Lower Duwamish Waterway NPDES Inspection Sampling Support

Technical Memorandum

Final

Prepared for

Toxics Cleanup Program
Northwest Regional Office
Washington State Department of Ecology
Bellevue, Washington

Prepared by

18912 North Creek Parkway, Suite 101
Bothell, Washington 98011

January 2015

Appendix J
Lafarge Cement

Limitation of Use: Leidos' project activities were restricted to collection and analysis of a limited number of environmental samples and visual observations obtained during the physical site visit, and from records made available by Ecology or third parties during the project. In preparing this report, Leidos has relied on verbal and written information provided by secondary sources and interviews, including information provided by the customer. Leidos has made no independent investigations concerning the accuracy or completeness of the information relied upon. Because the project activities consisted of collecting and evaluating a limited supply of information, Leidos may not have identified all potential items of concern and, therefore, Leidos warrants only that the project activities under this contract have been performed within the parameters and scope communicated by Ecology and reflected in the contract. Maps presented in this report were accurate based on the information available to Leidos at the time that the facility inspections were conducted.

This report is intended to be used in its entirety. Taking or using in any way excerpts from this report are not permitted and any party doing so does so at its own risk.

Table of Contents

Figures

Tables

Attachments

J-1 Introduction and Background

Facility Name	**Lafarge Cement**
Address	5400 West Marginal Way SW Seattle, WA 98106
NPDES Permit Type	Individual NPDES Permit
NPDES Permit No.	WA0002232
Permit Monitoring Requirements	TSS, turbidity, oil and grease, pH, total copper, total lead, total zinc, phthalate, PCBs, PAHs, antimony, arsenic, beryllium, cadmium, chromium (III), chromium (IV), mercury, nickel, selenium, silver, thallium
SIC Code	3241: Cement, Hydraulic
Inspection Date	June 19, 2013
Grab Samples	2 Water Samples (1 field duplicate water sample), 2 Solids Samples
Sample ID(s)	LF-TP-001-20130619-S LF-LS-004-20130619-S LF-TP-001-20130619-W LF-FD-001-20130619-W
Water Sample Analytes	PCB Congeners, SVOCs (including phthalates and PAHs), pesticides, metals, mercury, pH, specific conductance, anions, alkalinity, TOC/DOC, TSS
Solids Sample Analytes	Dioxins/furans (TP-001), PCB Aroclors, SVOCs (including phthalates and PAHs), pesticides, TPH-Diesel and Motor Oil (TP-001), TPH-Gasoline (TP-001), VOCs (TP-001), metals, mercury, TOC, total solids, grain size
Split Samples with Facility	Yes

Lafarge Cement (Lafarge) is located at 5400 West Marginal Way SW, in Seattle, Washington. The facility is approximately 19.4 acres in area and about 96 percent of this area is covered with pavement, buildings, or other structures (Lafarge 2012). A facility map is presented in Figure J-1a.

During 2010 and 2011, the plant transitioned to new operations involving manufacturing, blending and shipping. The new operation grinds granulated blast furnace slag that is imported as a feedstock for processing into various cement products. Periodic operations include transloading of various non-hazardous materials (Lafarge 2012).

Lafarge operates a truck wash near the facility entrance for trucks departing after bulk cement sales. Wash water from the truck wash is discharged to the King County sanitary sewer system according to the discharge authorization requirements (Lafarge 2012).

The facility has several designated loading and unloading areas. Raw materials are delivered to the facility via railcar, ship, barge, and truck. Granulated blast furnace slag is delivered to the

facility via ship. A waterfront crane located on the east wharf unloads and transfers the material to a holding area or to a raw materials conveyor. The slag is dried with a natural gas rotating drum dryer, conveyed to a silo, and then to the finish mills located inside the mill building. The finish mills pulverize the slag, gypsum and kiln dust along with a small amount of liquid grinding aid. The final product is pneumatically conveyed to the bulk storage silos. The final cementitious product is offloaded from the silos for rail or truck shipping or is packaged in bulk or consumer-sized bags for transport via truck (Lafarge 2012).

Gypsum and slag are stored outdoors in large bunkers until they are used in the manufacturing process. A covered shed is used for coal/coke storage. The entire site is paved with concrete except for a small open gravel area just north of the main entry gate along the railroad and curbed landscaped areas south and west of the entry gate. There are no significant soil erosion areas on site (Lafarge 2012).

J-1.1 Stormwater Conveyance and Treatment System

Lafarge is permitted to discharge to the Lower Duwamish Waterway (LDW) under specific circumstances via Outfall 008, which drains the majority of the facility. Outfalls 001 and 004 were capped in 2010. Process wastewater and non-contact cooling water are prohibited from discharge to the LDW and are collected and disposed of through the sanitary sewer system under the King County Major Discharge Authorization. Lafarge installed an electrocoagulation stormwater treatment system in late 2009 (Lafarge 2012).

Lift stations LS-001, LS-004, and LS-008 pump stormwater to the stormwater detention vault or storage tanks 2, 3 and 4. Stormwater is treated by electrocoagulation and conveyed to the downstream side of a weir in LS-008. Treated stormwater discharges to the LDW via Outfall 008. The current system has the capability to handle flows up to the 10-year, 24-hour rainfall event (2.9 inches) (Lafarge 2012).

The facility stormwater drainage plan is shown on Figure J-16.

J-1.2 Recent Compliance History

Ecology previously completed a stormwater compliance inspection at Lafarge on June 18, 2009. The sump pump at LS-008 was in need of maintenance and repair. During the inspection, Ecology observed that a significant amount of turbid water was discharged to the LDW. Lafarge failed to provide cover and containment for chemical products stored at the facility. Curbing at the facility appeared to be inadequate to prevent contaminated stormwater from discharging to the LDW. The Ecology inspector observed overflowing coal and iron slag piles with the potential to reach the LDW. Open piles of dried, contaminated dirt had the potential to become airborne, deposited on adjacent paved areas, and enter the stormwater drainage system. Ecology recommended formal enforcement actions for violations observed during the inspection (Ecology 2009).

Ecology issued an Agreed Order, an Amendment to the Agreed Order, and a Follow-Up Order related to the June 2009 notice of violation. The orders required Lafarge to complete an engineering report to determine appropriate long-term stormwater storage and treatment needs

(Ecology 2011). Ecology approved the engineering report for the long term treatment system in August 2010 (Aquarius 2010).

Based on available discharge monitoring report data, Lafarge has not exceeded benchmarks for permit parameters since the 4th quarter of 2009.

J-2 Inspection and Sampling

J-2.1 Stormwater Conveyance System Inspection

On June 19, 2013, Ecology conducted a stormwater compliance inspection at Lafarge. Leidos assisted Ecology with the inspection and sampling of the facility's stormwater conveyance system. The inspection included investigating influent and effluent points at drainage structures, written and photographic documentation, and assessing whether the drainage structures contained sufficient sampleable material. The coordinates of sample locations were measured with a survey-quality global positioning system and plotted on Figure J-2 using geographic information system software. Due to GPS reception being unavailable at the time of sampling, the coordinates for the transfer pump vault (TP-001) were not collected. An inspection photographic log and field documentation are presented in Attachments J-1 and J-2, respectively.

The field team inspected the following stormwater conveyance structures at Lafarge (Figure J-2): lift station 08 (LS-008), transfer pump vault (TP-001), lift station 04 (LS-004), and lift station 01 (LS-001). The lift stations LS-008 and LS-001 did not contain sufficient sampleable material. The transfer pump vault receives water from LS-001, LS-004, and LS-008. The TP-001 vault contained sufficient water and sampleable solids to collect grab samples of each media. The field team attempted to sample solids from LS-004. Sufficient sample volume was obtained to perform a limited number of analyses.

J-2.2 Stormwater Conveyance System Sampling

Ecology collected one water sample and field duplicate and two solids samples from the stormwater conveyance system at Lafarge. Leidos provided split samples of samples LF-TP-001-20130619-W and LF-TP-001-20130619-S to Lafarge. A split sample was not provided for LF-LS-004-20130619-S due to low sample volume. Laboratory analyses for the water samples are listed on Table J-1 and analytical data for water samples are presented in Tables J-2 through J-5. Laboratory analyses for the solids sample are listed on Table J-6 and analytical data are presented in Tables J-7 and J-8. Chain of custody forms and the laboratory reports are provided as Attachments J-3 and J-4, respectively.

J-2.2.1 Water Sample

Water sample LF-TP-001-20130619-W was collected from the transfer pump vault located at the eastern portion of the facility (Figure J-2, Attachment J-1). A field duplicate, LF-FD-001-20130619-W was collected at the TP-001 vault. Stormwater is conveyed to the vault by pumps at LS-001, LS-004, and LS-008. Stormwater is held in the transfer vault prior to treatment and discharge to the LDW. Discharge from the transfer vault did not occur during sample collection.

J-2.2.2 Solids Samples

Solids sample LF-TP-001-20130619-S was collected at the transfer pump vault located at the eastern portion of the facility (Figure J-2, Attachment J-1). The vault receives stormwater from the majority of the facility. Stormwater is conveyed to the vault by pumps at LS-001, LS-004, and LS-008. Solids in stormwater settle in the transfer vault. The depth of the vault was greater

than the length of sampling apparatus; therefore, the solids sample was collected from a ledge located on the northern portion of the vault wall. The sample is representative of storm drain solids at the facility. The sample consisted of brown and tan fine-grained sand and silt. No odor was detected during sample collection. After multiple grab attempts, sufficient sample volume was obtained for all analyses. Per discussion with Ecology, dioxin/furan analysis was requested for this sample.

Solids sample LF-LS-004-20130619-S was collected from LS-004 located at the northeast portion of the facility (Figure J-1, Attachment J-1). The lift station receives stormwater from the coal/coke storage building, scale house and loading bins, and additives building. The lift station pumps stormwater to the transfer pump vault for settling prior to treatment. The solids sample was collected from the southwest corner of the lift station and is representative of storm drain solids in drainage basin 4. The sample consisted of black gravel and sand. A slight petroleum odor was detected during sample collection. After multiple grab attempts insufficient sample volume was obtained to fill all required sample containers. Due to the large grain size and minimal sample volume, volatile organic compounds (VOCs) and petroleum hydrocarbons were not selected for analysis. Per discussion with Ecology, polychlorinated biphenyls (PCBs), semivolatile organic compounds (SVOCs), and metals were prioritized for analysis. Given the low sample volume, Lafarge did not request to split the sample.

J-3 Results

J-3.1 Chemical Analysis

Ecology collected one water sample and two solids samples during the June 19, 2013 compliance inspection at Lafarge. In addition, one field duplicate water sample was collected. Analytical methods, chemical results and regulatory criteria are presented in Tables J-1 through J-8.

All chemical results were independently validated by EcoChem, Inc. of Seattle, WA. A summary-level, U.S. Environmental Protection Agency (EPA) Stage 2B data validation was performed on all chemistry results; a full-level, EPA Stage 4 data validation was performed on the dioxin/furan results. A compliance-level screening (EPA Stage 2A), including a comparison of detected results to sample concentrations, was performed on the rinse blank samples. Data validation was performed following EPA guidance (EPA 1994, 2008, 2009, 2010). The data validation report is available as Attachment 2 to the draft LDW NPDES Inspection Sampling Support Technical Memorandum (Leidos 2014).

J-3.2 Inspection Results and Permit Compliance Requirements

The Ecology inspection report was not available for review.

J-4 References

Aquarius (Aquarius Environmental, LLC). 2010. Lafarge North America, Inc., Stormwater Treatment System Engineering Report. June 15, 2010.

Ecology (Washington Department of Ecology). 2009. Stormwater Compliance Inspection Report, Lafarge North America, Inc., 5400 West Marginal Way S.W., Seattle, WA 98106. August 19, 2009.

EPA (U.S. Environmental Protection Agency), Office of Emergency and Remedial Response. February 1994. *USEPA Contract Laboratory Program, National Functional Guidelines for Inorganic Data Review.* EPA 540/R-94/013. Washington, DC.

EPA, Office of Emergency and Remedial Response. June 2008. *USEPA Contract Laboratory Program, National Functional Guidelines for Organic Data Review*. EPA-540-R-08-01. Washington, DC.

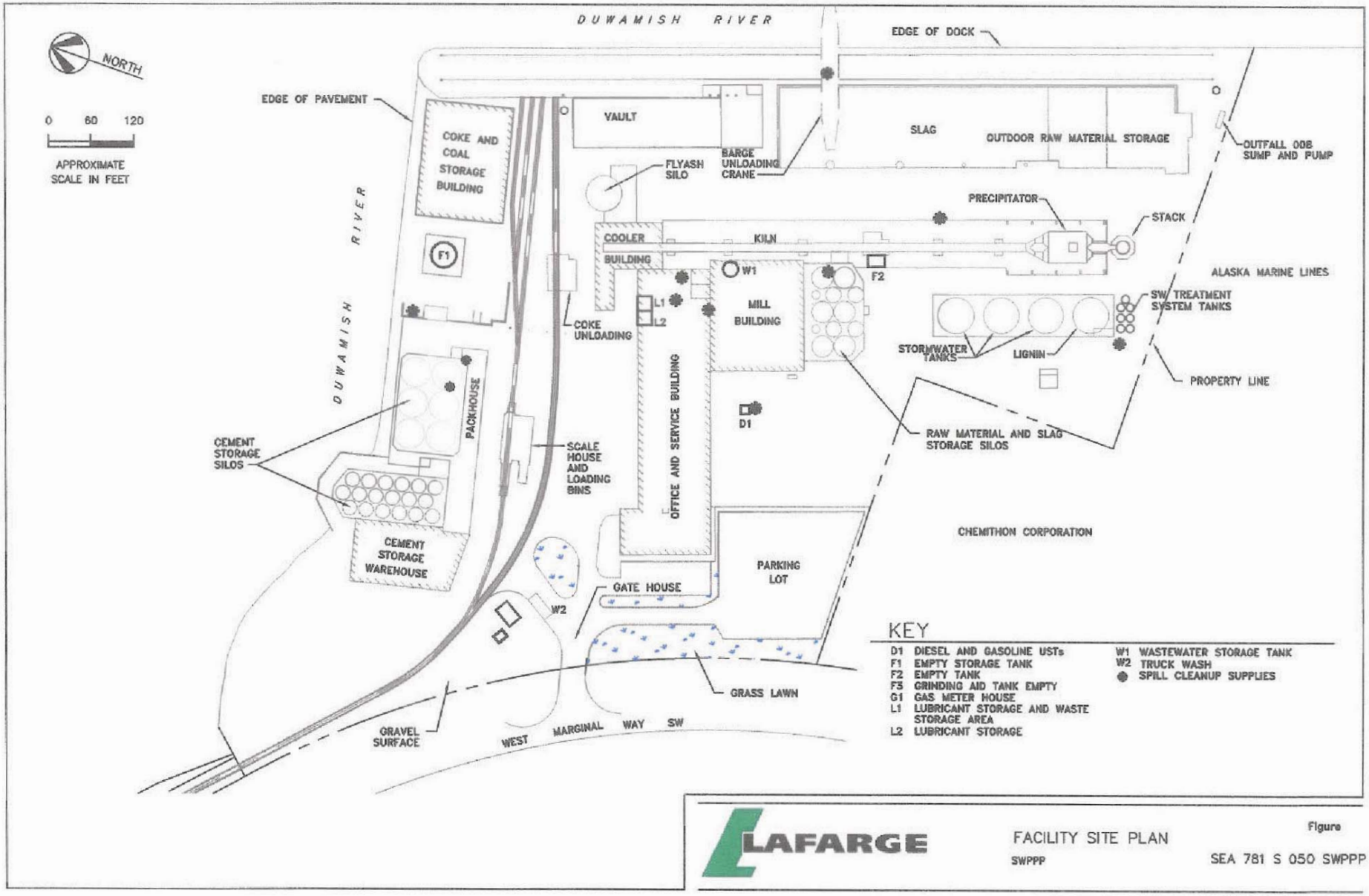
EPA, Office of Emergency and Remedial Response. January 2009. *Guidance for labeling externally validated laboratory analytical data for Superfund use.* EPA-540-R-08-005. Washington, DC.

EPA, Office of Emergency and Remedial Response. January 2010. *USEPA Contract Laboratory Program, National Functional Guidelines for Inorganic Data Review*. EPA 540-R-10-011. Washington, DC.

Lafarge (Lafarge North America, Inc.). 2012. Stormwater Pollution Prevention Plan, Lafarge North America Seattle Plant, Seattle, Washington. May 15, 2012.

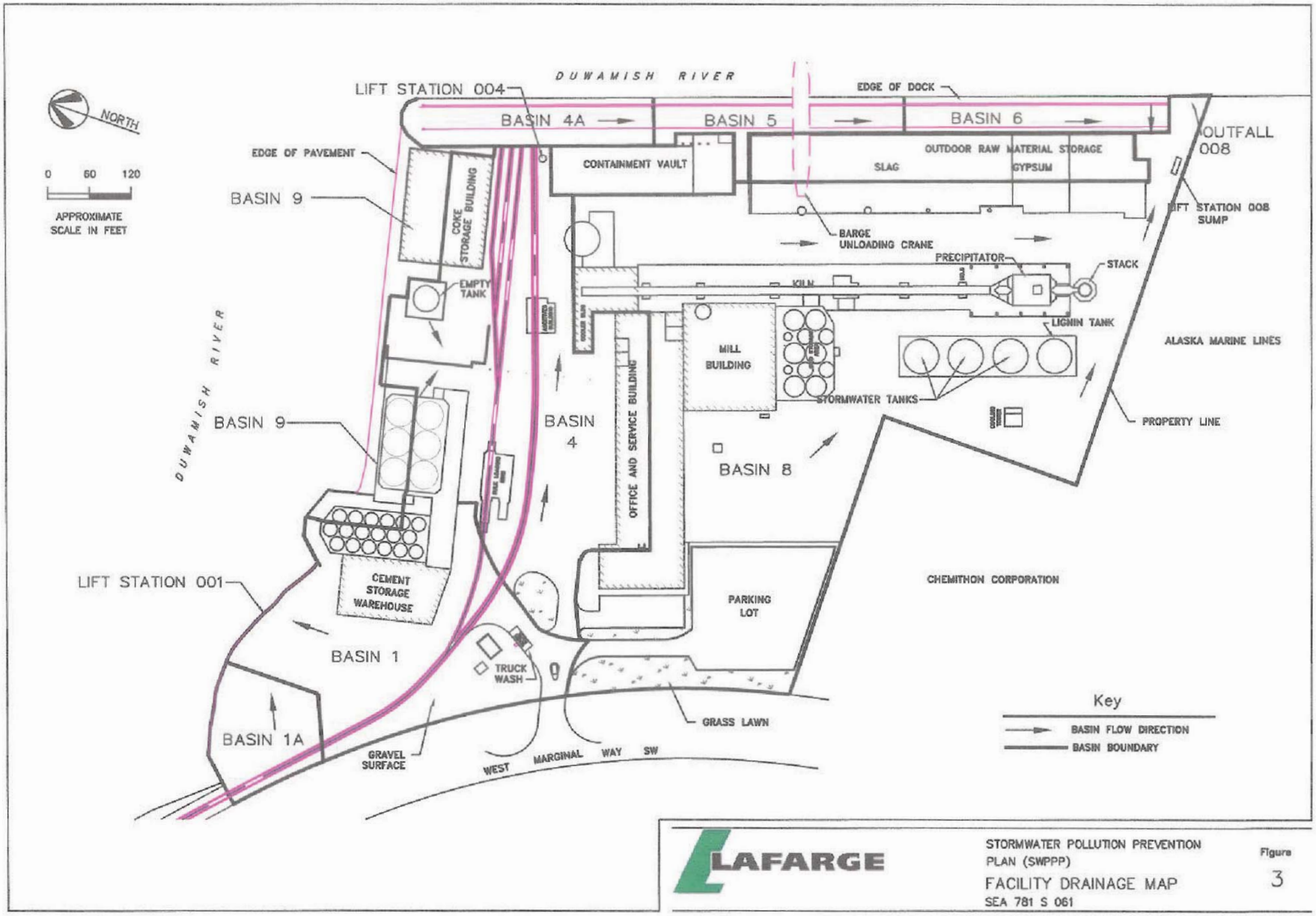
Leidos. 2014. LDW NPDES Inspection Sampling Support, Seattle, WA, Technical Memorandum. DRAFT. Prepared for Washington State Department of Ecology, Toxics Cleanup Program, Northwest Regional Office. In progress.

Figures



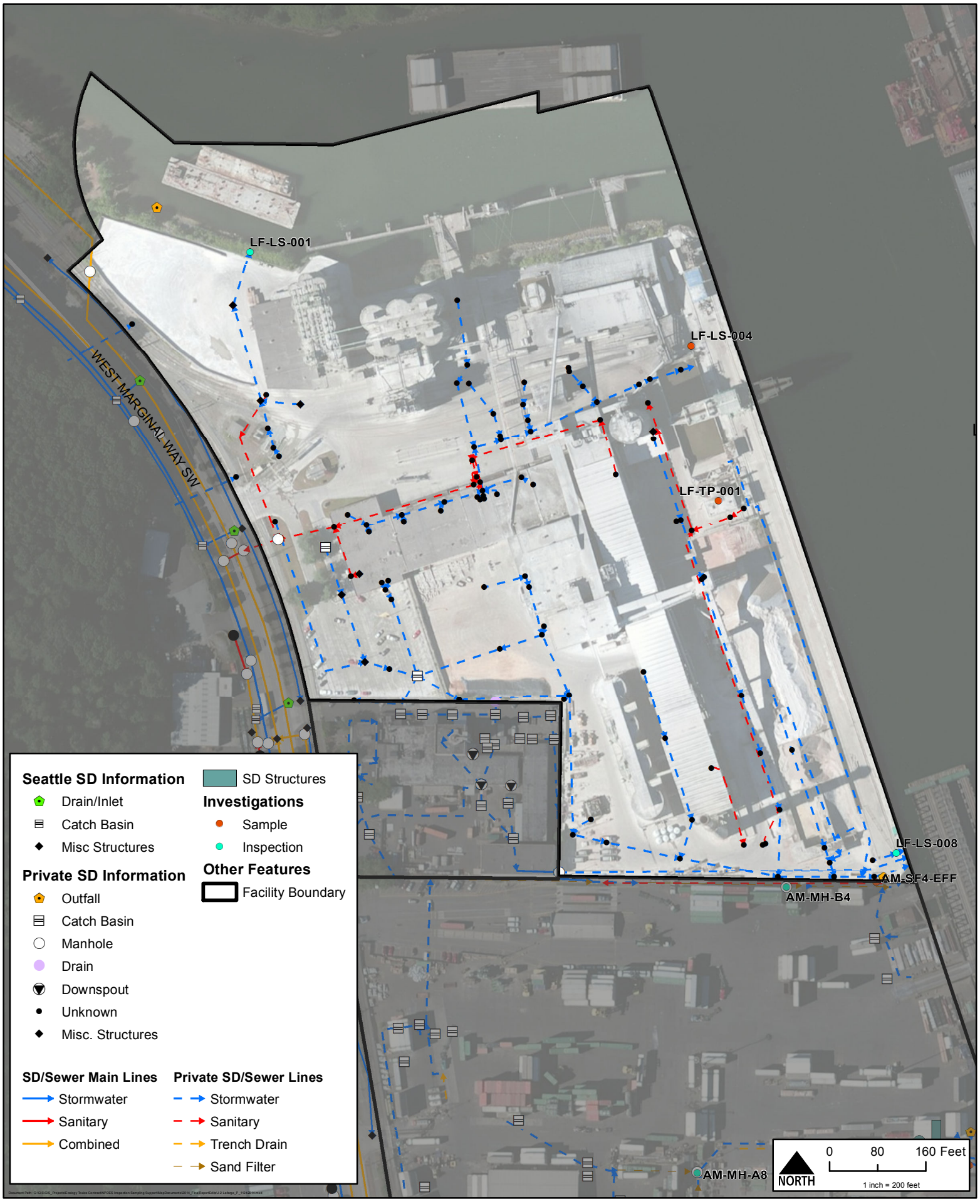
Source: Lafarge 2012 [10459]

Figure J–1a. Lafarge Cement Facility SWPPP Map



Source: Lafarge 2012 [10459]

Figure J–1b. Lafarge Cement Facility SWPPP Map



leidos

Figure J–2. Lafarge Cement Inspection and Sample Locations

DEPARTMENT OF ECOLOGY
State of Washington

Tables

Table J-1. Sample Analytical Methods – Water
NPDES Inspection Sampling Support: Lafarge Cement

Location ID / Collection Date		LF-TP-001	LF-FD-001 [a]
Analyte	**Units**	**6/19/2013**	**6/19/2013**
Metals (Total)			
Antimony	µg/L	E200.8	E200.8
Arsenic	µg/L	E200.8	E200.8
Beryllium	µg/L	E200.8	E200.8
Cadmium	µg/L	E200.8	E200.8
Chromium	µg/L	E200.8	E200.8
Copper	µg/L	E200.8	E200.8
Lead	µg/L	E200.8	E200.8
Mercury	µg/L	SW7470A	SW7470A
Nickel	µg/L	E200.8	E200.8
Selenium	µg/L	E200.8	E200.8
Silver	µg/L	E200.8	E200.8
Thallium	µg/L	E200.8	E200.8
Zinc	µg/L	E200.8	E200.8
Metals (Dissolved)			
Antimony	µg/L	E200.8	E200.8
Arsenic	µg/L	E200.8	E200.8
Beryllium	µg/L	E200.8	E200.8
Cadmium	µg/L	E200.8	E200.8
Chromium	µg/L	E200.8	E200.8
Copper	µg/L	E200.8	E200.8
Lead	µg/L	E200.8	E200.8
Mercury	µg/L	SW7470A	SW7470A
Nickel	µg/L	E200.8	E200.8
Selenium	µg/L	E200.8	E200.8
Silver	µg/L	E200.8	E200.8
Thallium	µg/L	E200.8	E200.8
Zinc	µg/L	E200.8	E200.8
PAHs			
1-Methylnaphthalene	µg/L	SW8270DSIM	SW8270DSIM
2-Chloronaphthalene	µg/L	SW8270D	SW8270D
2-Methylnaphthalene	µg/L	SW8270DSIM	SW8270DSIM
Acenaphthene	µg/L	SW8270DSIM	SW8270DSIM
Acenaphthylene	µg/L	SW8270DSIM	SW8270DSIM
Anthracene	µg/L	SW8270DSIM	SW8270DSIM
Benzo(a)anthracene	µg/L	SW8270DSIM	SW8270DSIM
Benzo(a)pyrene	µg/L	SW8270DSIM	SW8270DSIM
Benzo(b)fluoranthene	µg/L	SW8270DSIM	SW8270DSIM
Benzo(g,h,i)perylene	µg/L	SW8270DSIM	SW8270DSIM
Benzo(k)fluoranthene	µg/L	SW8270DSIM	SW8270DSIM
Chrysene	µg/L	SW8270DSIM	SW8270DSIM
Dibenz(a,h)anthracene	µg/L	SW8270DSIM	SW8270DSIM
Dibenzofuran	µg/L	SW8270DSIM	SW8270DSIM
Fluoranthene	µg/L	SW8270DSIM	SW8270DSIM
Fluorene	µg/L	SW8270DSIM	SW8270DSIM

Table J-1. Sample Analytical Methods – Water
NPDES Inspection Sampling Support: Lafarge Cement

Location ID / Collection Date		LF-TP-001	LF-FD-001 [a]
Analyte	**Units**	**6/19/2013**	**6/19/2013**
Indeno(1,2,3-cd)pyrene	µg/L	SW8270DSIM	SW8270DSIM
Naphthalene	µg/L	SW8270DSIM	SW8270DSIM
Phenanthrene	µg/L	SW8270DSIM	SW8270DSIM
Pyrene	µg/L	SW8270DSIM	SW8270DSIM
Total Benzofluoranthenes	µg/L	SW8270DSIM	SW8270DSIM
Total HPAHs	µg/L	SW8270DSIM	SW8270DSIM
Total LPAHs	µg/L	SW8270DSIM	SW8270DSIM
Total PAHs	µg/L	SW8270DSIM	SW8270DSIM
cPAHs, nd RL*0	µg/L	SW8270DSIM	SW8270DSIM
cPAHs, nd RL*0.5	µg/L	SW8270DSIM	SW8270DSIM
cPAHs, nd RL*1	µg/L	SW8270DSIM	SW8270DSIM
Phthalates			
bis(2-Ethylhexyl)phthalate	µg/L	SW8270D	SW8270D
Butylbenzylphthalate	µg/L	SW8270D	SW8270D
Di-n-Butylphthalate	µg/L	SW8270D	SW8270D
Diethylphthalate	µg/L	SW8270D	SW8270D
Dimethylphthalate	µg/L	SW8270D	SW8270D
Di-n-Octyl phthalate	µg/L	SW8270D	SW8270D
Phenols			
2,3,4,6-Tetrachlorophenol	µg/L	SW8270D	SW8270D
2,4,5-Trichlorophenol	µg/L	SW8270D	SW8270D
2,4,6-Trichlorophenol	µg/L	SW8270D	SW8270D
2,4-Dichlorophenol	µg/L	SW8270D	SW8270D
2,4-Dimethylphenol	µg/L	SW8270D	SW8270D
2,4-Dinitrophenol	µg/L	SW8270D	SW8270D
2-Chlorophenol	µg/L	SW8270D	SW8270D
2-Methylphenol	µg/L	SW8270D	SW8270D
2-Nitrophenol	µg/L	SW8270D	SW8270D
4,6-Dinitro-2-Methylphenol	µg/L	SW8270D	SW8270D
4-Chloro-3-methylphenol	µg/L	SW8270D	SW8270D
4-Methylphenol	µg/L	SW8270D	SW8270D
4-Nitrophenol	µg/L	SW8270D	SW8270D
Pentachlorophenol	µg/L	SW8270D	SW8270D
Phenol	µg/L	SW8270D	SW8270D
Other SVOCs			
1,2,4-Trichlorobenzene	µg/L	SW8270D	SW8270D
1,2-Dichlorobenzene	µg/L	SW8270D	SW8270D
1,2-Diphenylhydrazine	µg/L	R	R
1,3-Dichlorobenzene	µg/L	SW8270D	SW8270D
1,4-Dichlorobenzene	µg/L	SW8270D	SW8270D
2,4-Dinitrotoluene	µg/L	SW8270D	SW8270D
2,6-Dinitrotoluene	µg/L	SW8270D	SW8270D
2-Nitroaniline	µg/L	SW8270D	SW8270D
3,3'-Dichlorobenzidine	µg/L	SW8270D	SW8270D
3-Nitroaniline	µg/L	SW8270D	SW8270D

Table J-1. Sample Analytical Methods – Water
NPDES Inspection Sampling Support: Lafarge Cement

Location ID / Collection Date		LF-TP-001	LF-FD-001 [a]
Analyte	**Units**	**6/19/2013**	**6/19/2013**
4-Bromophenyl-phenylether	µg/L	SW8270D	SW8270D
4-Chloroaniline	µg/L	SW8270D	SW8270D
4-Chlorophenyl-phenylether	µg/L	SW8270D	SW8270D
4-Nitroaniline	µg/L	SW8270D	SW8270D
Aniline	µg/L	SW8270D	SW8270D
Azobenzene	µg/L	R	R
Benzoic Acid	µg/L	SW8270D	SW8270D
Benzyl Alcohol	µg/L	SW8270D	SW8270D
2,2'-Oxybis(1-Chloropropane)	µg/L	SW8270D	SW8270D
bis(2-Chloroethoxy) Methane	µg/L	SW8270D	SW8270D
Bis-(2-Chloroethyl) Ether	µg/L	SW8270D	SW8270D
Carbazole	µg/L	SW8270D	SW8270D
Hexachlorobenzene	µg/L	SW8081B	SW8081B
Hexachlorobutadiene	µg/L	SW8081B	SW8081B
Hexachlorocyclopentadiene	µg/L	SW8270D	SW8270D
Hexachloroethane	µg/L	SW8270D	SW8270D
Isophorone	µg/L	SW8270D	SW8270D
Nitrobenzene	µg/L	SW8270D	SW8270D
N-Nitrosodimethylamine	µg/L	SW8270D	SW8270D
N-Nitroso-Di-N-Propylamine	µg/L	SW8270D	SW8270D
N-Nitrosodiphenylamine	µg/L	SW8270D	SW8270D
N-Nitrosomethylethylamine	µg/L	na	na
PCB Aroclors			
PCB Aroclors	µg/L	na	na
PCB Congeners			
PCB Congeners	pg/L	1668C	1668C
Pesticides			
Pesticides	µg/L	SW8081B	SW8081B
Conventionals			
Alkalinity	mg/L CaCO3	SM2320	SM2320
Bicarbonate	mg/L CaCO3	SM2320	SM2320
Carbonate	mg/L CaCO3	SM2320	SM2320
Chloride	mg/L	EPA300.0	EPA300.0
Conductivity	µmhos/cm	EPA120.1	EPA120.1
Dissolved Organic Carbon	mg/L	SM5310B	SM5310B
Hydroxide	mg/L CaCO3	SM2320	SM2320
Nitrate + Nitrite	mg-N/L	na	na
N-Nitrate	mg-N/L	EPA300.0	EPA300.0
N-Nitrite	mg-N/L	na	na
pH	std units	SM4500H	SM4500H
Sulfate	mg/L	EPA300.0	EPA300.0
Total Organic Carbon	mg/L	SM5310B	SM5310B
Total Suspended Solids	mg/L	SM2540D	SM2540D

a - This is a field duplicate of the sample directly preceding it.

Table J-1. Sample Analytical Methods – Water
NPDES Inspection Sampling Support: Lafarge Cement

Location ID / Collection Date		LF-TP-001	LF-FD-001 [a]
Analyte	Units	6/19/2013	6/19/2013

µg/L - micrograms per liter
µmhos/cm - micromhos per centimeter
CaCO3 - calcium carbonate
cPAHs - carcinogenic polycyclic aromatic hydrocarbons
EPA - U.S. Environmental Protection Agency
HPAHs - high molecular weight polycyclic aromatic hydrocarbons
LPAHs - low molecular weight polycyclic aromatic hydrocarbons
mg/L - milligrams per liter
mg-N/L - milligrams per liter as nitrogen
na - not analyzed
nd - non-detect
NPDES - National Pollutant Discharge Elimination System
PAHs - polycyclic aromatic hydrocarbons
PCBs - polychlorinated biphenyls
pg/L - picograms per liter
R - Result rejected during data validation review.
RL - reporting limit
SIM - selected ion monitoring
std units - standard units
SVOCs - semivolatile organic compounds

Table J-2. Water Quality Data
NPDES Inspection Sampling Support: Lafarge Cement

Location ID			LF-TP-001	LF-FD-001 [a]
Collection Date			6/19/2013	6/19/2013
Analyte	WA NPDES ISGP	Unit	Result	Result
Field Parameters				
Flow	--	Yes/No	No	No
pH	5.0 to 9.0	std units	7.22	7.22
Conductivity	--	mS/cm	876	876
Temperature	--	degrees C	17.6	17.6
Total Dissolved Solids	--	g/L	0.56	0.56
Turbidity	25	NTU	0.5	0.5
Oil & Grease	No visible sheen	Yes/No	No	No
Dissolved Oxygen	--	mg/L	6.6	6.6

a - This is a field duplicate of the sample directly preceding it.
b - Facility's turbidity meter result was 1.81 NTU.

Results in **bold** exceed the WA NPDES ISGP.
degrees C - degrees Celsius
g/L - grams per liter
ISGP - Industrial Stormwater General Permit
mS/cm - milliSiemens per centimeter
na - not analyzed
NPDES - National Pollutant Discharge Elimination System
NTU - Nephelometric Turbidity Units
std units - standard units

WA - Washington State
> - Result exceeds equipment calibration limit.

Table J-3. Water Sample Results Compared to Criteria
NPDES Inspection Sampling Support: Lafarge Cement

Location ID						LF-TP-001					LF-FD-001				
Collection Date						6/19/2013					6/19/2013				
Analyte	WA NPDES ISGP	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
Total Metals (µg/L)															
Antimony	--	--	--	--	--	1.5					1.5				
Arsenic	150	36	69	--	--	2.1					2.0				
Beryllium	--	--	--	--	--	< 0.2 U					< 0.2 U				
Cadmium	2.1	9.4	42	--	--	< 0.1 U					< 0.1 U				
Chromium	--	--	--	--	--	3.3					3.2				
Copper	14	3.7	5.8	--	--	**5.0**	1.3				**4.9**	1.3			
Lead	81.6	8.5	221	--	--	1.3					1.3				
Mercury	1.4	0.025	2.1	--	--	< 0.02 U					< 0.02 U				
Nickel	--	8.3	75	--	--	1.6					1.6				
Selenium	5	71	291	--	--	0.7					0.7				
Silver	3.8	--	2.2	--	--	< 0.2 U					< 0.2 U				
Thallium	--	--	--	--	--	< 0.2 U					< 0.2 U				
Zinc	117	86	95	--	--	12					12				
Dissolved Metals (µg/L)															
Antimony		--	--	4,300	640	1.4					1.5				
Arsenic		36	69	--	--	1.5					1.5				
Beryllium		--	--	--	--	< 0.2 U					< 0.2 U				
Cadmium		9.3	42	--	--	< 0.1 U					< 0.1 U				
Chromium		--	--	--	--	1.4					1.4				
Copper		3.1	4.8	--	--	**3.5**	1.1				**3.4**	1.1			
Lead		8.1	210	--	--	< 0.1 U					< 0.1 U				
Mercury		0.025	1.8	0.15	--	< 0.02 U					< 0.02 U				
Nickel		8.2	74	4,600	4,600	1.4					1.4				
Selenium		71	290	--	4,200	0.6					0.6				
Silver		--	1.9	--	--	< 0.2 UJ					< 0.2 UJ				
Thallium		--	--	6.3	0.47	< 0.2 U					< 0.2 U				
Zinc		81	90	--	26,000	6.0					5.0				
PAHs (µg/L)															
1-Methylnaphthalene		--	--	--	--	< 0.01 U					< 0.01 U				
2-Chloronaphthalene		--	--	--	1,600	< 1.0 U					< 1.0 U				
2-Methylnaphthalene		--	--	--	--	< 0.01 U					< 0.01 U				
Acenaphthene		--	--	--	990	< 0.01 U					< 0.01 U				
Acenaphthylene		--	--	--	--	< 0.01 U					< 0.01 U				
Anthracene		--	--	110,000	40,000	< 0.01 U					< 0.01 U				

Table J-3. Water Sample Results Compared to Criteria
NPDES Inspection Sampling Support: Lafarge Cement

Location ID						LF-TP-001					LF-FD-001				
Collection Date						6/19/2013					6/19/2013				
Analyte	WA NPDES ISGP	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
Benzo(a)anthracene		--	--	0.031	0.018	< 0.01 U					< 0.01 U				
Benzo(a)pyrene		--	--	0.031	0.018	< 0.01 U					< 0.01 U				
Benzo(b)fluoranthene		--	--	0.031	0.018	< 0.01 U					< 0.01 U				
Benzo(g,h,i)perylene		--	--	--	--	< 0.01 U					< 0.01 U				
Benzo(k)fluoranthene		--	--	0.031	0.018	< 0.01 U					< 0.01 U				
Chrysene		--	--	0.031	0.018	< 0.01 U					< 0.01 U				
Dibenz(a,h)anthracene		--	--	0.031	0.018	< 0.01 U					< 0.01 U				
Dibenzofuran		--	--	--	--	< 0.01 U					< 0.01 U				
Fluoranthene		--	--	370	140	< 0.01 U					< 0.01 U				
Fluorene		--	--	14,000	5,300	< 0.01 U					< 0.01 U				
Indeno(1,2,3-cd)pyrene		--	--	0.031	0.018	< 0.01 U					< 0.01 U				
Naphthalene		--	--	--	--	< 0.01 U					< 0.01 U				
Phenanthrene		--	--	--	--	< 0.01 U					< 0.01 U				
Pyrene		--	--	11,000	4,000	< 0.01 U					< 0.01 U				
Total Benzofluoranthenes		--	--	--	--	< 0.02 U					< 0.02 U				
Total HPAHs		--	--	--	--	< 0.02 U					< 0.02 U				
Total LPAHs		--	--	--	--	< 0.01 U					< 0.01 U				
Total PAHs		--	--	--	--	< 0.02 U					< 0.02 U				
cPAHs, nd RL*0		--	--	--	--	< 0 U					< 0 U				
cPAHs, nd RL*0.5		--	--	--	--	< 0.0076 U					< 0.0076 U				
cPAHs, nd RL*1		--	--	--	--	< 0.015 U					< 0.015 U				
Phthalates (µg/L)															
bis(2-Ethylhexyl)phthalate		--	--	5.9	2.2	< 3.0 U					< 3.0 U				
Butylbenzylphthalate		--	--	--	1,900	< 1.0 U					< 1.0 U				
Di-n-Butylphthalate		--	--	12,000	4,500	< 1.0 U					< 1.0 U				
Diethylphthalate		--	--	120,000	44,000	< 1.0 U					< 1.0 U				
Dimethylphthalate		--	--	2,900,000	1,100,000	< 1.0 U					< 1.0 U				
Di-n-Octyl phthalate		--	--	--	--	< 1.0 U					< 1.0 U				
Phenols (µg/L)															
2,3,4,6-Tetrachlorophenol		--	--	--	--	< 1.0 U					< 1.0 U				
2,4,5-Trichlorophenol		--	--	--	3,600	< 5.0 U					< 5.0 U				
2,4,6-Trichlorophenol		--	--	6.5	2.4	< 3.0 U					< 3.0 U				
2,4-Dichlorophenol		--	--	790	290	< 3.0 U					< 3.0 U				
2,4-Dimethylphenol		--	--	--	850	< 3.0 U					< 3.0 U				
2,4-Dinitrophenol		--	--	14,000	5,300	< 20 U					< 20 U				

Table J-3. Water Sample Results Compared to Criteria
NPDES Inspection Sampling Support: Lafarge Cement

Location ID						LF-TP-001					LF-FD-001				
Collection Date						6/19/2013					6/19/2013				
Analyte	WA NPDES ISGP	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
2-Chlorophenol		--	--	--	150	< 1.0 U					< 1.0 U				
2-Methylphenol		--	--	--	--	< 1.0 U					< 1.0 U				
2-Nitrophenol		--	--	--	--	< 3.0 U					< 3.0 U				
4,6-Dinitro-2-Methylphenol		--	--	765	280	< 10 U					< 10 U				
4-Chloro-3-methylphenol		--	--	--	--	< 3.0 U					< 3.0 U				
4-Methylphenol		--	--	--	--	< 2.0 U					< 2.0 U				
4-Nitrophenol		--	--	--	--	< 10 U					< 10 U				
Pentachlorophenol		7.9	13	8.2	3	**< 10 U**					**< 10 U**				
Phenol		--	--	4,600,000	860,000	< 1.0 U					< 1.0 U				
Other SVOCs (µg/L)															
1,2,4-Trichlorobenzene		--	--	--	70	< 1.0 U					< 1.0 U				
1,2-Dichlorobenzene		--	--	17,000	1,300	< 1.0 U					< 1.0 U				
1,2-Diphenylhydrazine		--	--	0.54	0.2	R					R				
1,3-Dichlorobenzene		--	--	2,600	960	< 1.0 U					< 1.0 U				
1,4-Dichlorobenzene		--	--	2,600	190	< 1.0 U					< 1.0 U				
2,4-Dinitrotoluene		--	--	9.1	3.4	< 3.0 U					< 3.0 U				
2,6-Dinitrotoluene		--	--	--	--	< 3.0 U					< 3.0 U				
2-Nitroaniline		--	--	--	--	< 3.0 U					< 3.0 U				
3,3'-Dichlorobenzidine		--	--	0.077	0.028	**< 5.0 U**					**< 5.0 U**				
3-Nitroaniline		--	--	--	--	< 3.0 U					< 3.0 U				
4-Bromophenyl-phenylether		--	--	--	--	< 1.0 U					< 1.0 U				
4-Chloroaniline		--	--	--	--	< 5.0 U					< 5.0 U				
4-Chlorophenyl-phenylether		--	--	--	--	< 1.0 U					< 1.0 U				
4-Nitroaniline		--	--	--	--	< 3.0 U					< 3.0 U				
Aniline		--	--	--	--	< 1.0 U					< 1.0 U				
Azobenzene		--	--	--	--	R					R				
Benzoic Acid		--	--	--	--	< 20 U					< 20.0 U				
Benzyl Alcohol		--	--	--	--	< 2.0 U					< 2.0 U				
2,2'-Oxybis(1-Chloropropane)		--	--	170,000	65,000	< 1.0 U					< 1.0 U				
bis(2-Chloroethoxy) Methane		--	--	--	--	< 1.0 U					< 1.0 U				
Bis-(2-Chloroethyl) Ether		--	--	1.4	0.53	< 1.0 U					< 1.0 U				
Carbazole		--	--	--	--	< 1.0 U					< 1.0 U				
Hexachlorobenzene		--	--	0.00077	0.00029	**< 0.05 U**					**< 0.05 U**				
Hexachlorobutadiene		--	--	50	18	< 0.05 U					< 0.05 U				
Hexachlorocyclopentadiene		--	--	17,000	1,100	< 5.0 U					< 5.0 U				

Table J-3. Water Sample Results Compared to Criteria
NPDES Inspection Sampling Support: Lafarge Cement

Location ID						LF-TP-001						LF-FD-001					
Collection Date						6/19/2013						6/19/2013					
Analyte	WA NPDES ISGP	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO		Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO	
Hexachloroethane		--	--	8.9	3.3	< 2.0 U						< 2.0 U					
Isophorone		--	--	600	960	< 1.0 U						< 1.0 U					
Nitrobenzene		--	--	1,900	690	< 1.0 U						< 1.0 U					
N-Nitrosodimethylamine		--	--	8.1	3	< 3.0 U						< 3.0 U					
N-Nitroso-Di-N-Propylamine		--	--	--	0.51	< 1.0 U						< 1.0 U					
N-Nitrosodiphenylamine		--	--	16	6	< 1.0 U						< 1.0 U					
PCB Aroclors (µg/L)																	
Aroclor 1016		--	--	--	--	na						na					
Aroclor 1221		--	--	--	--	na						na					
Aroclor 1232		--	--	--	--	na						na					
Aroclor 1242		--	--	--	--	na						na					
Aroclor 1248		--	--	--	--	na						na					
Aroclor 1254		--	--	--	--	na						na					
Aroclor 1260		--	--	--	--	na						na					
Aroclor 1262		--	--	--	--	na						na					
Aroclor 1268		--	--	--	--	na						na					
Total PCB Aroclors		0.03	10	0.00017	0.000064	na						na					
Pesticides (µg/L)																	
4,4'-DDD		--	--	0.00084	0.00031	**< 0.1 U**						**< 0.1 U**					
4,4'-DDE		--	--	0.00059	0.00022	**< 0.1 U**						**< 0.1 U**					
4,4'-DDT		--	--	0.00059	0.00022	**< 0.1 U**						**< 0.1 U**					
Total DDTs		0.001	0.13	--	--	**< 0.1 U**						**< 0.1 U**					
Aldrin		--	--	0.00014	0.00005	**< 0.05 U**						**< 0.05 U**					
alpha-BHC		--	--	0.013	0.0049	**< 0.05 U**						**< 0.05 U**					
beta-BHC		--	--	0.046	0.017	**< 0.05 U**						**< 0.05 U**					
cis-Chlordane		--	--	--	--	< 0.05 U						< 0.05 U					
delta-BHC		--	--	--	--	< 0.05 UJ						< 0.05 UJ					
Dieldrin		--	--	0.00014	0.000054	**< 0.1 U**						**< 0.1 U**					
Endosulfan I		0.0087	0.034	2.0	89	***< 0.05 U***						***< 0.05 U***					
Endosulfan II		0.0087	0.034	2.0	89	***< 0.1 U***						***< 0.1 U***					
Endosulfan Sulfate		0.0087	0.034	2.0	89	***< 0.1 U***						***< 0.1 U***					
Endrin		0.0023	0.037	0.81	0.06	***< 0.1 U***						***< 0.1 U***					
Endrin Aldehyde		--	--	0.81	0.3	< 0.1 U						< 0.1 U					
Endrin Ketone		--	--	--	--	< 0.1 U						< 0.1 U					
Heptachlor		0.0036	0.053	0.00021	0.000079	**< 0.05 U**						**< 0.05 U**					

Table J-3. Water Sample Results Compared to Criteria
NPDES Inspection Sampling Support: Lafarge Cement

Location ID						LF-TP-001					LF-FD-001				
Collection Date						6/19/2013					6/19/2013				
Analyte	WA NPDES ISGP	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
Heptachlor Epoxide		--	--	0.00011	0.000039	**< 0.05 U**					**< 0.05 U**				
gamma-BHC (Lindane)		--	0.16	0.063	1.8	< 0.05 U					< 0.05 U				
Methoxychlor		--	--	--	--	< 0.5 U					< 0.5 U				
Toxaphene		0.0002	0.21	0.00075	0.00028	***< 5.0 U***					***< 5.0 U***				
trans-Chlordane		--	--	--	--	< 0.05 U					< 0.05 U				
Total aldrin/dieldrin		0.0019	0.71	--	--	**< 0.1 U**					**< 0.1 U**				
Total Chlordane		0.004	0.09	0.00059	0.00081	**< 0.05 U**					**< 0.05 U**				

a = This is a field duplicate of the sample directly preceding it.

Results in underline exceed the WA NPDES ISGP Benchmark for that parameter.
Results in **bold** exceed the WA WQC Marine Chronic.
Results in ***bold italics*** exceed the WA WQC Marine Acute.
Results that are shaded gray exceed the NTR HHO criteria.
Exceedance Factors (EFs) are presented for detected concentrations that exceed the WA, NTR, or NR WQC.
The EFs are calculated (result/criterion) and have no regulatory relevance. They provide an indication of the general magnitude of the concentration relative to the WA, NTR, or NR WQC.

< - not detected
µg/L - micrograms per liter
cPAHs - carcinogenic polycyclic aromatic hydrocarbons
EF - exceedance factor (sample result/criteria value)
HHO - Human Health - Consumption of Organisms Only
HPAHs - high molecular weight polycyclic aromatic hydrocarbons
ISGP - Industrial Stormwater General Permit
J - estimated concentration
JN - estimated concentration
LPAHs - low molecular weight polycyclic aromatic hydrocarbons
MA - Marine Acute
MC - Marine Chronic
na - not analyzed
nd - non-detect
NPDES - National Pollutant Discharge Elimination System
NR - National Recommended
NTR - National Toxics Rule
PAHs - polycyclic aromatic hydrocarbons
PCBs - polychlorinated biphenyls
RL - reporting limit
SVOCs - semivolatile organic compounds
U - not detected
WA - Washington State
WQC - Water Quality Criteria

Table J-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: Lafarge Cement

Location ID					LF-TP-001					LF-FD-001[c]				
Collection Date					6/19/2013					6/19/2013				
Analyte	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
Total PCB Congeners (µg/L)[a]	0.03	10	0.00017	0.000064	0.00531 CJ			31	83	0.00433 CJ			25	68
Total PCB Congeners (pg/L)[a]					5,310 CJ					4,330 CJ				
Estimated Total PCB Congeners (pg/L)[b]					5,410 CJ					4,400 CJ				
Total Monochlorobiphenyl (pg/L)[a]					3.82					2.48				
Estimated Total Monochlorobiphenyl (pg/L)[b]					3.82					9.31 J				
PCB-1					< 1.22 U					< 2.61 U				
PCB-2					< 1.40 U					2.48 J				
PCB-3					3.82 J					< 4.22 U				
Total Dichlorobiphenyl (pg/L)[a]					19.9					12.7				
Estimated Total Dichlorobiphenyl (pg/L)[b]					51.4					44.6				
PCB-4					< 5.35 U					< 5.23 U				
PCB-5					< 3.47 U					< 2.92 U				
PCB-6					< 3.49 U					< 2.94 U				
PCB-7					< 3.26 U					< 2.75 U				
PCB-8					6.31 J					4.41 J				
PCB-9					< 3.79 U					< 3.20 U				
PCB-10					< 3.69 U					< 3.61 U				
PCB-11					< 31.5 U					< 31.8 U				
PCB-12/13					< 3.25 CU					< 2.74 CU				
PCB-14					< 2.87 U					< 2.42 U				
PCB-15					13.6					8.31 J				
Total Trichlorobiphenyl (pg/L)[a]					101					55.3				
Estimated Total Trichlorobiphenyl (pg/L)[b]					113 J					61.8 J				
PCB-16					4.59 J					< 2.07 U				
PCB-17					3.73 J					2.41 J				
PCB-18/30					9.27 CJ					5.97 CJ				
PCB-19					6.75 J					6.07 J				
PCB-20/28					22.9 C					10.6 CJ				
PCB-21/33					< 9.30 U					4.81 CJ				
PCB-22					7.93 J					3.75 J				
PCB-23					< 1.83 U					< 1.63 U				
PCB-24					< 1.90 U					< 1.35 U				
PCB-25					< 2.26 U					< 1.63 U				
PCB-26/29					4.99 CJ					3.01 CJ				
PCB-27					5.79 J					5.64 J				
PCB-31					15.7					< 6.48 U				

Table J-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: Lafarge Cement

Location ID					LF-TP-001					LF-FD-001[c]				
Collection Date					6/19/2013					6/19/2013				
Analyte	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
PCB-32					8.17 J					6.14 J				
PCB-34					< 1.88 U					< 1.67 U				
PCB-35					< 1.93 U					< 1.72 U				
PCB-36					< 1.80 U					< 1.60 U				
PCB-37					11.6					6.88 J				
PCB-38					< 1.88 U					< 1.67 U				
PCB-39					< 1.71 U					< 1.52 U				
Total Tetrachlorobiphenyl (pg/L)[a]					425					276				
Estimated Total Tetrachlorobiphenyl (pg/L)[b]					430					288 J				
PCB-40/71					23.1 C					16.8 CJ				
PCB-41					< 2.00 U					< 1.54 U				
PCB-42					7.21 J					4.31 J				
PCB-43					< 1.98 U					< 1.53 U				
PCB-44/47/65					41.1 C					23.5 CJ				
PCB-45					9.63					7.87 J				
PCB-46					6.36 J					< 4.92 U				
PCB-48					3.07 J					< 1.33 U				
PCB-49/69					19.9 C					11.4 CJ				
PCB-50/53					18.9 CJ					15.9 CJ				
PCB-51					< 5.50 U					< 3.93 U				
PCB-52					138					99.2				
PCB-54					< 1.13 U					< 1.08 U				
PCB-55					< 1.75 U					< 1.52 U				
PCB-56					15.1					10.6				
PCB-57					< 1.78 U					< 1.54 U				
PCB-58					< 1.73 U					< 1.50 U				
PCB-59/62/75					6.10 CJ					5.80 CJ				
PCB-60					5.04 J					< 2.93 U				
PCB-61/70/74/76					62.9 C					34.5 CJ				
PCB-63					< 1.59 U					< 1.38 U				
PCB-64					24.4					16.3				
PCB-66					22.5					14.9				
PCB-67					< 1.70 U					< 1.48 U				
PCB-68					< 1.61 U					< 1.40 U				
PCB-72					< 1.75 U					< 1.52 U				

Table J-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: Lafarge Cement

Location ID					LF-TP-001					LF-FD-001[c]				
Collection Date					6/19/2013					6/19/2013				
Analyte	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
PCB-73					< 1.36 U					< 1.05 U				
PCB-77					19.3					13.2				
PCB-78					< 1.80 U					< 1.57 U				
PCB-79					2.08 J					1.57 J				
PCB-80					< 1.54 U					< 1.34 U				
PCB-81					< 1.73 U					< 1.51 U				
Total Pentachlorobiphenyl (pg/L)[a]					1,980					1,580				
Estimated Total Pentachlorobiphenyl (pg/L)[b]					2,000 J					1,590 J				
PCB-82					50.4					38.1				
PCB-83					21.7					18.9				
PCB-84					121					99.0				
PCB-85/116					31.9 C					22.7 C				
PCB-86/87/97/109/119/125					172 C					128 C				
PCB-88					< 1.82 U					< 1.58 U				
PCB-89					< 2.59 U					2.72 J				
PCB-90/101/113					264 C					209 C				
PCB-91					34.7					29.6				
PCB-92					58.5					49.2				
PCB-93/100					< 2.00 U					< 1.66 U				
PCB-94					< 1.68 U					< 1.46 U				
PCB-95					329					275				
PCB-96					< 1.71 U					1.77 J				
PCB-98					< 1.91 U					< 1.66 U				
PCB-99					73.9					56.0				
PCB-102					7.35 J					6.05 J				
PCB-103					1.95 J					1.80 J				
PCB-104					< 0.564 U					< 0.567 U				
PCB-105					85.4					63.9				
PCB-106					< 1.25 U					< 1.09 U				
PCB-107					15.1					11.3				
PCB-108/124					< 7.05 U					5.26 CJ				
PCB-110					536					432				
PCB-111					< 1.16 U					< 1.01 U				
PCB-112					< 1.19 U					< 1.03 U				
PCB-114					< 2.45 U					2.14 J				

Table J-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: Lafarge Cement

Location ID					LF-TP-001					LF-FD-001[c]				
Collection Date					6/19/2013					6/19/2013				
Analyte	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
PCB-115					< 5.34 U					6.19 J				
PCB-117					6.63 J					5.90 J				
PCB-118					161					114				
PCB-120					< 1.15 U					< 1.00 U				
PCB-121					< 1.16 U					< 1.01 U				
PCB-122					4.49 J					< 2.85 U				
PCB-123					2.90 J					2.48 J				
PCB-126					3.94 J					< 3.04 U				
PCB-127					< 1.16 U					< 1.02 U				
Total Hexachlorobiphenyl (pg/L)[a]					1,900					1,620				
Estimated Total Hexachlorobiphenyl (pg/L)[b]					1,910 J					1,620 J				
PCB-128/166					77.8 C					65.1 C				
PCB-129/138/163					470 C					402 C				
PCB-130					32.4					26.5				
PCB-131					7.04 J					5.59 J				
PCB-132					163					140				
PCB-133					6.12 J					4.67 J				
PCB-134					25.5					21.4				
PCB-135/151					124 C					109 C				
PCB-136					53.7					45.0				
PCB-137					21.4					16.7				
PCB-139/140					6.59 CJ					< 4.99 U				
PCB-141					76.6					62.8				
PCB-142					< 0.875 U					< 0.761 U				
PCB-143					2.16 J					< 1.46 U				
PCB-144					17.7					15.0				
PCB-145					< 0.657 U					< 0.558 U				
PCB-146					57.6					49.3				
PCB-147/149					323 C					280 C				
PCB-148					< 0.822 U					< 0.715 U				
PCB-150					< 0.623 U					< 0.529 U				
PCB-152					< 0.630 U					< 0.535 U				
PCB-153/168					309 C					260 C				
PCB-154					< 3.76 U					3.38 J				
PCB-155					< 0.596 U					< 0.506 U				

Table J-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: Lafarge Cement

Location ID					LF-TP-001					LF-FD-001[c]				
Collection Date					6/19/2013					6/19/2013				
Analyte	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO
PCB-156/157					37.2 C					31.6 C				
PCB-158					43.7					38.5				
PCB-159					3.60 J					< 2.48 U				
PCB-160					< 0.652 U					< 0.567 U				
PCB-161					< 0.632 U					< 0.550 U				
PCB-162					1.19 J					< 0.971 U				
PCB-164					30.9					27.1				
PCB-165					< 0.706 U					< 0.613 U				
PCB-167					14.9					11.8				
PCB-169					< 0.973 U					< 0.789 U				
Total Heptachlorobiphenyl (pg/L)[a]					714					642				
Estimated Total Heptachlorobiphenyl (pg/L)[b]					727 J					644 J				
PCB-170					95.6					78.3				
PCB-171/173					26.2 C					24.8 C				
PCB-172					15.6					13.7				
PCB-174					100					89.8				
PCB-175					< 2.79 U					< 2.40 U				
PCB-176					< 9.50 U					9.78				
PCB-177					57.7					51.0				
PCB-178					19.3					17.6				
PCB-179					38.6					33.1				
PCB-180/193					180 C					162 C				
PCB-181					< 1.16 U					< 0.936 U				
PCB-182					< 1.10 U					< 0.884 U				
PCB-183					42.0					39.4				
PCB-184					< 0.705 U					< 0.741 U				
PCB-185					10.1					7.99 J				
PCB-186					< 0.662 U					< 0.696 U				
PCB-187					103					92.7				
PCB-188					< 0.631 U					< 0.663 U				
PCB-189					2.71 J					2.38 J				
PCB-190					19.4					15.6				
PCB-191					4.18 J					3.39 J				
PCB-192					< 1.01 U					< 0.81 U				

Table J-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: Lafarge Cement

Location ID					LF-TP-001						LF-FD-001[c]					
Collection Date					6/19/2013						6/19/2013					
Analyte	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO		Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO	
Total Octachlorobiphenyl (pg/L)[a]					155						130					
Estimated Total Octachlorobiphenyl (pg/L)[b]					155						133 J					
PCB-194					36.0						31.3					
PCB-195					15.2						12.4					
PCB-196					18.4						16.1					
PCB-197					1.84 J						1.43 J					
PCB-198/199					41.4 C						35.5 C					
PCB-200					5.24 J						< 3.60 U					
PCB-201					4.31 J						3.89 J					
PCB-202					8.00 J						6.72 J					
PCB-203					22.6						20.8					
PCB-204					< 0.775 U						< 0.548 U					
PCB-205					1.55 J						1.56 J					
Total Nonachlorobiphenyl (pg/L)[a]					12.3						9.03					
Estimated Total Nonachlorobiphenyl (pg/L)[b]					12.3						9.03					
PCB-206					9.05 J						7.22 J					
PCB-207					1.13 J						< 0.939 U					
PCB-208					2.08 J						1.81 J					
Decachlorobiphenyl (pg/L)					< 2.11 U						< 2.11 U					
PCB-209					< 2.11 U						< 2.11 U					
PCB TEQ, nd SDL*0					0.405 J						0.00817 J					
PCB TEQ, nd SDL*0.5					0.420 J						0.172 J					
PCB TEQ, nd SDL*1					0.435 J						0.336 J					

a - Total PCBs and total PCB homologs include only congeners that met identification criteria as required by EPA Method1668B.
b - Estimated total PCBs and estimated total PCB homologs include congeners that were "estimated maximum possible concentration" or EMPC. The EMPC values were qualified by EcoChem as "U" to indicate the analyte was not detected at an elevated reporting limit that met criteria required by EPA Method1668B. Estimated total PCBs and estimated total PCB homolog values were qualified as estimated (J) where EMPCs were included in the reported totals.
c - This is a field duplicate of the sample directly preceding it.

Results in **bold** exceed the WA WQC Marine Chronic.
Results in ***bold italics*** exceed the WA WQC Marine Acute.
Results that are shaded gray exceed the NTR HHO criteria.
Exceedance Factors (EFs) are presented for detected concentrations that exceed the WA, NTR, or NR WQC.
The EFs are calculated (result/criterion) and have no regulatory relevance. They provide an

Table J-4. Water Sample Results – PCB Congeners
NPDES Inspection Sampling Support: Lafarge Cement

Location ID					LF-TP-001					LF-FD-001[c]				
Collection Date					6/19/2013					6/19/2013				
Analyte	WA WQC Marine Chronic	WA WQC Marine Acute	NTR WQC Human Health Organism	NR WQC Human Health Organism	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO	Result	EF WA MC	EF WA MA	EF NTR HHO	EF NR HHO

< - not detected
µg/L - micrograms per liter
C - coelution
EMPC - estimated maximum possible concentration
J - estimated concentration
nd - non-detect
NPDES - National Pollutant Discharge Elimination System
PCBs - polychlorinated biphenyls
pg/L - picograms per liter
SDL - sample detection limit
TEQ - toxic equivalency
U - not detected

Table J-5. Water Sample Results – Conventionals
NPDES Inspection Sampling Support: Lafarge Cement

Location ID			LF-TP-001	LF-FD-001 [a]
Collection Date			6/19/2013	6/19/2013
Analyte	WA NPDES ISGP	Unit	Result	Result
Conventionals				
Alkalinity	--	mg/L CaCO3	54.3	54.4
Bicarbonate	--	mg/L CaCO3	54.3	54.4
Carbonate	--	mg/L CaCO3	< 1.0 U	< 1.0 U
Chloride	--	mg/L	157	156
Conductivity	--	µmhos/cm	868	865
Dissolved Organic Carbon	--	mg/L	2.05	2.17
Hydroxide	--	mg/L CaCO3	< 1.0 U	< 1.0 U
N-Nitrate	--	mg-N/L	0.3	0.3
pH	5-9	std units	7.84	7.92
Sulfate	--	mg/L	98.6	98.5
Total Organic Carbon	--	mg/L	2.21	2.28
Total Suspended Solids	--	mg/L	10.2	2.2

a - This is a field duplicate of the sample directly preceding it.
Results in **bold** exceed the WA NPDES ISGP.

< - not detected
µmhos/cm - micromhos per centimeter
CaCO3 - calcium carbonate
ISGP - Industrial Stormwater General Permit
mg/L - milligrams per liter
mg-N/L - milligrams per liter as nitrogen
NPDES - National Pollutant Discharge Elimination System
std units - standard units
U - not detected
WA - Washington
J - estimated concentration

Table J-6. Sample Analytical Methods – Solids
NPDES Inspection Sampling Support: Lafarge Cement

Location ID / Collection Date	LF-LS-004	LF-TP-001
Analyte	**6/19/2013**	**6/19/2013**
Metals (Total) (mg/kg)		
Antimony	EPA200.8	EPA200.8
Arsenic	EPA200.8	EPA200.8
Beryllium	SW6010C	SW6010C
Cadmium	EPA200.8	EPA200.8
Chromium	EPA200.8	EPA200.8
Copper	SW6010C	SW6010C
Lead	EPA200.8	EPA200.8
Mercury	SW7471A	SW7471A
Nickel	EPA200.8	EPA200.8
Selenium	EPA200.8	EPA200.8
Silver	EPA200.8	EPA200.8
Thallium	EPA200.8	EPA200.8
Zinc	SW6010C	SW6010C
PAHs (µg/kg)		
1-Methylnaphthalene	SW8270D	SW8270D
2-Chloronaphthalene	SW8270D	SW8270D
2-Methylnaphthalene	SW8270D	SW8270D
Acenaphthene	SW8270D	SW8270D
Acenaphthylene	SW8270D	SW8270D
Anthracene	SW8270D	SW8270D
Benzo(a)anthracene	SW8270D	SW8270D
Benzo(a)pyrene	SW8270D	SW8270D
Benzo(g,h,i)perylene	SW8270D	SW8270D
Chrysene	SW8270D	SW8270D
Dibenz(a,h)anthracene	SW8270DSIM	SW8270D
Dibenzofuran	SW8270D	SW8270D
Fluoranthene	SW8270D	SW8270D
Fluorene	SW8270D	SW8270D
Indeno(1,2,3-cd)pyrene	SW8270D	SW8270D
Naphthalene	SW8270D	SW8270D
Phenanthrene	SW8270D	SW8270D
Pyrene	SW8270D	SW8270D
Total Benzofluoranthenes	SW8270D	SW8270D
Total HPAHs	SW8270DSIM	SW8270D
Total LPAHs	SW8270D	SW8270D
Total PAHs	SW8270DSIM	SW8270D
cPAHs, nd RL*0	SW8270DSIM	SW8270D
cPAHs, nd RL*0.5	SW8270DSIM	SW8270D
cPAHs, nd RL*1	SW8270DSIM	SW8270D
Phthalates (µg/kg)		
bis(2-Ethylhexyl)phthalate	SW8270D	SW8270D
Butylbenzylphthalate	SW8270DSIM	SW8270DSIM
Di-n-Butylphthalate	SW8270D	SW8270D
Diethylphthalate	SW8270DSIM	SW8270DSIM

Table J-6. Sample Analytical Methods – Solids
NPDES Inspection Sampling Support: Lafarge Cement

Location ID / Collection Date	LF-LS-004	LF-TP-001
Analyte	**6/19/2013**	**6/19/2013**
Dimethylphthalate	SW8270DSIM	SW8270DSIM
Di-n-Octyl phthalate	SW8270D	SW8270D
Phenols (µg/kg)		
2,4,5-Trichlorophenol	SW8270D	SW8270D
2,4,6-Trichlorophenol	SW8270D	SW8270D
2,4-Dichlorophenol	SW8270D	SW8270D
2,4-Dimethylphenol	SW8270DSIM	SW8270DSIM
2,4-Dinitrophenol	SW8270D	SW8270D
2-Chlorophenol	SW8270D	SW8270D
2-Methylphenol	SW8270DSIM	SW8270DSIM
2-Nitrophenol	SW8270D	SW8270D
4,6-Dinitro-2-Methylphenol	SW8270D	SW8270D
4-Chloro-3-methylphenol	SW8270D	SW8270D
4-Methylphenol	SW8270D	SW8270D
4-Nitrophenol	SW8270D	SW8270D
Pentachlorophenol	SW8270DSIM	SW8270DSIM
Phenol	SW8270D	SW8270D
Other SVOCs (µg/kg)		
1,2,4-Trichlorobenzene	SW8270DSIM	SW8270DSIM
1,2-Dichlorobenzene	SW8270DSIM	SW8260C
1,3-Dichlorobenzene	SW8270DSIM	SW8260C
1,4-Dichlorobenzene	SW8270DSIM	SW8260C
2,4-Dinitrotoluene	SW8270D	SW8270D
2,6-Dinitrotoluene	SW8270D	SW8270D
2-Nitroaniline	SW8270D	SW8270D
3,3'-Dichlorobenzidine	R	SW8270D
3-Nitroaniline	SW8270D	SW8270D
4-Bromophenyl-phenylether	SW8270D	SW8270D
4-Chloroaniline	SW8270D	SW8270D
4-Chlorophenyl-phenylether	SW8270D	SW8270D
4-Nitroaniline	SW8270D	SW8270D
Aniline	R	R
Benzoic Acid	R	SW8270D
Benzyl Alcohol	SW8270DSIM	SW8270DSIM
2,2'-Oxybis(1-Chloropropane)	SW8270D	SW8270D
bis(2-Chloroethoxy) Methane	SW8270D	SW8270D
Bis-(2-Chloroethyl) Ether	SW8270D	SW8270D
Carbazole	SW8270D	SW8270D
Hexachlorobenzene	SW8270DSIM	SW8081B
Hexachlorobutadiene	SW8270DSIM	SW8081B
Hexachlorocyclopentadiene	R	SW8270D
Hexachloroethane	SW8270D	SW8270D
Isophorone	SW8270D	SW8270D
Nitrobenzene	SW8270D	SW8270D
N-Nitrosodimethylamine	SW8270DSIM	SW8270DSIM

Table J-6. Sample Analytical Methods – Solids
NPDES Inspection Sampling Support: Lafarge Cement

Location ID / Collection Date	LF-LS-004	LF-TP-001
Analyte	**6/19/2013**	**6/19/2013**
N-Nitroso-Di-N-Propylamine	SW8270DSIM	SW8270DSIM
N-Nitrosodiphenylamine	SW8270DSIM	SW8270DSIM
PCB Aroclors (µg/kg)		
PCB Aroclors	SW8082A	SW8082A
Pesticides (µg/kg)		
Pesticides	SW8081B	SW8081B
VOCs (µg/kg)		
VOCs	na	SW8260C
TPHs (mg/kg)		
Gasoline-Range Hydrocarbons	na	NWTPHG
Diesel-Range Hydrocarbons	na	NWTPHD
Motor Oil-Range Hydrocarbons	na	NWTPHD
Dioxins and Furans (ng/kg)		
Dioxins and Furans	EPA 1613B	EPA 1613B
Grain size (%)		
Grain size	na	PSEP-PS
Conventionals (%)		
Total Organic Carbon	PLUMB81TC	PLUMB81TC
Total Solids	SM2540B	SM2540B

a - This is a field duplicate of the sample directly preceding it.

% - percent
µg/kg - micrograms per kilogram
cPAHs - carcinogenic polycyclic aromatic hydrocarbons
EPA - U.S. Environmental Protection Agency
HPAHs - high molecular weight polycyclic aromatic hydrocarbons
LPAHs - low molecular weight polycyclic aromatic hydrocarbons
mg/kg - milligrams per kilogram
nd - non-detect
ng/kg - nanograms per kilogram
NPDES - National Pollutant Discharge Elimination System
PAHs - polycyclic aromatic hydrocarbons
PCBs - polychlorinated biphenyls
R - Result rejected during data validation review.
RL - reporting limit
SIM - selected ion monitoring
SVOCs - semivolatile organic compounds
TPH - total petroleum hydrocarbons
VOCs - volatile organic compounds

Table J-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Lafarge Cement

Location ID			LF-LS-004			LF-TP-001		
Collection Date			6/19/2013			6/19/2013		
Analyte	SMS Criteria		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
Metals (Total) (mg/kg)								
Antimony	--	--	0.5 J			< 0.3 UJ		
Arsenic	57	93	29			12.3		
Beryllium	--	--	1.4			0.4		
Cadmium	5.1	6.7	0.1			1.0		
Chromium	260	270	32.9			35.2		
Copper	390	390	276			186		
Lead	450	530	20.5			18.5		
Mercury	0.41	0.59	< 0.03 U			0.06		
Nickel	--	--	39.9			30.4		
Selenium	--	--	1.0			< 0.8 U		
Silver	6.1	6.1	1.2			0.7		
Thallium	--	--	< 0.2 U			< 0.3 U		
Zinc	410	960	**584 J**	1.4		241 J		
PAHs (µg/kg)								
1-Methylnaphthalene	--	--	200			240		
2-Chloronaphthalene	--	--	< 20 U			< 20 U		
2-Methylnaphthalene	670	1,400	310			220		
Acenaphthene	500	730	20			26		
Acenaphthylene	1,300	1,300	< 20 U			< 20 U		
Anthracene	960	4,400	60			76		
Benzo(a)anthracene	1,300	1,600	130			190		
Benzo(a)pyrene	1,600	3,000	160			180		
Benzo(g,h,i)perylene	670	720	140			91		
Chrysene	1,400	2,800	170			260		
Dibenz(a,h)anthracene	230	540	78			30		
Dibenzofuran	540	700	56			25		
Fluoranthene	1,700	2,500	140			340		
Fluorene	540	1,000	45			48		
Indeno(1,2,3-cd)pyrene	600	690	56			65		
Naphthalene	2,100	2,400	170			100		
Phenanthrene	1,500	5,400	220			220		
Pyrene	2,600	3,300	180			570		
Total Benzofluoranthenes	3,200	3,600	120			270		
Total HPAHs	12,000	17,000	1,200			2,000		
Total LPAHs	5,200	13,000	520			470		
Total PAHs	--	--	1,700			2,500		
cPAHs, nd RL*0	1,000	--	200			240		
cPAHs, nd RL*0.5	1,000	--	200			240		
cPAHs, nd RL*1	1,000	--	200			240		
Phthalates (µg/kg)								
bis(2-Ethylhexyl)phthalate	1,300	1,900	520			850		
Butylbenzylphthalate	63	900	38			50		
Di-n-Butylphthalate	1,400	5,100	13 J			< 20 U		
Diethylphthalate	200	1,200	< 4.9 UJ			< 5 UJ		

Table J-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Lafarge Cement

Location ID			LF-LS-004			LF-TP-001		
Collection Date			6/19/2013			6/19/2013		
Analyte	SMS Criteria		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
Dimethylphthalate	71	160	5.6			< 5 U		
Di-n-Octyl phthalate	6,200	--	< 20 U			< 20 U		
Phenols (µg/kg)								
2,4,5-Trichlorophenol	--	--	< 98 U			< 100 U		
2,4,6-Trichlorophenol	--	--	< 98 U			< 100 U		
2,4-Dichlorophenol	--	--	< 200 U			< 200 U		
2,4-Dimethylphenol	29	29	**30**	1.0	1.0	< 20 U		
2,4-Dinitrophenol	--	--	< 830 U			< 850 U		
2-Chlorophenol	--	--	< 20 U			< 20 U		
2-Methylphenol	63	63	25			7.1		
2-Nitrophenol	--	--	< 98 U			< 100 U		
4,6-Dinitro-2-Methylphenol	--	--	< 200 U			< 200 U		
4-Chloro-3-methylphenol	--	--	< 98 U			< 100 U		
4-Methylphenol	670	670	45			18 J		
4-Nitrophenol	--	--	< 98 U			< 100 U		
Pentachlorophenol	360	690	< 49 U			< 50 U		
Phenol	420	1,200	120			43		
Other SVOCs (µg/kg)								
1,2,4-Trichlorobenzene	31	51	< 4.9 U			< 5.0 U		
1,2-Dichlorobenzene	35	50	< 4.9 U			< 1.5 U		
1,3-Dichlorobenzene	--	--	< 4.9 U			< 1.5 U		
1,4-Dichlorobenzene	110	120	3.8 J			< 1.5 U		
2,4-Dinitrotoluene	--	--	< 98 U			< 100 U		
2,6-Dinitrotoluene	--	--	< 98 U			< 100 U		
2-Nitroaniline	--	--	< 98 U			< 100 U		
3,3'-Dichlorobenzidine	--	--	R			< 150 U		
3-Nitroaniline	--	--	< 98 U			< 100 U		
4-Bromophenyl-phenylether	--	--	< 20 U			< 20 U		
4-Chloroaniline	--	--	< 260 UJ			< 270 U		
4-Chlorophenyl-phenylether	--	--	< 20 U			< 20 U		
4-Nitroaniline	--	--	< 98 U			< 100 U		
Aniline	--	--	R			R		
Benzoic Acid	650	650	R			< 400 U		
Benzyl Alcohol	57	73	20			14 J		
2,2'-Oxybis(1-Chloropropane)	--	--	< 20 U			< 20 U		
bis(2-Chloroethoxy) Methane	--	--	< 20 U			< 20 U		
Bis-(2-Chloroethyl) Ether	--	--	< 20 U			< 20 U		
Carbazole	--	--	37			< 20 U		
Hexachlorobenzene	22	70	< 4.9 U			< 4.9 U		
Hexachlorobutadiene	11	120	< 4.9 U			< 4.9 U		
Hexachlorocyclopentadiene	--	--	R			< 400 U		
Hexachloroethane	--	--	< 20 U			< 20 U		
Isophorone	--	--	< 20 U			< 20 U		
Nitrobenzene	--	--	< 20 U			< 20 U		
N-Nitrosodimethylamine	--	--	< 24 U			< 25 U		

Table J-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Lafarge Cement

Location ID			LF-LS-004			LF-TP-001		
Collection Date			6/19/2013			6/19/2013		
Analyte	SMS Criteria		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
N-Nitroso-Di-N-Propylamine	--	--	< 12 U			< 12 U		
N-Nitrosodiphenylamine	28	40	< 20 U			< 20 U		
PCB Aroclors (µg/kg)								
Aroclor 1016	--	--	< 4.0 U			< 3.9 U		
Aroclor 1221	--	--	< 4.0 U			< 3.9 U		
Aroclor 1232	--	--	< 4.0 U			< 3.9 U		
Aroclor 1242	--	--	< 4.0 U			< 3.9 U		
Aroclor 1248	--	--	< 12 U			< 5.8 U		
Aroclor 1254	--	--	40			14		
Aroclor 1260	--	--	14			8.8		
Aroclor 1262	--	--	< 4.0 U			< 3.9 U		
Aroclor 1268	--	--	< 4.0 U			< 3.9 U		
Total PCB Aroclors	130	1,000	54			23		
Pesticides (µg/kg)								
4,4'-DDD	--	--	< 5.0 UJ			< 4.9 UJ		
4,4'-DDE	--	--	< 5.0 U			< 4.9 U		
4,4'-DDT	--	--	< 5.0 U			< 4.9 U		
Total DDTs	--	--	< 5.0 U			< 4.9 U		
Aldrin	--	--	< 2.5 U			< 2.4 UJ		
alpha-BHC	--	--	< 2.5 UJ			< 2.4 UJ		
beta-BHC	--	--	< 2.5 U			< 2.4 U		
cis-Chlordane	--	--	< 2.5 UJ			< 2.4 UJ		
delta-BHC	--	--	< 2.5 UJ			< 2.4 UJ		
Dieldrin	--	--	< 5.0 U			< 4.9 UJ		
Endosulfan I	--	--	< 2.5 U			< 2.4 U		
Endosulfan II	--	--	< 5.0 U			< 4.9 U		
Endosulfan Sulfate	--	--	< 5.0 U			< 4.9 UJ		
Endrin	--	--	< 5.0 U			< 4.9 U		
Endrin Aldehyde	--	--	< 5.0 U			< 4.9 U		
Endrin Ketone	--	--	< 5.0 U			< 4.9 U		
Heptachlor	--	--	< 2.5 U			< 2.4 U		
Heptachlor Epoxide	--	--	< 5.0 U			< 4.9 U		
gamma-BHC (Lindane)	--	--	< 2.5 U			< 2.4 U		
Methoxychlor	--	--	< 25 U			< 24 UJ		
Toxaphene	--	--	< 500 U			< 490 U		
trans-Chlordane	--	--	< 2.5 U			< 2.4 UJ		
Total aldrin/dieldrin	--	--	< 5.0 U			< 4.9 UJ		
Total Chlordane	--	--	< 2.5 U			< 2.4 UJ		
VOCs (µg/kg)								
1,1,1,2-Tetrachloroethane	--	--	na			< 1.5 U		
1,1,1-Trichloroethane	--	--	na			< 1.5 U		
1,1,2,2-Tetrachloroethane	--	--	na			< 1.5 U		
1,1,2-Trichloro-1,2,2-trifluoroeth	--	--	na			< 2.9 U		
1,1,2-Trichloroethane	--	--	na			< 1.5 U		
1,1-Dichloroethane	--	--	na			< 1.5 U		

Table J-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Lafarge Cement

Location ID			LF-LS-004			LF-TP-001		
Collection Date			6/19/2013			6/19/2013		
Analyte	SMS Criteria		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
1,1-Dichloroethene	--	--	na			< 1.5 U		
1,1-Dichloropropene	--	--	na			< 1.5 U		
1,2,3-Trichlorobenzene	--	--	na			< 7.4 U		
1,2,3-Trichloropropane	--	--	na			< 2.9 U		
1,2,4-Trimethylbenzene	--	--	na			< 1.5 U		
1,2-Dibromo-3-chloropropane	--	--	na			< 7.4 U		
1,2-Dibromoethane	--	--	na			< 1.5 U		
1,2-Dichloroethane	--	--	na			< 1.5 U		
1,2-Dichloropropane	--	--	na			< 1.5 U		
1,3,5-Trimethylbenzene	--	--	na			< 1.5 U		
1,3-Dichloropropane	--	--	na			< 1.5 U		
2,2-Dichloropropane	--	--	na			< 1.5 U		
2-Chloroethylvinylether	--	--	na			R		
2-Chlorotoluene	--	--	na			< 1.5 U		
2-Hexanone	--	--	na			< 7.4 U		
4-Chlorotoluene	--	--	na			< 1.5 U		
Acetone	--	--	na			< 7.4 U		
Acrolein	--	--	na			< 74 U		
Acrylonitrile	--	--	na			< 7.4 U		
Benzene	--	--	na			< 1.5 U		
Bromobenzene	--	--	na			< 1.5 U		
Bromochloromethane	--	--	na			< 1.5 U		
Bromoethane	--	--	na			< 2.9 U		
Bromoform	--	--	na			< 1.5 U		
Bromomethane	--	--	na			< 1.5 U		
Carbon Disulfide	--	--	na			4.8		
Carbon Tetrachloride	--	--	na			< 1.5 U		
Chlorobenzene	--	--	na			< 1.5 U		
Dibromochloromethane	--	--	na			< 1.5 U		
Chloroethane	--	--	na			< 1.5 U		
Chloroform	--	--	na			0.9 J		
Chloromethane	--	--	na			< 1.5 U		
cis-1,2-Dichloroethene	--	--	na			< 1.5 U		
cis-1,3-Dichloropropene	--	--	na			< 1.5 U		
Dibromomethane	--	--	na			< 1.5 U		
Bromodichloromethane	--	--	na			< 1.5 U		
Dichlorodifluoromethane	--	--	na			< 1.5 U		
Ethylbenzene	--	--	na			< 1.5 U		
Isopropylbenzene	--	--	na			< 1.5 U		
m,p-Xylene	--	--	na			< 1.5 U		
2-Butanone	--	--	na			< 7.4 U		
Iodomethane	--	--	na			< 1.5 U		
4-Methyl-2-Pentanone (MIBK)	--	--	na			< 7.4 U		
Methyl tert-Butyl Ether	--	--	na			< 1.5 U		
Methylene Chloride	--	--	na			< 2.9 U		

Table J-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Lafarge Cement

Location ID			LF-LS-004			LF-TP-001		
Collection Date			6/19/2013			6/19/2013		
Analyte	SMS Criteria		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
n-Butylbenzene	--	--	na			< 1.5 U		
n-Propylbenzene	--	--	na			< 1.5 U		
o-Xylene	--	--	na			< 1.5 U		
4-Isopropyltoluene	--	--	na			< 1.5 U		
sec-Butylbenzene	--	--	na			< 1.5 U		
Styrene	--	--	na			< 1.5 U		
tert-Butylbenzene	--	--	na			< 1.5 U		
Tetrachloroethene	--	--	na			< 1.5 U		
Toluene	--	--	na			< 1.5 U		
Total Xylenes	--	--	na			< 1.5 U		
trans-1,2-Dichloroethene	--	--	na			< 1.5 U		
trans-1,3-Dichloropropene	--	--	na			< 1.5 U		
trans-1,4-Dichloro-2-butene	--	--	na			< 7.4 U		
Trichloroethene	--	--	na			< 1.5 U		
Trichlorofluoromethane	--	--	na			< 1.5 U		
Vinyl Acetate	--	--	na			< 7.4 U		
Vinyl Chloride	--	--	na			< 1.5 U		
TPH (mg/kg)								
Gasoline-Range Hydrocarbons	30/100	--	na			< 7.5 U		
Diesel-Range Hydrocarbons	2,000	--	na			1,100		
Motor Oil-Range Hydrocarbons	2,000	--	na			**2,300**	1.2	
Dioxins and Furans (ng/kg)								
2,3,7,8-TCDD	--	--	< 0.214 U			< 0.259 U		
1,2,3,7,8-PeCDD	--	--	< 0.3 U			0.525 J		
1,2,3,4,7,8-HxCDD	--	--	< 0.329 U			< 0.527 U		
1,2,3,6,7,8-HxCDD	--	--	0.942 J			0.986 J		
1,2,3,7,8,9-HxCDD	--	--	0.7 J			0.883 J		
1,2,3,4,6,7,8-HpCDD	--	--	23.4			17.3		
OCDD	--	--	189			144		
2,3,7,8-TCDF	--	--	< 0.489 U			0.514 J		
1,2,3,7,8-PeCDF	--	--	0.353 J			< 0.45 U		
2,3,4,7,8-PeCDF	--	--	< 0.31 U			< 0.517 U		
1,2,3,4,7,8-HxCDF	--	--	< 0.752 U			0.621 J		
1,2,3,6,7,8-HxCDF	--	--	0.406 J			0.513 J		
1,2,3,7,8,9-HxCDF	--	--	0.257 J			0.299 J		
2,3,4,6,7,8-HxCDF	--	--	0.464 J			0.682 J		
1,2,3,4,6,7,8-HpCDF	--	--	4.41 J			3.39 J		
1,2,3,4,7,8,9-HpCDF	--	--	0.774 J			< 0.455 U		
OCDF	--	--	10.9			< 8.71 U		
Dioxin/Furan TEQ, nd SDL*0	25	--	0.633 J			1.22 J		
Dioxin/Furan TEQ, nd SDL*0.5	25	--	1.02 J			1.47 J		
Dioxin/Furan TEQ, nd SDL*1	25	--	1.4 J			1.71 J		
Total TCDD	--	--	5.66 J			5.9 J		
Total TCDF	--	--	4.37 J			7.4 J		
Total PeCDD	--	--	8.02 J			7.07 J		

Table J-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Lafarge Cement

Location ID			LF-LS-004			LF-TP-001		
Collection Date			6/19/2013			6/19/2013		
Analyte	SMS Criteria		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET
Total PeCDF	--	--	5.49 J			7.43 J		
Total HxCDD	--	--	15.5 J			12.8 J		
Total HxCDF	--	--	8.06 J			6.73 J		
Total HpCDD	--	--	71.4			37.6		
Total HpCDF	--	--	13.3 J			9.18 J		
Grain size (%)								
> 10 Phi Clay	--	--	na			3.6		
8-9 Phi Clay	--	--	na			1.7		
9-10 Phi Clay	--	--	na			0.8		
Very Fine Silt	--	--	na			2.6		
Fine Silt	--	--	na			30		
Medium Silt	--	--	na			19.2		
Coarse Silt	--	--	na			5.4		
Total Fines	--	--	na			63.3		
Very Fine Sand	--	--	na			13.6		
Fine Sand	--	--	na			8.8		
Medium Sand	--	--	na			7.7		
Coarse Sand	--	--	na			4.9		
Very Coarse Sand	--	--	na			1.2		
Gravel	--	--	na			0.5		
Conventionals (%)								
Total Organic Carbon	--	--	2.04			1.22		
Total Solids	--	--	70.53			55.6		

a - LDW RALs are presented for cPAHs and Dioxin/Furan TEQs. MTCA Method A cleanup levels for soil are presented for TPH.
b - This is a field duplicate of the sample directly preceding it.
Results in **bold** exceed the SQS/LAET/RAL.
Results in **bold and shaded gray** exceed the CSL/2LAET.
EFs are presented for detected concentrations that exceed the SMS/AET criteria, LDW RALs, or MTCA Method A cleanup levels for soil only.
The EFs are calculated (result/criterion) and have no regulatory relevance. They provide an indication of the general magnitude of the concentration relative to the SMS criteria or LDW RALs.

% - percent
< - not detected
2LAET - Second Lowest Apparent Effects Threshold
AET - Apparent Effects Threshold
cPAHs - carcinogenic polycyclic aromatic hydrocarbons
CSL - Cleanup Screening Level
EF - exceedance factor (sample result/criteria value)
HPAHs - high molecular weight polycyclic aromatic hydrocarbons
J - estimated concentration
LAET - Lowest Apparent Effects Threshold
LDW - Lower Duwamish Waterway
LPAHs - low molecular weight polycyclic aromatic hydrocarbons

Table J-7. Solids Sample Results Compared to Dry Weight SMS/AET Criteria or LDW RALs
NPDES Inspection Sampling Support: Lafarge Cement

Location ID			LF-LS-004			LF-TP-001		
Collection Date			6/19/2013			6/19/2013		
Analyte	SMS Criteria		Result	EF		Result	EF	
	SQS/ LAET/RAL[a]	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET		SQS/ LAET/RAL	CSL/ 2LAET

ug/kg - micrograms per kilogram
mg/kg - milligrams per kilogram
MTCA - Model Toxics Control Act
na - not analyzed
nc - not calculated
nd - non-detect
ng/kg - nanograms per kilogram
NPDES - National Pollutant Discharge Elimination System
OC - organic carbon
PCBs - polychlorinated biphenyls
R - Rejected completely during data validation review
RAL - Remedial Action Levels
RL - reporting limit
SDL - sample detection limit
SMS - Washington State Sediment Management Standards
SQS - Sediment Quality Standard
SVOCs - semivolatile organic compounds
TEQ - toxic equivalency
TPH - total petroleum hydrocarbons
U - not detected
VOCs - volatile organic compounds

Table J-8. Solids Sample Results Compared to Organic Carbon-Normalized SMS Criteria
NPDES Inspection Sampling Support: Lafarge Cement

Location ID			LF-LS-004			LF-TP-001		
Collection Date			6/19/2013			6/19/2013		
Analyte	SMS Criteria		Result	EF		Result	EF	
	SQS	CSL		SQS	CSL		SQS	CSL
PAHs (mg/kg OC)								
2-Methylnaphthalene	38	64	15			18		
Acenaphthene	16	57	0.98			2.1		
Acenaphthylene	66	66	< 0.98 U			< 1.6 U		
Anthracene	220	1,200	2.9			6.2		
Benzo(a)anthracene	110	270	6.4			16		
Benzo(a)pyrene	99	210	7.8			15		
Benzo(g,h,i)perylene	31	78	6.9			7.5		
Chrysene	110	460	8.3			21		
Dibenz(a,h)anthracene	12	33	3.8			2.5		
Dibenzofuran	15	58	2.7			2		
Fluoranthene	160	1,200	6.9			28		
Fluorene	23	79	2.2			3.9		
Indeno(1,2,3-cd)pyrene	34	88	2.7			5.3		
Naphthalene	99	170	8.3			8.2		
Phenanthrene	100	480	11			18		
Pyrene	1,000	1,400	8.8			47		
Total Benzofluoranthenes	230	450	5.9			22		
Total HPAHs	960	5,300	58			160		
Total LPAHs	370	780	25			38		
Phthalates (mg/kg OC)								
bis(2-Ethylhexyl)phthalate	47	78	25			**70**	1.5	
Butylbenzylphthalate	4.9	64	1.9			4.1		
Di-n-Butylphthalate	220	1,700	0.64 J			< 1.6 U		
Diethylphthalate	61	110	< 0.24 UJ			< 0.41 UJ		
Dimethylphthalate	53	53	0.27			< 0.41 U		
Di-n-Octyl phthalate	58	4,500	< 0.98 U			< 1.6 U		
Other SVOCs (mg/kg OC)								
1,2,4-Trichlorobenzene	0.81	1.8	< 0.24 U			< 0.41 U		
1,2-Dichlorobenzene	2.3	2.3	< 0.24 U			< 0.12 U		
1,4-Dichlorobenzene	3.1	9	0.19 J			< 0.12 U		
Hexachlorobenzene	0.38	2.3	< 0.24 U			**< 0.4 U**		
Hexachlorobutadiene	3.9	6.2	< 0.24 U			< 0.4 U		
N-Nitrosodiphenylamine	11	11	< 0.98 U			< 1.6 U		
PCB Aroclors (mg/kg OC)								
Total PCB Aroclors	12	65	2.6			1.9		

Only samples with TOC content between 0.5 and 4.0% are OC-normalized for comparison with SMS OC-normalized criteria.

Exceedance Factors (EFs) are presented for detected concentrations that exceed the SMS criteria only.

The EFs are calculated (result/criterion) and have no regulatory relevance. They provide an indication of the general magnitude of the concentration relative to the SMS criteria.

Table J-8. Solids Sample Results Compared to Organic Carbon-Normalized SMS Criteria
NPDES Inspection Sampling Support: Lafarge Cement

Results in **bold** exceed the SQS.
Results in **bold and shaded gray** exceed the CSL.

< - not detected
CSL - Cleanup Screening Level
EF - exceedance factor (sample result/criteria value)
J - estimated concentration
mg/kg - milligrams per kilogram
NPDES - National Pollutant Discharge Elimination System
OC - organic carbon
PAHs - polycyclic aromatic hydrocarbons
PCBs - polychlorinated biphenyls
SMS - Washington State Sediment Management Standards
SQS - Sediment Quality Standard
SVOCs - semivolatile organic compounds
TOC - total organic carbon
U - not detected

Attachment J-1
Inspection Photographic Log

Conveyance Structure Information	
Structure Identification Number: LF-LS-008	**N←** 
Structure Type: Lift Station	
General Location: Southeastern corner of facility	
Characteristics: Open detention and pump chamber	
Pump Capacity (gpm): 1,800 – 1,200	
Design Storm: 10-year, 24-hour storm Peak 10 minute flow: 1,635 gpm	
Access: Open top	
Volume Gauge: No	
Sample ID: No sample collected due to insufficient material volume available.	
Drainage Information:	
Stormwater from the southern portion of the facility is conveyed to LF-LS-008 and pumped to the stormwater detention vault (LF-TP-001) or stormwater detention tanks. Stormwater is conveyed from the detention vault to the stormwater treatment system prior to returning to downstream side of LF-LS-008 where it is discharged to the LDW via Outfall 8. The stormwater treatment system discharge point into LF-LS-008 is the PVC pipe shown in the picture to the right.	**N➔** 

Conveyance Structure Information	
Structure Identification Number: LF-LS-004	**N↑** 
Structure Type: Lift Station	
General Location: Northeastern portion of facility	
Characteristics: Open detention and pump chamber	
Pump Capacity (gpm): 1,000 – 1,200	
Design Storm: 10-year, 24-hour storm Peak 10 minute flow: 633 gpm	
Access: Open grate	
Volume Gauge: No	
Sample ID: LF-LS-004-20130619-S	
Drainage Information:	
Stormwater from the northeastern portion of the facility is conveyed to LF-LS-004 and pumped to the stormwater detention vault (LF-TP-001) or stormwater detention tanks. Stormwater is conveyed from the detention vault to the stormwater treatment system prior to returning to downstream side of LF-LS-008 where it is discharged to the LDW via Outfall 8.	**N↑** 

Conveyance Structure Information	
Structure Identification Number: LF-LS-001	**N↗**
Structure Type: Lift Station	
General Location: Northwestern portion of facility	
Characteristics: Open detention and pump chamber	
Pump Capacity (gpm): 600 – 800	
Design Storm: 10-year, 24-hour storm Peak 10 minute flow: 445 gpm	
Access: Open grate	
Volume Gauge: No	
Sample ID: No sample collected due to insufficient material volume available.	
Drainage Information	
Stormwater from the northwestern portion of the facility is conveyed to LF-LS-001 and pumped to the stormwater detention vault (LF-TP-001) or stormwater detention tanks. Stormwater is conveyed from the detention vault to the stormwater treatment system prior to returning to downstream side of LF-LS-008 where it is discharged to the LDW via Outfall 8.	**N↓**

Conveyance Structure Information	
Structure Identification Number: LF-TP-001	**N←**
Structure Type: Transfer Sump/Pump	
General Location: East central portion of facility	
Characteristics: Indoor detention and pump chamber	
Pump Capacity (gpm): 2,800	
Design Storm: n/a	
Access: Open grate	
Volume Gauge: No	
Sample ID: LF-TP-001-20130619-W LF-FD-001-20130619-W LF-TP-001-20130619-S	
Drainage Information	
Stormwater from lift stations LF-LS-001, LF-LS-004, and LF-LS-008 is pumped to the transfer sump for settling. Stormwater from the transfer sump is pumped to stormwater tanks 3 or 4. Stormwater is treated by electrocoagulation and discharged to the LDW via Outfall 8. Conveyance lines from lift stations LF-LS-001, LF-LS-004, and LF-LS-008 are shown in the picture to the top right.	**N↓** 

Attachment J-2
Field Documentation

SAIC
From Science to Solutions

Sediment Collection Form

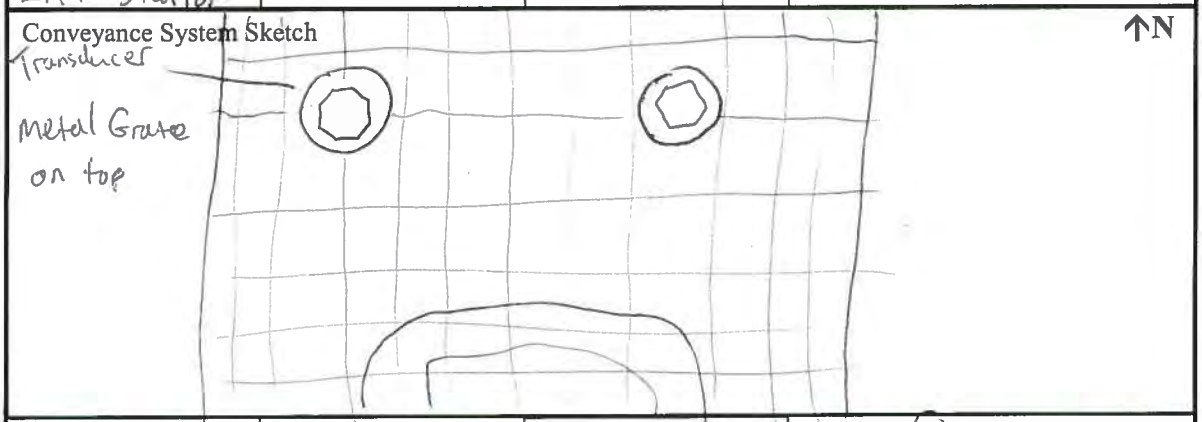
Project: NPDES Sampling Support **Location ID:** LF-LS-004

Facility Name: Lafarge Cement **Sample ID:** LF-LS-004-20130614-S

Sampled By: CW CN **Date:** 6 / 14 / 2013 **Time:** 1432

Structure Type:	Dimensions:	Standing Water:	Flow:
Lift Station	W 5 L 5	(Y) / N	Y / (N)

Conveyance System Sketch



Depth to Bottom:	Depth to Water:	Depth of Sediment:	Sampled: (Y) / N
6 ft	3 ft	-3 in	Discrete / Composite *(circle one)*

Sediment type:	*Sediment color:*	*Sediment Odor:*	***Comments:***
Cobble	Drab olive	None	
~~Gravel~~	Brown	(Slight)	
(Sand) C M F	Brown surface	Moderate	
Silt/clay	Gray	Strong	
Organic matter	(Black)	Overwhelming	Photo ID(s):
Debris	Tan	H_2S	
		(Petroleum)	GPS ID: LF-LS-004

NOTES: Lift Station 004 Conveyance Sw to TP
Minimal Sampleable material Collected 2 8 oz jar + 2 - 4oz jars
Lafarge decided not to Split this Sample

Recorded By/Date: CW 6/14/13 **Reviewed By/Date:** _____

Version2 -030311

SAIC
From Science to Solutions

Sediment Collection Form

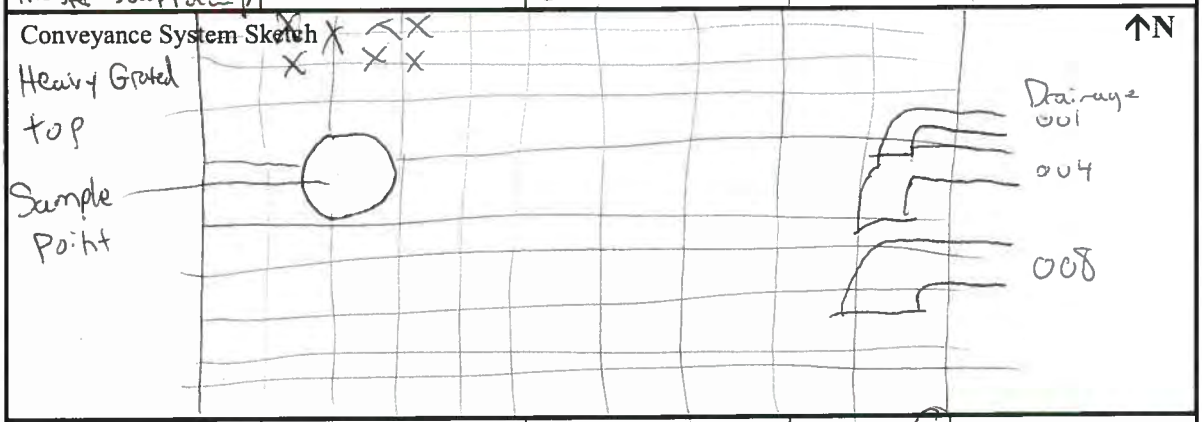
Project: NPDES Sampling Support **Location ID:** LF-TP-001

Facility Name: Lafarge Cement **Sample ID:** LF-TP-001-20130619-W

Sampled By: CW CN **Date:** 6 / 19 / 2013 **Time:** 1139

Structure Type:	Dimensions:	Standing Water:	Flow:
Transfer Sump Pump	W 10' L 12	(Y) N	Y / (N)

Conveyance System Sketch



Depth to Bottom:	Depth to Water:	Depth of Sediment:	Sampled: (Y) / N
20'+ ft	- 5 ft	~ in	Discrete / Composite *(circle one)*

Sediment type:	*Sediment color:*	*Sediment Odor:*	***Comments:***
Cobble	Drab olive	(None)	
Gravel	(Brown)	Slight	
Sand C M (F)	Brown surface	Moderate	
(Silt/clay)	Gray	Strong	
Organic matter	Black	Overwhelming	Photo ID(s):
Debris	(Tan)	H_2S	
		Petroleum	GPS ID: No signal

NOTES: Sample was collected from a shelf that ran along the north wall of the vault. Depth of the Sump did not allow sample equipment to ~~meet~~ reach the bottom. Sump receives stormwater from discharge lines 001, 004, + 009. SW is settled prior to being conveyed to the treatment System.

Split Sample w/ Lafarge

Recorded By/Date: CW ~~6/19/13~~ 6/19/13 **Reviewed By/Date:** _____

Version2 -030311

Lafarge Cement 6/19/13

Overcast, 60°

0632 CW arrive on site at field office
CN already at field office
Load field vehicle

0745 Depart field office for Lafarge

0758 Arrive at Lafarge. Ecology not on site yet

0802 Bob Wright on site
Discuss facility history and EPA enforcement actions

0807 Mahbub Alam + Ed Abassi arrive on site

0809 All parties enter into Lafarge front office and meet with Lafarge Representative Daniel
Go into conference room and discuss NPDES Sampling overview and potential sampling effort for the day

0829 Daniel (Lafarge) indicated that the northern portion of the facility near Lift Station 001 discharges via sheet flow to LDW

0851 Arrive at Outfall/Sump 008 to determine Sampleability

MOB to treatment system, probe transfer pump vault that receives LS 004, 008, 009

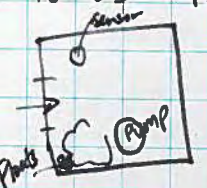
6/19/13 LAFARGE

0921 H+S Mtg
0935 Team split into 2
Sampling: CW, CW, Daniel (LaFarge)
SiteWalk: Mahbub, Ed, Dan (ECY)
Jonathan Hall (LaFarge)
0937 Begin to set up work area
1011 Begin sampling LF-TP-001-20130619-W
1021 and ~~B~~LF-FD001-20130619-W
1036 Water Quality Measurements
Temperature: 17.64°C
pH: 7.22 - 7.43
196 ORP mV
Conductivity: 0.876 mS/cm
Turbidity: 0.5 NTU
DO: 6.6 mg/L
TDS: 0.562 g/L TDS
0.4 ppt

Sampling Complete
1139 Begin Sampling LF-TP-001-20130619-S
1255 Completed sampling at LF-TP-001
Unable to collect gps pt. Because
Structure was under concrete roof
1301 Arrived back at visitor parking for break

LAFARGE 6/19/13

1330 MOBS to LS-004. Remove lid



1404 Prep for sampling
1432 Collect Sediment sample from LS-004
LF-LS-004-20130619-S
Only enough sample volume to fill 2 8oz.
and ~~1~~ 2 4-oz. Sample jars
Jar set was not split w/ Lafarge
Priority PCB, SVOCs/PAH, Metals
1517 Probed LS-001, Not enough volume for
sample collection Packing truck.
1527 Transfer LaFarge coolers to Daniel, sign over
COCs
Bob Wright offsite
1536 CW/CW offsite; MOBS to storage unit to unpack
1551 Arrive @ Field office
1552 Unload work truck
1626 MOBS to lab
1647 Arrive at ARI and relinquish samples
Depart for home.

CW 6/19/13

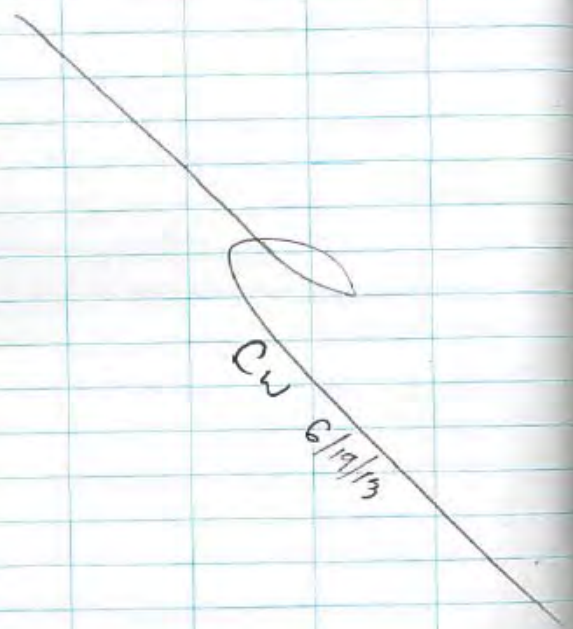
6/20/13 NPDES Sampling Support

0630 Depart home for field office

0641 Arrive at field office
Load INW, Geoline Equipment and PCB congener Samples. Depart Fieldoffice

0715 Arrive at INW and drop off equipment

0731 Arrive at Bothell office; Transfer PCB Congener Samples into Environmental Fridge.



Attachment J-3
Chain of Custody Forms

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: WU170 Wu165	Turn-around Requested: Standard TAT (3 wks)	Date: 6-19-13
ARI Client Company: **SAIC**	Phone: **206.300.2144** nancarrowc@saic.com	Page: 1 of 1
Client Contact: **Christine Nancarrow**		No. of Coolers: 2 Cooler Temps: 5.0, 5.9
Client Project Name: **NPDES Sampling Support**		
Client Project #: **209977**	Samplers: CW CN	

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	PCB Aroclors (EPA 8082)	SVOCs/PAHs (EPA 8270 / EPA 8270-SIM)	Pesticides (EPA 8081)	Dioxins/Furans (EPA 1613B)	TPH-Diesel (NWTPH-DW)	VOCs (EPA8260)	Metals (EPA 6010/200.8)	Mercury (EPA 7471)	TOC (Plumb 1981)	Total Solids (SM2540B)	Particle Size Distribution (Sedigraph)	NWTPH-Gas (NWTPH-Gx)	Notes/Comments
				Analysis Requested (Sediment Sample)													
LF-TP-001-20130619-S	6.19.13	1139	Sediment	10 w 11	X	X	X	X	X	X	X	X	X	X	X	X	
LF-LS-004-20130619-S	6.19.13	1432	Sediment	4	1	2	4	5	·	·	3	3	6	7	·	·	*See below
									CW								

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
Do not dispose of samples without prior written authorization from SAIC PM. *Please analyze in listed priority order.	Printed Name: Corey H. Wilson	Printed Name: Jennifer Millsap	Printed Name:	Printed Name:
	Company: SAIC	Company: ARI	Company:	Company:
	Date & Time: 6-19-13 1647	Date & Time: 6/19/13 1647	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: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: W1165	Turn-around Requested: Standard TAT (3wks)	Date: 6.19.13
ARI Client Company: **SAIC**	Phone: **206.300.2144** nancarrowc@saic.com	Page: 1 of 1
Client Contact: **Christine Nancarrow**		No. of Coolers: 2 Cooler Temps: 5.0, 5.9
Client Project Name: **NPDES Sampling Support**		
Client Project #: **209977**	Samplers: CW/CW	

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	SVOCs/PAHs (EPA 8270/8270 SIM)	Pesticides (EPA 8081)	Total Metals (EPA 200.8)	Mercury (EPA 7470)	Dissolved Metals (EPA 200.8)	pH (SM4500H)	Specific Conductance (EPA 120.1)	Anions (EPA 300.0/353.2)	Alkalinity (SM2320)	TOC (SM5310)	DOC (SM5310)	TSS (SM2540D)	Notes/Comments: VOCs EPA 8260 ~~NWTPH-Dx~~ 6-19-13 CW NWTPH-Gx
LF-TP-001-20130619-W	6.19.13	1011	H2O	12	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
LF-FD-001-20130619-W	6.19.13	1011	H2O	12	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
LF-QC-TB-20130619-W	6.19.13	1200	H2O	2													✓ ✓
									CW								

Comments/Special Instructions	Relinquished by: (Signature)	Received by: (Signature)	Relinquished by: (Signature)	Received by: (Signature)
Do not dispose of samples without prior written authorization from SAIC PM.	Printed Name: Corey H. Wilson	Printed Name: Jennifer Milsap	Printed Name:	Printed Name:
	Company: SAIC	Company: ARI	Company:	Company:
	Date & Time: 6-19-13 1647	Date & Time: 6/19/13 1647	Date & Time:	Date & Time:

Attachment J-4
Laboratory Reports

Note: Laboratory reports are included with digital files. The complete SGS Analytical laboratory report for PCB congeners analysis is available from Ecology upon request.

Table of Contents: ARI Job WU65, WU71

Client: SAIC

Project: 209977 NPDES Sampling Support

BC
Signature

July-02-2013
Date

Table of Contents: ARI Job WU65, WU71

Client: SAIC

Project: 209977 NPDES Sampling Support

BC
Signature

July-02-2013
Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

July 11, 2013

Christine Nancarrow
SAIC
18912 North Creek Parkway, Suite 101
Bothell, WA 98011

RE: Project: NPDES Sampling Support, 209977
ARI Job Nos.: WU65 & WU71

Dear Christine:

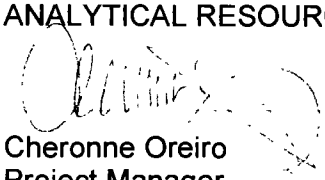
Please find enclosed the Chain-of-Custody record (COC), sample receipt documentation, and the final data package for samples from the project referenced above.

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

An electronic copy of this data package will be kept on file with ARI. Should you have any questions or problems, please feel free to contact me at any time.

Sincerely,

ANALYTICAL RESOURCES, INC.



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

cc: eFile WU65_WU71

Enclosures

Chain of Custody Documentation

ARI Job ID: WU65, WU71

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: W1165	Turn-around Requested: Standard TAT (3wks)
ARI Client Company: **SAIC**	Phone: **206.300.2144** nancarrowc@saic.com
Client Contact: **Christine Nancarrow**	
Client Project Name: **NPDES Sampling Support**	
Client Project #: **209977**	Samplers: CW/CW

Date: 6.19.13
Page: 1 of 1
No. of Coolers: 2 Cooler Temps: 5.0, 5.9

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	SVOCs/PAHs (EPA 8270/8270 SIM)	Pesticides (EPA 8081)	Total Metals (EPA 200.8)	Mercury (EPA 7470)	Dissolved Metals (EPA 200.8)	pH (SM4500H)	Specific Conductance (EPA 120.1)	Anions (EPA 300.0/353.2)	Alkalinity (SM2320)	TOC (SM5310)	DOC (SM5310)	TSS (SM2540D)	Notes/Comments
					Analysis Requested (Aqueous Sample)												
LF-TP-001-20130619-W	6.19.13	1011	H2O	12	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
LF-FD-001-20130619-W	6.19.13	1011	H2O	12	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
LF-QC-TB-20130619-W	6.19.13	1200	H2O	2												✓	✓ VOCs EPA 8260

Comments/Special Instructions
Do not dispose of samples without prior written authorization from SAIC PM.

Relinquished by (Signature)	Received by (Signature)	Relinquished by (Signature)	Received by (Signature)
Printed Name: Corey H. Wilson	Printed Name: Jennifer M. Wilson	Printed Name	Printed Name
Company: SAIC	Company: ARI	Company	Company
Date & Time: 6-19-13 1642	Date & Time: 6/19/13 1647	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: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: SAIC
Project Name: NPDES Sampling Support
COC No(s): (NA)
Delivered by: Fed-Ex UPS Courier Hand Delivered Other:
Assigned ARI Job No.:
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)	5.0 5.9	

If cooler temperature is out of compliance fill out form 00070F — Temp Gun ID#: 90877952

Cooler Accepted by: JM Date: 6/19/13 Time: 1647

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	4/15/13	

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

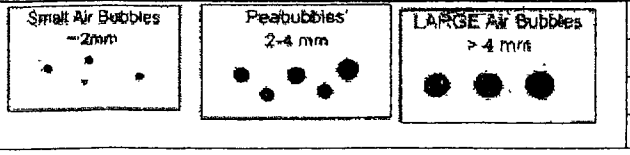
Samples Logged by: JM Date: 6/20/13 Time: 753

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

PRESERVATION VERIFICATION 06/20/13
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **WU65**

Inquiry Number: NONE
Analysis Requested: 06/20/13
Contact: Nancarrow, Christine
Client: SAIC
Logged by: JM
Sample Set Used: Yes-481
Validatable Package: LV4
Deliverables:

PC: Cheronne
VTSR: 06/19/13

Project #: 209977
Project: NPDES Sampling Support
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
13-13119 **WU65A**	LF-TP-001-20130619-W						TOT pass					fail										
13-13120 **WU65B**	LF-FD-001-20130619-W						TOT pass					fail										
13-13124 **WU65C**	LF-TP-001-20130619-W						DIS fail									N			<2	MP2452	2mL	CB 6/20/13
13-13125 **WU65D**	LF-FD-001-20130619-W						DIS fail									N			↓	↓	↓	↓

TOC + DOC are sharing a container.
TOC needs to be preserved + DOC needs to be filtered + preserved.

Filter + preserved C-D in lab
CB 6/20/13

SAMPLE RECEIPT

Checked By JM Date 6/20/13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: SAIC

Project Name: NPDES Sampling Support

COC No(s): (NA)

Delivered by: Fed-Ex UPS Courier Hand Delivered Other:

Assigned ARI Job No.: W471

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)	5.0 5.9	
If cooler temperature is out of compliance fill out form 00070F	Temp Gun ID#:	90877952

Cooler Accepted by: JM Date: 6/19/13 Time: 1647

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	4/15/13	

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

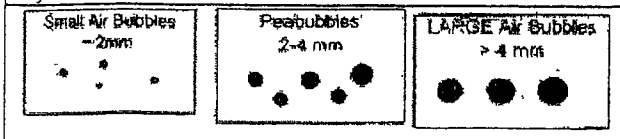
Samples Logged by: JM Date: 6/20/13 Time: 753

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

PRESERVATION VERIFICATION 06/20/13
Page 1 of 1

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: **WU71**

Inquiry Number: NONE
Analysis Requested: 06/20/13
Contact: Nancarrow, Christine
Client: SAIC
Logged by: JM
Sample Set Used: Yes-481
Validatable Package: LV4
Deliverables:

PC: Cheronne
VTSR: 06/19/13

Project #: 209977
Project: NPDES Sampling Support
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
13-13135 **WU71A**	LF-TP-001-20130619-W						TOT pass															
13-13136 **WU71B**	LF-FD-001-20130619-W						TOT pass															
13-13137 **WU71C**	LF-TP-001-20130619-W						DIS fail									N			<2	MP21452	2mL	CB 6/20/13
13-13138 **WU71D**	LF-FD-001-20130619-W						DIS fail									N			↓	↓	↓	↓

Filter & preserved (-D in lab CB 6/20/13

Checked By JM Date 6/20/13

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: WU65, WU71

Case Narrative

Client: SAIC
Project: NPDES Sampling Support, 209977
ARI Job Nos.: WU65 & WU71

Sample Receipt

Three water samples were received on June 19, 2013 under ARI jobs WU65 and WU71. The cooler temperatures measured by IR thermometer following ARI SOP were 5.0 and 5.9°C. For further details regarding sample receipt, please refer to the Cooler Receipt Form.

Semivolatiles by SW8270D

The samples were extracted and analyzed within recommended holding times.

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

The surrogate percent recovery of 2,4,6-Tribromophenol was outside the control limits high for sample **LF-FD-001-20130619**. All other surrogate percent recoveries were within control limits. No corrective action was taken.

Diethyphthalate was present in **MB-062613** at a level that was greater than ½ the reporting limit. All detected results for this compound have been flagged with a "B" qualifier. No further corrective action was taken.

The LCS and LCSD percent recoveries of 1,2-Diphenylhydrazine and Azobenzene were outside the control limits for **LCS-062613**. All other percent recoveries were within control limits. No corrective action was taken.

Low-Level PAHs by SW8270D-SIM

The samples were extracted and analyzed within the 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.

Pesticides by SW8081

The samples were extracted and analyzed within 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 of delta-BHC fell outside the control limits low for **LCS-062513**. All other percent recoveries were within control limits. No corrective action was taken.

Total and Dissolved Metals

The samples 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.

Low-Level Mercury

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

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

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

General Chemistry

The samples and associated laboratory QC were initially prepared 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 SRM percent recoveries were within limits.

The matrix spike percent recoveries and replicate RPDs were within the control limit.

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: WU65
Client: SAIC
Project Event: 209977
Project Name: NPDES Sampling Support

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	LF-TP-001-20130619-W	WU65A	13-13119	Water	06/19/13 10:11	06/19/13 16:47
2.	LF-FD-001-20130619-W	WU65B	13-13120	Water	06/19/13 10:11	06/19/13 16:47
3.	LF-TP-001-20130619-W	WU65C	13-13124	Water	06/19/13 10:11	06/19/13 16:47
4.	LF-FD-001-20130619-W	WU65D	13-13125	Water	06/19/13 10:11	06/19/13 16:47

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: WU71
Client: SAIC
Project Event: 209977
Project Name: NPDES Sampling Support

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	LF-TP-001-20130619-W	WU71A	13-13135	Water	06/19/13 10:11	06/19/13 16:47
2.	LF-FD-001-20130619-W	WU71B	13-13136	Water	06/19/13 10:11	06/19/13 16:47
3.	LF-TP-001-20130619-W	WU71C	13-13137	Water	06/19/13 10:11	06/19/13 16:47
4.	LF-FD-001-20130619-W	WU71D	13-13138	Water	06/19/13 10:11	06/19/13 16:47

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).

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)**

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

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

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

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.

LOD[1], LOQ[2] and Control Limits Summary
Analysis of Water Samples for Low Concentration PNA
EPA Method 8270 – SIM

Separatory Funnel Extraction (EPA Method 3510C) using 500 mL sample with extract concentrated to 0.5 mL final volume. Silica gel cleanup performed on extract prior to analysis. ARI bench Sheet 3071F

DL, LOD & LOQ units are nanograms per liter (ng/L) = parts-per-trillion (ppt). LOD Spike level = LOQ

Naphthalene	0.85	**5**	**10**	37 – **120**	≤ 30
2-Methylnaphthalene	0.72	**5**	**10**	39 – **120**	≤ 30
Acenaphthylene	0.81	**5**	**10**	35 – **120**	≤ 30
Acenaphthene	0.83	**5**	**10**	38 – **120**	≤ 30
Dibenzofuran	0.94	**5**	**10**	36 – **120**	≤ 30
Fluorene	1.41	**5**	**10**	41 – **120**	≤ 30
Phenanthrene	1.01	**5**	**10**	41 – **120**	≤ 30
Anthracene	0.58	**5**	**10**	28 – **120**	≤ 30
Fluoranthene	0.92	**5**	**10**	49 – **120**	≤ 30
Pyrene	0.70	**5**	**10**	42 - **120**	≤ 30
Benzo(a)anthracene	1.27	**5**	**10**	42 – **120**	≤ 30
Chrysene	1.57	**5**	**10**	46 – **120**	≤ 30
Benzo(b)fluoranthene	2.54	**5**	**10**	39 – **120**	≤ 30
Benzo(k)fluoranthene	0.85	**5**	**10**	50 – **120**	≤ 30
Benzo(j)fluoranthene	1.65	**5**	**10**	30 – 160 [5]	≤ 30
Benzo(a)pyrene	1.14	**5**	**10**	20 – **120**	≤ 30
Indeno(1,2,3-cd)pyrene	1.82	**5**	**10**	32 – **120**	≤ 30
Dibenz(a,h)anthracene	0.97	**5**	**10**	30 – **120**	≤ 30
Benzo(g,h,i)perylene	1.87	**5**	**10**	27 – **120**	≤ 30
1-Methylnaphthalene	0.88	**5**	**10**	38 – **120**	≤ 30
Perylene	3.21	**5**	**10**	30 – 160 [5]	≤ 30
2-Methylnapthalene-d_{10}			40 – **120**	35 – **120**	≤ 30
Fluoranthene-d_{10}			30 – 160 [5]	30 – 160 [5]	≤ 30
Dibenzo(a,h)anthracene-d_{14}			31 – **120**	26 – **120**	≤ 30

(1) Detection Limit (DL), Limit of Detection (LOD) and Limit of Quantitation (LOQ)are defined in ARI SOP 1018S

(2) Control limits calculated using data from all samples prepared between 4/1/11 through 3/31/12.

(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 < 120 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) Default limits pending generation of historic limits for Benzo(j)fluoranthene and Perylene

DL[1], LOD[1], LOQ[1] and Control Limits Summary
Analysis of Water Samples for Chlorinated Pesticides
EPA Method 8081B

Separatory Funnel (EPA Method 3510C) Extraction using 500 mL sample with extract concentrated to 5 mL final volume. ARI Bench Sheet 3038F

LOD Spike level = LOQ Concentration

Analyte	DL[1,2] µg/L	LOD[1] µg/L	LOQ[1] µg/L	LCS Control Limit[3,4]	Replicate RPD[5]
alpha-BHC	0.0085	0.025	**0.05**	51 – 120	≤ 40
beta-BHC	0.0098	0.025	**0.05**	44 – 134	≤ 40
gamma-BHC (Lindane)	0.0159	0.025	**0.05**	59 – 131	≤ 40
delta-BHC	0.0087	0.025	**0.05**	44 – 156	≤ 40
Heptachlor	0.0113	0.025	**0.05**	47 – 110	≤ 40
Aldrin	0.0103	0.025	**0.05**	47 – 106	≤ 40
Heptachlor Epoxide	0.0079	0.025	**0.05**	62 – 121	≤ 40
trans-Chlordane (*beta*-Chlordane, *gamma*-Chlordane)	0.0082	0.025	**0.05**	63 – 125	≤ 40
cis-Chlordane (*alpha*-chlordane)	0.0082	0.025	**0.05**	62 – 123	≤ 40
Endosulfan I	0.0089	0.025	**0.05**	**10** – 110	≤ 40
4,4'-DDE	0.0184	0.05	**0.10**	61 – 138	≤ 40
Dieldrin	0.0168	0.05	**0.10**	64 – 123	≤ 40
Endrin	0.0167	0.05	**0.10**	53 – 127	≤ 40
Endosulfan II	0.0139	0.05	**0.10**	23 – 102	≤ 40
4,4'-DDD	0.0186	0.05	**0.10**	53 – 133	≤ 40
Endrin Aldehyde	0.0163	0.05	**0.10**	28 – 107	≤ 40
4,4'-DDT	0.0169	0.05	**0.10**	49 – 127	≤ 40
Endosulfan Sulfate	0.0235	0.05	**0.10**	49 – 121	≤ 40
Endrin Ketone	0.0151	0.05	**0.10**	45 – 126	≤ 40
Methoxychlor	0.0744	0.25	**0.50**	48 – 118	≤ 40
Hexachlorobutadiene	0.0123	0.05	**0.10**	23 – **100**	≤ 40
Hexachlorobenzene	0.0101	0.05	**0.10**	44 – 101	≤ 40
Surrogate Standard Recovery			**MB / LCS**	**Samples**	**RPD**
Tetrachloro-*m*-xylene (TCMX)			38 – 103	30 – 105	≤ 40
Decachlorobiphenyl			37 – 125	11 – 144	≤ 40

(1) Detection Limit (DL), Limit of Detection (LOD) and Limit of Quantitation as defined in ARI SOP 1018S.
(2) MDL study QD48
(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) Control limits calculated using all data from 1/1/12 through 7/31/12.
(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

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

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.

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

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

Analytical Resources,Incorporated
Analytical Chemists and Consultants

Spike Recovery Control Limits for Conventional Wet Chemistry

Effective 5/1/09

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. http://www.arilabs.com/portal/downloads/ARI-CLs.zip

	ARI's Control Limits	
Sample Matrix:	Water	Soil / Sediment
Matrix Spike Recoveries	% Recovery	% Recovery
Ammonia	75 - 125	75 - 125
Bromide	75 125	75 - 125
Chloride	75 125	75 - 125
Cyanide	75 - 125	75 - 125
Ferrous Iron	75 - 125	75 - 125
Fluoride	75 - 125	75 - 125
Formaldehyde	75 - 125	75 - 125
Hexane Extractable Material	-- - --	78 - 114
Hexavalent Chromium	75 - 125	75 - 125
Nitrate/Nitrite	75 - 125	75 - 125
Oil and Grease	75 - 125	75 - 125
Phenol	75 - 125	75 - 125
Phosphorous	75 - 125	75 - 125
Sulfate	75 - 125	75 - 125
Sulfide	75 - 125	75 - 125
Total Kjeldahl Nitrogen	75 - 125	75 - 125
Total Organic Carbon	75 - 125	75 - 125
Duplicate RPDs		
Acidity	±20%	±20%
Alkalinity	±20%	±20%
BOD	±20%	±20%
Cation Exchange	±20%	±20%
COD	±20%	±20%
Conductivity	±20%	±20%
Salinity	±20%	±20%
Solids	±20%	±20%
Turbidity	±20%	±20%

Semivolatile Analysis
Report and Summary QC Forms

ARI Job ID: WU65, WU71

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3510C
Page 1 of 2

Sample ID: LF-TP-001-20130619-W
SAMPLE

Lab Sample ID: WU65A
LIMS ID: 13-13119
Matrix: Water
Data Release Authorized: MW
Reported: 07/10/13

QC Report No: WU65-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted: 06/26/13
Date Analyzed: 07/02/13 20:06
Instrument/Analyst: NT6/JZ

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	0.15	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	0.24	1.0	< 1.0 U
95-57-8	2-Chlorophenol	0.28	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	0.24	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	0.21	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	0.61	2.0	< 2.0 U
95-50-1	1,2-Dichlorobenzene	0.23	1.0	< 1.0 U
95-48-7	2-Methylphenol	0.24	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	0.19	1.0	< 1.0 U
106-44-5	4-Methylphenol	0.44	2.0	< 2.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	0.30	1.0	< 1.0 U
67-72-1	Hexachloroethane	0.24	2.0	< 2.0 U
98-95-3	Nitrobenzene	0.20	1.0	< 1.0 U
78-59-1	Isophorone	0.22	1.0	< 1.0 U
88-75-5	2-Nitrophenol	1.7	3.0	< 3.0 U
105-67-9	2,4-Dimethylphenol	0.35	3.0	< 3.0 U
65-85-0	Benzoic Acid	3.0	20	< 20 U
111-91-1	bis(2-Chloroethoxy) Methane	0.29	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	0.82	3.0	< 3.0 U
120-82-1	1,2,4-Trichlorobenzene	0.23	1.0	< 1.0 U
91-20-3	Naphthalene	0.24	1.0	< 1.0 U
106-47-8	4-Chloroaniline	1.3	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	0.30	3.0	< 3.0 U
59-50-7	4-Chloro-3-methylphenol	1.0	3.0	< 3.0 U
91-57-6	2-Methylnaphthalene	0.22	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	1.5	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	0.93	3.0	< 3.0 U
95-95-4	2,4,5-Trichlorophenol	1.0	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	0.30	1.0	< 1.0 U
88-74-4	2-Nitroaniline	1.6	3.0	< 3.0 U
131-11-3	Dimethylphthalate	0.36	1.0	< 1.0 U
208-96-8	Acenaphthylene	0.29	1.0	< 1.0 U
99-09-2	3-Nitroaniline	1.7	3.0	< 3.0 U
83-32-9	Acenaphthene	0.27	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	4.2	20	< 20 U
100-02-7	4-Nitrophenol	0.90	10	< 10 U
132-64-9	Dibenzofuran	0.36	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	1.2	3.0	< 3.0 U
121-14-2	2,4-Dinitrotoluene	1.2	3.0	< 3.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3510C

Sample ID: LF-TP-001-20130619-W
SAMPLE

Lab Sample ID: WU65A
LIMS ID: 13-13119
Matrix: Water
Date Analyzed: 07/02/13 20:06

QC Report No: WU65-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
84-66-2	Diethylphthalate	0.29	1.0	< 1.0 U
7005-72-3	4-Chlorophenyl-phenylether	0.30	1.0	< 1.0 U
86-73-7	Fluorene	0.31	1.0	< 1.0 U
100-01-6	4-Nitroaniline	1.9	3.0	< 3.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	3.4	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	0.25	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	0.37	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	0.33	1.0	< 1.0 U
87-86-5	Pentachlorophenol	1.6	10	< 10 U
85-01-8	Phenanthrene	0.40	1.0	< 1.0 U
86-74-8	Carbazole	0.37	1.0	< 1.0 U
120-12-7	Anthracene	0.32	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	0.34	1.0	< 1.0 U
206-44-0	Fluoranthene	0.40	1.0	< 1.0 U
129-00-0	Pyrene	0.36	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	0.32	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	1.6	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	0.35	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	0.34	3.0	< 3.0 U
218-01-9	Chrysene	0.42	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	0.33	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	0.33	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.39	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	0.43	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	0.41	1.0	< 1.0 U
62-53-3	Aniline	0.91	1.0	< 1.0 U
122-66-7	1,2-Diphenylhydrazine	0.40	1.0	< 1.0 U
62-75-9	N-Nitrosodimethylamine	0.94	3.0	< 3.0 U
103-33-3	Azobenzene	0.27	1.0	< 1.0 U
58-90-2	2,3,4,6-Tetrachlorophenol	0.15	1.0	< 1.0 U
90-12-0	1-Methylnaphthalene	0.38	1.0	< 1.0 U
TOTBFA	Total Benzofluoranthenes	0.78	5.0	< 5.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	65.6%	2-Fluorobiphenyl	76.8%
d14-p-Terphenyl	94.8%	d4-1,2-Dichlorobenzene	62.8%
d5-Phenol	23.1%	2-Fluorophenol	33.1%
2,4,6-Tribromophenol	118%	d4-2-Chlorophenol	52.0%

1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. ARI calibrates with Azobenzene and always reports these compounds as a combined concentration

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3510C

Sample ID: LF-FD-001-20130619-W
SAMPLE

Lab Sample ID: WU65B
LIMS ID: 13-13120
Matrix: Water
Data Release Authorized:
Reported: 07/10/13

QC Report No: WU65-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted: 06/26/13
Date Analyzed: 07/02/13 20:40
Instrument/Analyst: NT6/JZ

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	0.15	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	0.24	1.0	< 1.0 U
95-57-8	2-Chlorophenol	0.28	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	0.24	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	0.21	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	0.61	2.0	< 2.0 U
95-50-1	1,2-Dichlorobenzene	0.23	1.0	< 1.0 U
95-48-7	2-Methylphenol	0.24	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	0.19	1.0	< 1.0 U
106-44-5	4-Methylphenol	0.44	2.0	< 2.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	0.30	1.0	< 1.0 U
67-72-1	Hexachloroethane	0.24	2.0	< 2.0 U
98-95-3	Nitrobenzene	0.20	1.0	< 1.0 U
78-59-1	Isophorone	0.22	1.0	< 1.0 U
88-75-5	2-Nitrophenol	1.7	3.0	< 3.0 U
105-67-9	2,4-Dimethylphenol	0.35	3.0	< 3.0 U
65-85-0	Benzoic Acid	3.0	20	< 20 U
111-91-1	bis(2-Chloroethoxy) Methane	0.29	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	0.82	3.0	< 3.0 U
120-82-1	1,2,4-Trichlorobenzene	0.23	1.0	< 1.0 U
91-20-3	Naphthalene	0.24	1.0	< 1.0 U
106-47-8	4-Chloroaniline	1.3	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	0.30	3.0	< 3.0 U
59-50-7	4-Chloro-3-methylphenol	1.0	3.0	< 3.0 U
91-57-6	2-Methylnaphthalene	0.22	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	1.5	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	0.93	3.0	< 3.0 U
95-95-4	2,4,5-Trichlorophenol	1.0	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	0.30	1.0	< 1.0 U
88-74-4	2-Nitroaniline	1.6	3.0	< 3.0 U
131-11-3	Dimethylphthalate	0.36	1.0	< 1.0 U
208-96-8	Acenaphthylene	0.29	1.0	< 1.0 U
99-09-2	3-Nitroaniline	1.7	3.0	< 3.0 U
83-32-9	Acenaphthene	0.27	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	4.2	20	< 20 U
100-02-7	4-Nitrophenol	0.90	10	< 10 U
132-64-9	Dibenzofuran	0.36	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	1.2	3.0	< 3.0 U
121-14-2	2,4-Dinitrotoluene	1.2	3.0	< 3.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: LF-FD-001-20130619-W**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: WU65B QC Report No: WU65-SAIC
LIMS ID: 13-13120 Project: NPDES Sampling Support
Matrix: Water 209977
Date Analyzed: 07/02/13 20:40

CAS Number	Analyte	DL	LOQ	Result
84-66-2	Diethylphthalate	0.29	1.0	< 1.0 U
7005-72-3	4-Chlorophenyl-phenylether	0.30	1.0	< 1.0 U
86-73-7	Fluorene	0.31	1.0	< 1.0 U
100-01-6	4-Nitroaniline	1.9	3.0	< 3.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	3.4	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	0.25	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	0.37	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	0.33	1.0	< 1.0 U
87-86-5	Pentachlorophenol	1.6	10	< 10 U
85-01-8	Phenanthrene	0.40	1.0	< 1.0 U
86-74-8	Carbazole	0.37	1.0	< 1.0 U
120-12-7	Anthracene	0.32	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	0.34	1.0	< 1.0 U
206-44-0	Fluoranthene	0.40	1.0	< 1.0 U
129-00-0	Pyrene	0.36	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	0.32	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	1.6	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	0.35	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	0.34	3.0	< 3.0 U
218-01-9	Chrysene	0.42	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	0.33	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	0.33	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.39	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	0.43	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	0.41	1.0	< 1.0 U
62-53-3	Aniline	0.91	1.0	< 1.0 U
122-66-7	1,2-Diphenylhydrazine	0.40	1.0	< 1.0 U
62-75-9	N-Nitrosodimethylamine	0.94	3.0	< 3.0 U
103-33-3	Azobenzene	0.27	1.0	< 1.0 U
58-90-2	2,3,4,6-Tetrachlorophenol	0.15	1.0	< 1.0 U
90-12-0	1-Methylnaphthalene	0.38	1.0	< 1.0 U
TOTBFA	Total Benzofluoranthenes	0.78	5.0	< 5.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	62.8%	2-Fluorobiphenyl	73.2%
d14-p-Terphenyl	88.4%	d4-1,2-Dichlorobenzene	61.2%
d5-Phenol	21.9%	2-Fluorophenol	33.9%
2,4,6-Tribromophenol	154%	d4-2-Chlorophenol	49.6%

1,2-Diphenylhydrazine is unstable and readily converts to Azobenzene. ARI calibrates with Azobenzene and always reports these compounds as a combined concentration

ANALYTICAL RESOURCES INCORPORATED

SW8270 SEMIVOLATILES WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WU65-SAIC
Project: NPDES Sampling Support
209977

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
MB-062613	63.6%	70.4%	119%	59.6%	23.6%	34.4%	71.5%	50.1%	0
LCS-062613	79.6%	88.0%	119%	71.2%	30.1%	41.6%	74.4%	59.7%	0
LCSD-062613	72.8%	77.2%	113%	62.8%	26.5%	35.7%	65.9%	54.1%	0
LF-TP-001-20130619	65.6%	76.8%	94.8%	62.8%	23.1%	33.1%	118%	52.0%	0
LF-FD-001-20130619	62.8%	73.2%	88.4%	61.2%	21.9%	33.9%	154%*	49.6%	1

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(46-120)	(38-120)
(FBP) = 2-Fluorobiphenyl	(50-120)	(40-120)
(TPH) = d14-p-Terphenyl	(57-120)	(39-120)
(DCB) = d4-1,2-Dichlorobenzene	(40-120)	(33-120)
(PHL) = d5-Phenol	(20-120)	(12-120)
(2FP) = 2-Fluorophenol	(30-120)	(21-120)
(TBP) = 2,4,6-Tribromophenol	(55-124)	(37-126)
(2CP) = d4-2-Chlorophenol	(49-120)	(33-120)

Prep Method: SW3510C
Log Number Range: 13-13119 to 13-13120

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: LCS-062613
LCS/LCSD

Lab Sample ID: LCS-062613
LIMS ID: 13-13119
Matrix: Water
Data Release Authorized:
Reported: 07/10/13

QC Report No: WU65-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted LCS/LCSD: 06/26/13

Date Analyzed LCS: 07/08/13 18:30
LCSD: 07/08/13 19:04
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	13.0	25.0	52.0%	12.3	25.0	49.2%	5.5%
Bis-(2-Chloroethyl) Ether	18.4	25.0	73.6%	17.7	25.0	70.8%	3.9%
2-Chlorophenol	19.0	25.0	76.0%	18.1	25.0	72.4%	4.9%
1,3-Dichlorobenzene	15.8	25.0	63.2%	14.7	25.0	58.8%	7.2%
1,4-Dichlorobenzene	16.4	25.0	65.6%	15.1	25.0	60.4%	8.3%
Benzyl Alcohol	18.8	25.0	75.2%	18.5	25.0	74.0%	1.6%
1,2-Dichlorobenzene	16.5	25.0	66.0%	15.5	25.0	62.0%	6.2%
2-Methylphenol	17.4	25.0	69.6%	16.6	25.0	66.4%	4.7%
2,2'-Oxybis(1-Chloropropane)	17.7	25.0	70.8%	16.8	25.0	67.2%	5.2%
4-Methylphenol	32.8	50.0	65.6%	32.1	50.0	64.2%	2.2%
N-Nitroso-Di-N-Propylamine	16.5	25.0	66.0%	16.5	25.0	66.0%	0.0%
Hexachloroethane	15.5	25.0	62.0%	14.6	25.0	58.4%	6.0%
Nitrobenzene	18.5	25.0	74.0%	17.9	25.0	71.6%	3.3%
Isophorone	21.1	25.0	84.4%	21.1	25.0	84.4%	0.0%
2-Nitrophenol	21.0	25.0	84.0%	20.7	25.0	82.8%	1.4%
2,4-Dimethylphenol	43.4	75.0	57.9%	41.8	75.0	55.7%	3.8%
Benzoic Acid	27.6	138	20.0%	46.7	138	33.8%	51.4%
bis(2-Chloroethoxy) Methane	19.5	25.0	78.0%	19.2	25.0	76.8%	1.6%
2,4-Dichlorophenol	61.7	75.0	82.3%	60.4	75.0	80.5%	2.1%
1,2,4-Trichlorobenzene	17.4	25.0	69.6%	16.5	25.0	66.0%	5.3%
Naphthalene	19.8	25.0	79.2%	19.1	25.0	76.4%	3.6%
4-Chloroaniline	63.5	75.0	84.7%	64.0	75.0	85.3%	0.8%
Hexachlorobutadiene	16.3	25.0	65.2%	15.5	25.0	62.0%	5.0%
4-Chloro-3-methylphenol	63.7	75.0	84.9%	63.8	75.0	85.1%	0.2%
2-Methylnaphthalene	20.1	25.0	80.4%	19.7	25.0	78.8%	2.0%
Hexachlorocyclopentadiene	40.2	75.0	53.6%	36.5	75.0	48.7%	9.6%
2,4,6-Trichlorophenol	65.7	75.0	87.6%	62.4	75.0	83.2%	5.2%
2,4,5-Trichlorophenol	68.6	75.0	91.5%	63.9	75.0	85.2%	7.1%
2-Chloronaphthalene	20.7	25.0	82.8%	19.3	25.0	77.2%	7.0%
2-Nitroaniline	71.4	75.0	95.2%	69.3	75.0	92.4%	3.0%
Dimethylphthalate	21.6	25.0	86.4%	21.1	25.0	84.4%	2.3%
Acenaphthylene	20.4	25.0	81.6%	19.5	25.0	78.0%	4.5%
3-Nitroaniline	84.1	75.0	112%	84.4	75.0	113%	0.4%
Acenaphthene	21.2	25.0	84.8%	20.4	25.0	81.6%	3.8%
2,4-Dinitrophenol	92.1	138	66.7%	91.1	138	66.0%	1.1%
4-Nitrophenol	29.1	75.0	38.8%	29.7	75.0	39.6%	2.0%
Dibenzofuran	21.6	25.0	86.4%	20.8	25.0	83.2%	3.8%
2,6-Dinitrotoluene	62.5	75.0	83.3%	60.4	75.0	80.5%	3.4%
2,4-Dinitrotoluene	64.8	75.0	86.4%	63.2	75.0	84.3%	2.5%
Diethylphthalate	22.3 B	25.0	89.2%	22.1 B	25.0	88.4%	0.9%
4-Chlorophenyl-phenylether	21.5	25.0	86.0%	20.4	25.0	81.6%	5.3%
Fluorene	22.9	25.0	91.6%	22.1	25.0	88.4%	3.6%
4-Nitroaniline	86.7	75.0	116%	88.0	75.0	117%	1.5%
4,6-Dinitro-2-Methylphenol	103	138	74.6%	104	138	75.4%	1.0%
N-Nitrosodiphenylamine	19.1	25.0	76.4%	18.8	25.0	75.2%	1.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: LCS-062613**
 LCS/LCSD

Lab Sample ID: LCS-062613 QC Report No: WU65-SAIC
LIMS ID: 13-13119 Project: NPDES Sampling Support
Matrix: Water 209977
Date Analyzed LCS: 07/08/13 18:30
LCSD: 07/08/13 19:04

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
4-Bromophenyl-phenylether	20.6	25.0	82.4%	20.4	25.0	81.6%	1.0%
Hexachlorobenzene	19.2	25.0	76.8%	19.2	25.0	76.8%	0.0%
Pentachlorophenol	67.9	75.0	90.5%	68.0	75.0	90.7%	0.1%
Phenanthrene	22.4	25.0	89.6%	22.7	25.0	90.8%	1.3%
Carbazole	23.4	25.0	93.6%	24.1	25.0	96.4%	2.9%
Anthracene	21.6	25.0	86.4%	21.9	25.0	87.6%	1.4%
Di-n-Butylphthalate	23.1	25.0	92.4%	23.3	25.0	93.2%	0.9%
Fluoranthene	24.2	25.0	96.8%	24.8	25.0	99.2%	2.4%
Pyrene	23.2	25.0	92.8%	23.8	25.0	95.2%	2.6%
Butylbenzylphthalate	27.0	25.0	108%	23.4	25.0	93.6%	14.3%
3,3'-Dichlorobenzidine	54.7	75.0	72.9%	56.2	75.0	74.9%	2.7%
Benzo(a)anthracene	22.3	25.0	89.2%	22.4	25.0	89.6%	0.4%
bis(2-Ethylhexyl)phthalate	23.4	25.0	93.6%	24.0	25.0	96.0%	2.5%
Chrysene	22.4	25.0	89.6%	22.9	25.0	91.6%	2.2%
Di-n-Octyl phthalate	22.0	25.0	88.0%	22.1	25.0	88.4%	0.5%
Benzo(a)pyrene	22.1	25.0	88.4%	23.0	25.0	92.0%	4.0%
Indeno(1,2,3-cd)pyrene	22.8	25.0	91.2%	23.1	25.0	92.4%	1.3%
Dibenz(a,h)anthracene	21.3	25.0	85.2%	20.9	25.0	83.6%	1.9%
Benzo(g,h,i)perylene	20.7	25.0	82.8%	21.3	25.0	85.2%	2.9%
Aniline	50.2	75.0	66.9%	47.9	75.0	63.9%	4.7%
1,2-Diphenylhydrazine	< 1.0 U	25.0	NA%	< 1.0 U	25.0	NA%	NA
N-Nitrosodimethylamine	32.6	75.0	43.5%	30.5	75.0	40.7%	6.7%
Azobenzene	< 1.0 U	25.0	NA%	< 1.0 U	25.0	NA%	NA
2,3,4,6-Tetrachlorophenol	23.0	25.0	92.0%	22.7	25.0	90.8%	1.3%
1-Methylnaphthalene	23.2	25.0	92.8%	22.8	25.0	91.2%	1.7%
Total Benzofluoranthenes	46.5	50.0	93.0%	48.2	50.0	96.4%	3.6%

Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	79.6%	72.8%
2-Fluorobiphenyl	88.0%	77.2%
d14-p-Terphenyl	119%	113%
d4-1,2-Dichlorobenzene	71.2%	62.8%
d5-Phenol	30.1%	26.5%
2-Fluorophenol	41.6%	35.7%
2,4,6-Tribromophenol	74.4%	65.9%
d4-2-Chlorophenol	59.7%	54.1%

Results reported in µg/L
RPD calculated using sample concentrations per SW846.

4B

SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

WU65MBW1

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No: WU65

Project: NPDES SAMPLING SUPPO

Lab File ID: 07081310

Date Extracted: 06/26/13

Instrument ID: NT6

Date Analyzed: 07/08/13

Matrix: LIQUID

Time Analyzed: 1756

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	WU65LCSW1	WU65LCSW1	07081311	07/08/13
02	WU65LCSDW1	WU65LCSDW1	07081312	07/08/13
03	LF-TP-001-201306	WU65A	07081314	07/08/13
04	LF-FD-001-201306	WU65B	07081315	07/08/13
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MB-062613**
Extraction Method: SW3510C **METHOD BLANK**

Lab Sample ID: MB-062613
LIMS ID: 13-13119
Matrix: Water
Data Release Authorized: MW
Reported: 07/10/13

QC Report No: WU65-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/26/13
Date Analyzed: 07/08/13 17:56
Instrument/Analyst: NT6/JZ

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	0.15	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	0.24	1.0	< 1.0 U
95-57-8	2-Chlorophenol	0.28	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	0.24	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	0.21	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	0.61	2.0	< 2.0 U
95-50-1	1,2-Dichlorobenzene	0.23	1.0	< 1.0 U
95-48-7	2-Methylphenol	0.24	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	0.19	1.0	< 1.0 U
106-44-5	4-Methylphenol	0.44	2.0	< 2.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	0.30	1.0	< 1.0 U
67-72-1	Hexachloroethane	0.24	2.0	< 2.0 U
98-95-3	Nitrobenzene	0.20	1.0	< 1.0 U
78-59-1	Isophorone	0.22	1.0	< 1.0 U
88-75-5	2-Nitrophenol	1.7	3.0	< 3.0 U
105-67-9	2,4-Dimethylphenol	0.35	3.0	< 3.0 U
65-85-0	Benzoic Acid	3.0	20	< 20 U
111-91-1	bis(2-Chloroethoxy) Methane	0.29	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	0.82	3.0	< 3.0 U
120-82-1	1,2,4-Trichlorobenzene	0.23	1.0	< 1.0 U
91-20-3	Naphthalene	0.24	1.0	< 1.0 U
106-47-8	4-Chloroaniline	1.3	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	0.30	3.0	< 3.0 U
59-50-7	4-Chloro-3-methylphenol	1.0	3.0	< 3.0 U
91-57-6	2-Methylnaphthalene	0.22	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	1.5	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	0.93	3.0	< 3.0 U
95-95-4	2,4,5-Trichlorophenol	1.0	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	0.30	1.0	< 1.0 U
88-74-4	2-Nitroaniline	1.6	3.0	< 3.0 U
131-11-3	Dimethylphthalate	0.36	1.0	< 1.0 U
208-96-8	Acenaphthylene	0.29	1.0	< 1.0 U
99-09-2	3-Nitroaniline	1.7	3.0	< 3.0 U
83-32-9	Acenaphthene	0.27	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	4.2	20	< 20 U
100-02-7	4-Nitrophenol	0.90	10	< 10 U
132-64-9	Dibenzofuran	0.36	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	1.2	3.0	< 3.0 U
121-14-2	2,4-Dinitrotoluene	1.2	3.0	< 3.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MB-062613**
Extraction Method: SW3510C **METHOD BLANK**

Lab Sample ID: MB-062613 QC Report No: WU65-SAIC
LIMS ID: 13-13119 Project: NPDES Sampling Support
Matrix: Water 209977
Date Analyzed: 07/08/13 17:56

CAS Number	Analyte	DL	LOQ	Result
84-66-2	**Diethylphthalate**	**0.29**	**1.0**	**0.5 J**
7005-72-3	4-Chlorophenyl-phenylether	0.30	1.0	< 1.0 U
86-73-7	Fluorene	0.31	1.0	< 1.0 U
100-01-6	4-Nitroaniline	1.9	3.0	< 3.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	3.4	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	0.25	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	0.37	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	0.33	1.0	< 1.0 U
87-86-5	Pentachlorophenol	1.6	10	< 10 U
85-01-8	Phenanthrene	0.40	1.0	< 1.0 U
86-74-8	Carbazole	0.37	1.0	< 1.0 U
120-12-7	Anthracene	0.32	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	0.34	1.0	< 1.0 U
206-44-0	Fluoranthene	0.40	1.0	< 1.0 U
129-00-0	Pyrene	0.36	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	0.32	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	1.6	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	0.35	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	0.34	3.0	< 3.0 U
218-01-9	Chrysene	0.42	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	0.33	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	0.33	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.39	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	0.43	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	0.41	1.0	< 1.0 U
62-53-3	Aniline	0.91	1.0	< 1.0 U
122-66-7	1,2-Diphenylhydrazine	0.40	1.0	< 1.0 U
62-75-9	N-Nitrosodimethylamine	0.94	3.0	< 3.0 U
103-33-3	Azobenzene	0.27	1.0	< 1.0 U
58-90-2	2,3,4,6-Tetrachlorophenol	0.15	1.0	< 1.0 U
90-12-0	1-Methylnaphthalene	0.38	1.0	< 1.0 U
TOTBFA	Total Benzofluoranthenes	0.78	5.0	< 5.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	63.6%	2-Fluorobiphenyl	70.4%
d14-p-Terphenyl	119%	d4-1,2-Dichlorobenzene	59.6%
d5-Phenol	23.6%	2-Fluorophenol	34.4%
2,4,6-Tribromophenol	71.5%	d4-2-Chlorophenol	50.1%

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT6 Project: NPDES SAMPLING SUPPORTGREEN RI

DFTPP Injection Date: 07/08/13 DFTPP Injection Time: 1201

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	39.3
68	Less than 2.0% of mass 69	0.4 (1.1)1
69	Mass 69 relative abundance	38.4
70	Less than 2.0% of mass 69	0.3 (0.8)1
127	10.0 - 80.0% of mass 198	45.8
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	7.0
275	10.0 - 60.0% of mass 198	17.9
365	Greater than 1.0% of mass 198	1.90
441	0.0 - 24.0% of mass 442	8.2 (14.9)2
442	50.0 - 200.0% of mass 198	55.1
443	15.0 - 24.0% of mass 442	10.1 (18.4)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	IC250708	IC250708	07081301	07/08/13	1201
02	IC020708	IC020708	07081302	07/08/13	1235
03	IC10708	IC10708	07081303	07/08/13	1309
04	IC50708	IC50708	07081304	07/08/13	1343
05	IC100708	IC100708	07081305	07/08/13	1417
06	IC400708	IC400708	07081306	07/08/13	1451
07	IC600708	IC600708	07081307	07/08/13	1525
08	IC800708	IC800708	07081308	07/08/13	1559
09	WU65MBW1	WU65MBW1	07081310	07/08/13	1756
10	WU65LCSW1	WU65LCSW1	07081311	07/08/13	1830
11	WU65LCSDW1	WU65LCSDW1	07081312	07/08/13	1904
12	LF-TP-001-201306	WU65A	07081314	07/08/13	2013
13	LF-FD-001-201306	WU65B	07081315	07/08/13	2047
14					
15					
16					
17					
18					
19					
20					
21					
22					

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU65 Project: NPDES SAMPLING SUPPORTGR

Instrument ID: NT6 Calibration Date: 07/08/13

Method = SW846070813.m
Cal levels = 8

LAB FILE ID: RRF1 =07081303 RRF5 =07081304 RRF10 =07081305
RRF25 =07081301 RRF40 =07081306 RRF60 =07081307
RRF80 =07081308 RRF0.2=07081302

COMPOUND	RRF 1	RRF 5	RRF 10	RRF 25	RRF 40	RRF 60	RRF 80	RRF 0.2	___ RRF	%RSD /R^2
Phenol	1.634	1.593	1.682	1.834	1.638	1.568	1.636		1.655	5.2
Bis(2-Chloroethyl)ether	1.396	1.267	1.259	1.444	1.404	1.304	1.339		1.345	5.4
2-Chlorophenol	1.236	1.182	1.291	1.401	1.317	1.296	1.345		1.295	5.5
1,3-Dichlorobenzene	1.563	1.438	1.424	1.607	1.579	1.467	1.472		1.507	4.9
1,4-Dichlorobenzene	1.585	1.459	1.434	1.616	1.569	1.431	1.410		1.500	5.7
1,2-Dichlorobenzene	1.480	1.379	1.364	1.543	1.476	1.341	1.390		1.425	5.3
Benzyl alcohol	0.751	0.788	0.784	0.940	0.899	0.853	0.872		0.841	8.2
2,2'-oxybis(1-Chloropropane)	2.231	2.091	2.046	2.419	2.162	2.002	1.888		2.120	8.1
2-Methylphenol	1.079	1.063	1.156	1.276	1.202	1.183	1.165		1.160	6.3
Hexachloroethane	0.510	0.505	0.500	0.572	0.556	0.519	0.524		0.526	5.1
N-Nitroso-di-n-propylamine	0.895	0.873	0.870	1.043	0.973	0.917	0.950		0.932	6.7
4-Methylphenol	1.081	1.096	1.204	1.347	1.245	1.237	1.179		1.198	7.7
Nitrobenzene	0.359	0.341	0.336	0.379	0.350	0.319	0.323		0.344	6.1
Isophorone	0.552	0.537	0.526	0.594	0.574	0.546	0.587		0.559	4.6
2-Nitrophenol	0.142	0.157	0.176	0.189	0.193	0.196	0.203		0.179	12.6
2,4-Dimethylphenol	0.293	0.282	0.298	0.318	0.304	0.301	0.308		0.300	3.8
Bis(2-Chloroethoxy)methane	0.437	0.433	0.432	0.469	0.448	0.412	0.424		0.436	4.2
2,4-Dichlorophenol	0.230	0.254	0.278	0.296	0.287	0.283	0.283		0.273	8.4
1,2,4-Trichlorobenzene	0.320	0.298	0.301	0.321	0.329	0.304	0.308		0.312	3.8
Naphthalene	1.024	0.948	0.922	0.982	0.899	0.799	0.778		0.907	10.0
Benzoic acid		0.151	0.209	0.269	0.273	0.290	0.310		0.250	0.999
4-Chloroaniline	0.356	0.389	0.379	0.367	0.346	0.304	0.268		0.344	12.6
Hexachlorobutadiene	0.158	0.153	0.148	0.154	0.155	0.139	0.139		0.149	5.1
4-Chloro-3-methylphenol	0.202	0.228	0.251	0.275	0.256	0.261	0.263		0.248	10.1
2-Methylnaphthalene	0.502	0.491	0.494	0.557	0.529	0.487	0.482		0.506	5.4
Hexachlorocyclopentadiene		0.227	0.255	0.311	0.329	0.307	0.318		0.291	13.9
2,4,6-Trichlorophenol	0.236	0.275	0.310	0.323	0.326	0.329	0.333		0.304	11.8
2,4,5-Trichlorophenol	0.206	0.289	0.315	0.327	0.329	0.325	0.326		0.302	14.8
2-Chloronaphthalene	0.995	0.998	1.015	1.099	1.031	0.926	0.913		0.997	6.3
2-Nitroaniline	0.169	0.229	0.251	0.308	0.283	0.278	0.283		0.257	18.0
Acenaphthylene	1.517	1.502	1.508	1.628	1.529	1.380	1.391		1.494	5.7
Dimethylphthalate	1.017	1.022	1.016	1.135	1.147	1.093	1.166		1.085	6.1
2,6-Dinitrotoluene	0.177	0.222	0.238	0.262	0.260	0.247	0.258		0.238	12.7
Acenaphthene	0.946	0.885	0.921	1.041	1.029	0.950	0.973		0.964	5.8
3-Nitroaniline	0.195	0.244	0.248	0.256	0.246	0.210	0.225		0.232	9.8
2,4-Dinitrophenol		0.076	0.124	0.164	0.165	0.168	0.168		0.144	0.996
Dibenzofuran	1.240	1.176	1.170	1.347	1.193	1.098	1.087		1.187	7.4

<- Outside QC limits: %RSD <20% or R^2 > 0.990

FORM VI SV-1

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU65 Project: NPDES SAMPLING SUPPORTGR

Instrument ID: NT6 Calibration Date: 07/08/13

Method = SW846070813.m
Cal levels = 8

LAB FILE ID: RRF1 =07081303 RRF5 =07081304 RRF10 =07081305
RRF25 =07081301 RRF40 =07081306 RRF60 =07081307
RRF80 =07081308 RRF0.2=07081302

COMPOUND	RRF 1	RRF 5	RRF 10	RRF 25	RRF 40	RRF 60	RRF 80	RRF 0.2	RRF	%RSD /R^2	
4-Nitrophenol	0.039	0.064	0.077	0.103	0.090	0.098	0.095		0.081	0.996	
2,4-Dinitrotoluene	0.215	0.266	0.279	0.301	0.311	0.299	0.311		0.283	12.1	
Fluorene	1.063	0.990	1.003	1.070	1.022	0.909	0.876		0.990	7.4	
4-Chlorophenyl-phenylether	0.492	0.456	0.452	0.474	0.458	0.400	0.380		0.444	9.0	
Diethylphthalate	1.035	0.973	0.958	0.999	0.957	0.884	0.845		0.950	6.9	
4-Nitroaniline	0.169	0.180	0.168	0.149	0.189	0.201	0.214		0.181	12.2	
4,6-Dinitro-2-methylphenol		0.105	0.134	0.149	0.155	0.160	0.165		0.145	15.3	
N-Nitrosodiphenylamine (1)	0.497	0.479	0.489	0.552	0.576	0.556	0.576		0.532	7.9	
4-Bromophenyl-phenylether	0.192	0.191	0.189	0.202	0.212	0.199	0.213		0.200	5.0	
Hexachlorobenzene	0.249	0.221	0.214	0.212	0.222	0.203	0.208		0.218	6.9	
Pentachlorophenol		0.094	0.113	0.119	0.132	0.136	0.141		0.122	14.2	
Phenanthrene	0.997	0.911	0.936	1.051	1.063	0.992	1.052		1.000	6.0	
Anthracene	0.906	0.906	0.942	1.047	1.036	0.983	1.007		0.975	6.0	
Carbazole	0.887	0.819	0.739	0.729	0.841	0.880	0.960		0.836	9.9	
Di-n-butylphthalate	1.066	1.145	1.164	1.340	1.307	1.221	1.246		1.213	7.9	
Fluoranthene	0.873	0.896	0.942	1.080	1.099	1.036	1.080		1.001	9.5	
Pyrene	1.068	1.054	1.072	1.207	1.182	1.092	1.140		1.116	5.4	
Butylbenzylphthalate	0.418	0.490	0.524	0.627	0.627	0.595	0.619		0.557	14.6	
Benzo(a)anthracene	0.961	0.941	0.972	1.055	1.033	0.930	0.951		0.978	4.9	
3,3'-Dichlorobenzidine	0.286	0.306	0.319	0.335	0.322	0.267	0.266		0.300	9.2	
Chrysene	0.906	0.859	0.900	1.003	1.012	0.917	0.943		0.934	6.0	
bis(2-Ethylhexyl)phthalate	0.399	0.476	0.493	0.560	0.558	0.519	0.533		0.505	11.1	
Di-n-octylphthalate	1.104	0.994	0.968	1.011	0.961	0.846	0.846		0.961	9.5	
Benzo(b)fluoranthene	0.750	0.796	0.815	1.066	1.131	0.956	0.981		0.928	15.6	
Benzo(k)fluoranthene	0.962	0.932	0.994	1.031	0.927	0.890	0.908		0.949	5.2	
Benzo(a)pyrene	0.656	0.730	0.757	0.902	0.912	0.845	0.881		0.812	12.1	
Indeno(1,2,3-cd)pyrene	0.890	0.939	0.989	1.154	1.103	1.042	1.102		1.031	9.4	
Dibenzo(a,h)anthracene	0.682	0.735	0.797	0.961	0.935	0.863	0.869		0.834	12.2	
Benzo(g,h,i)perylene	0.789	0.807	0.834	0.999	1.025	0.975	1.057		0.926	12.2	
N-Nitrosodimethylamine	0.849	0.824	0.795	0.960	0.994	0.964	1.012		0.914	9.7	
Aniline	1.890	1.792	1.778	1.891	1.648	1.523	1.629		1.736	8.1	
Benzidine			0.136	0.077	0.096	0.094	0.135		0.108	24.7	<-
Pyridine	1.243	1.310	1.261	1.566	1.655	1.571	1.534		1.448	11.8	
1-methylnaphthalene	0.462	0.429	0.429	0.480	0.470	0.436	0.436		0.449	4.7	
Azobenzene (1,2-DP-Hydrazine	0.048	0.050	0.052	0.067	0.067	0.072	0.073		0.061	17.7	
2,3,4,6-Tetrachlorophenol	0.179	0.206	0.236	0.226	0.231	0.226	0.220		0.218	8.9	
1,2,4,5-Tetrachlorobenzene	0.435	0.437	0.436	0.479	0.493	0.454	0.471		0.458	5.1	

(1) Cannot be seperated from Diphenylamine
<- Outside QC limits: %RSD <20% or R^2 > 0.990

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU65 Project: NPDES SAMPLING SUPPORTGR

Instrument ID: NT6 Calibration Date: 07/08/13

Method = SW846070813.m
Cal levels = 8

LAB FILE ID: RRF1 =07081303 RRF5 =07081304 RRF10 =07081305
RRF25 =07081301 RRF40 =07081306 RRF60 =07081307
RRF80 =07081308 RRF0.2=07081302

COMPOUND	RRF 1	RRF 5	RRF 10	RRF 25	RRF 40	RRF 60	RRF 80	RRF 0.2	RRF	%RSD /R^2
Total Benzofluoranthenes	0.821	0.821	0.857	0.988	0.967	0.876	0.888		0.888	7.4
2-Fluorophenol	1.633	1.629	1.568	1.825	1.716	1.575			1.658	5.9
Phenol-d5	1.893	1.923	1.872	2.133	1.943	1.786			1.925	6.0
2-Chlorophenol-d4	1.640	1.626	1.593	1.830	1.713	1.569			1.662	5.8
1,2-Dichlorobenzene-d4	0.892	0.846	0.831	0.947	0.944	0.882			0.890	5.4
Nitrobenzene-d5	0.317	0.317	0.313	0.361	0.348	0.326			0.330	5.9
2-Fluorobiphenyl	1.058	1.062	1.039	1.144	1.129	1.044			1.079	4.2
2,4,6-Tribromophenol	0.148	0.142	0.164	0.142	0.144	0.133			0.146	7.0
Terphenyl-d14	0.517	0.513	0.515	0.583	0.616	0.573			0.553	7.9

<- 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: SAIC

ARI Job No: WU65 Project: NPDES SAMPLING SUPPORTGR

Instrument ID: NT6 Calibration Date: 07/08/13

Method = SW846070813.m
Cal levels = 8

LAB FILE ID: RRF1 =07081303 RRF5 =07081304 RRF10 =07081305
RRF25 =07081301 RRF40 =07081306 RRF60 =07081307
RRF80 =07081308 RRF0.2=07081302

COMPOUND	RRF 1	RRF 5	RRF 10	RRF 25	RRF 40	RRF 60	RRF 80	RRF 0.2	___ RRF	%RSD /R^2
Phenol	1.634	1.593	1.682	1.834	1.638	1.568	1.636		1.655	5.2
Bis(2-Chloroethyl)ether	1.396	1.267	1.259	1.444	1.404	1.304	1.339		1.345	5.4
2-Chlorophenol	1.236	1.182	1.291	1.401	1.317	1.296	1.345		1.295	5.5
1,3-Dichlorobenzene	1.563	1.438	1.424	1.607	1.579	1.467	1.472		1.507	4.9
1,4-Dichlorobenzene	1.585	1.459	1.434	1.616	1.569	1.431	1.410		1.500	5.7
1,2-Dichlorobenzene	1.480	1.379	1.364	1.543	1.476	1.341	1.390		1.425	5.3
Benzyl alcohol	0.751	0.788	0.784	0.940	0.899	0.853	0.872		0.841	8.2
2,2'-oxybis(1-Chloropropane)	2.231	2.091	2.046	2.419	2.162	2.002	1.888		2.120	8.1
2-Methylphenol	1.079	1.063	1.156	1.276	1.202	1.183	1.165		1.160	6.3
Hexachloroethane	0.510	0.505	0.500	0.572	0.556	0.519	0.524		0.526	5.1
N-Nitroso-di-n-propylamine	0.895	0.873	0.870	1.043	0.973	0.917	0.950		0.932	6.7
4-Methylphenol	1.081	1.096	1.204	1.347	1.245	1.237	1.179		1.198	7.7
Nitrobenzene	0.359	0.341	0.336	0.379	0.350	0.319	0.323		0.344	6.1
Isophorone	0.552	0.537	0.526	0.594	0.574	0.546	0.587		0.559	4.6
2-Nitrophenol	0.142	0.157	0.176	0.189	0.193	0.196	0.203		0.179	12.6
2,4-Dimethylphenol	0.293	0.282	0.298	0.318	0.304	0.301	0.308		0.300	3.8
Bis(2-Chloroethoxy)methane	0.437	0.433	0.432	0.469	0.448	0.412	0.424		0.436	4.2
2,4-Dichlorophenol	0.230	0.254	0.278	0.296	0.287	0.283	0.283		0.273	8.4
1,2,4-Trichlorobenzene	0.320	0.298	0.301	0.321	0.329	0.304	0.308		0.312	3.8
Naphthalene	1.024	0.948	0.922	0.982	0.899	0.799	0.778		0.907	10.0
Benzoic acid		0.151	0.209	0.269	0.273	0.290	0.310		0.250	0.999
4-Chloroaniline	0.356	0.389	0.379	0.367	0.346	0.304	0.268		0.344	12.6
Hexachlorobutadiene	0.158	0.153	0.148	0.154	0.155	0.139	0.139		0.149	5.1
4-Chloro-3-methylphenol	0.202	0.228	0.251	0.275	0.256	0.261	0.263		0.248	10.1
2-Methylnaphthalene	0.502	0.491	0.494	0.557	0.529	0.487	0.482		0.506	5.4
Hexachlorocyclopentadiene		0.227	0.255	0.311	0.329	0.307	0.318		0.291	13.9
2,4,6-Trichlorophenol	0.236	0.275	0.310	0.323	0.326	0.329	0.333		0.304	11.8
2,4,5-Trichlorophenol	0.206	0.289	0.315	0.327	0.329	0.325	0.326		0.302	14.8
2-Chloronaphthalene	0.995	0.998	1.015	1.099	1.031	0.926	0.913		0.997	6.3
2-Nitroaniline	0.169	0.229	0.251	0.308	0.283	0.278	0.283		0.257	18.0
Acenaphthylene	1.517	1.502	1.508	1.628	1.529	1.380	1.391		1.494	5.7
Dimethylphthalate	1.017	1.022	1.016	1.135	1.147	1.093	1.166		1.085	6.1
2,6-Dinitrotoluene	0.177	0.222	0.238	0.262	0.260	0.247	0.258		0.238	12.7
Acenaphthene	0.946	0.885	0.921	1.041	1.029	0.950	0.973		0.964	5.8
3-Nitroaniline	0.195	0.244	0.248	0.256	0.246	0.210	0.225		0.232	9.8
2,4-Dinitrophenol		0.076	0.124	0.164	0.165	0.168	0.168		0.144	0.996
Dibenzofuran	1.240	1.176	1.170	1.347	1.193	1.098	1.087		1.187	7.4

<- Outside QC limits: %RSD <20% or R^2 > 0.990

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU65 Project: NPDES SAMPLING SUPPORTGR

Instrument ID: NT6 Calibration Date: 07/08/13

Method = SW846070813.m
Cal levels = 8

LAB FILE ID: RRF1 =07081303 RRF5 =07081304 RRF10 =07081305
RRF25 =07081301 RRF40 =07081306 RRF60 =07081307
RRF80 =07081308 RRF0.2=07081302

COMPOUND	RRF 1	RRF 5	RRF 10	RRF 25	RRF 40	RRF 60	RRF 80	RRF 0.2	RRF	%RSD /R^2	
4-Nitrophenol	0.039	0.064	0.077	0.103	0.090	0.098	0.095		0.081	0.996	
2,4-Dinitrotoluene	0.215	0.266	0.279	0.301	0.311	0.299	0.311		0.283	12.1	
Fluorene	1.063	0.990	1.003	1.070	1.022	0.909	0.876		0.990	7.4	
4-Chlorophenyl-phenylether	0.492	0.456	0.452	0.474	0.458	0.400	0.380		0.444	9.0	
Diethylphthalate	1.035	0.973	0.958	0.999	0.957	0.884	0.845		0.950	6.9	
4-Nitroaniline	0.169	0.180	0.168	0.149	0.189	0.201	0.214		0.181	12.2	
4,6-Dinitro-2-methylphenol		0.105	0.134	0.149	0.155	0.160	0.165		0.145	15.3	
N-Nitrosodiphenylamine (1)	0.497	0.479	0.489	0.552	0.576	0.556	0.576		0.532	7.9	
4-Bromophenyl-phenylether	0.192	0.191	0.189	0.202	0.212	0.199	0.213		0.200	5.0	
Hexachlorobenzene	0.249	0.221	0.214	0.212	0.222	0.203	0.208		0.218	6.9	
Pentachlorophenol		0.094	0.113	0.119	0.132	0.136	0.141		0.122	14.2	
Phenanthrene	0.997	0.911	0.936	1.051	1.063	0.992	1.052		1.000	6.0	
Anthracene	0.906	0.906	0.942	1.047	1.036	0.983	1.007		0.975	6.0	
Carbazole	0.887	0.819	0.739	0.729	0.841	0.880	0.960		0.836	9.9	
Di-n-butylphthalate	1.066	1.145	1.164	1.340	1.307	1.221	1.246		1.213	7.9	
Fluoranthene	0.873	0.896	0.942	1.080	1.099	1.036	1.080		1.001	9.5	
Pyrene	1.068	1.054	1.072	1.207	1.182	1.092	1.140		1.116	5.4	
Butylbenzylphthalate	0.418	0.490	0.524	0.627	0.627	0.595	0.619		0.557	14.6	
Benzo(a)anthracene	0.961	0.941	0.972	1.055	1.033	0.930	0.951		0.978	4.9	
3,3'-Dichlorobenzidine	0.286	0.306	0.319	0.335	0.322	0.267	0.266		0.300	9.2	
Chrysene	0.906	0.859	0.900	1.003	1.012	0.917	0.943		0.934	6.0	
bis(2-Ethylhexyl)phthalate	0.399	0.476	0.493	0.560	0.558	0.519	0.533		0.505	11.1	
Di-n-octylphthalate	1.104	0.994	0.968	1.011	0.961	0.846	0.846		0.961	9.5	
Benzo(b)fluoranthene	0.750	0.796	0.815	1.066	1.131	0.956	0.981		0.928	15.6	
Benzo(k)fluoranthene	0.962	0.932	0.994	1.031	0.927	0.890	0.908		0.949	5.2	
Benzo(a)pyrene	0.656	0.730	0.757	0.902	0.912	0.845	0.881		0.812	12.1	
Indeno(1,2,3-cd)pyrene	0.890	0.939	0.989	1.154	1.103	1.042	1.102		1.031	9.4	
Dibenzo(a,h)anthracene	0.682	0.735	0.797	0.961	0.935	0.863	0.869		0.834	12.2	
Benzo(g,h,i)perylene	0.789	0.807	0.834	0.999	1.025	0.975	1.057		0.926	12.2	
N-Nitrosodimethylamine	0.849	0.824	0.795	0.960	0.994	0.964	1.012		0.914	9.7	
Aniline	1.890	1.792	1.778	1.891	1.648	1.523	1.629		1.736	8.1	
Benzidine			0.136	0.077	0.096	0.094	0.135		0.108	24.7	<-
Pyridine	1.243	1.310	1.261	1.566	1.655	1.571	1.534		1.448	11.8	
1-methylnaphthalene	0.462	0.429	0.429	0.480	0.470	0.436	0.436		0.449	4.7	
Azobenzene (1,2-DP-Hydrazine	0.048	0.050	0.052	0.067	0.067	0.072	0.073		0.061	17.7	
2,3,4,6-Tetrachlorophenol	0.179	0.206	0.236	0.226	0.231	0.226	0.220		0.218	8.9	
1,2,4,5-Tetrachlorobenzene	0.435	0.437	0.436	0.479	0.493	0.454	0.471		0.458	5.1	

(1) Cannot be seperated from Diphenylamine
<- Outside QC limits: %RSD <20% or R^2 > 0.990

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU65 Project: NPDES SAMPLING SUPPORTGR

Instrument ID: NT6 Calibration Date: 07/08/13

Method = SW846070813.m
Cal levels = 8

LAB FILE ID: RRF1 =07081303 RRF5 =07081304 RRF10 =07081305
RRF25 =07081301 RRF40 =07081306 RRF60 =07081307
RRF80 =07081308 RRF0.2=07081302

COMPOUND	RRF 1	RRF 5	RRF 10	RRF 25	RRF 40	RRF 60	RRF 80	RRF 0.2	___ RRF	%RSD /R^2
Total Benzofluoranthenes	0.821	0.821	0.857	0.988	0.967	0.876	0.888		0.888	7.4
2-Fluorophenol	1.633	1.629	1.568	1.825	1.716	1.575			1.658	5.9
Phenol-d5	1.893	1.923	1.872	2.133	1.943	1.786			1.925	6.0
2-Chlorophenol-d4	1.640	1.626	1.593	1.830	1.713	1.569			1.662	5.8
1,2-Dichlorobenzene-d4	0.892	0.846	0.831	0.947	0.944	0.882			0.890	5.4
Nitrobenzene-d5	0.317	0.317	0.313	0.361	0.348	0.326			0.330	5.9
2-Fluorobiphenyl	1.058	1.062	1.039	1.144	1.129	1.044			1.079	4.2
2,4,6-Tribromophenol	0.148	0.142	0.164	0.142	0.144	0.133			0.146	7.0
Terphenyl-d14	0.517	0.513	0.515	0.583	0.616	0.573			0.553	7.9

<- Outside QC limits: %RSD <20% or R^2 > 0.990

FORM VI SV-6

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU65 Project: NPDES SAMPLING SUPPORTGREEN R

Instrument ID: NT6 Cont. Calib. Date: 07/08/13

Init. Calib. Date: 07/08/13 Cont. Calib. Time: 1201

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Phenol	1.655	1.834	0.800	AVRG	10.8
Bis(2-Chloroethyl)ether	1.345	1.444	0.700	AVRG	7.4
2-Chlorophenol	1.295	1.401	0.800	AVRG	8.2
1,3-Dichlorobenzene	1.507	1.607	0.010	AVRG	6.6
1,4-Dichlorobenzene	1.500	1.616	0.010	AVRG	7.7
1,2-Dichlorobenzene	1.425	1.543	0.010	AVRG	8.3
Benzyl alcohol	0.841	0.940	0.010	AVRG	11.8
2,2'-oxybis(1-Chloropropane)	2.120	2.419	0.010	AVRG	14.1
2-Methylphenol	1.160	1.276	0.700	AVRG	10.0
Hexachloroethane	0.526	0.572	0.300	AVRG	8.7
N-Nitroso-di-n-propylamine	0.932	1.043	0.500	AVRG	11.9
4-Methylphenol	1.198	1.347	0.600	AVRG	12.4
Nitrobenzene	0.344	0.379	0.200	AVRG	10.2
Isophorone	0.559	0.594	0.400	AVRG	6.3
2-Nitrophenol	0.179	0.189	0.100	AVRG	5.6
2,4-Dimethylphenol	0.300	0.318	0.200	AVRG	6.0
Bis(2-Chloroethoxy)methane	0.436	0.469	0.300	AVRG	7.6
2,4-Dichlorophenol	0.273	0.296	0.200	AVRG	8.4
1,2,4-Trichlorobenzene	0.312	0.321	0.010	AVRG	2.9
Naphthalene	0.907	0.982	0.700	AVRG	8.3
Benzoic acid	50.00	51.29	0.010	2ORDR	2.6
4-Chloroaniline	0.344	0.367	0.010	AVRG	6.7
Hexachlorobutadiene	0.149	0.154	0.010	AVRG	3.4
4-Chloro-3-methylphenol	0.248	0.275	0.200	AVRG	10.9
2-Methylnaphthalene	0.506	0.557	0.400	AVRG	10.1
Hexachlorocyclopentadiene	0.291	0.311	0.050	AVRG	6.9
2,4,6-Trichlorophenol	0.304	0.323	0.200	AVRG	6.2
2,4,5-Trichlorophenol	0.302	0.327	0.200	AVRG	8.3
2-Chloronaphthalene	0.997	1.099	0.800	AVRG	10.2
2-Nitroaniline	0.257	0.308	0.010	AVRG	19.8
Acenaphthylene	1.494	1.628	0.900	AVRG	9.0
Dimethylphthalate	1.085	1.135	0.010	AVRG	4.6
2,6-Dinitrotoluene	0.238	0.262	0.200	AVRG	10.1
Acenaphthene	0.964	1.041	0.900	AVRG	8.0
3-Nitroaniline	0.232	0.256	0.010	AVRG	10.3
2,4-Dinitrophenol	50.00	48.88	0.010	LINR	-2.2
Dibenzofuran	1.187	1.347	0.800	AVRG	13.5

<- Exceeds QC limit of 20% D

* RF less than minimum RF

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU65 Project: NPDES SAMPLING SUPPORTGREEN R

Instrument ID: NT6 Cont. Calib. Date: 07/08/13

Init. Calib. Date: 07/08/13 Cont. Calib. Time: 1201

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
4-Nitrophenol	25.00	26.85	0.010	LINR	7.4	
2,4-Dinitrotoluene	0.283	0.301	0.200	AVRG	6.4	
Fluorene	0.990	1.070	0.900	AVRG	8.1	
4-Chlorophenyl-phenylether	0.444	0.474	0.400	AVRG	6.8	
Diethylphthalate	0.950	0.999	0.010	AVRG	5.2	
4-Nitroaniline	0.181	0.149	0.010	AVRG	-17.7	
4,6-Dinitro-2-methylphenol	0.145	0.149	0.010	AVRG	2.8	
N-Nitrosodiphenylamine(1)	0.532	0.552	0.010	AVRG	3.8	
4-Bromophenyl-phenylether	0.200	0.202	0.100	AVRG	1.0	
Hexachlorobenzene	0.218	0.212	0.100	AVRG	-2.8	
Pentachlorophenol	0.122	0.119	0.050	AVRG	-2.4	
Phenanthrene	1.000	1.051	0.700	AVRG	5.1	
Anthracene	0.975	1.047	0.700	AVRG	7.4	
Carbazole	0.836	0.729	0.010	AVRG	-12.8	
Di-n-butylphthalate	1.213	1.340	0.010	AVRG	10.5	
Fluoranthene	1.001	1.080	0.600	AVRG	7.9	
Pyrene	1.116	1.207	0.600	AVRG	8.2	
Butylbenzylphthalate	0.557	0.627	0.010	AVRG	12.6	
Benzo(a)anthracene	0.978	1.055	0.800	AVRG	7.9	
3,3'-Dichlorobenzidine	0.300	0.335	0.010	AVRG	11.7	
Chrysene	0.934	1.003	0.700	AVRG	7.4	
bis(2-Ethylhexyl)phthalate	0.505	0.560	0.010	AVRG	10.9	
Di-n-octylphthalate	0.961	1.011	0.010	AVRG	5.2	
Benzo(b)fluoranthene	0.928	1.066	0.700	AVRG	14.9	
Benzo(k)fluoranthene	0.949	1.031	0.700	AVRG	8.6	
Benzo(a)pyrene	0.812	0.902	0.700	AVRG	11.1	
Indeno(1,2,3-cd)pyrene	1.031	1.154	0.500	AVRG	11.9	
Dibenzo(a,h)anthracene	0.834	0.961	0.400	AVRG	15.2	
Benzo(g,h,i)perylene	0.926	0.999	0.500	AVRG	7.9	
N-Nitrosodimethylamine	0.914	0.960	0.010	AVRG	5.0	
Aniline	1.736	1.891	0.010	AVRG	8.9	
Benzidine	0.108	0.077	0.010	AVRG	-28.7	<-
Pyridine	1.448	1.566	0.010	AVRG	8.1	
1-methylnaphthalene	0.449	0.480	0.010	AVRG	6.9	
Azobenzene (1,2-DP-Hydrazine	0.061	0.067	0.010	AVRG	9.8	
2,3,4,6-Tetrachlorophenol	0.218	0.226	0.010	AVRG	3.7	

(1) Cannot be separated from Diphenylamine

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII SV-2

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU65 Project: NPDES SAMPLING SUPPORTGREEN R

Instrument ID: NT6 Cont. Calib. Date: 07/08/13

Init. Calib. Date: 07/08/13 Cont. Calib. Time: 1201

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
1,2,4,5-Tetrachlorobenzene	0.458	0.479	0.010	AVRG	4.6
Total Benzofluoranthenes	0.888	0.988	0.010	AVRG	11.3
2-Fluorophenol	1.658	1.825	0.010	AVRG	10.1
Phenol-d5	1.925	2.133	0.010	AVRG	10.8
2-Chlorophenol-d4	1.662	1.830	0.010	AVRG	10.1
1,2-Dichlorobenzene-d4	0.890	0.947	0.010	AVRG	6.4
Nitrobenzene-d5	0.330	0.361	0.010	AVRG	9.4
2-Fluorobiphenyl	1.079	1.144	0.010	AVRG	6.0
2,4,6-Tribromophenol	0.146	0.142	0.010	AVRG	-2.7
Terphenyl-d14	0.553	0.583	0.010	AVRG	5.4

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII SV-3

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU65 Project: NPDES SAMPLING SUPPORTGREEN RI

Ical Midpoint ID: 07081301 Ical Date: 07/08/13

Instrument ID: NT6 Cont. Cal Date: 07/08/13

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	507223	8.43	1843524	10.47	1048119	13.34
	UPPER LIMIT	1014446		3687048		2096238	
	LOWER LIMIT	253612		921762		524060	
	CCAL	507223	8.43	1843524	10.47	1048119	13.34
	UPPER LIMIT		8.93		10.97		13.84
	LOWER LIMIT		7.93		9.97		12.84
01	WU65MBW1	508186	8.43	1811025	10.47	1097574	13.33
02	WU65LCSW1	617623	8.42	2139084	10.47	1184699	13.33
03	WU65LCSDW1	620576	8.42	2153711	10.47	1253537	13.34
04	LF-TP-001-20	563015	8.42	1998636	10.47	1210122	13.33
05	LF-FD-001-20	607495	8.42	2166310	10.46	1306668	13.33
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
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.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU65 Project: NPDES SAMPLING SUPPORTGREEN RI

Ical Midpoint ID: 07081301 Ical Date: 07/08/13

Instrument ID: NT6 Cont. Cal Date: 07/08/13

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	ICAL MIDPT	1392753	15.72	1340567	20.03	1450550	22.19
	UPPER LIMIT	2785506		2681134		2901100	
	LOWER LIMIT	696376		670284		725275	
	CCAL	1392753	15.72	1340567	20.03	1450550	22.19
	UPPER LIMIT		16.22		20.53		22.69
	LOWER LIMIT		15.22		19.53		21.69
01	WU65MBW1	1632027	15.71	1483292	20.03	1578102	22.19
02	WU65LCSW1	1563842	15.71	1516894	20.03	1617029	22.19
03	WU65LCSDW1	1617585	15.72	1564022	20.03	1667907	22.19
04	LF-TP-001-20	1771352	15.71	1572275	20.02	1668374	22.18
05	LF-FD-001-20	1928318	15.71	1752519	20.02	1852262	22.18
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
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

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU65 Project: NPDES SAMPLING SUPPORTGREEN RI

Ical Midpoint ID: 07081301 Ical Date: 07/08/13

Instrument ID: NT6 Cont. Cal Date: 07/08/13

		IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	2097720	21.14				
	UPPER LIMIT	4195440					
	LOWER LIMIT	1048860					
	CCAL	2097720	21.14				
	UPPER LIMIT		21.64				
	LOWER LIMIT		20.64				
01	WU65MBW1	1986160	21.13				
02	WU65LCSW1	2304747	21.13				
03	WU65LCSDW1	2398107	21.13				
04	LF-TP-001-20	2249522	21.12				
05	LF-FD-001-20	2464637	21.12				
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
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.

SIM PAH Analysis
Report and Summary QC Forms

ARI Job ID: WU65, WU71

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: LF-TP-001-20130619-W**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: WU65A
LIMS ID: 13-13119
Matrix: Water
Data Release Authorized:
Reported: 06/26/13

QC Report No: WU65-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted: 06/24/13
Date Analyzed: 06/25/13 17:19
Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
91-20-3	Naphthalene	0.00085	0.010	< 0.010 U
91-57-6	2-Methylnaphthalene	0.00072	0.010	< 0.010 U
90-12-0	1-Methylnaphthalene	0.00088	0.010	< 0.010 U
208-96-8	Acenaphthylene	0.00081	0.010	< 0.010 U
83-32-9	Acenaphthene	0.00083	0.010	< 0.010 U
86-73-7	Fluorene	0.0014	0.010	< 0.010 U
85-01-8	Phenanthrene	0.0010	0.010	< 0.010 U
120-12-7	Anthracene	0.00058	0.010	< 0.010 U
206-44-0	Fluoranthene	0.00092	0.010	< 0.010 U
129-00-0	Pyrene	0.00070	0.010	< 0.010 U
56-55-3	Benzo(a)anthracene	0.0013	0.010	< 0.010 U
218-01-9	Chrysene	0.0016	0.010	< 0.010 U
205-99-2	Benzo(b)fluoranthene	0.0025	0.010	< 0.010 U
207-08-9	Benzo(k)fluoranthene	0.00085	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.0011	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.0018	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.00097	0.010	< 0.010 U
191-24-2	Benzo(g,h,i)perylene	0.0019	0.010	< 0.010 U
132-64-9	Dibenzofuran	0.00094	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.0025	0.020	< 0.020 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	82.7%
d10-2-Methylnaphthalene	72.3%
d14-Dibenzo(a,h)anthracen	72.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: LF-FD-001-20130619-W**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: WU65B
LIMS ID: 13-13120
Matrix: Water
Data Release Authorized: MW
Reported: 06/26/13

QC Report No: WU65-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted: 06/24/13
Date Analyzed: 06/25/13 17:46
Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
91-20-3	Naphthalene	0.00085	0.010	< 0.010 U
91-57-6	2-Methylnaphthalene	0.00072	0.010	< 0.010 U
90-12-0	1-Methylnaphthalene	0.00088	0.010	< 0.010 U
208-96-8	Acenaphthylene	0.00081	0.010	< 0.010 U
83-32-9	Acenaphthene	0.00083	0.010	< 0.010 U
86-73-7	Fluorene	0.0014	0.010	< 0.010 U
85-01-8	Phenanthrene	0.0010	0.010	< 0.010 U
120-12-7	Anthracene	0.00058	0.010	< 0.010 U
206-44-0	Fluoranthene	0.00092	0.010	< 0.010 U
129-00-0	Pyrene	0.00070	0.010	< 0.010 U
56-55-3	Benzo(a)anthracene	0.0013	0.010	< 0.010 U
218-01-9	Chrysene	0.0016	0.010	< 0.010 U
205-99-2	Benzo(b)fluoranthene	0.0025	0.010	< 0.010 U
207-08-9	Benzo(k)fluoranthene	0.00085	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.0011	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.0018	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.00097	0.010	< 0.010 U
191-24-2	Benzo(g,h,i)perylene	0.0019	0.010	< 0.010 U
132-64-9	Dibenzofuran	0.00094	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.0025	0.020	< 0.020 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	83.7%
d10-2-Methylnaphthalene	72.0%
d14-Dibenzo(a,h)anthracen	75.0%

ANALYTICAL RESOURCES INCORPORATED

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WU65-SAIC
Project: NPDES Sampling Support
209977

Client ID	FLN	MNP	DBA	TOT OUT
MB-062413	75.7%	68.0%	72.3%	0
LCS-062413	82.3%	78.0%	82.7%	0
LCSD-062413	76.0%	68.7%	74.0%	0
LF-TP-001-20130619-W	82.7%	72.3%	72.3%	0
LF-FD-001-20130619-W	83.7%	72.0%	75.0%	0

		LCS/MB LIMITS	QC LIMITS
(FLN)	= d10-Fluoranthene	(30-160)	(30-150)
(MNP)	= d10-2-Methylnaphthalene	(40-120)	(35-120)
(DBA)	= d14-Dibenzo(a,h)anthracene	(31-120)	(26-120)

Prep Method: SW3510C
Log Number Range: 13-13119 to 13-13120

FORM-II SIM SW8270

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: LCS-062413**
Page 1 of 1 **LAB CONTROL SAMPLE**

Lab Sample ID: LCS-062413
LIMS ID: 13-13119
Matrix: Water
Data Release Authorized: MW
Reported: 06/26/13

QC Report No: WU65-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 06/24/13

Date Analyzed LCS: 06/25/13 15:57
LCSD: 06/25/13 16:24
Instrument/Analyst LCS: NT11/VTS
LCSD: NT11/VTS

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	0.222	0.300	74.0%	0.200	0.300	66.7%	10.4%
2-Methylnaphthalene	0.230	0.300	76.7%	0.207	0.300	69.0%	10.5%
1-Methylnaphthalene	0.224	0.300	74.7%	0.204	0.300	68.0%	9.3%
Acenaphthylene	0.230	0.300	76.7%	0.211	0.300	70.3%	8.6%
Acenaphthene	0.221	0.300	73.7%	0.203	0.300	67.7%	8.5%
Fluorene	0.234	0.300	78.0%	0.218	0.300	72.7%	7.1%
Phenanthrene	0.218	0.300	72.7%	0.204	0.300	68.0%	6.6%
Anthracene	0.231	0.300	77.0%	0.206	0.300	68.7%	11.4%
Fluoranthene	0.226	0.300	75.3%	0.214	0.300	71.3%	5.5%
Pyrene	0.217	0.300	72.3%	0.198	0.300	66.0%	9.2%
Benzo(a)anthracene	0.240	0.300	80.0%	0.219	0.300	73.0%	9.2%
Chrysene	0.234	0.300	78.0%	0.212	0.300	70.7%	9.9%
Benzo(b)fluoranthene	0.224	0.300	74.7%	0.209	0.300	69.7%	6.9%
Benzo(k)fluoranthene	0.244	0.300	81.3%	0.222	0.300	74.0%	9.4%
Benzo(a)pyrene	0.224	0.300	74.7%	0.198	0.300	66.0%	12.3%
Indeno(1,2,3-cd)pyrene	0.242	0.300	80.7%	0.220	0.300	73.3%	9.5%
Dibenz(a,h)anthracene	0.247	0.300	82.3%	0.227	0.300	75.7%	8.4%
Benzo(g,h,i)perylene	0.235	0.300	78.3%	0.213	0.300	71.0%	9.8%
Dibenzofuran	0.226	0.300	75.3%	0.209	0.300	69.7%	7.8%
Total Benzofluoranthenes	0.718	0.900	79.8%	0.659	0.900	73.2%	8.6%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

SIM Semivolatile Surrogate Recovery

	LCS	LCSD
d10-Fluoranthene	82.3%	76.0%
d10-2-Methylnaphthalene	78.0%	68.7%
d14-Dibenzo(a,h)anthracene	82.7%	74.0%

4B

SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

WU65MBW1

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU65 Project: NPDES SAMPLING SUPPO

Lab File ID: WU65MB Date Extracted: 06/24/13

Instrument ID: NT11 Date Analyzed: 06/25/13

Matrix: LIQUID Time Analyzed: 1529

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	WU65LCSW1	WU65LCSW1	WU65SB	06/25/13
02	WU65LCSDW1	WU65LCSDW1	WU65SBD	06/25/13
03	LF-TP-001-201306	WU65A	WU65A	06/25/13
04	LF-FD-001-201306	WU65B	WU65B	06/25/13
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PNAs by Low Level SW8270D-SIM GC/MS **Sample ID: MB-062413**
Extraction Method: SW3510C **METHOD BLANK**

Lab Sample ID: MB-062413
LIMS ID: 13-13119
Matrix: Water
Data Release Authorized:
Reported: 06/26/13

QC Report No: WU65-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/24/13
Date Analyzed: 06/25/13 15:29
Instrument/Analyst: NT11/VTS

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	DL	LOQ	Result
91-20-3	Naphthalene	0.00085	0.010	< 0.010 U
91-57-6	2-Methylnaphthalene	0.00072	0.010	< 0.010 U
90-12-0	1-Methylnaphthalene	0.00088	0.010	< 0.010 U
208-96-8	Acenaphthylene	0.00081	0.010	< 0.010 U
83-32-9	Acenaphthene	0.00083	0.010	< 0.010 U
86-73-7	Fluorene	0.0014	0.010	< 0.010 U
85-01-8	Phenanthrene	0.0010	0.010	< 0.010 U
120-12-7	Anthracene	0.00058	0.010	< 0.010 U
206-44-0	Fluoranthene	0.00092	0.010	< 0.010 U
129-00-0	Pyrene	0.00070	0.010	< 0.010 U
56-55-3	Benzo(a)anthracene	0.0013	0.010	< 0.010 U
218-01-9	Chrysene	0.0016	0.010	< 0.010 U
205-99-2	Benzo(b)fluoranthene	0.0025	0.010	< 0.010 U
207-08-9	Benzo(k)fluoranthene	0.00085	0.010	< 0.010 U
50-32-8	Benzo(a)pyrene	0.0011	0.010	< 0.010 U
193-39-5	Indeno(1,2,3-cd)pyrene	0.0018	0.010	< 0.010 U
53-70-3	Dibenz(a,h)anthracene	0.00097	0.010	< 0.010 U
191-24-2	Benzo(g,h,i)perylene	0.0019	0.010	< 0.010 U
132-64-9	Dibenzofuran	0.00094	0.010	< 0.010 U
TOTBFA	Total Benzofluoranthenes	0.0025	0.020	< 0.020 U

Reported in µg/L (ppb)

SIM Semivolatile Surrogate Recovery

d10-Fluoranthene	75.7%
d10-2-Methylnaphthalene	68.0%
d14-Dibenzo(a,h)anthracen	72.3%

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT11 Project: NPDES SAMPLING SUPPORT

DFTPP Injection Date: 06/12/13 DFTPP Injection Time: 1530

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	41.8
68	Less than 2.0% of mass 69	0.3 (0.8)1
69	Mass 69 relative abundance	42.1
70	Less than 2.0% of mass 69	0.3 (0.6)1
127	10.0 - 80.0% of mass 198	47.1
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	7.3
275	10.0 - 60.0% of mass 198	26.0
365	Greater than 1.0% of mass 198	3.37
441	0.0 - 24.0% of mass 442	15.9 (17.3)2
442	50.0 - 200.0% of mass 198	92.3
443	15.0 - 24.0% of mass 442	19.1 (20.7)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		SIM 250	IC0612A	06/12/13	1546
02		SIM 1000	IC0612B	06/12/13	1615
03		SIM 10	IC0612C	06/12/13	1644
04		SIM 500	IC0612D	06/12/13	1713
05		SIM 50	IC0612E	06/12/13	1742
06		SIM 100	IC0612F	06/12/13	1811
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT11 Project: NPDES SAMPLING SUPPORT

DFTPP Injection Date: 06/25/13 DFTPP Injection Time: 1434

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	40.8
68	Less than 2.0% of mass 69	0.1 (0.3)1
69	Mass 69 relative abundance	38.9
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	10.0 - 80.0% of mass 198	45.0
197	Less than 2.0% of mass 198	0.3
198	Base Peak, 100% relative abundance	100.0
199	5.0 to 9.0% of mass 198	7.2
275	10.0 - 60.0% of mass 198	25.2
365	Greater than 1.0% of mass 198	3.45
441	0.0 - 24.0% of mass 442	16.0 (16.8)2
442	50.0 - 200.0% of mass 198	95.1
443	15.0 - 24.0% of mass 442	20.7 (21.8)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		SIM 250	CC0625	06/25/13	1450
02	WU65MBW1	WU65MBW1	WU65MB	06/25/13	1529
03	WU65LCSW1	WU65LCSW1	WU65SB	06/25/13	1557
04	WU65LCSDW1	WU65LCSDW1	WU65SBD	06/25/13	1624
05	LF-TP-001-201306	WU65A	WU65A	06/25/13	1719
06	LF-FD-001-201306	WU65B	WU65B	06/25/13	1746
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU65 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT11 Calibration Date: 06/12/13

Method = lowsim.m
Cal levels = 6

LAB FILE ID: RRF10 =IC0612C RRF50 =IC0612E RRF100=IC0612F
RRF250=IC0612A RRF500=IC0612D RRF1000=IC0612B

COMPOUND	RRF 10	RRF 50	RRF 100	RRF 250	RRF 500	RRF 1000	$\overline{RRF}$	%RSD /R^2
Naphthalene	1.170	0.967	1.043	0.974	0.942	0.841	0.990	11.1
2-Methylnaphthalene	0.638	0.541	0.629	0.624	0.621	0.576	0.605	6.3
Acenaphthylene	1.769	1.408	1.564	1.581	1.535	1.400	1.543	8.8
Acenaphthene	1.231	0.973	1.087	1.038	1.010	0.930	1.045	10.1
Dibenzofuran	1.861	1.430	1.644	1.559	1.474	1.328	1.549	12.1
Fluorene	1.268	1.010	1.117	1.121	1.091	1.023	1.105	8.4
Phenanthrene	1.408	1.055	1.208	1.104	1.073	0.956	1.134	13.8
Anthracene	1.016	0.806	0.984	1.005	1.015	0.940	0.961	8.5
Fluoranthene	1.506	0.990	1.293	1.186	1.180	1.072	1.204	15.0
Pyrene	2.133	1.319	1.625	1.449	1.444	1.311	1.547	20.0
Benzo(a)anthracene	1.538	1.123	1.328	1.271	1.232	1.160	1.275	11.6
Chrysene	1.835	1.305	1.528	1.402	1.360	1.227	1.443	15.0
Benzo(b)fluoranthene	1.715	1.325	1.560	1.502	1.482	1.410	1.499	8.9
Benzo(k)fluoranthene	1.696	1.368	1.604	1.540	1.564	1.475	1.541	7.3
Benzo(j)fluoranthene	1.928	1.637	1.854	1.689	1.732	1.562	1.734	7.9
Benzo(a)pyrene	1.385	1.086	1.280	1.260	1.260	1.206	1.246	7.9
Indeno(1,2,3-cd)pyrene	1.778	1.410	1.692	1.708	1.719	1.635	1.657	7.8
Dibenzo(a,h)anthracene	1.249	1.098	1.284	1.333	1.353	1.296	1.269	7.2
Benzo(g,h,i)perylene	1.763	1.333	1.513	1.463	1.453	1.367	1.482	10.3
1-methylnaphthalene	0.667	0.581	0.644	0.630	0.619	0.582	0.620	5.5
Perylene	1.665	1.357	1.510	1.445	1.455	1.356	1.465	7.8
2-Methylnaphthalene-d10	0.648	0.566	0.627	0.617	0.609	0.572	0.606	5.3
Dibenzo(a,h)anthracene-d14	1.099	0.936	1.121	1.158	1.166	1.126	1.101	7.7
Fluoranthene-d10	1.127	0.894	1.081	1.060	1.056	0.980	1.033	8.0

<- Outside QC limits: %RSD <20% or R^2 > 0.990

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU65 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT11 Cont. Calib. Date: 06/25/13

Init. Calib. Date: 06/12/13 Cont. Calib. Time: 1450

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Naphthalene	0.990	0.969	0.700	AVRG	-2.1
2-Methylnaphthalene	0.605	0.623	0.400	AVRG	3.0
Acenaphthylene	1.543	1.594	0.900	AVRG	3.3
Acenaphthene	1.045	1.041	0.900	AVRG	-0.4
Dibenzofuran	1.549	1.560	0.800	AVRG	0.7
Fluorene	1.105	1.139	0.900	AVRG	3.1
Phenanthrene	1.134	1.099	0.700	AVRG	-3.1
Anthracene	0.961	1.019	0.700	AVRG	6.0
Fluoranthene	1.204	1.238	0.600	AVRG	2.8
Pyrene	1.547	1.426	0.600	AVRG	-7.8
Benzo(a)anthracene	1.275	1.300	0.800	AVRG	2.0
Chrysene	1.443	1.374	0.700	AVRG	-4.8
Benzo(b)fluoranthene	1.499	1.404	0.700	AVRG	-6.3
Benzo(k)fluoranthene	1.541	1.557	0.700	AVRG	1.0
Benzo(j)fluoranthene	1.734	1.800	0.010	AVRG	3.8
Benzo(a)pyrene	1.246	1.266	0.700	AVRG	1.6
Indeno(1,2,3-cd)pyrene	1.657	1.682	0.500	AVRG	1.5
Dibenzo(a,h)anthracene	1.269	1.314	0.400	AVRG	3.5
Benzo(g,h,i)perylene	1.482	1.451	0.500	AVRG	-2.1
1-methylnaphthalene	0.620	0.631	0.010	AVRG	1.8
Perylene	1.465	1.446	0.010	AVRG	-1.3
2-Methylnaphthalene-d10	0.606	0.619	0.010	AVRG	2.1
Dibenzo(a,h)anthracene-d14	1.101	1.154	0.010	AVRG	4.8
Fluoranthene-d10	1.033	1.146	0.010	AVRG	10.9

<- 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: SAIC

ARI Job No: WU65 Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0612A Ical Date: 06/12/13

Instrument ID: NT11 Cont. Cal Date: 06/25/13

		IS1(NPT) AREA #	RT #	IS2(ANT) AREA #	RT #	IS3(PHN) AREA #	RT #
	ICAL MIDPT	270479	5.98	156669	8.94	244223	11.57
	UPPER LIMIT	540958		313338		488446	
	LOWER LIMIT	135240		78334		122112	
	CCAL	234406	5.98	134002	8.94	214831	11.57
	UPPER LIMIT		6.48		9.44		12.07
	LOWER LIMIT		5.48		8.44		11.07
01	WU65MBW1	252304	5.98	138067	8.94	224825	11.59
02	WU65LCSW1	256255	5.98	147005	8.94	243367	11.57
03	WU65LCSDW1	255317	5.98	144671	8.94	239989	11.57
04	LF-TP-001-20	246404	5.98	140542	8.94	243679	11.57
05	LF-FD-001-20	254599	5.98	146036	8.94	252059	11.57
06							
07							
08							
09							
10							
11							
12							
13							
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.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU65 Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0612A Ical Date: 06/12/13

Instrument ID: NT11 Cont. Cal Date: 06/25/13

		IS4(CRY) AREA #	RT #	IS5(PRY) AREA #	RT #	AREA #	RT #
	ICAL MIDPT	194330	16.28	162839	18.81		
	UPPER LIMIT	388660		325678			
	LOWER LIMIT	97165		81420			
	CCAL	185079	16.28	155741	18.81		
	UPPER LIMIT		16.78		19.31		
	LOWER LIMIT		15.78		18.31		
01	WU65MBW1	179588	16.28	152658	18.82		
02	WU65LCSW1	194047	16.28	161234	18.81		
03	WU65LCSDW1	197104	16.28	164085	18.81		
04	LF-TP-001-20	199825	16.28	169639	18.81		
05	LF-FD-001-20	203185	16.28	176121	18.81		
06							
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
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

Pesticide Analysis
Report and Summary QC Forms

ARI Job ID: WU65, WU71

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: LF-TP-001-20130619-W**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: WU65A
LIMS ID: 13-13119
Matrix: Water
Data Release Authorized:
Reported: 07/08/13

QC Report No: WU65-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted: 06/25/13
Date Analyzed: 07/05/13 14:38
Instrument/Analyst: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: No
Florisil Cleanup: No

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	0.0085	0.050	< 0.050 U
319-85-7	beta-BHC	0.0098	0.050	< 0.050 U
319-86-8	delta-BHC	0.0087	0.050	< 0.050 U
58-89-9	gamma-BHC (Lindane)	0.016	0.050	< 0.050 U
76-44-8	Heptachlor	0.011	0.050	< 0.050 U
309-00-2	Aldrin	0.010	0.050	< 0.050 U
1024-57-3	Heptachlor Epoxide	0.0079	0.050	< 0.050 U
959-98-8	Endosulfan I	0.0089	0.050	< 0.050 U
60-57-1	Dieldrin	0.017	0.10	< 0.10 U
72-55-9	4,4'-DDE	0.018	0.10	< 0.10 U
72-20-8	Endrin	0.017	0.10	< 0.10 U
33213-65-9	Endosulfan II	0.014	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.019	0.10	< 0.10 U
1031-07-8	Endosulfan Sulfate	0.024	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.017	0.10	< 0.10 U
72-43-5	Methoxychlor	0.074	0.50	< 0.50 U
53494-70-5	Endrin Ketone	0.015	0.10	< 0.10 U
7421-93-4	Endrin Aldehyde	0.016	0.10	< 0.10 U
5103-74-2	trans-Chlordane	0.0082	0.050	< 0.050 U
5103-71-9	cis-Chlordane	0.0082	0.050	< 0.050 U
8001-35-2	Toxaphene	0.22	5.0	< 5.0 U
118-74-1	Hexachlorobenzene	0.010	0.050	< 0.050 U
87-68-3	Hexachlorobutadiene	0.012	0.050	< 0.050 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	78.8%
Tetrachlorometaxylene	63.5%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: LF-FD-001-20130619-W**
Extraction Method: SW3510C **SAMPLE**

Lab Sample ID: WU65B
LIMS ID: 13-13120
Matrix: Water
Data Release Authorized:
Reported: 07/08/13

QC Report No: WU65-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted: 06/25/13
Date Analyzed: 07/05/13 14:56
Instrument/Analyst: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: No
Florisil Cleanup: No

Sample Amount: 500 mL
Final Extract Volume: 5.0 mL
Dilution Factor: 1.00
Silica Gel: No

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	0.0085	0.050	< 0.050 U
319-85-7	beta-BHC	0.0098	0.050	< 0.050 U
319-86-8	delta-BHC	0.0087	0.050	< 0.050 U
58-89-9	gamma-BHC (Lindane)	0.016	0.050	< 0.050 U
76-44-8	Heptachlor	0.011	0.050	< 0.050 U
309-00-2	Aldrin	0.010	0.050	< 0.050 U
1024-57-3	Heptachlor Epoxide	0.0079	0.050	< 0.050 U
959-98-8	Endosulfan I	0.0089	0.050	< 0.050 U
60-57-1	Dieldrin	0.017	0.10	< 0.10 U
72-55-9	4,4'-DDE	0.018	0.10	< 0.10 U
72-20-8	Endrin	0.017	0.10	< 0.10 U
33213-65-9	Endosulfan II	0.014	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.019	0.10	< 0.10 U
1031-07-8	Endosulfan Sulfate	0.024	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.017	0.10	< 0.10 U
72-43-5	Methoxychlor	0.074	0.50	< 0.50 U
53494-70-5	Endrin Ketone	0.015	0.10	< 0.10 U
7421-93-4	Endrin Aldehyde	0.016	0.10	< 0.10 U
5103-74-2	trans-Chlordane	0.0082	0.050	< 0.050 U
5103-71-9	cis-Chlordane	0.0082	0.050	< 0.050 U
8001-35-2	Toxaphene	0.22	5.0	< 5.0 U
118-74-1	Hexachlorobenzene	0.010	0.050	< 0.050 U
87-68-3	Hexachlorobutadiene	0.012	0.050	< 0.050 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	78.2%
Tetrachlorometaxylene	65.2%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

SW8081/PESTICIDE WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WU65-SAIC
Project: NPDES Sampling Support
209977

Client ID	DCBP	TCMX	TOT OUT
MB-062513	62.8%	64.0%	0
LCS-062513	79.2%	71.0%	0
LCSD-062513	67.2%	65.2%	0
LF-TP-001-20130619-W	78.8%	63.5%	0
LF-FD-001-20130619-W	78.2%	65.2%	0

	LCS/MB LIMITS	QC LIMITS
(DCBP) = Decachlorobiphenyl	(37-125)	(11-144)
(TCMX) = Tetrachlorometaxylene	(38-103)	(30-105)

Prep Method: SW3510C
Log Number Range: 13-13119 to 13-13120

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: LCS-062513**
Page 1 of 1 **LCS/LCSD**

Lab Sample ID: LCS-062513 QC Report No: WU65-SAIC
LIMS ID: 13-13119 Project: NPDES Sampling Support
Matrix: Water 209977
Data Release Authorized: Date Sampled: 06/19/13
Reported: 07/08/13 Date Received: 06/19/13

Date Extracted LCS/LCSD: 06/25/13 Sample Amount LCS: 500 mL
LCSD: 500 mL
Date Analyzed LCS: 07/05/13 13:45 Final Extract Volume LCS: 5.0 mL
LCSD: 07/05/13 14:02 LCSD: 5.0 mL
Instrument/Analyst LCS: ECD6/YZ Dilution Factor LCS: 1.00
LCSD: ECD6/YZ LCSD: 1.00
GPC Cleanup: No Sulfur Cleanup: No
Florisil Cleanup: No Silica Gel: No

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
alpha-BHC	0.167	0.200	83.5%	0.157	0.200	78.5%	6.2%
beta-BHC	0.171	0.200	85.5%	0.162	0.200	81.0%	5.4%
delta-BHC	0.0735	0.200	36.8%	0.0696	0.200	34.8%	5.5%
gamma-BHC (Lindane)	0.174	0.200	87.0%	0.165	0.200	82.5%	5.3%
Heptachlor	0.162	0.200	81.0%	0.153	0.200	76.5%	5.7%
Aldrin	0.156	0.200	78.0%	0.150	0.200	75.0%	3.9%
Heptachlor Epoxide	0.182	0.200	91.0%	0.174	0.200	87.0%	4.5%
Endosulfan I	0.189	0.200	94.5%	0.180	0.200	90.0%	4.9%
Dieldrin	0.370	0.400	92.5%	0.354	0.400	88.5%	4.4%
4,4'-DDE	0.447	0.400	112%	0.427	0.400	107%	4.6%
Endrin	0.364	0.400	91.0%	0.348	0.400	87.0%	4.5%
Endosulfan II	0.360	0.400	90.0%	0.345	0.400	86.2%	4.3%
4,4'-DDD	0.342	0.400	85.5%	0.323	0.400	80.8%	5.7%
Endosulfan Sulfate	0.306	0.400	76.5%	0.299	0.400	74.8%	2.3%
4,4'-DDT	0.358	0.400	89.5%	0.340	0.400	85.0%	5.2%
Methoxychlor	1.65	2.00	82.5%	1.54	2.00	77.0%	6.9%
Endrin Ketone	0.364	0.400	91.0%	0.367	0.400	91.8%	0.8%
Endrin Aldehyde	0.317	0.400	79.2%	0.312	0.400	78.0%	1.6%
trans-Chlordane	0.180	0.200	90.0%	0.173	0.200	86.5%	4.0%
cis-Chlordane	0.177	0.200	88.5%	0.170	0.200	85.0%	4.0%
Hexachlorobenzene	0.157	0.200	78.5%	0.150	0.200	75.0%	4.6%
Hexachlorobutadiene	0.122	0.200	61.0%	0.118	0.200	59.0%	3.3%

Pest/PCB Surrogate Recovery

	LCS	LCSD
Decachlorobiphenyl	79.2%	67.2%
Tetrachlorometaxylene	71.0%	65.2%

Results reported in µg/L (ppb)
RPD calculated using sample concentrations per SW846.

FORM 4
PESTICIDE METHOD BLANK SUMMARY

BLANK NO.

WU65MBW1

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WU65
Project: NPDES SAMPLING SUPPO

Lab Sample ID: WU65MBW1
Lab File ID: 0705A008

Date Extracted: 06/25/13
Matrix: LIQUID

Date Analyzed: 07/05/13
Instrument ID: ECD6

Time Analyzed: 1327
GC Columns: STX-CLP1/STX-CLP2

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	WU65LCSW1	WU65LCSW1	07/05/13
02	WU65LCSDW1	WU65LCSDW1	07/05/13
03	LF-TP-001-20130619-	WU65A	07/05/13
04	LF-FD-001-20130619-	WU65B	07/05/13

ALL RUNS ARE DUAL COLUMN

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Pesticides/PCB by GC/ECD Method SW8081B **Sample ID: MB-062513**
Extraction Method: SW3510C **METHOD BLANK**

Page 1 of 1
Lab Sample ID: MB-062513 QC Report No: WU65-SAIC
LIMS ID: 13-13119 Project: NPDES Sampling Support
Matrix: Water 209977
Data Release Authorized: Date Sampled: NA
Reported: 07/08/13 Date Received: NA

Date Extracted: 06/25/13 Sample Amount: 500 mL
Date Analyzed: 07/05/13 13:27 Final Extract Volume: 5.0 mL
Instrument/Analyst: ECD6/YZ Dilution Factor: 1.00
GPC Cleanup: No Silica Gel: No
Sulfur Cleanup: No
Florisil Cleanup: No

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	0.0085	0.050	< 0.050 U
319-85-7	beta-BHC	0.0098	0.050	< 0.050 U
319-86-8	delta-BHC	0.0087	0.050	< 0.050 U
58-89-9	gamma-BHC (Lindane)	0.016	0.050	< 0.050 U
76-44-8	Heptachlor	0.011	0.050	< 0.050 U
309-00-2	Aldrin	0.010	0.050	< 0.050 U
1024-57-3	Heptachlor Epoxide	0.0079	0.050	< 0.050 U
959-98-8	Endosulfan I	0.0089	0.050	< 0.050 U
60-57-1	Dieldrin	0.017	0.10	< 0.10 U
72-55-9	4,4'-DDE	0.018	0.10	< 0.10 U
72-20-8	Endrin	0.017	0.10	< 0.10 U
33213-65-9	Endosulfan II	0.014	0.10	< 0.10 U
72-54-8	4,4'-DDD	0.019	0.10	< 0.10 U
1031-07-8	Endosulfan Sulfate	0.024	0.10	< 0.10 U
50-29-3	4,4'-DDT	0.017	0.10	< 0.10 U
72-43-5	Methoxychlor	0.074	0.50	< 0.50 U
53494-70-5	Endrin Ketone	0.015	0.10	< 0.10 U
7421-93-4	Endrin Aldehyde	0.016	0.10	< 0.10 U
5103-74-2	trans-Chlordane	0.0082	0.050	< 0.050 U
5103-71-9	cis-Chlordane	0.0082	0.050	< 0.050 U
8001-35-2	Toxaphene	0.22	5.0	< 5.0 U
118-74-1	Hexachlorobenzene	0.010	0.050	< 0.050 U
87-68-3	Hexachlorobutadiene	0.012	0.050	< 0.050 U

Reported in µg/L (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	62.8%
Tetrachlorometaxylene	64.0%

6D
8081 INITIAL CALIBRATION RETENTION TIMES

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU65 Project: NPDES SAMPLING

GC Column: STX-CLP1 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 06/19/13

COMPOUND	RT OF STANDARDS LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	MEAN RT	RT WINDOW FROM	TO
alpha-BHC	4.29	4.29	4.29	4.29	4.29	4.29	4.29	4.29	4.24	4.34
beta-BHC	4.65	4.65	4.65	4.64	4.64	4.64	4.64	4.64	4.59	4.69
delta-BHC	4.82	4.82	4.81	4.81	4.81	4.81	4.81	4.81	4.76	4.86
gamma-BHC (Lindane)	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.52	4.62
Heptachlor	5.01	5.01	5.01	5.01	5.01	5.01	5.01	5.01	4.96	5.06
Aldrin	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.26	5.36
Heptachlor epoxide b	5.88	5.88	5.88	5.88	5.88	5.88	5.88	5.88	5.83	5.93
Endosulfan I	6.26	6.26	6.26	6.26	6.26	6.26	6.26	6.26	6.21	6.31
Dieldrin	6.48	6.48	6.48	6.48	6.48	6.48	6.48	6.48	6.43	6.53
4,4'-DDE	6.18	6.18	6.18	6.18	6.18	6.18	6.18	6.18	6.13	6.23
Endrin	6.70	6.70	6.70	6.70	6.70	6.70	6.70	6.70	6.65	6.75
Endosulfan II	6.91	6.91	6.91	6.91	6.91	6.91	6.91	6.91	6.86	6.96
4,4'-DDD	6.74	6.74	6.74	6.74	6.74	6.74	6.74	6.74	6.69	6.79
Endosulfan sulfate	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.62	7.72
4,4'-DDT	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.95	7.05
Methoxychlor	7.43	7.42	7.42	7.42	7.42	7.42	7.42	7.42	7.37	7.47
Endrin ketone	7.93	7.93	7.93	7.93	7.93	7.93	7.93	7.93	7.88	7.98
Endrin aldehyde	7.28	7.28	7.28	7.28	7.28	7.28	7.28	7.28	7.23	7.33
gamma-Chlordane	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.95	6.05
alpha-Chlordane	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.08	6.18
Hexachlorobutadiene	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.26	2.36
Hexachlorobenzene	4.14	4.14	4.14	4.14	4.14	4.14	4.14	4.14	4.09	4.19
Tetrachloro-m-xylene	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.75	3.85
Decachlorobiphenyl	8.78	8.78	8.78	8.78	8.78	8.78	8.78	8.78	8.73	8.83

6D
8081 INITIAL CALIBRATION RETENTION TIMES

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU65 Project: NPDES SAMPLING

GC Column: STX-CLP2 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 06/19/13

COMPOUND	RT OF STANDARDS LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	MEAN RT	RT WINDOW FROM	TO
alpha-BHC	4.71	4.71	4.71	4.71	4.71	4.71	4.71	4.71	4.66	4.76
beta-BHC	5.14	5.14	5.14	5.14	5.14	5.14	5.14	5.14	5.09	5.19
delta-BHC	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.40	5.50
gamma-BHC (Lindane)	5.07	5.07	5.07	5.06	5.07	5.07	5.07	5.07	5.02	5.12
Heptachlor	5.53	5.53	5.53	5.53	5.53	5.53	5.53	5.53	5.48	5.58
Aldrin	5.87	5.87	5.87	5.87	5.87	5.87	5.87	5.87	5.82	5.92
Heptachlor epoxide b	6.42	6.42	6.42	6.42	6.42	6.42	6.42	6.42	6.37	6.47
Endosulfan I	6.81	6.81	6.81	6.81	6.81	6.81	6.81	6.81	6.76	6.86
Dieldrin	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.02	7.12
4,4'-DDE	6.87	6.87	6.87	6.87	6.87	6.87	6.87	6.87	6.82	6.92
Endrin	7.36	7.36	7.35	7.35	7.36	7.36	7.36	7.36	7.31	7.41
Endosulfan II	7.54	7.54	7.54	7.54	7.54	7.54	7.55	7.54	7.50	7.60
4,4'-DDD	7.41	7.41	7.41	7.41	7.41	7.41	7.41	7.41	7.36	7.46
Endosulfan sulfate	8.09	8.09	8.09	8.09	8.09	8.09	8.09	8.09	8.04	8.14
4,4'-DDT	7.69	7.69	7.69	7.69	7.69	7.69	7.69	7.69	7.64	7.74
Methoxychlor	8.28	8.28	8.28	8.28	8.28	8.28	8.28	8.28	8.23	8.33
Endrin ketone	8.58	8.58	8.58	8.58	8.58	8.58	8.58	8.58	8.53	8.63
Endrin aldehyde	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.79	7.89
gamma-Chlordane	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.55	6.65
alpha-Chlordane	6.74	6.74	6.74	6.74	6.74	6.74	6.74	6.74	6.69	6.79
Hexachlorobutadiene	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.42	2.52
Hexachlorobenzene	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.54	4.64
Tetrachloro-m-xylene	4.13	4.13	4.13	4.13	4.13	4.13	4.13	4.13	4.08	4.18
Decachlorobiphenyl	9.72	9.72	9.72	9.72	9.72	9.72	9.72	9.72	9.67	9.77

6E
8081 PESTICIDE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU65 Project: NPDES SAMPLING

GC Column: STX-CLP1 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 06/19/13

	CALIBRATION FACTORS								R^2
COMPOUND	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	MEAN	%RSD
alpha-BHC	1.5439	1.5547	1.5102	1.6675	1.5722	1.6801	1.7024	1.6044	4.8
beta-BHC	0.7227	0.6940	0.6288	0.6544	0.5978	0.6172	0.6154	0.6472	7.1
delta-BHC	1.3108	1.3377	1.2922	1.4417	1.3673	1.4738	1.5010	1.3892	6.0
gamma-BHC (Lindane)	1.4389	1.4516	1.3866	1.5141	1.4188	1.5091	1.5210	1.4629	3.6
Heptachlor	1.4611	1.4499	1.3707	1.4603	1.3396	1.3863	1.3590	1.4038	3.7
Aldrin	1.3809	1.3803	1.3036	1.4204	1.3102	1.3714	1.3549	1.3602	3.0
Heptachlor epoxide b	1.3713	1.3363	1.2293	1.3089	1.1855	1.2139	1.1821	1.2610	6.1
Endosulfan I	1.2951	1.2614	1.1522	1.2204	1.1025	1.1230	1.0962	1.1787	6.8
Dieldrin	1.2872	1.2978	1.2235	1.3084	1.1909	1.2167	1.1938	1.2455	4.1
4,4'-DDE	1.0139	0.9831	0.9049	0.9548	0.8804	0.9337	0.9621	0.9476	4.8
Endrin	1.2671	1.2700	1.2054	1.2552	1.1578	1.1596	1.1241	1.2056	5.0
Endosulfan II	1.2826	1.2659	1.1980	1.2432	1.1395	1.1415	1.1072	1.1968	5.8
4,4'-DDD	1.2001	1.1988	1.1420	1.1784	1.1006	1.1329	1.1060	1.1512	3.6
Endosulfan sulfate	1.1243	1.1172	1.0439	1.0892	0.9973	1.0231	1.0024	1.0568	5.0
4,4'-DDT	1.1508	1.1600	1.1076	1.1738	1.0915	1.1372	1.1217	1.1346	2.6
Methoxychlor	0.6089	0.5929	0.5343	0.5362	0.4840	0.4979	0.5049	0.5370	8.9
Endrin ketone	1.4712	1.4100	1.2991	1.3397	1.2084	1.2410	1.2163	1.3122	7.7
Endrin aldehyde	1.0260	1.0155	0.9446	0.9809	0.8892	0.8943	0.8714	0.9460	6.7
gamma-Chlordane	1.3445	1.3274	1.2342	1.3370	1.2340	1.2975	1.2933	1.2954	3.6
alpha-Chlordane	1.3528	1.3154	1.2108	1.2957	1.1858	1.2371	1.2288	1.2609	4.8
Hexachlorobutadiene	1.9025	1.8274	1.7247	1.8054	1.6395	1.7040	1.7020	1.7579	5.1
Hexachlorobenzene	1.4861	1.3849	1.2506	1.2922	1.1582	1.1894	1.1740	1.2765	9.5
Tetrachloro-m-xylene	1.1560	1.1331	1.0665	1.1244	1.0248	1.0590	1.0400	1.0862	4.7
Decachlorobiphenyl	1.1337	1.0998	0.9925	1.0181	0.9174	0.9470	0.9398	1.0069	8.2

6E
8081 PESTICIDE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU65 Project: NPDES SAMPLING

GC Column: STX-CLP2 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 06/19/13

	CALIBRATION FACTORS								R^2
COMPOUND	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	MEAN	%RSD
alpha-BHC	1.8907	1.9585	1.8601	2.0205	1.8576	1.9256	1.8660	1.9113	3.2
beta-BHC	1.0592	0.9600	0.8113	0.8084	0.7203	0.7323	0.7044	0.8280	16.2
delta-BHC	1.6482	1.6625	1.5719	1.7263	1.5992	1.6594	1.6648	1.6475	3.0
gamma-BHC (Lindane)	1.7179	1.7217	1.6316	1.7706	1.6273	1.6803	1.6806	1.6900	3.0
Heptachlor	1.9323	1.7962	1.6666	1.7262	1.5264	1.4801	1.3470	1.6392	12.3
Aldrin	1.8340	1.6659	1.5367	1.6223	1.4440	1.4302	1.3301	1.5519	11.0
Heptachlor epoxide b	1.8168	1.6398	1.4044	1.4381	1.2629	1.2239	1.1149	1.4144	17.4
Endosulfan I	1.5192	1.4169	1.2720	1.3234	1.1718	1.1458	1.0476	1.2710	12.9
Dieldrin	1.5995	1.4528	1.3259	1.3512	1.1540	1.1018	0.9936	1.2827	16.5
4,4'-DDE	1.5367	1.4595	1.3241	1.3606	1.1790	1.1494	1.0294	1.2912	14.0
Endrin	1.9014	1.8672	1.7277	1.7487	1.5208	1.4564	1.3250	1.6496	13.2
Endosulfan II	1.9719	1.9168	1.7752	1.8312	1.5816	1.5646	1.4555	1.7281	11.3
4,4'-DDD	2.1094	1.9958	1.8121	1.8464	1.6032	1.5801	1.4841	1.7759	13.0
Endosulfan sulfate	1.7321	1.6421	1.4774	1.5146	1.3442	1.3332	1.2549	1.4712	11.8
4,4'-DDT	1.7471	1.6963	1.5902	1.6301	1.4383	1.4739	1.4388	1.5735	8.0
Methoxychlor	0.7305	0.7076	0.6202	0.6027	0.5239	0.5120	0.4022	0.5856	19.7
Endrin ketone	1.6388	1.6002	1.4832	1.5356	1.3499	1.3642	1.3207	1.4704	8.7
Endrin aldehyde	1.5847	1.5114	1.3396	1.3594	1.1937	1.1861	1.1117	1.3266	13.3
gamma-Chlordane	1.8298	1.6423	1.4613	1.5070	1.3462	1.3504	1.2825	1.4885	13.0
alpha-Chlordane	1.6047	1.4942	1.3505	1.4009	1.2502	1.2566	1.1949	1.3646	10.8
Hexachlorobutadiene	1.7754	1.7738	1.6689	1.7660	1.5610	1.5866	1.4596	1.6559	7.5
Hexachlorobenzene	1.9001	1.7583	1.5690	1.6119	1.4286	1.4201	1.3431	1.5759	12.7
Tetrachloro-m-xylene	1.5306	1.4889	1.3673	1.4133	1.2254	1.1895	1.0472	1.3232	13.2
Decachlorobiphenyl	1.4748	1.4207	1.2965	1.3235	1.1681	1.1996	1.1690	1.2932	9.5

6G

8081 INITIAL CALIBRATION OF SINGLE POINT PCBs and TOXAPHENE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU65 Project: NPDES SAMPLING

GC Column: STX-CLP1 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 06/19/13

Toxaphene			
Peak	RT	RT WIN	Cal Factor
1	6.958	6.91- 7.01	0.0513
2	7.010	6.96- 7.06	0.0354
3	7.267	7.22- 7.32	0.0585
4	7.593	7.54- 7.64	0.0595
5	7.632	7.58- 7.68	0.0395
6	7.913	7.86- 7.96	0.0336

FORM VI PEST-4C

6G

8081 INITIAL CALIBRATION OF SINGLE POINT PCBs and TOXAPHENE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU65 Project: NPDES SAMPLING

GC Column: STX-CLP2 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 06/19/13

Toxaphene			
Peak	RT	RT WIN	Cal Factor
1	7.291	7.24- 7.34	0.0560
2	7.615	7.57- 7.67	0.0826
3	7.846	7.80- 7.90	0.0906
4	8.314	8.26- 8.36	0.0653
5	8.353	8.30- 8.40	0.0831

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.: 20130619PEST

Analysis Date: 05-JUL-2013 12:33 Init. Calib. Date: 19-JUN-2013

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.172	127886
Endrin	6.685	7843718
4,4'-DDD	6.727	297447
4,4'-DDT	6.984	7763679
Endrin ketone	7.911	332793
Endrin aldehyde	7.267	157414

DDT Percent Breakdown = 5.2 %
((127886+297447) * 100)/(127886+297447+7763679)

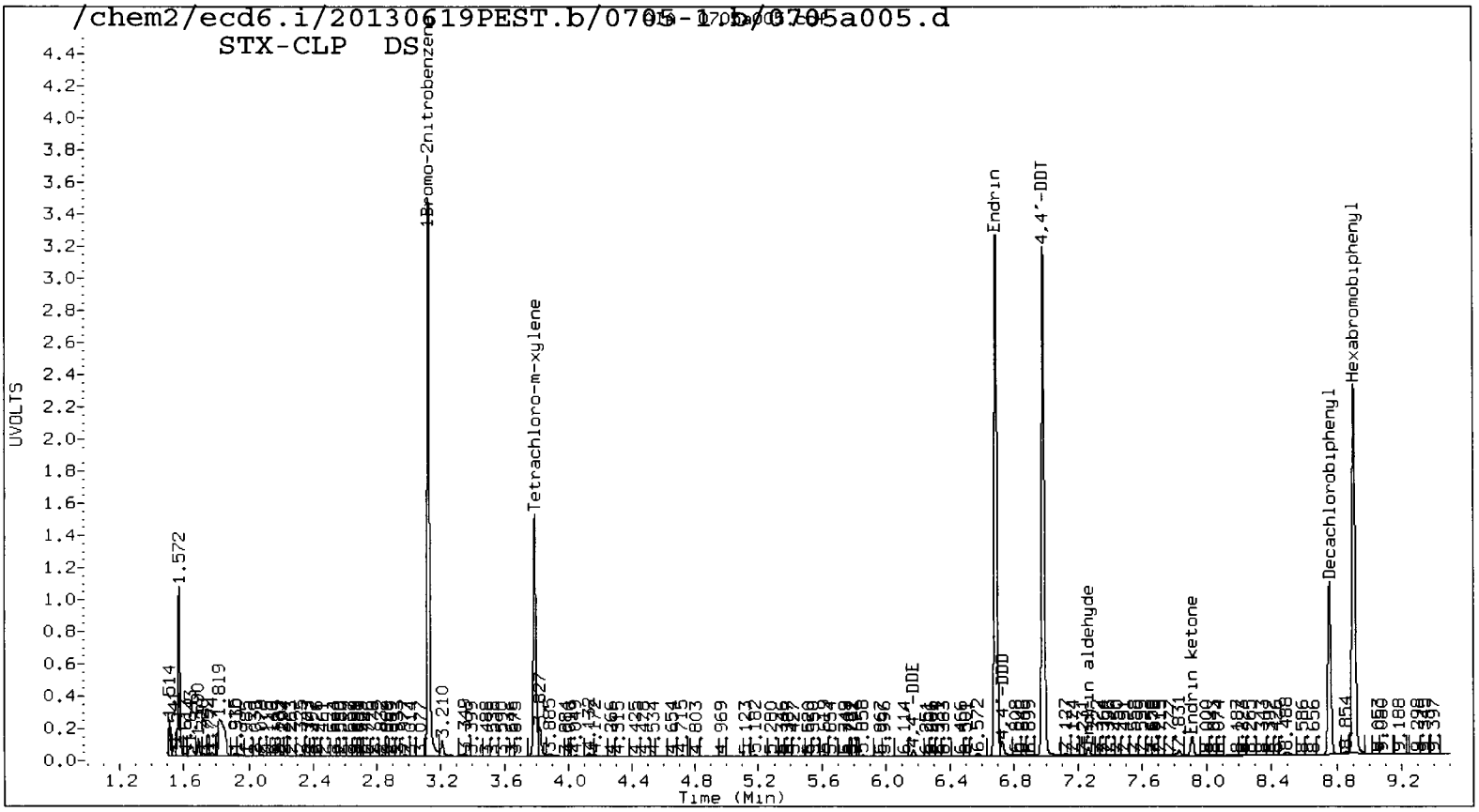
Endrin Percent Breakdown = 5.9 %
((157414+332793) * 100)/(157414+332793+7843718)

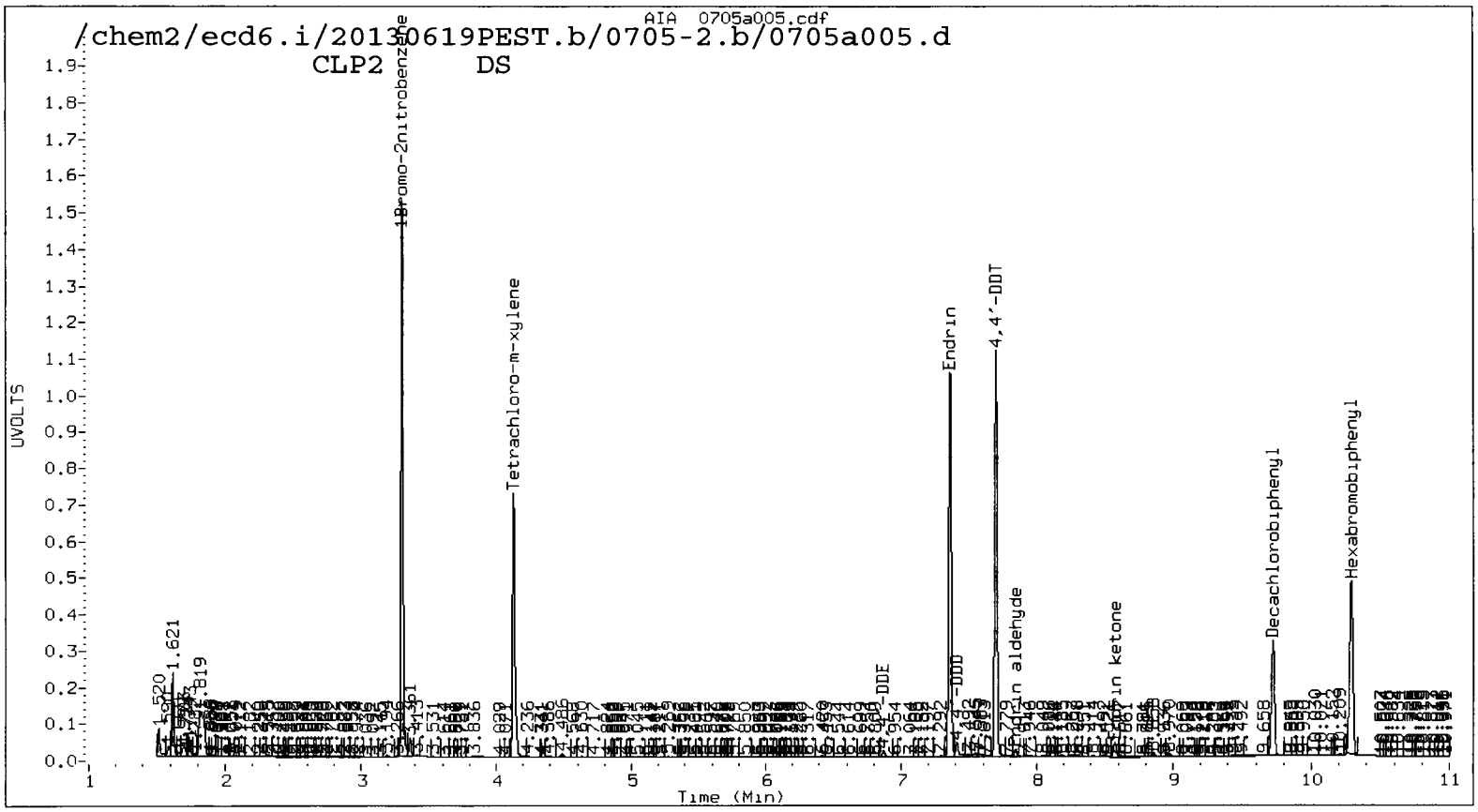
GC Column: STX-CLP2 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.870	523468
Endrin	7.355	27019209
4,4'-DDD	7.406	1484226
4,4'-DDT	7.694	27347050
Endrin ketone	8.576	1105058
Endrin aldehyde	7.841	747740

DDT Percent Breakdown = 6.8 %
((523468+1484226) * 100)/(523468+1484226+27347050)

Endrin Percent Breakdown = 6.4 %
((747740+1105058) * 100)/(747740+1105058+27019209)


/chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a005.d
STX-CLP DS
UVOLTS
Time (Min)
1.572
3.210
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0705a005.cdf
/chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a005.d
CLP2 DS
UVOLTS
Time (Min)
1.621
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU65 Project: NPDES SAMPLING

GC Column: STX-CLP2 ID: 0.53 (mm)

Init. Calib. Date: 06/19/13

Lab Ccal ID: INDAE Date/Time Analyzed: 07/05/13,1251

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
alpha-BHC	4.71	4.66	4.76	19.8	20.0	-1.2
beta-BHC	5.14	5.09	5.19	17.2	20.0	-13.8
delta-BHC	5.45	5.40	5.50	19.8	20.0	-0.8
gamma-BHC (Lindane)	5.07	5.02	5.12	19.5	20.0	-2.6
Heptachlor	5.53	5.48	5.58	18.6	20.0	-7.1
Aldrin	5.87	5.82	5.92	18.9	20.0	-5.5
Heptachlor epoxide b	6.42	6.37	6.47	18.2	20.0	-8.9
Endosulfan I	6.81	6.76	6.86	18.3	20.0	-8.4
Dieldrin	7.07	7.02	7.12	36.3	40.0	-9.2
4,4'-DDE	6.87	6.82	6.92	35.9	40.0	-10.4
Endrin	7.35	7.31	7.41	41.4	40.0	3.6
Endosulfan II	7.54	7.50	7.60	42.1	40.0	5.3
4,4'-DDD	7.41	7.36	7.46	38.9	40.0	-2.7
Endosulfan sulfate	8.09	8.04	8.14	42.8	40.0	7.1
4,4'-DDT	7.69	7.64	7.74	41.6	40.0	4.0
Methoxychlor	8.28	8.23	8.33	185.7	200.0	-7.2
Endrin ketone	8.58	8.53	8.63	43.9	40.0	9.6
Endrin aldehyde	7.84	7.79	7.89	41.8	40.0	4.5
gamma-Chlordane	6.60	6.55	6.65	17.9	20.0	-10.3
alpha-Chlordane	6.74	6.69	6.79	18.1	20.0	-9.7
Hexachlorobutadiene	2.47	2.42	2.52	19.1	20.0	-4.4
Hexachlorobenzene	4.59	4.54	4.64	20.5	20.0	2.4
Tetrachloro-m-xylene	4.13	4.08	4.18	39.3	40.0	-1.7
Decachlorobiphenyl	9.72	9.67	9.77	40.5	40.0	1.2

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU65 Project: NPDES SAMPLING

GC Column: STX-CLP1 ID: 0.53 (mm)

Init. Calib. Date: 06/19/13

Lab Ccal ID: INDAE Date/Time Analyzed: 07/05/13,1251

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
alpha-BHC	4.28	4.24	4.34	21.8	20.0	9.0
beta-BHC	4.64	4.59	4.69	19.9	20.0	-0.5
delta-BHC	4.81	4.76	4.86	21.6	20.0	8.2
gamma-BHC (Lindane)	4.56	4.52	4.62	21.5	20.0	7.4
Heptachlor	5.00	4.96	5.06	21.3	20.0	6.4
Aldrin	5.30	5.26	5.36	21.6	20.0	8.0
Heptachlor epoxide b	5.87	5.83	5.93	20.9	20.0	4.2
Endosulfan I	6.24	6.21	6.31	20.6	20.0	3.0
Dieldrin	6.47	6.43	6.53	42.4	40.0	5.9
4,4'-DDE	6.17	6.13	6.23	41.1	40.0	2.7
Endrin	6.69	6.65	6.75	40.6	40.0	1.5
Endosulfan II	6.89	6.86	6.96	40.2	40.0	0.5
4,4'-DDD	6.73	6.69	6.79	39.6	40.0	-1.0
Endosulfan sulfate	7.66	7.62	7.72	40.4	40.0	1.0
4,4'-DDT	6.98	6.95	7.05	40.7	40.0	1.7
Methoxychlor	7.41	7.37	7.47	182.4	200.0	-8.8
Endrin ketone	7.91	7.88	7.98	39.5	40.0	-1.3
Endrin aldehyde	7.27	7.23	7.33	40.2	40.0	0.6
gamma-Chlordane	5.99	5.95	6.05	21.4	20.0	7.1
alpha-Chlordane	6.11	6.08	6.18	20.9	20.0	4.5
Hexachlorobutadiene	2.31	2.26	2.36	20.7	20.0	3.7
Hexachlorobenzene	4.13	4.09	4.19	20.0	20.0	-0.2
Tetrachloro-m-xylene	3.79	3.75	3.85	41.5	40.0	3.6
Decachlorobiphenyl	8.76	8.73	8.83	39.3	40.0	-1.7

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.: 20130619PEST

Analysis Date: 05-JUL-2013 18:12 Init. Calib. Date: 19-JUN-2013

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.173	125664
Endrin	6.686	7754250
4,4'-DDD	6.728	269527
4,4'-DDT	6.984	7696139
Endrin ketone	7.912	270863
Endrin aldehyde	7.268	141446

DDT Percent Breakdown = 4.9 %
((125664+269527) * 100)/(125664+269527+7696139)

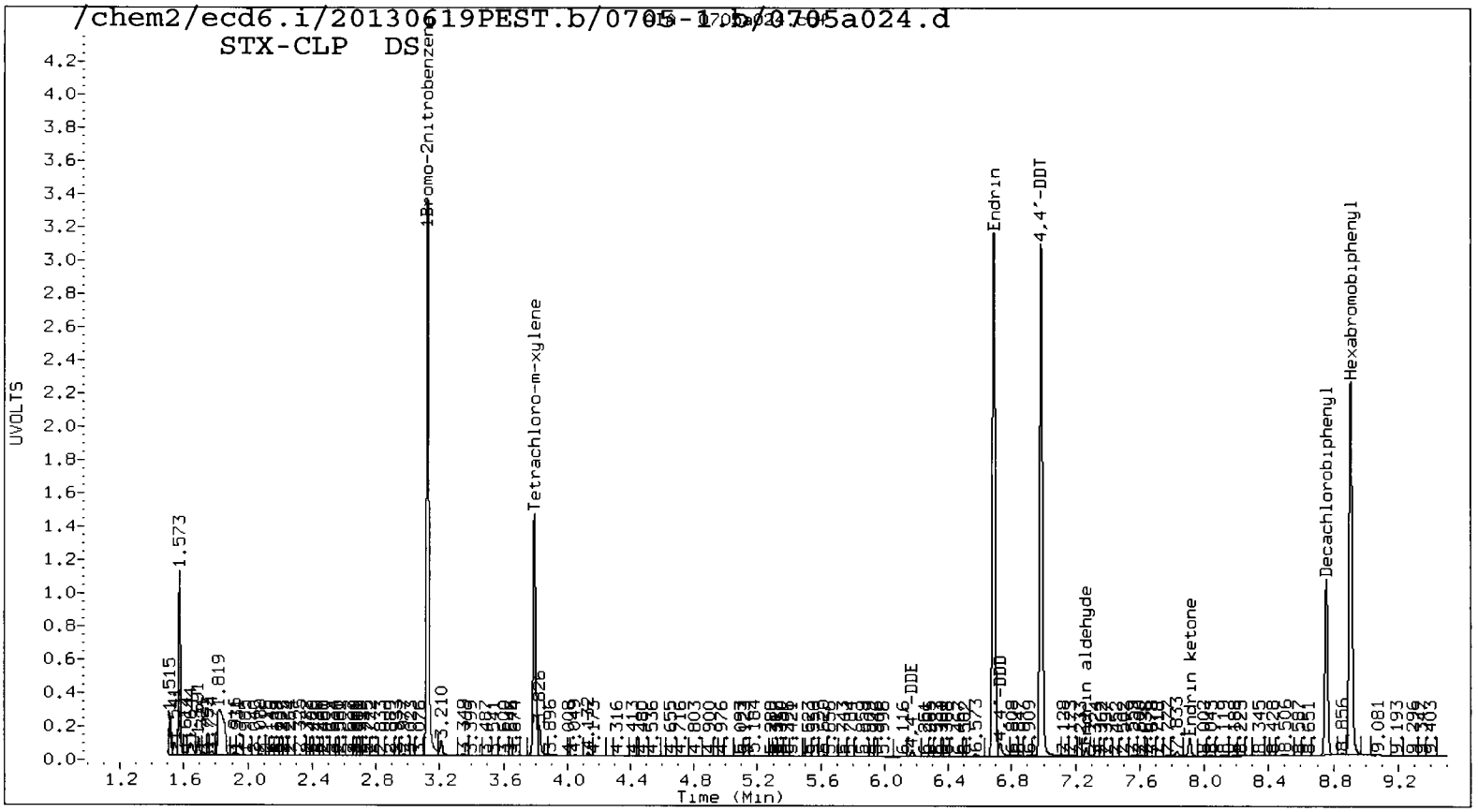
Endrin Percent Breakdown = 5.0 %
((141446+270863) * 100)/(141446+270863+7754250)

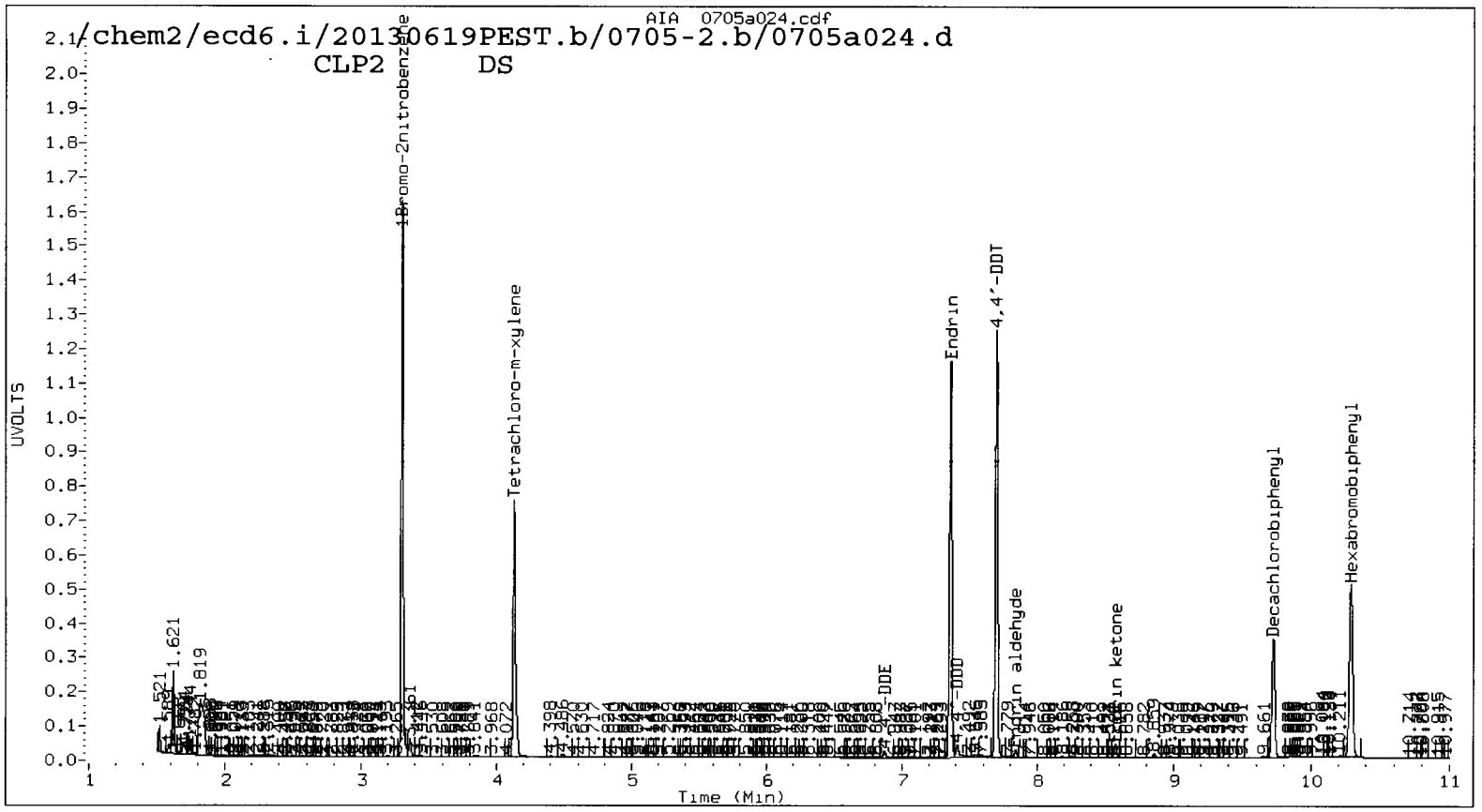
GC Column: STX-CLP2 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.870	574166
Endrin	7.356	29402986
4,4'-DDD	7.408	1465569
4,4'-DDT	7.695	30236058
Endrin ketone	8.577	986258
Endrin aldehyde	7.842	728845

DDT Percent Breakdown = 6.3 %
((574166+1465569) * 100)/(574166+1465569+30236058)

Endrin Percent Breakdown = 5.5 %
((728845+986258) * 100)/(728845+986258+29402986)


/chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a024.d
STX-CLP DS
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
1.573
3.210
4.819
6.116
UVOLTS
Time (Min)


AIA 0705a024.cdf
/chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a024.d
CLP2 DS
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
1.621
4.819
UVOLTS
Time (Min)

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU65 Project: NPDES SAMPLING

GC Column: STX-CLP2 ID: 0.53 (mm)

Init. Calib. Date: 06/19/13

Lab Ccal ID: INDAE Date/Time Analyzed: 07/05/13,1829

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
alpha-BHC	4.71	4.66	4.76	19.9	20.0	-0.7
beta-BHC	5.14	5.09	5.19	17.4	20.0	-13.1
delta-BHC	5.45	5.40	5.50	20.0	20.0	0.1
gamma-BHC (Lindane)	5.07	5.02	5.12	19.7	20.0	-1.6
Heptachlor	5.53	5.48	5.58	18.9	20.0	-5.4
Aldrin	5.87	5.82	5.92	19.0	20.0	-4.9
Heptachlor epoxide b	6.42	6.37	6.47	18.4	20.0	-8.1
Endosulfan I	6.81	6.76	6.86	18.6	20.0	-7.1
Dieldrin	7.07	7.02	7.12	36.8	40.0	-8.1
4,4'-DDE	6.87	6.82	6.92	36.3	40.0	-9.3
Endrin	7.36	7.31	7.41	41.0	40.0	2.6
Endosulfan II	7.54	7.50	7.60	41.5	40.0	3.7
4,4'-DDD	7.41	7.36	7.46	38.5	40.0	-3.7
Endosulfan sulfate	8.09	8.04	8.14	42.6	40.0	6.4
4,4'-DDT	7.70	7.64	7.74	41.7	40.0	4.3
Methoxychlor	8.28	8.23	8.33	183.4	200.0	-8.3
Endrin ketone	8.58	8.53	8.63	44.4	40.0	10.9
Endrin aldehyde	7.84	7.79	7.89	41.9	40.0	4.7
gamma-Chlordane	6.60	6.55	6.65	18.2	20.0	-9.2
alpha-Chlordane	6.74	6.69	6.79	18.3	20.0	-8.3
Hexachlorobutadiene	2.47	2.42	2.52	18.0	20.0	-9.9
Hexachlorobenzene	4.59	4.54	4.64	20.7	20.0	3.4
Tetrachloro-m-xylene	4.13	4.08	4.18	39.3	40.0	-1.8
Decachlorobiphenyl	9.72	9.67	9.77	41.2	40.0	3.0

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU65 Project: NPDES SAMPLING

GC Column: STX-CLP1 ID: 0.53 (mm)

Init. Calib. Date: 06/19/13

Lab Ccal ID: INDAE Date/Time Analyzed: 07/05/13,1829

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
alpha-BHC	4.28	4.24	4.34	22.1	20.0	10.4
beta-BHC	4.64	4.59	4.69	20.2	20.0	0.8
delta-BHC	4.81	4.76	4.86	21.9	20.0	9.4
gamma-BHC (Lindane)	4.56	4.52	4.62	21.7	20.0	8.7
Heptachlor	5.00	4.96	5.06	21.7	20.0	8.5
Aldrin	5.30	5.26	5.36	21.9	20.0	9.5
Heptachlor epoxide b	5.87	5.83	5.93	21.1	20.0	5.4
Endosulfan I	6.25	6.21	6.31	20.7	20.0	3.7
Dieldrin	6.47	6.43	6.53	42.6	40.0	6.4
4,4'-DDE	6.17	6.13	6.23	40.9	40.0	2.4
Endrin	6.68	6.65	6.75	40.8	40.0	1.9
Endosulfan II	6.89	6.86	6.96	40.1	40.0	0.3
4,4'-DDD	6.73	6.69	6.79	39.4	40.0	-1.6
Endosulfan sulfate	7.66	7.62	7.72	40.2	40.0	0.4
4,4'-DDT	6.98	6.95	7.05	41.2	40.0	3.1
Methoxychlor	7.41	7.37	7.47	184.7	200.0	-7.6
Endrin ketone	7.91	7.88	7.98	39.5	40.0	-1.3
Endrin aldehyde	7.27	7.23	7.33	40.2	40.0	0.6
gamma-Chlordane	5.99	5.95	6.05	21.6	20.0	8.1
alpha-Chlordane	6.11	6.08	6.18	21.2	20.0	5.8
Hexachlorobutadiene	2.31	2.26	2.36	20.9	20.0	4.4
Hexachlorobenzene	4.13	4.09	4.19	20.1	20.0	0.5
Tetrachloro-m-xylene	3.79	3.75	3.85	41.7	40.0	4.2
Decachlorobiphenyl	8.76	8.73	8.83	39.4	40.0	-1.4

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU65 Project: NPDES SAMPLING

GC Column: STX-CLP2 ID: 0.53 (mm)

Init. Calib. Date: 06/19/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 07/05/13,1309

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Toxaphene -1	7.29	7.24	7.34	2480	2500	-0.8
Toxaphene -2	7.62	7.57	7.67	2460	2500	-1.6
Toxaphene -3	7.85	7.80	7.90	2400	2500	-4.0
Toxaphene -4	8.31	8.26	8.36	2430	2500	-2.8
Toxaphene -5	8.35	8.30	8.40	2420	2500	-3.2

AVERAGE %D = 2.5

FORM VII PEST-3

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU65 Project: NPDES SAMPLING

GC Column: STX-CLP1 ID: 0.53 (mm)

Init. Calib. Date: 06/19/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 07/05/13,1309

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
Toxaphene -1	6.94	6.91	7.01	2320	2500	-7.2	
Toxaphene -2	6.99	6.96	7.06	2410	2500	-3.6	
Toxaphene -3	7.25	7.22	7.32	2300	2500	-8.0	
Toxaphene -4	7.58	7.54	7.64	2320	2500	-7.2	
Toxaphene -5	7.64	7.58	7.68	1830	2500	-26.8	<-
Toxaphene -6	7.89	7.86	7.96	2300	2500	-8.0	

AVERAGE %D = 10.1

FORM VII PEST-3

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU65 Project: NPDES SAMPLING

GC Column: STX-CLP2 ID: 0.53 (mm)

Init. Calib. Date: 06/19/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 07/05/13,1847

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Toxaphene -1	7.29	7.24	7.34	2490	2500	-0.4
Toxaphene -2	7.62	7.57	7.67	2500	2500	0.0
Toxaphene -3	7.85	7.80	7.90	2470	2500	-1.2
Toxaphene -4	8.31	8.26	8.36	2500	2500	0.0
Toxaphene -5	8.35	8.30	8.40	2520	2500	0.8

AVERAGE %D = 0.5

FORM VII PEST-3

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU65 Project: NPDES SAMPLING

GC Column: STX-CLP1 ID: 0.53 (mm)

Init. Calib. Date: 06/19/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 07/05/13,1847

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
Toxaphene -1	6.94	6.91	7.01	2370	2500	-5.2	
Toxaphene -2	6.99	6.96	7.06	2440	2500	-2.4	
Toxaphene -3	7.25	7.22	7.32	2380	2500	-4.8	
Toxaphene -4	7.58	7.54	7.64	2350	2500	-6.0	
Toxaphene -5	7.64	7.58	7.68	1920	2500	-23.2	<-
Toxaphene -6	7.89	7.86	7.96	2370	2500	-5.2	

AVERAGE %D = 7.8

FORM VII PEST-3

FORM 8
PESTICIDE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU65 Project: NPDES SAMPLING

GC Column: STX-CLP1 ID: 0.53(mm) Instrument ID: ECD6

Init. Calib. Date: 06/19/13

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

		IS1 AREA	RT	IS2 AREA	RT
	ICAL MIDPT	5590801	3.130	4870538	8.927
	UPPER LIMIT	11181602	3.180	9741076	8.977
	LOWER LIMIT	2795400	3.080	2435269	8.877

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01		INDAE	06/19/13	1757	5590801	3.130	4870538	8.927
02		INDAA	06/19/13	1814	5443407	3.130	4756712	8.927
03		INDAB	06/19/13	1832	5578569	3.131	4877747	8.927
04		INDAC	06/19/13	1850	5651084	3.130	4910634	8.926
05		INDAD	06/19/13	1908	5597417	3.130	4918023	8.927
06		INDAF	06/19/13	1926	5751246	3.130	5082371	8.927
07		INDAG	06/19/13	1944	5601251	3.131	5032937	8.927
08		TOXAPHENE	06/19/13	2317	6058478	3.132	5799142	8.927
09		DS	07/05/13	1233	6661369	3.124	6202267	8.905
10		INDAE	07/05/13	1251	6416600	3.124	5932228	8.906
11		TOXAPH	07/05/13	1309	6027774	3.124	5747706	8.905
12	WU65MBW1	WU65MBW1	07/05/13	1327	6130211	3.124	5707094	8.906
13	WU65LCSW1	WU65LCSW1	07/05/13	1345	6192907	3.124	5638023	8.906
14	WU65LCSDW1	WU65LCSDW1	07/05/13	1402	6888145	3.124	6318616	8.906
15	LF-TP-001-20	WU65A	07/05/13	1438	7112443	3.124	6336872	8.904
16	LF-FD-001-20	WU65B	07/05/13	1456	7353155	3.124	6534370	8.904
17		DS	07/05/13	1812	6570155	3.125	6036146	8.907
18		INDAE	07/05/13	1829	6365505	3.125	5916588	8.907
19		TOXAPH	07/05/13	1847	5984250	3.124	5714594	8.906

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- .05 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

FORM 8
PESTICIDE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU65 Project: NPDES SAMPLING

GC Column: STX-CLP2 ID: 0.53(mm) Instrument ID: ECD6

Init. Calib. Date: 06/19/13

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

		IS1 AREA	RT	IS2 AREA	RT
	ICAL MIDPT	28320361	3.300	16454599	10.289
	UPPER LIMIT	56640722	3.350	32909198	10.339
	LOWER LIMIT	14160180	3.250	8227300	10.239

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01		INDAE	06/19/13	1757	28320361	3.300	16454599	10.289
02		INDAA	06/19/13	1814	27626455	3.300	16087272	10.288
03		INDAB	06/19/13	1832	28124817	3.300	16392538	10.289
04		INDAC	06/19/13	1850	28473248	3.299	16513179	10.289
05		INDAD	06/19/13	1908	28402073	3.299	16714534	10.289
06		INDAF	06/19/13	1926	29146657	3.300	17347014	10.289
07		INDAG	06/19/13	1944	28311756	3.300	17081518	10.289
08		TOXAPHENE	06/19/13	2317	29930668	3.301	19105364	10.289
09		DS	07/05/13	1233	29862382	3.300	15770639	10.285
10		INDAE	07/05/13	1251	29558736	3.300	15796250	10.286
11		TOXAPH	07/05/13	1309	28221985	3.300	15001767	10.286
12	WU65MBW1	WU65MBW1	07/05/13	1327	28863269	3.300	15715288	10.286
13	WU65LCSW1	WU65LCSW1	07/05/13	1345	29494685	3.300	15896343	10.286
14	WU65LCSDW1	WU65LCSDW1	07/05/13	1402	32843486	3.300	17578117	10.286
15	LF-TP-001-20	WU65A	07/05/13	1438	31968654	3.300	16753201	10.285
16	LF-FD-001-20	WU65B	07/05/13	1456	33128964	3.300	17292931	10.285
17		DS	07/05/13	1812	32085538	3.301	17463106	10.287
18		INDAE	07/05/13	1829	31676402	3.301	17433121	10.288
19		TOXAPH	07/05/13	1847	29870826	3.300	16191067	10.286

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- .05 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

Metals Analysis
Report and Summary QC Forms

ARI Job ID: WU65, WU71

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WU65

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
LF-TP-001-20130619	WU65A	13-13119	
LF-TP-001-20130619D	WU65ADUP	13-13119	
LF-TP-001-20130619S	WU65ASPK	13-13119	
LF-FD-001-20130619	WU65B	13-13120	
PBW	WU65MB1	13-13120	
LCSW	WU65MB1SPK	13-13120	
LF-TP-001-20130619	WU65C	13-13124	
LF-TP-001-20130619D	WU65CDUP	13-13124	
LF-TP-001-20130619S	WU65CSPK	13-13124	
LF-FD-001-20130619	WU65D	13-13125	
PBW	WU65MB2	13-13125	
LCSW	WU65MB2SPK	13-13125	

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: Eric Larson for Name: Jay Kuhn

Date: 6-28-13 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: LF-TP-001-20130619-W
SAMPLE

Lab Sample ID: WU65A
LIMS ID: 13-13119
Matrix: Water
Data Release Authorized:
Reported: 06/28/13

QC Report No: WU65-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
200.8	06/24/13	200.8	06/27/13	**7440-36-0**	**Antimony**	0.010	0.2	**1.5**	
200.8	06/24/13	200.8	06/27/13	**7440-38-2**	**Arsenic**	0.048	0.2	**2.1**	
200.8	06/24/13	200.8	06/27/13	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	06/24/13	200.8	06/27/13	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	06/24/13	200.8	06/27/13	**7440-47-3**	**Chromium**	0.045	0.5	**3.3**	
200.8	06/24/13	200.8	06/27/13	**7440-50-8**	**Copper**	0.158	0.5	**5.0**	
200.8	06/24/13	200.8	06/27/13	**7439-92-1**	**Lead**	0.046	0.1	**1.3**	
200.8	06/24/13	200.8	06/27/13	**7440-02-0**	**Nickel**	0.079	0.5	**1.6**	
200.8	06/24/13	200.8	06/27/13	**7782-49-2**	**Selenium**	0.127	0.5	**0.7**	
200.8	06/24/13	200.8	06/27/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	06/24/13	200.8	06/27/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	06/24/13	200.8	06/27/13	**7440-66-6**	**Zinc**	0.50	4	**12**	

Reported in ug/L (ppb).
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: LF-FD-001-20130619-W
SAMPLE

Lab Sample ID: WU65B
LIMS ID: 13-13120
Matrix: Water
Data Release Authorized:
Reported: 06/28/13

QC Report No: WU65-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
200.8	06/24/13	200.8	06/27/13	**7440-36-0**	**Antimony**	0.010	0.2	**1.5**	
200.8	06/24/13	200.8	06/27/13	**7440-38-2**	**Arsenic**	0.048	0.2	**2.0**	
200.8	06/24/13	200.8	06/27/13	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	06/24/13	200.8	06/27/13	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	06/24/13	200.8	06/27/13	**7440-47-3**	**Chromium**	0.045	0.5	**3.2**	
200.8	06/24/13	200.8	06/27/13	**7440-50-8**	**Copper**	0.158	0.5	**4.9**	
200.8	06/24/13	200.8	06/27/13	**7439-92-1**	**Lead**	0.046	0.1	**1.3**	
200.8	06/24/13	200.8	06/27/13	**7440-02-0**	**Nickel**	0.079	0.5	**1.6**	
200.8	06/24/13	200.8	06/27/13	**7782-49-2**	**Selenium**	0.127	0.5	**0.7**	
200.8	06/24/13	200.8	06/27/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	06/24/13	200.8	06/27/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	06/24/13	200.8	06/27/13	**7440-66-6**	**Zinc**	0.50	4	**12**	

Reported in ug/L (ppb).
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: LF-TP-001-20130619-W
MATRIX SPIKE

Lab Sample ID: WU65A
LIMS ID: 13-13119
Matrix: Water
Data Release Authorized:
Reported: 06/28/13

QC Report No: WU65-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Antimony	200.8	1.5	25.8	25.0	97.2%	
Arsenic	200.8	2.1	29.4	25.0	109%	
Beryllium	200.8	0.2 U	24.7	25.0	98.8%	
Cadmium	200.8	0.1 U	23.9	25.0	95.6%	
Chromium	200.8	3.3	27.3	25.0	96.0%	
Copper	200.8	5.0	30.0	25.0	100%	
Lead	200.8	1.3	25.5	25.0	96.8%	
Nickel	200.8	1.6	26.4	25.0	99.2%	
Selenium	200.8	0.7	79.4	80.0	98.4%	
Silver	200.8	0.2 U	20.2	25.0	80.8%	
Thallium	200.8	0.2 U	25.4	25.0	102%	
Zinc	200.8	12	80	80	85.0%	

Reported in µg/L

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked
NR-Not Recovered

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: LF-TP-001-20130619-W
DUPLICATE

Lab Sample ID: WU65A
LIMS ID: 13-13119
Matrix: Water
Data Release Authorized:
Reported: 06/28/13

QC Report No: WU65-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/19/13
Date Received: 06/19/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	200.8	1.5	1.5	0.0%	+/- 20%	
Arsenic	200.8	2.1	2.0	4.9%	+/- 20%	
Beryllium	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Cadmium	200.8	0.1 U	0.1 U	0.0%	+/- 0.1	L
Chromium	200.8	3.3	3.2	3.1%	+/- 20%	
Copper	200.8	5.0	4.8	4.1%	+/- 20%	
Lead	200.8	1.3	1.3	0.0%	+/- 20%	
Nickel	200.8	1.6	1.6	0.0%	+/- 0.5	L
Selenium	200.8	0.7	0.6	15.4%	+/- 0.5	L
Silver	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Thallium	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Zinc	200.8	12	11	8.7%	+/- 4	L

Reported in µg/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: WU65LCS
LIMS ID: 13-13120
Matrix: Water
Data Release Authorized:
Reported: 06/28/13

QC Report No: WU65-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Antimony	200.8	24.1	25.0	96.4%	
Arsenic	200.8	26.7	25.0	107%	
Beryllium	200.8	23.8	25.0	95.2%	
Cadmium	200.8	24.4	25.0	97.6%	
Chromium	200.8	25.2	25.0	101%	
Copper	200.8	26.7	25.0	107%	
Lead	200.8	25.5	25.0	102%	
Nickel	200.8	25.8	25.0	103%	
Selenium	200.8	78.8	80.0	98.5%	
Silver	200.8	25.0	25.0	100%	
Thallium	200.8	26.6	25.0	106%	
Zinc	200.8	81	80	101%	

Reported in µg/L

N-Control limit not met
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: METHOD BLANK**

Lab Sample ID: WU65MB
LIMS ID: 13-13120
Matrix: Water
Data Release Authorized:
Reported: 06/28/13

QC Report No: WU65-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
200.8	06/24/13	200.8	06/27/13	7440-36-0	Antimony	0.010	0.2	0.2	U
200.8	06/24/13	200.8	06/27/13	7440-38-2	Arsenic	0.048	0.2	0.2	U
200.8	06/24/13	200.8	06/27/13	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	06/24/13	200.8	06/27/13	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	06/24/13	200.8	06/27/13	7440-47-3	Chromium	0.045	0.5	0.5	U
200.8	06/24/13	200.8	06/27/13	7440-50-8	Copper	0.158	0.5	0.5	U
200.8	06/24/13	200.8	06/27/13	7439-92-1	Lead	0.046	0.1	0.1	U
200.8	06/24/13	200.8	06/27/13	7440-02-0	Nickel	0.079	0.5	0.5	U
200.8	06/24/13	200.8	06/27/13	7782-49-2	Selenium	0.127	0.5	0.5	U
200.8	06/24/13	200.8	06/27/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	06/24/13	200.8	06/27/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	06/24/13	200.8	06/27/13	7440-66-6	Zinc	0.50	4	4	U

Reported in ug/L (ppb).
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: LF-TP-001-20130619-W
SAMPLE

Lab Sample ID: WU65C
LIMS ID: 13-13124
Matrix: Water
Data Release Authorized:
Reported: 06/28/13

QC Report No: WU65-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	Result	Q
200.8	06/24/13	200.8	06/27/13	**7440-36-0**	**Antimony**	0.010	0.2	**1.4**	
200.8	06/24/13	200.8	06/27/13	**7440-38-2**	**Arsenic**	0.048	0.2	**1.5**	
200.8	06/24/13	200.8	06/27/13	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	06/24/13	200.8	06/27/13	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	06/24/13	200.8	06/27/13	**7440-47-3**	**Chromium**	0.045	0.5	**1.4**	
200.8	06/24/13	200.8	06/27/13	**7440-50-8**	**Copper**	0.158	0.5	**3.5**	
200.8	06/24/13	200.8	06/27/13	7439-92-1	Lead	0.046	0.1	0.1	U
200.8	06/24/13	200.8	06/27/13	**7440-02-0**	**Nickel**	0.079	0.5	**1.4**	
200.8	06/24/13	200.8	06/27/13	**7782-49-2**	**Selenium**	0.127	0.5	**0.6**	
200.8	06/24/13	200.8	06/27/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	06/24/13	200.8	06/27/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	06/24/13	200.8	06/27/13	**7440-66-6**	**Zinc**	0.50	4	**6**	

Reported In µg/L (ppb)
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: LF-FD-001-20130619-W
SAMPLE

Lab Sample ID: WU65D
LIMS ID: 13-13125
Matrix: Water
Data Release Authorized:
Reported: 06/28/13

QC Report No: WU65-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	Result	Q
200.8	06/24/13	200.8	06/27/13	**7440-36-0**	**Antimony**	0.010	0.2	**1.5**	
200.8	06/24/13	200.8	06/27/13	**7440-38-2**	**Arsenic**	0.048	0.2	**1.5**	
200.8	06/24/13	200.8	06/27/13	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	06/24/13	200.8	06/27/13	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	06/24/13	200.8	06/27/13	**7440-47-3**	**Chromium**	0.045	0.5	**1.4**	
200.8	06/24/13	200.8	06/27/13	**7440-50-8**	**Copper**	0.158	0.5	**3.4**	
200.8	06/24/13	200.8	06/27/13	7439-92-1	Lead	0.046	0.1	0.1	U
200.8	06/24/13	200.8	06/27/13	**7440-02-0**	**Nickel**	0.079	0.5	**1.4**	
200.8	06/24/13	200.8	06/27/13	**7782-49-2**	**Selenium**	0.127	0.5	**0.6**	
200.8	06/24/13	200.8	06/27/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	06/24/13	200.8	06/27/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	06/24/13	200.8	06/27/13	**7440-66-6**	**Zinc**	0.50	4	**5**	

Reported In µg/L (ppb)
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: LF-TP-001-20130619-W
MATRIX SPIKE

Lab Sample ID: WU65C
LIMS ID: 13-13124
Matrix: Water
Data Release Authorized:
Reported: 06/28/13

QC Report No: WU65-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/19/13
Date Received: 06/19/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Antimony	200.8	1.4	25.0	25.0	94.4%	
Arsenic	200.8	1.5	27.9	25.0	106%	
Beryllium	200.8	0.2 U	23.7	25.0	94.8%	
Cadmium	200.8	0.1 U	23.5	25.0	94.0%	
Chromium	200.8	1.4	25.0	25.0	94.4%	
Copper	200.8	3.5	27.5	25.0	96.0%	
Lead	200.8	0.1 U	23.9	25.0	95.6%	
Nickel	200.8	1.4	25.2	25.0	95.2%	
Selenium	200.8	0.6	75.7	80.0	93.9%	
Silver	200.8	0.2 U	19.5	25.0	78.0%	
Thallium	200.8	0.2 U	24.7	25.0	98.8%	
Zinc	200.8	6	73	80.0	83.8%	

Reported in µg/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%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: LF-TP-001-20130619-W
DUPLICATE

Lab Sample ID: WU65C
LIMS ID: 13-13124
Matrix: Water
Data Release Authorized:
Reported: 06/28/13

QC Report No: WU65-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/19/13
Date Received: 06/19/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	200.8	1.4	1.5	6.9%	+/- 20%	
Arsenic	200.8	1.5	1.5	0.0%	+/- 20%	
Beryllium	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Cadmium	200.8	0.1 U	0.1 U	0.0%	+/- 0.1	L
Chromium	200.8	1.4	1.5	6.9%	+/- 0.5	L
Copper	200.8	3.5	3.5	0.0%	+/- 20%	
Lead	200.8	0.1 U	0.1 U	0.0%	+/- 0.1	L
Nickel	200.8	1.4	1.4	0.0%	+/- 0.5	L
Selenium	200.8	0.6	0.6	0.0%	+/- 0.5	L
Silver	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Thallium	200.8	0.2 U	0.2 U	0.0%	+/- 0.2	L
Zinc	200.8	6	6	0.0%	+/- 4	L

Reported in µg/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS

Sample ID: LAB CONTROL

Lab Sample ID: WU65LCS
LIMS ID: 13-13125
Matrix: Water
Data Release Authorized:
Reported: 06/28/13

QC Report No: WU65-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Antimony	200.8	24.0	25.0	96.0%	
Arsenic	200.8	26.4	25.0	106%	
Beryllium	200.8	23.5	25.0	94.0%	
Cadmium	200.8	24.4	25.0	97.6%	
Chromium	200.8	25.5	25.0	102%	
Copper	200.8	26.2	25.0	105%	
Lead	200.8	25.8	25.0	103%	
Nickel	200.8	25.7	25.0	103%	
Selenium	200.8	77.8	80.0	97.2%	
Silver	200.8	24.9	25.0	99.6%	
Thallium	200.8	26.8	25.0	107%	
Zinc	200.8	79	80	98.8%	

Reported in µg/L

N-Control limit not met
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS **Sample ID: METHOD BLANK**

Lab Sample ID: WU65MB
LIMS ID: 13-13125
Matrix: Water
Data Release Authorized:
Reported: 06/28/13

QC Report No: WU65-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	DL	LOQ	Result	Q
200.8	06/24/13	200.8	06/27/13	7440-36-0	Antimony	0.010	0.2	0.2	U
200.8	06/24/13	200.8	06/27/13	7440-38-2	Arsenic	0.048	0.2	0.2	U
200.8	06/24/13	200.8	06/27/13	7440-41-7	Beryllium	0.021	0.2	0.2	U
200.8	06/24/13	200.8	06/27/13	7440-43-9	Cadmium	0.010	0.1	0.1	U
200.8	06/24/13	200.8	06/27/13	7440-47-3	Chromium	0.045	0.5	0.5	U
200.8	06/24/13	200.8	06/27/13	7440-50-8	Copper	0.158	0.5	0.5	U
200.8	06/24/13	200.8	06/27/13	7439-92-1	Lead	0.046	0.1	0.1	U
200.8	06/24/13	200.8	06/27/13	7440-02-0	Nickel	0.079	0.5	0.5	U
200.8	06/24/13	200.8	06/27/13	7782-49-2	Selenium	0.127	0.5	0.5	U
200.8	06/24/13	200.8	06/27/13	7440-22-4	Silver	0.008	0.2	0.2	U
200.8	06/24/13	200.8	06/27/13	7440-28-0	Thallium	0.004	0.2	0.2	U
200.8	06/24/13	200.8	06/27/13	7440-66-6	Zinc	0.50	4	4	U

Reported In µg/L (ppb)
U-Analyte undetected at given LOQ
LOQ-Reporting Limit

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WU65

UNITS:ug/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Antimony	SB	PMS	MS062781	50.0	51.43	**102.9**	50.0	49.43	**98.9**	49.68	**99.4**	49.19	**98.4**	49.51	**99.0**	49.73	**99.5**
Arsenic	AS	PMS	MS062781	50.0	52.90	**105.8**	50.0	50.41	**100.8**	50.24	**100.5**	49.73	**99.5**	49.58	**99.2**	49.54	**99.1**
Beryllium	BE	PMS	MS062781	50.0	50.34	**100.7**	50.0	49.64	**99.3**	49.41	**98.8**	48.70	**97.4**	47.80	**95.6**	47.89	**95.8**
Cadmium	CD	PMS	MS062781	50.0	49.77	**99.5**	50.0	49.84	**99.7**	50.04	**100.1**	49.41	**98.8**	49.76	**99.5**	49.25	**98.5**
Chromium	CR	PMS	MS062781	50.0	51.04	**102.1**	50.0	50.19	**100.4**	51.18	**102.4**	49.94	**99.9**	48.83	**97.7**	49.58	**99.2**
Copper	CU	PMS	MS062781	50.0	51.78	**103.6**	50.0	50.44	**100.9**	50.33	**100.7**	50.10	**100.2**	49.31	**98.6**	49.61	**99.2**
Lead	PB	PMS	MS062781	50.0	52.24	**104.5**	50.0	50.23	**100.5**	49.84	**99.7**	49.19	**98.4**	49.44	**98.9**	49.83	**99.7**
Nickel	NI	PMS	MS062781	50.0	51.80	**103.6**	50.0	50.28	**100.6**	49.97	**99.9**	50.27	**100.5**	49.78	**99.6**	49.34	**98.7**
Selenium	SE	PMS	MS062781	80.0	80.60	**100.8**	50.0	50.76	**101.5**	51.10	**102.2**	50.20	**100.4**	49.42	**98.8**	50.04	**100.1**
Silver	AG	PMS	MS062781	50.0	50.76	**101.5**	50.0	49.89	**99.8**	49.69	**99.4**	49.78	**99.6**	49.36	**98.7**	49.30	**98.6**
Thallium	TL	PMS	MS062781	50.0	54.16	**108.3**	50.0	52.69	**105.4**	52.39	**104.8**	51.67	**103.3**	51.87	**103.7**	51.90	**103.8**
Zinc	ZN	PMS	MS062781	50.0	51.31	**102.6**	50.0	50.60	**101.2**	50.51	**101.0**	50.81	**101.6**	50.31	**100.6**	50.27	**100.5**

Control Limits: Mercury 80-120; Other Metals 90-110

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WU65

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
Antimony	SB	PMS	MS062781	0.2	0.22	**110.0**										
Arsenic	AS	PMS	MS062781	0.2	0.22	**110.0**										
Beryllium	BE	PMS	MS062781	0.2	0.22	**110.0**										
Cadmium	CD	PMS	MS062781	0.1	0.10	**100.0**										
Chromium	CR	PMS	MS062781	0.5	0.50	**100.0**										
Copper	CU	PMS	MS062781	0.5	0.51	**102.0**										
Lead	PB	PMS	MS062781	0.1	0.10	**100.0**										
Nickel	NI	PMS	MS062781	0.5	0.51	**102.0**										
Selenium	SE	PMS	MS062781	0.5	0.48	**96.0**										
Silver	AG	PMS	MS062781	0.2	0.19	**95.0**										
Thallium	TL	PMS	MS062781	0.2	0.20	**100.0**										
Zinc	ZN	PMS	MS062781	4.0	4.21	**105.3**										

Control Limits: no control limits have been established by the EPA at this time.

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS:ug/L

SDG: WU65

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Antimony	SB	PMS	MS062781	60.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Arsenic	AS	PMS	MS062781	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Beryllium	BE	PMS	MS062781	5.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Cadmium	CD	PMS	MS062781	5.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Chromium	CR	PMS	MS062781	10.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Copper	CU	PMS	MS062781	25.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Lead	PB	PMS	MS062781	3.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Nickel	NI	PMS	MS062781	40.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Selenium	SE	PMS	MS062781	5.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Silver	AG	PMS	MS062781	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Thallium	TL	PMS	MS062781	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Zinc	ZN	PMS	MS062781	20.0	4.0	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U	4.0	U

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

ICS SOURCE: I.V.

PROJECT: NPDES Sampling Suppo

RUNID: MS062781

SDG: WU65

INSTRUMENT ID: PE ELAN 6000

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Antimony			0.1	0.1							
Arsenic		20	0.1	19.1	**95.5**						
Barium			0.1	0.1							
Cadmium		20	0.1	19.3	**96.5**						
Chromium		20	0.5	19.5	**97.5**						
Cobalt		20	0.0	18.9	**94.5**						
Copper		20	0.5	19.7	**98.5**						
Manganese		20	0.1	20.5	**102.5**						
Molybdenum	400	400	371.2	373.1	**93.3**						
Nickel		20	0.5	19.9	**99.5**						
Silver		20	0.0	18.9	**94.5**						
Vanadium			0.2	-0.2							
Zinc		20	2.5	20.6	**103.0**						

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WU65 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
Antimony	SB	PMS	PE ELAN 6000 MS	0.00		60	0.2	4/1/2012		
Arsenic	AS	PMS	PE ELAN 6000 MS	0.00		10	0.2	4/1/2012		
Beryllium	BE	PMS	PE ELAN 6000 MS	0.00		5	0.2	4/1/2012		
Cadmium	CD	PMS	PE ELAN 6000 MS	0.00		5	0.1	4/1/2012		
Chromium	CR	PMS	PE ELAN 6000 MS	0.00		10	0.5	4/1/2012		
Copper	CU	PMS	PE ELAN 6000 MS	0.00		25	0.5	4/1/2012		
Lead	PB	PMS	PE ELAN 6000 MS	0.00		3	0.1	4/1/2012		
Nickel	NI	PMS	PE ELAN 6000 MS	0.00		40	0.5	4/1/2012		
Selenium	SE	PMS	PE ELAN 6000 MS	0.00		5	0.5	4/1/2012		
Silver	AG	PMS	PE ELAN 6000 MS	0.00		10	0.2	4/1/2012		
Thallium	TL	PMS	PE ELAN 6000 MS	0.00		10	0.2	4/1/2012		
Zinc	ZN	PMS	PE ELAN 6000 MS	0.00		20	4.0	4/1/2012		

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WU65

ANALYSIS METHOD: PMS

ARI PREP CODE: REN

PREPDATE: 6/24/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
LF-TP-001-20130619	WU65A	0.000	50.0	25.0
LF-TP-001-20130619D	WU65ADUP	0.000	50.0	25.0
LF-TP-001-20130619S	WU65ASPK	0.000	50.0	25.0
LF-FD-001-20130619	WU65B	0.000	50.0	25.0
LF-TP-001-20130619	WU65C	0.000	50.0	25.0
LF-TP-001-20130619D	WU65CDUP	0.000	50.0	25.0
LF-TP-001-20130619S	WU65CSPK	0.000	50.0	25.0
LF-FD-001-20130619	WU65D	0.000	50.0	25.0
PBW	WU65MB1	0.000	50.0	25.0
LCSW	WU65MB1SPK	0.000	50.0	25.0
PBW	WU65MB2	0.000	50.0	25.0
LCSW	WU65MB2SPK	0.000	50.0	25.0

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: PE ELAN 6000 MS | START DATE: 6/27/2013

SDG: WU65 | RUNID: MS062781 | METHOD: PMS | END DATE: 6/27/2013

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	08540		X		X			X		X		X	X								X	X	X	X				X			X
S1	S1	1.00	09000		X		X			X		X		X	X								X	X	X	X				X			X
S2	S2	1.00	09060		X		X			X		X		X	X								X	X	X	X				X			X
S3	S3	1.00	09110		X		X			X		X		X	X								X	X	X	X				X			X
S4	S4	1.00	09170		X		X			X		X		X	X								X	X	X	X				X			X
ZZZZZZ	Rinse Sampl	1.00	09240																														
ICV	MICV	1.00	09330		X		X			X		X		X	X								X	X	X	X				X			X
ICB	ICB	1.00	09400		X		X			X		X		X	X								X	X	X	X				X			X
CCV	MCCV1	1.00	09450		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB1	1.00	09520		X		X			X		X		X	X								X	X	X	X				X			X
CRI	MCRI	1.00	09570		X		X			X		X		X	X								X	X	X	X				X			X
ICSA	ICSAI	1.00	10020		X		X			X		X		X	X								X	X	X	X				X			X
ICSAB	ICSABI	1.00	10080		X		X			X		X		X	X								X	X	X	X				X			X
ZZZZZZ	LR200	1.00	10140																														
ZZZZZZ	LR300	1.00	10210																														
CCV	MCCV2	1.00	10270		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB2	1.00	10330		X		X			X		X		X	X								X	X	X	X				X			X
ZZZZZZ	WU58MB1	2.00	10400																														
ZZZZZZ	WU58A	2.00	10460																														
ZZZZZZ	WU58MB1SPK	2.00	10520																														
ZZZZZZ	WU58MB1SPD	2.00	10580																														
CCV	MCCV3	1.00	11040		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB3	1.00	11100		X		X			X		X		X	X								X	X	X	X				X			X
PBW	WU65MB1	2.00	11160		X		X			X		X		X	X								X	X	X	X				X			X
LF-TP-001-20130619D	WU65ADUP	2.00	11220		X		X			X		X		X	X								X	X	X	X				X			X
LF-TP-001-20130619	WU65A	2.00	11280		X		X			X		X		X	X								X	X	X	X				X			X
LF-TP-001-20130619S	WU65ASPK	2.00	11340		X		X			X		X		X	X								X	X	X	X				X			X
ZZZZZZ	ZZZZZZ	2.00	11400																														
LF-FD-001-20130619	WU65B	2.00	11460		X		X			X		X		X	X								X	X	X	X				X			X
LCSW	WU65MB1SPK	2.00	11520		X		X			X		X		X	X								X	X	X	X				X			X
CCV	MCCV4	1.00	11580		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB4	1.00	12040		X		X			X		X		X	X								X	X	X	X				X			X
PBW	WU65MB2	2.00	12100		X		X			X		X		X	X								X	X	X	X				X			X
LF-TP-001-20130619D	WU65CDUP	2.00	12160		X		X			X		X		X	X								X	X	X	X				X			X
LF-TP-001-20130619	WU65C	2.00	12220		X		X			X		X		X	X								X	X	X	X				X			X

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: PE ELAN 6000 MS | START DATE: 6/27/2013

SDG: WU65 | RUNID: MS062781 | METHOD: PMS | END DATE: 6/27/2013

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
LF-TP-001-20130619S	WU65CSPK	2.00	12270		X		X			X		X		X	X								X	X	X	X				X			X
ZZZZZZ	ZZZZZZ	2.00	12330																														
LF-FD-001-20130619	WU65D	2.00	12390		X		X			X		X		X	X								X	X	X	X				X			X
LCSW	WU65MB2SPK	2.00	12450		X		X			X		X		X	X								X	X	X	X				X			X
CCV	MCCV5	1.00	12510		X		X			X		X		X	X								X	X	X	X				X			X
CCB	CCB5	1.00	12580		X		X			X		X		X	X								X	X	X	X				X			X

Mercury Analysis
Report and Summary QC Forms

ARI Job ID: WU65, WU71

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WU71

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
LF-TP-001-20130619	WU71A	13-13135	
LF-TP-001-20130619D	WU71ADUP	13-13135	
LF-TP-001-20130619S	WU71ASPK	13-13135	
LF-FD-001-20130619	WU71B	13-13136	
PBW	WU71MB1	13-13136	
LCSW	WU71MB1SPK	13-13136	
LF-TP-001-20130619	WU71C	13-13137	
LF-TP-001-20130619D	WU71CDUP	13-13137	
LF-TP-001-20130619S	WU71CSPK	13-13137	
LF-FD-001-20130619	WU71D	13-13138	
PBW	WU71MB2	13-13138	
LCSW	WU71MB2SPK	13-13138	

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 (Eric Lawson for)

Date: 6-25-13 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
Total Mercury by Method SW7470A

Data Release Authorized:
Reported: 06/25/13
Date Received: 06/19/13
Page 1 of 1

QC Report No: WU71-SAIC
Project: NPDES Sampling Support
209977

Client/ ARI ID	Date Sampled	Matrix	Prep Date Anal Date	RL	Result
LF-TP-001-20130619-W WU71A 13-13135	06/19/13	Water	06/24/13 06/25/13	20.0	20.0 U
LF-FD-001-20130619-W WU71B 13-13136	06/19/13	Water	06/24/13 06/25/13	20.0	20.0 U
MB-062413 Method Blank	NA	Water	06/24/13 06/25/13	20.0	20.0 U

Reported in ng/L

RL-Analytical reporting limit
U-Undetected at reported detection limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: LF-TP-001-20130619-W
MATRIX SPIKE

Lab Sample ID: WU71A
LIMS ID: 13-13135
Matrix: Water
Data Release Authorized:
Reported: 06/25/13

QC Report No: WU71-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Mercury	7470A	20.0 U	110	100	110%	

Reported in ng/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%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: LF-TP-001-20130619-W DUPLICATE

Lab Sample ID: WU71A
LIMS ID: 13-13135
Matrix: Water
Data Release Authorized:
Reported: 06/25/13

QC Report No: WU71-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Mercury	7470A	20.0 U	20.0 U	0.0%	+/- 20.0	L

Reported in ng/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: WU71LCS
LIMS ID: 13-13136
Matrix: Water
Data Release Authorized:
Reported: 06/25/13

QC Report No: WU71-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Mercury	7470A	225	200	112%	

Reported in ng/L

N-Control limit not met
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
Dissolved Mercury by Method SW7470A

Data Release Authorized:
Reported: 06/25/13
Date Received: 06/19/13
Page 1 of 1

QC Report No238: WU71-SAIC
Project: NPDES Sampling Support
209977

Client/ ARI ID	Date Sampled	Matrix	Prep Date Anal Date	RL	Result
LF-TP-001-20130619-W WU71C 13-13137	06/19/13	Water	06/24/13 06/25/13	20.0	20.0 U
LF-FD-001-20130619-W WU71D 13-13138	06/19/13	Water	06/24/13 06/25/13	20.0	20.0 U
MB-062413 Method Blank	NA	Water	06/24/13 06/25/13	20.0	20.0 U

Reported in ng/L

RL-Analytical reporting limit
U-Undetected at reported detection limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: LF-TP-001-20130619-W
MATRIX SPIKE

Lab Sample ID: WU71C
LIMS ID: 13-13137
Matrix: Water
Data Release Authorized:
Reported: 06/25/13

QC Report No: WU71-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/19/13
Date Received: 06/19/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Mercury	7470A	20.0 U	105	100	105%	

Reported in ng/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%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS

Sample ID: LF-TP-001-20130619-W DUPLICATE

Lab Sample ID: WU71C
LIMS ID: 13-13137
Matrix: Water
Data Release Authorized:
Reported: 06/25/13

QC Report No: WU71-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Mercury	7470A	20.0 U	20.0 U	0.0%	+/- 20.0	L

Reported in ng/L

*-Control Limit Not Met
L-RPD Invalid, Limit = Detection Limit

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
DISSOLVED METALS
Page 1 of 1

Sample ID: LAB CONTROL

Lab Sample ID: WU71LCS
LIMS ID: 13-13138
Matrix: Water
Data Release Authorized:
Reported: 06/25/13

QC Report No: WU71-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Mercury	7470A	199	200	99.5%	

Reported in ng/L

N-Control limit not met
Control Limits: 80-120%

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WU71

UNITS:ng/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Mercury	HG	CVL	HG062501	500.0	510.00	**102.0**	500.0	516.00	**103.2**	539.00	**107.8**						

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WU71

UNITS: ng/L

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Mercury	HG	CVL	HG062502	500.0	505.00	**101.0**	500.0	504.00	**100.8**	511.00	**102.2**						

Control Limits: Mercury 80-120; Other Metals 90-110

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WU71

UNITS: ng/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
Mercury	HG	CVL	HG062501		20.0	20.60	**103.0**										

Control Limits: no control limits have been established by the EPA at this time.

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS: ng/L

SDG: WU71

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
Mercury	HG	CVL	HG062502		20.0	19.90	**99.5**										

Control Limits: no control limits have been established by the EPA at this time.

