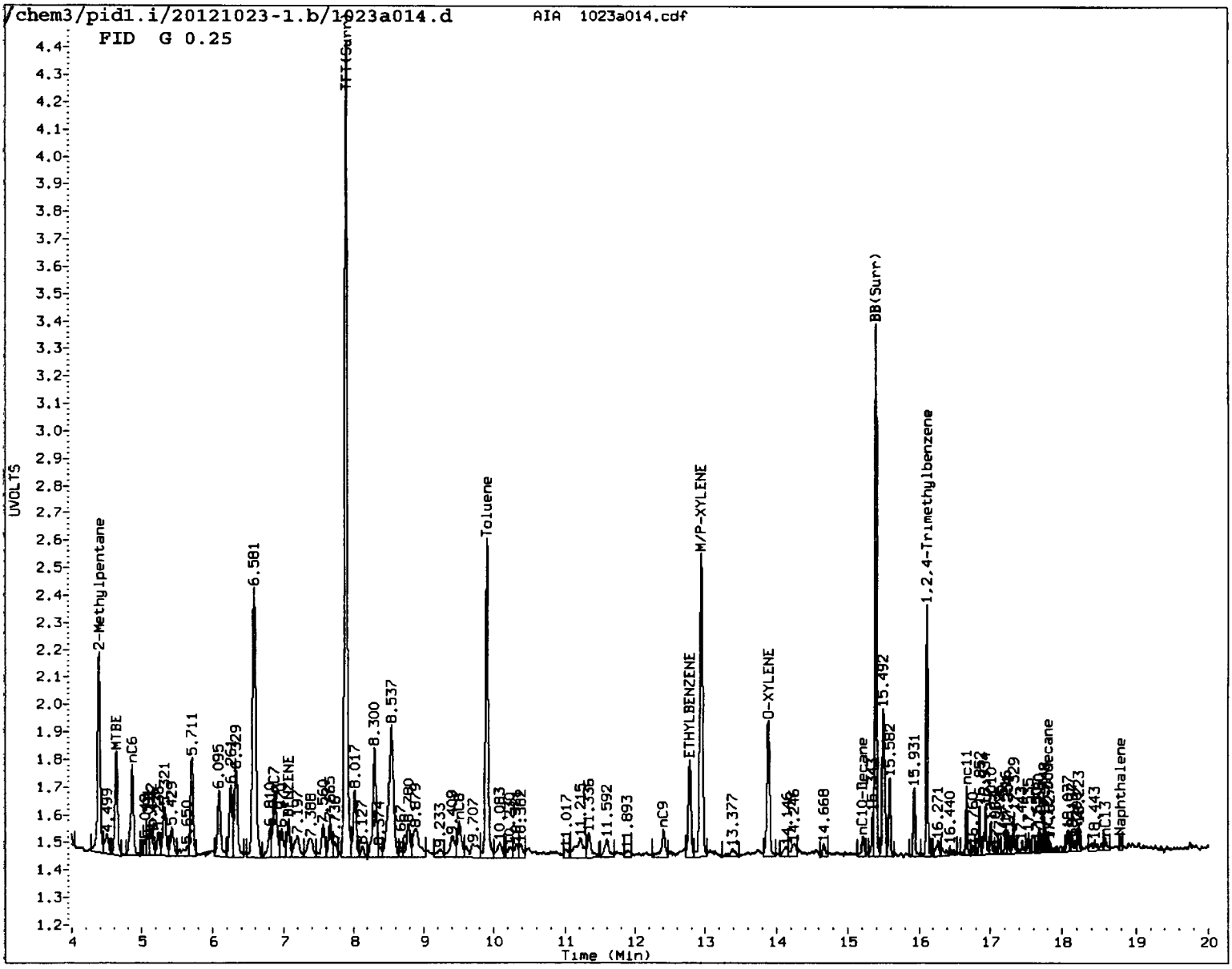
Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18

U797 : 21517



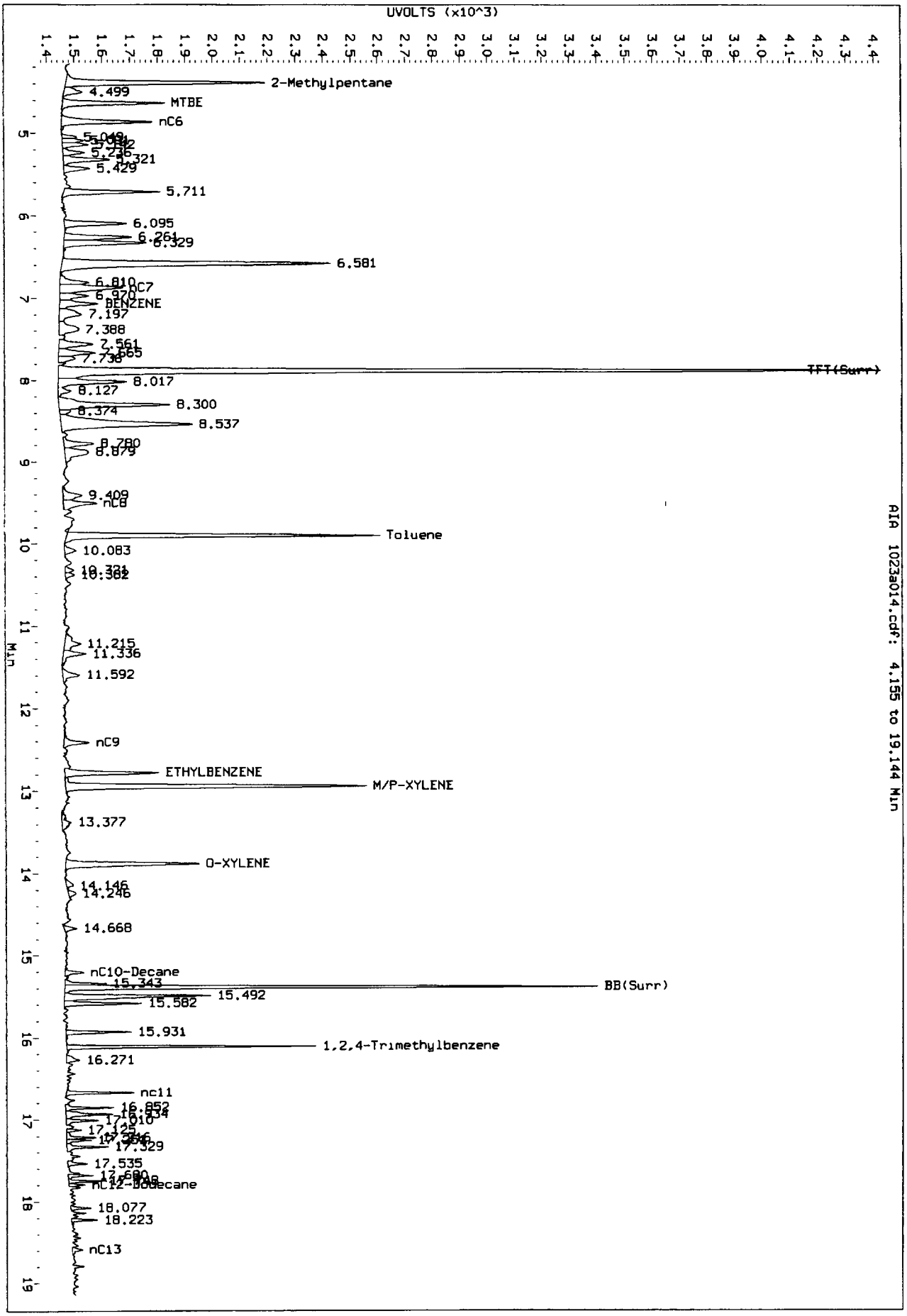


MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JW Date: 10/25/12


UVOLTS (x10^3)
Min
2-Methylpentane
4.499
MTBE
nC6
5.429
5.711
6.095
6.581
6.810
nC7
BENZENE
7.197
7.388
TFT(Surr)
8.017
8.127
8.300
8.374
8.537
8.879
9.409
nC8
Toluene
10.083
11.215
11.336
11.592
nC9
ETHYLBENZENE
M/P-XYLENE
13.377
O-XYLENE
14.146
14.246
14.668
nC10-Decane
15.343
BB(Surr)
15.492
15.582
15.931
1,2,4-Trimethylbenzene
16.271
nc11
17.329
17.535
nC12-Dodecane
18.077
18.223
nC13
AIA 1023a014.cdf: 4.155 to 19.144 Min
Data File: /chem3/pid1.i/20121023-1.b/1023a014.d/1023a014.cdf
Injection Date: 23-OCT-2012 22:42
Instrument: pid1.i
Client Sample ID:

Before

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a015.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a015.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: G 1.0
Client ID:
Injection Date: 23-OCT-2012 23:11
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.886	-0.001	3079	44718	97.8	TFT(Surr)
15.387	0.000	1964	17721	96.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	358654	1.002 M
8015C 2MP-TMB	(4.29 to 16.21)	723723	725276	1.002 M
AK101 nC6-nC10	(4.76 to 15.11)	582885	585010	1.004 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	376837	1.005 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

JW 10/25/12

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.894	0.001	3709	97.9	TFT(Surr)
15.395	0.002	7881	98.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.002	965	3.89	Benzene
9.906	0.000	9089	40.40	Toluene
12.786	-0.001	2253	11.43	Ethylbenzene
12.949	0.006	9128	42.45	M/P-Xylene
13.894	0.004	3286	19.58	O-Xylene
4.635	-0.019	211	2.93	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a015.d

Date : 23-OCT-2012 23:11

Client ID:

Sample Info: G 1.0

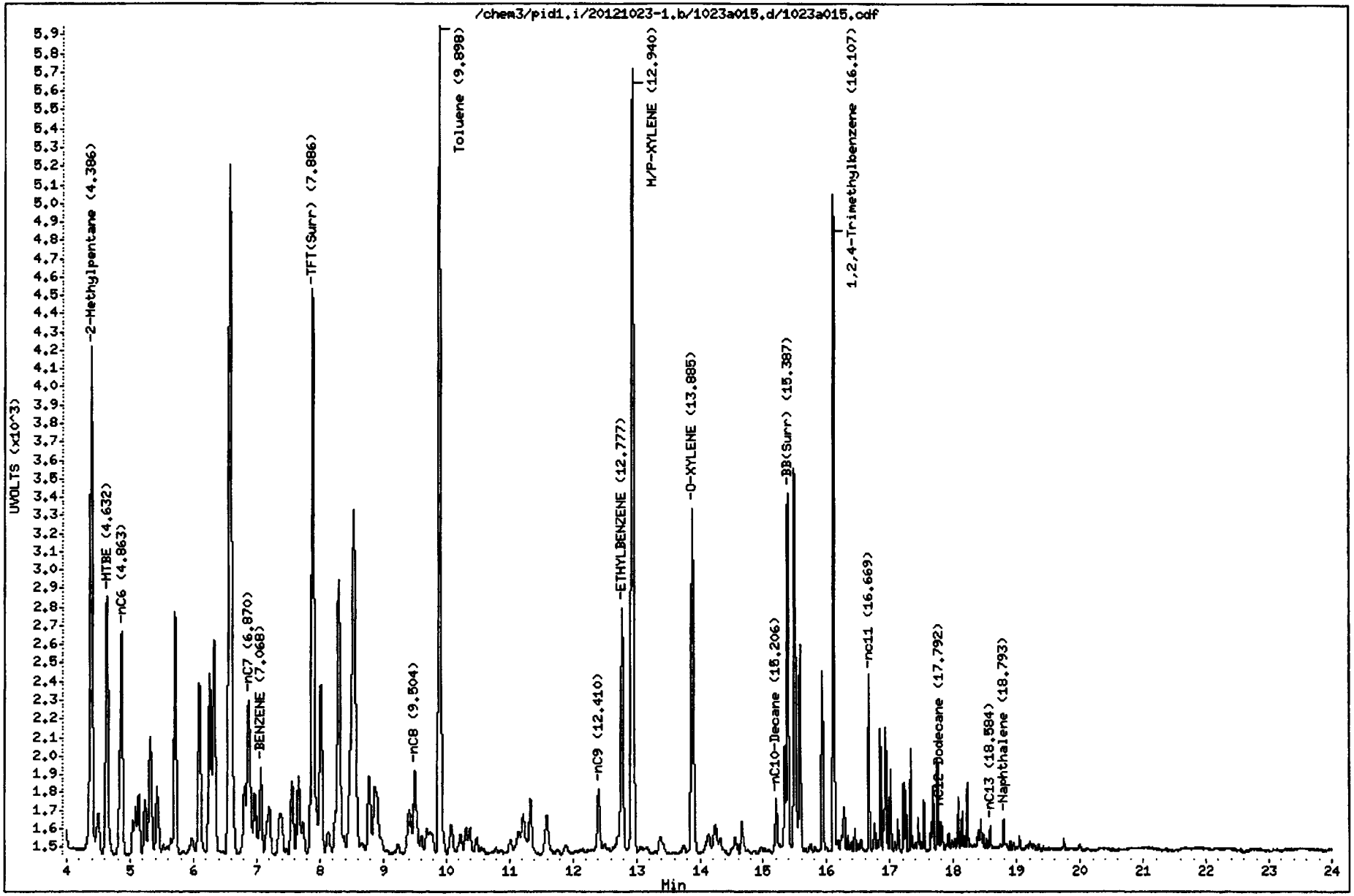
Column phase: RTX 502-2 FID

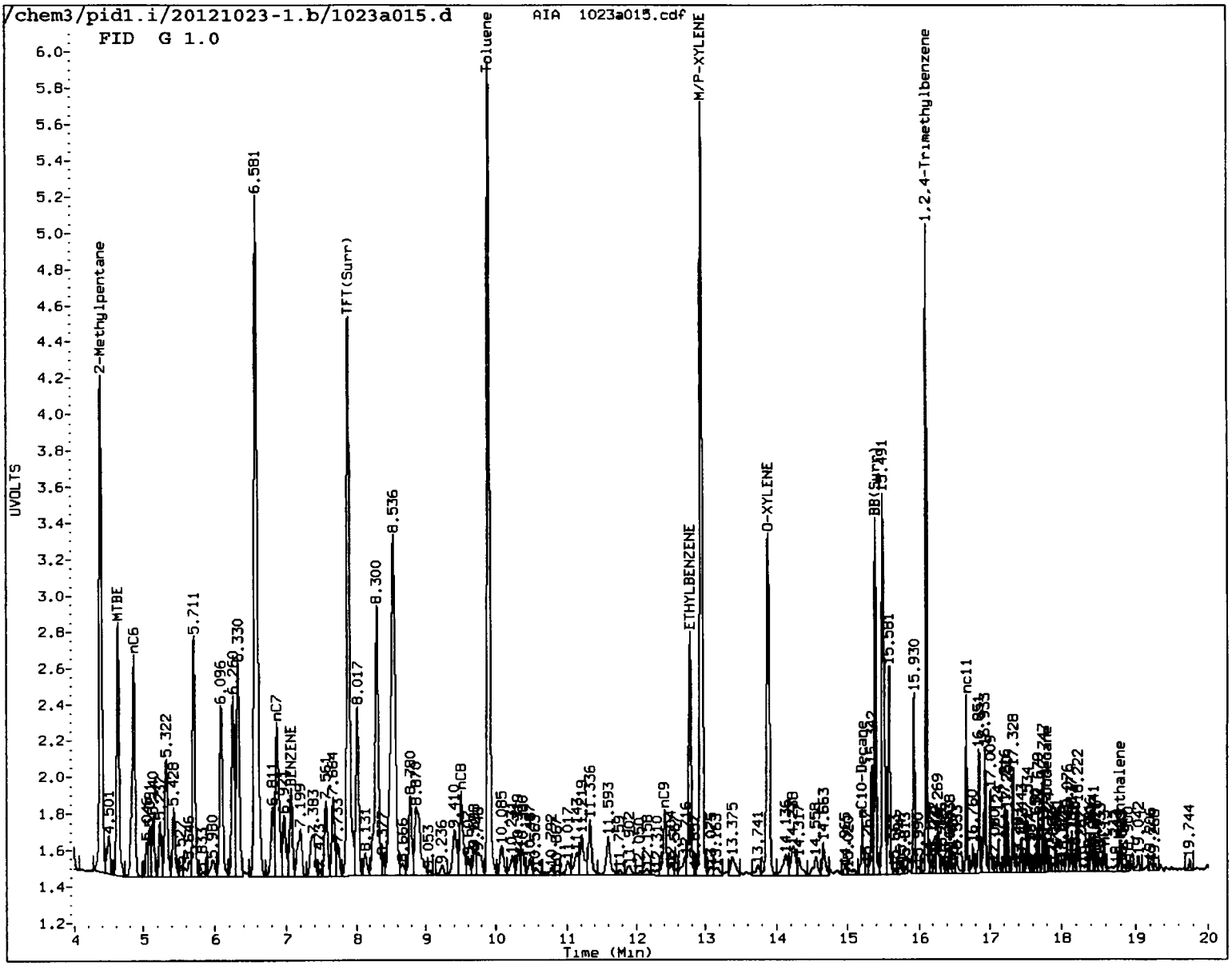
Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18

U797:01621



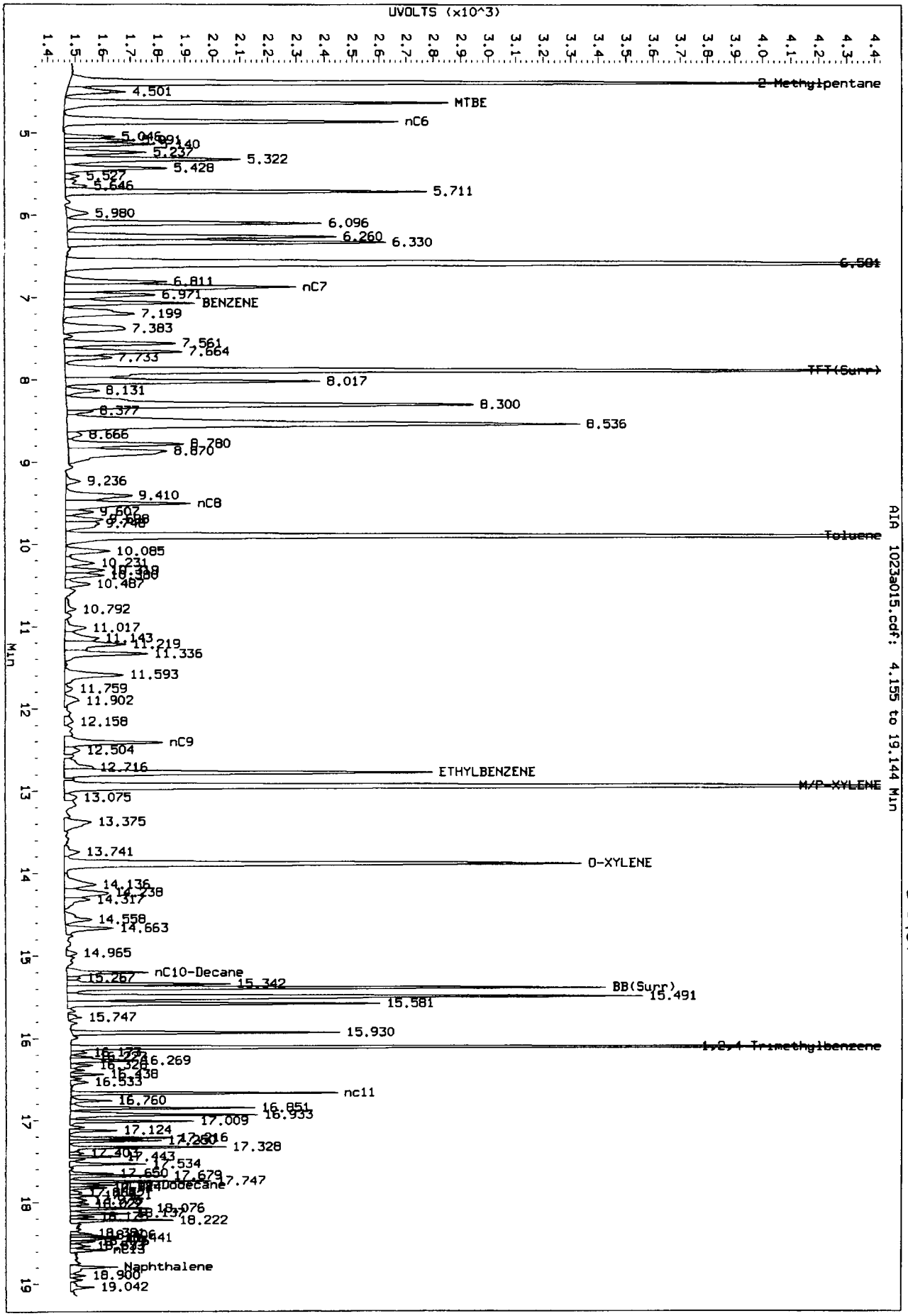


MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JW Date: 10/25/12



Data File: /chem3/pid1.i/20121023-1.b/1023a015.d/1023a015.cdf
Injection Date: 23-OCT-2012 23:11
Instrument: pid1.i
Client Sample ID:

AIA 1023a015.cdf: 4.155 to 19.144 Min

Before

0797:01629

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a016.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a016.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: G 2.5
Client ID:
Injection Date: 23-OCT-2012 23:40
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.885	-0.002	3238	46993	102.8	TFT(Surr)
15.387	0.000	2003	18605	98.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	848232	2.369
8015C 2MP-TMB	(4.29 to 16.21)	723723	1687315	2.331
AK101 nC6-nC10	(4.76 to 15.11)	582885	1358261	2.330
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	884847	2.359

JW 10/25/12

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	3774	99.6	TFT(Surr)
15.395	0.002	8059	100.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.002	2255	9.09	Benzene
9.907	0.000	21750	96.67	Toluene
12.785	-0.001	5424	27.51	Ethylbenzene
12.950	0.007	21923	101.96	M/P-Xylene
13.894	0.004	7944	47.33	O-Xylene
4.635	-0.018	486	6.75	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a016.d

Date : 23-OCT-2012 23:40

Client ID:

Sample Info: G 2.5

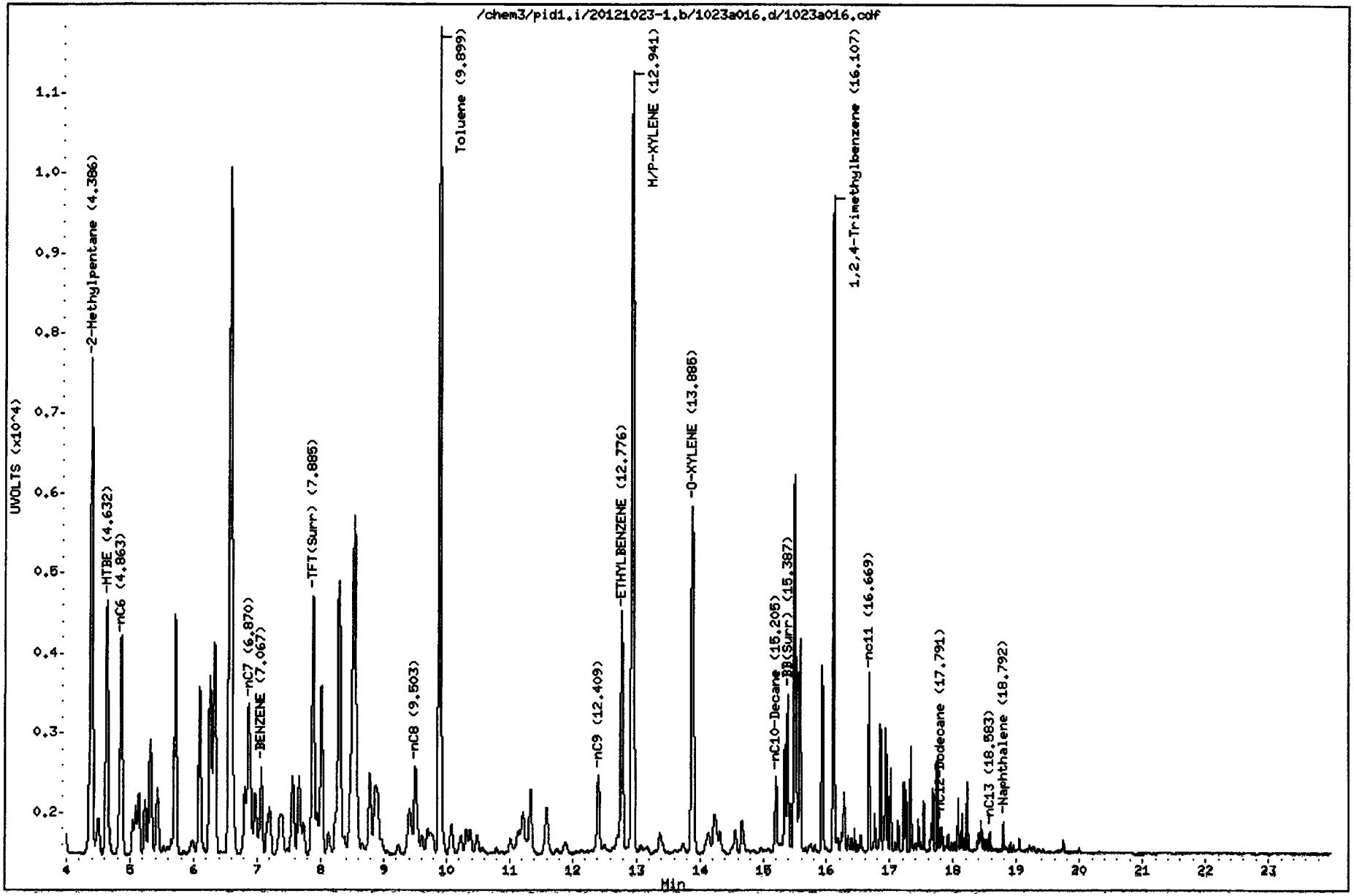
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18

UZ97 : 01525



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a017.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a017.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: G 5.0
Client ID:
Injection Date: 24-OCT-2012 00:10
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.883	-0.004	3585	55360	113.8	TFT(Surr)
15.387	0.000	2115	18935	104.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	1701302	4.751
8015C 2MP-TMB	(4.29 to 16.21)	723723	3352467	4.632
AK101 nC6-nC10	(4.76 to 15.11)	582885	2711219	4.651
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	1775567	4.734

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

JW 10/25/12

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.892	-0.001	4011	105.9	TFT(Surr)
15.395	0.001	8350	103.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.001	4431	17.87	Benzene
9.908	0.002	42408	188.49	Toluene
12.786	-0.001	10851	55.03	Ethylbenzene
12.952	0.009	43539	202.50	M/P-Xylene
13.895	0.005	15788	94.06	O-Xylene
4.636	-0.018	966	13.42	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a017.d

Date : 24-OCT-2012 00:10

Client ID:

Sample Info: G 5.0

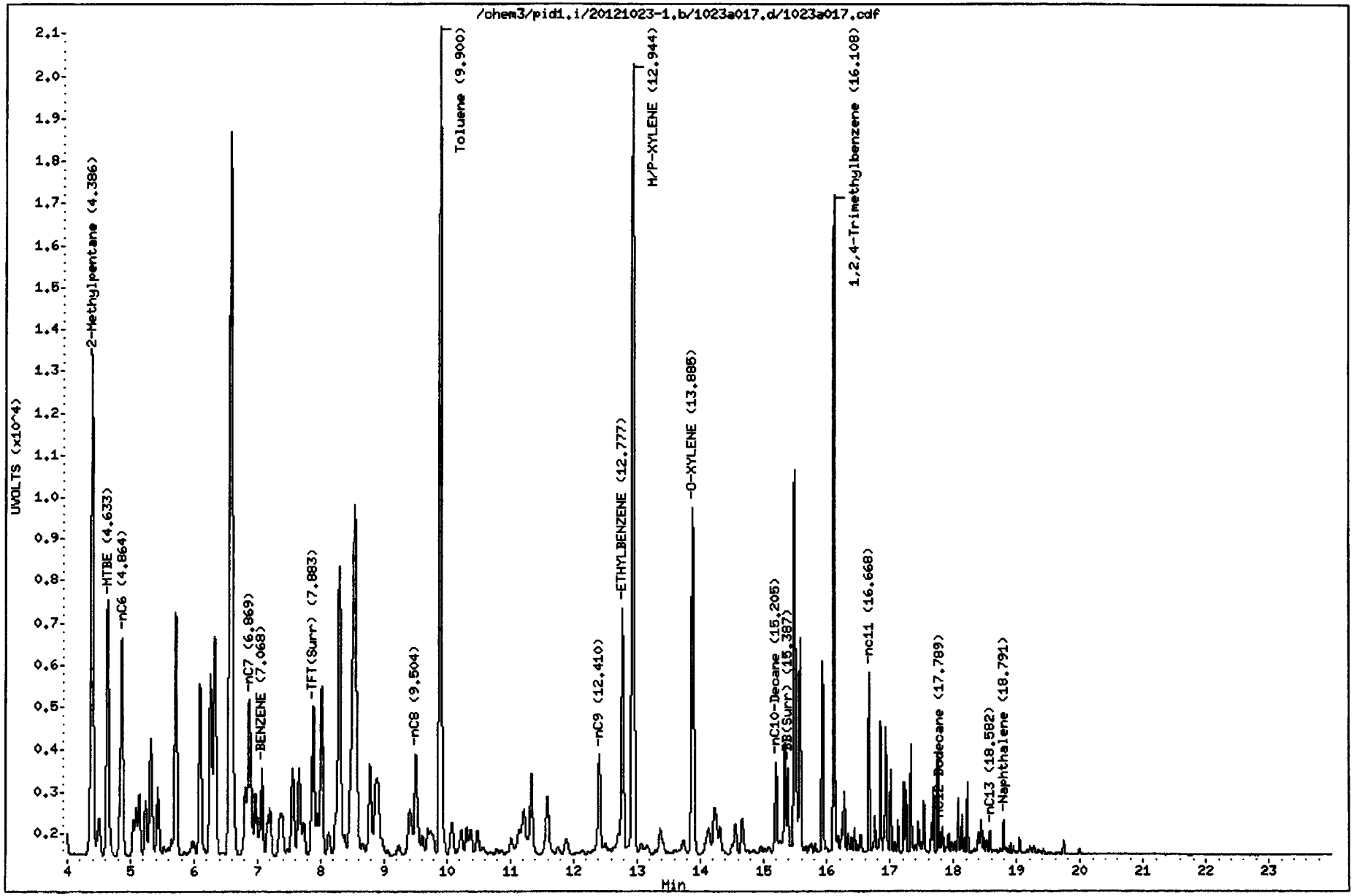
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18

UZ97-01527



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a018.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a018.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: G 10
Client ID:
Injection Date: 24-OCT-2012 00:39
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.880	-0.007	4738	79062	150.4	TFT(Surr)
15.388	0.001	2439	22291	120.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	3600012	10.053
8015C 2MP-TMB	(4.29 to 16.21)	723723	7328267	10.126
AK101 nC6-nC10	(4.76 to 15.11)	582885	5986278	10.270
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	3755718	10.013

JW 10/25/12

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.891	-0.003	4903	129.4	TFT(Surr)
15.395	0.002	9209	114.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.076	-0.001	9254	37.32	Benzene
9.912	0.005	88764	394.52	Toluene
12.789	0.002	22870	115.99	Ethylbenzene
12.958	0.015	90897	422.77	M/P-Xylene
13.898	0.008	33138	197.43	O-Xylene
4.636	-0.017	2050	28.47	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a018.d

Date : 24-OCT-2012 00:39

Client ID:

Sample Info: G 10

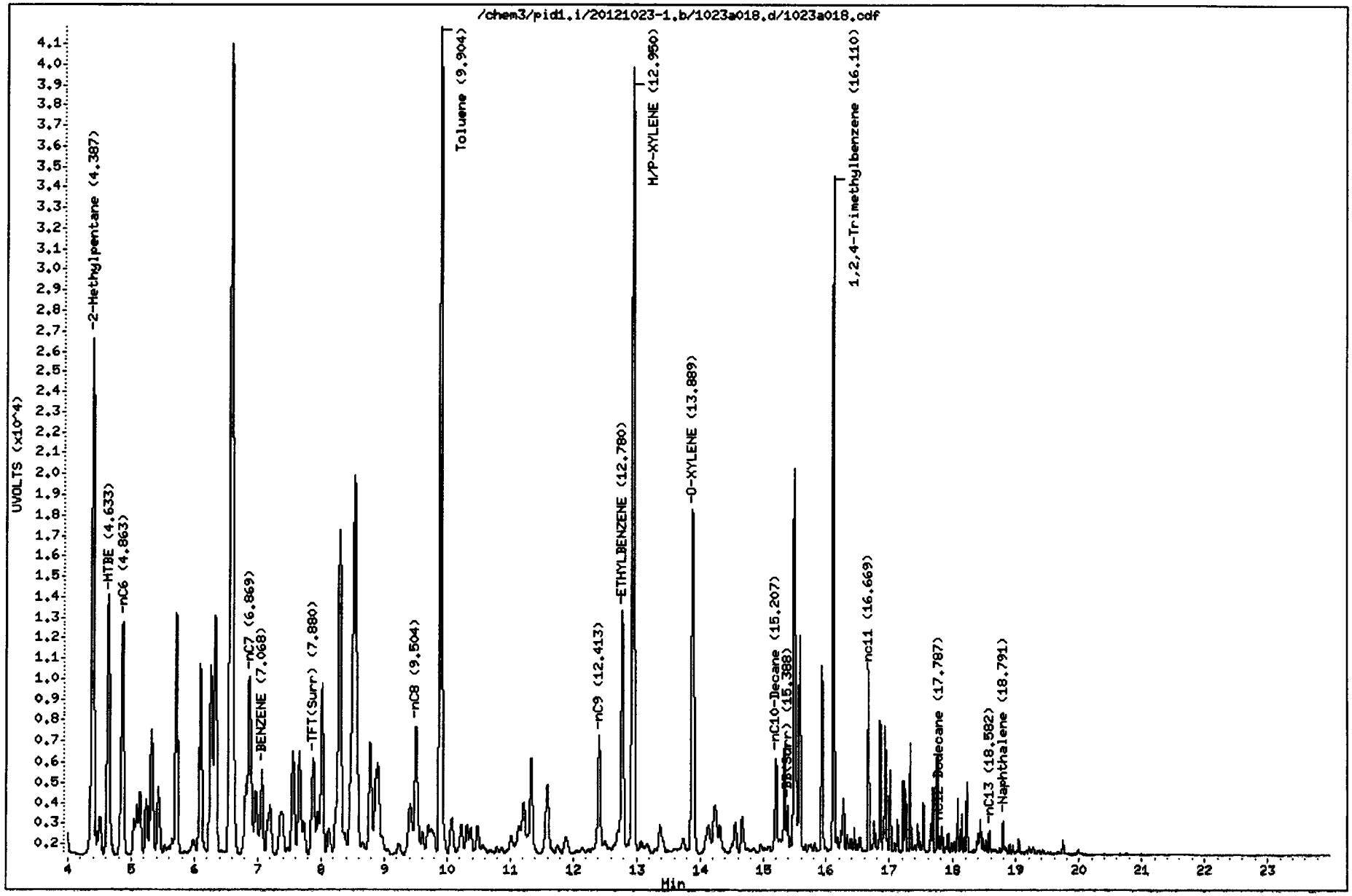
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18

UZ937 01529



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20121023-1.b/1023a019.d
Data file 2: /chem3/pid1.i/20121023-2.b/1023a019.d
Method: /chem3/pid1.i/20121023-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: GICV
Client ID:
Injection Date: 24-OCT-2012 01:08
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.884	-0.003	3250	47497	103.2	TFT(Surr)
15.387	0.000	2019	19039	99.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.90)	358114	917898	2.563
8015C 2MP-TMB	(4.29 to 16.21)	723723	1759198	2.431
AK101 nC6-nC10	(4.76 to 15.11)	582885	1408754	2.417
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	972996	2.594

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

JW 10/25/12

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	3791	100.1	TFT(Surr)
15.395	0.002	8074	100.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.002	2306	9.30	Benzene
9.907	0.000	22198	98.66	Toluene
12.785	-0.001	5582	28.31	Ethylbenzene
12.950	0.007	22656	105.37	M/P-Xylene
13.894	0.004	8207	48.90	O-Xylene
4.635	-0.019	542	7.53	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a019.d

Date : 24-OCT-2012 01:08

Client ID:

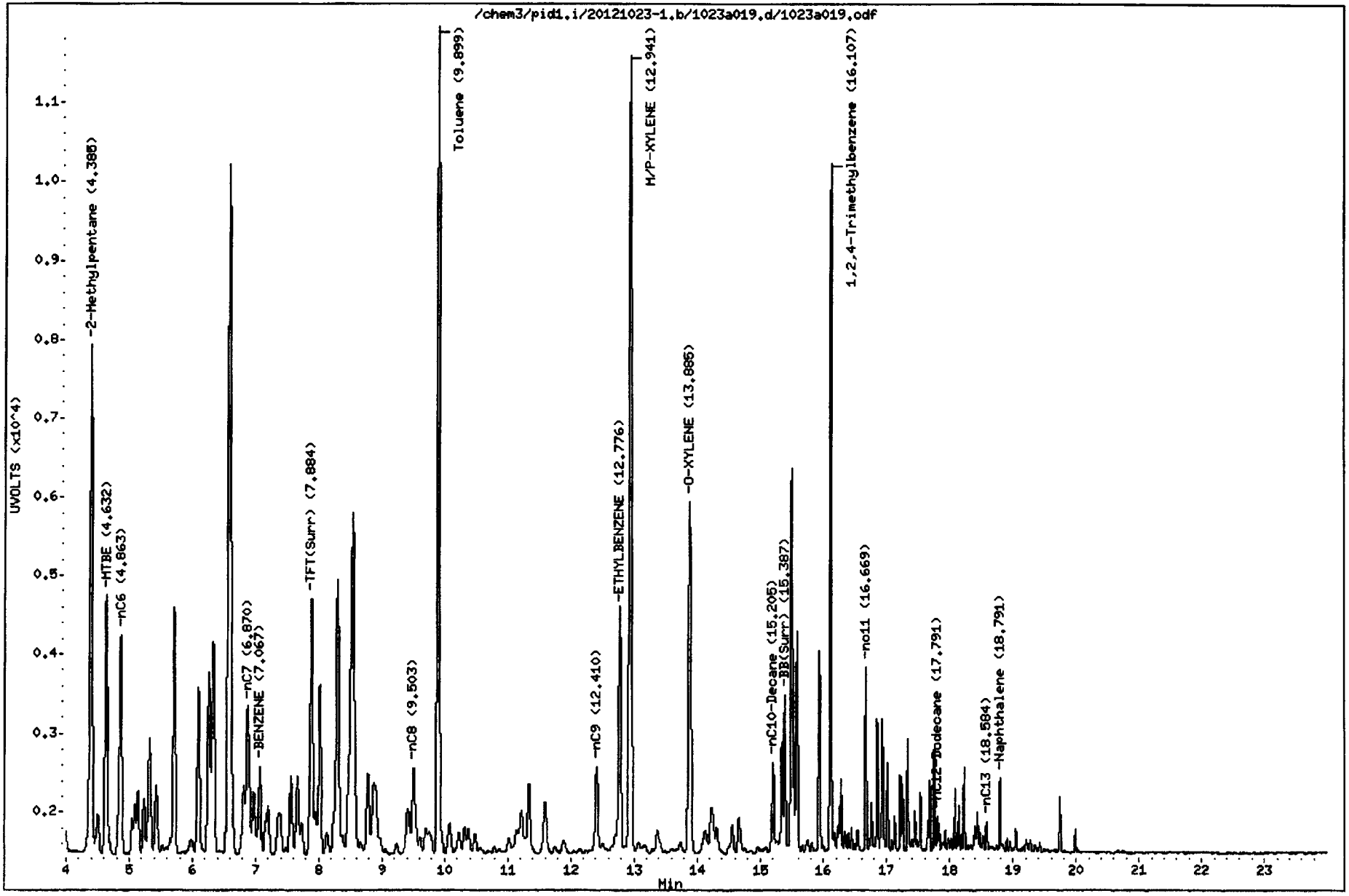
Sample Info: GICV

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



UZ97-014531

Report Date : 25-Oct-2012 17:27

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-1.b/FID.m
Batch File: /chem3/pid1.i/20121023-1.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	1023a013	1023a014	1023a015	1023a016	1023a017	1023a018
INJ.DATE:	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	24-OCT-2012	24-OCT-2012
INJ.TIME:	22:13	22:42	23:11	23:40	00:10	00:39

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 NWTPHG	+++++	+++++	+++++	+++++	+++++	+++++	0.492	0.422-0.562	+++++	+++++
2 WAGAS	+++++	+++++	+++++	+++++	+++++	+++++	0.937	0.867-1.007	+++++	+++++
3 AK101	+++++	+++++	+++++	+++++	+++++	+++++	1.251	1.181-1.321	+++++	+++++
4 8015GAS	+++++	+++++	+++++	+++++	+++++	+++++	1.539	1.469-1.609	+++++	+++++
5 2-Methylpentane	4.383	4.385	4.386	4.386	4.386	4.387	4.387	4.317-4.457	4.385	0.001
6 MTBE	4.633	4.631	4.632	4.632	4.633	4.633	4.647	4.577-4.717	4.632	0.001
7 nC6	4.862	4.864	4.863	4.863	4.864	4.863	4.864	4.794-4.934	4.863	0.001
8 nC7	6.871	6.871	6.870	6.870	6.869	6.869	6.864	6.794-6.934	6.870	0.001
9 BENZENE	7.069	7.067	7.068	7.067	7.068	7.068	7.063	6.993-7.133	7.068	0.001
$ 10 TFT(Surr)	7.885	7.886	7.886	7.885	7.883	7.880	7.887	7.817-7.957	7.884	0.002
11 nC8	9.502	9.505	9.504	9.503	9.504	9.504	9.507	9.437-9.577	9.504	0.001
12 Toluene	9.899	9.898	9.898	9.899	9.900	9.904	9.897	9.827-9.967	9.900	0.002
13 nC9	12.413	12.410	12.410	12.409	12.410	12.413	12.416	12.346-12.486	12.411	0.002
14 ETHYLBENZENE	12.777	12.777	12.777	12.776	12.777	12.780	12.780	12.710-12.850	12.777	0.001
15 M/P-XYLENE	12.940	12.940	12.940	12.941	12.944	12.950	12.933	12.863-13.003	12.942	0.004
16 O-XYLENE	13.884	13.885	13.885	13.885	13.885	13.889	13.883	13.813-13.953	13.885	0.002
17 nC10-Decane	15.205	15.207	15.206	15.205	15.205	15.207	15.207	15.137-15.277	15.206	0.001

Reviewer 1 ______ BW Date: 10/25/12
Reviewer 2 ______ JD Date: 10/26/12

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Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-1.b/FID.m
Batch File: /chem3/pid1.i/20121023-1.b
Inst ID: pid1.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 18 BB(Surr)	15.387	15.388	15.387	15.387	15.387	15.388	15.387	15.317-15.457	15.387	0.000
$ 19 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++	16.027	15.957-16.097	+++++	+++++
20 1,2,4-Trimethylbenzene	16.107	16.107	16.107	16.107	16.108	16.110	16.109	16.039-16.179	16.108	0.001
21 nc11	16.703	16.670	16.669	16.669	16.668	16.669	16.704	16.634-16.774	16.675	0.014
22 nC12-Dodecane	17.793	17.794	17.792	17.791	17.789	17.787	17.795	17.725-17.865	17.791	0.003
23 nC13	18.593	18.588	18.584	18.583	18.582	18.582	18.595	18.525-18.665	18.585	0.004
24 Naphthalene	18.790	18.793	18.793	18.792	18.791	18.791	18.796	18.726-18.866	18.792	0.001

Report Date : 25-Oct-2012 17:28

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Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20121023-2.b/PIDB.m
Batch File: /chem3/pid1.i/20121023-2.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	1023a013	1023a014	1023a015	1023a016	1023a017	1023a018
INJ.DATE:	23-OCT-2012	23-OCT-2012	23-OCT-2012	23-OCT-2012	24-OCT-2012	24-OCT-2012
INJ.TIME:	22:13	22:42	23:11	23:40	00:10	00:39

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 MTBE	+++++	+++++	4.635	4.635	4.636	4.636	4.653	4.603-4.703	4.635	0.001
	2 Benzene	+++++	7.075	7.075	7.075	7.075	7.076	7.077	7.027-7.127	7.075	0.000
$	3 TFT(Surr)	7.893	7.894	7.894	7.893	7.892	7.891	7.893	7.843-7.943	7.893	0.001
	4 Toluene	9.907	9.906	9.906	9.907	9.908	9.912	9.907	9.857-9.957	9.908	0.002
	5 Ethylbenzene	12.785	12.786	12.786	12.785	12.786	12.789	12.787	12.737-12.837	12.786	0.001
	6 M/P-Xylene	12.948	12.948	12.949	12.950	12.952	12.958	12.943	12.893-12.993	12.951	0.004
	7 O-Xylene	13.893	13.894	13.894	13.894	13.895	13.898	13.890	13.860-13.920	13.895	0.002
$	8 BB(Surr)	15.395	15.396	15.395	15.395	15.395	15.395	15.393	15.343-15.443	15.395	0.000

Reviewer 1 _____ Date: 10/25/12
Reviewer 2 _____ Date: 10/26/12

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid1.i/20121023-1.b

ARI Job No.: RINS Method: FID.m Instrument: pid1.i Date: 23-OCT-2012

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0941	1023a001.d	RINSE		1	NO MANUAL INTEGRATION
1010	1023a002.d	RT1023+BCAL1		1	NO MANUAL INTEGRATION
1039	1023a003.d	GCAL1		1	NO MANUAL INTEGRATION
1750	1023a004.d	B 200		1	Toluene, O-XYLENE, TFT(Surr), BB(Surr),
1820	1023a005.d	B 100		1	Toluene, BENZENE, TFT(Surr), BB(Surr),
1849	1023a006.d	B 50		1	Toluene, BENZENE, TFT(Surr), BB(Surr),
1918	1023a007.d	B 25		1	Toluene, BENZENE, O-XYLENE, TFT(Surr), BB(Surr),
1947	1023a008.d	B 5		1	Toluene, MTBE, BENZENE, O-XYLENE,
2016	1023a009.d	B 1		1	Toluene, MTBE, BENZENE, ETHYLBENZENE, M/P-XYLENE, O-XYLENE,
2045	1023a010.d	B 0.5		1	Toluene, MTBE, BENZENE, ETHYLBENZENE, M/P-XYLENE, O-XYLENE, TFT(Surr), BB(Surr),
2115	1023a011.d	B 0.25		1	Toluene, MTBE, BENZENE, ETHYLBENZENE, M/P-XYLENE, O-XYLENE, TFT(Surr), BB(Surr),
2144	1023a012.d	BICV		1	NO MANUAL INTEGRATION
2213	1023a013.d	G 0.10		1	nC12-Dodecane, Naphthalene, nc11, nC13,
2242	1023a014.d	G 0.25		1	Naphthalene,
2311	1023a015.d	G 1.0		1	Naphthalene,
2340	1023a016.d	G 2.5		1	NO MANUAL INTEGRATION
0010	1023a017.d	G 5.0		1	NO MANUAL INTEGRATION
0039	1023a018.d	G 10		1	NO MANUAL INTEGRATION
0108	1023a019.d	GICV		1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid1.i/20121023-2.b

ARI Job No.: RINS Method: PIDB.m Instrument: pid1.i Date: 23-OCT-2012

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0941	1023a001.d	RINSE		1	NO MANUAL INTEGRATION
1010	1023a002.d	RT1023+BCAL1		1	NO MANUAL INTEGRATION
1039	1023a003.d	GCAL1		1	NO MANUAL INTEGRATION
1750	1023a004.d	B 200		1	Toluene, O-Xylene, BB(Surr),
1820	1023a005.d	B 100		1	Benzene, Toluene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
1849	1023a006.d	B 50		1	Toluene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
1918	1023a007.d	B 25		1	Benzene, Toluene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
1947	1023a008.d	B 5		1	Benzene, Toluene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
2016	1023a009.d	B 1		1	Benzene, Toluene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
2045	1023a010.d	B 0.5		1	Benzene, Toluene, Ethylbenzene, M/P-Xylene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
2115	1023a011.d	B 0.25		1	Benzene, Toluene, Ethylbenzene, M/P-Xylene, O-Xylene, TFT(Surr), BB(Surr),
2144	1023a012.d	BICV		1	NO MANUAL INTEGRATION
2213	1023a013.d	G 0.10		1	NO MANUAL INTEGRATION
2242	1023a014.d	G 0.25		1	NO MANUAL INTEGRATION
2311	1023a015.d	G 1.0		1	NO MANUAL INTEGRATION
2340	1023a016.d	G 2.5		1	NO MANUAL INTEGRATION
0010	1023a017.d	G 5.0		1	NO MANUAL INTEGRATION
0039	1023a018.d	G 10		1	NO MANUAL INTEGRATION
0108	1023a019.d	GICV		1	NO MANUAL INTEGRATION

TPHG Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: VZ97

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Analyst Notes / Corrective Action Log

ARI Project ID: UZ97 Client ID: Anchor

ARI SOP: **404S**(Gas) **410S**(BTEX) **430S**(VPH) **700S**(8260C) **703S**(SIM) **706S**(524.2) **710S**(RSK-175)

Parameter(s): NWTPHG

Instrument: NT-2 NT-3 NT-5 NT-7 NT-9 PID-1 PID-2 PID-3 FID-6 FINN-5

Purge Volume (mL) 5 Curve Date: 12/23/12 Analysis Start Date: 1/18/13

pH ≤ 2.0	YES / NO / NA	Method Blank In Control?	YES / NO
BFB Tune Meets Criteria?	YES / NO / NA	LCS / LCSD Recovery In Control?	YES / NO
Internal Standard Meets Criteria?	YES / NO / NA	Surrogate Recovery In Control?	YES / NO
ICal acceptable?	YES / NO	CCal acceptable?	YES / NO
Q flag applied?	YES / NO / NA	Q flag applied?	YES / NO / NA
Manual Integrations for ICal?	YES / NO	Manual Integrations for Samples?	Yes / NO
Special Analysis Criteria Met?	YES / NO / NA		

Bubbles/Headspace: None SM (≤ 2mm •) PB (2-4mm) LG (> 4mm ●) Head Space

Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):

Inconsistency - UZ975 sample labeled as sampled 1/14/13, paperwork reads sampled 1/11/13, received with short hold analysis on MS/MSD basis

Additional Details on Reverse: Yes / No

Analyst: PC **Date:** 1/24/13

Reviewer: [signature] **Date:** 1/24

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Analyst Notes / Corrective Action Log

ARI Project ID: VZ97 Client ID: Anchor QEA

ARI SOP: **404S**(Gas) **410S**(BTEX) **430S**(VPH) **700S**(8260C) **703S**(SIM) **706S**(524.2) **710S**(RSK-175)

Parameter(s): NWTPHG

Instrument: NT-2 NT-3 NT-5 NT-7 NT-9 PID-1 PID-2 PID-3 FID-6 FINN-5

Purge Volume (mL) 5mL Curve Date: 10/23/12 Analysis Start Date: 1/18/13

pH ≤ 2.0	YES / NO / NA	Method Blank In Control?	YES / NO
BFB Tune Meets Criteria?	YES / NO / NA	LCS / LCSD Recovery In Control?	YES / NO
Internal Standard Meets Criteria?	YES / NO / NA	Surrogate Recovery In Control?	YES / NO
ICal acceptable?	YES / NO	CCal acceptable?	YES / NO
Q flag applied?	YES / NO / NA	Q flag applied?	YES / NO / NA
Manual Integrations for ICal?	YES / NO	Manual Integrations for Samples?	Yes / NO
Special Analysis Criteria Met?	YES / NO / NA		

Bubbles/Headspace: None SM (≤ 2mm •) PB (2-4mm) LG (> 4mm ●) Head Space

Detail problems, corrective actions and/or other pertinent information below (use reverse side when necessary):

* Sample A appears to have over 5mL liquid in the methanol vial #3.

* Very high sample weights - incomplete extraction. Received with short hold, analysis on 1x basis.

Additional Details on Reverse: Yes / No

Analyst: PC **Date:** 1/24/13

Reviewer: MW **Date:** 1/24

Analytical Resources Inc.: Organics Instrument Log

PID-1 Serial No.: 2750A-17141

Date: 1/18/13 Analysis: NWTPHS Analyst: LA

Column 1 Serial No.: 821728 Column Type: RTX5Sil

Column 2 Serial No.: _____ Column Type: _____

GC Method: ~~4607E~~ BETX Rev1 1/13 ICal Date: 10/23/12 Injection Volume: 5

IS	Ical/Ccal	ICV
LW771-1	LW758-2 LW772-3 LW768-4	LW768-4

Document All Maintenance Tasks In StarLIMS

	Time	Filename	LabID	ClientID	Vial#	pH	DF
1	0812	0118a001.d	RINSE	RINSE			1
2	0843	0118a002 d	RT/BCAL	RT/BCAL			1
3	0915	0118a003.d	GCAL 1	GCAL 1			1
4	0946	0118a004 d	LCS011713	LCS011713			1
5	1017	0118a005.d	LCSD011713	LCSD011713			1
6	1048	0118a006.d	MB011713	MB011713			1
7	1120	0118a007.d	VZ97U	Trip Blanks	3	CL	1
8	1151	0118a008.d	WA22A	Airgas-MH-1-170113			1
9	1223	0118a009 d	VZ97A	CSIA-20130107-001B			1
10	1254	0118a010 d	VZ97B	CSIA-20130107-002B			1
11	1325	0118a011.d	VZ97C	CSIA-20130107-003S+			1
12	1356	0118a012.d	VZ97D	CSIA-20130107-004S+			1
13	1427	0118a013.d	VZ97E	CSIA-20130107-005S+			1
14	1458	0118a014.d	GCAL 2	GCAL 2			1
15	1528	0118a015.d	VZ97F	CSIA20130109-006B			1
16	1559	0118a016 d	VZ97G	CSIA20130109-007B			1
17	1630	0118a017.d	VZ97H	CSIA20130109-008S+3			1
18	1707	0118a018.d	VZ97I	CSIA20130109-009S+6			1
19	1739	0118a019 d	VZ97J	CSIA20130109-010S+9			1
20	1810	0118a020.d	VZ97K	CSIA20130110-011B			1
21	1841	0118a021 d	VZ97L	CSIA20130110-012B			1
22	1912	0118a022.d	VZ97M	CSIA20130110-013S+3			1
23	1943	0118a023.d	VZ97N	CSIA20130110-014S+6			1
24	2014	0118a024.d	VZ97O	CSIA20130110-015S+9			1
25	2045	0118a025.d	GCAL 3				1
26	2116	0118a026.d	VZ97P	CSIA20130111-016B			1
27	2147	0118a027.d	VZ97Q	CSIA20130111-017B			1
28	2218	0118a028.d	VZ97R	CSIA20130111-018S+9			1
29	2249	0118a029 d	VZ97AMS				1
30	2320	0118a030.d	VZ97AMSD				1
31	2351	0118a031.d	LCS011813A				1
32	0022	0118a032.d	LCSD011813A				1
33	0054	0118a033.d	MB011813A				1
34	0125	0118a034.d	WA28A	EAL #145122			1
35	0156	0118a035.d	WA28B	EAL #145123			1
36	0227	0118a036.d	GCAL 4				1
37	0258	0118a037.d	WA28C	EAL #145124			1
38	0329	0118a038.d	WA28D	EAL #145125			1
39	0401	0118a039.d	WA28E	EAL #145126			1
40	0431	0118a040.d	WA28F	EAL #145127			1
41	0503	0118a041 d	WA28G	EAL #145128			1
42	0534	0118a042.d	WA28H	EAL #145129			1
43	0605	0118a043.d	WA28I	EAL #145130			1
44	0636	0118a044 d	WA28J	EAL #145131			1
45	0707	0118a045 d	WA28K	EAL #145132			1
46	0739	0118a046 d	WA28L	EAL #145133			1
47	0809	0118a047.d	GCAL 5				1

1/18/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

VZ97 01608

IPC
1/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130118-1.b/0118a002.d
Data file 2: /chem3/pid1.i/20130118-2.b/0118a002.d
Method: /chem3/pid1.i/20130118-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: RT/BCAL
Client ID: RT/BCAL
Injection Date: 18-JAN-2013 08:43
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.885	0.005	2893	41431	91.8	TFT(Surr)
15.385	0.005	1972	17226	97.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.79 to 17.89)	358114	472856	1.320
8015C 2MP-TMB	(4.28 to 16.20)	723723	566712	0.783
AK101 nC6-nC10	(4.76 to 15.10)	582885	394971	0.678
NWTPHG Tol-Nap	(9.79 to 18.89)	375093	508774	1.356

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	3487	92.1	TFT(Surr)
15.393	0.000	8020	99.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.072	0.000	5968	24.07	Benzene
9.905	0.000	5164	22.95	Toluene
12.784	0.000	4714	23.91	Ethylbenzene
12.943	0.000	10065	46.81	M/P-Xylene
13.889	0.000	4099	24.42	O-Xylene
4.648	0.000	1884	26.17	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130118-1.b/0118a002.d

Date : 18-JAN-2013 08:43

Client ID: RT/BCAL

Sample Info: RT/BCAL

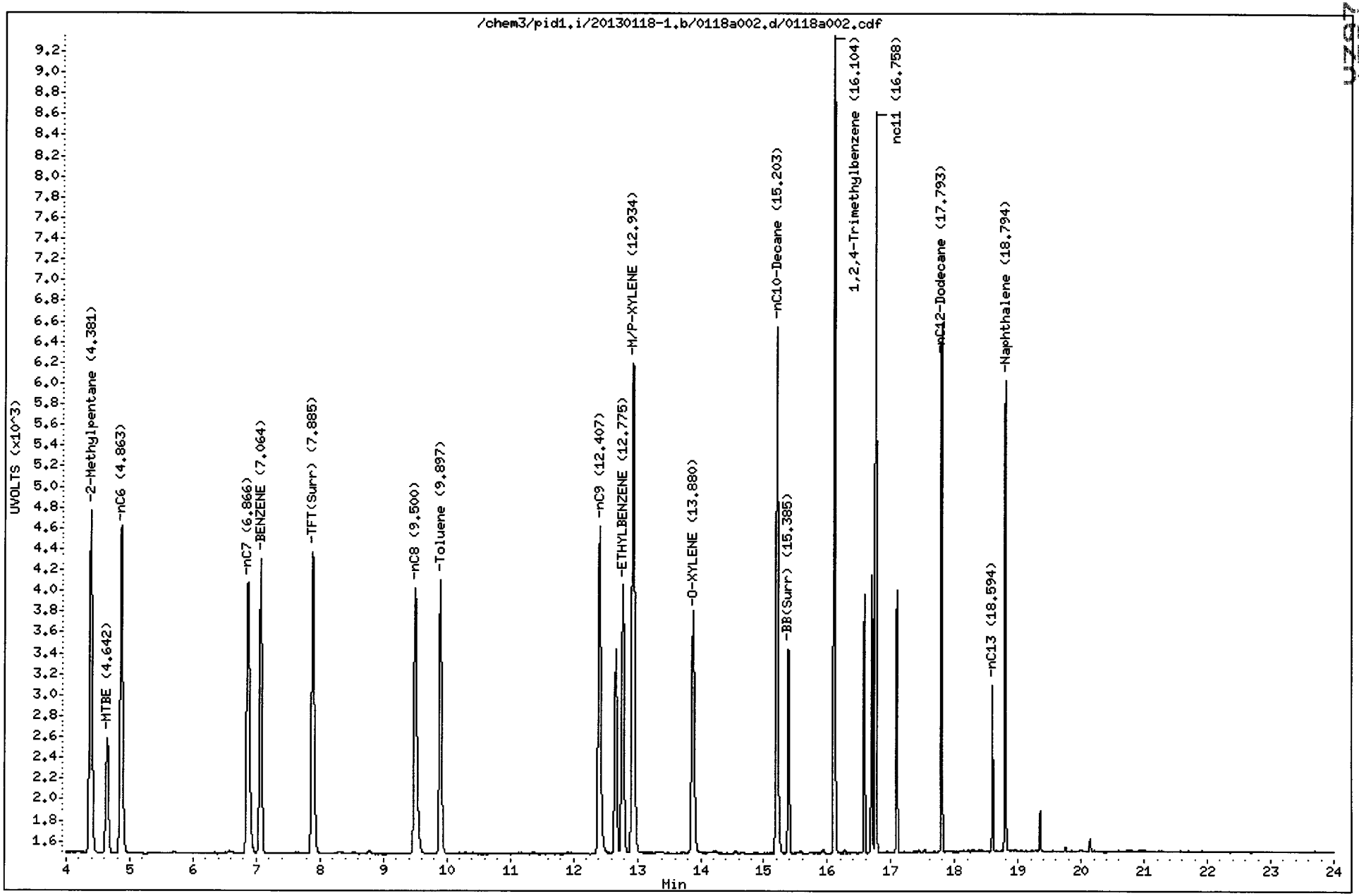
Instrument: pid1.i

Operator: LH

Column phase: RTX 502-2 FID

Column diameter: 0.18

UZ07-0156L2



1/21/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130118-1.b/0118a003.d
Data file 2: /chem3/pid1.i/20130118-2.b/0118a003.d
Method: /chem3/pid1.i/20130118-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: GCAL 1
Client ID: GCAL 1
Injection Date: 18-JAN-2013 09:15
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.885	0.005	3104	55629	98.5	TFT(Surr)
15.385	0.005	2038	19456	100.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.79 to 17.89)	358114	917574	2.562 M
8015C 2MP-TMB	(4.28 to 16.20)	723723	1796898	2.483 M
AK101 nC6-nC10	(4.76 to 15.10)	582885	1454206	2.495 M
NWTPHG Tol-Nap	(9.79 to 18.89)	375093	970072	2.586 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.894	0.000	3554	93.8	TFT(Surr)
15.392	0.000	8133	101.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.074	0.002	2091	8.43	Benzene
9.907	0.002	19618	87.19	Toluene
12.785	0.001	5173	26.24	Ethylbenzene
12.947	0.004	20313	94.48	M/P-Xylene
13.891	0.002	7444	44.35	O-Xylene
4.630	-0.018	467	6.49	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

VZ97 · 01643

Data File: /chem3/pid1.i/20130118-1.b/0118a003.d

Date : 18-JAN-2013 09:15

Client ID: GCAL 1

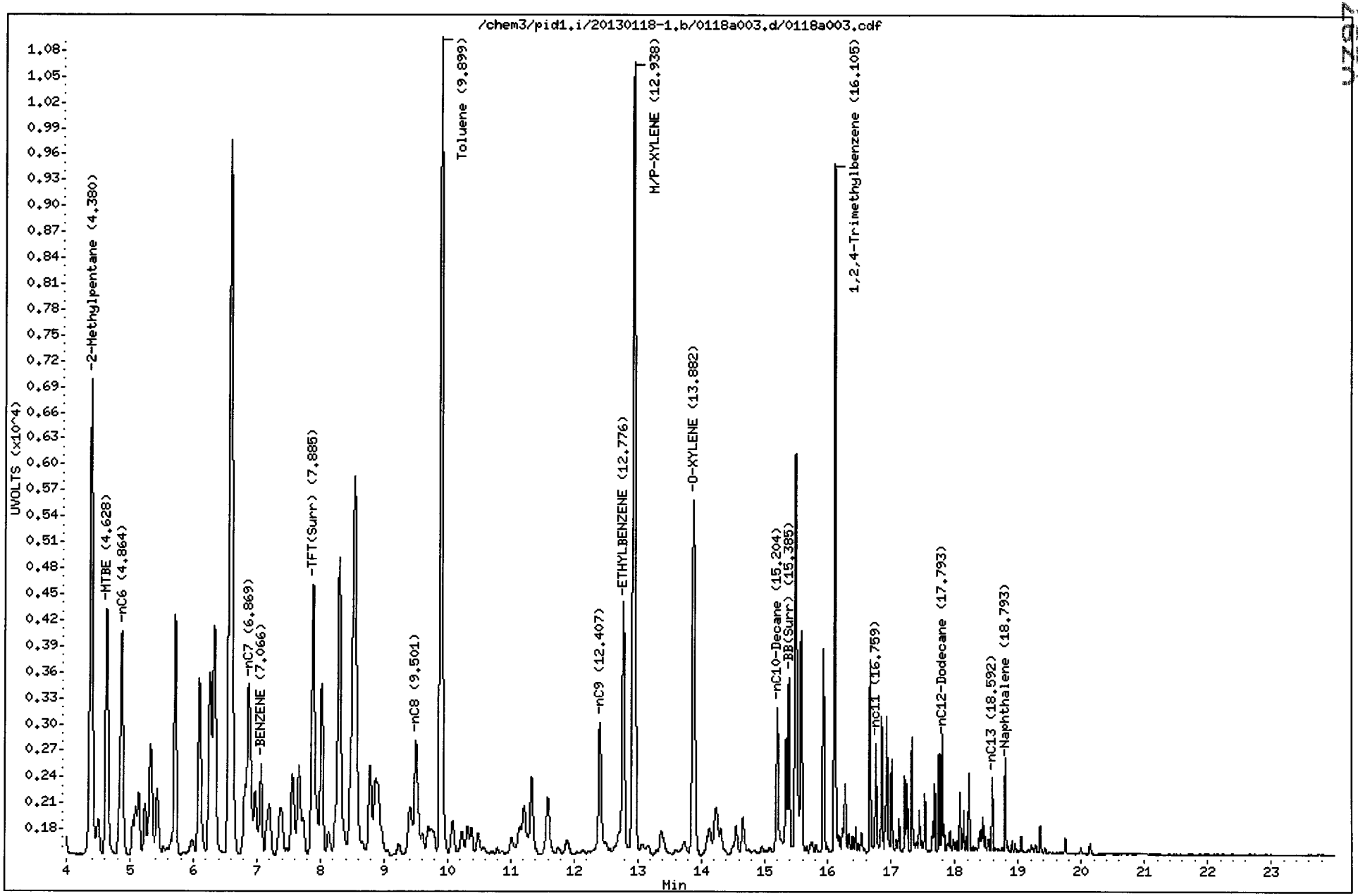
Sample Info: GCAL 1

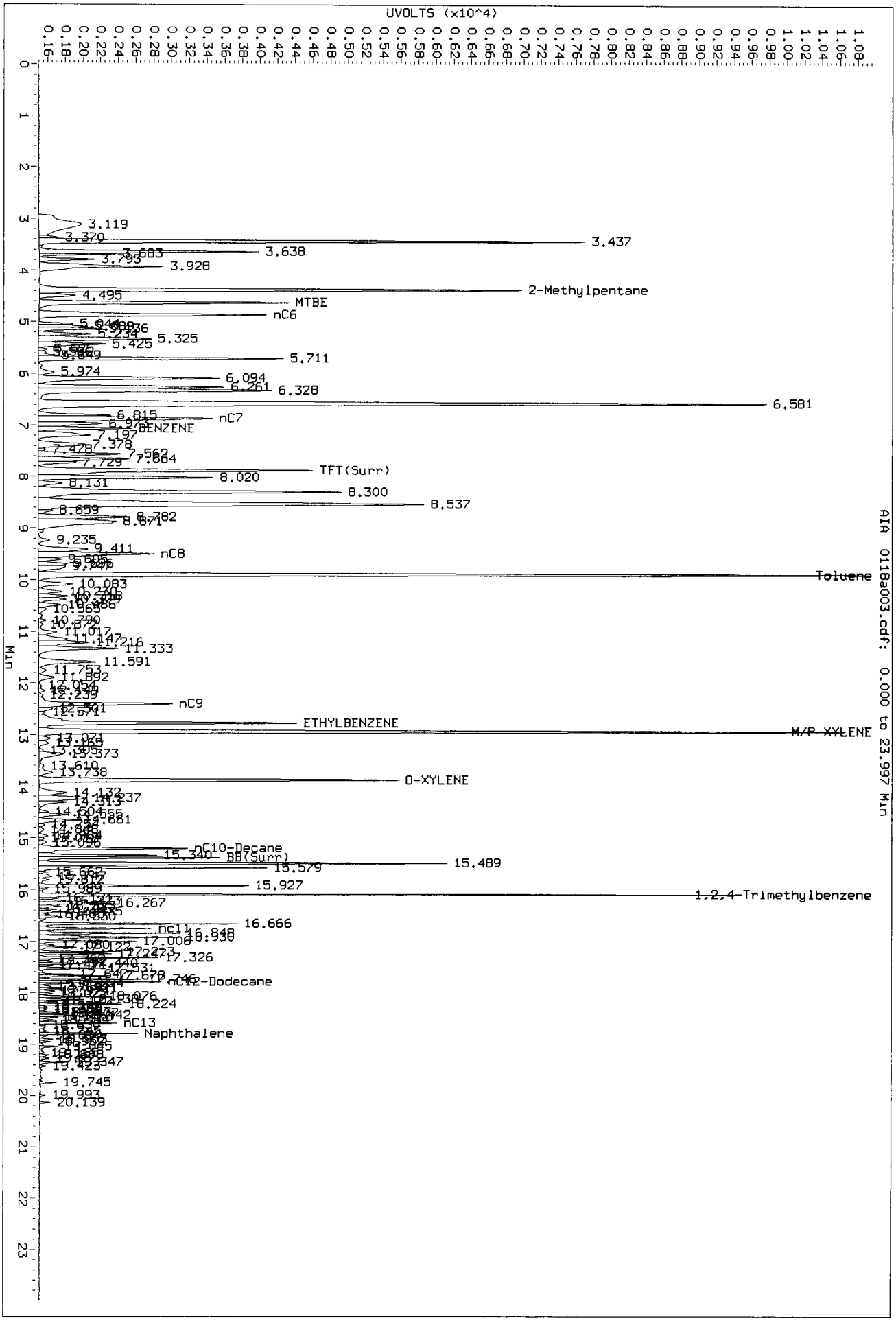
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

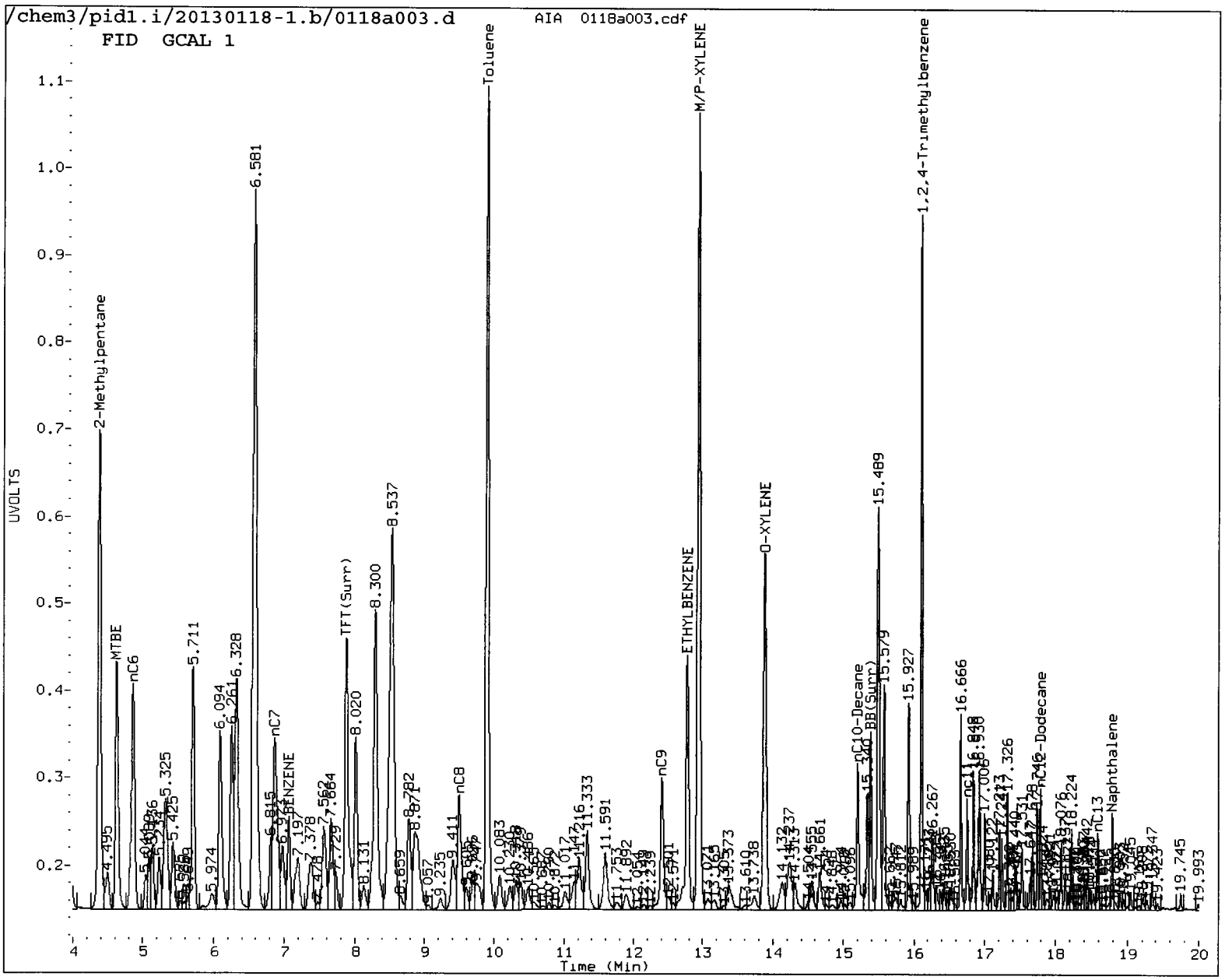
Column diameter: 0.18





Data File: /chem3/pid1.i/20130118-1.b/0118a003.d/0118a003.cdf
Injection Date: 18-JAN-2013 09:15
Instrument: pid1.i
Client Sample ID: GCAL 1

1/21/13



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YC Date: 1/31/13

V297 : 01646

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130118-1.b/0118a004.d
Data file 2: /chem3/pid1.i/20130118-2.b/0118a004.d
Method: /chem3/pid1.i/20130118-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: LCS011713
Client ID: LCS011713
Injection Date: 18-JAN-2013 09:46
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.883	0.003	2943	46689	93.4	TFT(Surr)
15.383	0.004	1974	18162	97.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.79 to 17.89)	358114	404010	1.128 M
8015C 2MP-TMB	(4.28 to 16.20)	723723	776607	1.073 M
AK101 nC6-nC10	(4.76 to 15.10)	582885	626236	1.074 M
NWTPHG Tol-Nap	(9.79 to 18.89)	375093	431025	1.149 M

1/18/13

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	3473	91.7	TFT(Surr)
15.392	0.000	7960	98.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.073	0.000	855	3.45	Benzene
9.905	0.000	8084	35.93	Toluene
12.783	-0.001	2077	10.53	Ethylbenzene
12.945	0.002	8246	38.35	M/P-Xylene
13.889	0.000	3028	18.04	O-Xylene
4.628	-0.020	200	2.78	MTBE

Indicates Peak Area was used for quantitation instead of Height
Indicates peak was manually integrated

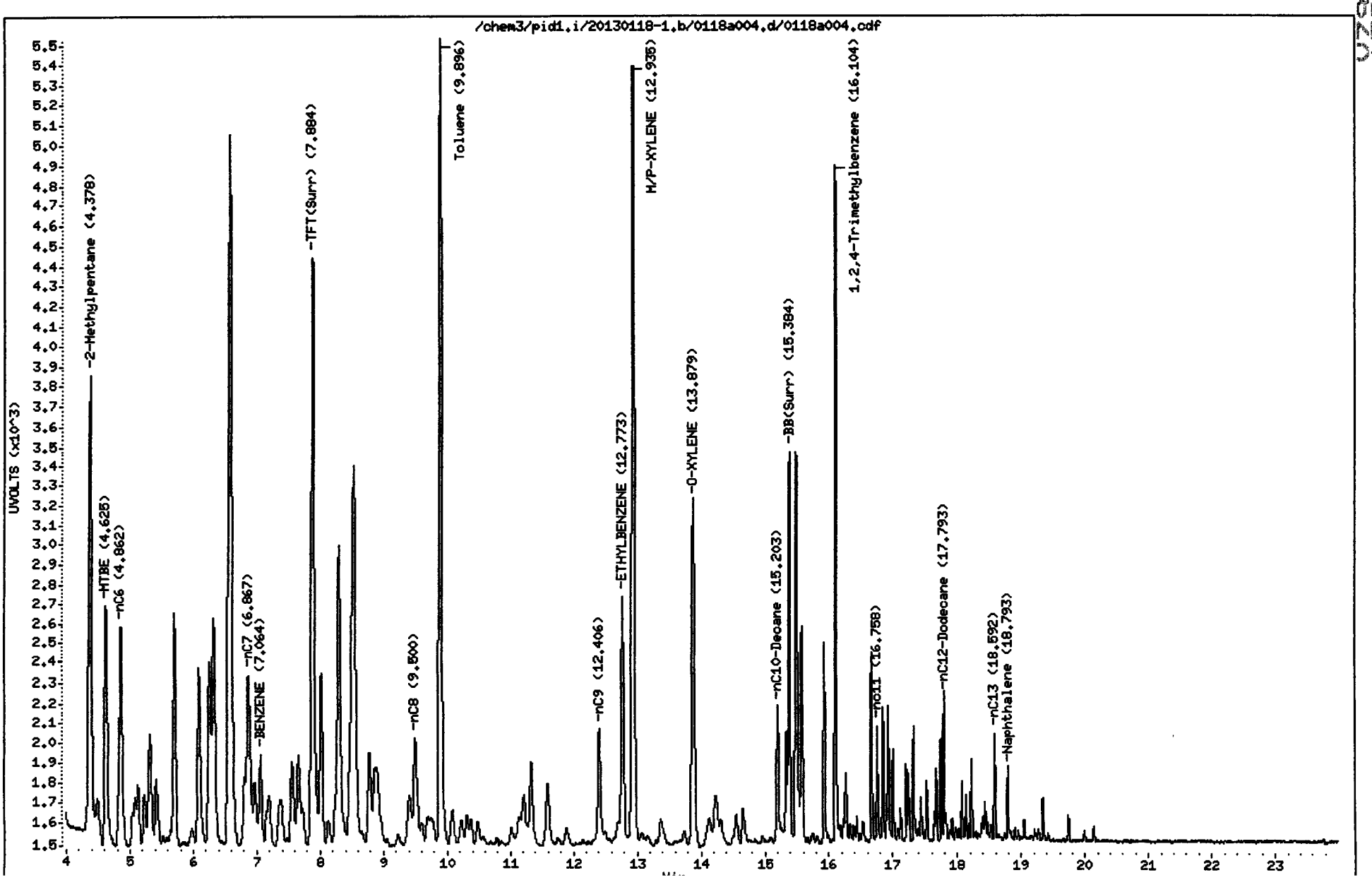
VZ97:01647

Data File: /chem3/pid1.i/20130118-1.b/0118a004.d
Date : 18-JAN-2013 09:46
Client ID: LCS011713
Sample Info: LCS011713