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WU71

UNITS:ng/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Mercury	HG	CVL	HG062501	25.0	20.0	20.0	U	20.0	U	20.0	U						

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS: ng/L

SDG: WU71

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Mercury	HG	CVL	HG062502	25.0	20.0	20.0	U	20.0	U	20.0	U						

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WU71 UNITS: ng/L

ANALYTE	EL	METH	INSTRUMENT	WAVELENTH (nm)	GFA BACK-GROUND	CLP CRDL	RL	RL DATE	ICP LINEAR RANGE (ng/L)	ICP LR DATE
Mercury	HG	CVL	CETAC MERCURY	253.70		25	20.0	4/1/2012		

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WU71

ANALYSIS METHOD: CVL

ARI PREP CODE: DLM

PREPDATE: 6/24/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
LF-TP-001-20130619	WU71C	0.000	20.0	20.0
LF-TP-001-20130619D	WU71CDUP	0.000	20.0	20.0
LF-TP-001-20130619S	WU71CSPK	0.000	20.0	20.0
LF-FD-001-20130619	WU71D	0.000	20.0	20.0
PBW	WU71MB2	0.000	20.0	20.0
LCSW	WU71MB2SPK	0.000	20.0	20.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WU71

ANALYSIS METHOD: CVL

ARI PREP CODE: TLM

PREPDATE: 6/24/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
LF-TP-001-20130619	WU71A	0.000	20.0	20.0
LF-TP-001-20130619D	WU71ADUP	0.000	20.0	20.0
LF-TP-001-20130619S	WU71ASPK	0.000	20.0	20.0
LF-FD-001-20130619	WU71B	0.000	20.0	20.0
PBW	WU71MB1	0.000	20.0	20.0
LCSW	WU71MB1SPK	0.000	20.0	20.0

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: CETAC MERCURY | START DATE: 6/25/2013

SDG: WU71 | RUNID: HG062501 | METHOD: CVL | END DATE: 6/25/2013

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	11083														X																
S20	S20	1.00	11111														X																
S50	S50	1.00	11140														X																
S100	S100	1.00	11164														X																
S200	S200	1.00	11192														X																
S400	S400	1.00	11220														X																
S1000	S1000	1.00	11245														X																
ICV	AICV	1.00	11285														X																
ICB	ICB	1.00	11313														X																
CCV	ACCV1	1.00	11341														X																
CCB	CCB1	1.00	11365														X																
CRA	CRA	1.00	11394														X																
ZZZZZZ	WU61MB1	1.00	11422																														
ZZZZZZ	WU61MB1SPK	1.00	11450																														
ZZZZZZ	WU61MB1SPD	1.00	11474																														
ZZZZZZ	WU61A	1.00	11502																														
PBW	WU71MB1	1.00	11530														X																
LCSW	WU71MB1SPK	1.00	11554														X																
LF-TP-001-20130619	WU71A	1.00	11583														X																
LF-TP-001-20130619D	WU71ADUP	1.00	12011														X																
LF-TP-001-20130619S	WU71ASPK	1.00	12035														X																
CCV	ACCV2	1.00	12064														X																
CCB	CCB2	1.00	12092														X																

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: CETAC MERCURY | START DATE: 6/25/2013

SDG: WU71 | RUNID: HG062502 | METHOD: CVL | END DATE: 6/25/2013

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	12574														X																
S20	S20	1.00	13002														X																
S50	S50	1.00	13031														X																
S100	S100	1.00	13055														X																
S200	S200	1.00	13083														X																
S400	S400	1.00	13111														X																
S1000	S1000	1.00	13140														X																
ICV	AICV	1.00	13170														X																
ICB	ICB	1.00	13194														X																
CCV	ACCV1	1.00	13223														X																
CCB	CCB1	1.00	13251														X																
CRA	CRA	1.00	13275														X																
LF-FD-001-20130619	WU71B	1.00	13303														X																
PBW	WU71MB2	1.00	13331														X																
LCSW	WU71MB2SPK	1.00	13360														X																
LF-TP-001-20130619	WU71C	1.00	13384														X																
LF-TP-001-20130619D	WU71CDUP	1.00	13412														X																
LF-TP-001-20130619S	WU71CSPK	1.00	13440														X																
LF-FD-001-20130619	WU71D	1.00	13464														X																
CCV	ACCV2	1.00	13493														X																
CCB	CCB2	1.00	13521														X																

General Chemistry Analysis
Report and Summary QC Forms

ARI Job ID: WU65, WU71

SAMPLE RESULTS-CONVENTIONALS
WU65-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: MB
Reported: 07/01/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Client ID: LF-TP-001-20130619-W
ARI ID: 13-13119 WU65A

Analyte	Date Batch	Method	Units	RL	Sample
pH	06/19/13 061913#1	SM4500H	std units	0.01	7.84
Alkalinity	06/28/13 062813#1	SM 2320	mg/L CaCO3	1.0	54.3
Carbonate	06/28/13	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Bicarbonate	06/28/13	SM 2320	mg/L CaCO3	1.0	54.3
Hydroxide	06/28/13	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Conductivity	06/21/13 062113#1	EPA 120.1	umhos/cm	1.00	868
Total Suspended Solids	06/21/13 062113#1	SM2540D	mg/L	1.0	10.2
Chloride	06/20/13 062013#1	EPA 300.0	mg/L	5.0	157
N-Nitrate	06/20/13 062013#1	EPA 300.0	mg-N/L	0.1	0.3
Sulfate	06/20/13 062013#1	EPA 300.0	mg/L	5.0	98.6
Total Organic Carbon	06/24/13 062413#1	SM5310B	mg/L	1.50	2.21
Dissolved Organic Carbon	06/24/13 062413#1	SM5310B	mg/L	1.50	2.05

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
WU65-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 07/01/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Client ID: LF-FD-001-20130619-W
ARI ID: 13-13120 WU65B

Analyte	Date Batch	Method	Units	RL	Sample
pH	06/19/13 061913#1	SM4500H	std units	0.01	7.92
Alkalinity	06/28/13 062813#1	SM 2320	mg/L CaCO3	1.0	54.4
Carbonate	06/28/13	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Bicarbonate	06/28/13	SM 2320	mg/L CaCO3	1.0	54.4
Hydroxide	06/28/13	SM 2320	mg/L CaCO3	1.0	< 1.0 U
Conductivity	06/21/13 062113#1	EPA 120.1	umhos/cm	1.00	865
Total Suspended Solids	06/21/13 062113#1	SM2540D	mg/L	1.1	2.2
Chloride	06/20/13 062013#1	EPA 300.0	mg/L	5.0	156
N-Nitrate	06/20/13 062013#1	EPA 300.0	mg-N/L	0.1	0.3
Sulfate	06/20/13 062013#1	EPA 300.0	mg/L	5.0	98.5
Total Organic Carbon	06/24/13 062413#1	SM5310B	mg/L	1.50	2.28
Dissolved Organic Carbon	06/24/13 062413#1	SM5310B	mg/L	1.50	2.17

RL Analytical reporting limit
U Undetected at reported detection limit

MS/MSD RESULTS-CONVENTIONALS
WU65-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 07/01/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Analyte	Method	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: WU65A Client ID: LF-TP-001-20130619-W							
Chloride	EPA 300.0	06/20/13	mg/L	157	344	200	93.5%
N-Nitrate	EPA 300.0	06/20/13	mg-N/L	0.3	2.3	2.0	100.0%
Sulfate	EPA 300.0	06/20/13	mg/L	98.6	194	100	95.4%
Total Organic Carbon	SM5310B	06/24/13	mg/L	2.21	22.6	20.0	102.0%
Dissolved Organic Carbon	SM5310B	06/24/13	mg/L	2.05	22.6	20.0	102.8%

REPLICATE RESULTS-CONVENTIONALS
WU65-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized MG
Reported: 07/01/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Analyte	Method	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: WU65A Client ID: LF-TP-001-20130619-W						
pH	SM4500H	06/19/13	std units	7.84	7.86	0.02
Alkalinity	SM 2320	06/28/13	mg/L CaCO3	54.3	54.3	0.0%
Carbonate	SM 2320	06/28/13	mg/L CaCO3	< 1.0	< 1.0	NA
Bicarbonate	SM 2320	06/28/13	mg/L CaCO3	54.3	54.3	0.0%
Hydroxide	SM 2320	06/28/13	mg/L CaCO3	< 1.0	< 1.0	NA
Conductivity	EPA 120.1	06/21/13	umhos/cm	868	872	0.5%
Chloride	EPA 300.0	06/20/13	mg/L	157	157	0.0%
N-Nitrate	EPA 300.0	06/20/13	mg-N/L	0.3	0.3	0.0%
Sulfate	EPA 300.0	06/20/13	mg/L	98.6	98.4	0.2%
Total Organic Carbon	SM5310B	06/24/13	mg/L	2.21	2.27	2.7%
Dissolved Organic Carbo	SM5310B	06/24/13	mg/L	2.05	2.13	3.8%

pH is evaluated as the Absolute Difference between the values rather than Relative Percent Difference

LAB CONTROL RESULTS-CONVENTIONALS
WU65-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: DB
Reported: 07/01/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
pH SM4500H	ICVL	06/19/13	std units	6.99	7.00	0.01
Total Suspended Solids SM2540D	ICVL	06/21/13	mg/L	49.7	50.0	99.4%

pH is evaluated as the Absolute Difference between the values rather than Percent Recovery.

METHOD BLANK RESULTS-CONVENTIONALS
WU65-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized: NAB
Reported: 07/01/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Analyte	Method	Date	Units	Blank	ID
Conductivity	EPA 120.1	06/21/13	umhos/cm	< 1.00 U	
Total Suspended Solids	SM2540D	06/21/13	mg/L	< 1.0 U	
Chloride	EPA 300.0	06/20/13	mg/L	< 0.1 U	
N-Nitrate	EPA 300.0	06/20/13	mg-N/L	< 0.1 U	
Sulfate	EPA 300.0	06/20/13	mg/L	< 0.1 U	
Total Organic Carbon	SM5310B	06/24/13	mg/L	< 1.50 U	
Dissolved Organic Carbon	SM5310B	06/24/13	mg/L	< 1.50 U	
		06/24/13		< 1.50 U	FB

FB Filtration Blank

STANDARD REFERENCE RESULTS-CONVENTIONALS
WU65-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Water
Data Release Authorized:
Reported: 07/01/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Method	Date	Units	SRM	True Value	Recovery
Alkalinity ERA #P114506	SM 2320	06/28/13	mg/L CaCO3	31.3	32.1	97.5%
Conductivity Ricca #4110724	EPA 120.1	06/21/13	umhos/cm	991	1,000	99.1%
Chloride ERA 210312	EPA 300.0	06/20/13	mg/L	3.0	3.0	100.0%
N-Nitrate ERA #220912	EPA 300.0	06/20/13	mg-N/L	2.9	3.0	96.7%
Sulfate ERA 240312	EPA 300.0	06/20/13	mg/L	3.0	3.0	100.0%
Total Organic Carbon ERA 0409-12-01	SM5310B	06/24/13	mg/L	20.7	20.0	103.5%
Dissolved Organic Carbon ERA 0409-12-01	SM5310B	06/24/13	mg/L	20.7	20.0	103.5%

Semivolatile Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WU65, WU71

Incorporated
Analytical Chemists and
Consultants

(8270D) BAN –Water
Separatory Funnel (3510C) (SOP # 3311S)

Preparation Test BAN # 1 (BANWSI) In-House (1.0-5.0ppb)
ARI Job No(s) WU65 Page 1 of 1 Batch set up by: SP

Bottle #	Extraction Requirements	Volume Extracted	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	WU65 MBW	500mL	0.5mL	0.5mL		AR 06/24/13
	SBW	500mL	0.5mL	0.5mL		
	SBW Dup	500mL	0.5mL	0.5mL		
	QLS	500mL	0.5mL	0.5mL		
7	A	500mL	0.5mL	0.5mL		
7	B	500mL	0.5mL	0.5mL		Analyst/Date
		500mL	0.5mL	0.5mL		KD 80-85°C (1) 2 3 4 5 6
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		Analyst/Date
		500mL	0.5mL	0.5mL		TurboVap (1) 2 3
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		SP 7-2-13
Analyst/Date	CT/AR 06/24/13 →	SP 7/2/13	SP 7/2/13		Reviewed by SR 7/2/13	Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	A (2093-4)	100/150µg/mL	125µL	7/2/13	AR	AC
Full List Spike (Freezer)	7 (2015-5)	100µg/mL	125µL	1/29/14	AR	AC
Base Spike	56 (2065-2)	200µg/mL	125µL	7/31/13	AR	AC
~~Benzidine Spike~~	~~39 ( )~~	500µg/mL	125µL			
Acid Spike	38 (2091-4)	100/200µg/mL	125µL	2/28/14	AR	AC
QLS Spike (Freezer)	14 (B044538)	10-100µg/mL	50µL	1/31/14	AR	AC
Extraction Time:	12:30					

SPECIAL INSTRUCTIONS: 1. Add surr/spk. 2. Adjust Acid (pH <2) using 1:1 Sulfuric Acid. (1/4 pipet for blanks & 1/2 pipet for samples). Verify pH! 3. Extract 1X 60mL DCM, Plus 2X 30mL DCM. 4. Adjust Basic (pH >12) using 1 pipet 10 N Sodium Hydroxide solution. Verify pH! 5. Extract 1X 60mL DCM, Plus 2X 30mL DCM. 5. Pour Acid Fraction first into KD then Basic Fraction into Acid. 6. KD to 5mL at 80°. 7. TurboVap to 0.5mL. 8. Vial in DCM.

A. Archive Y / (N)

WU65 : 20114

Reagent and Solutions Identification

(8270D) BAN –Water
Separatory Funnel (3510C) (SOP # 3311S)

ARI Job No(s) WU65

(8270D) BAN Aqueous:	Analyst/Date
Separatory Funnel Station: Methylene Chloride: (I# 8279) 1:1 Sulfuric Acid/DI H20: (H# 189) 10 N Sodium Hydroxide: (H# 049) Anhydrous Sodium Sulfate: (I# 8185 + jar date 6/8/13)	Sep. Funnel CT 06/24/13
KD Station: Methylene Chloride: (I# B999674	KD 07/01/13
Vialing Station: Methylene Chloride: (I# B999674)	Vialing SP 7/2/13

WU65 : 881112

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WU65 Client ID: SAIC

Parameter: BAN Client Project: NPDES Sampling Support

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 WU65 samples A, B	AR 06/24/13
☐ 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)	

WU65 - 0614 13

Semivolatile Raw Data
Initial Calibration

ARI Job ID: WU65, WU71

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): 7/8/13 Internal Standard ID B000878.F Expiration 6/26/14

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?	(N/A) YES / NO	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	2046-1	8/13/13
↓	2054-1	12/31/13	↓	2047-1	12/31/13
↓	2055-1	12/1/13	↓	2058-1	12/1/13
in house stock	2061-1	12/1/13	in house stock	2061-1	12/1/13
Cambridge	I803	1/23/14	Cambridge	I803	1/23/14
Spex & Restek	2027-2	10/1/13	Spex & Restek	2027-2	10/1/13
Supelco	B000933	6/28/14	Supelco	B000933	6/28/14

Detail problems, corrective actions and/or other pertinent information below:

1) linear curve fit: 2,4-Dinitrophenol, 4-Nitrophenol
2) Quadratic curve fit: Benzoic Acid
3) First point dropped: Carbazol, p-Benzoquinone, Benzoic Acid, Hexachlorocyclopentadiene, 2,4-Dinitrophenol, 4,6-Dinitro-2-Methylphenol, Pentachlorophenol, Benzidine, 2,6-Dichlorophenol, N-Nitrosomethylethylamine.

Analyst: [signature] **Date:** 7/8/13.

Reviewer: [signature] **Date:** 7.9.13

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUL-2013 12:01
End Cal Date : 08-JUL-2013 15:59
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130708.b/SW846070813.m
Cal Date : 08-Jul-2013 16:34 jianqing
Curve Type : Average

Calibration File Names:
Level 1: /chem2/nt6.i/20130708.b/07081303.d
Level 2: /chem2/nt6.i/20130708.b/07081304.d
Level 3: /chem2/nt6.i/20130708.b/07081305.d
Level 4: /chem2/nt6.i/20130708.b/07081301.d
Level 5: /chem2/nt6.i/20130708.b/07081306.d
Level 6: /chem2/nt6.i/20130708.b/07081307.d
Level 7: /chem2/nt6.i/20130708.b/07081308.d
Level 8: /chem2/nt6.i/20130708.b/07081302.d

01/08/13

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	+++++	0.40856	0.47247	0.53937	0.56173	0.66046		
	+++++	+++++					0.52852	17.990
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
170 N,N-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
171 2,3-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUL-2013 12:01
End Cal Date : 08-JUL-2013 15:59
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130708.b/SW846070813.m
Cal Date : 08-Jul-2013 16:34 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	+++++	0.19843	0.21465	0.28246	0.27680	0.24455		
	0.24071	+++++					0.24294	13.649
168 Pentachlorobenzene	0.37752	0.34624	0.33903	0.34045	0.35701	0.32444		
	0.32171	+++++					0.34377	5.588
145 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
146 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUL-2013 12:01
End Cal Date : 08-JUL-2013 15:59
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130708.b/SW846070813.m
Cal Date : 08-Jul-2013 16:34 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	0.62824	0.61574	0.62440	0.67062	0.64143	0.52116		
	0.51013	+++++					0.60167	10.204
132 3,6-Dimethylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
127 2-Isopropylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUL-2013 12:01
End Cal Date : 08-JUL-2013 15:59
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130708.b/SW846070813.m
Cal Date : 08-Jul-2013 16:34 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	0.22980	0.22281	0.22380	0.26538	0.23511	0.22314		
	0.22930	+++++					0.23276	6.474
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
123 Acetophenone	1.52279	1.45748	1.43363	1.67564	1.60631	1.49344		
	1.54960	+++++					1.53413	5.533
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
143 1,4-Dioxane	0.57633	0.52099	0.50128	0.58633	0.62679	0.61261		
	0.65171	+++++					0.58229	9.430
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
120 2,3,4,6-Tetrachlorophenol	0.17946	0.20558	0.23613	0.22643	0.23076	0.22642		
	0.21986	+++++					0.21781	8.942

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUL-2013 12:01
End Cal Date : 08-JUL-2013 15:59
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130708.b/SW846070813.m
Cal Date : 08-Jul-2013 16:34 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	0.13249	0.14509	0.15862	0.17596	0.20374	0.20827		
	+++++	+++++					0.17070	18.137
119 7,12-Dimethylbenz(a)anthracen	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
118 Triphenyl Phosphate	0.15802	0.16693	0.17802	0.19758	0.20926	0.18966		
	0.20155	+++++					0.18586	10.163
117 Butyl Diphenyl Phosphate	0.17068	0.19031	0.20306	0.24291	0.22873	0.21743		
	0.23261	+++++					0.21225	12.085
116 Dibutyl Phenyl Phosphate	0.44827	0.50619	0.54296	0.64455	0.68154	0.66601		
	0.73653	+++++					0.60372	17.452
115 Tributyl Phosphate	0.84343	0.87773	0.91399	1.06778	1.03343	0.96984		
	1.02306	+++++					0.96132	8.862
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
113 Diphenyl Oxide	0.74011	0.70876	0.72422	0.80103	0.79097	0.71926		
	0.76650	+++++					0.75012	4.857
112 Biphenyl	1.07585	1.03935	1.05461	1.12656	1.04115	0.91809		
	0.88924	+++++					1.02069	8.388

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUL-2013 12:01
End Cal Date : 08-JUL-2013 15:59
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130708.b/SW846070813.m
Cal Date : 08-Jul-2013 16:34 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)	0.04798	0.05000	0.05186	0.06722	0.06683	0.07159		
	0.07293	+++++					0.06120	17.661
110 Tetrachloroguaiacol	0.02008	0.01803	0.01759	0.01801	0.01858	0.01712		
	0.01792	+++++					0.01819	5.199
109 3,4,5-Trichloroguaiacol	0.10123	0.09922	0.10009	0.10883	0.11391	0.10924		
	0.11823	+++++					0.10725	6.846
181 3,4,6-Trichloroguaiacol	0.33910	0.35961	0.36745	0.36480	0.35509	0.31780		
	0.29484	+++++					0.34267	7.960
108 4,5,6-Trichloroguaiacol	0.13931	0.13421	0.14046	0.14962	0.15508	0.14533		
	0.14841	+++++					0.14463	4.914
184 3,4-Dichloroguaiacol	0.35325	0.34682	0.36672	0.41280	0.41711	0.39870		
	0.40367	+++++					0.38558	7.589
107 4,5-Dichloroguaiacol	0.19494	0.21000	0.21993	0.24339	0.25235	0.24539		
	0.25600	+++++					0.23171	10.124
182 4,6-Dichloroguaiacol	0.41493	0.43619	0.45446	0.51106	0.51399	0.50419		
	0.49015	+++++					0.47499	8.350
185 4-Chloroguaiacol	0.09474	0.09972	0.09916	0.11994	0.12019	0.12088		
	0.13508	+++++					0.11282	13.298

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUL-2013 12:01
End Cal Date : 08-JUL-2013 15:59
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130708.b/SW846070813.m
Cal Date : 08-Jul-2013 16:34 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						
106 Guaiacol	1.11585	1.12995	1.14883	1.31903	1.23537	1.09109		
	1.11391	+++++					1.16486	7.067
105 1-methylnaphthalene	0.46185	0.42875	0.42899	0.48003	0.46985	0.43616		
	0.43580	+++++					0.44878	4.737
151 1,2,4,5-Tetrachlorobenzene	0.43480	0.43714	0.43596	0.47888	0.49308	0.45417		
	0.47135	+++++					0.45791	5.136
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
156 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
157 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUL-2013 12:01
End Cal Date : 08-JUL-2013 15:59
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130708.b/SW846070813.m
Cal Date : 08-Jul-2013 16:34 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						
167 2,2',4,4',5-Pentabromobipheny	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
3 Phenol	1.63400	1.59290	1.68220	1.83363	1.63791	1.56838		
	1.63644	+++++					1.65507	5.237
4 Bis(2-Chloroethyl)ether	1.39656	1.26670	1.25874	1.44393	1.40402	1.30407		
	1.33903	+++++					1.34472	5.363
6 2-Chlorophenol	1.23558	1.18230	1.29145	1.40083	1.31720	1.29568		
	1.34474	+++++					1.29540	5.496
7 1,3-Dichlorobenzene	1.56299	1.43801	1.42379	1.60739	1.57913	1.46742		
	1.47233	+++++					1.50730	4.910
9 1,4-Dichlorobenzene	1.58530	1.45878	1.43356	1.61561	1.56893	1.43085		
	1.40995	+++++					1.50043	5.733
11 Benzyl alcohol	0.75115	0.78760	0.78360	0.94029	0.89866	0.85337		
	0.87226	+++++					0.84099	8.200
12 1,2-Dichlorobenzene	1.47986	1.37869	1.36405	1.54340	1.47608	1.34134		
	1.39059	+++++					1.42486	5.258
13 2-Methylphenol	1.07867	1.06329	1.15657	1.27646	1.20162	1.18278		
	1.16524	+++++					1.16066	6.274

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUL-2013 12:01
End Cal Date : 08-JUL-2013 15:59
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130708.b/SW846070813.m
Cal Date : 08-Jul-2013 16:34 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						
14 2,2'-oxybis(1-Chloropropane)	2.23101	2.09143	2.04609	2.41946	2.16178	2.00158		
	1.88777	+++++					2.11988	8.125
15 4-Methylphenol	1.08066	1.09592	1.20357	1.34731	1.24525	1.23697		
	1.17912	+++++					1.19840	7.665
16 N-Nitroso-di-n-propylamine	0.89501	0.87296	0.87051	1.04329	0.97280	0.91712		
	0.94987	+++++					0.93165	6.678
17 Hexachloroethane	0.50973	0.50478	0.49978	0.57153	0.55555	0.51941		
	0.52402	+++++					0.52640	5.141
19 Nitrobenzene	0.35915	0.34142	0.33632	0.37904	0.35038	0.31881		
	0.32330	+++++					0.34406	6.081
20 Isophorone	0.55166	0.53739	0.52606	0.59369	0.57397	0.54644		
	0.58701	+++++					0.55946	4.600
21 2-Nitrophenol	0.14181	0.15705	0.17627	0.18947	0.19339	0.19646		
	0.20328	+++++					0.17968	12.611
22 2,4-Dimethylphenol	0.29274	0.28219	0.29752	0.31760	0.30428	0.30108		
	0.30766	+++++					0.30044	3.753
23 Bis(2-Chloroethoxy)methane	0.43727	0.43269	0.43187	0.46900	0.44770	0.41173		
	0.42454	+++++					0.43640	4.158

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUL-2013 12:01
End Cal Date : 08-JUL-2013 15:59
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130708.b/SW846070813.m
Cal Date : 08-Jul-2013 16:34 jianqing
Curve Type : Average

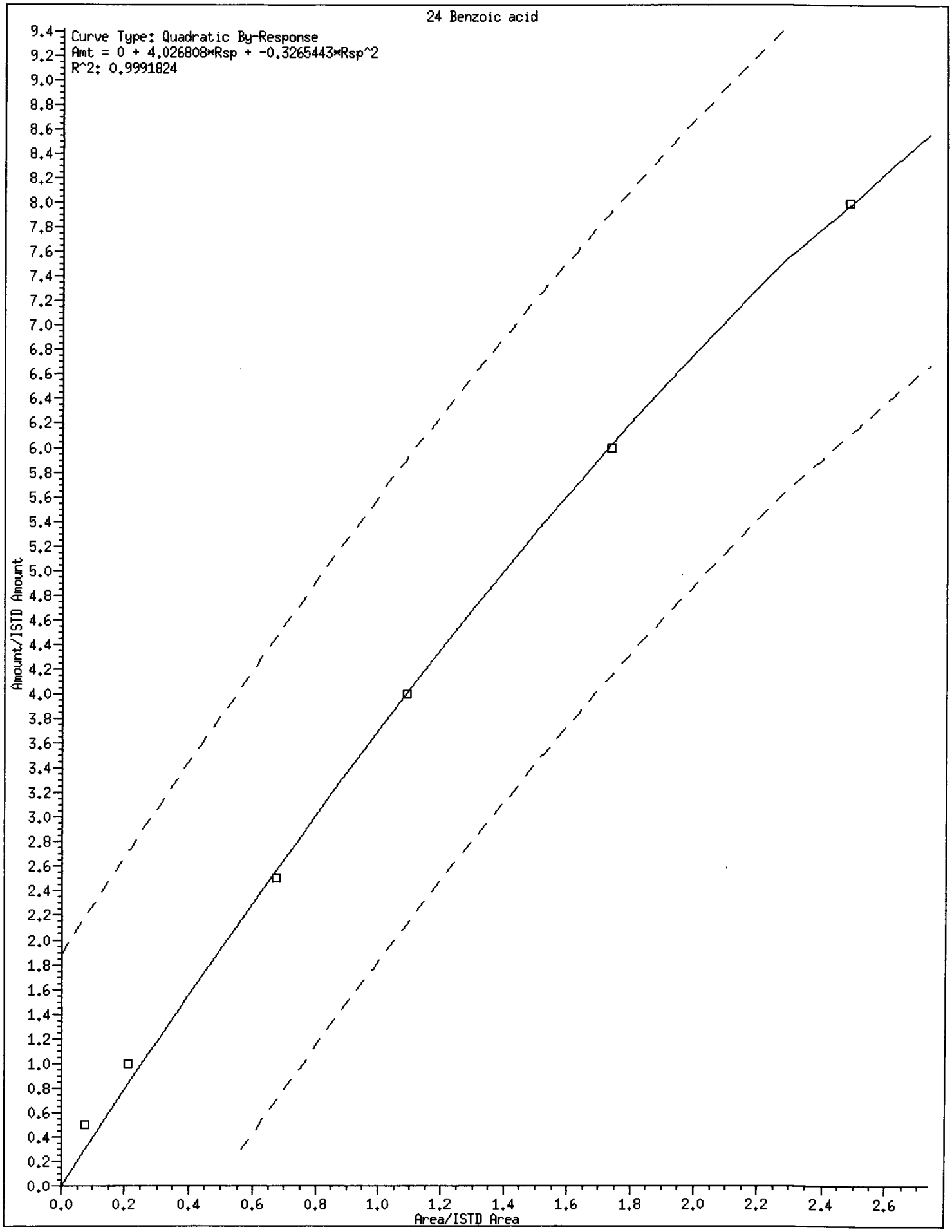
Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD	
	80.000 Level 7	0.20000 Level 8							
24 Benzoic acid	+++++	0.15065	0.20871	0.26948	0.27287	0.29032			
	0.31030	+++++					0.25039	23.788	<-
25 2,4-Dichlorophenol	0.22982	0.25423	0.27793	0.29632	0.28702	0.28297			
	0.28298	+++++					0.27304	8.432	
26 1,2,4-Trichlorobenzene	0.32007	0.29771	0.30097	0.32070	0.32925	0.30427			
	0.30771	+++++					0.31153	3.799	
28 Naphthalene	1.02401	0.94792	0.92209	0.98211	0.89940	0.79907			
	0.77812	+++++					0.90753	10.013	
29 4-Chloroaniline	0.35644	0.38915	0.37946	0.36718	0.34617	0.30416			
	0.26830	+++++					0.34441	12.606	
30 Hexachlorobutadiene	0.15821	0.15274	0.14823	0.15380	0.15519	0.13948			
	0.13916	+++++					0.14955	5.080	
31 4-Chloro-3-methylphenol	0.20151	0.22833	0.25107	0.27477	0.25611	0.26121			
	0.26267	+++++					0.24795	10.056	
32 2-Methylnaphthalene	0.50201	0.49141	0.49450	0.55743	0.52899	0.48707			
	0.48221	+++++					0.50623	5.385	
33 Hexachlorocyclopentadiene	+++++	0.22741	0.25470	0.31064	0.32947	0.30730			
	0.31835	+++++					0.29131	13.935	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUL-2013 12:01
End Cal Date : 08-JUL-2013 15:59
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130708.b/SW846070813.m
Cal Date : 08-Jul-2013 16:34 jianqing

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									
22 2,4-Dimethylphenol	0.29274	0.28219	0.29752	0.31760	0.30428	0.30108					
	0.30766	+++++					AVRG		0.30044		3.75300
23 Bis(2-Chloroethoxy)methane	0.43727	0.43269	0.43187	0.46900	0.44770	0.41173					
	0.42454	+++++					AVRG		0.43640		4.15755
24 Benzoic acid	+++++	156689	415408	1241981	2288008	3491744					
	4691234	+++++					QUAD	0.000e+00	4.02681	-0.32654	0.99918
25 2,4-Dichlorophenol	0.22982	0.25423	0.27793	0.29632	0.28702	0.28297					
	0.28298	+++++					AVRG		0.27304		8.43184
26 1,2,4-Trichlorobenzene	0.32007	0.29771	0.30097	0.32070	0.32925	0.30427					
	0.30771	+++++					AVRG		0.31153		3.79929
28 Naphthalene	1.02401	0.94792	0.92209	0.98211	0.89940	0.79907					
	0.77812	+++++					AVRG		0.90753		10.01336
29 4-Chloroaniline	0.35644	0.38915	0.37946	0.36718	0.34617	0.30416					
	0.26830	+++++					AVRG		0.34441		12.60600


24 Benzoic acid
Curve Type: Quadratic By-Response
Amt = 0 + 4.026808*Rsp + -0.3265443*Rsp^2
R^2: 0.9991824
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
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

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUL-2013 12:01
End Cal Date : 08-JUL-2013 15:59
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130708.b/SW846070813.m
Cal Date : 08-Jul-2013 16:34 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						
34 2,4,6-Trichlorophenol	0.23623	0.27546	0.30986	0.32260	0.32636	0.32868		
	0.33286	+++++					0.30458	11.783
35 2,4,5-Trichlorophenol	0.20589	0.28901	0.31527	0.32692	0.32870	0.32487		
	0.32641	+++++					0.30244	14.807
37 2-Chloronaphthalene	0.99479	0.99794	1.01544	1.09898	1.03069	0.92631		
	0.91342	+++++					0.99680	6.327
38 2-Nitroaniline	0.16933	0.22881	0.25123	0.30787	0.28271	0.27806		
	0.28312	+++++					0.25730	18.012
39 Dimethylphthalate	1.01729	1.02193	1.01609	1.13482	1.14704	1.09299		
	1.16555	+++++					1.08510	6.089
40 Acenaphthylene	1.51713	1.50178	1.50853	1.62808	1.52917	1.38052		
	1.39139	+++++					1.49380	5.695
41 2,6-Dinitrotoluene	0.17684	0.22240	0.23777	0.26163	0.25952	0.24713		
	0.25791	+++++					0.23760	12.724
43 3-Nitroaniline	0.19465	0.24351	0.24756	0.25653	0.24599	0.21041		
	0.22532	+++++					0.23199	9.763
44 Acenaphthene	0.94620	0.88547	0.92098	1.04086	1.02897	0.94967		
	0.97310	+++++					0.96361	5.801

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUL-2013 12:01
End Cal Date : 08-JUL-2013 15:59
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130708.b/SW846070813.m
Cal Date : 08-Jul-2013 16:34 jianqing
Curve Type : Average

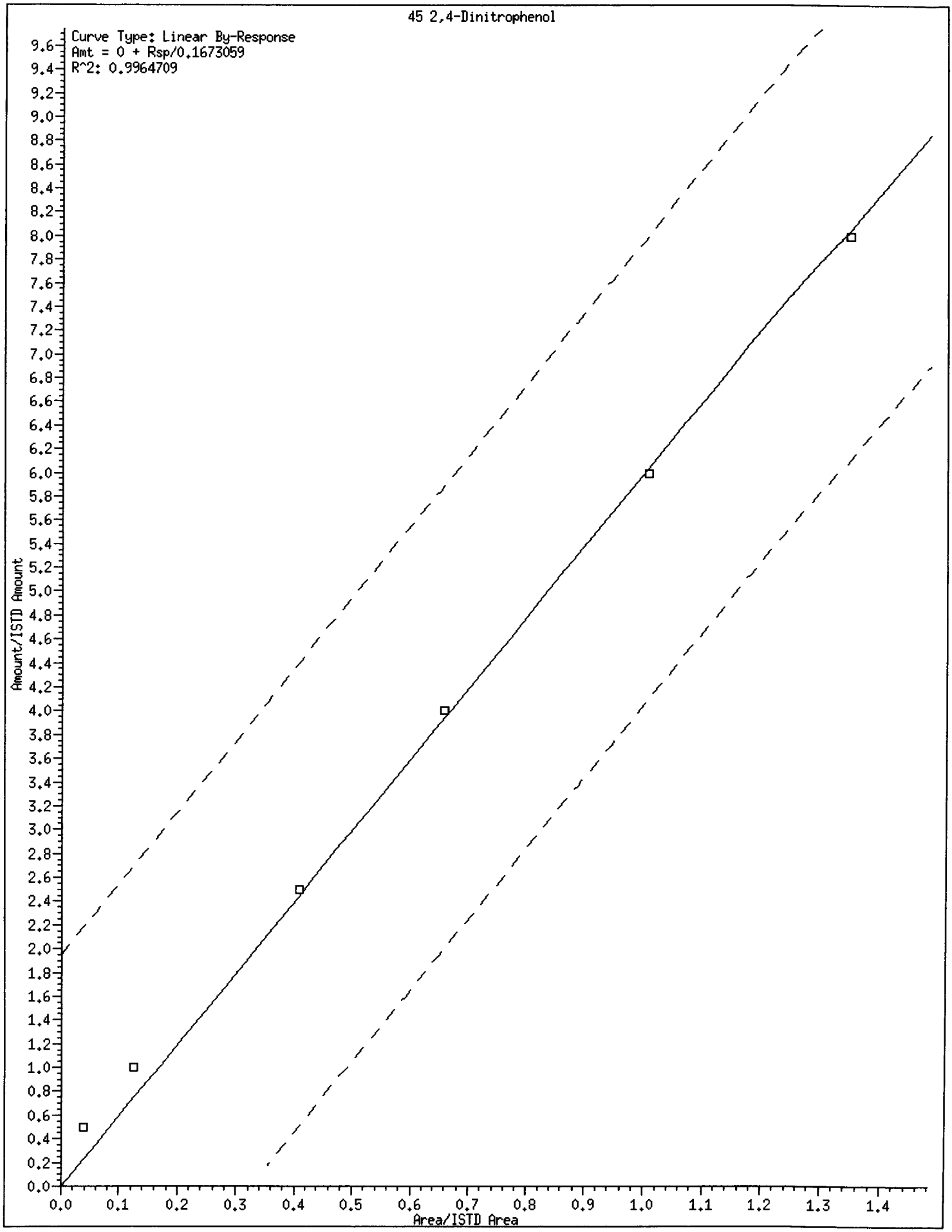
Compound	1.000 Level 1	5.000 Level 2	10.000 Level 3	25.000 Level 4	40.000 Level 5	60.000 Level 6	RRF	% RSD	
	80.000 Level 7	0.20000 Level 8							
45 2,4-Dinitrophenol	+++++	0.07589	0.12453	0.16356	0.16466	0.16835			
	0.16838	+++++					0.14423	25.968	<-
46 Dibenzofuran	1.23979	1.17621	1.17006	1.34727	1.19338	1.09843			
	1.08723	+++++					1.18748	7.431	
47 4-Nitrophenol	0.03877	0.06442	0.07733	0.10263	0.08966	0.09808			
	0.09506	+++++					0.08085	28.135	<-
48 2,4-Dinitrotoluene	0.21498	0.26631	0.27940	0.30149	0.31107	0.29860			
	0.31061	+++++					0.28321	12.107	
49 Fluorene	1.06291	0.98965	1.00324	1.06962	1.02198	0.90905			
	0.87628	+++++					0.99039	7.413	
50 Diethylphthalate	1.03544	0.97277	0.95753	0.99864	0.95714	0.88353			
	0.84465	+++++					0.94996	6.904	
51 4-Chlorophenyl-phenylether	0.49218	0.45564	0.45221	0.47399	0.45781	0.40015			
	0.38026	+++++					0.44461	8.995	
52 4-Nitroaniline	0.16898	0.17986	0.16776	0.14912	0.18918	0.20135			
	0.21438	+++++					0.18152	12.176	
53 4,6-Dinitro-2-methylphenol	+++++	0.10525	0.13449	0.14865	0.15496	0.16022			
	0.16534	+++++					0.14482	15.280	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUL-2013 12:01
End Cal Date : 08-JUL-2013 15:59
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130708.b/SW846070813.m
Cal Date : 08-Jul-2013 16:34 jianqing

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	0.16933	0.22881	0.25123	0.30787	0.28271	0.27806					
	0.28312	+++++					AVRG		0.25730		18.01238
39 Dimethylphthalate	1.01729	1.02193	1.01609	1.13482	1.14704	1.09299					
	1.16555	+++++					AVRG		1.08510		6.08893
40 Acenaphthylene	1.51713	1.50178	1.50853	1.62808	1.52917	1.38052					
	1.39139	+++++					AVRG		1.49380		5.69526
41 2,6-Dinitrotoluene	0.17684	0.22240	0.23777	0.26163	0.25952	0.24713					
	0.25791	+++++					AVRG		0.23760		12.72397
43 3-Nitroaniline	0.19465	0.24351	0.24756	0.25653	0.24599	0.21041					
	0.22532	+++++					AVRG		0.23199		9.76272
44 Acenaphthene	0.94620	0.88547	0.92098	1.04086	1.02897	0.94967					
	0.97310	+++++					AVRG		0.96361		5.80139
45 2,4-Dinitrophenol	+++++	46704	144880	428566	783013	1135293					
	1397478	+++++					LINR	0.000e+00	0.16731		0.99647

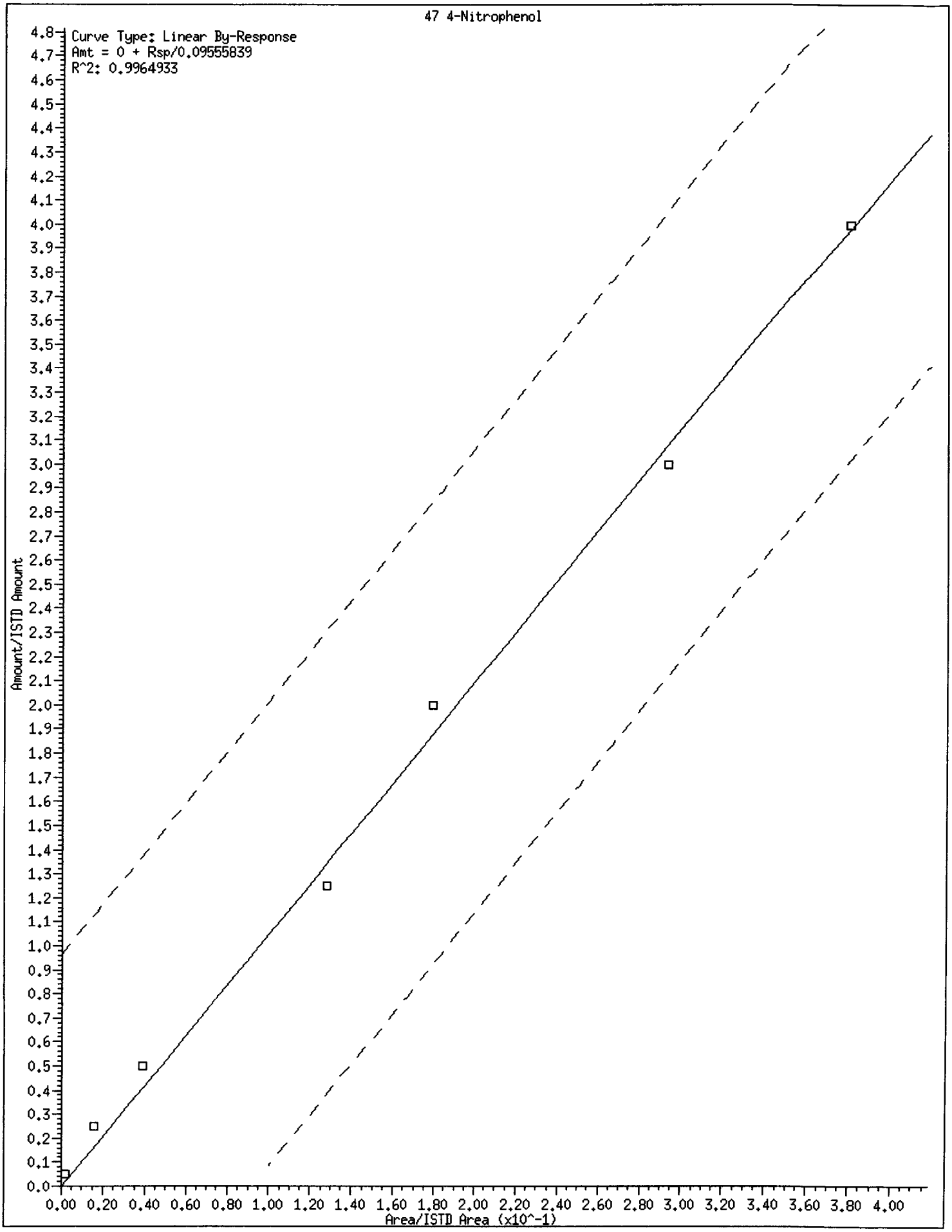

45 2,4-Dinitrophenol
Curve Type: Linear By-Response
Amt = 0 + Rsp/0.1673059
R^2: 0.9964709
Amount/ISTD Amount
Area/ISTD Area
0.0
0.1
0.2
0.3
0.4
0.5
0.6
0.7
0.8
0.9
1.0
1.1
1.2
1.3
1.4

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUL-2013 12:01
End Cal Date : 08-JUL-2013 15:59
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130708.b/SW846070813.m
Cal Date : 08-Jul-2013 16:34 jianqing

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									
46 Dibenzofuran	1.23979	1.17621	1.17006	1.34727	1.19338	1.09843					
	1.08723	+++++					AVRG		1.18748		7.43058
47 4-Nitrophenol	2410	19821	44982	134466	213190	330704					
	394475	+++++					LINR	0.000e+00	0.09556		0.99649
48 2,4-Dinitrotoluene	0.21498	0.26631	0.27940	0.30149	0.31107	0.29860					
	0.31061	+++++					AVRG		0.28321		12.10652
49 Fluorene	1.06291	0.98965	1.00324	1.06962	1.02198	0.90905					
	0.87628	+++++					AVRG		0.99039		7.41259
50 Diethylphthalate	1.03544	0.97277	0.95753	0.99864	0.95714	0.88353					
	0.84465	+++++					AVRG		0.94996		6.90412
51 4-Chlorophenyl-phenylether	0.49218	0.45564	0.45221	0.47399	0.45781	0.40015					
	0.38026	+++++					AVRG		0.44461		8.99513
52 4-Nitroaniline	0.16898	0.17986	0.16776	0.14912	0.18918	0.20135					
	0.21438	+++++					AVRG		0.18152		12.17572


47 4-Nitrophenol
Curve Type: Linear By-Response
Amt = 0 + Rsp/0.09555839
R^2: 0.9964933
Amount/ISTD Amount
Area/ISTD Area (x10^-1)

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUL-2013 12:01
End Cal Date : 08-JUL-2013 15:59
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130708.b/SW846070813.m
Cal Date : 08-Jul-2013 16:34 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						
54 N-Nitrosodiphenylamine	0.49748	0.47881	0.48940	0.55255	0.57554	0.55556		
	0.57657	+++++					0.53227	7.932
56 4-Bromophenyl-phenylether	0.19203	0.19081	0.18924	0.20237	0.21206	0.19897		
	0.21333	+++++					0.19983	4.976
57 Hexachlorobenzene	0.24936	0.22067	0.21415	0.21259	0.22224	0.20300		
	0.20806	+++++					0.21858	6.923
58 Pentachlorophenol	+++++	0.09455	0.11274	0.11926	0.13259	0.13560		
	0.14111	+++++					0.12264	14.153
60 Phenanthrene	0.99739	0.91148	0.93568	1.05087	1.06297	0.99208		
	1.05203	+++++					1.00036	5.956
61 Anthracene	0.90592	0.90571	0.94185	1.04732	1.03639	0.98269		
	1.00744	+++++					0.97533	6.034
62 Carbazole	0.88721	0.81864	0.73872	0.72874	0.84108	0.87994		
	0.95972	+++++					0.83629	9.903
63 Di-n-butylphthalate	1.06606	1.14535	1.16358	1.34006	1.30694	1.22086		
	1.24555	+++++					1.21263	7.874
64 Fluoranthene	0.87287	0.89598	0.94249	1.08036	1.09863	1.03557		
	1.07992	+++++					1.00083	9.490

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUL-2013 12:01
End Cal Date : 08-JUL-2013 15:59
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130708.b/SW846070813.m
Cal Date : 08-Jul-2013 16:34 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						
65 Pyrene	1.06793	1.05431	1.07183	1.20705	1.18166	1.09164		
	1.13974	+++++					1.11631	5.403
67 Butylbenzylphthalate	0.41785	0.48995	0.52437	0.62676	0.62705	0.59468		
	0.61902	+++++					0.55710	14.649
68 Benzo(a)anthracene	0.96131	0.94068	0.97181	1.05463	1.03272	0.92953		
	0.95111	+++++					0.97740	4.879
70 3,3'-Dichlorobenzidine	0.28612	0.30558	0.31938	0.33519	0.32237	0.26685		
	0.26628	+++++					0.30025	9.196
71 Chrysene	0.90560	0.85893	0.90048	1.00301	1.01241	0.91682		
	0.94324	+++++					0.93436	6.000
72 bis(2-Ethylhexyl)phthalate	0.39901	0.47600	0.49341	0.55971	0.55830	0.51917		
	0.53268	+++++					0.50547	11.135
73 Di-n-octylphthalate	1.10388	0.99369	0.96755	1.01075	0.96093	0.84611		
	0.84648	+++++					0.96134	9.526
74 Benzo(b)fluoranthene	0.75039	0.79654	0.81492	1.06563	1.13132	0.95580		
	0.98135	+++++					0.92799	15.586
75 Benzo(k)fluoranthene	0.96199	0.93221	0.99397	1.03063	0.92715	0.89001		
	0.90855	+++++					0.94922	5.220

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUL-2013 12:01
End Cal Date : 08-JUL-2013 15:59
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130708.b/SW846070813.m
Cal Date : 08-Jul-2013 17:04 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							
76 Benzo(a)pyrene	0.65646	0.72958	0.75705	0.90217	0.91260	0.84472			
	0.88126	+++++					0.81198	12.121	
78 Indeno(1,2,3-cd)pyrene	0.88987	0.93872	0.98867	1.15450	1.10330	1.04158			
	1.10153	+++++					1.03117	9.351	
79 Dibenzo(a,h)anthracene	0.68194	0.73537	0.79697	0.96125	0.93515	0.86292			
	0.86932	+++++					0.83470	12.250	
80 Benzo(g,h,i)perylene	0.78877	0.80682	0.83374	0.99903	1.02483	0.97502			
	1.05724	+++++					0.92649	12.170	
90 N-Nitrosodimethylamine	0.84886	0.82440	0.79529	0.96048	0.99456	0.96451			
	1.01236	+++++					0.91435	9.704	
91 Aniline	1.89023	1.79165	1.77831	1.89139	1.64795	1.52339			
	1.62888	+++++					1.73597	8.053	
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	
93 Benzidine	+++++	+++++	0.13589	0.07672	0.09577	0.09398			
	0.13473	+++++					0.10742	24.697	<-
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUL-2013 12:01
End Cal Date : 08-JUL-2013 15:59
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130708.b/SW846070813.m
Cal Date : 08-Jul-2013 16:34 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	80.000 Level 7	0.20000 Level 8	___ RRF	% RSD
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
98 Retene	0.39820	0.41472	0.43250	0.49282	0.50854	0.46322	0.49490	+++++	0.45784	9.460
99 Perylene	0.89930	0.73276	0.73880	0.85504	0.83976	0.78513	0.79707	+++++	0.80684	7.613
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
103 Pyridine	1.24277	1.31038	1.26126	1.56602	1.65508	1.57139	1.53419	+++++	1.44873	11.802
187 Total Benzofluoranthenes	0.82147	0.82113	0.85688	0.98785	0.96731	0.87573	0.88757	+++++	0.88828	7.450
188 2,6-Dichlorophenol	+++++	1.07432	1.10778	1.21673	1.15471	1.03804	0.94001	+++++	1.08860	8.811

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUL-2013 12:01
End Cal Date : 08-JUL-2013 15:59
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130708.b/SW846070813.m
Cal Date : 08-Jul-2013 16:34 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	+++++	0.43608	0.41725	0.45128	0.29899	0.46787		
	0.50631	+++++					0.42963	16.482
$ 1 2-Fluorophenol	1.63312	1.62876	1.56771	1.82518	1.71614	1.57508		
	+++++	+++++					1.65767	5.900
$ 137 d8-1,4-Dioxane	0.49539	0.46509	0.47256	0.54033	0.57892	0.56415		
	0.58787	+++++					0.52919	9.673
$ 2 Phenol-d5	1.89282	1.92321	1.87218	2.13333	1.94320	1.78641		
	+++++	+++++					1.92519	6.002
$ 5 2-Chlorophenol-d4	1.64002	1.62604	1.59301	1.83056	1.71260	1.56946		
	+++++	+++++					1.66195	5.776
$ 10 1,2-Dichlorobenzene-d4	0.89250	0.84622	0.83114	0.94699	0.94416	0.88160		
	+++++	+++++					0.89044	5.418
$ 18 Nitrobenzene-d5	0.31718	0.31693	0.31271	0.36071	0.34789	0.32619		
	+++++	+++++					0.33027	5.920
$ 36 2-Fluorobiphenyl	1.05772	1.06257	1.03904	1.14361	1.12944	1.04377		
	+++++	+++++					1.07936	4.201
$ 55 2,4,6-Tribromophenol	0.14764	0.14191	0.16387	0.14253	0.14382	0.13329		
	+++++	+++++					0.14551	6.978

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUL-2013 12:01
End Cal Date : 08-JUL-2013 15:59
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130708.b/SW846070813.m
Cal Date : 08-Jul-2013 16:34 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	0.51743	0.51309	0.51520	0.58341	0.61568	0.57302		
	+++++	+++++					0.55297	7.900
$ 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.

INITIAL CALIBRATION DATA

Start Cal Date : 08-JUL-2013 12:01
End Cal Date : 08-JUL-2013 15:59
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem2/nt6.i/20130708.b/SW846070813.m
Cal Date : 08-Jul-2013 16:34 jianqing

Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Linear	Amt = b + Rsp/m1	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/nt6.i/20130708.b/SW846070813.m
Batch File: /chem2/nt6.i/20130708.b
Inst ID: nt6.i

07/08/13

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08
FILENAME:	07081301	07081302	07081303	07081304	07081305	07081306	07081307	07081308
INJ.DATE:	08-JUL-2013	08-JUL-2013	08-JUL-2013	08-JUL-2013	08-JUL-2013	08-JUL-2013	08-JUL-2013	08-JUL-2013
INJ.TIME:	12:01	12:35	13:09	13:43	14:17	14:51	15:25	15:59

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	6.476	+++++	6.467	6.467	6.467	6.478	6.483	+++++	6.476	3.476-9.476	6.473	0.007
186 Carbaryl	16.514	+++++	16.500	16.500	16.500	16.516	16.526	16.532	16.514	13.514-19.514	16.512	0.013
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.225	5.225-11.225	+++++	+++++
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.363	11.363-17.363	+++++	+++++
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.531	15.531-21.531	+++++	+++++
170 N,N-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.634	13.634-19.634	+++++	+++++
171 2,3-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.609	14.609-20.609	+++++	+++++
172 2,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.863	13.863-19.863	+++++	+++++
173 2,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.605	17.605-23.605	+++++	+++++
174 2,6-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.015	14.015-20.015	+++++	+++++
175 3,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.609	14.609-20.609	+++++	+++++
176 3,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.562	14.562-20.562	+++++	+++++
177 p-Benzoquinone	7.123	+++++	7.119	7.119	7.119	7.124	7.124	7.124	7.123	4.123-10.123	7.122	0.003
168 Pentachlorobenzene	13.688	+++++	13.679	13.679	13.684	13.690	13.695	13.700	13.688	10.688-16.688	13.688	0.008
145 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.212	44.212-50.212	+++++	+++++
146 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.746	44.746-50.746	+++++	+++++
147 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.216	45.216-51.216	+++++	+++++

Reviewer 1 WD Date: 7.9.13
Reviewer 2 _____ Date: _____

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/nt6.i/20130708.b/SW846070813.m
Batch File: /chem2/nt6.i/20130708.b
Inst ID: nt6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
148 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.281	44.281-50.281	+++++	+++++
149 TCMX	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.387	40.387-46.387	+++++	+++++
150 DCBP	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.989	47.989-53.989	+++++	+++++
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	67.733	64.733-70.733	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.067	62.067-68.067	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
142 1,2-Dibromo-3-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.917	46.917-52.917	+++++	+++++
135 2,3,5,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.871	10.871-16.871	+++++	+++++
136 2,3,4,5-tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.317	36.317-42.317	+++++	+++++
$ 137 d8-1,4-Dioxane	3.084	+++++	3.096	3.091	3.091	3.086	3.096	3.118	3.084	0.084-6.084	3.095	0.011
* 134 Di-n-octylphthalate-d4	21.135	21.127	21.126	21.126	21.126	21.132	21.131	21.137	21.135	18.135-24.135	21.130	0.004
133 Butylatedhydroxytoluen	13.491	+++++	13.487	13.487	13.487	13.492	13.497	13.503	13.491	10.491-16.491	13.492	0.006
132 3,6-Dimethylphenanthre	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.450	62.450-68.450	+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	64.400	61.400-67.400	+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	62.100	59.100-65.100	+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.912	51.912-57.912	+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.212	51.212-57.212	+++++	+++++
127 2-Isopropylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	57.650	54.650-60.650	+++++	+++++
126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.750	53.750-59.750	+++++	+++++
144 alpha-Terpineol	10.520	+++++	10.506	10.506	10.511	10.522	10.527	10.532	10.520	7.520-13.520	10.518	0.010
125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.166	49.166-55.166	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/nt6.i/20130708.b/SW846070813.m
Batch File: /chem2/nt6.i/20130708.b
Inst ID: nt6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.617	47.617-53.617	+++++	+++++
123 Acetophenone	9.121	+++++	9.111	9.106	9.112	9.122	9.127	9.127	9.121	6.121-12.121	9.118	0.008
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.467	40.467-46.467	+++++	+++++
143 1,4-Dioxane	3.143	3.162	3.160	3.150	3.150	3.150	3.155	3.176	3.143	0.143-6.143	3.156	0.010
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.500	51.500-57.500	+++++	+++++
120 2,3,4,6-Tetrachlorophe	13.923	+++++	13.919	13.920	13.920	13.925	13.930	13.935	13.923	10.923-16.923	13.925	0.006
178 2-Benzyl-4-Chloropheno	16.466	+++++	16.451	16.446	16.452	16.468	16.478	16.489	16.466	13.466-19.466	16.464	0.016
119 7,12-Dimethylbenz(a)an	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.069	44.069-50.069	+++++	+++++
118 Triphenyl Phosphate	19.538	+++++	19.529	19.529	19.529	19.540	19.539	19.545	19.538	16.538-22.538	19.535	0.007
117 Butyl Diphenyl Phospha	17.930	+++++	17.926	17.921	17.926	17.932	17.936	17.937	17.930	14.930-20.930	17.930	0.006
116 Dibutyl Phenyl Phospha	16.247	+++++	16.232	16.233	16.238	16.249	16.243	16.248	16.247	13.247-19.247	16.242	0.007
115 Tributyl Phosphate	14.511	+++++	14.491	14.491	14.496	14.513	14.528	14.534	14.511	11.511-17.511	14.509	0.017
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.950	45.950-51.950	+++++	+++++
113 Diphenyl Oxide	12.582	+++++	12.578	12.579	12.579	12.584	12.589	12.589	12.582	9.582-15.582	12.583	0.005
112 Biphenyl	12.395	+++++	12.386	12.392	12.392	12.397	12.397	12.402	12.395	9.395-15.395	12.394	0.005
111 Azobenzene (1,2-DP-Hyd	16.466	+++++	16.446	16.446	16.452	16.468	16.478	16.484	16.466	13.466-19.466	16.463	0.015
110 Tetrachloroguaiacol	15.232	+++++	15.223	15.228	15.228	15.234	15.239	15.244	15.232	12.232-18.232	15.233	0.007
109 3,4,5-Trichloroguaiaco	14.019	+++++	14.015	14.010	14.010	14.021	14.026	14.031	14.019	11.019-17.019	14.019	0.008
181 3,4,6-Trichloroguaiaco	14.137	+++++	14.133	14.133	14.133	14.144	14.149	14.154	14.137	11.137-17.137	14.141	0.009
108 4,5,6-Trichloroguaiaco	15.050	+++++	15.041	15.041	15.041	15.052	15.057	15.063	15.050	12.050-18.050	15.049	0.009
184 3,4-Dichloroguaiacol	12.476	+++++	12.472	12.472	12.472	12.477	12.482	12.488	12.476	9.476-15.476	12.477	0.006
107 4,5-Dichloroguaiacol	13.256	+++++	13.246	13.247	13.246	13.257	13.267	13.273	13.256	10.256-16.256	13.256	0.011
182 4,6-Dichloroguaiacol	13.256	+++++	13.246	13.247	13.246	13.257	13.267	13.273	13.256	10.256-16.256	13.256	0.011
185 4-Chloroguaiacol	11.386	+++++	11.376	11.377	11.377	11.387	11.387	11.392	11.386	8.386-14.386	11.383	0.007

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/nt6.i/20130708.b/SW846070813.m
Batch File: /chem2/nt6.i/20130708.b
Inst ID: nt6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
106	Guaiacol	9.377	+++++	9.368	9.368	9.368	9.379	9.384	9.389	9.377	6.377-12.377	9.376	0.009
105	1-methylnaphthalene	11.797	+++++	11.788	11.788	11.788	11.793	11.798	11.798	11.797	8.797-14.797	11.793	0.005
151	1,2,4,5-Tetrachloroben	11.957	+++++	11.953	11.954	11.954	11.959	11.964	11.964	11.957	8.957-14.957	11.958	0.005
152	Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.943	27.943-33.943	+++++	+++++
153	Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.442	20.442-26.442	+++++	+++++
154	Diazinon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.968	18.968-24.968	+++++	+++++
155	Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.466	20.466-26.466	+++++	+++++
156	Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.866	19.866-25.866	+++++	+++++
157	Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.413	20.413-26.413	+++++	+++++
158	Ethion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.952	21.952-27.952	+++++	+++++
159	4-Nonylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.721	18.721-24.721	+++++	+++++
160	Tetraethyl Tin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.159	15.159-21.159	+++++	+++++
161	1,2,3-Trichloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	36.246	33.246-39.246	+++++	+++++
162	1,2,3,4-Tetrachloronap	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	37.506	34.506-40.506	+++++	+++++
163	1,2,3,5,8-Pentachloron	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	38.893	35.893-41.893	+++++	+++++
164	1,2,3,4,6,7-Hexachloro	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.681	36.681-42.681	+++++	+++++
165	1,2,3,4,5,6,7-Heptachl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	41.123	38.123-44.123	+++++	+++++
166	Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.253	39.253-45.253	+++++	+++++
167	2,2',4,4',5-Pentabromo	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.033	39.033-45.033	+++++	+++++
$ 2	Phenol-d5	7.983	+++++	7.963	7.969	7.968	7.985	7.995	+++++	7.983	4.983-10.983	7.977	0.012
3	Phenol	7.999	+++++	7.984	7.985	7.984	8.006	8.016	8.006	7.999	4.999-10.999	7.997	0.013
4	Bis(2-Chloroethyl)ethe	8.090	+++++	8.080	8.086	8.086	8.097	8.102	8.096	8.090	5.090-11.090	8.091	0.008
$ 5	2-Chlorophenol-d4	8.132	+++++	8.123	8.118	8.123	8.129	8.134	+++++	8.132	5.132-11.132	8.127	0.006

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/nt6.i/20130708.b/SW846070813.m
Batch File: /chem2/nt6.i/20130708.b
Inst ID: nt6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	6 2-Chlorophenol	8.154	+++++	8.144	8.145	8.145	8.156	8.160	8.160	8.154	5.154-11.154	8.152	0.007
	7 1,3-Dichlorobenzene	8.367	+++++	8.363	8.364	8.364	8.369	8.369	8.369	8.367	5.367-11.367	8.366	0.003
*	8 1,4-Dichlorobenzene-d4	8.432	8.424	8.422	8.423	8.422	8.428	8.433	8.428	8.432	5.432-11.432	8.426	0.004
	9 1,4-Dichlorobenzene	8.453	+++++	8.449	8.449	8.449	8.455	8.454	8.454	8.453	5.453-11.453	8.452	0.003
$	10 1,2-Dichlorobenzene-d4	8.725	+++++	8.721	8.722	8.722	8.727	8.732	+++++	8.725	5.725-11.725	8.725	0.004
	11 Benzyl alcohol	8.699	+++++	8.689	8.690	8.690	8.700	8.711	8.716	8.699	5.699-11.699	8.699	0.011
	12 1,2-Dichlorobenzene	8.752	+++++	8.743	8.743	8.743	8.748	8.753	8.748	8.752	5.752-11.752	8.747	0.004
	13 2-Methylphenol	8.928	+++++	8.914	8.914	8.914	8.925	8.935	8.940	8.928	5.928-11.928	8.924	0.011
	14 2,2'-oxybis(1-Chloropr	8.955	+++++	8.951	8.951	8.951	8.951	8.956	8.962	8.955	5.955-11.955	8.954	0.004
	15 4-Methylphenol	9.153	+++++	9.143	9.144	9.144	9.160	9.165	9.170	9.153	6.153-12.153	9.154	0.011
	16 N-Nitroso-di-n-propyla	9.174	+++++	9.159	9.160	9.165	9.181	9.191	9.191	9.174	6.174-12.174	9.175	0.014
	17 Hexachloroethane	9.238	+++++	9.234	9.229	9.235	9.235	9.234	9.234	9.238	6.238-12.238	9.234	0.003
$	18 Nitrobenzene-d5	9.356	+++++	9.346	9.347	9.347	9.357	9.362	+++++	9.356	6.356-12.356	9.353	0.007
	19 Nitrobenzene	9.388	+++++	9.373	9.373	9.379	9.390	9.394	9.395	9.388	6.388-12.388	9.385	0.009
	20 Isophorone	9.762	+++++	9.747	9.753	9.753	9.769	9.774	9.784	9.762	6.762-12.762	9.763	0.013
	21 2-Nitrophenol	9.895	+++++	9.891	9.892	9.892	9.897	9.902	9.902	9.895	6.895-12.895	9.896	0.005
	22 2,4-Dimethylphenol	9.991	+++++	9.982	9.982	9.982	9.993	9.998	10.004	9.991	6.991-12.991	9.990	0.009
	23 Bis(2-Chloroethoxy)met	10.141	+++++	10.132	10.132	10.132	10.143	10.148	10.153	10.141	7.141-13.141	10.140	0.009
	24 Benzoic acid	10.243	+++++	10.084	10.127	10.164	10.276	10.324	10.361	10.243	7.243-13.243	10.226	0.104
	25 2,4-Dichlorophenol	10.275	+++++	10.265	10.266	10.271	10.276	10.281	10.287	10.275	7.275-13.275	10.274	0.008
	26 1,2,4-Trichlorobenzene	10.414	+++++	10.404	10.405	10.404	10.410	10.415	10.415	10.414	7.414-13.414	10.409	0.005
*	27 Naphthalene-d8	10.472	10.464	10.463	10.463	10.463	10.469	10.473	10.474	10.472	7.472-13.472	10.468	0.005
	28 Naphthalene	10.504	+++++	10.495	10.495	10.495	10.501	10.506	10.506	10.504	7.504-13.504	10.500	0.005
	29 4-Chloroaniline	10.638	+++++	10.629	10.629	10.629	10.640	10.644	10.650	10.638	7.638-13.638	10.637	0.009

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/nt6.i/20130708.b/SW846070813.m
Batch File: /chem2/nt6.i/20130708.b
Inst ID: nt6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	30 Hexachlorobutadiene	10.814	+++++	10.805	10.811	10.810	10.811	10.815	10.816	10.814	7.814-13.814	10.812	0.004
	31 4-Chloro-3-methylpheno	11.434	+++++	11.430	11.425	11.425	11.436	11.440	11.446	11.434	8.434-14.434	11.434	0.008
	32 2-Methylnaphthalene	11.621	+++++	11.611	11.612	11.617	11.623	11.622	11.628	11.621	8.621-14.621	11.619	0.006
	33 Hexachlorocyclopentadi	12.000	+++++	11.996	11.991	11.996	11.996	12.001	12.001	12.000	9.000-15.000	11.998	0.004
	34 2,4,6-Trichlorophenol	12.128	+++++	12.124	12.125	12.125	12.130	12.135	12.135	12.128	9.128-15.128	12.129	0.005
	35 2,4,5-Trichlorophenol	12.187	+++++	12.178	12.178	12.178	12.189	12.194	12.194	12.187	9.187-15.187	12.185	0.007
$	36 2-Fluorobiphenyl	12.262	+++++	12.253	12.253	12.253	12.258	12.263	+++++	12.262	9.262-15.262	12.257	0.005
	37 2-Chloronaphthalene	12.406	+++++	12.397	12.397	12.397	12.408	12.413	12.413	12.406	9.406-15.406	12.404	0.007
	38 2-Nitroaniline	12.630	+++++	12.621	12.622	12.621	12.632	12.637	12.643	12.630	9.630-15.630	12.629	0.009
	39 Dimethylphthalate	12.999	+++++	12.984	12.985	12.985	13.001	13.011	13.016	12.999	9.999-15.999	12.997	0.013
	40 Acenaphthylene	13.085	+++++	13.075	13.076	13.075	13.086	13.086	13.091	13.085	10.085-16.085	13.082	0.007
	41 2,6-Dinitrotoluene	13.095	+++++	13.081	13.086	13.086	13.097	13.102	13.113	13.095	10.095-16.095	13.094	0.011
*	42 Acenaphthene-d10	13.336	13.328	13.326	13.332	13.332	13.337	13.337	13.342	13.336	10.336-16.336	13.334	0.005
	43 3-Nitroaniline	13.314	+++++	13.294	13.295	13.300	13.316	13.321	13.332	13.314	10.314-16.314	13.310	0.014
	44 Acenaphthene	13.389	+++++	13.380	13.380	13.380	13.391	13.390	13.396	13.389	10.389-16.389	13.387	0.007
	45 2,4-Dinitrophenol	13.480	+++++	13.465	13.460	13.465	13.482	13.486	13.508	13.480	10.480-16.480	13.478	0.016
	46 Dibenzofuran	13.651	+++++	13.636	13.637	13.642	13.653	13.657	13.663	13.651	10.651-16.651	13.648	0.010
	47 4-Nitrophenol	13.597	+++++	13.599	13.588	13.588	13.604	13.615	13.620	13.597	10.597-16.597	13.602	0.012
	48 2,4-Dinitrotoluene	13.726	+++++	13.711	13.711	13.711	13.727	13.738	13.743	13.726	10.726-16.726	13.724	0.013
	49 Fluorene	14.206	+++++	14.197	14.197	14.197	14.208	14.213	14.218	14.206	11.206-17.206	14.205	0.009
	50 Diethylphthalate	14.153	+++++	14.133	14.139	14.139	14.155	14.160	14.165	14.153	11.153-17.153	14.149	0.012
	51 4-Chlorophenyl-phenyle	14.222	+++++	14.213	14.213	14.213	14.224	14.229	14.229	14.222	11.222-17.222	14.221	0.007
	52 4-Nitroaniline	14.303	+++++	14.293	14.288	14.293	14.315	14.330	14.341	14.303	11.303-17.303	14.309	0.020
	53 4,6-Dinitro-2-methylph	14.383	+++++	14.368	14.368	14.368	14.395	14.405	14.411	14.383	11.383-17.383	14.386	0.018

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/nt6.i/20130708.b/SW846070813.m
Batch File: /chem2/nt6.i/20130708.b
Inst ID: nt6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	54 N-Nitrosodiphenylamine	14.431	+++++	14.411	14.416	14.416	14.433	14.437	14.443	14.431	11.431-17.431	14.427	0.012
$	55 2,4,6-Tribromophenol	14.628	+++++	14.619	14.619	14.619	14.636	14.640	+++++	14.628	11.628-17.628	14.627	0.009
	56 4-Bromophenyl-phenylet	15.008	+++++	14.998	14.999	14.999	15.004	15.009	15.009	15.008	12.008-18.008	15.004	0.005
	57 Hexachlorobenzene	15.232	+++++	15.223	15.228	15.228	15.234	15.239	15.244	15.232	12.232-18.232	15.233	0.007
	58 Pentachlorophenol	15.526	+++++	15.522	15.517	15.522	15.528	15.532	15.538	15.526	12.526-18.526	15.526	0.007
*	59 Phenanthrene-d10	15.718	15.710	15.709	15.709	15.709	15.720	15.719	15.725	15.718	12.718-18.718	15.715	0.006
	60 Phenanthrene	15.756	+++++	15.741	15.741	15.747	15.757	15.762	15.768	15.756	12.756-18.756	15.753	0.010
	61 Anthracene	15.830	+++++	15.816	15.816	15.816	15.827	15.837	15.837	15.830	12.830-18.830	15.826	0.010
	62 Carbazole	16.103	+++++	16.094	16.094	16.094	16.105	16.109	16.115	16.103	13.103-19.103	16.102	0.009
	63 Di-n-butylphthalate	16.797	+++++	16.788	16.788	16.788	16.794	16.799	16.804	16.797	13.797-19.797	16.794	0.006
	64 Fluoranthene	17.695	+++++	17.685	17.686	17.686	17.691	17.696	17.702	17.695	14.695-20.695	17.692	0.006
	65 Pyrene	18.053	+++++	18.038	18.038	18.044	18.054	18.054	18.059	18.053	15.053-21.053	18.049	0.009
$	66 Terphenyl-d14	18.347	+++++	18.343	18.338	18.343	18.348	18.353	+++++	18.347	15.347-21.347	18.345	0.005
	67 Butylbenzylphthalate	19.217	+++++	19.208	19.208	19.214	19.219	19.219	19.229	19.217	16.217-22.217	19.216	0.007
	68 Benzo(a)anthracene	20.008	+++++	19.999	19.999	19.999	20.010	20.020	20.025	20.008	17.008-23.008	20.008	0.011
*	69 Chrysene-d12	20.035	20.022	20.025	20.026	20.026	20.036	20.036	20.041	20.035	17.035-23.035	20.031	0.007
	70 3,3'-Dichlorobenzidine	20.003	+++++	19.999	19.999	19.999	20.004	20.004	20.009	20.003	17.003-23.003	20.002	0.004
	71 Chrysene	20.072	+++++	20.063	20.063	20.068	20.079	20.084	20.089	20.072	17.072-23.072	20.074	0.010
	72 bis(2-Ethylhexyl)phtha	20.200	+++++	20.196	20.197	20.197	20.197	20.201	20.207	20.200	17.200-23.200	20.199	0.004
	73 Di-n-octylphthalate	21.141	+++++	21.131	21.137	21.137	21.142	21.142	21.147	21.141	18.141-24.141	21.139	0.005
	74 Benzo(b)fluoranthene	21.664	+++++	21.649	21.650	21.655	21.666	21.676	21.681	21.664	18.664-24.664	21.663	0.013
	75 Benzo(k)fluoranthene	21.696	+++++	21.681	21.682	21.682	21.703	21.708	21.713	21.696	18.696-24.696	21.695	0.014
	76 Benzo(a)pyrene	22.113	+++++	22.103	22.104	22.104	22.115	22.119	22.130	22.113	19.113-25.113	22.113	0.010
*	77 Perylene-d12	22.193	22.180	22.184	22.184	22.184	22.195	22.194	22.200	22.193	19.193-25.193	22.189	0.007

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/nt6.i/20130708.b/SW846070813.m
Batch File: /chem2/nt6.i/20130708.b
Inst ID: nt6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	78 Indeno(1,2,3-cd)pyrene	23.849	+++++	23.829	23.829	23.829	23.856	23.861	23.866	23.849	20.849-26.849	23.846	0.016
	79 Dibenzo(a,h)anthracene	23.865	+++++	23.850	23.851	23.845	23.877	23.888	23.904	23.865	20.865-26.865	23.869	0.022
	80 Benzo(g,h,i)perylene	24.314	+++++	24.288	24.289	24.294	24.326	24.336	24.352	24.314	21.314-27.314	24.314	0.025
$	85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	51.633	48.633-54.633	+++++	+++++
$	86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	63.533	60.533-66.533	+++++	+++++
$	87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	60.273	57.273-63.273	+++++	+++++
$	88 Dibenz(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	78.600	75.600-81.600	+++++	+++++
$	89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.841	47.841-53.841	+++++	+++++
	90 N-Nitrosodimethylamine	3.939	+++++	3.935	3.935	3.935	3.941	3.956	3.978	3.939	0.939-6.939	3.945	0.016
	91 Aniline	7.983	+++++	7.973	7.974	7.974	7.985	7.984	7.984	7.983	4.983-10.983	7.980	0.005
	92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.160	53.160-59.160	+++++	+++++
	93 Benzidine	17.930	+++++	17.926	17.921	17.921	17.932	17.931	17.931	17.930	14.930-20.930	17.927	0.005
$	95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.075	49.075-55.075	+++++	+++++
	96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.250	46.250-52.250	+++++	+++++
	97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	61.202	58.202-64.202	+++++	+++++
	98 Retene	18.598	+++++	18.594	18.594	18.594	18.599	18.604	18.604	18.598	15.598-21.598	18.598	0.005
	99 Perylene	22.230	+++++	22.216	22.216	22.216	22.232	22.237	22.242	22.230	19.230-25.230	22.227	0.011
	100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.074	19.074-25.074	+++++	+++++
	101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.255	19.255-25.255	+++++	+++++
	102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.369	18.369-24.369	+++++	+++++
	103 Pyridine	3.896	+++++	3.929	3.908	3.903	3.892	3.903	3.919	3.896	0.896-6.896	3.907	0.013
	187 Total Benzofluoranthen	21.696	+++++	21.681	21.650	21.682	21.703	21.708	21.713	21.696	18.696-24.696	21.690	0.022
	188 2,6-Dichlorophenol	10.649	+++++	10.639	10.640	10.639	10.650	10.655	10.661	10.649	7.649-13.649	10.648	0.009
	189 N-Nitrosomethylethylam	5.659	+++++	5.666	5.655	5.661	5.661	5.660	5.666	5.659	2.659-8.659	5.661	0.004

Analytical Resources Inc.: Organics Instrument Log

NT-6 Serial No.:GC=US00036167, MS=US81221575

Date: 7/8/13 Analysis: 8270D Analyst: [redacted]

GC Program: [redacted] Column No: 234157 Column Type: Rtx-5MS

Instrument Tune (.U or .CT.): 130708 EM Voltage: 1800

Calibration File: 070830 Curve Date: 7/8/13 Injection Vol.: 1µl

IS/SS	Ical/Ccal	LCS/ICV
B000785	2053-2, 2054-1	2056-1, 2057-1
	2055-1, 2061-1	2058-1, 2061-1
	1803I, 1803I	1803I, 2027-2
	2027-2 B000933	B000933

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem2/nt6.i/20130708.b

	Time	Filename	LabID	ClientId	DF															
1	1201	07081301.d	IC250708	IC250708	1	8.43	507223	10.47	1843524	13.34	1048119	15.72	1392753	20.03	1340567	22.19	1450550	21.14	2097720	
2	1235	07081302.d	IC020708	IC020708	1	8.42	542382													
3	1309	07081303.d	IC10708	IC10708	1	8.42	581960	10.46	2042194	13.33	1243376	15.71	1771287	20.03	1594239	22.18	1721800	21.13	2143658	
4	1343	07081304.d	IC50708	IC50708	1	8.42	591252	10.46	2080149	13.33	1230780	15.71	1737437	20.03	1599648	22.18	1695254	21.13	2201896	
5	1417	07081305.d	IC100708	IC100708	1	8.42	562163	10.46	1990383	13.33	1163414	15.71	1620267	20.03	1520026	22.18	1615408	21.13	2145014	
6	1451	07081306.d	IC400708	IC400708	1	8.43	582898	10.47	2096246	13.34	1188830	15.72	1543729	20.04	1519253	22.19	1674848	21.13	2344960	
7	1525	07081307.d	IC600708	IC600708	1	8.43	556124	10.47	2004545	13.34	1123936	15.72	1422042	20.04	1421640	22.19	1558882	21.13	2205278	
8	1559	07081308.d	IC800708	IC800708	1	8.43	529906	10.47	1889800	13.34	1037468	15.72	1255886	20.04	1244774	22.20	1395041	21.14	1962042	
9	1633	07081309.d	ICV0708	ICV0708	1	8.42	576118	10.47	2066898	13.33	1191169	15.72	1601782	20.03	1547714	22.19	1653078	21.13	2322894	
10	1756	07081310.d	WU65MBW1	WU65MBW1	1	8.43	508186	10.47	1811025	13.33	1097574	15.71	1632027	20.03	1483292	21.13	1986160	22.19	1578102	
11	1830	07081311.d	WU65LCSW1	WU65LCSW1	1	8.42	617623	10.47	2139084	13.33	1184699	15.71	1563842	20.03	1516894	21.13	2304747	22.19	1617029	
12	1904	07081312.d	WU65LCSDW1	WU65LCSDW1	1	8.42	620576	10.47	2153711	13.34	1253537	15.72	1617585	20.03	1564022	21.13	2398107	22.19	1667907	
13	1939	07081313.d	WU65QLS	WU65QLS	1	8.42	607031	10.46	2163818	13.33	1296097	15.71	1824660	20.03	1685426	21.13	2316321	22.19	1801154	
14	2013	07081314.d	WU65A	LF-TP-001-20	1	8.42	563015	10.47	1998636	13.33	1210122	15.71	1771352	20.02	1572275	21.12	2249522	22.18	1668374	
15	2047	07081315.d	WU65B	LF-FD-001-20	1	8.42	607495	10.46	2166310	13.33	1306668	15.71	1928318	20.02	1752519	21.12	2464637	22.18	1852262	
16	2121	07081316.d	WV51MBW1	WV51MBW1	1	8.42	604439	10.46	2134772	13.33	1298160	15.71	1926170	20.02	1773956	21.12	2443825	22.18	1937069	
17	2155	07081317.d	WV51LCSW1	WV51LCSW1	1	8.42	667458	10.47	2324651	13.34	1301070	15.71	1755617	20.03	1665732	21.13	2478863	22.18	1792283	
18	2229	07081318.d	WV51QLS	WV51QLS	1	8.42	42167	10.46	156307	13.33	83949	15.70	117098	20.01	111718	21.13	135111	22.17	114714	
19	2303	07081319.d	WV51C	BFS1322	1	8.42	644297	10.46	2262495	13.33	1374857	15.71	2017814	20.02	1820270	21.13	2515626	22.18	1964081	

[redacted] 07/09/13

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/20130708.b

ARI Job No.: IC25 Method: SW846070813.m Instrument: nt6.i Date: 08-JUL-2013

AR 07/08/13

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1201	07081301.d	IC250708	IC250708	1	NO MANUAL INTEGRATION
1235	07081302.d	IC020708	IC020708	1	NO MANUAL INTEGRATION
1309	07081303.d	IC10708	IC10708	1	3-Nitroaniline, 1,2-Dichlorobenzene-d4,
1343	07081304.d	IC50708	IC50708	1	NO MANUAL INTEGRATION
1417	07081305.d	IC100708	IC100708	1	NO MANUAL INTEGRATION
1451	07081306.d	IC400708	IC400708	1	NO MANUAL INTEGRATION
1525	07081307.d	IC600708	IC600708	1	4-Nitrophenol, Dibutyl Phenyl Phosphate,
1559	07081308.d	IC800708	IC800708	1	4-Nitrophenol, Dibutyl Phenyl Phosphate,

Data File: /chem2/nt6.i/20130708.b/tune.b/07081301.d

Date : 08-JUL-2013 12:01

Client ID: DFTPP0708

Instrument: nt6.i

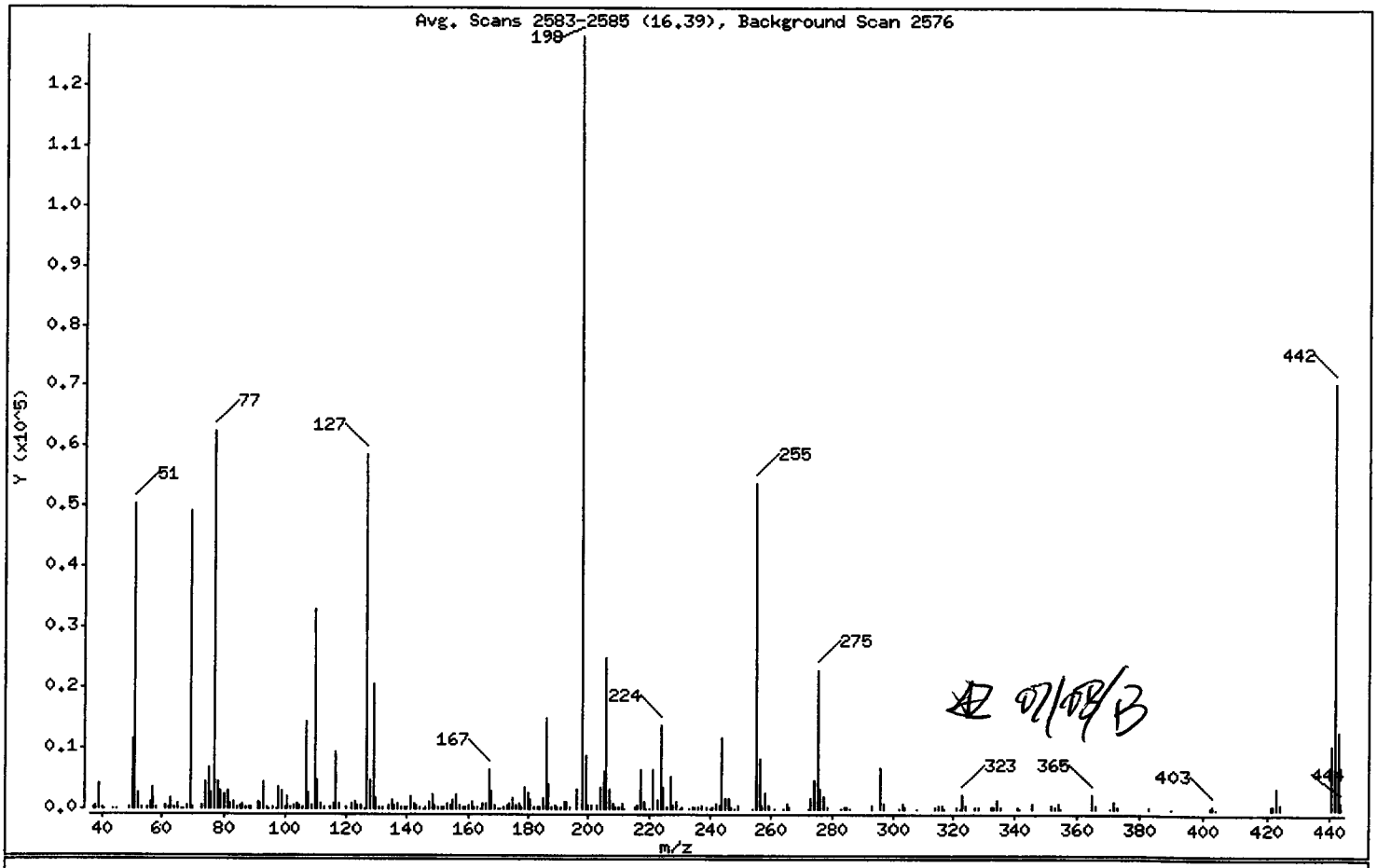
Sample Info: DFTPP0708

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	39.30
68	Less than 2.00% of mass 69	0.42 (1.08)
69	Mass 69 relative abundance	38.36
70	Less than 2.00% of mass 69	0.29 (0.77)
127	10.00 - 80.00% of mass 198	45.80
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.99
275	10.00 - 60.00% of mass 198	17.94
365	Greater than 1.00% of mass 198	1.90
441	0.01 - 24.00% of mass 442	8.23 (14.94)
442	50.00 - 200.00% of mass 198	55.07
443	15.00 - 24.00% of mass 442	10.12 (18.38)

Data File: /chem2/nt6.i/20130708.b/tune.b/07081301.d

Date : 08-JUL-2013 12:01

Client ID: DFTPP0708 Instrument: nt6.i

Sample Info: DFTPP0708

Operator: JZ

Column phase: ZB-5msi Column diameter: 0.32

Data File: 07081301.d
Spectrum: Avg. Scans 2583-2585 (16.39), Background Scan 2576
Location of Maximum: 198.00
Number of points: 257

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	351	113.00	258	182.00	323	259.00	489
38.00	654	115.00	149	183.00	440	261.00	119
39.00	4089	116.00	853	184.00	419	264.00	74
40.00	357	117.00	9482	185.00	1676	265.00	900
41.00	62	118.00	800	186.00	15053	266.00	234
44.00	21	120.00	152	187.00	4158	272.00	130
45.00	107	122.00	1012	188.00	359	273.00	1833
49.00	241	123.00	1181	189.00	671	274.00	4695
50.00	11448	124.00	720	190.00	250	275.00	22992
51.00	50384	125.00	606	191.00	418	276.00	3351
52.00	2651	126.00	110	192.00	1189	277.00	2001
53.00	338	127.00	58712	193.00	1072	278.00	374
55.00	150	128.00	4584	194.00	224	283.00	71
56.00	1295	129.00	20648	196.00	3152	284.00	187
57.00	3499	130.00	1776	198.00	128192	285.00	389
58.00	240	131.00	411	199.00	8956	286.00	64
61.00	616	132.00	214	200.00	658	293.00	568
62.00	400	134.00	534	201.00	600	296.00	6704
63.00	1682	135.00	1503	203.00	522	297.00	948
64.00	326	136.00	609	204.00	3457	302.00	67
65.00	807	137.00	1026	205.00	6089	303.00	887
66.00	59	138.00	195	206.00	25008	304.00	220
67.00	129	139.00	251	207.00	3119	308.00	58
68.00	533	140.00	430	208.00	778	314.00	256
69.00	49176	141.00	2096	209.00	225	315.00	617
70.00	378	142.00	785	210.00	406	316.00	465
73.00	511	143.00	610	211.00	1005	317.00	54
74.00	4387	144.00	359	212.00	54	321.00	244
75.00	6759	145.00	93	215.00	252	322.00	55
76.00	2554	146.00	434	216.00	454	323.00	2469
77.00	62568	147.00	1120	217.00	6601	324.00	486
78.00	4549	148.00	2309	218.00	1200	327.00	359
79.00	2827	149.00	552	219.00	112	328.00	208
80.00	2308	150.00	281	220.00	75	332.00	172
81.00	3084	151.00	419	221.00	6462	333.00	254

Data File: /chem2/nt6.i/20130708.b/tune.b/07081301.d

Date : 08-JUL-2013 12:01

Client ID: DFTPP0708 Instrument: nt6.i

Sample Info: DFTPP0708

Operator: JZ

Column phase: ZB-5msi Column diameter: 0.32

Data File: 07081301.d
Spectrum: Avg. Scans 2583-2585 (16.39), Background Scan 2576
Location of Maximum: 198.00
Number of points: 257

m/z	Y	m/z	Y	m/z	Y	m/z	Y
82.00	1023	152.00	151	223.00	1438	334.00	1445
83.00	1057	153.00	860	224.00	13908	335.00	381
84.00	262	154.00	724	225.00	3444	341.00	270
85.00	507	155.00	1435	226.00	360	342.00	52
86.00	739	156.00	2390	227.00	5255	346.00	763
87.00	442	157.00	602	228.00	710	352.00	608
88.00	186	158.00	304	229.00	1152	353.00	420
89.00	213	159.00	368	230.00	125	354.00	739
91.00	1054	160.00	709	231.00	425	355.00	138
92.00	807	161.00	1188	233.00	75	365.00	2436
93.00	4480	162.00	263	234.00	342	366.00	539
94.00	288	163.00	196	235.00	373	371.00	144
95.00	24	164.00	131	236.00	340	372.00	1098
96.00	379	165.00	943	237.00	506	373.00	305
97.00	94	166.00	861	239.00	214	383.00	381
98.00	3430	167.00	6457	240.00	52	390.00	80
99.00	2905	168.00	2966	241.00	401	402.00	428
100.00	362	169.00	633	242.00	889	403.00	631
101.00	1955	170.00	51	243.00	639	404.00	137
102.00	150	171.00	96	244.00	11652	421.00	588
103.00	640	172.00	423	245.00	1751	422.00	542
104.00	958	173.00	637	246.00	1687	423.00	3600
105.00	662	174.00	833	247.00	316	424.00	767
106.00	352	175.00	1788	248.00	67	441.00	10544
107.00	14521	176.00	545	249.00	446	442.00	70592
108.00	2578	177.00	796	254.00	88	443.00	12973
109.00	487	178.00	354	255.00	53872	444.00	1211
110.00	33112	179.00	3512	256.00	8218		
111.00	4780	180.00	2638	257.00	636		
112.00	759	181.00	1493	258.00	2717		

Data File: /chem2/nt6.i/20130708.b/tune.b/07081301.d

Date : 08-JUL-2013 12:01

Client ID: DFTPP0708

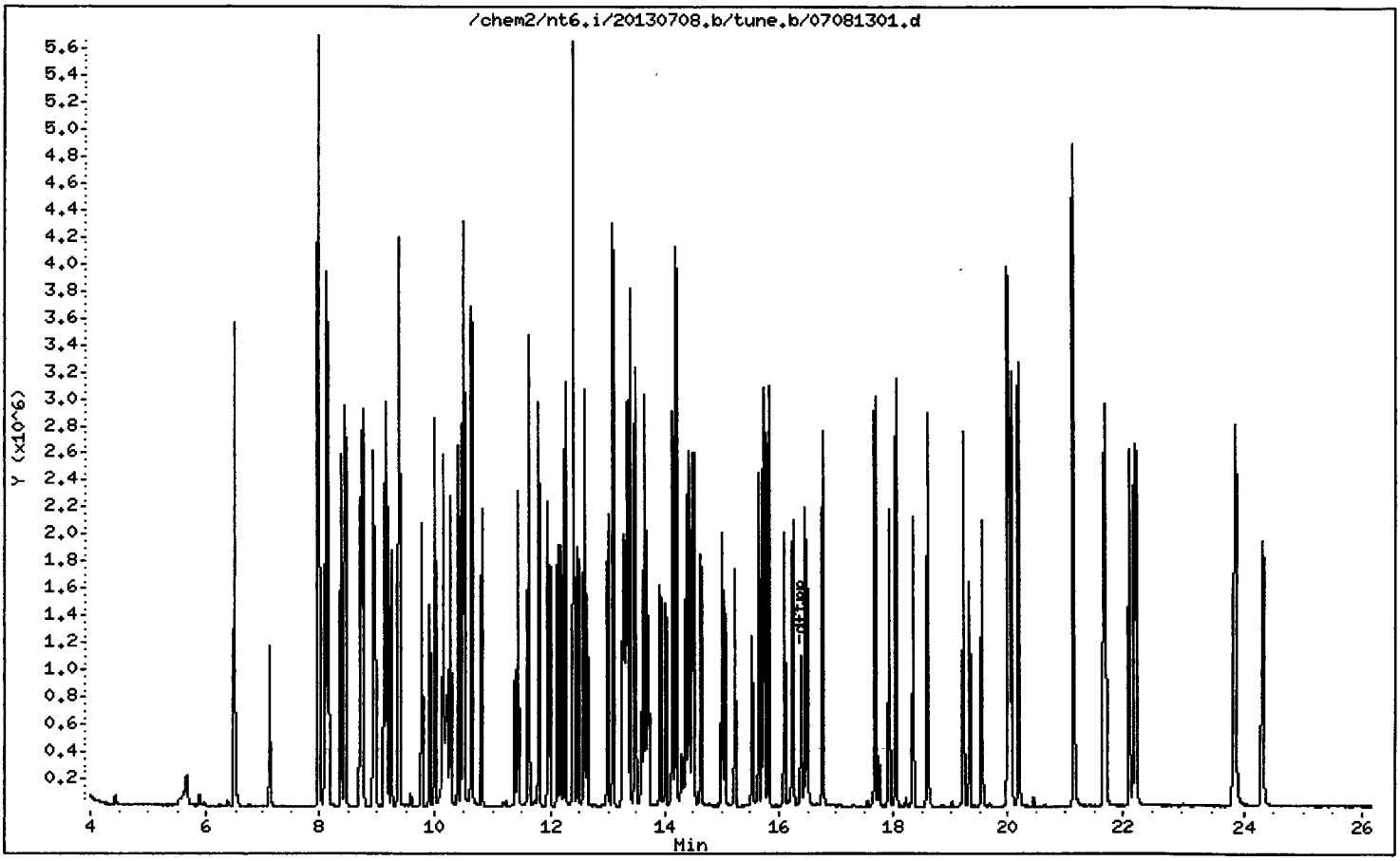
Instrument: nt6.i

Sample Info: DFTPP0708

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/20130708.b/ddt.b/07081301.d ARI ID: DDT
Method: /chem2/nt6.i/20130708.b/ddt.b/sw846ddt.m Misc: 13-
Analysis Date: 08-JUL-2013 12:01 Instrument: nt6.i

COMPOUND	RT	AREA
Pentachlorophenol	15.526	217854
Benzidine	17.930	123444
4,4'-DDE	----	----
4,4'-DDD	18.854	2543
4,4'-DDT	19.324	481656

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

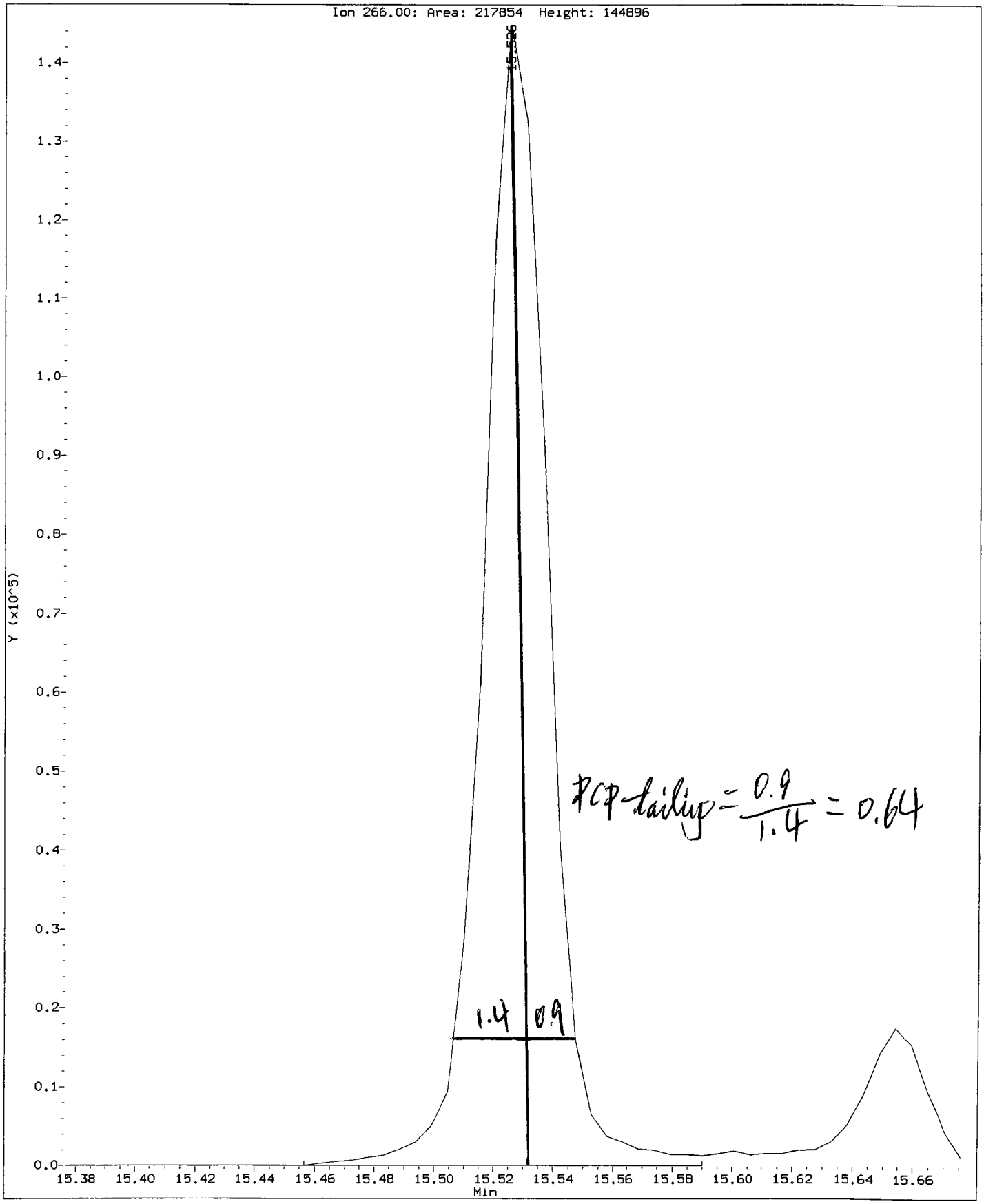
$$\text{DDT Percent Breakdown} = \frac{(0 + 2543) * 100}{(0 + 2543 + 481656)}$$

DDT Percent Breakdown = 0.5 %

07/08/13

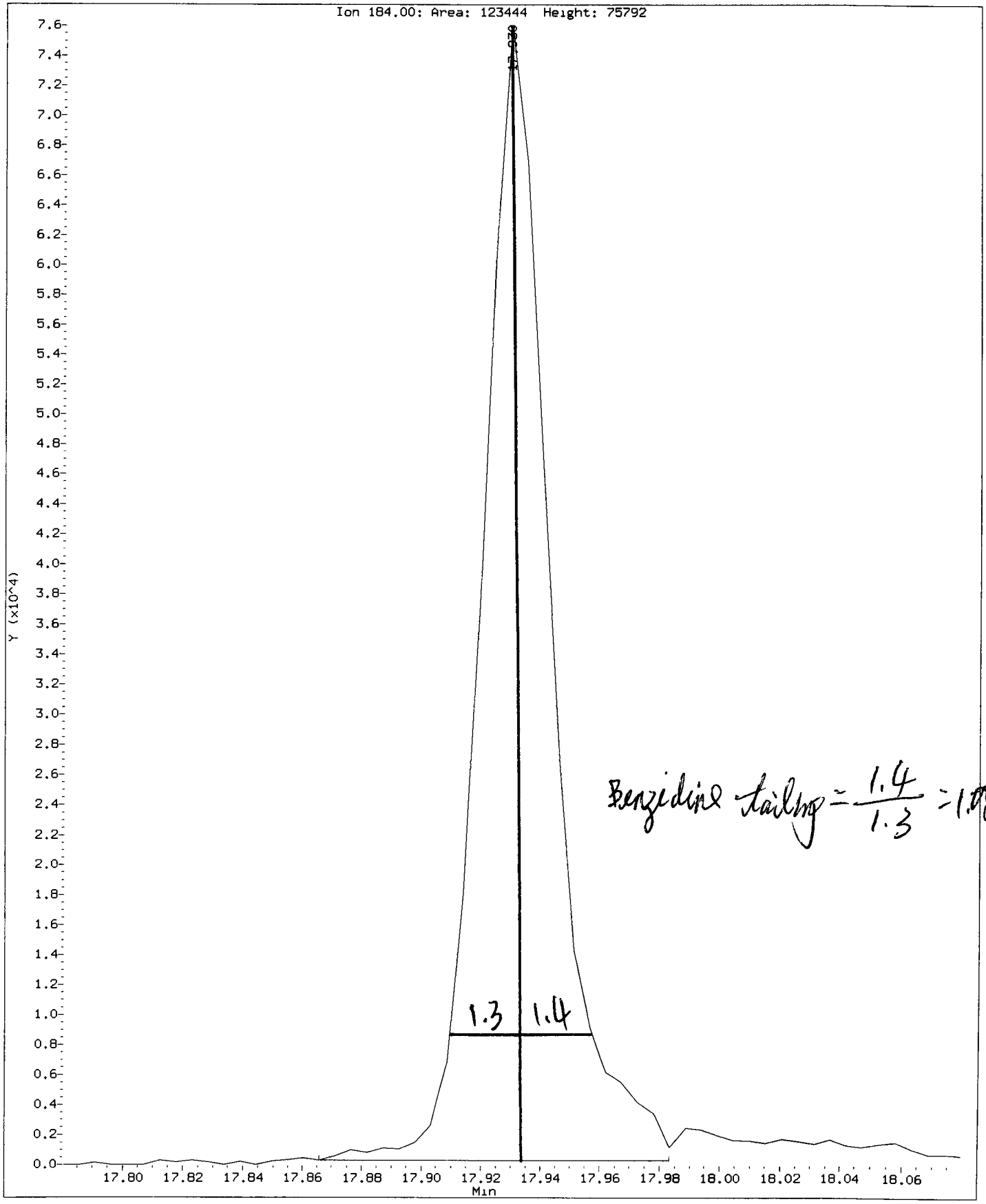
Data File: /chem2/nt6.i/20130708.b/ddt.b/07081301.d
Injection Date: 08-JUL-2013 12:01
Instrument: nt6.i
Client Sample ID: DDT0708

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem2/nt6.i/20130708.b/ddt.b/07081301.d
Injection Date: 08-JUL-2013 12:01
Instrument: nt6.i
Client Sample ID: DDT0708

Compound: Benzidine
CAS Number:



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130708.b/07081303.d
Lab Smp Id: IC10708 Client Smp ID: IC10708
Inj Date : 08-JUL-2013 13:09
Operator : JZ Inst ID: nt6.i
Smp Info : IC10708,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130708.b/SW846070813.m
Meth Date : 08-Jul-2013 16:42 jianqing Quant Type: ISTD
Cal Date : 08-JUL-2013 15:59 Cal File: 07081308.d
Als bottle: 3 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

JZ 07/08/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.467	6.483	(0.768)	71281	1.50000	1.478
$	2 Phenol-d5	99	7.963	7.995	(0.945)	82616	1.50000	1.475
	3 Phenol	94	7.984	8.006	(0.948)	47546	1.00000	0.9873
$	5 2-Chlorophenol-d4	132	8.123	8.134	(0.964)	71582	1.50000	1.480
	4 Bis(2-Chloroethyl)ether	93	8.080	8.096	(0.959)	40637	1.00000	1.039
	6 2-Chlorophenol	128	8.144	8.160	(0.967)	35953	1.00000	0.9538
	7 1,3-Dichlorobenzene	146	8.363	8.369	(0.993)	45480	1.00000	1.037
*	8 1,4-Dichlorobenzene-d4	152	8.422	8.428	(1.000)	581960	20.0000	
	9 1,4-Dichlorobenzene	146	8.449	8.454	(1.003)	46129	1.00000	1.057
$	10 1,2-Dichlorobenzene-d4	152	8.721	8.732	(1.036)	25970	1.00000	1.002 (M)
	12 1,2-Dichlorobenzene	146	8.743	8.748	(1.038)	43061	1.00000	1.039
	11 Benzyl alcohol	108	8.689	8.716	(1.032)	21857	1.00000	0.8932
	14 2,2'-oxybis(1-Chloropropane)	45	8.951	8.962	(1.063)	64918	1.00000	1.052
	13 2-Methylphenol	108	8.914	8.940	(1.058)	31387	1.00000	0.9294
	17 Hexachloroethane	117	9.234	9.234	(1.096)	14832	1.00000	0.9683
	16 N-Nitroso-di-n-propylamine	70	9.159	9.191	(1.088)	26043	1.00000	0.9607
	15 4-Methylphenol	108	9.143	9.170	(1.086)	31445	1.00000	0.9018
$	18 Nitrobenzene-d5	82	9.346	9.362	(0.893)	32387	1.00000	0.9604
	19 Nitrobenzene	77	9.373	9.395	(0.896)	36673	1.00000	1.044
	20 Isophorone	82	9.747	9.784	(0.932)	56330	1.00000	0.9861
	21 2-Nitrophenol	139	9.891	9.902	(0.945)	14480	1.00000	0.7892
	22 2,4-Dimethylphenol	107	9.982	10.004	(0.954)	29892	1.00000	0.9744
	23 Bis(2-Chloroethoxy)methane	93	10.132	10.153	(0.968)	44649	1.00000	1.002
	24 Benzoic acid	105	10.084	10.361	(0.964)	15154	2.00000	0.5973
	25 2,4-Dichlorophenol	162	10.265	10.287	(0.981)	23467	1.00000	0.8417
	26 1,2,4-Trichlorobenzene	180	10.404	10.415	(0.994)	32682	1.00000	1.027
*	27 Naphthalene-d8	136	10.463	10.474	(1.000)	2042194	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
	28 Naphthalene	128	10.495	10.506	(1.003)	104561	1.00000	1.128
	29 4-Chloroaniline	127	10.629	10.650	(1.016)	36396	1.00000	1.035
	30 Hexachlorobutadiene	225	10.805	10.816	(1.033)	16155	1.00000	1.058
	31 4-Chloro-3-methylphenol	107	11.430	11.446	(1.092)	20576	1.00000	0.8127
	32 2-Methylnaphthalene	141	11.611	11.628	(1.110)	51260	1.00000	0.9917
	33 Hexachlorocyclopentadiene	237	11.996	12.001	(0.900)	10576	1.00000	0.5840
	34 2,4,6-Trichlorophenol	196	12.124	12.135	(0.910)	14686	1.00000	0.7756
	35 2,4,5-Trichlorophenol	196	12.178	12.194	(0.914)	12800	1.00000	0.6808
$	36 2-Fluorobiphenyl	172	12.253	12.263	(0.919)	65757	1.00000	0.9800
	37 2-Chloronaphthalene	162	12.397	12.413	(0.930)	61845	1.00000	0.9980
	38 2-Nitroaniline	65	12.621	12.643	(0.947)	10527	1.00000	0.6581
	39 Dimethylphthalate	163	12.984	13.016	(0.974)	63244	1.00000	0.9375
	40 Acenaphthylene	152	13.075	13.091	(0.981)	94318	1.00000	1.016
	41 2,6-Dinitrotoluene	165	13.081	13.113	(0.982)	10994	1.00000	0.7443
*	42 Acenaphthene-d10	164	13.326	13.342	(1.000)	1243376	20.0000	
	43 3-Nitroaniline	138	13.294	13.332	(0.998)	12101	1.00000	0.8390 (M)
	44 Acenaphthene	153	13.380	13.396	(1.004)	58824	1.00000	0.9819
	45 2,4-Dinitrophenol	184	13.465	13.508	(1.010)	1598	2.00000	0.1536
	46 Dibenzofuran	168	13.636	13.663	(1.023)	77076	1.00000	1.044
	47 4-Nitrophenol	109	13.599	13.620	(1.020)	2410	1.00000	0.4057
	48 2,4-Dinitrotoluene	165	13.711	13.743	(1.029)	13365	1.00000	0.7591
	50 Diethylphthalate	149	14.133	14.165	(1.061)	64372	1.00000	1.090
	49 Fluorene	166	14.197	14.218	(1.065)	66080	1.00000	1.073
	51 4-Chlorophenyl-phenylether	204	14.213	14.229	(1.067)	30598	1.00000	1.107
	52 4-Nitroaniline	138	14.293	14.341	(1.073)	10505	1.00000	0.9309
	53 4,6-Dinitro-2-methylphenol	198	14.368	14.411	(0.915)	9529	2.00000	0.7430
	54 N-Nitrosodiphenylamine	169	14.411	14.443	(0.917)	44059	1.00000	0.9346
$	55 2,4,6-Tribromophenol	330	14.619	14.640	(1.097)	13768	1.50000	1.522
	56 4-Bromophenyl-phenylether	248	14.998	15.009	(0.955)	17007	1.00000	0.9610
	57 Hexachlorobenzene	284	15.223	15.244	(0.969)	22084	1.00000	1.141
	58 Pentachlorophenol	266	15.522	15.538	(0.988)	4930	1.00000	0.4539
*	59 Phenanthrene-d10	188	15.709	15.725	(1.000)	1771287	20.0000	
	60 Phenanthrene	178	15.741	15.768	(1.002)	88333	1.00000	0.9970
	61 Anthracene	178	15.816	15.837	(1.007)	80232	1.00000	0.9288
	62 Carbazole	167	16.094	16.115	(1.024)	78575	1.00000	1.061
	63 Di-n-butylphthalate	149	16.788	16.804	(1.069)	94415	1.00000	0.8791
	64 Fluoranthene	202	17.685	17.702	(1.126)	77305	1.00000	0.8721
	65 Pyrene	202	18.038	18.059	(0.901)	85127	1.00000	0.9567
$	66 Terphenyl-d14	244	18.343	18.353	(0.916)	41245	1.00000	0.9357
	67 Butylbenzylphthalate	149	19.208	19.229	(0.959)	33308	1.00000	0.7501
	68 Benzo(a)anthracene	228	19.999	20.025	(0.999)	76628	1.00000	0.9835
*	69 Chrysene-d12	240	20.025	20.041	(1.000)	1594239	20.0000	
	70 3,3'-Dichlorobenzidine	252	19.999	20.009	(0.999)	22807	1.00000	0.9529
	71 Chrysene	228	20.063	20.089	(1.002)	72187	1.00000	0.9692
	72 bis(2-Ethylhexyl)phthalate	149	20.196	20.207	(0.956)	42767	1.00000	0.7894
*	134 Di-n-octylphthalate-d4	153	21.126	21.137	(1.000)	2143658	20.0000	
	73 Di-n-octylphthalate	149	21.131	21.147	(1.000)	118317	1.00000	1.148

	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	21.649	21.681	(0.976)	64601	1.00000	0.8086
75	Benzo(k)fluoranthene	252	21.681	21.713	(0.977)	82818	1.00000	1.013
187	Total Benzofluoranthenes	252	21.681	21.713	(0.977)	141441	2.00000	1.850
76	Benzo(a)pyrene	252	22.103	22.130	(0.996)	56515	1.00000	0.8085
* 77	Perylene-d12	264	22.184	22.200	(1.000)	1721800	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	23.829	23.866	(1.074)	76609	1.00000	0.8630
79	Dibenzo(a,h)anthracene	278	23.850	23.904	(1.075)	58708	1.00000	0.8170
80	Benzo(g,h,i)perylene	276	24.288	24.352	(1.095)	67905	1.00000	0.8513
90	N-Nitrosodimethylamine	74	3.935	3.978	(0.467)	24700	1.00000	0.9284
103	Pyridine	79	3.929	3.919	(0.467)	36162	1.00000	0.8578
91	Aniline	93	7.973	7.984	(0.947)	55002	1.00000	1.089
105	1-methylnaphthalene	141	11.788	11.798	(1.127)	47159	1.00000	1.029
93	Benzidine	184	17.926	17.931	(0.895)	29319	1.00000	3.424
111	Azobenzene (1,2-DP-Hydrazine)	77	16.446	16.484	(1.047)	4249	1.00000	0.7839
143	1,4-Dioxane	88	3.160	3.176	(0.375)	16770	1.00000	0.9898
$ 137	d8-1,4-Dioxane	96	3.096	3.118	(0.368)	14415	1.00000	0.9361
144	alpha-Terpineol	59	10.506	10.532	(1.004)	23465	1.00000	0.9873
177	p-Benzoquinone	82	7.119	7.124	(0.845)	4523	1.00000	0.6398
98	Retene	219	18.594	18.604	(0.928)	31741	1.00000	0.8697
99	Perylene	252	22.216	22.242	(1.001)	77421	1.00000	1.115
133	Butylatedhydroxytoluene	205	13.487	13.503	(1.012)	39057	1.00000	1.044
115	Tributyl Phosphate	99	14.491	14.534	(0.922)	74698	1.00000	0.8774
116	Dibutyl Phenyl Phosphate	175	16.232	16.248	(1.033)	39701	1.00000	0.7425
117	Butyl Diphenyl Phosphate	94	17.926	17.937	(0.895)	13605	1.00000	0.8041
118	Triphenyl Phosphate	326	19.529	19.545	(0.975)	12596	1.00000	0.8502
123	Acetophenone	105	9.111	9.127	(1.082)	44310	1.00000	0.9926
168	Pentachlorobenzene	250	13.679	13.700	(1.026)	23470	1.00000	1.098
113	Diphenyl Oxide	170	12.578	12.589	(0.944)	46012	1.00000	0.9867
112	Biphenyl	154	12.386	12.402	(0.929)	66884	1.00000	1.054
120	2,3,4,6-Tetrachlorophenol	232	13.919	13.935	(1.044)	11157	1.00000	0.8240
151	1,2,4,5-Tetrachlorobenzene	216	11.953	11.964	(0.897)	27031	1.00000	0.9495
110	Tetrachloroguaiacol	247	15.223	15.244	(0.969)	3557	2.00000	2.208
109	3,4,5-Trichloroguaiacol	213	14.015	14.031	(0.892)	8965	1.00000	0.9438
181	3,4,6-Trichloroguaiacol	211	14.133	14.154	(1.678)	9867	1.00000	0.9896
108	4,5,6-Trichloroguaiacol	213	15.041	15.063	(1.129)	8661	1.00000	0.9632
184	3,4-Dichloroguaiacol	192	12.472	12.488	(1.481)	10279	1.00000	0.9162
107	4,5-Dichloroguaiacol	192	13.246	13.273	(0.994)	24238	2.00000	1.683
182	4,6-Dichloroguaiacol	192	13.246	13.273	(1.573)	24147	2.00000	1.747
185	4-Chloroguaiacol	115	11.376	11.392	(1.087)	4837	0.50000	0.4199
186	Carbaryl	144	16.500	16.532	(1.050)	29754	1.00000	0.6357
178	2-Benzyl-4-Chlorophenol	218	16.451	16.489	(1.047)	11734	1.00000	0.7762
106	Guaiacol	124	9.368	9.389	(1.112)	32469	1.00000	0.9579
188	2,6-Dichlorophenol	162	10.639	10.661	(1.263)	30251	2.00000	0.9550
189	N-Nitrosomethylethylamine	88	5.666	5.666	(0.673)	9102	2.00000	0.7281

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: 07081303.d
Lab Smp Id: IC10708
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130708.b/SW846070813.m
Misc Info: 13-

Calibration Date: 08-JUL-2013
Calibration Time: 12:01
Client Smp ID: IC10708
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	507223	253612	1014446	581960	14.73
27 Naphthalene-d8	1843524	921762	3687048	2042194	10.78
42 Acenaphthene-d10	1048119	524060	2096238	1243376	18.63
59 Phenanthrene-d10	1392753	696376	2785506	1771287	27.18
69 Chrysene-d12	1340567	670284	2681134	1594239	18.92
134 Di-n-octylphthala	2097720	1048860	4195440	2143658	2.19
77 Perylene-d12	1450550	725275	2901100	1721800	18.70

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.43	7.93	8.93	8.42	-0.11
27 Naphthalene-d8	10.47	9.97	10.97	10.46	-0.09
42 Acenaphthene-d10	13.34	12.84	13.84	13.33	-0.07
59 Phenanthrene-d10	15.72	15.22	16.22	15.71	-0.06
69 Chrysene-d12	20.03	19.53	20.53	20.03	-0.05
134 Di-n-octylphthala	21.14	20.64	21.64	21.13	-0.04
77 Perylene-d12	22.19	21.69	22.69	22.18	-0.04

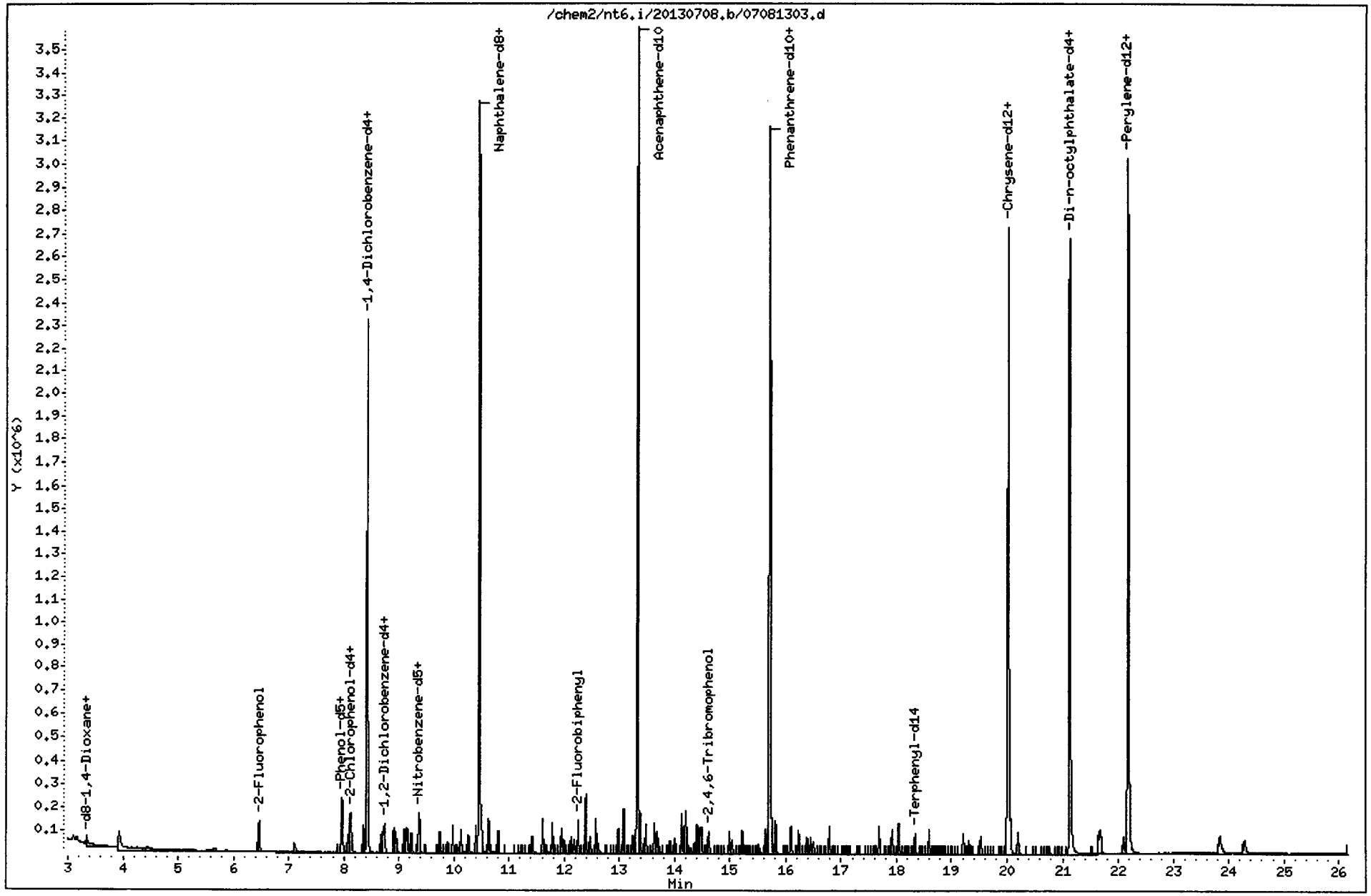
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130708.b/07081303.d
Date : 08-JUL-2013 13:09
Client ID: IC10708
Sample Info: IC10708,

Instrument: nt6.i

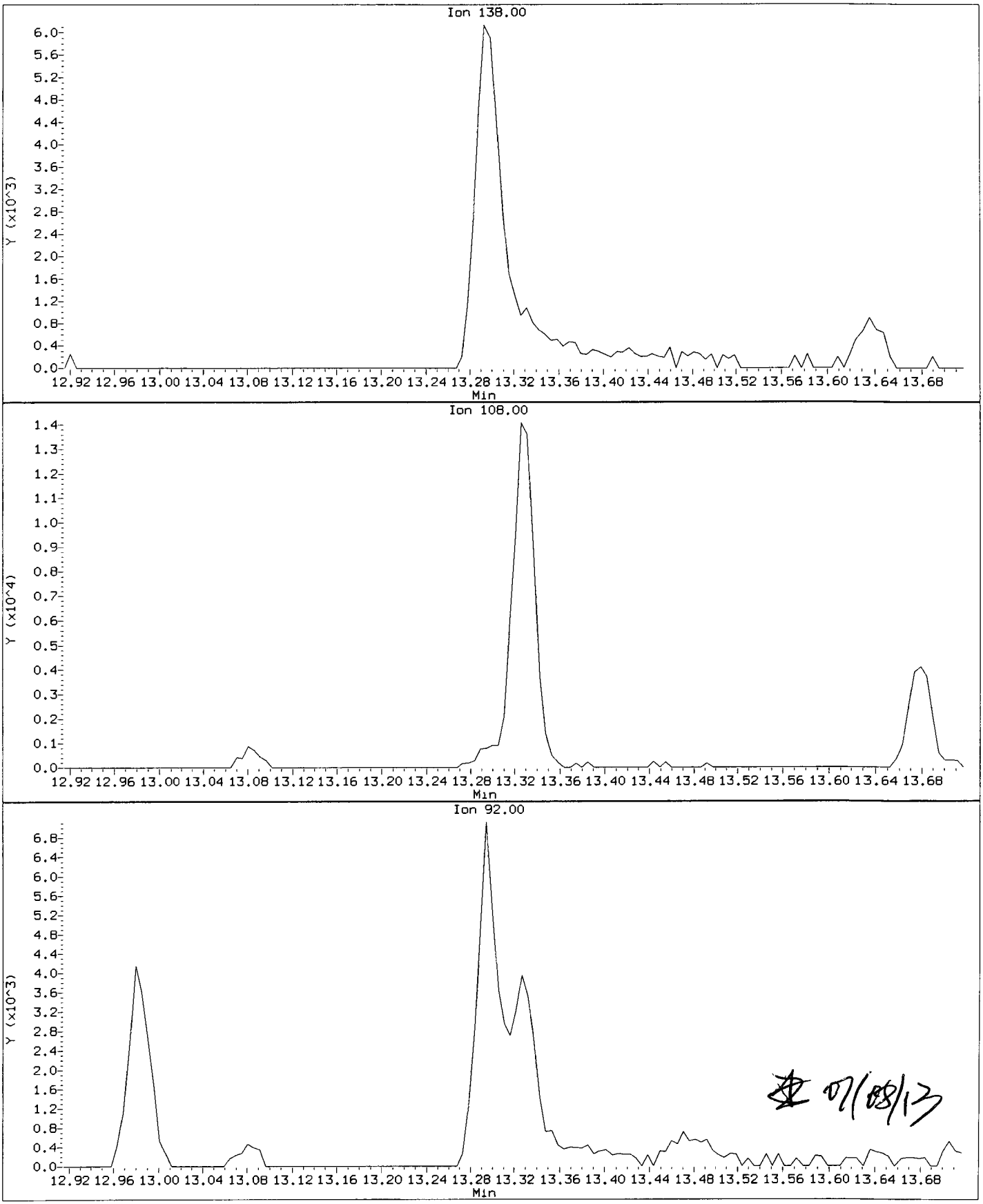
Operator: JZ
Column diameter: 0.32

Column phase: ZB-5msi



Data File: /chem2/nt6.1/20130708.b/07081303.d
Injection Date: 08-JUL-2013 13:09
Instrument: nt6.1
Client Sample ID: IC10708

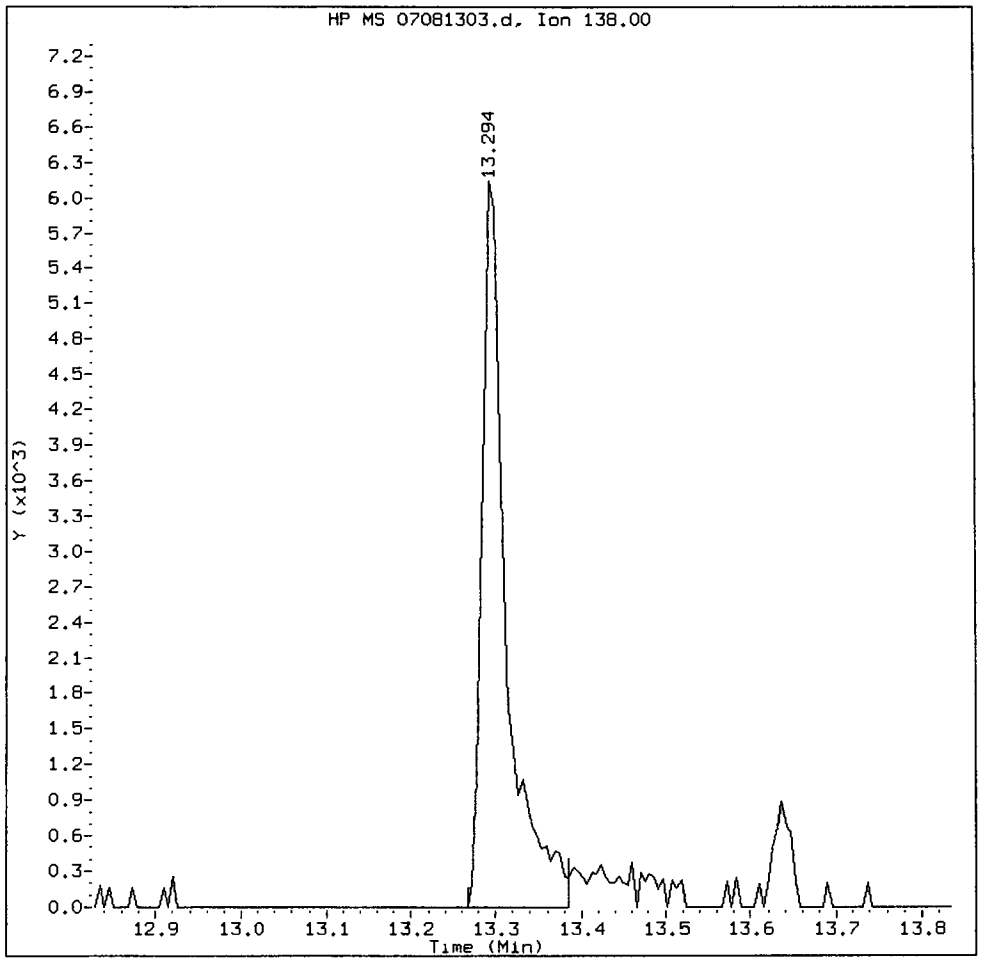
Compound: 3-Nitroaniline
CAS Number: 99-09-2



07/08/13

IC10708, /chem2/nt6.i/20130708.b/07081303.d

3-Nitroaniline Amount: 0.84 Area: 12101



MANUAL INTEGRATION for 3-Nitroaniline

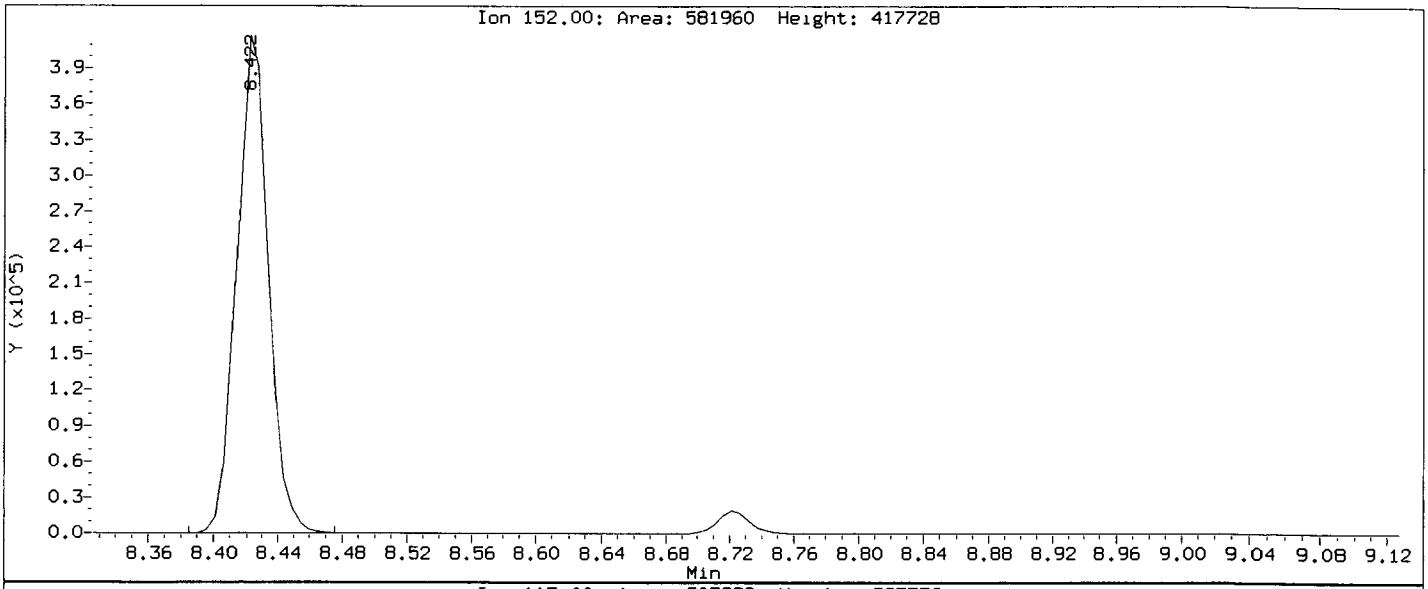
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

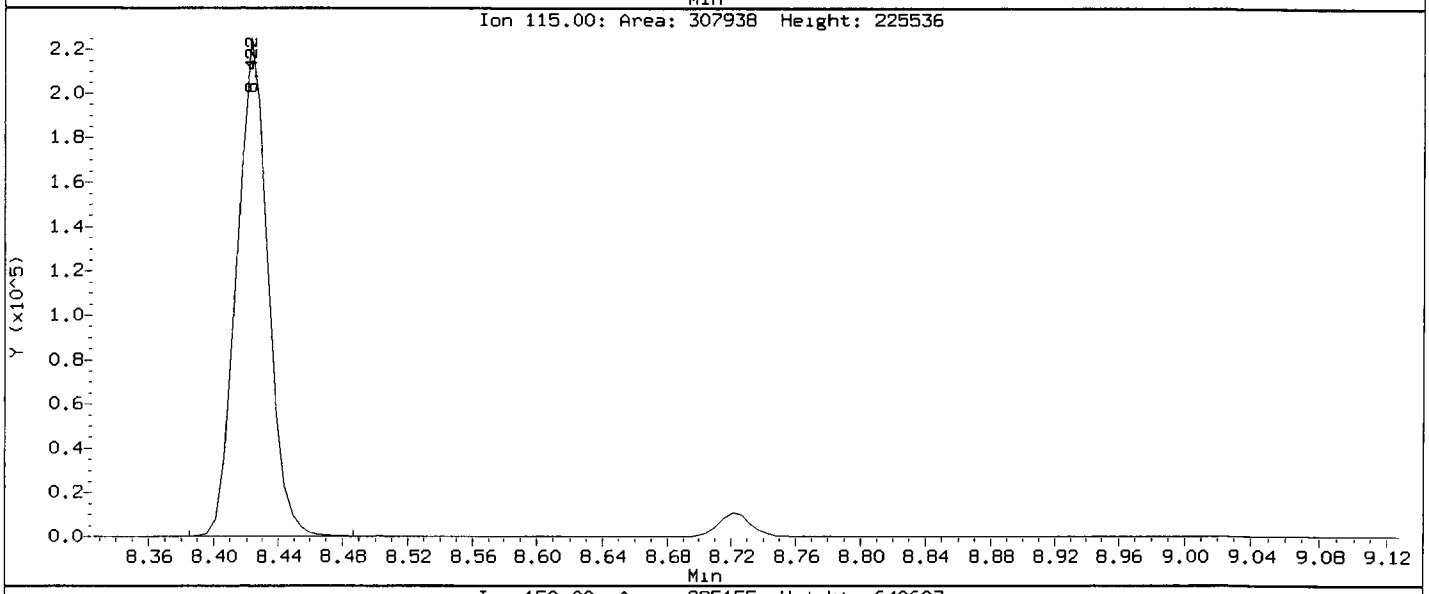
5. Other _____

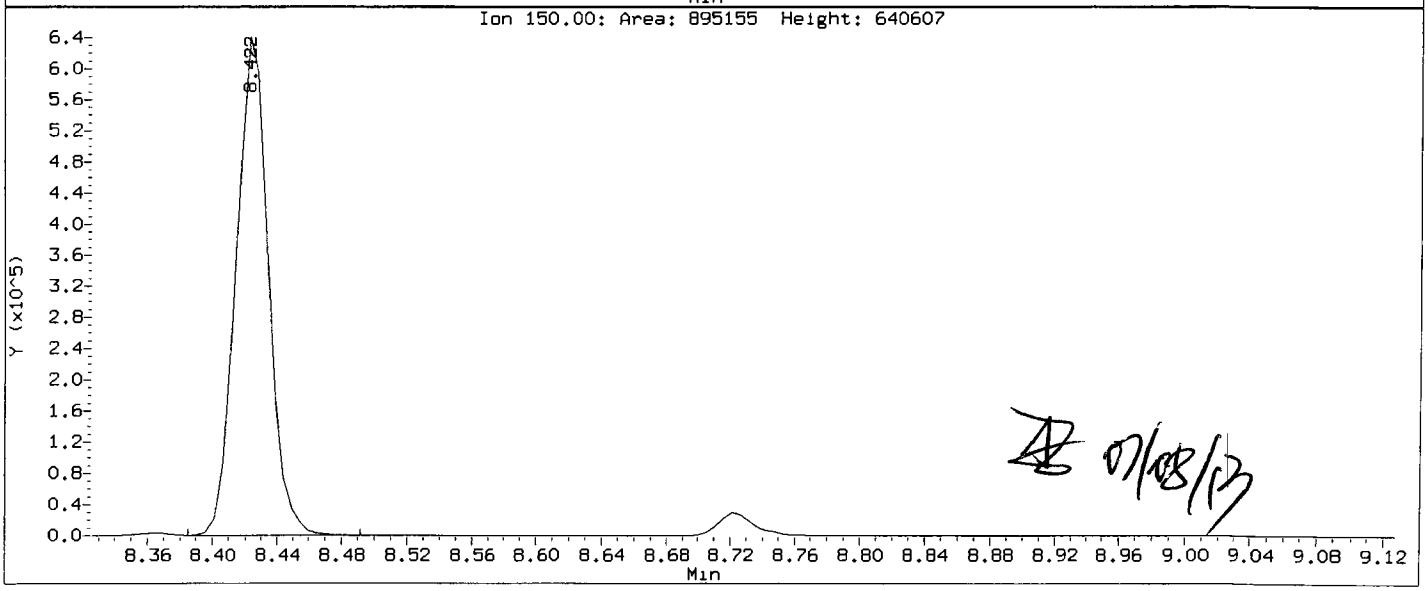
Analyst: _____ Date: 07/08/13

Data File: /chem2/nt6.i/20130708.b/07081303.d
Injection Date: 08-JUL-2013 13:09
Instrument: nt6.i
Client Sample ID: IC10708

Compound: 1,2-Dichlorobenzene-d4
CAS Number: 2199-69-1



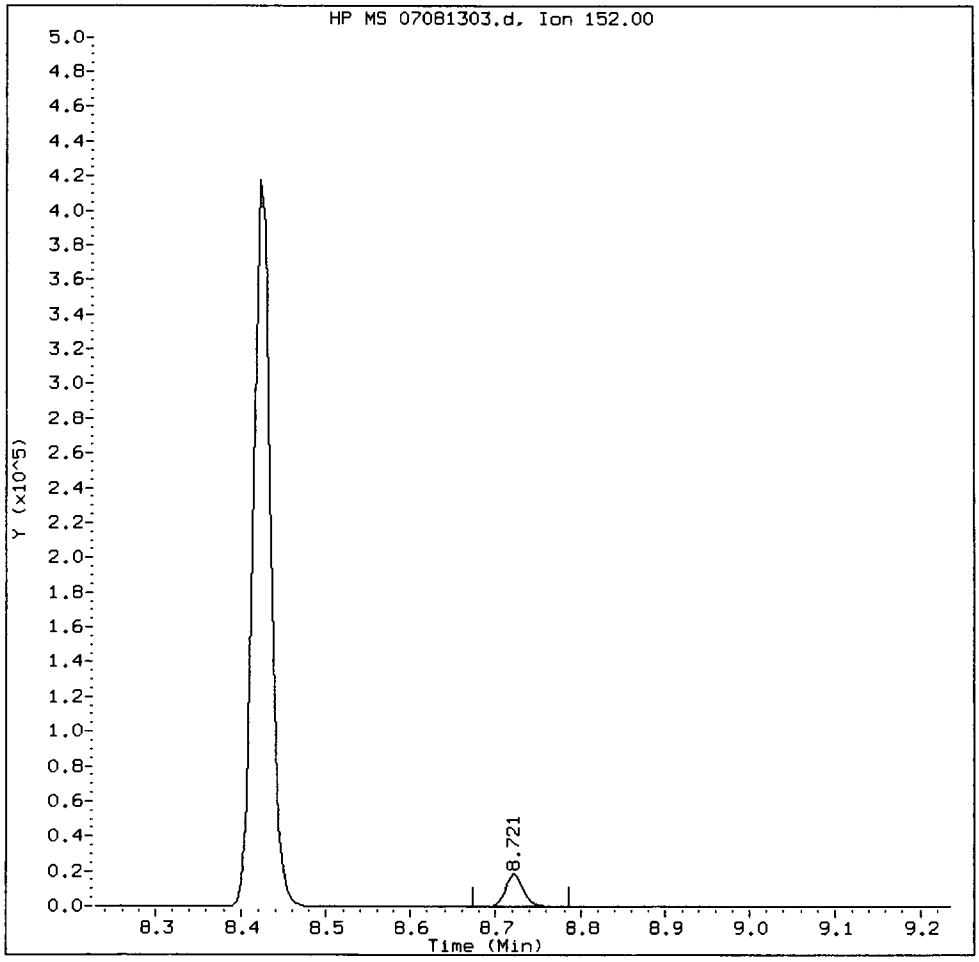




07/08/13

IC10708, /chem2/nt6.i/20130708.b/07081303.d

1,2-Dichlorobenzene-d4 Amount: 1.00 Area: 25970



MANUAL INTEGRATION for 1,2-Dichlorobenzene-d4

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 07/08/13

CO-ELUTION SUMMARY FOR FILE - 07081303.d

Lab ID: IC10708, Method: SW846070813.m, Instrument: nt6.i, Date: 08-JUL-2013

RT	CO-ELUTION COMPOUNDS
19.999	3,3'-Dichlorobenzidine and Benzo(a)anthracene

checked ok.

07/08/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130708.b/07081304.d
Lab Smp Id: IC50708 Client Smp ID: IC50708
Inj Date : 08-JUL-2013 13:43
Operator : JZ Inst ID: nt6.i
Smp Info : IC50708,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130708.b/SW846070813.m
Meth Date : 08-Jul-2013 16:42 jianqing Quant Type: ISTD
Cal Date : 08-JUL-2013 15:59 Cal File: 07081308.d
Als bottle: 4 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

07/08/13

AMOUNTS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.467	6.483	(0.768)	361127	7.50000	7.369
$	2 Phenol-d5	99	7.969	7.995	(0.946)	426413	7.50000	7.492
	3 Phenol	94	7.985	8.006	(0.948)	235452	5.00000	4.812
$	5 2-Chlorophenol-d4	132	8.118	8.134	(0.964)	360524	7.50000	7.338
	4 Bis(2-Chloroethyl)ether	93	8.086	8.096	(0.960)	187234	5.00000	4.710
	6 2-Chlorophenol	128	8.145	8.160	(0.967)	174760	5.00000	4.563
	7 1,3-Dichlorobenzene	146	8.364	8.369	(0.993)	212557	5.00000	4.770
*	8 1,4-Dichlorobenzene-d4	152	8.423	8.428	(1.000)	591252	20.0000	
	9 1,4-Dichlorobenzene	146	8.449	8.454	(1.003)	215627	5.00000	4.861
$	10 1,2-Dichlorobenzene-d4	152	8.722	8.732	(1.036)	125083	5.00000	4.752
	12 1,2-Dichlorobenzene	146	8.743	8.748	(1.038)	203789	5.00000	4.838
	11 Benzyl alcohol	108	8.690	8.716	(1.032)	116418	5.00000	4.683
	14 2,2'-oxybis(1-Chloropropane)	45	8.951	8.962	(1.063)	309140	5.00000	4.933
	13 2-Methylphenol	108	8.914	8.940	(1.058)	157168	5.00000	4.581
	17 Hexachloroethane	117	9.229	9.234	(1.096)	74613	5.00000	4.795
	16 N-Nitroso-di-n-propylamine	70	9.160	9.191	(1.088)	129035	5.00000	4.685
	15 4-Methylphenol	108	9.144	9.170	(1.086)	161991	5.00000	4.572
$	18 Nitrobenzene-d5	82	9.347	9.362	(0.893)	164817	5.00000	4.798
	19 Nitrobenzene	77	9.373	9.395	(0.896)	177553	5.00000	4.962
	20 Isophorone	82	9.753	9.784	(0.932)	279465	5.00000	4.803
	21 2-Nitrophenol	139	9.892	9.902	(0.945)	81670	5.00000	4.370
	22 2,4-Dimethylphenol	107	9.982	10.004	(0.954)	146748	5.00000	4.696
	23 Bis(2-Chloroethoxy)methane	93	10.132	10.153	(0.968)	225016	5.00000	4.958
	24 Benzoic acid	105	10.127	10.361	(0.968)	156689	10.0000	6.029
	25 2,4-Dichlorophenol	162	10.266	10.287	(0.981)	132210	5.00000	4.656
	26 1,2,4-Trichlorobenzene	180	10.405	10.415	(0.994)	154822	5.00000	4.778
*	27 Naphthalene-d8	136	10.463	10.474	(1.000)	2080149	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	10.495	10.506	(1.003)	492954	5.00000	5.223
	29 4-Chloroaniline	127	10.629	10.650	(1.016)	202373	5.00000	5.650
	30 Hexachlorobutadiene	225	10.811	10.816	(1.033)	79433	5.00000	5.107
	31 4-Chloro-3-methylphenol	107	11.425	11.446	(1.092)	118741	5.00000	4.604
	32 2-Methylnaphthalene	141	11.612	11.628	(1.110)	255550	5.00000	4.854
	33 Hexachlorocyclopentadiene	237	11.991	12.001	(0.899)	69974	5.00000	3.903
	34 2,4,6-Trichlorophenol	196	12.125	12.135	(0.909)	84759	5.00000	4.522
	35 2,4,5-Trichlorophenol	196	12.178	12.194	(0.913)	88927	5.00000	4.778
$	36 2-Fluorobiphenyl	172	12.253	12.263	(0.919)	326946	5.00000	4.922
	37 2-Chloronaphthalene	162	12.397	12.413	(0.930)	307060	5.00000	5.006
	38 2-Nitroaniline	65	12.622	12.643	(0.947)	70403	5.00000	4.446
	39 Dimethylphthalate	163	12.985	13.016	(0.974)	314444	5.00000	4.709
	40 Acenaphthylene	152	13.076	13.091	(0.981)	462089	5.00000	5.027
	41 2,6-Dinitrotoluene	165	13.086	13.113	(0.982)	68431	5.00000	4.680
*	42 Acenaphthene-d10	164	13.332	13.342	(1.000)	1230780	20.0000	
	43 3-Nitroaniline	138	13.295	13.332	(0.997)	74927	5.00000	5.248
	44 Acenaphthene	153	13.380	13.396	(1.004)	272454	5.00000	4.595
	45 2,4-Dinitrophenol	184	13.460	13.508	(1.010)	46704	10.0000	4.536
	46 Dibenzofuran	168	13.637	13.663	(1.023)	361915	5.00000	4.953
	47 4-Nitrophenol	109	13.588	13.620	(1.019)	19821	5.00000	3.371
	48 2,4-Dinitrotoluene	165	13.711	13.743	(1.028)	81941	5.00000	4.702
	50 Diethylphthalate	149	14.139	14.165	(1.060)	299318	5.00000	5.120
	49 Fluorene	166	14.197	14.218	(1.065)	304509	5.00000	4.996
	51 4-Chlorophenyl-phenylether	204	14.213	14.229	(1.066)	140197	5.00000	5.124
	52 4-Nitroaniline	138	14.288	14.341	(1.072)	55342	5.00000	4.954
	53 4,6-Dinitro-2-methylphenol	198	14.368	14.411	(0.915)	91431	10.0000	7.268
	54 N-Nitrosodiphenylamine	169	14.416	14.443	(0.918)	207976	5.00000	4.498
$	55 2,4,6-Tribromophenol	330	14.619	14.640	(1.097)	65499	7.50000	7.315
	56 4-Bromophenyl-phenylether	248	14.999	15.009	(0.955)	82879	5.00000	4.774
	57 Hexachlorobenzene	284	15.228	15.244	(0.969)	95851	5.00000	5.048
	58 Pentachlorophenol	266	15.517	15.538	(0.988)	41069	5.00000	3.855
*	59 Phenanthrene-d10	188	15.709	15.725	(1.000)	1737437	20.0000	
	60 Phenanthrene	178	15.741	15.768	(1.002)	395911	5.00000	4.556
	61 Anthracene	178	15.816	15.837	(1.007)	393404	5.00000	4.643
	62 Carbazole	167	16.094	16.115	(1.024)	355582	5.00000	4.894
	63 Di-n-butylphthalate	149	16.788	16.804	(1.069)	497492	5.00000	4.723
	64 Fluoranthene	202	17.686	17.702	(1.126)	389177	5.00000	4.476
	65 Pyrene	202	18.038	18.059	(0.901)	421633	5.00000	4.722
$	66 Terphenyl-d14	244	18.338	18.353	(0.916)	205192	5.00000	4.639
	67 Butylbenzylphthalate	149	19.208	19.229	(0.959)	195938	5.00000	4.397
	68 Benzo(a)anthracene	228	19.999	20.025	(0.999)	376190	5.00000	4.812
*	69 Chrysene-d12	240	20.026	20.041	(1.000)	1599648	20.0000	
	70 3,3'-Dichlorobenzidine	252	19.999	20.009	(0.999)	122204	5.00000	5.089
	71 Chrysene	228	20.063	20.089	(1.002)	343498	5.00000	4.596
	72 bis(2-Ethylhexyl)phthalate	149	20.197	20.207	(0.956)	262025	5.00000	4.708
*	134 Di-n-octylphthalate-d4	153	21.126	21.137	(1.000)	2201896	20.0000	
	73 Di-n-octylphthalate	149	21.137	21.147	(1.000)	546998	5.00000	5.168

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
74	Benzo(b)fluoranthene	252	21.650	21.681	(0.976)	337584	5.00000	4.292
75	Benzo(k)fluoranthene	252	21.682	21.713	(0.977)	395083	5.00000	4.910
187	Total Benzofluoranthenes	252	21.650	21.713	(0.976)	696016	10.0000	9.244
76	Benzo(a)pyrene	252	22.104	22.130	(0.996)	309207	5.00000	4.493
* 77	Perylene-d12	264	22.184	22.200	(1.000)	1695254	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	23.829	23.866	(1.074)	397841	5.00000	4.552
79	Dibenzo(a,h)anthracene	278	23.851	23.904	(1.075)	311661	5.00000	4.405
80	Benzo(g,h,i)perylene	276	24.289	24.352	(1.095)	341942	5.00000	4.354
90	N-Nitrosodimethylamine	74	3.935	3.978	(0.467)	121857	5.00000	4.508
103	Pyridine	79	3.908	3.919	(0.464)	193691	5.00000	4.523
91	Aniline	93	7.974	7.984	(0.947)	264829	5.00000	5.160
105	1-methylnaphthalene	141	11.788	11.798	(1.127)	222968	5.00000	4.777
93	Benzidine	184	17.921	17.931	(0.895)	94066	5.00000	10.95
111	Azobenzene (1,2-DP-Hydrazine)	77	16.446	16.484	(1.047)	21720	5.00000	4.085
143	1,4-Dioxane	88	3.150	3.176	(0.374)	77009	5.00000	4.474
$ 137	d8-1,4-Dioxane	96	3.091	3.118	(0.367)	68747	5.00000	4.394
144	alpha-Terpineol	59	10.506	10.532	(1.004)	115869	5.00000	4.786
177	p-Benzoquinone	82	7.119	7.124	(0.845)	29331	5.00000	4.084
98	Retene	219	18.594	18.604	(0.928)	165851	5.00000	4.529
99	Perylene	252	22.216	22.242	(1.001)	310554	5.00000	4.541
133	Butylatedhydroxytoluene	205	13.487	13.503	(1.012)	189460	5.00000	5.117
115	Tributyl Phosphate	99	14.491	14.534	(0.922)	381251	5.00000	4.565
116	Dibutyl Phenyl Phosphate	175	16.233	16.248	(1.033)	219868	5.00000	4.192
117	Butyl Diphenyl Phosphate	94	17.921	17.937	(0.895)	76106	5.00000	4.483
118	Triphenyl Phosphate	326	19.529	19.545	(0.975)	66756	5.00000	4.491
123	Acetophenone	105	9.106	9.127	(1.081)	215434	5.00000	4.750
168	Pentachlorobenzene	250	13.679	13.700	(1.026)	106537	5.00000	5.036
113	Diphenyl Oxide	170	12.579	12.589	(0.944)	218082	5.00000	4.724
112	Biphenyl	154	12.392	12.402	(0.929)	319804	5.00000	5.091
120	2,3,4,6-Tetrachlorophenol	232	13.920	13.935	(1.044)	63257	5.00000	4.719
151	1,2,4,5-Tetrachlorobenzene	216	11.954	11.964	(0.897)	134505	5.00000	4.773
110	Tetrachloroguaiacol	247	15.228	15.244	(0.969)	15663	10.0000	9.912
109	3,4,5-Trichloroguaiacol	213	14.010	14.031	(0.892)	43095	5.00000	4.626
181	3,4,6-Trichloroguaiacol	211	14.133	14.154	(1.678)	53155	5.00000	5.247
108	4,5,6-Trichloroguaiacol	213	15.041	15.063	(1.128)	41296	5.00000	4.640
184	3,4-Dichloroguaiacol	192	12.472	12.488	(1.481)	51264	5.00000	4.497
107	4,5-Dichloroguaiacol	192	13.247	13.273	(0.994)	129231	10.0000	9.063
182	4,6-Dichloroguaiacol	192	13.247	13.273	(1.573)	128949	10.0000	9.183
185	4-Chloroguaiacol	115	11.377	11.392	(1.087)	25930	2.50000	2.210
186	Carbaryl	144	16.500	16.532	(1.050)	177461	5.00000	3.865
178	2-Benzyl-4-Chlorophenol	218	16.446	16.489	(1.047)	63021	5.00000	4.250
106	Guaiacol	124	9.368	9.389	(1.112)	167021	5.00000	4.850
188	2,6-Dichlorophenol	162	10.640	10.661	(1.263)	158798	5.00000	4.934
189	N-Nitrosomethylethylamine	88	5.655	5.666	(0.671)	64459	5.00000	5.075

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 07081304.d
Lab Smp Id: IC50708
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130708.b/SW846070813.m
Misc Info: 13-

Calibration Date: 08-JUL-2013
Calibration Time: 12:01
Client Smp ID: IC50708
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	507223	253612	1014446	591252	16.57
27 Naphthalene-d8	1843524	921762	3687048	2080149	12.84
42 Acenaphthene-d10	1048119	524060	2096238	1230780	17.43
59 Phenanthrene-d10	1392753	696376	2785506	1737437	24.75
69 Chrysene-d12	1340567	670284	2681134	1599648	19.33
134 Di-n-octylphthala	2097720	1048860	4195440	2201896	4.97
77 Perylene-d12	1450550	725275	2901100	1695254	16.87

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.43	7.93	8.93	8.42	-0.11
27 Naphthalene-d8	10.47	9.97	10.97	10.46	-0.09
42 Acenaphthene-d10	13.34	12.84	13.84	13.33	-0.03
59 Phenanthrene-d10	15.72	15.22	16.22	15.71	-0.06
69 Chrysene-d12	20.03	19.53	20.53	20.03	-0.04
134 Di-n-octylphthala	21.14	20.64	21.64	21.13	-0.04
77 Perylene-d12	22.19	21.69	22.69	22.18	-0.04

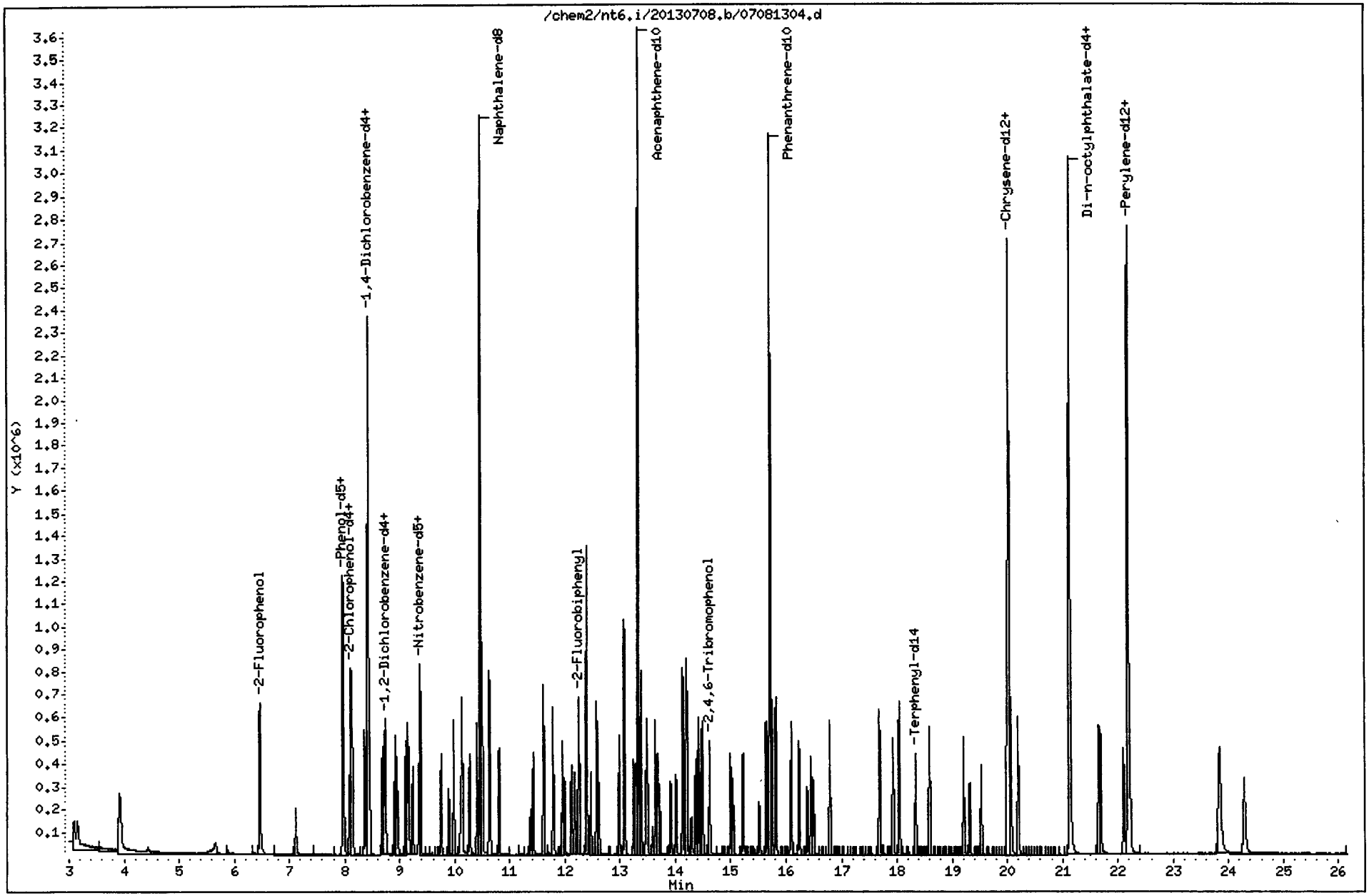
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130708.b/07081304.d
Date : 08-JUL-2013 13:43
Client ID: IC50708
Sample Info: IC50708,

Instrument: nt6.i

Operator: JZ
Column diameter: 0.32

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - 07081304.d

Lab ID: IC50708, Method: SW846070813.m, Instrument: nt6.i, Date: 08-JUL-2013

RT	CO-ELUTION COMPOUNDS
19.999	3,3'-Dichlorobenzidine and Benzo(a)anthracene

checked OK

07/08/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130708.b/07081305.d
Lab Smp Id: IC100708 Client Smp ID: IC100708
Inj Date : 08-JUL-2013 14:17
Operator : JZ Inst ID: nt6.i
Smp Info : IC100708,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130708.b/SW846070813.m
Meth Date : 08-Jul-2013 16:42 jianqing Quant Type: ISTD
Cal Date : 08-JUL-2013 15:59 Cal File: 07081308.d
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

07/18/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.467	6.483	(0.768)	660982	15.0000	14.19
$	2 Phenol-d5	99	7.968	7.995	(0.946)	789354	15.0000	14.59
	3 Phenol	94	7.984	8.006	(0.948)	472835	10.0000	10.16
$	5 2-Chlorophenol-d4	132	8.123	8.134	(0.964)	671650	15.0000	14.38
	4 Bis(2-Chloroethyl)ether	93	8.086	8.096	(0.960)	353809	10.0000	9.361
	6 2-Chlorophenol	128	8.145	8.160	(0.967)	363002	10.0000	9.970
	7 1,3-Dichlorobenzene	146	8.364	8.369	(0.993)	400200	10.0000	9.446
*	8 1,4-Dichlorobenzene-d4	152	8.422	8.428	(1.000)	562163	20.0000	
	9 1,4-Dichlorobenzene	146	8.449	8.454	(1.003)	402948	10.0000	9.554
$	10 1,2-Dichlorobenzene-d4	152	8.722	8.732	(1.036)	233617	10.0000	9.334
	12 1,2-Dichlorobenzene	146	8.743	8.748	(1.038)	383408	10.0000	9.573
	11 Benzyl alcohol	108	8.690	8.716	(1.032)	220256	10.0000	9.318
	14 2,2'-oxybis(1-Chloropropane)	45	8.951	8.962	(1.063)	575118	10.0000	9.652
	13 2-Methylphenol	108	8.914	8.940	(1.058)	325091	10.0000	9.965
	17 Hexachloroethane	117	9.235	9.234	(1.096)	140480	10.0000	9.494
	16 N-Nitroso-di-n-propylamine	70	9.165	9.191	(1.088)	244685	10.0000	9.344
	15 4-Methylphenol	108	9.144	9.170	(1.086)	338300	10.0000	10.04
$	18 Nitrobenzene-d5	82	9.347	9.362	(0.893)	311204	10.0000	9.468
	19 Nitrobenzene	77	9.379	9.395	(0.896)	334704	10.0000	9.775
	20 Isophorone	82	9.753	9.784	(0.932)	523527	10.0000	9.403
	21 2-Nitrophenol	139	9.892	9.902	(0.945)	175425	10.0000	9.811
	22 2,4-Dimethylphenol	107	9.982	10.004	(0.954)	296090	10.0000	9.903
	23 Bis(2-Chloroethoxy)methane	93	10.132	10.153	(0.968)	429796	10.0000	9.896
	24 Benzoic acid	105	10.164	10.361	(0.971)	415408	20.0000	16.52
	25 2,4-Dichlorophenol	162	10.271	10.287	(0.982)	276593	10.0000	10.18
	26 1,2,4-Trichlorobenzene	180	10.404	10.415	(0.994)	299520	10.0000	9.661
*	27 Naphthalene-d8	136	10.463	10.474	(1.000)	1990383	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	10.495	10.506	(1.003)	917654	10.0000	10.16
	29 4-Chloroaniline	127	10.629	10.650	(1.016)	377633	10.0000	11.02
	30 Hexachlorobutadiene	225	10.810	10.816	(1.033)	147515	10.0000	9.912
	31 4-Chloro-3-methylphenol	107	11.425	11.446	(1.092)	249867	10.0000	10.13
	32 2-Methylnaphthalene	141	11.617	11.628	(1.110)	492127	10.0000	9.768
	33 Hexachlorocyclopentadiene	237	11.996	12.001	(0.900)	148163	10.0000	8.743
	34 2,4,6-Trichlorophenol	196	12.125	12.135	(0.909)	180248	10.0000	10.17
	35 2,4,5-Trichlorophenol	196	12.178	12.194	(0.913)	183394	10.0000	10.42
$	36 2-Fluorobiphenyl	172	12.253	12.263	(0.919)	604416	10.0000	9.626
	37 2-Chloronaphthalene	162	12.397	12.413	(0.930)	590690	10.0000	10.19
	38 2-Nitroaniline	65	12.621	12.643	(0.947)	146145	10.0000	9.764
	39 Dimethylphthalate	163	12.985	13.016	(0.974)	591068	10.0000	9.364
	40 Acenaphthylene	152	13.075	13.091	(0.981)	877521	10.0000	10.10
	41 2,6-Dinitrotoluene	165	13.086	13.113	(0.982)	138314	10.0000	10.01
*	42 Acenaphthene-d10	164	13.332	13.342	(1.000)	1163414	20.0000	
	43 3-Nitroaniline	138	13.300	13.332	(0.998)	144010	10.0000	10.67
	44 Acenaphthene	153	13.380	13.396	(1.004)	535741	10.0000	9.558
	45 2,4-Dinitrophenol	184	13.465	13.508	(1.010)	144880	20.0000	14.89
	46 Dibenzofuran	168	13.642	13.663	(1.023)	680631	10.0000	9.853
	47 4-Nitrophenol	109	13.588	13.620	(1.019)	44982	10.0000	8.092
	48 2,4-Dinitrotoluene	165	13.711	13.743	(1.028)	162529	10.0000	9.866
	50 Diethylphthalate	149	14.139	14.165	(1.060)	557002	10.0000	10.08
	49 Fluorene	166	14.197	14.218	(1.065)	583593	10.0000	10.13
	51 4-Chlorophenyl-phenylether	204	14.213	14.229	(1.066)	263054	10.0000	10.17
	52 4-Nitroaniline	138	14.293	14.341	(1.072)	97586	10.0000	9.242
	53 4,6-Dinitro-2-methylphenol	198	14.368	14.411	(0.915)	217914	20.0000	18.57
	54 N-Nitrosodiphenylamine	169	14.416	14.443	(0.918)	396481	10.0000	9.195
$	55 2,4,6-Tribromophenol	330	14.619	14.640	(1.097)	142983	15.0000	16.89
	56 4-Bromophenyl-phenylether	248	14.999	15.009	(0.955)	153312	10.0000	9.470
	57 Hexachlorobenzene	284	15.228	15.244	(0.969)	173490	10.0000	9.797
	58 Pentachlorophenol	266	15.522	15.538	(0.988)	91335	10.0000	9.193
*	59 Phenanthrene-d10	188	15.709	15.725	(1.000)	1620267	20.0000	
	60 Phenanthrene	178	15.747	15.768	(1.002)	758029	10.0000	9.354
	61 Anthracene	178	15.816	15.837	(1.007)	763027	10.0000	9.657
	62 Carbazole	167	16.094	16.115	(1.024)	598465	10.0000	8.833
	63 Di-n-butylphthalate	149	16.788	16.804	(1.069)	942652	10.0000	9.595
	64 Fluoranthene	202	17.686	17.702	(1.126)	763543	10.0000	9.417
	65 Pyrene	202	18.044	18.059	(0.901)	814601	10.0000	9.602
$	66 Terphenyl-d14	244	18.343	18.353	(0.916)	391558	10.0000	9.317
	67 Butylbenzylphthalate	149	19.214	19.229	(0.959)	398525	10.0000	9.412
	68 Benzo(a)anthracene	228	19.999	20.025	(0.999)	738589	10.0000	9.943
*	69 Chrysene-d12	240	20.026	20.041	(1.000)	1520026	20.0000	
	70 3,3'-Dichlorobenzidine	252	19.999	20.009	(0.999)	242736	10.0000	10.64
	71 Chrysene	228	20.068	20.089	(1.002)	684379	10.0000	9.637
	72 bis(2-Ethylhexyl)phthalate	149	20.197	20.207	(0.956)	529187	10.0000	9.761
*	134 Di-n-octylphthalate-d4	153	21.126	21.137	(1.000)	2145014	20.0000	
	73 Di-n-octylphthalate	149	21.137	21.147	(1.000)	1037705	10.0000	10.06

	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	21.655	21.681	(0.976)	658211	10.0000	8.781
75	Benzo(k)fluoranthene	252	21.682	21.713	(0.977)	802836	10.0000	10.47
187	Total Benzofluoranthenes	252	21.682	21.713	(0.977)	1384206	20.0000	19.29
76	Benzo(a)pyrene	252	22.104	22.130	(0.996)	611469	10.0000	9.323
* 77	Perylene-d12	264	22.184	22.200	(1.000)	1615408	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	23.829	23.866	(1.074)	798553	10.0000	9.588
79	Dibenzo(a,h)anthracene	278	23.845	23.904	(1.075)	643715	10.0000	9.548
80	Benzo(g,h,i)perylene	276	24.294	24.352	(1.095)	673414	10.0000	8.999
90	N-Nitrosodimethylamine	74	3.935	3.978	(0.467)	223540	10.0000	8.698
103	Pyridine	79	3.903	3.919	(0.463)	354516	10.0000	8.706
91	Aniline	93	7.974	7.984	(0.947)	499849	10.0000	10.24
105	1-methylnaphthalene	141	11.788	11.798	(1.127)	426932	10.0000	9.559
93	Benzidine	184	17.921	17.931	(0.895)	103276	10.0000	12.65
111	Azobenzene (1,2-DP-Hydrazine)	77	16.452	16.484	(1.047)	42013	10.0000	8.473
143	1,4-Dioxane	88	3.150	3.176	(0.374)	140901	10.0000	8.609
$ 137	d8-1,4-Dioxane	96	3.091	3.118	(0.367)	132827	10.0000	8.930
144	alpha-Terpineol	59	10.511	10.532	(1.005)	222725	10.0000	9.615
177	p-Benzoquinone	82	7.119	7.124	(0.845)	60335	10.0000	8.836
98	Retene	219	18.594	18.604	(0.928)	328708	10.0000	9.447
99	Perylene	252	22.216	22.242	(1.001)	596735	10.0000	9.157
133	Butylatedhydroxytoluene	205	13.487	13.503	(1.012)	363216	10.0000	10.38
115	Tributyl Phosphate	99	14.496	14.534	(0.923)	740451	10.0000	9.508
116	Dibutyl Phenyl Phosphate	175	16.238	16.248	(1.034)	439867	10.0000	8.993
117	Butyl Diphenyl Phosphate	94	17.926	17.937	(0.895)	154328	10.0000	9.567
118	Triphenyl Phosphate	326	19.529	19.545	(0.975)	135298	10.0000	9.578
123	Acetophenone	105	9.112	9.127	(1.082)	402966	10.0000	9.345
168	Pentachlorobenzene	250	13.684	13.700	(1.026)	197219	10.0000	9.862
113	Diphenyl Oxide	170	12.579	12.589	(0.944)	421285	10.0000	9.655
112	Biphenyl	154	12.392	12.402	(0.929)	613475	10.0000	10.33
120	2,3,4,6-Tetrachlorophenol	232	13.920	13.935	(1.044)	137356	10.0000	10.84
151	1,2,4,5-Tetrachlorobenzene	216	11.954	11.964	(0.897)	253603	10.0000	9.521
110	Tetrachloroguaiacol	247	15.228	15.244	(0.969)	28493	20.0000	19.33
109	3,4,5-Trichloroguaiacol	213	14.010	14.031	(0.892)	81086	10.0000	9.333
181	3,4,6-Trichloroguaiacol	211	14.133	14.154	(1.678)	103282	10.0000	10.72
108	4,5,6-Trichloroguaiacol	213	15.041	15.063	(1.128)	81708	10.0000	9.712
184	3,4-Dichloroguaiacol	192	12.472	12.488	(1.481)	103077	10.0000	9.511
107	4,5-Dichloroguaiacol	192	13.246	13.273	(0.994)	255866	20.0000	18.98
182	4,6-Dichloroguaiacol	192	13.246	13.273	(1.573)	255479	20.0000	19.14
185	4-Chloroguaiacol	115	11.377	11.392	(1.087)	49340	5.00000	4.395
186	Carbaryl	144	16.500	16.532	(1.050)	382761	10.0000	8.939
178	2-Benzyl-4-Chlorophenol	218	16.452	16.489	(1.047)	128506	10.0000	9.293
106	Guaiacol	124	9.368	9.389	(1.112)	322914	10.0000	9.862
188	2,6-Dichlorophenol	162	10.639	10.661	(1.263)	311377	10.0000	10.18
189	N-Nitrosomethylethylamine	88	5.661	5.666	(0.672)	117282	10.0000	9.712

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 07081305.d
Lab Smp Id: IC100708
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130708.b/SW846070813.m
Misc Info: 13-

Calibration Date: 08-JUL-2013
Calibration Time: 12:01
Client Smp ID: IC100708
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	507223	253612	1014446	562163	10.83
27 Naphthalene-d8	1843524	921762	3687048	1990383	7.97
42 Acenaphthene-d10	1048119	524060	2096238	1163414	11.00
59 Phenanthrene-d10	1392753	696376	2785506	1620267	16.34
69 Chrysene-d12	1340567	670284	2681134	1520026	13.39
134 Di-n-octylphthala	2097720	1048860	4195440	2145014	2.25
77 Perylene-d12	1450550	725275	2901100	1615408	11.37

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.43	7.93	8.93	8.42	-0.11
27 Naphthalene-d8	10.47	9.97	10.97	10.46	-0.09
42 Acenaphthene-d10	13.34	12.84	13.84	13.33	-0.03
59 Phenanthrene-d10	15.72	15.22	16.22	15.71	-0.06
69 Chrysene-d12	20.03	19.53	20.53	20.03	-0.05
134 Di-n-octylphthala	21.14	20.64	21.64	21.13	-0.04
77 Perylene-d12	22.19	21.69	22.69	22.18	-0.04

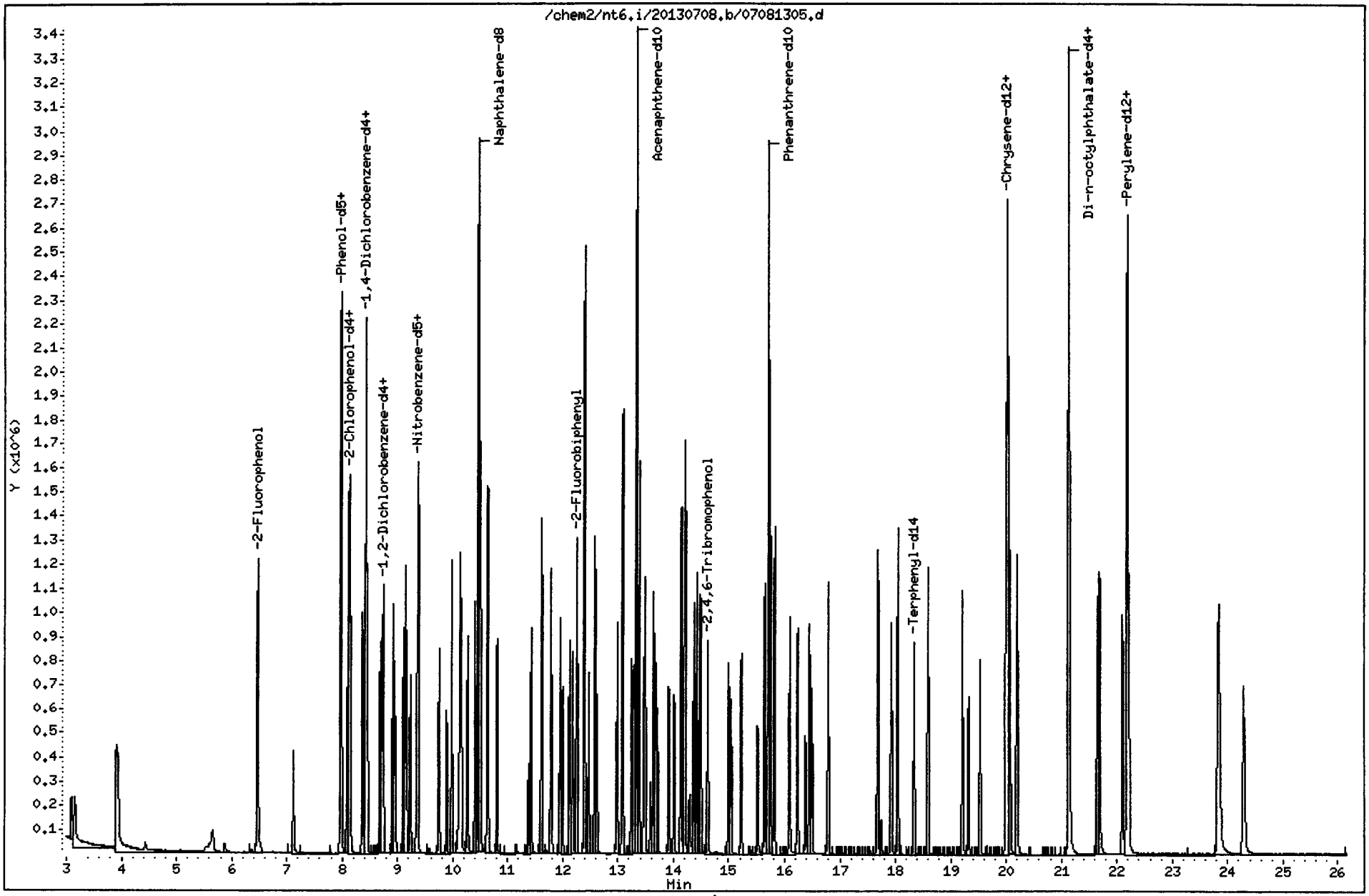
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130708.b/07081305.d
Date : 08-JUL-2013 14:17
Client ID: IC100708
Sample Info: IC100708,

Instrument: nt6.i

Operator: JZ
Column diameter: 0.32

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - 07081305.d

Lab ID: IC100708, Method: SW846070813.m, Instrument: nt6.i, Date: 08-JUL-2013

RT	CO-ELUTION COMPOUNDS
19.999	3,3'-Dichlorobenzidine and Benzo(a)anthracene

checked OK

07/08/13

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130708.b/07081301.d
Lab Smp Id: IC250708 Client Smp ID: IC250708
Inj Date : 08-JUL-2013 12:01
Operator : JZ Inst ID: nt6.i
Smp Info : IC250708
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130708.b/SW846070813.m
Meth Date : 08-Jul-2013 17:12 jianqing Quant Type: ISTD
Cal Date : 08-JUL-2013 12:01 Cal File: 07081301.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

AK 07/08/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.476	6.483	(0.768)	1735826	37.5000	41.29
$	2 Phenol-d5	99	7.983	7.995	(0.947)	2028885	37.5000	41.55
	3 Phenol	94	7.999	8.006	(0.949)	1162574	25.0000	27.65
$	5 2-Chlorophenol-d4	132	8.132	8.134	(0.965)	1740943	37.5000	41.30
	4 Bis(2-Chloroethyl)ether	93	8.090	8.096	(0.959)	915493	25.0000	26.83
	6 2-Chlorophenol	128	8.154	8.160	(0.967)	888166	25.0000	27.21
	7 1,3-Dichlorobenzene	146	8.367	8.369	(0.992)	1019129	25.0000	26.56
*	8 1,4-Dichlorobenzene-d4	152	8.432	8.428	(1.000)	507223	20.0000	
	9 1,4-Dichlorobenzene	146	8.453	8.454	(1.003)	1024341	25.0000	26.65
$	10 1,2-Dichlorobenzene-d4	152	8.725	8.732	(1.035)	600420	25.0000	26.59
	12 1,2-Dichlorobenzene	146	8.752	8.748	(1.038)	978560	25.0000	26.97
	11 Benzyl alcohol	108	8.699	8.716	(1.032)	596171	25.0000	28.13
	14 2,2'-oxybis(1-Chloropropane)	45	8.955	8.962	(1.062)	1534010	25.0000	28.02
	13 2-Methylphenol	108	8.928	8.940	(1.059)	809310	25.0000	27.51
	17 Hexachloroethane	117	9.238	9.234	(1.096)	362364	25.0000	27.12
	16 N-Nitroso-di-n-propylamine	70	9.174	9.191	(1.088)	661479	25.0000	28.09
	15 4-Methylphenol	108	9.153	9.170	(1.086)	854235	25.0000	28.03
$	18 Nitrobenzene-d5	82	9.356	9.362	(0.893)	831229	25.0000	27.30
	19 Nitrobenzene	77	9.388	9.395	(0.896)	873452	25.0000	27.27
	20 Isophorone	82	9.762	9.784	(0.932)	1368096	25.0000	26.75
	21 2-Nitrophenol	139	9.895	9.902	(0.945)	436617	25.0000	26.95
	22 2,4-Dimethylphenol	107	9.991	10.004	(0.954)	731887	25.0000	26.53
	23 Bis(2-Chloroethoxy)methane	93	10.141	10.153	(0.968)	1080772	25.0000	26.75
	24 Benzoic acid	105	10.243	10.361	(0.978)	1241981	50.0000	63.85
	25 2,4-Dichlorophenol	162	10.275	10.287	(0.981)	682831	25.0000	27.30
	26 1,2,4-Trichlorobenzene	180	10.414	10.415	(0.994)	739016	25.0000	25.68
*	27 Naphthalene-d8	136	10.472	10.474	(1.000)	1843524	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	10.504	10.506	(1.003)	2263181	25.0000	26.43
	29 4-Chloroaniline	127	10.638	10.650	(1.016)	846138	25.0000	25.71
	30 Hexachlorobutadiene	225	10.814	10.816	(1.033)	354419	25.0000	25.42
	31 4-Chloro-3-methylphenol	107	11.434	11.446	(1.092)	633189	25.0000	27.98
	32 2-Methylnaphthalene	141	11.621	11.628	(1.110)	1284538	25.0000	27.31
	33 Hexachlorocyclopentadiene	237	12.000	12.001	(0.900)	406984	25.0000	29.13
	34 2,4,6-Trichlorophenol	196	12.128	12.135	(0.909)	422657	25.0000	26.90
	35 2,4,5-Trichlorophenol	196	12.187	12.194	(0.914)	428318	25.0000	27.39
$	36 2-Fluorobiphenyl	172	12.262	12.263	(0.919)	1498299	25.0000	26.49
	37 2-Chloronaphthalene	162	12.406	12.413	(0.930)	1439833	25.0000	27.18
	38 2-Nitroaniline	65	12.630	12.643	(0.947)	403355	25.0000	30.42
	39 Dimethylphthalate	163	12.999	13.016	(0.975)	1486782	25.0000	26.47
	40 Acenaphthylene	152	13.085	13.091	(0.981)	2133027	25.0000	26.94
	41 2,6-Dinitrotoluene	165	13.095	13.113	(0.982)	342776	25.0000	27.93
*	42 Acenaphthene-d10	164	13.336	13.342	(1.000)	1048119	20.0000	
	43 3-Nitroaniline	138	13.314	13.332	(0.998)	336087	25.0000	27.51
	44 Acenaphthene	153	13.389	13.396	(1.004)	1363677	25.0000	27.05
	45 2,4-Dinitrophenol	184	13.480	13.508	(1.011)	428566	50.0000	69.12
	46 Dibenzofuran	168	13.651	13.663	(1.024)	1765126	25.0000	27.97
	47 4-Nitrophenol	109	13.597	13.620	(1.020)	134466	25.0000	34.41
	48 2,4-Dinitrotoluene	165	13.726	13.743	(1.029)	394998	25.0000	27.05
	50 Diethylphthalate	149	14.153	14.165	(1.061)	1308362	25.0000	25.80
	49 Fluorene	166	14.206	14.218	(1.065)	1401358	25.0000	26.49
	51 4-Chlorophenyl-phenylether	204	14.222	14.229	(1.066)	620999	25.0000	26.02
	52 4-Nitroaniline	138	14.303	14.341	(1.073)	195374	25.0000	21.18
	53 4,6-Dinitro-2-methylphenol	198	14.383	14.411	(0.915)	517590	50.0000	58.88
	54 N-Nitrosodiphenylamine	169	14.431	14.443	(0.918)	961950	25.0000	26.32
$	55 2,4,6-Tribromophenol	330	14.628	14.640	(1.097)	280101	37.5000	36.73
	56 4-Bromophenyl-phenylether	248	15.008	15.009	(0.955)	352314	25.0000	25.61
	57 Hexachlorobenzene	284	15.232	15.244	(0.969)	370110	25.0000	24.12
	58 Pentachlorophenol	266	15.526	15.538	(0.988)	207628	25.0000	27.50
*	59 Phenanthrene-d10	188	15.718	15.725	(1.000)	1392753	20.0000	
	60 Phenanthrene	178	15.756	15.768	(1.002)	1829497	25.0000	26.49
	61 Anthracene	178	15.830	15.837	(1.007)	1823322	25.0000	26.99
	62 Carbazole	167	16.103	16.115	(1.024)	1268701	25.0000	22.33
	63 Di-n-butylphthalate	149	16.797	16.804	(1.069)	2332969	25.0000	27.75
	64 Fluoranthene	202	17.695	17.702	(1.126)	1880837	25.0000	27.35
	65 Pyrene	202	18.053	18.059	(0.901)	2022665	25.0000	27.13
$	66 Terphenyl-d14	244	18.347	18.353	(0.916)	977617	25.0000	26.38
	67 Butylbenzylphthalate	149	19.217	19.229	(0.959)	1050264	25.0000	28.66
	68 Benzo(a)anthracene	228	20.008	20.025	(0.999)	1767246	25.0000	26.85
*	69 Chrysene-d12	240	20.035	20.041	(1.000)	1340567	20.0000	
	70 3,3'-Dichlorobenzidine	252	20.003	20.009	(0.998)	561685	25.0000	27.39
	71 Chrysene	228	20.072	20.089	(1.002)	1680757	25.0000	26.88
	72 bis(2-Ethylhexyl)phthalate	149	20.200	20.207	(0.956)	1467647	25.0000	27.93
*	134 Di-n-octylphthalate-d4	153	21.135	21.137	(1.000)	2097720	20.0000	
	73 Di-n-octylphthalate	149	21.141	21.147	(1.000)	2650351	25.0000	25.77

	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	21.664	21.681	(0.976)	1932187	25.0000	28.99 (H)
75	Benzo(k)fluoranthene	252	21.696	21.713	(0.978)	1868717	25.0000	26.95
187	Total Benzofluoranthenes	252	21.696	21.713	(0.978)	3582302	50.0000	55.60
76	Benzo(a)pyrene	252	22.113	22.130	(0.996)	1635800	25.0000	28.18
* 77	Perylene-d12	264	22.193	22.200	(1.000)	1450550	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	23.849	23.866	(1.075)	2093323	25.0000	28.31
79	Dibenzo(a,h)anthracene	278	23.865	23.904	(1.075)	1742931	25.0000	28.99
80	Benzo(g,h,i)perylene	276	24.314	24.352	(1.096)	1811430	25.0000	27.61
90	N-Nitrosodimethylamine	74	3.939	3.978	(0.467)	608970	25.0000	26.74
103	Pyridine	79	3.896	3.919	(0.462)	992901	25.0000	27.29
91	Aniline	93	7.983	7.984	(0.947)	1199193	25.0000	26.96
105	1-methylnaphthalene	141	11.797	11.798	(1.127)	1106180	25.0000	26.61
93	Benzidine	184	17.930	17.931	(0.895)	128566	25.0000	11.45
111	Azobenzene (1,2-DP-Hydrazine)	77	16.466	16.484	(1.048)	117033	25.0000	28.37
143	1,4-Dioxane	88	3.143	3.176	(0.373)	371747	25.0000	25.68
$ 137	d8-1,4-Dioxane	96	3.084	3.118	(0.366)	342582	25.0000	26.01
144	alpha-Terpineol	59	10.520	10.532	(1.005)	611551	25.0000	28.43
177	p-Benzoquinone	82	7.123	7.124	(0.845)	179089	25.0000	30.87
98	Retene	219	18.598	18.604	(0.928)	825825	25.0000	27.28
99	Perylene	252	22.230	22.242	(1.002)	1550354	25.0000	26.44
133	Butylatedhydroxytoluene	205	13.491	13.503	(1.012)	878616	25.0000	27.18
115	Tributyl Phosphate	99	14.511	14.534	(0.923)	1858942	25.0000	28.07
116	Dibutyl Phenyl Phosphate	175	16.247	16.248	(1.034)	1122132	25.0000	27.71
117	Butyl Diphenyl Phosphate	94	17.930	17.937	(0.895)	407051	25.0000	29.08
118	Triphenyl Phosphate	326	19.538	19.545	(0.975)	331084	25.0000	26.96
123	Acetophenone	105	9.121	9.127	(1.082)	1062406	25.0000	27.35
168	Pentachlorobenzene	250	13.688	13.700	(1.026)	446043	25.0000	24.50
113	Diphenyl Oxide	170	12.582	12.589	(0.944)	1049468	25.0000	26.79
112	Biphenyl	154	12.395	12.402	(0.929)	1475958	25.0000	27.01
120	2,3,4,6-Tetrachlorophenol	232	13.923	13.935	(1.044)	296656	25.0000	26.03
151	1,2,4,5-Tetrachlorobenzene	216	11.957	11.964	(0.897)	627404	25.0000	26.27
110	Tetrachloroguaiacol	247	15.232	15.244	(0.969)	62719	50.0000	49.39
109	3,4,5-Trichloroguaiacol	213	14.019	14.031	(0.892)	189465	25.0000	25.81
181	3,4,6-Trichloroguaiacol	211	14.137	14.154	(1.677)	231294	25.0000	26.01
108	4,5,6-Trichloroguaiacol	213	15.050	15.063	(1.129)	196024	25.0000	25.98
184	3,4-Dichloroguaiacol	192	12.476	12.488	(1.480)	261729	25.0000	26.98
107	4,5-Dichloroguaiacol	192	13.256	13.273	(0.994)	637765	50.0000	53.45
182	4,6-Dichloroguaiacol	192	13.256	13.273	(1.572)	648048	50.0000	54.08
185	4-Chloroguaiacol	115	11.386	11.392	(1.087)	138198	12.5000	13.74
186	Carbaryl	144	16.514	16.532	(1.051)	939018	25.0000	27.16
178	2-Benzyl-4-Chlorophenol	218	16.466	16.489	(1.048)	306341	25.0000	25.77
106	Guaiacol	124	9.377	9.389	(1.112)	836300	25.0000	28.10
188	2,6-Dichlorophenol	162	10.649	10.661	(1.263)	771444	25.0000	27.20
189	N-Nitrosomethylethylamine	88	5.659	5.666	(0.671)	286123	25.0000	27.23

QC Flag Legend

H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 07081301.d
Lab Smp Id: IC250708
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130708.b/SW846070813.m
Misc Info: 13-

Calibration Date: 08-JUL-2013
Calibration Time: 12:01
Client Smp ID: IC250708
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	507223	253612	1014446	507223	0.00
27 Naphthalene-d8	1843524	921762	3687048	1843524	0.00
42 Acenaphthene-d10	1048119	524060	2096238	1048119	0.00
59 Phenanthrene-d10	1392753	696376	2785506	1392753	0.00
69 Chrysene-d12	1340567	670284	2681134	1340567	0.00
134 Di-n-octylphthala	2097720	1048860	4195440	2097720	0.00
77 Perylene-d12	1450550	725275	2901100	1450550	0.00

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.43	7.93	8.93	8.43	0.00
27 Naphthalene-d8	10.47	9.97	10.97	10.47	0.00
42 Acenaphthene-d10	13.34	12.84	13.84	13.34	0.00
59 Phenanthrene-d10	15.72	15.22	16.22	15.72	0.00
69 Chrysene-d12	20.03	19.53	20.53	20.03	0.00
134 Di-n-octylphthala	21.14	20.64	21.64	21.14	0.00
77 Perylene-d12	22.19	21.69	22.69	22.19	0.00

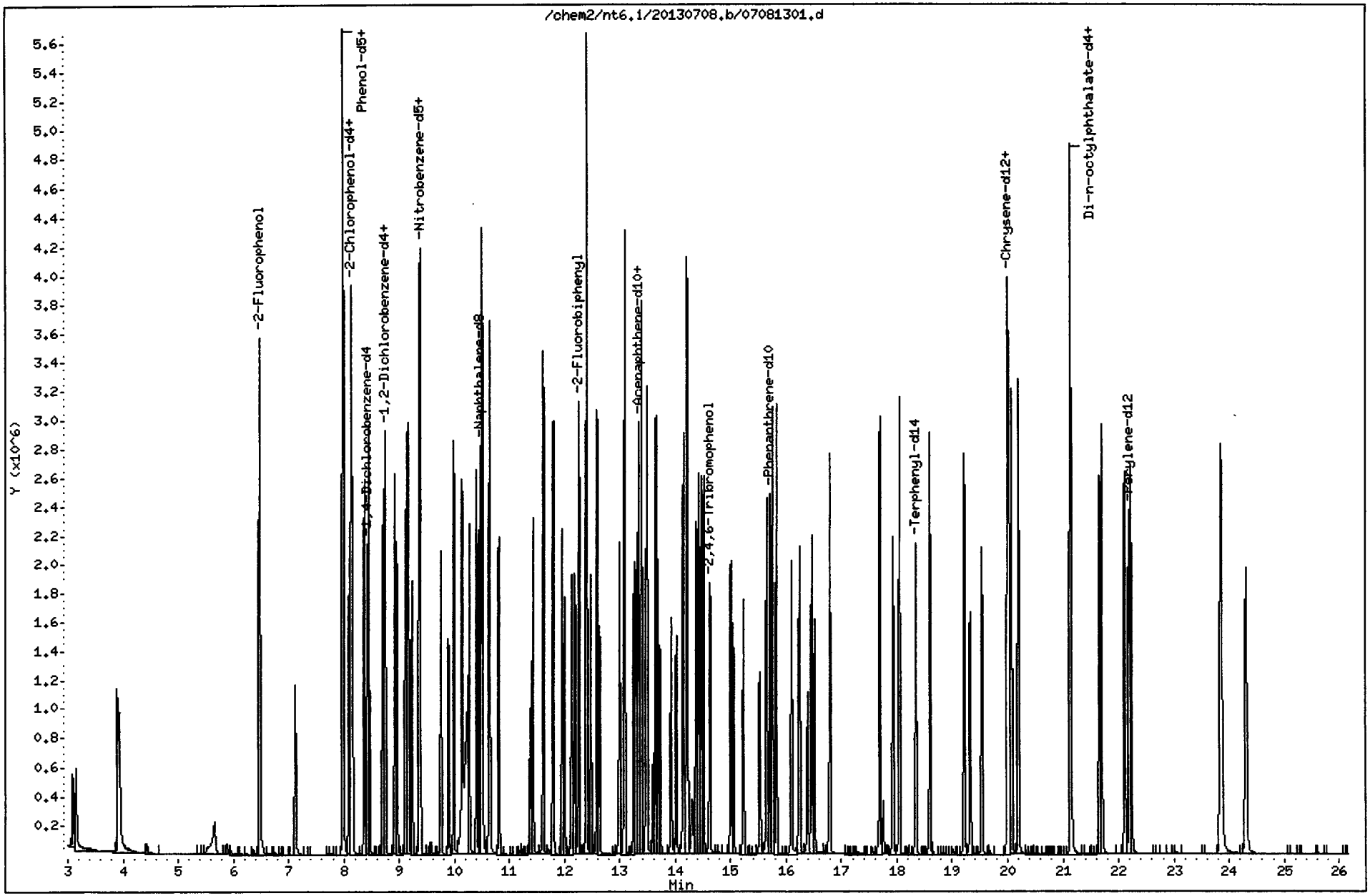
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130708.b/07081301.d
Date : 08-JUL-2013 12:01
Client ID: IC250708
Sample Info: IC250708

Instrument: nt6.i

Operator: JZ
Column diameter: 0.32

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - 07081301.d

Lab ID: IC250708, Method: SW846070813.m, Instrument: nt6.i, Date: 08-JUL-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130708.b/07081306.d
Lab Smp Id: IC400708 Client Smp ID: IC400708
Inj Date : 08-JUL-2013 14:51
Operator : JZ Inst ID: nt6.i
Smp Info : IC400708,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130708.b/SW846070813.m
Meth Date : 08-Jul-2013 16:42 jianqing Quant Type: ISTD
Cal Date : 08-JUL-2013 15:59 Cal File: 07081308.d
Als bottle: 6 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

07/08/13

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.478	6.483	(0.769)	3001012	60.0000	62.12
$	2	Phenol-d5	99	7.985	7.995	(0.947)	3398063	60.0000	60.56
	3	Phenol	94	8.006	8.006	(0.950)	1909474	40.0000	39.59
$	5	2-Chlorophenol-d4	132	8.129	8.134	(0.964)	2994822	60.0000	61.83
	4	Bis(2-Chloroethyl)ether	93	8.097	8.096	(0.961)	1636799	40.0000	41.76
	6	2-Chlorophenol	128	8.156	8.160	(0.968)	1535589	40.0000	40.67
	7	1,3-Dichlorobenzene	146	8.369	8.369	(0.993)	1840945	40.0000	41.91
*	8	1,4-Dichlorobenzene-d4	152	8.428	8.428	(1.000)	582898	20.0000	
	9	1,4-Dichlorobenzene	146	8.455	8.454	(1.003)	1829053	40.0000	41.83
$	10	1,2-Dichlorobenzene-d4	152	8.727	8.732	(1.035)	1100700	40.0000	42.41
	12	1,2-Dichlorobenzene	146	8.748	8.748	(1.038)	1720808	40.0000	41.44
	11	Benzyl alcohol	108	8.700	8.716	(1.032)	1047653	40.0000	42.74
	14	2,2'-oxybis(1-Chloropropane)	45	8.951	8.962	(1.062)	2520192	40.0000	40.79
	13	2-Methylphenol	108	8.925	8.940	(1.059)	1400839	40.0000	41.41
	17	Hexachloroethane	117	9.235	9.234	(1.096)	647660	40.0000	42.22
	16	N-Nitroso-di-n-propylamine	70	9.181	9.191	(1.089)	1134089	40.0000	41.77
	15	4-Methylphenol	108	9.160	9.170	(1.087)	1451709	40.0000	41.56
$	18	Nitrobenzene-d5	82	9.357	9.362	(0.894)	1458522	40.0000	42.13
	19	Nitrobenzene	77	9.390	9.395	(0.897)	1468978	40.0000	40.73
	20	Isophorone	82	9.769	9.784	(0.933)	2406380	40.0000	41.04
	21	2-Nitrophenol	139	9.897	9.902	(0.945)	810789	40.0000	43.05
	22	2,4-Dimethylphenol	107	9.993	10.004	(0.955)	1275701	40.0000	40.51
	23	Bis(2-Chloroethoxy)methane	93	10.143	10.153	(0.969)	1876973	40.0000	41.04
	24	Benzoic acid	105	10.276	10.361	(0.982)	2288008	80.0000	80.12
	25	2,4-Dichlorophenol	162	10.276	10.287	(0.982)	1203315	40.0000	42.05
	26	1,2,4-Trichlorobenzene	180	10.410	10.415	(0.994)	1380364	40.0000	42.28
*	27	Naphthalene-d8	136	10.469	10.474	(1.000)	2096246	20.0000	

		QUANT SIG					AMOUNTS CAL-AMT	AMOUNTS ON-COL
Compounds		MASS	RT	EXP RT	REL RT	RESPONSE	(ug/mL)	(ug/mL)
28	Naphthalene	128	10.501	10.506	(1.003)	3770732	40.0000	39.64
29	4-Chloroaniline	127	10.640	10.650	(1.016)	1451320	40.0000	40.20
30	Hexachlorobutadiene	225	10.811	10.816	(1.033)	650647	40.0000	41.51
31	4-Chloro-3-methylphenol	107	11.436	11.446	(1.092)	1073729	40.0000	41.32
32	2-Methylnaphthalene	141	11.623	11.628	(1.110)	2217791	40.0000	41.80
33	Hexachlorocyclopentadiene	237	11.996	12.001	(0.899)	783358	40.0000	45.24
34	2,4,6-Trichlorophenol	196	12.130	12.135	(0.909)	775984	40.0000	42.86
35	2,4,5-Trichlorophenol	196	12.189	12.194	(0.914)	781541	40.0000	43.47
$ 36	2-Fluorobiphenyl	172	12.258	12.263	(0.919)	2685419	40.0000	41.86
37	2-Chloronaphthalene	162	12.408	12.413	(0.930)	2450627	40.0000	41.36
38	2-Nitroaniline	65	12.632	12.643	(0.947)	672180	40.0000	43.95
39	Dimethylphthalate	163	13.001	13.016	(0.975)	2727266	40.0000	42.28
40	Acenaphthylene	152	13.086	13.091	(0.981)	3635844	40.0000	40.95
41	2,6-Dinitrotoluene	165	13.097	13.113	(0.982)	617052	40.0000	43.69
* 42	Acenaphthene-d10	164	13.337	13.342	(1.000)	1188830	20.0000	
43	3-Nitroaniline	138	13.316	13.332	(0.998)	584874	40.0000	42.41
44	Acenaphthene	153	13.391	13.396	(1.004)	2446551	40.0000	42.71
45	2,4-Dinitrophenol	184	13.482	13.508	(1.011)	783013	80.0000	78.74
46	Dibenzofuran	168	13.653	13.663	(1.024)	2837453	40.0000	40.20
47	4-Nitrophenol	109	13.604	13.620	(1.020)	213190	40.0000	37.53
48	2,4-Dinitrotoluene	165	13.727	13.743	(1.029)	739612	40.0000	43.93
50	Diethylphthalate	149	14.155	14.165	(1.061)	2275743	40.0000	40.30
49	Fluorene	166	14.208	14.218	(1.065)	2429927	40.0000	41.28
51	4-Chlorophenyl-phenylether	204	14.224	14.229	(1.066)	1088518	40.0000	41.19
52	4-Nitroaniline	138	14.315	14.341	(1.073)	449817	40.0000	41.69
53	4,6-Dinitro-2-methylphenol	198	14.395	14.411	(0.916)	956882	80.0000	85.60
54	N-Nitrosodiphenylamine	169	14.433	14.443	(0.918)	1776957	40.0000	43.25
$ 55	2,4,6-Tribromophenol	330	14.636	14.640	(1.097)	512939	60.0000	59.30
56	4-Bromophenyl-phenylether	248	15.004	15.009	(0.954)	654724	40.0000	42.45
57	Hexachlorobenzene	284	15.234	15.244	(0.969)	686169	40.0000	40.67
58	Pentachlorophenol	266	15.528	15.538	(0.988)	409361	40.0000	43.24
* 59	Phenanthrene-d10	188	15.720	15.725	(1.000)	1543729	20.0000	
60	Phenanthrene	178	15.757	15.768	(1.002)	3281867	40.0000	42.50
61	Anthracene	178	15.827	15.837	(1.007)	3199825	40.0000	42.50
62	Carbazole	167	16.105	16.115	(1.024)	2596808	40.0000	40.23
63	Di-n-butylphthalate	149	16.794	16.804	(1.068)	4035121	40.0000	43.11
64	Fluoranthene	202	17.691	17.702	(1.125)	3391972	40.0000	43.91
65	Pyrene	202	18.054	18.059	(0.901)	3590478	40.0000	42.34
$ 66	Terphenyl-d14	244	18.348	18.353	(0.916)	1870736	40.0000	44.54
67	Butylbenzylphthalate	149	19.219	19.229	(0.959)	1905291	40.0000	45.02
68	Benzo(a)anthracene	228	20.010	20.025	(0.999)	3137923	40.0000	42.26
* 69	Chrysene-d12	240	20.036	20.041	(1.000)	1519253	20.0000	
70	3,3'-Dichlorobenzidine	252	20.004	20.009	(0.998)	979517	40.0000	42.95
71	Chrysene	228	20.079	20.089	(1.002)	3076204	40.0000	43.34
72	bis(2-Ethylhexyl)phthalate	149	20.197	20.207	(0.956)	2618384	40.0000	44.18
* 134	Di-n-octylphthalate-d4	153	21.132	21.137	(1.000)	2344960	20.0000	
73	Di-n-octylphthalate	149	21.142	21.147	(1.000)	4506706	40.0000	39.98

	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	21.666	21.681	(0.976)	3789580	40.0000	48.76
75	Benzo(k)fluoranthene	252	21.703	21.713	(0.978)	3105658	40.0000	39.07
187	Total Benzofluoranthenes	252	21.703	21.713	(0.978)	6480362	80.0000	87.12
76	Benzo(a)pyrene	252	22.115	22.130	(0.996)	3056931	40.0000	44.96
* 77	Perylene-d12	264	22.195	22.200	(1.000)	1674848	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	23.856	23.866	(1.075)	3695734	40.0000	42.80
79	Dibenzo(a,h)anthracene	278	23.877	23.904	(1.076)	3132481	40.0000	44.81
80	Benzo(g,h,i)perylene	276	24.326	24.352	(1.096)	3432862	40.0000	44.25
90	N-Nitrosodimethylamine	74	3.941	3.978	(0.468)	1159449	40.0000	43.51
103	Pyridine	79	3.892	3.919	(0.462)	1929481	40.0000	45.70
91	Aniline	93	7.985	7.984	(0.947)	1921176	40.0000	37.97
105	1-methylnaphthalene	141	11.793	11.798	(1.127)	1969841	40.0000	41.88
93	Benzidine	184	17.932	17.931	(0.895)	290989	40.0000	35.66
111	Azobenzene (1,2-DP-Hydrazine)	77	16.468	16.484	(1.048)	206346	40.0000	43.68
143	1,4-Dioxane	88	3.150	3.176	(0.374)	730708	40.0000	43.06
$ 137	d8-1,4-Dioxane	96	3.086	3.118	(0.366)	674907	40.0000	43.76
144	alpha-Terpineol	59	10.522	10.532	(1.005)	985717	40.0000	40.40
177	p-Benzoquinone	82	7.124	7.124	(0.845)	322696	40.0000	45.58
98	Retene	219	18.599	18.604	(0.928)	1545189	40.0000	44.43
99	Perylene	252	22.232	22.242	(1.002)	2812944	40.0000	41.63
133	Butylatedhydroxytoluene	205	13.492	13.503	(1.012)	1525091	40.0000	42.64
115	Tributyl Phosphate	99	14.513	14.534	(0.923)	3190664	40.0000	43.00
116	Dibutyl Phenyl Phosphate	175	16.249	16.248	(1.034)	2104241	40.0000	45.16
117	Butyl Diphenyl Phosphate	94	17.932	17.937	(0.895)	694997	40.0000	43.11
118	Triphenyl Phosphate	326	19.540	19.545	(0.975)	635830	40.0000	45.04
123	Acetophenone	105	9.122	9.127	(1.082)	1872627	40.0000	41.88
168	Pentachlorobenzene	250	13.690	13.700	(1.026)	848843	40.0000	41.54
113	Diphenyl Oxide	170	12.584	12.589	(0.944)	1880667	40.0000	42.18
112	Biphenyl	154	12.397	12.402	(0.930)	2475506	40.0000	40.80
120	2,3,4,6-Tetrachlorophenol	232	13.925	13.935	(1.044)	548672	40.0000	42.38
151	1,2,4,5-Tetrachlorobenzene	216	11.959	11.964	(0.897)	1172375	40.0000	43.07
110	Tetrachloroguaiacol	247	15.234	15.244	(0.969)	114735	80.0000	81.72
109	3,4,5-Trichloroguaiacol	213	14.021	14.031	(0.892)	351688	40.0000	42.48
181	3,4,6-Trichloroguaiacol	211	14.144	14.154	(1.678)	413961	40.0000	41.45
108	4,5,6-Trichloroguaiacol	213	15.052	15.063	(1.129)	368736	40.0000	42.89
184	3,4-Dichloroguaiacol	192	12.477	12.488	(1.480)	486263	40.0000	43.27
107	4,5-Dichloroguaiacol	192	13.257	13.273	(0.994)	1200011	80.0000	87.13
182	4,6-Dichloroguaiacol	192	13.257	13.273	(1.573)	1198419	80.0000	86.57
185	4-Chloroguaiacol	115	11.387	11.392	(1.088)	251942	20.0000	21.31
186	Carbaryl	144	16.516	16.532	(1.051)	1734323	40.0000	42.51
178	2-Benzyl-4-Chlorophenol	218	16.468	16.489	(1.048)	629033	40.0000	47.74
106	Guaiacol	124	9.379	9.389	(1.113)	1440185	40.0000	42.42
188	2,6-Dichlorophenol	162	10.650	10.661	(1.264)	1346160	40.0000	42.43
189	N-Nitrosomethylethylamine	88	5.661	5.666	(0.672)	348562	40.0000	27.84

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 07081306.d
Lab Smp Id: IC400708
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130708.b/SW846070813.m
Misc Info: 13-

Calibration Date: 08-JUL-2013
Calibration Time: 12:01
Client Smp ID: IC400708
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	507223	253612	1014446	582898	14.92
27 Naphthalene-d8	1843524	921762	3687048	2096246	13.71
42 Acenaphthene-d10	1048119	524060	2096238	1188830	13.43
59 Phenanthrene-d10	1392753	696376	2785506	1543729	10.84
69 Chrysene-d12	1340567	670284	2681134	1519253	13.33
134 Di-n-octylphthala	2097720	1048860	4195440	2344960	11.79
77 Perylene-d12	1450550	725275	2901100	1674848	15.46

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.43	7.93	8.93	8.43	-0.04
27 Naphthalene-d8	10.47	9.97	10.97	10.47	-0.03
42 Acenaphthene-d10	13.34	12.84	13.84	13.34	0.01
59 Phenanthrene-d10	15.72	15.22	16.22	15.72	0.01
69 Chrysene-d12	20.03	19.53	20.53	20.04	0.01
134 Di-n-octylphthala	21.14	20.64	21.64	21.13	-0.02
77 Perylene-d12	22.19	21.69	22.69	22.19	0.01

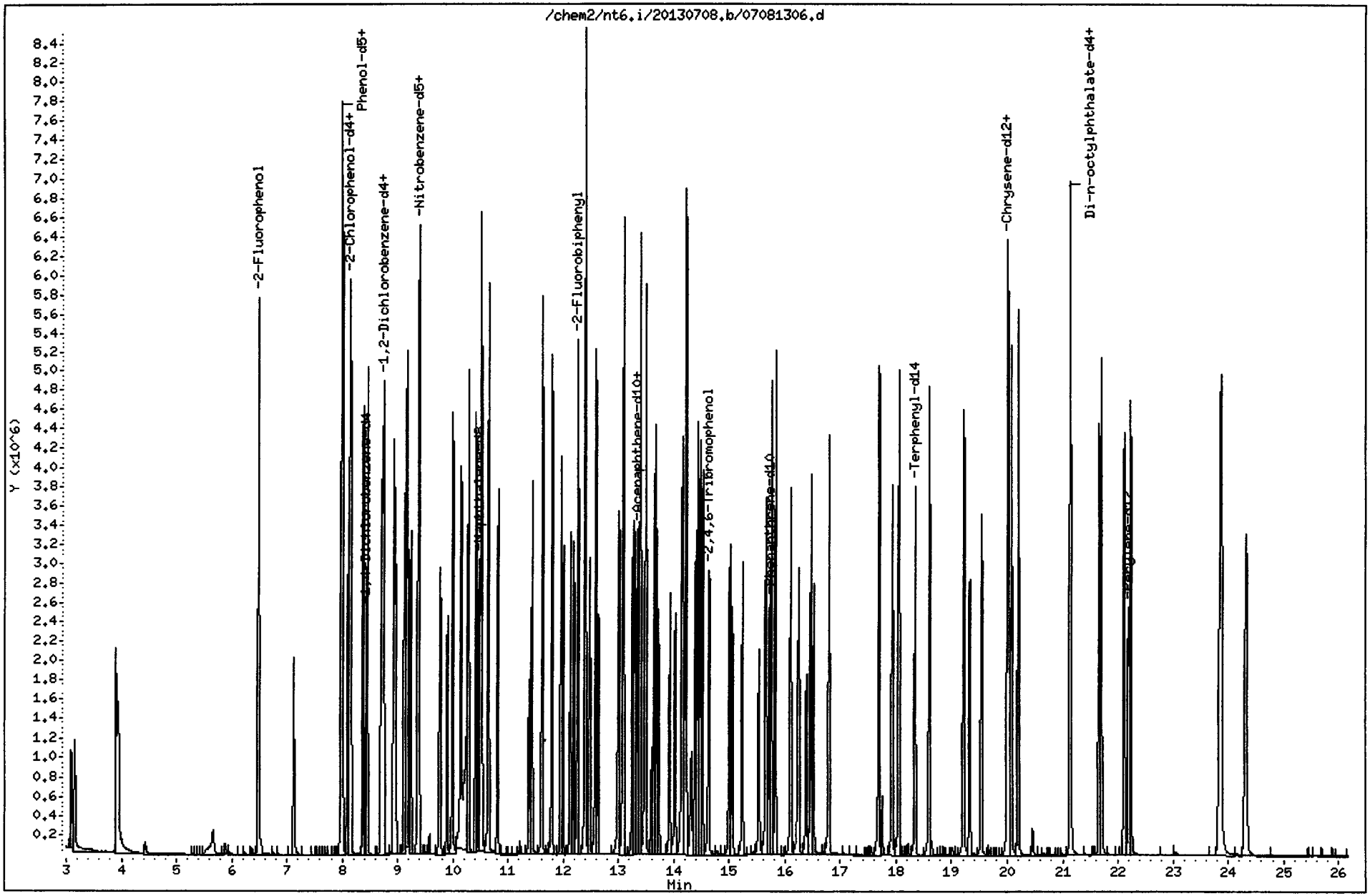
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130708.b/07081306.d
Date : 08-JUL-2013 14:51
Client ID: IC400708
Sample Info: IC400708,

Instrument: nt6.i

Operator: JZ
Column diameter: 0.32

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - 07081306.d

Lab ID: IC400708, Method: SW846070813.m, Instrument: nt6.i, Date: 08-JUL-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130708.b/07081307.d
Lab Smp Id: IC600708 Client Smp ID: IC600708
Inj Date : 08-JUL-2013 15:25
Operator : JZ Inst ID: nt6.i
Smp Info : IC600708,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130708.b/SW846070813.m
Meth Date : 08-Jul-2013 16:42 jianqing Quant Type: ISTD
Cal Date : 08-JUL-2013 15:59 Cal File: 07081308.d
Als bottle: 7 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

07/08/13

AMOUNTS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.483	6.483	(0.769)	3941718	90.0000	85.52
$	2 Phenol-d5	99	7.995	7.995	(0.948)	4470593	90.0000	83.51
	3 Phenol	94	8.016	8.006	(0.951)	2616643	60.0000	56.86
$	5 2-Chlorophenol-d4	132	8.134	8.134	(0.965)	3927665	90.0000	84.99
	4 Bis(2-Chloroethyl)ether	93	8.102	8.096	(0.961)	2175674	60.0000	58.19
	6 2-Chlorophenol	128	8.160	8.160	(0.968)	2161678	60.0000	60.01
	7 1,3-Dichlorobenzene	146	8.369	8.369	(0.992)	2448210	60.0000	58.41
*	8 1,4-Dichlorobenzene-d4	152	8.433	8.428	(1.000)	556124	20.0000	
	9 1,4-Dichlorobenzene	146	8.454	8.454	(1.003)	2387185	60.0000	57.22
$	10 1,2-Dichlorobenzene-d4	152	8.732	8.732	(1.035)	1470844	60.0000	59.40
	12 1,2-Dichlorobenzene	146	8.753	8.748	(1.038)	2237860	60.0000	56.48
	11 Benzyl alcohol	108	8.711	8.716	(1.033)	1423739	60.0000	60.88
	14 2,2'-oxybis(1-Chloropropane)	45	8.956	8.962	(1.062)	3339385	60.0000,	56.65
	13 2-Methylphenol	108	8.935	8.940	(1.060)	1973315	60.0000	61.14
	17 Hexachloroethane	117	9.234	9.234	(1.095)	866576	60.0000	59.20
	16 N-Nitroso-di-n-propylamine	70	9.191	9.191	(1.090)	1530103	60.0000	59.06
	15 4-Methylphenol	108	9.165	9.170	(1.087)	2063725	60.0000	61.93
$	18 Nitrobenzene-d5	82	9.362	9.362	(0.894)	1961598	60.0000	59.26
	19 Nitrobenzene	77	9.394	9.395	(0.897)	1917225	60.0000	55.60
	20 Isophorone	82	9.774	9.784	(0.933)	3286084	60.0000	58.60
	21 2-Nitrophenol	139	9.902	9.902	(0.945)	1181441	60.0000	65.60
	22 2,4-Dimethylphenol	107	9.998	10.004	(0.955)	1810598	60.0000	60.13
	23 Bis(2-Chloroethoxy)methane	93	10.148	10.153	(0.969)	2475973	60.0000	56.61
	24 Benzoic acid	105	10.324	10.361	(0.986)	3491744	120.000	120.5
	25 2,4-Dichlorophenol	162	10.281	10.287	(0.982)	1701705	60.0000	62.18
	26 1,2,4-Trichlorobenzene	180	10.415	10.415	(0.994)	1829783	60.0000	58.60
*	27 Naphthalene-d8	136	10.473	10.474	(1.000)	2004545	20.0000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
	28 Naphthalene	128	10.506	10.506	(1.003)	4805291	60.0000	52.83
	29 4-Chloroaniline	127	10.644	10.650	(1.016)	1829113	60.0000	52.99
	30 Hexachlorobutadiene	225	10.815	10.816	(1.033)	838771	60.0000	55.96
	31 4-Chloro-3-methylphenol	107	11.440	11.446	(1.092)	1570837	60.0000	63.21
	32 2-Methylnaphthalene	141	11.622	11.628	(1.110)	2929051	60.0000	57.73
	33 Hexachlorocyclopentadiene	237	12.001	12.001	(0.900)	1036141	60.0000	63.29
	34 2,4,6-Trichlorophenol	196	12.135	12.135	(0.910)	1108254	60.0000	64.75
	35 2,4,5-Trichlorophenol	196	12.194	12.194	(0.914)	1095403	60.0000	64.45
$	36 2-Fluorobiphenyl	172	12.263	12.263	(0.919)	3519396	60.0000	58.02
	37 2-Chloronaphthalene	162	12.413	12.413	(0.931)	3123343	60.0000	55.76
	38 2-Nitroaniline	65	12.637	12.643	(0.948)	937569	60.0000	64.84
	39 Dimethylphthalate	163	13.011	13.016	(0.976)	3685359	60.0000	60.44
	40 Acenaphthylene	152	13.086	13.091	(0.981)	4654847	60.0000	55.45
	41 2,6-Dinitrotoluene	165	13.102	13.113	(0.982)	833274	60.0000	62.41
*	42 Acenaphthene-d10	164	13.337	13.342	(1.000)	1123936	20.0000	
	43 3-Nitroaniline	138	13.321	13.332	(0.999)	709466	60.0000	54.42
	44 Acenaphthene	153	13.390	13.396	(1.004)	3202101	60.0000	59.13
	45 2,4-Dinitrophenol	184	13.486	13.508	(1.011)	1135293	120.000	120.7
	46 Dibenzofuran	168	13.657	13.663	(1.024)	3703701	60.0000	55.50
	47 4-Nitrophenol	109	13.615	13.620	(1.021)	330704	60.0000	61.58 (M)
	48 2,4-Dinitrotoluene	165	13.738	13.743	(1.030)	1006836	60.0000	63.26
	50 Diethylphthalate	149	14.160	14.165	(1.062)	2979100	60.0000	55.80
	49 Fluorene	166	14.213	14.218	(1.066)	3065136	60.0000	55.07
	51 4-Chlorophenyl-phenylether	204	14.229	14.229	(1.067)	1349230	60.0000	54.00
	52 4-Nitroaniline	138	14.330	14.341	(1.075)	678928	60.0000	66.56
	53 4,6-Dinitro-2-methylphenol	198	14.405	14.411	(0.916)	1367069	120.000	132.8
	54 N-Nitrosodiphenylamine	169	14.437	14.443	(0.918)	2370071	60.0000	62.62
$	55 2,4,6-Tribromophenol	330	14.640	14.640	(1.098)	674149	90.0000	82.44
	56 4-Bromophenyl-phenylether	248	15.009	15.009	(0.955)	848845	60.0000	59.74
	57 Hexachlorobenzene	284	15.239	15.244	(0.969)	866009	60.0000	55.72
	58 Pentachlorophenol	266	15.532	15.538	(0.988)	578492	60.0000	66.34
*	59 Phenanthrene-d10	188	15.719	15.725	(1.000)	1422042	20.0000	
	60 Phenanthrene	178	15.762	15.768	(1.003)	4232345	60.0000	59.50
	61 Anthracene	178	15.837	15.837	(1.007)	4192294	60.0000	60.45
	62 Carbazole	167	16.109	16.115	(1.025)	3753949	60.0000	63.13
	63 Di-n-butylphthalate	149	16.799	16.804	(1.069)	5208329	60.0000	60.41
	64 Fluoranthene	202	17.696	17.702	(1.126)	4417862	60.0000	62.08
	65 Pyrene	202	18.054	18.059	(0.901)	4655740	60.0000	58.67
$	66 Terphenyl-d14	244	18.353	18.353	(0.916)	2443890	60.0000	62.18
	67 Butylbenzylphthalate	149	19.219	19.229	(0.959)	2536268	60.0000	64.05
	68 Benzo(a)anthracene	228	20.020	20.025	(0.999)	3964365	60.0000	57.06
*	69 Chrysene-d12	240	20.036	20.041	(1.000)	1421640	20.0000	
	70 3,3'-Dichlorobenzidine	252	20.004	20.009	(0.998)	1138090	60.0000	53.32
	71 Chrysene	228	20.084	20.089	(1.002)	3910168	60.0000	58.87
	72 bis(2-Ethylhexyl)phthalate	149	20.201	20.207	(0.956)	3434751	60.0000	61.63
*	134 Di-n-octylphthalate-d4	153	21.131	21.137	(1.000)	2205278	20.0000	
	73 Di-n-octylphthalate	149	21.142	21.147	(1.000)	5597738	60.0000	52.81

	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	21.676	21.681	(0.977)	4469942	60.0000	61.80
75	Benzo(k)fluoranthene	252	21.708	21.713	(0.978)	4162260	60.0000	56.26
187	Total Benzofluoranthenes	252	21.708	21.713	(0.978)	8190949	120.000	118.3
76	Benzo(a)pyrene	252	22.119	22.130	(0.997)	3950445	60.0000	62.42
* 77	Perylene-d12	264	22.194	22.200	(1.000)	1558882	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	23.861	23.866	(1.075)	4871107	60.0000	60.61
79	Dibenzo(a,h)anthracene	278	23.888	23.904	(1.076)	4035569	60.0000	62.03
80	Benzo(g,h,i)perylene	276	24.336	24.352	(1.097)	4559833	60.0000	63.14
90	N-Nitrosodimethylamine	74	3.956	3.978	(0.469)	1609160	60.0000	63.29
103	Pyridine	79	3.903	3.919	(0.463)	2621658	60.0000	65.08
91	Aniline	93	7.984	7.984	(0.947)	2541575	60.0000	52.65
105	1-methylnaphthalene	141	11.798	11.798	(1.126)	2622922	60.0000	58.31
93	Benzidine	184	17.931	17.931	(0.895)	400796	60.0000	52.49
111	Azobenzene (1,2-DP-Hydrazine)	77	16.478	16.484	(1.048)	305401	60.0000	70.18
143	1,4-Dioxane	88	3.155	3.176	(0.374)	1022056	60.0000	63.12
$ 137	d8-1,4-Dioxane	96	3.096	3.118	(0.367)	941218	60.0000	63.96
144	alpha-Terpineol	59	10.527	10.532	(1.005)	1341866	60.0000	57.52
177	p-Benzoquinone	82	7.124	7.124	(0.845)	408006	60.0000	60.40
98	Retene	219	18.604	18.604	(0.929)	1975614	60.0000	60.71
99	Perylene	252	22.237	22.242	(1.002)	3671776	60.0000	58.39
133	Butylatedhydroxytoluene	205	13.497	13.503	(1.012)	1757268	60.0000	51.97
115	Tributyl Phosphate	99	14.528	14.534	(0.924)	4137461	60.0000	60.53
116	Dibutyl Phenyl Phosphate	175	16.243	16.248	(1.033)	2841266	60.0000	66.19 (M)
117	Butyl Diphenyl Phosphate	94	17.936	17.937	(0.895)	927302	60.0000	61.46
118	Triphenyl Phosphate	326	19.539	19.545	(0.975)	808896	60.0000	61.23
123	Acetophenone	105	9.127	9.127	(1.082)	2491613	60.0000	58.41
168	Pentachlorobenzene	250	13.695	13.700	(1.027)	1093959	60.0000	56.63
113	Diphenyl Oxide	170	12.589	12.589	(0.944)	2425193	60.0000	57.53
112	Biphenyl	154	12.397	12.402	(0.930)	3095611	60.0000	53.97
120	2,3,4,6-Tetrachlorophenol	232	13.930	13.935	(1.044)	763444	60.0000	62.37
151	1,2,4,5-Tetrachlorobenzene	216	11.964	11.964	(0.897)	1531365	60.0000	59.51
110	Tetrachloroguaiacol	247	15.239	15.244	(0.969)	146080	120.000	112.9
109	3,4,5-Trichloroguaiacol	213	14.026	14.031	(0.892)	466033	60.0000	61.11
181	3,4,6-Trichloroguaiacol	211	14.149	14.154	(1.678)	530206	60.0000	55.65
108	4,5,6-Trichloroguaiacol	213	15.057	15.063	(1.129)	490011	60.0000	60.29
184	3,4-Dichloroguaiacol	192	12.482	12.488	(1.480)	665172	60.0000	62.04
107	4,5-Dichloroguaiacol	192	13.267	13.273	(0.995)	1654820	120.000	127.1
182	4,6-Dichloroguaiacol	192	13.267	13.273	(1.573)	1682352	120.000	127.4
185	4-Chloroguaiacol	115	11.387	11.392	(1.087)	363473	30.0000	32.15
186	Carbaryl	144	16.526	16.532	(1.051)	2817619	60.0000	74.98
178	2-Benzyl-4-Chlorophenol	218	16.478	16.489	(1.048)	888489	60.0000	73.21
106	Guaiacol	124	9.384	9.389	(1.113)	1820341	60.0000	56.20
188	2,6-Dichlorophenol	162	10.655	10.661	(1.264)	1731836	60.0000	57.21
189	N-Nitrosomethylethylamine	88	5.660	5.666	(0.671)	780580	60.0000	65.34

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: 07081307.d
Lab Smp Id: IC600708
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130708.b/SW846070813.m
Misc Info: 13-

Calibration Date: 08-JUL-2013
Calibration Time: 12:01
Client Smp ID: IC600708
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	507223	253612	1014446	556124	9.64
27 Naphthalene-d8	1843524	921762	3687048	2004545	8.73
42 Acenaphthene-d10	1048119	524060	2096238	1123936	7.23
59 Phenanthrene-d10	1392753	696376	2785506	1422042	2.10
69 Chrysene-d12	1340567	670284	2681134	1421640	6.05
134 Di-n-octylphthala	2097720	1048860	4195440	2205278	5.13
77 Perylene-d12	1450550	725275	2901100	1558882	7.47

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.43	7.93	8.93	8.43	0.01
27 Naphthalene-d8	10.47	9.97	10.97	10.47	0.01
42 Acenaphthene-d10	13.34	12.84	13.84	13.34	0.01
59 Phenanthrene-d10	15.72	15.22	16.22	15.72	0.01
69 Chrysene-d12	20.03	19.53	20.53	20.04	0.01
134 Di-n-octylphthala	21.14	20.64	21.64	21.13	-0.02
77 Perylene-d12	22.19	21.69	22.69	22.19	0.01

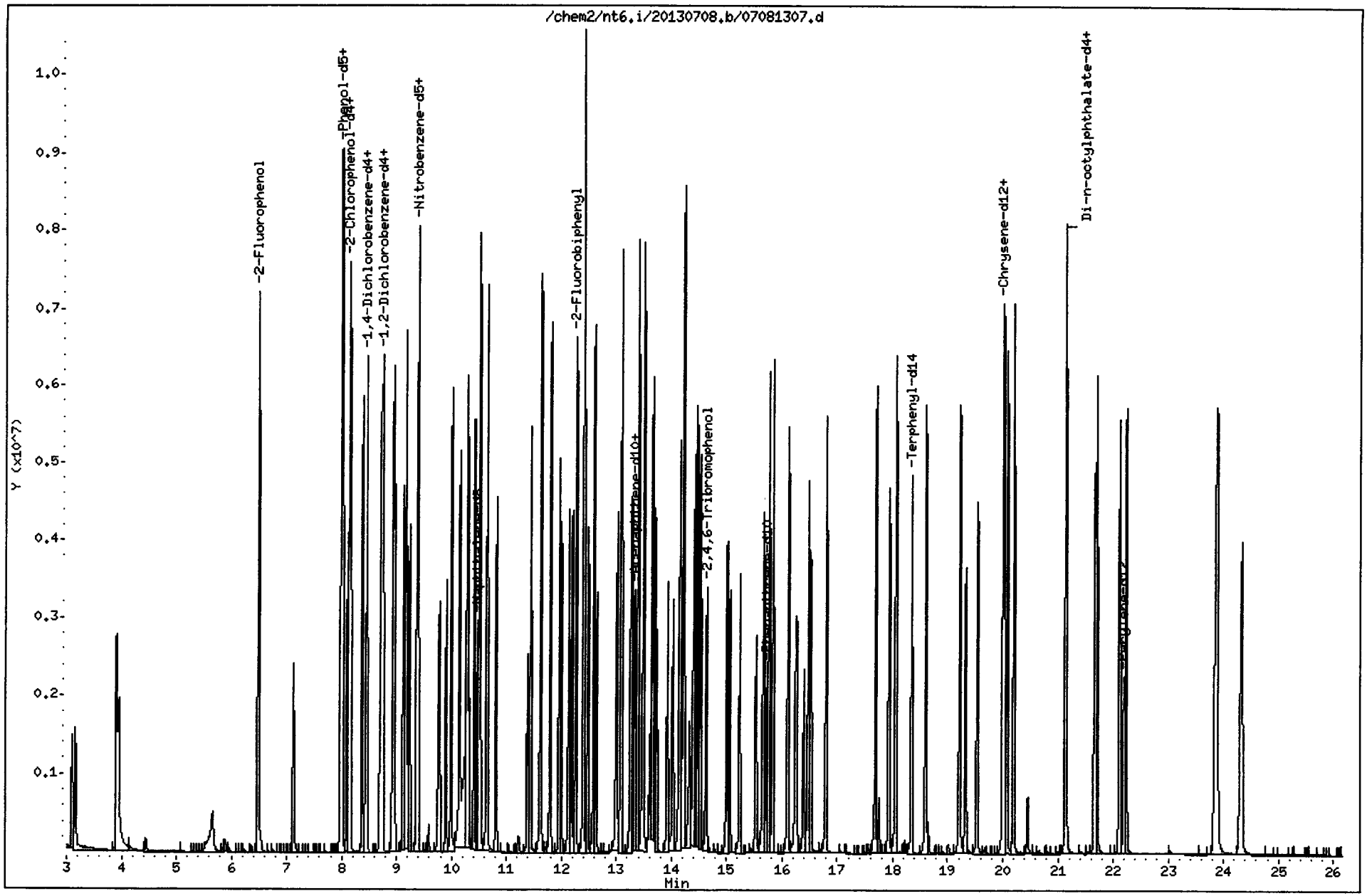
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130708.b/07081307.d
Date : 08-JUL-2013 15:25
Client ID: IC600708
Sample Info: IC600708,

Instrument: nt6.i

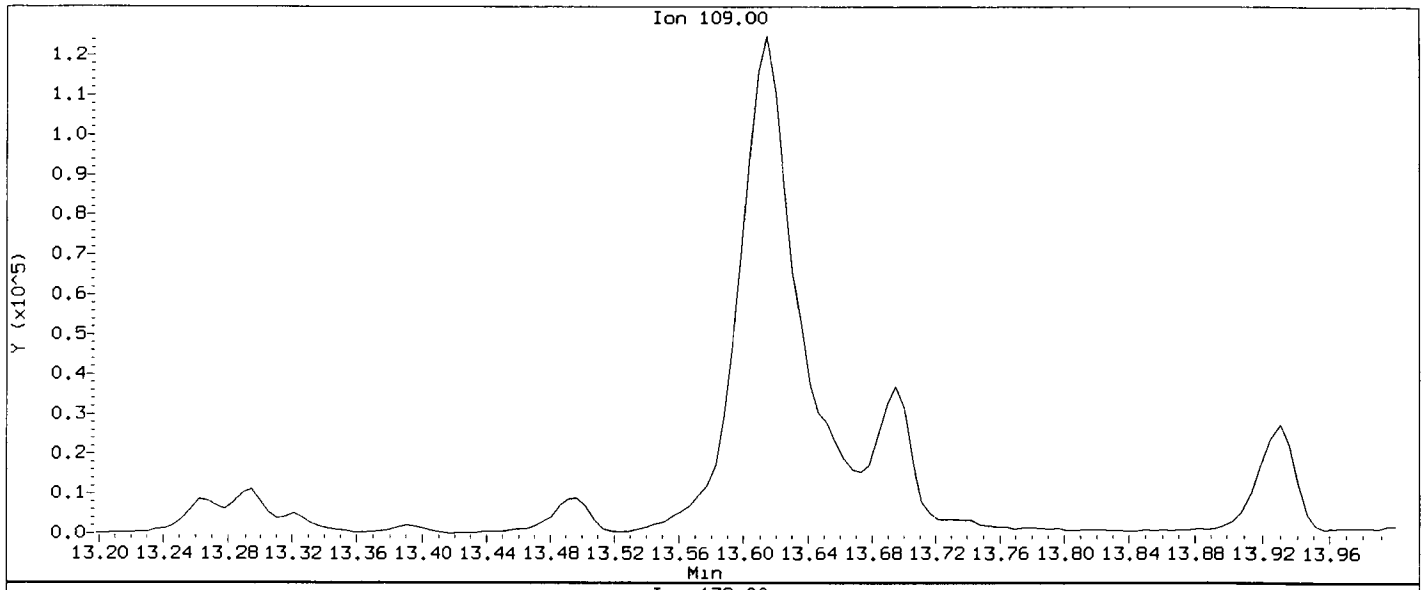
Operator: JZ
Column diameter: 0.32

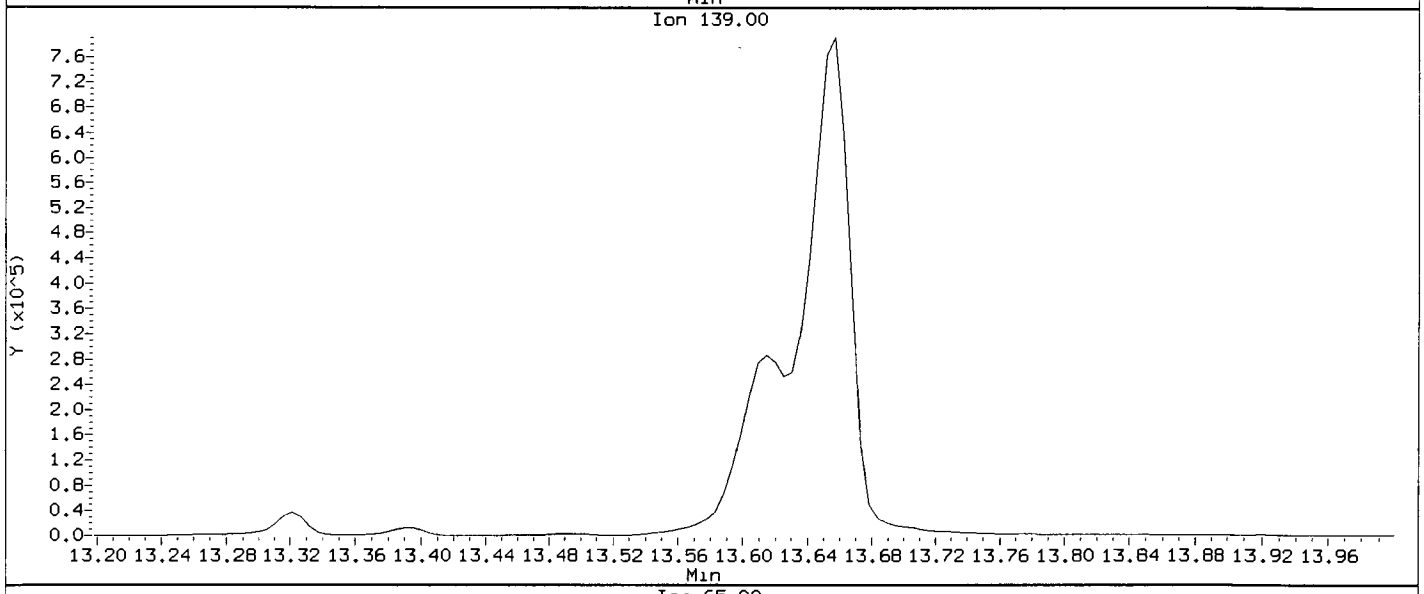
Column phase: ZB-5msi

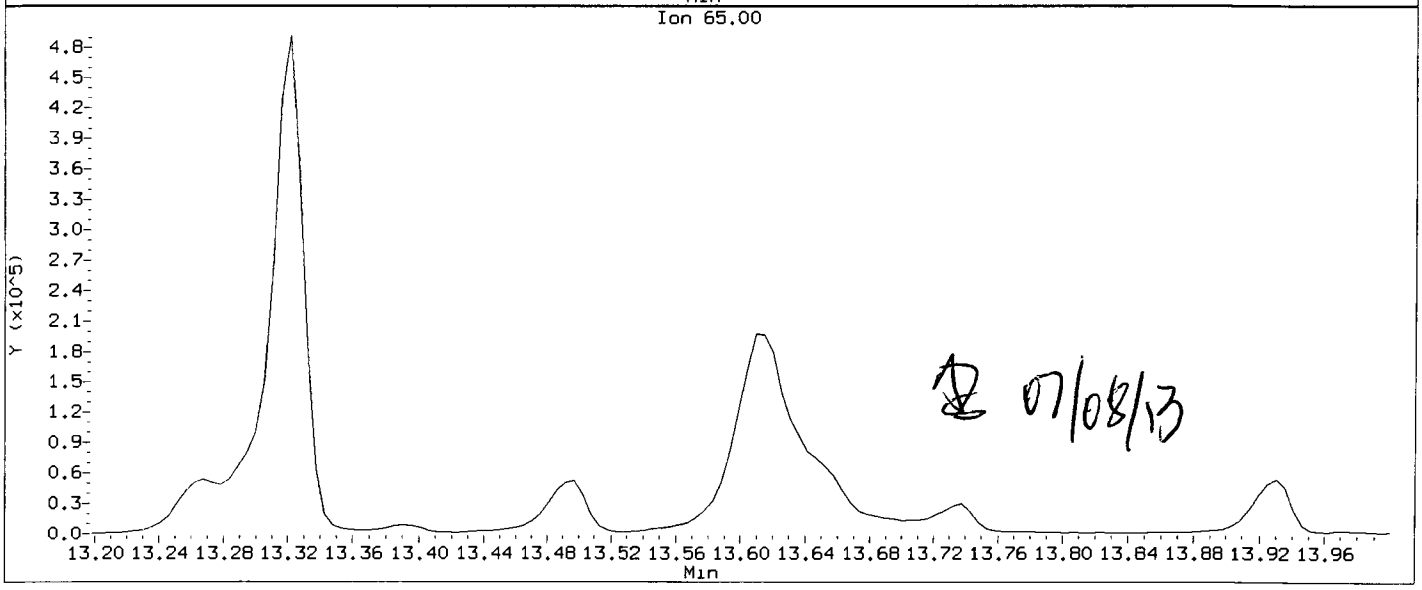


Data File: /chem2/nt6.i/20130708.b/07081307.d
Injection Date: 08-JUL-2013 15:25
Instrument: nt6.i
Client Sample ID: IC600708

Compound: 4-Nitrophenol
CAS Number: 100-02-7



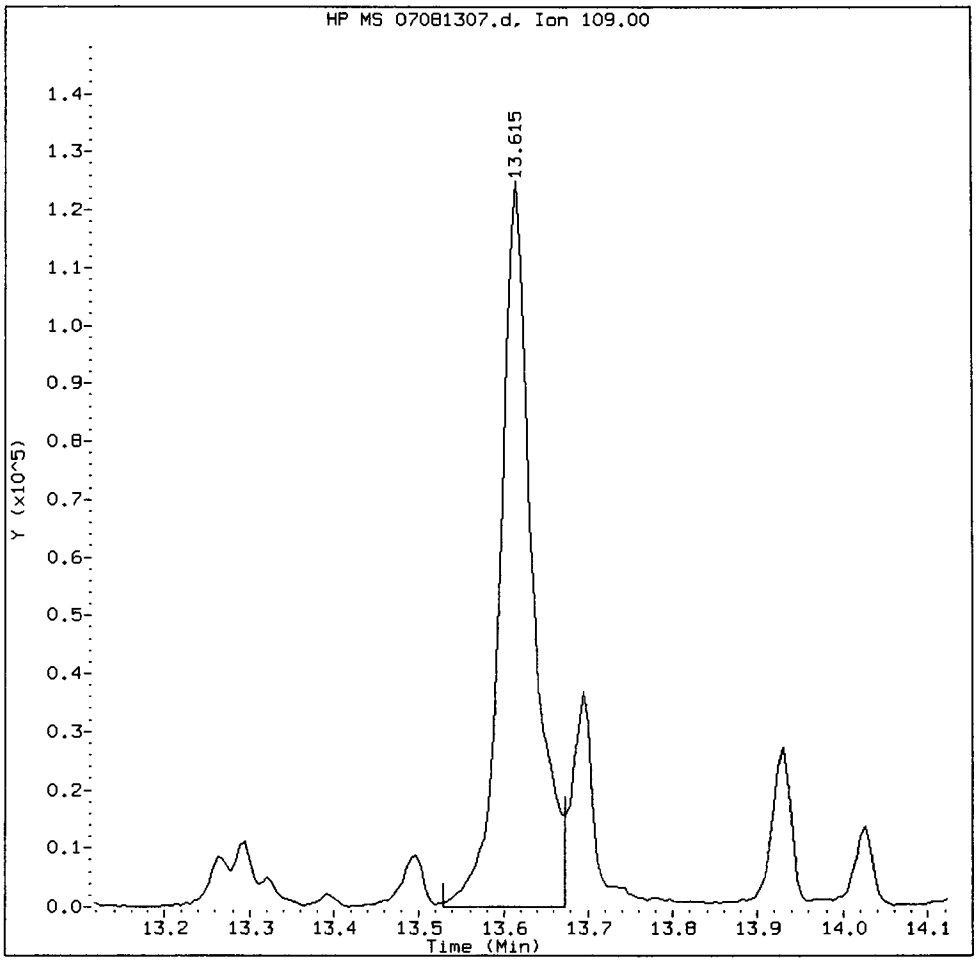




07/08/13

IC600708, /chem2/nt6.i/20130708.b/07081307.d

4-Nitrophenol Amount: 61.58 Area: 330704



MANUAL INTEGRATION for 4-Nitrophenol

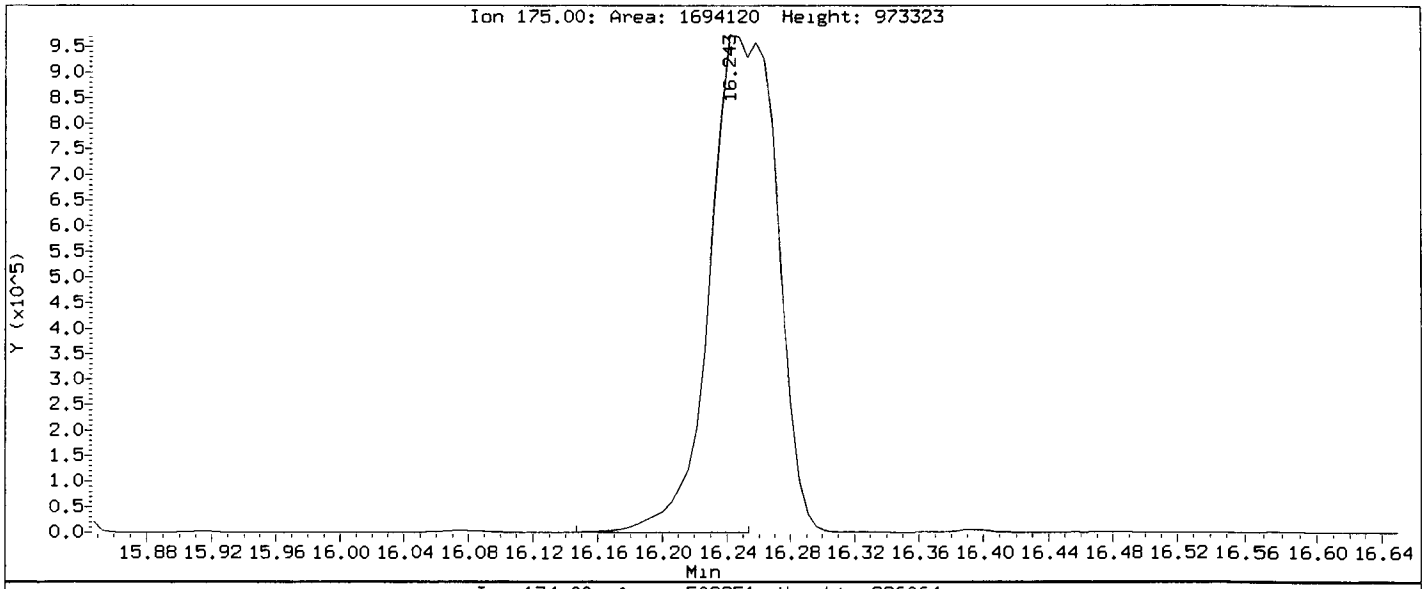
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

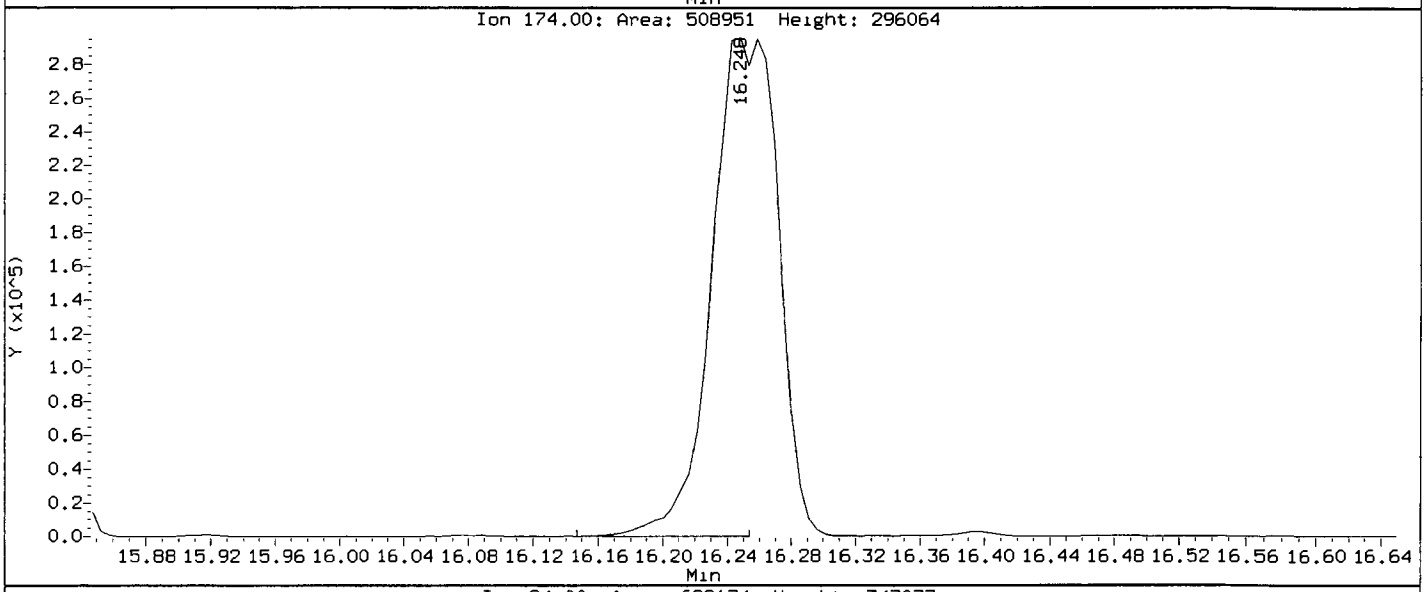
5. Other _____

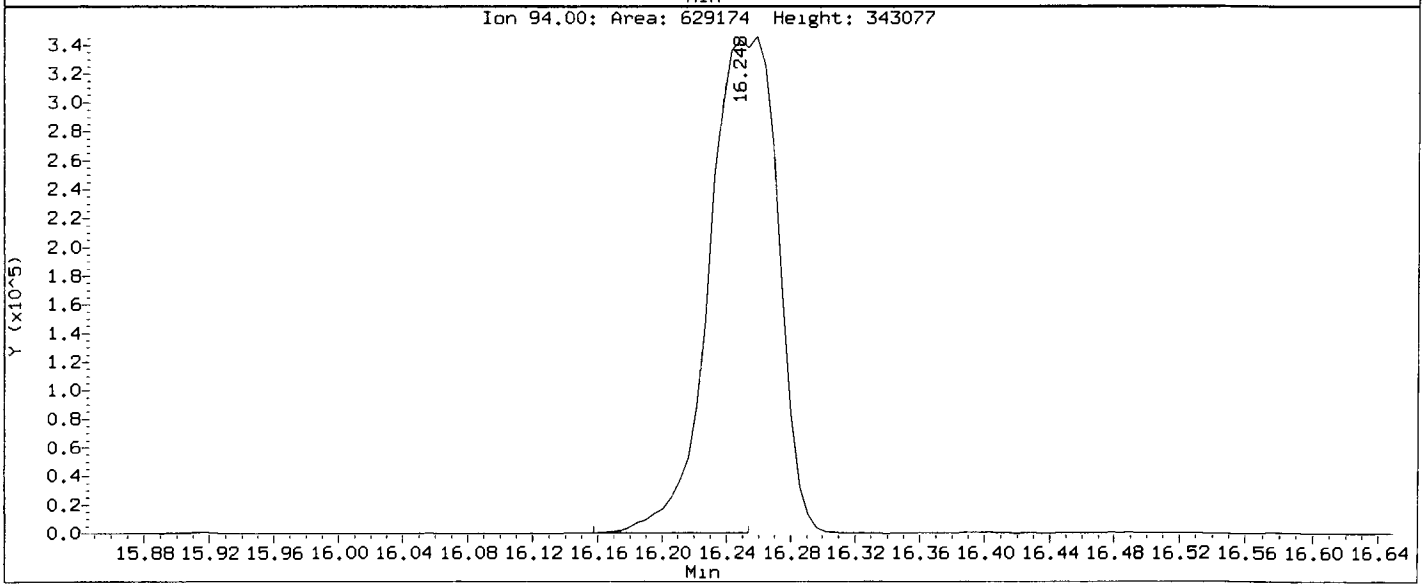
Analyst: _____ Date: 07/08/13

Data File: /chem2/nt6.i/20130708.b/07081307.d
Injection Date: 08-JUL-2013 15:25
Instrument: nt6.i
Client Sample ID: IC600708

Compound: Dibutyl Phenyl Phosphate
CAS Number:

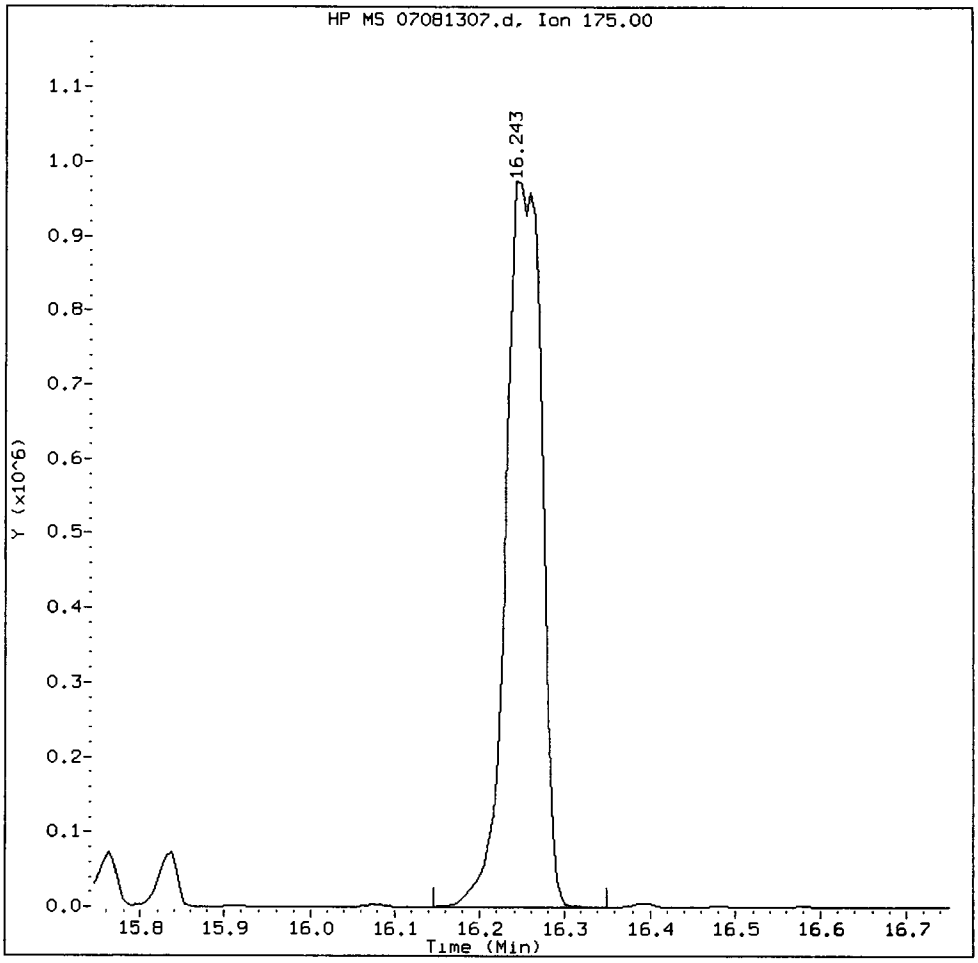






IC600708, /chem2/nt6.i/20130708.b/07081307.d

Dibutyl Phenyl Phosphate Amount: 66.19 Area: 2841266



MANUAL INTEGRATION for Dibutyl Phenyl Phosphate

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 07/08/13

CO-ELUTION SUMMARY FOR FILE - 07081307.d

Lab ID: IC600708, Method: SW846070813.m, Instrument: nt6.i, Date: 08-JUL-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130708.b/07081302.d
Lab Smp Id: IC020708 Client Smp ID: IC020708
Inj Date : 08-JUL-2013 12:35
Operator : JZ Inst ID: nt6.i
Smp Info : IC020708,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130708.b/SW846070813.m
Meth Date : 08-Jul-2013 16:42 jianqing Quant Type: ISTD
Cal Date : 08-JUL-2013 15:59 Cal File: 07081308.d
Als bottle: 2 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: DIOX.sub
Target Version: 3.50

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
* 8 1,4-Dichlorobenzene-d4	152	8.424	8.428	(1.000)	542382	20.0000	
$ 137 d8-1,4-Dioxane	96	Compound Not Detected.					
143 1,4-Dioxane	88	3.162	3.176	(0.375)	2864	0.20000	0.1814

07/08/13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 07081302.d
Lab Smp Id: IC020708
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130708.b/SW846070813.m
Misc Info: 13-

Calibration Date: 08-JUL-2013
Calibration Time: 12:01
Client Smp ID: IC020708
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	507223	253612	1014446	542382	6.93

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.43	7.93	8.93	8.42	-0.09

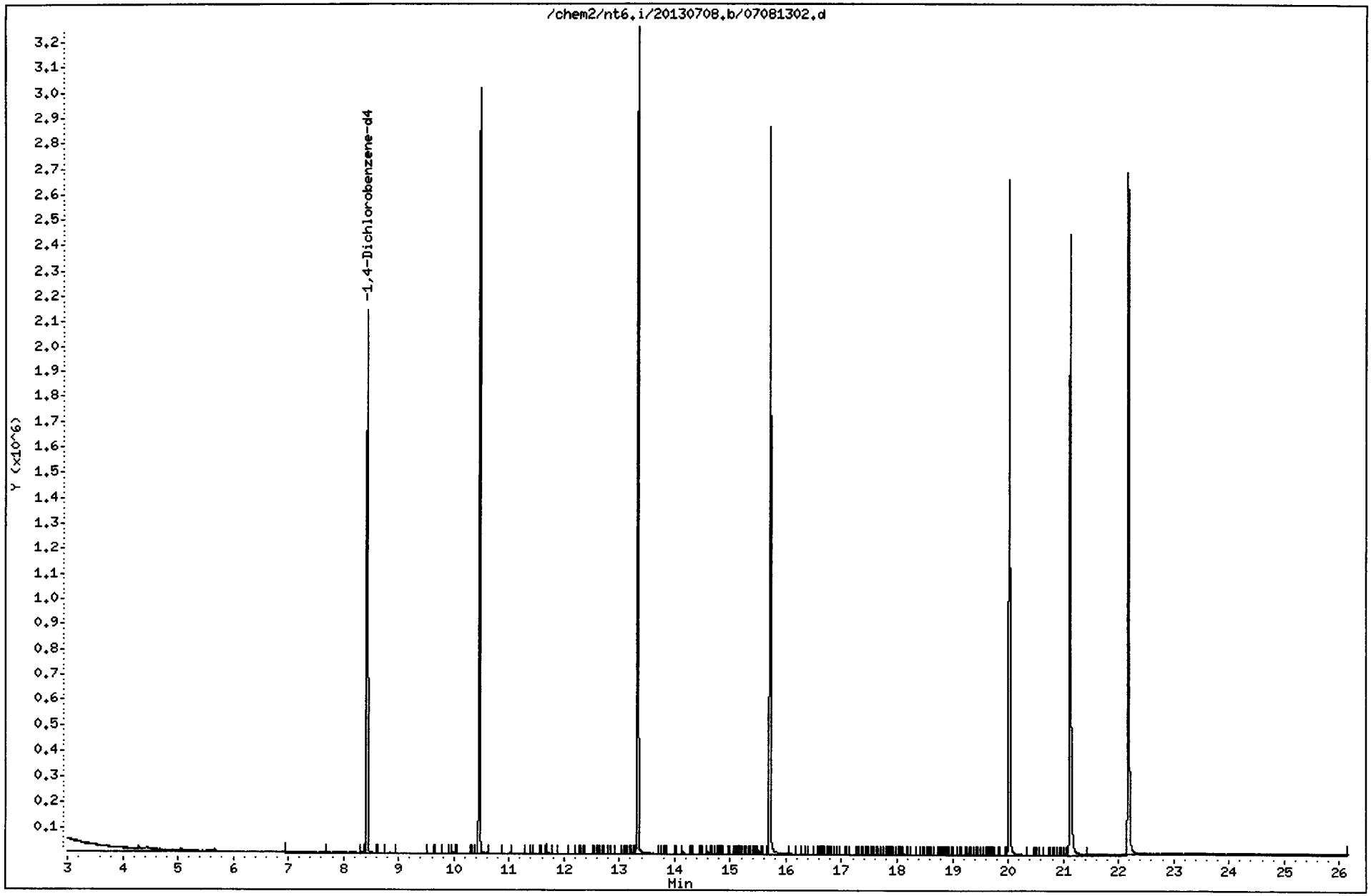
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130708.b/07081302.d
Date : 08-JUL-2013 12:35
Client ID: IC020708
Sample Info: IC020708,

Instrument: nt6.i

Operator: JZ
Column diameter: 0.32

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - 07081302.d

Lab ID: IC020708, Method: SW846070813.m, Instrument: nt6.i, Date: 08-JUL-2013

RT	CO-ELUTION COMPOUNDS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130708.b/07081308.d
Lab Smp Id: IC800708 Client Smp ID: IC800708
Inj Date : 08-JUL-2013 15:59
Operator : JZ Inst ID: nt6.i
Smp Info : IC800708,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130708.b/SW846070813.m
Meth Date : 08-Jul-2013 16:42 jianqing Quant Type: ISTD
Cal Date : 08-JUL-2013 15:59 Cal File: 07081308.d
Als bottle: 8 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

AR 07/08/13

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

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1	2-Fluorophenol	112	Compound Not Detected.					
$	2	Phenol-d5	99	Compound Not Detected.					
	3	Phenol	94	8.006	8.006	(0.950)	3468633	80.0000	79.10
$	5	2-Chlorophenol-d4	132	Compound Not Detected.					
	4	Bis(2-Chloroethyl)ether	93	8.096	8.096	(0.961)	2838235	80.0000	79.66
	6	2-Chlorophenol	128	8.160	8.160	(0.968)	2850345	80.0000	83.05
	7	1,3-Dichlorobenzene	146	8.369	8.369	(0.993)	3120791	80.0000	78.14
*	8	1,4-Dichlorobenzene-d4	152	8.428	8.428	(1.000)	529906	20.0000	
	9	1,4-Dichlorobenzene	146	8.454	8.454	(1.003)	2988559	80.0000	75.18
$	10	1,2-Dichlorobenzene-d4	152	Compound Not Detected.					
	12	1,2-Dichlorobenzene	146	8.748	8.748	(1.038)	2947521	80.0000	78.08
	11	Benzyl alcohol	108	8.716	8.716	(1.034)	1848869	80.0000	82.97
	14	2,2'-oxybis(1-Chloropropane)	45	8.962	8.962	(1.063)	4001371	80.0000	71.24
	13	2-Methylphenol	108	8.940	8.940	(1.061)	2469881	80.0000	80.32
	17	Hexachloroethane	117	9.234	9.234	(1.096)	1110732	80.0000	79.64
	16	N-Nitroso-di-n-propylamine	70	9.191	9.191	(1.091)	2013368	80.0000	81.56

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
	15 4-Methylphenol	108	9.170	9.170	(1.088)	2499293	80.0000	78.71
$	18 Nitrobenzene-d5	82	Compound Not Detected.					
	19 Nitrobenzene	77	9.395	9.395	(0.897)	2443919	80.0000	75.17
	20 Isophorone	82	9.784	9.784	(0.934)	4437361	80.0000	83.94
	21 2-Nitrophenol	139	9.902	9.902	(0.945)	1536650	80.0000	90.51
	22 2,4-Dimethylphenol	107	10.004	10.004	(0.955)	2325679	80.0000	81.92
	23 Bis(2-Chloroethoxy)methane	93	10.153	10.153	(0.969)	3209151	80.0000	77.83
	24 Benzoic acid	105	10.361	10.361	(0.989)	4691234	160.000	159.7
	25 2,4-Dichlorophenol	162	10.287	10.287	(0.982)	2139117	80.0000	82.91
	26 1,2,4-Trichlorobenzene	180	10.415	10.415	(0.994)	2326077	80.0000	79.02
*	27 Naphthalene-d8	136	10.474	10.474	(1.000)	1889800	20.0000	
	28 Naphthalene	128	10.506	10.506	(1.003)	5881994	80.0000	68.59
	29 4-Chloroaniline	127	10.650	10.650	(1.017)	2028107	80.0000	62.32
	30 Hexachlorobutadiene	225	10.816	10.816	(1.033)	1051944	80.0000	74.44
	31 4-Chloro-3-methylphenol	107	11.446	11.446	(1.093)	1985601	80.0000	84.75
	32 2-Methylnaphthalene	141	11.628	11.628	(1.110)	3645123	80.0000	76.20
	33 Hexachlorocyclopentadiene	237	12.001	12.001	(0.900)	1321112	80.0000	87.43
	34 2,4,6-Trichlorophenol	196	12.135	12.135	(0.910)	1381318	80.0000	87.43
	35 2,4,5-Trichlorophenol	196	12.194	12.194	(0.914)	1354541	80.0000	86.34
$	36 2-Fluorobiphenyl	172	Compound Not Detected.					
	37 2-Chloronaphthalene	162	12.413	12.413	(0.930)	3790573	80.0000	73.31
	38 2-Nitroaniline	65	12.643	12.643	(0.948)	1174926	80.0000	88.03
	39 Dimethylphthalate	163	13.016	13.016	(0.976)	4836886	80.0000	85.93
	40 Acenaphthylene	152	13.091	13.091	(0.981)	5774085	80.0000	74.52
	41 2,6-Dinitrotoluene	165	13.113	13.113	(0.983)	1070274	80.0000	86.84
*	42 Acenaphthene-d10	164	13.342	13.342	(1.000)	1037468	20.0000	
	43 3-Nitroaniline	138	13.332	13.332	(0.999)	935035	80.0000	77.70
	44 Acenaphthene	153	13.396	13.396	(1.004)	4038245	80.0000	80.79
	45 2,4-Dinitrophenol	184	13.508	13.508	(1.012)	1397478	160.000	161.0
	46 Dibenzofuran	168	13.663	13.663	(1.024)	4511862	80.0000	73.25
	47 4-Nitrophenol	109	13.620	13.620	(1.021)	394475	80.0000	79.58 (M)
	48 2,4-Dinitrotoluene	165	13.743	13.743	(1.030)	1288974	80.0000	87.74
	50 Diethylphthalate	149	14.165	14.165	(1.062)	3505170	80.0000	71.13
	49 Fluorene	166	14.218	14.218	(1.066)	3636461	80.0000	70.78
	51 4-Chlorophenyl-phenylether	204	14.229	14.229	(1.066)	1578044	80.0000	68.42
	52 4-Nitroaniline	138	14.341	14.341	(1.075)	889638	80.0000	94.48
	53 4,6-Dinitro-2-methylphenol	198	14.411	14.411	(0.916)	1661189	160.000	182.7
	54 N-Nitrosodiphenylamine	169	14.443	14.443	(0.918)	2896438	80.0000	86.66
$	55 2,4,6-Tribromophenol	330	Compound Not Detected.					
	56 4-Bromophenyl-phenylether	248	15.009	15.009	(0.954)	1071667	80.0000	85.40
	57 Hexachlorobenzene	284	15.244	15.244	(0.969)	1045199	80.0000	76.15
	58 Pentachlorophenol	266	15.538	15.538	(0.988)	708852	80.0000	92.04
*	59 Phenanthrene-d10	188	15.725	15.725	(1.000)	1255886	20.0000	
	60 Phenanthrene	178	15.768	15.768	(1.003)	5284898	80.0000	84.13
	61 Anthracene	178	15.837	15.837	(1.007)	5060906	80.0000	82.63
	62 Carbazole	167	16.115	16.115	(1.025)	4821207	80.0000	91.81
	63 Di-n-butylphthalate	149	16.804	16.804	(1.069)	6257065	80.0000	82.17

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
	64 Fluoranthene	202	17.702	17.702	(1.126)	5425008	80.0000	86.32
	65 Pyrene	202	18.059	18.059	(0.901)	5674898	80.0000	81.68
$	66 Terphenyl-d14	244	Compound Not Detected.					
	67 Butylbenzylphthalate	149	19.229	19.229	(0.959)	3082148	80.0000	88.89
	68 Benzo(a)anthracene	228	20.025	20.025	(0.999)	4735675	80.0000	77.85
*	69 Chrysene-d12	240	20.041	20.041	(1.000)	1244774	20.0000	
	70 3,3'-Dichlorobenzidine	252	20.009	20.009	(0.998)	1325846	80.0000	70.95
	71 Chrysene	228	20.089	20.089	(1.002)	4696506	80.0000	80.76
	72 bis(2-Ethylhexyl)phthalate	149	20.207	20.207	(0.956)	4180548	80.0000	84.31
*	134 Di-n-octylphthalate-d4	153	21.137	21.137	(1.000)	1962042	20.0000	
	73 Di-n-octylphthalate	149	21.147	21.147	(1.000)	6643299	80.0000	70.44
	74 Benzo(b)fluoranthene	252	21.681	21.681	(0.977)	5476090	80.0000	84.60
	75 Benzo(k)fluoranthene	252	21.713	21.713	(0.978)	5069879	80.0000	76.57
	187 Total Benzofluoranthenes	252	21.713	21.713	(0.978)	9905577	160.000	159.9
	76 Benzo(a)pyrene	252	22.130	22.130	(0.997)	4917590	80.0000	86.83
*	77 Perylene-d12	264	22.200	22.200	(1.000)	1395041	20.0000	
	78 Indeno(1,2,3-cd)pyrene	276	23.866	23.866	(1.075)	6146727	80.0000	85.46
	79 Dibenzo(a,h)anthracene	278	23.904	23.904	(1.077)	4850952	80.0000	83.32
	80 Benzo(g,h,i)perylene	276	24.352	24.352	(1.097)	5899587	80.0000	91.29
	90 N-Nitrosodimethylamine	74	3.978	3.978	(0.472)	2145814	80.0000	88.58
	103 Pyridine	79	3.919	3.919	(0.465)	3251915	80.0000	84.72
	91 Aniline	93	7.984	7.984	(0.947)	3452606	80.0000	75.06
	105 1-methylnaphthalene	141	11.798	11.798	(1.126)	3294335	80.0000	77.69
	93 Benzidine	184	17.931	17.931	(0.895)	670841	80.0000	100.3
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.484	16.484	(1.048)	366369	80.0000	95.33
	143 1,4-Dioxane	88	3.176	3.176	(0.377)	1381372	80.0000	89.54
$	137 d8-1,4-Dioxane	96	3.118	3.118	(0.370)	1246059	80.0000	88.87
	144 alpha-Terpineol	59	10.532	10.532	(1.006)	1733289	80.0000	78.81
	177 p-Benzoquinone	82	7.124	7.124	(0.845)	510209	80.0000	79.27
	98 Retene	219	18.604	18.604	(0.928)	2464174	80.0000	86.48
	99 Perylene	252	22.242	22.242	(1.002)	4447763	80.0000	79.03
	133 Butylatedhydroxytoluene	205	13.503	13.503	(1.012)	2116973	80.0000	67.83
	115 Tributyl Phosphate	99	14.534	14.534	(0.924)	5139404	80.0000	85.14
	116 Dibutyl Phenyl Phosphate	175	16.248	16.248	(1.033)	3699968	80.0000	97.60 (M)
	117 Butyl Diphenyl Phosphate	94	17.937	17.937	(0.895)	1158190	80.0000	87.68
	118 Triphenyl Phosphate	326	19.545	19.545	(0.975)	1003558	80.0000	86.76
	123 Acetophenone	105	9.127	9.127	(1.083)	3284579	80.0000	80.81
	168 Pentachlorobenzene	250	13.700	13.700	(1.027)	1335050	80.0000	74.87
	113 Diphenyl Oxide	170	12.589	12.589	(0.944)	3180880	80.0000	81.75
	112 Biphenyl	154	12.402	12.402	(0.930)	3690216	80.0000	69.70
	120 2,3,4,6-Tetrachlorophenol	232	13.935	13.935	(1.044)	912400	80.0000	80.76
	151 1,2,4,5-Tetrachlorobenzene	216	11.964	11.964	(0.897)	1956046	80.0000	82.35
	110 Tetrachloroguaiacol	247	15.244	15.244	(0.969)	180069	160.000	157.6
	109 3,4,5-Trichloroguaiacol	213	14.031	14.031	(0.892)	593917	80.0000	88.19
	181 3,4,6-Trichloroguaiacol	211	14.154	14.154	(1.680)	624955	80.0000	68.83
	108 4,5,6-Trichloroguaiacol	213	15.063	15.063	(1.129)	615869	80.0000	82.09
	184 3,4-Dichloroguaiacol	192	12.488	12.488	(1.482)	855620	80.0000	83.75

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
107 4,5-Dichloroguaiacol	192	13.273	13.273	(0.995)	2124717	160.000	176.8
182 4,6-Dichloroguaiacol	192	13.273	13.273	(1.575)	2077849	160.000	165.1
185 4-Chloroguaiacol	115	11.392	11.392	(1.088)	510536	40.0000	47.89
186 Carbaryl	144	16.532	16.532	(1.051)	3188857	80.0000	96.08
178 2-Benzyl-4-Chlorophenol	218	16.489	16.489	(1.049)	1079908	80.0000	100.8
106 Guaiacol	124	9.389	9.389	(1.114)	2361063	80.0000	76.50
188 2,6-Dichlorophenol	162	10.661	10.661	(1.265)	1992473	80.0000	69.08
189 N-Nitrosomethylethylamine	88	5.666	5.666	(0.672)	1073194	80.0000	94.28

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: 07081308.d
Lab Smp Id: IC800708
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130708.b/SW846070813.m
Misc Info: 13-

Calibration Date: 08-JUL-2013
Calibration Time: 12:01
Client Smp ID: IC800708
Level: LOW
Sample Type: WATER

Test Mode:
Use Initial Calibration Level 4.

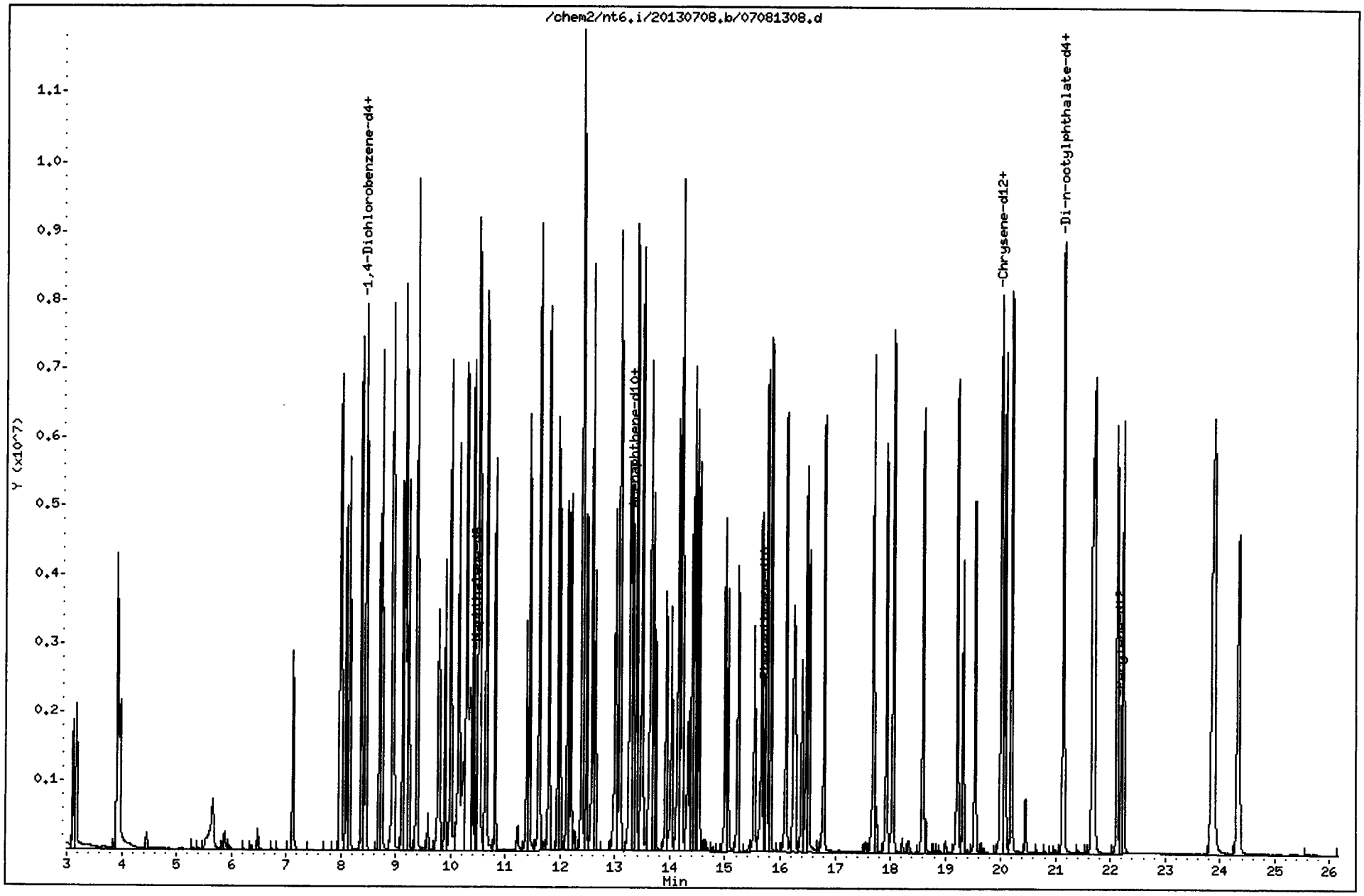
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	507223	253612	1014446	529906	4.47
27 Naphthalene-d8	1843524	921762	3687048	1889800	2.51
42 Acenaphthene-d10	1048119	524060	2096238	1037468	-1.02
59 Phenanthrene-d10	1392753	696376	2785506	1255886	-9.83
69 Chrysene-d12	1340567	670284	2681134	1244774	-7.15
134 Di-n-octylphthala	2097720	1048860	4195440	1962042	-6.47
77 Perylene-d12	1450550	725275	2901100	1395041	-3.83

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.43	7.93	8.93	8.43	-0.05
27 Naphthalene-d8	10.47	9.97	10.97	10.47	0.01
42 Acenaphthene-d10	13.34	12.84	13.84	13.34	0.05
59 Phenanthrene-d10	15.72	15.22	16.22	15.72	0.04
69 Chrysene-d12	20.03	19.53	20.53	20.04	0.03
134 Di-n-octylphthala	21.14	20.64	21.64	21.14	0.01
77 Perylene-d12	22.19	21.69	22.69	22.20	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.