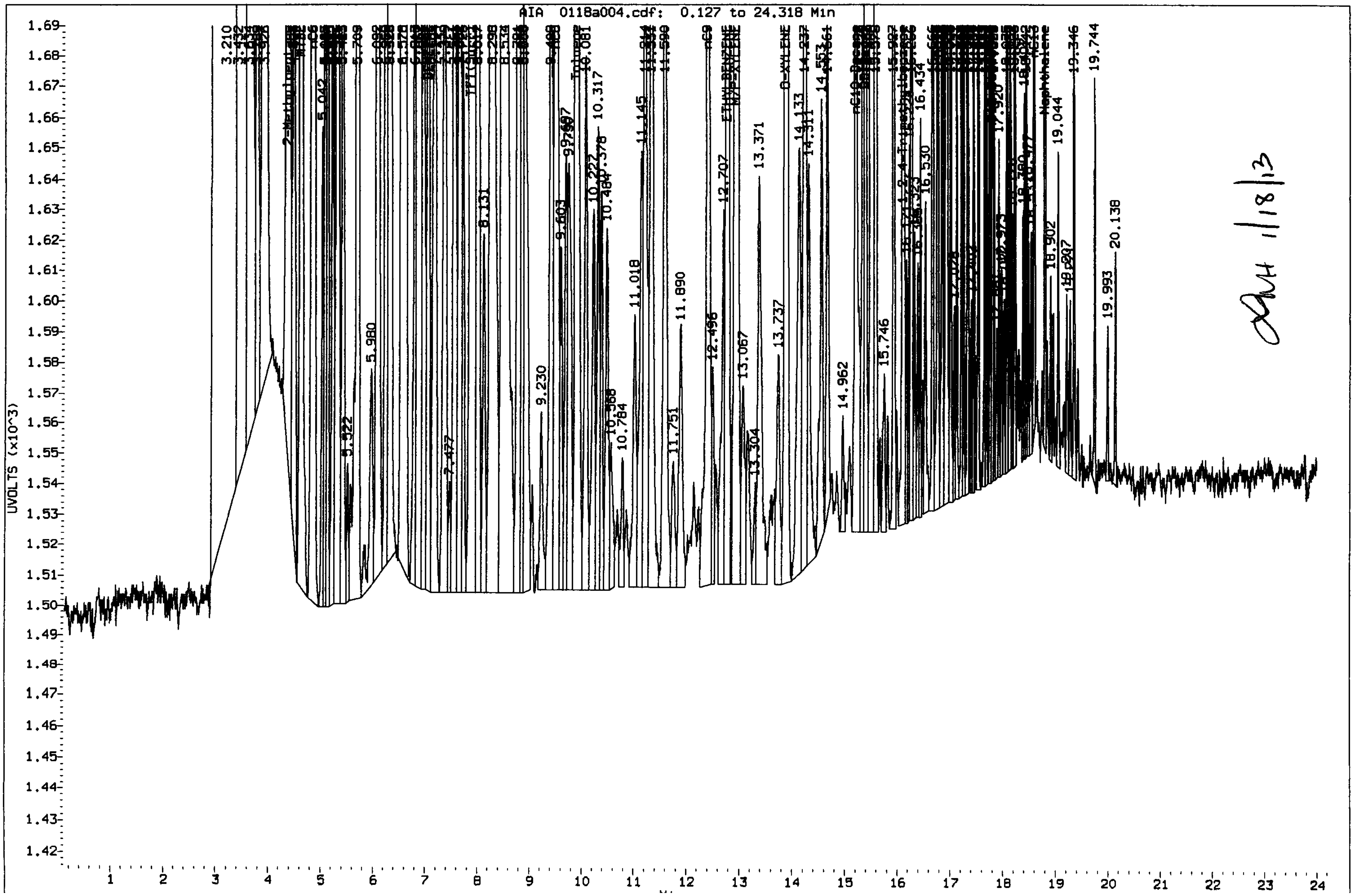
Instrument: pid1.i
Operator: LH
Column diameter: 0.18

Column phase: RTX 502-2 FID

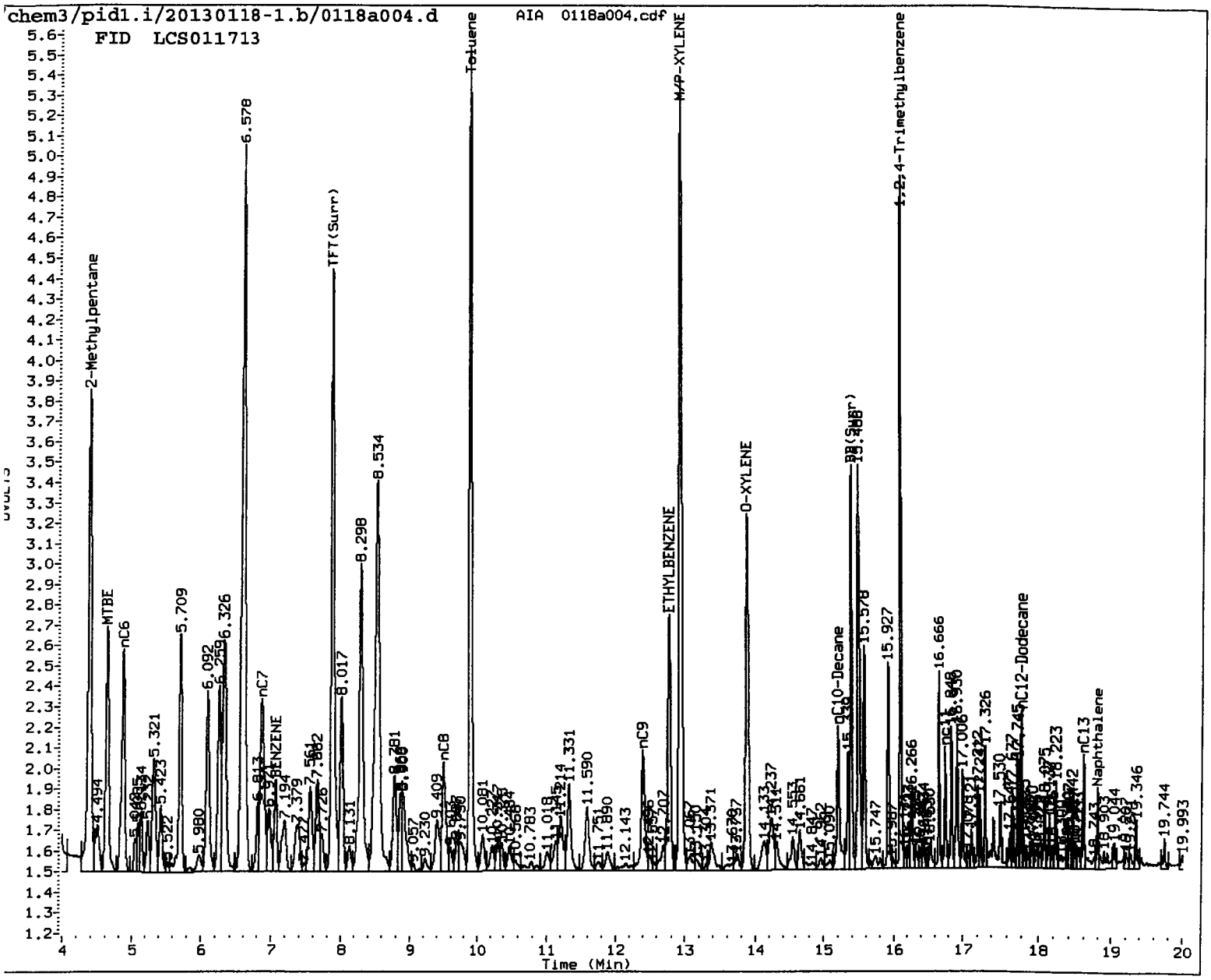
U2917 01/16/13



Data File: /chem3/pid1.i/20130118-1.b/0118a004.d/0118a004.cdf
Injection Date: 18-JAN-2013 09:46
Instrument: pid1.i
Client Sample ID: LCS011713



dmH 1/18/13



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 1/18/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130118-1.b/0118a005.d
Data file 2: /chem3/pid1.i/20130118-2.b/0118a005.d
Method: /chem3/pid1.i/20130118-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: LCSD011713
Client ID: LCSD011713
Injection Date: 18-JAN-2013 10:17
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.887	0.007	2887	45431	91.7	TFT(Surr)
15.383	0.004	1939	17849	95.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.79 to 17.89)	358114	378210	1.056 M
8015C 2MP-TMB	(4.28 to 16.20)	723723	742386	1.026 M
AK101 nC6-nC10	(4.76 to 15.10)	582885	597233	1.025 M
NWTPHG Tol-Nap	(9.79 to 18.89)	375093	404858	1.079 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

1/18/13

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.894	0.001	3393	89.6	TFT(Surr)
15.393	0.000	7804	97.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.074	0.002	842	3.40	Benzene
9.906	0.001	7889	35.06	Toluene
12.784	0.000	2036	10.33	Ethylbenzene
12.946	0.003	8147	37.89	M/P-Xylene
13.890	0.001	2983	17.77	O-Xylene
4.630	-0.019	173	2.40	MTBE

Indicates Peak Area was used for quantitation instead of Height
Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130118-1.b/0118a005.d

Date : 18-JAN-2013 10:17

Client ID: LCSD011713

Sample Info: LCSD011713

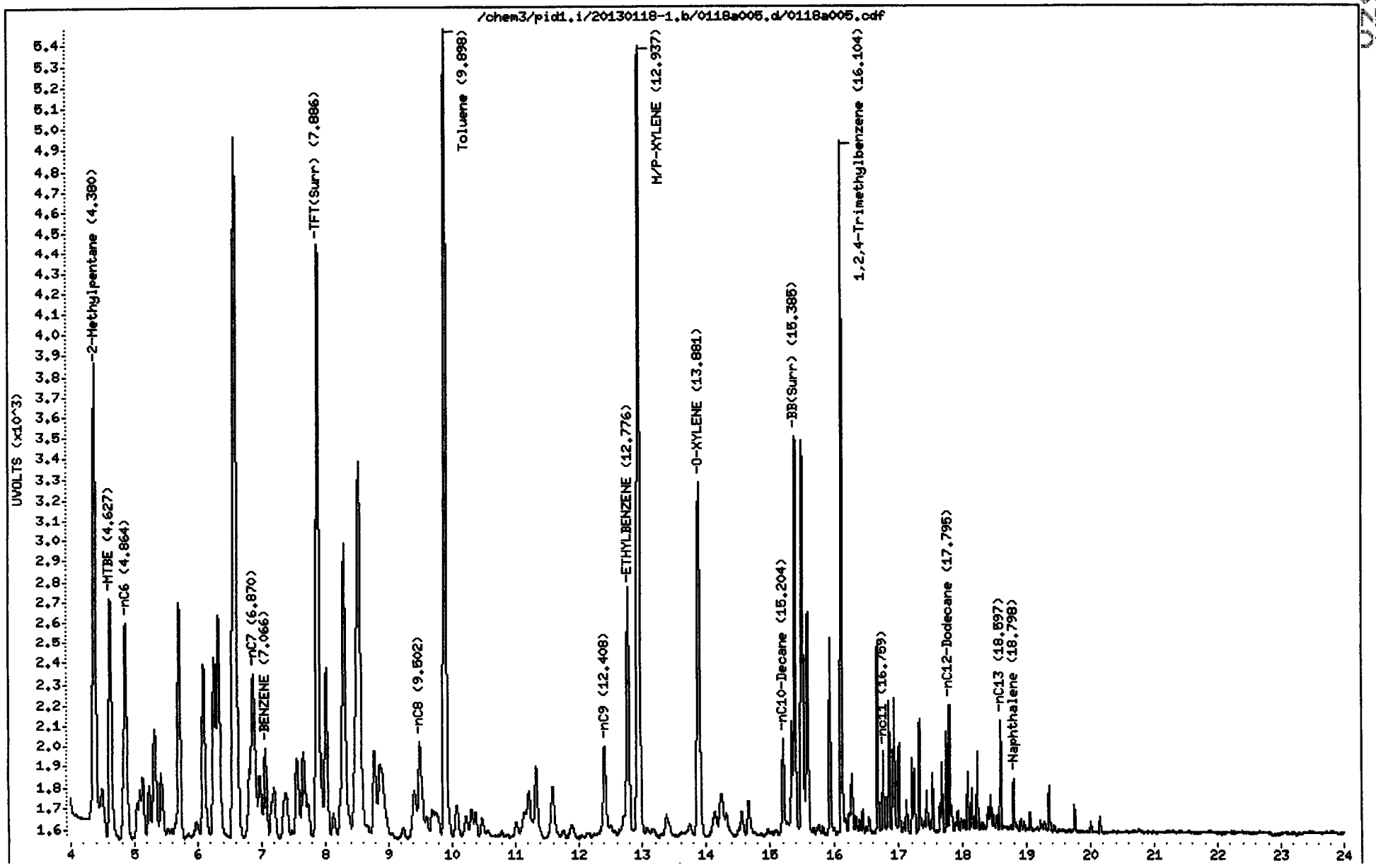
Instrument: pid1.i

Operator: LH

Column phase: RTX 502-2 FID

Column diameter: 0.18

UZ37 : 21552



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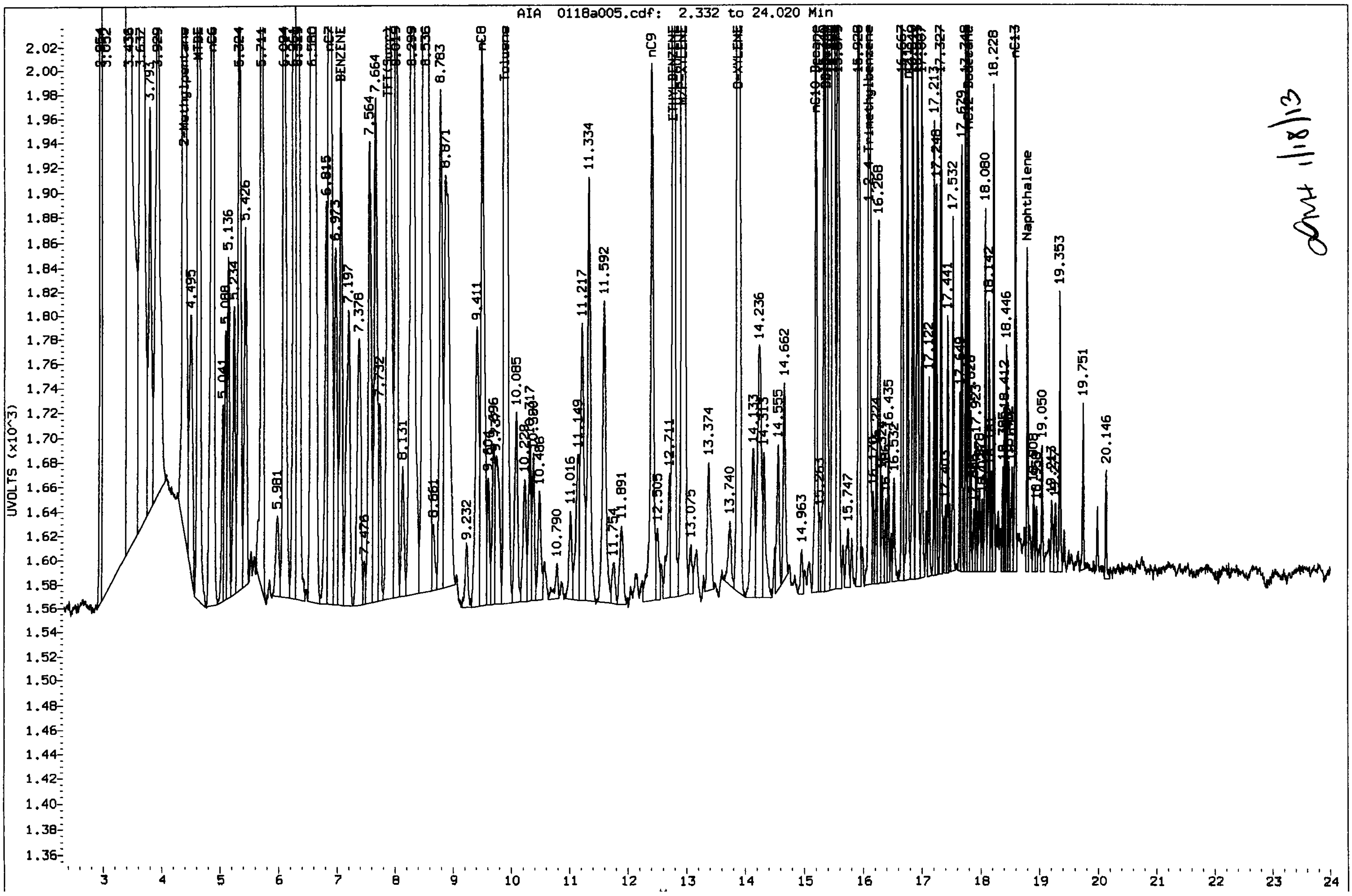
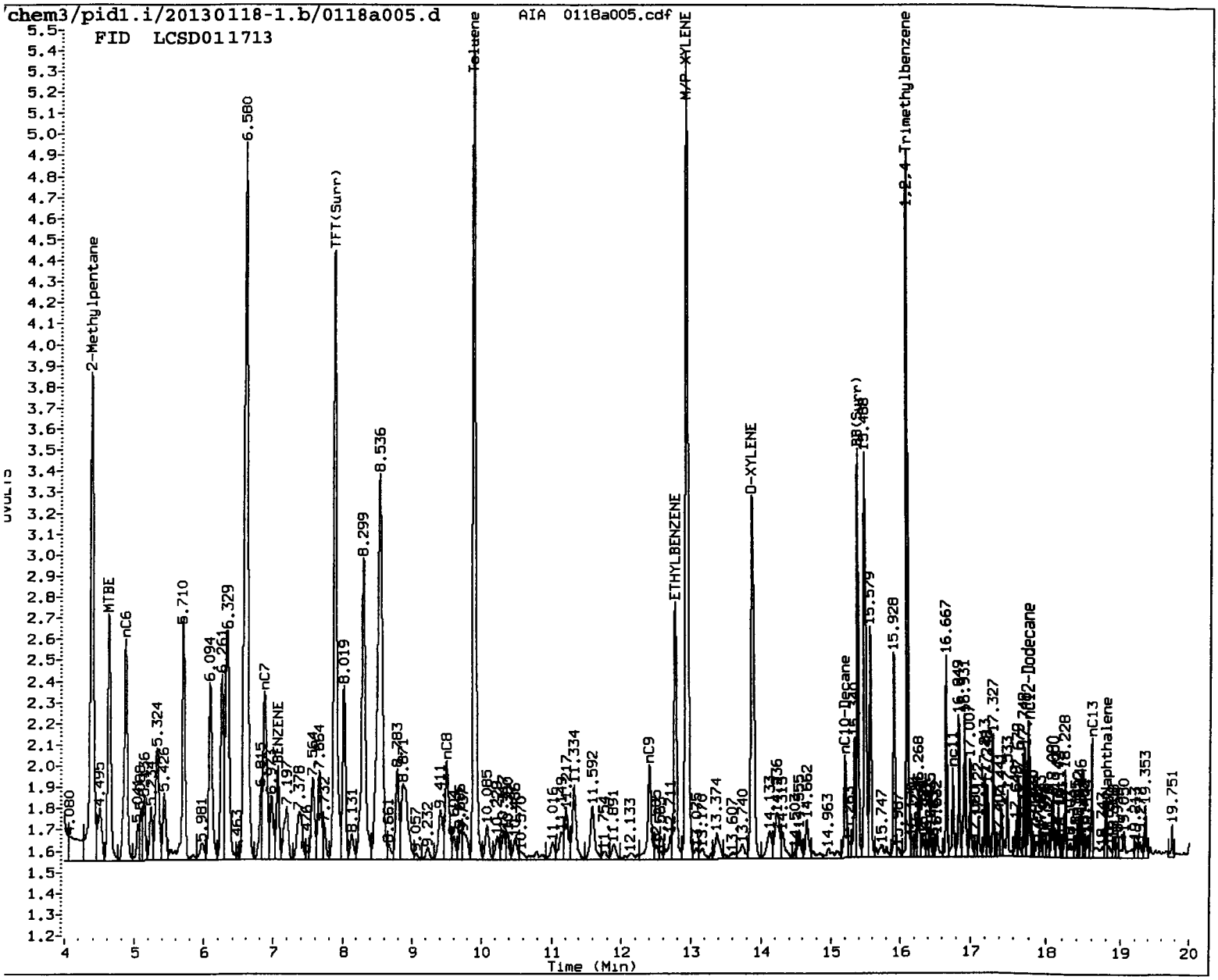
Injection Date: 18-JAN-2013 10:17
Instrument: pid1.i
Client Sample ID: LCSD011713



dmH 1/18/13



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 1/18/13

V797 : 01654

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130118-1.b/0118a006.d
Data file 2: /chem3/pid1.i/20130118-2.b/0118a006.d
Method: /chem3/pid1.i/20130118-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: MB011713
Client ID: MB011713
Injection Date: 18-JAN-2013 10:48
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.885	0.005	2735	38992	86.8	TFT(Surr)
15.385	0.005	1933	16484	95.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.79 to 17.89)	358114	8439	0.024
8015C 2MP-TMB	(4.28 to 16.20)	723723	8407	0.012
AK101 nC6-nC10	(4.76 to 15.10)	582885	6626	0.011
NWTPHG Tol-Nap	(9.79 to 18.89)	375093	10776	0.029

1 Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	3268	86.3	TFT(Surr)
15.393	0.000	7827	97.3	BB(Surr)

SW8021 (PID)

1/18/13

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

Indicates Peak Area was used for quantitation instead of Height
Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130118-1.b/0118a006.d

Date : 18-JAN-2013 10:48

Client ID: MB011713

Sample Info: MB011713

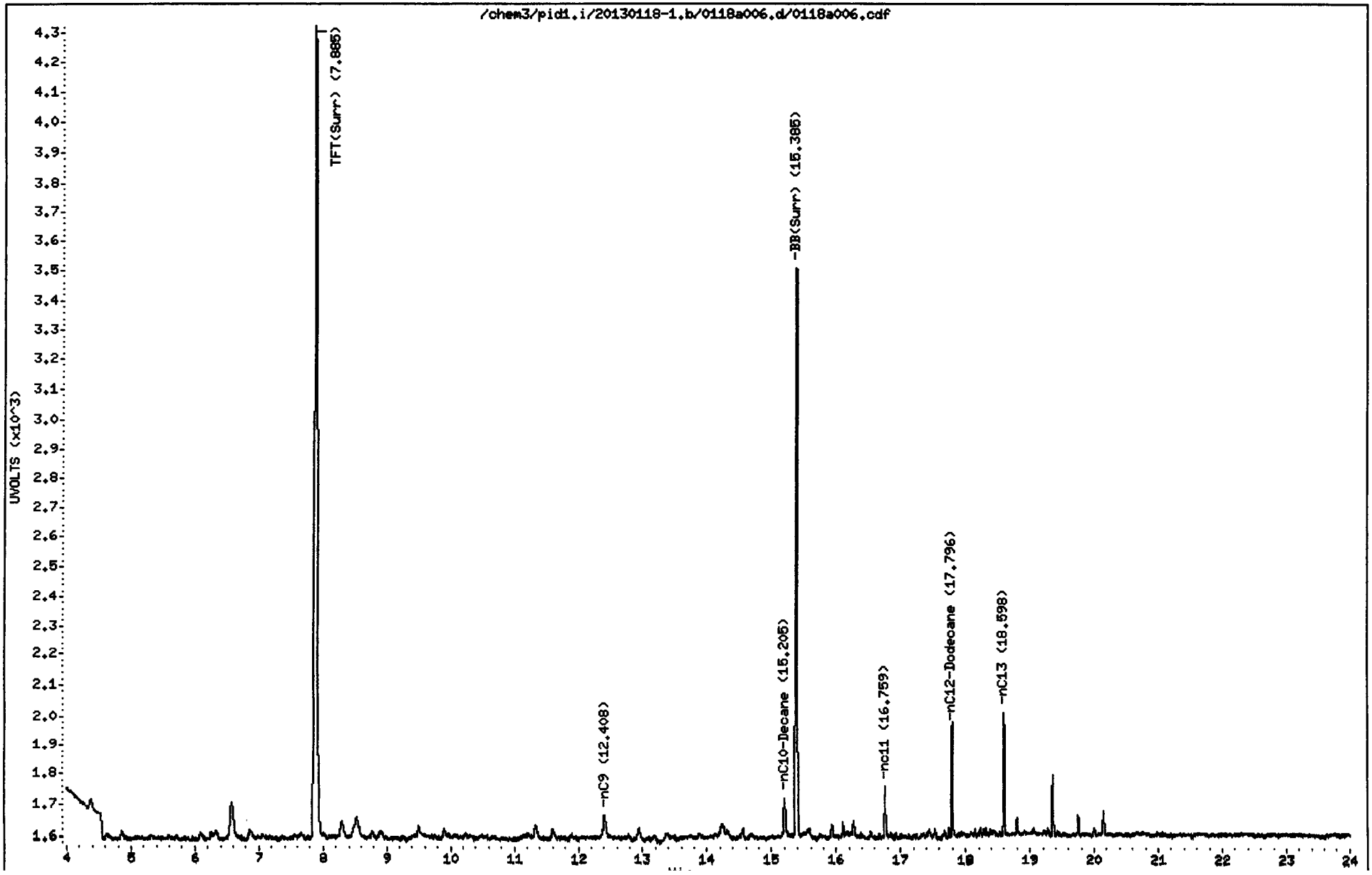
Instrument: pid1.i

Operator: LH

Column phase: RTX 502-2 FID

Column diameter: 0.18

U797 01455



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130118-1.b/0118a007.d
Data file 2: /chem3/pid1.i/20130118-2.b/0118a007.d
Method: /chem3/pid1.i/20130118-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: VZ97U
Client ID: Trip Blanks
Injection Date: 18-JAN-2013 11:20
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.887	0.007	2739	39208	87.0	TFT(Surr)
15.385	0.006	1888	16290	93.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.79 to 17.89)	358114	7437	0.021
8015C 2MP-TMB	(4.28 to 16.20)	723723	2852	0.004
AK101 nC6-nC10	(4.76 to 15.10)	582885	561	0.001
NWTPHG Tol-Nap	(9.79 to 18.89)	375093	9765	0.026

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

1/18/13

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.895	0.002	3276	86.5	TFT(Surr)
15.393	0.001	7635	94.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130118-1.b/0118a007.d

Date : 18-JAN-2013 11:20

Client ID: Trip Blanks

Sample Info: VZ97U

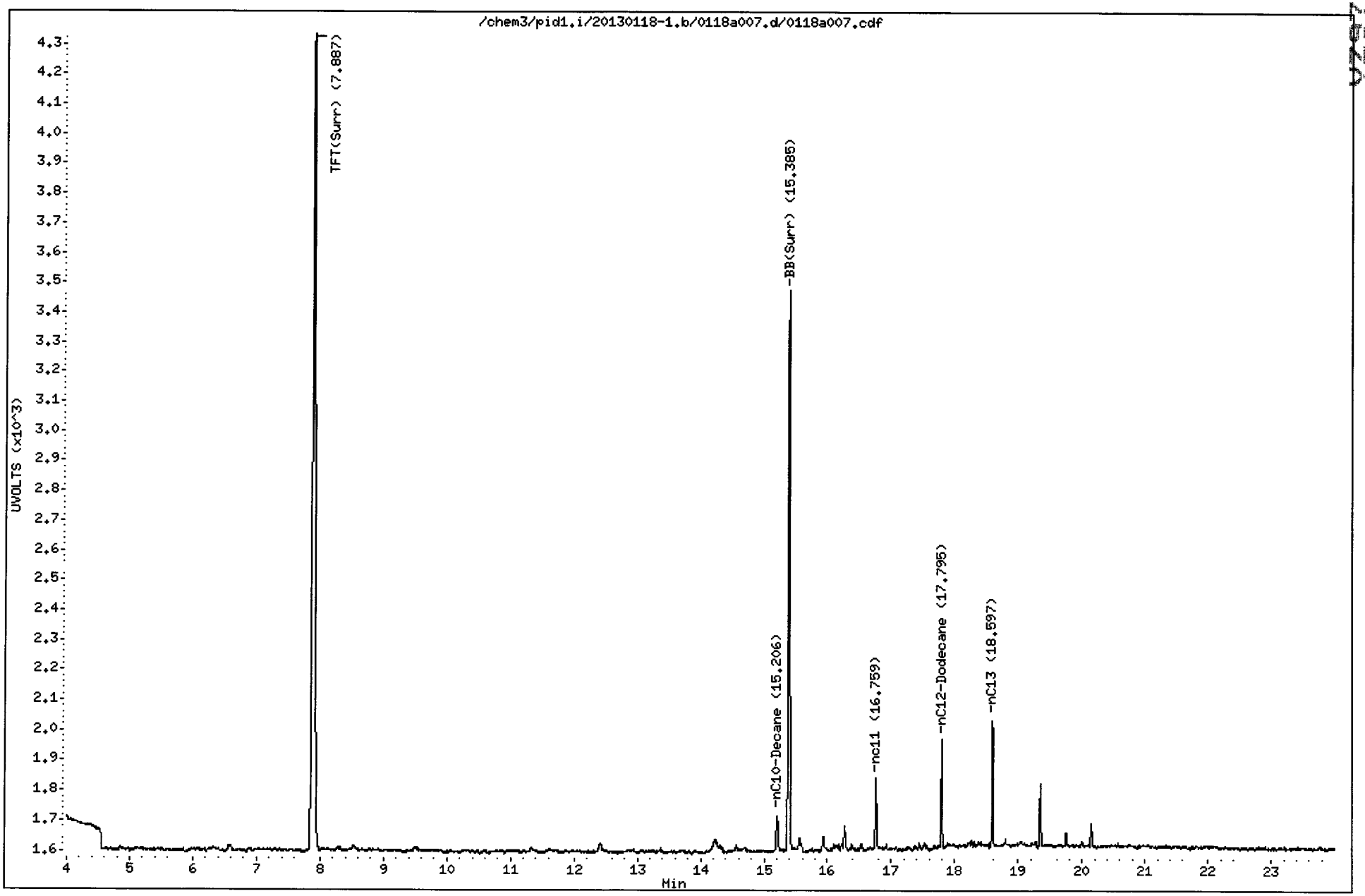
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18

VZ97.0155a



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130118-1.b/0118a009.d
Data file 2: /chem3/pid1.i/20130118-2.b/0118a009.d
Method: /chem3/pid1.i/20130118-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: VZ97A
Client ID: CSIA-20130107-001B
Injection Date: 18-JAN-2013 12:23
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.885	0.005	2762	39266	87.7	TFT(Surr)
15.385	0.006	1930	16563	95.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.79 to 17.89)	358114	4238	0.012
8015C 2MP-TMB	(4.28 to 16.20)	723723	1367	0.002
AK101 nC6-nC10	(4.76 to 15.10)	582885	1366	0.002
NWTPHG Tol-Nap	(9.79 to 18.89)	375093	6004	0.016

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	3298	87.1	TFT(Surr)
15.393	0.000	7797	96.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130118-1.b/0118a009.d

Date : 18-JAN-2013 12:23

Client ID: CSIA-20130107-001B

Sample Info: VZ97A

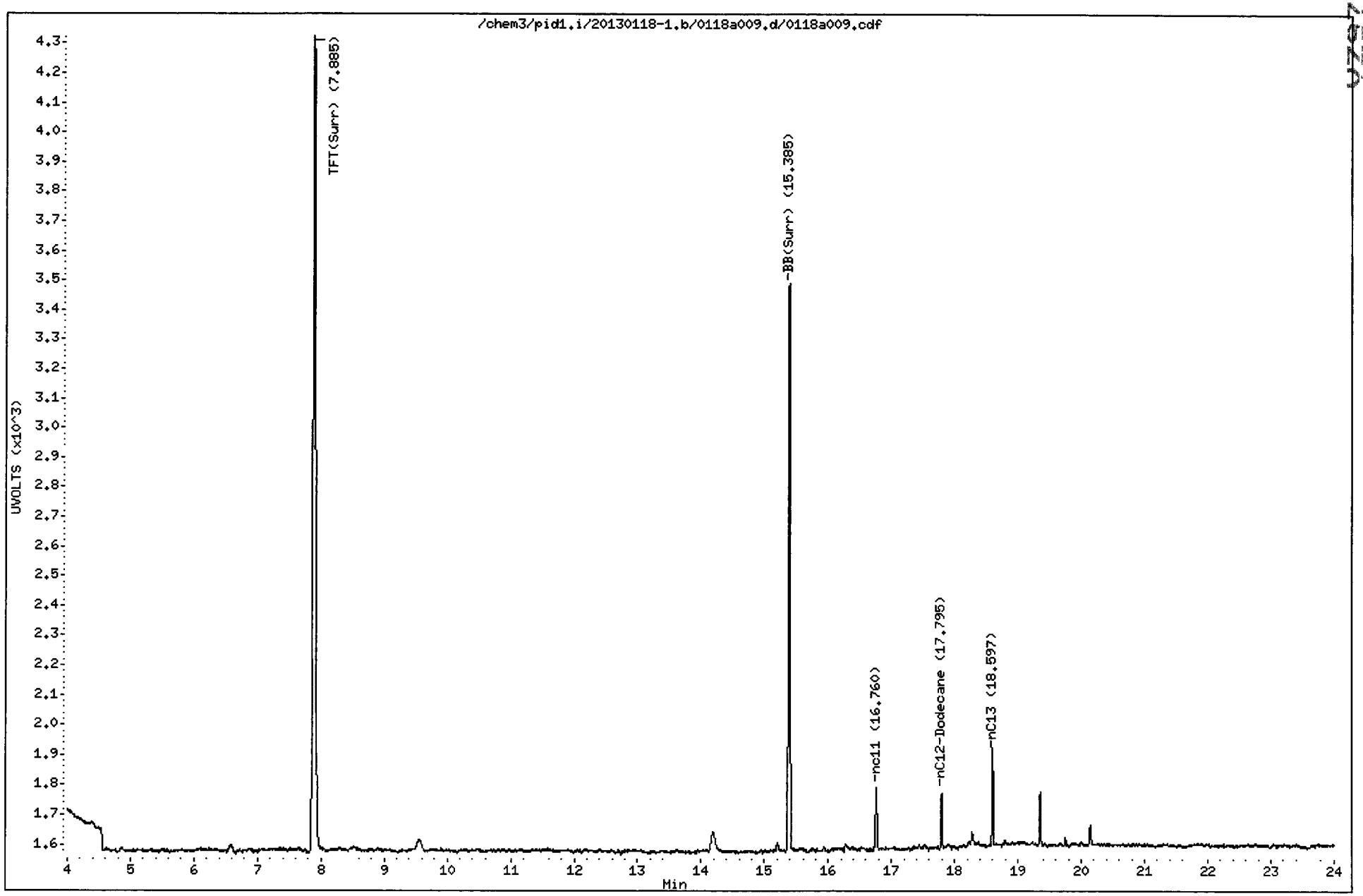
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18

VZ97 01/30/13



PC
1/24/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130118-1.b/0118a010.d
Data file 2: /chem3/pid1.i/20130118-2.b/0118a010.d
Method: /chem3/pid1.i/20130118-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: VZ97B
Client ID: CSIA-20130107-002B
Injection Date: 18-JAN-2013 12:54
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.885	0.005	2724	38964	86.5	TFT(Surr)
15.386	0.006	1906	16536	93.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.79 to 17.89)	358114	3159	0.009
8015C 2MP-TMB	(4.28 to 16.20)	723723	1144	0.002
AK101 nC6-nC10	(4.76 to 15.10)	582885	1144	0.002
NWTPHG Tol-Nap	(9.79 to 18.89)	375093	4757	0.013

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.894	0.000	3263	86.1	TFT(Surr)
15.393	0.001	7746	96.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130118-1.b/0118a010.d

Date : 18-JAN-2013 12:54

Client ID: CSIA-20130107-002B

Sample Info: VZ97B

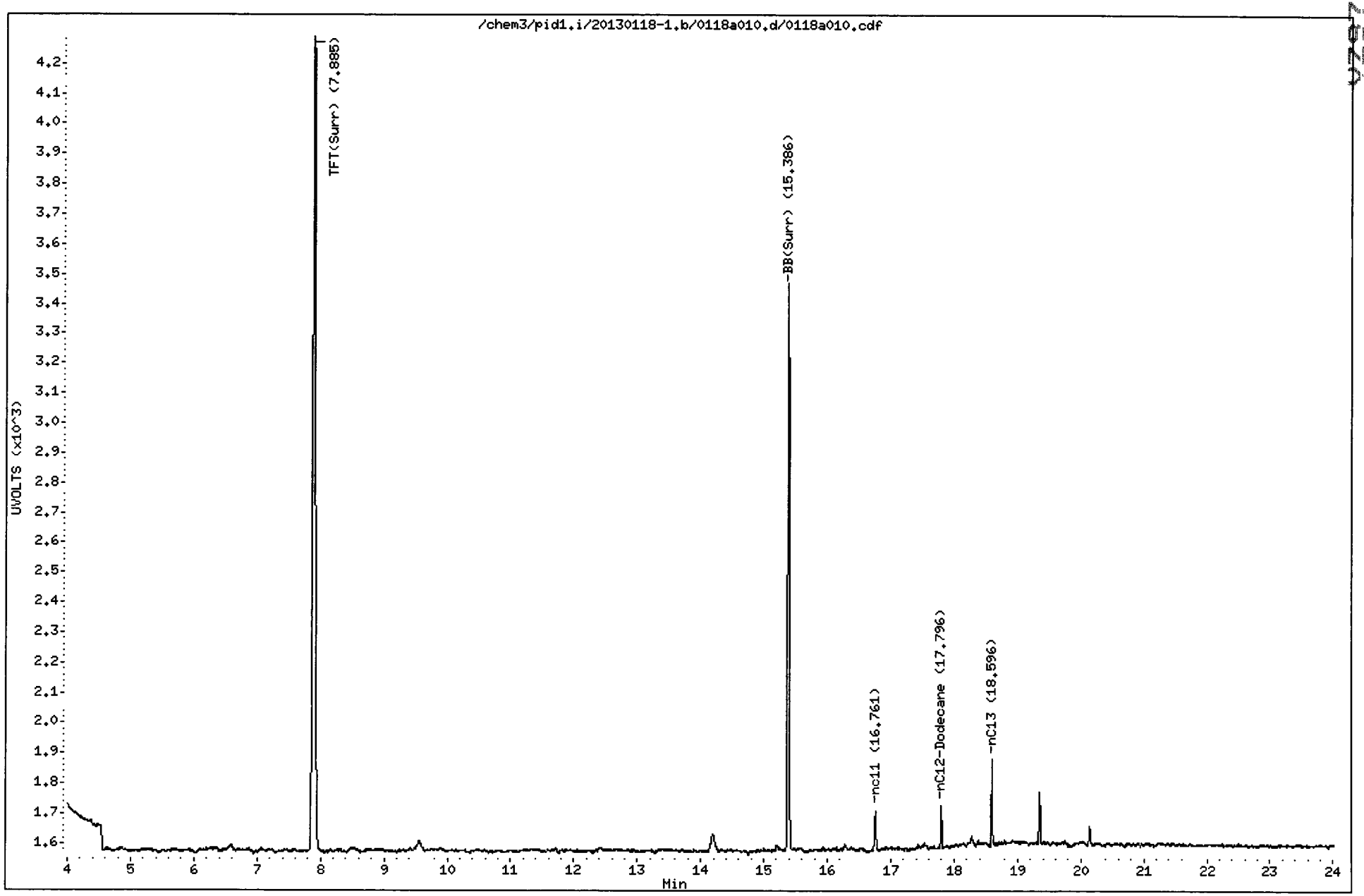
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18

VZ97 - 5162



RC 1/21/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130118-1.b/0118a011.d
Data file 2: /chem3/pid1.i/20130118-2.b/0118a011.d
Method: /chem3/pid1.i/20130118-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: VZ97C
Client ID: CSIA-20130107-003S+
Injection Date: 18-JAN-2013 13:25
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.886	0.006	2653	38139	84.2	TFT(Surr)
15.385	0.005	1866	16021	91.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.79 to 17.89)	358114	2339	0.007
8015C 2MP-TMB	(4.28 to 16.20)	723723	733	0.001
AK101 nC6-nC10	(4.76 to 15.10)	582885	733	0.001
NWTPHG Tol-Nap	(9.79 to 18.89)	375093	3783	0.010

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.894	0.001	3165	83.6	TFT(Surr)
15.393	0.000	7491	93.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130118-1.b/0118a011.d

Date : 18-JAN-2013 13:25

Client ID: CSIA-20130107-003S+

Sample Info: VZ97C

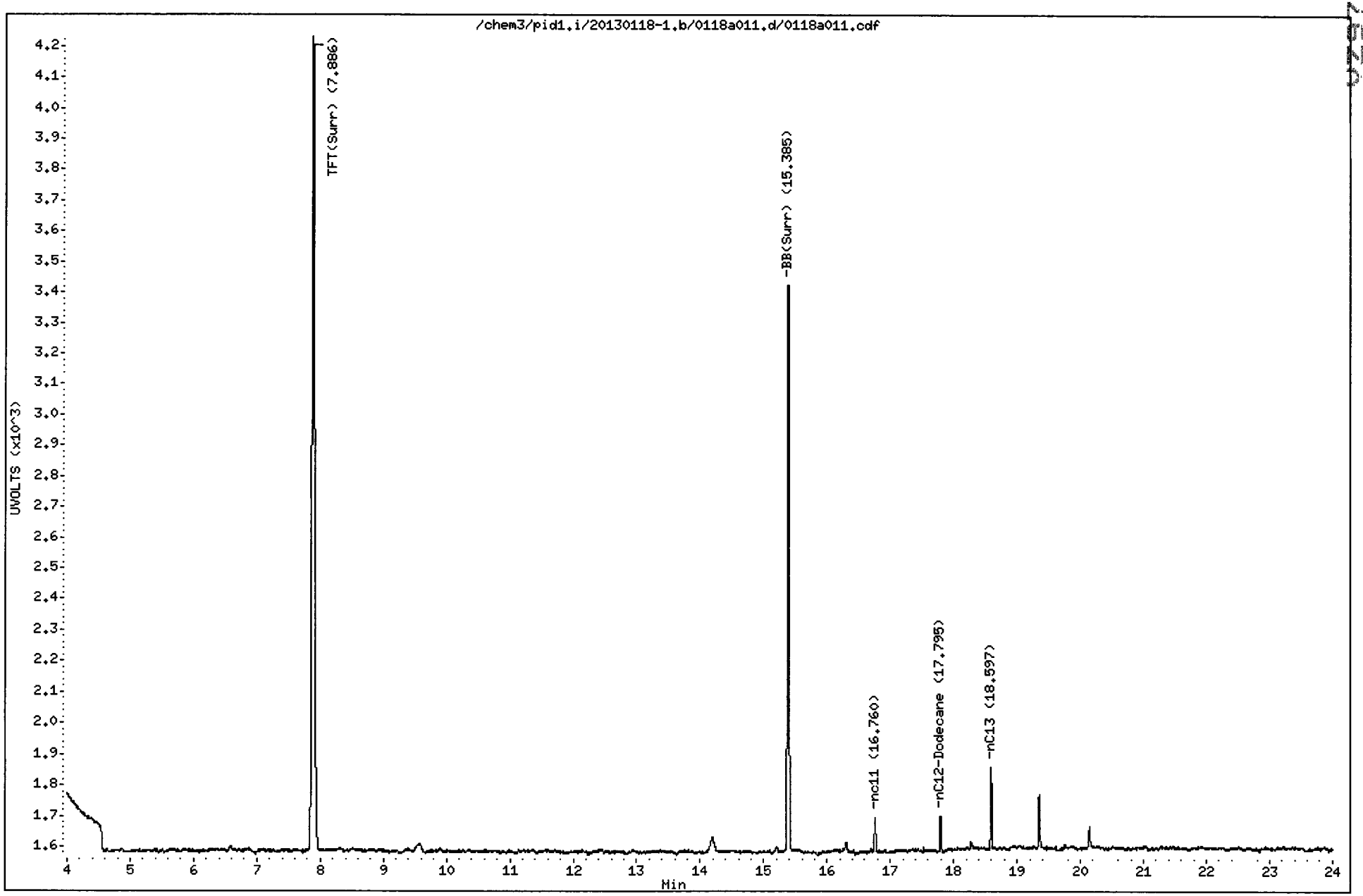
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18

VZ97: 01/18/13



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130118-1.b/0118a012.d
Data file 2: /chem3/pid1.i/20130118-2.b/0118a012.d
Method: /chem3/pid1.i/20130118-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: VZ97D
Client ID: CSIA-20130107-004S+
Injection Date: 18-JAN-2013 13:56
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.885	0.005	2732	38471	86.7	TFT(Surr)
15.385	0.005	1933	16604	95.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.79 to 17.89)	358114	1335	0.004
8015C 2MP-TMB	(4.28 to 16.20)	723723	1	0.000
AK101 nC6-nC10	(4.76 to 15.10)	582885	1	0.000
NWTPHG Tol-Nap	(9.79 to 18.89)	375093	2595	0.007

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	3265	86.2	TFT(Surr)
15.393	0.000	7774	96.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130118-1.b/0118a012.d

Date : 18-JAN-2013 13:56

Client ID: CSIA-20130107-004S+

Sample Info: VZ97D

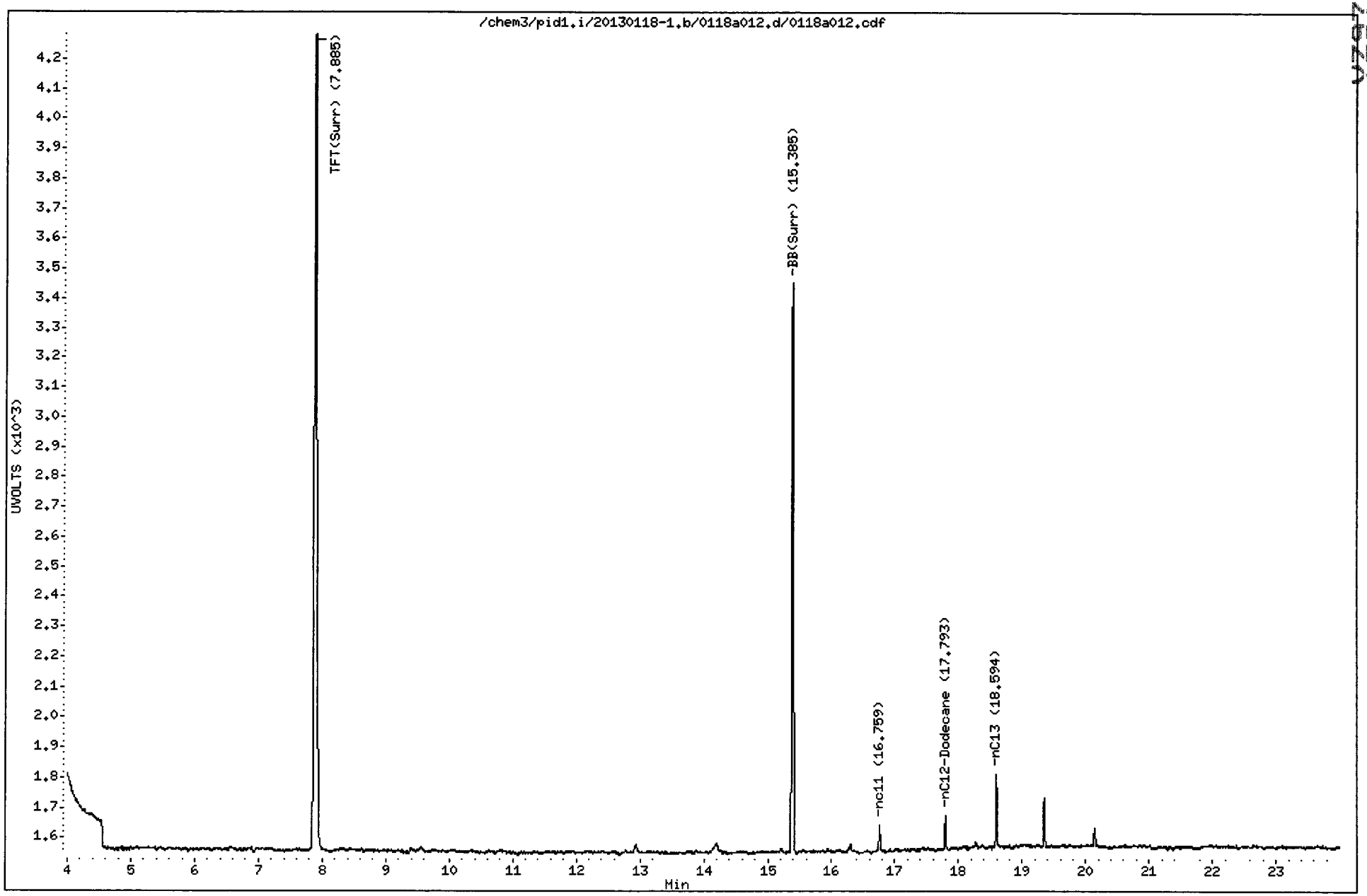
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18

VZ97 21656



KG 1/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130118-1.b/0118a013.d
Data file 2: /chem3/pid1.i/20130118-2.b/0118a013.d
Method: /chem3/pid1.i/20130118-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: VZ97E
Client ID: CSIA-20130107-005S+
Injection Date: 18-JAN-2013 14:27
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.886	0.006	2639	37361	83.8	TFT(Surr)
15.385	0.006	1913	16332	94.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.79 to 17.89)	358114	1053	0.003
8015C 2MP-TMB	(4.28 to 16.20)	723723	0	0.000
AK101 nC6-nC10	(4.76 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap	(9.79 to 18.89)	375093	2348	0.006

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.894	0.001	3155	83.3	TFT(Surr)
15.393	0.001	7706	95.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130118-1.b/0118a013.d

Date : 18-JAN-2013 14:27

Client ID: CSIA-20130107-005S+

Sample Info: VZ97E

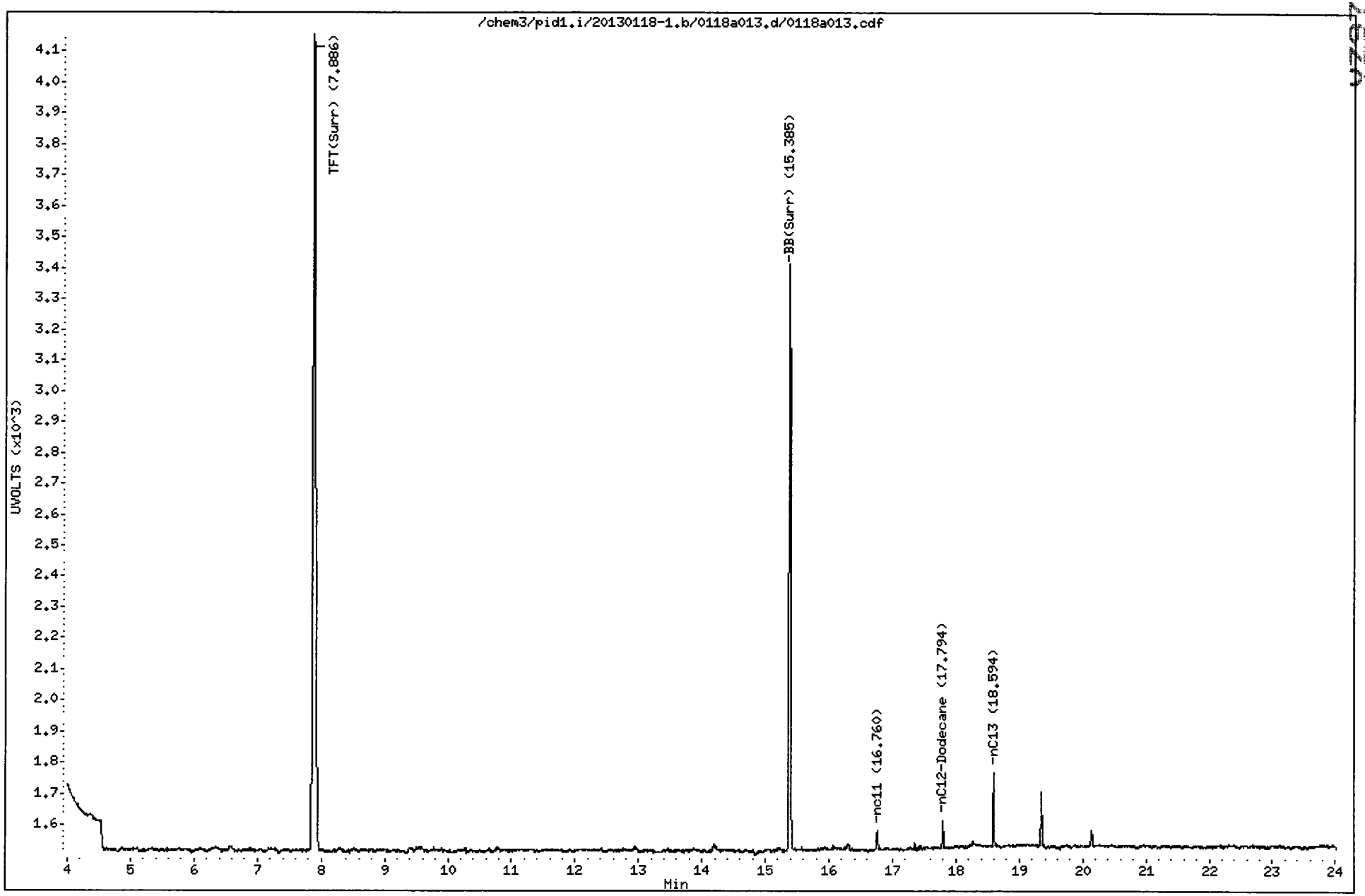
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18

VZ97 01553



1/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130118-1.b/0118a014.d
Data file 2: /chem3/pid1.i/20130118-2.b/0118a014.d
Method: /chem3/pid1.i/20130118-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: GCAL 2
Client ID: GCAL 2
Injection Date: 18-JAN-2013 14:58
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.884	0.004	3050	54240	96.8	TFT(Surr)
15.385	0.005	1953	18928	96.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.79 to 17.89)	358114	844085	2.357 M
8015C 2MP-TMB	(4.28 to 16.20)	723723	1696670	2.344 M
AK101 nC6-nC10	(4.76 to 15.10)	582885	1373275	2.356 M
NWTPHG Tol-Nap	(9.79 to 18.89)	375093	885786	2.362 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	3506	92.6	TFT(Surr)
15.393	0.000	7963	99.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.073	0.001	2033	8.20	Benzene
9.907	0.001	19128	85.02	Toluene
12.785	0.001	4984	25.28	Ethylbenzene
12.947	0.004	19724	91.74	M/P-Xylene
13.890	0.001	7251	43.20	O-Xylene
4.629	-0.020	465	6.46	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130118-1.b/0118a014.d

Date : 18-JAN-2013 14:58

Client ID: GCAL 2

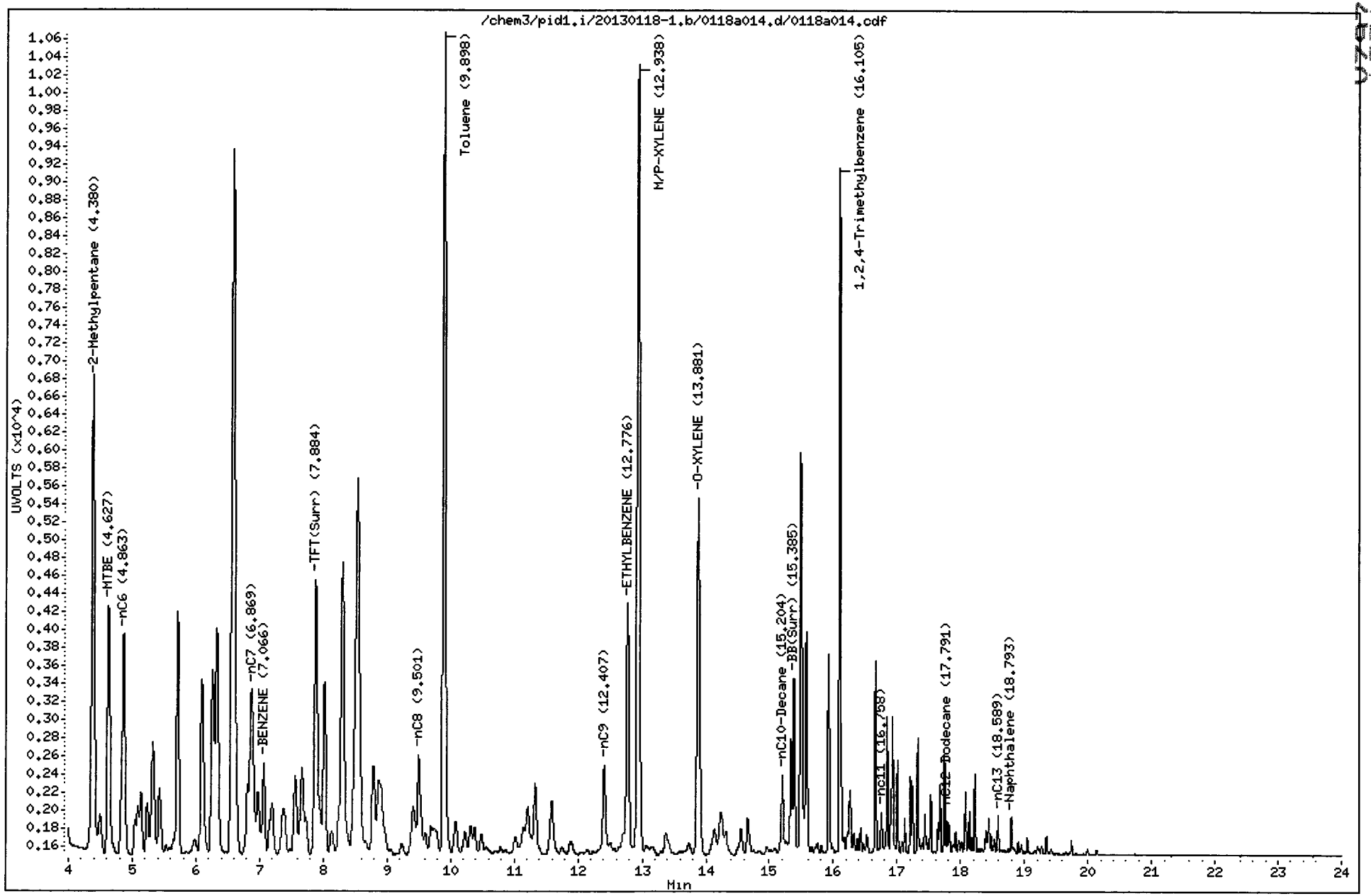
Sample Info: GCAL 2

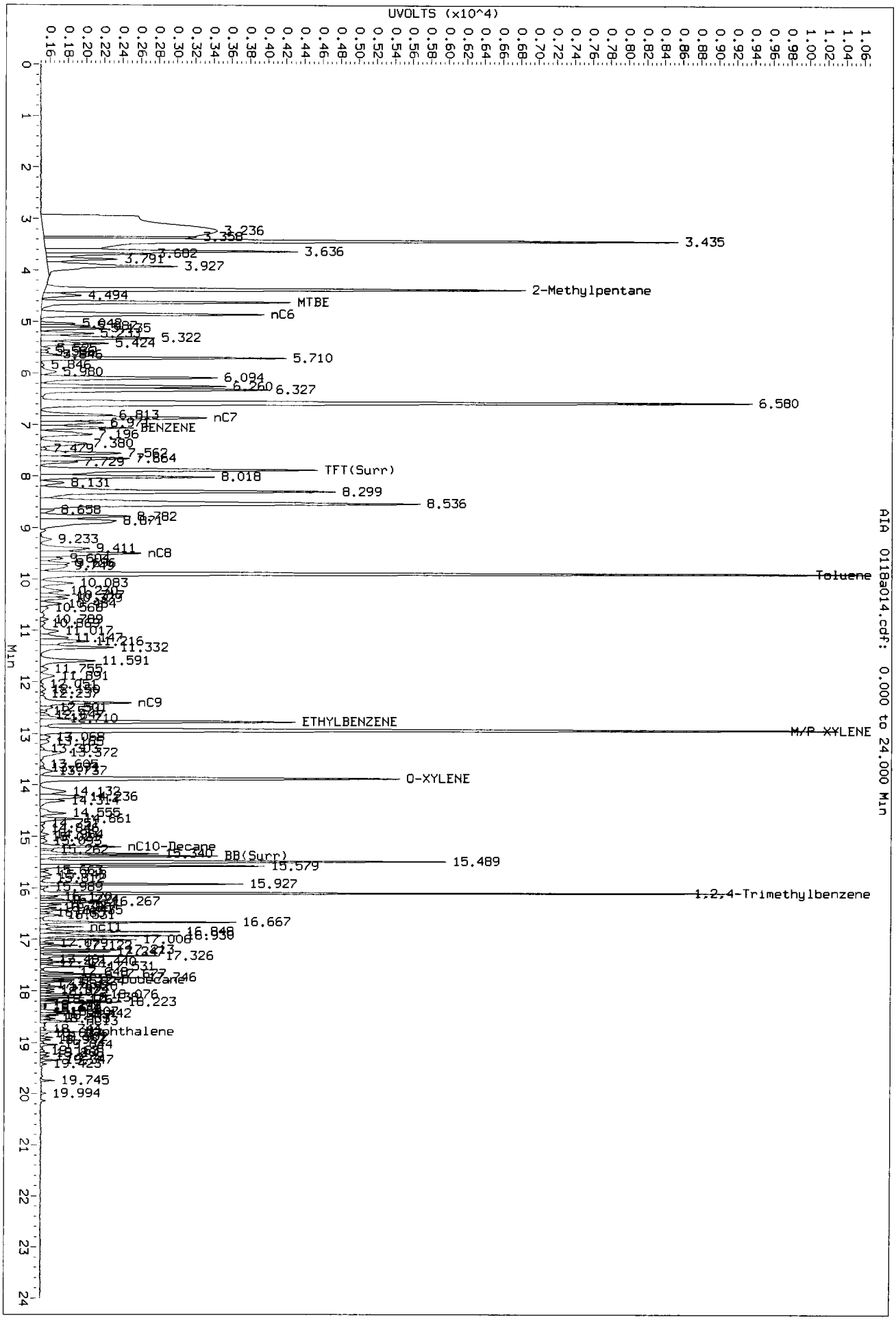
Instrument: pid1.i

Operator: LH

Column phase: RTX 502-2 FID

Column diameter: 0.18





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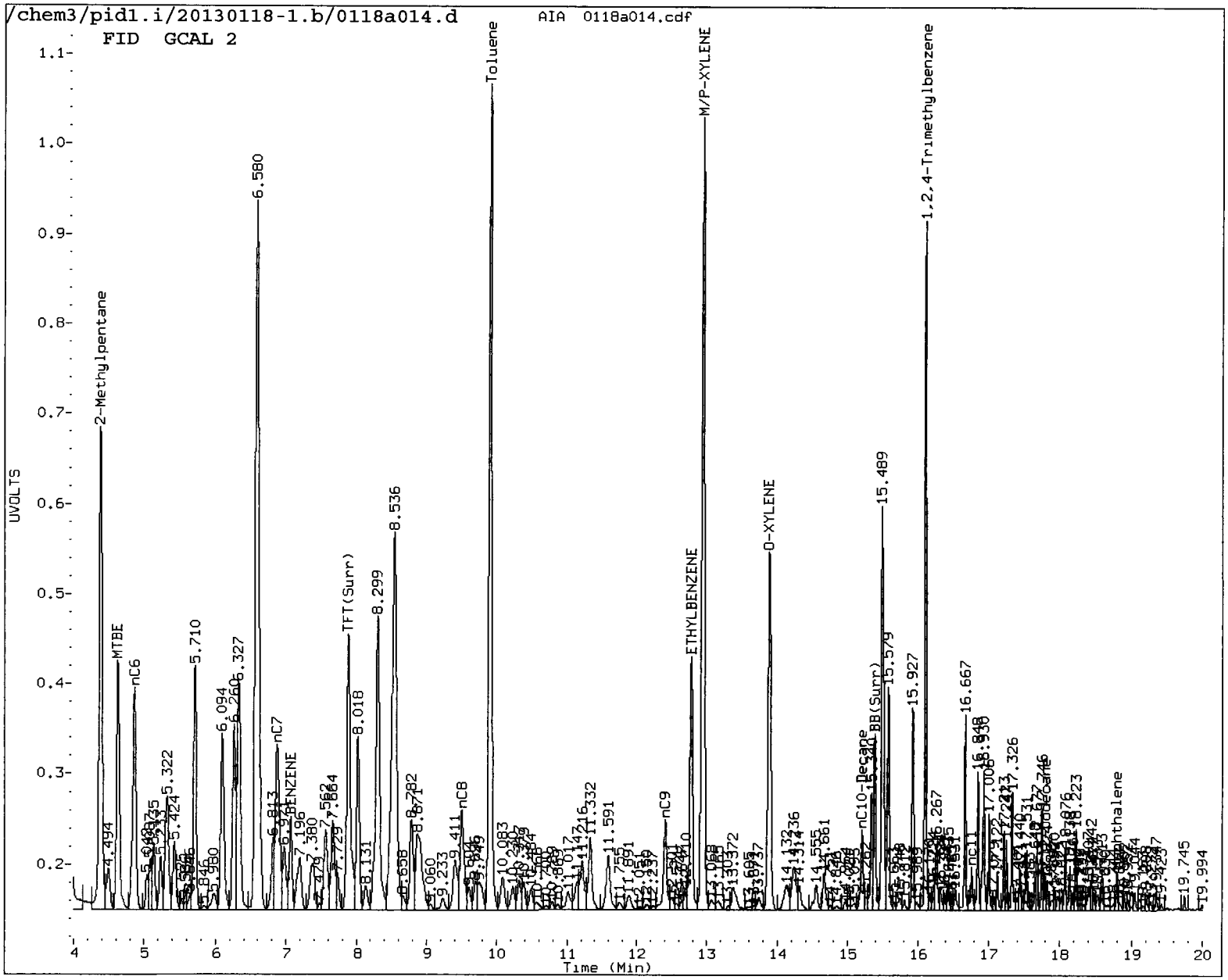
Injection Date: 18-JAN-2013 14:58
Instrument: pid1.i
Client Sample ID: GCAL 2



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YC Date: 1/22/13

1/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130118-1.b/0118a015.d
Data file 2: /chem3/pid1.i/20130118-2.b/0118a015.d
Method: /chem3/pid1.i/20130118-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: VZ97F
Client ID: CSIA20130109-006B
Injection Date: 18-JAN-2013 15:28
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.885	0.005	2615	37228	83.0	TFT(Surr)
15.385	0.005	1835	16744	90.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.79 to 17.89)	358114	25282	0.071 M
8015C 2MP-TMB	(4.28 to 16.20)	723723	32824	0.045 M
AK101 nC6-nC10	(4.76 to 15.10)	582885	24434	0.042 M
NWTPHG Tol-Nap	(9.79 to 18.89)	375093	34005	0.091 M

GRQJ

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	3137	82.8	TFT(Surr)
15.393	0.000	7405	92.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130118-1.b/0118a015.d

Date : 18-JAN-2013 15:28

Client ID: CSIA20130109-006B

Sample Info: VZ97F

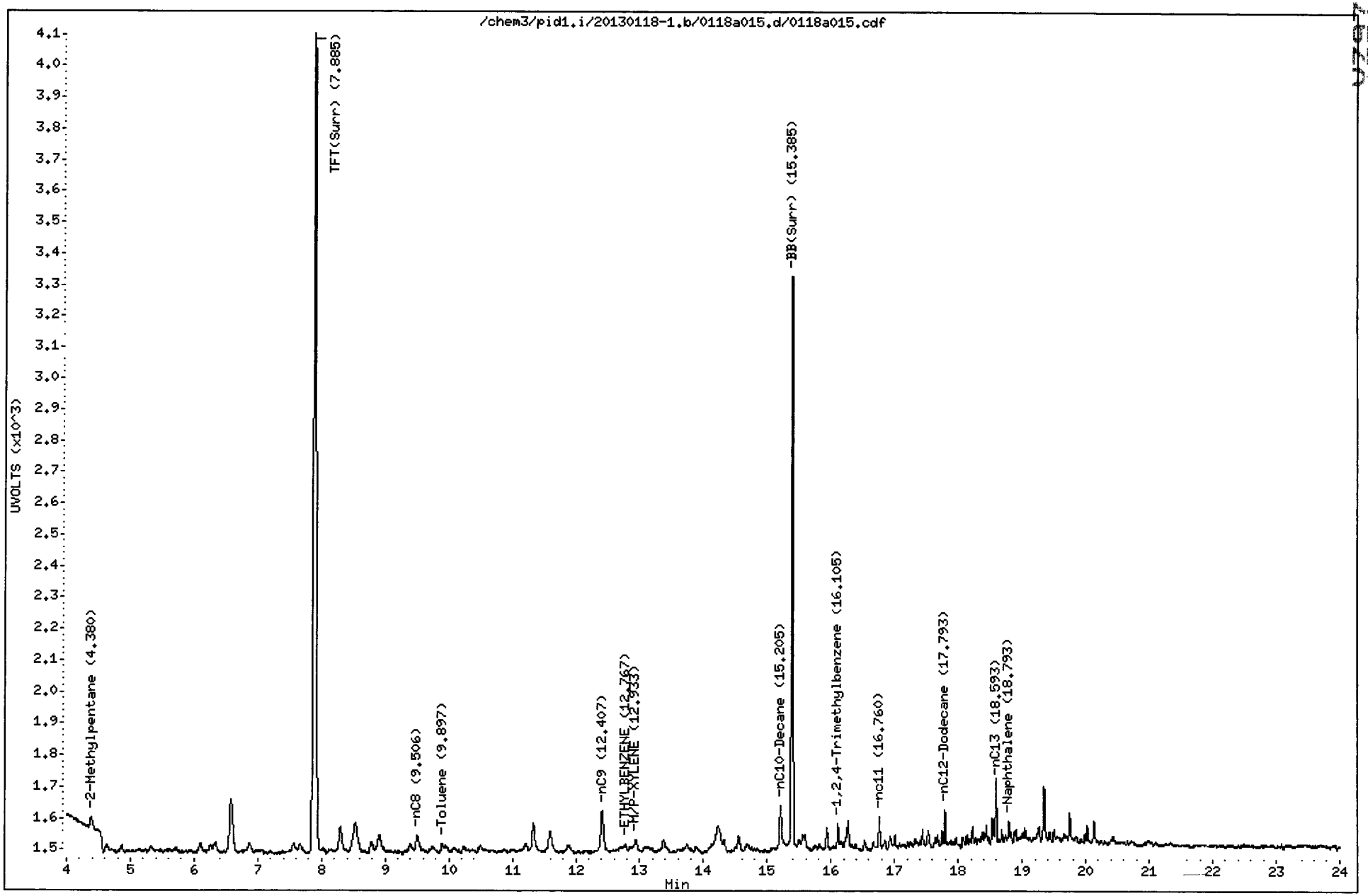
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18

VZ97 : 91571



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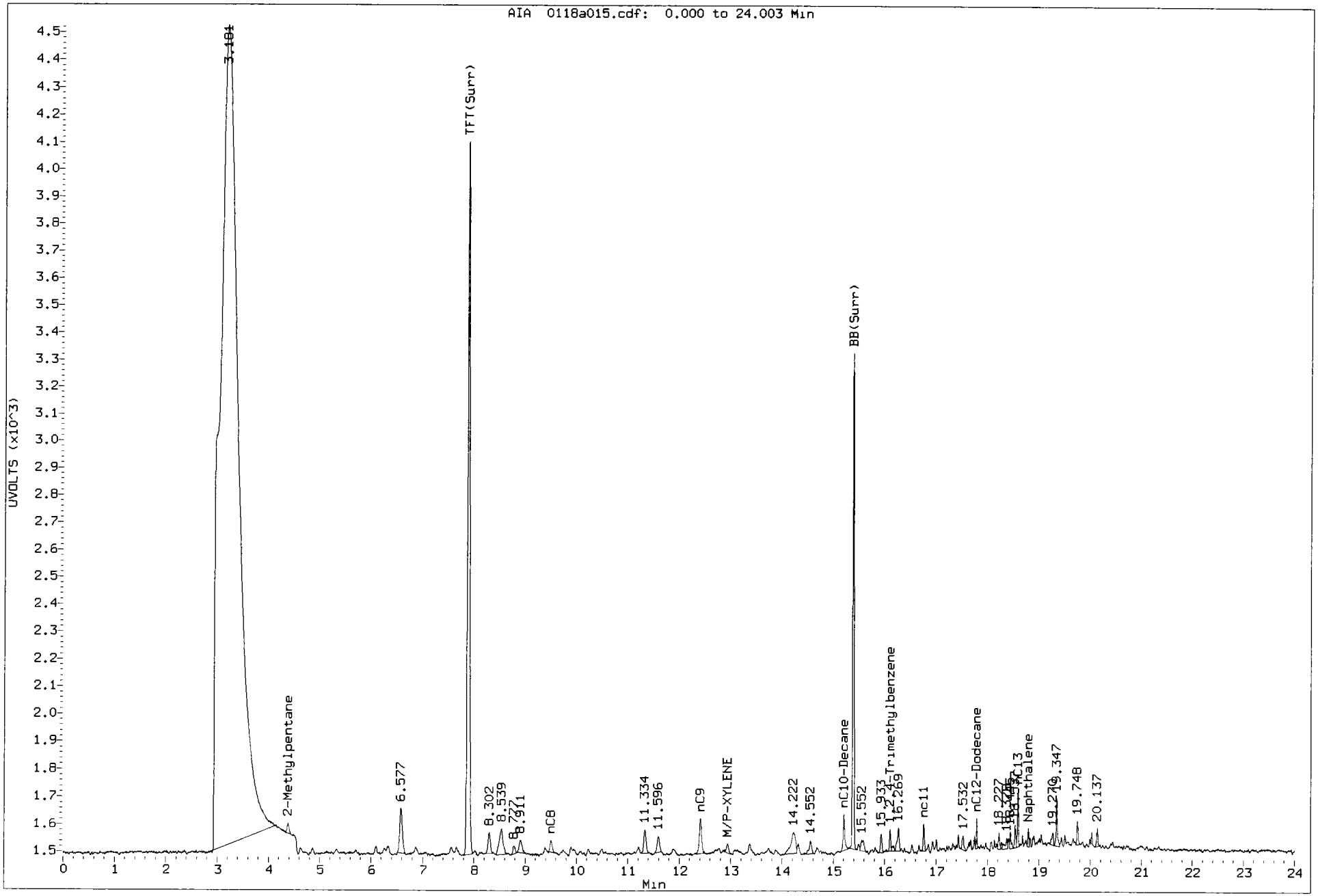
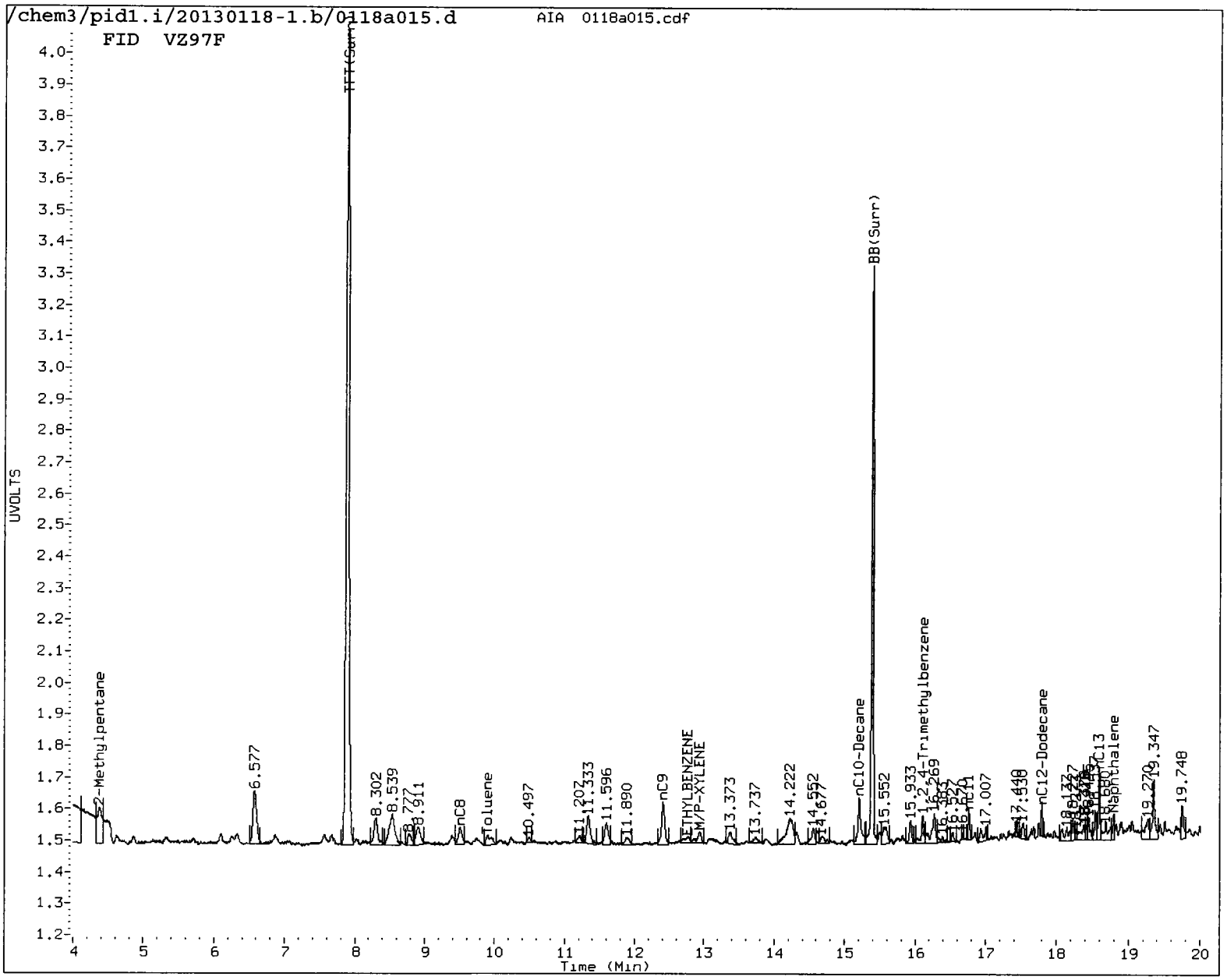
Injection Date: 18-JAN-2013 15:28
Instrument: pid1.i
Client Sample ID: CSIA20130109-006B



U797 : 61575



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: RC Date: 1/22/13

1/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130118-1.b/0118a016.d
Data file 2: /chem3/pid1.i/20130118-2.b/0118a016.d
Method: /chem3/pid1.i/20130118-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: VZ97G
Client ID: CSIA20130109-007B
Injection Date: 18-JAN-2013 15:59
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.886	0.006	2611	37269	82.9	TFT(Surr)
15.385	0.006	1877	16442	92.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.79 to 17.89)	358114	11830	0.033 M
8015C 2MP-TMB	(4.28 to 16.20)	723723	1403	0.002
AK101 nC6-nC10	(4.76 to 15.10)	582885	854	0.001
NWTPHG Tol-Nap	(9.79 to 18.89)	375093	35922	0.096 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.894	0.001	3108	82.0	TFT(Surr)
15.393	0.000	7641	95.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130118-1.b/0118a016.d

Date : 18-JAN-2013 15:59

Client ID: CSIA20130109-007B

Sample Info: VZ97G

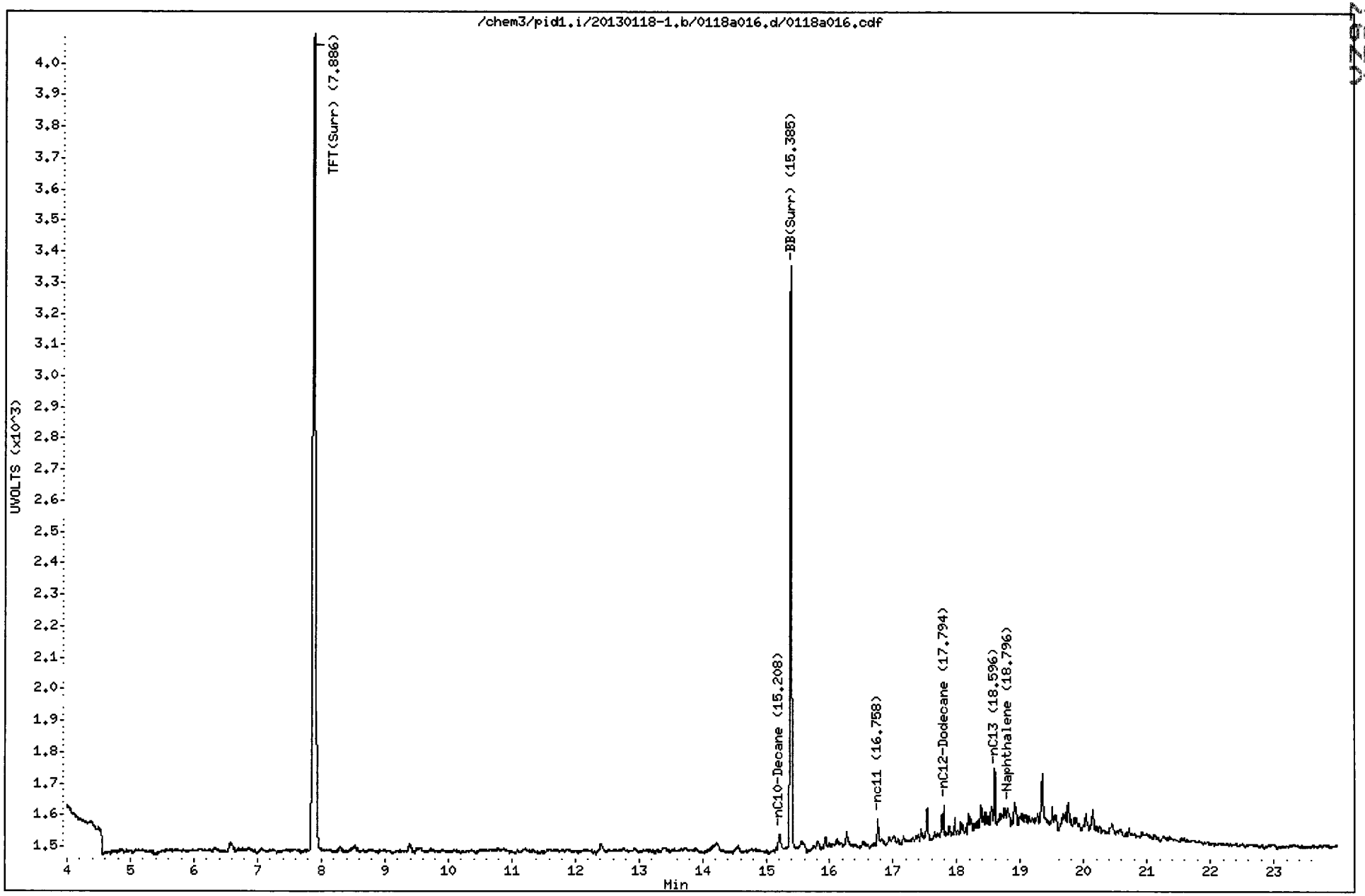
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

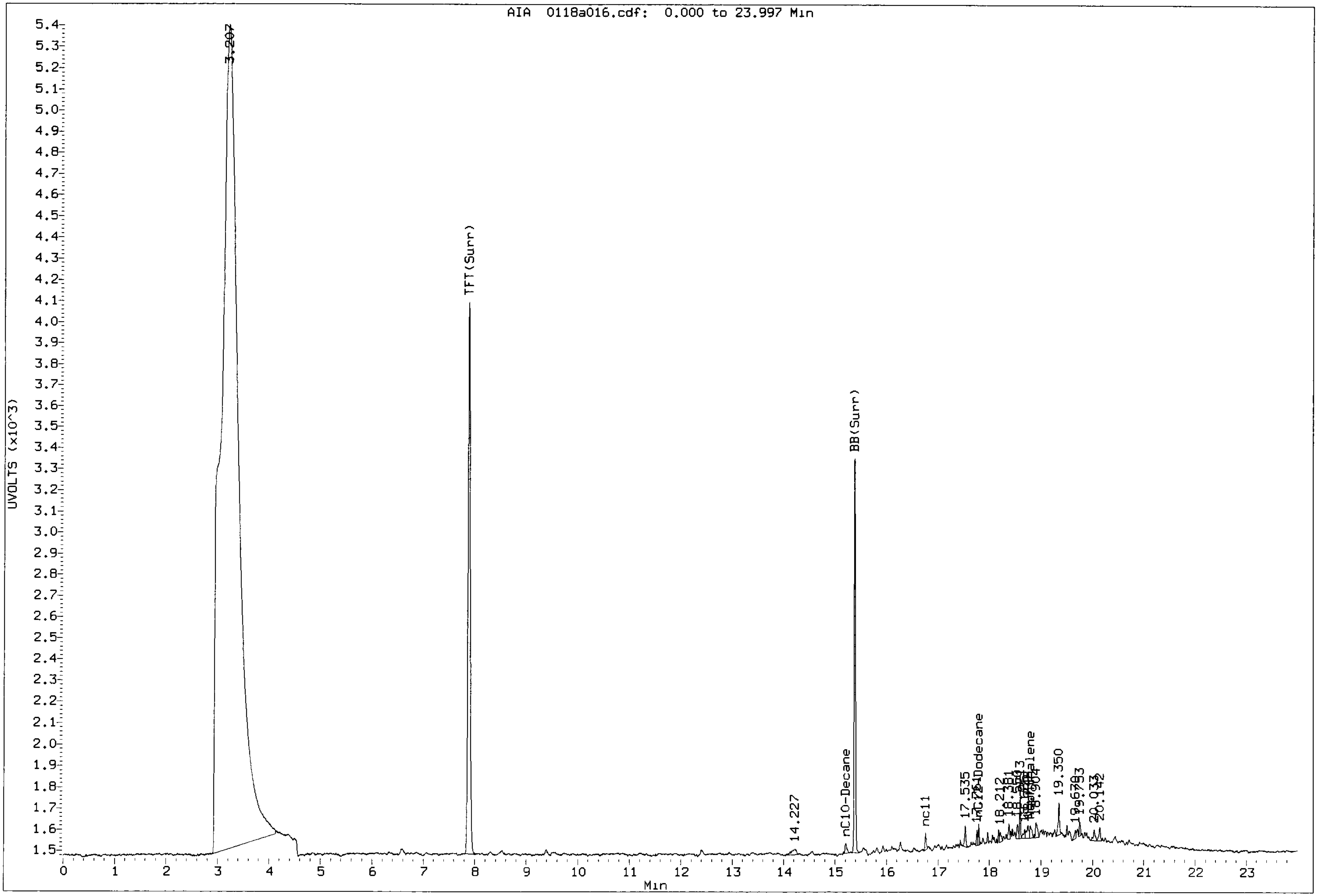
Column diameter: 0.18

VZ97-S1579



PC 1/22/13

Data File: /chem3/pid1.i/20130118-1.b/0118a016.d/0118a016.cdf
Injection Date: 18-JAN-2013 15:59
Instrument: pid1.i
Client Sample ID: CSIA20130109-007B



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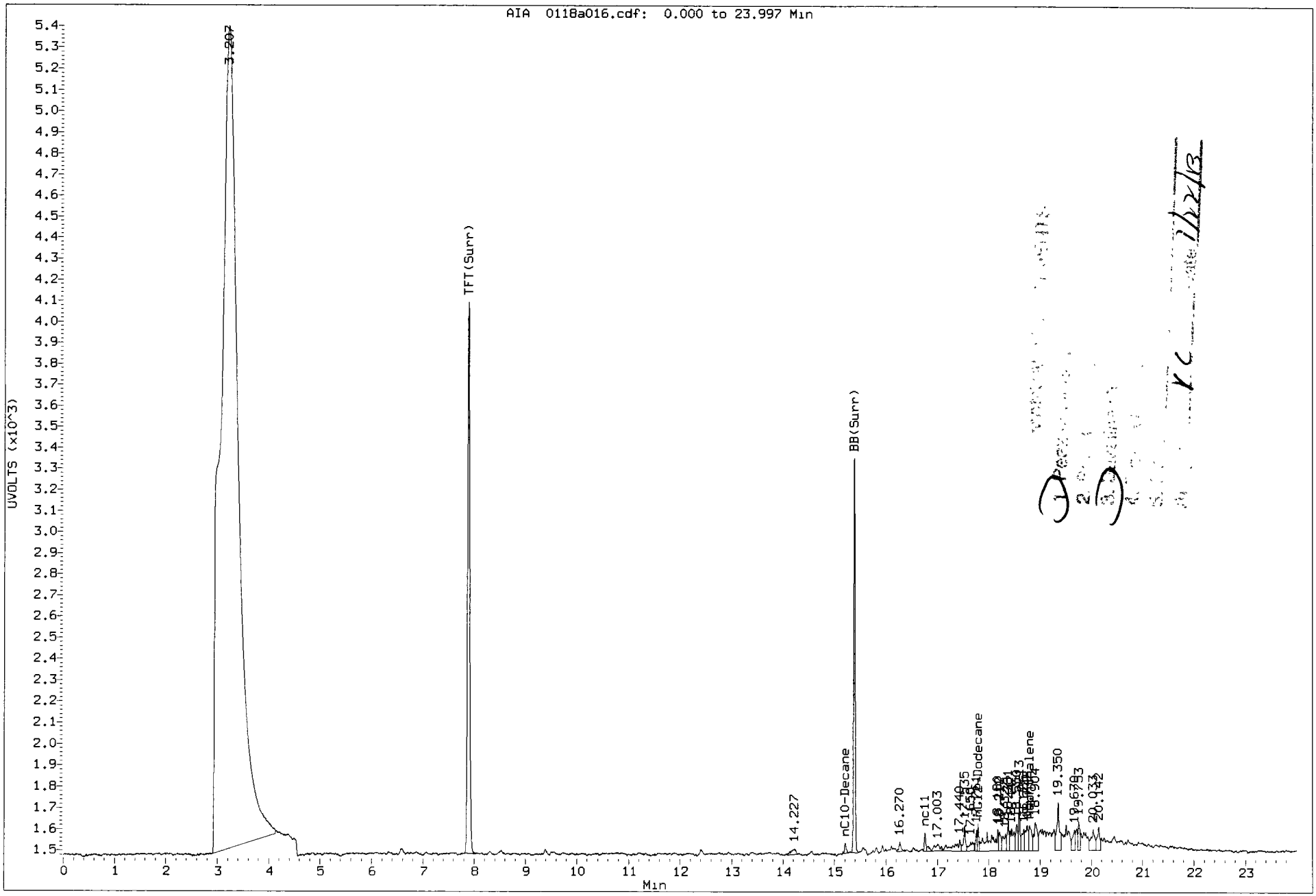
Injection Date: 18-JAN-2013 15:59
Instrument: pid1.i
Client Sample ID: CSIA20130109-007B



U797 01999

VC
1/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130118-1.b/0118a017.d
Data file 2: /chem3/pid1.i/20130118-2.b/0118a017.d
Method: /chem3/pid1.i/20130118-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: VZ97H
Client ID: CSIA20130109-008S+3
Injection Date: 18-JAN-2013 16:30
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.885	0.004	2719	38462	86.3	TFT(Surr)
15.384	0.005	1943	16757	95.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.79 to 17.89)	358114	987	0.003
8015C 2MP-TMB	(4.28 to 16.20)	723723	1	0.000
AK101 nC6-nC10	(4.76 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap	(9.79 to 18.89)	375093	1915	0.005

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.893	0.000	3245	85.7	TFT(Surr)
15.392	0.000	7789	96.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130118-1.b/0118a017.d

Date : 18-JAN-2013 16:30

Client ID: CSIA20130109-008S+3

Sample Info: VZ97H

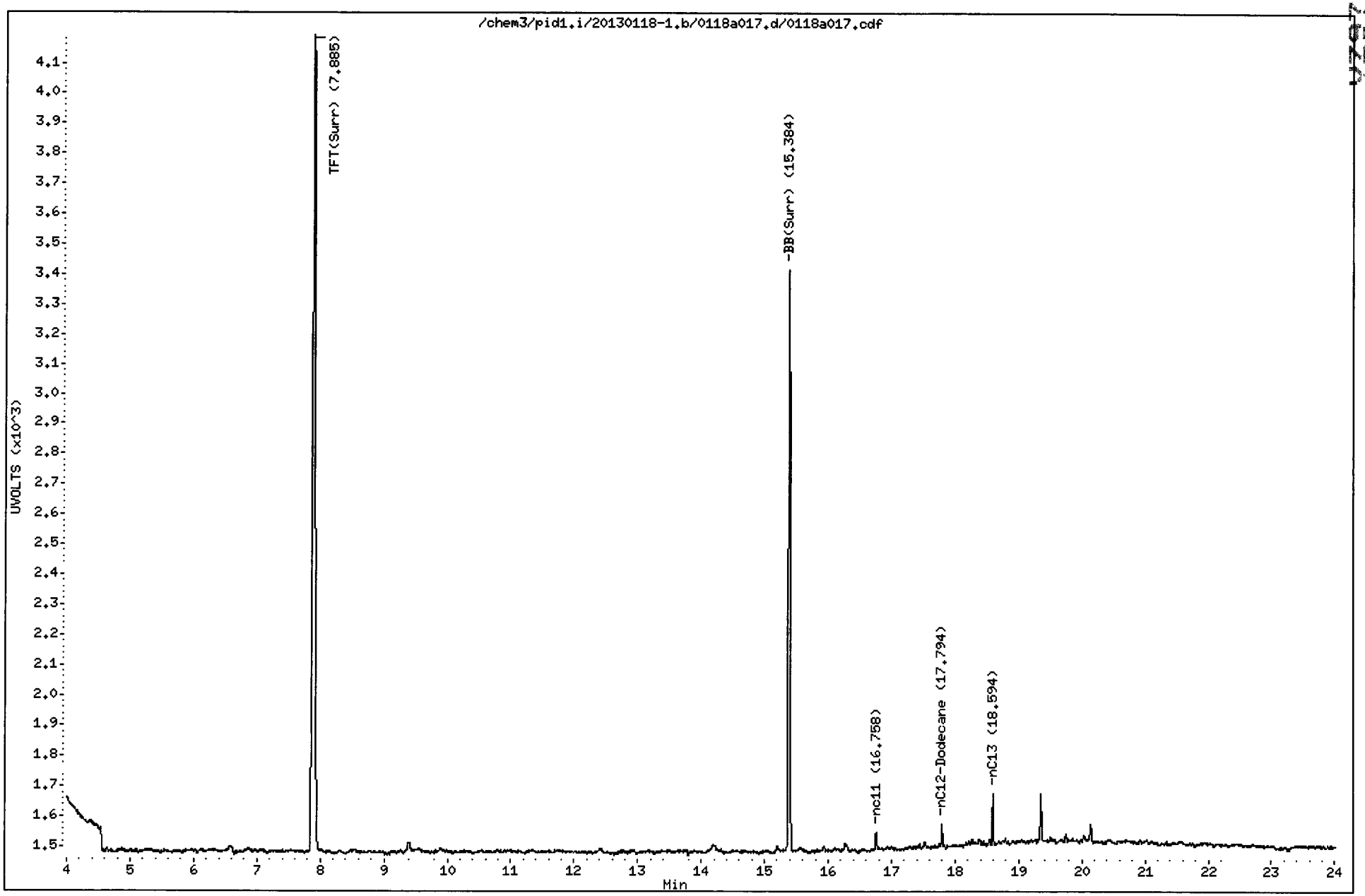
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18

VZ97H 01592



RC 1/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130118-1.b/0118a018.d
Data file 2: /chem3/pid1.i/20130118-2.b/0118a018.d
Method: /chem3/pid1.i/20130118-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: VZ97I
Client ID: CSIA20130109-009S+6
Injection Date: 18-JAN-2013 17:07
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.889	0.009	2610	37050	82.9	TFT(Surr)
15.387	0.007	1925	16573	94.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.79 to 17.89)	358114	1668	0.005
8015C 2MP-TMB	(4.28 to 16.20)	723723	1	0.000
AK101 nC6-nC10	(4.76 to 15.10)	582885	1	0.000
NWTPHG Tol-Nap	(9.79 to 18.89)	375093	2698	0.007

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.897	0.003	3118	82.3	TFT(Surr)
15.394	0.002	7730	96.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

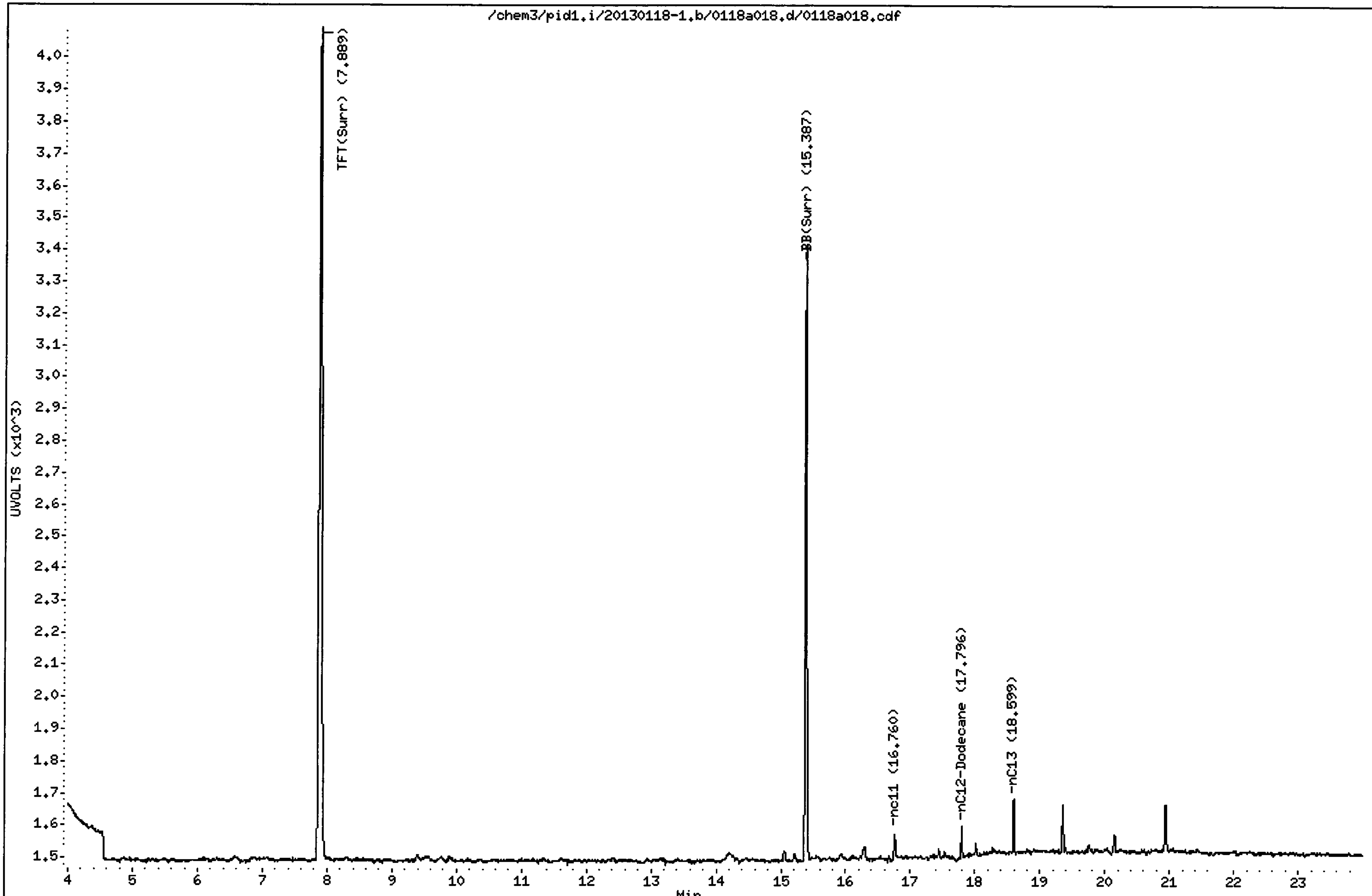
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130118-1.b/0118a018.d
Date : 18-JAN-2013 17:07
Client ID: CSIA20130109-009S+6
Sample Info: VZ97I

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH
Column diameter: 0.18



VZ97 : 0160U

VC
11/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130118-1.b/0118a019.d
Data file 2: /chem3/pid1.i/20130118-2.b/0118a019.d
Method: /chem3/pid1.i/20130118-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: VZ97J
Client ID: CSIA20130109-010S+9
Injection Date: 18-JAN-2013 17:39
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.886	0.006	2643	37704	83.9	TFT(Surr)
15.385	0.005	1958	16943	96.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.79 to 17.89)	358114	57558	0.161 M
8015C 2MP-TMB	(4.28 to 16.20)	723723	1113	0.002
AK101 nC6-nC10	(4.76 to 15.10)	582885	675	0.001
NWTPHG Tol-Nap	(9.79 to 18.89)	375093	254180	0.678 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.894	0.000	3161	83.4	TFT(Surr)
15.393	0.000	7845	97.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130118-1.b/0118a019.d

Date : 18-JAN-2013 17:39

Client ID: CSIA20130109-010S+9

Sample Info: VZ97J

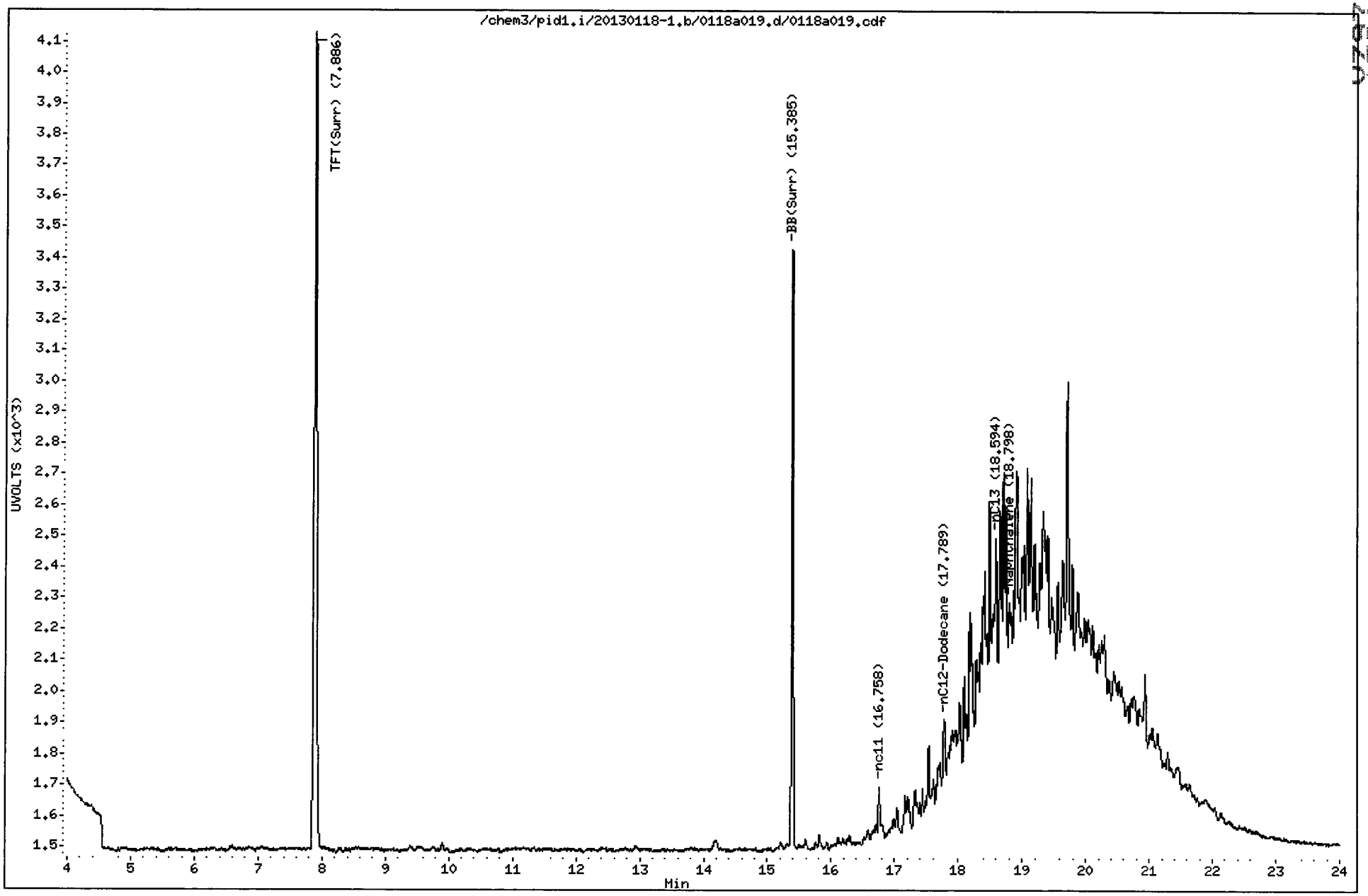
Instrument: pid1.i

Operator: LH

Column phase: RTX 502-2 FID

Column diameter: 0.18

VZ97J 01696



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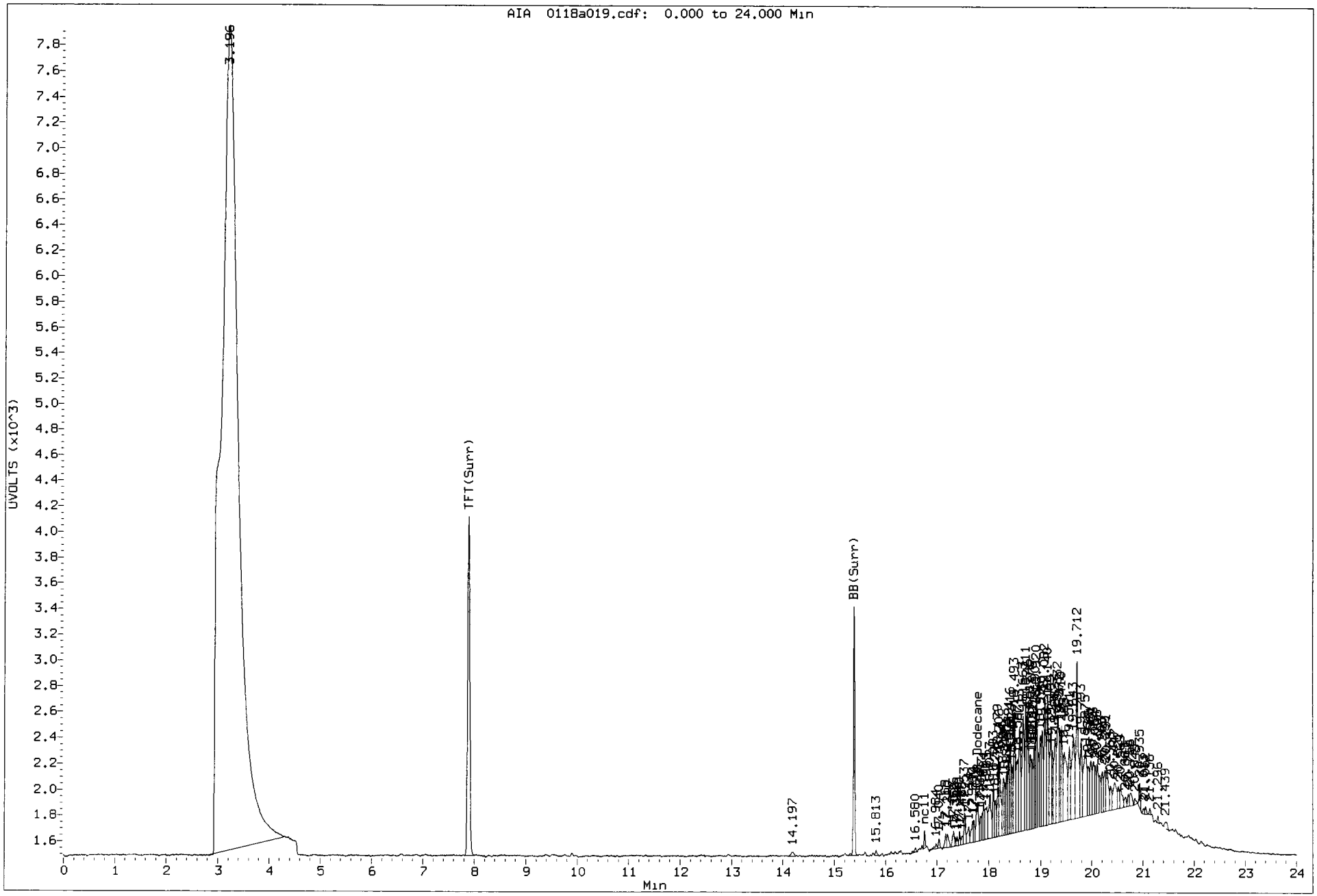
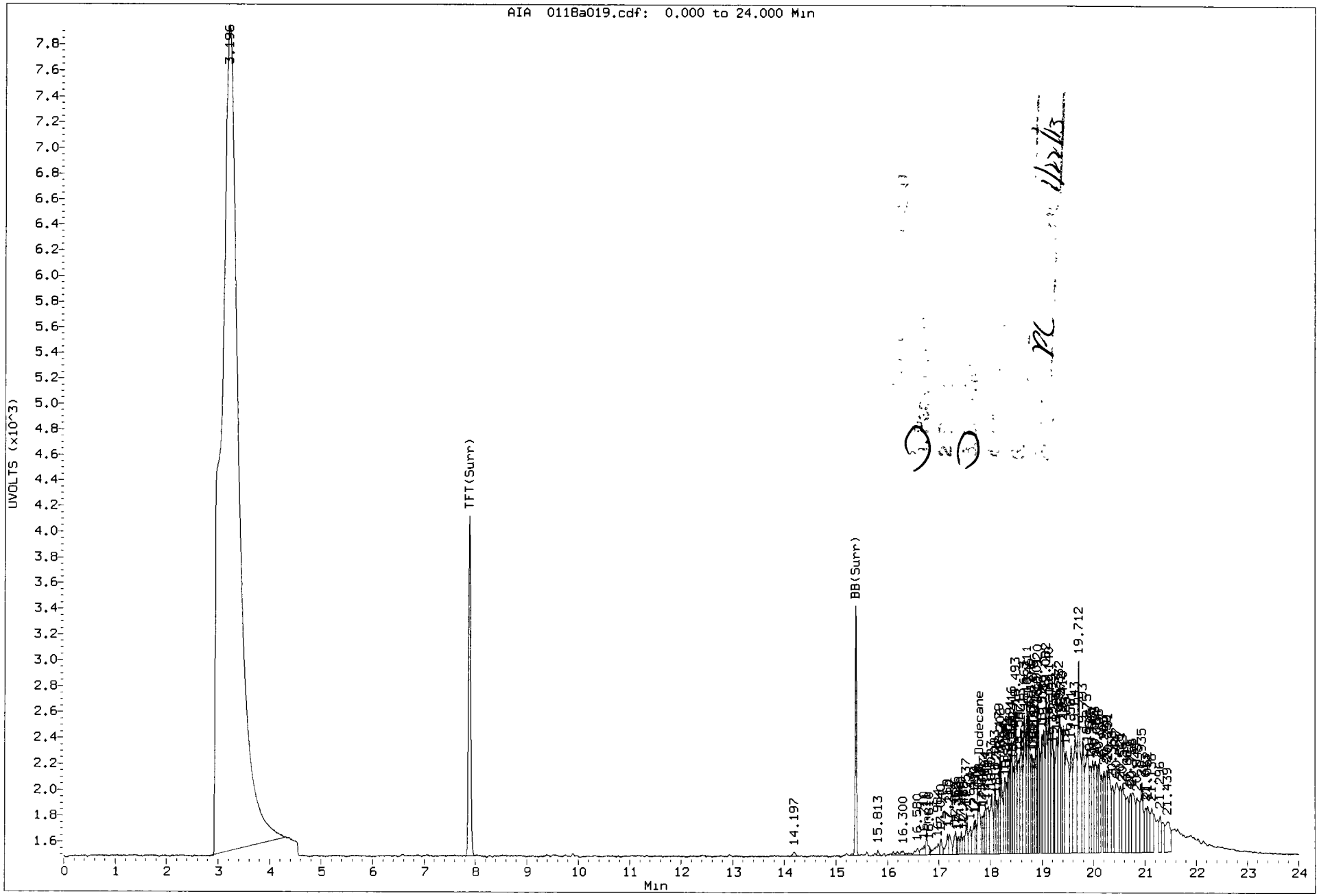
Injection Date: 18-JAN-2013 17:39
Instrument: pid1.1
Client Sample ID: CSIA20130109-010S+9



VZ97:21587

Data File: /chem3/pid1.i/20130118-1.b/0118a019.d/0118a019.cdf
Injection Date: 18-JAN-2013 17:39
Instrument: pid1.i
Client Sample ID: CSIA20130109-010S+9



VZ97-016599

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130118-1.b/0118a023.d
Data file 2: /chem3/pid1.i/20130118-2.b/0118a023.d
Method: /chem3/pid1.i/20130118-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: VZ97N
Client ID: CSIA20130110-014S+6
Injection Date: 18-JAN-2013 19:43
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.887	0.007	2608	36724	82.8	TFT(Surr)
15.385	0.006	1879	16819	92.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.79 to 17.89)	358114	33115	0.092 M
8015C 2MP-TMB	(4.28 to 16.20)	723723	6692	0.009 M
AK101 nC6-nC10	(4.76 to 15.10)	582885	1346	0.002
NWTPHG Tol-Nap	(9.79 to 18.89)	375093	82148	0.219 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.895	0.002	3081	81.3	TFT(Surr)
15.393	0.000	7576	94.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130118-1.b/0118a023.d

Date : 18-JAN-2013 19:43

Client ID: CSIA20130110-014S+6

Sample Info: VZ97N

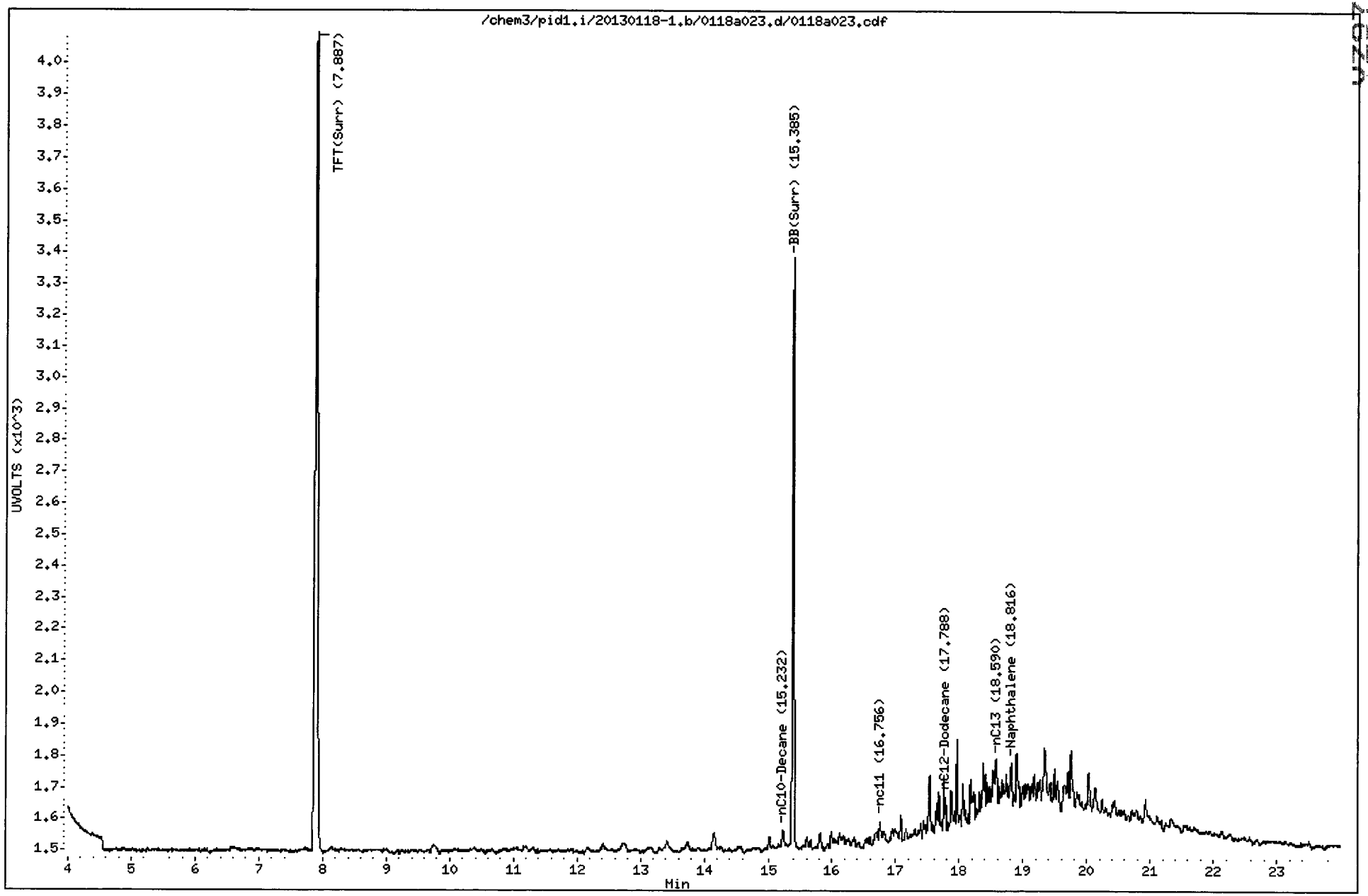
Instrument: pid1.i

Operator: LH

Column phase: RTX 502-2 FID

Column diameter: 0.18

VZ97.01599



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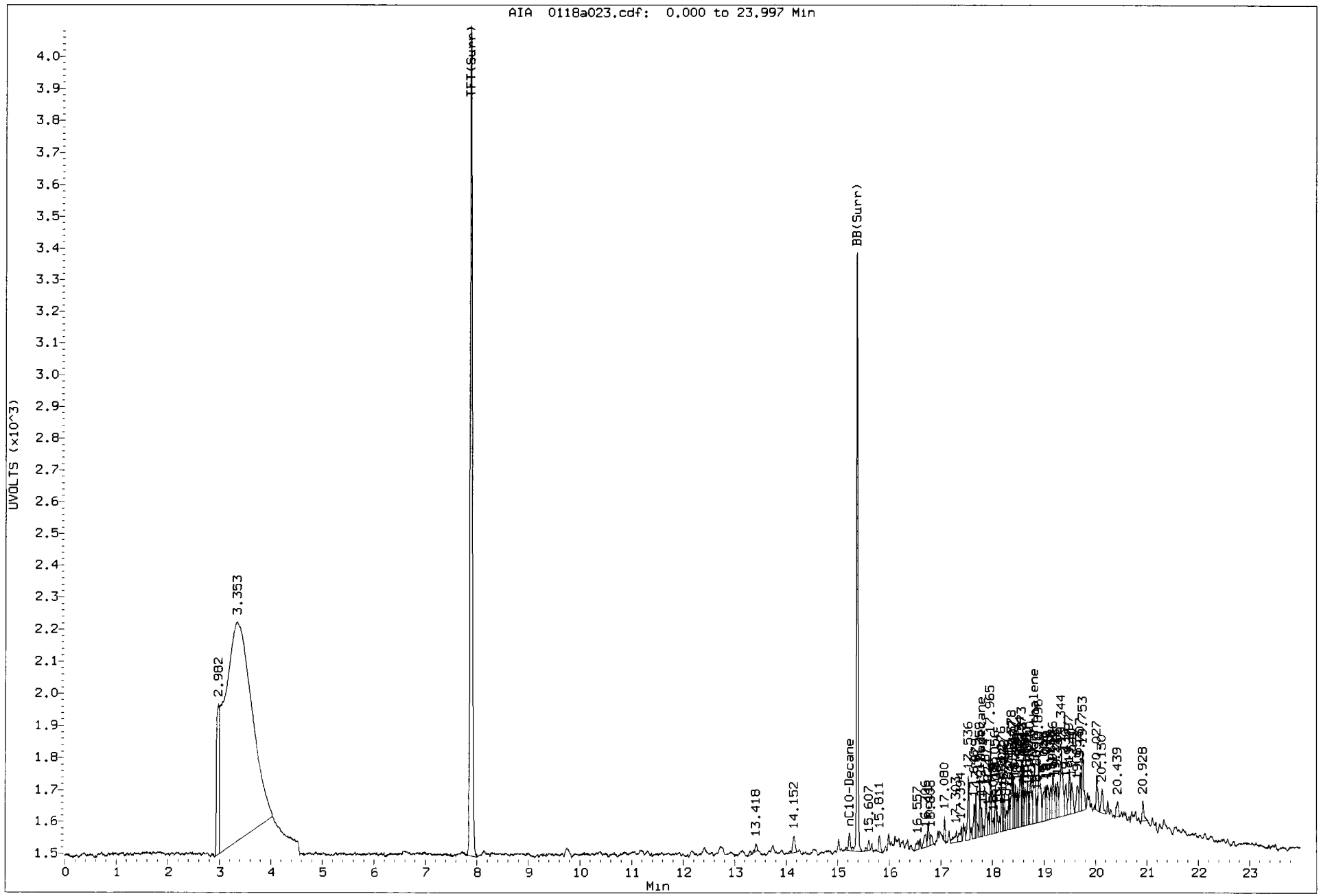
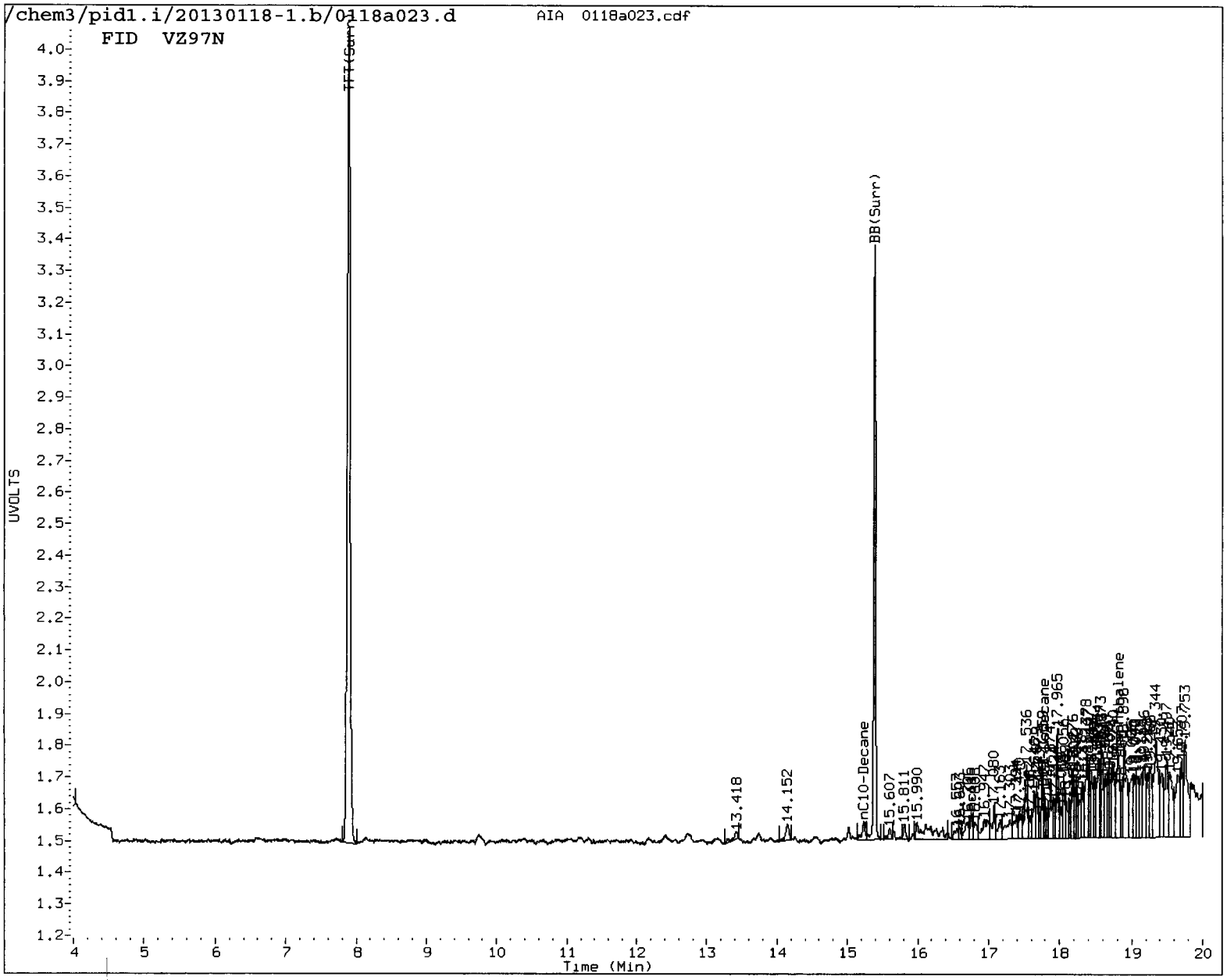
Injection Date: 18-JAN-2013 19:43
Instrument: pid1.i
Client Sample ID: CSIA20130110-014S+6



UZ937:01591



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YC Date: 1/22/13

PC
1/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130118-1.b/0118a025.d
Data file 2: /chem3/pid1.i/20130118-2.b/0118a025.d
Method: /chem3/pid1.i/20130118-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: GCAL 3
Client ID:
Injection Date: 18-JAN-2013 20:45
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.885	0.005	3098	54064	98.4	TFT(Surr)
15.386	0.006	2039	19599	100.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.79 to 17.89)	358114	824374	2.302 M
8015C 2MP-TMB	(4.28 to 16.20)	723723	1595084	2.204 M
AK101 nC6-nC10	(4.76 to 15.10)	582885	1285246	2.205 M
NWTPHG Tol-Nap	(9.79 to 18.89)	375093	867882	2.314 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.894	0.001	3570	94.2	TFT(Surr)
15.393	0.001	8401	104.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.074	0.002	2011	8.11	Benzene
9.907	0.002	19177	85.23	Toluene
12.786	0.002	4924	24.97	Ethylbenzene
12.948	0.004	19563	90.99	M/P-Xylene
13.891	0.002	7170	42.72	O-Xylene
4.629	-0.019	430	5.97	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

U797:01593

Data File: /chem3/pid1.i/20130118-1.b/0118a025.d

Date : 18-JAN-2013 20:45

Client ID:

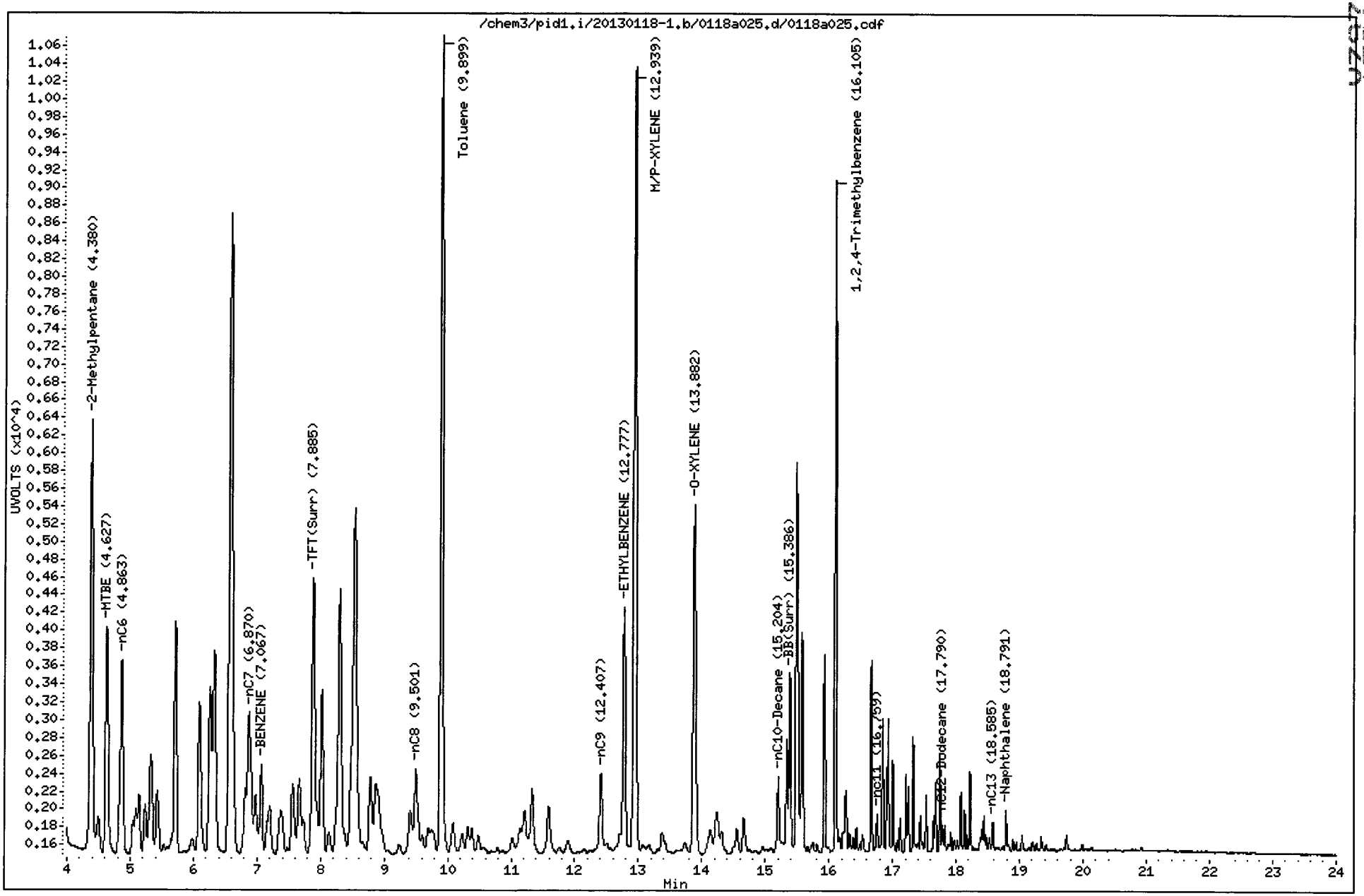
Sample Info: GCAL 3

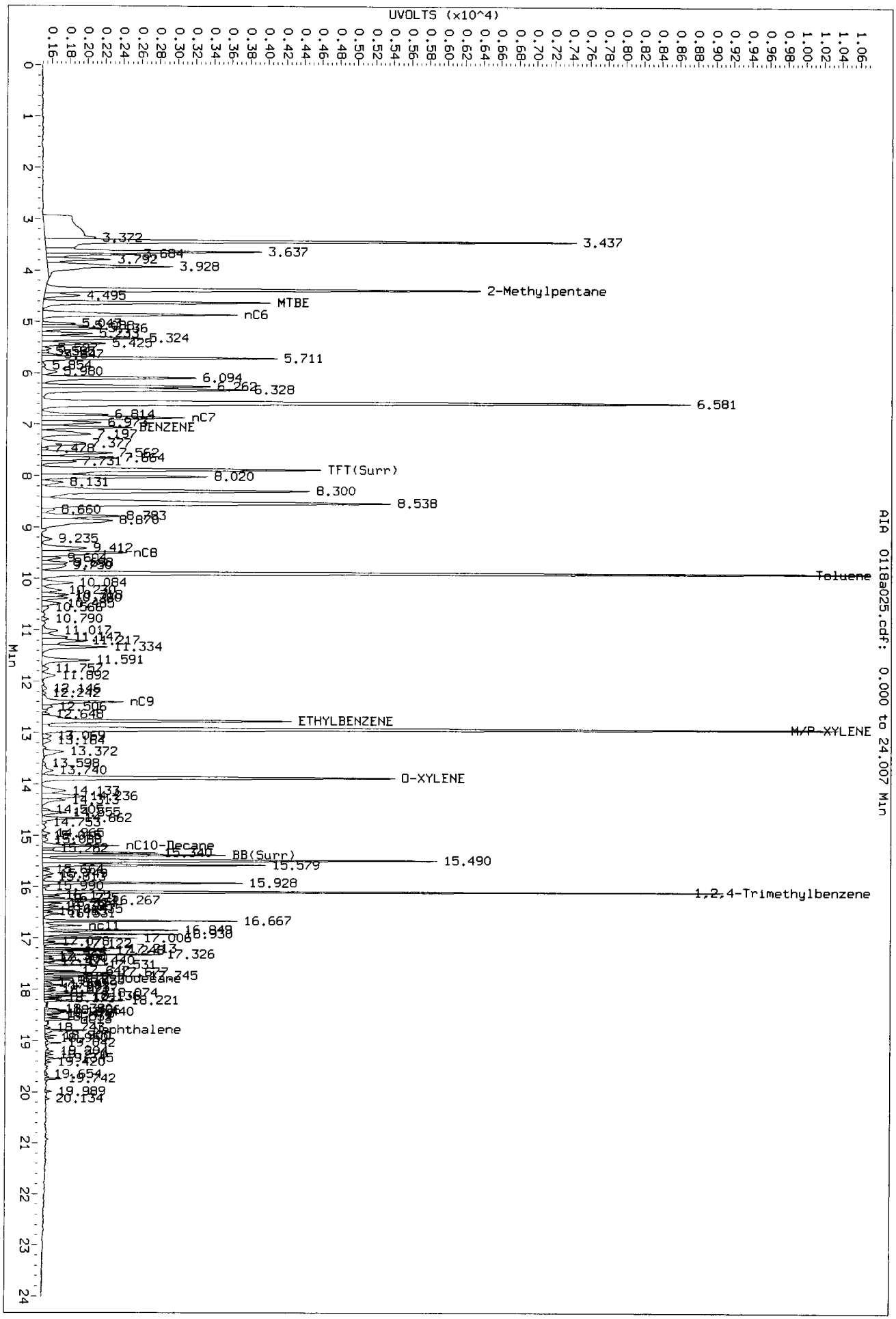
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18

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Min
Data File: /chem3/pid1.i/20130118-1.b/0118a025.d/0118a025.cdf
Injection Date: 18-JAN-2013 20:45
Instrument: pid1.i
Client Sample ID:
AIA 0118a025.cdf: 0.000 to 24.007 Min
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3.437
3.637
3.792
3.928
2-Methylpentane
4.495
MTBE
nC6
5.324
5.425
5.711
6.094
6.328
6.581
nC7
BENZENE
7.478
7.731
TFT(Surr)
8.020
8.131
8.300
8.538
8.660
8.870
9.235
nC8
Toluene
10.084
10.790
11.017
11.334
11.591
11.757
11.892
nC9
12.506
12.648
ETHYLBENZENE
M/P-XYLENE
13.372
13.598
13.740
O-XYLENE
nC10-Decane
15.340
BB(Surr)
15.490
15.579
15.928
1,2,4-Trimethylbenzene
16.267
16.667
nC11
16.848
16.938
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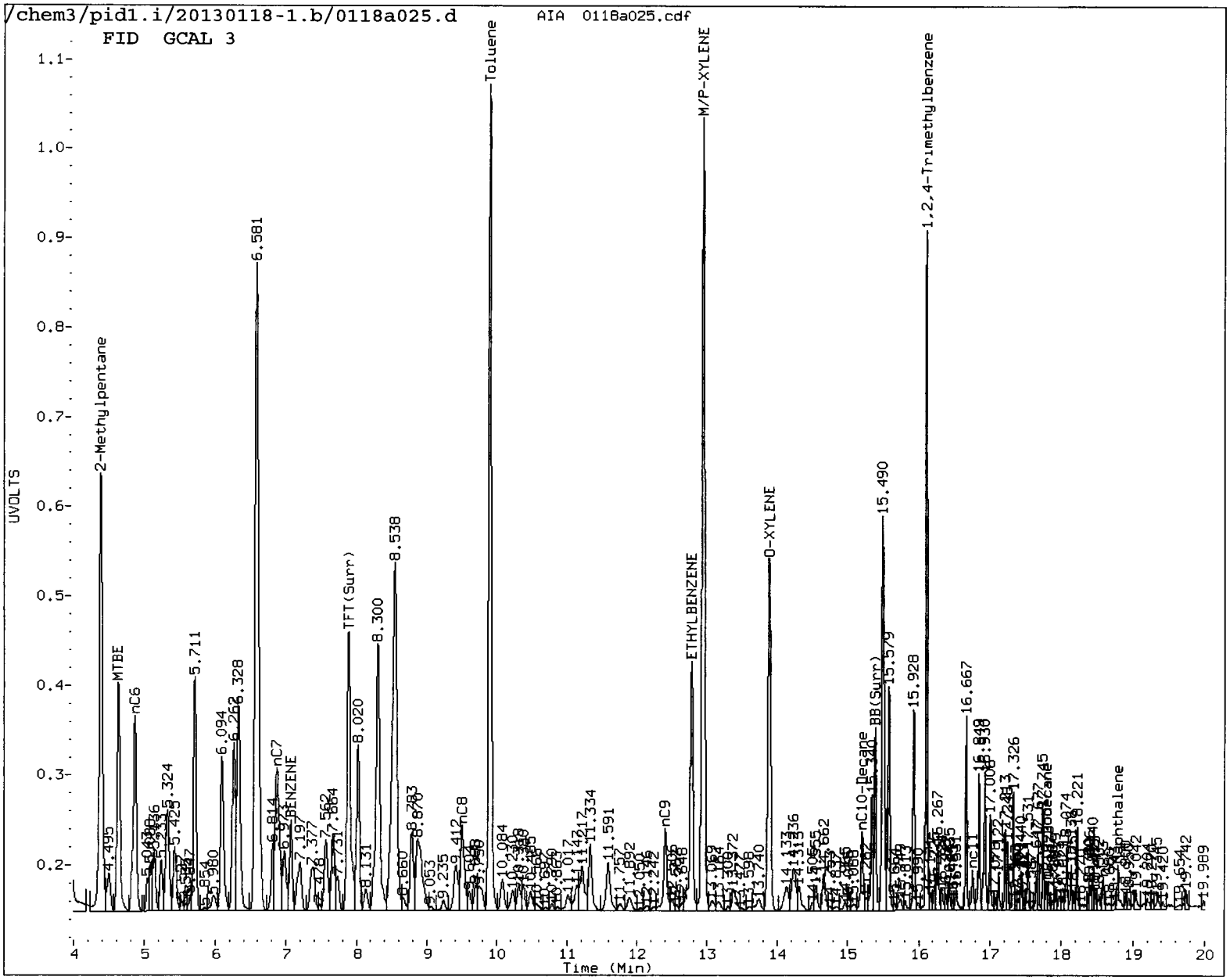
17.326
18.221
Naphthalene
19.420
19.654
19.742
19.989
20.134

1/22/13



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: VC Date: 1/22/13

VZ97 · 01108

RC
1/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130118-1.b/0118a028.d
Data file 2: /chem3/pid1.i/20130118-2.b/0118a028.d
Method: /chem3/pid1.i/20130118-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: VZ97R
Client ID: CSIA20130111-018S+9
Injection Date: 18-JAN-2013 22:18
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.886	0.006	2592	36674	82.3	TFT(Surr)
15.384	0.005	2141	29828	105.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.79 to 17.89)	358114	653687	1.825 M
8015C 2MP-TMB	(4.28 to 16.20)	723723	189171	0.261 M
AK101 nC6-nC10	(4.76 to 15.10)	582885	86887	0.149 M
NWTPHG Tol-Nap	(9.79 to 18.89)	375093	1180220	3.146 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.894	0.001	3083	81.4	TFT(Surr)
15.392	0.000	7907	98.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
12.757	-0.027	190	0.96	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130118-1.b/0118a028.d

Date : 18-JAN-2013 22:18

Client ID: CSIA20130111-018S+9

Sample Info: VZ97R

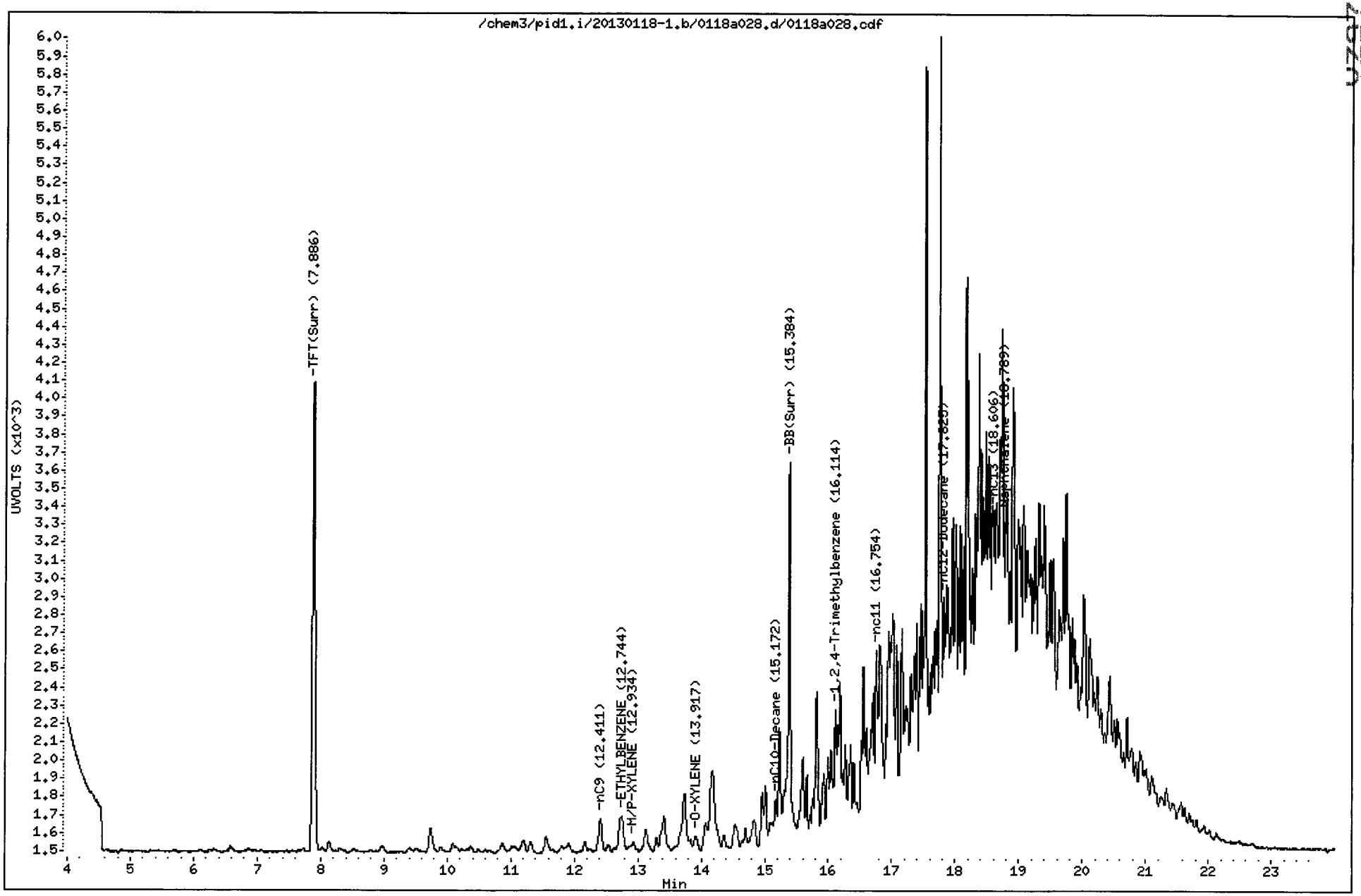
Column phase: RTX 502-2 FID

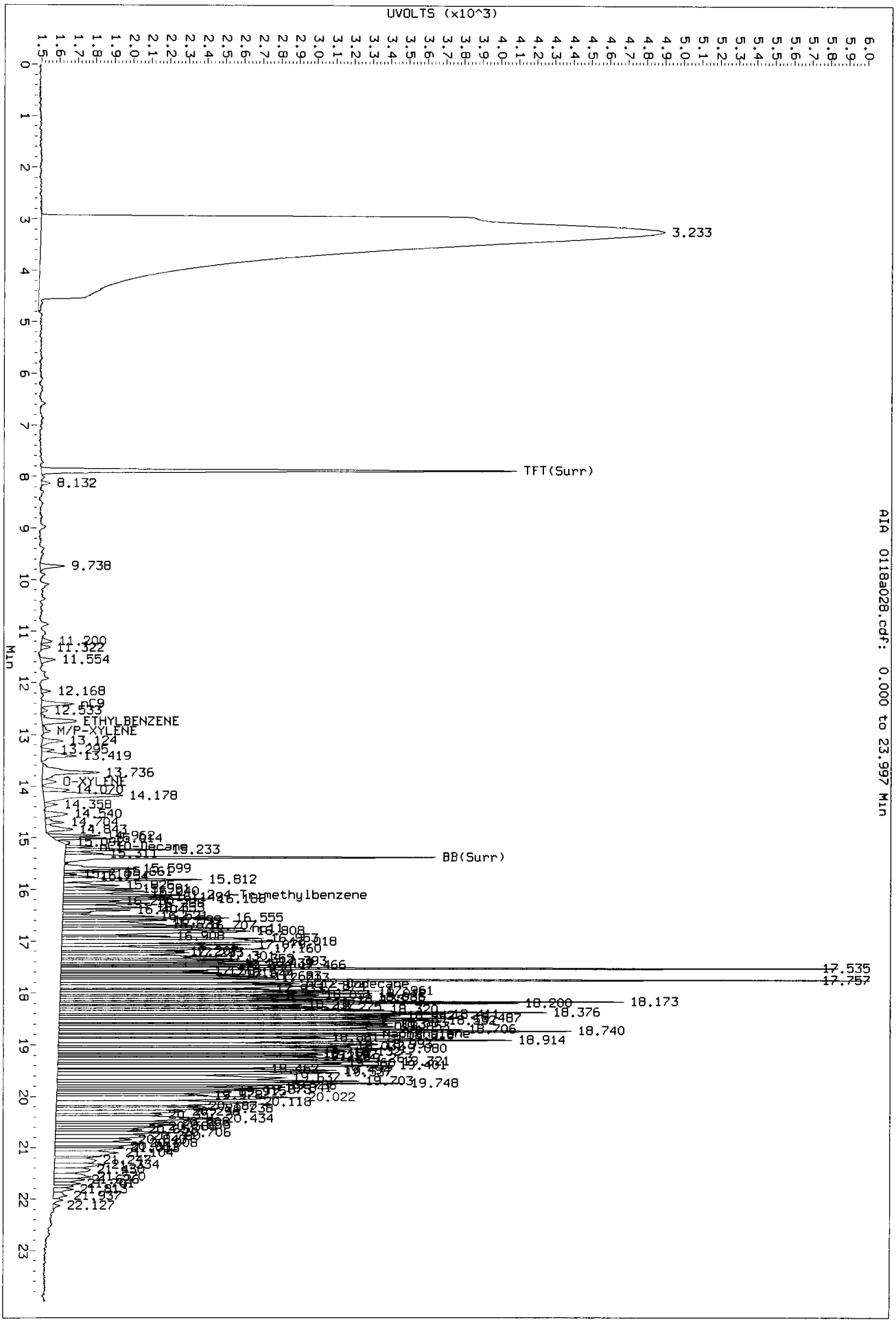
Instrument: pid1.i

Operator: LH

Column diameter: 0.18

VZ97.61598





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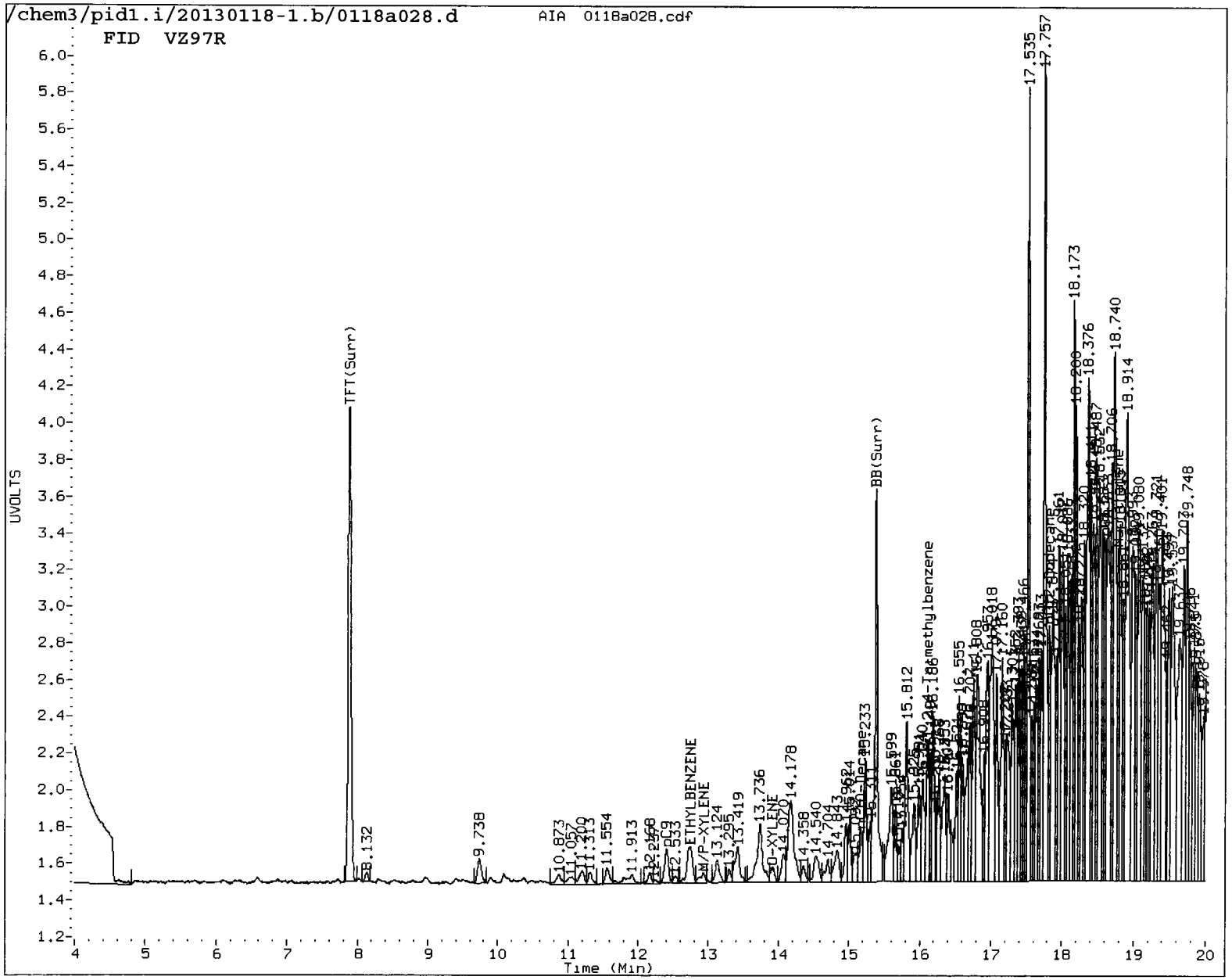
Injection Date: 18-JAN-2013 22:18
Instrument: pid1.i
Client Sample ID: CSIA20130111-018S+9

1/22/13

V797 : 91693



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: PC Date: 1/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130118-1.b/0118a029.d
Data file 2: /chem3/pid1.i/20130118-2.b/0118a029.d
Method: /chem3/pid1.i/20130118-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: VZ97AMS
Client ID:
Injection Date: 18-JAN-2013 22:49
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.886	0.006	2713	42363	86.1	TFT(Surr)
15.386	0.006	1923	17499	94.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.79 to 17.89)	358114	351405	0.981 M
8015C 2MP-TMB	(4.28 to 16.20)	723723	625422	0.864 M
AK101 nC6-nC10	(4.76 to 15.10)	582885	486302	0.834 M
NWTPHG Tol-Nap	(9.79 to 18.89)	375093	429550	1.145 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.894	0.001	3178	83.9	TFT(Surr)
15.393	0.000	7804	97.0	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.074	0.002	799	3.22	Benzene
9.907	0.002	7530	33.47	Toluene
12.785	0.001	1935	9.81	Ethylbenzene
12.946	0.003	7709	35.85	M/P-Xylene
13.890	0.001	2846	16.96	O-Xylene
4.629	-0.019	160	2.22	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130118-1.b/0118a029.d

Date : 18-JAN-2013 22:49

Client ID:

Sample Info: VZ97AMS

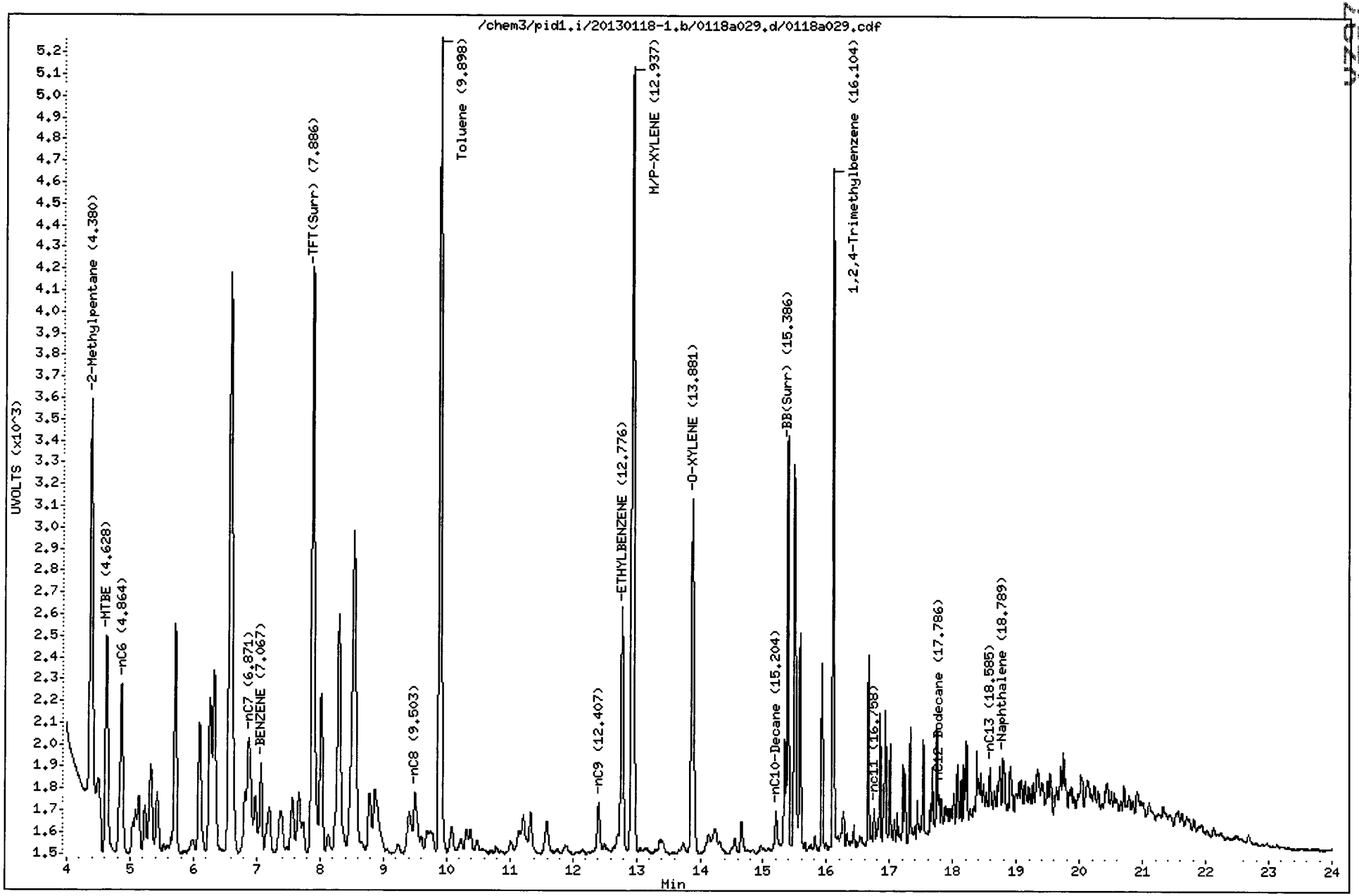
Column phase: RTX 502-2 FID

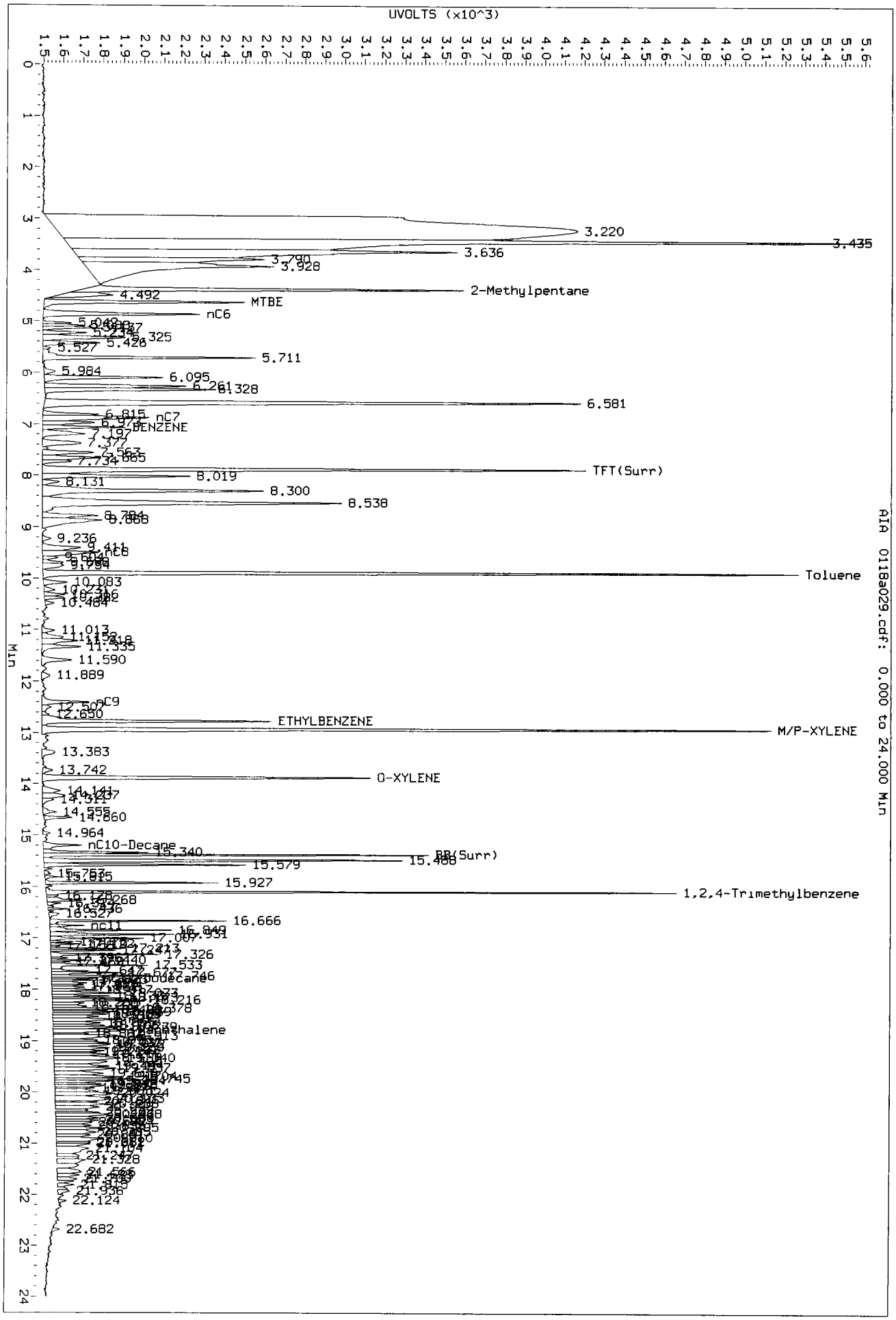
Instrument: pid1.i

Operator: LH

Column diameter: 0.18

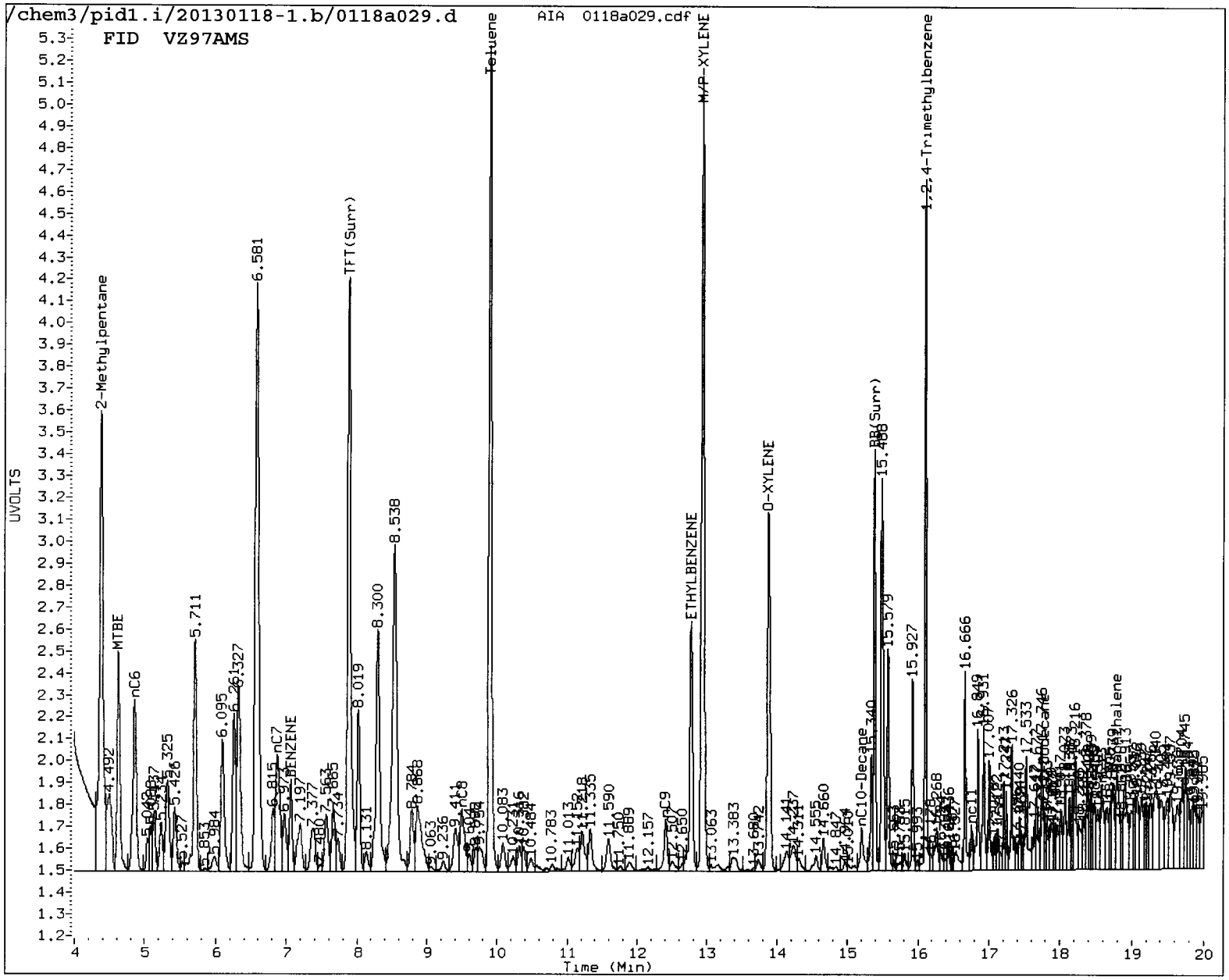
VZ97 01 7012





Data File: /chem3/pid1.i/20130118-1.b/0118a029.d/0118a029.cdf
Injection Date: 18-JAN-2013 22:49
Instrument: pid1.i
Client Sample ID:

AIA 0118a029.cdf: 0.000 to 24.000 Min



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: PC Date: 1/31/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130118-1.b/0118a030.d
Data file 2: /chem3/pid1.i/20130118-2.b/0118a030.d
Method: /chem3/pid1.i/20130118-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: VZ97AMSD
Client ID:
Injection Date: 18-JAN-2013 23:20
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.887	0.007	2551	40061	81.0	TFT(Surr)
15.386	0.006	1869	16913	92.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.79 to 17.89)	358114	321933	0.899 M
8015C 2MP-TMB	(4.28 to 16.20)	723723	594160	0.821 M
AK101 nC6-nC10	(4.76 to 15.10)	582885	464575	0.797 M
NWTPHG Tol-Nap	(9.79 to 18.89)	375093	364185	0.971 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.895	0.002	2980	78.7	TFT(Surr)
15.393	0.001	7623	94.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	0.003	823	3.32	Benzene
9.907	0.002	7681	34.14	Toluene
12.785	0.001	1954	9.91	Ethylbenzene
12.947	0.003	7689	35.76	M/P-Xylene
13.891	0.001	2868	17.09	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130118-1.b/0118a030.d

Date : 18-JAN-2013 23:20

Client ID:

Sample Info: VZ97AMSD

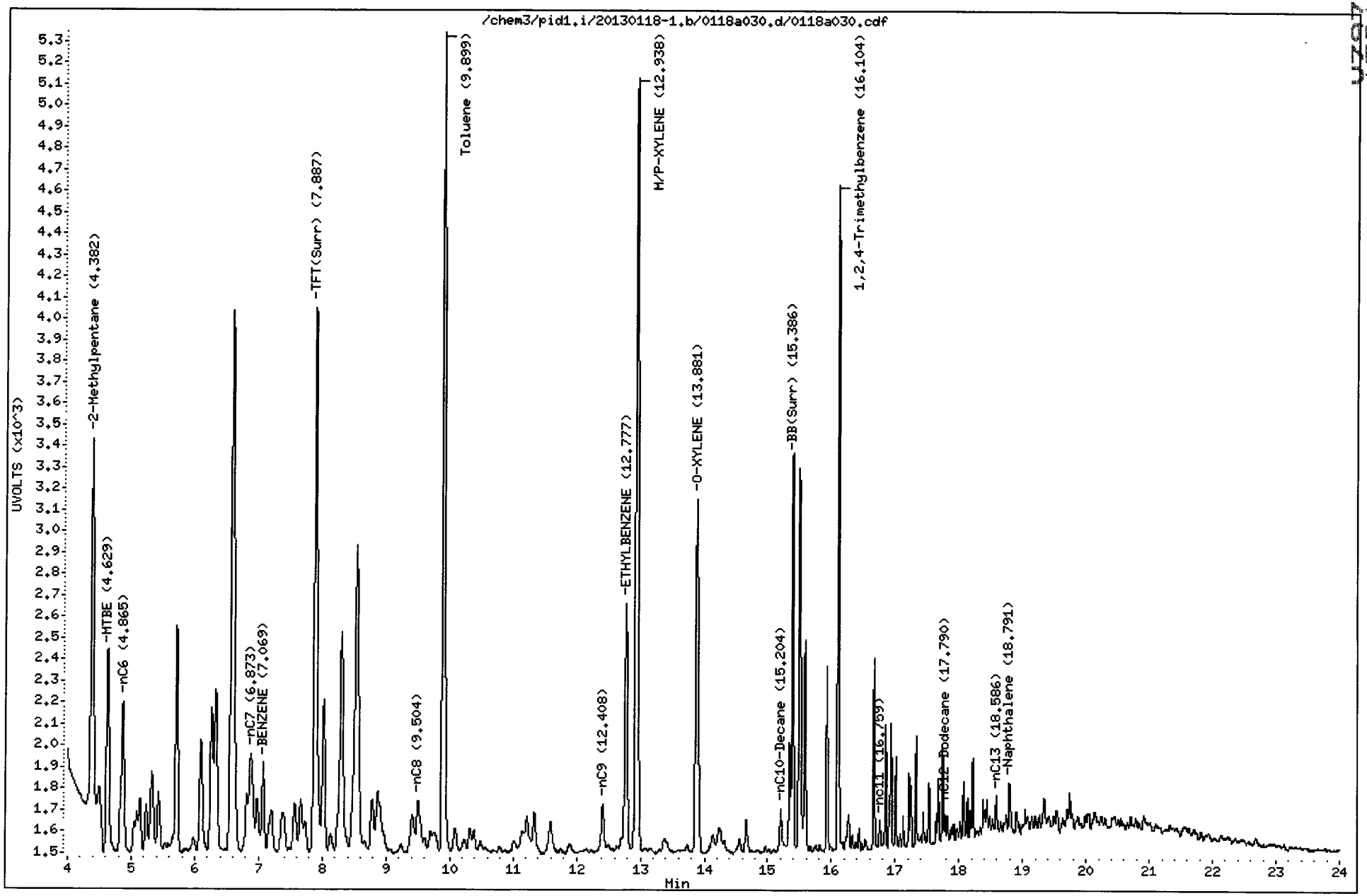
Column phase: RTX 502-2 FID

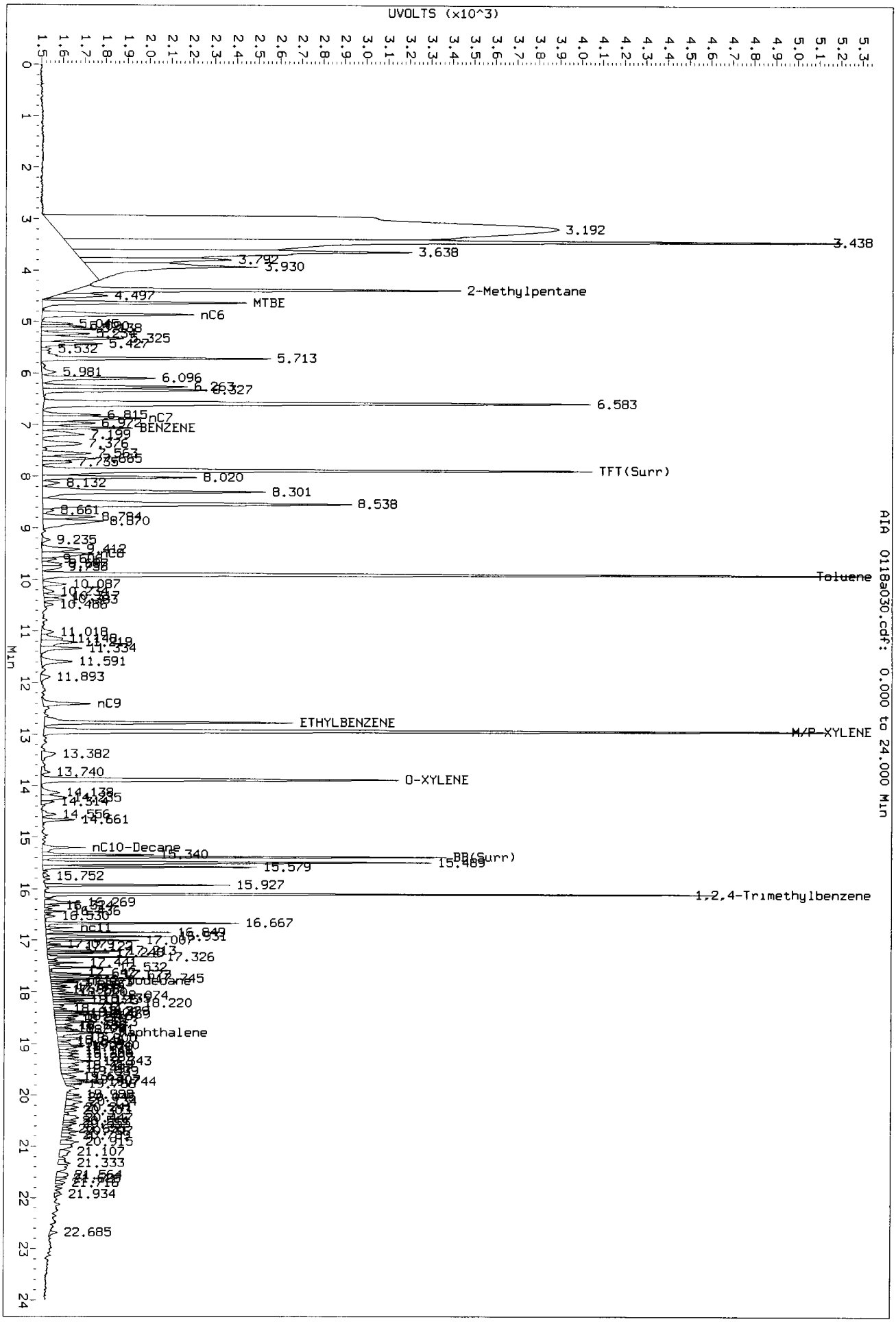
Instrument: pid1.i

Operator: LH

Column diameter: 0.18

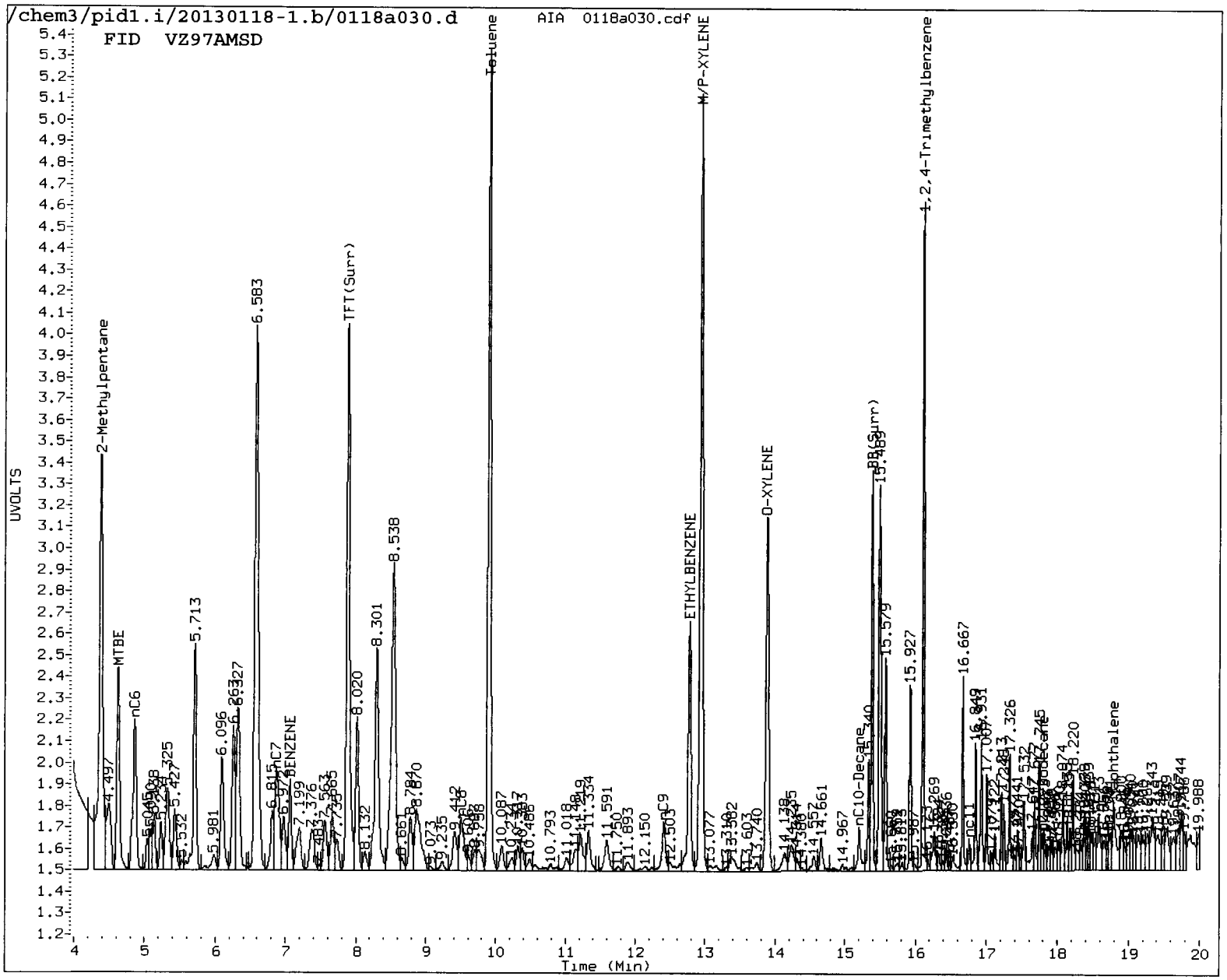
VZ97-011705





Data File: /chem3/pid1.i/20130118-1.b/0118a030.d/0118a030.cdf
Injection Date: 18-JAN-2013 23:20
Instrument: pid1.i
Client Sample ID:

1/22/13



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YC Date: 1/22/13

PG 1/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130118-1.b/0118a036.d
Data file 2: /chem3/pid1.i/20130118-2.b/0118a036.d
Method: /chem3/pid1.i/20130118-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: GCAL 4
Client ID:
Injection Date: 19-JAN-2013 02:27
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.885	0.005	3100	54292	98.4	TFT(Surr)
15.385	0.005	2061	19352	101.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.79 to 17.89)	358114	807500	2.255 M
8015C 2MP-TMB	(4.28 to 16.20)	723723	1561024	2.157 M
AK101 nC6-nC10	(4.76 to 15.10)	582885	1253271	2.150 M
NWTPHG Tol-Nap	(9.79 to 18.89)	375093	848452	2.262 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.894	0.001	3554	93.8	TFT(Surr)
15.393	0.000	8433	104.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.074	0.002	2035	8.21	Benzene
9.907	0.002	19165	85.18	Toluene
12.785	0.001	4891	24.81	Ethylbenzene
12.947	0.004	19680	91.53	M/P-Xylene
13.890	0.001	7229	43.07	O-Xylene
4.630	-0.018	421	5.85	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130118-1.b/0118a036.d

Date : 19-JAN-2013 02:27

Client ID:

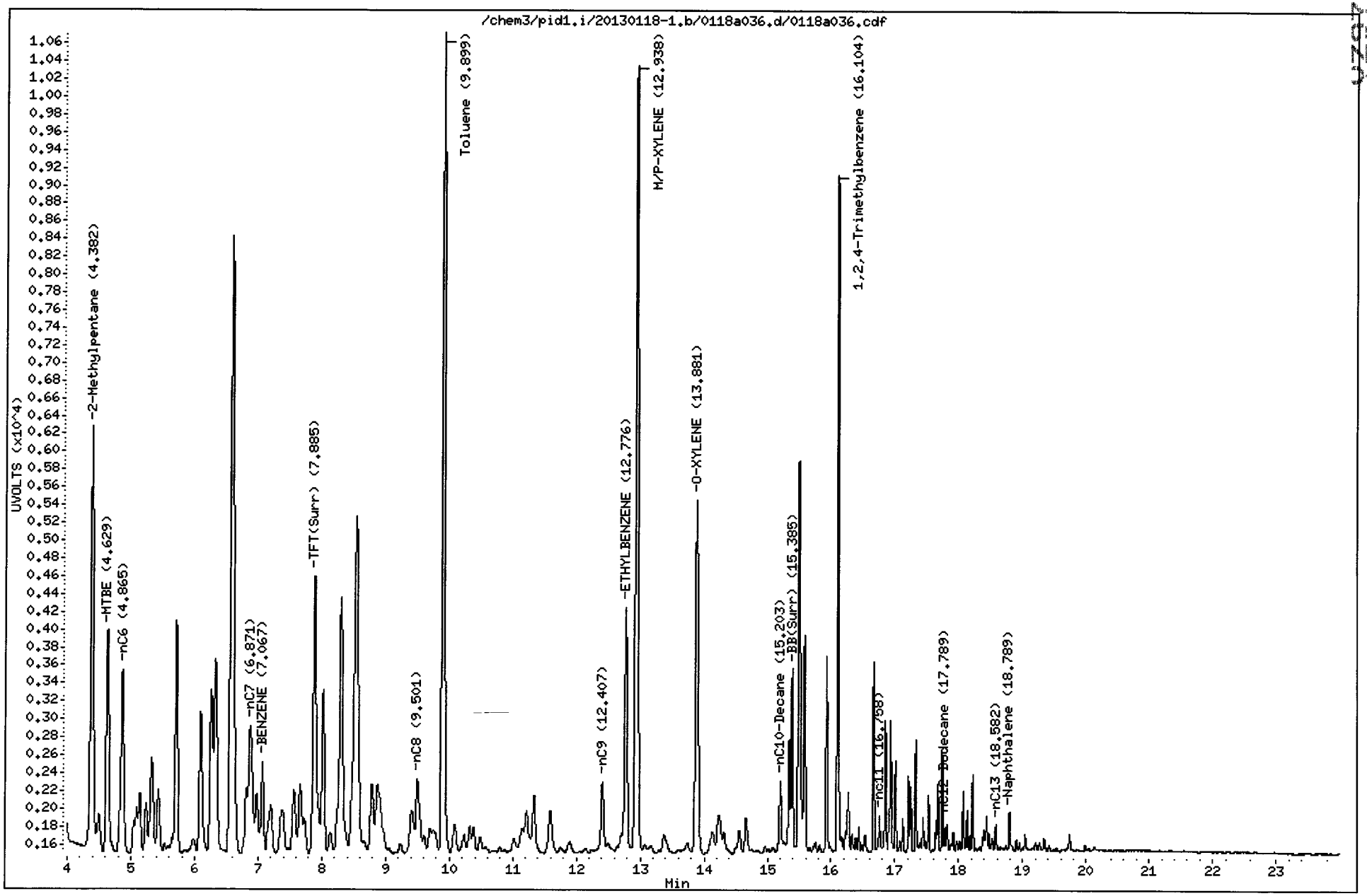
Sample Info: GCAL 4

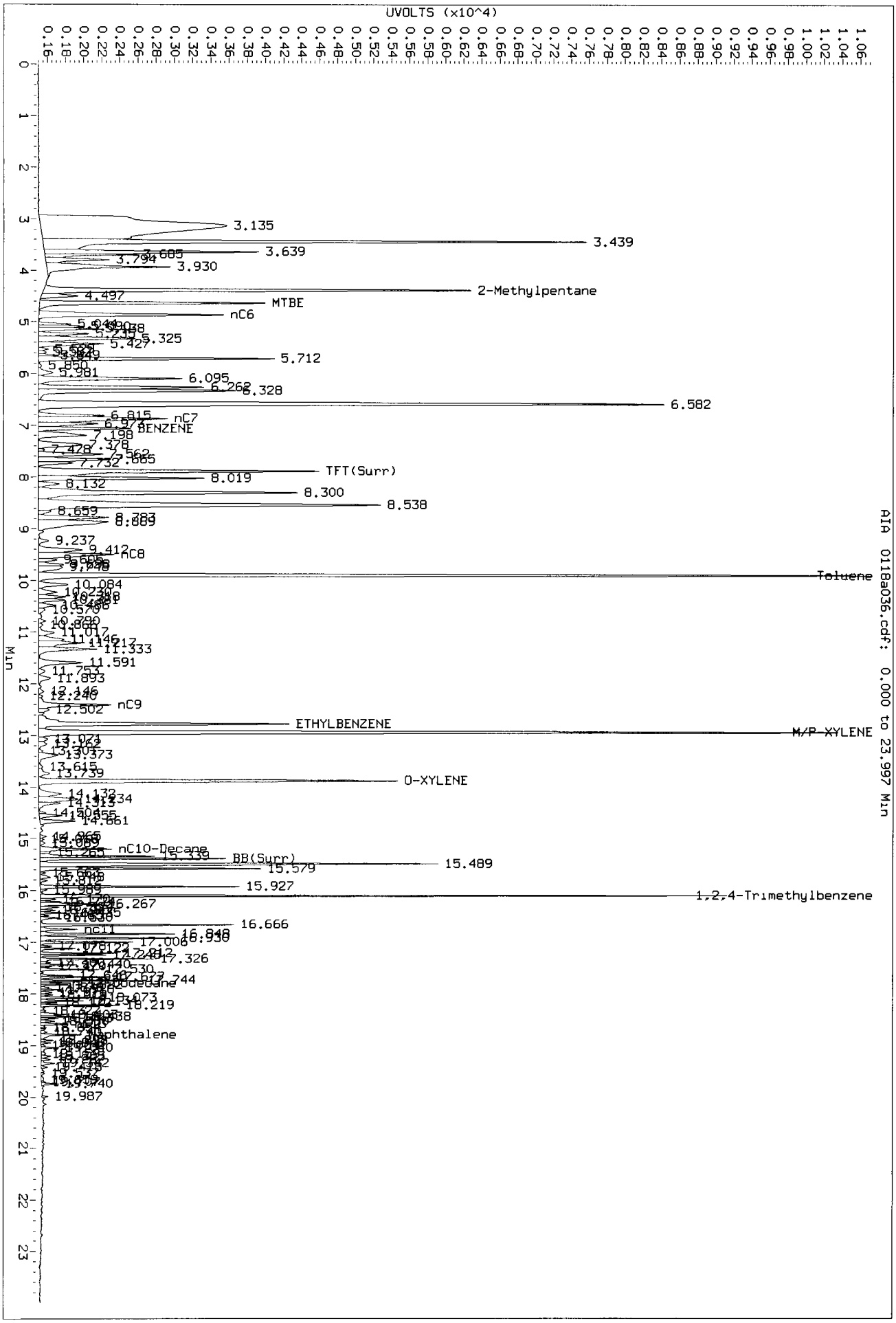
Instrument: pid1.i

Operator: LH

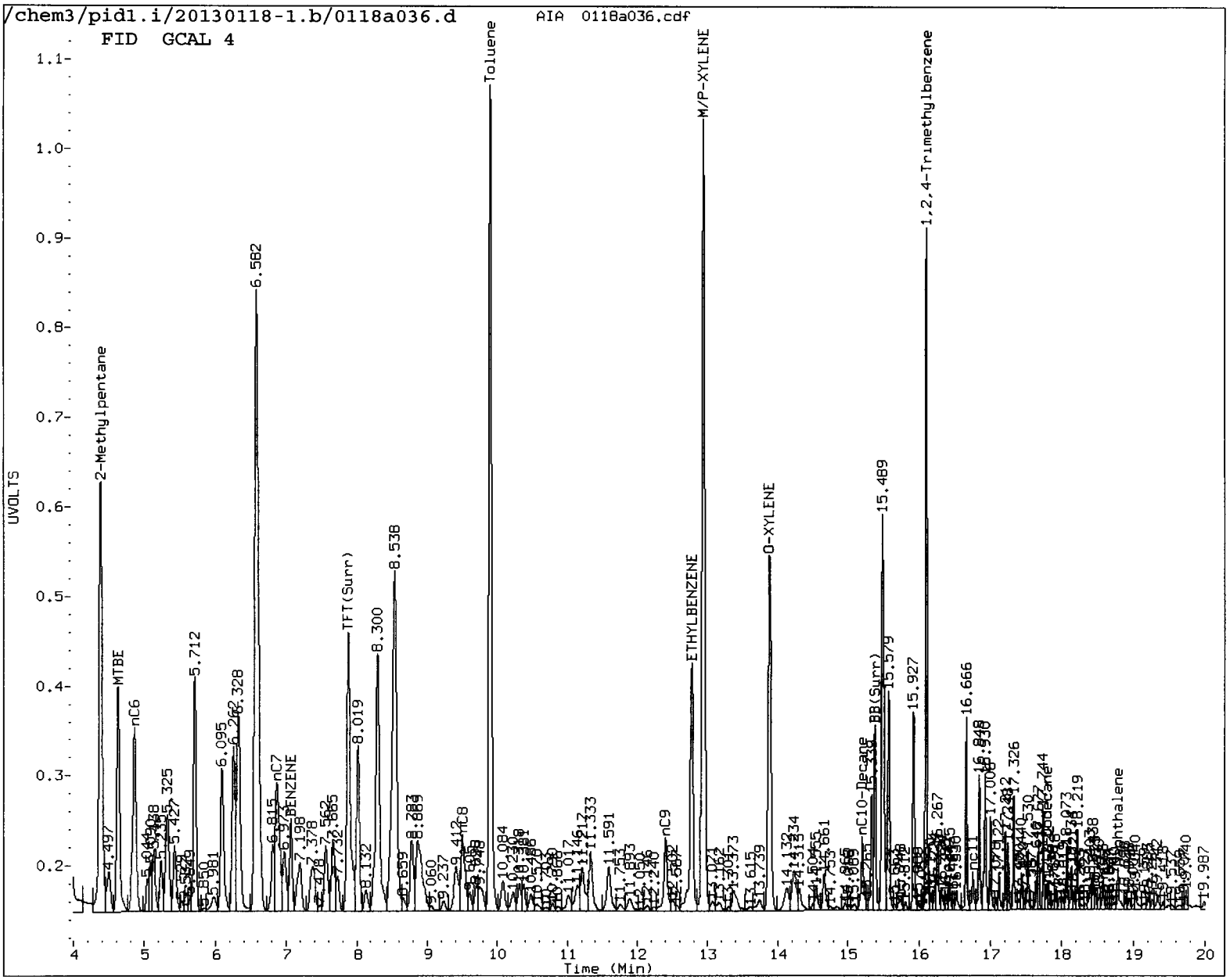
Column phase: RTX 502-2 FID

Column diameter: 0.18




UVOLTS (x10^4)
Min
3.135
3.439
3.639
3.930
2-Methylpentane
MTBE
nC6
5.325
5.712
6.095
6.328
6.582
nC7
BENZENE
TFT(Surr)
8.019
8.300
8.538
nC8
Toluene
11.333
11.591
nC9
ETHYLBENZENE
M/P-XYLENE
O-XYLENE
nC10-Decane
BB(Surr)
15.489
15.579
15.927
1,2,4-Trimethylbenzene
16.666
17.326
18.219
19.987
Data File: /chem3/pid1.i/20130118-1.b/0118a036.d/0118a036.cdf
Injection Date: 19-JAN-2013 02:27
Instrument: pid1.i
Client Sample ID:
AIA 0118a036.cdf: 0.000 to 23.997 Min

V797 01711



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: _____

Analytical Resources Inc.: Organics Instrument Log

PID-1 Serial No.: 2750A-17141

Date: 1/21/13 Analysis: NWTPHG Analyst: PC

Column 1 Serial No.: 821728 Column Type: RTX502.2

Column 2 Serial No.: _____ Column Type: _____

GC Method: BTEX ICal Date: 10/23/12 PC 1/21/13 Injection Volume: 5

IS	Ical/Ccal	ICV
VW771-1	VW758-2 VW772-3 VW768-4	VW768-4

Document All Maintenance Tasks In StarLIMS

	Time	Filename	LabID	ClientID	Vial#	pH	DF
1	0932	0121a001.d	RINSE				1
2	1003	0121a002.d	RT0121+BCAL				1
3	1033	0121a003.d	GCAL 1				1
4	1104	0121a004.d	LCS0121				1
5	1135	0121a005.d	LCSD0121				1
6	1206	0121a006.d	MB0121				1
7	1353	0121a007.d	VZ86H	Trip Blank	2	<2	1
8	1425	0121a008.d	VZ97S	CSIA20130114-001DW	5		1
9	1456	0121a009.d	WA41A	EAL#145140			1
10	1527	0121a010.d	WA41B	EAL#145141			1
11	1558	0121a011.d	WA41C	EAL#145142			1
12	1628	0121a012.d	VZ97K	CSIA20130110-011B			1
13	1659	0121a013.d	VZ97L	CSIA20130110-012B			1
14	1730	0121a014.d	GCAL 2				1
15	1801	0121a015.d	VZ97M	CSIA20130110-013S+3			1
16	1832	0121a016.d	VZ97O	CSIA20130110-015S+9			1
17	1903	0121a017.d	VZ97P	CSIA20130111-016S			1
18	1934	0121a018.d	VZ97Q	CSIA20130111-017B			1
19	2004	0121a019.d	VZ86A	HC-N202122-5-GW	2	<2	1
20	2035	0121a020.d	VZ86AMS	HC-N202122-5-GW MS	3		1
21	2106	0121a021.d	VZ86AMSD	HC-N202122-5-GW MSD	4		1
22	2137	0121a022.d	VZ86B	HC-N202122-7-GW	3		1
23	2208	0121a023.d	VZ86C	HC-N202122-8-GW	4	<2	1
24	2239	0121a024.d	VZ86D	HC-N910-5-GW	1		1
25	2310	0121a025.d	GCAL 3				1
26	2341	0121a026.d	VZ86E	HC-N910-6-GW	4	<2	1
27	0012	0121a027.d	VZ86F	HC-N910-7-GW	5		1
28	0043	0121a028.d	VZ86G	HC-N910-8-GW	3		1
29	0114	0121a029.d	GCAL 4				1

PC 1/22/13

Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

PC
1/23/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130121-1.b/0121a002.d
Data file 2: /chem3/pid1.i/20130121-2.b/0121a002.d
Method: /chem3/pid1.i/20130121-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: RT0121+BCAL
Client ID:
Injection Date: 21-JAN-2013 10:03
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.888	0.000	2841	41000	90.2	TFT(Surr)
15.385	0.000	1938	16577	95.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.89)	358114	458221	1.280
8015C 2MP-TMB	(4.29 to 16.20)	723723	551137	0.762
AK101 nC6-nC10	(4.77 to 15.10)	582885	384727	0.660
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	493854	1.317

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.896	0.000	3395	89.6	TFT(Surr)
15.393	0.000	7853	97.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.076	0.000	5785	23.33	Benzene
9.908	0.000	4948	21.99	Toluene
12.785	0.000	4563	23.14	Ethylbenzene
12.944	0.000	9833	45.73	M/P-Xylene
13.890	0.000	4039	24.06	O-Xylene
4.655	0.000	1875	26.04	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

0797 : 01714

Data File: /chem3/pid1.i/20130121-1.b/0121a002.d

Date : 21-JAN-2013 10:03

Client ID:

Sample Info: RT0121+BCAL

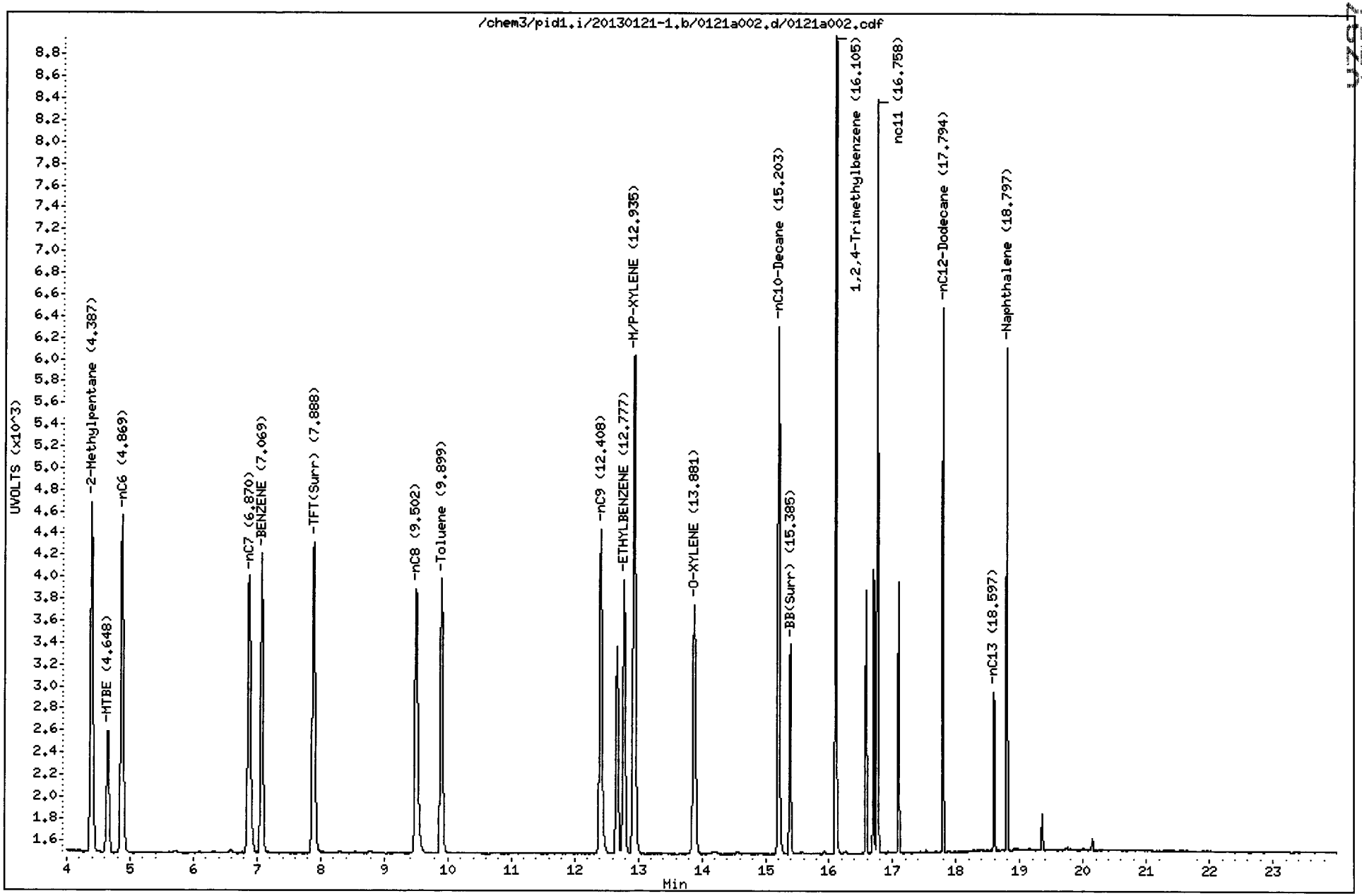
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: pc

Column diameter: 0.18

UFG17-01715



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130121-1.b/0121a003.d
Data file 2: /chem3/pid1.i/20130121-2.b/0121a003.d
Method: /chem3/pid1.i/20130121-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: GCAL 1
Client ID:
Injection Date: 21-JAN-2013 10:33
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.885	-0.003	3154	55483	100.1	TFT(Surr)
15.386	0.000	2004	19410	98.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.89)	358114	885048	2.471 M
8015C 2MP-TMB	(4.29 to 16.20)	723723	1725464	2.384 M
AK101 nC6-nC10	(4.77 to 15.10)	582885	1396526	2.396 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	934771	2.492 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.894	-0.002	3573	94.3	TFT(Surr)
15.393	0.000	8037	99.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.075	-0.001	1992	8.03	Benzene
9.907	0.000	18952	84.23	Toluene
12.785	0.000	4950	25.10	Ethylbenzene
12.948	0.003	19469	90.55	M/P-Xylene
13.891	0.001	7137	42.52	O-Xylene
4.632	-0.023	458	6.36	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

UZ97 · 01716

Data File: /chem3/pid1.i/20130121-1.b/0121a003.d

Date : 21-JAN-2013 10:33

Client ID:

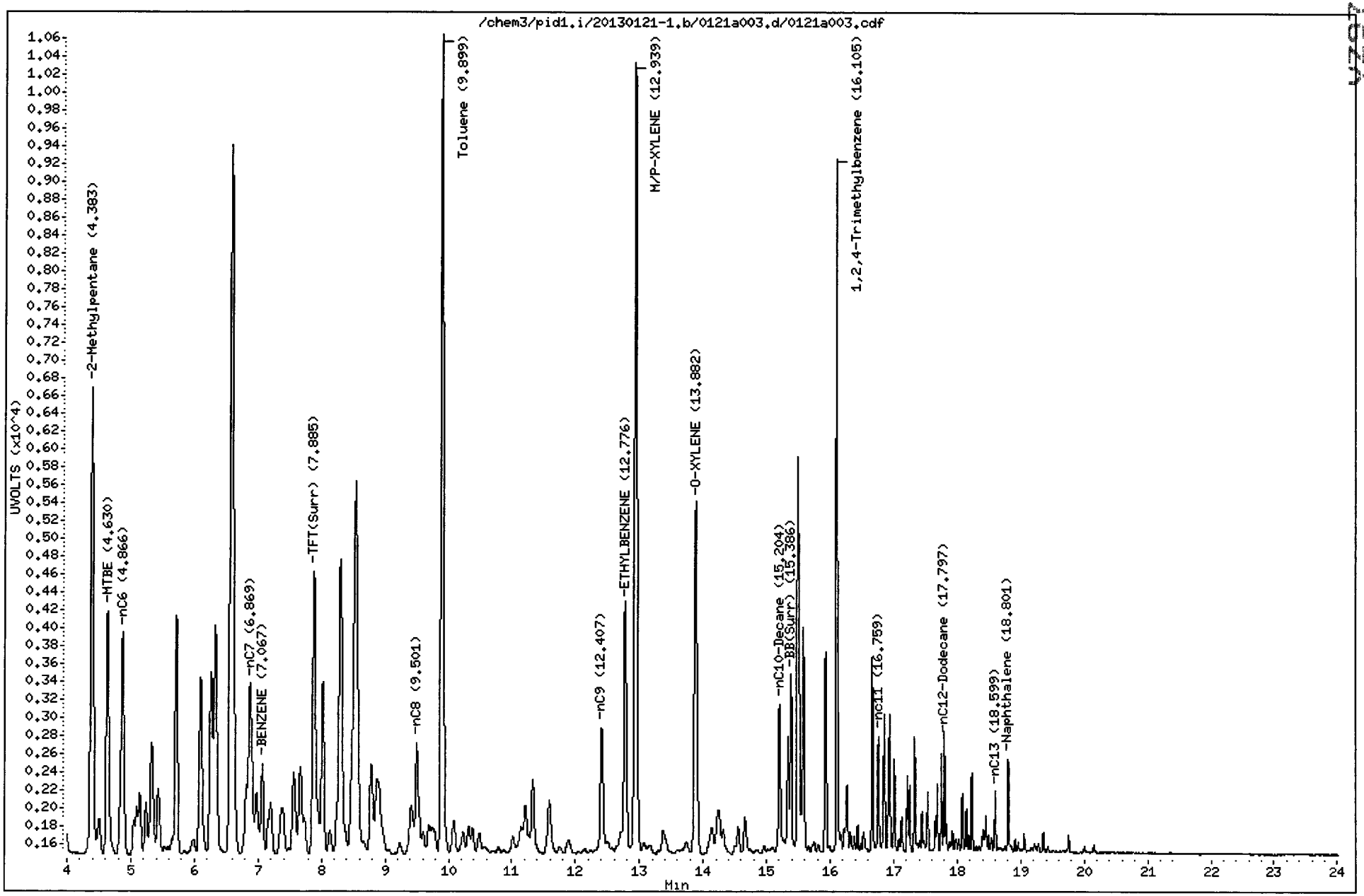
Sample Info: GCAL 1

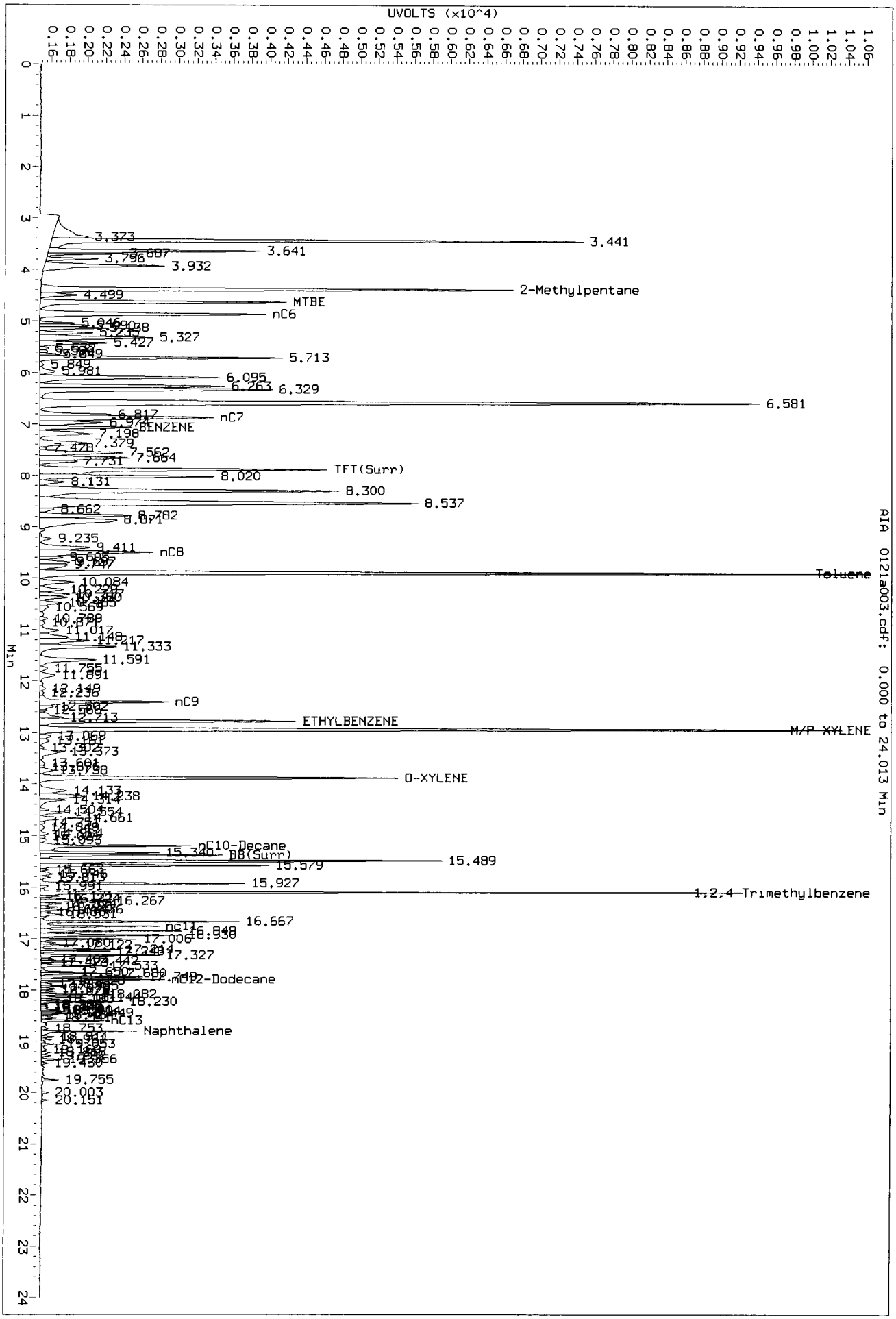
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: pc

Column diameter: 0.18





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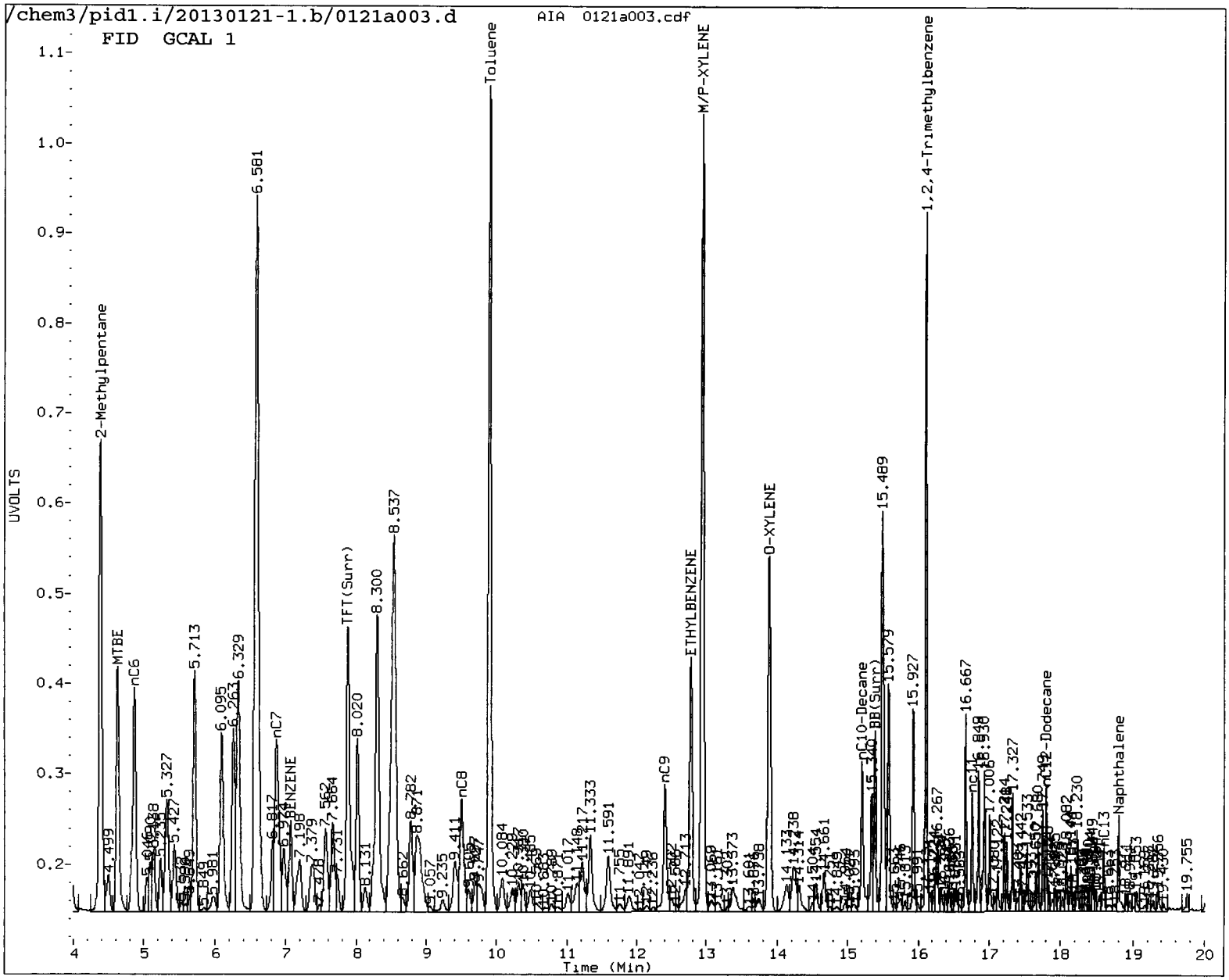
Injection Date: 21-JAN-2013 10:33
Instrument: pid1.i
Client Sample ID:

AIA 0121a003.cdf: 0.000 to 24.013 Min

PC 1/23/13



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: KC Date: 1/23/13

PC
1/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130121-1.b/0121a004.d
Data file 2: /chem3/pid1.i/20130121-2.b/0121a004.d
Method: /chem3/pid1.i/20130121-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: LCS0121
Client ID:
Injection Date: 21-JAN-2013 11:04
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.886	-0.001	2974	46483	94.4	TFT(Surr)
15.385	0.000	1980	18238	97.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.89)	358114	378310	1.056 M
8015C 2MP-TMB	(4.29 to 16.20)	723723	748266	1.034 M
AK101 nC6-nC10	(4.77 to 15.10)	582885	596616	1.024 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	401340	1.070 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.896	0.000	3462	91.4	TFT(Surr)
15.394	0.001	7989	99.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.076	0.000	822	3.31	Benzene
9.908	0.000	7629	33.91	Toluene
12.786	0.001	1983	10.06	Ethylbenzene
12.947	0.003	7929	36.88	M/P-Xylene
13.891	0.001	2890	17.22	O-Xylene
4.634	-0.022	181	2.51	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130121-1.b/0121a004.d

Date : 21-JAN-2013 11:04

Client ID:

Sample Info: LCS0121

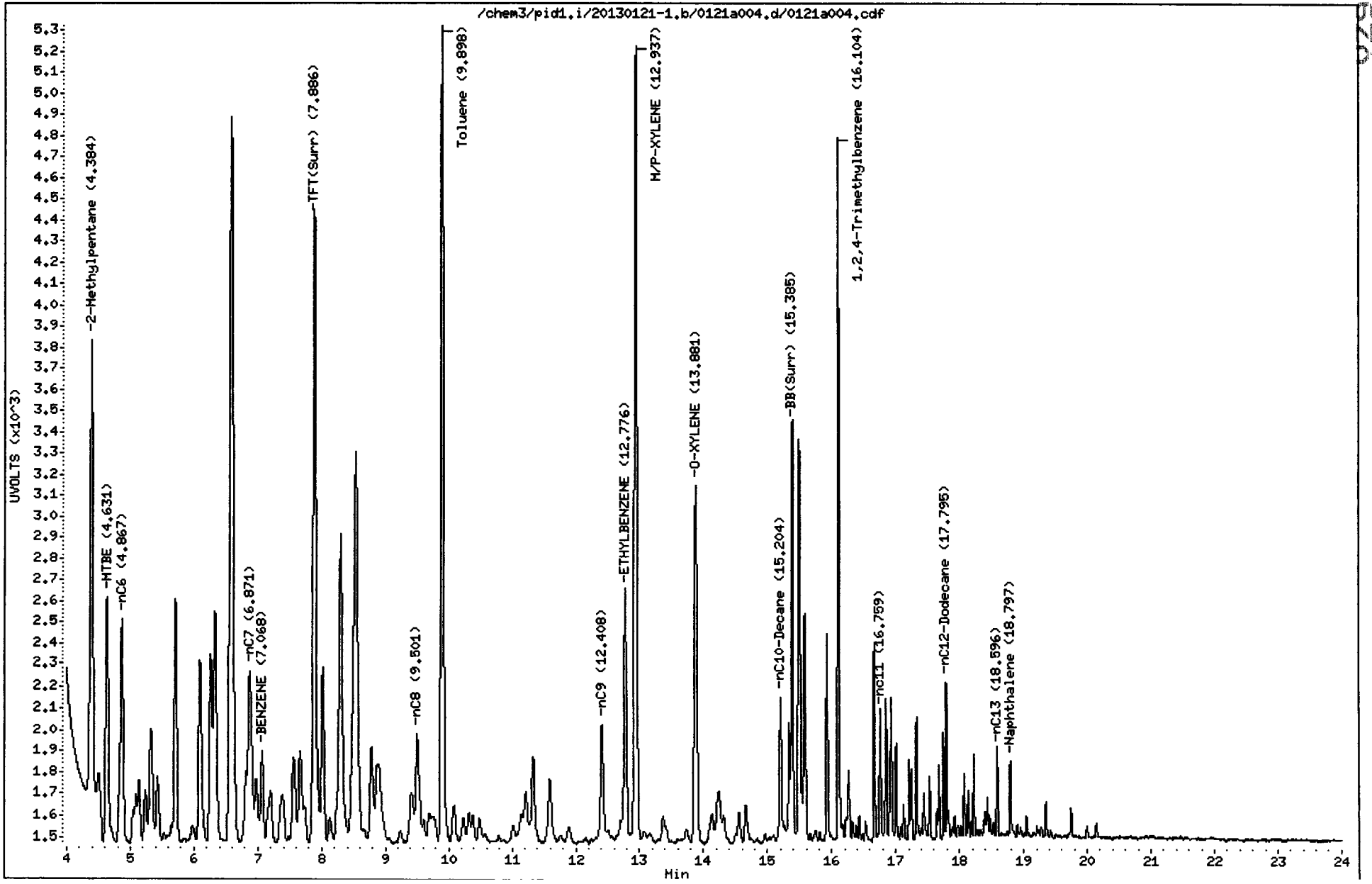
Column phase: RTX 502-2 FID

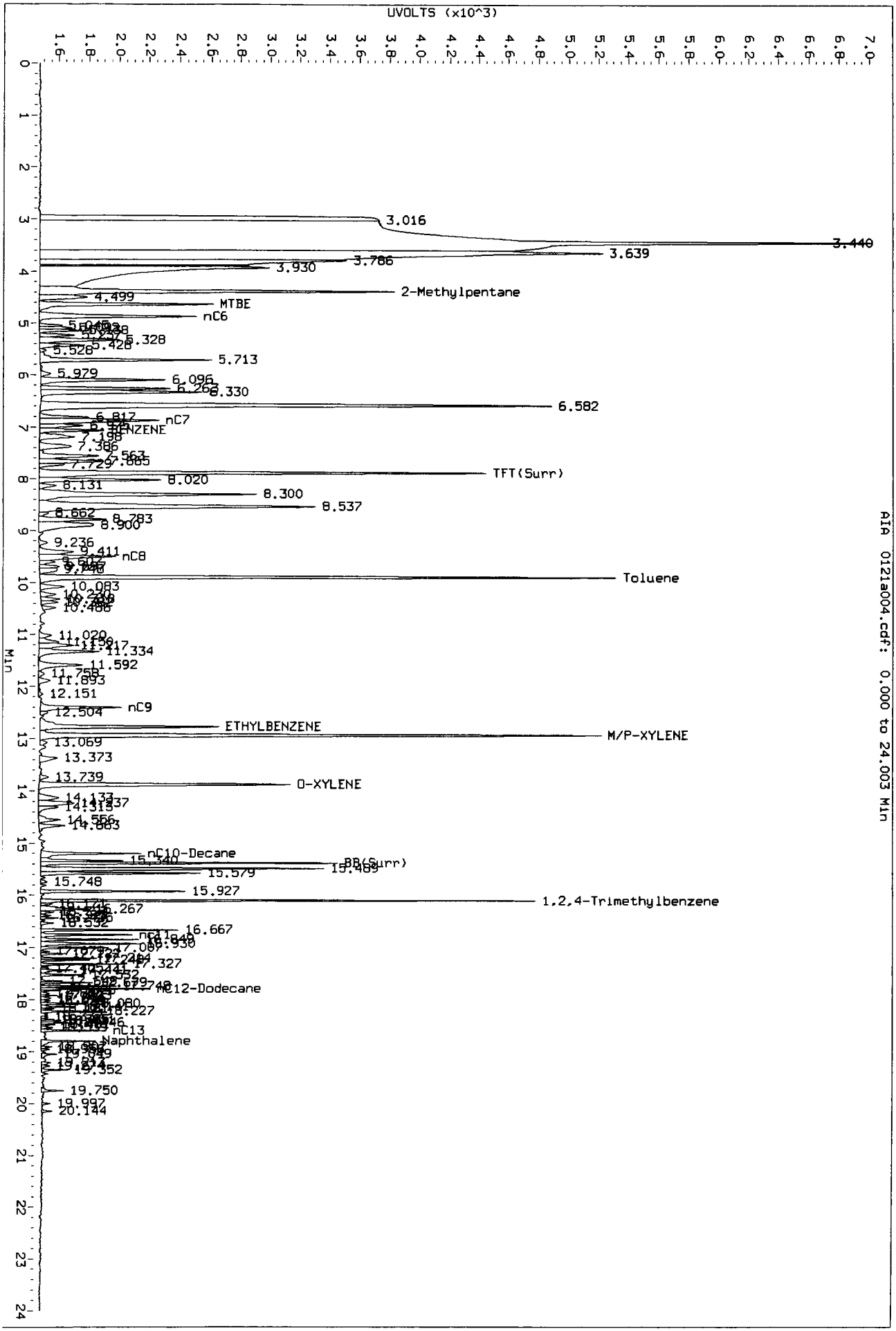
Instrument: pid1.i

Operator: pc

Column diameter: 0.18

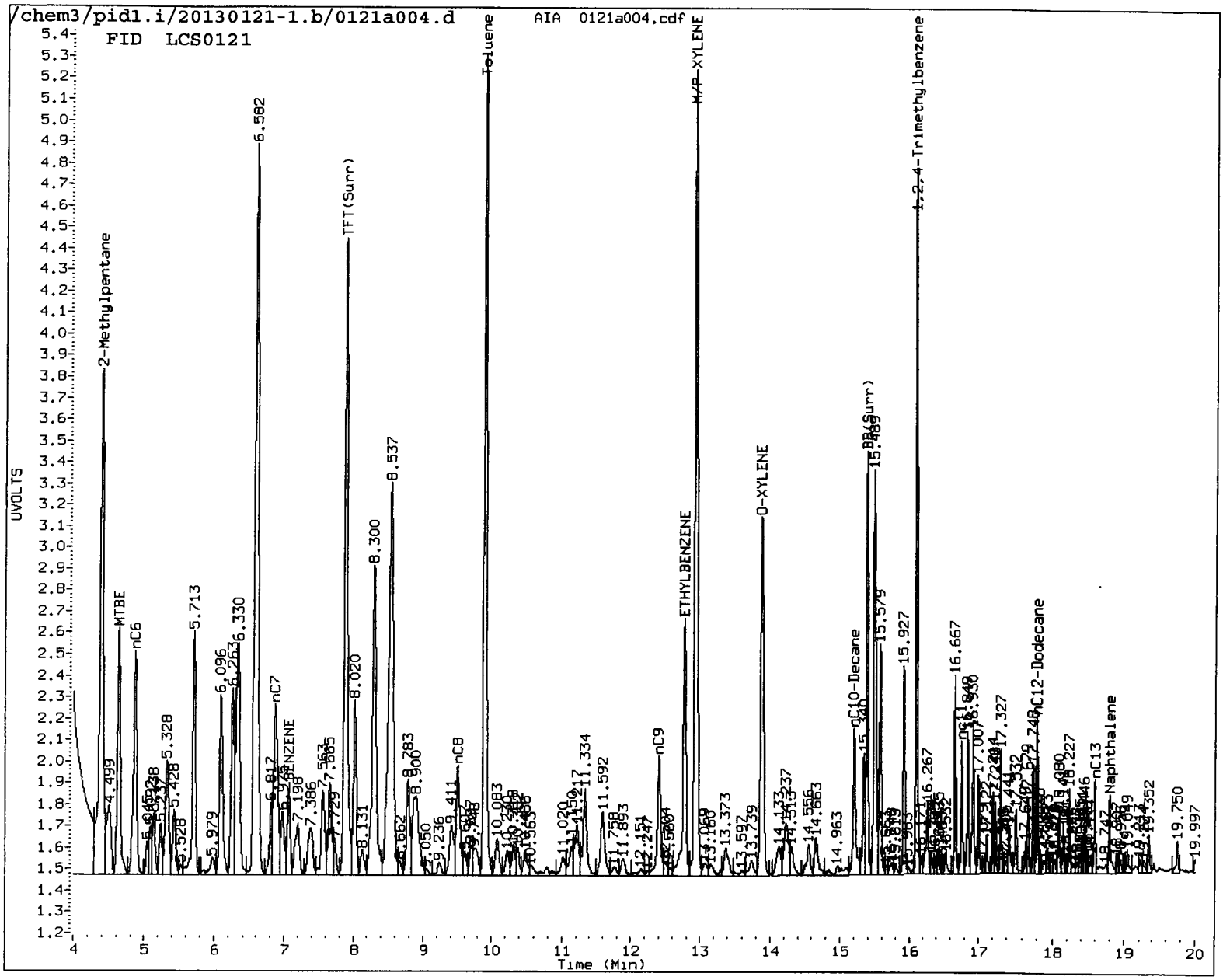
0257-01721





Data File: /chem3/pid1.i/20130121-1.b/0121a004.d/0121a004.cdf
Injection Date: 21-JAN-2013 11:04
Instrument: pid1.i
Client Sample ID:

PC 1/22/13



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: PC Date: 1/22/13

VTC 1/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130121-1.b/0121a005.d
Data file 2: /chem3/pid1.i/20130121-2.b/0121a005.d
Method: /chem3/pid1.i/20130121-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: LCSD0121
Client ID:
Injection Date: 21-JAN-2013 11:35
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.887	-0.001	3034	47307	96.3	TFT(Surr)
15.385	-0.001	2026	18423	99.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.89)	358114	363862	1.016 M
8015C 2MP-TMB	(4.29 to 16.20)	723723	734398	1.015 M
AK101 nC6-nC10	(4.77 to 15.10)	582885	578442	0.992 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	384660	1.026 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.895	-0.001	3573	94.3	TFT(Surr)
15.393	0.000	8076	100.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.076	0.000	804	3.24	Benzene
9.907	-0.001	7684	34.15	Toluene
12.784	-0.001	1996	10.12	Ethylbenzene
12.946	0.002	7890	36.70	M/P-Xylene
13.890	0.000	2875	17.13	O-Xylene
4.634	-0.021	178	2.47	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130121-1.b/0121a005.d

Date : 21-JAN-2013 11:35

Client ID:

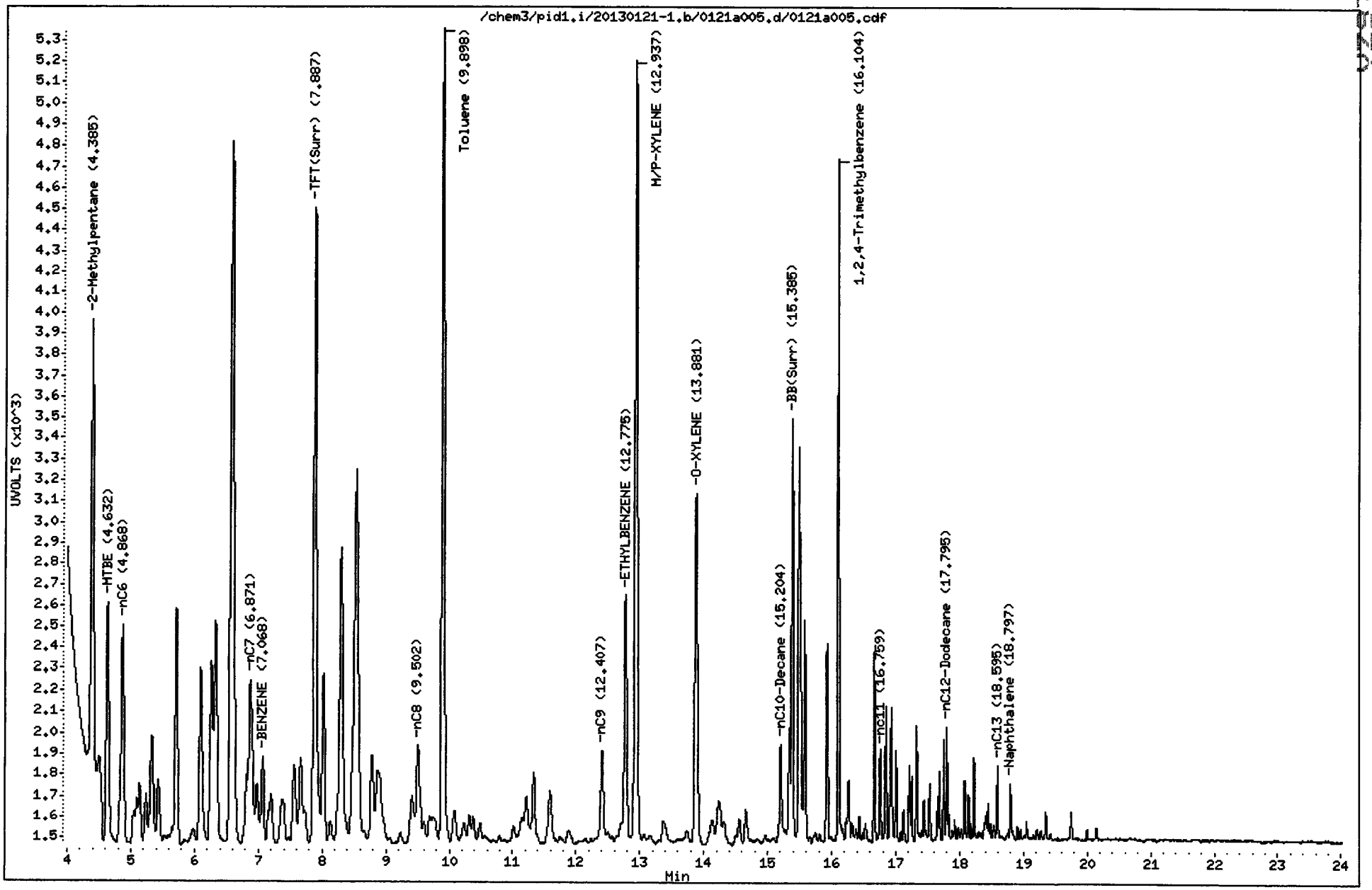
Sample Info: LCSD0121

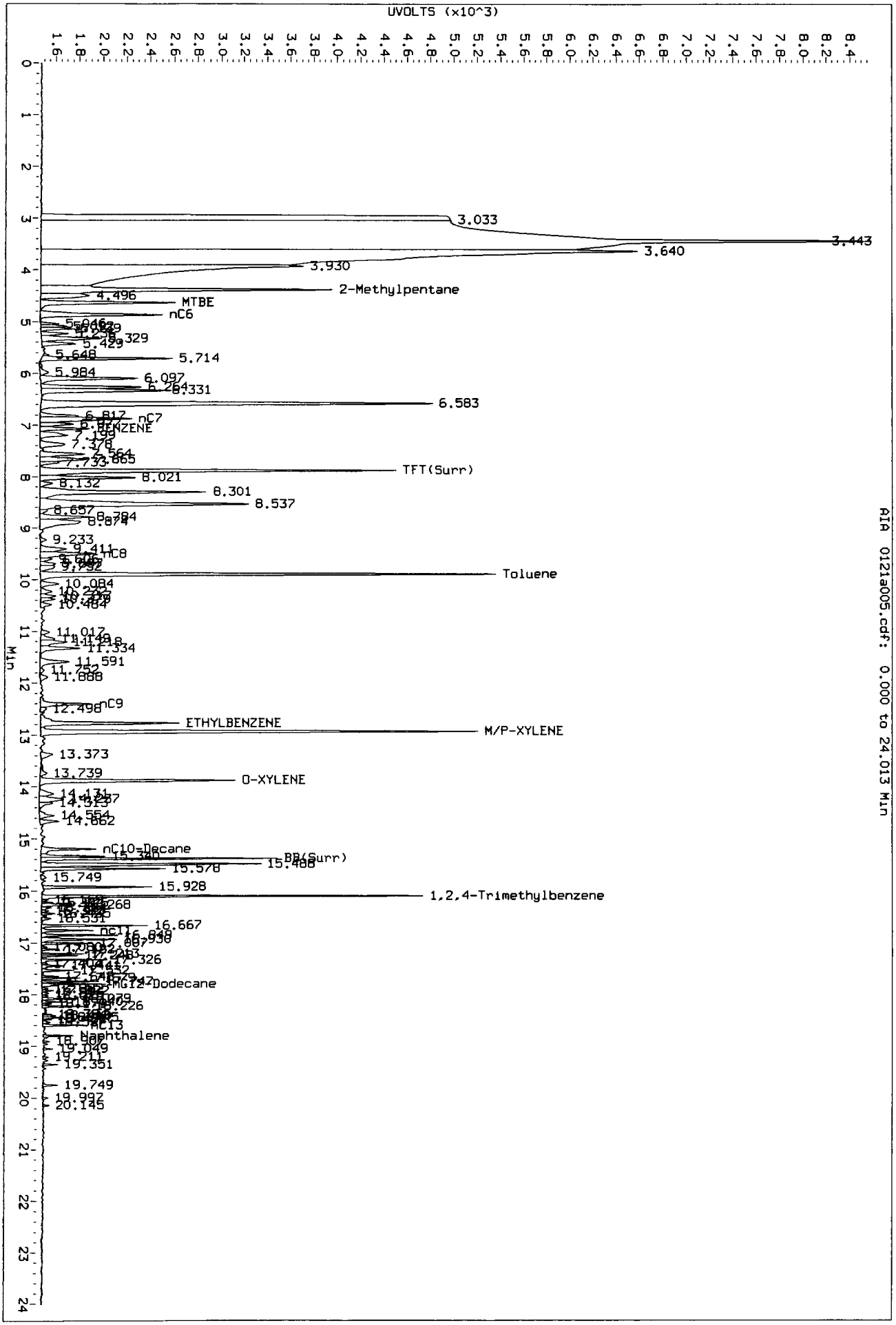
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: pc

Column diameter: 0.18

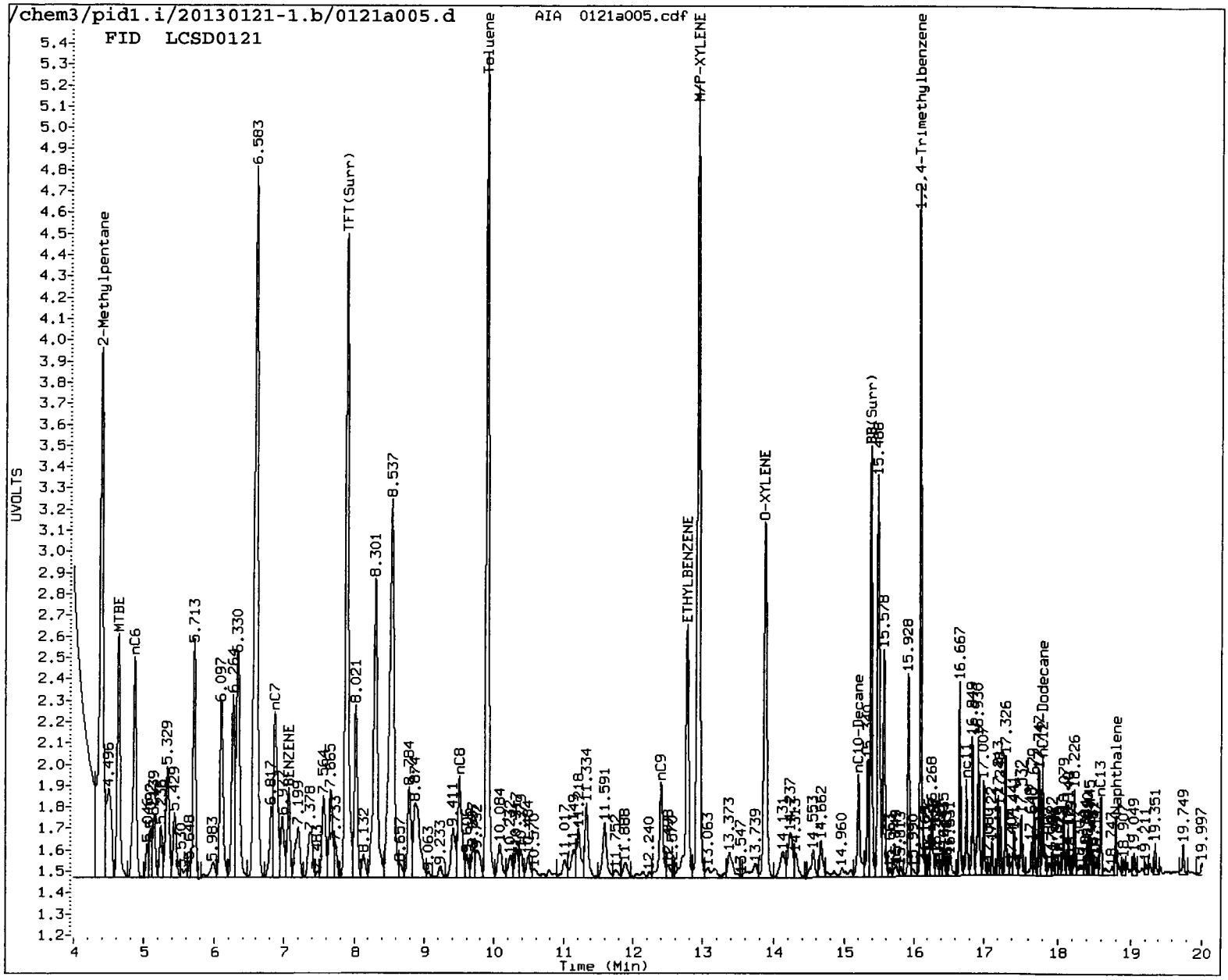




Data File: /chem3/pid1.i/20130121-1.b/0121a005.d/0121a005.cdf
Injection Date: 21-JAN-2013 11:35
Instrument: pid1.i
Client Sample ID:

AIA 0121a005.cdf: 0.000 to 24.013 Min

PC
1/22/13



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: PC Date: 1/22/13

KC
1/31/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130121-1.b/0121a006.d
Data file 2: /chem3/pid1.i/20130121-2.b/0121a006.d
Method: /chem3/pid1.i/20130121-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: MB0121
Client ID:
Injection Date: 21-JAN-2013 12:06
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.888	0.001	2862	40984	90.9	TFT(Surr)
15.386	0.001	2030	17463	100.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.89)	358114	8034	0.022
8015C 2MP-TMB	(4.29 to 16.20)	723723	8787	0.012
AK101 nC6-nC10	(4.77 to 15.10)	582885	5659	0.010
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	10026	0.027

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.896	0.001	3408	90.0	TFT(Surr)
15.394	0.002	8122	100.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130121-1.b/0121a006.d

Date : 21-JAN-2013 12:06

Client ID:

Sample Info: MB0121

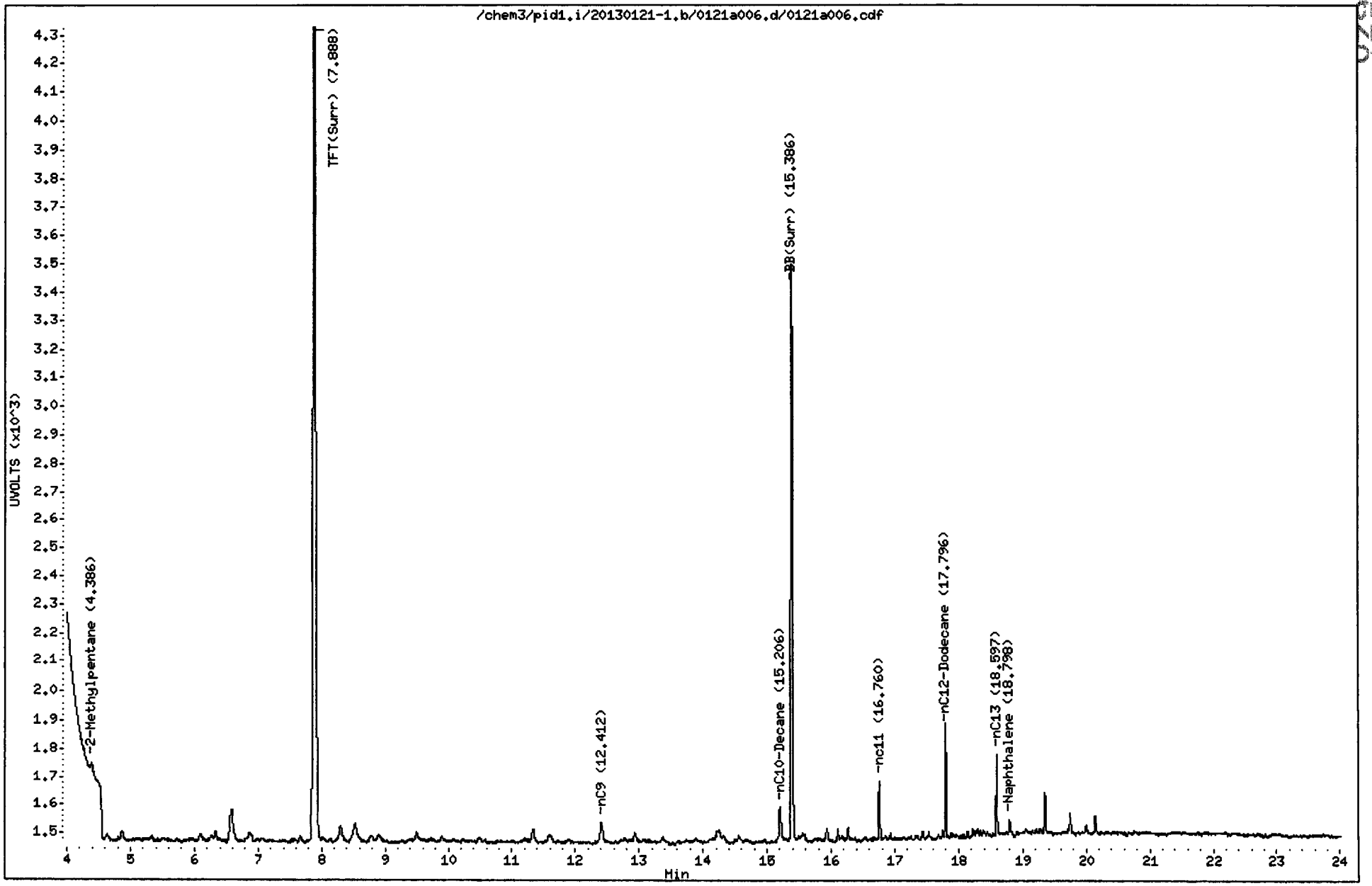
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: pc

Column diameter: 0.18

021723



1/23/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130121-1.b/0121a008.d
Data file 2: /chem3/pid1.i/20130121-2.b/0121a008.d
Method: /chem3/pid1.i/20130121-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: VZ97S
Client ID: CSIA20130114-001DW
Injection Date: 21-JAN-2013 14:25
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.888	0.000	2861	41186	90.8	TFT(Surr)
15.386	0.001	1977	17484	97.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.89)	358114	38770	0.108 M
8015C 2MP-TMB	(4.29 to 16.20)	723723	3889	0.005 M
AK101 nC6-nC10	(4.77 to 15.10)	582885	432	0.001
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	102999	0.275 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.896	0.000	3420	90.3	TFT(Surr)
15.394	0.001	7841	97.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130121-1.b/0121a008.d

Date : 21-JAN-2013 14:25

Client ID: CSIA20130114-001DW

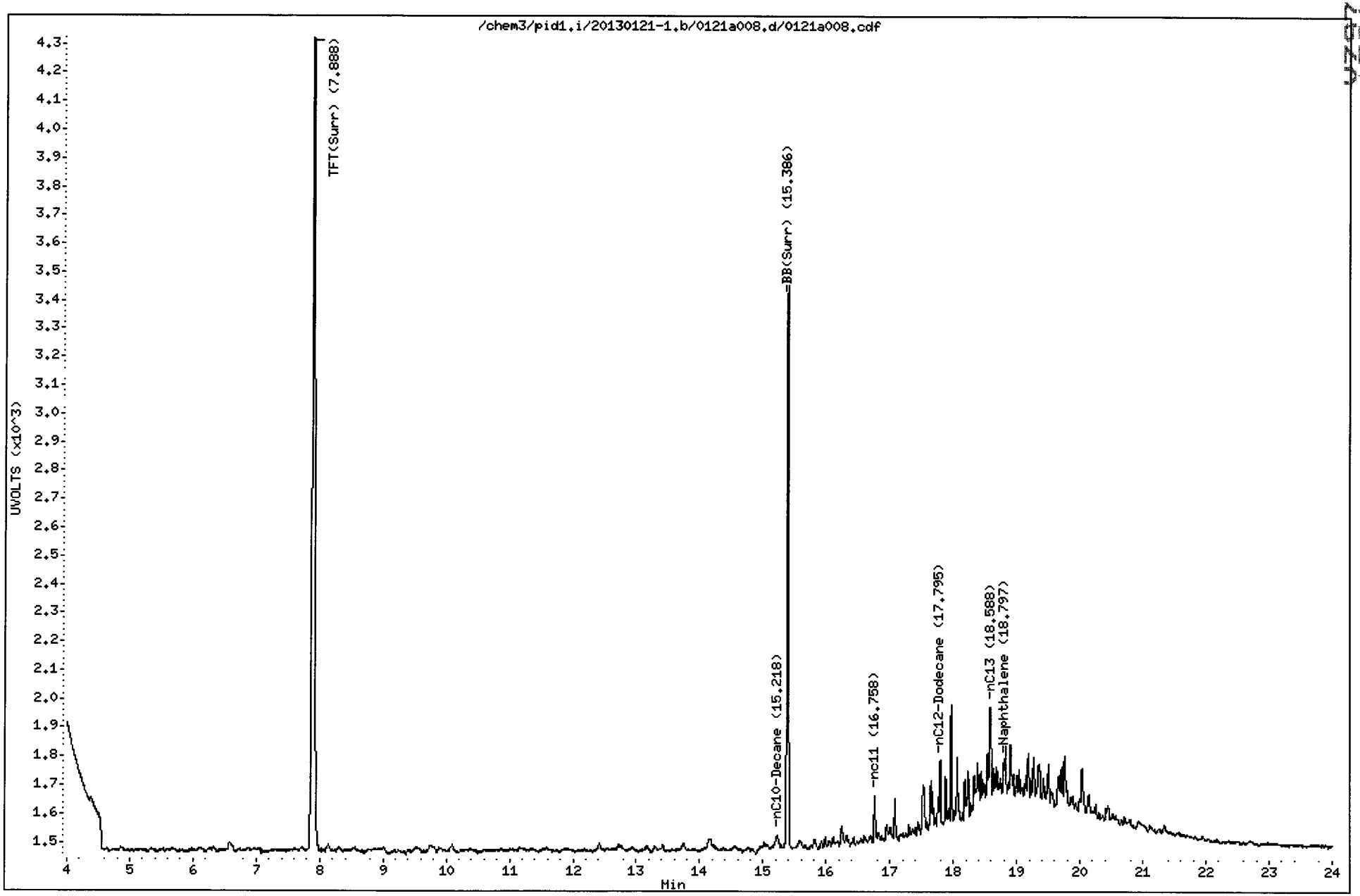
Sample Info: VZ97S

Column phase: RTX 502-2 FID

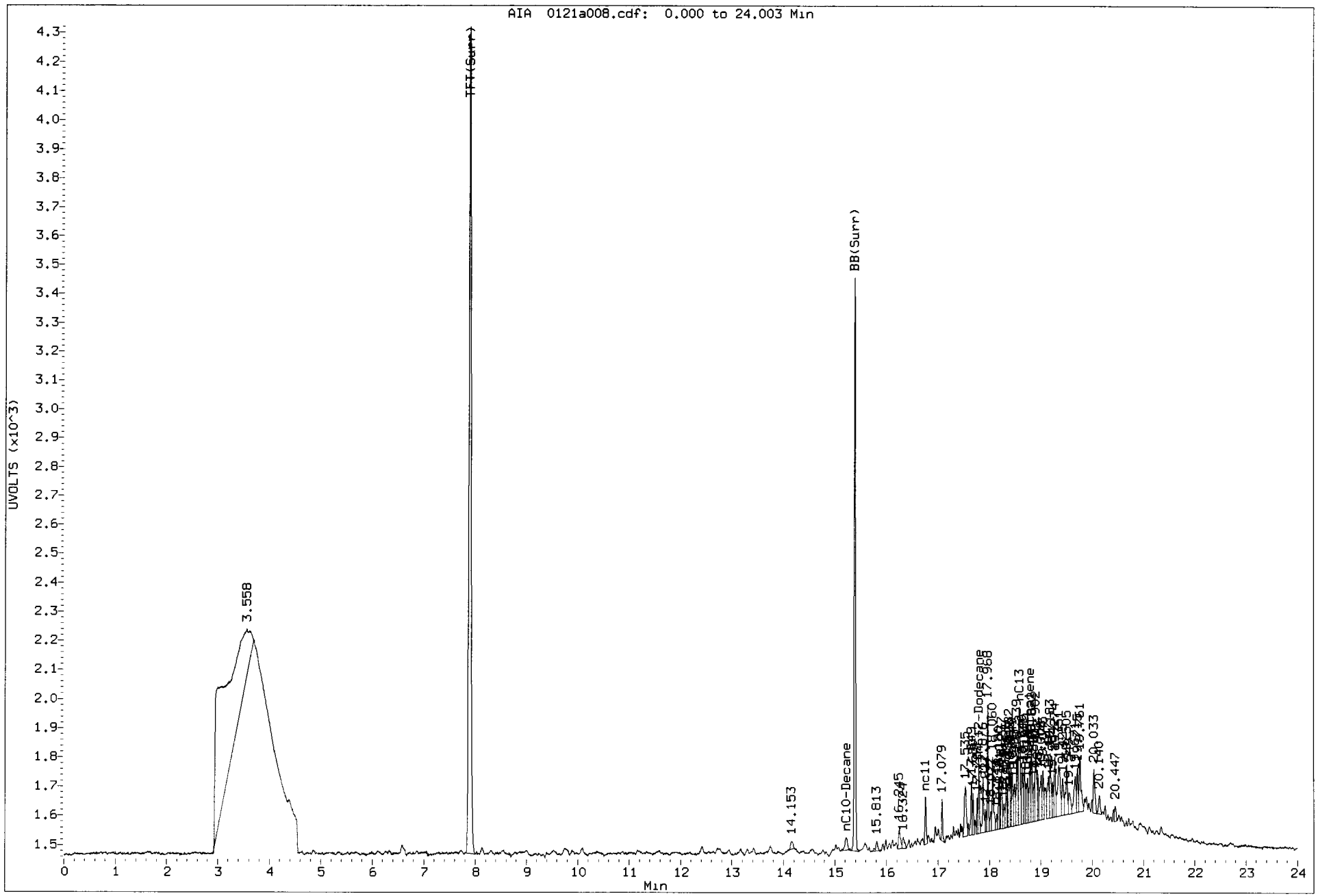
Instrument: pid1.i

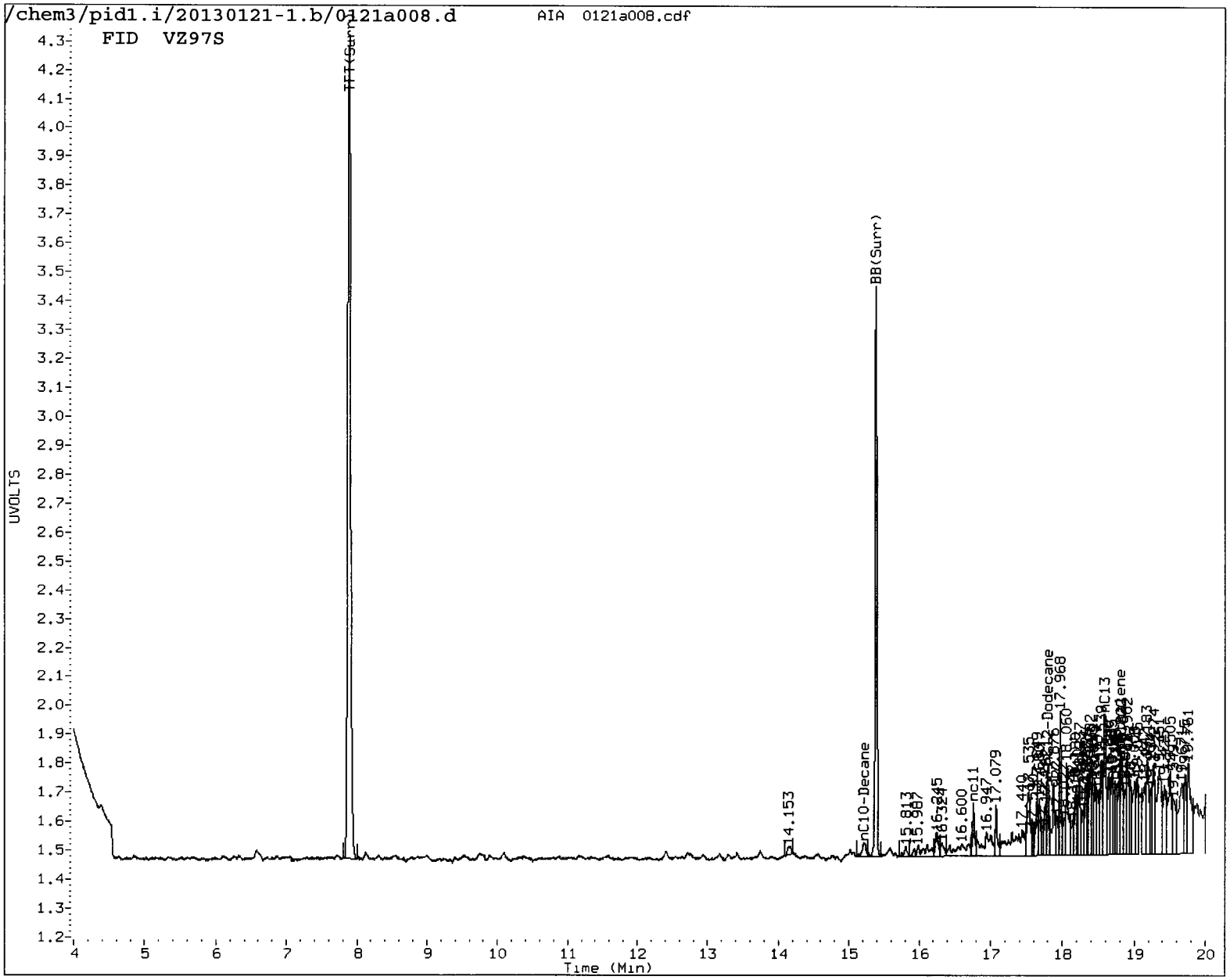
Operator: PC

Column diameter: 0.18



Data File: /chem3/pid1.i/20130121-1.b/0121a008.d/0121a008.cdf
Injection Date: 21-JAN-2013 14:25
Instrument: pid1.i
Client Sample ID: CSIA20130114-001DW





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: PC Date: 1/23/13

MC
1/23/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130121-1.b/0121a012.d
Data file 2: /chem3/pid1.i/20130121-2.b/0121a012.d
Method: /chem3/pid1.i/20130121-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: VZ97K
Client ID: CSIA20130110-011B
Injection Date: 21-JAN-2013 16:28
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.889	0.001	2690	38394	85.4	TFT(Surr)
15.386	0.001	1914	19986	94.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.89)	358114	136738	0.382 M
8015C 2MP-TMB	(4.29 to 16.20)	723723	37870	0.052 M
AK101 nC6-nC10	(4.77 to 15.10)	582885	17440	0.030 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	308748	0.823 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.897	0.001	3177	83.9	TFT(Surr)
15.394	0.001	7436	92.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130121-1.b/0121a012.d

Date : 21-JAN-2013 16:28

Client ID: CSIA20130110-011B

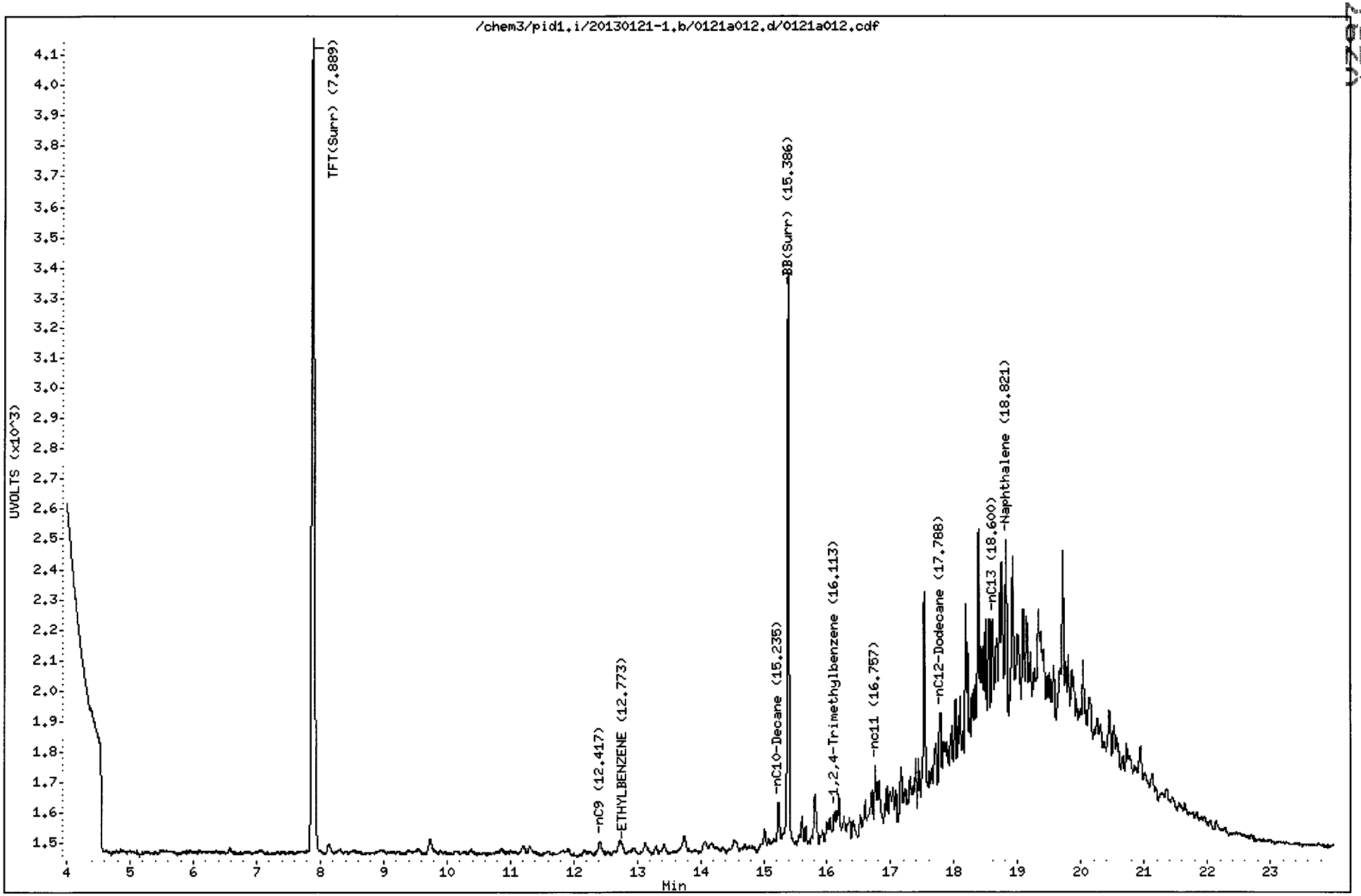
Sample Info: VZ97K

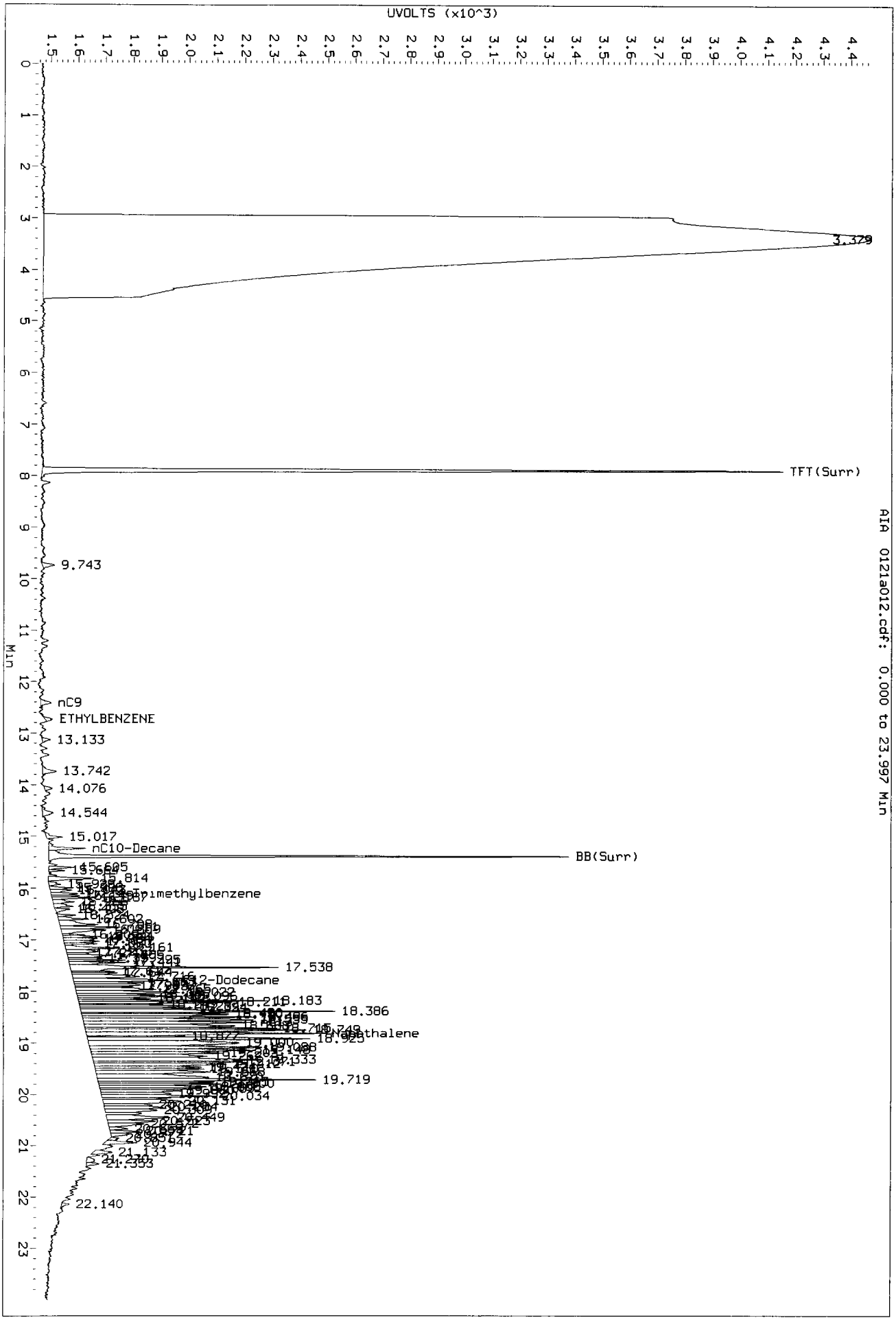
Column phase: RTX 502-2 FID

Instrument: pid1.i

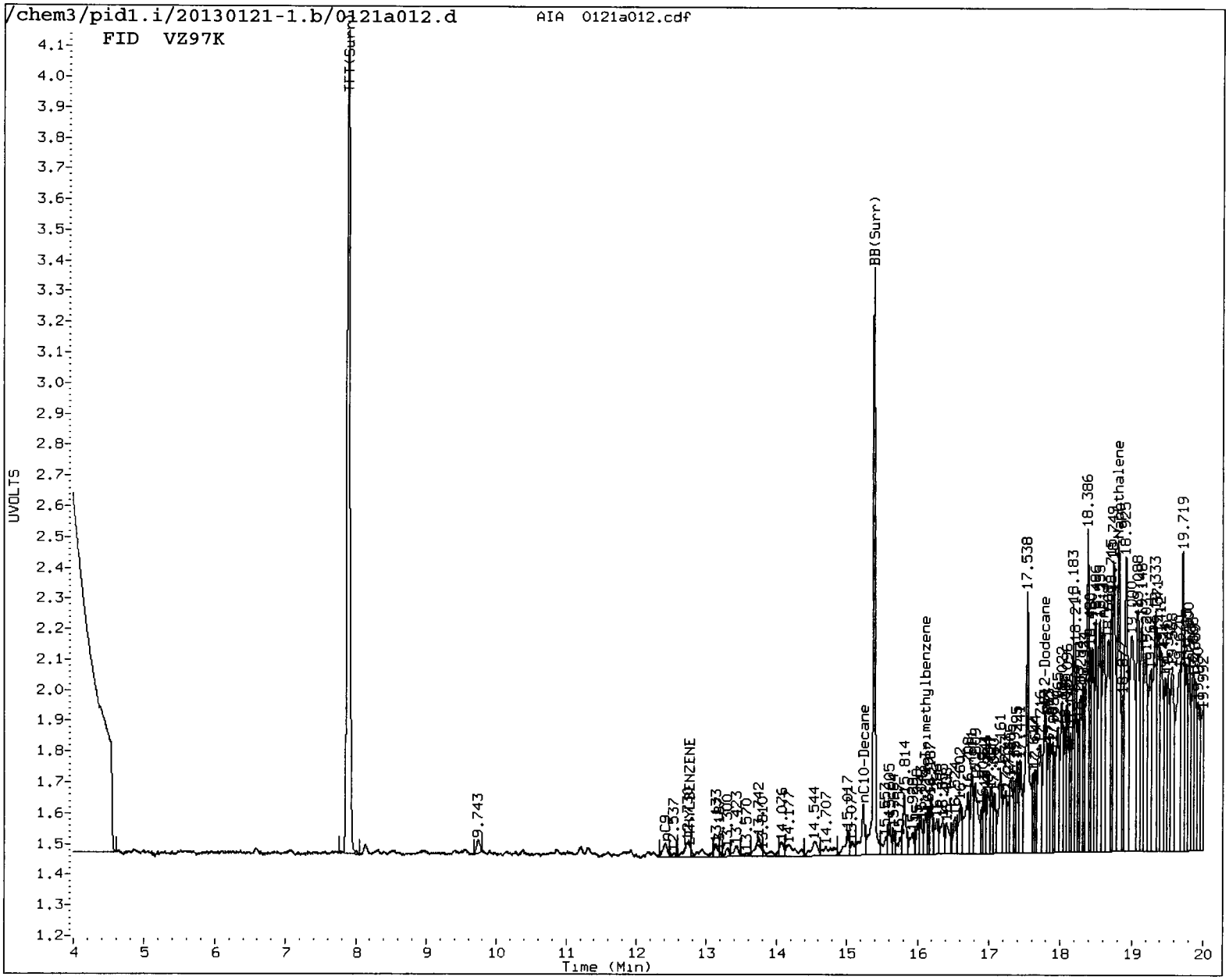
Operator: PC

Column diameter: 0.18




UVOLTS (x10^3)
Min
3.329
TFT(Surr)
9.743
nC9
ETHYLBENZENE
13.133
13.742
14.076
14.544
15.017
nC10-Decane
BB(Surr)
17.538
18.386
19.719
22.140
Data File: /chem3/pid1.i/20130121-1.b/0121a012.d/0121a012.cdf
Injection Date: 21-JAN-2013 16:28
Instrument: pid1.i
Client Sample ID: CSIA20130110-011B
AIA 0121a012.cdf: 0.000 to 23.997 Min

V207-01736



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YC Date: 1/23/13

VC
1/23/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130121-1.b/0121a013.d
Data file 2: /chem3/pid1.i/20130121-2.b/0121a013.d
Method: /chem3/pid1.i/20130121-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: VZ97L
Client ID: CSIA20130110-012B
Injection Date: 21-JAN-2013 16:59
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.888	0.000	2716	38538	86.2	TFT(Surr)
15.386	0.001	1851	16565	91.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.89)	358114	25108	0.070 M
8015C 2MP-TMB	(4.29 to 16.20)	723723	3929	0.005 M
AK101 nC6-nC10	(4.77 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	75404	0.201 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.896	0.000	3217	84.9	TFT(Surr)
15.394	0.001	7439	92.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130121-1.b/0121a013.d

Date : 21-JAN-2013 16:59

Client ID: CSIA20130110-012B

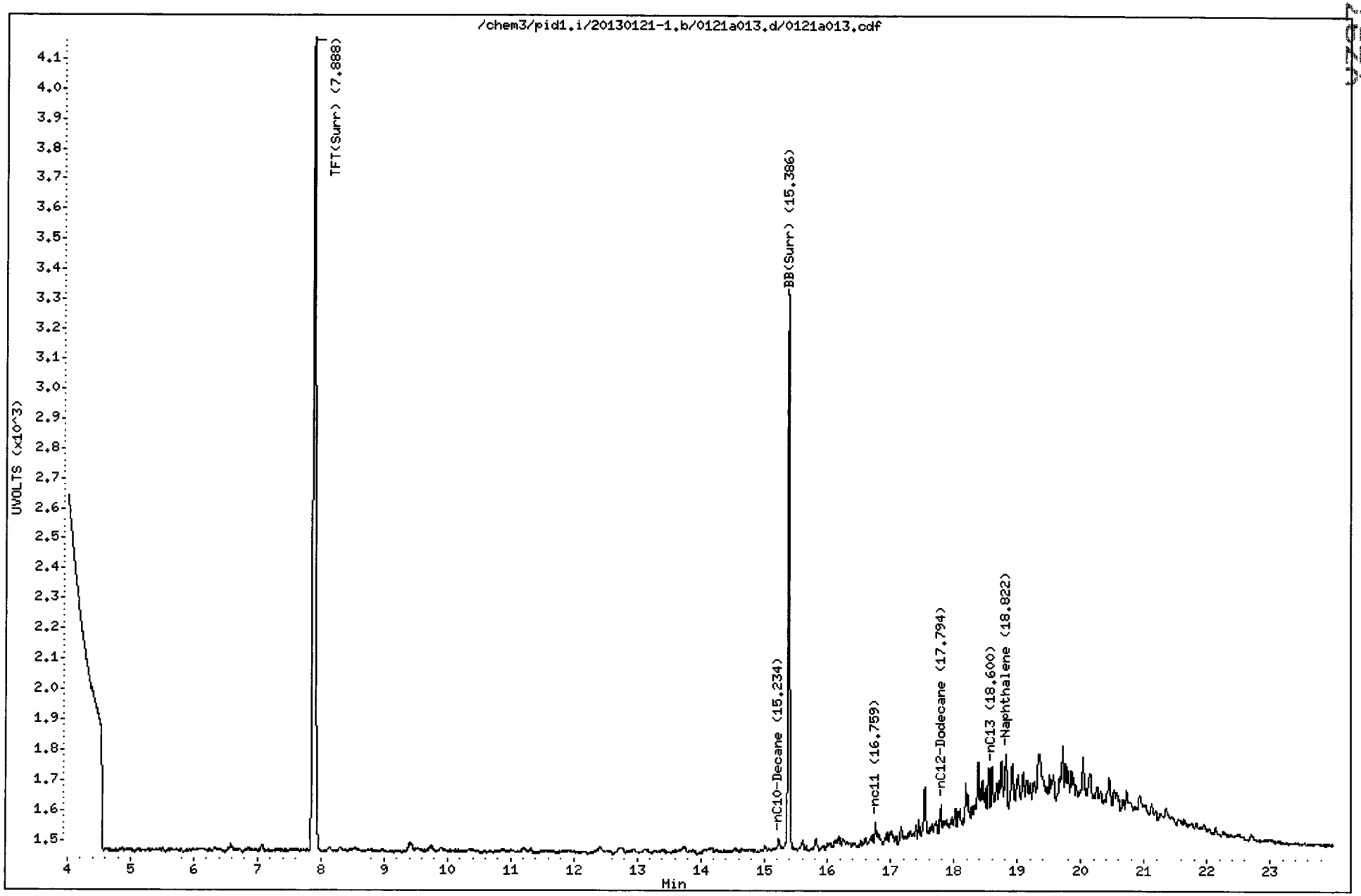
Sample Info: VZ97L

Column phase: RTX 502-2 FID

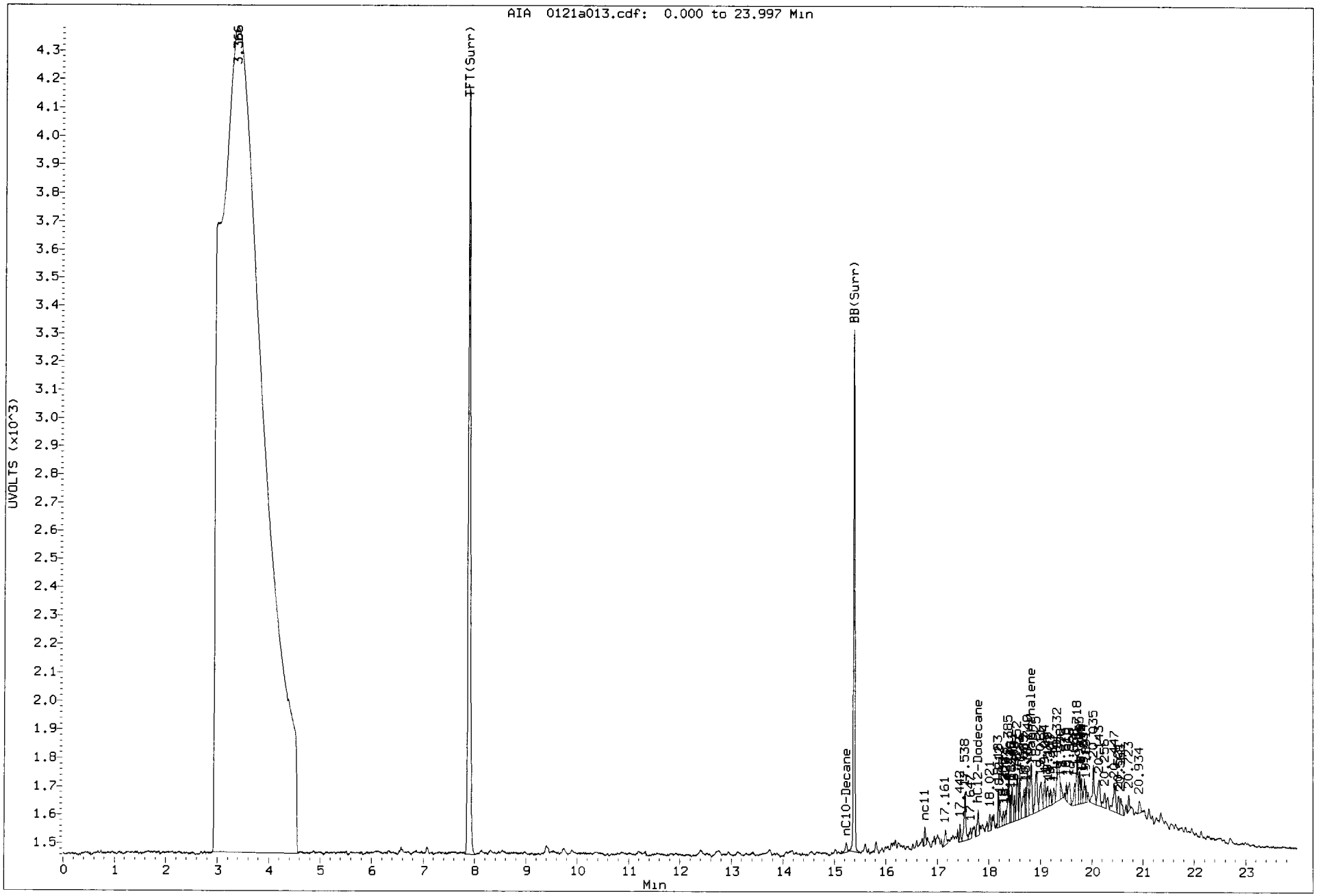
Instrument: pid1.i

Operator: PC

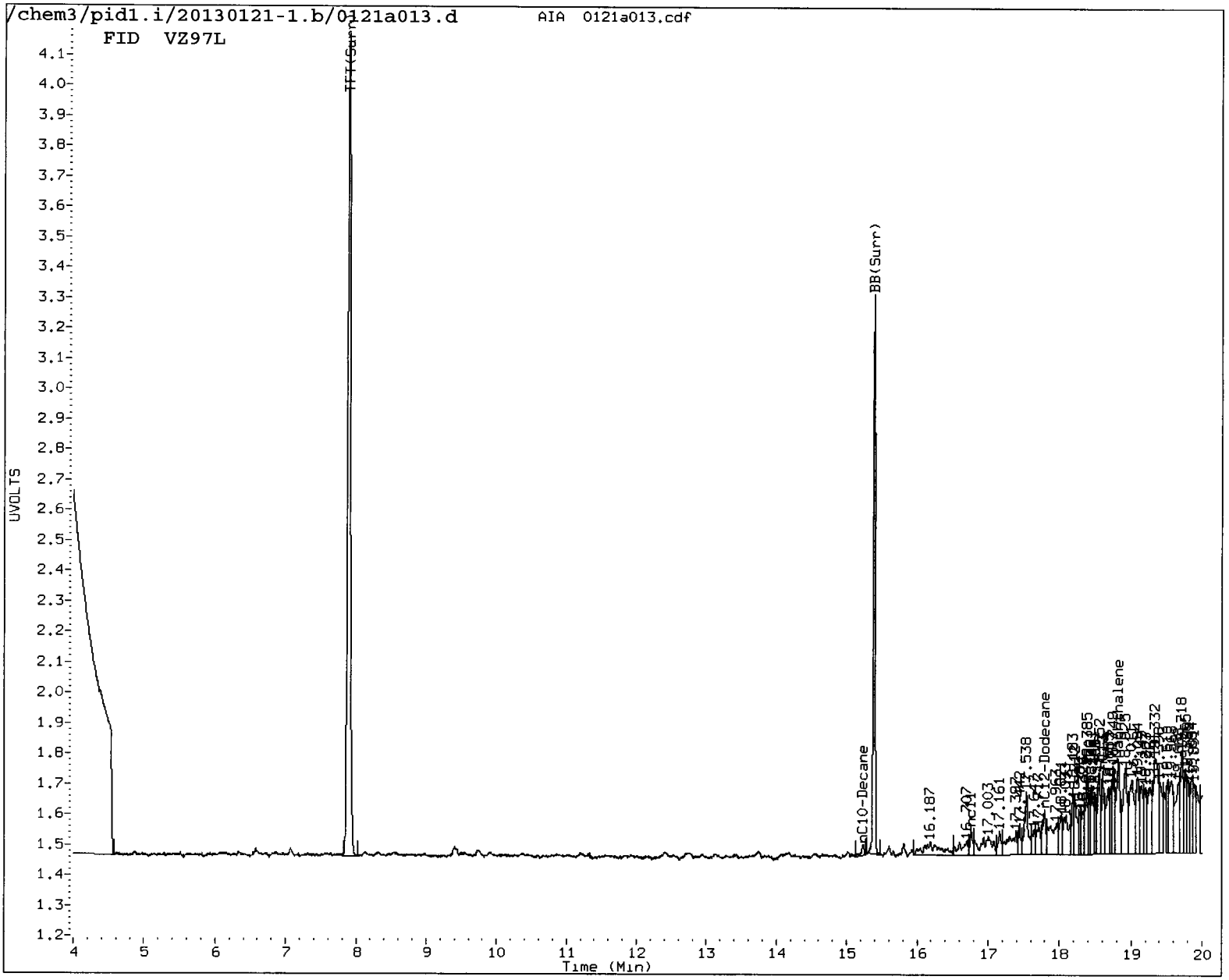
Column diameter: 0.18



Data File: /chem3/pid1.i/20130121-1.b/0121a013.d/0121a013.cdf
Injection Date: 21-JAN-2013 16:59
Instrument: pid1.i
Client Sample ID: CSIA20130110-012B



UZ97:01719



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: KC Date: 1/23/13

PC
1/23/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130121-1.b/0121a014.d
Data file 2: /chem3/pid1.i/20130121-2.b/0121a014.d
Method: /chem3/pid1.i/20130121-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: GCAL 2
Client ID:
Injection Date: 21-JAN-2013 17:30
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.887	-0.001	3112	53853	98.8	TFT(Surr)
15.386	0.001	1990	18784	98.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.89)	358114	832032	2.323 M
8015C 2MP-TMB	(4.29 to 16.20)	723723	1655721	2.288 M
AK101 nC6-nC10	(4.77 to 15.10)	582885	1327206	2.277 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	882512	2.353 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.896	0.000	3550	93.7	TFT(Surr)
15.394	0.001	7940	98.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.076	0.000	1971	7.95	Benzene
9.909	0.001	18800	83.56	Toluene
12.787	0.001	4867	24.68	Ethylbenzene
12.949	0.004	19411	90.28	M/P-Xylene
13.892	0.002	7048	41.99	O-Xylene
4.632	-0.023	436	6.06	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130121-1.b/0121a014.d

Date : 21-JAN-2013 17:30

Client ID:

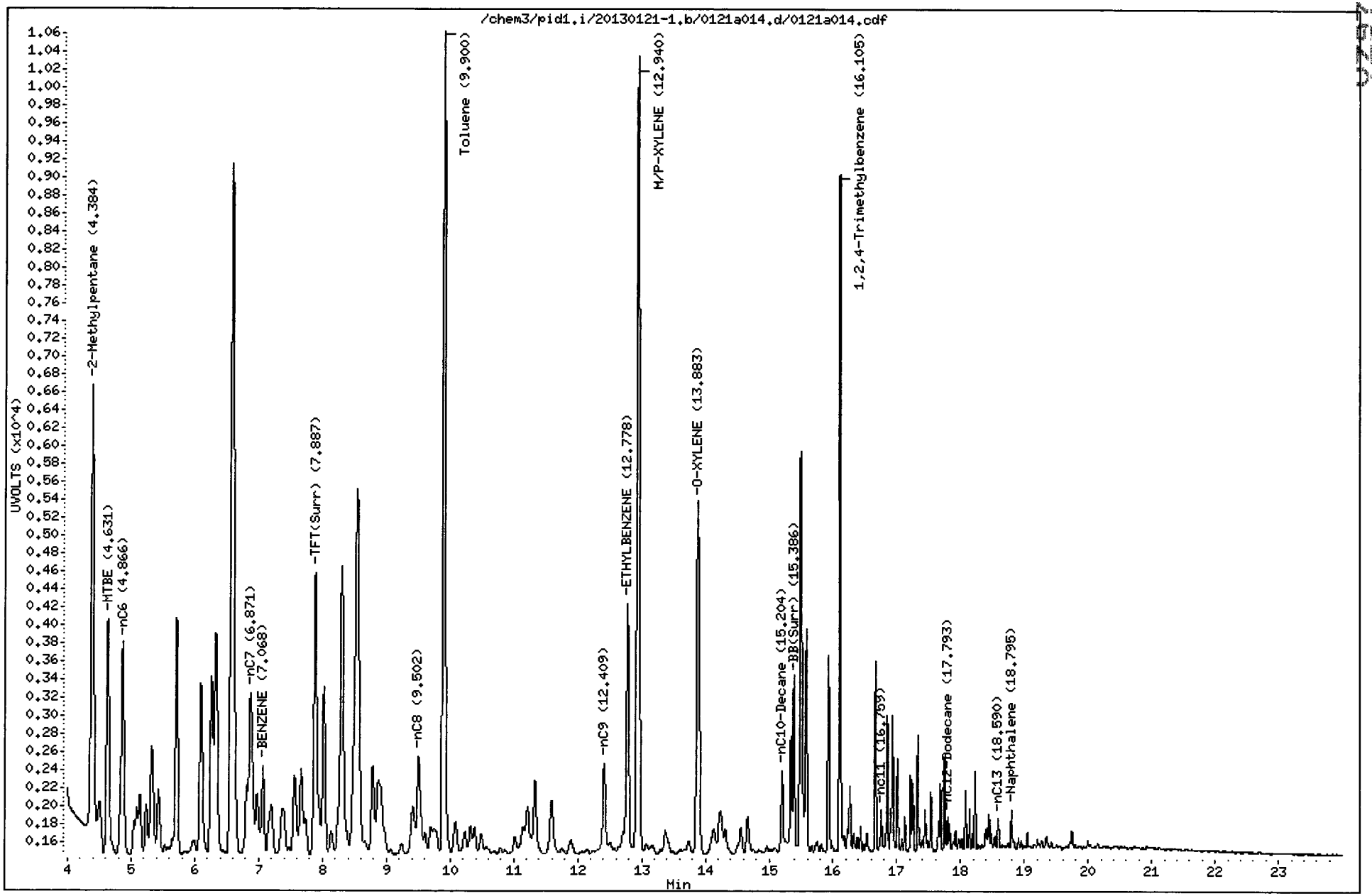
Sample Info: GCAL 2

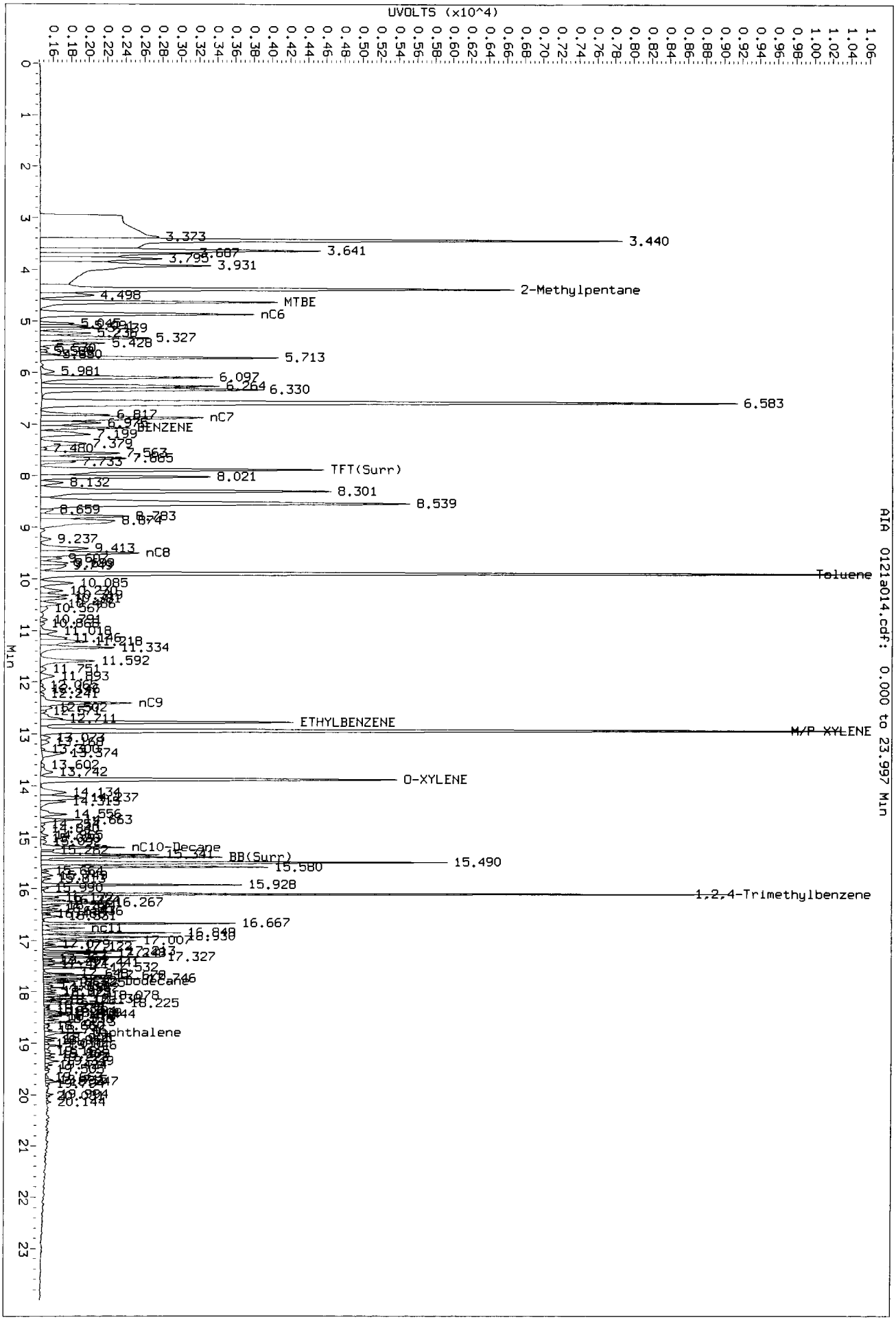
Instrument: pid1.i

Operator: PC

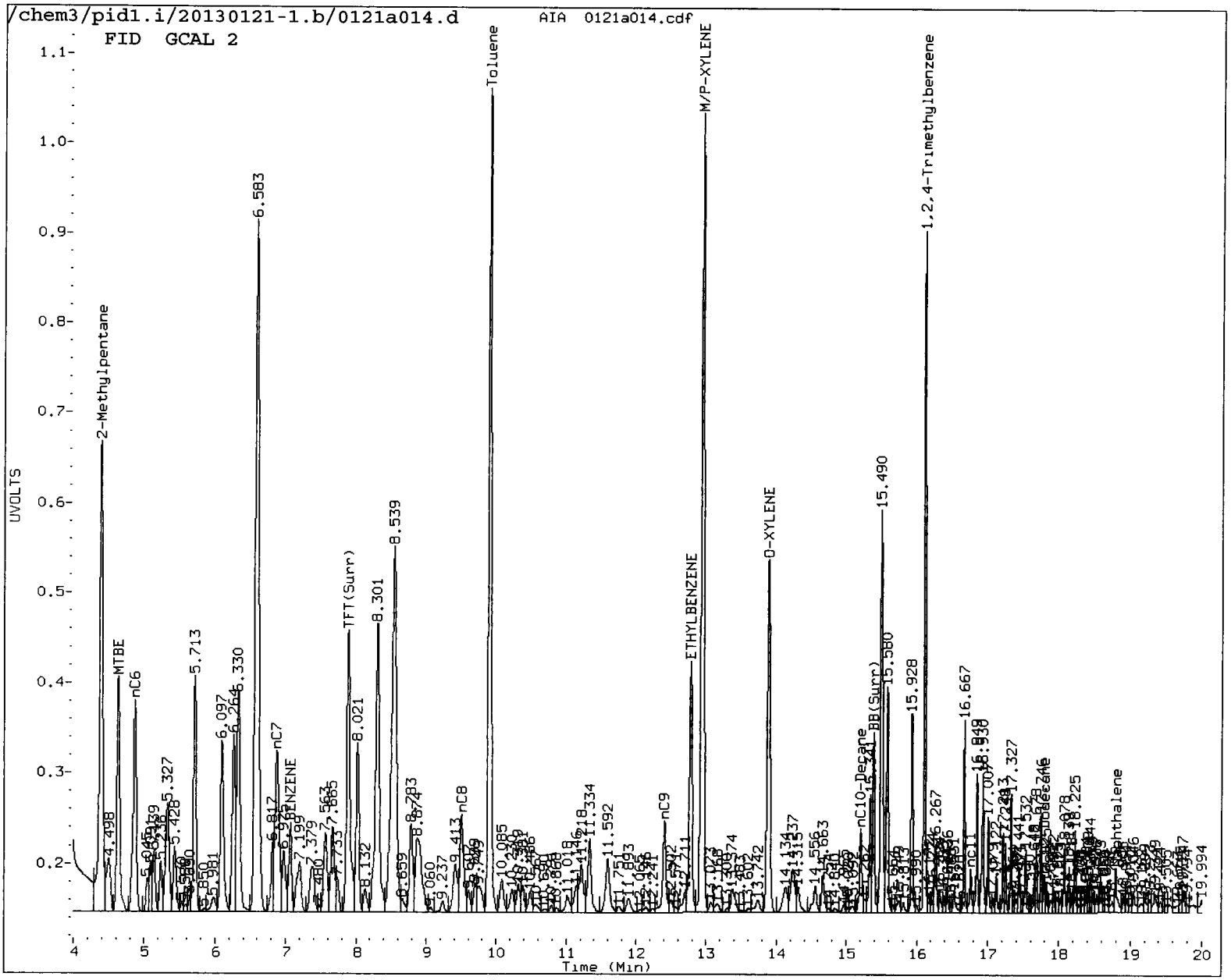
Column phase: RTX 502-2 FID

Column diameter: 0.18





Data File: /chem3/pid1.i/20130121-1.b/0121a014.d/0121a014.cdf
Injection Date: 21-JAN-2013 17:30
Instrument: pid1.i
Client Sample ID:



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: KC Date: 1/23/13

BC
1/23/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130121-1.b/0121a015.d
Data file 2: /chem3/pid1.i/20130121-2.b/0121a015.d
Method: /chem3/pid1.i/20130121-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: VZ97M
Client ID: CSIA20130110-013S+3
Injection Date: 21-JAN-2013 18:01
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.888	0.000	2765	40547	87.8	TFT(Surr)
15.385	0.000	2355	37901	116.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.89)	358114	745102	2.081
8015C 2MP-TMB	(4.29 to 16.20)	723723	317078	0.438
AK101 nC6-nC10	(4.77 to 15.10)	582885	197636	0.339
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	1318020	3.514

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.896	0.000	3269	86.3	TFT(Surr)
15.394	0.001	8211	102.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
12.760	-0.025	316	1.60	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130121-1.b/0121a015.d

Date : 21-JAN-2013 18:01

Client ID: CSIA20130110-013S+3

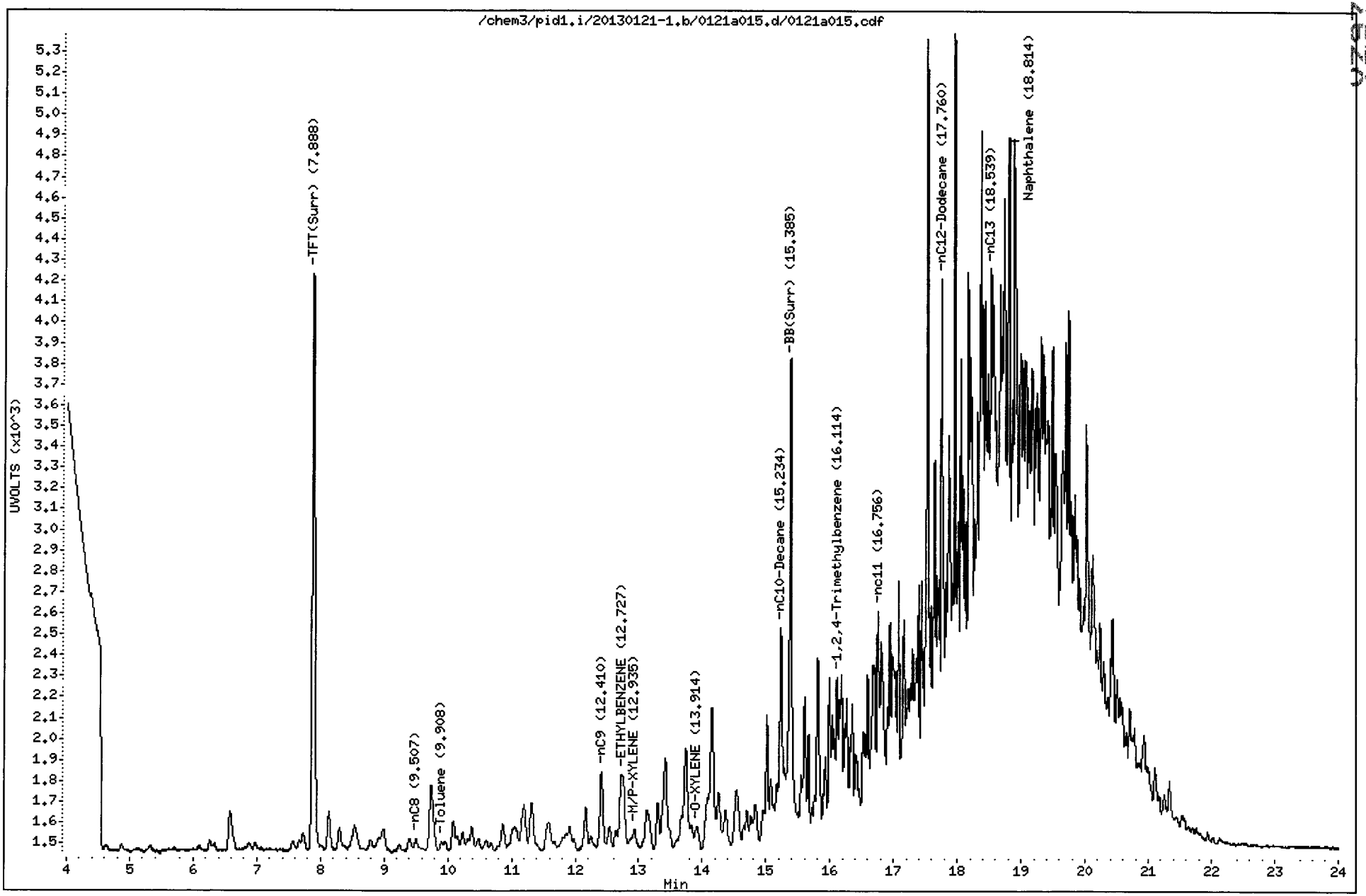
Sample Info: VZ97M

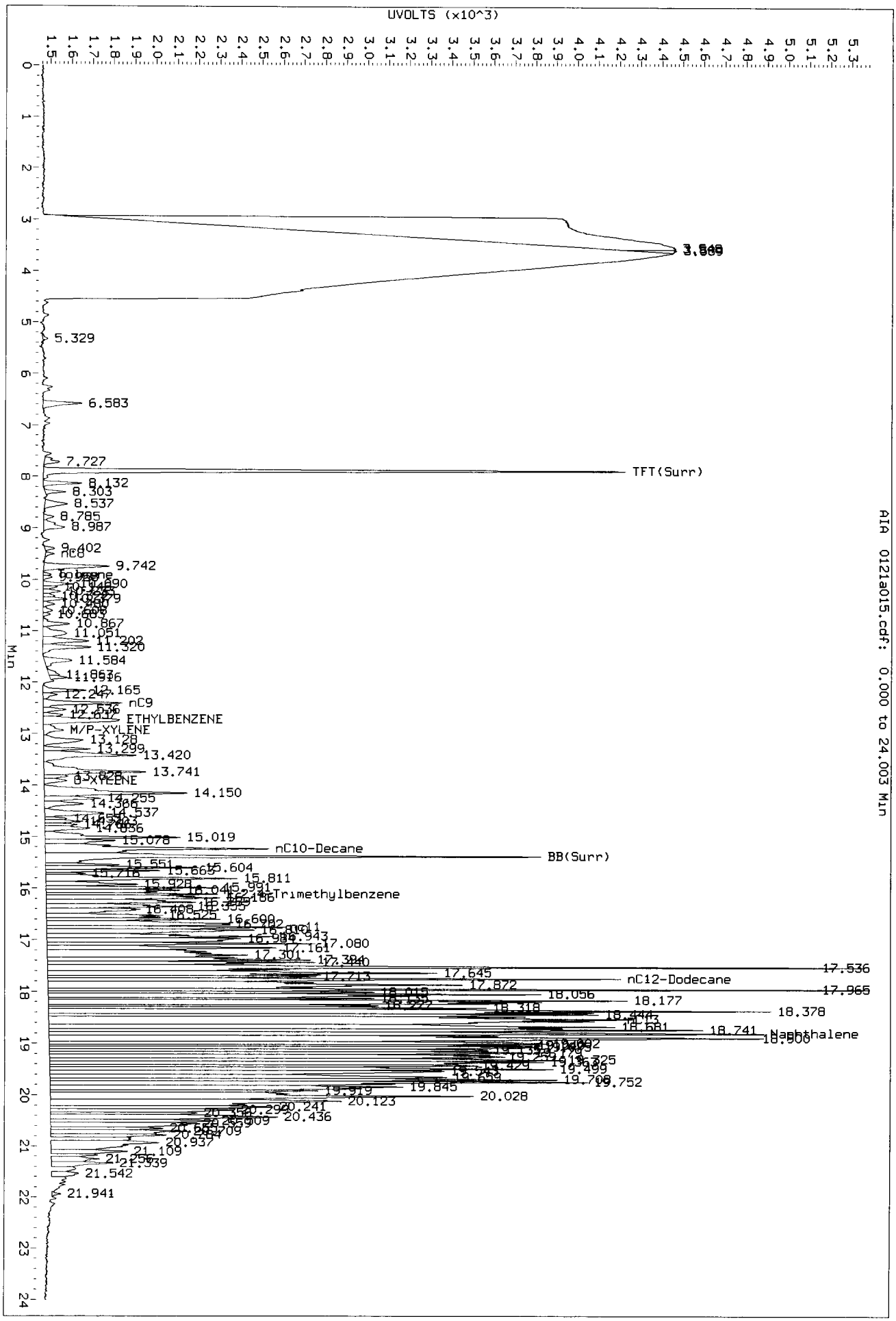
Column phase: RTX 502-2 FID

Instrument: pid1.i

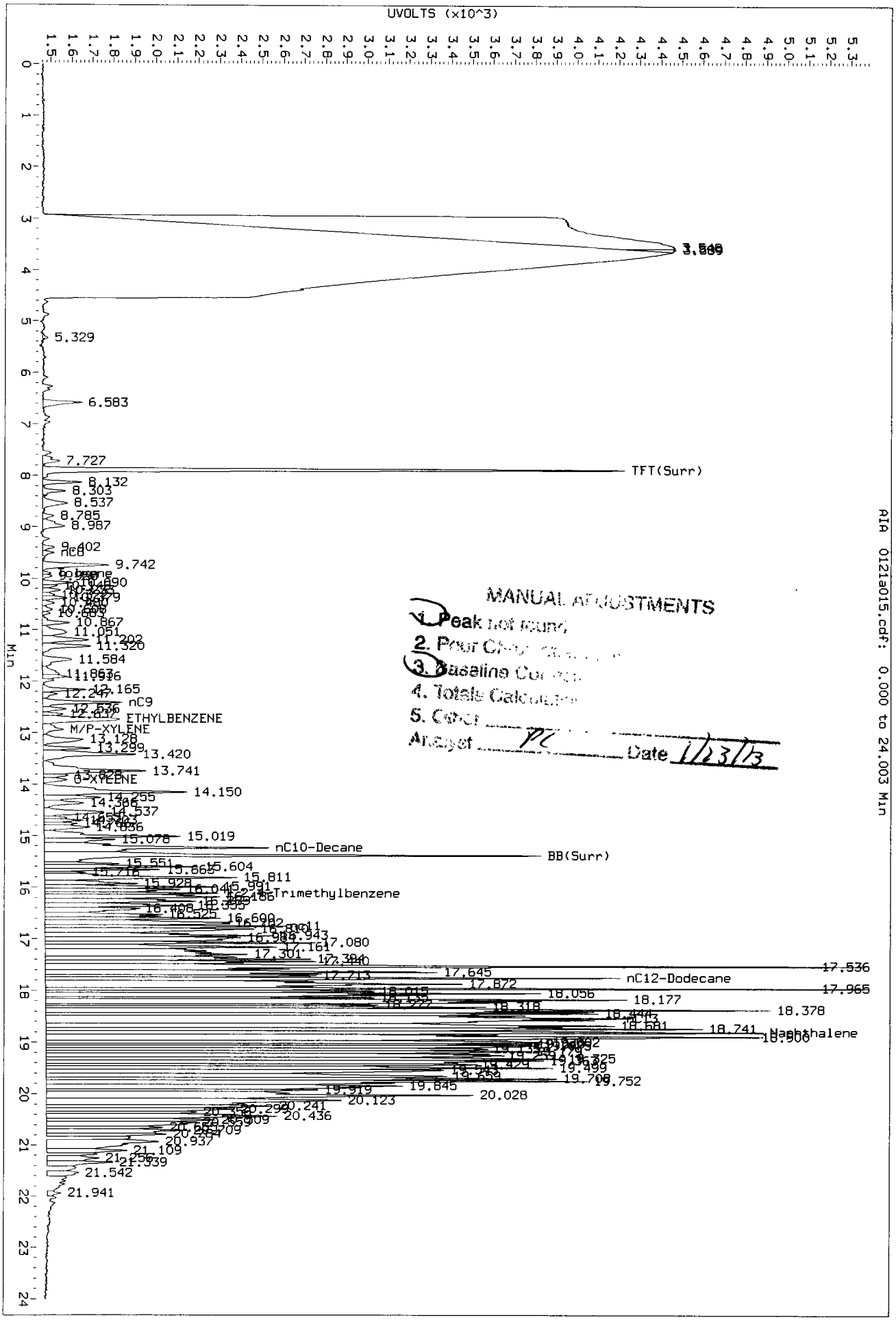
Operator: PC

Column diameter: 0.18




UVOLTS (x10^3)
Min
AIA 0121a015.cdf: 0.000 to 24.003 Min
Data File: /chem3/pid1.i/20130121-1.b/0121a015.d/0121a015.cdf
Injection Date: 21-JAN-2013 18:01
Instrument: pid1.i
Client Sample ID: CSIA20130110-0135+3
5.329
6.583
7.727
TFT(Surr)
8.132
8.303
8.537
8.785
8.987
9.402
nC8
9.742
10.867
11.051
11.202
11.320
11.584
12.165
nC9
ETHYLBENZENE
M/P-XYLENE
13.128
13.420
13.741
O-XYLENE
14.150
14.255
14.537
15.019
nC10-Decane
BB(Surr)
15.604
15.811
Trimethylbenzene
16.525
16.690
17.080
17.645
17.536
nC12-Dodecane
17.872
17.965
18.056
18.177
18.318
18.378
18.741
Naphthalene
18.900
19.499
19.752
19.845
20.028
20.123
20.241
20.436
20.937
21.109
21.339
21.542
21.941

V797 01748



MANUAL ADJUSTMENTS

1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other

Analyst PC Date 1/23/13

Data File: /chem3/pid1.i/20130121-1.b/0121a015.d/0121a015.cdf
Injection Date: 21-JAN-2013 18:01
Instrument: pid1.i
Client Sample ID: CSIA20130110-0135+3

AIA 0121a015.cdf: 0.000 to 24.003 Min

NC
1/23/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130121-1.b/0121a016.d
Data file 2: /chem3/pid1.i/20130121-2.b/0121a016.d
Method: /chem3/pid1.i/20130121-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: VZ970
Client ID: CSIA20130110-015S+9
Injection Date: 21-JAN-2013 18:32
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.890	0.002	2650	37358	84.1	TFT(Surr)
15.387	0.002	2133	28219	105.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.89)	358114	551290	1.539 M
8015C 2MP-TMB	(4.29 to 16.20)	723723	236264	0.326 M
AK101 nC6-nC10	(4.77 to 15.10)	582885	65370	0.112 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	1245741	3.321 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.898	0.002	3085	81.4	TFT(Surr)
15.395	0.002	7771	96.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
12.759	-0.027	162	0.82	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130121-1.b/0121a016.d

Date : 21-JAN-2013 18:32

Client ID: CSIA20130110-015S+9

Sample Info: VZ970

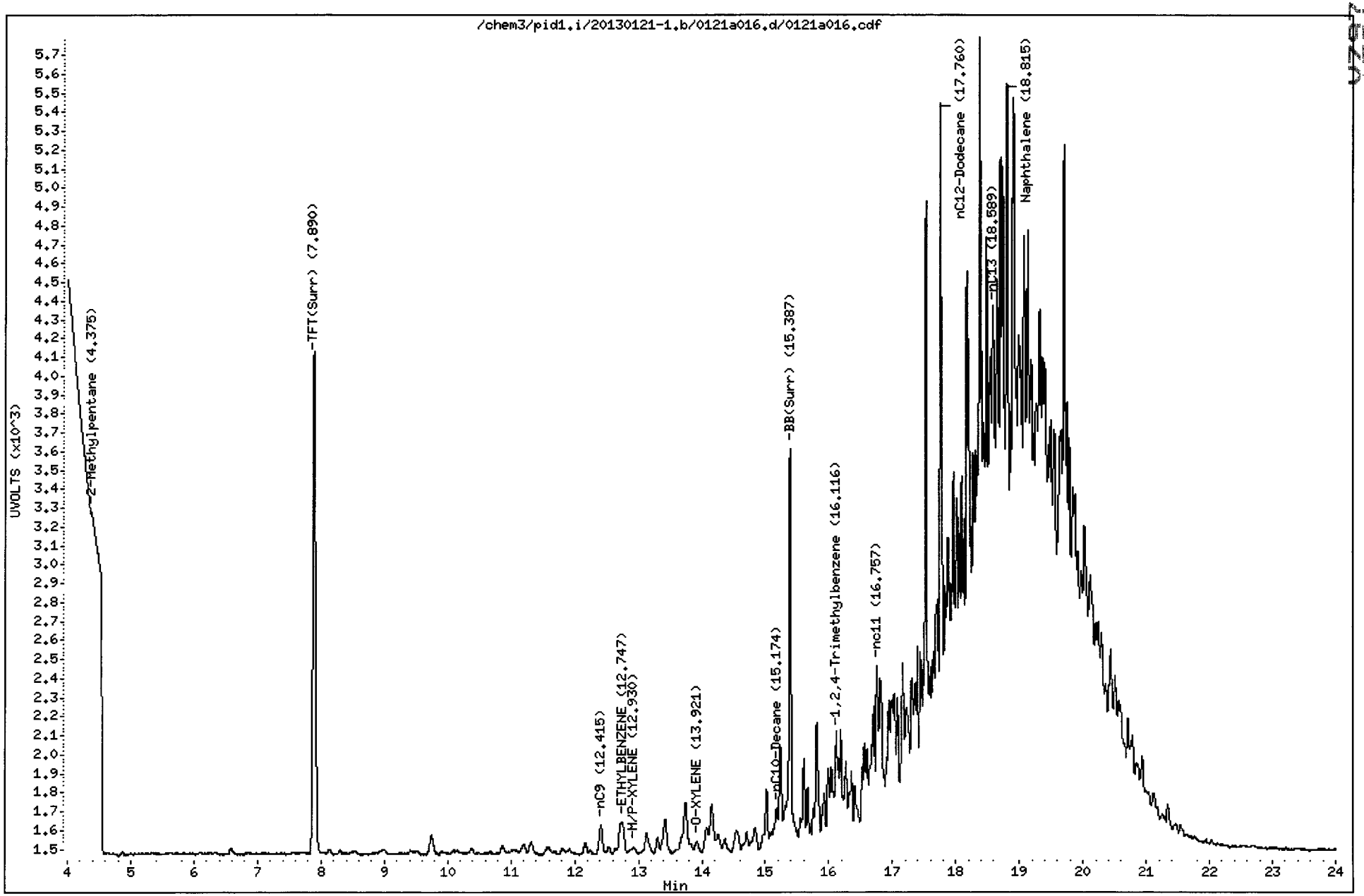
Column phase: RTX 502-2 FID

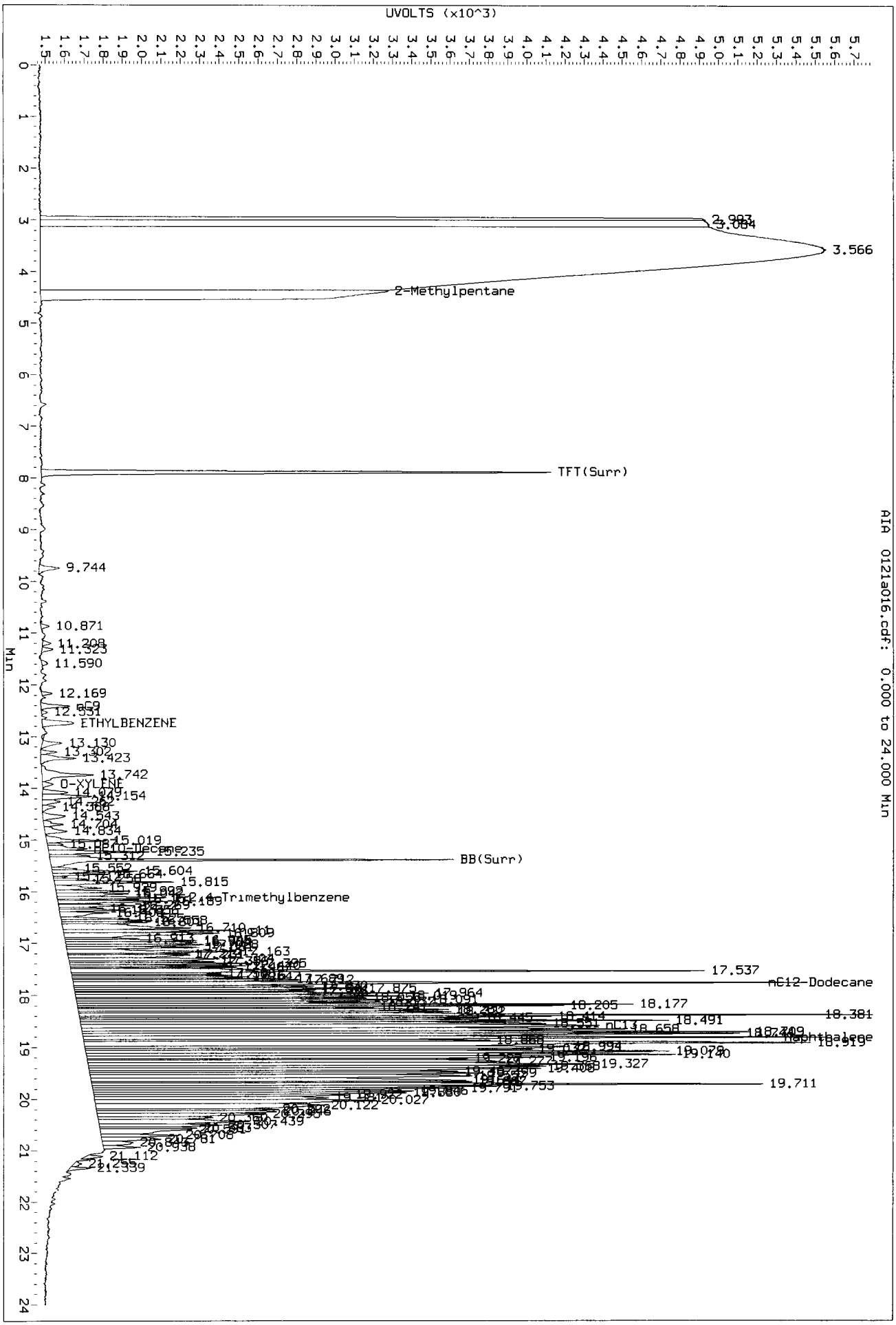
Instrument: pid1.i

Operator: PC

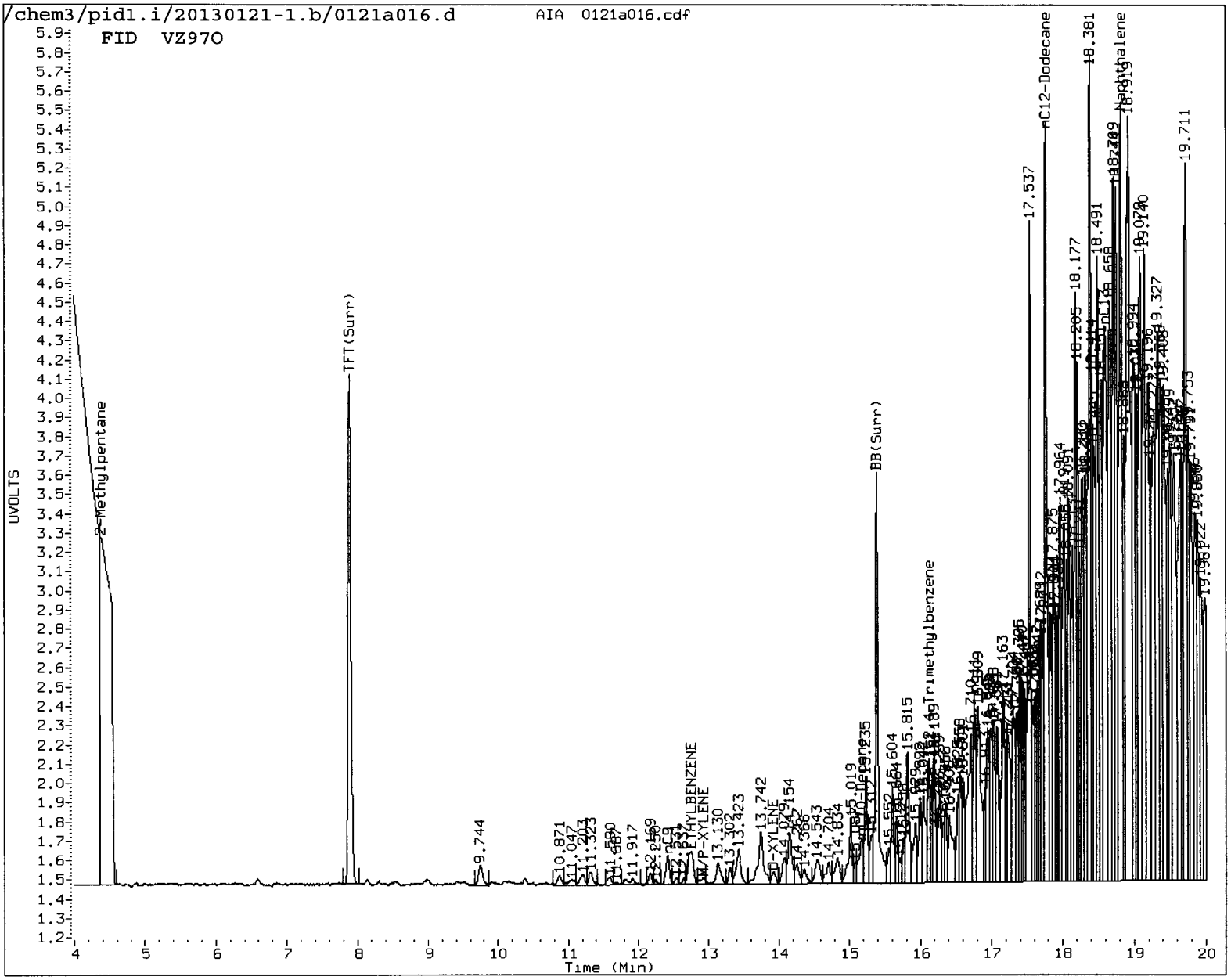
Column diameter: 0.18

VZ97 : 81751




UVOLTS (x10^3)
Min
Data File: /chem3/pid1.i/20130121-1.b/0121a016.d/0121a016.cdf
Injection Date: 21-JAN-2013 18:32
Instrument: pid1.i
Client Sample ID: CSIA20130110-0155+9
AIA 0121a016.cdf: 0.000 to 24.000 Min
2=Methylpentane
3.566
TFT(Surr)
9.744
10.871
11.323
11.590
12.169
ETHYLBENZENE
13.130
13.423
13.742
O-XYLENE
14.154
14.543
14.704
14.834
BB(Surr)
15.604
15.815
17.537
nC12-Dodecane
18.177
18.381
18.491
18.919
19.711
20.122
20.027
21.112
21.339