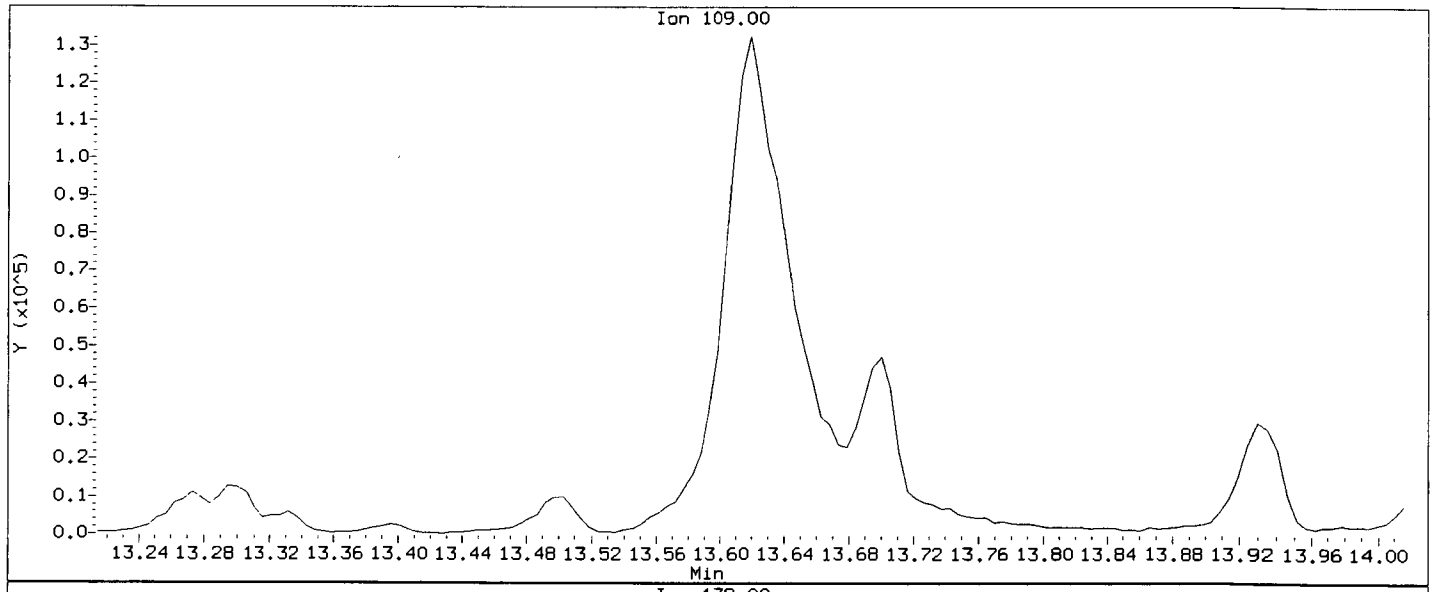
Data File: /chem2/nt6.i/20130708.b/07081308.d
Date : 08-JUL-2013 15:59
Client ID: IC800708
Sample Info: IC800708,
Volume Injected (uL): 1.0
Column phase: ZB-5msi

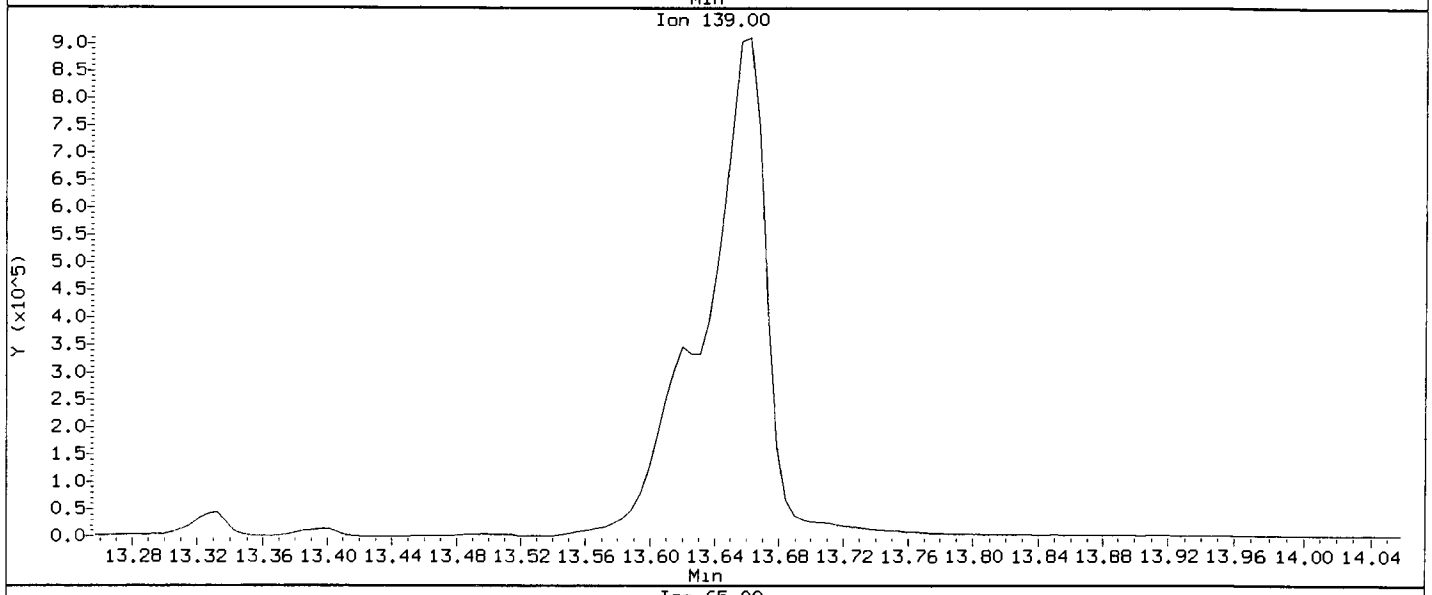
Instrument: nt6.i
Operator: JZ
Column diameter: 0.32

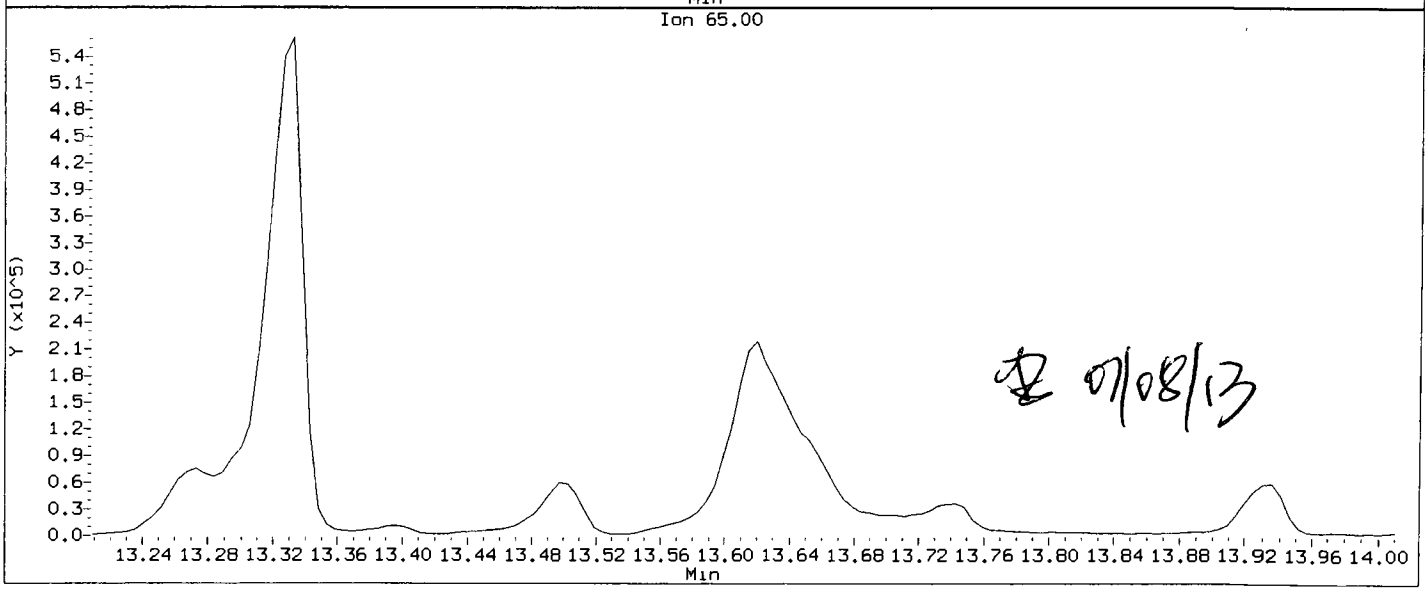


Data File: /chem2/nt6.i/20130708.b/07081308.d
Injection Date: 08-JUL-2013 15:59
Instrument: nt6.i
Client Sample ID: IC800708

Compound: 4-Nitrophenol
CAS Number: 100-02-7



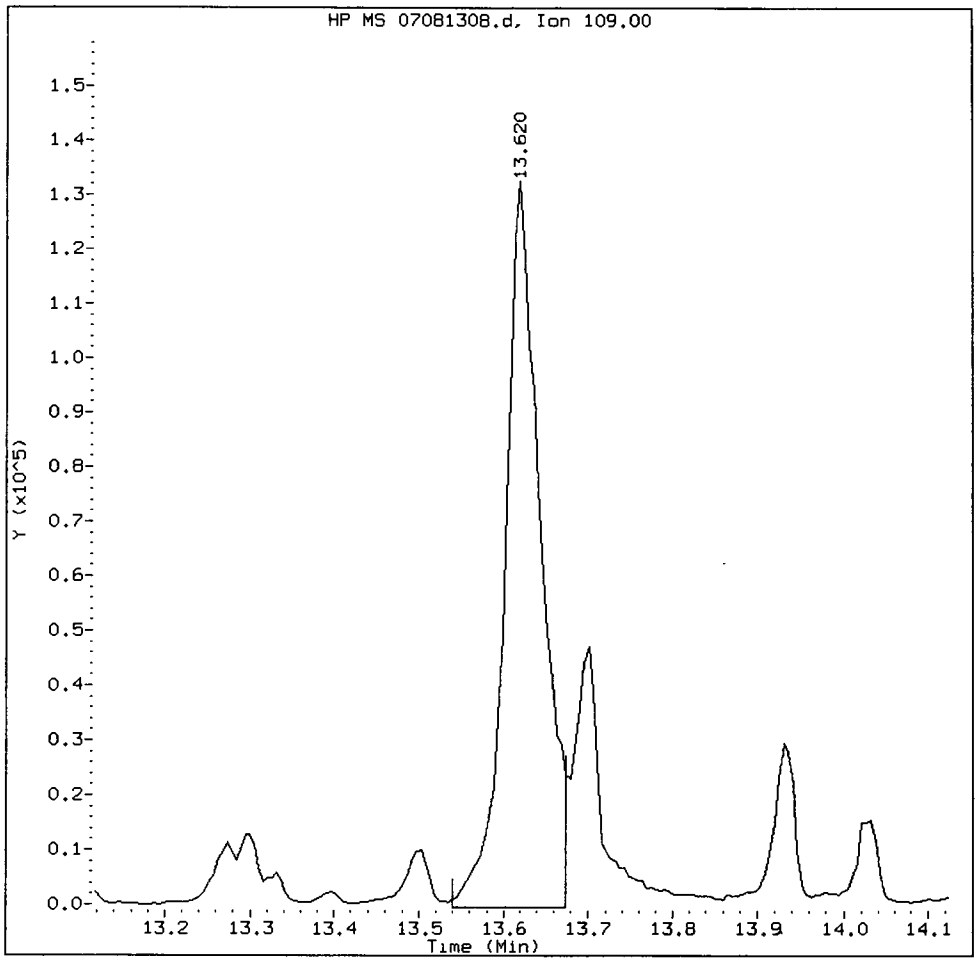




07/08/13

IC800708, /chem2/nt6.i/20130708.b/07081308.d

4-Nitrophenol Amount: 79.58 Area: 394475



MANUAL INTEGRATION for 4-Nitrophenol

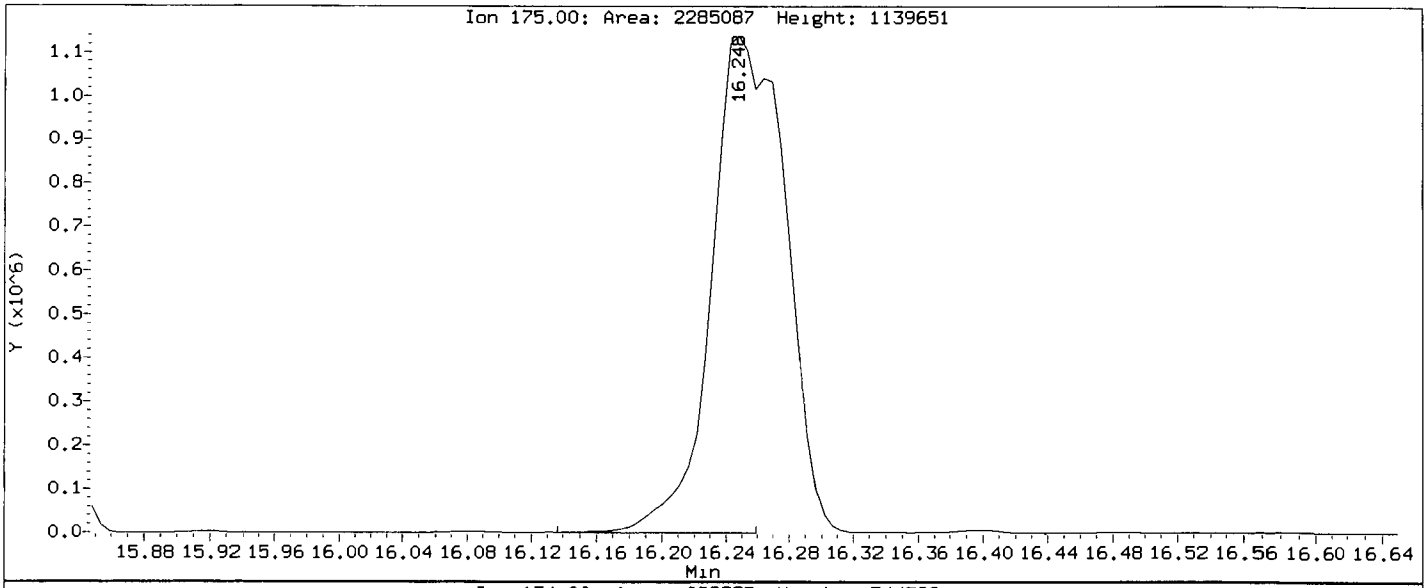
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

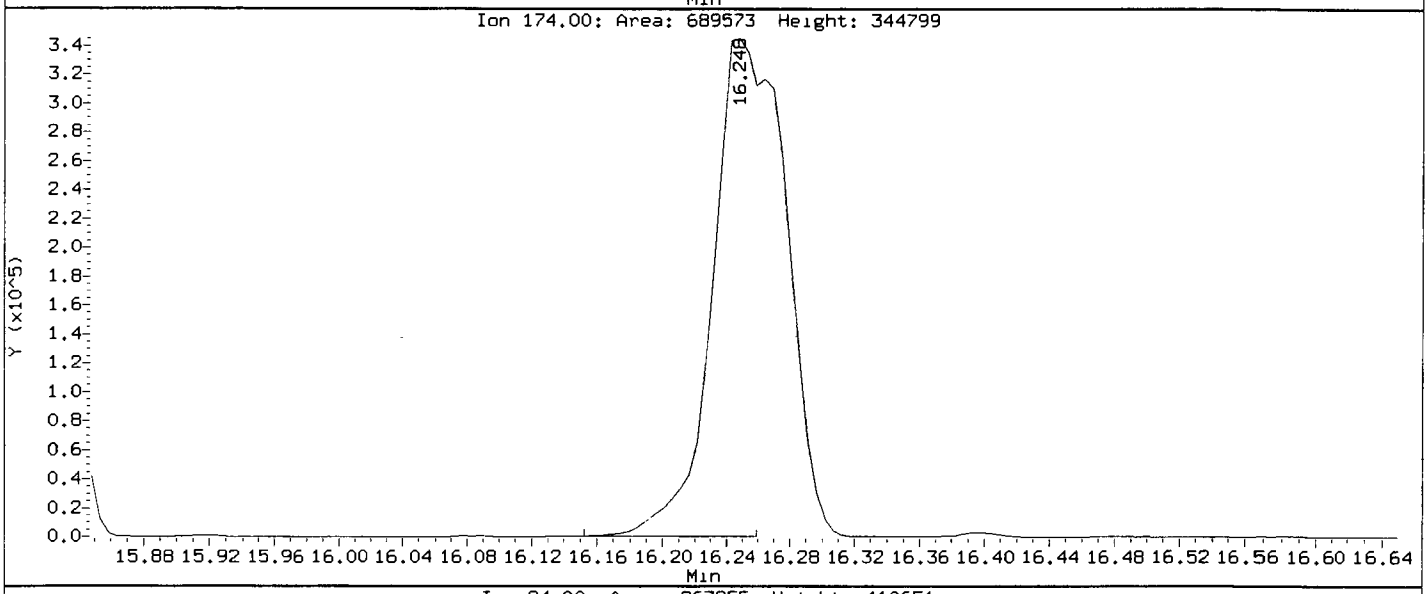
5. Other _____

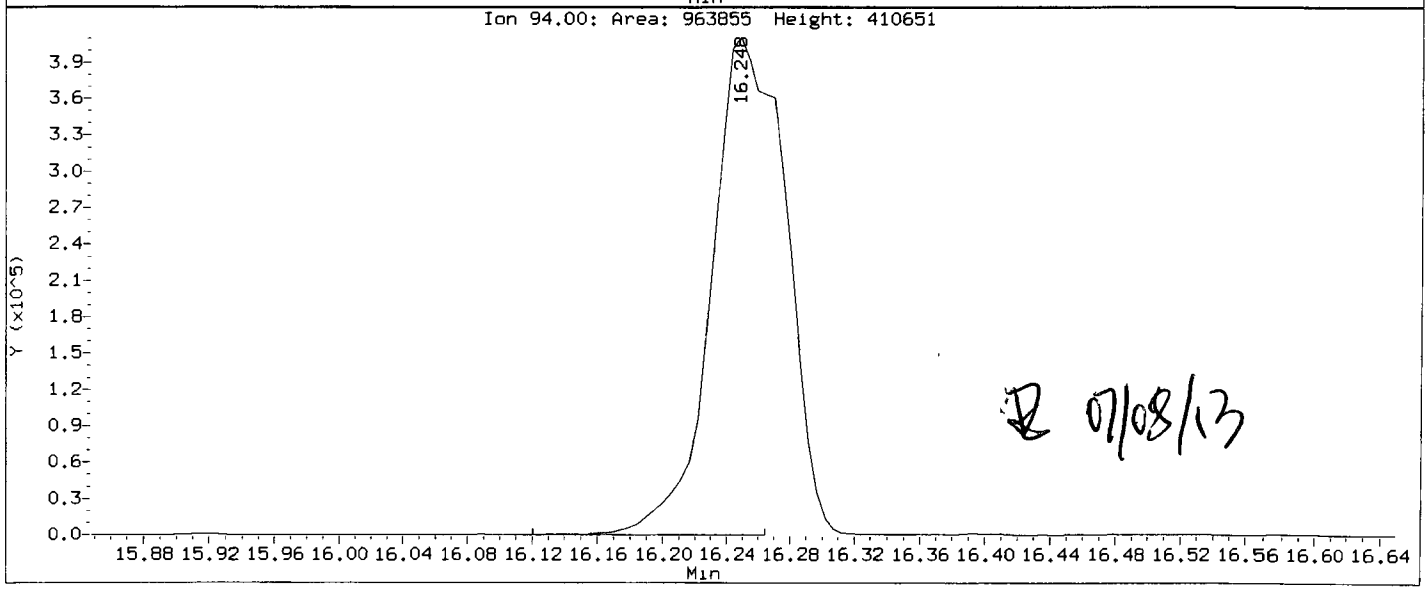
Analyst: _____ Date: 7/08/13

Data File: /chem2/nt6.i/20130708.b/07081308.d
Injection Date: 08-JUL-2013 15:59
Instrument: nt6.i
Client Sample ID: IC800708

Compound: Dibutyl Phenyl Phosphate
CAS Number:



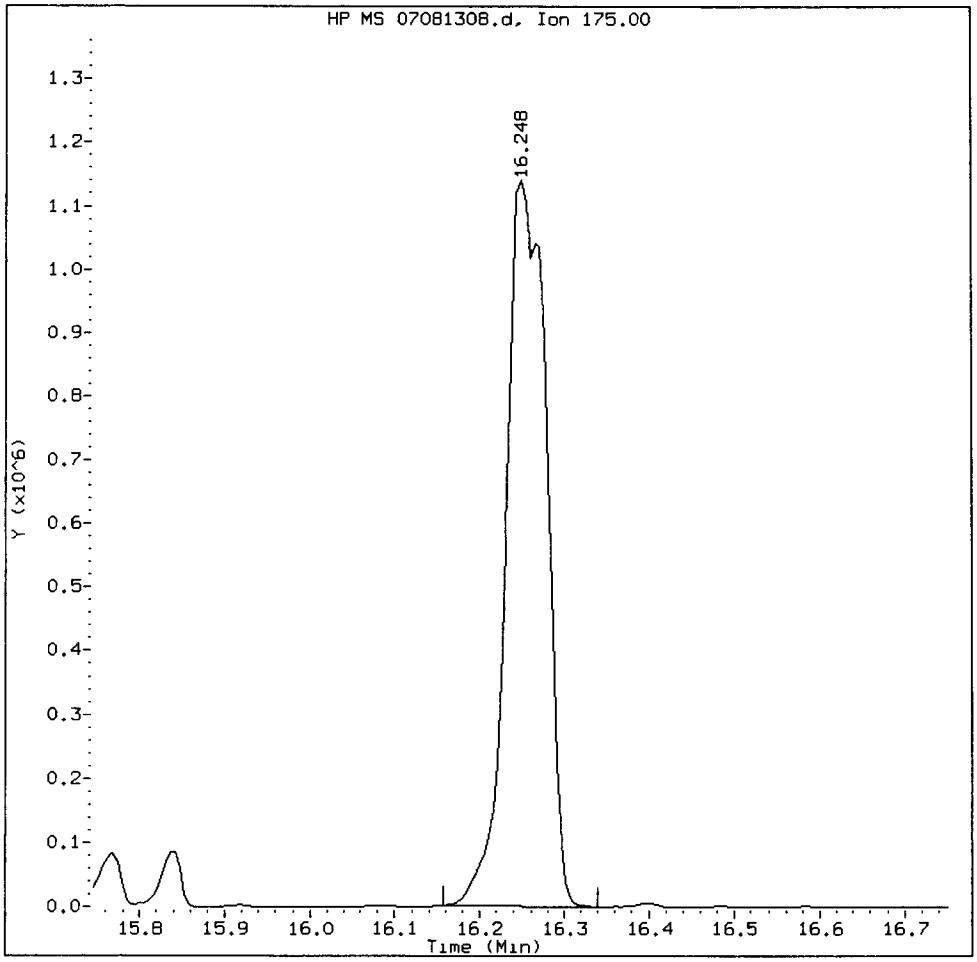




R 07/08/13

IC800708, /chem2/nt6.i/20130708.b/07081308.d

Dibutyl Phenyl Phosphate Amount: 97.60 Area: 3699968



MANUAL INTEGRATION for Dibutyl Phenyl Phosphate

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: AR Date: 07/08/13

CO-ELUTION SUMMARY FOR FILE - 07081308.d

Lab ID: IC800708, Method: SW846070813.m, Instrument: nt6.i, Date: 08-JUL-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130708.b/07081309.d
Lab Smp Id: ICV0708 Client Smp ID: ICV0708
Inj Date : 08-JUL-2013 16:33
Operator : JZ Inst ID: nt6.i
Smp Info : ICV0708,
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130708.b/SW846070813.m
Meth Date : 08-Jul-2013 17:04 jianqing Quant Type: ISTD
Cal Date : 08-JUL-2013 15:59 Cal File: 07081308.d
Als bottle: 9 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

07/08/13

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)
$	2 Phenol-d5	99	7.981	7.995	(0.947)	2236274	40.3246	40.32
	3 Phenol	94	7.998	8.006	(0.949)	1252072	26.2623	26.26
$	5 2-Chlorophenol-d4	132	8.126	8.134	(0.964)	1934412	40.4064	40.41
	4 Bis(2-Chloroethyl)ether	93	8.088	8.096	(0.960)	944294	24.3778	24.38
	6 2-Chlorophenol	128	8.152	8.160	(0.968)	997306	26.7266	26.73
	7 1,3-Dichlorobenzene	146	8.366	8.369	(0.993)	1033238	23.7969	23.80
*	8 1,4-Dichlorobenzene-d4	152	8.425	8.428	(1.000)	576118	20.0000	
	9 1,4-Dichlorobenzene	146	8.452	8.454	(1.003)	1053494	24.3745	24.37
	12 1,2-Dichlorobenzene	146	8.745	8.748	(1.038)	988153	24.0753	24.08
	11 Benzyl alcohol	108	8.697	8.716	(1.032)	599361	24.7409	24.74
	14 2,2'-oxybis(1-Chloropropane)	45	8.948	8.962	(1.062)	1494504	24.4740	24.47
	13 2-Methylphenol	108	8.922	8.940	(1.059)	947290	28.3332	28.33
	17 Hexachloroethane	117	9.232	9.234	(1.096)	370929	24.4621	24.46
	16 N-Nitroso-di-n-propylamine	70	9.173	9.191	(1.089)	630641	23.4988	23.50
	15 4-Methylphenol	108	9.151	9.170	(1.086)	952514	27.5923	27.59
$	18 Nitrobenzene-d5	82	9.354	9.362	(0.893)	911408	26.7028	26.70

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
	19 Nitrobenzene	77	9.381	9.395	(0.896)	851220	23.9396	23.94
	20 Isophorone	82	9.760	9.784	(0.932)	1569371	27.1436	27.14
	21 2-Nitrophenol	139	9.894	9.902	(0.945)	518857	27.9427	27.94
	22 2,4-Dimethylphenol	107	9.990	10.004	(0.954)	821645	26.4629	26.46
	23 Bis(2-Chloroethoxy)methane	93	10.140	10.153	(0.968)	1051663	23.3187	23.32
	24 Benzoic acid	105	10.247	10.361	(0.979)	1438162	52.8757	52.88
	25 2,4-Dichlorophenol	162	10.273	10.287	(0.981)	764310	27.0867	27.09
	26 1,2,4-Trichlorobenzene	180	10.407	10.415	(0.994)	774724	24.0638	24.06
*	27 Naphthalene-d8	136	10.471	10.474	(1.000)	2066898	20.0000	
	28 Naphthalene	128	10.498	10.506	(1.003)	2471932	26.3564	26.36
	29 4-Chloroaniline	127	10.637	10.650	(1.016)	922279	25.9119	25.91
	30 Hexachlorobutadiene	225	10.807	10.816	(1.032)	373749	24.1834	24.18
	31 4-Chloro-3-methylphenol	107	11.432	11.446	(1.092)	669944	26.1443	26.14
	32 2-Methylnaphthalene	141	11.619	11.628	(1.110)	1285514	24.5719	24.57
	33 Hexachlorocyclopentadiene	237	11.999	12.001	(0.900)	406188	23.4113	23.41
	34 2,4,6-Trichlorophenol	196	12.127	12.135	(0.909)	501993	27.6728	27.67
	35 2,4,5-Trichlorophenol	196	12.186	12.194	(0.914)	522101	28.9850	28.99
$	36 2-Fluorobiphenyl	172	12.255	12.263	(0.919)	1727859	26.8782	26.88
	37 2-Chloronaphthalene	162	12.399	12.413	(0.930)	1491899	25.1298	25.13
	38 2-Nitroaniline	65	12.629	12.643	(0.947)	403044	26.3003	26.30
	39 Dimethylphthalate	163	12.992	13.016	(0.974)	1543771	23.8874	23.89
	40 Acenaphthylene	152	13.078	13.091	(0.981)	2342247	26.3268	26.33
	41 2,6-Dinitrotoluene	165	13.094	13.113	(0.982)	358522	25.3353	25.34
*	42 Acenaphthene-d10	164	13.334	13.342	(1.000)	1191169	20.0000	
	43 3-Nitroaniline	138	13.308	13.332	(0.998)	378683	27.4065	27.41
	44 Acenaphthene	153	13.388	13.396	(1.004)	1496063	26.0679	26.07
	45 2,4-Dinitrophenol	184	13.479	13.508	(1.011)	536960	53.8874	53.89
	46 Dibenzofuran	168	13.649	13.663	(1.024)	1756076	24.8298	24.83
	47 4-Nitrophenol	109	13.596	13.620	(1.020)	134418	23.6181	23.62
	48 2,4-Dinitrotoluene	165	13.724	13.743	(1.029)	419962	24.8978	24.90
	50 Diethylphthalate	149	14.146	14.165	(1.061)	1362352	24.0792	24.08
	49 Fluorene	166	14.205	14.218	(1.065)	1623943	27.5309	27.53
	51 4-Chlorophenyl-phenylether	204	14.221	14.229	(1.066)	640358	24.1827	24.18
	52 4-Nitroaniline	138	14.307	14.341	(1.073)	286587	26.5089	26.51
	53 4,6-Dinitro-2-methylphenol	198	14.381	14.411	(0.915)	599128	51.6556	51.66
	54 N-Nitrosodiphenylamine	169	14.424	14.443	(0.918)	970832	22.7739	22.77
$	55 2,4,6-Tribromophenol	330	14.627	14.640	(1.097)	369278	42.6104	42.61
	56 4-Bromophenyl-phenylether	248	15.001	15.009	(0.954)	374801	23.4189	23.42
	57 Hexachlorobenzene	284	15.231	15.244	(0.969)	421812	24.0953	24.10
	58 Pentachlorophenol	266	15.525	15.538	(0.988)	260728	26.5446	26.54
*	59 Phenanthrene-d10	188	15.717	15.725	(1.000)	1601782	20.0000	
	60 Phenanthrene	178	15.754	15.768	(1.002)	2062086	25.7382	25.74
	61 Anthracene	178	15.824	15.837	(1.007)	2061273	26.3882	26.39
	62 Carbazole	167	16.096	16.115	(1.024)	1446817	21.6014	21.60
	63 Di-n-butylphthalate	149	16.791	16.804	(1.068)	2421639	24.9350	24.93
	64 Fluoranthene	202	17.688	17.702	(1.125)	2241928	27.9697	27.97
	65 Pyrene	202	18.046	18.059	(0.901)	2359734	27.3161	27.32

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
$	66 Terphenyl-d14	244	18.345	18.353	(0.916)	1191636	27.8472	27.85
	67 Butylbenzylphthalate	149	19.216	19.229	(0.959)	1054650	24.4634	24.46
	68 Benzo(a)anthracene	228	20.007	20.025	(0.999)	2084672	27.5617	27.56
*	69 Chrysene-d12	240	20.033	20.041	(1.000)	1547714	20.0000	
	70 3,3'-Dichlorobenzidine	252	20.001	20.009	(0.998)	628625	27.0548	27.05
	71 Chrysene	228	20.071	20.089	(1.002)	1982879	27.4235	27.42
	72 bis(2-Ethylhexyl)phthalate	149	20.199	20.207	(0.956)	1494664	25.4595	25.46
*	134 Di-n-octylphthalate-d4	153	21.128	21.137	(1.000)	2322894	20.0000	
	73 Di-n-octylphthalate	149	21.139	21.147	(1.000)	2560089	22.9286	22.93
	74 Benzo(b)fluoranthene	252	21.657	21.681	(0.976)	2038364	26.5751	26.58
	75 Benzo(k)fluoranthene	252	21.695	21.713	(0.978)	2269157	28.9225	28.92
	187 Total Benzofluoranthenes	252	21.695	21.713	(0.978)	4135933	56.3329	56.33
	76 Benzo(a)pyrene	252	22.111	22.130	(0.996)	1888829	28.1440	28.14
*	77 Perylene-d12	264	22.192	22.200	(1.000)	1653078	20.0000	
	78 Indeno(1,2,3-cd)pyrene	276	23.842	23.866	(1.074)	2415504	28.3410	28.34
	79 Dibenzo(a,h)anthracene	278	23.864	23.904	(1.075)	1995033	28.9171	28.92
	80 Benzo(g,h,i)perylene	276	24.312	24.352	(1.096)	2074692	27.0924	27.09
	90 N-Nitrosodimethylamine	74	3.938	3.978	(0.467)	599243	22.7515	22.75
	103 Pyridine	79	3.895	3.919	(0.462)	957296	22.9392	22.94
	91 Aniline	93	7.981	7.984	(0.947)	1274374	25.4843	25.48
	105 1-methylnaphthalene	141	11.790	11.798	(1.126)	1349150	29.0898	29.09
	93 Benzidine	184	17.929	17.931	(0.895)	194817	23.4366	23.44
	111 Azobenzene (1,2-DP-Hydrazine)	77	16.465	16.484	(1.048)	112612	22.9744	22.97
	143 1,4-Dioxane	88	3.147	3.176	(0.374)	405278	24.1620	24.16
$	137 d8-1,4-Dioxane	96	3.088	3.118	(0.367)	388846	25.5086	25.51
	144 alpha-Terpineol	59	10.514	10.532	(1.004)	640562	26.6292	26.63
	177 p-Benzoquinone	82	7.121	7.124	(0.845)	194405	27.7802	27.78
	98 Retene	219	18.596	18.604	(0.928)	982323	27.7253	27.73
	99 Perylene	252	22.224	22.242	(1.001)	1742195	26.1244	26.12
	133 Butylatedhydroxytoluene	205	13.489	13.503	(1.012)	986847	27.5388	27.54
	115 Tributyl Phosphate	99	14.510	14.534	(0.923)	2028374	26.3454	26.35
	116 Dibutyl Phenyl Phosphate	175	16.246	16.248	(1.034)	1292821	26.7380	26.74
	117 Butyl Diphenyl Phosphate	94	17.929	17.937	(0.895)	438946	26.7246	26.72
	118 Triphenyl Phosphate	326	19.537	19.545	(0.975)	400410	27.8393	27.84
	123 Acetophenone	105	9.114	9.127	(1.082)	1220176	27.6109	27.61
	168 Pentachlorobenzene	250	13.687	13.700	(1.026)	574377	28.0532	28.05
	113 Diphenyl Oxide	170	12.581	12.589	(0.944)	1306379	29.2411	29.24
	112 Biphenyl	154	12.394	12.402	(0.929)	1753356	28.8424	28.84
	120 2,3,4,6-Tetrachlorophenol	232	13.922	13.935	(1.044)	345824	26.6588	26.66
	151 1,2,4,5-Tetrachlorobenzene	216	11.956	11.964	(0.897)	752628	27.5966	27.60
	110 Tetrachloroguaiacol	247	15.231	15.244	(0.969)	66945	45.9514	45.95
	109 3,4,5-Trichloroguaiacol	213	14.018	14.031	(0.892)	221264	25.7602	25.76
	181 3,4,6-Trichloroguaiacol	211	14.136	14.154	(1.678)	260433	26.3840	26.38
	108 4,5,6-Trichloroguaiacol	213	15.049	15.063	(1.129)	226106	26.2485	26.25
	184 3,4-Dichloroguaiacol	192	12.474	12.488	(1.481)	291108	26.2095	26.21
	107 4,5-Dichloroguaiacol	192	13.254	13.273	(0.994)	741560	53.7342	53.73
	182 4,6-Dichloroguaiacol	192	13.254	13.273	(1.573)	739648	54.0575	54.06

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
185 4-Chloroguaiacol	115	11.384	11.392	(1.087)	147663	12.6652	12.67
186 Carbaryl	144	16.508	16.532	(1.050)	1130315	26.7034	26.70
178 2-Benzyl-4-Chlorophenol	218	16.465	16.489	(1.048)	355376	25.9952	26.00
106 Guaiacol	124	9.376	9.389	(1.113)	899547	26.8083	26.81
188 2,6-Dichlorophenol	162	10.647	10.661	(1.264)	816571	26.0402	26.04
189 N-Nitrosomethylethylamine	88	5.658	5.666	(0.672)	316642	25.5853	25.59

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 07081309.d
Lab Smp Id: ICV0708
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130708.b/SW846070813.m
Misc Info: 13-

Calibration Date: 08-JUL-2013
Calibration Time: 12:01
Client Smp ID: ICV0708
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	507223	253612	1014446	576118	13.58
27 Naphthalene-d8	1843524	921762	3687048	2066898	12.12
42 Acenaphthene-d10	1048119	524060	2096238	1191169	13.65
59 Phenanthrene-d10	1392753	696376	2785506	1601782	15.01
69 Chrysene-d12	1340567	670284	2681134	1547714	15.45
134 Di-n-octylphthala	2097720	1048860	4195440	2322894	10.73
77 Perylene-d12	1450550	725275	2901100	1653078	13.96

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.43	7.93	8.93	8.42	-0.08
27 Naphthalene-d8	10.47	9.97	10.97	10.47	-0.01
42 Acenaphthene-d10	13.34	12.84	13.84	13.33	-0.01
59 Phenanthrene-d10	15.72	15.22	16.22	15.72	-0.01
69 Chrysene-d12	20.03	19.53	20.53	20.03	-0.01
134 Di-n-octylphthala	21.14	20.64	21.64	21.13	-0.03
77 Perylene-d12	22.19	21.69	22.69	22.19	-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: ICV0708
Level: LOW
Data Type: MS DATA
SpikeList File: ICVS.spk
Sublist File: ICALS.sub
Method File: /chem2/nt6.i/20130708.b/SW846070813.m
Misc Info: 13-

Client SDG: 20130708
Fraction: SV
Client Smp ID: ICV0708
Operator: JZ
SampleType: LCS
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
3 Phenol	25.00	26.26	105.05	70-130
4 Bis(2-Chloroethyl)	25.00	24.38	97.51	70-130
6 2-Chlorophenol	25.00	26.73	106.91	70-130
7 1,3-Dichlorobenzen	25.00	23.80	95.19	70-130
9 1,4-Dichlorobenzen	25.00	24.37	97.50	70-130
11 Benzyl alcohol	25.00	24.74	98.96	70-130
12 1,2-Dichlorobenzen	25.00	24.08	96.30	70-130
13 2-Methylphenol	25.00	28.33	113.33	70-130
14 2,2'-oxybis(1-Chlo	25.00	24.47	97.90	70-130
15 4-Methylphenol	25.00	27.59	110.37	70-130
16 N-Nitroso-di-n-pro	25.00	23.50	94.00	70-130
17 Hexachloroethane	25.00	24.46	97.85	70-130
19 Nitrobenzene	25.00	23.94	95.76	70-130
20 Isophorone	25.00	27.14	108.57	70-130
21 2-Nitrophenol	25.00	27.94	111.77	70-130
22 2,4-Dimethylphenol	25.00	26.46	105.85	70-130
23 Bis(2-Chloroethoxy	25.00	23.32	93.27	70-130
24 Benzoic acid	50.00	52.88	105.75	70-130
25 2,4-Dichlorophenol	25.00	27.09	108.35	70-130
26 1,2,4-Trichloroben	25.00	24.06	96.26	70-130
28 Naphthalene	25.00	26.36	105.43	70-130
29 4-Chloroaniline	25.00	25.91	103.65	70-130
30 Hexachlorobutadien	25.00	24.18	96.73	70-130
31 4-Chloro-3-methylp	25.00	26.14	104.58	70-130
32 2-Methylnaphthalen	25.00	24.57	98.29	70-130
33 Hexachlorocyclopen	25.00	23.41	93.65	70-130
34 2,4,6-Trichlorophe	25.00	27.67	110.69	70-130
35 2,4,5-Trichlorophe	25.00	28.99	115.94	70-130
37 2-Chloronaphthalen	25.00	25.13	100.52	70-130
38 2-Nitroaniline	25.00	26.30	105.20	70-130
39 Dimethylphthalate	25.00	23.89	95.55	70-130
40 Acenaphthylene	25.00	26.33	105.31	70-130
41 2,6-Dinitrotoluene	25.00	25.34	101.34	70-130

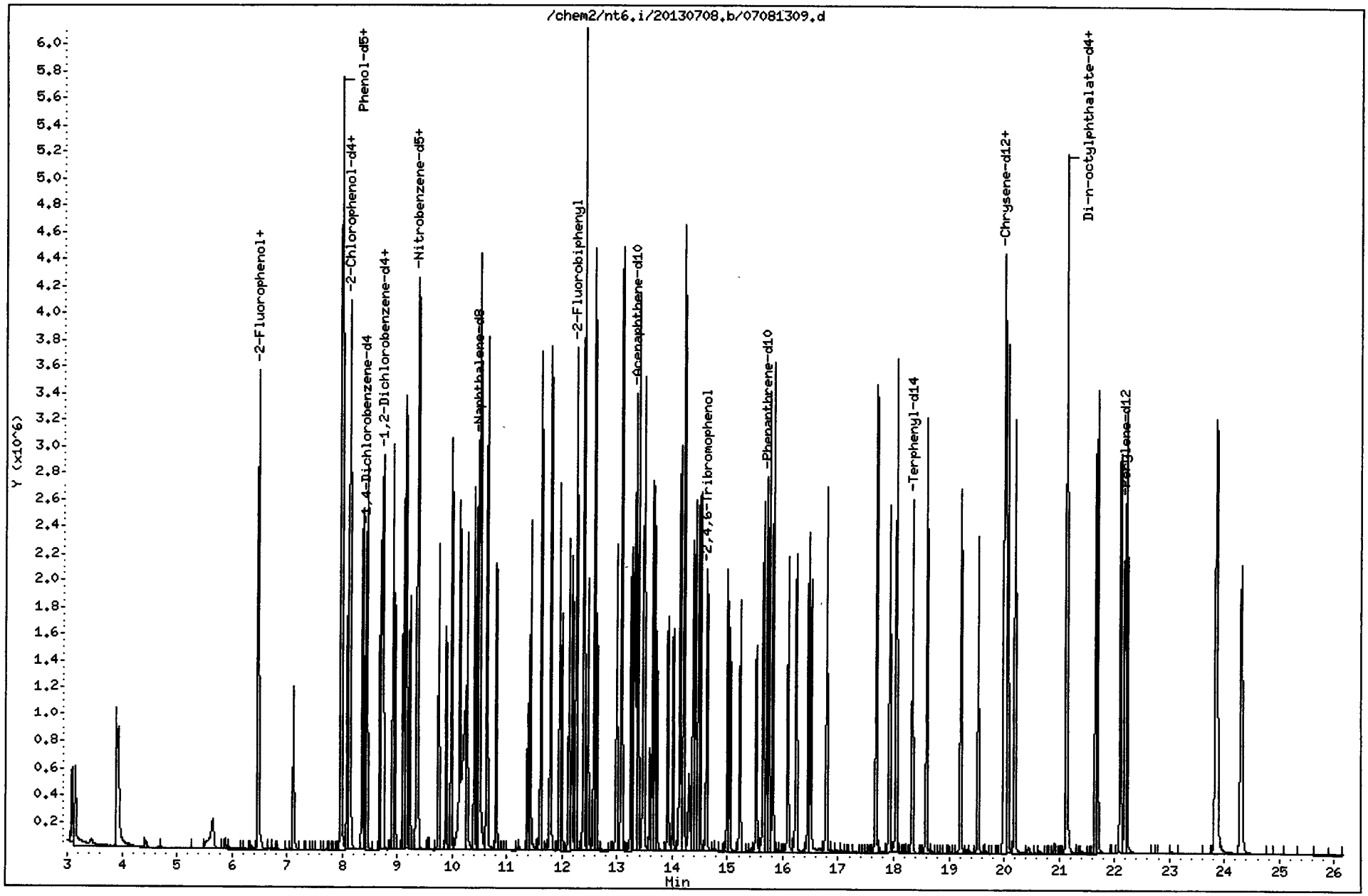
SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
43	3-Nitroaniline	25.00	27.41	109.63	70-130
44	Acenaphthene	25.00	26.07	104.27	70-130
45	2,4-Dinitrophenol	50.00	53.89	107.77	70-130
46	Dibenzofuran	25.00	24.83	99.32	70-130
47	4-Nitrophenol	25.00	23.62	94.47	70-130
48	2,4-Dinitrotoluene	25.00	24.90	99.59	70-130
49	Fluorene	25.00	27.53	110.12	70-130
50	Diethylphthalate	25.00	24.08	96.32	70-130
51	4-Chlorophenyl-phe	25.00	24.18	96.73	70-130
52	4-Nitroaniline	25.00	26.51	106.04	70-130
53	4,6-Dinitro-2-meth	50.00	51.66	103.31	70-130
54	N-Nitrosodiphenyla	25.00	22.77	91.10	70-130
56	4-Bromophenyl-phen	25.00	23.42	93.68	70-130
57	Hexachlorobenzene	25.00	24.10	96.38	70-130
58	Pentachlorophenol	25.00	26.54	106.18	70-130
60	Phenanthrene	25.00	25.74	102.95	70-130
61	Anthracene	25.00	26.39	105.55	70-130
62	Carbazole	25.00	21.60	86.41	70-130
63	Di-n-butylphthalat	25.00	24.93	99.74	70-130
64	Fluoranthene	25.00	27.97	111.88	70-130
65	Pyrene	25.00	27.32	109.26	70-130
67	Butylbenzylphthala	25.00	24.46	97.85	70-130
68	Benzo(a)anthracene	25.00	27.56	110.25	70-130
70	3,3'-Dichlorobenzi	25.00	27.05	108.22	70-130
71	Chrysene	25.00	27.42	109.69	70-130
72	bis(2-Ethylhexyl)p	25.00	25.46	101.84	70-130
73	Di-n-octylphthalat	25.00	22.93	91.71	70-130
74	Benzo(b)fluoranthe	25.00	26.58	106.30	70-130
75	Benzo(k)fluoranthe	25.00	28.92	115.69	70-130
187	Total Benzofluoran	50.00	56.33	112.67	70-130
76	Benzo(a)pyrene	25.00	28.14	112.58	70-130
78	Indeno(1,2,3-cd)py	25.00	28.34	113.36	70-130
79	Dibenzo(a,h)anthra	25.00	28.92	115.67	70-130
80	Benzo(g,h,i)peryle	25.00	27.09	108.37	70-130
90	N-Nitrosodimethyla	25.00	22.75	91.01	70-130
103	Pyridine	25.00	22.94	91.76	70-130
91	Aniline	25.00	25.48	101.94	70-130
105	1-methylnaphthalen	25.00	29.09	116.36	70-130
111	Azobenzene (1,2-DP	25.00	22.97	91.90	70-130
93	Benzidine	25.00	23.44	93.75	70-130
143	1,4-Dioxane	25.00	24.16	96.65	70-130
177	p-Benzoquinone	25.00	27.78	111.12	70-130
99	Perylene	25.00	26.12	104.50	70-130
133	Butylatedhydroxyto	25.00	27.54	110.16	70-130
115	Tributyl Phosphate	25.00	26.35	105.38	70-130
116	Dibutyl Phenyl Pho	25.00	26.74	106.95	70-130
117	Butyl Diphenyl Pho	25.00	26.72	106.90	70-130

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
118 Triphenyl Phosphat	25.00	27.84	111.36	70-130
123 Acetophenone	25.00	27.61	110.44	70-130
168 Pentachlorobenzene	25.00	28.05	112.21	70-130
113 Diphenyl Oxide	25.00	29.24	116.96	70-130
112 Biphenyl	25.00	28.84	115.37	70-130
120 2,3,4,6-Tetrachlor	25.00	26.66	106.64	70-130
151 1,2,4,5-Tetrachlor	25.00	27.60	110.39	70-130
186 Carbaryl	25.00	26.70	106.81	70-130
178 2-Benzyl-4-Chlorop	25.00	26.00	103.98	70-130

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	37.50	39.52	105.39	75-125
$ 2 Phenol-d5	37.50	40.32	107.53	75-125
$ 5 2-Chlorophenol-d4	37.50	40.41	107.75	75-125
$ 10 1,2-Dichlorobenzen	25.00	26.55	106.20	75-125
$ 18 Nitrobenzene-d5	25.00	26.70	106.81	75-125
$ 36 2-Fluorobiphenyl	25.00	26.88	107.51	75-125
$ 55 2,4,6-Tribromophen	37.50	42.61	113.63	75-125
$ 66 Terphenyl-d14	25.00	27.85	111.39	75-125
$ 137 d8-1,4-Dioxane	25.00	25.51	102.03	75-125

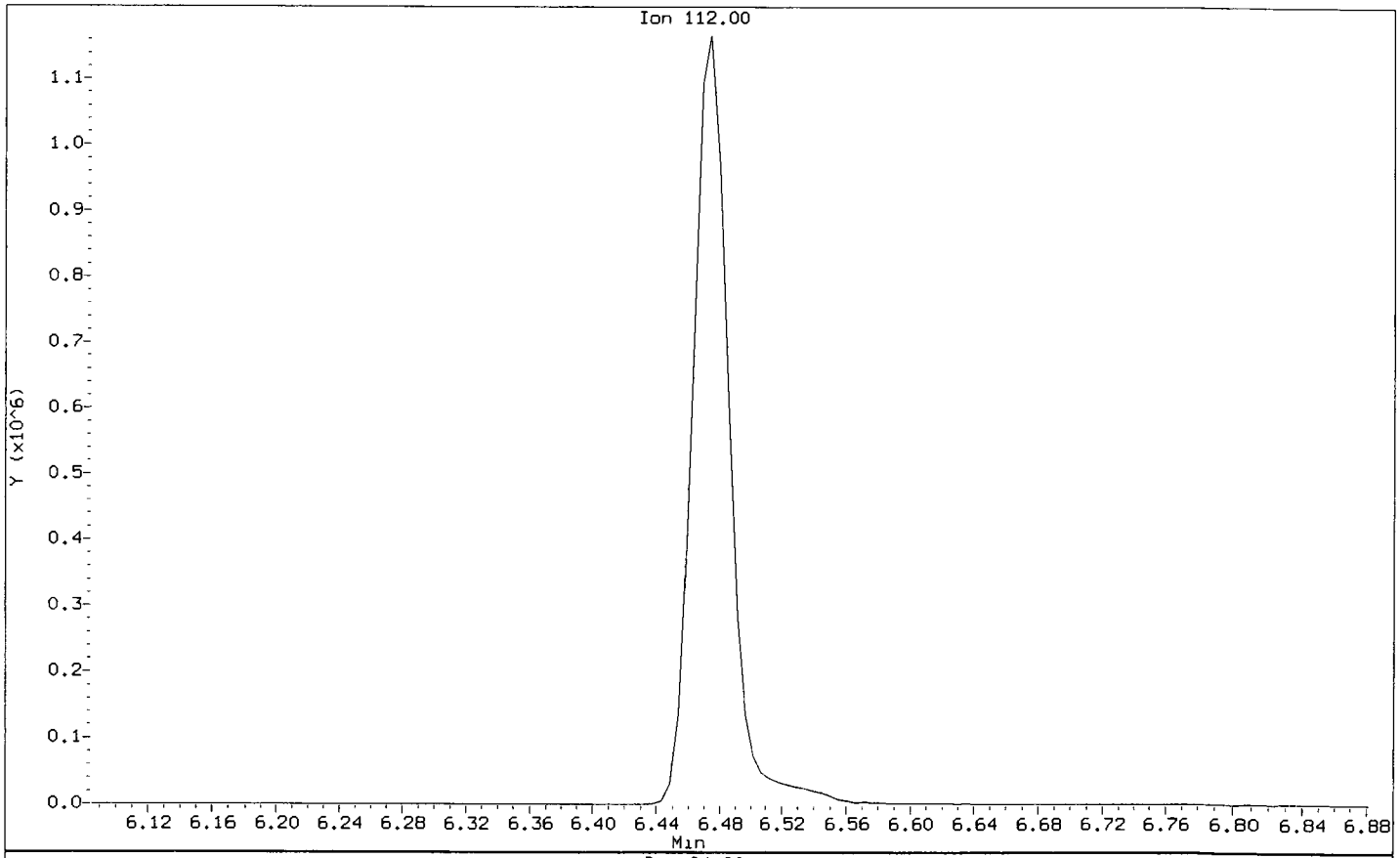
Data File: /chem2/nt6.i/20130708.b/07081309.d
Date : 08-JUL-2013 16:33
Client ID: ICV0708
Sample Info: ICV0708,
Volume Injected (uL): 1.0
Column phase: ZB-5msi

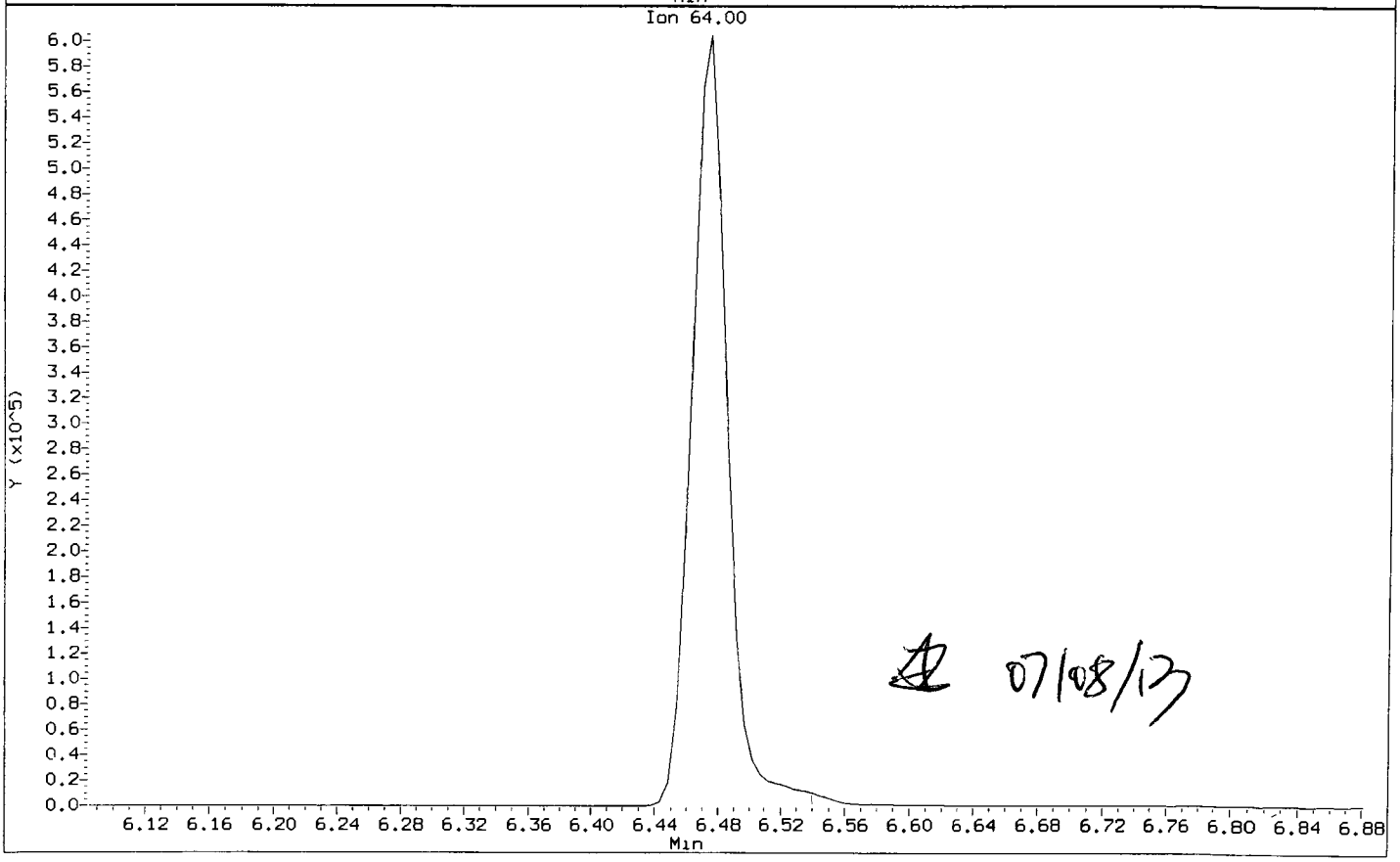
Instrument: nt6.i
Operator: JZ
Column diameter: 0.32



Data File: /chem2/nt6.1/20130708.b/07081309.d
Injection Date: 08-JUL-2013 16:33
Instrument: nt6.1
Client Sample ID: ICV0708

Compound: 2-Fluorophenol
CAS Number: 367-12-4

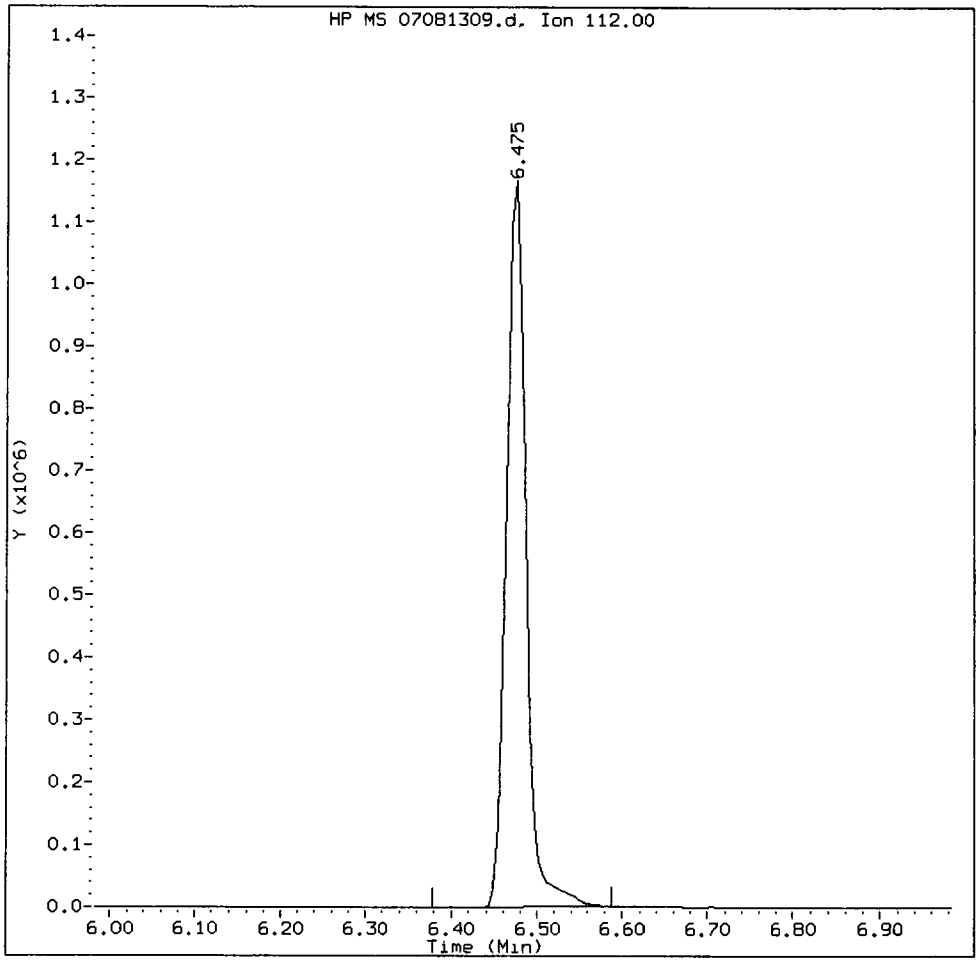




07/08/13

ICV0708, /chem2/nt6.i/20130708.b/07081309.d

2-Fluorophenol Amount: 39.52 Area: 1887201



MANUAL INTEGRATION for 2-Fluorophenol

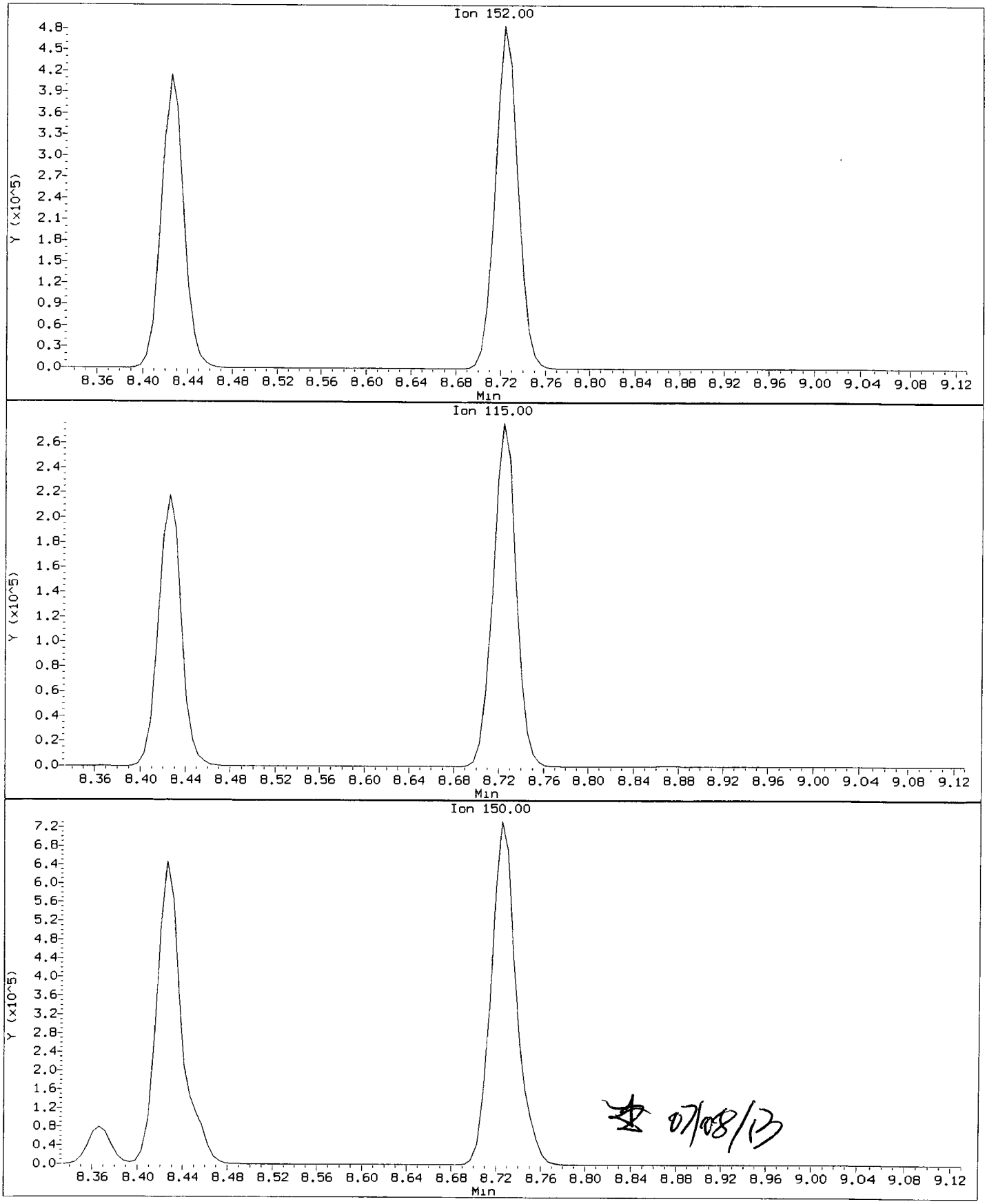
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 07/08/13

Data File: /chem2/nt6.i/20130708.b/07081309.d
Injection Date: 08-JUL-2013 16:33
Instrument: nt6.i
Client Sample ID: ICV0708

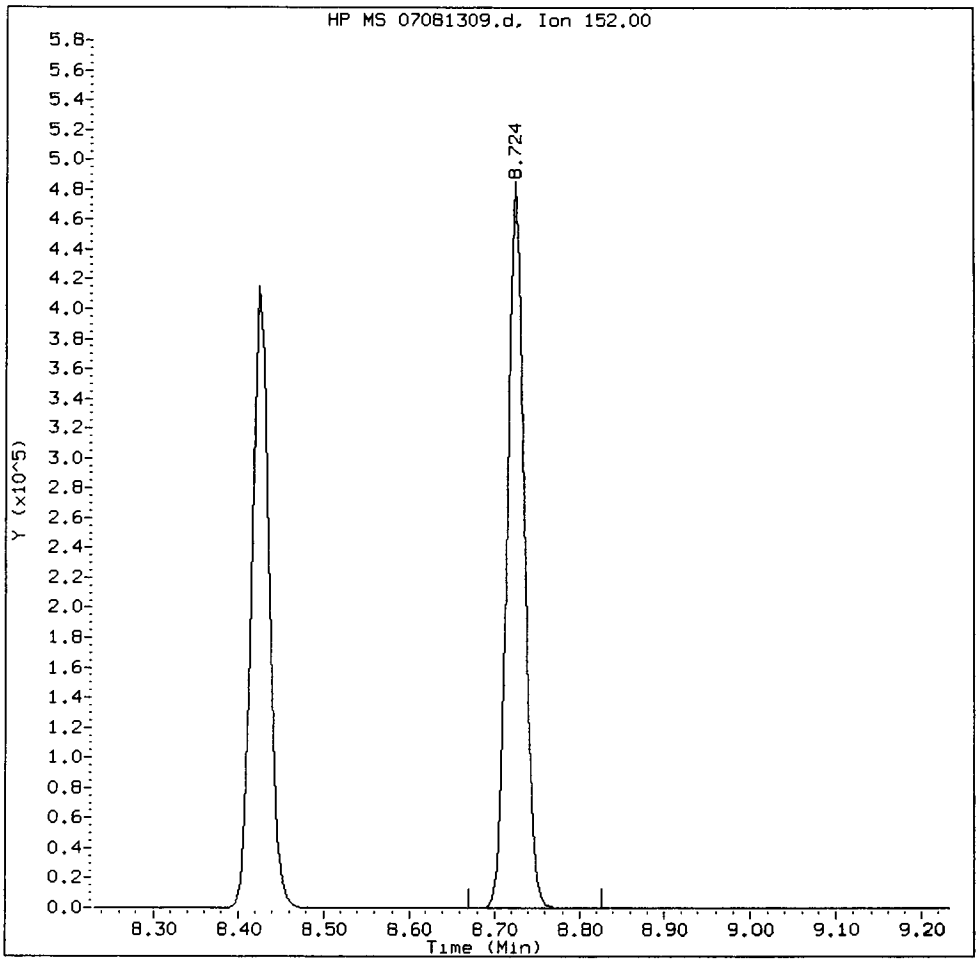
Compound: 1,2-Dichlorobenzene-d4
CAS Number: 2199-69-1



07/08/13

ICV0708, /chem2/nt6.i/20130708.b/07081309.d

1,2-Dichlorobenzene-d4 Amount: 26.55 Area: 680984



MANUAL INTEGRATION for 1,2-Dichlorobenzene-d4

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 07/08/13

CO-ELUTION SUMMARY FOR FILE - 07081309.d

Lab ID: ICV0708, Method: SW846070813.m, Instrument: nt6.i, Date: 08-JUL-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Semivolatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WU65, WU71

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

GC/MS SVOA Analyst Notes / Data Review Checklist

ARI WORK Order: WU65 Client ID: SAIC.

METHOD: **8270D(SIM-SVOA)** **KRONE(Butyl Tins)** **8270D(SVOA)** **8270D(OP-Pest)**

Instrument: **NT-4** **NT-6** **NT-8** **NT-10** **NT11** **NT12**

Curve Date: 7/8/13 Analysis Start Date: ~~7/8/13~~ 7/8/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
DFTPP Tune met Criteria?	Y / N / ✓	Internal Standard within 50-200%?	Y / N / ✓
DDT Breakdown <20%?	Y / N /	Retention Times within Windows?	Y / N / ✓
Peak Tailing Factor ≤2?	Y / N /	Method Blank in Control?	Y / N / OK
CCAL Meets %D?	Y / N /	LCS / LCSD Recovery in Control?	Y / N /
ICAL Q Flag applied?	NA / Y / N /	LCS / LCSD RPD ≤ 30%?	NA /
CCAL Q flag applied?	NA / Y / N /	MS / MSD Recovery in Control?	NA / Y / N /
Surrogate Recovery met?	Y / N /	MS / MSD RPD ≤ 30%?	NA /
Manual Integrations?	Y / N /	Samples Diluted?	Y / N /
Integration Summary?	Y / N /	Special Analysis Request?	Y / N /

Detail problems, corrective actions and/or other pertinent information below.

Samples A & B + MB/LCS/LCSD + QLS.

MB: "J" flag on compound Diethylphthalate.

Forms included.

Tribromophenol surrogate high in "B" —

(Review 1) Analyst: _____ **Date:** 07/10/13.

(Review 2) Reviewer: _____ **Date:** 7/10

WUS5 : 39255

Analytical Resources Inc.: Organics Instrument Log

NT-6 Serial No.:GC=US00036167, MS=US81221575

Date: 7/8/13 Analysis: 8270D Analyst: [redacted]

GC Program: DB-5MS (NEW) Column No: 234157 Column Type: DB-5MS

Instrument Tune (.U or .CT.): 130703 EM Voltage: 1800

Calibration File: 070813.1 Curve Date: 7/8/13 Injection Vol.: 1µl

IS/SS	Ical/Ccal	LCS/ICV
B000785	2053-2, 2054-1	2056-1, 2057-1
	2058-1, 2061-1	2058-1, 2061-1
	18031, 18031	18031, 2027-2
	2027-2 B000933	B000933

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem2/nt6.i/20130708.b

	Time	Filename	LabID	ClientId	DF											
1	1201	07081301.d	IC250708	IC250708	1	8.43	507223	10.47	1843524	13.34	1048119	15.72	1392753	20.03	1340567	22.19	1450550	21.14	2097720
2	1235	07081302.d	IC020708	IC020708	1	8.42	542382												
3	1309	07081303.d	IC10708	IC10708	1	8.42	581960	10.46	2042194	13.33	1243376	15.71	1771287	20.03	1594239	22.18	1721800	21.13	2143658
4	1343	07081304.d	IC50708	IC50708	1	8.42	591252	10.46	2080149	13.33	1230780	15.71	1737437	20.03	1599648	22.18	1695254	21.13	2201896
5	1417	07081305.d	IC100708	IC100708	1	8.42	562163	10.46	1990383	13.33	1163414	15.71	1620267	20.03	1520026	22.18	1615408	21.13	2145014
6	1451	07081306.d	IC400708	IC400708	1	8.43	582898	10.47	2096246	13.34	1188830	15.72	1543729	20.04	1519253	22.19	1674848	21.13	2344960
7	1525	07081307.d	IC600708	IC600708	1	8.43	556124	10.47	2004545	13.34	1123936	15.72	1422042	20.04	1421640	22.19	1558882	21.13	2205278
8	1559	07081308.d	IC800708	IC800708	1	8.43	529906	10.47	1889800	13.34	1037468	15.72	1255886	20.04	1244774	22.20	1395041	21.14	1962042
9	1633	07081309.d	ICV0708	ICV0708	1	8.42	576118	10.47	2066898	13.33	1191169	15.72	1601782	20.03	1547714	22.19	1653078	21.13	2322894
10	1756	07081310.d	WU65MBW1	WU65MBW1	1	8.43	508186	10.47	1811025	13.33	1097574	15.71	1632027	20.03	1483292	21.13	1986160	22.19	1578102
11	1830	07081311.d	WU65LCSW1	WU65LCSW1	1	8.42	617623	10.47	2139084	13.33	1184699	15.71	1563842	20.03	1516894	21.13	2304747	22.19	1617029
12	1904	07081312.d	WU65LCSDW1	WU65LCSDW1	1	8.42	620576	10.47	2153711	13.34	1253537	15.72	1617585	20.03	1564022	21.13	2398107	22.19	1667907
13	1939	07081313.d	WU65QLS	WU65QLS	1	8.42	607031	10.46	2163818	13.33	1296097	15.71	1824660	20.03	1685426	21.13	2316321	22.19	1801154
14	2013	07081314.d	WU65A	LF-TP-001-20	1	8.42	563015	10.47	1998636	13.33	1210122	15.71	1771352	20.02	1572275	21.12	2249522	22.18	1668374
15	2047	07081315.d	WU65B	LF-FD-001-20	1	8.42	607495	10.46	2166310	13.33	1306668	15.71	1928318	20.02	1752519	21.12	2464637	22.18	1852262
16	2121	07081316.d	WV51MBW1	WV51MBW1	1	8.42	604439	10.46	2134772	13.33	1298160	15.71	1926170	20.02	1773956	21.12	2443825	22.18	1937069
17	2155	07081317.d	WV51LCSW1	WV51LCSW1	1	8.42	667458	10.47	2324651	13.34	1301070	15.71	1755617	20.03	1665732	21.13	2478863	22.18	1792283
18	2229	07081318.d	WV51QLS	WV51QLS	1	8.42	42167	10.46	156307	13.33	83949	15.70	117098	20.01	111718	21.13	135111	22.17	114714
19	2303	07081319.d	WV51C	BF51322	1	8.42	644297	10.46	2262495	13.33	1374857	15.71	2017814	20.02	1820270	21.13	2515626	22.18	1964081

[redacted] 7/10/13

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/20130708.b

ARI Job No.: IC25 Method: SW846070813.m Instrument: nt6.i Date: 08-JUL-2013

AR 07/10/13

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1201	07081301.d	IC250708	IC250708	1	NO MANUAL INTEGRATION
1756	07081310.d	WU65MBW1	WU65MBW1	1	NO MANUAL INTEGRATION
1830	07081311.d	WU65LCSW1	WU65LCSW1	1	NO MANUAL INTEGRATION
1904	07081312.d	WU65LCSDW1	WU65LCSDW1	1	NO MANUAL INTEGRATION
1939	07081313.d	WU65QLS	WU65QLS	1	Isophorone,
2013	07081314.d	WU65A	LF-TP-001-	1	NO MANUAL INTEGRATION
2047	07081315.d	WU65B	LF-FD-001-	1	NO MANUAL INTEGRATION

Q-FLAG SUMMARY FOR DATABATCH - /chem2/nt6.i/20130708.b

Instrument: nt6.i Date: 08-JUL-2013 Method: SW846070813.m

INITIAL CAL: 08-JUL-2013

Compound	%RSD or R^2	
Benzidine	24.7	MC

CONTINUING CAL: 08-JUL-2013

Compound	%D	
Benzidine	-28.6	MC

07/10/13

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt6.i Injection Date: 08-JUL-2013 12:01
Lab File ID: 07081301.d Init. Cal. Date(s): 08-JUL-2013 08-JUL-2013
Analysis Type: Init. Cal. Times: 12:01 15:59
Lab Sample ID: IC250708 Quant Type: ISTD
Method: /chem2/nt6.i/20130708.b/SW846070813.m

AZ 07/10/13

COMPOUND	RRF / AMOUNT	RF25	CCAL RRF25	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 2-Fluorophenol	1.65767	1.82518	1.82518	0.010	10.10551	20.00000	Averaged
$ 2 Phenol-d5	1.92519	2.13333	2.13333	0.010	10.81110	20.00000	Averaged
3 Phenol	1.65507	1.83363	1.83363	0.010	10.78892	20.00000	Averaged
$ 5 2-Chlorophenol-d4	1.66195	1.83056	1.83056	0.010	10.14543	20.00000	Averaged
4 Bis(2-Chloroethyl)ether	1.34472	1.44393	1.44393	0.010	7.37774	20.00000	Averaged
6 2-Chlorophenol	1.29540	1.40083	1.40083	0.010	8.13887	20.00000	Averaged
7 1,3-Dichlorobenzene	1.50730	1.60739	1.60739	0.010	6.64042	20.00000	Averaged
9 1,4-Dichlorobenzene	1.50043	1.61561	1.61561	0.010	7.67659	20.00000	Averaged
$ 10 1,2-Dichlorobenzene-d4	0.89044	0.94699	0.94699	0.010	6.35139	20.00000	Averaged
12 1,2-Dichlorobenzene	1.42486	1.54340	1.54340	0.010	8.31951	20.00000	Averaged
11 Benzyl alcohol	0.84099	0.94029	0.94029	0.010	11.80737	20.00000	Averaged
14 2,2'-oxybis(1-Chloropropane	2.11988	2.41946	2.41946	0.010	14.13239	20.00000	Averaged
13 2-Methylphenol	1.16066	1.27646	1.27646	0.010	9.97673	20.00000	Averaged
17 Hexachloroethane	0.52640	0.57153	0.57153	0.010	8.57246	20.00000	Averaged
16 N-Nitroso-di-n-propylamine	0.93165	1.04329	1.04329	0.005	11.98315	20.00000	Averaged
15 4-Methylphenol	1.19840	1.34731	1.34731	0.010	12.42600	20.00000	Averaged
$ 18 Nitrobenzene-d5	0.33027	0.36071	0.36071	0.010	9.21801	20.00000	Averaged
19 Nitrobenzene	0.34406	0.37904	0.37904	0.010	10.16499	20.00000	Averaged
20 Isophorone	0.55946	0.59369	0.59369	0.010	6.11773	20.00000	Averaged
21 2-Nitrophenol	0.17968	0.18947	0.18947	0.010	5.45133	20.00000	Averaged
22 2,4-Dimethylphenol	0.30044	0.31760	0.31760	0.010	5.71267	20.00000	Averaged
23 Bis(2-Chloroethoxy)methane	0.43640	0.46900	0.46900	0.010	7.47105	20.00000	Averaged
24 Benzoic acid	51.29298	50.00000	0.26948	0.010	2.58596	20.00000	Quadratic
25 2,4-Dichlorophenol	0.27304	0.29632	0.29632	0.010	8.52509	20.00000	Averaged
26 1,2,4-Trichlorobenzene	0.31153	0.32070	0.32070	0.010	2.94408	20.00000	Averaged
28 Naphthalene	0.90753	0.98211	0.98211	0.010	8.21788	20.00000	Averaged
29 4-Chloroaniline	0.34441	0.36718	0.36718	0.010	6.61256	20.00000	Averaged
30 Hexachlorobutadiene	0.14955	0.15380	0.15380	0.010	2.84546	20.00000	Averaged
31 4-Chloro-3-methylphenol	0.24795	0.27477	0.27477	0.010	10.81601	20.00000	Averaged
32 2-Methylnaphthalene	0.50623	0.55743	0.55743	0.010	10.11318	20.00000	Averaged
33 Hexachlorocyclopentadiene	0.29131	0.31064	0.31064	0.010	6.63488	20.00000	Averaged
34 2,4,6-Trichlorophenol	0.30458	0.32260	0.32260	0.010	5.91710	20.00000	Averaged
35 2,4,5-Trichlorophenol	0.30244	0.32692	0.32692	0.010	8.09565	20.00000	Averaged
$ 36 2-Fluorobiphenyl	1.07936	1.14361	1.14361	0.010	5.95292	20.00000	Averaged
37 2-Chloronaphthalene	0.99680	1.09898	1.09898	0.010	10.25166	20.00000	Averaged

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt6.i Injection Date: 08-JUL-2013 12:01
Lab File ID: 07081301.d Init. Cal. Date(s): 08-JUL-2013 08-JUL-2013
Analysis Type: Init. Cal. Times: 12:01 15:59
Lab Sample ID: IC250708 Quant Type: ISTD
Method: /chem2/nt6.i/20130708.b/SW846070813.m

COMPOUND	RRF / AMOUNT	RF25	CCAL RRF25	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
38 2-Nitroaniline	0.25730	0.30787	0.30787	0.010	19.65179	20.00000	Averaged
39 Dimethylphthalate	1.08510	1.13482	1.13482	0.010	4.58171	20.00000	Averaged
40 Acenaphthylene	1.49380	1.62808	1.62808	0.010	8.98928	20.00000	Averaged
41 2,6-Dinitrotoluene	0.23760	0.26163	0.26163	0.010	10.11423	20.00000	Averaged
43 3-Nitroaniline	0.23199	0.25653	0.25653	0.010	10.57397	20.00000	Averaged
44 Acenaphthene	0.96361	1.04086	1.04086	0.010	8.01674	20.00000	Averaged
45 2,4-Dinitrophenol	48.87939	50.00000	0.16356	0.010	-2.24122	20.00000	Linear
46 Dibenzofuran	1.18748	1.34727	1.34727	0.010	13.45621	20.00000	Averaged
47 4-Nitrophenol	26.85116	25.00000	0.10263	0.010	7.40464	20.00000	Linear
48 2,4-Dinitrotoluene	0.28321	0.30149	0.30149	0.010	6.45581	20.00000	Averaged
50 Diethylphthalate	0.94996	0.99864	0.99864	0.010	5.12445	20.00000	Averaged
49 Fluorene	0.99039	1.06962	1.06962	0.010	7.99960	20.00000	Averaged
51 4-Chlorophenyl-phenylether	0.44461	0.47399	0.47399	0.010	6.60940	20.00000	Averaged
52 4-Nitroaniline	0.18152	0.14912	0.14912	0.010	-17.84689	20.00000	Averaged
53 4,6-Dinitro-2-methylphenol	0.14482	0.14865	0.14865	0.010	2.64629	20.00000	Averaged
54 N-Nitrosodiphenylamine	0.53227	0.55255	0.55255	0.010	3.80883	20.00000	Averaged
$ 55 2,4,6-Tribromophenol	0.14551	0.14253	0.14253	0.010	-2.04901	20.00000	Averaged
56 4-Bromophenyl-phenylether	0.19983	0.20237	0.20237	0.010	1.27089	20.00000	Averaged
57 Hexachlorobenzene	0.21858	0.21259	0.21259	0.010	-2.74019	20.00000	Averaged
58 Pentachlorophenol	0.12264	0.11926	0.11926	0.010	-2.75565	20.00000	Averaged
60 Phenanthrene	1.00036	1.05087	1.05087	0.010	5.04920	20.00000	Averaged
61 Anthracene	0.97533	1.04732	1.04732	0.010	7.38079	20.00000	Averaged
62 Carbazole	0.83629	0.72874	0.72874	0.010	-12.86031	20.00000	Averaged
63 Di-n-butylphthalate	1.21263	1.34006	1.34006	0.010	10.50898	20.00000	Averaged
64 Fluoranthene	1.00083	1.08036	1.08036	0.010	7.94608	20.00000	Averaged
65 Pyrene	1.11631	1.20705	1.20705	0.010	8.12871	20.00000	Averaged
$ 66 Terphenyl-d14	0.55297	0.58341	0.58341	0.010	5.50393	20.00000	Averaged
67 Butylbenzylphthalate	0.55710	0.62676	0.62676	0.010	12.50430	20.00000	Averaged
68 Benzo(a)anthracene	0.97740	1.05463	1.05463	0.010	7.90133	20.00000	Averaged
70 3,3'-Dichlorobenzidine	0.30025	0.33519	0.33519	0.010	11.63669	20.00000	Averaged
71 Chrysene	0.93436	1.00301	1.00301	0.010	7.34787	20.00000	Averaged
72 bis(2-Ethylhexyl)phthalate	0.50547	0.55971	0.55971	0.010	10.73115	20.00000	Averaged
73 Di-n-octylphthalate	0.96134	1.01075	1.01075	0.010	5.13998	20.00000	Averaged
74 Benzo(b)fluoranthene	0.92799	1.06563	1.06563	0.010	14.83179	20.00000	Averaged
75 Benzo(k)fluoranthene	0.94922	1.03063	1.03063	0.010	8.57650	20.00000	Averaged

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt6.i Injection Date: 08-JUL-2013 12:01
Lab File ID: 07081301.d Init. Cal. Date(s): 08-JUL-2013 08-JUL-2013
Analysis Type: Init. Cal. Times: 12:01 15:59
Lab Sample ID: IC250708 Quant Type: ISTD
Method: /chem2/nt6.i/20130708.b/SW846070813.m

COMPOUND	RRF / AMOUNT	RF25	CCAL RRF25	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
187 Total Benzofluoranthenes	0.88828	0.98785	0.98785	0.010	11.20935	20.00000	Averaged	
76 Benzo(a)pyrene	0.81198	0.90217	0.90217	0.010	11.10757	20.00000	Averaged	
78 Indeno(1,2,3-cd)pyrene	1.03117	1.15450	1.15450	0.010	11.96033	20.00000	Averaged	
79 Dibenzo(a,h)anthracene	0.83470	0.96125	0.96125	0.010	15.16092	20.00000	Averaged	
80 Benzo(g,h,i)perylene	0.92649	0.99903	0.99903	0.010	7.82927	20.00000	Averaged	
90 N-Nitrosodimethylamine	0.91435	0.96048	0.96048	0.010	5.04497	20.00000	Averaged	
103 Pyridine	1.44873	1.56602	1.56602	0.010	8.09633	20.00000	Averaged	
91 Aniline	1.73597	1.89139	1.89139	0.010	8.95269	20.00000	Averaged	
105 1-methylnaphthalene	0.44878	0.48003	0.48003	0.010	6.96365	20.00000	Averaged	
93 Benzidine	0.10742	0.07672	0.07672	0.010	-28.57418	20.00000	Averaged	<-
111 Azobenzene (1,2-DP-Hydrazin	0.06120	0.06722	0.06722	0.010	9.83903	20.00000	Averaged	
143 1,4-Dioxane	0.58229	0.58633	0.58633	0.010	0.69307	20.00000	Averaged	
$ 137 d8-1,4-Dioxane	0.52919	0.54033	0.54033	0.010	2.10464	20.00000	Averaged	
144 alpha-Terpineol	0.23276	0.26538	0.26538	0.010	14.01432	20.00000	Averaged	
177 p-Benzoquinone	0.24294	0.28246	0.28246	0.010	16.27043	20.00000	Averaged	
98 Retene	0.45784	0.49282	0.49282	0.010	7.63973	20.00000	Averaged	
99 Perylene	0.80684	0.85504	0.85504	0.010	5.97454	20.00000	Averaged	
133 Butylatedhydroxytoluene	0.60167	0.67062	0.67062	0.010	11.45948	20.00000	Averaged	
115 Tributyl Phosphate	0.96132	1.06778	1.06778	0.010	11.07399	20.00000	Averaged	
116 Dibutyl Phenyl Phosphate	0.60372	0.64455	0.64455	0.010	6.76362	20.00000	Averaged	
117 Butyl Diphenyl Phosphate	0.21225	0.24291	0.24291	0.010	14.44867	20.00000	Averaged	
118 Triphenyl Phosphate	0.18586	0.19758	0.19758	0.010	6.30508	20.00000	Averaged	
123 Acetophenone	1.53413	1.67564	1.67564	0.010	9.22460	20.00000	Averaged	
168 Pentachlorobenzene	0.34377	0.34045	0.34045	0.010	-0.96592	20.00000	Averaged	
113 Diphenyl Oxide	0.75012	0.80103	0.80103	0.010	6.78653	20.00000	Averaged	
112 Biphenyl	1.02069	1.12656	1.12656	0.010	10.37196	20.00000	Averaged	
120 2,3,4,6-Tetrachlorophenol	0.21781	0.22643	0.22643	0.010	3.95895	20.00000	Averaged	
151 1,2,4,5-Tetrachlorobenzene	0.45791	0.47888	0.47888	0.010	4.57922	20.00000	Averaged	
110 Tetrachloroguaiacol	0.01819	0.01801	0.01801	0.010	-0.97643	20.00000	Averaged	
109 3,4,5-Trichloroguaiacol	0.10725	0.10883	0.10883	0.010	1.47431	20.00000	Averaged	
181 3,4,6-Trichloroguaiacol	0.34267	0.36480	0.36480	0.010	6.45868	20.00000	Averaged	
108 4,5,6-Trichloroguaiacol	0.14463	0.14962	0.14962	0.010	3.44857	20.00000	Averaged	
184 3,4-Dichloroguaiacol	0.38558	0.41280	0.41280	0.010	7.06032	20.00000	Averaged	
107 4,5-Dichloroguaiacol	0.23171	0.24339	0.24339	0.010	5.04086	20.00000	Averaged	
182 4,6-Dichloroguaiacol	0.47499	0.51106	0.51106	0.010	7.59213	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt6.i Injection Date: 08-JUL-2013 12:01
Lab File ID: 07081301.d Init. Cal. Date(s): 08-JUL-2013 08-JUL-2013
Analysis Type: Init. Cal. Times: 12:01 15:59
Lab Sample ID: IC250708 Quant Type: ISTD
Method: /chem2/nt6.i/20130708.b/SW846070813.m

COMPOUND	RRF / AMOUNT	RF25	CCAL RRF25	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
185 4-Chloroguaiacol	0.11282	0.11994	0.11994	0.010	6.31702	20.00000	Averaged
186 Carbaryl	0.52852	0.53937	0.53937	0.010	2.05387	20.00000	Averaged
178 2-Benzyl-4-Chlorophenol	0.17070	0.17596	0.17596	0.010	3.08602	20.00000	Averaged
106 Guaiacol	1.16486	1.31903	1.31903	0.010	13.23479	20.00000	Averaged
188 2,6-Dichlorophenol	1.08860	1.21673	1.21673	0.010	11.77053	20.00000	Averaged
189 N-Nitrosomethylethylamine	0.42963	0.45128	0.45128	0.010	5.03833	20.00000	Averaged

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130708.b/07081301.d
Lab Smp Id: IC250708 Client Smp ID: IC250708
Inj Date : 08-JUL-2013 12:01
Operator : JZ Inst ID: nt6.i
Smp Info : IC250708
Misc Info : 13-
Comment : 1ul Injection
Method : /chem2/nt6.i/20130708.b/SW846070813.m
Meth Date : 10-Jul-2013 12:38 jianqing Quant Type: ISTD
Cal Date : 08-JUL-2013 15:59 Cal File: 07081308.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: ICALS.sub
Target Version: 3.50

AB 07/10/13

AMOUNTS

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.476	6.476	(0.768)	1735826	37.5000	41.29
$	2 Phenol-d5	99	7.983	7.983	(0.947)	2028885	37.5000	41.55
	3 Phenol	94	7.999	7.999	(0.949)	1162574	25.0000	27.70
$	5 2-Chlorophenol-d4	132	8.132	8.132	(0.965)	1740943	37.5000	41.30
	4 Bis(2-Chloroethyl)ether	93	8.090	8.090	(0.959)	915493	25.0000	26.84
	6 2-Chlorophenol	128	8.154	8.154	(0.967)	888166	25.0000	27.03
	7 1,3-Dichlorobenzene	146	8.367	8.367	(0.992)	1019129	25.0000	26.66
*	8 1,4-Dichlorobenzene-d4	152	8.432	8.432	(1.000)	507223	20.0000	
	9 1,4-Dichlorobenzene	146	8.453	8.453	(1.003)	1024341	25.0000	26.92
$	10 1,2-Dichlorobenzene-d4	152	8.725	8.725	(1.035)	600420	25.0000	26.59
	12 1,2-Dichlorobenzene	146	8.752	8.752	(1.038)	978560	25.0000	27.08
	11 Benzyl alcohol	108	8.699	8.699	(1.032)	596171	25.0000	27.95
	14 2,2'-oxybis(1-Chloropropane)	45	8.955	8.955	(1.062)	1534010	25.0000	28.53
	13 2-Methylphenol	108	8.928	8.928	(1.059)	809310	25.0000	27.49
	17 Hexachloroethane	117	9.238	9.238	(1.096)	362364	25.0000	27.14
	16 N-Nitroso-di-n-propylamine	70	9.174	9.174	(1.088)	661479	25.0000	28.00
	15 4-Methylphenol	108	9.153	9.153	(1.086)	854235	25.0000	28.11
$	18 Nitrobenzene-d5	82	9.356	9.356	(0.893)	831229	25.0000	27.30
	19 Nitrobenzene	77	9.388	9.388	(0.896)	873452	25.0000	27.54
	20 Isophorone	82	9.762	9.762	(0.932)	1368096	25.0000	26.53
	21 2-Nitrophenol	139	9.895	9.895	(0.945)	436617	25.0000	26.36
	22 2,4-Dimethylphenol	107	9.991	9.991	(0.954)	731887	25.0000	26.43
	23 Bis(2-Chloroethoxy)methane	93	10.141	10.141	(0.968)	1080772	25.0000	26.87
	24 Benzoic acid	105	10.243	10.243	(0.978)	1241981	50.0000	51.29
	25 2,4-Dichlorophenol	162	10.275	10.275	(0.981)	682831	25.0000	27.13
	26 1,2,4-Trichlorobenzene	180	10.414	10.414	(0.994)	739016	25.0000	25.74
*	27 Naphthalene-d8	136	10.472	10.472	(1.000)	1843524	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	10.504	10.504	(1.003)	2263181	25.0000	27.05
	29 4-Chloroaniline	127	10.638	10.638	(1.016)	846138	25.0000	26.65
	30 Hexachlorobutadiene	225	10.814	10.814	(1.033)	354419	25.0000	25.71
	31 4-Chloro-3-methylphenol	107	11.434	11.434	(1.092)	633189	25.0000	27.70
	32 2-Methylnaphthalene	141	11.621	11.621	(1.110)	1284538	25.0000	27.53
	33 Hexachlorocyclopentadiene	237	12.000	12.000	(0.900)	406984	25.0000	26.66
	34 2,4,6-Trichlorophenol	196	12.128	12.128	(0.909)	422657	25.0000	26.48
	35 2,4,5-Trichlorophenol	196	12.187	12.187	(0.914)	428318	25.0000	27.02
$	36 2-Fluorobiphenyl	172	12.262	12.262	(0.919)	1498299	25.0000	26.49
	37 2-Chloronaphthalene	162	12.406	12.406	(0.930)	1439833	25.0000	27.56
	38 2-Nitroaniline	65	12.630	12.630	(0.947)	403355	25.0000	29.91
	39 Dimethylphthalate	163	12.999	12.999	(0.975)	1486782	25.0000	26.15
	40 Acenaphthylene	152	13.085	13.085	(0.981)	2133027	25.0000	27.25
	41 2,6-Dinitrotoluene	165	13.095	13.095	(0.982)	342776	25.0000	27.53
*	42 Acenaphthene-d10	164	13.336	13.336	(1.000)	1048119	20.0000	
	43 3-Nitroaniline	138	13.314	13.314	(0.998)	336087	25.0000	27.64
	44 Acenaphthene	153	13.389	13.389	(1.004)	1363677	25.0000	27.00
	45 2,4-Dinitrophenol	184	13.480	13.480	(1.011)	428566	50.0000	48.88
	46 Dibenzofuran	168	13.651	13.651	(1.024)	1765126	25.0000	28.36
	47 4-Nitrophenol	109	13.597	13.597	(1.020)	134466	25.0000	26.85
	48 2,4-Dinitrotoluene	165	13.726	13.726	(1.029)	394998	25.0000	26.61
	50 Diethylphthalate	149	14.153	14.153	(1.061)	1308362	25.0000	26.28
	49 Fluorene	166	14.206	14.206	(1.065)	1401358	25.0000	27.00
	51 4-Chlorophenyl-phenylether	204	14.222	14.222	(1.066)	620999	25.0000	26.65
	52 4-Nitroaniline	138	14.303	14.303	(1.073)	195374	25.0000	20.54
	53 4,6-Dinitro-2-methylphenol	198	14.383	14.383	(0.915)	517590	50.0000	51.32
	54 N-Nitrosodiphenylamine	169	14.431	14.431	(0.918)	961950	25.0000	25.95
$	55 2,4,6-Tribromophenol	330	14.628	14.628	(1.097)	280101	37.5000	36.73
	56 4-Bromophenyl-phenylether	248	15.008	15.008	(0.955)	352314	25.0000	25.32
	57 Hexachlorobenzene	284	15.232	15.232	(0.969)	370110	25.0000	24.31
	58 Pentachlorophenol	266	15.526	15.526	(0.988)	207628	25.0000	24.31
*	59 Phenanthrene-d10	188	15.718	15.718	(1.000)	1392753	20.0000	
	60 Phenanthrene	178	15.756	15.756	(1.002)	1829497	25.0000	26.26
	61 Anthracene	178	15.830	15.830	(1.007)	1823322	25.0000	26.85
	62 Carbazole	167	16.103	16.103	(1.024)	1268701	25.0000	21.78
	63 Di-n-butylphthalate	149	16.797	16.797	(1.069)	2332969	25.0000	27.63
	64 Fluoranthene	202	17.695	17.695	(1.126)	1880837	25.0000	26.99
	65 Pyrene	202	18.053	18.053	(0.901)	2022665	25.0000	27.03
$	66 Terphenyl-d14	244	18.347	18.347	(0.916)	977617	25.0000	26.38
	67 Butylbenzylphthalate	149	19.217	19.217	(0.959)	1050264	25.0000	28.13
	68 Benzo(a)anthracene	228	20.008	20.008	(0.999)	1767246	25.0000	26.98
*	69 Chrysene-d12	240	20.035	20.035	(1.000)	1340567	20.0000	
	70 3,3'-Dichlorobenzidine	252	20.003	20.003	(0.998)	561685	25.0000	27.91
	71 Chrysene	228	20.072	20.072	(1.002)	1680757	25.0000	26.84
	72 bis(2-Ethylhexyl)phthalate	149	20.200	20.200	(0.956)	1467647	25.0000	27.68
*	134 Di-n-octylphthalate-d4	153	21.135	21.135	(1.000)	2097720	20.0000	
	73 Di-n-octylphthalate	149	21.141	21.141	(1.000)	2650351	25.0000	26.28

	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	21.664	21.664	(0.976)	1932187	25.0000	28.71(H)
75	Benzo(k)fluoranthene	252	21.696	21.696	(0.978)	1868717	25.0000	27.14
187	Total Benzofluoranthenes	252	21.696	21.696	(0.978)	3582302	50.0000	55.60
76	Benzo(a)pyrene	252	22.113	22.113	(0.996)	1635800	25.0000	27.78
* 77	Perylene-d12	264	22.193	22.193	(1.000)	1450550	20.0000	
78	Indeno(1,2,3-cd)pyrene	276	23.849	23.849	(1.075)	2093323	25.0000	27.99
79	Dibenzo(a,h)anthracene	278	23.865	23.865	(1.075)	1742931	25.0000	28.79
80	Benzo(g,h,i)perylene	276	24.314	24.314	(1.096)	1811430	25.0000	26.96
90	N-Nitrosodimethylamine	74	3.939	3.939	(0.467)	608970	25.0000	26.26
103	Pyridine	79	3.896	3.896	(0.462)	992901	25.0000	27.02
91	Aniline	93	7.983	7.983	(0.947)	1199193	25.0000	27.24
105	1-methylnaphthalene	141	11.797	11.797	(1.127)	1106180	25.0000	26.74
93	Benzidine	184	17.930	17.930	(0.895)	128566	25.0000	17.86
111	Azobenzene (1,2-DP-Hydrazine)	77	16.466	16.466	(1.048)	117033	25.0000	27.46
143	1,4-Dioxane	88	3.143	3.143	(0.373)	371747	25.0000	25.17
$ 137	d8-1,4-Dioxane	96	3.084	3.084	(0.366)	342582	25.0000	25.53
144	alpha-Terpineol	59	10.520	10.520	(1.005)	611551	25.0000	28.50
177	p-Benzoquinone	82	7.123	7.123	(0.845)	179089	25.0000	29.07
98	Retene	219	18.598	18.598	(0.928)	825825	25.0000	26.91
99	Perylene	252	22.230	22.230	(1.002)	1550354	25.0000	26.49
133	Butylatedhydroxytoluene	205	13.491	13.491	(1.012)	878616	25.0000	27.86
115	Tributyl Phosphate	99	14.511	14.511	(0.923)	1858942	25.0000	27.77
116	Dibutyl Phenyl Phosphate	175	16.247	16.247	(1.034)	1122132	25.0000	26.69
117	Butyl Diphenyl Phosphate	94	17.930	17.930	(0.895)	407051	25.0000	28.61
118	Triphenyl Phosphate	326	19.538	19.538	(0.975)	331084	25.0000	26.58
123	Acetophenone	105	9.121	9.121	(1.082)	1062406	25.0000	27.31
168	Pentachlorobenzene	250	13.688	13.688	(1.026)	446043	25.0000	24.76
113	Diphenyl Oxide	170	12.582	12.582	(0.944)	1049468	25.0000	26.70
112	Biphenyl	154	12.395	12.395	(0.929)	1475958	25.0000	27.59
120	2,3,4,6-Tetrachlorophenol	232	13.923	13.923	(1.044)	296656	25.0000	25.99
151	1,2,4,5-Tetrachlorobenzene	216	11.957	11.957	(0.897)	627404	25.0000	26.14
110	Tetrachloroguaiacol	247	15.232	15.232	(0.969)	62719	50.0000	49.51
109	3,4,5-Trichloroguaiacol	213	14.019	14.019	(0.892)	189465	25.0000	25.37
181	3,4,6-Trichloroguaiacol	211	14.137	14.137	(1.677)	231294	25.0000	26.61
108	4,5,6-Trichloroguaiacol	213	15.050	15.050	(1.129)	196024	25.0000	25.86
184	3,4-Dichloroguaiacol	192	12.476	12.476	(1.480)	261729	25.0000	26.77
107	4,5-Dichloroguaiacol	192	13.256	13.256	(0.994)	637765	50.0000	52.52
182	4,6-Dichloroguaiacol	192	13.256	13.256	(1.572)	648048	50.0000	53.80
185	4-Chloroguaiacol	115	11.386	11.386	(1.087)	138198	12.5000	13.29
186	Carbaryl	144	16.514	16.514	(1.051)	939018	25.0000	25.51
178	2-Benzyl-4-Chlorophenol	218	16.466	16.466	(1.048)	306341	25.0000	25.77
106	Guaiacol	124	9.377	9.377	(1.112)	836300	25.0000	28.31
188	2,6-Dichlorophenol	162	10.649	10.649	(1.263)	771444	25.0000	27.94
189	N-Nitrosomethylethylamine	88	5.659	5.659	(0.671)	286123	25.0000	26.26

QC Flag Legend

H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 07081301.d
Lab Smp Id: IC250708
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130708.b/SW846070813.m
Misc Info: 13-

Calibration Date: 08-JUL-2013
Calibration Time: 12:01
Client Smp ID: IC250708
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	507223	253612	1014446	507223	0.00
27 Naphthalene-d8	1843524	921762	3687048	1843524	0.00
42 Acenaphthene-d10	1048119	524060	2096238	1048119	0.00
59 Phenanthrene-d10	1392753	696376	2785506	1392753	0.00
69 Chrysene-d12	1340567	670284	2681134	1340567	0.00
134 Di-n-octylphthala	2097720	1048860	4195440	2097720	0.00
77 Perylene-d12	1450550	725275	2901100	1450550	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.43	7.93	8.93	8.43	0.00
27 Naphthalene-d8	10.47	9.97	10.97	10.47	0.00
42 Acenaphthene-d10	13.34	12.84	13.84	13.34	0.00
59 Phenanthrene-d10	15.72	15.22	16.22	15.72	0.00
69 Chrysene-d12	20.03	19.53	20.53	20.03	0.00
134 Di-n-octylphthala	21.14	20.64	21.64	21.14	0.00
77 Perylene-d12	22.19	21.69	22.69	22.19	0.00

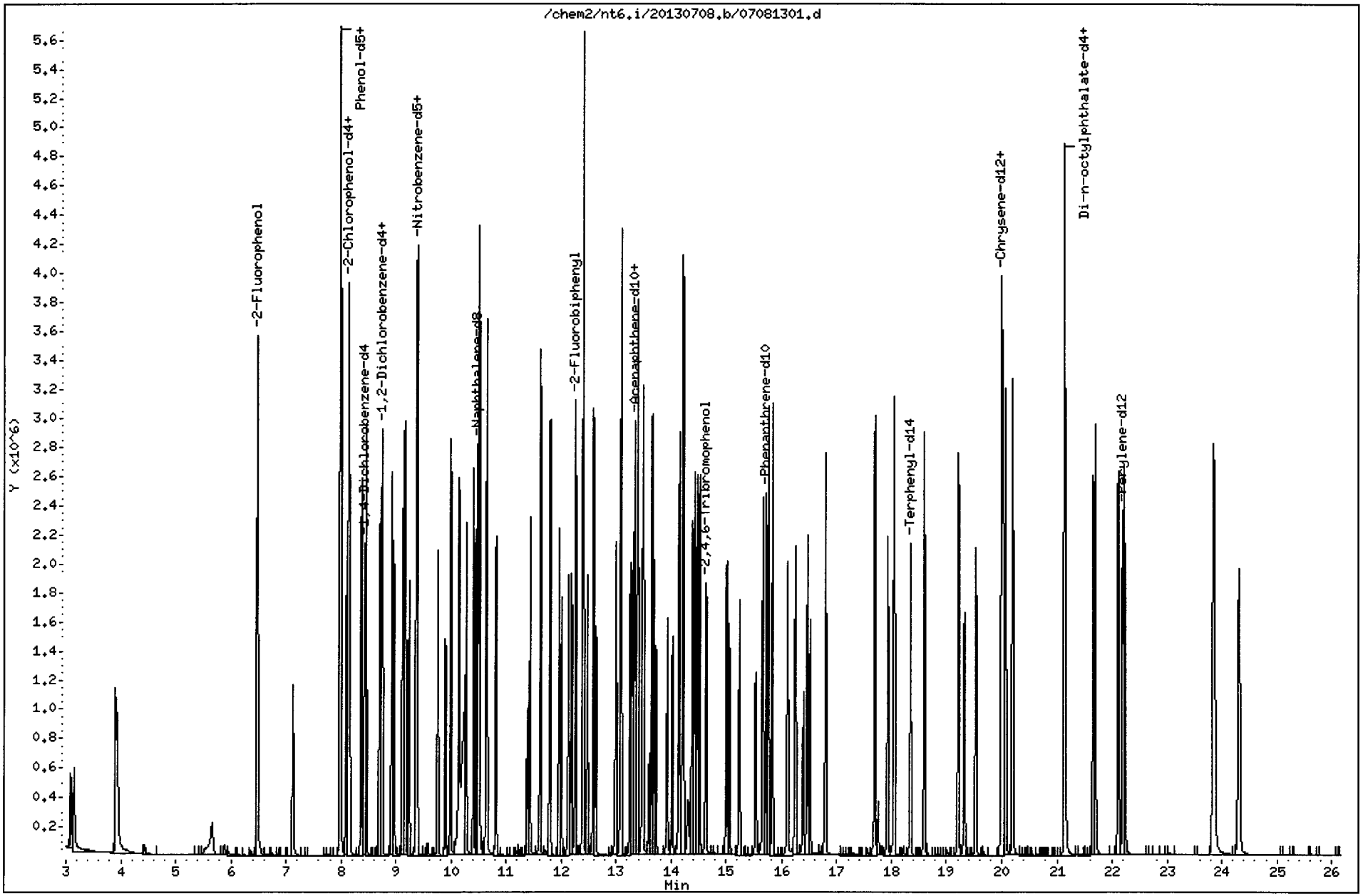
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem2/nt6.i/20130708.b/07081301.d
Date : 08-JUL-2013 12:01
Client ID: IC250708
Sample Info: IC250708

Instrument: nt6.i

Operator: JZ
Column diameter: 0.32

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - 07081301.d

Lab ID: IC250708, Method: SW846070813.m, Instrument: nt6.i, Date: 08-JUL-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem2/nt6.i/20130708.b/tune.b/07081301.d

Date : 08-JUL-2013 12:01

Client ID: DFTPP0708

Instrument: nt6.i

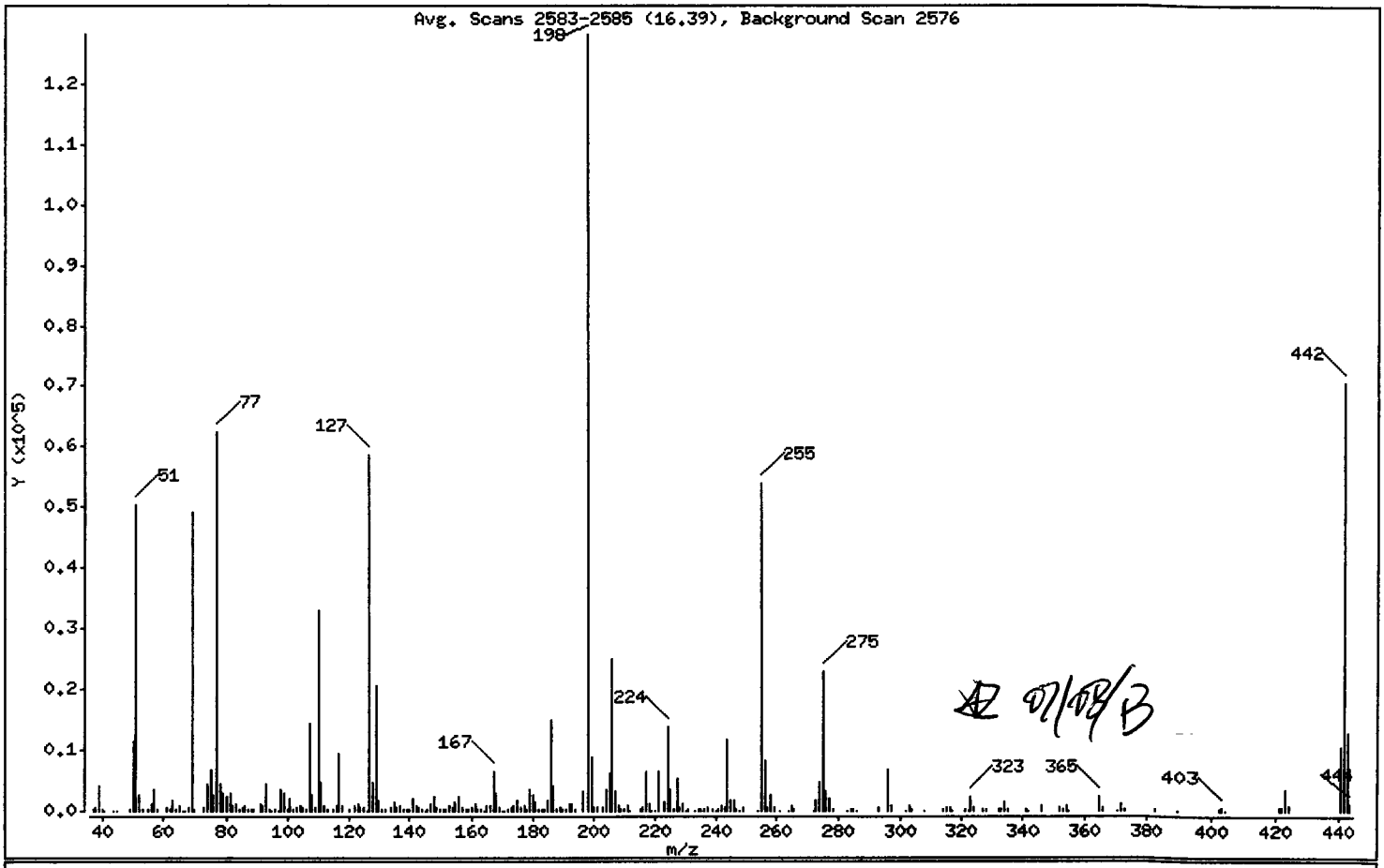
Sample Info: DFTPP0708

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	39.30
68	Less than 2.00% of mass 69	0.42 (1.08)
69	Mass 69 relative abundance	38.36
70	Less than 2.00% of mass 69	0.29 (0.77)
127	10.00 - 80.00% of mass 198	45.80
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.99
275	10.00 - 60.00% of mass 198	17.94
365	Greater than 1.00% of mass 198	1.90
441	0.01 - 24.00% of mass 442	8.23 (14.94)
442	50.00 - 200.00% of mass 198	55.07
443	15.00 - 24.00% of mass 442	10.12 (18.38)

Data File: /chem2/nt6.i/20130708.b/tune.b/07081301.d

Date : 08-JUL-2013 12:01

Client ID: DFTPP0708

Instrument: nt6.i

Sample Info: DFTPP0708

Operator: JZ

Column phase: ZB-5msi

Column diameter: 0.32

Data File: 07081301.d

Spectrum: Avg. Scans 2583-2585 (16.39), Background Scan 2576

Location of Maximum: 198.00

Number of points: 257

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	351	113.00	258	182.00	323	259.00	489
38.00	654	115.00	149	183.00	440	261.00	119
39.00	4089	116.00	853	184.00	419	264.00	74
40.00	357	117.00	9482	185.00	1676	265.00	900
41.00	62	118.00	800	186.00	15053	266.00	234
44.00	21	120.00	152	187.00	4158	272.00	130
45.00	107	122.00	1012	188.00	359	273.00	1833
49.00	241	123.00	1181	189.00	671	274.00	4695
50.00	11448	124.00	720	190.00	250	275.00	22992
51.00	50384	125.00	606	191.00	418	276.00	3351
52.00	2651	126.00	110	192.00	1189	277.00	2001
53.00	338	127.00	58712	193.00	1072	278.00	374
55.00	150	128.00	4584	194.00	224	283.00	71
56.00	1295	129.00	20648	196.00	3152	284.00	187
57.00	3499	130.00	1776	198.00	128192	285.00	389
58.00	240	131.00	411	199.00	8956	286.00	64
61.00	616	132.00	214	200.00	658	293.00	568
62.00	400	134.00	534	201.00	600	296.00	6704
63.00	1682	135.00	1503	203.00	522	297.00	948
64.00	326	136.00	609	204.00	3457	302.00	67
65.00	807	137.00	1026	205.00	6089	303.00	887
66.00	59	138.00	195	206.00	25008	304.00	220
67.00	129	139.00	251	207.00	3119	308.00	58
68.00	533	140.00	430	208.00	778	314.00	256
69.00	49176	141.00	2096	209.00	225	315.00	617
70.00	378	142.00	785	210.00	406	316.00	465
73.00	511	143.00	610	211.00	1005	317.00	54
74.00	4387	144.00	359	212.00	54	321.00	244
75.00	6759	145.00	93	215.00	252	322.00	55
76.00	2554	146.00	434	216.00	454	323.00	2469
77.00	62568	147.00	1120	217.00	6601	324.00	486
78.00	4549	148.00	2309	218.00	1200	327.00	359
79.00	2827	149.00	552	219.00	112	328.00	208
80.00	2308	150.00	281	220.00	75	332.00	172
81.00	3084	151.00	419	221.00	6462	333.00	254

Data File: /chem2/nt6.i/20130708.b/tune.b/07081301.d

Date : 08-JUL-2013 12:01

Client ID: DFTPP0708 Instrument: nt6.i

Sample Info: DFTPP0708

Operator: JZ

Column phase: ZB-5msi Column diameter: 0.32

Data File: 07081301.d
Spectrum: Avg. Scans 2583-2585 (16.39), Background Scan 2576
Location of Maximum: 198.00
Number of points: 257

m/z	Y	m/z	Y	m/z	Y	m/z	Y
82.00	1023	152.00	151	223.00	1438	334.00	1445
83.00	1057	153.00	860	224.00	13908	335.00	381
84.00	262	154.00	724	225.00	3444	341.00	270
85.00	507	155.00	1435	226.00	360	342.00	52
86.00	739	156.00	2390	227.00	5255	346.00	763
87.00	442	157.00	602	228.00	710	352.00	608
88.00	186	158.00	304	229.00	1152	353.00	420
89.00	213	159.00	368	230.00	125	354.00	739
91.00	1054	160.00	709	231.00	425	355.00	138
92.00	807	161.00	1188	233.00	75	365.00	2436
93.00	4480	162.00	263	234.00	342	366.00	539
94.00	288	163.00	196	235.00	373	371.00	144
95.00	24	164.00	131	236.00	340	372.00	1098
96.00	379	165.00	943	237.00	506	373.00	305
97.00	94	166.00	861	239.00	214	383.00	381
98.00	3430	167.00	6457	240.00	52	390.00	80
99.00	2905	168.00	2966	241.00	401	402.00	428
100.00	362	169.00	633	242.00	889	403.00	631
101.00	1955	170.00	51	243.00	639	404.00	137
102.00	150	171.00	96	244.00	11652	421.00	588
103.00	640	172.00	423	245.00	1751	422.00	542
104.00	958	173.00	637	246.00	1687	423.00	3600
105.00	662	174.00	833	247.00	316	424.00	767
106.00	352	175.00	1788	248.00	67	441.00	10544
107.00	14521	176.00	545	249.00	446	442.00	70592
108.00	2578	177.00	796	254.00	88	443.00	12973
109.00	487	178.00	354	255.00	53872	444.00	1211
110.00	33112	179.00	3512	256.00	8218		
111.00	4780	180.00	2638	257.00	636		
112.00	759	181.00	1493	258.00	2717		

Data File: /chem2/nt6.i/20130708.b/tune.b/07081301.d

Date : 08-JUL-2013 12:01

Client ID: DFTPP0708

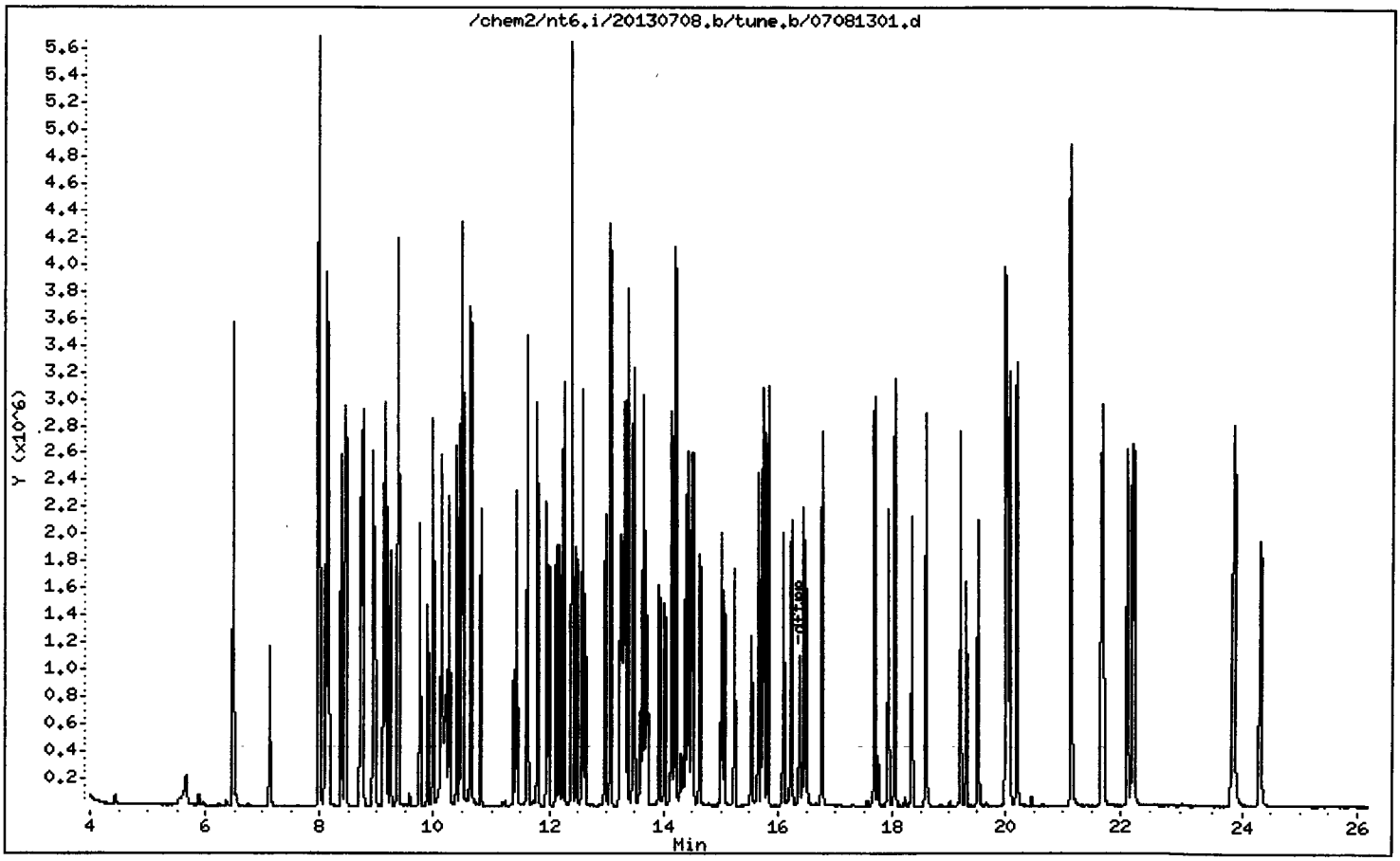
Instrument: nt6.i

Sample Info: DFTPP0708

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/20130708.b/ddt.b/07081301.d ARI ID: DDT
Method: /chem2/nt6.i/20130708.b/ddt.b/sw846ddt.m Misc: 13-
Analysis Date: 08-JUL-2013 12:01 Instrument: nt6.i

COMPOUND	RT	AREA
Pentachlorophenol	15.526	217854
Benzidine	17.930	123444
4,4'-DDE	----	----
4,4'-DDD	18.854	2543
4,4'-DDT	19.324	481656

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

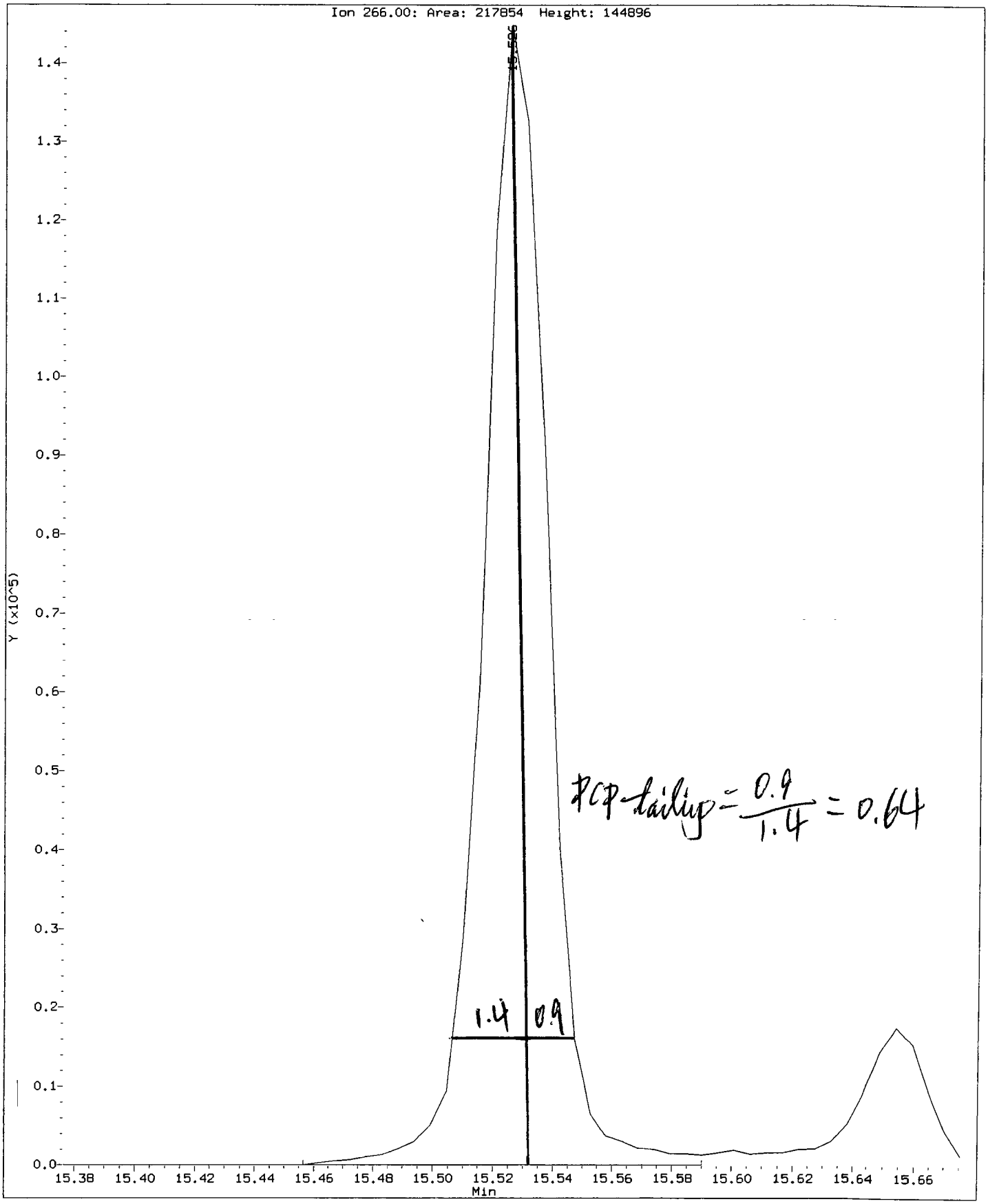
$$\text{DDT Percent Breakdown} = \frac{(0 + 2543) * 100}{(0 + 2543 + 481656)}$$

DDT Percent Breakdown = 0.5 %

07/08/13

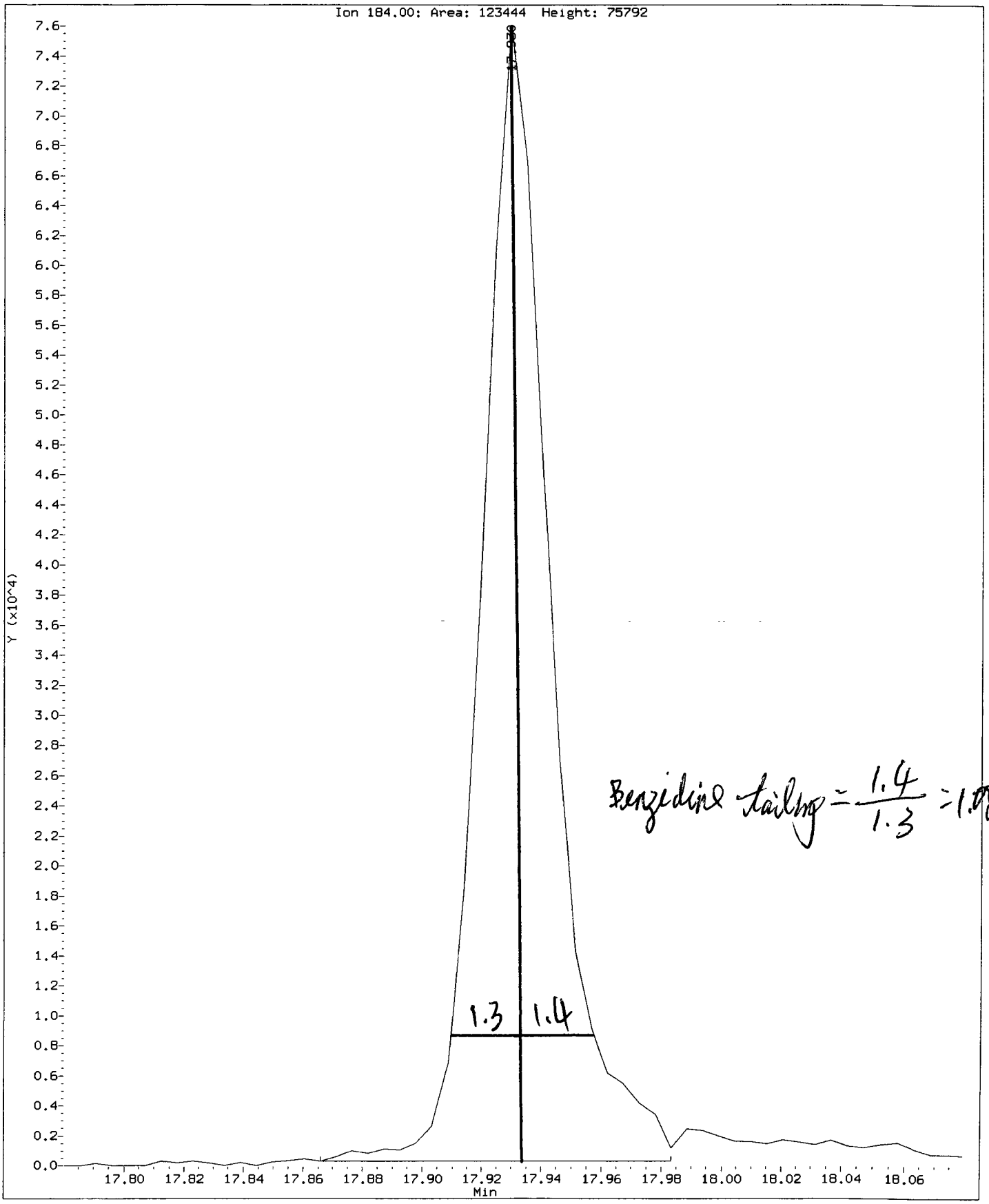
Data File: /chem2/nt6.1/20130708.b/ddt.b/07081301.d
Injection Date: 08-JUL-2013 12:01
Instrument: nt6.1
Client Sample ID: DDT0708

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem2/nt6.i/20130708.b/ddt.b/07081301.d
Injection Date: 08-JUL-2013 12:01
Instrument: nt6.i
Client Sample ID: DDT0708

Compound: Benzidine
CAS Number:



Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130708.b/07081314.d
Lab Smp Id: WU65A Client Smp ID: LF-TP-001-20130619-
Inj Date : 08-JUL-2013 20:13
Operator : JZ Inst ID: nt6.i
Smp Info : WU65A
Misc Info : 13-13119
Comment : 1ul Injection
Method : /chem2/nt6.i/20130708.b/SW846070813.m
Meth Date : 10-Jul-2013 12:21 jianqing Quant Type: ISTD
Cal Date : 08-JUL-2013 15:59 Cal File: 07081308.d
Als bottle: 14
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SEPAtclp.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt/Vo * CpndVariable 07/10/13

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	6.470	6.483	(0.768)	592433	12.6956	12.70
$ 2	Phenol-d5	99	7.965	7.995	(0.945)	465588	8.59088	8.591
3	Phenol	94	Compound Not Detected.					
$ 5	2-Chlorophenol-d4	132	8.120	8.134	(0.964)	920201	19.6687	19.67
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	8.425	8.428	(1.000)	563015	20.0000	
9	1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10	1,2-Dichlorobenzene-d4	152	8.724	8.732	(1.036)	401328	16.0106	16.01
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.					

							CONCENTRATIONS	
	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/mL)	FINAL (ug/L)
	15 4-Methylphenol	108	Compound Not Detected.					
$	18 Nitrobenzene-d5	82	9.344	9.362	(0.893)	538286	16.3095	16.31
	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	10.466	10.474	(1.000)	1998636	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	12.250	12.263	(0.919)	1221278	18.7004	18.70
	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	13.329	13.342	(1.000)	1210122	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	14.616	14.640	(1.097)	282810	32.1219	32.12
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	15.706	15.725	(1.000)	1771352	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	18.345	18.353	(0.916)	1201445	27.6378	27.64
	67 Butylbenzylphthalate	149	Compound Not Detected.					
	68 Benzo(a)anthracene	228	Compound Not Detected.					
*	69 Chrysene-d12	240	20.023	20.041	(1.000)	1572275	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	21.123	21.137	(1.000)	2249522	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	22.181	22.200	(1.000)	1668374	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.					
	120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					
	151 1,2,4,5-Tetrachlorobenzene	216	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: 07081314.d
Lab Smp Id: WU65A
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130708.b/SW846070813.m
Misc Info: 13-13119

Calibration Date: 08-JUL-2013
Calibration Time: 12:01
Client Smp ID: LF-TP-001-201306
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	507223	253612	1014446	563015	11.00
27 Naphthalene-d8	1843524	921762	3687048	1998636	8.41
42 Acenaphthene-d10	1048119	524060	2096238	1210122	15.46
59 Phenanthrene-d10	1392753	696376	2785506	1771352	27.18
69 Chrysene-d12	1340567	670284	2681134	1572275	17.28
134 Di-n-octylphthala	2097720	1048860	4195440	2249522	7.24
77 Perylene-d12	1450550	725275	2901100	1668374	15.02

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.43	7.93	8.93	8.42	-0.08
27 Naphthalene-d8	10.47	9.97	10.97	10.47	-0.06
42 Acenaphthene-d10	13.34	12.84	13.84	13.33	-0.05
59 Phenanthrene-d10	15.72	15.22	16.22	15.71	-0.08
69 Chrysene-d12	20.03	19.53	20.53	20.02	-0.06
134 Di-n-octylphthala	21.14	20.64	21.64	21.12	-0.06
77 Perylene-d12	22.19	21.69	22.69	22.18	-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.

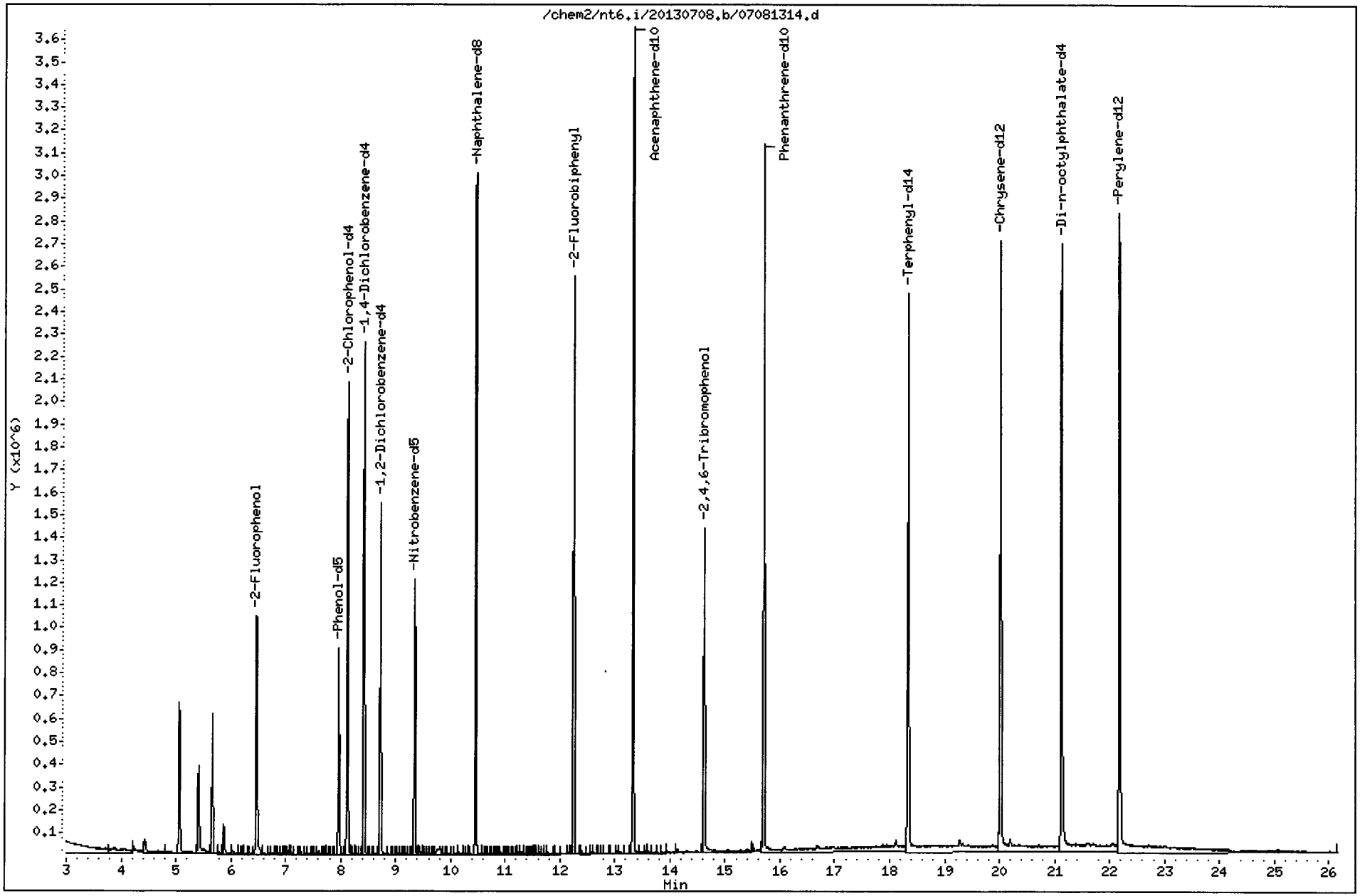
RECOVERY REPORT

Client Name: SAIC
Client SDG: WU65
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: WU65A
Client Smp ID: LF-TP-001-20130619-
Level: LOW
Operator: JZ
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: SEPAtclpLCS.spk
Quant Type: ISTD
Sublist File: SEPAtclp.sub
Method File: /chem2/nt6.i/20130708.b/SW846070813.m
Misc Info: 13-13119

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	37.50	12.70	33.85	21-120
$ 2 Phenol-d5	37.50	8.591	22.91	12-120
$ 5 2-Chlorophenol-d4	37.50	19.67	52.45	33-120
$ 10 1,2-Dichlorobenzen	25.00	16.01	64.04	33-120
$ 18 Nitrobenzene-d5	25.00	16.31	65.24	38-120
$ 36 2-Fluorobiphenyl	25.00	18.70	74.80	40-120
$ 55 2,4,6-Tribromophen	37.50	32.12	85.66	37-126
$ 66 Terphenyl-d14	25.00	27.64	110.55	39-120

Data File: /chem2/nt6.i/20130708.b/07081314.d
Date : 08-JUL-2013 20:13
Client ID: LF-TP-001-20130619-
Sample Info: WU65A
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32



CO-ELUTION SUMMARY FOR FILE - 07081314.d

Lab ID: WU65A, Method: SW846070813.m, Instrument: nt6.i, Date: 08-JUL-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130708.b/07081315.d
Lab Smp Id: WU65B Client Smp ID: LF-FD-001-20130619-
Inj Date : 08-JUL-2013 20:47
Operator : JZ Inst ID: nt6.i
Smp Info : WU65B
Misc Info : 13-13120
Comment : 1ul Injection
Method : /chem2/nt6.i/20130708.b/SW846070813.m
Meth Date : 10-Jul-2013 12:21 jianqing Quant Type: ISTD
Cal Date : 08-JUL-2013 15:59 Cal File: 07081308.d
Als bottle: 15
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SEPAtclp.sub
Target Version: 3.50

R 07/10/13

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	6.466	6.483	(0.768)	630390	12.5199	12.52
$	2	Phenol-d5	99	7.967	7.995	(0.946)	489292	8.36722	8.367
	3	Phenol	94	Compound Not Detected.					
$	5	2-Chlorophenol-d4	132	8.122	8.134	(0.964)	963699	19.0902	19.09
	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	8.421	8.428	(1.000)	607495	20.0000	
	9	1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10	1,2-Dichlorobenzene-d4	152	8.720	8.732	(1.036)	427557	15.8080	15.81
	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	9.345	9.362	(0.893)	570583	15.9500	15.95
	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	10.462	10.474	(1.000)	2166310	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	12.251	12.263	(0.919)	1300517	18.4423	18.44
	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	13.325	13.342	(1.000)	1306668	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	14.623	14.640	(1.097)	317680	33.4165	33.42
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	15.708	15.725	(1.000)	1928318	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	18.341	18.353	(0.916)	1257880	25.9600	25.96
	67 Butylbenzylphthalate	149	Compound Not Detected.					
	68 Benzo(a)anthracene	228	Compound Not Detected.					
*	69 Chrysene-d12	240	20.024	20.041	(1.000)	1752519	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	21.125	21.137	(1.000)	2464637	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	22.182	22.200	(1.000)	1852262	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.					
	120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					
	151 1,2,4,5-Tetrachlorobenzene	216	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: 07081315.d
Lab Smp Id: WU65B
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130708.b/SW846070813.m
Misc Info: 13-13120

Calibration Date: 08-JUL-2013
Calibration Time: 12:01
Client Smp ID: LF-FD-001-201306
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 4.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	507223	253612	1014446	607495	19.77
27 Naphthalene-d8	1843524	921762	3687048	2166310	17.51
42 Acenaphthene-d10	1048119	524060	2096238	1306668	24.67
59 Phenanthrene-d10	1392753	696376	2785506	1928318	38.45
69 Chrysene-d12	1340567	670284	2681134	1752519	30.73
134 Di-n-octylphthala	2097720	1048860	4195440	2464637	17.49
77 Perylene-d12	1450550	725275	2901100	1852262	27.69

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.43	7.93	8.93	8.42	-0.12
27 Naphthalene-d8	10.47	9.97	10.97	10.46	-0.10
42 Acenaphthene-d10	13.34	12.84	13.84	13.33	-0.08
59 Phenanthrene-d10	15.72	15.22	16.22	15.71	-0.07
69 Chrysene-d12	20.03	19.53	20.53	20.02	-0.05
134 Di-n-octylphthala	21.14	20.64	21.64	21.12	-0.05
77 Perylene-d12	22.19	21.69	22.69	22.18	-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.

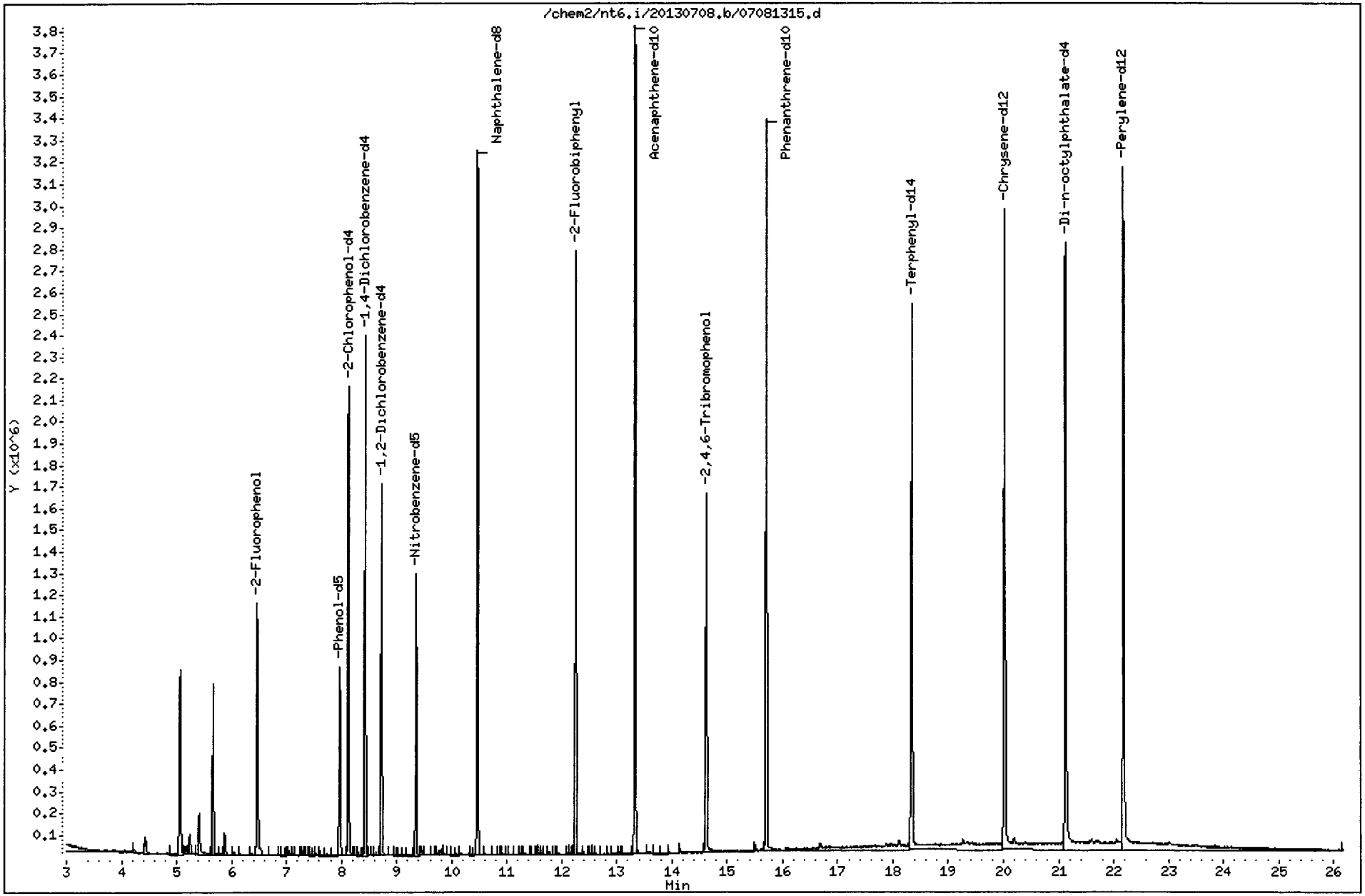
RECOVERY REPORT

Client Name: SAIC
Client SDG: WU65
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: WU65B
Client Smp ID: LF-FD-001-20130619-
Level: LOW
Operator: JZ
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: SEPAtclpLCS.spk
Quant Type: ISTD
Sublist File: SEPAtclp.sub
Method File: /chem2/nt6.i/20130708.b/SW846070813.m
Misc Info: 13-13120

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	37.50	12.52	33.39	21-120
$ 2 Phenol-d5	37.50	8.367	22.31	12-120
$ 5 2-Chlorophenol-d4	37.50	19.09	50.91	33-120
$ 10 1,2-Dichlorobenzen	25.00	15.81	63.23	33-120
$ 18 Nitrobenzene-d5	25.00	15.95	63.80	38-120
$ 36 2-Fluorobiphenyl	25.00	18.44	73.77	40-120
$ 55 2,4,6-Tribromophen	37.50	33.42	89.11	37-126
$ 66 Terphenyl-d14	25.00	25.96	103.84	39-120

Data File: /chem2/nt6.i/20130708.b/07081315.d
Date : 08-JUL-2013 20:47
Client ID: LF-FD-001-20130619-
Sample Info: WU65B
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32



CO-ELUTION SUMMARY FOR FILE - 07081315.d

Lab ID: WU65B, Method: SW846070813.m, Instrument: nt6.i, Date: 08-JUL-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130708.b/07081310.d
Lab Smp Id: WU65MBW1 Client Smp ID: WU65MBW1
Inj Date : 08-JUL-2013 17:56
Operator : JZ Inst ID: nt6.i
Smp Info : WU65MBW1,
Misc Info : 13-13119
Comment : 1ul Injection
Method : /chem2/nt6.i/20130708.b/SW846070813.m
Meth Date : 10-Jul-2013 12:47 jianqing Quant Type: ISTD
Cal Date : 08-JUL-2013 15:59 Cal File: 07081308.d
Als bottle: 10 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SEPAtclpMBLCS.sub
Target Version: 3.50

07/10/13

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	6.473	6.476	(0.768)	543870	12.9124	12.91
$ 2	Phenol-d5	99	7.968	7.983	(0.945)	432993	8.85145	8.851
3	Phenol	94	Compound Not Detected.					
$ 5	2-Chlorophenol-d4	132	8.123	8.132	(0.964)	793577	18.7922	18.79
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	8.428	8.432	(1.000)	508186	20.0000	
9	1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10	1,2-Dichlorobenzene-d4	152	8.727	8.725	(1.035)	336041	14.8524	14.85
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	9.352	9.356	(0.893)	475521	15.9004	15.90
	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	10.468	10.472	(1.000)	1811025	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	12.258	12.262	(0.919)	1039956	17.5568	17.56
	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	13.332	13.336	(1.000)	1097574	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	14.138	14.153	(1.060)	27783	0.53293	0.5329
	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	14.625	14.628	(1.097)	214187	26.8223	26.82
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	15.714	15.718	(1.000)	1632027	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	18.348	18.347	(0.916)	1221048	29.7738	29.77
	67 Butylbenzylphthalate	149	Compound Not Detected.					
	68 Benzo(a)anthracene	228	Compound Not Detected.					
*	69 Chrysene-d12	240	20.026	20.035	(1.000)	1483292	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	21.126	21.135	(1.000)	1986160	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	22.189	22.193	(1.000)	1578102	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.					
	120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					
	151 1,2,4,5-Tetrachlorobenzene	216	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: 07081310.d
Lab Smp Id: WU65MBW1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130708.b/SW846070813.m
Misc Info: 13-13119

Calibration Date: 08-JUL-2013
Calibration Time: 12:01
Client Smp ID: WU65MBW1
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	507223	253612	1014446	508186	0.19
27 Naphthalene-d8	1843524	921762	3687048	1811025	-1.76
42 Acenaphthene-d10	1048119	524060	2096238	1097574	4.72
59 Phenanthrene-d10	1392753	696376	2785506	1632027	17.18
69 Chrysene-d12	1340567	670284	2681134	1483292	10.65
134 Di-n-octylphthala	2097720	1048860	4195440	1986160	-5.32
77 Perylene-d12	1450550	725275	2901100	1578102	8.79

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.43	7.93	8.93	8.43	-0.05
27 Naphthalene-d8	10.47	9.97	10.97	10.47	-0.04
42 Acenaphthene-d10	13.34	12.84	13.84	13.33	-0.03
59 Phenanthrene-d10	15.72	15.22	16.22	15.71	-0.02
69 Chrysene-d12	20.03	19.53	20.53	20.03	-0.05
134 Di-n-octylphthala	21.14	20.64	21.64	21.13	-0.04
77 Perylene-d12	22.19	21.69	22.69	22.19	-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.

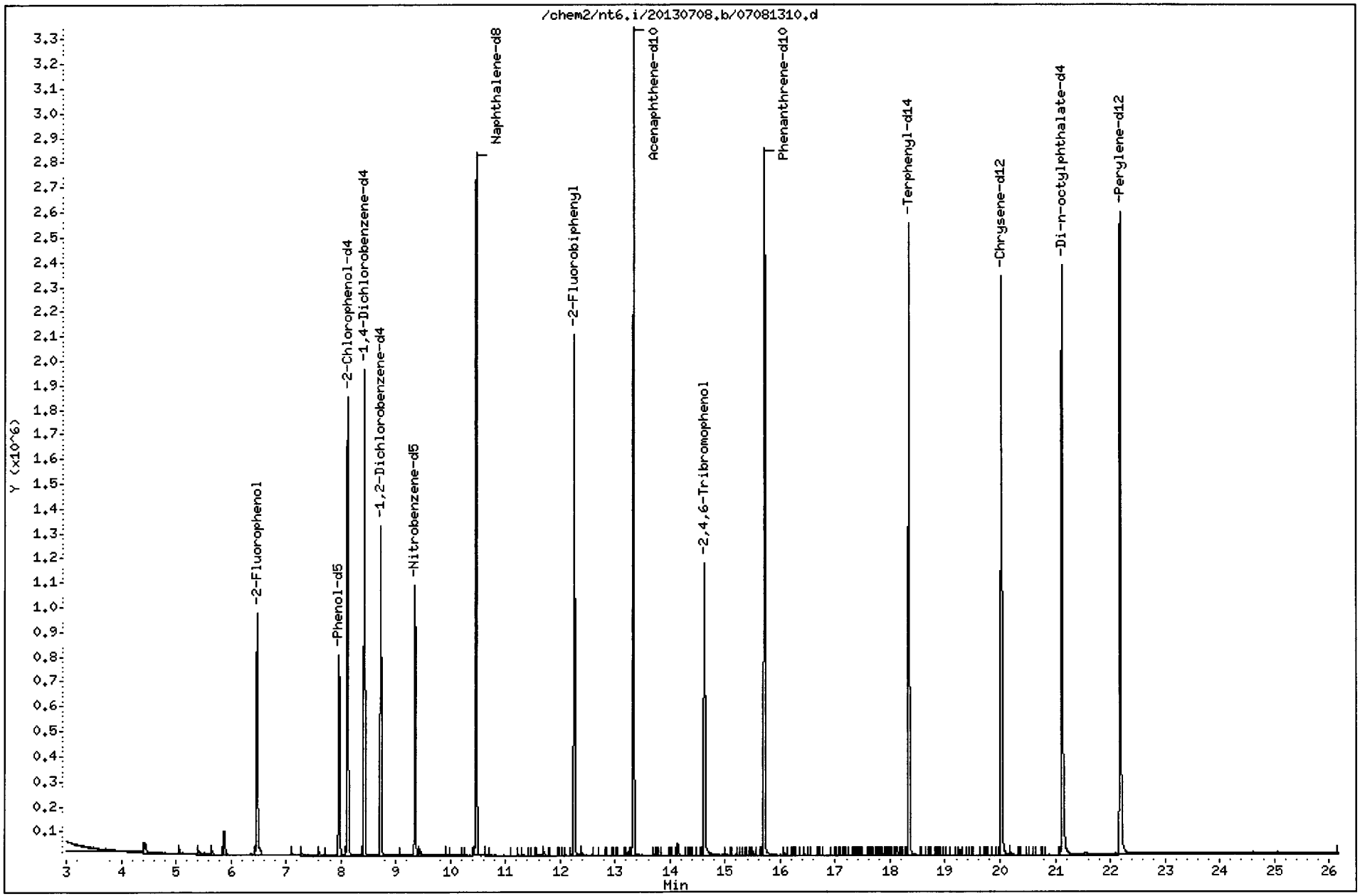
RECOVERY REPORT

Client Name: SAIC
Client SDG: WU65
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: WU65MBW1
Client Smp ID: WU65MBW1
Level: LOW
Operator: JZ
Data Type: MS DATA
SampleType: BLANK
SpikeList File: SEPAtclpLCS.spk
Quant Type: ISTD
Sublist File: SEPAtclpMBLCS.sub
Method File: /chem2/nt6.i/20130708.b/SW846070813.m
Misc Info: 13-13119

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	37.50	12.91	34.43	30-120
$ 2 Phenol-d5	37.50	8.851	23.60	20-120
$ 5 2-Chlorophenol-d4	37.50	18.79	50.11	49-120
$ 10 1,2-Dichlorobenzen	25.00	14.85	59.41	40-120
$ 18 Nitrobenzene-d5	25.00	15.90	63.60	46-120
$ 36 2-Fluorobiphenyl	25.00	17.56	70.23	50-120
$ 55 2,4,6-Tribromophen	37.50	26.82	71.53	55-124
$ 66 Terphenyl-d14	25.00	29.77	119.10	57-120

Data File: /chem2/nt6.i/20130708.b/07081310.d
Date : 08-JUL-2013 17:56
Client ID: WU65MBW1
Sample Info: WU65MBW1,
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32



Data File: /chem2/nt6.i/20130708.b/07081310.d

Date : 08-JUL-2013 17:56

Client ID: WU65MBW1

Instrument: nt6.i

Sample Info: WU65MBW1,

Volume Injected (uL): 1.0

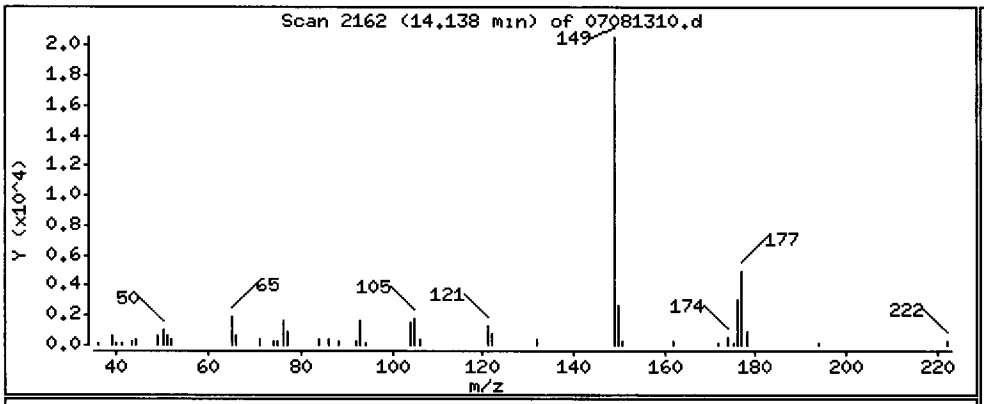
Operator: JZ

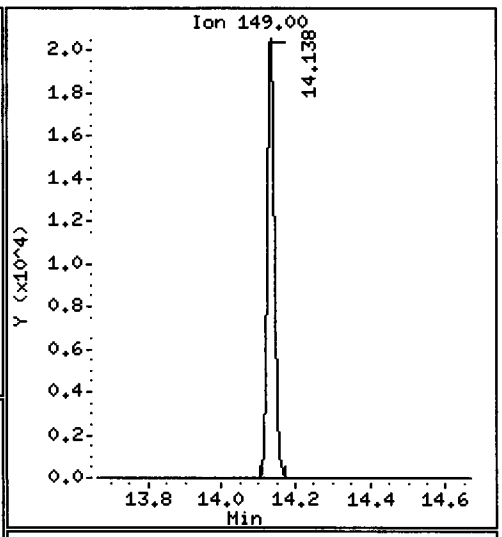
Column phase: ZB-5msi

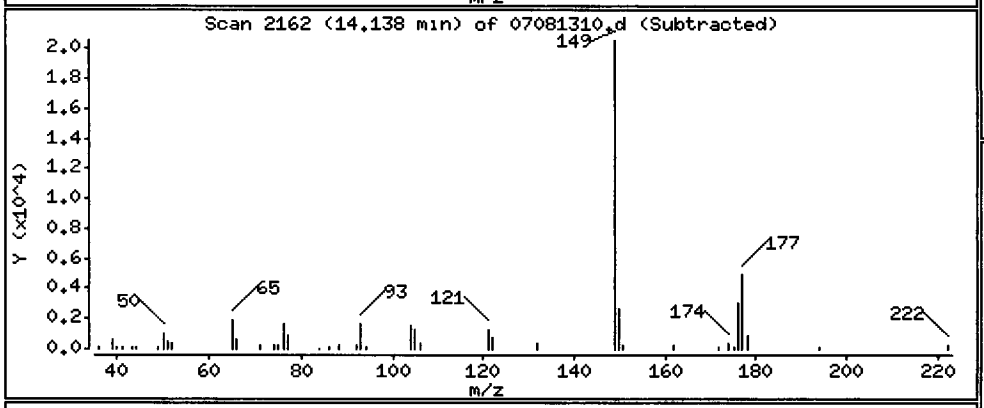
Column diameter: 0.32

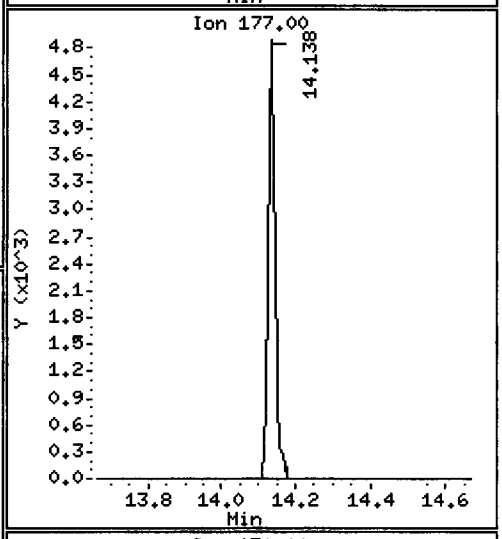
50 Diethylphthalate

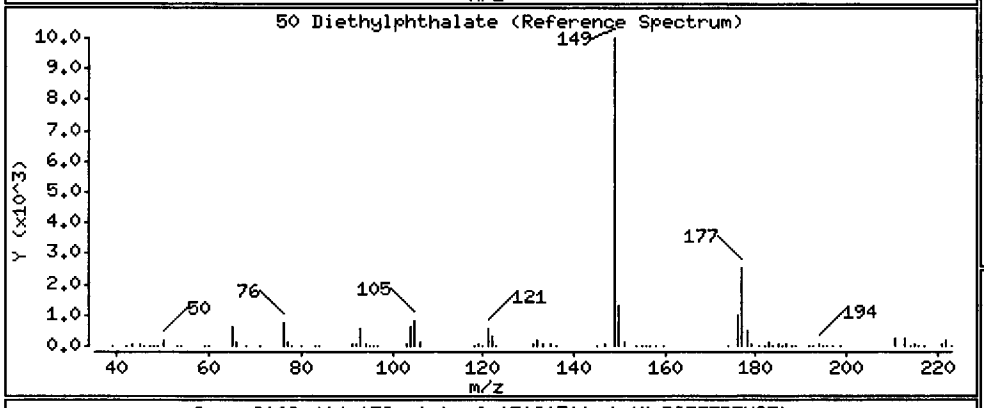
Concentration: 0.5329 ug/L

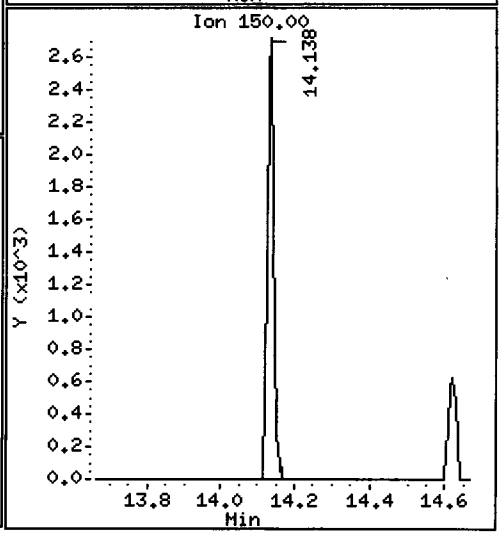


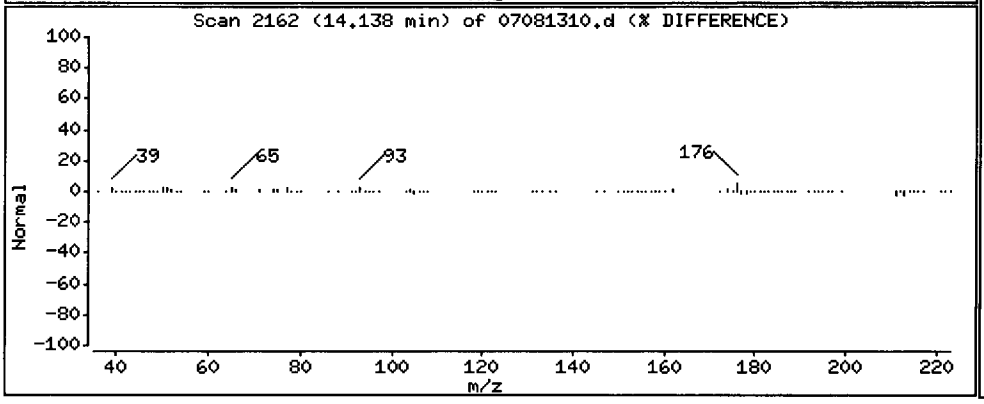












CO-ELUTION SUMMARY FOR FILE - 07081310.d

Lab ID: WU65MBW1, Method: SW846070813.m, Instrument: nt6.i, Date: 08-JUL-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130708.b/07081311.d
Lab Smp Id: WU65LCSW1 Client Smp ID: WU65LCSW1
Inj Date : 08-JUL-2013 18:30
Operator : JZ Inst ID: nt6.i
Smp Info : WU65LCSW1,
Misc Info : 13-13119
Comment : 1ul Injection
Method : /chem2/nt6.i/20130708.b/SW846070813.m
Meth Date : 10-Jul-2013 12:21 jianqing Quant Type: ISTD
Cal Date : 08-JUL-2013 15:59 Cal File: 07081308.d
Als bottle: 11 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SEPAtclpMBLCS.sub
Target Version: 3.50

07/10/13

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	6.469	6.483	(0.768)	797089	15.5710	15.57
$	2 Phenol-d5	99	7.970	7.995	(0.946)	673623	11.3305	11.33
	3 Phenol	94	7.986	8.006	(0.948)	666578	13.0419	13.04
$	5 2-Chlorophenol-d4	132	8.125	8.134	(0.964)	1150525	22.4174	22.42
	4 Bis(2-Chloroethyl)ether	93	8.088	8.096	(0.960)	764665	18.4139	18.41
	6 2-Chlorophenol	128	8.147	8.160	(0.967)	761394	19.0332	19.03
	7 1,3-Dichlorobenzene	146	8.366	8.369	(0.993)	734101	15.7712	15.77
*	8 1,4-Dichlorobenzene-d4	152	8.425	8.428	(1.000)	617623	20.0000	
	9 1,4-Dichlorobenzene	146	8.451	8.454	(1.003)	760078	16.4040	16.40
$	10 1,2-Dichlorobenzene-d4	152	8.724	8.732	(1.036)	488219	17.7549	17.75
	12 1,2-Dichlorobenzene	146	8.745	8.748	(1.038)	725903	16.4973	16.50
	11 Benzyl alcohol	108	8.697	8.716	(1.032)	487284	18.7628	18.76
	14 2,2'-oxybis(1-Chloropropane)	45	8.953	8.962	(1.063)	1159212	17.7076	17.71
	13 2-Methylphenol	108	8.916	8.940	(1.058)	622879	17.3782	17.38
	17 Hexachloroethane	117	9.231	9.234	(1.096)	252568	15.5370	15.54
	16 N-Nitroso-di-n-propylamine	70	9.172	9.191	(1.089)	475237	16.5182	16.52

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
	15 4-Methylphenol	108	9.156	9.170	(1.087)	1213286	32.7845	32.78
$	18 Nitrobenzene-d5	82	9.349	9.362	(0.893)	701504	19.8593	19.86
	19 Nitrobenzene	77	9.381	9.395	(0.896)	681547	18.5209	18.52
	20 Isophorone	82	9.765	9.784	(0.933)	1261476	21.0820	21.08
	21 2-Nitrophenol	139	9.894	9.902	(0.945)	404080	21.0271	21.03
	22 2,4-Dimethylphenol	107	9.990	10.004	(0.955)	1393935	43.3797	43.38
	23 Bis(2-Chloroethoxy)methane	93	10.139	10.153	(0.969)	910746	19.5126	19.51
	24 Benzoic acid	105	10.198	10.361	(0.974)	756197	27.6545	27.65
	25 2,4-Dichlorophenol	162	10.273	10.287	(0.982)	1800901	61.6691	61.67
	26 1,2,4-Trichlorobenzene	180	10.406	10.415	(0.994)	578986	17.3771	17.38
*	27 Naphthalene-d8	136	10.465	10.474	(1.000)	2139084	20.0000	
	28 Naphthalene	128	10.497	10.506	(1.003)	1920390	19.7847	19.78
	29 4-Chloroaniline	127	10.636	10.650	(1.016)	2338165	63.4751	63.48
	30 Hexachlorobutadiene	225	10.807	10.816	(1.033)	260893	16.3114	16.31
	31 4-Chloro-3-methylphenol	107	11.432	11.446	(1.092)	1689031	63.6895	63.69
	32 2-Methylnaphthalene	141	11.619	11.628	(1.110)	1087082	20.0778	20.08
	33 Hexachlorocyclopentadiene	237	11.993	12.001	(0.899)	694231	40.2317	40.23
	34 2,4,6-Trichlorophenol	196	12.127	12.135	(0.909)	1185242	65.6943	65.69
	35 2,4,5-Trichlorophenol	196	12.185	12.194	(0.914)	1228937	68.5984	68.60
$	36 2-Fluorobiphenyl	172	12.255	12.263	(0.919)	1408597	22.0315	22.03
	37 2-Chloronaphthalene	162	12.399	12.413	(0.930)	1224606	20.7402	20.74
	38 2-Nitroaniline	65	12.634	12.643	(0.948)	1088361	71.4081	71.41
	39 Dimethylphthalate	163	12.997	13.016	(0.975)	1387321	21.5838	21.58
	40 Acenaphthylene	152	13.083	13.091	(0.981)	1809250	20.4470	20.45
	41 2,6-Dinitrotoluene	165	13.099	13.113	(0.982)	879709	62.5050	62.50
*	42 Acenaphthene-d10	164	13.334	13.342	(1.000)	1184699	20.0000	
	43 3-Nitroaniline	138	13.318	13.332	(0.999)	1156334	84.1448	84.14
	44 Acenaphthene	153	13.387	13.396	(1.004)	1209749	21.1942	21.19
	45 2,4-Dinitrophenol	184	13.484	13.508	(1.011)	912338	92.0590	92.06
	46 Dibenzofuran	168	13.644	13.663	(1.023)	1517002	21.5666	21.57
	47 4-Nitrophenol	109	13.596	13.620	(1.020)	164839	29.1215	29.12
	48 2,4-Dinitrotoluene	165	13.729	13.743	(1.030)	1086581	64.7708	64.77
	50 Diethylphthalate	149	14.151	14.165	(1.061)	1257169	22.3415	22.34
	49 Fluorene	166	14.205	14.218	(1.065)	1343344	22.8983	22.90
	51 4-Chlorophenyl-phenylether	204	14.215	14.229	(1.066)	565764	21.4824	21.48
	52 4-Nitroaniline	138	14.322	14.341	(1.074)	932562	86.7316	86.73
	53 4,6-Dinitro-2-methylphenol	198	14.392	14.411	(0.916)	1165509	102.926	102.9
	54 N-Nitrosodiphenylamine	169	14.424	14.443	(0.918)	793518	19.0660	19.07
$	55 2,4,6-Tribromophenol	330	14.627	14.640	(1.097)	240080	27.8538	27.85
	56 4-Bromophenyl-phenylether	248	15.001	15.009	(0.955)	321067	20.5481	20.55
	57 Hexachlorobenzene	284	15.230	15.244	(0.969)	327610	19.1682	19.17
	58 Pentachlorophenol	266	15.524	15.538	(0.988)	650765	67.8616	67.86
*	59 Phenanthrene-d10	188	15.711	15.725	(1.000)	1563842	20.0000	
	60 Phenanthrene	178	15.754	15.768	(1.003)	1756147	22.4514	22.45
	61 Anthracene	178	15.823	15.837	(1.007)	1650156	21.6376	21.64
	62 Carbazole	167	16.096	16.115	(1.024)	1527249	23.3554	23.36
	63 Di-n-butylphthalate	149	16.790	16.804	(1.069)	2190308	23.1002	23.10

B

07/10/B

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	64 Fluoranthene	202	17.688	17.702	(1.126)	1897093	24.2418	24.24
	65 Pyrene	202	18.046	18.059	(0.901)	1963713	23.1936	23.19
$	66 Terphenyl-d14	244	18.340	18.353	(0.916)	1247485	29.7446	29.74
	67 Butylbenzylphthalate	149	19.210	19.229	(0.959)	1139450	26.9674	26.97
	68 Benzo(a)anthracene	228	20.001	20.025	(0.999)	1655809	22.3364	22.34
*	69 Chrysene-d12	240	20.028	20.041	(1.000)	1516894	20.0000	
	70 3,3'-Dichlorobenzidine	252	20.006	20.009	(0.999)	1245086	54.6747	54.67
	71 Chrysene	228	20.070	20.089	(1.002)	1587361	22.3995	22.40
	72 bis(2-Ethylhexyl)phthalate	149	20.199	20.207	(0.956)	1360594	23.3583	23.36
*	134 Di-n-octylphthalate-d4	153	21.128	21.137	(1.000)	2304747	20.0000	
	73 Di-n-octylphthalate	149	21.139	21.147	(1.000)	2437149	21.9994	22.00
	74 Benzo(b)fluoranthene	252	21.657	21.681	(0.976)	1928252	25.6999	25.70
	75 Benzo(k)fluoranthene	252	21.689	21.713	(0.978)	1658656	21.6124	21.61
	76 Benzo(a)pyrene	252	22.106	22.130	(0.996)	1451986	22.1172	22.12
*	77 Perylene-d12	264	22.186	22.200	(1.000)	1617029	20.0000	
	78 Indeno(1,2,3-cd)pyrene	276	23.837	23.866	(1.074)	1899934	22.7888	22.79
	79 Dibenzo(a,h)anthracene	278	23.858	23.904	(1.075)	1436571	21.2866	21.29
	80 Benzo(g,h,i)perylene	276	24.301	24.352	(1.095)	1551494	20.7119	20.71
	90 N-Nitrosodimethylamine	74	3.942	3.978	(0.468)	919498	32.5646	32.56
	91 Aniline	93	7.981	7.984	(0.947)	2689630	50.1715	50.17
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	3.894	3.919	(0.462)	1135026	25.3703	25.37
	105 1-methylnaphthalene	141	11.790	11.798	(1.127)	1111307	23.1529	23.15
	111 Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
	120 2,3,4,6-Tetrachlorophenol	232	13.922	13.935	(1.044)	296683	22.9956	23.00
	151 1,2,4,5-Tetrachlorobenzene	216	Compound Not Detected.					
	187 Total Benzofluoranthenes	252	21.689	21.713	(0.978)	3336796	46.4615	46.46

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 07081311.d
Lab Smp Id: WU65LCSW1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130708.b/SW846070813.m
Misc Info: 13-13119

Calibration Date: 08-JUL-2013
Calibration Time: 12:01
Client Smp ID: WU65LCSW1
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	507223	253612	1014446	617623	21.77
27 Naphthalene-d8	1843524	921762	3687048	2139084	16.03
42 Acenaphthene-d10	1048119	524060	2096238	1184699	13.03
59 Phenanthrene-d10	1392753	696376	2785506	1563842	12.28
69 Chrysene-d12	1340567	670284	2681134	1516894	13.15
134 Di-n-octylphthala	2097720	1048860	4195440	2304747	9.87
77 Perylene-d12	1450550	725275	2901100	1617029	11.48

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.43	7.93	8.93	8.42	-0.08
27 Naphthalene-d8	10.47	9.97	10.97	10.47	-0.07
42 Acenaphthene-d10	13.34	12.84	13.84	13.33	-0.01
59 Phenanthrene-d10	15.72	15.22	16.22	15.71	-0.04
69 Chrysene-d12	20.03	19.53	20.53	20.03	-0.04
134 Di-n-octylphthala	21.14	20.64	21.64	21.13	-0.03
77 Perylene-d12	22.19	21.69	22.69	22.19	-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: SAIC
Client SDG: WU65
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: WU65LCSW1
Client Smp ID: WU65LCSW1
Level: LOW
Operator: JZ
Data Type: MS DATA
SampleType: LCS
SpikeList File: SEPAtclpLCS.spk
Quant Type: ISTD
Sublist File: SEPAtclpMBLCS.sub
Method File: /chem2/nt6.i/20130708.b/SW846070813.m
Misc Info: 13-13119

SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
3	Phenol	25.00	13.04	52.17	16-100
4	Bis(2-Chloroethyl)	25.00	18.41	73.66	41-112
6	2-Chlorophenol	25.00	19.03	76.13	43-111
7	1,3-Dichlorobenzen	25.00	15.77	63.08	32-100
9	1,4-Dichlorobenzen	25.00	16.40	65.62	32-100
11	Benzyl alcohol	25.00	18.76	75.05	22-100
12	1,2-Dichlorobenzen	25.00	16.50	65.99	34-100
13	2-Methylphenol	25.00	17.38	69.51	36-110
14	2,2'-oxybis(1-Chlo	25.00	17.71	70.83	29-118
15	4-Methylphenol	50.00	32.78	65.57	38-104
16	N-Nitroso-di-n-pro	25.00	16.52	66.07	38-115
17	Hexachloroethane	25.00	15.54	62.15	24-100
19	Nitrobenzene	25.00	18.52	74.08	45-106
20	Isophorone	25.00	21.08	84.33	55-119
21	2-Nitrophenol	25.00	21.03	84.11	46-118
22	2,4-Dimethylphenol	75.00	43.38	57.84	28-105
23	Bis(2-Chloroethoxy	25.00	19.51	78.05	44-118
24	Benzoic acid	137.5	27.65	20.11	11-100
25	2,4-Dichlorophenol	75.00	61.67	82.23	43-121
26	1,2,4-Trichloroben	25.00	17.38	69.51	35-100
28	Naphthalene	25.00	19.78	79.14	36-111
29	4-Chloroaniline	75.00	63.48	84.63	10-174
30	Hexachlorobutadien	25.00	16.31	65.25	24-100
31	4-Chloro-3-methylp	75.00	63.69	84.92	45-122
32	2-Methylnaphthalen	25.00	20.08	80.31	45-103
33	Hexachlorocyclopen	75.00	40.23	53.64	23-108
34	2,4,6-Trichlorophe	75.00	65.69	87.59	48-122
35	2,4,5-Trichlorophe	75.00	68.60	91.46	48-122
37	2-Chloronaphthalen	25.00	20.74	82.96	39-118
38	2-Nitroaniline	75.00	71.41	95.21	48-118
39	Dimethylphthalate	25.00	21.58	86.34	50-120
40	Acenaphthylene	25.00	20.45	81.79	50-119
41	2,6-Dinitrotoluene	75.00	62.50	83.34	48-133

SPIKE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
43	3-Nitroaniline	75.00	84.14	112.19	54-140
44	Acenaphthene	25.00	21.19	84.78	41-120
45	2,4-Dinitrophenol	137.5	92.06	66.95	23-176
46	Dibenzofuran	25.00	21.57	86.27	51-114
47	4-Nitrophenol	75.00	29.12	38.83	13-100
48	2,4-Dinitrotoluene	75.00	64.77	86.36	51-134
49	Fluorene	25.00	22.90	91.59	50-120
50	Diethylphthalate	25.00	22.34	89.37	48-122
51	4-Chlorophenyl-phe	25.00	21.48	85.93	50-118
52	4-Nitroaniline	75.00	86.73	115.64	42-136
53	4,6-Dinitro-2-meth	137.5	102.9	74.86	32-121
54	N-Nitrosodiphenyla	25.00	19.07	76.26	58-141
56	4-Bromophenyl-phen	25.00	20.55	82.19	50-122
57	Hexachlorobenzene	25.00	19.17	76.67	47-125
58	Pentachlorophenol	75.00	67.86	90.48	35-130
60	Phenanthrene	25.00	22.45	89.81	49-120
61	Anthracene	25.00	21.64	86.55	53-116
62	Carbazole	25.00	23.36	93.42	57-122
63	Di-n-butylphthalat	25.00	23.10	92.40	57-121
64	Fluoranthene	25.00	24.24	96.97	56-119
65	Pyrene	25.00	23.19	92.77	37-143
67	Butylbenzylphthala	25.00	26.97	107.87	34-152
68	Benzo(a)anthracene	25.00	22.34	89.35	49-129
70	3,3'-Dichlorobenzi	75.00	54.67	72.90	50-128
71	Chrysene	25.00	22.40	89.60	45-128
72	bis(2-Ethylhexyl)p	25.00	23.36	93.43	57-133
73	Di-n-octylphthalat	25.00	22.00	88.00	52-120
74	Benzo(b)fluoranthe	25.00	25.70	102.80	50-126
75	Benzo(k)fluoranthe	25.00	21.61	86.45	49-126
76	Benzo(a)pyrene	25.00	22.12	88.47	46-109
78	Indeno(1,2,3-cd)py	25.00	22.79	91.16	34-136
79	Dibenzo(a,h)anthra	25.00	21.29	85.15	41-134
80	Benzo(g,h,i)peryle	25.00	20.71	82.85	41-133
91	Aniline	75.00	50.17	66.90	28-126
111	Azobenzene (1,2-D	25.00	0.000	0 *	55-119
105	1-methylnaphthalen	25.00	23.15	92.61	43-115
90	N-Nitrosodimethyla	75.00	32.56	43.42	31-100
103	Pyridine	75.00	25.37	33.83	25-100
120	2,3,4,6-Tetrachlor	25.00	23.00	91.98	30-160
151	1,2,4,5-Tetrachlo	25.00	0.000	0 *	30-160
187	Total Benzofluoran	50.00	46.46	92.92	30-160

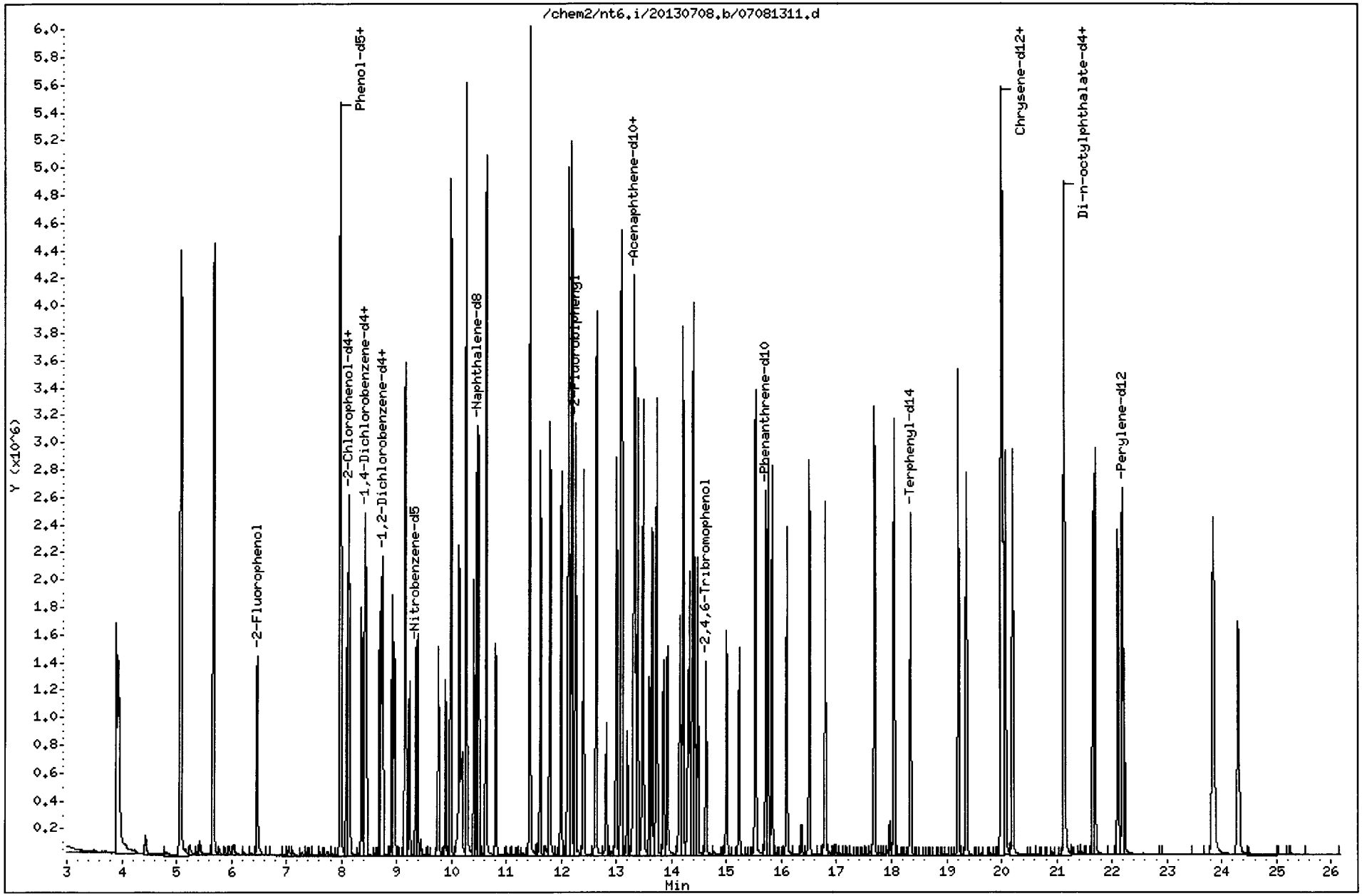
SURROGATE	COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1	2-Fluorophenol	37.50	15.57	41.52	30-120

07/10/13

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 2 Phenol-d5	37.50	11.33	30.21	20-120
$ 5 2-Chlorophenol-d4	37.50	22.42	59.78	49-120
$ 10 1,2-Dichlorobenzen	25.00	17.75	71.02	40-120
$ 18 Nitrobenzene-d5	25.00	19.86	79.44	46-120
$ 36 2-Fluorobiphenyl	25.00	22.03	88.13	50-120
$ 55 2,4,6-Tribromophen	37.50	27.85	74.28	55-124
$ 66 Terphenyl-d14	25.00	29.74	118.98	57-120

Data File: /chem2/nt6.i/20130708.b/07081311.d
Date : 08-JUL-2013 18:30
Client ID: WU65LCSW1
Sample Info: WU65LCSW1,
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32



CO-ELUTION SUMMARY FOR FILE - 07081311.d

Lab ID: WU65LCSW1, Method: SW846070813.m, Instrument: nt6.i, Date: 08-JUL-201

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem2/nt6.i/20130708.b/07081312.d
Lab Smp Id: WU65LCSDW1 Client Smp ID: WU65LCSDW1
Inj Date : 08-JUL-2013 19:04
Operator : JZ Inst ID: nt6.i
Smp Info : WU65LCSDW1,
Misc Info : 13-13119
Comment : 1ul Injection
Method : /chem2/nt6.i/20130708.b/SW846070813.m
Meth Date : 10-Jul-2013 12:38 jianqing Quant Type: ISTD
Cal Date : 08-JUL-2013 15:59 Cal File: 07081308.d
Als bottle: 12 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: SEPAtclpMBLCS.sub
Target Version: 3.50

JZ 07/10/13

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	6.468	6.476	(0.768)	688081	13.3776	13.38
$	2 Phenol-d5	99	7.970	7.983	(0.946)	593992	9.94355	9.944
	3 Phenol	94	7.986	7.999	(0.948)	633142	12.3288	12.33
$	5 2-Chlorophenol-d4	132	8.125	8.132	(0.964)	1047873	20.3201	20.32
	4 Bis(2-Chloroethyl)ether	93	8.087	8.090	(0.960)	737977	17.6867	17.69
	6 2-Chlorophenol	128	8.146	8.154	(0.967)	725952	18.0609	18.06
	7 1,3-Dichlorobenzene	146	8.365	8.367	(0.993)	689341	14.7391	14.74
*	8 1,4-Dichlorobenzene-d4	152	8.424	8.432	(1.000)	620576	20.0000	
	9 1,4-Dichlorobenzene	146	8.450	8.453	(1.003)	704715	15.1368	15.14
$	10 1,2-Dichlorobenzene-d4	152	8.723	8.725	(1.036)	434064	15.7103	15.71
	12 1,2-Dichlorobenzene	146	8.744	8.752	(1.038)	684919	15.4918	15.49
	11 Benzyl alcohol	108	8.696	8.699	(1.032)	482622	18.4948	18.49
	14 2,2'-oxybis(1-Chloropropane)	45	8.953	8.955	(1.063)	1104534	16.7921	16.79
	13 2-Methylphenol	108	8.915	8.928	(1.058)	598523	16.6192	16.62
	17 Hexachloroethane	117	9.230	9.238	(1.096)	238913	14.6271	14.63
	16 N-Nitroso-di-n-propylamine	70	9.172	9.174	(1.089)	477946	16.5333	16.53

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/L)
15	4-Methylphenol	108	9.156	9.153	(1.087)	1194904	32.1341	32.13
$ 18	Nitrobenzene-d5	82	9.353	9.356	(0.893)	645812	18.1585	18.16
19	Nitrobenzene	77	9.380	9.388	(0.896)	662574	17.8830	17.88
20	Isophorone	82	9.765	9.762	(0.933)	1268813	21.0606	21.06
21	2-Nitrophenol	139	9.893	9.895	(0.945)	401265	20.7388	20.74
22	2,4-Dimethylphenol	107	9.989	9.991	(0.954)	1351364	41.7693	41.77
23	Bis(2-Chloroethoxy)methane	93	10.139	10.141	(0.968)	900041	19.1523	19.15
24	Benzoic acid	105	10.240	10.243	(0.978)	1313753	46.6966	46.70
25	2,4-Dichlorophenol	162	10.277	10.275	(0.982)	1774744	60.3607	60.36
26	1,2,4-Trichlorobenzene	180	10.406	10.414	(0.994)	553276	16.4927	16.49
* 27	Naphthalene-d8	136	10.470	10.472	(1.000)	2153711	20.0000	
28	Naphthalene	128	10.502	10.504	(1.003)	1862608	19.0591	19.06
29	4-Chloroaniline	127	10.635	10.638	(1.016)	2373373	63.9933	63.99
30	Hexachlorobutadiene	225	10.812	10.814	(1.033)	248956	15.4594	15.46
31	4-Chloro-3-methylphenol	107	11.437	11.434	(1.092)	1704629	63.8411	63.84
32	2-Methylnaphthalene	141	11.618	11.621	(1.110)	1073671	19.6954	19.70
33	Hexachlorocyclopentadiene	237	11.998	12.000	(0.899)	666409	36.4986	36.50
34	2,4,6-Trichlorophenol	196	12.131	12.128	(0.909)	1191214	62.3995	62.40
35	2,4,5-Trichlorophenol	196	12.185	12.187	(0.913)	1210615	63.8648	63.86
$ 36	2-Fluorobiphenyl	172	12.254	12.262	(0.919)	1304111	19.2771	19.28
37	2-Chloronaphthalene	162	12.398	12.406	(0.930)	1203154	19.2578	19.26
38	2-Nitroaniline	65	12.639	12.630	(0.948)	1117931	69.3203	69.32
39	Dimethylphthalate	163	13.002	12.999	(0.975)	1433437	21.0766	21.08
40	Acenaphthylene	152	13.082	13.085	(0.981)	1828447	19.5291	19.53
41	2,6-Dinitrotoluene	165	13.098	13.095	(0.982)	899823	60.4232	60.42
* 42	Acenaphthene-d10	164	13.338	13.336	(1.000)	1253537	20.0000	
43	3-Nitroaniline	138	13.317	13.314	(0.998)	1227749	84.4353	84.44
44	Acenaphthene	153	13.387	13.389	(1.004)	1234455	20.4394	20.44
45	2,4-Dinitrophenol	184	13.483	13.480	(1.011)	955526	91.1222	91.12
46	Dibenzofuran	168	13.648	13.651	(1.023)	1545064	20.7593	20.76
47	4-Nitrophenol	109	13.600	13.597	(1.020)	178030	29.7247	29.72
48	2,4-Dinitrotoluene	165	13.734	13.726	(1.030)	1121939	63.2058	63.21
50	Diethylphthalate	149	14.150	14.153	(1.061)	1313884	22.0672	22.07
49	Fluorene	166	14.204	14.206	(1.065)	1370637	22.0805	22.08
51	4-Chlorophenyl-phenylether	204	14.220	14.222	(1.066)	567757	20.3742	20.37
52	4-Nitroaniline	138	14.327	14.303	(1.074)	1001000	87.9842	87.98
53	4,6-Dinitro-2-methylphenol	198	14.391	14.383	(0.916)	1218785	104.055	104.1
54	N-Nitrosodiphenylamine	169	14.428	14.431	(0.918)	810002	18.8155	18.82
$ 55	2,4,6-Tribromophenol	330	14.626	14.628	(1.097)	225396	24.7141	24.71
56	4-Bromophenyl-phenylether	248	15.000	15.008	(0.954)	329780	20.4045	20.40
57	Hexachlorobenzene	284	15.230	15.232	(0.969)	339329	19.1942	19.19
58	Pentachlorophenol	266	15.529	15.526	(0.988)	674412	67.9909	67.99
* 59	Phenanthrene-d10	188	15.716	15.718	(1.000)	1617585	20.0000	
60	Phenanthrene	178	15.753	15.756	(1.002)	1835926	22.6915	22.69
61	Anthracene	178	15.823	15.830	(1.007)	1730081	21.9319	21.93
62	Carbazole	167	16.100	16.103	(1.024)	1627987	24.0688	24.07
63	Di-n-butylphthalate	149	16.795	16.797	(1.069)	2283714	23.2851	23.29

B

B 07/10/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/L)
	64 Fluoranthene	202	17.692	17.695	(1.126)	2007353	24.7986	24.80
	65 Pyrene	202	18.045	18.053	(0.901)	2082313	23.8533	23.85
$	66 Terphenyl-d14	244	18.344	18.347	(0.916)	1224023	28.3058	28.31
	67 Butylbenzylphthalate	149	19.215	19.217	(0.959)	1021366	23.4443	23.44
	68 Benzo(a)anthracene	228	20.005	20.008	(0.999)	1711241	22.3886	22.39
*	69 Chrysene-d12	240	20.032	20.035	(1.000)	1564022	20.0000	
	70 3,3'-Dichlorobenzidine	252	20.005	20.003	(0.999)	1319170	56.1824	56.18
	71 Chrysene	228	20.070	20.072	(1.002)	1676056	22.9384	22.94
	72 bis(2-Ethylhexyl)phthalate	149	20.198	20.200	(0.956)	1451890	23.9553	23.96
*	134 Di-n-octylphthalate-d4	153	21.127	21.135	(1.000)	2398107	20.0000	
	73 Di-n-octylphthalate	149	21.138	21.141	(1.000)	2542540	22.0572	22.06
	74 Benzo(b)fluoranthene	252	21.662	21.664	(0.976)	1774887	22.9343	22.93
	75 Benzo(k)fluoranthene	252	21.688	21.696	(0.977)	2037014	25.7328	25.73
	76 Benzo(a)pyrene	252	22.110	22.113	(0.996)	1560902	23.0510	23.05
*	77 Perylene-d12	264	22.190	22.193	(1.000)	1667907	20.0000	
	78 Indeno(1,2,3-cd)pyrene	276	23.841	23.849	(1.074)	1986752	23.1032	23.10
	79 Dibenzo(a,h)anthracene	278	23.857	23.865	(1.075)	1456946	20.9300	20.93
	80 Benzo(g,h,i)perylene	276	24.306	24.314	(1.095)	1644682	21.2862	21.29
	90 N-Nitrosodimethylamine	74	3.947	3.939	(0.469)	866441	30.5395	30.54
	91 Aniline	93	7.980	7.983	(0.947)	2582053	47.9356	47.94(H)
	93 Benzidine	184	Compound Not Detected.					
	103 Pyridine	79	3.899	3.896	(0.463)	1073967	23.8913	23.89
	105 1-methylnaphthalene	141	11.789	11.797	(1.126)	1102699	22.8175	22.82
	111 Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
	120 2,3,4,6-Tetrachlorophenol	232	13.926	13.923	(1.044)	309686	22.6853	22.69
	151 1,2,4,5-Tetrachlorobenzene	216	Compound Not Detected.					
	187 Total Benzofluoranthenes	252	21.688	21.696	(0.977)	3572191	48.2219	48.22

QC Flag Legend

H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt6.i
Lab File ID: 07081312.d
Lab Smp Id: WU65LCSDW1
Analysis Type: SV
Quant Type: ISTD
Operator: JZ
Method File: /chem2/nt6.i/20130708.b/SW846070813.m
Misc Info: 13-13119

Calibration Date: 08-JUL-2013
Calibration Time: 12:01
Client Smp ID: WU65LCSDW1
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	507223	253612	1014446	620576	22.35
27 Naphthalene-d8	1843524	921762	3687048	2153711	16.83
42 Acenaphthene-d10	1048119	524060	2096238	1253537	19.60
59 Phenanthrene-d10	1392753	696376	2785506	1617585	16.14
69 Chrysene-d12	1340567	670284	2681134	1564022	16.67
134 Di-n-octylphthala	2097720	1048860	4195440	2398107	14.32
77 Perylene-d12	1450550	725275	2901100	1667907	14.98

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.43	7.93	8.93	8.42	-0.09
27 Naphthalene-d8	10.47	9.97	10.97	10.47	-0.02
42 Acenaphthene-d10	13.34	12.84	13.84	13.34	0.02
59 Phenanthrene-d10	15.72	15.22	16.22	15.72	-0.02
69 Chrysene-d12	20.03	19.53	20.53	20.03	-0.01
134 Di-n-octylphthala	21.14	20.64	21.64	21.13	-0.04
77 Perylene-d12	22.19	21.69	22.69	22.19	-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: SAIC
Client SDG: WU65
Sample Matrix: LIQUID
Fraction: SV
Lab Smp Id: WU65LCSDW1
Client Smp ID: WU65LCSDW1
Level: LOW
Operator: JZ
Data Type: MS DATA
SampleType: LCSD
SpikeList File: SEPAtclpLCS.spk
Quant Type: ISTD
Sublist File: SEPAtclpMBLCS.sub
Method File: /chem2/nt6.i/20130708.b/SW846070813.m
Misc Info: 13-13119

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
3 Phenol	25.00	12.33	49.32	16-100
4 Bis(2-Chloroethyl)	25.00	17.69	70.75	41-112
6 2-Chlorophenol	25.00	18.06	72.24	43-111
7 1,3-Dichlorobenzen	25.00	14.74	58.96	32-100
9 1,4-Dichlorobenzen	25.00	15.14	60.55	32-100
11 Benzyl alcohol	25.00	18.49	73.98	22-100
12 1,2-Dichlorobenzen	25.00	15.49	61.97	34-100
13 2-Methylphenol	25.00	16.62	66.48	36-110
14 2,2'-oxybis(1-Chlo	25.00	16.79	67.17	29-118
15 4-Methylphenol	50.00	32.13	64.27	38-104
16 N-Nitroso-di-n-pro	25.00	16.53	66.13	38-115
17 Hexachloroethane	25.00	14.63	58.51	24-100
19 Nitrobenzene	25.00	17.88	71.53	45-106
20 Isophorone	25.00	21.06	84.24	55-119
21 2-Nitrophenol	25.00	20.74	82.96	46-118
22 2,4-Dimethylphenol	75.00	41.77	55.69	28-105
23 Bis(2-Chloroethoxy	25.00	19.15	76.61	44-118
24 Benzoic acid	137.5	46.70	33.96	11-100
25 2,4-Dichlorophenol	75.00	60.36	80.48	43-121
26 1,2,4-Trichloroben	25.00	16.49	65.97	35-100
28 Naphthalene	25.00	19.06	76.24	36-111
29 4-Chloroaniline	75.00	63.99	85.32	10-174
30 Hexachlorobutadien	25.00	15.46	61.84	24-100
31 4-Chloro-3-methylp	75.00	63.84	85.12	45-122
32 2-Methylnaphthalen	25.00	19.70	78.78	45-103
33 Hexachlorocyclopen	75.00	36.50	48.66	23-108
34 2,4,6-Trichlorophe	75.00	62.40	83.20	48-122
35 2,4,5-Trichlorophe	75.00	63.86	85.15	48-122
37 2-Chloronaphthalen	25.00	19.26	77.03	39-118
38 2-Nitroaniline	75.00	69.32	92.43	48-118
39 Dimethylphthalate	25.00	21.08	84.31	50-120
40 Acenaphthylene	25.00	19.53	78.12	50-119
41 2,6-Dinitrotoluene	75.00	60.42	80.56	48-133

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
43 3-Nitroaniline	75.00	84.44	112.58	54-140
44 Acenaphthene	25.00	20.44	81.76	41-120
45 2,4-Dinitrophenol	137.5	91.12	66.27	23-176
46 Dibenzofuran	25.00	20.76	83.04	51-114
47 4-Nitrophenol	75.00	29.72	39.63	13-100
48 2,4-Dinitrotoluene	75.00	63.21	84.27	51-134
49 Fluorene	25.00	22.08	88.32	50-120
50 Diethylphthalate	25.00	22.07	88.27	48-122
51 4-Chlorophenyl-phe	25.00	20.37	81.50	50-118
52 4-Nitroaniline	75.00	87.98	117.31	42-136
53 4,6-Dinitro-2-meth	137.5	104.1	75.68	32-121
54 N-Nitrosodiphenyla	25.00	18.82	75.26	58-141
56 4-Bromophenyl-phen	25.00	20.40	81.62	50-122
57 Hexachlorobenzene	25.00	19.19	76.78	47-125
58 Pentachlorophenol	75.00	67.99	90.65	35-130
60 Phenanthrene	25.00	22.69	90.77	49-120
61 Anthracene	25.00	21.93	87.73	53-116
62 Carbazole	25.00	24.07	96.28	57-122
63 Di-n-butylphthalat	25.00	23.29	93.14	57-121
64 Fluoranthene	25.00	24.80	99.19	56-119
65 Pyrene	25.00	23.85	95.41	37-143
67 Butylbenzylphthala	25.00	23.44	93.78	34-152
68 Benzo(a)anthracene	25.00	22.39	89.55	49-129
70 3,3'-Dichlorobenzi	75.00	56.18	74.91	50-128
71 Chrysene	25.00	22.94	91.75	45-128
72 bis(2-Ethylhexyl)p	25.00	23.96	95.82	57-133
73 Di-n-octylphthalat	25.00	22.06	88.23	52-120
74 Benzo(b)fluoranthe	25.00	22.93	91.74	50-126
75 Benzo(k)fluoranthe	25.00	25.73	102.93	49-126
76 Benzo(a)pyrene	25.00	23.05	92.20	46-109
78 Indeno(1,2,3-cd)py	25.00	23.10	92.41	34-136
79 Dibenzo(a,h)anthra	25.00	20.93	83.72	41-134
80 Benzo(g,h,i)peryle	25.00	21.29	85.14	41-133
91 Aniline	75.00	47.94	63.91	28-126
111 Azobenzene (1,2-D	25.00	0.000	NC *	55-119
105 1-methylnaphthalen	25.00	22.82	91.27	43-115
90 N-Nitrosodimethyla	75.00	30.54	40.72	31-100
103 Pyridine	75.00	23.89	31.86	25-100
120 2,3,4,6-Tetrachlor	25.00	22.69	90.74	30-160
151 1,2,4,5-Tetrachlo	25.00	0.000	NC *	30-160
187 Total Benzofluoran	50.00	48.22	96.44	30-160

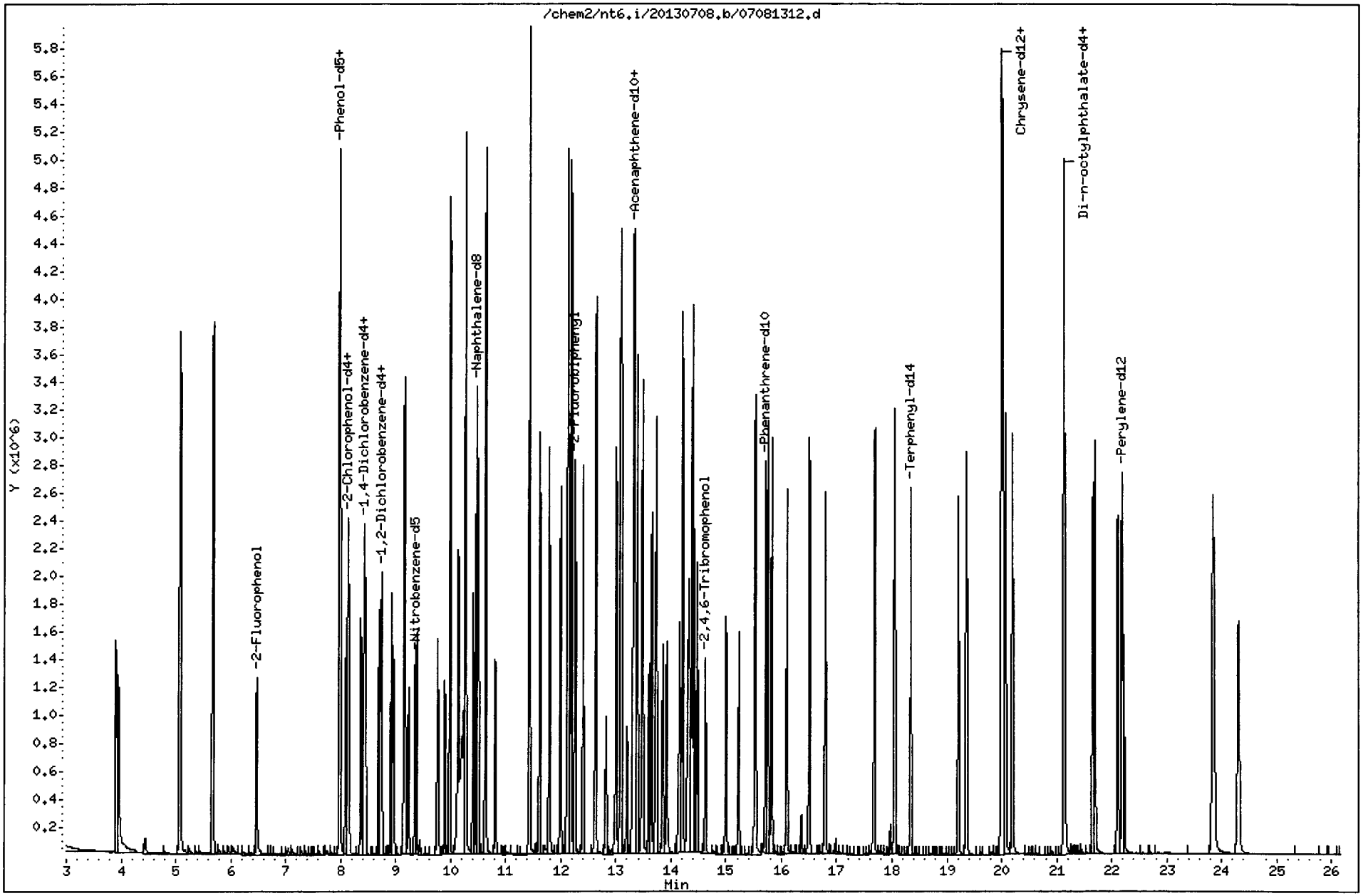
SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	37.50	13.38	35.67	30-120

07/10/13

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 2 Phenol-d5	37.50	9.944	26.52	20-120
$ 5 2-Chlorophenol-d4	37.50	20.32	54.19	49-120
$ 10 1,2-Dichlorobenzen	25.00	15.71	62.84	40-120
$ 18 Nitrobenzene-d5	25.00	18.16	72.63	46-120
$ 36 2-Fluorobiphenyl	25.00	19.28	77.11	50-120
$ 55 2,4,6-Tribromophen	37.50	24.71	65.90	55-124
$ 66 Terphenyl-d14	25.00	28.31	113.22	57-120

Data File: /chem2/nt6.i/20130708.b/07081312.d
Date : 08-JUL-2013 19:04
Client ID: WU65LCSDW1
Sample Info: WU65LCSDW1,
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt6.i
Operator: JZ
Column diameter: 0.32



CO-ELUTION SUMMARY FOR FILE - 07081312.d

Lab ID: WU65LCSDW1, Method: SW846070813.m, Instrument: nt6.i, Date: 08-JUL-20

RT	CO-ELUTION COMPOUNDS
20.005	3,3'-Dichlorobenzidine and Benzo(a)anthracene

checked AE

AE 07/10/20

SIM PAH Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WU65, WU71

Incorporated
Analytical Chemists and

Organic Extractions Benchsheet

(8270D) SIM PNA-Water
Separatory Funnel (3510C) (SOP # 3311S)

Preparation Test SIM PNA L-L # 6 (SPNALWSL) Low Level (0.01ppb)

ARI Job No(s) WU65 Page 1 of 1 Batch set up by: SC

Bottle #	Extraction Requirements	Volume Extracted	Final Effective Volume	Volume to Lab	Comments	Verify Client ID
	WU65 MBW	500mL	0.5mL	0.5mL		AR 06/24/13 Analyst/Date
	SBW	500mL	0.5mL	0.5mL		
	SBW Dup.	500mL	0.5mL	0.5mL		
	QLS	500mL	0.5mL	0.5mL		
7	A	500mL	0.5mL	0.5mL		KD 80°C 1 2 3 4 5 6 Analyst/Date 6/25/13
8	B	500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		TurboVap 1 2 3 Pre-Silica Gel Shakeout CSZ 6/25/13 Analyst/Date
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
		500mL	0.5mL	0.5mL		
Analyst/Date	AR 06/24/13 →	CSZ 6/25/13	CSZ 6/25/13	CSZ 6/25/13 Reviewed BH		(REQ) Silica Gel Clean Shakeout (1:1) CSZ 6/25/13 Analyst/Date
						TurboVap 1 2 3 Post Silica Gel Shakeout CSZ 6/25/13 Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	I (Base 3/6)	1.5/7.5µg/mL	100µL	2/21/14	AR	AC
Spike	18 (2077-2)	1.5/7.5µg/mL	100µL	10/13/13	AR	AC
QLS Spike	2 (2077-3)	0.1µg/mL	50µL	10/13/13	AR	AC

Extraction Time: 14:55

SPECIAL INSTRUCTIONS: Note: LOW LEVEL SIM PNA'S MUST BE COMPLETED WITHIN 48HRS!
1. USE ONLY NON-SCRATCHED GLASSWARE. 2. Rinse all glassware with Low Level DCM.
3. Extract 3X with 30mL Low Level DCM. 4. KD (no drying column) at 80°. (Thoroughly rinse Snyder Columns with Low Level DCM)! 5. TurboVap below 10mL. 6. Silica Gel Clean-up Shakeout=REQUIRED. (Scintillation vial shakeout): Add 1g of Silica Gel. Vortex for 1min. Pass thru turbo drying column with glass wool and sodium sulfate plug and Low Level DCM. 7. TurboVap. 8. Vial in Low Level DCM. (Pre-clean vialing syringes thoroughly)! 9. Post screen extracts with any color.

1319

A. Archive Y / N

Organic Extractions
Reagent and Solutions Identification

(8270D)Low Level SIM PNA-Water
Separatory Funnel (3510C) (SOP # 3311S)

ARI Job No(s) WUG5

(8270D) Low Level SIM PNA Aqueous:	Analyst/Date
Separatory Funnel Station: Low Level Methylene Chloride: (I# 8163) Anhydrous Sodium Sulfate: (I# 8185+ jar date 06/08/13)	Sep. Funnel AR 06/24/13
KD Station: Low Level Methylene Chloride: (I# 8054)	KD RR 06/25/13
Vialing Station: Low Level Methylene Chloride: (I# 8214) 0% Silica Gel I 8035 Neutral Glass wool: (I# 8666+ jar date 5/7/13) Anhydrous Sodium Sulfate: (I# 8068+ jar date 5/6/13)	Vialing CSR 6/25/13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WU65 Client ID: SAIC

Parameter: Low level SIM PNA Client Project: NPDES Sampling Support

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 WU65 samples A, B	AR 06/24/13
☐ 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)	

WU65 : 00338

SIM PAH Raw Data
Initial Calibration

ARI Job ID: WU65, WU71

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): 6.12.13 Internal Standard ID B000331 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)[1]	ICV Exceeding ±30%?	YES / (NO)
ICal Meets %RSD & r^2 Criteria?	(YES) / NO	Linear Fits Used?	YES / (NO)
Q flag applied?	YES / (NO)	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
Supelco	B000365	8/31/13	Absolute	B000604	2/26/14

Detail problems, corrective actions and/or other pertinent information below:

(1) pcp @ 2.41, does not affect curve, benzidine <2

Analyst: VD **Date:** 6.13.12

Reviewer: _____ **Date:** _____

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/nt11.i/20130612.b/lowsim.m
Batch File: /chem3/nt11.i/20130612.b
Inst ID: nt11.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	ic0612a	ic0612b	ic0612c	ic0612d	ic0612e	ic0612f
INJ.DATE:	12-JUN-2013	12-JUN-2013	12-JUN-2013	12-JUN-2013	12-JUN-2013	12-JUN-2013
INJ.TIME:	15:46	16:15	16:44	17:13	17:42	18:11

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	4 Naphthalene-d8	5.976	5.976	5.976	5.976	5.976	5.976	5.976	5.726-6.226	5.976	0.000
	5 Naphthalene	6.018	6.018	6.018	6.018	6.018	6.018	6.018	5.768-6.268	6.018	0.000
$	6 2-Methylnaphthalene-d1	6.953	6.953	6.953	6.953	6.953	6.953	6.953	6.703-7.203	6.953	0.000
	7 2-Methylnaphthalene	7.006	7.006	7.006	7.005	7.006	7.006	7.006	6.756-7.256	7.006	0.000
	8 1-Methylnaphthalene	7.247	7.247	7.247	7.247	7.247	7.247	7.247	6.997-7.497	7.247	0.000
	10 Acenaphthylene	8.784	8.784	8.784	8.784	8.784	8.784	8.784	8.534-9.034	8.784	0.000
*	11 Acenaphthene-d10	8.939	8.939	8.939	8.939	8.939	8.939	8.939	8.689-9.189	8.939	0.000
	12 Acenaphthene	8.995	8.994	8.995	8.994	8.995	8.995	8.995	8.745-9.245	8.995	0.000
	14 Dibenzofuran	9.205	9.205	9.205	9.205	9.205	9.205	9.205	8.955-9.455	9.205	0.000
	15 Fluorene	9.825	9.814	9.825	9.814	9.814	9.814	9.825	9.575-10.075	9.818	0.006
$	16 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	12.499	12.249-12.749	+++++	+++++
	17 Pentachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	13.381	13.131-13.631	+++++	+++++
*	18 Phenanthrene-d10	11.574	11.574	11.574	11.574	11.574	11.574	11.574	11.324-11.824	11.574	0.000
	19 Phenanthrene	11.619	11.618	11.618	11.618	11.618	11.619	11.619	11.369-11.869	11.618	0.000
	20 Anthracene	11.674	11.674	11.674	11.674	11.674	11.674	11.674	11.424-11.924	11.674	0.000
	22 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	14.533	14.283-14.783	+++++	+++++
$	23 Fluoranthene-d10	13.657	13.657	13.657	13.657	13.657	13.657	13.657	13.407-13.907	13.657	0.000

Reviewer 1 VD Date: 6.13.13
Reviewer 2 _____ Date: _____

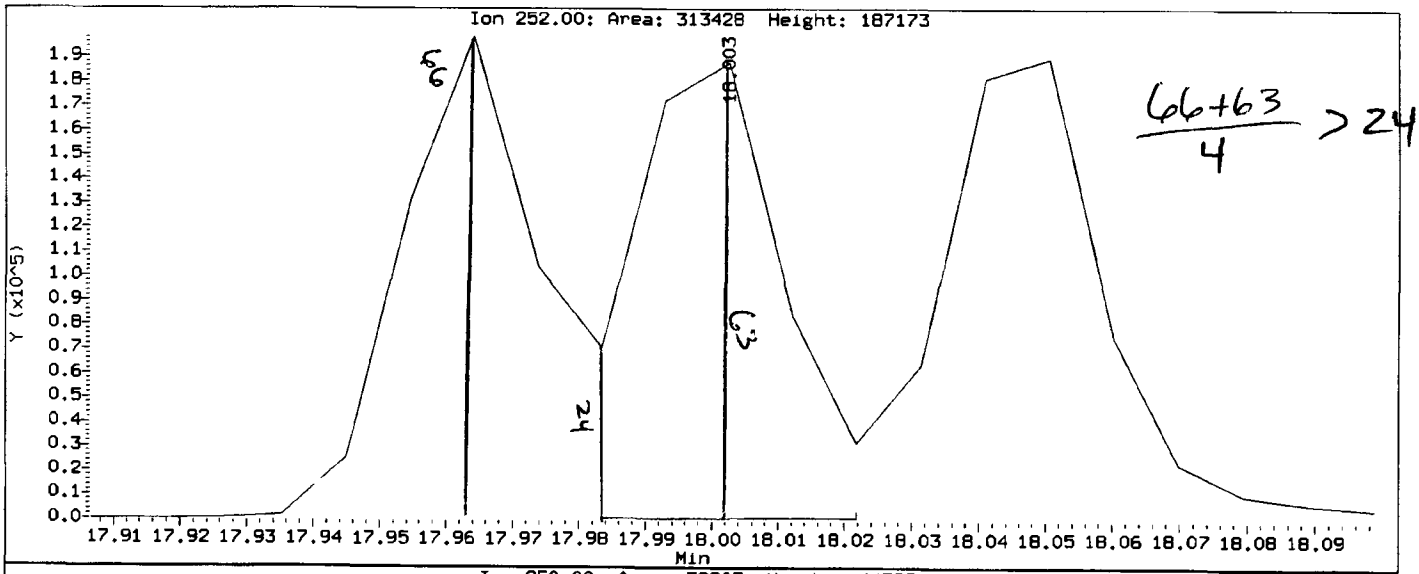
Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

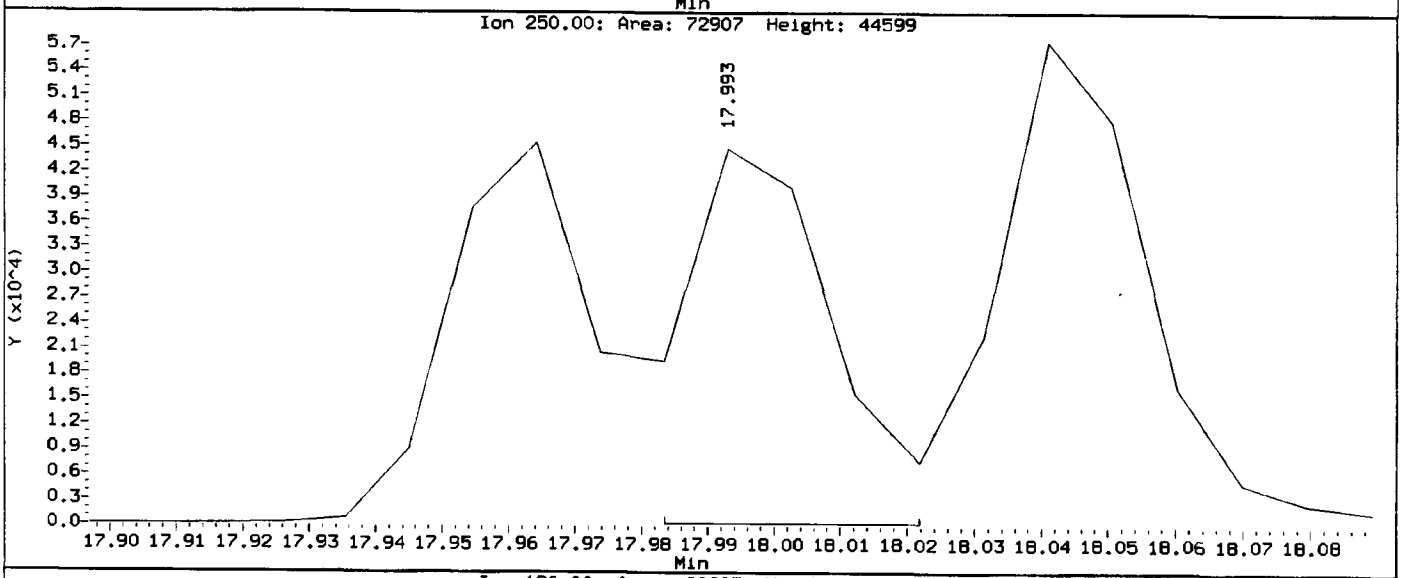
Method File: /chem3/nt11.i/20130612.b/lowsim.m
Batch File: /chem3/nt11.i/20130612.b
Inst ID: nt11.i

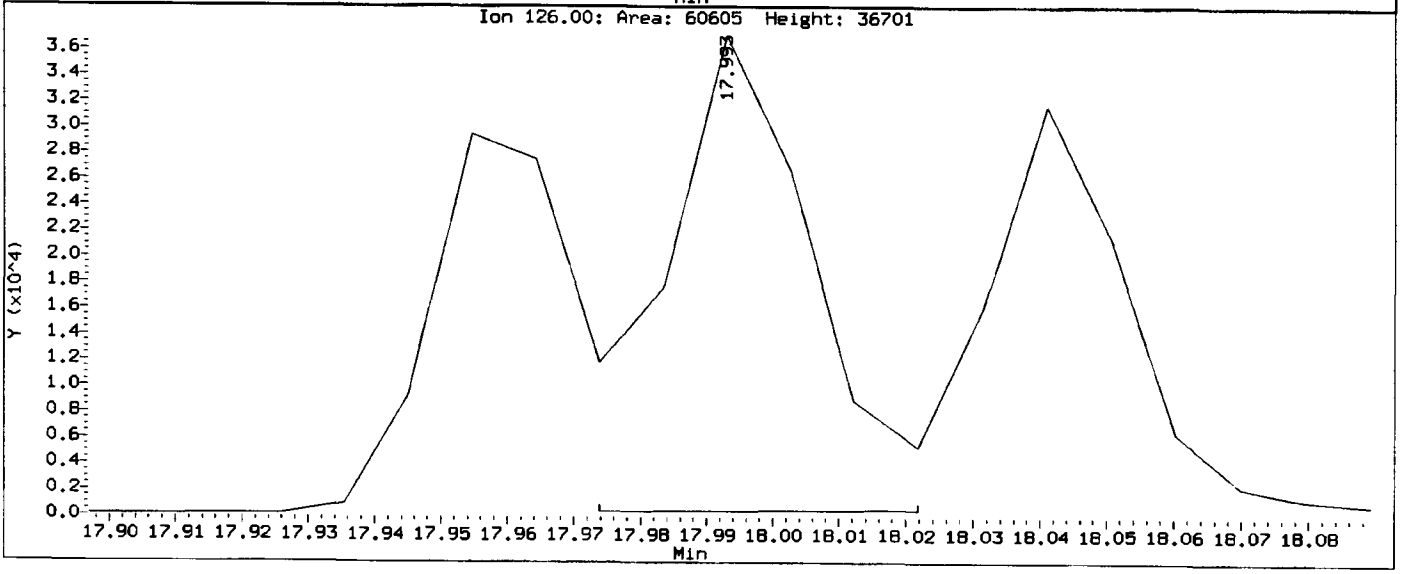
Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
24 Fluoranthene	13.686	13.686	13.686	13.686	13.686	13.686	13.686	13.436-13.936	13.686	0.000
25 Pyrene	14.166	14.166	14.166	14.166	14.166	14.166	14.166	13.916-14.416	14.166	0.000
28 Benzo(a)anthracene	16.184	16.184	16.184	16.184	16.184	16.184	16.184	15.934-16.434	16.184	0.000
* 29 Chrysene-d12	16.275	16.275	16.275	16.275	16.275	16.275	16.275	16.025-16.525	16.275	0.000
30 Chrysene	16.325	16.325	16.325	16.317	16.317	16.317	16.325	16.075-16.575	16.321	0.005
44 Benzo(b)fluoranthene	17.964	17.964	17.964	17.964	17.964	17.964	17.964	17.714-18.214	17.964	0.000
45 Benzo(k)fluoranthene	18.003	18.002	18.003	18.002	18.003	18.003	18.003	17.753-18.253	18.003	0.000
46 Benzo(j)fluoranthene	18.051	18.051	18.041	18.050	18.051	18.051	18.051	17.801-18.301	18.049	0.004
34 Benzo(a)pyrene	18.637	18.637	18.637	18.636	18.646	18.637	18.637	18.387-18.887	18.638	0.004
* 35 Perylene-d12	18.810	18.810	18.810	18.809	18.810	18.810	18.810	18.560-19.060	18.810	0.000
$ 36 Dibenzo(a,h)anthracene	20.764	20.764	20.764	20.764	20.764	20.764	20.764	20.514-21.014	20.764	0.000
37 Indeno(1,2,3-cd)pyrene	20.853	20.852	20.853	20.852	20.852	20.853	20.853	20.603-21.103	20.853	0.000
38 Dibenzo(a,h)anthracene	20.853	20.852	20.853	20.852	20.852	20.853	20.853	20.603-21.103	20.853	0.000
39 Benzo(g,h,i)perylene	21.705	21.705	21.705	21.705	21.705	21.705	21.705	21.455-21.955	21.705	0.000
47 Perylene	18.858	18.858	18.858	18.857	18.858	18.858	18.858	18.608-19.108	18.858	0.000

Data File: /chem3/nt11.i/20130612.b/ic0612a.d
Injection Date: 12-JUN-2013 15:46
Instrument: nt11.i
Client Sample ID:

Compound: Benzo(k)fluoranthene
CAS Number:







WUCS : 00035

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/nt11.i/20130612.b

ARI Job No.: DFTP Method: DF8270.m Instrument: nt11.i Date: 12-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1530	df0612.d	DFTPP 10		1	NO MANUAL INTEGRATION
1546	ic0612a.d	SIM 250		1	NO MANUAL INTEGRATION
1615	ic0612b.d	SIM 1000		1	NO MANUAL INTEGRATION
1644	ic0612c.d	SIM 10		1	NO MANUAL INTEGRATION
1713	ic0612d.d	SIM 500		1	NO MANUAL INTEGRATION
1742	ic0612e.d	SIM 50		1	NO MANUAL INTEGRATION
1811	ic0612f.d	SIM 100		1	NO MANUAL INTEGRATION
1840	icv0612.d	SIM ICV 250		1	NO MANUAL INTEGRATION

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-JUN-2013 15:46
End Cal Date : 12-JUN-2013 18:11
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem3/nt11.i/20130612.b/lowsim.m
Cal Date : 13-Jun-2013 07:54 van
Curve Type : Average

Calibration File Names:
Level 1: /chem3/nt11.i/20130612.b/ic0612c.d
Level 2: /chem3/nt11.i/20130612.b/ic0612e.d
Level 3: /chem3/nt11.i/20130612.b/ic0612f.d
Level 4: /chem3/nt11.i/20130612.b/ic0612a.d
Level 5: /chem3/nt11.i/20130612.b/ic0612d.d
Level 6: /chem3/nt11.i/20130612.b/ic0612b.d

Compound	10.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	___ RRF	% RSD
5 Naphthalene	1.16989	0.96702	1.04281	0.97447	0.94208	0.84064	0.98949	11.119
7 2-Methylnaphthalene	0.63775	0.54076	0.62888	0.62446	0.62142	0.57589	0.60486	6.302
8 1-Methylnaphthalene	0.66699	0.58111	0.64363	0.63051	0.61904	0.58189	0.62053	5.508
10 Acenaphthylene	1.76894	1.40820	1.56430	1.58061	1.53542	1.40020	1.54294	8.769
12 Acenaphthene	1.23101	0.97262	1.08724	1.03825	1.01007	0.92952	1.04479	10.150
14 Dibenzofuran	1.86109	1.42983	1.64384	1.55936	1.47403	1.32806	1.54937	12.079
15 Fluorene	1.26835	1.01052	1.11725	1.12104	1.09066	1.02298	1.10513	8.386
17 Pentachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
19 Phenanthrene	1.40759	1.05545	1.20763	1.10458	1.07282	0.95585	1.13398	13.819
20 Anthracene	1.01637	0.80550	0.98411	1.00522	1.01506	0.94007	0.96105	8.465
22 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
24 Fluoranthene	1.50563	0.99003	1.29305	1.18559	1.17961	1.07225	1.20436	14.991
25 Pyrene	2.13320	1.31920	1.62487	1.44922	1.44369	1.31145	1.54694	19.973
28 Benzo(a)anthracene	1.53812	1.12278	1.32759	1.27131	1.23230	1.15993	1.27534	11.643
30 Chrysene	1.83513	1.30545	1.52828	1.40239	1.36000	1.22691	1.44303	15.030
44 Benzo(b)fluoranthene	1.71529	1.32468	1.56040	1.50222	1.48182	1.41058	1.49916	8.903
45 Benzo(k)fluoranthene	1.69626	1.36791	1.60368	1.53982	1.56413	1.47499	1.54113	7.277
46 Benzo(j)fluoranthene	1.92766	1.63731	1.85451	1.68910	1.73152	1.56169	1.73363	7.871
34 Benzo(a)pyrene	1.38490	1.08598	1.27956	1.26037	1.25970	1.20595	1.24608	7.865
37 Indeno(1,2,3-cd)pyrene	1.77776	1.41015	1.69251	1.70815	1.71870	1.63473	1.65700	7.808
38 Dibenzo(a,h)anthracene	1.24924	1.09776	1.28353	1.33306	1.35280	1.29584	1.26870	7.204

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 12-JUN-2013 15:46
End Cal Date : 12-JUN-2013 18:11
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem3/nt11.i/20130612.b/lowsim.m
Cal Date : 13-Jun-2013 07:54 van
Curve Type : Average

	Compound	10.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	39 Benzo(g,h,i)perylene	1.76267	1.33262	1.51341	1.46320	1.45288	1.36720	1.48200	10.298
	47 Perylene	1.66509	1.35702	1.51043	1.44489	1.45472	1.35641	1.46476	7.847
$	6 2-Methylnaphthalene-d10	0.64779	0.56610	0.62727	0.61674	0.60873	0.57157	0.60637	5.267
$	16 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
$	23 Fluoranthene-d10	1.12679	0.89411	1.08067	1.06043	1.05562	0.97969	1.03288	8.038
$	36 Dibenzo(a,h)anthracene-d14	1.09892	0.93564	1.12074	1.15799	1.16643	1.12637	1.10102	7.697

Analytical Resources Inc.: Organics Instrument Log

NT-11 Serial No.:GC=US10140004, MS=US10481502

Date: 6·12·13 Analysis: low sim PNA Analyst: VB

GC Program: lowsim Column No: 14123 Column Type: Rx:-175,1ms

Instrument Tune (.U or .CT.): 130612.U EM Voltage: 1376

Calibration File: df0612 Curve Date: 6·12·13 Injection Vol.: 2 ul

IS/SS	Ical/Ccal	LCS/ICV
B000331	B000365	B000604

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem3/nt11.i/20130612.b

	Time	Filename	LabID	ClientId	DF									
1	1530	df0612.d	DFTPP 10		1	NO ISTDS FOUND								
2	1546	ic0612a.d	SIM 250		1	5.98	270479	8.94	156669	11.57	244223	16.28	194330	18.81	162839
3	1615	ic0612b.d	SIM 1000		1	5.98	276093	8.94	167665	11.57	257108	16.28	206699	18.81	165050
4	1644	ic0612c.d	SIM 10		1	5.98	274965	8.94	144109	11.57	226217	16.28	170364	18.81	141830
5	1713	ic0612d.d	SIM 500		1	5.98	260937	8.94	154444	11.57	234858	16.28	187693	18.81	151727
6	1742	ic0612e.d	SIM 50		1	5.98	259532	8.94	142929	11.57	221343	16.28	164927	18.81	134445
7	1811	ic0612f.d	SIM 100		1	5.98	257480	8.94	144249	11.57	223110	16.28	173838	18.81	142749
8	1840	icv0612.d	SIM ICV 250		1	5.98	253751	8.94	144883	11.57	222056	16.28	171640	18.81	141089
9	1908	ws97mb.d	WS97MBW1	WS97MBW1	1	5.98	270075	8.94	147902	11.57	250461	16.28	176331	18.81	141530
10	1937	ws97sb.d	WS97LCSW1	WS97LCSW1	1	5.98	269794	8.94	156461	11.57	251349	16.28	187674	18.81	148361
11	2006	ws97sbd.d	WS97LCSDW1	WS97LCSDW1	1	5.98	283697	8.94	162216	11.57	264618	16.28	202470	18.81	163502
12	2035	ws97qls1.d	WS97QLS1		1	5.98	281917	8.94	155174	11.57	260223	16.28	188681	18.81	153279
13	2104	ws97a.d	WS97A	LS431-W-0606	1	5.98	277360	8.94	161197	11.57	261000	16.28	191821	18.81	159393
14	2133	wt15a.d	WT15A	LTST-W-LSIV-	1	5.98	272670	8.94	160643	11.57	266115	16.28	198864	18.81	172368
15	2202	ws90a.d	WS90A	CL-MH-SPS-20	1	5.98	285000	8.94	167156	11.57	275580	16.28	207520	18.81	177029
16	2231	ws90b.d	WS90B	CL-VT-EFF-20	1	5.98	284887	8.94	168729	11.57	276129	16.28	208482	18.81	178659
17	2300	ws90c.d	WS90C	QC-EB-02-201	1	5.98	294815	8.94	178304	11.57	280260	16.28	211800	18.81	177469
18	2329	ws90d.d	WS90D	QC-EB-03-201	1	5.98	288239	8.94	173065	11.57	272368	16.27	203221	18.81	170733

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

VB 6.13.13

WUS1 : 00339

Q-FLAG SUMMARY FOR DATABATCH - /chem3/nt11.i/20130612.b

Instrument: nt11.i Date: 12-JUN-2013 Method: lowsim.m

INITIAL CAL: 12-JUN-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 12-JUN-2013

Compound	%D
NO Q-FLAGS	

Data File: /chem3/nt11.i/20130612.b/df0612.d

Date : 12-JUN-2013 15:30

Client ID:

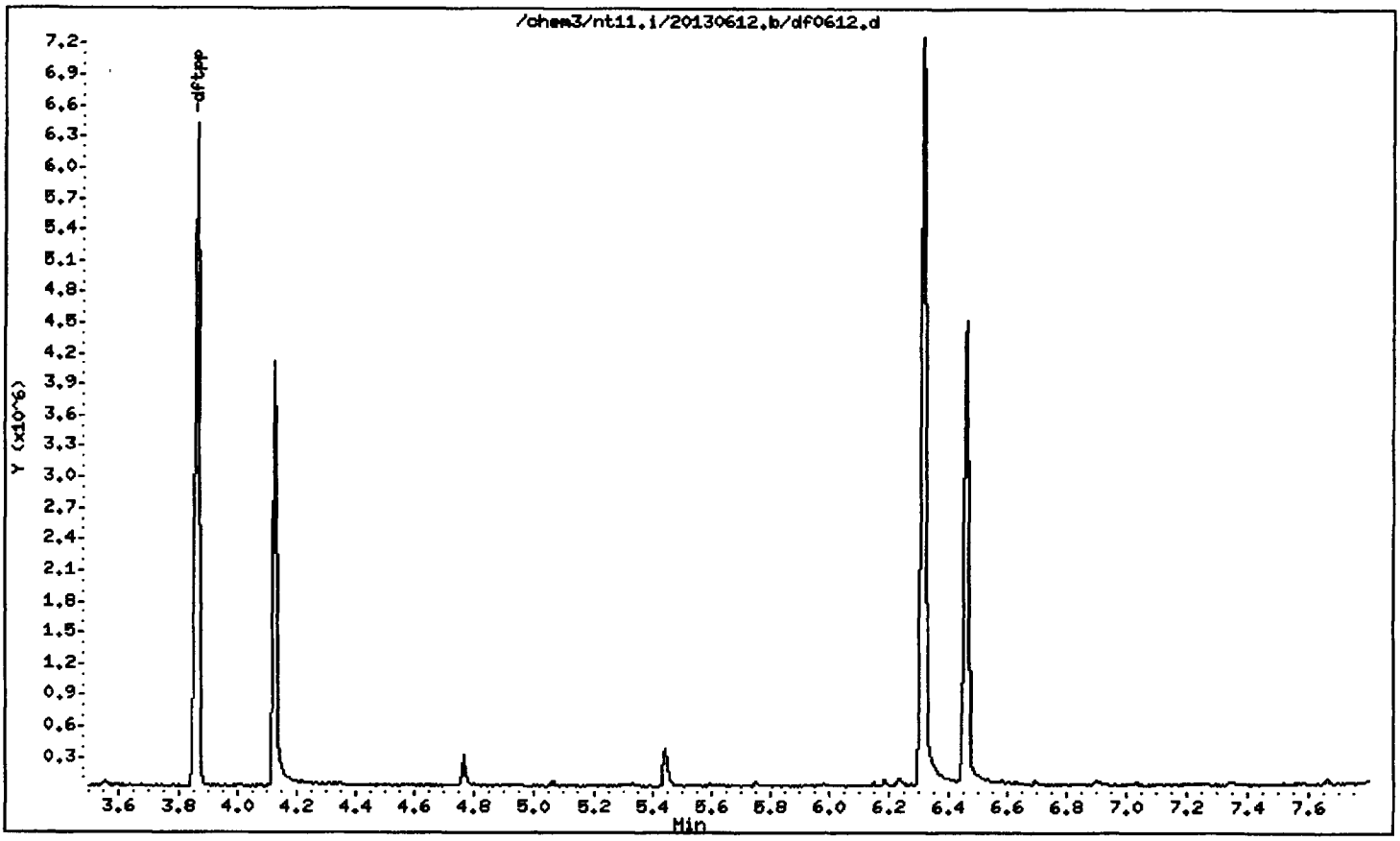
Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

Column diameter: 0.25



Data File: /chem3/nt11.i/20130612.b/df0612.d

Date : 12-JUN-2013 15:30

Client ID:

Instrument: nt11.i

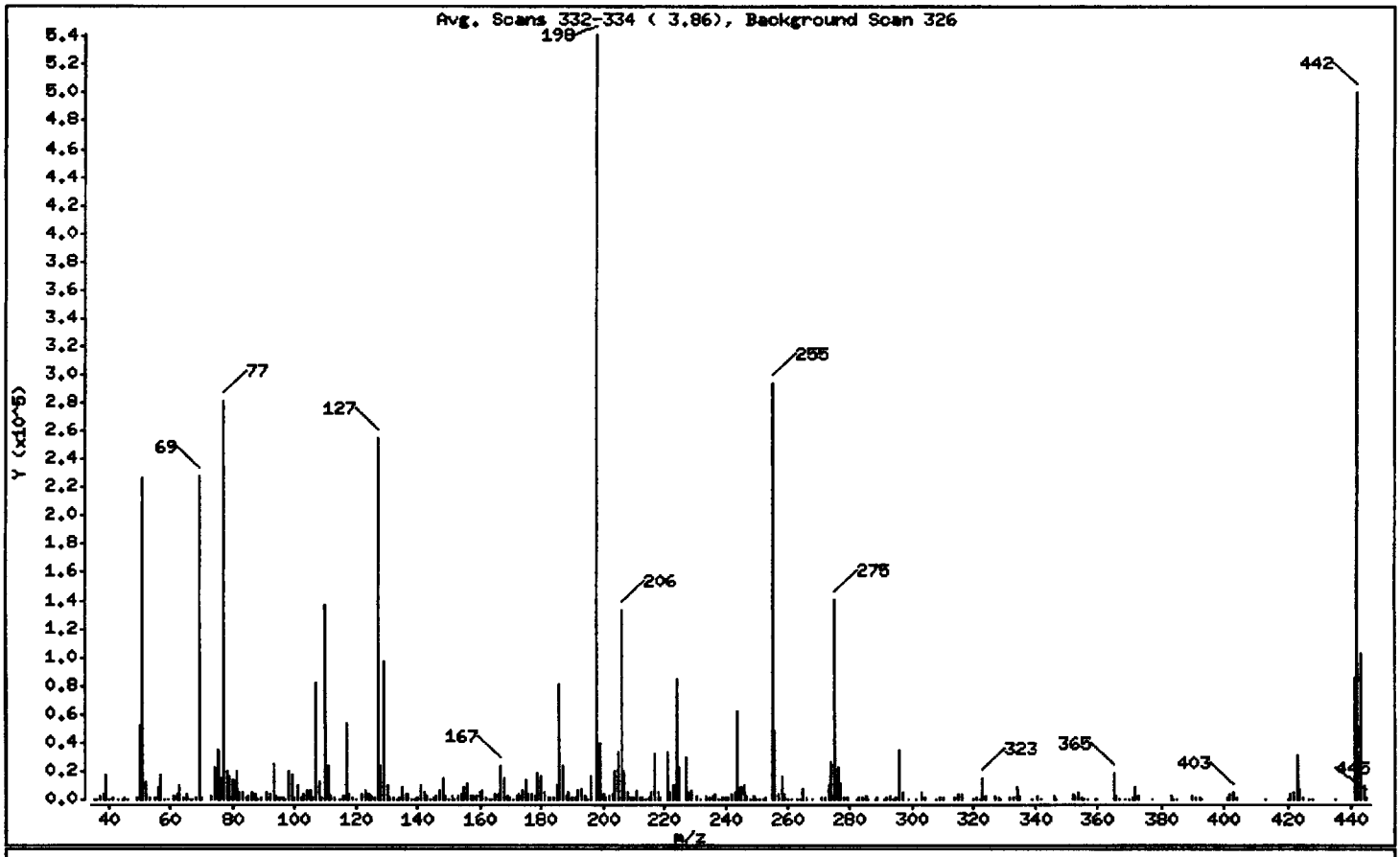
Sample Info: DFTPP 10

Operator: VTS

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	41.83
68	Less than 2.00% of mass 69	0.33 (0.78)
69	Mass 69 relative abundance	42.09
70	Less than 2.00% of mass 69	0.26 (0.62)
127	10.00 - 80.00% of mass 198	47.10
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	7.33
275	10.00 - 60.00% of mass 198	28.96
365	Greater than 1.00% of mass 198	3.37
441	0.01 - 24.00% of mass 442	15.93 (17.26)
442	50.00 - 200.00% of mass 198	92.32
443	15.00 - 24.00% of mass 442	19.09 (20.67)

Data File: /chem3/nt11.i/20130612.b/df0612.d

Date : 12-JUN-2013 15:30

Client ID:

Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

Column diameter: 0.25

Data File: df0612.d
Spectrum: Avg. Scans 332-334 (3.86), Background Scan 326
Location of Maximum: 198.00
Number of points: 309

m/z	Y	m/z	Y	m/z	Y	m/z	Y
35.00	499	123.00	6563	202.00	2318	293.00	2932
36.00	174	124.00	4081	203.00	3146	294.00	381
37.00	1873	125.00	2503	204.00	19832	295.00	799
38.00	3737	126.00	830	205.00	33080	296.00	34720
39.00	17296	127.00	255104	206.00	132608	297.00	8594
40.00	450	128.00	23104	207.00	20112	299.00	209
41.00	1540	129.00	97560	208.00	4745	301.00	508
43.00	230	130.00	9378	209.00	1216	303.00	4743
44.00	488	131.00	1373	210.00	1409	304.00	678
45.00	734	132.00	926	211.00	6434	308.00	390
46.00	169	133.00	528	212.00	1471	309.00	717
49.00	1562	134.00	1816	213.00	719	310.00	894
50.00	52168	135.00	8598	214.00	189	314.00	1576
51.00	226496	136.00	3677	215.00	1070	315.00	4016
52.00	12912	137.00	3885	216.00	4500	316.00	3651
53.00	664	138.00	452	217.00	31912	320.00	606
55.00	1149	139.00	433	218.00	8594	321.00	1501
56.00	8160	140.00	831	219.00	658	322.00	214
57.00	17880	141.00	10321	221.00	33424	323.00	14945
58.00	441	142.00	5109	222.00	4536	324.00	2932
59.00	226	143.00	2294	223.00	10371	327.00	2760
61.00	2144	144.00	449	224.00	85280	328.00	900
62.00	3456	145.00	988	225.00	22872	329.00	166
63.00	9520	146.00	2427	227.00	29944	332.00	1231
64.00	1697	147.00	6617	228.00	4744	333.00	754
65.00	4237	148.00	15170	229.00	6575	334.00	8469
66.00	204	149.00	2757	231.00	2376	335.00	2370
67.00	288	150.00	607	232.00	289	339.00	172
68.00	1788	151.00	1875	234.00	2244	341.00	2369
69.00	227968	152.00	196	235.00	1554	342.00	481
70.00	1406	153.00	2586	236.00	1895	346.00	2807
73.00	2667	154.00	3342	237.00	3396	347.00	509
74.00	22672	155.00	8343	238.00	405	352.00	3910
75.00	34880	156.00	10947	239.00	1210	353.00	3039
76.00	15409	157.00	2763	240.00	639	354.00	4983

Data File: /chem3/nt11.i/20130612.b/df0612.d

Date : 12-JUN-2013 15:30

Client ID:

Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

Column diameter: 0.25

Data File: df0612.d
Spectrum: Avg. Scans 332-334 (3.86), Background Scan 326
Location of Maximum: 198.00
Number of points: 309

m/z	Y	m/z	Y	m/z	Y	m/z	Y
77.00	281472	158.00	2497	241.00	1425	355.00	1532
78.00	20304	159.00	2166	242.00	3447	356.00	180
79.00	16093	160.00	4539	243.00	4787	357.00	223
80.00	13874	161.00	6565	244.00	61728	359.00	234
81.00	20016	162.00	1412	245.00	8518	360.00	195
82.00	4608	163.00	422	246.00	9452	365.00	18256
83.00	4815	164.00	476	247.00	2216	366.00	3105
84.00	1144	165.00	4090	248.00	452	367.00	205
85.00	2629	166.00	3544	249.00	2856	369.00	194
86.00	4798	167.00	24152	250.00	277	370.00	180
87.00	3180	168.00	14871	251.00	615	371.00	1240
88.00	383	169.00	2560	252.00	188	372.00	8150
89.00	626	170.00	968	253.00	1285	373.00	2175
91.00	4498	171.00	194	255.00	293760	377.00	441
92.00	3906	172.00	2960	256.00	47984	383.00	2682
93.00	25504	173.00	3233	257.00	4136	384.00	422
94.00	2843	174.00	6324	258.00	15825	385.00	241
95.00	1100	175.00	13305	259.00	3121	390.00	2375
96.00	1387	176.00	3281	260.00	319	391.00	1056
97.00	338	177.00	3656	261.00	529	392.00	649
98.00	19808	178.00	1968	263.00	447	393.00	360
99.00	16904	179.00	18152	264.00	268	401.00	1012
100.00	1411	180.00	15951	265.00	7719	402.00	3720
101.00	9360	181.00	5374	266.00	1279	403.00	4996
102.00	1457	182.00	1113	268.00	217	404.00	1133
103.00	3196	183.00	1108	271.00	1420	413.00	578
104.00	5932	184.00	1093	272.00	1531	420.00	231
105.00	6462	185.00	9650	273.00	9428	421.00	4210
106.00	660	186.00	81496	274.00	26608	422.00	4387
107.00	81784	187.00	23240	275.00	140608	423.00	31280
108.00	12454	188.00	2080	276.00	21928	424.00	7293
109.00	1104	189.00	4530	277.00	10813	425.00	666
110.00	136512	190.00	640	278.00	1706	427.00	173
111.00	23176	191.00	1743	279.00	924	428.00	231
112.00	2451	192.00	6298	282.00	181	435.00	178

Data File: /chem3/nt11.i/20130612.b/df0612.d

Date : 12-JUN-2013 15:30

Client ID:

Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

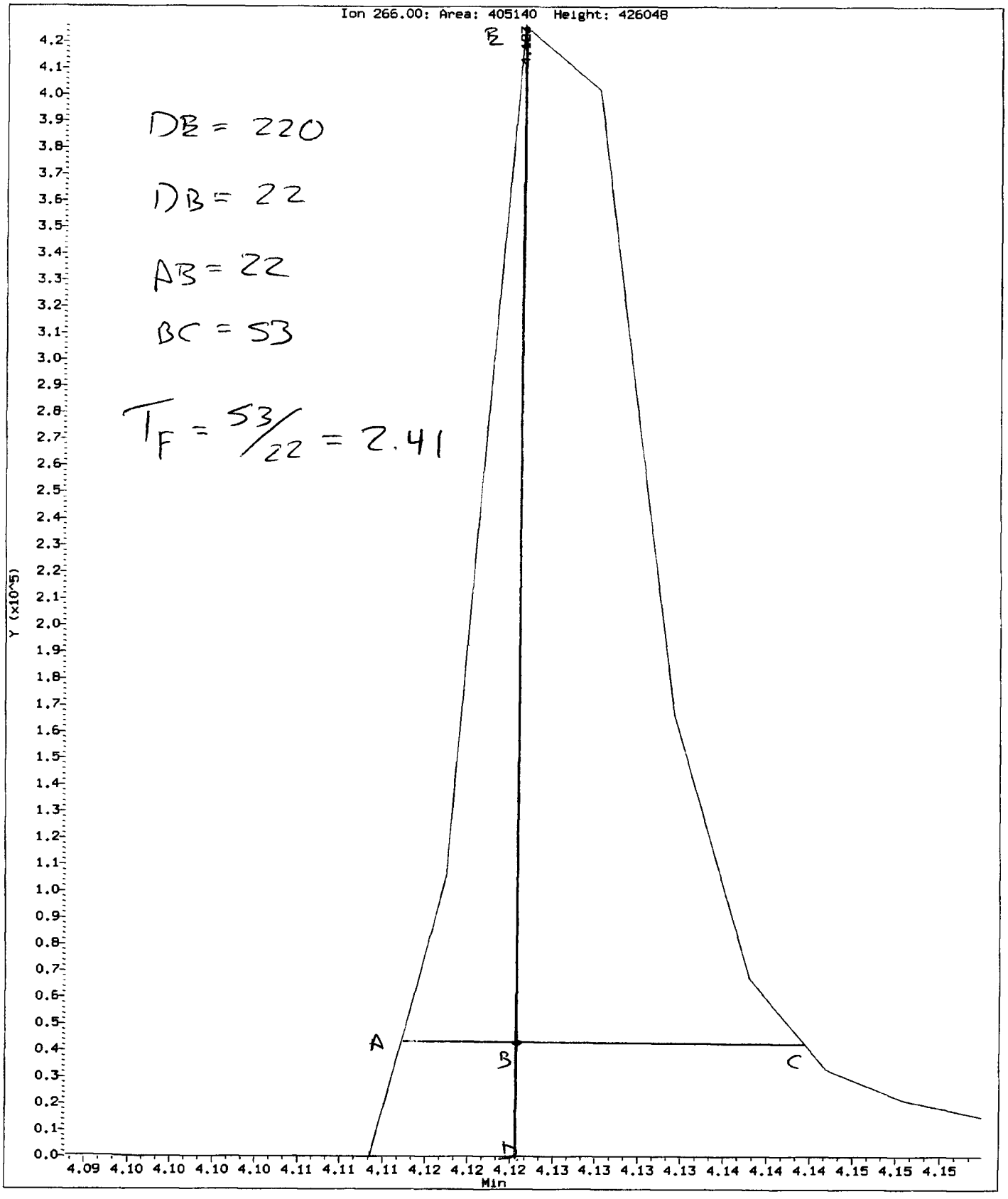
Column diameter: 0.25

Data File: df0612.d
Spectrum: Avg. Scans 332-334 (3.86), Background Scan 326
Location of Maximum: 198.00
Number of points: 309

m/z	Y	m/z	Y	m/z	Y	m/z	Y
113.00	1324	193.00	8060	283.00	1500	441.00	86304
115.00	319	194.00	2069	284.00	929	442.00	500032
116.00	3067	195.00	608	285.00	2392	443.00	103376
117.00	53528	196.00	16552	286.00	503	444.00	10288
118.00	3547	198.00	541632	288.00	173	445.00	855
119.00	906	199.00	39696	289.00	993		
120.00	412	200.00	3879	291.00	461		
122.00	3953	201.00	1246	292.00	806		

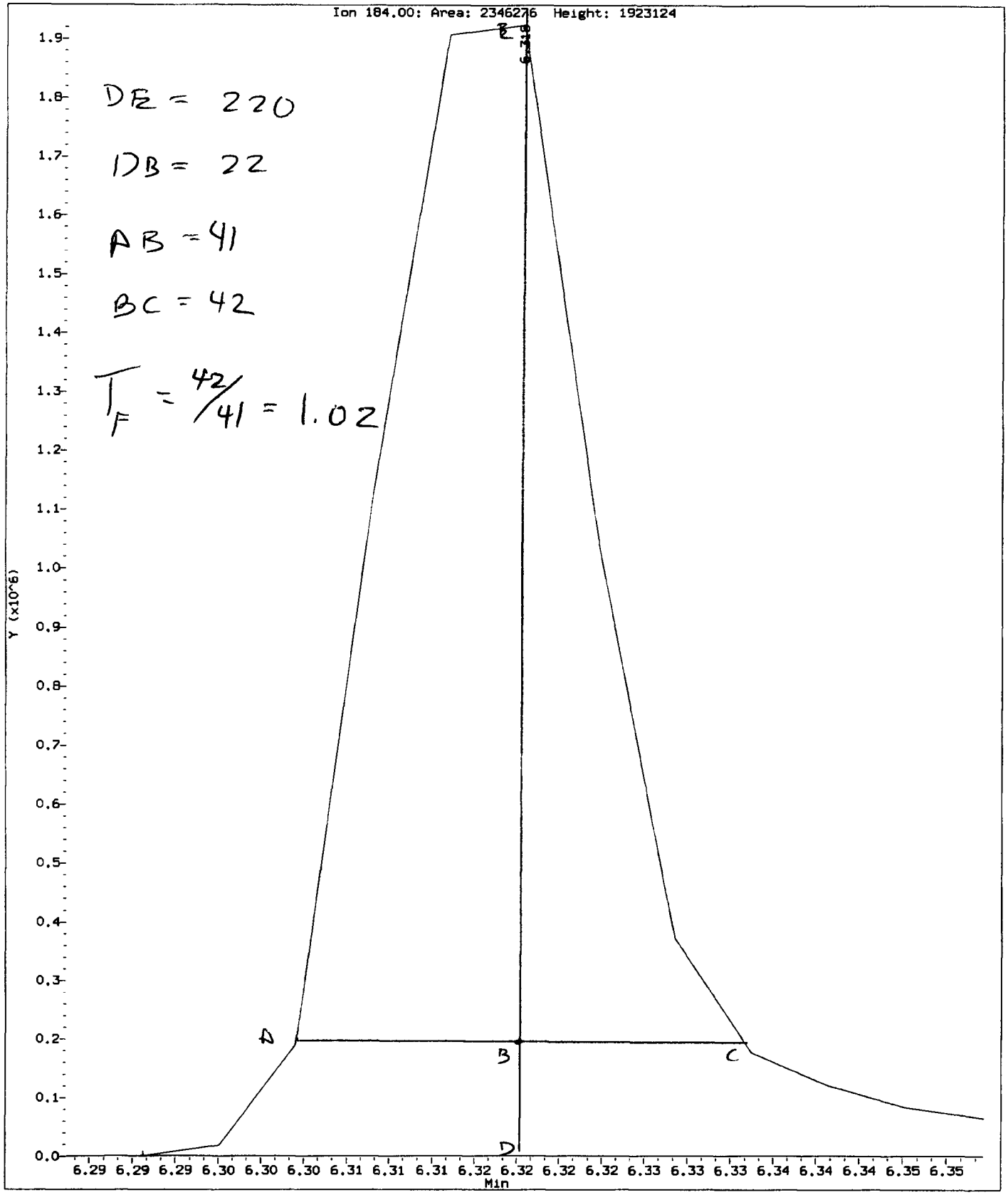
Data File: /chem3/nt11.i/20130612.b/DDT.b/df0612.d
Injection Date: 12-JUN-2013 15:30
Instrument: nt11.i
Client Sample ID:

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem3/nt11.i/20130612.b/DDT.b/df0612.d
Injection Date: 12-JUN-2013 15:30
Instrument: nt11.i
Client Sample ID:

Compound: Benzidine
CAS Number:



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem3/nt11.i/20130612.b/DDT.b/df0612.d ARI ID: DFTPP 10
Method: /chem3/nt11.i/20130612.b/DDT.b/sw846ddt.m Misc:
Analysis Date: 12-JUN-2013 15:30 Instrument: nt11.i

COMPOUND	RT	AREA
Pentachlorophenol	4.123	405140
Benzidine	6.318	2346276
4,4'-DDE	5.758	4247
4,4'-DDD	6.238	11300
4,4'-DDT	6.463	624089

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(\ 4247 + 11300) * 100}{(\ 4247 + 11300 + 624089)}$$

DDT Percent Breakdown = 2.4 %

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130612.b/ic0612a.d
Lab Smp Id: SIM 250
Inj Date : 12-JUN-2013 15:46
Operator : VTS Inst ID: nt11.i
Smp Info : SIM 250
Misc Info :
Comment :
Method : /chem3/nt11.i/20130612.b/lowsim.m
Meth Date : 13-Jun-2013 07:55 van Quant Type: ISTD
Cal Date : 12-JUN-2013 15:46 Cal File: ic0612a.d
Als bottle: 2 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
*	4 Naphthalene-d8	136	5.976	5.976	(1.000)	270479	200.000	
	5 Naphthalene	128	6.018	6.018	(1.007)	329467	250.000	250
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.163)	208519	250.000	250
	7 2-Methylnaphthalene	142	7.006	7.006	(1.172)	211130	250.000	250
	8 1-methylnaphthalene	142	7.247	7.247	(1.213)	213175	250.000	250
	10 Acenaphthylene	152	8.784	8.784	(0.983)	309540	250.000	250
*	11 Acenaphthene-d10	164	8.939	8.939	(1.000)	156669	200.000	
	12 Acenaphthene	153	8.995	8.995	(1.006)	203327	250.000	250
	14 Dibenzofuran	168	9.205	9.205	(1.030)	305380	250.000	250
	15 Fluorene	166	9.825	9.814	(1.099)	219540	250.000	250
*	18 Phenanthrene-d10	188	11.574	11.574	(1.000)	244223	200.000	
	19 Phenanthrene	178	11.619	11.619	(1.004)	337204	250.000	250
	20 Anthracene	178	11.674	11.674	(1.009)	306873	250.000	250
$	23 Fluoranthene-d10	212	13.657	13.657	(1.180)	323728	250.000	250
	24 Fluoranthene	202	13.686	13.686	(1.182)	361936	250.000	250
	25 Pyrene	202	14.166	14.166	(0.870)	352034	250.000	250
	28 Benzo(a)anthracene	228	16.184	16.184	(0.994)	308816	250.000	250
*	29 Chrysene-d12	240	16.275	16.275	(1.000)	194330	200.000	
	30 Chrysene	228	16.325	16.317	(1.003)	340659	250.000	250
	44 Benzo(b)fluoranthene	252	17.964	17.964	(0.955)	305774	250.000	250
	45 Benzo(k)fluoranthene	252	18.003	18.003	(0.957)	313428	250.000	250
	46 Benzo(j)fluoranthene	252	18.051	18.051	(0.960)	343814	250.000	250
	34 Benzo(a)pyrene	252	18.637	18.637	(0.991)	256547	250.000	250
*	35 Perylene-d12	264	18.810	18.810	(1.000)	162839	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	20.853	20.853	(1.109)	347692	250.000	250
$	36 Dibenzo(a,h)anthracene-d14	292	20.764	20.764	(1.104)	235708	250.000	250
	38 Dibenzo(a,h)anthracene	278	20.853	20.853	(1.109)	271342	250.000	250

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
39 Benzo(g,h,i)perylene	276	21.705	21.705	(1.154)	297833	250.000	250
47 Perylene	252	18.858	18.858	(1.003)	294106	250.000	250

6.13.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ic0612a.d
Lab Smp Id: SIM 250
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130612.b/lowsim.m
Misc Info:

Calibration Date: 12-JUN-2013
Calibration Time: 15:46

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	270479	135240	540958	270479	0.00
11 Acenaphthene-d10	156669	78334	313338	156669	0.00
18 Phenanthrene-d10	244223	122112	488446	244223	0.00
29 Chrysene-d12	194330	97165	388660	194330	0.00
35 Perylene-d12	162839	81420	325678	162839	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	5.98	5.48	6.48	5.98	0.00
11 Acenaphthene-d10	8.94	8.44	9.44	8.94	0.00
18 Phenanthrene-d10	11.57	11.07	12.07	11.57	0.00
29 Chrysene-d12	16.28	15.78	16.78	16.28	0.00
35 Perylene-d12	18.81	18.31	19.31	18.81	0.00

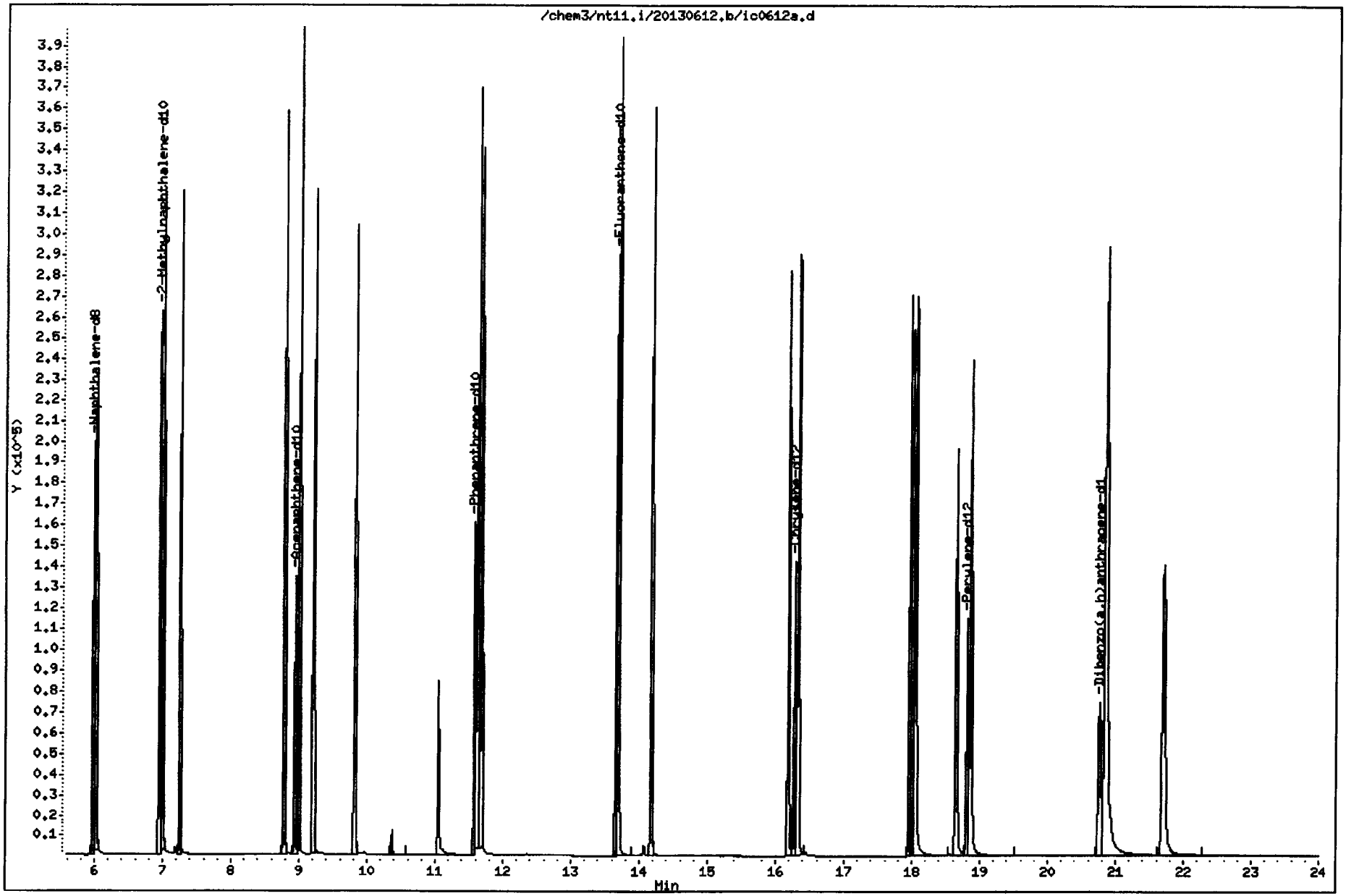
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.i/20130612.b/ic0612a.d
Date : 12-JUN-2013 15:46
Client ID:
Sample Info: SIM 250

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25

Column phase: Rxi-17Sil MS



CO-ELUTION SUMMARY FOR FILE - ic0612a.d

Lab ID: SIM 250, Method: lowsim.m, Instrument: nt11.i, Date: 12-JUN-2013

RT	CO-ELUTION COMPOUNDS
20.853	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.853	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130612.b/ic0612b.d
Lab Smp Id: SIM 1000
Inj Date : 12-JUN-2013 16:15
Operator : VTS Inst ID: nt11.i
Smp Info : SIM 1000
Misc Info :
Comment :
Method : /chem3/nt11.i/20130612.b/lowsim.m
Meth Date : 13-Jun-2013 07:55 van Quant Type: ISTD
Cal Date : 12-JUN-2013 16:15 Cal File: ic0612b.d
Als bottle: 3 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
*	4 Naphthalene-d8	136	5.976	5.976	(1.000)	276093	200.000	
	5 Naphthalene	128	6.018	6.018	(1.007)	1160470	1000.00	926
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.163)	789027	1000.00	962
	7 2-Methylnaphthalene	142	7.006	7.006	(1.172)	794999	1000.00	960
	8 1-methylnaphthalene	142	7.247	7.247	(1.213)	803274	1000.00	960
	10 Acenaphthylene	152	8.784	8.784	(0.983)	1173819	1000.00	939
*	11 Acenaphthene-d10	164	8.939	8.939	(1.000)	167665	200.000	
	12 Acenaphthene	153	8.994	8.995	(1.006)	779241	1000.00	945
	14 Dibenzofuran	168	9.205	9.205	(1.030)	1113350	1000.00	920
	15 Fluorene	166	9.814	9.814	(1.098)	857589	1000.00	954
*	18 Phenanthrene-d10	188	11.574	11.574	(1.000)	257108	200.000	
	19 Phenanthrene	178	11.618	11.619	(1.004)	1228781	1000.00	928
	20 Anthracene	178	11.674	11.674	(1.009)	1208500	1000.00	967
$	23 Fluoranthene-d10	212	13.657	13.657	(1.180)	1259425	1000.00	960
	24 Fluoranthene	202	13.686	13.686	(1.182)	1378418	1000.00	950
	25 Pyrene	202	14.166	14.166	(0.870)	1355377	1000.00	950
	28 Benzo(a)anthracene	228	16.184	16.184	(0.994)	1198777	1000.00	954
*	29 Chrysene-d12	240	16.275	16.275	(1.000)	206699	200.000	
	30 Chrysene	228	16.325	16.317	(1.003)	1268006	1000.00	933
	44 Benzo(b)fluoranthene	252	17.964	17.964	(0.955)	1164078	1000.00	969
	45 Benzo(k)fluoranthene	252	18.002	18.003	(0.957)	1217237	1000.00	978
	46 Benzo(j)fluoranthene	252	18.051	18.051	(0.960)	1288788	1000.00	961
	34 Benzo(a)pyrene	252	18.637	18.637	(0.991)	995214	1000.00	978
*	35 Perylene-d12	264	18.810	18.810	(1.000)	165050	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	20.852	20.853	(1.109)	1349060	1000.00	978
$	36 Dibenzo(a,h)anthracene-d14	292	20.764	20.764	(1.104)	929539	1000.00	986
	38 Dibenzo(a,h)anthracene	278	20.852	20.853	(1.109)	1069391	1000.00	986

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	ON-COL (ng/mL)
39 Benzo(g,h,i)perylene	276	21.705	21.705	(1.154)	1128284	1000.00	966
47 Perylene	252	18.858	18.858	(1.003)	1119380	1000.00	968

MJ
6.13.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ic0612b.d
Lab Smp Id: SIM 1000
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130612.b/lowsim.m
Misc Info:

Calibration Date: 12-JUN-2013
Calibration Time: 15:46

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

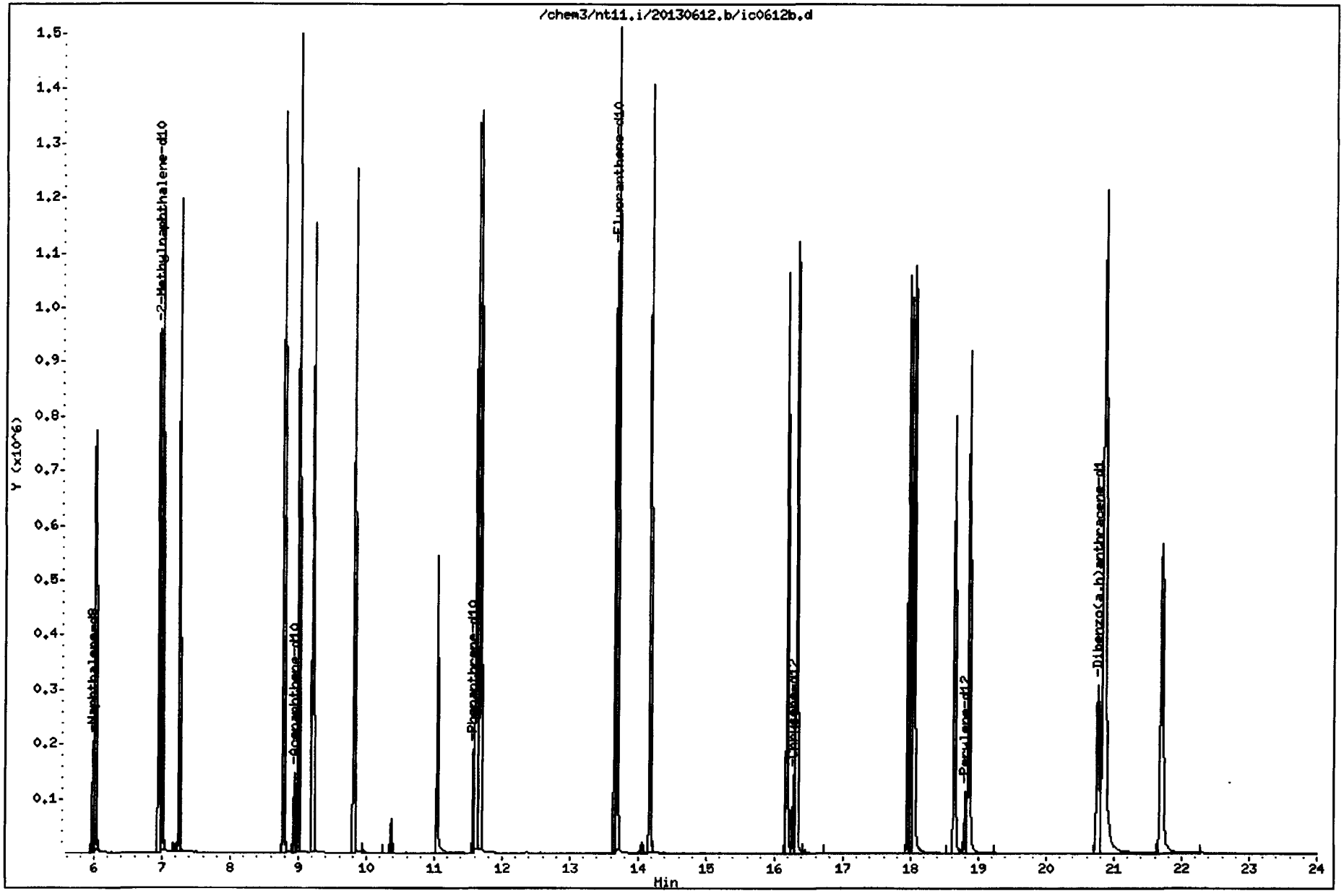
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	270479	135240	540958	276093	2.08
11 Acenaphthene-d10	156669	78334	313338	167665	7.02
18 Phenanthrene-d10	244223	122112	488446	257108	5.28
29 Chrysene-d12	194330	97165	388660	206699	6.36
35 Perylene-d12	162839	81420	325678	165050	1.36

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	5.98	5.48	6.48	5.98	0.00
11 Acenaphthene-d10	8.94	8.44	9.44	8.94	0.00
18 Phenanthrene-d10	11.57	11.07	12.07	11.57	0.00
29 Chrysene-d12	16.28	15.78	16.78	16.28	0.00
35 Perylene-d12	18.81	18.31	19.31	18.81	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/20130612.b/ic0612b.d
Date : 12-JUN-2013 16:15
Client ID:
Sample Info: SIM 1000

Instrument: nt11.i
Operator: VTS
Column phase: Rxi-17Sil MS
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ic0612b.d

Lab ID: SIM 1000, Method: lowsim.m, Instrument: nt11.i, Date: 12-JUN-2013

RT	CO-ELUTION COMPOUNDS
20.852	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.852	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130612.b/ic0612c.d
Lab Smp Id: SIM 10
Inj Date : 12-JUN-2013 16:44
Operator : VTS Inst ID: nt11.i
Smp Info : SIM 10
Misc Info :
Comment :
Method : /chem3/nt11.i/20130612.b/lowsim.m
Meth Date : 13-Jun-2013 07:55 van Quant Type: ISTD
Cal Date : 12-JUN-2013 16:44 Cal File: ic0612c.d
Als bottle: 4 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	5.976	5.976	(1.000)	274965	200.000	
	5 Naphthalene	128	6.018	6.018	(1.007)	16084	10.0000	11.8
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.163)	8906	10.0000	10.6
	7 2-Methylnaphthalene	142	7.006	7.006	(1.172)	8768	10.0000	10.4
	8 1-methylnaphthalene	142	7.247	7.247	(1.213)	9170	10.0000	10.6
	10 Acenaphthylene	152	8.784	8.784	(0.983)	12746	10.0000	11.2
*	11 Acenaphthene-d10	164	8.939	8.939	(1.000)	144109	200.000	
	12 Acenaphthene	153	8.995	8.995	(1.006)	8870	10.0000	11.5
	14 Dibenzofuran	168	9.205	9.205	(1.030)	13410	10.0000	11.8
	15 Fluorene	166	9.825	9.814	(1.099)	9139	10.0000	11.2
*	18 Phenanthrene-d10	188	11.574	11.574	(1.000)	226217	200.000	
	19 Phenanthrene	178	11.618	11.619	(1.004)	15921	10.0000	12.2
	20 Anthracene	178	11.674	11.674	(1.009)	11496	10.0000	10.3
$	23 Fluoranthene-d10	212	13.657	13.657	(1.180)	12745	10.0000	10.7
	24 Fluoranthene	202	13.686	13.686	(1.182)	17030	10.0000	12.0
	25 Pyrene	202	14.166	14.166	(0.870)	18171	10.0000	13.1
	28 Benzo(a)anthracene	228	16.184	16.184	(0.994)	13102	10.0000	11.6
*	29 Chrysene-d12	240	16.275	16.275	(1.000)	170364	200.000	
	30 Chrysene	228	16.325	16.317	(1.003)	15632	10.0000	12.3
	44 Benzo(b)fluoranthene	252	17.964	17.964	(0.955)	12164	10.0000	11.1
	45 Benzo(k)fluoranthene	252	18.003	18.003	(0.957)	12029	10.0000	10.8
	46 Benzo(j)fluoranthene	252	18.041	18.051	(0.959)	13670	10.0000	11.2
	34 Benzo(a)pyrene	252	18.637	18.637	(0.991)	9821	10.0000	10.8
*	35 Perylene-d12	264	18.810	18.810	(1.000)	141830	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	20.853	20.853	(1.109)	12607	10.0000	10.4
$	36 Dibenzo(a,h)anthracene-d14	292	20.764	20.764	(1.104)	7793	10.0000	9.74
	38 Dibenzo(a,h)anthracene	278	20.853	20.853	(1.109)	8859	10.0000	9.66

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
39 Benzo(g,h,i)perylene	276	21.705	21.705	(1.154)	12500	10.0000	11.5
47 Perylene	252	18.858	18.858	(1.003)	11808	10.0000	11.2

47
6.3.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ic0612c.d
Lab Smp Id: SIM 10
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130612.b/lowsim.m
Misc Info:

Calibration Date: 12-JUN-2013
Calibration Time: 15:46

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	270479	135240	540958	274965	1.66
11 Acenaphthene-d10	156669	78334	313338	144109	-8.02
18 Phenanthrene-d10	244223	122112	488446	226217	-7.37
29 Chrysene-d12	194330	97165	388660	170364	-12.33
35 Perylene-d12	162839	81420	325678	141830	-12.90

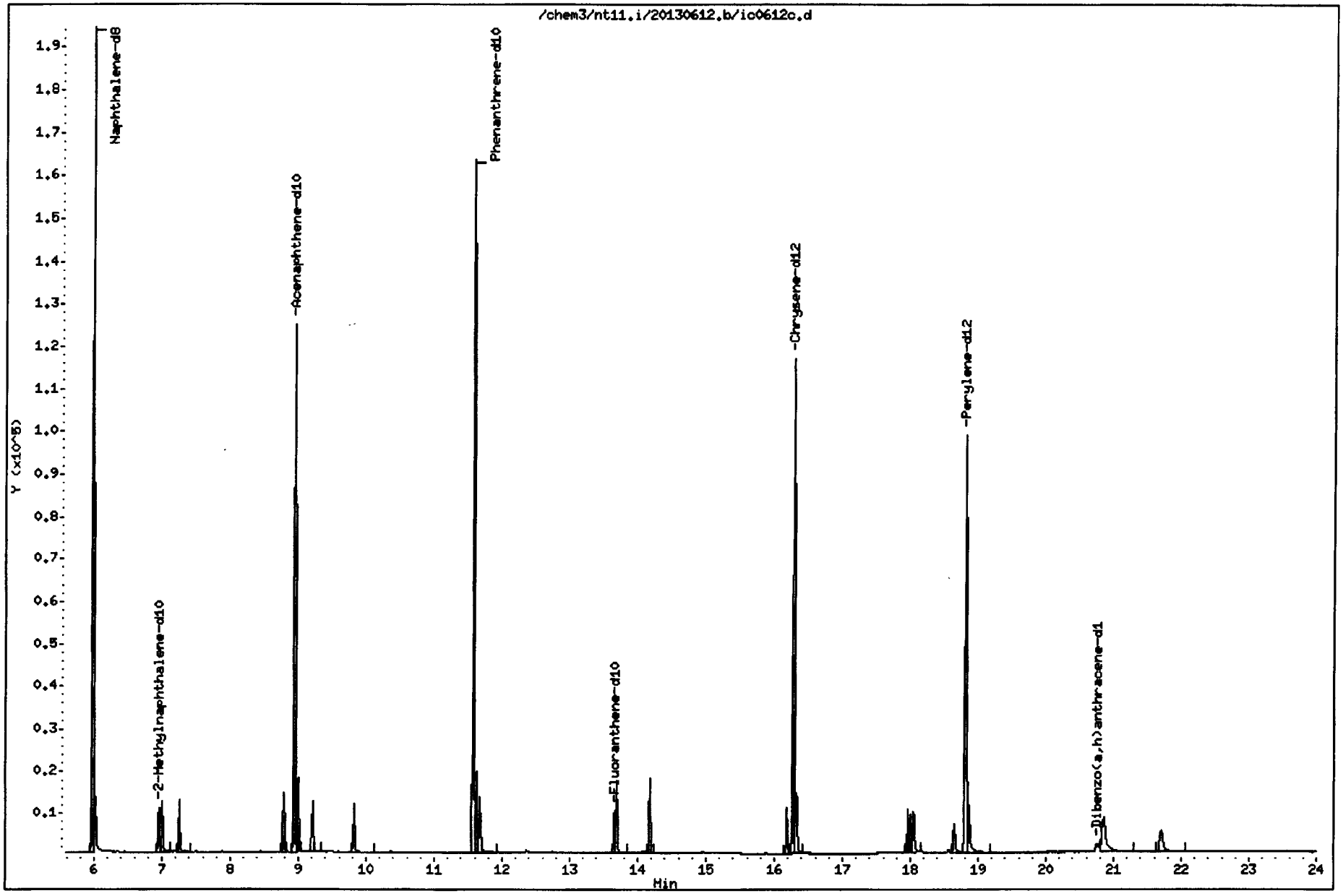
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	5.98	5.48	6.48	5.98	0.00
11 Acenaphthene-d10	8.94	8.44	9.44	8.94	0.00
18 Phenanthrene-d10	11.57	11.07	12.07	11.57	0.00
29 Chrysene-d12	16.28	15.78	16.78	16.28	0.00
35 Perylene-d12	18.81	18.31	19.31	18.81	0.00

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/20130612.b/ic0612c.d
Date : 12-JUN-2013 16:44
Client ID:
Sample Info: SIM 10

Instrument: nt11.i

Operator: VTS
Column phase: Rxi-17Sil MS
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ic0612c.d

Lab ID: SIM 10, Method: lowsim.m, Instrument: nt11.i, Date: 12-JUN-2013

RT	CO-ELUTION COMPOUNDS
20.853	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.853	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130612.b/ic0612d.d
Lab Smp Id: SIM 500
Inj Date : 12-JUN-2013 17:13
Operator : VTS Inst ID: nt11.i
Smp Info : SIM 500
Misc Info :
Comment :
Method : /chem3/nt11.i/20130612.b/lowsim.m
Meth Date : 13-Jun-2013 07:55 van Quant Type: ISTD
Cal Date : 12-JUN-2013 17:13 Cal File: ic0612d.d
Als bottle: 5 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	5.976	5.976	(1.000)	260937	200.000	
	5 Naphthalene	128	6.018	6.018	(1.007)	614559	500.000	480
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.163)	397102	500.000	498
	7 2-Methylnaphthalene	142	7.005	7.006	(1.172)	405376	500.000	505
	8 1-methylnaphthalene	142	7.247	7.247	(1.213)	403824	500.000	496
	10 Acenaphthylene	152	8.784	8.784	(0.983)	592841	500.000	489
*	11 Acenaphthene-d10	164	8.939	8.939	(1.000)	154444	200.000	
	12 Acenaphthene	153	8.994	8.995	(1.006)	389998	500.000	480
	14 Dibenzofuran	168	9.205	9.205	(1.030)	569137	500.000	474
	15 Fluorene	166	9.814	9.814	(1.098)	421113	500.000	484
*	18 Phenanthrene-d10	188	11.574	11.574	(1.000)	234858	200.000	
	19 Phenanthrene	178	11.618	11.619	(1.004)	629900	500.000	473
	20 Anthracene	178	11.674	11.674	(1.009)	595986	500.000	510
$	23 Fluoranthene-d10	212	13.657	13.657	(1.180)	619800	500.000	500
	24 Fluoranthene	202	13.686	13.686	(1.182)	692602	500.000	477
	25 Pyrene	202	14.166	14.166	(0.870)	677428	500.000	456
	28 Benzo(a)anthracene	228	16.184	16.184	(0.994)	578235	500.000	474
*	29 Chrysene-d12	240	16.275	16.275	(1.000)	187693	200.000	
	30 Chrysene	228	16.317	16.317	(1.003)	638154	500.000	467
	44 Benzo(b)fluoranthene	252	17.964	17.964	(0.955)	562080	500.000	485
	45 Benzo(k)fluoranthene	252	18.002	18.003	(0.957)	593300	500.000	499
	46 Benzo(j)fluoranthene	252	18.050	18.051	(0.960)	656795	500.000	501
	34 Benzo(a)pyrene	252	18.636	18.637	(0.991)	477826	500.000	493
*	35 Perylene-d12	264	18.809	18.810	(1.000)	151727	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	20.852	20.853	(1.109)	651934	500.000	503
$	36 Dibenzo(a,h)anthracene-d14	292	20.764	20.764	(1.104)	442449	500.000	513
	38 Dibenzo(a,h)anthracene	278	20.852	20.853	(1.109)	513139	500.000	517

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
39 Benzo(g,h,i)perylene	276	21.705	21.705	(1.154)	551101	500.000	481
47 Perylene	252	18.857	18.858	(1.003)	551799	500.000	491

6-13-13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ic0612d.d
Lab Smp Id: SIM 500
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130612.b/lowsim.m
Misc Info:

Calibration Date: 12-JUN-2013
Calibration Time: 15:46

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	270479	135240	540958	260937	-3.53
11 Acenaphthene-d10	156669	78334	313338	154444	-1.42
18 Phenanthrene-d10	244223	122112	488446	234858	-3.83
29 Chrysene-d12	194330	97165	388660	187693	-3.42
35 Perylene-d12	162839	81420	325678	151727	-6.82

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	5.98	5.48	6.48	5.98	-0.01
11 Acenaphthene-d10	8.94	8.44	9.44	8.94	0.00
18 Phenanthrene-d10	11.57	11.07	12.07	11.57	0.00
29 Chrysene-d12	16.28	15.78	16.78	16.28	0.00
35 Perylene-d12	18.81	18.31	19.31	18.81	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/20130612.b/ic0612d.d

Date : 12-JUN-2013 17:13

Client ID:

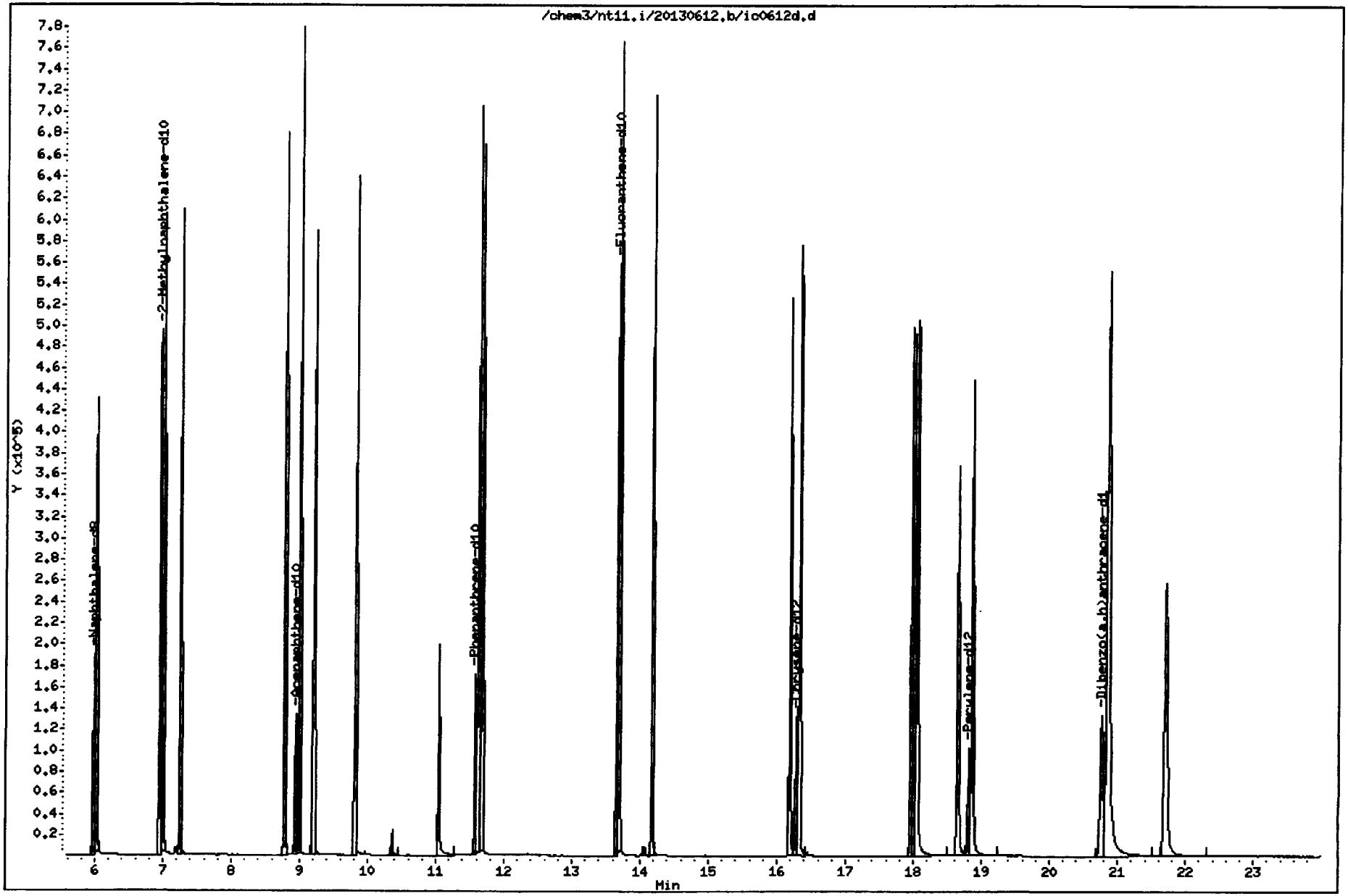
Sample Info: SIM 500

Instrument: nt11.i

Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ic0612d.d

Lab ID: SIM 500, Method: lowsim.m, Instrument: nt11.i, Date: 12-JUN-2013

RT	CO-ELUTION COMPOUNDS
20.852	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.852	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130612.b/ic0612e.d
Lab Smp Id: SIM 50
Inj Date : 12-JUN-2013 17:42
Operator : VTS Inst ID: nt11.i
Smp Info : SIM 50
Misc Info :
Comment :
Method : /chem3/nt11.i/20130612.b/lowsim.m
Meth Date : 13-Jun-2013 07:55 van Quant Type: ISTD
Cal Date : 12-JUN-2013 17:42 Cal File: ic0612e.d
Als bottle: 6 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	5.976	5.976	(1.000)	259532	200.000	
	5 Naphthalene	128	6.018	6.018	(1.007)	62743	50.0000	49.4
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.163)	36730	50.0000	47.0
	7 2-Methylnaphthalene	142	7.006	7.006	(1.172)	35086	50.0000	45.1
	8 1-methylnaphthalene	142	7.247	7.247	(1.213)	37704	50.0000	47.2
	10 Acenaphthylene	152	8.784	8.784	(0.983)	50318	50.0000	45.8
*	11 Acenaphthene-d10	164	8.939	8.939	(1.000)	142929	200.000	
	12 Acenaphthene	153	8.995	8.995	(1.006)	34754	50.0000	46.9
	14 Dibenzofuran	168	9.205	9.205	(1.030)	51091	50.0000	46.7
	15 Fluorene	166	9.814	9.814	(1.098)	36108	50.0000	45.8
*	18 Phenanthrene-d10	188	11.574	11.574	(1.000)	221343	200.000	
	19 Phenanthrene	178	11.618	11.619	(1.004)	58404	50.0000	47.1
	20 Anthracene	178	11.674	11.674	(1.009)	44573	50.0000	42.1
$	23 Fluoranthene-d10	212	13.657	13.657	(1.180)	49476	50.0000	43.7
	24 Fluoranthene	202	13.686	13.686	(1.182)	54784	50.0000	41.7
	25 Pyrene	202	14.166	14.166	(0.870)	54393	50.0000	43.1
	28 Benzo(a)anthracene	228	16.184	16.184	(0.994)	46294	50.0000	44.4
*	29 Chrysene-d12	240	16.275	16.275	(1.000)	164927	200.000	
	30 Chrysene	228	16.317	16.317	(1.003)	53826	50.0000	45.8
	44 Benzo(b)fluoranthene	252	17.964	17.964	(0.955)	44524	50.0000	44.5
	45 Benzo(k)fluoranthene	252	18.003	18.003	(0.957)	45977	50.0000	44.7
	46 Benzo(j)fluoranthene	252	18.051	18.051	(0.960)	55032	50.0000	47.9
	34 Benzo(a)pyrene	252	18.646	18.637	(0.991)	36501	50.0000	43.8
*	35 Perylene-d12	264	18.810	18.810	(1.000)	134445	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	20.852	20.853	(1.109)	47397	50.0000	42.7
$	36 Dibenzo(a,h)anthracene-d14	292	20.764	20.764	(1.104)	31448	50.0000	42.6
	38 Dibenzo(a,h)anthracene	278	20.852	20.853	(1.109)	36897	50.0000	43.4

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
39 Benzo(g,h,i)perylene	276	21.705	21.705	(1.154)	44791	50.0000	45.2
47 Perylene	252	18.858	18.858	(1.003)	45611	50.0000	46.6

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ic0612e.d
Lab Smp Id: SIM 50
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130612.b/lowsim.m
Misc Info:

Calibration Date: 12-JUN-2013
Calibration Time: 15:46

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	270479	135240	540958	259532	-4.05
11 Acenaphthene-d10	156669	78334	313338	142929	-8.77
18 Phenanthrene-d10	244223	122112	488446	221343	-9.37
29 Chrysene-d12	194330	97165	388660	164927	-15.13
35 Perylene-d12	162839	81420	325678	134445	-17.44

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	5.98	5.48	6.48	5.98	0.00
11 Acenaphthene-d10	8.94	8.44	9.44	8.94	0.00
18 Phenanthrene-d10	11.57	11.07	12.07	11.57	0.00
29 Chrysene-d12	16.28	15.78	16.78	16.28	0.00
35 Perylene-d12	18.81	18.31	19.31	18.81	0.00

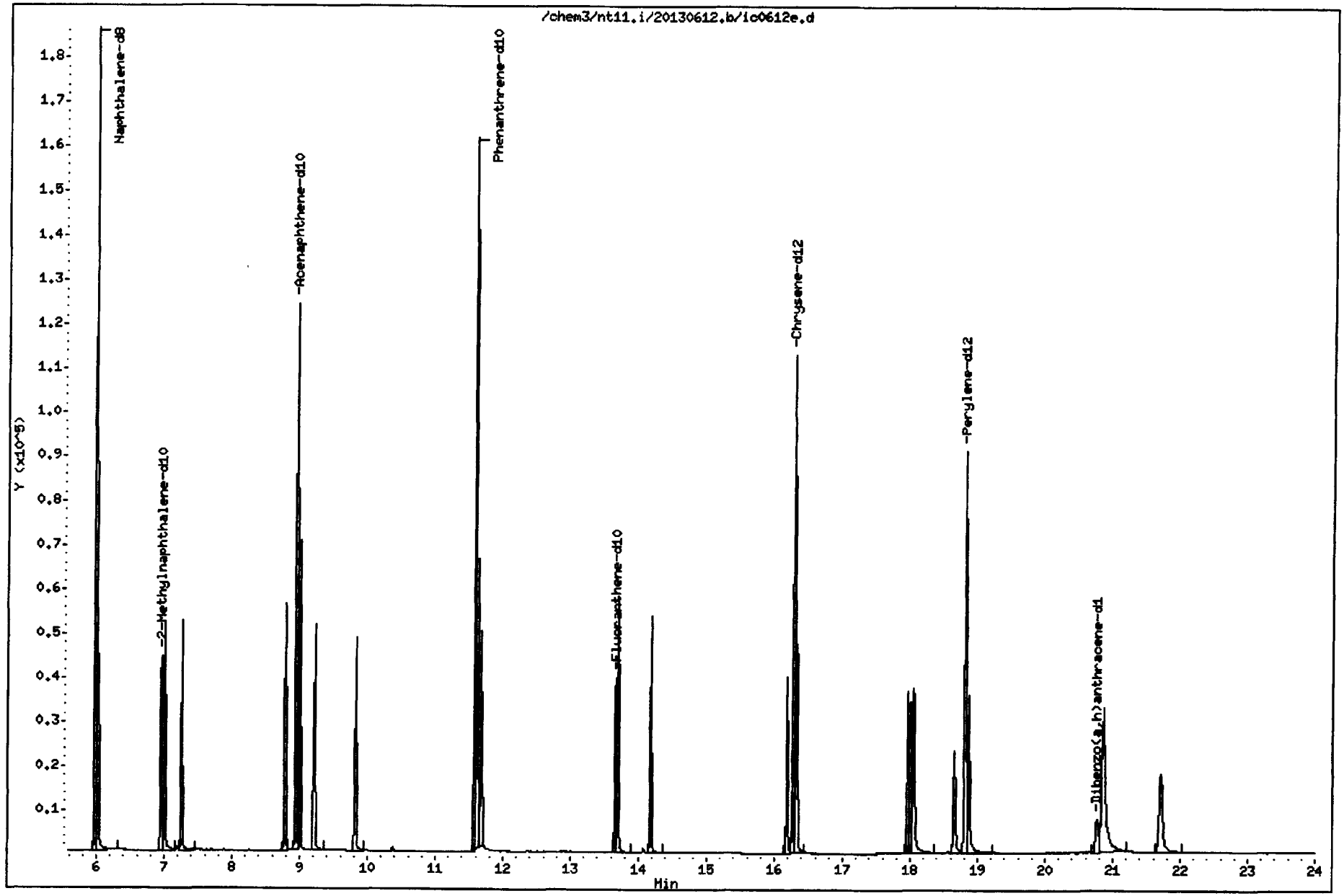
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.i/20130612.b/ic0612e.d
Date : 12-JUN-2013 17:42
Client ID:
Sample Info: SIM 50

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25

Column phase: Rxi-17Sil MS



CO-ELUTION SUMMARY FOR FILE - ic0612e.d

Lab ID: SIM 50, Method: lowsim.m, Instrument: nt11.i, Date: 12-JUN-2013

RT	CO-ELUTION COMPOUNDS
20.852	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.852	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130612.b/ic0612f.d
Lab Smp Id: SIM 100
Inj Date : 12-JUN-2013 18:11
Operator : VTS Inst ID: nt11.i
Smp Info : SIM 100
Misc Info :
Comment :
Method : /chem3/nt11.i/20130612.b/lowsim.m
Meth Date : 13-Jun-2013 07:55 van Quant Type: ISTD
Cal Date : 12-JUN-2013 18:11 Cal File: ic0612f.d
Als bottle: 7 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	5.976	5.976	(1.000)	257480	200.000	
	5 Naphthalene	128	6.018	6.018	(1.007)	134252	100.000	105
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.163)	80755	100.000	103
	7 2-Methylnaphthalene	142	7.006	7.006	(1.172)	80962	100.000	104
	8 1-methylnaphthalene	142	7.247	7.247	(1.213)	82861	100.000	104
	10 Acenaphthylene	152	8.784	8.784	(0.983)	112824	100.000	101
*	11 Acenaphthene-d10	164	8.939	8.939	(1.000)	144249	200.000	
	12 Acenaphthene	153	8.995	8.995	(1.006)	78417	100.000	104
	14 Dibenzofuran	168	9.205	9.205	(1.030)	118561	100.000	106
	15 Fluorene	166	9.814	9.814	(1.098)	80581	100.000	101
*	18 Phenanthrene-d10	188	11.574	11.574	(1.000)	223110	200.000	
	19 Phenanthrene	178	11.619	11.619	(1.004)	134717	100.000	106
	20 Anthracene	178	11.674	11.674	(1.009)	109782	100.000	102
$	23 Fluoranthene-d10	212	13.657	13.657	(1.180)	120554	100.000	105
	24 Fluoranthene	202	13.686	13.686	(1.182)	144246	100.000	107
	25 Pyrene	202	14.166	14.166	(0.870)	141232	100.000	105
	28 Benzo(a)anthracene	228	16.184	16.184	(0.994)	115393	100.000	104
*	29 Chrysene-d12	240	16.275	16.275	(1.000)	173838	200.000	
	30 Chrysene	228	16.317	16.317	(1.003)	132837	100.000	106
	44 Benzo(b)fluoranthene	252	17.964	17.964	(0.955)	111373	100.000	104
	45 Benzo(k)fluoranthene	252	18.003	18.003	(0.957)	114462	100.000	104
	46 Benzo(j)fluoranthene	252	18.051	18.051	(0.960)	132365	100.000	107
	34 Benzo(a)pyrene	252	18.637	18.637	(0.991)	91328	100.000	103
*	35 Perylene-d12	264	18.810	18.810	(1.000)	142749	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	20.853	20.853	(1.109)	120802	100.000	102
$	36 Dibenzo(a,h)anthracene-d14	292	20.764	20.764	(1.104)	79992	100.000	102
	38 Dibenzo(a,h)anthracene	278	20.853	20.853	(1.109)	91611	100.000	101

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
39 Benzo(g,h,i)perylene	276	21.705	21.705	(1.154)	108019	100.000	102
47 Perylene	252	18.858	18.858	(1.003)	107806	100.000	103

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: ic0612f.d
Lab Smp Id: SIM 100
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130612.b/lowsim.m
Misc Info:

Calibration Date: 12-JUN-2013
Calibration Time: 15:46

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	270479	135240	540958	257480	-4.81
11 Acenaphthene-d10	156669	78334	313338	144249	-7.93
18 Phenanthrene-d10	244223	122112	488446	223110	-8.64
29 Chrysene-d12	194330	97165	388660	173838	-10.54
35 Perylene-d12	162839	81420	325678	142749	-12.34

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	5.98	5.48	6.48	5.98	0.00
11 Acenaphthene-d10	8.94	8.44	9.44	8.94	0.00
18 Phenanthrene-d10	11.57	11.07	12.07	11.57	0.00
29 Chrysene-d12	16.28	15.78	16.78	16.28	0.00
35 Perylene-d12	18.81	18.31	19.31	18.81	0.00

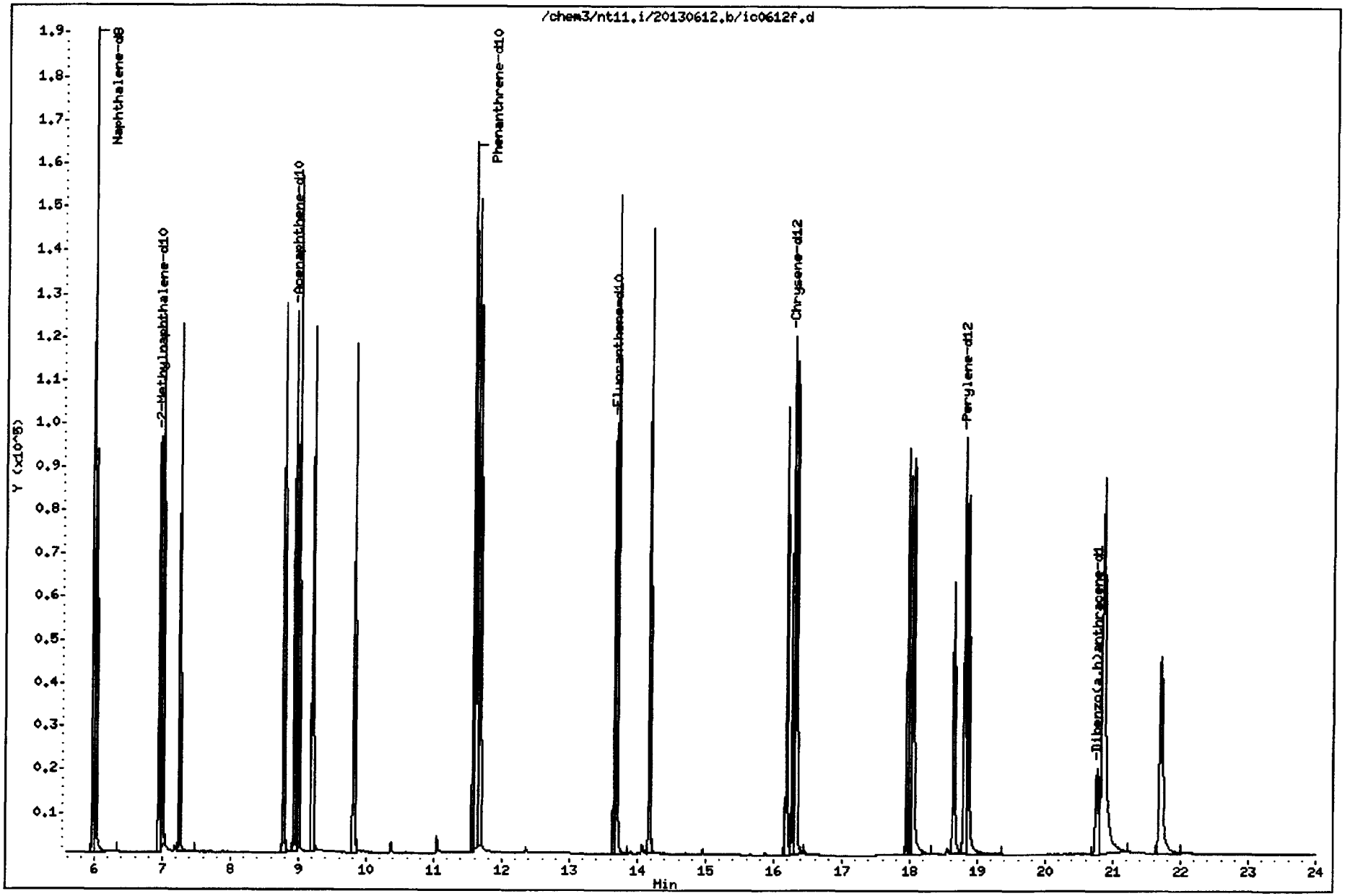
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem3/nt11.i/20130612.b/ic0612f.d
Date : 12-JUN-2013 18:11
Client ID:
Sample Info: SIM 100

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25

Column phase: Rxi-17Sil MS



CO-ELUTION SUMMARY FOR FILE - ic0612f.d

Lab ID: SIM 100, Method: lowsim.m, Instrument: nt11.i, Date: 12-JUN-2013

RT	CO-ELUTION COMPOUNDS
20.853	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.853	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130612.b/icv0612.d
Lab Smp Id: SIM ICV 250
Inj Date : 12-JUN-2013 18:40
Operator : VTS Inst ID: nt11.i
Smp Info : SIM ICV 250
Misc Info :
Comment :
Method : /chem3/nt11.i/20130612.b/lowsim.m
Meth Date : 13-Jun-2013 07:55 van Quant Type: ISTD
Cal Date : 12-JUN-2013 18:11 Cal File: ic0612f.d
Als bottle: 8 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ng/mL)
* 4	Naphthalene-d8	136	5.976	5.976	(1.000)	253751	200.000	
5	Naphthalene	128	6.018	6.018	(1.007)	306561	244.191	244(R)
$ 6	2-Methylnaphthalene-d10	152	Compound Not Detected.					
7	2-Methylnaphthalene	142	7.006	7.006	(1.172)	196157	255.606	256(R)
8	1-methylnaphthalene	142	7.247	7.247	(1.213)	189095	240.182	240(R)
10	Acenaphthylene	152	8.784	8.784	(0.983)	274559	245.640	246(R)
* 11	Acenaphthene-d10	164	8.939	8.939	(1.000)	144883	200.000	
12	Acenaphthene	153	8.995	8.995	(1.006)	187975	248.362	248(R)
14	Dibenzofuran	168	9.205	9.205	(1.030)	275111	245.113	245(R)
15	Fluorene	166	9.814	9.814	(1.098)	194315	242.720	243
* 18	Phenanthrene-d10	188	11.574	11.574	(1.000)	222056	200.000	
19	Phenanthrene	178	11.619	11.619	(1.004)	301890	239.778	240
20	Anthracene	178	11.674	11.674	(1.009)	257168	241.011	241
$ 23	Fluoranthene-d10	212	Compound Not Detected.					
24	Fluoranthene	202	13.686	13.686	(1.182)	277764	207.724	208
25	Pyrene	202	14.167	14.166	(0.870)	298425	224.788	225
28	Benzo(a)anthracene	228	16.184	16.184	(0.994)	253770	231.861	232
* 29	Chrysene-d12	240	16.276	16.275	(1.000)	171640	200.000	
30	Chrysene	228	16.317	16.317	(1.003)	295925	238.956	239
44	Benzo(b)fluoranthene	252	17.964	17.964	(0.955)	249497	235.914	236
45	Benzo(k)fluoranthene	252	18.003	18.003	(0.957)	288539	265.401	265
46	Benzo(j)fluoranthene	252	Compound Not Detected.					
34	Benzo(a)pyrene	252	18.637	18.637	(0.991)	243375	276.865	277(R)
* 35	Perylene-d12	264	18.810	18.810	(1.000)	141089	200.000	
37	Indeno(1,2,3-cd)pyrene	276	20.853	20.853	(1.109)	277866	237.711	238
$ 36	Dibenzo(a,h)anthracene-d14	292	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ng/mL)
38 Dibenzo(a,h)anthracene	278	20.853	20.853	(1.109)	215637	240.935	241
39 Benzo(g,h,i)perylene	276	21.706	21.705	(1.154)	249141	238.306	238
47 Perylene	252	18.858	18.858	(1.003)	252597	244.455	244

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

6.13.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: icv0612.d
Lab Smp Id: SIM ICV 250
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130612.b/lowsim.m
Misc Info:

Calibration Date: 12-JUN-2013
Calibration Time: 15:46

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	270479	135240	540958	253751	-6.18
11 Acenaphthene-d10	156669	78334	313338	144883	-7.52
18 Phenanthrene-d10	244223	122112	488446	222056	-9.08
29 Chrysene-d12	194330	97165	388660	171640	-11.68
35 Perylene-d12	162839	81420	325678	141089	-13.36

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	5.98	5.48	6.48	5.98	0.00
11 Acenaphthene-d10	8.94	8.44	9.44	8.94	0.00
18 Phenanthrene-d10	11.57	11.07	12.07	11.57	0.00
29 Chrysene-d12	16.28	15.78	16.78	16.28	0.00
35 Perylene-d12	18.81	18.31	19.31	18.81	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:
Sample Matrix: NONE Fraction: SV
Lab Smp Id: SIM ICV 250
Level: Operator: VTS
Data Type: MS DATA SampleType: LCS
SpikeList File: waterlcs.spk Quant Type: ISTD
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130612.b/lowsim.m
Misc Info:

SPIKE COMPOUND	AMOUNT ADDED ng/mL	AMOUNT RECOVERED ng/mL	% RECOVERED	LIMITS
5 Naphthalene	249	244	98.07*	80-120
7 2-Methylnaphthalen	249	256	102.65*	
8 1-methylnaphthalen	249	240	96.46*	
10 Acenaphthylene	249	246	98.65*	
12 Acenaphthene	249	248	99.74*	
14 Dibenzofuran	249	245	98.44*	
15 Fluorene	249	243	97.48	
19 Phenanthrene	249	240	96.30	
20 Anthracene	249	241	96.79	
24 Fluoranthene	249	208	83.42	
25 Pyrene	249	225	90.28	
28 Benzo(a)anthracene	249	232	93.12	
30 Chrysene	249	239	95.97	
44 Benzo(b)fluoranthe	249	236	94.74	
45 Benzo(k)fluoranthe	249	265	106.59	
46 Benzo(j)fluoranth	249	0.00	*	
34 Benzo(a)pyrene	249	277	111.19*	
37 Indeno(1,2,3-cd)py	249	238	95.47	
38 Dibenzo(a,h)anthra	249	241	96.76	
39 Benzo(g,h,i)peryle	249	238	95.71	
47 Perylene	249	244	98.17	

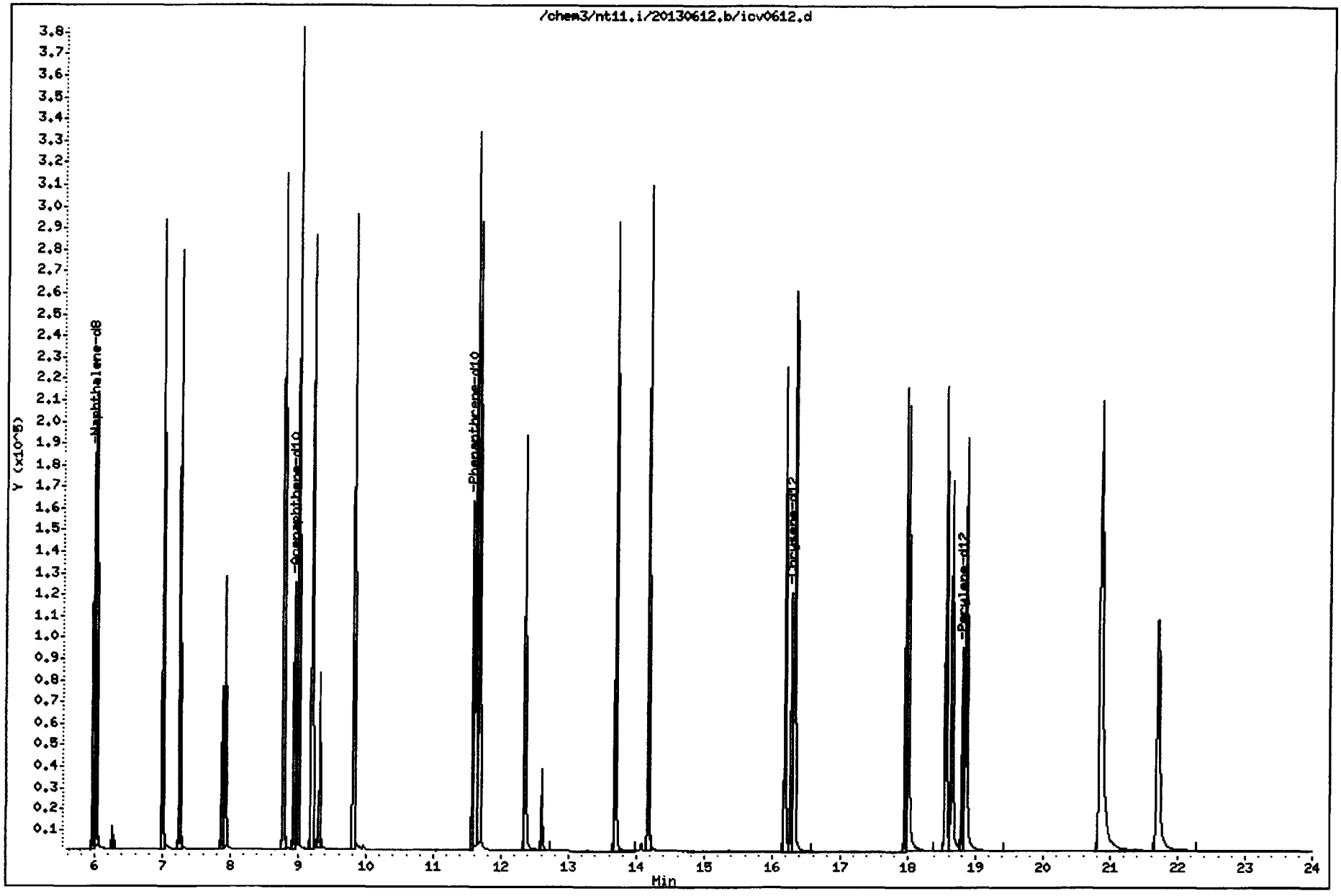
SURROGATE COMPOUND	AMOUNT ADDED ng/mL	AMOUNT RECOVERED ng/mL	% RECOVERED	LIMITS
$ 6 2-Methylnaphthale	0.150	0.00	*	
$ 23 Fluoranthene-d10	0.150	0.00	*	
$ 36 Dibenzo(a,h)anthr	0.150	0.00	*	

Data File: /chem3/nt11.i/20130612.b/icv0612.d
Date : 12-JUN-2013 18:40
Client ID:
Sample Info: SIM ICV 250

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25

Column phase: Rxi-17Sil MS



CO-ELUTION SUMMARY FOR FILE - icv0612.d

Lab ID: SIM ICV 250, Method: lowsim.m, Instrument: nt11.i, Date: 12-JUN-2013

RT	CO-ELUTION COMPOUNDS
20.853	Indeno(1,2,3-cd)pyrene and Dibenzo(a,h)anthracene
20.853	Dibenzo(a,h)anthracene and Indeno(1,2,3-cd)pyrene

SIM PAH Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WU65, WU71

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS SVOA Analyst Notes / Data Review Checklist

ARI WORK Order: WU65 Client ID: SPZC

METHOD: **8270D**(SIM-SVOA) **KRONE**(Butyl Tins) **8270D**(SVOA) **8270D**(OP-Pest)

Instrument: NT-4 NT-6 NT-8 NT-10 (NT11) NT12

Curve Date: 6.12.13 Analysis Start Date: 6.25.13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
DFTPP Tune met Criteria?	(Y) / N / ✓	Internal Standard within 50-200%?	(Y) / N / ✓
DDT Breakdown <20%?	(Y) / N / ✓	Retention Times within Windows?	(Y) / N / ✓
Peak Tailing Factor ≤2?	(Y) / N / ✓	Method Blank in Control?	(Y) / N / ✓
CCAL Meets %D?	(Y) / N / ✓	(LCS) / (LCSD) Recovery in Control?	(Y) / N / ✓
ICAL Q Flag applied?	Y / (N)	LCS / LCSD RPD ≤ 30%?	(NA) /
CCAL Q flag applied?	Y / (N) / ✓	~~MS / MSD Recovery in Control?~~	~~Y / N /~~
Surrogate Recovery met?	(Y) / N / ✓	~~MS / MSD RPD ≤ 30%?~~	~~NA /~~
Manual Integrations?	Y / (N)	Samples Diluted?	Y / (N)
Integration Summary?	(Y) / N / ✓	Special Analysis Request?	(Y) / N /

Detail problems, corrective actions and/or other pertinent information below.