VZ97 : 01752



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: MC Date: 1/23/13

MC
1/23/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130121-1.b/0121a017.d
Data file 2: /chem3/pid1.i/20130121-2.b/0121a017.d
Method: /chem3/pid1.i/20130121-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: VZ97P
Client ID: CSIA20130111-016B
Injection Date: 21-JAN-2013 19:03
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.889	0.001	2721	38519	86.4	TFT(Surr)
15.387	0.001	2009	22509	98.9	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.89)	358114	199404	0.557 M
8015C 2MP-TMB	(4.29 to 16.20)	723723	155787	0.215 M
AK101 nC6-nC10	(4.77 to 15.10)	582885	31584	0.054 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	441695	1.178 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.897	0.001	3180	83.9	TFT(Surr)
15.394	0.002	7800	96.9	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130121-1.b/0121a017.d

Date : 21-JAN-2013 19:03

Client ID: CSIA20130111-016B

Sample Info: VZ97P

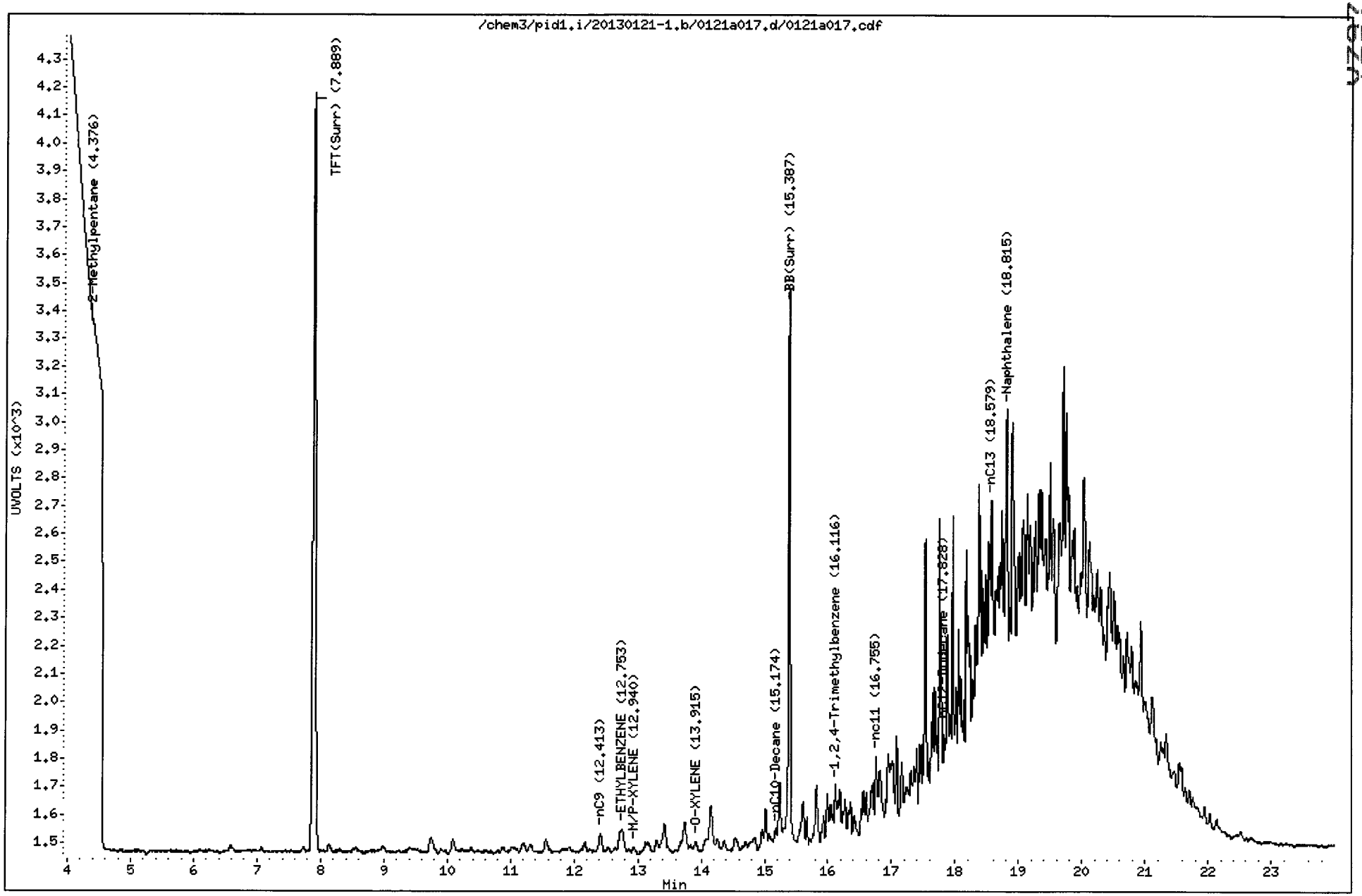
Column phase: RTX 502-2 FID

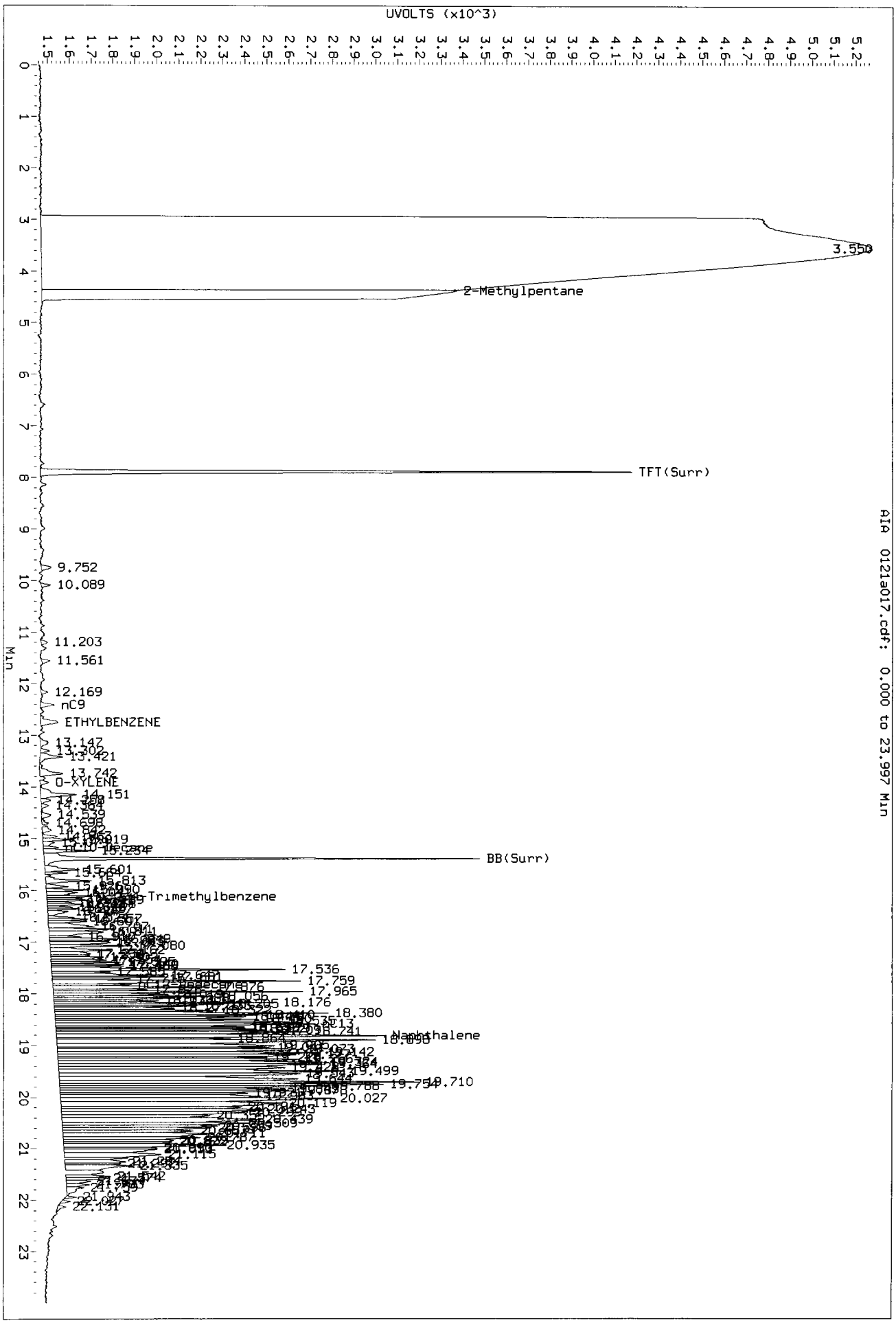
Instrument: pid1.i

Operator: PC

Column diameter: 0.18

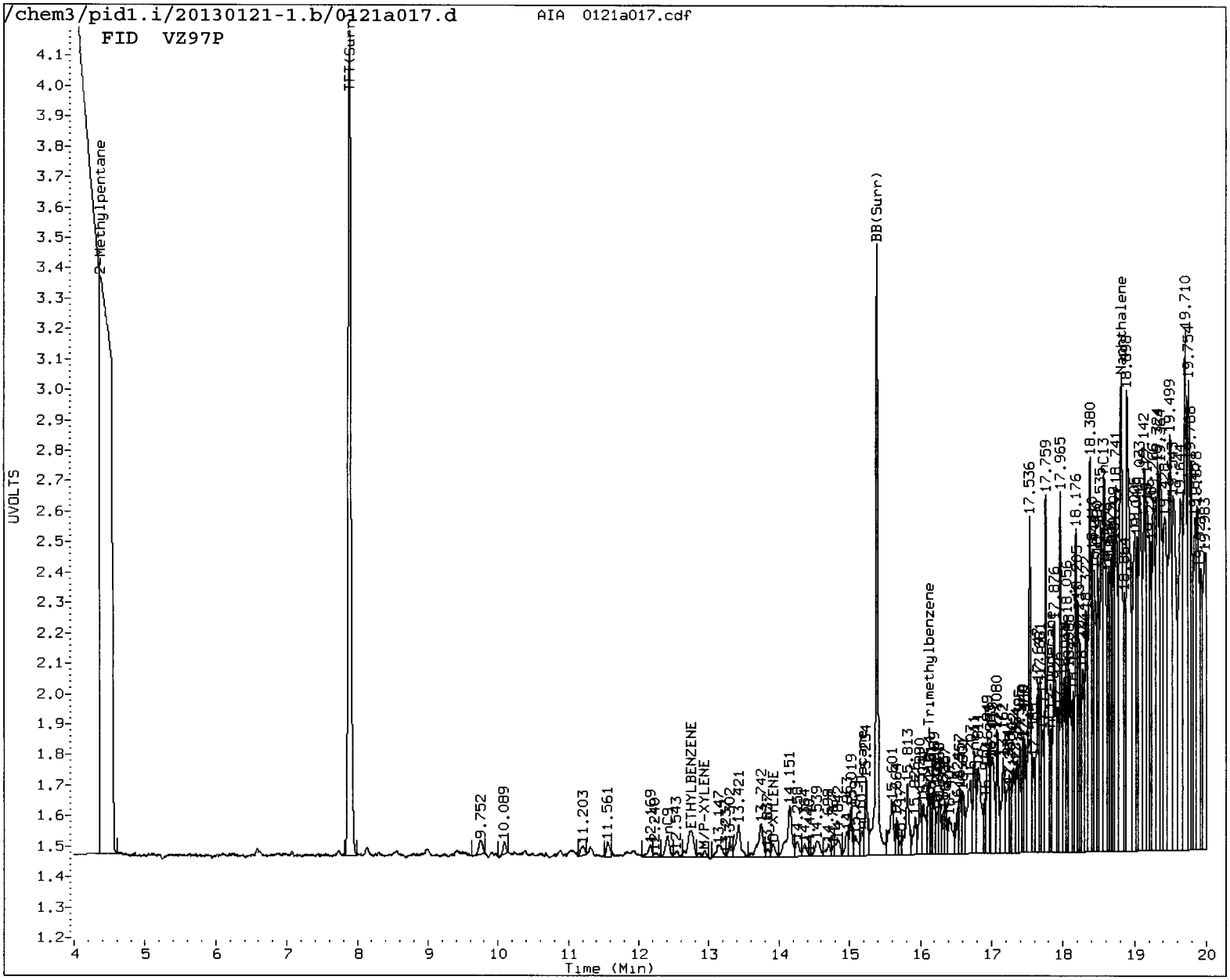
VZ97.01755





Data File: /chem3/pid1.i/20130121-1.b/0121a017.d/0121a017.cdf
Injection Date: 21-JAN-2013 19:03
Instrument: pid1.i
Client Sample ID: CSIA20130111-016B

AIA 0121a017.cdf: 0.000 to 23.997 Min



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YC Date: 1/23/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130121-1.b/0121a018.d
Data file 2: /chem3/pid1.i/20130121-2.b/0121a018.d
Method: /chem3/pid1.i/20130121-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: VZ97Q
Client ID: CSIA20130111-017B
Injection Date: 21-JAN-2013 19:34
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.888	0.000	2695	38549	85.6	TFT(Surr)
15.387	0.002	1949	17560	96.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.89)	358114	45272	0.126 M
8015C 2MP-TMB	(4.29 to 16.20)	723723	9033	0.012 M
AK101 nC6-nC10	(4.77 to 15.10)	582885	958	0.002
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	133889	0.357 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.896	0.000	3171	83.7	TFT(Surr)
15.394	0.002	7842	97.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

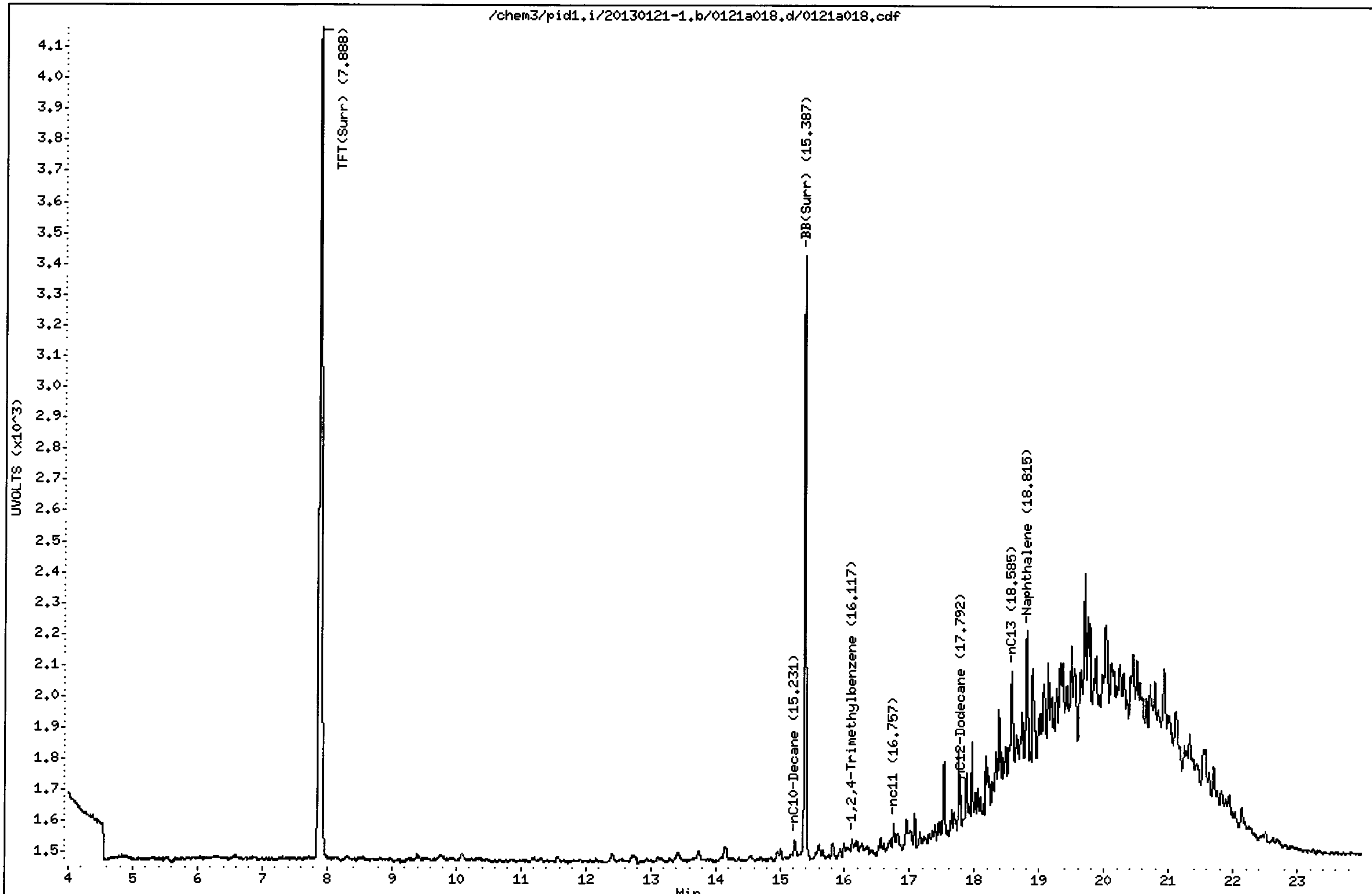
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130121-1.b/0121a018.d
Date : 21-JAN-2013 19:34
Client ID: CSIA20130111-017B
Sample Info: VZ97Q

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC
Column diameter: 0.18



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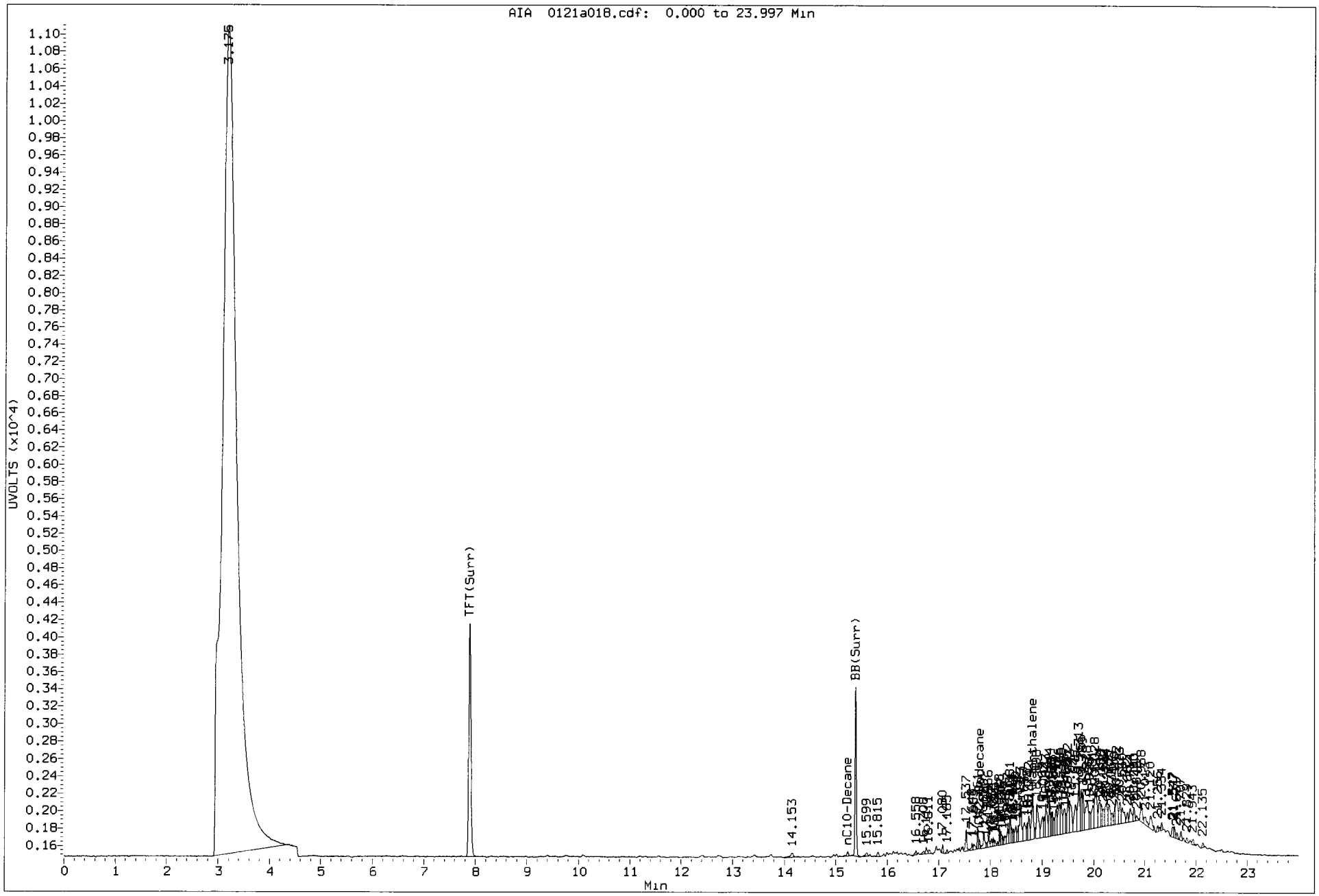
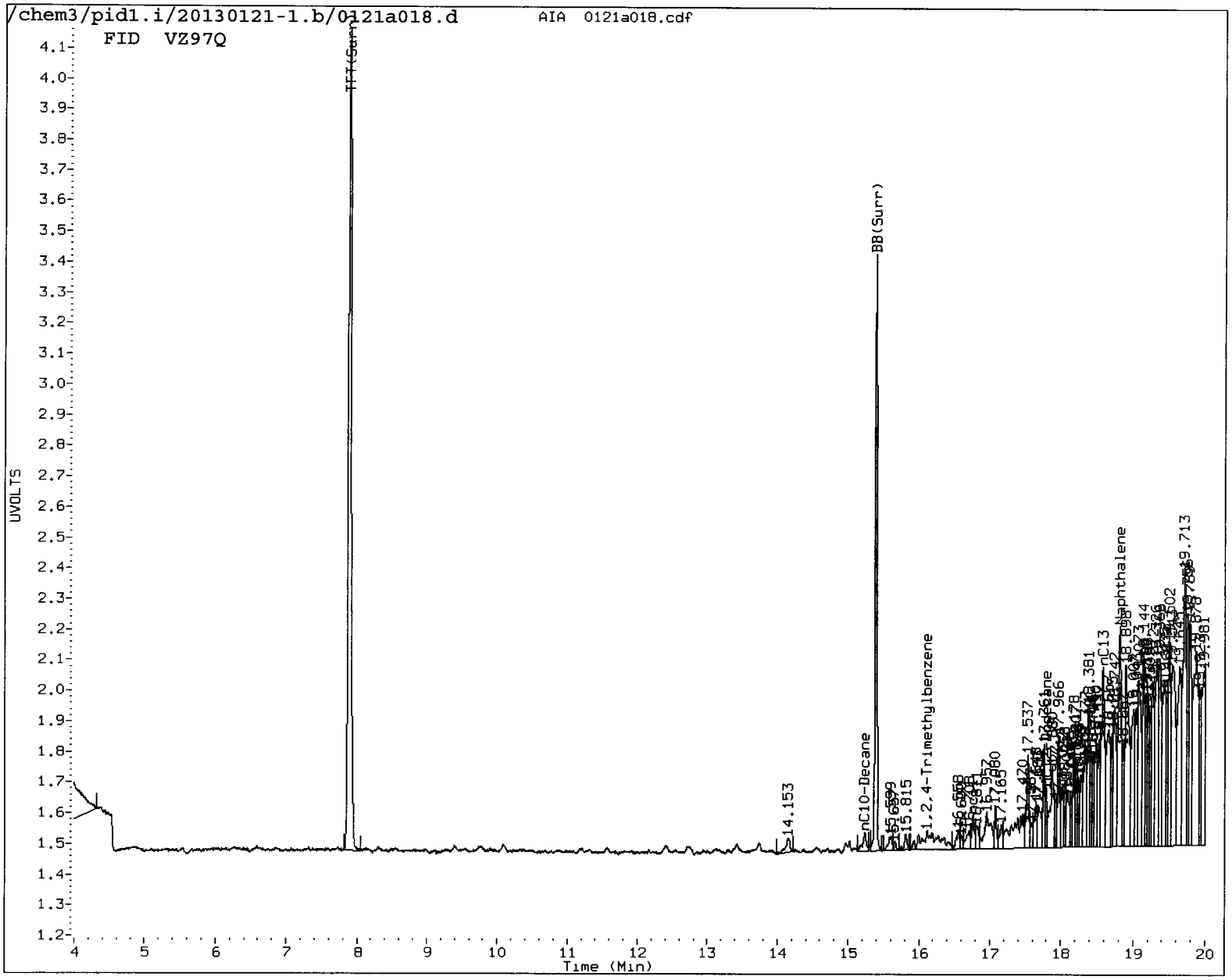
Injection Date: 21-JAN-2013 19:34
Instrument: pid1.i
Client Sample ID: CSIA20130111-017B





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: KC Date: 1/23/13

PC
1/23/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130121-1.b/0121a025.d
Data file 2: /chem3/pid1.i/20130121-2.b/0121a025.d
Method: /chem3/pid1.i/20130121-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 23-OCT-2012

ARI ID: GCAL 3
Client ID:
Injection Date: 21-JAN-2013 23:10
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.888	0.001	2954	52017	93.8	TFT(Surr)
15.387	0.002	1995	18438	98.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.80 to 17.89)	358114	781650	2.183 M
8015C 2MP-TMB	(4.29 to 16.20)	723723	1497058	2.069 M
AK101 nC6-nC10	(4.77 to 15.10)	582885	1201992	2.062 M
NWTPHG Tol-Nap	(9.80 to 18.90)	375093	823296	2.195 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.897	0.002	3352	88.5	TFT(Surr)
15.395	0.002	8011	99.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.078	0.002	1965	7.92	Benzene
9.911	0.003	18497	82.21	Toluene
12.788	0.003	4719	23.93	Ethylbenzene
12.950	0.006	19071	88.70	M/P-Xylene
13.894	0.003	7000	41.70	O-Xylene
4.634	-0.021	384	5.33	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130121-1.b/0121a025.d

Date : 21-JAN-2013 23:10

Client ID:

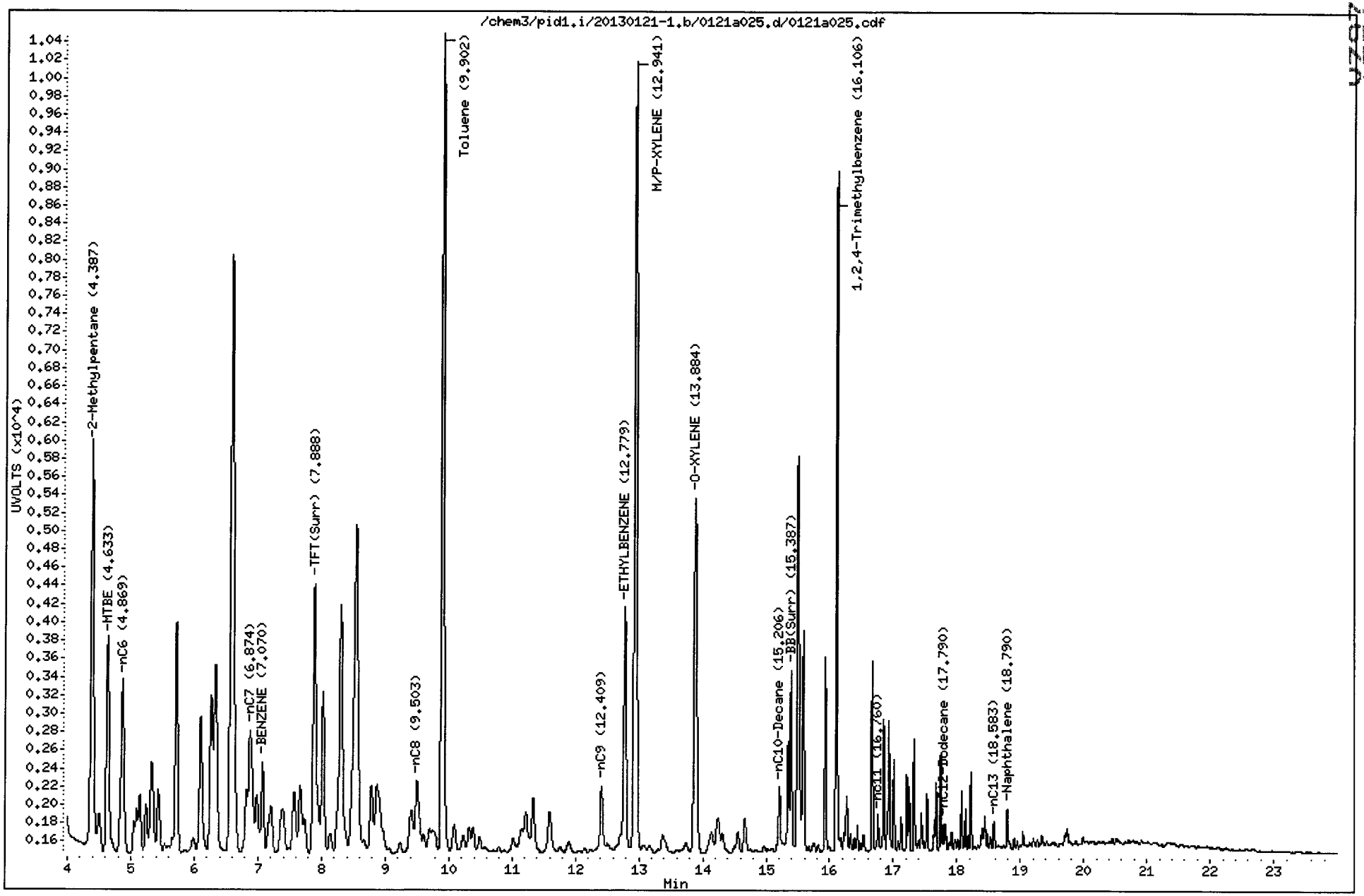
Sample Info: GCAL 3

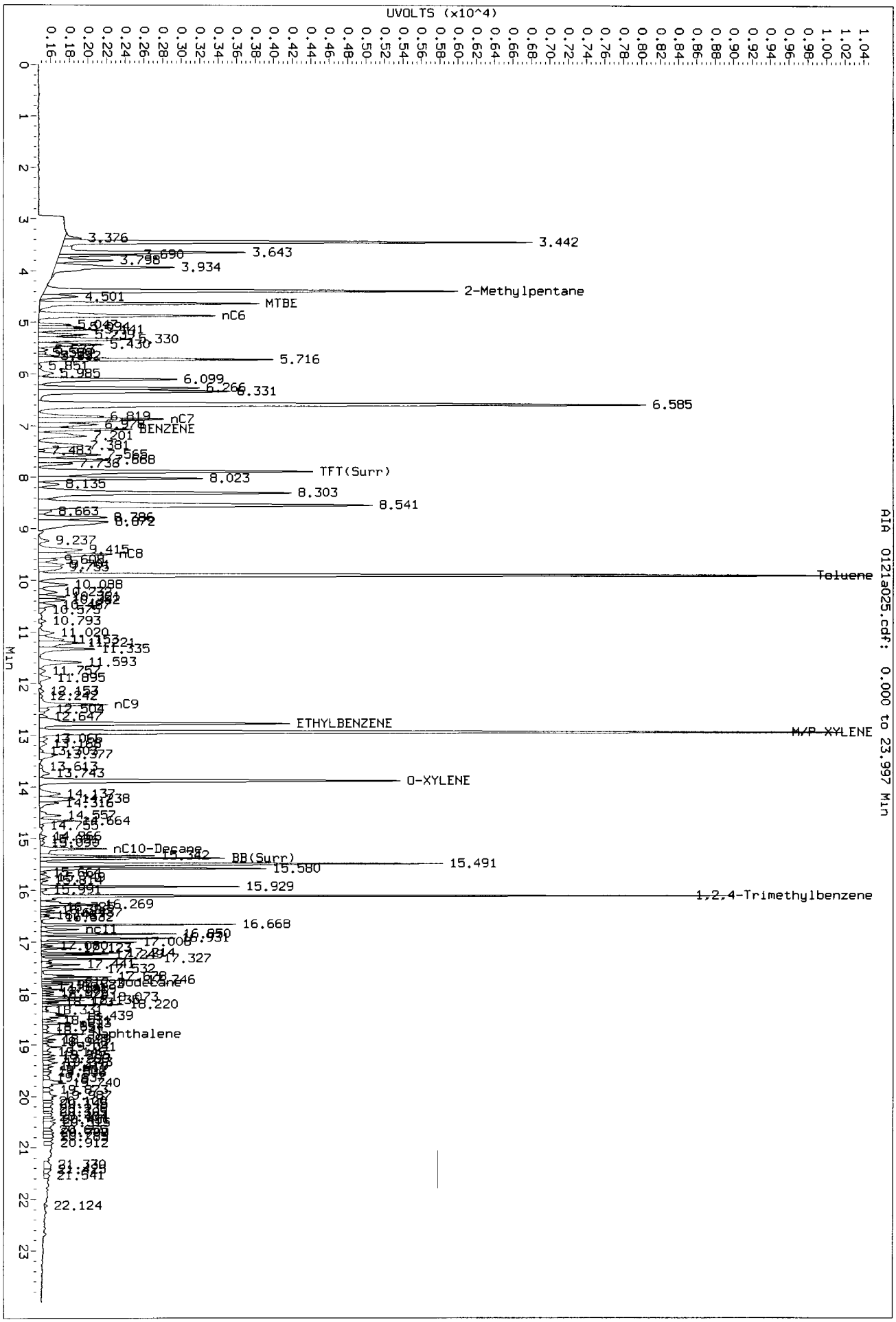
Column phase: RTX 502-2 FID

Instrument: pid1.i

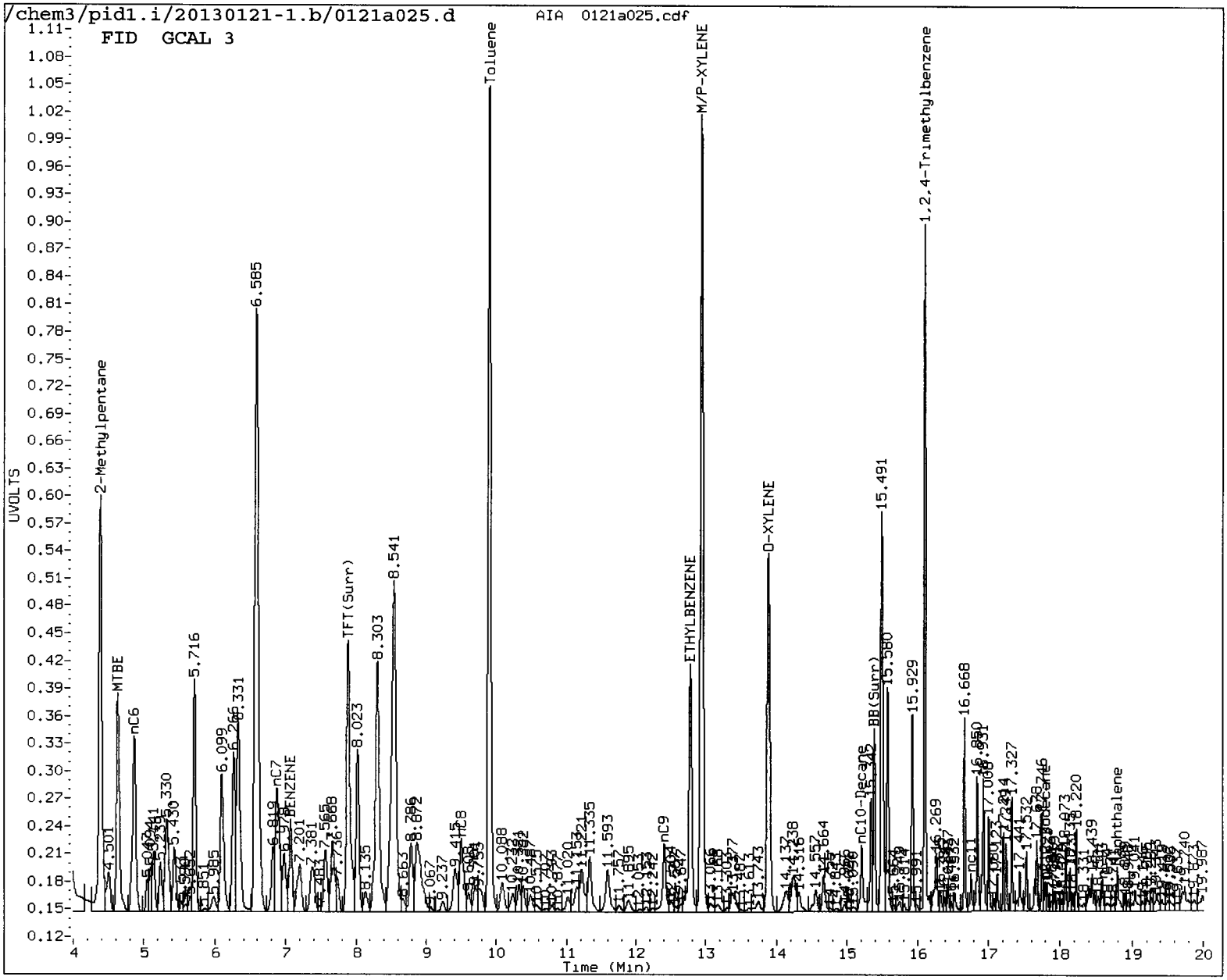
Operator: PC

Column diameter: 0.18




UVOLTS (x10^4)
Min
Data File: /chem3/pid1.i/20130121-1.b/0121a025.d/0121a025.cdf
Injection Date: 21-JAN-2013 23:10
Instrument: pid1.i
Client Sample ID:
AIA 0121a025.cdf: 0.000 to 23.997 Min
3.376
3.442
3.643
3.798
3.934
2-Methylpentane
4.501
MTBE
nC6
5.330
5.430
5.716
5.985
6.099
6.266
6.331
6.585
nC7
BENZENE
7.201
7.381
7.483
7.738
TFT(Surr)
8.023
8.135
8.303
8.541
8.663
8.672
9.237
9.415
nC8
9.793
Toluene
10.088
10.793
11.020
11.335
11.593
11.757
11.895
12.242
nC9
12.504
12.647
ETHYLBENZENE
M/P-XYLENE
13.377
13.613
13.743
O-XYLENE
14.316
14.557
14.664
nC10-Decane
BB(Surr)
15.491
15.580
15.929
1,2,4-Trimethylbenzene
16.269
16.668
nC11
16.850
16.931
17.008
17.327
17.532
17.678
18.220
18.439
Naphthalene
20.912
21.330
21.541
22.124

VZ97 · 01764



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: PC Date: 1/23/13

Metals Raw Data
Preparation Bench Sheets and Notes

ARI Job ID: VZ97

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: DM **Final Volume** 50 **Sample ID** V207 SSPK, MBSPK

Date: 01-16-13 **Final Volume (Hg):** 20

		Prepcode:	TWC		
		Spike Solution:	ICP Routine	ICP No GFA	GFA
		Standard No.:	3001-10		
		Vol Added (mL):	0.5		
	Ag		50		2.0
S	Al		200	200	
T	As		200 ✓		10
O	Ba		200 ✓	200	
C	Be		50	50	
K	Ca		1000 ✓	1000	
	Cd		50		2.0
	Co		50	50	
C	Cr		50 ✓	50	
O	Cu		50 ✓	50	
N	Fe		200 ✓	200	
C	K		1000 ✓	1000	
E	Mg		1000 ✓	1000	
N	Mn		50 ✓	50	
T	Na		1000 ✓	1000	
R	Ni		50 ✓	50	
A	Pb		200 ✓		10
T	Se		200		10
I	Sr		50	50	
O	Tl		200		10
N	V		50	50	
	Zn		50 ✓	50	

	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
Ag	25		
Al			500
As	25		
Ba	25		
Be	25		
Ca			500
Cd	25		
Co	25		
Cr	25		
Cu	25		
Fe			500
K			500
Mg			500
Mn	25		
Mo		25	
Na			500
Ni	25		
Pb	25		
Sb		25	
Se	80		
Tl	25		
U	25		
V	25		
Zn	80		

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std No.
Hg	TWM	CVA	1.0	0.02	2908-7
Hg MBSPK	↓	CVA	1.0	0.04	↓
Sb		ICP	2000		
Sb		GFA	100		
B		ICP	500		
Mo		ICP	500		
Si		ICP	10000		
Sn		ICP	500		
Ti		ICP	2000		

Additional Elements:

Element	Prepcode	Analysis	Stock Conc.	Stock Added	Std. No.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Digestion Log

Analyst: DM Date: 01-18-13 Time: 0913

Matrix: Water Block ID: #7 Block Temp: 90°C Thermometer: MP2C

ARI Sample ID	Btl #	pH<2	Prep Code: TWC Initial ~~Wt (g)~~ Vol (mL)	Prep Code: TWC Final Vol (mL)	Prep Code: Initial Wt (g) Vol (mL)	Prep Code: Final Vol (mL)	Comments
WA19 B	1	√	50.0	50.0			
" MB	—	√	↓	↓			
" MBSPK	—	√					
WA18 A	1	√					
" MB	—	√					
" MBSPK	—	√					
V2077 S	"	√					
" SDUP	"	√					
" SSPK	"	√					
" MB1	—	√	↓	↓			
" MB1SPK	—	√	50.0	50.0			
				01-18-13 DM			

Chemical/Reagent ID:

HNO_3: I7970 HCl: MP2422 H_2O_2: — Tube Lot #: 1208057

V797 · 01768

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: TWM Matrix: water

Analyst: DM Date: 01-18-13

Bath Temp: 95°C Start Time: 0930 End Time: 1130

ARI Sample ID	Sample Bottle #	pH<2	Initial ~~Weight (g)~~ Volume (mL)	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
VZ97 9	11	✓	20.0	20.0	1	Y	
" 9DUP	11	✓	↓	↓	1	↓	
" 9SPK	11	✓	↓	↓	1	↓	
" MB1	—	✓	↓	↓	1	↓	
" MB1SPK	—	✓	20.0	20.0	1	Y	
			01-18-13 DM				

Chemical/Reagent ID:

HNO_3: I7970 H_2SO_4: I7677 HCl: —

5% $K_2S_2O_8$: MB2418 5% $KMnO_4$: MB2401 Digest Tube Lot: 1206057

Metals Raw Data
Run Logs, Calibrations, and Raw Data

ARI Job ID: VZ97

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: 12-19-12 Analysis Date: 1-21-13 Analyst: BA

LR Date: 7-30-12 Page: 1 of 3

All corrections made by analyst unless otherwise noted. BA 1-21-13

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		STD 0			3003-2
		2			3007-6
		3			-7
		4			-8
		5			-9
		ICV			2988-6
		ICB			
		CRI			
		ICSA			
		ICSAB			
		Hi PUR QC7			
		Spex QC21			
		DI Check			
		CCV1			
		CCB1			
		WA22 MB2	LEN	5	Ba↑ - CAF
		AtDMA			
		At			
		AtSpK			
		CCV2			
		CCB2			
		VZ85 MB	TWC		
		VZ89 MB2			
		C			

VZ97:01771

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 1-21-13 Analyst: BA

LR Date: — Page: 2 of 3

All corrections made by analyst unless otherwise noted. BA 1-21-13

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		VZ89 D	TWC		
		VZ85 ADUP			✓
		A			
		ASPK			✓
		MBSPK			✓
		VZ89 MB2SPK			✓
		CCV3			
		CCB3			
		WA20 MB	SWC	2	
		VZ87 MB	TWC		
		ADUP			✓
		A			
		ASPK			✓
		WA20 ADUP	SWC	2	✓
		A			
		ASPK			✓ Zn↑ - CAF
		MBSPK			
		VZ87 MBSPK	TWC		
		CCV4			
		CCB4			
		VZ97 MB1	TWC		
		SDUP			✓
		S			
		SSPK			✓ Ca, K, Mg, Na STL
		MB1SPK			✓

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 1-21-13 Analyst: BA

LR Date: — Page: 3 of 3

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		CCV5			
		CCB5			End Plot (VZ97)
		WA18 MB	TWC		
		WA19 MB	↓		
		↓ B			
		WA18 A			
		↓ MBSPK		✓	
		WA19 ↓		✓	
		CCV6			
		CCB6			
		BA 1/21/13			

VZ97 : 01773

Nebulizer Parameters: Hg_ReAlign

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

1/21/2013 10:32:01 AM Hg ReAlign... Actual peak offset (nm): 0.003
Drift (nm): 0.000 Slit adjustment: 0

Analysis Begun

Start Time: 1/21/2013 10:39:03 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 1/21/2013 8:44:13 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\BLKS.sif
Batch ID:
Results Data Set: blanks
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Method Loaded
Method Name: 7300bcESI2FAST
IEC File: IEC110912A.iec
Method Description: 12Axial Elements
Method Last Saved: 8/13/2012 7:13:22 AM
MSF File:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Al 308.215	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
B 249.677	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Be 313.042	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ca 317.933	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cd 228.802	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Cr 267.716	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Fe 273.955	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
K 766.490	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Mg 279.077	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mn 257.610	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Na 589.592	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Na 330.237	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ni 231.604	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Se 196.026	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Si 288.158	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Ti 334.903	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Zn 206.200	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
ScA 357.253	Lin, Calc Int	Peak Area	Axial	n/a	n/a
ScR 361.383	Lin, Calc Int	Peak Area	Radial	n/a	n/a

Sequence No.: 1
Sample ID: B1
Autosampler Location: 1
Date Collected: 1/21/2013 10:39:10 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: B1

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Analysis Begun

Start Time: 1/21/2013 11:05:59 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 1/21/2013 8:44:13 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISETMON.sif
Batch ID:
Results Data Set: I2130121
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: Calib Blank 1
Autosampler Location: 1
Date Collected: 1/21/2013 11:06:00 AM
Data Type: Original

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	3038652.1	7997.24	0.26%	100.0	%
ScR 361.383	350662.4	2219.08	0.63%	100.0	%
Ag 328.068†	-94.6	25.92	27.39%	[0.00]	mg/L
Al 308.215†	231.1	2.97	1.29%	[0.00]	mg/L
As 188.979†	-19.6	3.37	17.18%	[0.00]	mg/L
B 249.677†	14.3	4.19	29.28%	[0.00]	mg/L
Ba 233.527†	33.0	4.37	13.27%	[0.00]	mg/L
Be 313.042†	771.4	14.66	1.90%	[0.00]	mg/L
Ca 317.933†	161.0	17.19	10.68%	[0.00]	mg/L
Cd 228.802†	330.8	5.00	1.51%	[0.00]	mg/L
Co 228.616†	-110.9	5.65	5.10%	[0.00]	mg/L
Cr 267.716†	-200.8	8.76	4.36%	[0.00]	mg/L
Cu 324.752†	3320.7	16.97	0.51%	[0.00]	mg/L
Fe 273.955†	25.0	1.23	4.92%	[0.00]	mg/L
K 766.490†	536.8	24.30	4.53%	[0.00]	mg/L
Mg 279.077†	94.7	9.36	9.89%	[0.00]	mg/L
Mn 257.610†	234.8	4.32	1.84%	[0.00]	mg/L
Mo 202.031†	100.5	4.36	4.34%	[0.00]	mg/L
Na 589.592†	-273.2	26.03	9.53%	[0.00]	mg/L
Na 330.237†	-238.0	8.20	3.44%	[0.00]	mg/L
Ni 231.604†	-7.8	0.98	12.59%	[0.00]	mg/L
Pb 220.353†	50.5	4.58	9.07%	[0.00]	mg/L
Sb 206.836†	90.9	3.52	3.87%	[0.00]	mg/L
Se 196.026†	-53.8	4.09	7.59%	[0.00]	mg/L
Si 288.158†	64.3	1.63	2.53%	[0.00]	mg/L
Sn 189.927†	-6.3	2.17	34.52%	[0.00]	mg/L
Sr 421.552†	437.4	45.57	10.42%	[0.00]	mg/L
Ti 334.903†	-98.2	13.15	13.39%	[0.00]	mg/L
Tl 190.801†	-51.5	1.28	2.49%	[0.00]	mg/L
V 292.402†	174.8	17.47	9.99%	[0.00]	mg/L
Zn 206.200†	3.6	1.30	35.86%	[0.00]	mg/L

Sequence No.: 2
Sample ID: STD2
Autosampler Location: 2
Date Collected: 1/21/2013 11:10:17 AM
Data Type: Original

Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: STD2

Analyte	Mean Corrected	Calib

Analyte	Intensity	Std.Dev.	RSD	Conc.	Units
ScA 357.253	3059760.3	5220.75	0.17%	100.7	%
ScR 361.383	350398.7	1557.84	0.44%	99.92	%
Ba 233.527†	57671.5	383.79	0.67%	[10]	mg/L
Cd 228.802†	362107.3	469.99	0.13%	[10]	mg/L
Co 228.616†	512695.9	1524.97	0.30%	[10]	mg/L
Cr 267.716†	76212.2	228.60	0.30%	[10]	mg/L
Cu 324.752†	3094058.1	4734.89	0.15%	[10]	mg/L
Mn 257.610†	480088.4	2491.32	0.52%	[10]	mg/L
V 292.402†	1590818.3	5213.82	0.33%	[10]	mg/L

Sequence No.: 3
Sample ID: STD3

Autosampler Location: 3
Date Collected: 1/21/2013 11:12:05 AM
Data Type: Original

Nebulizer Parameters: STD3

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: STD3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
ScA 357.253	3038936.1	14582.19	0.48%	100.0	%
ScR 361.383	352298.9	3028.29	0.86%	100.5	%
Ag 328.068†	228897.5	696.60	0.30%	[1.0]	mg/L
As 188.979†	23043.4	148.43	0.64%	[10]	mg/L
B 249.677†	84239.4	216.57	0.26%	[10]	mg/L
Be 313.042†	3395472.1	51331.09	1.51%	[5.0]	mg/L
Na 589.592†	657228.1	7439.43	1.13%	[50]	mg/L
Ni 231.604†	52036.8	61.41	0.12%	[10]	mg/L
Pb 220.353†	113238.0	880.38	0.78%	[10]	mg/L
Se 196.026†	19025.8	105.29	0.55%	[10]	mg/L
Sr 421.552†	5046509.1	59322.18	1.18%	[5]	mg/L
Tl 190.801†	30211.3	274.00	0.91%	[10]	mg/L
Zn 206.200†	50167.4	139.97	0.28%	[10]	mg/L

Sequence No.: 4
Sample ID: STD4

Autosampler Location: 4
Date Collected: 1/21/2013 11:14:40 AM
Data Type: Original

Nebulizer Parameters: STD4

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: STD4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Calib Conc.	Units
ScA 357.253	3047994.0	5500.48	0.18%	100.3	%
ScR 361.383	354504.6	107.97	0.03%	101.1	%
Mo 202.031†	266769.3	1011.95	0.38%	[10]	mg/L
Sb 206.836†	43031.1	44.80	0.10%	[10]	mg/L
Si 288.158†	23885.2	242.86	1.02%	[10]	mg/L
Sn 189.927†	52968.3	45.24	0.09%	[10]	mg/L
Ti 334.903†	252753.9	753.74	0.30%	[10]	mg/L

Sequence No.: 5
Sample ID: STD5

Autosampler Location: 5
Date Collected: 1/21/2013 11:16:56 AM
Data Type: Original

Nebulizer Parameters: STD5

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

Mean Data: STD5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	2865690.8	13183.24	0.46%	94.31	%
ScR 361.383	345005.5	954.66	0.28%	98.39	%
Al 308.215†	54791.9	73.90	0.13%	[30]	mg/L
Ca 317.933†	472911.5	1343.76	0.28%	[30]	mg/L
Fe 273.955†	177636.6	743.29	0.42%	[100]	mg/L
K 766.490†	212882.9	897.95	0.42%	[100]	mg/L
Mg 279.077†	45150.9	14.37	0.03%	[30]	mg/L
Na 330.237†	3409.7	12.06	0.35%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	228900	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1826	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	2304	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	8424	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	5767	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	679100	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	15760	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	36210	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	51270	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	7621	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	309400	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1776	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	2129	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	1505	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	48010	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	26680	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	13140	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	34.10	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	5204	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	11320	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	4303	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1903	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	2389	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	5297	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	1009000	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	25280	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	3021	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	159100	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	5017	0.00000	1.000000	

Analysis Begun

Start Time: 1/21/2013 11:24:58 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 1/21/2013 8:44:13 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISETMON.sif
Batch ID:
Results Data Set: I2130121
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Method Loaded
Method Name: 7300bcESI2FAST
IEC File: IEC110912A.iec
Method Description: 12Axial Elements
Method Last Saved: 1/21/2013 11:09:38 AM
MSF File:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Al 308.215	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
B 249.677	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Be 313.042	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ca 317.933	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cd 228.802	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Cr 267.716	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Fe 273.955	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
K 766.490	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Mg 279.077	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mn 257.610	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Na 589.592	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Na 330.237	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ni 231.604	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Se 196.026	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Si 288.158	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Ti 334.903	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Zn 206.200	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
ScA 357.253	Lin, Calc Int	Peak Area	Axial	n/a	n/a
ScR 361.383	Lin, Calc Int	Peak Area	Radial	n/a	n/a

Sequence No.: 1
Sample ID: ICV
Autosampler Location: 7
Date Collected: 1/21/2013 11:25:00 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	3012941.5	99.15	%	0.443				0.45%
ScR 361.383	340755.9	97.17	%	0.598				0.62%
Ag 328.068†	240760.3	1.052	mg/L	0.0053	1.052	mg/L	0.0053	0.51%
Al 308.215†	3758.0	2.023	mg/L	0.0020	2.023	mg/L	0.0020	0.10%
As 188.979†	4595.0	2.019	mg/L	0.0105	2.019	mg/L	0.0105	0.52%

B 249.677†	8702.8	1.032 mg/L	0.0023	1.032 mg/L	0.0023	0.22%
Ba 233.527†	5941.8	1.030 mg/L	0.0038	1.030 mg/L	0.0038	0.37%
Be 313.042†	687472.9	1.012 mg/L	0.0028	1.012 mg/L	0.0028	0.28%
Ca 317.933†	32586.4	2.067 mg/L	0.0059	2.067 mg/L	0.0059	0.29%
Cd 228.802†	37688.4	1.028 mg/L	0.0084	1.028 mg/L	0.0084	0.82%
Co 228.616†	51299.7	0.9985 mg/L	0.00359	0.9985 mg/L	0.00359	0.36%
Cr 267.716†	7793.2	1.022 mg/L	0.0025	1.022 mg/L	0.0025	0.25%
Cu 324.752†	320565.4	1.036 mg/L	0.0041	1.036 mg/L	0.0041	0.40%
Fe 273.955†	3670.0	2.059 mg/L	0.0108	2.059 mg/L	0.0108	0.53%
K 766.490†	42651.6	20.04 mg/L	0.052	20.04 mg/L	0.052	0.26%
Mg 279.077†	3027.2	2.018 mg/L	0.0102	2.018 mg/L	0.0102	0.50%
Mn 257.610†	49367.7	1.029 mg/L	0.0044	1.029 mg/L	0.0044	0.43%
Mo 202.031†	26980.7	1.011 mg/L	0.0042	1.011 mg/L	0.0042	0.42%
Na 589.592†	692566.3	52.69 mg/L	0.345	52.69 mg/L	0.345	0.65%
Na 330.237†	1789.4	52.37 mg/L	0.434	52.37 mg/L	0.434	0.83%
Ni 231.604†	5333.0	1.025 mg/L	0.0059	1.025 mg/L	0.0059	0.57%
Pb 220.353†	22780.4	2.013 mg/L	0.0077	2.013 mg/L	0.0077	0.38%
Sb 206.836†	9036.8	2.099 mg/L	0.0088	2.099 mg/L	0.0088	0.42%
Se 196.026†	3777.1	1.984 mg/L	0.0110	1.984 mg/L	0.0110	0.56%
Si 288.158†	4974.6	2.082 mg/L	0.0064	2.082 mg/L	0.0064	0.31%
Sn 189.927†	5278.4	0.9980 mg/L	0.00348	0.9980 mg/L	0.00348	0.35%
Sr 421.552†	1041327.8	1.032 mg/L	0.0019	1.032 mg/L	0.0019	0.18%
Ti 334.903†	26231.5	1.037 mg/L	0.0019	1.037 mg/L	0.0019	0.19%
Tl 190.801†	6105.9	2.013 mg/L	0.0075	2.013 mg/L	0.0075	0.37%
V 292.402†	162893.6	1.028 mg/L	0.0065	1.028 mg/L	0.0065	0.63%
Zn 206.200†	5292.1	1.055 mg/L	0.0032	1.055 mg/L	0.0032	0.31%

Method Loaded
Method Name: 7300bcESI2FAST **Method Last Saved: 1/21/2013 11:09:38 AM**
IEC File: IEC110912A.iec **MSF File:**
Method Description: 12Axial Elements

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Al 308.215	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
B 249.677	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Be 313.042	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ca 317.933	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cd 228.802	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Cr 267.716	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Fe 273.955	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
K 766.490	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Mg 279.077	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mn 257.610	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Na 589.592	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Na 330.237	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ni 231.604	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Se 196.026	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Si 288.158	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Ti 334.903	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Zn 206.200	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
ScA 357.253	Lin, Calc Int	Peak Area	Axial	n/a	n/a
ScR 361.383	Lin, Calc Int	Peak Area	Radial	n/a	n/a

Sequence No.: 2 **Autosampler Location: 1**
Sample ID: JCB **Date Collected: 1/21/2013 11:28:17 AM**
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3063855.8	100.8	%	0.49				0.49%
ScR 361.383	356000.5	101.5	%	0.50				0.50%
Ag 328.068†	12.3	0.00005	mg/L	0.000217	0.00005	mg/L	0.000217	404.22%
Al 308.215†	5.8	0.00316	mg/L	0.005885	0.00316	mg/L	0.005885	186.39%
As 188.979†	1.2	0.00055	mg/L	0.002538	0.00055	mg/L	0.002538	464.39%
B 249.677†	17.9	0.00212	mg/L	0.000627	0.00212	mg/L	0.000627	29.53%
Ba 233.527†	0.1	0.00002	mg/L	0.000617	0.00002	mg/L	0.000617	>999.9%
Be 313.042†	-11.5	-0.00002	mg/L	0.000025	-0.00002	mg/L	0.000025	149.53%
Ca 317.933†	-10.0	-0.00064	mg/L	0.000628	-0.00064	mg/L	0.000628	98.75%
Cd 228.802†	-5.9	-0.00016	mg/L	0.000065	-0.00016	mg/L	0.000065	39.74%
Co 228.616†	-1.1	-0.00002	mg/L	0.000126	-0.00002	mg/L	0.000126	567.44%
Cr 267.716†	13.0	0.00171	mg/L	0.000464	0.00171	mg/L	0.000464	27.20%
Cu 324.752†	-3.1	-0.00001	mg/L	0.000086	-0.00001	mg/L	0.000086	810.88%
Fe 273.955†	0.3	0.00017	mg/L	0.001187	0.00017	mg/L	0.001187	681.89%
K 766.490†	8.4	0.00395	mg/L	0.022112	0.00395	mg/L	0.022112	559.59%
Mg 279.077†	-12.2	-0.00811	mg/L	0.003214	-0.00811	mg/L	0.003214	39.65%
Mn 257.610†	-6.1	-0.00013	mg/L	0.000048	-0.00013	mg/L	0.000048	37.71%

Mo 202.031†	44.1	0.00165 mg/L	0.000324	0.00165 mg/L	0.000324	19.62%
Na 589.592†	41.7	0.00318 mg/L	0.004812	0.00318 mg/L	0.004812	151.55%
Na 330.237†	4.8	0.1400 mg/L	0.40238	0.1400 mg/L	0.40238	287.45%
Ni 231.604†	5.6	0.00108 mg/L	0.000079	0.00108 mg/L	0.000079	7.33%
Pb 220.353†	6.7	0.00059 mg/L	0.000600	0.00059 mg/L	0.000600	100.96%
Sb 206.836†	15.8	0.00365 mg/L	0.001543	0.00365 mg/L	0.001543	42.23%
Se 196.026†	0.6	0.00031 mg/L	0.001397	0.00031 mg/L	0.001397	455.83%
Si 288.158†	-0.9	-0.00039 mg/L	0.000385	-0.00039 mg/L	0.000385	98.72%
Sn 189.927†	2.5	0.00047 mg/L	0.000491	0.00047 mg/L	0.000491	104.18%
Sr 421.552†	5.7	0.00001 mg/L	0.000027	0.00001 mg/L	0.000027	481.71%
Ti 334.903†	14.5	0.00057 mg/L	0.000680	0.00057 mg/L	0.000680	118.97%
Tl 190.801†	-0.0	-0.00001 mg/L	0.001387	-0.00001 mg/L	0.001387	>999.9%
V 292.402†	-11.5	-0.00006 mg/L	0.000047	-0.00006 mg/L	0.000047	72.79%
Zn 206.200†	0.0	0.00000 mg/L	0.000344	0.00000 mg/L	0.000344	>999.9%

Method Loaded
Method Name: 7300bcESI2FAST
IEC File: IEC110912A.iec
Method Description: 12Axial Elements

Method Last Saved: 1/21/2013 11:27:39 AM
MSF File:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Al 308.215	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
B 249.677	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Be 313.042	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ca 317.933	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cd 228.802	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Cr 267.716	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Fe 273.955	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
K 766.490	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Mg 279.077	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mn 257.610	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Na 589.592	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Na 330.237	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ni 231.604	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Se 196.026	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Si 288.158	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Ti 334.903	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Zn 206.200	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
ScA 357.253	Lin, Calc Int	Peak Area	Axial	n/a	n/a
ScR 361.383	Lin, Calc Int	Peak Area	Radial	n/a	n/a

Sequence No.: 3
Sample ID: CRI

Autosampler Location: 301
Date Collected: 1/21/2013 11:32:33 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	3031849.1	99.78	%	0.431				0.43%
ScR 361.383	348984.2	99.52	%	0.817				0.82%
Ag 328.068†	732.4	0.00320	mg/L	0.000190	0.00320	mg/L	0.000190	5.95%
Al 308.215†	93.0	0.05077	mg/L	0.001657	0.05077	mg/L	0.001657	3.26%
As 188.979†	113.9	0.04958	mg/L	0.001090	0.04958	mg/L	0.001090	2.20%
B 249.677†	182.0	0.02161	mg/L	0.000507	0.02161	mg/L	0.000507	2.35%
Ba 233.527†	15.9	0.00275	mg/L	0.000692	0.00275	mg/L	0.000692	25.12%
Be 313.042†	668.7	0.00098	mg/L	0.000026	0.00098	mg/L	0.000026	2.69%
Ca 317.933†	747.5	0.04742	mg/L	0.000221	0.04742	mg/L	0.000221	0.47%
Cd 228.802†	83.9	0.00200	mg/L	0.000011	0.00200	mg/L	0.000011	0.54%
Co 228.616†	170.9	0.00332	mg/L	0.000106	0.00332	mg/L	0.000106	3.18%
Cr 267.716†	47.5	0.00623	mg/L	0.000604	0.00623	mg/L	0.000604	9.69%
Cu 324.752†	620.4	0.00200	mg/L	0.000162	0.00200	mg/L	0.000162	8.08%
Fe 273.955†	87.9	0.04949	mg/L	0.001461	0.04949	mg/L	0.001461	2.95%
K 766.490†	1016.6	0.4776	mg/L	0.00580	0.4776	mg/L	0.00580	1.21%
Mg 279.077†	66.4	0.04410	mg/L	0.002677	0.04410	mg/L	0.002677	6.07%
Mn 257.610†	52.6	0.00110	mg/L	0.000114	0.00110	mg/L	0.000114	10.37%

Mo 202.031†	137.6	0.00516 mg/L	0.000223	0.00516 mg/L	0.000223	4.32%
Na 589.592†	6494.4	0.4941 mg/L	0.00683	0.4941 mg/L	0.00683	1.38%
Na 330.237†	19.0	0.5569 mg/L	0.14527	0.5569 mg/L	0.14527	26.08%
Ni 231.604†	58.4	0.01123 mg/L	0.000613	0.01123 mg/L	0.000613	5.46%
Pb 220.353†	226.3	0.02000 mg/L	0.000260	0.02000 mg/L	0.000260	1.30%
Sb 206.836†	224.2	0.05212 mg/L	0.000531	0.05212 mg/L	0.000531	1.02%
Se 196.026†	89.9	0.04725 mg/L	0.004161	0.04725 mg/L	0.004161	8.81%
Si 288.158†	145.0	0.06067 mg/L	0.000533	0.06067 mg/L	0.000533	0.88%
Sn 189.927†	49.2	0.00932 mg/L	0.000091	0.00932 mg/L	0.000091	0.97%
Sr 421.552†	1030.6	0.00102 mg/L	0.000024	0.00102 mg/L	0.000024	2.35%
Ti 334.903†	152.0	0.00600 mg/L	0.001203	0.00600 mg/L	0.001203	20.04%
Tl 190.801†	151.9	0.05026 mg/L	0.001211	0.05026 mg/L	0.001211	2.41%
V 292.402†	498.1	0.00316 mg/L	0.000056	0.00316 mg/L	0.000056	1.77%
Zn 206.200†	46.6	0.00929 mg/L	0.000442	0.00929 mg/L	0.000442	4.76%

Method Loaded
Method Name: 7300bcESI2FAST
IEC File: IEC110912A.iec
Method Description: l2Axial Elements

Method Last Saved: 1/21/2013 11:27:39 AM
MSF File:

Analyte	Calibration Equation	Processing	View	Internal Standard	IEC
Ag 328.068	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Al 308.215	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
As 188.979	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
B 249.677	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ba 233.527	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Be 313.042	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ca 317.933	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cd 228.802	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Co 228.616	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Cr 267.716	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Cu 324.752	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Fe 273.955	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
K 766.490	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Mg 279.077	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mn 257.610	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Mo 202.031	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Na 589.592	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Na 330.237	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Ni 231.604	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Pb 220.353	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sb 206.836	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Se 196.026	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Si 288.158	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Sn 189.927	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Sr 421.552	Lin Thru 0	Peak Area	Radial	ScR 361.383	No
Ti 334.903	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
Tl 190.801	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
V 292.402	Lin Thru 0	Peak Area	Axial	ScA 357.253	Yes
Zn 206.200	Lin Thru 0	Peak Area	Radial	ScR 361.383	Yes
ScA 357.253	Lin, Calc Int	Peak Area	Axial	n/a	n/a
ScR 361.383	Lin, Calc Int	Peak Area	Radial	n/a	n/a

User canceled analysis.

Analysis Begun

Start Time: 1/21/2013 11:36:44 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202

Plasma On Time: 1/21/2013 8:44:13 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISETMON.sif
Batch ID:
Results Data Set: I2130121
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 4
Sample ID: ICSA

Autosampler Location: 302
Date Collected: 1/21/2013 11:36:45 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2966389.7	97.62	%	0.423				0.43%
ScR 361.383	342738.1	97.74	%	0.236				0.24%
Ag 328.068†	-212.9	-0.00093	mg/L	0.000182	-0.00093	mg/L	0.000182	19.61%
Al 308.215†	363482.6	199.0	mg/L	0.44	199.0	mg/L	0.44	0.22%

VZ97 01784

As 188.979†	54.0	0.01531 mg/L	0.001967	0.01531 mg/L	0.001967	12.84%
B 249.677†	-66.4	-0.00788 mg/L	0.002467	-0.00788 mg/L	0.002467	31.30%
Ba 233.527†	171.0	-0.00331 mg/L	0.000319	-0.00331 mg/L	0.000319	9.65%
Be 313.042†	55.1	0.00008 mg/L	0.000010	0.00008 mg/L	0.000010	12.13%
Ca 317.933†	1550725.8	98.37 mg/L	0.189	98.37 mg/L	0.189	0.19%
Cd 228.802†	51.0	0.00125 mg/L	0.000181	0.00125 mg/L	0.000181	14.43%
Co 228.616†	97.5	0.00188 mg/L	0.000109	0.00188 mg/L	0.000109	5.78%
Cr 267.716†	44.3	0.00258 mg/L	0.001199	0.00258 mg/L	0.001199	46.40%
Cu 324.752†	-2507.6	-0.00041 mg/L	0.000053	-0.00041 mg/L	0.000053	13.10%
Fe 273.955†	342170.6	192.6 mg/L	1.08	192.6 mg/L	1.08	0.56%
K 766.490†	21.3	0.01000 mg/L	0.001606	0.01000 mg/L	0.001606	16.06%
Mg 279.077†	154452.8	102.5 mg/L	0.67	102.5 mg/L	0.67	0.65%
Mn 257.610†	54.7	0.00118 mg/L	0.000162	0.00118 mg/L	0.000162	13.76%
Mo 202.031†	84.1	0.00190 mg/L	0.000158	0.00190 mg/L	0.000158	8.30%
Na 589.592†	209.1	0.01591 mg/L	0.003329	0.01591 mg/L	0.003329	20.93%
Na 330.237†	0.3	0.01140 mg/L	0.274470	0.01140 mg/L	0.274470	>999.9%
Ni 231.604†	-2.3	-0.00042 mg/L	0.000379	-0.00042 mg/L	0.000379	90.42%
Pb 220.353†	-516.7	-0.00552 mg/L	0.000825	-0.00552 mg/L	0.000825	14.93%
Sb 206.836†	53.6	0.01226 mg/L	0.001854	0.01226 mg/L	0.001854	15.12%
Se 196.026†	49.0	-0.00043 mg/L	0.005451	-0.00043 mg/L	0.005451	>999.9%
Si 288.158†	-54.5	-0.01089 mg/L	0.003242	-0.01089 mg/L	0.003242	29.78%
Sn 189.927†	-84.6	-0.00022 mg/L	0.000314	-0.00022 mg/L	0.000314	143.63%
Sr 421.552†	4228.5	0.00419 mg/L Cont.	0.000036	0.00419 mg/L	0.000036	0.87%
Ti 334.903†	213.8	0.00195 mg/L	0.000063	0.00195 mg/L	0.000063	3.20%
Tl 190.801†	-56.7	0.00571 mg/L	0.001783	0.00571 mg/L	0.001783	31.21%
V 292.402†	1494.8	0.00234 mg/L	0.000261	0.00234 mg/L	0.000261	11.16%
Zn 206.200†	6.9	0.00137 mg/L	0.000179	0.00137 mg/L	0.000179	13.02%

Sequence No.: 5
Sample ID: ICSAB

Autosampler Location: 303
Date Collected: 1/21/2013 11:41:02 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

Mean Data: ICSAB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2950771.8	97.11	%	0.365				0.38%
ScR 361.383	337979.8	96.38	%	0.776				0.81%
Ag 328.068†	244881.8	1.070	mg/L	0.0062	1.070	mg/L	0.0062	0.58%
Al 308.215†	364313.9	199.5	mg/L	0.70	199.5	mg/L	0.70	0.35%
As 188.979†	2351.2	1.012	mg/L	0.0049	1.012	mg/L	0.0049	0.49%
B 249.677†	-45.3	-0.00732	mg/L	0.001289	-0.00732	mg/L	0.001289	17.62%
Ba 233.527†	6079.3	1.021	mg/L	0.0089	1.021	mg/L	0.0089	0.87%
Be 313.042†	679747.5	1.001	mg/L	0.0034	1.001	mg/L	0.0034	0.34%
Ca 317.933†	1545846.7	98.06	mg/L	0.321	98.06	mg/L	0.321	0.33%
Cd 228.802†	37065.9	1.018	mg/L	0.0059	1.018	mg/L	0.0059	0.58%
Co 228.616†	48572.7	0.9472	mg/L	0.00298	0.9472	mg/L	0.00298	0.31%
Cr 267.716†	7775.8	1.017	mg/L	0.0064	1.017	mg/L	0.0064	0.62%
Cu 324.752†	321743.1	1.048	mg/L	0.0035	1.048	mg/L	0.0035	0.34%
Fe 273.955†	343523.8	193.4	mg/L	0.02	193.4	mg/L	0.02	0.01%
K 766.490†	6.7	0.00314	mg/L	0.014756	0.00314	mg/L	0.014756	469.76%
Mg 279.077†	147391.2	97.82	mg/L	0.347	97.82	mg/L	0.347	0.36%
Mn 257.610†	45923.2	0.9568	mg/L	0.00053	0.9568	mg/L	0.00053	0.06%
Mo 202.031†	90.2	0.00208	mg/L	0.000231	0.00208	mg/L	0.000231	11.13%
Na 589.592†	230.3	0.01752	mg/L	0.002784	0.01752	mg/L	0.002784	15.89%
Na 330.237†	9.1	-0.04949	mg/L	0.202993	-0.04949	mg/L	0.202993	410.17%
Ni 231.604†	5114.0	0.9829	mg/L	0.00482	0.9829	mg/L	0.00482	0.49%
Pb 220.353†	10309.2	0.9511	mg/L	0.00229	0.9511	mg/L	0.00229	0.24%
Sb 206.836†	4405.3	1.013	mg/L	0.0030	1.013	mg/L	0.0030	0.30%
Se 196.026†	1929.9	0.9871	mg/L	0.00663	0.9871	mg/L	0.00663	0.67%
Si 288.158†	-55.9	-0.00835	mg/L	0.001234	-0.00835	mg/L	0.001234	14.78%
Sn 189.927†	-84.4	0.00026	mg/L	0.001131	0.00026	mg/L	0.001131	433.99%
Sr 421.552†	4184.6	0.00415	mg/L Conf.	0.000045	0.00415	mg/L	0.000045	1.08%
Ti 334.903†	222.5	0.00212	mg/L	0.000442	0.00212	mg/L	0.000442	20.87%
Tl 190.801†	2815.0	0.9473	mg/L	0.00191	0.9473	mg/L	0.00191	0.20%
V 292.402†	158213.6	0.9920	mg/L	0.00419	0.9920	mg/L	0.00419	0.42%
Zn 206.200†	4844.1	0.9656	mg/L	0.00815	0.9656	mg/L	0.00815	0.84%

Sequence No.: 6
Sample ID: HiPurQC7M

Autosampler Location: 304
Date Collected: 1/21/2013 11:46:29 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: HiPurQC7M

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: HiPurQC7M

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3060987.7	100.7	%	0.58				0.57%
ScR 361.383	354237.2	101.0	%	0.54				0.53%
Ag 328.068†	239534.9	1.046	mg/L	0.0020	1.046	mg/L	0.0020	0.20%
Al 308.215†	3506.8	1.920	mg/L	0.0139	1.920	mg/L	0.0139	0.72%
As 188.979†	3.9	0.00169	mg/L	0.001689	0.00169	mg/L	0.001689	99.77%
B 249.677†	16671.3	1.979	mg/L	0.0143	1.979	mg/L	0.0143	0.72%
Ba 233.527†	11411.2	1.979	mg/L	0.0221	1.979	mg/L	0.0221	1.12%
Be 313.042†	15.7	0.00002	mg/L	0.000039	0.00002	mg/L	0.000039	168.77%
Ca 317.933†	50.8	0.00322	mg/L	0.000209	0.00322	mg/L	0.000209	6.48%
Cd 228.802†	-3.5	-0.00011	mg/L	0.000131	-0.00011	mg/L	0.000131	123.95%
Co 228.616†	8.0	-0.00000	mg/L	0.000155	-0.00000	mg/L	0.000155	>999.9%
Cr 267.716†	12.0	0.00158	mg/L	0.000246	0.00158	mg/L	0.000246	15.58%
Cu 324.752†	-8.9	-0.00003	mg/L	0.000085	-0.00003	mg/L	0.000085	298.35%
Fe 273.955†	5.2	0.00291	mg/L	0.001263	0.00291	mg/L	0.001263	43.32%
K 766.490†	40523.7	19.04	mg/L	0.031	19.04	mg/L	0.031	0.16%
Mg 279.077†	-8.0	-0.00531	mg/L	0.001273	-0.00531	mg/L	0.001273	24.00%
Mn 257.610†	0.1	-0.00001	mg/L	0.000036	-0.00001	mg/L	0.000036	467.94%
Mo 202.031†	1.8	0.00007	mg/L	0.000222	0.00007	mg/L	0.000222	324.79%
Na 589.592†	25830.5	1.965	mg/L	0.0048	1.965	mg/L	0.0048	0.24%
Na 330.237†	67.7	1.986	mg/L	0.1653	1.986	mg/L	0.1653	8.32%
Ni 231.604†	3.3	0.00063	mg/L	0.000841	0.00063	mg/L	0.000841	132.64%
Pb 220.353†	-2.2	0.00028	mg/L	0.000720	0.00028	mg/L	0.000720	256.04%
Sb 206.836†	15.4	0.00354	mg/L	0.001458	0.00354	mg/L	0.001458	41.15%
Se 196.026†	2.0	0.00082	mg/L	0.001908	0.00082	mg/L	0.001908	231.61%
Si 288.158†	4627.6	1.937	mg/L	0.0157	1.937	mg/L	0.0157	0.81%
Sn 189.927†	-1.5	-0.00028	mg/L	0.000336	-0.00028	mg/L	0.000336	121.49%
Sr 421.552†	-22.3	-0.00002	mg/L	0.000031	-0.00002	mg/L	0.000031	138.36%
Ti 334.903†	13.2	0.00052	mg/L	0.000470	0.00052	mg/L	0.000470	89.97%
Tl 190.801†	-1.8	-0.00060	mg/L	0.001993	-0.00060	mg/L	0.001993	334.55%
V 292.402†	-18.9	-0.00011	mg/L	0.000190	-0.00011	mg/L	0.000190	169.79%
Zn 206.200†	-2.4	-0.00048	mg/L	0.000570	-0.00048	mg/L	0.000570	118.23%

Sequence No.: 7
Sample ID: SPEXQC21

Autosampler Location: 305
Date Collected: 1/21/2013 11:50:44 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: SPEXQC21

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: SPEXQC21

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3071825.6	101.1	%	0.28				0.27%
ScR 361.383	343294.3	97.90	%	0.375				0.38%
Ag 328.068†	-31.2	0.00045	mg/L	0.000201	0.00045	mg/L	0.000201	44.58%
Al 308.215†	157.4	0.01806	mg/L	0.000711	0.01806	mg/L	0.000711	3.94%
As 188.979†	4542.4	2.022	mg/L	0.0094	2.022	mg/L	0.0094	0.46%
B 249.677†	103.8	0.01047	mg/L	0.001094	0.01047	mg/L	0.001094	10.45%
Ba 233.527†	5.9	0.00037	mg/L	0.000583	0.00037	mg/L	0.000583	158.03%
Be 313.042†	1343119.0	1.977	mg/L	0.0126	1.977	mg/L	0.0126	0.64%
Ca 317.933†	31590.5	2.004	mg/L	0.0033	2.004	mg/L	0.0033	0.17%
Cd 228.802†	74790.3	2.054	mg/L	0.0053	2.054	mg/L	0.0053	0.26%
Co 228.616†	104512.7	2.034	mg/L	0.0064	2.034	mg/L	0.0064	0.31%
Cr 267.716†	15470.5	2.029	mg/L	0.0047	2.029	mg/L	0.0047	0.23%
Cu 324.752†	606548.0	1.960	mg/L	0.0033	1.960	mg/L	0.0033	0.17%
Fe 273.955†	3705.3	2.072	mg/L	0.0146	2.072	mg/L	0.0146	0.71%
K 766.490†	-29.5	-0.01388	mg/L	0.010785	-0.01388	mg/L	0.010785	77.72%
Mg 279.077†	3120.8	2.088	mg/L	0.0115	2.088	mg/L	0.0115	0.55%
Mn 257.610†	97229.9	2.026	mg/L	0.0078	2.026	mg/L	0.0078	0.38%
Mo 202.031†	52199.8	1.957	mg/L	0.0089	1.957	mg/L	0.0089	0.45%
Na 589.592†	467.4	0.03556	mg/L	0.004283	0.03556	mg/L	0.004283	12.04%
Na 330.237†	-9.7	-0.4980	mg/L	0.19857	-0.4980	mg/L	0.19857	39.87%
Ni 231.604†	10818.7	2.079	mg/L	0.0087	2.079	mg/L	0.0087	0.42%
Pb 220.353†	22442.8	1.983	mg/L	0.0071	1.983	mg/L	0.0071	0.36%
Sb 206.836†	9096.7	2.094	mg/L	0.0064	2.094	mg/L	0.0064	0.31%
Se 196.026†	3836.5	2.014	mg/L	0.0033	2.014	mg/L	0.0033	0.16%
Si 288.158†	110.0	0.05698	mg/L	0.012471	0.05698	mg/L	0.012471	21.89%
Sn 189.927†	-15.3	-0.00124	mg/L	0.000319	-0.00124	mg/L	0.000319	25.70%
Sr 421.552†	2082646.1	2.063	mg/L	0.0049	2.063	mg/L	0.0049	0.24%
Ti 334.903†	52299.7	2.067	mg/L	0.0048	2.067	mg/L	0.0048	0.23%
Tl 190.801†	6298.0	2.068	mg/L	0.0071	2.068	mg/L	0.0071	0.34%
V 292.402†	324250.7	2.047	mg/L	0.0079	2.047	mg/L	0.0079	0.39%
Zn 206.200†	10444.7	2.081	mg/L	0.0091	2.081	mg/L	0.0091	0.44%

Sequence No.: 8
Sample ID: DI CHECK

Autosampler Location: 306
Date Collected: 1/21/2013 11:55:02 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: DI CHECK

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

Mean Data: DI CHECK

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3106074.0	102.2	%	0.36				0.35%
ScR 361.383	358690.7	102.3	%	0.81				0.79%
Ag 328.068†	-24.5	-0.00011	mg/L	0.000205	-0.00011	mg/L	0.000205	191.40%
Al 308.215†	-2.7	-0.00150	mg/L	0.006996	-0.00150	mg/L	0.006996	465.20%
As 188.979†	2.5	0.00109	mg/L	0.001294	0.00109	mg/L	0.001294	118.78%
B 249.677†	2.0	0.00024	mg/L	0.000540	0.00024	mg/L	0.000540	221.46%
Ba 233.527†	1.9	0.00034	mg/L	0.000471	0.00034	mg/L	0.000471	140.08%
Be 313.042†	83.8	0.00012	mg/L	0.000086	0.00012	mg/L	0.000086	70.02%
Ca 317.933†	-7.7	-0.00049	mg/L	0.000462	-0.00049	mg/L	0.000462	95.00%
Cd 228.802†	2.7	0.00007	mg/L	0.000122	0.00007	mg/L	0.000122	177.03%
Co 228.616†	20.9	0.00041	mg/L	0.000125	0.00041	mg/L	0.000125	30.68%
Cr 267.716†	13.9	0.00183	mg/L	0.000593	0.00183	mg/L	0.000593	32.43%
Cu 324.752†	-22.3	-0.00007	mg/L	0.000016	-0.00007	mg/L	0.000016	21.62%
Fe 273.955†	1.2	0.00070	mg/L	0.002672	0.00070	mg/L	0.002672	380.72%
K 766.490†	-10.9	-0.00510	mg/L	0.008313	-0.00510	mg/L	0.008313	162.96%
Mg 279.077†	-13.6	-0.00901	mg/L	0.002247	-0.00901	mg/L	0.002247	24.95%
Mn 257.610†	-1.1	-0.00002	mg/L	0.000102	-0.00002	mg/L	0.000102	462.44%
Mo 202.031†	64.5	0.00242	mg/L	0.000676	0.00242	mg/L	0.000676	27.95%
Na 589.592†	7.9	0.00060	mg/L	0.004761	0.00060	mg/L	0.004761	792.55%
Na 330.237†	-0.8	-0.02485	mg/L	0.087550	-0.02485	mg/L	0.087550	352.38%
Ni 231.604†	6.7	0.00129	mg/L	0.001195	0.00129	mg/L	0.001195	92.74%
Pb 220.353†	7.8	0.00069	mg/L	0.000491	0.00069	mg/L	0.000491	70.88%
Sb 206.836†	-8.2	-0.00194	mg/L	0.001464	-0.00194	mg/L	0.001464	75.54%
Se 196.026†	6.0	0.00313	mg/L	0.002174	0.00313	mg/L	0.002174	69.39%
Si 288.158†	-8.2	-0.00342	mg/L	0.000995	-0.00342	mg/L	0.000995	29.10%
Sn 189.927†	1.5	0.00028	mg/L	0.000300	0.00028	mg/L	0.000300	107.16%
Sr 421.552†	85.7	0.00008	mg/L	0.000058	0.00008	mg/L	0.000058	68.89%
Ti 334.903†	8.0	0.00031	mg/L	0.000123	0.00031	mg/L	0.000123	38.98%
Tl 190.801†	6.1	0.00200	mg/L	0.000898	0.00200	mg/L	0.000898	44.82%
V 292.402†	18.9	0.00013	mg/L	0.000189	0.00013	mg/L	0.000189	147.40%
Zn 206.200†	3.7	0.00073	mg/L	0.000415	0.00073	mg/L	0.000415	56.73%

Sequence No.: 9
Sample ID: CV 1

Autosampler Location: 7
Date Collected: 1/21/2013 11:59:18 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3051268.8	100.4	%	0.18				0.18%
ScR 361.383	347010.7	98.96	%	0.224				0.23%
Ag 328.068†	238071.7	1.040	mg/L	0.0101	1.040	mg/L	0.0101	0.97%
Al 308.215†	3695.2	1.989	mg/L	0.0204	1.989	mg/L	0.0204	1.03%
As 188.979†	4608.3	2.025	mg/L	0.0152	2.025	mg/L	0.0152	0.75%
B 249.677†	8563.5	1.016	mg/L	0.0072	1.016	mg/L	0.0072	0.71%
Ba 233.527†	5867.3	1.017	mg/L	0.0169	1.017	mg/L	0.0169	1.66%
Be 313.042†	675115.5	0.9939	mg/L	0.00562	0.9939	mg/L	0.00562	0.57%
Ca 317.933†	32089.2	2.036	mg/L	0.0197	2.036	mg/L	0.0197	0.97%
Cd 228.802†	37166.7	1.014	mg/L	0.0074	1.014	mg/L	0.0074	0.73%
Co 228.616†	51030.7	0.9933	mg/L	0.00762	0.9933	mg/L	0.00762	0.77%
Cr 267.716†	7710.1	1.011	mg/L	0.0082	1.011	mg/L	0.0082	0.81%
Cu 324.752†	317474.3	1.026	mg/L	0.0066	1.026	mg/L	0.0066	0.65%
Fe 273.955†	3605.3	2.023	mg/L	0.0143	2.023	mg/L	0.0143	0.71%
K 766.490†	42320.3	19.88	mg/L	0.027	19.88	mg/L	0.027	0.14%
Mg 279.077†	3006.9	2.005	mg/L	0.0264	2.005	mg/L	0.0264	1.32%
Mn 257.610†	48542.6	1.012	mg/L	0.0068	1.012	mg/L	0.0068	0.68%
Mo 202.031†	26954.6	1.010	mg/L	0.0059	1.010	mg/L	0.0059	0.58%
Na 589.592†	684867.2	52.10	mg/L	0.200	52.10	mg/L	0.200	0.38%
Na 330.237†	1761.0	51.54	mg/L	0.328	51.54	mg/L	0.328	0.64%
Ni 231.604†	5296.0	1.018	mg/L	0.0089	1.018	mg/L	0.0089	0.88%
Pb 220.353†	22758.9	2.011	mg/L	0.0131	2.011	mg/L	0.0131	0.65%
Sb 206.836†	9035.2	2.099	mg/L	0.0099	2.099	mg/L	0.0099	0.47%
Se 196.026†	3792.6	1.992	mg/L	0.0135	1.992	mg/L	0.0135	0.68%
Si 288.158†	4873.6	2.040	mg/L	0.0161	2.040	mg/L	0.0161	0.79%
Sn 189.927†	5279.7	0.9983	mg/L	0.00800	0.9983	mg/L	0.00800	0.80%
Sr 421.552†	1031027.7	1.022	mg/L	0.0009	1.022	mg/L	0.0009	0.09%
Ti 334.903†	25961.1	1.026	mg/L	0.0017	1.026	mg/L	0.0017	0.16%
Tl 190.801†	6085.4	2.006	mg/L	0.0108	2.006	mg/L	0.0108	0.54%
V 292.402†	160768.2	1.015	mg/L	0.0101	1.015	mg/L	0.0101	0.99%
Zn 206.200†	5212.4	1.039	mg/L	0.0107	1.039	mg/L	0.0107	1.03%

Sequence No.: 10
Sample ID: CB

Autosampler Location: 1
Date Collected: 1/21/2013 12:02:37 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3042704.4	100.1	%	0.39				0.39%
ScR 361.383	351950.8	100.4	%	0.03				0.03%
Ag 328.068†	11.2	0.00005	mg/L	0.000088	0.00005	mg/L	0.000088	179.50%
Al 308.215†	-12.8	-0.00705	mg/L	0.005131	-0.00705	mg/L	0.005131	72.79%
As 188.979†	-0.2	-0.00006	mg/L	0.000804	-0.00006	mg/L	0.000804	>999.9%
B 249.677†	16.8	0.00200	mg/L	0.001057	0.00200	mg/L	0.001057	52.88%
Ba 233.527†	0.7	0.00013	mg/L	0.000365	0.00013	mg/L	0.000365	288.66%
Be 313.042†	18.5	0.00003	mg/L	0.000019	0.00003	mg/L	0.000019	69.73%
Ca 317.933†	-9.3	-0.00059	mg/L	0.000974	-0.00059	mg/L	0.000974	165.37%
Cd 228.802†	-3.8	-0.00010	mg/L	0.000143	-0.00010	mg/L	0.000143	139.20%
Co 228.616†	0.1	-0.00000	mg/L	0.000033	-0.00000	mg/L	0.000033	>999.9%
Cr 267.716†	7.0	0.00092	mg/L	0.000428	0.00092	mg/L	0.000428	46.54%
Cu 324.752†	2.5	0.00001	mg/L	0.000083	0.00001	mg/L	0.000083	>999.9%
Fe 273.955†	2.7	0.00153	mg/L	0.000600	0.00153	mg/L	0.000600	39.28%
K 766.490†	2.6	0.00124	mg/L	0.018530	0.00124	mg/L	0.018530	>999.9%
Mg 279.077†	-7.5	-0.00498	mg/L	0.002874	-0.00498	mg/L	0.002874	57.75%
Mn 257.610†	-1.3	-0.00003	mg/L	0.000022	-0.00003	mg/L	0.000022	80.20%
Mo 202.031†	40.9	0.00153	mg/L	0.000283	0.00153	mg/L	0.000283	18.44%
Na 589.592†	-5.1	-0.00039	mg/L	0.000089	-0.00039	mg/L	0.000089	23.06%
Na 330.237†	-3.8	-0.1121	mg/L	0.37409	-0.1121	mg/L	0.37409	333.71%
Ni 231.604†	2.6	0.00049	mg/L	0.000308	0.00049	mg/L	0.000308	62.46%
Pb 220.353†	1.5	0.00013	mg/L	0.001116	0.00013	mg/L	0.001116	867.89%
Sb 206.836†	19.9	0.00461	mg/L	0.001208	0.00461	mg/L	0.001208	26.21%
Se 196.026†	-1.1	-0.00055	mg/L	0.003382	-0.00055	mg/L	0.003382	610.02%
Si 288.158†	0.4	0.00018	mg/L	0.001318	0.00018	mg/L	0.001318	738.04%
Sn 189.927†	-2.2	-0.00041	mg/L	0.000838	-0.00041	mg/L	0.000838	205.25%
Sr 421.552†	-16.5	-0.00002	mg/L	0.000023	-0.00002	mg/L	0.000023	141.01%
Ti 334.903†	32.1	0.00127	mg/L	0.000307	0.00127	mg/L	0.000307	24.18%
Tl 190.801†	1.0	0.00032	mg/L	0.000796	0.00032	mg/L	0.000796	246.90%
V 292.402†	-4.1	-0.00002	mg/L	0.000125	-0.00002	mg/L	0.000125	566.98%
Zn 206.200†	0.7	0.00014	mg/L	0.000406	0.00014	mg/L	0.000406	285.35%

Sequence No.: 11
Sample ID: WA22 MB2 LEN

Autosampler Location: 307
Date Collected: 1/21/2013 12:06:53 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WA22 MB2 LEN

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: WA22 MB2 LEN

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2987987.2	98.33	%	0.430				0.44%
ScR 361.383	351452.3	100.2	%	1.30				1.29%
Ag 328.068†	41.8	0.00018	mg/L	0.000250	0.00091	mg/L	0.001252	136.99%
Al 308.215†	11.6	0.00633	mg/L	0.003788	0.03163	mg/L	0.018940	59.87%
As 188.979†	2.6	0.00113	mg/L	0.000168	0.00565	mg/L	0.000842	14.90%
B 249.677†	252.8	0.03001	mg/L	0.000847	0.1500	mg/L	0.00424	2.82%
Ba 233.527†	587.2	0.1018	mg/L	0.00257	0.5091	mg/L	0.01286	2.53%
Be 313.042†	25.0	0.00004	mg/L	0.000019	0.00018	mg/L	0.000097	52.85%
Ca 317.933†	5091.1	0.3230	mg/L	0.00514	1.615	mg/L	0.0257	1.59%
Cd 228.802†	9.2	0.00025	mg/L	0.000093	0.00125	mg/L	0.000467	37.38%
Co 228.616†	5.6	0.00010	mg/L	0.000054	0.00050	mg/L	0.000270	54.48%
Cr 267.716†	6.8	0.00089	mg/L	0.000393	0.00445	mg/L	0.001963	44.15%
Cu 324.752†	208.8	0.00067	mg/L	0.000092	0.00337	mg/L	0.000461	13.66%
Fe 273.955†	4.0	0.00224	mg/L	0.002192	0.01119	mg/L	0.010960	97.95%
K 766.490†	170.6	0.08016	mg/L	0.016901	0.4008	mg/L	0.08451	21.09%
Mg 279.077†	54.1	0.03591	mg/L	0.001859	0.1796	mg/L	0.00930	5.18%
Mn 257.610†	0.6	0.00001	mg/L	0.000053	0.00006	mg/L	0.000265	477.11%
Mo 202.031†	9.3	0.00035	mg/L	0.000033	0.00173	mg/L	0.000163	9.42%
Na 589.592†	3804172.8	289.4	mg/L	5.67	1447	mg/L	28.37	1.96%
Na 330.237†	9967.3	292.3	mg/L	3.83	1462	mg/L	19.16	1.31%
Ni 231.604†	18.2	0.00350	mg/L	0.000163	0.01748	mg/L	0.000815	4.66%
Pb 220.353†	2.9	0.00026	mg/L	0.000705	0.00128	mg/L	0.003523	274.61%
Sb 206.836†	7.9	0.00182	mg/L	0.001040	0.00909	mg/L	0.005200	57.20%
Se 196.026†	3.0	0.00158	mg/L	0.001536	0.00789	mg/L	0.007680	97.29%
Si 288.158†	40.3	0.01688	mg/L	0.004434	0.08439	mg/L	0.022172	26.27%
Sn 189.927†	1.6	0.00035	mg/L	0.000668	0.00175	mg/L	0.003339	190.47%
Sr 421.552†	1014.0	0.00100	mg/L	0.000035	0.00502	mg/L	0.000176	3.50%
Ti 334.903†	14.2	0.00054	mg/L	0.000551	0.00270	mg/L	0.002757	102.26%
Tl 190.801†	1.0	0.00033	mg/L	0.001004	0.00163	mg/L	0.005022	307.50%
V 292.402†	-2.7	-0.00001	mg/L	0.000101	-0.00007	mg/L	0.000505	761.65%
Zn 206.200†	114.9	0.02290	mg/L	0.000365	0.1145	mg/L	0.00182	1.59%

Sequence No.: 12
Sample ID: WA22 AtDUP LEN

Autosampler Location: 308
Date Collected: 1/21/2013 12:11:28 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WA22 AtDUP LEN

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: WA22 AtDUP LEN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2916295.7	95.97	%	0.329				0.34%
ScR 361.383	337738.6	96.31	%	0.046				0.05%
Ag 328.068†	-208.3	-0.00091	mg/L	0.000091	-0.00455	mg/L	0.000453	9.96%
Al 308.215†	18.1	0.00980	mg/L	0.002351	0.04902	mg/L	0.011755	23.98%
As 188.979†	75.4	0.01963	mg/L	0.002921	0.09816	mg/L	0.014604	14.88%
B 249.677†	188.6	0.02239	mg/L	0.000794	0.1119	mg/L	0.00397	3.55%
Ba 233.527†	392.7	0.06810	mg/L	0.001098	0.3405	mg/L	0.00549	1.61%
Be 313.042†	79.7	0.00012	mg/L	0.000026	0.00058	mg/L	0.000132	22.58%
Ca 317.933†	2506171.2	159.0	mg/L	1.08	794.9	mg/L	5.38	0.68%
Cd 228.802†	65.3	0.00159	mg/L	0.000169	0.00795	mg/L	0.000844	10.62%
Co 228.616†	78.6	0.00150	mg/L	0.000046	0.00750	mg/L	0.000230	3.06%
Cr 267.716†	21.5	0.00106	mg/L	0.001257	0.00528	mg/L	0.006283	118.89%
Cu 324.752†	664.4	0.00214	mg/L	0.000138	0.01069	mg/L	0.000688	6.44%
Fe 273.955†	15.0	0.00844	mg/L	0.001098	0.04219	mg/L	0.005488	13.01%
K 766.490†	2226.3	1.046	mg/L	0.0388	5.229	mg/L	0.1939	3.71%
Mg 279.077†	1172.3	0.7602	mg/L	0.00687	3.801	mg/L	0.0344	0.90%
Mn 257.610†	2261.5	0.04662	mg/L	0.000406	0.2331	mg/L	0.00203	0.87%
Mo 202.031†	117.0	0.00236	mg/L	0.000109	0.01180	mg/L	0.000547	4.64%
Na 589.592†	3865684.9	294.1	mg/L	0.65	1470	mg/L	3.24	0.22%
Na 330.237†	9838.4	288.5	mg/L	2.25	1442	mg/L	11.27	0.78%
Ni 231.604†	19.7	0.00379	mg/L	0.000956	0.01896	mg/L	0.004780	25.22%
Pb 220.353†	-19.9	-0.00175	mg/L	0.000842	-0.00876	mg/L	0.004210	48.03%
Sb 206.836†	7.0	0.00143	mg/L	0.001877	0.00717	mg/L	0.009384	130.83%
Se 196.026†	-16.8	-0.00885	mg/L	0.002390	-0.04423	mg/L	0.011951	27.02%
Si 288.158†	5830.7	2.441	mg/L	0.0352	12.21	mg/L	0.176	1.44%
Sn 189.927†	-98.2	0.00692	mg/L	0.000700	0.03459	mg/L	0.003502	10.12%
Sr 421.552†	91953.2	0.09111	mg/L	0.000870	0.4555	mg/L	0.00435	0.96%
Ti 334.903†	342.6	0.00304	mg/L	0.000162	0.01522	mg/L	0.000810	5.32%
Tl 190.801†	26.6	0.00880	mg/L	0.001106	0.04398	mg/L	0.005529	12.57%
V 292.402†	208.0	0.00132	mg/L	0.000022	0.00661	mg/L	0.000110	1.67%
Zn 206.200†	1409.3	0.2809	mg/L	0.00197	1.405	mg/L	0.0098	0.70%

Sequence No.: 13
Sample ID: WA22 At LEN

Autosampler Location: 309
Date Collected: 1/21/2013 12:16:02 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WA22 At LEN

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: WA22 At LEN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2933164.3	96.53	%	0.329				0.34%
ScR 361.383	341927.9	97.51	%	0.344				0.35%
Ag 328.068†	-229.1	-0.00100	mg/L	0.000104	-0.00500	mg/L	0.000519	10.38%
Al 308.215†	33.6	0.01830	mg/L	0.003346	0.09151	mg/L	0.016730	18.28%
As 188.979†	77.2	0.02040	mg/L	0.001890	0.1020	mg/L	0.00945	9.26%
B 249.677†	181.4	0.02154	mg/L	0.000932	0.1077	mg/L	0.00466	4.33%
Ba 233.527†	390.8	0.06776	mg/L	0.000512	0.3388	mg/L	0.00256	0.76%
Be 313.042†	61.6	0.00009	mg/L	0.000035	0.00045	mg/L	0.000173	38.23%
Ca 317.933†	2502066.8	158.7	mg/L	0.53	793.6	mg/L	2.64	0.33%
Cd 228.802†	57.4	0.00137	mg/L	0.000166	0.00683	mg/L	0.000832	12.19%
Co 228.616†	74.0	0.00141	mg/L	0.000040	0.00707	mg/L	0.000198	2.80%
Cr 267.716†	35.1	0.00284	mg/L	0.001408	0.01421	mg/L	0.007041	49.56%
Cu 324.752†	597.7	0.00192	mg/L	0.000075	0.00961	mg/L	0.000373	3.88%
Fe 273.955†	12.6	0.00712	mg/L	0.001769	0.03558	mg/L	0.008846	24.86%
K 766.490†	2303.5	1.082	mg/L	0.0117	5.410	mg/L	0.0586	1.08%
Mg 279.077†	1177.2	0.7634	mg/L	0.00589	3.817	mg/L	0.0295	0.77%
Mn 257.610†	2153.3	0.04437	mg/L	0.000327	0.2218	mg/L	0.00164	0.74%
Mo 202.031†	113.9	0.00225	mg/L	0.000154	0.01123	mg/L	0.000769	6.85%
Na 589.592†	3825003.7	291.0	mg/L	1.54	1455	mg/L	7.68	0.53%
Na 330.237†	9860.2	289.1	mg/L	1.58	1445	mg/L	7.91	0.55%
Ni 231.604†	21.4	0.00411	mg/L	0.000765	0.02056	mg/L	0.003823	18.59%
Pb 220.353†	-14.6	-0.00128	mg/L	0.000978	-0.00638	mg/L	0.004892	76.68%
Sb 206.836†	-1.4	-0.00055	mg/L	0.002710	-0.00277	mg/L	0.013552	489.51%
Se 196.026†	-17.0	-0.00894	mg/L	0.002498	-0.04470	mg/L	0.012492	27.95%
Si 288.158†	5952.7	2.492	mg/L	0.0002	12.46	mg/L	0.001	0.01%
Sn 189.927†	-93.8	0.00771	mg/L	0.001342	0.03854	mg/L	0.006708	17.41%
Sr 421.552†	91975.7	0.09113	mg/L	0.000260	0.4556	mg/L	0.00130	0.29%
Ti 334.903†	330.7	0.00259	mg/L	0.000462	0.01294	mg/L	0.002308	17.84%
Tl 190.801†	30.6	0.01011	mg/L	0.002923	0.05057	mg/L	0.014615	28.90%
V 292.402†	207.6	0.00133	mg/L	0.000094	0.00663	mg/L	0.000471	7.10%
Zn 206.200†	1421.3	0.2833	mg/L	0.00152	1.417	mg/L	0.0076	0.54%

Sequence No.: 14
Sample ID: WA22 AtSPK LEN

Autosampler Location: 310
Date Collected: 1/21/2013 12:20:36 PM
Data Type: Original

Dilution: 5.000000X

Nebulizer Parameters: WA22 AtSPK LEN

Analyte	Back Pressure	Flow
All	213.0 kPa	0.75 L/min

Mean Data: WA22 AtSPK LEN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2903225.6	95.54	%	0.288				0.30%
ScR 361.383	336963.2	96.09	%	0.629				0.65%
Ag 328.068†	49124.7	0.2147	mg/L	0.00097	1.073	mg/L	0.0049	0.45%
Al 308.215†	1546.2	0.8435	mg/L	0.01226	4.217	mg/L	0.0613	1.45%
As 188.979†	2048.9	0.8751	mg/L	0.00756	4.376	mg/L	0.0378	0.86%
B 249.677†	200.0	0.02332	mg/L	0.000788	0.1166	mg/L	0.00394	3.38%
Ba 233.527†	5098.8	0.8840	mg/L	0.00936	4.420	mg/L	0.0468	1.06%
Be 313.042†	133298.7	0.1962	mg/L	0.00125	0.9812	mg/L	0.00625	0.64%
Ca 317.933†	2654001.2	168.4	mg/L	0.93	841.8	mg/L	4.63	0.55%
Cd 228.802†	8174.4	0.2200	mg/L	0.00171	1.100	mg/L	0.0085	0.78%
Co 228.616†	10434.0	0.2034	mg/L	0.00137	1.017	mg/L	0.0068	0.67%
Cr 267.716†	1576.4	0.2045	mg/L	0.00263	1.023	mg/L	0.0132	1.29%
Cu 324.752†	66782.6	0.2159	mg/L	0.00086	1.079	mg/L	0.0043	0.40%
Fe 273.955†	1428.7	0.8028	mg/L	0.01180	4.014	mg/L	0.0590	1.47%
K 766.490†	11019.5	5.176	mg/L	0.0275	25.88	mg/L	0.137	0.53%
Mg 279.077†	7226.5	4.782	mg/L	0.0565	23.91	mg/L	0.283	1.18%
Mn 257.610†	11811.7	0.2457	mg/L	0.00250	1.228	mg/L	0.0125	1.02%
Mo 202.031†	123.3	0.00247	mg/L	0.000071	0.01233	mg/L	0.000354	2.87%
Na 589.592†	4037063.4	307.1	mg/L	3.86	1536	mg/L	19.28	1.26%
Na 330.237†	10589.6	310.4	mg/L	3.30	1552	mg/L	16.50	1.06%
Ni 231.604†	1062.3	0.2038	mg/L	0.00267	1.019	mg/L	0.0133	1.31%
Pb 220.353†	9119.6	0.8056	mg/L	0.00574	4.028	mg/L	0.0287	0.71%
Sb 206.836†	4.6	-0.00125	mg/L	0.001234	-0.00626	mg/L	0.006171	98.52%
Se 196.026†	1602.3	0.8418	mg/L	0.00762	4.209	mg/L	0.0381	0.90%
Si 288.158†	6297.0	2.638	mg/L	0.0359	13.19	mg/L	0.179	1.36%
Sn 189.927†	-98.8	0.00834	mg/L	0.000479	0.04170	mg/L	0.002395	5.74%
Sr 421.552†	300772.7	0.2980	mg/L	0.00161	1.490	mg/L	0.0080	0.54%
Ti 334.903†	346.6	0.00254	mg/L	0.000319	0.01270	mg/L	0.001594	12.55%
Tl 190.801†	2432.6	0.8034	mg/L	0.00484	4.017	mg/L	0.0242	0.60%
V 292.402†	32366.3	0.2043	mg/L	0.00114	1.022	mg/L	0.0057	0.56%
Zn 206.200†	2450.6	0.4885	mg/L	0.00400	2.443	mg/L	0.0200	0.82%

Sequence No.: 15
Sample ID: CV 2

Autosampler Location: 7
Date Collected: 1/21/2013 12:24:55 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	3079655.7	101.3	%	1.06				1.05%
ScR 361.383	351568.8	100.3	%	0.24				0.24%
Ag 328.068†	235273.3	1.028	mg/L	0.0060	1.028	mg/L	0.0060	0.59%
Al 308.215†	3649.3	1.964	mg/L	0.0094	1.964	mg/L	0.0094	0.48%
As 188.979†	4573.4	2.009	mg/L	0.0179	2.009	mg/L	0.0179	0.89%
B 249.677†	8391.4	0.9953	mg/L	0.00491	0.9953	mg/L	0.00491	0.49%
Ba 233.527†	5778.7	1.002	mg/L	0.0050	1.002	mg/L	0.0050	0.50%
Be 313.042†	670521.9	0.9872	mg/L	0.00672	0.9872	mg/L	0.00672	0.68%
Ca 317.933†	31777.7	2.016	mg/L	0.0071	2.016	mg/L	0.0071	0.35%
Cd 228.802†	36953.0	1.008	mg/L	0.0074	1.008	mg/L	0.0074	0.73%
Co 228.616†	50710.0	0.9870	mg/L	0.00991	0.9870	mg/L	0.00991	1.00%
Cr 267.716†	7592.0	0.9956	mg/L	0.00652	0.9956	mg/L	0.00652	0.66%
Cu 324.752†	314414.1	1.016	mg/L	0.0126	1.016	mg/L	0.0126	1.24%
Fe 273.955†	3580.2	2.008	mg/L	0.0086	2.008	mg/L	0.0086	0.43%
K 766.490†	41699.2	19.59	mg/L	0.059	19.59	mg/L	0.059	0.30%
Mg 279.077†	2984.8	1.990	mg/L	0.0006	1.990	mg/L	0.0006	0.03%
Mn 257.610†	47982.6	0.9998	mg/L	0.00807	0.9998	mg/L	0.00807	0.81%
Mo 202.031†	26667.6	0.9996	mg/L	0.01099	0.9996	mg/L	0.01099	1.10%
Na 589.592†	671695.0	51.10	mg/L	0.405	51.10	mg/L	0.405	0.79%
Na 330.237†	1737.2	50.84	mg/L	0.186	50.84	mg/L	0.186	0.37%
Ni 231.604†	5201.0	0.9998	mg/L	0.00869	0.9998	mg/L	0.00869	0.87%
Pb 220.353†	22576.6	1.995	mg/L	0.0198	1.995	mg/L	0.0198	0.99%
Sb 206.836†	8932.6	2.075	mg/L	0.0204	2.075	mg/L	0.0204	0.98%
Se 196.026†	3767.6	1.979	mg/L	0.0214	1.979	mg/L	0.0214	1.08%
Si 288.158†	4831.4	2.022	mg/L	0.0150	2.022	mg/L	0.0150	0.74%
Sn 189.927†	5254.6	0.9935	mg/L	0.01156	0.9935	mg/L	0.01156	1.16%
Sr 421.552†	1013870.3	1.005	mg/L	0.0032	1.005	mg/L	0.0032	0.32%
Ti 334.903†	25626.2	1.013	mg/L	0.0024	1.013	mg/L	0.0024	0.23%
Tl 190.801†	6037.8	1.990	mg/L	0.0158	1.990	mg/L	0.0158	0.79%
V 292.402†	159443.6	1.007	mg/L	0.0074	1.007	mg/L	0.0074	0.73%
Zn 206.200†	5197.0	1.036	mg/L	0.0028	1.036	mg/L	0.0028	0.27%

Sequence No.: 16
Sample ID: CB 2

Autosampler Location: 1
Date Collected: 1/21/2013 12:28:13 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3040313.1	100.1	%	0.32				0.32%
ScR 361.383	347745.9	99.17	%	0.623				0.63%
Ag 328.068†	26.6	0.00012	mg/L	0.000064	0.00012	mg/L	0.000064	54.78%
Al 308.215†	3.5	0.00189	mg/L	0.008362	0.00189	mg/L	0.008362	442.08%
As 188.979†	0.4	0.00019	mg/L	0.002413	0.00019	mg/L	0.002413	>999.9%
B 249.677†	12.8	0.00153	mg/L	0.000579	0.00153	mg/L	0.000579	37.95%
Ba 233.527†	2.4	0.00042	mg/L	0.000485	0.00042	mg/L	0.000485	115.50%
Be 313.042†	9.5	0.00001	mg/L	0.000013	0.00001	mg/L	0.000013	94.36%
Ca 317.933†	6.9	0.00044	mg/L	0.000698	0.00044	mg/L	0.000698	159.40%
Cd 228.802†	-0.5	-0.00002	mg/L	0.000107	-0.00002	mg/L	0.000107	713.85%
Co 228.616†	3.2	0.00006	mg/L	0.000134	0.00006	mg/L	0.000134	220.91%
Cr 267.716†	2.8	0.00037	mg/L	0.000236	0.00037	mg/L	0.000236	63.71%
Cu 324.752†	2.8	0.00001	mg/L	0.000031	0.00001	mg/L	0.000031	361.96%
Fe 273.955†	0.9	0.00051	mg/L	0.002132	0.00051	mg/L	0.002132	419.69%
K 766.490†	14.7	0.00693	mg/L	0.010920	0.00693	mg/L	0.010920	157.62%
Mg 279.077†	-8.6	-0.00568	mg/L	0.004404	-0.00568	mg/L	0.004404	77.55%
Mn 257.610†	0.4	0.00001	mg/L	0.000124	0.00001	mg/L	0.000124	>999.9%
Mo 202.031†	31.0	0.00116	mg/L	0.000421	0.00116	mg/L	0.000421	36.19%
Na 589.592†	392.4	0.02985	mg/L	0.001508	0.02985	mg/L	0.001508	5.05%
Na 330.237†	1.2	0.03378	mg/L	0.178311	0.03378	mg/L	0.178311	527.85%
Ni 231.604†	5.7	0.00111	mg/L	0.000172	0.00111	mg/L	0.000172	15.52%
Pb 220.353†	3.5	0.00031	mg/L	0.000842	0.00031	mg/L	0.000842	273.60%
Sb 206.836†	13.2	0.00306	mg/L	0.000653	0.00306	mg/L	0.000653	21.35%
Se 196.026†	-5.3	-0.00279	mg/L	0.000681	-0.00279	mg/L	0.000681	24.45%
Si 288.158†	1.9	0.00079	mg/L	0.004984	0.00079	mg/L	0.004984	632.16%
Sn 189.927†	1.0	0.00019	mg/L	0.000278	0.00019	mg/L	0.000278	147.97%
Sr 421.552†	14.8	0.00001	mg/L	0.000034	0.00001	mg/L	0.000034	232.05%
Ti 334.903†	13.0	0.00051	mg/L	0.000394	0.00051	mg/L	0.000394	76.99%
Tl 190.801†	1.5	0.00050	mg/L	0.001286	0.00050	mg/L	0.001286	256.68%
V 292.402†	-2.1	-0.00001	mg/L	0.000036	-0.00001	mg/L	0.000036	319.36%
Zn 206.200†	3.4	0.00068	mg/L	0.000612	0.00068	mg/L	0.000612	90.49%

Analysis Begun

Start Time: 1/21/2013 12:38:50 PM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 1/21/2013 8:44:13 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\0121.sif
Batch ID:
Results Data Set: I2130121
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: VZ85 MB TWC
Autosampler Location: 311
Date Collected: 1/21/2013 12:38:51 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: VZ85 MB TWC

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: VZ85 MB TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	3084213.3	101.5	%	0.56				0.55%
ScR 361.383	351736.3	100.3	%	0.48				0.48%
Ag 328.068†	-8.2	-0.00004	mg/L	0.000021	-0.00004	mg/L	0.000021	56.96%
Al 308.215†	5.7	0.00310	mg/L	0.004290	0.00310	mg/L	0.004290	138.20%
As 188.979†	1.0	0.00043	mg/L	0.000967	0.00043	mg/L	0.000967	223.90%
B 249.677†	1.2	0.00014	mg/L	0.000998	0.00014	mg/L	0.000998	695.97%
Ba 233.527†	3.3	0.00057	mg/L	0.000613	0.00057	mg/L	0.000613	108.19%
Be 313.042†	-22.5	-0.00003	mg/L	0.000009	-0.00003	mg/L	0.000009	28.46%
Ca 317.933†	39.0	0.00247	mg/L	0.000801	0.00247	mg/L	0.000801	32.35%
Cd 228.802†	-6.2	-0.00017	mg/L	0.000066	-0.00017	mg/L	0.000066	37.90%
Co 228.616†	2.7	0.00005	mg/L	0.000106	0.00005	mg/L	0.000106	207.66%
Cr 267.716†	11.6	0.00153	mg/L	0.000389	0.00153	mg/L	0.000389	25.44%
Cu 324.752†	528.9	0.00171	mg/L	0.000057	0.00171	mg/L	0.000057	3.36%
Fe 273.955†	3.5	0.00200	mg/L	0.000827	0.00200	mg/L	0.000827	41.39%
K 766.490†	-17.4	-0.00815	mg/L	0.020316	-0.00815	mg/L	0.020316	249.22%
Mg 279.077†	-12.0	-0.00798	mg/L	0.004712	-0.00798	mg/L	0.004712	59.05%
Mn 257.610†	-2.7	-0.00006	mg/L	0.000089	-0.00006	mg/L	0.000089	157.81%
Mo 202.031†	-0.8	-0.00003	mg/L	0.000076	-0.00003	mg/L	0.000076	263.49%
Na 589.592†	216.7	0.01649	mg/L	0.002641	0.01649	mg/L	0.002641	16.02%
Na 330.237†	5.6	0.1643	mg/L	0.52084	0.1643	mg/L	0.52084	317.08%
Ni 231.604†	1.1	0.00021	mg/L	0.001084	0.00021	mg/L	0.001084	512.03%
Pb 220.353†	8.6	0.00076	mg/L	0.000728	0.00076	mg/L	0.000728	95.34%
Sb 206.836†	0.9	0.00019	mg/L	0.001436	0.00019	mg/L	0.001436	736.70%
Se 196.026†	-4.7	-0.00247	mg/L	0.001153	-0.00247	mg/L	0.001153	46.63%
Si 288.158†	13.1	0.00547	mg/L	0.003227	0.00547	mg/L	0.003227	59.04%
Sn 189.927†	-0.3	-0.00006	mg/L	0.000826	-0.00006	mg/L	0.000826	>999.9%
Sr 421.552†	8.0	0.00001	mg/L	0.000033	0.00001	mg/L	0.000033	418.14%
Ti 334.903†	16.8	0.00067	mg/L	0.000428	0.00067	mg/L	0.000428	64.34%
Tl 190.801†	-0.5	-0.00016	mg/L	0.001069	-0.00016	mg/L	0.001069	664.14%
V 292.402†	9.4	0.00007	mg/L	0.000152	0.00007	mg/L	0.000152	232.51%
Zn 206.200†	9.4	0.00187	mg/L	0.000319	0.00187	mg/L	0.000319	17.02%

Sequence No.: 2
Sample ID: VZ89 MB2 TWC

Autosampler Location: 312
Date Collected: 1/21/2013 12:43:08 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: VZ89 MB2 TWC

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: VZ89 MB2 TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3101093.6	102.1	%	0.49				0.48%
ScR 361.383	358371.1	102.2	%	0.66				0.64%
Ag 328.068†	4.9	0.00002	mg/L	0.000107	0.00002	mg/L	0.000107	497.07%
Al 308.215†	5.7	0.00310	mg/L	0.007218	0.00310	mg/L	0.007218	233.21%
As 188.979†	0.6	0.00028	mg/L	0.002245	0.00028	mg/L	0.002245	800.29%
B 249.677†	-5.2	-0.00062	mg/L	0.000572	-0.00062	mg/L	0.000572	92.57%
Ba 233.527†	2.8	0.00048	mg/L	0.000437	0.00048	mg/L	0.000437	90.64%
Be 313.042†	-4.1	-0.00001	mg/L	0.000042	-0.00001	mg/L	0.000042	681.21%
Ca 317.933†	35.7	0.00226	mg/L	0.000347	0.00226	mg/L	0.000347	15.33%
Cd 228.802†	-7.7	-0.00021	mg/L	0.000048	-0.00021	mg/L	0.000048	22.48%
Co 228.616†	7.0	0.00013	mg/L	0.000031	0.00013	mg/L	0.000031	23.12%
Cr 267.716†	17.9	0.00235	mg/L	0.000693	0.00235	mg/L	0.000693	29.49%
Cu 324.752†	-18.3	-0.00006	mg/L	0.000122	-0.00006	mg/L	0.000122	207.44%
Fe 273.955†	4.6	0.00261	mg/L	0.001841	0.00261	mg/L	0.001841	70.41%
K 766.490†	-14.8	-0.00696	mg/L	0.016779	-0.00696	mg/L	0.016779	241.21%
Mg 279.077†	-16.1	-0.01069	mg/L	0.002363	-0.01069	mg/L	0.002363	22.10%
Mn 257.610†	-3.4	-0.00007	mg/L	0.000073	-0.00007	mg/L	0.000073	103.70%
Mo 202.031†	-4.4	-0.00016	mg/L	0.000051	-0.00016	mg/L	0.000051	31.52%
Na 589.592†	259.8	0.01977	mg/L	0.001836	0.01977	mg/L	0.001836	9.29%
Na 330.237†	9.5	0.2787	mg/L	0.18999	0.2787	mg/L	0.18999	68.18%
Ni 231.604†	10.0	0.00193	mg/L	0.000316	0.00193	mg/L	0.000316	16.41%
Pb 220.353†	-5.4	-0.00047	mg/L	0.000888	-0.00047	mg/L	0.000888	189.01%
Sb 206.836†	-2.6	-0.00064	mg/L	0.000759	-0.00064	mg/L	0.000759	118.35%
Se 196.026†	-1.8	-0.00094	mg/L	0.001097	-0.00094	mg/L	0.001097	116.91%
Si 288.158†	-1.6	-0.00068	mg/L	0.003307	-0.00068	mg/L	0.003307	483.28%
Sn 189.927†	-1.2	-0.00024	mg/L	0.000482	-0.00024	mg/L	0.000482	204.49%
Sr 421.552†	-2.5	-0.00000	mg/L	0.000033	-0.00000	mg/L	0.000033	>999.9%
Ti 334.903†	33.8	0.00133	mg/L	0.000305	0.00133	mg/L	0.000305	22.85%
Tl 190.801†	0.3	0.00011	mg/L	0.001139	0.00011	mg/L	0.001139	>999.9%
V 292.402†	-6.8	-0.00003	mg/L	0.000164	-0.00003	mg/L	0.000164	488.28%
Zn 206.200†	6.8	0.00136	mg/L	0.000366	0.00136	mg/L	0.000366	26.85%

Sequence No.: 3
Sample ID: VZ89 C TWC

Autosampler Location: 313
Date Collected: 1/21/2013 12:47:23 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: VZ89 C TWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VZ89 C TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3033687.1	99.84	%	0.227				0.23%
ScR 361.383	344555.7	98.26	%	0.403				0.41%
Ag 328.068†	-0.2	-0.00000	mg/L	0.000077	-0.00000	mg/L	0.000077	>999.9%
Al 308.215†	61.0	0.03337	mg/L	0.003254	0.03337	mg/L	0.003254	9.75%
As 188.979†	17.8	0.00649	mg/L	0.001928	0.00649	mg/L	0.001928	29.70%
B 249.677†	155.5	0.01847	mg/L	0.000340	0.01847	mg/L	0.000340	1.84%
Ba 233.527†	38.6	0.00669	mg/L	0.000733	0.00669	mg/L	0.000733	10.96%
Be 313.042†	22.8	0.00003	mg/L	0.000011	0.00003	mg/L	0.000011	32.01%
Ca 317.933†	240535.8	15.26	mg/L	0.220	15.26	mg/L	0.220	1.44%
Cd 228.802†	11.2	0.00026	mg/L	0.000009	0.00026	mg/L	0.000009	3.44%
Co 228.616†	0.4	0.00000	mg/L	0.000155	0.00000	mg/L	0.000155	>999.9%
Cr 267.716†	75.8	0.00937	mg/L	0.000546	0.00937	mg/L	0.000546	5.83%
Cu 324.752†	15604.1	0.05041	mg/L	0.000349	0.05041	mg/L	0.000349	0.69%
Fe 273.955†	47.5	0.02675	mg/L	0.001569	0.02675	mg/L	0.001569	5.86%
K 766.490†	1422.7	0.6683	mg/L	0.01920	0.6683	mg/L	0.01920	2.87%
Mg 279.077†	4287.0	2.847	mg/L	0.0239	2.847	mg/L	0.0239	0.84%
Mn 257.610†	434.7	0.00916	mg/L	0.000140	0.00916	mg/L	0.000140	1.53%
Mo 202.031†	39.0	0.00127	mg/L	0.000372	0.00127	mg/L	0.000372	29.37%
Na 589.592†	1478491.6	112.5	mg/L	0.13	112.5	mg/L	0.13	0.12%
Na 330.237†	3797.9	110.2	mg/L	0.76	110.2	mg/L	0.76	0.69%
Ni 231.604†	26.2	0.00503	mg/L	0.001112	0.00503	mg/L	0.001112	22.13%
Pb 220.353†	9063.5	0.8003	mg/L	0.01271	0.8003	mg/L	0.01271	1.59%
Sb 206.836†	-10.0	0.00082	mg/L	0.002187	0.00082	mg/L	0.002187	266.51%
Se 196.026†	-7.0	-0.00368	mg/L	0.003247	-0.00368	mg/L	0.003247	88.15%
Si 288.158†	35754.7	14.97	mg/L	0.194	14.97	mg/L	0.194	1.29%
Sn 189.927†	1876.1	0.3567	mg/L	0.00172	0.3567	mg/L	0.00172	0.48%
Sr 421.552†	64541.5	0.06395	mg/L	0.000697	0.06395	mg/L	0.000697	1.09%
Ti 334.903†	88.3	0.00248	mg/L	0.000088	0.00248	mg/L	0.000088	3.54%
Tl 190.801†	8.3	0.00275	mg/L	0.001723	0.00275	mg/L	0.001723	62.55%
V 292.402†	81.0	0.00055	mg/L	0.000075	0.00055	mg/L	0.000075	13.69%
Zn 206.200†	17994.0	3.587	mg/L	0.0534	3.587	mg/L	0.0534	1.49%

Sequence No.: 4
Sample ID: VZ89 D TWC

Autosampler Location: 314
Date Collected: 1/21/2013 12:51:40 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: VZ89 D TWC

Analyte	Back Pressure	Flow
All	213.0 kPa	0.75 L/min

Mean Data: VZ89 D TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3038828.0	100.0	%	0.53				0.53%
ScR 361.383	351598.7	100.3	%	0.38				0.38%
Ag 328.068†	157.4	0.00069	mg/L	0.000216	0.00069	mg/L	0.000216	31.40%
Al 308.215†	182.1	0.09960	mg/L	0.010094	0.09960	mg/L	0.010094	10.13%
As 188.979†	2.7	0.00116	mg/L	0.001431	0.00116	mg/L	0.001431	122.83%
B 249.677†	256.2	0.03040	mg/L	0.000359	0.03040	mg/L	0.000359	1.18%
Ba 233.527†	283.4	0.04848	mg/L	0.000485	0.04848	mg/L	0.000485	1.00%
Be 313.042†	6.0	0.00001	mg/L	0.000010	0.00001	mg/L	0.000010	118.35%
Ca 317.933†	26910.2	1.707	mg/L	0.0010	1.707	mg/L	0.0010	0.06%
Cd 228.802†	81.0	0.00292	mg/L	0.000116	0.00292	mg/L	0.000116	3.95%
Co 228.616†	660.0	0.01274	mg/L	0.000074	0.01274	mg/L	0.000074	0.58%
Cr 267.716†	25.9	0.00348	mg/L	0.000474	0.00348	mg/L	0.000474	13.64%
Cu 324.752†	1465288.1	4.736	mg/L	0.0247	4.736	mg/L	0.0247	0.52%
Fe 273.955†	6154.2	3.464	mg/L	0.0031	3.464	mg/L	0.0031	0.09%
K 766.490†	458.1	0.2152	mg/L	0.01914	0.2152	mg/L	0.01914	8.90%
Mg 279.077†	128.3	0.08328	mg/L	0.002289	0.08328	mg/L	0.002289	2.75%
Mn 257.610†	13828.4	0.2881	mg/L	0.00073	0.2881	mg/L	0.00073	0.25%
Mo 202.031†	181.3	0.00677	mg/L	0.000030	0.00677	mg/L	0.000030	0.45%
Na 589.592†	7070.4	0.5379	mg/L	0.00269	0.5379	mg/L	0.00269	0.50%
Na 330.237†	26.8	0.5679	mg/L	0.19463	0.5679	mg/L	0.19463	34.27%
Ni 231.604†	3729.1	0.7166	mg/L	0.00240	0.7166	mg/L	0.00240	0.33%
Pb 220.353†	2428.5	0.2077	mg/L	0.00061	0.2077	mg/L	0.00061	0.30%
Sb 206.836†	8.1	0.00192	mg/L	0.000954	0.00192	mg/L	0.000954	49.59%
Se 196.026†	-2.2	-0.00117	mg/L	0.002533	-0.00117	mg/L	0.002533	216.89%
Si 288.158†	509.8	0.2134	mg/L	0.00201	0.2134	mg/L	0.00201	0.94%
Sn 189.927†	49.6	0.00964	mg/L	0.000487	0.00964	mg/L	0.000487	5.05%
Sr 421.552†	16428.6	0.01628	mg/L	0.000039	0.01628	mg/L	0.000039	0.24%
Ti 334.903†	133.0	0.00514	mg/L	0.000326	0.00514	mg/L	0.000326	6.33%
Tl 190.801†	4.3	0.00181	mg/L	0.000353	0.00181	mg/L	0.000353	19.52%
V 292.402†	1.4	-0.00006	mg/L	0.000161	-0.00006	mg/L	0.000161	271.46%
Zn 206.200†	3322.5	0.6623	mg/L	0.00253	0.6623	mg/L	0.00253	0.38%

Sequence No.: 5
Sample ID: VZ85 ADUP TWC

Autosampler Location: 315
Date Collected: 1/21/2013 12:55:41 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: VZ85 ADUP TWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VZ85 ADUP TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3061689.3	100.8	%	0.48				0.48%
ScR 361.383	352032.3	100.4	%	0.19				0.19%
Ag 328.068†	3.8	0.00002	mg/L	0.000086	0.00002	mg/L	0.000086	479.41%
Al 308.215†	3782.7	2.071	mg/L	0.0074	2.071	mg/L	0.0074	0.36%
As 188.979†	6.7	0.00168	mg/L	0.001181	0.00168	mg/L	0.001181	70.25%
B 249.677†	609.3	0.07232	mg/L	0.000125	0.07232	mg/L	0.000125	0.17%
Ba 233.527†	1402.6	0.2426	mg/L	0.00092	0.2426	mg/L	0.00092	0.38%
Be 313.042†	24.3	0.00004	mg/L	0.000025	0.00004	mg/L	0.000025	72.30%
Ca 317.933†	62087.3	3.939	mg/L	0.0134	3.939	mg/L	0.0134	0.34%
Cd 228.802†	11.2	0.00029	mg/L	0.000069	0.00029	mg/L	0.000069	23.77%
Co 228.616†	59.5	0.00116	mg/L	0.000052	0.00116	mg/L	0.000052	4.50%
Cr 267.716†	5001.8	0.6563	mg/L	0.00085	0.6563	mg/L	0.00085	0.13%
Cu 324.752†	3120.3	0.01023	mg/L	0.000143	0.01023	mg/L	0.000143	1.40%
Fe 273.955†	6068.3	3.417	mg/L	0.0190	3.417	mg/L	0.0190	0.56%
K 766.490†	4664.8	2.191	mg/L	0.0095	2.191	mg/L	0.0095	0.43%
Mg 279.077†	1357.0	0.9002	mg/L	0.00207	0.9002	mg/L	0.00207	0.23%
Mn 257.610†	413.6	0.00862	mg/L	0.000080	0.00862	mg/L	0.000080	0.93%
Mo 202.031†	12.9	0.00040	mg/L	0.000141	0.00040	mg/L	0.000141	35.39%
Na 589.592†	174934.9	13.31	mg/L	0.088	13.31	mg/L	0.088	0.66%
Na 330.237†	464.1	13.61	mg/L	0.233	13.61	mg/L	0.233	1.71%
Ni 231.604†	16.9	0.00326	mg/L	0.000425	0.00326	mg/L	0.000425	13.04%
Pb 220.353†	-13.0	0.00036	mg/L	0.000222	0.00036	mg/L	0.000222	61.45%
Sb 206.836†	41.4	0.00012	mg/L	0.001677	0.00012	mg/L	0.001677	>999.9%
Se 196.026†	-1.2	-0.00090	mg/L	0.001580	-0.00090	mg/L	0.001580	175.10%
Si 288.158†	4363.8	1.827	mg/L	0.0112	1.827	mg/L	0.0112	0.61%
Sn 189.927†	-4.5	-0.00021	mg/L	0.000635	-0.00021	mg/L	0.000635	297.57%
Sr 421.552†	17636.4	0.01747	mg/L	0.000119	0.01747	mg/L	0.000119	0.68%
Ti 334.903†	108.6	0.00391	mg/L	0.000273	0.00391	mg/L	0.000273	6.98%
Tl 190.801†	0.8	0.00044	mg/L	0.001138	0.00044	mg/L	0.001138	258.82%
V 292.402†	611.5	0.00653	mg/L	0.000116	0.00653	mg/L	0.000116	1.77%
Zn 206.200†	25.8	0.00510	mg/L	0.000274	0.00510	mg/L	0.000274	5.38%

Sequence No.: 6
Sample ID: VZ85 A TWC

Autosampler Location: 316
Date Collected: 1/21/2013 12:59:41 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: VZ85 A TWC

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: VZ85 A TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3071015.4	101.1	%	0.66				0.65%
ScR 361.383	356322.2	101.6	%	0.09				0.08%
Ag 328.068†	18.2	0.00008	mg/L	0.000171	0.00008	mg/L	0.000171	211.56%
Al 308.215†	3728.5	2.041	mg/L	0.0033	2.041	mg/L	0.0033	0.16%
As 188.979†	9.9	0.00307	mg/L	0.002312	0.00307	mg/L	0.002312	75.40%
B 249.677†	592.2	0.07030	mg/L	0.000231	0.07030	mg/L	0.000231	0.33%
Ba 233.527†	1399.6	0.2421	mg/L	0.00294	0.2421	mg/L	0.00294	1.21%
Be 313.042†	12.7	0.00002	mg/L	0.000013	0.00002	mg/L	0.000013	74.65%
Ca 317.933†	61266.7	3.887	mg/L	0.0127	3.887	mg/L	0.0127	0.33%
Cd 228.802†	17.6	0.00046	mg/L	0.000113	0.00046	mg/L	0.000113	24.44%
Co 228.616†	61.4	0.00119	mg/L	0.000039	0.00119	mg/L	0.000039	3.31%
Cr 267.716†	4918.9	0.6454	mg/L	0.00125	0.6454	mg/L	0.00125	0.19%
Cu 324.752†	3106.8	0.01018	mg/L	0.000115	0.01018	mg/L	0.000115	1.13%
Fe 273.955†	5947.3	3.349	mg/L	0.0154	3.349	mg/L	0.0154	0.46%
K 766.490†	4596.0	2.159	mg/L	0.0031	2.159	mg/L	0.0031	0.15%
Mg 279.077†	1334.8	0.8854	mg/L	0.00187	0.8854	mg/L	0.00187	0.21%
Mn 257.610†	403.3	0.00841	mg/L	0.000063	0.00841	mg/L	0.000063	0.75%
Mo 202.031†	12.4	0.00038	mg/L	0.000166	0.00038	mg/L	0.000166	43.64%
Na 589.592†	173460.8	13.20	mg/L	0.079	13.20	mg/L	0.079	0.60%
Na 330.237†	450.8	13.22	mg/L	0.122	13.22	mg/L	0.122	0.92%
Ni 231.604†	12.4	0.00239	mg/L	0.000355	0.00239	mg/L	0.000355	14.82%
Pb 220.353†	-8.7	0.00072	mg/L	0.000332	0.00072	mg/L	0.000332	46.41%
Sb 206.836†	44.1	0.00092	mg/L	0.002144	0.00092	mg/L	0.002144	234.22%
Se 196.026†	-6.0	-0.00344	mg/L	0.002245	-0.00344	mg/L	0.002245	65.30%
Si 288.158†	4220.9	1.767	mg/L	0.0172	1.767	mg/L	0.0172	0.97%
Sn 189.927†	-1.7	0.00030	mg/L	0.000464	0.00030	mg/L	0.000464	155.50%
Sr 421.552†	17607.5	0.01745	mg/L	0.000097	0.01745	mg/L	0.000097	0.55%
Ti 334.903†	109.2	0.00393	mg/L	0.000399	0.00393	mg/L	0.000399	10.15%
Tl 190.801†	-0.5	0.00001	mg/L	0.000769	0.00001	mg/L	0.000769	>999.9%
V 292.402†	641.5	0.00668	mg/L	0.000088	0.00668	mg/L	0.000088	1.32%
Zn 206.200†	26.6	0.00526	mg/L	0.000283	0.00526	mg/L	0.000283	5.37%

Sequence No.: 7
Sample ID: VZ85 ASPK TWC

Autosampler Location: 317
Date Collected: 1/21/2013 1:03:42 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: VZ85 ASPK TWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VZ85 ASPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3061405.1	100.7	%	0.37				0.37%
ScR 361.383	352518.5	100.5	%	0.64				0.63%
Ag 328.068†	118810.4	0.5192	mg/L	0.00293	0.5192	mg/L	0.00293	0.56%
Al 308.215†	7439.5	4.066	mg/L	0.0259	4.066	mg/L	0.0259	0.64%
As 188.979†	4708.7	2.041	mg/L	0.0120	2.041	mg/L	0.0120	0.59%
B 249.677†	604.0	0.07068	mg/L	0.000217	0.07068	mg/L	0.000217	0.31%
Ba 233.527†	13019.2	2.256	mg/L	0.0196	2.256	mg/L	0.0196	0.87%
Be 313.042†	337505.4	0.4969	mg/L	0.00143	0.4969	mg/L	0.00143	0.29%
Ca 317.933†	214878.4	13.63	mg/L	0.048	13.63	mg/L	0.048	0.35%
Cd 228.802†	18740.1	0.5043	mg/L	0.00616	0.5043	mg/L	0.00616	1.22%
Co 228.616†	25323.3	0.4937	mg/L	0.00312	0.4937	mg/L	0.00312	0.63%
Cr 267.716†	8766.0	1.149	mg/L	0.0098	1.149	mg/L	0.0098	0.86%
Cu 324.752†	158243.0	0.5117	mg/L	0.00337	0.5117	mg/L	0.00337	0.66%
Fe 273.955†	9574.2	5.387	mg/L	0.0276	5.387	mg/L	0.0276	0.51%
K 766.490†	25031.1	11.76	mg/L	0.033	11.76	mg/L	0.033	0.28%
Mg 279.077†	16406.5	10.90	mg/L	0.082	10.90	mg/L	0.082	0.75%
Mn 257.610†	24346.3	0.5075	mg/L	0.00296	0.5075	mg/L	0.00296	0.58%
Mo 202.031†	36.5	0.00113	mg/L	0.000156	0.00113	mg/L	0.000156	13.81%
Na 589.592†	304716.5	23.18	mg/L	0.187	23.18	mg/L	0.187	0.81%
Na 330.237†	801.2	23.34	mg/L	0.083	23.34	mg/L	0.083	0.36%
Ni 231.604†	2594.7	0.4978	mg/L	0.00381	0.4978	mg/L	0.00381	0.76%
Pb 220.353†	22025.1	1.947	mg/L	0.0187	1.947	mg/L	0.0187	0.96%
Sb 206.836†	66.1	0.00072	mg/L	0.001107	0.00072	mg/L	0.001107	153.78%
Se 196.026†	3796.4	1.994	mg/L	0.0085	1.994	mg/L	0.0085	0.43%
Si 288.158†	4158.3	1.744	mg/L	0.0222	1.744	mg/L	0.0222	1.27%
Sn 189.927†	-20.3	-0.00158	mg/L	0.000973	-0.00158	mg/L	0.000973	61.65%
Sr 421.552†	521168.6	0.5164	mg/L	0.00211	0.5164	mg/L	0.00211	0.41%
Ti 334.903†	138.2	0.00434	mg/L	0.000337	0.00434	mg/L	0.000337	7.76%
Tl 190.801†	6055.9	2.000	mg/L	0.0068	2.000	mg/L	0.0068	0.34%
V 292.402†	80215.4	0.5090	mg/L	0.00393	0.5090	mg/L	0.00393	0.77%
Zn 206.200†	2467.8	0.4919	mg/L	0.00260	0.4919	mg/L	0.00260	0.53%

Sequence No.: 8
Sample ID: VZ85 MBSPK TWC

Autosampler Location: 318
Date Collected: 1/21/2013 1:07:43 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: VZ85 MBSPK TWC

Analyte	Back Pressure	Flow
All	213.0 kPa	0.75 L/min

Mean Data: VZ85 MBSPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3068750.4	101.0	%	0.37				0.36%
ScR 361.383	351103.7	100.1	%	0.55				0.55%
Ag 328.068†	119602.7	0.5227	mg/L	0.00398	0.5227	mg/L	0.00398	0.76%
Al 308.215†	3675.2	2.005	mg/L	0.0044	2.005	mg/L	0.0044	0.22%
As 188.979†	4593.1	1.992	mg/L	0.0045	1.992	mg/L	0.0045	0.23%
B 249.677†	15.7	0.00087	mg/L	0.000744	0.00087	mg/L	0.000744	85.94%
Ba 233.527†	11505.5	1.995	mg/L	0.0088	1.995	mg/L	0.0088	0.44%
Be 313.042†	332793.7	0.4900	mg/L	0.00360	0.4900	mg/L	0.00360	0.74%
Ca 317.933†	149693.7	9.496	mg/L	0.0166	9.496	mg/L	0.0166	0.17%
Cd 228.802†	18654.5	0.5023	mg/L	0.00218	0.5023	mg/L	0.00218	0.43%
Co 228.616†	25038.4	0.4881	mg/L	0.00342	0.4881	mg/L	0.00342	0.70%
Cr 267.716†	3813.4	0.4991	mg/L	0.00279	0.4991	mg/L	0.00279	0.56%
Cu 324.752†	154326.2	0.4989	mg/L	0.00291	0.4989	mg/L	0.00291	0.58%
Fe 273.955†	3524.3	1.981	mg/L	0.0047	1.981	mg/L	0.0047	0.24%
K 766.490†	20290.7	9.531	mg/L	0.0437	9.531	mg/L	0.0437	0.46%
Mg 279.077†	14926.8	9.917	mg/L	0.0447	9.917	mg/L	0.0447	0.45%
Mn 257.610†	23671.1	0.4934	mg/L	0.00110	0.4934	mg/L	0.00110	0.22%
Mo 202.031†	28.1	0.00090	mg/L	0.000079	0.00090	mg/L	0.000079	8.79%
Na 589.592†	130926.3	9.960	mg/L	0.0086	9.960	mg/L	0.0086	0.09%
Na 330.237†	347.5	10.03	mg/L	0.028	10.03	mg/L	0.028	0.27%
Ni 231.604†	2566.5	0.4923	mg/L	0.00188	0.4923	mg/L	0.00188	0.38%
Pb 220.353†	21951.2	1.939	mg/L	0.0131	1.939	mg/L	0.0131	0.67%
Sb 206.836†	18.7	-0.00090	mg/L	0.000775	-0.00090	mg/L	0.000775	86.48%
Se 196.026†	3743.0	1.967	mg/L	0.0041	1.967	mg/L	0.0041	0.21%
Si 288.158†	0.8	0.00336	mg/L	0.004076	0.00336	mg/L	0.004076	121.18%
Sn 189.927†	-19.7	-0.00213	mg/L	0.000528	-0.00213	mg/L	0.000528	24.74%
Sr 421.552†	499914.9	0.4953	mg/L	0.00007	0.4953	mg/L	0.00007	0.01%
Ti 334.903†	42.1	0.00094	mg/L	0.000214	0.00094	mg/L	0.000214	22.76%
Tl 190.801†	6028.5	1.991	mg/L	0.0033	1.991	mg/L	0.0033	0.17%
V 292.402†	79401.5	0.5013	mg/L	0.00287	0.5013	mg/L	0.00287	0.57%
Zn 206.200†	2422.9	0.4830	mg/L	0.00154	0.4830	mg/L	0.00154	0.32%

Sequence No.: 9
Sample ID: VZ89 MB2SPK TWC

Autosampler Location: 319
Date Collected: 1/21/2013 1:11:44 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: VZ89 MB2SPK TWC

Analyte	Back Pressure	Flow
All	217.0 kPa	0.75 L/min

Mean Data: VZ89 MB2SPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3067253.7	100.9	%	0.46				0.46%
ScR 361.383	353474.3	100.8	%	0.21				0.21%
Ag 328.068†	119535.9	0.5224	mg/L	0.00207	0.5224	mg/L	0.00207	0.40%
Al 308.215†	3672.4	2.003	mg/L	0.0035	2.003	mg/L	0.0035	0.17%
As 188.979†	4675.9	2.028	mg/L	0.0084	2.028	mg/L	0.0084	0.42%
B 249.677†	8.6	0.00001	mg/L	0.000089	0.00001	mg/L	0.000089	>999.9%
Ba 233.527†	11541.3	2.001	mg/L	0.0032	2.001	mg/L	0.0032	0.16%
Be 313.042†	334566.5	0.4926	mg/L	0.00269	0.4926	mg/L	0.00269	0.55%
Ca 317.933†	150047.5	9.519	mg/L	0.0346	9.519	mg/L	0.0346	0.36%
Cd 228.802†	18828.9	0.5069	mg/L	0.00109	0.5069	mg/L	0.00109	0.22%
Co 228.616†	25320.2	0.4936	mg/L	0.00132	0.4936	mg/L	0.00132	0.27%
Cr 267.716†	3829.0	0.5012	mg/L	0.00172	0.5012	mg/L	0.00172	0.34%
Cu 324.752†	154496.7	0.4994	mg/L	0.00139	0.4994	mg/L	0.00139	0.28%
Fe 273.955†	3541.7	1.990	mg/L	0.0181	1.990	mg/L	0.0181	0.91%
K 766.490†	20276.8	9.525	mg/L	0.0478	9.525	mg/L	0.0478	0.50%
Mg 279.077†	15024.0	9.982	mg/L	0.0659	9.982	mg/L	0.0659	0.66%
Mn 257.610†	23835.0	0.4968	mg/L	0.00337	0.4968	mg/L	0.00337	0.68%
Mo 202.031†	24.6	0.00078	mg/L	0.000115	0.00078	mg/L	0.000115	14.79%
Na 589.592†	130181.7	9.904	mg/L	0.0239	9.904	mg/L	0.0239	0.24%
Na 330.237†	339.7	9.803	mg/L	0.1617	9.803	mg/L	0.1617	1.65%
Ni 231.604†	2572.6	0.4946	mg/L	0.00490	0.4946	mg/L	0.00490	0.99%
Pb 220.353†	22246.6	1.965	mg/L	0.0013	1.965	mg/L	0.0013	0.07%
Sb 206.836†	8834.4	2.048	mg/L	0.0059	2.048	mg/L	0.0059	0.29%
Se 196.026†	3834.4	2.015	mg/L	0.0108	2.015	mg/L	0.0108	0.54%
Si 288.158†	-2.4	0.00203	mg/L	0.004273	0.00203	mg/L	0.004273	210.69%
Sn 189.927†	-28.6	-0.00287	mg/L	0.000508	-0.00287	mg/L	0.000508	17.67%
Sr 421.552†	500214.2	0.4956	mg/L	0.00074	0.4956	mg/L	0.00074	0.15%
Ti 334.903†	32.8	0.00057	mg/L	0.000051	0.00057	mg/L	0.000051	8.95%
Tl 190.801†	6086.3	2.010	mg/L	0.0054	2.010	mg/L	0.0054	0.27%
V 292.402†	79563.4	0.5023	mg/L	0.00228	0.5023	mg/L	0.00228	0.45%
Zn 206.200†	2452.2	0.4889	mg/L	0.00286	0.4889	mg/L	0.00286	0.59%

Sequence No.: 10
Sample ID: CV 3

Autosampler Location: 7
Date Collected: 1/21/2013 1:15:45 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3048674.9	100.3	%	0.35				0.35%
ScR 361.383	345895.0	98.64	%	0.129				0.13%
Ag 328.068†	237504.3	1.038	mg/L	0.0061	1.038	mg/L	0.0061	0.59%
Al 308.215†	3704.1	1.994	mg/L	0.0168	1.994	mg/L	0.0168	0.84%
As 188.979†	4571.5	2.009	mg/L	0.0055	2.009	mg/L	0.0055	0.27%
B 249.677†	8532.4	1.012	mg/L	0.0054	1.012	mg/L	0.0054	0.53%
Ba 233.527†	5849.0	1.014	mg/L	0.0064	1.014	mg/L	0.0064	0.63%
Be 313.042†	677113.1	0.9969	mg/L	0.00950	0.9969	mg/L	0.00950	0.95%
Ca 317.933†	32165.9	2.041	mg/L	0.0084	2.041	mg/L	0.0084	0.41%
Cd 228.802†	37360.6	1.019	mg/L	0.0061	1.019	mg/L	0.0061	0.60%
Co 228.616†	50754.0	0.9879	mg/L	0.00497	0.9879	mg/L	0.00497	0.50%
Cr 267.716†	7684.7	1.008	mg/L	0.0049	1.008	mg/L	0.0049	0.49%
Cu 324.752†	316379.2	1.022	mg/L	0.0052	1.022	mg/L	0.0052	0.51%
Fe 273.955†	3632.3	2.038	mg/L	0.0109	2.038	mg/L	0.0109	0.54%
K 766.490†	42161.0	19.80	mg/L	0.066	19.80	mg/L	0.066	0.33%
Mg 279.077†	3006.3	2.004	mg/L	0.0130	2.004	mg/L	0.0130	0.65%
Mn 257.610†	48757.0	1.016	mg/L	0.0032	1.016	mg/L	0.0032	0.31%
Mo 202.031†	26793.0	1.004	mg/L	0.0014	1.004	mg/L	0.0014	0.14%
Na 589.592†	678355.9	51.61	mg/L	0.326	51.61	mg/L	0.326	0.63%
Na 330.237†	1751.5	51.26	mg/L	0.386	51.26	mg/L	0.386	0.75%
Ni 231.604†	5271.9	1.013	mg/L	0.0030	1.013	mg/L	0.0030	0.29%
Pb 220.353†	22640.3	2.000	mg/L	0.0052	2.000	mg/L	0.0052	0.26%
Sb 206.836†	8993.1	2.089	mg/L	0.0049	2.089	mg/L	0.0049	0.24%
Se 196.026†	3761.0	1.975	mg/L	0.0024	1.975	mg/L	0.0024	0.12%
Si 288.158†	4908.8	2.055	mg/L	0.0109	2.055	mg/L	0.0109	0.53%
Sn 189.927†	5267.6	0.9960	mg/L	0.00296	0.9960	mg/L	0.00296	0.30%
Sr 421.552†	1026601.0	1.017	mg/L	0.0032	1.017	mg/L	0.0032	0.32%
Ti 334.903†	25932.8	1.025	mg/L	0.0040	1.025	mg/L	0.0040	0.39%
Tl 190.801†	6049.1	1.994	mg/L	0.0041	1.994	mg/L	0.0041	0.21%
V 292.402†	160615.2	1.014	mg/L	0.0057	1.014	mg/L	0.0057	0.56%
Zn 206.200†	5223.9	1.041	mg/L	0.0055	1.041	mg/L	0.0055	0.53%

Sequence No.: 11
Sample ID: CB 3

Autosampler Location: 1
Date Collected: 1/21/2013 1:19:04 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	3058324.0	100.6	%	0.56				0.56%
ScR 361.383	353838.5	100.9	%	0.76				0.75%
Ag 328.068†	-4.8	-0.00002	mg/L	0.000010	-0.00002	mg/L	0.000010	48.96%
Al 308.215†	5.4	0.00292	mg/L	0.004388	0.00292	mg/L	0.004388	150.27%
As 188.979†	-0.7	-0.00032	mg/L	0.000806	-0.00032	mg/L	0.000806	249.01%
B 249.677†	13.4	0.00159	mg/L	0.000508	0.00159	mg/L	0.000508	31.95%
Ba 233.527†	2.8	0.00049	mg/L	0.000984	0.00049	mg/L	0.000984	200.04%
Be 313.042†	-7.5	-0.00001	mg/L	0.000024	-0.00001	mg/L	0.000024	219.74%
Ca 317.933†	1.8	0.00012	mg/L	0.000751	0.00012	mg/L	0.000751	645.84%
Cd 228.802†	-5.5	-0.00015	mg/L	0.000096	-0.00015	mg/L	0.000096	64.19%
Co 228.616†	3.0	0.00006	mg/L	0.000007	0.00006	mg/L	0.000007	12.17%
Cr 267.716†	10.9	0.00144	mg/L	0.000341	0.00144	mg/L	0.000341	23.77%
Cu 324.752†	-22.4	-0.00007	mg/L	0.000017	-0.00007	mg/L	0.000017	22.88%
Fe 273.955†	1.8	0.00102	mg/L	0.000876	0.00102	mg/L	0.000876	86.29%
K 766.490†	-15.5	-0.00729	mg/L	0.007995	-0.00729	mg/L	0.007995	109.68%
Mg 279.077†	-12.8	-0.00851	mg/L	0.004398	-0.00851	mg/L	0.004398	51.67%
Mn 257.610†	1.0	0.00002	mg/L	0.000090	0.00002	mg/L	0.000090	422.56%
Mo 202.031†	30.4	0.00114	mg/L	0.000125	0.00114	mg/L	0.000125	10.93%
Na 589.592†	155.2	0.01181	mg/L	0.002246	0.01181	mg/L	0.002246	19.01%
Na 330.237†	7.5	0.2192	mg/L	0.41490	0.2192	mg/L	0.41490	189.25%
Ni 231.604†	3.7	0.00071	mg/L	0.000661	0.00071	mg/L	0.000661	93.68%
Pb 220.353†	8.9	0.00079	mg/L	0.000258	0.00079	mg/L	0.000258	32.64%
Sb 206.836†	13.8	0.00318	mg/L	0.001366	0.00318	mg/L	0.001366	42.95%
Se 196.026†	4.4	0.00232	mg/L	0.001640	0.00232	mg/L	0.001640	70.78%
Si 288.158†	-6.0	-0.00250	mg/L	0.001720	-0.00250	mg/L	0.001720	68.82%
Sn 189.927†	-3.0	-0.00056	mg/L	0.000405	-0.00056	mg/L	0.000405	71.96%
Sr 421.552†	-48.1	-0.00005	mg/L	0.000015	-0.00005	mg/L	0.000015	31.65%
Ti 334.903†	-7.3	-0.00029	mg/L	0.000953	-0.00029	mg/L	0.000953	326.30%
Tl 190.801†	6.6	0.00217	mg/L	0.000999	0.00217	mg/L	0.000999	46.08%
V 292.402†	-0.0	0.00001	mg/L	0.000113	0.00001	mg/L	0.000113	>999.9%
Zn 206.200†	3.7	0.00074	mg/L	0.000473	0.00074	mg/L	0.000473	63.76%

Analysis Begun

Start Time: 1/21/2013 1:24:51 PM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 1/21/2013 8:44:13 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\0121.sif
Batch ID:
Results Data Set: I2130121
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: WA20 MB SWC
Autosampler Location: 320
Date Collected: 1/21/2013 1:24:53 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WA20 MB SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: WA20 MB SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3102469.6	102.1	%	0.72				0.71%
ScR 361.383	356691.1	101.7	%	0.77				0.75%
Ag 328.068†	26.2	0.00011	mg/L	0.000055	0.00023	mg/L	0.000110	47.98%
Al 308.215†	-1.6	-0.00088	mg/L	0.005779	-0.00176	mg/L	0.011558	658.32%
As 188.979†	0.8	0.00034	mg/L	0.001036	0.00068	mg/L	0.002071	303.99%
B 249.677†	1.6	0.00019	mg/L	0.000688	0.00037	mg/L	0.001376	370.53%
Ba 233.527†	-0.5	-0.00008	mg/L	0.000426	-0.00016	mg/L	0.000852	516.81%
Be 313.042†	-5.2	-0.00001	mg/L	0.000030	-0.00002	mg/L	0.000060	389.28%
Ca 317.933†	43.6	0.00277	mg/L	0.000834	0.00553	mg/L	0.001668	30.16%
Cd 228.802†	-8.8	-0.00025	mg/L	0.000139	-0.00049	mg/L	0.000277	56.51%
Co 228.616†	-2.3	-0.00005	mg/L	0.000137	-0.00009	mg/L	0.000273	297.17%
Cr 267.716†	15.3	0.00201	mg/L	0.000610	0.00402	mg/L	0.001219	30.34%
Cu 324.752†	-32.2	-0.00010	mg/L	0.000083	-0.00021	mg/L	0.000167	80.19%
Fe 273.955†	3.9	0.00219	mg/L	0.001590	0.00439	mg/L	0.003180	72.52%
K 766.490†	7.8	0.00369	mg/L	0.022985	0.00737	mg/L	0.045971	623.73%
Mg 279.077†	-10.7	-0.00712	mg/L	0.000784	-0.01424	mg/L	0.001569	11.02%
Mn 257.610†	-5.1	-0.00011	mg/L	0.000104	-0.00021	mg/L	0.000207	97.14%
Mo 202.031†	-0.0	-0.00000	mg/L	0.000144	-0.00000	mg/L	0.000288	>999.9%
Na 589.592†	178.6	0.01359	mg/L	0.003331	0.02717	mg/L	0.006662	24.52%
Na 330.237†	-0.5	-0.01428	mg/L	0.238202	-0.02856	mg/L	0.476403	>999.9%
Ni 231.604†	5.2	0.00100	mg/L	0.000720	0.00201	mg/L	0.001439	71.64%
Pb 220.353†	-3.2	-0.00027	mg/L	0.000515	-0.00055	mg/L	0.001029	187.35%
Sb 206.836†	1.4	0.00028	mg/L	0.001590	0.00056	mg/L	0.003180	563.94%
Se 196.026†	1.2	0.00063	mg/L	0.001683	0.00127	mg/L	0.003367	265.50%
Si 288.158†	-4.4	-0.00186	mg/L	0.000210	-0.00371	mg/L	0.000419	11.29%
Sn 189.927†	-3.0	-0.00057	mg/L	0.000656	-0.00115	mg/L	0.001311	114.26%
Sr 421.552†	-9.8	-0.00001	mg/L	0.000020	-0.00002	mg/L	0.000039	201.02%
Ti 334.903†	4.7	0.00019	mg/L	0.001156	0.00037	mg/L	0.002313	620.81%
Tl 190.801†	-0.8	-0.00027	mg/L	0.000416	-0.00053	mg/L	0.000832	156.79%
V 292.402†	9.4	0.00007	mg/L	0.000100	0.00013	mg/L	0.000200	148.25%
Zn 206.200†	4.5	0.00089	mg/L	0.000098	0.00179	mg/L	0.000196	10.97%

Sequence No.: 2
Sample ID: VZ87 MB TWC

Autosampler Location: 321
Date Collected: 1/21/2013 1:29:10 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: VZ87 MB TWC