Initial ID package

(Review 1) Analyst: VD **Date:** 6.26.13

(Review 2) Reviewer: MMT **Date:** 6/26

Analytical Resources Inc.: Organics Instrument Log

NT-11 Serial No.:GC=US10140004, MS=US10481502

Date: 6·25·13 Analysis: 4ww sim pwp Analyst: VD

GC Program: awsim Column No: 14123 Column Type: Rxi-17Sil ms

Instrument Tune (.U or .CT.): 130612.U EM Voltage: 1376

Calibration File: df0625 Curve Date: 6·12·13 Injection Vol.: 2 ul

IS/SS	Ical/Ccal	LCS/ICV
B000331	B000365	

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem3/nt11.i/20130625.b

	Time	Filename	LabID	ClientId	DF									
1	1434	df0625.d	DFTPP 10		1	NO ISTDS FOUND								
2	1450	cc0625.d	SIM 250		1	5.98	234406	8.94	134002	11.57	214831	16.28	185079	18.81	155741
3	1529	wu65mb.d	WU65MBW1	WU65MBW1	1	5.98	252304	8.94	138067	11.59	224825	16.28	179588	18.82	152658
4	1557	wu65sb.d	WU65LCSW1	WU65LCSW1	1	5.98	256255	8.94	147005	11.57	243367	16.28	194047	18.81	161234
5	1624	wu65sbd.d	WU65LCSDW1	WU65LCSDW1	1	5.98	255317	8.94	144671	11.57	239989	16.28	197104	18.81	164085
6	1652	wu65qls1.d	WU65QLS1		1	5.98	250537	8.94	137937	11.57	229898	16.28	182564	18.81	152846
7	1719	wu65a.d	WU65A	LF-TP-001-20	1	5.98	246404	8.94	140542	11.57	243679	16.28	199825	18.81	169639
8	1746	wu65b.d	WU65B	LF-FD-001-20	1	5.98	254599	8.94	146036	11.57	252059	16.28	203185	18.81	176121

6.26.13

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/20130625.b

ARI Job No.: SIM Method: lowsim.m Instrument: nt11.i Date: 25-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1450	cc0625.d	SIM 250		1	NO MANUAL INTEGRATION
1434	df0625.d	DFTPP 10		1	NO MANUAL INTEGRATION
1719	wu65a.d	WU65A	LF-TP-001-	1	NO MANUAL INTEGRATION
1746	wu65b.d	WU65B	LF-FD-001-	1	NO MANUAL INTEGRATION
1529	wu65mb.d	WU65MBW1	WU65MBW1	1	NO MANUAL INTEGRATION
1652	wu65qls1.d	WU65QLS1		1	NO MANUAL INTEGRATION
1557	wu65sb.d	WU65LCSW1	WU65LCSW1	1	NO MANUAL INTEGRATION
1624	wu65sbd.d	WU65LCSDW1	WU65LCSDW1	1	NO MANUAL INTEGRATION

Q-FLAG SUMMARY FOR DATABATCH - /chem3/nt11.i/20130625.b

Instrument: nt11.i Date: 25-JUN-2013 Method: lowsim.m

INITIAL CAL: 12-JUN-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 25-JUN-2013

Compound	%D
NO Q-FLAGS	

Data File: /chem3/nt11.i/20130625.b/df0625.d

Date : 25-JUN-2013 14:34

Client ID:

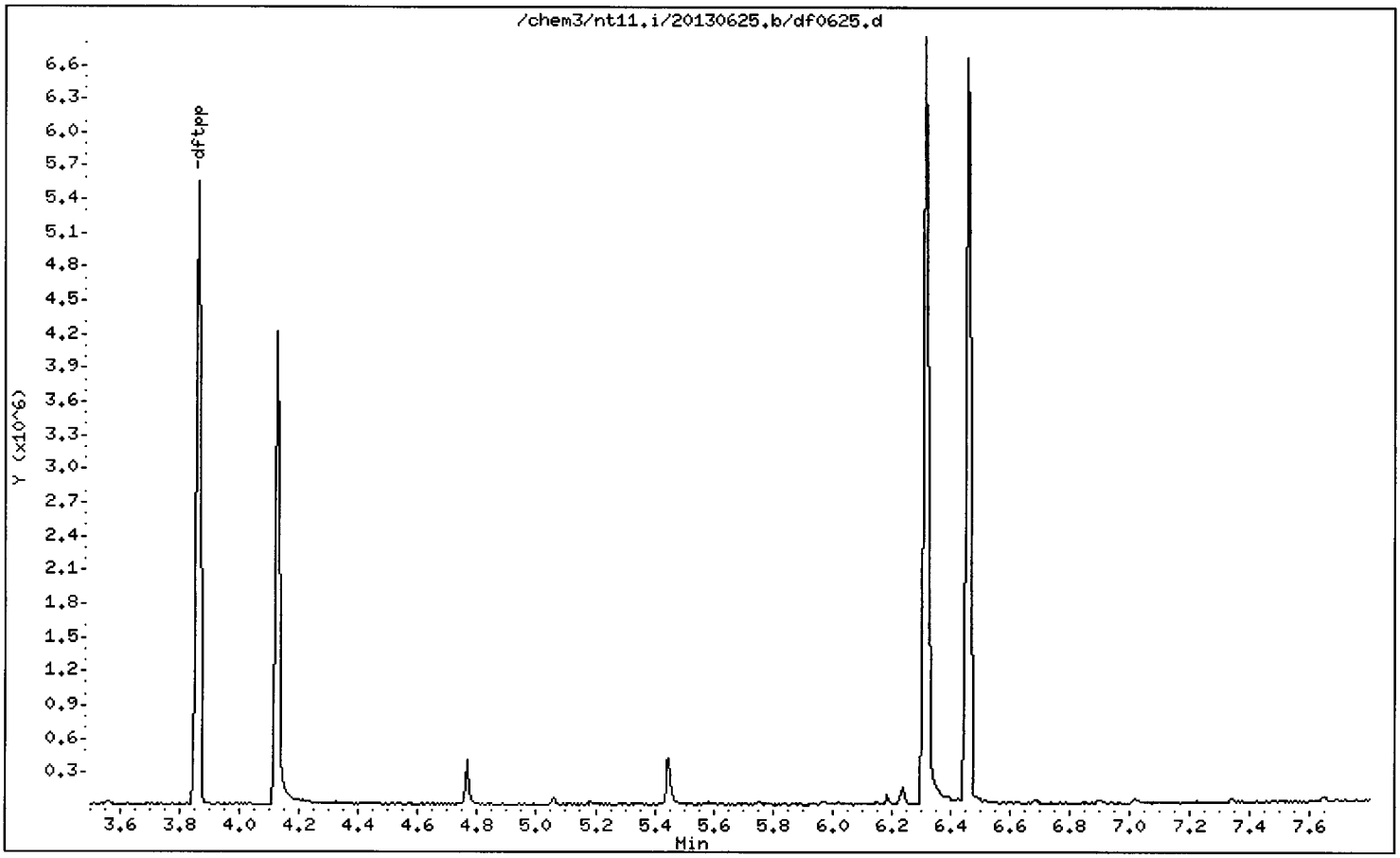
Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

Column diameter: 0.25



Data File: /chem3/nt11.i/20130625.b/df0625.d

Date : 25-JUN-2013 14:34

Client ID:

Instrument: nt11.i

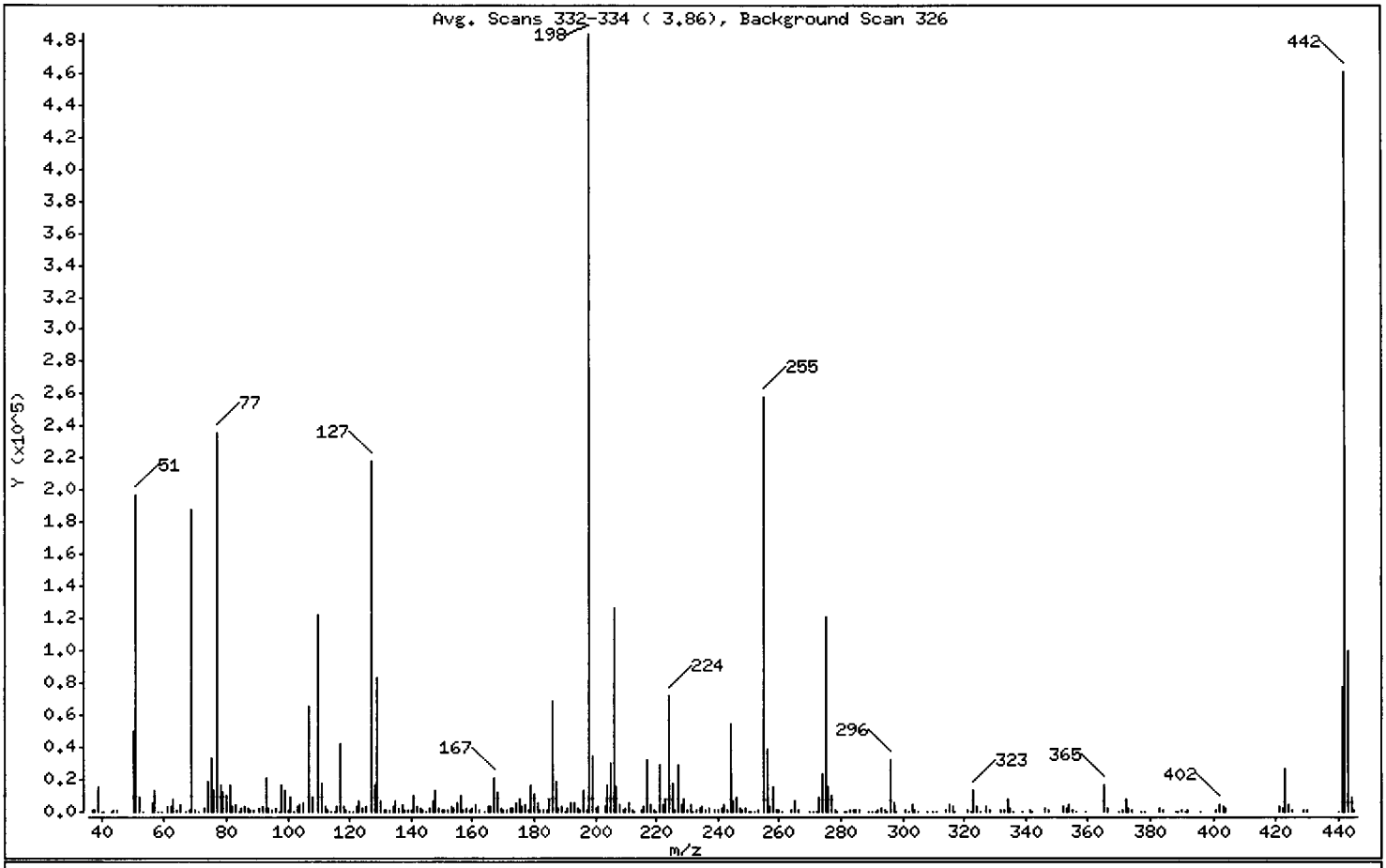
Sample Info: DFTPP 10

Operator: VTS

Column phase: Rx1-17silms

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	40.79
68	Less than 2.00% of mass 69	0.12 (0.32)
69	Mass 69 relative abundance	38.87
70	Less than 2.00% of mass 69	0.21 (0.53)
127	10.00 - 80.00% of mass 198	45.02
197	Less than 2.00% of mass 198	0.27
199	5.00 - 9.00% of mass 198	7.17
275	10.00 - 60.00% of mass 198	25.17
365	Greater than 1.00% of mass 198	3.45
441	0.01 - 24.00% of mass 442	16.02 (16.84)
442	50.00 - 200.00% of mass 198	95.11
443	15.00 - 24.00% of mass 442	20.71 (21.78)

Data File: /chem3/nt11.i/20130625.b/df0625.d

Date : 25-JUN-2013 14:34

Client ID:

Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms

Column diameter: 0.25

Data File: df0625.d

Spectrum: Avg. Scans 332-334 (3.86), Background Scan 326

Location of Maximum: 198.00

Number of points: 307

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	892	127.00	217984	206.00	126776	294.00	720
38.00	1134	128.00	16213	207.00	15458	295.00	513
39.00	15394	129.00	83360	208.00	4724	296.00	32176
40.00	532	130.00	6758	209.00	1353	297.00	5023
41.00	149	131.00	1431	210.00	1827	298.00	235
43.00	180	132.00	927	211.00	5608	301.00	616
44.00	623	133.00	680	212.00	964	302.00	512
45.00	768	134.00	2936	213.00	222	303.00	4938
50.00	50120	135.00	6319	215.00	1405	304.00	1206
51.00	197504	136.00	2384	216.00	2830	305.00	219
52.00	9087	137.00	4094	217.00	32056	308.00	283
53.00	189	138.00	634	218.00	4169	310.00	182
55.00	420	139.00	781	219.00	854	311.00	203
56.00	5428	140.00	910	220.00	172	314.00	1480
57.00	13537	141.00	9930	221.00	29400	315.00	4788
58.00	448	142.00	3645	222.00	4025	316.00	2991
59.00	169	143.00	2781	223.00	7854	317.00	254
61.00	2796	144.00	1019	224.00	72136	321.00	1617
62.00	3006	145.00	467	225.00	17968	322.00	171
63.00	7651	146.00	2505	226.00	689	323.00	12885
64.00	1215	147.00	6800	227.00	28880	324.00	3101
65.00	4737	148.00	13372	228.00	3915	325.00	181
67.00	185	149.00	2582	229.00	7661	327.00	3015
68.00	601	150.00	813	230.00	621	328.00	1091
69.00	188224	151.00	1293	231.00	4071	332.00	1090
70.00	994	152.00	850	232.00	496	333.00	1385
71.00	253	153.00	2846	233.00	572	334.00	7505
73.00	2773	154.00	2701	234.00	1916	335.00	2502
74.00	18376	155.00	5892	235.00	3013	336.00	192
75.00	33328	156.00	9798	236.00	1645	339.00	288
76.00	13592	157.00	1408	237.00	2361	341.00	1403
77.00	235776	158.00	1992	239.00	1434	342.00	449
78.00	16528	159.00	1232	240.00	766	346.00	2420
79.00	12522	160.00	2663	241.00	1690	347.00	582
80.00	9711	161.00	4989	242.00	3934	352.00	3125

Date : 25-JUN-2013 14:34

Client ID: Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

Column phase: Rxi-17silms Column diameter: 0.25

Data File: df0625.d
Spectrum: Avg. Scans 332-334 (3.86), Background Scan 326
Location of Maximum: 198.00
Number of points: 307

m/z	Y	m/z	Y	m/z	Y	m/z	Y
81.00	16188	162.00	1225	243.00	1497	353.00	2675
82.00	3570	164.00	251	244.00	54456	354.00	4924
83.00	4379	165.00	3706	245.00	6997	355.00	1133
84.00	66	166.00	3369	246.00	9180	356.00	219
85.00	2635	167.00	21080	247.00	2189	359.00	256
86.00	3401	168.00	12378	248.00	856	365.00	16680
87.00	2425	169.00	2667	249.00	1755	366.00	1737
88.00	1327	170.00	837	250.00	264	370.00	301
89.00	843	171.00	797	251.00	290	371.00	1197
91.00	2386	172.00	1959	252.00	205	372.00	7627
92.00	3781	173.00	2245	253.00	1128	373.00	1930
93.00	20624	174.00	5216	255.00	258368	374.00	584
94.00	1820	175.00	8184	256.00	39040	377.00	375
95.00	803	176.00	2924	257.00	3280	378.00	227
96.00	1988	177.00	3937	258.00	15141	383.00	2018
97.00	195	178.00	715	259.00	1461	384.00	671
98.00	16864	179.00	17144	260.00	654	388.00	178
99.00	13721	180.00	11140	261.00	556	389.00	187
100.00	1396	181.00	5255	264.00	571	390.00	917
101.00	9160	182.00	1168	265.00	6416	391.00	544
102.00	322	183.00	671	266.00	1247	392.00	662
103.00	3052	184.00	1597	270.00	241	396.00	230
104.00	4568	185.00	7916	271.00	458	401.00	777
105.00	5564	186.00	69240	272.00	352	402.00	4210
107.00	65440	187.00	18784	273.00	8472	403.00	3834
108.00	9389	188.00	2098	274.00	23808	404.00	1825
110.00	122592	189.00	2976	275.00	121856	415.00	171
111.00	17984	190.00	483	276.00	16104	421.00	3240
112.00	3123	191.00	1802	277.00	9695	422.00	2155
113.00	740	192.00	5038	278.00	1411	423.00	26912
114.00	397	193.00	6023	279.00	205	424.00	4652
115.00	403	194.00	1963	281.00	487	425.00	685
116.00	3853	195.00	750	282.00	175	429.00	564
117.00	42728	196.00	13730	283.00	1091	430.00	589
118.00	2971	197.00	1287	284.00	1371	431.00	174

Date : 25-JUN-2013 14:34

Client ID: Instrument: nt11.i

Sample Info: DFTPP 10

Operator: VTS

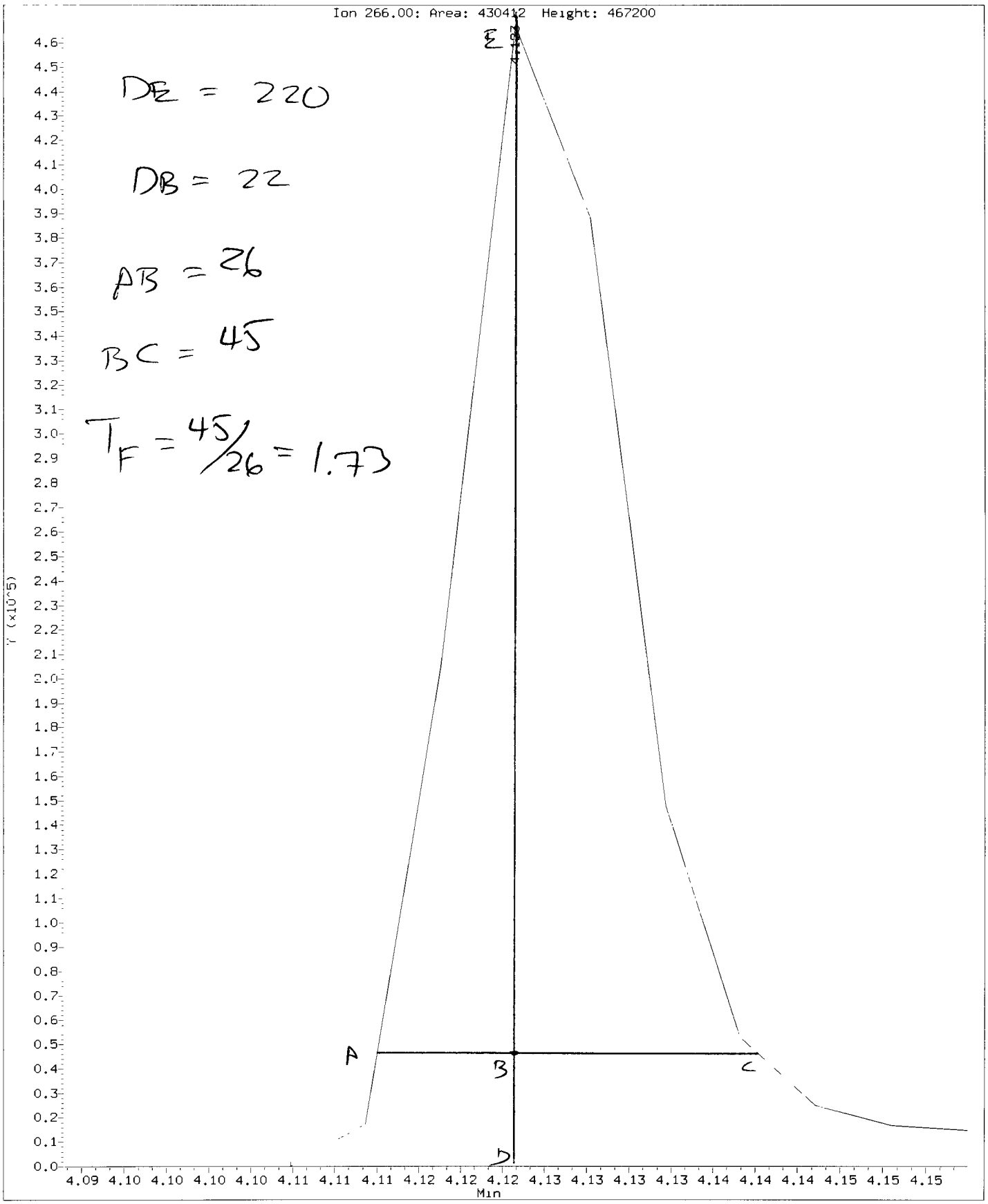
Column phase: Rxi-17silms Column diameter: 0.25

Data File: df0625.d
Spectrum: Avg. Scans 332-334 (3.86), Background Scan 326
Location of Maximum: 198.00
Number of points: 307

m/z	Y	m/z	Y	m/z	Y	m/z	Y
119.00	645	198.00	484224	285.00	1651	440.00	237
120.00	482	199.00	34696	286.00	631	441.00	77560
121.00	472	200.00	2527	289.00	198	442.00	460544
122.00	3880	201.00	3042	290.00	443	443.00	100304
123.00	6267	203.00	2984	291.00	253	444.00	9129
124.00	2271	204.00	16512	292.00	798	445.00	748
125.00	3375	205.00	29896	293.00	2396		

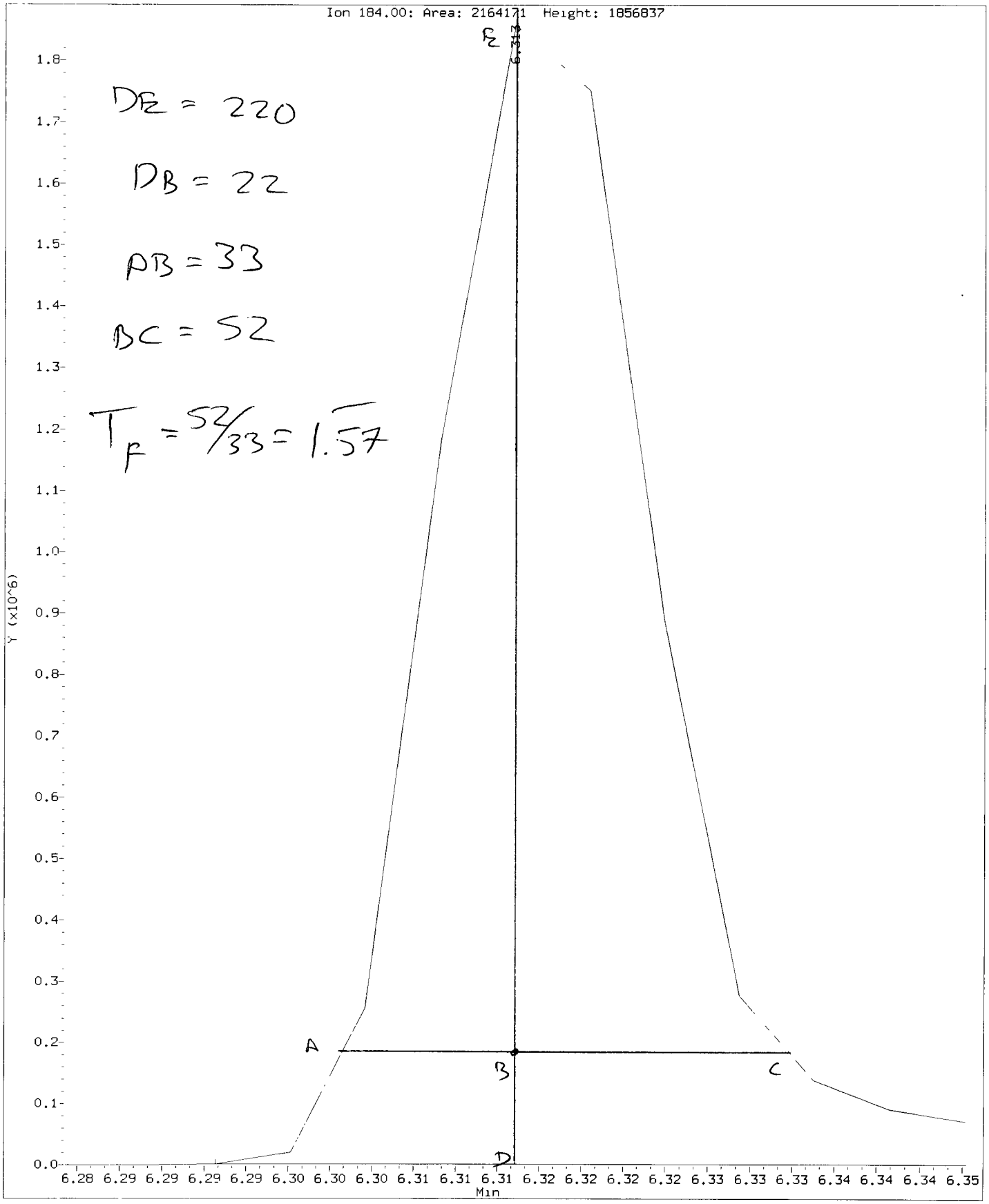
Data File: /chem3/nt11.i/20130625.b/DDT.b/df0625.d
Injection Date: 25-JUN-2013 14:34
Instrument: nt11.i
Client Sample ID:

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem3/nt11.1/20130625.b/DDT.b/df0625.d
Injection Date: 25-JUN-2013 14:34
Instrument: nt11.1
Client Sample ID:

Compound: Benzidine
CAS Number:



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem3/nt11.i/20130625.b/DDT.b/df0625.d ARI ID: DFTPP 10
Method: /chem3/nt11.i/20130625.b/DDT.b/sw846ddt.m Misc:
Analysis Date: 25-JUN-2013 14:34 Instrument: nt11.i

COMPOUND	RT	AREA
Pentachlorophenol	4.123	430412
Benzidine	6.313	2164171
4,4'-DDE	5.758	3230
4,4'-DDD	6.238	24353
4,4'-DDT	6.457	1025448

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(\ 3230 + 24353) * 100}{(\ 3230 + 24353 + 1025448)}$$

DDT Percent Breakdown = 2.6 %

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130625.b/cc0625.d
Lab Smp Id: SIM 250
Inj Date : 25-JUN-2013 14:50
Operator : VTS Inst ID: nt11.i
Smp Info : SIM 250
Misc Info :
Comment :
Method : /chem3/nt11.i/20130625.b/lowsim.m
Meth Date : 26-Jun-2013 07:45 van Quant Type: ISTD
Cal Date : 12-JUN-2013 18:11 Cal File: ic0612f.d
Als bottle: 2 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
*	4 Naphthalene-d8	136	5.976	5.976	(1.000)	234406	200.000	
	5 Naphthalene	128	6.018	6.018	(1.007)	283871	250.000	245
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.163)	181301	250.000	255
	7 2-Methylnaphthalene	142	7.006	7.006	(1.172)	182686	250.000	258
	8 1-methylnaphthalene	142	7.247	7.247	(1.213)	184834	250.000	254
	10 Acenaphthylene	152	8.784	8.784	(0.983)	267024	250.000	258
*	11 Acenaphthene-d10	164	8.939	8.939	(1.000)	134002	200.000	
	12 Acenaphthene	153	8.995	8.995	(1.006)	174335	250.000	249
	14 Dibenzofuran	168	9.205	9.205	(1.030)	261292	250.000	252
	15 Fluorene	166	9.825	9.825	(1.099)	190720	250.000	258
*	18 Phenanthrene-d10	188	11.574	11.574	(1.000)	214831	200.000	
	19 Phenanthrene	178	11.619	11.619	(1.004)	295023	250.000	242
	20 Anthracene	178	11.674	11.674	(1.009)	273601	250.000	265
$	23 Fluoranthene-d10	212	13.657	13.657	(1.180)	307693	250.000	277
	24 Fluoranthene	202	13.686	13.686	(1.182)	332325	250.000	257
	25 Pyrene	202	14.176	14.176	(0.871)	329872	250.000	230
	28 Benzo(a)anthracene	228	16.184	16.184	(0.994)	300782	250.000	255
*	29 Chrysene-d12	240	16.275	16.275	(1.000)	185079	200.000	
	30 Chrysene	228	16.325	16.325	(1.003)	317804	250.000	238
	44 Benzo(b)fluoranthene	252	17.964	17.964	(0.955)	273296	250.000	234
	45 Benzo(k)fluoranthene	252	18.003	18.003	(0.957)	303183	250.000	253
	46 Benzo(j)fluoranthene	252	18.051	18.051	(0.960)	350530	250.000	260
	34 Benzo(a)pyrene	252	18.646	18.646	(0.991)	246432	250.000	254
*	35 Perylene-d12	264	18.810	18.810	(1.000)	155741	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	20.864	20.864	(1.109)	327388	250.000	254
$	36 Dibenzo(a,h)anthracene-d14	292	20.764	20.764	(1.104)	224582	250.000	262

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
38 Dibenzo(a,h)anthracene	278	20.853	20.853	(1.109)	255870	250.000	259
39 Benzo(g,h,i)perylene	276	21.705	21.705	(1.154)	282510	250.000	245
47 Perylene	252	18.867	18.867	(1.003)	281534	250.000	247

LB
6.26.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: cc0625.d
Lab Smp Id: SIM 250
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130625.b/lowsim.m
Misc Info:

Calibration Date: 25-JUN-2013
Calibration Time: 14:50

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	270479	135240	540958	234406	-13.34
11 Acenaphthene-d10	156669	78334	313338	134002	-14.47
18 Phenanthrene-d10	244223	122112	488446	214831	-12.03
29 Chrysene-d12	194330	97165	388660	185079	-4.76
35 Perylene-d12	162839	81420	325678	155741	-4.36

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	5.98	5.48	6.48	5.98	0.00
11 Acenaphthene-d10	8.94	8.44	9.44	8.94	0.00
18 Phenanthrene-d10	11.57	11.07	12.07	11.57	0.00
29 Chrysene-d12	16.28	15.78	16.78	16.28	0.00
35 Perylene-d12	18.81	18.31	19.31	18.81	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.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt11.i Injection Date: 25-JUN-2013 14:50
Lab File ID: cc0625.d Init. Cal. Date(s): 12-JUN-2013 12-JUN-2013
Analysis Type: Init. Cal. Times: 15:46 18:11
Lab Sample ID: SIM 250 Quant Type: ISTD
Method: /chem3/nt11.i/20130625.b/lowsim.m

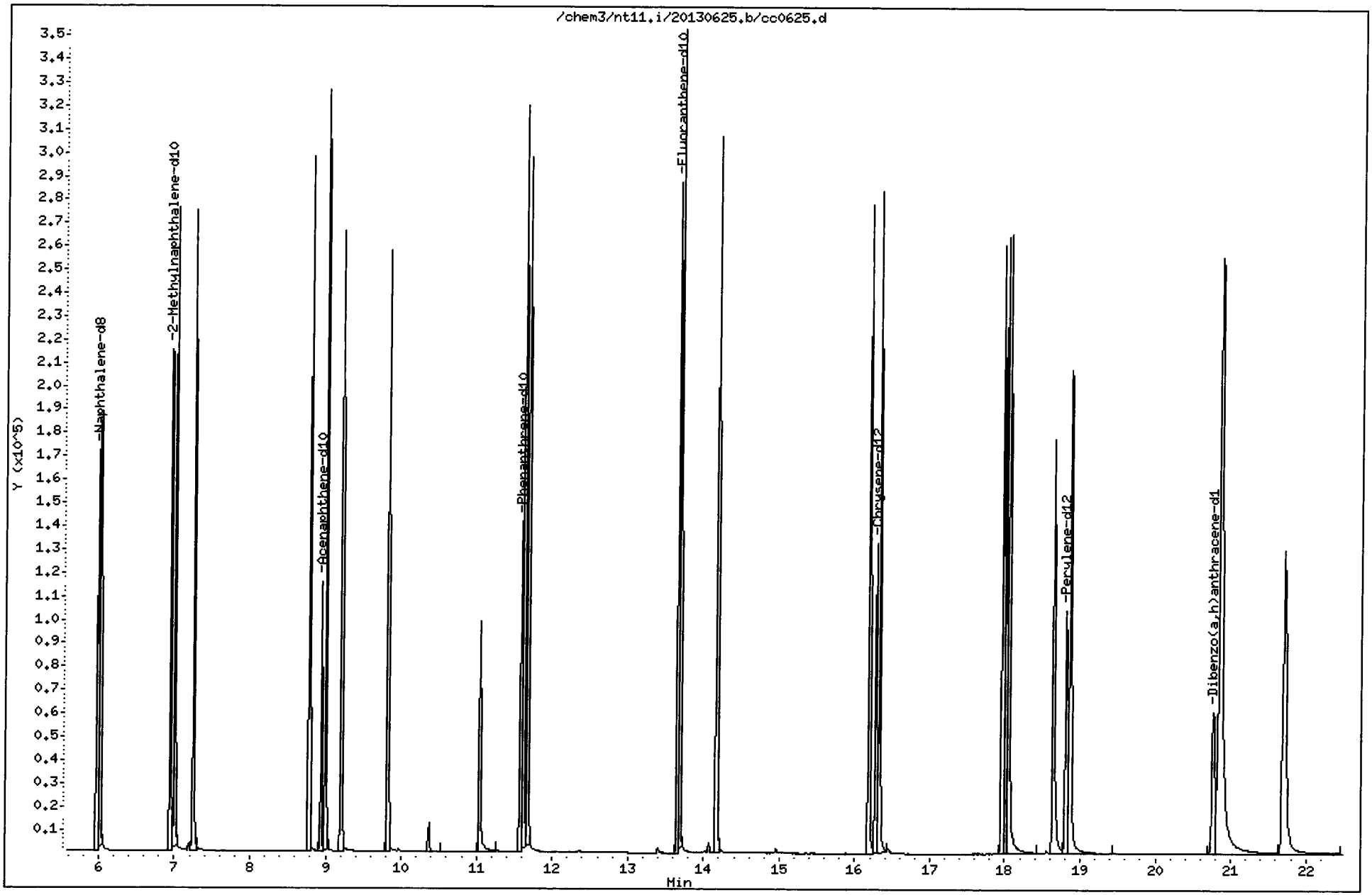
COMPOUND	RRF / AMOUNT	RF250	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
5 Naphthalene	0.98949	0.96882	0.010	-2.08880	20.00000	Averaged
$ 6 2-Methylnaphthalene-d10	0.60637	0.61876	0.010	2.04360	20.00000	Averaged
7 2-Methylnaphthalene	0.60486	0.62349	0.010	3.07930	20.00000	Averaged
8 1-Methylnaphthalene	0.62053	0.63082	0.010	1.65815	20.00000	Averaged
10 Acenaphthylene	1.54294	1.59415	0.010	3.31915	20.00000	Averaged
12 Acenaphthene	1.04479	1.04079	0.010	-0.38214	20.00000	Averaged
14 Dibenzofuran	1.54937	1.55993	0.010	0.68165	20.00000	Averaged
15 Fluorene	1.10513	1.13861	0.010	3.02987	20.00000	Averaged
19 Phenanthrene	1.13398	1.09862	0.010	-3.11870	20.00000	Averaged
20 Anthracene	0.96105	1.01885	0.010	6.01371	20.00000	Averaged
$ 23 Fluoranthene-d10	1.03288	1.14580	0.200	10.93207	20.00000	Averaged
24 Fluoranthene	1.20436	1.23753	0.010	2.75389	20.00000	Averaged
25 Pyrene	1.54694	1.42586	0.010	-7.82686	20.00000	Averaged
28 Benzo(a)anthracene	1.27534	1.30012	0.010	1.94340	20.00000	Averaged
30 Chrysene	1.44303	1.37370	0.010	-4.80444	20.00000	Averaged
44 Benzo(b)fluoranthene	1.49916	1.40385	0.200	-6.35797	20.00000	Averaged
45 Benzo(k)fluoranthene	1.54113	1.55736	0.200	1.05346	20.00000	Averaged
46 Benzo(j)fluoranthene	1.73363	1.80058	0.200	3.86142	20.00000	Averaged
34 Benzo(a)pyrene	1.24608	1.26585	0.010	1.58722	20.00000	Averaged
37 Indeno(1,2,3-cd)pyrene	1.65700	1.68170	0.010	1.49066	20.00000	Averaged
$ 36 Dibenzo(a,h)anthracene-d14	1.10102	1.15362	0.010	4.77739	20.00000	Averaged
38 Dibenzo(a,h)anthracene	1.26870	1.31433	0.010	3.59661	20.00000	Averaged
39 Benzo(g,h,i)perylene	1.48200	1.45118	0.010	-2.07962	20.00000	Averaged
47 Perylene	1.46476	1.44616	0.200	-1.26956	20.00000	Averaged

Data File: /chem3/nt11.i/20130625.b/cc0625.d
Date : 25-JUN-2013 14:50
Client ID:
Sample Info: SIM 250

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25

Column phase: Rxi-17Sil MS



CO-ELUTION SUMMARY FOR FILE - cc0625.d

Lab ID: SIM 250, Method: lowsim.m, Instrument: nt11.i, Date: 25-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130625.b/wu65mb.d
Lab Smp Id: WU65MBW1 Client Smp ID: WU65MBW1
Inj Date : 25-JUN-2013 15:29
Operator : VTS Inst ID: nt11.i
Smp Info : WU65MBW1
Misc Info : 13-13119
Comment :
Method : /chem3/nt11.i/20130625.b/lowsim.m
Meth Date : 26-Jun-2013 07:45 van Quant Type: ISTD
Cal Date : 12-JUN-2013 18:11 Cal File: ic0612f.d
Als bottle: 3 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50

Concentration Formula: Amt * DF * Vt / Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Final Extract Volume (uL)
Vo	500.00000	Sample Volume extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
*	4 Naphthalene-d8	136	5.976	5.976	(1.000)	252304	200.000	
	5 Naphthalene	128	Compound Not Detected.					
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.163)	155852	203.743	204
	7 2-Methylnaphthalene	142	Compound Not Detected.					
	8 1-methylnaphthalene	142	Compound Not Detected.					
	10 Acenaphthylene	152	Compound Not Detected.					
*	11 Acenaphthene-d10	164	8.939	8.939	(1.000)	138067	200.000	
	12 Acenaphthene	153	Compound Not Detected.					
	14 Dibenzofuran	168	Compound Not Detected.					
	15 Fluorene	166	Compound Not Detected.					
*	18 Phenanthrene-d10	188	11.585	11.574	(1.000)	224825	200.000	
	19 Phenanthrene	178	Compound Not Detected.					
	20 Anthracene	178	Compound Not Detected.					
$	23 Fluoranthene-d10	212	13.657	13.657	(1.179)	263615	227.041	227
	24 Fluoranthene	202	Compound Not Detected.					
	25 Pyrene	202	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
	28 Benzo(a)anthracene	228	Compound Not Detected.					
*	29 Chrysene-d12	240	16.275	16.275	(1.000)	179588	200.000	
	30 Chrysene	228	Compound Not Detected.					
	44 Benzo(b)fluoranthene	252	Compound Not Detected.					
	45 Benzo(k)fluoranthene	252	Compound Not Detected.					
	46 Benzo(j)fluoranthene	252	Compound Not Detected.					
	34 Benzo(a)pyrene	252	Compound Not Detected.					
*	35 Perylene-d12	264	18.819	18.810	(1.000)	152658	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
$	36 Dibenzo(a,h)anthracene-d14	292	20.775	20.764	(1.104)	182389	217.028	217
	38 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	39 Benzo(g,h,i)perylene	276	Compound Not Detected.					
	47 Perylene	252	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: wu65mb.d
Lab Smp Id: WU65MBW1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130625.b/lowsim.m
Misc Info: 13-13119

Calibration Date: 25-JUN-2013
Calibration Time: 14:50
Client Smp ID: WU65MBW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	270479	135240	540958	252304	-6.72
11 Acenaphthene-d10	156669	78334	313338	138067	-11.87
18 Phenanthrene-d10	244223	122112	488446	224825	-7.94
29 Chrysene-d12	194330	97165	388660	179588	-7.59
35 Perylene-d12	162839	81420	325678	152658	-6.25

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	5.98	5.48	6.48	5.98	0.00
11 Acenaphthene-d10	8.94	8.44	9.44	8.94	0.00
18 Phenanthrene-d10	11.57	11.07	12.07	11.59	0.10
29 Chrysene-d12	16.28	15.78	16.78	16.28	0.00
35 Perylene-d12	18.81	18.31	19.31	18.82	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

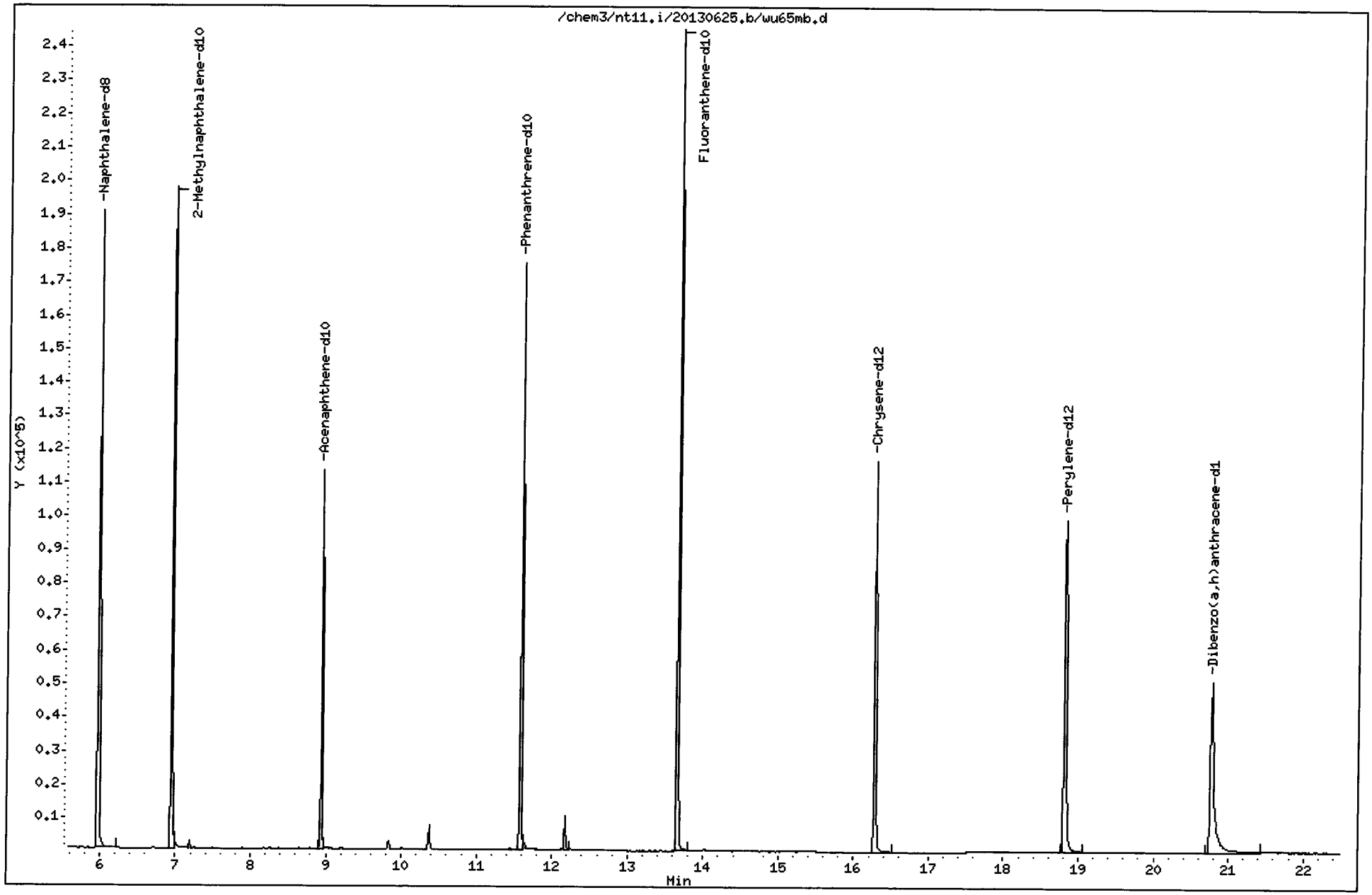
Client Name: SAIC
Sample Matrix: LIQUID
Lab Smp Id: WU65MBW1
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130625.b/lowsim.m
Misc Info: 13-13119

Client SDG: WU65
Fraction: SV
Client Smp ID: WU65MBW1
Operator: VTS
SampleType: BLANK
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	204	67.91	35-94
$ 23 Fluoranthene-d10	300	227	75.68	30-160
$ 36 Dibenzo(a,h)anthra	300	217	72.34	26-115

Data File: /chem3/nt11.i/20130625.b/wu65mb.d
Date : 25-JUN-2013 15:29
Client ID: WU65MBW1
Sample Info: WU65MBW1
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i
Operator: VTS
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - wu65mb.d

Lab ID: WU65MBW1, Method: lowsim.m, Instrument: nt11.i, Date: 25-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130625.b/wu65sb.d
Lab Smp Id: WU65LCSW1 Client Smp ID: WU65LCSW1
Inj Date : 25-JUN-2013 15:57
Operator : VTS Inst ID: nt11.i
Smp Info : WU65LCSW1
Misc Info : 13-13119
Comment :
Method : /chem3/nt11.i/20130625.b/lowsim.m
Meth Date : 26-Jun-2013 07:45 van Quant Type: ISTD
Cal Date : 12-JUN-2013 18:11 Cal File: ic0612f.d
Als bottle: 4 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt / Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Final Extract Volume (uL)
Vo	500.00000	Sample Volume extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
*	4 Naphthalene-d8	136	5.976	5.976	(1.000)	256255	200.000	
	5 Naphthalene	128	6.018	6.018	(1.007)	280988	221.634	222
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.163)	181600	233.743	234
	7 2-Methylnaphthalene	142	7.006	7.006	(1.172)	177944	229.607	230
	8 1-methylnaphthalene	142	7.247	7.247	(1.213)	178485	224.491	224
	10 Acenaphthylene	152	8.784	8.784	(0.983)	260459	229.661	230
*	11 Acenaphthene-d10	164	8.939	8.939	(1.000)	147005	200.000	
	12 Acenaphthene	153	8.994	8.995	(1.006)	169940	221.292	221
	14 Dibenzofuran	168	9.205	9.205	(1.030)	256928	225.608	226
	15 Fluorene	166	9.825	9.825	(1.099)	190395	234.390	234
*	18 Phenanthrene-d10	188	11.574	11.574	(1.000)	243367	200.000	
	19 Phenanthrene	178	11.618	11.619	(1.004)	300873	218.044	218
	20 Anthracene	178	11.674	11.674	(1.009)	269950	230.836	231
$	23 Fluoranthene-d10	212	13.657	13.657	(1.180)	309963	246.619	247
	24 Fluoranthene	202	13.686	13.686	(1.182)	331605	226.273	226

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
	25 Pyrene	202	14.166	14.176	(0.870)	326266	217.381	217
	28 Benzo(a)anthracene	228	16.184	16.184	(0.994)	296447	239.577	240
*	29 Chrysene-d12	240	16.275	16.275	(1.000)	194047	200.000	
	30 Chrysene	228	16.325	16.325	(1.003)	328171	234.395	234
	44 Benzo(b)fluoranthene	252	17.964	17.964	(0.955)	270606	223.904	224
	45 Benzo(k)fluoranthene	252	18.002	18.003	(0.957)	303664	244.415	244
	46 Benzo(j)fluoranthene	252	18.050	18.051	(0.960)	348799	249.570	250
	34 Benzo(a)pyrene	252	18.646	18.646	(0.991)	225229	224.209	224
*	35 Perylene-d12	264	18.810	18.810	(1.000)	161234	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	20.864	20.864	(1.109)	323107	241.878	242
$	36 Dibenzo(a,h)anthracene-d14	292	20.764	20.764	(1.104)	220268	248.160	248
	38 Dibenzo(a,h)anthracene	278	20.852	20.853	(1.109)	252839	247.205	247
	39 Benzo(g,h,i)perylene	276	21.705	21.705	(1.154)	280317	234.626	235
	47 Perylene	252	18.867	18.867	(1.003)	265329	224.694	225

6.26.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: wu65sb.d
Lab Smp Id: WU65LCSW1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130625.b/lowsim.m
Misc Info: 13-13119

Calibration Date: 25-JUN-2013
Calibration Time: 14:50
Client Smp ID: WU65LCSW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	270479	135240	540958	256255	-5.26
11 Acenaphthene-d10	156669	78334	313338	147005	-6.17
18 Phenanthrene-d10	244223	122112	488446	243367	-0.35
29 Chrysene-d12	194330	97165	388660	194047	-0.15
35 Perylene-d12	162839	81420	325678	161234	-0.99

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	5.98	5.48	6.48	5.98	0.00
11 Acenaphthene-d10	8.94	8.44	9.44	8.94	0.00
18 Phenanthrene-d10	11.57	11.07	12.07	11.57	0.00
29 Chrysene-d12	16.28	15.78	16.78	16.28	0.00
35 Perylene-d12	18.81	18.31	19.31	18.81	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: SAIC
Sample Matrix: LIQUID
Lab Smp Id: WU65LCSW1
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130625.b/lowsim.m
Misc Info: 13-13119

Client SDG: WU65
Fraction: SV
Client Smp ID: WU65LCSW1
Operator: VTS
SampleType: LCS
Quant Type: ISTD

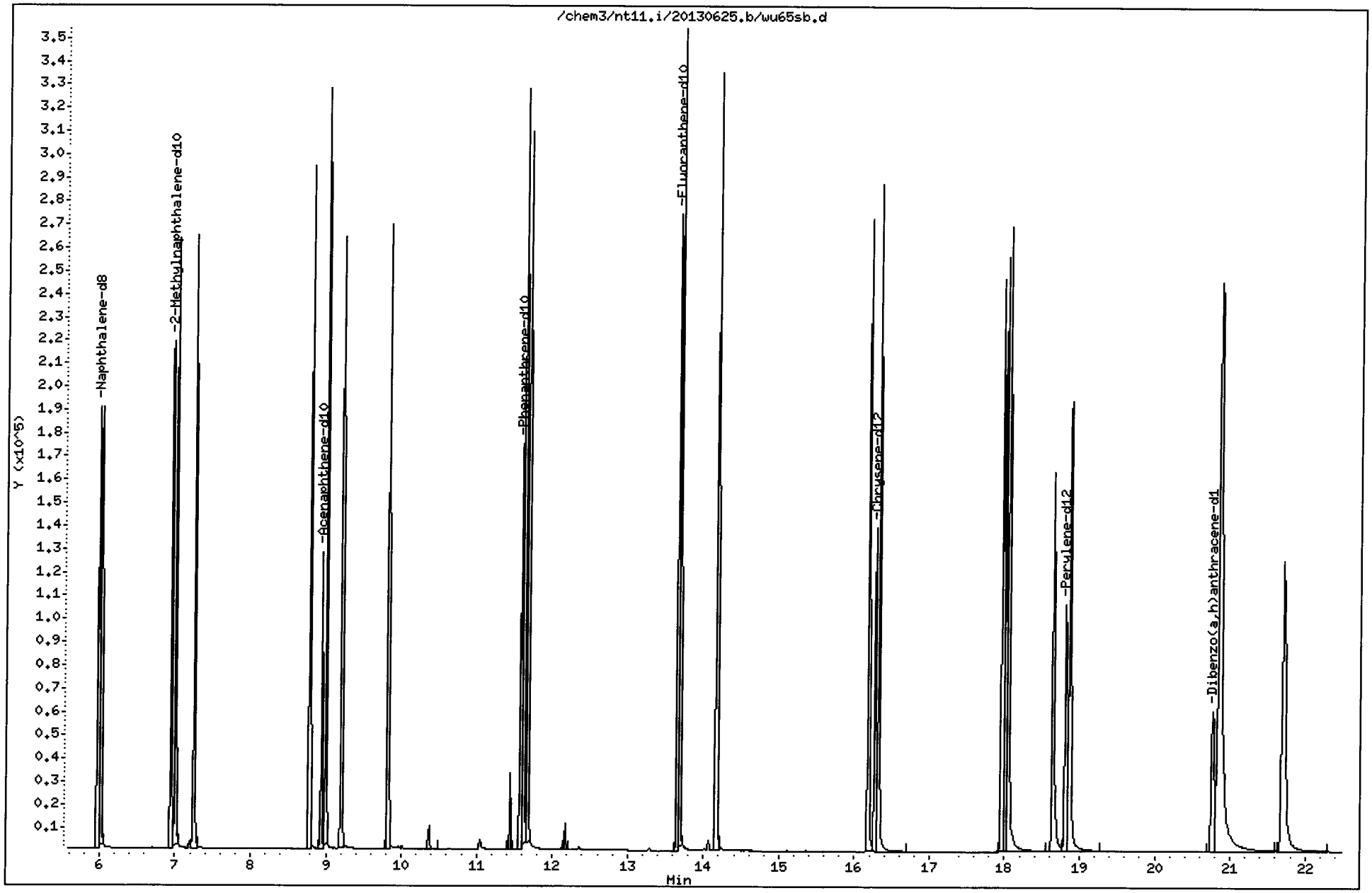
SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
5 Naphthalene	300	222	73.88	37-90
7 2-Methylnaphthalen	300	230	76.54	39-90
8 1-methylnaphthalen	300	224	74.83	38-95
10 Acenaphthylene	300	230	76.55	35-95
12 Acenaphthene	300	221	73.76	38-94
14 Dibenzofuran	300	226	75.20	36-94
15 Fluorene	300	234	78.13	41-102
19 Phenanthrene	300	218	72.68	41-101
20 Anthracene	300	231	76.95	28-101
24 Fluoranthene	300	226	75.42	49-114
25 Pyrene	300	217	72.46	42-114
28 Benzo(a)anthracene	300	240	79.86	42-111
30 Chrysene	300	234	78.13	46-106
44 Benzo(b)fluoranthe	300	224	74.63	30-160
45 Benzo(k)fluoranthe	300	244	81.47	30-160
46 Benzo(j)fluoranthe	300	250	83.19	30-160
34 Benzo(a)pyrene	300	224	74.74	20-99
37 Indeno(1,2,3-cd)py	300	242	80.63	32-113
38 Dibenzo(a,h)anthra	300	247	82.40	30-113
39 Benzo(g,h,i)peryle	300	235	78.21	27-113
47 Perylene	300	225	74.90	30-160

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	234	77.91	35-94
$ 23 Fluoranthene-d10	300	247	82.21	30-160
$ 36 Dibenzo(a,h)anthra	300	248	82.72	26-115

Data File: /chem3/nt11.i/20130625.b/wu65sb.d
Date : 25-JUN-2013 15:57
Client ID: WU65LCSW1
Sample Info: WU65LCSW1
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i

Operator: VTS
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - wu65sb.d

Lab ID: WU65LCSW1, Method: lowsim.m, Instrument: nt11.i, Date: 25-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130625.b/wu65sbd.d
Lab Smp Id: WU65LCSDW1 Client Smp ID: WU65LCSDW1
Inj Date : 25-JUN-2013 16:24
Operator : VTS Inst ID: nt11.i
Smp Info : WU65LCSDW1
Misc Info : 13-13119
Comment :
Method : /chem3/nt11.i/20130625.b/lowsim.m
Meth Date : 26-Jun-2013 07:45 van Quant Type: ISTD
Cal Date : 12-JUN-2013 18:11 Cal File: ic0612f.d
Als bottle: 5 QC Sample: LCSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt / Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Final Extract Volume (uL)
Vo	500.00000	Sample Volume extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
*	4 Naphthalene-d8	136	5.976	5.976	(1.000)	255317	200.000	
	5 Naphthalene	128	6.018	6.018	(1.007)	252330	199.761	200
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.163)	159576	206.150	206
	7 2-Methylnaphthalene	142	7.006	7.006	(1.172)	159639	206.745	207
	8 1-methylnaphthalene	142	7.247	7.247	(1.213)	161200	203.495	203
	10 Acenaphthylene	152	8.784	8.784	(0.983)	235854	211.321	211
*	11 Acenaphthene-d10	164	8.939	8.939	(1.000)	144671	200.000	
	12 Acenaphthene	153	8.995	8.995	(1.006)	153118	202.604	203
	14 Dibenzofuran	168	9.205	9.205	(1.030)	233839	208.646	209
	15 Fluorene	166	9.814	9.825	(1.098)	174428	218.198	218
*	18 Phenanthrene-d10	188	11.574	11.574	(1.000)	239989	200.000	
	19 Phenanthrene	178	11.618	11.619	(1.004)	277638	204.038	204
	20 Anthracene	178	11.674	11.674	(1.009)	237594	206.028	206
$	23 Fluoranthene-d10	212	13.657	13.657	(1.180)	282760	228.142	228
	24 Fluoranthene	202	13.686	13.686	(1.182)	308797	213.676	214

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
	25 Pyrene	202	14.166	14.176	(0.870)	301113	197.511	198
	28 Benzo(a)anthracene	228	16.184	16.184	(0.994)	275789	219.425	219
*	29 Chrysene-d12	240	16.275	16.275	(1.000)	197104	200.000	
	30 Chrysene	228	16.325	16.325	(1.003)	302009	212.363	212
	44 Benzo(b)fluoranthene	252	17.964	17.964	(0.955)	256885	208.858	209
	45 Benzo(k)fluoranthene	252	18.003	18.003	(0.957)	280690	221.998	222
	46 Benzo(j)fluoranthene	252	18.051	18.051	(0.960)	324440	228.107	228
	34 Benzo(a)pyrene	252	18.646	18.646	(0.991)	202142	197.730	198
*	35 Perylene-d12	264	18.810	18.810	(1.000)	164085	200.000	
	37 Indeno(1,2,3-cd)pyrene	276	20.864	20.864	(1.109)	299450	220.274	220
$	36 Dibenzo(a,h)anthracene-d14	292	20.764	20.764	(1.104)	200096	221.516	222
	38 Dibenzo(a,h)anthracene	278	20.852	20.853	(1.109)	235874	226.611	227
	39 Benzo(g,h,i)perylene	276	21.705	21.705	(1.154)	259425	213.366	213
	47 Perylene	252	18.858	18.867	(1.003)	230949	192.181	192

VD
6.26.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: wu65sbd.d
Lab Smp Id: WU65LCSDW1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130625.b/lowsim.m
Misc Info: 13-13119

Calibration Date: 25-JUN-2013
Calibration Time: 14:50
Client Smp ID: WU65LCSDW1
Level: LOW
Sample Type: Liquid

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	270479	135240	540958	255317	-5.61
11 Acenaphthene-d10	156669	78334	313338	144671	-7.66
18 Phenanthrene-d10	244223	122112	488446	239989	-1.73
29 Chrysene-d12	194330	97165	388660	197104	1.43
35 Perylene-d12	162839	81420	325678	164085	0.77

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	5.98	5.48	6.48	5.98	0.00
11 Acenaphthene-d10	8.94	8.44	9.44	8.94	0.00
18 Phenanthrene-d10	11.57	11.07	12.07	11.57	0.00
29 Chrysene-d12	16.28	15.78	16.78	16.28	0.00
35 Perylene-d12	18.81	18.31	19.31	18.81	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: SAIC
Sample Matrix: LIQUID
Lab Smp Id: WU65LCSDW1
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130625.b/lowsim.m
Misc Info: 13-13119

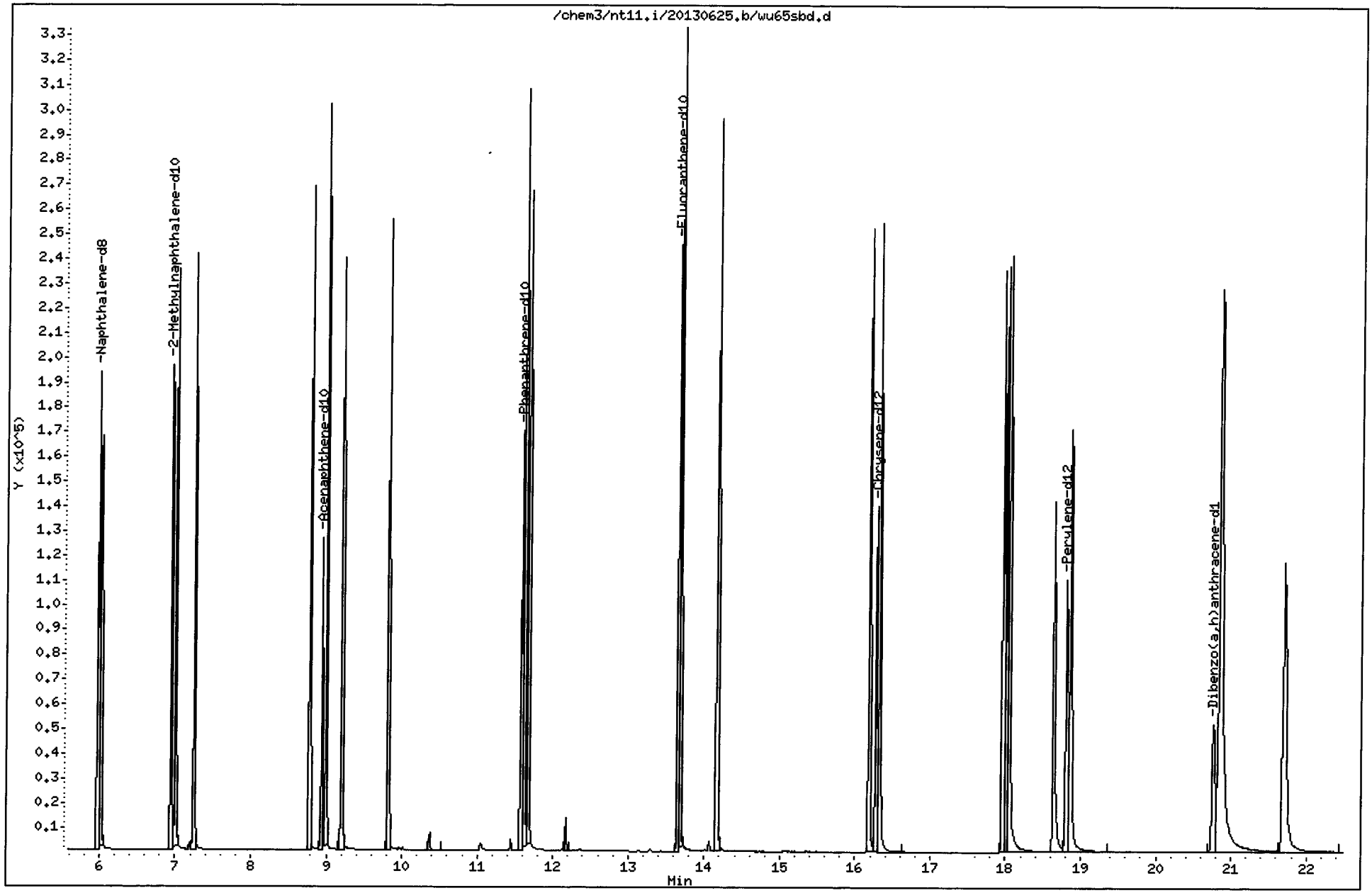
Client SDG: WU65
Fraction: SV
Client Smp ID: WU65LCSDW1
Operator: VTS
SampleType: LCSD
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
5 Naphthalene	300	200	66.59	37-90
7 2-Methylnaphthalen	300	207	68.91	39-90
8 1-methylnaphthalen	300	203	67.83	38-95
10 Acenaphthylene	300	211	70.44	35-95
12 Acenaphthene	300	203	67.53	38-94
14 Dibenzofuran	300	209	69.55	36-94
15 Fluorene	300	218	72.73	41-102
19 Phenanthrene	300	204	68.01	41-101
20 Anthracene	300	206	68.68	28-101
24 Fluoranthene	300	214	71.23	49-114
25 Pyrene	300	198	65.84	42-114
28 Benzo(a)anthracene	300	219	73.14	42-111
30 Chrysene	300	212	70.79	46-106
44 Benzo(b)fluoranthe	300	209	69.62	30-160
45 Benzo(k)fluoranthe	300	222	74.00	30-160
46 Benzo(j)fluoranthe	300	228	76.04	30-160
34 Benzo(a)pyrene	300	198	65.91	20-99
37 Indeno(1,2,3-cd)py	300	220	73.42	32-113
38 Dibenzo(a,h)anthra	300	227	75.54	30-113
39 Benzo(g,h,i)peryle	300	213	71.12	27-113
47 Perylene	300	192	64.06	30-160

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	206	68.72	35-94
$ 23 Fluoranthene-d10	300	228	76.05	30-160
$ 36 Dibenzo(a,h)anthra	300	222	73.84	26-115

Data File: /chem3/nt11.i/20130625.b/wu65sbd.d
Date : 25-JUN-2013 16:24
Client ID: WU65LCSDW1
Sample Info: WU65LCSDW1
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i
Operator: VTS
Column diameter: 0.25



Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130625.b/wu65a.d
Lab Smp Id: WU65A Client Smp ID: LF-TP-001-20130619-
Inj Date : 25-JUN-2013 17:19
Operator : VTS Inst ID: nt11.i
Smp Info : WU65A
Misc Info : 13-13119
Comment :
Method : /chem3/nt11.i/20130625.b/lowsim.m
Meth Date : 26-Jun-2013 07:45 van Quant Type: ISTD
Cal Date : 12-JUN-2013 18:11 Cal File: ic0612f.d
Als bottle: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt / Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Final Extract Volume (uL)
Vo	500.00000	Sample Volume extracted (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
*	4 Naphthalene-d8	136	5.976	5.976	(1.000)	246404	200.000	
	5 Naphthalene	128	Compound Not Detected.					
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.163)	162381	217.361	217
	7 2-Methylnaphthalene	142	Compound Not Detected.					
	8 1-methylnaphthalene	142	Compound Not Detected.					
	10 Acenaphthylene	152	Compound Not Detected.					
*	11 Acenaphthene-d10	164	8.939	8.939	(1.000)	140542	200.000	
	12 Acenaphthene	153	Compound Not Detected.					
	14 Dibenzofuran	168	Compound Not Detected.					
	15 Fluorene	166	Compound Not Detected.					
*	18 Phenanthrene-d10	188	11.574	11.574	(1.000)	243679	200.000	
	19 Phenanthrene	178	Compound Not Detected.					
	20 Anthracene	178	Compound Not Detected.					
$	23 Fluoranthene-d10	212	13.657	13.657	(1.180)	311644	247.639	248
	24 Fluoranthene	202	Compound Not Detected.					

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
25 Pyrene	202	14.166	14.176	(0.870)	11363	7.35191	7.35
28 Benzo(a)anthracene	228	Compound Not Detected.					
* 29 Chrysene-d12	240	16.275	16.275	(1.000)	199825	200.000	
30 Chrysene	228	Compound Not Detected.					
44 Benzo(b)fluoranthene	252	Compound Not Detected.					
45 Benzo(k)fluoranthene	252	Compound Not Detected.					
46 Benzo(j)fluoranthene	252	Compound Not Detected.					
34 Benzo(a)pyrene	252	Compound Not Detected.					
* 35 Perylene-d12	264	18.810	18.810	(1.000)	169639	200.000	
37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
$ 36 Dibenzo(a,h)anthracene-d14	292	20.764	20.764	(1.104)	202343	216.670	217
38 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
39 Benzo(g,h,i)perylene	276	Compound Not Detected.					
47 Perylene	252	Compound Not Detected.					

6.26.13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: wu65a.d
Lab Smp Id: WU65A
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130625.b/lowsim.m
Misc Info: 13-13119

Calibration Date: 25-JUN-2013
Calibration Time: 14:50
Client Smp ID: LF-TP-001-20130619-
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	270479	135240	540958	246404	-8.90
11 Acenaphthene-d10	156669	78334	313338	140542	-10.29
18 Phenanthrene-d10	244223	122112	488446	243679	-0.22
29 Chrysene-d12	194330	97165	388660	199825	2.83
35 Perylene-d12	162839	81420	325678	169639	4.18

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	5.98	5.48	6.48	5.98	0.00
11 Acenaphthene-d10	8.94	8.44	9.44	8.94	0.00
18 Phenanthrene-d10	11.57	11.07	12.07	11.57	0.00
29 Chrysene-d12	16.28	15.78	16.78	16.28	0.00
35 Perylene-d12	18.81	18.31	19.31	18.81	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

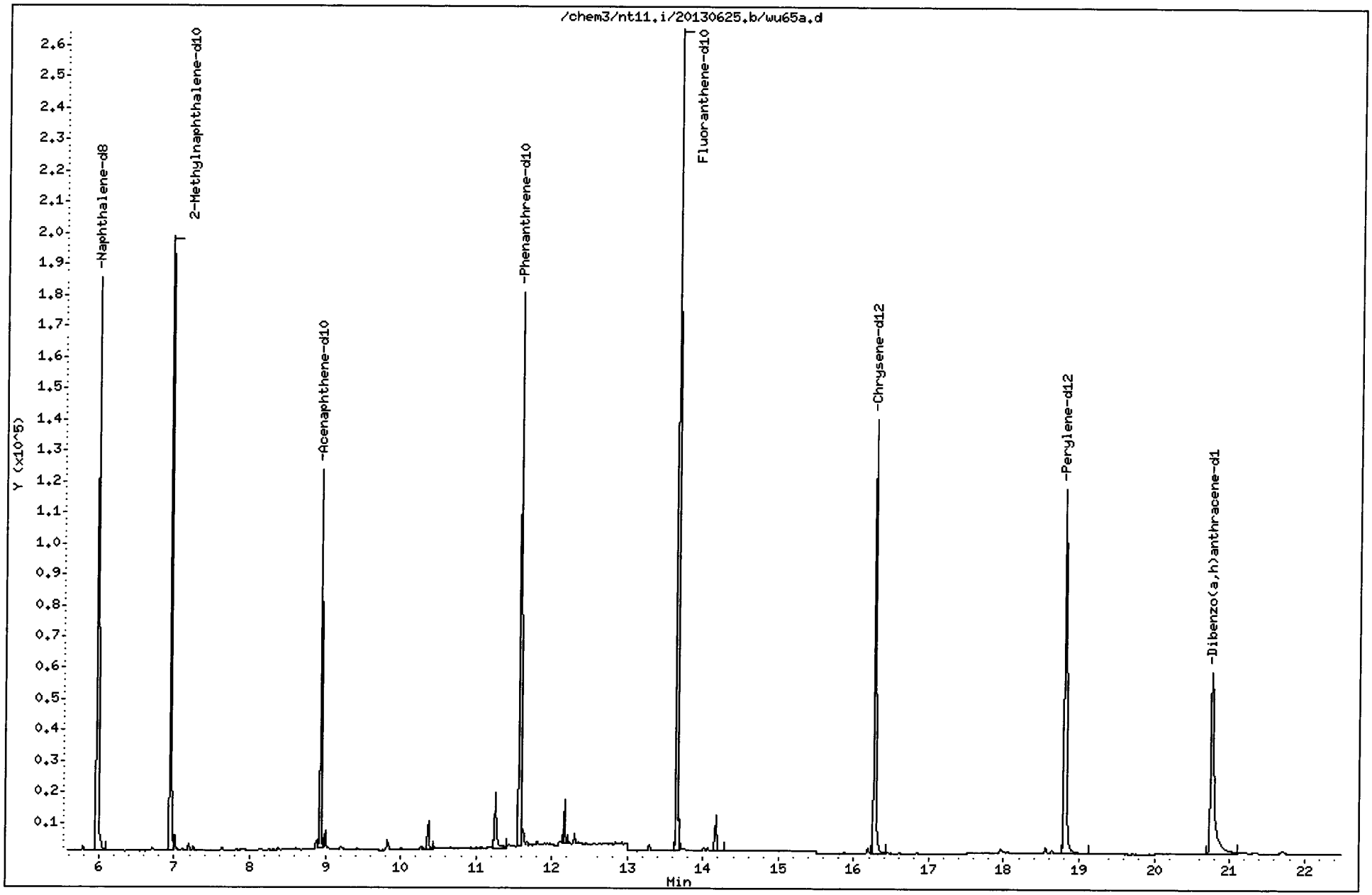
Client Name: SAIC
Sample Matrix: LIQUID
Lab Smp Id: WU65A
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130625.b/lowsim.m
Misc Info: 13-13119

Client SDG: WU65
Fraction: SV
Client Smp ID: LF-TP-001-20130619-
Operator: VTS
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	217	72.45	35-94
$ 23 Fluoranthene-d10	300	248	82.55	30-160
$ 36 Dibenzo(a,h)anthra	300	217	72.22	26-115

Data File: /chem3/nt11.i/20130625.b/wu65a.d
Date : 25-JUN-2013 17:19
Client ID: LF-TP-001-20130619-
Sample Info: WU65A
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i
Operator: VTS
Column diameter: 0.25



Data File: /chem3/nt11.i/20130625.b/wu65a.d

Date : 25-JUN-2013 17:19

Client ID: LF-TP-001-20130619-

Instrument: nt11.i

Sample Info: WU65A

Volume Injected (uL): 2.0

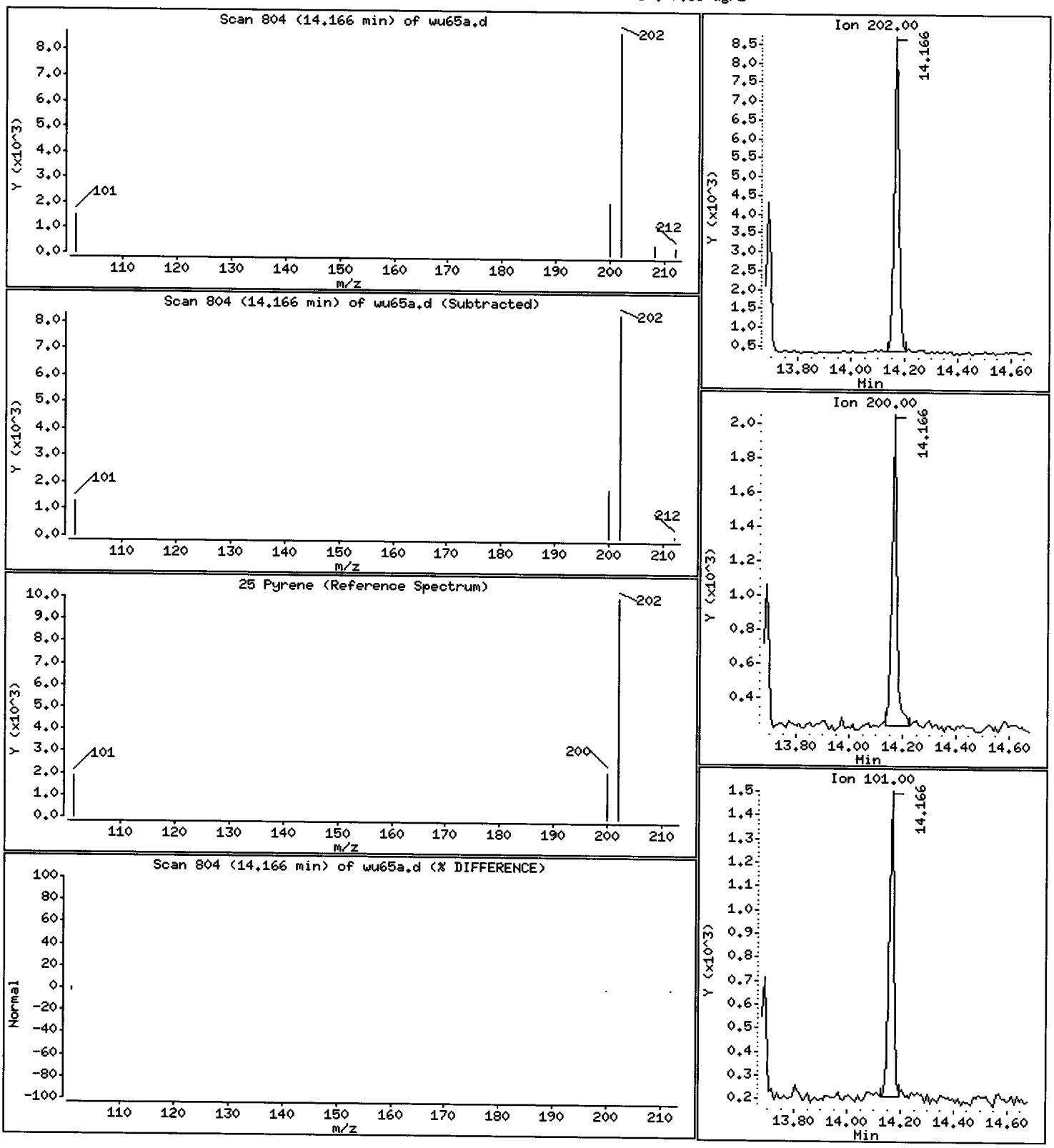
Operator: VTS

Column phase: Rxi-17Sil MS

Column diameter: 0.25

25 Pyrene

Concentration: 7.35 ug/L



CO-ELUTION SUMMARY FOR FILE - wu65a.d

Lab ID: WU65A, Method: lowsim.m, Instrument: nt11.i, Date: 25-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

LOW LEVEL PNAs BY SW8270D-SIM

Data file : /chem3/nt11.i/20130625.b/wu65b.d
Lab Smp Id: WU65B Client Smp ID: LF-FD-001-20130619-
Inj Date : 25-JUN-2013 17:46
Operator : VTS Inst ID: nt11.i
Smp Info : WU65B
Misc Info : 13-13120
Comment :
Method : /chem3/nt11.i/20130625.b/lowsim.m
Meth Date : 26-Jun-2013 07:45 van Quant Type: ISTD
Cal Date : 12-JUN-2013 18:11 Cal File: ic0612f.d
Als bottle: 8
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: newpna.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * Vt / Vo * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	500.00000	Final Extract Volume (uL)
Vo	500.00000	Sample Volume extracted (mL)

Cpnd Variable Local Compound Variable

		QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
*	4 Naphthalene-d8	136	5.976	5.976	(1.000)	254599	200.000	
	5 Naphthalene	128	6.018	6.018	(1.007)	9954	7.90244	7.90
$	6 2-Methylnaphthalene-d10	152	6.953	6.953	(1.163)	166460	215.649	216
	7 2-Methylnaphthalene	142	7.006	7.006	(1.172)	6458	8.38718	8.39
	8 1-methylnaphthalene	142	Compound Not Detected.					
	10 Acenaphthylene	152	Compound Not Detected.					
*	11 Acenaphthene-d10	164	8.939	8.939	(1.000)	146036	200.000	
	12 Acenaphthene	153	Compound Not Detected.					
	14 Dibenzofuran	168	Compound Not Detected.					
	15 Fluorene	166	Compound Not Detected.					
*	18 Phenanthrene-d10	188	11.574	11.574	(1.000)	252059	200.000	
	19 Phenanthrene	178	Compound Not Detected.					
	20 Anthracene	178	Compound Not Detected.					
$	23 Fluoranthene-d10	212	13.657	13.657	(1.180)	327257	251.400	251
	24 Fluoranthene	202	13.686	13.686	(1.182)	7612	5.01499	5.01

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	FINAL (ug/L)
25 Pyrene	202	14.166	14.176	(0.870)	15310	9.74183	9.74
28 Benzo(a)anthracene	228	Compound Not Detected.					
* 29 Chrysene-d12	240	16.275	16.275	(1.000)	203185	200.000	
30 Chrysene	228	16.317	16.325	(1.003)	7734	5.27555	5.28
44 Benzo(b)fluoranthene	252	Compound Not Detected.					
45 Benzo(k)fluoranthene	252	Compound Not Detected.					
46 Benzo(j)fluoranthene	252	Compound Not Detected.					
34 Benzo(a)pyrene	252	Compound Not Detected.					
* 35 Perylene-d12	264	18.809	18.810	(1.000)	176121	200.000	
37 Indeno(1,2,3-cd)pyrene	276	Compound Not Detected.					
$ 36 Dibenzo(a,h)anthracene-d14	292	20.764	20.764	(1.104)	217895	224.736	225
38 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
39 Benzo(g,h,i)perylene	276	Compound Not Detected.					
47 Perylene	252	Compound Not Detected.					

6-26-13

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt11.i
Lab File ID: wu65b.d
Lab Smp Id: WU65B
Analysis Type: SV
Quant Type: ISTD
Operator: VTS
Method File: /chem3/nt11.i/20130625.b/lowsim.m
Misc Info: 13-13120

Calibration Date: 25-JUN-2013
Calibration Time: 14:50
Client Smp ID: LF-FD-001-20130619-
Level: LOW
Sample Type: Water

Test Mode:
Use Initial Calibration Level 4.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	270479	135240	540958	254599	-5.87
11 Acenaphthene-d10	156669	78334	313338	146036	-6.79
18 Phenanthrene-d10	244223	122112	488446	252059	3.21
29 Chrysene-d12	194330	97165	388660	203185	4.56
35 Perylene-d12	162839	81420	325678	176121	8.16

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
4 Naphthalene-d8	5.98	5.48	6.48	5.98	0.00
11 Acenaphthene-d10	8.94	8.44	9.44	8.94	0.00
18 Phenanthrene-d10	11.57	11.07	12.07	11.57	0.00
29 Chrysene-d12	16.28	15.78	16.78	16.28	0.00
35 Perylene-d12	18.81	18.31	19.31	18.81	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

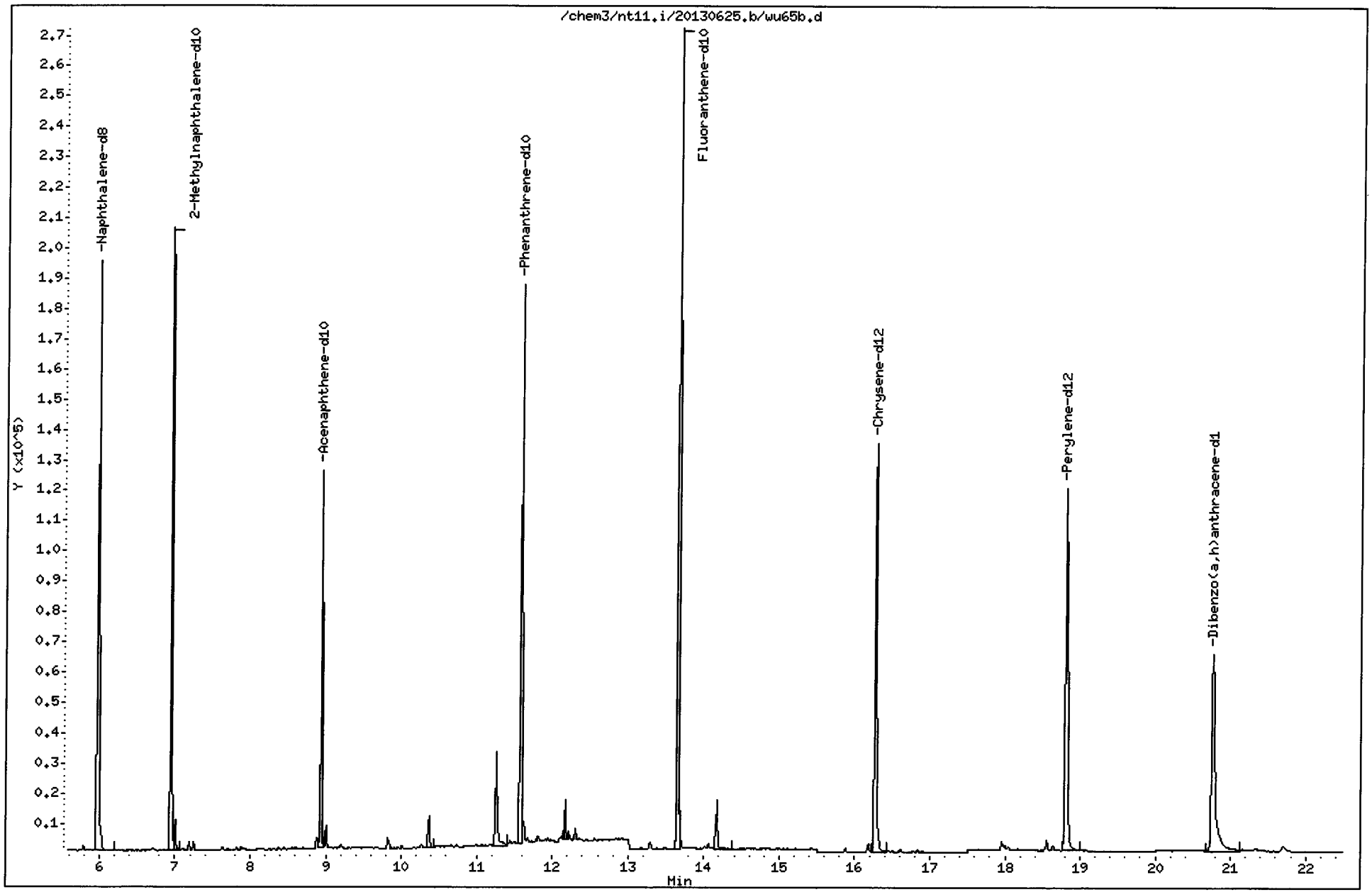
Client Name: SAIC
Sample Matrix: LIQUID
Lab Smp Id: WU65B
Level: LOW
Data Type: MS DATA
SpikeList File: waterlcs.spk
Sublist File: newpna.sub
Method File: /chem3/nt11.i/20130625.b/lowsim.m
Misc Info: 13-13120

Client SDG: WU65
Fraction: SV
Client Smp ID: LF-FD-001-20130619-
Operator: VTS
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/L	CONC RECOVERED ug/L	% RECOVERED	LIMITS
$ 6 2-Methylnaphthalen	300	216	71.88	35-94
$ 23 Fluoranthene-d10	300	251	83.80	30-160
$ 36 Dibenzo(a,h)anthra	300	225	74.91	26-115

Data File: /chem3/nt11.i/20130625.b/wu65b.d
Date : 25-JUN-2013 17:46
Client ID: LF-FD-001-20130619-
Sample Info: WU65B
Volume Injected (uL): 2.0
Column phase: Rxi-17Sil MS

Instrument: nt11.i
Operator: VTS
Column diameter: 0.25



Data File: /chem3/nt11.i/20130625.b/wu65b.d

Date : 25-JUN-2013 17:46

Client ID: LF-FD-001-20130619-

Instrument: nt11.i

Sample Info: WU65B

Volume Injected (uL): 2.0

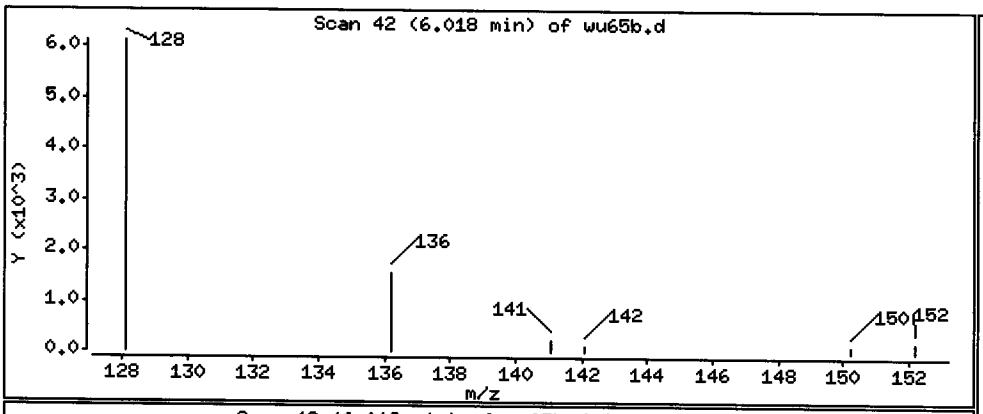
Operator: VTS

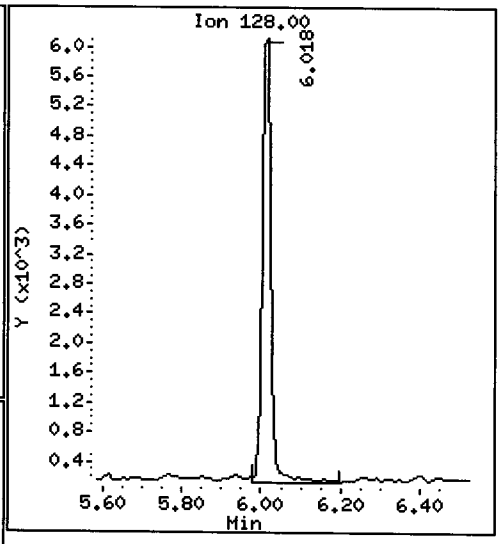
Column phase: Rxi-17Sil MS

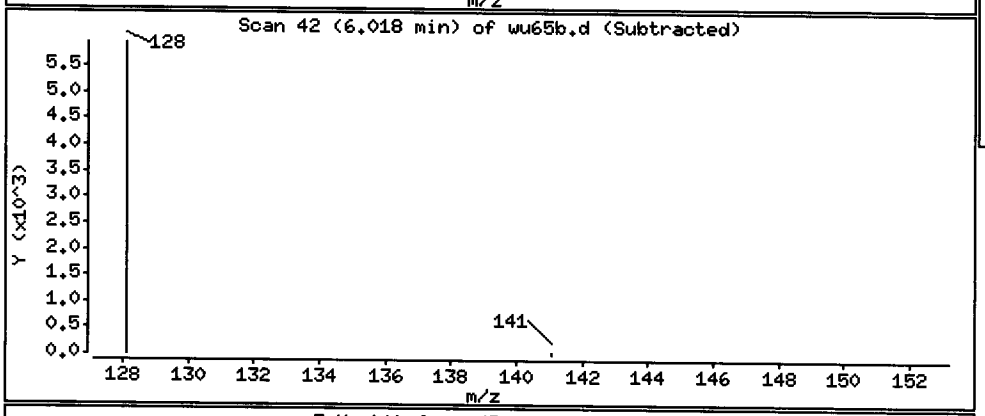
Column diameter: 0.25

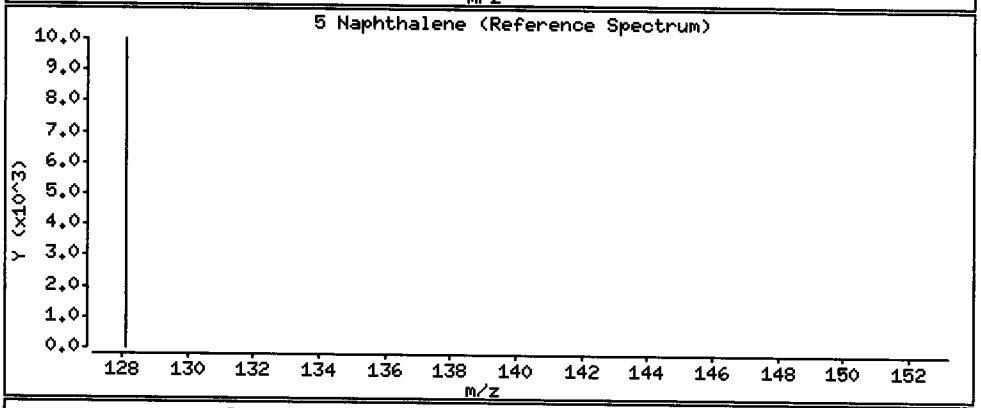
5 Naphthalene

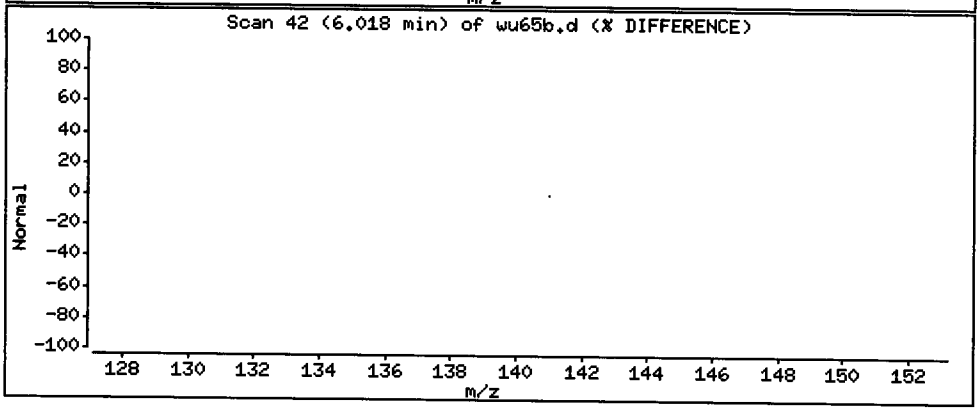
Concentration: 7.90 ug/L











Data File: /chem3/nt11.i/20130625.b/wu65b.d

Date : 25-JUN-2013 17:46

Client ID: LF-FD-001-20130619-

Instrument: nt11.i

Sample Info: WU65B

Volume Injected (uL): 2.0

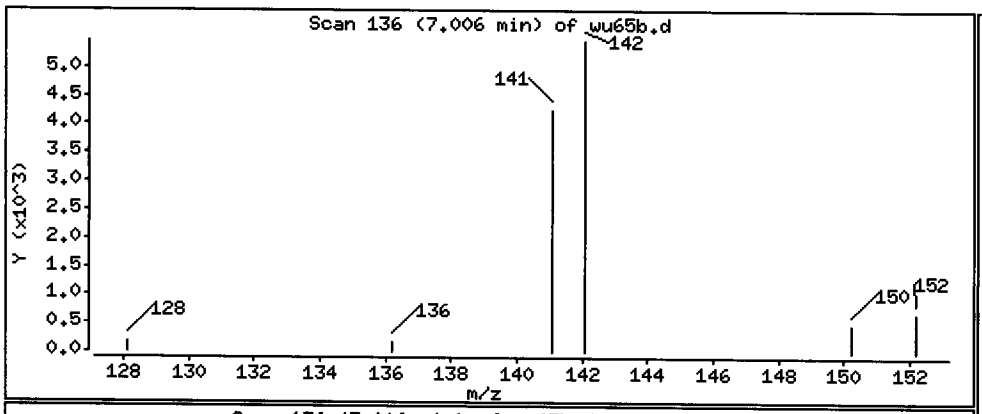
Operator: VTS

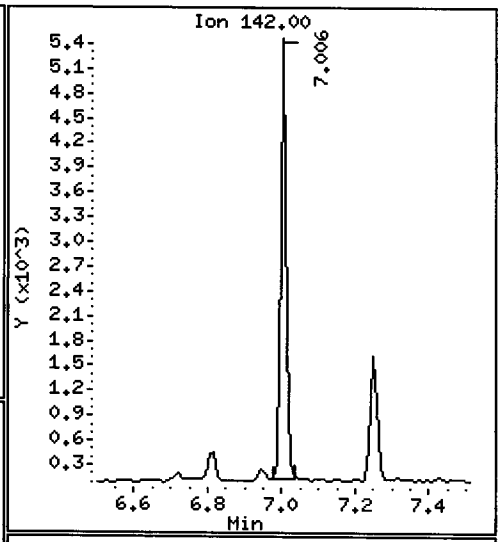
Column phase: Rxi-17Sil MS

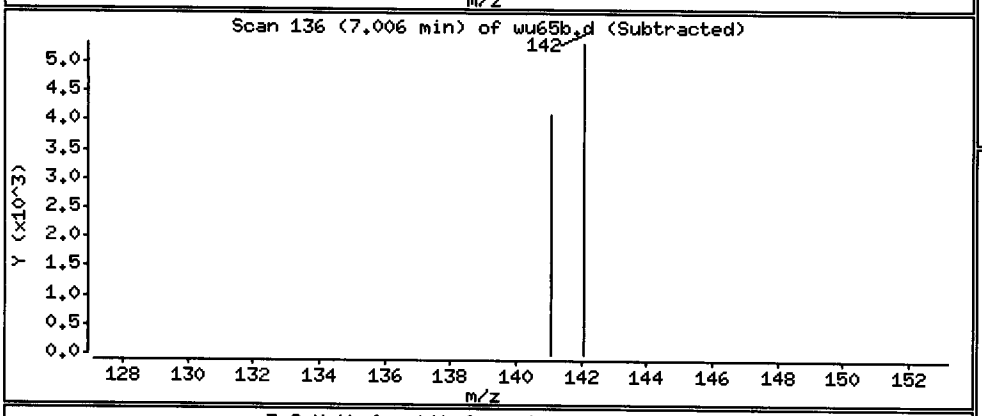
Column diameter: 0.25

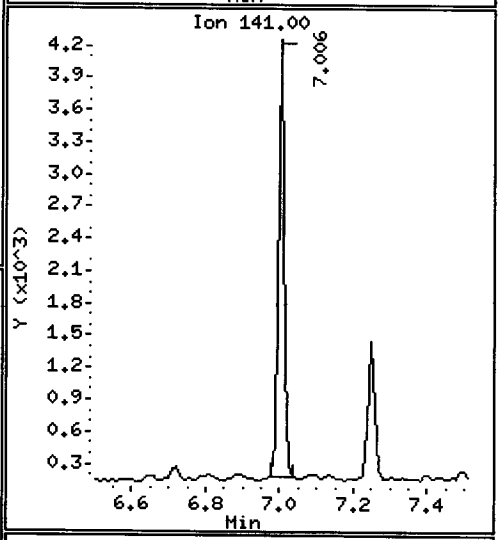
7 2-Methylnaphthalene

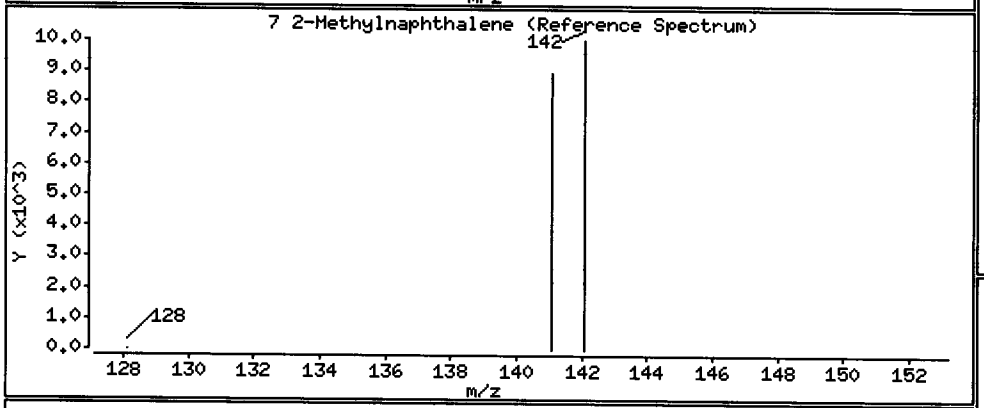
Concentration: 8.39 ug/L

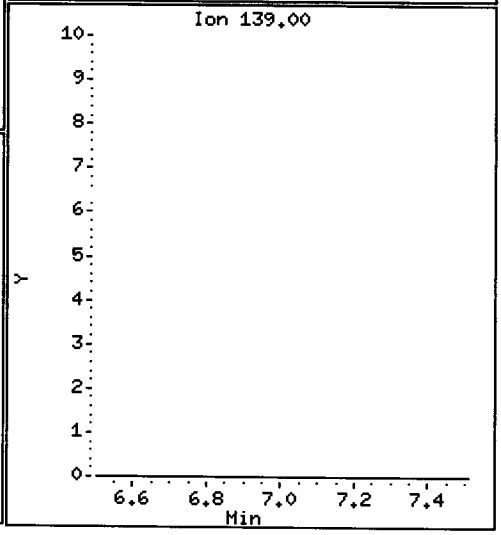


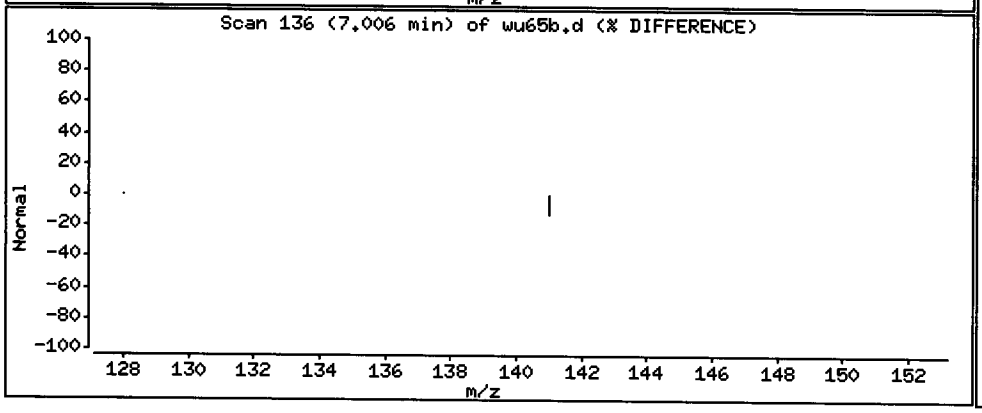












Data File: /chem3/nt11.i/20130625.b/wu65b.d

Date : 25-JUN-2013 17:46

Client ID: LF-FD-001-20130619-

Instrument: nt11.i

Sample Info: WU65B

Volume Injected (uL): 2.0

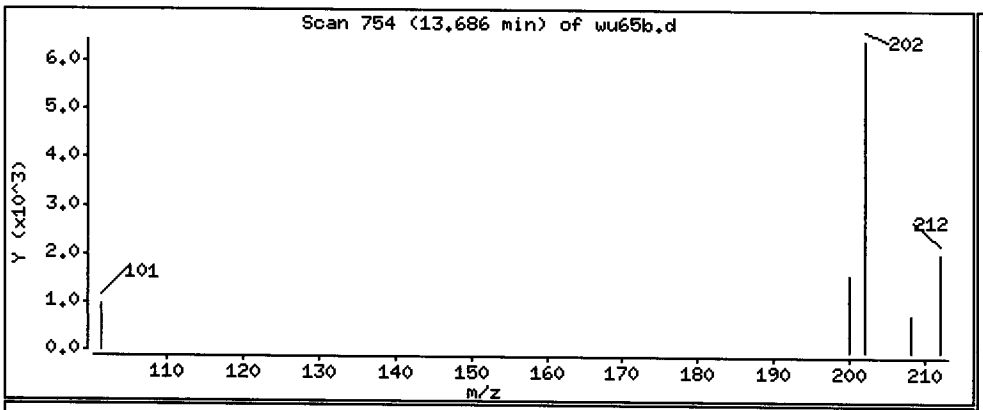
Operator: VTS

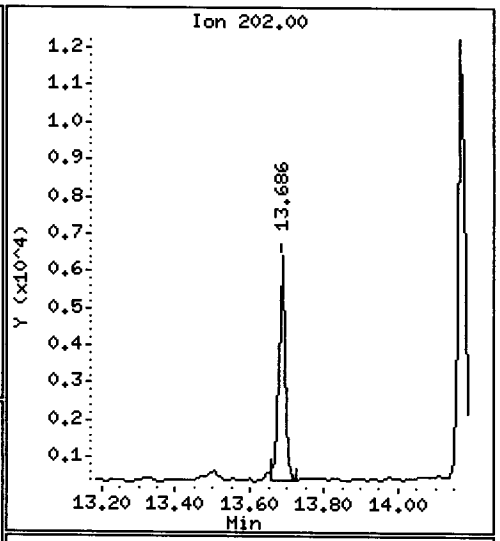
Column phase: Rxi-17Sil MS

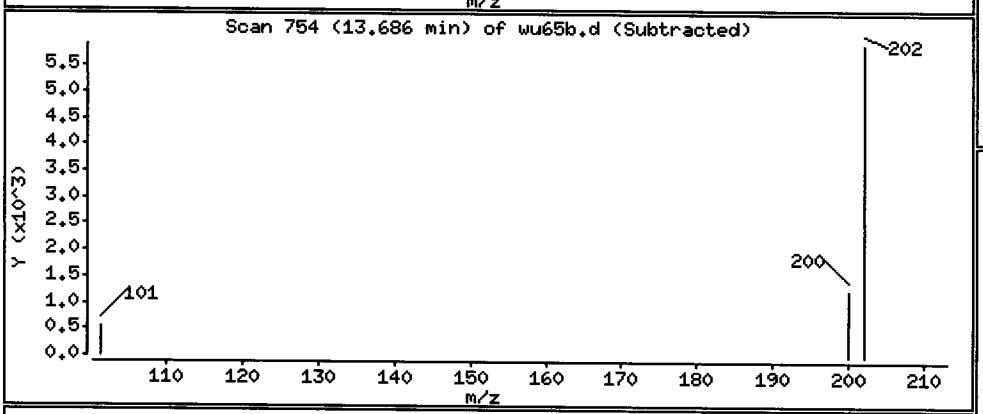
Column diameter: 0.25

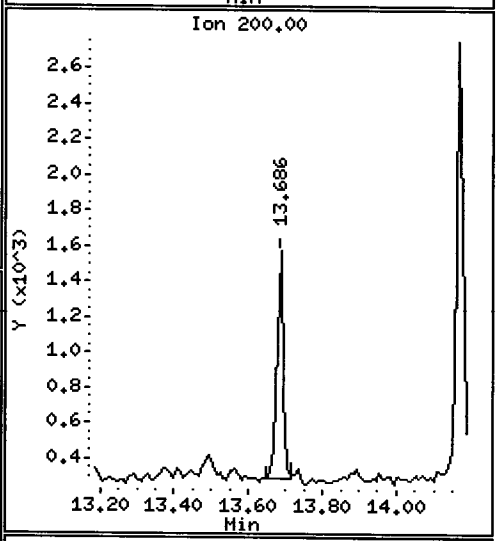
24 Fluoranthene

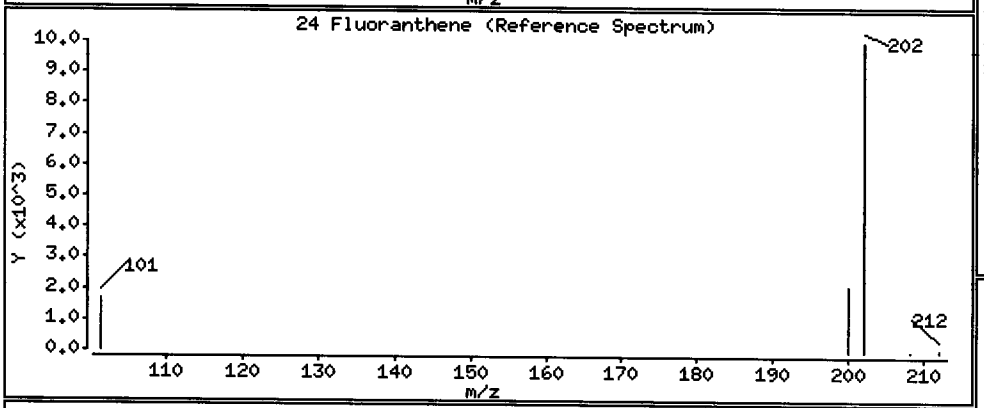
Concentration: 5.01 ug/L

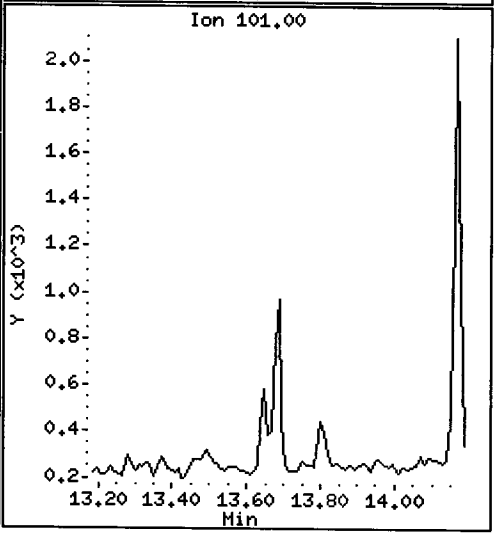


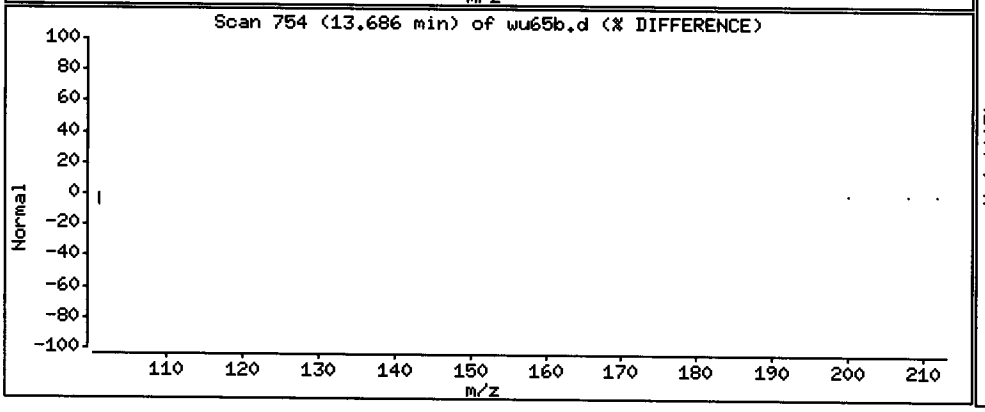












Data File: /chem3/nt11.i/20130625.b/wu65b.d

Date : 25-JUN-2013 17:46

Client ID: LF-FD-001-20130619-

Instrument: nt11.i

Sample Info: WU65B

Volume Injected (uL): 2.0

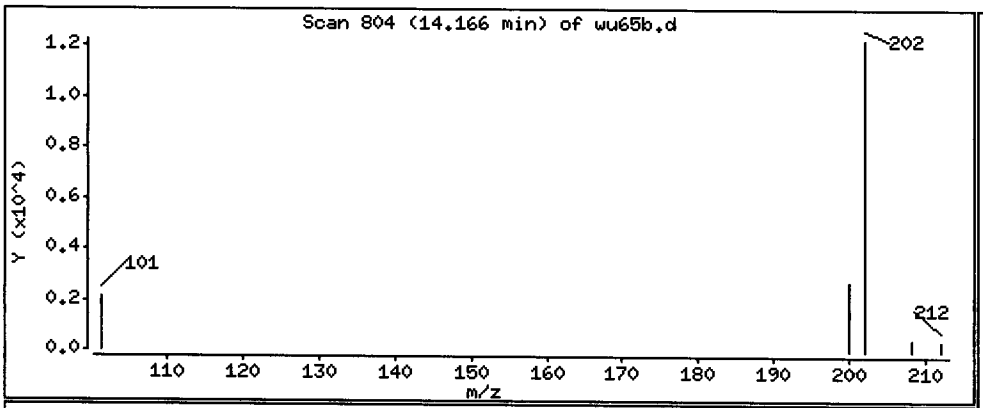
Operator: VTS

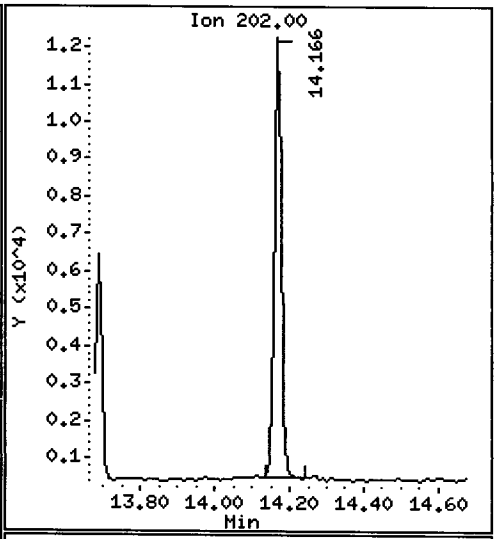
Column phase: Rxi-17Sil MS

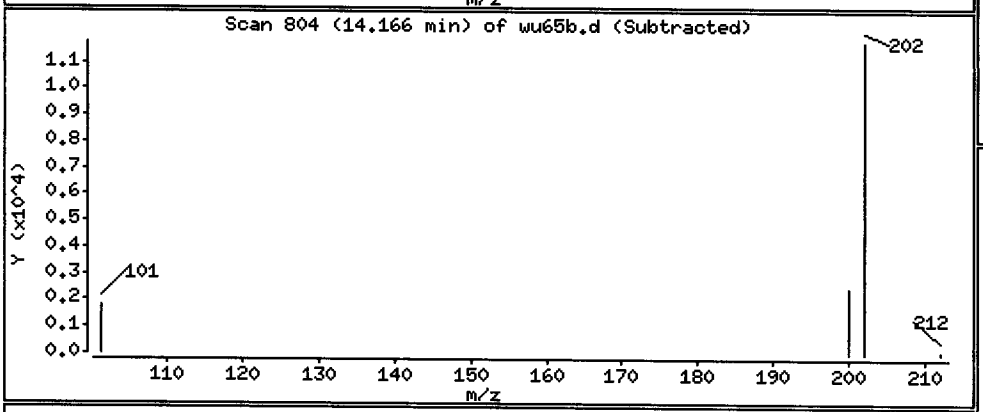
Column diameter: 0.25

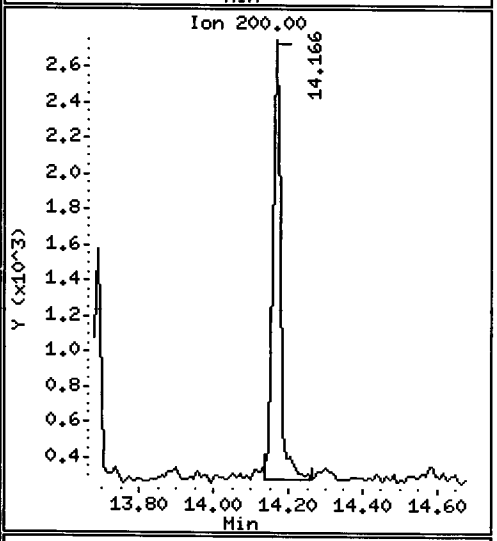
25 Pyrene

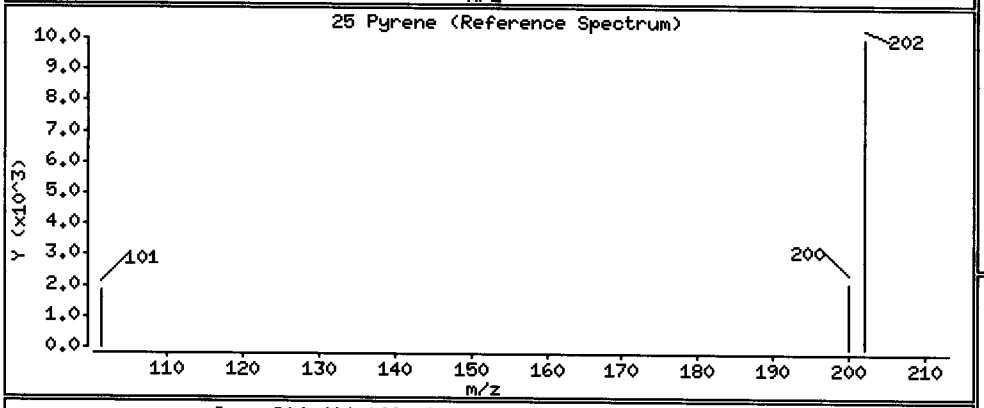
Concentration: 9.74 ug/L

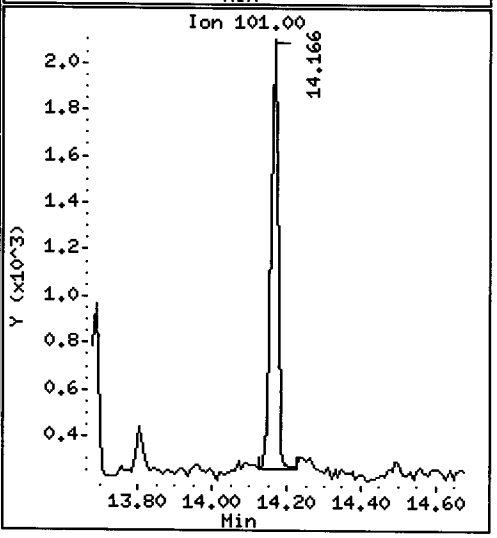


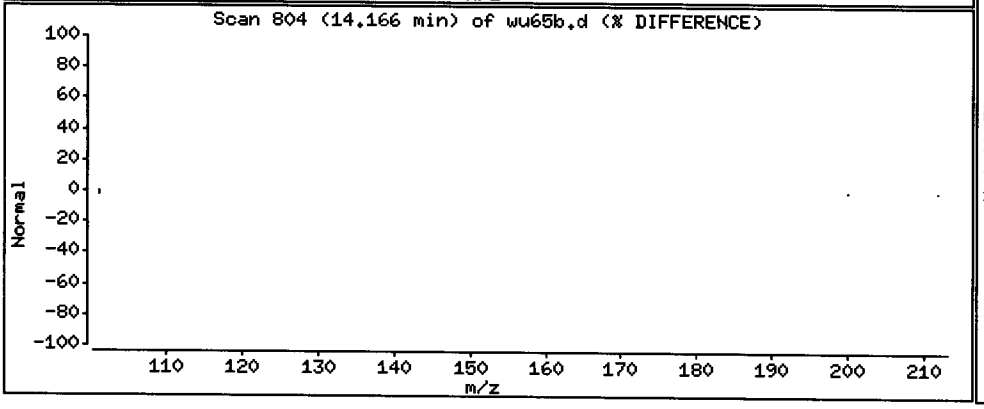












Data File: /chem3/nt11.i/20130625.b/wu65b.d

Date : 25-JUN-2013 17:46

Client ID: LF-FD-001-20130619-

Instrument: nt11.i

Sample Info: WU65B

Volume Injected (uL): 2.0

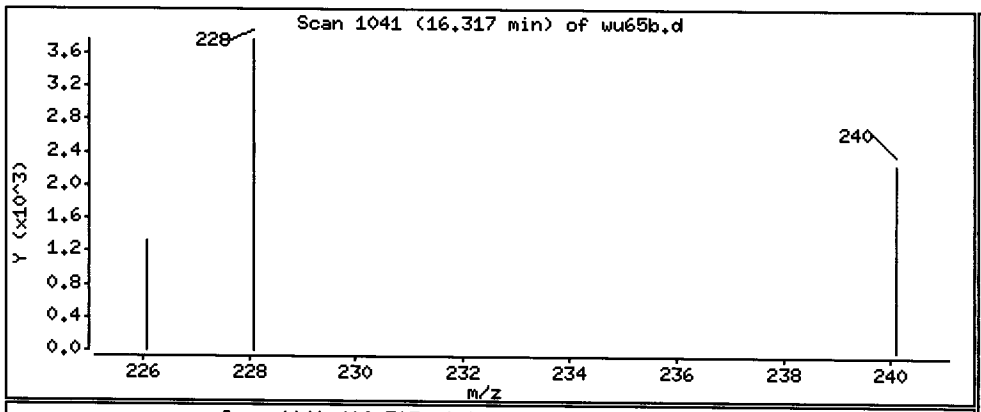
Operator: VTS

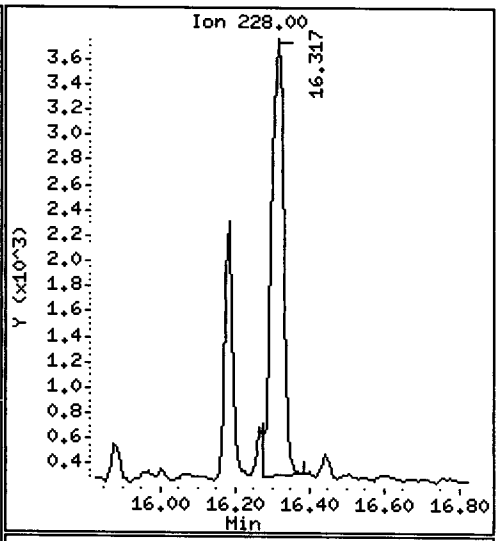
Column phase: Rxi-17Sil MS

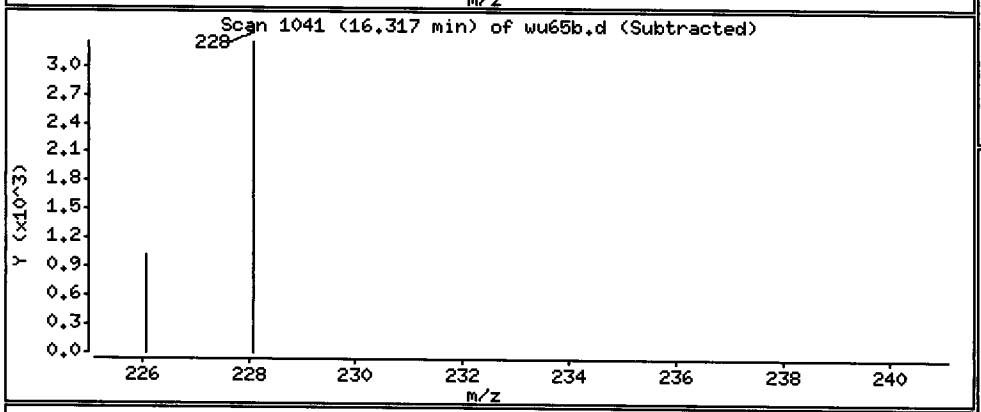
Column diameter: 0.25

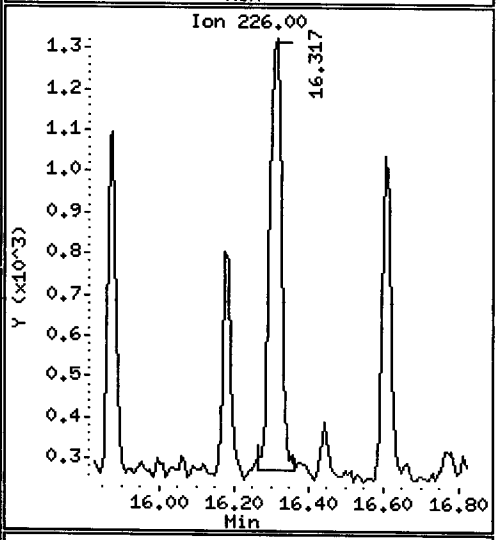
30 Chrysene

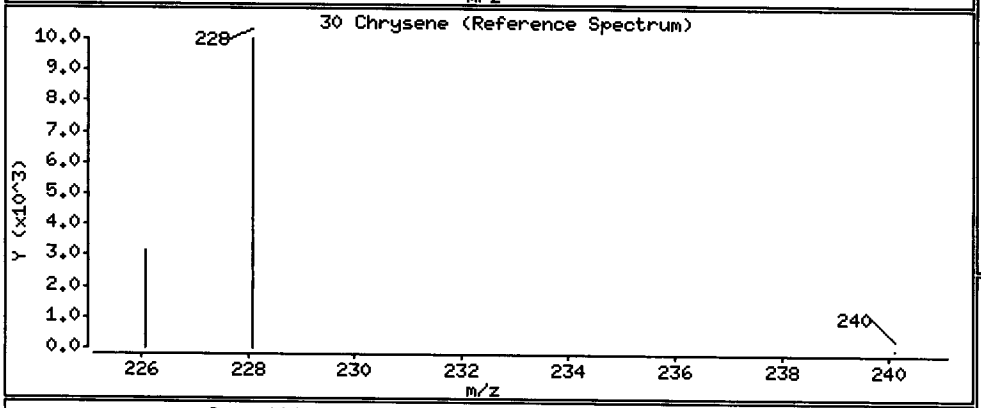
Concentration: 5.28 ug/L

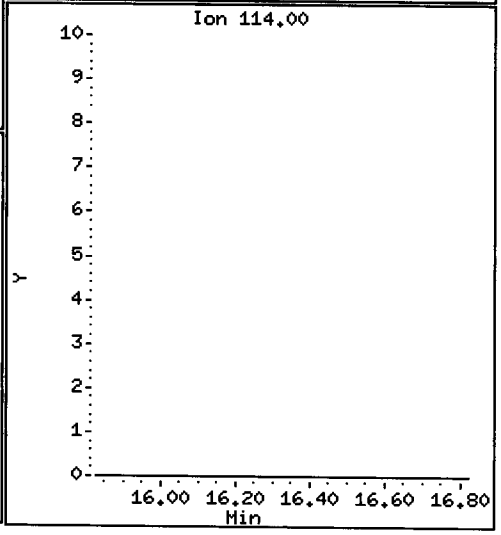


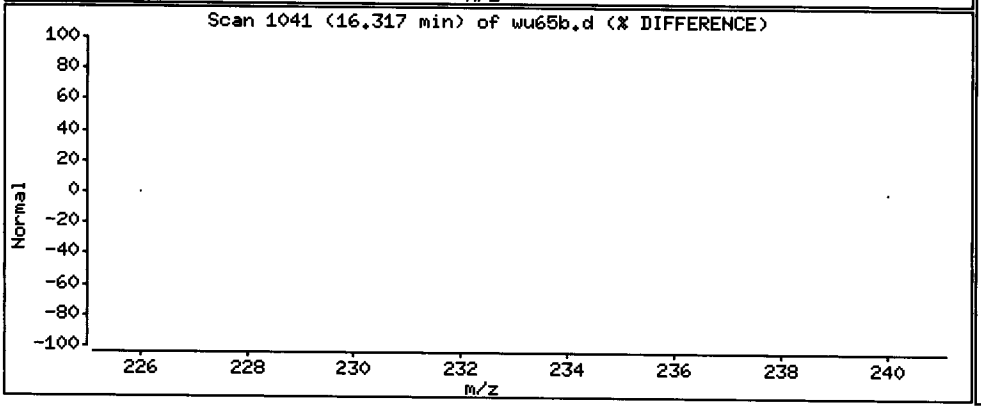












CO-ELUTION SUMMARY FOR FILE - wu65b.d

Lab ID: WU65B, Method: lowsim.m, Instrument: nt11.i, Date: 25-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Pesticide Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WU65, WU71

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(8081B) Pest – Water
Separatory Funnel (3510C) (SOP # 3311S)

Preparation Test Pest # 1(PESWSI)
ARI Job No(s) WU65 Page 1 of 1 In-House (0.05-0.1ppb) Batch set up by: SP

Bottle #	ARI Sample I.D.	Volume Extracted	(Opt/REQ) Acid Clean (5mL)	(Opt/REQ) Sulfur Clean 4.5mL+0.5mL (5mL) Ethyl Acetate? 1 2 3	(Opt) Silica Gel Clean (1:5) Any Color	Final Effective Volume	Volume to Lab	Comment	Verify Client ID
	WU65 MBW	500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		AR 06/25/13 Analyst/Date
	SBW	500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		Verify pH is 5-9
	SBW Dup.	500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		AR 06/25/13
	QLS	500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		Analyst/Date
4	A	500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		KD 80-85°C
9	B	500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		Hexane Exchange (2 X 20mL) 100°C 1 2 3 4 5 6
		500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		PK 07/01/13 Analyst/Date
		500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
		500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		TurboVap 1 2 3 Pre-Cleanups (4mL=10mL Hexane Exchange)
		500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		SP 7/2/13 Analyst/Date
		500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
		500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
		500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		TurboVap 1 2 3 Post Cleanups
		500mL	(5mL) Y / N	(5mL) Y / N	(1:5) Y / N	5mL	1mL		
Analyst/Date AR 06/25/13 →						SP 7/2/13	SP 7/2/13	Reviewed by/ Date SP 7/2/13	Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	N (B004151)	2µg/mL	100µL	4/30/14	AR	SP
Spike (Freezer)	3 (B004650)	0.5/1/5µg/mL	200µL	12/5/13	AR	SP
QLS Spike (Freezer)	10 (B000567)	0.25-2.5µg/mL	50µL	12/10/13	AR	SP
Extraction Time: 0910						

SPECIAL INSTRUCTIONS: 1. Verify pH is 5-9 2. Adjust pH (if necessary=Analyst Notes). 3. Add Surr/Spike. 4. Add 30mL DCM to 500mL sample bottle and perform a bottle rinse. 5. Extract 3X with 30mL DCM. 6. KD (NO Drying Column) at 80-85°C. 7. Exchange (2 X with 20mL) Hexane at 100°C. 8. TurboVap to 4mL=10mL Hexane Exchange. 9. TurboVap. 10. Clean-ups? (Any color after ~~Acid~~ or Sulfur Clean=REQ SPE. 11. TurboVap (if Silica Clean). 12. Vial with Hexane. (Note: Ethyl Acetate is needed to recover Endrin Aldehyde in Sulfur Clean, if No Acid Clean).

A. Archive Y / N

Reagent and Solutions Identification

(8081B) Pest – Water
Separatory Funnel (3510C) (SOP # 3311S)

ARI Job No(s): WU65

(8081B) Pest Aqueous:	Analyst/Date
Separatory Funnel Station: Methylene Chloride: (I# 8279) Anhydrous Sodium Sulfate: (I# 8185 + jar date 06/08/13)	Sep Funnel AR 06/25/13
KD Station: Methylene Chloride: (I# 8279) Hexane: (I# 0981)	KD 07/01/13
Vialing Station: Hexane: (I# T3400677 Concentrated Sulfuric Acid: (I# N/A) Ethyl Acetate: (I#) Tetrabutylammonium hydrogensulfate (TBAS): (H#) Sodium Sulfite: (I#) Silica Gel (SPE) Darts: (I#)	Vialing SP 7/2/13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WU65 Client ID: SAIC

Parameter: ~~W~~ Poly Pest Client Project: NPDES Sampling Support

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 WU65 samples A,B	AR 06/25/13
☐ 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)	

WU65 : 9044

Pesticide Raw Data
Initial Calibration

ARI Job ID: WU65, WU71

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): 06/19/13 Internal Standard ID 2006-1 Expiration 07/26/13

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
DS	B370	08/29/13	INDA ICV 06/19/13	2023-1	05/16/13
IB	1982-2	05/16/13	WND ICV	2064-1	01/17/14
INDA	B339	12/10/13	HCB/HCBD	1886-2	05/28/12
Toxaphene	B558	09/29/14			
WND	B559	07/27/13			

Detail problems, corrective actions and/or other pertinent information below:

Analyst: JK **Date:** 06/24/13

Reviewer: VD **Date:** 6/25/13

Analytical Resources Inc.: Organics Instrument Log

ECD6 Serial No.: US00007128

Date: 06/19/13 Analysis: Pest Analyst: JR

Column 1 Serial No.: 108624 Column Type: CLP1

Column 2 Serial No.: 109709 Column Type: CLP2

GC Method: Pest ICal Date: 2uL (ul inj)

IS	Ical/Ccal	ICV
2026-1	B339	2083-1
	B559	2064-1
	B959	1836-2
	B370	

Document All Maintenance Tasks In StarLIMS

	Inject Date/Time	Filename	DF	LabID
1	19-JUN-2013 17:21	0619a010.d	1	IB
2	19-JUN-2013 17:39	0619a011.d	1	DS
3	19-JUN-2013 17:57	0619a012.d	1	INDAE
4	19-JUN-2013 18:14	0619a013.d	1	INDAA
5	19-JUN-2013 18:32	0619a014.d	1	INDAB
6	19-JUN-2013 18:50	0619a015.d	1	INDAC
7	19-JUN-2013 19:08	0619a016.d	1	INDAD
8	19-JUN-2013 19:26	0619a017.d	1	INDAF
9	19-JUN-2013 19:44	0619a018.d	1	INDAG
10	19-JUN-2013 20:01	0619a019.d	1	INDA ICV
11	19-JUN-2013 20:19	0619a020.d	1	HCB/HCBD
12	19-JUN-2013 23:17	0619a030.d	1	TOXAPHENE
13	19-JUN-2013 20:55	0619a022.d	1	WNDE
14	19-JUN-2013 21:13	0619a023.d	1	WNDA
15	19-JUN-2013 21:30	0619a024.d	1	WNDB
16	19-JUN-2013 21:48	0619a025.d	1	WNDC
17	19-JUN-2013 22:06	0619a026.d	1	WNDD
18	19-JUN-2013 22:24	0619a027.d	1	WNDF
19	19-JUN-2013 22:42	0619a028.d	1	WNDG
20	19-JUN-2013 22:59	0619a029.d	1	WND ICV
21	19-JUN-2013 23:35	0619a031.d	1	TECHCHLOR
22	19-JUN-2013 23:53	0619a032.d	1	TECH ICV
23	20-JUN-2013 00:10	0619a033.d	1	DS
24	20-JUN-2013 00:28	0619a034.d	1	INDAE#1
25	20-JUN-2013 00:46	0619a035.d	1	WNDE#1
26	20-JUN-2013 01:04	0619a036.d	1	WT36MBS1
27	20-JUN-2013 01:22	0619a037.d	1	WT36LCS1
28	20-JUN-2013 01:40	0619a038.d	1	WT36LCSDS
29	20-JUN-2013 01:57	0619a039.d	1	WT36A
30	20-JUN-2013 02:15	0619a040.d	1	WS91A
31	20-JUN-2013 02:33	0619a041.d	1	WS91AMS
32	20-JUN-2013 02:51	0619a042.d	1	WS91AMSD
33	20-JUN-2013 03:09	0619a043.d	1	WT53MBW1
34	20-JUN-2013 03:26	0619a044.d	1	WT53LCSW1
35	20-JUN-2013 03:44	0619a045.d	1	WT53LCSDW
36	20-JUN-2013 04:02	0619a046.d	1	DS
37	20-JUN-2013 04:20	0619a047.d	1	INDAE#2
38	20-JUN-2013 04:38	0619a048.d	1	WNDE#2
39	20-JUN-2013 04:55	0619a049.d	1	WT53QLS
40	20-JUN-2013 05:13	0619a050.d	1	WT53A
41	20-JUN-2013 05:31	0619a051.d	1	WT53B
42	20-JUN-2013 05:49	0619a052.d	1	WT53C
43	20-JUN-2013 06:07	0619a053.d	1	WT53D
44	20-JUN-2013 06:24	0619a054.d	1	WT53E
45	20-JUN-2013 06:42	0619a055.d	1	WT07MBW1
46	20-JUN-2013 07:00	0619a056.d	1	WT07LCSW1
47	20-JUN-2013 07:18	0619a057.d	1	WT07LCSDW
48	20-JUN-2013 07:36	0619a058.d	1	WT07QLS
49	20-JUN-2013 07:53	0619a059.d	1	DS
50	20-JUN-2013 08:11	0619a060.d	1	INDAE#3
51	20-JUN-2013 08:29	0619a061.d	1	WNDE#3
52	20-JUN-2013 08:47	0619a062.d	1	WT07A
53	20-JUN-2013 09:05	0619a063.d	1	WT07B
54	20-JUN-2013 09:23	0619a064.d	1	WS90MBW1
55	20-JUN-2013 09:41	0619a065.d	1	WS90LCSS1
56	20-JUN-2013 09:59	0619a066.d	1	WS90LCSDS1
57	20-JUN-2013 10:16	0619a067.d	1	WS90QLS
58	20-JUN-2013 10:34	0619a068.d	1	WS90A
59	20-JUN-2013 10:52	0619a069.d	1	WS90B
60	20-JUN-2013 11:11	0619a070.d	1	DS
61	20-JUN-2013 11:28	0619a071.d	1	INDAE#4
62	20-JUN-2013 11:46	0619a072.d	1	WNDE#4

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/ecd6.i/20130619PEST.b/ical-1.b

ARI Job No.: IB Method: PEST0619.m Instrument: ecd6.i Date: 19-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1721	0619a010.d	IB		1	NO MANUAL INTEGRATION
1739	0619a011.d	DS		1	NO MANUAL INTEGRATION
1757	0619a012.d	INDAE		1	NO MANUAL INTEGRATION
1814	0619a013.d	INDAA		1	NO MANUAL INTEGRATION
1832	0619a014.d	INDAB		1	NO MANUAL INTEGRATION
1850	0619a015.d	INDAC		1	NO MANUAL INTEGRATION
1908	0619a016.d	INDAD		1	NO MANUAL INTEGRATION
1926	0619a017.d	INDAF		1	NO MANUAL INTEGRATION
1944	0619a018.d	INDAG		1	NO MANUAL INTEGRATION
2001	0619a019.d	INDA ICV		1	NO MANUAL INTEGRATION
2019	0619a020.d	HCB/HCBD ICV		1	NO MANUAL INTEGRATION
2317	0619a030.d	TOXAPHENE		1	NO MANUAL INTEGRATION
2055	0619a022.d	WNDE		1	NO MANUAL INTEGRATION
2113	0619a023.d	WNDA		1	NO MANUAL INTEGRATION
2130	0619a024.d	WNDB		1	NO MANUAL INTEGRATION
2148	0619a025.d	WNDC		1	NO MANUAL INTEGRATION
2206	0619a026.d	WNDD		1	NO MANUAL INTEGRATION
2224	0619a027.d	WNDF		1	NO MANUAL INTEGRATION
2242	0619a028.d	WNDG		1	NO MANUAL INTEGRATION
2259	0619a029.d	WND ICV		1	NO MANUAL INTEGRATION

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a023.d
Level 2: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a024.d
Level 3: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a025.d
Level 4: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a026.d
Level 5: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a030.d
Level 6: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a027.d
Level 7: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a028.d
Level 8: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a030.d

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
1 Hexachlorobutadiene	1.90255	1.82746	1.72475	1.80538	1.63952	1.70403		
	1.70205	+++++					1.75796	5.148
3 Hexachlorobenzene	1.48607	1.38489	1.25065	1.29219	1.15823	1.18938		
	1.17400	+++++					1.27649	9.523
4 alpha-BHC	1.54387	1.55472	1.51023	1.66746	1.57221	1.68013		
	1.70242	+++++					1.60443	4.784
5 gamma-BHC (Lindane)	1.43893	1.45162	1.38660	1.51406	1.41885	1.50915		
	1.52105	+++++					1.46289	3.596
6 beta-BHC	0.72267	0.69399	0.62885	0.65445	0.59777	0.61724		
	0.61539	+++++					0.64719	7.088
7 delta-BHC	1.31076	1.33767	1.29222	1.44170	1.36734	1.47377		
	1.50098	+++++					1.38921	5.957

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
8 Heptachlor	1.46111	1.44992	1.37073	1.46029	1.33959	1.38629		
	1.35896	+++++					1.40384	3.694
9 Aldrin	1.38090	1.38032	1.30360	1.42040	1.31018	1.37139		
	1.35489	+++++					1.36024	3.048
38 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
11 Heptachlor epoxide b	1.37134	1.33627	1.22935	1.30893	1.18548	1.21388		
	1.18211	+++++					1.26105	6.081
12 gamma-Chlordane	1.34452	1.32741	1.23423	1.33704	1.23398	1.29746		
	1.29333	+++++					1.29542	3.551
13 alpha-Chlordane	1.35279	1.31541	1.21079	1.29571	1.18577	1.23709		
	1.22879	+++++					1.26091	4.844
14 Endosulfan I	1.29513	1.26141	1.15224	1.22045	1.10253	1.12302		
	1.09618	+++++					1.17871	6.801
15 4,4'-DDE	1.01389	0.98313	0.90492	0.95484	0.88046	0.93369		
	0.96207	+++++					0.94757	4.806

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
16 Dieldrin	1.28716	1.29785	1.22354	1.30837	1.19093	1.21674		
	1.19385	+++++					1.24549	4.066
17 Endrin	1.26711	1.27002	1.20537	1.25522	1.15780	1.15955		
	1.12413	+++++					1.20560	4.958
18 4,4'-DDD	1.20014	1.19876	1.14202	1.17837	1.10056	1.13288		
	1.10599	+++++					1.15125	3.621
19 Endosulfan II	1.28259	1.26594	1.19796	1.24319	1.13952	1.14153		
	1.10718	+++++					1.19684	5.775
20 4,4'-DDT	1.15079	1.15997	1.10760	1.17386	1.09155	1.13724		
	1.12168	+++++					1.13467	2.595
21 Endrin aldehyde	1.02599	1.01548	0.94464	0.98095	0.88920	0.89428		
	0.87136	+++++					0.94598	6.675
22 Methoxychlor	0.60895	0.59288	0.53434	0.53623	0.48400	0.49787		
	0.50489	+++++					0.53702	8.891
23 Endosulfan sulfate	1.12427	1.11725	1.04391	1.08924	0.99727	1.02307		
	1.00241	+++++					1.05677	5.047
24 Endrin ketone	1.47123	1.40999	1.29907	1.33968	1.20839	1.24100		
	1.21628	+++++					1.31223	7.673

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
26 Aroclor-1016(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
27 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
28 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
29 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(6)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
30 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
31 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
32 Aroclor-1260(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
33 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
34 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
35 Toxaphene(1)	+++++	+++++	+++++	+++++	0.05135	+++++		
	+++++	0.05135					0.05135	0.000
(2)	+++++	+++++	+++++	+++++	0.03543	+++++		
	+++++	+++++					0.03543	0.000
(3)	+++++	+++++	+++++	+++++	0.05845	+++++		
	+++++	+++++					0.05845	0.000
(4)	+++++	+++++	+++++	+++++	0.05954	+++++		
	+++++	+++++					0.05954	0.000
(5)	+++++	+++++	+++++	+++++	0.03954	+++++		
	+++++	+++++					0.03954	0.000
(6)	+++++	+++++	+++++	+++++	0.03356	+++++		
	+++++	+++++					0.03356	0.000
39 2,4-DDE	0.87274	0.86308	0.83381	0.82491	0.81805	0.80267		
	0.74462	+++++					0.82284	5.152
40 2,4-DDD	0.77761	0.77575	0.74597	0.74361	0.73419	0.72905		
	0.68555	+++++					0.74168	4.206
41 2,4-DDT	0.88597	0.88005	0.86843	0.85814	0.85985	0.84955		
	0.80325	+++++					0.85789	3.174

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
43 Oxychlordane	1.15065	1.13104	1.11190	1.08121	1.07576	1.03688		
	0.95359	+++++					1.07729	6.160
44 trans-Nonachlor	1.35198	1.34250	1.32180	1.31589	1.32536	1.33307		
	1.26444	+++++					1.32215	2.140
45 cis-Nonachlor	1.49934	1.50007	1.44006	1.44337	1.45793	1.46723		
	1.40485	+++++					1.45898	2.327
46 Mirex	0.98377	0.93549	0.90240	0.86728	0.86159	0.86043		
	0.82136	+++++					0.89033	6.139
47 bis-(2-ethylhexyl) Phthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
59 Tech-Chlordane(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	___ RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
48 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
49 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
50 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
51 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
55 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
56 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
60 Kepone	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
61 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
$ 2 Tetrachloro-m-xylene	1.15603	1.13307	1.06647	1.12441	1.02482	1.05901		
	1.04003	+++++					1.08626	4.688
$ 25 Decachlorobiphenyl	1.13367	1.09978	0.99247	1.01808	0.91736	0.94702		
	0.93976	+++++					1.00688	8.224

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a023.d
Level 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a024.d
Level 3: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a025.d
Level 4: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a026.d
Level 5: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a030.d
Level 6: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a027.d
Level 7: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a028.d
Level 8: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a030.d/0619a030.cdf

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
1 Hexachlorobutadiene	1.77542	1.77383	1.66890	1.76599	1.56096	1.58663		
	1.45961	+++++					1.65591	7.511
3 Hexachlorobenzene	1.90014	1.75831	1.56896	1.61188	1.42856	1.42008		
	1.34315	+++++					1.57587	12.689
4 alpha-BHC	1.89067	1.95848	1.86011	2.02052	1.85761	1.92559		
	1.86606	+++++					1.91129	3.192
5 gamma-BHC (Lindane)	1.71793	1.72173	1.63161	1.77057	1.62732	1.68032		
	1.68059	+++++					1.69001	3.036
6 beta-BHC	1.05921	0.95999	0.81135	0.80846	0.72028	0.73231		
	0.70444	+++++					0.82800	16.171
7 delta-BHC	1.64820	1.66251	1.57188	1.72634	1.59922	1.65937		
	1.66482	+++++					1.64748	3.028

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
8 Heptachlor	1.93228	1.79619	1.66661	1.72620	1.52645	1.48015	1.63927	12.258
	1.34701	+++++						
37 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	+++++	+++++						
9 Aldrin	1.83405	1.66591	1.53672	1.62235	1.44396	1.43019	1.55190	10.956
	1.33013	+++++						
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	+++++	+++++						
11 Heptachlor epoxide b	1.81675	1.63979	1.40438	1.43813	1.26288	1.22389	1.41439	17.374
	1.11487	+++++						
12 gamma-Chlordane	1.82983	1.64233	1.46128	1.50701	1.34625	1.35044	1.48852	12.951
	1.28248	+++++						
13 alpha-Chlordane	1.60468	1.49416	1.35051	1.40092	1.25024	1.25659	1.36457	10.765
	1.19492	+++++						
14 Endosulfan I	1.51918	1.41686	1.27203	1.32343	1.17177	1.14586	1.27096	12.890
	1.04761	+++++						
15 4,4'-DDE	1.53674	1.45951	1.32415	1.36063	1.17900	1.14945	1.29127	13.988
	1.02941	+++++						

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
16 Dieldrin	1.59950	1.45277	1.32593	1.35123	1.15396	1.10181		
	0.99360	+++++					1.28269	16.499
17 Endrin	1.90141	1.86720	1.72775	1.74870	1.52078	1.45639		
	1.32506	+++++					1.64961	13.234
18 4,4'-DDD	2.10942	1.99577	1.81214	1.84639	1.60315	1.58015		
	1.48408	+++++					1.77587	12.988
19 Endosulfan II	1.97192	1.91679	1.77518	1.83122	1.58158	1.56461		
	1.45551	+++++					1.72812	11.340
20 4,4'-DDT	1.74714	1.69628	1.59021	1.63006	1.43826	1.47388		
	1.43879	+++++					1.57352	8.000
21 Endrin aldehyde	1.58468	1.51144	1.33959	1.35940	1.19370	1.18610		
	1.11175	+++++					1.32666	13.257
22 Endosulfan sulfate	1.73214	1.64211	1.47745	1.51465	1.34424	1.33317		
	1.25492	+++++					1.47124	11.811
23 Methoxychlor	0.73051	0.70763	0.62021	0.60272	0.52386	0.51201		
	0.40225	+++++					0.58560	19.746
24 Endrin ketone	1.63883	1.60020	1.48325	1.53566	1.34995	1.36416		
	1.32073	+++++					1.47040	8.684

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	___ RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
26 Aroclor-1016(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
27 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
28 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
29 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++						
30 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	+++++	+++++						
(2)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	+++++	+++++						
(3)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	+++++	+++++						
(4)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	+++++	+++++						
(5)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	+++++	+++++						
31 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	+++++	+++++						
(2)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	+++++	+++++						
(3)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
	+++++	+++++						

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
32 Aroclor-1260(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
33 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
34 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
35 Toxaphene(1)	+++++	+++++	+++++	+++++	0.05597	+++++		
	+++++	+++++					0.05597	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(2)	+++++	+++++	+++++	+++++	0.08258	+++++		
	+++++	+++++					0.08258	0.000
(3)	+++++	+++++	+++++	+++++	0.09061	+++++		
	+++++	+++++					0.09061	0.000
(4)	+++++	+++++	+++++	+++++	0.06531	+++++		
	+++++	+++++					0.06531	0.000
(5)	+++++	+++++	+++++	+++++	0.08305	+++++		
	+++++	+++++					0.08305	0.000
38 2,4-DDE	0.80626	0.82048	0.79847	0.78354	0.75300	0.69902		
	0.61137	+++++					0.75316	9.901
39 2,4-DDD	1.13292	1.14334	1.11231	1.09801	1.08138	1.03514		
	0.92519	+++++					1.07547	7.001
40 2,4-DDT	1.20070	1.21618	1.21055	1.20015	1.18944	1.14928		
	1.03688	+++++					1.17188	5.412
41 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
42 Oxychlordane	1.05303	1.08292	1.07870	1.07429	1.05167	1.01445		
	0.94342	+++++					1.04264	4.756

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
43 trans-Nonachlor	1.98806	2.04006	2.05919	2.05043	2.00581	1.96863		
	1.70892	+++++					1.97444	6.167
44 cis-Nonachlor	2.06223	2.12219	2.13854	2.12945	2.10040	2.07532		
	1.76577	+++++					2.05627	6.378
45 Mirex	1.11651	1.05520	0.99593	0.98159	0.96129	0.94571		
	0.90853	+++++					0.99497	7.061
46 bis-(2-ethylhexyl) Phthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
56 Tech-Chlordane(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
47 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
48 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
49 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
50 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
51 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
53 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
54 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
57 Kepone	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
58 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 2 Tetrachloro-m-xylene	1.53064	1.48891	1.36733	1.41327	1.22546	1.18954		
	1.04722	+++++					1.32319	13.239
$ 25 Decachlorobiphenyl	1.47476	1.42068	1.29648	1.32353	1.16810	1.19962		
	1.16903	+++++					1.29317	9.469

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Batch File: /chem2/ecd6.i/20130619PEST.b/wical-1.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0619a022	0619a023	0619a024	0619a025	0619a026	0619a027	0619a028
INJ.DATE:	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013
INJ.TIME:	20:55	21:13	21:30	21:48	22:06	22:24	22:42

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.312	2.262-2.362	+++++	+++++
*	54 1Bromo-2nitrobenzene	3.131	3.131	3.130	3.131	3.131	3.130	3.130	3.130	3.080-3.180	3.131	0.000
*	58 Hexabromobiphenyl	8.927	8.927	8.927	8.926	8.928	8.927	8.927	8.927	8.877-8.977	8.927	0.000
$	2 Tetrachloro-m-xylene	3.800	3.800	3.800	3.800	3.800	3.799	3.799	3.799	3.749-3.849	3.800	0.000
	3 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.140	4.090-4.190	+++++	+++++
	4 alpha-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.286	4.236-4.336	+++++	+++++
	5 gamma-BHC (Lindane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.569	4.519-4.619	+++++	+++++
	6 beta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.644	4.594-4.694	+++++	+++++
	7 delta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.813	4.763-4.863	+++++	+++++
	8 Heptachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.015	4.965-5.065	+++++	+++++
	9 Aldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.307	5.257-5.357	+++++	+++++
	38 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627	13.577-13.677	+++++	+++++
	10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.869	10.819-10.919	+++++	+++++
	11 Heptachlor epoxide b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.883	5.832-5.933	+++++	+++++
	12 gamma-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.002	5.952-6.052	+++++	+++++
	13 alpha-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.126	6.076-6.176	+++++	+++++
	14 Endosulfan I	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.260	6.210-6.310	+++++	+++++

Reviewer 1 _____ Date: 06/24/13 06/25/13
Reviewer 2 _____ Date: 6/25/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Batch File: /chem2/ecd6.i/20130619PEST.b/wical-1.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	15 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.184	6.134-6.234	+++++	+++++
	16 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.483	6.433-6.533	+++++	+++++
	17 Endrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.701	6.651-6.751	+++++	+++++
	18 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.740	6.690-6.790	+++++	+++++
	19 Endosulfan II	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.906	6.856-6.956	+++++	+++++
	20 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.998	6.948-7.048	+++++	+++++
	21 Endrin aldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.284	7.234-7.334	+++++	+++++
	22 Methoxychlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.424	7.374-7.474	+++++	+++++
	23 Endosulfan sulfate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.674	7.624-7.724	+++++	+++++
	24 Endrin ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.930	7.880-7.980	+++++	+++++
$	25 Decachlorobiphenyl	8.777	8.777	8.777	8.776	8.777	8.776	8.777	8.777	8.727-8.827	8.777	0.000
	26 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.715-3.815	+++++	+++++
	27 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.881	4.831-4.931	+++++	+++++
	28 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.359	5.309-5.409	+++++	+++++
	29 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.715-3.815	+++++	+++++
	30 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.418	4.368-4.468	+++++	+++++
	31 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.257	5.207-5.307	+++++	+++++
	32 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.045	5.995-6.095	+++++	+++++
	33 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.301	8.251-8.351	+++++	+++++
	34 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.259	11.209-11.309	+++++	+++++
	35 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.958	6.908-7.008	+++++	+++++
	39 2,4-DDE	5.862	5.863	5.863	5.863	5.863	5.861	5.861	5.861	5.811-5.911	5.862	0.001

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Batch File: /chem2/ecd6.i/20130619PEST.b/wical-1.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD	6.349	6.350	6.350	6.350	6.350	6.348	6.348	6.348	6.298-6.398	6.349	0.001
41 2,4-DDT	6.587	6.587	6.587	6.588	6.588	6.587	6.587	6.587	6.537-6.637	6.588	0.000
42 Hexachloroethane	1.758	1.758	1.758	1.759	1.758	1.756	1.758	1.758	1.708-1.808	1.758	0.001
43 Oxychlordane	5.787	5.787	5.787	5.787	5.788	5.787	5.787	5.787	5.737-5.837	5.787	0.000
44 trans-Nonachlor	6.110	6.110	6.110	6.110	6.111	6.110	6.110	6.110	6.060-6.160	6.110	0.000
45 cis-Nonachlor	6.726	6.726	6.727	6.727	6.727	6.726	6.727	6.727	6.677-6.777	6.726	0.000
46 Mirex	7.601	7.601	7.600	7.601	7.601	7.601	7.601	7.601	7.551-7.651	7.601	0.000
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.156	20.106-20.206	+++++	+++++
59 Tech-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.935	4.885-4.985	+++++	+++++
48 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.319	6.269-6.369	+++++	+++++
49 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.936	9.886-9.986	+++++	+++++
50 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.891	11.841-11.941	+++++	+++++
51 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.827	14.777-14.877	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.750	9.700-9.800	+++++	+++++
55 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.107	9.057-9.157	+++++	+++++
56 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.251	10.201-10.301	+++++	+++++
60 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.581	6.531-6.631	+++++	+++++
61 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.953	6.903-7.003	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Batch File: /chem2/ecd6.i/20130619PEST.b/ical-1.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0619a012	0619a013	0619a014	0619a015	0619a016	0619a017	0619a018
INJ.DATE:	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013
INJ.TIME:	17:57	18:14	18:32	18:50	19:08	19:26	19:44

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Hexachlorobutadiene	2.311	2.310	2.311	2.311	2.310	2.311	2.312	2.312	2.262-2.362	2.311	0.001
* 54 1Bromo-2nitrobenzene	3.130	3.130	3.131	3.130	3.130	3.130	3.131	3.130	3.080-3.180	3.130	0.000
* 58 Hexabromobiphenyl	8.927	8.927	8.927	8.926	8.927	8.927	8.927	8.927	8.877-8.977	8.927	0.000
$ 2 Tetrachloro-m-xylene	3.799	3.799	3.800	3.799	3.799	3.799	3.799	3.799	3.749-3.849	3.799	0.000
3 Hexachlorobenzene	4.140	4.141	4.141	4.141	4.140	4.140	4.140	4.140	4.090-4.190	4.140	0.001
4 alpha-BHC	4.286	4.286	4.286	4.286	4.286	4.286	4.286	4.286	4.236-4.336	4.286	0.000
5 gamma-BHC (Lindane)	4.569	4.568	4.569	4.568	4.568	4.569	4.569	4.569	4.519-4.619	4.569	0.000
6 beta-BHC	4.645	4.646	4.646	4.645	4.645	4.644	4.644	4.644	4.594-4.694	4.645	0.001
7 delta-BHC	4.814	4.815	4.815	4.815	4.814	4.814	4.813	4.813	4.763-4.863	4.814	0.001
8 Heptachlor	5.014	5.014	5.015	5.014	5.014	5.015	5.015	5.015	4.965-5.065	5.014	0.000
9 Aldrin	5.307	5.307	5.307	5.307	5.306	5.307	5.307	5.307	5.257-5.357	5.307	0.000
38 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627	13.577-13.677	+++++	+++++
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.869	10.819-10.919	+++++	+++++
11 Heptachlor epoxide b	5.882	5.882	5.883	5.882	5.881	5.882	5.883	5.883	5.832-5.933	5.882	0.000
12 gamma-Chlordane	6.002	6.002	6.002	6.002	6.001	6.002	6.002	6.002	5.952-6.052	6.002	0.000
13 alpha-Chlordane	6.126	6.127	6.126	6.126	6.126	6.126	6.126	6.126	6.076-6.176	6.126	0.000
14 Endosulfan I	6.260	6.259	6.259	6.259	6.259	6.259	6.260	6.260	6.210-6.310	6.259	0.000

Reviewer 1 _____ Date: 06/25/13

Reviewer 2 _____ Date: 6/25/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Batch File: /chem2/ecd6.i/20130619PEST.b/ical-1.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
15 4,4'-DDE	6.183	6.184	6.183	6.182	6.182	6.184	6.184	6.184	6.134-6.234	6.183	0.001
16 Dieldrin	6.482	6.482	6.482	6.482	6.482	6.482	6.483	6.483	6.433-6.533	6.482	0.000
17 Endrin	6.701	6.701	6.700	6.700	6.700	6.700	6.701	6.701	6.651-6.751	6.700	0.000
18 4,4'-DDD	6.741	6.743	6.743	6.742	6.741	6.740	6.740	6.740	6.690-6.790	6.741	0.001
19 Endosulfan II	6.906	6.907	6.907	6.906	6.906	6.906	6.906	6.906	6.856-6.956	6.906	0.000
20 4,4'-DDT	6.999	7.000	7.000	6.999	6.999	6.998	6.998	6.998	6.948-7.048	6.999	0.001
21 Endrin aldehyde	7.284	7.284	7.284	7.283	7.283	7.283	7.284	7.284	7.234-7.334	7.284	0.000
22 Methoxychlor	7.425	7.425	7.425	7.424	7.424	7.424	7.424	7.424	7.374-7.474	7.425	0.000
23 Endosulfan sulfate	7.674	7.675	7.674	7.674	7.674	7.674	7.674	7.674	7.624-7.724	7.674	0.000
24 Endrin ketone	7.930	7.929	7.930	7.929	7.929	7.929	7.930	7.930	7.880-7.980	7.929	0.000
$ 25 Decachlorobiphenyl	8.777	8.777	8.777	8.776	8.777	8.777	8.777	8.777	8.727-8.827	8.777	0.000
26 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.715-3.815	+++++	+++++
27 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.881	4.831-4.931	+++++	+++++
28 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.359	5.309-5.409	+++++	+++++
29 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.715-3.815	+++++	+++++
30 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.418	4.368-4.468	+++++	+++++
31 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.257	5.207-5.307	+++++	+++++
32 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.045	5.995-6.095	+++++	+++++
33 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.301	8.251-8.351	+++++	+++++
34 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.259	11.209-11.309	+++++	+++++
35 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.958	6.908-7.008	+++++	+++++
39 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.861	5.811-5.911	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Batch File: /chem2/ecd6.i/20130619PEST.b/ical-1.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.348	6.298-6.398	+++++	+++++
41 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.587	6.537-6.637	+++++	+++++
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.758	1.708-1.808	+++++	+++++
43 Oxychlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.787	5.737-5.837	+++++	+++++
44 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.110	6.060-6.160	+++++	+++++
45 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.727	6.677-6.777	+++++	+++++
46 Mirex	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.601	7.551-7.651	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.156	20.106-20.206	+++++	+++++
59 Tech-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.935	4.885-4.985	+++++	+++++
48 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.319	6.269-6.369	+++++	+++++
49 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.936	9.886-9.986	+++++	+++++
50 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.891	11.841-11.941	+++++	+++++
51 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.827	14.777-14.877	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.750	9.700-9.800	+++++	+++++
55 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.107	9.057-9.157	+++++	+++++
56 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.251	10.201-10.301	+++++	+++++
60 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.581	6.531-6.631	+++++	+++++
61 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.953	6.903-7.003	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Batch File: /chem2/ecd6.i/20130619PEST.b/ical-2.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0619a012	0619a013	0619a014	0619a015	0619a016	0619a017	0619a018
INJ.DATE:	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013
INJ.TIME:	17:57	18:14	18:32	18:50	19:08	19:26	19:44

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene	2.467	2.467	2.468	2.467	2.467	2.468	2.469	2.469	2.419-2.519	2.468	0.001
*	52 1Bromo-2nitrobenzene	3.300	3.300	3.300	3.299	3.299	3.300	3.300	3.299	3.249-3.349	3.300	0.000
*	55 Hexabromobiphenyl	10.289	10.288	10.289	10.289	10.289	10.289	10.289	10.288	10.238-10.338	10.289	0.000
$	2 Tetrachloro-m-xylene	4.127	4.127	4.127	4.127	4.126	4.127	4.128	4.128	4.079-4.178	4.127	0.001
	3 Hexachlorobenzene	4.586	4.586	4.587	4.586	4.586	4.586	4.586	4.586	4.536-4.636	4.586	0.000
	4 alpha-BHC	4.709	4.709	4.709	4.709	4.708	4.709	4.710	4.710	4.660-4.760	4.709	0.001
	5 gamma-BHC (Lindane)	5.066	5.065	5.065	5.065	5.065	5.066	5.066	5.066	5.016-5.116	5.065	0.000
	6 beta-BHC	5.138	5.139	5.139	5.139	5.138	5.138	5.138	5.138	5.088-5.188	5.138	0.001
	7 delta-BHC	5.449	5.450	5.450	5.449	5.449	5.450	5.450	5.450	5.400-5.500	5.450	0.000
	8 Heptachlor	5.529	5.528	5.529	5.528	5.528	5.529	5.529	5.529	5.479-5.579	5.529	0.001
	37 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.538-14.638	+++++	+++++
	9 Aldrin	5.867	5.866	5.867	5.866	5.866	5.867	5.867	5.867	5.817-5.917	5.867	0.001
	10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.630-12.730	+++++	+++++
	11 Heptachlor epoxide b	6.422	6.421	6.421	6.420	6.420	6.421	6.422	6.422	6.372-6.472	6.421	0.001
	12 gamma-Chlordane	6.604	6.604	6.604	6.603	6.603	6.604	6.604	6.604	6.554-6.654	6.604	0.000
	13 alpha-Chlordane	6.742	6.741	6.742	6.741	6.741	6.742	6.742	6.742	6.692-6.792	6.741	0.001
	14 Endosulfan I	6.809	6.808	6.809	6.808	6.808	6.808	6.809	6.809	6.759-6.859	6.808	0.000

Reviewer 1 _____ Date: 06/25/13
Reviewer 2 _____ Date: 6/25/13

Report Date : 25-Jun-2013 09:52

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Batch File: /chem2/ecd6.i/20130619PEST.b/ical-2.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
15 4,4'-DDE	6.868	6.869	6.869	6.868	6.868	6.869	6.870	6.870	6.820-6.920	6.869	0.001
16 Dieldrin	7.066	7.066	7.065	7.065	7.066	7.067	7.067	7.067	7.017-7.117	7.066	0.001
17 Endrin	7.355	7.355	7.355	7.355	7.355	7.356	7.356	7.356	7.306-7.406	7.355	0.001
18 4,4'-DDD	7.407	7.408	7.407	7.407	7.407	7.406	7.407	7.407	7.357-7.457	7.407	0.001
19 Endosulfan II	7.544	7.544	7.544	7.544	7.544	7.545	7.545	7.545	7.495-7.595	7.544	0.001
20 4,4'-DDT	7.695	7.694	7.694	7.694	7.694	7.694	7.694	7.694	7.644-7.744	7.694	0.000
21 Endrin aldehyde	7.842	7.841	7.841	7.841	7.841	7.842	7.843	7.843	7.793-7.893	7.842	0.000
22 Endosulfan sulfate	8.087	8.087	8.086	8.087	8.087	8.087	8.087	8.087	8.037-8.137	8.087	0.000
23 Methoxychlor	8.277	8.277	8.277	8.277	8.277	8.277	8.282	8.282	8.232-8.332	8.278	0.002
24 Endrin ketone	8.578	8.577	8.577	8.577	8.577	8.578	8.578	8.578	8.528-8.628	8.577	0.001
$ 25 Decachlorobiphenyl	9.725	9.724	9.725	9.724	9.725	9.724	9.725	9.725	9.675-9.775	9.724	0.000
26 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.180	4.130-4.230	+++++	+++++
27 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.051	5.001-5.101	+++++	+++++
28 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.171	5.121-5.221	+++++	+++++
29 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.970	4.920-5.020	+++++	+++++
30 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.285	5.235-5.335	+++++	+++++
31 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.968	5.918-6.018	+++++	+++++
32 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.767	6.717-6.817	+++++	+++++
33 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.714	9.664-9.764	+++++	+++++
34 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.791	11.741-11.841	+++++	+++++
35 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.291	7.241-7.341	+++++	+++++
38 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.580	6.530-6.630	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Batch File: /chem2/ecd6.i/20130619PEST.b/ical-2.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
39 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.065	7.015-7.115	+++++	+++++
40 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.353	7.303-7.403	+++++	+++++
41 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.726	1.676-1.776	+++++	+++++
42 Oxychlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.332	6.282-6.382	+++++	+++++
43 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.690	6.640-6.740	+++++	+++++
44 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.415	7.365-7.465	+++++	+++++
45 Mirex	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.564	8.514-8.614	+++++	+++++
46 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.499	21.449-21.549	+++++	+++++
56 Tech-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.378	5.328-5.428	+++++	+++++
47 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.871	4.821-4.921	+++++	+++++
48 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.640	6.590-6.690	+++++	+++++
49 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.115	8.065-8.165	+++++	+++++
50 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.286	11.236-11.336	+++++	+++++
51 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.527	6.477-6.577	+++++	+++++
53 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.342	6.292-6.392	+++++	+++++
54 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.841	6.791-6.891	+++++	+++++
57 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.336	7.286-7.386	+++++	+++++
58 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.745	7.695-7.795	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Batch File: /chem2/ecd6.i/20130619PEST.b/wical-2.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0619a022	0619a023	0619a024	0619a025	0619a026	0619a027	0619a028
INJ.DATE:	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013
INJ.TIME:	20:55	21:13	21:30	21:48	22:06	22:24	22:42

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.469	2.419-2.519	+++++	+++++
* 52 1Bromo-2nitrobenzene	3.300	3.300	3.300	3.300	3.300	3.300	3.299	3.299	3.249-3.349	3.300	0.000
* 55 Hexabromobiphenyl	10.289	10.289	10.289	10.288	10.290	10.289	10.288	10.288	10.238-10.338	10.289	0.000
$ 2 Tetrachloro-m-xylene	4.127	4.126	4.127	4.127	4.127	4.127	4.127	4.128	4.079-4.178	4.127	0.000
3 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.586	4.536-4.636	+++++	+++++
4 alpha-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.710	4.660-4.760	+++++	+++++
5 gamma-BHC (Lindane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.066	5.016-5.116	+++++	+++++
6 beta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.138	5.088-5.188	+++++	+++++
7 delta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.450	5.400-5.500	+++++	+++++
8 Heptachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.529	5.479-5.579	+++++	+++++
37 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.538-14.638	+++++	+++++
9 Aldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.867	5.817-5.917	+++++	+++++
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.630-12.730	+++++	+++++
11 Heptachlor epoxide b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.422	6.372-6.472	+++++	+++++
12 gamma-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.604	6.554-6.654	+++++	+++++
13 alpha-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.742	6.692-6.792	+++++	+++++
14 Endosulfan I	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.809	6.759-6.859	+++++	+++++

Reviewer 1 _____ Date: 06/25/13
Reviewer 2 _____ Date: 6/25/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Batch File: /chem2/ecd6.i/20130619PEST.b/wical-2.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
15 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.870	6.820-6.920	+++++	+++++
16 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.067	7.017-7.117	+++++	+++++
17 Endrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.356	7.306-7.406	+++++	+++++
18 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.407	7.357-7.457	+++++	+++++
19 Endosulfan II	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.545	7.495-7.595	+++++	+++++
20 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.694	7.644-7.744	+++++	+++++
21 Endrin aldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.843	7.793-7.893	+++++	+++++
22 Endosulfan sulfate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.087	8.037-8.137	+++++	+++++
23 Methoxychlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.282	8.232-8.332	+++++	+++++
24 Endrin ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.578	8.528-8.628	+++++	+++++
$ 25 Decachlorobiphenyl	9.725	9.725	9.725	9.724	9.725	9.725	9.724	9.725	9.675-9.775	9.725	0.000
26 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.180	4.130-4.230	+++++	+++++
27 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.051	5.001-5.101	+++++	+++++
28 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.171	5.121-5.221	+++++	+++++
29 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.970	4.920-5.020	+++++	+++++
30 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.285	5.235-5.335	+++++	+++++
31 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.968	5.918-6.018	+++++	+++++
32 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.767	6.717-6.817	+++++	+++++
33 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.714	9.664-9.764	+++++	+++++
34 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.791	11.741-11.841	+++++	+++++
35 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.291	7.241-7.341	+++++	+++++
38 2,4-DDE	6.580	6.580	6.580	6.580	6.581	6.580	6.580	6.580	6.530-6.630	6.580	0.000

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Batch File: /chem2/ecd6.i/20130619PEST.b/wical-2.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
39 2,4-DDD	7.065	7.065	7.065	7.066	7.066	7.065	7.065	7.065	7.015-7.115	7.065	0.000
40 2,4-DDT	7.352	7.352	7.352	7.352	7.352	7.352	7.353	7.353	7.303-7.403	7.352	0.000
41 Hexachloroethane	1.727	1.726	1.727	1.727	1.726	1.726	1.726	1.726	1.676-1.776	1.727	0.000
42 Oxychlordane	6.331	6.331	6.331	6.331	6.332	6.332	6.332	6.332	6.282-6.382	6.331	0.001
43 trans-Nonachlor	6.688	6.688	6.687	6.688	6.689	6.688	6.690	6.690	6.640-6.740	6.688	0.001
44 cis-Nonachlor	7.412	7.411	7.412	7.412	7.413	7.412	7.415	7.415	7.365-7.465	7.412	0.001
45 Mirex	8.564	8.564	8.564	8.563	8.565	8.565	8.564	8.564	8.514-8.614	8.564	0.000
46 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.499	21.449-21.549	+++++	+++++
56 Tech-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.378	5.328-5.428	+++++	+++++
47 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.871	4.821-4.921	+++++	+++++
48 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.640	6.590-6.690	+++++	+++++
49 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.115	8.065-8.165	+++++	+++++
50 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.286	11.236-11.336	+++++	+++++
51 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.527	6.477-6.577	+++++	+++++
53 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.342	6.292-6.392	+++++	+++++
54 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.841	6.791-6.891	+++++	+++++
57 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.336	7.286-7.386	+++++	+++++
58 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.745	7.695-7.795	+++++	+++++

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a010.d ARI ID: IB
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a010.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 17:21
Compound Sublist: wpest Report Date: 06/25/2013 09:50
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.131	-0.001	5445201	3.300	0.000	27743026	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.272	-0.014	1237	4.712	0.002	5841	0.0113	0.0088	25.0	alpha-BHC
----			5.142	0.003	6031	0.0000	0.0210	---	beta-BHC
4.809	-0.005	1463	5.464	0.014	13614	0.0155	0.0238	42.5*	delta-BHC
----			5.068	0.001	9540	0.0000	0.0163	---	gamma-BHC (Lindane)
----			5.545	0.015	13162	0.0000	0.0232	---	Heptachlor
5.324	0.017	1263	5.852	-0.015	17483	0.0136	0.0325	81.7*	Aldrin
5.892	0.010	3416	6.400	-0.022	27268	0.0398	0.0556	33.1	Heptachlor epoxide b
6.299	0.039	1341	6.782	-0.027	5404	0.0167	0.0123	30.7	Endosulfan I
6.464	-0.018	5067	7.109	0.042	9944	0.0598	0.0224	91.1*	Dieldrin
6.180	-0.004	2407	6.869	-0.001	3466	0.0373	0.0077	131.3*	4,4'-DDE
6.667	-0.034	3562	7.373	0.017	23753	0.0502	0.0729	36.9	Endrin
6.913	0.007	2185	7.551	0.006	5567	0.0310	0.0163	62.1*	Endosulfan II
6.763	0.023	2946	----			0.0434	0.0000	---	4,4'-DDD
7.675	0.001	1856	8.088	0.001	2732	0.0298	0.0094	104.2*	Endosulfan sulfate
6.979	-0.019	7544	7.708	0.013	39804	0.1129	0.1280	12.6	4,4'-DDT
7.383	-0.041	1252	8.259	-0.023	37348	0.0396	0.3227	156.3*	Methoxychlor
7.926	-0.004	15142	8.585	0.007	30994	0.1959	0.1066	59.0*	Endrin ketone
7.303	0.019	3898	7.834	-0.008	11414	0.0700	0.0435	46.6*	Endrin aldehyde
5.988	-0.014	2452	6.626	0.021	24027	0.0278	0.0465	50.4*	gamma-Chlordane
6.127	0.000	4338	6.744	0.002	3096	0.0505	0.0065	154.2*	alpha-Chlordane
2.312	0.000	3453	2.469	-0.001	3790	0.0289	0.0066	125.5*	Hexachlorobutadiene
4.139	0.000	39886	4.583	-0.003	14742	0.4591	0.0270	177.8*	Hexachlorobenzene
5.755	-0.031	1280	6.335	0.003	10455	0.0202	0.0289	35.6	Oxychlordane
----			6.571	-0.009	7079	0.0000	0.0271	---	2,4-DDE
----			6.687	-0.004	4941	0.0000	0.0127	---	trans-Nonachlor
6.335	-0.014	2519	7.045	-0.019	15599	0.0577	0.0734	24.0	2,4-DDD
6.587	0.000	1121	----			0.0222	0.0000	---	2,4-DDT
6.717	-0.010	8796	7.412	-0.003	4224	0.1024	0.0104	163.1*	cis-Nonachlor
7.576	-0.024	8765	8.535	-0.029	217054	0.1671	1.1037	147.4*	Mirex
8.927	0.000	4712338	10.289	0.001	15811694	80.0000	80.0000	0.0	Hexabromobiphenyl
1.757	-0.001	3388	1.727	0.001	198727	0.0000	0.0000	---	Hexachloroethane
6.562	-0.019	2192	7.316	-0.020	7938	0.0000	0.0000	---	Kepone
3.800	0.000	2775489	4.127	-0.001	17285223	37.5388	37.6693	0.3	Tetrachloro-m-xylen
8.777	0.000	2204810	9.726	0.001	9380530	37.1748	36.7014	1.3	Decachlorobiphenyl

06/25/13

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	93.8	94.2	93.8~	130- 0
Decachlorobiphenyl	92.9	91.8	91.8~	130- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

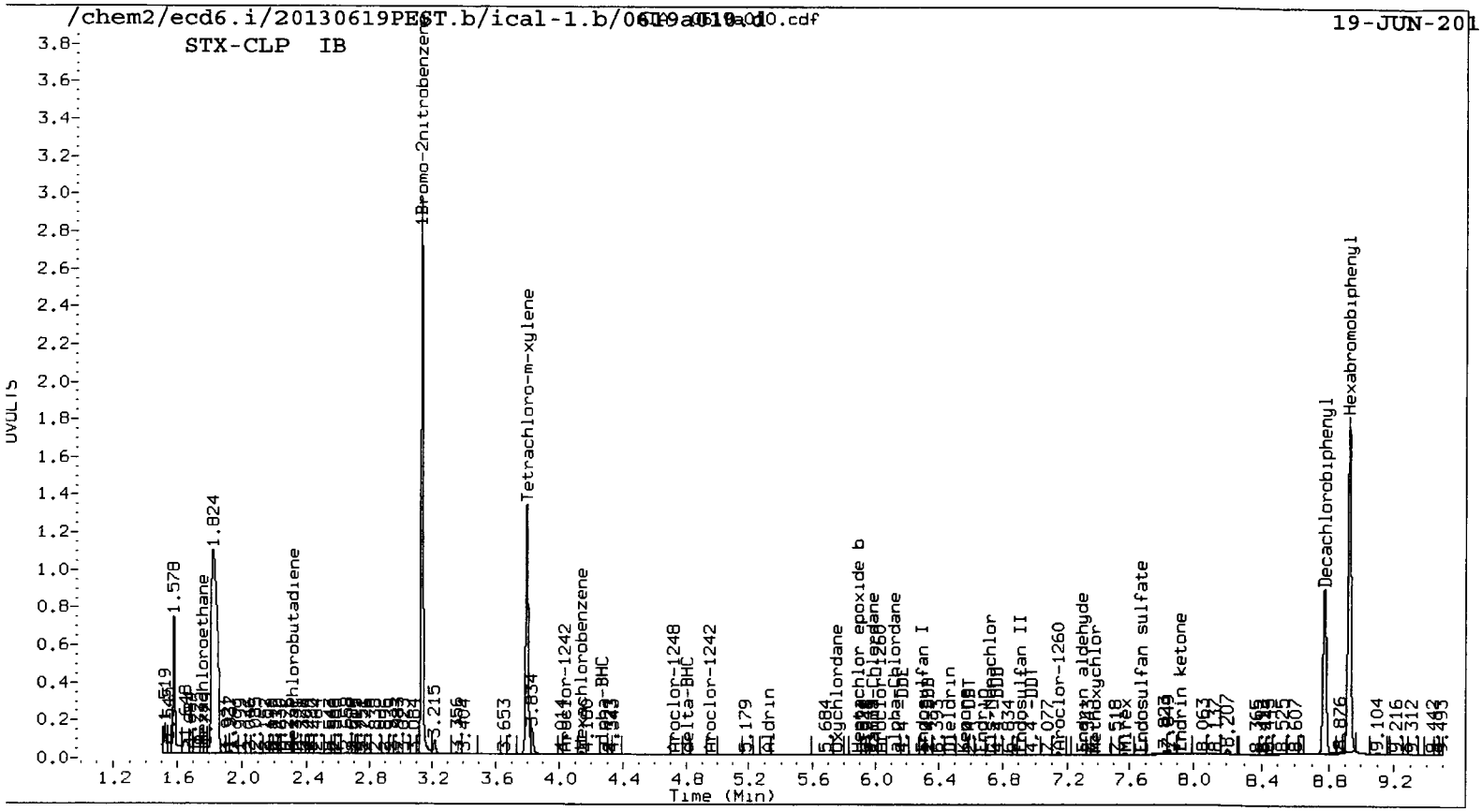
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5445201	-2.6
Hexabromobiphenyl	4870538	4712338	-3.2

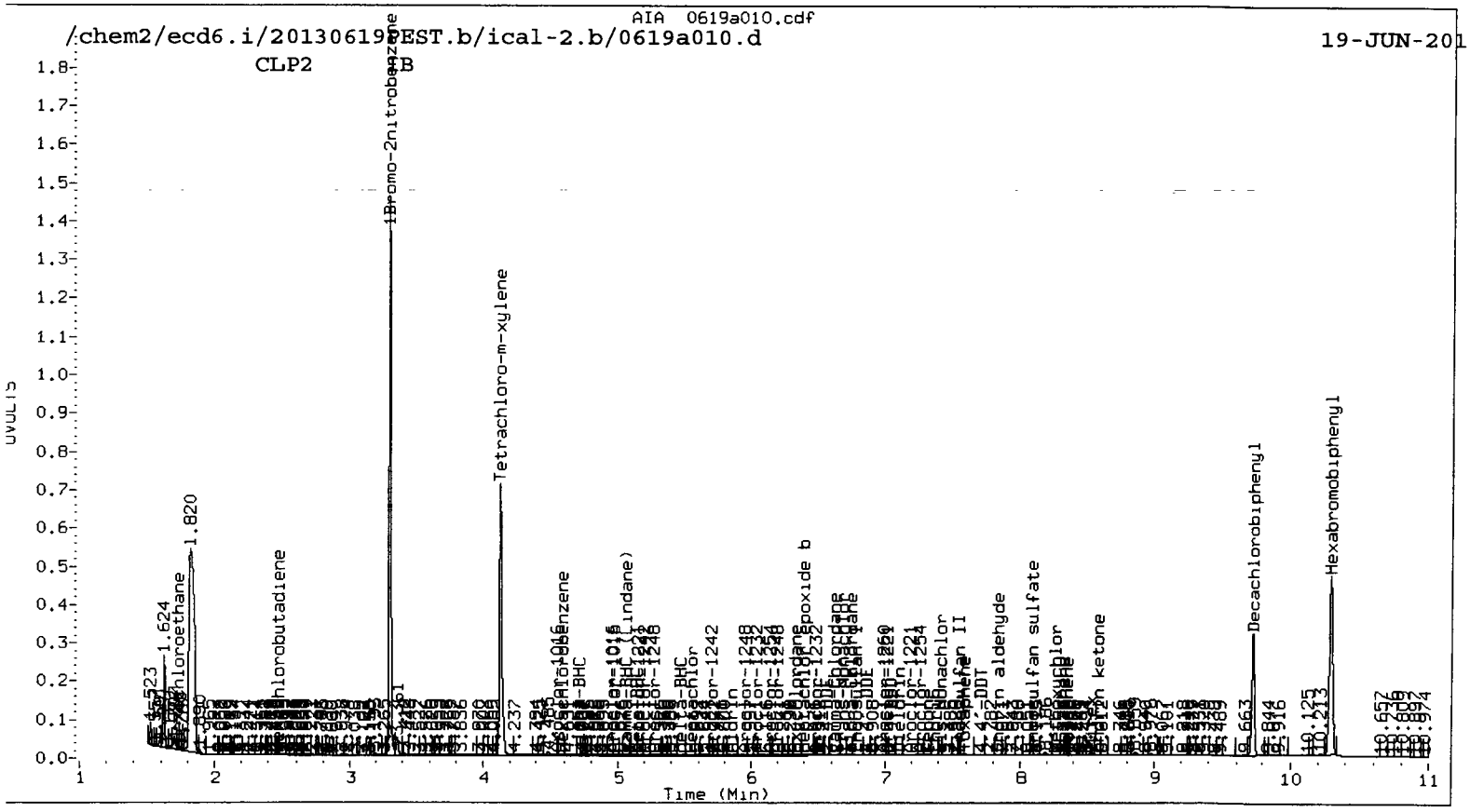
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	27743026	-2.0
Hexabromobiphenyl	16454599	15811694	-3.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col				CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.979	0.020	7544	2.5	1	7.316	0.025	7938	0.7
Toxaphene	2	---			0.000	2	7.586	-0.029	150016	9.2
Toxaphene	3	7.303	0.035	3898	1.1	3	7.834	-0.012	11414	0.6
Toxaphene	4	7.576	-0.016	8765	2.5	4	8.317	0.003	5589	0.4
Toxaphene	5	7.675	0.043	1856	0.8	5	8.352	-0.001	1996	0.1
Toxaphene	6	7.926	0.012	15142	7.7	NS	---			----
Total STX-CLPAve (5 peaks): 2.916						Total CLP2Ave (5 peaks): 2.220				RPD = 27
Corrected Ave (4 peaks): 1.731						Corrected Ave (4 peaks): 0.477				RPD = 114*


/chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a010.d
19-JUN-201
STX-CLP IB
UV VOLTS
Time (Min)
1.578
1.824
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0619a010.cdf
/chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a010.d
19-JUN-201
CLP2
UV VOLTS
Time (Min)
1.820
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS

ARI Job No.: 20130619PEST

Analysis Date: 19-JUN-2013 17:39

Init. Calib. Date: 19-JUN-2013

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.186	95936
Endrin	6.701	6813037
4,4'-DDD	6.742	278389
4,4'-DDT	7.000	6738589
Endrin ketone	7.930	275869
Endrin aldehyde	7.284	115494

DDT Percent Breakdown = 5.3 %
((95936+278389) * 100)/(95936+278389+6738589)

Endrin Percent Breakdown = 5.4 %
((115494+275869) * 100)/(115494+275869+6813037)

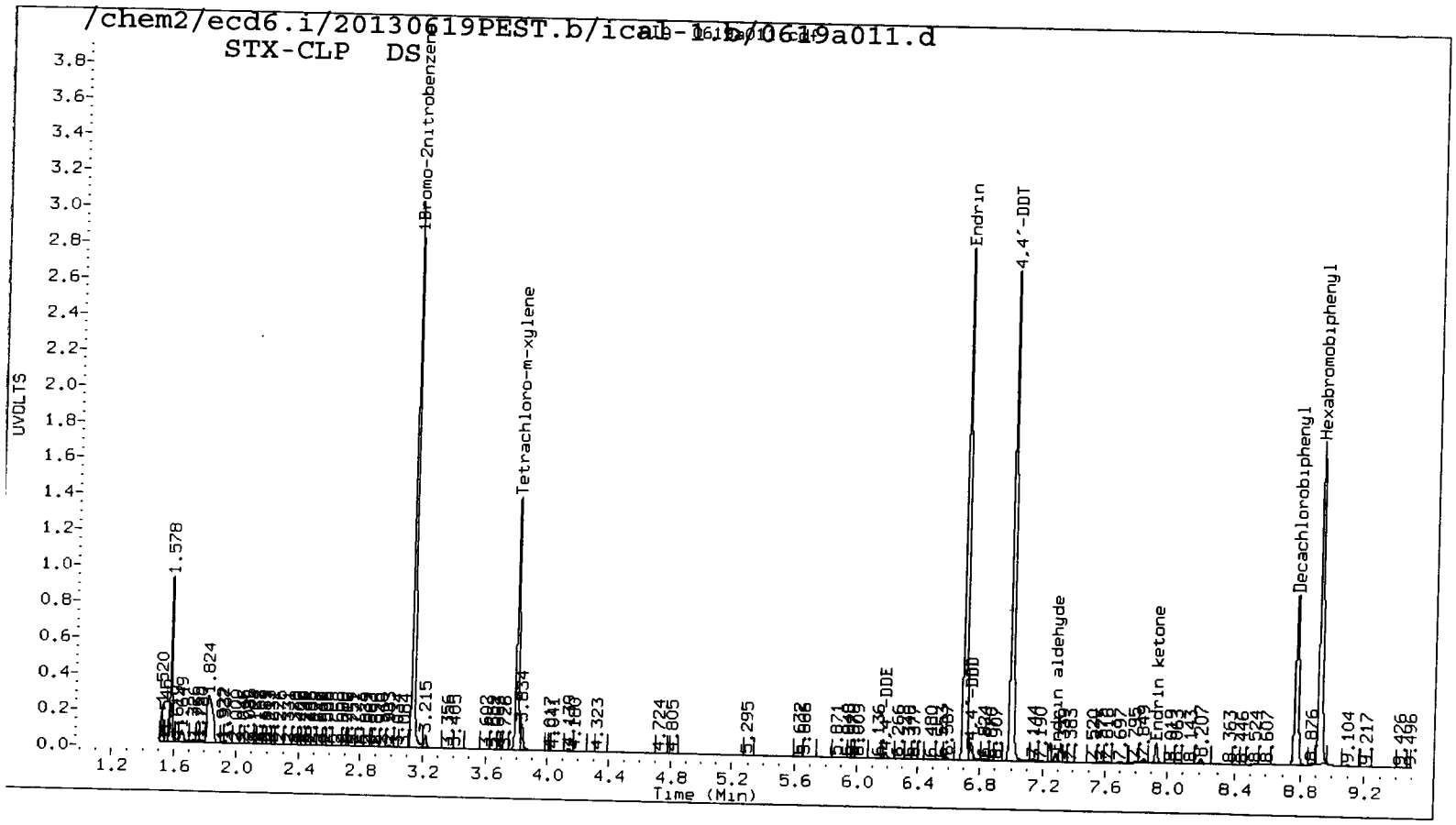
GC Column: STX-CLP2 ID: 0.53(mm)

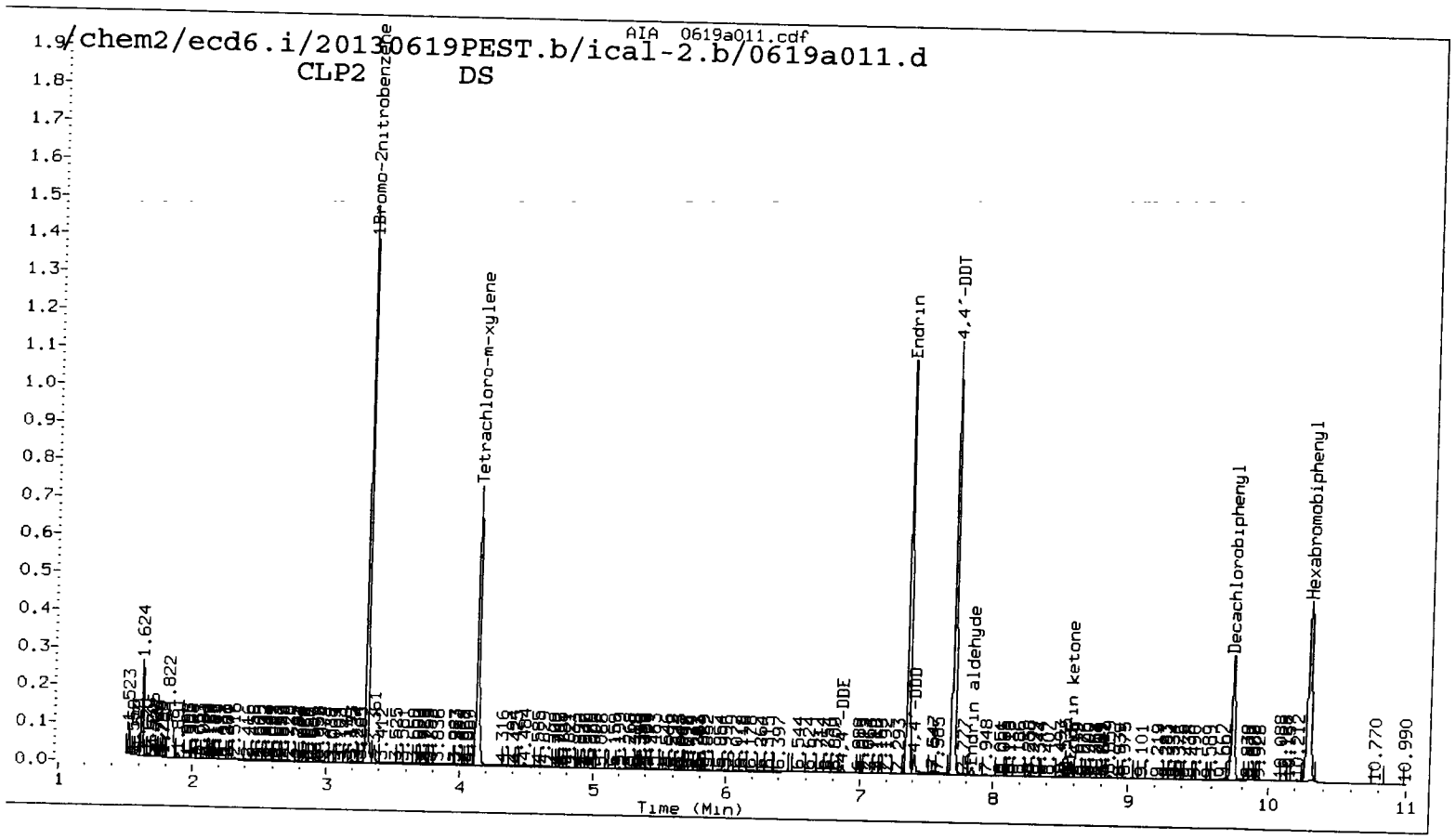
06/25/13

COMPOUND	RT	AREA
4,4'-DDE	6.869	489895
Endrin	7.356	27988972
4,4'-DDD	7.407	1891401
4,4'-DDT	7.695	28478839
Endrin ketone	8.578	1018617
Endrin aldehyde	7.842	619288

DDT Percent Breakdown = 7.7 %
((489895+1891401) * 100)/(489895+1891401+28478839)

Endrin Percent Breakdown = 5.5 %
((619288+1018617) * 100)/(619288+1018617+27988972)


/chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a011.d
STX-CLP DS
UVOLTS
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
1.578
1.824
3.215
3.834
Time (Min)


AIA 0619a011.cdf
/chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a011.d
CLP2 DS
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
1.624
1.822
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a012.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a012.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 17:57
Compound Sublist: INDA Report Date: 06/25/2013 09:50
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.130	-0.001	5590801	3.300	0.000	28320361	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.286	0.000	2197479	4.709	-0.001	13152047	19.5983	19.4383	0.8	alpha-BHC
4.645	0.001	835510	5.138	0.000	5099619	18.4728	17.3979	6.0	beta-BHC
4.814	0.001	1911138	5.449	-0.001	11322606	19.6853	19.4141	1.4	delta-BHC
4.569	0.000	1983131	5.066	-0.001	11521601	19.3979	19.2581	0.7	gamma-BHC (Lindane)
5.014	0.000	1872342	5.529	-0.001	10807405	19.0846	18.6236	2.4	Heptachlor
5.307	0.000	1831236	5.867	0.000	10223350	19.2639	18.6089	3.5	Aldrin
5.882	0.000	1656941	6.422	0.000	8941275	18.8014	17.8576	5.1	Heptachlor epoxide b
6.260	0.000	1541002	6.809	0.000	8296243	18.7074	18.4391	1.4	Endosulfan I
6.482	0.000	3329129	7.066	-0.001	16340234	38.2478	35.9857	6.1	Dieldrin
6.183	-0.001	2461228	6.868	-0.002	16694923	37.1669	36.5223	1.7	4,4'-DDE
6.701	0.000	2819551	7.355	-0.001	12511920	38.4140	36.8761	4.1	Endrin
6.906	0.001	2775029	7.544	-0.001	13012156	38.0841	36.6083	4.0	Endosulfan II
6.741	0.001	2680166	7.407	0.000	13189613	38.2390	36.1096	5.7	4,4'-DDD
7.674	0.000	2428615	8.087	0.000	11059493	37.7476	36.5472	3.2	Endosulfan sulfate
6.999	0.001	2658216	7.695	0.000	11832997	38.4799	36.5617	5.1	4,4'-DDT
7.425	0.000	5893323	8.277	-0.005	21549834	180.2526	178.9147	0.7	Methoxychlor
7.930	0.000	2942761	8.578	-0.001	11106420	36.8347	36.7234	0.3	Endrin ketone
7.284	0.000	2165447	7.842	-0.001	9820893	37.5991	35.9909	4.4	Endrin aldehyde
6.002	0.000	1724732	6.604	0.000	9531588	19.0513	18.0885	5.2	gamma-Chlordane
6.126	0.000	1657348	6.742	0.000	8851820	18.8082	18.3243	2.6	alpha-Chlordane
2.311	-0.001	2291552	2.467	-0.002	11051717	18.6525	18.8532	1.1	Hexachlorobutadiene
4.140	0.001	1618855	4.586	0.000	10114339	18.1471	18.1305	0.1	Hexachlorobenzene
8.927	0.000	4870538	10.289	0.001	16454599	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	2864775	4.127	-0.002	17352669	37.7374	37.0454	1.9	Tetrachloro-m-xylen
8.777	-0.001	2234017	9.725	0.000	9610334	36.4437	36.1314	0.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	94.3	92.6	92.6~	115- 0
Decachlorobiphenyl	91.1	90.3	90.3~	115- 0

4465 : 20197

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

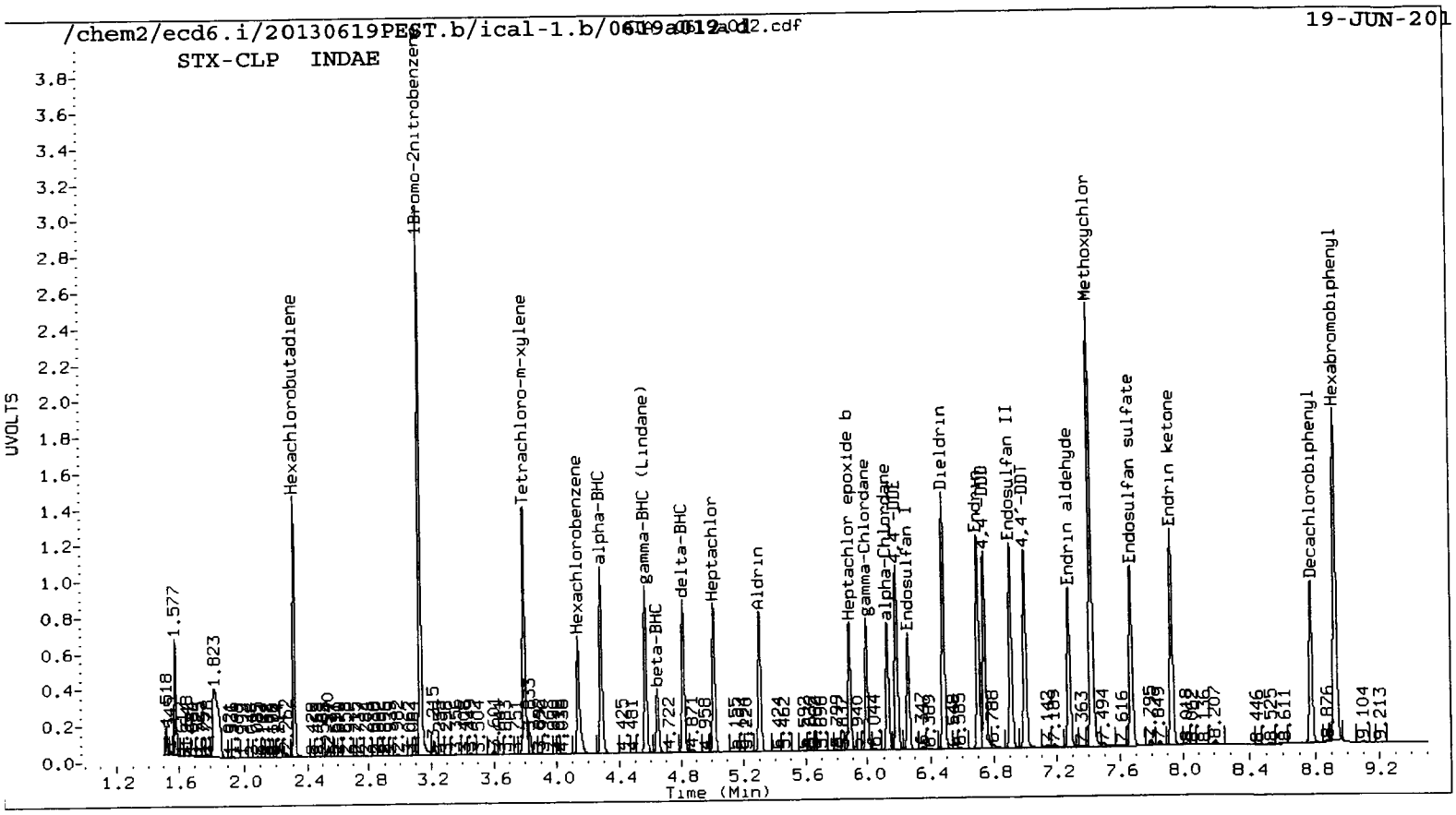
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5590801	0.0
Hexabromobiphenyl	4870538	4870538	0.0

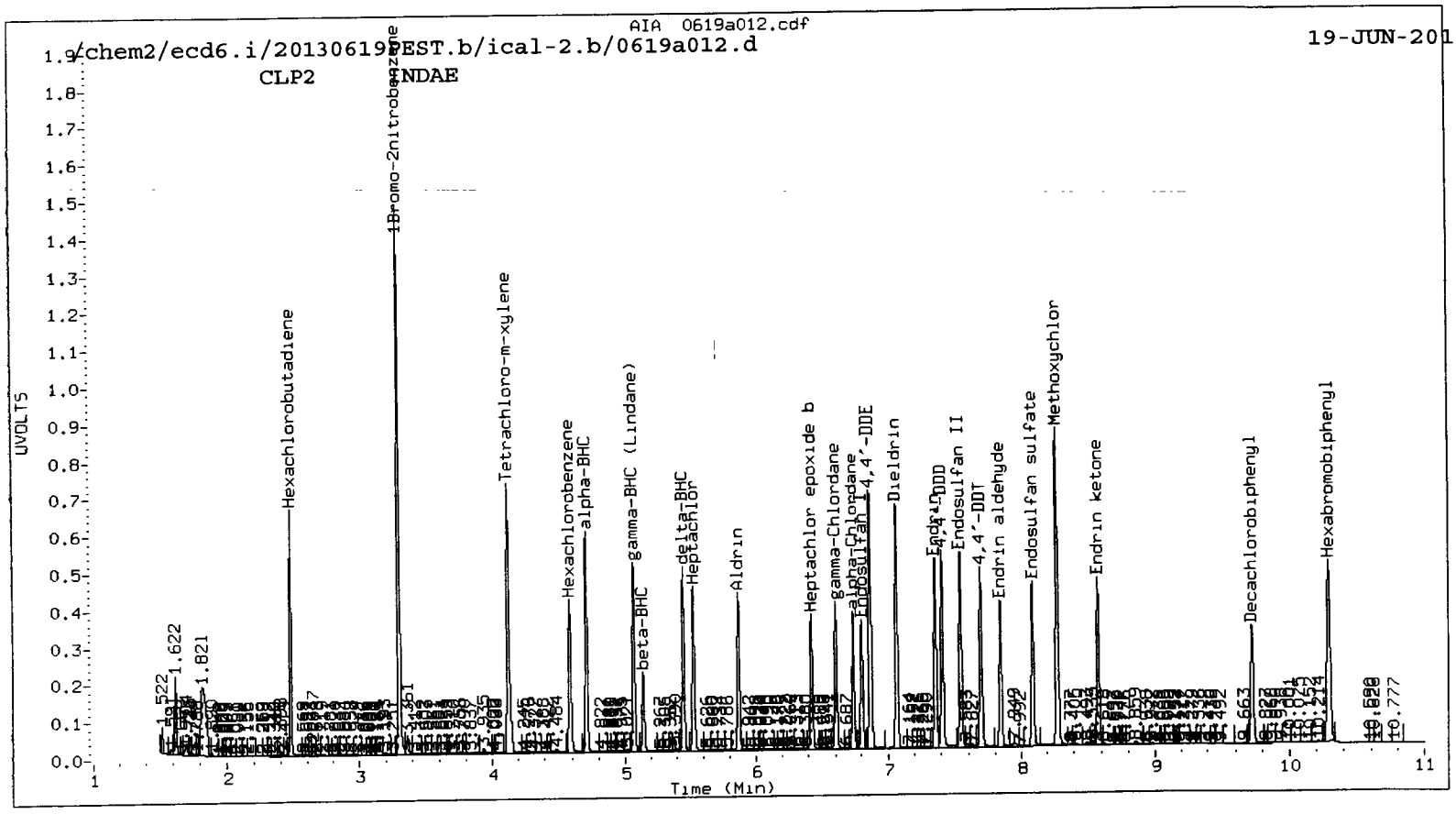
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28320361	0.0
Hexabromobiphenyl	16454599	16454599	0.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a012.d
19-JUN-201
STX-CLP INDAE
UVOLTS
Time (Min)
1.577
1.823
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0619a012.cdf
/chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a012.d
19-JUN-201
CLP2 INDAE
UVOLTS
Time (Min)
1.622
1.821
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a013.d ARI ID: INDAA
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a013.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 19-JUN-2013 18:14
Report Date: 06/25/2013 09:50
Matrix: NONE
Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.130	-0.001	5443407	3.300	0.000	27626455	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.286	0.000	131311	4.709	-0.001	816134	1.2028	1.2365	2.8	alpha-BHC
4.646	0.002	61465	5.139	0.001	457221	1.3958	1.5990	13.6	beta-BHC
4.815	0.002	111484	5.450	0.000	711469	1.1794	1.2506	5.9	delta-BHC
4.568	0.000	122386	5.065	-0.001	741566	1.2295	1.2706	3.3	gamma-BHC (Lindane)
5.014	-0.001	124272	5.528	-0.001	834093	1.3010	1.4734	12.4	Heptachlor
5.307	0.000	117450	5.866	-0.001	791691	1.2690	1.4773	15.2	Aldrin
5.882	0.000	116637	6.421	-0.001	784226	1.3593	1.6056	16.6	Heptachlor epoxide b
6.259	-0.001	110155	6.808	-0.001	655773	1.3735	1.4941	8.4	Endosulfan I
6.482	-0.001	218954	7.066	-0.002	1380894	2.5836	3.1175	18.7	Dieldrin
6.184	0.000	172469	6.869	-0.001	1326712	2.6750	2.9753	10.6	4,4'-DDE
6.701	0.000	188353	7.355	-0.001	955890	2.6276	2.8816	9.2	Endrin
6.907	0.001	190654	7.544	-0.001	991338	2.6791	2.8527	6.3	Endosulfan II
6.743	0.003	178398	7.408	0.001	1060462	2.6062	2.9696	13.0	4,4'-DDD
7.675	0.000	167119	8.087	-0.001	870793	2.6597	2.9433	10.1	Endosulfan sulfate
7.000	0.002	171062	7.694	0.000	878337	2.5355	2.7759	9.0	4,4'-DDT
7.425	0.001	452591	8.277	-0.005	1836243	14.1742	15.5933	9.5	Methoxychlor
7.929	0.000	218694	8.577	-0.001	823887	2.8029	2.7864	0.6	Endrin ketone
7.284	0.001	152510	7.841	-0.001	796663	2.7114	2.9862	9.6	Endrin aldehyde
6.002	0.000	114356	6.604	-0.001	789869	1.2974	1.5366	16.9	gamma-Chlordane
6.127	0.000	115059	6.741	-0.001	692681	1.3411	1.4699	9.2	alpha-Chlordane
2.310	-0.002	161818	2.467	-0.002	766383	1.3528	1.3402	0.9	Hexachlorobutadiene
4.141	0.001	126395	4.586	0.000	820221	1.4552	1.5072	3.5	Hexachlorobenzene
8.927	-0.001	4756712	10.288	0.000	16087272	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	196648	4.127	-0.002	1321445	2.6606	2.8919	8.3	Tetrachloro-m-xylene
8.777	-0.001	168517	9.724	-0.001	741403	2.8148	2.8511	1.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	6.7	7.2	6.7~	115- 0
Decachlorobiphenyl	7.0	7.1	7.0~	115- 0

WQS : 69198

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

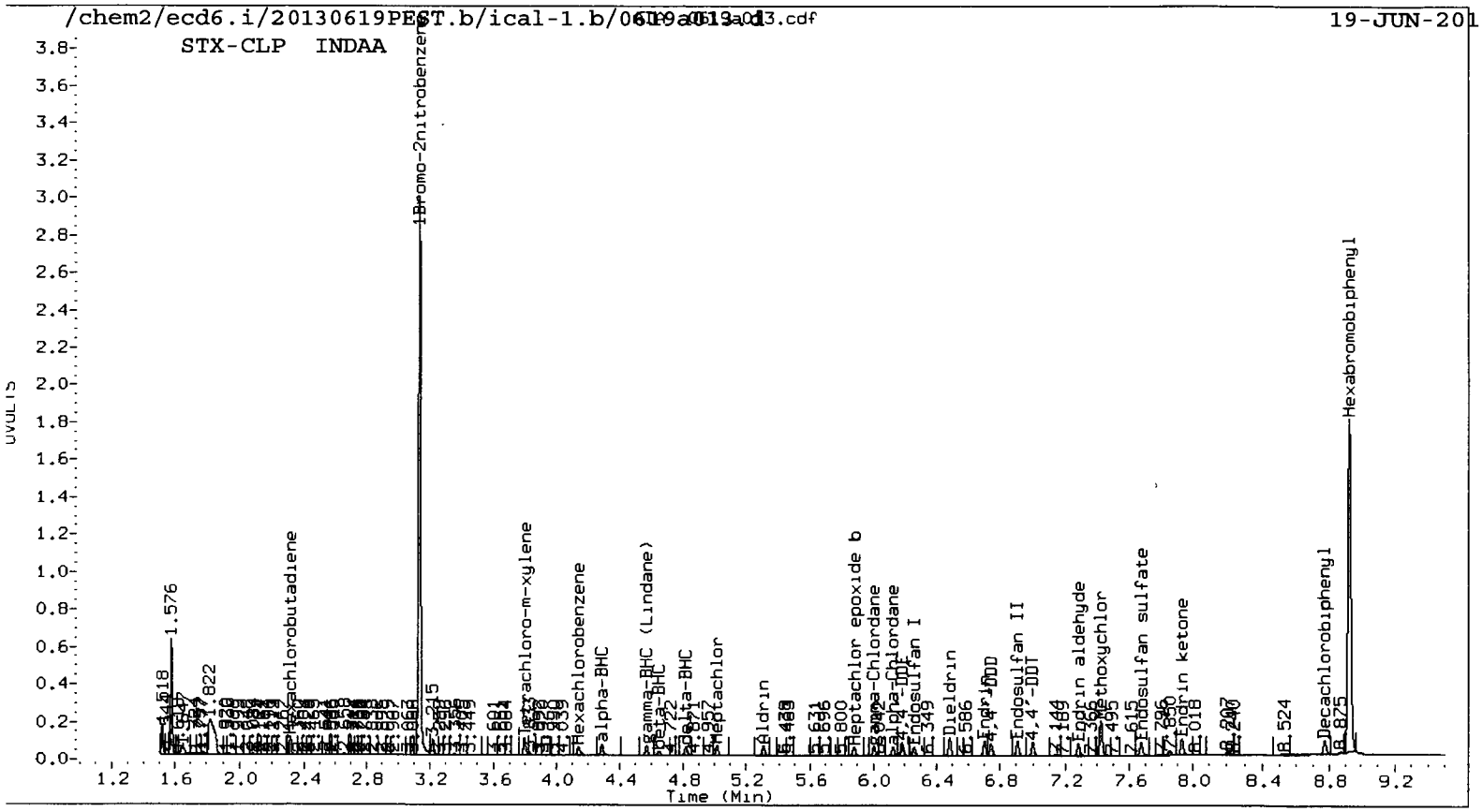
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5443407	-2.6
Hexabromobiphenyl	4870538	4756712	-2.3

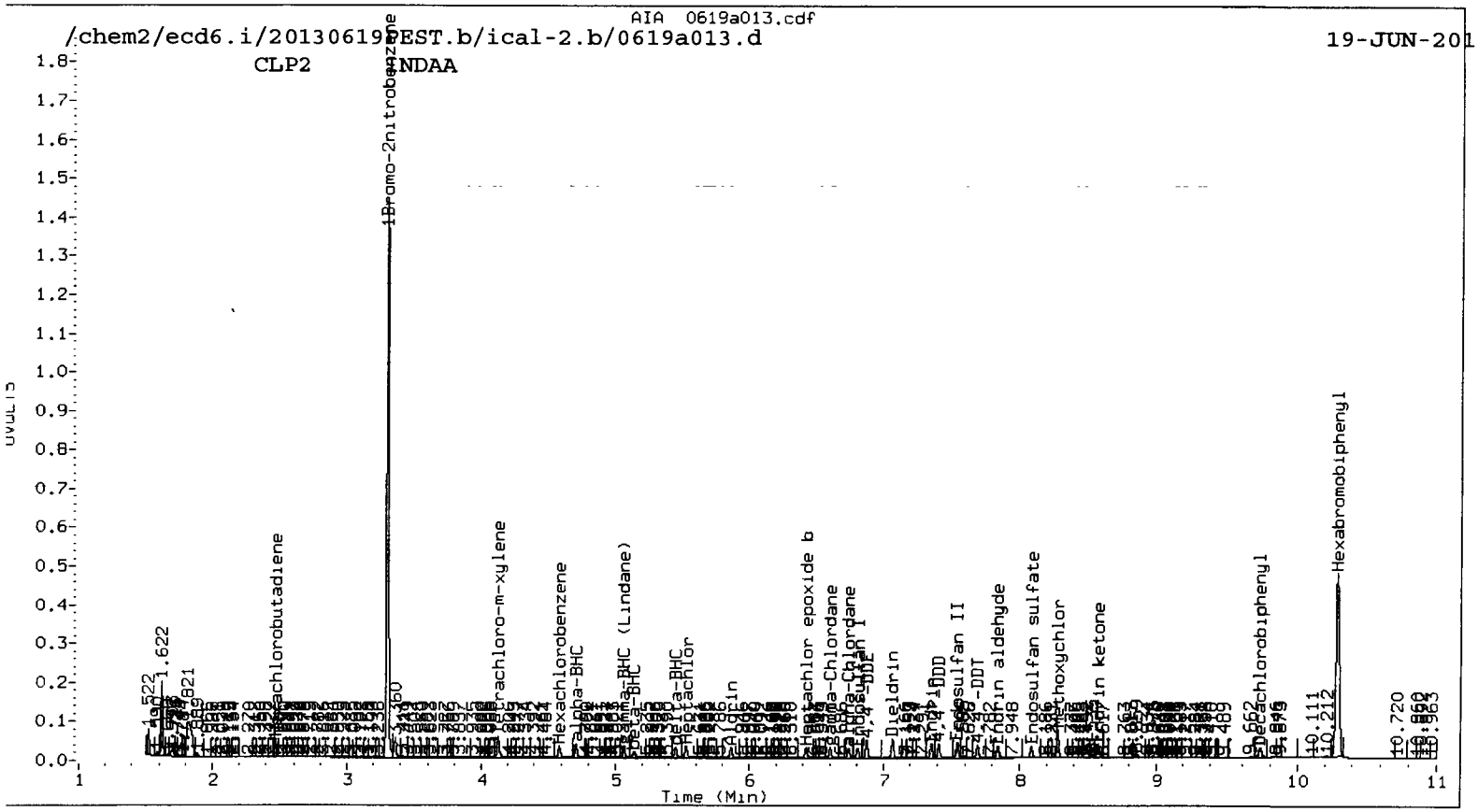
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	27626455	-2.5
Hexabromobiphenyl	16454599	16087272	-2.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a013.d
0619a013.cdf
19-JUN-201
STX-CLP INDAA
UVOLTS
Time (Min)
1.576
1.822
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0619a013.cdf
/chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a013.d
19-JUN-201
CLP2 INDAA
UVOLTS
Time (Min)
1.622
1Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a014.d ARI ID: INDAB
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a014.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 18:32
Compound Sublist: INDA Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.131	-0.001	5578569	3.300	0.001	28124817	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.286	0.000	271034	4.709	-0.001	1721306	2.4225	2.5617	5.6	alpha-BHC
4.646	0.002	120984	5.139	0.001	843735	2.6808	2.8985	7.8	beta-BHC
4.815	0.002	233196	5.450	0.000	1461179	2.4073	2.5228	4.7	delta-BHC
4.569	0.000	253061	5.065	-0.001	1513233	2.4807	2.5469	2.6	gamma-BHC (Lindane)
5.015	0.000	252765	5.529	-0.001	1578669	2.5821	2.7393	5.9	Heptachlor
5.307	0.000	240632	5.867	-0.001	1464165	2.5369	2.6837	5.6	Aldrin
5.883	0.000	232952	6.421	-0.001	1441216	2.6491	2.8984	9.0	Heptachlor epoxide b
6.259	0.000	219902	6.809	0.000	1245281	2.6754	2.7870	4.1	Endosulfan I
6.482	0.000	452509	7.065	-0.002	2553673	5.2102	5.6630	8.3	Dieldrin
6.183	-0.001	342779	6.869	-0.001	2565531	5.1876	5.6514	8.6	4,4'-DDE
6.700	-0.001	387178	7.355	-0.001	1913011	5.2672	5.6595	7.2	Endrin
6.907	0.001	385932	7.544	-0.001	1963811	5.2886	5.5459	4.7	Endosulfan II
6.743	0.003	365453	7.407	0.001	2044731	5.2064	5.6191	7.6	4,4'-DDD
7.674	0.000	340604	8.086	-0.001	1682393	5.2861	5.5807	5.4	Endosulfan sulfate
7.000	0.002	353629	7.694	0.000	1737896	5.1115	5.3901	5.3	4,4'-DDT
7.425	0.001	903724	8.277	-0.005	3624930	27.6004	30.2095	9.0	Methoxychlor
7.930	0.000	429848	8.577	-0.001	1639454	5.3725	5.4414	1.3	Endrin ketone
7.284	0.000	309578	7.841	-0.001	1548519	5.3673	5.6964	5.9	Endrin aldehyde
6.002	0.000	231407	6.604	-0.001	1443449	2.5617	2.7583	7.4	gamma-Chlordane
6.126	0.000	229315	6.742	0.000	1313218	2.6081	2.7374	4.8	alpha-Chlordane
2.311	-0.001	318581	2.468	-0.002	1559023	2.5988	2.6780	3.0	Hexachlorobutadiene
4.141	0.002	241429	4.587	0.000	1545377	2.7123	2.7894	2.8	Hexachlorobenzene
8.927	0.000	4877747	10.289	0.001	16392538	80.0000	80.0000	0.0	Hexabromobiphenyl
3.800	0.001	395058	4.127	-0.001	2617199	5.2155	5.6262	7.6	Tetrachloro-m-xylene
8.777	-0.001	335277	9.725	0.000	1455538	5.4613	5.4930	0.6	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

6/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	13.0	14.1	13.0~	115- 0
Decachlorobiphenyl	13.7	13.7	13.7~	115- 0

WUG : 88493

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

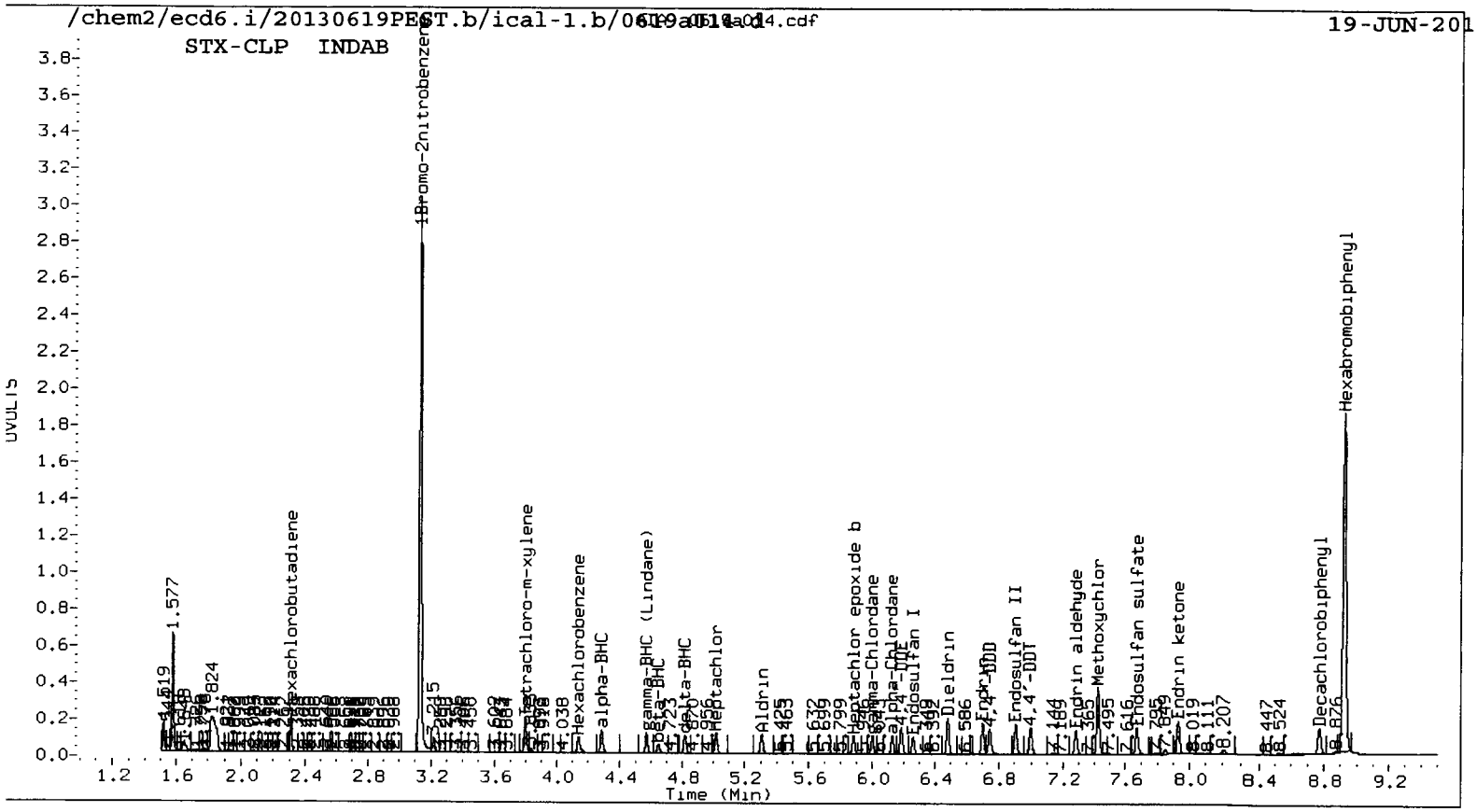
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5578569	-0.2
Hexabromobiphenyl	4870538	4877747	0.1

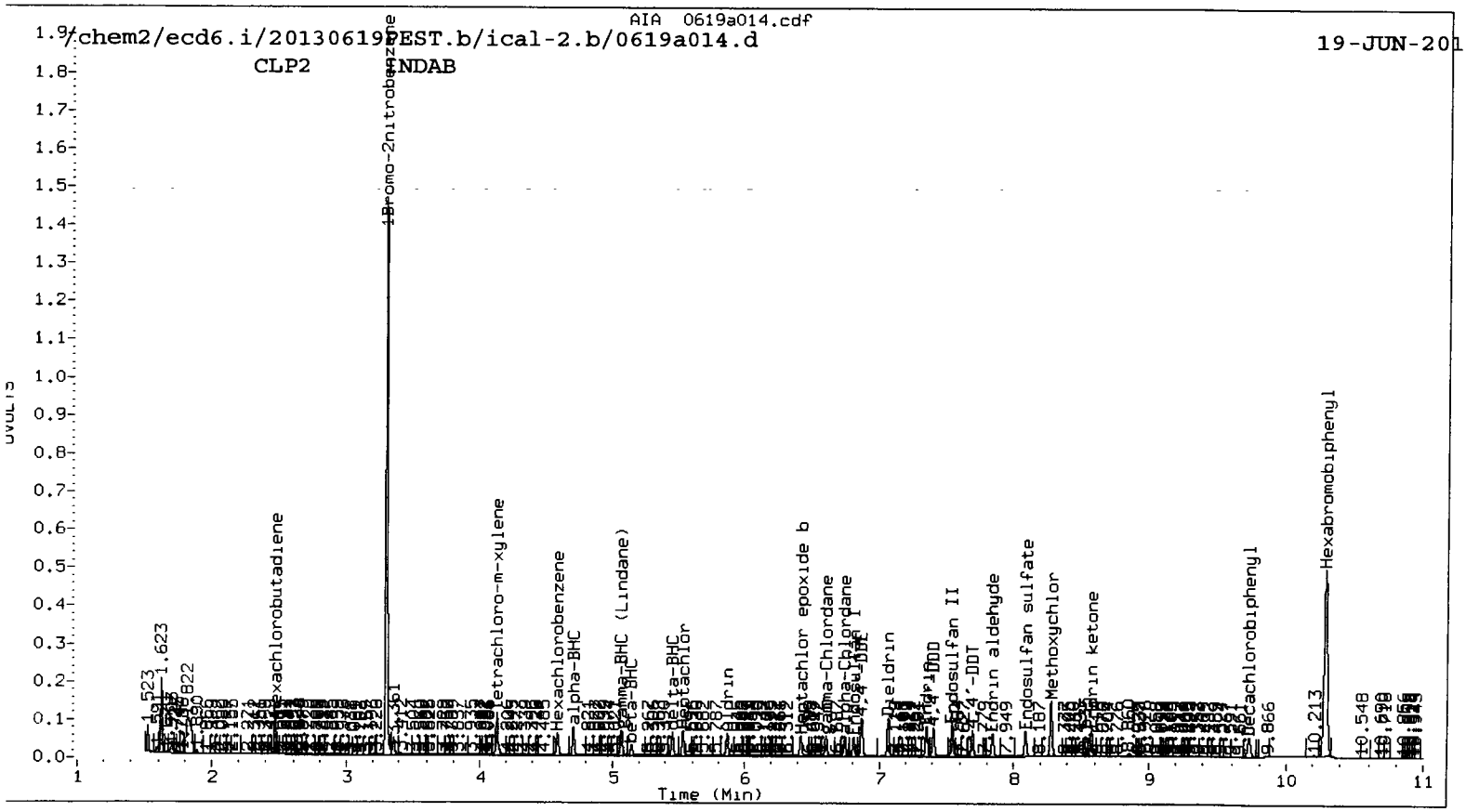
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28124817	-0.7
Hexabromobiphenyl	16454599	16392538	-0.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a014.d
0619a014.cdf
19-JUN-201
STX-CLP INDAB
UVULIS
1.577
1Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDE
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)


AIA 0619a014.cdf
/chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a014.d
19-JUN-201
CLP2 INDAB
UVULIS
1Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
Heptachlor
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDE
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a015.d ARI ID: INDAC
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a015.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 18:50
Compound Sublist: INDA Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.130	-0.001	5651084	3.299	0.000	28473248	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.286	0.000	533404	4.709	-0.001	3310204	4.7064	4.8661	3.3	alpha-BHC
4.645	0.001	222104	5.139	0.000	1443860	4.8583	4.8994	0.8	beta-BHC
4.815	0.001	456403	5.449	-0.001	2797279	4.6509	4.7706	2.5	delta-BHC
4.568	0.000	489737	5.065	-0.001	2903570	4.7392	4.8272	1.8	gamma-BHC (Lindane)
5.014	-0.001	484132	5.528	-0.001	2965857	4.8821	5.0834	4.0	Heptachlor
5.307	-0.001	460422	5.866	-0.001	2734717	4.7918	4.9511	3.3	Aldrin
5.882	-0.001	434196	6.420	-0.002	2499209	4.8743	4.9646	1.8	Heptachlor epoxide b
6.259	-0.001	406962	6.808	-0.001	2263684	4.8877	5.0042	2.4	Endosulfan I
6.482	-0.001	864291	7.065	-0.002	4719193	9.8238	10.3371	5.1	Dieldrin
6.182	-0.002	639222	6.868	-0.002	4712850	9.5499	10.2546	7.1	4,4'-DDE
6.700	-0.001	739889	7.355	-0.002	3566322	9.9981	10.4737	4.6	Endrin
6.906	0.000	735342	7.544	-0.002	3664235	10.0093	10.2723	2.6	Endosulfan II
6.742	0.002	701003	7.407	0.000	3740522	9.9198	10.2042	2.8	4,4'-DDD
7.674	-0.001	640784	8.087	-0.001	3049684	9.8783	10.0422	1.6	Endosulfan sulfate
6.999	0.001	679878	7.694	0.000	3282418	9.7614	10.1061	3.5	4,4'-DDT
7.424	0.000	1639957	8.277	-0.005	6401010	49.7500	52.9550	6.2	Methoxychlor
7.929	0.000	797409	8.577	-0.002	3061655	9.8997	10.0874	1.9	Endrin ketone
7.283	0.000	579846	7.841	-0.001	2765107	9.9858	10.0974	1.1	Endrin aldehyde
6.002	-0.001	435922	6.603	-0.001	2600459	4.7638	4.9085	3.0	gamma-Chlordane
6.126	-0.001	427644	6.741	-0.002	2403332	4.8013	4.9485	3.0	alpha-Chlordane
2.311	-0.001	609169	2.467	-0.002	2969940	4.9055	5.0392	2.7	Hexachlorobutadiene
4.141	0.001	441722	4.586	0.000	2792079	4.8988	4.9781	1.6	Hexachlorobenzene
8.926	-0.001	4910634	10.289	0.000	16513179	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	753339	4.127	-0.002	4866543	9.8178	10.3336	5.1	Tetrachloro-m-xylene
8.776	-0.001	609208	9.724	-0.001	2676119	9.8569	10.0256	1.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	24.5	25.8	24.5~	115- 0
Decachlorobiphenyl	24.6	25.1	24.6~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

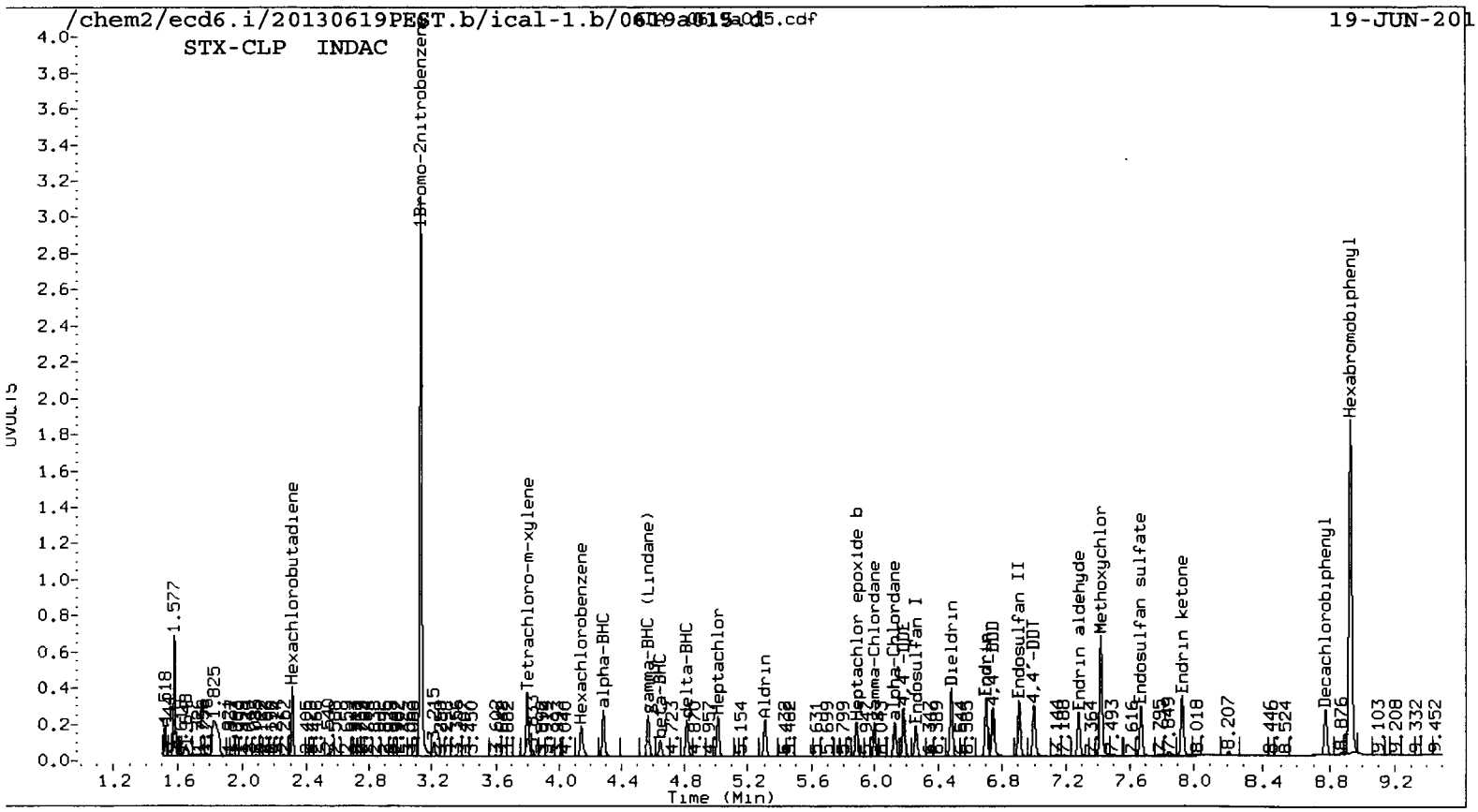
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5651084	1.1
Hexabromobiphenyl	4870538	4910634	0.8

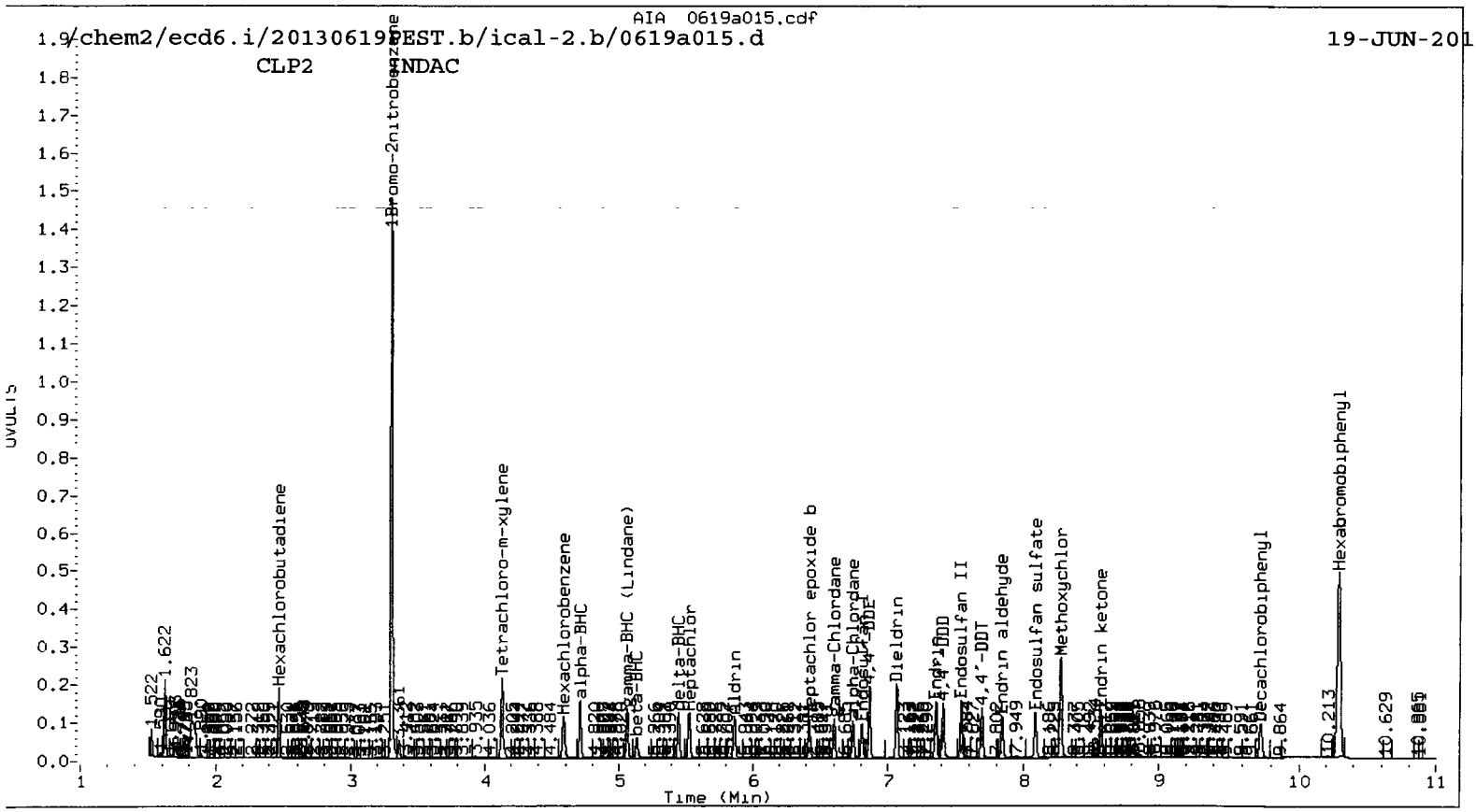
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28473248	0.5
Hexabromobiphenyl	16454599	16513179	0.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a015.d
19-JUN-201
STX-CLP INDAC
UVUL15
Time (Min)
1-Bromo-2-nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0619a015.cdf
/chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a015.d
19-JUN-201
CLP2 INDAC
UVUL15
Time (Min)
1-Bromo-2-nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a016.d ARI ID: INDAD
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a016.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 19:08
Compound Sublist: INDA Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.130	-0.002	5597417	3.299	0.000	28402073	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.286	-0.001	1166684	4.708	-0.002	7173359	10.3928	10.5715	1.7	alpha-BHC
4.645	0.001	457904	5.138	0.000	2870240	10.1121	9.7639	3.5	beta-BHC
4.814	0.000	1008727	5.449	-0.001	6128970	10.3779	10.4787	1.0	delta-BHC
4.568	0.000	1059355	5.065	-0.002	6285992	10.3498	10.4767	1.2	gamma-BHC (Lindane)
5.014	-0.001	1021731	5.528	-0.001	6128452	10.4021	10.5303	1.2	Heptachlor
5.306	-0.001	993823	5.866	-0.002	5759762	10.4423	10.4540	0.1	Aldrin
5.881	-0.001	915825	6.420	-0.002	5105747	10.3796	10.1679	2.1	Heptachlor epoxide b
6.259	-0.001	853922	6.808	-0.001	4698518	10.3541	10.4128	0.6	Endosulfan I
6.482	-0.001	1830874	7.066	-0.002	9594439	21.0097	21.0688	0.3	Dieldrin
6.182	-0.002	1336155	6.868	-0.002	9661210	20.1534	21.0743	4.5	4,4'-DDE
6.700	-0.001	1543295	7.355	-0.001	7307158	20.8231	21.2013	1.8	Endrin
6.906	0.000	1528510	7.544	-0.001	7652018	20.7745	21.1933	2.0	Endosulfan II
6.741	0.001	1448815	7.407	0.000	7715403	20.4712	20.7942	1.6	4,4'-DDD
7.674	0.000	1339229	8.087	-0.001	6329186	20.6145	20.5902	0.1	Endosulfan sulfate
6.999	0.000	1443267	7.694	-0.001	6811436	20.6908	20.7187	0.1	4,4'-DDT
7.424	0.000	3296480	8.277	-0.005	12592818	99.8523	102.9243	3.0	Methoxychlor
7.929	0.000	1647140	8.577	-0.001	6416942	20.4182	20.8876	2.3	Endrin ketone
7.283	0.000	1206079	7.841	-0.001	5680432	20.7392	20.4935	1.2	Endrin aldehyde
6.001	-0.001	935499	6.603	-0.001	5350283	10.3213	10.1242	1.9	gamma-Chlordane
6.126	-0.001	906578	6.741	-0.001	4973613	10.2760	10.2663	0.1	alpha-Chlordane
2.310	-0.002	1263182	2.467	-0.002	6269724	10.2697	10.6648	3.8	Hexachlorobutadiene
4.140	0.000	904118	4.586	-0.001	5722607	10.1230	10.2285	1.0	Hexachlorobenzene
8.927	0.000	4918023	10.289	0.001	16714534	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	1573454	4.126	-0.002	10034915	20.7024	21.3614	3.1	Tetrachloro-m-xylen
8.777	-0.001	1251738	9.725	0.000	5530544	20.2226	20.4695	1.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

6/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	51.8	53.4	51.8~	115- 0
Decachlorobiphenyl	50.6	51.2	50.6~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

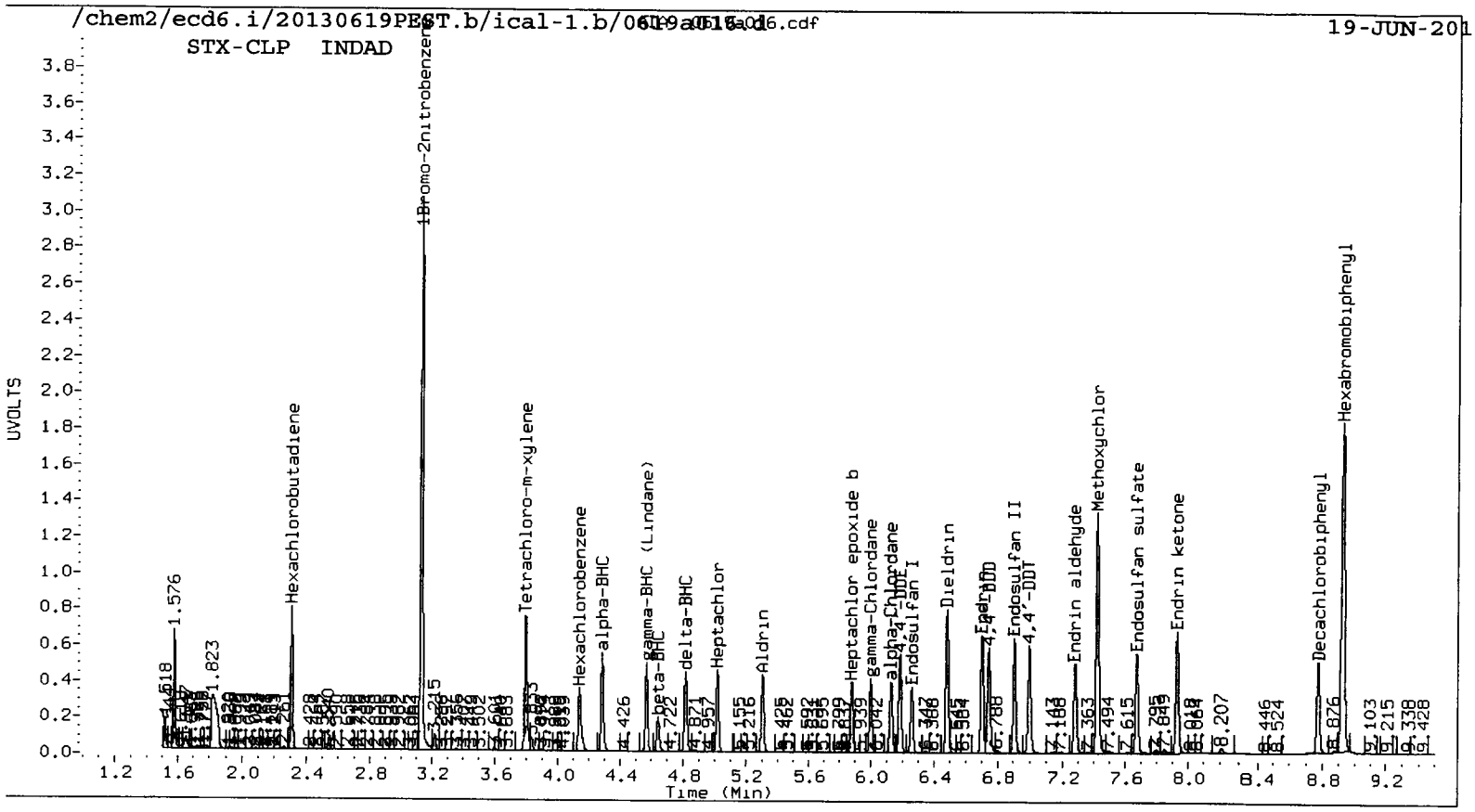
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5597417	0.1
Hexabromobiphenyl	4870538	4918023	1.0

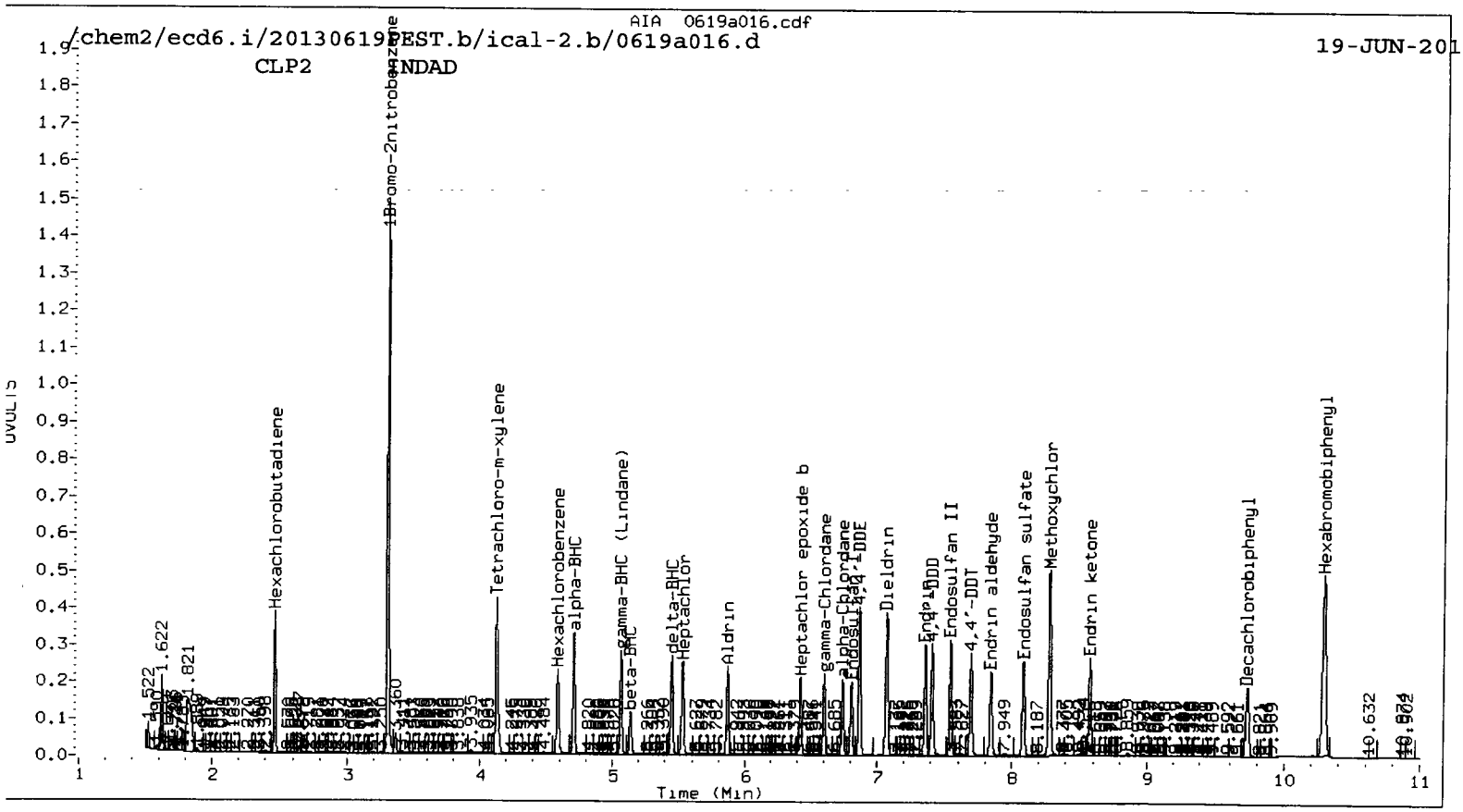
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28402073	0.3
Hexabromobiphenyl	16454599	16714534	1.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a016.d
0619a016.cdf
19-JUN-201
STX-CLP INDAD
UVOLTS
Time (Min)
1.576
1.823
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0619a016.cdf
/chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a016.d
19-JUN-201
CLP2 INDAD
UVOLTS
Time (Min)
1.622
1.821
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
Dieldrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a017.d ARI ID: INDAF
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a017.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 19:26
Compound Sublist: INDA Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.130	-0.001	5751246	3.300	0.000	29146657	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.286	0.000	4831430	4.709	-0.001	28062312	41.8872	40.2993	3.9	alpha-BHC
4.644	0.000	1774946	5.138	-0.001	10672180	38.1486	35.3770	7.5	beta-BHC
4.814	0.000	4238006	5.450	0.000	24182583	42.4349	40.2888	5.2	delta-BHC
4.569	0.000	4339740	5.066	-0.001	24487912	41.2647	39.7707	3.7	gamma-BHC (Lindane)
5.015	0.000	3986440	5.529	0.000	21570666	39.4998	36.1173	8.9	Heptachlor
5.307	0.000	3943610	5.867	-0.001	20842596	40.3280	36.8629	9.0	Aldrin
5.882	0.000	3490657	6.421	-0.001	17836183	38.5037	34.6127	10.6	Heptachlor epoxide
6.259	0.000	3229378	6.808	-0.001	16698987	38.1102	36.0627	5.5	Endosulfan I
6.482	0.000	6997753	7.067	0.000	32113961	78.1531	68.7187	12.8	Dieldrin
6.184	-0.001	5369897	6.869	-0.001	33502698	78.8284	71.2136	10.2	4,4'-DDE
6.700	-0.001	5893266	7.356	-0.001	25263950	76.9443	70.6293	8.6	Endrin
6.906	0.000	5801680	7.545	-0.001	27141373	76.3028	72.4309	5.2	Endosulfan II
6.740	0.000	5757700	7.406	0.000	27410859	78.7235	71.1830	10.1	4,4'-DDD
7.674	0.000	5199603	8.087	-0.001	23126577	77.4483	72.4924	6.6	Endosulfan sulfate
6.998	0.000	5779869	7.694	0.000	25567397	80.1811	74.9342	6.8	4,4'-DDT
7.424	0.000	12651909	8.277	-0.004	44409139	370.8413	349.7334	5.9	Methoxychlor
7.929	0.000	6307219	8.578	-0.001	23664020	75.6572	74.2197	1.9	Endrin ketone
7.283	0.000	4545058	7.842	-0.001	20575239	75.6274	71.5236	5.6	Endrin aldehyde
6.002	0.000	3731013	6.604	0.000	19680475	40.0629	36.2896	9.9	gamma-Chlordane
6.126	0.000	3557417	6.742	-0.001	18312770	39.2446	36.8348	6.3	alpha-Chlordane
2.311	-0.001	4900160	2.468	-0.001	23122415	38.7729	38.3265	1.2	Hexachlorobutadiene
4.140	0.000	3420199	4.586	0.000	20695310	37.2703	36.0457	3.3	Hexachlorobenzene
8.927	0.000	5082371	10.289	0.001	17347014	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	6090602	4.127	-0.002	34671082	77.9926	71.9193	8.1	Tetrachloro-m-xylen
8.777	-0.001	4813124	9.724	-0.001	20809777	75.2444	74.2124	1.4	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13
06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	195.0	179.8	179.8~	115- 0
Decachlorobiphenyl	188.1	185.5	185.5~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

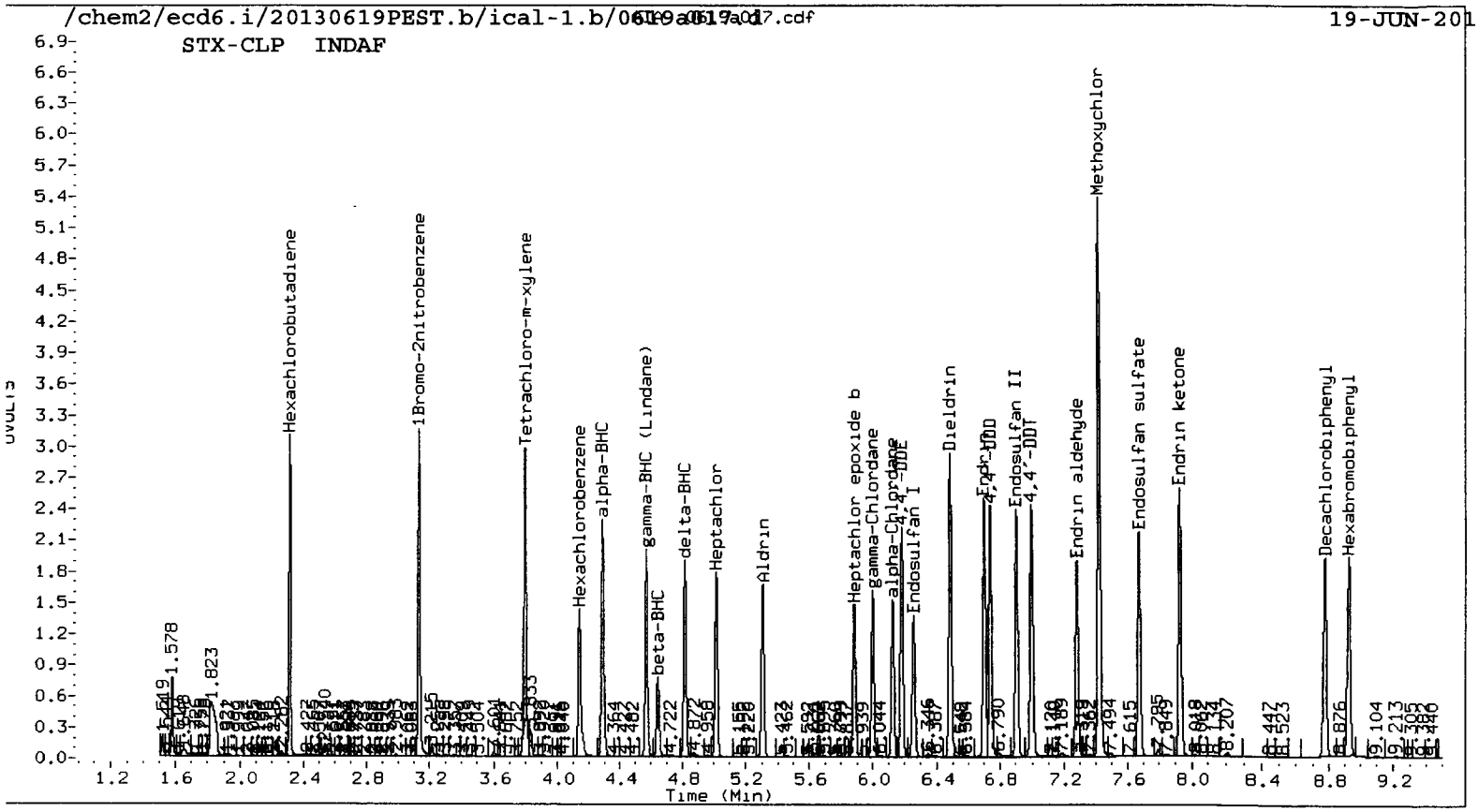
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5751246	2.9
Hexabromobiphenyl	4870538	5082371	4.3

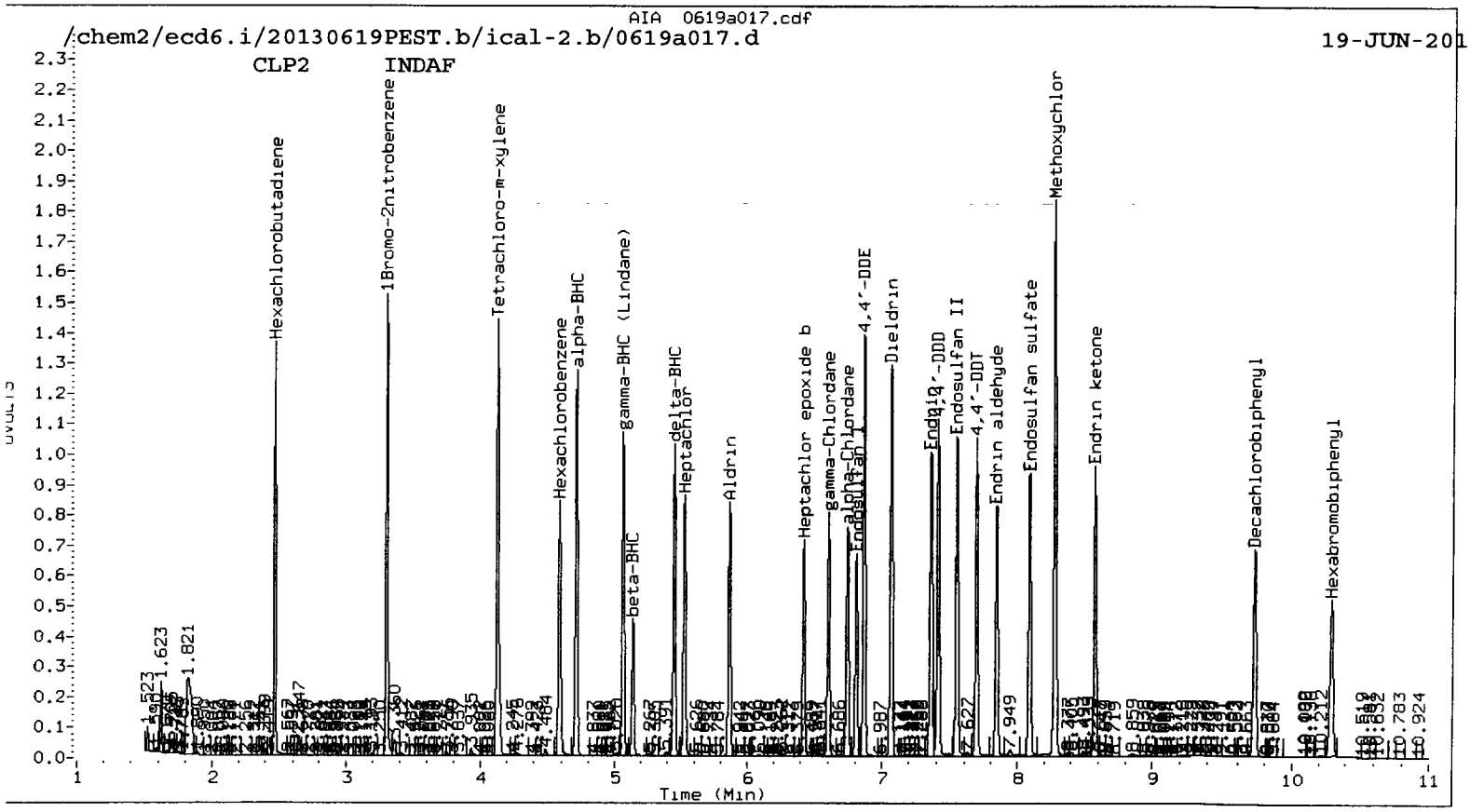
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	29146657	2.9
Hexabromobiphenyl	16454599	17347014	5.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a017.d
19-JUN-201
STX-CLP INDAF
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)


AIA 0619a017.cdf
/chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a017.d
19-JUN-201
CLP2 INDAF
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
4,4'-DDE
Dieldrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a018.d ARI ID: INDAG
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a018.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Injection Date: 19-JUN-2013 19:44
Compound Sublist: INDA
Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul
Matrix: NONE
Operator: ar
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.131	-0.001	5601251	3.300	0.001	28311756	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.286	0.000	9535674	4.710	0.000	52831349	84.8857	78.1067	8.3	alpha-BHC
4.644	0.000	3446963	5.138	0.000	19944043	76.0689	68.0618	11.1	beta-BHC
4.813	0.000	8407388	5.450	0.000	47133896	86.4369	80.8420	6.7	delta-BHC
4.569	0.000	8519760	5.066	0.000	47580501	83.1801	79.5541	4.5	gamma-BHC (Lindane)
5.015	0.000	7611890	5.529	0.000	38136107	77.4425	65.7370	16.4	Heptachlor
5.307	0.000	7589069	5.867	0.000	37658349	79.6852	68.5679	15.0	Aldrin
5.883	0.000	6621317	6.422	0.000	31564056	74.9924	63.0591	17.3	Heptachlor epoxide
6.260	0.000	6139988	6.809	0.000	29659615	74.3988	65.9410	12.1	Endosulfan I
6.483	0.000	13374054	7.067	0.000	56261276	153.3655	123.9403	21.2	Dieldrin
6.184	0.000	10777552	6.870	0.000	58288946	162.4477	127.5532	24.1	4,4'-DDE
6.701	0.000	11315372	7.356	0.000	45268029	149.1881	128.5208	14.9	Endrin
6.906	0.000	11144702	7.545	0.000	49724483	148.0130	134.7600	9.4	Endosulfan II
6.740	0.000	11132759	7.407	0.000	50700725	153.7104	133.7107	13.9	4,4'-DDD
7.674	0.000	10090121	8.087	0.000	42871891	151.7690	136.4747	10.6	Endosulfan sulfat
6.998	0.000	11290652	7.694	0.000	49153383	158.1677	146.3004	7.8	4,4'-DDT
7.424	0.000	25410659	8.282	0.000	68710958	752.1298	549.5270	31.1	Methoxychlor
7.930	0.000	12242959	8.578	0.000	45120219	148.3008	143.7144	3.1	Endrin ketone
7.284	0.000	8770972	7.843	0.000	37980609	147.3779	134.0802	9.4	Endrin aldehyde
6.002	0.000	7244242	6.604	0.000	36309167	79.8704	68.9264	14.7	gamma-Chlordane
6.126	0.000	6882735	6.742	0.000	33830196	77.9620	70.0537	10.7	alpha-Chlordane
2.312	0.000	9533617	2.469	0.000	41324182	77.4557	70.5167	9.4	Hexachlorobutadiene
4.140	0.000	6575895	4.586	0.000	38026898	73.5771	68.1858	7.6	Hexachlorobenzene
8.927	0.000	5032937	10.289	0.001	17081518	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	11650961	4.128	0.000	59297060	153.1904	126.6289	19.0	Tetrachloro-m-xyl
8.777	0.000	9459476	9.725	0.000	39937738	149.3341	144.6407	3.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

6/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	383.0	316.6	316.6~	115- 0
Decachlorobiphenyl	373.3	361.6	361.6~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

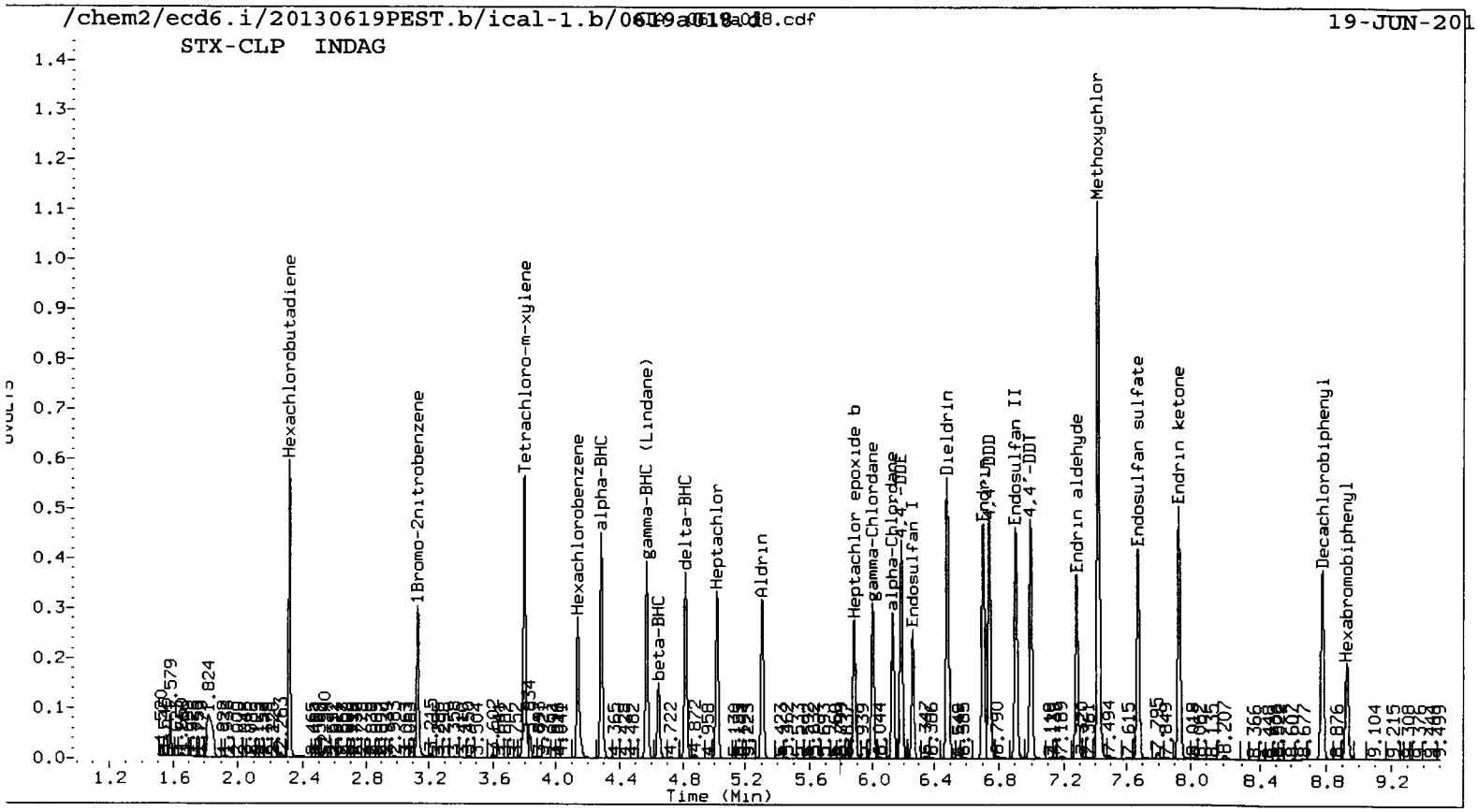
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5601251	0.2
Hexabromobiphenyl	4870538	5032937	3.3

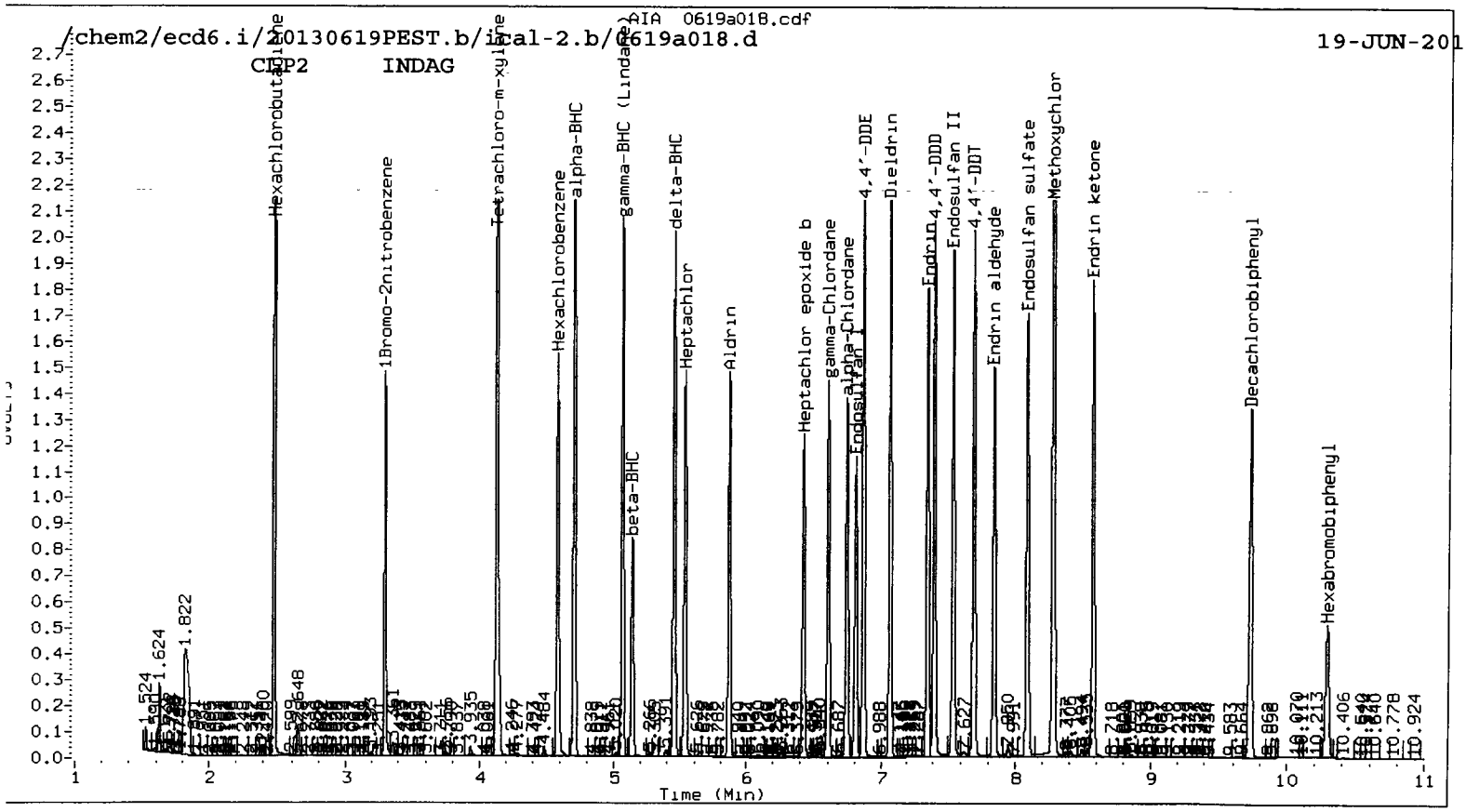
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28311756	0.0
Hexabromobiphenyl	16454599	17081518	3.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a018.d
0619a018.cdf
19-JUN-201
STX-CLP INDAG
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)


/chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a018.d
0619a018.cdf
19-JUN-201
CLP2 INDAG
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a019.d ARI ID: INDA ICV
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a019.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 19-JUN-2013 20:01
Report Date: 06/25/2013 09:51
Matrix: NONE
Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.130	-0.001	5662321	3.300	0.000	28347211	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.286	0.000	4855154	4.710	0.000	27588708	42.7540	40.7366	4.8	alpha-BHC
4.645	0.001	1822898	5.139	0.000	10652715	39.7945	36.3084	9.2	beta-BHC
4.814	0.001	4184696	5.450	0.000	23785579	42.5591	40.7450	4.4	delta-BHC
4.569	0.000	4344523	5.066	0.000	24367918	41.9589	40.6919	3.1	gamma-BHC (Lindane)
5.015	0.000	3968184	5.530	0.000	21193899	39.9364	36.4872	9.0	Heptachlor
5.307	0.000	4065594	5.867	-0.001	21069990	42.2283	38.3160	9.7	Aldrin
5.882	0.000	3520931	6.422	0.000	17669895	39.4476	35.2570	11.2	Heptachlor epoxide
6.260	0.000	3339914	6.809	0.000	16390864	40.0336	36.3956	9.5	Endosulfan I
6.482	0.000	3635982	7.067	-0.001	17715883	41.2455	38.9783	5.7	Dieldrin
6.186	0.001	3446918	6.870	0.000	17845149	51.3943	39.0016	27.4	4,4'-DDE
6.701	0.000	3061363	7.356	0.000	13742736	40.4364	38.9338	3.8	Endrin
6.907	0.001	2960864	7.545	0.000	14554305	39.3951	39.3599	0.1	Endosulfan II
6.742	0.002	2998582	7.408	0.001	14669806	41.4771	38.6054	7.2	4,4'-DDD
7.675	0.000	2678851	8.087	0.000	12153450	40.3671	38.6057	4.5	Endosulfan sulfate
6.999	0.001	2896942	7.695	0.000	13011033	40.6566	38.6434	5.1	4,4'-DDT
7.425	0.001	1399039	8.277	-0.005	5503814	41.4857	43.9237	5.7	Methoxychlor
7.930	0.000	3140634	8.578	0.000	12066382	38.1124	38.3511	0.6	Endrin ketone
7.284	0.000	2303678	7.842	-0.001	10586002	38.7792	37.2912	3.9	Endrin aldehyde
6.002	0.000	3758964	6.605	0.000	19267024	40.9970	36.5292	11.5	gamma-Chlordane
6.126	0.000	3606097	6.742	0.000	18191702	40.4064	37.6232	7.1	alpha-Chlordane
2.294	-0.017	4300	2.454	-0.016	8293	0.0346	0.0141	83.9*	Hexachlorobutadiene
4.139	-0.001	47437	4.597	0.011	15351	0.5250	0.0275	180.1*	Hexachlorobenzene
8.927	0.000	5023768	10.289	0.000	17118059	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	3012987	4.127	-0.002	18593722	39.1884	39.6573	1.2	Tetrachloro-m-xylen
8.777	0.000	2476257	9.725	0.000	10738704	39.1633	38.8089	0.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

6/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	98.0	99.1	98.0~	115- 0
Decachlorobiphenyl	97.9	97.0	97.0~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

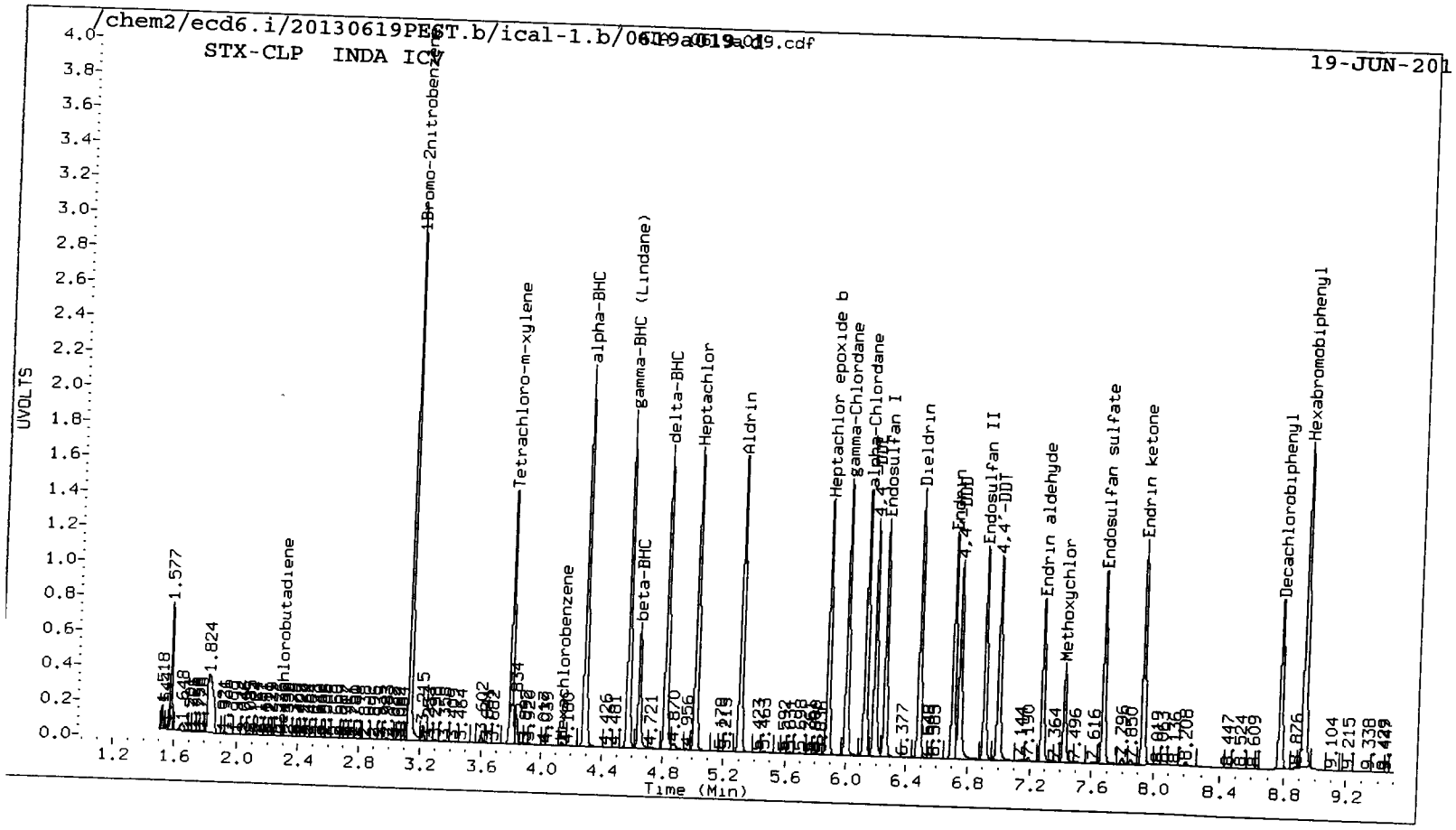
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5662321	1.3
Hexabromobiphenyl	4870538	5023768	3.1

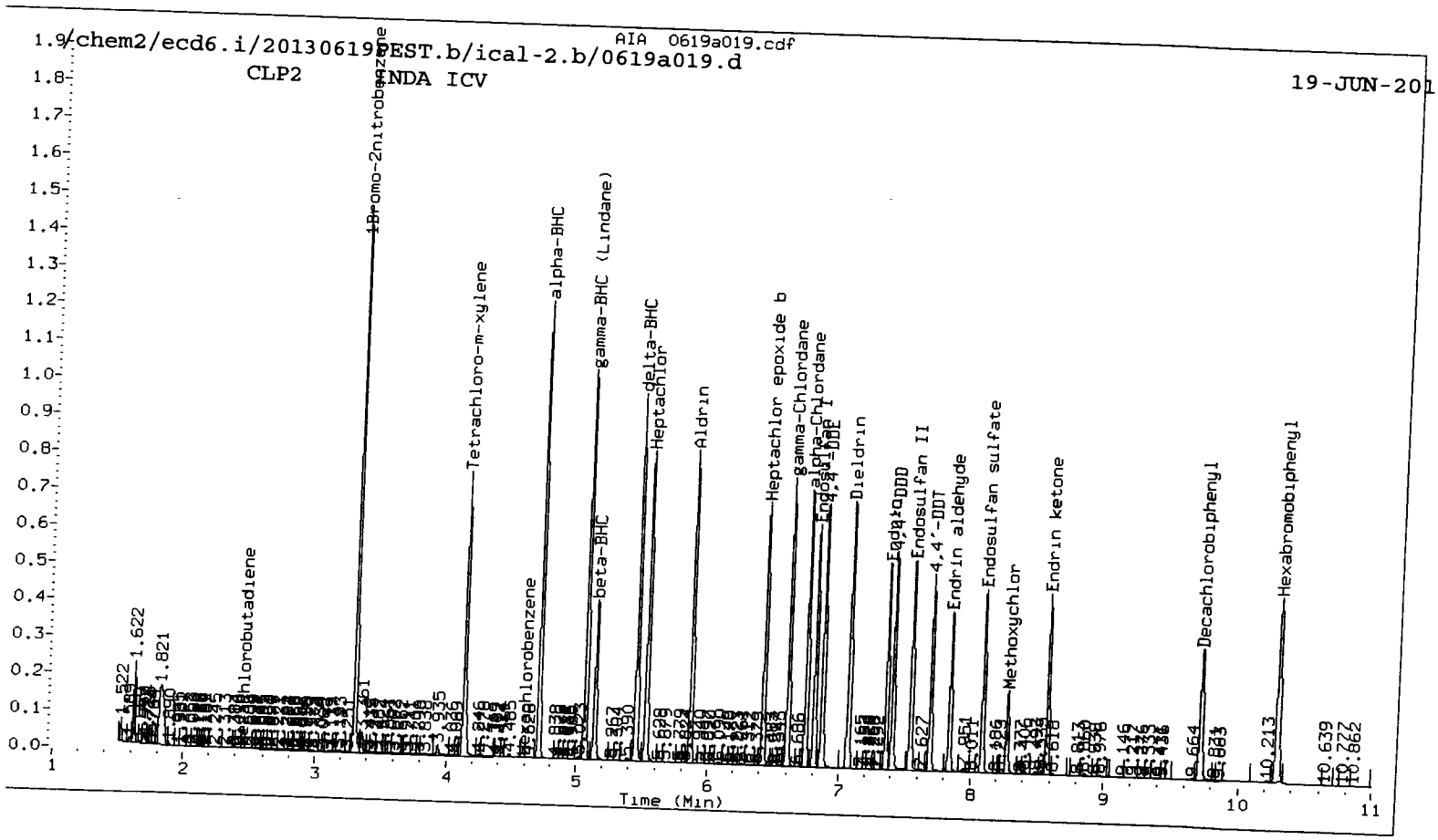
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28347211	0.1
Hexabromobiphenyl	16454599	17118059	4.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a019.d
AIA 0619a019.cdf
STX-CLP INDA ICV
19-JUN-201
UVOLTS
Time (Min)
1.577
1.824
Bromo-2nitrobenzene
Tetrachloro-m-xylene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDE
Endrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


/chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a019.d
AIA 0619a019.cdf
CLP2 INDA ICV
19-JUN-201
Time (Min)
1.622
1.821
Bromo-2nitrobenzene
Tetrachloro-m-xylene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
4,4'-DDE
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a020.d ARI ID: HCB/HCBD ICV
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a020.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Injection Date: 19-JUN-2013 20:19
Compound Sublist: wpest
Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul
Matrix: NONE
Operator: ar
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.131	-0.001	5825856	3.300	0.000	29136306	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.270	-0.016	15741	----			0.1347	0.0000	---	alpha-BHC
4.638	-0.006	6185	5.153	0.015	34366	0.1312	0.1140	14.1	beta-BHC
4.807	-0.007	7827	5.460	0.010	55686	0.0774	0.0928	18.1	delta-BHC
4.568	-0.001	6365	5.039	-0.027	48784	0.0597	0.0793	28.1	gamma-BHC (Lindane)
5.011	-0.004	3542	5.532	0.003	24053	0.0346	0.0403	15.1	Heptachlor
5.321	0.014	5699	5.852	-0.016	197176	0.0575	0.3489	143.4*	Aldrin
5.889	0.006	6810	6.421	-0.001	28673	0.0742	0.0557	28.5	Heptachlor epoxide b
6.261	0.001	2191	6.806	-0.004	50626	0.0255	0.1094	124.3*	Endosulfan I
6.470	-0.013	6721	7.043	-0.024	10216	0.0741	0.0219	108.9*	Dieldrin
6.184	-0.001	7689	6.868	-0.002	52897	0.1114	0.1125	0.9	4,4'-DDE
6.664	-0.038	4458	7.355	-0.001	17421	0.0557	0.0477	15.5	Endrin
6.907	0.001	3007	7.523	-0.022	46924	0.0379	0.1227	105.6*	Endosulfan II
6.736	-0.004	11288	7.408	0.001	34975	0.1478	0.0890	49.7*	4,4'-DDD
7.676	0.001	2737	8.087	0.000	30094	0.0390	0.0924	81.2*	Endosulfan sulfate
6.996	-0.002	4564	7.702	0.008	61753	0.0606	0.1773	98.1*	4,4'-DDT
7.429	0.004	2297	8.277	-0.004	19064	0.0645	0.1471	78.1*	Methoxychlor
7.924	-0.005	12452	8.574	-0.004	24754	0.1430	0.0761	61.1*	Endrin ketone
7.285	0.001	3329	7.841	-0.001	51003	0.0530	0.1737	106.4*	Endrin aldehyde
5.977	-0.025	27144	6.612	0.007	182548	0.2877	0.3367	15.7	gamma-Chlordane
6.121	-0.005	10392	6.743	0.001	26109	0.1132	0.0525	73.2*	alpha-Chlordane
2.311	-0.001	5901418	2.469	-0.001	26560599	46.0975	44.0411	4.6	Hexachlorobutadiene
4.139	-0.001	3444301	4.585	-0.001	18722188	37.0522	32.6206	12.7	Hexachlorobenzene
5.786	-0.001	2264	6.329	-0.003	59974	0.0317	0.1579	133.2*	Oxychlordane
----			6.572	-0.008	30438	0.0000	0.1110	---	2,4-DDE
----			6.685	-0.005	39610	0.0000	0.0906	---	trans-Nonachlor
6.347	-0.001	4676	7.062	-0.003	27477	0.0950	0.1154	19.4	2,4-DDD
6.587	0.000	5399	7.371	0.018	18445	0.0949	0.0711	28.6	2,4-DDT
----			----			0.0000	0.0000	---	cis-Nonachlor
7.597	-0.004	2451	8.534	-0.030	243505	0.0415	1.1056	185.5*	Mirex
8.926	-0.001	5307615	10.289	0.000	17708234	80.0000	80.0000	0.0	Hexabromobiphenyl
1.759	0.001	2077	1.727	0.001	136283	0.0000	0.0000	---	Hexachloroethane
6.553	-0.028	5051	7.331	-0.006	21984	0.0000	0.0000	---	Kepone
3.799	0.000	3282589	4.126	-0.002	18514400	41.4965	38.4186	7.7	Tetrachloro-m-xylen
8.776	-0.001	2787558	9.725	0.000	11737142	41.7290	41.0035	1.8	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

KR 06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	103.7	96.0	96.0~	130- 0
Decachlorobiphenyl	104.3	102.5	102.5~	130- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

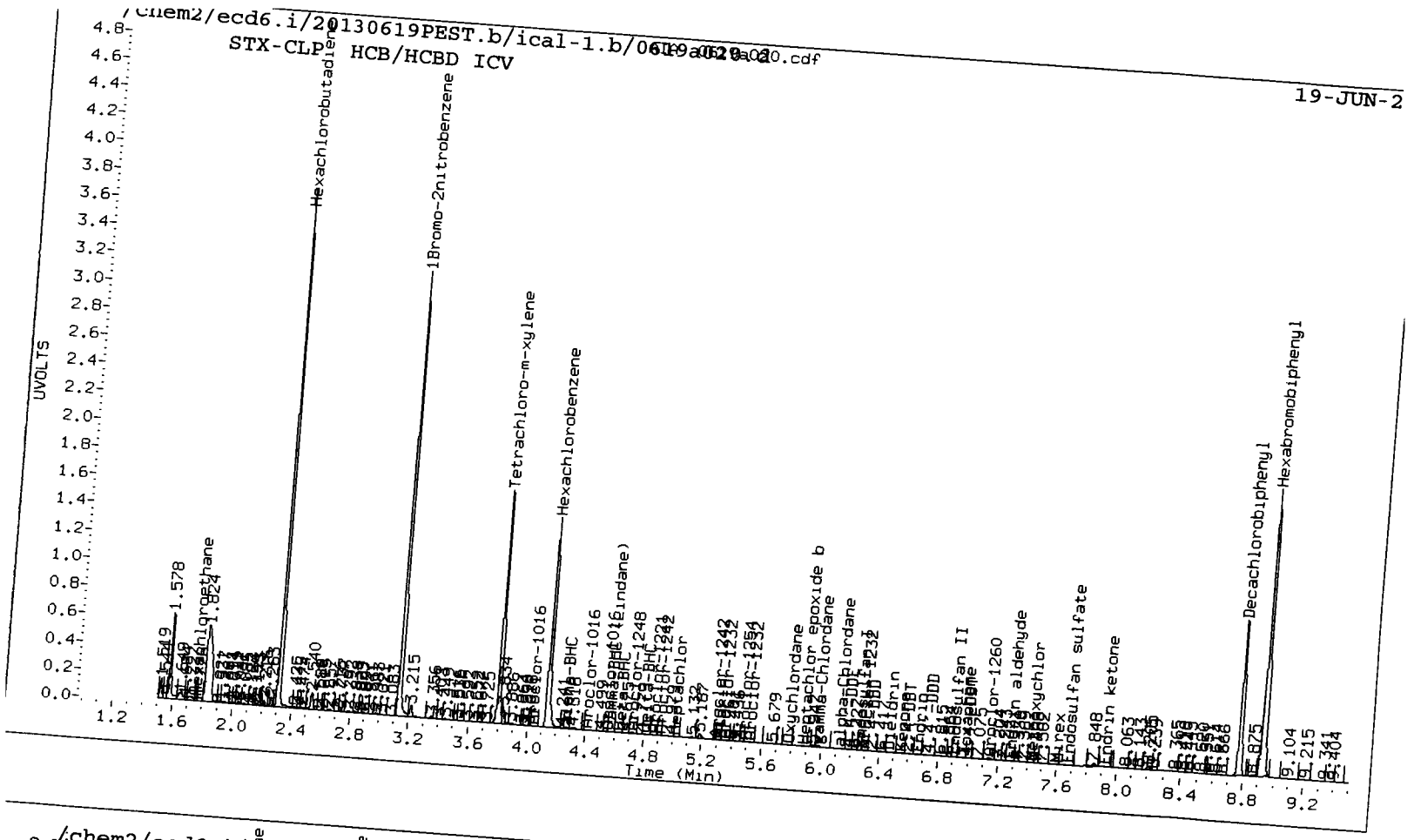
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5825856	4.2
Hexabromobiphenyl	4870538	5307615	9.0

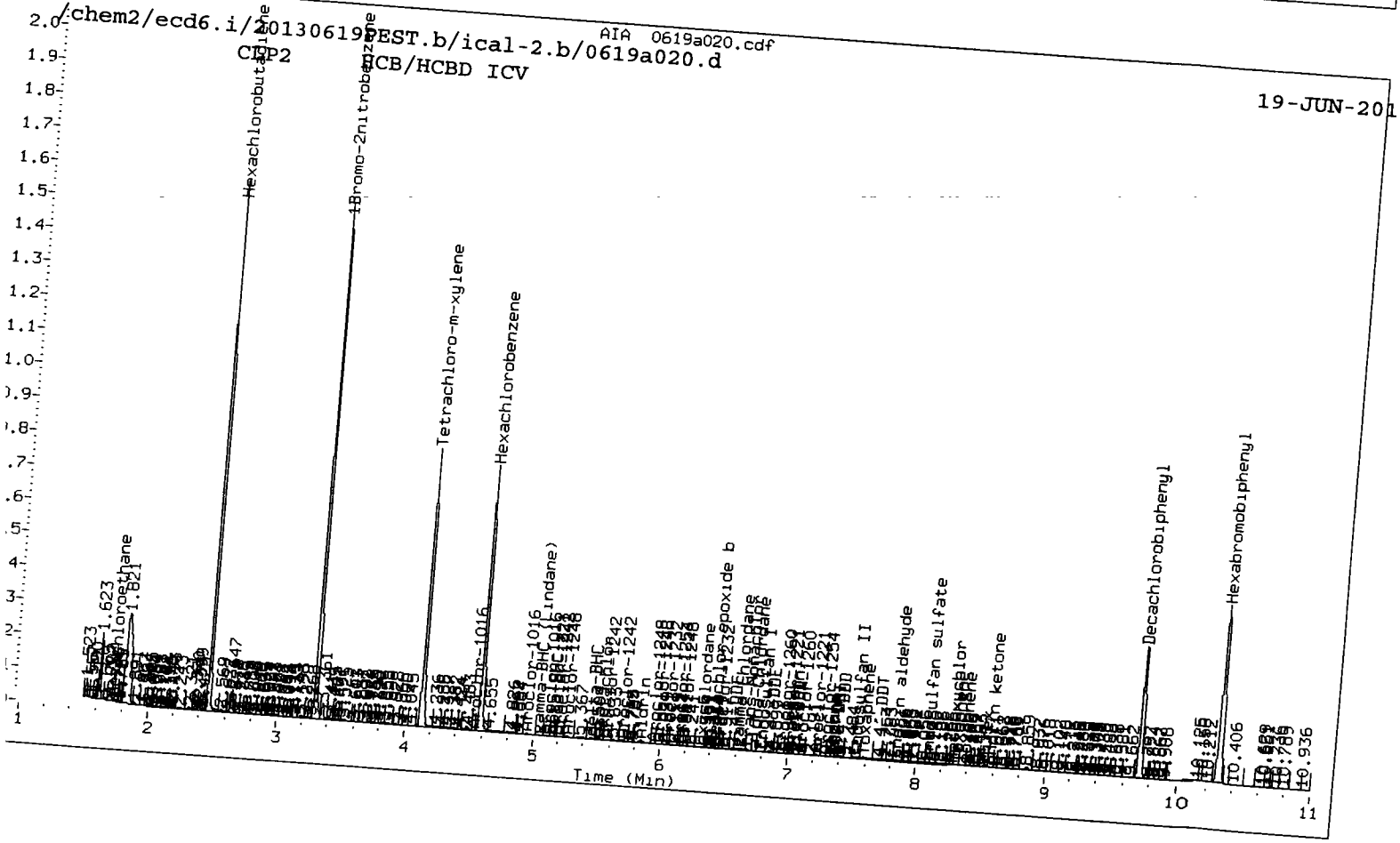
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	29136306	2.9
Hexabromobiphenyl	16454599	17708234	7.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	Peak#	STX-CLP Col RT	Shift	Height	Amount	Peak#	CLP2 Col RT	Shift	Height	Amount
Toxaphene	1	6.977	0.019	5656	1.7	1	7.285	-0.006	21029	1.7
Toxaphene	2	6.996	-0.013	4564	1.9	2	7.584	-0.031	161753	8.8
Toxaphene	3	7.285	0.018	3329	0.9	3	7.841	-0.005	51003	2.5
Toxaphene	4	7.597	0.004	2451	0.6	4	8.313	-0.001	27940	1.9
Toxaphene	5	---			0.000	5	8.374	0.022	31267	1.7
Toxaphene	6	7.924	0.011	12452	5.6	NS	---			---
Total STX-CLPAve (5 peaks): 2.135						Total CLP2Ave (5 peaks): 3.345				RPD = 44*
Corrected Ave (4 peaks): 1.270						Corrected Ave (4 peaks): 1.968				RPD = 43*


/chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a020.d
STX-CLP1 HCB/HCBD ICV
19-JUN-2
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
Decachlorobiphenyl
Hexabromobiphenyl


/chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a020.d
CLP2 HCB/HCBD ICV
19-JUN-201
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a030.d ARI ID: TOXAPHENE
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a030.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 23:17
Compound Sublist: TOXAPH Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.132	0.000	6058478	3.301	0.001	29930668	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.927	0.000	5799142	10.289	0.000	19105364	80.0000	80.0000	0.0	Hexabromobiphenyl
3.800	0.001	2712292	4.127	-0.001	16671590	32.9707	33.6765	2.1	Tetrachloro-m-xylen
8.777	0.000	2659985	9.724	0.000	11618435	36.4442	37.6206	3.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	82.4	84.2	82.4~	150- 0
Decachlorobiphenyl	91.1	94.1	91.1~	150- 0

~ Indicates recovery outside QC Limits

6/25/13

INTERNAL STANDARD SUMMARY

Column 1

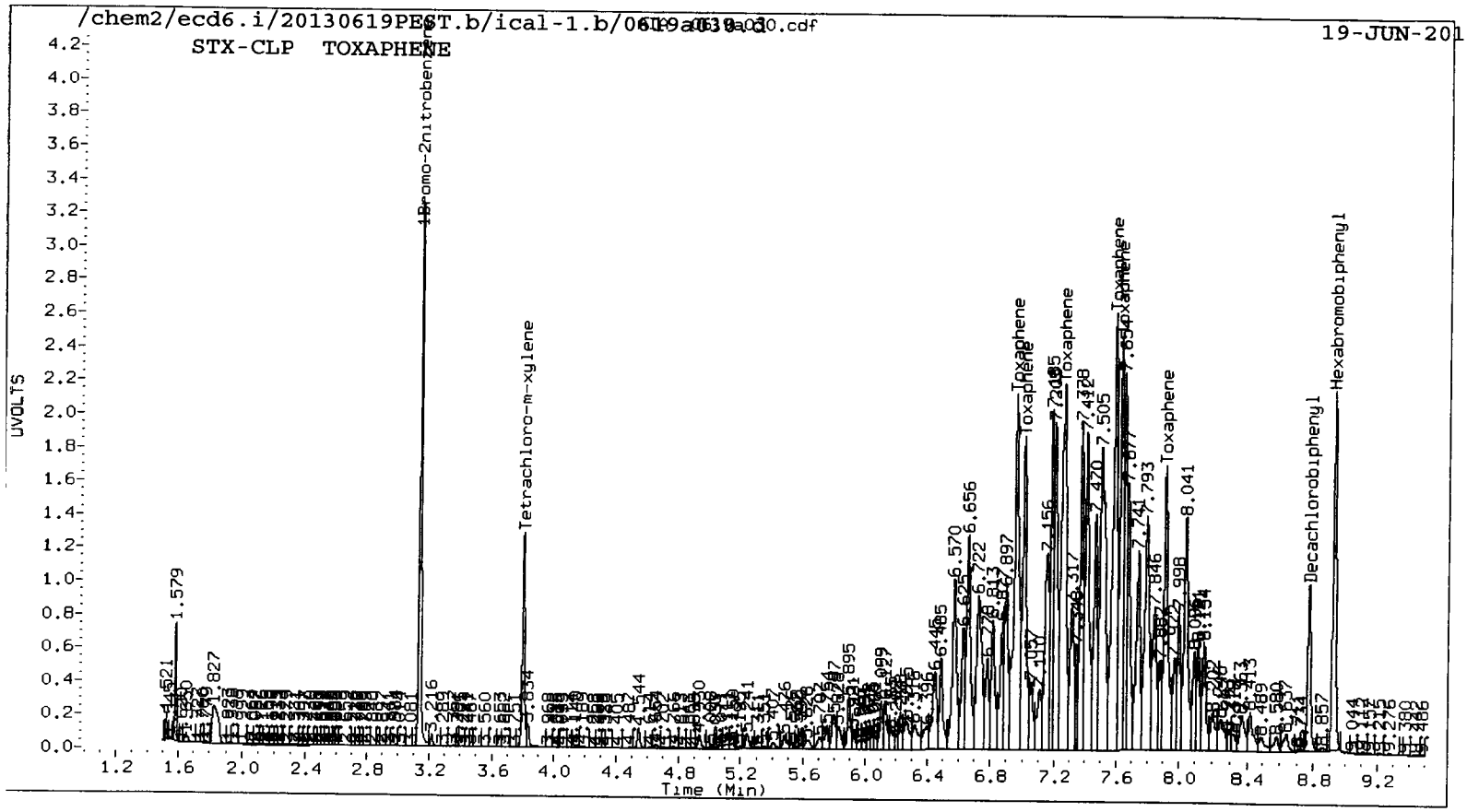
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	6058478	8.4
Hexabromobiphenyl	4870538	5799142	19.1

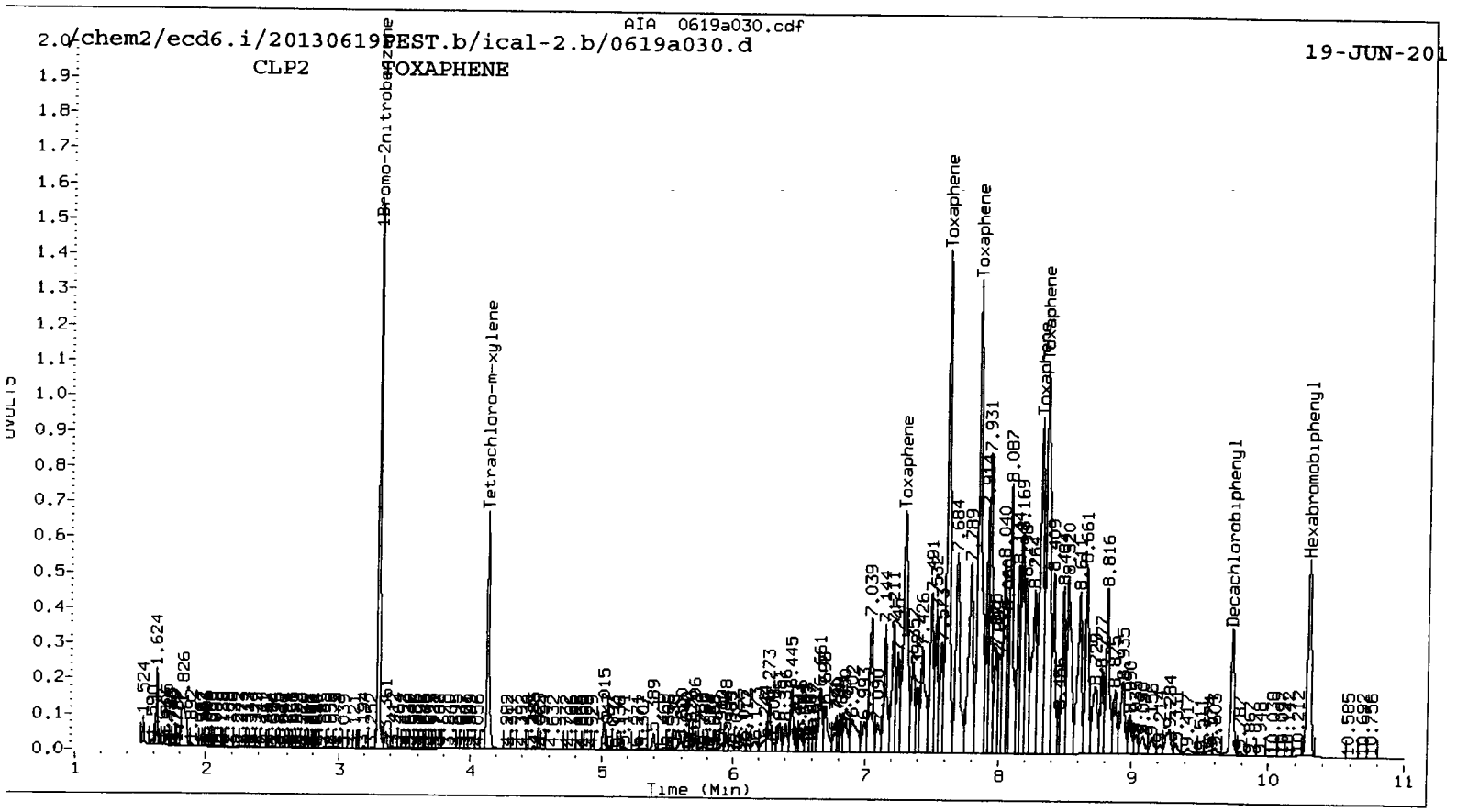
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	29930668	5.7
Hexabromobiphenyl	16454599	19105364	16.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.958	0.000	9305172	2500.0	1	7.291	0.000	33416871	2500.0
Toxaphene	2	7.010	0.000	6420857	2500.0	2	7.615	0.000	49303313	2500.0
Toxaphene	3	7.267	0.000	10593063	2500.0	3	7.846	0.000	54099773	2500.0
Toxaphene	4	7.593	0.000	10790117	2500.0	4	8.314	0.000	38993888	2500.0
Toxaphene	5	7.632	0.000	7165051	2500.0	5	8.353	0.000	49587064	2500.0
Toxaphene	6	7.913	0.000	6082441	2500.0	NS	---			---
Total STX-CLPAve (6 peaks): 2500.000						Total CLP2Ave (5 peaks): 2500.000				RPD = 0
Corrected Ave (6 peaks): 2500.000						Corrected Ave (5 peaks): 2500.000				RPD = 0


/chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a030.cdf
STX-CLP TOXAPHENE
19-JUN-201
UVOLTS
Time (Min)
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0619a030.cdf
/chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a030.d
CLP2 TOXAPHENE
19-JUN-201
UVOLTS
Time (Min)
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a022.d ARI ID: WNDE
Data file 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a022.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 20:55
Compound Sublist: WND Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
1.758	0.001	1274	1.727	0.001	146749	0.0000	0.0000	---	Hexachloroethane
3.131	-0.001	5981300	3.300	0.000	29422294	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.787	0.000	2908033	6.331	-0.001	15471323	39.9432	40.3466	1.0	Oxychlordane
5.862	0.001	2211390	6.580	0.000	11077550	39.7672	39.9916	0.6	2,4-DDE
6.110	0.000	3582762	6.688	-0.002	18301689	40.0972	40.6354	1.3	trans-Nonachlor
6.349	0.001	1984688	7.065	0.000	9866849	39.5962	40.2197	1.6	2,4-DDD
6.587	0.000	2324382	7.352	-0.001	10852842	40.0914	40.5992	1.3	2,4-DDT
6.726	0.000	3941134	7.412	-0.003	19164808	39.9713	40.8584	2.2	cis-Nonachlor
7.601	0.000	2329092	8.564	-0.001	8771162	38.7089	38.6461	0.2	Mirex
8.927	0.000	5406477	10.289	0.001	18248706	80.0000	80.0000	0.0	Hexabromobiphenyl
3.800	0.000	3055226	4.127	-0.002	18478701	37.6186	37.9718	0.9	Tetrachloro-m-xylen
8.777	0.000	2538730	9.725	0.000	10820368	37.3092	36.6812	1.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	94.0	94.9	94.0~	150- 0
Decachlorobiphenyl	93.3	91.7	91.7~	150- 0

~ Indicates recovery outside QC Limits

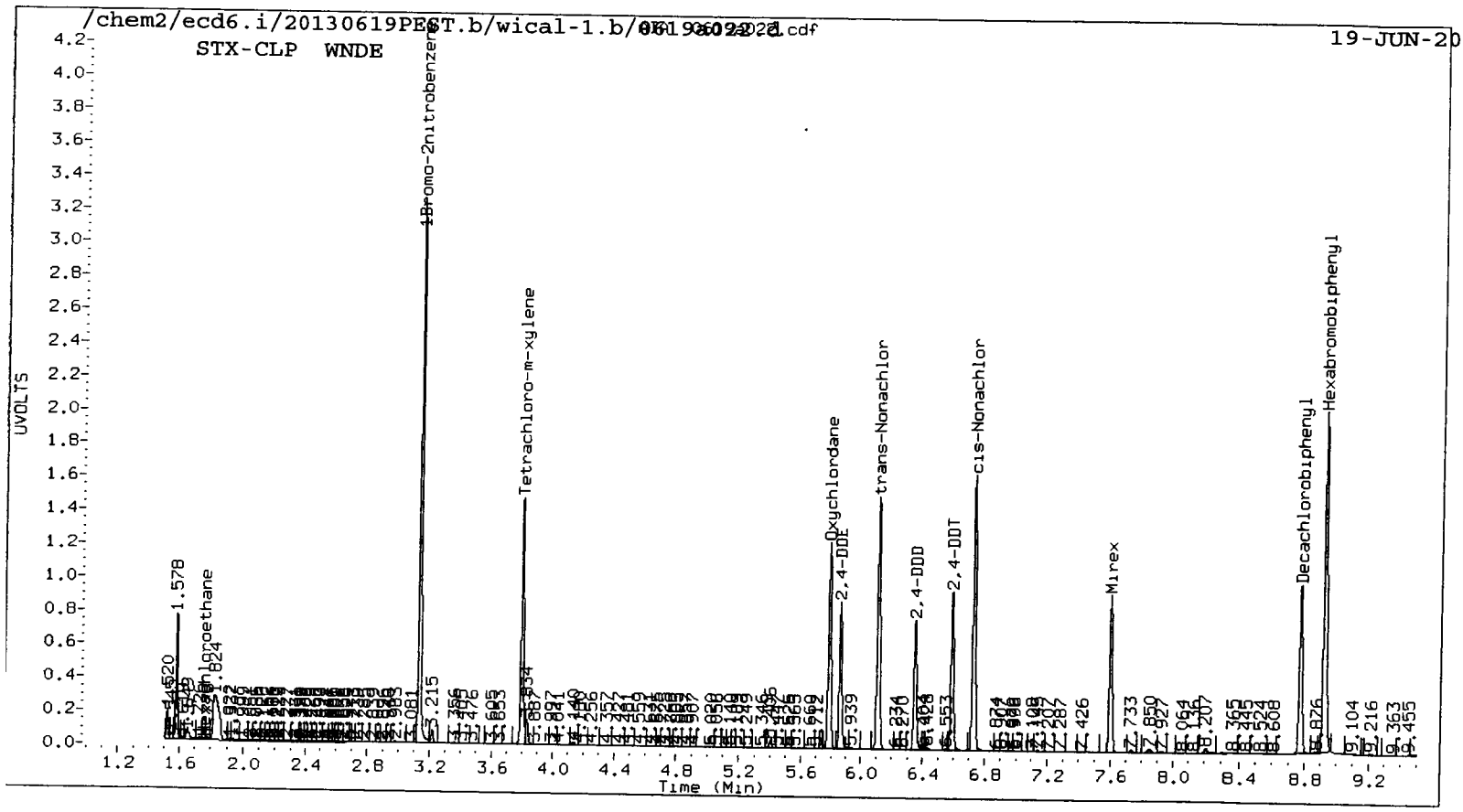
INTERNAL STANDARD SUMMARY

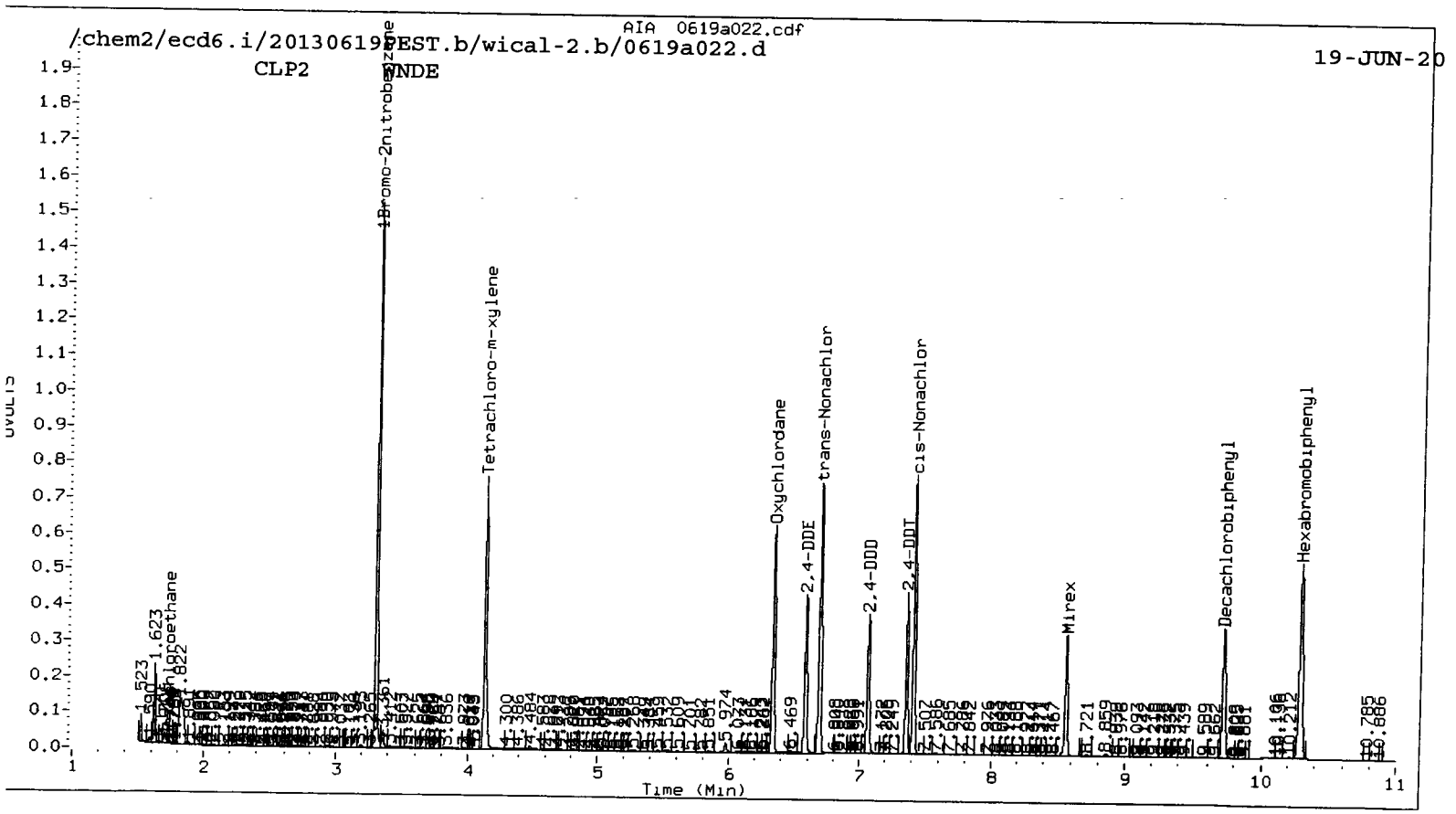
Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5981300	7.0
Hexabromobiphenyl	4870538	5406477	11.0

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	29422294	3.9
Hexabromobiphenyl	16454599	18248706	10.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a022.d
STX-CLP WNDE
19-JUN-20
UVOLTS
1.578
Pentachloroethane
4Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)


AIA 0619a022.cdf
/chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a022.d
CLP2 WNDE
19-JUN-20
UVOLTS
1.623
Pentachloroethane
4Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a023.d ARI ID: WNDA
Data file 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a023.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 21:13
Compound Sublist: WND Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.758	0.001	735	1.726	0.000	123087	0.0000	0.0000	---	Hexachloroethane
3.131	-0.001	5831093	3.300	0.001	28731894	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.787	0.000	186864	6.331	-0.002	945490	2.6702	2.5249	5.6	Oxychlordane
5.863	0.001	141733	6.580	0.000	723920	2.6516	2.6763	0.9	2,4-DDE
6.110	-0.001	219560	6.688	-0.002	1094437	2.5564	2.5172	1.5	trans-Nonachlor
6.350	0.002	126284	7.065	0.000	623677	2.6211	2.6335	0.5	2,4-DDD
6.587	0.000	143881	7.352	-0.001	660992	2.5818	2.5615	0.8	2,4-DDT
6.726	-0.001	243492	7.411	-0.004	1135268	2.5692	2.5072	2.4	cis-Nonachlor
7.601	0.000	159764	8.564	-0.001	614646	2.7624	2.8054	1.5	Mirex
8.927	-0.001	5196778	10.289	0.001	17616180	80.0000	80.0000	0.0	Hexabromobiphenyl
3.800	0.001	185150	4.126	-0.002	1188081	2.3385	2.5000	6.7	Tetrachloro-m-xylene
8.777	-0.001	172900	9.725	0.000	734360	2.6435	2.5789	2.5	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	5.8	6.3	5.8~	150- 0
Decachlorobiphenyl	6.6	6.4	6.4~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

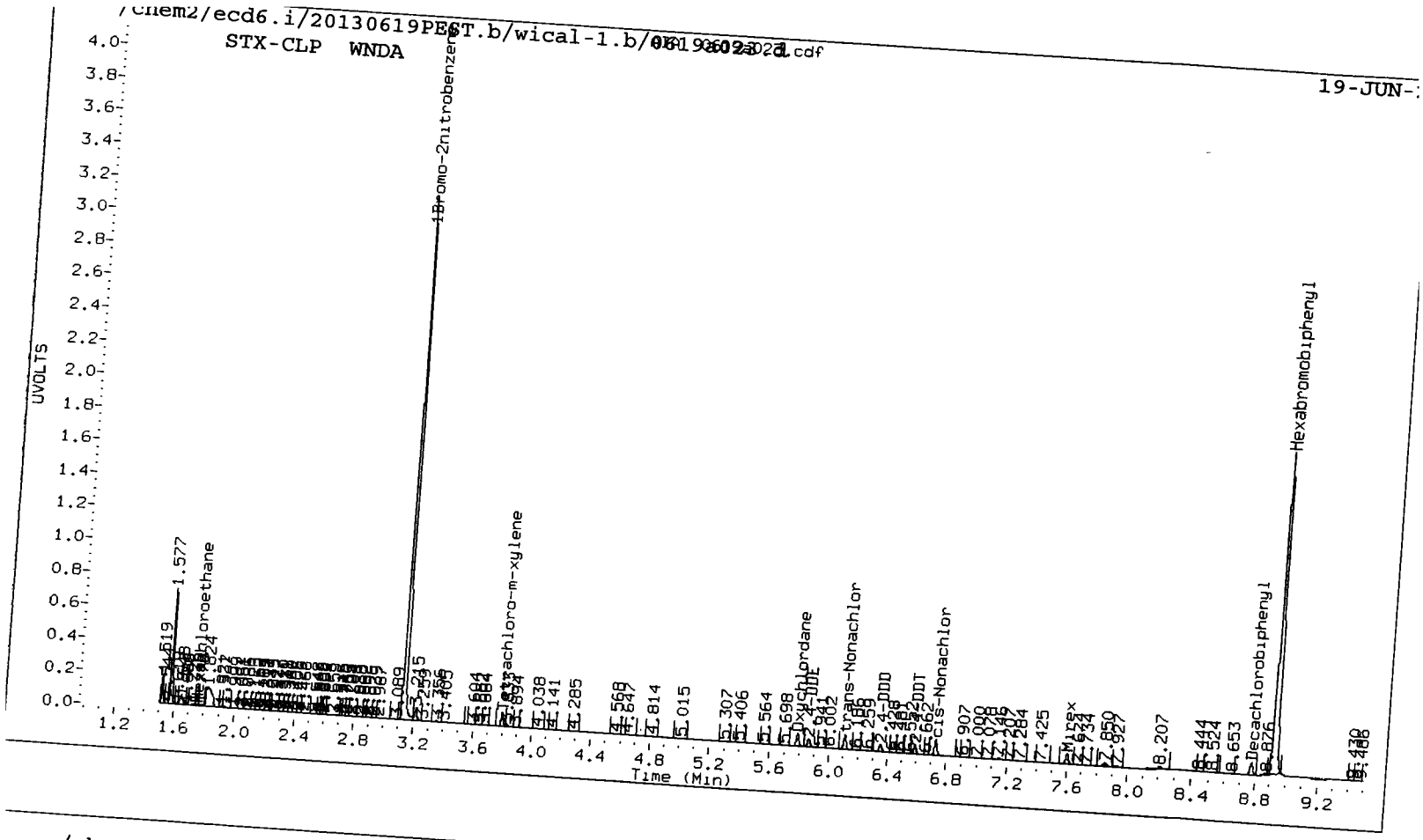
	Column 1		
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5831093	4.3
Hexabromobiphenyl	4870538	5196778	6.7

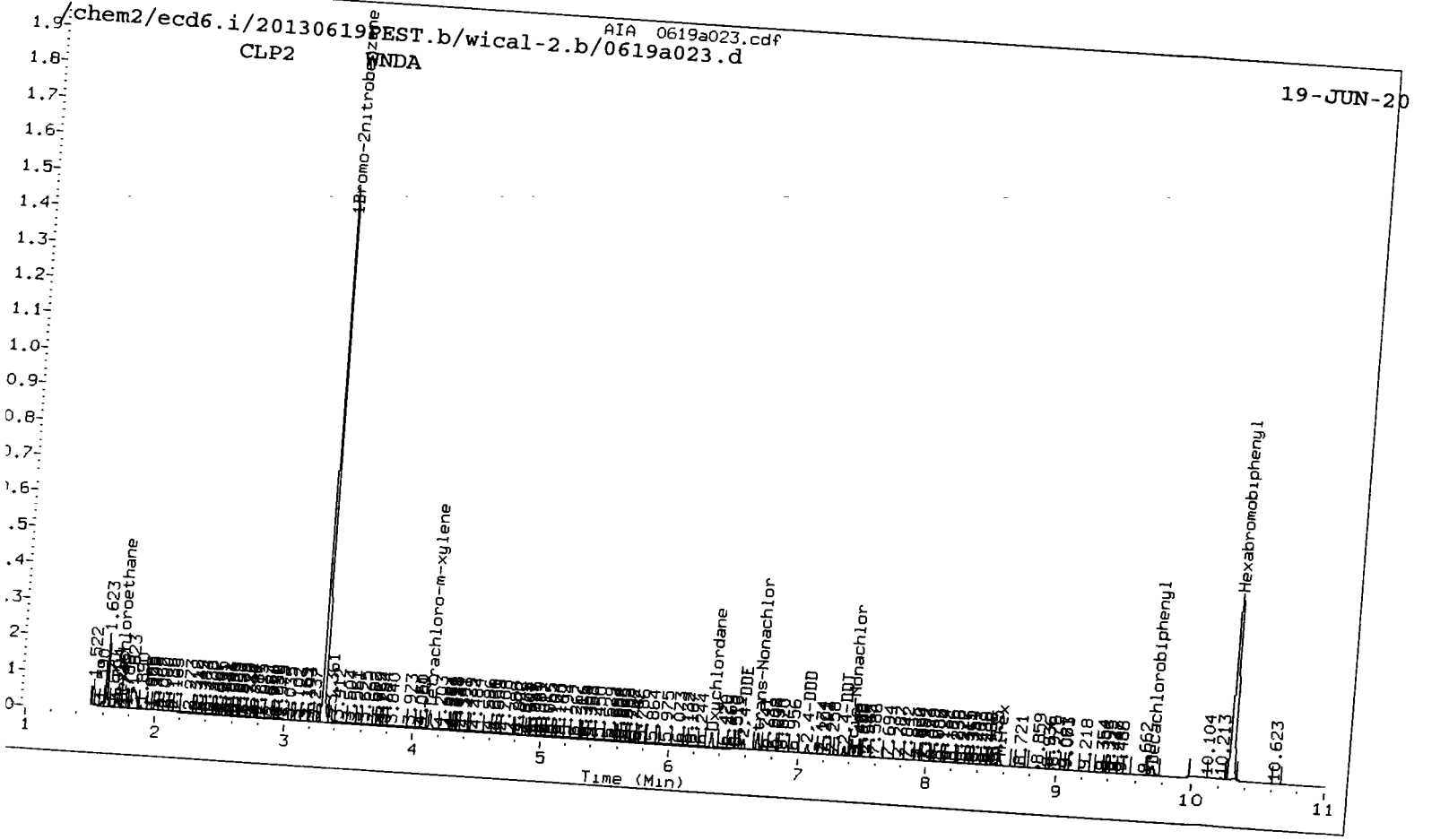
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28731894	1.5
Hexabromobiphenyl	16454599	17616180	7.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a023.d
STX-CLP WNDA
19-JUN-
UVOLTS
Time (Min)
1.577
Tetrachloroethane
Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexabromobiphenyl
Decachlorobiphenyl


/chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a023.d
AIA 0619a023.cdf
CLP2 WNDA
19-JUN-20
Time (Min)
1.623
Tetrachloroethane
Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexabromobiphenyl
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a024.d ARI ID: WNDB
Data file 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a024.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 21:30
Compound Sublist: WND Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
1.758	0.000	821	1.727	0.001	125733	0.0000	0.0000	---	Hexachloroethane
3.130	-0.001	5811438	3.300	0.000	28704362	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.787	0.000	370207	6.331	-0.002	1942777	5.2495	5.1931	1.1	Oxychlordane
5.863	0.001	282499	6.580	0.000	1471963	5.2445	5.4469	3.8	2,4-DDE
6.110	-0.001	439420	6.687	-0.003	2255304	5.0770	5.1662	1.7	trans-Nonachlor
6.350	0.002	253914	7.065	0.001	1263973	5.2297	5.3155	1.6	2,4-DDD
6.587	0.000	288053	7.352	-0.001	1344496	5.1291	5.1890	1.2	2,4-DDT
6.727	0.000	490995	7.412	-0.004	2346101	5.1408	5.1603	0.4	cis-Nonachlor
7.600	0.000	306200	8.564	0.000	1166537	5.2536	5.3027	0.9	Mirex
8.927	0.000	5237048	10.289	0.001	17688146	80.0000	80.0000	0.0	Hexabromobiphenyl
3.800	0.000	369366	4.127	-0.002	2455096	4.6809	5.1712	10.0	Tetrachloro-m-xylene
8.777	0.000	341718	9.725	0.000	1439576	5.1844	5.0348	2.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

6/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	11.7	12.9	11.7~	150- 0
Decachlorobiphenyl	13.0	12.6	12.6~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

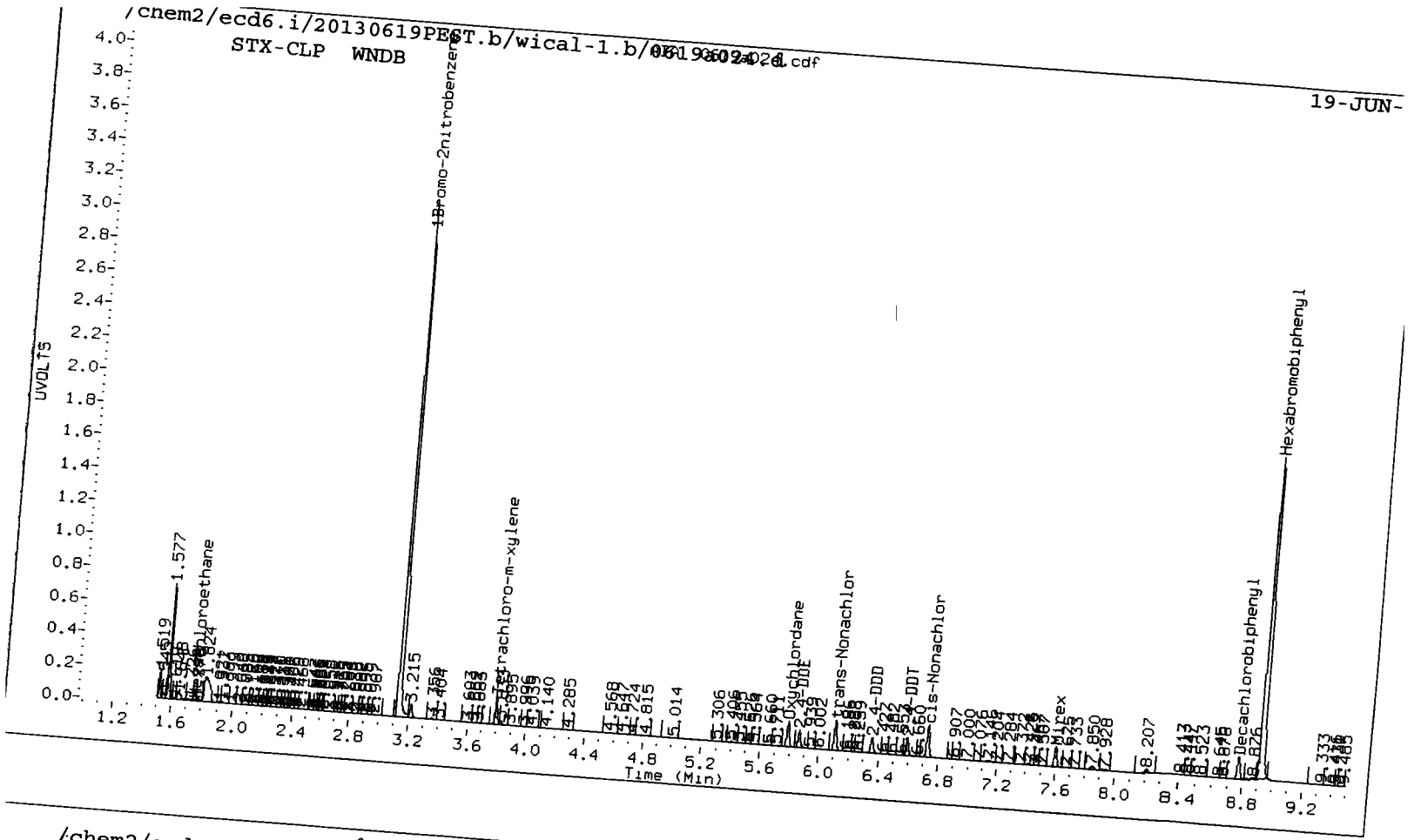
Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5811438	3.9
Hexabromobiphenyl	4870538	5237048	7.5

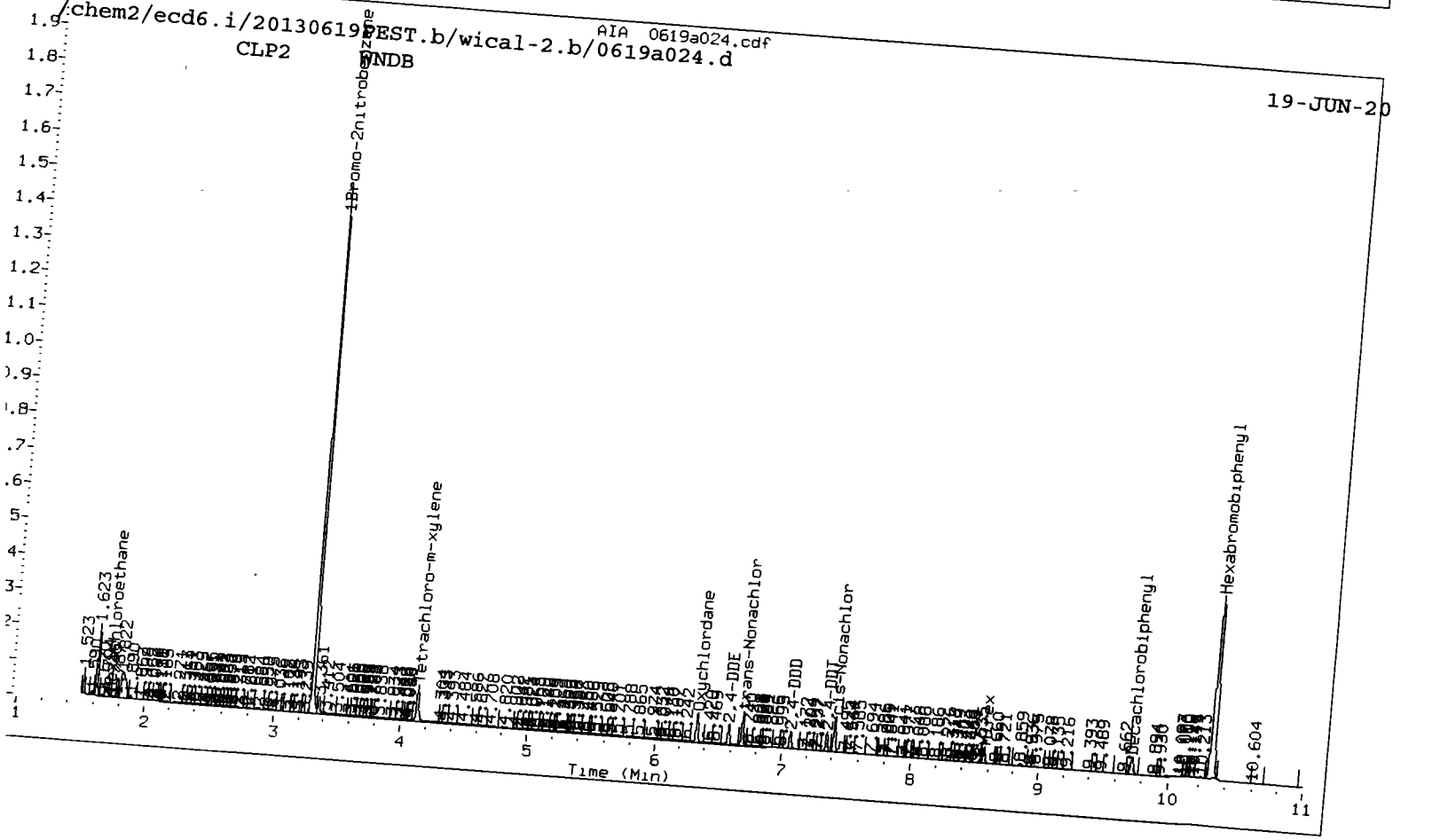
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28704362	1.4
Hexabromobiphenyl	16454599	17688146	7.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

			STX-CLP Col				CLP2 Col		
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a024.d
STX-CLP WNDB
AIA 0619a024.cdf
19-JUN-
UVOLTS
Time (Min)
1,2,4,5-Tetrachloro-m-xylene
Hexabromobiphenyl
Decachlorobiphenyl


/chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a024.d
CLP2 WNDB
AIA 0619a024.cdf
19-JUN-20
Time (Min)
1,2,4,5-Tetrachloro-m-xylene
Hexabromobiphenyl
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a025.d ARI ID: WNDC
Data file 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a025.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 21:48
Compound Sublist: WND Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.759	0.001	791	1.727	0.001	131582	0.0000	0.0000	---	Hexachloroethane
3.131	-0.001	5920700	3.300	0.001	29296978	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.787	0.000	743037	6.331	-0.001	3950329	10.3213	10.3459	0.2	Oxychlordane
5.863	0.001	557203	6.580	0.000	2924113	10.1333	10.6016	4.5	2,4-DDE
6.110	0.000	883302	6.688	-0.002	4661405	9.9973	10.4292	4.2	trans-Nonachlor
6.350	0.002	498501	7.066	0.001	2517945	10.0579	10.3425	2.8	2,4-DDD
6.588	0.001	580337	7.352	0.000	2740346	10.1229	10.3300	2.0	2,4-DDT
6.727	0.000	962333	7.412	-0.003	4841041	9.8703	10.4001	5.2	cis-Nonachlor
7.601	0.000	603038	8.563	-0.001	2254506	10.1356	10.0097	1.2	Mirex
8.926	-0.001	5346075	10.288	0.000	18109694	80.0000	80.0000	0.0	Hexabromobiphenyl
3.800	0.001	744789	4.127	-0.001	4872540	9.2644	10.0554	8.2	Tetrachloro-m-xylene
8.776	-0.001	647176	9.724	-0.001	2804700	9.6184	9.5810	0.4	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

6/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	23.2	25.1	23.2~	150- 0
Decachlorobiphenyl	24.0	24.0	24.0~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

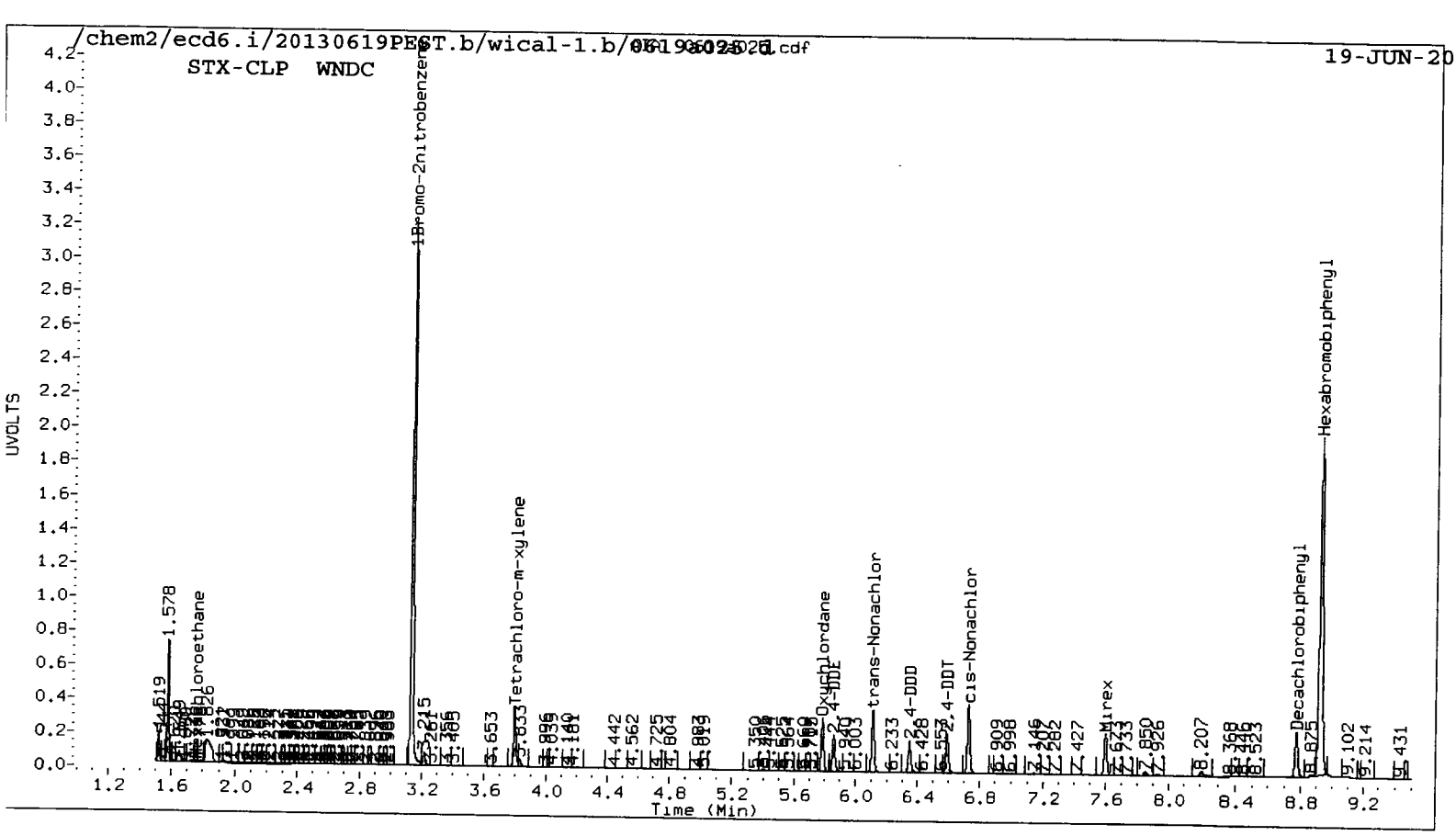
	Column 1		
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5920700	5.9
Hexabromobiphenyl	4870538	5346075	9.8

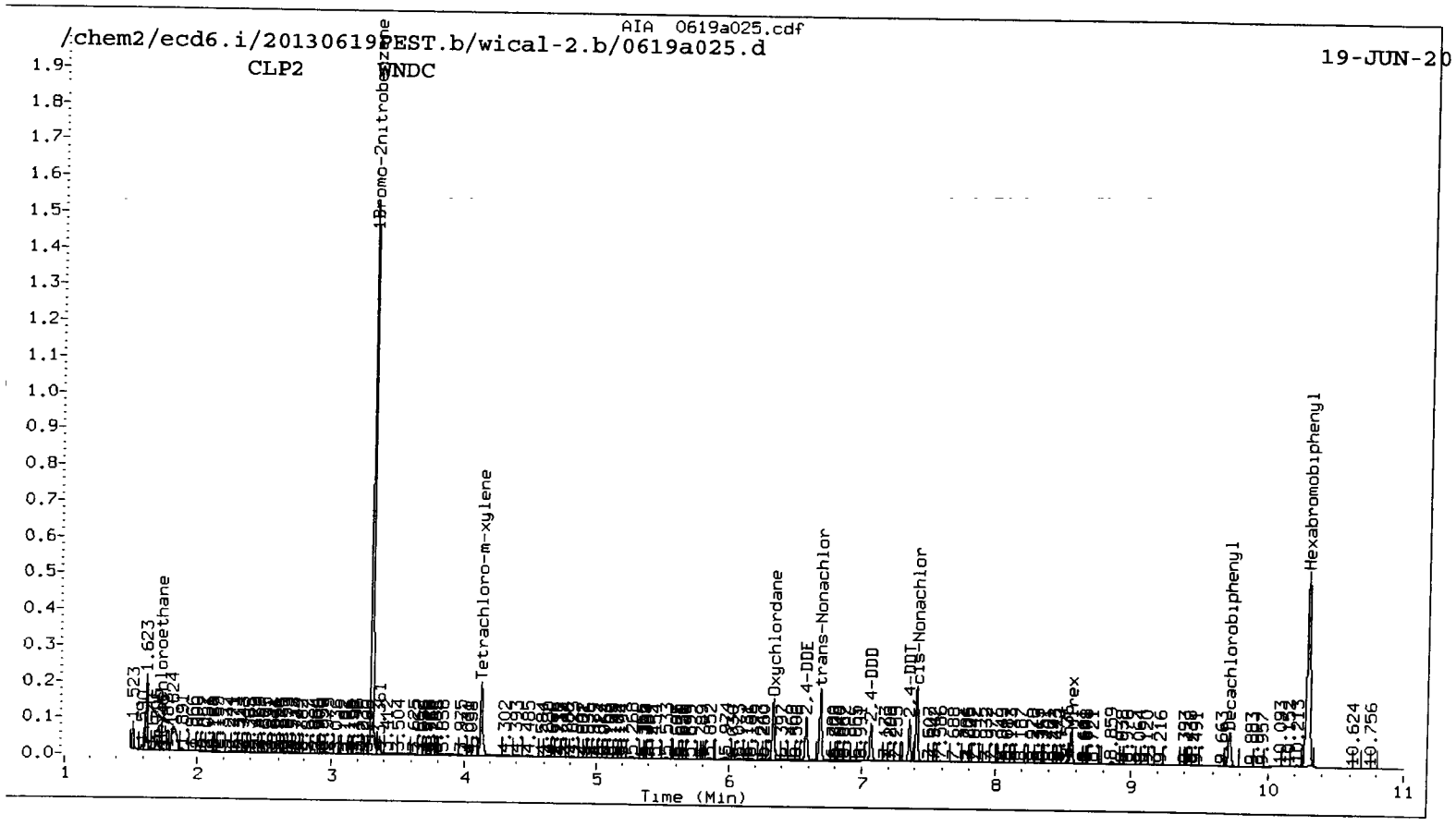
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	29296978	3.4
Hexabromobiphenyl	16454599	18109694	10.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

			STX-CLP Col				CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a025.d
STX-CLP WNDC
19-JUN-20
UVOLTS
Time (Min)
1.578
Tetrachloro-m-xylene
Hexabromobiphenyl
Decachlorobiphenyl
Mirex


/chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a025.d
AIA 0619a025.cdf
CLP2 WNDC
19-JUN-20
Time (Min)
1.623
Tetrachloro-m-xylene
Oxychlordane
trans-Nonachlor
cis-Nonachlor
Hexabromobiphenyl
Decachlorobiphenyl
Mirex

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a026.d ARI ID: WNDD
Data file 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a026.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 22:06
Compound Sublist: WND Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.758	0.001	1046	1.726	0.001	140170	0.0000	0.0000	---	Hexachloroethane
3.131	-0.001	5825954	3.300	0.001	28828761	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.788	0.001	1417285	6.332	-0.001	7742609	20.0729	20.6071	2.6	Oxychlordane
5.863	0.001	1081320	6.581	0.001	5647091	20.0504	20.8065	3.7	2,4-DDE
6.111	0.000	1724901	6.689	-0.002	9125838	19.9053	20.7697	4.3	trans-Nonachlor
6.350	0.002	974743	7.066	0.001	4886930	20.0521	20.4193	1.8	2,4-DDD
6.588	0.001	1124874	7.352	0.000	5341498	20.0058	20.4824	2.4	2,4-DDT
6.727	0.000	1892006	7.413	-0.003	9477549	19.7860	20.7118	4.6	cis-Nonachlor
7.601	0.000	1136859	8.565	0.000	4368778	19.4823	19.7312	1.3	Mirex
8.928	0.000	5243309	10.290	0.001	17802786	80.0000	80.0000	0.0	Hexabromobiphenyl
3.800	0.001	1458232	4.127	-0.001	9366030	18.4338	19.6425	6.3	Tetrachloro-m-xylene
8.777	0.000	1240181	9.725	0.000	5343942	18.7929	18.5698	1.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

jx 06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	46.1	49.1	46.1~	150- 0
Decachlorobiphenyl	47.0	46.4	46.4~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

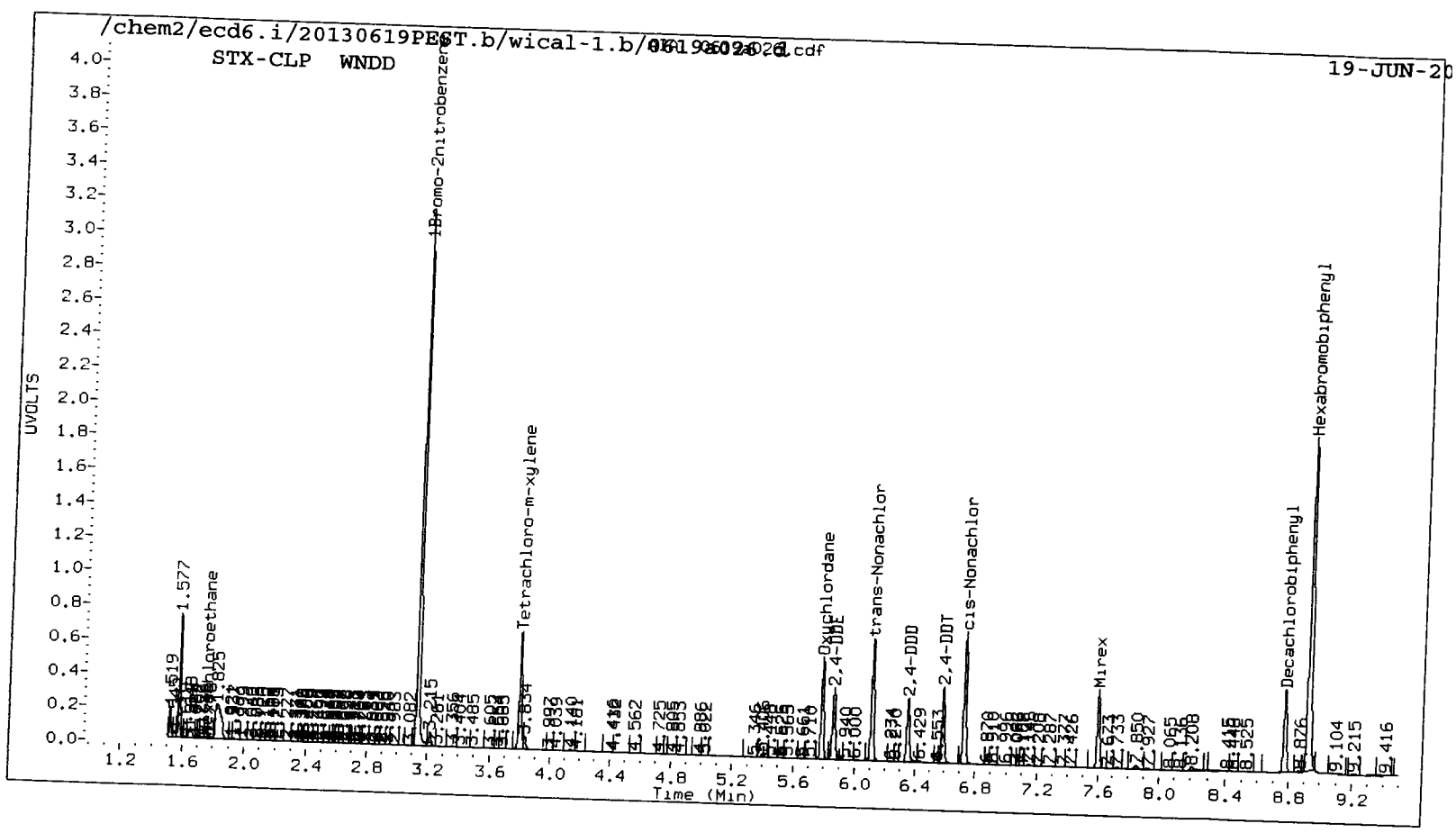
	Column 1		
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5825954	4.2
Hexabromobiphenyl	4870538	5243309	7.7

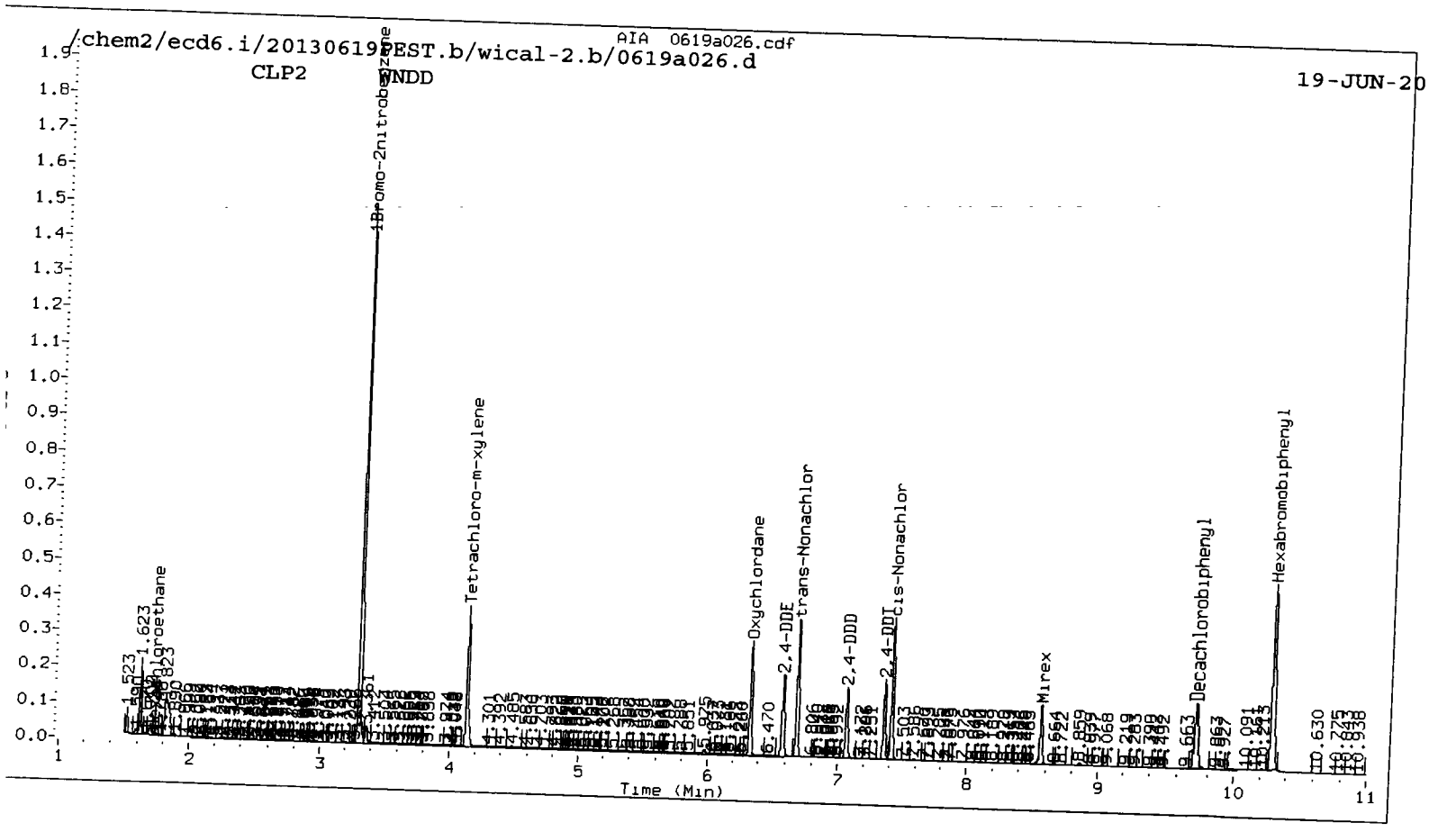
WU55 : 20529

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28828761	1.8
Hexabromobiphenyl	16454599	17802786	8.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a026.d
0619a026.cdf
STX-CLP WNDD
19-JUN-20
UVOLTS
Time (Min)
1,2-Dibromoethane
1,3-Dibromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl


/chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a026.d
AIA 0619a026.cdf
CLP2 WNDD
19-JUN-20
Time (Min)
1,2-Dibromoethane
1,3-Dibromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a027.d ARI ID: WNDF
Data file 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a027.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 22:24
Compound Sublist: WND Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.756	-0.001	1746	1.726	0.000	191313	0.0000	0.0000	---	Hexachloroethane
3.130	-0.001	5852777	3.300	0.000	28874628	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.787	0.000	5496120	6.332	-0.001	29291826	76.9993	77.8369	1.1	Oxychlordane
5.861	0.000	4254664	6.580	-0.001	20183802	78.0390	74.2485	5.0	2,4-DDE
6.110	0.000	7066116	6.688	-0.002	35122691	80.6611	79.7644	1.1	trans-Nonachlor
6.348	0.000	3864434	7.065	0.000	18468214	78.6383	77.0003	2.1	2,4-DDD
6.587	0.000	4503164	7.352	-0.001	20504517	79.2224	78.4569	1.0	2,4-DDT
6.726	0.000	7777229	7.412	-0.003	37026269	80.4524	80.7412	0.4	cis-Nonachlor
7.601	0.000	4560804	8.565	0.000	16872664	77.3130	76.0396	1.7	Mirex
8.927	0.000	5300626	10.289	0.000	17841215	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	6041881	4.127	-0.002	34519068	76.0265	72.2785	5.1	Tetrachloro-m-xylen
8.776	-0.001	5004883	9.725	0.000	21145178	75.0205	73.3197	2.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	190.1	180.7	180.7~	150- 0
Decachlorobiphenyl	187.6	183.3	183.3~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

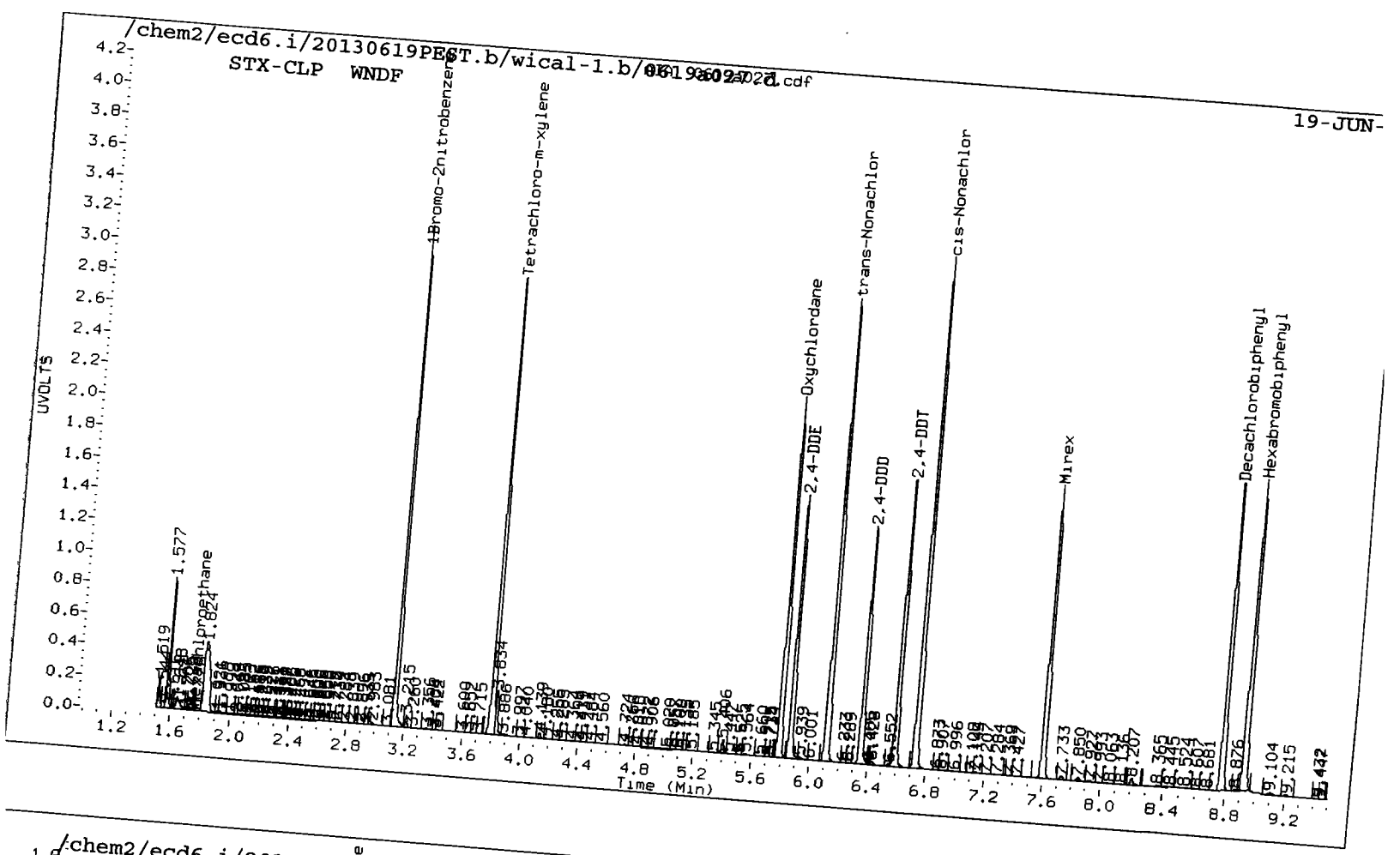
	Column 1		
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5852777	4.7
Hexabromobiphenyl	4870538	5300626	8.8

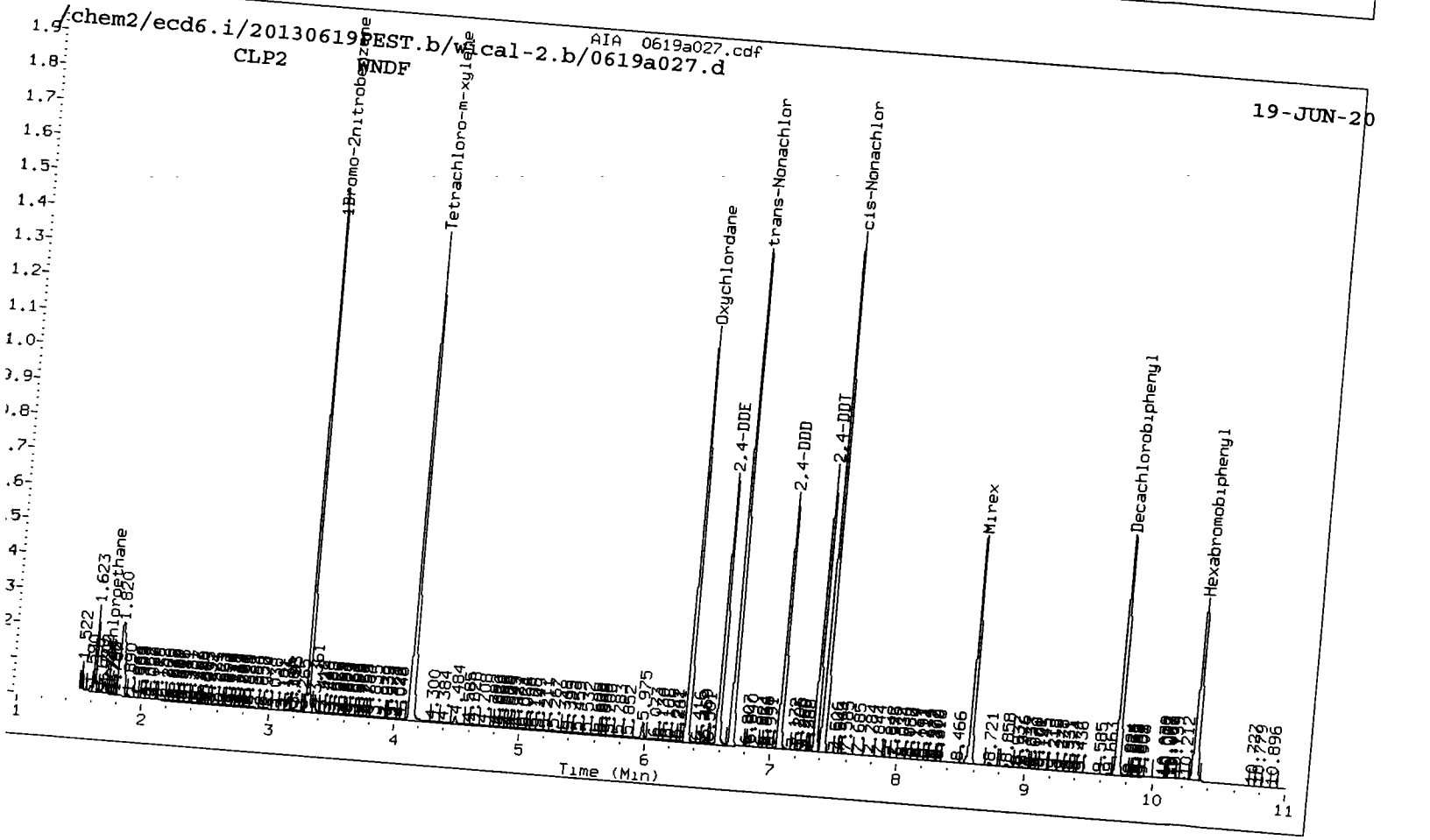
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28874628	2.0
Hexabromobiphenyl	16454599	17841215	8.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a027.d
STX-CLP WNDF
AIA 0619a027.cdf
19-JUN-
UVOLTS
1.577
1.824
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)


/chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a027.d
CLP2 WNDF
AIA 0619a027.cdf
19-JUN-20
1.623
1.820
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a028.d ARI ID: WNDG
Data file 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a028.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 22:42
Compound Sublist: WND Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.758	0.000	2172	1.726	0.000	459344	0.0000	0.0000	---	Hexachloroethane
3.130	-0.001	5777001	3.299	0.000	28352573	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.787	0.000	10041452	6.332	0.000	53496498	141.6274	144.7734	2.2	Oxychlordane
5.861	0.000	7841014	6.580	0.000	34667644	144.7901	129.8772	10.9	2,4-DDE
6.110	0.000	13314783	6.690	0.000	60674113	153.0163	138.4836	10.0	trans-Nonachlor
6.348	0.000	7219024	7.065	0.000	32848121	147.8928	137.6422	7.2	2,4-DDD
6.587	0.000	8458360	7.353	0.000	36813655	149.8087	141.5676	5.7	2,4-DDT
6.727	0.000	14793375	7.415	0.000	62692268	154.0642	137.3955	11.4	cis-Nonachlor
7.601	0.000	8649046	8.564	0.000	32256718	147.6044	146.0999	1.0	Mirex
8.927	0.000	5265103	10.288	0.000	17752152	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	11433536	4.127	-0.002	59324331	145.7582	126.5048	14.1	Tetrachloro-m-xyl
8.777	-0.001	9543559	9.724	0.000	40008772	144.0181	139.4241	3.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	364.4	316.3	316.3~	150- 0
Decachlorobiphenyl	360.0	348.6	348.6~	150- 0

~ Indicates recovery outside QC Limits

06/25/13

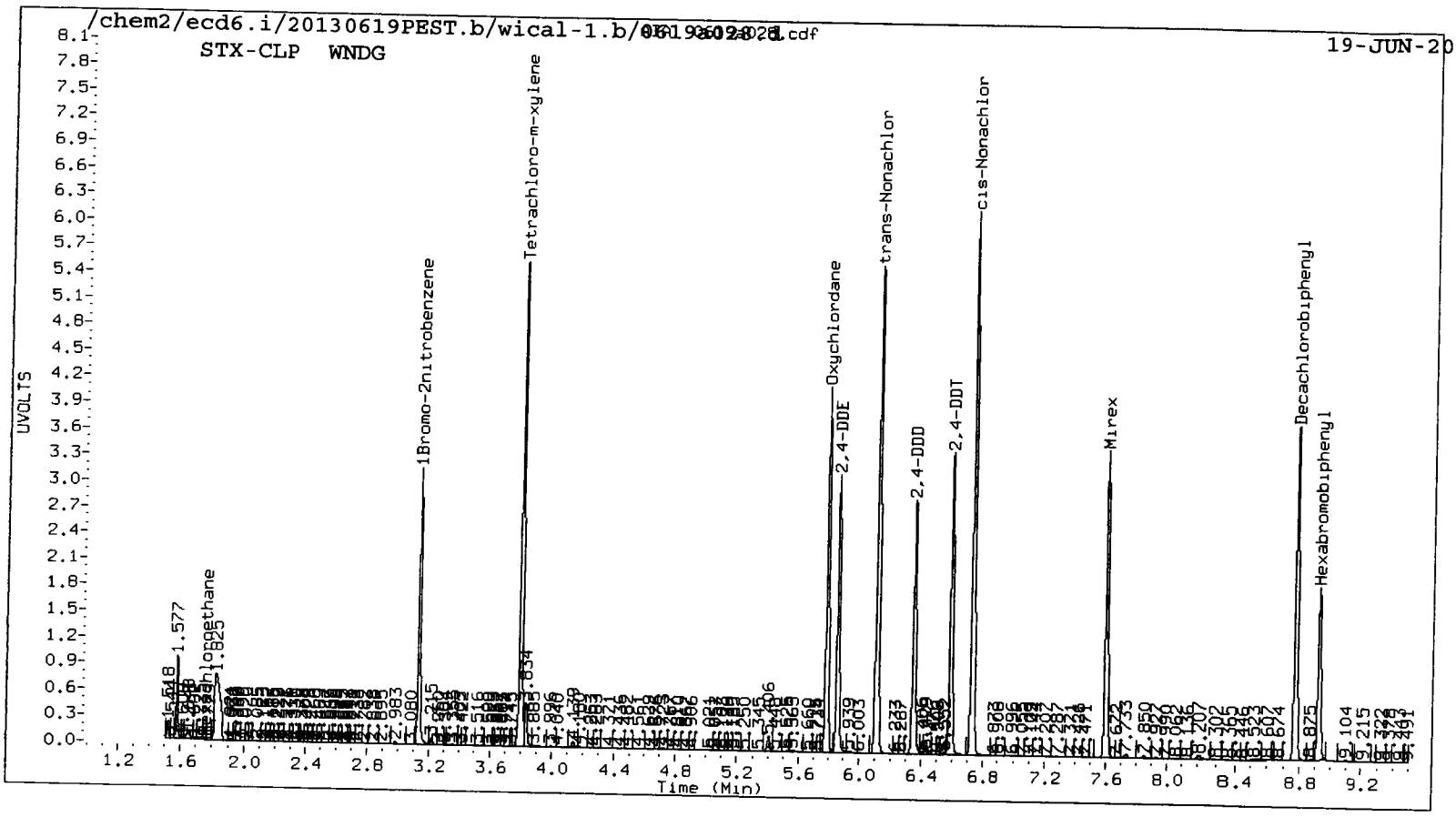
INTERNAL STANDARD SUMMARY

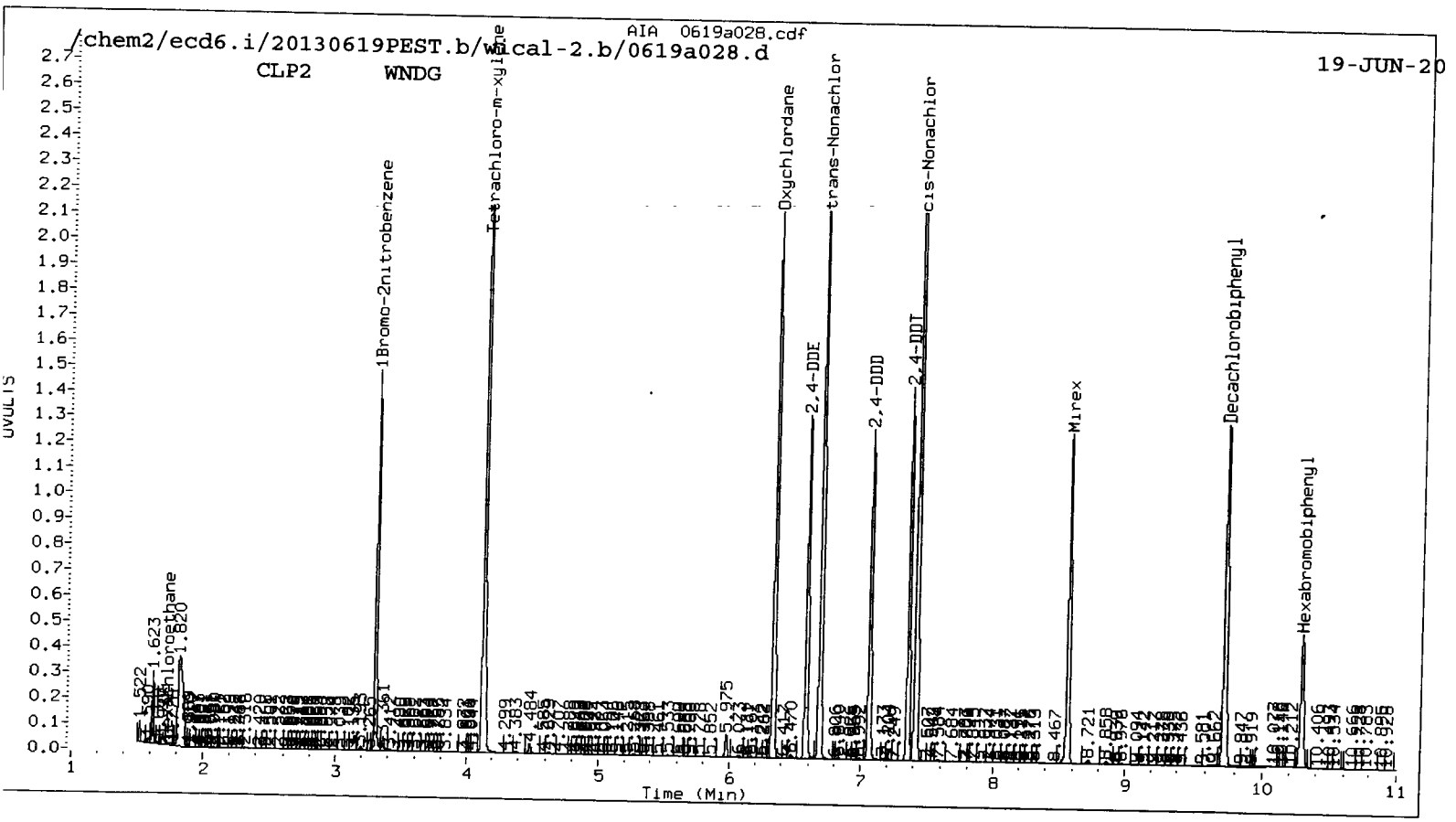
	Column 1		
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5777001	3.3
Hexabromobiphenyl	4870538	5265103	8.1

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28352573	0.1
Hexabromobiphenyl	16454599	17752152	7.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a028.d
STX-CLP WNDG
19-JUN-20
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
trans-Nonachlor
cis-Nonachlor
2,4-DDE
2,4-DDD
2,4-DDT
Mirex
Decachlorobiphenyl
Hexabromobiphenyl


/chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a028.d
AIA 0619a028.cdf
CLP2 WNDG
19-JUN-20
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
trans-Nonachlor
cis-Nonachlor
2,4-DDE
2,4-DDD
2,4-DDT
Mirex
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a029.d ARI ID: WND ICV
Data file 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a029.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 22:59
Compound Sublist: WND Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
1.758	0.001	826	1.726	0.000	153413	0.0000	0.0000	---	Hexachloroethane
3.130	-0.001	5841693	3.299	0.000	28922276	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.787	0.000	3597148	6.331	-0.001	17914975	49.2350	47.5269	3.5	Oxychlordane
5.861	-0.001	2932889	6.580	0.000	14207629	52.5566	52.1783	0.7	2,4-DDE
6.110	-0.001	4035811	6.688	-0.002	19905533	45.0090	44.7751	0.5	trans-Nonachlor
6.348	0.000	2687997	7.064	0.000	12861642	53.4395	53.1136	0.6	2,4-DDD
6.587	0.000	3215633	7.353	0.000	14586359	55.2691	55.2803	0.0	2,4-DDT
6.726	0.000	4401299	7.413	-0.002	20968088	44.4816	45.2883	1.8	cis-Nonachlor
7.598	-0.002	1170	8.574	0.010	45639	0.0194	0.2037	165.3*	Mirex
8.926	-0.001	5425526	10.289	0.000	18012862	80.0000	80.0000	0.0	Hexabromobiphenyl
3.797	-0.002	17239	4.129	0.001	47453	0.2173	0.0992	74.6*	Tetrachloro-m-xylene
8.780	0.003	7350	9.727	0.003	5151	0.1076	0.0177	143.5*	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	0.5	0.2	0.2~	150- 0
Decachlorobiphenyl	0.3	0.0	0.0~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

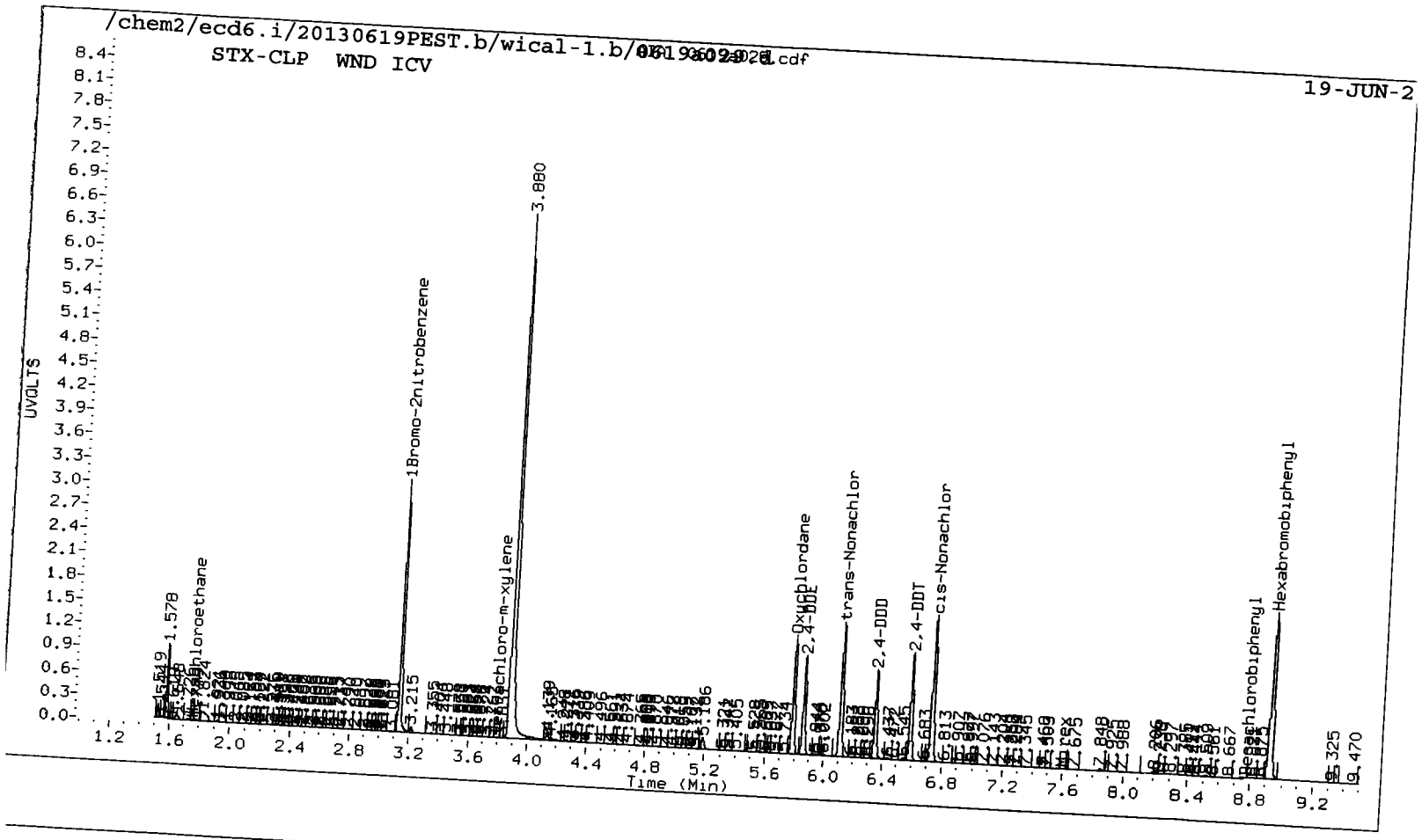
Standard Cpnd	Column 1 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5841693	4.5
Hexabromobiphenyl	4870538	5425526	11.4

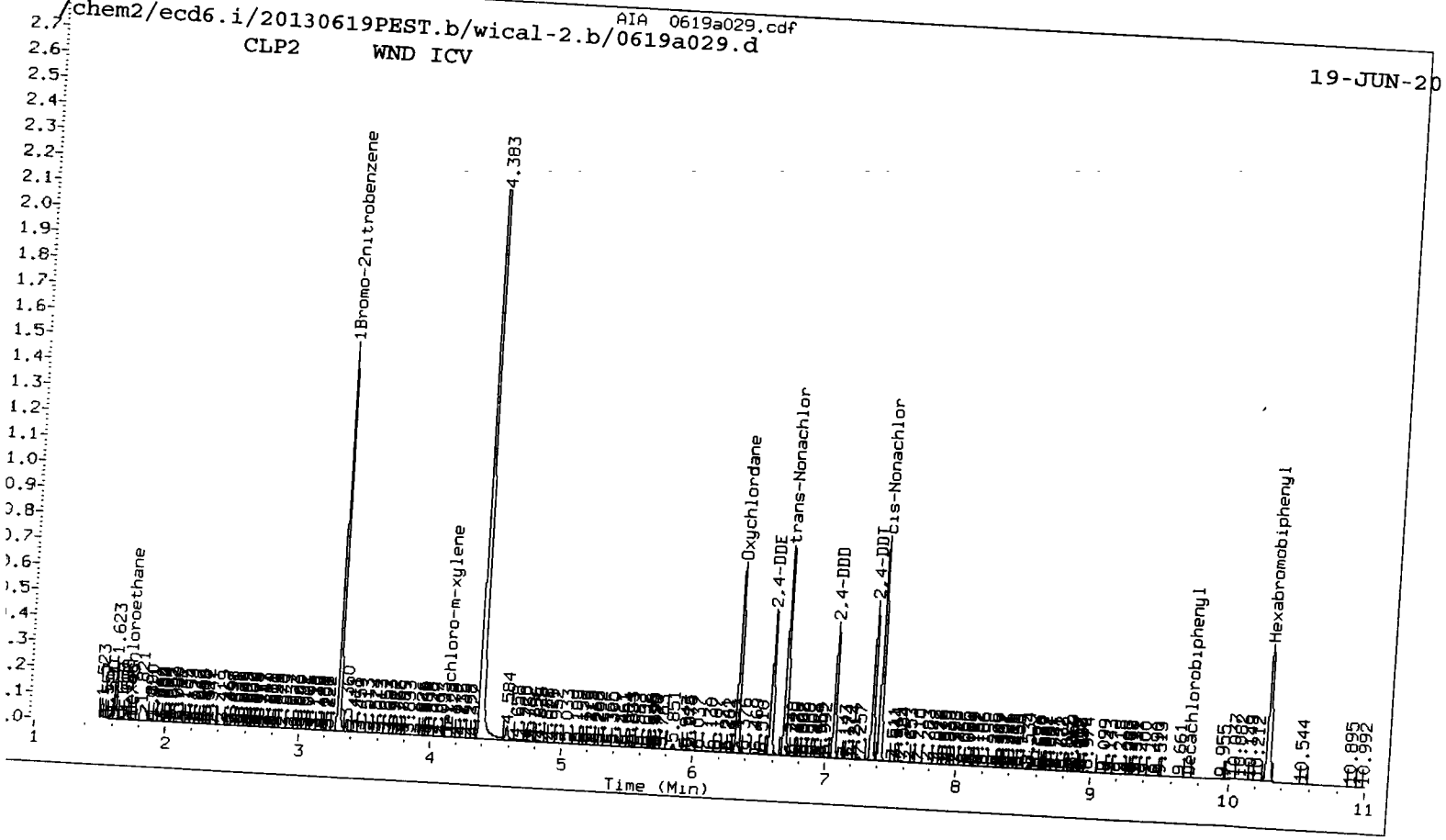
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28922276	2.1
Hexabromobiphenyl	16454599	18012862	9.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a029.d
STX-CLP WND ICV
19-JUN-2
UVOLTS
Time (Min)
1.578
1Bromo-2nitrobenzene
3.880
Chloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Hexabromobiphenyl


/chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a029.d
AIA 0619a029.cdf
CLP2 WND ICV
19-JUN-20
Time (Min)
1Bromo-2nitrobenzene
4.383
Chloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Hexabromobiphenyl

Pesticide Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WU65, WU71

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WU65 Client ID: SAIC

METHOD: ~~**8082A**(PCB)~~ **8151A**(Herb) **NW-TPH**(TPH-D) **NW-TPH**(HCID) **8041A**(PCP)
8081B(PEST) **8015B**(Dir Inj) **NW-EPH**(EPH) **8082A**(PBDE) **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: 06/19/13 Analysis Start Date: 07/05/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Endrin/DDT B.D. ≤15%?	NA / (Y) / N / ✓	Method Blank in Control?	(Y) / N / ✓
Retention times within Windows?	(Y) / N / ✓	LCS / LCSD Recovery in Control?	(Y) / N / ✓
CCAL met %D Criteria?	(Y) / N / ✓	LCS / LCSD RPD ≤30%?	NA / ~~X~~ 20%
Surrogate Recovery in Control?	(Y) / N / ✓	MS / MSD Recovery in Control?	Y / N / NT
Internal STD. within 50-200%?	NA / (Y) / N / ✓	MS / MSD RPD ≤30%?	(NA) / NA ✓
Manual Integrations?	Y / (N) ✓	Samples Diluted?	Y / (N) ✓
Integration Summary?	(Y) / N ✓	Special Analysis Request?	(Y) / N / ✓

Detail problems, corrective actions and/or other pertinent information below

(Review 1) Analyst: YZ **Date:** 7/8/13

(Review 2) Reviewer: B **Date:** 7/8/13

Analytical Resources Inc.: Organics Instrument Log

ECD6 Serial No.: US00007128

Date: 07/05/13 Analysis: Pest Analyst: YB

Column 1 Serial No.: 1085044 Column Type: CC1

Column 2 Serial No.: 109 4709 Column Type: CC2

GC Method: Pest ICal Date:

IS	Ical/Ccal	ICV
2006-1	B339	
	B359	
	B370	

GC LOG SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130619PEST.b/0705-1.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	05-JUL-2013 11:40	0705a002.d	1	DS	
2	05-JUL-2013 11:58	0705a003.d	1	INDAE	
3	05-JUL-2013 12:16	0705a004.d	1	TOXAPH	
4	05-JUL-2013 12:33	0705a005.d	1	DS	
5	05-JUL-2013 12:51	0705a006.d	1	INDAE	
6	05-JUL-2013 13:09	0705a007.d	1	TOXAPH	
7	05-JUL-2013 13:27	0705a008.d	1	WU65MBW1	
8	05-JUL-2013 13:45	0705a009.d	1	WU65LCSW1	
9	05-JUL-2013 14:02	0705a010.d	1	WU65LCSDW1	
10	05-JUL-2013 14:20	0705a011.d	1	WU65QLS	
11	05-JUL-2013 14:38	0705a012.d	1	WU65A	
12	05-JUL-2013 14:56	0705a013.d	1	WU65B	
13	05-JUL-2013 15:14	0705a014.d	1	WV55MBW1	
14	05-JUL-2013 15:31	0705a015.d	1	WV55LCSW1	
15	05-JUL-2013 15:49	0705a016.d	1	WV55LCSDW1	
16	05-JUL-2013 16:07	0705a017.d	1	WV55QLS	
17	05-JUL-2013 16:25	0705a018.d	1	WV55A	
18	05-JUL-2013 16:43	0705a019.d	1	WV55B	
19	05-JUL-2013 17:00	0705a020.d	1	WV55C	
20	05-JUL-2013 17:18	0705a021.d	1	WV55D	
21	05-JUL-2013 17:36	0705a022.d	1	WV55E	
22	05-JUL-2013 17:54	0705a023.d	1	WV55F	
23	05-JUL-2013 18:12	0705a024.d	1	DS	
24	05-JUL-2013 18:29	0705a025.d	1	INDAE	
25	05-JUL-2013 18:47	0705a026.d	1	TOXAPH	
26	05-JUL-2013 19:05	0705a027.d	1	WV19MBS1	WV19MBS1
27	05-JUL-2013 19:23	0705a028.d	1	WV19LCSS1	WV19LCSS1
28	05-JUL-2013 19:41	0705a029.d	1	WV19LCSDS1	WV19LCSDS1
29	05-JUL-2013 19:58	0705a030.d	1	WV19QLS	
30	05-JUL-2013 20:16	0705a031.d	1	WV19A	201306211100
31	05-JUL-2013 20:34	0705a032.d	1	WV19B	201306211200
32	05-JUL-2013 20:52	0705a033.d	1	DS	
33	05-JUL-2013 21:10	0705a034.d	1	INDAE	
34	05-JUL-2013 21:27	0705a035.d	1	TOXAPH	
35	05-JUL-2013 21:45	0705a036.d	1	WU70MBS1	
36	05-JUL-2013 22:03	0705a037.d	1	WU70LCSS1	
37	05-JUL-2013 22:21	0705a038.d	1	WU70QLS	
38	05-JUL-2013 22:39	0705a039.d	1	WU70B	5
39	05-JUL-2013 22:56	0705a040.d	1	WU79BMS	5
40	05-JUL-2013 23:14	0705a041.d	1	WU70BMSD	5
41	05-JUL-2013 23:32	0705a042.d	1	WU70C	5
42	05-JUL-2013 23:50	0705a043.d	1	DS	
	06-JUL-2013 00:08	0705a044.d	1	INDAE	

7/8/13

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YE 07/09/13

Data file 1: /chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a006.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a006.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Injection Date: 05-JUL-2013 12:51
Compound Sublist: INDA
Report Date: 07/08/2013 14:07
Instrument, Inj. Vol.: ecd6.i, 1ul
Matrix: NONE
Operator: ar
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.124	-0.007	6416600	3.300	0.001	29558736	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.277	-0.009	2804983	4.710	-0.001	13958400	21.7968	19.7657	9.8	alpha-BHC
4.636	-0.008	1033200	5.140	0.002	5271513	19.9037	17.2308	14.4	beta-BHC
4.806	-0.008	2412303	5.450	0.000	12073675	21.6496	19.8346	8.8	delta-BHC
4.559	-0.010	2520949	5.066	0.000	12156993	21.4850	19.4689	9.8	gamma-BHC (Lindane)
5.004	-0.011	2396789	5.529	-0.001	11251104	21.2861	18.5759	13.6	Heptachlor
5.295	-0.012	2357684	5.867	-0.001	10835808	21.6100	18.8974	13.4	Aldrin
5.869	-0.014	2108989	6.421	-0.001	9521344	20.8510	18.2194	13.5	Heptachlor epoxide b
6.245	-0.015	1947919	6.809	-0.001	8605810	20.6039	18.3258	11.7	Endosulfan I
6.467	-0.016	4232519	7.066	-0.001	17220519	42.3685	36.3354	15.3	Dieldrin
6.169	-0.015	3123630	6.869	-0.001	17105342	41.0992	35.8524	13.6	4,4'-DDE
6.685	-0.016	3629346	7.355	-0.001	13491590	40.5973	41.4207	2.0	Endrin
6.890	-0.016	3566828	7.545	0.000	14375966	40.1899	42.1308	4.7	Endosulfan II
6.727	-0.014	3378921	7.408	0.001	13642069	39.5806	38.9049	1.7	4,4'-DDD
7.657	-0.018	3165284	8.087	-0.001	12443649	40.3927	42.8351	5.9	Endosulfan sulfate
6.983	-0.015	3422684	7.695	0.000	12930236	40.6789	41.6170	2.3	4,4'-DDT
7.408	-0.016	7264414	8.277	-0.005	21470479	182.4236	185.6852	1.8	Methoxychlor
7.911	-0.018	3840928	8.577	-0.001	12734828	39.4727	43.8626	10.5	Endrin ketone
7.267	-0.016	2822882	7.842	-0.001	10946113	40.2421	41.7864	3.8	Endrin aldehyde
5.988	-0.014	2226464	6.604	0.000	9869743	21.4283	17.9455	17.7	gamma-Chlordane
6.112	-0.015	2113883	6.742	-0.001	9103537	20.9018	18.0558	14.6	alpha-Chlordane
2.305	-0.006	2923346	2.467	-0.002	11698703	20.7327	19.1208	8.1	Hexachlorobutadiene
4.133	-0.006	2044323	4.587	0.001	11920868	19.9672	20.4735	2.5	Hexachlorobenzene
8.906	-0.021	5932228	10.286	-0.003	15796250	80.0000	80.0000	0.0	Hexabromobiphenyl
3.793	-0.006	3612243	4.128	-0.001	19221320	41.4598	39.3155	5.3	Tetrachloro-m-xylen
8.756	-0.022	2934998	9.722	-0.002	10340915	39.3100	40.4985	3.0	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	103.6	98.3	98.3~	115- 0
Decachlorobiphenyl	98.3	101.2	98.3~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

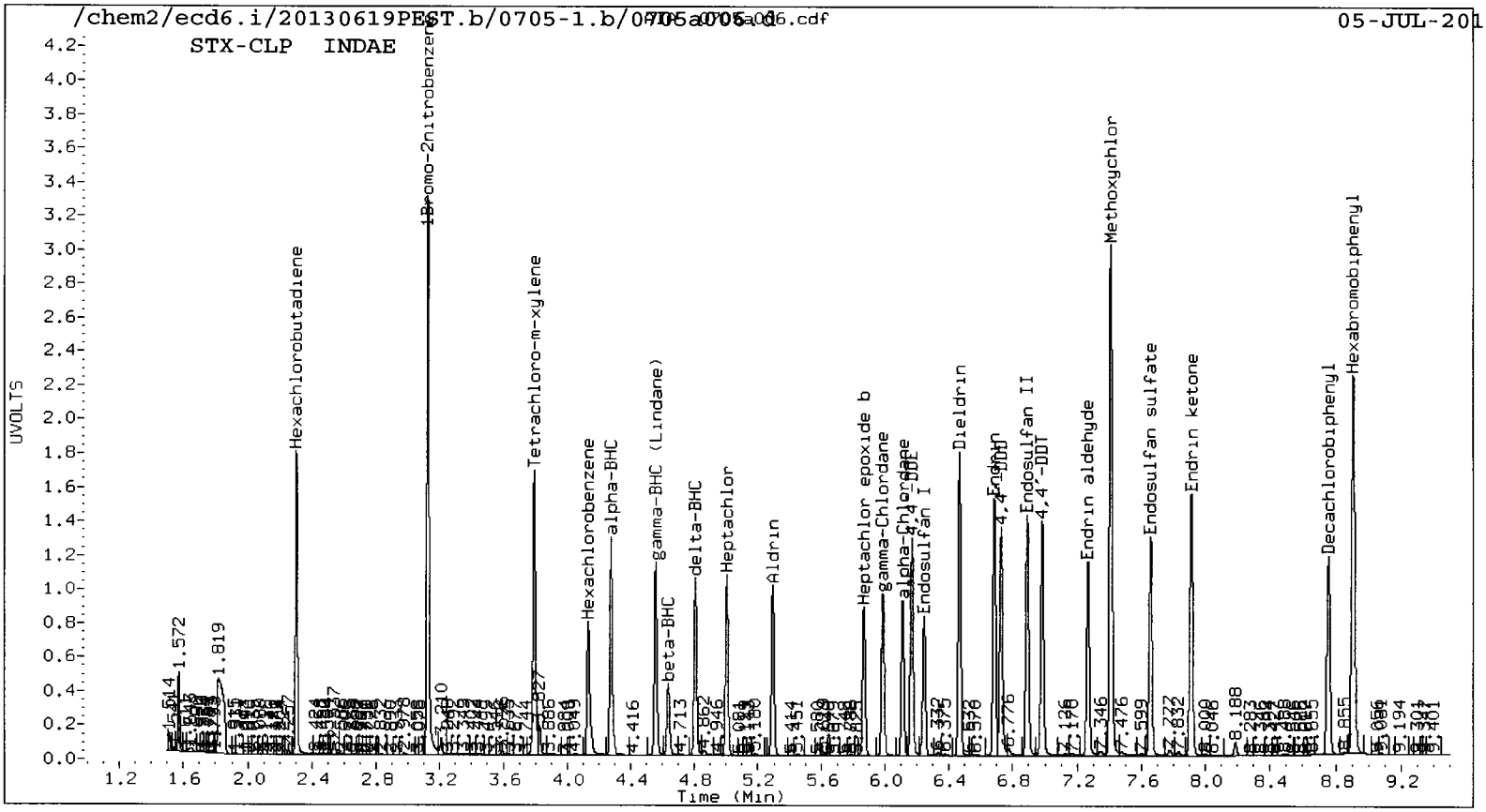
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	6416600	14.8
Hexabromobiphenyl	4870538	5932228	21.8

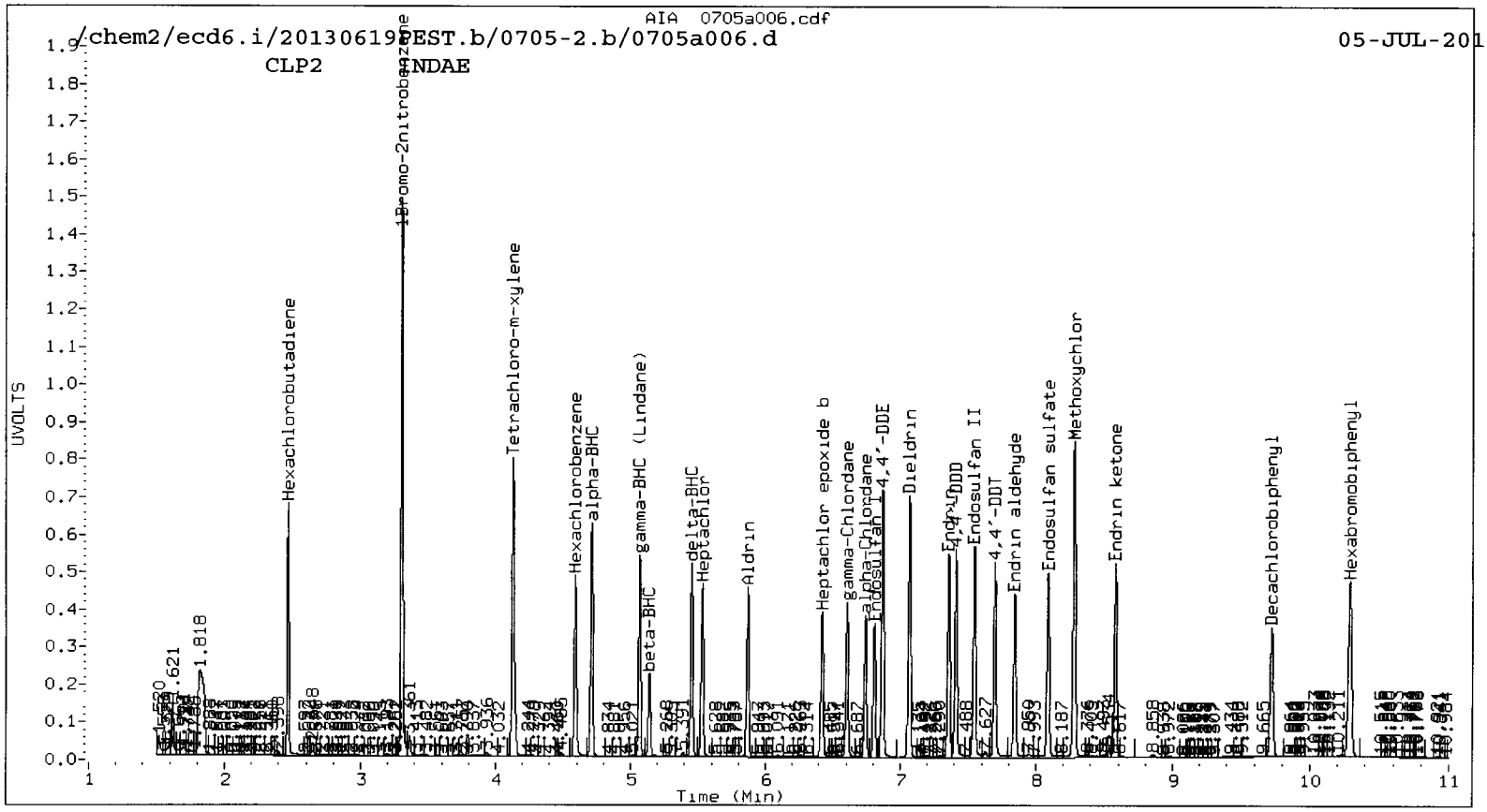
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	29558736	4.4
Hexabromobiphenyl	16454599	15796250	-4.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a006.d
STX-CLP INDAE
05-JUL-201
UVOLTS
Time (Min)
1.572
1.819
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0705a006.cdf
/chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a006.d
CLP2 INDAE
05-JUL-201
UVOLTS
Time (Min)
1.621
1.818
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

VZ 07/08/13

Data file 1: /chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a007.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a007.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 05-JUL-2013 13:09
Compound Sublist: TOXAPH Report Date: 07/08/2013 14:07
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.124	-0.007	6027774	3.300	0.001	28221985	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.905	-0.022	5747706	10.286	-0.003	15001767	80.0000	80.0000	0.0	Hexabromobiphenyl
3.793	-0.007	2579842	4.128	0.000	14597974	31.5204	31.2732	0.8	Tetrachloro-m-xylen
8.755	-0.022	2462075	9.722	-0.003	8567844	34.0346	35.3316	3.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	78.8	78.2	78.2~	150- 0
Decachlorobiphenyl	85.1	88.3	85.1~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

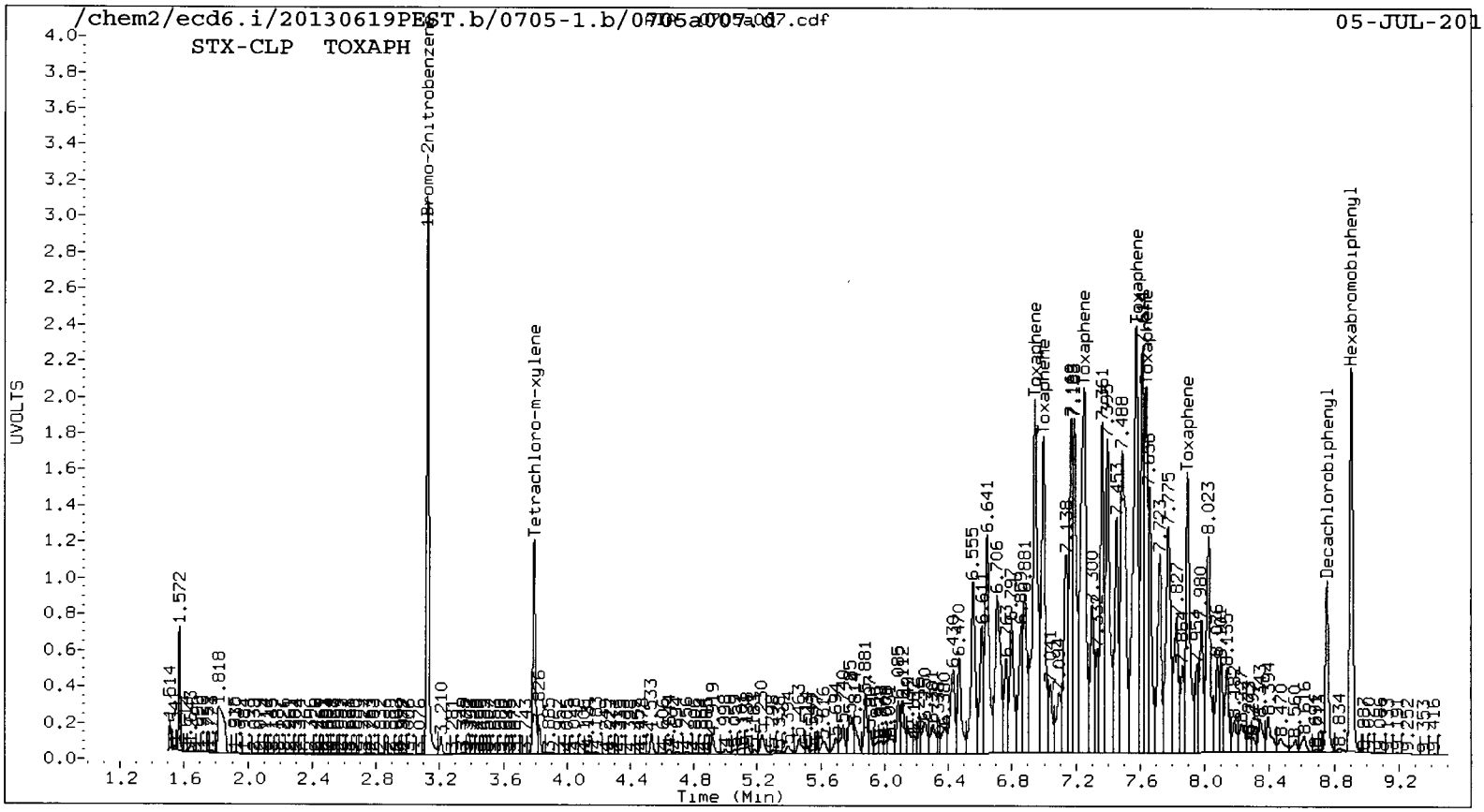
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	6027774	7.8
Hexabromobiphenyl	4870538	5747706	18.0

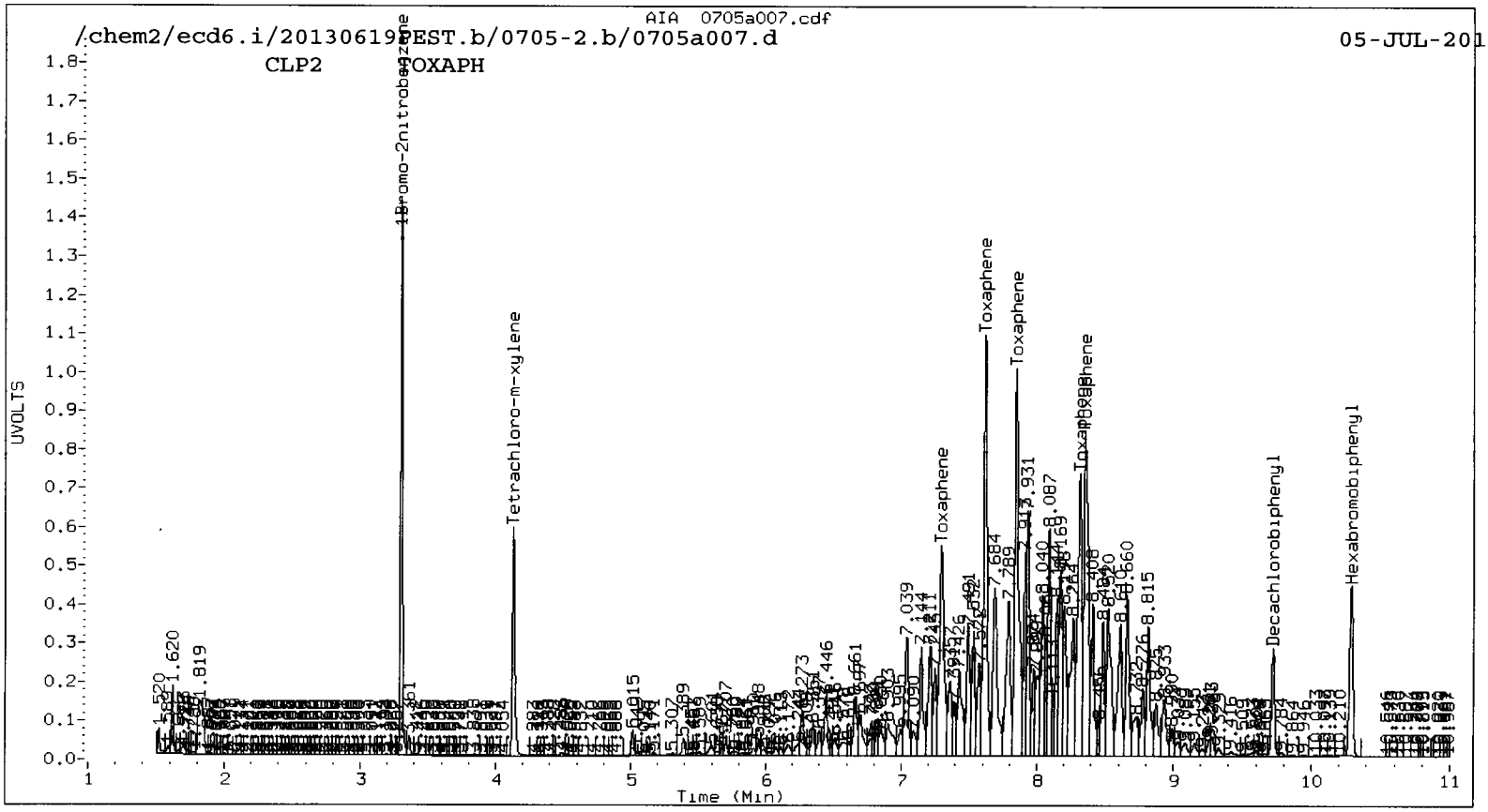
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28221985	-0.3
Hexabromobiphenyl	16454599	15001767	-8.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.942	-0.016	8564159	2321.5	1	7.290	-0.001	26008534	2478.0
Toxaphene	2	6.994	-0.016	6127124	2407.0	2	7.616	0.000	38037534	2456.3
Toxaphene	3	7.250	-0.017	9671831	2303.0	3	7.846	0.000	40835161	2403.2
Toxaphene	4	7.575	-0.018	9918957	2318.7	4	8.313	0.000	29790729	2432.4
Toxaphene	5	7.637	0.005	5209674	1834.0	5	8.351	-0.001	37674308	2419.0
Toxaphene	6	7.894	-0.019	5549356	2301.3	NS	---			----
Total STX-CLPAve (6 peaks): 2247.589						Total CLP2Ave (5 peaks): 2437.789				RPD = 8
Corrected Ave (6 peaks): 2247.589						Corrected Ave (5 peaks): 2437.789				RPD = 8


/chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a007.d
05-JUL-201
STX-CLP TOXAPH
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)


AIA 0705a007.cdf
/chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a007.d
05-JUL-201
CLP2 TOXAPH
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a008.d ARI ID: WU65MBW1
Data file 2: /chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a008.d Client ID: WU65MBW1
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 05-JUL-2013 13:27
Compound Sublist: wpest Report Date: 07/08/2013 14:06
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: WATER
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.124	-0.007	6130211	3.300	0.001	28863269	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.276	-0.011	4928	4.715	0.004	33430	0.0401	0.0485	19.0	alpha-BHC
4.660	0.016	2242	5.144	0.006	6154	0.0452	0.0206	74.8*	beta-BHC
4.792	-0.022	9243	5.464	0.014	38761	0.0868	0.0652	28.4	delta-BHC
4.550	-0.018	2822	5.045	-0.021	57129	0.0252	0.0937	115.3*	gamma-BHC (Lindane)
5.003	-0.012	2015	5.526	-0.003	13831	0.0187	0.0234	22.1	Heptachlor
5.317	0.010	21335	5.851	-0.017	76523	0.2047	0.1367	39.9	Aldrin
5.877	-0.006	5492	6.420	-0.002	59365	0.0568	0.1163	68.7*	Heptachlor epoxide b
6.251	-0.009	1898	6.807	-0.002	28072	0.0210	0.0612	97.8*	Endosulfan I
6.466	-0.016	2702	7.094	0.027	41106	0.0283	0.0888	103.3*	Dieldrin
6.172	-0.012	2779	6.871	0.001	43032	0.0383	0.0924	82.8*	4,4'-DDE
----			----			0.0000	0.0000	---	Endrin
6.893	-0.013	4003	7.542	-0.004	26117	0.0469	0.0769	48.5*	Endosulfan II
6.727	-0.013	4272	7.408	0.001	58240	0.0520	0.1669	105.0*	4,4'-DDD
7.658	-0.016	9956	8.086	-0.002	71866	0.1321	0.2487	61.3*	Endosulfan sulfate
6.992	-0.006	7663	7.693	-0.001	81570	0.0947	0.2639	94.4*	4,4'-DDT
7.406	-0.019	11886	8.275	-0.007	138353	0.3103	1.2027	118.0*	Methoxychlor
7.908	-0.021	38916	8.609	0.031	95568	0.4157	0.3309	22.7	Endrin ketone
7.256	-0.028	7627	7.842	0.000	158271	0.1130	0.6073	137.2*	Endrin aldehyde
5.973	-0.029	7456	6.618	0.014	98482	0.0751	0.1834	83.8*	gamma-Chlordane
6.113	-0.014	4977	6.743	0.001	27515	0.0515	0.0559	8.2	alpha-Chlordane
2.305	-0.007	5008	2.475	0.006	80555	0.0372	0.1348	113.5*	Hexachlorobutadiene
4.132	-0.008	52642	4.587	0.000	76127	0.5382	0.1339	120.3*	Hexachlorobenzene
5.749	-0.038	3366	6.319	-0.014	64839	0.0438	0.1724	119.0*	Oxychlordane
5.816	-0.046	1185	6.569	-0.012	29300	0.0202	0.1078	136.9*	2,4-DDE
6.146	0.036	1904	6.687	-0.004	47123	0.0202	0.1215	143.0*	trans-Nonachlor
6.363	0.015	3741	7.066	0.001	42811	0.0707	0.2026	96.5*	2,4-DDD
6.610	0.022	2497	7.352	-0.001	49564	0.0408	0.2153	136.3*	2,4-DDT
6.708	-0.018	4146	7.436	0.021	52455	0.0398	0.1299	106.1*	cis-Nonachlor
7.578	-0.023	15188	8.568	0.004	113075	0.2391	0.5785	83.0*	Mirex
8.906	-0.022	5707094	10.286	-0.003	15715288	80.0000	80.0000	0.0	Hexabromobiphenyl
1.753	-0.005	4604	1.738	0.012	2616309	0.0000	0.0000	---	Hexachloroethane
6.555	-0.026	4100	7.330	-0.007	23133	0.0000	0.0000	---	Kepone
3.792	-0.007	2130928	4.127	-0.001	11969173	25.6005	25.0718	2.1	Tetrachloro-m-xylen
8.755	-0.022	1731631	9.723	-0.002	6367349	24.1076	25.0651	3.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	64.0	62.7	62.7	52-100
Decachlorobiphenyl	60.3	62.7	60.3	54-100

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

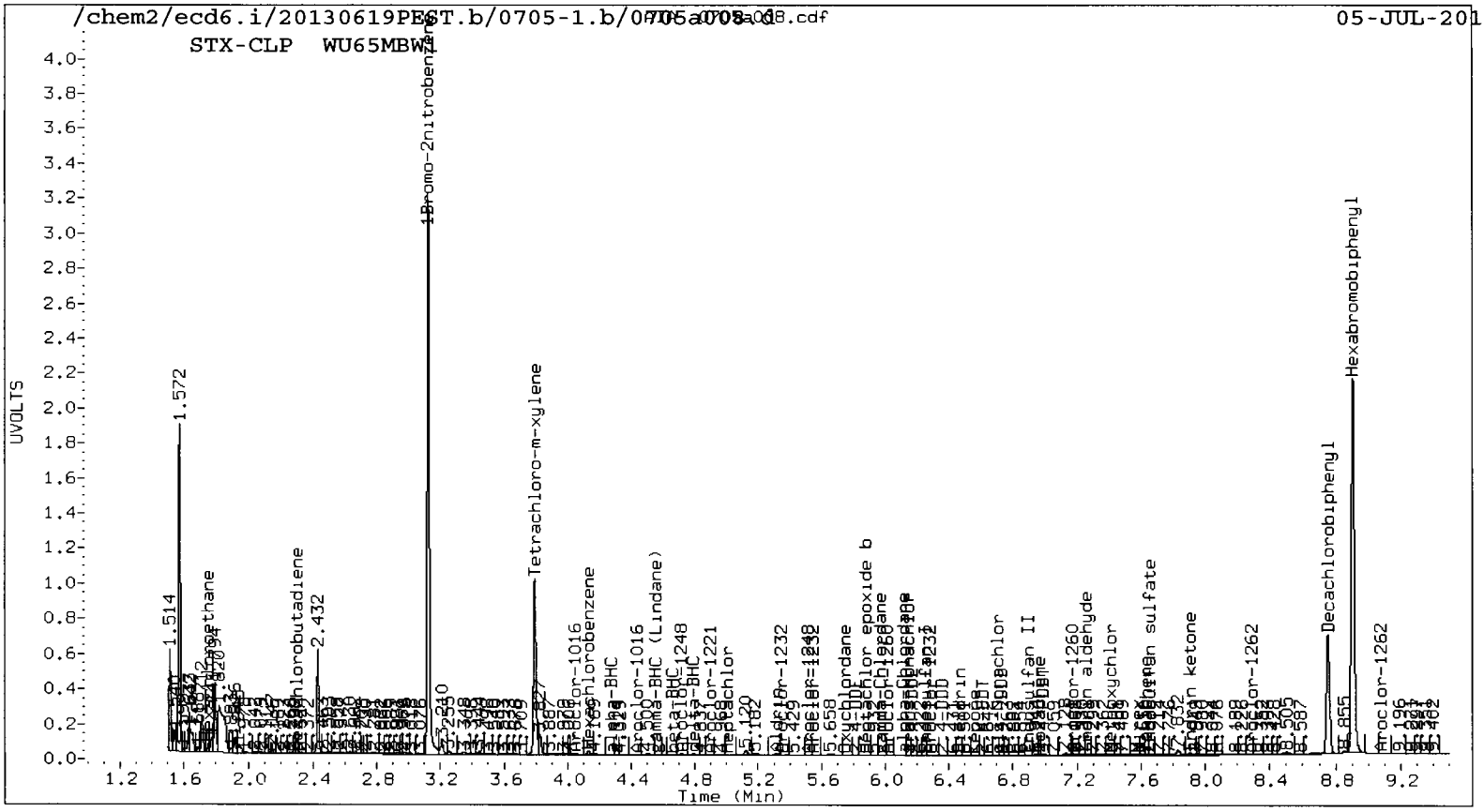
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	6130211	9.6
Hexabromobiphenyl	4870538	5707094	17.2

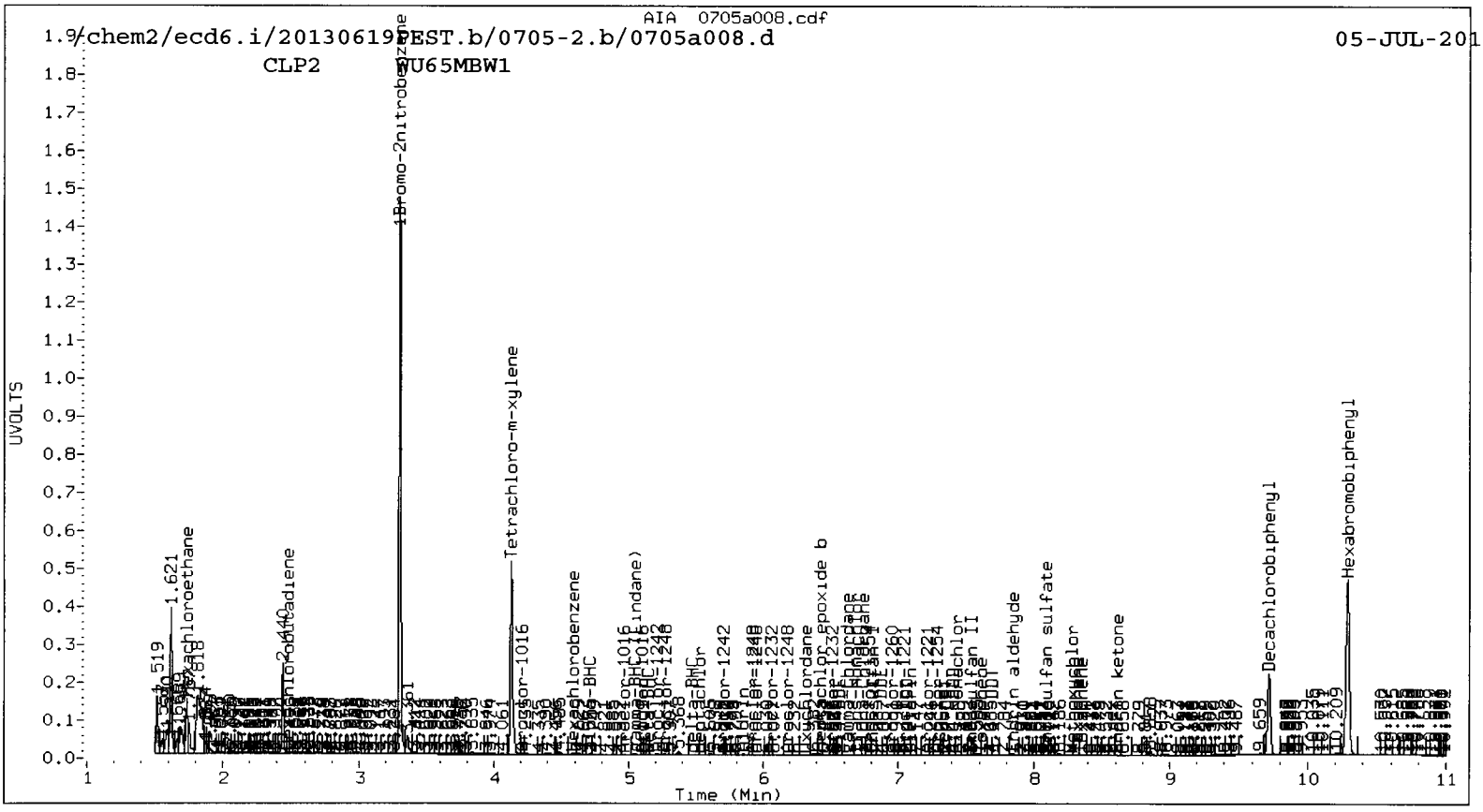
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28863269	1.9
Hexabromobiphenyl	16454599	15715288	-4.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col				CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.961	0.003	2240	0.6	1	7.290	-0.001	63773	5.8
Toxaphene	2	6.992	-0.018	7663	3.0	2	7.613	-0.002	87690	5.4
Toxaphene	3	7.256	-0.011	7627	1.8	3	7.842	-0.004	158271	8.9
Toxaphene	4	7.578	-0.015	15188	3.6	4	8.314	0.000	85706	6.7
Toxaphene	5	7.634	0.002	5073	1.8	5	8.352	-0.001	114995	7.0
Toxaphene	6	7.908	-0.005	38916	16.3	NS	---			----
Total STX-CLPAve (6 peaks): 4.517						Total CLP2Ave (5 peaks): 6.765			RPD = 40	
Corrected Ave (5 peaks): 2.169						Corrected Ave (5 peaks): 6.765			RPD = 103*	


/chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a008.d
05-JUL-201
STX-CLP WU65MBW1
UVOLTS
Time (Min)
1.572
1.514
2.432
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0705a008.cdf
/chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a008.d
05-JUL-201
CLP2 WU65MBW1
UVOLTS
Time (Min)
1.621
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 07/08/13

Data file 1: /chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a009.d ARI ID: WU65LCSW1
Data file 2: /chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a009.d Client ID: WU65LCSW1
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 05-JUL-2013 13:45
Compound Sublist: wpest Report Date: 07/08/2013 14:06
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: WATER
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.124	-0.007	6192907	3.300	0.001	29494685	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.277	-0.009	2075851	4.710	-0.001	10697013	16.7136	15.1804	9.6	alpha-BHC
4.637	-0.007	857121	5.141	0.002	4343272	17.1081	14.2276	18.4	beta-BHC
4.806	-0.008	790549	5.451	0.001	4034217	7.3512	6.6418	10.1	delta-BHC
4.559	-0.010	1969583	5.066	0.000	9897709	17.3923	15.8851	9.1	gamma-BHC (Lindane)
5.004	-0.011	1757011	5.529	0.000	8497064	16.1678	14.0594	14.0	Heptachlor
5.295	-0.012	1644707	5.867	0.000	7667513	15.6195	13.4010	15.3	Aldrin
5.869	-0.014	1780121	6.421	-0.001	8073643	18.2353	15.4827	16.3	Heptachlor epoxide b
6.245	-0.015	1722569	6.809	0.000	7368851	18.8784	15.7258	18.2	Endosulfan I
6.467	-0.016	3572176	7.066	-0.001	15221045	37.0500	32.1863	14.0	Dieldrin
6.172	-0.012	3277270	6.870	0.000	14270360	44.6783	29.9753	39.4	4,4'-DDE
6.685	-0.016	3087229	7.355	-0.001	11941127	36.3353	36.4298	0.3	Endrin
6.891	-0.015	2997124	7.545	0.000	12350676	35.5329	35.9675	1.2	Endosulfan II
6.727	-0.013	2778806	7.407	0.001	11583089	34.2494	32.8251	4.2	4,4'-DDD
7.657	-0.018	2282637	8.087	-0.001	8648196	30.6491	29.5825	3.5	Endosulfan sulfate
6.984	-0.014	2866133	7.694	0.000	11156618	35.8418	35.6824	0.4	4,4'-DDT
7.408	-0.016	6244202	8.276	-0.006	18519738	164.9865	159.1575	3.6	Methoxychlor
7.911	-0.018	3224047	8.577	-0.001	10621960	34.8621	36.3549	4.2	Endrin ketone
7.267	-0.016	2110580	7.842	-0.001	8208288	31.6578	31.1376	1.7	Endrin aldehyde
5.989	-0.013	1807608	6.605	0.000	8150978	18.0255	14.8526	19.3	gamma-Chlordane
6.113	-0.014	1732370	6.742	0.000	7600272	17.7482	15.1070	16.1	alpha-Chlordane
2.305	-0.007	1660080	2.467	-0.002	6506105	12.1987	10.6569	13.5	Hexachlorobutadiene
4.133	-0.007	1526621	4.587	0.001	9107511	15.4493	15.6757	1.5	Hexachlorobenzene
5.786	0.000	12330	6.318	-0.015	54298	0.1624	0.1413	13.9	Oxychlordane
5.824	-0.037	2100	6.544	-0.036	193260	0.0362	0.6960	180.2*	2,4-DDE
----			6.687	-0.004	52278	0.0000	0.1333	---	trans-Nonachlor
6.336	-0.012	48749	----			0.9326	0.0000	---	2,4-DDD
6.571	-0.016	19676	----			0.3254	0.0000	---	2,4-DDT
6.776	0.049	139053	----			1.3524	0.0000	---	cis-Nonachlor
7.598	-0.002	24405	8.534	-0.030	26425	0.3889	0.1337	97.7*	Mirex
8.906	-0.021	5638023	10.286	-0.002	15896343	80.0000	80.0000	0.0	Hexabromobiphenyl
1.753	-0.005	2043	1.738	0.012	2665119	0.0000	0.0000	---	Hexachloroethane
----			7.291	-0.046	64826	0.0000	0.0000	---	Kepone
3.792	-0.007	2392105	4.128	-0.001	13569280	28.4473	27.8150	2.2	Tetrachloro-m-xylen
8.755	-0.022	2201564	9.722	-0.003	8153151	31.0254	31.7294	2.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	71.1	69.5	69.5	52-100
Decachlorobiphenyl	77.6	79.3	77.6	54-100
4,4'-DDE	0.0	0.0	0.0~	0- 0
Endrin	90838.3	0.0	0.0~	10-200
4,4'-DDD	0.0	0.0	0.0~	0- 0
4,4'-DDT	89604.5	0.0	0.0~	0- 0
Endrin ketone	0.0	0.0	0.0~	0- 0
Endrin aldehyde	0.0	0.0	0.0~	0- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

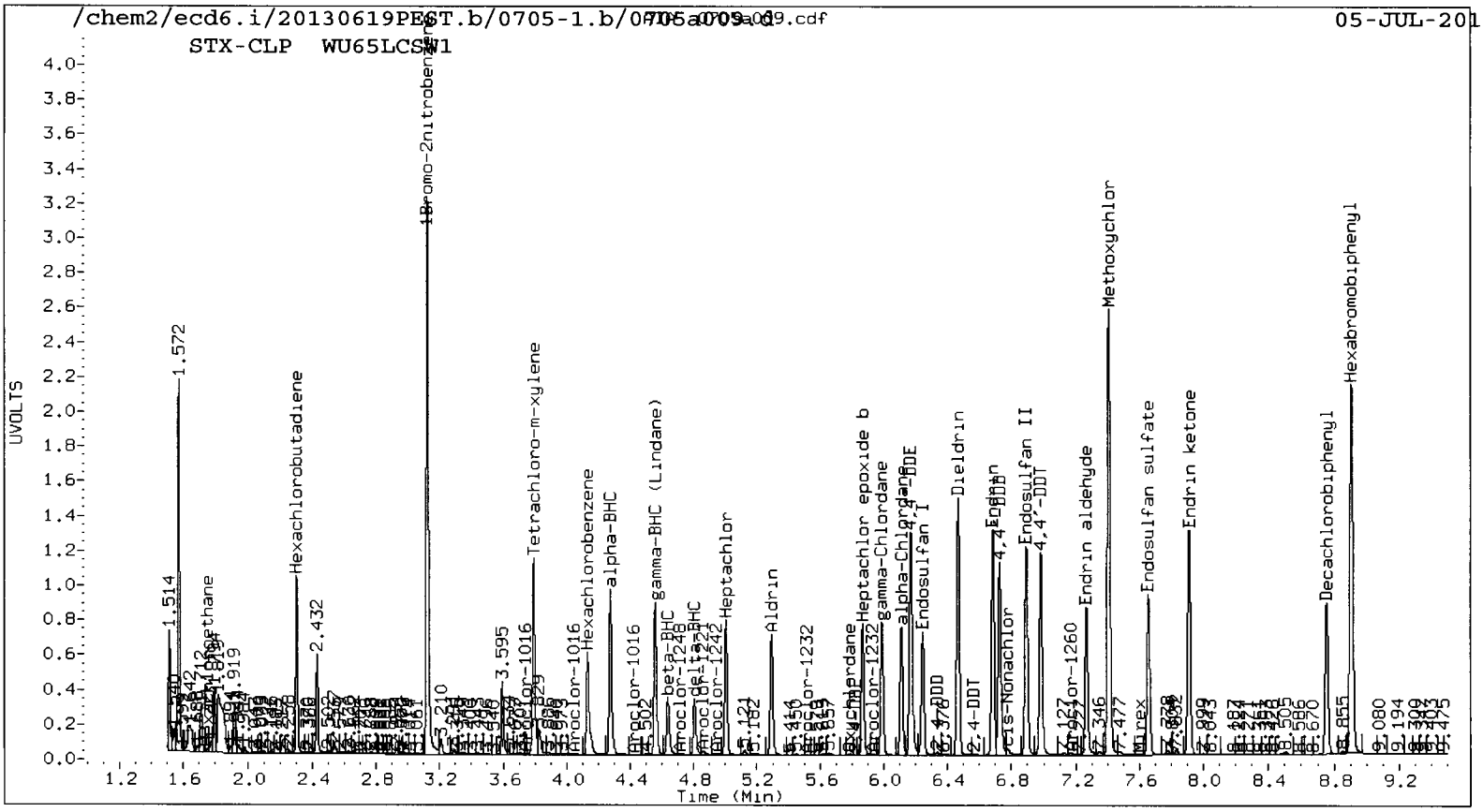
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	6192907	10.8
Hexabromobiphenyl	4870538	5638023	15.8

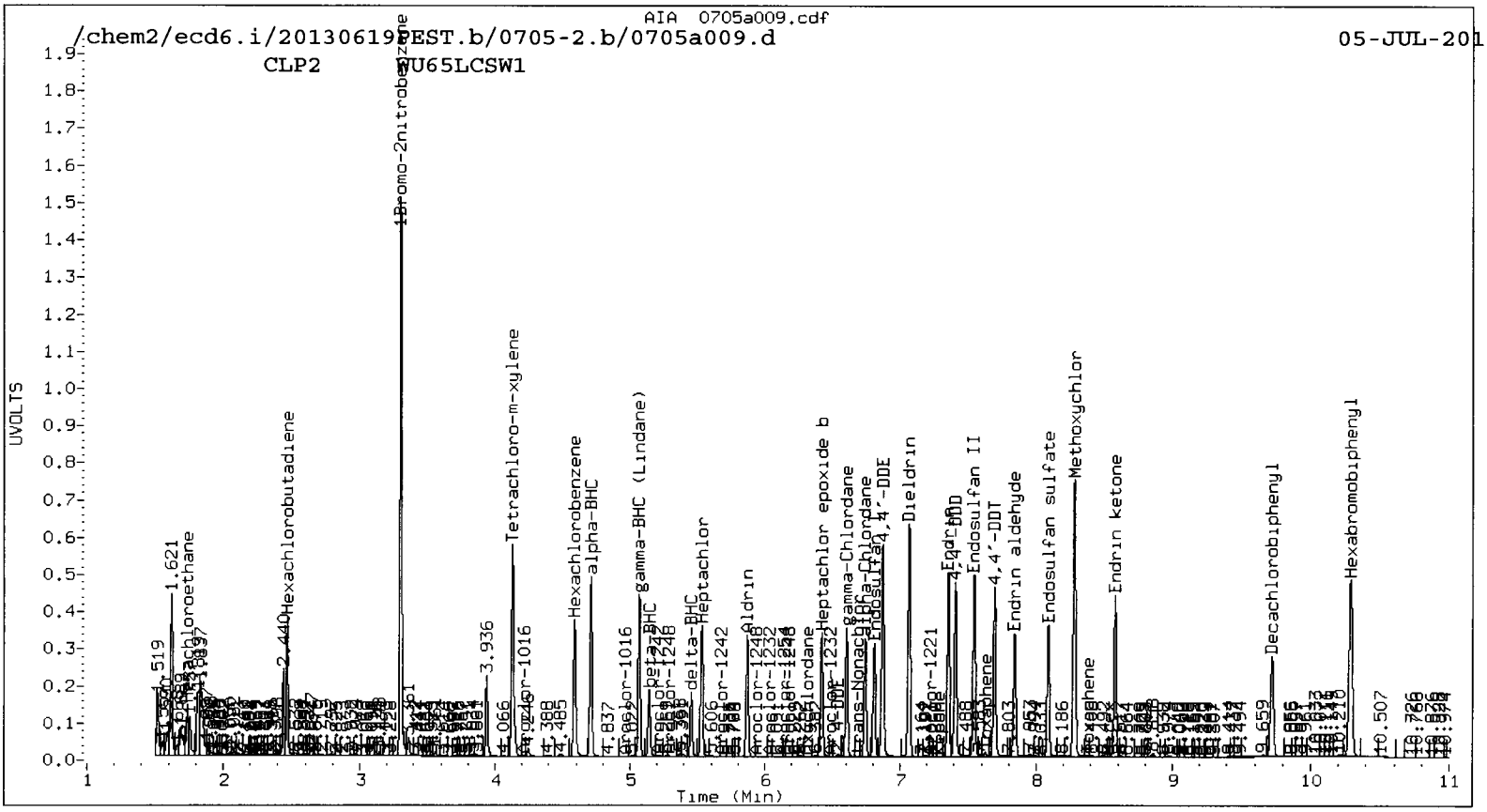
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	29494685	4.1
Hexabromobiphenyl	16454599	15896343	-3.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.984	0.025	2866133	792.0	1	7.291	0.000	64826	5.8
Toxaphene	2	---			0.000	2	7.627	0.012	390684	23.8
Toxaphene	3	7.267	0.000	2110580	512.3	3	7.842	-0.004	8208288	455.9
Toxaphene	4	7.598	0.006	24405	5.8	4	8.276	-0.037	18519738	1427.0
Toxaphene	5	7.657	0.025	2282637	819.2	5	8.377	0.024	139711	8.5
Toxaphene	6	7.911	-0.002	3224047	1363.0	NS	---			----
Total STX-CLPAve (5 peaks): 698.484						Total CLP2Ave (5 peaks): 384.206				RPD = 58*
Corrected Ave (4 peaks): 532.352						Corrected Ave (4 peaks): 123.497				RPD = 125*


/chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a009.d
AIA 0705a009.cdf
05-JUL-201
STX-CLP WU65LCSW1
UVOLTS
Time (Min)
1.514
1.572
Hexachlorobutadiene
2.432
1Bromo-2nitrobenzene
3.595
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
4,4'-DDD
2,4'-DDT
cis-Nonachlor
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Mirex
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


/chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a009.d
AIA 0705a009.cdf
05-JUL-201
CLP2 WU65LCSW1
UVOLTS
Time (Min)
1.621
Hexachlorobutadiene
2.440
1Bromo-2nitrobenzene
3.936
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
Dieldrin
4,4'-DDE
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 07/08/13

Data file 1: /chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a010.d ARI ID: WU65LCSDW1
Data file 2: /chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a010.d Client ID: WU65LCSDW1
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 05-JUL-2013 14:02
Compound Sublist: wpest Report Date: 07/08/2013 14:06
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: WATER
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.124	-0.008	6888145	3.300	0.000	32843486	80.0000	80.0000 IS	0.0	1Bromo-2nitrobenzen
4.277	-0.009	2173583	4.709	-0.001	11236747	15.7341	14.3204	9.4	alpha-BHC
4.636	-0.008	902223	5.140	0.002	4583912	16.1907	13.4848	18.2	beta-BHC
4.805	-0.008	832803	5.451	0.001	4283208	6.9625	6.3327	9.5	delta-BHC
4.559	-0.010	2082877	5.066	0.000	10423368	16.5363	15.0231	9.6	gamma-BHC (Lindane)
5.003	-0.011	1851292	5.529	0.000	8963894	15.3160	13.3195	13.9	Heptachlor
5.295	-0.013	1751830	5.867	0.000	8170146	14.9577	12.8235	15.4	Aldrin
5.868	-0.014	1891597	6.421	-0.001	8592919	17.4214	14.7983	16.3	Heptachlor epoxide b
6.245	-0.015	1828119	6.809	0.000	7825759	18.0130	14.9980	18.3	Endosulfan I
6.467	-0.016	3791623	7.066	-0.002	16054931	35.3568	30.4880	14.8	Dieldrin
6.172	-0.012	3487772	6.870	0.000	15118724	42.7488	28.5192	39.9	4,4'-DDE
6.685	-0.016	3264510	7.355	-0.001	12628021	34.2833	34.8395	1.6	Endrin
6.891	-0.015	3147568	7.545	0.000	13086401	33.2971	34.4639	3.4	Endosulfan II
6.727	-0.013	2940217	7.407	0.000	12263079	32.3355	31.4272	2.8	4,4'-DDD
7.656	-0.018	2421870	8.086	-0.001	9660762	29.0160	29.8844	2.9	Endosulfan sulfate
6.983	-0.015	3030974	7.694	0.000	11771459	33.8205	34.0468	0.7	4,4'-DDT
7.407	-0.017	6544926	8.276	-0.006	19871392	154.3054	154.4349	0.1	Methoxychlor
7.911	-0.019	3418334	8.577	-0.002	11842938	32.9815	36.6558	10.6	Endrin ketone
7.266	-0.017	2272601	7.841	-0.001	9085985	30.4164	31.1694	2.4	Endrin aldehyde
5.988	-0.014	1925214	6.604	0.000	8701908	17.2605	14.2397	19.2	gamma-Chlordane
6.112	-0.014	1846704	6.741	-0.001	8082595	17.0099	14.4276	16.4	alpha-Chlordane
2.305	-0.007	1792183	2.467	-0.003	6476265	11.8402	9.5264	21.7	Hexachlorobutadiene
4.132	-0.007	1596143	4.587	0.001	9519040	14.5225	14.7134	1.3	Hexachlorobenzene
5.786	0.000	12962	6.317	-0.015	52220	0.1523	0.1220	22.1	Oxychlordane
5.824	-0.037	2261	6.543	-0.037	198968	0.0348	0.6435	179.5*	2,4-DDE
----			6.687	-0.004	49719	0.0000	0.1146	---	trans-Nonachlor
6.336	-0.012	52234	7.030	-0.035	74350	0.8917	0.3146	95.7*	2,4-DDD
6.570	-0.017	21136	----			0.3119	0.0000	---	2,4-DDT
6.775	0.048	150787	----			1.3085	0.0000	---	cis-Nonachlor
7.598	-0.002	22865	----			0.3252	0.0000	---	Mirex
8.906	-0.022	6318616	10.286	-0.003	17578117	80.0000	80.0000 IS	0.0	Hexabromobiphenyl
1.753	-0.005	1823	1.738	0.012	2818088	0.0000	0.0000	---	Hexachloroethane
----			7.290	-0.047	59561	0.0000	0.0000	---	Kepone
3.792	-0.007	2442074	4.127	-0.001	13881940	26.1103	25.5545	2.2	Tetrachloro-m-xylen
8.755	-0.022	2087536	9.722	-0.002	7644545	26.2498	26.9038	2.5	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	65.3	63.9	63.9	52-100
Decachlorobiphenyl	65.6	67.3	65.6	54-100
4,4'-DDE	0.0	0.0	0.0~	0- 0
Endrin	85708.3	0.0	0.0~	10-200
4,4'-DDD	0.0	0.0	0.0~	0- 0
4,4'-DDT	84551.4	0.0	0.0~	0- 0
Endrin ketone	0.0	0.0	0.0~	0- 0
Endrin aldehyde	0.0	0.0	0.0~	0- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

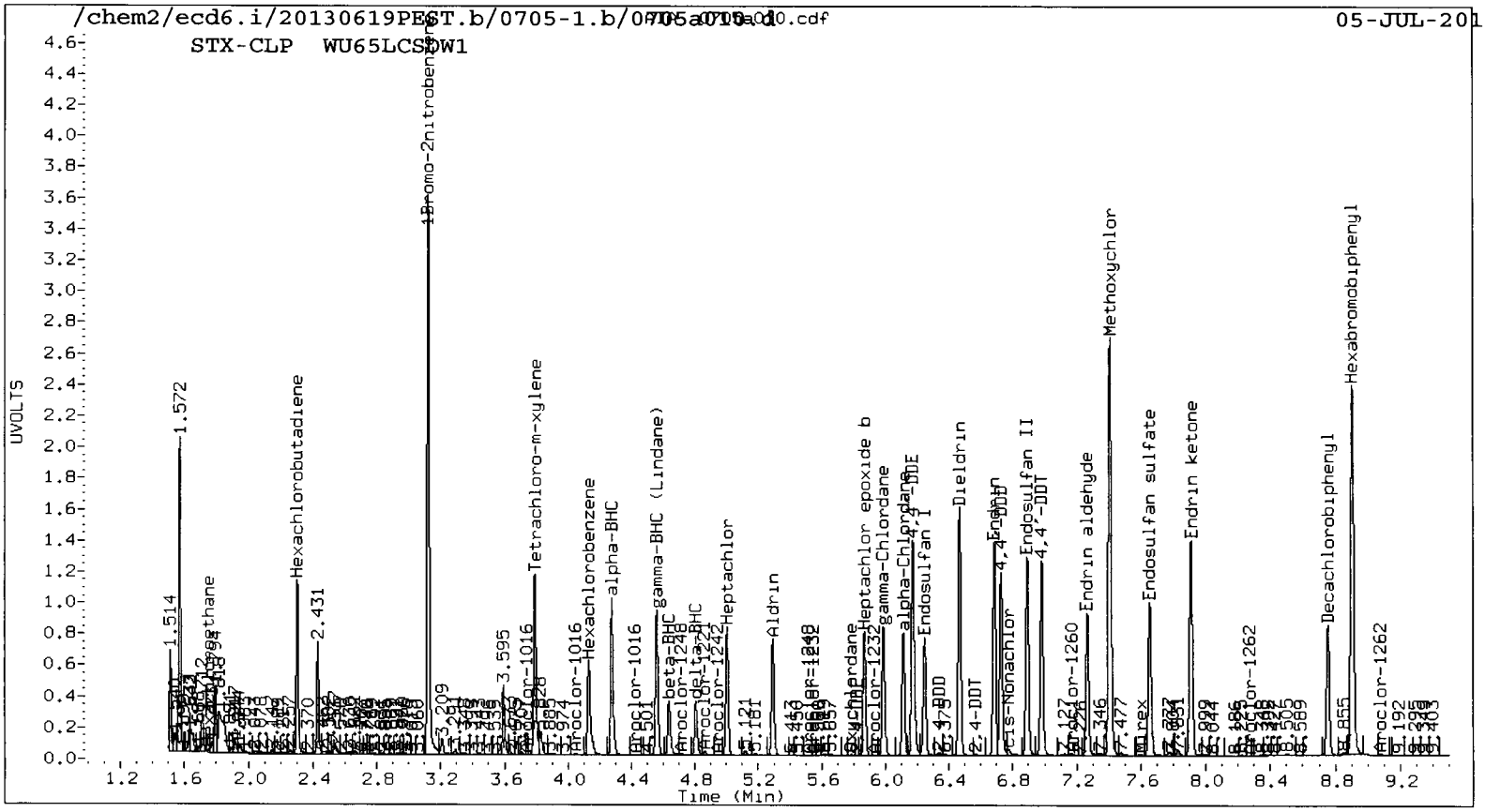
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	6888145	23.2
Hexabromobiphenyl	4870538	6318616	29.7

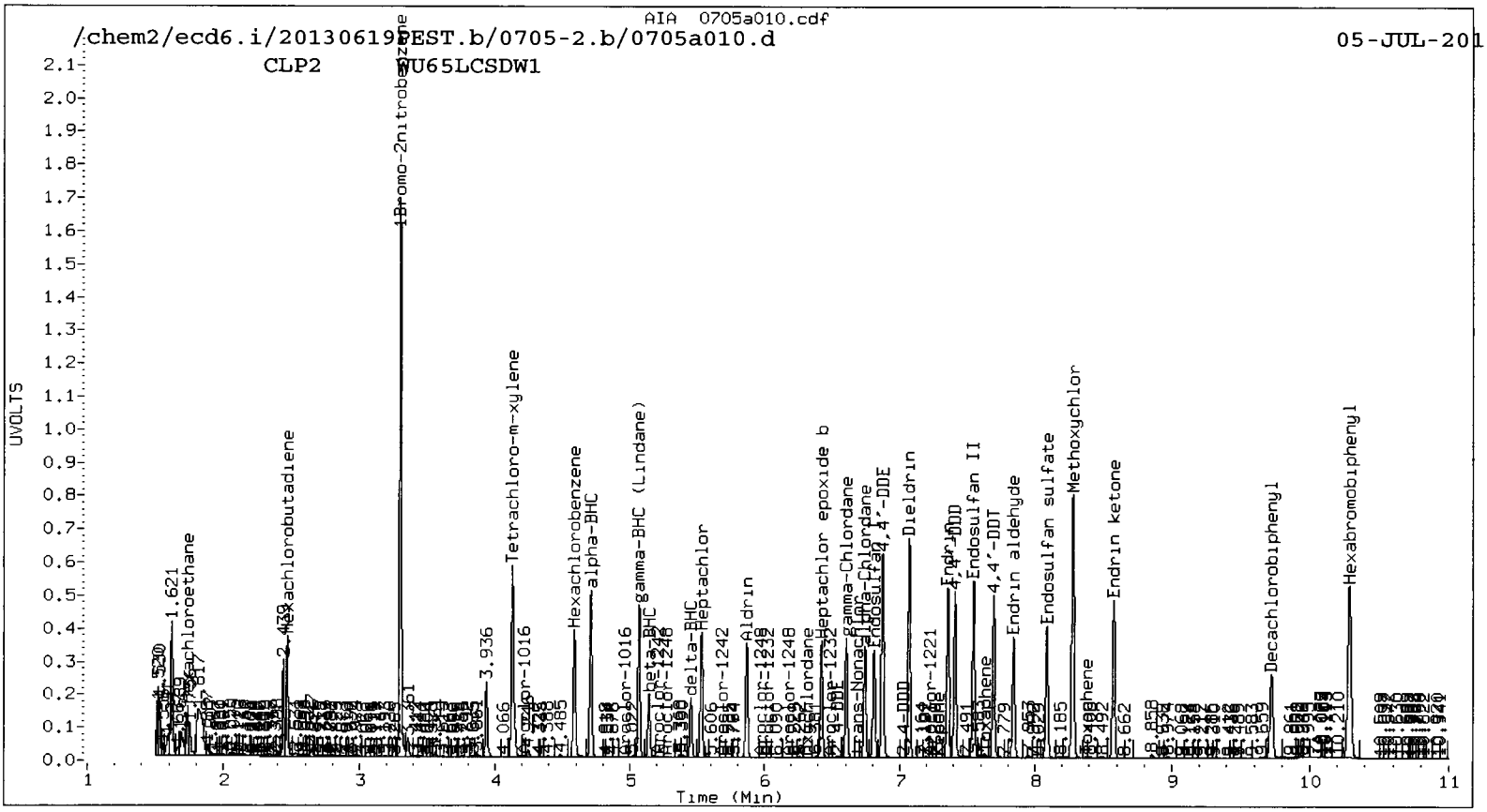
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	32843486	16.0
Hexabromobiphenyl	16454599	17578117	6.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.983	0.025	3030974	747.4	1	7.290	-0.002	59561	4.8
Toxaphene	2	---			0.000	2	7.627	0.011	422097	23.3
Toxaphene	3	7.266	-0.001	2272601	492.2	3	7.841	-0.005	9085985	456.4
Toxaphene	4	7.598	0.006	22865	4.9	4	8.276	-0.037	19871392	1384.7
Toxaphene	5	7.656	0.024	2421870	775.6	5	8.376	0.024	158684	8.7
Toxaphene	6	7.911	-0.002	3418334	1289.5	NS	---			----
Total STX-CLPAve (5 peaks): 661.907						Total CLP2Ave (5 peaks): 375.570				RPD = 55*
Corrected Ave (4 peaks): 505.011						Corrected Ave (4 peaks): 123.288				RPD = 122*


/chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a010.d
05-JUL-201
STX-CLP WU65LCSDW1
UVOLTS
Time (Min)
1.572
1.514
Hexachlorobutadiene
2.431
1Bromo-2nitrobenzene
3.209
3.595
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
2,4-DDT
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0705a010.cdf
/chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a010.d
05-JUL-201
CLP2 WU65LCSDW1
UVOLTS
Time (Min)
1.621
Hexachlorobutadiene
2.439
1Bromo-2nitrobenzene
3.936
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
trans-Nonachlor
Endosulfan I
4,4'-DDE
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 07/08/13

Data file 1: /chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a012.d ARI ID: WU65A
Data file 2: /chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a012.d Client ID: LF-TP-001-20130619-
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 05-JUL-2013 14:38
Compound Sublist: wpest Report Date: 07/08/2013 14:06
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: WATER
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.124	-0.008	7112443	3.300	0.001	31968654	80.0000	80.0000 IS	0.0	1Bromo-2nitrobenzen
4.265	-0.021	30006	4.712	0.002	144472	~~0.2104~~	~~0.1892~~	10.6	alpha-BHC
4.645	0.001	52518	5.150	0.012	141728	0.9127	0.4283	72.2*	beta-BHC
4.824	0.011	19942	5.469	0.019	178812	0.1615	0.2716	50.9*	delta-BHC
4.561	-0.007	44013	5.042	-0.024	325803	0.3384	0.4824	35.1	gamma-BHC (Lindane)
5.006	-0.009	27266	5.529	0.000	97087	0.2185	0.1482	38.3	Heptachlor
5.287	-0.020	10776	5.846	-0.021	185604	0.0891	0.2993	108.2*	Aldrin
5.904	0.021	6677	6.414	-0.007	121686	0.0596	0.2153	113.3*	Heptachlor epoxide b
6.241	-0.019	192364	6.786	-0.023	804321	1.8356	1.5837	14.7	Endosulfan I
6.460	-0.022	6431	7.103	0.036	85348	0.0581	0.1665	96.6*	Dieldrin
6.173	-0.011	11276	6.849	-0.021	95561	0.1338	0.1852	32.2	4,4'-DDE
----			7.373	0.017	79837	0.0000	0.2311	---	Endrin
6.898	-0.008	27683	7.520	-0.025	221232	0.2920	0.6113	70.7*	Endosulfan II
6.720	-0.020	123988	7.408	0.001	92768	1.3596	0.2494	138.0*	4,4'-DDD
7.667	-0.007	41075	8.083	-0.005	666305	0.4907	2.1626	126.0*	Endosulfan sulfate
6.966	-0.032	26790	7.674	-0.021	329359	0.2981	0.9995	108.1*	4,4'-DDT
7.447	0.023	52294	8.274	-0.007	244123	1.2293	1.9907	47.3*	Methoxychlor
7.907	-0.022	50231	8.579	0.001	274485	0.4833	0.8914	59.4*	Endrin ketone
7.263	-0.021	16126	7.862	0.019	493790	0.2152	1.7774	156.8*	Endrin aldehyde
5.985	-0.017	5370	6.607	0.003	265695	0.0466	0.4467	162.2*	gamma-Chlordane
6.119	-0.007	22814	----			0.2035	0.0000	---	alpha-Chlordane
2.324	0.012	29564	2.477	0.007	54029	0.1892	0.0817	79.4*	Hexachlorobutadiene
4.130	-0.009	50038	4.569	-0.018	216687	0.4409	0.3441	24.7	Hexachlorobenzene
5.774	-0.013	9498	6.322	-0.010	217133	0.1113	0.5211	129.6*	Oxychlordane
5.856	-0.005	14227	6.560	-0.020	94337	0.2183	0.3184	35.8	2,4-DDE
6.063	-0.048	28689	6.686	-0.005	320851	0.2739	0.7760	95.6*	trans-Nonachlor
6.329	-0.019	16108	7.052	-0.012	249381	0.2742	1.1073	120.6*	2,4-DDD
6.591	0.004	12899	7.347	-0.005	110983	0.1898	0.4522	81.7*	2,4-DDT
----			----			0.0000	0.0000	---	cis-Nonachlor
7.565	-0.035	30214	8.528	-0.036	79505	~~0.4284~~	~~0.3816~~	11.6	Mirex
8.904	-0.023	6336872	10.285	-0.003	16753201	80.0000	80.0000 IS	0.0	Hexabromobiphenyl
1.752	-0.005	2231	1.738	0.012	1672888	~~0.0000~~	~~0.0000~~	---	Hexachloroethane
6.554	-0.027	10230	7.311	-0.026	78175	~~0.0000~~	0.0000	---	Kepone
3.792	-0.007	2455803	4.127	-0.002	11574295	~~25.4290~~	~~21.8896~~	15.0	Tetrachloro-m-xylen
8.754	-0.023	2420144	9.722	-0.002	8524340	30.3445	31.4772	3.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	63.6	54.7	54.7	52-100
Decachlorobiphenyl	75.9	78.7	75.9	54-100

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

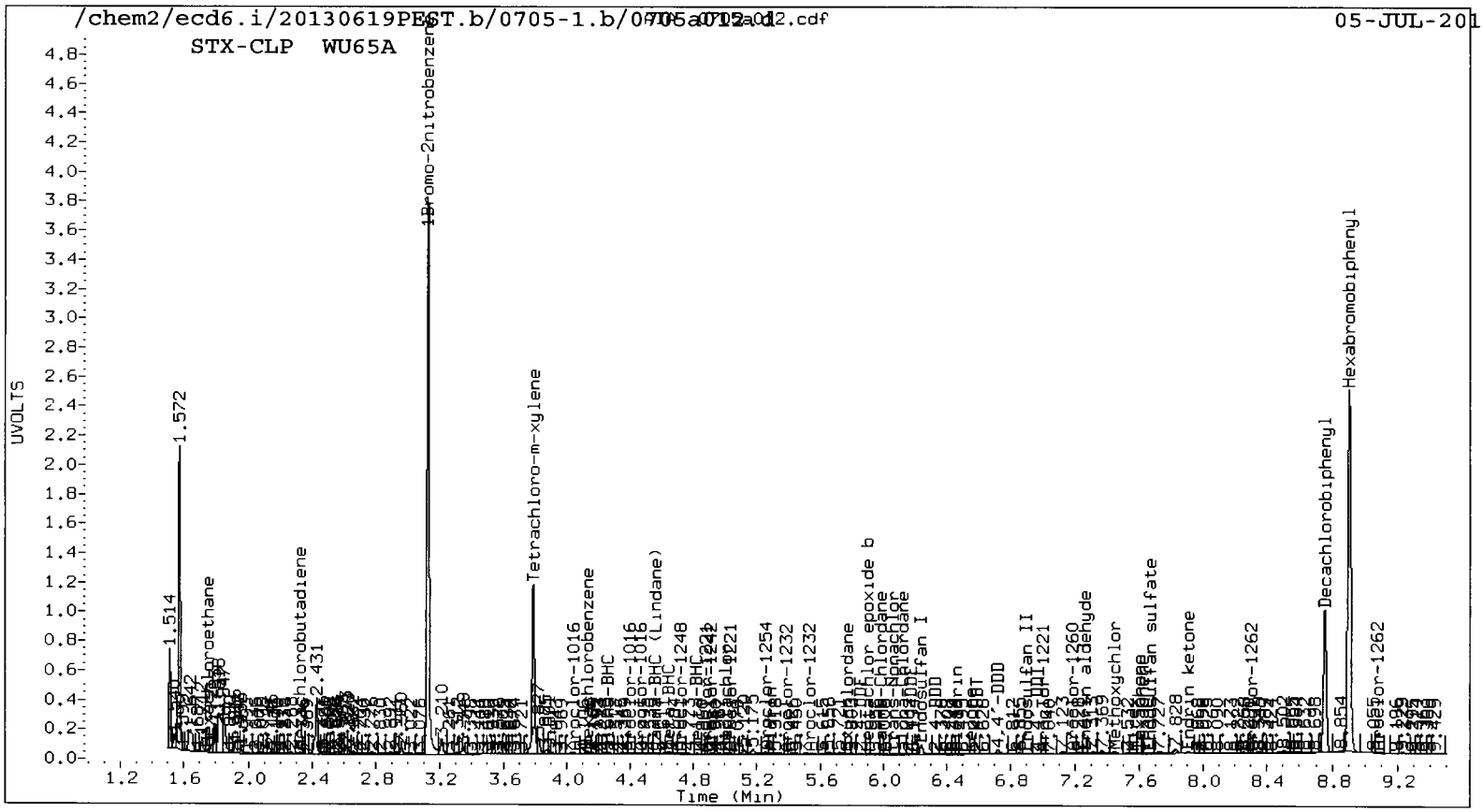
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	7112443	27.2
Hexabromobiphenyl	4870538	6336872	30.1

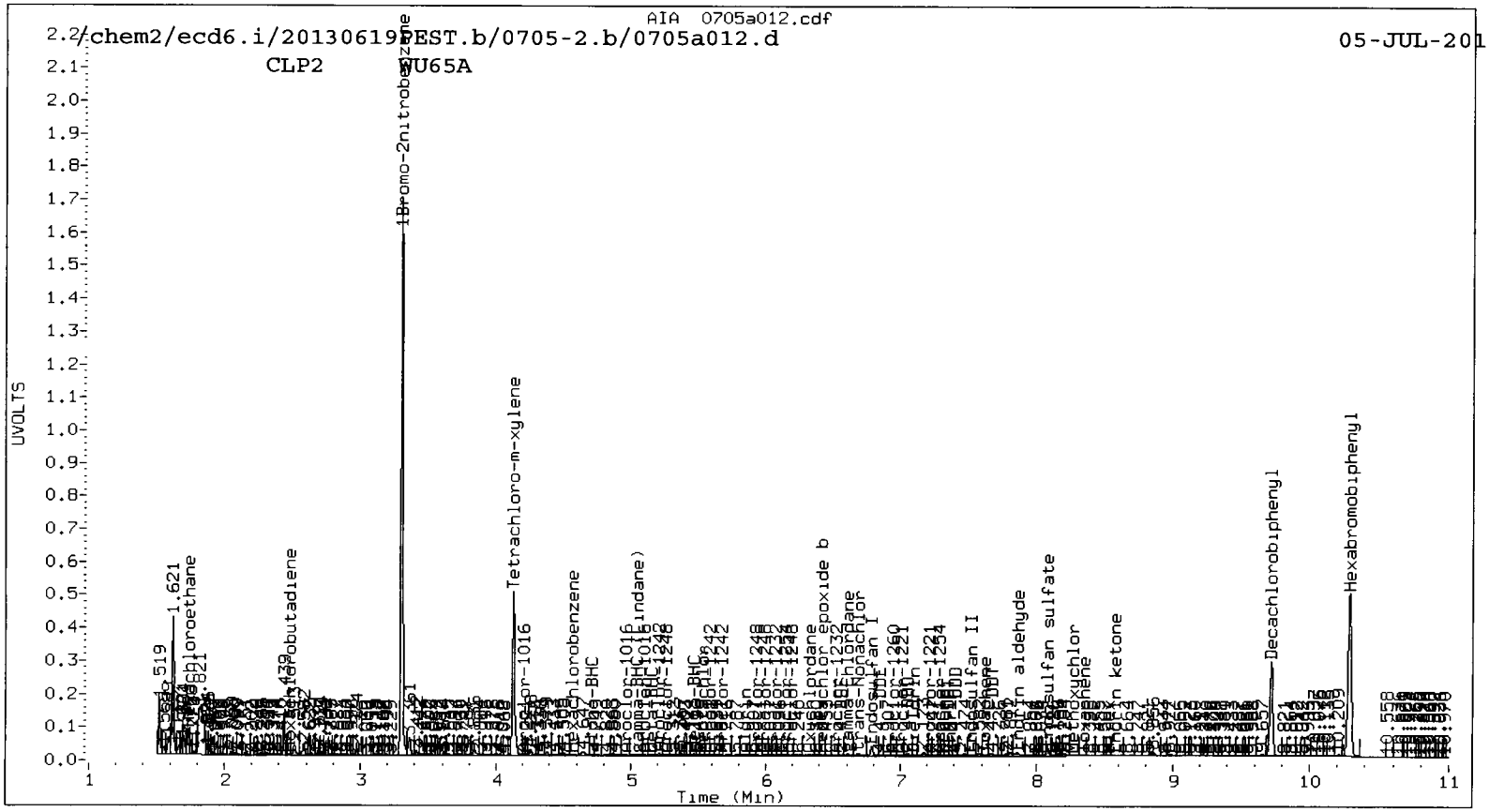
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	31968654	12.9
Hexabromobiphenyl	16454599	16753201	1.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.966	0.008	26790	6.6	1	7.286	-0.005	66006	5.6
Toxaphene	2	7.003	-0.007	11885	4.2	2	7.624	0.009	123541	7.1
Toxaphene	3	7.263	-0.004	16126	3.5	3	7.862	0.016	493790	26.0
Toxaphene	4	7.599	0.007	14563	3.1	4	8.349	0.035	188423	13.8
Toxaphene	5	7.621	-0.011	4126	1.3	5	---			0.0
Toxaphene	6	7.907	-0.006	50231	18.9	NS	---			----
Total STX-CLPAve (6 peaks): 6.267						Total CLP2Ave (4 peaks): 13.143				RPD = 71*
Corrected Ave (5 peaks): 3.742						Corrected Ave (3 peaks): 8.851				RPD = 81*


/chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a012.d
05-JUL-201
STX-CLP WU65A
UVOLTS
Time (Min)
1.514
1.572
2.431
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0705a012.cdf
/chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a012.d
05-JUL-201
CLP2 WU65A
UVOLTS
Time (Min)
1.621
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a013.d ARI ID: WU65B
Data file 2: /chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a013.d Client ID: LF-FD-001-20130619-
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 05-JUL-2013 14:56
Compound Sublist: wpest Report Date: 07/08/2013 14:06
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: WATER
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.124	-0.008	7353155	3.300	0.001	33128964	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.266	-0.020	28176	4.712	0.002	133853	0.1911	0.1691	12.2	alpha-BHC
4.645	0.001	43433	5.151	0.012	122323	0.7301	0.3567	68.7*	beta-BHC
4.824	0.010	14491	5.469	0.019	168920	0.1135	0.2476	74.3*	delta-BHC
4.562	-0.007	40818	5.043	-0.023	302382	0.3036	0.4321	34.9	gamma-BHC (Lindane)
5.006	-0.009	23829	5.530	0.000	87495	0.1847	0.1289	35.6	Heptachlor
5.289	-0.018	8637	5.841	-0.027	144960	0.0691	0.2256	106.2*	Aldrin
5.905	0.023	3838	6.414	-0.008	112160	0.0331	0.1915	141.0*	Heptachlor epoxide b
6.241	-0.019	176467	6.786	-0.023	824316	1.6288	1.5662	3.9	Endosulfan I
6.461	-0.021	1821	7.103	0.036	91639	0.0159	0.1725	166.2*	Dieldrin
6.171	-0.013	3690	6.859	-0.011	41349	0.0424	0.0773	58.4*	4,4'-DDE
----			7.373	0.017	72347	0.0000	0.2029	---	Endrin
6.898	-0.008	11257	7.520	-0.025	205282	0.1152	0.5495	130.7*	Endosulfan II
6.720	-0.020	87408	----			0.9295	0.0000	---	4,4'-DDD
7.668	-0.006	33119	8.082	-0.005	634259	0.3837	1.9944	135.5*	Endosulfan sulfate
6.961	-0.037	8810	7.673	-0.021	317951	0.0951	0.9348	163.1*	4,4'-DDT
7.447	0.023	36975	8.273	-0.008	230508	0.8430	1.8210	73.4*	Methoxychlor
7.907	-0.023	43623	8.577	-0.001	192775	0.4070	0.6065	39.4	Endrin ketone
7.261	-0.022	6875	7.862	0.019	409111	0.0890	1.4266	176.5*	Endrin aldehyde
5.984	-0.018	3164	6.607	0.003	199575	0.0266	0.3238	169.7*	gamma-Chlordane
6.119	-0.008	16177	----			0.1396	0.0000	---	alpha-Chlordane
2.324	0.012	28904	2.476	0.007	48111	0.1789	0.0702	87.3*	Hexachlorobutadiene
4.131	-0.009	50544	4.569	-0.017	160031	0.4308	0.2452	54.9*	Hexachlorobenzene
5.773	-0.014	5851	6.321	-0.012	171515	0.0665	0.3972	142.6*	Oxychlordane
5.857	-0.004	7439	6.559	-0.021	86054	0.1107	0.2759	85.5*	2,4-DDE
6.062	-0.048	24545	6.686	-0.004	290789	0.2273	0.6813	99.9*	trans-Nonachlor
6.327	-0.022	7140	7.053	-0.012	220663	0.1179	0.9492	155.8*	2,4-DDD
6.590	0.003	4497	7.347	-0.005	102894	0.0642	0.4062	145.4*	2,4-DDT
6.775	0.049	2959	7.410	-0.005	87427	0.0248	0.1967	155.2*	cis-Nonachlor
7.567	-0.034	21949	8.566	0.001	115338	0.3018	0.5363	55.9*	Mirex
8.904	-0.023	6534370	10.285	-0.003	17292931	80.0000	80.0000	0.0	Hexabromobiphenyl
1.753	-0.005	2084	1.738	0.012	1803981	0.0000	0.0000	---	Hexachloroethane
6.560	-0.021	3185	7.312	-0.024	73692	0.0000	0.0000	---	Kepone
3.792	-0.007	2605941	4.127	-0.001	12235492	26.1003	22.3296	15.6	Tetrachloro-m-xylen
8.754	-0.023	2492411	9.722	-0.003	8758262	30.3061	31.3316	3.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	65.3	55.8	55.8	52-100
Decachlorobiphenyl	75.8	78.3	75.8	54-100

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

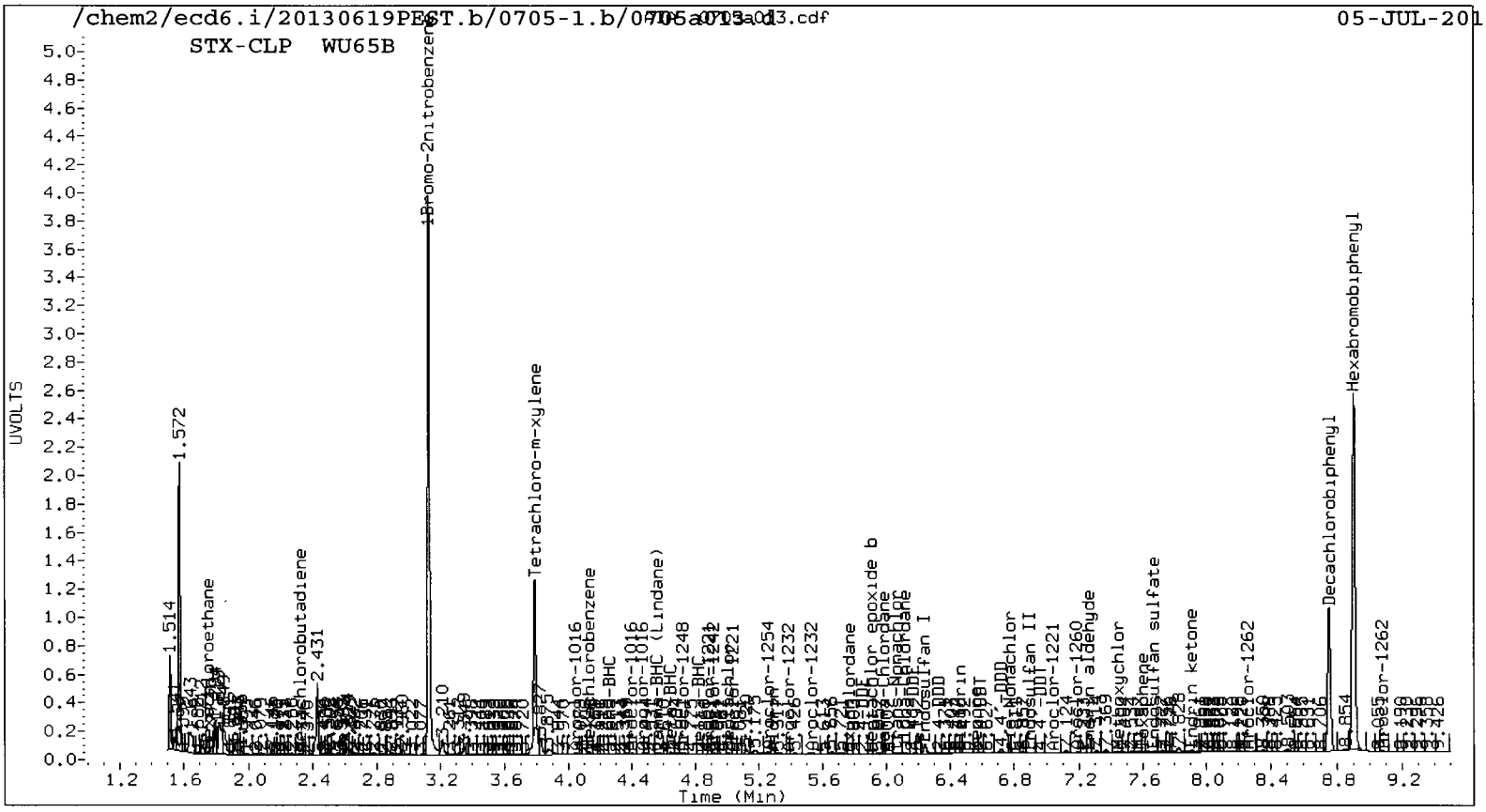
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	7353155	31.5
Hexabromobiphenyl	4870538	6534370	34.2

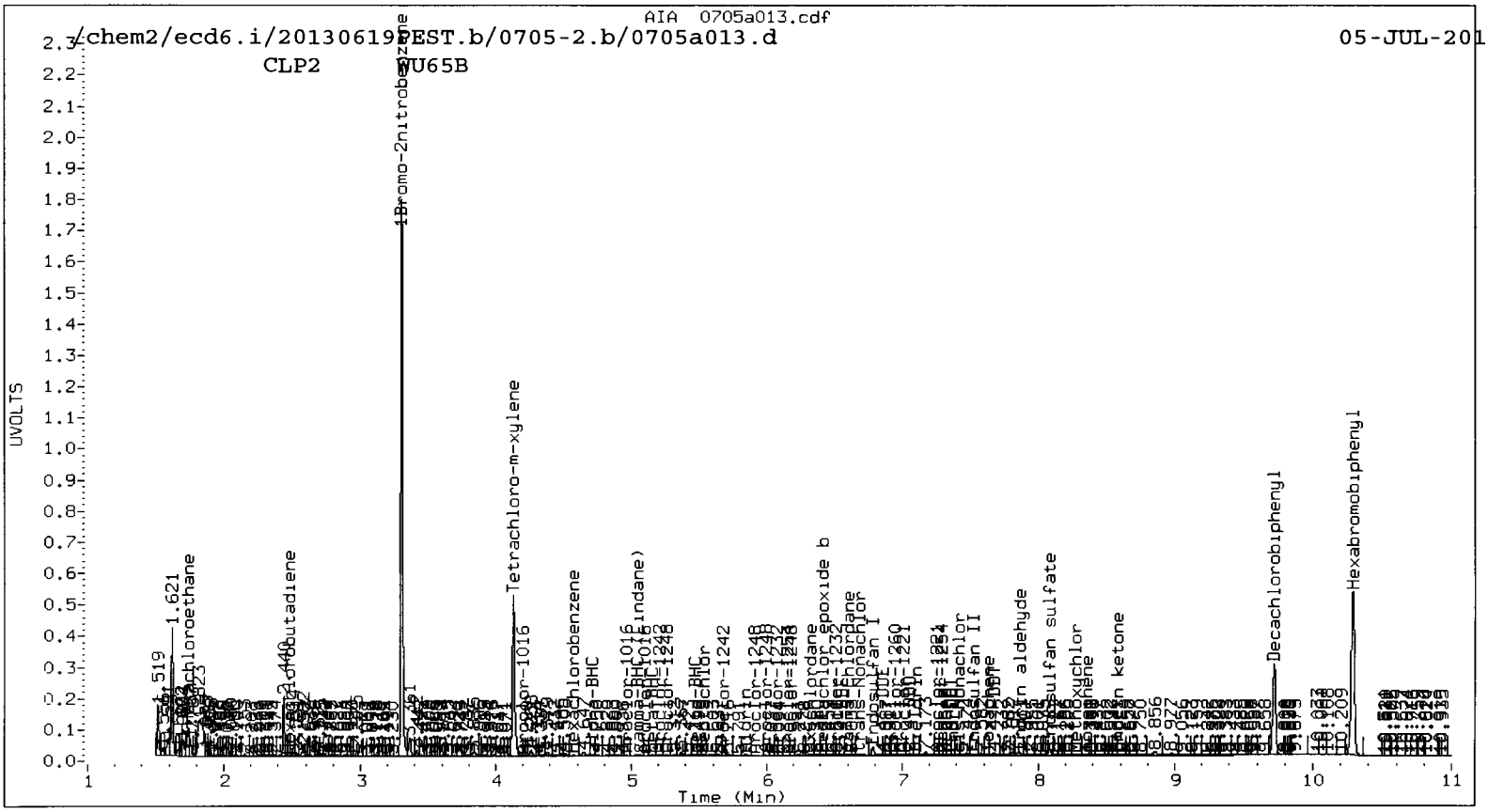
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	33128964	17.0
Hexabromobiphenyl	16454599	17292931	5.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col				CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.961	0.003	8810	2.1	1	7.288	-0.003	71297	5.9
Toxaphene	2	7.042	0.032	19366	6.7	2	7.626	0.011	117524	6.6
Toxaphene	3	7.261	-0.006	6875	1.4	3	7.862	0.015	409111	20.9
Toxaphene	4	7.604	0.012	5858	1.2	4	8.349	0.035	181768	12.9
Toxaphene	5	---			0.000	5	---			0.000
Toxaphene	6	7.907	-0.007	43623	15.9	NS	---			----
Total STX-CLPAve (5 peaks): 5.470						Total CLP2Ave (4 peaks): 11.560				RPD = 72*
Corrected Ave (4 peaks): 2.859						Corrected Ave (3 peaks): 8.451				RPD = 99*


/chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a013.d
AIA 0705a013.cdf
05-JUL-201
STX-CLP WU65B
UVOLTS
Time (Min)
1.514
1.572
2.431
3.240
4Bromo-2nitrobenzene
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl


/chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a013.d
AIA 0705a013.cdf
05-JUL-201
CLP2 WU65B
UVOLTS
Time (Min)
1.519
1.621
4Bromo-2nitrobenzene
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 07/08/13

Data file 1: /chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a025.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a025.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 05-JUL-2013 18:29
Compound Sublist: INDA Report Date: 07/08/2013 14:07
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.125	-0.007	6365505	3.301	0.001	31676402	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.278	-0.008	2817918	4.710	0.000	15027615	22.0731	19.8572	10.6	alpha-BHC
4.637	-0.007	1038378	5.140	0.002	5695081	20.1641	17.3709	14.9	beta-BHC
4.806	-0.008	2417934	5.451	0.001	13061229	21.8743	20.0225	8.8	delta-BHC
4.559	-0.009	2531650	5.066	0.000	13162412	21.7494	19.6698	10.0	gamma-BHC (Lindane)
5.004	-0.011	2423929	5.529	0.000	12276790	21.7000	18.9143	13.7	Heptachlor
5.295	-0.012	2371228	5.867	0.000	11686738	21.9086	19.0188	14.1	Aldrin
5.869	-0.014	2114850	6.421	0.000	10291880	21.0768	18.3773	13.7	Heptachlor epoxide
6.245	-0.015	1944803	6.809	0.000	9347597	20.7361	18.5747	11.0	Endosulfan I
6.467	-0.015	4218053	7.066	-0.001	18668699	42.5627	36.7577	14.6	Dieldrin
6.170	-0.014	3086852	6.869	-0.001	18554870	40.9413	36.2906	12.0	4,4'-DDE
6.685	-0.016	3635560	7.356	-0.001	14755239	40.7743	41.0468	0.7	Endrin
6.891	-0.015	3552066	7.545	0.000	15620439	40.1294	41.4797	3.3	Endosulfan II
6.727	-0.013	3352390	7.408	0.001	14911309	39.3736	38.5318	2.2	4,4'-DDD
7.657	-0.017	3139420	8.088	0.000	13644196	40.1686	42.5578	5.8	Endosulfan sulfate
6.984	-0.014	3460229	7.695	0.001	14305037	41.2338	41.7189	1.2	4,4'-DDT
7.409	-0.015	7336550	8.277	-0.004	23409634	184.7221	183.4463	0.7	Methoxychlor
7.912	-0.018	3829983	8.577	-0.001	14211000	39.4643	44.3512	11.7	Endrin ketone
7.267	-0.016	2815056	7.842	0.000	12103962	40.2367	41.8679	4.0	Endrin aldehyde
5.989	-0.013	2228321	6.605	0.000	10704560	21.6184	18.1622	17.4	gamma-Chlordane
6.113	-0.014	2123491	6.742	0.000	9906478	21.1653	18.3348	14.3	alpha-Chlordane
2.306	-0.006	2921007	2.467	-0.002	11818793	20.8824	18.0257	14.7	Hexachlorobutadiene
4.134	-0.006	2041100	4.587	0.001	12901860	20.0958	20.6770	2.9	Hexachlorobenzene
8.907	-0.020	5916588	10.288	-0.001	17433121	80.0000	80.0000	0.0	Hexabromobiphenyl
3.793	-0.006	3600984	4.128	0.000	20586066	41.6623	39.2920	5.9	Tetrachloro-m-xylen
8.756	-0.021	2935790	9.723	-0.002	11610723	39.4246	41.2019	4.4	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	104.2	98.2	98.2~	115- 0
Decachlorobiphenyl	98.6	103.0	98.6~	115- 0

~ Indicates recovery outside QC Limits

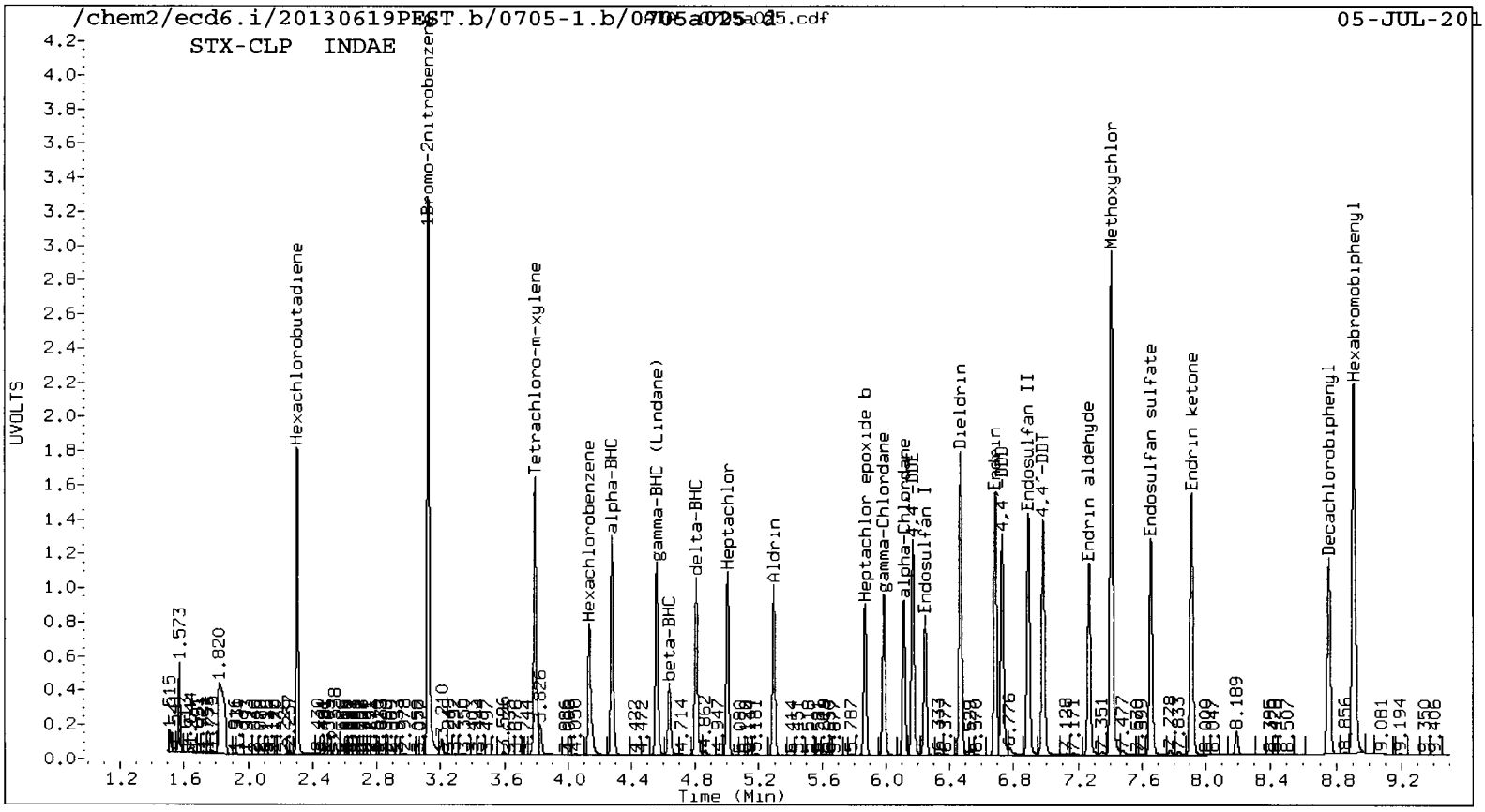
INTERNAL STANDARD SUMMARY

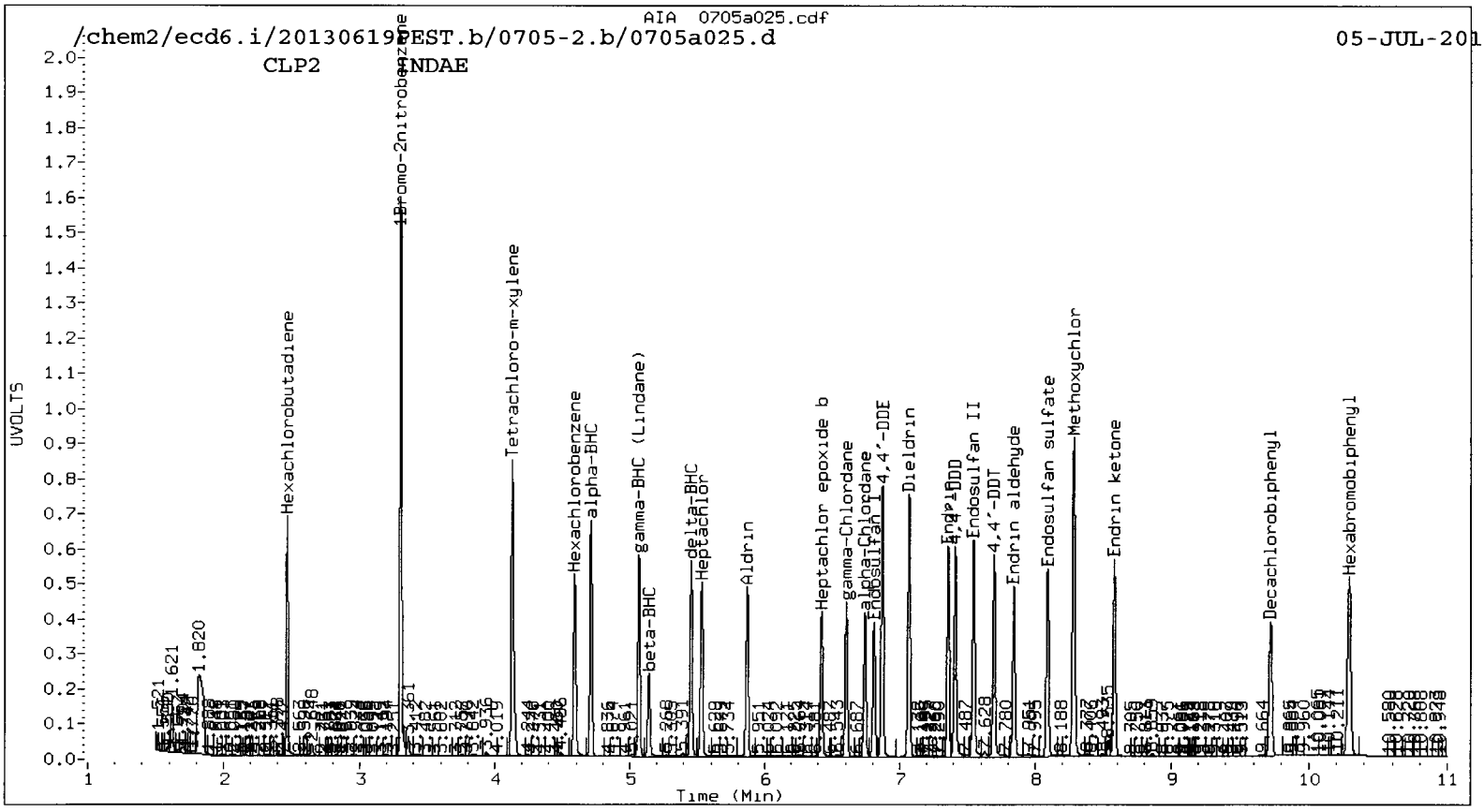
Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	Column 1 %D
Bromo-Nitrobenzene	5590801	6365505	13.9
Hexabromobiphenyl	4870538	5916588	21.5

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	Column 2 %D
Bromo-Nitrobenzene	28320361	31676402	11.9
Hexabromobiphenyl	16454599	17433121	5.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a025.d
05-JUL-201
STX-CLP INDAE
UVOLTS
Time (Min)
1.573
1.820
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0705a025.cdf
/chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a025.d
05-JUL-201
CLP2 INDAE
UVOLTS
Time (Min)
1.621
1.820
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 07/08/13

Data file 1: /chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a026.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a026.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 05-JUL-2013 18:47
Compound Sublist: TOXAPH Report Date: 07/08/2013 14:07
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.124	-0.007	5984250	3.300	0.001	29870826	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.906	-0.021	5714594	10.286	-0.003	16191067	80.0000	80.0000	0.0	Hexabromobiphenyl
3.793	-0.006	2523604	4.128	0.000	15375924	31.0575	31.1215	0.2	Tetrachloro-m-xylen
8.755	-0.022	2472081	9.722	-0.003	9459787	34.3709	36.1443	5.0	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	77.6	77.8	77.6~	150- 0
Decachlorobiphenyl	85.9	90.4	85.9~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

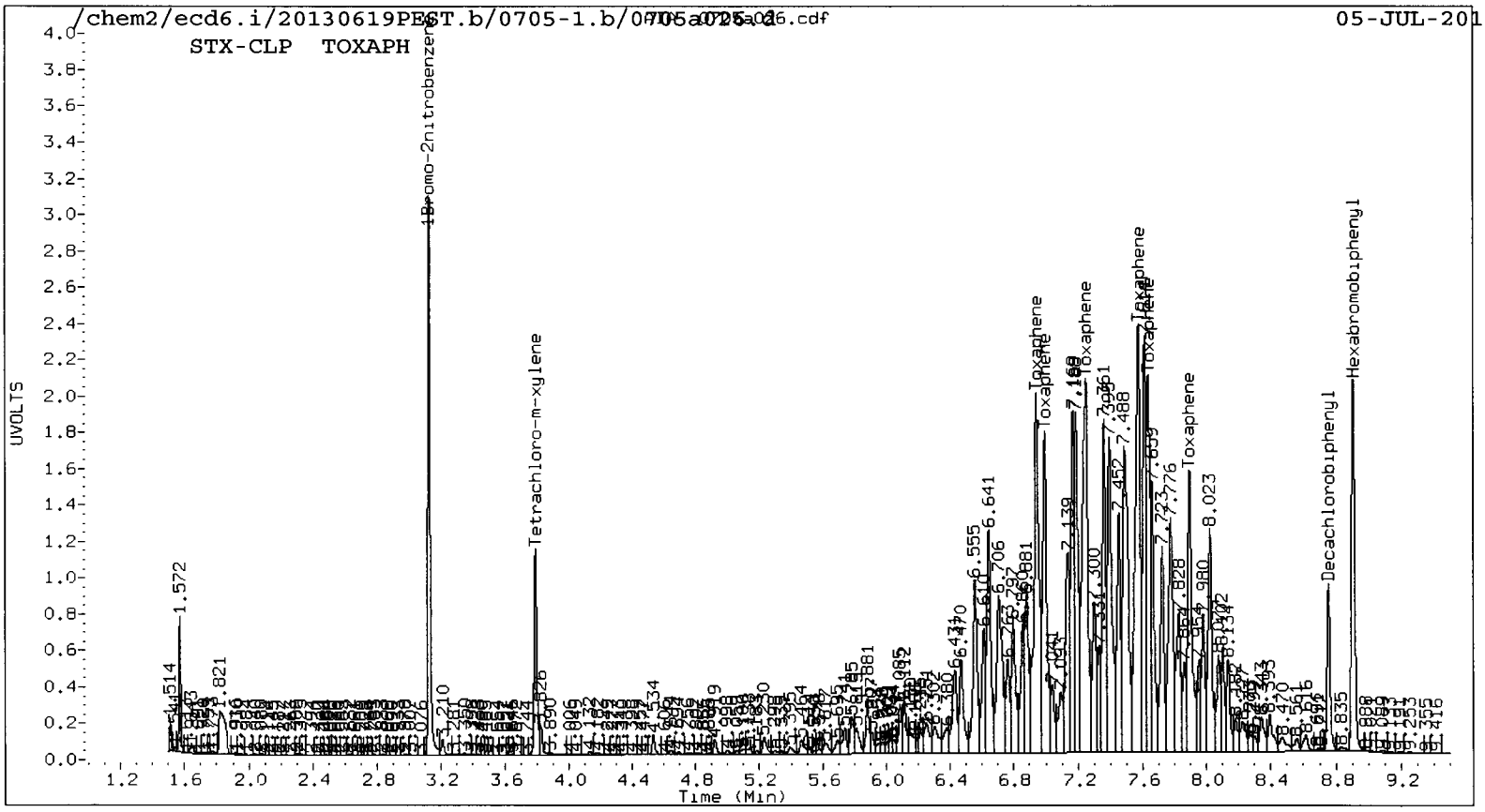
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5984250	7.0
Hexabromobiphenyl	4870538	5714594	17.3

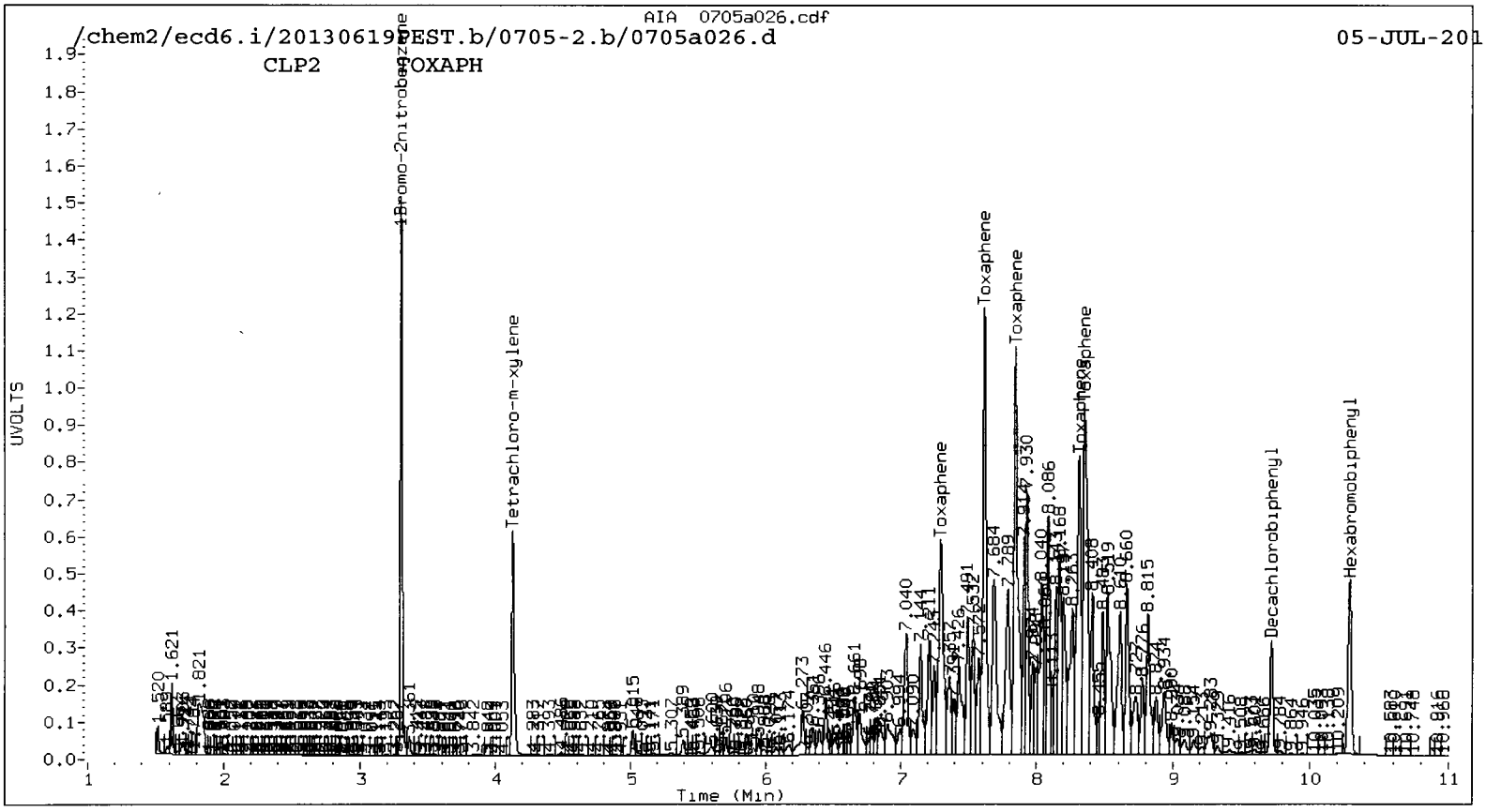
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	29870826	5.5
Hexabromobiphenyl	16454599	16191067	-1.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.943	-0.016	8698300	2371.5	1	7.291	-0.001	28172116	2487.0
Toxaphene	2	6.994	-0.016	6162926	2435.1	2	7.615	0.000	41737849	2497.3
Toxaphene	3	7.250	-0.017	9929809	2378.1	3	7.846	-0.001	45324512	2471.5
Toxaphene	4	7.575	-0.017	9980063	2346.5	4	8.313	-0.001	33100792	2504.2
Toxaphene	5	7.636	0.004	5439257	1925.9	5	8.352	0.000	42304447	2516.7
Toxaphene	6	7.895	-0.019	5673566	2366.4	NS	---			----
Total STX-CLPAve (6 peaks): 2303.940						Total CLP2Ave (5 peaks): 2495.336				RPD = 8
Corrected Ave (6 peaks): 2303.940						Corrected Ave (5 peaks): 2495.336				RPD = 8


/chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a026.d
AIA 0705a026.cdf
05-JUL-201
STX-CLP TOXAPH
UVOLTS
Time (Min)
4-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0705a026.cdf
/chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a026.d
05-JUL-201
CLP2 TOXAPH
UVOLTS
Time (Min)
4-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl

Metals Raw Data
Preparation Bench Sheets and Notes

ARI Job ID: WU65, WU71

SPIKING LOG

Analyst: TDM

Date: 6-24-13

Final Volume 25

Final Volume (Hg):

Sample ID WU65 ASPK, MBISPK, CSPK, MB2SPK

	Prepcode:			
	Spike Solution:	ICP Routine	ICP No GFA	GFA
	Standard No.:			
	Vol Added (mL):			
STOCK CONCENTRATION	Ag	50		2.0
	Al	200	200	
	As	200		10
	Ba	200	200	
	Be	50	50	
	Ca	1000	1000	
	Cd	50		2.0
	Co	50	50	
	Cr	50	50	
	Cu	50	50	
	Fe	200	200	
	K	1000	1000	
	Mg	1000	1000	
	Mn	50	50	
	Na	1000	1000	
	Ni	50	50	
	Pb	200		10
	Se	200		10
	Sr	50	50	
	Tl	200		10
	V	50	50	
	Zn	50	50	

	REN	REN	
	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
	B510	B511	
	0.05	0.05	
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		CVA	1.0		
Hg MBSPK		CVA	1.0		
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: 6-24-13 Time: 0810

Matrix: WATER Block ID: #13 Block Temp: 91°C Thermometer: MP2C

ARI Sample ID	Btl #	pH<2	Prep Code: REN Initial ~~Wt (g)~~ Vol (mL)	Prep Code: REN Final Vol (mL)	Prep Code: Initial Wt (g) Vol (mL)	Prep Code: Final Vol (mL)	Comments
WU65 A	5	✓	50.0	25.0			
" AOUP	5	✓					
" ASPK	5	✓					
" B	5	✓					
" MB1	—	✓					
" MB1SPK	—	✓					
" C	1	—					
" COUP	1	—					
" CSPK	1	—					- Filtered
" D	1	—					in Lab
" MB2	—	—					
" MB2SPK	—	—	50.0	25.0			
				6-24-13 DM			

Chemical/Reagent ID: HNO_3 : MP2510 MP2452 H_2O_2 : I8135 Tube LOT # MH21KK06

Metals Raw Data
Run Logs, Calibrations, and Raw Data

ARI Job ID: WU65, WU71

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP (ICP-MS) GFA CVA **Analysis Date:** 6-27-13

MS1	Analyst BA 6-28-13	Peer 6-28-13	Comment
Logbook:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration:			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration Verification:			
ICV/CCV	✓	✓	See log
ICB/CCB	✓	✓	
Samples:			
RSD's & SD's	✓	✓	
Internal Standards	✓	✓	
Carry-over	✓	✓	
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	
Post Spikes/Serial Dilutions	✓	✓	
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysts Notes and CAF's	—	—	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Sciex ELAN 6000 Serial No. Z13960660

Analysis Date: 6-27-13 **Analyst:** BA **Page:** 1 **of** 3

All corrections made by analyst unless otherwise noted. BA 6-27-13

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		STD 0			3035-5
		1			B795
		2			B796
		3			B797
		4			B798
		Rinse sample			
		ICV			3023-4
		ICB			
		CCV1			
		CCB1			
		Low Check			
		ICSA			~~SC4~~
		ICSAB			
		LR200			
		LR300			
		CCV2			Mn ↑
		CCB2			
		WU58 MB1	BEN	2	
		A			
		MB1SPK			✓
		MB1SPD			✓
		CCV3			
		CCB3			End WU58
		WU65 MB1	BEN	2	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Sciex ELAN 6000 Serial No. Z13960660

Analysis Date: 6-27-13 **Analyst:** BA **Page:** 2 of 3

All corrections made by analyst unless otherwise noted. BA 6-27-13

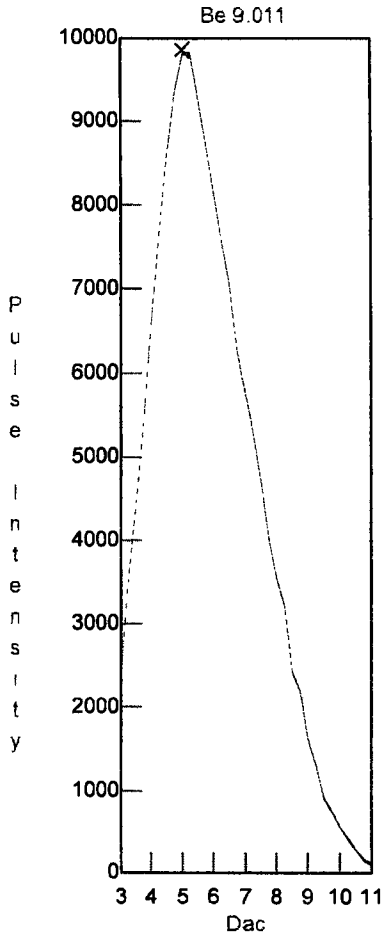
Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		WW65 ADUP	REN	2	
		A			
		ASPK			
zzz		~~APOST~~ zzzzzz			
		B			
		MB1SPK			
		CCV4			
		CCB4			
		WW65 MB2	REN	2	
		CDUP			
		C			
		CSPK			
zzz		~~CPOST~~ zzzzzz			
		D			
		MB2SPK			
		CCV5			
		CCB5			End Pkg (WW65)
		WV22 MB1	REN	2	
		MB2			
		A			
		B			Zn > LR (RR Sx)
		C			
		D			Zn > LR (RR Sx)
		MB1SPK			

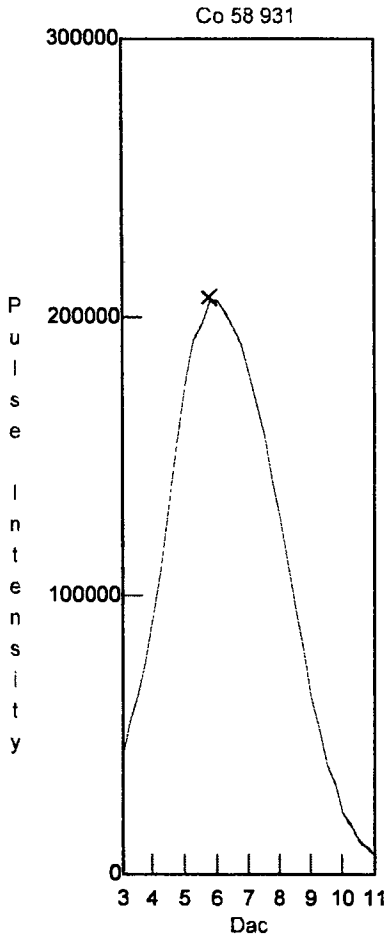
Instrument Tuning Report

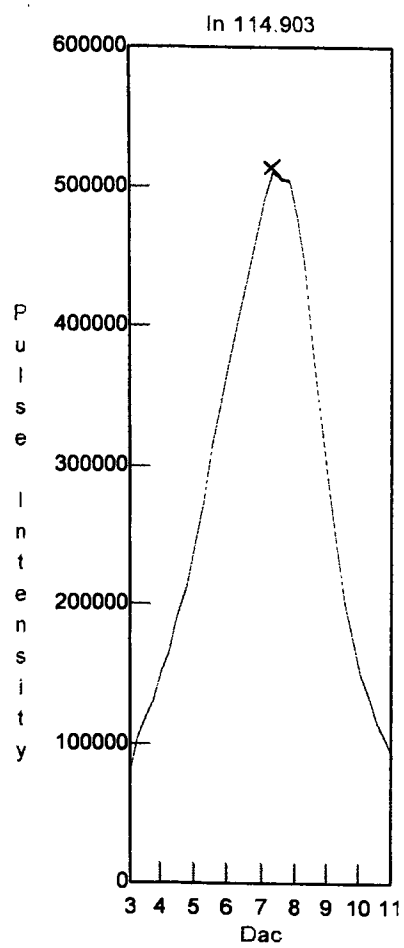
File Name: Default.tun
File Path: C:\Elandata\Tuning\Default.tun

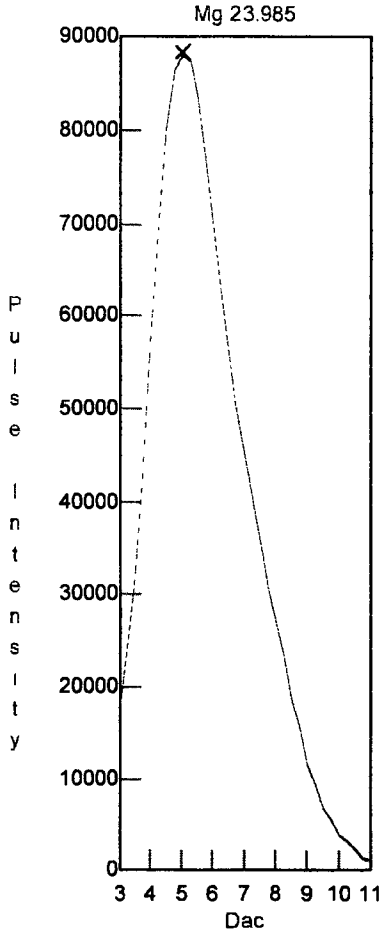
Analyte	Exact Mass	Meas. Mass	Mass DAC	Res. DAC	Meas. Pk. Width	Custom Res.
Be	9.012	9.075	2023	2170	0.673	
Mg	23.985	24.029	5656	2274	0.678	
Co	58.933	58.979	14151	2537	0.690	
In	114.904	114.928	27794	2982	0.684	
Pb	207.977	208.026	50454	3726	0.693	

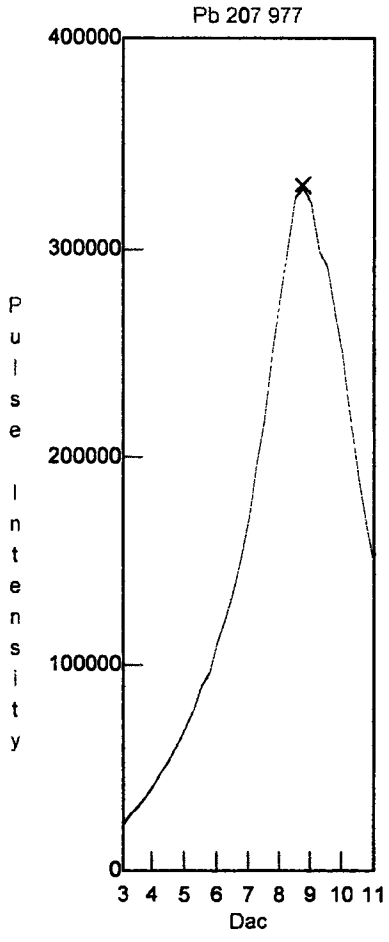
6-27-13

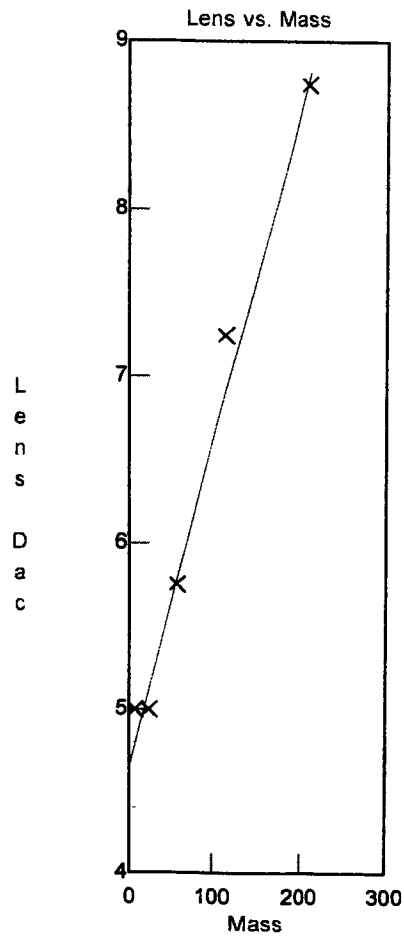












Daily Performance Report

Sample ID: Sample
Sample Date/Time: Thursday, June 27, 2013 08:18:36
Sample Description:
Sample File: 1119.sam
Method File: C:\Elandata\Method\aridailyperf.mth
Dataset File: C:\Elandata\Dataset\daily performance\Sample.1559
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\Default.dac
Number of Replicates: 5
Dual Detector Mode: Dual

Neb 0.93

Summary

	Analyte	Mass	Net Intens. Mean	Net Intens. SD	Net Intens. RSD
	Mg	24	25038.576	584.772	2.335
	In	115	314863.050	3282.413	1.042
	Pb	208	198676.696	2812.755	1.416
>	Ba	138	241391.482	2227.287	0.923
	Ba++	69	0.013	0.000	1.887
>	Ce	140	295066.011	3489.836	1.183
	CeO	156	0.030	0.001	2.222
	Bkgd	220	6.001	1.630	27.163

Mg w/in Perkin-Elmer specs

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 27, 2013 08:54:34
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060513.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L				242414	0
[	Be	9		ug/L				3	33
	C	13		mg/L				6328	3
	Cl	37		mg/L				2367054	0
[>	Sc	45		ug/L				372333	1
|	V	51		ug/L				3214	7
|	V-1	51		ug/L				3709	1
|	Cr	52		ug/L				8815	1
|	Cr	53		ug/L				1154	5
|	Mn	55		ug/L				450	2
[	Co	59		ug/L				61	10
[>	Ge	72		ug/L				336728	0
|	Ni	60		ug/L				39	39
|	Ni	62		ug/L				49	6
|	Cu	63		ug/L				186	8
|	Cu	65		ug/L				75	2
|	Zn	66		ug/L				337	7
|	Zn	67		ug/L				113	11
|	Zn	68		ug/L				7099	1
|	As	75		ug/L				138	11
|	As-1	75		ug/L				10888	0
|	Se	82		ug/L				2	283
|	Se	78		ug/L				11062	0
[	Mo	98		ug/L				42	19
	Y	89		ug/L				331294	0
	Kr	83		ug/L				136	1
[>	In	115		ug/L				309156	1
|	Ag	107		ug/L				19	3
|	Cd	111		ug/L				150	12
|	Cd	114		ug/L				20	44
|	Sb	121		ug/L				20	15
|	Sb	123		ug/L				16	19
|	Ba	135		ug/L				29	15
[	Ba	137		ug/L				54	8
[>	Tb	159		ug/L				381205	1
|	Tl	205		ug/L				265	6
|	Pb	208		ug/L				615	9
|	Bi	209		ug/L				299792	0
|	Th	232		ug/L				29	8
[	U	238		ug/L				8	28

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 27, 2013 09:00:23
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060513.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L			242414	243727	2
⌊	Be	9	10.000	ug/L	0.396	3	3	3271	1
	C	13		mg/L			6328	2944	1
	Cl	37		mg/L			2367054	2393000	0
⌈>	Sc	45		ug/L			372333	378461	1
|	V	51	10.000	ug/L	0 051	0	3214	159844	0
|	V-1	51	10.000	ug/L	0 092	0	3709	161893	0
|	Cr	52	10.000	ug/L	0.057	0	8815	140173	0
|	Cr	53	10.000	ug/L	0 153	1	1154	16494	0
|	Mn	55	10.000	ug/L	0.117	1	450	214916	0
⌊	Co	59	10.000	ug/L	0.105	1	61	151654	0
⌈>	Ge	72		ug/L			336728	343493	0
|	Ni	60	10.000	ug/L	0.026	0	39	31439	0
|	Ni	62	10.000	ug/L	0.069	0	49	4633	0
|	Cu	63	10.000	ug/L	0.066	0	186	66457	0
|	Cu	65	10.000	ug/L	0 062	0	75	30651	0
|	Zn	66	10.000	ug/L	0.180	1	337	19861	1
|	Zn	67	10.000	ug/L	0.099	0	113	3360	0
|	Zn	68	10.000	ug/L	0.026	0	7099	20714	0
|	As	75	10.000	ug/L	0.055	0	138	20112	1
|	As-1	75	10.000	ug/L	0.051	0	10888	30208	0
|	Se	82	10.000	ug/L	0.171	1	2	2410	1
|	Se	78	10.000	ug/L	0.223	2	11062	16560	0
⌊	Mo	98	10.000	ug/L	0.089	0	42	66856	0
	Y	89		ug/L			331294	337940	0
	Kr	83		ug/L			136	148	9
⌈>	In	115		ug/L			309156	311176	0
|	Ag	107	10.000	ug/L	0 052	0	19	110198	0
|	Cd	111	10.000	ug/L	0.002	0	150	27200	0
|	Cd	114	10.000	ug/L	0.050	0	20	61495	0
|	Sb	121	10.000	ug/L	0.148	1	20	82186	0
|	Sb	123	10.000	ug/L	0.109	1	16	61751	0
|	Ba	135	10.000	ug/L	0.067	0	29	21093	0
⌊	Ba	137	10.000	ug/L	0.033	0	54	36289	1
⌈>	Tb	159		ug/L			381205	385642	1
|	Tl	205	10.000	ug/L	0.126	1	265	270786	0
|	Pb	208	10.000	ug/L	0.094	0	615	368080	0
|	Bi	209		ug/L			299792	303812	0
|	Th	232	10.000	ug/L	0.141	1	29	407947	0
⌊	U	238	10.000	ug/L	0.167	1	8	448123	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 27, 2013 09:06:11
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060513.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L			242414	243341	1
⌊	Be	9	19.973	ug/L	0.269	1	3	6488	2
	C	13		mg/L			6328	2959	3
	Cl	37		mg/L			2367054	2391877	0
⌈>	Sc	45		ug/L			372333	374588	0
|	V	51	20.035	ug/L	0.055	0	3214	315922	0
|	V-1	51	20.043	ug/L	0.097	0	3709	320161	0
|	Cr	52	20.070	ug/L	0.255	1	8815	273179	0
|	Cr	53	20.095	ug/L	0.406	2	1154	32224	1
|	Mn	55	20.052	ug/L	0.349	1	450	430590	1
⌊	Co	59	20.009	ug/L	0.239	1	61	300860	0
⌈>	Ge	72		ug/L			336728	341966	0
|	Ni	60	20.003	ug/L	0.105	0	39	62607	0
|	Ni	62	19.961	ug/L	0.230	1	49	9085	0
|	Cu	63	19.996	ug/L	0.089	0	186	131987	0
|	Cu	65	20.035	ug/L	0 086	0	75	61484	0
|	Zn	66	20.054	ug/L	0.129	0	337	39735	0
|	Zn	67	20.172	ug/L	0.532	2	113	6863	2
|	Zn	68	20.022	ug/L	0.145	0	7099	34184	0
|	As	75	20.029	ug/L	0.051	0	138	40192	0
|	As-1	75	20.073	ug/L	0.124	0	10888	49799	0
|	Se	82	19.969	ug/L	0.040	0	2	4761	0
|	Se	78	20.115	ug/L	0.253	1	11062	22048	0
⌊	Mo	98	20.043	ug/L	0.028	0	42	134516	0
	Y	89		ug/L			331294	335746	0
	Kr	83		ug/L			136	150	2
⌈>	In	115		ug/L			309156	308066	0
|	Ag	107	19.971	ug/L	0.281	1	19	216602	1
|	Cd	111	20.010	ug/L	0.064	0	150	53834	0
|	Cd	114	20.050	ug/L	0.186	0	20	123274	0
|	Sb	121	20.042	ug/L	0.302	1	20	164439	0
|	Sb	123	20.034	ug/L	0.282	1	16	123294	0
|	Ba	135	20.033	ug/L	0.287	1	29	42074	0
⌊	Ba	137	20.019	ug/L	0.182	0	54	72128	0
⌈>	Tb	159		ug/L			381205	381972	0
|	Tl	205	20.008	ug/L	0.203	1	265	537292	0
|	Pb	208	20.021	ug/L	0.052	0	615	732424	0
|	Bi	209		ug/L			299792	297994	0
|	Th	232	20.052	ug/L	0.073	0	29	818823	0
⌊	U	238	20.046	ug/L	0.054	0	8	898110	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 27, 2013 09:11:59
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060513.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L			242414	233613	3
⌊	Be	9	49.990	ug/L	0.860	1	3	15563	1
	C	13		mg/L			6328	2452	5
	Cl	37		mg/L			2367054	2370998	0
⌈>	Sc	45		ug/L			372333	369968	1
|	V	51	50.131	ug/L	0.797	1	3214	786133	0
|	V-1	51	50.141	ug/L	0.831	1	3709	796648	0
|	Cr	52	50.038	ug/L	0.830	1	8815	662045	0
|	Cr	53	50.075	ug/L	0.901	1	1154	78173	0
|	Mn	55	50.152	ug/L	0.765	1	450	1079314	0
⌊	Co	59	50.115	ug/L	0.455	0	61	752787	0
⌈>	Ge	72		ug/L			336728	342587	0
|	Ni	60	49.827	ug/L	0 451	0	39	153514	0
|	Ni	62	49.775	ug/L	1.260	2	49	22125	2
|	Cu	63	49.823	ug/L	0.115	0	186	323474	0
|	Cu	65	49.799	ug/L	0 354	0	75	149982	0
|	Zn	66	49.899	ug/L	0.301	0	337	97555	0
|	Zn	67	49.825	ug/L	0.251	0	113	16527	1
|	Zn	68	50.068	ug/L	0.546	1	7099	75260	0
|	As	75	49.965	ug/L	0.343	0	138	99887	0
|	As-1	75	50.023	ug/L	0.349	0	10888	108015	0
|	Se	82	49.933	ug/L	0.250	0	2	11845	0
|	Se	78	50.119	ug/L	0.377	0	11062	38571	0
⌊	Mo	98	50.092	ug/L	0.373	0	42	339843	0
	Y	89		ug/L			331294	341907	1
	Kr	83		ug/L			136	153	1
⌈>	In	115		ug/L			309156	310129	0
|	Ag	107	49.883	ug/L	0.196	0	19	538325	1
|	Cd	111	50.020	ug/L	0.223	0	150	135518	0
|	Cd	114	49.862	ug/L	0.117	0	20	304392	0
|	Sb	121	49.943	ug/L	0.300	0	20	410185	0
|	Sb	123	49.987	ug/L	0.296	0	16	309304	1
|	Ba	135	49.949	ug/L	0.366	0	29	105038	0
⌊	Ba	137	50.007	ug/L	0.726	1	54	181423	0
⌈>	Tb	159		ug/L			381205	382081	1
|	Tl	205	50.081	ug/L	0.224	0	265	1355759	0
|	Pb	208	49.990	ug/L	1.003	2	615	1826209	0
|	Bi	209		ug/L			299792	297337	1
|	Th	232	49.597	ug/L	0.397	0	29	1947346	0
⌊	U	238	49.564	ug/L	1.102	2	8	2128008	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 27, 2013 09:17:48
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060513.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			242414	219202	2
[	Be	9	100.475	ug/L	1.181	1	3	29828	3
	C	13		mg/L			6328	2985	1
	Cl	37		mg/L			2367054	2344384	0
[>	Sc	45		ug/L			372333	361129	1
[	V	51	100.556	ug/L	0.636	0	3214	1565112	0
[	V-1	51	100.481	ug/L	0.232	0	3709	1580105	0
[	Cr	52	100.624	ug/L	1.846	1	8815	1318175	1
[	Cr	53	100.375	ug/L	0.956	0	1154	153748	0
[	Mn	55	98.472	ug/L	0.947	0	450	1968102	0
[	Co	59	100.667	ug/L	2.093	2	61	1509364	1
[>	Ge	72		ug/L			336728	344325	0
[	Ni	60	99.668	ug/L	0.277	0	39	305229	1
[	Ni	62	99.936	ug/L	0.922	0	49	44504	0
[	Cu	63	99.925	ug/L	0.658	0	186	650206	0
[	Cu	65	99.704	ug/L	1.087	1	75	298778	0
[	Zn	66	99.732	ug/L	0.343	0	337	193902	0
[	Zn	67	99.520	ug/L	1.328	1	113	32541	0
[	Zn	68	99.482	ug/L	0.608	0	7099	140832	0
[	As	75	100.071	ug/L	0 867	0	138	201409	0
[	As-1	75	100.103	ug/L	1.126	1	10888	206777	0
[	Se	82	99.982	ug/L	0.901	0	2	23822	1
[	Se	78	100.075	ug/L	1.075	1	11062	66270	0
[	Mo	98	100.540	ug/L	1.345	1	42	698084	1
	Y	89		ug/L			331294	345601	1
	Kr	83		ug/L			136	164	2
[>	In	115		ug/L			309156	312058	0
[	Ag	107	100.091	ug/L	0.663	0	19	1090163	0
[	Cd	111	100.007	ug/L	1.060	1	150	272546	1
[	Cd	114	100.166	ug/L	0.312	0	20	618688	0
[	Sb	121	100.261	ug/L	0.791	0	20	835831	0
[	Sb	123	100.143	ug/L	1.142	1	16	626449	1
[	Ba	135	99.928	ug/L	0.388	0	29	210914	0
[	Ba	137	99.928	ug/L	0.648	0	54	363881	0
[>	Tb	159		ug/L			381205	383462	0
[	Tl	205	98.346	ug/L	1.268	1	265	2532031	0
[	Pb	208	99.771	ug/L	1.199	1	615	3629922	0
[	Bi	209		ug/L			299792	298314	0
[	Th	232	99.734	ug/L	1.574	1	29	3895344	0
[	U	238	99.575	ug/L	0.840	0	8	4231236	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Rinse Sample
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 27, 2013 09:24:06
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\060513.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens. RSD
⌈>	Li	6		ug/L			242414	219228	0
⌊	Be	9	-0.003	ug/L	0.000	1	3	2	0
	C	13		mg/L			6328	5488	1
	Cl	37		mg/L			2367054	2382330	0
⌈>	Sc	45		ug/L			372333	361484	0
|	V	51	-0.009	ug/L	0.004	46	3214	2973	2
|	V-1	51	-0.014	ug/L	0.002	11	3709	3377	0
|	Cr	52	0.012	ug/L	0.009	72	8815	8719	1
|	Cr	53	-0.004	ug/L	0.006	141	1154	1114	1
|	Mn	55	0.012	ug/L	0.002	17	450	678	6
⌊	Co	59	0.004	ug/L	0.001	26	61	119	13
⌈>	Ge	72		ug/L			336728	343720	0
|	Ni	60	-0.001	ug/L	0.002	245	39	38	13
|	Ni	62	0.028	ug/L	0.018	65	49	62	12
|	Cu	63	0.007	ug/L	0.003	49	186	232	8
|	Cu	65	0.012	ug/L	0.003	29	75	112	9
|	Zn	66	-0.016	ug/L	0.017	109	337	314	10
|	Zn	67	-0.070	ug/L	0.048	68	113	92	17
|	Zn	68	-0.158	ug/L	0.047	30	7099	7034	0
|	As	75	0.002	ug/L	0.009	627	138	144	12
|	As-1	75	-0.038	ug/L	0.025	67	10888	11040	0
|	Se	82	-0.060	ug/L	0.028	46	2	-12	54
|	Se	78	-0.182	ug/L	0.054	29	11062	11192	0
⌊	Mo	98	0.020	ug/L	0.009	45	42	185	34
	Y	89		ug/L			331294	346432	1
	Kr	83		ug/L			136	143	2
⌈>	In	115		ug/L			309156	316506	0
|	Ag	107	0.009	ug/L	0.003	37	19	115	29
|	Cd	111	0.003	ug/L	0.012	348	150	163	18
|	Cd	114	0.003	ug/L	0.001	46	20	40	20
|	Sb	121	0.130	ug/L	0.035	26	20	1116	25
|	Sb	123	0.122	ug/L	0.035	28	16	786	27
|	Ba	135	0.009	ug/L	0.003	30	29	49	11
⌊	Ba	137	0.006	ug/L	0.003	40	54	79	11
⌈>	Tb	159		ug/L			381205	381055	0
|	Tl	205	0.010	ug/L	0.002	21	265	518	10
|	Pb	208	0.003	ug/L	0.002	55	615	735	9
|	Bi	209		ug/L			299792	302182	0
|	Th	232	0.041	ug/L	0.010	24	29	1636	23
⌊	U	238	0.006	ug/L	0 002	37	8	276	36

Quantitative Analysis - Calibration Report

Sample Date/Time: Thursday, June 27, 2013 09:17:48
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

Analyte	Mass	r Corr Coeff	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
Li	6							
Be	9	1.0000	0.0014	10	20	50	100	
C	13							
Cl	37							
Sc	45							
V	51	0.9999	0.0430	10	20	50	100	
V-1	51	1.0000	0.0434	10	20	50	100	
Cr	52	0.9999	0.0360	10	20	50	100	
Cr	53	1.0000	0.0042	10	20	50	100	
Mn	55	0.9996	0.0553	10	20	50	100	
Co	59	0.9999	0.0415	10	20	50	100	
Ge	72							
Ni	60	1.0000	0.0089	10	20	50	100	
Ni	62	1.0000	0.0013	10	20	50	100	
Cu	63	1.0000	0.0189	10	20	50	100	
Cu	65	1.0000	0.0087	10	20	50	100	
Zn	66	1.0000	0.0056	10	20	50	100	
Zn	67	0.9999	0.0009	10	20	50	100	
Zn	68	1.0000	0.0039	10	20	50	100	
As	75	1.0000	0.0058	10	20	50	100	
As-1	75	1.0000	0.0057	10	20	50	100	
Se	82	1.0000	0.0007	10	20	50	100	
Se	78	1.0000	0.0016	10	20	50	100	
Mo	98	0.9999	0.0202	10	20	50	100	
Y	89							
Kr	83							
In	115							
Ag	107	1.0000	0.0349	10	20	50	100	
Cd	111	1.0000	0.0087	10	20	50	100	
Cd	114	1.0000	0.0198	10	20	50	100	
Sb	121	1.0000	0.0267	10	20	50	100	
Sb	123	1.0000	0.0200	10	20	50	100	
Ba	135	1.0000	0.0068	10	20	50	100	
Ba	137	1.0000	0.0117	10	20	50	100	
Tb	159							
Tl	205	0.9995	0.0671	10	20	50	100	
Pb	208	1.0000	0.0949	10	20	50	100	
Bi	209							
Th	232	0.9999	0.1019	10	20	50	100	
U	238	0.9999	0.1108	10	20	50	100	

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 27, 2013 09:33:57
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L			242414	215188	1
⌊	Be	9	50.338	ug/L	0.785	1	3	14672	2
	C	13		mg/L			6328	5141	1
	Cl	37		mg/L			2367054	2348042	0
⌈>	Sc	45		ug/L			372333	359497	0
|	V	51	51.273	ug/L	0.657	1	3214	795925	0
|	V-1	51	51.390	ug/L	0.607	1	3709	806201	0
|	Cr	52	51.042	ug/L	0.645	1	8815	669849	0
|	Cr	53	51.438	ug/L	0.709	1	1154	78979	1
|	Mn	55	55.120	ug/L	0.574	1	450	1096862	0
⌊	Co	59	51.985	ug/L	0.477	0	61	776030	0
⌈>	Ge	72		ug/L			336728	341277	0
|	Ni	60	51.804	ug/L	0.189	0	39	157259	0
|	Ni	62	51.582	ug/L	0.295	0	49	22792	0
|	Cu	63	51.780	ug/L	0.366	0	186	334043	0
|	Cu	65	52.399	ug/L	0.329	0	75	155674	0
|	Zn	66	51.306	ug/L	0.443	0	337	99034	0
|	Zn	67	51.336	ug/L	0.631	1	113	16694	1
|	Zn	68	51.344	ug/L	0.295	0	7099	75524	0
|	As	75	52.899	ug/L	0.089	0	138	105594	0
|	As-1	75	52.327	ug/L	0.181	0	10888	112403	0
|	Se	82	80.598	ug/L	0.201	0	2	19034	0
|	Se	78	81.389	ug/L	0.258	0	11062	55514	0
⌊	Mo	98	50.883	ug/L	0.327	0	42	350206	0
	Y	89		ug/L			331294	343033	1
	Kr	83		ug/L			136	152	3
⌈>	In	115		ug/L			309156	312929	1
|	Ag	107	50.758	ug/L	0.306	0	19	554360	0
|	Cd	111	49.767	ug/L	0.502	1	150	136074	0
|	Cd	114	49.744	ug/L	0.586	1	20	308098	0
|	Sb	121	51.426	ug/L	0.647	1	20	429891	0
|	Sb	123	51.148	ug/L	0.332	0	16	320841	0
|	Ba	135	50.702	ug/L	0.305	0	29	107323	0
⌊	Ba	137	51.095	ug/L	0.726	1	54	186591	0
⌈>	Tb	159		ug/L			381205	380578	1
|	Tl	205	54.161	ug/L	0.589	1	265	1383985	1
|	Pb	208	52.244	ug/L	0.612	1	615	1886652	1
|	Bi	209		ug/L			299792	296183	1
|	Th	232	51.749	ug/L	1.227	2	29	2005550	0
⌊	U	238	51.791	ug/L	0.544	1	8	2184037	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICB
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 27, 2013 09:40:15
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			242414	217491	2
	Be	9	-0.001	ug/L	0.007	458	3	2	65
	C	13		mg/L			6328	5464	1
	Cl	37		mg/L			2367054	2370508	1
>	Sc	45		ug/L			372333	360233	0
	V	51	-0.000	ug/L	0.006	3929	3214	3108	3
	V-1	51	-0.019	ug/L	0.002	8	3709	3285	0
	Cr	52	0.001	ug/L	0.010	732	8815	8546	1
	Cr	53	-0.062	ug/L	0.027	43	1154	1022	3
	Mn	55	0.006	ug/L	0.003	54	450	559	12
	Co	59	0.002	ug/L	0.001	45	61	89	15
>	Ge	72		ug/L			336728	343632	0
	Ni	60	0.000	ug/L	0.003	1133	39	41	23
	Ni	62	0.001	ug/L	0.010	1968	49	50	9
	Cu	63	0.005	ug/L	0.001	15	186	221	2
	Cu	65	0.005	ug/L	0.004	88	75	90	13
	Zn	66	-0.021	ug/L	0.010	49	337	304	6
	Zn	67	-0.069	ug/L	0.024	34	113	93	8
	Zn	68	-0.161	ug/L	0.140	87	7099	7028	2
	As	75	0.019	ug/L	0.011	55	138	179	12
	As-1	75	-0.017	ug/L	0.063	376	10888	11078	0
	Se	82	-0.014	ug/L	0.036	261	2	-1	778
	Se	78	-0.144	ug/L	0.251	174	11062	11210	0
	Mo	98	0.006	ug/L	0.002	37	42	84	17
	Y	89		ug/L			331294	343040	0
	Kr	83		ug/L			136	138	7
>	In	115		ug/L			309156	314611	0
	Ag	107	0.005	ug/L	0.002	31	19	75	23
	Cd	111	0.004	ug/L	0.004	91	150	164	6
	Cd	114	0.002	ug/L	0.002	72	20	35	29
	Sb	121	0.024	ug/L	0.003	10	20	227	9
	Sb	123	0.025	ug/L	0.004	16	16	171	15
	Ba	135	0.005	ug/L	0 002	52	29	40	13
	Ba	137	0.003	ug/L	0.001	19	54	67	2
>	Tb	159		ug/L			381205	379678	0
	Tl	205	0.003	ug/L	0.002	68	265	351	17
	Pb	208	0.001	ug/L	0.001	64	615	664	5
	Bi	209		ug/L			299792	301772	0
	Th	232	0.027	ug/L	0 007	25	29	1084	25
	U	238	0.003	ug/L	0.001	33	8	141	31

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 27, 2013 09:45:44
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			242414	208929	1
[	Be	9	49.639	ug/L	0.509	1	3	14048	1
	C	13		mg/L			6328	2369	8
	Cl	37		mg/L			2367054	2370651	0
[>	Sc	45		ug/L			372333	355832	1
[	V	51	50.139	ug/L	0.632	1	3214	770424	0
[	V-1	51	50.329	ug/L	0.463	0	3709	781564	0
[	Cr	52	50.191	ug/L	0.736	1	8815	652062	0
[	Cr	53	50.818	ug/L	0.216	0	1154	77245	0
[	Mn	55	54.063	ug/L	0.670	1	450	1064820	0
[	Co	59	50.835	ug/L	0.769	1	61	751062	0
[>	Ge	72		ug/L			336728	344358	0
[	Ni	60	50.281	ug/L	0.359	0	39	154011	0
[	Ni	62	50.351	ug/L	0.331	0	49	22449	0
[	Cu	63	50.438	ug/L	0.703	1	186	328311	0
[	Cu	65	50.738	ug/L	0.518	1	75	152091	0
[	Zn	66	50.598	ug/L	0.552	1	337	98549	0
[	Zn	67	50.405	ug/L	0.170	0	113	16541	0
[	Zn	68	50.241	ug/L	0.608	1	7099	74722	0
[	As	75	50.413	ug/L	0 206	0	138	101545	0
[	As-1	75	50.232	ug/L	0.465	0	10888	109318	0
[	Se	82	50.758	ug/L	0.378	0	2	12095	0
[	Se	78	50.127	ug/L	1.063	2	11062	38842	0
[	Mo	98	50.276	ug/L	0.668	1	42	349125	0
	Y	89		ug/L			331294	346065	0
	Kr	83		ug/L			136	148	4
[>	In	115		ug/L			309156	315452	1
[	Ag	107	49.892	ug/L	0.777	1	19	549253	0
[	Cd	111	49.843	ug/L	0.294	0	150	137384	0
[	Cd	114	49.733	ug/L	0.075	0	20	310531	1
[	Sb	121	49.432	ug/L	0.087	0	20	416578	1
[	Sb	123	49.551	ug/L	0.167	0	16	313355	1
[	Ba	135	49.287	ug/L	0.074	0	29	105173	1
[	Ba	137	49.424	ug/L	0.339	0	54	181951	0
[>	Tb	159		ug/L			381205	378988	0
[	Tl	205	52.689	ug/L	0.427	0	265	1340923	1
[	Pb	208	50.230	ug/L	0.571	1	615	1806576	0
[	Bi	209		ug/L			299792	291438	0
[	Th	232	50.285	ug/L	0.221	0	29	1941282	0
[	U	238	50.295	ug/L	1.072	2	8	2112213	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 27, 2013 09:52:02
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L			242414	209828	0
⌊	Be	9	-0.003	ug/L	0.004	168	3	2	50
	C	13		mg/L			6328	5188	1
	Cl	37		mg/L			2367054	2373598	0
⌈>	Sc	45		ug/L			372333	355140	0
|	V	51	0.003	ug/L	0.004	151	3214	3104	1
|	V-1	51	-0.019	ug/L	0.005	26	3709	3251	2
|	Cr	52	0.012	ug/L	0.010	83	8815	8566	0
|	Cr	53	-0.057	ug/L	0.019	33	1154	1015	2
|	Mn	55	0.007	ug/L	0.003	43	450	559	10
⌊	Co	59	0.003	ug/L	0.001	19	61	100	7
⌈>	Ge	72		ug/L			336728	340083	0
|	Ni	60	-0.003	ug/L	0.001	34	39	30	10
|	Ni	62	-0.014	ug/L	0.018	127	49	43	18
|	Cu	63	0.005	ug/L	0.003	49	186	220	7
|	Cu	65	0.010	ug/L	0.007	62	75	106	17
|	Zn	66	-0.014	ug/L	0.015	110	337	314	9
|	Zn	67	-0.051	ug/L	0.019	36	113	97	6
|	Zn	68	-0.030	ug/L	0.084	274	7099	7129	1
|	As	75	0.001	ug/L	0 009	809	138	142	12
|	As-1	75	0.072	ug/L	0.032	44	10888	11136	0
|	Se	82	-0.053	ug/L	0.043	80	2	-10	97
|	Se	78	0.229	ug/L	0.109	47	11062	11296	0
⌊	Mo	98	0.007	ug/L	0.003	48	42	90	25
	Y	89		ug/L			331294	346353	0
	Kr	83		ug/L			136	144	4
⌈>	In	115		ug/L			309156	315060	0
|	Ag	107	0.005	ug/L	0.002	34	19	75	25
|	Cd	111	0.005	ug/L	0.005	95	150	168	8
|	Cd	114	0.000	ug/L	0.000	99	20	24	11
|	Sb	121	0.066	ug/L	0.018	27	20	578	26
|	Sb	123	0.067	ug/L	0.020	29	16	441	28
|	Ba	135	0.007	ug/L	0.002	26	29	44	8
⌊	Ba	137	0.000	ug/L	0.002	618	54	56	11
⌈>	Tb	159		ug/L			381205	376717	0
|	Tl	205	0.006	ug/L	0.001	24	265	403	8
|	Pb	208	0.002	ug/L	0.001	94	615	661	7
|	Bi	209		ug/L			299792	300452	1
|	Th	232	0.032	ug/L	0.008	24	29	1243	23
⌊	U	238	0.003	ug/L	0.001	34	8	148	32

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LOW CHECK
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 27, 2013 09:57:30
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L			242414	212457 ✓	1
⌊	Be	9	0.223	ug/L	0.018	8	3	67	6
	C	13		mg/L			6328	5010	3
	Cl	37		mg/L			2367054	2380163	0
⌈>	Sc	45		ug/L			372333	356837 ✓	0
⌈	V	51	0.188	ug/L	0.012	6	3214	5968	3
⌈	V-1	51	0.169	ug/L	0.004	2	3709	6171	1
⌈	Cr	52	0.498	ug/L	0.011	2	8815	14859	1
⌈	Cr	53	0.425	ug/L	0.027	6	1154	1744	2
⌈	Mn	55	0.550	ug/L	0.015	2	450	11285	2
⌊	Co	59	0.203	ug/L	0.004	2	61	3060	1
⌈>	Ge	72		ug/L			336728	342344 ✓	0
⌈	Ni	60	0.509	ug/L	0.017	3	39	1589	3
⌈	Ni	62	0.534	ug/L	0.061	11	49	286	9
⌈	Cu	63	0.510	ug/L	0.011	2	186	3486	2
⌈	Cu	65	0.524	ug/L	0.018	3	75	1635	3
⌈	Zn	66	4.209	ug/L	0.032	0	337	8465	0
⌈	Zn	67	3.633	ug/L	0.163	4	113	1292	4
⌈	Zn	68	4.059	ug/L	0.125	3	7099	12635	1
⌈	As	75	0.216	ug/L	0.014	6	138	571	4
⌈	As-1	75	0.236	ug/L	0.009	3	10888	11527	0
⌈	Se	82	0.480	ug/L	0.043	8	2	115	8
⌈	Se	78	0.605	ug/L	0.079	12	11062	11577	0
⌊	Mo	98	0.194	ug/L	0.005	2	42	1385	2
	Y	89		ug/L			331294	342919	0
	Kr	83		ug/L			136	144	5
⌈>	In	115		ug/L			309156	313833 ✓	0
⌈	Ag	107	0.189	ug/L	0.007	3	19	2091	3
⌈	Cd	111	0.101	ug/L	0.017	16	150	428	10
⌈	Cd	114	0.092	ug/L	0.006	6	20	591	5
⌈	Sb	121	0.221	ug/L	0.003	1	20	1874	1
⌈	Sb	123	0.221	ug/L	0.006	2	16	1405	2
⌈	Ba	135	0.476	ug/L	0.017	3	29	1039	3
⌊	Ba	137	0.489	ug/L	0.005	1	54	1844	0
⌈>	Tb	159		ug/L			381205	379260 ✓	0
⌈	Tl	205	0.203	ug/L	0.005	2	265	5438	2
⌈	Pb	208	0.100	ug/L	0.001	1	615	4203	1
⌈	Bi	209		ug/L			299792	297086	0
⌈	Th	232	0.219	ug/L	0.005	2	29	8473	2
⌊	U	238	0.208	ug/L	0.003	1	8	8745	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSA
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 27, 2013 10:02:58
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L			242414	230579	1
⌊	Be	9	-0.006	ug/L	0.005	76	3	1	86
	C	13		mg/L			6328	16350	2
	Cl	37		mg/L			2367054	4107080	0
⌈>	Sc	45		ug/L			372333	370583	1
|	V	51	0.216	ug/L	0.052	24	3214	6642	11
|	V-1	51	0.657	ug/L	0.033	4	3709	14264	2
|	Cr	52	0.472	ug/L	0.022	4	8815	15078	1
|	Cr	53	1.917	ug/L	0.065	3	1154	4141	3
|	Mn	55	0.076	ug/L	0.009	12	450	2010	8
⌊	Co	59	0.019	ug/L	0.002	10	61	354	9
⌈>	Ge	72		ug/L			336728	342630	0
|	Ni	60	0.525	ug/L	0.016	2	39	1639	2
|	Ni	62	3.789	ug/L	0.144	3	49	1727	3
|	Cu	63	0.515	ug/L	0.011	2	186	3523	1
|	Cu	65	0.676	ug/L	0.011	1	75	2092	1
|	Zn	66	2.454	ug/L	0.091	3	337	5082	2
|	Zn	67	2.520	ug/L	0.124	4	113	932	3
|	Zn	68	1.406	ug/L	0.134	9	7099	9101	1
|	As	75	0.060	ug/L	0.026	43	138	260	19
|	As-1	75	-0.099	ug/L	0.036	35	10888	10885	0
|	Se	82	-0.045	ug/L	0.054	120	2	-8	152
|	Se	78	-0.526	ug/L	0.078	14	11062	10968	0
⌊	Mo	98	371.171	ug/L	0.452	0	42	2564453	0
	Y	89		ug/L			331294	340720	0
	Kr	83		ug/L			136	158	2
⌈>	In	115		ug/L			309156	308296	1
|	Ag	107	0.023	ug/L	0.001	4	19	268	5
|	Cd	111	0.093	ug/L	0.029	31	150	401	21
|	Cd	114	0.660	ug/L	0.010	1	20	4049	3
|	Sb	121	0.078	ug/L	0.003	3	20	665	5
|	Sb	123	0.072	ug/L	0.005	6	16	464	7
|	Ba	135	0.053	ug/L	0.011	20	29	140	14
⌊	Ba	137	0.051	ug/L	0.010	18	54	238	12
⌈>	Tb	159		ug/L			381205	382053	1
|	Tl	205	0.015	ug/L	0.001	7	265	641	4
|	Pb	208	0.043	ug/L	0.002	3	615	2192	3
|	Bi	209		ug/L			299792	287087	0
|	Th	232	0.047	ug/L	0.009	18	29	1864	19
⌊	U	238	0.001	ug/L	0.000	8	8	54	7

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSAB
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 27, 2013 10:08:56
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			242414	238455 ✓	0
[	Be	9	-0.001	ug/L	0.010	852	3	3	94
	C	13		mg/L			6328	17595	1
	Cl	37		mg/L			2367054	4120653	0
[>	Sc	45		ug/L			372333	368701 ✓	0
|	V	51	-0.189	ug/L	0 074	39	3214	187	629
|	V-1	51	0.560	ug/L	0.020	3	3709	12643	2
|	Cr	52	19.545	ug/L	0.106	0	8815	268466	0
|	Cr	53	21.369	ug/L	0.269	1	1154	34320	1
|	Mn	55	20.521	ug/L	0.203	0	450	419109	1
[	Co	59	18.875	ug/L	0.066	0	61	289030	0
[>	Ge	72		ug/L			336728	337050 ✓	0
|	Ni	60	19.901	ug/L	0.176	0	39	59685	0
|	Ni	62	23.105	ug/L	0.586	2	49	10108	1
|	Cu	63	19.678	ug/L	0.113	0	186	125491	0
|	Cu	65	20.162	ug/L	0.126	0	75	59202	0
|	Zn	66	20.604	ug/L	0.272	1	337	39479	1
|	Zn	67	18.924	ug/L	0.057	0	113	6149	1
|	Zn	68	19.260	ug/L	0.253	1	7099	32419	0
|	As	75	19.070	ug/L	0.149	0	138	37682	0
|	As-1	75	19.415	ug/L	0.179	0	10888	48041	0
|	Se	82	-0.034	ug/L	0.015	44	2	-5	61
|	Se	78	-0.670	ug/L	0.135	20	11062	10712	0
[	Mo	98	373.118	ug/L	1.880	0	42	2535851	0
	Y	89		ug/L			331294	329882	0
	Kr	83		ug/L			136	159	2
[>	In	115		ug/L			309156	302856 ✓	0
|	Ag	107	18.852	ug/L	0.021	0	19	199294	0
|	Cd	111	19.281	ug/L	0.270	1	150	51112	0
|	Cd	114	19.861	ug/L	0.121	0	20	119069	0
|	Sb	121	0.071	ug/L	0.001	0	20	594	1
|	Sb	123	0.075	ug/L	0.002	3	16	471	3
|	Ba	135	0.061	ug/L	0.005	7	29	152	6
[	Ba	137	0.054	ug/L	0.010	18	54	245	14
[>	Tb	159		ug/L			381205	379258 ✓	0
|	Tl	205	0.020	ug/L	0.001	3	265	780	2
|	Pb	208	0.037	ug/L	0.001	1	615	1952	1
|	Bi	209		ug/L			299792	282365	0
|	Th	232	0.030	ug/L	0.002	6	29	1204	6
[	U	238	0.004	ug/L	0.000	4	8	180	4

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR200
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 27, 2013 10:14:55
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			242414	217068 ✓	3
[	Be	9	195.810	ug/L	3.427	1	3	57575	4
	C	13		mg/L			6328	5516	3
	Cl	37		mg/L			2367054	2353290	0
[>	Sc	45		ug/L			372333	359237 ✓	2
[	V	51	182.439	ug/L	2.953	1	3214	2821626	0
[	V-1	51	186.822	ug/L	3.441	1	3709	2918698	0
[	Cr	52	184.811	ug/L	3.334	1	8815	2400869	0
[	Cr	53	199.196	ug/L	4.942	2	1154	302341	0
[	Mn	55	197.124	ug/L	4.954	2	450	3917549	0
[	Co	59	183.987	ug/L	4.673	2	61	2743578	0
[>	Ge	72		ug/L			336728	339551 ✓	0
[	Ni	60	195.891	ug/L	2.204	1	39	591536	1
[	Ni	62	194.465	ug/L	0.255	0	49	85353	0
[	Cu	63	194.698	ug/L	2.327	1	186	1249144	1
[	Cu	65	194.712	ug/L	1.324	0	75	575355	1
[	Zn	66	192.947	ug/L	0.718	0	337	369611	0
[	Zn	67	193.993	ug/L	2.637	1	113	62445	0
[	Zn	68	193.818	ug/L	1.220	0	7099	263796	1
[	As	75	198.101	ug/L	0.223	0	138	393058	0
[	As-1	75	198.601	ug/L	0.331	0	10888	393766	0
[	Se	82	195.345	ug/L	0.647	0	2	45897	1
[	Se	78	196.796	ug/L	0.870	0	11062	117737	1
[	Mo	98	204.043	ug/L	1.860	0	42	1397103	1
	Y	89		ug/L			331294	342291	0
	Kr	83		ug/L			136	183	1
[>	In	115		ug/L			309156	308787 ✓	1
[	Ag	107	185.275	ug/L	0.439	0	19	1996809	1
[	Cd	111	196.683	ug/L	0.728	0	150	530257	1
[	Cd	114	196.758	ug/L	0.483	0	20	1202560	1
[	Sb	121	199.201	ug/L	0.989	0	20	1643197	1
[	Sb	123	198.577	ug/L	2.810	1	16	1229062	0
[	Ba	135	200.040	ug/L	0.829	0	29	417753	0
[	Ba	137	200.333	ug/L	2.301	1	54	721742	0
[>	Tb	159		ug/L			381205	381075 ✓	0
[	Tl	205	195.905	ug/L	0.808	0	265	5012396	0
[	Pb	208	191.087	ug/L	0.363	0	615	6908885	0
[	Bi	209		ug/L			299792	278222	0
[	Th	232	201.894	ug/L	1.585	0	29	7836665	0
[	U	238	201.064	ug/L	1.399	0	8	8490757	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR300
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 27, 2013 10:21:12
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			242414	199522	4
[	Be	9	290.847	ug/L	3.130	1	3	78570	3
	C	13		mg/L			6328	4983	3
	Cl	37		mg/L			2367054	2317169	0
[>	Sc	45		ug/L			372333	348093	2
|	V	51	277.907	ug/L	1.515	0	3214	4163843	1
|	V-1	51	284.339	ug/L	2 362	0	3709	4303217	1
|	Cr	52	282.706	ug/L	4.926	1	8815	3554360	0
|	Cr	53	303.773	ug/L	6.549	2	1154	446213	0
|	Mn	55	305.035	ug/L	4.019	1	450	5874762	0
[	Co	59	285.351	ug/L	6 509	2	61	4123145	0
[>	Ge	72		ug/L			336728	346311	0
|	Ni	60	290.412	ug/L	2 568	0	39	894389	0
|	Ni	62	288.076	ug/L	2.793	0	49	128930	0
|	Cu	63	287.897	ug/L	2.175	0	186	1883791	0
|	Cu	65	287.417	ug/L	1.865	0	75	866126	0
|	Zn	66	283.630	ug/L	1.157	0	337	553982	0
|	Zn	67	288.120	ug/L	5.087	1	113	94532	1
|	Zn	68	285.445	ug/L	3.323	1	7099	392763	0
|	As	75	293.058	ug/L	2.712	0	138	592948	0
|	As-1	75	294.016	ug/L	2.335	0	10888	589149	0
|	Se	82	285.727	ug/L	3.575	1	2	68465	1
|	Se	78	288.275	ug/L	1.638	0	11062	170606	0
[	Mo	98	296.933	ug/L	1.774	0	42	2073526	0
	Y	89		ug/L			331294	352621	1
	Kr	83		ug/L			136	200	2
[>	In	115		ug/L			309156	316546	0
|	Ag	107	278.896	ug/L	3.403	1	19	3081323	1
|	Cd	111	292.968	ug/L	1.525	0	150	809603	0
|	Cd	114	292.319	ug/L	0.387	0	20	1831477	0
|	Sb	121	284.349	ug/L	2.999	1	20	2404596	1
|	Sb	123	298.460	ug/L	1.671	0	16	1893863	0
|	Ba	135	294.927	ug/L	2.761	0	29	631376	0
[	Ba	137	296.733	ug/L	2.094	0	54	1095953	0
[>	Tb	159		ug/L			381205	383507	0
|	Tl	205	293.028	ug/L	2.090	0	265	7545070	1
|	Pb	208	278.801	ug/L	1.318	0	615	10144060	0
|	Bi	209		ug/L			299792	260985	0
|	Th	232	302.409	ug/L	3.167	1	29	11812771	0
[	U	238	299.490	ug/L	2.246	0	8	12727725	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 27, 2013 10:27:30
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			242414	200150	0
[	Be	9	49.411	ug/L	1.779	3	3	13394	3
	C	13		mg/L			6328	2348	2
	Cl	37		mg/L			2367054	2355024	0
[>	Sc	45		ug/L			372333	352821	0
[	V	51	50.629	ug/L	0.128	0	3214	771419	0
[	V-1	51	50.730	ug/L	0.230	0	3709	781144	0
[	Cr	52	51.184	ug/L	0.471	0	8815	659226	0
[	Cr	53	51.499	ug/L	0.376	0	1154	77602	0
[	Mn	55	55.571	ug/L	0.374	0	450	1085312	0
[	Co	59	51.772	ug/L	0.382	0	61	758503	0
[>	Ge	72		ug/L			336728	349543	0
[	Ni	60	49.966	ug/L	0.336	0	39	155351	0
[	Ni	62	49.992	ug/L	0.634	1	49	22627	1
[	Cu	63	50.332	ug/L	0.294	0	186	332570	0
[	Cu	65	50.752	ug/L	0 652	1	75	154426	0
[	Zn	66	50.513	ug/L	0.490	0	337	99868	0
[	Zn	67	50.425	ug/L	0.522	1	113	16796	0
[	Zn	68	51.098	ug/L	0.335	0	7099	77020	1
[	As	75	50.244	ug/L	0.412	0	138	102728	0
[	As-1	75	50.277	ug/L	0.245	0	10888	111057	0
[	Se	82	51.100	ug/L	0.711	1	2	12360	0
[	Se	78	51.347	ug/L	0.535	1	11062	40109	0
[	Mo	98	50.894	ug/L	0.338	0	42	358756	0
	Y	89		ug/L			331294	352331	0
	Kr	83		ug/L			136	165	4
[>	In	115		ug/L			309156	322437	0
[	Ag	107	49.690	ug/L	0.373	0	19	559209	0
[	Cd	111	50.039	ug/L	0.608	1	150	140979	0
[	Cd	114	49.774	ug/L	0.458	0	20	317658	0
[	Sb	121	49.683	ug/L	0.504	1	20	427955	0
[	Sb	123	49.743	ug/L	0.313	0	16	321521	0
[	Ba	135	49.313	ug/L	0.321	0	29	107559	0
[	Ba	137	49.251	ug/L	0.734	1	54	185330	1
[>	Tb	159		ug/L			381205	385690	0
[	Tl	205	52.394	ug/L	0.242	0	265	1356964	0
[	Pb	208	49.838	ug/L	0.374	0	615	1824124	0
[	Bi	209		ug/L			299792	298159	1
[	Th	232	51.522	ug/L	0.443	0	29	2024105	0
[	U	238	51.348	ug/L	0.951	1	8	2194554	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 27, 2013 10:33:48
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L			242414	204715 ✓	1
└	Be	9	-0.005	ug/L	0.005	97	3	1	86
	C	13		mg/L			6328	4882	0
	Cl	37		mg/L			2367054	2400852	0
⌈>	Sc	45		ug/L			372333	353221	0
|	V	51	-0.001	ug/L	0.011	1412	3214	3037	5
|	V-1	51	0.044	ug/L	0.005	11	3709	4192	1
|	Cr	52	0.028	ug/L	0.013	46	8815	8719	2
|	Cr	53	0.174	ug/L	0.033	19	1154	1354	4
|	Mn	55	0.023	ug/L	0.003	11	450	873	5
└	Co	59	0.006	ug/L	0 003	46	61	143	27
⌈>	Ge	72		ug/L			336728	346072 ✓	0
|	Ni	60	0.001	ug/L	0.001	74	39	42	3
|	Ni	62	0.025	ug/L	0.021	83	49	61	14
|	Cu	63	0.025	ug/L	0 004	17	186	354	8
|	Cu	65	0.019	ug/L	0.007	39	75	133	17
|	Zn	66	-0.012	ug/L	0.006	54	337	324	3
|	Zn	67	-0.042	ug/L	0.054	130	113	102	18
|	Zn	68	0.105	ug/L	0.051	48	7099	7437	0
|	As	75	0.015	ug/L	0.010	67	138	173	12
|	As-1	75	0.171	ug/L	0.066	38	10888	11525	0
|	Se	82	-0.053	ug/L	0.009	16	2	-10	19
|	Se	78	0.546	ug/L	0.232	42	11062	11670	0
└	Mo	98	0.023	ug/L	0.005	20	42	203	16
	Y	89		ug/L			331294	348308	0
	Kr	83		ug/L			136	151	0
⌈>	In	115		ug/L			309156	319293 ✓	0
|	Ag	107	0.011	ug/L	0.002	17	19	141	14
|	Cd	111	0.008	ug/L	0.001	17	150	179	2
|	Cd	114	0.003	ug/L	0.002	67	20	39	30
|	Sb	121	0.131	ug/L	0.028	21	20	1134	20
|	Sb	123	0.126	ug/L	0.027	21	16	822	20
|	Ba	135	0.011	ug/L	0.004	35	29	54	15
└	Ba	137	0.006	ug/L	0.004	66	54	80	19
⌈>	Tb	159		ug/L			381205	379745 ✓	0
|	Tl	205	0.011	ug/L	0.002	18	265	537	9
|	Pb	208	0.005	ug/L	0.001	26	615	789	5
|	Bi	209		ug/L			299792	300090	0
|	Th	232	0.052	ug/L	0.011	20	29	2055	20
└	U	238	0.008	ug/L	0.002	24	8	332	24

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WU58 MB1 REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, June 27, 2013 10:40:11
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			242414	218142 ✓	0
	Be	9	U -0.007	ug/L	0.000	0	3	1	
	C	13		mg/L			6328	4702	3
	Cl	37		mg/L			2367054	2419990	0
>	Sc	45		ug/L			372333	297476	0
	V	51	U 0.036	ug/L	0.005	12	3214	3032	1
	V-1	51	0.087	ug/L	0.005	6	3709	4094	2
	Cr	52	U 0.174	ug/L	0.017	9	8815	8910	1
	Cr	53	0.339	ug/L	0.013	3	1154	1346	1
	Mn	55	0.102	ug/L	0.002	1	450	2046	0
	Co	59	0.002	ug/L	0.001	43	61	77	15
>	Ge	72		ug/L			336728	360630 ✓	0
	Ni	60	U 0.015	ug/L	0 003	18	39	90	9
	Ni	62	0.021	ug/L	0.024	113	49	62	17
	Cu	63	U 0.034	ug/L	0.003	8	186	432	4
	Cu	65	0.031	ug/L	0.003	9	75	176	4
	Zn	66	U 0.158	ug/L	0.011	7	337	682	3
	Zn	67	0.121	ug/L	0.053	44	113	162	11
	Zn	68	0.176	ug/L	0.053	29	7099	7850	1
	As	75	U 0.003	ug/L	0.008	242	138	155	10
	As-1	75	-0.040	ug/L	0.031	77	10888	11578	0
	Se	82	U -0.016	ug/L	0.008	52	2	-1	126
	Se	78	-0.203	ug/L	0.109	53	11062	11731	0
	Mo	98	0.020	ug/L	0.009	44	42	188	33
	Y	89		ug/L			331294	365246	0
	Kr	83		ug/L			136	138	2
>	In	115		ug/L			309156	332600 ✓	0
	Ag	107	U 0.005	ug/L	0 001	18	19	79	13
	Cd	111	U 0.006	ug/L	0.005	84	150	180	9
	Cd	114	0.001	ug/L	0.001	123	20	27	23
	Sb	121	U 0.059	ug/L	0.006	10	20	547	9
	Sb	123	0.056	ug/L	0 005	9	16	390	8
	Ba	135	U 0.009	ug/L	0.004	45	29	51	17
	Ba	137	0.005	ug/L	0.001	29	54	76	7
>	Tb	159		ug/L			381205	398719 ✓	0
	Tl	205	U -0.001	ug/L	0.001	132	265	253	12
	Pb	208	U -0.001	ug/L	0.001	171	615	622	4
	Bi	209		ug/L			299792	310550	1
	Th	232	0.032	ug/L	0.003	10	29	1343	10
	U	238	0.003	ug/L	0.000	3	8	132	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WU58 A REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, June 27, 2013 10:46:09
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			242414	216618	1
[	Be	9	U 0.007	ug/L	0.009	126	3	5	48
	C	13		mg/L			6328	4922	2
	Cl	37		mg/L			2367054	2472609	0
[>	Sc	45		ug/L			372333	402351	0
[	V	51	0.825	ug/L	0.006	0	3214	17754	0
[	V-1	51	0.861	ug/L	0.004	0	3709	19062	0
[	Cr	52	U 0.140	ug/L	0.004	3	8815	11550	0
[	Cr	53	0.281	ug/L	0.013	4	1154	1723	1
[	Mn	55	48.470	ug/L	0.221	0	450	1079617	0
[	Co	59	0.105	ug/L	0.002	2	61	1822	2
[>	Ge	72		ug/L			336728	360840	0
[	Ni	60	U 0.435	ug/L	0.023	5	39	1437	5
[	Ni	62	0.350	ug/L	0 022	6	49	215	4
[	Cu	63	0.627	ug/L	0 010	1	186	4472	1
[	Cu	65	0.576	ug/L	0.016	2	75	1888	2
[	Zn	66	U 1.284	ug/L	0.012	0	337	2972	0
[	Zn	67	1.283	ug/L	0.021	1	113	559	0
[	Zn	68	1.422	ug/L	0.091	6	7099	9608	1
[	As	75	0.672	ug/L	0.003	0	138	1565	0
[	As-1	75	0.608	ug/L	0.021	3	10888	12913	0
[	Se	82	U 0.077	ug/L	0.052	67	2	21	60
[	Se	78	-0.220	ug/L	0.070	31	11062	11728	0
[	Mo	98	0.149	ug/L	0.003	1	42	1131	1
	Y	89		ug/L			331294	369707	0
	Kr	83		ug/L			136	143	2
[>	In	115		ug/L			309156	332545	0
[	Ag	107	U 0.006	ug/L	0.001	19	19	93	14
[	Cd	111	U 0.014	ug/L	0.002	16	150	202	3
[	Cd	114	0.003	ug/L	0.001	24	20	43	12
[	Sb	121	U 0.070	ug/L	0.004	6	20	647	6
[	Sb	123	0.065	ug/L	0.005	7	16	450	8
[	Ba	135	3.354	ug/L	0.069	2	29	7574	1
[	Ba	137	3.329	ug/L	0.031	0	54	12973	0
[>	Tb	159		ug/L			381205	400240	0
[	Tl	205	U -0.000	ug/L	0.001	316	265	270	10
[	Pb	208	U 0.086	ug/L	0.003	3	615	3899	3
[	Bi	209		ug/L			299792	311660	1
[	Th	232	0.048	ug/L	0.005	9	29	1987	10
[	U	238	0.012	ug/L	0.001	4	8	555	4

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WU58 MB1SPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, June 27, 2013 10:52:06
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			242414	218462	1
	Be	9	23.496	ug/L	0 350	1	3	6954	1
	C	13		mg/L			6328	4939	1
	Cl	37		mg/L			2367054	2462339	0
>	Sc	45		ug/L			372333	380625	0
	V	51	24.048	ug/L	0.239	0	3214	397001	0
	V-1	51	24.088	ug/L	0.136	0	3709	402135	0
	Cr	52	24.601	ug/L	0.364	1	8815	346496	1
	Cr	53	24.717	ug/L	0 056	0	1154	40795	0
	Mn	55	26.784	ug/L	0.222	0	450	564565	0
	Co	59	25.094	ug/L	0.235	0	61	396656	0
>	Ge	72		ug/L			336728	363346	0
	Ni	60	25.266	ug/L	0.210	0	39	81680	0
	Ni	62	25.572	ug/L	0.411	1	49	12057	1
	Cu	63	25.952	ug/L	0.095	0	186	178347	0
	Cu	65	26.202	ug/L	0.283	1	75	82914	0
	Zn	66	78.694	ug/L	0.767	0	337	161525	0
	Zn	67	71.885	ug/L	0.179	0	113	24839	0
	Zn	68	78.341	ug/L	0.526	0	7099	118658	0
	As	75	26.077	ug/L	0.283	1	138	55493	0
	As-1	75	24.538	ug/L	0.337	1	10888	62356	0
	Se	82	77.668	ug/L	0.566	0	2	19528	0
	Se	78	77.400	ug/L	0.929	1	11062	56790	0
	Mo	98	24.660	ug/L	0.110	0	42	180722	0
	Y	89		ug/L			331294	367690	1
	Kr	83		ug/L			136	140	5
>	In	115		ug/L			309156	336526	0
	Ag	107	24.506	ug/L	0.115	0	19	287849	0
	Cd	111	24.034	ug/L	0.114	0	150	70760	0
	Cd	114	23.952	ug/L	0.110	0	20	159558	0
	Sb	121	24.063	ug/L	0.099	0	20	216352	0
	Sb	123	24.185	ug/L	0.125	0	16	163169	0
	Ba	135	24.042	ug/L	0.201	0	29	54748	1
	Ba	137	23.943	ug/L	0.223	0	54	94070	1
>	Tb	159		ug/L			381205	399866	0
	Tl	205	25.930	ug/L	0.113	0	265	696393	1
	Pb	208	24.876	ug/L	0.224	0	615	944278	0
	Bl	209		ug/L			299792	311547	0
	Th	232	23.869	ug/L	0.426	1	29	972146	0
	U	238	25.753	ug/L	0.162	0	8	1141128	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WU58 MB1SPD REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, June 27, 2013 10:58:03
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			242414	223339 ✓	0
[	Be	9	23.202	ug/L	0.296	1	3	7020	0
	C	13		mg/L			6328	5188	2
	Cl	37		mg/L			2367054	2493779	0
[>	Sc	45		ug/L			372333	382700	0
[	V	51	24.352	ug/L	0 191	0	3214	404172	0
[	V-1	51	24.416	ug/L	0.164	0	3709	409789	1
[	Cr	52	24.871	ug/L	0.215	0	8815	352104	0
[	Cr	53	25.067	ug/L	0.176	0	1154	41583	1
[	Mn	55	26.980	ug/L	0.127	0	450	571816	0
[	Co	59	25.217	ug/L	0.238	0	61	400779	0
[>	Ge	72		ug/L			336728	361866 ✓	0
[	Ni	60	25.517	ug/L	0.183	0	39	82155	0
[	Ni	62	25.720	ug/L	0 161	0	49	12076	0
[	Cu	63	26.308	ug/L	0.165	0	186	180062	0
[	Cu	65	26.469	ug/L	0.306	1	75	83421	1
[	Zn	66	80.143	ug/L	0 658	0	337	163825	0
[	Zn	67	73.291	ug/L	0.083	0	113	25219	0
[	Zn	68	79.588	ug/L	0.380	0	7099	119938	0
[	As	75	26.224	ug/L	0.199	0	138	55581	1
[	As-1	75	24.806	ug/L	0.030	0	10888	62653	0
[	Se	82	78.274	ug/L	0.318	0	2	19600	0
[	Se	78	78.508	ug/L	0.547	0	11062	57200	0
[	Mo	98	23.704	ug/L	0.205	0	42	173005	0
	Y	89		ug/L			331294	365194	0
	Kr	83		ug/L			136	146	5
[>	In	115		ug/L			309156	331307 ✓	0
[	Ag	107	25.090	ug/L	0.291	1	19	290138	0
[	Cd	111	24.593	ug/L	0.162	0	150	71277	0
[	Cd	114	24.527	ug/L	0.239	0	20	160854	0
[	Sb	121	23.695	ug/L	0.201	0	20	209737	0
[	Sb	123	23.795	ug/L	0.166	0	16	158045	0
[	Ba	135	24.681	ug/L	0.115	0	29	55329	0
[	Ba	137	24.877	ug/L	0.143	0	54	96218	0
[>	Tb	159		ug/L			381205	398822 ✓	0
[	Tl	205	26.205	ug/L	0.084	0	265	701958	0
[	Pb	208	24.995	ug/L	0.150	0	615	946355	0
[	Bi	209		ug/L			299792	314766	0
[	Th	232	24.254	ug/L	0.143	0	29	985342	0
[	U	238	25.778	ug/L	0.145	0	8	1139319	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 27, 2013 11:04:03
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			242414	212184 ✓	1
[	Be	9	48.701	ug/L	1.037	2	3	13995	2
	C	13		mg/L			6328	2731	2
	Cl	37		mg/L			2367054	2508423	0
[>	Sc	45		ug/L			372333	366524 ✓	1
[	V	51	50.065	ug/L	0.533	1	3214	792435	0
[	V-1	51	50.125	ug/L	0.629	1	3709	801796	0
[	Cr	52	49.936	ug/L	0.363	0	8815	668339	0
[	Cr	53	50.139	ug/L	0.691	1	1154	78515	1
[	Mn	55	54.107	ug/L	0.866	1	450	1097705	0
[	Co	59	50.426	ug/L	0.664	1	61	767425	0
[>	Ge	72		ug/L			336728	352055 ✓	0
[	Ni	60	50.269	ug/L	0.702	1	39	157410	0
[	Ni	62	49.787	ug/L	0.614	1	49	22694	0
[	Cu	63	50.095	ug/L	0.587	1	186	333368	0
[	Cu	65	50.524	ug/L	0.777	1	75	154836	1
[	Zn	66	50.813	ug/L	0.859	1	337	101179	1
[	Zn	67	50.424	ug/L	0.888	1	113	16915	0
[	Zn	68	50.643	ug/L	0.675	1	7099	76943	0
[	As	75	49.731	ug/L	0.374	0	138	102410	0
[	As-1	75	49.907	ug/L	0.389	0	10888	111113	0
[	Se	82	50.201	ug/L	0.558	1	2	12229	0
[	Se	78	50.872	ug/L	0.581	1	11062	40129	0
[	Mo	98	49.792	ug/L	0.520	1	42	353494	0
	Y	89		ug/L			331294	351118	0
	Kr	83		ug/L			136	156	5
[>	In	115		ug/L			309156	322502 ✓	0
[	Ag	107	49.776	ug/L	0.377	0	19	560280	0
[	Cd	111	49.407	ug/L	0.074	0	150	139234	0
[	Cd	114	49.844	ug/L	0.683	1	20	318175	1
[	Sb	121	49.185	ug/L	0.474	0	20	423757	0
[	Sb	123	49.435	ug/L	0.505	1	16	319592	0
[	Ba	135	48.864	ug/L	0.614	1	29	106599	0
[	Ba	137	49.431	ug/L	0.575	1	54	186049	0
[>	Tb	159		ug/L			381205	389676 ✓	0
[	Tl	205	51.670	ug/L	0.278	0	265	1352049	0
[	Pb	208	49.190	ug/L	0 297	0	615	1819113	0
[	Bi	209		ug/L			299792	294440	0
[	Th	232	49.974	ug/L	0.566	1	29	1983651	1
[	U	238	50.025	ug/L	0.518	1	8	2160243	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 27, 2013 11:10:21
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			242414	213685	1
[	Be	9	-0.004	ug/L	0.007	157	3	2	91
	C	13		mg/L			6328	5090	2
	Cl	37		mg/L			2367054	2485168	0
[>	Sc	45		ug/L			372333	367153	0
[	V	51	-0.001	ug/L	0.010	929	3214	3152	4
[	V-1	51	-0.017	ug/L	0.006	33	3709	3390	2
[	Cr	52	0.032	ug/L	0.012	39	8815	9112	1
[	Cr	53	-0.021	ug/L	0.007	32	1154	1105	1
[	Mn	55	0.008	ug/L	0.002	31	450	600	8
[	Co	59	0.003	ug/L	0.001	18	61	102	7
[>	Ge	72		ug/L			336728	351234	0
[	Ni	60	-0.001	ug/L	0.002	152	39	37	15
[	Ni	62	0.013	ug/L	0.006	49	49	57	5
[	Cu	63	0.004	ug/L	0.001	37	186	220	4
[	Cu	65	0.004	ug/L	0.005	118	75	91	17
[	Zn	66	-0.008	ug/L	0.019	229	337	336	11
[	Zn	67	-0.055	ug/L	0.046	84	113	100	15
[	Zn	68	0.273	ug/L	0.127	46	7099	7778	2
[	As	75	0.006	ug/L	0.013	199	138	157	16
[	As-1	75	0.200	ug/L	0.032	15	10888	11755	0
[	Se	82	-0.006	ug/L	0.013	202	2	0	446
[	Se	78	0.701	ug/L	0.133	18	11062	11931	0
[	Mo	98	0.007	ug/L	0.004	61	42	90	31
	Y	89		ug/L			331294	352581	1
	Kr	83		ug/L			136	147	4
[>	In	115		ug/L			309156	323709	0
[	Ag	107	0.005	ug/L	0.001	23	19	78	16
[	Cd	111	0.009	ug/L	0.007	79	150	182	10
[	Cd	114	0.002	ug/L	0.000	24	20	33	8
[	Sb	121	0.069	ug/L	0.016	23	20	621	22
[	Sb	123	0.070	ug/L	0.019	26	16	473	25
[	Ba	135	0.002	ug/L	0.004	171	29	36	24
[	Ba	137	0.002	ug/L	0.000	18	54	64	2
[>	Tb	159		ug/L			381205	384681	0
[	Tl	205	0.005	ug/L	0.001	19	265	400	6
[	Pb	208	0.001	ug/L	0.001	55	615	659	3
[	Bi	209		ug/L			299792	303054	1
[	Th	232	0.037	ug/L	0.010	26	29	1488	25
[	U	238	0.004	ug/L	0.001	33	8	192	32

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WU65 MB1 REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, June 27, 2013 11:16:13
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
>	Li	6		ug/L			242414	226239 ✓	0
	Be	9	U -0.002	ug/L	0.002	122	3	2	24
	C	13		mg/L			6328	4639	1
	Cl	37		mg/L			2367054	2464349	0
>	Sc	45		ug/L			372333	302713 ✓	0
	V	51	0.040	ug/L	0.007	18	3214	3135	3
	V-1	51	0.019	ug/L	0.009	46	3709	3260	3
	Cr	52	U 0.189	ug/L	0.015	7	8815	9233	2
	Cr	53	0.114	ug/L	0.057	49	1154	1083	6
	Mn	55	0.023	ug/L	0.002	10	450	757	5
	Co	59	0.002	ug/L	0.001	45	61	75	15
>	Ge	72		ug/L			336728	365370 ✓	0
	Ni	60	U 0.003	ug/L	0.001	45	39	52	7
	Ni	62	-0.008	ug/L	0.013	160	49	49	12
	Cu	63	U 0.050	ug/L	0.006	11	186	547	7
	Cu	65	0.058	ug/L	0.002	3	75	266	3
	Zn	66	U 0.724	ug/L	0.026	3	337	1857	3
	Zn	67	0.575	ug/L	0.033	5	113	321	3
	Zn	68	0.678	ug/L	0.020	2	7099	8668	0
	As	75	U -0.013	ug/L	0.007	59	138	123	13
	As-1	75	0.004	ug/L	0.019	489	10888	11822	0
	Se	82	U -0.033	ug/L	0.037	113	2	-5	158
	Se	78	0.011	ug/L	0.069	619	11062	12010	0
	Mo	98	0.005	ug/L	0 003	60	42	84	26
	Y	89		ug/L			331294	365524	0
	Kr	83		ug/L			136	144	1
>	In	115		ug/L			309156	333997 ✓	1
	Ag	107	U 0.003	ug/L	0.001	35	19	60	22
	Cd	111	U -0.000	ug/L	0.008	2741	150	162	14
	Cd	114	0.000	ug/L	0.000	302	20	23	8
	Sb	121	U 0.029	ug/L	0.006	21	20	285	19
	Sb	123	0.030	ug/L	0.004	12	16	220	10
	Ba	135	0.000	ug/L	0.002	793	29	32	13
	Ba	137	-0.001	ug/L	0.002	140	54	53	13
>	Tb	159		ug/L			381205	401261 ✓	1
	Tl	205	U -0.003	ug/L	0.001	30	265	204	9
	Pb	208	U -0.003	ug/L	0.001	24	615	540	6
	Bi	209		ug/L			299792	316292	0
	Th	232	0.025	ug/L	0.003	11	29	1054	9
	U	238	0.002	ug/L	0.000	4	8	85	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WU65 ADUP REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, June 27, 2013 11:22:12
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
>	Li	6		ug/L			242414	204952 ✓	1
	Be	9	U 0.007	ug/L	0.004	64	3	5	25
	C	13		mg/L			6328	4513	2
	Cl	37		mg/L			2367054	3744971	0
>	Sc	45		ug/L			372333	383823 ✓	1
	V	51	4.036	ug/L	0 061	1	3214	69933	0
	V-1	51	4.392	ug/L	0.099	2	3709	77038	0
	Cr	52	3.194	ug/L	0 044	1	8815	53272	0
	Cr	53	4.396	ug/L	0.173	3	1154	8292	1
	Mn	55	22.750	ug/L	0.576	2	450	483501	0
	Co	59	0.166	ug/L	0.005	2	61	2706	1
>	Ge	72		ug/L			336728	350579 ✓	1
	Ni	60	1.579	ug/L	0.036	2	39	4964	1
	Ni	62	1.395	ug/L	0.031	2	49	683	1
	Cu	63	5.561	ug/L	0.046	0	186	37024	0
	Cu	65	4.783	ug/L	0.088	1	75	14665	0
	Zn	66	11.421	ug/L	0.048	0	337	22919	0
	Zn	67	11.115	ug/L	0.184	1	113	3805	2
	Zn	68	12.184	ug/L	0.206	1	7099	24046	0
	As	75	2.012	ug/L	0.021	1	138	4264	1
	As-1	75	2.400	ug/L	0.055	2	10888	16111	0
	Se	82	0.630	ug/L	0.017	2	2	155	3
	Se	78	1.910	ug/L	0.194	10	11062	12584	0
	Mo	98	5.831	ug/L	0.030	0	42	41264	1
	Y	89		ug/L			331294	370995	1
	Kr	83		ug/L			136	151	5
>	In	115		ug/L			309156	321254 ✓	0
	Ag	107	U 0.011	ug/L	0.000	4	19	148	2
	Cd	111	U -0.027	ug/L	0.009	34	150	82	30
	Cd	114	0.019	ug/L	0.001	5	20	142	5
	Sb	121	1.486	ug/L	0.007	0	20	12774	1
	Sb	123	1.461	ug/L	0.033	2	16	9428	2
	Ba	135	27.639	ug/L	0.181	0	29	60077	0
	Ba	137	27.749	ug/L	0.116	0	54	104069	1
>	Tb	159		ug/L			381205	396165 ✓	0
	Tl	205	U 0.025	ug/L	0.002	6	265	946	3
	Pb	208	1.291	ug/L	0.029	2	615	49170	1
	Bi	209		ug/L			299792	288048	0
	Th	232	0.045	ug/L	0.001	1	29	1827	1
	U	238	0.203	ug/L	0 006	3	8	8929	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WU65 A REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, June 27, 2013 11:28:11
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens. RSD
[>	Li	6		ug/L			242414	200337 ✓	0
[	Be	9	U 0.005	ug/L	0.003	47	3	4	15
	C	13		mg/L			6328	4659	0
	Cl	37		mg/L			2367054	3705174	0
[>	Sc	45		ug/L			372333	379265 ✓	0
[	V	51	4.146	ug/L	0.041	0	3214	70917	1
[	V-1	51	4.571	ug/L	0.017	0	3709	79095	0
[	Cr	52	3.314	ug/L	0.055	1	8815	54279	1
[	Cr	53	4.742	ug/L	0.053	1	1154	8748	0
[	Mn	55	23.375	ug/L	0.188	0	450	491024	1
[	Co	59	0.170	ug/L	0.006	3	61	2737	3
[>	Ge	72		ug/L			336728	353978 ✓	0
[	Ni	60	1.601	ug/L	0.069	4	39	5082	4
[	Ni	62	1.389	ug/L	0.156	11	49	686	10
[	Cu	63	5.613	ug/L	0.078	1	186	37733	1
[	Cu	65	4.951	ug/L	0.034	0	75	15326	0
[	Zn	66	11.671	ug/L	0.089	0	337	23640	0
[	Zn	67	11.527	ug/L	0.110	0	113	3980	1
[	Zn	68	12.137	ug/L	0.170	1	7099	24215	0
[	As	75	2.060	ug/L	0.020	0	138	4405	0
[	As-1	75	2.323	ug/L	0.019	0	10888	16113	0
[	Se	82	0.664	ug/L	0.063	9	2	164	9
[	Se	78	1.495	ug/L	0.100	6	11062	12473	0
[	Mo	98	5.925	ug/L	0.041	0	42	42335	0
	Y	89		ug/L			331294	372800	0
	Kr	83		ug/L			136	153	7
[>	In	115		ug/L			309156	326711 ✓	0
[	Ag	107	U 0.009	ug/L	0.002	17	19	125	15
[	Cd	111	U -0.010	ug/L	0.021	217	150	132	44
[	Cd	114	0.020	ug/L	0.004	17	20	148	15
[	Sb	121	1.489	ug/L	0.020	1	20	13017	0
[	Sb	123	1.473	ug/L	0.034	2	16	9663	1
[	Ba	135	28.178	ug/L	0.063	0	29	62289	0
[	Ba	137	28.362	ug/L	0.152	0	54	108169	0
[>	Tb	159		ug/L			381205	399492 ✓	0
[	Tl	205	U 0.027	ug/L	0.001	2	265	1014	2
[	Pb	208	1.310	ug/L	0.014	1	615	50309	1
[	Bi	209		ug/L			299792	288917	1
[	Th	232	0.032	ug/L	0.001	1	29	1322	2
[	U	238	0.213	ug/L	0.002	0	8	9423	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WU65 ASPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, June 27, 2013 11:34:09
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			242414	199659 ✓	1
[	Be	9	24.686	ug/L	0.564	2	3	6678	3
	C	13		mg/L			6328	4710	0
	Cl	37		mg/L			2367054	3720377	0
[>	Sc	45		ug/L			372333	378198 ✓	1
|	V	51	28.378	ug/L	0.206	0	3214	464906	1
|	V-1	51	28.840	ug/L	0.182	0	3709	477634	1
|	Cr	52	27.266	ug/L	0.163	0	8815	380634	1
|	Cr	53	28.829	ug/L	0.174	0	1154	47081	1
|	Mn	55	51.236	ug/L	0.549	1	450	1072620	1
[	Co	59	24.728	ug/L	0.254	1	61	388341	0
[>	Ge	72		ug/L			336728	349929 ✓	1
|	Ni	60	26.417	ug/L	0.225	0	39	82249	1
|	Ni	62	26.385	ug/L	0.312	1	49	11977	0
|	Cu	63	30.225	ug/L	0.280	0	186	199995	0
|	Cu	65	29.954	ug/L	0.268	0	75	91272	0
|	Zn	66	86.114	ug/L	0.528	0	337	170189	0
|	Zn	67	79.560	ug/L	0.719	0	113	26465	2
|	Zn	68	85.504	ug/L	0.587	0	7099	124045	0
|	As	75	29.402	ug/L	0.183	0	138	60240	0
|	As-1	75	28.258	ug/L	0.532	1	10888	67434	0
|	Se	82	79.403	ug/L	0.646	0	2	19227	1
|	Se	78	80.452	ug/L	1.467	1	11062	56390	0
[	Mo	98	31.782	ug/L	0.083	0	42	224297	1
	Y	89		ug/L			331294	367659	1
	Kr	83		ug/L			136	154	3
[>	In	115		ug/L			309156	321186 ✓	0
|	Ag	107	20.231	ug/L	0.182	0	19	226814	1
|	Cd	111	23.861	ug/L	0.205	0	150	67049	1
|	Cd	114	23.988	ug/L	0.216	0	20	152527	1
|	Sb	121	25.747	ug/L	0.125	0	20	220930	0
|	Sb	123	25.737	ug/L	0.297	1	16	165715	1
|	Ba	135	53.101	ug/L	0.169	0	29	115372	1
[	Ba	137	53.324	ug/L	0.207	0	54	199888	1
[>	Tb	159		ug/L			381205	395853 ✓	0
|	Tl	205	25.435	ug/L	0.163	0	265	676256	0
|	Pb	208	25.474	ug/L	0.103	0	615	957286	0
|	Bi	209		ug/L			299792	286195	1
|	Th	232	25.370	ug/L	0.382	1	29	1022933	0
[	U	238	26.876	ug/L	0.266	0	8	1179036	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~WU65 APOST REN~~ 222222
Sample Dil Factor: 2 BA 6/27/13
Comments:
Sample Date/Time: Thursday, June 27, 2013 11:40:06
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L			242414	201689 ✓	0
⌊	Be	9	22.949	ug/L	0.323	1	3	6271	2
	C	13		mg/L			6328	4774	1
	Cl	37		mg/L			2367054	3743034	0
⌈>	Sc	45		ug/L			372333	376258 ✓	0
|	V	51	27.266	ug/L	0.103	0	3214	444535	0
|	V-1	51	27.787	ug/L	0 059	0	3709	457982	0
|	Cr	52	25.849	ug/L	0.142	0	8815	359452	0
|	Cr	53	27.614	ug/L	0.200	0	1154	44918	1
|	Mn	55	47.220	ug/L	0 201	0	450	983586	0
⌊	Co	59	22.824	ug/L	0.055	0	61	356651	0
⌈>	Ge	72		ug/L			336728	343194 ✓	0
|	Ni	60	24.911	ug/L	0.154	0	39	76069	1
|	Ni	62	24.664	ug/L	0.744	3	49	10986	3
|	Cu	63	28.838	ug/L	0.128	0	186	187172	0
|	Cu	65	28.491	ug/L	0.171	0	75	85152	0
|	Zn	66	83.137	ug/L	0.782	0	337	161173	1
|	Zn	67	77.698	ug/L	0.447	0	113	25349	0
|	Zn	68	82.239	ug/L	0.462	0	7099	117298	1
|	As	75	28.640	ug/L	0.287	1	138	57558	1
|	As-1	75	27.349	ug/L	0.246	0	10888	64376	1
|	Se	82	76.770	ug/L	0.382	0	2	18232	0
|	Se	78	77.127	ug/L	0.665	0	11062	53492	0
⌊	Mo	98	31.449	ug/L	0.053	0	42	217681	0
	Y	89		ug/L			331294	361831	0
	Kr	83		ug/L			136	155	5
⌈>	In	115		ug/L			309156	312596 ✓	0
|	Ag	107	22.553	ug/L	0.206	0	19	246083	1
|	Cd	111	22.760	ug/L	0.136	0	150	62252	0
|	Cd	114	22.857	ug/L	0.116	0	20	141441	1
|	Sb	121	25.755	ug/L	0.373	1	20	215080	0
|	Sb	123	25.731	ug/L	0.265	1	16	161244	0
|	Ba	135	52.144	ug/L	0.129	0	29	110263	0
⌊	Ba	137	52.431	ug/L	0.829	1	54	191297	2
⌈>	Tb	159		ug/L			381205	384792 ✓	0
|	Tl	205	24.006	ug/L	0.327	1	265	620434	1
|	Pb	208	24.468	ug/L	0.144	0	615	893806	0
|	Bi	209		ug/L			299792	281627	0
|	Th	232	25.299	ug/L	0.129	0	29	991658	1
⌊	U	238	25.668	ug/L	0.115	0	8	1094538	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WU65 B REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, June 27, 2013 11:46:05
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			242414	213887 ✓	1
[	Be	9	✓ 0.004	ug/L	0.010	225	3	4	62
	C	13		mg/L			6328	4749	2
	Cl	37		mg/L			2367054	3848160	0
[>	Sc	45		ug/L			372333	383606 ✓	1
[	V	51	4.136	ug/L	0.058	1	3214	71557	1
[	V-1	51	4.596	ug/L	0.022	0	3709	80428	1
[	Cr	52	3.224	ug/L	0.049	1	8815	53664	1
[	Cr	53	4.774	ug/L	0.085	1	1154	8901	1
[	Mn	55	23.265	ug/L	0 087	0	450	494295	0
[	Co	59	0.169	ug/L	0.003	1	61	2762	2
[>	Ge	72		ug/L			336728	351877 ✓	0
[	Ni	60	1.578	ug/L	0.022	1	39	4977	1
[	Ni	62	1.558	ug/L	0 171	10	49	760	10
[	Cu	63	5.574	ug/L	0.038	0	186	37248	0
[	Cu	65	4.902	ug/L	0 112	2	75	15083	1
[	Zn	66	11.639	ug/L	0.064	0	337	23438	0
[	Zn	67	11.326	ug/L	0.197	1	113	3889	0
[	Zn	68	11.876	ug/L	0.253	2	7099	23712	1
[	As	75	2.025	ug/L	0.042	2	138	4305	1
[	As-1	75	2.097	ug/L	0.106	5	10888	15566	0
[	Se	82	0.661	ug/L	0.021	3	2	163	2
[	Se	78	0.811	ug/L	0.269	33	11062	12014	0
[	Mo	98	5.715	ug/L	0.057	1	42	40593	0
	Y	89		ug/L			331294	368054	0
	Kr	83		ug/L			136	149	1
[>	In	115		ug/L			309156	322615 ✓	0
[	Ag	107	✓ 0.011	ug/L	0.001	12	19	139	10
[	Cd	111	✓ -0.024	ug/L	0.020	84	150	90	61
[	Cd	114	0.022	ug/L	0.000	0	20	164	1
[	Sb	121	1.519	ug/L	0.017	1	20	13113	0
[	Sb	123	1.530	ug/L	0.034	2	16	9912	1
[	Ba	135	27.743	ug/L	0.190	0	29	60559	0
[	Ba	137	27.736	ug/L	0.327	1	54	104456	0
[>	Tb	159		ug/L			381205	397869 ✓	1
[	Tl	205	✓ 0.026	ug/L	0.002	6	265	976	4
[	Pb	208	1.326	ug/L	0.017	1	615	50699	0
[	Bi	209		ug/L			299792	287930	0
[	Th	232	0.054	ug/L	0.011	21	29	2209	20
[	U	238	0.209	ug/L	0.004	1	8	9226	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WU65 MB1SPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, June 27, 2013 11:52:02
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L			242414	228065 ✓	0
⌊	Be	9	23.770	ug/L	0.307	1	3	7344	0
	C	13		mg/L			6328	4597	1
	Cl	37		mg/L			2367054	2611365	0
⌈>	Sc	45		ug/L			372333	379349 ✓	0
|	V	51	24.743	ug/L	0.180	0	3214	407012	0
|	V-1	51	25.011	ug/L	0.206	0	3709	415994	0
|	Cr	52	25.253	ug/L	0.233	0	8815	354248	0
|	Cr	53	26.122	ug/L	0.320	1	1154	42902	0
|	Mn	55	27.948	ug/L	0.348	1	450	587100	0
⌊	Co	59	26.082	ug/L	0.298	1	61	410901	1
⌈>	Ge	72		ug/L			336728	366107 ✓	0
|	Ni	60	25.762	ug/L	0.330	1	39	83913	1
|	Ni	62	26.272	ug/L	0.157	0	49	12478	0
|	Cu	63	26.676	ug/L	0.213	0	186	184712	1
|	Cu	65	26.930	ug/L	0.409	1	75	85865	1
|	Zn	66	80.619	ug/L	0.534	0	337	166724	0
|	Zn	67	74.767	ug/L	0.713	0	113	26026	1
|	Zn	68	79.567	ug/L	0.620	0	7099	121308	0
|	As	75	26.684	ug/L	0.309	1	138	57213	0
|	As-1	75	25.275	ug/L	0 374	1	10888	64359	0
|	Se	82	78.760	ug/L	1.099	1	2	19952	0
|	Se	78	79.003	ug/L	1.443	1	11062	58156	0
⌊	Mo	98	24.296	ug/L	0.334	1	42	179392	0
	Y	89		ug/L			331294	369597	0
	Kr	83		ug/L			136	142	1
⌈>	In	115		ug/L			309156	339674 ✓	0
|	Ag	107	25.049	ug/L	0.274	1	19	296975	1
|	Cd	111	24.409	ug/L	0.304	1	150	72529	0
|	Cd	114	24.620	ug/L	0.125	0	20	165540	0
|	Sb	121	24.100	ug/L	0.183	0	20	218697	0
|	Sb	123	23.993	ug/L	0.192	0	16	163376	0
|	Ba	135	24.576	ug/L	0.264	1	29	56486	1
⌊	Ba	137	24.836	ug/L	0.305	1	54	98481	0
⌈>	Tb	159		ug/L			381205	405835 ✓	1
|	Tl	205	26.604	ug/L	0.116	0	265	725175	1
|	Pb	208	25.541	ug/L	0.256	1	615	983978	1
|	Bi	209		ug/L			299792	315906	0
|	Th	232	24.402	ug/L	0.083	0	29	1008750	1
⌊	U	238	26.301	ug/L	0.382	1	8	1182753	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 27, 2013 11:58:00
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L			242414	220379 ✓	2
⌊	Be	9	47.804	ug/L	0.460	0	3	14268	1
	C	13		mg/L			6328	3069	2
	Cl	37		mg/L			2367054	2709879	0
⌈>	Sc	45		ug/L			372333	366456 ✓	1
|	V	51	48.811	ug/L	0.307	0	3214	772533	1
|	V-1	51	48.937	ug/L	0.271	0	3709	782752	1
|	Cr	52	48.829	ug/L	0.320	0	8815	653573	1
|	Cr	53	49.245	ug/L	0.388	0	1154	77121	1
|	Mn	55	52.301	ug/L	0.478	0	450	1060898	1
⌊	Co	59	48.167	ug/L	0.162	0	61	732969	1
⌈>	Ge	72		ug/L			336728	342503 ✓	1
|	Ni	60	49.777	ug/L	0.365	0	39	151655	1
|	Ni	62	49.982	ug/L	0.286	0	49	22167	2
|	Cu	63	49.306	ug/L	0.335	0	186	319225	1
|	Cu	65	50.288	ug/L	0.183	0	75	149940	1
|	Zn	66	50.306	ug/L	0.275	0	337	97464	1
|	Zn	67	51.154	ug/L	0.447	0	113	16694	1
|	Zn	68	50.988	ug/L	0.373	0	7099	75324	1
|	As	75	49.581	ug/L	0.253	0	138	99338	1
|	As-1	75	49.733	ug/L	0.215	0	10888	107766	1
|	Se	82	49.415	ug/L	0.061	0	2	11712	1
|	Se	78	49.946	ug/L	0.240	0	11062	38536	1
⌊	Mo	98	49.103	ug/L	0.167	0	42	339161	1
	Y	89		ug/L			331294	338754	1
	Kr	83		ug/L			136	154	3
⌈>	In	115		ug/L			309156	311986 ✓	1
|	Ag	107	49.357	ug/L	0.297	0	19	537458	1
|	Cd	111	49.761	ug/L	0.417	0	150	135663	1
|	Cd	114	50.162	ug/L	0.599	1	20	309788	2
|	Sb	121	49.508	ug/L	0.578	1	20	412611	1
|	Sb	123	49.548	ug/L	0.225	0	16	309888	1
|	Ba	135	49.367	ug/L	0.110	0	29	104189	1
⌊	Ba	137	49.358	ug/L	0.573	1	54	179727	2
⌈>	Tb	159		ug/L			381205	373403 ✓	1
|	Tl	205	51.874	ug/L	0.474	0	265	1300757	1
|	Pb	208	49.435	ug/L	0.131	0	615	1751842	1
|	Bi	209		ug/L			299792	288211	1
|	Th	232	51.363	ug/L	0.634	1	29	1953484	0
⌊	U	238	50.711	ug/L	0.224	0	8	2098390	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 27, 2013 12:04:18
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L			242414	224354 ✓	1
└	Be	9	0.005	ug/L	0 000	3	3	5	0
	C	13		mg/L			6328	5795	2
	Cl	37		mg/L			2367054	2780271	0
⌈>	Sc	45		ug/L			372333	365471 ✓	1
|	V	51	0.005	ug/L	0.023	459	3214	3237	12
|	V-1	51	0.104	ug/L	0.012	11	3709	5283	1
|	Cr	52	0.029	ug/L	0.001	3	8815	9034	1
|	Cr	53	0.354	ug/L	0.110	31	1154	1675	8
|	Mn	55	0.002	ug/L	0.002	106	450	482	7
└	Co	59	0.003	ug/L	0.002	48	61	110	20
⌈>	Ge	72		ug/L			336728	336777 ✓	0
|	Ni	60	0.002	ug/L	0.003	123	39	46	16
|	Ni	62	0.128	ug/L	0.043	33	49	105	18
|	Cu	63	0.009	ug/L	0.005	52	186	240	11
|	Cu	65	0.008	ug/L	0.003	33	75	97	6
|	Zn	66	-0.006	ug/L	0.020	313	337	325	10
|	Zn	67	0.020	ug/L	0.051	254	113	119	12
|	Zn	68	0.191	ug/L	0.139	72	7099	7350	1
|	As	75	-0.006	ug/L	0.015	233	138	126	23
|	As-1	75	0.139	ug/L	0.013	9	10888	11155	1
|	Se	82	-0.074	ug/L	0.035	47	2	-15	54
|	Se	78	0.458	ug/L	0.055	12	11062	11310	0
└	Mo	98	0.005	ug/L	0.002	41	42	78	18
	Y	89		ug/L			331294	333856	0
	Kr	83		ug/L			136	141	1
⌈>	In	115		ug/L			309156	306538 ✓	0
|	Ag	107	0.006	ug/L	0.003	48	19	82	36
|	Cd	111	0.014	ug/L	0.004	31	150	186	6
|	Cd	114	0.002	ug/L	0.002	77	20	33	29
|	Sb	121	0.069	ug/L	0.018	25	20	587	25
|	Sb	123	0.068	ug/L	0.021	30	16	436	29
|	Ba	135	0.005	ug/L	0.002	34	29	40	9
└	Ba	137	0.004	ug/L	0.003	77	54	67	14
⌈>	Tb	159		ug/L			381205	365797 ✓	0
|	Tl	205	0.006	ug/L	0.003	43	265	409	16
|	Pb	208	0.003	ug/L	0.002	47	615	707	7
|	Bi	209		ug/L			299792	286033	1
|	Th	232	0.042	ug/L	0.012	27	29	1587	27
└	U	238	0.005	ug/L	0.002	39	8	192	38

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WU65 MB2 REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, June 27, 2013 12:10:07
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			242414	237729	0
[	Be	9	U 0.000	ug/L	0.010	4399	3	3	88
	C	13		mg/L			6328	5245	1
	Cl	37		mg/L			2367054	2758169	0
[>	Sc	45		ug/L			372333	315934	0
[	V	51	0.047	ug/L	0.009	18	3214	3361	3
[	V-1	51	0.138	ug/L	0.005	3	3709	5041	1
[	Cr	52	U 0.180	ug/L	0.008	4	8815	9525	1
[	Cr	53	0.477	ug/L	0.008	1	1154	1613	1
[	Mn	55	0.026	ug/L	0.001	2	450	844	1
[	Co	59	0.001	ug/L	0.000	36	61	62	6
[>	Ge	72		ug/L			336728	351099	0
[	Ni	60	U 0.009	ug/L	0.004	45	39	70	18
[	Ni	62	0.074	ug/L	0.038	51	49	85	20
[	Cu	63	U 0.044	ug/L	0.003	6	186	485	3
[	Cu	65	0.042	ug/L	0.009	21	75	205	13
[	Zn	66	U 0.301	ug/L	0.015	5	337	948	2
[	Zn	67	0.260	ug/L	0.032	12	113	204	5
[	Zn	68	0.245	ug/L	0.016	6	7099	7737	0
[	As	75	U -0.011	ug/L	0.011	96	138	121	18
[	As-1	75	-0.010	ug/L	0.045	470	10888	11333	0
[	Se	82	U -0.060	ug/L	0.039	64	2	-12	76
[	Se	78	-0.062	ug/L	0.173	277	11062	11499	0
[	Mo	98	0.005	ug/L	0.002	34	42	79	15
	Y	89		ug/L			331294	347147	0
	Kr	83		ug/L			136	141	6
[>	In	115		ug/L			309156	316936	1
[	Ag	107	U 0.004	ug/L	0.001	35	19	61	24
[	Cd	111	U 0.013	ug/L	0.004	30	150	191	4
[	Cd	114	0.000	ug/L	0.001	258	20	24	29
[	Sb	121	U 0.036	ug/L	0.004	11	20	330	9
[	Sb	123	0.033	ug/L	0.007	20	16	224	19
[	Ba	135	0.027	ug/L	0.005	18	29	87	11
[	Ba	137	0.020	ug/L	0.004	18	54	129	9
[>	Tb	159		ug/L			381205	379479	0
[	Tl	205	U -0.003	ug/L	0.001	26	265	176	13
[	Pb	208	U 0.006	ug/L	0.001	22	615	817	5
[	Bi	209		ug/L			299792	294280	0
[	Th	232	0.028	ug/L	0.007	23	29	1123	22
[	U	238	0.002	ug/L	0.000	15	8	95	13

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WU65 CDUP REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, June 27, 2013 12:16:04
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			242414	227390	1
[	Be	9	U -0.002	ug/L	0.002	108	3	2	24
	C	13		mg/L			6328	5315	4
	Cl	37		mg/L			2367054	4093776	0
[>	Sc	45		ug/L			372333	338190	1
[	V	51	3.362	ug/L	0.078	2	3214	51825	1
[	V-1	51	3.838	ug/L	0.061	1	3709	59759	0
[	Cr	52	1.502	ug/L	0.058	3	8815	26315	1
[	Cr	53	3.134	ug/L	0.054	1	1154	5510	1
[	Mn	55	11.198	ug/L	0.080	0	450	209947	0
[	Co	59	0.095	ug/L	0.002	2	61	1384	0
[>	Ge	72		ug/L			336728	329163	1
[	Ni	60	1.355	ug/L	0.058	4	39	4005	3
[	Ni	62	1.304	ug/L	0.172	13	49	601	10
[	Cu	63	4.222	ug/L	0 039	0	186	26433	1
[	Cu	65	3.510	ug/L	0.050	1	75	10126	1
[	Zn	66	5.605	ug/L	0.143	2	337	10729	2
[	Zn	67	5.922	ug/L	0.222	3	113	1954	2
[	Zn	68	6.138	ug/L	0.137	2	7099	14816	0
[	As	75	1.540	ug/L	0.020	1	138	3095	0
[	As-1	75	1.637	ug/L	0.094	5	10888	13699	0
[	Se	82	0.624	ug/L	0.064	10	2	144	8
[	Se	78	0.911	ug/L	0.304	33	11062	11290	0
[	Mo	98	5.704	ug/L	0.099	1	42	37901	1
	Y	89		ug/L			331294	333054	1
	Kr	83		ug/L			136	141	7
[>	In	115		ug/L			309156	295793	1
[	Ag	107	U 0.004	ug/L	0.001	27	19	65	18
[	Cd	111	U -0.036	ug/L	0.009	24	150	50	43
[	Cd	114	0.015	ug/L	0.002	12	20	107	10
[	Sb	121	1.519	ug/L	0.024	1	20	12018	0
[	Sb	123	1.526	ug/L	0.022	1	16	9064	1
[	Ba	135	26.437	ug/L	0.347	1	29	52912	1
[	Ba	137	26.566	ug/L	0.164	0	54	91731	0
[>	Tb	159		ug/L			381205	369419	1
[	Tl	205	U 0.022	ug/L	0 001	5	265	809	3
[	Pb	208	U 0.029	ug/L	0.008	26	615	1598	16
[	Bi	209		ug/L			299792	263707	1
[	Th	232	0.029	ug/L	0 001	2	29	1136	3
[	U	238	0.196	ug/L	0.003	1	8	8035	1

WU65 : 2014

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WU65 C REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, June 27, 2013 12:22:01
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			242414	227046	1
[	Be	9	U -0.005	ug/L	0.002	49	3	2	34
	C	13		mg/L			6328	5407	2
	Cl	37		mg/L			2367054	3989633	0
[>	Sc	45		ug/L			372333	343451	0
[	V	51	3.164	ug/L	0.074	2	3214	49705	1
[	V-1	51	3.677	ug/L	0.059	1	3709	58289	1
[	Cr	52	1.422	ug/L	0.028	2	8815	25739	1
[	Cr	53	3.173	ug/L	0.137	4	1154	5653	3
[	Mn	55	10.725	ug/L	0.041	0	450	204244	0
[	Co	59	0.089	ug/L	0.000	0	61	1325	0
[>	Ge	72		ug/L			336728	331135	0
[	Ni	60	1.368	ug/L	0.079	5	39	4066	5
[	Ni	62	1.299	ug/L	0.107	8	49	604	7
[	Cu	63	4.104	ug/L	0.056	1	186	25855	1
[	Cu	65	3.476	ug/L	0.028	0	75	10090	0
[	Zn	66	5.632	ug/L	0.054	0	337	10844	1
[	Zn	67	5.832	ug/L	0.158	2	113	1939	2
[	Zn	68	5.928	ug/L	0.177	2	7099	14635	1
[	As	75	1.531	ug/L	0.027	1	138	3097	1
[	As-1	75	1.466	ug/L	0.031	2	10888	13463	0
[	Se	82	0.643	ug/L	0.056	8	2	149	8
[	Se	78	0.334	ug/L	0.130	38	11062	11055	0
[	Mo	98	5.558	ug/L	0.087	1	42	37157	1
	Y	89		ug/L			331294	335675	0
	Kr	83		ug/L			136	136	3
[>	In	115		ug/L			309156	298013	1
[	Ag	107	U 0.004	ug/L	0.000	8	19	61	7
[	Cd	111	U -0.055	ug/L	0.025	44	150	2	3059
[	Cd	114	0.015	ug/L	0.002	11	20	106	7
[	Sb	121	1.451	ug/L	0.008	0	20	11572	1
[	Sb	123	1.469	ug/L	0.018	1	16	8794	1
[	Ba	135	25.683	ug/L	0.170	0	29	51787	1
[	Ba	137	25.848	ug/L	0.285	1	54	89920	0
[>	Tb	159		ug/L			381205	373039	0
[	Tl	205	U 0.022	ug/L	0.002	10	265	820	7
[	Pb	208	U 0.034	ug/L	0.000	0	615	1809	0
[	Bi	209		ug/L			299792	269831	1
[	Th	232	0.020	ug/L	0.001	6	29	784	5
[	U	238	0.189	ug/L	0.002	1	8	7839	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WU65 CSPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, June 27, 2013 12:27:57
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			242414	218548 ✓	2
[	Be	9	23.706	ug/L	0.580	2	3	7016	1
	C	13		mg/L			6328	5320	1
	Cl	37		mg/L			2367054	3907939	0
[>	Sc	45		ug/L			372333	356040 ✓	0
[	V	51	27.203	ug/L	0.287	1	3214	419712	1
[	V-1	51	27.736	ug/L	0.298	1	3709	432606	1
[	Cr	52	25.001	ug/L	0.273	1	8815	329278	1
[	Cr	53	26.830	ug/L	0.366	1	1154	41331	1
[	Mn	55	35.242	ug/L	0.182	0	450	694750	0
[	Co	59	23.554	ug/L	0.146	0	61	348271	0
[>	Ge	72		ug/L			336728	326568 ✓	1
[	Ni	60	25.173	ug/L	0.307	1	39	73144	1
[	Ni	62	25.378	ug/L	0.459	1	49	10755	2
[	Cu	63	27.792	ug/L	0.253	0	186	171652	1
[	Cu	65	27.540	ug/L	0.104	0	75	78326	0
[	Zn	66	79.979	ug/L	0.658	0	337	147536	0
[	Zn	67	73.484	ug/L	0.696	0	113	22819	1
[	Zn	68	79.268	ug/L	0.474	0	7099	107828	0
[	As	75	27.910	ug/L	0.119	0	138	53374	0
[	As-1	75	26.711	ug/L	0.088	0	10888	60073	0
[	Se	82	75.702	ug/L	0.462	0	2	17107	1
[	Se	78	76.394	ug/L	0.500	0	11062	50519	1
[	Mo	98	29.009	ug/L	0.223	0	42	191060	0
	Y	89		ug/L			331294	331839	1
	Kr	83		ug/L			136	156	7
[>	In	115		ug/L			309156	295479 ✓	1
[	Ag	107	19.494	ug/L	0.208	1	19	201048	0
[	Cd	111	23.542	ug/L	0.068	0	150	60862	1
[	Cd	114	23.511	ug/L	0.096	0	20	137521	1
[	Sb	121	24.988	ug/L	0.116	0	20	197260	1
[	Sb	123	25.229	ug/L	0.365	1	16	149443	1
[	Ba	135	49.343	ug/L	0.586	1	29	98619	0
[	Ba	137	50.076	ug/L	0.298	0	54	172684	0
[>	Tb	159		ug/L			381205	365253 ✓	0
[	Tl	205	24.691	ug/L	0.202	0	265	605701	0
[	Pb	208	23.888	ug/L	0.265	1	615	828309	0
[	Bi	209		ug/L			299792	267864	0
[	Th	232	23.957	ug/L	0.270	1	29	891321	0
[	U	238	26.357	ug/L	0.466	1	8	1066781	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~WU65 CPOST REN~~ ZZZZZZ
Sample Dil Factor: 2 BA 6/27/13
Comments:
Sample Date/Time: Thursday, June 27, 2013 12:33:54
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens	Intens. RSD
⌈>	Li	6		ug/L			242414	220016 ✓	1
⌊	Be	9	22.890	ug/L	0.536	2	3	6822	1
	C	13		mg/L			6328	5143	2
	Cl	37		mg/L			2367054	3898725	0
⌈>	Sc	45		ug/L			372333	341888 ✓	0
|	V	51	28.309	ug/L	0.383	1	3214	419254	0
|	V-1	51	28.883	ug/L	0.371	1	3709	432404	0
|	Cr	52	25.966	ug/L	0.256	0	8815	328054	0
|	Cr	53	27.935	ug/L	0.224	0	1154	41275	0
|	Mn	55	36.987	ug/L	0.436	1	450	700101	0
⌊	Co	59	24.276	ug/L	0.405	1	61	344665	1
⌈>	Ge	72		ug/L			336728	333843 ✓	1
|	Ni	60	24.556	ug/L	0.267	1	39	72935	0
|	Ni	62	24.770	ug/L	0.436	1	49	10730	0
|	Cu	63	26.950	ug/L	0.217	0	186	170150	0
|	Cu	65	26.466	ug/L	0.163	0	75	76947	0
|	Zn	66	76.456	ug/L	0.645	0	337	144193	0
|	Zn	67	71.366	ug/L	0.833	1	113	22656	0
|	Zn	68	75.752	ug/L	0.034	0	7099	105655	1
|	As	75	27.257	ug/L	0.222	0	138	53288	0
|	As-1	75	26.104	ug/L	0.398	1	10888	60258	0
|	Se	82	74.072	ug/L	0.645	0	2	17111	1
|	Se	78	74.802	ug/L	1.299	1	11062	50794	1
⌊	Mo	98	30.596	ug/L	0.253	0	42	206008	1
	Y	89		ug/L			331294	341194	0
	Kr	83		ug/L			136	154	4
⌈>	In	115		ug/L			309156	301407 ✓	0
|	Ag	107	22.102	ug/L	0.199	0	19	232535	1
|	Cd	111	22.555	ug/L	0.024	0	150	59485	0
|	Cd	114	22.661	ug/L	0.176	0	20	135206	0
|	Sb	121	26.010	ug/L	0.281	1	20	209450	1
|	Sb	123	26.198	ug/L	0.272	1	16	158305	1
|	Ba	135	49.669	ug/L	0.264	0	29	101272	0
⌊	Ba	137	49.686	ug/L	0.278	0	54	174779	0
⌈>	Tb	159		ug/L			381205	375901 ✓	1
|	Tl	205	23.953	ug/L	0.127	0	265	604789	1
|	Pb	208	23.074	ug/L	0.152	0	615	823511	1
|	Bi	209		ug/L			299792	275219	0
|	Th	232	24.991	ug/L	0.189	0	29	956885	0
⌊	U	238	25.880	ug/L	0.028	0	8	1078111	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WU65 D REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, June 27, 2013 12:39:54
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			242414	215810 ✓	1
[	Be	9	U 0.003	ug/L	0.003	93	3	4	17
	C	13		mg/L			6328	5015	0
	Cl	37		mg/L			2367054	3833755	0
[>	Sc	45		ug/L			372333	343292 ✓	0
[	V	51	3.113	ug/L	0.012	0	3214	48935	0
[	V-1	51	3.699	ug/L	0.013	0	3709	58596	0
[	Cr	52	1.395	ug/L	0.011	0	8815	25391	0
[	Cr	53	3.386	ug/L	0.027	0	1154	5958	0
[	Mn	55	10.638	ug/L	0.057	0	450	202482	0
[	Co	59	0.091	ug/L	0.003	3	61	1355	3
[>	Ge	72		ug/L			336728	333562 ✓	0
[	Ni	60	1.384	ug/L	0.048	3	39	4143	2
[	Ni	62	1.586	ug/L	0.031	1	49	732	1
[	Cu	63	4.020	ug/L	0.050	1	186	25514	0
[	Cu	65	3.409	ug/L	0 006	0	75	9966	0
[	Zn	66	5.387	ug/L	0.027	0	337	10462	0
[	Zn	67	5.631	ug/L	0.249	4	113	1889	4
[	Zn	68	5.754	ug/L	0.284	4	7099	14515	1
[	As	75	1.520	ug/L	0.008	0	138	3098	1
[	As-1	75	1.622	ug/L	0 072	4	10888	13855	0
[	Se	82	0.599	ug/L	0.034	5	2	140	4
[	Se	78	0.900	ug/L	0 246	27	11062	11436	0
[	Mo	98	5.574	ug/L	0.054	0	42	37533	1
	Y	89		ug/L			331294	346807	1
	Kr	83		ug/L			136	142	7
[>	In	115		ug/L			309156	305266 ✓	0
[	Ag	107	U 0.007	ug/L	0.002	26	19	93	20
[	Cd	111	U -0.036	ug/L	0.015	41	150	53	74
[	Cd	114	0.015	ug/L	0.001	7	20	113	6
[	Sb	121	1.457	ug/L	0.027	1	20	11898	1
[	Sb	123	1.460	ug/L	0.026	1	16	8952	0
[	Ba	135	25.197	ug/L	0.321	1	29	52044	0
[	Ba	137	25.369	ug/L	0.118	0	54	90409	0
[>	Tb	159		ug/L			381205	379077 ✓	0
[	Tl	205	U 0.024	ug/L	0.001	5	265	876	4
[	Pb	208	U 0.028	ug/L	0.002	8	615	1621	5
[	Bi	209		ug/L			299792	278445	1
[	Th	232	0.049	ug/L	0.014	27	29	1909	28
[	U	238	0.190	ug/L	0.003	1	8	7994	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WU65 MB2SPK REN
Sample Dil Factor: 2
Comments:
Sample Date/Time: Thursday, June 27, 2013 12:45:53
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			242414	217017 ✓	0
[	Be	9	23.521	ug/L	0.311	1	3	6916	1
	C	13		mg/L			6328	4535	1
	Cl	37		mg/L			2367054	2495400	0
[>	Sc	45		ug/L			372333	358427 ✓	0
|	V	51	25.097	ug/L	0.075	0	3214	390043	0
|	V-1	51	25.364	ug/L	0.056	0	3709	398540	0
|	Cr	52	25.534	ug/L	0.146	0	8815	338354	0
|	Cr	53	26.398	ug/L	0.352	1	1154	40951	0
|	Mn	55	28.068	ug/L	0.315	1	450	557087	0
[	Co	59	25.934	ug/L	0.313	1	61	386029	1
[>	Ge	72		ug/L			336728	348542 ✓	0
|	Ni	60	25.723	ug/L	0.151	0	39	79769	0
|	Ni	62	26.283	ug/L	0.145	0	49	11885	0
|	Cu	63	26.173	ug/L	0.187	0	186	172537	0
|	Cu	65	26.429	ug/L	0.329	1	75	80227	1
|	Zn	66	79.297	ug/L	0.985	1	337	156130	1
|	Zn	67	72.719	ug/L	1.429	1	113	24103	2
|	Zn	68	77.939	ug/L	0.386	0	7099	113280	0
|	As	75	26.350	ug/L	0.151	0	138	53790	0
|	As-1	75	25.088	ug/L	0.404	1	10888	60904	0
|	Se	82	77.826	ug/L	0.344	0	2	18770	0
|	Se	78	78.580	ug/L	1.158	1	11062	55133	0
[	Mo	98	24.391	ug/L	0.067	0	42	171464	0
	Y	89		ug/L			331294	356096	0
	Kr	83		ug/L			136	146	2
[>	In	115		ug/L			309156	324844 ✓	0
|	Ag	107	24.896	ug/L	0.405	1	19	282279	1
|	Cd	111	24.380	ug/L	0.228	0	150	69282	0
|	Cd	114	24.428	ug/L	0.250	1	20	157076	0
|	Sb	121	24.001	ug/L	0.024	0	20	208299	0
|	Sb	123	23.939	ug/L	0.194	0	16	155897	0
|	Ba	135	24.687	ug/L	0.153	0	29	54263	0
[	Ba	137	24.997	ug/L	0.209	0	54	94795	0
[>	Tb	159		ug/L			381205	394367 ✓	0
|	Tl	205	26.769	ug/L	0.400	1	265	709006	1
|	Pb	208	25.761	ug/L	0.312	1	615	964410	0
|	Bi	209		ug/L			299792	312577	1
|	Th	232	25.340	ug/L	0.156	0	29	1017926	0
[	U	238	26.680	ug/L	0 233	0	8	1165996	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 27, 2013 12:51:53
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
[>	Li	6		ug/L			242414	214886 ✓	0
[	Be	9	47.890	ug/L	1.091	2	3	13940	2
	C	13		mg/L			6328	2924	1
	Cl	37		mg/L			2367054	2584250	0
[>	Sc	45		ug/L			372333	359808 ✓	1
[	V	51	49.191	ug/L	0.457	0	3214	764380	0
[	V-1	51	49.420	ug/L	0.576	1	3709	776056	0
[	Cr	52	49.584	ug/L	0.771	1	8815	651462	0
[	Cr	53	50.325	ug/L	1.069	2	1154	77349	0
[	Mn	55	53.171	ug/L	0.413	0	450	1058973	0
[	Co	59	49.991	ug/L	0.870	1	61	746831	0
[>	Ge	72		ug/L			336728	343477 ✓	0
[	Ni	60	49.336	ug/L	0.362	0	39	150732	0
[	Ni	62	49.598	ug/L	0.190	0	49	22058	0
[	Cu	63	49.612	ug/L	0.347	0	186	322135	0
[	Cu	65	50.379	ug/L	0.813	1	75	150633	1
[	Zn	66	50.267	ug/L	0.342	0	337	97659	0
[	Zn	67	50.973	ug/L	0.399	0	113	16684	1
[	Zn	68	50.787	ug/L	0.488	0	7099	75263	0
[	As	75	49.542	ug/L	0.064	0	138	99539	0
[	As-1	75	49.778	ug/L	0.225	0	10888	108157	0
[	Se	82	50.039	ug/L	0.366	0	2	11894	0
[	Se	78	50.963	ug/L	0.379	0	11062	39202	0
[	Mo	98	49.556	ug/L	0.334	0	42	343272	1
	Y	89		ug/L			331294	344427	0
	Kr	83		ug/L			136	160	4
[>	In	115		ug/L			309156	313698 ✓	0
[	Ag	107	49.303	ug/L	0.769	1	19	539809	1
[	Cd	111	49.252	ug/L	0.644	1	150	135003	0
[	Cd	114	49.511	ug/L	0.436	0	20	307419	0
[	Sb	121	49.734	ug/L	0.224	0	20	416801	0
[	Sb	123	49.496	ug/L	0.325	0	16	311255	0
[	Ba	135	49.489	ug/L	0.798	1	29	105015	1
[	Ba	137	49.800	ug/L	0.292	0	54	182327	0
[>	Tb	159		ug/L			381205	385120 ✓	1
[	Tl	205	51.899	ug/L	1.089	2	265	1342008	1
[	Pb	208	49.829	ug/L	1.007	2	615	1820940	1
[	Bi	209		ug/L			299792	293971	1
[	Th	232	51.315	ug/L	0.573	1	29	2012911	0
[	U	238	51.034	ug/L	1.032	2	8	2177760	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB5
Sample Dil Factor:
Comments:
Sample Date/Time: Thursday, June 27, 2013 12:58:11
Number of Replicates: 3
Method File: C:\Elandata\Method\2008LoNoMinNoRh.mth
Tuning File: C:\Elandata\Tuning\default.tun
Optimization File: C:\Elandata\Optimize\default.dac
Calibration File: C:\Elandata\Calibration\062713.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc. RSD	Blank Intens.	Meas. Intens.	Intens. RSD
⌈>	Li	6		ug/L			242414	221395 ✓	0
⌊	Be	9	-0.006	ug/L	0.005	82	3	1	86
	C	13		mg/L			6328	5235	2
	Cl	37		mg/L			2367054	2668644	0
⌈>	Sc	45		ug/L			372333	363780 ✓	0
|	V	51	0.028	ug/L	0.014	50	3214	3581	6
|	V-1	51	0.118	ug/L	0.004	3	3709	5494	0
|	Cr	52	0.031	ug/L	0.008	25	8815	9020	0
|	Cr	53	0.329	ug/L	0.059	17	1154	1631	4
|	Mn	55	0.001	ug/L	0.003	274	450	462	12
⌊	Co	59	0.002	ug/L	0.002	83	61	95	30
⌈>	Ge	72		ug/L			336728	344815 ✓	0
|	Ni	60	-0.001	ug/L	0.001	127	39	37	10
|	Ni	62	0.320	ug/L	0.036	11	49	192	8
|	Cu	63	0.009	ug/L	0.003	35	186	250	8
|	Cu	65	0.009	ug/L	0.001	17	75	102	4
|	Zn	66	-0.019	ug/L	0.008	39	337	308	5
|	Zn	67	-0.005	ug/L	0.052	1108	113	114	15
|	Zn	68	0.213	ug/L	0.008	3	7099	7555	0
|	As	75	-0.001	ug/L	0.014	1097	138	139	20
|	As-1	75	0.138	ug/L	0.027	19	10888	11419	0
|	Se	82	-0.008	ug/L	0.076	963	2	0	6431
|	Se	78	0.467	ug/L	0.075	15	11062	11584	0
⌊	Mo	98	0.009	ug/L	0 004	47	42	104	28
	Y	89		ug/L			331294	345849	0
	Kr	83		ug/L			136	135	5
⌈>	In	115		ug/L			309156	316653 ✓	1
|	Ag	107	0.006	ug/L	0.003	44	19	83	33
|	Cd	111	0.012	ug/L	0.004	30	150	188	6
|	Cd	114	0.002	ug/L	0.002	92	20	32	31
|	Sb	121	0.071	ug/L	0.019	26	20	619	25
|	Sb	123	0.069	ug/L	0.017	24	16	456	23
|	Ba	135	0.004	ug/L	0.001	37	29	38	6
⌊	Ba	137	0.004	ug/L	0.001	36	54	70	7
⌈>	Tb	159		ug/L			381205	378689 ✓	0
|	Tl	205	0.007	ug/L	0.002	30	265	435	12
|	Pb	208	0.003	ug/L	0.002	67	615	716	10
|	Bi	209		ug/L			299792	299525	0
|	Th	232	0.047	ug/L	0.013	26	29	1837	26
⌊	U	238	0.005	ug/L	0.002	32	8	213	31

Mercury Raw Data
Preparation Bench Sheets and Notes

ARI Job ID: WU65, WU71

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: DM **Final Volume** _____ **Sample ID** WV08 ABSPK, MBSPK

Date: 6-24-13 **Final Volume (Hg):** 20

WV61 MB1SPK, MB1SPD

WV71 ABSPK, MB1SPK

	Prepcode:			
	Spike Solution:	ICP Routine	ICP No GFA	GFA
	Standard No.:			
	Vol Added (mL):			
STOCK CONCENTRATION	Ag	50		2.0
	Al	200	200	
	As	200		10
	Ba	200	200	
	Be	50	50	
	Ca	1000	1000	
	Cd	50		2.0
	Co	50	50	
	Cr	50	50	
	Cu	50	50	
	Fe	200	200	
	K	1000	1000	
	Mg	1000	1000	
	Mn	50	50	
	Na	1000	1000	
	Ni	50	50	
	Pb	200		10
	Se	200		10
	Sr	50	50	
	Tl	200		10
	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	TLM	CVA	1.0	0.02	3007-14
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

SPIKING LOG

Analyst: DM

Date: 6-24-15

Final Volume _____

Final Volume (Hg): 20

Sample ID WU71 CSPK, MB2SPK

Prepcode:				
Spike Solution:		ICP Routine	ICP No GFA	GFA
Standard No.:				
Vol Added (mL):				
	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	DLM	CVA	1.0	0.02	3007-14
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

Mercury Digestion Log

Prep Code: TLM | DLM
Analyst: DM
Bath Temp: 95°c
Start Time: 0945
Matrix: Water
Date: 6-24-13
End Time: 1145

ARI Sample ID	Sample Bottle #	pH<2	Initial ~~Weight (g)~~ Volume (mL)	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
WV08 A	1	–	20.0	20.0	4|5 1	N	
" ADUP	1	–			1		
" APSK	1	–			1		
" B	1	–			1		
" MB	–	–			1		
" MBSPK	–	–			1	N	
WQG1 A	1	√			6|30 1	Y	
" MB1	–	√			1		
" MB1SPK	–	√			1		
" MB1SPD	–	√			1		
WU71 A	1	√			7|6 1		
" ADUP	1	√			1		
" ASPK	1	√			1		
" B	1	√			1		
" MB1	–	√			1		
" MB1SPK	–	√			1		
" C	1	–			1		
" CDUP	1	–			1		
" CSPK	1	–			1		– DLM
" D	1	–			1		
" MB2	–	–			1		
" MB2SPK	–	–	20.0	20.0	1	Y	
				6-24-13 DM			

Chemical/Reagent ID:

HNO_3: IB1C9 | MP2462 H_2SO_4: IB044 HCl: –

5% $K_2S_2O_8$: MP2491 5% $KMnO_4$: MP2475 Digest Tube Lot: MH21KK0C

Mercury Raw Data
Run Logs, Calibrations, and Raw Data

ARI Job ID: WU65, WU71

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA (CVA)

Analysis Date: 6-25-13

Low Level	Analyst 6-25 DM	Peer 6-25-13	Comment
Logbook			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Curve			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
QC			
ICV/CCV	✓	✓	SEE RUN LOG
ICB/CCB	✓	✓	
Spike			
RSD's & SD's	✓	✓	
Internal Standards	—	—	
Carry-over	—	—	
Matrix Spike			
CRI/CRA	✓	✓	
ICSA/ICSAB	—	—	
Post Spikes/Serial Dilutions	—	—	
Analytic Spikes	—	—	
Method			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	
Data			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Notes	—	—	

Mercury Analysis Log

Analyst: DR

Instrument: CETAC

Date: 6-25-13

Page: 1 of 3

ARI Sample ID		Prep Code	Dilution	QC Data (ppb) ppt	Comments	
STD	0.0	TLM	1X			
"	20.0					
"	50.0					
"	100.0					
"	200.0					
"	400.0					
"	1000.0					
ICV				509.52	Begin CLP %R=102	√
ICB				-1.44		√
CCV1				516.18	%R=103	√
CCB1				2.01		√
CRA				20.62		√
WU61	MB1			-0.17		√
"	MB1SPK			222.67	%R=111	√
"	MB1SPD			216.98	%R=108	√
"	A					
WU71	MB1			0.91		√
"	MB1SPK			224.56	%R=112	√
"	A			3.51		
"	ADUP			2.60	No RPD: Undetected	√
"	ASPK			109.68	%R=110	√
CCV2				538.91	%R=108	√
CCB2				0.48	END CLP	√
WU71	B	↓				
"	MB2	DLM		0.87		√
"	MB2SPK			210.86	%R=105	√
"	C			0.93		
"	CDUP			1.34	No RPD: Undetected	√
"	CSPK			113.94	%R=114	√
"	D	↓	↓			

Chemical/Reagent ID:

10% $SnCl_2$: MP251K

14% NH_2OH/NaCl: MP2477

Standard ID:

Standard: 3037-10

ICV/CCV: 3037-11

Mercury Analysis Log

Analyst: DM
Instrument: CETAC

Date: 6-25-13
Page: 2 of 3

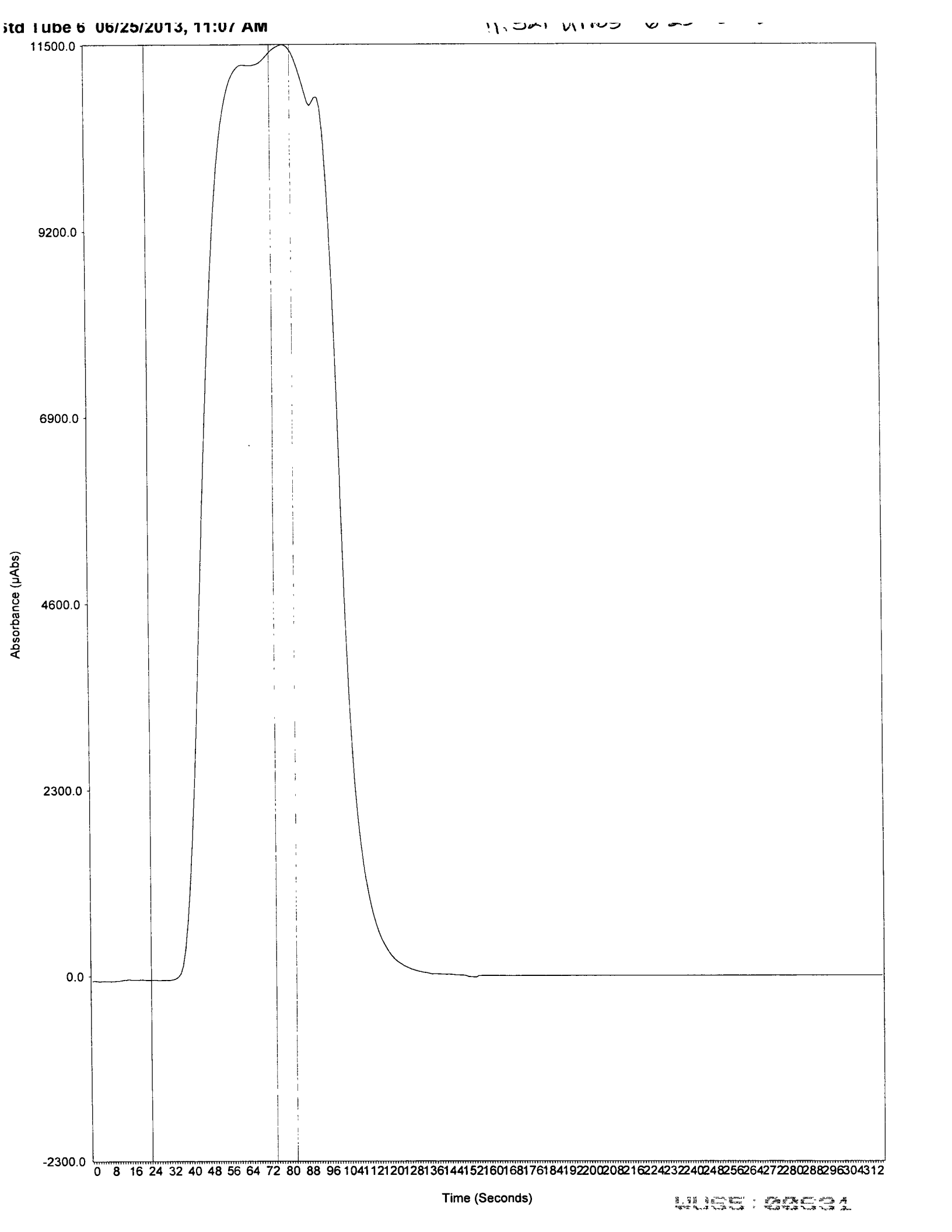
ARI Sample ID	Prep Code	Dilution	QC Data (ppb)ppt	Comments
CCV3	TLM	1X	552.95	%R=110 High X
CCV4			551.92	%R=110 High X
CCV5			582.81	%R=110 High X
STD 0.0				
" 20.0				
" 50.0				
" 100.0				
" 200.0				
" 400.0				
" 1000.0				
ICV			505.13	Begin CLP %R=101 ✓
ICB			0.73	✓
CCV1			503.66	%R=101 ✓
CCB1			1.97	✓
CRA			19.90	✓
WV71 B				
" MB2	DLM		-0.13	✓
" MB2SPK			199.53	%R=100 ✓
" C			-1.53	
" CDUP			0.79	NO RPD: Undetected ✓
" CSPK			104.68	%R=105 ✓
" D				
CCV2	TLM		511.24	%R=102 ✓
CCB2			-0.15	END CLP ✓
WV08 MB			0.21	✓
" MBSPK			224.75	%R=112 ✓
" A			18.43	
" ADUP			10.11	NO RPD: Undetected ✓
" ASPK			6-25-13 105.30	%R=105 ✓
" B				

Chemical/Reagent ID:
10% $SnCl_2$: MP2516

14% NH_2OH/NaCl: MP2477

Standard ID:
Standard: 3057-10

ICV/CCV: 3057-11


Std Tube 6 06/25/2013, 11:07 AM
11500.0
9200.0
6900.0
4600.0
2300.0
0.0
-2300.0
Absorbance (µAbs)
0 8 16 24 32 40 48 56 64 72 80 88 96 104 112 120 128 136 144 152 160 168 176 184 192 200 208 216 224 232 240 248 256 264 272 280 288 296 304 312
Time (Seconds)

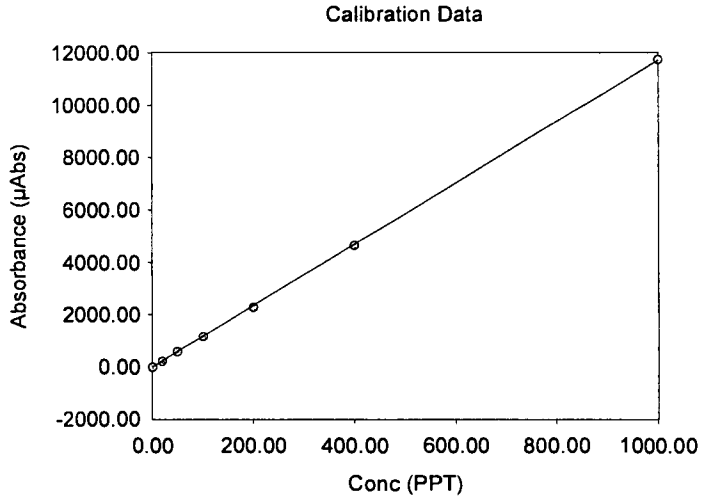
CETAC Hg Analysis Report - 13062500.DB - Tuesday, June 25, 2013, 2:45:02 PM

Analyst
Date Started Tuesday, June 25, 2013, 11:04:45
Worksheet LOW LEVEL CALIB 20 TO 1000 PPT
Comment

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
Std Tube 6	25-Jun-2013, 11:04	1000.00	0.24	11500.00	11482	11526	11550	11525	

Information about this calibration could not be retrieved from the Master File.