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

Mean Data: VZ87 MB TWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3088212.8	101.6	%	0.12				0.12%
ScR 361.383	353339.7	100.8	%	1.09				1.09%
Ag 328.068†	6.4	0.00003	mg/L	0.000190	0.00003	mg/L	0.000190	674.53%
Al 308.215†	6.3	0.00343	mg/L	0.008256	0.00343	mg/L	0.008256	241.04%
As 188.979†	-0.2	-0.00008	mg/L	0.002055	-0.00008	mg/L	0.002055	>999.9%
B 249.677†	4.6	0.00054	mg/L	0.000704	0.00054	mg/L	0.000704	130.11%
Ba 233.527†	3.9	0.00068	mg/L	0.000787	0.00068	mg/L	0.000787	116.27%
Be 313.042†	-14.8	-0.00002	mg/L	0.000026	-0.00002	mg/L	0.000026	119.86%
Ca 317.933†	28.3	0.00179	mg/L	0.000283	0.00179	mg/L	0.000283	15.77%
Cd 228.802†	-8.5	-0.00023	mg/L	0.000077	-0.00023	mg/L	0.000077	33.16%
Co 228.616†	9.4	0.00018	mg/L	0.000036	0.00018	mg/L	0.000036	19.70%
Cr 267.716†	9.1	0.00120	mg/L	0.000361	0.00120	mg/L	0.000361	30.15%
Cu 324.752†	-21.7	-0.00007	mg/L	0.000046	-0.00007	mg/L	0.000046	66.12%
Fe 273.955†	-0.8	-0.00043	mg/L	0.000933	-0.00043	mg/L	0.000933	219.03%
K 766.490†	-37.2	-0.01749	mg/L	0.008193	-0.01749	mg/L	0.008193	46.84%
Mg 279.077†	-10.4	-0.00688	mg/L	0.002423	-0.00688	mg/L	0.002423	35.24%
Mn 257.610†	28.5	0.00059	mg/L	0.000056	0.00059	mg/L	0.000056	9.49%
Mo 202.031†	0.2	0.00001	mg/L	0.000102	0.00001	mg/L	0.000102	>999.9%
Na 589.592†	134.5	0.01023	mg/L	0.004395	0.01023	mg/L	0.004395	42.96%
Na 330.237†	-10.7	-0.3138	mg/L	0.46878	-0.3138	mg/L	0.46878	149.40%
Ni 231.604†	3.8	0.00073	mg/L	0.000569	0.00073	mg/L	0.000569	78.18%
Pb 220.353†	2.4	0.00021	mg/L	0.000317	0.00021	mg/L	0.000317	147.92%
Sb 206.836†	-1.8	-0.00044	mg/L	0.000833	-0.00044	mg/L	0.000833	190.43%
Se 196.026†	2.8	0.00147	mg/L	0.003021	0.00147	mg/L	0.003021	205.51%
Si 288.158†	-0.1	-0.00003	mg/L	0.002516	-0.00003	mg/L	0.002516	>999.9%
Sn 189.927†	-0.2	-0.00004	mg/L	0.000394	-0.00004	mg/L	0.000394	892.80%
Sr 421.552†	-13.1	-0.00001	mg/L	0.000012	-0.00001	mg/L	0.000012	96.00%
Ti 334.903†	1.5	0.00006	mg/L	0.000310	0.00006	mg/L	0.000310	521.12%
Tl 190.801†	0.3	0.00011	mg/L	0.000227	0.00011	mg/L	0.000227	202.02%
V 292.402†	3.5	0.00003	mg/L	0.000106	0.00003	mg/L	0.000106	389.32%
Zn 206.200†	4.3	0.00085	mg/L	0.000121	0.00085	mg/L	0.000121	14.18%

Sequence No.: 3
Sample ID: VZ87 ADUP TWC

Autosampler Location: 322
Date Collected: 1/21/2013 1:33:25 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: VZ87 ADUP TWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VZ87 ADUP TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2932174.4	96.50	%	0.045				0.05%
ScR 361.383	342233.6	97.60	%	0.769				0.79%
Ag 328.068†	-192.1	-0.00084	mg/L	0.000375	-0.00084	mg/L	0.000375	44.75%
Al 308.215†	23.3	0.01259	mg/L	0.002677	0.01259	mg/L	0.002677	21.26%
As 188.979†	84.0	0.02280	mg/L	0.000787	0.02280	mg/L	0.000787	3.45%
B 249.677†	1164.4	0.1382	mg/L	0.00108	0.1382	mg/L	0.00108	0.78%
Ba 233.527†	191.6	0.03322	mg/L	0.000166	0.03322	mg/L	0.000166	0.50%
Be 313.042†	50.9	0.00007	mg/L	0.000017	0.00007	mg/L	0.000017	22.66%
Ca 317.933†	2612656.3	165.7	mg/L	0.13	165.7	mg/L	0.13	0.08%
Cd 228.802†	12.7	0.00011	mg/L	0.000146	0.00011	mg/L	0.000146	129.37%
Co 228.616†	55.8	0.00106	mg/L	0.000175	0.00106	mg/L	0.000175	16.57%
Cr 267.716†	81.6	0.00278	mg/L	0.000829	0.00278	mg/L	0.000829	29.86%
Cu 324.752†	958.4	0.00267	mg/L	0.000031	0.00267	mg/L	0.000031	1.14%
Fe 273.955†	55.6	0.03132	mg/L	0.001379	0.03132	mg/L	0.001379	4.40%
K 766.490†	15218.1	7.149	mg/L	0.0411	7.149	mg/L	0.0411	0.58%
Mg 279.077†	91833.1	61.00	mg/L	0.489	61.00	mg/L	0.489	0.80%
Mn 257.610†	257.4	0.00486	mg/L	0.000038	0.00486	mg/L	0.000038	0.78%
Mo 202.031†	176.3	0.00450	mg/L	0.000293	0.00450	mg/L	0.000293	6.51%
Na 589.592†	699256.3	53.20	mg/L	0.152	53.20	mg/L	0.152	0.29%
Na 330.237†	1811.5	53.13	mg/L	0.323	53.13	mg/L	0.323	0.61%
Ni 231.604†	24.7	0.00475	mg/L	0.001180	0.00475	mg/L	0.001180	24.86%
Pb 220.353†	-26.5	-0.00233	mg/L	0.000510	-0.00233	mg/L	0.000510	21.95%
Sb 206.836†	-3.7	-0.00117	mg/L	0.001057	-0.00117	mg/L	0.001057	90.46%
Se 196.026†	-10.5	-0.00551	mg/L	0.002536	-0.00551	mg/L	0.002536	46.02%
Si 288.158†	27729.9	11.62	mg/L	0.450	11.62	mg/L	0.450	3.88%
Sn 189.927†	-99.8	0.00770	mg/L	0.000383	0.00770	mg/L	0.000383	4.97%
Sr 421.552†	701212.6	0.6948	mg/L	0.00238	0.6948	mg/L	0.00238	0.34%
Ti 334.903†	376.5	0.00393	mg/L	0.000285	0.00393	mg/L	0.000285	7.25%
Tl 190.801†	20.2	0.00668	mg/L	0.002681	0.00668	mg/L	0.002681	40.14%
V 292.402†	403.8	0.00258	mg/L	0.000081	0.00258	mg/L	0.000081	3.14%
Zn 206.200†	0.1	0.00002	mg/L	0.000830	0.00002	mg/L	0.000830	>999.9%

Sequence No.: 4
Sample ID: VZ87 A TWC

Autosampler Location: 323
Date Collected: 1/21/2013 1:37:41 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: VZ87 A TWC

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: VZ87 A TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2970544.7	97.76	%	0.367				0.38%
ScR 361.383	342021.6	97.54	%	0.772				0.79%
Ag 328.068†	-196.9	-0.00086	mg/L	0.000254	-0.00086	mg/L	0.000254	29.52%
Al 308.215†	18.1	0.00973	mg/L	0.003982	0.00973	mg/L	0.003982	40.94%
As 188.979†	76.8	0.02033	mg/L	0.001336	0.02033	mg/L	0.001336	6.57%
B 249.677†	1137.4	0.1350	mg/L	0.00179	0.1350	mg/L	0.00179	1.33%
Ba 233.527†	182.3	0.03161	mg/L	0.000155	0.03161	mg/L	0.000155	0.49%
Be 313.042†	43.0	0.00006	mg/L	0.000009	0.00006	mg/L	0.000009	14.69%
Ca 317.933†	2509336.6	159.2	mg/L	0.37	159.2	mg/L	0.37	0.23%
Cd 228.802†	5.7	-0.00006	mg/L	0.000156	-0.00006	mg/L	0.000156	256.18%
Co 228.616†	51.6	0.00097	mg/L	0.000057	0.00097	mg/L	0.000057	5.90%
Cr 267.716†	77.3	0.00255	mg/L	0.000490	0.00255	mg/L	0.000490	19.22%
Cu 324.752†	858.1	0.00237	mg/L	0.000034	0.00237	mg/L	0.000034	1.44%
Fe 273.955†	51.0	0.02869	mg/L	0.000873	0.02869	mg/L	0.000873	3.04%
K 766.490†	14687.6	6.899	mg/L	0.0992	6.899	mg/L	0.0992	1.44%
Mg 279.077†	87861.2	58.36	mg/L	0.676	58.36	mg/L	0.676	1.16%
Mn 257.610†	239.4	0.00450	mg/L	0.000080	0.00450	mg/L	0.000080	1.77%
Mo 202.031†	170.5	0.00436	mg/L	0.000161	0.00436	mg/L	0.000161	3.70%
Na 589.592†	676846.2	51.49	mg/L	0.392	51.49	mg/L	0.392	0.76%
Na 330.237†	1737.9	50.97	mg/L	0.607	50.97	mg/L	0.607	1.19%
Ni 231.604†	25.5	0.00489	mg/L	0.000727	0.00489	mg/L	0.000727	14.87%
Pb 220.353†	-30.3	-0.00266	mg/L	0.000470	-0.00266	mg/L	0.000470	17.68%
Sb 206.836†	-0.8	-0.00047	mg/L	0.001549	-0.00047	mg/L	0.001549	326.66%
Se 196.026†	-4.2	-0.00224	mg/L	0.003952	-0.00224	mg/L	0.003952	176.76%
Si 288.158†	27687.9	11.60	mg/L	0.377	11.60	mg/L	0.377	3.25%
Sn 189.927†	-93.8	0.00778	mg/L	0.000753	0.00778	mg/L	0.000753	9.68%
Sr 421.552†	676144.2	0.6699	mg/L	0.00274	0.6699	mg/L	0.00274	0.41%
Ti 334.903†	446.8	0.00715	mg/L	0.000340	0.00715	mg/L	0.000340	4.76%
Tl 190.801†	27.6	0.00911	mg/L	0.001044	0.00911	mg/L	0.001044	11.46%
V 292.402†	409.9	0.00261	mg/L	0.000173	0.00261	mg/L	0.000173	6.63%
Zn 206.200†	0.4	0.00009	mg/L	0.000990	0.00009	mg/L	0.000990	>999.9%

Sequence No.: 5
Sample ID: VZ87 ASPK TWC

Autosampler Location: 324
Date Collected: 1/21/2013 1:41:57 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: VZ87 ASPK TWC

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: VZ87 ASPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2976255.2	97.95	%	0.520				0.53%
ScR 361.383	345532.8	98.54	%	0.432				0.44%
Ag 328.068†	119441.6	0.5220	mg/L	0.00264	0.5220	mg/L	0.00264	0.50%
Al 308.215†	3805.0	2.076	mg/L	0.0067	2.076	mg/L	0.0067	0.32%
As 188.979†	4788.9	2.064	mg/L	0.0128	2.064	mg/L	0.0128	0.62%
B 249.677†	1127.3	0.1328	mg/L	0.00046	0.1328	mg/L	0.00046	0.34%
Ba 233.527†	11655.1	2.021	mg/L	0.0079	2.021	mg/L	0.0079	0.39%
Be 313.042†	337270.9	0.4965	mg/L	0.00123	0.4965	mg/L	0.00123	0.25%
Ca 317.933†	2697245.5	171.1	mg/L	0.51	171.1	mg/L	0.51	0.30%
Cd 228.802†	19374.7	0.5216	mg/L	0.00330	0.5216	mg/L	0.00330	0.63%
Co 228.616†	24821.0	0.4839	mg/L	0.00255	0.4839	mg/L	0.00255	0.53%
Cr 267.716†	3901.2	0.5032	mg/L	0.00125	0.5032	mg/L	0.00125	0.25%
Cu 324.752†	157856.8	0.5099	mg/L	0.00360	0.5099	mg/L	0.00360	0.71%
Fe 273.955†	3610.3	2.029	mg/L	0.0017	2.029	mg/L	0.0017	0.08%
K 766.490†	36056.0	16.94	mg/L	0.043	16.94	mg/L	0.043	0.25%
Mg 279.077†	100473.0	66.74	mg/L	0.136	66.74	mg/L	0.136	0.20%
Mn 257.610†	24227.5	0.5045	mg/L	0.00045	0.5045	mg/L	0.00045	0.09%
Mo 202.031†	177.7	0.00445	mg/L	0.000257	0.00445	mg/L	0.000257	5.78%
Na 589.592†	816090.0	62.09	mg/L	0.114	62.09	mg/L	0.114	0.18%
Na 330.237†	2166.1	63.37	mg/L	0.141	63.37	mg/L	0.141	0.22%
Ni 231.604†	2530.3	0.4854	mg/L	0.00105	0.4854	mg/L	0.00105	0.22%
Pb 220.353†	21961.7	1.940	mg/L	0.0123	1.940	mg/L	0.0123	0.63%
Sb 206.836†	22.7	-0.00027	mg/L	0.000670	-0.00027	mg/L	0.000670	250.56%
Se 196.026†	3831.5	2.013	mg/L	0.0073	2.013	mg/L	0.0073	0.36%
Si 288.158†	28296.0	11.86	mg/L	0.225	11.86	mg/L	0.225	1.90%
Sn 189.927†	-94.6	0.00960	mg/L	0.000663	0.00960	mg/L	0.000663	6.91%
Sr 421.552†	1192918.0	1.182	mg/L	0.0017	1.182	mg/L	0.0017	0.14%
Ti 334.903†	371.1	0.00327	mg/L	0.000194	0.00327	mg/L	0.000194	5.94%
Tl 190.801†	5874.4	1.940	mg/L	0.0068	1.940	mg/L	0.0068	0.35%
V 292.402†	78759.6	0.4973	mg/L	0.00248	0.4973	mg/L	0.00248	0.50%
Zn 206.200†	2386.0	0.4757	mg/L	0.00111	0.4757	mg/L	0.00111	0.23%

Sequence No.: 6
Sample ID: WA20 ADUP SWC

Autosampler Location: 325
Date Collected: 1/21/2013 1:45:59 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WA20 ADUP SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: WA20 ADUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3112975.1	102.4	%	0.13				0.13%
ScR 361.383	360601.6	102.8	%	0.36				0.35%
Ag 328.068†	1047.1	0.00458	mg/L	0.000053	0.00915	mg/L	0.000106	1.15%
Al 308.215†	5718.2	3.130	mg/L	0.0194	6.261	mg/L	0.0389	0.62%
As 188.979†	20.7	0.01001	mg/L	0.000753	0.02002	mg/L	0.001506	7.52%
B 249.677†	104.2	0.01237	mg/L	0.000019	0.02474	mg/L	0.000038	0.15%
Ba 233.527†	1187.1	0.2050	mg/L	0.00059	0.4101	mg/L	0.00118	0.29%
Be 313.042†	80.6	0.00012	mg/L	0.000024	0.00023	mg/L	0.000048	20.86%
Ca 317.933†	198923.5	12.62	mg/L	0.059	25.24	mg/L	0.118	0.47%
Cd 228.802†	88.1	0.00238	mg/L	0.000156	0.00476	mg/L	0.000311	6.53%
Co 228.616†	84.8	0.00149	mg/L	0.000175	0.00299	mg/L	0.000351	11.75%
Cr 267.716†	120.6	0.01570	mg/L	0.000658	0.03139	mg/L	0.001316	4.19%
Cu 324.752†	88018.9	0.2846	mg/L	0.00068	0.5693	mg/L	0.00135	0.24%
Fe 273.955†	8154.9	4.591	mg/L	0.0347	9.181	mg/L	0.0694	0.76%
K 766.490†	1774.6	0.8336	mg/L	0.01022	1.667	mg/L	0.0204	1.23%
Mg 279.077†	2276.1	1.508	mg/L	0.0133	3.017	mg/L	0.0266	0.88%
Mn 257.610†	4147.5	0.08637	mg/L	0.000739	0.1727	mg/L	0.00148	0.86%
Mo 202.031†	169.8	0.00620	mg/L	0.000163	0.01241	mg/L	0.000327	2.63%
Na 589.592†	7397.9	0.5628	mg/L	0.00235	1.126	mg/L	0.0047	0.42%
Na 330.237†	29.6	0.6794	mg/L	0.16137	1.359	mg/L	0.3227	23.75%
Ni 231.604†	54.4	0.01045	mg/L	0.001173	0.02091	mg/L	0.002346	11.22%
Pb 220.353†	190.2	0.01698	mg/L	0.000702	0.03396	mg/L	0.001403	4.13%
Sb 206.836†	13.1	0.00305	mg/L	0.000792	0.00609	mg/L	0.001583	25.98%
Se 196.026†	1.8	0.00054	mg/L	0.003473	0.00108	mg/L	0.006946	645.19%
Si 288.158†	1935.4	0.8104	mg/L	0.04703	1.621	mg/L	0.0941	5.80%
Sn 189.927†	92.7	0.01953	mg/L	0.000336	0.03907	mg/L	0.000673	1.72%
Sr 421.552†	52847.8	0.05236	mg/L	0.000100	0.1047	mg/L	0.00020	0.19%
Ti 334.903†	1874.2	0.07331	mg/L	0.000333	0.1466	mg/L	0.00067	0.45%
Tl 190.801†	9.5	0.00369	mg/L	0.001566	0.00738	mg/L	0.003133	42.46%
V 292.402†	1267.5	0.00784	mg/L	0.000094	0.01568	mg/L	0.000188	1.20%
Zn 206.200†	3116.0	0.6211	mg/L	0.00536	1.242	mg/L	0.0107	0.86%

Sequence No.: 7
Sample ID: WA20 A SWC

Autosampler Location: 326
Date Collected: 1/21/2013 1:49:59 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WA20 A SWC

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

Mean Data: WA20 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3092296.8	101.8	%	0.41				0.41%
ScR 361.383	359021.5	102.4	%	0.37				0.36%
Ag 328.068†	1016.3	0.00444	mg/L	0.000102	0.00888	mg/L	0.000205	2.30%
Al 308.215†	5130.8	2.809	mg/L	0.0106	5.618	mg/L	0.0212	0.38%
As 188.979†	17.5	0.00861	mg/L	0.000822	0.01721	mg/L	0.001644	9.55%
B 249.677†	86.7	0.01030	mg/L	0.001083	0.02060	mg/L	0.002165	10.51%
Ba 233.527†	1030.0	0.1779	mg/L	0.00102	0.3558	mg/L	0.00203	0.57%
Be 313.042†	-7.9	-0.00001	mg/L	0.000008	-0.00003	mg/L	0.000017	59.99%
Ca 317.933†	183914.5	11.67	mg/L	0.057	23.33	mg/L	0.114	0.49%
Cd 228.802†	80.7	0.00219	mg/L	0.000136	0.00437	mg/L	0.000271	6.20%
Co 228.616†	65.3	0.00112	mg/L	0.000138	0.00224	mg/L	0.000277	12.35%
Cr 267.716†	112.7	0.01467	mg/L	0.000325	0.02933	mg/L	0.000649	2.21%
Cu 324.752†	78813.4	0.2549	mg/L	0.00151	0.5097	mg/L	0.00302	0.59%
Fe 273.955†	7043.6	3.965	mg/L	0.0190	7.930	mg/L	0.0381	0.48%
K 766.490†	1735.2	0.8151	mg/L	0.02268	1.630	mg/L	0.0454	2.78%
Mg 279.077†	2053.7	1.361	mg/L	0.0005	2.722	mg/L	0.0010	0.04%
Mn 257.610†	3742.2	0.07793	mg/L	0.000152	0.1559	mg/L	0.00030	0.20%
Mo 202.031†	166.1	0.00608	mg/L	0.000118	0.01216	mg/L	0.000235	1.94%
Na 589.592†	7214.1	0.5488	mg/L	0.00519	1.098	mg/L	0.0104	0.95%
Na 330.237†	22.9	0.5074	mg/L	0.15947	1.015	mg/L	0.3189	31.43%
Ni 231.604†	46.1	0.00886	mg/L	0.000462	0.01773	mg/L	0.000924	5.21%
Pb 220.353†	148.9	0.01332	mg/L	0.000370	0.02664	mg/L	0.000740	2.78%
Sb 206.836†	16.9	0.00391	mg/L	0.000129	0.00782	mg/L	0.000257	3.29%
Se 196.026†	1.4	0.00034	mg/L	0.002041	0.00068	mg/L	0.004081	602.12%
Si 288.158†	1609.8	0.6740	mg/L	0.01280	1.348	mg/L	0.0256	1.90%
Sn 189.927†	82.8	0.01752	mg/L	0.000460	0.03504	mg/L	0.000920	2.62%
Sr 421.552†	48355.1	0.04791	mg/L	0.000116	0.09582	mg/L	0.000232	0.24%
Ti 334.903†	1815.5	0.07105	mg/L	0.001299	0.1421	mg/L	0.00260	1.83%
Tl 190.801†	6.3	0.00255	mg/L	0.000170	0.00510	mg/L	0.000339	6.66%
V 292.402†	1127.6	0.00698	mg/L	0.000183	0.01396	mg/L	0.000365	2.62%
Zn 206.200†	2769.9	0.5521	mg/L	0.00241	1.104	mg/L	0.0048	0.44%

Sequence No.: 8
Sample ID: WA20 ASPK SWC

Autosampler Location: 327
Date Collected: 1/21/2013 1:53:59 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WA20 ASPK SWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: WA20 ASPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3091697.2	101.7	%	0.09				0.09%
ScR 361.383	359166.2	102.4	%	0.30				0.29%
Ag 328.068†	120461.8	0.5264	mg/L	0.00286	1.053	mg/L	0.0057	0.54%
Al 308.215†	10210.3	5.574	mg/L	0.0091	11.15	mg/L	0.018	0.16%
As 188.979†	4702.2	2.039	mg/L	0.0059	4.077	mg/L	0.0118	0.29%
B 249.677†	116.8	0.01345	mg/L	0.000970	0.02690	mg/L	0.001940	7.21%
Ba 233.527†	12647.4	2.192	mg/L	0.0092	4.383	mg/L	0.0184	0.42%
Be 313.042†	335715.2	0.4943	mg/L	0.00148	0.9885	mg/L	0.00296	0.30%
Ca 317.933†	427297.0	27.11	mg/L	0.039	54.21	mg/L	0.079	0.15%
Cd 228.802†	18970.6	0.5107	mg/L	0.00252	1.021	mg/L	0.0050	0.49%
Co 228.616†	25278.9	0.4927	mg/L	0.00398	0.9854	mg/L	0.00796	0.81%
Cr 267.716†	3890.9	0.5091	mg/L	0.00084	1.018	mg/L	0.0017	0.16%
Cu 324.752†	249861.6	0.8076	mg/L	0.00135	1.615	mg/L	0.0027	0.17%
Fe 273.955†	12551.0	7.062	mg/L	0.0281	14.12	mg/L	0.056	0.40%
K 766.490†	22172.4	10.42	mg/L	0.017	20.83	mg/L	0.034	0.16%
Mg 279.077†	17445.8	11.59	mg/L	0.037	23.18	mg/L	0.075	0.32%
Mn 257.610†	28168.7	0.5871	mg/L	0.00157	1.174	mg/L	0.0031	0.27%
Mo 202.031†	13241.9	0.4960	mg/L	0.00185	0.9920	mg/L	0.00370	0.37%
Na 589.592†	137543.4	10.46	mg/L	0.019	20.93	mg/L	0.037	0.18%
Na 330.237†	380.8	10.80	mg/L	0.136	21.59	mg/L	0.272	1.26%
Ni 231.604†	2582.1	0.4953	mg/L	0.00316	0.9907	mg/L	0.00632	0.64%
Pb 220.353†	22304.5	1.971	mg/L	0.0141	3.941	mg/L	0.0282	0.72%
Sb 206.836†	34.2	0.00280	mg/L	0.000369	0.00560	mg/L	0.000738	13.19%
Se 196.026†	3641.6	1.913	mg/L	0.0100	3.825	mg/L	0.0199	0.52%
Si 288.158†	1827.1	0.7689	mg/L	0.01432	1.538	mg/L	0.0286	1.86%
Sn 189.927†	84.9	0.02044	mg/L	0.000874	0.04088	mg/L	0.001747	4.27%
Sr 421.552†	567781.7	0.5625	mg/L	0.00116	1.125	mg/L	0.0023	0.21%
Ti 334.903†	2123.4	0.08169	mg/L	0.000481	0.1634	mg/L	0.00096	0.59%
Tl 190.801†	6007.8	1.985	mg/L	0.0026	3.971	mg/L	0.0052	0.13%
V 292.402†	80037.9	0.5054	mg/L	0.00296	1.011	mg/L	0.0059	0.59%
Zn 206.200†	5957.3	1.187	mg/L	0.0039	2.375	mg/L	0.0077	0.33%

Sequence No.: 9
Sample ID: WA20 MBSPK SWC

Autosampler Location: 328
Date Collected: 1/21/2013 1:58:01 PM
Data Type: Original

Dilution: 2.000000X

Nebulizer Parameters: WA20 MBSPK SWC

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: WA20 MBSPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3085798.9	101.6	%	0.97				0.95%
ScR 361.383	356295.0	101.6	%	0.35				0.34%
Ag 328.068†	120093.6	0.5248	mg/L	0.00235	1.050	mg/L	0.0047	0.45%
Al 308.215†	3716.8	2.019	mg/L	0.0130	4.038	mg/L	0.0259	0.64%
As 188.979†	4703.8	2.038	mg/L	0.0183	4.077	mg/L	0.0367	0.90%
B 249.677†	1.2	-0.00028	mg/L	0.001798	-0.00055	mg/L	0.003595	651.82%
Ba 233.527†	11560.0	2.004	mg/L	0.0120	4.008	mg/L	0.0240	0.60%
Be 313.042†	339185.8	0.4994	mg/L	0.00113	0.9987	mg/L	0.00226	0.23%
Ca 317.933†	152167.3	9.653	mg/L	0.0194	19.31	mg/L	0.039	0.20%
Cd 228.802†	18984.4	0.5111	mg/L	0.00305	1.022	mg/L	0.0061	0.60%
Co 228.616†	25389.8	0.4951	mg/L	0.00268	0.9901	mg/L	0.00535	0.54%
Cr 267.716†	3861.2	0.5054	mg/L	0.00245	1.011	mg/L	0.0049	0.48%
Cu 324.752†	155932.9	0.5039	mg/L	0.00311	1.008	mg/L	0.0062	0.62%
Fe 273.955†	3586.4	2.015	mg/L	0.0110	4.031	mg/L	0.0219	0.54%
K 766.490†	20613.6	9.683	mg/L	0.0209	19.37	mg/L	0.042	0.22%
Mg 279.077†	15118.0	10.05	mg/L	0.046	20.09	mg/L	0.092	0.46%
Mn 257.610†	24104.9	0.5024	mg/L	0.00203	1.005	mg/L	0.0041	0.40%
Mo 202.031†	13394.8	0.5020	mg/L	0.00441	1.004	mg/L	0.0088	0.88%
Na 589.592†	131830.3	10.03	mg/L	0.026	20.06	mg/L	0.052	0.26%
Na 330.237†	347.0	10.02	mg/L	0.019	20.03	mg/L	0.038	0.19%
Ni 231.604†	2583.4	0.4956	mg/L	0.00118	0.9912	mg/L	0.00235	0.24%
Pb 220.353†	22318.0	1.972	mg/L	0.0116	3.943	mg/L	0.0233	0.59%
Sb 206.836†	20.1	-0.00065	mg/L	0.000803	-0.00129	mg/L	0.001606	124.10%
Se 196.026†	3840.4	2.018	mg/L	0.0214	4.035	mg/L	0.0428	1.06%
Si 288.158†	36.2	0.01904	mg/L	0.007236	0.03808	mg/L	0.014472	38.01%
Sn 189.927†	-20.4	-0.00223	mg/L	0.000395	-0.00446	mg/L	0.000790	17.69%
Sr 421.552†	507427.4	0.5028	mg/L	0.00024	1.006	mg/L	0.0005	0.05%
Ti 334.903†	52.7	0.00091	mg/L	0.000123	0.00183	mg/L	0.000246	13.50%
Tl 190.801†	6113.6	2.020	mg/L	0.0176	4.039	mg/L	0.0353	0.87%
V 292.402†	79935.1	0.5049	mg/L	0.00273	1.010	mg/L	0.0055	0.54%
Zn 206.200†	2459.4	0.4902	mg/L	0.00254	0.9803	mg/L	0.00508	0.52%

Sequence No.: 10
Sample ID: VZ87 MBSPK TWC

Autosampler Location: 329
Date Collected: 1/21/2013 2:02:02 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: VZ87 MBSPK TWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VZ87 MBSPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3080878.0	101.4	%	0.37				0.36%
ScR 361.383	353823.5	100.9	%	1.03				1.02%
Ag 328.068†	119908.9	0.5240	mg/L	0.00372	0.5240	mg/L	0.00372	0.71%
Al 308.215†	3713.6	2.026	mg/L	0.0198	2.026	mg/L	0.0198	0.98%
As 188.979†	4719.8	2.047	mg/L	0.0067	2.047	mg/L	0.0067	0.33%
B 249.677†	9.3	0.00009	mg/L	0.000938	0.00009	mg/L	0.000938	>999.9%
Ba 233.527†	11595.8	2.010	mg/L	0.0226	2.010	mg/L	0.0226	1.12%
Be 313.042†	339752.5	0.5002	mg/L	0.00258	0.5002	mg/L	0.00258	0.52%
Ca 317.933†	152211.0	9.656	mg/L	0.0293	9.656	mg/L	0.0293	0.30%
Cd 228.802†	18986.3	0.5111	mg/L	0.00231	0.5111	mg/L	0.00231	0.45%
Co 228.616†	25449.5	0.4962	mg/L	0.00275	0.4962	mg/L	0.00275	0.56%
Cr 267.716†	3876.9	0.5074	mg/L	0.00453	0.5074	mg/L	0.00453	0.89%
Cu 324.752†	155797.5	0.5036	mg/L	0.00397	0.5036	mg/L	0.00397	0.79%
Fe 273.955†	3617.0	2.033	mg/L	0.0194	2.033	mg/L	0.0194	0.96%
K 766.490†	20566.6	9.661	mg/L	0.0130	9.661	mg/L	0.0130	0.13%
Mg 279.077†	15182.6	10.09	mg/L	0.117	10.09	mg/L	0.117	1.16%
Mn 257.610†	24225.5	0.5050	mg/L	0.00586	0.5050	mg/L	0.00586	1.16%
Mo 202.031†	37.6	0.00126	mg/L	0.000123	0.00126	mg/L	0.000123	9.72%
Na 589.592†	131460.8	10.00	mg/L	0.037	10.00	mg/L	0.037	0.37%
Na 330.237†	351.9	10.16	mg/L	0.222	10.16	mg/L	0.222	2.18%
Ni 231.604†	2605.6	0.4999	mg/L	0.00517	0.4999	mg/L	0.00517	1.03%
Pb 220.353†	22417.2	1.980	mg/L	0.0124	1.980	mg/L	0.0124	0.63%
Sb 206.836†	25.5	0.00059	mg/L	0.001700	0.00059	mg/L	0.001700	289.58%
Se 196.026†	3879.8	2.038	mg/L	0.0128	2.038	mg/L	0.0128	0.63%
Si 288.158†	23.1	0.01275	mg/L	0.009236	0.01275	mg/L	0.009236	72.43%
Sn 189.927†	-18.0	-0.00178	mg/L	0.000776	-0.00178	mg/L	0.000776	43.56%
Sr 421.552†	506650.6	0.5020	mg/L	0.00153	0.5020	mg/L	0.00153	0.30%
Ti 334.903†	31.0	0.00049	mg/L	0.000575	0.00049	mg/L	0.000575	118.16%
Tl 190.801†	6129.1	2.024	mg/L	0.0091	2.024	mg/L	0.0091	0.45%
V 292.402†	80134.7	0.5059	mg/L	0.00336	0.5059	mg/L	0.00336	0.66%
Zn 206.200†	2478.4	0.4941	mg/L	0.00631	0.4941	mg/L	0.00631	1.28%

Sequence No.: 11
Sample ID: CV 4

Autosampler Location: 7
Date Collected: 1/21/2013 2:06:03 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	213.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3036181.6	99.92	%	0.259				0.26%
ScR 361.383	346733.0	98.88	%	0.167				0.17%
Ag 328.068†	236182.4	1.032	mg/L	0.0079	1.032	mg/L	0.0079	0.76%
Al 308.215†	3691.0	1.987	mg/L	0.0282	1.987	mg/L	0.0282	1.42%
As 188.979†	4575.5	2.011	mg/L	0.0119	2.011	mg/L	0.0119	0.59%
B 249.677†	8494.5	1.008	mg/L	0.0112	1.008	mg/L	0.0112	1.11%
Ba 233.527†	5769.0	0.9998	mg/L	0.01956	0.9998	mg/L	0.01956	1.96%
Be 313.042†	678129.7	0.9984	mg/L	0.00030	0.9984	mg/L	0.00030	0.03%
Ca 317.933†	31815.8	2.018	mg/L	0.0239	2.018	mg/L	0.0239	1.18%
Cd 228.802†	37308.7	1.018	mg/L	0.0074	1.018	mg/L	0.0074	0.73%
Co 228.616†	50546.4	0.9838	mg/L	0.00529	0.9838	mg/L	0.00529	0.54%
Cr 267.716†	7634.7	1.001	mg/L	0.0117	1.001	mg/L	0.0117	1.17%
Cu 324.752†	316748.5	1.023	mg/L	0.0048	1.023	mg/L	0.0048	0.47%
Fe 273.955†	3611.2	2.026	mg/L	0.0200	2.026	mg/L	0.0200	0.99%
K 766.490†	42112.3	19.78	mg/L	0.126	19.78	mg/L	0.126	0.64%
Mg 279.077†	2975.6	1.984	mg/L	0.0164	1.984	mg/L	0.0164	0.83%
Mn 257.610†	48485.1	1.010	mg/L	0.0095	1.010	mg/L	0.0095	0.94%
Mo 202.031†	26860.0	1.007	mg/L	0.0056	1.007	mg/L	0.0056	0.55%
Na 589.592†	677954.3	51.58	mg/L	0.184	51.58	mg/L	0.184	0.36%
Na 330.237†	1745.8	51.09	mg/L	0.469	51.09	mg/L	0.469	0.92%
Ni 231.604†	5197.4	0.9991	mg/L	0.00748	0.9991	mg/L	0.00748	0.75%
Pb 220.353†	22657.2	2.002	mg/L	0.0105	2.002	mg/L	0.0105	0.53%
Sb 206.836†	8988.2	2.088	mg/L	0.0116	2.088	mg/L	0.0116	0.56%
Se 196.026†	3768.6	1.979	mg/L	0.0104	1.979	mg/L	0.0104	0.53%
Si 288.158†	4881.6	2.043	mg/L	0.0201	2.043	mg/L	0.0201	0.99%
Sn 189.927†	5279.0	0.9981	mg/L	0.00630	0.9981	mg/L	0.00630	0.63%
Sr 421.552†	1028988.5	1.020	mg/L	0.0024	1.020	mg/L	0.0024	0.24%
Ti 334.903†	25963.9	1.026	mg/L	0.0018	1.026	mg/L	0.0018	0.18%
Tl 190.801†	6049.0	1.994	mg/L	0.0098	1.994	mg/L	0.0098	0.49%
V 292.402†	159769.6	1.009	mg/L	0.0079	1.009	mg/L	0.0079	0.78%
Zn 206.200†	5187.3	1.034	mg/L	0.0132	1.034	mg/L	0.0132	1.27%

Sequence No.: 12
Sample ID: CB 4

Autosampler Location: 1
Date Collected: 1/21/2013 2:09:22 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3075323.5	101.2	%	0.63				0.62%
ScR 361.383	356633.6	101.7	%	1.12				1.10%
Ag 328.068†	47.4	0.00021	mg/L	0.000112	0.00021	mg/L	0.000112	54.21%
Al 308.215†	3.7	0.00201	mg/L	0.004873	0.00201	mg/L	0.004873	243.00%
As 188.979†	2.0	0.00084	mg/L	0.001001	0.00084	mg/L	0.001001	118.51%
B 249.677†	10.6	0.00126	mg/L	0.000405	0.00126	mg/L	0.000405	32.14%
Ba 233.527†	2.2	0.00039	mg/L	0.000755	0.00039	mg/L	0.000755	194.98%
Be 313.042†	-24.0	-0.00004	mg/L	0.000020	-0.00004	mg/L	0.000020	56.20%
Ca 317.933†	-3.3	-0.00021	mg/L	0.000686	-0.00021	mg/L	0.000686	328.27%
Cd 228.802†	-3.7	-0.00011	mg/L	0.000039	-0.00011	mg/L	0.000039	36.65%
Co 228.616†	6.1	0.00012	mg/L	0.000098	0.00012	mg/L	0.000098	83.10%
Cr 267.716†	13.2	0.00174	mg/L	0.000184	0.00174	mg/L	0.000184	10.61%
Cu 324.752†	-101.9	-0.00033	mg/L	0.000042	-0.00033	mg/L	0.000042	12.83%
Fe 273.955†	3.7	0.00208	mg/L	0.000846	0.00208	mg/L	0.000846	40.66%
K 766.490†	8.0	0.00374	mg/L	0.003683	0.00374	mg/L	0.003683	98.36%
Mg 279.077†	-19.2	-0.01277	mg/L	0.005902	-0.01277	mg/L	0.005902	46.22%
Mn 257.610†	-1.0	-0.00002	mg/L	0.000020	-0.00002	mg/L	0.000020	97.85%
Mo 202.031†	33.1	0.00124	mg/L	0.000145	0.00124	mg/L	0.000145	11.74%
Na 589.592†	110.5	0.00841	mg/L	0.003623	0.00841	mg/L	0.003623	43.10%
Na 330.237†	-2.4	-0.07095	mg/L	0.277097	-0.07095	mg/L	0.277097	390.58%
Ni 231.604†	0.6	0.00012	mg/L	0.000347	0.00012	mg/L	0.000347	283.22%
Pb 220.353†	7.2	0.00064	mg/L	0.000237	0.00064	mg/L	0.000237	36.88%
Sb 206.836†	21.0	0.00486	mg/L	0.001396	0.00486	mg/L	0.001396	28.75%
Se 196.026†	-0.1	-0.00008	mg/L	0.001348	-0.00008	mg/L	0.001348	>999.9%
Si 288.158†	23.3	0.00977	mg/L	0.004381	0.00977	mg/L	0.004381	44.82%
Sn 189.927†	-1.0	-0.00018	mg/L	0.000227	-0.00018	mg/L	0.000227	122.84%
Sr 421.552†	-0.2	-0.00000	mg/L	0.000037	-0.00000	mg/L	0.000037	>999.9%
Ti 334.903†	4.5	0.00018	mg/L	0.000945	0.00018	mg/L	0.000945	531.81%
Tl 190.801†	2.6	0.00086	mg/L	0.000737	0.00086	mg/L	0.000737	85.70%
V 292.402†	0.1	0.00001	mg/L	0.000123	0.00001	mg/L	0.000123	>999.9%
Zn 206.200†	3.2	0.00064	mg/L	0.000159	0.00064	mg/L	0.000159	25.02%

Sequence No.: 13
Sample ID: VZ97 MB1 TWC

Autosampler Location: 330
Date Collected: 1/21/2013 2:13:38 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: VZ97 MB1 TWC

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

Mean Data: VZ97 MB1 TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3108904.1	102.3	%	0.57				0.55%
ScR 361.383	356573.4	101.7	%	0.78				0.76%
Ag 328.068†	20.0	0.00009	mg/L	0.000080	0.00009	mg/L	0.000080	92.01%
Al 308.215†	-1.1	-0.00059	mg/L	0.007970	-0.00059	mg/L	0.007970	>999.9%
As 188.979†	0.2	0.00009	mg/L	0.000745	0.00009	mg/L	0.000745	853.26%
B 249.677†	5.4	0.00064	mg/L	0.000409	0.00064	mg/L	0.000409	64.39%
Ba 233.527†	5.0	0.00087	mg/L	0.000511	0.00087	mg/L	0.000511	58.72%
Be 313.042†	3.7	0.00001	mg/L	0.000055	0.00001	mg/L	0.000055	>999.9%
Ca 317.933†	52.0	0.00330	mg/L	0.000356	0.00330	mg/L	0.000356	10.79%
Cd 228.802†	-7.1	-0.00019	mg/L	0.000175	-0.00019	mg/L	0.000175	89.67%
Co 228.616†	9.5	0.00018	mg/L	0.000135	0.00018	mg/L	0.000135	73.19%
Cr 267.716†	14.0	0.00184	mg/L	0.001346	0.00184	mg/L	0.001346	73.15%
Cu 324.752†	-85.9	-0.00028	mg/L	0.000030	-0.00028	mg/L	0.000030	10.98%
Fe 273.955†	1.7	0.00094	mg/L	0.000786	0.00094	mg/L	0.000786	83.66%
K 766.490†	-9.6	-0.00449	mg/L	0.002928	-0.00449	mg/L	0.002928	65.24%
Mg 279.077†	-12.7	-0.00844	mg/L	0.007401	-0.00844	mg/L	0.007401	87.69%
Mn 257.610†	-0.6	-0.00001	mg/L	0.000028	-0.00001	mg/L	0.000028	212.66%
Mo 202.031†	-1.6	-0.00006	mg/L	0.000142	-0.00006	mg/L	0.000142	230.01%
Na 589.592†	186.4	0.01418	mg/L	0.002564	0.01418	mg/L	0.002564	18.08%
Na 330.237†	-4.9	-0.1434	mg/L	0.38534	-0.1434	mg/L	0.38534	268.68%
Ni 231.604†	8.4	0.00161	mg/L	0.000635	0.00161	mg/L	0.000635	39.38%
Pb 220.353†	7.0	0.00062	mg/L	0.000648	0.00062	mg/L	0.000648	103.66%
Sb 206.836†	0.0	-0.00003	mg/L	0.000351	-0.00003	mg/L	0.000351	>999.9%
Se 196.026†	1.7	0.00089	mg/L	0.000793	0.00089	mg/L	0.000793	89.59%
Si 288.158†	23.6	0.00988	mg/L	0.003737	0.00988	mg/L	0.003737	37.81%
Sn 189.927†	-1.6	-0.00031	mg/L	0.001122	-0.00031	mg/L	0.001122	362.41%
Sr 421.552†	53.9	0.00005	mg/L	0.000077	0.00005	mg/L	0.000077	143.46%
Ti 334.903†	9.6	0.00038	mg/L	0.000935	0.00038	mg/L	0.000935	246.98%
Tl 190.801†	3.6	0.00118	mg/L	0.000690	0.00118	mg/L	0.000690	58.59%
V 292.402†	3.7	0.00003	mg/L	0.000107	0.00003	mg/L	0.000107	348.44%
Zn 206.200†	6.4	0.00128	mg/L	0.000837	0.00128	mg/L	0.000837	65.38%

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Analysis Begun

Start Time: 1/21/2013 2:18:03 PM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202

Plasma On Time: 1/21/2013 8:44:13 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\0121.sif
Batch ID:
Results Data Set: I2130121
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

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Sequence No.: 1
Sample ID: VZ97 SDUP TWC

Autosampler Location: 331
Date Collected: 1/21/2013 2:18:04 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: VZ97 SDUP TWC

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: VZ97 SDUP TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2641614.3	86.93	%	0.517				0.59%
ScR 361.383	324106.4	92.43	%	0.756				0.82%
Ag 328.068†	-320.8	-0.00140	mg/L	0.000252	-0.00140	mg/L	0.000252	18.02%
Al 308.215†	1417.2	0.7750	mg/L	0.00637	0.7750	mg/L	0.00637	0.82%
As 188.979†	100.4	0.02558	mg/L	0.001666	0.02558	mg/L	0.001666	6.51%
B 249.677†	7864.9	0.9337	mg/L	0.00292	0.9337	mg/L	0.00292	0.31%
Ba 233.527†	1444.6	0.2502	mg/L	0.00120	0.2502	mg/L	0.00120	0.48%
Be 313.042†	83.3	0.00012	mg/L	0.000037	0.00012	mg/L	0.000037	30.38%
Ca 317.933†	3582841.1	227.3	mg/L	0.70	227.3	mg/L	0.70	0.31%
Cd 228.802†	33.3	0.00064	mg/L	0.000189	0.00064	mg/L	0.000189	29.59%
Co 228.616†	285.0	0.00544	mg/L	0.000260	0.00544	mg/L	0.000260	4.77%
Cr 267.716†	243.7	0.00217	mg/L	0.000502	0.00217	mg/L	0.000502	23.17%
Cu 324.752†	2596.6	0.00657	mg/L	0.000065	0.00657	mg/L	0.000065	0.99%
Fe 273.955†	2784.2	1.567	mg/L	0.0217	1.567	mg/L	0.0217	1.38%
K 766.490†	176774.8	83.04	mg/L	0.010	83.04	mg/L	0.010	0.01%
Mg 279.077†	407080.9	270.5	mg/L	0.36	270.5	mg/L	0.36	0.13%
Mn 257.610†	34775.0	0.7237	mg/L	0.00487	0.7237	mg/L	0.00487	0.67%
Mo 202.031†	1252.9	0.04407	mg/L	0.000311	0.04407	mg/L	0.000311	0.71%
Na 589.592†	Saturated2							
Na 330.237†	76882.3	2255	mg/L	2.53	2255	mg/L	2.53	0.11%
Ni 231.604†	56.1	0.01079	mg/L	0.000912	0.01079	mg/L	0.000912	8.46%
Pb 220.353†	64.8	0.00589	mg/L	0.001660	0.00589	mg/L	0.001660	28.19%
Sb 206.836†	45.9	0.01003	mg/L	0.000870	0.01003	mg/L	0.000870	8.68%
Se 196.026†	6.4	0.00325	mg/L	0.007603	0.00325	mg/L	0.007603	233.63%
Si 288.158†	16481.9	6.932	mg/L	0.2709	6.932	mg/L	0.2709	3.91%
Sn 189.927†	-121.6	0.01344	mg/L	0.001369	0.01344	mg/L	0.001369	10.18%
Sr 421.552†	2720515.0	2.695	mg/L	0.0015	2.695	mg/L	0.0015	0.05%
Ti 334.903†	1315.8	0.03699	mg/L	0.001024	0.03699	mg/L	0.001024	2.77%
Tl 190.801†	26.2	0.00885	mg/L	0.000909	0.00885	mg/L	0.000909	10.27%
V 292.402†	748.2	0.00489	mg/L	0.000078	0.00489	mg/L	0.000078	1.60%
Zn 206.200†	321.5	0.06407	mg/L	0.000919	0.06407	mg/L	0.000919	1.43%

Sequence No.: 2
Sample ID: VZ97 S TWC

Autosampler Location: 332
Date Collected: 1/21/2013 2:22:22 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: VZ97 S TWC

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: VZ97 S TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2653225.8	87.32	%	0.033				0.04%
ScR 361.383	317949.5	90.67	%	0.144				0.16%
Ag 328.068†	-303.6	-0.00133	mg/L	0.000285	-0.00133	mg/L	0.000285	21.54%
Al 308.215†	1405.7	0.7687	mg/L	0.00876	0.7687	mg/L	0.00876	1.14%
As 188.979†	99.6	0.02522	mg/L	0.001880	0.02522	mg/L	0.001880	7.45%
B 249.677†	7866.5	0.9339	mg/L	0.00784	0.9339	mg/L	0.00784	0.84%
Ba 233.527†	1437.1	0.2489	mg/L	0.00188	0.2489	mg/L	0.00188	0.76%
Be 313.042†	99.5	0.00014	mg/L	0.000010	0.00014	mg/L	0.000010	6.69%
Ca 317.933†	3595029.4	228.1	mg/L	0.62	228.1	mg/L	0.62	0.27%
Cd 228.802†	29.0	0.00052	mg/L	0.000207	0.00052	mg/L	0.000207	39.45%
Co 228.616†	289.0	0.00552	mg/L	0.000096	0.00552	mg/L	0.000096	1.74%
Cr 267.716†	234.0	0.00087	mg/L	0.000633	0.00087	mg/L	0.000633	72.43%
Cu 324.752†	2585.1	0.00653	mg/L	0.000165	0.00653	mg/L	0.000165	2.53%
Fe 273.955†	2769.8	1.559	mg/L	0.0065	1.559	mg/L	0.0065	0.42%
K 766.490†	177018.0	83.15	mg/L	0.321	83.15	mg/L	0.321	0.39%
Mg 279.077†	407161.0	270.5	mg/L	1.55	270.5	mg/L	1.55	0.57%
Mn 257.610†	34590.3	0.7198	mg/L	0.00424	0.7198	mg/L	0.00424	0.59%
Mo 202.031†	1242.7	0.04368	mg/L	0.000144	0.04368	mg/L	0.000144	0.33%
Na 589.592†	Saturated2							
Na 330.237†	76913.6	2256	mg/L	11.71	2256	mg/L	11.71	0.52%
Ni 231.604†	58.0	0.01114	mg/L	0.001685	0.01114	mg/L	0.001685	15.12%
Pb 220.353†	72.5	0.00656	mg/L	0.000086	0.00656	mg/L	0.000086	1.31%
Sb 206.836†	38.1	0.00826	mg/L	0.002004	0.00826	mg/L	0.002004	24.26%
Se 196.026†	-2.3	-0.00130	mg/L	0.001952	-0.00130	mg/L	0.001952	149.67%
Si 288.158†	16303.0	6.857	mg/L	0.2577	6.857	mg/L	0.2577	3.76%
Sn 189.927†	-115.6	0.01471	mg/L	0.000790	0.01471	mg/L	0.000790	5.37%
Sr 421.552†	2728195.5	2.703	mg/L	0.0068	2.703	mg/L	0.0068	0.25%
Ti 334.903†	1333.0	0.03762	mg/L	0.000297	0.03762	mg/L	0.000297	0.79%
Tl 190.801†	17.8	0.00608	mg/L	0.003168	0.00608	mg/L	0.003168	52.12%
V 292.402†	738.4	0.00482	mg/L	0.000148	0.00482	mg/L	0.000148	3.08%
Zn 206.200†	317.7	0.06331	mg/L	0.000756	0.06331	mg/L	0.000756	1.19%

Sequence No.: 3
Sample ID: VZ97 SSPK TWC

Autosampler Location: 333
Date Collected: 1/21/2013 2:26:39 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: VZ97 SSPK TWC

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: VZ97 SSPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	2656588.1	87.43	%	0.973				1.11%
ScR 361.383	331969.4	94.67	%	0.053				0.06%
Ag 328.068†	124513.9	0.5441	mg/L	0.00402	0.5441	mg/L	0.00402	0.74%
Al 308.215†	5114.4	2.792	mg/L	0.0175	2.792	mg/L	0.0175	0.63%
As 188.979†	5144.4	2.214	mg/L	0.0215	2.214	mg/L	0.0215	0.97%
B 249.677†	7855.0	0.9315	mg/L	0.00452	0.9315	mg/L	0.00452	0.49%
Ba 233.527†	12433.0	2.155	mg/L	0.0120	2.155	mg/L	0.0120	0.56%
Be 313.042†	328677.5	0.4839	mg/L	0.00298	0.4839	mg/L	0.00298	0.62%
Ca 317.933†	3671371.9	232.9	mg/L	1.52	232.9	mg/L	1.52	0.65%
Cd 228.802†	20260.8	0.5451	mg/L	0.00637	0.5451	mg/L	0.00637	1.17%
Co 228.616†	24208.1	0.4718	mg/L	0.00440	0.4718	mg/L	0.00440	0.93%
Cr 267.716†	3943.1	0.4872	mg/L	0.00343	0.4872	mg/L	0.00343	0.70%
Cu 324.752†	165008.5	0.5316	mg/L	0.00336	0.5316	mg/L	0.00336	0.63%
Fe 273.955†	6162.1	3.466	mg/L	0.0213	3.466	mg/L	0.0213	0.61%
K 766.490†	194336.1	91.29	mg/L	0.360	91.29	mg/L	0.360	0.39%
Mg 279.077†	410396.8	272.7	mg/L	0.80	272.7	mg/L	0.80	0.29%
Mn 257.610†	56076.8	1.168	mg/L	0.0067	1.168	mg/L	0.0067	0.58%
Mo 202.031†	1249.6	0.04385	mg/L	0.000304	0.04385	mg/L	0.000304	0.69%
Na 589.592†	Saturated2							
Na 330.237†	74618.8	2188	mg/L	8.34	2188	mg/L	8.34	0.38%
Ni 231.604†	2477.3	0.4753	mg/L	0.00264	0.4753	mg/L	0.00264	0.56%
Pb 220.353†	20963.0	1.852	mg/L	0.0195	1.852	mg/L	0.0195	1.05%
Sb 206.836†	72.4	0.01112	mg/L	0.001651	0.01112	mg/L	0.001651	14.85%
Se 196.026†	4089.7	2.149	mg/L	0.0250	2.149	mg/L	0.0250	1.16%
Si 288.158†	16301.9	6.859	mg/L	0.2149	6.859	mg/L	0.2149	3.13%
Sn 189.927†	-123.3	0.01409	mg/L	0.000208	0.01409	mg/L	0.000208	1.48%
Sr 421.552†	3154951.6	3.126	mg/L	0.0191	3.126	mg/L	0.0191	0.61%
Ti 334.903†	1307.8	0.03621	mg/L	0.000648	0.03621	mg/L	0.000648	1.79%
Tl 190.801†	5264.6	1.739	mg/L	0.0125	1.739	mg/L	0.0125	0.72%
V 292.402†	76808.7	0.4851	mg/L	0.00352	0.4851	mg/L	0.00352	0.73%
Zn 206.200†	2625.1	0.5233	mg/L	0.00315	0.5233	mg/L	0.00315	0.60%

Sequence No.: 4
Sample ID: VZ97 MB1SPK TWC

Autosampler Location: 334
Date Collected: 1/21/2013 2:30:41 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: VZ97 MB1SPK TWC

Analyte	Back Pressure	Flow
All	216.0 kPa	0.75 L/min

Mean Data: VZ97 MB1SPK TWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	3053715.7	100.5	%	0.28				0.28%
ScR 361.383	355532.6	101.4	%	0.58				0.57%
Ag 328.068†	120784.7	0.5278	mg/L	0.00359	0.5278	mg/L	0.00359	0.68%
Al 308.215†	3695.3	2.016	mg/L	0.0173	2.016	mg/L	0.0173	0.86%
As 188.979†	4754.1	2.062	mg/L	0.0114	2.062	mg/L	0.0114	0.55%
B 249.677†	31.0	0.00265	mg/L	0.000640	0.00265	mg/L	0.000640	24.19%
Ba 233.527†	11531.1	1.999	mg/L	0.0232	1.999	mg/L	0.0232	1.16%
Be 313.042†	336226.2	0.4950	mg/L	0.00397	0.4950	mg/L	0.00397	0.80%
Ca 317.933†	151131.2	9.587	mg/L	0.0829	9.587	mg/L	0.0829	0.86%
Cd 228.802†	19149.4	0.5155	mg/L	0.00492	0.5155	mg/L	0.00492	0.95%
Co 228.616†	25693.8	0.5009	mg/L	0.00468	0.5009	mg/L	0.00468	0.93%
Cr 267.716†	3869.7	0.5065	mg/L	0.00479	0.5065	mg/L	0.00479	0.95%
Cu 324.752†	156695.5	0.5065	mg/L	0.00386	0.5065	mg/L	0.00386	0.76%
Fe 273.955†	3594.4	2.020	mg/L	0.0209	2.020	mg/L	0.0209	1.03%
K 766.490†	20646.7	9.699	mg/L	0.0896	9.699	mg/L	0.0896	0.92%
Mg 279.077†	15181.0	10.09	mg/L	0.107	10.09	mg/L	0.107	1.06%
Mn 257.610†	24095.4	0.5023	mg/L	0.00489	0.5023	mg/L	0.00489	0.97%
Mo 202.031†	30.6	0.00100	mg/L	0.000163	0.00100	mg/L	0.000163	16.35%
Na 589.592†	135230.8	10.29	mg/L	0.030	10.29	mg/L	0.030	0.29%
Na 330.237†	352.7	10.18	mg/L	0.200	10.18	mg/L	0.200	1.96%
Ni 231.604†	2592.3	0.4973	mg/L	0.00538	0.4973	mg/L	0.00538	1.08%
Pb 220.353†	22636.4	2.000	mg/L	0.0175	2.000	mg/L	0.0175	0.87%
Sb 206.836†	27.5	0.00109	mg/L	0.001050	0.00109	mg/L	0.001050	96.53%
Se 196.026†	3881.8	2.039	mg/L	0.0117	2.039	mg/L	0.0117	0.57%
Si 288.158†	203.5	0.08828	mg/L	0.042233	0.08828	mg/L	0.042233	47.84%
Sn 189.927†	-22.5	-0.00264	mg/L	0.000510	-0.00264	mg/L	0.000510	19.33%
Sr 421.552†	503796.0	0.4992	mg/L	0.00362	0.4992	mg/L	0.00362	0.72%
Ti 334.903†	35.2	0.00066	mg/L	0.000550	0.00066	mg/L	0.000550	83.70%
Tl 190.801†	6187.1	2.043	mg/L	0.0134	2.043	mg/L	0.0134	0.65%
V 292.402†	80937.0	0.5110	mg/L	0.00512	0.5110	mg/L	0.00512	1.00%
Zn 206.200†	2461.1	0.4906	mg/L	0.00540	0.4906	mg/L	0.00540	1.10%

Sequence No.: 5
Sample ID: CV 5

Autosampler Location: 7
Date Collected: 1/21/2013 2:34:42 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	214.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3054206.0	100.5	%	0.26				0.26%
ScR 361.383	350183.7	99.86	%	0.440				0.44%
Ag 328.068†	235735.4	1.030	mg/L	0.0037	1.030	mg/L	0.0037	0.36%
Al 308.215†	3646.4	1.962	mg/L	0.0163	1.962	mg/L	0.0163	0.83%
As 188.979†	4548.3	1.999	mg/L	0.0029	1.999	mg/L	0.0029	0.14%
B 249.677†	8426.7	0.9995	mg/L	0.01178	0.9995	mg/L	0.01178	1.18%
Ba 233.527†	5711.6	0.9899	mg/L	0.00940	0.9899	mg/L	0.00940	0.95%
Be 313.042†	674073.6	0.9924	mg/L	0.00632	0.9924	mg/L	0.00632	0.64%
Ca 317.933†	31652.0	2.008	mg/L	0.0194	2.008	mg/L	0.0194	0.97%
Cd 228.802†	37195.4	1.015	mg/L	0.0026	1.015	mg/L	0.0026	0.26%
Co 228.616†	50466.2	0.9823	mg/L	0.00418	0.9823	mg/L	0.00418	0.43%
Cr 267.716†	7598.8	0.9965	mg/L	0.00803	0.9965	mg/L	0.00803	0.81%
Cu 324.752†	315364.9	1.019	mg/L	0.0048	1.019	mg/L	0.0048	0.47%
Fe 273.955†	3603.1	2.021	mg/L	0.0186	2.021	mg/L	0.0186	0.92%
K 766.490†	41812.3	19.64	mg/L	0.051	19.64	mg/L	0.051	0.26%
Mg 279.077†	2975.6	1.984	mg/L	0.0280	1.984	mg/L	0.0280	1.41%
Mn 257.610†	48334.8	1.007	mg/L	0.0107	1.007	mg/L	0.0107	1.06%
Mo 202.031†	26708.5	1.001	mg/L	0.0027	1.001	mg/L	0.0027	0.27%
Na 589.592†	672104.6	51.13	mg/L	0.069	51.13	mg/L	0.069	0.14%
Na 330.237†	1750.9	51.24	mg/L	0.815	51.24	mg/L	0.815	1.59%
Ni 231.604†	5154.5	0.9908	mg/L	0.01142	0.9908	mg/L	0.01142	1.15%
Pb 220.353†	22533.3	1.991	mg/L	0.0068	1.991	mg/L	0.0068	0.34%
Sb 206.836†	8912.3	2.070	mg/L	0.0092	2.070	mg/L	0.0092	0.44%
Se 196.026†	3752.4	1.971	mg/L	0.0018	1.971	mg/L	0.0018	0.09%
Si 288.158†	4891.9	2.047	mg/L	0.0064	2.047	mg/L	0.0064	0.31%
Sn 189.927†	5254.4	0.9935	mg/L	0.00342	0.9935	mg/L	0.00342	0.34%
Sr 421.552†	1018773.8	1.009	mg/L	0.0006	1.009	mg/L	0.0006	0.06%
Ti 334.903†	25733.1	1.017	mg/L	0.0017	1.017	mg/L	0.0017	0.17%
Tl 190.801†	5999.9	1.978	mg/L	0.0069	1.978	mg/L	0.0069	0.35%
V 292.402†	159556.3	1.007	mg/L	0.0036	1.007	mg/L	0.0036	0.36%
Zn 206.200†	5145.7	1.025	mg/L	0.0154	1.025	mg/L	0.0154	1.50%

Sequence No.: 6
Sample ID: CB 5

Autosampler Location: 1
Date Collected: 1/21/2013 2:38:01 PM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	215.0 kPa	0.75 L/min

Mean Data: CB

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3086868.9	101.6	%	0.96				0.94%
ScR 361.383	354010.2	101.0	%	0.60				0.60%
Ag 328.068†	18.0	0.00008	mg/L	0.000240	0.00008	mg/L	0.000240	304.82%
Al 308.215†	-3.1	-0.00175	mg/L	0.008943	-0.00175	mg/L	0.008943	512.07%
As 188.979†	-1.7	-0.00071	mg/L	0.000440	-0.00071	mg/L	0.000440	61.67%
B 249.677†	15.7	0.00187	mg/L	0.000851	0.00187	mg/L	0.000851	45.59%
Ba 233.527†	4.0	0.00069	mg/L	0.000152	0.00069	mg/L	0.000152	21.89%
Be 313.042†	-31.9	-0.00005	mg/L	0.000026	-0.00005	mg/L	0.000026	55.88%
Ca 317.933†	-1.8	-0.00011	mg/L	0.000944	-0.00011	mg/L	0.000944	828.66%
Cd 228.802†	-6.0	-0.00016	mg/L	0.000161	-0.00016	mg/L	0.000161	100.14%
Co 228.616†	3.6	0.00007	mg/L	0.000083	0.00007	mg/L	0.000083	120.82%
Cr 267.716†	15.2	0.00199	mg/L	0.000539	0.00199	mg/L	0.000539	27.09%
Cu 324.752†	-119.5	-0.00039	mg/L	0.000204	-0.00039	mg/L	0.000204	52.67%
Fe 273.955†	3.3	0.00184	mg/L	0.001115	0.00184	mg/L	0.001115	60.67%
K 766.490†	48.6	0.02284	mg/L	0.031481	0.02284	mg/L	0.031481	137.81%
Mg 279.077†	-14.0	-0.00929	mg/L	0.003354	-0.00929	mg/L	0.003354	36.08%
Mn 257.610†	-2.4	-0.00005	mg/L	0.000077	-0.00005	mg/L	0.000077	154.48%
Mo 202.031†	34.4	0.00129	mg/L	0.000292	0.00129	mg/L	0.000292	22.64%
Na 589.592†	2253.6	0.1714	mg/L	0.00219	0.1714	mg/L	0.00219	1.28%
Na 330.237†	8.9	0.2622	mg/L	0.59377	0.2622	mg/L	0.59377	226.42%
Ni 231.604†	-0.8	-0.00015	mg/L	0.000336	-0.00015	mg/L	0.000336	217.87%
Pb 220.353†	2.8	0.00025	mg/L	0.000625	0.00025	mg/L	0.000625	246.22%
Sb 206.836†	22.2	0.00512	mg/L	0.001415	0.00512	mg/L	0.001415	27.63%
Se 196.026†	-4.5	-0.00236	mg/L	0.002689	-0.00236	mg/L	0.002689	114.15%
Si 288.158†	65.9	0.02760	mg/L	0.015364	0.02760	mg/L	0.015364	55.67%
Sn 189.927†	1.3	0.00025	mg/L	0.000859	0.00025	mg/L	0.000859	342.24%
Sr 421.552†	4.2	0.00000	mg/L	0.000044	0.00000	mg/L	0.000044	>999.9%
Ti 334.903†	26.0	0.00103	mg/L	0.000687	0.00103	mg/L	0.000687	66.83%
Tl 190.801†	4.7	0.00154	mg/L	0.001294	0.00154	mg/L	0.001294	83.92%
V 292.402†	-2.1	-0.00000	mg/L	0.000111	-0.00000	mg/L	0.000111	>999.9%
Zn 206.200†	1.6	0.00033	mg/L	0.000104	0.00033	mg/L	0.000104	31.81%

Mercury Analysis Log

Analyst: NB
Instrument: CETAC

Date: 01-18-13
Page: 2 of 4

ARI Sample ID		Prep Code	Dilution	QC Data (ppb)	Comments
WA21	MB	SMM	1x	-0.01	✓
"	MBSPK			1.98	%R=99 ✓
"	C			0.15	
"	CDUP			0.11	✓
"	CSPK			1.12	%R=97 ✓
"	D				
WA22	MB1			0.00	✓
"	MB1SPK			1.96	%R=98 ✓
"	A			1.89	
"	ADUP			0.95	RPD=66.2 ~~Low~~ X High
CCV				3.88	%R=97 ✓ NB 01-18-13
CCB				0.00	✓
WA22	ASPK			2.06	%R=17 LOW X
CCV				3.85	%R=96 ✓
CCB				-0.00	✓
WA22	A			1.88	DEL
"	ADUP			0.94	RPD=66.7 ~~Low~~ X High
"	ASPK			2.03	%R=15 LOW X NB 01-18-13
CCV				3.93	%R=98 ✓
CCB		↓	↓	-0.01	✓
STD	0.0	TWM	1x		
"	0.1				
"	0.5				
"	1.0				
"	2.0				
"	5.0				
"	10.0				
ICV				7.74	Begin CLP. %R=97 ✓
ICB				-0.01	✓
CCV1		↓	↓	3.86	%R=97 ✓

Chemical/Reagent ID:
10% $SnCl_2$: MP2427

14% NH_2OH/NaCl: MP2398

Standard ID:
Standard: 3006-13 (SMM)
3006-14 (TWM)

ICV/CCV: 56-18

U797 : 0182A

Mercury Analysis Log

Analyst: NB
Instrument: CETAC

Date: 01-18-13
Page: 3 of 4

ARI Sample ID		Prep Code	Dilution	QC Data (ppb)	Comments	
CCB1		TWM	1X	-0.01		✓
CRA				0.08		✓
VZ97	MB1			0.01		✓
"	MB1SPK			2.05	%R = 103	✓
"	S			0.02		
"	SDUP			0.04	No RPD: undetected.	✓
"	SSPK			0.93	%R = 93	✓
CCV2				3.87	%R = 97	✓
NB 01-18-13 ~~CCV~~ CCB2		↓		-0.00	End CLP.	✓
VZ89	MB1	LEM		0.00		✓
"	A			0.01		
"	ADUP			0.00	No RPD: undetected.	✓
"	ASPK			0.98	%R = 98	✓
"	B	↓				
"	MB2	TWM		-0.01		✓
"	MB2SPK			1.89	%R = 95	✓
"	C					
CCV				3.87	%R = 97	✓
CCB				-0.01		✓
VZ86	MB1			0.01		✓
"	MB1SPK			2.06	%R = 103	✓
"	A			-0.00		
"	ADUP			-0.00	No RPD: undetected.	✓
"	ASPK			1.05	%R = 105	✓
"	B					
"	C					
"	D					
"	E					
"	F					
CCV		↓	↓	3.83	%R = 96	✓

Chemical/Reagent ID:
10% $SnCl_2$: MP2427
14% NH_2OH/NaCl: MP2398

Standard ID:
Standard: 3006-14
ICV/CCV: 56-18

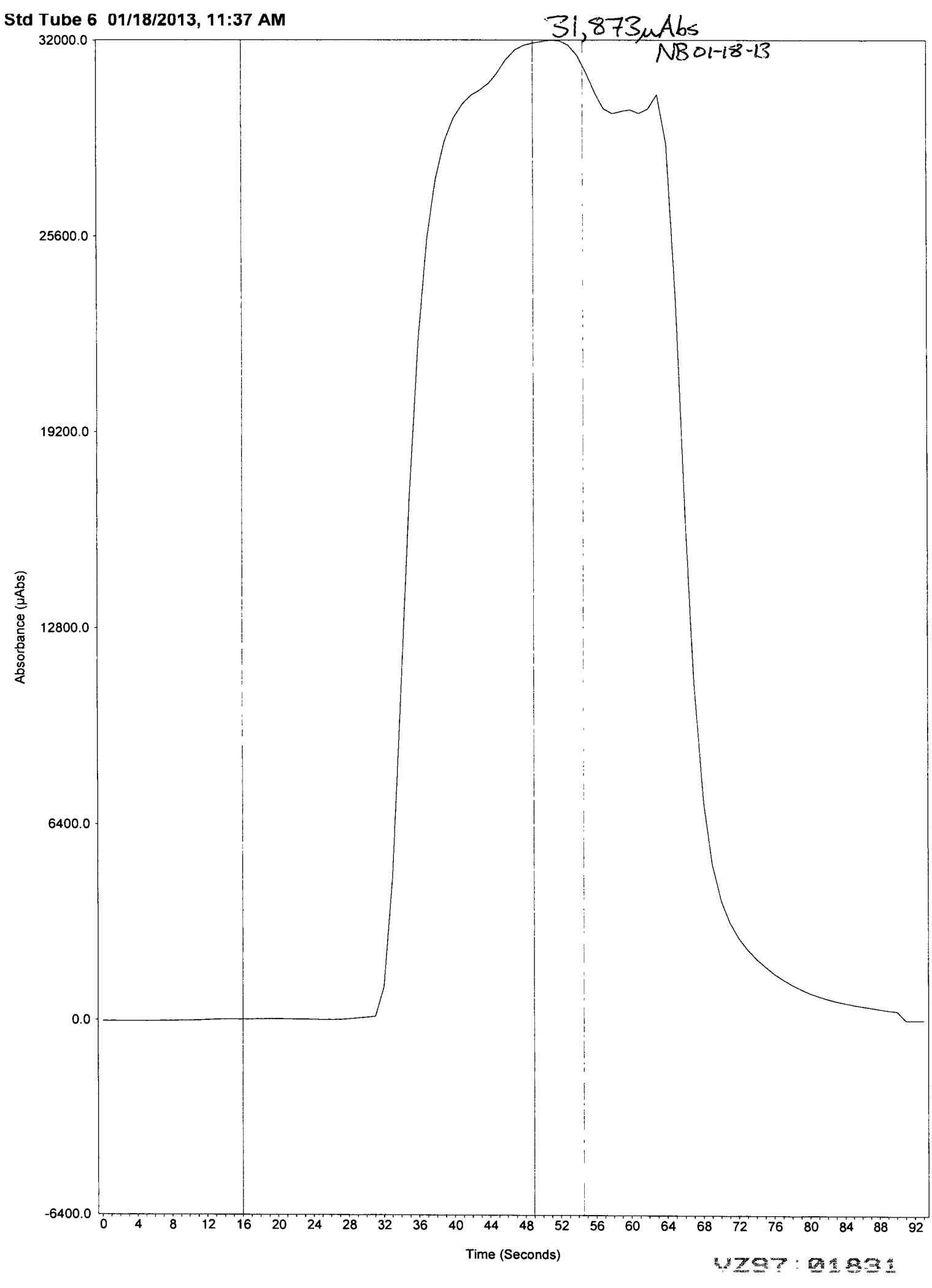
VZ97 : 01829

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA (CVA) **Analysis Date:** 01-18-13

	Analyst NB 01-18-13	Peer ~~AA~~ 1-21	Comment
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
ICV/CCV	✓	✓	
ICB/CCB	✓	✓	
RSD's & SD's	✓	✓	
Internal Standards	—	—	
Carry-over	—	—	
CRI/CRA	✓	✓	
ICSA/ICSAB	—	—	
Post Spikes/Serial Dilutions	—	—	
Analytic Spikes	—	—	
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	WA22
Matrix Duplicates	✓	✓	"
Method Blanks	✓	✓	
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
	✓	✓	WA22 SMM-CAF


Std Tube 6 01/18/2013, 11:37 AM
31,873 µAbs
NB 01-18-13
32000.0
25600.0
19200.0
12800.0
6400.0
0.0
-6400.0
Absorbance (µAbs)
0 4 8 12 16 20 24 28 32 36 40 44 48 52 56 60 64 68 72 76 80 84 88 92
Time (Seconds)

CETAC Hg Analysis Report - 13011800.DB - Friday, January 18, 2013, 3:16:37 PM

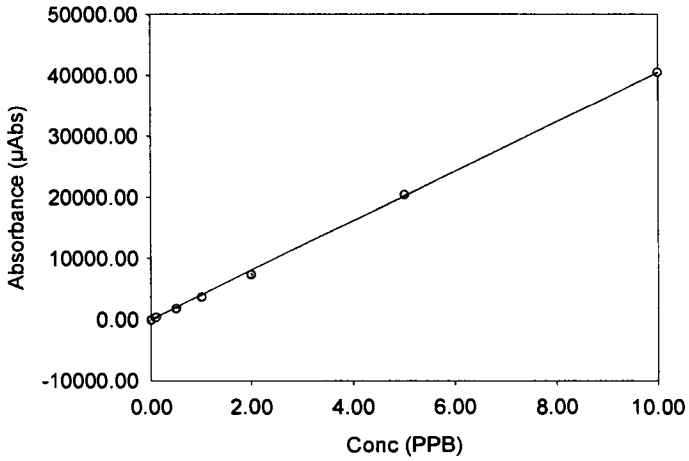
Analyst
Date Started Friday, January 18, 2013, 13:05:45
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	18-Jan-2013, 13:05	-0.01	36.10	-21.30	1.00	

1/24/13

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
Calibration Zero	18-Jan-2013, 13:11	0.00	10.80	-26.80	1.00	
Standard #1	18-Jan-2013, 13:12	0.10	0.29	350.00	1.00	
Standard #2	18-Jan-2013, 13:14	0.50	0.91	1780.00	1.00	
Standard #3	18-Jan-2013, 13:15	1.00	0.23	3660.00	1.00	
Standard #4	18-Jan-2013, 13:17	2.00	0.41	7320.00	1.00	
Standard #5	18-Jan-2013, 13:19	5.00	0.24	20500.00	1.00	
Standard #6	18-Jan-2013, 13:20	10.00	0.21	40500.00	1.00	

Calibration Data



Int.	0.000
Slope	4044.748
Correlation	0.99968

TWM

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
ICV	18-Jan-2013, 13:31	7.74	1.03	31300.00	1.00	← Begin CLP.
ICB	18-Jan-2013, 13:33	-0.01	13.70	-57.80	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	18-Jan-2013, 13:35	3.86	0.20	15600.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	18-Jan-2013, 13:36	-0.01	5.65	-48.20	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
CRA	18-Jan-2013, 13:38	0.08	0.52	320.00	1.00	
VZ97 MB1 TWM	18-Jan-2013, 13:39	0.01	27.00	29.10	1.00	
VZ97 MB1SPK TWM	18-Jan-2013, 13:41	2.05	0.31	8310.00	1.00	
VZ97 S TWM	18-Jan-2013, 13:43	0.02	4.91	93.10	1.00	
VZ97 SDUP TWM	18-Jan-2013, 13:44	0.04	5.11	161.00	1.00	
VZ97 SSPK TWM	18-Jan-2013, 13:46	0.93	0.63	3750.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	18-Jan-2013, 13:47	3.87	0.24	15700.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	18-Jan-2013, 13:49	-0.00	20.30	-15.50	1.00	← End CLP.

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
VZ89 MB1 LEM	18-Jan-2013, 13:52	0.00	445.00	2.85	1.00	
VZ89 A LEM	18-Jan-2013, 13:54	0.01	37.60	30.80	1.00	
VZ89 ADUP LEM	18-Jan-2013, 13:55	0.00	67.30	4.42	1.00	

VZ97 : 01832

APPENDIX D
SUMMARY OF WEIGHT TICKETS

Port of Bellingham
Chevron Subarea Interim Action
Material Ticket Summary

Sand Cap		Filter Material		Armor Stone		Fish Mix	
Ticket	**Weight (tons)**	**Ticket**	**Weight (tons)**	**Ticket**	**Weight (tons)**	**Ticket**	**Weight (tons)**
58339	31.79	226512	19.97	226534	28.35	58386	36.73
58340	32.01	226511	17.79	226535	32.51	58385	32.72
58328	33.44	226514	20.09	226536	31.47	58383	32.72
58334	31.29	226513	18.7	226111	34.04	58381	34.04
58338	32.31	226516	19.62	226118	31.36	58380	31.49
58341	32.02	226515	19.4	226112	33.68	58378	32.34
58346	32.69	226518	20.81	226119	30.84	58376	32.76
58347	31.58	226517	19.65	226543	31.54	58375	31.37
58351	32.97	226509	17.12	226544	33.36		
58353	33.38	226519	7.62	226545	32.56		
58352	32.68	226510	19.23	226546	32.8		
58358	31.76	226076	19.96	226547	31.51		
222632	32.74	226520	26.31	226077	33.49		
58364	31.98	226521	18.9	226078	35.21		
58365	31.21	226532	20.64	226079	30.8		
58373	34.39	226533	20.12	226082	32.67		
58374	31.15	226081	20.12	226084	34.01		
				226083	34.3		
TOTAL	549.39		326.05		584.5		264.17

Port of Bellingham
Chevron Subarea Interim Action
Disposal Ticket Summary

PCS		Timber	
Ticket	**Weight (tons)**	**Ticket**	**Weight (tons)**
2027697	26.08	2006984	14.76
2027721	26.48		
2027830	21.94		
2027834	23.61		
2027835	23.68		
2027836	25.38		
2019055	25.4		
2019059	25.52		
2019060	24.82		
2019064	26.01		
2019073	27.28		
2019076	26.27		
2019081	25.98		
2019087	25.17		
2019091	27.62		
2019093	26.76		
2019097	26.54		
2019098	26.77		
2019100	27.34		
2019094	25.91		
2019615	24.75		
2019617	25.99		
2019625	27.3		
2019638	24.8		
2019642	23.66		
2019651	24.85		
2019654	23.06		
2019659	24.3		
2019661	25.57		
2019663	25.8		
2019665	25.43		
2019669	25.64		
2019913	26.78		
2019914	25.4		
2019919	24.43		
2019920	25.04		
2019924	26.54		
2019925	24.85		
2019934	26.28		
2015267	25.8		
2015277	25.66		
2015523	23.36		
2006154	27.26		
2006418	29.02		
2011149	27.61		
2011152	26.76		
TOTAL	1180.5		14.76