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
Calibration Zero	25-Jun-2013, 11:08	0.00	91.30	-6.28	-13	-9	-3	-1	
Standard #1	25-Jun-2013, 11:11	20.00	0.69	210.00	209	210	210	212	
Standard #2	25-Jun-2013, 11:14	50.00	0.57	574.00	579	574	573	571	
Standard #3	25-Jun-2013, 11:16	100.00	0.15	1160.00	1157	1161	1158	1160	
Standard #4	25-Jun-2013, 11:19	200.00	0.02	2270.00	2274	2274	2274	2274	
Standard #5	25-Jun-2013, 11:22	400.00	0.28	4650.00	4633	4649	4658	4661	
Standard #6	25-Jun-2013, 11:24	1000.00	0.41	11700.00	11682	11745	11786	11785	



Int.	0.000
Slope	11.718
Correlation	0.99996

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
ICV	25-Jun-2013, 11:28	510.00	0.09	5970.00	5964	5975	5976	5969	Begin CLP
ICB	25-Jun-2013, 11:31	-1.44	15.90	-16.90	-18	-19	-17	-13	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Standard	25-Jun-2013, 11:34	516.00	0.11	6050.00	6048	6051	6056	6040	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Blank	25-Jun-2013, 11:36	2.01	5.90	23.60	24	23	25	22	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
CRA	25-Jun-2013, 11:39	20.60	0.45	242.00	242	241	241	243	
WU61 MB1 TLM	25-Jun-2013, 11:42	-0.17	239.00	-1.98	-7	-5	2	2	
WU61 MB1SPK TLM	25-Jun-2013, 11:45	223.00	0.14	2610.00	2609	2611	2613	2604	
WU61 MB1SPD TLM	25-Jun-2013, 11:47	217.00	0.20	2540.00	2535	2543	2547	2546	
WU61 A TLM	25-Jun-2013, 11:50	1.97	14.80	23.10	24	19	22	27	
WU71 MB1 TLM	25-Jun-2013, 11:53	0.91	23.90	10.70	10	14	11	8	
WU71 MB1SPK TLM	25-Jun-2013, 11:55	225.00	0.40	2630.00	2618	2628	2638	2641	
WU71 A TLM	25-Jun-2013, 11:58	3.51	15.70	41.10	33	41	43	48	
WU71 ADUP TLM	25-Jun-2013, 12:01	2.60	16.50	30.50	37	32	27	27	
WU71 ASPK TLM	25-Jun-2013, 12:03	110.00	0.59	1290.00	1277	1281	1289	1294	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Standard	25-Jun-2013, 12:06	539.00	0.30	6320.00	6326	6330	6317	6287	

CETAC Hg Analysis Report - 13062500.DB - Tuesday, June 25, 2013, 2:45:03 PM

Analyst
Date Started Tuesday, June 25, 2013, 12:09:27
Worksheet LOW LEVEL CALIB 20 TO 1000 PPT
Comment

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Blank	25-Jun-2013, 12:09	0.48	83.60	5.67	0	9	10	3	END CLP

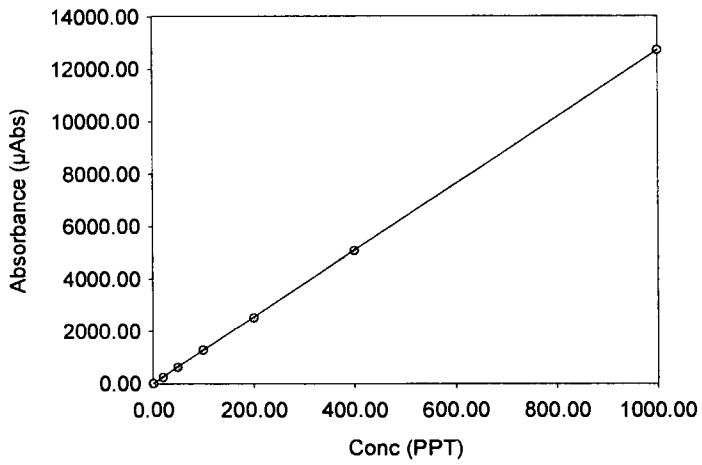
Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
WU71 B TLM	25-Jun-2013, 12:12	2.30	4.40	26.90	28	28	26	26	
WU71 MB2 DLM	25-Jun-2013, 12:14	0.87	13.70	10.20	8	10	12	11	
WU71 MB2SPK DLM	25-Jun-2013, 12:17	211.00	0.14	2470.00	2467	2474	2474	2468	
WU71 C DLM	25-Jun-2013, 12:20	0.93	10.70	10.90	13	10	10	11	
WU71 CDUP DLM	25-Jun-2013, 12:22	1.34	12.10	15.70	18	16	13	16	
WU71 CSPK DLM	25-Jun-2013, 12:25	114.00	0.51	1340.00	1342	1339	1334	1326	
WU71 D DLM	25-Jun-2013, 12:28	1.28	21.20	15.00	19	15	15	11	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Standard	25-Jun-2013, 12:31	552.00	0.10	6470.00	6470	6480	6478	6467	Q
QC Standard	25-Jun-2013, 12:40	552.00	0.26	6470.00	6445	6465	6479	6482	Q
QC Standard	25-Jun-2013, 12:51	550.00	0.13	6450.00	6438	6446	6456	6455	Q

High %R

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
Calibration Zero	25-Jun-2013, 12:57	0.00	442.00	1.23	9	1	-2	-3	
Standard #1	25-Jun-2013, 13:00	20.00	1.45	235.00	231	233	236	238	
Standard #2	25-Jun-2013, 13:03	50.00	0.23	615.00	613	616	615	615	
Standard #3	25-Jun-2013, 13:05	100.00	0.61	1270.00	1267	1270	1279	1284	
Standard #4	25-Jun-2013, 13:08	200.00	0.39	2520.00	2529	2529	2520	2508	
Standard #5	25-Jun-2013, 13:11	400.00	0.29	5060.00	5039	5059	5070	5071	
Standard #6	25-Jun-2013, 13:14	1000.00	0.06	12700.00	12718	12730	12726	12713	

Calibration Data



Int.	0.000
Slope	12.708
Correlation	0.99999

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
ICV	25-Jun-2013, 13:17	505.00	0.05	6420.00	6420	6421	6420	6414	Beg in CLP
ICB	25-Jun-2013, 13:19	0.73	15.00	9.22	9	8	9	11	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Standard	25-Jun-2013, 13:22	504.00	0.14	6400.00	6388	6403	6407	6405	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Blank	25-Jun-2013, 13:25	1.97	9.92	25.00	26	26	27	21	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
CRA	25-Jun-2013, 13:27	19.90	2.39	253.00	260	255	250	246	
WU71 B TLM	25-Jun-2013, 13:30	2.65	6.21	33.70	36	35	31	32	
WU71 MB2 DLM	25-Jun-2013, 13:33	-0.13	89.80	-1.63	-2	1	-2	-3	
WU71 MB2SPK DLM	25-Jun-2013, 13:36	199.00	0.19	2530.00	2527	2533	2535	2538	
WU71 C DLM	25-Jun-2013, 13:38	-1.53	25.20	-19.50	-27	-17			

CETAC Hg Analysis Report - 13062500.DB - Tuesday, June 25, 2013, 2:45:03 PM

Analyst
Date Started Tuesday, June 25, 2013, 13:41:23
Worksheet LOW LEVEL CALIB 20 TO 1000 PPT
Comment

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
WU71 CDUP DLM	25-Jun-2013, 13:41	0.79	37.60	10.10	7	9	16	9	
WU71 CSPK DLM	25-Jun-2013, 13:44	105.00	0.08	1330.00	1329	1331	1332	1330	
WU71 D DLM	25-Jun-2013, 13:46	-0.04	223.00	-0.54	-2	-1	1	0	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Standard	25-Jun-2013, 13:49	511.00	0.40	6500.00	6496	6520	6509	6461	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Blank	25-Jun-2013, 13:52	-0.15	63.50	-1.93	-3	-1	-1	-3	ENDCLP

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
WV08 MB TLM	25-Jun-2013, 13:55	0.21	156.00	2.66	-0	0	2	9	
WV08 MBSPK TLM	25-Jun-2013, 13:57	225.00	0.39	2860.00	2842	2853	2861	2868	
WV08 A TLM	25-Jun-2013, 14:00	18.40	2.39	234.00	238	239	234	226	
WV08 ADUP TLM	25-Jun-2013, 14:03	10.10	4.78	128.00	123	125	129	137	
WV08 ASPK TLM	25-Jun-2013, 14:05	105.00	0.13	1340.00	1340	1339	1336	1337	
WV08 B TLM	25-Jun-2013, 14:08	0.36	54.00	4.60	2	4	8	4	
WV23 MB1 TLM	25-Jun-2013, 14:11	-0.94	8.13	-11.90	-13	-12	-11	-12	
WV23 MB1SPK TLM	25-Jun-2013, 14:13	203.00	0.32	2580.00	2573	2572	2581	2590	
WV23 A TLM	25-Jun-2013, 14:16	6.64	3.89	84.40	81	84	84	89	
WV23 B TLM	25-Jun-2013, 14:19	10.40	0.73	132.00	133	132	132	131	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Standard	25-Jun-2013, 14:21	518.00	0.10	6580.00	6572	6583	6586	6585	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Blank	25-Jun-2013, 14:24	-0.64	32.20	-8.15	-7	-6	-8	-12	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
WV23 MB2 DLM	25-Jun-2013, 14:27	0.48	38.30	6.16	8	6	3	8	
WV23 MB2SPK DLM	25-Jun-2013, 14:30	209.00	0.41	2650.00	2639	2645	2654	2664	
WV23 C DLM	25-Jun-2013, 14:32	4.23	3.35	53.70	55	55	51	54	
WV23 D DLM	25-Jun-2013, 14:35	4.75	3.28	60.40	63	60	58	61	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Standard	25-Jun-2013, 14:38	523.00	0.15	6650.00	6637	6649	6658	6657	

Sample ID	Analysis Time	Conc (PPT)	%RSD	Avg. µAbs	Readings				Flags
QC Blank	25-Jun-2013, 14:41	0.06	451.00	0.70	-4	1	2	4	

Analyst	
Date Created:	Wednesday, November 27, 2002
Worksheet	LOW LEVEL CALIB 20 TO 1000 PPT
Comment	
Sip Duration (Sec.):	55
Rinse Duration (Sec.):	100
Read Delay:	75
Integration Time/Replicate:	2.00
# of Replicates:	4
# of Repeats:	1
Baseline Correction Enabled:	True
Baseline Point 1 Start Time:	20
Baseline Point 1 End Time:	24
2-Point Baseline Corr. Enabled:	False
Baseline Point 2 Start Time:	148
Baseline Point 2 End Time:	152
Gas Flow (ml/min):	30
Calibration Algorithm:	Linear, Zero Intercept
Recalibration Frequency:	0
Reslope Frequency:	0
Reslope Standard:	2
Calibration Standard #1 Conc.:	20.00 PPT
Calibration Standard #2 Conc.:	50.00 PPT
Calibration Standard #3 Conc.:	100.00 PPT
Calibration Standard #4 Conc.:	200.00 PPT
Calibration Standard #5 Conc.:	400.00 PPT
Calibration Standard #6 Conc.:	1000.00 PPT
QC Enabled:	True
QC-RSD Enabled:	True
Limit Condition & Error Action:	If %RSD > 5.0%, if µAbs. > 200, Flag and Continue
QC-Std Enabled:	True
Limit Condition & Error Action:	If outside 90% .. 110%,Stop
QC-Blank Enabled:	True
Limit Condition & Error Action:	If outside -20 .. 20,Stop

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Standard Prep Log

Prep Code: TLM Digested 20.0mL Instrument: CETAC

Analyst: DM Date: 6.24.13

Bath Temp: 95°C Start Time: 1200 End Time: 1300

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0	—	0.00	100.0	0.0	1
STD1	3057-10	0.02		0.02	1
STD2		0.05		0.05	1
STD3		0.10		0.1	1
STD4		0.20		0.2	1
STD5		~~0.50~~ 0.4		0.4	1
STD6		1.00		1.00	1
CRA		0.02		0.02	1
ICB/CCB	—	0.00		0.0	1
ICV/LCS	3057-11	1.0		0.5	1
CCV		1.0	100.0	0.5	1

Chemical/Reagent ID:

HNO_3: IB109 H_2SO_4: IB044 HCl: —

5% $K_2S_2O_8$: MP0491 5% $KMnO_4$: MP2502

Prep Code: _____ Instrument: _____

Analyst: _____ Date: _____

Bath Temp: _____ Start Time: _____ End Time: _____

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0		0.00			
STD1					
STD2		0.05			
STD3		0.10			
STD4		0.20			
STD5		0.50			
STD6		1.00			
CRA					
ICB/CCB		0.00			
ICV/LCS					
CCV					

Chemical/Reagent ID:

HNO_3: _____ H_2SO_4: _____ HCl: _____

5% $K_2S_2O_8$: _____ 5% $KMnO_4$: _____

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: TLM | DLM
Analyst: DM
Bath Temp: 95°c
Start Time: 0945
Matrix: Water
Date: 6-24-13
End Time: 1145

ARI Sample ID	Sample Bottle #	pH<2	Initial ~~Weight (g)~~ Volume (mL)	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
WV08 A	1	–	20.0	20.0	4/25 1	N	
" ADUP	1	–			1		
" ASPK	1	–			1		
" B	1	–			1		
" MB	–	–			1		
" MBSPK	–	–			1	N	
WQG1 A	1	√			6/30 1	Y	
" MB1	–	√			1		
" MB1SPK	–	√			1		
" MB1SD	–	√			1		
WU71 A	1	√			7/6 1		
" ADUP	1	√			1		
" ASPK	1	√			1		
" B	1	√			1		
" MB1	–	√			1		
" MB1SPK	–	√			1		
" C	1	–			1		
" CDUP	1	–			1		
" CSPK	1	–			1		– DLM
" D	1	–			1		
" MB2	–	–			1		
" MB2SPK	–	–	20.0	20.0	1	Y	
				6-24-13 DM			

Chemical/Reagent ID:

HNO_3: IB169 | MP2462 H_2SO_4: IB044 HCl: –

5% $K_2S_2O_8$: MP2491 5% $KMnO_4$: MP2475 Digest Tube Lot: MH21KK06

General Chemistry Raw Data
Analyst Notes and Raw Data

ARI Job ID: WU65, WU71

pH EPA 150.1 No: 3435
Data Analyst: Ursula Walter Analyzed by: UW
Comments: Date Analyzed: 6/19/13
Print Date: 6/20/13 12:11 Time Analyzed: 17:35

MB 6-20

	ARI ID	Result	Q	RL	SPK	UAD
1.	ICVL	6.99		0.01	7.00	0.01
2.	WU65A	7.84		0.01		
3.	WU65A DUP	7.86		0.01		0.02
4.	WU65B	7.92		0.01		
5.	WU68A	6.99		0.01		
6.	WU68A DUP	6.98		0.01		0.01
7.	WU69A	7.38		0.01		
8.	CCVL	7.04		0.01	7.00	0.04

Analytical Resources, Incorporated
Analytical Chemists and Consultants

pH Logbook

Meter ID: Accumet AR60

Calibration

Date:	6/19/13		Buffer	Source	Lot #	pH	Temp.
Time:	12:25		2.00	Ricca	1211549	2.00	19.9
Analyst:	ee		4.00	Fisher	130035	4.00	20.1
			7.00	Ricca	1211266	7.02	20.2
			10.00	Fisher	126248	10.05	20.4
			12.00	Ricca	1212084	11.97	20.7
			Verification	Fisher	124864	7.02	20.8

Sample pH

Analyst Initials	Time	Sample ID	1	2	3	4	Temp-erature
ee	12:45	ICV	7.02	7.02			20.8
	WU50A1		7.84	7.84			20.9
	↓ A1dup	→	7.85	7.85			21.0
	↓ B1	→	6.33	6.33			21.1
	WU49A1	→	6.06	6.06	← BOD		21.7
		CCV	7.01	7.01			21.4
ee	14:27	ICV	6.98	6.98			21.5
		WT78F'	8.67	8.67	← ReDox		21.4
		↓ G'	8.64	8.64			21.4
		CCV	7.02	7.02			22.0
ee	17:35	ICV	6.99	6.99			20.9
		~~WU61A1~~ ee	6.63	6.63	← BOD		~~22.7~~
		WU65A1	7.84	7.84			18.5
		I A1dup	7.86	7.87			18.6
		↓ B1	7.92	7.92			18.5
		WU68A1	6.99	6.99			18.7
		I A1dup	6.98	6.98			18.6
		WU69A1	7.78	7.78			18.4
		CCV	7.04	7.04			20.6
		CCV					

6-21-17

TOTAL SUSPENDED SOLIDS / VOLATILE SUSPENDED SOLIDS (TSS / TVSS) DATE: 6/21/2013

Methods : SM 2540 D-97, 2540 E-97 ANALYST: KE 9:30

Instrumentation ***Drying Ovens:*** 12 ***Analytical Balance:*** 1123230597

Muffle Furnace: N / A

make no entries to shaded cells
they are calculated !!

TSS (mg/l) calculated as:
Final dry wt (mg) = (minimum Dry Wt - Tare Wt)*1000
TSS = [(Final Dry Wt)/ ml Sample] * 1000
if dy wt < 1mg, TSS = <1mg / mL sample * 1000
with "<" flag

Loss on ignition (LOI) = TVSS (mg/L) calculated as:
LOI (mg) = Dry wt(mg) -((min ash wt - tare wt) * 1000)
TVSS (mg/L) = LOI / mL sample * 1000
if LOI <1mg, TVSS = <1mg / mL sample * 1000
with "<" flag

LCS source: *Cellulose, MP Biomedicals Lot# **6399J*** 0.05 grams to 1000 mL = **50** ***mg/L TSS***

SAMPLE ID	DISH #	filtered (mL)	TARE WT (grams)	DRY WT 104C (grams) 1	2	3	4	DryWT (mg)	TSS (mg/L)	ASH WT 550C (grams) 1	2	3	4	LOI (mg)	TVSS (mg/l)
Cal Weight ID			CV-02	CV-02	CV-02	CV-02	CV-02			CV-02	CV-02	CV-02	CV-02		
Date & Time			6/21/13 10:48 KE	6/21/13 12:28 KE											
Cal Wt (g) 10.0000				10.0000	10.0000										
record weights to 4 places				*Cal OK!*	*Cal OK!*										
BLANK		1000	0.1259	0.1260	0.1260	STOP		0.1	< 1						
LCS # 00617-06		1000	0.1262	0.1760	0.1759	STOP		49.7	49.7	99.4%	% Recovery				
WU63 A4		950	0.1241	0.1243	0.1242	STOP		0.1	< 1.1						
WU63 B4		940	0.1250	0.1254	0.1254	STOP		0.4	< 1.1						
WU63 C4		920	0.1261	0.1262	0.1261	STOP		0.0	< 1.1						
WU63 D4		950	0.1241	0.1525	0.1524	STOP		28.3	29.8						
WU63 E4		950	0.1269	0.1319	0.1318	STOP		4.9	5.2						
WU63 F4		950	0.1250	0.1251	0.1252	STOP		0.1	< 1.1						
WU63 G4		950	0.1268	0.1276	0.1276	STOP		0.8	< 1.1						
WU63 H4		950	0.1276	0.1316	0.1315	STOP		3.9	4.1						
WU63 I 4		940	0.1188	0.1381	0.1380	STOP		19.2	20.4						
WU63 J 4		920	0.1282	0.1287	0.1286	STOP		0.4	< 1.1						
WU63 K10		950	0.1267	0.1270	0.1269	STOP		0.2	< 1.1						
WU63 K11dup		950	0.1268	0.1268	0.1268	STOP		0.0	< 1.1						
								RPD =	*NA*					*RPD =*	*NA*
WU64 A1		30	0.1238	0.1592	0.1592	STOP		35.4	1180.0						
WU64 A1 dup		30	0.1236	0.1652	0.1648	STOP		41.2	1373.3						
								RPD =	*15.1%*					*RPD =*	*NA*
WU65 A2		960	0.1250	0.1351	0.1348	STOP		9.8	10.2						
WU65 B2		950	0.1277	0.1299	0.1298	STOP		2.1	2.2						
WU79 A1		30	0.1244	0.1361	0.1359	STOP		11.5	383.3						

TOTAL SUSPENDED SOLIDS / VOLATILE SUSPENDED SOLIDS (TSS / TVSS)

Methods : SM 2540 D-97, 2540 E-97

DATE: 6/21/2013

ANALYST: KE 9:30

Instrumentation ***Drying Ovens:*** 12 ***Analytical Balance:*** 1123230597

Muffle Furnace: N / A

make no entries to shaded cells

they are calculated !!

TSS (mg/l) calculated as:
Final dry wt (mg) = (minimum Dry Wt - Tare Wt)*1000
TSS = [(Final Dry Wt)/ ml Sample] * 1000
if dy wt < 1mg, TSS = <1mg / mL sample * 1000
with "<" flag

Loss on ignition (LOI) = TVSS (mg/L) calculated as:
LOI (mg) = Dry wt(mg) -((min ash wt - tare wt) * 1000)
TVSS (mg/L) = LOI / mL sample * 1000
if LOI <1mg, TVSS = <1mg / mL sample * 1000
with "<" flag

LCS source: *Cellulose, MP Biomedicals Lot# **6399J*** | 0.05 | grams to | 1000 | mL = | **50** ***mg/L TSS***

SAMPLE ID	DISH #	filtered (mL)	TARE WT (grams)	DRY WT 104C (grams) 1	2	3	4	DryWT (mg)	TSS (mg/L)	ASH WT 550C (grams) 1	2	3	4	LOI (mg)	TVSS (mg/l)
WU79 A1 dup		30	0.1243	0.1377	0.1376	STOP		13.3	443.3						
							RPD =		14.5%					*RPD =*	NA
WU88 A1		920	0.1294	0.1592	0.1591	STOP		29.7	32.3						

② 0.1592 6-21-13 (A)

Analytical Resources, Incorporated
Analytical Chemists and Consultants

TOTAL SUSPENDED (TSS) / TOTAL VOLATILE SUSPENDED SOLID(TVSS) BENCHSHEET

Analyst: (N)	Date/Time: 6-21-13 9:30	Oven #: 012	Muffle Furnace: 62790918520	Balance: 1123230597

Dry at 104 °C (12-24 hrs) then combust at 550 °C for 30 min. Record Weights to 4 places

TSS (mg/L) calculated as:
Final Dry Weight (mg) = (Min Dry Weight – Tare Weight) * 1000
TSS = (Final Dry Weight) / (mL Sample) * 1000
If dry wt < 1 mg / mL sample * 1000 use "<" flag

Loss on Ignition (LOI) = TVSS (mg / L) is calculated as:
LOI (mg / L) = Dry Weight (mg) – [(Minimum Ash Weight – Tare Weight) * 1000]
TVSS (mg / L) = LOI / mL sample * 1,000
If LOI < 1 mg, TVSS = < 1 mg / mL sample * 1000 use "<" flag

LCS (Cellulose from MP Biochemicals) Lot #	6399J	0.0500 Gram to 1000 mL = **50 mg / L TSS**							
Cal Weight ID	CV-02	CV-02	CV-02	CV-02	CV-02			CV-02	CV-02
Date & Time:			6-21-13 10:48	6-21-13 12:14					
Cal Weight (10.0000g):			10.0000 (1)	10.0000 (1)					

Sample ID	Dish #	Filtered mL	Tare	Dry Weight 104°C (grams)			Dry Wt mg	TSS	Ash Weight 550°C		LOI - mg	TVSS mg/L
				1	2	3			1	2		
BLANK	PSS49	1000	0.1259	0.1260	0.1260							
LCS # CC617-06	PSS50	1000	0.1262	0.1260	0.1259							
W463 A4	PSS51	950	0.1241	0.1243	0.1242							
B4	PSS52	940	0.1250	0.1254	0.1254							
C4	PSS53	920	0.1261	0.1262	0.1261							
D4	PSS54	950	0.1241	0.1525	0.1524							
E4	PSS55	950	0.1269	0.1319	0.1318							
F4	PSS56	950	0.1250	0.1251	0.1252							
G4	PSS57	950	0.1268	0.1276	0.1276							
H4	PSS58	950	0.1276	0.1316	0.1315							
I4	PSS59	940	0.1198	0.1381	0.1380							
J4	PSS60	920	0.1282	0.1287	0.1286							
K10,4	PSS61	950	0.1267	0.1270	0.1269							
OR K11	10.5562	950	0.1268	0.1268	0.1268							
W464 A1	PS016	30	0.1238	0.1592 (2)	0.1592							
" OR A1	PS017	30	0.1236	0.1652	~~0.1648~~	0.1648						
W465 A2	PS019	960	0.1250	0.1351	0.1348							
" B2	PS020	950	0.1277	0.1299	0.1298							
W479 A1	PS021	30	0.1244	0.1361	0.1359							
" OR A1	PS022	30	0.1243	0.1377	0.1376							
W488 A1	PS023	920	0.1294	0.1592	0.1591							

W
6-21-13

CONDUCTIVITY BENCHSHEET (EPA 120.1) Date / Time : 6/21/13 13:36

EPA 120.1, SM 2510 B-97, EPA 9050A Analyst : KE

Temperature compensated to 25 °C

INSTRUMENT: Orion Model 115 SN:002482 ELECTRODE: Orion 011510 SN:KU9020 K= 1 cm-1

Direct Calibration		Cell Constant Adjustment	
1413 Calibration Standard	0.01 N KCl	*1413 Calibration Standard*	0.01N KCl
ARI #	00613-06	ARI #	
µS/cm =	1,413	*Current value*	*Cal Temp (°C)*
Cal Temp (°C) =	19.5		*Expected*
input µS =	1277	Adjust to	*Displayed*
Cell constant =	0.9931		%

Calibration Verification Standard *Record Certified Values*

Source: RICCA CHEMICAL COMPANY *µS / cm =* 1000

Lot Number: #1302913 *TDS (mg/l) =*

Sample Data

(NOTE: if requested, switch MODE to read TDS) Enter dilution as mL final / mL sample

ARI Number	Sample Dilution	Temp (C)	CONDUCTIVITY @ 25C (mS/cm)	CONDUCTIVITY @ 25C (µS/cm)	TDS (mg/L)	Notes & Flags
ICB		22.2		0.6		OK!
ICV		19.6		991		99.10%
WU65 A3		19.2		868		
WU65 A3 dup		19.2		872		RPD =0.46 %
WU65 B3		19.1		865		
WU78 A1		19.5		30.5		
WU78 A1 dup		19.6		30.4		RPD =0.33 %
WU78 B1		19.5		129.5		
WU78 C1		19.3		157.7		
WU78 D1		19.7		81.9		
WU78 E1		19.7		44.7		
WU78 F1		19.4		45.8		
CCB		22.3		0.3		OK!
CCV		19.6		994		99.40%
WU78 G1		19.6		46.3		
WU78 H1		19.4		53.8		
WU78 I 1		19.7		78.5		
WU78 J 1		19.6		629		
WU78 K1		19.7		178.3		
WU78 L1		19.5		213		
WU86 A1		19.5		55.8		
WU86 A1 dup		19.4		56.0		RPD =0.36 %
CCB		22.2		0.5		OK!
CCV		19.8		988		98.80%

CONDUCTIVITY BENCHSHEET (EPA 120.1) Date / Time : 6-21-13 13:36

EPA 120.1, SM 2510 B-97, EPA 9050A Analyst : (A)

Temperature compensated to 25 °C

INSTRUMENT: Orion Model 115 SN:002482 *ELECTRODE: Orion 011510 SN:KU9020* *K= 1 cm-1*

Direct Calibration

1413 Calibration Standard 0.01 N KCl

ARI # 00613-06

µS/cm =	1,413
Cal Temp (°C) =	19.5
input µS =	[illegible]
Cell constant =	0.9931

Cell Constant Adjustment

1413 Calibration Standard 0.01N KCl

ARI #

Current value *Cal Temp (°C)*

Expected

Adjust to *Displayed*

%

Calibration Verification Standard

Source: RICCA CHEMICAL COMPANY

Lot Number: # 1302913

Record Certified Values

µS / cm = 1000

TDS (mg/l) =

Sample Data

(NOTE: if requested, switch MODE to read TDS) *Enter dilution as mL final / mL sample*

ARI Number	Sample Dilution	Temp (C)	CONDUCTIVITY @ 25C (mS/cm)	CONDUCTIVITY @ 25C (µS/cm)	TDS (mg/L)	Notes & Flags
ICB		22.2		0.6		
ICV		19.6		991		
WU165 A3		19.2		868		
A3		19.2		872		
B3		19.1		865		
WU178 A1		19.5		30.5		
A1		19.6		30.4		
B1		19.5		129.5		
C1		19.3		157.7		
D1		19.7		81.9		
E1		19.7		44.7		
F1		19.4		45.8		
CCB		22.3		0.3		
CCV		19.6		994		
WU178 G1		19.6		46.3		
H1		19.4		53.8		
I1		19.7		78.5		
J1		19.6		629		
K1		19.7		178.3		
L1		19.5		213		
WU180 A1		19.5		55.8		
mA1		19.4		56.0		
CCB		22.2		0.5		
CCV		19.8		988		
CCB		6-21-13 (A)				
CCV						

Amount Summary

Sequence Details

Name:	**JUNE2013CDE**	*Calibration:*	**MAY2313RR**	**ARI # 616-02**
Directory:	**Instrument Data\2013 DATA\JUNE 2013**	*Calibration exp:*	**7/23/2013**	
Data Vault:	**ChromeleonLocal**	*Queue Start:*	**6/20/2013 10:34**	
No. of Injections.	**23.000**	*User:*	**CDE**	

By Component

		ERA 130312	ERA 210312	ERA 490412	ERA 370911	ERA 240312	ERA 220912	ERA 030112
Name	Dilution	Amount n.a. Fluoride	Amount n.a. Chloride	Amount n.a. Nitrite	Amount n.a. Bromide	Amount n.a. Sulfate	Amount n.a. Nitrate	Amount n.a. Phosphate
RINSE	1.0	n.a.	n.a.	n.a.	n.a.	n a.	n.a	n.a.
ICV	1 0	2 968	2.984	2.974	2.989	2.971	2.933	2.881
%R=		**98.9%**	**99.5%**	**99.1%**	**99.6%**	**99.0%**	**97.8%**	**96.0%**
ICB	1 0	n a.	n.a.	n.a	n.a.	n.a.	n.a.	n a.
LOW	1.0	0.086	0 090	0.084	0.082	0.084	0.083	0.076
WU65 A1	1 0	0.299	163.209	n a.	n.a.	n.a.	0.315	n.a
WU65 A1 dup	1 0	0 298	163.498	n.a.	n.a.	n.a.	0.315	n.a.
%RPD=		**0.61%**	**0.18%**			**#VALUE!**	**0.08%**	
WU65 A1 ms	1.0	2.307	163.867	1.980	1.756	n a.	2.301	1.847
%R=		**100.4%**	**32.9%**	**#VALUE!**	**#VALUE!**	**#VALUE!**	**99.3%**	**#VALUE!**
SPK=	**0.05**	***mL 200ppm Int. to***		***5.0***	***mLsample=***		***2.00 ppm***	
WU65 B1	1.0	0.302	163.490	n.a	n.a.	n.a.	0.316	0.022
WT06 D1	50.0	45.028	3346 759	n.a.	94.710	n.a.	15 697	n.a.
WT49 D3	100.0	n.a.	51.557	n.a	n.a.	154.489	2.817	n.a.
WT49 D3	50.0	n.a.	50.304	n a.	n.a.	156.700	2.803	n.a.
WT49 D3	20.0	n.a.	52.648	n.a.	n.a.	163.730	3.099	n a
WU65 B1	50.0	n.a.	156.267	n.a.	n a	98.510	n a	n.a
CCV	1.0	2.999	3.004	2.994	3.007	2.984	2.933	2.847
%R=		**100.0%**	**100.1%**	**99.8%**	**100.2%**	**99.5%**	**97.8%**	**94.9%**
CCB	1 0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n a
WU65 A1	50.0	n.a.	156.513	n.a	n.a.	98.602	n.a.	n.a.
WU65 A1 dup	50.0	n a	156.522	n a.	n.a.	98.400	n.a.	n.a
%RPD=		**#VALUE!**	**0.01%**			**0.20%**	**#VALUE!**	
WU65 A1 ms	100 0	n.a.	343.852	n.a.	n.a	91.873	n.a.	n.a.
%R=		**#VALUE!**	**93.7%**	**#VALUE!**	**#VALUE!**	**-3.4%**	**#VALUE!**	**#VALUE!**
SPK=	**0.10**	***mL 10,000ppm Cl stock to***		***5.0***	***mLsample=***		***200.00 ppm***	
WU65 A1 ms	100.0	n.a.	151.585	n.a.	n.a.	193.677	n.a.	n.a.
%R=		**#VALUE!**	**-4.9%**	**#VALUE!**	**#VALUE!**	**95.3%**	**#VALUE!**	**#VALUE!**
SPK=	**0.05**	***mL 10,000ppm SO4 stock to***		***5.0***	***mLsample=***		***100.00 ppm***	
WT06 D1	20.0	41.057	3350.451	n.a.	n.a.	n.a	16.009	n.a.
CCV	1.0	3.032	3.037	2.990	3.005	3.023	2 933	2.764
%R=		**101.1%**	**101.2%**	**99.7%**	**100.2%**	**100.8%**	**97.8%**	**92.1%**
CCB	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n a
STOP	1.0	n.a.	n.a.	n a.	n a.	n.a.	n.a.	n.a.

Sequence Overview

Sequence Details

Name:	**JUNE2013CDE**	*Queue Start:*	**2013-06-20T10:34:30-**
Directory:	**2013 DATA\JUNE 2013**	*Created By:*	**pat**
Data Vault:	**ChromeleonLocal**		
No. of Injections:	**23**		

Injection Details

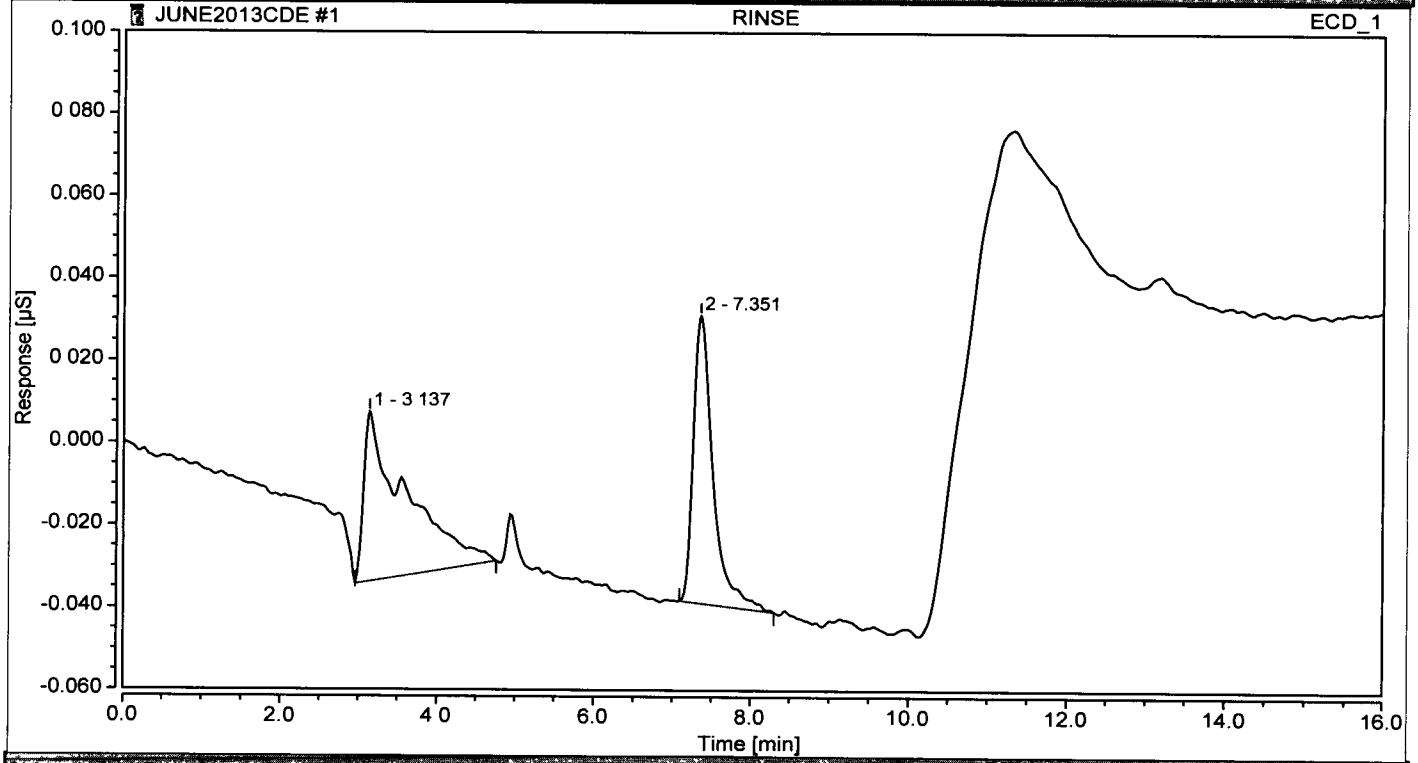
No.	Injection Name	Position	Type	Level	Dilution	Inject Time
1	RINSE	1	Unknown		1.0	20/Jun/13 10:34:30
2	ICV	2	Check Standard	06	1.0	20/Jun/13 10:53:27
3	ICB	3	Blank		1.0	20/Jun/13 11:12:37
4	LOW	4	Unknown		1.0	20/Jun/13 11:31:52
5	WU65 A1	5	Unknown		1.0	20/Jun/13 11:51:13
6	WU65 A1 dup	6	Unknown		1.0	20/Jun/13 12:10:39
7	WU65 A1 ms	7	Unknown		1.0	20/Jun/13 12:30:11
8	WU65 B1	8	Unknown		1.0	20/Jun/13 12:49:48
9	WT06 D1	9	Unknown		50.0	20/Jun/13 13:09:32
10	WT49 D3	10	Unknown		100.0	20/Jun/13 13:29:20
11	WT49 D3	11	Unknown		50.0	20/Jun/13 13:49:14
12	WT49 D3	12	Unknown		20.0	20/Jun/13 14:09:14
13	WT65 B1	13	Unknown		50.0	20/Jun/13 14:29:20
14	CCV	2	Check Standard	06	1.0	20/Jun/13 14:49:31
15	CCB	3	Blank		1.0	20/Jun/13 15:10:06
16	WU65 A1	14	Unknown		50.0	20/Jun/13 15:30:46
17	WU65 A1 dup	15	Unknown		50.0	20/Jun/13 15:51:13
18	WU65 A1 ms	16	Unknown		100.0	20/Jun/13 16:11:45
19	WU65 A1 ms	17	Unknown		100.0	20/Jun/13 16:32:22
20	WT06 D1	18	Unknown		20.0	20/Jun/13 16:53:04
21	CCV	2	Check Standard	06	1.0	20/Jun/13 17:13:52
22	CCB	3	Blank		1.0	20/Jun/13 17:33:50
23	STOP	1	Unknown		1.0	20/Jun/13 17:53:57

Chromatogram and Results

Injection Details

Injection Name:	*RINSE*	Inject Number:	1
Vial Number.	*1*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUNE2013CDE
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*20/06/13 10:34*		

Chromatogram



Integration Results

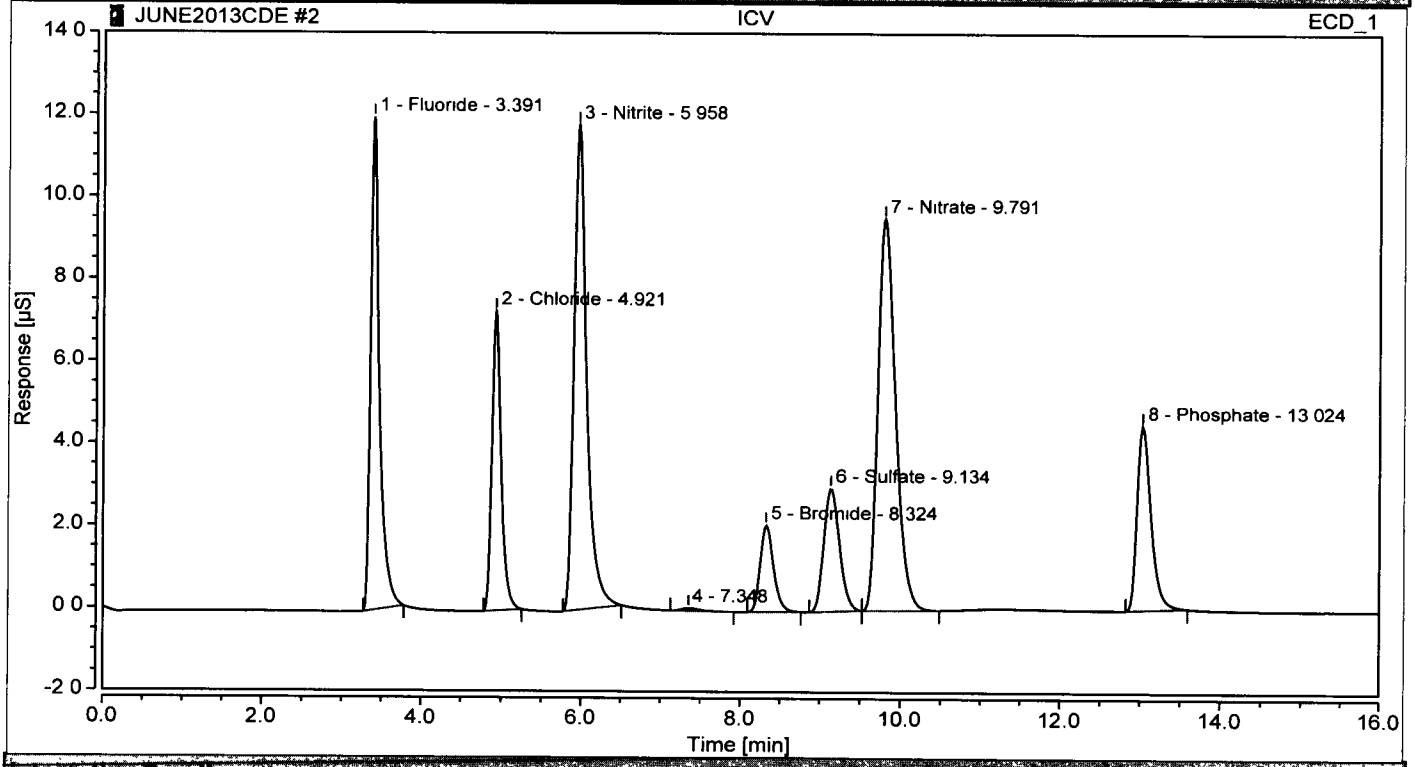
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1		1.0	n.a.	3.14	0.026	0.041	FALSE	n.a.
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Chloride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		1.0	n.a.	7.35	0.021	0.070	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*ICV*	Inject Number:	2
Vial Number:	*2*	User:	pat
Injection Type:	*Check Standard*	Sequence:	JUNE2013CDE
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*20/06/13 10:53*		

Chromatogram



Integration Results

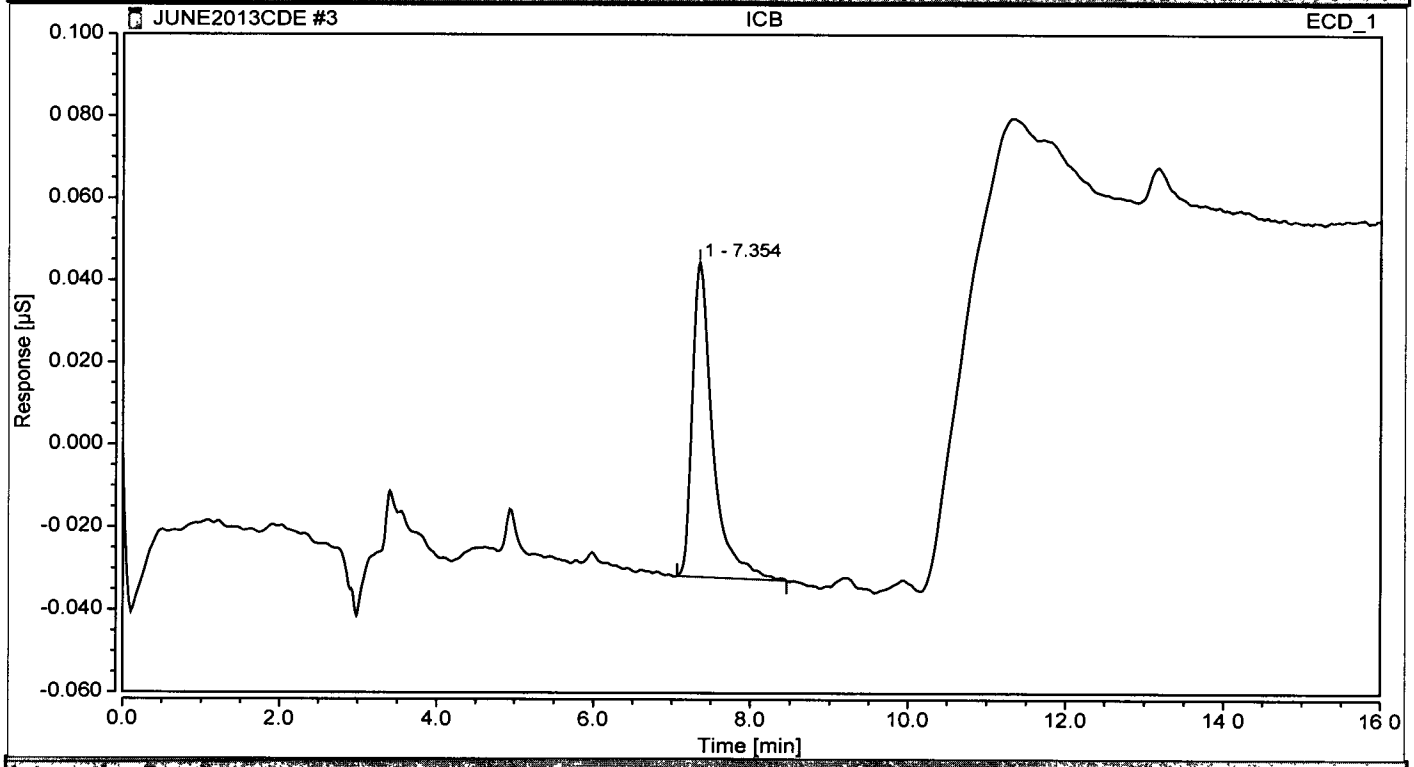
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	2.968	3.39	1.532	11.980	FALSE	-1.06
2	Chloride	1.0	2.984	4.92	0.956	7.283	FALSE	-0.53
3	Nitrite	1.0	2.974	5.96	2.168	11.785	FALSE	-0.85
4		1.0	n.a.	7.35	0.017	0.065	FALSE	n.a.
5	Bromide	1.0	2.989	8.32	0.406	2.102	FALSE	-0.37
6	Sulfate	1.0	2.971	9.13	0.674	2.988	FALSE	-0.96
7	Nitrate	1.0	2.933	9.79	2.406	9.526	FALSE	-2.22
8	Phosphate	1.0	2.881	13.02	0.899	4.483	FALSE	-3.96

Chromatogram and Results

Injection Details

Injection Name:	*ICB*	Inject Number:	3
Vial Number:	*3*	User:	pat
Injection Type:	*Blank*	Sequence:	JUNE2013CDE
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*20/06/13 11:12*		

Chromatogram



Integration Results

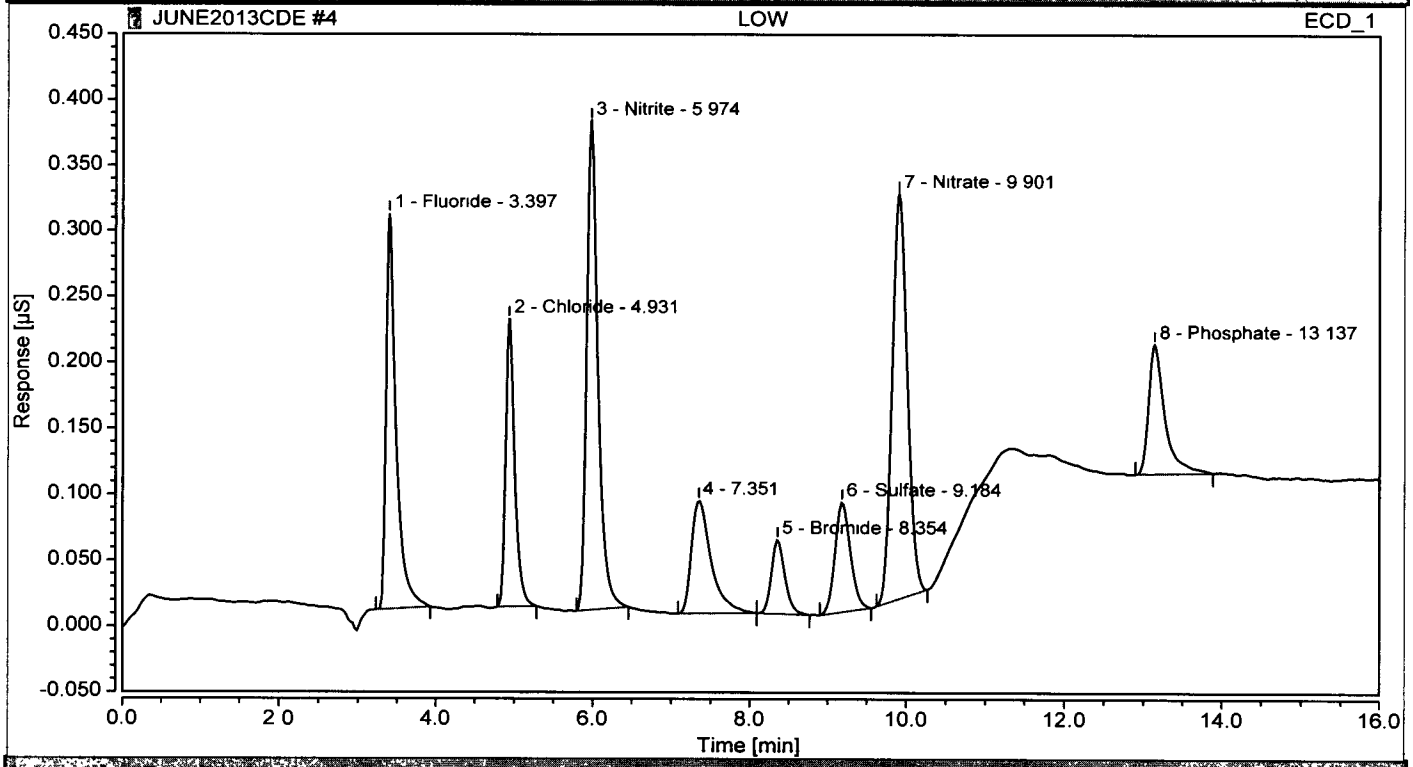
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Chloride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		1.0	n.a.	7.35	0.023	0.076	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*LOW*	Inject Number:	4
Vial Number:	*4*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUNE2013CDE
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodat*		
Injection Date/Time:	*20/06/13 11:31*		

Chromatogram



Integration Results

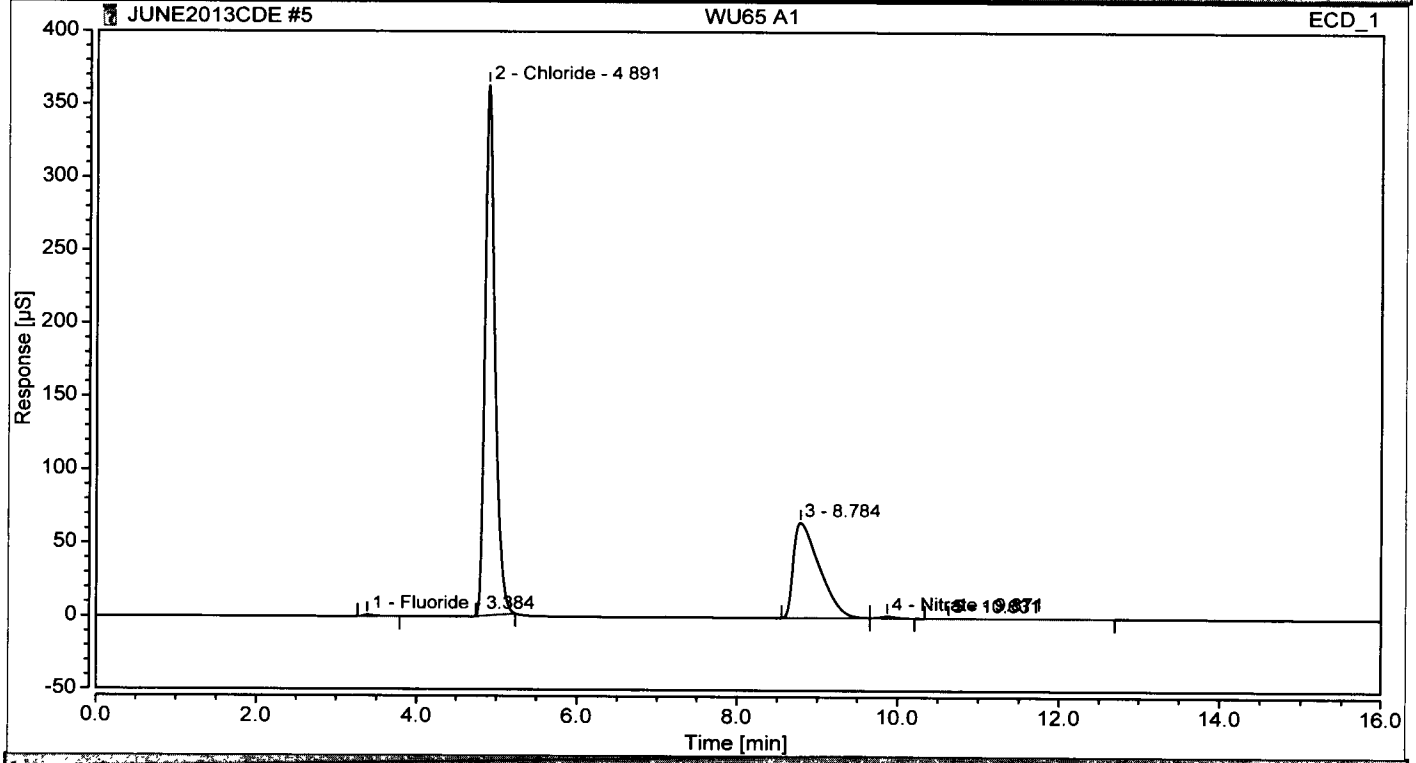
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.086	3.40	0.044	0.300	FALSE	n.a.
2	Chloride	1.0	0.090	4.93	0.029	0.218	FALSE	n.a.
3	Nitrite	1.0	0.084	5.97	0.062	0.371	FALSE	n.a.
4		1.0	n.a.	7.35	0.025	0.086	FALSE	n.a.
5	Bromide	1.0	0.082	8.35	0.011	0.056	FALSE	n.a.
6	Sulfate	1.0	0.084	9.18	0.019	0.083	FALSE	n.a.
7	Nitrate	1.0	0.083	9.90	0.068	0.308	FALSE	n.a.
8	Phosphate	1.0	0.076	13.14	0.024	0.098	FALSE	n.a.

Chromatogram and Results

Injection Details

Injection Name.	*WU65 A1*	Inject Number:	5
Vial Number:	*5*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUNE2013CDE
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*20/06/13 11:51*		

Chromatogram



Integration Results

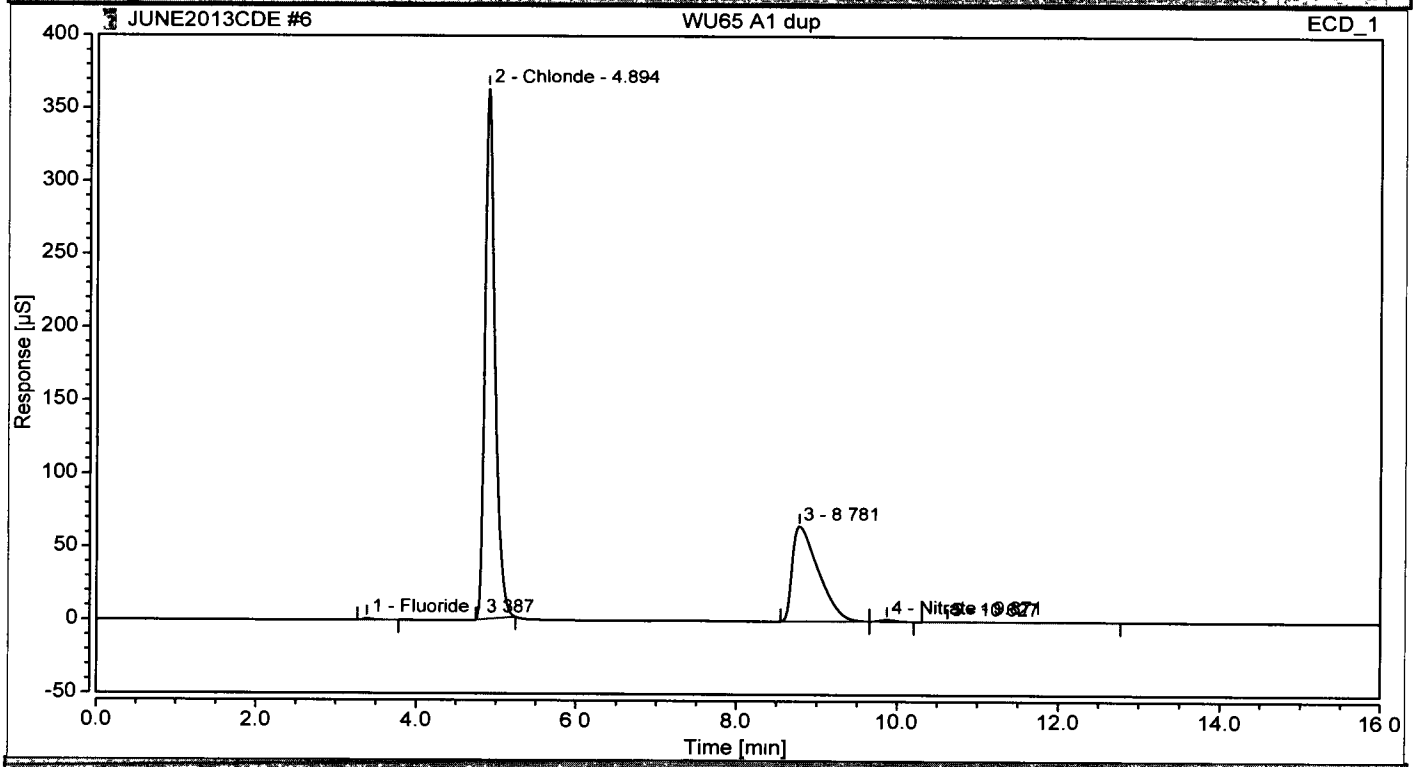
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.299	3.38	0.155	1.159	FALSE	n.a.
2	Chloride	1.0	163.209	4.89	52.288	362.445	FALSE	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		1.0	n.a.	8.78	24.347	64.991	FALSE	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Nitrate	1.0	0.315	9.87	0.258	1.196	FALSE	n.a.
5		1.0	n.a.	10.63	0.118	0.180	FALSE	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*WU65 A1 dup*	Inject Number:	6
Vial Number:	*6*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUNE2013CDE
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*20/06/13 12:10*		

Chromatogram



Integration Results

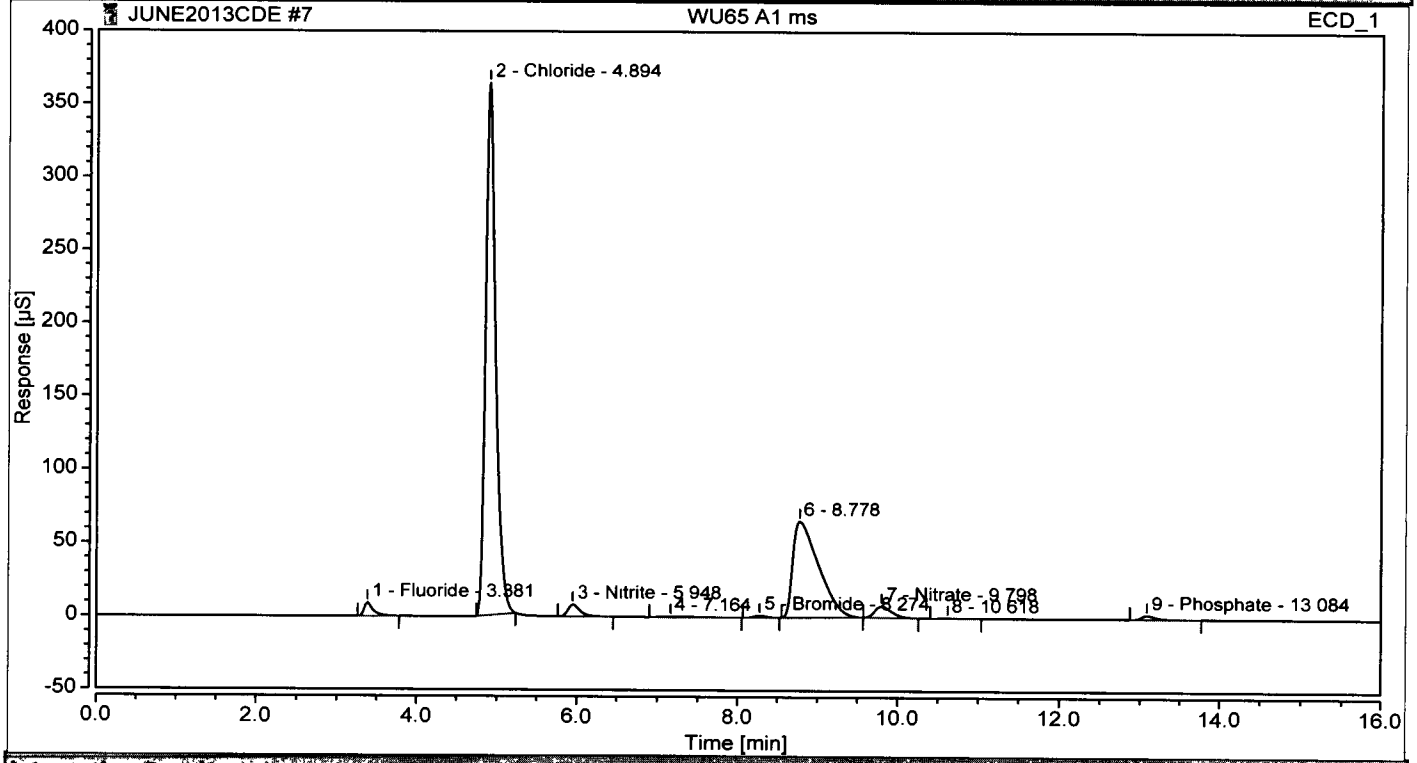
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.298	3.39	0.154	1.155	FALSE	n.a.
2	Chloride	1.0	163.498	4.89	52.381	362.822	FALSE	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		1.0	n.a.	8.78	24.353	65.130	FALSE	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Nitrate	1.0	0.315	9.87	0.259	1.200	FALSE	n.a.
5		1.0	n.a.	10.63	0.127	0.184	FALSE	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*WU65 A1 ms*	Inject Number:	7
Vial Number:	*7*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUNE2013CDE
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*20/06/13 12:30*		

Chromatogram



Integration Results

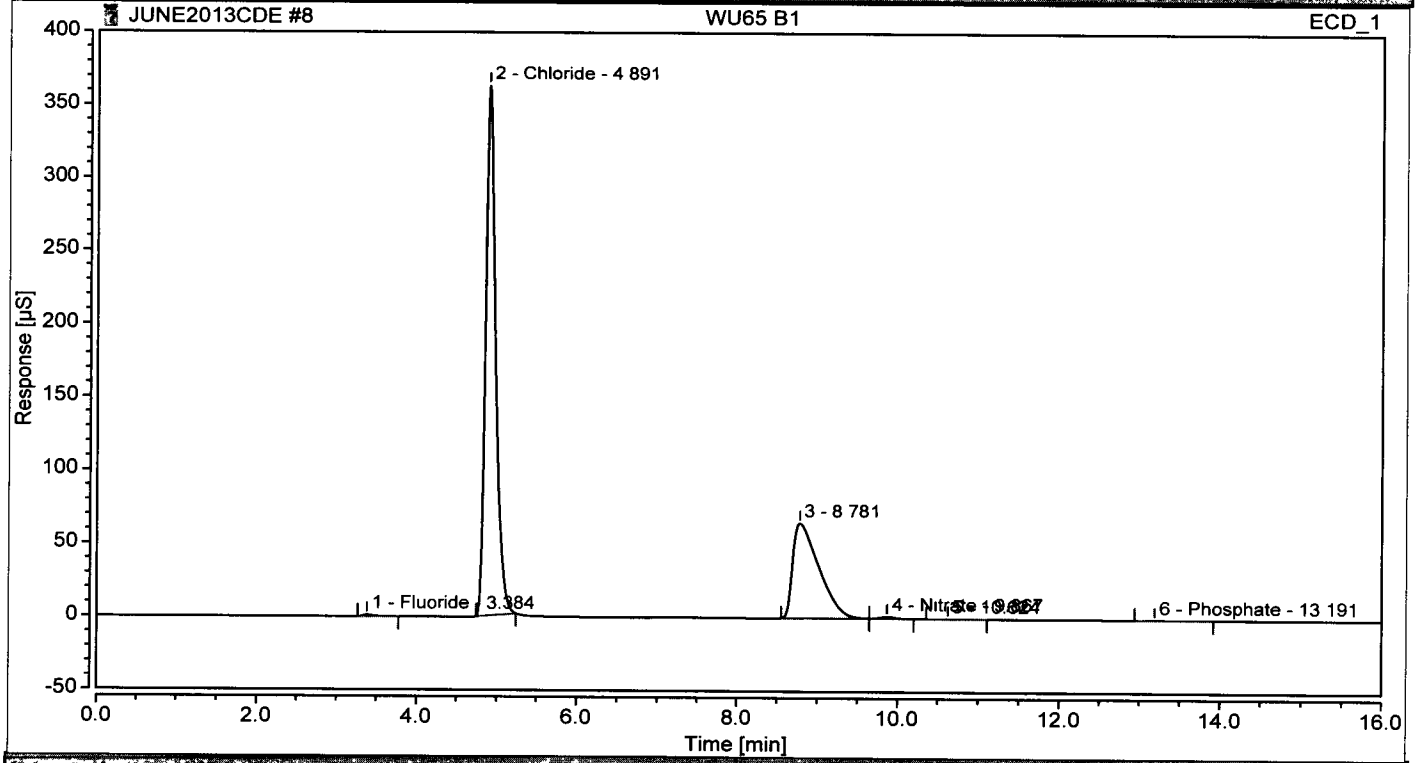
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	2.307	3.38	1.191	9.134	FALSE	n.a.
2	Chloride	1.0	163.867	4.89	52.499	363.904	FALSE	n.a.
3	Nitrite	1.0	1.980	5.95	1.443	8.177	FALSE	n.a.
4		1.0	n.a.	7.16	0.179	0.301	FALSE	n.a.
5	Bromide	1.0	1.756	8.27	0.239	1.352	FALSE	n.a.
6		1.0	n.a.	8.78	24.462	65.580	FALSE	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
7	Nitrate	1.0	2.301	9.80	1.887	7.754	FALSE	n.a.
8		1.0	n.a.	10.62	0.029	0.142	FALSE	n.a.
9	Phosphate	1.0	1.847	13.08	0.577	2.755	FALSE	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*WU65 B1*	Inject Number:	8
Vial Number:	*8*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUNE2013CDE
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodat*		
Injection Date/Time:	*20/06/13 12:49*		

Chromatogram



Integration Results

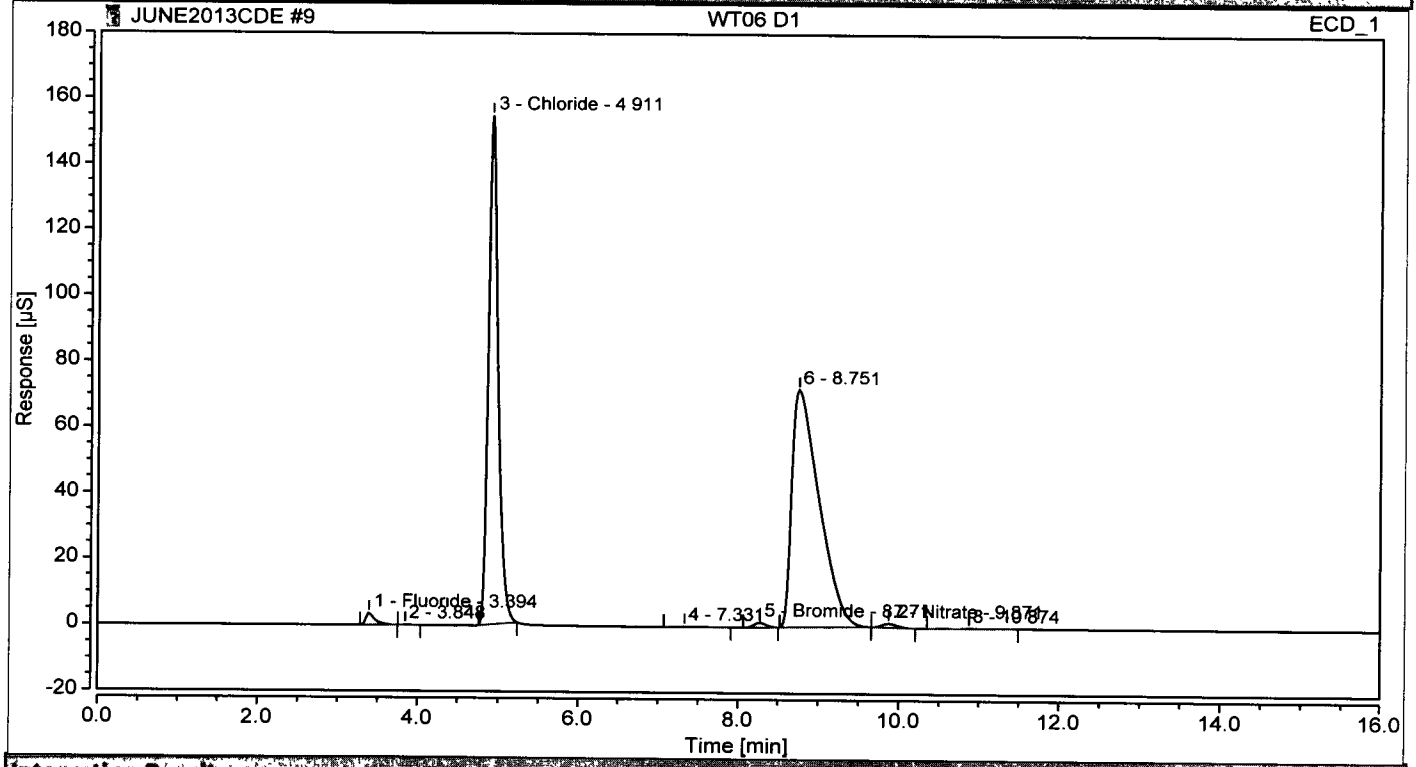
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	0.302	3.38	0.156	1.183	FALSE	n.a.
2	Chloride	1.0	163.490	4.89	52.378	362.760	FALSE	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3		1.0	n.a.	8.78	24.344	65.068	FALSE	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4	Nitrate	1.0	0.316	9.87	0.259	1.201	FALSE	n.a.
5		1.0	n.a.	10.62	0.035	0.159	FALSE	n.a.
6	Phosphate	1.0	0.022	13.19	0.007	0.020	FALSE	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*WT06 D1*	Inject Number:	9
Vial Number:	*9*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUNE2013CDE
Dilution Factor:	*50.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*20/06/13 13:09*		

Chromatogram



Integration Results

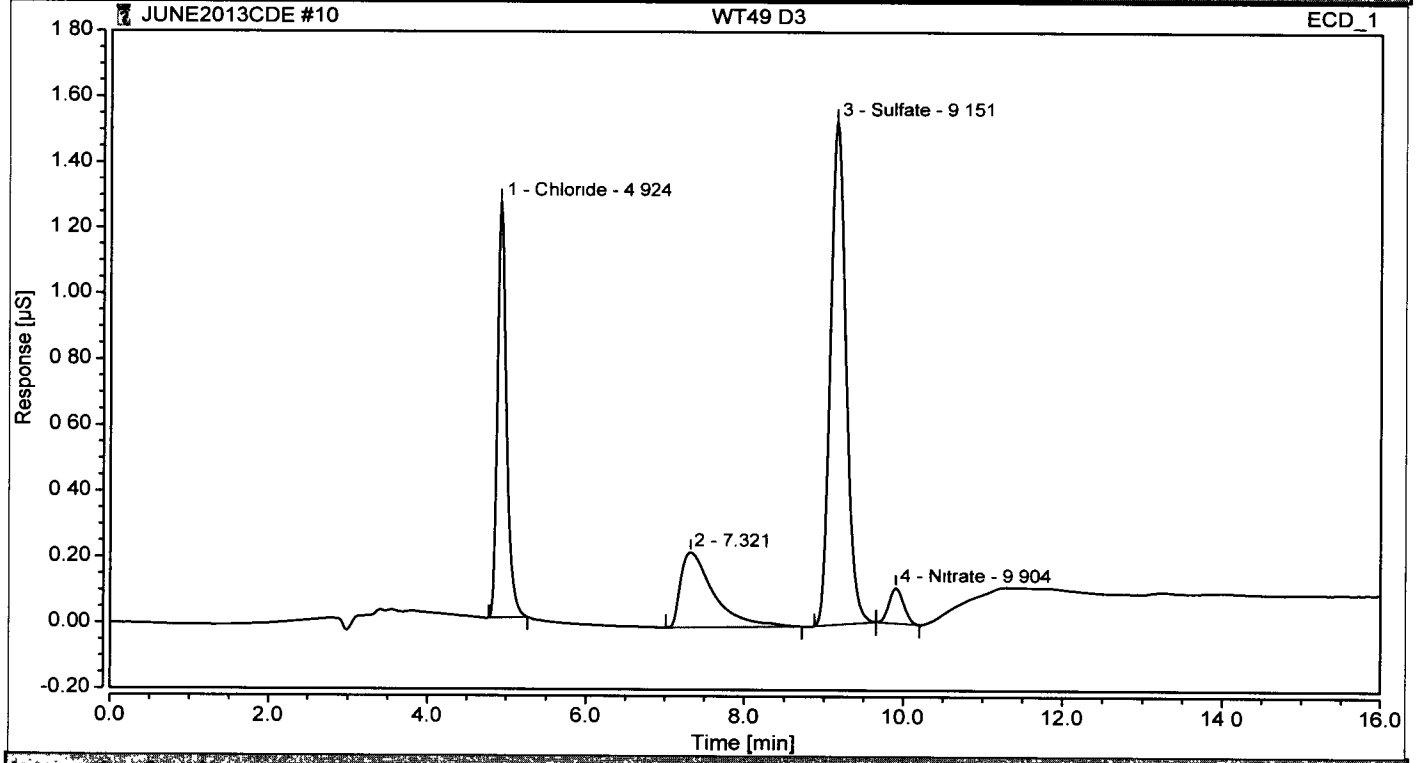
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	50.0	45.028	3.39	0.465	3.512	FALSE	n.a.
2		50.0	n.a.	3.85	0.009	0.090	FALSE	n.a.
3	Chloride	50.0	3346.759	4.91	21.444	154.407	FALSE	n.a.
n.a.	Nitrite	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4		50.0	n.a.	7.33	0.037	0.123	FALSE	n.a.
5	Bromide	50.0	94.710	8.27	0.257	1.472	FALSE	n.a.
6		50.0	n.a.	8.75	28.256	72.008	FALSE	n.a.
n.a.	Sulfate	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
7	Nitrate	50.0	15.697	9.87	0.257	1.198	FALSE	n.a.
8		50.0	n.a.	10.87	0.031	0.096	FALSE	n.a.
n.a.	Phosphate	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*WT49 D3*	Inject Number:	10
Vial Number:	*10*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUNE2013CDE
Dilution Factor:	*100.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*20/06/13 13:29*		

Chromatogram



Integration Results

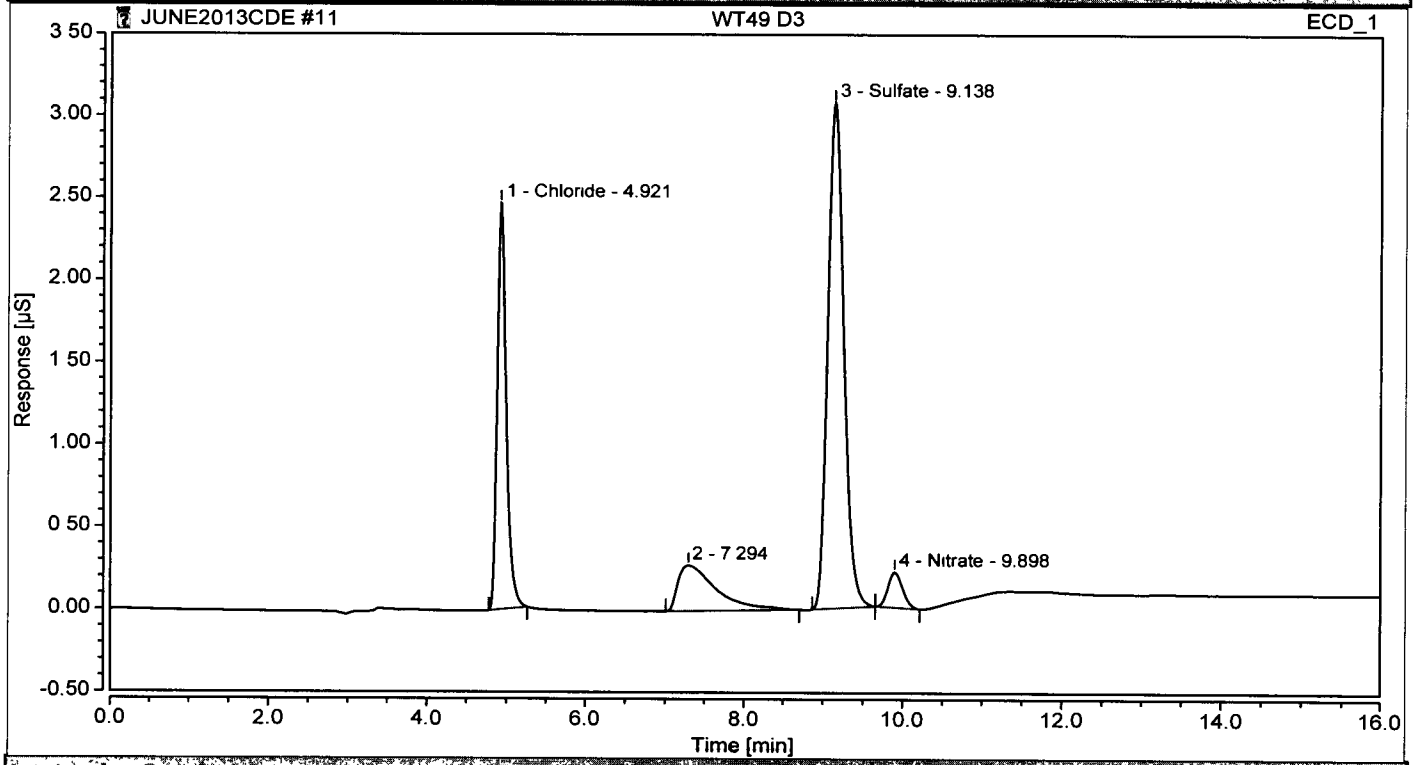
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	100.0	51.557	4.92	0.165	1.265	FALSE	n.a.
n.a.	Nitrite	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		100.0	n.a.	7.32	0.110	0.228	FALSE	n.a.
n.a.	Bromide	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	100.0	154.489	9.15	0.351	1.529	FALSE	n.a.
4	Nitrate	100.0	2.817	9.90	0.023	0.108	FALSE	n.a.
n.a.	Phosphate	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name.	*WT49 D3*	Inject Number:	11
Vial Number:	*11*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUNE2013CDE
Dilution Factor:	*50.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodat*		
Injection Date/Time:	*20/06/13 13:49*		

Chromatogram



Integration Results

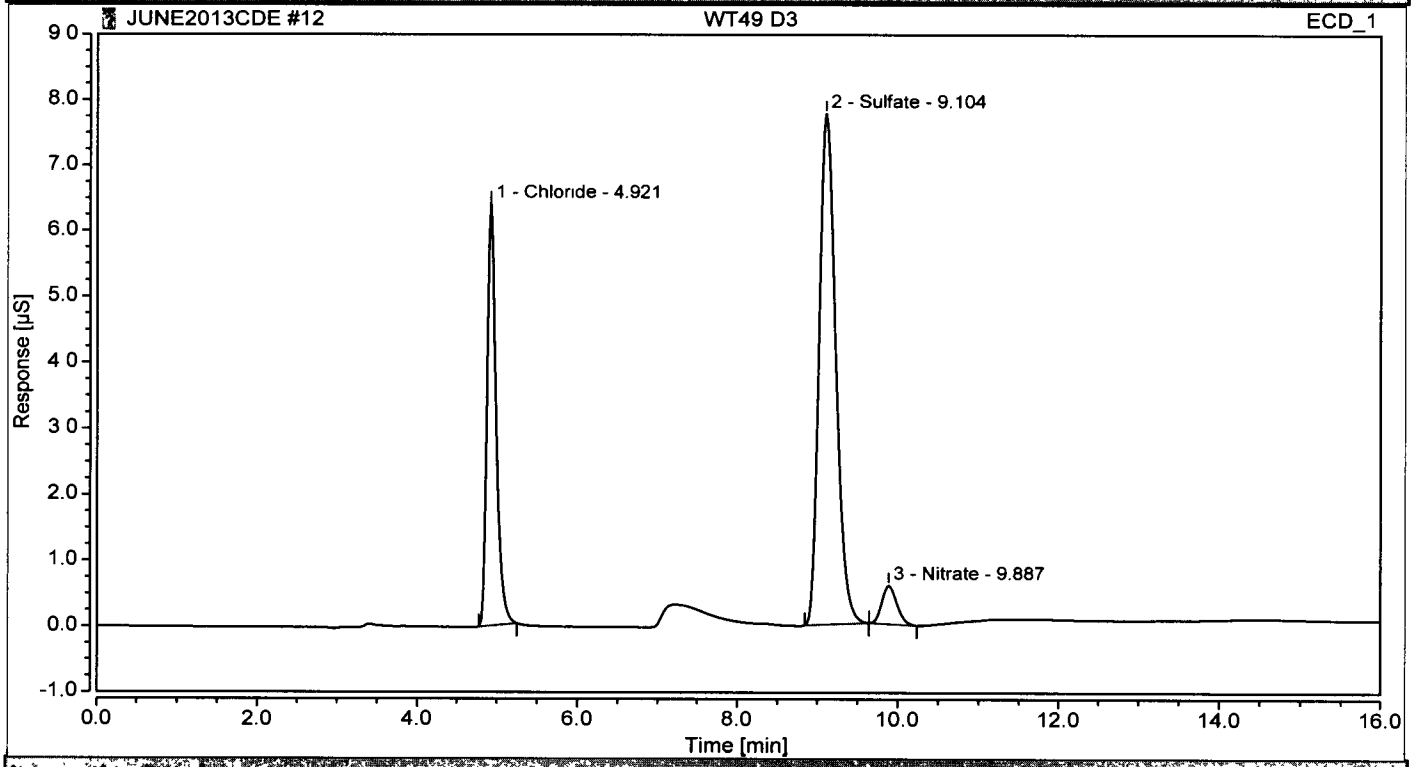
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	50.0	50.304	4.92	0.322	2.467	FALSE	n.a.
n.a.	Nitrite	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		50.0	n.a.	7.29	0.155	0.276	FALSE	n.a.
n.a.	Bromide	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	50.0	156.700	9.14	0.711	3.073	FALSE	n.a.
4	Nitrate	50.0	2.803	9.90	0.046	0.214	FALSE	n.a.
n.a.	Phosphate	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*WT49 D3*	Inject Number:	12
Vial Number:	*12*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUNE2013CDE
Dilution Factor:	*20.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*20/06/13 14:09*		

Chromatogram



Integration Results

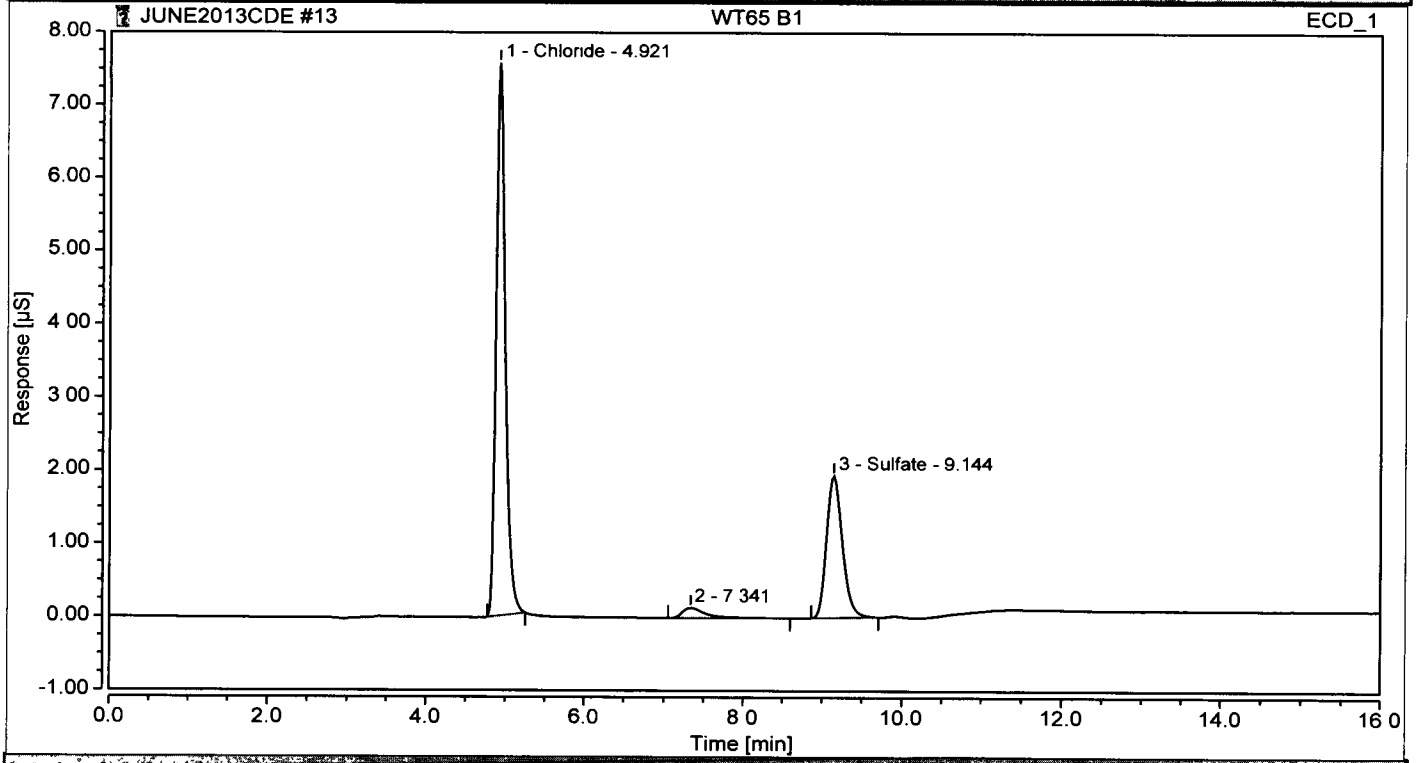
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	20.0	52.648	4.92	0.843	6.404	FALSE	n.a.
n.a.	Nitrite	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Bromide	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2	Sulfate	20.0	163.730	9.10	1.858	7.762	FALSE	n.a.
3	Nitrate	20.0	3.099	9.89	0.127	0.586	FALSE	n.a.
n.a.	Phosphate	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*WT65 B1*	Inject Number:	13
Vial Number:	*13*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUNE2013CDE
Dilution Factor:	*50.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*20/06/13 14:29*		

Chromatogram



Integration Results

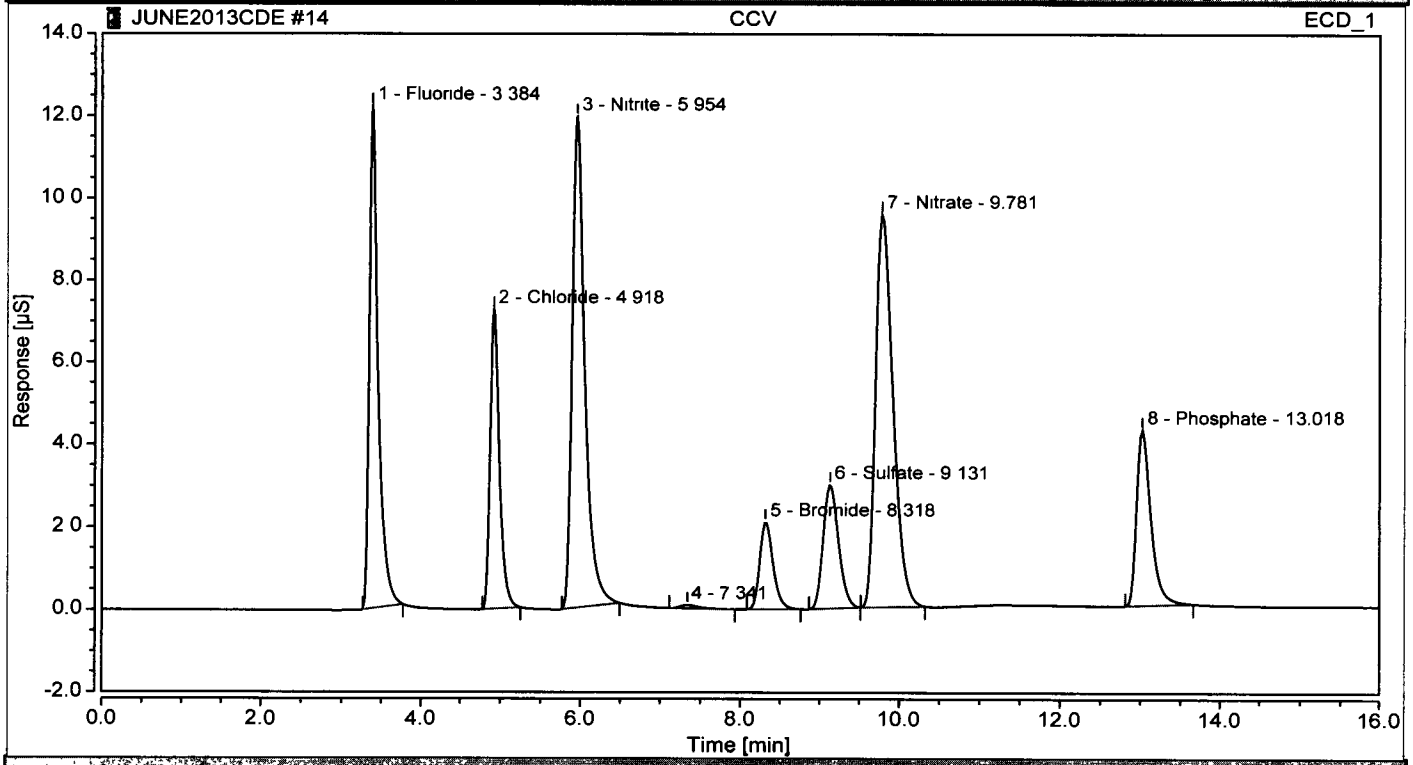
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	50.0	156.267	4.92	1.001	7.567	FALSE	n.a.
n.a.	Nitrite	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		50.0	n.a.	7.34	0.047	0.136	FALSE	n.a.
n.a.	Bromide	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	50.0	98.510	9.14	0.447	1.943	FALSE	n.a.
n.a.	Nitrate	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*CCV*	Inject Number:	14
Vial Number:	*2*	User:	pat
Injection Type:	*Check Standard*	Sequence:	JUNE2013CDE
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*20/06/13 14:49*		

Chromatogram



Integration Results

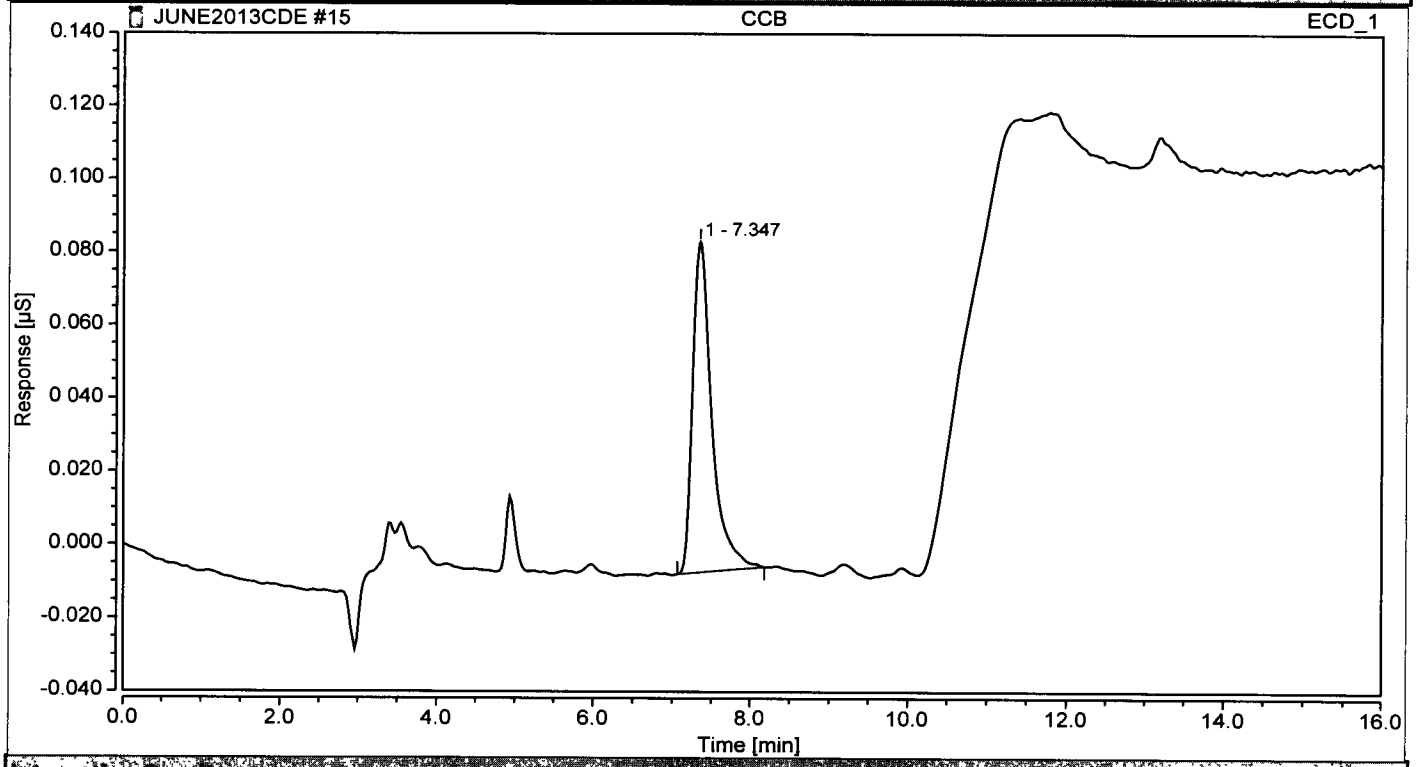
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	2.999	3.38	1.548	12.208	FALSE	-0.03
2	Chloride	1.0	3.004	4.92	0.962	7.269	FALSE	0.12
3	Nitrite	1.0	2.994	5.95	2.182	11.931	FALSE	-0.21
4		1.0	n.a.	7.34	0.020	0.080	FALSE	n.a.
5	Bromide	1.0	3.007	8.32	0.409	2.113	FALSE	0.24
6	Sulfate	1.0	2.984	9.13	0.677	2.993	FALSE	-0.52
7	Nitrate	1.0	2.933	9.78	2.405	9.552	FALSE	-2.23
8	Phosphate	1.0	2.847	13.02	0.889	4.251	FALSE	-5.09

Chromatogram and Results

Injection Details

Injection Name:	*CCB*	Inject Number:	15
Vial Number:	*3*	User:	pat
Injection Type:	*Blank*	Sequence:	JUNE2013CDE
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*20/06/13 15:10*		

Chromatogram



Integration Results

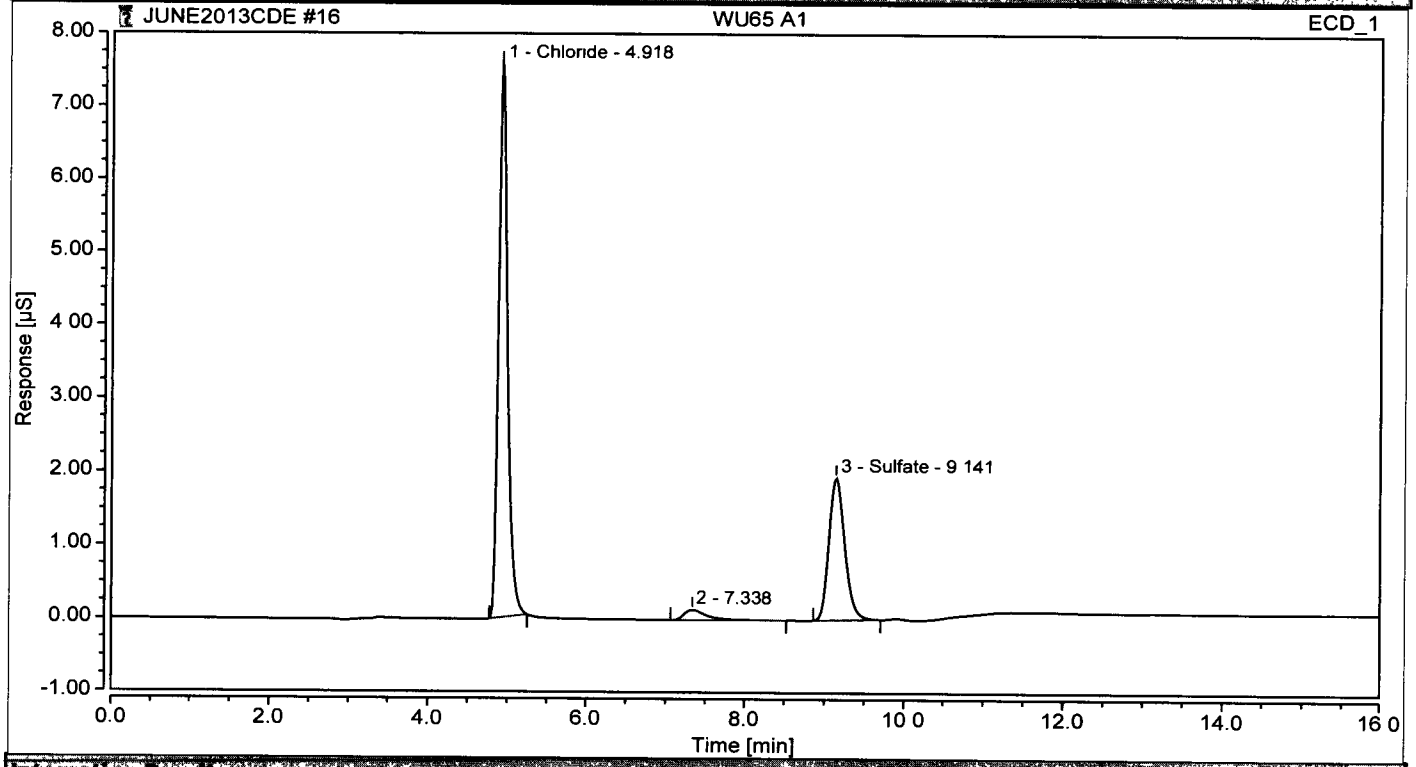
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Chloride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		1.0	n.a.	7.35	0.026	0.090	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*WU65 A1*	Inject Number:	16
Vial Number.	*14*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUNE2013CDE
Dilution Factor:	*50.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodat*		
Injection Date/Time:	*20/06/13 15:30*		

Chromatogram



Integration Results

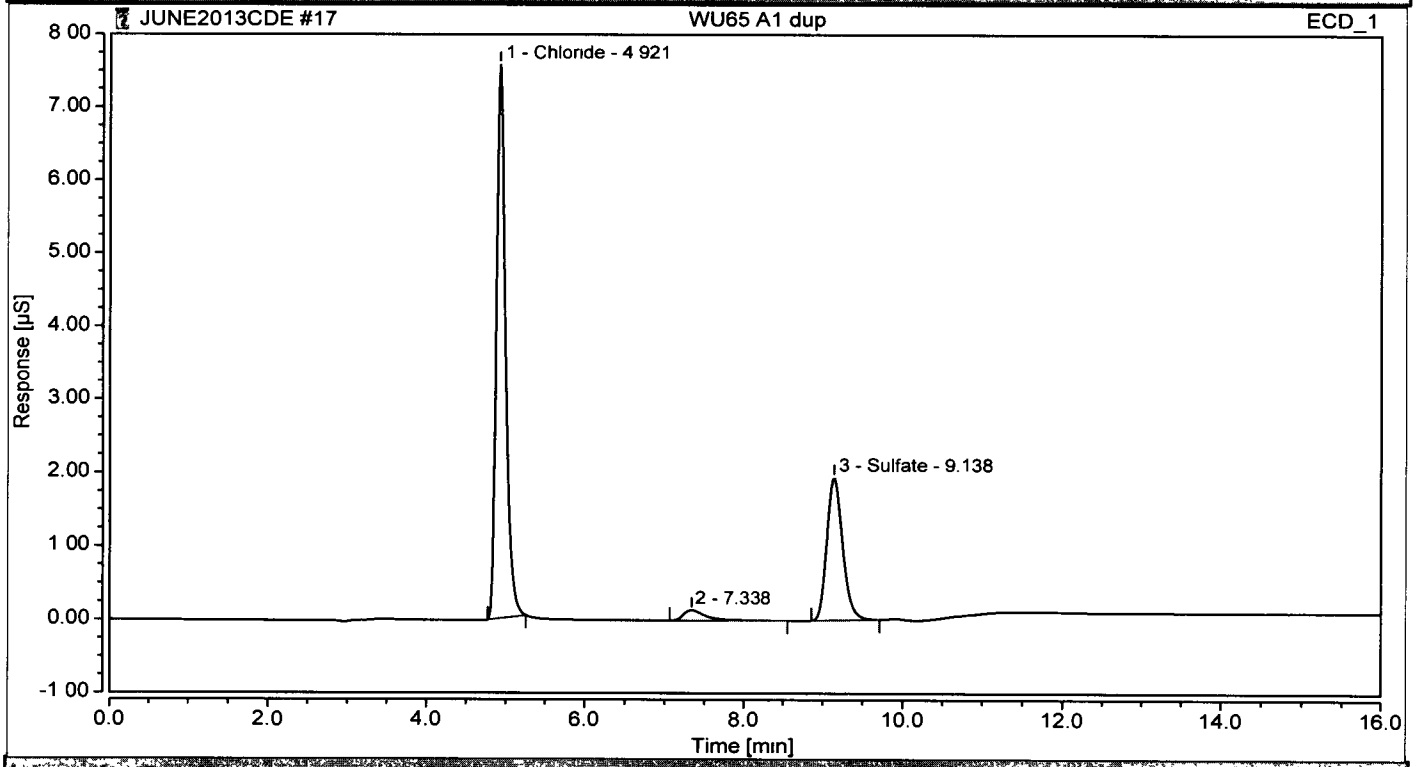
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	50.0	156.513	4.92	1.003	7.568	FALSE	n.a.
n.a.	Nitrite	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		50.0	n.a.	7.34	0.046	0.137	FALSE	n.a.
n.a.	Bromide	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	50.0	98.602	9.14	0.448	1.939	FALSE	n.a.
n.a.	Nitrate	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*WU65 A1 dup*	Inject Number:	17
Vial Number:	*15*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUNE2013CDE
Dilution Factor:	*50.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*20/06/13 15:51*		

Chromatogram



Integration Results

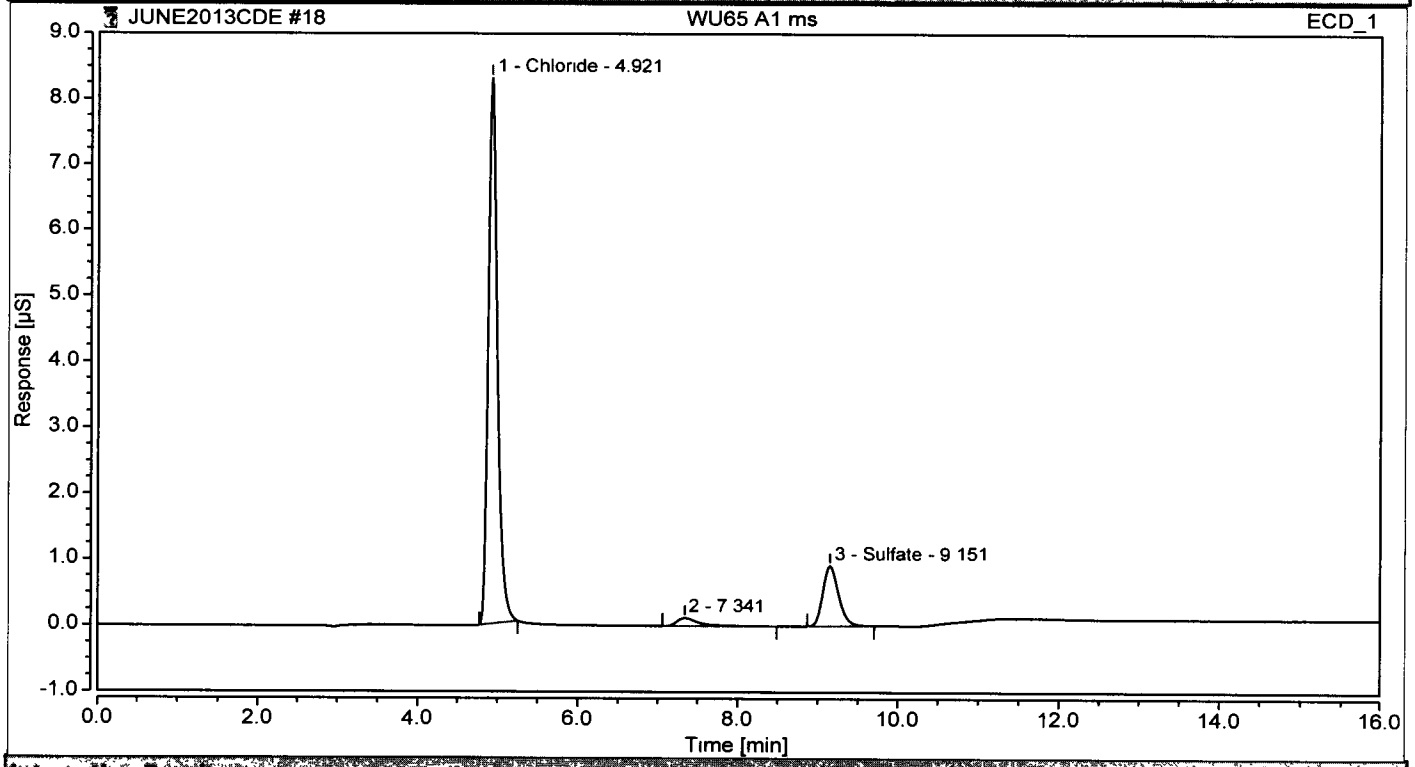
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	50.0	156.522	4.92	1.003	7.571	FALSE	n.a.
n.a.	Nitrite	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		50.0	n.a.	7.34	0.047	0.138	FALSE	n.a.
n.a.	Bromide	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	50.0	98.400	9.14	0.447	1.942	FALSE	n.a.
n.a.	Nitrate	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	50.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*WU65 A1 ms*	Inject Number:	18
Vial Number:	*16*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUNE2013CDE
Dilution Factor:	*100.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*20/06/13 16:11*		

Chromatogram



Integration Results

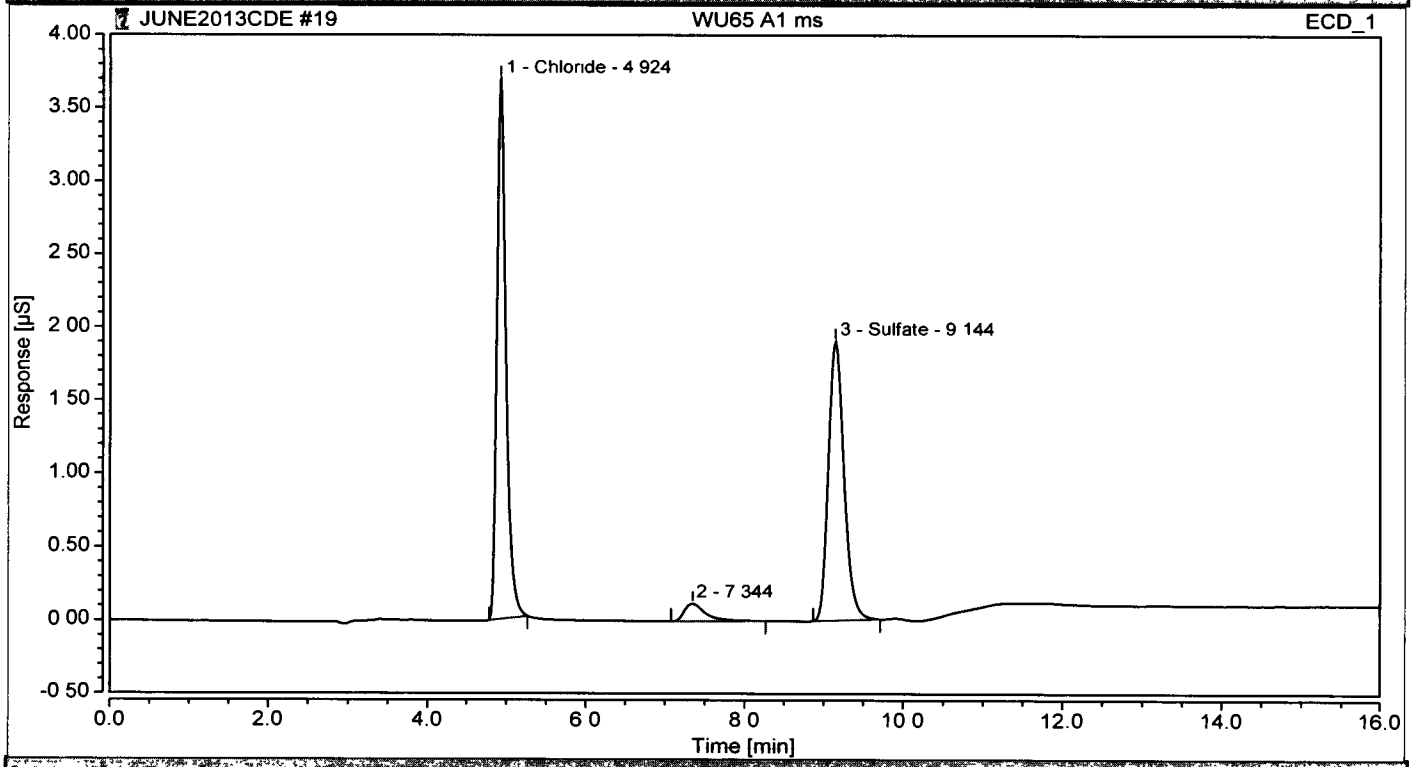
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	100.0	343.852	4.92	1.102	8.297	FALSE	n.a.
n.a.	Nitrite	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		100.0	n.a.	7.34	0.037	0.117	FALSE	n.a.
n.a.	Bromide	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	100.0	91.873	9.15	0.209	0.910	FALSE	n.a.
n.a.	Nitrate	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*WU65 A1 ms*	Inject Number:	19
Vial Number:	*17*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUNE2013CDE
Dilution Factor:	*100.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*20/06/13 16:32*		

Chromatogram



Integration Results

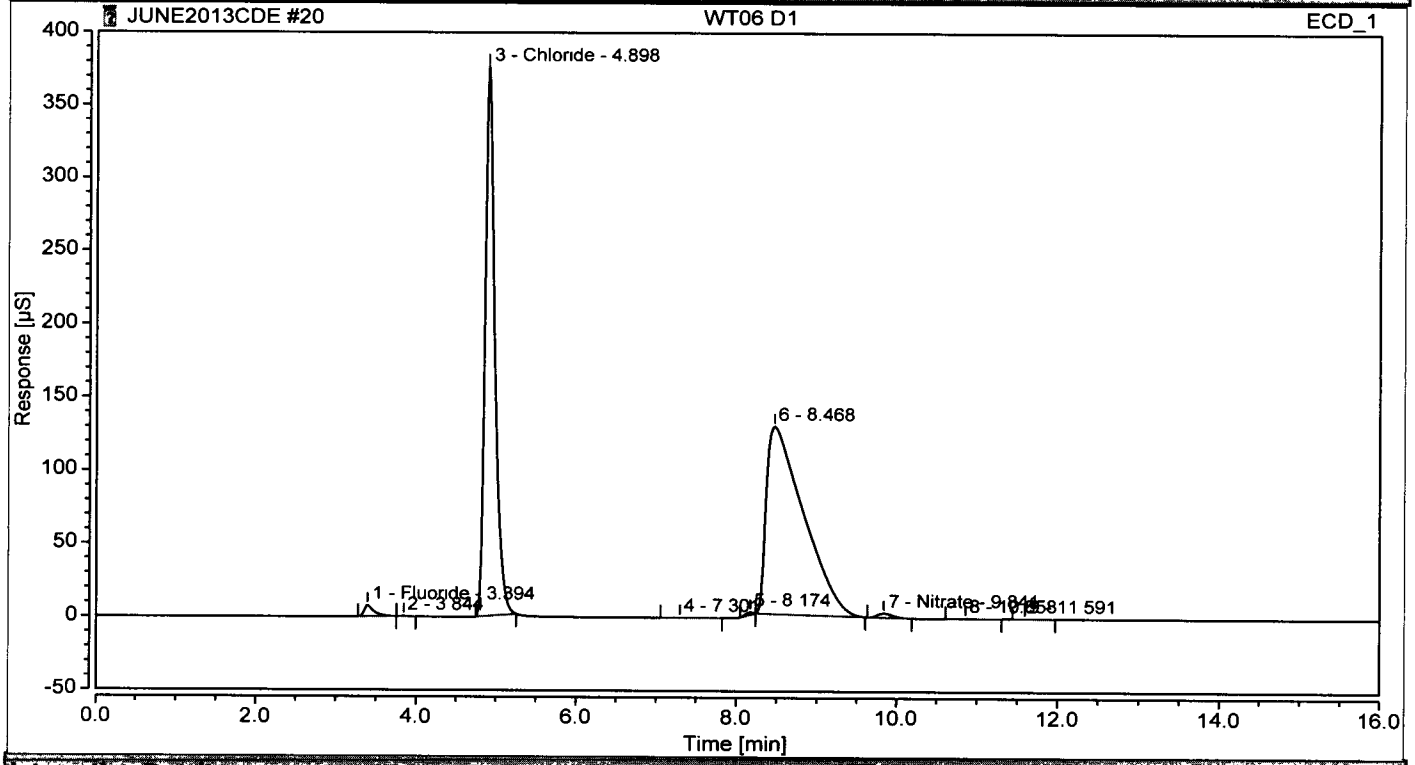
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1	Chloride	100.0	151.585	4.92	0.486	3.688	FALSE	n.a.
n.a.	Nitrite	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2		100.0	n.a.	7.34	0.037	0.118	FALSE	n.a.
n.a.	Bromide	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3	Sulfate	100.0	193.677	9.14	0.440	1.905	FALSE	n.a.
n.a.	Nitrate	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	100.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*WT06 D1*	Inject Number:	20
Vial Number:	*18*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUNE2013CDE
Dilution Factor:	*20.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*20/06/13 16:53*		

Chromatogram



Integration Results

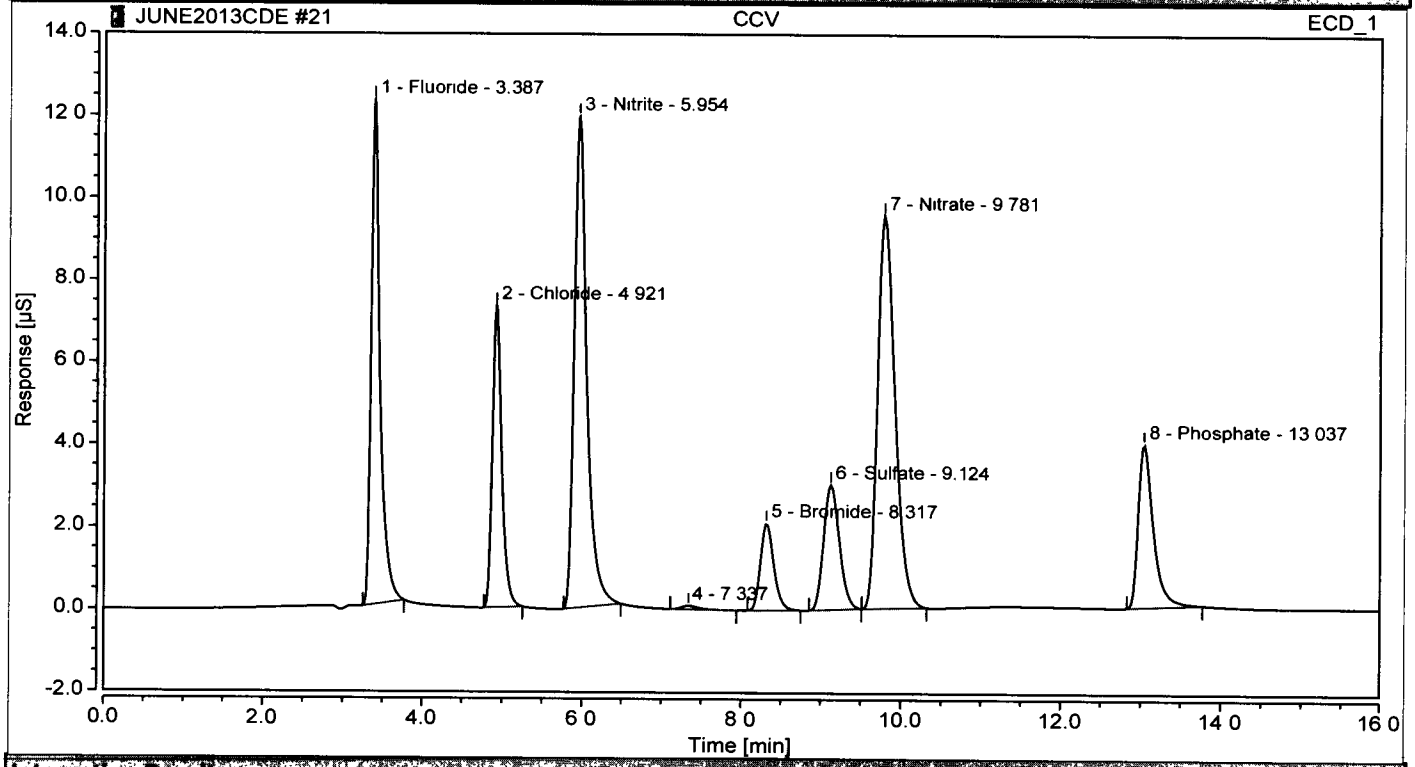
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	20.0	41.057	3.39	1.060	7.553	FALSE	n.a.
2		20.0	n.a.	3.84	0.023	0.233	FALSE	n.a.
3	Chloride	20.0	3350.451	4.90	53.670	375.567	FALSE	n.a.
n.a.	Nitrite	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4		20.0	n.a.	7.30	0.047	0.151	FALSE	n.a.
5		20.0	n.a.	8.17	0.191	1.758	FALSE	n.a.
n.a.	Bromide	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
6		20.0	n.a.	8.47	68.390	128.101	FALSE	n.a.
n.a.	Sulfate	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
7	Nitrate	20.0	16.009	9.84	0.656	2.981	FALSE	n.a.
8		20.0	n.a.	10.86	0.040	0.213	FALSE	n.a.
9		20.0	n.a.	11.59	0.009	0.058	FALSE	n.a.
n.a.	Phosphate	20.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*CCV*	Inject Number:	21
Vial Number:	*2*	User:	pat
Injection Type:	*Check Standard*	Sequence:	JUNE2013CDE
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodat*		
Injection Date/Time:	*20/06/13 17:13*		

Chromatogram



Integration Results

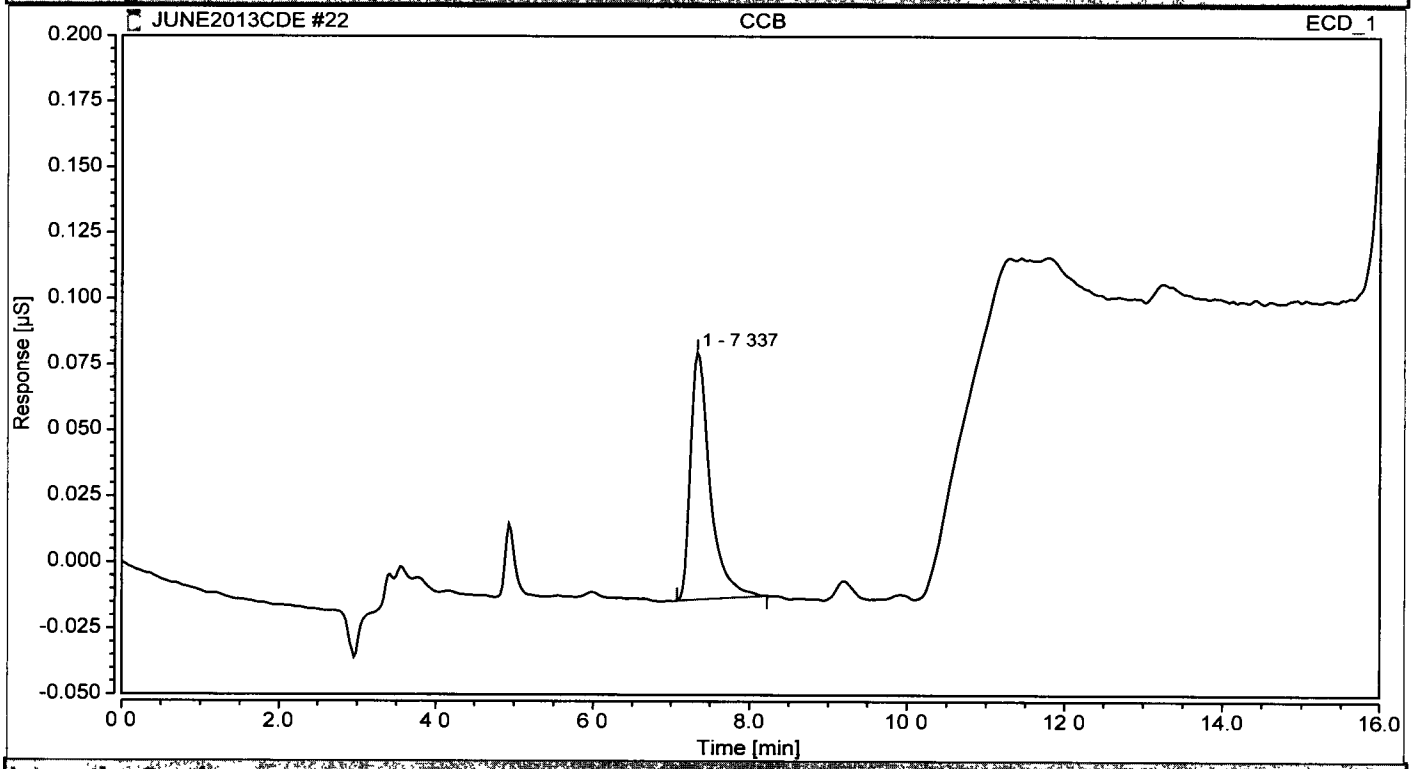
No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
1	Fluoride	1.0	3.032	3.39	1.565	12.260	FALSE	1.08
2	Chloride	1.0	3.037	4.92	0.973	7.326	FALSE	1.24
3	Nitrite	1.0	2.990	5.95	2.180	11.931	FALSE	-0.32
4		1.0	n.a.	7.34	0.021	0.082	FALSE	n.a.
5	Bromide	1.0	3.005	8.32	0.408	2.111	FALSE	0.16
6	Sulfate	1.0	3.023	9.12	0.686	3.027	FALSE	0.78
7	Nitrate	1.0	2.933	9.78	2.405	9.541	FALSE	-2.24
8	Phosphate	1.0	2.764	13.04	0.863	3.959	FALSE	-7.88

Chromatogram and Results

Injection Details

Injection Name.	*CCB*	Inject Number:	22
Vial Number:	*3*	User:	pat
Injection Type.	*Blank*	Sequence:	JUNE2013CDE
Dilution Factor:	*1.0*		
Instrument Method:	*INSTRMETH*		
Processing Method:	*processmethodal*		
Injection Date/Time:	*20/06/13 17:33*		

Chromatogram



Integration Results

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	µS*min	µS		mg/l
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Chloride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1		1.0	n.a.	7.34	0.027	0.094	FALSE	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Chromatogram and Results

Injection Details

Injection Name:	*STOP*	Inject Number:	23
Vial Number:	*1*	User:	pat
Injection Type:	*Unknown*	Sequence:	JUNE2013CDE
Dilution Factor:	*1.0*		
Instrument Method:	*SHUTDOWN*		
Processing Method:	*processmethodat*		
Injection Date/Time:	*20/06/13 17:53*		

Chromatogram

Can't read channel ECD_1 from injection #23 - STOP
Channel is not available

Integration Results

No.	Peak Name	Dilution	Amount	Retention	Area	Height	anipulated	Amnt.Dev.
			mg/l	min	n.a.	n.a.		mg/l
n.a.	Fluoride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Chloride	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrite	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Bromide	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Sulfate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Nitrate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
n.a.	Phosphate	1.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Calibration

CALIBRATION FILE NAME: MAY2313RR

Calibration Details — Fluoride

Calibration Type	Lin	*Offset (C0)*	0 0000
Evaluation Type	Area	*Slope (C1)*	1 9371
Number of Calibration Points	5	*Curve (C2)*	0 0000
Number of disabled Calibration Points	0	*R-Square*	0 9999

Calibration Results — Fluoride

No	Injection Name	Calibration Level	X Value Fluoride	Y Value Fluoride	Amount mg/l Fluoride	Area µS*min Fluoride	Height µS Fluoride
1	STD1	01	0.0437	0.1000	0.0847	0.044	0.345
2	STD2	02	0.2465	0.5000	0.4774	0.246	2.058
3	STD3	03	0.5150	1.0000	0.9977	0.515	4.296
4	STD4	04	1.3017	2.5000	2.5216	1.302	10.658
5	STD5	05	2.5770	5.0000	4.9920	2.577	20.470

Calibration Details — Chloride

Calibration Type	Lin	*Offset (C0)*	0 0000
Evaluation Type	Area	*Slope (C1)*	3 1205
Number of Calibration Points	5	*Curve (C2)*	0 0000
Number of disabled Calibration Points	0	*R-Square*	0 9995

Calibration Results — Chloride

No.	Injection Name	Calibration Level	X Value Chloride	Y Value Chloride	Amount mg/l Chloride	Area µS*min Chloride	Height µS Chloride
1	STD1	01	0.0297	0.1000	0.0927	0.030	0.227
2	STD2	02	0.1451	0.5000	0.4527	0.145	1.120
3	STD3	03	0.3025	1.0000	0.9440	0.303	2.330
4	STD4	04	0.7874	2.5000	2.4570	0.787	6.013
5	STD5	05	1.6138	5.0000	5.0359	1.614	12.265

Calibration Details — Nitrite

Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	1 3718
Number of Calibration Points	5	*Curve (C2)*	0 0000
Number of disabled Calibration Points	0	*R-Square*	0 9998

Calibration Results — Nitrite

No	Injection Name	Calibration Level	X Value Nitrite	Y Value Nitrite	Amount mg/l Nitrite	Area µS*min Nitrite	Height µS Nitrite
1	STD1	01	0.0644	0.1000	0.0884	0.064	0.405
2	STD2	02	0.3583	0.5000	0.4915	0.358	2.212
3	STD3	03	0.7416	1.0000	1.0173	0.742	4.433
4	STD4	04	1.8526	2.5000	2.5414	1.853	10.468
5	STD5	05	3.6277	5.0000	4.9764	3.628	19.511

Calibration Details — Bromide

Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	7 3523
Number of Calibration Points	5	*Curve (C2)*	0 0000
Number of disabled Calibration Points	0	*R-Square*	0.9981

Calibration Results — Bromide

No.	Injection Name	Calibration Level	X Value Bromide	Y Value Bromide	Amount mg/l Bromide	Area µS*min Bromide	Height µS Bromide
1	STD1	01	0.0103	0.1000	0.0754	0.010	0.053
2	STD2	02	0.0571	0.5000	0.4198	0.057	0.295
3	STD3	03	0.1217	1.0000	0.8948	0.122	0.634
4	STD4	04	0.3283	2.5000	2.4138	0.328	1.709
5	STD5	05	0.6891	5.0000	5.0667	0.689	3.562

Calibration Details	**Sulfate**		
Calibration Type	Lin	*Offset (C0)*	0 0000
Evaluation Type	Area	*Slope (C1)*	4 4029
Number of Calibration Points	5	*Curve (C2)*	0 0000
Number of disabled Calibration Points	0	*R-Square*	0.9988

Calibration Results — **Sulfate**

No.	Injection Name	Calibration Level	X Value Sulfate	Y Value Sulfate	Amount mg/l Sulfate	Area µS*min Sulfate	Height µS Sulfate
1	STD1	01	0.0188	0.1000	0.0828	0.019	0.082
2	STD2	02	0.0972	0.5000	0.4279	0.097	0.430
3	STD3	03	0.2082	1.0000	0.9165	0.208	0.922
4	STD4	04	0.5542	2.5000	2.4403	0.554	2.441
5	STD5	05	1.1471	5.0000	5.0504	1.147	5.017

Calibration Details	**Nitrate**		
Calibration Type	Lin	*Offset (C0)*	0.0000
Evaluation Type	Area	*Slope (C1)*	1.2190
Number of Calibration Points	5	*Curve (C2)*	0 0000
Number of disabled Calibration Points	0	*R-Square*	0 9994

Calibration Results — **Nitrate**

No.	Injection Name	Calibration Level	X Value Nitrate	Y Value Nitrate	Amount mg/l Nitrate	Area µS*min Nitrate	Height µS Nitrate
1	STD1	01	0.0615	0.1000	0.0750	0.062	0.286
2	STD2	02	0.3635	0.5000	0.4431	0.363	1.613
3	STD3	03	0.7771	1.0000	0.9473	0.777	3.349
4	STD4	04	2.0213	2.5000	2.4640	2.021	8.179
5	STD5	05	4.1286	5.0000	5.0329	4.129	15.253

Calibration Details	**Phosphate**		
Calibration Type	Lin	*Offset (C0)*	0 0000
Evaluation Type	Area	*Slope (C1)*	3 1994
Number of Calibration Points	5	*Curve (C2)*	0.0000
Number of disabled Calibration Points	0	*R-Square*	0 9974

Calibration Results — **Phosphate**

No	Injection Name	Calibration Level	X Value Phosphate	Y Value Phosphate	Amount mg/l Phosphate	Area µS*min Phosphate	Height µS Phosphate
1	STD1	01	0.0222	0.1000	0.0710	0.022	0.094
2	STD2	02	0.1242	0.5000	0.3972	0.124	0.609
3	STD3	03	0.2753	1.0000	0.8808	0.275	1.415
4	STD4	04	0.7508	2.5000	2.4020	0.751	3.811
5	STD5	05	1.5864	5.0000	5 0755	1.586	7.410

TOC, Aqueous Data Summary (Apollo 9000) DATE: 6/24/13 0:00

EPA 9060 A, SM 5310 B-00 UW

Analysis Mode: **NPOC** *Instrument:* ***Apollo 9000***

Detection Limits (mgC/L)

MRL = 1.5 **upper blank =** 1.5 **lower blank =** -1.5

Calibration Data

Stock ID: ARI 00136-10 | factor (I 0 3.756E+00 | r²: 1.00000

Curve Date: 6/21/2013 | intercept (b_{cal}): 32575 | sys blk (b_{sys}) 21111

Curve ID: 062113X 0-50ppm

LCS, Verification Standard and Inorganic Sparge Check

	Organic Carbon			Inorganic carbon		
Source:	**ERA 0409-12-01**			**ARI # 00128-6**		
Conc:	5,000	*mg/L*		1,000	*mg/L*	
dilution:	1.00	*mL to*	mg C/ L	5.00	*mL to*	mg C/ L
Volume:	250	*mL =*	**20.0**	250	*mL =*	**20**

Sample Data

SAMPLE ID	Dilution Factor	Carbon (mg C/L) *enter Form as TC, TIC, NPOC* Form	# reps	mean	stdev	Measured	Report as	Notes: *will flag if RSD >5%*
ICV	1	NPOC	3	20.6600		20.66	20.7	*103.50%*
ICB	1	NPOC	3	0.0000		0.00	<1.5	*OK !*
1.5 ppm	1	NPOC	3	0.6473		0.65	<1.5	43.15%
~~IC Sparge Check~~	~~1~~	~~NPOC~~	~~3~~	~~45.6200~~		~~45.62~~	~~45.6~~	~~CVS Err @ 228%~~
WT51 O1 DOC	1	NPOC	3	0.9379		0.94	<1.5	
WT51 Q1 DOC	1	NPOC	3	0.8301		0.83	<1.5	
FILTER BLK WU42	1	NPOC	3	0.1022		0.10	<1.5	
WU42 A2 DOC	1	NPOC	3	1.2780		1.28	<1.5	
WU42 B2 DOC	1	NPOC	3	1.5100		1.51	1.51	
FILTER BLK WU51	1	NPOC	3	0.3319		0.33	<1.5	
WU51 A DOC	1	NPOC	3	1.8950		1.90	1.9	
WU51 A DOC dup	1	NPOC	3	1.9710		1.97	1.97	*RPD =3.6%*
CCV	1	NPOC	3	20.8700		20.87	20.9	*104.50%*
CCB	1	NPOC	3	0.1379		0.14	<1.5	*OK !*
WU51 A DOC ms	1	NPOC	3	22.3900		22.39	22.4	*102.48%*
Spike at	0.200	*mL of*	2,000	*ppm Std to*	20.00	*mL =*	20.0	*mg/L*
WU51 B DOC	1	NPOC	3	0.8045		0.80	<1.5	
WU51 C DOC	1	NPOC	3	1.6560		1.66	1.66	
WU51 D DOC	1	NPOC	3	0.8045		0.80	<1.5	
WU51 E DOC	1	NPOC	3	0.2877		0.29	<1.5	
FILTER BLK WU65	1	NPOC	3	0.0871		0.09	<1.5	
WU65 A DOC	1	NPOC	3	2.0530		2.05	2.05	
WU65 A DOCdup	1	NPOC	3	2.1300		2.13	2.13	*RPD =3.8%*
WU65 A DOCms	1	NPOC	3	22.6400		22.64	22.6	*102.94%*
Spike at	0.200	*mL of*	2,000	*ppm Std to*	20.00	*mL =*	20.0	*mg/L*
WU65 B DOC	1	NPOC	3	2.1680		2.17	2.17	
CCV	1	NPOC	3	20.7900		20.79	20.8	*104.00%*
CCB	1	NPOC	3	0.1022		0.10	<1.5	*OK !*
WU65 A TOC	1	NPOC	3	2.2110		2.21	2.21	
WU65 A TOC dup	1	NPOC	3	2.2720		2.27	2.27	*RPD =2.7%*
WU65 A TOC ms	1	NPOC	3	22.5700		22.57	22.6	*101.80%*
Spike at	0.200	*mL of*	2,000	*ppm Std to*	20.00	*mL =*	20.0	*mg/L*
WU65 B TOC	1	NPOC	3	2.2790		2.28	2.28	
CCV	1	NPOC	3	20.9500		20.95	21	*105.00%*
CCB	1	NPOC	3	0.0527		0.05	<1.5	*OK !*

* = Sample is < 5x the MRL (7.5) and RSD >5% is expected due to low concentration in sample.

TOC-L Cal Curve Information
C:\TOC-L\CalCurves\NPOC CAL 062113.2013 06 21 11 17 51.cal

Date of Creation	6/21/2013 1:34:54 PM
User	Ursula
System	TOC-L SUSPENDED SOLIDS

Cal. Curve

Sample Name:	NPOC STANDARD
Sample ID:	UntitledNPOC STANDARD
Object ID	0L-10000101463-10101000-1332B3D197D5-0000
Cal. Curve:	NPOC CAL 062113.cal
Status	Completed
Comment:	

Standard	NPOC

Conc: 0.000mg/L

1	0.000	50uL	1.000	*******		6/21/2013 11:25:21 AM
2	0.000	50uL	1.000	*******		6/21/2013 11:28:51 AM
3	0 000	50uL	1.000	*******		6/21/2013 11:32:21 AM

Acid Add.	1.500%
Sparge Gas Flow	80ml
Sp. Time	90.00sec
Mean Area	0.000
SD Area	0.000
CV Area	0.00%
Vial	0

Conc: 0.5000mg/L

1	1.898	50uL	10.00	*******		6/21/2013 11:43:57 AM
2	2.122	50uL	10.00	*******	E	6/21/2013 11:48:42 AM
3	1.887	50uL	10 00	*******		6/21/2013 11:53:20 AM
4	1 907	50uL	10 00	*******		6/21/2013 11:58:10 AM

Acid Add.	1.500%
Sparge Gas Flow	80ml
Sp. Time	90.00sec
Mean Area	1.897
SD Area	0.01002
CV Area	0.53%
Vial	1

Conc: 1.000mg/L

1	4 109	50uL	5.000	*******	E	6/21/2013 12:07:33 PM
2	3 914	50uL	5.000	*******		6/21/2013 12:11.32 PM
3	3.964	50uL	5.000	*******		6/21/2013 12:15:23 PM
4	3.911	50uL	5.000	*******		6/21/2013 12:19:15 PM

Acid Add.	1.500%
Sparge Gas Flow	80ml
Sp. Time	90.00sec
Mean Area	3.930
SD Area	0.02977
CV Area	0.76%
Vial	1

Conc: 5.000mg/L

1	18.89	50uL	1.000	*******		6/21/2013 12:28:26 PM
2	18.84	50uL	1.000	*******		6/21/2013 12:32:37 PM
3	18.85	50uL	1.000	*******		6/21/2013 12:36:53 PM

Acid Add. 1.500%
Sparge Gas Flow 80ml
Sp. Time 90.00sec
Mean Area 18.86
SD Area 0.02646
CV Area 0.14%
Vial 1

Conc: 10.00mg/L

1	37.85	50uL	5.000	*******		6/21/2013 12:48:47 PM
2	37.90	50uL	5.000	*******		6/21/2013 12:53:06 PM
3	38.30	50uL	5.000	*******		6/21/2013 12:57:23 PM

Acid Add. 1.500%
Sparge Gas Flow 80ml
Sp. Time 90.00sec
Mean Area 38.02
SD Area 0.2466
CV Area 0.65%
Vial 2

Conc: 20.00mg/L

1	75.94	50uL	2.500	*******		6/21/2013 1:07:21 PM
2	76.32	50uL	2.500	*******		6/21/2013 1:11:48 PM
3	75.81	50uL	2.500	*******		6/21/2013 1:16:15 PM

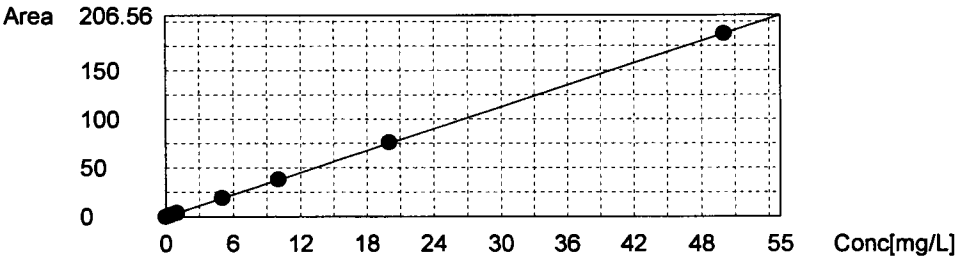
Acid Add. 1.500%
Sparge Gas Flow 80ml
Sp. Time 90.00sec
Mean Area 76.02
SD Area 0.2650
CV Area 0.35%
Vial 2

Conc: 50.00mg/L

1	185.1	50uL	1.000	*******		6/21/2013 1:25:43 PM
2	189.4	50uL	1.000	*******		6/21/2013 1:30:16 PM
3	188.6	50uL	1.000	*******		6/21/2013 1:34:54 PM

Acid Add. 1.500%
Sparge Gas Flow 80ml
Sp. Time 90.00sec
Mean Area 187.7
SD Area 2.287
CV Area 1.22%
Vial 2

Slope: 3.756
Intercept 0.000
r^2 1.0000
r 1.0000
Zero Shift Yes



TOC-L Cal Curve Information
C:\TOC-L\CalCurves\NPOC CAL 062113.2013 06 21 11 17 51.cal

Date of Creation	6/21/2013 1:34:54 PM
User	Ursula
System	TOC-L SUSPENDED SOLIDS

Cal. Curve

Sample Name:	NPOC STANDARD
Sample ID:	UntitledNPOC STANDARD
Object ID	0L-10000101463-10101000-1332B3D197D5-0000
Cal. Curve:	NPOC CAL 062113.cal
Status	Completed
Comment:	

Standard	NPOC

Conc: 0.000mg/L

1	0.000	50uL	1.000	*******		6/21/2013 11:25:21 AM
2	0.000	50uL	1.000	*******		6/21/2013 11:28:51 AM
3	0.000	50uL	1.000	*******		6/21/2013 11:32.21 AM

Acid Add.	1.500%
Sparge Gas Flow	80ml
Sp. Time	90.00sec
Mean Area	0.000
SD Area	0.000
CV Area	0.00%
Vial	0

Conc: 0.5000mg/L

1	1.898	50uL	10.00	*******		6/21/2013 11:43:57 AM
2	2.122	50uL	10.00	*******	E	6/21/2013 11:48:42 AM
3	1 887	50uL	10.00	*******		6/21/2013 11:53:20 AM
4	1.907	50uL	10.00	*******		6/21/2013 11:58:10 AM

Acid Add.	1.500%
Sparge Gas Flow	80ml
Sp. Time	90.00sec
Mean Area	1.897
SD Area	0.01002
CV Area	0.53%
Vial	1

Conc: 1.000mg/L

1	4 109	50uL	5.000	*******	E	6/21/2013 12:07:33 PM
2	3.914	50uL	5.000	*******		6/21/2013 12:11:32 PM
3	3.964	50uL	5.000	*******		6/21/2013 12:15:23 PM
4	3.911	50uL	5.000	*******		6/21/2013 12:19:15 PM

Acid Add.	1.500%
Sparge Gas Flow	80ml
Sp. Time	90.00sec
Mean Area	3.930
SD Area	0.02977
CV Area	0.76%
Vial	1

Conc: 5.000mg/L

1	18.89	50uL	1.000	*******	6/21/2013 12:28:26 PM
2	18.84	50uL	1.000	*******	6/21/2013 12:32:37 PM
3	18.85	50uL	1.000	*******	6/21/2013 12:36:53 PM

Acid Add. 1.500%
Sparge Gas Flow 80ml
Sp. Time 90.00sec
Mean Area 18.86
SD Area 0.02646
CV Area 0.14%
Vial 1

Conc: 10.00mg/L

1	37.85	50uL	5.000	*******	6/21/2013 12:48:47 PM
2	37.90	50uL	5.000	*******	6/21/2013 12:53:06 PM
3	38.30	50uL	5.000	*******	6/21/2013 12:57:23 PM

Acid Add. 1.500%
Sparge Gas Flow 80ml
Sp. Time 90.00sec
Mean Area 38.02
SD Area 0.2466
CV Area 0.65%
Vial 2

Conc: 20.00mg/L

1	75.94	50uL	2.500	*******	6/21/2013 1:07:21 PM
2	76.32	50uL	2.500	*******	6/21/2013 1:11:48 PM
3	75.81	50uL	2.500	*******	6/21/2013 1:16:15 PM

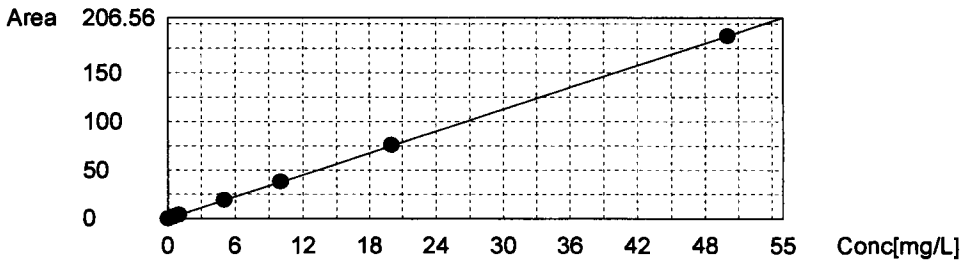
Acid Add. 1.500%
Sparge Gas Flow 80ml
Sp. Time 90.00sec
Mean Area 76.02
SD Area 0.2650
CV Area 0.35%
Vial 2

Conc: 50.00mg/L

1	185.1	50uL	1.000	*******	6/21/2013 1:25:43 PM
2	189.4	50uL	1.000	*******	6/21/2013 1:30:16 PM
3	188 6	50uL	1 000	*******	6/21/2013 1:34:54 PM

Acid Add. 1.500%
Sparge Gas Flow 80ml
Sp. Time 90.00sec
Mean Area 187.7
SD Area 2.287
CV Area 1.22%
Vial 2

Slope: 3.756
Intercept 0.000
r^2 1.0000
r 1.0000
Zero Shift Yes



	Type	Analysis	Sample Name	Sample ID	Origin	Manual Diluti	Result	Notes	Status	Date / Time	Vial
1*	Unknown	NPOC	NPOC STANDAR	RINSE	NPOC CAL	1.000			Defined		0
2*	Control	NPOC	CVS	CVS 20	CVS 20 pp	1.000			Defined		1
3*	Control	NPOC	ICB/CCB		ICB CCB.tpl	1.000			Defined		2
4*	Control	NPOC	DQL	0.5 mg/L	DQL.tpl	1.000			Defined		3
5*	Control	NPOC	Sparge Check	Untitled	Sparge Che	1.000			Defined		4
6*	Unknown	NPOC	NPOC STANDAR	WT51 O1 DOC	NPOC CAL	1.000			Defined		10
7*	Unknown	NPOC	NPOC STANDAR	WT51 Q1 DOC	NPOC CAL	1.000			Defined		11
8*	Unknown	NPOC	NPOC STANDAR	FILTER BLK WU4	NPOC CAL	1.000			Defined		12
9*	Unknown	NPOC	NPOC STANDAR	WU42 A2 DOC	NPOC CAL	1.000			Defined		13
10*	Unknown	NPOC	NPOC STANDAR	WU42 B2 DOC	NPOC CAL	1.000			Defined		14
11*	Unknown	NPOC	NPOC STANDAR	FILTER BLK WU5	NPOC CAL	1.000			Defined		15
12*	Unknown	NPOC	NPOC STANDAR	WU51 A DOC	NPOC CAL	1.000			Defined		16
13*	Unknown	NPOC	NPOC STANDAR	WU51 A DUP DO	NPOC CAL	1.000			Defined		17
14*	Control	NPOC	CVS	CVS 20	CVS 20 pp	1.000			Defined		1
15*	Control	NPOC	ICB/CCB		ICB CCB.tpl	1.000			Defined		2
16*	Unknown	NPOC	NPOC STANDAR	WT51 A MS DOC	NPOC CAL	1.000			Defined		18
17*	Unknown	NPOC	NPOC STANDAR	WT51 B DOC	NPOC CAL	1.000			Defined		19
18*	Unknown	NPOC	NPOC STANDAR	WT51 C DOC	NPOC CAL	1.000			Defined		20
19*	Unknown	NPOC	NPOC STANDAR	WT51 D DOC	NPOC CAL	1.000			Defined		21
20*	Unknown	NPOC	NPOC STANDAR	WT51 E DOC	NPOC CAL	1.000			Defined		22
21*	Unknown	NPOC	NPOC STANDAR	FILTER BLK WU6	NPOC CAL	1.000			Defined		23
22*	Unknown	NPOC	NPOC STANDAR	WU65 A DOC	NPOC CAL	1.000			Defined		24
23*	Unknown	NPOC	NPOC STANDAR	WU65 A DUP DO	NPOC CAL	1.000			Defined		25
24*	Unknown	NPOC	NPOC STANDAR	WU65 A MS DOC	NPOC CAL	1.000			Defined		26
25*	Unknown	NPOC	NPOC STANDAR	WU65 B DOC	NPOC CAL	1.000			Defined		27
26*	Control	NPOC	CVS	CVS 20	CVS 20 pp	1.000			Defined		5
27*	Control	NPOC	ICB/CCB		ICB CCB.tpl	1.000			Defined		6
28*	Unknown	NPOC	NPOC STANDAR	WU65 A6	NPOC CAL	1.000			Defined		28
29*	Unknown	NPOC	NPOC STANDAR	WU65 A6 DUP	NPOC CAL	1.000			Defined		29
30*	Unknown	NPOC	NPOC STANDAR	WU65 A6 MS	NPOC CAL	1.000			Defined		30
31*	Unknown	NPOC	NPOC STANDAR	WU65 B6	NPOC CAL	1.000			Defined		31
32*	Control	NPOC	CVS	CVS 20	CVS 20 pp	1.000			Defined		5
33*	Control	NPOC	ICB/CCB		ICB CCB.tpl	1.000			Defined		6

TOC-Control L Report

Ursula
2013_06_24_001.tlx

Instr.Information

Instrument Options	TOC/ASI/IC Unit/
Catalyst	Regular Sensitivity

Sample

Sample Name:	NPOC STANDARD
Sample ID:	RINSE
Origin:	NPOC CAL 062113.cal
Status	Completed
Chk. Result	

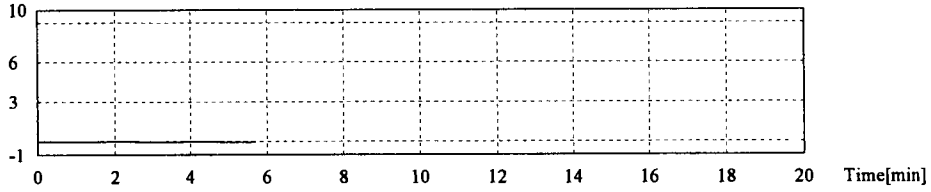
Unknown	NPOC	1 000	NPOC 0 000mg/L

1. Det

Anal.: NPOC

1	0 000	0 000mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51.cal	6/24/2013 11:24 30 AM
2	0.000	0 000mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 11 28 00 AM
3	0 000	0 000mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 11 31:30 AM

Mean Area	0.000
Mean Conc	0.000mg/L



Control Sample

Sample Name:	CVS
Sample ID:	CVS 20
Method:	CVS 20 ppm.tpl
Status	Completed
Chk. Result	Control value: 103.3 / Control exceeds range!

Control	NPOC	1 000	NPOC 20 66ppm

1. Det.

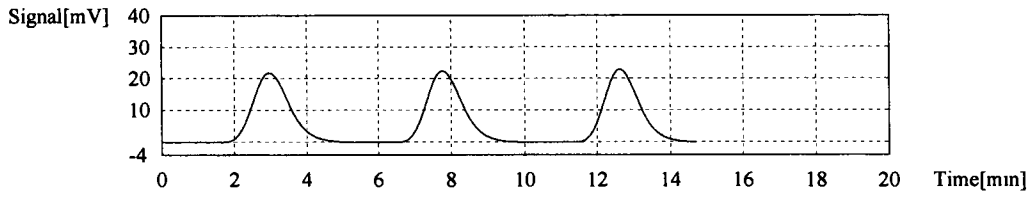
Anal.: NPOC

1	151 7	20 54ppm	100uL	1 000		NPOC Suspended 0.5 to 50 2013_05_07_12_18_27 cal	6/24/2013 11 44 07 AM
2	153 3	20.76ppm	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	6/24/2013 11:50:01 AM
3	152 8	20 69ppm	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	6/24/2013 11 55 54 AM

TOC-Control L Report

Ursula
2013_06_24_001.tlx

Mean Area 152.6
Mean Conc. 20 66ppm



Control Sample

Sample Name: ICB/CCB
Sample ID:
Method: ICB CCB.tpl
Status Completed
Chk. Result Control value: 0.000 / Control within range!

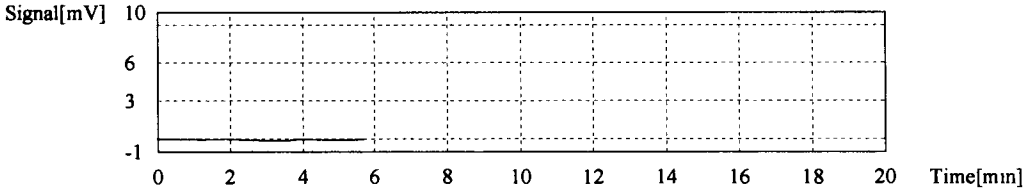
Control	NPOC	1.000	NPOC 0 000mg/L

1. Det.

Anal.: NPOC

1	0 000	0.000mg/L	100uL	1.000	NPOC Suspended 0.5 to 50 2013_05_07_12_18_27 cal	6/24/2013 12:05:42 PM
2	0 000	0 000mg/L	100uL	1.000	NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	6/24/2013 12 09 12 PM
3	0 000	0 000mg/L	100uL	1 000	NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	6/24/2013 12 12 48 PM

Mean Area 0 000
Mean Conc 0 000mg/L



Control Sample

Sample Name: DQL
Sample ID: 0.5 mg/L
Method: DQL.tpl
Status Completed
Chk. Result Control value: 0.6473 / Control within range!

Control	NPOC	1 000	NPOC:0 6473mg/L

1. Det.

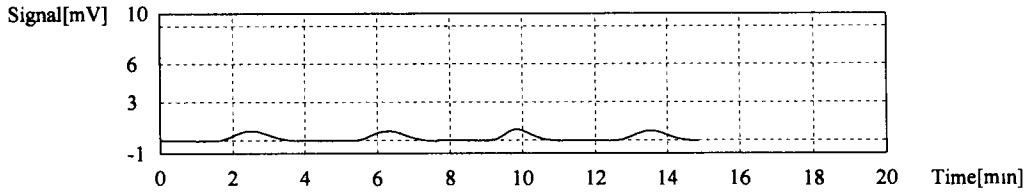
Anal.: NPOC

TOC-Control L Report

Ursula
2013_06_24_001.tlx

1	4 813	0 6517mg/L	100uL	1 000		NPOC Suspended 0.5 to 50.2013_05_07_12_18_27.cal	6/24/2013 12:24 04 PM
2	4 732	0 6407mg/L	100uL	1 000		NPOC Suspended 0 5 to 50.2013_05_07_12_18_27 cal	6/24/2013 12 28 43 PM
3	4 255	0.5761mg/L	100uL	1 000	E	NPOC Suspended 0.5 to 50 2013_05_07_12_18_27 cal	6/24/2013 12 33 05 PM
4	4 798	0 6496mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	6/24/2013 12 37 49 PM

Mean Area 4.781
Mean Conc 0 6473mg/L



Control Sample

Sample Name: Sparge Check
Sample ID: Untitled
Method: Sparge Check.tpl
Status Completed
Chk. Result Control value· 228.1 / Control exceeds range!

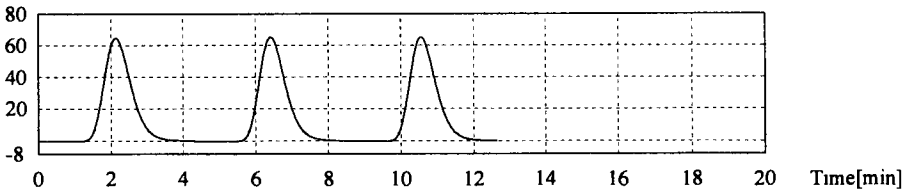
Control	NPOC	1 000	NPOC 45 62mg/L

1. Det.

Anal.: NPOC

1	342 5	46 37mg/L	100uL	1.000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	6/24/2013 12·49 32 PM
2	334 7	45 32mg/L	100uL	1.000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	6/24/2013 12·54·41 PM
3	333 5	45 16mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	6/24/2013 12 59:50 PM

Mean Area 336.9
Mean Conc. 45 62mg/L



Sample

Sample Name: NPOC STANDARD
Sample ID: WT51 01 DOC
Origin: NPOC CAL 062113.cal
Status Completed
Chk. Result

Unknown	NPOC	1.000	NPOC·0 9379mg/L

1. Det

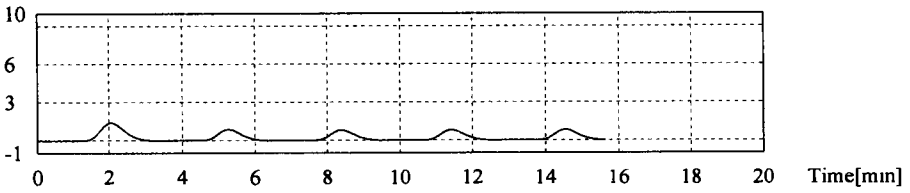
TOC-Control L Report

Ursula
2013_06_24_001 tlx

Anal.: NPOC

1	6 574	1 750mg/L	50uL	1 000	E	NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 1 11 02 PM
2	3 832	1 020mg/L	50uL	1 000	E	NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 1 15 09 PM
3	3 479	0 9263mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 1 19 11 PM
4	3 588	0 9554mg/L	50uL	1 000		NPOC CAL 062113.2013_06_21_11_17_51 cal	6/24/2013 1 23 19 PM
5	3 500	0 9319mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 1 27 23 PM

Mean Area 3.522
Mean Conc 0.9379mg/L



Sample

Sample Name: NPOC STANDARD
Sample ID: WT51 Q1 DOC
Origin: NPOC CAL 062113.cal
Status Completed
Chk. Result

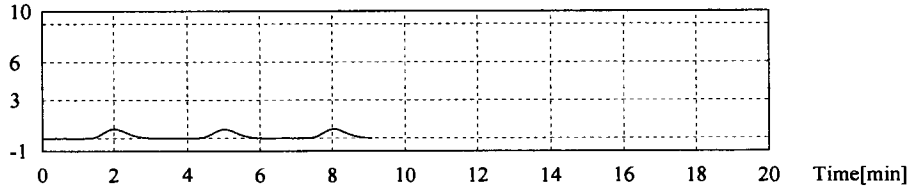
Unknown	NPOC	1 000	NPOC:0 8301mg/L

1. Det

Anal.: NPOC

1	3 196	0 8510mg/L	50uL	1 000	NPOC CAL 062113.2013_06_21_11_17_51 cal	6/24/2013 1.38:18 PM
2	3 093	0 8236mg/L	50uL	1.000	NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 1 42.20 PM
3	3 064	0 8158mg/L	50uL	1 000	NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 1·46·22 PM

Mean Area 3 118
Mean Conc 0.8301mg/L



Sample

Sample Name: NPOC STANDARD
Sample ID: FILTER BLK WU42
Origin: NPOC CAL 062113.cal
Status Completed
Chk. Result

Unknown	NPOC	1 000	NPOC.0 1022mg/L

TOC-Control L Report

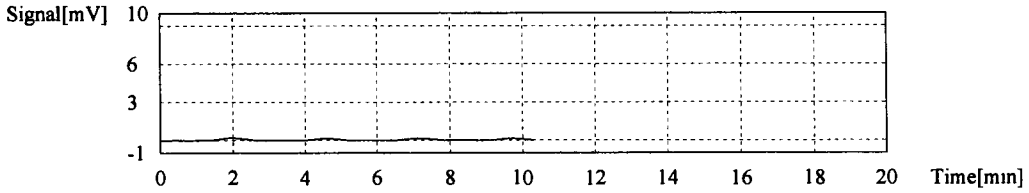
Ursula
2013_06_24_001.tlx

1 Det

Anal.: NPOC

1	0 7151	0 1904mg/L	50uL	1 000	E	NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 1 56 54 PM
2	0 3671	0.09775mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 2.00 24 PM
3	0 4061	0 1081mg/L	50uL	1.000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 2 04 01 PM
4	0 3778	0 1006mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51.cal	6/24/2013 2 07 33 PM

Mean Area 0 3837
Mean Conc. 0.1022mg/L



Sample

Sample Name. NPOC STANDARD
Sample ID: WU42 A2 DOC
Origin: NPOC CAL 062113.cal
Status Completed
Chk. Result

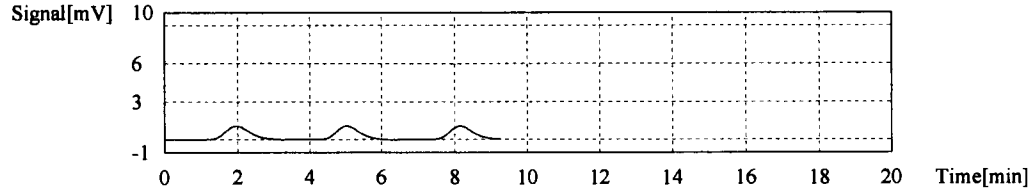
Unknown	NPOC	1 000	NPOC 1 278mg/L

1. Det

Anal.: NPOC

1	4 789	1 275mg/L	50uL	1 000	NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 2 18 30 PM
2	4 835	1 287mg/L	50uL	1 000	NPOC CAL 062113.2013_06_21_11_17_51 cal	6/24/2013 2 22 37 PM
3	4 779	1 272mg/L	50uL	1 000	NPOC CAL 062113 2013_06_21_11_17_51.cal	6/24/2013 2.26.41 PM

Mean Area 4.801
Mean Conc. 1 278mg/L



Sample

Sample Name: NPOC STANDARD
Sample ID: WU42 B2 DOC
Origin: NPOC CAL 062113 cal
Status Completed
Chk. Result

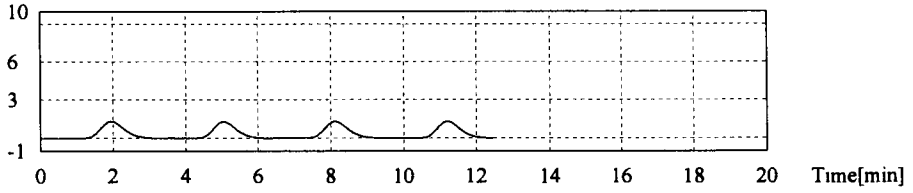
Unknown	NPOC	1 000	NPOC 1 510mg/L

1. Det

Anal.: NPOC

1	5 860	1.560mg/L	50uL	1 000	E	NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 2 37 41 PM
2	5 651	1 505mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51.cal	6/24/2013 2:41.46 PM
3	5 654	1 505mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 2 45 51 PM
4	5 709	1 520mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 2 50 01 PM

Mean Area 5.671
Mean Conc. 1 510mg/L



Sample

Sample Name: NPOC STANDARD
Sample ID: FILTER BLK WU51
Origin: NPOC CAL 062113.cal
Status Completed
Chk. Result

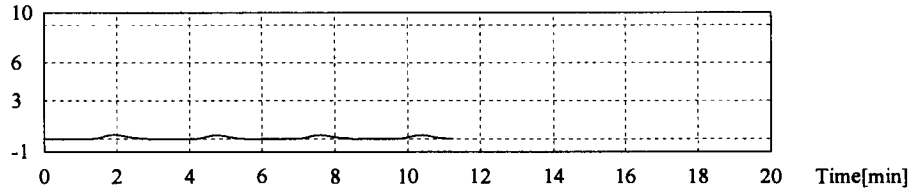
Unknown	NPOC	1 000	NPOC 0 3319mg/L

1. Det

Anal.: NPOC

1	1 308	0 3483mg/L	50uL	1.000		NPOC CAL 062113.2013_06_21_11_17_51 cal	6/24/2013 3.00·45 PM
2	1 267	0 3374mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 3 04 36 PM
3	1 077	0 2868mg/L	50uL	1.000	E	NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 3·08 23 PM
4	1 165	0 3102mg/L	50uL	1 000		NPOC CAL 062113.2013_06_21_11_17_51 cal	6/24/2013 3 12 10 PM

Mean Area 1.247
Mean Conc. 0.3319mg/L



Sample

Sample Name: NPOC STANDARD
Sample ID: WU51 A DOC
Origin: NPOC CAL 062113 cal
Status Completed
Chk. Result

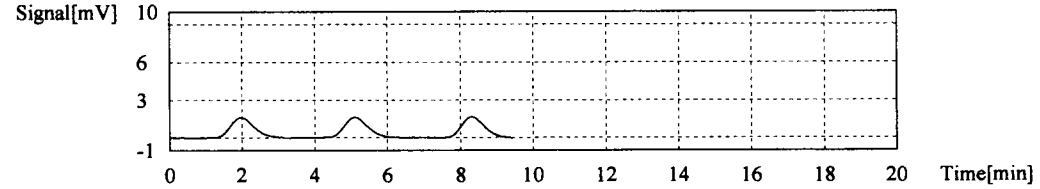
Unknown	NPOC	1.000	NPOC 1 895mg/L

1. Det

Anal.: NPOC

1	7 036	1 873mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51.cal	6/24/2013 3 23 12 PM
2	7 095	1 889mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 3 27 24 PM
3	7 224	1 924mg/L	50uL	1 000		NPOC CAL 062113.2013_06_21_11_17_51 cal	6/24/2013 3 31 31 PM

Mean Area 7.118
Mean Conc. 1 895mg/L



Sample

Sample Name: NPOC STANDARD
Sample ID: WU51 A DUP DOC
Origin: NPOC CAL 062113.cal
Status Completed
Chk. Result

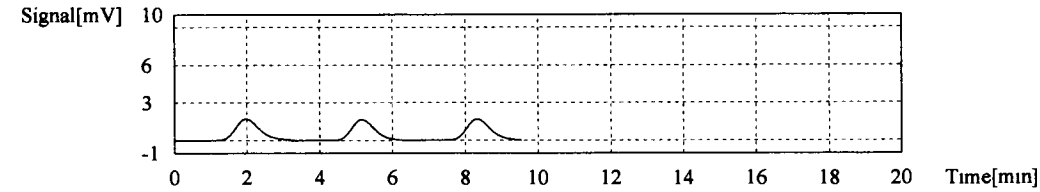
Unknown	NPOC	1 000	NPOC 1 971mg/L

1. Det

Anal.: NPOC

1	7 485	1 993mg/L	50uL	1 000		NPOC CAL 062113.2013_06_21_11_17_51 cal	6/24/2013 3 42 37 PM
2	7 256	1 932mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 3 46 46 PM
3	7 461	1 987mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 3 50 56 PM

Mean Area 7.401
Mean Conc. 1 971mg/L



Control Sample

TOC-Control L Report

Ursula
2013_06_24_001.tlx

Sample Name: CVS
Sample ID: CVS 20
Method: CVS 20 ppm.tpl
Status Completed
Chk. Result Control value. 104 3 / Control exceeds range!

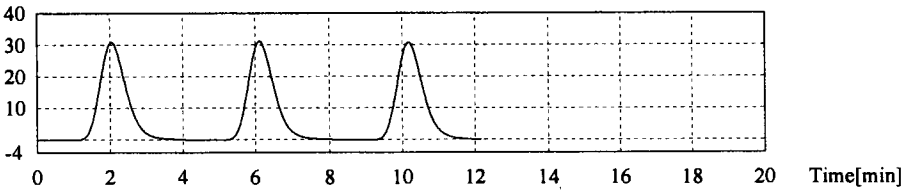
Control	NPOC	1 000	NPOC 20 87ppm

1. Det.

Anal.: NPOC

1	153 4	20 77ppm	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27.cal	6/24/2013 4.02:57 PM
2	154 5	20 92ppm	100uL	1 000		NPOC Suspended 0.5 to 50 2013_05_07_12_18_27 cal	6/24/2013 4:08 00 PM
3	154 5	20 92ppm	100uL	1 000		NPOC Suspended 0 5 to 50.2013_05_07_12_18_27 cal	6/24/2013 4 13 02 PM

Mean Area 154.1
Mean Conc. 20.87ppm



Control Sample

Sample Name: ICB/CCB
Sample ID:
Method: ICB CCB.tpl
Status Completed
Chk. Result Control value: 0.1379 / Control within range!

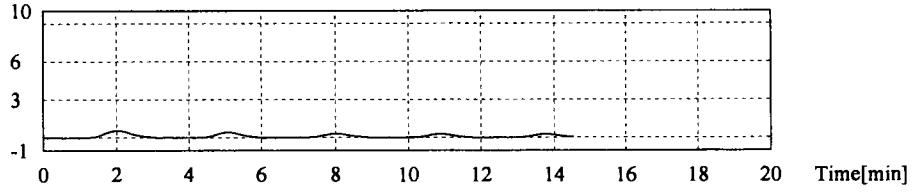
Control	NPOC	1 000	NPOC 0 1379mg/L

1. Det.

Anal.: NPOC

1	2 510	0 3399mg/L	100uL	1 000	E	NPOC Suspended 0 5 to 50.2013_05_07_12_18_27.cal	6/24/2013 4 23 58 PM
2	1 863	0 2522mg/L	100uL	1 000	E	NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	6/24/2013 4 27 54 PM
3	1 117	0.1512mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	6/24/2013 4.31 45 PM
4	1 096	0 1484mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	6/24/2013 4 35 37 PM
5	0 8425	0 1141mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	6/24/2013 4 39 22 PM

Mean Area 1.019
Mean Conc. 0 1379mg/L



Sample

Sample Name:	NPOC STANDARD
Sample ID:	WT51 A MS DOC
Origin:	NPOC CAL 062113 cal
Status	Completed
Chk. Result	

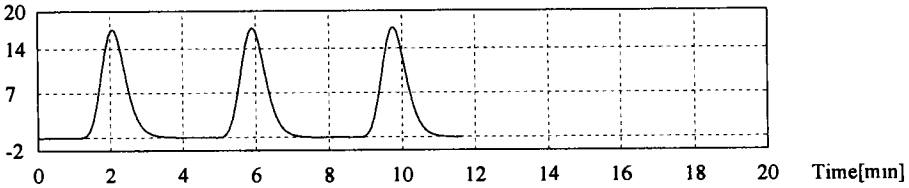
Unknown	NPOC	1 000	NPOC 22 39mg/L

1. Det

Anal.: NPOC

1	82 95	22 09mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51.cal	6/24/2013 4:51 12 PM
2	84 56	22 52mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 4 56 05 PM
3	84 75	22 57mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 5.01.00 PM

Mean Area	84 09
Mean Conc.	22.39mg/L



Sample

Sample Name	NPOC STANDARD
Sample ID.	WT51 B DOC
Origin	NPOC CAL 062113 cal
Status	Completed
Chk Result	

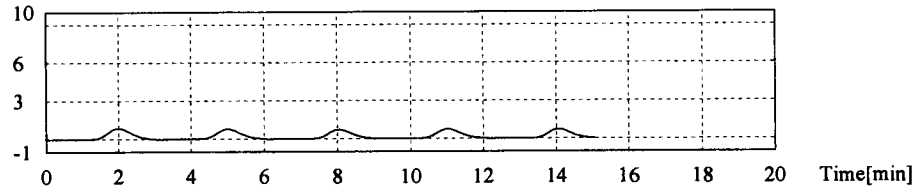
Unknown	NPOC	1 000	NPOC 0 8045mg/L

1. Det

Anal.: NPOC

1	3 858	1 027mg/L	50uL	1 000	E	NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 5 11 56 PM
2	3 237	0 8619mg/L	50uL	1 000	E	NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 5 15.57 PM
3	3 044	0 8105mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 5 19 55 PM
4	3 077	0 8193mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 5 23 57 PM
5	2 943	0 7836mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 5 27.56 PM

Mean Area	3.021
Mean Conc.	0.8045mg/L



TOC-Control L Report

Ursula
2013_06_24_001 tlx

Sample

Sample Name: NPOC STANDARD
Sample ID: WT51 C DOC
Origin. NPOC CAL 062113.cal
Status Completed
Chk. Result

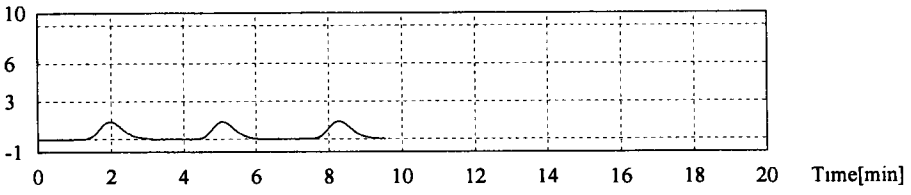
Unknown	NPOC	1 000	NPOC 1 656mg/L

1. Det

Anal.: NPOC

1	6 130	1 632mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 5.38 55 PM
2	6 268	1 669mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 5 43 04 PM
3	6 262	1 667mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 5 47 19 PM

Mean Area 6.220
Mean Conc 1.656mg/L



Sample

Sample Name. NPOC STANDARD
Sample ID. WT51 D DOC
Origin: NPOC CAL 062113.cal
Status Completed
Chk. Result

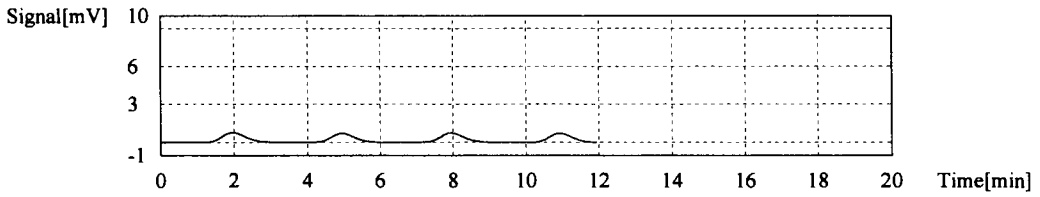
Unknown	NPOC	1 000	NPOC 0 8028mg/L

1. Det

Anal.: NPOC

1	3 224	0 8584mg/L	50uL	1 000	E	NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 5 58 10 PM
2	2 990	0 7961mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 6 02 10 PM
3	3 068	0 8169mg/L	50uL	1.000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 6 06 09 PM
4	2 987	0 7953mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 6 10 06 PM

Mean Area 3 015
Mean Conc. 0.8028mg/L



Sample

Sample Name: NPOC STANDARD
Sample ID: WT51 E DOC
Origin: NPOC CAL 062113.cal
Status Completed
Chk. Result

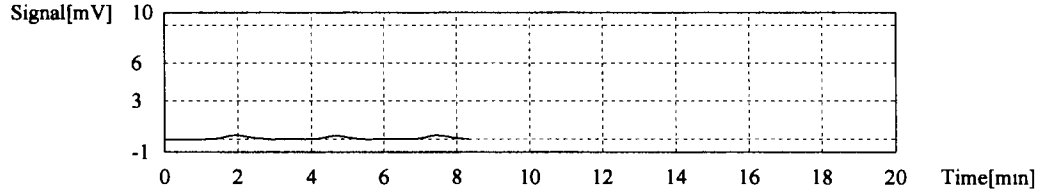
Unknown	NPOC	1 000	NPOC 0 2877mg/L

1. Det

Anal.: NPOC

1	1 181	0 3145mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 6.20.45 PM
2	1 013	0 2697mg/L	50uL	1.000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 6 24 33 PM
3	1 047	0 2788mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 6 28 17 PM

Mean Area 1.080
Mean Conc. 0.2877mg/L



Sample

Sample Name: NPOC STANDARD
Sample ID: FILTER BLK WU65
Origin NPOC CAL 062113.cal
Status Completed
Chk. Result

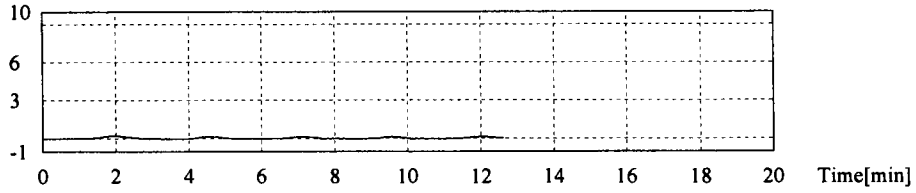
Unknown	NPOC	1 000	NPOC.0 08707mg/L

1. Det

Anal.: NPOC

1	0 6961	0 1853mg/L	50uL	1 000	E	NPOC CAL 062113.2013_06_21_11_17_51 cal	6/24/2013 6.38 48 PM
2	0 5658	0 1507mg/L	50uL	1 000	E	NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 6 42 21 PM
3	0 3739	0 09956mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 6 45 47 PM
4	0 2292	0 06103mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 6 49 18 PM
5	0 3779	0 1006mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 6 52 53 PM

Mean Area 0 3270
Mean Conc. 0.08707mg/L



Sample

Sample Name: NPOC STANDARD
Sample ID: WU65 A DOC
Origin. NPOC CAL 062113.cal
Status Completed
Chk. Result

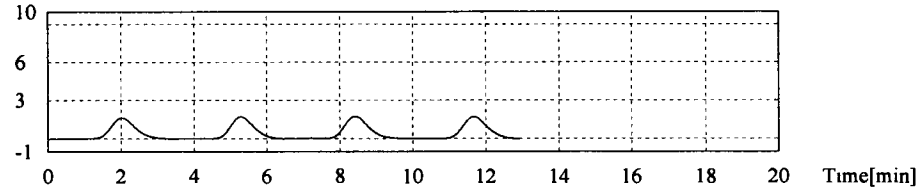
Unknown	NPOC	1 000	NPOC 2 053mg/L

1. Det

Anal.: NPOC

1	7 453	1.984mg/L	50uL	1 000	E	NPOC CAL 062113.2013_06_21_11_17_51 cal	6/24/2013 7 04 05 PM
2	7 550	2 010mg/L	50uL	1 000		NPOC CAL 062113.2013_06_21_11_17_51 cal	6/24/2013 7.08.12 PM
3	7 759	2 066mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51.cal	6/24/2013 7 12 27 PM
4	7 826	2 084mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 7 16 41 PM

Mean Area 7.712
Mean Conc. 2.053mg/L



Sample

Sample Name: NPOC STANDARD
Sample ID: WU65 A DUP DOC
Origin: NPOC CAL 062113 cal
Status Completed
Chk. Result

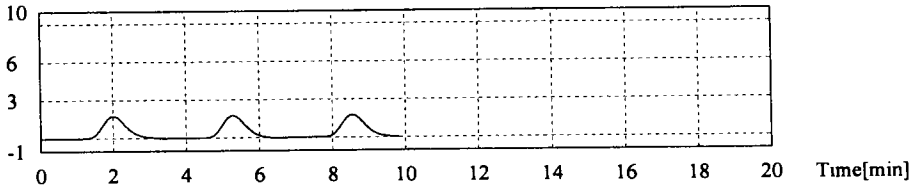
Unknown	NPOC	1 000	NPOC 2 130mg/L

1. Det

Anal.: NPOC

1	8 031	2 138mg/L	50uL	1.000	NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 7 27:51 PM
2	7.968	2 122mg/L	50uL	1.000	NPOC CAL 062113 2013_06_21_11_17_51.cal	6/24/2013 7 32 06 PM
3	7 995	2.129mg/L	50uL	1 000	NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 7 36 23 PM

Mean Area 7.998
Mean Conc. 2 130mg/L



Sample

Sample Name: NPOC STANDARD
Sample ID: WU65 A MS DOC
Origin: NPOC CAL 062113.cal
Status Completed
Chk. Result

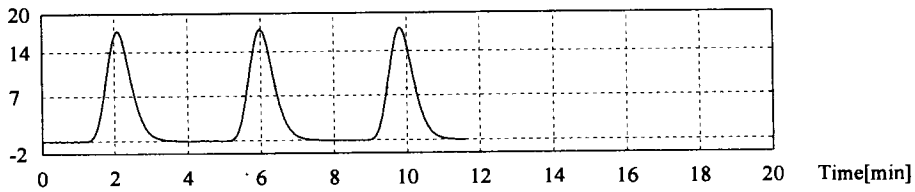
Unknown	NPOC	1 000	NPOC 22 64mg/L

1. Det

Anal.: NPOC

1	84 24	22 43mg/L	50uL	1 000	NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 7:48 12 PM
2	85 08	22 65mg/L	50uL	1 000	NPOC CAL 062113.2013_06_21_11_17_51 cal	6/24/2013 7 53.01 PM
3	85 79	22 84mg/L	50uL	1 000	NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 7 57 51 PM

Mean Area 85.04
Mean Conc. 22.64mg/L



Sample

Sample Name: NPOC STANDARD
Sample ID: WU65 B DOC
Origin: NPOC CAL 062113.cal
Status Completed
Chk. Result

Unknown	NPOC	1 000	NPOC 2 168mg/L

TOC-Control L Report

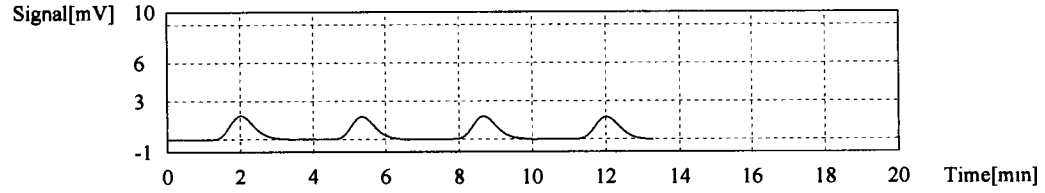
Ursula
2013_06_24_001.tlx

1. Det

Anal.: NPOC

1	8 596	2 289mg/L	50uL	1 000	E	NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 8.09.05 PM
2	8 118	2 162mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51.cal	6/24/2013 8 13 24 PM
3	8 169	2 175mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 8 17 44 PM
4	8 141	2 168mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 8 22 01 PM

Mean Area 8.143
Mean Conc 2 168mg/L



Control Sample

Sample Name: CVS
Sample ID. CVS 20
Method: CVS 20 ppm.tpl
Status Completed
Chk. Result Control value· 103.9 / Control exceeds range!

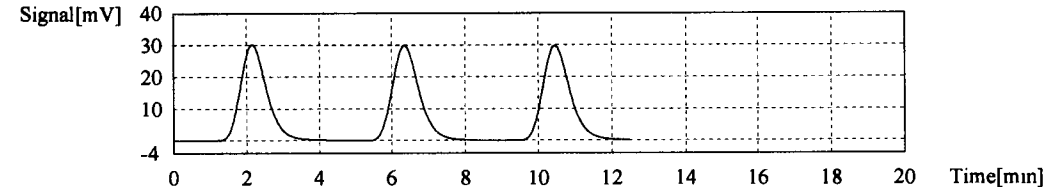
Control	NPOC	1 000	NPOC.20 79ppm

1. Det.

Anal. NPOC

1	152 5	20 65ppm	100uL	1 000		NPOC Suspended 0.5 to 50 2013_05_07_12_18_27 cal	6/24/2013 8 34 07 PM
2	153.8	20.82ppm	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	6/24/2013 8.39.15 PM
3	154 3	20.89ppm	100uL	1.000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	6/24/2013 8 44 24 PM

Mean Area 153.5
Mean Conc. 20.79ppm



Control Sample

Sample Name: ICB/CCB
Sample ID:
Method: ICB CCB.tpl
Status Completed
Chk Result Control value: 0.1022 / Control within range!

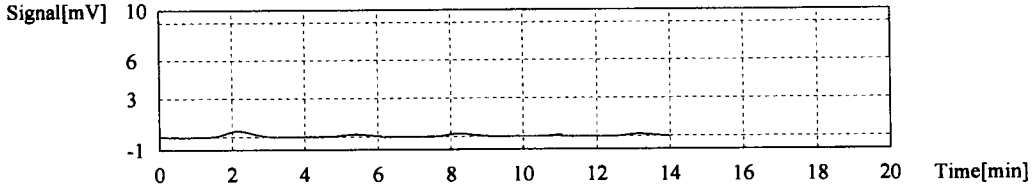
Control	NPOC	1 000	NPOC.0 1022mg/L

1. Det.

Anal.: NPOC

1	2 372	0 3212mg/L	100uL	1 000	E	NPOC Suspended 0.5 to 50 2013_05_07_12_18_27.cal	6/24/2013 8 55 32 PM
2	0.6338	0.08582mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	6/24/2013 8.59 22 PM
3	0 9485	0 1284mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27.cal	6/24/2013 9 03 24 PM
4	0 000	0 000mg/L	100uL	1 000	E	NPOC Suspended 0 5 to 50.2013_05_07_12_18_27 cal	6/24/2013 9 06 19 PM
5	0 6815	0 09227mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	6/24/2013 9 10 50 PM

Mean Area 0 7546
Mean Conc 0 1022mg/L



Sample

Sample Name: NPOC STANDARD
Sample ID. WU65 A6
Origin: NPOC CAL 062113.cal
Status Completed
Chk. Result

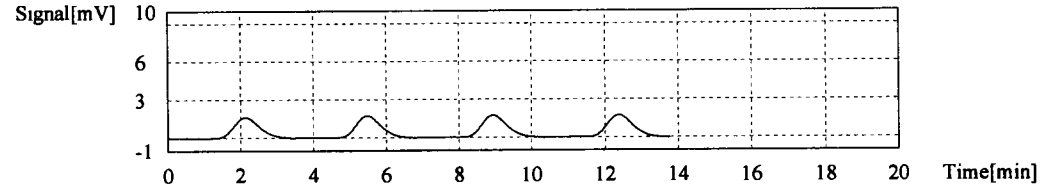
Unknown	NPOC	1 000	NPOC 2 211mg/L

1. Det

Anal.: NPOC

1	7 900	2 104mg/L	50uL	1 000	E	NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 9:22 20 PM
2	8 255	2 198mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51.cal	6/24/2013 9 26 46 PM
3	8 236	2.193mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 9:31 11 PM
4	8 419	2 242mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 9 35 42 PM

Mean Area 8.303
Mean Conc. 2.211mg/L



Sample

Sample Name: NPOC STANDARD
Sample ID: WU65 A6 DUP
Origin: NPOC CAL 062113 cal
Status Completed
Chk. Result

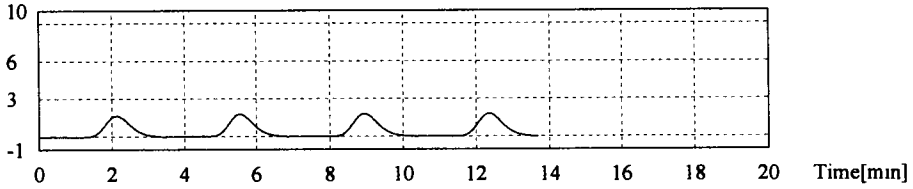
Unknown	NPOC	1 000	NPOC 2 272mg/L

1. Det

Anal.: NPOC

1	8 076	2 150mg/L	50uL	1 000	E	NPOC CAL 062113.2013_06_21_11_17_51 cal	6/24/2013 9 47.02 PM
2	8 495	2.262mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 9:51 26 PM
3	8 576	2.284mg/L	50uL	1 000		NPOC CAL 062113.2013_06_21_11_17_51 cal	6/24/2013 9 55 52 PM
4	8 524	2 270mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 10.00 17 PM

Mean Area 8.532
Mean Conc. 2 272mg/L



Sample

Sample Name: NPOC STANDARD
Sample ID: WU65 A6 MS
Origin: NPOC CAL 062113.cal
Status Completed
Chk. Result

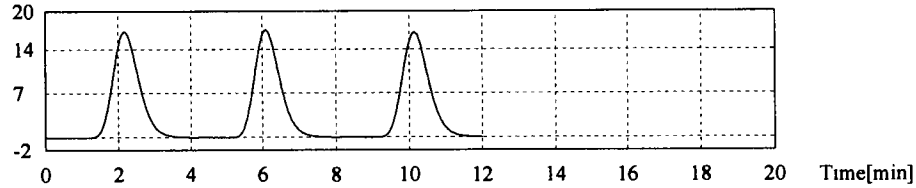
Unknown	NPOC	1 000	NPOC 22 57mg/L

1 Det

Anal.: NPOC

1	84 04	22 38mg/L	50uL	1.000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 10.12 09 PM
2	84.09	22.39mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 10:17 09 PM
3	86 13	22 93mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 10 22 11 PM

Mean Area 84.75
Mean Conc. 22.57mg/L



TOC-Control L Report

Ursula
2013_06_24_001.tlx

Sample

Sample Name: NPOC STANDARD
Sample ID: WU65 B6
Origin: NPOC CAL 062113.cal
Status Completed
Chk. Result

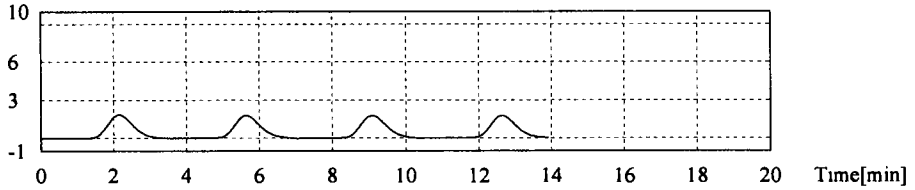
Unknown	NPOC	1 000	NPOC 2 279mg/L

1. Det

Anal.: NPOC

1	9 034	2.405mg/L	50uL	1 000	E	NPOC CAL 062113 2013_06_21_11_17_51.cal	6/24/2013 10.33 35 PM
2	8 546	2 276mg/L	50uL	1 000		NPOC CAL 062113.2013_06_21_11_17_51 cal	6/24/2013 10 38 02 PM
3	8 701	2 317mg/L	50uL	1 000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 10:42.34 PM
4	8 431	2 245mg/L	50uL	1.000		NPOC CAL 062113 2013_06_21_11_17_51 cal	6/24/2013 10.47 00 PM

Mean Area 8.559
Mean Conc. 2.279mg/L



Control Sample

Sample Name: CVS
Sample ID: CVS 20
Method: CVS 20 ppm.tpl
Status Completed
Chk. Result Control value. 104.8 / Control exceeds range!

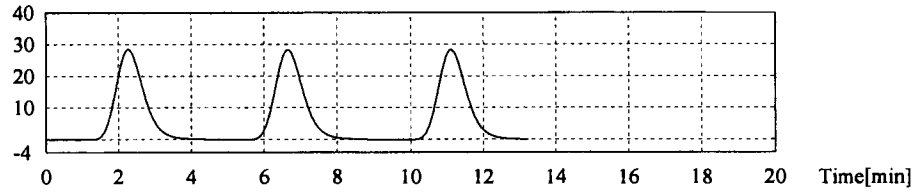
Control	NPOC	1 000	NPOC 20 95ppm

1. Det.

Anal.: NPOC

1	154 0	20 85ppm	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	6/24/2013 10 59 32 PM
2	155 6	21 07ppm	100uL	1 000		NPOC Suspended 0 5 to 50.2013_05_07_12_18_27 cal	6/24/2013 11:04:59 PM
3	154 6	20 93ppm	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	6/24/2013 11 10 23 PM

Mean Area 154 7
Mean Conc. 20.95ppm



TOC-Control L Report

Ursula
2013_06_24_001 tlx

Control Sample

Sample Name: ICB/CCB
Sample ID:
Method: ICB CCB.tpl
Status Completed
Chk. Result Control value. 0.05276 / Control within range!

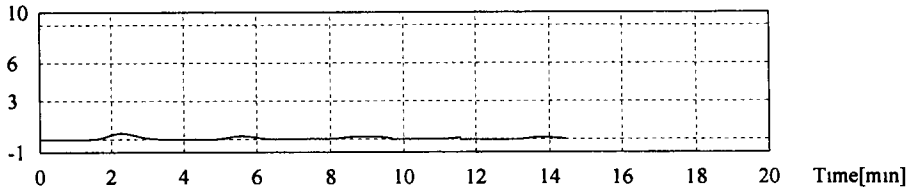
Control	NPOC	1 000	NPOC.0 05276mg/L

1. Det.

Anal.: NPOC

1	2 450	0 3317mg/L	100uL	1.000	E	NPOC Suspended 0.5 to 50 2013_05_07_12_18_27 cal	6/24/2013 11 21 36 PM
2	1 261	0 1707mg/L	100uL	1 000	E	NPOC Suspended 0.5 to 50 2013_05_07_12_18_27 cal	6/24/2013 11 25 47 PM
3	0 7148	0 09678mg/L	100uL	1 000		NPOC Suspended 0 5 to 50.2013_05_07_12_18_27 cal	6/24/2013 11 29 57 PM
4	0 000	0 000mg/L	100uL	1 000		NPOC Suspended 0 5 to 50 2013_05_07_12_18_27 cal	6/24/2013 11 32 51 PM
5	0 4542	0 06150mg/L	100uL	1 000		NPOC Suspended 0.5 to 50 2013_05_07_12_18_27 cal	6/24/2013 11 37 17 PM

Mean Area 0.3897
Mean Conc. 0 05276mg/L



ALKALINITY BENCHSHEET methods: **SM 2320 B-97**

Date/Time: 6/28/13 9:40

pH meter verification **pH meter ID: ACCUMET AR60** **Buret ID: 08J32234**

Analyst: UW

Buffer pH **7.00** **pH Probe ID : AR60**

Measured pH 6.98 *Calibration OK* **Acid ARI ID:**

Standardization of acid titrant ***(titration to pH 4.5)***

ARI ID. *00139-10*

grams Na2CO3 = **0.6279** *to* **250** *ml DI*

Normality Na2CO3 = 0.0474

Assumed Acid Normality = **0.02**

Standardized Acid Normality= 0.0195 ***OK!***

BLANK		STANDARD TITRATION		
BLANK	ml ACID	ml Na2CO3	ml ACID	N H2SO4
1	0.00	**5**	12.13	0.020
2	0.00	**5**	12.23	0.019
3	0.00	**5**	12.16	0.019
AVERAGE	0.00			0.019

Partitioning Calculations

T=Total, P=Phenolphthalein

Obs	*HCO3*	*CO3*	*OH*
P =0	T	0	0
P< 0 5T	T - 2P	2P	0
P= 0.5T	0	2P	0
P> 0.5T	0	2(T - P)	2P - T
P =T	0	0	T

Calibration Verification Standard (second source sodium carbonate solution)

ARI ID *00139-11* *mg/L CaCO3*

grams Na2CO3 = **0.6283** *grams in* **250** *mL =* *2371*

dilution. **5.0** *mL to* **100** *CVS =* **118.6**

DQL Std (2ppm) *dilute* **0.084** *mL stock to 100 mL DI =* **2.0**

Laboratory Control Standard (LCS)

mg/L CaCO3

Source: *ERA P213-506* **32.10**

SAMPLE DATA

Alk (mg/L CaCO3 = [{mL acid X Nacid) X 50,000] / mL sample

low level = {{{(2 X mL4 5)-mL4 2] X Nacid) X 50,000} / mL sample

(shaded cells are calculated, make no entries)

Sample Number	Sample ID	Initial pH	Volume (ml)	TEMP (C)	ml H2SO4 pH=8 3	ml H2SO4 pH =4 5	ml H2SO4 pH=4 2	ALK (mg CaCO3/l) Phenolph	ALK (mg CaCO3/l) TOT HIGH	ALK (mg CaCO3/l) TOT LOW	Partitioning (mg/l CaCO3) HCO3	Partitioning (mg/l CaCO3) CO3	Partitioning (mg/l CaCO3) OH	(mg/l) FREE CO2
ICV		10.17	100	22.0	5.91	12.00	0 00	57.5	116.8		*98.5% OK!*			
ICB		4 01	100	22 3	0 00	0.00	0.00	0.0		0.0	0.0	0.0	0.0	0.0
DQL Std (2ppm)		6.50	100	21.9	0.00	0.18	0.21	0.0		1.5				
LCS		8.63	50	19.0	0.63	1.61	1.69	12.3	31.3		*97.6% OK!*			
WU65 A3		7.78	100	19.8	0.00	5.58	0.00	0.0	54.3		54.3	0.0	0.0	1.8
WU65 A3 dup		7.75	100	19.6	0.00	5.58	0.00	0.0	54.3		54.3	0.0	0.0	1.9
RPD =									*0.0%*		*0.0%*			*6.9%*
WU65 B3		7.73	100	19 7	0.00	5.59	0.00	0.0	54.4		54.4	0.0	0.0	2.0
WU63 F3		7.33	100	19.5	0.00	22.03	0.00	0.0	214.4		214.4	0.0	0.0	20.1
WU63 G3		7.07	100	19.4		HIGH		0.0	#######	#VALUE!	#######	0.0	0.0	#VALUE!
WU63 H3		6.73	100	20.1		HIGH		0.0	#######	#VALUE!	#######	0.0	0.0	#VALUE!
WU63 I3		6.79	100	19.3		HIGH		0.0	#######	#VALUE!	#######	0.0	0.0	#VALUE!
WU63 J3		7.66	100	20.0	0.00	13.84	0.00	0.0	134.7		134.7	0.0	0.0	5.9
WU63 K7		7.91	100	19.7	0.00	16.41	0.00	0.0	159.7		159.7	0.0	0.0	3.9
WU63 K7 dup		7.90	100	20.0	0.00	16.38	0.00	0.0	159.4		159.4	0.0	0.0	4.0
RPD =									*0.2%*		*0.2%*			*2.1%*
CCV		10 32	100	22.8	5.89	12.24	0.00	57.3	119 1		*100.5%*	*OK!*		
WU54 D5		6.78	100	19.6		HIGH		0.0	#######	#VALUE!	#######	0.0	0.0	#VALUE!
WU54 E5		6.87	100	19.2		HIGH		0.0	#######	#VALUE!	#######	0.0	0.0	#VALUE!
WV55 A6		7.47	100	19.6	0.00	9.69	0.00	0.0	94.3		94.3	0.0	0.0	6.4
WV55 A6 dup		7.51	100	19.9	0.00	9.81	0 00	0.0	95.5		95.5	0.0	0.0	5.9
RPD =									*1.2%*		*1.2%*			*8.0%*
WV55 B6		7 61	100	19.5	0.00	10.01	0.00	0.0	97.4		97.4	0.0	0.0	4.8
WV55 C2		7.44	100	19.7	0.00	7.14	0.00	0.0	69.5		69.5	0.0	0.0	5.0
WV55 E6		7.07	100	19.8	0.00	7.24	0.00	0.0	70 5		70.5	0.0	0.0	12.0
WV55 F6		6.90	100	20.3	0.00	1 77	1.91	0.0		15.9	15.9	0.0	0.0	4.0

SAMPLE DATA

Alk (mg/L CaCO3 = [{mL acid X Nacid) X 50,000] / mL sample (shaded cells are calculated, make no entries)

low level = {(((2 X mL4.5) - mL4.2] X Nacid) X 50,000} / mL sample

Sample Number	Sample ID	Initial pH	Volume (ml)	TEMP (C)	ml H2SO4 pH=8.3	ml H2SO4 pH =4.5	ml H2SO4 pH=4.2	ALK (mg CaCO3/l) Phenolph	ALK (mg CaCO3/l) TOT HIGH	ALK (mg CaCO3/l) TOT LOW	Partitioning (mg/l CaCO3) HCO3	Partitioning (mg/l CaCO3) CO3	Partitioning (mg/l CaCO3) OH	(mg/l) FREE CO2
WV74 E10		6.71	100	20.0		HIGH		0.0	#######	#VALUE!	#######	0.0	0.0	#VALUE!
WV84 A7		6.66	100	21.3	0.00	2.11	0.00	0.0	20.5		20.5	0.0	0.0	9.0
CCV		10.30	100	23.9	5.91	12.25	0.00	57.5	119.2		*100.6%*	*OK!*	0.0	0.0
WV84 A7 dup		6.67	100	21.7	0.00	2.11	0.00	0.0	20.5		20.5	0.0	0.0	8.8
RPD =									*0.0%*		*0.0%*			*3.5%*
WV84 B7		6.75	100	21.1	0.00	2.51	0.00	0.0	24.4		24.4	0.0	0.0	8.7
WV84 C7		6.70	100	21.0	0.00	2.28	0.00	0.0	22.2		22.2	0.0	0.0	8.9
WV84 D7		6.68	100	21.4	0.00	2.02	0.00	0.0		39.3	39.3	0.0	0.0	16.4
CCV		10.28	100	24.2	5.95	12.26	0.00	57.9	119.3		*100.6%*	*OK!*	0.0	0.0

ALKALINITY BENCHSHEET

methods: **SM 2320 B-97**

pH meter verification — **pH meter ID:** **ACCUMET AR60** — **Buret ID:** 08J32234 ~~01G30627~~ — **pH Probe ID :** AR60 — **Acid ARI ID:**

Date/Time: 6-28-10 9:40

Analyst: W

Buffer pH	7.00
Measured pH	6.98

must agree within 0.1 pH un

Standardization of acid titrant *(titration to pH 4.5)*

ARI ID: 00179-10

grams Na2CO3 =	0.6253	79 to	250	ml DI
Normality Na2CO3 =	0.0472			
Assumed Acid Normality =	0.02			
Standardized Acid Normality=				

BLANK		STANDARD TITRATION		
BLANK	ml ACID	ml Na2CO3	ml ACID	N H2SO4
1	0.00	5	12.10	
2	0.00	5	12.27	
3	0.00	5	12.16	
AVERAGE				

Partitioning Calculations

T=Total, P=Phenolphthalein

Obs	HCO3	CO3	OH
P =0	T	0	0
P< 0.5T	T - 2P	2P	0
P= 0 5T	0	2P	0
P> 0.5T	0	2(T - P)	2P - T
P =T	0	0	T

Calibration Verification Standard (second source sodium carbonate solution)

ARI ID: 00129-11

grams Na2CO3 = 0.6283 grams in 250 mL = ######

dilution: 5 mL to 100 CVS = _____

DQL Std (2ppm) dilute mL stock to 100 mL DI =

mg/L CaCO3

Laboratory Control Standard (LCS)

Source: ERA P210-506

mg/L CaCO3 ~~49.20~~ 52.1

SAMPLE DATA

Alk (mg/L CaCO3 = [(mL acid X Nacid) X 50,000] / mL sample

low level = {(((2 X mL4.5)-mL4.2] X Nacid) X 50,000} / mL sample

(shaded cells are calculated, make no entries)

Sample Number	Sample ID	Initial pH	Volume (ml)	TEMP (C)	ml H2SO4 pH=8.3	ml H2SO4 pH =4.5	ml H2SO4 pH=4.2	ALK (mg CaCO3/l) Phenolph	ALK (mg CaCO3/l) TOT HIGH	ALK (mg CaCO3/l) TOT LOW	Partitioning (mg/l CaCO3) HCO3	Partitioning (mg/l CaCO3) CO3	Partitioning (mg/l CaCO3) OH	(mg/l) FREE CO2
ICV		10.17	100	22.2	5.91	12.20	0.00							
ICB		4.01	100	22.3	0.00	0.00	0.00							
DQL Std (2ppm)		6.50	100	21.9	0.00	0.18	0.4							
LCS		8.67	50	19.0	0.63	1.61	1.69							
WW65 A7		7.78	100	19.8	0.00	5.58	0.00							
A7 dup		7.75	"	19.6	"	5.58	"							
B7		7.73		19.7		5.59								
WW63 F7		7.33		19.5		22.01								
G7		7.07		19.4		HIGH								
H7		6.73		20.1		HIGH								
I7		6.79		19.3		HIGH								
J7		7.66		20.0		13.84								
K7		7.91		19.7		16.41								
K7 dup		7.90		20.0		16.38								
CCV		10.22		22.8	5.89	12.24								
WW49 D5		6.78		19.6	0.00	HIGH								
E5		6.87		19.2	"	HIGH								
WW55 A6		7.47		19.6		9.69								
A6 dup		7.51		19.9		9.81								
B6		7.61		19.5		10.01								
C6		7.44		19.7		7.14								
E6		7.07		19.8		7.24	↓							
F6		6.90		20.1		1.77	1.91							
WW74 E10		6.71		20.0		HIGH	0.00							
WW84 A7		6.66		21.0	↓	2.11	↓							
CCV		10.30	↓	22.4	5.91	12.25								

ALKALINITY BENCHSHEET methods: **SM 2320 B-97** Date: 6-28-11

pH meter verification pH meter ID: **ACCUMET AR60** Buret ID: 01G30627 Analyst:

Sample Number	Sample ID	Initial pH	Volume (ml)	TEMP (C)	ml H2SO4 pH=8.3	ml H2SO4 pH =4.5	ml H2SO4 pH=4.2	ALK (mg CaCO3/l) Phenolph	ALK (mg CaCO3/l) TOT HIGH	ALK (mg CaCO3/l) TOT LOW	(mg/l CaCO3) HCO3	(mg/l CaCO3) CO3	(mg/l CaCO3) OH	(mg/l) FREE CO2
LVV 8:1 A7 dup		6.67	100	21.7	0.00	2.11	0.00							
B7		6.75		21.1		2.51								
C7		6.70		21.0		2.28								
D7		6.68		21.4		2.02								
CCV		10.28		24.2	5.95	12.26								
CCV														
CCV														
CCV														

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Conventionals Laboratory Analyst Notes

ARI Job No.: WM65

Client ID: SAIC

Parameter: DOC - TOC

Client Project:

List problems, concerns, corrective actions and any other pertinent information
Split volume for DOC, filtered and preserved it.
preserved leftover volume for TOC.

Analyst Initials:	W	Date:	6-20-17

5147F

Revision 007
6/11/10

WM65 : 297041

Table of Contents: ARI Job WU70

Client: SAIC

Project: 209977 NPDES Sampling Support

BC
Signature

July-01-2013
Date

Table of Contents: ARI Job WU70

Client: SAIC

Project: 209977 NPDES Sampling Support

PC
Signature

July-01-2013
Date

Table of Contents: ARI Job WU70

Client: SAIC

Project: 209977 NPDES Sampling Support

DC

Signature

July-01-2013

Date

Analytical Resources, Incorporated
Analytical Chemists and Consultants

July 12, 2013

Christine Nancarrow
SAIC
18912 North Creek Parkway, Suite 101
Bothell, WA 98011

RE: Project: NPDES Sampling Support, 209977
ARI Job No.: WU70

Dear Christine:

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 of the analyses are discussed in the Case Narrative.

An electronic copy of this data package will be kept on file with ARI. Should you have any questions or problems, please feel free to contact me at any time.

Sincerely,

ANALYTICAL RESOURCES, INC.

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

cc: eFile WU70

Enclosures

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

Chain of Custody Documentation

ARI Job ID: WU70

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: WU70 WU65	Turn-around Requested: Standard TAT (3 wks)	Date: 6-19-13
ARI Client Company: **SAIC**	Phone: **206.300.2144** nancarrowc@saic.com	Page: 1 of
Client Contact: **Christine Nancarrow**		No. of Coolers: 2 Cooler Temps: 5.0, 5.9
Client Project Name: **NPDES Sampling Support**		
Client Project #: **209977**	Samplers: CW CN	

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	PCB Aroclors (EPA 8082)	SVOCs/PAHs (EPA 8270 / EPA 8270-SIM)	Pesticides (EPA 8081)	Dioxins/Furans (EPA 1613B)	TPH-Diesel (NWTPH-DW)	VOCs (EPA8260)	Metals (EPA 6010/200.8)	Mercury (EPA 7471)	TOC (Plumb 1981)	Total Solids (SM2540B)	Particle Size Distribution (Sedigraph)	NWTPH-Gas (NWTPH-Gx)	Notes/Comments
					Analysis Requested (Sediment Sample)												
LF-TP-001-20130619-S	6.19.13	1139	Sediment	10 11	X	X	X	X	X	X	X	X	X	X	X	X	
LF-LS-004-20130619-S	6.19.13	1432	Sediment	4	1	2	4	5	·	·	3	3	6	7	·	·	*See below

Comments/Special Instructions	Relinquished by (Signature)	Received by (Signature)	Relinquished by (Signature)	Received by (Signature)
Do not dispose of samples without prior written authorization from SAIC PM. *Please analyze in listed priority order.	Printed Name: Corey H. Wilson	Printed Name: Jennifer M. Illsley	Printed Name:	Printed Name
	Company: SAIC	Company: ARI	Company	Company
	Date & Time: 6-19-13 1647	Date & Time: 6/19/13 1647	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: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer. Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded

Chain of Custody Record & Laboratory Analysis Request

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

ARI Assigned Number: WU70 ~~WU70~~	Turn-around Requested: Standard TAT (3wks)
ARI Client Company: **SAIC**	Phone: **206.300.2144** nancarrowc@saic.com
Client Contact: **Christine Nancarrow**	
Client Project Name: **NPDES Sampling Support**	
Client Project #: **209977**	Samplers: CW/CW

Date: 6.19.13
Page: 1 of 1
No. of Coolers: 2
Cooler Temps: 5.0, 5.9

Sample ID	Date	Time	Matrix	No Containers	SVOCs/PAHs (EPA 8270/8270 SIM)	Pesticides (EPA 8081)	Total Metals (EPA 200.8)	Mercury (EPA 7470)	Dissolved Metals (EPA 200.8)	pH (SM4500H)	Specific Conductance (EPA 120.1)	Anions (EPA 300.0/353.2)	Alkalinity (SM2320)	TOC (SM5310)	DOC (SM5310)	TSS (SM2540D)	Notes/Comments: VOCs EPA 8260 ~~NWTPH-Dx~~ CW 6.19.13 NWTPH-Gx
LF-TP-001-20130619-W	6.19.13	1011	H2O	12	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
LF-FD-001-20130619-W	6.19.13	1011	H2O	12	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	
LF-QC-TB-20130619-W	6.19.13	1200	H2O	2													✓ ✓
									CW								

Comments/Special Instructions	Relinquished by (Signature)	Received by (Signature)	Relinquished by (Signature)	Received by (Signature)
Do not dispose of samples without prior written authorization from SAIC PM.	Printed Name: Corey H. Wilson	Printed Name: Jennifer M. Hoyt	Printed Name:	Printed Name
	Company: SAIC	Company: ARI	Company:	Company:
	Date & Time: 6-19-13 1647	Date & Time: 6/19/13 1647	Date & Time:	Date & Time

Sample Retention Policy: Unless specified by workorder or contract, all water/soil samples submitted to ARI will be discarded or returned, no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer Sediment samples submitted under PSDDA/PSEP/SMS protocol will be stored frozen for up to one year and then discarded.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: SAIC
Project Name: NPDES Sampling Support
COC No(s): _____ (NA)
Delivered by: Fed-Ex UPS Courier Hand Delivered Other: _____
Assigned ARI Job No: WU70
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)	5.0 5.9	
If cooler temperature is out of compliance fill out form 00070F	Temp Gun ID#:	90877952

Cooler Accepted by: JM Date: 6/19/13 Time: 1647

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)~~ JM	NO
Was sufficient amount of sample sent in each bottle?		(YES)	NO
Date VOC Trip Blank was made at ARI	(NA)	~~4/15/13~~ JM	
Was Sample Split by ARI: (NA) YES Date/Time _____ Equipment _____		Split by: _____	

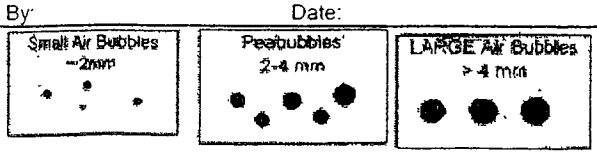
Samples Logged by: JM Date: 6/20/13 Time: 753

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

WU70 : 20020

Case Narrative, Data Qualifiers, Control Limits

ARI Job ID: WU70

ANALYTICAL
RESOURCES
INCORPORATED

Case Narrative

Client: SAIC
Project: NPDES Sampling Support, 209977
ARI Job No.: WU70

Sample Receipt

Two sediment samples and one water sample were received on June 19, 2013 under ARI job WU70. The cooler temperatures measured by IR thermometer following ARI SOP were 5.0 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 recommended holding times.

The initial calibration was outside the 20% control limit high for Iodomethane. All detected results for this compound have been flagged with a "Q" qualifier. No further corrective action was taken. Initial calibrations were within method requirements.

The continuing calibration fell outside the control limits low for Acrylonitrile, and was out high for Acrolein and Iodomethane. All detected results associated with this CCAL 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.

Methylene Chloride, 1,2,4-Trichlorobenzene Naphthalene, and 1,2,3-Trichlorobenzene were present in **MB-062713A** at low levels. All detected results associated with this method blank have been flagged with a "B" qualifier. No further corrective action was taken.

The LCS percent recovery of Acrolein was outside the control limits high for **LCS-062713A**. All other percent recoveries were within control limits. No corrective action was taken.

Semivolatiles by SW8270D

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

Initial calibrations were within method requirements.

The continuing calibration was outside the 20% control limit high for 3-Nitroaniline. 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 percent recoveries of Aniline fell outside the control limits low for **LCS-062713**. All other percent recoveries were within control limits. No corrective action was taken.

Several matrix spike and matrix spike duplicate percent recoveries were outside advisory control limits with wide RPDs for sample **LF-LS-004-20130619-S**. No corrective action is required for matrix QC.

SIM Semivolatiles by SW78270-SIM

The samples and associated laboratory QC were extracted and analyzed within 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.

Diethylphthalate was present in **MB-062713** at a level that was greater than the reporting limit. All detected results for this compound have been flagged with a "B" qualifier. No further corrective action was taken.

The LCS percent recovery of Diethylphthalate fell outside the control limit low for **LCS-062713**. All other percent recoveries were within control limits. No corrective action was taken.

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

Dioxin/Furans by SW1613B

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

Analysis was performed using the application specific RTX-Dioxin 2 column, which has a unique isomer separation for the 2378-TCDF, eliminating the need for second column confirmation.

Initial and continuing calibration results were within method requirements.

Both extraction and clean-up surrogate percent recoveries were within control limits.

The method blank contained reportable responses below the reporting limit for several compounds. "B" qualifiers were applied to associated results that were less than ten times the levels found in the method blank. No further corrective action was taken.

The OPR (Ongoing Precision and Accuracy or LCS) percent recovery of 1,2,3,4,6,7,8-HpCDF was outside the control limit high for **OPR-062713**. All other percent recoveries were within control limits. No corrective action was taken.

Specific results have been "EMPC"-flagged indicating a response not meeting requirements of positive identification. The EMPC values are treated as undetects under some programs and as hits under programs with more conservative protocols.

Select results have has been flagged with an "X" on the Form I's due to indication of a co-eluting PDBE.

The TEQ is presented with WHO2005 with ND=0 for undetects and ND=1/2 for undetects, with EMPCs included as hits.

Pesticides by SW8081

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

Initial calibrations were within method requirements.

The opening and closing pesticide continuing calibrations fell outside the 20% control limit low for several compounds on the first column, but all compounds were within the control limit on the second column. No 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.

Several LCS percent recoveries fell outside control limits low for **LCS-062713**. No corrective action was taken.

Several matrix spike and matrix spike duplicate percent recoveries were outside advisory control limits with wide RPDs for sample **LF-TP-001-20130619-S**. No corrective action is required for matrix QC.

Aroclor PCBs by SW8082

The samples and associated laboratory QC were extracted and analyzed within 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 limit. The LCS percent recoveries were within control limits.

The matrix spike and matrix spike duplicate percent recoveries fell outside advisory control limits low for sample **LF-LS-004-20130619-S**. No corrective action is required for matrix QC.

NWTPH-Dx

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

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

The method blank was clean at the reporting limits. The LCS percent recovery was within control limits.

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

NWTPH-Gx

The samples were analyzed within recommended holding times.

Initial and continuing calibrations were within method requirements.

The surrogate percent recoveries were within control limits.

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

Metals and Mercury

The samples 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 of antimony and zinc fell outside the control limits low for sample **LF-TP-001-20130619-S**. Post digestion spikes were performed and the recoveries were within control limits. All relevant data have been flagged with an "N" qualifier on the appropriate Form V. No further corrective action was taken.

The duplicate RPD of copper was outside the control limit for sample **LF-TP-001-20130619-S**. All relevant data have been flagged with a "*" qualifier on the Form VI. No further corrective action was taken.

General Chemistry (TOC/TS)

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

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

The SRM percent recovery was within limits.

The matrix spike percent recovery and replicate RPDs were within control limits.

Geotechnical Parameters

A laboratory-specific case narrative follows this page.

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Client: SAIC	**ARI Job No.:** WU70
Client Project: NPDES Sampling Support	**Client Project No.:** 209977

Case Narrative

1. One sample was submitted for analysis on June 20, 2013.
2. The sample was submitted for grain size analysis by means of X-ray diffraction using a Sedigraph 5120. The values are calculated using Stokes' Law of sedimentation and Beer's law of extinction.
3. The sample was run in a single batch and one sample from another job was chosen for triplicate analysis.
4. The standard operating procedure calls for the sample to be measured on the #4 (4750 µm) sieve, down to the 1.0 µm particle size with the Sedigraph 5120. If there were no particles measured at these extremes, the data is not included in the report.
5. Organic material does not absorb X-rays, and is not included in the fine portion of the analysis.
6. The data is provided in summary tables and plots.
7. There were no other noted anomalies in the sample or methods on this project.

Released by: Elizabeth Tobler _____ Date: July 2, 2013
Technician

Reviewed by: Gillenna Curtis _____ Date: 7/2/13
Geotechnical Laboratory Manager

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: WU70
Client: SAIC
Project Event: 209977
Project Name: NPDES Sampling Support

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	LF-QC-TB-20130619-W	WU70A	13-13121	Water	06/19/13	06/19/13 16:47
2.	LF-TP-001-20130619-S	WU70B	13-13122	Sediment	06/19/13 11:39	06/19/13 16:47
3.	LF-LS-004-20130619-S	WU70C	13-13123	Sediment	06/19/13 14:32	06/19/13 16:47

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).

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)**

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

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

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

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
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

DL[1] LOD[1], LOQ[1] and Control Limits Summary
GC - MS – SVOA Analysis of Sediment
EPA Method 8270 Full Scan & SIM

Microwave Extraction (EPA Method 3546, Bench Sheet 3093F) - 10 g sample with extract concentrated to 1 mL final volume

LOD Spike level = LOQ (unless otherwise noted)

Analyte	Full Scan Analysis (µg/kg)			SIM Analysis (µg/kg)			LCS, MS Control Limits (%)[2, 12]		RPD[4]
	DL	LOD	LOQ	DL	LOD	LOQ	Full Scan	SIM	
Phenol	8.65	10	**20**	2.56	5	**5**	34 – **120**	30 – 160[3]	≤ 30
bis-(2-Chloroethyl)ether	3.35	10	**20**	--	--	--	36 – **120**	--	≤ 30
2-Chlorophenol	2.39	10	**20**	--	--	--	39 – **120**	--	≤ 30
1,3-Dichlorobenzene	2.63	10	**20**	1.31	2.5	**5**	40 – **120**	30 – **120**	≤ 30
1,4-Dichlorobenzene	2.86	10	**20**	1.19	2.5	**5**	39 – **120**	36 – **120**	≤ 30
1,2-Dichlorobenzene	2.50	10	**20**	1.10	2.5	**5**	40 – **120**	36 – **120**	≤ 30
Benzyl alcohol	6.09	10	**20**	7.04	10	**20**[5]	19 – **120**	25 – 123	≤ 30
2,2'-oxy-*bis*-(1-Chloropropane)	3.76	10	**20**	--	--	--	32 – **120**	--	≤ 30
2-Methylphenol	5.25	10	**20**	1.81	2.5	**5**	28 – **120**	26 – **120**	≤ 30
Hexachloroethane	2.94	10	**20**	--	--	--	38 – **120**	--	≤ 30
N-Nitroso-di-n-propylamine	3.36	10	**20**	9.48	10	**12**[5]	34 – **120**	30 – 160[3]	≤ 30
4-Methylphenol[8]	6.63	10	**20**	2.52	5	**10**	29 – **120**	30 – 160[3]	≤ 30
Nitrobenzene	4.06	10	**20**	--	--	--	36 – **120**	--	≤ 30
Isophorone	2.86	10	**20**	--	--	--	37 – **120**	--	≤ 30
2-Nitrophenol	38.7	50	**100**	--	--	--	30 – **120**	--	≤ 30
2,4-Dimethylphenol	3.46	20	**40**	2.89	10	**20**	**10 – 120**	10 – **120**	≤ 30
bis-(2-Chloroethoxy)methane	2.00	10	**20**	--	--	--	39 – **120**	--	≤ 30
2,4-Dichlorophenol	21.5	100	**200**	--	--	--	28 – **120**	--	≤ 30
1,2,4-Trichlorobenzene	3.48	10	**20**	1.86	2.5	**5**	35 – **120**	35 – **120**	≤ 30
Naphthalene	2.76	10	**20**	--	--	--	43 – **120**	--	≤ 30
Benzoic acid	101	200	**400**[7]	--	--	--	**10 – 120**	--	≤ 30
4-Chloroaniline	22.3	135	**270**[6]	--	--	--	11 – **120**	--	≤ 30
Hexachlorobutadiene	4.57	10	**20**	0.96	2.5	**5**	37 – **120**	34 – **120**	≤ 30
4-Chloro-3-methylphenol	15.1	50	**100**	--	--	--	32 – **120**	--	≤ 30
2-Methylnaphthalene	3.06	10	**20**	--	--	--	43 – **120**	--	≤ 30
Hexachlorocyclopentadiene	66.4	200	**400**[6]	--	--	--	**10 – 120**	--	≤ 30
2,4,6-Trichlorophenol	22.4	50	**100**	--	--	--	30 – **120**	--	≤ 30
2,4,5-Trichlorophenol	21.4	50	**100**	--	--	--	28 – **120**	--	≤ 30
2-Chloronaphthalene	2.64	10	**20**	--	--	--	40 – **120**	--	≤ 30
2-Nitroaniline	18.4	50	**100**	--	--	--	31 – 126	--	≤ 30
Acenaphthylene	5.71	10	**20**	--	--	--	42 – **120**	--	≤ 30
Dimethylphthalate	2.90	10	**20**	1.34	2.5	**5**	43 – **120**	38 – **120**	≤ 30
2,6-Dinitrotoluene	30.6	50	**100**	--	--	--	33 – 123	--	≤ 30

DL effective 10/20/11
Full Scan Control limits effective 4/12/13
Sim Control Limits effective 5/22/13

DL[1] LOD[1], LOQ[1] and Control Limits Summary
GC - MS – SVOA Analysis of Sediment
EPA Method 8270 Full Scan & SIM

Microwave Extraction (EPA Method 3546, Bench Sheet 3093F) - 10 g sample with extract concentrated to 1 mL final volume

LOD Spike level = LOQ (unless otherwise noted)

Analyte	Full Scan Analysis (µg/kg)			SIM Analysis (µg/kg)			LCS, MS Control Limits (%)[2, 12]		RPD[4]
	DL	LOD	LOQ	DL	LOD	LOQ	Full Scan	SIM	
Acenaphthene	3.28	10	**20**	--	--	--	45 – **120**	--	≤ 30
3-Nitroaniline	22.5	50	**100**	--	--	--	22 – **120**	--	≤ 30
2,4-Dinitrophenol	111	425	**850**[6]	--	--	--	**10** – **120**	--	≤ 30
Dibenzofuran	4.10	10	**20**	--	--	--	43 – **120**	--	≤ 30
4-Nitrophenol	34.7	50	**100**	--	--	--	15 – 138	--	≤ 30
2,4-Dinitrotoluene	19.5	50	**100**	--	--	--	35 – 127	--	≤ 30
Fluorene	4.35	10	**20**	--	--	--	45 – **120**	--	≤ 30
4-Chlorophenyl-phenylether	5.29	10	**20**	--	--	--	32 – **120**	--	≤ 30
Diethylphthalate	36.6	50	**50**[5]	3.26	5.0	**5.0**	50 – 120	55 – **120**	≤ 30
4-Nitroaniline	37.9	50	**100**	--	--	--	24 – 125	--	≤ 30
4,6-Dinitro-2-methylphenol	21.2	100	**200**	--	--	--	24 – **120**	--	≤ 30
N-Nitrosodiphenylamine	5.39	10	**20**	1.38	10	**20**	36 – **120**	27 – **120**	≤ 30
4-Bromophenyl-phenylether	5.03	10	**20**	--	--	--	39 – **120**	--	≤ 30
Hexachlorobenzene	4.29	10	**20**	1.26	2.5	**5**	33 – **120**	32 – **120**	≤ 30
Pentachlorophenol	48.5	100	**200**[6]	14.3	25	**50**	16 – 120	26 – **120**	≤ 30
Phenanthrene	3.64	10	**20**	--	--	--	49 – **120**	--	≤ 30
Anthracene	4.50	10	**20**	--	--	--	45 – **120**	--	≤ 30
Carbazole	2.69	10	**20**	--	--	--	43 – 135	--	≤ 30
Di-n-butylphthalate	8.16	10	**20**	--	--	--	48 – 126	--	≤ 30
Fluoranthene	2.91	10	**20**	--	--	--	53 – **120**	--	≤ 30
Pyrene	1.94	10	**20**	--	--	--	48 – 121	--	≤ 30
Butylbenzylphthalate	6.14	10	**20**	2.89	5.0	**5**	45 – 132	32 – 142	≤ 30
Benzo(a)anthracene	3.29	10	**20**	--	--	--	49 – **120**	--	≤ 30
3,3'-Dichlorobenzidine	17.8	75	**150**[6]	--	--	--	**10** – **120**	--	≤ 30
Chrysene	3.75	10	**20**	--	--	--	47 – **120**	--	≤ 30
bis-(2-Ethylhexyl)phthalate	14.6	20	**25**[5]	--	--	--	34 – 130	--	≤ 30
Di-n-octylphthalate	5.84	10	**20**	--	--	--	28 – 124	--	≤ 30
Benzo(b)fluoranthene[9]	3.47	10	**20**	--	--	--	42 – 132	--	≤ 30
Benzo(k)fluoranthene[9]	4.18	10	**20**	--	--	--	39 – 129	--	≤ 30
Benzofluoranthene-Total[10]	6.67	20	**40**	--	--	--	30 – 160[3]	--	≤ 30
Benzo(a)pyrene	5.45	10	**20**	--	--	--	42 – **120**	--	≤ 30
Indeno(1,2,3-cd)pyrene	4.68	10	**20**	--	--	--	42 – 123	--	≤ 30
Dibenzo(a,h)anthracene	4.31	10	**20**	2.02	2.5	**5**	30 – 133	28 – 125	≤ 30
Benzo(g,h,i)perylene	4.40	10	**20**	--	--	--	38 – 126	--	≤ 30
N-Nitrosodimethylamine	14.1	50	**100**	3.15	13	**25**	17 – **120**	30 – 160[3]	≤ 30

DL effective 10/20/11
Full Scan Control limits effective 4/12/13
Sim Control Limits effective 5/22/13

DL[1] LOD[1], LOQ[1] and Control Limits Summary
GC - MS – SVOA Analysis of Sediment
EPA Method 8270 Full Scan & SIM

Microwave Extraction (EPA Method 3546, Bench Sheet 3093F) - 10 g sample with extract concentrated to 1 mL final volume

LOD Spike level = LOQ (unless otherwise noted)

Analyte	Full Scan Analysis (µg/kg)			SIM Analysis (µg/kg)			LCS, MS Control Limits (%)[2, 12]		RPD[4]
	DL	LOD	LOQ	DL	LOD	LOQ	Full Scan	SIM	
Aniline	40.0	270	**540**[6]	--	--	--	**10** – 134	--	≤ 30
Pyridine	32.7	75	**150**[6]	--	--	--	**10** – 147	--	≤ 30
1-Methylnaphthalene	2.68	10	**20**	--	--	--	42 – **120**	--	≤ 30
Azobenzene (1,2-DP-Hydrazine)	2.98	10	**20**	--	--	--	35 – **120**	--	≤ 30
Retene [11]	4.01	10	**20**	--	--	--	30 – 160[3]	--	≤ 30
Surrogate Standards							**MB / LCS**	**Samples**	**RPD**
2-Fluorophenol							32 – **120**	27 – **120**	≤ 30
Phenol-d_5							32 – **120**	29 – **120**	≤ 30
2-Chlorophenol-d_4							36 – **120**	31 – **120**	≤ 30
1,2-Dichlorobenzene-d_4							37 – **120**	32 – **120**	≤ 30
Nitrobenzene-d_5							33 –**120**	30 – **120**	≤ 30
2-Fluorobiphenyl							35 –**120**	35 – **120**	≤ 30
2,4,6-Tribromophenol							23 – 133	24 – 134	≤ 30
p-Terphenyl-d_{14}							42 – 124	37 – **120**	≤ 30

(1) Detection Limit (DL), Limit of Detection (LOD), Limit of Quantitation (LOQ) are defined in ARI SOP 1018S
(2) 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 < 120 for the upper limit
(3) 30 – 160 are default values used when there is insufficient data to calculate historic control limits.
(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) Spiked at 5 ppb
(6) Spiked at 100 ppb
(7) Spiked at 200 ppb
(8) 3-Methylphenol (not calibrated) co-elutes with 4-Methylphennol (calibrated)
(9) Benzo(b)fluoranthene and Benzo(k)fluoranthene are reported as separate analytes only when the height of the valley between the isomer peaks is less than than 50% of the average of the two peak heights, otherwise total Benzofluoranthenes are reported.
(10) Benzo(b)fluoranthene + Benzo(j)fluoranthene + Benzo(k)fluoranthene (only the b & k isomers are calibrated)
(11) LOD study WC15 (2/5/13)
(12) Control limits calculated using spike recovery data from 3/1/11 through 4/1/13

DL[1], LOD[1], LOQ[1] and Control Limits Summary
Analysis of Sediment Samples for Dioxins & Furans
EPA Method 1613B

Soxhlet (EPA Method 3540C) Extraction using 10 g sample with extract concentrated to 0.02 mL final volume. ARI Bench Sheet 3083F

LOD Spike level = LOQ = 0.1 ppt (ng/kg) = 1 pg/g

Analyte	DL[1] pg/g	LOD[1] pg/g	LOQ[1] pg/g	OPR Control Limit [2,3]	Sample Replicate RPD [3,4]
2,3,7,8-TCDF	0.230	**0.5**	**1**	75 – 158	≤ 25
2,3,7,8-TCDD	0.274	**0.5**	**1**	67 – 158	≤ 25
1,2,3,7,8-PeCDF	0.832	**2.5**	**2.5**	80 – 134	≤ 25
2,3,4,7,8-PeCDF	1.076	**2.5**	**1**	68 – 160	≤ 25
1,2,3,7,8-PeCDD	0.647	**2.5**	**1**	70 – 142	≤ 25
1,2,3,4,7,8-HxCDF	0.991	**2.5**	**2.5**	72 – 134	≤ 25
1,2,3,6,7,8-HxCDF	0.769	**2.5**	**2.5**	84 – 130	≤ 25
2,3,4,6,7,8-HxCDF	0.904	**2.5**	**2.5**	70 – 156	≤ 25
1,2,3,7,8,9-HxCDF	0.857	**2.5**	**2.5**	78 – 130	≤ 25
1,2,3,4,7,8-HxCDD	0.481	**2.5**	**2.5**	70 – 164	≤ 25
1,2,3,6,7,8-HxCDD	0.561	**2.5**	**2.5**	76 – 134	≤ 25
1,2,3,7,8,9-HxCDD	0.886	**2.5**	**2.5**	64 – 162	≤ 25
1,2,3,4,6,7,8-HpCDF	1.165	**2.5**	**2.5**	82 – 122	≤ 25
1,2,3,4,7,8,9-HpCDF	0.688	**2.5**	**2.5**	78 – 138	≤ 25
1,2,3,4,6,7,8-HpCDD	0.828	**2.5**	**2.5**	70 – 140	≤ 25
OCDF	2.176	**5.0**	**5**	63 – 170	≤ 25
OCDD	7.452	**5.0**	**5**	78 – 144	≤ 25

(1) Detection Limit (DL), Limit of Detection (LOD) and Limit of Quantitation (LOQ) are defined in ARI SOP 1018S

(2) Ongoing precision and recovery (OPR) analyzes as specified in the referenced method.

(3) Method specified control limits.

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

4

DL[1], LOD[1], LOQ[1] and Control Limits Summary
Analysis of Soil/Sediment Samples for Chlorinated Pesticides
EPA Method 8081B

Microwave (EPA Method 3546) Extraction using 12.5g (dry weight) sample with extract concentrated to 2.5 mL final volume. ARI Bench Sheet 3046F

LOD Spike level = LOQ Concentration

Analyte	DL[1,2] µg/kg	LOD[1] µg/kg	LOQ[1] µg/kg	LCS Control Limit[3,4]	Replicate RPD[5]
alpha-BHC	0.081	0.25	**0.5**	68 – 115	≤ 40
beta-BHC	0.139	0.25	**0.5**	60 – 126	≤ 40
gamma-BHC (Lindane)	0.048	0.25	**0.5**	68 – 134	≤ 40
delta-BHC	0.082	0.25	**0.5**	71 – 154	≤ 40
Heptachlor	0.132	0.25	**0.5**	66 – 115	≤ 40
Aldrin	0.055	0.25	**0.5**	66 – 115	≤ 40
Heptachlor Epoxide	0.085	0.25	**0.5**	65 – 127	≤ 40
trans-Chlordane (*beta*-Chlordane, *gamma*-Chlordane)	0.077	0.25	**0.5**	73 – 136	≤ 40
cis-Chlordane (*alpha*-chlordane)	0.051	0.25	**0.5**	77 – 124	≤ 40
Endosulfan I	0.072	0.25	**0.5**	28 – **100**	≤ 40
4,4'-DDE	0.124	0.5	**1.0**	71 – 149	≤ 40
Dieldrin	0.100	0.5	**1.0**	74 – 131	≤ 40
Endrin	0.215	0.5	**1.0**	72 – 135	≤ 40
Endosulfan II	0.116	0.5	**1.0**	37 – 110	≤ 40
4,4'-DDD	0.135	0.5	**1.0**	76 – 137	≤ 40
Endrin Aldehyde	0.218	0.5	**1.0**	38 – 109	≤ 40
4,4'-DDT	0.192	0.5	**1.0**	58 – 144	≤ 40
Endosulfan Sulfate	0.192	0.5	**1.0**	47 – 148	≤ 40
Endrin Ketone	0.119	0.5	**1.0**	29 – 165	≤ 40
Methoxychlor	0.698	2.5	**5.0**	65 – 123	≤ 40
Hexachlorobutadiene	0.138	0.5	**1.0**	43 – 104	≤ 40
Hexachlorobenzene	0.094	0.5	**1.0**	62 – 119	≤ 40
Surrogate Standard Recovery			**MB / LCS**	**Samples**	**RPD**
Tetrachloro-*m*-xylene (TCMX)			47 – 124	34 – 169	≤ 40
Decachlorobiphenyl			60 – 149	36 – 182	≤ 40

(1) Detection Limit (DL), Limit of Detection (LOD) and Limit of Quantitation as defined in ARI SOP 1018S.
(2) MDL study QZ38
(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) Control limits calculated using all data from 1/1/12 through 7/31/12.
(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

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

Analytical Resources,Incorporated
Analytical Chemists and Consultants

Quality Control Criteria for Analysis of Solid Matrix Samples for Aroclors (Polychlorinated Biphenyls – PCB) EPA Method 8082B

Extraction Bench Sheet	Extraction	DL[1] (ppb)	LOD[1] (ppb)	LOQ[1] (ppb)	Analyte	Spike Recovery Control Limits (%)[2,3,5]			RPD[4]
						LCS	MB/LCS Surrogate	Sample Surrogate	
PCB 15-3067F	12g to 4 mL	10.69	17	33	Aroclor 1016	62 – 111	--	--	≤ 40
		14.42	17	33	Aroclor 1260	59 – 118	--	--	
PCB 08-3025F		--	--	--	TCMX	--	58 – 112	53 – 116	
		--	--	--	DCBP	--	59 – 115	35 – 133	
PCB 05-3017F	5 g to 5 mL[6]	8.00	10	20	Aroclor 1016	56 – 115	--	--	≤ 40
		9.28	10	20	Aroclor 1260	58 – 120	--	--	
PCB 06-3026F		--	--	--	TCMX	--	52 – 117	57 – 109	
		--	--	--	DCBP	--	61 – 114	54 – 115	
PCB 18-3098F	5 g to 2.5 mL[6]	4.61	5	10	Aroclor 1016	66 – 114	--	--	≤ 40
		4.97	5	10	Aroclor 1260	63 – 120	--	--	
PCB06-3026F		--	--	--	TCMX	--	57 – 114	71 – 108	
		--	--	--	DCBP	--	59 – 118	53 – 126	
PCB 19-3099F	12.5 g to 2.5 mL[6]	1.56	2	4	Aroclor 1016	64 – **100**	--	--	≤ 40
		0.589	2	4	Aroclor 1260	64 – 107	--	--	
PCB 06-3026F		--	--	--	TCMX	--	54 – **100**	45 – 102	
		--	--	--	DCBP	--	64 – 105	37 – 128	
PCB 12-3019F	5 g to 40 mL	38.2	400	800	Aroclor 1016	30 – 160	--	--	≤ 40
		73.1	400	800	Aroclor 1260	30 – 160	--	--	
		--	--	--	TCMX	--	30 – 160	30 – 160	
		--	--	--	DCBP	--	30 – 160	30 – 160	

(1) Detection Limit (DL), Limit of Detection (LOD) & Limit of Quantitation (LOQ) are defined in ARI SOP 1018S.
(2) 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.
(3) 30 – 160 are default limits used when there is insufficient data to calculate historic control limits
(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) Control Limits calculated usng all data generated between 6/1/12 and 12/31/12

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	
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	
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	
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	
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

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	
NWTPH-G	Toluene – Naphthalene	0.057	0.125	0.25	**80 – 120**	--	--	
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**	--	--	≤ 40
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**	--	--	
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**	--	--	≤ 40
8021B	o-Xylene	0.136	0.5	1.0	75 – 121	--	--	
	Trifluorotoluene (TFT)	--	--	--	--	**80 – 120**	**80 - 120**	
	Bromobenzene	--	--	--	--	**80 – 120**	77 - **120**	
NWTPH-G	Toluene – Naphthalene	1.66	2.5	5	**80 – 120**	--	--	
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**	--	--	≤ 40
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**	--	--	
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**	--	--	≤ 40
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.

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**	**0.1**
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

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_0=Original, C_D=Duplicate
(4) ARI has no accreditation for these elements.

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

Spike Recovery Control Limits for Conventional Wet Chemistry

Effective 5/1/09

Control limits are updated periodically. Assure that you have ARI's current control limits by downloading the files at the time of use. http://www.arilabs.com/portal/downloads/ARI-CLs.zip

	ARI's Control Limits	
Sample Matrix:	Water	Soil / Sediment
Matrix Spike Recoveries	% Recovery	% Recovery
Ammonia	75 - 125	75 - 125
Bromide	75 125	75 - 125
Chloride	75 125	75 - 125
Cyanide	75 - 125	75 - 125
Ferrous Iron	75 - 125	75 - 125
Fluoride	75 - 125	75 - 125
Formaldehyde	75 - 125	75 - 125
Hexane Extractable Material	-- - --	78 - 114
Hexavalent Chromium	75 - 125	75 - 125
Nitrate/Nitrite	75 - 125	75 - 125
Oil and Grease	75 - 125	75 - 125
Phenol	75 - 125	75 - 125
Phosphorous	75 - 125	75 - 125
Sulfate	75 - 125	75 - 125
Sulfide	75 - 125	75 - 125
Total Kjeldahl Nitrogen	75 - 125	75 - 125
Total Organic Carbon	75 - 125	75 - 125
Duplicate RPDs		
Acidity	±20%	±20%
Alkalinity	±20%	±20%
BOD	±20%	±20%
Cation Exchange	±20%	±20%
COD	±20%	±20%
Conductivity	±20%	±20%
Salinity	±20%	±20%
Solids	±20%	±20%
Turbidity	±20%	±20%

Volatile Analysis
Report and Summary QC Forms

ARI Job ID: WU70

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LF-TP-001-20130619-S**
Page 1 of 2 **SAMPLE**

Lab Sample ID: WU70B
LIMS ID: 13-13122
Matrix: Sediment
Data Release Authorized:
Reported: 07/01/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Instrument/Analyst: NT5/PAB
Date Analyzed: 06/28/13 01:40

Sample Amount: 3.39 g-dry-wt
Purge Volume: 5.0 mL
Moisture: 40.7%

CAS Number	Analyte	DL	LOQ	Result
74-87-3	Chloromethane	0.39	1.5	< 1.5 U
74-83-9	Bromomethane	0.28	1.5	< 1.5 U
75-01-4	Vinyl Chloride	0.35	1.5	< 1.5 U
75-00-3	Chloroethane	0.68	1.5	< 1.5 U
75-09-2	Methylene Chloride	0.94	2.9	< 2.9 U
67-64-1	Acetone	0.71	7.4	< 7.4 U
75-15-0	**Carbon Disulfide**	**0.82**	**1.5**	**4.8**
75-35-4	1,1-Dichloroethene	0.50	1.5	< 1.5 U
75-34-3	1,1-Dichloroethane	0.30	1.5	< 1.5 U
156-60-5	trans-1,2-Dichloroethene	0.39	1.5	< 1.5 U
156-59-2	cis-1,2-Dichloroethene	0.35	1.5	< 1.5 U
67-66-3	**Chloroform**	**0.35**	**1.5**	**0.9 J**
107-06-2	1,2-Dichloroethane	0.28	1.5	< 1.5 U
78-93-3	2-Butanone	0.76	7.4	< 7.4 U
71-55-6	1,1,1-Trichloroethane	0.33	1.5	< 1.5 U
56-23-5	Carbon Tetrachloride	0.31	1.5	< 1.5 U
108-05-4	Vinyl Acetate	0.56	7.4	< 7.4 U
75-27-4	Bromodichloromethane	0.37	1.5	< 1.5 U
78-87-5	1,2-Dichloropropane	0.24	1.5	< 1.5 U
10061-01-5	cis-1,3-Dichloropropene	0.33	1.5	< 1.5 U
79-01-6	Trichloroethene	0.31	1.5	< 1.5 U
124-48-1	Dibromochloromethane	0.39	1.5	< 1.5 U
79-00-5	1,1,2-Trichloroethane	0.42	1.5	< 1.5 U
71-43-2	Benzene	0.44	1.5	< 1.5 U
10061-02-6	trans-1,3-Dichloropropene	0.32	1.5	< 1.5 U
110-75-8	2-Chloroethylvinylether	0.41	7.4	< 7.4 U
75-25-2	Bromoform	0.44	1.5	< 1.5 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	0.62	7.4	< 7.4 U
591-78-6	2-Hexanone	0.65	7.4	< 7.4 U
127-18-4	Tetrachloroethene	0.38	1.5	< 1.5 U
79-34-5	1,1,2,2-Tetrachloroethane	0.37	1.5	< 1.5 U
108-88-3	Toluene	0.22	1.5	< 1.5 U
108-90-7	Chlorobenzene	0.32	1.5	< 1.5 U
100-41-4	Ethylbenzene	0.30	1.5	< 1.5 U
100-42-5	Styrene	0.20	1.5	< 1.5 U
75-69-4	Trichlorofluoromethane	0.39	1.5	< 1.5 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.42	2.9	< 2.9 U
179601-23-1	m,p-Xylene	0.58	1.5	< 1.5 U
95-47-6	o-Xylene	0.33	1.5	< 1.5 U
95-50-1	1,2-Dichlorobenzene	0.43	1.5	< 1.5 U
541-73-1	1,3-Dichlorobenzene	0.33	1.5	< 1.5 U
106-46-7	1,4-Dichlorobenzene	0.34	1.5	< 1.5 U
107-02-8	Acrolein	5.6	74	< 74 U

Lab Sample ID: WU70B
LIMS ID: 13-13122
Matrix: Sediment
Date Analyzed: 06/28/13 01:40

QC Report No: WU70-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
74-88-4	Iodomethane	0.32	1.5	< 1.5 U
74-96-4	Bromoethane	0.65	2.9	< 2.9 U
107-13-1	Acrylonitrile	1.5	7.4	< 7.4 U
563-58-6	1,1-Dichloropropene	0.46	1.5	< 1.5 U
74-95-3	Dibromomethane	0.22	1.5	< 1.5 U
630-20-6	1,1,1,2-Tetrachloroethane	0.34	1.5	< 1.5 U
96-12-8	1,2-Dibromo-3-chloropropane	0.86	7.4	< 7.4 U
96-18-4	1,2,3-Trichloropropane	0.76	2.9	< 2.9 U
110-57-6	trans-1,4-Dichloro-2-butene	0.64	7.4	< 7.4 U
108-67-8	1,3,5-Trimethylbenzene	0.37	1.5	< 1.5 U
95-63-6	1,2,4-Trimethylbenzene	0.34	1.5	< 1.5 U
87-68-3	Hexachlorobutadiene	0.60	7.4	< 7.4 U
106-93-4	1,2-Dibromoethane	0.26	1.5	< 1.5 U
74-97-5	Bromochloromethane	0.48	1.5	< 1.5 U
75-71-8	Dichlorodifluoromethane	0.31	1.5	< 1.5 U
594-20-7	2,2-Dichloropropane	0.43	1.5	< 1.5 U
142-28-9	1,3-Dichloropropane	0.31	1.5	< 1.5 U
98-82-8	Isopropylbenzene	0.34	1.5	< 1.5 U
103-65-1	n-Propylbenzene	0.40	1.5	< 1.5 U
108-86-1	Bromobenzene	0.23	1.5	< 1.5 U
95-49-8	2-Chlorotoluene	0.44	1.5	< 1.5 U
106-43-4	4-Chlorotoluene	0.41	1.5	< 1.5 U
98-06-6	tert-Butylbenzene	0.45	1.5	< 1.5 U
135-98-8	sec-Butylbenzene	0.35	1.5	< 1.5 U
99-87-6	4-Isopropyltoluene	0.35	1.5	< 1.5 U
104-51-8	n-Butylbenzene	0.39	1.5	< 1.5 U
120-82-1	1,2,4-Trichlorobenzene	0.49	7.4	< 7.4 U
91-20-3	Naphthalene	0.63	7.4	< 7.4 U
87-61-6	1,2,3-Trichlorobenzene	0.45	7.4	< 7.4 U
1634-04-4	Methyl tert-Butyl Ether	0.34	1.5	< 1.5 U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	115%
d8-Toluene	102%
Bromofluorobenzene	97.4%
d4-1,2-Dichlorobenzene	103%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LF-QC-TB-20130619-W**
 SAMPLE

Lab Sample ID: WU70A
LIMS ID: 13-13121
Matrix: Water
Data Release Authorized:
Reported: 07/01/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Instrument/Analyst: NT5/PAB
Date Analyzed: 06/28/13 01:16

Sample Amount: 5.00 mL
Purge Volume: 5.0 mL

CAS Number	Analyte	DL	LOQ	Result
74-87-3	Chloromethane	0.13	1.0	< 1.0 U
74-83-9	Bromomethane	0.43	1.0	< 1.0 U
75-01-4	Vinyl Chloride	0.25	1.0	< 1.0 U
75-00-3	Chloroethane	0.19	1.0	< 1.0 U
75-09-2	Methylene Chloride	0.19	2.0	< 2.0 U
67-64-1	Acetone	3.0	10	< 10 U
75-15-0	Carbon Disulfide	0.18	1.0	< 1.0 U
75-35-4	1,1-Dichloroethene	0.30	1.0	< 1.0 U
75-34-3	1,1-Dichloroethane	0.21	1.0	< 1.0 U
156-60-5	trans-1,2-Dichloroethene	0.20	1.0	< 1.0 U
156-59-2	cis-1,2-Dichloroethene	0.10	1.0	< 1.0 U
67-66-3	Chloroform	0.19	1.0	< 1.0 U
107-06-2	1,2-Dichloroethane	0.24	1.0	< 1.0 U
78-93-3	2-Butanone	2.0	5.0	< 5.0 U
71-55-6	1,1,1-Trichloroethane	0.18	1.0	< 1.0 U
56-23-5	Carbon Tetrachloride	0.23	1.0	< 1.0 U
108-05-4	Vinyl Acetate	0.22	5.0	< 5.0 U
75-27-4	Bromodichloromethane	0.19	1.0	< 1.0 U
78-87-5	1,2-Dichloropropane	0.23	1.0	< 1.0 U
10061-01-5	cis-1,3-Dichloropropene	0.23	1.0	< 1.0 U
79-01-6	Trichloroethene	0.29	1.0	< 1.0 U
124-48-1	Dibromochloromethane	0.23	1.0	< 1.0 U
79-00-5	1,1,2-Trichloroethane	0.26	1.0	< 1.0 U
71-43-2	Benzene	0.25	1.0	< 1.0 U
10061-02-6	trans-1,3-Dichloropropene	0.20	1.0	< 1.0 U
110-75-8	2-Chloroethylvinylether	0.22	5.0	< 5.0 U
75-25-2	Bromoform	0.29	1.0	< 1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	0.37	5.0	< 5.0 U
591-78-6	2-Hexanone	0.93	5.0	< 5.0 U
127-18-4	Tetrachloroethene	0.09	1.0	< 1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	0.14	1.0	< 1.0 U
108-88-3	Toluene	0.18	1.0	< 1.0 U
108-90-7	Chlorobenzene	0.14	1.0	< 1.0 U
100-41-4	Ethylbenzene	0.18	1.0	< 1.0 U
100-42-5	Styrene	0.12	1.0	< 1.0 U
75-69-4	Trichlorofluoromethane	0.18	1.0	< 1.0 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.18	2.0	< 2.0 U
179601-23-1	m,p-Xylene	0.36	2.0	< 2.0 U
95-47-6	o-Xylene	0.22	1.0	< 1.0 U
95-50-1	1,2-Dichlorobenzene	0.20	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	0.28	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	0.28	1.0	< 1.0 U
107-02-8	Acrolein	1.9	10	< 10 U
74-88-4	Iodomethane	0.26	1.0	< 1.0 U
74-96-4	Bromoethane	0.42	2.0	< 2.0 U
107-13-1	Acrylonitrile	0.50	5.0	< 5.0 U
563-58-6	1,1-Dichloropropene	0.27	1.0	< 1.0 U
74-95-3	Dibromomethane	0.29	1.0	< 1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	0.29	1.0	< 1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	0.44	5.0	< 5.0 U

Lab Sample ID: WU70A QC Report No: WU70-SAIC
LIMS ID: 13-13121 Project: NPDES Sampling Support
Matrix: Water 209977
Date Analyzed: 06/28/13 01:16

CAS Number	Analyte	DL	LOQ	Result
96-18-4	1,2,3-Trichloropropane	0.54	2.0	< 2.0 U
110-57-6	trans-1,4-Dichloro-2-butene	0.86	5.0	< 5.0 U
108-67-8	1,3,5-Trimethylbenzene	0.14	1.0	< 1.0 U
95-63-6	1,2,4-Trimethylbenzene	0.15	1.0	< 1.0 U
87-68-3	Hexachlorobutadiene	0.18	5.0	< 5.0 U
106-93-4	1,2-Dibromoethane	0.18	1.0	< 1.0 U
74-97-5	Bromochloromethane	0.20	1.0	< 1.0 U
75-71-8	Dichlorodifluoromethane	0.25	1.0	< 1.0 U
594-20-7	2,2-Dichloropropane	0.10	1.0	< 1.0 U
142-28-9	1,3-Dichloropropane	0.17	5.0	< 5.0 U
98-82-8	Isopropylbenzene	0.30	1.0	< 1.0 U
103-65-1	n-Propylbenzene	0.12	1.0	< 1.0 U
108-86-1	Bromobenzene	0.24	1.0	< 1.0 U
95-49-8	2-Chlorotoluene	0.14	1.0	< 1.0 U
106-43-4	4-Chlorotoluene	0.21	1.0	< 1.0 U
98-06-6	tert-Butylbenzene	0.40	1.0	< 1.0 U
135-98-8	sec-Butylbenzene	0.13	1.0	< 1.0 U
99-87-6	4-Isopropyltoluene	0.35	1.0	< 1.0 U
104-51-8	n-Butylbenzene	0.37	1.0	< 1.0 U
120-82-1	1,2,4-Trichlorobenzene	0.34	5.0	< 5.0 U
91-20-3	Naphthalene	0.23	5.0	< 5.0 U
87-61-6	1,2,3-Trichlorobenzene	0.32	5.0	< 5.0 U
1634-04-4	Methyl tert-Butyl Ether	0.16	1.0	< 1.0 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	98.0%
d8-Toluene	100%
Bromofluorobenzene	99.7%
d4-1,2-Dichlorobenzene	100%

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: Sediment

QC Report No: WU70-SAIC
Project: NPDES Sampling Support
209977

ARI ID	Client ID	Level	DCE	TOL	BFB	DCB	TOT OUT
MB-062713A	Method Blank	Low	102%	100%	99.9%	101%	0
LCS-062713A	Lab Control	Low	102%	99.6%	99.8%	100%	0
LCSD-062713A	Lab Control Dup	Low	100%	99.6%	101%	98.9%	0
WU70B	LF-TP-001-20130619-S	Low	115%	102%	97.4%	103%	0

	LCS/MB LIMITS		QC LIMITS	
SW8260C	Low	Med	Low	Med
(DCE) = d4-1,2-Dichloroethane	80-122	76-120	80-149	69-120
(TOL) = d8-Toluene	80-120	80-120	77-120	80-120
(BFB) = Bromofluorobenzene	80-120	80-120	80-120	76-128
(DCB) = d4-1,2-Dichlorobenzene	80-120	80-120	80-120	80-120

Log Number Range: 13-13122 to 13-13122

ANALYTICAL RESOURCES INCORPORATED

VOA SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: WU70-SAIC
Project: NPDES Sampling Support
209977

ARI ID	Client ID	PV	DCE	TOL	BFB	DCB	TOT OUT
MB-062713A	Method Blank	5	102%	100%	99.9%	101%	0
LCS-062713A	Lab Control	5	102%	99.6%	99.8%	100%	0
LCSD-062713A	Lab Control Dup	5	100%	99.6%	101%	98.9%	0
WU70A	LF-QC-TB-20130619-W	5	98.0%	100%	99.7%	100%	0

	LCS/MB LIMITS	QC LIMITS
SW8260C		
(DCE) = d4-1,2-Dichloroethane	80-122	80-125
(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: 13-13121 to 13-13121

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-062713A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-062713A
LIMS ID: 13-13122
Matrix: Sediment
Data Release Authorized:
Reported: 07/01/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: NT5/PAB
LCSD: NT5/PAB
Date Analyzed LCS: 06/27/13 19:30
LCSD: 06/27/13 20:05

Sample Amount LCS: 5.00 g-dry-wt
LCSD: 5.00 g-dry-wt
Purge Volume LCS: 5.0 mL
LCSD: 5.0 mL
Moisture: NA

Analyte	LCS		Spike Added-LCS	LCS Recovery	LCSD		Spike Added-LCSD	LCSD Recovery	RPD
Chloromethane	51.4		50.0	103%	50.8		50.0	102%	1.2%
Bromomethane	49.7		50.0	99.4%	47.2		50.0	94.4%	5.2%
Vinyl Chloride	57.3		50.0	115%	54.2		50.0	108%	5.6%
Chloroethane	56.7		50.0	113%	52.4		50.0	105%	7.9%
Methylene Chloride	39.3	B	50.0	78.6%	36.8	B	50.0	73.6%	6.6%
Acetone	228		250	91.2%	166		250	66.4%	31.5%
Carbon Disulfide	57.9		50.0	116%	52.2		50.0	104%	10.4%
1,1-Dichloroethene	58.2		50.0	116%	52.1		50.0	104%	11.1%
1,1-Dichloroethane	56.8		50.0	114%	54.5		50.0	109%	4.1%
trans-1,2-Dichloroethene	51.1		50.0	102%	47.4		50.0	94.8%	7.5%
cis-1,2-Dichloroethene	53.4		50.0	107%	51.0		50.0	102%	4.6%
Chloroform	53.8		50.0	108%	51.5		50.0	103%	4.4%
1,2-Dichloroethane	51.4		50.0	103%	49.5		50.0	99.0%	3.8%
2-Butanone	237		250	94.8%	233		250	93.2%	1.7%
1,1,1-Trichloroethane	55.2		50.0	110%	51.3		50.0	103%	7.3%
Carbon Tetrachloride	56.2		50.0	112%	51.6		50.0	103%	8.5%
Vinyl Acetate	51.6		50.0	103%	50.3		50.0	101%	2.6%
Bromodichloromethane	53.1		50.0	106%	50.9		50.0	102%	4.2%
1,2-Dichloropropane	53.1		50.0	106%	50.3		50.0	101%	5.4%
cis-1,3-Dichloropropene	54.5		50.0	109%	52.2		50.0	104%	4.3%
Trichloroethene	54.6		50.0	109%	50.5		50.0	101%	7.8%
Dibromochloromethane	52.8		50.0	106%	50.6		50.0	101%	4.3%
1,1,2-Trichloroethane	50.8		50.0	102%	49.0		50.0	98.0%	3.6%
Benzene	55.1		50.0	110%	51.7		50.0	103%	6.4%
trans-1,3-Dichloropropene	53.2		50.0	106%	51.5		50.0	103%	3.2%
2-Chloroethylvinylether	60.2		50.0	120%	59.6		50.0	119%	1.0%
Bromoform	51.4		50.0	103%	48.2		50.0	96.4%	6.4%
4-Methyl-2-Pentanone (MIBK)	253		250	101%	247		250	98.8%	2.4%
2-Hexanone	256		250	102%	248		250	99.2%	3.2%
Tetrachloroethene	56.5		50.0	113%	51.2		50.0	102%	9.8%
1,1,2,2-Tetrachloroethane	50.5		50.0	101%	47.4		50.0	94.8%	6.3%
Toluene	54.5		50.0	109%	51.0		50.0	102%	6.6%
Chlorobenzene	54.7		50.0	109%	51.1		50.0	102%	6.8%
Ethylbenzene	58.5		50.0	117%	53.9		50.0	108%	8.2%
Styrene	58.4		50.0	117%	54.6		50.0	109%	6.7%
Trichlorofluoromethane	55.7		50.0	111%	51.2		50.0	102%	8.4%
1,1,2-Trichloro-1,2,2-trifluoroetha	58.9		50.0	118%	51.7		50.0	103%	13.0%

Lab Sample ID: LCS-062713A QC Report No: WU70-SAIC
LIMS ID: 13-13122 Project: NPDES Sampling Support
Matrix: Sediment 209977

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
m,p-Xylene	116	100	116%	108	100	108%	7.1%
o-Xylene	57.3	50.0	115%	53.5	50.0	107%	6.9%
1,2-Dichlorobenzene	54.4	50.0	109%	49.7	50.0	99.4%	9.0%
1,3-Dichlorobenzene	56.5	50.0	113%	50.9	50.0	102%	10.4%
1,4-Dichlorobenzene	55.5	50.0	111%	50.5	50.0	101%	9.4%
Acrolein	330 Q	250	132%	306 Q	250	122%	7.5%
Iodomethane	71.1 Q	50.0	142%	63.0 Q	50.0	126%	12.1%
Bromoethane	53.8	50.0	108%	48.4	50.0	96.8%	10.6%
Acrylonitrile	52.1 Q	50.0	104%	52.2 Q	50.0	104%	0.2%
1,1-Dichloropropene	54.2	50.0	108%	49.7	50.0	99.4%	8.7%
Dibromomethane	51.3	50.0	103%	49.6	50.0	99.2%	3.4%
1,1,1,2-Tetrachloroethane	53.7	50.0	107%	51.0	50.0	102%	5.2%
1,2-Dibromo-3-chloropropane	46.6	50.0	93.2%	46.0	50.0	92.0%	1.3%
1,2,3-Trichloropropane	49.8	50.0	99.6%	47.5	50.0	95.0%	4.7%
trans-1,4-Dichloro-2-butene	50.7	50.0	101%	47.2	50.0	94.4%	7.2%
1,3,5-Trimethylbenzene	60.6	50.0	121%	54.3	50.0	109%	11.0%
1,2,4-Trimethylbenzene	60.9	50.0	122%	54.8	50.0	110%	10.5%
Hexachlorobutadiene	54.3	50.0	109%	49.2	50.0	98.4%	9.9%
1,2-Dibromoethane	51.5	50.0	103%	49.8	50.0	99.6%	3.4%
Bromochloromethane	51.7	50.0	103%	50.2	50.0	100%	2.9%
Dichlorodifluoromethane	56.3	50.0	113%	53.4	50.0	107%	5.3%
2,2-Dichloropropane	55.6	50.0	111%	51.3	50.0	103%	8.0%
1,3-Dichloropropane	53.0	50.0	106%	51.0	50.0	102%	3.8%
Isopropylbenzene	61.7	50.0	123%	55.3	50.0	111%	10.9%
n-Propylbenzene	60.9	50.0	122%	54.0	50.0	108%	12.0%
Bromobenzene	54.0	50.0	108%	49.5	50.0	99.0%	8.7%
2-Chlorotoluene	58.9	50.0	118%	52.7	50.0	105%	11.1%
4-Chlorotoluene	59.0	50.0	118%	52.7	50.0	105%	11.3%
tert-Butylbenzene	60.2	50.0	120%	54.2	50.0	108%	10.5%
sec-Butylbenzene	61.3	50.0	123%	54.7	50.0	109%	11.4%
4-Isopropyltoluene	63.1	50.0	126%	56.0	50.0	112%	11.9%
n-Butylbenzene	63.6	50.0	127%	56.1	50.0	112%	12.5%
1,2,4-Trichlorobenzene	54.7 B	50.0	109%	49.9 B	50.0	99.8%	9.2%
Naphthalene	49.0 B	50.0	98.0%	47.6 B	50.0	95.2%	2.9%
1,2,3-Trichlorobenzene	50.8 B	50.0	102%	47.5 B	50.0	95.0%	6.7%
Methyl tert-Butyl Ether	51.2	50.0	102%	51.9	50.0	104%	1.4%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	102%	100%
d8-Toluene	99.6%	99.6%
Bromofluorobenzene	99.8%	101%
d4-1,2-Dichlorobenzene	100%	98.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-062713A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-062713A
LIMS ID: 13-13121
Matrix: Water
Data Release Authorized:
Reported: 07/01/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: NT5/PAB
LCSD: NT5/PAB
Date Analyzed LCS: 06/27/13 19:30
LCSD: 06/27/13 20:05

Sample Amount LCS: 5.00 mL
LCSD: 5.00 mL
Purge Volume LCS: 5.0 mL
LCSD: 5.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Chloromethane	51.4	50.0	103%	50.8	50.0	102%	1.2%
Bromomethane	49.7	50.0	99.4%	47.2	50.0	94.4%	5.2%
Vinyl Chloride	57.3	50.0	115%	54.2	50.0	108%	5.6%
Chloroethane	56.7	50.0	113%	52.4	50.0	105%	7.9%
Methylene Chloride	39.3 B	50.0	78.6%	36.8 B	50.0	73.6%	6.6%
Acetone	228	250	91.2%	166	250	66.4%	31.5%
Carbon Disulfide	57.9	50.0	116%	52.2	50.0	104%	10.4%
1,1-Dichloroethene	58.2	50.0	116%	52.1	50.0	104%	11.1%
1,1-Dichloroethane	56.8	50.0	114%	54.5	50.0	109%	4.1%
trans-1,2-Dichloroethene	51.1	50.0	102%	47.4	50.0	94.8%	7.5%
cis-1,2-Dichloroethene	53.4	50.0	107%	51.0	50.0	102%	4.6%
Chloroform	53.8	50.0	108%	51.5	50.0	103%	4.4%
1,2-Dichloroethane	51.4	50.0	103%	49.5	50.0	99.0%	3.8%
2-Butanone	237	250	94.8%	233	250	93.2%	1.7%
1,1,1-Trichloroethane	55.2	50.0	110%	51.3	50.0	103%	7.3%
Carbon Tetrachloride	56.2	50.0	112%	51.6	50.0	103%	8.5%
Vinyl Acetate	51.6	50.0	103%	50.3	50.0	101%	2.6%
Bromodichloromethane	53.1	50.0	106%	50.9	50.0	102%	4.2%
1,2-Dichloropropane	53.1	50.0	106%	50.3	50.0	101%	5.4%
cis-1,3-Dichloropropene	54.5	50.0	109%	52.2	50.0	104%	4.3%
Trichloroethene	54.6	50.0	109%	50.5	50.0	101%	7.8%
Dibromochloromethane	52.8	50.0	106%	50.6	50.0	101%	4.3%
1,1,2-Trichloroethane	50.8	50.0	102%	49.0	50.0	98.0%	3.6%
Benzene	55.1	50.0	110%	51.7	50.0	103%	6.4%
trans-1,3-Dichloropropene	53.2	50.0	106%	51.5	50.0	103%	3.2%
2-Chloroethylvinylether	60.2	50.0	120%	59.6	50.0	119%	1.0%
Bromoform	51.4	50.0	103%	48.2	50.0	96.4%	6.4%
4-Methyl-2-Pentanone (MIBK)	253	250	101%	247	250	98.8%	2.4%
2-Hexanone	256	250	102%	248	250	99.2%	3.2%
Tetrachloroethene	56.5	50.0	113%	51.2	50.0	102%	9.8%
1,1,2,2-Tetrachloroethane	50.5	50.0	101%	47.4	50.0	94.8%	6.3%
Toluene	54.5	50.0	109%	51.0	50.0	102%	6.6%
Chlorobenzene	54.7	50.0	109%	51.1	50.0	102%	6.8%
Ethylbenzene	58.5	50.0	117%	53.9	50.0	108%	8.2%
Styrene	58.4	50.0	117%	54.6	50.0	109%	6.7%
Trichlorofluoromethane	55.7	50.0	111%	51.2	50.0	102%	8.4%
1,1,2-Trichloro-1,2,2-trifluoroetha	58.9	50.0	118%	51.7	50.0	103%	13.0%
m,p-Xylene	116	100	116%	108	100	108%	7.1%

Lab Sample ID: LCS-062713A QC Report No: WU70-SAIC
LIMS ID: 13-13121 Project: NPDES Sampling Support
Matrix: Water 209977

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
o-Xylene	57.3	50.0	115%	53.5	50.0	107%	6.9%
1,2-Dichlorobenzene	54.4	50.0	109%	49.7	50.0	99.4%	9.0%
1,3-Dichlorobenzene	56.5	50.0	113%	50.9	50.0	102%	10.4%
1,4-Dichlorobenzene	55.5	50.0	111%	50.5	50.0	101%	9.4%
Acrolein	330 Q	250	132%	306 Q	250	122%	7.5%
Iodomethane	71.1 Q	50.0	142%	63.0 Q	50.0	126%	12.1%
Bromoethane	53.8	50.0	108%	48.4	50.0	96.8%	10.6%
Acrylonitrile	52.1 Q	50.0	104%	52.2 Q	50.0	104%	0.2%
1,1-Dichloropropene	54.2	50.0	108%	49.7	50.0	99.4%	8.7%
Dibromomethane	51.3	50.0	103%	49.6	50.0	99.2%	3.4%
1,1,1,2-Tetrachloroethane	53.7	50.0	107%	51.0	50.0	102%	5.2%
1,2-Dibromo-3-chloropropane	46.6	50.0	93.2%	46.0	50.0	92.0%	1.3%
1,2,3-Trichloropropane	49.8	50.0	99.6%	47.5	50.0	95.0%	4.7%
trans-1,4-Dichloro-2-butene	50.7	50.0	101%	47.2	50.0	94.4%	7.2%
1,3,5-Trimethylbenzene	60.6	50.0	121%	54.3	50.0	109%	11.0%
1,2,4-Trimethylbenzene	60.9	50.0	122%	54.8	50.0	110%	10.5%
Hexachlorobutadiene	54.3	50.0	109%	49.2	50.0	98.4%	9.9%
1,2-Dibromoethane	51.5	50.0	103%	49.8	50.0	99.6%	3.4%
Bromochloromethane	51.7	50.0	103%	50.2	50.0	100%	2.9%
Dichlorodifluoromethane	56.3	50.0	113%	53.4	50.0	107%	5.3%
2,2-Dichloropropane	55.6	50.0	111%	51.3	50.0	103%	8.0%
1,3-Dichloropropane	53.0	50.0	106%	51.0	50.0	102%	3.8%
Isopropylbenzene	61.7	50.0	123%	55.3	50.0	111%	10.9%
n-Propylbenzene	60.9	50.0	122%	54.0	50.0	108%	12.0%
Bromobenzene	54.0	50.0	108%	49.5	50.0	99.0%	8.7%
2-Chlorotoluene	58.9	50.0	118%	52.7	50.0	105%	11.1%
4-Chlorotoluene	59.0	50.0	118%	52.7	50.0	105%	11.3%
tert-Butylbenzene	60.2	50.0	120%	54.2	50.0	108%	10.5%
sec-Butylbenzene	61.3	50.0	123%	54.7	50.0	109%	11.4%
4-Isopropyltoluene	63.1	50.0	126%	56.0	50.0	112%	11.9%
n-Butylbenzene	63.6	50.0	127%	56.1	50.0	112%	12.5%
1,2,4-Trichlorobenzene	54.7 B	50.0	109%	49.9 B	50.0	99.8%	9.2%
Naphthalene	49.0 B	50.0	98.0%	47.6 B	50.0	95.2%	2.9%
1,2,3-Trichlorobenzene	50.8 B	50.0	102%	47.5 B	50.0	95.0%	6.7%
Methyl tert-Butyl Ether	51.2	50.0	102%	51.9	50.0	104%	1.4%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	102%	100%
d8-Toluene	99.6%	99.6%
Bromofluorobenzene	99.8%	101%
d4-1,2-Dichlorobenzene	100%	98.9%

4A

VOLATILE METHOD BLANK SUMMARY

Method Blank ID.

MB0627

Lab Name: ANALYTICAL RESOURCES INC

Client: SAIC

ARI Job No: WU70

Project: NPDES SAMPLING

Lab File ID: MB0627

Lab Sample ID: MB0627

Date Analyzed: 06/27/13

Time Analyzed: 2053

Instrument ID: NT5

Heated Purge: (Y/N) Y

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	TIME ANALYZED
01	LCS0627	LCS0627	LCS0627	1930
02	LCC0627	LCS0627	LCS0627A	2005
03	LF-QC-TB-201	WU70A	WU70A	0116
04	LF-TP-001-20	WU70B	WU70B	0140
05				
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

COMMENTS:

WU70:08645

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-062713A**
 METHOD BLANK

Lab Sample ID: MB-062713A
LIMS ID: 13-13122
Matrix: Sediment
Data Release Authorized:
Reported: 07/01/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT5/PAB
Date Analyzed: 06/27/13 20:53

Sample Amount: 5.00 g-dry-wt
Purge Volume: 5.0 mL
Moisture: NA

CAS Number	Analyte	DL	LOQ	Result
74-87-3	Chloromethane	0.26	1.0	< 1.0 U
74-83-9	Bromomethane	0.19	1.0	< 1.0 U
75-01-4	Vinyl Chloride	0.24	1.0	< 1.0 U
75-00-3	Chloroethane	0.46	1.0	< 1.0 U
75-09-2	**Methylene Chloride**	**0.64**	**2.0**	**3.3**
67-64-1	Acetone	0.48	5.0	< 5.0 U
75-15-0	Carbon Disulfide	0.56	1.0	< 1.0 U
75-35-4	1,1-Dichloroethene	0.34	1.0	< 1.0 U
75-34-3	1,1-Dichloroethane	0.20	1.0	< 1.0 U
156-60-5	trans-1,2-Dichloroethene	0.27	1.0	< 1.0 U
156-59-2	cis-1,2-Dichloroethene	0.24	1.0	< 1.0 U
67-66-3	Chloroform	0.23	1.0	< 1.0 U
107-06-2	1,2-Dichloroethane	0.19	1.0	< 1.0 U
78-93-3	2-Butanone	0.51	5.0	< 5.0 U
71-55-6	1,1,1-Trichloroethane	0.23	1.0	< 1.0 U
56-23-5	Carbon Tetrachloride	0.21	1.0	< 1.0 U
108-05-4	Vinyl Acetate	0.38	5.0	< 5.0 U
75-27-4	Bromodichloromethane	0.25	1.0	< 1.0 U
78-87-5	1,2-Dichloropropane	0.16	1.0	< 1.0 U
10061-01-5	cis-1,3-Dichloropropene	0.23	1.0	< 1.0 U
79-01-6	Trichloroethene	0.21	1.0	< 1.0 U
124-48-1	Dibromochloromethane	0.27	1.0	< 1.0 U
79-00-5	1,1,2-Trichloroethane	0.29	1.0	< 1.0 U
71-43-2	Benzene	0.30	1.0	< 1.0 U
10061-02-6	trans-1,3-Dichloropropene	0.22	1.0	< 1.0 U
110-75-8	2-Chloroethylvinylether	0.28	5.0	< 5.0 U
75-25-2	Bromoform	0.30	1.0	< 1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	0.42	5.0	< 5.0 U
591-78-6	2-Hexanone	0.44	5.0	< 5.0 U
127-18-4	Tetrachloroethene	0.26	1.0	< 1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	0.25	1.0	< 1.0 U
108-88-3	Toluene	0.15	1.0	< 1.0 U
108-90-7	Chlorobenzene	0.22	1.0	< 1.0 U
100-41-4	Ethylbenzene	0.20	1.0	< 1.0 U
100-42-5	Styrene	0.14	1.0	< 1.0 U
75-69-4	Trichlorofluoromethane	0.27	1.0	< 1.0 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.29	2.0	< 2.0 U
179601-23-1	m,p-Xylene	0.39	1.0	< 1.0 U
95-47-6	o-Xylene	0.22	1.0	< 1.0 U
95-50-1	1,2-Dichlorobenzene	0.29	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	0.23	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	0.23	1.0	< 1.0 U
107-02-8	Acrolein	3.8	50	< 50 U

Lab Sample ID: MB-062713A QC Report No: WU70-SAIC
LIMS ID: 13-13122 Project: NPDES Sampling Support
Matrix: Sediment 209977
Date Analyzed: 06/27/13 20:53

CAS Number	Analyte	DL	LOQ	Result
74-88-4	Iodomethane	0.22	1.0	< 1.0 U
74-96-4	Bromoethane	0.44	2.0	< 2.0 U
107-13-1	Acrylonitrile	1.0	5.0	< 5.0 U
563-58-6	1,1-Dichloropropene	0.31	1.0	< 1.0 U
74-95-3	Dibromomethane	0.15	1.0	< 1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	0.23	1.0	< 1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	0.59	5.0	< 5.0 U
96-18-4	1,2,3-Trichloropropane	0.52	2.0	< 2.0 U
110-57-6	trans-1,4-Dichloro-2-butene	0.44	5.0	< 5.0 U
108-67-8	1,3,5-Trimethylbenzene	0.25	1.0	< 1.0 U
95-63-6	1,2,4-Trimethylbenzene	0.23	1.0	< 1.0 U
87-68-3	Hexachlorobutadiene	0.41	5.0	< 5.0 U
106-93-4	1,2-Dibromoethane	0.18	1.0	< 1.0 U
74-97-5	Bromochloromethane	0.32	1.0	< 1.0 U
75-71-8	Dichlorodifluoromethane	0.21	1.0	< 1.0 U
594-20-7	2,2-Dichloropropane	0.29	1.0	< 1.0 U
142-28-9	1,3-Dichloropropane	0.21	1.0	< 1.0 U
98-82-8	Isopropylbenzene	0.23	1.0	< 1.0 U
103-65-1	n-Propylbenzene	0.27	1.0	< 1.0 U
108-86-1	Bromobenzene	0.15	1.0	< 1.0 U
95-49-8	2-Chlorotoluene	0.30	1.0	< 1.0 U
106-43-4	4-Chlorotoluene	0.28	1.0	< 1.0 U
98-06-6	tert-Butylbenzene	0.31	1.0	< 1.0 U
135-98-8	sec-Butylbenzene	0.24	1.0	< 1.0 U
99-87-6	4-Isopropyltoluene	0.24	1.0	< 1.0 U
104-51-8	n-Butylbenzene	0.26	1.0	< 1.0 U
120-82-1	**1,2,4-Trichlorobenzene**	**0.33**	**5.0**	**0.7 J**
91-20-3	**Naphthalene**	**0.43**	**5.0**	**1.4 J**
87-61-6	**1,2,3-Trichlorobenzene**	**0.30**	**5.0**	**0.8 J**
1634-04-4	Methyl tert-Butyl Ether	0.23	1.0	< 1.0 U

Reported in µg/kg (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	102%
d8-Toluene	100%
Bromofluorobenzene	99.9%
d4-1,2-Dichlorobenzene	101%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-062713A**
 METHOD BLANK

Lab Sample ID: MB-062713A
LIMS ID: 13-13121
Matrix: Water
Data Release Authorized:
Reported: 07/01/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT5/PAB
Date Analyzed: 06/27/13 20:53

Sample Amount: 5.00 mL
Purge Volume: 5.0 mL

CAS Number	Analyte	DL	LOQ	Result
74-87-3	Chloromethane	0.13	1.0	< 1.0 U
74-83-9	Bromomethane	0.43	1.0	< 1.0 U
75-01-4	Vinyl Chloride	0.25	1.0	< 1.0 U
75-00-3	Chloroethane	0.19	1.0	< 1.0 U
75-09-2	**Methylene Chloride**	**0.19**	**2.0**	**3.3**
67-64-1	Acetone	3.0	10	< 10 U
75-15-0	Carbon Disulfide	0.18	1.0	< 1.0 U
75-35-4	1,1-Dichloroethene	0.30	1.0	< 1.0 U
75-34-3	1,1-Dichloroethane	0.21	1.0	< 1.0 U
156-60-5	trans-1,2-Dichloroethene	0.20	1.0	< 1.0 U
156-59-2	cis-1,2-Dichloroethene	0.10	1.0	< 1.0 U
67-66-3	Chloroform	0.19	1.0	< 1.0 U
107-06-2	1,2-Dichloroethane	0.24	1.0	< 1.0 U
78-93-3	2-Butanone	2.0	5.0	< 5.0 U
71-55-6	1,1,1-Trichloroethane	0.18	1.0	< 1.0 U
56-23-5	Carbon Tetrachloride	0.23	1.0	< 1.0 U
108-05-4	Vinyl Acetate	0.22	5.0	< 5.0 U
75-27-4	Bromodichloromethane	0.19	1.0	< 1.0 U
78-87-5	1,2-Dichloropropane	0.23	1.0	< 1.0 U
10061-01-5	cis-1,3-Dichloropropene	0.23	1.0	< 1.0 U
79-01-6	Trichloroethene	0.29	1.0	< 1.0 U
124-48-1	Dibromochloromethane	0.23	1.0	< 1.0 U
79-00-5	1,1,2-Trichloroethane	0.26	1.0	< 1.0 U
71-43-2	Benzene	0.25	1.0	< 1.0 U
10061-02-6	trans-1,3-Dichloropropene	0.20	1.0	< 1.0 U
110-75-8	2-Chloroethylvinylether	0.22	5.0	< 5.0 U
75-25-2	Bromoform	0.29	1.0	< 1.0 U
108-10-1	4-Methyl-2-Pentanone (MIBK)	0.37	5.0	< 5.0 U
591-78-6	2-Hexanone	0.93	5.0	< 5.0 U
127-18-4	Tetrachloroethene	0.09	1.0	< 1.0 U
79-34-5	1,1,2,2-Tetrachloroethane	0.14	1.0	< 1.0 U
108-88-3	Toluene	0.18	1.0	< 1.0 U
108-90-7	Chlorobenzene	0.14	1.0	< 1.0 U
100-41-4	Ethylbenzene	0.18	1.0	< 1.0 U
100-42-5	Styrene	0.12	1.0	< 1.0 U
75-69-4	Trichlorofluoromethane	0.18	1.0	< 1.0 U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroe	0.18	2.0	< 2.0 U
179601-23-1	m,p-Xylene	0.36	2.0	< 2.0 U
95-47-6	o-Xylene	0.22	1.0	< 1.0 U
95-50-1	1,2-Dichlorobenzene	0.20	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	0.28	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	0.28	1.0	< 1.0 U
107-02-8	Acrolein	1.9	10	< 10 U
74-88-4	Iodomethane	0.26	1.0	< 1.0 U
74-96-4	Bromoethane	0.42	2.0	< 2.0 U
107-13-1	Acrylonitrile	0.50	5.0	< 5.0 U
563-58-6	1,1-Dichloropropene	0.27	1.0	< 1.0 U
74-95-3	Dibromomethane	0.29	1.0	< 1.0 U
630-20-6	1,1,1,2-Tetrachloroethane	0.29	1.0	< 1.0 U
96-12-8	1,2-Dibromo-3-chloropropane	0.44	5.0	< 5.0 U

Lab Sample ID: MB-062713A
LIMS ID: 13-13121
Matrix: Water
Date Analyzed: 06/27/13 20:53

QC Report No: WU70-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
96-18-4	1,2,3-Trichloropropane	0.54	2.0	< 2.0 U
110-57-6	trans-1,4-Dichloro-2-butene	0.86	5.0	< 5.0 U
108-67-8	1,3,5-Trimethylbenzene	0.14	1.0	< 1.0 U
95-63-6	1,2,4-Trimethylbenzene	0.15	1.0	< 1.0 U
87-68-3	Hexachlorobutadiene	0.18	5.0	< 5.0 U
106-93-4	1,2-Dibromoethane	0.18	1.0	< 1.0 U
74-97-5	Bromochloromethane	0.20	1.0	< 1.0 U
75-71-8	Dichlorodifluoromethane	0.25	1.0	< 1.0 U
594-20-7	2,2-Dichloropropane	0.10	1.0	< 1.0 U
142-28-9	1,3-Dichloropropane	0.17	5.0	< 5.0 U
98-82-8	Isopropylbenzene	0.30	1.0	< 1.0 U
103-65-1	n-Propylbenzene	0.12	1.0	< 1.0 U
108-86-1	Bromobenzene	0.24	1.0	< 1.0 U
95-49-8	2-Chlorotoluene	0.14	1.0	< 1.0 U
106-43-4	4-Chlorotoluene	0.21	1.0	< 1.0 U
98-06-6	tert-Butylbenzene	0.40	1.0	< 1.0 U
135-98-8	sec-Butylbenzene	0.13	1.0	< 1.0 U
99-87-6	4-Isopropyltoluene	0.35	1.0	< 1.0 U
104-51-8	n-Butylbenzene	0.37	1.0	< 1.0 U
120-82-1	**1,2,4-Trichlorobenzene**	**0.34**	**5.0**	**0.7 J**
91-20-3	**Naphthalene**	**0.23**	**5.0**	**1.4 J**
87-61-6	**1,2,3-Trichlorobenzene**	**0.32**	**5.0**	**0.8 J**
1634-04-4	Methyl tert-Butyl Ether	0.16	1.0	< 1.0 U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	102%
d8-Toluene	100%
Bromofluorobenzene	99.9%
d4-1,2-Dichlorobenzene	101%

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ANALYTICAL RESOURCES INC Contract: SAIC

Lab Code: ARI Case No.: NPDES SAMPLING SDG No.: WU70

Lab File ID: BFB0627 BFB Injection Date: 06/27/13

Instrument ID: NT5 BFB Injection Time: 0940

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	8.0 - 40.0% of mass 95	18.6
75	30.0 - 66.0% of mass 95	45.7
95	Base Peak, 100% relative abundance	100.0
96	5.0 - 9.0% of mass 95	6.2
173	Less than 2.0% of mass 174	0.0 (0.0)1
174	50.0 - 101.0% of mass 95	83.7
175	4.0 - 9.0% of mass 174	5.9 (7.1)1
176	95.0 - 101.0% of mass 174	80.6 (96.3)1
177	5.0 - 9.0% of mass 176	5.2 (6.4)2

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

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

	EPA SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD1	IC0627	0010627	06/27/13	1043
02	VSTD200	IC0627	2000627	06/27/13	1107
03	VSTD150	IC0627	1500627	06/27/13	1131
04	VSTD100	IC0627	1000627	06/27/13	1155
05	VSTD10	IC0627	0100627	06/27/13	1243
06	VSTD5	IC0627	0050627	06/27/13	1307
07	VSTD2	IC0627	0020627	06/27/13	1330
08	VSTD50	IC0627	0500627A	06/27/13	1548
09	ICV0627	ICV0627	ICV0627	06/27/13	1722
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

WU70:0048

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: ANALYTICAL RESOURCES INC Contract: SAIC

Lab Code: ARI Case No.: NPDES SAMPLING SDG No.: WU70

Lab File ID: BFB0627X BFB Injection Date: 06/27/13

Instrument ID: NT5 BFB Injection Time: 1658

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	8.0 - 40.0% of mass 95	19.6	
75	30.0 - 66.0% of mass 95	46.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0% of mass 95	6.5	
173	Less than 2.0% of mass 174	0.0	(0.0)1
174	50.0 - 101.0% of mass 95	77.7	
175	4.0 - 9.0% of mass 174	5.7	(7.3)1
176	95.0 - 101.0% of mass 174	74.2	(95.5)1
177	5.0 - 9.0% of mass 176	4.9	(6.7)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	VSTD50	CC0627	CC0627	06/27/13	1746
02	LCS0627	LCS0627	LCS0627	06/27/13	1930
03	LCC0627	LCS0627	LCS0627A	06/27/13	2005
04	MB0627	MB0627	MB0627	06/27/13	2053
05	LF-QC-TB-2013061	WU70A	WU70A	06/28/13	0116
06	LF-TP-001-201306	WU70B	WU70B	06/28/13	0140
07					
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU70 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 06/27/13

LAB FILE ID: RF1: 0010627 RF2: 0020627 RF5: 0050627
RF10: 0100627 RF50: 0500627A

COMPOUND	RF1	RF2	RF5	RF10	RF50
Chloromethane	0.550	0.615	0.582	0.631	0.641
Vinyl Chloride	0.472	0.530	0.538	0.515	0.622
Bromomethane	0.328	0.358	0.329	0.315	0.308
Chloroethane	0.343	0.341	0.332	0.331	0.365
Trichlorofluoromethane	0.530	0.568	0.576	0.608	0.646
Acrolein				0.058	0.045
112Trichloro122Trifluoroetha	0.330	0.304	0.374	0.335	0.430
Acetone	0.089	0.080	0.101	0.072	0.093
1,1-Dichloroethene	0.327	0.322	0.388	0.364	0.428
Bromoethane	0.237	0.235	0.285	0.218	0.302
Iodomethane	0.236	0.192	0.263	0.214	0.440
Methylene Chloride	0.789	0.664	0.497	0.323	0.441
Acrylonitrile	0.161	0.216	0.144	0.214	0.140
Carbon Disulfide	1.259	1.166	1.443	1.292	1.536
Trans-1,2-Dichloroethene	0.347	0.423	0.384	0.312	0.450
Vinyl Acetate	0.804	1.161	1.148	1.198	1.099
1,1-Dichloroethane	0.681	0.866	0.703	0.894	0.774
2-Butanone	0.043	0.058	0.059	0.062	0.056
2,2-Dichloropropane	0.560	0.627	0.654	0.695	0.718
Cis-1,2-Dichloroethene	0.374	0.447	0.464	0.505	0.479
Chloroform	0.624	0.750	0.720	0.769	0.744
Bromochloromethane	0.168	0.198	0.206	0.217	0.203
1,1,1-Trichloroethane	0.546	0.666	0.652	0.719	0.690
1,1-Dichloropropene	0.321	0.366	0.425	0.437	0.415
Carbon Tetrachloride	0.284	0.325	0.321	0.362	0.357
1,2-Dichloroethane	0.291	0.371	0.366	0.384	0.358
Benzene	0.904	1.122	1.175	1.262	1.164
Trichloroethene	0.229	0.260	0.274	0.292	0.293
1,2-Dichloropropane	0.245	0.304	0.319	0.344	0.320
Bromodichloromethane	0.279	0.340	0.350	0.370	0.356
Dibromomethane	0.122	0.153	0.151	0.162	0.152
2-Chloroethyl Vinyl Ether		0.043	0.043	0.048	0.057
4-Methyl-2-Pentanone	0.090	0.136	0.142	0.150	0.131
Cis 1,3-dichloropropene	0.301	0.409	0.438	0.477	0.458
Toluene	0.601	0.710	0.724	0.778	0.731
Trans 1,3-Dichloropropene	0.297	0.386	0.399	0.433	0.408
2-Hexanone	0.146	0.222	0.239	0.256	0.219

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU70 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 06/27/13

LAB FILE ID: RF1: 0010627 RF2: 0020627 RF5: 0050627
RF10: 0100627 RF50: 0500627A

COMPOUND	RF1	RF2	RF5	RF10	RF50
1,1,2-Trichloroethane	0.186	0.232	0.234	0.247	0.225
1,3-Dichloropropane	0.296	0.403	0.432	0.468	0.430
Tetrachloroethene	0.235	0.282	0.286	0.312	0.322
Chlorodibromomethane	0.200	0.249	0.260	0.277	0.267
1,2-Dibromoethane	0.165	0.224	0.226	0.240	0.223
Chlorobenzene	0.612	0.740	0.753	0.806	0.758
Ethyl Benzene	1.014	1.260	1.331	1.436	1.374
1,1,1,2-Tetrachloroethane	0.209	0.247	0.265	0.282	0.273
m,p-xylene	0.353	0.465	0.491	0.534	0.515
o-Xylene	0.308	0.410	0.450	0.506	0.502
Styrene	0.498	0.726	0.788	0.857	0.837
Bromoform	0.253	0.343	0.350	0.384	0.346
1,1,2,2-Tetrachloroethane	0.424	0.589	0.583	0.634	0.558
1,2,3-Trichloropropane	0.129	0.181	0.183	0.196	0.173
Trans-1,4-Dichloro 2-Butene	0.164	0.197	0.211	0.226	0.214
N-Propyl Benzene	1.974	2.607	2.753	3.073	2.858
Bromobenzene	0.417	0.572	0.590	0.646	0.585
Isopropyl Benzene	1.358	2.027	2.262	2.555	2.404
2-Chloro Toluene	1.126	1.543	1.651	1.852	1.740
4-Chloro Toluene	1.127	1.633	1.720	1.908	1.834
T-Butyl Benzene	1.050	1.489	1.666	1.886	1.794
1,3,5-Trimethyl Benzene	1.204	1.739	1.897	2.147	2.043
1,2,4-Trimethylbenzene	1.143	1.697	1.850	2.101	2.015
S-Butyl Benzene	1.662	2.354	2.497	2.778	2.643
4-Isopropyl Toluene	1.245	1.715	1.957	2.251	2.206
1,3-Dichlorobenzene	0.820	1.088	1.099	1.189	1.124
1,4-Dichlorobenzene	0.901	1.102	1.106	1.215	1.149
N-Butyl Benzene	1.177	1.577	1.742	2.006	2.108
1,2-Dichlorobenzene	0.822	1.053	1.066	1.143	1.055
1,2-Dibromo 3-Chloropropane		0.104	0.112	0.120	0.109
1,2,4-Trichlorobenzene		0.662	0.673	0.787	0.820
Hexachloro 1,3-Butadiene		0.453	0.458	0.500	0.518
Naphthalene		1.641	1.651	1.873	1.648
1,2,3-Trichlorobenzene		0.698	0.720	0.797	0.759
Dichlorodifluoromethane	0.293	0.286	0.268	0.259	0.335
Methyl tert butyl ether	0.941	1.242	1.147	0.872	1.214

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU70 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 06/27/13

LAB FILE ID: RF1: 0010627 RF2: 0020627 RF5: 0050627
RF10: 0100627 RF50: 0500627A

COMPOUND	RF1	RF2	RF5	RF10	RF50
d4-1,2-Dichloroethane	0.550	0.561	0.550	0.544	0.548
d8-Toluene	1.260	1.244	1.247	1.242	1.226
4-Bromofluorobenzene	0.535	0.533	0.532	0.527	0.534
d4-1,2-Dichlorobenzene	0.927	0.918	0.911	0.920	0.901
Dibromofluoromethane	0.491	0.492	0.477	0.488	0.456

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU70 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 06/27/13

LAB FILE ID: RF100: 1000627 RF150: 1500627 RF200: 2000627

COMPOUND	RF100	RF150	RF200
Chloromethane	0.590	0.589	0.572
Vinyl Chloride	0.574	0.520	0.525
Bromomethane	0.288	0.276	0.262
Chloroethane	0.326	0.300	0.276
Trichlorofluoromethane	0.604	0.612	0.618
Acrolein	0.054	0.059	0.056
112Trichloro122Trifluoroetha	0.307	0.332	0.327
Acetone	0.063		
1,1-Dichloroethene	0.322	0.345	0.331
Bromoethane	0.203	0.208	0.200
Iodomethane	0.281	0.304	0.335
Methylene Chloride			
Acrylonitrile	0.215	0.173	
Carbon Disulfide	1.136	1.186	1.104
Trans-1,2-Dichloroethene	0.289	0.300	0.304
Vinyl Acetate	1.152	1.105	1.009
1,1-Dichloroethane	0.901		
2-Butanone	0.062	0.061	0.060
2,2-Dichloropropane	0.689	0.692	0.700
Cis-1,2-Dichloroethene	0.477	0.474	0.458
Chloroform	0.758	0.746	0.736
Bromochloromethane	0.207	0.205	0.201
1,1,1-Trichloroethane	0.694	0.698	0.692
1,1-Dichloropropene	0.402	0.400	0.391
Carbon Tetrachloride	0.361	0.365	0.366
1,2-Dichloroethane	0.357	0.351	0.343
Benzene	1.102	1.024	0.946
Trichloroethene	0.283	0.285	0.280
1,2-Dichloropropane	0.323	0.315	0.298
Bromodichloromethane	0.354	0.347	0.336
Dibromomethane	0.155	0.153	0.149
2-Chloroethyl Vinyl Ether	0.050	0.049	0.046
4-Methyl-2-Pentanone	0.136	0.130	0.125
Cis 1,3-dichloropropene	0.454	0.442	0.415
Toluene	0.694	0.654	0.610
Trans 1,3-Dichloropropene	0.409	0.399	0.381
2-Hexanone	0.227	0.231	0.186

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU70 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 06/27/13

LAB FILE ID: RF100: 1000627 RF150: 1500627 RF200: 2000627

COMPOUND	RF100	RF150	RF200
1,1,2-Trichloroethane	0.231	0.224	0.215
1,3-Dichloropropane	0.440	0.429	0.411
Tetrachloroethene	0.305	0.307	0.306
Chlorodibromomethane	0.273	0.271	0.266
1,2-Dibromoethane	0.228	0.224	0.215
Chlorobenzene	0.717	0.687	0.648
Ethyl Benzene	1.205	1.094	1.009
1,1,1,2-Tetrachloroethane	0.269	0.267	0.261
m,p-xylene	0.464	0.428	0.400
o-Xylene	0.487	0.478	0.462
Styrene	0.784	0.732	0.680
Bromoform	0.370	0.370	0.362
1,1,2,2-Tetrachloroethane	0.600	0.612	0.598
1,2,3-Trichloropropane	0.186	0.191	0.189
Trans-1,4-Dichloro 2-Butene	0.237	0.237	0.246
N-Propyl Benzene	2.469	2.236	2.018
Bromobenzene	0.588	0.592	0.571
Isopropyl Benzene	2.176	2.006	1.804
2-Chloro Toluene	1.644	1.580	1.462
4-Chloro Toluene	1.700	1.637	1.553
T-Butyl Benzene	1.691	1.621	1.507
1,3,5-Trimethyl Benzene	1.882	1.775	1.618
1,2,4-Trimethylbenzene	1.845	1.739	1.594
S-Butyl Benzene	2.310	2.116	1.907
4-Isopropyl Toluene	1.954	1.812	1.657
1,3-Dichlorobenzene	1.041	1.013	0.963
1,4-Dichlorobenzene	1.074	1.057	1.021
N-Butyl Benzene	1.868	1.759	1.648
1,2-Dichlorobenzene	1.008	0.998	0.984
1,2-Dibromo 3-Chloropropane	0.123	0.130	0.134
1,2,4-Trichlorobenzene	0.766	0.800	0.802
Hexachloro 1,3-Butadiene	0.482	0.498	0.508
Naphthalene	1.688	1.662	1.559
1,2,3-Trichlorobenzene	0.738	0.778	0.775
Dichlorodifluoromethane	0.284	0.286	0.316
Methyl tert butyl ether			

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU70 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 06/27/13

LAB FILE ID: RF100: 1000627 RF150: 1500627 RF200: 2000627

COMPOUND	RF100	RF150	RF200
d4-1,2-Dichloroethane	0.533	0.541	0.549
d8-Toluene	1.239	1.235	1.223
4-Bromofluorobenzene	0.531	0.532	0.532
d4-1,2-Dichlorobenzene	0.894	0.908	0.918
Dibromofluoromethane	0.483	0.484	0.479

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU70 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 06/27/13

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R^2	
Chloromethane	AVRG	0.596	5.1	
Vinyl Chloride	AVRG	0.537	8.3	
Bromomethane	AVRG	0.308	10.3	
Chloroethane	AVRG	0.327	8.4	
Trichlorofluoromethane	AVRG	0.595	6.0	
Acrolein	AVRG	0.055	10.4	
112Trichloro122Trifluoroetha	AVRG	0.342	12.0	
Acetone	AVRG	0.083	17.0	
1,1-Dichloroethene	AVRG	0.353	10.7	
Bromoethane	AVRG	0.236	16.2	
Iodomethane	AVRG	0.283	27.8	<-
Methylene Chloride	LINR		0.9946	
Acrylonitrile	AVRG	0.180	19.0	
Carbon Disulfide	AVRG	1.265	12.1	
Trans-1,2-Dichloroethene	AVRG	0.351	17.4	
Vinyl Acetate	AVRG	1.084	11.7	
1,1-Dichloroethane	AVRG	0.803	12.1	
2-Butanone	AVRG	0.058	11.1	
2,2-Dichloropropane	AVRG	0.667	7.8	
Cis-1,2-Dichloroethene	AVRG	0.460	8.4	
Chloroform	AVRG	0.731	6.2	
Bromochloromethane	AVRG	0.201	7.2	
1,1,1-Trichloroethane	AVRG	0.670	8.0	
1,1-Dichloropropene	AVRG	0.394	9.3	
Carbon Tetrachloride	AVRG	0.343	8.7	
1,2-Dichloroethane	AVRG	0.353	8.0	
Benzene	AVRG	1.087	11.2	
Trichloroethene	AVRG	0.275	7.8	
1,2-Dichloropropane	AVRG	0.308	9.4	
Bromodichloromethane	AVRG	0.342	8.1	
Dibromomethane	AVRG	0.150	7.8	
2-Chloroethyl Vinyl Ether	AVRG	0.048	9.7	
4-Methyl-2-Pentanone	AVRG	0.130	13.8	
Cis 1,3-dichloropropene	AVRG	0.424	12.9	
Toluene	AVRG	0.688	8.9	
Trans 1,3-Dichloropropene	AVRG	0.389	10.4	
2-Hexanone	AVRG	0.216	16.0	

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

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU70 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 06/27/13

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R^2
1,1,2-Trichloroethane	AVRG	0.224	8.0
1,3-Dichloropropane	AVRG	0.414	12.4
Tetrachloroethene	AVRG	0.294	9.3
Chlorodibromomethane	AVRG	0.258	9.7
1,2-Dibromoethane	AVRG	0.218	10.4
Chlorobenzene	AVRG	0.715	8.9
Ethyl Benzene	AVRG	1.216	13.5
1,1,1,2-Tetrachloroethane	AVRG	0.259	8.7
m,p-xylene	AVRG	0.456	13.2
o-Xylene	AVRG	0.450	14.5
Styrene	AVRG	0.738	15.3
Bromoform	AVRG	0.347	11.7
1,1,2,2-Tetrachloroethane	AVRG	0.575	11.3
1,2,3-Trichloropropane	AVRG	0.179	11.7
Trans-1,4-Dichloro 2-Butene	AVRG	0.217	12.3
N-Propyl Benzene	AVRG	2.498	15.9
Bromobenzene	AVRG	0.570	11.6
Isopropyl Benzene	AVRG	2.074	18.0
2-Chloro Toluene	AVRG	1.575	13.8
4-Chloro Toluene	AVRG	1.639	14.4
T-Butyl Benzene	AVRG	1.588	16.1
1,3,5-Trimethyl Benzene	AVRG	1.788	16.2
1,2,4-Trimethylbenzene	AVRG	1.748	16.9
S-Butyl Benzene	AVRG	2.283	16.4
4-Isopropyl Toluene	AVRG	1.850	17.5
1,3-Dichlorobenzene	AVRG	1.042	10.9
1,4-Dichlorobenzene	AVRG	1.078	8.6
N-Butyl Benzene	AVRG	1.736	16.5
1,2-Dichlorobenzene	AVRG	1.016	9.2
1,2-Dibromo 3-Chloropropane	AVRG	0.119	9.4
1,2,4-Trichlorobenzene	AVRG	0.759	8.5
Hexachloro 1,3-Butadiene	AVRG	0.488	5.1
Naphthalene	AVRG	1.674	5.7
1,2,3-Trichlorobenzene	AVRG	0.752	4.7
Dichlorodifluoromethane	AVRG	0.291	8.4
Methyl tert butyl ether	AVRG	1.083	15.4

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

FORM 6
VOLATILE INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU70 Project: NPDES SAMPLING

Instrument ID: NT5 Calibration Date: 06/27/13

COMPOUND	CURVE TYPE	AVE RF	%RSD OR R^2
d4-1,2-Dichloroethane	AVRG	0.547	1.5
d8-Toluene	AVRG	1.239	0.9
4-Bromofluorobenzene	AVRG	0.532	0.4
d4-1,2-Dichlorobenzene	AVRG	0.912	1.2
Dibromofluoromethane	AVRG	0.481	2.4

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

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU70 Project: NPDES SAMPLING

Instrument ID: NT5 Cont. Calib. Date: 06/27/13

Init. Calib. Date: 06/27/13 Cont. Calib. Time: 1746

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Chloromethane	0.596	0.5801	0.100	AVRG	-2.7	
Vinyl Chloride	0.537	0.5595	0.010	AVRG	4.2	
Bromomethane	0.308	0.2853	0.010	AVRG	-7.4	
Chloroethane	0.327	0.3412	0.010	AVRG	4.3	
Trichlorofluoromethane	0.595	0.5984	0.010	AVRG	0.6	
Acrolein	0.054	0.1013	0.010	AVRG	87.6	<-
112Trichloro122Trifluoroetha	0.342	0.3958	0.010	AVRG	15.7	
Acetone	0.083	0.0800	0.010	AVRG	-3.6	
1,1-Dichloroethene	0.353	0.3984	0.010	AVRG	12.9	
Bromoethane	0.236	0.2762	0.010	AVRG	17.0	
Iodomethane	0.283	0.4071	0.010	AVRG	43.8	<-
Methylene Chloride	50.000	45.295	0.010	LINR	-9.4	
Acrylonitrile	0.180	0.1374	0.010	AVRG	-23.7	<-
Carbon Disulfide	1.265	1.4301	0.010	AVRG	13.0	
Trans-1,2-Dichloroethene	0.351	0.3936	0.010	AVRG	12.1	
Vinyl Acetate	1.084	1.0742	0.010	AVRG	-0.9	
1,1-Dichloroethane	0.803	0.6906	0.100	AVRG	-14.0	
2-Butanone	0.058	0.0554	0.010	AVRG	-4.5	
2,2-Dichloropropane	0.667	0.6606	0.010	AVRG	-1.0	
Cis-1,2-Dichloroethene	0.460	0.4525	0.010	AVRG	-1.6	
Chloroform	0.731	0.7016	0.010	AVRG	-4.0	
Bromochloromethane	0.201	0.1933	0.010	AVRG	-3.8	
1,1,1-Trichloroethane	0.670	0.6452	0.010	AVRG	-3.7	
1,1-Dichloropropene	0.395	0.3926	0.010	AVRG	-0.6	
Carbon Tetrachloride	0.343	0.3310	0.010	AVRG	-3.5	
1,2-Dichloroethane	0.353	0.3400	0.010	AVRG	-3.7	
Benzene	1.087	1.0992	0.010	AVRG	1.1	
Trichloroethene	0.274	0.2741	0.010	AVRG	0.0	
1,2-Dichloropropane	0.308	0.3025	0.010	AVRG	-1.8	
Bromodichloromethane	0.342	0.3360	0.010	AVRG	-1.8	
Dibromomethane	0.150	0.1458	0.010	AVRG	-2.8	
2-Chloroethyl Vinyl Ether	0.048	0.0553	0.010	AVRG	15.2	
4-Methyl-2-Pentanone	0.130	0.1309	0.010	AVRG	0.7	
Cis 1,3-dichloropropene	0.424	0.4302	0.010	AVRG	1.5	
Toluene	0.688	0.6873	0.010	AVRG	-0.1	
Trans 1,3-Dichloropropene	0.389	0.3884	0.010	AVRG	-0.2	
2-Hexanone	0.216	0.2215	0.010	AVRG	2.5	

<- 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: SAIC

ARI Job No: WU70 Project: NPDES SAMPLING

Instrument ID: NT5 Cont. Calib. Date: 06/27/13

Init. Calib. Date: 06/27/13 Cont. Calib. Time: 1746

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
1,1,2-Trichloroethane	0.224	0.2153	0.010	AVRG	-3.9
1,3-Dichloropropane	0.414	0.4144	0.010	AVRG	0.1
Tetrachloroethene	0.294	0.2990	0.010	AVRG	1.7
Chlorodibromomethane	0.258	0.2558	0.010	AVRG	-0.8
1,2-Dibromoethane	0.218	0.2160	0.010	AVRG	-0.9
Chlorobenzene	0.715	0.7206	0.300	AVRG	0.8
Ethyl Benzene	1.215	1.2977	0.010	AVRG	6.8
1,1,1,2-Tetrachloroethane	0.259	0.2574	0.010	AVRG	-0.6
m,p-xylene	0.456	0.4870	0.010	AVRG	6.8
o-Xylene	0.450	0.4727	0.010	AVRG	5.0
Styrene	0.738	0.7953	0.010	AVRG	7.8
Bromoform	0.347	0.3378	0.100	AVRG	-2.6
1,1,2,2-Tetrachloroethane	0.575	0.5523	0.300	AVRG	-3.9
1,2,3-Trichloropropane	0.178	0.1738	0.010	AVRG	-2.4
Trans-1,4-Dichloro 2-Butene	0.216	0.2054	0.010	AVRG	-4.9
N-Propyl Benzene	2.498	2.7177	0.010	AVRG	8.8
Bromobenzene	0.570	0.5620	0.010	AVRG	-1.4
Isopropyl Benzene	2.074	2.3088	0.010	AVRG	11.3
2-Chloro Toluene	1.575	1.6662	0.010	AVRG	5.8
4-Chloro Toluene	1.639	1.7328	0.010	AVRG	5.7
T-Butyl Benzene	1.588	1.7190	0.010	AVRG	8.2
1,3,5-Trimethyl Benzene	1.788	1.9443	0.010	AVRG	8.7
1,2,4-Trimethylbenzene	1.748	1.9137	0.010	AVRG	9.5
S-Butyl Benzene	2.283	2.5135	0.010	AVRG	10.1
4-Isopropyl Toluene	1.850	2.0799	0.010	AVRG	12.4
1,3-Dichlorobenzene	1.042	1.0613	0.010	AVRG	1.8
1,4-Dichlorobenzene	1.078	1.0829	0.010	AVRG	0.4
N-Butyl Benzene	1.736	1.9665	0.010	AVRG	13.3
1,2-Dichlorobenzene	1.016	1.0029	0.010	AVRG	-1.3
1,2-Dibromo 3-Chloropropane	0.119	0.1072	0.010	AVRG	-9.9
1,2,4-Trichlorobenzene	0.758	0.7487	0.010	AVRG	-1.2
Hexachloro 1,3-Butadiene	0.488	0.4674	0.010	AVRG	-4.2
Naphthalene	1.674	1.5359	0.010	AVRG	-8.2
1,2,3-Trichlorobenzene	0.752	0.6972	0.010	AVRG	-7.3
Dichlorodifluoromethane	0.291	0.2978	0.010	AVRG	2.3
Methyl tert butyl ether	1.083	1.1126	0.010	AVRG	2.7

<- 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: SAIC

ARI Job No: WU70 Project: NPDES SAMPLING

Instrument ID: NT5 Cont. Calib. Date: 06/27/13

Init. Calib. Date: 06/27/13 Cont. Calib. Time: 1746

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
d4-1,2-Dichloroethane	0.547	0.5452	0.010	AVRG	-0.3
d8-Toluene	1.240	1.2317	0.010	AVRG	-0.7
4-Bromofluorobenzene	0.532	0.5352	0.010	AVRG	0.6
d4-1,2-Dichlorobenzene	0.912	0.9059	0.010	AVRG	-0.7
Dibromofluoromethane	0.481	0.4524	0.010	AVRG	-5.9

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

FORM VII VOA

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU70 Project: NPDES SAMPLING

Ical Midpoint ID: 0100627 Ical Date: 06/27/13

Instrument ID: NT5 Project Run Date: 06/27/13

		IS1(PFB) AREA	#	RT	#	IS2(DFB) AREA	#	RT	#	IS3(CLB) AREA	#	RT	#
	ICAL MIDPT	1723537		4.65		2831384		5.11		2756425		7.59	
	UPPER LIMIT	3447074		5.15		5662768		5.61		5512850		8.09	
	LOWER LIMIT	861768		4.15		1415692		4.61		1378212		7.09	
	Sample ID												
01	ICV0627	1611945		4.67		2662626		5.12		2557796		7.60	
02													
03													
04													
05													
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: SAIC

ARI Job No: WU70 | Project: NPDES SAMPLING

Ical Midpoint ID: 0100627 | Ical Date: 06/27/13

Instrument ID: NT5 | Project Run Date: 06/27/13

		IS4 (DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	1422668	9.67				
	UPPER LIMIT	2845336	10.17				
	LOWER LIMIT	711334	9.17				
	Sample ID						
01	ICV0627	1386219	9.67				
02							
03							
04							
05							
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.

WU70:0603

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC | Client: SAIC

ARI Job No: WU70 | Project: NPDES SAMPLING

Ical Midpoint ID: 0100627 | Ical Date: 06/27/13

Instrument ID: NT5 | Project Run Date: 06/27/13

		IS1(PFB) AREA #	RT #	IS2(DFB) AREA #	RT #	IS3(CLB) AREA #	RT #
	ICAL MIDPT	1723537	4.65	2831384	5.11	2756425	7.59
	UPPER LIMIT	3447074	5.15	5662768	5.61	5512850	8.09
	LOWER LIMIT	861768	4.15	1415692	4.61	1378212	7.09
	Sample ID						
01	LCS0627	1473161	4.67	2440245	5.11	2335287	7.60
02	LCC0627	1561743	4.66	2584151	5.11	2491123	7.60
03	MB0627	1528018	4.67	2529819	5.12	2494290	7.60
04	LF-QC-TB-201	1682143	4.67	2783621	5.12	2779448	7.60
05	LF-TP-001-20	965746	4.67	1645347	5.12	1669959	7.60
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: SAIC

ARI Job No: WU70 Project: NPDES SAMPLING

Ical Midpoint ID: 0100627 Ical Date: 06/27/13

Instrument ID: NT5 Project Run Date: 06/27/13

		IS4 (DCB) AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	1422668	9.67				
	UPPER LIMIT	2845336	10.17				
	LOWER LIMIT	711334	9.17				
	Sample ID						
01	LCS0627	1219894	9.67				
02	LCC0627	1341563	9.67				
03	MB0627	1323306	9.67				
04	LF-QC-TB-201	1510132	9.67				
05	LF-TP-001-20	857768	9.67				
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.

WU70:00005

Semivolatile Analysis
Report and Summary QC Forms

ARI Job ID: WU70

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546

Sample ID: LF-TP-001-20130619-S
SAMPLE

Lab Sample ID: WU70B
LIMS ID: 13-13122
Matrix: Sediment
Data Release Authorized:
Reported: 07/09/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted: 06/27/13
Date Analyzed: 07/06/13 00:10
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 44.3%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	**Phenol**	**8.6**	**20**	**43**
111-44-4	Bis-(2-Chloroethyl) Ether	3.3	20	< 20 U
95-57-8	2-Chlorophenol	2.4	20	< 20 U
541-73-1	1,3-Dichlorobenzene	2.6	20	< 20 U
106-46-7	1,4-Dichlorobenzene	2.8	20	< 20 U
100-51-6	Benzyl Alcohol	6.1	20	< 20 U
95-50-1	1,2-Dichlorobenzene	2.5	20	< 20 U
95-48-7	2-Methylphenol	5.2	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	3.7	20	< 20 U
106-44-5	**4-Methylphenol**	**6.6**	**20**	**18 J**
621-64-7	N-Nitroso-Di-N-Propylamine	3.3	20	< 20 U
67-72-1	Hexachloroethane	2.9	20	< 20 U
98-95-3	Nitrobenzene	4.0	20	< 20 U
78-59-1	Isophorone	2.8	20	< 20 U
88-75-5	2-Nitrophenol	39	100	< 100 U
105-67-9	2,4-Dimethylphenol	3.4	40	< 40 U
65-85-0	Benzoic Acid	100	400	< 400 U
111-91-1	bis(2-Chloroethoxy) Methane	2.0	20	< 20 U
120-83-2	2,4-Dichlorophenol	21	200	< 200 U
120-82-1	1,2,4-Trichlorobenzene	3.5	20	< 20 U
91-20-3	**Naphthalene**	**2.7**	**20**	**100**
106-47-8	4-Chloroaniline	22	270	< 270 U
87-68-3	Hexachlorobutadiene	4.6	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	15	100	< 100 U
91-57-6	**2-Methylnaphthalene**	**3.0**	**20**	**220**
77-47-4	Hexachlorocyclopentadiene	66	400	< 400 U
88-06-2	2,4,6-Trichlorophenol	22	100	< 100 U
95-95-4	2,4,5-Trichlorophenol	21	100	< 100 U
91-58-7	2-Chloronaphthalene	2.6	20	< 20 U
88-74-4	2-Nitroaniline	18	100	< 100 U
131-11-3	Dimethylphthalate	2.9	20	< 20 U
208-96-8	Acenaphthylene	5.7	20	< 20 U
99-09-2	3-Nitroaniline	22	100	< 100 U
83-32-9	**Acenaphthene**	**3.3**	**20**	**26**
51-28-5	2,4-Dinitrophenol	110	850	< 850 U
100-02-7	4-Nitrophenol	35	100	< 100 U
132-64-9	**Dibenzofuran**	**4.1**	**20**	**25**
606-20-2	2,6-Dinitrotoluene	30	100	< 100 U
121-14-2	2,4-Dinitrotoluene	19	100	< 100 U
84-66-2	Diethylphthalate	36	50	< 50 U
7005-72-3	4-Chlorophenyl-phenylether	5.3	20	< 20 U
86-73-7	**Fluorene**	**4.3**	**20**	**48**
100-01-6	4-Nitroaniline	38	100	< 100 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: LF-TP-001-20130619-S**
Extraction Method: SW3546 **SAMPLE**

Lab Sample ID: WU70B QC Report No: WU70-SAIC
LIMS ID: 13-13122 Project: NPDES Sampling Support
Matrix: Sediment 209977
Date Analyzed: 07/06/13 00:10

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	21	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	5.4	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	5.0	20	< 20 U
118-74-1	Hexachlorobenzene	4.3	20	< 20 U
87-86-5	Pentachlorophenol	48	200	< 200 U
85-01-8	**Phenanthrene**	**3.6**	**20**	**220**
86-74-8	Carbazole	2.7	20	< 20 U
120-12-7	**Anthracene**	**4.5**	**20**	**76**
84-74-2	Di-n-Butylphthalate	8.1	20	< 20 U
206-44-0	**Fluoranthene**	**2.9**	**20**	**340**
129-00-0	**Pyrene**	**1.9**	**20**	**570**
85-68-7	Butylbenzylphthalate	6.1	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	18	150	< 150 U
56-55-3	**Benzo(a)anthracene**	**3.3**	**20**	**190**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**15**	**25**	**850**
218-01-9	**Chrysene**	**3.7**	**20**	**260**
117-84-0	Di-n-Octyl phthalate	5.8	20	< 20 U
50-32-8	**Benzo(a)pyrene**	**5.4**	**20**	**180**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**4.7**	**20**	**65**
53-70-3	**Dibenz(a,h)anthracene**	**4.3**	**20**	**30**
191-24-2	**Benzo(g,h,i)perylene**	**4.4**	**20**	**91**
62-53-3	Aniline	40	540	< 540 U
62-75-9	N-Nitrosodimethylamine	14	100	< 100 U
90-12-0	**1-Methylnaphthalene**	**2.7**	**20**	**240**
TOTBFA	**Total Benzofluoranthenes**	**2.7**	**40**	**270**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	70.0%	2-Fluorobiphenyl	84.8%
d14-p-Terphenyl	99.4%	d4-1,2-Dichlorobenzene	65.2%
d5-Phenol	68.5%	2-Fluorophenol	66.8%
2,4,6-Tribromophenol	67.2%	d4-2-Chlorophenol	68.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546

Sample ID: LF-LS-004-20130619-S
SAMPLE

Lab Sample ID: WU70C
LIMS ID: 13-13123
Matrix: Sediment
Data Release Authorized:
Reported: 07/09/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted: 06/27/13
Date Analyzed: 07/06/13 00:47
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.3 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 21.1%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	**Phenol**	**8.4**	**20**	**120**
111-44-4	Bis-(2-Chloroethyl) Ether	3.3	20	< 20 U
95-57-8	2-Chlorophenol	2.3	20	< 20 U
541-73-1	1,3-Dichlorobenzene	2.6	20	< 20 U
106-46-7	1,4-Dichlorobenzene	2.8	20	< 20 U
100-51-6	Benzyl Alcohol	5.9	20	< 20 U
95-50-1	1,2-Dichlorobenzene	2.4	20	< 20 U
95-48-7	**2-Methylphenol**	**5.1**	**20**	**25**
108-60-1	2,2'-Oxybis(1-Chloropropane)	3.7	20	< 20 U
106-44-5	**4-Methylphenol**	**6.5**	**20**	**45**
621-64-7	N-Nitroso-Di-N-Propylamine	3.3	20	< 20 U
67-72-1	Hexachloroethane	2.9	20	< 20 U
98-95-3	Nitrobenzene	4.0	20	< 20 U
78-59-1	Isophorone	2.8	20	< 20 U
88-75-5	2-Nitrophenol	38	98	< 98 U
105-67-9	**2,4-Dimethylphenol**	**3.4**	**39**	**20 J**
65-85-0	Benzoic Acid	98	390	< 390 U
111-91-1	bis(2-Chloroethoxy) Methane	1.9	20	< 20 U
120-83-2	2,4-Dichlorophenol	21	200	< 200 U
120-82-1	1,2,4-Trichlorobenzene	3.4	20	< 20 U
91-20-3	**Naphthalene**	**2.7**	**20**	**170**
106-47-8	4-Chloroaniline	22	260	< 260 U
87-68-3	Hexachlorobutadiene	4.5	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	15	98	< 98 U
91-57-6	**2-Methylnaphthalene**	**3.0**	**20**	**310**
77-47-4	Hexachlorocyclopentadiene	65	390	< 390 U
88-06-2	2,4,6-Trichlorophenol	22	98	< 98 U
95-95-4	2,4,5-Trichlorophenol	21	98	< 98 U
91-58-7	2-Chloronaphthalene	2.6	20	< 20 U
88-74-4	2-Nitroaniline	18	98	< 98 U
131-11-3	Dimethylphthalate	2.8	20	< 20 U
208-96-8	Acenaphthylene	5.6	20	< 20 U
99-09-2	3-Nitroaniline	22	98	< 98 U
83-32-9	**Acenaphthene**	**3.2**	**20**	**20**
51-28-5	2,4-Dinitrophenol	110	830	< 830 U
100-02-7	4-Nitrophenol	34	98	< 98 U
132-64-9	**Dibenzofuran**	**4.0**	**20**	**56**
606-20-2	2,6-Dinitrotoluene	30	98	< 98 U
121-14-2	2,4-Dinitrotoluene	19	98	< 98 U
84-66-2	Diethylphthalate	36	49	< 49 U
7005-72-3	4-Chlorophenyl-phenylether	5.2	20	< 20 U
86-73-7	**Fluorene**	**4.2**	**20**	**45**
100-01-6	4-Nitroaniline	37	98	< 98 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546

Sample ID: LF-LS-004-20130619-S
SAMPLE

Lab Sample ID: WU70C
LIMS ID: 13-13123
Matrix: Sediment
Date Analyzed: 07/06/13 00:47

QC Report No: WU70-SAIC
Project: NPDES Sampling Support
209977

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	21	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	5.3	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	4.9	20	< 20 U
118-74-1	Hexachlorobenzene	4.2	20	< 20 U
87-86-5	Pentachlorophenol	47	200	< 200 U
85-01-8	**Phenanthrene**	**3.5**	**20**	**220**
86-74-8	**Carbazole**	**2.6**	**20**	**37**
120-12-7	**Anthracene**	**4.4**	**20**	**60**
84-74-2	**Di-n-Butylphthalate**	**8.0**	**20**	**13 J**
206-44-0	**Fluoranthene**	**2.8**	**20**	**140**
129-00-0	**Pyrene**	**1.9**	**20**	**180**
85-68-7	**Butylbenzylphthalate**	**6.0**	**20**	**35**
91-94-1	3,3'-Dichlorobenzidine	17	150	< 150 U
56-55-3	**Benzo(a)anthracene**	**3.2**	**20**	**130**
117-81-7	**bis(2-Ethylhexyl)phthalate**	**14**	**24**	**520**
218-01-9	**Chrysene**	**3.7**	**20**	**170**
117-84-0	Di-n-Octyl phthalate	5.7	20	< 20 U
50-32-8	**Benzo(a)pyrene**	**5.3**	**20**	**160**
193-39-5	**Indeno(1,2,3-cd)pyrene**	**4.6**	**20**	**56**
53-70-3	**Dibenz(a,h)anthracene**	**4.2**	**20**	**73**
191-24-2	**Benzo(g,h,i)perylene**	**4.3**	**20**	**140**
62-53-3	Aniline	39	530	< 530 U
62-75-9	N-Nitrosodimethylamine	14	98	< 98 U
90-12-0	**1-Methylnaphthalene**	**2.6**	**20**	**200**
TOTBFA	**Total Benzofluoranthenes**	**2.7**	**39**	**120**

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	65.4%	2-Fluorobiphenyl	76.6%
d14-p-Terphenyl	91.8%	d4-1,2-Dichlorobenzene	63.2%
d5-Phenol	65.5%	2-Fluorophenol	60.4%
2,4,6-Tribromophenol	44.1%	d4-2-Chlorophenol	65.6%

ANALYTICAL RESOURCES INCORPORATED

SW8270 SEMIVOLATILES SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WU70-SAIC
Project: NPDES Sampling Support
209977

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
LF-TP-001-20130619	70.0%	84.8%	99.4%	65.2%	68.5%	66.8%	67.2%	68.9%	0
MB-062713	64.4%	73.4%	95.8%	65.2%	62.7%	62.4%	67.2%	64.9%	0
LCS-062713	68.2%	70.6%	105%	64.2%	69.9%	67.6%	77.6%	68.4%	0
LF-LS-004-20130619	65.4%	76.6%	91.8%	63.2%	65.5%	60.4%	44.1%	65.6%	0
LF-LS-004-20130619 MS	64.8%	77.2%	90.2%	63.2%	67.7%	63.1%	51.2%	66.4%	0
LF-LS-004-20130619 MSD	64.6%	79.0%	89.4%	62.2%	67.1%	63.1%	54.1%	65.3%	0

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(33-120)	(30-120)
(FBP) = 2-Fluorobiphenyl	(35-120)	(35-120)
(TPH) = d14-p-Terphenyl	(42-124)	(37-120)
(DCB) = d4-1,2-Dichlorobenzene	(37-120)	(32-120)
(PHL) = d5-Phenol	(32-120)	(29-120)
(2FP) = 2-Fluorophenol	(32-120)	(27-120)
(TBP) = 2,4,6-Tribromophenol	(23-133)	(24-134)
(2CP) = d4-2-Chlorophenol	(36-120)	(31-120)

Prep Method: SW3546
Log Number Range: 13-13122 to 13-13123

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

Sample ID: LF-LS-004-20130619-S
MS/MSD

Lab Sample ID: WU70C
LIMS ID: 13-13123
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/12/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted MS/MSD: 06/27/13

Date Analyzed MS: 07/06/13 01:24
MSD: 07/06/13 02:00
Instrument/Analyst MS: NT10/YZ
MSD: NT10/YZ
GPC Cleanup: Yes

Sample Amount MS: 10.27 g-dry-wt
MSD: 10.28 g-dry-wt
Final Extract Volume MS: 1.0 mL
MSD: 1.0 mL
Dilution Factor MS: 1.00
MSD: 1.00
Percent Moisture: 21.1 %

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Phenol	120	455	487	68.8%	433	486	64.4%	5.0%
Bis-(2-Chloroethyl) Ether	< 20 U	383	487	78.6%	365	486	75.1%	4.8%
2-Chlorophenol	< 20 U	339	487	69.6%	328	486	67.5%	3.3%
1,3-Dichlorobenzene	< 20 U	347	487	71.3%	339	486	69.8%	2.3%
1,4-Dichlorobenzene	< 20 U	354	487	72.7%	342	486	70.4%	3.4%
Benzyl Alcohol	< 20 U	422	487	86.7%	397	486	81.7%	6.1%
1,2-Dichlorobenzene	< 20 U	359	487	73.7%	344	486	70.8%	4.3%
2-Methylphenol	25	347	487	66.1%	336	486	64.0%	3.2%
2,2'-Oxybis(1-Chloropropane)	< 20 U	352	487	72.3%	354	486	72.8%	0.6%
4-Methylphenol	45	727	974	70.0%	697	973	67.0%	4.2%
N-Nitroso-Di-N-Propylamine	< 20 U	396	487	81.3%	375	486	77.2%	5.4%
Hexachloroethane	< 20 U	343	487	70.4%	327	486	67.3%	4.8%
Nitrobenzene	< 20 U	379	487	77.8%	367	486	75.5%	3.2%
Isophorone	< 20 U	382	487	78.4%	366	486	75.3%	4.3%
2-Nitrophenol	< 98 U	328	487	67.4%	313	486	64.4%	4.7%
2,4-Dimethylphenol	20 J	863	1460	57.7%	645	1460	42.8%	28.9%
Benzoic Acid	< 390 U	< 389 U	2680	NA	< 389 U	2680	NA	NA
bis(2-Chloroethoxy) Methane	< 20 U	389	487	79.9%	380	486	78.2%	2.3%
2,4-Dichlorophenol	< 200 U	1150	1460	78.8%	1140	1460	78.1%	0.9%
1,2,4-Trichlorobenzene	< 20 U	377	487	77.4%	370	486	76.1%	1.9%
Naphthalene	170	535	487	74.9%	523	486	72.6%	2.3%
4-Chloroaniline	< 260 U	58.4 J	1460	4.0%	164 J	1460	11.2%	95.0%
Hexachlorobutadiene	< 20 U	367	487	75.4%	361	486	74.3%	1.6%
4-Chloro-3-methylphenol	< 98 U	1100	1460	75.3%	1060	1460	72.6%	3.7%
2-Methylnaphthalene	310	770	487	94.5%	749	486	90.3%	2.8%
Hexachlorocyclopentadiene	< 390 U	< 389 U	1460	NA	< 389 U	1460	NA	NA
2,4,6-Trichlorophenol	< 98 U	982	1460	67.3%	1020	1460	69.9%	3.8%
2,4,5-Trichlorophenol	< 98 U	1030	1460	70.5%	1050	1460	71.9%	1.9%
2-Chloronaphthalene	< 20 U	434	487	89.1%	433	486	89.1%	0.2%
2-Nitroaniline	< 98 U	1340	1460	91.8%	1290	1460	88.4%	3.8%
Dimethylphthalate	< 20 U	419	487	86.0%	411	486	84.6%	1.9%
Acenaphthylene	< 20 U	374	487	76.8%	352	486	72.4%	6.1%
3-Nitroaniline	< 98 U	332 Q	1460	22.7%	208 Q	1460	14.2%	45.9%
Acenaphthene	20	415	487	81.1%	407	486	79.6%	1.9%
2,4-Dinitrophenol	< 830 U	837	2680	31.2%	825 J	2680	30.8%	1.4%
4-Nitrophenol	< 98 U	202	1460	13.8%	239	1460	16.4%	16.8%
Dibenzofuran	56	483	487	87.7%	473	486	85.8%	2.1%
2,6-Dinitrotoluene	< 98 U	1240	1460	84.9%	1260	1460	86.3%	1.6%
2,4-Dinitrotoluene	< 98 U	1260	1460	86.3%	1270	1460	87.0%	0.8%
Diethylphthalate	< 49 U	443	487	91.0%	483	486	99.4%	8.6%
4-Chlorophenyl-phenylether	< 20 U	392	487	80.5%	390	486	80.2%	0.5%
Fluorene	45	421	487	77.2%	420	486	77.2%	0.2%
4-Nitroaniline	< 98 U	574	1460	39.3%	486	1460	33.3%	16.6%
4,6-Dinitro-2-Methylphenol	< 200 U	1470	2680	54.9%	1370	2680	51.1%	7.0%
N-Nitrosodiphenylamine	< 20 U	513	487	105%	482	486	99.2%	6.2%

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

Sample ID: LF-LS-004-20130619-S
MS/MSD

Lab Sample ID: WU70C
LIMS ID: 13-13123
Matrix: Sediment
Date Analyzed MS: 07/06/13 01:24
MSD: 07/06/13 02:00

QC Report No: WU70-SAIC
Project: NPDES Sampling Support
209977

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
4-Bromophenyl-phenylether	< 20 U	420	487	86.2%	423	486	87.0%	0.7%
Hexachlorobenzene	< 20 U	412	487	84.6%	406	486	83.5%	1.5%
Pentachlorophenol	< 200 U	347	1460	23.8%	382	1460	26.2%	9.6%
Phenanthrene	220	661	487	90.6%	629	486	84.2%	5.0%
Carbazole	37	612	487	118%	608	486	117%	0.7%
Anthracene	60	444	487	78.9%	443	486	78.8%	0.2%
Di-n-Butylphthalate	13 J	469	487	93.6%	466	486	93.2%	0.6%
Fluoranthene	140	563	487	86.9%	763	486	128%	30.2%
Pyrene	180	592	487	84.6%	881	486	144%	39.2%
Butylbenzylphthalate	35	496	487	94.7%	568	486	110%	13.5%
3,3'-Dichlorobenzidine	< 150 U	131 J	1460	9.0%	< 146 U	1460	NA	NA
Benzo(a)anthracene	130	527	487	81.5%	758	486	129%	36.0%
bis(2-Ethylhexyl)phthalate	520	978	487	94.0%	1060	486	111%	8.0%
Chrysene	170	574	487	83.0%	886	486	147%	42.7%
Di-n-Octyl phthalate	< 20 U	419	487	86.0%	440	486	90.5%	4.9%
Benzo(a)pyrene	160	547	487	79.5%	698	486	111%	24.3%
Indeno(1,2,3-cd)pyrene	56	401	487	70.8%	427	486	76.3%	6.3%
Dibenz(a,h)anthracene	73	422	487	71.7%	449	486	77.4%	6.2%
Benzo(g,h,i)perylene	140	443	487	62.2%	450	486	63.8%	1.6%
Aniline	< 530 U	< 526 U	1460	NA	< 525 U	1460	NA	NA
N-Nitrosodimethylamine	< 98 U	946	1460	64.8%	891	1460	61.0%	6.0%
1-Methylnaphthalene	200	638	487	89.9%	636	486	89.7%	0.3%
Total Benzofluoranthenes	120	775	974	67.2%	961	973	86.4%	21.4%

Reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.
NA-No recovery due to high concentration of analyte in original sample and/or calculated negative recovery.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546

Sample ID: LF-LS-004-20130619-S
MATRIX SPIKE

Lab Sample ID: WU70C
LIMS ID: 13-13123
Matrix: Sediment
Data Release Authorized:
Reported: 07/09/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted: 06/27/13
Date Analyzed: 07/06/13 01:24
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.3 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 21.1%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	8.4	20	---
111-44-4	Bis-(2-Chloroethyl) Ether	3.3	20	---
95-57-8	2-Chlorophenol	2.3	20	---
541-73-1	1,3-Dichlorobenzene	2.6	20	---
106-46-7	1,4-Dichlorobenzene	2.8	20	---
100-51-6	Benzyl Alcohol	5.9	20	---
95-50-1	1,2-Dichlorobenzene	2.4	20	---
95-48-7	2-Methylphenol	5.1	20	---
108-60-1	2,2'-Oxybis(1-Chloropropane)	3.7	20	---
106-44-5	4-Methylphenol	6.5	20	---
621-64-7	N-Nitroso-Di-N-Propylamine	3.3	20	---
67-72-1	Hexachloroethane	2.9	20	---
98-95-3	Nitrobenzene	4.0	20	---
78-59-1	Isophorone	2.8	20	---
88-75-5	2-Nitrophenol	38	97	---
105-67-9	2,4-Dimethylphenol	3.4	39	---
65-85-0	Benzoic Acid	98	390	---
111-91-1	bis(2-Chloroethoxy) Methane	1.9	20	---
120-83-2	2,4-Dichlorophenol	21	200	---
120-82-1	1,2,4-Trichlorobenzene	3.4	20	---
91-20-3	Naphthalene	2.7	20	---
106-47-8	4-Chloroaniline	22	260	---
87-68-3	Hexachlorobutadiene	4.4	20	---
59-50-7	4-Chloro-3-methylphenol	15	97	---
91-57-6	2-Methylnaphthalene	3.0	20	---
77-47-4	Hexachlorocyclopentadiene	65	390	---
88-06-2	2,4,6-Trichlorophenol	22	97	---
95-95-4	2,4,5-Trichlorophenol	21	97	---
91-58-7	2-Chloronaphthalene	2.6	20	---
88-74-4	2-Nitroaniline	18	97	---
131-11-3	Dimethylphthalate	2.8	20	---
208-96-8	Acenaphthylene	5.6	20	---
99-09-2	3-Nitroaniline	22	97	---
83-32-9	Acenaphthene	3.2	20	---
51-28-5	2,4-Dinitrophenol	110	830	---
100-02-7	4-Nitrophenol	34	97	---
132-64-9	Dibenzofuran	4.0	20	---
606-20-2	2,6-Dinitrotoluene	30	97	---
121-14-2	2,4-Dinitrotoluene	19	97	---
84-66-2	Diethylphthalate	36	49	---
7005-72-3	4-Chlorophenyl-phenylether	5.2	20	---
86-73-7	Fluorene	4.2	20	---
100-01-6	4-Nitroaniline	37	97	---

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: LF-LS-004-20130619-S**
Extraction Method: SW3546 **MATRIX SPIKE**

Lab Sample ID: WU70C QC Report No: WU70-SAIC
LIMS ID: 13-13123 Project: NPDES Sampling Support
Matrix: Sediment 209977
Date Analyzed: 07/06/13 01:24

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	21	200	---
86-30-6	N-Nitrosodiphenylamine	5.2	20	---
101-55-3	4-Bromophenyl-phenylether	4.9	20	---
118-74-1	Hexachlorobenzene	4.2	20	---
87-86-5	Pentachlorophenol	47	200	---
85-01-8	Phenanthrene	3.5	20	---
86-74-8	Carbazole	2.6	20	---
120-12-7	Anthracene	4.4	20	---
84-74-2	Di-n-Butylphthalate	7.9	20	---
206-44-0	Fluoranthene	2.8	20	---
129-00-0	Pyrene	1.9	20	---
85-68-7	Butylbenzylphthalate	6.0	20	---
91-94-1	3,3'-Dichlorobenzidine	17	150	---
56-55-3	Benzo(a)anthracene	3.2	20	---
117-81-7	bis(2-Ethylhexyl)phthalate	14	24	---
218-01-9	Chrysene	3.7	20	---
117-84-0	Di-n-Octyl phthalate	5.7	20	---
50-32-8	Benzo(a)pyrene	5.3	20	---
193-39-5	Indeno(1,2,3-cd)pyrene	4.6	20	---
53-70-3	Dibenz(a,h)anthracene	4.2	20	---
191-24-2	Benzo(g,h,i)perylene	4.3	20	---
62-53-3	Aniline	39	530	---
62-75-9	N-Nitrosodimethylamine	14	97	---
90-12-0	1-Methylnaphthalene	2.6	20	---
TOTBFA	Total Benzofluoranthenes	2.7	39	---

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	64.8%	2-Fluorobiphenyl	77.2%
d14-p-Terphenyl	90.2%	d4-1,2-Dichlorobenzene	63.2%
d5-Phenol	67.7%	2-Fluorophenol	63.1%
2,4,6-Tribromophenol	51.2%	d4-2-Chlorophenol	66.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3546
Page 1 of 2

Sample ID: LF-LS-004-20130619-S
MATRIX SPIKE DUPLICATE

Lab Sample ID: WU70C
LIMS ID: 13-13123
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/09/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted: 06/27/13
Date Analyzed: 07/06/13 02:00
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.3 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 21.1%

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	8.4	20	---
111-44-4	Bis-(2-Chloroethyl) Ether	3.3	20	---
95-57-8	2-Chlorophenol	2.3	20	---
541-73-1	1,3-Dichlorobenzene	2.6	20	---
106-46-7	1,4-Dichlorobenzene	2.8	20	---
100-51-6	Benzyl Alcohol	5.9	20	---
95-50-1	1,2-Dichlorobenzene	2.4	20	---
95-48-7	2-Methylphenol	5.1	20	---
108-60-1	2,2'-Oxybis(1-Chloropropane)	3.7	20	---
106-44-5	4-Methylphenol	6.4	20	---
621-64-7	N-Nitroso-Di-N-Propylamine	3.3	20	---
67-72-1	Hexachloroethane	2.9	20	---
98-95-3	Nitrobenzene	3.9	20	---
78-59-1	Isophorone	2.8	20	---
88-75-5	2-Nitrophenol	38	97	---
105-67-9	2,4-Dimethylphenol	3.4	39	---
65-85-0	Benzoic Acid	98	390	---
111-91-1	bis(2-Chloroethoxy) Methane	1.9	20	---
120-83-2	2,4-Dichlorophenol	21	200	---
120-82-1	1,2,4-Trichlorobenzene	3.4	20	---
91-20-3	Naphthalene	2.7	20	---
106-47-8	4-Chloroaniline	22	260	---
87-68-3	Hexachlorobutadiene	4.4	20	---
59-50-7	4-Chloro-3-methylphenol	15	97	---
91-57-6	2-Methylnaphthalene	3.0	20	---
77-47-4	Hexachlorocyclopentadiene	65	390	---
88-06-2	2,4,6-Trichlorophenol	22	97	---
95-95-4	2,4,5-Trichlorophenol	21	97	---
91-58-7	2-Chloronaphthalene	2.6	20	---
88-74-4	2-Nitroaniline	18	97	---
131-11-3	Dimethylphthalate	2.8	20	---
208-96-8	Acenaphthylene	5.6	20	---
99-09-2	3-Nitroaniline	22	97	---
83-32-9	Acenaphthene	3.2	20	---
51-28-5	2,4-Dinitrophenol	110	830	---
100-02-7	4-Nitrophenol	34	97	---
132-64-9	Dibenzofuran	4.0	20	---
606-20-2	2,6-Dinitrotoluene	30	97	---
121-14-2	2,4-Dinitrotoluene	19	97	---
84-66-2	Diethylphthalate	36	49	---
7005-72-3	4-Chlorophenyl-phenylether	5.1	20	---
86-73-7	Fluorene	4.2	20	---
100-01-6	4-Nitroaniline	37	97	---

WU70:00015

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: LF-LS-004-20130619-S**
Extraction Method: SW3546 **MATRIX SPIKE DUPLICATE**

Lab Sample ID: WU70C QC Report No: WU70-SAIC
LIMS ID: 13-13123 Project: NPDES Sampling Support
Matrix: Sediment 209977
Date Analyzed: 07/06/13 02:00

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	21	200	---
86-30-6	N-Nitrosodiphenylamine	5.2	20	---
101-55-3	4-Bromophenyl-phenylether	4.9	20	---
118-74-1	Hexachlorobenzene	4.2	20	---
87-86-5	Pentachlorophenol	47	200	---
85-01-8	Phenanthrene	3.5	20	---
86-74-8	Carbazole	2.6	20	---
120-12-7	Anthracene	4.4	20	---
84-74-2	Di-n-Butylphthalate	7.9	20	---
206-44-0	Fluoranthene	2.8	20	---
129-00-0	Pyrene	1.9	20	---
85-68-7	Butylbenzylphthalate	6.0	20	---
91-94-1	3,3'-Dichlorobenzidine	17	150	---
56-55-3	Benzo(a)anthracene	3.2	20	---
117-81-7	bis(2-Ethylhexyl)phthalate	14	24	---
218-01-9	Chrysene	3.6	20	---
117-84-0	Di-n-Octyl phthalate	5.7	20	---
50-32-8	Benzo(a)pyrene	5.3	20	---
193-39-5	Indeno(1,2,3-cd)pyrene	4.6	20	---
53-70-3	Dibenz(a,h)anthracene	4.2	20	---
191-24-2	Benzo(g,h,i)perylene	4.3	20	---
62-53-3	Aniline	39	520	---
62-75-9	N-Nitrosodimethylamine	14	97	---
90-12-0	1-Methylnaphthalene	2.6	20	---
TOTBFA	Total Benzofluoranthenes	2.7	39	---

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	64.6%	2-Fluorobiphenyl	79.0%
d14-p-Terphenyl	89.4%	d4-1,2-Dichlorobenzene	62.2%
d5-Phenol	67.1%	2-Fluorophenol	63.1%
2,4,6-Tribromophenol	54.1%	d4-2-Chlorophenol	65.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

Sample ID: LCS-062713
LAB CONTROL

Lab Sample ID: LCS-062713
LIMS ID: 13-13123
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/12/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted: 06/27/13
Date Analyzed: 07/05/13 23:33
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.00 g
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: NA

Analyte	Lab Control	Spike Added	Recovery
Phenol	359	500	71.8%
Bis-(2-Chloroethyl) Ether	380	500	76.0%
2-Chlorophenol	338	500	67.6%
1,3-Dichlorobenzene	355	500	71.0%
1,4-Dichlorobenzene	351	500	70.2%
Benzyl Alcohol	423	500	84.6%
1,2-Dichlorobenzene	363	500	72.6%
2-Methylphenol	332	500	66.4%
2,2'-Oxybis(1-Chloropropane)	369	500	73.8%
4-Methylphenol	693	1000	69.3%
N-Nitroso-Di-N-Propylamine	358	500	71.6%
Hexachloroethane	348	500	69.6%
Nitrobenzene	383	500	76.6%
Isophorone	383	500	76.6%
2-Nitrophenol	352	500	70.4%
2,4-Dimethylphenol	811	1500	54.1%
Benzoic Acid	1920	2750	69.8%
bis(2-Chloroethoxy) Methane	386	500	77.2%
2,4-Dichlorophenol	1180	1500	78.7%
1,2,4-Trichlorobenzene	375	500	75.0%
Naphthalene	354	500	70.8%
4-Chloroaniline	246 J	1500	16.4%
Hexachlorobutadiene	367	500	73.4%
4-Chloro-3-methylphenol	1170	1500	78.0%
2-Methylnaphthalene	385	500	77.0%
Hexachlorocyclopentadiene	878	1500	58.5%
2,4,6-Trichlorophenol	1060	1500	70.7%
2,4,5-Trichlorophenol	1150	1500	76.7%
2-Chloronaphthalene	399	500	79.8%
2-Nitroaniline	1440	1500	96.0%
Dimethylphthalate	450	500	90.0%
Acenaphthylene	356	500	71.2%
3-Nitroaniline	794 Q	1500	52.9%
Acenaphthene	392	500	78.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270 GC/MS

Sample ID: LCS-062713
LAB CONTROL

Lab Sample ID: LCS-062713
LIMS ID: 13-13123
Matrix: Sediment
Date Analyzed: 07/05/13 23:33

QC Report No: WU70-SAIC
Project: NPDES Sampling Support
209977

Analyte	Lab Control	Spike Added	Recovery
2,4-Dinitrophenol	1840	2750	66.9%
4-Nitrophenol	1020	1500	68.0%
Dibenzofuran	421	500	84.2%
2,6-Dinitrotoluene	1380	1500	92.0%
2,4-Dinitrotoluene	1440	1500	96.0%
Diethylphthalate	455	500	91.0%
4-Chlorophenyl-phenylether	416	500	83.2%
Fluorene	397	500	79.4%
4-Nitroaniline	1110	1500	74.0%
4,6-Dinitro-2-Methylphenol	2020	2750	73.5%
N-Nitrosodiphenylamine	460	500	92.0%
4-Bromophenyl-phenylether	499	500	99.8%
Hexachlorobenzene	404	500	80.8%
Pentachlorophenol	1190	1500	79.3%
Phenanthrene	436	500	87.2%
Carbazole	593	500	119%
Anthracene	383	500	76.6%
Di-n-Butylphthalate	488	500	97.6%
Fluoranthene	423	500	84.6%
Pyrene	461	500	92.2%
Butylbenzylphthalate	529	500	106%
3,3'-Dichlorobenzidine	460	1500	30.7%
Benzo(a)anthracene	414	500	82.8%
bis(2-Ethylhexyl)phthalate	452	500	90.4%
Chrysene	405	500	81.0%
Di-n-Octyl phthalate	397	500	79.4%
Benzo(a)pyrene	392	500	78.4%
Indeno(1,2,3-cd)pyrene	423	500	84.6%
Dibenz(a,h)anthracene	406	500	81.2%
Benzo(g,h,i)perylene	386	500	77.2%
Aniline	97.0 J	1500	6.5%
N-Nitrosodimethylamine	916	1500	61.1%
1-Methylnaphthalene	416	500	83.2%
Total Benzofluoranthenes	865	1000	86.5%

Semivolatile Surrogate Recovery	
d5-Nitrobenzene	68.2%
2-Fluorobiphenyl	70.6%
d14-p-Terphenyl	105%
d4-1,2-Dichlorobenzene	64.2%
d5-Phenol	69.9%
2-Fluorophenol	67.6%
2,4,6-Tribromophenol	77.6%
d4-2-Chlorophenol	68.4%

Reported in µg/kg (ppb)

4B
SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

WU70MBS1

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No: WU70
Project: NPDES SAMPLING SUPPO

Lab File ID: WU70MB
Date Extracted: 06/27/13

Instrument ID: NT10
Date Analyzed: 07/05/13

Matrix: SOLID
Time Analyzed: 2256

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	WU70LCSS1	WU70LCSS1	WU79BSB	07/05/13
02	LF-TP-001-201306	WU70B	WU70CB	07/06/13
03	LF-LS-004-201306	WU70C	WU70C	07/06/13
04	LF-LS-004-20130	WU70CMS	WU70CMS	07/06/13
05	LF-LS-004-20130	WU70CMSD	WU70CMSD	07/06/13
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

FORM IV SV

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MB-062713**
Extraction Method: SW3546 **METHOD BLANK**

Lab Sample ID: MB-062713
LIMS ID: 13-13123
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/09/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/27/13
Date Analyzed: 07/05/13 22:56
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.0 g
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: NA

CAS Number	Analyte	DL	LOQ	Result
108-95-2	Phenol	8.6	20	< 20 U
111-44-4	Bis-(2-Chloroethyl) Ether	3.4	20	< 20 U
95-57-8	2-Chlorophenol	2.4	20	< 20 U
541-73-1	1,3-Dichlorobenzene	2.6	20	< 20 U
106-46-7	1,4-Dichlorobenzene	2.9	20	< 20 U
100-51-6	Benzyl Alcohol	6.1	20	< 20 U
95-50-1	1,2-Dichlorobenzene	2.5	20	< 20 U
95-48-7	2-Methylphenol	5.2	20	< 20 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	3.8	20	< 20 U
106-44-5	4-Methylphenol	6.6	20	< 20 U
621-64-7	N-Nitroso-Di-N-Propylamine	3.4	20	< 20 U
67-72-1	Hexachloroethane	2.9	20	< 20 U
98-95-3	Nitrobenzene	4.1	20	< 20 U
78-59-1	Isophorone	2.9	20	< 20 U
88-75-5	2-Nitrophenol	39	100	< 100 U
105-67-9	2,4-Dimethylphenol	3.5	40	< 40 U
65-85-0	Benzoic Acid	100	400	< 400 U
111-91-1	bis(2-Chloroethoxy) Methane	2.0	20	< 20 U
120-83-2	2,4-Dichlorophenol	22	200	< 200 U
120-82-1	1,2,4-Trichlorobenzene	3.5	20	< 20 U
91-20-3	Naphthalene	2.8	20	< 20 U
106-47-8	4-Chloroaniline	22	270	< 270 U
87-68-3	Hexachlorobutadiene	4.6	20	< 20 U
59-50-7	4-Chloro-3-methylphenol	15	100	< 100 U
91-57-6	2-Methylnaphthalene	3.1	20	< 20 U
77-47-4	Hexachlorocyclopentadiene	66	400	< 400 U
88-06-2	2,4,6-Trichlorophenol	22	100	< 100 U
95-95-4	2,4,5-Trichlorophenol	21	100	< 100 U
91-58-7	2-Chloronaphthalene	2.6	20	< 20 U
88-74-4	2-Nitroaniline	18	100	< 100 U
131-11-3	Dimethylphthalate	2.9	20	< 20 U
208-96-8	Acenaphthylene	5.7	20	< 20 U
99-09-2	3-Nitroaniline	22	100	< 100 U
83-32-9	Acenaphthene	3.3	20	< 20 U
51-28-5	2,4-Dinitrophenol	110	850	< 850 U
100-02-7	4-Nitrophenol	35	100	< 100 U
132-64-9	Dibenzofuran	4.1	20	< 20 U
606-20-2	2,6-Dinitrotoluene	31	100	< 100 U
121-14-2	2,4-Dinitrotoluene	20	100	< 100 U
84-66-2	Diethylphthalate	37	50	< 50 U
7005-72-3	4-Chlorophenyl-phenylether	5.3	20	< 20 U
86-73-7	Fluorene	4.4	20	< 20 U
100-01-6	4-Nitroaniline	38	100	< 100 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MB-062713**
Extraction Method: SW3546 **METHOD BLANK**

Lab Sample ID: MB-062713 QC Report No: WU70-SAIC
LIMS ID: 13-13123 Project: NPDES Sampling Support
Matrix: Sediment 209977
Date Analyzed: 07/05/13 22:56

CAS Number	Analyte	DL	LOQ	Result
534-52-1	4,6-Dinitro-2-Methylphenol	21	200	< 200 U
86-30-6	N-Nitrosodiphenylamine	5.4	20	< 20 U
101-55-3	4-Bromophenyl-phenylether	5.0	20	< 20 U
118-74-1	Hexachlorobenzene	4.3	20	< 20 U
87-86-5	Pentachlorophenol	48	200	< 200 U
85-01-8	Phenanthrene	3.6	20	< 20 U
86-74-8	Carbazole	2.7	20	< 20 U
120-12-7	Anthracene	4.5	20	< 20 U
84-74-2	Di-n-Butylphthalate	8.2	20	< 20 U
206-44-0	Fluoranthene	2.9	20	< 20 U
129-00-0	Pyrene	1.9	20	< 20 U
85-68-7	Butylbenzylphthalate	6.1	20	< 20 U
91-94-1	3,3'-Dichlorobenzidine	18	150	< 150 U
56-55-3	Benzo(a)anthracene	3.3	20	< 20 U
117-81-7	bis(2-Ethylhexyl)phthalate	15	25	< 25 U
218-01-9	Chrysene	3.8	20	< 20 U
117-84-0	Di-n-Octyl phthalate	5.8	20	< 20 U
50-32-8	Benzo(a)pyrene	5.4	20	< 20 U
193-39-5	Indeno(1,2,3-cd)pyrene	4.7	20	< 20 U
53-70-3	Dibenz(a,h)anthracene	4.3	20	< 20 U
191-24-2	Benzo(g,h,i)perylene	4.4	20	< 20 U
62-53-3	Aniline	40	540	< 540 U
62-75-9	N-Nitrosodimethylamine	14	100	< 100 U
90-12-0	1-Methylnaphthalene	2.7	20	< 20 U
TOTBFA	Total Benzofluoranthenes	2.8	40	< 40 U

Reported in µg/kg (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	64.4%	2-Fluorobiphenyl	73.4%
d14-p-Terphenyl	95.8%	d4-1,2-Dichlorobenzene	65.2%
d5-Phenol	62.7%	2-Fluorophenol	62.4%
2,4,6-Tribromophenol	67.2%	d4-2-Chlorophenol	64.9%

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES SAMPLING SUPPORT

DFTPP Injection Date: 07/05/13 DFTPP Injection Time: 1158

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	18.7
68	Less than 2.0% of mass 69	0.6 (1.4)1
69	Mass 69 relative abundance	41.2
70	Less than 2.0% of mass 69	0.2 (0.5)1
127	10.0 - 80.0% of mass 198	48.8
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	6.8
275	10.0 - 60.0% of mass 198	25.9
365	Greater than 1.0% of mass 198	3.46
441	0.0 - 24.0% of mass 442	14.3 (15.6)2
442	50.0 - 200.0% of mass 198	91.4
443	15.0 - 24.0% of mass 442	18.1 (19.8)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		ABN 5	IC0705A	07/05/13	1214
02		ABN20	IC0705B	07/05/13	1251
03		ABN0.2	IC0705C	07/05/13	1328
04		ABN1.0	IC0705D	07/05/13	1405
05		ABN10	IC0705E	07/05/13	1442
06		ABN2.5	IC0705F	07/05/13	1520
07		ABN0.5	IC0705G	07/05/13	1557
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES SAMPLING SUPPORT

DFTPP Injection Date: 07/05/13 DFTPP Injection Time: 1744

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	18.2
68	Less than 2.0% of mass 69	0.6 (1.5)1
69	Mass 69 relative abundance	41.6
70	Less than 2.0% of mass 69	0.2 (0.4)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	6.7
275	10.0 - 60.0% of mass 198	25.7
365	Greater than 1.0% of mass 198	3.51
441	0.0 - 24.0% of mass 442	14.3 (15.4)2
442	50.0 - 200.0% of mass 198	92.9
443	15.0 - 24.0% of mass 442	18.2 (19.6)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		CC0705	CC0705	07/05/13	1800
02	WU70MBS1	WU70MBS1	WU70MB	07/05/13	2256
03	WU70LCSS1	WU70LCSS1	WU79BSB	07/05/13	2333
04	LF-TP-001-201306	WU70B	WU70CB	07/06/13	0010
05	LF-LS-004-201306	WU70C	WU70C	07/06/13	0047
06	LF-LS-004-20130	WU70CMS	WU70CMS	07/06/13	0124
07	LF-LS-004-20130	WU70CMSD	WU70CMSD	07/06/13	0200
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU70 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Calibration Date: 07/05/13

Method = ABN.m
Cal levels = 7

LAB FILE ID: RRF0.2=IC0705C RRF0.5=IC0705G RRF1 =IC0705D
RRF2.5=IC0705F RRF5 =IC0705A RRF10 =IC0705E
RRF20 =IC0705B

COMPOUND	RRF 0.2	RRF 0.5	RRF 1	RRF 2.5	RRF 5	RRF 10	RRF 20	$\overline{RRF}$	%RSD /R^2
Phenol	2.048	2.061	2.122	2.144	2.069	2.054	2.151	2.093	2.1
Bis(2-Chloroethyl)ether	1.667	1.645	1.638	1.634	1.494	1.518	1.582	1.597	4.2
2-Chlorophenol	1.529	1.482	1.492	1.516	1.451	1.444	1.530	1.492	2.4
1,3-Dichlorobenzene	1.637	1.529	1.528	1.492	1.427	1.428	1.495	1.505	4.8
1,4-Dichlorobenzene	1.724	1.517	1.490	1.489	1.400	1.415	1.464	1.500	7.2
1,2-Dichlorobenzene	1.526	1.442	1.464	1.431	1.335	1.339	1.396	1.419	4.8
Benzyl alcohol	0.805	0.784	0.814	0.865	0.859	0.888	0.956	0.853	6.9
2,2'-oxybis(1-Chloropropane)	0.482	0.475	0.492	0.473	0.457	0.449	0.470	0.471	3.1
2-Methylphenol	1.552	1.450	1.452	1.549	1.429	1.442	1.525	1.486	3.6
Hexachloroethane	0.708	0.673	0.658	0.678	0.629	0.636	0.676	0.665	4.1
N-Nitroso-di-n-propylamine	1.122	1.039	1.051	1.069	0.998	1.024	1.055	1.051	3.7
4-Methylphenol	1.463	1.460	1.503	1.588	1.469	1.490	1.546	1.503	3.2
Nitrobenzene	0.450	0.419	0.435	0.436	0.420	0.426	0.448	0.433	2.9
Isophorone	0.817	0.763	0.770	0.780	0.764	0.787	0.837	0.788	3.6
2-Nitrophenol	0.270	0.259	0.281	0.289	0.286	0.285	0.292	0.280	4.2
2,4-Dimethylphenol	0.433	0.417	0.432	0.441	0.425	0.413	0.424	0.426	2.3
Bis(2-Chloroethoxy)methane	0.536	0.488	0.508	0.494	0.476	0.475	0.503	0.497	4.3
2,4-Dichlorophenol	0.299	0.309	0.322	0.332	0.328	0.324	0.340	0.322	4.3
1,2,4-Trichlorobenzene	0.391	0.352	0.356	0.347	0.336	0.327	0.347	0.351	5.7
Naphthalene	1.102	1.024	1.043	1.040	1.019	1.009	1.074	1.044	3.2
Benzoic acid		0.237	0.273	0.340	0.357	0.383	0.426	0.336	0.999
4-Chloroaniline	0.406	0.443	0.483	0.477	0.503	0.478	0.434	0.460	7.3
Hexachlorobutadiene	0.239	0.203	0.209	0.209	0.199	0.198	0.208	0.209	6.7
4-Chloro-3-methylphenol	0.292	0.325	0.344	0.369	0.372	0.377	0.411	0.356	10.9
2-Methylnaphthalene	0.714	0.664	0.690	0.692	0.675	0.682	0.738	0.694	3.6
Hexachlorocyclopentadiene	0.416	0.407	0.421	0.446	0.447	0.462	0.505	0.443	7.5
2,4,6-Trichlorophenol	0.392	0.418	0.451	0.465	0.462	0.468	0.540	0.456	10.2
2,4,5-Trichlorophenol	0.382	0.406	0.444	0.482	0.479	0.497	0.510	0.457	10.5
2-Chloronaphthalene	1.228	1.145	1.148	1.139	1.127	1.140	1.225	1.164	3.7
2-Nitroaniline	0.223	0.269	0.301	0.332	0.340	0.342	0.374	0.312	16.5
Acenaphthylene	2.029	1.916	1.897	1.890	1.862	1.815	1.933	1.906	3.5
Dimethylphthalate	1.413	1.279	1.314	1.321	1.282	1.240	1.246	1.299	4.5
2,6-Dinitrotoluene	0.264	0.276	0.299	0.309	0.297	0.293	0.310	0.292	5.8
Acenaphthene	1.177	1.132	1.107	1.130	1.110	1.128	1.186	1.138	2.7
3-Nitroaniline	0.157	0.239	0.263	0.282	0.274	0.296	0.242	0.250	18.4
2,4-Dinitrophenol		0.110	0.160	0.225	0.250	0.262	0.289	0.216	0.999
Dibenzofuran	1.625	1.524	1.521	1.543	1.518	1.516	1.586	1.548	2.7

<- Outside QC limits: %RSD <20% or R^2 > 0.990

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU70 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Calibration Date: 07/05/13

Method = ABN.m
Cal levels = 7

LAB FILE ID: RRF0.2=IC0705C RRF0.5=IC0705G RRF1 =IC0705D
RRF2.5=IC0705F RRF5 =IC0705A RRF10 =IC0705E
RRF20 =IC0705B

COMPOUND	RRF 0.2	RRF 0.5	RRF 1	RRF 2.5	RRF 5	RRF 10	RRF 20	RRF	%RSD /R^2
4-Nitrophenol		0.065	0.103	0.160	0.182	0.190	0.200	0.150	0.999
2,4-Dinitrotoluene	0.291	0.346	0.382	0.404	0.405	0.410	0.428	0.381	12.5
Fluorene	1.361	1.376	1.352	1.375	1.363	1.347	1.383	1.365	1.0
4-Chlorophenyl-phenylether	0.696	0.697	0.677	0.674	0.665	0.635	0.654	0.671	3.3
Diethylphthalate	1.421	1.358	1.396	1.482	1.471	1.539	1.515	1.454	4.5
4-Nitroaniline	0.131	0.185	0.227	0.263	0.252	0.263	0.239	0.223	0.999
4,6-Dinitro-2-methylphenol	0.108	0.152	0.176	0.196	0.197	0.196	0.199	0.175	0.999
N-Nitrosodiphenylamine (1)	0.472	0.483	0.513	0.512	0.479	0.466	0.470	0.485	4.0
4-Bromophenyl-phenylether	0.242	0.235	0.238	0.246	0.279	0.234	0.236	0.244	6.5
Hexachlorobenzene	0.291	0.254	0.269	0.263	0.249	0.248	0.252	0.261	5.9
Pentachlorophenol	0.187	0.193	0.199	0.217	0.218	0.210	0.222	0.206	6.6
Phenanthrene	1.164	1.059	1.099	1.087	1.045	1.061	1.104	1.088	3.7
Anthracene	1.167	1.114	1.143	1.157	1.122	1.124	1.181	1.144	2.2
Carbazole	0.844	0.874	0.866	0.694	0.505	0.610	0.688	0.726	19.5
Di-n-butylphthalate	1.241	1.160	1.229	1.300	1.284	1.328	1.416	1.280	6.4
Fluoranthene	1.340	1.231	1.330	1.331	1.304	1.333	1.413	1.326	4.1
Pyrene	1.327	1.253	1.316	1.321	1.327	1.345	1.421	1.330	3.7
Butylbenzylphthalate	0.487	0.438	0.509	0.527	0.526	0.522	0.561	0.510	7.6
Benzo(a)anthracene	1.367	1.248	1.247	1.204	1.206	1.199	1.284	1.251	4.8
3,3'-Dichlorobenzidine	0.500	0.457	0.474	0.383	0.416	0.488	0.574	0.470	13.1
Chrysene	1.214	1.099	1.120	1.101	1.094	1.100	1.182	1.130	4.2
bis(2-Ethylhexyl)phthalate	0.500	0.487	0.528	0.527	0.512	0.498	0.527	0.511	3.2
Di-n-octylphthalate	1.051	0.997	0.995	0.969	0.936	0.930	1.000	0.982	4.2
Benzo(b)fluoranthene	1.121	0.993	1.087	1.180	1.136	1.183	1.284	1.140	7.9
Benzo(k)fluoranthene	1.524	1.389	1.402	1.424	1.343	1.427	1.547	1.436	5.1
Benzo(a)pyrene	1.075	0.980	1.026	1.064	1.046	1.066	1.130	1.055	4.3
Indeno(1,2,3-cd)pyrene	1.147	1.065	1.196	1.260	1.279	1.315	1.392	1.236	8.9
Dibenzo(a,h)anthracene	0.862	0.877	0.921	0.963	0.964	0.996	1.050	0.948	7.0
Benzo(g,h,i)perylene	1.048	0.968	1.038	1.055	1.047	1.084	1.171	1.059	5.7
N-Nitrosodimethylamine	0.887	0.875	0.946	0.966	0.977	1.000	1.069	0.960	6.9
Aniline	4.714	4.414	4.562	4.550	4.293	4.240	4.254	4.432	4.1
Benzidine		0.175	0.245	0.186	0.156	0.168	0.150	0.180	0.998
Retene	0.510	0.479	0.522	0.509	0.506	0.507	0.551	0.512	4.2
Perylene	1.068	1.023	1.027	1.007	0.985	1.022	1.085	1.031	3.3
Pyridine	0.799	0.825	0.856	0.848	0.842	0.860	0.899	0.847	3.7
1-methylnaphthalene	0.659	0.611	0.621	0.626	0.626	0.620	0.669	0.633	3.4
Azobenzene (1,2-DP-Hydrazine	1.490	1.427	1.435	1.437	1.382	1.381	1.400	1.422	2.7

(1) Cannot be seperated from Diphenylamine
<- Outside QC limits: %RSD <20% or R^2 > 0.990

FORM VI SV-2

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU70 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Calibration Date: 07/05/13

Method = ABN.m
Cal levels = 7

LAB FILE ID: RRF0.2=IC0705C RRF0.5=IC0705G RRF1 =IC0705D
RRF2.5=IC0705F RRF5 =IC0705A RRF10 =IC0705E
RRF20 =IC0705B

COMPOUND	RRF 0.2	RRF 0.5	RRF 1	RRF 2.5	RRF 5	RRF 10	RRF 20	___ RRF	%RSD /R^2
2,3,4,6-Tetrachlorophenol	0.299	0.324	0.343	0.366	0.371	0.375	0.401	0.354	9.7
Total Benzofluoranthenes	1.287	1.159	1.226	1.248	1.224	1.231	1.290	1.238	3.6
2-Fluorophenol	1.505	1.454	1.454	1.525	1.485	1.458	1.532	1.488	2.3
Phenol-d5	1.938	1.866	1.940	2.056	2.006	2.071	2.192	2.010	5.4
2-Chlorophenol-d4	1.482	1.426	1.406	1.479	1.385	1.411	1.489	1.440	2.9
1,2-Dichlorobenzene-d4	1.152	1.008	1.028	1.007	0.974	0.965	1.005	1.020	6.1
Nitrobenzene-d5	0.490	0.481	0.484	0.484	0.480	0.486	0.511	0.488	2.2
2-Fluorobiphenyl	1.554	1.444	1.412	1.455	1.419	1.426	1.529	1.463	3.8
2,4,6-Tribromophenol	0.221	0.230	0.244	0.254	0.256	0.256	0.271	0.247	7.0
Terphenyl-d14	0.731	0.705	0.718	0.718	0.715	0.706	0.745	0.720	2.0

<- Outside QC limits: %RSD <20% or R^2 > 0.990

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU70 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Cont. Calib. Date: 07/05/13

Init. Calib. Date: 07/05/13 Cont. Calib. Time: 1800

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift	
Phenol	2.093	2.111	0.800	AVRG	0.9	
Bis(2-Chloroethyl)ether	1.597	1.597	0.700	AVRG	0.0	
2-Chlorophenol	1.492	1.466	0.800	AVRG	-1.7	
1,3-Dichlorobenzene	1.505	1.434	0.010	AVRG	-4.7	
1,4-Dichlorobenzene	1.500	1.415	0.010	AVRG	-5.7	
1,2-Dichlorobenzene	1.419	1.357	0.010	AVRG	-4.4	
Benzyl alcohol	0.853	0.872	0.010	AVRG	2.2	
2,2'-oxybis(1-Chloropropane)	0.471	0.460	0.010	AVRG	-2.3	
2-Methylphenol	1.486	1.465	0.700	AVRG	-1.4	
Hexachloroethane	0.665	0.643	0.300	AVRG	-3.3	
N-Nitroso-di-n-propylamine	1.051	1.038	0.500	AVRG	-1.2	
4-Methylphenol	1.503	1.526	0.600	AVRG	1.5	
Nitrobenzene	0.433	0.429	0.200	AVRG	-0.9	
Isophorone	0.788	0.792	0.400	AVRG	0.5	
2-Nitrophenol	0.280	0.272	0.100	AVRG	-2.8	
2,4-Dimethylphenol	0.426	0.426	0.200	AVRG	0.0	
Bis(2-Chloroethoxy)methane	0.497	0.485	0.300	AVRG	-2.4	
2,4-Dichlorophenol	0.322	0.327	0.200	AVRG	1.6	
1,2,4-Trichlorobenzene	0.351	0.335	0.010	AVRG	-4.6	
Naphthalene	1.044	1.014	0.700	AVRG	-2.9	
Benzoic acid	20.00	19.93	0.010	2ORDR	-0.4	
4-Chloroaniline	0.460	0.485	0.010	AVRG	5.4	
Hexachlorobutadiene	0.209	0.201	0.010	AVRG	-3.8	
4-Chloro-3-methylphenol	0.356	0.379	0.200	AVRG	6.5	
2-Methylnaphthalene	0.694	0.681	0.400	AVRG	-1.9	
Hexachlorocyclopentadiene	0.443	0.449	0.050	AVRG	1.4	
2,4,6-Trichlorophenol	0.456	0.448	0.200	AVRG	-1.8	
2,4,5-Trichlorophenol	0.457	0.484	0.200	AVRG	5.9	
2-Chloronaphthalene	1.164	1.116	0.800	AVRG	-4.1	
2-Nitroaniline	0.312	0.340	0.010	AVRG	9.0	
Acenaphthylene	1.906	1.837	0.900	AVRG	-3.6	
Dimethylphthalate	1.299	1.264	0.010	AVRG	-2.7	
2,6-Dinitrotoluene	0.292	0.298	0.200	AVRG	2.0	
Acenaphthene	1.138	1.112	0.900	AVRG	-2.3	
3-Nitroaniline	0.250	0.301	0.010	AVRG	20.4	<-
2,4-Dinitrophenol	20.00	20.16	0.010	2ORDR	0.8	
Dibenzofuran	1.548	1.542	0.800	AVRG	-0.4	

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

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU70 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Cont. Calib. Date: 07/05/13

Init. Calib. Date: 07/05/13 Cont. Calib. Time: 1800

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
4-Nitrophenol	10.00	10.28	0.010	2ORDR	2.8
2,4-Dinitrotoluene	0.381	0.406	0.200	AVRG	6.6
Fluorene	1.365	1.342	0.900	AVRG	-1.7
4-Chlorophenyl-phenylether	0.671	0.652	0.400	AVRG	-2.8
Diethylphthalate	1.454	1.488	0.010	AVRG	2.3
4-Nitroaniline	10.00	10.21	0.010	2ORDR	2.1
4,6-Dinitro-2-methylphenol	20.00	19.99	0.010	2ORDR	-0.0
N-Nitrosodiphenylamine(1)	0.485	0.482	0.010	AVRG	-0.6
4-Bromophenyl-phenylether	0.244	0.268	0.100	AVRG	9.8
Hexachlorobenzene	0.261	0.246	0.100	AVRG	-5.7
Pentachlorophenol	0.206	0.208	0.050	AVRG	1.0
Phenanthrene	1.088	1.048	0.700	AVRG	-3.7
Anthracene	1.144	1.130	0.700	AVRG	-1.2
Carbazole	0.726	0.604	0.010	AVRG	-16.8
Di-n-butylphthalate	1.280	1.278	0.010	AVRG	-0.2
Fluoranthene	1.326	1.301	0.600	AVRG	-1.9
Pyrene	1.330	1.347	0.600	AVRG	1.3
Butylbenzylphthalate	0.510	0.529	0.010	AVRG	3.7
Benzo(a)anthracene	1.251	1.211	0.800	AVRG	-3.2
3,3'-Dichlorobenzidine	0.470	0.426	0.010	AVRG	-9.4
Chrysene	1.130	1.092	0.700	AVRG	-3.4
bis(2-Ethylhexyl)phthalate	0.511	0.524	0.010	AVRG	2.5
Di-n-octylphthalate	0.982	0.956	0.010	AVRG	-2.6
Benzo(b)fluoranthene	1.140	1.149	0.700	AVRG	0.8
Benzo(k)fluoranthene	1.436	1.376	0.700	AVRG	-4.2
Benzo(a)pyrene	1.055	1.050	0.700	AVRG	-0.5
Indeno(1,2,3-cd)pyrene	1.236	1.282	0.500	AVRG	3.7
Dibenzo(a,h)anthracene	0.948	0.960	0.400	AVRG	1.3
Benzo(g,h,i)perylene	1.059	1.067	0.500	AVRG	0.8
N-Nitrosodimethylamine	0.960	0.986	0.010	AVRG	2.7
Aniline	4.432	4.415	0.010	AVRG	-0.4
Benzidine	10.00	10.42	0.010	2ORDR	4.2
Retene	0.512	0.507	0.010	AVRG	-1.0
Perylene	1.031	1.010	0.010	AVRG	-2.0
Pyridine	0.847	0.869	0.010	AVRG	2.6
1-methylnaphthalene	0.633	0.623	0.010	AVRG	-1.6

(1) Cannot be separated from Diphenylamine

<- Exceeds QC limit of 20% D

* RF less than minimum RF

FORM VII SV-2

7C

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU70 Project: NPDES SAMPLING SUPPORT

Instrument ID: NT10 Cont. Calib. Date: 07/05/13

Init. Calib. Date: 07/05/13 Cont. Calib. Time: 1800

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Azobenzene (1,2-DP-Hydrazine	1.422	1.408	0.010	AVRG	-1.0
2,3,4,6-Tetrachlorophenol	0.354	0.360	0.010	AVRG	1.7
Total Benzofluoranthenes	1.238	1.241	0.010	AVRG	0.2
2-Fluorophenol	1.488	1.489	0.010	AVRG	0.1
Phenol-d5	2.010	2.063	0.010	AVRG	2.6
2-Chlorophenol-d4	1.440	1.390	0.010	AVRG	-3.5
1,2-Dichlorobenzene-d4	1.020	0.979	0.010	AVRG	-4.0
Nitrobenzene-d5	0.488	0.494	0.010	AVRG	1.2
2-Fluorobiphenyl	1.463	1.394	0.010	AVRG	-4.7
2,4,6-Tribromophenol	0.247	0.248	0.010	AVRG	0.4
Terphenyl-d14	0.720	0.714	0.010	AVRG	-0.8

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

FORM VII SV-3

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC — Client: SAIC

ARI Job No: WU70 — Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0705A — Ical Date: 07/05/13

Instrument ID: NT10 — Cont. Cal Date: 07/05/13

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	97290	8.82	336205	11.49	202661	15.40
	UPPER LIMIT	194580		672410		405322	
	LOWER LIMIT	48645		168102		101330	
	CCAL	97290	8.82	336205	11.49	202661	15.40
	UPPER LIMIT		9.32		11.99		15.90
	LOWER LIMIT		8.32		10.99		14.90
01	WU70MBS1	97435	8.82	362404	11.48	192642	15.40
02	WU70LCSS1	90316	8.82	326963	11.48	195394	15.40
03	LF-TP-001-20	89501	8.82	331760	11.48	172189	15.40
04	LF-LS-004-20	89295	8.82	331746	11.49	178188	15.40
05	LF-LS-004-20	85337	8.82	309525	11.49	170794	15.40
06	LF-LS-004-20	82652	8.83	297548	11.49	161801	15.41
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
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

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU70 Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0705A Ical Date: 07/05/13

Instrument ID: NT10 Cont. Cal Date: 07/05/13

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	ICAL MIDPT	352196	18.75	358983	23.85	381873	26.29
	UPPER LIMIT	704392		717966		763746	
	LOWER LIMIT	176098		179492		190936	
	CCAL	352196	18.75	358983	23.85	381873	26.29
	UPPER LIMIT		19.25		24.35		26.79
	LOWER LIMIT		18.25		23.35		25.79
01	WU70MBS1	316350	18.74	299209	23.85	328376	26.30
02	WU70LCSS1	323078	18.74	310076	23.86	314618	26.30
03	LF-TP-001-20	284215	18.77	287936	23.95	309679	26.50
04	LF-LS-004-20	270086	18.76	284246	23.88	300774	26.37
05	LF-LS-004-20	265002	18.77	273564	23.89	297945	26.39
06	LF-LS-004-20	254399	18.77	265554	23.90	277790	26.41
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
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

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC | Client: SAIC

ARI Job No: WU70 | Project: NPDES SAMPLING SUPPORT

Ical Midpoint ID: IC0705A | Ical Date: 07/05/13

Instrument ID: NT10 | Cont. Cal Date: 07/05/13

		IS7 AREA #	RT #	AREA #	RT #	AREA #	RT #
	ICAL MIDPT	503607	25.03				
	UPPER LIMIT	1007214					
	LOWER LIMIT	251804					
	CCAL	503607	25.03				
	UPPER LIMIT		25.53				
	LOWER LIMIT		24.53				
01	WU70MBS1	443567	25.03				
02	WU70LCSS1	431439	25.03				
03	LF-TP-001-20	423427	25.16				
04	LF-LS-004-20	410558	25.07				
05	LF-LS-004-20	399803	25.08				
06	LF-LS-004-20	385562	25.09				
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							
20							
21							
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

SIM Semivolatile Analysis
Report and Summary QC Forms

ARI Job ID: WU70

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: LF-TP-001-20130619-S**
Extraction Method: SW3546 **SAMPLE**

Lab Sample ID: WU70B
LIMS ID: 13-13122
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/10/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted: 06/27/13
Date Analyzed: 07/06/13 00:10
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 44.3 %

CAS Number	Analyte	DL	LOQ	Result
53-70-3	**Dibenz(a,h)anthracene**	**2.0**	**5.0**	**28**
106-46-7	1,4-Dichlorobenzene	1.2	5.0	< 5.0 U
120-82-1	1,2,4-Trichlorobenzene	1.9	5.0	< 5.0 U
118-74-1	Hexachlorobenzene	1.3	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	0.96	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.3	5.0	< 5.0 U
84-66-2	Diethylphthalate	3.2	5.0	< 5.0 U
85-68-7	**Butylbenzylphthalate**	**2.9**	**5.0**	**50**
95-48-7	**2-Methylphenol**	**1.8**	**5.0**	**7.1**
105-67-9	2,4-Dimethylphenol	2.9	20	< 20 U
86-30-6	N-Nitrosodiphenylamine	1.4	20	< 20 U
100-51-6	**Benzyl Alcohol**	**7.0**	**20**	**14 J**
87-86-5	Pentachlorophenol	14	50	< 50 U
95-50-1	1,2-Dichlorobenzene	1.1	5.0	< 5.0 U
541-73-1	1,3-Dichlorobenzene	1.3	5.0	< 5.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	9.4	12	< 12 U
62-75-9	N-Nitrosodimethylamine	3.1	25	< 25 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	67.7%
d14-p-Terphenyl	96.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: LF-LS-004-20130619-S**
Extraction Method: SW3546 **SAMPLE**

Lab Sample ID: WU70C
LIMS ID: 13-13123
Matrix: Sediment
Data Release Authorized:
Reported: 07/10/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted: 06/27/13
Date Analyzed: 07/06/13 00:47
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.3 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 21.1 %

CAS Number	Analyte	DL	LOQ	Result
53-70-3	**Dibenz(a,h)anthracene**	**2.0**	**4.9**	**78**
106-46-7	**1,4-Dichlorobenzene**	**1.2**	**4.9**	**3.8 J**
120-82-1	1,2,4-Trichlorobenzene	1.8	4.9	< 4.9 U
118-74-1	Hexachlorobenzene	1.2	4.9	< 4.9 U
87-68-3	Hexachlorobutadiene	0.94	4.9	< 4.9 U
131-11-3	**Dimethylphthalate**	**1.3**	**4.9**	**5.6**
84-66-2	Diethylphthalate	3.2	4.9	< 4.9 U
85-68-7	**Butylbenzylphthalate**	**2.8**	**4.9**	**38**
95-48-7	**2-Methylphenol**	**1.8**	**4.9**	**25**
105-67-9	**2,4-Dimethylphenol**	**2.8**	**20**	**30**
86-30-6	N-Nitrosodiphenylamine	1.3	20	< 20 U
100-51-6	**Benzyl Alcohol**	**6.9**	**20**	**20**
87-86-5	Pentachlorophenol	14	49	< 49 U
95-50-1	1,2-Dichlorobenzene	1.1	4.9	< 4.9 U
541-73-1	1,3-Dichlorobenzene	1.3	4.9	< 4.9 U
621-64-7	N-Nitroso-Di-N-Propylamine	9.2	12	< 12 U
62-75-9	N-Nitrosodimethylamine	3.1	24	< 24 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	61.2%
d14-p-Terphenyl	90.8%

ANALYTICAL RESOURCES INCORPORATED

SIM SW8270 SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977

Client ID	FPH	TER	TOT OUT
LF-TP-001-20130619-S	67.7%	96.0%	0
MB-062713	62.5%	98.0%	0
LCS-062713	67.6%	101%	0
LF-LS-004-20130619-S	61.2%	90.8%	0
LF-LS-004-20130619-S MS	64.5%	93.6%	0
LF-LS-004-20130619-S MSD	64.7%	89.8%	0

	LCS/MB LIMITS	QC LIMITS
(FPH) = 2-Fluorophenol	(32-100)	(27-100)
(TER) = d14-p-Terphenyl	(42-124)	(37-111)

Prep Method: SW3546
Log Number Range: 13-13122 to 13-13123

WU70:20297

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: LF-LS-004-20130619-S**
Page 1 of 1 **MATRIX SPIKE**

Lab Sample ID: WU70C
LIMS ID: 13-13123
Matrix: Sediment
Data Release Authorized:
Reported: 07/10/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted MS/MSD: 06/27/13

Sample Amount MS: 10.27 g-dry-wt
MSD: 10.28 g-dry-wt
Date Analyzed MS: 07/06/13 01:24
MSD: 07/06/13 02:00
Final Extract Volume MS: 1.0 mL
MSD: 1.0 mL
Instrument/Analyst MS: NT10/YZ
MSD: NT10/YZ
Dilution Factor MS: 1.00
MSD: 1.00

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Dibenz(a,h)anthracene	78	444	487	75.2%	469	486	80.5%	5.5%
1,4-Dichlorobenzene	3.8 J	343	487	69.7%	334	486	67.9%	2.7%
1,2,4-Trichlorobenzene	< 4.9 U	357	487	73.3%	348	486	71.6%	2.6%
Hexachlorobenzene	< 4.9 U	393	487	80.7%	378	486	77.8%	3.9%
Hexachlorobutadiene	< 4.9 U	350	487	71.9%	341	486	70.2%	2.6%
Dimethylphthalate	5.6	404	487	81.8%	398	486	80.7%	1.5%
Diethylphthalate	< 4.9 U	317 B	487	65.1%	396 B	486	81.5%	22.2%
Butylbenzylphthalate	38	590 E	487	113%	632 E	486	122%	6.9%
2-Methylphenol	25	352	487	67.1%	349	486	66.7%	0.9%
2,4-Dimethylphenol	30	853	1460	56.4%	649	1460	42.4%	27.2%
N-Nitrosodiphenylamine	< 20 U	569 E	487	117%	501 E	486	103%	12.7%
Benzyl Alcohol	20	456	487	89.5%	440	486	86.4%	3.6%
Pentachlorophenol	< 49 U	397	1460	27.2%	433	1460	29.7%	8.7%
1,2-Dichlorobenzene	< 4.9 U	341	487	70.0%	337	486	69.3%	1.2%
1,3-Dichlorobenzene	< 4.9 U	332	487	68.2%	326	486	67.1%	1.8%
N-Nitroso-Di-N-Propylamine	< 12 U	384	487	78.9%	376	486	77.4%	2.1%
N-Nitrosodimethylamine	< 24 U	947	1460	64.9%	910	1460	62.3%	4.0%

Reported in µg/kg (ppb)

RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: LF-LS-004-20130619-S**
Extraction Method: SW3546 **MATRIX SPIKE**

Lab Sample ID: WU70C
LIMS ID: 13-13123
Matrix: Sediment
Data Release Authorized:
Reported: 07/10/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted: 06/27/13
Date Analyzed: 07/06/13 01:24
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.3 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 21.1 %

CAS Number	Analyte	DL	LOQ	Result
53-70-3	Dibenz(a,h)anthracene	2.0	4.9	---
106-46-7	1,4-Dichlorobenzene	1.2	4.9	---
120-82-1	1,2,4-Trichlorobenzene	1.8	4.9	---
118-74-1	Hexachlorobenzene	1.2	4.9	---
87-68-3	Hexachlorobutadiene	0.93	4.9	---
131-11-3	Dimethylphthalate	1.3	4.9	---
84-66-2	Diethylphthalate	3.2	4.9	---
85-68-7	Butylbenzylphthalate	2.8	4.9	---
95-48-7	2-Methylphenol	1.8	4.9	---
105-67-9	2,4-Dimethylphenol	2.8	20	---
86-30-6	N-Nitrosodiphenylamine	1.3	20	---
100-51-6	Benzyl Alcohol	6.9	20	---
87-86-5	Pentachlorophenol	14	49	---
95-50-1	1,2-Dichlorobenzene	1.1	4.9	---
541-73-1	1,3-Dichlorobenzene	1.3	4.9	---
621-64-7	N-Nitroso-Di-N-Propylamine	9.2	12	---
62-75-9	N-Nitrosodimethylamine	3.1	24	---

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	64.5%
d14-p-Terphenyl	93.6%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: LF-LS-004-20130619-S**
Extraction Method: SW3546 **MATRIX SPIKE DUP**

Lab Sample ID: WU70C
LIMS ID: 13-13123
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/10/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted: 06/27/13
Date Analyzed: 07/06/13 02:00
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.3 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: 21.1 %

CAS Number	Analyte	DL	LOQ	Result
53-70-3	Dibenz(a,h)anthracene	2.0	4.9	---
106-46-7	1,4-Dichlorobenzene	1.2	4.9	---
120-82-1	1,2,4-Trichlorobenzene	1.8	4.9	---
118-74-1	Hexachlorobenzene	1.2	4.9	---
87-68-3	Hexachlorobutadiene	0.93	4.9	---
131-11-3	Dimethylphthalate	1.3	4.9	---
84-66-2	Diethylphthalate	3.2	4.9	---
85-68-7	Butylbenzylphthalate	2.8	4.9	---
95-48-7	2-Methylphenol	1.8	4.9	---
105-67-9	2,4-Dimethylphenol	2.8	20	---
86-30-6	N-Nitrosodiphenylamine	1.3	20	---
100-51-6	Benzyl Alcohol	6.8	20	---
87-86-5	Pentachlorophenol	14	49	---
95-50-1	1,2-Dichlorobenzene	1.1	4.9	---
541-73-1	1,3-Dichlorobenzene	1.3	4.9	---
621-64-7	N-Nitroso-Di-N-Propylamine	9.2	12	---
62-75-9	N-Nitrosodimethylamine	3.1	24	---

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	64.7%
d14-p-Terphenyl	89.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: LCS-062713**
Page 1 of 1 **LAB CONTROL SAMPLE**

Lab Sample ID: LCS-062713
LIMS ID: 13-13123
Matrix: Sediment
Data Release Authorized:
Reported: 07/10/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/27/13
Date Analyzed LCS: 07/05/13 23:33
Instrument/Analyst LCS: NT10/YZ

Sample Amount LCS: 10.00 g-dry-wt
Final Extract Volume LCS: 1.0 mL
Dilution Factor LCS: 1.00

Analyte	LCS		Spike Added	Recovery
Dibenz(a,h)anthracene	442		500	88.4%
1,4-Dichlorobenzene	346		500	69.2%
1,2,4-Trichlorobenzene	356		500	71.2%
Hexachlorobenzene	384		500	76.8%
Hexachlorobutadiene	352		500	70.4%
Dimethylphthalate	442		500	88.4%
Diethylphthalate	207	B	500	41.4%
Butylbenzylphthalate	588	E	500	118%
2-Methylphenol	333		500	66.6%
2,4-Dimethylphenol	828		1500	55.2%
N-Nitrosodiphenylamine	472		500	94.4%
Benzyl Alcohol	458		500	91.6%
Pentachlorophenol	1290	E	1500	86.0%
1,2-Dichlorobenzene	351		500	70.2%
1,3-Dichlorobenzene	341		500	68.2%
N-Nitroso-Di-N-Propylamine	363		500	72.6%
N-Nitrosodimethylamine	929		1500	61.9%

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	67.6%
d14-p-Terphenyl	101%

4B
SEMIVOLATILE METHOD BLANK SUMMARY

BLANK NO.

WU70MBS1

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No: WU70
Project: NPDES SAMPLING SUPPO

Lab File ID: WU70MB
Date Extracted: 06/27/13

Instrument ID: NT10
Date Analyzed: 07/05/13

Matrix: SOLID
Time Analyzed: 2256

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
01	WU70LCSS1	WU70LCSS1	WU79BSB	07/05/13
02	LF-TP-001-201306	WU70B	WU70CB	07/06/13
03	LF-LS-004-201306	WU70C	WU70C	07/06/13
04	LF-LS-004-20130	WU70CMS	WU70CMS	07/06/13
05	LF-LS-004-20130	WU70CMSD	WU70CMSD	07/06/13
06				
07				
08				
09				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

FORM IV SV

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by Selected Ion Monitoring GC/MS **Sample ID: MB-062713**
Extraction Method: SW3546 **METHOD BLANK**

Lab Sample ID: MB-062713
LIMS ID: 13-13123
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/10/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/27/13
Date Analyzed: 07/05/13 22:56
Instrument/Analyst: NT10/YZ
GPC Cleanup: Yes

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 1.0 mL
Dilution Factor: 1.00
Percent Moisture: NA

CAS Number	Analyte	DL	LOQ	Result
53-70-3	Dibenz(a,h)anthracene	2.0	5.0	< 5.0 U
106-46-7	1,4-Dichlorobenzene	1.2	5.0	< 5.0 U
120-82-1	1,2,4-Trichlorobenzene	1.9	5.0	< 5.0 U
118-74-1	Hexachlorobenzene	1.3	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	0.96	5.0	< 5.0 U
131-11-3	Dimethylphthalate	1.3	5.0	< 5.0 U
84-66-2	**Diethylphthalate**	**3.3**	**5.0**	**11**
85-68-7	Butylbenzylphthalate	2.9	5.0	< 5.0 U
95-48-7	2-Methylphenol	1.8	5.0	< 5.0 U
105-67-9	2,4-Dimethylphenol	2.9	20	< 20 U
86-30-6	N-Nitrosodiphenylamine	1.4	20	< 20 U
100-51-6	Benzyl Alcohol	7.0	20	< 20 U
87-86-5	Pentachlorophenol	14	50	< 50 U
95-50-1	1,2-Dichlorobenzene	1.1	5.0	< 5.0 U
541-73-1	1,3-Dichlorobenzene	1.3	5.0	< 5.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	9.5	12	< 12 U
62-75-9	N-Nitrosodimethylamine	3.2	25	< 25 U

Reported in µg/kg (ppb)

SIM Semivolatile Surrogate Recovery

2-Fluorophenol	62.5%
d14-p-Terphenyl	98.0%

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES SAMPLING SUPPORTGREEN

DFTPP Injection Date: 07/05/13 DFTPP Injection Time: 1744

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	18.2
68	Less than 2.0% of mass 69	0.6 (1.5)1
69	Mass 69 relative abundance	41.6
70	Less than 2.0% of mass 69	0.2 (0.4)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	6.7
275	10.0 - 60.0% of mass 198	25.7
365	Greater than 1.0% of mass 198	3.51
441	0.0 - 24.0% of mass 442	14.3 (15.4)2
442	50.0 - 200.0% of mass 198	92.9
443	15.0 - 24.0% of mass 442	18.2 (19.6)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		ABN 5	IC0705A	07/05/13	1214
02		ABN0.2	IC0705C	07/05/13	1328
03		ABN1.0	IC0705D	07/05/13	1405
04		ABN2.5	IC0705F	07/05/13	1520
05		ABN0.5	IC0705G	07/05/13	1557
06		ABN0.05	IC0705H	07/05/13	1634
07		ABN0.1	IC0705I	07/05/13	1711
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

Instrument ID: NT10 Project: NPDES SAMPLING SUPPORTGREEN

DFTPP Injection Date: 07/05/13 DFTPP Injection Time: 1744

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.0% of mass 198	18.2
68	Less than 2.0% of mass 69	0.6 (1.5)1
69	Mass 69 relative abundance	41.6
70	Less than 2.0% of mass 69	0.2 (0.4)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	6.7
275	10.0 - 60.0% of mass 198	25.7
365	Greater than 1.0% of mass 198	3.51
441	0.0 - 24.0% of mass 442	14.3 (15.4)2
442	50.0 - 200.0% of mass 198	92.9
443	15.0 - 24.0% of mass 442	18.2 (19.6)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		CC0705A	CC0705A	07/05/13	1837
02	WU70MBS1	WU70MBS1	WU70MB	07/05/13	2256
03	WU70LCSS1	WU70LCSS1	WU79BSB	07/05/13	2333
04	LF-TP-001-201306	WU70B	WU70CB	07/06/13	0010
05	LF-LS-004-201306	WU70C	WU70C	07/06/13	0047
06	LF-LS-004-20130	WU70CMS	WU70CMS	07/06/13	0124
07	LF-LS-004-20130	WU70CMSD	WU70CMSD	07/06/13	0200
08					
09					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					

FORM V SV

6B

SEMIVOLATILE 8270-D INITIAL CALIBRATION DATA

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU70 Project: NPDES SAMPLING SUPPORTGREEN

Instrument ID: NT10 Calibration Date: 07/05/13

Method = SIM.b/SIMABN2.m
Cal levels = 7

LAB FILE ID: RRF0.05=IC0705H RRF0.1=IC0705I RRF0.2=IC0705C
RRF0.5=IC0705G RRF1 =IC0705D RRF2.5=IC0705F
RRF5 =IC0705A

COMPOUND	RRF 0.05	RRF 0.1	RRF 0.2	RRF 0.5	RRF 1	RRF 2.5	RRF 5	RRF	%RSD /R^2
Phenol	1.870	1.868	2.009	2.001	2.020	2.077	2.012	1.980	4.0
1,3-Dichlorobenzene	1.713	1.586	1.654	1.550	1.539	1.533	1.440	1.574	5.7
1,4-Dichlorobenzene	1.631	1.564	1.615	1.489	1.498	1.485	1.404	1.526	5.3
1,2-Dichlorobenzene	1.570	1.492	1.560	1.442	1.432	1.434	1.347	1.468	5.4
Benzyl alcohol	0.916	0.887	1.029	1.036	0.987	1.079	1.039	0.996	7.1
2-Methylphenol	1.397	1.336	1.456	1.468	1.460	1.514	1.430	1.437	4.0
N-Nitroso-di-n-propylamine	0.922	0.872	0.978	0.956	0.958	0.988	0.909	0.940	4.4
4-Methylphenol	1.251	1.295	1.442	1.468	1.496	1.541	1.504	1.428	7.8
2,4-Dimethylphenol	0.390	0.383	0.431	0.421	0.420	0.429	0.411	0.412	4.6
1,2,4-Trichlorobenzene	0.394	0.385	0.401	0.366	0.362	0.363	0.344	0.374	5.4
Hexachlorobutadiene	0.236	0.236	0.235	0.214	0.213	0.215	0.207	0.222	5.8
Dimethylphthalate	1.217	1.210	1.365	1.231	1.256	1.232	1.193	1.243	4.6
Diethylphthalate	0.190	0.187	0.192	0.179	0.165			0.183	6.1
N-Nitrosodiphenylamine (1)	0.373	0.416	0.480	0.489	0.506	0.499	0.474	0.462	10.6
Hexachlorobenzene	0.315	0.300	0.312	0.284	0.285	0.271	0.261	0.290	7.0
Pentachlorophenol	0.149	0.164	0.201	0.205	0.219	0.220	0.220	0.197	14.7
Butylbenzylphthalate	0.335	0.338	0.465	0.438	0.484	0.502	0.502	0.438	16.6
Dibenzo(a,h)anthracene	0.697	0.716	0.919	0.891	0.969	0.998	0.988	0.882	14.3
N-Nitrosodimethylamine	0.786	0.830	0.916	0.926	0.943	0.975	0.963	0.906	7.8
2-Fluorophenol	1.450	1.387	1.477	1.447	1.442	1.495	1.451	1.450	2.3
Terphenyl-d14	0.463	0.443	0.504	0.447	0.470	0.466	0.446	0.463	4.5

(1) Cannot be seperated from Diphenylamine

<- Outside QC limits: %RSD <20% or R^2 > 0.990

7B

SEMIVOLATILE 8270-D CONTINUING CALIBRATION CHECK

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU70 Project: NPDES SAMPLING SUPPORTGREEN

Instrument ID: NT10 Cont. Calib. Date: 07/05/13

Init. Calib. Date: 07/05/13 Cont. Calib. Time: 1837

COMPOUND	CalAmt or ARF	CC Amt or RF	MIN RRF	CURVE TYPE	%D or Drift
Phenol	1.980	2.060	0.800	AVRG	4.0
1,3-Dichlorobenzene	1.574	1.534	0.010	AVRG	-2.5
1,4-Dichlorobenzene	1.526	1.482	0.010	AVRG	-2.9
1,2-Dichlorobenzene	1.468	1.430	0.010	AVRG	-2.6
Benzyl alcohol	0.996	1.016	0.010	AVRG	2.0
2-Methylphenol	1.437	1.505	0.700	AVRG	4.7
N-Nitroso-di-n-propylamine	0.940	0.980	0.500	AVRG	4.2
4-Methylphenol	1.428	1.528	0.600	AVRG	7.0
2,4-Dimethylphenol	0.412	0.435	0.200	AVRG	5.6
1,2,4-Trichlorobenzene	0.374	0.359	0.010	AVRG	-4.0
Hexachlorobutadiene	0.222	0.214	0.010	AVRG	-3.6
Dimethylphthalate	1.243	1.247	0.010	AVRG	0.3
Diethylphthalate	0.183	0.160	0.010	AVRG	-12.6
N-Nitrosodiphenylamine(1)	0.462	0.502	0.010	AVRG	8.6
Hexachlorobenzene	0.290	0.278	0.100	AVRG	-4.1
Pentachlorophenol	0.197	0.214	0.050	AVRG	8.6
Butylbenzylphthalate	0.438	0.468	0.010	AVRG	6.8
Dibenzo(a,h)anthracene	0.882	0.952	0.400	AVRG	7.9
N-Nitrosodimethylamine	0.906	0.951	0.010	AVRG	5.0
2-Fluorophenol	1.450	1.479	0.010	AVRG	2.0
Terphenyl-d14	0.463	0.466	0.010	AVRG	0.6

(1) Cannot be separated from Diphenylamine

<- Exceeds QC limit of 20% D

* RF less than minimum RF

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU70 Project: NPDES SAMPLING SUPPORTGREEN

Ical Midpoint ID: IC0705D Ical Date: 07/05/13

Instrument ID: NT10 Cont. Cal Date: 07/05/13

		IS1(DCB) AREA #	RT #	IS2(NPT) AREA #	RT #	IS3(ANT) AREA #	RT #
	ICAL MIDPT	115828	8.83	412333	11.49	225152	15.39
	UPPER LIMIT	231656		824666		450304	
	LOWER LIMIT	57914		206166		112576	
	CCAL	109836	8.82	391053	11.49	213079	15.39
	UPPER LIMIT		9.32		11.99		15.89
	LOWER LIMIT		8.32		10.99		14.89
01	WU70MBS1	112074	8.82	421836	11.48	202770	15.39
02	WU70LCSS1	103434	8.82	372298	11.48	206356	15.39
03	LF-TP-001-20	102291	8.83	380334	11.49	189141	15.40
04	LF-LS-004-20	103329	8.83	380912	11.49	188841	15.40
05	LF-LS-004-20	99593	8.83	356715	11.49	184327	15.41
06	LF-LS-004-20	94445	8.83	344309	11.49	177233	15.41
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
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.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No: WU70 Project: NPDES SAMPLING SUPPORTGREEN

Ical Midpoint ID: IC0705D Ical Date: 07/05/13

Instrument ID: NT10 Cont. Cal Date: 07/05/13

		IS4(PHN) AREA #	RT #	IS5(CRY) AREA #	RT #	IS6(PRY) AREA #	RT #
	ICAL MIDPT	415301	18.74	449306	23.85	474708	26.28
	UPPER LIMIT	830602		898612		949416	
	LOWER LIMIT	207650		224653		237354	
	CCAL	392889	18.74	413365	23.85	444988	26.28
	UPPER LIMIT		19.24		24.35		26.78
	LOWER LIMIT		18.24		23.35		25.78
01	WU70MBS1	374893	18.75	356176	23.86	400187	26.30
02	WU70LCSS1	376025	18.75	368160	23.86	382348	26.29
03	LF-TP-001-20	332066	18.77	342337	23.95	369420	26.50
04	LF-LS-004-20	321554	18.76	330293	23.89	369913	26.38
05	LF-LS-004-20	306196	18.76	321952	23.89	362311	26.39
06	LF-LS-004-20	300446	18.76	318691	23.90	347460	26.41
07							
08							
09							
10							
11							
12							
13							
14							
15							
16							
17							
18							
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

Dioxin Analysis
Report and Summary QC Forms

ARI Job ID: WU70

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: LF-TP-001-20130619-S**

Lab Sample ID: WU70B
LIMS ID: 13-13122
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/03/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted: 06/27/13
Date Analyzed: 07/01/13 17:23
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF	0.70	0.65-0.89		0.990	0.514	J
2,3,7,8-TCDD	0.23	0.65-0.89		0.990	0.259	JEMPC
1,2,3,7,8-PeCDF	1.19	1.32-1.78		0.990	0.450	JXEMPC
2,3,4,7,8-PeCDF	1.96	1.32-1.78		0.990	0.517	JEMPC
1,2,3,7,8-PeCDD	1.35	1.32-1.78		0.990	0.525	J
1,2,3,4,7,8-HxCDF	1.11	1.05-1.43		0.990	0.621	J
1,2,3,6,7,8-HxCDF	1.15	1.05-1.43		0.990	0.513	J
2,3,4,6,7,8-HxCDF	1.23	1.05-1.43		0.990	0.682	J
1,2,3,7,8,9-HxCDF	1.17	1.05-1.43		0.990	0.299	J
1,2,3,4,7,8-HxCDD	1.05	1.05-1.43		0.990	0.527	JEMPC
1,2,3,6,7,8-HxCDD	1.34	1.05-1.43		0.990	0.986	J
1,2,3,7,8,9-HxCDD	1.42	1.05-1.43		0.990	0.883	J
1,2,3,4,6,7,8-HpCDF	1.02	0.88-1.20		0.990	3.39	B
1,2,3,4,7,8,9-HpCDF	0.83	0.88-1.20		0.990	0.455	JEMPC
1,2,3,4,6,7,8-HpCDD	1.06	0.88-1.20		0.990	17.3	
OCDF	0.74	0.76-1.02		1.98	8.71	BEMPC
OCDD	0.88	0.76-1.02		1.98	144	

Homologue Group	EDL	RL	Result	
Total TCDF		0.990	7.40	EMPC
Total TCDD		0.990	5.90	EMPC
Total PeCDF		1.98	7.43	EMPC
Total PeCDD		0.990	7.07	EMPC
Total HxCDF		1.98	6.73	EMPC
Total HxCDD		1.98	12.8	EMPC
Total HpCDF		1.98	9.18	EMPC
Total HpCDD		1.98	37.6	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 1.71

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 1.71

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: LF-TP-001-20130619-S**

Lab Sample ID: WU70B
LIMS ID: 13-13122
Matrix: Sediment
Data Release Authorized:
Reported: 07/03/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted: 06/27/13
Date Analyzed: 07/01/13 17:23
Instrument/Analyst: AS1/PK

Sample Amount: 10.1 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.75	0.65-0.89	80.4	24-169	
13C-2,3,7,8-TCDD	0.78	0.65-0.89	89.8	25-164	
13C-1,2,3,7,8-PeCDF	1.56	1.32-1.78	104	24-185	
13C-2,3,4,7,8-PeCDF	1.57	1.32-1.78	98.1	21-178	
13C-1,2,3,7,8-PeCDD	1.56	1.32-1.78	96.2	25-181	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	91.1	26-152	
13C-1,2,3,6,7,8-HxCDF	0.50	0.43-0.59	87.7	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	91.1	28-136	
13C-1,2,3,7,8,9-HxCDF	0.51	0.43-0.59	104	29-147	
13C-1,2,3,4,7,8-HxCDD	1.26	1.05-1.43	91.7	32-141	
13C-1,2,3,6,7,8-HxCDD	1.27	1.05-1.43	85.5	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.44	0.37-0.51	81.0	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.44	0.37-0.51	90.0	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.03	0.88-1.20	89.9	23-140	
13C-OCDD	0.88	0.76-1.02	74.0	17-157	
37Cl4-2,3,7,8-TCDD			89.1	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: LF-LS-004-20130619-S**

Lab Sample ID: WU70C
LIMS ID: 13-13123
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/03/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted: 06/27/13
Date Analyzed: 07/01/13 18:16
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.3 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF	0.90	0.65-0.89		0.974	0.489	JEMPC
2,3,7,8-TCDD	0.19	0.65-0.89		0.974	0.214	JEMPC
1,2,3,7,8-PeCDF	1.57	1.32-1.78		0.974	0.353	J
2,3,4,7,8-PeCDF	1.04	1.32-1.78		0.974	0.310	JEMPC
1,2,3,7,8-PeCDD	1.24	1.32-1.78		0.974	0.300	JEMPC
1,2,3,4,7,8-HxCDF	1.45	1.05-1.43		0.974	0.752	JEMPC
1,2,3,6,7,8-HxCDF	1.29	1.05-1.43		0.974	0.406	J
2,3,4,6,7,8-HxCDF	1.14	1.05-1.43		0.974	0.464	J
1,2,3,7,8,9-HxCDF	1.37	1.05-1.43		0.974	0.257	J
1,2,3,4,7,8-HxCDD	1.47	1.05-1.43		0.974	0.329	JEMPC
1,2,3,6,7,8-HxCDD	1.13	1.05-1.43		0.974	0.942	J
1,2,3,7,8,9-HxCDD	1.35	1.05-1.43		0.974	0.700	J
1,2,3,4,6,7,8-HpCDF	1.07	0.88-1.20		0.974	4.41	B
1,2,3,4,7,8,9-HpCDF	1.03	0.88-1.20		0.974	0.774	J
1,2,3,4,6,7,8-HpCDD	1.01	0.88-1.20		0.974	23.4	
OCDF	0.87	0.76-1.02		1.95	10.9	B
OCDD	0.88	0.76-1.02		1.95	189	

Homologue Group	EDL	RL	Result	
Total TCDF		0.974	4.37	EMPC
Total TCDD		0.974	5.66	EMPC
Total PeCDF		1.95	5.49	EMPC
Total PeCDD		0.974	8.02	EMPC
Total HxCDF		1.95	8.06	EMPC
Total HxCDD		1.95	15.5	EMPC
Total HpCDF		1.95	13.3	EMPC
Total HpCDD		1.95	71.4	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 1.40

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 1.40

Reported in pg/g

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B

ANALYTICAL RESOURCES INCORPORATED

Sample ID: LF-LS-004-20130619-S

Lab Sample ID: WU70C
LIMS ID: 13-13123
Matrix: Sediment
Data Release Authorized:
Reported: 07/03/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted: 06/27/13
Date Analyzed: 07/01/13 18:16
Instrument/Analyst: AS1/PK

Sample Amount: 10.3 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.75	0.65-0.89	60.8	24-169	
13C-2,3,7,8-TCDD	0.78	0.65-0.89	75.8	25-164	
13C-1,2,3,7,8-PeCDF	1.55	1.32-1.78	101	24-185	
13C-2,3,4,7,8-PeCDF	1.54	1.32-1.78	98.4	21-178	
13C-1,2,3,7,8-PeCDD	1.56	1.32-1.78	95.9	25-181	
13C-1,2,3,4,7,8-HxCDF	0.51	0.43-0.59	83.8	26-152	
13C-1,2,3,6,7,8-HxCDF	0.51	0.43-0.59	82.1	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	84.9	28-136	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	89.9	29-147	
13C-1,2,3,4,7,8-HxCDD	1.25	1.05-1.43	86.1	32-141	
13C-1,2,3,6,7,8-HxCDD	1.22	1.05-1.43	81.3	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.44	0.37-0.51	75.0	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.45	0.37-0.51	79.3	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.04	0.88-1.20	82.4	23-140	
13C-OCDD	0.89	0.76-1.02	58.7	17-157	
37Cl4-2,3,7,8-TCDD			77.3	35-197	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: OPR-062713**

Lab Sample ID: OPR-062713
LIMS ID: 13-13122
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/03/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/27/13
Date Analyzed: 07/01/13 16:31
Instrument/Analyst: AS1/PK
Acid Cleanup: Yes
Silica-Carbon Cleanup: No

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00
Silica-Florisil Cleanup: Yes

Analyte	Ion Ratio	Ratio Limits	RL	Result
2,3,7,8-TCDF	0.75	0.65-0.89	1.00	23.0
2,3,7,8-TCDD	0.77	0.65-0.89	1.00	21.5
1,2,3,7,8-PeCDF	1.54	1.32-1.78	1.00	104
2,3,4,7,8-PeCDF	1.54	1.32-1.78	1.00	105
1,2,3,7,8-PeCDD	1.55	1.32-1.78	1.00	104
1,2,3,4,7,8-HxCDF	1.22	1.05-1.43	1.00	103
1,2,3,6,7,8-HxCDF	1.19	1.05-1.43	1.00	102
2,3,4,6,7,8-HxCDF	1.20	1.05-1.43	1.00	105
1,2,3,7,8,9-HxCDF	1.23	1.05-1.43	1.00	106
1,2,3,4,7,8-HxCDD	1.22	1.05-1.43	1.00	101
1,2,3,6,7,8-HxCDD	1.27	1.05-1.43	1.00	106
1,2,3,7,8,9-HxCDD	1.26	1.05-1.43	1.00	109
1,2,3,4,6,7,8-HpCDF	1.05	0.88-1.20	1.00	136
1,2,3,4,7,8,9-HpCDF	1.03	0.88-1.20	1.00	106
1,2,3,4,6,7,8-HpCDD	1.03	0.88-1.20	1.00	108
OCDF	0.89	0.76-1.02	2.00	194
OCDD	0.88	0.76-1.02	2.00	218

Homologue Group	EDL	RL	Result	
Total TCDF		1.00	29.1	EMPC
Total TCDD		1.00	22.8	EMPC
Total PeCDF		2.00	223	EMPC
Total PeCDD		1.00	106	EMPC
Total HxCDF		2.00	422	EMPC
Total HxCDD		2.00	317	EMPC
Total HpCDF		2.00	244	
Total HpCDD		2.00	110	

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: OPR-062713**

Lab Sample ID: OPR-062713
LIMS ID: 13-13122
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/03/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/27/13
Date Analyzed: 07/01/13 16:31
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.76	0.65-0.89	94.6	22-152	
13C-2,3,7,8-TCDD	0.78	0.65-0.89	93.9	20-175	
13C-1,2,3,7,8-PeCDF	1.56	1.32-1.78	101	21-192	
13C-2,3,4,7,8-PeCDF	1.54	1.32-1.78	88.2	13-328	
13C-1,2,3,7,8-PeCDD	1.55	1.32-1.78	95.6	21-227	
13C-1,2,3,4,7,8-HxCDF	0.51	0.43-0.59	90.3	19-202	
13C-1,2,3,6,7,8-HxCDF	0.52	0.43-0.59	96.6	21-159	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	89.4	22-176	
13C-1,2,3,7,8,9-HxCDF	0.52	0.43-0.59	85.8	17-205	
13C-1,2,3,4,7,8-HxCDD	1.24	1.05-1.43	97.9	21-193	
13C-1,2,3,6,7,8-HxCDD	1.22	1.05-1.43	93.6	25-163	
13C-1,2,3,4,6,7,8-HpCDF	0.44	0.37-0.51	83.2	21-158	
13C-1,2,3,4,7,8,9-HpCDF	0.43	0.37-0.51	85.0	20-186	
13C-1,2,3,4,6,7,8-HpCDD	1.03	0.88-1.20	97.6	26-166	
13C-OCDD	0.88	0.76-1.02	82.0	13-198	
37Cl4-2,3,7,8-TCDD			97.1	31-191	

Reported in Percent Recovery

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: OPR-062713**

Lab Sample ID: OPR-062713
LIMS ID: 13-13122
Matrix: Sediment
Data Release Authorized:
Reported: 07/03/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/27/13
Date Analyzed: 07/01/13 16:31
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	OPR	Spiked	Recovery	Limits
2,3,7,8-TCDF	23.0	20.0	115	75-158
2,3,7,8-TCDD	21.5	20.0	108	67-158
1,2,3,7,8-PeCDF	104	100	104	80-134
2,3,4,7,8-PeCDF	105	100	105	68-160
1,2,3,7,8-PeCDD	104	100	104	70-142
1,2,3,4,7,8-HxCDF	103	100	103	72-134
1,2,3,6,7,8-HxCDF	102	100	102	84-130
2,3,4,6,7,8-HxCDF	105	100	105	70-156
1,2,3,7,8,9-HxCDF	106	100	106	78-130
1,2,3,4,7,8-HxCDD	101	100	101	70-164
1,2,3,6,7,8-HxCDD	106	100	106	76-134
1,2,3,7,8,9-HxCDD	109	100	109	64-162
1,2,3,4,6,7,8-HpCDF	136	100	136	82-132
1,2,3,4,7,8,9-HpCDF	106	100	106	78-138
1,2,3,4,6,7,8-HpCDD	108	100	108	70-140
OCDF	194	200	97.0	63-170
OCDD	218	200	109	78-144

Reported in pg/g

4DF - FORM IV-HR CDD
CDD/CDF METHOD BLANK SUMMARY
HIGH RESOLUTION

Blank No.
WU70MB

Lab Name: ANALYTICAL RESOURCES, INC. Contract: SAIC

Lab Code: WU70 Project: NPDES

Matrix:(Soil/Water/Ash/Tissue/Oil) SOIL Lab Sample ID: WU70MBS

Sample wt/vol: 10 (g/ml) g Lab File ID: 13070108

Water Sample Prep: (sep/spe) Date Received: 19-JUN-13

GC Column: RTX-DIOXIN2 ID: 0.25 mm Date Extracted: 27-JUN-13

Instrument ID: AUTOSPEC1 Date Analyzed: 01-JUL-13

Client Sample No.	Lab Sample ID	Lab File ID	Date Analyzed
WU70OPR	WU70OPR	13070109	07/01/13
LF-TP-001-20130619-S	WU70B	13070110	07/01/13
LF-LS-004-20130619-S	WU70C	13070111	07/01/13

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: MB-062713**

Lab Sample ID: MB-062713 QC Report No: WU70-SAIC
LIMS ID: 13-13122 Project: NPDES Sampling Support
Matrix: Sediment 209977
Data Release Authorized: Date Sampled: NA
Reported: 07/03/13 Date Received: NA

Date Extracted: 06/27/13 Sample Amount: 10.0 g-dry-wt
Date Analyzed: 07/01/13 15:38 Final Extract Volume: 20 uL
Instrument/Analyst: AS1/PK Dilution Factor: 1.00
Acid Cleanup: Yes Silica-Florisil Cleanup: Yes
Silica-Carbon Cleanup: No

Analyte	Ion Ratio	Ratio Limits	EDL	RL	Result	
2,3,7,8-TCDF		0.65-0.89	0.0500	1.00	< 0.0500	U
2,3,7,8-TCDD		0.65-0.89	0.0480	1.00	< 0.0480	U
1,2,3,7,8-PeCDF		1.32-1.78	0.0580	1.00	< 0.0580	U
2,3,4,7,8-PeCDF		1.32-1.78	0.0640	1.00	< 0.0640	U
1,2,3,7,8-PeCDD		1.32-1.78	0.0760	1.00	< 0.0760	U
1,2,3,4,7,8-HxCDF		1.05-1.43	0.0480	1.00	< 0.0480	U
1,2,3,6,7,8-HxCDF		1.05-1.43	0.0420	1.00	< 0.0420	U
2,3,4,6,7,8-HxCDF		1.05-1.43	0.0480	1.00	< 0.0480	U
1,2,3,7,8,9-HxCDF		1.05-1.43	0.0580	1.00	< 0.0580	U
1,2,3,4,7,8-HxCDD		1.05-1.43	0.0760	1.00	< 0.0760	U
1,2,3,6,7,8-HxCDD		1.05-1.43	0.0780	1.00	< 0.0780	U
1,2,3,7,8,9-HxCDD		1.05-1.43	0.0840	1.00	< 0.0840	U
1,2,3,4,6,7,8-HpCDF	1.49	0.88-1.20		1.00	0.618	JEMPC
1,2,3,4,7,8,9-HpCDF		0.88-1.20	0.112	1.00	< 0.112	U
1,2,3,4,6,7,8-HpCDD	0.90	0.88-1.20		1.00	1.29	
OCDF	0.77	0.76-1.02		2.00	1.35	J
OCDD	0.90	0.76-1.02		2.00	8.03	

Homologue Group	EDL	RL	Result	
Total TCDF	0.0500	1.00	< 0.0500	U
Total TCDD	0.0480	1.00	0.475	EMPC
Total PeCDF	0.0640	2.00	0.210	EMPC
Total PeCDD	0.0760	1.00	0.205	EMPC
Total HxCDF	0.0580	2.00	0.667	EMPC
Total HxCDD	0.0840	2.00	1.01	EMPC
Total HpCDF		2.00	1.98	EMPC
Total HpCDD		2.00	2.46	

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=0, Including EMPC): 0.02

Total 2,3,7,8-TCDD Equivalence (WHO2005, ND=1/2 EDL, Including EMPC): 0.12

Reported in pg/g

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Dioxins/Furans by EPA 1613B **Sample ID: MB-062713**

Lab Sample ID: MB-062713
LIMS ID: 13-13122
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/03/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/27/13
Date Analyzed: 07/01/13 15:38
Instrument/Analyst: AS1/PK

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 20 uL
Dilution Factor: 1.00

Analyte	Ion Ratio	Ratio Limits	Result	Limits	Exceedance
13C-2,3,7,8-TCDF	0.76	0.65-0.89	94.1	24-169	
13C-2,3,7,8-TCDD	0.79	0.65-0.89	101	25-164	
13C-1,2,3,7,8-PeCDF	1.55	1.32-1.78	112	24-185	
13C-2,3,4,7,8-PeCDF	1.54	1.32-1.78	100	21-178	
13C-1,2,3,7,8-PeCDD	1.56	1.32-1.78	108	25-181	
13C-1,2,3,4,7,8-HxCDF	0.52	0.43-0.59	89.8	26-152	
13C-1,2,3,6,7,8-HxCDF	0.50	0.43-0.59	96.4	26-123	
13C-2,3,4,6,7,8-HxCDF	0.52	0.43-0.59	91.0	28-136	
13C-1,2,3,7,8,9-HxCDF	0.51	0.43-0.59	89.3	29-147	
13C-1,2,3,4,7,8-HxCDD	1.27	1.05-1.43	98.6	32-141	
13C-1,2,3,6,7,8-HxCDD	1.22	1.05-1.43	95.6	28-130	
13C-1,2,3,4,6,7,8-HpCDF	0.44	0.37-0.51	86.8	28-143	
13C-1,2,3,4,7,8,9-HpCDF	0.46	0.37-0.51	91.8	26-138	
13C-1,2,3,4,6,7,8-HpCDD	1.04	0.88-1.20	102	23-140	
13C-OCDD	0.88	0.76-1.02	87.7	17-157	
37Cl4-2,3,7,8-TCDD			104	35-197	

Reported in Percent Recovery

5DFA - FORM V-HR CDD-1
CDD/CDF WINDOW DEFINING MIX (WDM) SUMMARY
HIGH RESOLUTION

Standard No.: CS3

Lab Name: ANALYTICAL RESOURCES, INC. Contract: SAIC

Lab Code: WU70 Project: NPDES

GC Column: RTX-DIOXIN2 ID: 0.25 mm Lab File ID: 13070102

Instrument ID: AUTOSPEC1 Date Analyzed: 01-JUL-13

Time Analyzed: 1024

CDD/CDF	RT First Eluting	RT Last Eluting
TCDD	24.31	27.78
TCDF	23.03	28.05
PeCDD	29.57	32.70
PeCDF	27.90	33.09
HxCDD	34.80	37.50
HxCDF	34.00	37.94
HpCDD	40.61	41.91
HpCDF	40.04	42.83

5DFB - FORM V-HR CDD-2
CDD/CDF CHROMATOGRAPHIC RESOLUTION SUMMARY
HIGH RESOLUTION

Standard No.

TETRA ISC

Lab Name:	ANALYTICAL RESOURCES, INC.	Contract:	SAIC
Lab Code:	WU70	Project:	NPDES
GC Column:	RTX-DIOXIN2 ID: .25 mm	Lab File ID:	13070103
Instrument:	AUTOSPEC1	Date Analyzed:	01-JUL-13
		Time Analyzed:	1115

Percent Valley determination for RTX-DIOXIN2 column -
For the column performance solution beginning 12-hour period:

1278-TCDD/2378-TCDD: 16.7

Quality Control (QC) Limits:

Percent Valley between the TCDD isomers must be less than or equal to 25%

Percent Valley determination for RTX-DIOXIN2 column -
For the column performance solution beginning 12-hour period:

3467-TCDF/2378-TCDF: 15.5

QC Limits:

Percent Valley between the TCDD/TCDF isomers must be less than or equal to 25%

5DFB - FORM V-HR CDD-3
CDD/CDF ANALTYICAL SEQUENCE SUMMARY
HIGH RESOLUTION

Lab Name: ANALYTICAL RESOURCES, INC. Contract: SAIC

Lab Code: WU70 Project: NPDES

GC Column: RTX-DIOXIN2 ID: 0.25 mm Instrument ID: AUTOSPEC1

Init. Calib. Date(s): 20-JUN-13

Init: Calib. Times: 12:34 to 17:10

The Analytical Sequence of standards, samples, blanks, and Laboratory Control Samples (LCS) is as follows:

Client Sample No.	Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed
CS3	CS3	13070102	07/01/13	1024
ISC01	ISC	13070103	07/01/13	1115
WU70MB	WU70MBS	13070108	07/01/13	1538
WU70OPR	WU70OPR	13070109	07/01/13	1631
LF-TP-001-20130619-S	WU70B	13070110	07/01/13	1723
LF-LS-004-20130619-S	WU70C	13070111	07/01/13	1816
CS3	CS3	13070116	07/01/13	1908

6DFA - Form VI-HR CDD-1
CDD/CDF INITIAL CALIBRATION RESPONSE FACTOR SUMMARY
HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES, INC.	Contract:	SAIC
Lab Code:	WU70	Case No.:	NPDES
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1		
Init.Calib.Date CSL:	20-Jun-13	Init.Calib.Time CSL:	12:34:03
Init.Calib.Date CS1:	20-Jun-13	Init.Calib.Time CS1:	13:43:04
Init.Calib.Date CS2:	20-Jun-13	Init.Calib.Time CS2:	14:33:31
Init.Calib.Date CS3:	20-Jun-13	Init.Calib.Time CS3:	15:25:46
Init.Calib.Date CS4:	20-Jun-13	Init.Calib.Time CS4:	16:18:06
Init.Calib.Date CS5:	20-Jun-13	Init.Calib.Time CS5:	17:10:20

Target Analytes	RR/RRF						Mean RR/RRF	% RSD	Limits (% +/-)
	CSL	CS1	CS2	CS3	CS4	CS5			
2378-TCDD	0.00	1.01	0.89	0.91	0.93	0.94	0.94	4.8	20.0
2378-TCDF	0.00	0.78	0.75	0.79	0.76	0.77	0.77	2.0	20.0
12378-PeCDF	0.81	0.81	0.79	0.85	0.81	0.81	0.81	2.3	20.0
12378-PeCDD	0.95	0.92	0.86	0.87	0.88	0.89	0.89	3.6	20.0
23478-PeCDF	0.87	0.85	0.80	0.84	0.83	0.83	0.84	2.6	20.0
123478-HxCDF	1.02	0.96	0.95	0.95	0.96	0.96	0.97	2.6	20.0
123678-HxCDF	0.97	0.98	0.92	0.96	0.92	0.96	0.95	2.6	20.0
123478-HxCDD	0.94	0.96	0.87	0.87	0.87	0.88	0.90	4.7	20.0
123678-HxCDD	0.76	0.85	0.81	0.84	0.80	0.83	0.82	4.0	20.0
123789-HxCDD[2]	0.74	0.80	0.79	0.80	0.80	0.80	0.79	3.0	20.0
234678-HxCDF	0.90	1.03	0.99	1.06	1.00	1.02	1.00	5.4	20.0
123789-HxCDF	0.77	0.89	0.86	0.92	0.90	0.91	0.87	6.5	20.0
1234678-HpCDF	0.89	1.12	1.08	1.14	1.08	1.12	1.07	8.5	20.0
1234678-HpCDD	0.80	0.87	0.87	0.92	0.92	0.90	0.88	4.8	20.0
1234789-HpCDF	1.01	1.10	1.04	1.15	1.09	1.13	1.09	4.7	20.0
OCDD	0.85	0.84	0.87	0.88	0.90	0.91	0.88	3.0	20.0
OCDF[1]	0.82	0.83	0.85	0.93	0.91	0.93	0.88	5.8	20.0
37CL-2378-TCDD	1.07	1.02	0.91	0.95	1.00	1.04	1.00	5.8	20.0

(1) The Relative Response (RR) is calculated based on the labeled analogs of the other two HxCDDs.
(2) The RR is calculated based on the labeled analog of OCDD

Labeled Compounds	RR/RRF						Mean RR/RRF	% RSD	Limits (% +/-)
	CSL	CS1	CS2	CS3	CS4	CS5			
13C-2378-TCDD	0.91	0.91	0.91	0.92	0.92	0.95	0.92	2.0	35.0
13C-12378-PeCDD	0.65	0.64	0.63	0.65	0.69	0.75	0.67	6.5	35.0
13C-123478-HxCDD	1.00	1.02	1.02	1.06	1.03	1.05	1.03	2.0	35.0
13C-123678-HxCDD	1.14	1.17	1.13	1.17	1.15	1.13	1.15	1.7	35.0
13C-1234678-HpCDD	0.76	0.78	0.80	0.77	0.81	0.81	0.79	2.6	35.0
13C-OCDD	0.65	0.67	0.69	0.65	0.75	0.77	0.70	7.5	35.0
13C-2378-TCDF	1.19	1.19	1.17	1.19	1.20	1.20	1.19	0.9	35.0
13C-12378-PeCDF	0.87	0.90	0.86	0.89	0.92	0.98	0.90	4.7	35.0
13C-23478-PeCDF	0.85	0.87	0.84	0.86	0.89	0.96	0.88	4.9	35.0
13C-123478-HxCDF	1.05	1.14	1.08	1.17	1.07	1.07	1.10	4.2	35.0
13C-123678-HxCDF	1.16	1.22	1.20	1.24	1.17	1.13	1.19	3.5	35.0
13C-234678-HxCDF	1.07	1.08	1.02	1.05	1.02	1.00	1.04	3.1	35.0
13C-123789-HxCDF	0.90	0.98	0.96	0.94	0.95	0.92	0.94	2.9	35.0
13C-1234678-HpCDF	0.80	0.85	0.82	0.83	0.83	0.81	0.83	2.4	35.0
13C-1234789-HpCDF	0.58	0.62	0.61	0.60	0.63	0.61	0.61	2.9	35.0

6DFB - Form VI-HR CDD-2
CDD/CDF INITIAL CALIBRATION ION ABUNDANCE RATIO SUMMARY
HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES, INC.	Contract:	SAIC
Lab Code:	WU70	Case No.:	NPDES
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1		
Init.Calib.Date CSL:	20-Jun-13	Init.Calib.Time CSL:	12:34:03
Init.Calib.Date CS1:	20-Jun-13	Init.Calib.Time CS1:	13:43:04
Init.Calib.Date CS2:	20-Jun-13	Init.Calib.Time CS2:	14:33:31
Init.Calib.Date CS3:	20-Jun-13	Init.Calib.Time CS3:	15:25:46
Init.Calib.Date CS4:	20-Jun-13	Init.Calib.Time CS4:	16:18:06
Init.Calib.Date CS5:	20-Jun-13	Init.Calib.Time CS5:	17:10:20

Target Analytes	Selected Ions	Ion Abundance Ratio						Ratio Flag	Ratio QC Limits#
		CSL	CS1	CS2	CS3	CS4	CS5		
2378-TCDD	320/322	0.00	0.79	0.81	0.77	0.76	0.75		0.65 - 0.89
2378-TCDF	304/306	0.00	0.74	0.77	0.72	0.72	0.74		0.65 - 0.89
12378-PeCDF	340/342	1.34	1.68	1.50	1.53	1.50	1.49		1.32 - 1.78
12378-PeCDD	356/358	1.68	1.46	1.45	1.53	1.49	1.51		1.32 - 1.78
23478-PeCDF	340/342	1.66	1.59	1.47	1.50	1.50	1.49		1.32 - 1.78
123478-HxCDF	374/376	1.30	1.16	1.26	1.21	1.21	1.21		1.05 - 1.43
123678-HxCDF	374/376	1.26	1.27	1.25	1.22	1.20	1.20		1.05 - 1.43
123478-HxCDD	390/392	1.42	1.31	1.27	1.24	1.22	1.22		1.05 - 1.43
123678-HxCDD	390/392	1.34	1.26	1.20	1.20	1.22	1.21		1.05 - 1.43
123789-HxCDD	390/392	1.38	1.18	1.19	1.23	1.24	1.22		1.05 - 1.43
234678-HxCDF	374/376	1.31	1.32	1.18	1.23	1.20	1.20		1.05 - 1.43
123789-HxCDF	374/376	1.33	1.19	1.25	1.24	1.16	1.20		1.05 - 1.43
1234678-HpCDF	408/410	1.06	1.04	1.02	1.00	1.00	1.00		0.89 - 1.21
1234678-HpCDD	424/426	0.98	1.00	1.04	1.02	1.02	1.01		0.89 - 1.21
1234789-HpCDF	408/410	0.93	0.99	0.94	1.02	0.97	0.98		0.89 - 1.21
OCDD	458/460	0.83	1.00	0.87	0.88	0.87	0.86		0.76 - 1.02
OCDF	442/444	0.90	0.88	0.86	0.89	0.90	0.88		0.76 - 1.02

Labeled Compounds	Selected Ions	Ion Abundance Ratio						Ratio Flag	Ratio QC Limits
		CSL	CS1	CS2	CS3	CS4	CS5		
13C-2378-TCDD	332/334	0.78	0.77	0.76	0.78	0.78	0.77		0.65 - 0.89
13C-12378-PeCDD	368/370	1.56	1.56	1.58	1.53	1.52	1.53		1.32 - 1.78
13C-123478-HxCDD	402/404	1.22	1.20	1.28	1.24	1.23	1.25		1.05 - 1.43
13C-123678-HxCDD	402/404	1.26	1.20	1.22	1.18	1.22	1.24		1.05 - 1.43
13C-1234678-HpCDD	436/438	1.04	1.00	1.04	1.04	1.01	1.05		0.89 - 1.21
13C-OCDD	470/472	0.87	0.89	0.90	0.88	0.89	0.88		0.76 - 1.02
13C-2378-TCDF	316/318	0.76	0.76	0.76	0.76	0.75	0.76		0.65 - 0.89
13C-12378-PeCDF	352/354	1.50	1.54	1.54	1.54	1.50	1.55		1.32 - 1.78
13C-23478-PeCDF	352/354	1.55	1.54	1.53	1.55	1.54	1.56		1.32 - 1.78
13C-123478-HxCDF	384/386	0.50	0.50	0.50	0.51	0.51	0.51		0.43 - 0.59
13C-123678-HxCDF	384/386	0.50	0.51	0.52	0.53	0.51	0.51		0.43 - 0.59
13C-234678-HxCDF	384/386	0.50	0.50	0.50	0.51	0.52	0.51		0.43 - 0.59
13C-123789-HxCDF	384/386	0.49	0.51	0.49	0.52	0.51	0.51		0.43 - 0.59
13C-1234678-HpCDF	418/420	0.43	0.43	0.41	0.44	0.43	0.44		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.42	0.43	0.44	0.43	0.43	0.44		0.37 - 0.51

Internal Standards	Selected Ions	Ion Abundance Ratio						Ratio Flag	Ion Ratio QC Limits
		CSL	CS1	CS2	CS3	CS4	CS5		
13C-1234-TCDD	332/334	0.77	0.78	0.78	0.78	0.78	0.79		0.65 - 0.89
13C-123789-HxCDD	402/404	1.24	1.22	1.21	1.24	1.22	1.21		1.05 - 1.43

(#) Quality Control (QC) limits represent ±15% window around the theoretical ion abundance ratio. The laboratory must flag any analyte in any calibration solution which does not meet the ion abundance ratio QC limit by placing an asterisk in the flag column.

7DFA - Form VII-HR CDD-1
CDD/CDF CONTINUING CALIBRATION SUMMARY
HIGH RESOLUTION

Lab Name.	ANALYTICAL RESOURCES	Contract.	SAIC
Lab Code.	WU70	Case No.	NPDES
TO No.:		SDG No.:	
GC Column.	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	13070102
Date Analysed	01-Jul-13	Time Analysed	10.24.23
Init.Calib.Date:	20-JUN-13	Init.Calib.Time:	

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
2378-TCDD	320/322	0.94	0.94	0.5		0.75		0.65 - 0.89
2378-TCDF	304/306	0 79	0.77	2.6		0 76		0.65 - 0.89
12378-PeCDF	340/342	0.84	0.81	3.2		1.54		1.32 - 1.78
12378-PeCDD	356/358	0.89	0.89	-0.3		1.53		1.32 - 1.78
23478-PeCDF	340/342	0.85	0.84	2.1		1.51		1 32 - 1 78
123478-HxCDF	374/376	0.98	0.97	1.5		1.20		1.05 - 1 43
123678-HxCDF	374/376	0.96	0.95	0 5		1.20		1.05 - 1.43
123478-HxCDD	390/392	0.89	0.90	-1.3		1.23		1.05 - 1.43
123678-HxCDD	390/392	0.84	0.82	2.2		1.19		1.05 - 1.43
123789-HxCDD	390/392	0.84	0.79	6.0		1.26		1.05 - 1.43
234678-HxCDF	374/376	1.02	1 00	2.2		1.23		1.05 - 1.43
123789-HxCDF	374/376	0.91	0.87	4 5		1.24		1.05 - 1.43
1234678-HpCDF	408/410	1.14	1 07	6.1		1.00		0.89 - 1.21
1234678-HpCDD	424/426	0.91	0.88	3.1		1 03		0.89 - 1.21
1234789-HpCDF	408/410	1.12	1 09	3.4		1 00		0.89 - 1.21
OCDD	458/460	0.89	0.88	1.4		0.87		0.76 - 1.02
OCDF	442/444	0.91	0 88	3.5		0.90		0.76 - 1.02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
13C-2378-TCDD	332/334	0.95	0.92	3 8		0.77		0.65 - 0 89
13C-12378-PeCDD	368/370	0.71	0.67	5.8		1.55		1.32 - 1.78
13C-123478-HxCDD	402/404	1.03	1.03	-0.2		1.24		1.05 - 1.43
13C-123678-HxCDD	402/404	1.09	1.15	-4.7		1.23		1.05 - 1.43
13C-1234678-HpCDD	436/438	0.83	0.79	5.5		1 02		0.89 - 1.21
13C-OCDD	470/472	0.72	0.70	4.1		0.88		0.76 - 1.02
13C-2378-TCDF	316/318	1.25	1.19	4.8		0.76		0 65 - 0 89
13C-12378-PeCDF	352/354	0.95	0 90	5.3		1.55		1.32 - 1.78
13C-23478-PeCDF	352/354	0.92	0 88	5.2		1.55		1.32 - 1.78
13C-123478-HxCDF	384/386	1 10	1.10	0.2		0.51		0.43 - 0.59
13C-123678-HxCDF	384/386	1.15	1.19	-3.4		0.52		0.43 - 0.59
13C-234678-HxCDF	384/386	1.02	1 04	-1.4		0.51		0.43 - 0.59
13C-123789-HxCDF	384/386	0.97	0.94	3 1		0 51		0.43 - 0.59
13C-1234678-HpCDF	418/420	0.84	0.83	1.6		0 44		0.37 - 0.51
13C-1234789-HpCDF	418/420	0.66	0.61	8.2		0.43		0.37 - 0 51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
37CL-2378-TCDD	328	1.03	1.00	2 5		NA	NA	NA

Internal Standards	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ion Ratio Flag#	Ion Ratio QC Limits
13C-1234-TCDD	332/334	NA	NA	NA	NA	0.78		0.65 - 0.89
13C-123789-HxCDD	402/404	NA	NA	NA	NA	1.23		1.05 - 1.43

(#) The laboratory must flag any analyte which does not meet the criteria for Percentage Difference (%D) or ion abundance ratio by placing an asterisk in the appropriate flag column.

7DFB - Form VII-HR CDD-2
CDD/CDF CONTINUING CALIBRATION RETENTION TIME SUMMARY
HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES	Contract:	SAIC
Lab Code:	WU70	Case No.:	NPDES
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	13070102
Date Analysed	01-Jul-13	Time Analysed	10:24:23
Init.Calib.Date:	20-JUN-13	Init.Calib.Time:	

Target Analytes	RRT#	RT
2378-TCDD	1 00	27 20
2378-TCDF	1 00	26.56
12378-PeCDF	1.00	30 71
12378-PeCDD	1 00	32.31
23478-PeCDF	1 00	32.06
123478-HxCDF	1 00	35.74
123678-HxCDF	1 00	35.88
123478-HxCDD	1.00	36.96
123678-HxCDD	1.00	37.09
123789-HxCDD	1.01	37.50
234678-HxCDF	1.00	36.84
123789-HxCDF	1 00	37 94
1234678-HpCDF	1.00	40.04
1234678-HpCDD	1.00	41.91
1234789-HpCDF	1.00	42 83
OCDD	1.00	48.02
OCDF	1.01	48.30

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1 03	27 17
13C-12378-PeCDD	1 22	32 29
13C-123478-HxCDD	0.99	36 95
13C-123678-HxCDD	0.99	37 08
13C-1234678-HpCDD	1.12	41 89
13C-OCDD	1.28	48.00
13C-2378-TCDF	1.01	26.54
13C-12378-PeCDF	1.16	30.69
13C-23478-PeCDF	1.22	32.03
13C-123478-HxCDF	0.95	35.72
13C-123678-HxCDF	0.96	35.87
13C-234678-HxCDF	0.98	36.81
13C-123789-HxCDF	1 01	37.92
13C-1234678-HpCDF	1.07	40.03
13C-1234789-HpCDF	1.14	42.81

Clean up Standard	RRT#	RT
37CL-2378-TCDD	1 03	27 20

Internal Standards	RRT#	RT
13C-1234-TCDD	0.00	26.36
13C-123789-HxCDD	0.00	37.49

(#) RRT = (RT of Analyte)/(RT of appropriate labeled compound)

7DFA - Form VII-HR CDD-1
CDD/CDF CONTINUING CALIBRATION SUMMARY
HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES	Contract:	SAIC
Lab Code:	WU70	Case No.:	NPDES
TO No :		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	13070116
Date Analysed	01-Jul-13	Time Analysed	19:08:16
Init.Calib.Date	20-JUN-13	Init.Calib.Time.	

Target Analytes	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
2378-TCDD	320/322	0.96	0.94	2.0		0 75		0.65 - 0.89
2378-TCDF	304/306	0.81	0.77	4.7		0.77		0.65 - 0.89
12378-PeCDF	340/342	0.84	0.81	3.2		1.53		1.32 - 1 78
12378-PeCDD	356/358	0.91	0.89	1.9		1.51		1 32 - 1.78
23478-PeCDF	340/342	0.85	0.84	1.5		1.53		1.32 - 1.78
123478-HxCDF	374/376	1.00	0.97	3.0		1.22		1.05 - 1.43
123678-HxCDF	374/376	0.96	0.95	0.8		1 20		1.05 - 1.43
123478-HxCDD	390/392	0.89	0.90	-0.4		1.24		1.05 - 1.43
123678-HxCDD	390/392	0.82	0.82	0.9		1.24		1.05 - 1.43
123789-HxCDD	390/392	0.91	0.79	15 2		1.25		1 05 - 1.43
234678-HxCDF	374/376	1.03	1.00	3.4		1.20		1.05 - 1.43
123789-HxCDF	374/376	0.91	0.87	4.7		1.22		1.05 - 1.43
1234678-HpCDF	408/410	1.11	1.07	3.9		1.02		0.89 - 1.21
1234678-HpCDD	424/426	0.93	0.88	5 5		1.01		0.89 - 1.21
1234789-HpCDF	408/410	1.16	1.09	7.1		1.01		0.89 - 1.21
OCDD	458/460	0.91	0.88	4 3		0.88		0.76 - 1.02
OCDF	442/444	0.94	0.88	7.6		0.89		0.76 - 1.02

Labeled Compounds	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
13C-2378-TCDD	332/334	0.92	0.92	0 4		0.77		0.65 - 0.89
13C-12378-PeCDD	368/370	0.68	0.67	2.3		1.55		1.32 - 1.78
13C-123478-HxCDD	402/404	0.92	1.03	-11.2		1.27		1.05 - 1.43
13C-123678-HxCDD	402/404	1.02	1.15	-11.4		1.20		1 05 - 1.43
13C-1234678-HpCDD	436/438	0.75	0.79	-5.1		1.04		0 89 - 1.21
13C-OCDD	470/472	0 63	0 70	-9.0		0 88		0 76 - 1.02
13C-2378-TCDF	316/318	1.28	1 19	7.2		0.76		0.65 - 0.89
13C-12378-PeCDF	352/354	0.99	0.90	9.2		1.57		1.32 - 1.78
13C-23478-PeCDF	352/354	0.93	0.88	6.1		1.55		1.32 - 1.78
13C-123478-HxCDF	384/386	1.07	1 10	-2.8		0.51		0.43 - 0.59
13C-123678-HxCDF	384/386	1.13	1.19	-4 4		0.50		0.43 - 0.59
13C-234678-HxCDF	384/386	0.94	1.04	-9.7		0.51		0.43 - 0.59
13C-123789-HxCDF	384/386	0.90	0.94	-4.2		0.52		0.43 - 0 59
13C-1234678-HpCDF	418/420	0.79	0.83	-3.8		0.44		0 37 - 0.51
13C-1234789-HpCDF	418/420	0.62	0.61	2 5		0.44		0 37 - 0.51

Clean-up	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ratio Flag#	Ratio QC Limits
37CL-2378-TCDD	328	1.01	1.00	1.5		NA	NA	NA

Internal Standards	Selected Ions	RRF	Mean RRF	%D	%D Flag#	Ion Ratio	Ion Ratio Flag#	Ion Ratio QC Limits
13C-1234-TCDD	332/334	NA	NA	NA	NA	0.79		0 65 - 0.89
13C-123789-HxCDD	402/404	NA	NA	NA	NA	1.22		1 05 - 1.43

(#) The laboratory must flag any analyte which does not meet the criteria for Percentage Difference (%D) or ion abundance ratio by placing an asterisk in the appropriate flag column

7DFB - Form VII-HR CDD-2
CDD/CDF CONTINUING CALIBRATION RETENTION TIME SUMMARY
HIGH RESOLUTION

Lab Name:	ANALYTICAL RESOURCES	Contract:	SAIC
Lab Code:	WU70	Case No.:	NPDES
TO No.:		SDG No.:	
GC Column:	RTX-DIOXIN2	ID (mm):	.25
Instrument ID:	AUTOSPEC1	Lab File ID:	13070116
Date Analysed	01-Jul-13	Time Analysed	19:08:16
Init.Calib.Date:	20-JUN-13	Init.Calib.Time:	

Target Analytes	RRT#	RT
2378-TCDD	1.00	27.17
2378-TCDF	1.00	26.53
12378-PeCDF	1.00	30.68
12378-PeCDD	1.00	32.28
23478-PeCDF	1.00	32.02
123478-HxCDF	1.00	35.71
123678-HxCDF	1.00	35.86
123478-HxCDD	1.00	36.93
123678-HxCDD	1.00	37.07
123789-HxCDD	1.01	37.48
234678-HxCDF	1.00	36.80
123789-HxCDF	1.00	37.92
1234678-HpCDF	1.00	40.01
1234678-HpCDD	1.00	41.88
1234789-HpCDF	1.00	42.80
OCDD	1.00	47.99
OCDF	1.01	48.28

Labeled Compounds	RRT#	RT
13C-2378-TCDD	1.03	27.14
13C-12378-PeCDD	1.23	32.26
13C-123478-HxCDD	0.99	36.92
13C-123678-HxCDD	0.99	37.04
13C-1234678-HpCDD	1.12	41.87
13C-OCDD	1.28	47.96
13C-2378-TCDF	1.01	26.50
13C-12378-PeCDF	1.17	30.66
13C-23478-PeCDF	1.22	32.01
13C-123478-HxCDF	0.95	35.70
13C-123678-HxCDF	0.96	35.84
13C-234678-HxCDF	0.98	36.79
13C-123789-HxCDF	1.01	37.90
13C-1234678-HpCDF	1.07	40.00
13C-1234789-HpCDF	1.14	42.79

Clean up Standard	RRT#	RT
37CL-2378-TCDD	1.03	27 15

Internal Standards	RRT#	RT
13C-1234-TCDD	0.00	26.32
13C-123789-HxCDD	0.00	37.47

(#) RRT = (RT of Analyte)/(RT of appropriate labeled compound)

Pesticide Analysis
Report and Summary QC Forms

ARI Job ID: WU70

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: LF-TP-001-20130619-S
SAMPLE

Lab Sample ID: WU70B
LIMS ID: 13-13122
Matrix: Sediment
Data Release Authorized:
Reported: 07/08/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted: 06/27/13
Date Analyzed: 07/05/13 22:39
Instrument/Analyst: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.8 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 44.3%

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	0.40	2.4	< 2.4 U
319-85-7	beta-BHC	0.68	2.4	< 2.4 U
319-86-8	delta-BHC	0.40	2.4	< 2.4 U
58-89-9	gamma-BHC (Lindane)	0.23	2.4	< 2.4 U
76-44-8	Heptachlor	0.64	2.4	< 2.4 U
309-00-2	Aldrin	0.27	2.4	< 2.4 U
1024-57-3	Heptachlor Epoxide	0.41	4.9	< 4.9 U
959-98-8	Endosulfan I	0.35	2.4	< 2.4 U
60-57-1	Dieldrin	0.49	4.9	< 4.9 U
72-55-9	4,4'-DDE	0.60	4.9	< 4.9 U
72-20-8	Endrin	1.1	4.9	< 4.9 U
33213-65-9	Endosulfan II	0.57	4.9	< 4.9 U
72-54-8	4,4'-DDD	0.66	4.9	< 4.9 U
1031-07-8	Endosulfan Sulfate	0.94	4.9	< 4.9 U
50-29-3	4,4'-DDT	0.94	4.9	< 4.9 U
72-43-5	Methoxychlor	3.4	24	< 24 U
53494-70-5	Endrin Ketone	0.58	4.9	< 4.9 U
7421-93-4	Endrin Aldehyde	1.1	4.9	< 4.9 U
5103-74-2	trans-Chlordane	0.38	2.4	< 2.4 U
5103-71-9	cis-Chlordane	0.25	2.4	< 2.4 U
8001-35-2	Toxaphene	170	490	< 490 U
118-74-1	Hexachlorobenzene	0.46	4.9	< 4.9 U
87-68-3	Hexachlorobutadiene	0.67	4.9	< 4.9 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	96.5%
Tetrachlorometaxylene	91.8%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: LF-LS-004-20130619-S
SAMPLE

Lab Sample ID: WU70C
LIMS ID: 13-13123
Matrix: Sediment
Data Release Authorized:
Reported: 07/08/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted: 06/27/13
Date Analyzed: 07/05/13 23:32
Instrument/Analyst: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.6 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 21.1%

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	0.40	2.5	< 2.5 U
319-85-7	beta-BHC	0.69	2.5	< 2.5 U
319-86-8	delta-BHC	0.41	2.5	< 2.5 U
58-89-9	gamma-BHC (Lindane)	0.24	2.5	< 2.5 U
76-44-8	Heptachlor	0.65	2.5	< 2.5 U
309-00-2	Aldrin	0.27	2.5	< 2.5 U
1024-57-3	Heptachlor Epoxide	0.42	5.0	< 5.0 U
959-98-8	Endosulfan I	0.36	2.5	< 2.5 U
60-57-1	Dieldrin	0.49	5.0	< 5.0 U
72-55-9	4,4'-DDE	0.61	5.0	< 5.0 U
72-20-8	Endrin	1.1	5.0	< 5.0 U
33213-65-9	Endosulfan II	0.57	5.0	< 5.0 U
72-54-8	4,4'-DDD	0.67	5.0	< 5.0 U
1031-07-8	Endosulfan Sulfate	0.95	5.0	< 5.0 U
50-29-3	4,4'-DDT	0.95	5.0	< 5.0 U
72-43-5	Methoxychlor	3.5	25	< 25 U
53494-70-5	Endrin Ketone	0.59	5.0	< 5.0 U
7421-93-4	Endrin Aldehyde	1.1	5.0	< 5.0 U
5103-74-2	trans-Chlordane	0.38	2.5	< 2.5 U
5103-71-9	cis-Chlordane	0.25	2.5	< 2.5 U
8001-35-2	Toxaphene	170	500	< 500 U
118-74-1	Hexachlorobenzene	0.47	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	0.68	5.0	< 5.0 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	97.0%
Tetrachlorometaxylene	73.9%

This analyte (CAS registry No. 5103-74-2) is named trans-Chlordane in EPA Method 8081B(Feb 2007). It has also been named gamma-Chlordane and beta-Chlordane.

$ This analyte (CAS registry No. 5103-71-9) is named cis-Chlordane in EPA Method 8081B(Feb 2007). It has also been named alpha-Chlordane.

ANALYTICAL RESOURCES INCORPORATED

SW8081 PESTICIDE SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WU70-SAIC
Project: NPDES Sampling Support
209977

Client ID	DCBP	TCMX	TOT OUT
MB-062713	85.0%	60.8%	0
LCS-062713	84.8%	60.2%	0
LF-TP-001-20130619-S	96.5%	91.8%	0
LF-TP-001-20130619-S MS	78.4%	79.9%	0
LF-TP-001-20130619-S MSD	107%	97.8%	0
LF-LS-004-20130619-S	97.0%	73.9%	0

	LCS/MB LIMITS	QC LIMITS
(DCBP) = Decachlorobiphenyl	(60-149)	(36-182)
(TCMX) = Tetrachlorometaxylene	(47-124)	(34-169)

Prep Method: SW3546
Log Number Range: 13-13122 to 13-13123

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Page 1 of 1

Sample ID: LF-TP-001-20130619-S
MS/MSD

Lab Sample ID: WU70B
LIMS ID: 13-13122
Matrix: Sediment
Data Release Authorized:
Reported: 07/08/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted MS/MSD: 06/27/13

Date Analyzed MS: 07/05/13 22:56
MSD: 07/05/13 23:14
Instrument/Analyst MS: ECD6/YZ
MSD: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount MS: 12.8 g-dry-wt
MSD: 12.8 g-dry-wt
Final Extract Volume MS: 2.5 mL
MSD: 2.5 mL
Dilution Factor MS: 5.00
MSD: 5.00
Silica Gel: Yes

Percent Moisture: 44.3%

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
alpha-BHC	< 2.44	3.38 JP	3.90	86.7%	4.33 JP	3.90	111%	24.6%
beta-BHC	< 2.44	4.50 JP	3.90	115%	5.26 JP	3.90	135%	15.6%
delta-BHC	< 2.44	1.13 JP	3.90	29.0%	1.35 JP	3.90	34.6%	17.7%
gamma-BHC (Lindane)	< 2.44	1.20 J	3.90	30.8%	1.37 J	3.90	35.1%	13.2%
Heptachlor	< 2.44	2.21 JP	3.90	56.7%	3.92 JP	3.90	101%	55.8%
Aldrin	< 2.44	1.79 J	3.90	45.9%	2.13 J	3.90	54.6%	17.3%
Heptachlor Epoxide	< 4.88	2.71 J	3.90	69.5%	3.24 JP	3.90	83.1%	17.8%
Endosulfan I	< 2.44	2.33 JP	3.90	59.7%	2.69 JP	3.90	69.0%	14.3%
Dieldrin	< 4.88	4.48 JP	7.79	57.5%	5.20 JP	7.80	66.7%	14.9%
4,4'-DDE	< 4.88	6.12 JP	7.79	78.6%	7.67 JP	7.80	98.3%	22.5%
Endrin	< 4.88	6.26 J	7.79	80.4%	5.62 J	7.80	72.1%	10.8%
Endosulfan II	< 4.88	4.07 JP	7.79	52.2%	2.73 JP	7.80	35.0%	39.4%
4,4'-DDD	< 4.88	3.67 J	7.79	47.1%	4.20 JP	7.80	53.8%	13.5%
Endosulfan Sulfate	< 4.88	2.17 J	7.79	27.9%	1.63 JP	7.80	20.9%	28.4%
4,4'-DDT	< 4.88	5.37 JP	7.79	68.9%	3.39 J	7.80	43.5%	45.2%
Methoxychlor	< 24.4	17.9 JP	39.0	45.9%	10.5 J	39.0	26.9%	52.1%
Endrin Ketone	< 4.88	5.46 JP	7.79	70.1%	4.07 J	7.80	52.2%	29.2%
Endrin Aldehyde	< 4.88	3.14 J	7.79	40.3%	2.15 J	7.80	27.6%	37.4%
trans-Chlordane	< 2.44	2.36 J	3.90	60.5%	2.72 JP	3.90	69.7%	14.2%
cis-Chlordane	< 2.44	2.47 JP	3.90	63.3%	2.89 JP	3.90	74.1%	15.7%
Hexachlorobenzene	< 4.88	2.76 J	3.90	70.8%	3.20 JP	3.90	82.1%	14.8%
Hexachlorobutadiene	< 4.88	2.54 J	3.90	65.1%	2.87 J	3.90	73.6%	12.2%

Reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: LF-TP-001-20130619-S
MATRIX SPIKE

Lab Sample ID: WU70B
LIMS ID: 13-13122
Matrix: Sediment
Data Release Authorized:
Reported: 07/08/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted: 06/27/13
Date Analyzed: 07/05/13 22:56
Instrument/Analyst: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.8 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 44.3%

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	0.39	2.4	---
319-85-7	beta-BHC	0.68	2.4	---
319-86-8	delta-BHC	0.40	2.4	---
58-89-9	gamma-BHC (Lindane)	0.23	2.4	---
76-44-8	Heptachlor	0.64	2.4	---
309-00-2	Aldrin	0.27	2.4	---
1024-57-3	Heptachlor Epoxide	0.41	4.9	---
959-98-8	Endosulfan I	0.35	2.4	---
60-57-1	Dieldrin	0.49	4.9	---
72-55-9	4,4'-DDE	0.60	4.9	---
72-20-8	Endrin	1.1	4.9	---
33213-65-9	Endosulfan II	0.57	4.9	---
72-54-8	4,4'-DDD	0.66	4.9	---
1031-07-8	Endosulfan Sulfate	0.94	4.9	---
50-29-3	4,4'-DDT	0.94	4.9	---
72-43-5	Methoxychlor	3.4	24	---
53494-70-5	Endrin Ketone	0.58	4.9	---
7421-93-4	Endrin Aldehyde	1.1	4.9	---
5103-74-2	trans-Chlordane	0.38	2.4	---
5103-71-9	cis-Chlordane	0.25	2.4	---
8001-35-2	Toxaphene	170	490	< 490 U
118-74-1	Hexachlorobenzene	0.46	4.9	---
87-68-3	Hexachlorobutadiene	0.67	4.9	---

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	78.4%
Tetrachlorometaxylene	79.9%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: LF-TP-001-20130619-S
MATRIX SPIKE DUP

Lab Sample ID: WU70B
LIMS ID: 13-13122
Matrix: Sediment
Data Release Authorized:
Reported: 07/08/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted: 06/27/13
Date Analyzed: 07/05/13 23:14
Instrument/Analyst: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.8 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 5.00
Silica Gel: Yes

Percent Moisture: 44.3%

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	0.39	2.4	---
319-85-7	beta-BHC	0.68	2.4	---
319-86-8	delta-BHC	0.40	2.4	---
58-89-9	gamma-BHC (Lindane)	0.23	2.4	---
76-44-8	Heptachlor	0.64	2.4	---
309-00-2	Aldrin	0.27	2.4	---
1024-57-3	Heptachlor Epoxide	0.41	4.9	---
959-98-8	Endosulfan I	0.35	2.4	---
60-57-1	Dieldrin	0.49	4.9	---
72-55-9	4,4'-DDE	0.60	4.9	---
72-20-8	Endrin	1.1	4.9	---
33213-65-9	Endosulfan II	0.57	4.9	---
72-54-8	4,4'-DDD	0.66	4.9	---
1031-07-8	Endosulfan Sulfate	0.94	4.9	---
50-29-3	4,4'-DDT	0.94	4.9	---
72-43-5	Methoxychlor	3.4	24	---
53494-70-5	Endrin Ketone	0.58	4.9	---
7421-93-4	Endrin Aldehyde	1.1	4.9	---
5103-74-2	trans-Chlordane	0.38	2.4	---
5103-71-9	cis-Chlordane	0.25	2.4	---
8001-35-2	Toxaphene	170	490	< 490 U
118-74-1	Hexachlorobenzene	0.46	4.9	---
87-68-3	Hexachlorobutadiene	0.67	4.9	---

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	107%
Tetrachlorometaxylene	97.8%

FORM I

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Page 1 of 1

Sample ID: LCS-062713
LAB CONTROL

Lab Sample ID: LCS-062713
LIMS ID: 13-13122
Matrix: Sediment
Data Release Authorized:
Reported: 07/08/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted: 06/27/13
Date Analyzed: 07/05/13 22:03
Instrument/Analyst: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No
Acid Cleanup: No

Sample Amount: 12.5 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: NA

Analyte	Lab Control	Spike Added	Recovery
alpha-BHC	2.52	4.00	63.0%
beta-BHC	2.82	4.00	70.5%
delta-BHC	1.06	4.00	26.5%
gamma-BHC (Lindane)	2.72	4.00	68.0%
Heptachlor	2.76	4.00	69.0%
Aldrin	2.76	4.00	69.0%
Heptachlor Epoxide	3.06	4.00	76.5%
Endosulfan I	3.06	4.00	76.5%
Dieldrin	6.04	8.00	75.5%
4,4'-DDE	7.40 P	8.00	92.5%
Endrin	6.34	8.00	79.2%
Endosulfan II	6.12	8.00	76.5%
4,4'-DDD	5.98	8.00	74.8%
Endosulfan Sulfate	5.46	8.00	68.2%
4,4'-DDT	6.12	8.00	76.5%
Methoxychlor	29.6	40.0	74.0%
Endrin Ketone	6.74	8.00	84.2%
Endrin Aldehyde	4.98	8.00	62.2%
trans-Chlordane	3.02	4.00	75.5%
cis-Chlordane	2.96	4.00	74.0%
Hexachlorobenzene	2.58	4.00	64.5%
Hexachlorobutadiene	2.30	4.00	57.5%

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	84.8%
Tetrachlorometaxylene	60.2%

Reported in µg/kg (ppb)

FORM III

FORM 4
PESTICIDE METHOD BLANK SUMMARY

BLANK NO.

WU70MBS1

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WU70
Project: NPDES SAMPLING SUPPO

Lab Sample ID: WU70MBS1
Lab File ID: 0705A036

Date Extracted: 06/27/13
Matrix: SOLID

Date Analyzed: 07/05/13
Instrument ID: ECD6

Time Analyzed: 2145
GC Columns: STX-CLP1/STX-CLP2

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	WU70LCSS1	WU70LCSS1	07/05/13
02	LF-TP-001-20130619-	WU70B	07/05/13
03	LF-TP-001-20130 MS	WU70BMS	07/05/13
04	LF-TP-001-20130 MSD	WU70BMSD	07/05/13
05	LF-LS-004-20130619-	WU70C	07/05/13

ALL RUNS ARE DUAL COLUMN

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA Pesticides/PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: MB-062713
METHOD BLANK

Lab Sample ID: MB-062713
LIMS ID: 13-13122
Matrix: Sediment
Data Release Authorized:
Reported: 07/08/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/27/13
Date Analyzed: 07/05/13 21:45
Instrument/Analyst: ECD6/YZ
GPC Cleanup: No
Sulfur Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.5 g
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: NA

CAS Number	Analyte	DL	LOQ	Result
319-84-6	alpha-BHC	0.081	0.50	< 0.50 U
319-85-7	beta-BHC	0.14	0.50	< 0.50 U
319-86-8	delta-BHC	0.082	0.50	< 0.50 U
58-89-9	gamma-BHC (Lindane)	0.048	0.50	< 0.50 U
76-44-8	Heptachlor	0.13	0.50	< 0.50 U
309-00-2	Aldrin	0.055	0.50	< 0.50 U
1024-57-3	Heptachlor Epoxide	0.085	1.0	< 1.0 U
959-98-8	Endosulfan I	0.072	0.50	< 0.50 U
60-57-1	Dieldrin	0.10	1.0	< 1.0 U
72-55-9	4,4'-DDE	0.12	1.0	< 1.0 U
72-20-8	Endrin	0.22	1.0	< 1.0 U
33213-65-9	Endosulfan II	0.12	1.0	< 1.0 U
72-54-8	4,4'-DDD	0.14	1.0	< 1.0 U
1031-07-8	Endosulfan Sulfate	0.19	1.0	< 1.0 U
50-29-3	4,4'-DDT	0.19	1.0	< 1.0 U
72-43-5	Methoxychlor	0.70	5.0	< 5.0 U
53494-70-5	Endrin Ketone	0.12	1.0	< 1.0 U
7421-93-4	Endrin Aldehyde	0.22	1.0	< 1.0 U
5103-74-2	trans-Chlordane	0.077	0.50	< 0.50 U
5103-71-9	cis-Chlordane	0.051	0.50	< 0.50 U
8001-35-2	Toxaphene	35	100	< 100 U
118-74-1	Hexachlorobenzene	0.094	1.0	< 1.0 U
87-68-3	Hexachlorobutadiene	0.14	1.0	< 1.0 U

Reported in µg/kg (ppb)

Pest/PCB Surrogate Recovery

Decachlorobiphenyl	85.0%
Tetrachlorometaxylene	60.8%

FORM I

6D
8081 INITIAL CALIBRATION RETENTION TIMES

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU70 Project: NPDES SAMPLING

GC Column: STX-CLP1 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 06/19/13

	RT OF STANDARDS							MEAN	RT WINDOW	
COMPOUND	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	RT	FROM	TO
alpha-BHC	4.29	4.29	4.29	4.29	4.29	4.29	4.29	4.29	4.24	4.34
beta-BHC	4.65	4.65	4.65	4.64	4.64	4.64	4.64	4.64	4.59	4.69
delta-BHC	4.82	4.82	4.81	4.81	4.81	4.81	4.81	4.81	4.76	4.86
gamma-BHC (Lindane)	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.57	4.52	4.62
Heptachlor	5.01	5.01	5.01	5.01	5.01	5.01	5.01	5.01	4.96	5.06
Aldrin	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.31	5.26	5.36
Heptachlor epoxide b	5.88	5.88	5.88	5.88	5.88	5.88	5.88	5.88	5.83	5.93
Endosulfan I	6.26	6.26	6.26	6.26	6.26	6.26	6.26	6.26	6.21	6.31
Dieldrin	6.48	6.48	6.48	6.48	6.48	6.48	6.48	6.48	6.43	6.53
4,4'-DDE	6.18	6.18	6.18	6.18	6.18	6.18	6.18	6.18	6.13	6.23
Endrin	6.70	6.70	6.70	6.70	6.70	6.70	6.70	6.70	6.65	6.75
Endosulfan II	6.91	6.91	6.91	6.91	6.91	6.91	6.91	6.91	6.86	6.96
4,4'-DDD	6.74	6.74	6.74	6.74	6.74	6.74	6.74	6.74	6.69	6.79
Endosulfan sulfate	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.67	7.62	7.72
4,4'-DDT	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	6.95	7.05
Methoxychlor	7.43	7.42	7.42	7.42	7.42	7.42	7.42	7.42	7.37	7.47
Endrin ketone	7.93	7.93	7.93	7.93	7.93	7.93	7.93	7.93	7.88	7.98
Endrin aldehyde	7.28	7.28	7.28	7.28	7.28	7.28	7.28	7.28	7.23	7.33
gamma-Chlordane	6.00	6.00	6.00	6.00	6.00	6.00	6.00	6.00	5.95	6.05
alpha-Chlordane	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.13	6.08	6.18
Hexachlorobutadiene	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.31	2.26	2.36
Hexachlorobenzene	4.14	4.14	4.14	4.14	4.14	4.14	4.14	4.14	4.09	4.19
Tetrachloro-m-xylene	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.80	3.75	3.85
Decachlorobiphenyl	8.78	8.78	8.78	8.78	8.78	8.78	8.78	8.78	8.73	8.83

6D

8081 INITIAL CALIBRATION RETENTION TIMES

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU70 Project: NPDES SAMPLING

GC Column: STX-CLP2 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 06/19/13

	RT OF STANDARDS							MEAN	RT WINDOW	
COMPOUND	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	RT	FROM	TO
alpha-BHC	4.71	4.71	4.71	4.71	4.71	4.71	4.71	4.71	4.66	4.76
beta-BHC	5.14	5.14	5.14	5.14	5.14	5.14	5.14	5.14	5.09	5.19
delta-BHC	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.45	5.40	5.50
gamma-BHC (Lindane)	5.07	5.07	5.07	5.06	5.07	5.07	5.07	5.07	5.02	5.12
Heptachlor	5.53	5.53	5.53	5.53	5.53	5.53	5.53	5.53	5.48	5.58
Aldrin	5.87	5.87	5.87	5.87	5.87	5.87	5.87	5.87	5.82	5.92
Heptachlor epoxide b	6.42	6.42	6.42	6.42	6.42	6.42	6.42	6.42	6.37	6.47
Endosulfan I	6.81	6.81	6.81	6.81	6.81	6.81	6.81	6.81	6.76	6.86
Dieldrin	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.07	7.02	7.12
4,4'-DDE	6.87	6.87	6.87	6.87	6.87	6.87	6.87	6.87	6.82	6.92
Endrin	7.36	7.36	7.35	7.35	7.36	7.36	7.36	7.36	7.31	7.41
Endosulfan II	7.54	7.54	7.54	7.54	7.54	7.54	7.55	7.54	7.50	7.60
4,4'-DDD	7.41	7.41	7.41	7.41	7.41	7.41	7.41	7.41	7.36	7.46
Endosulfan sulfate	8.09	8.09	8.09	8.09	8.09	8.09	8.09	8.09	8.04	8.14
4,4'-DDT	7.69	7.69	7.69	7.69	7.69	7.69	7.69	7.69	7.64	7.74
Methoxychlor	8.28	8.28	8.28	8.28	8.28	8.28	8.28	8.28	8.23	8.33
Endrin ketone	8.58	8.58	8.58	8.58	8.58	8.58	8.58	8.58	8.53	8.63
Endrin aldehyde	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.84	7.79	7.89
gamma-Chlordane	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.55	6.65
alpha-Chlordane	6.74	6.74	6.74	6.74	6.74	6.74	6.74	6.74	6.69	6.79
Hexachlorobutadiene	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.47	2.42	2.52
Hexachlorobenzene	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.59	4.54	4.64
Tetrachloro-m-xylene	4.13	4.13	4.13	4.13	4.13	4.13	4.13	4.13	4.08	4.18
Decachlorobiphenyl	9.72	9.72	9.72	9.72	9.72	9.72	9.72	9.72	9.67	9.77

6E
8081 PESTICIDE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU70 Project: NPDES SAMPLING

GC Column: STX-CLP1 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 06/19/13

	CALIBRATION FACTORS								R^2
COMPOUND	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	MEAN	%RSD
alpha-BHC	1.5439	1.5547	1.5102	1.6675	1.5722	1.6801	1.7024	1.6044	4.8
beta-BHC	0.7227	0.6940	0.6288	0.6544	0.5978	0.6172	0.6154	0.6472	7.1
delta-BHC	1.3108	1.3377	1.2922	1.4417	1.3673	1.4738	1.5010	1.3892	6.0
gamma-BHC (Lindane)	1.4389	1.4516	1.3866	1.5141	1.4188	1.5091	1.5210	1.4629	3.6
Heptachlor	1.4611	1.4499	1.3707	1.4603	1.3396	1.3863	1.3590	1.4038	3.7
Aldrin	1.3809	1.3803	1.3036	1.4204	1.3102	1.3714	1.3549	1.3602	3.0
Heptachlor epoxide b	1.3713	1.3363	1.2293	1.3089	1.1855	1.2139	1.1821	1.2610	6.1
Endosulfan I	1.2951	1.2614	1.1522	1.2204	1.1025	1.1230	1.0962	1.1787	6.8
Dieldrin	1.2872	1.2978	1.2235	1.3084	1.1909	1.2167	1.1938	1.2455	4.1
4,4'-DDE	1.0139	0.9831	0.9049	0.9548	0.8804	0.9337	0.9621	0.9476	4.8
Endrin	1.2671	1.2700	1.2054	1.2552	1.1578	1.1596	1.1241	1.2056	5.0
Endosulfan II	1.2826	1.2659	1.1980	1.2432	1.1395	1.1415	1.1072	1.1968	5.8
4,4'-DDD	1.2001	1.1988	1.1420	1.1784	1.1006	1.1329	1.1060	1.1512	3.6
Endosulfan sulfate	1.1243	1.1172	1.0439	1.0892	0.9973	1.0231	1.0024	1.0568	5.0
4,4'-DDT	1.1508	1.1600	1.1076	1.1738	1.0915	1.1372	1.1217	1.1346	2.6
Methoxychlor	0.6089	0.5929	0.5343	0.5362	0.4840	0.4979	0.5049	0.5370	8.9
Endrin ketone	1.4712	1.4100	1.2991	1.3397	1.2084	1.2410	1.2163	1.3122	7.7
Endrin aldehyde	1.0260	1.0155	0.9446	0.9809	0.8892	0.8943	0.8714	0.9460	6.7
gamma-Chlordane	1.3445	1.3274	1.2342	1.3370	1.2340	1.2975	1.2933	1.2954	3.6
alpha-Chlordane	1.3528	1.3154	1.2108	1.2957	1.1858	1.2371	1.2288	1.2609	4.8
Hexachlorobutadiene	1.9025	1.8274	1.7247	1.8054	1.6395	1.7040	1.7020	1.7579	5.1
Hexachlorobenzene	1.4861	1.3849	1.2506	1.2922	1.1582	1.1894	1.1740	1.2765	9.5
Tetrachloro-m-xylene	1.1560	1.1331	1.0665	1.1244	1.0248	1.0590	1.0400	1.0862	4.7
Decachlorobiphenyl	1.1337	1.0998	0.9925	1.0181	0.9174	0.9470	0.9398	1.0069	8.2

6E
8081 PESTICIDE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU70 Project: NPDES SAMPLING

GC Column: STX-CLP2 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 06/19/13

COMPOUND	CALIBRATION FACTORS LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6	LVL 7	MEAN	R^2 %RSD
alpha-BHC	1.8907	1.9585	1.8601	2.0205	1.8576	1.9256	1.8660	1.9113	3.2
beta-BHC	1.0592	0.9600	0.8113	0.8084	0.7203	0.7323	0.7044	0.8280	16.2
delta-BHC	1.6482	1.6625	1.5719	1.7263	1.5992	1.6594	1.6648	1.6475	3.0
gamma-BHC (Lindane)	1.7179	1.7217	1.6316	1.7706	1.6273	1.6803	1.6806	1.6900	3.0
Heptachlor	1.9323	1.7962	1.6666	1.7262	1.5264	1.4801	1.3470	1.6392	12.3
Aldrin	1.8340	1.6659	1.5367	1.6223	1.4440	1.4302	1.3301	1.5519	11.0
Heptachlor epoxide b	1.8168	1.6398	1.4044	1.4381	1.2629	1.2239	1.1149	1.4144	17.4
Endosulfan I	1.5192	1.4169	1.2720	1.3234	1.1718	1.1458	1.0476	1.2710	12.9
Dieldrin	1.5995	1.4528	1.3259	1.3512	1.1540	1.1018	0.9936	1.2827	16.5
4,4'-DDE	1.5367	1.4595	1.3241	1.3606	1.1790	1.1494	1.0294	1.2912	14.0
Endrin	1.9014	1.8672	1.7277	1.7487	1.5208	1.4564	1.3250	1.6496	13.2
Endosulfan II	1.9719	1.9168	1.7752	1.8312	1.5816	1.5646	1.4555	1.7281	11.3
4,4'-DDD	2.1094	1.9958	1.8121	1.8464	1.6032	1.5801	1.4841	1.7759	13.0
Endosulfan sulfate	1.7321	1.6421	1.4774	1.5146	1.3442	1.3332	1.2549	1.4712	11.8
4,4'-DDT	1.7471	1.6963	1.5902	1.6301	1.4383	1.4739	1.4388	1.5735	8.0
Methoxychlor	0.7305	0.7076	0.6202	0.6027	0.5239	0.5120	0.4022	0.5856	19.7
Endrin ketone	1.6388	1.6002	1.4832	1.5356	1.3499	1.3642	1.3207	1.4704	8.7
Endrin aldehyde	1.5847	1.5114	1.3396	1.3594	1.1937	1.1861	1.1117	1.3266	13.3
gamma-Chlordane	1.8298	1.6423	1.4613	1.5070	1.3462	1.3504	1.2825	1.4885	13.0
alpha-Chlordane	1.6047	1.4942	1.3505	1.4009	1.2502	1.2566	1.1949	1.3646	10.8
Hexachlorobutadiene	1.7754	1.7738	1.6689	1.7660	1.5610	1.5866	1.4596	1.6559	7.5
Hexachlorobenzene	1.9001	1.7583	1.5690	1.6119	1.4286	1.4201	1.3431	1.5759	12.7
Tetrachloro-m-xylene	1.5306	1.4889	1.3673	1.4133	1.2254	1.1895	1.0472	1.3232	13.2
Decachlorobiphenyl	1.4748	1.4207	1.2965	1.3235	1.1681	1.1996	1.1690	1.2932	9.5

6G

8081 INITIAL CALIBRATION OF SINGLE POINT PCBs and TOXAPHENE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU70 Project: NPDES SAMPLING

GC Column: STX-CLP1 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 06/19/13

Toxaphene			
Peak	RT	RT WIN	Cal Factor
1	6.958	6.91- 7.01	0.0513
2	7.010	6.96- 7.06	0.0354
3	7.267	7.22- 7.32	0.0585
4	7.593	7.54- 7.64	0.0595
5	7.632	7.58- 7.68	0.0395
6	7.913	7.86- 7.96	0.0336

6G

8081 INITIAL CALIBRATION OF SINGLE POINT PCBs and TOXAPHENE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU70 Project: NPDES SAMPLING

GC Column: STX-CLP2 ID: 0.53 (mm) Instrument ID: ECD6

Calibration Date: 06/19/13

Toxaphene			
Peak	RT	RT WIN	Cal Factor
1	7.291	7.24- 7.34	0.0560
2	7.615	7.57- 7.67	0.0826
3	7.846	7.80- 7.90	0.0906
4	8.314	8.26- 8.36	0.0653
5	8.353	8.30- 8.40	0.0831

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.: 20130619PEST

Analysis Date: 05-JUL-2013 20:52 Init. Calib. Date: 19-JUN-2013

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.172	89911
Endrin	6.685	7014526
4,4'-DDD	6.727	271199
4,4'-DDT	6.984	6589187
Endrin ketone	7.911	245066
Endrin aldehyde	7.267	103170

DDT Percent Breakdown = 5.2 %
((89911+271199) * 100)/(89911+271199+6589187)

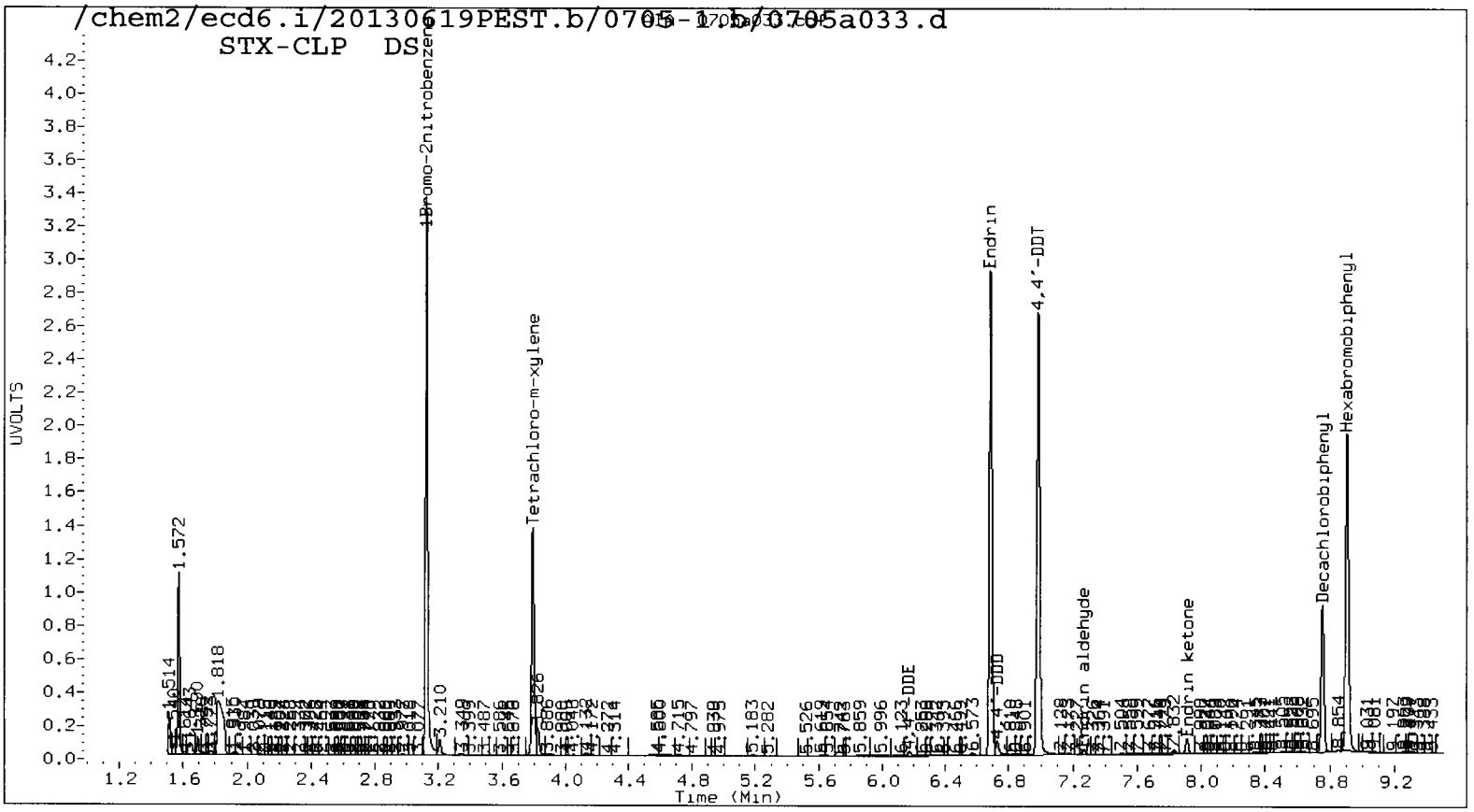
Endrin Percent Breakdown = 4.7 %
((103170+245066) * 100)/(103170+245066+7014526)

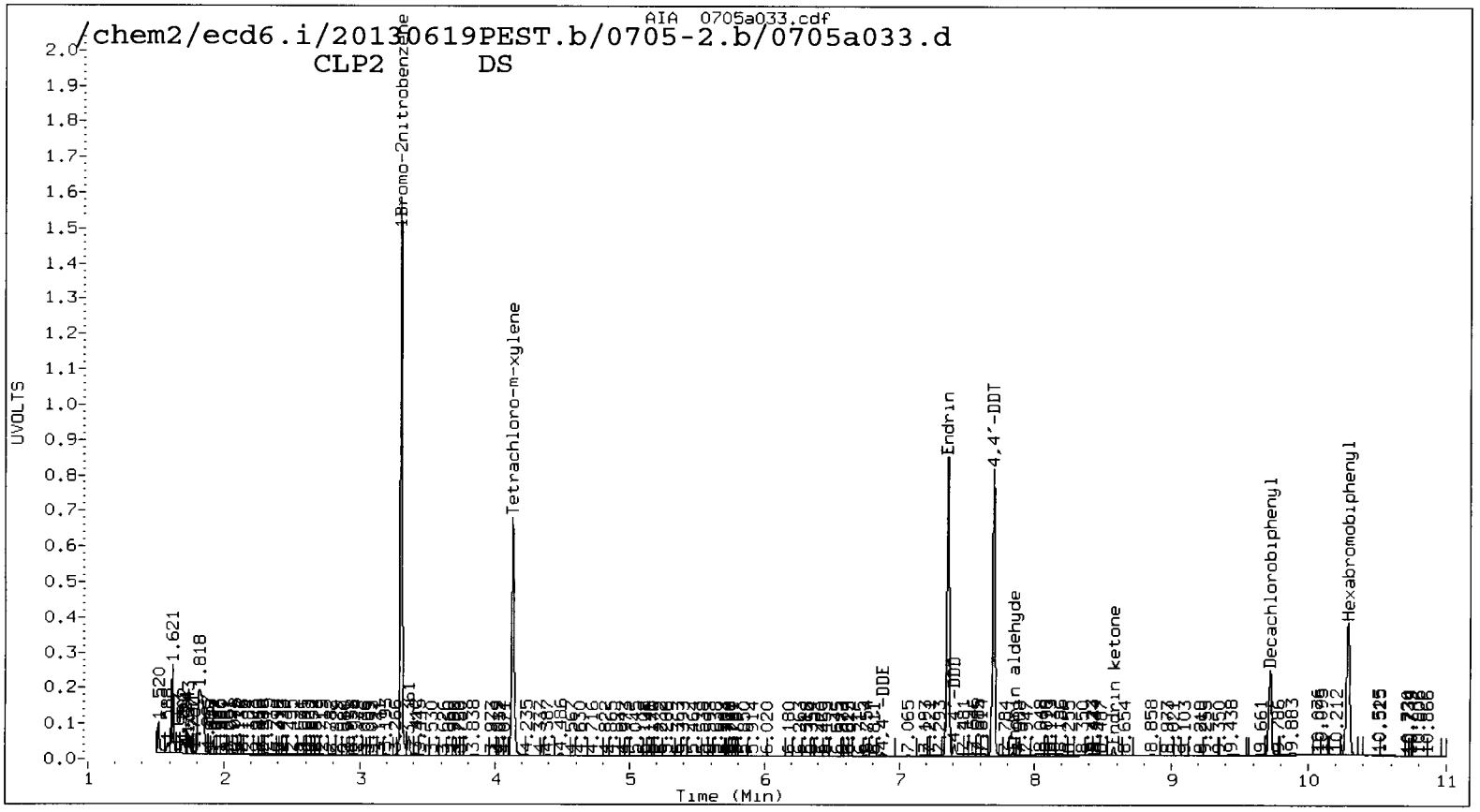
GC Column: STX-CLP2 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.870	423497
Endrin	7.356	20775197
4,4'-DDD	7.407	1251378
4,4'-DDT	7.695	19385057
Endrin ketone	8.577	797212
Endrin aldehyde	7.843	308841

DDT Percent Breakdown = 8.0 %
((423497+1251378) * 100)/(423497+1251378+19385057)

Endrin Percent Breakdown = 5.1 %
((308841+797212) * 100)/(308841+797212+20775197)


/chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a033.d
STX-CLP DS
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Decachlorobiphenyl
Hexabromobiphenyl
DDE
Endrin aldehyde
Endrin ketone
1.572
1.818
3.210


AIA 0705a033.cdf
/chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a033.d
CLP2 DS
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Decachlorobiphenyl
Hexabromobiphenyl
DDE
Endrin aldehyde
Endrin ketone
1.621
1.818

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU70 Project: NPDES SAMPLING

GC Column: STX-CLP2 ID: 0.53 (mm)

Init. Calib. Date: 06/19/13

Lab Ccal ID: INDAE Date/Time Analyzed: 07/05/13,2110

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
alpha-BHC	4.71	4.66	4.76	19.0	20.0	-4.9	
beta-BHC	5.14	5.09	5.19	16.5	20.0	-17.5	
delta-BHC	5.45	5.40	5.50	19.1	20.0	-4.5	
gamma-BHC (Lindane)	5.07	5.02	5.12	18.9	20.0	-5.7	
Heptachlor	5.53	5.48	5.58	18.0	20.0	-9.9	
Aldrin	5.87	5.82	5.92	17.5	20.0	-12.7	
Heptachlor epoxide b	6.42	6.37	6.47	16.2	20.0	-19.0	
Endosulfan I	6.81	6.76	6.86	16.0	20.0	-20.0	
Dieldrin	7.07	7.02	7.12	31.1	40.0	-22.3	<-
4,4'-DDE	6.87	6.82	6.92	31.1	40.0	-22.2	<-
Endrin	7.36	7.31	7.41	42.9	40.0	7.4	
Endosulfan II	7.54	7.50	7.60	43.0	40.0	7.4	
4,4'-DDD	7.41	7.36	7.46	39.9	40.0	-0.1	
Endosulfan sulfate	8.09	8.04	8.14	42.9	40.0	7.2	
4,4'-DDT	7.69	7.64	7.74	40.5	40.0	1.2	
Methoxychlor	8.28	8.23	8.33	202.5	200.0	1.2	
Endrin ketone	8.58	8.53	8.63	41.0	40.0	2.5	
Endrin aldehyde	7.84	7.79	7.89	43.1	40.0	7.6	
gamma-Chlordane	6.60	6.55	6.65	15.5	20.0	-22.7	<-
alpha-Chlordane	6.74	6.69	6.79	15.8	20.0	-21.1	<-
Hexachlorobutadiene	2.47	2.42	2.52	16.5	20.0	-17.3	
Hexachlorobenzene	4.59	4.54	4.64	19.8	20.0	-0.8	
Tetrachloro-m-xylene	4.13	4.08	4.18	38.2	40.0	-4.4	
Decachlorobiphenyl	9.72	9.67	9.77	41.7	40.0	4.4	

FORM VII PEST-2

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU70 Project: NPDES SAMPLING

GC Column: STX-CLP1 ID: 0.53 (mm)

Init. Calib. Date: 06/19/13

Lab Ccal ID: INDAE Date/Time Analyzed: 07/05/13,2110

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
alpha-BHC	4.28	4.24	4.34	22.0	20.0	10.1
beta-BHC	4.64	4.59	4.69	19.9	20.0	-0.5
delta-BHC	4.81	4.76	4.86	21.8	20.0	8.8
gamma-BHC (Lindane)	4.56	4.52	4.62	21.6	20.0	8.0
Heptachlor	5.00	4.96	5.06	21.5	20.0	7.2
Aldrin	5.30	5.26	5.36	21.5	20.0	7.3
Heptachlor epoxide b	5.87	5.83	5.93	20.6	20.0	2.8
Endosulfan I	6.24	6.21	6.31	20.2	20.0	0.9
Dieldrin	6.47	6.43	6.53	41.3	40.0	3.2
4,4'-DDE	6.17	6.13	6.23	40.6	40.0	1.4
Endrin	6.69	6.65	6.75	43.3	40.0	8.3
Endosulfan II	6.89	6.86	6.96	41.5	40.0	3.6
4,4'-DDD	6.73	6.69	6.79	41.5	40.0	3.7
Endosulfan sulfate	7.66	7.62	7.72	41.3	40.0	3.3
4,4'-DDT	6.98	6.95	7.05	41.5	40.0	3.6
Methoxychlor	7.41	7.37	7.47	196.4	200.0	-1.8
Endrin ketone	7.91	7.88	7.98	40.6	40.0	1.4
Endrin aldehyde	7.27	7.23	7.33	41.8	40.0	4.5
gamma-Chlordane	5.99	5.95	6.05	20.9	20.0	4.5
alpha-Chlordane	6.11	6.08	6.18	20.4	20.0	1.8
Hexachlorobutadiene	2.31	2.26	2.36	20.9	20.0	4.4
Hexachlorobenzene	4.13	4.09	4.19	19.9	20.0	-0.4
Tetrachloro-m-xylene	3.79	3.75	3.85	41.4	40.0	3.5
Decachlorobiphenyl	8.76	8.73	8.83	39.7	40.0	-0.6

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU70 Project: NPDES SAMPLING

GC Column: STX-CLP2 ID: 0.53 (mm)

Init. Calib. Date: 06/19/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 07/05/13,2127

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Toxaphene -1	7.29	7.24	7.34	2520	2500	0.8
Toxaphene -2	7.62	7.57	7.67	2490	2500	-0.4
Toxaphene -3	7.85	7.80	7.90	2440	2500	-2.4
Toxaphene -4	8.31	8.26	8.36	2360	2500	-5.6
Toxaphene -5	8.35	8.30	8.40	2380	2500	-4.8

AVERAGE %D = 2.8

FORM VII PEST-3

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU70 Project: NPDES SAMPLING

GC Column: STX-CLP1 ID: 0.53 (mm)

Init. Calib. Date: 06/19/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 07/05/13,2127

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D	
Toxaphene -1	6.94	6.91	7.01	2390	2500	-4.4	
Toxaphene -2	6.99	6.96	7.06	2440	2500	-2.4	
Toxaphene -3	7.25	7.22	7.32	2350	2500	-6.0	
Toxaphene -4	7.58	7.54	7.64	2310	2500	-7.6	
Toxaphene -5	7.64	7.58	7.68	1860	2500	-25.6	<-
Toxaphene -6	7.89	7.86	7.96	2280	2500	-8.8	

AVERAGE %D = 9.1

FORM VII PEST-3

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.: 20130619PEST

Analysis Date: 05-JUL-2013 23:50 Init. Calib. Date: 19-JUN-2013

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.171	59637
Endrin	6.685	6291172
4,4'-DDD	6.727	258589
4,4'-DDT	6.983	5635199
Endrin ketone	7.911	261273
Endrin aldehyde	7.268	149362

DDT Percent Breakdown = 5.3 %
((59637+258589) * 100)/(59637+258589+5635199)

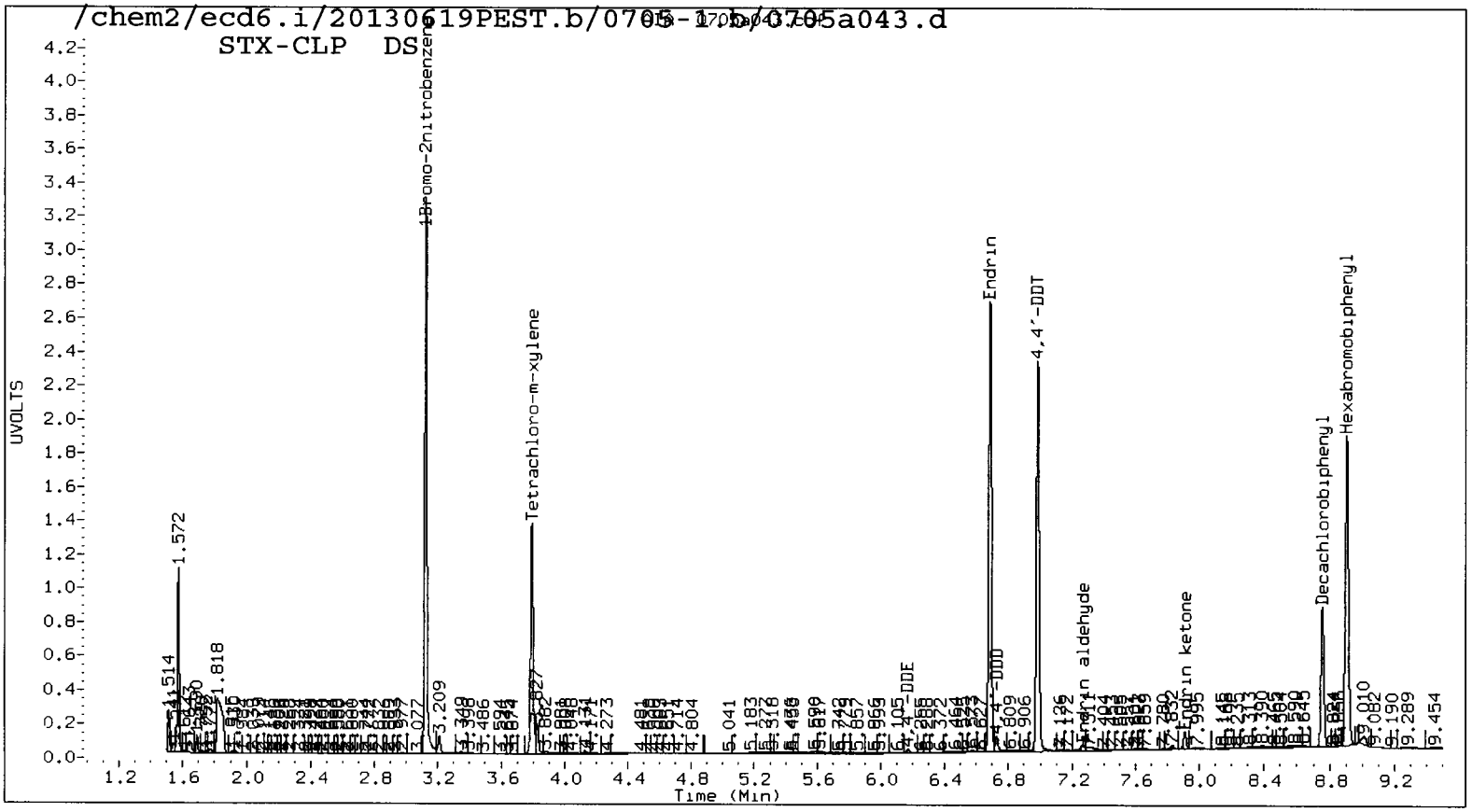
Endrin Percent Breakdown = 6.1 %
((149362+261273) * 100)/(149362+261273+6291172)

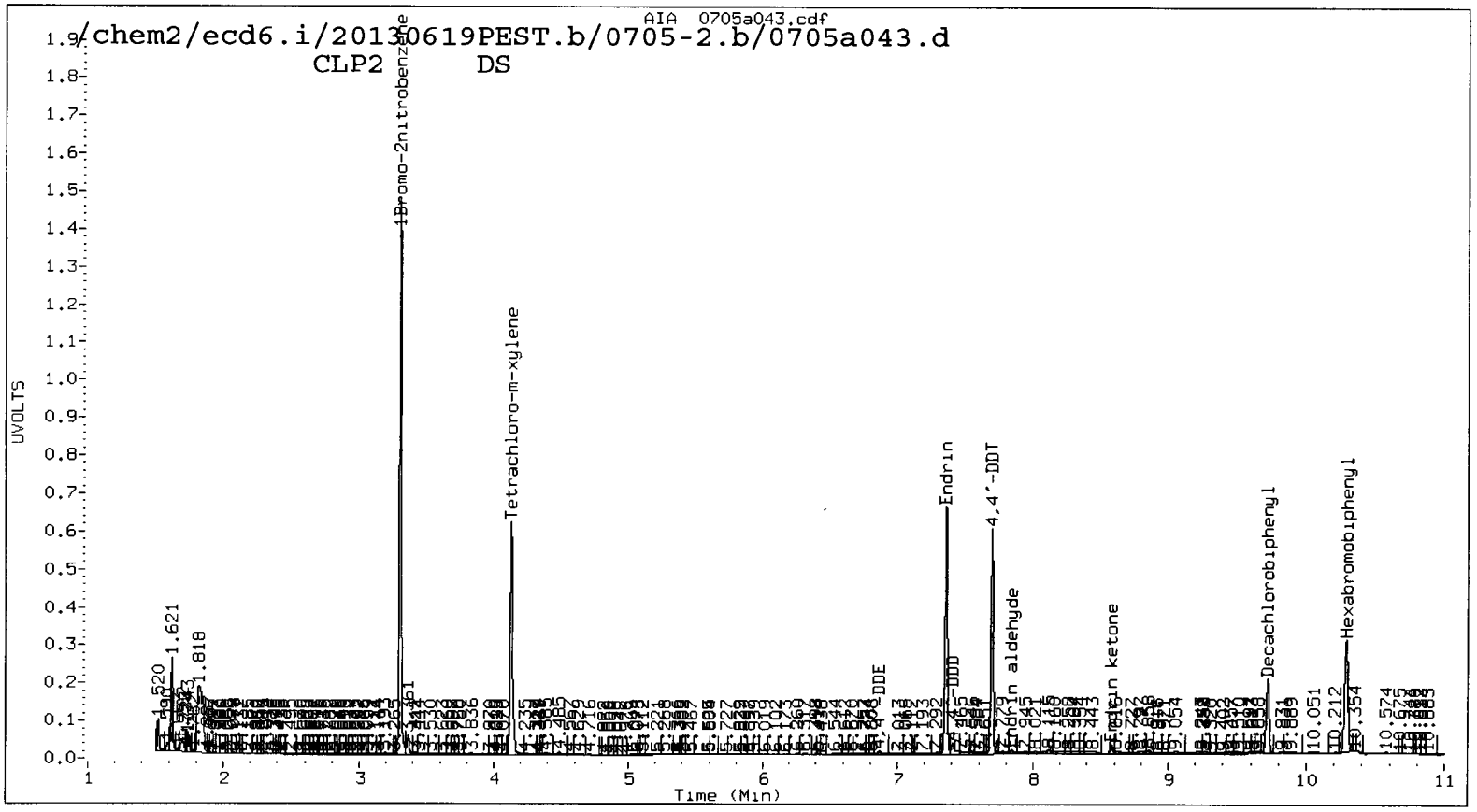
GC Column: STX-CLP2 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.869	355984
Endrin	7.356	15827928
4,4'-DDD	7.407	1128889
4,4'-DDT	7.694	13972758
Endrin ketone	8.578	789478
Endrin aldehyde	7.841	508382

DDT Percent Breakdown = 9.6 %
((355984+1128889) * 100)/(355984+1128889+13972758)

Endrin Percent Breakdown = 7.6 %
((508382+789478) * 100)/(508382+789478+15827928)


/chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a043.d
STX-CLP DS
UVOLTS
Time (Min)
1.572
1.818
3.209
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0705a043.cdf
/chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a043.d
CLP2 DS
UVOLTS
Time (Min)
1.621
1.818
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Endrin aldehyde
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU70 Project: NPDES SAMPLING

GC Column: STX-CLP2 ID: 0.53 (mm)

Init. Calib. Date: 06/19/13

Lab Ccal ID: INDAE Date/Time Analyzed: 07/06/13,0008

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D	
alpha-BHC	4.71	4.66	4.76	17.9	20.0	-10.7	
beta-BHC	5.14	5.09	5.19	14.9	20.0	-25.5	<-
delta-BHC	5.45	5.40	5.50	16.9	20.0	-15.3	
gamma-BHC (Lindane)	5.07	5.02	5.12	17.4	20.0	-12.8	
Heptachlor	5.53	5.48	5.58	15.9	20.0	-20.5	<-
Aldrin	5.87	5.82	5.92	15.2	20.0	-24.1	<-
Heptachlor epoxide b	6.42	6.37	6.47	13.6	20.0	-31.8	<-
Endosulfan I	6.81	6.76	6.86	12.6	20.0	-37.1	<-
Dieldrin	7.07	7.02	7.12	24.2	40.0	-39.4	<-
4,4'-DDE	6.87	6.82	6.92	24.1	40.0	-39.8	<-
Endrin	7.36	7.31	7.41	38.6	40.0	-3.5	
Endosulfan II	7.54	7.50	7.60	39.1	40.0	-2.1	
4,4'-DDD	7.41	7.36	7.46	35.9	40.0	-10.2	
Endosulfan sulfate	8.09	8.04	8.14	36.5	40.0	-8.7	
4,4'-DDT	7.69	7.64	7.74	36.1	40.0	-9.8	
Methoxychlor	8.28	8.23	8.33	194.3	200.0	-2.8	
Endrin ketone	8.58	8.53	8.63	38.5	40.0	-3.7	
Endrin aldehyde	7.84	7.79	7.89	38.2	40.0	-4.4	
gamma-Chlordane	6.60	6.55	6.65	12.6	20.0	-37.0	<-
alpha-Chlordane	6.74	6.69	6.79	12.4	20.0	-37.8	<-
Hexachlorobutadiene	2.47	2.42	2.52	15.8	20.0	-20.9	<-
Hexachlorobenzene	4.59	4.54	4.64	18.7	20.0	-6.3	
Tetrachloro-m-xylene	4.13	4.08	4.18	36.1	40.0	-9.7	
Decachlorobiphenyl	9.72	9.67	9.77	40.1	40.0	0.2	

FORM VII PEST-2

7E

8081 PESTICIDE CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU70 Project: NPDES SAMPLING

GC Column: STX-CLP1 ID: 0.53 (mm)

Init. Calib. Date: 06/19/13

Lab Ccal ID: INDAE Date/Time Analyzed: 07/06/13,0008

PEST MIX COMPOUND	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D
alpha-BHC	4.28	4.24	4.34	21.6	20.0	7.8
beta-BHC	4.64	4.59	4.69	19.2	20.0	-3.8
delta-BHC	4.81	4.76	4.86	21.0	20.0	4.9
gamma-BHC (Lindane)	4.56	4.52	4.62	20.9	20.0	4.7
Heptachlor	5.00	4.96	5.06	20.6	20.0	2.8
Aldrin	5.30	5.26	5.36	20.7	20.0	3.6
Heptachlor epoxide b	5.87	5.83	5.93	19.6	20.0	-2.1
Endosulfan I	6.24	6.21	6.31	19.0	20.0	-4.8
Dieldrin	6.47	6.43	6.53	38.5	40.0	-3.8
4,4'-DDE	6.17	6.13	6.23	39.3	40.0	-1.8
Endrin	6.68	6.65	6.75	42.0	40.0	5.1
Endosulfan II	6.89	6.86	6.96	40.1	40.0	0.2
4,4'-DDD	6.73	6.69	6.79	40.5	40.0	1.2
Endosulfan sulfate	7.66	7.62	7.72	38.8	40.0	-3.0
4,4'-DDT	6.98	6.95	7.05	38.6	40.0	-3.5
Methoxychlor	7.41	7.37	7.47	193.4	200.0	-3.3
Endrin ketone	7.91	7.88	7.98	38.3	40.0	-4.2
Endrin aldehyde	7.27	7.23	7.33	39.8	40.0	-0.4
gamma-Chlordane	5.99	5.95	6.05	19.6	20.0	-1.8
alpha-Chlordane	6.11	6.08	6.18	19.0	20.0	-4.8
Hexachlorobutadiene	2.31	2.26	2.36	20.8	20.0	3.9
Hexachlorobenzene	4.13	4.09	4.19	19.6	20.0	-2.2
Tetrachloro-m-xylene	3.79	3.75	3.85	40.9	40.0	2.3
Decachlorobiphenyl	8.76	8.73	8.83	38.6	40.0	-3.4

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU70 Project: NPDES SAMPLING

GC Column: STX-CLP2 ID: 0.53 (mm)

Init. Calib. Date: 06/19/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 07/06/13,0025

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Toxaphene -1	7.29	7.24	7.34	2410	2500	-3.6
Toxaphene -2	7.61	7.57	7.67	2390	2500	-4.4
Toxaphene -3	7.85	7.80	7.90	2250	2500	-10.0
Toxaphene -4	8.31	8.26	8.36	2120	2500	-15.2
Toxaphene -5	8.35	8.30	8.40	2130	2500	-14.8

AVERAGE %D = 9.6

FORM VII PEST-3

7F

8081 PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU70 Project: NPDES SAMPLING

GC Column: STX-CLP1 ID: 0.53 (mm)

Init. Calib. Date: 06/19/13

Lab Ccal ID: TOXAPH Date/Time Analyzed: 07/06/13,0025

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ug/L)	NOM AMOUNT (ug/L)	%D	
Toxaphene -1	6.94	6.91	7.01	2330	2500	-6.8	
Toxaphene -2	6.99	6.96	7.06	2380	2500	-4.8	
Toxaphene -3	7.25	7.22	7.32	2270	2500	-9.2	
Toxaphene -4	7.58	7.54	7.64	2190	2500	-12.4	
Toxaphene -5	7.64	7.58	7.68	1710	2500	-31.6	<-
Toxaphene -6	7.89	7.86	7.96	2130	2500	-14.8	

AVERAGE %D = 13.3

FORM VII PEST-3

FORM 8
PESTICIDE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU70 Project: NPDES SAMPLING

GC Column: STX-CLP1 ID: 0.53(mm) Instrument ID: ECD6

Init. Calib. Date: 06/19/13

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

		IS1 AREA	RT	IS2 AREA	RT
	ICAL MIDPT	5590801	3.130	4870538	8.927
	UPPER LIMIT	11181602	3.180	9741076	8.977
	LOWER LIMIT	2795400	3.080	2435269	8.877

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01		INDAE	06/19/13	1757	5590801	3.130	4870538	8.927
02		INDAA	06/19/13	1814	5443407	3.130	4756712	8.927
03		INDAB	06/19/13	1832	5578569	3.131	4877747	8.927
04		INDAC	06/19/13	1850	5651084	3.130	4910634	8.926
05		INDAD	06/19/13	1908	5597417	3.130	4918023	8.927
06		INDAF	06/19/13	1926	5751246	3.130	5082371	8.927
07		INDAG	06/19/13	1944	5601251	3.131	5032937	8.927
08		TOXAPHENE	06/19/13	2317	6058478	3.132	5799142	8.927
09		DS	07/05/13	2052	6386973	3.124	5083958	8.906
10		INDAE	07/05/13	2110	6241944	3.124	5310961	8.906
11		TOXAPH	07/05/13	2127	5930187	3.125	5415221	8.907
12	WU70MBS1	WU70MBS1	07/05/13	2145	7174722	3.123	6121490	8.905
13	WU70LCSS1	WU70LCSS1	07/05/13	2203	7203385	3.124	6278158	8.904
14	LF-TP-001-20	WU70B	07/05/13	2239	5489362	3.123	5143914	8.909
15	LF-TP-001-20	WU70BMS	07/05/13	2256	6599131	3.123	5559059	8.906
16	LF-TP-001-20	WU70BMSD	07/05/13	2314	6139422	3.123	5215325	8.907
17	LF-LS-004-20	WU70C	07/05/13	2332	5583150	3.123	4861915	8.906
18		DS	07/05/13	2350	6254246	3.124	4735168	8.905
19		INDAE	07/06/13	0008	6311156	3.124	5071834	8.905
20		TOXAPH	07/06/13	0025	6031202	3.124	5254952	8.905

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- .05 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

FORM 8
PESTICIDE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU70 Project: NPDES SAMPLING

GC Column: STX-CLP2 ID: 0.53(mm) Instrument ID: ECD6

Init. Calib. Date: 06/19/13

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

		IS1 AREA	RT	IS2 AREA	RT
	ICAL MIDPT	28320361	3.300	16454599	10.289
	UPPER LIMIT	56640722	3.350	32909198	10.339
	LOWER LIMIT	14160180	3.250	8227300	10.239

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01		INDAE	06/19/13	1757	28320361	3.300	16454599	10.289
02		INDAA	06/19/13	1814	27626455	3.300	16087272	10.288
03		INDAB	06/19/13	1832	28124817	3.300	16392538	10.289
04		INDAC	06/19/13	1850	28473248	3.299	16513179	10.289
05		INDAD	06/19/13	1908	28402073	3.299	16714534	10.289
06		INDAF	06/19/13	1926	29146657	3.300	17347014	10.289
07		INDAG	06/19/13	1944	28311756	3.300	17081518	10.289
08		TOXAPHENE	06/19/13	2317	29930668	3.301	19105364	10.289
09		DS	07/05/13	2052	30763175	3.300	12599443	10.286
10		INDAE	07/05/13	2110	31779643	3.300	13978626	10.286
11		TOXAPH	07/05/13	2127	30566341	3.301	14534555	10.287
12	WU70MBS1	WU70MBS1	07/05/13	2145	35714024	3.300	17423932	10.286
13	WU70LCSS1	WU70LCSS1	07/05/13	2203	35891983	3.300	18007976	10.286
14	LF-TP-001-20	WU70B	07/05/13	2239	22025553	3.299	9253280	10.288
15	LF-TP-001-20	WU70BMS	07/05/13	2256	25067171	3.299	10283404	10.287
16	LF-TP-001-20	WU70BMSD	07/05/13	2314	23361382	3.299	9504897	10.287
17	LF-LS-004-20	WU70C	07/05/13	2332	21998848	3.299	9120439	10.287
18		DS	07/05/13	2350	28554978	3.300	9927486	10.286
19		INDAE	07/06/13	0008	31658820	3.301	11271638	10.287
20		TOXAPH	07/06/13	0025	30222299	3.300	11692651	10.285

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- .05 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

PCB Analysis
Report and Summary QC Forms

ARI Job ID: WU70

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD **Sample ID: LF-TP-001-20130619-S**
Extraction Method: SW3546 **SAMPLE**

Lab Sample ID: WU70B
LIMS ID: 13-13122
Matrix: Sediment
Data Release Authorized: mw
Reported: 07/08/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted: 06/27/13
Date Analyzed: 07/04/13 10:50
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 12.8 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 44.3%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	0.99	3.9	< 3.9 U
53469-21-9	Aroclor 1242	1.3	3.9	< 3.9 U
12672-29-6	Aroclor 1248	1.3	5.8	< 5.8 Y
11097-69-1	**Aroclor 1254**	**1.3**	**3.9**	**14**
11096-82-5	**Aroclor 1260**	**1.3**	**3.9**	**8.8**
11104-28-2	Aroclor 1221	1.3	3.9	< 3.9 U
11141-16-5	Aroclor 1232	1.3	3.9	< 3.9 U
37324-23-5	Aroclor 1262	1.3	3.9	< 3.9 U
11100-14-4	Aroclor 1268	1.3	3.9	< 3.9 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	62.5%
Tetrachlorometaxylene	65.8%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD **Sample ID: LF-LS-004-20130619-S**
Extraction Method: SW3546 **SAMPLE**

Lab Sample ID: WU70C
LIMS ID: 13-13123
Matrix: Sediment
Data Release Authorized:
Reported: 07/08/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted: 06/27/13
Date Analyzed: 07/04/13 11:11
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 12.6 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 21.1%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	1.0	4.0	< 4.0 U
53469-21-9	Aroclor 1242	1.3	4.0	< 4.0 U
12672-29-6	Aroclor 1248	1.3	12	< 12 Y
11097-69-1	**Aroclor 1254**	**1.3**	**4.0**	**40**
11096-82-5	**Aroclor 1260**	**1.3**	**4.0**	**14**
11104-28-2	Aroclor 1221	1.3	4.0	< 4.0 U
11141-16-5	Aroclor 1232	1.3	4.0	< 4.0 U
37324-23-5	Aroclor 1262	1.3	4.0	< 4.0 U
11100-14-4	Aroclor 1268	1.3	4.0	< 4.0 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	75.0%
Tetrachlorometaxylene	71.5%

ANALYTICAL RESOURCES INCORPORATED

SW8082/PCB SOIL/SEDIMENT SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WU70-SAIC
Project: NPDES Sampling Support
209977

Client ID	DCBP % REC	DCBP LCL-UCL	TCMX % REC	TCMX LCL-UCL	TOT OUT
LF-TP-001-20130619-S	62.5%	37-128	65.8%	45-102	0
MB-062713	88.5%	64-105	70.2%	54-100	0
LCS-062713	82.8%	64-105	65.5%	54-100	0
LF-LS-004-20130619-S	75.0%	37-128	71.5%	45-102	0
LF-LS-004-20130619-S MS	80.2%	35-133	68.5%	53-116	0
LF-LS-004-20130619-S MSD	68.2%	35-133	78.0%	53-116	0

Microwave (MARS) Control Limits PCBSMM
Prep Method: SW3546
Log Number Range: 13-13122 to 13-13123

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Page 1 of 1

Sample ID: LF-LS-004-20130619-S
MS/MSD

Lab Sample ID: WU70C
LIMS ID: 13-13123
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/08/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted MS/MSD: 06/27/13

Date Analyzed MS: 07/04/13 11:31
MSD: 07/04/13 11:51
Instrument/Analyst MS: ECD5/JGR
MSD: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount MS: 12.6 g-dry-wt
MSD: 12.6 g-dry-wt
Final Extract Volume MS: 2.5 mL
MSD: 2.5 mL
Dilution Factor MS: 1.00
MSD: 1.00
Silica Gel: Yes

Percent Moisture: 21.1%

Analyte	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Aroclor 1016	< 4.0 U	81.5	99.7	81.7%	92.5	99.7	92.8%	12.6%
Aroclor 1260	14	68.1	99.7	54.3%	78.7	99.7	64.9%	14.4%

Results reported in µg/kg (ppb)
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD
Extraction Method: SW3546
Page 1 of 1

Sample ID: LF-LS-004-20130619-S
MATRIX SPIKE

Lab Sample ID: WU70C
LIMS ID: 13-13123
Matrix: Sediment
Data Release Authorized:
Reported: 07/08/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted: 06/27/13
Date Analyzed: 07/04/13 11:31
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 12.6 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 21.1%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	1.0	4.0	---
53469-21-9	Aroclor 1242	1.3	4.0	< 4.0 U
12672-29-6	Aroclor 1248	1.3	40	< 40 Y
11097-69-1	**Aroclor 1254**	**1.3**	**4.0**	**61**
11096-82-5	Aroclor 1260	1.3	4.0	---
11104-28-2	Aroclor 1221	1.3	4.0	< 4.0 U
11141-16-5	Aroclor 1232	1.3	4.0	< 4.0 U
37324-23-5	Aroclor 1262	1.3	4.0	< 4.0 U
11100-14-4	Aroclor 1268	1.3	4.0	< 4.0 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	80.2%
Tetrachlorometaxylene	68.5%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD **Sample ID: LF-LS-004-20130619-S**
Extraction Method: SW3546 **MATRIX SPIKE DUP**

Lab Sample ID: WU70C
LIMS ID: 13-13123
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/08/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted: 06/27/13
Date Analyzed: 07/04/13 11:51
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 12.6 g-dry-wt
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: 21.1%

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	1.0	4.0	---
53469-21-9	Aroclor 1242	1.3	4.0	< 4.0 U
12672-29-6	Aroclor 1248	1.3	40	< 40 Y
11097-69-1	**Aroclor 1254**	**1.3**	**4.0**	**66**
11096-82-5	Aroclor 1260	1.3	4.0	---
11104-28-2	Aroclor 1221	1.3	4.0	< 4.0 U
11141-16-5	Aroclor 1232	1.3	4.0	< 4.0 U
37324-23-5	Aroclor 1262	1.3	4.0	< 4.0 U
11100-14-4	Aroclor 1268	1.3	4.0	< 4.0 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	68.2%
Tetrachlorometaxylene	78.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD

Sample ID: LCS-062713
LAB CONTROL

Lab Sample ID: LCS-062713
LIMS ID: 13-13123
Matrix: Sediment
Data Release Authorized:
Reported: 07/08/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/27/13
Date Analyzed: 07/04/13 09:50
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes
Florisil Cleanup: No

Sample Amount: 12.5 g-dry-wt
Final Extract Volume: 2.50 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: NA

Analyte	Lab Control	Spike Added	Recovery
Aroclor 1016	64.7	101	64.1%
Aroclor 1260	67.9	101	67.2%

PCB Surrogate Recovery

Decachlorobiphenyl	82.8%
Tetrachlorometaxylene	65.5%

Results reported in µg/kg (ppb)

PCB METHOD BLANK SUMMARY

BLANK NO.

WU70MBS1

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WU70
Project: NPDES SAMPLING SUPPO

Lab Sample ID: WU70MBS1
Lab File ID: 0703B060

Date Extracted: 06/27/13
Matrix: SOLID

Date Analyzed: 07/04/13
Instrument ID: ECD5

Time Analyzed: 0929
GC Columns: ZB5/ZB35

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	WU70LCSS1	WU70LCSS1	07/04/13
02	LF-TP-001-20130619-	WU70B	07/04/13
03	LF-LS-004-20130619-	WU70C	07/04/13
04	LF-LS-004-20130 MS	WU70CMS	07/04/13
05	LF-LS-004-20130 MSD	WU70CMSD	07/04/13

ALL RUNS ARE DUAL COLUMN

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PSDDA PCB by GC/ECD **Sample ID: MB-062713**
Extraction Method: SW3546 **METHOD BLANK**

Lab Sample ID: MB-062713
LIMS ID: 13-13123
Matrix: Sediment
Data Release Authorized: MW
Reported: 07/08/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/27/13
Date Analyzed: 07/04/13 09:29
Instrument/Analyst: ECD5/JGR
GPC Cleanup: No
Sulfur Cleanup: Yes
Acid Cleanup: Yes

Sample Amount: 12.5 g
Final Extract Volume: 2.5 mL
Dilution Factor: 1.00
Silica Gel: Yes

Percent Moisture: NA

CAS Number	Analyte	MDL	RL	Result
12674-11-2	Aroclor 1016	1.0	4.0	< 4.0 U
53469-21-9	Aroclor 1242	1.4	4.0	< 4.0 U
12672-29-6	Aroclor 1248	1.4	4.0	< 4.0 U
11097-69-1	Aroclor 1254	1.4	4.0	< 4.0 U
11096-82-5	Aroclor 1260	1.4	4.0	< 4.0 U
11104-28-2	Aroclor 1221	1.4	4.0	< 4.0 U
11141-16-5	Aroclor 1232	1.4	4.0	< 4.0 U
37324-23-5	Aroclor 1262	1.4	4.0	< 4.0 U
11100-14-4	Aroclor 1268	1.4	4.0	< 4.0 U

Reported in µg/kg (ppb)

PCB Surrogate Recovery

Decachlorobiphenyl	88.5%
Tetrachlorometaxylene	70.2%

8082 INITIAL CALIBRATION OF AROCLOR 1016/1260

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU70 Project: NPDES SAMPLING

GC Column: ZB5 Instrument ID: ECD5

Calibration Date: 07/03/13

SURROGATES

	RT WIN	LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
TCX	4.29- 4.49	1.2887	1.2847	1.3663	1.2713	1.2237	1.1747	1.2682	5.1
DCB	12.71-12.91	1.4131	1.2967	1.1943	1.0201	0.9595	0.9046	1.1314	17.9

Aroclor-1016 Peak	RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1	5.94- 6.14	0.0428	0.0397	0.0401	0.0356	0.0332	0.0311	0.0371	12.2
2	6.35- 6.55	0.1334	0.1237	0.1245	0.1097	0.1023	0.0961	0.1150	12.6
3	6.50- 6.70	0.0593	0.0549	0.0547	0.0483	0.0450	0.0419	0.0507	13.2
4	6.61- 6.81	0.0433	0.0401	0.0406	0.0357	0.0337	0.0318	0.0375	12.0

AROCLOR AVERAGE %RSD = 12.5

Aroclor-1260 Peak	RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1	9.85-10.05	0.0568	0.0510	0.0492	0.0431	0.0395	0.0367	0.0461	16.5
2	10.17-10.37	0.0572	0.0511	0.0493	0.0434	0.0397	0.0370	0.0463	16.4
3	10.54-10.74	0.1454	0.1274	0.1227	0.1096	0.0994	0.0941	0.1164	16.5
4	10.94-11.14	0.0759	0.0676	0.0654	0.0581	0.0536	0.0502	0.0618	15.5
5	11.13-11.33	0.0421	0.0371	0.0356	0.0314	0.0293	0.0276	0.0338	16.1

AROCLOR AVERAGE %RSD = 16.2

6F

8082 INITIAL CALIBRATION OF AROCLOR 1016/1260

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU70 Project: NPDES SAMPLING

GC Column: ZB35 Instrument ID: ECD5

Calibration Date: 07/03/13

SURROGATES

RT WIN	LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
TCX 4.29- 4.49	1.0544	1.0395	1.1072	1.0521	1.0254	0.9928	1.0452	3.6
DCB 13.08-13.28	1.1388	1.1031	1.0982	0.9840	0.9302	0.8805	1.0224	10.3

Aroclor-1016 Peak RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1 6.04- 6.24	0.0506	0.0491	0.0490	0.0434	0.0401	0.0369	0.0448	12.5
2 6.68- 6.88	0.1074	0.1034	0.1032	0.0943	0.0887	0.0833	0.0967	9.8
3 7.06- 7.26	0.0269	0.0261	0.0266	0.0248	0.0237	0.0226	0.0251	6.8
4 7.24- 7.44	0.0257	0.0245	0.0245	0.0223	0.0209	0.0199	0.0230	10.0

AROCLOR AVERAGE %RSD = 9.8

Aroclor-1260 Peak RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1 10.14-10.34	0.0505	0.0475	0.0477	0.0435	0.0403	0.0380	0.0446	10.8
2 10.59-10.79	0.0585	0.0575	0.0579	0.0535	0.0497	0.0472	0.0540	8.8
3 10.86-11.06	0.1130	0.1162	0.1168	0.1073	0.0996	0.0946	0.1079	8.5
4 11.38-11.58	0.0416	0.0360	0.0337	0.0325	0.0289	0.0278	0.0334	15.0

AROCLOR AVERAGE %RSD = 10.8

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU70 Project: NPDES SAMPLING

GC Column: ZB5 Instrument ID: ECD5

Calibration Date: 07/03/13

Aroclor-1221			
Peak	RT	RT WIN	Cal Factor
1	4.752	4.65- 4.85	0.01773
2	4.929	4.83- 5.03	0.01226
3	5.037	4.94- 5.14	0.03508

Aroclor-1232			
Peak	RT	RT WIN	Cal Factor
1	4.752	4.65- 4.85	0.01173
2	4.927	4.83- 5.03	0.00874
3	6.036	5.94- 6.14	0.01521
4	6.443	6.34- 6.54	0.04704

Aroclor-1242			
Peak	RT	RT WIN	Cal Factor
1	6.038	5.94- 6.14	0.02980
2	6.447	6.35- 6.55	0.09171
3	6.596	6.50- 6.70	0.04055
4	7.854	7.75- 7.95	0.04939

Aroclor-1248			
Peak	RT	RT WIN	Cal Factor
1	6.442	6.34- 6.54	0.05866
2	7.421	7.32- 7.52	0.06464
3	7.854	7.75- 7.95	0.08238
4	8.090	7.99- 8.19	0.05894

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU70 Project: NPDES SAMPLING

GC Column: ZB5 Instrument ID: ECD5

Calibration Date: 07/03/13

Aroclor-1254			
Peak	RT	RT WIN	Cal Factor
1	8.173	8.07- 8.27	0.07876
2	8.545	8.44- 8.64	0.05179
3	8.682	8.58- 8.78	0.10721
4	9.035	8.94- 9.14	0.11563
5	9.344	9.24- 9.44	0.04608

Aroclor-1262			
Peak	RT	RT WIN	Cal Factor
1	10.265	10.16-10.36	0.05612
2	10.641	10.54-10.74	0.13402
3	11.041	10.94-11.14	0.04734
4	11.230	11.13-11.33	0.06340
5	11.900	11.80-12.00	0.05675

Aroclor-1268			
Peak	RT	RT WIN	Cal Factor
1	11.157	11.06-11.26	0.13519
2	11.229	11.13-11.33	0.14100
3	11.614	11.51-11.71	0.11654
4	12.406	12.31-12.51	0.33352

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU70 Project: NPDES SAMPLING

GC Column: ZB35 Instrument ID: ECD5

Calibration Date: 07/03/13

Aroclor-1221			
Peak	RT	RT WIN	Cal Factor
1	3.674	3.57- 3.77	0.00817
2	5.069	4.97- 5.17	0.01390
3	5.321	5.22- 5.42	0.00780
4	5.436	5.34- 5.54	0.02424

Aroclor-1232			
Peak	RT	RT WIN	Cal Factor
1	5.069	4.97- 5.17	0.00855
2	5.320	5.22- 5.42	0.00488
3	5.435	5.33- 5.53	0.01718
4	6.141	6.04- 6.24	0.02036

Aroclor-1242			
Peak	RT	RT WIN	Cal Factor
1	6.142	6.04- 6.24	0.03618
2	6.779	6.68- 6.88	0.07854
3	6.987	6.89- 7.09	0.03260
4	8.216	8.12- 8.32	0.02747

Aroclor-1248			
Peak	RT	RT WIN	Cal Factor
1	6.773	6.67- 6.87	0.04949
2	7.682	7.58- 7.78	0.04068
3	8.214	8.11- 8.31	0.04227
4	8.560	8.46- 8.66	0.05526

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU70 Project: NPDES SAMPLING

GC Column: ZB35 Instrument ID: ECD5

Calibration Date: 07/03/13

Aroclor-1254			
Peak	RT	RT WIN	Cal Factor
1	8.275	8.18- 8.38	0.03803
2	8.452	8.35- 8.55	0.04750
3	8.973	8.87- 9.07	0.03683
4	9.123	9.02- 9.22	0.07927
5	9.909	9.81-10.01	0.04678

Aroclor-1262			
Peak	RT	RT WIN	Cal Factor
1	10.237	10.14-10.34	0.07110
2	10.686	10.59-10.79	0.06717
3	10.961	10.86-11.06	0.13338
4	11.543	11.44-11.64	0.09440
5	12.282	12.18-12.38	0.05282

Aroclor-1268			
Peak	RT	RT WIN	Cal Factor
1	11.481	11.38-11.58	0.14220
2	11.548	11.45-11.65	0.13750
3	11.944	11.84-12.04	0.11292
4	12.765	12.67-12.87	0.33071

7F

PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU70 Project: NPDES SAMPLING

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :07/04/13

Lab Standard ID: AR1254 Time Analyzed :0647

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1254-1	8.17	8.07	8.27	240.3	250.0	-3.9
Aroclor-1254-2	8.54	8.44	8.64	236.5	250.0	-5.4
Aroclor-1254-3	8.68	8.58	8.78	241.5	250.0	-3.4
Aroclor-1254-4	9.04	8.94	9.14	235.0	250.0	-6.0
Aroclor-1254-5	9.34	9.24	9.44	228.9	250.0	-8.4

AVERAGE %D = 5.4

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU70 Project: NPDES SAMPLING

GC Column: ZB35 Intrument: ECD5

Init. Calib. Date: 07/03/13

Date Analyzed :07/04/13

Lab Standard ID: AR1254 Time Analyzed :0647

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1254-1	8.28	8.18	8.38	251.2	250.0	0.5
Aroclor-1254-2	8.45	8.35	8.55	249.9	250.0	-0.0
Aroclor-1254-3	8.97	8.87	9.07	247.7	250.0	-0.9
Aroclor-1254-4	9.12	9.02	9.22	247.3	250.0	-1.1
Aroclor-1254-5	9.91	9.81	10.01	246.1	250.0	-1.6

AVERAGE %D = 0.8

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WU70
Project: NPDES SAMPLING

GC Column: ZB5
Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :07/04/13

Lab Standard ID: AR1660
Time Analyzed :0707

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.04	5.94	6.14	232.6	250.0	-7.0
Aroclor-1016-2	6.44	6.35	6.55	233.9	250.0	-6.4
Aroclor-1016-3	6.59	6.50	6.70	233.0	250.0	-6.8
Aroclor-1016-4	6.71	6.61	6.81	235.5	250.0	-5.8

AVERAGE %D = 6.5

Date Analyzed :07/04/13

Lab Standard ID: AR1660
Time Analyzed :0707

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	9.95	9.85	10.05	218.7	250.0	-12.5
Aroclor-1260-2	10.27	10.17	10.37	217.4	250.0	-13.0
Aroclor-1260-3	10.64	10.54	10.74	219.2	250.0	-12.3
Aroclor-1260-4	11.04	10.94	11.14	215.9	250.0	-13.6
Aroclor-1260-5	11.23	11.13	11.33	219.7	250.0	-12.1

AVERAGE %D = 12.7

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU70 Project: NPDES SAMPLING

GC Column: ZB35 Intrument: ECD5

Init. Calib. Date: 07/03/13

Date Analyzed :07/04/13

Lab Standard ID: AR1660 Time Analyzed :0707

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.14	6.04	6.24	242.4	250.0	-3.0
Aroclor-1016-2	6.78	6.68	6.88	245.7	250.0	-1.7
Aroclor-1016-3	7.16	7.06	7.26	246.0	250.0	-1.6
Aroclor-1016-4	7.33	7.24	7.44	245.4	250.0	-1.8

AVERAGE %D = 2.0

Date Analyzed :07/04/13

Lab Standard ID: AR1660 Time Analyzed :0707

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	10.24	10.14	10.34	235.3	250.0	-5.9
Aroclor-1260-2	10.69	10.59	10.79	236.0	250.0	-5.6
Aroclor-1260-3	10.96	10.86	11.06	235.9	250.0	-5.6
Aroclor-1260-4	11.48	11.38	11.58	211.6	250.0	-15.4

AVERAGE %D = 8.1

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU70 Project: NPDES SAMPLING

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :07/04/13

Lab Standard ID: AR1248 Time Analyzed :1010

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1248-1	6.44	6.34	6.54	244.0	250.0	-2.4
Aroclor-1248-2	7.42	7.32	7.52	244.7	250.0	-2.1
Aroclor-1248-3	7.85	7.75	7.95	245.3	250.0	-1.9
Aroclor-1248-4	8.09	7.99	8.19	234.5	250.0	-6.2

AVERAGE %D = 3.2

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WU70
Project: NPDES SAMPLING

GC Column: ZB35
Intrument: ECD5

Init. Calib. Date: 07/03/13

Date Analyzed :07/04/13

Lab Standard ID: AR1248
Time Analyzed :1010

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1248-1	6.77	6.67	6.87	251.6	250.0	0.6
Aroclor-1248-2	7.68	7.58	7.78	247.0	250.0	-1.2
Aroclor-1248-3	8.21	8.11	8.31	248.6	250.0	-0.6
Aroclor-1248-4	8.56	8.46	8.66	248.8	250.0	-0.5

AVERAGE %D = 0.7

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU70 Project: NPDES SAMPLING

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :07/04/13

Lab Standard ID: AR1660 Time Analyzed :1030

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.04	5.94	6.14	230.6	250.0	-7.8
Aroclor-1016-2	6.45	6.35	6.55	233.4	250.0	-6.6
Aroclor-1016-3	6.60	6.50	6.70	231.9	250.0	-7.2
Aroclor-1016-4	6.71	6.61	6.81	236.6	250.0	-5.4

AVERAGE %D = 6.8

Date Analyzed :07/04/13

Lab Standard ID: AR1660 Time Analyzed :1030

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	9.95	9.85	10.05	221.9	250.0	-11.2
Aroclor-1260-2	10.27	10.17	10.37	221.4	250.0	-11.4
Aroclor-1260-3	10.64	10.54	10.74	225.6	250.0	-9.8
Aroclor-1260-4	11.04	10.94	11.14	218.5	250.0	-12.6
Aroclor-1260-5	11.23	11.13	11.33	222.7	250.0	-10.9

AVERAGE %D = 11.2

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU70 Project: NPDES SAMPLING

GC Column: ZB35 Intrument: ECD5

Init. Calib. Date: 07/03/13

Date Analyzed :07/04/13

Lab Standard ID: AR1660 Time Analyzed :1030

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.14	6.04	6.24	240.3	250.0	-3.9
Aroclor-1016-2	6.78	6.68	6.88	245.5	250.0	-1.8
Aroclor-1016-3	7.16	7.06	7.26	245.0	250.0	-2.0
Aroclor-1016-4	7.34	7.24	7.44	242.4	250.0	-3.0

AVERAGE %D = 2.7

Date Analyzed :07/04/13

Lab Standard ID: AR1660 Time Analyzed :1030

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	10.24	10.14	10.34	246.5	250.0	-1.4
Aroclor-1260-2	10.69	10.59	10.79	242.7	250.0	-2.9
Aroclor-1260-3	10.96	10.86	11.06	238.6	250.0	-4.6
Aroclor-1260-4	11.48	11.38	11.58	214.7	250.0	-14.1

AVERAGE %D = 5.8

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU70 Project: NPDES SAMPLING

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :07/04/13

Lab Standard ID: AR1242 Time Analyzed :1232

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1242-1	6.04	5.94	6.14	222.1	250.0	-11.2
Aroclor-1242-2	6.45	6.35	6.55	227.7	250.0	-8.9
Aroclor-1242-3	6.60	6.50	6.70	220.9	250.0	-11.6
Aroclor-1242-4	7.85	7.75	7.95	213.8	250.0	-14.5

AVERAGE %D = 11.6

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC
Client: SAIC

ARI Job No.: WU70
Project: NPDES SAMPLING

GC Column: ZB35
Intrument: ECD5

Init. Calib. Date: 07/03/13

Date Analyzed :07/04/13

Lab Standard ID: AR1242
Time Analyzed :1232

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1242-1	6.14	6.04	6.24	239.3	250.0	-4.3
Aroclor-1242-2	6.78	6.68	6.88	242.8	250.0	-2.9
Aroclor-1242-3	6.99	6.89	7.09	245.3	250.0	-1.9
Aroclor-1242-4	8.22	8.12	8.32	222.5	250.0	-11.0

AVERAGE %D = 5.0

FORM VII PCB

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU70 Project: NPDES SAMPLING

GC Column: ZB5 Intrument: ECD5

Init. Calib. Date: 05/07/13

Date Analyzed :07/04/13

Lab Standard ID: AR1660 Time Analyzed :1252

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.04	5.94	6.14	230.3	250.0	-7.9
Aroclor-1016-2	6.45	6.35	6.55	232.4	250.0	-7.0
Aroclor-1016-3	6.60	6.50	6.70	229.6	250.0	-8.2
Aroclor-1016-4	6.71	6.61	6.81	233.7	250.0	-6.5

AVERAGE %D = 7.4

Date Analyzed :07/04/13

Lab Standard ID: AR1660 Time Analyzed :1252

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	9.95	9.85	10.05	221.4	250.0	-11.4
Aroclor-1260-2	10.27	10.17	10.37	217.4	250.0	-13.0
Aroclor-1260-3	10.64	10.54	10.74	217.6	250.0	-12.9
Aroclor-1260-4	11.04	10.94	11.14	209.1	250.0	-16.3
Aroclor-1260-5	11.23	11.13	11.33	213.4	250.0	-14.6

AVERAGE %D = 13.6

7F
PCB CALIBRATION VERIFICATION SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU70 Project: NPDES SAMPLING

GC Column: ZB35 Intrument: ECD5

Init. Calib. Date: 07/03/13

Date Analyzed :07/04/13

Lab Standard ID: AR1660 Time Analyzed :1252

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1016-1	6.14	6.04	6.24	245.4	250.0	-1.8
Aroclor-1016-2	6.78	6.68	6.88	249.3	250.0	-0.3
Aroclor-1016-3	7.16	7.06	7.26	247.5	250.0	-1.0
Aroclor-1016-4	7.34	7.24	7.44	243.4	250.0	-2.6

AVERAGE %D = 1.4

Date Analyzed :07/04/13

Lab Standard ID: AR1660 Time Analyzed :1252

COMPOUND/PEAK NO.	RT	RT WINDOW FROM	RT WINDOW TO	CALC AMOUNT (ng)	NOM AMOUNT (ng)	%D
Aroclor-1260-1	10.24	10.14	10.34	243.5	250.0	-2.6
Aroclor-1260-2	10.69	10.59	10.79	243.1	250.0	-2.8
Aroclor-1260-3	10.96	10.86	11.06	244.5	250.0	-2.2
Aroclor-1260-4	11.48	11.38	11.58	217.3	250.0	-13.1

AVERAGE %D = 5.2

FORM VII PCB

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU70 Project: NPDES SAMPLING

GC Column: ZB5 ID: 0.53(mm) Instrument ID: ECD5

Init. Calib. Date: 05/07/13

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

		IS1 AREA	RT	IS2 AREA	RT
	ICAL MIDPT	54036699	2.230	94298658	13.175
	UPPER LIMIT	108073398	2.330	188597316	13.275
	LOWER LIMIT	27018350	2.130	47149329	13.075

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01	ZZZZZ	ZZZZZ	07/03/13	1409	53520042	2.227	92213476	13.175
02		0.25PPM AR16	07/03/13	1429	54036699	2.230	94298658	13.175
03		0.02PPM AR16	07/03/13	1448	56696922	2.229	98484852	13.175
04		0.05PPM AR16	07/03/13	1508	53462228	2.229	93803582	13.175
05		1 PPM AR1660	07/03/13	1528	52744763	2.228	93309532	13.174
06		0.1PPM AR166	07/03/13	1547	55828494	2.229	99062417	13.175
07		0.5PPM AR166	07/03/13	1607	55117944	2.227	97957899	13.174
08		AR1242	07/03/13	1627	54135509	2.228	95980403	13.174
09		AR1248	07/03/13	1646	54435899	2.229	96914111	13.175
10		AR1254	07/03/13	1706	53047932	2.227	96734318	13.176
11		AR2162	07/03/13	1726	53657519	2.230	96593672	13.175
12		AR3268	07/03/13	1746	53977722	2.228	98041539	13.175
13	ZZZZZ	ZZZZZ	07/03/13	1806	56163010	2.230	102610444	13.174
14	ZZZZZ	ZZZZZ	07/03/13	1825	55572423	2.229	101536066	13.175
15	ZZZZZ	ZZZZZ	07/03/13	1845	57013429	2.228	102851159	13.175
16	ZZZZZ	ZZZZZ	07/03/13	1905	57197105	2.228	103206649	13.174
17	ZZZZZ	ZZZZZ	07/03/13	1925	56119865	2.227	101966563	13.174
18	ZZZZZ	ZZZZZ	07/03/13	1945	56309514	2.227	103219670	13.175
19		AR1254	07/04/13	0647	56438684	2.228	98781645	13.176
20		AR1660	07/04/13	0707	58040153	2.230	101959934	13.176
21	WU70MBS1	WU70MBS1	07/04/13	0929	62189736	2.228	102522787	13.173
22	WU70LCSS1	WU70LCSS1	07/04/13	0950	60774367	2.228	103045425	13.173
23		AR1248	07/04/13	1010	58519764	2.227	102307094	13.175
24		AR1660	07/04/13	1030	58704751	2.228	98812668	13.176
25	LF-TP-001-20	WU70B	07/04/13	1050	51354391	2.228	83281105	13.175
26	LF-LS-004-20	WU70C	07/04/13	1111	54184459	2.228	84897756	13.173
27	LF-LS-004-20	WU70CMS	07/04/13	1131	54249883	2.227	89377780	13.173
28	LF-LS-004-20	WU70CMSD	07/04/13	1151	54633719	2.229	84859085	13.175
29		AR1242	07/04/13	1232	59452890	2.228	92906552	13.175
30		AR1660	07/04/13	1252	59920500	2.230	93072814	13.175

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- 0.1 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

FORM 8
PCB INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

ARI Job No.: WU70 Project: NPDES SAMPLING

GC Column: ZB35 ID: 0.53(mm) Instrument ID: ECD5

Init. Calib. Date: 07/03/13

THE ANALYTICAL SEQUENCE OF PERFORMANCE EVALUATION MIXTURES, BLANKS, SAMPLES, AND STANDARDS IS GIVEN BELOW:

	IS1 AREA	RT	IS2 AREA	RT
ICAL MIDPT	16218104	2.708	17872840	14.047
UPPER LIMIT	32436208	2.808	35745680	14.147
LOWER LIMIT	8109052	2.608	8936420	13.947

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME	IS1 AREA	RT	IS2 AREA	RT
01	ZZZZZ	ZZZZZ	07/03/13	1409	16075309	2.705	17671217	14.047
02		0.25PPM AR16	07/03/13	1429	16218104	2.708	17872840	14.047
03		0.02PPM AR16	07/03/13	1448	16740971	2.706	18596529	14.045
04		0.05PPM AR16	07/03/13	1508	15688123	2.704	17670872	14.046
05		1 PPM AR1660	07/03/13	1528	15825033	2.705	17790996	14.046
06		0.1PPM AR166	07/03/13	1547	16464468	2.707	18558687	14.046
07		0.5PPM AR166	07/03/13	1607	16374217	2.703	18532815	14.046
08		AR1242	07/03/13	1627	15988032	2.705	18116079	14.046
09		AR1248	07/03/13	1646	16106147	2.706	18310071	14.046
10		AR1254	07/03/13	1706	15655814	2.705	18111026	14.047
11		AR2162	07/03/13	1726	15729801	2.707	18312081	14.046
12		AR3268	07/03/13	1746	15722713	2.704	18502994	14.045
13	ZZZZZ	ZZZZZ	07/03/13	1806	16401495	2.705	19129346	14.045
14	ZZZZZ	ZZZZZ	07/03/13	1825	16195879	2.706	18895684	14.046
15	ZZZZZ	ZZZZZ	07/03/13	1845	16668049	2.704	19397719	14.045
16	ZZZZZ	ZZZZZ	07/03/13	1905	16487800	2.704	19438480	14.045
17	ZZZZZ	ZZZZZ	07/03/13	1925	16248647	2.702	19282994	14.046
18	ZZZZZ	ZZZZZ	07/03/13	1945	16360135	2.702	19522763	14.045
19		AR1254	07/04/13	0647	15531331	2.702	17586351	14.046
20		AR1660	07/04/13	0707	16101729	2.703	18509226	14.046
21	WU70MBS1	WU70MBS1	07/04/13	0929	17353568	2.702	17631285	14.044
22	WU70LCSS1	WU70LCSS1	07/04/13	0950	17017145	2.703	17719356	14.045
23		AR1248	07/04/13	1010	16148776	2.702	17425419	14.045
24		AR1660	07/04/13	1030	16259974	2.702	17399472	14.046
25	LF-TP-001-20	WU70B	07/04/13	1050	14524968	2.703	16121762	14.046
26	LF-LS-004-20	WU70C	07/04/13	1111	14709195	2.703	18929027	14.045
27	LF-LS-004-20	WU70CMS	07/04/13	1131	14784141	2.701	23741179	14.047
28	LF-LS-004-20	WU70CMSD	07/04/13	1151	14898246	2.703	21329857	14.046
29		AR1242	07/04/13	1232	16181582	2.703	15722336	14.045
30		AR1660	07/04/13	1252	16120168	2.704	16060608	14.047

IS1 = 1-Bromo-2-Nitrobenzene RT Window = RT +/- 0.1 min
IS2 = Hexabromobiphenyl

* Indicates value outside QC Limits

TPHD Analysis
Report and Summary QC Forms

ARI Job ID: WU70

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS

NWTPHD by GC/FID
Extraction Method: SW3546
Page 1 of 1

QC Report No: WU70-SAIC
Project: NPDES Sampling Support
209977

Matrix: Sediment

Date Received: 06/19/13

Data Release Authorized:
Reported: 06/26/13

ARI ID	Sample ID	Analysis Date	DF	Range	Result	RL	MDL
MB-062413	Method Blank	06/25/13	1.0	Diesel	< 50 U	50	14
13-13122		FID4A		Motor Oil	< 100 U	100	25
				HC ID	---		
				o-Terphenyl	98.3%		
WU70B	LF-TP-001-20130619-S	06/25/13	1.0	**Diesel**	**1,100**	90	24
13-13122		FID4A		**Motor Oil**	**2,300**	180	45
				HC ID	DIESEL/MOTOR OIL		
				o-Terphenyl	80.5%		

Reported in mg/kg (ppm)

Diesel quantitation on total peaks in the range from C12 to C24.
Motor Oil quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicates results of organics or additional hydrocarbons in ranges are not identifiable.

ANALYTICAL RESOURCES INCORPORATED

TPHD SURROGATE RECOVERY SUMMARY

Matrix: Sediment

QC Report No: WU70-SAIC
Project: NPDES Sampling Support
209977

Client ID	OTER	TOT OUT
062413MBS	98.3%	0
062413LCS	92.4%	0
LF-TP-001-20130619-S	80.5%	0
LF-TP-001-20130619-S MS	81.5%	0
LF-TP-001-20130619-S MSD	87.0%	0

	LCS/MB LIMITS	QC LIMITS
(OTER) = o-Terphenyl	(50-150)	(50-150)

Prep Method: SW3546
Log Number Range: 13-13122 to 13-13122

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID
Page 1 of 1

Sample ID: LF-TP-001-20130619-S
MS/MSD

Lab Sample ID: WU70B
LIMS ID: 13-13122
Matrix: Sediment
Data Release Authorized:
Reported: 06/26/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Date Extracted MS/MSD: 06/24/13

Date Analyzed MS: 06/25/13 18:11
MSD: 06/25/13 18:32
Instrument/Analyst MS: FID4A/JLW
MSD: FID4A/JLW

Sample Amount MS: 5.58 g-dry-wt
MSD: 5.58 g-dry-wt
Final Extract Volume MS: 10 mL
MSD: 10 mL
Dilution Factor MS: 1.00
MSD: 1.00
Percent Moisture: 44.3%

Range	Sample	MS	Spike Added-MS	MS Recovery	MSD	Spike Added-MSD	MSD Recovery	RPD
Diesel	1,100	2,840	2,690	64.7%	3,020	2,690	71.4%	6.1%

TPHD Surrogate Recovery

	MS	MSD
o-Terphenyl	81.5%	87.0%

Results reported in mg/kg
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID
Page 1 of 1

Sample ID: LCS-062413
LAB CONTROL

Lab Sample ID: LCS-062413
LIMS ID: 13-13122
Matrix: Sediment
Data Release Authorized:
Reported: 06/26/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Date Extracted: 06/24/13
Date Analyzed: 06/25/13 17:09
Instrument/Analyst: FID4A/JLW

Sample Amount: 10.0 g-dry-wt
Final Extract Volume: 10 mL
Dilution Factor: 1.00

Range	Lab Control	Spike Added	Recovery
Diesel	1,460	1,500	97.3%

TPHD Surrogate Recovery

o-Terphenyl	92.4%

Results reported in mg/kg

FORM III

ANALYTICAL RESOURCES INCORPORATED

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

Matrix: Sediment
Date Received: 06/19/13

ARI Job: WU70
Project: NPDES Sampling Support
209977

ARI ID	Client ID	Client Amt	Final Vol	Basis	Prep Date
13-13122-062413MB1	Method Blank	10.0 g	10.0 mL	-	06/24/13
13-13122-062413LCS1	Lab Control	10.0 g	10.0 mL	-	06/24/13
13-13122-WU70B	LF-TP-001-20130619-5.57 g		10.0 mL	D	06/24/13
13-13122-WU70BMS	LF-TP-001-20130619-5.58 g		10.0 mL	D	06/24/13
13-13122-WU70BMSD	LF-TP-001-20130619-5.58 g		10.0 mL	D	06/24/13

Basis: D=Dry Weight W=As Received

WU70 : 09195

TPH METHOD BLANK SUMMARY

BLANK NO.

WU70MBS1

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WU70 Project No.: NPDES SAMPLING SUPPORT

Date Extracted: 06/24/13 Matrix: SOLID

Date Analyzed : 06/25/13 Instrument ID : FID4A

Time Analyzed : 1648

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	WU70LCSS1	WU70LCSS1	06/25/13
02	LF-TP-001-20	WU70B	06/25/13
03	LF-TP-001-20	WU70BMS	06/25/13
04	LF-TP-001-20	WU70BMSD	06/25/13
05			
06			
07			
08			
09			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

6a
DIESEL INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: SAIC

Instrument: FID4A.I

Project: NPDES Sampling Support

Calibration Date: 13-APR-2013

SDG No.: WU70

Diesel Range	RF1 50	RF2 100	RF3 250	RF4 500	RF5 1000	RF6 2500	Ave RF	%RSD
WA Diesel	15188	15021	14479	14279	14226	13910	14517	3.4
AK Diesel	17981	17836	17184	16948	16866	16485	17217	3.4
OR Diesel	18067	17904	17254	17021	16941	16562	17291	3.4
Cal Diesel	17937	17789	17145	16910	16821	16447	17175	3.4
o-Terph	20876	20737	19497	18356	18320	17911	19283	6.7

<- Indicates %RSD outside limits
Surrogate areas are not included in Diesel RF calculation.

Quant Ranges :
WA Diesel C12-C24 (3.908-7.326)
AK Diesel C10-C25 (2.967-7.574)
OR Diesel C10-C28 (2.967-8.269)
Cal Diesel C10-C24 (2.967-7.326)

Calibration Files	Analysis Time
0413a006.d	13-APR-2013 11:53
0413a007.d	13-APR-2013 12:13
0413a008.d	13-APR-2013 12:34
0413a009.d	13-APR-2013 12:54
0413a010.d	13-APR-2013 13:15
0413a011.d	13-APR-2013 13:35

6a
NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

Instrument: FID4A.I
Project: NPDES Sampling Support

Calibration Date: 20-MAY-2013
SDG No.: WU70

Product Range	RF1 100	RF2 250	RF3 500	RF4 1000	RF5 2500	RF6 5000	Ave RF	%RSD
WA M.Oil C24-C38	14505	14238	13594	13326	11838	9930	12905	13.4
Triac Surr	19882	20137	19857	19391	18502	18199	19328	4.1

<- Indicates %RSD outside limits
Surrogate areas are not included in Motor Oil RF calculation.

Calibration Files	Analysis Time
0520a016.d	20-MAY-2013 17:53
0520a017.d	20-MAY-2013 18:13
0520a018.d	20-MAY-2013 18:34
0520a019.d	20-MAY-2013 18:55
0520a020.d	20-MAY-2013 19:15
0520a021.d	20-MAY-2013 19:36

7a

DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 13-APR-2013
Project: NPDES Sampling Supp

CCal Date: 25-JUN-2013
SDG No.: WU70

Analysis Time: 14:22
Lab ID: DIESEL#2

Instrument: FID4A.I
Lab File Name: 0625a015.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D	
WADies(C12-C24)	3644697	251.1	250	0.4	
AK102 (C10-C25)	4287121	249.0	250	-0.4	
NASDies(C10-C24)	4272439	216.6	250	-13.3	
Terphenyl	891537	46.2	45	2.7	
Creos (C12-C22)	3495244	1601.9	250	540.8	<-

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

FORM VII-Diesel

7a

MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 20-MAY-2013
Project: NPDES Sampling Supp

CCal Date: 25-JUN-2013
SDG No.: WU70

Analysis Time: 14:43
Lab ID: MOIL#2

Instrument: FID4A.I
Lab File Name: 0625a016.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D
WAMoil(C24-C38)	5747449	445.4	500	-10.9
AK103 (C25-C36)	5108613	555.2	500	11.0
OR MOIL(C28-C40)	4192832	555.1	500	11.0
CRUDE(Tol-C40)	6580338	871.3	500	74.3
n-Triacontane	860009	44.5	45	-1.1

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

FORM VII-Diesel

7a

DIESEL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 13-APR-2013
Project: NPDES Sampling Supp

CCal Date: 25-JUN-2013
SDG No.: WU70

Analysis Time: 18:52
Lab ID: DIESEL#3

Instrument: FID4A.I
Lab File Name: 0625a028.d

Diesel Range	Area*	CalcAmnt	NomAmnt	% D	
WADies(C12-C24)	3815110	262.8	250	5.1	
AK102 (C10-C25)	4477392	260.1	250	4.0	
NASDies(C10-C24)	4460611	226.2	250	-9.5	
Terphenyl	913094	47.4	45	5.2	
Creos (C12-C22)	3662129	1678.4	250	571.4	<-

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

FORM VII-Diesel

7a

MOTOR OIL CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 20-MAY-2013
Project: NPDES Sampling Supp

CCal Date: 25-JUN-2013
SDG No.: WU70

Analysis Time: 19:13
Lab ID: MOIL#3

Instrument: FID4A.I
Lab File Name: 0625a029.d

M.oil Range	Area*	CalcAmnt	NomAmnt	% D
WAMoil(C24-C38)	6218743	481.9	500	-3.6
AK103 (C25-C36)	5528072	600.7	500	20.1
OR MOIL(C28-C40)	4572950	605.5	500	21.1
CRUDE(Tol-C40)	7061870	935.0	500	87.0
n-Triacontane	890621	46.1	45	2.4

* Surrogate areas are subtracted from range areas
<- Indicates a %D outside QC limits

FORM VII-Diesel

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WU70 Project: NPDES SAMPLING SUPPORT

Instrument ID: FID4A GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 6.26 TRIAC: 9.15

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01	ZZZZZ	ZZZZZ	06/25/13	0904	6.26	9.17
02		RT0625	06/25/13	0924	6.26	9.15
03	ZZZZZ	ZZZZZ	06/25/13	0945	6.26	9.14
04	SPU LDW SOUR	DIESEL#1	06/25/13	1005	6.26	9.17
05	SPU LDW SOUR	MOIL#1	06/25/13	1026	6.25	9.14
06	ZZZZZ	ZZZZZ	06/25/13	1116	6.26	9.17
07	ZZZZZ	ZZZZZ	06/25/13	1136	6.26	9.15
08	ZZZZZ	ZZZZZ	06/25/13	1157	6.26	9.14
09	ZZZZZ	ZZZZZ	06/25/13	1218	6.26	9.15
10	ZZZZZ	ZZZZZ	06/25/13	1238	6.26	9.14
11	ZZZZZ	ZZZZZ	06/25/13	1259	6.26	9.15
12	ZZZZZ	ZZZZZ	06/25/13	1320	6.26	9.15
13	ZZZZZ	ZZZZZ	06/25/13	1341	6.26	9.16
14	ZZZZZ	ZZZZZ	06/25/13	1402	6.26	9.14
15	NPDES SAMPLI	DIESEL#2	06/25/13	1422	6.26	9.14
16	NPDES SAMPLI	MOIL#2	06/25/13	1443	6.25	9.15
17	ZZZZZ	ZZZZZ	06/25/13	1504	6.26	9.15
18	ZZZZZ	ZZZZZ	06/25/13	1525	6.26	9.15
19	ZZZZZ	ZZZZZ	06/25/13	1546	6.26	9.15
20	ZZZZZ	ZZZZZ	06/25/13	1606	6.26	9.15
21	ZZZZZ	ZZZZZ	06/25/13	1627	6.26	9.15
22	WU70MBS1	WU70MBS1	06/25/13	1648	6.26	9.14
23	WU70LCSS1	WU70LCSS1	06/25/13	1709	6.26	9.14
24	ZZZZZ	ZZZZZ	06/25/13	1729	6.26	9.13
25	LF-TP-001-20	WU70B	06/25/13	1750	6.26	9.15
26	LF-TP-001-20	WU70BMS	06/25/13	1811	6.26	9.13
27	LF-TP-001-20	WU70BMSD	06/25/13	1832	6.26	9.13
28	NPDES SAMPLI	DIESEL#3	06/25/13	1852	6.26	9.16
29	NPDES SAMPLI	MOIL#3	06/25/13	1913	6.25	9.13
30	ZZZZZ	ZZZZZ	06/25/13	1933	6.26	9.12
31	ZZZZZ	ZZZZZ	06/25/13	1954	6.26	9.13
32	ZZZZZ	ZZZZZ	06/25/13	2015	6.25	9.12

	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: SAIC

SDG No.: WU70 Project: NPDES SAMPLING SUPPORT

Instrument ID: FID4A GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 6.26 TRIAC: 9.15

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01	ZZZZZ	ZZZZZ	06/25/13	2035	6.25	9.11
02	ZZZZZ	ZZZZZ	06/25/13	2056	6.26	9.16
03	ZZZZZ	ZZZZZ	06/25/13	2116	6.25	9.13
04	ZZZZZ	ZZZZZ	06/25/13	2137	6.26	9.14

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

8

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WU70 Project: NPDES Sampling Support

Instrument ID: FID4A GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 5.86 TRIAC: 8.70

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		RINSE	04/13/13	0947	5.87	8.70
02		RT0413	04/13/13	1007	5.86	8.70
03		IB0413	04/13/13	1027	5.86	8.69
04		DIESEL#1	04/13/13	1047	5.87	8.69
05		MOIL#1	04/13/13	1107	5.85	8.69
06		DIESEL50	04/13/13	1153	5.86	8.71
07		DIESEL100	04/13/13	1213	5.86	8.71
08		DIESEL250	04/13/13	1234	5.87	8.71
09		DIESEL500	04/13/13	1254	5.87	8.71
10		DIESEL1000	04/13/13	1315	5.88	8.71
11		DIESEL2500	04/13/13	1335	5.90	8.70
12		DIESELICV250	04/13/13	1356	5.86	8.70
13		MOIL100	04/13/13	1416	5.90	8.67
14		MOIL250	04/13/13	1436	5.90	8.68
15		MOIL500	04/13/13	1457	5.90	8.68
16		MOIL1000	04/13/13	1517	5.90	8.70
17		MOIL2500	04/13/13	1538	5.90	8.72
18		MOIL5000	04/13/13	1558	5.90	8.75
19		MOILICV500	04/13/13	1619	5.90	8.68

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

8

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WU70 Project: NPDES Sampling Support

Instrument ID: FID4A GC Column: RTX-1

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
TERPH: 5.72 TRIAC: 8.54

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		RINSE	05/20/13	1100	5.79*	8.61*
02		RINSE	05/20/13	1120	5.77*	8.60*
03		RINSE	05/20/13	1141	5.77*	8.63*
04		RINSE	05/20/13	1202	5.77*	8.60*
05		RT0520	05/20/13	1223	5.72	8.54
06		IB0520	05/20/13	1244	5.71	8.54
07		DIESEL#1	05/20/13	1305	5.72	8.52
08		MOIL#1	05/20/13	1325	5.73	8.54
09		RINSE	05/20/13	1528	5.72	8.55
10		MINSP 50	05/20/13	1549	5.71	8.53
11		MINSP 100	05/20/13	1609	5.71	8.52
12		MINSP 250	05/20/13	1630	5.72	8.55
13		MINSP 500	05/20/13	1651	5.73	8.54
14		MINSP 1000	05/20/13	1711	5.74	8.56
15		MINSP 2500	05/20/13	1732	5.76	8.55
16		MOIL 100	05/20/13	1753	5.71	8.53
17		MOIL 250	05/20/13	1813	5.71	8.54
18		MOIL 500	05/20/13	1834	5.71	8.54
19		MOIL 1000	05/20/13	1855	5.71	8.56
20		MOIL 2500	05/20/13	1915	5.71	8.58
21		MOIL 5000	05/20/13	1936	5.71	8.61*
22		MOIL ICV 500	05/20/13	1956	5.71	8.54

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

TPHG Analysis
Report and Summary QC Forms

ARI Job ID: WU70

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Matrix: Sediment

Data Release Authorized:
Reported: 06/28/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

ARI ID	Client ID	Analysis Date	Range	Result	LOQ	DL
MB-062713	Method Blank	06/27/13	Gasoline	< 5.0 U	5.0	1.7
13-13122		PID1	HC ID	---		
			Trifluorotoluene	107%		
			Bromobenzene	100%		
WU70B	LF-TP-001-20130606	06/27/13	Gasoline	< 7.5 U	7.5	2.5
13-13122		PID1	HC ID	---		
			Trifluorotoluene	100%		
			Bromobenzene	97.3%		

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

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Matrix: Water

Data Release Authorized:
Reported: 06/28/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

ARI ID	Client ID	Analysis Date	Basis	Range	Result	LOQ	DL
WU70A	LF-QC-TB-201306106	06/27/13	Wet	Gasoline	< 0.25 U	0.25	0.057
13-13121		PID1		HC ID	---		
				Trifluorotoluene	106%		
				Bromobenzene	96.1%		

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 SOIL SURROGATE RECOVERY SUMMARY

ARI Job: WU70
Matrix: Sediment

QC Report No: WU70-SAIC
Project: NPDES Sampling Support
Event: 209977

Client ID	BFB	TFT	BBZ	TOT OUT
MB-062713	NA	107%	100%	0
LCS-062713	NA	117%	100%	0
LCSD-062713	NA	116%	102%	0
LF-TP-001-20130619-S	NA	100%	97.3%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(65-128)
(BBZ) = Bromobenzene	(80-120)	(52-149)

Log Number Range: 13-13122 to 13-13122

FORM II TPHG

WU70:09219

ANALYTICAL RESOURCES INCORPORATED

TPHG WATER SURROGATE RECOVERY SUMMARY

ARI Job: WU70
Matrix: Water

QC Report No: WU70-SAIC
Project: NPDES Sampling Support
Event: 209977

Client ID	TFT	BBZ	TOT OUT
LF-QC-TB-20130619-	106%	96.1%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(80-120)
(BBZ) = Bromobenzene	(80-120)	(80-120)

Log Number Range: 13-13121 to 13-13121

FORM II TPHG

WU70:209211

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Page 1 of 1

Sample ID: LCS-062713
LAB CONTROL SAMPLE

Lab Sample ID: LCS-062713
LIMS ID: 13-13122
Matrix: Sediment
Data Release Authorized:
Reported: 06/28/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 06/27/13 11:00
LCSD: 06/27/13 11:29
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	58.3	50.0	117%	55.2	50.0	110%	5.5%

Reported in mg/kg (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	117%	116%
Bromobenzene	100%	102%

4

BETX/GAS METHOD BLANK SUMMARY

BLANK NO.

MB0627

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WU70 Project No.: NPDES SAMPLING SUPPORT

Date Analyzed : 06/27/13 Matrix: SOIL

Time Analyzed : 1158 Instrument ID : PID1

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

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED
01	LCS0627	LCS0627	06/27/13
02	LCSD0627	LCSD0627	06/27/13
03	TRIP BLANKS	WV68C	06/27/13
04	LF-TP-001-20	WU70B	06/27/13
05			
06			
07			
08			
09			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			

6a

GAS INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: SAIC

Instrument/Det: PID1.I/RTX 502-2 FID Project: NPDES SAMPLING SUPPORT

Calibration Date: 23-OCT-2012 SDG No.: WU70

Surr Calibration Date: 22-MAY-2013

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)	+++++	30.63636	30.95455	30.54545	29.88060	29.37000		
	28.75188	28.18539	28.40000				29.59053	3.634
$ BB(Surr)	+++++	20.63636	20.13636	20.50000	19.88060	19.80000		
	19.51128	19.17978	19.32000				19.87055	2.668

<- 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
0522a002.d	22-MAY-2013 09:02
0522a003.d	22-MAY-2013 09:30
0522a004.d	22-MAY-2013 09:58
0522a005.d	22-MAY-2013 10:27
0522a006.d	22-MAY-2013 10:56
0522a007.d	22-MAY-2013 11:25
0522a008.d	22-MAY-2013 11:55
0522a009.d	22-MAY-2013 12:24

7a
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 23-OCT-2012
Project: NPDES SAMPLING

CCal Date: 27-JUN-2013
SDG No.: WU70

Lab File Name: 0627a003.d
Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	812266	2.27	2.50	-9.3
AKGas (C6-C10)	1249470	2.14	2.50	-14.3
NWGas (Tol-Nap)	872234	2.33	2.50	-7.0
8015C (2MP-TMB)	1535314	2.12	2.50	-15.1

* Surrogate areas are subtracted from Total Area
<- Indicates an RPD outside QC limits

7b
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 23-OCT-2012
Project: NPDES SAMPLING

CCal Date: 27-JUN-2013
SDG No.: WU70

Lab File Name: 0627a003.d
Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	48018	116.8	100.0	16.8
Bromobenzene	18654	99.7	100.0	-0.3

7a
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 23-OCT-2012
Project: NPDES

CCal Date: 27-JUN-2013
SDG No.: WU70

Lab File Name: 0627a014.d
Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	841220	2.35	2.50	-6.0
AKGas (C6-C10)	1336304	2.29	2.50	-8.3
NWGas (Tol-Nap)	884486	2.36	2.50	-5.7
8015C (2MP-TMB)	1647674	2.28	2.50	-8.9

* Surrogate areas are subtracted from Total Area
<- Indicates an RPD outside QC limits

FORM VII-GAS

7b
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: SAIC

ICal Date: 23-OCT-2012 Project: NPDES

CCal Date: 27-JUN-2013 SDG No.: WU70

Lab File Name: 0627a014.d Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	48060	116.2	100.0	16.2
Bromobenzene	19084	104.5	100.0	4.5

7a
GAS CONTINUING CALIBRATION VERIFICATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 23-OCT-2012
Project: NPDES SAMPLING

CCal Date: 27-JUN-2013
SDG No.: WU70

Lab File Name: 0627a025.d
Inst/Det: PID1.I/RTX 502-2 FID

Gas Range	Area*	CalcAmnt	NomAmnt	%D
WAGas (Tol-C12)	803834	2.24	2.50	-10.2
AKGas (C6-C10)	1253056	2.15	2.50	-14.0
NWGas (Tol-Nap)	844526	2.25	2.50	-9.9
8015C (2MP-TMB)	1552830	2.15	2.50	-14.2

* Surrogate areas are subtracted from Total Area
<- Indicates an RPD outside QC limits

FORM VII-GAS

7b
FID SURROGATE CONTINUING CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.
Client: SAIC

ICal Date: 23-OCT-2012
Project: NPDES SAMPLING

CCal Date: 27-JUN-2013
SDG No.: WU70

Lab File Name: 0627a025.d
Inst/Det: PID1.I/RTX 502-2 FID

Surrogate	Area	CalcAmnt	NomAmnt	RPD
Trifluorotol	46068	111.9	100.0	11.9
Bromobenzene	18608	102.2	100.0	2.2

BETX/GAS ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WU70 Project: NPDES SAMPLING SUPPORT

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	S1 #	S2 RT	S2 #
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

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WU70 Project: NPDES SAMPLING SUPPORT

Instrument ID: PID1 GC Column: RTX 502-2 FID

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

SURROGATE RT FROM DAILY STANDARD
S1 : 7.85 S2 : 15.38

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT #	S2 RT #
01	BCAL0.25	BCAL0.25	05/22/13	0902	7.85	15.38
02	BCAL0.5	BCAL0.5	05/22/13	0930	7.85	15.38
03	BCAL1	BCAL1	05/22/13	0958	7.85	15.38
04	BCAL5	BCAL5	05/22/13	1027	7.85	15.38
05	BCAL25	BCAL25	05/22/13	1056	7.85	15.38
06	BCAL50	BCAL50	05/22/13	1125	7.85	15.38
07	BCAL100	BCAL100	05/22/13	1155	7.85	15.38
08	BCAL200	BCAL200	05/22/13	1224	7.85	15.38
09	ICV25	ICV25	05/22/13	1253	7.85	15.38

QC LIMITS

S1 = TFT(Surr) (+/- 0.07 MINUTES)
S2 = BB(Surr) (+/- 0.07 MINUTES)

* Values outside of QC limits.

FORM VIII TPH

BETX/GAS ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client: SAIC

SDG No.: WU70 Project: NPDES SAMPLING SUPPORT

Instrument ID: PID1 GC Detector: RTX 502-2 FID

Run Date: 06/27/13

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, AND STANDARDS, IS GIVEN BELOW:

METHOD SURROGATE RT
S1 : 7.84 S2 : 15.38

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	S1 RT	S1 #	S2 RT	S2 #
01	RT0626+BCAL	RT0626+BCAL	06/27/13	0926	7.84		15.38	
02	NPDES SAMPLI	GCAL 1	06/27/13	0955	7.84		15.38	
03	LCS0627	LCS0627	06/27/13	1100	7.84		15.38	
04	LCSD0627	LCSD0627	06/27/13	1129	7.84		15.38	
05	MB0627	MB0627	06/27/13	1158	7.84		15.38	
06	LF-QC-TB-201	WU70A	06/27/13	1349	7.84		15.38	
07	NPDES	GCAL 2	06/27/13	1644	7.84		15.38	
08	LF-TP-001-20	WU70B	06/27/13	1812	7.84		15.38	
09	NPDES SAMPLI	GCAL 3	06/27/13	2205	7.84		15.38	

QC LIMITS

S1 = TFT(Surr) (+/- 0.07 MINUTES)
S2 = BB(Surr) (+/- 0.07 MINUTES)

* Values outside of QC limits.

FORM VIII-2 BETX

Metals Analysis
Report and Summary QC Forms

ARI Job ID: WU70

Cover Page

INORGANIC ANALYSIS DATA PACKAGE

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WU70

CLIENT ID	ARI ID	ARI LIMS ID	REPREP
LF-TP-001-20130619	WU70B	13-13122	
LF-TP-001-20130619D	WU70BDUP	13-13122	
LF-TP-001-20130619S	WU70BSPK	13-13122	
LF-LS-004-20130619	WU70C	13-13123	
PBS	WU70MB1	13-13123	
LCSS	WU70MB1SPK	13-13123	

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: Eric Larson for Name: Jay Kuhn

Date: 7-5-13 Title: Inorganics Director

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: LF-TP-001-20130619-S
SAMPLE

Lab Sample ID: WU70B
LIMS ID: 13-13122
Matrix: Sediment
Data Release Authorized:
Reported: 07/05/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Percent Total Solids: 55.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
3050B	06/26/13	200.8	07/01/13	7440-36-0	Antimony	0.022	0.3	0.3	U
3050B	06/26/13	200.8	07/01/13	**7440-38-2**	**Arsenic**	0.15	0.3	**12.3**	
3050B	06/26/13	6010C	06/28/13	**7440-41-7**	**Beryllium**	0.018	0.2	**0.4**	
3050B	06/26/13	200.8	07/01/13	**7440-43-9**	**Cadmium**	0.020	0.2	**1.0**	
3050B	06/26/13	200.8	07/01/13	**7440-47-3**	**Chromium**	0.064	0.8	**35.2**	
3050B	06/26/13	6010C	06/28/13	**7440-50-8**	**Copper**	0.089	0.4	**186**	
3050B	06/26/13	200.8	07/01/13	**7439-92-1**	**Lead**	0.079	0.2	**18.5**	
CLP	06/26/13	7471A	07/03/13	**7439-97-6**	**Mercury**	0.0022	0.04	**0.06**	
3050B	06/26/13	200.8	07/01/13	**7440-02-0**	**Nickel**	0.082	0.8	**30.4**	
3050B	06/26/13	200.8	07/01/13	7782-49-2	Selenium	0.17	0.8	0.8	U
3050B	06/26/13	200.8	07/01/13	**7440-22-4**	**Silver**	0.013	0.3	**0.7**	
3050B	06/26/13	200.8	07/01/13	7440-28-0	Thallium	0.0050	0.3	0.3	U
3050B	06/26/13	6010C	06/28/13	**7440-66-6**	**Zinc**	0.21	2	**241**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: LF-LS-004-20130619-S
SAMPLE

Lab Sample ID: WU70C
LIMS ID: 13-13123
Matrix: Sediment
Data Release Authorized:
Reported: 07/05/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Percent Total Solids: 75.1%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
3050B	06/26/13	200.8	07/01/13	**7440-36-0**	**Antimony**	0.016	0.2	**0.5**	
3050B	06/26/13	200.8	07/01/13	**7440-38-2**	**Arsenic**	0.11	0.2	**29.0**	
3050B	06/26/13	6010C	06/28/13	**7440-41-7**	**Beryllium**	0.032	0.3	**1.4**	
3050B	06/26/13	200.8	07/01/13	**7440-43-9**	**Cadmium**	0.015	0.1	**0.1**	
3050B	06/26/13	200.8	07/01/13	**7440-47-3**	**Chromium**	0.046	0.6	**32.9**	
3050B	06/26/13	6010C	06/28/13	**7440-50-8**	**Copper**	0.16	0.6	**276**	
3050B	06/26/13	200.8	07/01/13	**7439-92-1**	**Lead**	0.057	0.1	**20.5**	
CLP	06/26/13	7471A	07/03/13	7439-97-6	Mercury	0.0016	0.03	0.03	U
3050B	06/26/13	200.8	07/01/13	**7440-02-0**	**Nickel**	0.060	0.6	**39.9**	
3050B	06/26/13	200.8	07/01/13	**7782-49-2**	**Selenium**	0.12	0.6	**1.0**	
3050B	06/26/13	200.8	07/01/13	**7440-22-4**	**Silver**	0.0098	0.2	**1.2**	
3050B	06/26/13	200.8	07/01/13	7440-28-0	Thallium	0.0037	0.2	0.2	U
3050B	06/26/13	6010C	06/28/13	**7440-66-6**	**Zinc**	0.39	3	**584**	

Reported in mg/kg-dry (ppm).
U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample ID: LF-TP-001-20130619-S
MATRIX SPIKE

Lab Sample ID: WU70B
LIMS ID: 13-13122
Matrix: Sediment
Data Release Authorized:
Reported: 07/05/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support
209977
Date Sampled: 06/19/13
Date Received: 06/19/13

MATRIX SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Spike	Spike Added	% Recovery	Q
Antimony	200.8	0.3 U	0.3 U	42.0	0.7%	N
Arsenic	200.8	12.3	52.5	42.0	95.7%	
Beryllium	6010C	0.4	80.3	89.4	89.4%	
Cadmium	200.8	1.0	41.8	42.0	97.1%	
Chromium	200.8	35.2	77.7	42.0	101%	
Copper	6010C	186	258	89.4	80.5%	
Lead	200.8	18.5	59.0	42.0	96.4%	
Mercury	7471A	0.06	0.56	0.428	117%	
Nickel	200.8	30.4	73.3	42.0	102%	
Selenium	200.8	0.8 U	129	134	96.3%	
Silver	200.8	0.7	37.7	42.0	88.1%	
Thallium	200.8	0.3 U	38.0	42.0	90.5%	
Zinc	6010C	241	285	89.4	49.2%	N

Reported in mg/kg-dry

N-Control Limit Not Met
H-% Recovery Not Applicable, Sample Concentration Too High
NA-Not Applicable, Analyte Not Spiked

Percent Recovery Limits: 75-125%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS
Page 1 of 1

Sample ID: LF-TP-001-20130619-S DUPLICATE

Lab Sample ID: WU70B
LIMS ID: 13-13122
Matrix: Sediment
Data Release Authorized:
Reported: 07/05/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

MATRIX DUPLICATE QUALITY CONTROL REPORT

Analyte	Analysis Method	Sample	Duplicate	RPD	Control Limit	Q
Antimony	200.8	0.3 U	0.3 U	0.0%	+/- 0.3	L
Arsenic	200.8	12.3	11.2	9.4%	+/- 20%	
Beryllium	6010C	0.4	0.4	0.0%	+/- 0.2	L
Cadmium	200.8	1.0	1.1	9.5%	+/- 20%	
Chromium	200.8	35.2	34.2	2.9%	+/- 20%	
Copper	6010C	186	140	28.2%	+/- 20%	*
Lead	200.8	18.5	17.1	7.9%	+/- 20%	
Mercury	7471A	0.06	0.06	0.0%	+/- 0.04	L
Nickel	200.8	30.4	29.6	2.7%	+/- 20%	
Selenium	200.8	0.8 U	0.8 U	0.0%	+/- 0.8	L
Silver	200.8	0.7	0.6	15.4%	+/- 0.3	L
Thallium	200.8	0.3 U	0.3 U	0.0%	+/- 0.3	L
Zinc	6010C	241	207	15.2%	+/- 20%	

Reported in mg/kg-dry

*-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: WU70LCS
LIMS ID: 13-13123
Matrix: Sediment
Data Release Authorized:
Reported: 07/05/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

BLANK SPIKE QUALITY CONTROL REPORT

Analyte	Analysis Method	Spike Found	Spike Added	% Recovery	Q
Antimony	200.8	25.3	25.0	101%	
Arsenic	200.8	23.6	25.0	94.4%	
Beryllium	6010C	45.6	50.0	91.2%	
Cadmium	200.8	24.4	25.0	97.6%	
Chromium	200.8	25.4	25.0	102%	
Copper	6010C	49.1	50.0	98.2%	
Lead	200.8	25.1	25.0	100%	
Mercury	7471A	0.50	0.50	100%	
Nickel	200.8	24.8	25.0	99.2%	
Selenium	200.8	79.1	80.0	98.9%	
Silver	200.8	25.2	25.0	101%	
Thallium	200.8	24.3	25.0	97.2%	
Zinc	6010C	48	50	96.0%	

Reported in mg/kg-dry

N-Control limit not met
NA-Not Applicable, Analyte Not Spiked
Control Limits: 80-120%

ANALYTICAL RESOURCES INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS **Sample ID: METHOD BLANK**

Lab Sample ID: WU70MB
LIMS ID: 13-13123
Matrix: Sediment
Data Release Authorized:
Reported: 07/05/13

QC Report No: WU70-SAIC
Project: NPDES Sampling Support 209977
Date Sampled: NA
Date Received: NA

Percent Total Solids: NA

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	MDL	LOQ	Result	Q
3050B	06/26/13	200.8	07/01/13	7440-36-0	Antimony	0.013	0.2	0.2	U
3050B	06/26/13	200.8	07/01/13	7440-38-2	Arsenic	0.087	0.2	0.2	U
3050B	06/26/13	6010C	06/28/13	7440-41-7	Beryllium	0.010	0.1	0.1	U
3050B	06/26/13	200.8	07/01/13	7440-43-9	Cadmium	0.012	0.1	0.1	U
3050B	06/26/13	200.8	07/01/13	7440-47-3	Chromium	0.038	0.5	0.5	U
3050B	06/26/13	6010C	06/28/13	7440-50-8	Copper	0.050	0.2	0.2	U
3050B	06/26/13	200.8	07/01/13	7439-92-1	Lead	0.047	0.1	0.1	U
CLP	06/26/13	7471A	07/03/13	7439-97-6	Mercury	0.0013	0.02	0.02	U
3050B	06/26/13	200.8	07/01/13	7440-02-0	Nickel	0.049	0.5	0.5	U
3050B	06/26/13	200.8	07/01/13	7782-49-2	Selenium	0.099	0.5	0.5	U
3050B	06/26/13	200.8	07/01/13	7440-22-4	Silver	0.0080	0.2	0.2	U
3050B	06/26/13	200.8	07/01/13	7440-28-0	Thallium	0.0030	0.2	0.2	U
3050B	06/26/13	6010C	06/28/13	7440-66-6	Zinc	0.12	1	1	U

Reported in mg/kg (ppm).
U-Analyte undetected at given LOQ
LOQ-Limit of Quantitation

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS: ug/L

SDG: WU70

ANALYTE	EL	M	RUN	ICVTV	ICV	%R	CCVTV	CCV1	%R	CCV2	%R	CCV3	%R	CCV4	%R	CCV5	%R
Antimony	SB	PMS	MS070111	50.0	52.17	**104.3**	50.0	50.54	**101.1**	51.15	**102.3**	49.15	**98.3**	48.54	**97.1**	50.78	**101.6**
Arsenic	AS	PMS	MS070111	50.0	51.63	**103.3**	50.0	51.56	**103.1**	50.63	**101.3**	48.59	**97.2**	49.55	**99.1**	50.84	**101.7**
Beryllium	BE	ICP	IP062871	1000.0	999.95	**100.0**	1000.0	977.01	**97.7**	975.10	**97.5**	964.95	**96.5**				
Cadmium	CD	PMS	MS070111	50.0	49.50	**99.0**	50.0	50.71	**101.4**	52.24	**104.5**	48.56	**97.1**	48.20	**96.4**	50.11	**100.2**
Chromium	CR	PMS	MS070111	50.0	51.25	**102.5**	50.0	50.06	**100.1**	50.44	**100.9**	48.61	**97.2**	48.69	**97.4**	50.85	**101.7**
Copper	CU	ICP	IP062871	1000.0	1012.63	**101.3**	1000.0	1000.55	**100.1**	1028.73	**102.9**	986.69	**98.7**				
Lead	PB	PMS	MS070111	50.0	51.28	**102.6**	50.0	49.50	**99.0**	49.05	**98.1**	47.56	**95.1**	47.52	**95.0**	50.37	**100.7**
Mercury	HG	CVA	HG070301	8.0	8.67	**108.4**	4.0	4.17	**104.3**	4.24	**106.0**	4.32	**108.0**				
Nickel	NI	PMS	MS070111	50.0	52.57	**105.1**	50.0	51.95	**103.9**	51.60	**103.2**	48.55	**97.1**	48.06	**96.1**	49.79	**99.6**
Selenium	SE	PMS	MS070111	80.0	79.50	**99.4**	50.0	52.58	**105.2**	51.56	**103.1**	50.15	**100.3**	50.70	**101.4**	51.70	**103.4**
Silver	AG	PMS	MS070111	50.0	52.32	**104.6**	50.0	51.73	**103.5**	51.39	**102.8**	48.01	**96.0**	48.20	**96.4**	51.13	**102.3**
Thallium	TL	PMS	MS070111	50.0	48.71	**97.4**	50.0	48.06	**96.1**	47.85	**95.7**	46.26	**92.5**	46.13	**92.3**	48.12	**96.2**
Zinc	ZN	ICP	IP062871	1000.0	994.59	**99.5**	1000.0	986.55	**98.7**	987.00	**98.7**	987.50	**98.8**				

Control Limits: Mercury 80-120; Other Metals 90-110

Calibration Verification

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS: ug/L

SDG: WU70

ANALYTE	EL	M	RUN	CCVTV	CCV6	%R	CCV7	%R	CCV8	%R	CCV9	%R	CCV10	%R	CCV11	%R
Antimony	SB	PMS	MS070111	50.0	50.04	**100.1**										
Arsenic	AS	PMS	MS070111	50.0	49.23	**98.5**										
Beryllium	BE	ICP	IP062871	1000.0												
Cadmium	CD	PMS	MS070111	50.0	48.99	**98.0**										
Chromium	CR	PMS	MS070111	50.0	49.43	**98.9**										
Copper	CU	ICP	IP062871	1000.0												
Lead	PB	PMS	MS070111	50.0	48.35	**96.7**										
Mercury	HG	CVA	HG070301	4.0												
Nickel	NI	PMS	MS070111	50.0	48.25	**96.5**										
Selenium	SE	PMS	MS070111	50.0	50.27	**100.5**										
Silver	AG	PMS	MS070111	50.0	50.24	**100.5**										
Thallium	TL	PMS	MS070111	50.0	46.78	**93.6**										
Zinc	ZN	ICP	IP062871	1000.0												

Control Limits: Mercury 80-120; Other Metals 90-110

CRDL Standard

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS: ug/L

SDG: WU70

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
Antimony	SB	PMS	MS070111	0.2	0.24	**120.0**										
Arsenic	AS	PMS	MS070111	0.2	0.20	**100.0**										
Beryllium	BE	ICP	IP062871	1.0	0.97	**97.0**										
Cadmium	CD	PMS	MS070111	0.1	0.10	**100.0**										
Chromium	CR	PMS	MS070111	0.5	0.52	**104.0**										
Copper	CU	ICP	IP062871	2.0	2.00	**100.0**										
Lead	PB	PMS	MS070111	0.1	0.08	**80.0**										
Mercury	HG	CVA	HG070301	0.1	0.09	**90.0**										
Nickel	NI	PMS	MS070111	0.5	0.44	**88.0**										
Selenium	SE	PMS	MS070111	0.5	0.56	**112.0**										
Silver	AG	PMS	MS070111	0.2	0.20	**100.0**										
Thallium	TL	PMS	MS070111	0.2	0.19	**95.0**										
Zinc	ZN	ICP	IP062871	10.0	9.73	**97.3**										

Control Limits: no control limits have been established by the EPA at this time.

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WU70

UNITS: ug/L

ANALYTE	EL	METH	RUN	CRDL	IDL	ICB	C	CCB1	C	CCB2	C	CCB3	C	CCB4	C	CCB5	C
Antimony	SB	PMS	MS070111	60.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Arsenic	AS	PMS	MS070111	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Beryllium	BE	ICP	IP062871	5.0	1.0	1.0	U	1.0	U	1.0	U	1.0	U				
Cadmium	CD	PMS	MS070111	5.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Chromium	CR	PMS	MS070111	10.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Copper	CU	ICP	IP062871	25.0	2.0	2.0	U	2.0	U	2.0	U	2.0	U				
Lead	PB	PMS	MS070111	3.0	0.1	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U	0.1	U
Mercury	HG	CVA	HG070301	0.2	0.1	0.1	U	0.1	U	0.1	U	0.1	U				
Nickel	NI	PMS	MS070111	40.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Selenium	SE	PMS	MS070111	5.0	0.5	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U	0.5	U
Silver	AG	PMS	MS070111	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Thallium	TL	PMS	MS070111	10.0	0.2	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U	0.2	U
Zinc	ZN	ICP	IP062871	20.0	10.0	10.0	U	10.0	U	10.0	U	10.0	U				

Calibration Blanks

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

UNITS: ug/L

SDG: WU70

ANALYTE	EL	METH	RUN	CRDL	IDL	CCB6	C	CCB7	C	CCB8	C	CCB9	C	CCB10	C	CCB11	C
Antimony	SB	PMS	MS070111	60.0	0.2	0.2	U										
Arsenic	AS	PMS	MS070111	10.0	0.2	0.2	U										
Beryllium	BE	ICP	IP062871	5.0	1.0												
Cadmium	CD	PMS	MS070111	5.0	0.1	0.1	U										
Chromium	CR	PMS	MS070111	10.0	0.5	0.5	U										
Copper	CU	ICP	IP062871	25.0	2.0												
Lead	PB	PMS	MS070111	3.0	0.1	0.1	U										
Mercury	HG	CVA	HG070301	0.2	0.1												
Nickel	NI	PMS	MS070111	40.0	0.5	0.5	U										
Selenium	SE	PMS	MS070111	5.0	0.5	0.5	U										
Silver	AG	PMS	MS070111	10.0	0.2	0.2	U										
Thallium	TL	PMS	MS070111	10.0	0.2	0.2	U										
Zinc	ZN	ICP	IP062871	20.0	10.0												

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

ICS SOURCE: I.V.

PROJECT: NPDES Sampling Suppo

RUNID: IP062871

SDG: WU70

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	200630.3	202169.4	**101.1**						
Antimony		1000	12.5	1031.0	**103.1**						
Arsenic		1000	22.0	1034.1	**103.4**						
Barium		1000	-3.6	1032.9	**103.3**						
Beryllium		1000	0.1	990.8	**99.1**						
Boron			-4.3	-7.6							
Cadmium		1000	0.4	1043.0	**104.3**						
Calcium	100000	100000	99006.6	99722.8	**99.7**						
Chromium		1000	1.5	1044.6	**104.5**						
Cobalt		1000	-0.1	961.9	**96.2**						
Copper		1000	-0.2	1063.3	**106.3**						
Iron	200000	200000	199680.9	200866.2	**100.4**						
Lead		1000	-8.2	986.0	**98.6**						
Magnesium	100000	100000	103143.5	99633.6	**99.6**						
Manganese		1000	0.6	992.0	**99.2**						
Molybdenum			2.3	2.3							
Nickel		1000	0.4	961.2	**96.1**						
Potassium			-3.6	-25.1							
Selenium		1000	12.2	1018.8	**101.9**						
Silicon			-2.5	-2.0							
Silver		1000	-1.1	1069.7	**107.0**						
Sodium			9.9	2.5							
Strontium			5.4	5.5							
Thallium		1000	0.5	953.2	**95.3**						
Tin			-10.1	-9.0							
Titanium			2.9	2.2							
Vanadium		1000	-0.8	1011.7	**101.2**						
Zinc		1000	2.8	963.5	**96.4**						

ICP Interference Check Sample

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

ICS SOURCE: I.V.

PROJECT: NPDES Sampling Suppo

RUNID: MS070111

SDG: WU70

INSTRUMENT ID: NEXION 300D

UNITS: ug/L

ANALYTE	ICSA TV	ICSAB TV	ICSA1	ICSAB1	%R	ICSA2	ICSAB2	%R	ICSA3	ICSAB3	%R
Antimony			0.1	0.1							
Arsenic		20	0.0	19.9	**99.5**						
Cadmium		20	0.2	19.2	**96.0**						
Chromium		20	0.7	20.2	**101.0**						
Cobalt		20	0.0	19.4	**97.0**						
Copper		20	1.6	20.7	**103.5**						
Manganese		20	0.1	18.9	**94.5**						
Molybdenum	400	400	417.9	410.5	**102.6**						
Nickel		20	0.3	20.3	**101.5**						
Selenium			-0.2	-0.2							
Silver		20	0.0	18.9	**94.5**						
Zinc		20	-0.7	19.1	**95.5**						

Post Digest Spike Sample Recovery

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

ANALYSIS METHOD: ICP

SDG: WU70

UNITS: ug/L

ANALYTE	CLIENT ID	ARI ID	RUNID	SPIKED SAMPLE RESULT	C	SAMPLE RESULT	C	SPIKE ADDED	MATRIX	%R
Zinc	LF-TP-001-20130619	WU70BPOST	IP062871	3565.45		2704.90		1000	Sediment	**86.1**
Antimony	LF-TP-001-20130619	WU70BPOST	MS070111	484.84	**B**	1000.00	**U**	500	Sediment	**97.0**

IDLs and ICP Linear Ranges

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WU70 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
Antimony	SB	PMS	NEXION 300D MS	0.00		60	0.2	4/1/2012		
Arsenic	AS	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Beryllium	BE	ICP	OPTIMA ICP 2	313.04		5	1.0	4/1/2012	5000.0	6/10/2013
Cadmium	CD	PMS	NEXION 300D MS	0.00		5	0.1	4/1/2012		
Chromium	CR	PMS	NEXION 300D MS	0.00		10	0.5	4/1/2012		
Copper	CU	ICP	OPTIMA ICP 2	324.75		25	2.0	4/1/2012	40000.0	6/10/2013
Lead	PB	PMS	NEXION 300D MS	0.00		3	0.1	4/1/2012		
Mercury	HG	CVA	CETAC MERCURY	253.70		0.2	0.1	4/1/2012		
Nickel	NI	PMS	NEXION 300D MS	0.00		40	0.5	4/1/2012		
Selenium	SE	PMS	NEXION 300D MS	0.00		5	0.5	4/1/2012		
Silver	AG	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Thallium	TL	PMS	NEXION 300D MS	0.00		10	0.2	4/1/2012		
Zinc	ZN	ICP	OPTIMA ICP 2	213.86		20	10.0	4/1/2012	100000.0	6/10/2013

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

IEC DATE: 6/10/2013

SDG: WU70

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	13.5116900	0.0000000	0.0000000
Arsenic	188.98	0.0000000	0.0000000	0.0000000	0.0000000	0.0733590	0.0000000	-1.1562270	1.6205640	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1808730	0.0000000	0.0000000	0.1684250
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Boron	249.67	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	2.1037380	0.0000000	0.0000000	0.0000000
Cadmium	228.80	0.0000000	5.4930220	0.0000000	0.0000000	0.0000000	0.0000000	0.1385480	0.0000000	0.0000000	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	0.0000000	0.0000000	0.0000000	0.0000000	0.0970800	0.0000000	0.0000000	0.0000000	0.0000000	-0.0418440
Cobalt	228.62	0.0000000	0.0000000	0.0906750	0.0000000	0.0000000	0.0000000	0.0000000	-0.0404570	0.0000000	0.0120010
Copper	324.75	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1617900	0.0000000	0.0000000	-0.0440960
Iron	273.96	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-1.0775070	0.0000000	0.0000000
Lead	220.35	-0.2330880	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.1375770	-1.7455340	1.4164220	0.0510640
Magnesium	279.08	0.0000000	0.0000000	0.0000000	0.0000000	0.1238020	0.0000000	-1.6776030	-1.2063230	0.0000000	0.6021300
Manganese	257.61	0.0056830	0.0000000	0.0000000	0.0000000	0.0040290	0.0000000	0.0000000	0.0000000	0.0000000	-0.0043570
Molybdenum	202.03	0.0000000	0.0000000	0.0000000	0.0000000	0.0127170	0.0000000	0.0000000	0.0494370	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	0.1095620	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.5156780	0.0000000	0.0000000	0.0000000
Silicon	288.16	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-3.7783440	0.0000000	-0.6443870	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	4.3373140	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	5.9719930	0.4226130	0.0000000	-0.1373360
Tin	189.93	0.0000000	0.0000000	0.0000000	0.0000000	-0.1284010	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	0.0000000	0.0000000	0.0622130	0.0000000	0.0000000	0.1906300	0.0000000	0.0000000
Vanadium	292.40	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-3.9208100	0.0000000	0.0530020
Zinc	206.20	0.0000000	0.0000000	0.0000000	0.0000000	0.0123920	0.0000000	0.0000000	-0.0659320	0.0000000	0.0000000

ICP Interelement Correction Factors

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

IEC DATE: 6/10/2013

SDG: WU70

INSTRUMENT ID: OPTIMA ICP 2

ANALYTE	WAVELENGTH	MG	MN	MO	NI	PB	SB	TI	TL	V	ZN
Aluminum	308.22	0.0000000	0.0000000	16.0812590	0.0000000	0.0000000	0.0000000	1.9531650	0.0000000	15.6704600	0.0000000
Antimony	206.84	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	-0.8263670	0.0000000	-3.8485090	0.0000000
Arsenic	188.98	0.0000000	0.0000000	3.4165090	0.0000000	0.0000000	0.0000000	-32.1596340	0.0000000	0.0000000	0.0000000
Barium	233.53	0.0000000	0.0000000	0.0000000	0.1266550	0.0000000	0.0000000	0.0000000	0.0000000	0.2235440	0.0000000
Beryllium	313.04	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0102770	0.0000000	0.2401990	0.0000000
Boron	249.67	0.0000000	0.0000000	-1.0759410	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Cadmium	228.80	0.0000000	0.0000000	0.0000000	-0.9387840	0.0000000	0.0000000	0.0000000	0.0000000	0.0597550	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	0.0860990	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.3212800	0.0000000
Cobalt	228.62	0.0000000	0.0000000	-0.1256200	0.1682020	0.0000000	0.0000000	1.7253070	0.0000000	0.0000000	0.0000000
Copper	324.75	0.0058198	0.0000000	0.3004190	0.0000000	0.0000000	0.0000000	0.1851800	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	7.2530080	0.0000000
Lead	220.35	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Magnesium	279.08	0.0000000	0.0000000	-5.2138260	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	-0.1832430	0.0000000	0.0000000	0.0000000	0.0000000	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	-0.5439300	0.0000000	0.4201630	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	0.5911140	0.0000000
Silicon	288.16	-0.1130470	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	0.0000000	0.0000000	-0.2887870	0.0000000
Sodium	589.59	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	287.1603720	0.0000000	0.0000000	306.9999840
Thallium	190.80	0.0000000	0.0000000	-1.5891790	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	3.6439390	0.0000000
Tin	189.93	0.0000000	0.0000000	0.0000000	0.0000000	-0.0384380	-0.4873020	-0.2074990	0.0000000	0.0000000	0.0000000
Titanium	334.90	0.0000000	0.0000000	0.9474070	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000
Vanadium	292.40	0.0000000	-0.1525200	-0.5409400	0.0000000	0.0000000	0.0000000	0.5527510	0.0000000	0.0000000	0.0000000
Zinc	206.20	0.0000000	0.0000000	0.2376970	0.0000000	-0.0608720	0.0000000	0.0000000	0.0000000	0.0000000	0.0000000

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

ANALYSIS METHOD: ICP

PROJECT: NPDES Sampling Suppo

ARI PREP CODE: SWC

SDG: WU70

PREPDATE: 6/26/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
LF-TP-001-20130619	WU70B	1.007	0.0	50.0
LF-TP-001-20130619D	WU70BDUP	1.012	0.0	50.0
LF-TP-001-20130619S	WU70BSPK	1.005	0.0	50.0
LF-LS-004-20130619	WU70C	1.034	0.0	50.0
PBS	WU70MB1	1.000	0.0	50.0
LCSS	WU70MB1SPK	1.000	0.0	50.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WU70

ANALYSIS METHOD: PMS

ARI PREP CODE: SWN

PREPDATE: 6/26/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
LF-TP-001-20130619	WU70B	1.075	0.0	50.0
LF-TP-001-20130619D	WU70BDUP	1.073	0.0	50.0
LF-TP-001-20130619S	WU70BSPK	1.070	0.0	50.0
LF-LS-004-20130619	WU70C	1.089	0.0	50.0
PBS	WU70MB1	1.000	0.0	50.0
LCSS	WU70MB1SPK	1.000	0.0	50.0

Preparation Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo

SDG: WU70

ANALYSIS METHOD: CVA

ARI PREP CODE: SMM

PREPDATE: 6/26/2013

CLIENT ID	ARI ID	MASS (g)	INITIAL VOLUME (mL)	FINAL VOLUME (mL)
LF-TP-001-20130619	WU70B	0.212	0.0	50.0
LF-TP-001-20130619D	WU70BDUP	0.209	0.0	50.0
LF-TP-001-20130619S	WU70BSPK	0.210	0.0	50.0
LF-LS-004-20130619	WU70C	0.223	0.0	50.0
PBS	WU70MB1	0.200	0.0	50.0
LCSW	WU70MB1SPK	0.200	0.0	50.0

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 6/28/2013

SDG: WU70 | RUNID: IP062871 | METHOD: ICP | END DATE: 6/28/2013

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	08302							X					X																		X
S2	S2	1.00	08344												X																		
S3	S3	1.00	08362							X																							X
S4	S4	1.00	08390																														
S5	S5	1.00	08411																														
ICV	ICV	1.00	08500							X					X																		X
ICB	ICB	1.00	08541							X					X																		X
CRI	CRII	1.00	08582							X					X																		X
ICSA	ICSAI	1.00	09024							X					X																		X
ICSAB	ICSABI	1.00	09064							X					X																		X
CCV	CCV1	1.00	09114							X					X																		X
CCB	CCB1	1.00	09155							X					X																		X
PBS	WU70MB1	2.00	09200							X					X																		X
ZZZZZZ	WV53A	2.00	09242																														
ZZZZZZ	WV53B	2.00	09282																														
ZZZZZZ	WV53C	2.00	09322																														
LF-LS-004-20130619	WU70C	2.00	09364																														
LF-TP-001-20130619D	WU70BDUP	2.00	09410							X					X																		X
LF-TP-001-20130619	WU70B	2.00	09452							X					X																		X
LF-TP-001-20130619S	WU70BSPK	2.00	09494							X					X																		X
LF-TP-001-20130619A	WU70BPOST	2.00	09532																														X
LCSS	WU70MB1SPK	2.00	09565							X					X																		X
CCV	CCV2	1.00	10005							X					X																		X
CCB	CCB2	1.00	10050							X					X																		X
ZZZZZZ	WV53MB	2.00	10153																														
ZZZZZZ	WV68MB1	1.00	10194																														
ZZZZZZ	WV68A	1.00	10240																														
ZZZZZZ	WV68B	1.00	10281																														
ZZZZZZ	WV68H	1.00	10323																														
ZZZZZZ	WV68I	1.00	10370																														
LF-LS-004-20130619	WU70C	5.00	10413							X					X																		X
ZZZZZZ	WV53D	2.00	10455																														
ZZZZZZ	WV68MB1SPK	1.00	10495																														
ZZZZZZ	WV53MBSPK	2.00	10535																														
CCV	CCV3	1.00	10575							X					X																		X

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: OPTIMA ICP 2 | START DATE: 6/28/2013

SDG: WU70 | RUNID: IP062871 | METHOD: ICP | END DATE: 6/28/2013

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
CCB	CCB3	1.00	11020							X					X																		X

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: NEXION 300D MS | START DATE: 7/1/2013

SDG: WU70 | RUNID: MS070111 | METHOD: PMS | END DATE: 7/1/2013

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	09220		X		X					X		X									X	X	X	X				X			
S1	S1	1.00	09260		X		X					X		X									X	X	X	X				X			
S2	S2	1.00	09310		X		X					X		X									X	X	X	X				X			
S3	S3	1.00	09350		X		X					X		X									X	X	X	X				X			
S4	S4	1.00	09390		X		X					X		X									X	X	X	X				X			
S5	S5	1.00	09450																														
ZZZZZZ	Rinse sampl	1.00	09510																														
ICV	MICV	1.00	09580		X		X					X		X									X	X	X	X				X			
ICB	ICB	1.00	10050		X		X					X		X									X	X	X	X				X			
CCV	MCCV1	1.00	10090		X		X					X		X									X	X	X	X				X			
CCB	CCB1	1.00	10160		X		X					X		X									X	X	X	X				X			
CRI	MCRI	1.00	10200		X		X					X		X									X	X	X	X				X			
ICSA	ICSAI	1.00	10240		X		X					X		X									X	X	X	X				X			
ICSAB	ICSABI	1.00	10300		X		X					X		X									X	X	X	X				X			
ZZZZZZ	LR200	1.00	10370																														
ZZZZZZ	LR300	1.00	10440																														
ZZZZZZ	B1	1.00	10510																														
CCV	MCCV2	1.00	10570		X		X					X		X									X	X	X	X				X			
CCB	CCB2	1.00	11040		X		X					X		X									X	X	X	X				X			
ZZZZZZ	DI Check	1.00	11110																														
ZZZZZZ	ERA P197	10.00	11150																														
ZZZZZZ	WU63I	10.00	11190																														
ZZZZZZ	WU63R	5.00	11230																														
ZZZZZZ	WU63T	5.00	11270																														
ZZZZZZ	WU63U	10.00	11310																														
ZZZZZZ	B1	1.00	11360																														
CCV	MCCV3	1.00	11400		X		X					X		X									X	X	X	X				X			
CCB	CCB3	1.00	11470		X		X					X		X									X	X	X	X				X			
ZZZZZZ	WV19MB1	20.00	11520																														
ZZZZZZ	WV19ADUP	20.00	11560																														
ZZZZZZ	WV19A	20.00	12000																														
ZZZZZZ	WV19ASPK	20.00	12040																														
ZZZZZZ	WV19B	20.00	12080																														
ZZZZZZ	WV19MB1SPK	20.00	12120																														
ZZZZZZ	WV19MB1SPD	20.00	12160																														

FORM XIV

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: NEXION 300D MS | START DATE: 7/1/2013

SDG: WU70 | RUNID: MS070111 | METHOD: PMS | END DATE: 7/1/2013

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
CCV	MCCV4	1.00	12220		X		X					X		X									X	X	X	X				X			
CCB	CCB4	1.00	12290		X		X					X		X									X	X	X	X				X			
ZZZZZZ	WV09MB1	20.00	12330																														
ZZZZZZ	WV09B	20.00	12370																														
ZZZZZZ	WV09C	20.00	12410																														
ZZZZZZ	WV09A-L	100.00	12450																														
ZZZZZZ	WV09A	20.00	12490																														
ZZZZZZ	WV09ADUP	20.00	12540																														
ZZZZZZ	WV09ASPK	20.00	12580																														
ZZZZZZ	ZZZZZZ	20.00	13020																														
ZZZZZZ	WV09REF1	50.00	13060																														
ZZZZZZ	WV09MB1SPK	20.00	13100																														
CCV	MCCV5	1.00	13150		X		X					X		X									X	X	X	X				X			
CCB	CCB5	1.00	13220		X		X					X		X									X	X	X	X				X			
PBS	WU70MB1	20.00	13270		X		X					X		X									X	X	X	X				X			
LF-LS-004-20130619	WU70C	20.00	13310		X		X					X		X									X	X	X	X				X			
LF-TP-001-20130619D	WU70BDUP	20.00	13350		X		X					X		X									X	X	X	X				X			
LF-TP-001-20130619	WU70B	20.00	13390		X		X					X		X									X	X	X	X				X			
LF-TP-001-20130619S	WU70BSPK	20.00	13430		X		X					X		X									X	X	X	X				X			
LF-TP-001-20130619A	WU70BPOST	20.00	13470																						X								
LCSS	WU70MB1SPK	20.00	13510		X		X					X		X									X	X	X	X				X			
CCV	MCCV6	1.00	13570		X		X					X		X									X	X	X	X				X			
CCB	CCB6	1.00	14040		X		X					X		X									X	X	X	X				X			

Analysis Run Log

ANALYTICAL RESOURCES INCORPORATED

CLIENT: SAIC

PROJECT: NPDES Sampling Suppo | INSTRUMENT ID: CETAC MERCURY | START DATE: 7/3/2013

SDG: WU70 | RUNID: HG070301 | METHOD: CVA | END DATE: 7/3/2013

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	10260														X																
S0.1	S0.1	1.00	10274														X																
S0.5	S0.5	1.00	10292														X																
S1	S1	1.00	10305														X																
S2	S2	1.00	10323														X																
S5	S5	1.00	10341														X																
S10	S10	1.00	10355														X																
ICV	AICV	1.00	10460														X																
ICB	ICB	1.00	10473														X																
CCV	ACCV1	1.00	10491														X																
CCB	CCB1	1.00	10505														X																
CRA	CRA	1.00	10523														X																
ZZZZZZ	WV85MB1	1.00	10540																														
ZZZZZZ	WV85MB1SPK	1.00	10554																														
ZZZZZZ	WV85REF1	5.00	10571																														
ZZZZZZ	WV85B	1.00	10585																														
ZZZZZZ	WV85BDUP	1.00	11003																														
ZZZZZZ	WV85BSPK	1.00	11020																														
ZZZZZZ	WV19MB1	1.00	11034																														
ZZZZZZ	WV19MB1SPK	1.00	11052																														
ZZZZZZ	WV19MB1SPD	1.00	11070																														
CCV	ACCV2	1.00	11084														X																
CCB	CCB2	1.00	11102														X																
ZZZZZZ	WV19A	1.00	11115																														
ZZZZZZ	WV19ADUP	1.00	11133																														
ZZZZZZ	WV19ASPK	1.00	11150																														
ZZZZZZ	WV19B	1.00	11164																														
PBW	WU70MB1	1.00	11182														X																
LCSW	WU70MB1SPK	1.00	11195														X																
LF-TP-001-20130619	WU70B	1.00	11213														X																
LF-TP-001-20130619D	WU70BDUP	1.00	11231														X																
LF-TP-001-20130619S	WU70BSPK	1.00	11244														X																
LF-LS-004-20130619	WU70C	1.00	11262														X																
CCV	ACCV3	1.00	11280														X																
CCB	CCB3	1.00	11294														X																

FORM XIV

General Chemistry Analysis
Report and Summary QC Forms

ARI Job ID: WU70

SAMPLE RESULTS-CONVENTIONALS
WU70-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/10/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Client ID: LF-TP-001-20130619-S
ARI ID: 13-13122 WU70B

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/25/13 062513#1	SM2540B	Percent	0.01	55.60
Total Organic Carbon	07/09/13 070913#1	Plumb,1981	Percent	0.020	1.22

RL Analytical reporting limit
U Undetected at reported detection limit

SAMPLE RESULTS-CONVENTIONALS
WU70-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/10/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Client ID: LF-LS-004-20130619-S
ARI ID: 13-13123 WU70C

Analyte	Date	Method	Units	RL	Sample
Total Solids	06/25/13 062513#1	SM2540B	Percent	0.01	70.53
Total Organic Carbon	07/09/13 070913#1	Plumb,1981	Percent	0.020	2.04

RL Analytical reporting limit
U Undetected at reported detection limit

MS/MSD RESULTS-CONVENTIONALS
WU70-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/10/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Analyte	Date	Units	Sample	Spike	Spike Added	Recovery
ARI ID: WU70B Client ID: LF-TP-001-20130619-S						
Total Organic Carbon	07/09/13	Percent	1.22	3.12	2.03	93.5%

REPLICATE RESULTS-CONVENTIONALS
WU70-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/10/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: 06/19/13
Date Received: 06/19/13

Analyte	Date	Units	Sample	Replicate(s)	RPD/RSD
ARI ID: WU70B Client ID: LF-TP-001-20130619-S					
Total Solids	06/25/13	Percent	55.60	55.56 55.24	0.4%
Total Organic Carbon	07/09/13	Percent	1.22	1.11 1.03	8.5%

LAB CONTROL RESULTS-CONVENTIONALS
WU70-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/10/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Analyte/Method	QC ID	Date	Units	LCS	Spike Added	Recovery
Total Organic Carbon Plumb,1981	ICVL	07/09/13	Percent	0.101	0.100	101.0%

METHOD BLANK RESULTS-CONVENTIONALS
WU70-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/10/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Analyte	Date	Units	Blank	QC ID
Total Solids	06/25/13	Percent	< 0.01 U	ICB
Total Organic Carbon	07/09/13	Percent	< 0.020 U	ICB

STANDARD REFERENCE RESULTS-CONVENTIONALS
WU70-SAIC

ANALYTICAL RESOURCES INCORPORATED

Matrix: Sediment
Data Release Authorized:
Reported: 07/10/13

Project: NPDES Sampling Support
Event: 209977
Date Sampled: NA
Date Received: NA

Analyte/SRM ID	Date	Units	SRM	True Value	Recovery
Total Organic Carbon NIST 1941B	07/09/13	Percent	2.73	2.99	91.3%

Geotechnical Analysis
Report and Summary QC Forms

ARI Job ID: WU70

SAIC
NPDES Sampling Support
209977

Modified PSEP - Sieve/Sedigraph Method
Apparent Grain Size Distribution Summary
Percent Finer Than Indicated Size

Sample No.	Gravel			Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Silt				Clay	
Phi Size	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
Sieve Size (microns)	3/8"	#4 (4750)	#10 (2000)	#18 (1000)	#35 (500)	#60 (250)	#120 (125)	#230 (63)	31.00	15.60	7.80	3.90	2.00	1.00
AM-VT-INF-20130612-S	100.0	100.0	99.4	98.8	98.3	97.2	95.7	94.2	93.4	88.0	55.1	34.5	26.6	23.8
	100.0	100.0	99.9	99.6	99.1	98.0	96.4	94.9	94.8	88.8	52.9	35.6	27.9	23.4
	100.0	100.0	99.8	99.2	98.5	97.2	95.7	94.2	93.2	86.5	52.6	34.3	26.9	25.4
LF-TP-001-20130619-S	100.0	100.0	99.5	98.3	93.4	85.7	76.8	63.3	57.9	38.7	8.7	6.1	4.4	3.6

Notes to the Testing:

1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

WU70

SAIC
NPDES Sampling Support
209977

Modified PSEP - Sieve/Sedigraph Method
Apparent Grain Size Distribution Summary
Percent Retained in Each Size Fraction

Sample No.	Gravel	Very Coarse Sand	Coarse Sand	Medium Sand	Fine Sand	Very Fine Sand	Coarse Silt	Medium Silt	Fine Silt	Very Fine Silt	Clay			Total Fines
Phi Size	< -1	-1 to 0	0 to 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 6	6 to 7	7 to 8	8 to 9	9 to 10	> 10	> 4
Sieve Size (microns)	> #10 (2000)	10 to 18 (2000-1000)	18-35 (1000-500)	35-60 (500-250)	60-120 (250-125)	120-230 (125-62)	62.5-31 0	31.0-15 6	15.6-7 8	7.8-3 9	3 9-2.0	2 0-1 0	<1 0	<230 (<62)
AM-VT-INF-20130612-S	0.6	0.6	0.6	1.1	1.5	1.4	0.8	5.4	32.9	20.6	7.9	2.8	23.8	94.2
	0.1	0.3	0.5	1.1	1.6	1.5	0.1	6.0	35.9	17.3	7.7	4.5	23.4	94.9
	0.2	0.6	0.7	1.3	1.6	1.5	1.0	6.7	33.9	18.3	7.4	1.5	25.4	94.2
LF-TP-001-20130619-S	0.5	1.2	4.9	7.7	8.8	13.6	5.4	19.2	30.0	2.6	1.7	0.8	3.6	63.3

Notes to the Testing:

1. Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution. See narrative for discussion of the testing.

WU70

QA SUMMARY

Client:	SAIC	Client Project	NPDES Sampling Support
ARI Trip Sample ID:	WT81A	Client Project No..	209977
Client Trip. Sample ID	AM-VT-INF-20130612-S	Batch No	WU70-1

Relative Standard Deviation, By Phi Size

Sample ID	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10
AM-VT-INF-20130612-S	100.0	100.0	99.4	98.8	98 3	97.2	95.7	94.2	93.4	88.0	55.1	34 5	26 6	23.8
	100.0	100 0	99 9	99 6	99.1	98.0	96 4	94 9	94.8	88.8	52.9	35.6	27 9	23 4
	100.0	100 0	99 8	99.2	98.5	97 2	95 7	94 2	93.2	86.5	52.6	34 3	26.9	25.4
AVE	100.0	100.0	99 7	99 2	98 6	97 5	95.9	94.4	93.8	87.8	53.5	34 8	27.1	24 2
STDEV	0.0	0 0	0.3	0.4	0.4	0.4	0.4	0.4	0 9	1.2	1 4	0 7	0.7	1.1
%RSD	0.0	0.0	0.3	0 4	0.4	0 5	0 4	0.5	0.9	1 3	2 5	2 0	2.5	4.4

The Triplicate Applies To The Following Samples

Client ID	Date Sampled	Date Extracted	Date Complete	Data Qualifier	Sedigraph Fine Portion Dry Mass (g)
AM-VT-INF-20130612-S	6/12/2013	6/27/2013	7/1/2013		6.8
	6/12/2013	6/27/2013	7/1/2013		7.2
	6/12/2013	6/27/2013	7/1/2013		7.8
LF-TP-001-20130619-S	6/19/2013	6/26/2013	7/2/2013		14.3

* ARI Internal QA limits = 95-105%

Notes to the Testing:

1 Organic matter was not removed prior to testing, thus the reported values are the "apparent" grain size distribution See narrative for discussion of the testing.

Total Solids

ARI Job ID: WU70

Volatiles Total Solids-voats
Data By: Pat Basilio
Created: 7/ 1/13

Worklist: 6649
Analyst: PAB
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. WU70B 13-13122	_____	_____	*	59.28

Worklist ID: 6649 Page: 1
* - VOA TS Copied From BETX TS
% - VOA TS Copied From Metals TS
$ - VOA TS Copied From Extraction TS

WU70:6649

Total Solids Targets-Extractions
Data By: Jim Hawk
Created: 6/24/13

Worklist: 4301
Analyst: JBH
Comments:

	ARI ID	Target Dry Wt (g)	Total Solids	Min Wet Wt (g)
1.	WU70B	10.00	55.7	17.95
2.	WU70C	10.00	78.9	12.67

BETX/TPHG Total Solids-betxts
Data By: Paul K. Campbell
Created: 6/28/13

Worklist: 6213
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. WU70B 13-13122	1.13	12.45	7.84	59.28

Worklist ID: 6213 Page: 1
* - BETX TS Copied From VOA TS
% - BETX TS Copied From Metals TS
$ - BETX TS Copied From Extraction TS

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Total Solids Bench Sheet

Laboratory Section: VOA

Oven Identification: ~~1~~ PC 6/27/13 1-6

Balance ID: 4005006 PT120

Samples in Oven: Date: 6/27/13 Time: 1250 Temp: 101 Analyst: PC

Removed from Oven: Date: 6/28/13 Time: 0815 Temp: 102 Analyst: PC

Source of Total Solids Data If From A Different Lab: _____

ARI Sample ID	Tare Weight (g)	Tare + Sample Wet (g)	Tare + Sample Dry (g)	Date & Time Last Weight	Final Weighting >12 hrs[1]
WU70B	1,13	12,45	7,84	6/28/13 0820	X
WU87A	1,14	14,00	9,64		
B	1,13	11,60	8,13		
C	1,12	11,88	8,29		

1) Place a check mark in this column if samples have dried > 12 but < 24 hours. When samples have been at 104°C < 12 hours, constant weight must be verified as described in SOP 10023S. Use a 2nd bench sheet for additional weightings.

WU70:B827

Solids Data Entry Report Checked by: DM Date: 6/28/13
Date: 06/27/13 Data Analyst: CB

Solids Determination performed on 06/26/13 by CB

JOB	SAMPLE	CLIENTID	TAREWEIGHT	SAMPDISH	DRYWEIGHT	SOLIDS
WU70	B	LF-TP-001-20130619-	1.018	10.060	6.048	55.63
WU70	C	LF-LS-004-20130619-	1.004	10.339	8.018	75.14

WU70 : 99266

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Total Solids Bench Sheet

Laboratory Section Metals

Oven Identification: 07 **Balance ID:** 068755

Samples in Oven: Date: 6-26-13 Time: 1025 Temp: 103°C Analyst: CB

Removed from Oven: Date: 6-27-13 Time: 0740 Temp: 102°C Analyst: CB

ARI Sample ID		Tare Weight (g)	Tare + Sample Wet (g)	Tare + Sample Dry (g)	Date & Time Last Weight	Final Weighting >12 hrs[1]
WU70	B	1.018	10.060	6.048	—	√
"	C	1.009	10.339	8.018	—	√
WU84	A	1.000	10.295	9.366	—	√
"	B	1.014	10.119	9.236	—	√
"	C	0.990	10.293	9.618	—	√
"	D	0.970	10.417	9.539	—	√
"	E	0.992	10.664	9.924	—	√
"	F	0.995	10.338	9.940	—	√
WU34	A *MB	0.959	10 818	10.472	—	√
"	B *~~MBDUP~~	1.012	10.067	7.751	—	√
"	C	0.987	10.263	8.687	—	√
"	D	0.991	10.091	8.444	—	√
"	E	1.005	10 760	8.342	—	√
"	F	0.966	10.394	8.698	—	√
"	G	0.987	10.269	8.483	—	√
"	H	0.979	10.186	8.130	—	√
"	I	0.997	10 996	8.707	—	√

* CB 6/26/13

CB 6-26-13

1) Place a check mark in this column if samples have dried > 12 but < 24 hours. When samples have been at 104°C < 12 hours, constant weight must be verified as described in SOP 10023S. Use a 2nd bench sheet for additional weightings.

WU70 : 06269

Extractions Total Solids-extts
Data By: Alex Choeng
Created: 6/21/13

Worklist: 3770
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
1.	WU70B 13-13122 LF-TP-001-20130619-S	1.20	12.68	7.60	55.7	NR
2.	WU70C 13-13123 LF-LS-004-20130619-S	1.20	13.66	11.03	78.9	NR

WU70:09279

Extractions Total Solids-extts
Data By: Alex Choeng
Created: 6/21/13

Worklist: 3770
Analyst: AC
Comments:

Oven ID: ϕ15

Balance ID: B139298ϕϕ2

Samples In: Date: 6-21-13 Time: 14:00 Temp: 102°C Analyst: AC

Samples Out: Date: 06/24/13 Time: 07:00 Temp: 103° Analyst: JR

	ARI ID CLIENT ID	Tare Wt (g)	Wet Wt (g)	Dry Wt (g)	% Solids	pH
1.	WU70B 13-13122 LF-TP-001-20130619-S	1.2ϕ	12.68	7.60		NR
2.	WU70C 13-13123 LF-LS-004-20130619-S	1.2ϕ	13.66	11.83		NR

Volatile Raw Data
Initial Calibration Notes and Raw Data

ARI Job ID: WU70

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): 6/27/17 Internal Standard ID Bromo3/Toulene Expiration 12/11/17

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)	5

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
ultra	Bromo3	12/11/17	custom	IntStd	12/11/17
restek/ultra	Bromo3	12/27/17	SIGMA	IntStd	6/28/17
ultra	Bromo3	7/31/17	ultra	IntStd	7/31/17
ultra	Bromo3	1/5/17			

Detail problems, corrective actions and/or other pertinent information below:

isobutanol - 27.8% RSD - doesn't meet linear/quadratic fit ≥ r^2 0.990
- Q flag in all runs

DGM - 34% RSD - meets linear fit

Analyst: _____ **Date:** 6/28/17

Reviewer: _____ **Date:** _____

Analytical Resources Inc.: Volatile Organics Instrument Log

NT-5 Serial No.:GC=US10228086, MS=US10462818

Date: 6/27/13 Analysis: 8260C Analyst: ID

GC Program: VOA4 Column No: 938151 Column Type: 624(UI)

Instrument Tune (.U or .CT.): PAT(100) EM Voltage: 1494

Inj. Vol: 5 Calibration File: b130627 Curve Date: 6/27/13

IS/SS	Ical/Ccal	LCS/ICV
b000643	b000807	iw794-4
b000644	b000804	iw797-3
		IRW1

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt5.i/27JUN13.b

	Time	Filename	LabID	ClientID	Vial#	pH	DF							
1	0940	bfb0627.d	BFB0627	BFB0627			1							
2	1043	0010627.d	IC0627	VSTD1			1 | 4.66	1806972 | | 5.11	2944860 | | 7.59	2931914 | | 9.67	1662438 |	
3	1107	2000627.d	IC0627	VSTD200			1 | 4.65	1657456 | | 5.11	2736925 | | 7.60	2540726 | | 9.68	1324580 |	
4	1131	1500627.d	IC0627	VSTD150			1 | 4.66	1735360 | | 5.11	2861897 | | 7.60	2697287 | | 9.68	1385568 |	
5	1155	1000627.d	IC0627	VSTD100			1 | 4.67	1756133 | | 5.12	2890240 | | 7.60	2761179 | | 9.67	1447038 |	
6	1243	0100627.d	IC0627	VSTD10			1 | 4.65	1723537 | | 5.11	2831384 | | 7.59	2756425 | | 9.67	1422668 |	
7	1307	0050627.d	IC0627	VSTD5			1 | 4.66	1694501 | | 5.11	2786053 | | 7.59	2729297 | | 9.67	1446481 |	
8	1330	0020627.d	IC0627	VSTD2			1 | 4.66	1629659 | | 5.11	2671641 | | 7.59	2648389 | | 9.67	1408047 |	
9	1548	0500627a.d	IC0627	VSTD50			1 | 4.65	1623586 | | 5.11	2656709 | | 7.60	2557235 | | 9.67	1374359 |	
10	1722	icv0627.d	ICV0627	ICV0627			1 | 4.67	1611945 | | 5.12	2662626 | | 7.60	2557796 | | 9.67	1386219 |	

6/27/13

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.

WLTB : 0627W

Data File: /chem1/nt5.i/27JUN13.b/bfb0627.d

Date : 27-JUN-2013 09:40

Client ID: BFB0627

Instrument: nt5.i

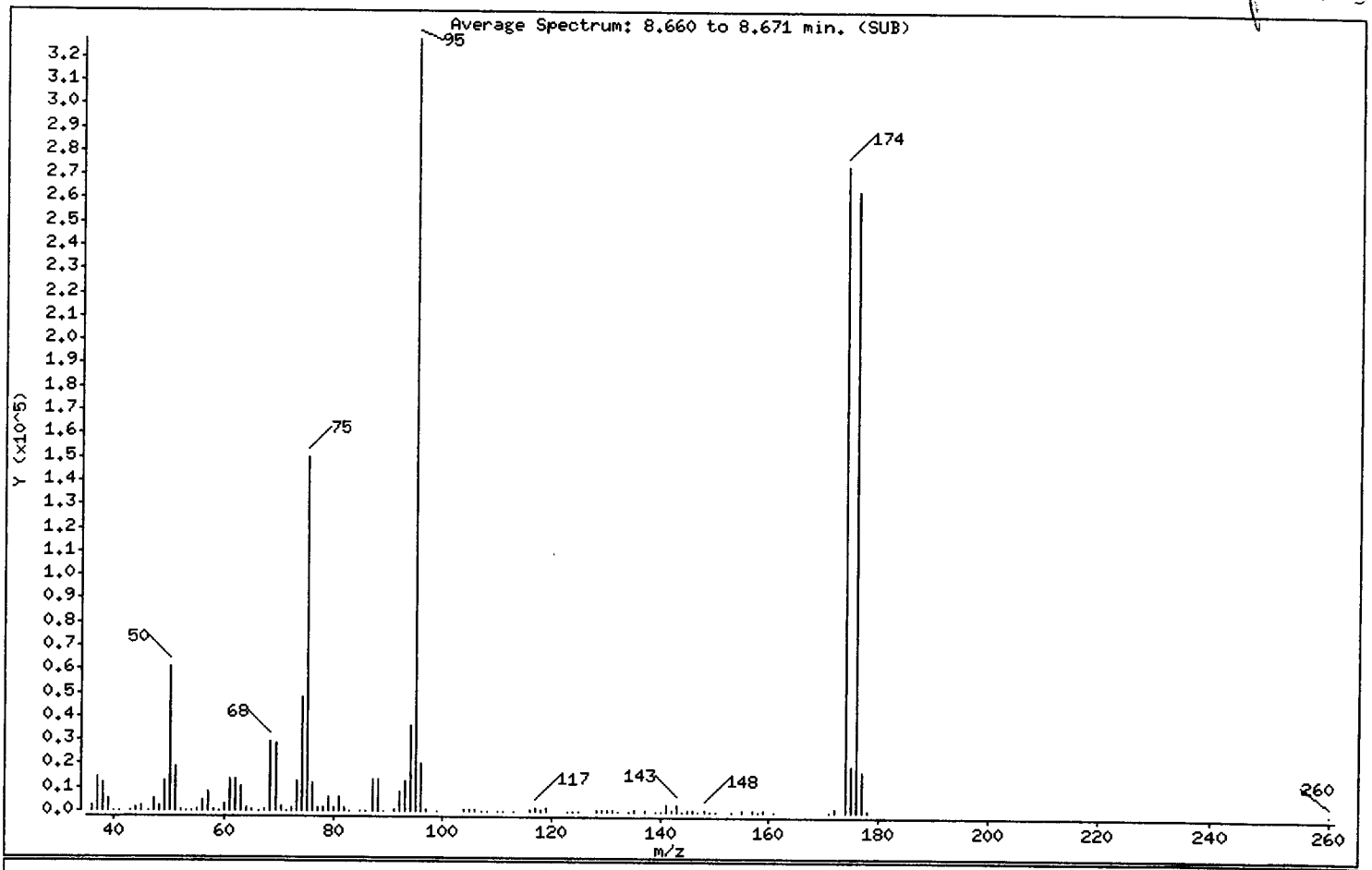
Sample Info: BFB0627,BFB0627,,1,27JUN13,,

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	8.00 - 40.00% of mass 95	18.57
75	30.00 - 66.00% of mass 95	45.69
96	5.00 - 9.00% of mass 95	6.19
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 101.00% of mass 95	83.67
175	4.00 - 9.00% of mass 174	5.93 (7.08)
176	95.00 - 101.00% of mass 174	80.56 (96.29)
177	5.00 - 9.00% of mass 176	5.19 (6.44)

Data File: /chem1/nt5.i/27JUN13.b/bfb0627.d

Date : 27-JUN-2013 09:40

Client ID: BFB0627 Instrument: nt5.i

Sample Info: BFB0627,BFB0627,,1,27JUN13,,

Operator: PB

Column phase: RTXVMS Column diameter: 0.18

Data File: bfb0627.d

Spectrum: Average Spectrum: 8.660 to 8.671 min. (SUB)

Location of Maximum: 95.00

Number of points: 116

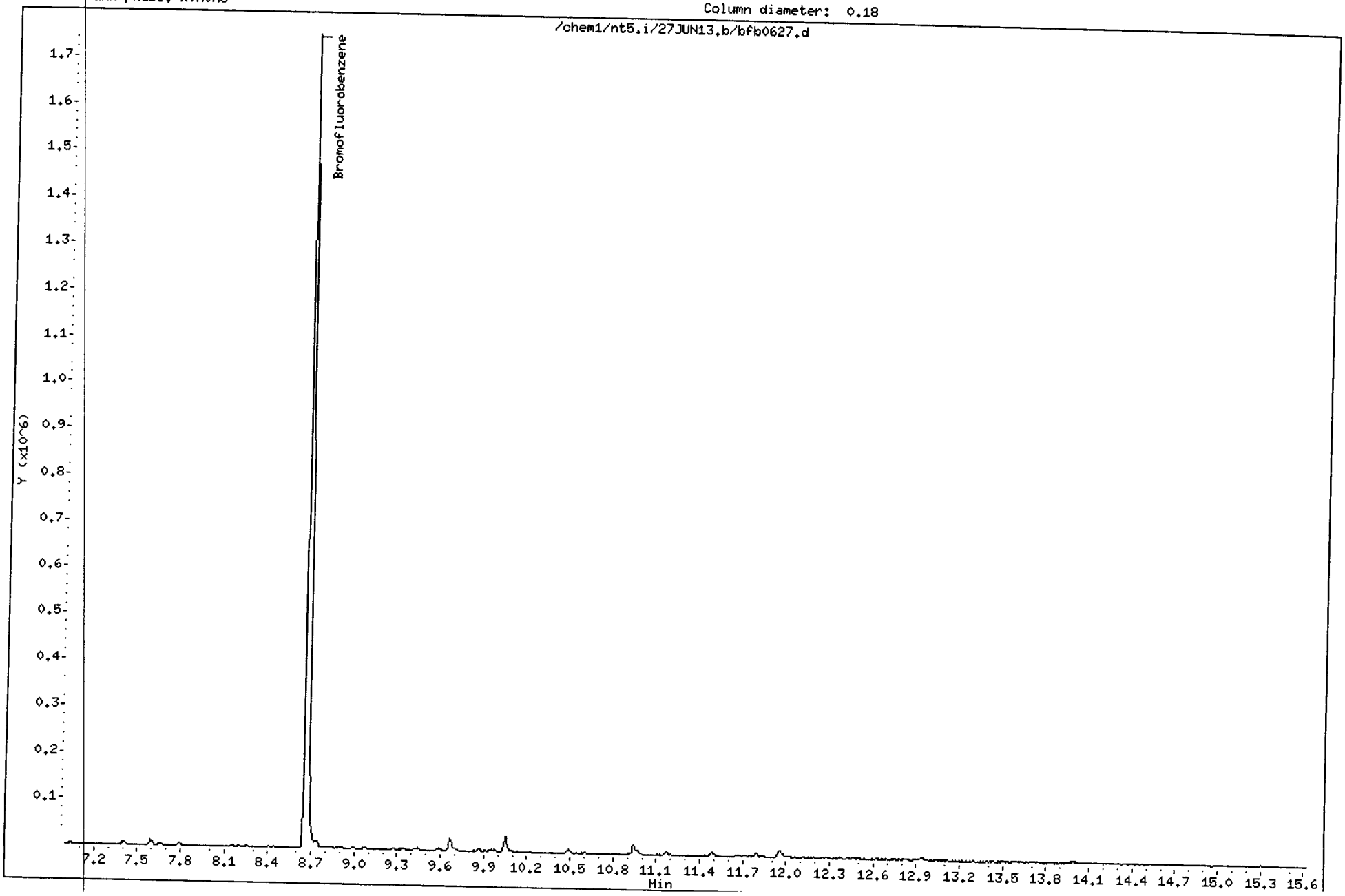
m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	2413	67.00	593	104.00	1058	142.00	430
37.00	14073	68.00	29584	105.00	432	143.00	3080
38.00	12168	69.00	28904	106.00	1077	144.00	258
39.00	5333	70.00	2138	107.00	211	145.00	645
40.00	61	71.00	99	108.00	91	146.00	456
41.00	36	72.00	1441	110.00	223	147.00	275
43.00	103	73.00	12577	111.00	244	148.00	816
44.00	1357	74.00	47784	112.00	227	149.00	190
45.00	2483	75.00	149568	113.00	189	150.00	369
46.00	238	76.00	12339	115.00	295	152.00	188
47.00	5379	77.00	1841	116.00	902	153.00	257
48.00	1882	78.00	1197	117.00	1866	154.00	240
49.00	12737	79.00	5874	118.00	879	155.00	812
50.00	60792	80.00	1804	119.00	1407	156.00	102
51.00	19056	81.00	6243	123.00	41	157.00	613
52.00	1001	82.00	1196	124.00	160	158.00	137
53.00	185	83.00	232	125.00	43	159.00	408
54.00	178	85.00	51	126.00	106	161.00	376
55.00	712	86.00	330	127.00	82	171.00	342
56.00	4299	87.00	13622	128.00	830	172.00	1482
57.00	8035	88.00	13621	129.00	447	174.00	273856
58.00	400	89.00	50	130.00	988	175.00	19392
59.00	38	91.00	817	131.00	468	176.00	263680
60.00	2754	92.00	8203	132.00	40	177.00	16976
61.00	13557	93.00	12592	134.00	81	178.00	533
62.00	13729	94.00	35816	135.00	508	260.00	50
63.00	10480	95.00	327296	137.00	734		
64.00	1218	96.00	20272	139.00	65		
65.00	930	97.00	763	140.00	295		
66.00	148	99.00	54	141.00	2804		

Data File: /chem1/nt5.i/27JUN13.b/bfb0627.d
Date : 27-JUN-2013 09:40
Client ID: BFB0627
Sample Info: BFB0627,BFB0627,,1,27JUN13,,

Column phase: RTXVMS

Instrument: nt5.i

Operator: PB
Column diameter: 0.18



Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/VO121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb

Calibration File Names:
Level 1: /chem1/nt5.i/27JUN13.b/0010627.d
Level 2: /chem1/nt5.i/27JUN13.b/0020627.d
Level 3: /chem1/nt5.i/27JUN13.b/0050627.d
Level 4: /chem1/nt5.i/27JUN13.b/0100627.d
Level 5: /chem1/nt5.i/27JUN13.b/0500627a.d
Level 6: /chem1/nt5.i/27JUN13.b/1000627.d
Level 7: /chem1/nt5.i/27JUN13.b/1500627.d
Level 8: /chem1/nt5.i/27JUN13.b/2000627.d

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
1 Dichlorodifluoromethane	0.29309	0.28584	0.26797	0.25924	0.33463	0.28372					
	0.28554	0.31573					AVRG		0.29072		8.39284
2 Chloromethane	0.55017	0.61493	0.58189	0.63104	0.64077	0.59042					
	0.58944	0.57243					AVRG		0.59639		5.11665
3 Vinyl Chloride	0.47176	0.53011	0.53772	0.51473	0.62244	0.57436					
	0.52040	0.52535					AVRG		0.53711		8.29899

6/28/13

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
4 Bromomethane	0.32776	0.35834	0.32930	0.31488	0.30763	0.28758					
	0.27571	0.26154					AVRG		0.30784		10.30446
5 Chloroethane	0.34284	0.34133	0.33155	0.33145	0.36515	0.32596					
	0.29951	0.27632					AVRG		0.32676		8.40236
6 Trichlorofluoromethane	0.52992	0.56766	0.57657	0.60795	0.64635	0.60415					
	0.61162	0.61850					AVRG		0.59534		6.03579
7 1,1-Dichloroethene	0.32668	0.32254	0.38804	0.36363	0.42794	0.32175					
	0.34538	0.33111					AVRG		0.35338		10.74379
8 Carbon Disulfide	1.25910	1.16627	1.44320	1.29187	1.53623	1.13643					
	1.18644	1.10426					AVRG		1.26547		12.10862
9 112Trichloro122Trifluoroethan	0.33003	0.30450	0.37374	0.33495	0.43004	0.30701					
	0.33161	0.32699					AVRG		0.34236		12.05063
10 Iodomethane	0.23589	0.19257	0.26331	0.21356	0.44010	0.28139					
	0.30456	0.33544					AVRG		0.28335		27.82180 <-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	 m1	 m2	%RSD or R^2
	150 Level 7	200 Level 8									
11 Bromoethane	0.23664	0.23531	0.28484	0.21834	0.30216	0.20316					
	0.20764	0.20031					AVRG		0.23605		16.19705
12 Acrolein	+++++	+++++	+++++	0.05813	0.04498	0.05444					
	0.05914	0.05648					AVRG		0.05463		10.39878
13 Methylene Chloride	28528	43270	84192	111292	711184	+++++					
	+++++	+++++					LINR	0.000e+00	0.43880		0.99463
14 Acetone	0.08935	0.08026	0.10115	0.07213	0.09297	0.06303					
	+++++	+++++					AVRG		0.08315		16.95430
15 Trans-1,2-Dichloroethene	0.34738	0.42262	0.38453	0.31232	0.45052	0.28941					
	0.30049	0.30360					AVRG		0.35136		17.43083
16 Methyl tert butyl ether	0.94124	1.24166	1.14693	0.87163	1.21409	+++++					
	+++++	+++++					AVRG		1.08311		15.39513
17 1,1-Dichloroethane	0.68131	0.86652	0.70338	0.89460	0.77401	0.90080					
	+++++	+++++					AVRG		0.80343		12.13942

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	150 Level 7	200 Level 8										
18 Acrylonitrile	0.16082	0.21627	0.14411	0.21353	0.13976	0.21536						
	0.17302	+++++					AVRG		0.18041		18.95091	
19 Vinyl Acetate	0.80391	1.16079	1.14781	1.19825	1.09867	1.15218						
	1.10468	1.00948					AVRG		1.08447		11.68005	
20 Cis-1,2-Dichloroethene	0.37416	0.44704	0.46392	0.50519	0.47880	0.47709						
	0.47410	0.45751					AVRG		0.45973		8.40187	
21 Allyl Chloride	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++	+++++					AVRG		0.000e+00		0.000e+00	<-
22 2,2-Dichloropropane	0.56055	0.62663	0.65387	0.69498	0.71806	0.68869						
	0.69233	0.70004					AVRG		0.66689		7.75571	
23 Bromochloromethane	0.16796	0.19831	0.20551	0.21747	0.20330	0.20700						
	0.20541	0.20146					AVRG		0.20080		7.17034	
24 Chloroform	0.62411	0.75006	0.72026	0.76941	0.74394	0.75776						
	0.74582	0.73649					AVRG		0.73098		6.22909	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	 m1	 m2	%RSD or R^2
	150 Level 7	200 Level 8									
25 Carbon Tetrachloride	0.28404	0.32517	0.32078	0.36155	0.35718	0.36121					
	0.36504	0.36650					AVRG		0.34268		8.68659
26 1,1,1-Trichloroethane	0.54602	0.66603	0.65196	0.71868	0.69036	0.69446					
	0.69755	0.69205					AVRG		0.66964		8.04955
28 1,1-Dichloropropene	0.32100	0.36638	0.42468	0.43700	0.41499	0.40165					
	0.40006	0.39061					AVRG		0.39455		9.30135
29 2-Butanone	0.04271	0.05788	0.05898	0.06239	0.05569	0.06173					
	0.06127	0.05951					AVRG		0.05752		11.08413
30 Benzene	0.90402	1.12161	1.17472	1.26220	1.16364	1.10201					
	1.02456	0.94576					AVRG		1.08732		11.15703
33 1,2-Dichloroethane	0.29081	0.37134	0.36649	0.38448	0.35803	0.35733					
	0.35088	0.34288					AVRG		0.35278		7.96506
34 Trichloroethene	0.22899	0.26004	0.27389	0.29246	0.29348	0.28315					
	0.28498	0.28027					AVRG		0.27466		7.76129

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/VO121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
36 Methyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00
37 Dibromomethane	0.12247	0.15346	0.15073	0.16184	0.15243	0.15532					
	0.15349	0.14900					AVRG		0.14984		7.80686
38 1,2-Dichloropropane	0.24480	0.30418	0.31913	0.34384	0.31967	0.32267					
	0.31541	0.29852					AVRG		0.30852		9.41858
39 Bromodichloromethane	0.27860	0.33987	0.35054	0.37021	0.35652	0.35408					
	0.34729	0.33555					AVRG		0.34158		8.06866
40 2-Chloroethyl Vinyl Ether	+++++	0.04331	0.04335	0.04769	0.05691	0.05006					
	0.04879	0.04614					AVRG		0.04803		9.74282
41 Cis 1,3-dichloropropene	0.30100	0.40885	0.43824	0.47721	0.45812	0.45431					
	0.44157	0.41545					AVRG		0.42434		12.86330
43 Toluene	0.60106	0.71053	0.72444	0.77755	0.73091	0.69413					
	0.65376	0.61034					AVRG		0.68784		8.94429

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
44 Tetrachloroethene	0.23478	0.28256	0.28623	0.31252	0.32223	0.30480					
	0.30705	0.30585					AVRG		0.29450		9.31105
45 4-Methyl-2-Pentanone	0.08983	0.13595	0.14231	0.15020	0.13087	0.13635					
	0.13032	0.12539					AVRG		0.13015		13.83944
46 Trans 1,3-Dichloropropene	0.29713	0.38646	0.39938	0.43298	0.40777	0.40882					
	0.39862	0.38065					AVRG		0.38898		10.37319
47 1,1,2-Trichloroethane	0.18600	0.23239	0.23391	0.24675	0.22507	0.23071					
	0.22427	0.21469					AVRG		0.22422		8.01801
48 Chlorodibromomethane	0.20028	0.24902	0.26029	0.27734	0.26746	0.27348					
	0.27121	0.26622					AVRG		0.25816		9.67017
49 1,3-Dichloropropane	0.29626	0.40342	0.43207	0.46764	0.42987	0.43989					
	0.42935	0.41136					AVRG		0.41373		12.37279
50 1,2-Dibromoethane	0.16500	0.22380	0.22654	0.24048	0.22325	0.22849					
	0.22372	0.21489					AVRG		0.21827		10.39017

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
51 2-Hexanone	0.14596	0.22249	0.23866	0.25611	0.21870	0.22678					
	0.23115	0.18576					AVRG		0.21570		15.99877
53 Chlorobenzene	0.61172	0.73953	0.75326	0.80617	0.75775	0.71666					
	0.68679	0.64765					AVRG		0.71494		8.87894
54 Ethyl Benzene	1.01434	1.26017	1.33128	1.43642	1.37422	1.20543					
	1.09353	1.00922					AVRG		1.21558		13.46010
55 1,1,1,2-Tetrachloroethane	0.20881	0.24720	0.26522	0.28171	0.27285	0.26877					
	0.26748	0.26087					AVRG		0.25911		8.72239
56 m,p-xylene	0.35279	0.46533	0.49082	0.53392	0.51519	0.46424					
	0.42803	0.40030					AVRG		0.45633		13.22102
57 o-Xylene	0.30835	0.41001	0.44982	0.50599	0.50168	0.48686					
	0.47821	0.46212					AVRG		0.45038		14.47979
58 Styrene	0.49822	0.72635	0.78816	0.85715	0.83737	0.78445					
	0.73196	0.68037					AVRG		0.73800		15.34131

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
59 Bromoform	0.25276	0.34342	0.34984	0.38411	0.34624	0.36968					
	0.37040	0.36173					AVRG		0.34727		11.70069
60 Isopropyl Benzene	1.35819	2.02699	2.26150	2.55549	2.40369	2.17576					
	2.00598	1.80399					AVRG		2.07395		18.02436
61 Cyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++	+++++					AVRG		0.000e+00		0.000e+00
63 Bromobenzene	0.41719	0.57241	0.59012	0.64561	0.58506	0.58806					
	0.59238	0.57137					AVRG		0.57028		11.58136
64 N-Propyl Benzene	1.97454	2.60716	2.75292	3.07288	2.85782	2.46869					
	2.23611	2.01778					AVRG		2.49849		15.94465
65 1,1,2,2-Tetrachloroethane	0.42384	0.58894	0.58264	0.63388	0.55796	0.60002					
	0.61215	0.59856					AVRG		0.57475		11.27981
66 2-Chloro Toluene	1.12570	1.54349	1.65109	1.85215	1.74056	1.64411					
	1.57958	1.46179					AVRG		1.57481		13.79766

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/VO121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
67 1,3,5-Trimethyl Benzene	1.20411	1.73863	1.89672	2.14669	2.04291	1.88189					
	1.77468	1.61757					AVRG		1.78790		16.19489
68 1,2,3-Trichloropropane	0.12948	0.18149	0.18334	0.19593	0.17333	0.18580					
	0.19086	0.18892					AVRG		0.17864		11.74275
69 Trans-1,4-Dichloro 2-Butene	0.16440	0.19680	0.21147	0.22554	0.21442	0.23717					
	0.23731	0.24659					AVRG		0.21671		12.30780
70 4-Chloro Toluene	1.12741	1.63310	1.71985	1.90827	1.83411	1.69985					
	1.63746	1.55349					AVRG		1.63919		14.39760
71 T-Butyl Benzene	1.04960	1.48905	1.66608	1.88614	1.79418	1.69148					
	1.62105	1.50672					AVRG		1.58804		16.06441
72 1,2,4-Trimethylbenzene	1.14287	1.69692	1.85017	2.10121	2.01532	1.84536					
	1.73916	1.59425					AVRG		1.74816		16.86759
73 S-Butyl Benzene	1.66184	2.35390	2.49731	2.77753	2.64262	2.30961					
	2.11624	1.90668					AVRG		2.28322		16.39454

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
74 4-Isopropyl Toluene	1.24501	1.71495	1.95678	2.25072	2.20625	1.95367					
	1.81225	1.65716					AVRG		1.84960		17.48955
75 1,3-Dichlorobenzene	0.82012	1.08858	1.09898	1.18882	1.12389	1.04101					
	1.01285	0.96339					AVRG		1.04221		10.87615
77 1,4-Dichlorobenzene	0.90073	1.10177	1.10641	1.21485	1.14882	1.07382					
	1.05714	1.02086					AVRG		1.07805		8.60654
78 N-Butyl Benzene	1.17683	1.57702	1.74179	2.00573	2.10846	1.86804					
	1.75912	1.64832					AVRG		1.73566		16.51447
80 1,2-Dichlorobenzene	0.82220	1.05293	1.06651	1.14331	1.05473	1.00855					
	0.99831	0.98409					AVRG		1.01633		9.15257
81 1,2-Dibromo 3-Chloropropane	+++++	0.10373	0.11220	0.12029	0.10922	0.12267					
	0.13007	0.13429					AVRG		0.11892		9.37957
82 Hexachloro 1,3-Butadiene	+++++	0.45277	0.45831	0.50040	0.51853	0.48232					
	0.49822	0.50794					AVRG		0.48836		5.11384

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/VO121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
83 1,2,4-Trichlorobenzene	+++++	0.66241	0.67343	0.78724	0.81979	0.76633					
	0.79972	0.80232					AVRG		0.75875		8.46192
84 Naphthalene	+++++	1.64126	1.65074	1.87303	1.64800	1.68837					
	1.66153	1.55889					AVRG		1.67455		5.74406
85 1,2,3-Trichlorobenzene	+++++	0.69856	0.72000	0.79736	0.75893	0.73768					
	0.77822	0.77486					AVRG		0.75223		4.66880
$ 27 Dibromofluoromethane	0.49143	0.49229	0.47698	0.48835	0.45642	0.48289					
	0.48434	0.47875					AVRG		0.48143		2.39247
$ 32 d4-1,2-Dichloroethane	0.55020	0.56114	0.55027	0.54459	0.54753	0.53306					
	0.54104	0.54891					AVRG		0.54709		1.48252
$ 42 d8-Toluene	1.25954	1.24423	1.24694	1.24151	1.22576	1.23886					
	1.23533	1.22289					AVRG		1.23938		0.94792
$ 62 4-Bromofluorobenzene	0.53541	0.53267	0.53218	0.52739	0.53438	0.53142					
	0.53201	0.53177					AVRG		0.53215		0.44480

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb

Compound	1 Level 1	2 Level 2	5 Level 3	10 Level 4	50 Level 5	100 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	150 Level 7	200 Level 8									
$ 79 d4-1,2-Dichlorobenzene	0.92719	0.91822	0.91106	0.91970	0.90066	0.89375					
	0.90757	0.91763					AVRG		0.91197		1.20306

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb

Curve	Formula	Units
Averaged	Amt = Rsp/ml	Response
Linear	Amt = b + Rsp/ml	Response

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb
Curve Type : Average

Calibration File Names:
Level 1: /chem1/nt5.i/27JUN13.b/0010627.d
Level 2: /chem1/nt5.i/27JUN13.b/0020627.d
Level 3: /chem1/nt5.i/27JUN13.b/0050627.d
Level 4: /chem1/nt5.i/27JUN13.b/0100627.d
Level 5: /chem1/nt5.i/27JUN13.b/0500627a.d
Level 6: /chem1/nt5.i/27JUN13.b/1000627.d
Level 7: /chem1/nt5.i/27JUN13.b/1500627.d
Level 8: /chem1/nt5.i/27JUN13.b/2000627.d

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
1 Dichlorodifluoromethane	0.29309	0.28584	0.26797	0.25924	0.33463	0.28372		
	0.28554	0.31573					0.29072	8.393
2 Chloromethane	0.55017	0.61493	0.58189	0.63104	0.64077	0.59042		
	0.58944	0.57243					0.59639	5.117
3 Vinyl Chloride	0.47176	0.53011	0.53772	0.51473	0.62244	0.57436		
	0.52040	0.52535					0.53711	8.299
4 Bromomethane	0.32776	0.35834	0.32930	0.31488	0.30763	0.28758		
	0.27571	0.26154					0.30784	10.304
5 Chloroethane	0.34284	0.34133	0.33155	0.33145	0.36515	0.32596		
	0.29951	0.27632					0.32676	8.402
6 Trichlorofluoromethane	0.52992	0.56766	0.57657	0.60795	0.64635	0.60415		
	0.61162	0.61850					0.59534	6.036

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	150.000 Level 7	200.000 Level 8	RRF	% RSD	
7 1,1-Dichloroethene	0.32668	0.32254	0.38804	0.36363	0.42794	0.32175	0.34538	0.33111	0.35338	10.744	
8 Carbon Disulfide	1.25910	1.16627	1.44320	1.29187	1.53623	1.13643	1.18644	1.10426	1.26547	12.109	
9 112Trichloro122Trifluoroethan	0.33003	0.30450	0.37374	0.33495	0.43004	0.30701	0.33161	0.32699	0.34236	12.051	
10 Iodomethane	0.23589	0.19257	0.26331	0.21356	0.44010	0.28139	0.30456	0.33544	0.28335	27.822	<-
11 Bromoethane	0.23664	0.23531	0.28484	0.21834	0.30216	0.20316	0.20764	0.20031	0.23605	16.197	
12 Acrolein	+++++	+++++	+++++	0.05813	0.04498	0.05444	0.05914	0.05648	0.05463	10.399	
13 Methylene Chloride	0.78939	0.66379	0.49685	0.32286	0.44075	+++++	+++++	+++++	0.54273	34.018	<-
14 Acetone	0.08935	0.08026	0.10115	0.07213	0.09297	0.06303	+++++	+++++	0.08315	16.954	
15 Trans-1,2-Dichloroethene	0.34738	0.42262	0.38453	0.31232	0.45052	0.28941	0.30049	0.30360	0.35136	17.431	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/VO121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
	150.000 Level 7	200.000 Level 8							
16 Methyl tert butyl ether	0.94124	1.24166	1.14693	0.87163	1.21409	+++++			
	+++++	+++++					1.08311	15.395	
17 1,1-Dichloroethane	0.68131	0.86652	0.70338	0.89460	0.77401	0.90080			
	+++++	+++++					0.80343	12.139	
18 Acrylonitrile	0.16082	0.21627	0.14411	0.21353	0.13976	0.21536			
	0.17302	+++++					0.18041	18.951	
19 Vinyl Acetate	0.80391	1.16079	1.14781	1.19825	1.09867	1.15218			
	1.10468	1.00948					1.08447	11.680	
20 Cis-1,2-Dichloroethene	0.37416	0.44704	0.46392	0.50519	0.47880	0.47709			
	0.47410	0.45751					0.45973	8.402	
21 Allyl Chloride	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
22 2,2-Dichloropropane	0.56055	0.62663	0.65387	0.69498	0.71806	0.68869			
	0.69233	0.70004					0.66689	7.756	
23 Bromochloromethane	0.16796	0.19831	0.20551	0.21747	0.20330	0.20700			
	0.20541	0.20146					0.20080	7.170	
24 Chloroform	0.62411	0.75006	0.72026	0.76941	0.74394	0.75776			
	0.74582	0.73649					0.73098	6.229	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
	150.000 Level 7	200.000 Level 8							
25 Carbon Tetrachloride	0.28404	0.32517	0.32078	0.36155	0.35718	0.36121			
	0.36504	0.36650					0.34268	8.687	
26 1,1,1-Trichloroethane	0.54602	0.66603	0.65196	0.71868	0.69036	0.69446			
	0.69755	0.69205					0.66964	8.050	
28 1,1-Dichloropropene	0.32100	0.36638	0.42468	0.43700	0.41499	0.40165			
	0.40006	0.39061					0.39455	9.301	
29 2-Butanone	0.04271	0.05788	0.05898	0.06239	0.05569	0.06173			
	0.06127	0.05951					0.05752	11.084	
30 Benzene	0.90402	1.12161	1.17472	1.26220	1.16364	1.10201			
	1.02456	0.94576					1.08732	11.157	
33 1,2-Dichloroethane	0.29081	0.37134	0.36649	0.38448	0.35803	0.35733			
	0.35088	0.34288					0.35278	7.965	
34 Trichloroethene	0.22899	0.26004	0.27389	0.29246	0.29348	0.28315			
	0.28498	0.28027					0.27466	7.761	
36 Methyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
37 Dibromomethane	0.12247	0.15346	0.15073	0.16184	0.15243	0.15532			
	0.15349	0.14900					0.14984	7.807	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
38 1,2-Dichloropropane	0.24480	0.30418	0.31913	0.34384	0.31967	0.32267		
	0.31541	0.29852					0.30852	9.419
39 Bromodichloromethane	0.27860	0.33987	0.35054	0.37021	0.35652	0.35408		
	0.34729	0.33555					0.34158	8.069
40 2-Chloroethyl Vinyl Ether	+++++	0.04331	0.04335	0.04769	0.05691	0.05006		
	0.04879	0.04614					0.04803	9.743
41 Cis 1,3-dichloropropene	0.30100	0.40885	0.43824	0.47721	0.45812	0.45431		
	0.44157	0.41545					0.42434	12.863
43 Toluene	0.60106	0.71053	0.72444	0.77755	0.73091	0.69413		
	0.65376	0.61034					0.68784	8.944
44 Tetrachloroethene	0.23478	0.28256	0.28623	0.31252	0.32223	0.30480		
	0.30705	0.30585					0.29450	9.311
45 4-Methyl-2-Pentanone	0.08983	0.13595	0.14231	0.15020	0.13087	0.13635		
	0.13032	0.12539					0.13015	13.839
46 Trans 1,3-Dichloropropene	0.29713	0.38646	0.39938	0.43298	0.40777	0.40882		
	0.39862	0.38065					0.38898	10.373
47 1,1,2-Trichloroethane	0.18600	0.23239	0.23391	0.24675	0.22507	0.23071		
	0.22427	0.21469					0.22422	8.018

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
48 Chlorodibromomethane	0.20028	0.24902	0.26029	0.27734	0.26746	0.27348		
	0.27121	0.26622					0.25816	9.670
49 1,3-Dichloropropane	0.29626	0.40342	0.43207	0.46764	0.42987	0.43989		
	0.42935	0.41136					0.41373	12.373
50 1,2-Dibromoethane	0.16500	0.22380	0.22654	0.24048	0.22325	0.22849		
	0.22372	0.21489					0.21827	10.390
51 2-Hexanone	0.14596	0.22249	0.23866	0.25611	0.21870	0.22678		
	0.23115	0.18576					0.21570	15.999
53 Chlorobenzene	0.61172	0.73953	0.75326	0.80617	0.75775	0.71666		
	0.68679	0.64765					0.71494	8.879
54 Ethyl Benzene	1.01434	1.26017	1.33128	1.43642	1.37422	1.20543		
	1.09353	1.00922					1.21558	13.460
55 1,1,1,2-Tetrachloroethane	0.20881	0.24720	0.26522	0.28171	0.27285	0.26877		
	0.26748	0.26087					0.25911	8.722
56 m,p-xylene	0.35279	0.46533	0.49082	0.53392	0.51519	0.46424		
	0.42803	0.40030					0.45633	13.221
57 o-Xylene	0.30835	0.41001	0.44982	0.50599	0.50168	0.48686		
	0.47821	0.46212					0.45038	14.480

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD	
	150.000 Level 7	200.000 Level 8							
58 Styrene	0.49822	0.72635	0.78816	0.85715	0.83737	0.78445			
	0.73196	0.68037					0.73800	15.341	
59 Bromoform	0.25276	0.34342	0.34984	0.38411	0.34624	0.36968			
	0.37040	0.36173					0.34727	11.701	
60 Isopropyl Benzene	1.35819	2.02699	2.26150	2.55549	2.40369	2.17576			
	2.00598	1.80399					2.07395	18.024	
61 Cyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++					+++++	+++++	<-
63 Bromobenzene	0.41719	0.57241	0.59012	0.64561	0.58506	0.58806			
	0.59238	0.57137					0.57028	11.581	
64 N-Propyl Benzene	1.97454	2.60716	2.75292	3.07288	2.85782	2.46869			
	2.23611	2.01778					2.49849	15.945	
65 1,1,2,2-Tetrachloroethane	0.42384	0.58894	0.58264	0.63388	0.55796	0.60002			
	0.61215	0.59856					0.57475	11.280	
66 2-Chloro Toluene	1.12570	1.54349	1.65109	1.85215	1.74056	1.64411			
	1.57958	1.46179					1.57481	13.798	
67 1,3,5-Trimethyl Benzene	1.20411	1.73863	1.89672	2.14669	2.04291	1.88189			
	1.77468	1.61757					1.78790	16.195	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
68 1,2,3-Trichloropropane	0.12948	0.18149	0.18334	0.19593	0.17333	0.18580		
	0.19086	0.18892					0.17864	11.743
69 Trans-1,4-Dichloro 2-Butene	0.16440	0.19680	0.21147	0.22554	0.21442	0.23717		
	0.23731	0.24659					0.21671	12.308
70 4-Chloro Toluene	1.12741	1.63310	1.71985	1.90827	1.83411	1.69985		
	1.63746	1.55349					1.63919	14.398
71 T-Butyl Benzene	1.04960	1.48905	1.66608	1.88614	1.79418	1.69148		
	1.62105	1.50672					1.58804	16.064
72 1,2,4-Trimethylbenzene	1.14287	1.69692	1.85017	2.10121	2.01532	1.84536		
	1.73916	1.59425					1.74816	16.868
73 S-Butyl Benzene	1.66184	2.35390	2.49731	2.77753	2.64262	2.30961		
	2.11624	1.90668					2.28322	16.395
74 4-Isopropyl Toluene	1.24501	1.71495	1.95678	2.25072	2.20625	1.95367		
	1.81225	1.65716					1.84960	17.490
75 1,3-Dichlorobenzene	0.82012	1.08858	1.09898	1.18882	1.12389	1.04101		
	1.01285	0.96339					1.04221	10.876
77 1,4-Dichlorobenzene	0.90073	1.10177	1.10641	1.21485	1.14882	1.07382		
	1.05714	1.02086					1.07805	8.607

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb
Curve Type : Average

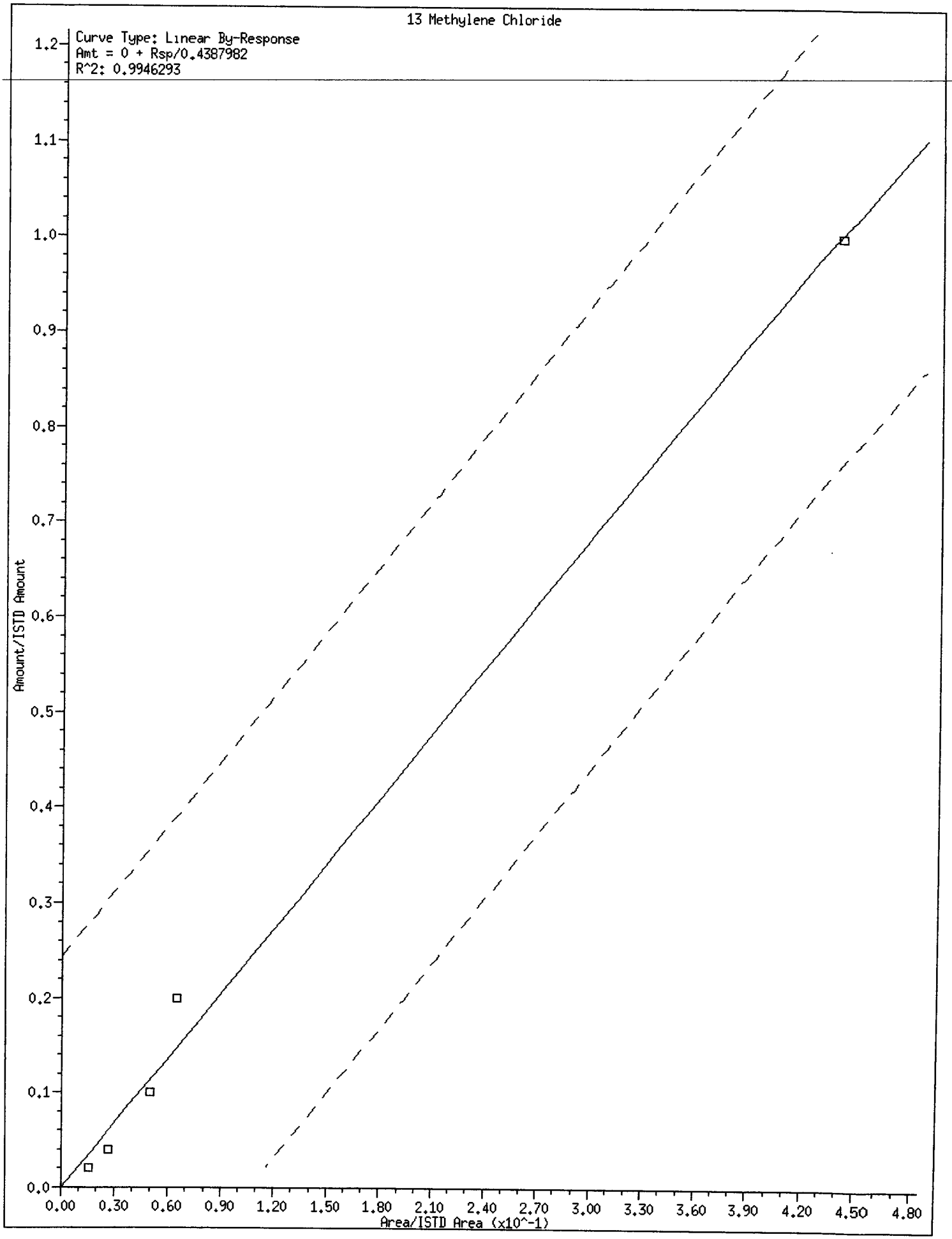
Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
78 N-Butyl Benzene	1.17683	1.57702	1.74179	2.00573	2.10846	1.86804		
	1.75912	1.64832					1.73566	16.514
80 1,2-Dichlorobenzene	0.82220	1.05293	1.06651	1.14331	1.05473	1.00855		
	0.99831	0.98409					1.01633	9.153
81 1,2-Dibromo 3-Chloropropane	+++++	0.10373	0.11220	0.12029	0.10922	0.12267		
	0.13007	0.13429					0.11892	9.380
82 Hexachloro 1,3-Butadiene	+++++	0.45277	0.45831	0.50040	0.51853	0.48232		
	0.49822	0.50794					0.48836	5.114
83 1,2,4-Trichlorobenzene	+++++	0.66241	0.67343	0.78724	0.81979	0.76633		
	0.79972	0.80232					0.75875	8.462
84 Naphthalene	+++++	1.64126	1.65074	1.87303	1.64800	1.68837		
	1.66153	1.55889					1.67455	5.744
85 1,2,3-Trichlorobenzene	+++++	0.69856	0.72000	0.79736	0.75893	0.73768		
	0.77822	0.77486					0.75223	4.669
$ 27 Dibromofluoromethane	0.49143	0.49229	0.47698	0.48835	0.45642	0.48289		
	0.48434	0.47875					0.48143	2.392
$ 32 d4-1,2-Dichloroethane	0.55020	0.56114	0.55027	0.54459	0.54753	0.53306		
	0.54104	0.54891					0.54709	1.483

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 27-JUN-2013 10:43
End Cal Date : 27-JUN-2013 15:48
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt5.i/27JUN13.b/V0121012S.m
Cal Date : 28-Jun-2013 11:09 patrickb
Curve Type : Average

Compound	1.000 Level 1	2.000 Level 2	5.000 Level 3	10.000 Level 4	50.000 Level 5	100.000 Level 6	RRF	% RSD
	150.000 Level 7	200.000 Level 8						
$ 42 d8-Toluene	1.25954	1.24423	1.24694	1.24151	1.22576	1.23886		
	1.23533	1.22289					1.23938	0.948
$ 62 4-Bromofluorobenzene	0.53541	0.53267	0.53218	0.52739	0.53438	0.53142		
	0.53201	0.53177					0.53215	0.445
$ 79 d4-1,2-Dichlorobenzene	0.92719	0.91822	0.91106	0.91970	0.90066	0.89375		
	0.90757	0.91763					0.91197	1.203


13 Methylene Chloride
Curve Type: Linear By-Response
Amt = 0 + Rsp/0.4387982
R^2: 0.9946293
Amount/ISTD Amount
Area/ISTD Area (x10^-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
0.00
0.30
0.60
0.90
1.20
1.50
1.80
2.10
2.40
2.70
3.00
3.30
3.60
3.90
4.20
4.50
4.80

WUTB : 883502

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt5.i/27JUN13.b

ARI Job No.: BFB0 Method: bfb8260.m Instrument: nt5.i Date: 27-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0940	bfb0627.d	BFB0627	BFB0627	1	NO MANUAL INTEGRATION
1043	0010627.d	IC0627	VSTD1	1	Chloromethane, Acrolein, Acetone, Acrylonitrile, 1,2,3-Trichloropropane, Trans-1,4-Dichloro 2-Butene,
1107	2000627.d	IC0627	VSTD200	1	Chloromethane,
1131	1500627.d	IC0627	VSTD150	1	Chloromethane,
1155	1000627.d	IC0627	VSTD100	1	Chloromethane,
1243	0100627.d	IC0627	VSTD10	1	Chloromethane, Acetone,
1307	0050627.d	IC0627	VSTD5	1	Chloromethane, Acrolein,
1330	0020627.d	IC0627	VSTD2	1	Chloromethane, 1,2,3-Trichloropropane, Trans-1,4-Dichloro 2-Butene,
1548	0500627a.d	IC0627	VSTD50	1	Chloromethane, Acrolein, Acetone,
1722	icv0627.d	ICV0627	ICV0627	1	Chloromethane, Acetone,

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Batch File: /chem1/nt5.i/27JUN13.b
Inst ID: nt5.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08
FILENAME:	0010627	2000627	1500627	1000627	0100627	0050627	0020627	0500627a
INJ.DATE:	27-JUN-2013	27-JUN-2013	27-JUN-2013	27-JUN-2013	27-JUN-2013	27-JUN-2013	27-JUN-2013	27-JUN-2013
INJ.TIME:	10:43	11:07	11:31	11:55	12:43	13:07	13:30	15:48

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Dichlorodifluoromethan	1.028	1.034	1.045	1.057	1.034	1.040	1.034	1.028	1.057	0.963-1.150	1.038	0.010
2 Chloromethane	1.153	1.153	1.159	1.176	1.153	1.159	1.159	1.147	1.176	1.082-1.269	1.157	0.008
3 Vinyl Chloride	1.198	1.204	1.215	1.227	1.204	1.210	1.204	1.198	1.226	1.133-1.320	1.207	0.010
4 Bromomethane	1.413	1.407	1.419	1.430	1.407	1.413	1.407	1.407	1.436	1.342-1.529	1.413	0.008
5 Chloroethane	1.492	1.498	1.509	1.521	1.498	1.504	1.498	1.492	1.521	1.427-1.614	1.502	0.010
6 Trichlorofluoromethane	1.583	1.588	1.600	1.611	1.589	1.594	1.594	1.583	1.611	1.518-1.704	1.593	0.010
7 1,1-Dichloroethene	1.951	1.939	1.956	1.968	1.945	1.956	1.951	1.945	1.973	1.880-2.066	1.951	0.009
8 Carbon Disulfide	1.951	1.945	1.956	1.968	1.951	1.956	1.951	1.945	1.979	1.885-2.072	1.953	0.007
9 112Trichloro122Trifluo	1.990	1.984	1.996	2.007	1.984	1.996	1.990	1.990	2.018	1.925-2.112	1.992	0.007
10 Iodomethane	2.047	2.047	2.058	2.064	2.047	2.058	2.047	2.047	2.075	1.981-2.168	2.052	0.007
11 Bromoethane	2.143	2.143	2.154	2.160	2.143	2.154	2.149	2.143	2.171	2.078-2.264	2.149	0.007
12 Acrolein	2.262	2.245	2.262	2.267	2.245	2.290	2.250	2.301	2.313	2.219-2.406	2.265	0.021
13 Methylene Chloride	2.426	2.409	2.420	2.432	2.414	2.437	2.420	2.420	2.454	2.360-2.547	2.422	0.009
14 Acetone	2.652	2.584	2.595	2.596	2.584	2.726	2.567	2.725	2.742	2.649-2.836	2.629	0.065
15 Trans-1,2-Dichloroethe	2.567	2.545	2.556	2.567	2.550	2.573	2.567	2.561	2.590	2.496-2.683	2.561	0.010
16 Methyl tert butyl ethe	2.731	2.731	2.743	2.765	2.737	2.737	2.743	2.725	2.754	2.660-2.847	2.739	0.012
17 1,1-Dichloroethane	3.172	3.144	3.161	3.178	3.155	3.178	3.178	3.172	3.201	3.107-3.294	3.168	0.013

Reviewer 1 _____ Date: 6/4/13

Reviewer 2 _____ Date: _____

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Batch File: /chem1/nt5.i/27JUN13.b
Inst ID: nt5.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	18 Acrylonitrile	3.303	3.297	3.303	3.314	3.297	3.320	3.286	3.336	3.348	3.254-3.441	3.307	0.016
	19 Vinyl Acetate	3.512	3.512	3.529	3.540	3.518	3.523	3.518	3.517	3.540	3.447-3.633	3.521	0.010
	20 Cis-1,2-Dichloroethene	3.727	3.704	3.716	3.733	3.716	3.727	3.721	3.721	3.744	3.650-3.837	3.720	0.009
	21 Allyl Chloride	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.560	4.467-4.653	+++++	+++++
	22 2,2-Dichloropropane	3.823	3.795	3.812	3.829	3.812	3.823	3.829	3.817	3.840	3.746-3.933	3.817	0.011
	23 Bromochloromethane	3.913	3.897	3.908	3.919	3.902	3.919	3.908	3.908	3.930	3.837-4.024	3.909	0.008
	24 Chloroform	4.010	4.010	4.015	4.027	4.010	4.015	4.015	4.010	4.027	3.933-4.120	4.014	0.006
	25 Carbon Tetrachloride	4.100	4.072	4.089	4.100	4.089	4.100	4.106	4.094	4.117	4.015-4.219	4.094	0.011
	26 1,1,1-Trichloroethane	4.174	4.151	4.162	4.174	4.162	4.174	4.174	4.168	4.185	4.091-4.278	4.167	0.008
$	27 Dibromofluoromethane	4.179	4.179	4.185	4.196	4.179	4.185	4.179	4.179	4.196	4.103-4.290	4.183	0.006
	28 1,1-Dichloropropene	4.287	4.270	4.281	4.293	4.281	4.293	4.292	4.287	4.304	4.201-4.406	4.285	0.008
	29 2-Butanone	4.383	4.434	4.428	4.411	4.400	4.428	4.372	4.428	4.434	4.340-4.527	4.411	0.024
	30 Benzene	4.519	4.507	4.519	4.525	4.513	4.519	4.519	4.519	4.530	4.428-4.632	4.517	0.005
*	31 Pentafluorobenzene	4.660	4.649	4.660	4.666	4.655	4.660	4.660	4.654	4.671	4.578-4.765	4.658	0.005
$	32 d4-1,2-Dichloroethane	4.649	4.649	4.655	4.660	4.649	4.655	4.655	4.649	4.666	4.572-4.759	4.652	0.004
	33 1,2-Dichloroethane	4.711	4.711	4.717	4.723	4.711	4.717	4.717	4.711	4.728	4.626-4.830	4.715	0.004
	34 Trichloroethene	5.056	5.051	5.056	5.062	5.051	5.056	5.056	5.056	5.067	4.965-5.170	5.055	0.004
*	35 1,4-Difluorobenzene	5.113	5.107	5.113	5.119	5.107	5.113	5.113	5.107	5.118	5.016-5.221	5.111	0.004
	36 Methyl Methacrylate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.693	5.591-5.795	+++++	+++++
	37 Dibromomethane	5.413	5.413	5.418	5.418	5.413	5.418	5.413	5.412	5.424	5.321-5.526	5.415	0.003
	38 1,2-Dichloropropane	5.509	5.509	5.509	5.515	5.503	5.509	5.509	5.503	5.514	5.412-5.617	5.508	0.004
	39 Bromodichloromethane	5.582	5.588	5.588	5.588	5.582	5.582	5.582	5.582	5.588	5.485-5.690	5.584	0.003

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Batch File: /chem1/nt5.i/27JUN13.b
Inst ID: nt5.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	40 2-Chloroethyl Vinyl Et	6.120	6.125	6.125	6.125	6.120	6.125	6.120	6.120	6.125	6.023-6.228	6.123	0.003
	41 Cis 1,3-dichloropropen	6.131	6.131	6.137	6.137	6.131	6.131	6.131	6.131	6.137	6.034-6.239	6.132	0.003
$	42 d8-Toluene	6.289	6.289	6.289	6.295	6.284	6.290	6.289	6.289	6.295	6.193-6.397	6.289	0.003
	43 Toluene	6.329	6.335	6.335	6.335	6.329	6.329	6.329	6.329	6.335	6.232-6.437	6.331	0.003
	44 Tetrachloroethene	6.646	6.646	6.646	6.646	6.640	6.646	6.640	6.646	6.646	6.494-6.798	6.644	0.003
	45 4-Methyl-2-Pentanone	6.697	6.725	6.719	6.714	6.702	6.702	6.697	6.702	6.708	6.606-6.810	6.707	0.011
	46 Trans 1,3-Dichloroprop	6.691	6.702	6.702	6.702	6.697	6.697	6.691	6.697	6.702	6.600-6.805	6.697	0.005
	47 1,1,2-Trichloroethane	6.827	6.838	6.832	6.833	6.821	6.827	6.821	6.827	6.827	6.724-6.929	6.828	0.006
	48 Chlorodibromomethane	6.957	6.968	6.968	6.968	6.963	6.963	6.957	6.962	6.963	6.811-7.114	6.963	0.005
	49 1,3-Dichloropropane	7.042	7.053	7.053	7.048	7.042	7.042	7.042	7.042	7.047	6.895-7.199	7.045	0.005
	50 1,2-Dibromoethane	7.132	7.144	7.144	7.144	7.138	7.138	7.138	7.138	7.144	7.041-7.246	7.139	0.004
	51 2-Hexanone	7.409	7.432	7.426	7.421	7.415	7.415	7.409	7.415	7.421	7.269-7.573	7.418	0.008
*	52 d5-Chlorobenzene	7.590	7.596	7.596	7.596	7.590	7.591	7.590	7.596	7.596	7.444-7.748	7.593	0.003
	53 Chlorobenzene	7.607	7.613	7.613	7.613	7.607	7.608	7.607	7.607	7.613	7.461-7.765	7.610	0.003
	54 Ethyl Benzene	7.658	7.670	7.670	7.664	7.653	7.658	7.653	7.658	7.664	7.512-7.816	7.661	0.007
	55 1,1,1,2-Tetrachloroeth	7.670	7.687	7.687	7.681	7.670	7.675	7.670	7.675	7.675	7.523-7.827	7.677	0.007
	56 m,p-xylene	7.788	7.805	7.805	7.800	7.788	7.789	7.788	7.794	7.794	7.642-7.946	7.795	0.008
	57 o-Xylene	8.150	8.162	8.162	8.156	8.151	8.151	8.150	8.156	8.156	8.004-8.308	8.155	0.005
	58 Styrene	8.201	8.213	8.207	8.207	8.196	8.202	8.201	8.201	8.201	8.049-8.353	8.204	0.005
	59 Bromoform	8.190	8.207	8.201	8.202	8.190	8.190	8.190	8.196	8.196	8.002-8.389	8.196	0.007
	60 Isopropyl Benzene	8.439	8.450	8.445	8.445	8.439	8.439	8.439	8.445	8.445	8.251-8.638	8.443	0.004
	61 Cyclohexanone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.568	8.416-8.720	+++++	+++++
$	62 4-Bromofluorobenzene	8.665	8.665	8.665	8.665	8.660	8.660	8.660	8.665	8.665	8.513-8.817	8.663	0.003
	63 Bromobenzene	8.739	8.744	8.745	8.745	8.739	8.739	8.739	8.739	8.739	8.545-8.932	8.741	0.003

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Batch File: /chem1/nt5.i/27JUN13.b
Inst ID: nt5.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	64 N-Propyl Benzene	8.807	8.818	8.818	8.812	8.807	8.807	8.807	8.812	8.812	8.619-9.006	8.811	0.005
	65 1,1,2,2-Tetrachloroeth	8.869	8.897	8.880	8.875	8.869	8.869	8.869	8.869	8.869	8.675-9.062	8.875	0.010
	66 2-Chloro Toluene	8.920	8.931	8.926	8.926	8.914	8.914	8.914	8.920	8.920	8.726-9.113	8.921	0.006
	67 1,3,5-Trimethyl Benzen	8.999	9.016	9.010	9.005	8.993	8.993	8.993	9.005	8.999	8.806-9.192	9.002	0.009
	68 1,2,3-Trichloropropane	8.965	8.982	8.976	8.971	8.965	8.965	8.965	8.971	8.971	8.777-9.164	8.970	0.006
	69 Trans-1,4-Dichloro 2-B	9.027	9.044	9.039	9.033	9.022	9.022	9.022	9.027	9.027	8.834-9.221	9.029	0.009
	70 4-Chloro Toluene	9.073	9.084	9.078	9.078	9.067	9.067	9.067	9.072	9.073	8.879-9.266	9.073	0.006
	71 T-Butyl Benzene	9.276	9.282	9.282	9.276	9.271	9.271	9.271	9.276	9.276	9.083-9.470	9.276	0.005
	72 1,2,4-Trimethylbenzene	9.344	9.350	9.350	9.344	9.338	9.339	9.338	9.344	9.338	9.145-9.532	9.343	0.005
	73 S-Butyl Benzene	9.440	9.452	9.446	9.440	9.435	9.435	9.435	9.440	9.440	9.247-9.634	9.440	0.006
	74 4-Isopropyl Toluene	9.587	9.599	9.593	9.588	9.582	9.582	9.582	9.587	9.582	9.388-9.775	9.587	0.006
	75 1,3-Dichlorobenzene	9.599	9.610	9.604	9.599	9.593	9.593	9.593	9.599	9.599	9.405-9.792	9.599	0.006
*	76 d4-1,4-Dichlorobenzene	9.672	9.678	9.678	9.672	9.667	9.667	9.667	9.672	9.672	9.479-9.866	9.672	0.005
	77 1,4-Dichlorobenzene	9.684	9.695	9.689	9.689	9.678	9.678	9.678	9.689	9.683	9.490-9.877	9.685	0.007
	78 N-Butyl Benzene	9.972	9.978	9.978	9.972	9.966	9.966	9.966	9.972	9.966	9.773-10.160	9.971	0.005
$	79 d4-1,2-Dichlorobenzene	10.057	10.063	10.057	10.057	10.051	10.051	10.051	10.057	10.051	9.858-10.245	10.055	0.004
	80 1,2-Dichlorobenzene	10.063	10.074	10.068	10.063	10.057	10.057	10.057	10.068	10.062	9.869-10.256	10.063	0.006
	81 1,2-Dibromo 3-Chloropr	10.821	10.826	10.821	10.815	10.809	10.809	10.809	10.815	10.809	10.616-11.003	10.816	0.006
	82 Hexachloro 1,3-Butadie	11.499	11.505	11.494	11.494	11.488	11.483	11.482	11.505	11.488	11.295-11.681	11.494	0.009
	83 1,2,4-Trichlorobenzene	11.488	11.494	11.482	11.483	11.477	11.471	11.477	11.488	11.477	11.283-11.670	11.482	0.007
	84 Naphthalene	11.805	11.805	11.799	11.794	11.788	11.788	11.788	11.805	11.788	11.594-11.981	11.796	0.008
	85 1,2,3-Trichlorobenzene	11.986	11.986	11.980	11.975	11.969	11.963	11.969	11.986	11.969	11.775-12.162	11.977	0.009

Analytical Resources, Inc.

Data file : /chem1/nt5.i/27JUN13.b/0010627.d 8260C
Lab Smp Id: IC0627 Client Smp ID: VSTD1
Inj Date : 27-JUN-2013 10:43
Operator : PB Inst ID: nt5.i
Smp Info : IC0627,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/27JUN13.b/VO121012S.m
Meth Date : 28-Jun-2013 12:58 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 10:43 Cal File: 0010627.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 * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.028	1.057	(0.221)	10592	1.00000	1.008
2 Chloromethane	50	1.153	1.176	(0.247)	19883	1.00000	0.9225 (M)
3 Vinyl Chloride	62	1.198	1.226	(0.257)	17049	1.00000	0.8783
4 Bromomethane	94	1.413	1.436	(0.303)	11845	1.00000	1.065
5 Chloroethane	64	1.492	1.521	(0.320)	12390	1.00000	1.049
6 Trichlorofluoromethane	101	1.583	1.611	(0.340)	19151	1.00000	0.8901
7 1,1-Dichloroethene	96	1.951	1.973	(0.419)	11806	1.00000	0.9244
8 Carbon Disulfide	76	1.951	1.979	(0.419)	45503	1.00000	0.9950 (T)
9 112Trichloro122Trifluoroethane	101	1.990	2.018	(0.427)	11927	1.00000	0.9640
10 Iodomethane	142	2.047	2.075	(0.439)	8525	1.00000	0.8325
11 Bromoethane	108	2.143	2.171	(0.460)	8552	1.00000	1.002
12 Acrolein	56	2.262	2.313	(0.485)	14275	5.00000	7.230 (M)
13 Methylene Chloride	84	2.426	2.454	(0.520)	28528	1.00000	1.799
14 Acetone	43	2.652	2.742	(0.569)	16146	5.00000	5.373 (M)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.567	2.590	(0.551)	12554	1.00000	0.9887
	16 Methyl tert butyl ether	73	2.731	2.754	(0.586)	34016	1.00000	0.8690
	17 1,1-Dichloroethane	63	3.172	3.201	(0.681)	24622	1.00000	0.8480
	18 Acrylonitrile	53	3.303	3.348	(0.709)	5812	1.00000	0.8914(M)
	19 Vinyl Acetate	43	3.512	3.540	(0.754)	29053	1.00000	0.7413
	20 Cis-1,2-Dichloroethene	96	3.727	3.744	(0.800)	13522	1.00000	0.8139
	22 2,2-Dichloropropane	77	3.823	3.840	(0.820)	20258	1.00000	0.8405
	23 Bromochloromethane	128	3.913	3.930	(0.840)	6070	1.00000	0.8364
	24 Chloroform	83	4.010	4.027	(0.860)	22555	1.00000	0.8538
	25 Carbon Tetrachloride	117	4.100	4.117	(0.802)	16729	1.00000	0.8289
$	27 Dibromofluoromethane	111	4.179	4.196	(0.897)	887996	50.0000	51.038
	26 1,1,1-Trichloroethane	97	4.174	4.185	(0.896)	19733	1.00000	0.8154
	28 1,1-Dichloropropene	75	4.287	4.304	(0.838)	18906	1.00000	0.8136
	29 2-Butanone	72	4.383	4.434	(0.941)	7717	5.00000	3.712
	30 Benzene	78	4.519	4.530	(0.884)	53244	1.00000	0.8314
*	31 Pentafluorobenzene	168	4.660	4.671	(1.000)	1806972	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.649	4.666	(0.998)	994205	50.0000	50.284
	33 1,2-Dichloroethane	62	4.711	4.728	(0.921)	17128	1.00000	0.8243
	34 Trichloroethene	95	5.056	5.067	(0.989)	13487	1.00000	0.8337
*	35 1,4-Difluorobenzene	114	5.113	5.118	(1.000)	2944860	50.0000	
	37 Dibromomethane	93	5.413	5.424	(1.059)	7213	1.00000	0.8173
	38 1,2-Dichloropropane	63	5.509	5.514	(1.077)	14418	1.00000	0.7935
	39 Bromodichloromethane	83	5.582	5.588	(1.092)	16409	1.00000	0.8156
	41 Cis 1,3-dichloropropene	75	6.131	6.137	(1.199)	17728	1.00000	0.7093
$	42 d8-Toluene	98	6.289	6.295	(1.230)	3709177	50.0000	50.813
	43 Toluene	92	6.329	6.335	(1.238)	35401	1.00000	0.8738
	44 Tetrachloroethene	166	6.646	6.646	(0.876)	13767	1.00000	0.7972
	45 4-Methyl-2-Pentanone	58	6.697	6.708	(1.310)	26453	5.00000	3.451
	46 Trans 1,3-Dichloropropene	75	6.691	6.702	(1.309)	17500	1.00000	0.7639
	47 1,1,2-Trichloroethane	97	6.827	6.827	(1.335)	10955	1.00000	0.8295
	48 Chlorodibromomethane	129	6.957	6.963	(0.917)	11744	1.00000	0.7758
	49 1,3-Dichloropropane	76	7.042	7.047	(0.928)	17372	1.00000	0.7161
	50 1,2-Dibromoethane	107	7.132	7.144	(1.395)	9718	1.00000	0.7559
	51 2-Hexanone	43	7.409	7.421	(0.976)	42795	5.00000	3.383
	52 d5-Chlorobenzene	117	7.590	7.596	(1.000)	2931914	50.0000	
	53 Chlorobenzene	112	7.607	7.613	(1.002)	35870	1.00000	0.8556
	54 Ethyl Benzene	91	7.658	7.664	(1.009)	59479	1.00000	0.8344
	55 1,1,1,2-Tetrachloroethane	131	7.670	7.675	(1.010)	12244	1.00000	0.8058
	56 m,p-xylene	106	7.788	7.794	(1.026)	41374	2.00000	1.546
	57 o-Xylene	106	8.150	8.156	(1.074)	18081	1.00000	0.6846
	58 Styrene	104	8.201	8.201	(1.080)	29215	1.00000	0.6751
	59 Bromoform	173	8.190	8.196	(0.847)	8404	1.00000	0.7278
	60 Isopropyl Benzene	105	8.439	8.445	(0.872)	45158	1.00000	0.6549
	62 4-Bromofluorobenzene	95	8.665	8.665	(1.142)	1569762	50.0000	50.306
	63 Bromobenzene	156	8.739	8.739	(0.903)	13871	1.00000	0.7316
	64 N-Propyl Benzene	91	8.807	8.812	(0.911)	65651	1.00000	0.7903
	65 1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	14092	1.00000	0.7374

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
66	2-Chloro Toluene	91	8.920	8.920	(0.922)	37428	1.00000	0.7148
67	1,3,5-Trimethyl Benzene	105	8.999	8.999	(0.930)	40035	1.00000	0.6735
68	1,2,3-Trichloropropane	110	8.965	8.971	(0.927)	4305	1.00000	0.7248 (TM)
69	Trans-1,4-Dichloro 2-Butene	53	9.027	9.027	(0.933)	5466	1.00000	0.7586 (M)
70	4-Chloro Toluene	91	9.073	9.073	(0.938)	37485	1.00000	0.6878
71	T-Butyl Benzene	119	9.276	9.276	(0.959)	34898	1.00000	0.6609
72	1,2,4-Trimethylbenzene	105	9.344	9.338	(0.966)	37999	1.00000	0.6538
73	S-Butyl Benzene	105	9.440	9.440	(0.976)	55254	1.00000	0.7278
74	4-Isopropyl Toluene	119	9.587	9.582	(0.991)	41395	1.00000	0.6731
75	1,3-Dichlorobenzene	146	9.599	9.599	(0.992)	27268	1.00000	0.7869
* 76	d4-1,4-Dichlorobenzene	152	9.672	9.672	(1.000)	1662438	50.0000	
77	1,4-Dichlorobenzene	146	9.684	9.683	(1.001)	29948	1.00000	0.8355
78	N-Butyl Benzene	91	9.972	9.966	(1.031)	39128	1.00000	0.6780
$ 79	d4-1,2-Dichlorobenzene	152	10.057	10.051	(1.040)	1541404	50.0000	50.835
80	1,2-Dichlorobenzene	146	10.063	10.062	(1.040)	27337	1.00000	0.8090
81	1,2-Dibromo 3-Chloropropane	75	10.821	10.809	(1.119)	2437	1.00000	0.6163
82	Hexachloro 1,3-Butadiene	225	11.499	11.488	(1.189)	12172	1.00000	0.7496
83	1,2,4-Trichlorobenzene	180	11.488	11.477	(1.188)	15953	1.00000	0.6324
84	Naphthalene	128	11.805	11.788	(1.220)	29227	1.00000	0.5249
85	1,2,3-Trichlorobenzene	180	11.986	11.969	(1.239)	15157	1.00000	0.6060

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: nt5.i
Lab File ID: 0010627.d
Lab Smp Id: IC0627
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 27-JUN-2013
Calibration Time: 17:46
Client Smp ID: VSTD1
Level: LOW
Sample Type: SOIL

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	1613586	806793	3227172	1806972	11.98
35 1,4-Difluorobenze	2656709	1328354	5313418	2944860	10.85
52 d5-Chlorobenzene	2557235	1278618	5114470	2931914	14.65
76 d4-1,4-Dichlorobe	1374359	687180	2748718	1662438	20.96

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.66	-0.24
35 1,4-Difluorobenze	5.12	4.62	5.62	5.11	-0.11
52 d5-Chlorobenzene	7.60	7.10	8.10	7.59	-0.07
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

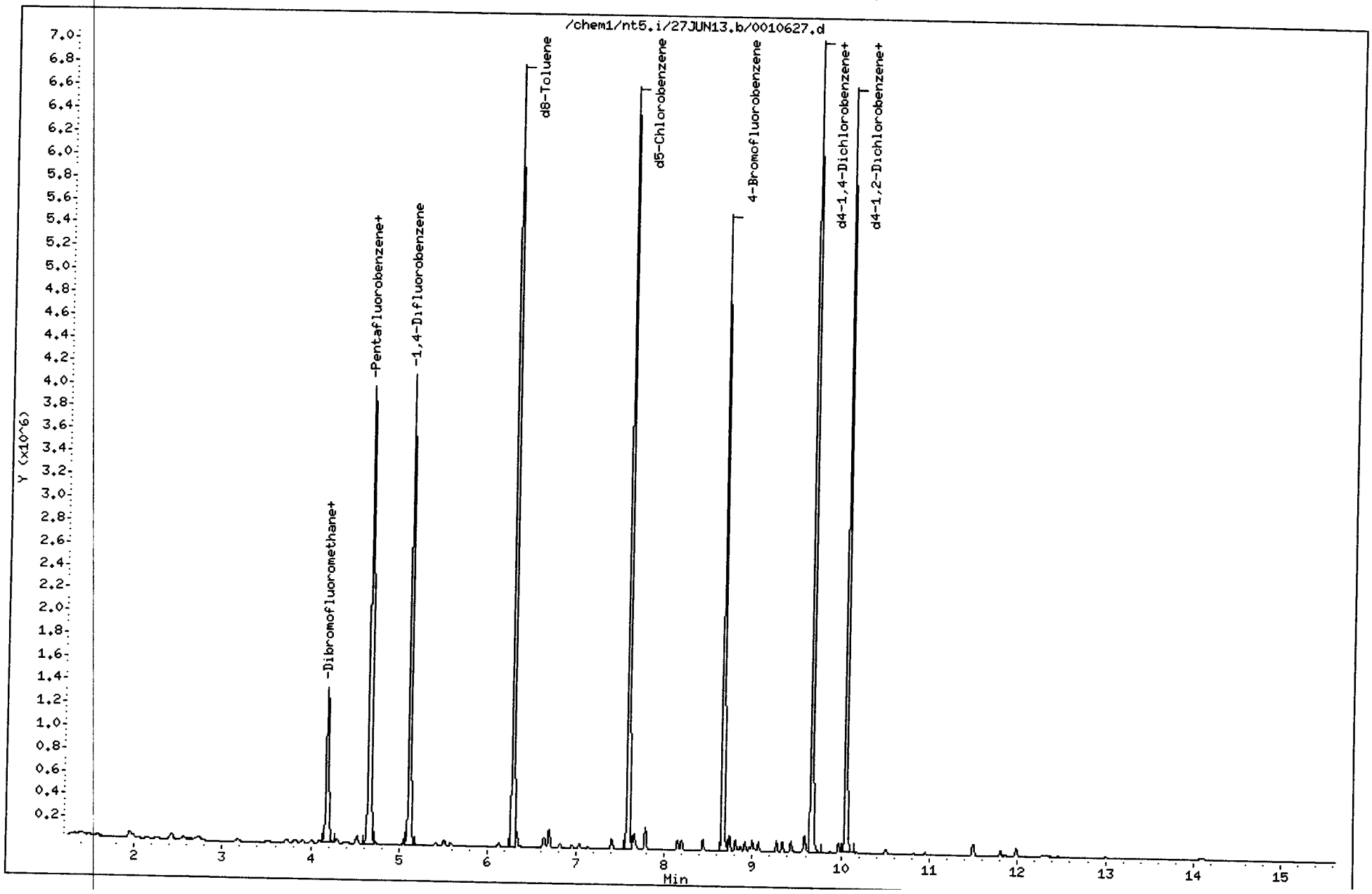
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/27JUN13.b/0010627.d
Date : 27-JUN-2013 10:43
Client ID: VSTD1
Sample Info: IC0627,5,5,0

Instrument: nt5.i

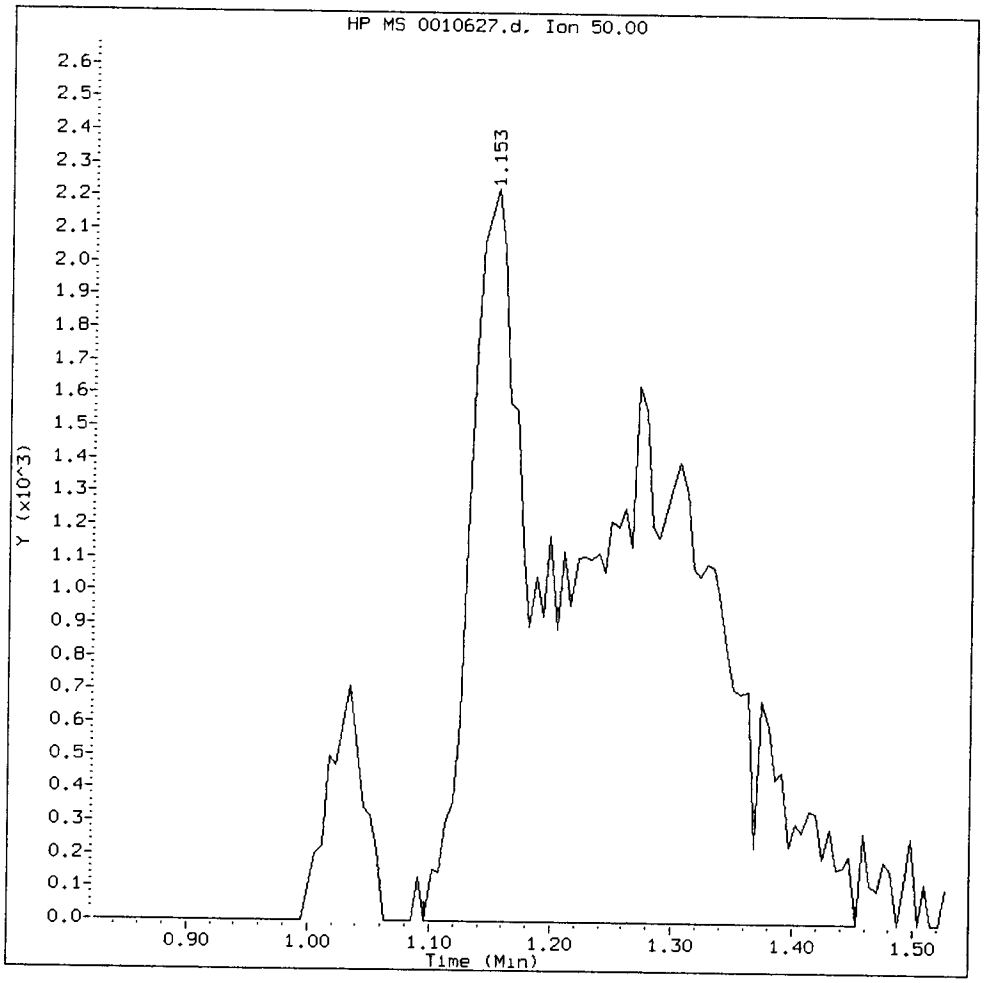
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



IC0627, /chem1/nt5.i/27JUN13.b/0010627.d

Chloromethane Amount: 0.92 Area: 19883



MANUAL INTEGRATION for Chloromethane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

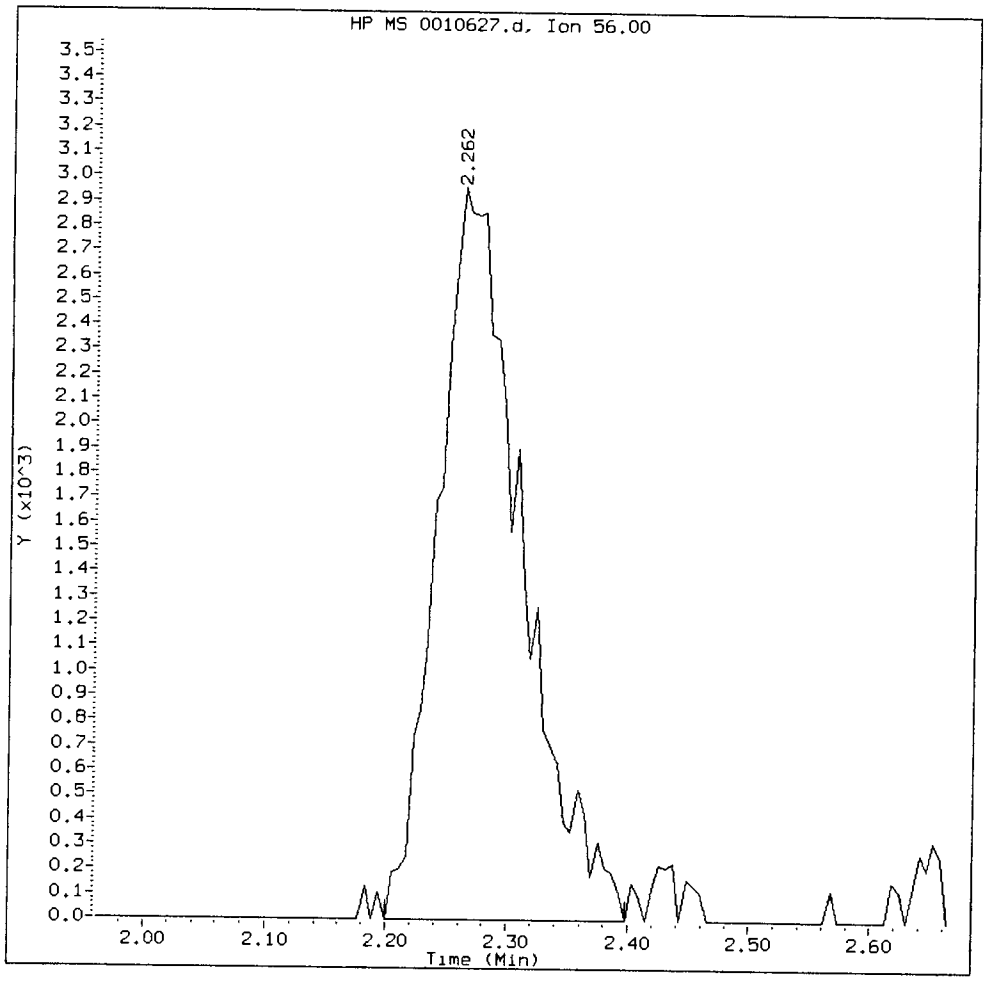
5. Other _____

Analyst: _____ Date: 6/27/13

WU78:08313

IC0627, /chem1/nt5.i/27JUN13.b/0010627.d

Acrolein Amount: 7.23 Area: 14275



MANUAL INTEGRATION for Acrolein

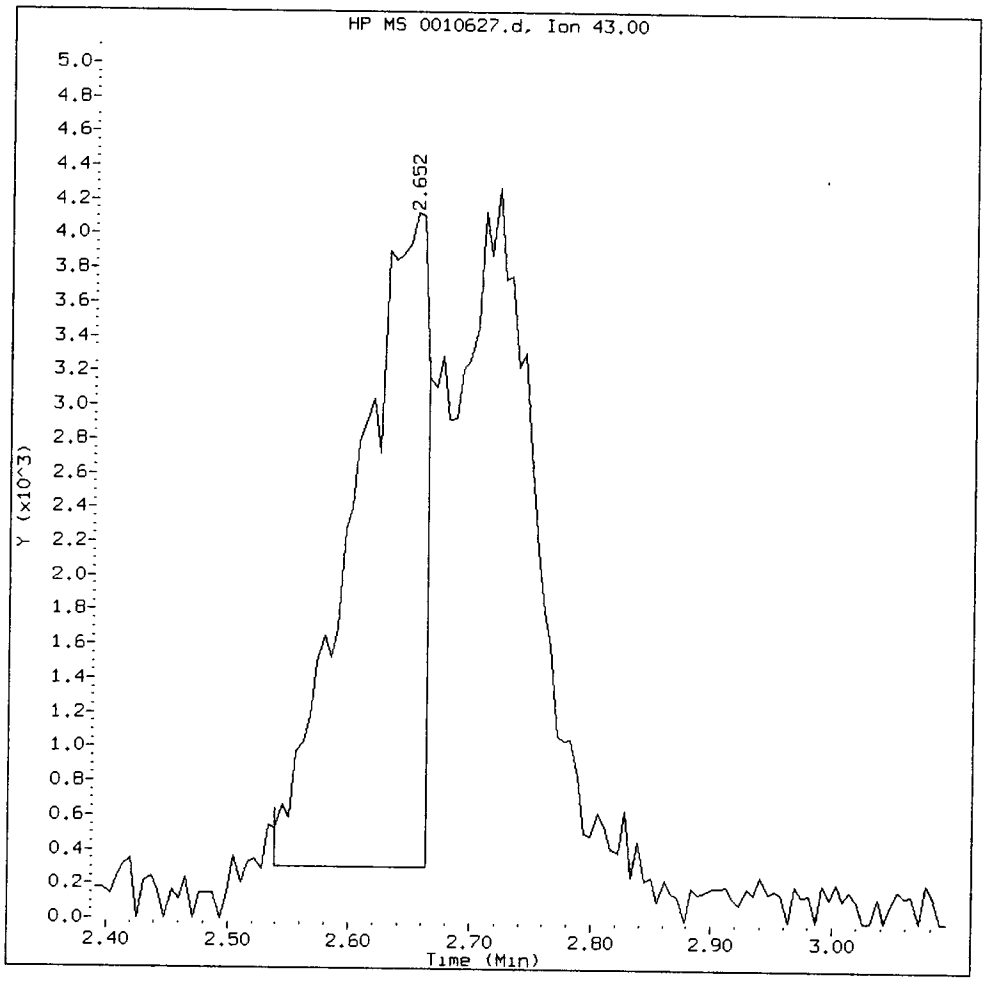
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/19/13

IC0627, /chem1/nt5.i/27JUN13.b/0010627.d

Acetone Amount: 5.37 Area: 16146



MANUAL INTEGRATION for Acetone

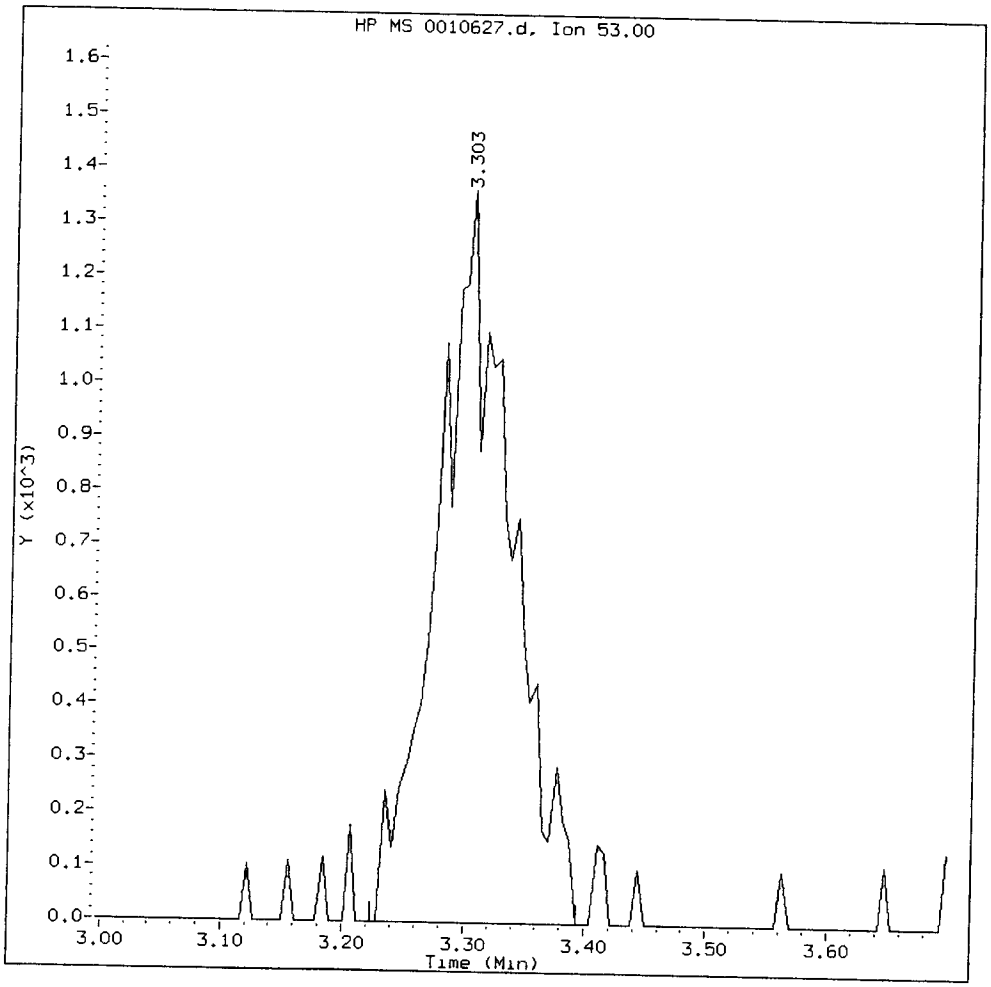
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/24/13

IC0627, /chem1/nt5.i/27JUN13.b/0010627.d

Acrylonitrile Amount: 0.89 Area: 5812



MANUAL INTEGRATION for Acrylonitrile

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

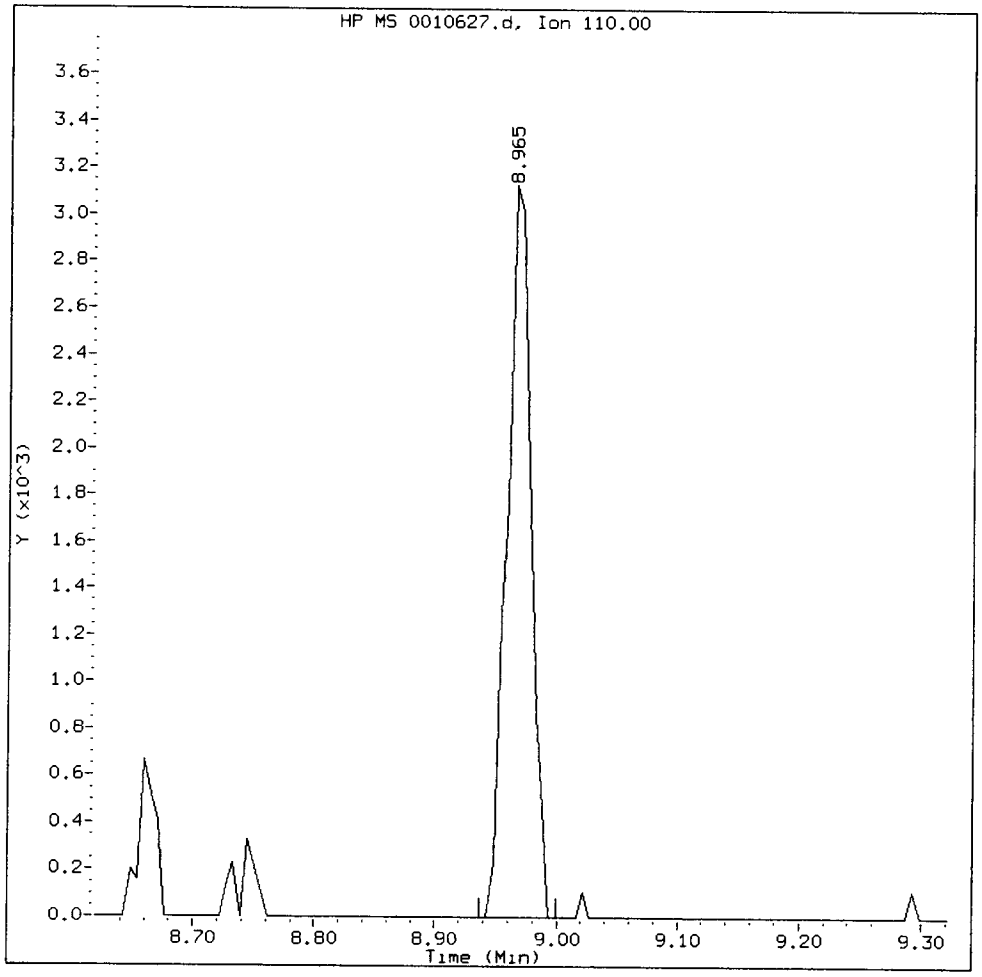
5. Other _____

Analyst: _____ Date: 6/19/13

WLTO: 00216

IC0627, /chem1/nt5.i/27JUN13.b/0010627.d

1,2,3-Trichloropropane Amount: 0.72 Area: 4305



MANUAL INTEGRATION for 1,2,3-Trichloropropane

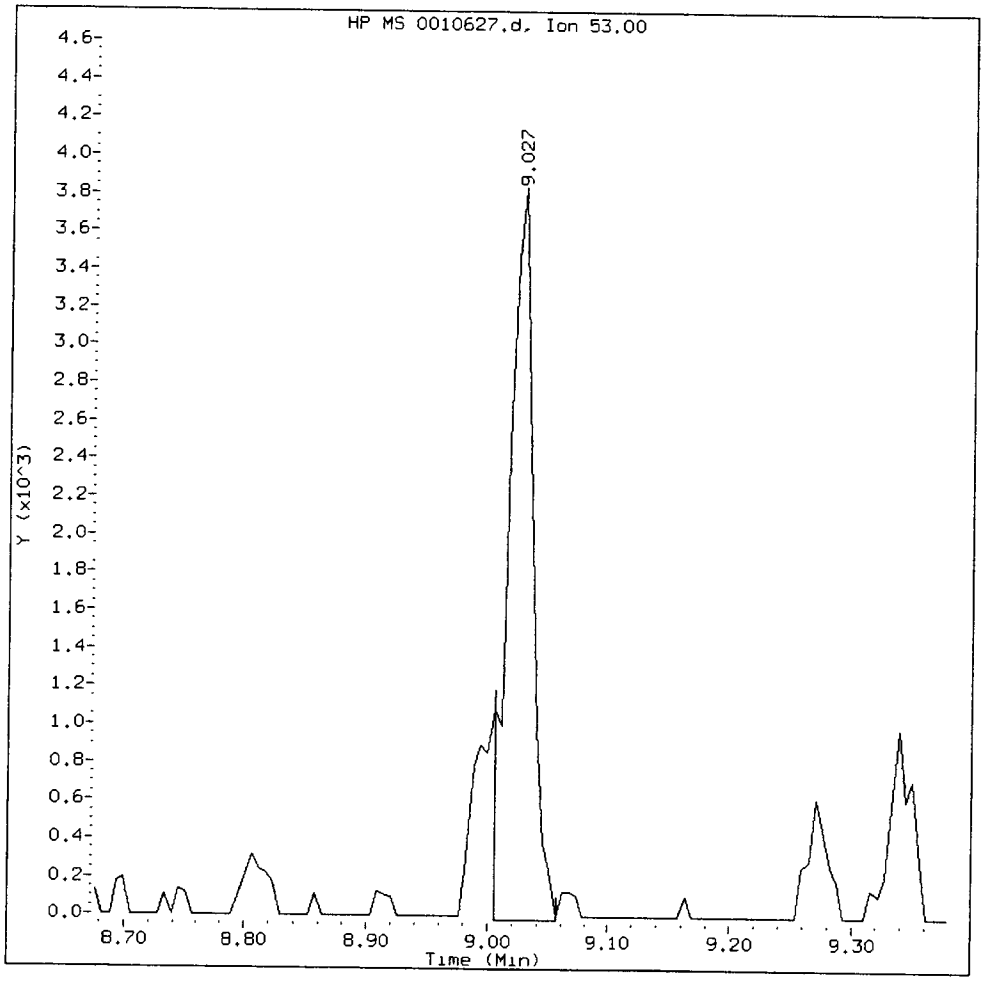
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: _____

IC0627, /chem1/nt5.i/27JUN13.b/0010627.d

Trans-1,4-Dichloro 2-Butene Amount: 0.76 Area: 5466



MANUAL INTEGRATION for Trans-1,4-Dichloro 2-Butene

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/27/13

CO-ELUTION SUMMARY FOR FILE - 0010627.d

Lab ID: IC0627, Method: VO121012S.m, Instrument: nt5.i, Date: 27-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/0020627.d
Lab Smp Id: IC0627 Client Smp ID: VSTD2
Inj Date : 27-JUN-2013 13:30
Operator : PB Inst ID: nt5.i
Smp Info : IC0627,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/27JUN13.b/VO121012S.m
Meth Date : 28-Jun-2013 12:58 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 13:30 Cal File: 0020627.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 * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.034	1.057	(0.222)	18633	2.00000	1.966
2 Chloromethane	50	1.159	1.176	(0.249)	40085	2.00000	2.062(M)
3 Vinyl Chloride	62	1.204	1.226	(0.258)	34556	2.00000	1.974
4 Bromomethane	94	1.407	1.436	(0.302)	23359	2.00000	2.328
5 Chloroethane	64	1.498	1.521	(0.321)	22250	2.00000	2.089
6 Trichlorofluoromethane	101	1.594	1.611	(0.342)	37004	2.00000	1.907
7 1,1-Dichloroethene	96	1.951	1.973	(0.419)	21025	2.00000	1.825
8 Carbon Disulfide	76	1.951	1.979	(0.419)	76025	2.00000	1.843
9 112Trichloro122Trifluoroethane	101	1.990	2.018	(0.427)	19849	2.00000	1.779
10 Iodomethane	142	2.047	2.075	(0.439)	12553	2.00000	1.359
11 Bromoethane	108	2.149	2.171	(0.461)	15339	2.00000	1.994
12 Acrolein	56	2.250	2.313	(0.483)	29063	10.0000	16.321
13 Methylene Chloride	84	2.420	2.454	(0.519)	43270	2.00000	3.025
14 Acetone	43	2.567	2.742	(0.551)	26160	10.0000	9.653(T)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.567	2.590	(0.551)	27549	2.00000	2.406
	16 Methyl tert butyl ether	73	2.743	2.754	(0.588)	80939	2.00000	2.293
	17 1,1-Dichloroethane	63	3.178	3.201	(0.682)	56485	2.00000	2.157
	18 Acrylonitrile	53	3.286	3.348	(0.705)	14098	2.00000	2.398
	19 Vinyl Acetate	43	3.518	3.540	(0.755)	75668	2.00000	2.141
	20 Cis-1,2-Dichloroethene	96	3.721	3.744	(0.798)	29141	2.00000	1.945
	22 2,2-Dichloropropane	77	3.829	3.840	(0.822)	40848	2.00000	1.879
	23 Bromochloromethane	128	3.908	3.930	(0.839)	12927	2.00000	1.975
	24 Chloroform	83	4.015	4.027	(0.862)	48894	2.00000	2.052
	25 Carbon Tetrachloride	117	4.106	4.117	(0.803)	34749	2.00000	1.898
$	27 Dibromofluoromethane	111	4.179	4.196	(0.897)	802261	50.0000	51.127
	26 1,1,1-Trichloroethane	97	4.174	4.185	(0.896)	43416	2.00000	1.989
	28 1,1-Dichloropropene	75	4.292	4.304	(0.840)	39153	2.00000	1.857
	29 2-Butanone	72	4.372	4.434	(0.938)	18866	10.0000	10.063
	30 Benzene	78	4.519	4.530	(0.884)	119862	2.00000	2.063
*	31 Pentafluorobenzene	168	4.660	4.671	(1.000)	1629659	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.655	4.666	(0.999)	914466	50.0000	51.284
	33 1,2-Dichloroethane	62	4.717	4.728	(0.923)	39683	2.00000	2.105
	34 Trichloroethene	95	5.056	5.067	(0.989)	27789	2.00000	1.894
*	35 1,4-Difluorobenzene	114	5.113	5.118	(1.000)	2671641	50.0000	
	37 Dibromomethane	93	5.413	5.424	(1.059)	16400	2.00000	2.048
	38 1,2-Dichloropropane	63	5.509	5.514	(1.077)	32506	2.00000	1.972
	39 Bromodichloromethane	83	5.582	5.588	(1.092)	36320	2.00000	1.990
	40 2-Chloroethyl Vinyl Ether	63	6.120	6.125	(1.197)	4628	2.00000	1.803
	41 Cis 1,3-dichloropropene	75	6.131	6.137	(1.199)	43692	2.00000	1.927
$	42 d8-Toluene	98	6.289	6.295	(1.230)	3324149	50.0000	50.196
	43 Toluene	92	6.329	6.335	(1.238)	75931	2.00000	2.066
	44 Tetrachloroethene	166	6.640	6.646	(0.875)	29933	2.00000	1.919
	45 4-Methyl-2-Pentanone	58	6.697	6.708	(1.310)	72642	10.0000	10.446
	46 Trans 1,3-Dichloropropene	75	6.691	6.702	(1.309)	41299	2.00000	1.987
	47 1,1,2-Trichloroethane	97	6.821	6.827	(1.334)	24834	2.00000	2.073
	48 Chlorodibromomethane	129	6.957	6.963	(0.917)	26380	2.00000	1.929
	49 1,3-Dichloropropane	76	7.042	7.047	(0.928)	42737	2.00000	1.950
	50 1,2-Dibromoethane	107	7.138	7.144	(1.396)	23916	2.00000	2.051
	51 2-Hexanone	43	7.409	7.421	(0.976)	117850	10.0000	10.315
	52 d5-Chlorobenzene	117	7.590	7.596	(1.000)	2648389	50.0000	
	53 Chlorobenzene	112	7.607	7.613	(1.002)	78342	2.00000	2.069
	54 Ethyl Benzene	91	7.653	7.664	(1.008)	133497	2.00000	2.073
	55 1,1,1,2-Tetrachloroethane	131	7.670	7.675	(1.010)	26187	2.00000	1.908
	56 m,p-xylene	106	7.788	7.794	(1.026)	98591	4.00000	4.079
	57 o-Xylene	106	8.150	8.156	(1.074)	43435	2.00000	1.821
	58 Styrene	104	8.201	8.201	(1.080)	76946	2.00000	1.968
	59 Bromoform	173	8.190	8.196	(0.847)	19342	2.00000	1.978
	60 Isopropyl Benzene	105	8.439	8.445	(0.873)	114164	2.00000	1.955
	62 4-Bromofluorobenzene	95	8.660	8.665	(1.141)	1410717	50.0000	50.049
	63 Bromobenzene	156	8.739	8.739	(0.904)	32239	2.00000	2.007
	64 N-Propyl Benzene	91	8.807	8.812	(0.911)	146840	2.00000	2.087

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	65 1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	33170	2.00000	2.049
	66 2-Chloro Toluene	91	8.914	8.920	(0.922)	86932	2.00000	1.960
	67 1,3,5-Trimethyl Benzene	105	8.993	8.999	(0.930)	97923	2.00000	1.945
	68 1,2,3-Trichloropropane	110	8.965	8.971	(0.927)	10222	2.00000	2.032(M)
	69 Trans-1,4-Dichloro 2-Butene	53	9.022	9.027	(0.933)	11084	2.00000	1.816(M)
	70 4-Chloro Toluene	91	9.067	9.073	(0.938)	91979	2.00000	1.993
	71 T-Butyl Benzene	119	9.271	9.276	(0.959)	83866	2.00000	1.875
	72 1,2,4-Trimethylbenzene	105	9.338	9.338	(0.966)	95574	2.00000	1.941
	73 S-Butyl Benzene	105	9.435	9.440	(0.976)	132576	2.00000	2.062
	74 4-Isopropyl Toluene	119	9.582	9.582	(0.991)	96589	2.00000	1.854
	75 1,3-Dichlorobenzene	146	9.593	9.599	(0.992)	61311	2.00000	2.089
*	76 d4-1,4-Dichlorobenzene	152	9.667	9.672	(1.000)	1408047	50.0000	
	77 1,4-Dichlorobenzene	146	9.678	9.683	(1.001)	62054	2.00000	2.044
	78 N-Butyl Benzene	91	9.966	9.966	(1.031)	88821	2.00000	1.817
$	79 d4-1,2-Dichlorobenzene	152	10.051	10.051	(1.040)	1292894	50.0000	50.342
	80 1,2-Dichlorobenzene	146	10.057	10.062	(1.040)	59303	2.00000	2.072
	81 1,2-Dibromo 3-Chloropropane	75	10.809	10.809	(1.118)	5842	2.00000	1.744
	82 Hexachloro 1,3-Butadiene	225	11.482	11.488	(1.188)	25501	2.00000	1.854
	83 1,2,4-Trichlorobenzene	180	11.477	11.477	(1.187)	37308	2.00000	1.746
	84 Naphthalene	128	11.788	11.788	(1.219)	92439	2.00000	1.960
	85 1,2,3-Trichlorobenzene	180	11.969	11.969	(1.238)	39344	2.00000	1.857

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: nt5.i
Lab File ID: 0020627.d
Lab Smp Id: IC0627
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 27-JUN-2013
Calibration Time: 17:46
Client Smp ID: VSTD2
Level: LOW
Sample Type: SOIL

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	1613586	806793	3227172	1629659	1.00
35 1,4-Difluorobenze	2656709	1328354	5313418	2671641	0.56
52 d5-Chlorobenzene	2557235	1278618	5114470	2648389	3.56
76 d4-1,4-Dichlorobe	1374359	687180	2748718	1408047	2.45

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.66	-0.24
35 1,4-Difluorobenze	5.12	4.62	5.62	5.11	-0.11
52 d5-Chlorobenzene	7.60	7.10	8.10	7.59	-0.07
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	-0.06

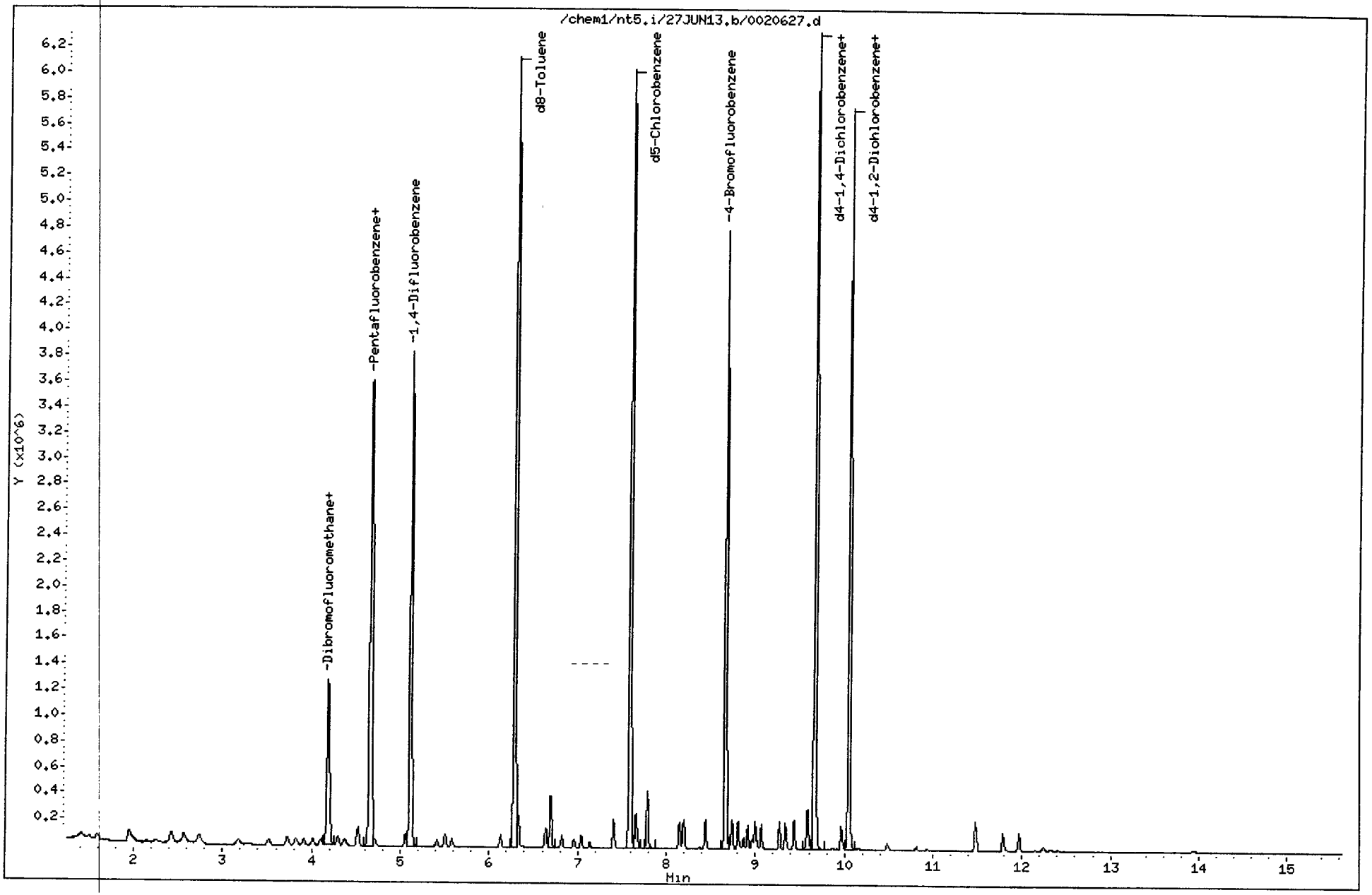
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/27JUN13.b/0020627.d
Date : 27-JUN-2013 13:30
Client ID: VSTD2
Sample Info: IC0627,5,5,0

Instrument: nt5.i

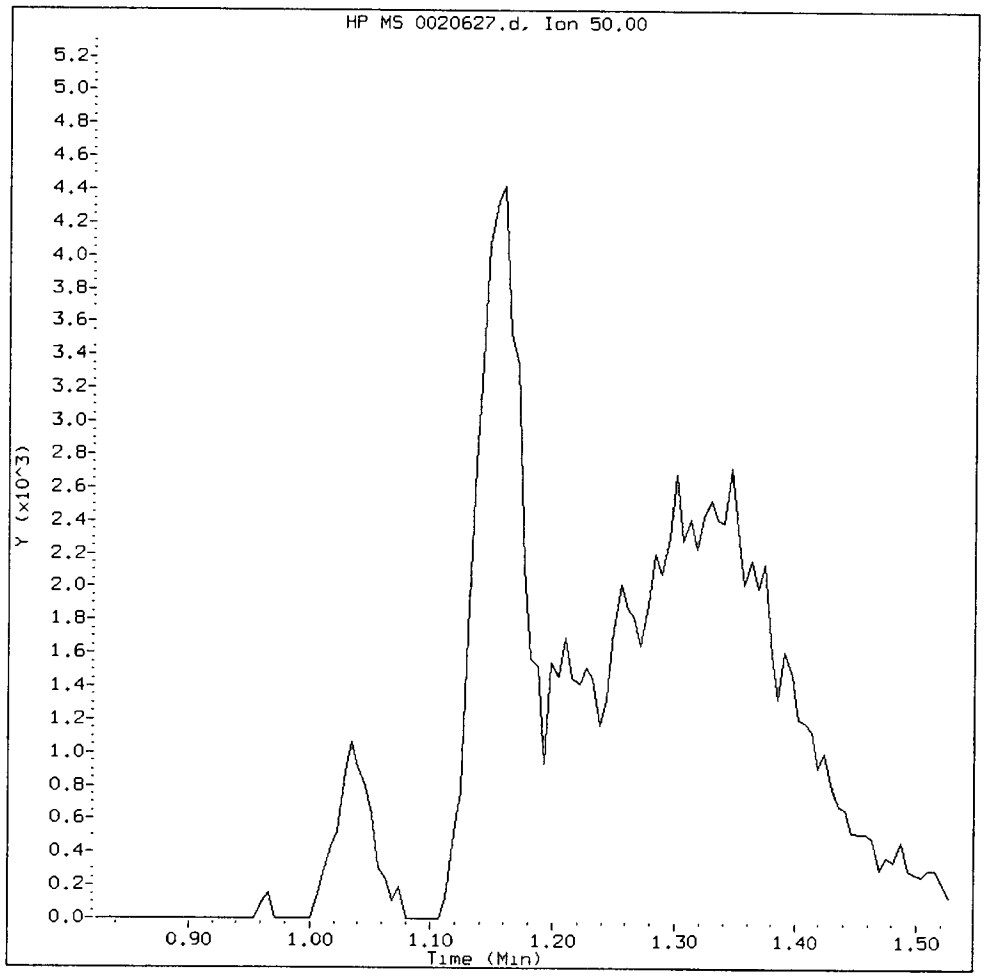
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



IC0627, /chem1/nt5.i/27JUN13.b/0020627.d

Chloromethane Amount: 2.06 Area: 40085



MANUAL INTEGRATION for Chloromethane

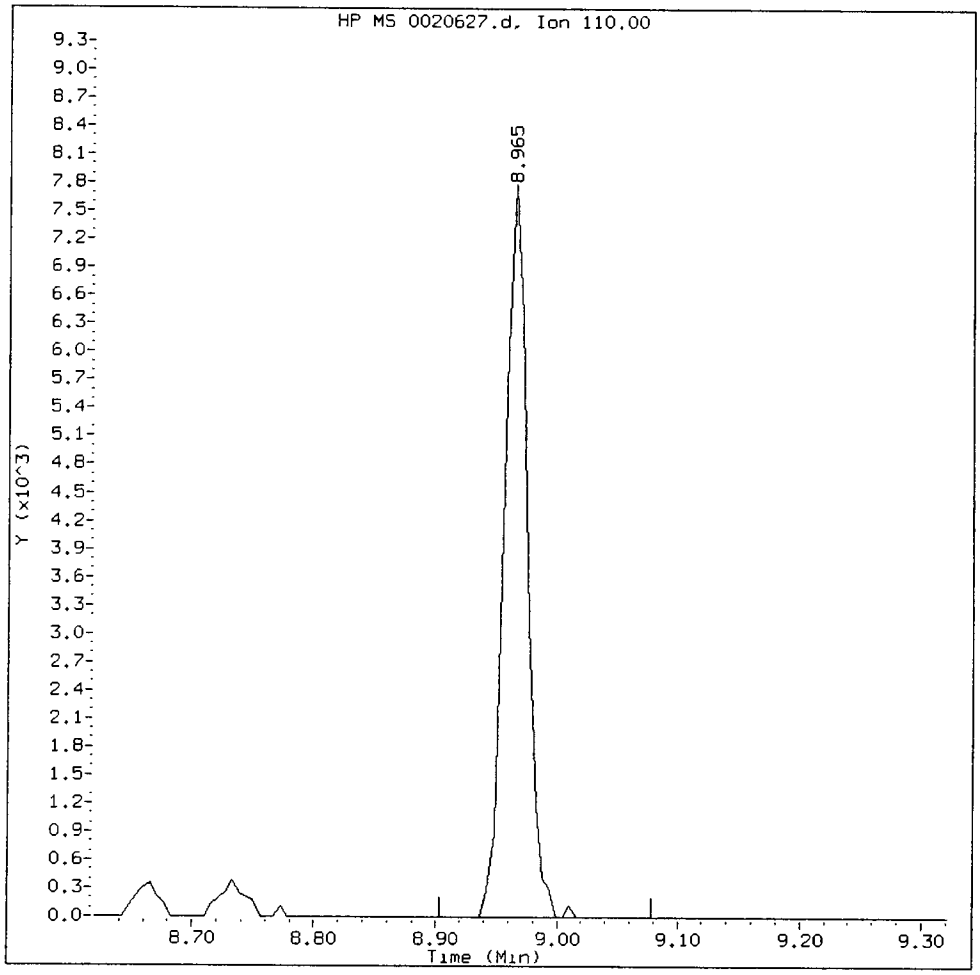
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/25/13

IC0627, /chem1/nt5.i/27JUN13.b/0020627.d

1,2,3-Trichloropropane Amount: 2.03 Area: 10222



MANUAL INTEGRATION for 1,2,3-Trichloropropane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

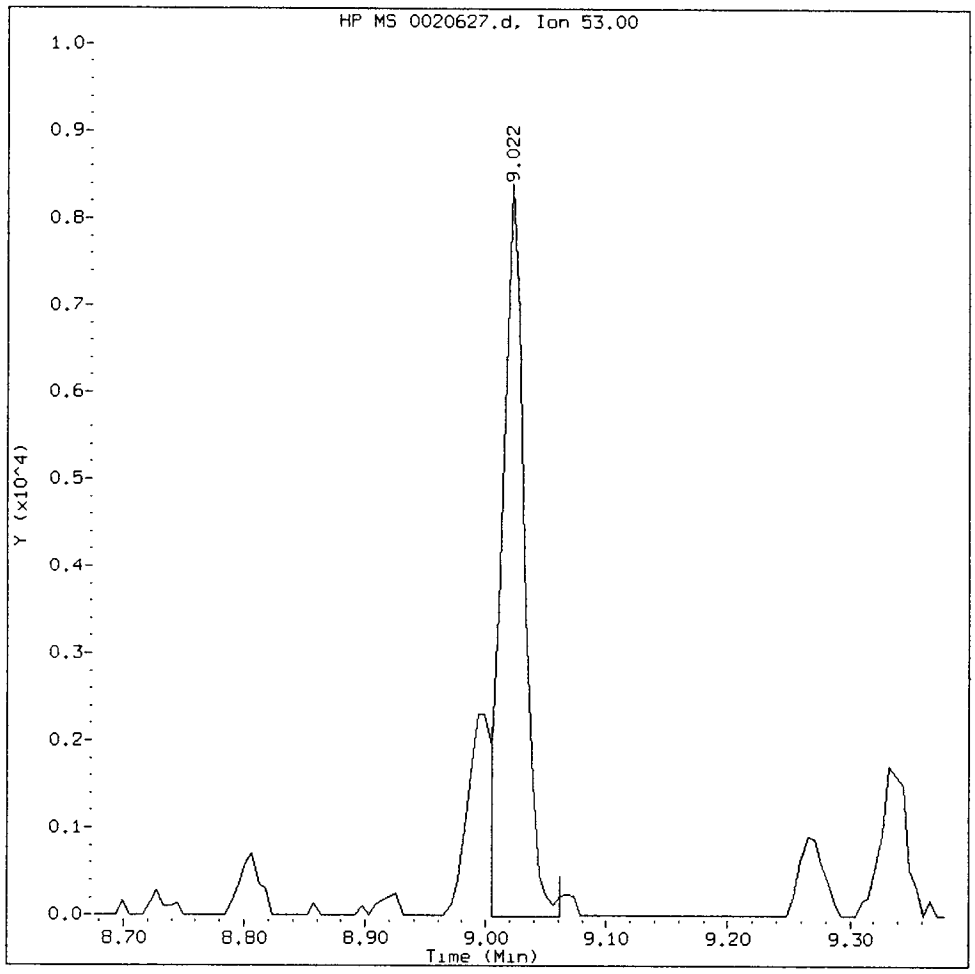
5. Other _____

Analyst: _____ Date: 6/28/13

WU79 : 00326

IC0627, /chem1/nt5.i/27JUN13.b/0020627.d

Trans-1,4-Dichloro 2-Butene Amount: 1.82 Area: 11084



MANUAL INTEGRATION for Trans-1,4-Dichloro 2-Butene

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/27/13

CO-ELUTION SUMMARY FOR FILE - 0020627.d

Lab ID: IC0627, Method: VO121012S.m, Instrument: nt5.i, Date: 27-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/0050627.d
Lab Smp Id: IC0627 Client Smp ID: VSTD5
Inj Date : 27-JUN-2013 13:07
Operator : PB Inst ID: nt5.i
Smp Info : IC0627,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/27JUN13.b/VO121012S.m
Meth Date : 28-Jun-2013 12:58 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 13:07 Cal File: 0050627.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 * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.040	1.057	(0.223)	45408	5.00000	4.609
2 Chloromethane	50	1.159	1.176	(0.249)	98602	5.00000	4.878(M)
3 Vinyl Chloride	62	1.210	1.226	(0.260)	91117	5.00000	5.006
4 Bromomethane	94	1.413	1.436	(0.303)	55800	5.00000	5.349
5 Chloroethane	64	1.504	1.521	(0.323)	56181	5.00000	5.073
6 Trichlorofluoromethane	101	1.594	1.611	(0.342)	97700	5.00000	4.842
7 1,1-Dichloroethene	96	1.956	1.973	(0.420)	65754	5.00000	5.490
8 Carbon Disulfide	76	1.956	1.979	(0.420)	244550	5.00000	5.702
9 112Trichloro122Trifluoroethane	101	1.996	2.018	(0.428)	63331	5.00000	5.458
10 Iodomethane	142	2.058	2.075	(0.442)	44618	5.00000	4.646
11 Bromoethane	108	2.154	2.171	(0.462)	48267	5.00000	6.034
12 Acrolein	56	2.290	2.313	(0.491)	88041	25.0000	47.550(M)
13 Methylene Chloride	84	2.437	2.454	(0.523)	84192	5.00000	5.662
14 Acetone	43	2.726	2.742	(0.585)	85702	25.0000	30.413

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.573	2.590	(0.552)	65159	5.00000	5.472
	16 Methyl tert butyl ether	73	2.737	2.754	(0.587)	194347	5.00000	5.295
	17 1,1-Dichloroethane	63	3.178	3.201	(0.682)	119187	5.00000	4.377
	18 Acrylonitrile	53	3.320	3.348	(0.712)	24420	5.00000	3.994
	19 Vinyl Acetate	43	3.523	3.540	(0.756)	194496	5.00000	5.292
	20 Cis-1,2-Dichloroethene	96	3.727	3.744	(0.800)	78612	5.00000	5.046
	22 2,2-Dichloropropane	77	3.823	3.840	(0.820)	110799	5.00000	4.902
	23 Bromochloromethane	128	3.919	3.930	(0.841)	34824	5.00000	5.117
	24 Chloroform	83	4.015	4.027	(0.862)	122048	5.00000	4.927
	25 Carbon Tetrachloride	117	4.100	4.117	(0.802)	89371	5.00000	4.680
$	27 Dibromofluoromethane	111	4.185	4.196	(0.898)	808248	50.0000	49.538
	26 1,1,1-Trichloroethane	97	4.174	4.185	(0.896)	110474	5.00000	4.868
	28 1,1-Dichloropropene	75	4.293	4.304	(0.840)	118318	5.00000	5.382
	29 2-Butanone	72	4.428	4.434	(0.950)	49974	25.0000	25.636
	30 Benzene	78	4.519	4.530	(0.884)	327283	5.00000	5.402
*	31 Pentafluorobenzene	168	4.660	4.671	(1.000)	1694501	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.655	4.666	(0.999)	932437	50.0000	50.291
	33 1,2-Dichloroethane	62	4.717	4.728	(0.923)	102107	5.00000	5.194
	34 Trichloroethene	95	5.056	5.067	(0.989)	76308	5.00000	4.986
*	35 1,4-Difluorobenzene	114	5.113	5.118	(1.000)	2786053	50.0000	
	37 Dibromomethane	93	5.418	5.424	(1.060)	41993	5.00000	5.030
	38 1,2-Dichloropropane	63	5.509	5.514	(1.077)	88910	5.00000	5.172
	39 Bromodichloromethane	83	5.582	5.588	(1.092)	97663	5.00000	5.131
	40 2-Chloroethyl Vinyl Ether	63	6.125	6.125	(1.198)	12077	5.00000	4.512
	41 Cis 1,3-dichloropropene	75	6.131	6.137	(1.199)	122097	5.00000	5.164
$	42 d8-Toluene	98	6.290	6.295	(1.230)	3474044	50.0000	50.305
	43 Toluene	92	6.329	6.335	(1.238)	201833	5.00000	5.266
	44 Tetrachloroethene	166	6.646	6.646	(0.876)	78122	5.00000	4.860
	45 4-Methyl-2-Pentanone	58	6.702	6.708	(1.311)	198236	25.0000	27.335
	46 Trans 1,3-Dichloropropene	75	6.697	6.702	(1.310)	111270	5.00000	5.134
	47 1,1,2-Trichloroethane	97	6.827	6.827	(1.335)	65169	5.00000	5.216
	48 Chlorodibromomethane	129	6.963	6.963	(0.917)	71042	5.00000	5.041
	49 1,3-Dichloropropane	76	7.042	7.047	(0.928)	117926	5.00000	5.222
	50 1,2-Dibromoethane	107	7.138	7.144	(1.396)	63114	5.00000	5.189
	51 2-Hexanone	43	7.415	7.421	(0.977)	325688	25.0000	27.661
*	52 d5-Chlorobenzene	117	7.591	7.596	(1.000)	2729297	50.0000	
	53 Chlorobenzene	112	7.608	7.613	(1.002)	205588	5.00000	5.268
	54 Ethyl Benzene	91	7.658	7.664	(1.009)	363346	5.00000	5.476
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.011)	72386	5.00000	5.118
	56 m,p-xylene	106	7.789	7.794	(1.026)	267917	10.0000	10.756
	57 o-Xylene	106	8.151	8.156	(1.074)	122769	5.00000	4.994
	58 Styrene	104	8.202	8.201	(1.080)	215113	5.00000	5.340
	59 Bromoform	173	8.190	8.196	(0.847)	50604	5.00000	5.037
	60 Isopropyl Benzene	105	8.439	8.445	(0.873)	327122	5.00000	5.452
$	62 4-Bromofluorobenzene	95	8.660	8.665	(1.141)	1452484	50.0000	50.003
	63 Bromobenzene	156	8.739	8.739	(0.904)	85360	5.00000	5.174
	64 N-Propyl Benzene	91	8.807	8.812	(0.911)	398204	5.00000	5.509

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	65 1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	84278	5.00000	5.069
	66 2-Chloro Toluene	91	8.914	8.920	(0.922)	238827	5.00000	5.242
	67 1,3,5-Trimethyl Benzene	105	8.993	8.999	(0.930)	274357	5.00000	5.304
	68 1,2,3-Trichloropropane	110	8.965	8.971	(0.927)	26520	5.00000	5.131
	69 Trans-1,4-Dichloro 2-Butene	53	9.022	9.027	(0.933)	30589	5.00000	4.879
	70 4-Chloro Toluene	91	9.067	9.073	(0.938)	248773	5.00000	5.246
	71 T-Butyl Benzene	119	9.271	9.276	(0.959)	240996	5.00000	5.246
	72 1,2,4-Trimethylbenzene	105	9.339	9.338	(0.966)	267624	5.00000	5.292
	73 S-Butyl Benzene	105	9.435	9.440	(0.976)	361231	5.00000	5.469
	74 4-Isopropyl Toluene	119	9.582	9.582	(0.991)	283044	5.00000	5.290
	75 1,3-Dichlorobenzene	146	9.593	9.599	(0.992)	158966	5.00000	5.272
*	76 d4-1,4-Dichlorobenzene	152	9.667	9.672	(1.000)	1446481	50.0000	
	77 1,4-Dichlorobenzene	146	9.678	9.683	(1.001)	160040	5.00000	5.132
	78 N-Butyl Benzene	91	9.966	9.966	(1.031)	251947	5.00000	5.018
$	79 d4-1,2-Dichlorobenzene	152	10.051	10.051	(1.040)	1317833	50.0000	49.950
	80 1,2-Dichlorobenzene	146	10.057	10.062	(1.040)	154268	5.00000	5.247
	81 1,2-Dibromo 3-Chloropropane	75	10.809	10.809	(1.118)	16230	5.00000	4.717
	82 Hexachloro 1,3-Butadiene	225	11.483	11.488	(1.188)	66293	5.00000	4.692
	83 1,2,4-Trichlorobenzene	180	11.471	11.477	(1.187)	97410	5.00000	4.438
	84 Naphthalene	128	11.788	11.788	(1.219)	238777	5.00000	4.929
	85 1,2,3-Trichlorobenzene	180	11.963	11.969	(1.238)	104146	5.00000	4.786

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 0050627.d
Lab Smp Id: IC0627
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 27-JUN-2013
Calibration Time: 17:46
Client Smp ID: VSTD5
Level: LOW
Sample Type: SOIL

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	1613586	806793	3227172	1694501	5.01
35 1,4-Difluorobenze	2656709	1328354	5313418	2786053	4.87
52 d5-Chlorobenzene	2557235	1278618	5114470	2729297	6.73
76 d4-1,4-Dichlorobe	1374359	687180	2748718	1446481	5.25

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.66	-0.24
35 1,4-Difluorobenze	5.12	4.62	5.62	5.11	-0.11
52 d5-Chlorobenzene	7.60	7.10	8.10	7.59	-0.07
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	-0.06

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/nt5.i/27JUN13.b/0050627.d

Date : 27-JUN-2013 13:07

Client ID: VSTD5

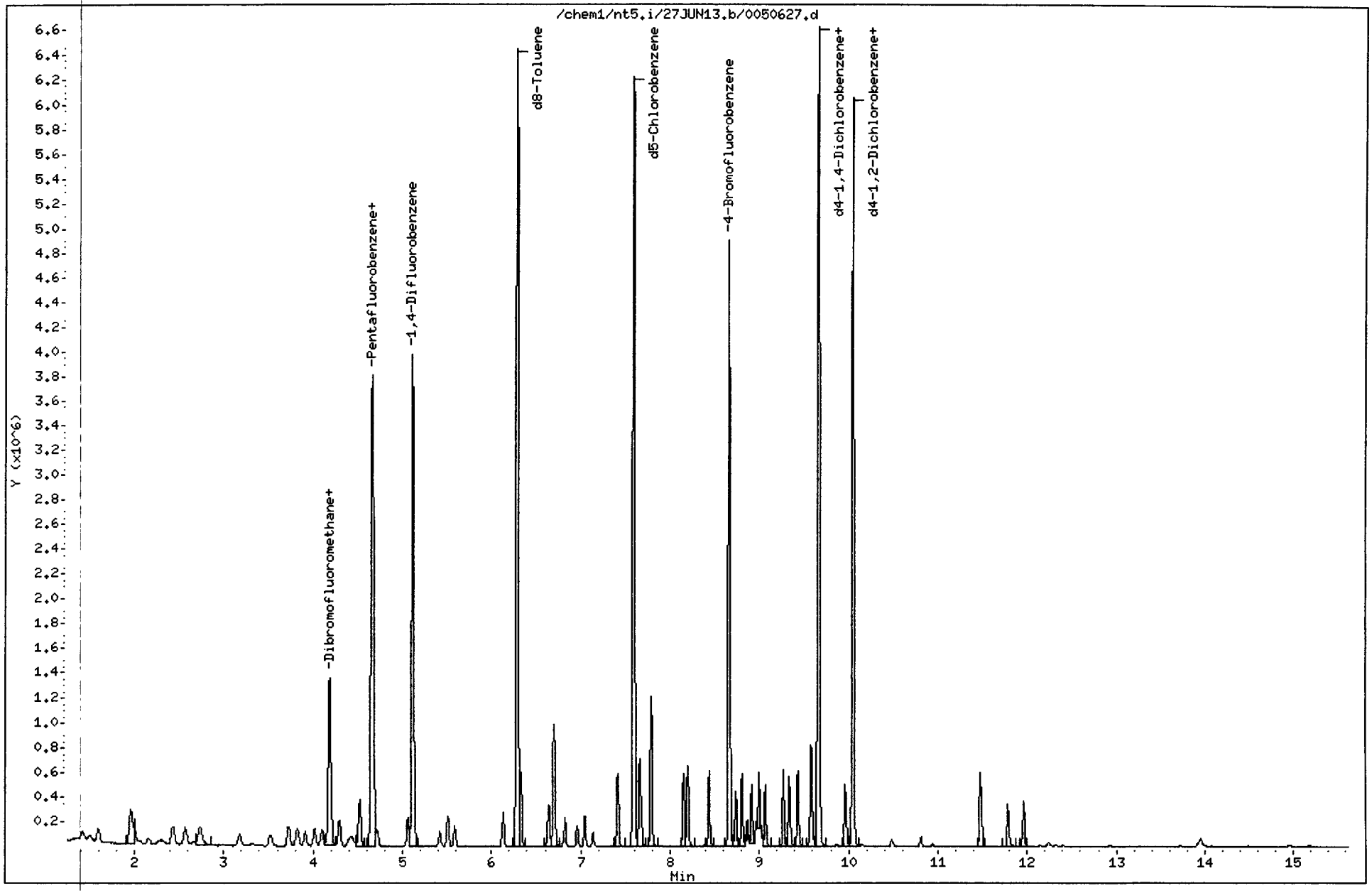
Sample Info: IC0627,5,5,0

Column phase: RTXVMS

Instrument: nt5.i

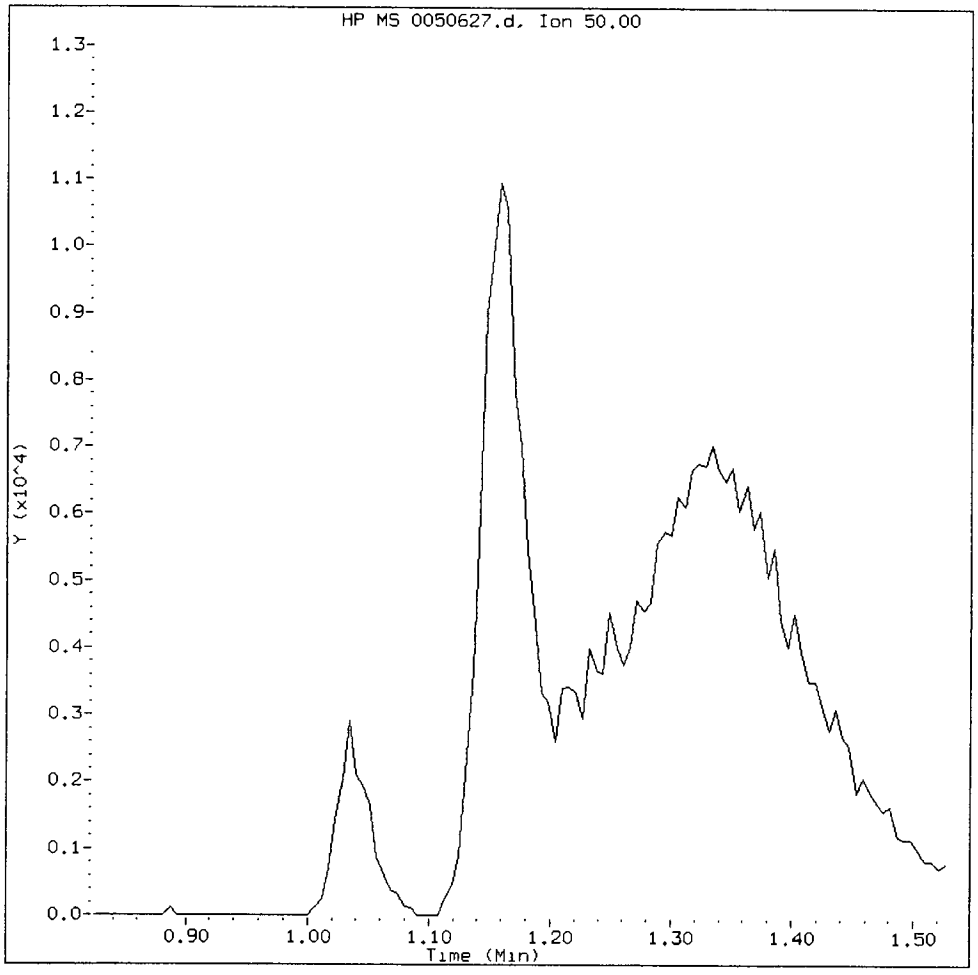
Operator: PB

Column diameter: 0.18



IC0627, /chem1/nt5.i/27JUN13.b/0050627.d

Chloromethane Amount: 4.88 Area: 98602



MANUAL INTEGRATION for Chloromethane

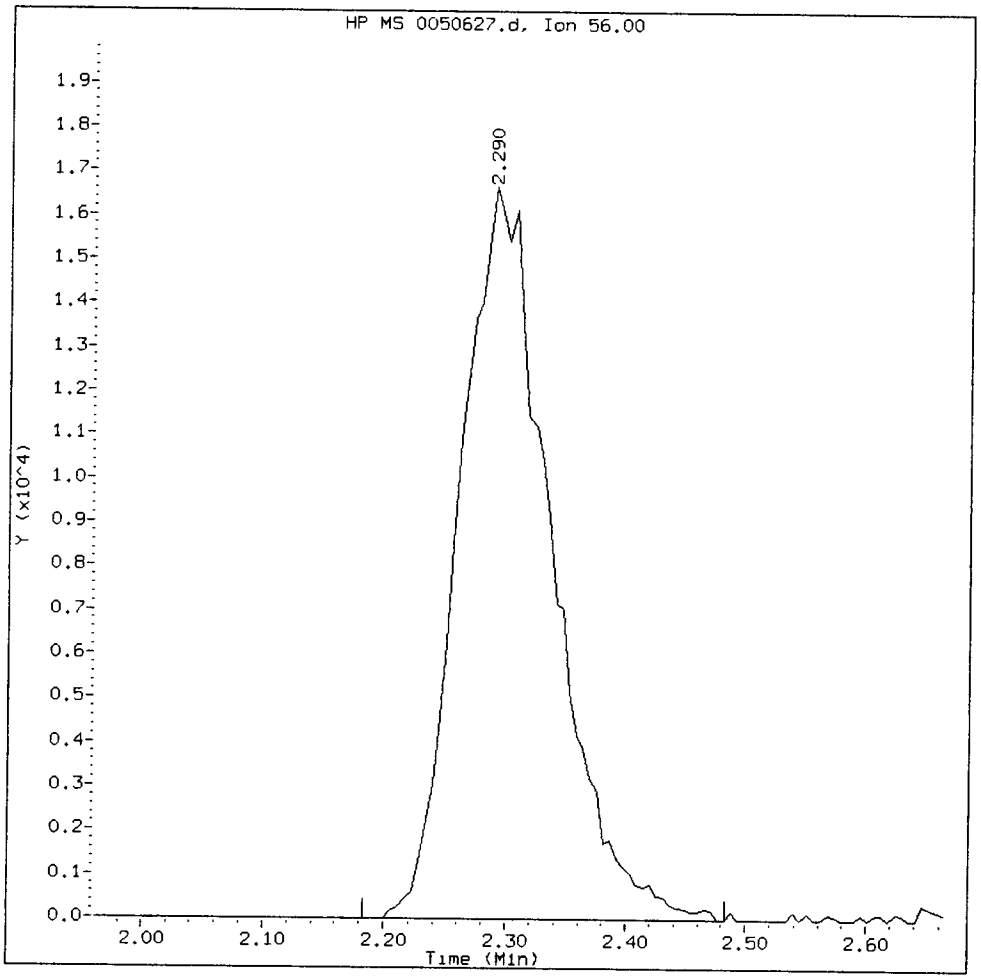
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/24

IC0627, /chem1/nt5.i/27JUN13.b/0050627.d

Acrolein Amount: 47.55 Area: 88041



MANUAL INTEGRATION for Acrolein

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/14

CO-ELUTION SUMMARY FOR FILE - 0050627.d

Lab ID: IC0627, Method: VO121012S.m, Instrument: nt5.i, Date: 27-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/0100627.d
Lab Smp Id: IC0627 Client Smp ID: VSTD10
Inj Date : 27-JUN-2013 12:43
Operator : PB Inst ID: nt5.i
Smp Info : IC0627,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/27JUN13.b/VO121012S.m
Meth Date : 28-Jun-2013 12:58 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 12:43 Cal File: 0100627.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 * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.034	1.057	(0.222)	89363	10.0000	8.917
2 Chloromethane	50	1.153	1.176	(0.248)	217525	10.0000	10.581(M)
3 Vinyl Chloride	62	1.204	1.226	(0.259)	177432	10.0000	9.583
4 Bromomethane	94	1.407	1.436	(0.302)	108543	10.0000	10.229
5 Chloroethane	64	1.498	1.521	(0.322)	114252	10.0000	10.143
6 Trichlorofluoromethane	101	1.589	1.611	(0.341)	209565	10.0000	10.212
7 1,1-Dichloroethene	96	1.945	1.973	(0.418)	125345	10.0000	10.290
8 Carbon Disulfide	76	1.951	1.979	(0.419)	445316	10.0000	10.209
9 112Trichloro122Trifluoroethane	101	1.984	2.018	(0.426)	115460	10.0000	9.784
10 Iodomethane	142	2.047	2.075	(0.440)	73617	10.0000	7.537
11 Bromoethane	108	2.143	2.171	(0.460)	75262	10.0000	9.250
12 Acrolein	56	2.245	2.313	(0.482)	100186	50.0000	53.197
13 Methylene Chloride	84	2.414	2.454	(0.519)	111292	10.0000	7.358
14 Acetone	43	2.584	2.742	(0.555)	124315	50.0000	43.372(TMH)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.550	2.590	(0.548)	107660	10.0000	8.889
	16 Methyl tert butyl ether	73	2.737	2.754	(0.588)	300456	10.0000	8.047
	17 1,1-Dichloroethane	63	3.155	3.201	(0.678)	308375	10.0000	11.135
	18 Acrylonitrile	53	3.297	3.348	(0.708)	73606	10.0000	11.836
	19 Vinyl Acetate	43	3.518	3.540	(0.756)	413045	10.0000	11.049
	20 Cis-1,2-Dichloroethene	96	3.716	3.744	(0.798)	174143	10.0000	10.989
	22 2,2-Dichloropropane	77	3.812	3.840	(0.819)	239566	10.0000	10.421
	23 Bromochloromethane	128	3.902	3.930	(0.838)	74964	10.0000	10.830
	24 Chloroform	83	4.010	4.027	(0.861)	265223	10.0000	10.526
	25 Carbon Tetrachloride	117	4.089	4.117	(0.801)	204737	10.0000	10.551
$	27 Dibromofluoromethane	111	4.179	4.196	(0.898)	841682	50.0000	50.718
	26 1,1,1-Trichloroethane	97	4.162	4.185	(0.894)	247736	10.0000	10.732
	28 1,1-Dichloropropene	75	4.281	4.304	(0.838)	247462	10.0000	11.076
	29 2-Butanone	72	4.400	4.434	(0.945)	107538	50.0000	54.236
	30 Benzene	78	4.513	4.530	(0.884)	714754	10.0000	11.608
*	31 Pentafluorobenzene	168	4.655	4.671	(1.000)	1723537	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.649	4.666	(0.999)	938616	50.0000	49.771
	33 1,2-Dichloroethane	62	4.711	4.728	(0.922)	217720	10.0000	10.898
	34 Trichloroethene	95	5.051	5.067	(0.989)	165611	10.0000	10.648
*	35 1,4-Difluorobenzene	114	5.107	5.118	(1.000)	2831384	50.0000	
	37 Dibromomethane	93	5.413	5.424	(1.060)	91646	10.0000	10.801
	38 1,2-Dichloropropane	63	5.503	5.514	(1.078)	194706	10.0000	11.145
	39 Bromodichloromethane	83	5.582	5.588	(1.093)	209640	10.0000	10.838
	40 2-Chloroethyl Vinyl Ether	63	6.120	6.125	(1.198)	27007	10.0000	9.929
	41 Cis 1,3-dichloropropene	75	6.131	6.137	(1.200)	270232	10.0000	11.246
$	42 d8-Toluene	98	6.284	6.295	(1.230)	3515193	50.0000	50.086
	43 Toluene	92	6.329	6.335	(1.239)	440309	10.0000	11.304
	44 Tetrachloroethene	166	6.640	6.646	(0.875)	172286	10.0000	10.612
	45 4-Methyl-2-Pentanone	58	6.702	6.708	(1.312)	425285	50.0000	57.704
	46 Trans 1,3-Dichloropropene	75	6.697	6.702	(1.311)	245188	10.0000	11.131
	47 1,1,2-Trichloroethane	97	6.821	6.827	(1.336)	139731	10.0000	11.005
	48 Chlorodibromomethane	129	6.963	6.963	(0.917)	152892	10.0000	10.743
	49 1,3-Dichloropropane	76	7.042	7.047	(0.928)	257803	10.0000	11.303
	50 1,2-Dibromoethane	107	7.138	7.144	(1.398)	136178	10.0000	11.018
	51 2-Hexanone	43	7.415	7.421	(0.977)	705941	50.0000	59.366
*	52 d5-Chlorobenzene	117	7.590	7.596	(1.000)	2756425	50.0000	
	53 Chlorobenzene	112	7.607	7.613	(1.002)	444430	10.0000	11.276
	54 Ethyl Benzene	91	7.653	7.664	(1.008)	791879	10.0000	11.817
	55 1,1,1,2-Tetrachloroethane	131	7.670	7.675	(1.010)	155300	10.0000	10.872
	56 m,p-xylene	106	7.788	7.794	(1.026)	588683	20.0000	23.401
	57 o-Xylene	106	8.151	8.156	(1.074)	278946	10.0000	11.235
	58 Styrene	104	8.196	8.201	(1.080)	472534	10.0000	11.614
	59 Bromoform	173	8.190	8.196	(0.847)	109291	10.0000	11.061
	60 Isopropyl Benzene	105	8.439	8.445	(0.873)	727122	10.0000	12.322
$	62 4-Bromofluorobenzene	95	8.660	8.665	(1.141)	1453706	50.0000	49.552
	63 Bromobenzene	156	8.739	8.739	(0.904)	183698	10.0000	11.321
	64 N-Propyl Benzene	91	8.807	8.812	(0.911)	874337	10.0000	12.299

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	180359	10.0000	11.029
66	2-Chloro Toluene	91	8.914	8.920	(0.922)	527000	10.0000	11.761
67	1,3,5-Trimethyl Benzene	105	8.993	8.999	(0.930)	610805	10.0000	12.007
68	1,2,3-Trichloropropane	110	8.965	8.971	(0.927)	55748	10.0000	10.967
69	Trans-1,4-Dichloro 2-Butene	53	9.022	9.027	(0.933)	64174	10.0000	10.407
70	4-Chloro Toluene	91	9.067	9.073	(0.938)	542967	10.0000	11.642
71	T-Butyl Benzene	119	9.271	9.276	(0.959)	536670	10.0000	11.877
72	1,2,4-Trimethylbenzene	105	9.338	9.338	(0.966)	597866	10.0000	12.020
73	S-Butyl Benzene	105	9.435	9.440	(0.976)	790302	10.0000	12.165
74	4-Isopropyl Toluene	119	9.582	9.582	(0.991)	640405	10.0000	12.169
75	1,3-Dichlorobenzene	146	9.593	9.599	(0.992)	338260	10.0000	11.407
* 76	d4-1,4-Dichlorobenzene	152	9.667	9.672	(1.000)	1422668	50.0000	
77	1,4-Dichlorobenzene	146	9.678	9.683	(1.001)	345667	10.0000	11.269
78	N-Butyl Benzene	91	9.966	9.966	(1.031)	570697	10.0000	11.556
$ 79	d4-1,2-Dichlorobenzene	152	10.051	10.051	(1.040)	1308425	50.0000	50.424
80	1,2-Dichlorobenzene	146	10.057	10.062	(1.040)	325311	10.0000	11.249
81	1,2-Dibromo 3-Chloropropane	75	10.809	10.809	(1.118)	34226	10.0000	10.115
82	Hexachloro 1,3-Butadiene	225	11.488	11.488	(1.188)	142380	10.0000	10.247
83	1,2,4-Trichlorobenzene	180	11.477	11.477	(1.187)	223995	10.0000	10.375
84	Naphthalene	128	11.788	11.788	(1.219)	532940	10.0000	11.185
85	1,2,3-Trichlorobenzene	180	11.969	11.969	(1.238)	226875	10.0000	10.600

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 0100627.d
Lab Smp Id: IC0627
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 27-JUN-2013
Calibration Time: 17:46
Client Smp ID: VSTD10
Level: LOW
Sample Type: SOIL

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	1613586	806793	3227172	1723537	6.81
35 1,4-Difluorobenze	2656709	1328354	5313418	2831384	6.57
52 d5-Chlorobenzene	2557235	1278618	5114470	2756425	7.79
76 d4-1,4-Dichlorobe	1374359	687180	2748718	1422668	3.52

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.67	4.17	5.17	4.65	-0.36
35 1,4-Difluorobenze	5.12	4.62	5.62	5.11	-0.22
52 d5-Chlorobenzene	7.60	7.10	8.10	7.59	-0.07
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	-0.06

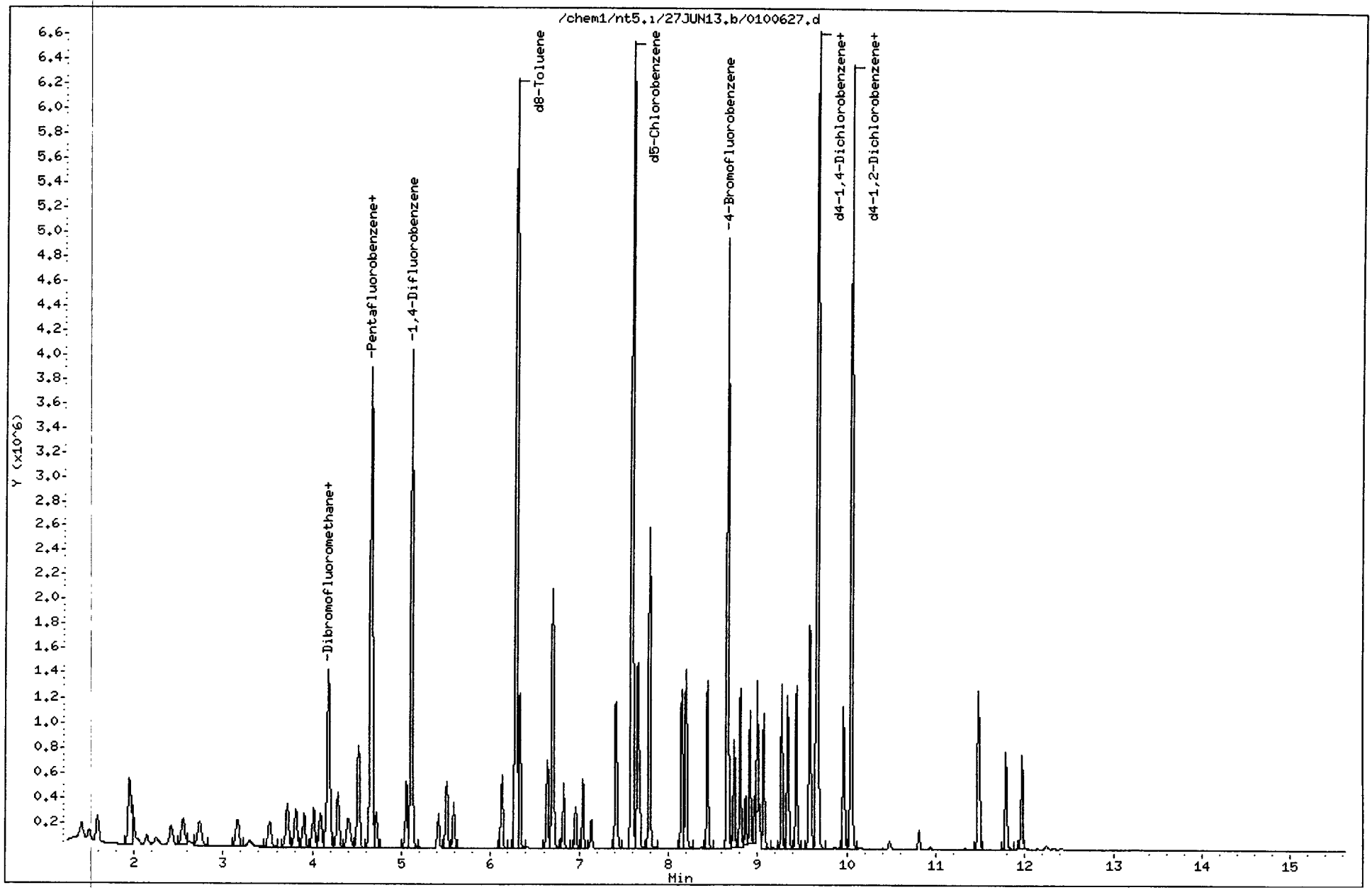
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/27JUN13.b/0100627.d
Date : 27-JUN-2013 12:43
Client ID: VSTD10
Sample Info: IC0627,5,5,0

Instrument: nt5.1

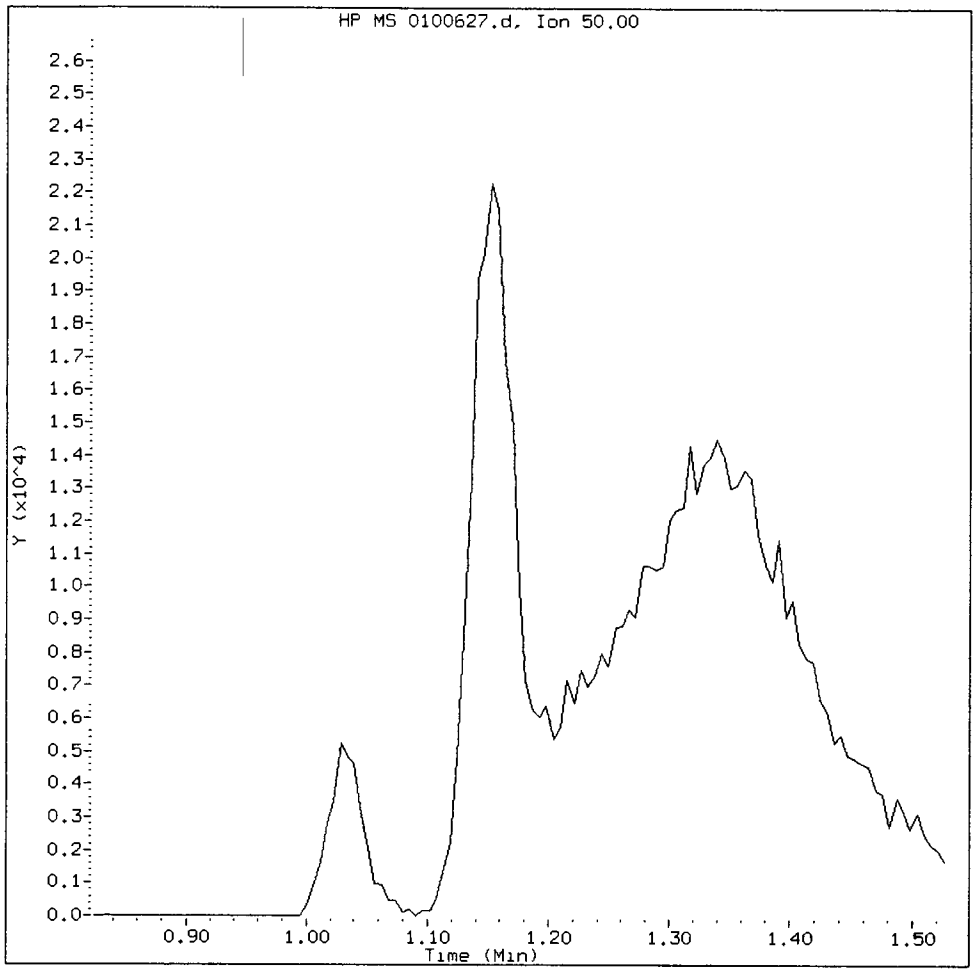
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



IC0627, /chem1/nt5.i/27JUN13.b/0100627.d

Chloromethane Amount: 10.58 Area: 217525



MANUAL INTEGRATION for Chloromethane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

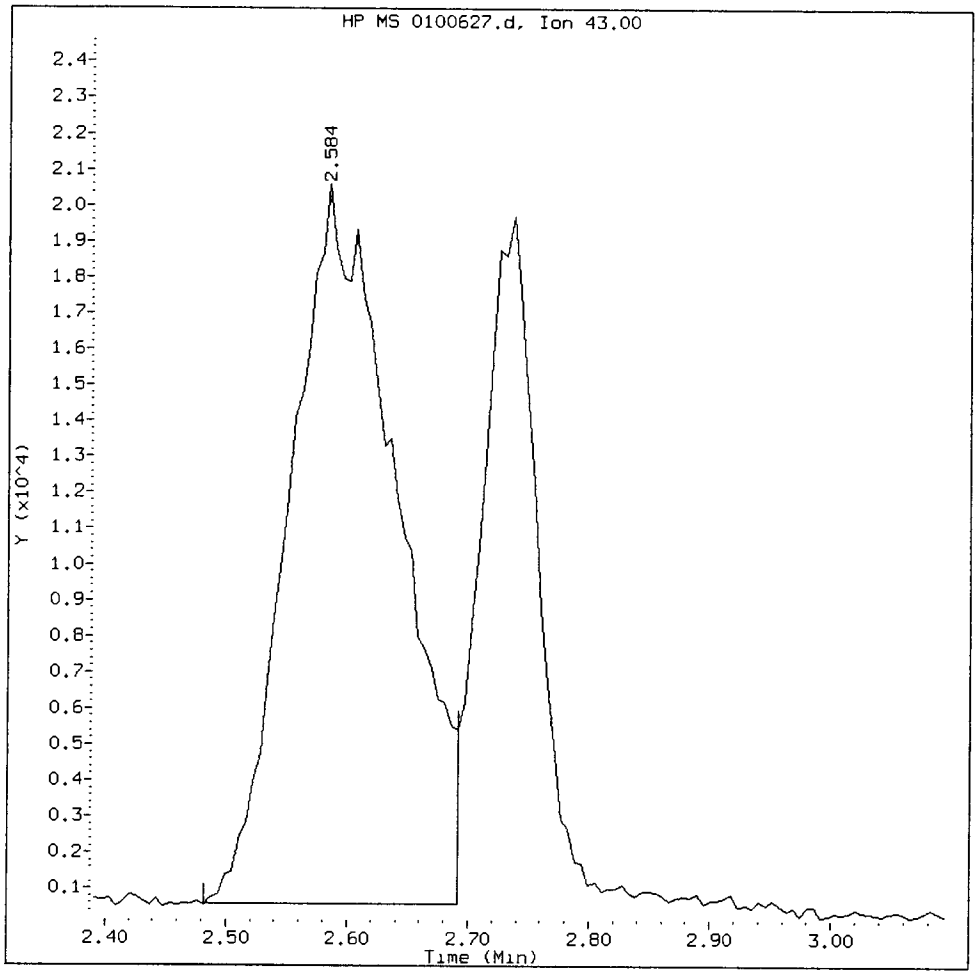
5. Other _____

Analyst: _____ Date: 6/24/13

WD13:00342

IC0627, /chem1/nt5.i/27JUN13.b/0100627.d

Acetone Amount: 43.37 Area: 124315



MANUAL INTEGRATION for Acetone

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/21/13

CO-ELUTION SUMMARY FOR FILE - 0100627.d

Lab ID: IC0627, Method: VO121012S.m, Instrument: nt5.i, Date: 27-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/0500627a.d
Lab Smp Id: IC0627 Client Smp ID: VSTD50
Inj Date : 27-JUN-2013 15:48
Operator : PB Inst ID: nt5.i
Smp Info : IC0627,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/27JUN13.b/VO121012S.m
Meth Date : 28-Jun-2013 12:58 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 15:48 Cal File: 0500627a.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 * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.028	1.028	(0.221)	539961	50.0000	57.553
2 Chloromethane	50	1.147	1.147	(0.246)	1033938	50.0000	53.721(M)
3 Vinyl Chloride	62	1.198	1.198	(0.257)	1004366	50.0000	57.944
4 Bromomethane	94	1.407	1.407	(0.302)	496390	50.0000	49.966
5 Chloroethane	64	1.492	1.492	(0.321)	589206	50.0000	55.874
6 Trichlorofluoromethane	101	1.583	1.583	(0.340)	1042947	50.0000	54.284
7 1,1-Dichloroethene	96	1.945	1.945	(0.418)	690512	50.0000	60.549
8 Carbon Disulfide	76	1.945	1.945	(0.418)	2478833	50.0000	60.698
9 112Trichloro122Trifluoroethane	101	1.990	1.990	(0.428)	693903	50.0000	62.805
10 Iodomethane	142	2.047	2.047	(0.440)	710144	50.0000	77.660
11 Bromoethane	108	2.143	2.143	(0.460)	487566	50.0000	64.004
12 Acrolein	56	2.301	2.301	(0.494)	362914	250.000	205.83(M)
13 Methylene Chloride	84	2.420	2.420	(0.520)	711184	50.0000	50.222
14 Acetone	43	2.725	2.725	(0.586)	750099	250.000	279.53(M)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.561	2.561	(0.550)	726949	50.0000	64.111
	16 Methyl tert butyl ether	73	2.725	2.725	(0.586)	1959040	50.0000	56.047
	17 1,1-Dichloroethane	63	3.172	3.172	(0.682)	1248938	50.0000	48.169
	18 Acrylonitrile	53	3.336	3.336	(0.717)	225507	50.0000	38.732
	19 Vinyl Acetate	43	3.517	3.517	(0.756)	1772791	50.0000	50.654
	20 Cis-1,2-Dichloroethene	96	3.721	3.721	(0.799)	772580	50.0000	52.074
	22 2,2-Dichloropropane	77	3.817	3.817	(0.820)	1158646	50.0000	53.836
	23 Bromochloromethane	128	3.908	3.908	(0.840)	328045	50.0000	50.622
	24 Chloroform	83	4.010	4.010	(0.861)	1200413	50.0000	50.886
	25 Carbon Tetrachloride	117	4.094	4.094	(0.802)	948930	50.0000	52.115
$	27 Dibromofluoromethane	111	4.179	4.179	(0.898)	736475	50.0000	47.402
	26 1,1,1-Trichloroethane	97	4.168	4.168	(0.895)	1113958	50.0000	51.547
	28 1,1-Dichloropropene	75	4.287	4.287	(0.839)	1102512	50.0000	52.591
	29 2-Butanone	72	4.428	4.428	(0.951)	449293	250.000	242.04
	30 Benzene	78	4.519	4.519	(0.885)	3091456	50.0000	53.510
*	31 Pentafluorobenzene	168	4.654	4.654	(1.000)	1613586	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.649	4.649	(0.999)	883484	50.0000	50.040
	33 1,2-Dichloroethane	62	4.711	4.711	(0.922)	951170	50.0000	50.743
	34 Trichloroethene	95	5.056	5.056	(0.990)	779694	50.0000	53.427
*	35 1,4-Difluorobenzene	114	5.107	5.107	(1.000)	2656709	50.0000	
	37 Dibromomethane	93	5.412	5.412	(1.060)	404953	50.0000	50.863
	38 1,2-Dichloropropane	63	5.503	5.503	(1.078)	849266	50.0000	51.806
	39 Bromodichloromethane	83	5.582	5.582	(1.093)	947181	50.0000	52.187
	40 2-Chloroethyl Vinyl Ether	63	6.120	6.120	(1.198)	151189	50.0000	59.236
	41 Cis 1,3-dichloropropene	75	6.131	6.131	(1.200)	1217103	50.0000	53.980
$	42 d8-Toluene	98	6.289	6.289	(1.232)	3256477	50.0000	49.450
	43 Toluene	92	6.329	6.329	(1.239)	1941825	50.0000	53.131
	44 Tetrachloroethene	166	6.646	6.646	(0.875)	824011	50.0000	54.707
	45 4-Methyl-2-Pentanone	58	6.702	6.702	(1.312)	1738379	250.000	251.37
	46 Trans 1,3-Dichloropropene	75	6.697	6.697	(1.311)	1083319	50.0000	52.415
	47 1,1,2-Trichloroethane	97	6.827	6.827	(1.337)	597946	50.0000	50.189
	48 Chlorodibromomethane	129	6.962	6.962	(0.917)	683963	50.0000	51.801
	49 1,3-Dichloropropane	76	7.042	7.042	(0.927)	1099272	50.0000	51.950
	50 1,2-Dibromoethane	107	7.138	7.138	(1.398)	593106	50.0000	51.140
	51 2-Hexanone	43	7.415	7.415	(0.976)	2796363	250.000	253.48
*	52 d5-Chlorobenzene	117	7.596	7.596	(1.000)	2557235	50.0000	
	53 Chlorobenzene	112	7.607	7.607	(1.001)	1937755	50.0000	52.994
	54 Ethyl Benzene	91	7.658	7.658	(1.008)	3514205	50.0000	56.525
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.010)	697740	50.0000	52.651
	56 m,p-xylene	106	7.794	7.794	(1.026)	2634940	100.000	112.90
	57 o-Xylene	106	8.156	8.156	(1.074)	1282915	50.0000	55.695
	58 Styrene	104	8.201	8.201	(1.080)	2141346	50.0000	56.732
	59 Bromoform	173	8.196	8.196	(0.847)	475860	50.0000	49.852
	60 Isopropyl Benzene	105	8.445	8.445	(0.873)	3303536	50.0000	57.950
$	62 4-Bromofluorobenzene	95	8.665	8.665	(1.141)	1366538	50.0000	50.209
	63 Bromobenzene	156	8.739	8.739	(0.903)	804085	50.0000	51.296
	64 N-Propyl Benzene	91	8.812	8.812	(0.911)	3927668	50.0000	57.191

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
	65 1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	766836	50.0000	48.539
	66 2-Chloro Toluene	91	8.920	8.920	(0.922)	2392152	50.0000	55.263
	67 1,3,5-Trimethyl Benzene	105	9.005	9.005	(0.931)	2807692	50.0000	57.132
	68 1,2,3-Trichloropropane	110	8.971	8.971	(0.927)	238221	50.0000	48.513
	69 Trans-1,4-Dichloro 2-Butene	53	9.027	9.027	(0.933)	294684	50.0000	49.470
	70 4-Chloro Toluene	91	9.072	9.072	(0.938)	2520724	50.0000	55.946
	71 T-Butyl Benzene	119	9.276	9.276	(0.959)	2465851	50.0000	56.491
	72 1,2,4-Trimethylbenzene	105	9.344	9.344	(0.966)	2769771	50.0000	57.641
	73 S-Butyl Benzene	105	9.440	9.440	(0.976)	3631905	50.0000	57.871
	74 4-Isopropyl Toluene	119	9.587	9.587	(0.991)	3032182	50.0000	59.641
	75 1,3-Dichlorobenzene	146	9.599	9.599	(0.992)	1544630	50.0000	53.919
*	76 d4-1,4-Dichlorobenzene	152	9.672	9.672	(1.000)	1374359	50.0000	
	77 1,4-Dichlorobenzene	146	9.689	9.689	(1.002)	1578891	50.0000	53.282
	78 N-Butyl Benzene	91	9.972	9.972	(1.031)	2897783	50.0000	60.739
$	79 d4-1,2-Dichlorobenzene	152	10.057	10.057	(1.040)	1237835	50.0000	49.380
	80 1,2-Dichlorobenzene	146	10.068	10.068	(1.041)	1449577	50.0000	51.889
	81 1,2-Dibromo 3-Chloropropane	75	10.815	10.815	(1.118)	150104	50.0000	45.919
	82 Hexachloro 1,3-Butadiene	225	11.505	11.505	(1.189)	712650	50.0000	53.090
	83 1,2,4-Trichlorobenzene	180	11.488	11.488	(1.188)	1126687	50.0000	54.023
	84 Naphthalene	128	11.805	11.805	(1.220)	2264939	50.0000	49.207
	85 1,2,3-Trichlorobenzene	180	11.986	11.986	(1.239)	1043041	50.0000	50.445

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 0500627a.d
Lab Smp Id: IC0627
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 27-JUN-2013
Calibration Time: 15:48
Client Smp ID: VSTD50
Level: LOW
Sample Type: SOIL

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	1613586	806793	3227172	1613586	0.00
35 1,4-Difluorobenze	2656709	1328354	5313418	2656709	0.00
52 d5-Chlorobenzene	2557235	1278618	5114470	2557235	0.00
76 d4-1,4-Dichlorobe	1374359	687180	2748718	1374359	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.65	4.15	5.15	4.65	0.00
35 1,4-Difluorobenze	5.11	4.61	5.61	5.11	0.00
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	0.00

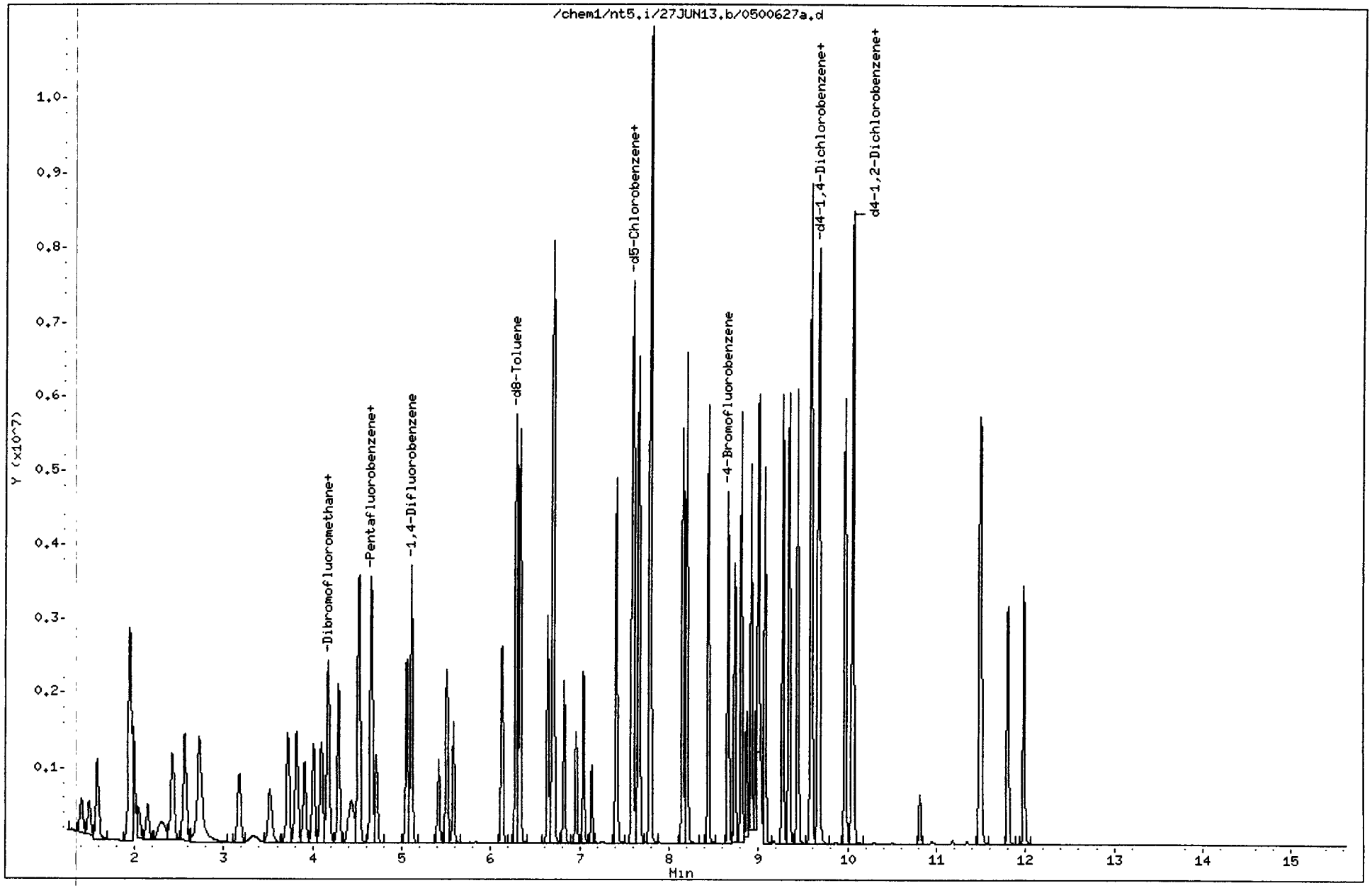
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/27JUN13.b/0500627a.d
Date : 27-JUN-2013 15:48
Client ID: VSTD50
Sample Info: IC0627,5,5,0

Column phase: RTXVMS

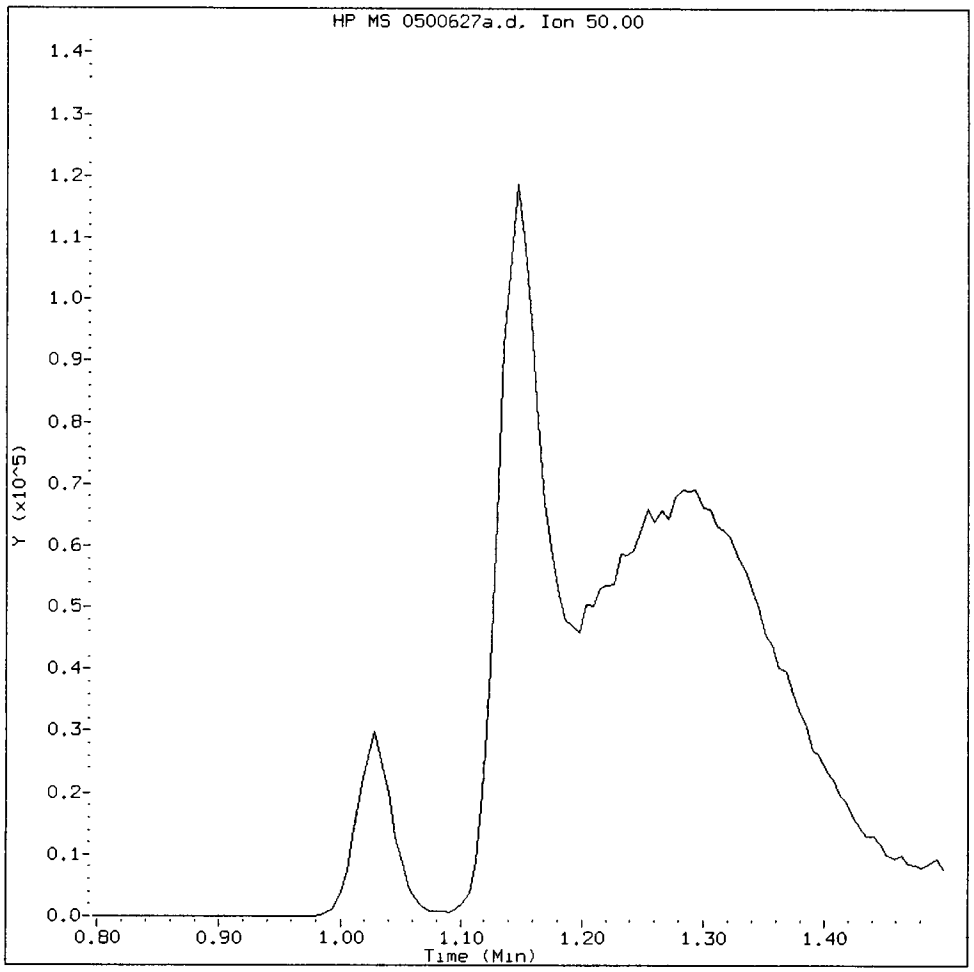
Instrument: nt5.i

Operator: PB
Column diameter: 0.18



IC0627, /chem1/nt5.i/27JUN13.b/0500627a.d

Chloromethane Amount: 53.72 Area: 1033938



MANUAL INTEGRATION for Chloromethane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/27/13

CO-ELUTION SUMMARY FOR FILE - 0500627a.d

Lab ID: IC0627, Method: VO121012S.m, Instrument: nt5.i, Date: 27-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/1000627.d
Lab Smp Id: IC0627 Client Smp ID: VSTD100
Inj Date : 27-JUN-2013 11:55
Operator : PB Inst ID: nt5.i
Smp Info : IC0627,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/27JUN13.b/VO121012S.m
Meth Date : 28-Jun-2013 12:58 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 11:55 Cal File: 1000627.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 * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.057	1.028	(0.226)	996484	100.000	97.591
2 Chloromethane	50	1.176	1.147	(0.252)	2073708	100.000	98.999(M)
3 Vinyl Chloride	62	1.227	1.198	(0.263)	2017304	100.000	106.94
4 Bromomethane	94	1.430	1.407	(0.307)	1010054	100.000	93.417
5 Chloroethane	64	1.521	1.492	(0.326)	1144851	100.000	99.753
6 Trichlorofluoromethane	101	1.611	1.583	(0.345)	2121930	100.000	101.48
7 1,1-Dichloroethene	96	1.968	1.945	(0.422)	1130056	100.000	91.047
8 Carbon Disulfide	76	1.968	1.945	(0.422)	3991456	100.000	89.803
9 112Trichloro122Trifluoroethane	101	2.007	1.990	(0.430)	1078299	100.000	89.675
10 Iodomethane	142	2.064	2.047	(0.442)	988310	100.000	99.306
11 Bromoethane	108	2.160	2.143	(0.463)	713548	100.000	86.066
12 Acrolein	56	2.267	2.301	(0.486)	956072	500.000	498.24
13 Methylene Chloride	84	2.432	2.420	(0.521)	910446	100.000	59.075
14 Acetone	43	2.596	2.725	(0.556)	1106904	500.000	379.02(TH)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.567	2.561	(0.550)	1016485	100.000	82.369
	16 Methyl tert butyl ether	73	2.765	2.725	(0.593)	2678889	100.000	70.420
	17 1,1-Dichloroethane	63	3.178	3.172	(0.681)	3163841	100.000	112.12
	18 Acrylonitrile	53	3.314	3.336	(0.710)	756417	100.000	119.37
	19 Vinyl Acetate	43	3.540	3.517	(0.759)	4046749	100.000	106.24
	20 Cis-1,2-Dichloroethene	96	3.733	3.721	(0.800)	1675659	100.000	103.78
	22 2,2-Dichloropropane	77	3.829	3.817	(0.821)	2418861	100.000	103.27
	23 Bromochloromethane	128	3.919	3.908	(0.840)	727039	100.000	103.09
	24 Chloroform	83	4.027	4.010	(0.863)	2661439	100.000	103.66
	25 Carbon Tetrachloride	117	4.100	4.094	(0.801)	2087996	100.000	105.41
$	27 Dibromofluoromethane	111	4.196	4.179	(0.899)	848027	50.0000	50.152
	26 1,1,1-Trichloroethane	97	4.174	4.168	(0.895)	2439128	100.000	103.71
	28 1,1-Dichloropropene	75	4.293	4.287	(0.839)	2321750	100.000	101.80
	29 2-Butanone	72	4.411	4.428	(0.945)	1084114	500.000	536.62
	30 Benzene	78	4.525	4.519	(0.884)	6370174	100.000	101.35
*	31 Pentafluorobenzene	168	4.666	4.654	(1.000)	1756133	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.649	(0.999)	936121	50.0000	48.717
	33 1,2-Dichloroethane	62	4.723	4.711	(0.923)	2065567	100.000	101.29
	34 Trichloroethene	95	5.062	5.056	(0.989)	1636716	100.000	103.09
*	35 1,4-Difluorobenzene	114	5.119	5.107	(1.000)	2890240	50.0000	
	37 Dibromomethane	93	5.418	5.412	(1.059)	897820	100.000	103.66
	38 1,2-Dichloropropane	63	5.515	5.503	(1.077)	1865186	100.000	104.58
	39 Bromodichloromethane	83	5.588	5.582	(1.092)	2046777	100.000	103.66
	40 2-Chloroethyl Vinyl Ether	63	6.125	6.120	(1.197)	289354	100.000	104.21
	41 Cis 1,3-dichloropropene	75	6.137	6.131	(1.199)	2626106	100.000	107.06
$	42 d8-Toluene	98	6.295	6.289	(1.230)	3580613	50.0000	49.979
	43 Toluene	92	6.335	6.329	(1.238)	4012420	100.000	100.91
	44 Tetrachloroethene	166	6.646	6.646	(0.875)	1683209	100.000	103.50
	45 4-Methyl-2-Pentanone	58	6.714	6.702	(1.312)	3940743	500.000	523.80
	46 Trans 1,3-Dichloropropene	75	6.702	6.697	(1.309)	2363181	100.000	105.10
	47 1,1,2-Trichloroethane	97	6.833	6.827	(1.335)	1333591	100.000	102.89
	48 Chlorodibromomethane	129	6.968	6.962	(0.917)	1510254	100.000	105.93
	49 1,3-Dichloropropane	76	7.048	7.042	(0.928)	2429216	100.000	106.32
	50 1,2-Dibromoethane	107	7.144	7.138	(1.396)	1320785	100.000	104.68
	51 2-Hexanone	43	7.421	7.415	(0.977)	6261913	500.000	525.69
*	52 d5-Chlorobenzene	117	7.596	7.596	(1.000)	2761179	50.0000	
	53 Chlorobenzene	112	7.613	7.607	(1.002)	3957643	100.000	100.24
	54 Ethyl Benzene	91	7.664	7.658	(1.009)	6656793	100.000	99.165
	55 1,1,1,2-Tetrachloroethane	131	7.681	7.675	(1.011)	1484227	100.000	103.73
	56 m,p-xylene	106	7.800	7.794	(1.027)	5127453	200.000	203.47
	57 o-Xylene	106	8.156	8.156	(1.074)	2688608	100.000	108.10
	58 Styrene	104	8.207	8.201	(1.080)	4332016	100.000	106.29
	59 Bromoform	173	8.202	8.196	(0.848)	1069886	100.000	106.45
	60 Isopropyl Benzene	105	8.445	8.445	(0.873)	6296814	100.000	104.91
$	62 4-Bromofluorobenzene	95	8.665	8.665	(1.141)	1467338	50.0000	49.931
	63 Bromobenzene	156	8.745	8.739	(0.904)	1701889	100.000	103.12
	64 N-Propyl Benzene	91	8.812	8.812	(0.911)	7144564	100.000	98.807

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.875	8.869	(0.918)	1736506	100.000	104.40
66	2-Chloro Toluene	91	8.926	8.920	(0.923)	4758188	100.000	104.40
67	1,3,5-Trimethyl Benzene	105	9.005	9.005	(0.931)	5446341	100.000	105.26
68	1,2,3-Trichloropropane	110	8.971	8.971	(0.927)	537721	100.000	104.01
69	Trans-1,4-Dichloro 2-Butene	53	9.033	9.027	(0.934)	686387	100.000	109.44
70	4-Chloro Toluene	91	9.078	9.072	(0.939)	4919486	100.000	103.70
71	T-Butyl Benzene	119	9.276	9.276	(0.959)	4895282	100.000	106.51
72	1,2,4-Trimethylbenzene	105	9.344	9.344	(0.966)	5340614	100.000	105.56
73	S-Butyl Benzene	105	9.440	9.440	(0.976)	6684191	100.000	101.16
74	4-Isopropyl Toluene	119	9.588	9.587	(0.991)	5654077	100.000	105.63
75	1,3-Dichlorobenzene	146	9.599	9.599	(0.992)	3012769	100.000	99.885
* 76	d4-1,4-Dichlorobenzene	152	9.672	9.672	(1.000)	1447038	50.0000	
77	1,4-Dichlorobenzene	146	9.689	9.689	(1.002)	3107728	100.000	99.608
78	N-Butyl Benzene	91	9.972	9.972	(1.031)	5406257	100.000	107.63
$ 79	d4-1,2-Dichlorobenzene	152	10.057	10.057	(1.040)	1293292	50.0000	49.001
80	1,2-Dichlorobenzene	146	10.063	10.068	(1.040)	2918814	100.000	99.235
81	1,2-Dibromo 3-Chloropropane	75	10.815	10.815	(1.118)	355029	100.000	103.15
82	Hexachloro 1,3-Butadiene	225	11.494	11.505	(1.188)	1395873	100.000	98.764
83	1,2,4-Trichlorobenzene	180	11.483	11.488	(1.187)	2217824	100.000	101.00
84	Naphthalene	128	11.794	11.805	(1.219)	4886257	100.000	100.83
85	1,2,3-Trichlorobenzene	180	11.975	11.986	(1.238)	2134912	100.000	98.066

QC Flag Legend

T - Target compound detected outside RT window.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: 1000627.d
Lab Smp Id: IC0627
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 27-JUN-2013
Calibration Time: 15:48
Client Smp ID: VSTD100
Level: LOW
Sample Type: SOIL

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	1613586	806793	3227172	1756133	8.83
35 1,4-Difluorobenze	2656709	1328354	5313418	2890240	8.79
52 d5-Chlorobenzene	2557235	1278618	5114470	2761179	7.98
76 d4-1,4-Dichlorobe	1374359	687180	2748718	1447038	5.29

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.65	4.15	5.15	4.67	0.25
35 1,4-Difluorobenze	5.11	4.61	5.61	5.12	0.23
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 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: /chem1/nt5.i/27JUN13.b/1000627.d

Date : 27-JUN-2013 11:55

Client ID: VSTD100

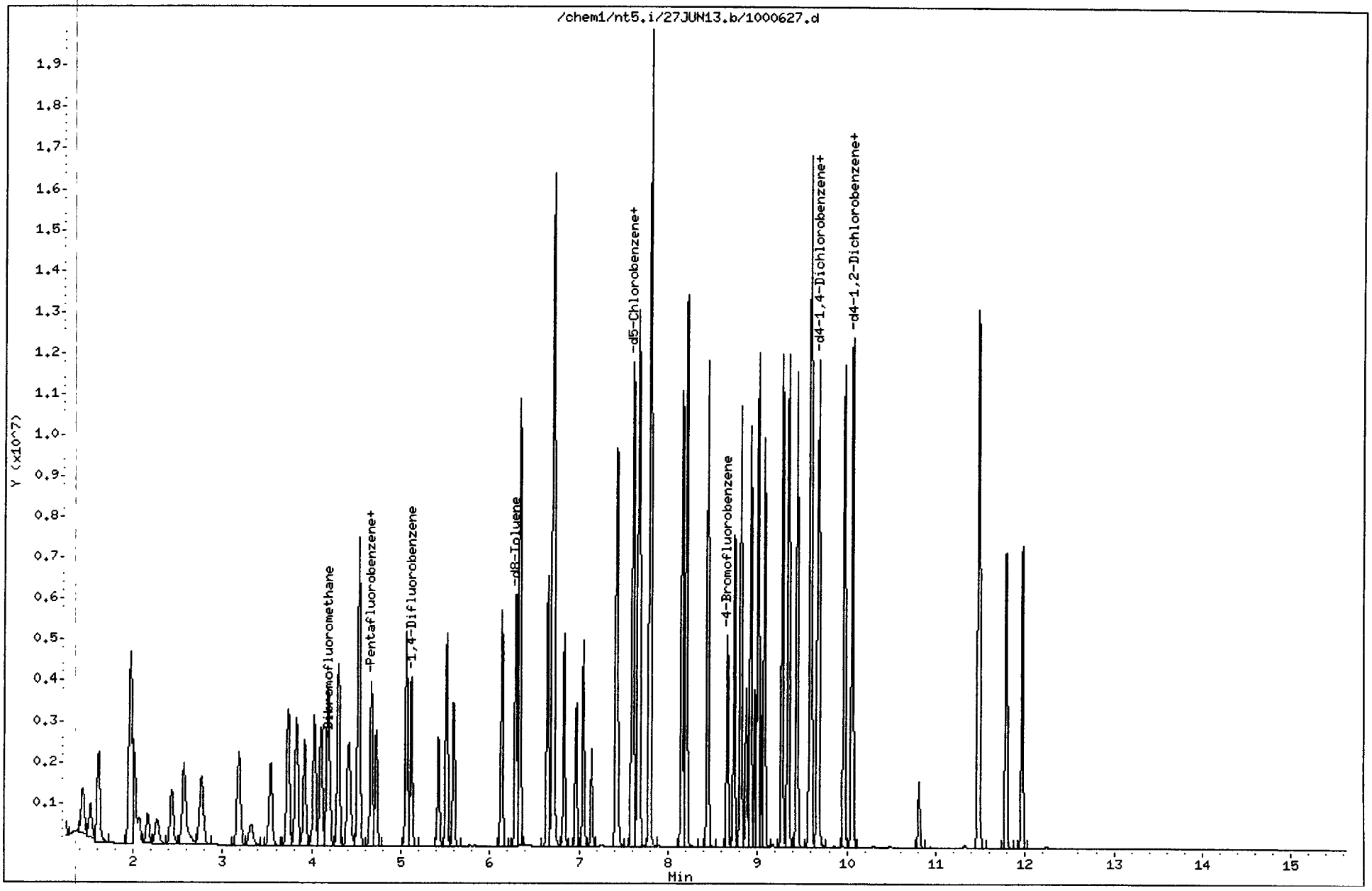
Sample Info: IC0627,5,5,0

Instrument: nt5.i

Operator: PB

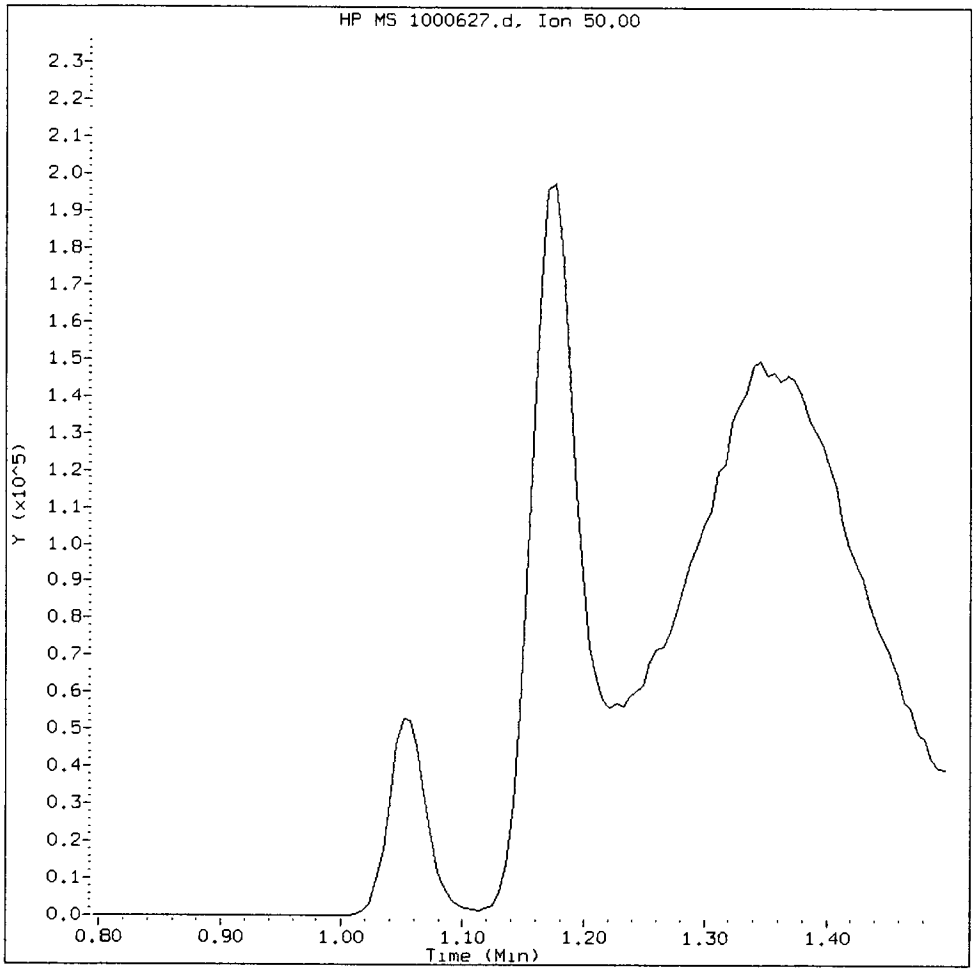
Column phase: RTXVMS

Column diameter: 0.18



IC0627, /chem1/nt5.i/27JUN13.b/1000627.d

Chloromethane Amount: 99.00 Area: 2073708



MANUAL INTEGRATION for Chloromethane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/14/14

CO-ELUTION SUMMARY FOR FILE - 1000627.d

Lab ID: IC0627, Method: VO121012S.m, Instrument: nt5.i, Date: 27-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/1500627.d
Lab Smp Id: IC0627 Client Smp ID: VSTD150
Inj Date : 27-JUN-2013 11:31
Operator : PB Inst ID: nt5.i
Smp Info : IC0627,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/27JUN13.b/V0121012S.m
Meth Date : 28-Jun-2013 12:58 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 11:31 Cal File: 1500627.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 * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.045	1.028	(0.224)	1486529	150.000	147.33
2 Chloromethane	50	1.159	1.147	(0.249)	3068673	150.000	148.25(M)
3 Vinyl Chloride	62	1.215	1.198	(0.261)	2709239	150.000	145.33
4 Bromomethane	94	1.419	1.407	(0.304)	1435368	150.000	134.34
5 Chloroethane	64	1.509	1.492	(0.324)	1559284	150.000	137.49
6 Trichlorofluoromethane	101	1.600	1.583	(0.343)	3184163	150.000	154.10
7 1,1-Dichloroethene	96	1.956	1.945	(0.420)	1798095	150.000	146.60
8 Carbon Disulfide	76	1.956	1.945	(0.420)	6176688	150.000	140.63
9 112Trichloro122Trifluoroethane	101	1.996	1.990	(0.428)	1726393	150.000	145.29
10 Iodomethane	142	2.058	2.047	(0.442)	1585554	150.000	161.22
11 Bromoethane	108	2.154	2.143	(0.462)	1081004	150.000	131.95
12 Acrolein	56	2.262	2.301	(0.485)	1539423	750.000	811.84
13 Methylene Chloride	84	2.420	2.420	(0.519)	1387460	150.000	91.104
14 Acetone	43	2.595	2.725	(0.557)	1613252	750.000	559.01(T)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.556	2.561	(0.548)	1564391	150.000	128.28
	16 Methyl tert butyl ether	73	2.743	2.725	(0.588)	3972245	150.000	105.67
	17 1,1-Dichloroethane	63	3.161	3.172	(0.678)	2080414	150.000	74.607
	18 Acrylonitrile	53	3.303	3.336	(0.709)	900756	150.000	143.85
	19 Vinyl Acetate	43	3.529	3.517	(0.757)	5751052	150.000	152.80
	20 Cis-1,2-Dichloroethene	96	3.716	3.721	(0.797)	2468226	150.000	154.69
	22 2,2-Dichloropropane	77	3.812	3.817	(0.818)	3604338	150.000	155.72
	23 Bromochloromethane	128	3.908	3.908	(0.839)	1069386	150.000	153.44
	24 Chloroform	83	4.015	4.010	(0.862)	3882812	150.000	153.05
	25 Carbon Tetrachloride	117	4.089	4.094	(0.800)	3134154	150.000	159.79
$	27 Dibromofluoromethane	111	4.185	4.179	(0.898)	840507	50.0000	50.302
	26 1,1,1-Trichloroethane	97	4.162	4.168	(0.893)	3631498	150.000	156.25
	28 1,1-Dichloropropene	75	4.281	4.287	(0.837)	3434799	150.000	152.10
	29 2-Butanone	72	4.428	4.428	(0.950)	1594765	750.000	798.83
	30 Benzene	78	4.519	4.519	(0.884)	8796575	150.000	141.34
*	31 Pentafluorobenzene	168	4.660	4.654	(1.000)	1735360	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.655	4.649	(0.999)	938897	50.0000	49.447
	33 1,2-Dichloroethane	62	4.717	4.711	(0.923)	3012559	150.000	149.19
	34 Trichloroethene	95	5.056	5.056	(0.989)	2446738	150.000	155.64
*	35 1,4-Difluorobenzene	114	5.113	5.107	(1.000)	2861897	50.0000	
	37 Dibromomethane	93	5.418	5.412	(1.060)	1317786	150.000	153.65
	38 1,2-Dichloropropane	63	5.509	5.503	(1.077)	2707977	150.000	153.35
	39 Bromodichloromethane	83	5.588	5.582	(1.093)	2981699	150.000	152.50
	40 2-Chloroethyl Vinyl Ether	63	6.125	6.120	(1.198)	418882	150.000	152.35
	41 Cis 1,3-dichloropropene	75	6.137	6.131	(1.200)	3791169	150.000	156.09
$	42 d8-Toluene	98	6.289	6.289	(1.230)	3535375	50.0000	49.836
	43 Toluene	92	6.335	6.329	(1.239)	5612952	150.000	142.57
	44 Tetrachloroethene	166	6.646	6.646	(0.875)	2484626	150.000	156.39
	45 4-Methyl-2-Pentanone	58	6.719	6.702	(1.314)	5594545	750.000	750.99
	46 Trans 1,3-Dichloropropene	75	6.702	6.697	(1.311)	3422409	150.000	153.72
	47 1,1,2-Trichloroethane	97	6.832	6.827	(1.336)	1925491	150.000	150.03
	48 Chlorodibromomethane	129	6.968	6.962	(0.917)	2194615	150.000	157.58
	49 1,3-Dichloropropane	76	7.053	7.042	(0.928)	3474226	150.000	155.66
	50 1,2-Dibromoethane	107	7.144	7.138	(1.397)	1920792	150.000	153.75
	51 2-Hexanone	43	7.426	7.415	(0.978)	9352060	750.000	803.70
*	52 d5-Chlorobenzene	117	7.596	7.596	(1.000)	2697287	50.0000	
	53 Chlorobenzene	112	7.613	7.607	(1.002)	5557397	150.000	144.09
	54 Ethyl Benzene	91	7.670	7.658	(1.010)	8848677	150.000	134.94
	55 1,1,1,2-Tetrachloroethane	131	7.687	7.675	(1.012)	2164446	150.000	154.85
	56 m,p-xylene	106	7.805	7.794	(1.028)	6927171	300.000	281.40
	57 o-Xylene	106	8.162	8.156	(1.074)	3869571	150.000	159.27
	58 Styrene	104	8.207	8.201	(1.080)	5922891	150.000	148.77
	59 Bromoform	173	8.201	8.196	(0.847)	1539628	150.000	159.99
	60 Isopropyl Benzene	105	8.445	8.445	(0.873)	8338276	150.000	145.08
$	62 4-Bromofluorobenzene	95	8.665	8.665	(1.141)	1434977	50.0000	49.986
	63 Bromobenzene	156	8.745	8.739	(0.904)	2462347	150.000	155.81
	64 N-Propyl Benzene	91	8.818	8.812	(0.911)	9294839	150.000	134.25

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.880	8.869	(0.918)	2544523	150.000	159.76
66	2-Chloro Toluene	91	8.926	8.920	(0.922)	6565851	150.000	150.45
67	1,3,5-Trimethyl Benzene	105	9.010	9.005	(0.931)	7376823	150.000	148.89
68	1,2,3-Trichloropropane	110	8.976	8.971	(0.928)	793367	150.000	160.26
69	Trans-1,4-Dichloro 2-Butene	53	9.039	9.027	(0.934)	986436	150.000	164.26
70	4-Chloro Toluene	91	9.078	9.072	(0.938)	6806424	150.000	149.84
71	T-Butyl Benzene	119	9.282	9.276	(0.959)	6738214	150.000	153.12
72	1,2,4-Trimethylbenzene	105	9.350	9.344	(0.966)	7229161	150.000	149.23
73	S-Butyl Benzene	105	9.446	9.440	(0.976)	8796592	150.000	139.03
74	4-Isopropyl Toluene	119	9.593	9.587	(0.991)	7532969	150.000	146.97
75	1,3-Dichlorobenzene	146	9.604	9.599	(0.992)	4210107	150.000	145.77
* 76	d4-1,4-Dichlorobenzene	152	9.678	9.672	(1.000)	1385568	50.0000	
77	1,4-Dichlorobenzene	146	9.689	9.689	(1.001)	4394229	150.000	147.09
78	N-Butyl Benzene	91	9.978	9.972	(1.031)	7312144	150.000	152.03
$ 79	d4-1,2-Dichlorobenzene	152	10.057	10.057	(1.039)	1257494	50.0000	49.758
80	1,2-Dichlorobenzene	146	10.068	10.068	(1.040)	4149683	150.000	147.34
81	1,2-Dibromo 3-Chloropropane	75	10.821	10.815	(1.118)	540651	150.000	164.06
82	Hexachloro 1,3-Butadiene	225	11.494	11.505	(1.188)	2070946	150.000	153.03
83	1,2,4-Trichlorobenzene	180	11.482	11.488	(1.186)	3324193	150.000	158.10
84	Naphthalene	128	11.799	11.805	(1.219)	6906472	150.000	148.83
85	1,2,3-Trichlorobenzene	180	11.980	11.986	(1.238)	3234820	150.000	155.18

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: nt5.i
Lab File ID: 1500627.d
Lab Smp Id: IC0627
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 27-JUN-2013
Calibration Time: 15:48
Client Smp ID: VSTD150
Level: LOW
Sample Type: SOIL

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	1613586	806793	3227172	1735360	7.55
35 1,4-Difluorobenze	2656709	1328354	5313418	2861897	7.72
52 d5-Chlorobenzene	2557235	1278618	5114470	2697287	5.48
76 d4-1,4-Dichlorobe	1374359	687180	2748718	1385568	0.82

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.65	4.15	5.15	4.66	0.12
35 1,4-Difluorobenze	5.11	4.61	5.61	5.11	0.11
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.68	0.06

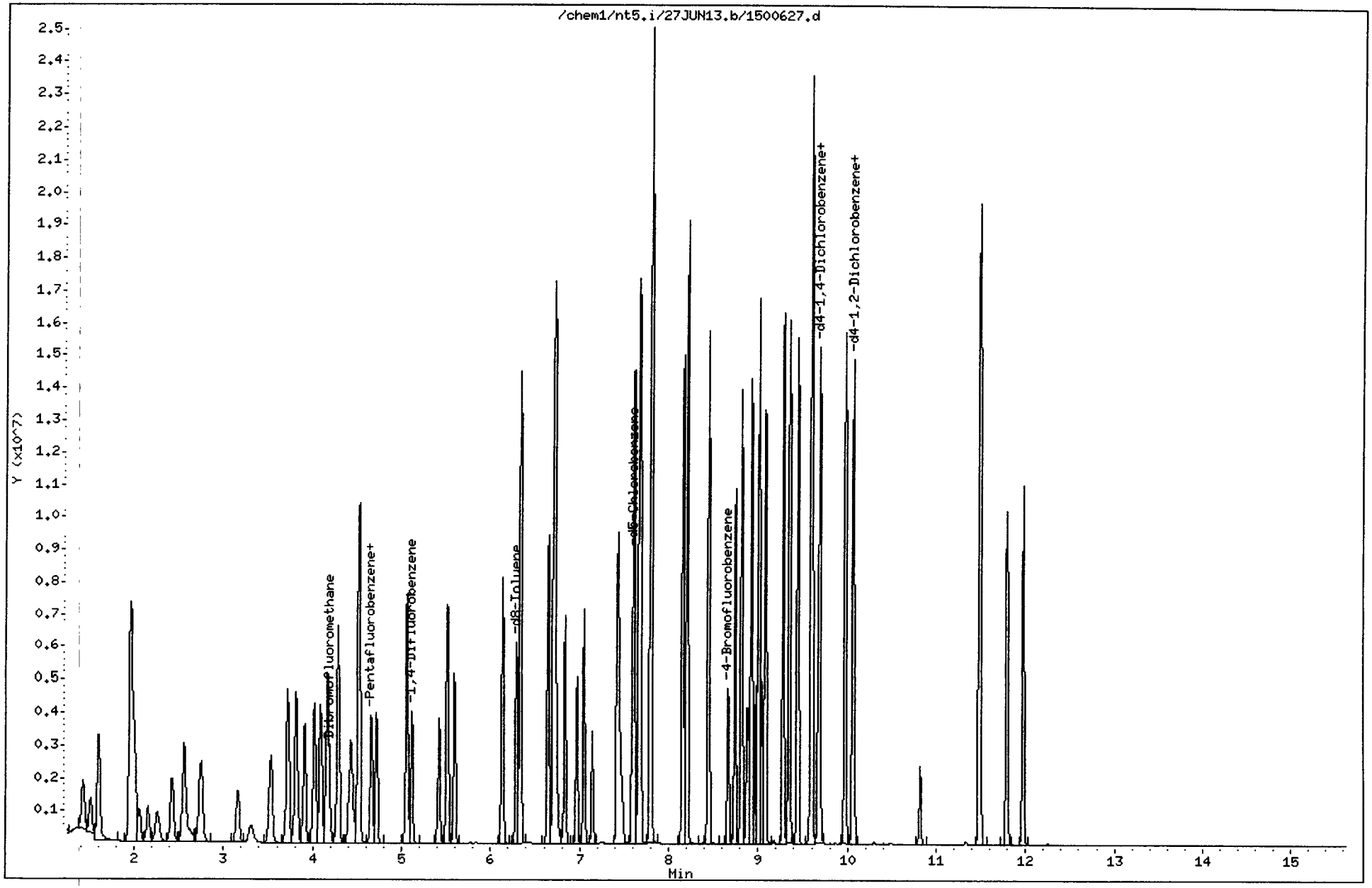
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/27JUN13.b/1500627.d
Date : 27-JUN-2013 11:31
Client ID: VSTD150
Sample Info: IC0627,5,5,0

Instrument: nt5.i

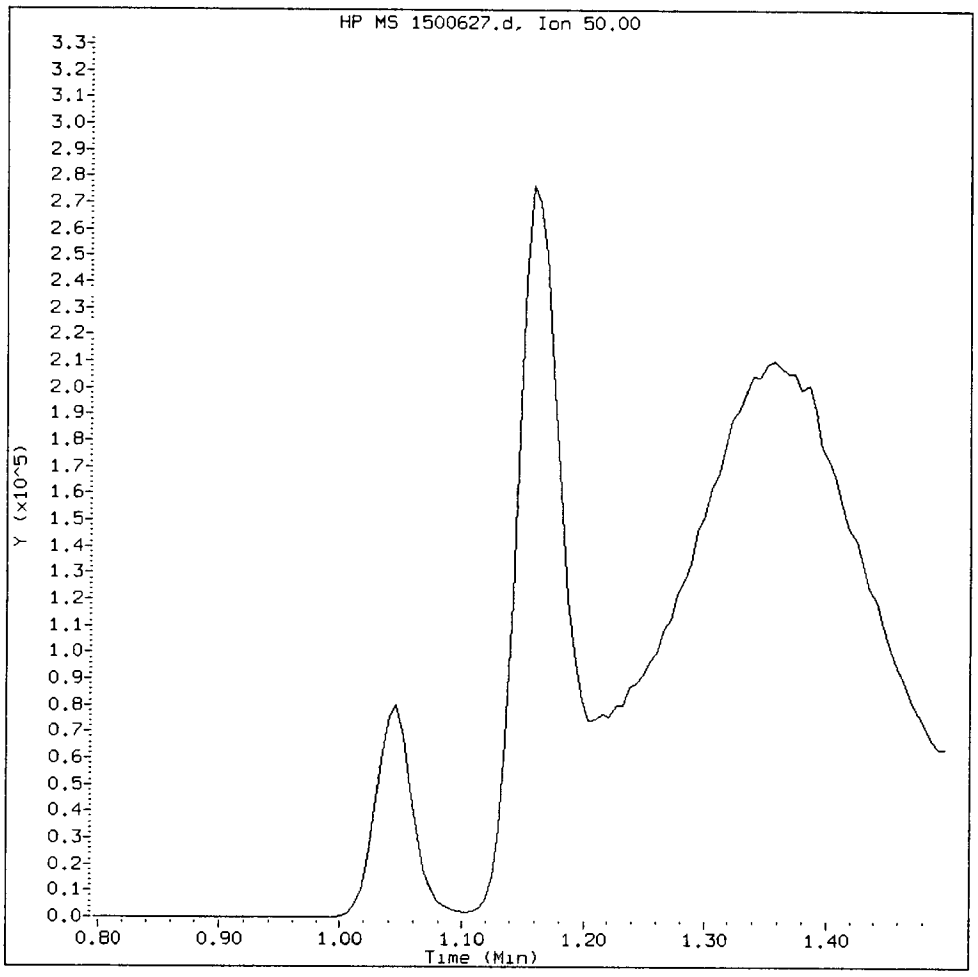
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



IC0627, /chem1/nt5.i/27JUN13.b/1500627.d

Chloromethane Amount: 148.25 Area: 3068673



MANUAL INTEGRATION for Chloromethane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/27/13

CO-ELUTION SUMMARY FOR FILE - 1500627.d

Lab ID: IC0627, Method: VO121012S.m, Instrument: nt5.i, Date: 27-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/2000627.d
Lab Smp Id: IC0627 Client Smp ID: VSTD200
Inj Date : 27-JUN-2013 11:07
Operator : PB Inst ID: nt5.i
Smp Info : IC0627,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/27JUN13.b/VO121012S.m
Meth Date : 28-Jun-2013 12:58 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 11:07 Cal File: 2000627.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 * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.034	1.028	(0.222)	2093219	200.000	217.20
2 Chloromethane	50	1.153	1.147	(0.248)	3795104	200.000	191.97(M)
3 Vinyl Chloride	62	1.204	1.198	(0.259)	3482947	200.000	195.62
4 Bromomethane	94	1.407	1.407	(0.303)	1733972	200.000	169.92
5 Chloroethane	64	1.498	1.492	(0.322)	1831968	200.000	169.13
6 Trichlorofluoromethane	101	1.588	1.583	(0.342)	4100544	200.000	207.78
7 1,1-Dichloroethene	96	1.939	1.945	(0.417)	2195173	200.000	187.39
8 Carbon Disulfide	76	1.945	1.945	(0.418)	7321053	200.000	174.52
9 112Trichloro122Trifluoroethane	101	1.984	1.990	(0.427)	2167865	200.000	191.02
10 Iodomethane	142	2.047	2.047	(0.440)	2223937	200.000	236.77
11 Bromoethane	108	2.143	2.143	(0.461)	1328041	200.000	169.72
12 Acrolein	56	2.245	2.301	(0.483)	1872275	1000.00	1033.8
13 Methylene Chloride	84	2.409	2.420	(0.518)	1704517	200.000	117.18
14 Acetone	43	2.584	2.725	(0.556)	2012544	1000.00	730.15(T)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.545	2.561	(0.547)	2012817	200.000	172.81
	16 Methyl tert butyl ether	73	2.731	2.725	(0.587)	4809456	200.000	133.95
	17 1,1-Dichloroethane	63	3.144	3.172	(0.676)	2489845	200.000	93.487
	18 Acrylonitrile	53	3.297	3.336	(0.709)	404866	200.000	67.698
	19 Vinyl Acetate	43	3.512	3.517	(0.755)	6692695	200.000	186.17
	20 Cis-1,2-Dichloroethene	96	3.704	3.721	(0.797)	3033194	200.000	199.03
	22 2,2-Dichloropropane	77	3.795	3.817	(0.816)	4641125	200.000	209.94
	23 Bromochloromethane	128	3.897	3.908	(0.838)	1335621	200.000	200.65
	24 Chloroform	83	4.010	4.010	(0.862)	4882826	200.000	201.51
	25 Carbon Tetrachloride	117	4.072	4.094	(0.797)	4012321	200.000	213.90
$	27 Dibromofluoromethane	111	4.179	4.179	(0.899)	793513	50.0000	49.722
	26 1,1,1-Trichloroethane	97	4.151	4.168	(0.893)	4588179	200.000	206.69
	28 1,1-Dichloropropene	75	4.270	4.287	(0.836)	4276268	200.000	198.00
	29 2-Butanone	72	4.434	4.428	(0.954)	1972614	1000.00	1034.5
	30 Benzene	78	4.507	4.519	(0.883)	10353898	200.000	173.96
*	31 Pentafluorobenzene	168	4.649	4.654	(1.000)	1657456	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.649	4.649	(1.000)	909790	50.0000	50.166
	33 1,2-Dichloroethane	62	4.711	4.711	(0.922)	3753758	200.000	194.39
	34 Trichloroethene	95	5.051	5.056	(0.989)	3068340	200.000	204.09
*	35 1,4-Difluorobenzene	114	5.107	5.107	(1.000)	2736925	50.0000	
	37 Dibromomethane	93	5.413	5.412	(1.060)	1631155	200.000	198.87
	38 1,2-Dichloropropane	63	5.509	5.503	(1.079)	3268060	200.000	193.51
	39 Bromodichloromethane	83	5.588	5.582	(1.094)	3673538	200.000	196.47
	40 2-Chloroethyl Vinyl Ether	63	6.125	6.120	(1.199)	505167	200.000	192.13
	41 Cis 1,3-dichloropropene	75	6.131	6.131	(1.200)	4548268	200.000	195.81
$	42 d8-Toluene	98	6.289	6.289	(1.232)	3346949	50.0000	49.335
	43 Toluene	92	6.335	6.329	(1.240)	6681831	200.000	177.47
	44 Tetrachloroethene	166	6.646	6.646	(0.875)	3108329	200.000	207.71
	45 4-Methyl-2-Pentanone	58	6.725	6.702	(1.317)	6863512	1000.00	963.40
	46 Trans 1,3-Dichloropropene	75	6.702	6.697	(1.312)	4167292	200.000	195.72
	47 1,1,2-Trichloroethane	97	6.838	6.827	(1.339)	2350400	200.000	191.50
	48 Chlorodibromomethane	129	6.968	6.962	(0.917)	2705570	200.000	206.24
	49 1,3-Dichloropropane	76	7.053	7.042	(0.928)	4180624	200.000	198.85
	50 1,2-Dibromoethane	107	7.144	7.138	(1.399)	2352561	200.000	196.90
	51 2-Hexanone	43	7.432	7.415	(0.978)	9439201	1000.00	861.18
*	52 d5-Chlorobenzene	117	7.596	7.596	(1.000)	2540726	50.0000	
	53 Chlorobenzene	112	7.613	7.607	(1.002)	6582041	200.000	181.18
	54 Ethyl Benzene	91	7.670	7.658	(1.010)	10256637	200.000	166.05
	55 1,1,1,2-Tetrachloroethane	131	7.687	7.675	(1.012)	2651213	200.000	201.36
	56 m,p-xylene	106	7.805	7.794	(1.028)	8136341	400.000	350.88
	57 o-Xylene	106	8.162	8.156	(1.074)	4696459	200.000	205.21
	58 Styrene	104	8.213	8.201	(1.081)	6914550	200.000	184.38
	59 Bromoform	173	8.207	8.196	(0.848)	1916551	200.000	208.33
	60 Isopropyl Benzene	105	8.450	8.445	(0.873)	9558130	200.000	173.97
$	62 4-Bromofluorobenzene	95	8.665	8.665	(1.141)	1351092	50.0000	49.964
	63 Bromobenzene	156	8.744	8.739	(0.904)	3027319	200.000	200.39
	64 N-Propyl Benzene	91	8.818	8.812	(0.911)	10690846	200.000	161.52

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.897	8.869	(0.919)	3171371	200.000	208.29
66	2-Chloro Toluene	91	8.931	8.920	(0.923)	7745027	200.000	185.65
67	1,3,5-Trimethyl Benzene	105	9.016	9.005	(0.932)	8570388	200.000	180.95
68	1,2,3-Trichloropropane	110	8.982	8.971	(0.928)	1000946	200.000	211.50
69	Trans-1,4-Dichloro 2-Butene	53	9.044	9.027	(0.935)	1306537	200.000	227.58
70	4-Chloro Toluene	91	9.084	9.072	(0.939)	8230881	200.000	189.54
71	T-Butyl Benzene	119	9.282	9.276	(0.959)	7983108	200.000	189.76
72	1,2,4-Trimethylbenzene	105	9.350	9.344	(0.966)	8446834	200.000	182.39
73	S-Butyl Benzene	105	9.452	9.440	(0.977)	10102191	200.000	167.02
74	4-Isopropyl Toluene	119	9.599	9.587	(0.992)	8780182	200.000	179.19
75	1,3-Dichlorobenzene	146	9.610	9.599	(0.993)	5104346	200.000	184.88
* 76	d4-1,4-Dichlorobenzene	152	9.678	9.672	(1.000)	1324580	50.0000	
77	1,4-Dichlorobenzene	146	9.695	9.689	(1.002)	5408844	200.000	189.39
78	N-Butyl Benzene	91	9.978	9.972	(1.031)	8733315	200.000	189.94
$ 79	d4-1,2-Dichlorobenzene	152	10.063	10.057	(1.040)	1215480	50.0000	50.310
80	1,2-Dichlorobenzene	146	10.074	10.068	(1.041)	5214012	200.000	193.66
81	1,2-Dibromo 3-Chloropropane	75	10.826	10.815	(1.119)	711501	200.000	225.84
82	Hexachloro 1,3-Butadiene	225	11.505	11.505	(1.189)	2691233	200.000	208.02
83	1,2,4-Trichlorobenzene	180	11.494	11.488	(1.188)	4250934	200.000	211.48
84	Naphthalene	128	11.805	11.805	(1.220)	8259508	200.000	186.19
85	1,2,3-Trichlorobenzene	180	11.986	11.986	(1.238)	4105475	200.000	206.02

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: nt5.i
Lab File ID: 2000627.d
Lab Smp Id: IC0627
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 27-JUN-2013
Calibration Time: 15:48
Client Smp ID: VSTD200
Level: LOW
Sample Type: SOIL

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	1613586	806793	3227172	1657456	2.72
35 1,4-Difluorobenze	2656709	1328354	5313418	2736925	3.02
52 d5-Chlorobenzene	2557235	1278618	5114470	2540726	-0.65
76 d4-1,4-Dichlorobe	1374359	687180	2748718	1324580	-3.62

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.65	4.15	5.15	4.65	-0.12
35 1,4-Difluorobenze	5.11	4.61	5.61	5.11	0.00
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.68	0.06

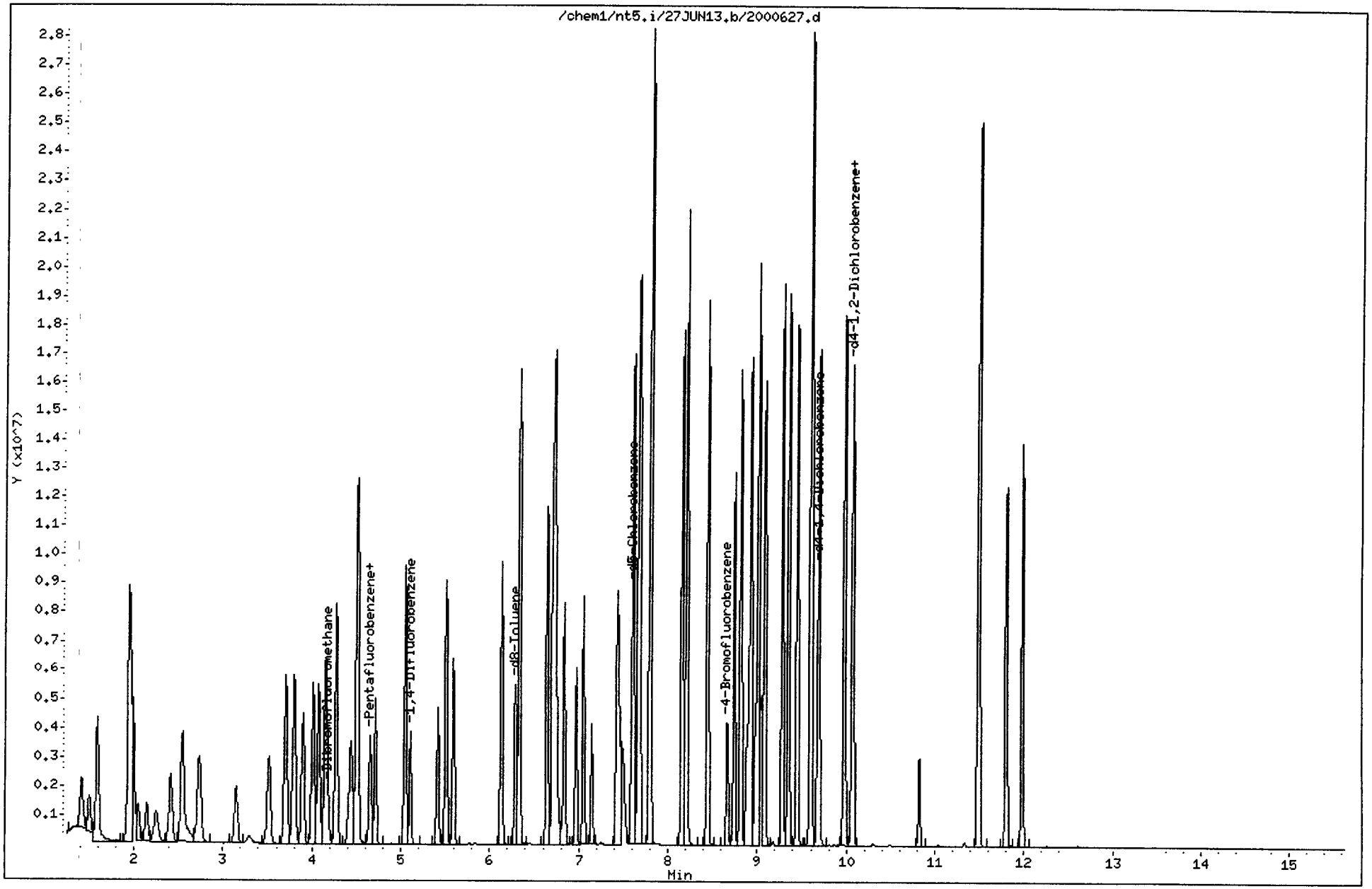
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt5.i/27JUN13.b/2000627.d
Date : 27-JUN-2013 11:07
Client ID: VSTD200
Sample Info: IC0627,5,5,0

Column phase: RTXVMS

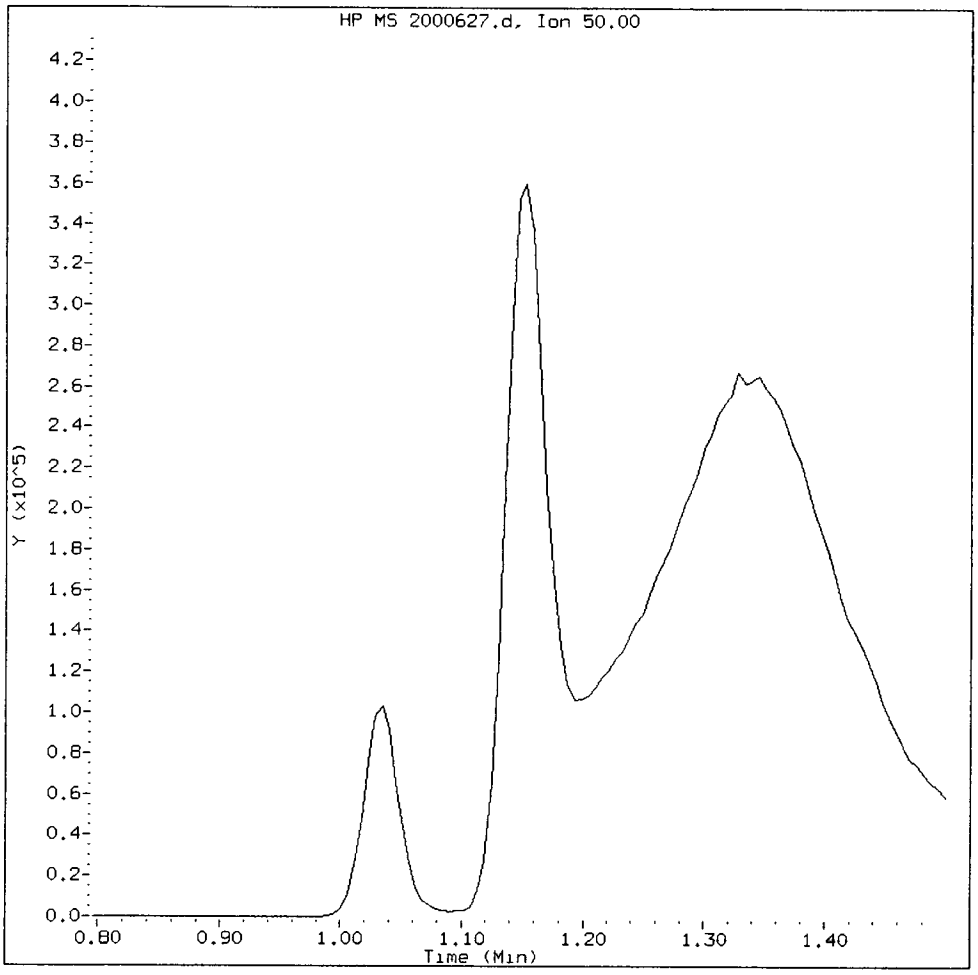
Instrument: nt5.i

Operator: PB
Column diameter: 0.18



IC0627, /chem1/nt5.i/27JUN13.b/2000627.d

Chloromethane Amount: 191.97 Area: 3795104



MANUAL INTEGRATION for Chloromethane

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 6/14/13

CO-ELUTION SUMMARY FOR FILE - 2000627.d

Lab ID: IC0627, Method: VO121012S.m, Instrument: nt5.i, Date: 27-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/icv0627.d
Lab Smp Id: ICV0627 Client Smp ID: ICV0627
Inj Date : 27-JUN-2013 17:22
Operator : PB Inst ID: nt5.i
Smp Info : ICV0627,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/27JUN13.b/V0121012S.m
Meth Date : 28-Jun-2013 12:58 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 11:07 Cal File: 2000627.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

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
1 Dichlorodifluoromethane	85	1.045	1.028	(0.224)	486523	51.9097	51.910
2 Chloromethane	50	1.164	1.147	(0.250)	935727	48.6677	48.668(M)
3 Vinyl Chloride	62	1.215	1.198	(0.260)	929175	53.6606	53.661
4 Bromomethane	94	1.419	1.407	(0.304)	465307	46.8845	46.885
5 Chloroethane	64	1.509	1.492	(0.323)	563312	53.4731	53.473
6 Trichlorofluoromethane	101	1.600	1.583	(0.343)	979368	51.0269	51.027
7 1,1-Dichloroethene	96	1.956	1.945	(0.419)	513665	45.0874	45.087
8 Carbon Disulfide	76	1.962	1.945	(0.420)	1819863	44.6072	44.607
9 112Trichloro122Trifluoroethane	101	2.001	1.990	(0.429)	501622	45.4481	45.448
10 Iodomethane	142	2.058	2.047	(0.441)	477550	52.2769	52.277
11 Bromoethane	108	2.154	2.143	(0.462)	323763	42.5443	42.544
12 Acrolein	56	2.256	2.301	(0.484)	444734	252.496	252.50
13 Methylene Chloride	84	2.426	2.420	(0.520)	506304	35.7904	35.790
14 Acetone	43	2.590	2.725	(0.555)	626730	233.796	233.80(MH)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.567	2.561	(0.550)	618570	54.6082	54.608(Q)
	16 Methyl tert butyl ether	73	2.754	2.725	(0.590)	1969531	56.4041	56.404
	17 1,1-Dichloroethane	63	3.184	3.172	(0.682)	1427593	55.1155	55.115
	18 Acrylonitrile	53	3.302	3.336	(0.708)	315875	54.3090	54.309
	19 Vinyl Acetate	43	3.529	3.517	(0.756)	1775764	50.7910	50.791
	20 Cis-1,2-Dichloroethene	96	3.732	3.721	(0.800)	739825	49.9171	49.917
	22 2,2-Dichloropropane	77	3.829	3.817	(0.821)	1100339	51.1787	51.179
	23 Bromochloromethane	128	3.919	3.908	(0.840)	320839	49.5607	49.561
	24 Chloroform	83	4.021	4.010	(0.862)	1201183	50.9708	50.971
	25 Carbon Tetrachloride	117	4.106	4.094	(0.802)	943725	51.7144	51.714
$	27 Dibromofluoromethane	111	4.191	4.179	(0.898)	787137	50.7149	50.715
	26 1,1,1-Trichloroethane	97	4.174	4.168	(0.895)	1088934	50.4406	50.441
	28 1,1-Dichloropropene	75	4.298	4.287	(0.840)	1045965	49.7828	49.783
	29 2-Butanone	72	4.389	4.428	(0.941)	445511	240.247	240.25(Q)
	30 Benzene	78	4.524	4.519	(0.884)	2978232	51.4355	51.435
*	31 Pentafluorobenzene	168	4.666	4.654	(1.000)	1611945	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.660	4.649	(0.999)	885317	50.1947	50.195
	33 1,2-Dichloroethane	62	4.717	4.711	(0.922)	928170	49.4064	49.406
	34 Trichloroethene	95	5.062	5.056	(0.989)	739948	50.5907	50.591
*	35 1,4-Difluorobenzene	114	5.118	5.107	(1.000)	2662626	50.0000	
	37 Dibromomethane	93	5.418	5.412	(1.059)	395162	49.5229	49.523
	38 1,2-Dichloropropane	63	5.509	5.503	(1.076)	824560	50.1871	50.187
	39 Bromodichloromethane	83	5.588	5.582	(1.092)	915194	50.3125	50.313
	40 2-Chloroethyl Vinyl Ether	63	6.120	6.120	(1.196)	146016	57.0825	57.083
	41 Cis 1,3-dichloropropene	75	6.131	6.131	(1.198)	1178903	52.1699	52.170
$	42 d8-Toluene	98	6.289	6.289	(1.229)	3270546	49.5535	49.554
	43 Toluene	92	6.335	6.329	(1.238)	1867771	50.9912	50.991(Q)
	44 Tetrachloroethene	166	6.646	6.646	(0.875)	782321	51.9279	51.928
	45 4-Methyl-2-Pentanone	58	6.702	6.702	(1.309)	1744561	251.708	251.71(Q)
	46 Trans 1,3-Dichloropropene	75	6.697	6.697	(1.308)	1066184	51.4717	51.472
	47 1,1,2-Trichloroethane	97	6.827	6.827	(1.334)	588678	49.3010	49.301
	48 Chlorodibromomethane	129	6.962	6.962	(0.917)	669042	50.6598	50.660
	49 1,3-Dichloropropane	76	7.047	7.042	(0.928)	1086801	51.3493	51.349
	50 1,2-Dibromoethane	107	7.138	7.138	(1.395)	578549	49.7744	49.774
	51 2-Hexanone	43	7.415	7.415	(0.976)	2820567	255.615	255.62
*	52 d5-Chlorobenzene	117	7.596	7.596	(1.000)	2557796	50.0000	
	53 Chlorobenzene	112	7.607	7.607	(1.001)	1877415	51.3327	51.333
	54 Ethyl Benzene	91	7.658	7.658	(1.008)	3374079	54.2597	54.260
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.010)	671048	50.6255	50.626
	56 m,p-xylene	106	7.794	7.794	(1.026)	2548552	109.174	109.17(Q)
	57 o-Xylene	106	8.156	8.156	(1.074)	1240894	53.8592	53.859(Q)
	58 Styrene	104	8.201	8.201	(1.080)	2070121	54.8329	54.833
	59 Bromoform	173	8.196	8.196	(0.847)	469071	48.7200	48.720
	60 Isopropyl Benzene	105	8.445	8.445	(0.873)	3192362	55.5203	55.520
$	62 4-Bromofluorobenzene	95	8.665	8.665	(1.141)	1372033	50.4002	50.400
	63 Bromobenzene	156	8.739	8.739	(0.903)	787670	49.8193	49.819
	64 N-Propyl Benzene	91	8.812	8.812	(0.911)	3785725	54.6525	54.653

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	756006	47.4445	47.445
66	2-Chloro Toluene	91	8.920	8.920	(0.922)	2310273	52.9144	52.914
67	1,3,5-Trimethyl Benzene	105	8.999	9.005	(0.930)	2710338	54.6787	54.679
68	1,2,3-Trichloropropane	110	8.971	8.971	(0.927)	234390	47.3247	47.325
69	Trans-1,4-Dichloro 2-Butene	53	9.027	9.027	(0.933)	286498	47.6844	47.684
70	4-Chloro Toluene	91	9.073	9.072	(0.938)	2422271	53.3005	53.301
71	T-Butyl Benzene	119	9.276	9.276	(0.959)	2384543	54.1604	54.160
72	1,2,4-Trimethylbenzene	105	9.338	9.344	(0.965)	2681649	55.3298	55.330
73	S-Butyl Benzene	105	9.440	9.440	(0.976)	3497974	55.2596	55.260
74	4-Isopropyl Toluene	119	9.582	9.587	(0.991)	2915191	56.8497	56.850
75	1,3-Dichlorobenzene	146	9.599	9.599	(0.992)	1493558	51.6900	51.690
* 76	d4-1,4-Dichlorobenzene	152	9.672	9.672	(1.000)	1386219	50.0000	(Q)
77	1,4-Dichlorobenzene	146	9.683	9.689	(1.001)	1520220	50.8634	50.863
78	N-Butyl Benzene	91	9.966	9.972	(1.030)	2769417	57.5521	57.552
$ 79	d4-1,2-Dichlorobenzene	152	10.051	10.057	(1.039)	1246672	49.3070	49.307(Q)
80	1,2-Dichlorobenzene	146	10.062	10.068	(1.040)	1410008	50.0410	50.041
81	1,2-Dibromo 3-Chloropropane	75	10.809	10.815	(1.118)	149394	45.3110	45.311
82	Hexachloro 1,3-Butadiene	225	11.488	11.505	(1.188)	681551	50.3385	50.339
83	1,2,4-Trichlorobenzene	180	11.477	11.488	(1.187)	1083836	51.5234	51.523
84	Naphthalene	128	11.788	11.805	(1.219)	2162911	46.5886	46.589
85	1,2,3-Trichlorobenzene	180	11.969	11.986	(1.237)	1002493	48.0695	48.069

QC Flag Legend

Q - Qualifier signal failed the ratio test.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: icv0627.d
Lab Smp Id: ICV0627
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 27-JUN-2013
Calibration Time: 15:48
Client Smp ID: ICV0627
Level: LOW
Sample Type: SOIL

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	1613586	806793	3227172	1611945	-0.10
35 1,4-Difluorobenze	2656709	1328354	5313418	2662626	0.22
52 d5-Chlorobenzene	2557235	1278618	5114470	2557796	0.02
76 d4-1,4-Dichlorobe	1374359	687180	2748718	1386219	0.86

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.65	4.15	5.15	4.67	0.24
35 1,4-Difluorobenze	5.11	4.61	5.61	5.12	0.22
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 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:
Sample Matrix: SOLID
Lab Smp Id: ICV0627
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-

Client SDG: 27JUN13
Fraction: VOA
Client Smp ID: ICV0627
Operator: PB
SampleType: LCS
Quant Type: ISTD

	SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
1	Dichlorodifluorome	50.000	51.910	103.82	53-148
2	Chloromethane	50.000	48.668	97.34	64-125
3	Vinyl Chloride	50.000	53.661	107.32	63-137
4	Bromomethane	50.000	46.885	93.77	57-136
5	Chloroethane	50.000	53.473	106.95	64-131
6	Trichlorofluoromet	50.000	51.027	102.05	69-132
12	Acrolein	250.00	252.50	101.00	54-137
9	112Trichloro122Tri	50.000	45.448	90.90	74-130
14	Acetone	250.00	233.80	93.52	60-131
7	1,1-Dichloroethene	50.000	45.087	90.17	75-126
11	Bromoethane	50.000	42.544	85.09	76-126
10	Iodomethane	50.000	52.277	104.55	65-139
13	Methylene Chloride	50.000	35.790	71.58	70-123
8	Carbon Disulfide	50.000	44.607	89.21	71-129
18	Acrylonitrile	50.000	54.309	108.62	67-125
15	Trans-1,2-Dichloro	50.000	54.608	109.22	80-120
19	Vinyl Acetate	50.000	50.791	101.58	60-136
17	1,1-Dichloroethane	50.000	55.115	110.23	80-120
29	2-Butanone	250.00	240.25	96.10	70-120
22	2,2-Dichloropropan	50.000	51.179	102.36	74-123
20	Cis-1,2-Dichloroet	50.000	49.917	99.83	80-120
24	Chloroform	50.000	50.971	101.94	80-120
23	Bromochloromethane	50.000	49.561	99.12	80-120
26	1,1,1-Trichloroeth	50.000	50.441	100.88	77-121
28	1,1-Dichloropropen	50.000	49.783	99.57	80-120
25	Carbon Tetrachlori	50.000	51.714	103.43	77-122
33	1,2-Dichloroethane	50.000	49.406	98.81	76-120
30	Benzene	50.000	51.435	102.87	80-120
34	Trichloroethene	50.000	50.591	101.18	80-120
38	1,2-Dichloropropan	50.000	50.187	100.37	80-120
39	Bromodichlorometha	50.000	50.313	100.63	77-121
37	Dibromomethane	50.000	49.523	99.05	80-120
40	2-Chloroethyl Viny	50.000	57.083	114.17	10-191

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
45 4-Methyl-2-Pentano	250.00	251.71	100.68	67-120
41 Cis 1,3-dichloropr	50.000	52.170	104.34	74-120
43 Toluene	50.000	50.991	101.98	80-120
46 Trans 1,3-Dichloro	50.000	51.472	102.94	65-120
51 2-Hexanone	250.00	255.62	102.25	65-130
47 1,1,2-Trichloroeth	50.000	49.301	98.60	80-120
49 1,3-Dichloropropan	50.000	51.349	102.70	80-120
44 Tetrachloroethene	50.000	51.928	103.86	80-121
48 Chlorodibromometha	50.000	50.660	101.32	64-120
50 1,2-Dibromoethane	50.000	49.774	99.55	75-120
53 Chlorobenzene	50.000	51.333	102.67	80-120
55 1,1,1,2-Tetrachlor	50.000	50.626	101.25	69-121
54 Ethyl Benzene	50.000	54.260	108.52	80-127
56 m,p-xylene	100.00	109.17	109.17	80-125
57 o-Xylene	50.000	53.859	107.72	78-120
58 Styrene	50.000	54.833	109.67	80-123
60 Isopropyl Benzene	50.000	55.520	111.04	80-127
59 Bromoform	50.000	48.720	97.44	60-120
65 1,1,2,2-Tetrachlor	50.000	47.445	94.89	74-120
68 1,2,3-Trichloropro	50.000	47.325	94.65	72-121
69 Trans-1,4-Dichloro	50.000	47.684	95.37	65-126
64 N-Propyl Benzene	50.000	54.653	109.31	80-132
63 Bromobenzene	50.000	49.819	99.64	80-120
67 1,3,5-Trimethyl Be	50.000	54.679	109.36	80-125
66 2-Chloro Toluene	50.000	52.914	105.83	80-125
70 4-Chloro Toluene	50.000	53.301	106.60	80-127
71 T-Butyl Benzene	50.000	54.160	108.32	87-122
72 1,2,4-Trimethylben	50.000	55.330	110.66	80-126
73 S-Butyl Benzene	50.000	55.260	110.52	80-134
74 4-Isopropyl Toluen	50.000	56.850	113.70	80-131
75 1,3-Dichlorobenzen	50.000	51.690	103.38	80-120
77 1,4-Dichlorobenzen	50.000	50.863	101.73	80-120
78 N-Butyl Benzene	50.000	57.552	115.10	80-138
80 1,2-Dichlorobenzen	50.000	50.041	100.08	80-120
81 1,2-Dibromo 3-Chlo	50.000	45.311	90.62	59-120
83 1,2,4-Trichloroben	50.000	51.523	103.05	78-130
82 Hexachloro 1,3-But	50.000	50.339	100.68	76-129
84 Naphthalene	50.000	46.589	93.18	66-120
85 1,2,3-Trichloroben	50.000	48.069	96.14	73-123

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	50.715	101.43	70-130

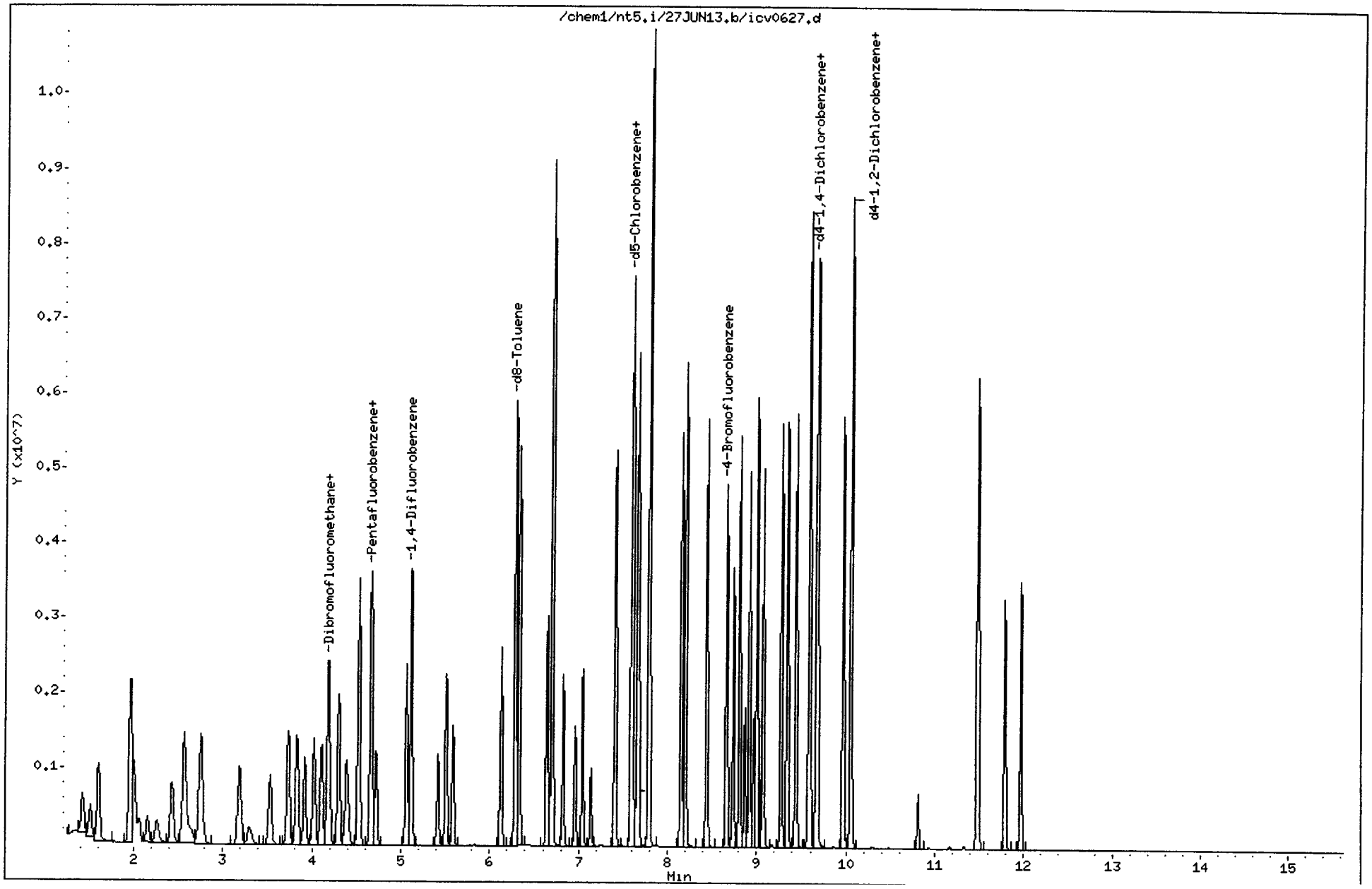
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 32 d4-1,2-Dichloroeth	50.000	50.195	100.39	80-149
$ 42 d8-Toluene	50.000	49.554	99.11	77-120
$ 62 4-Bromofluorobenze	50.000	50.400	100.80	80-120
$ 79 d4-1,2-Dichloroben	50.000	49.307	98.61	80-120

Data File: /chem1/nt5.i/27JUN13.b/icv0627.d
Date : 27-JUN-2013 17:22
Client ID: ICV0627
Sample Info: ICV0627,5,5,0

Instrument: nt5.i

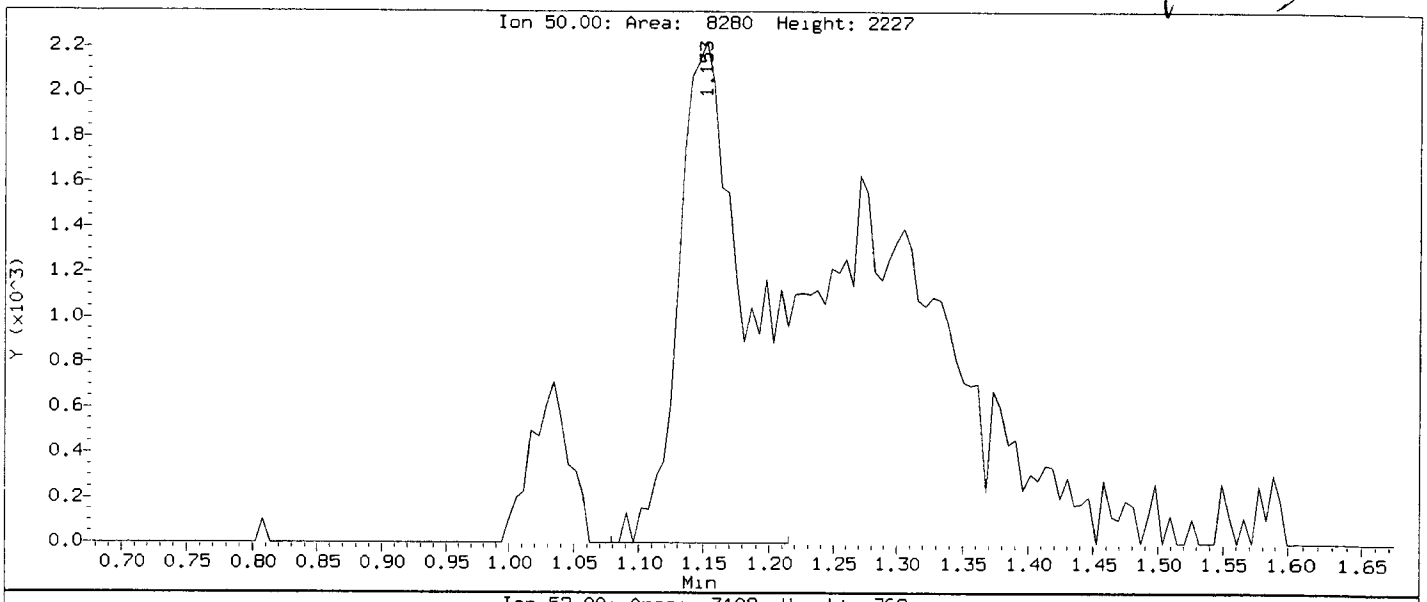
Operator: PB
Column diameter: 0.18

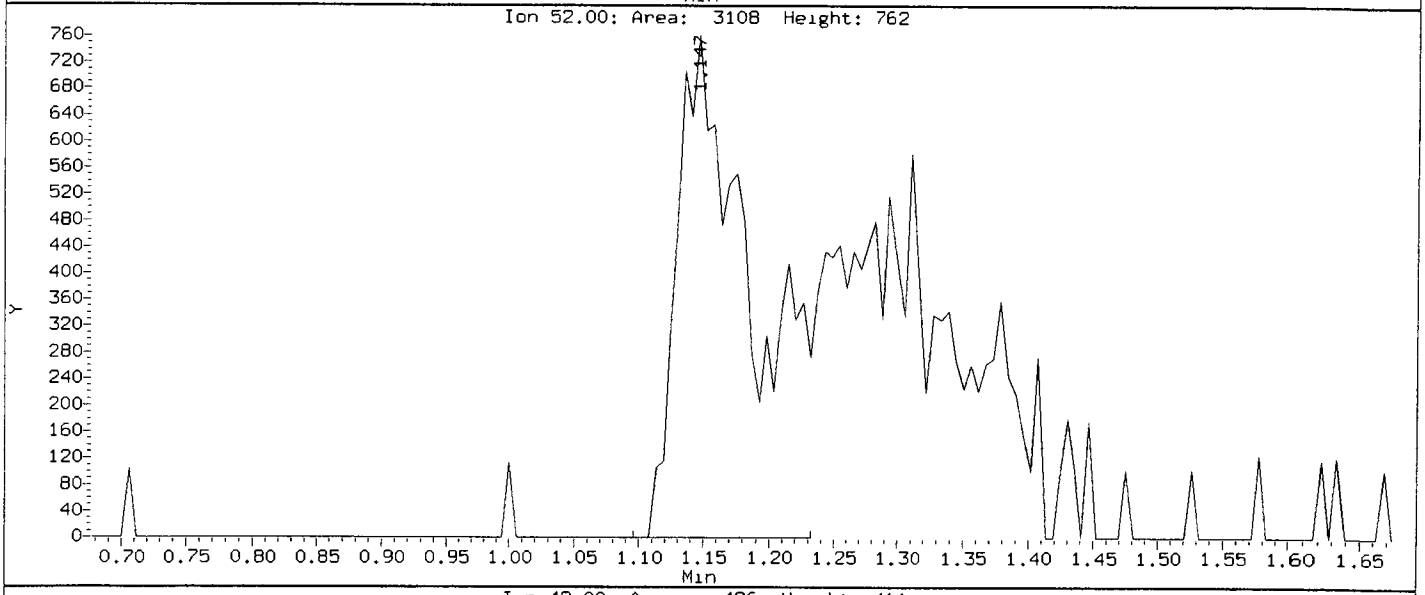
Column phase: RTXVMS

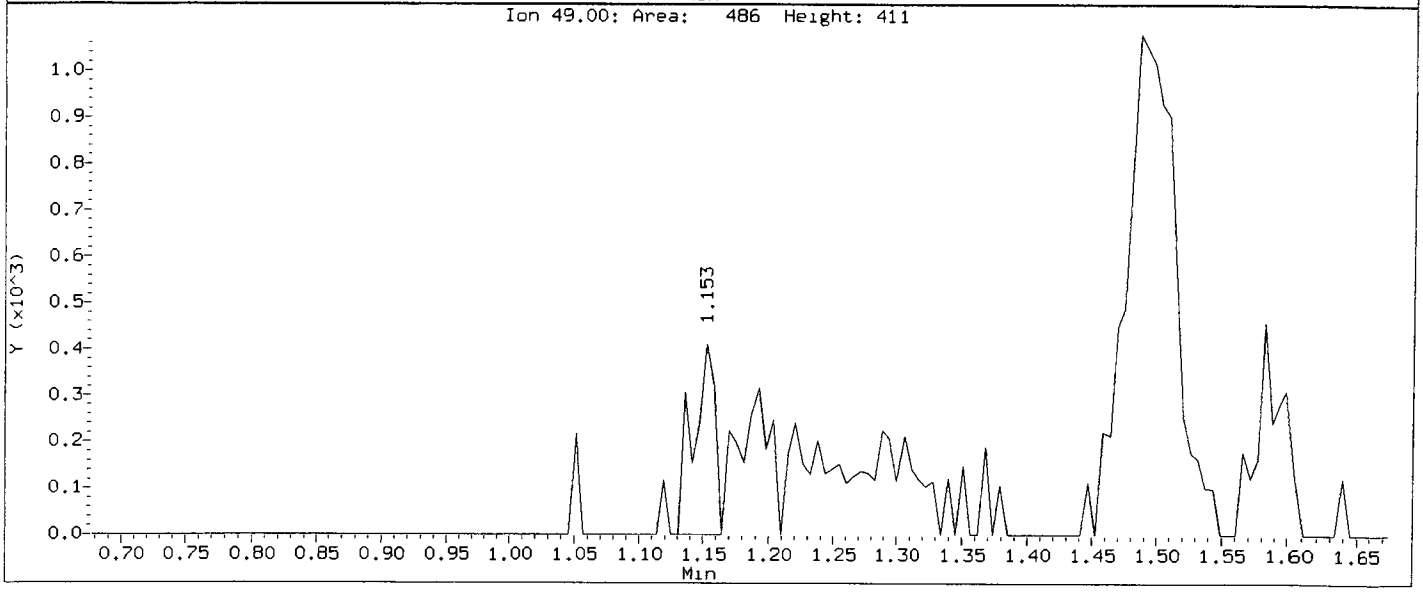


Data File: /chem1/nt5.1/27JUN13.b/0010627.d
Injection Date: 27-JUN-2013 10:43
Instrument: nt5.1
Client Sample ID: VSTD1

Compound: Chloromethane
CAS Number:





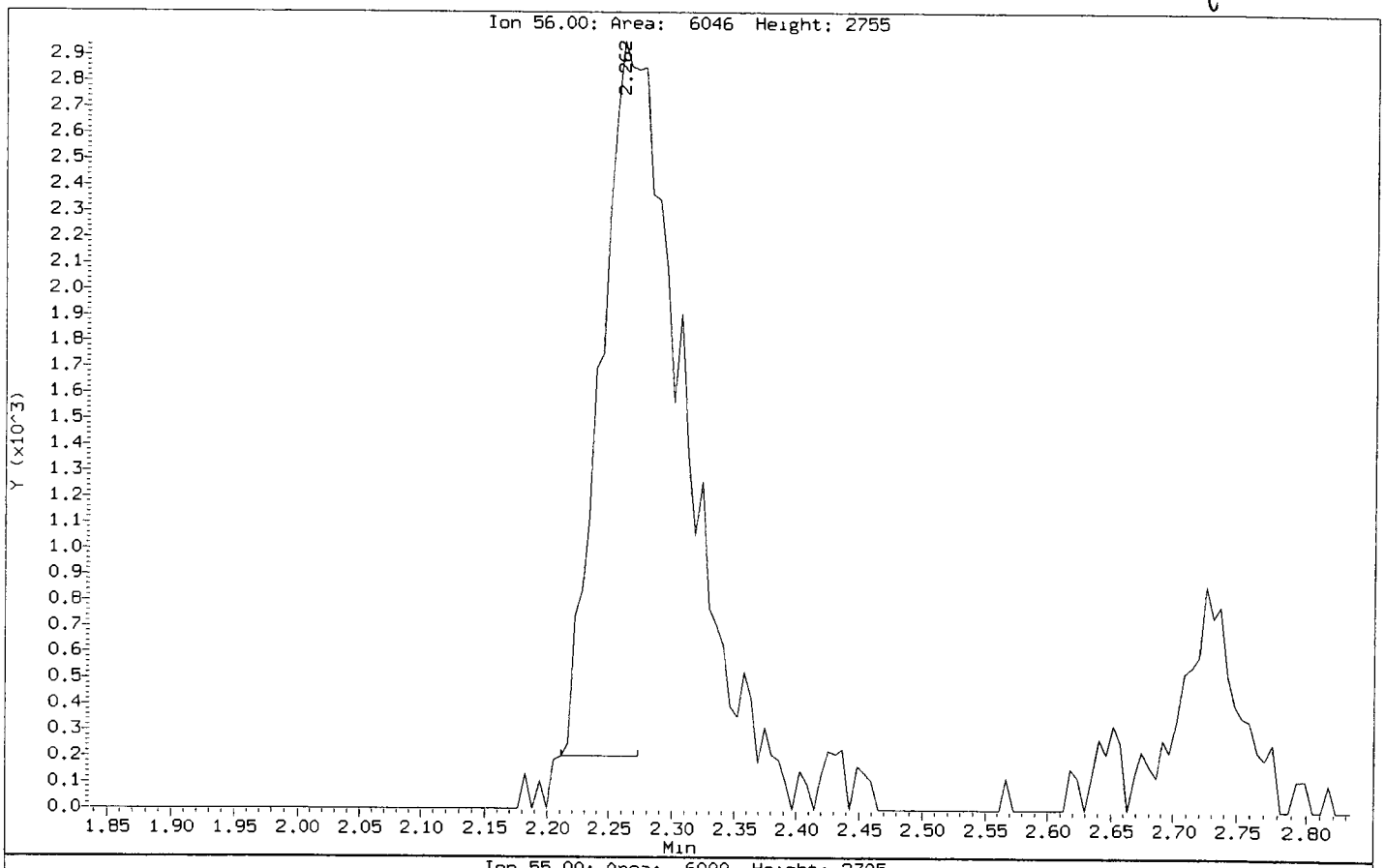


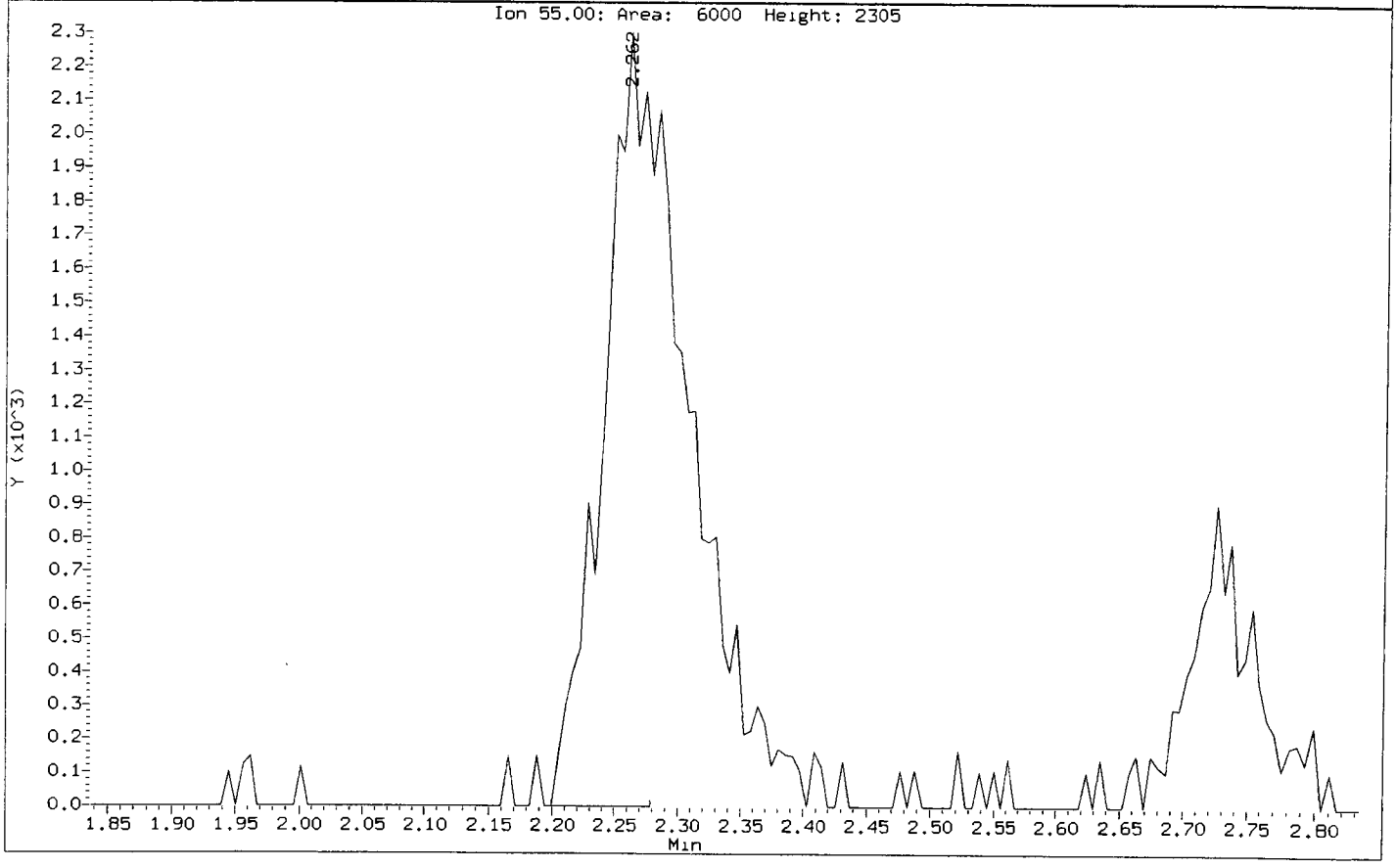
WUTG : 88361

Data File: /chem1/nt5.1/27JUN13.b/0010627.d
Injection Date: 27-JUN-2013 10:43
Instrument: nt5.1
Client Sample ID: VSTD1

Compound: Acrolein
CAS Number:

4/46



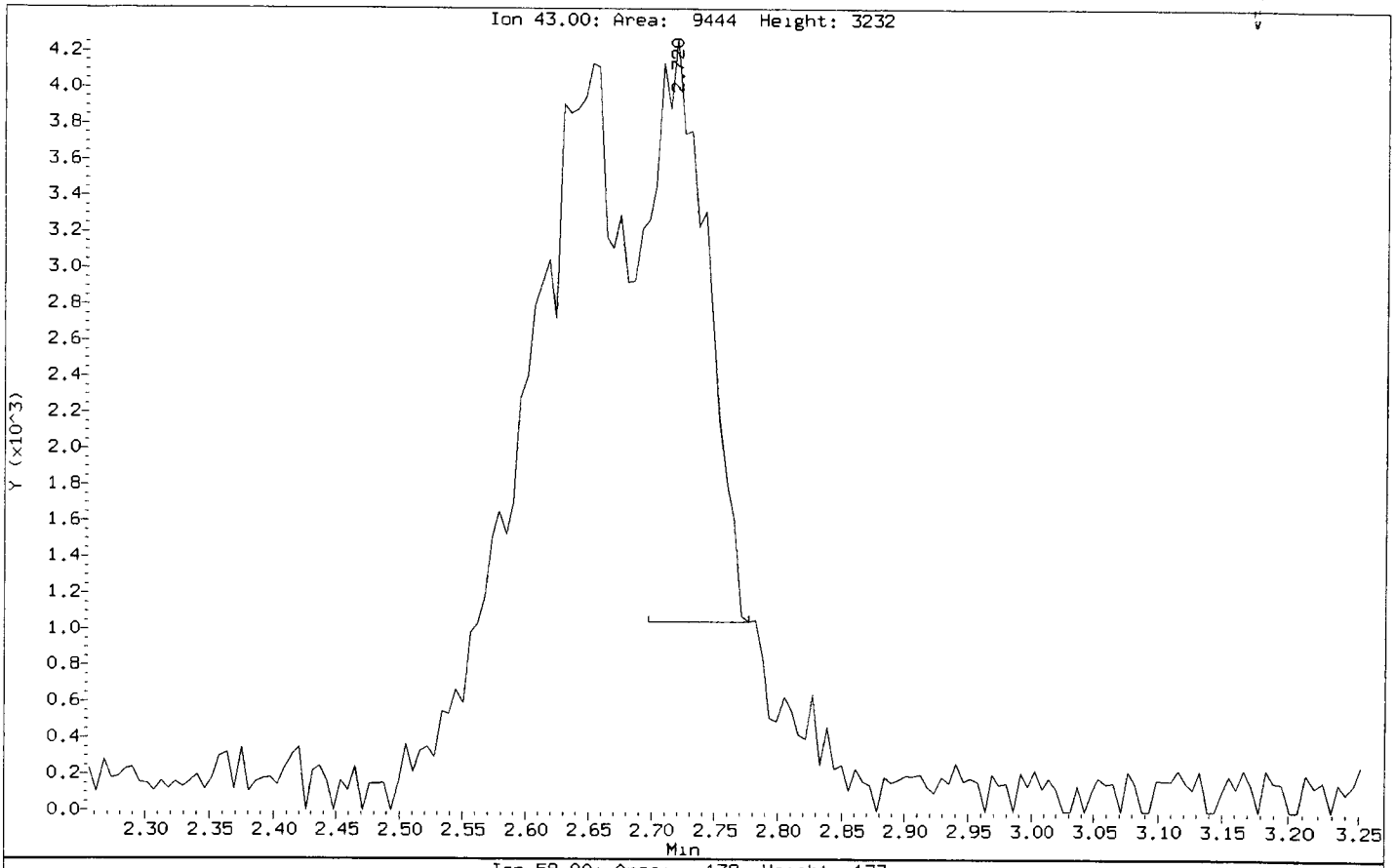


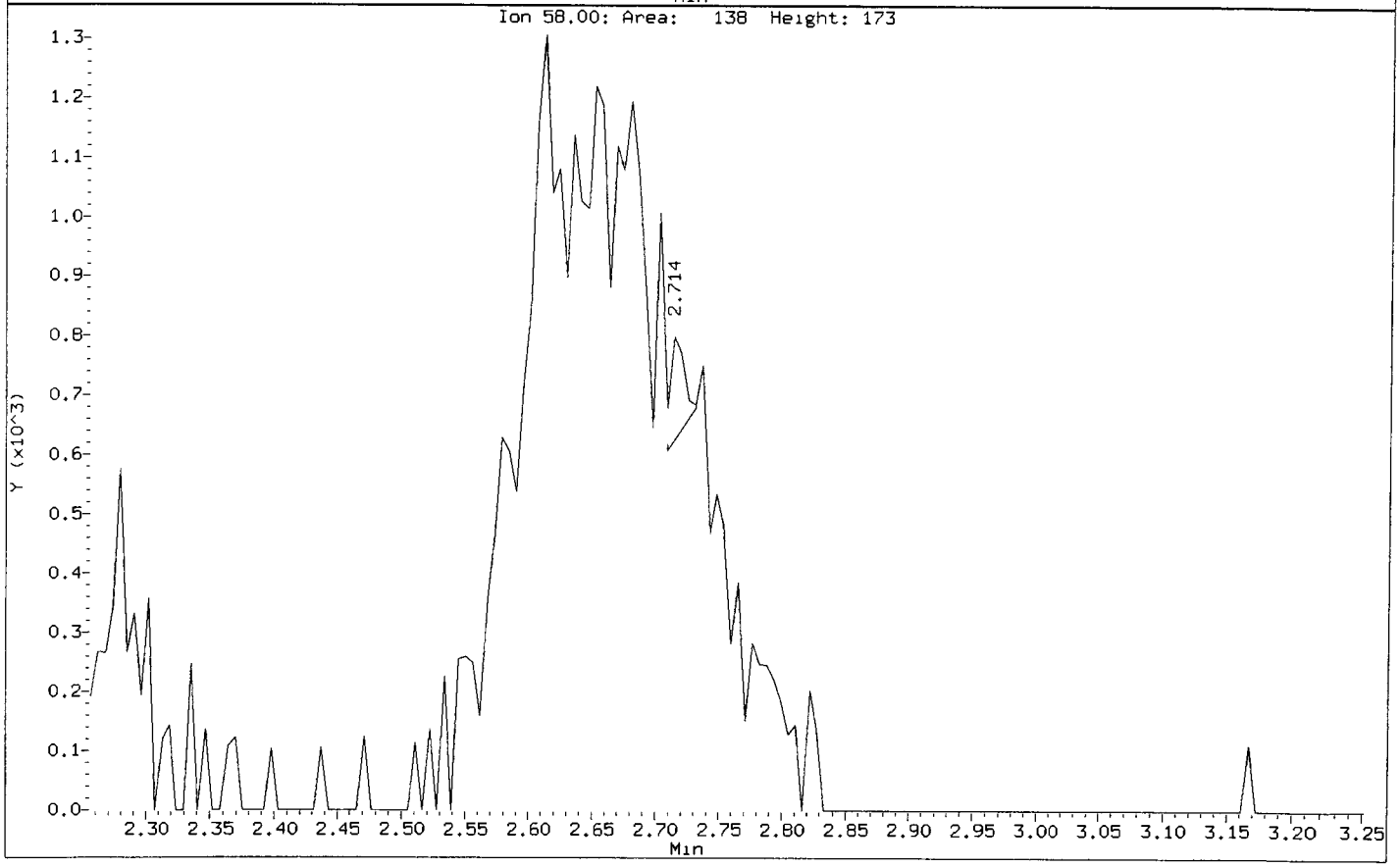
WUTG : 86362

Data File: /chem1/nt5.i/27JUN13.b/0010627.d
Injection Date: 27-JUN-2013 10:43
Instrument: nt5.i
Client Sample ID: VSTD1

Compound: Acetone
CAS Number:

7/4/13

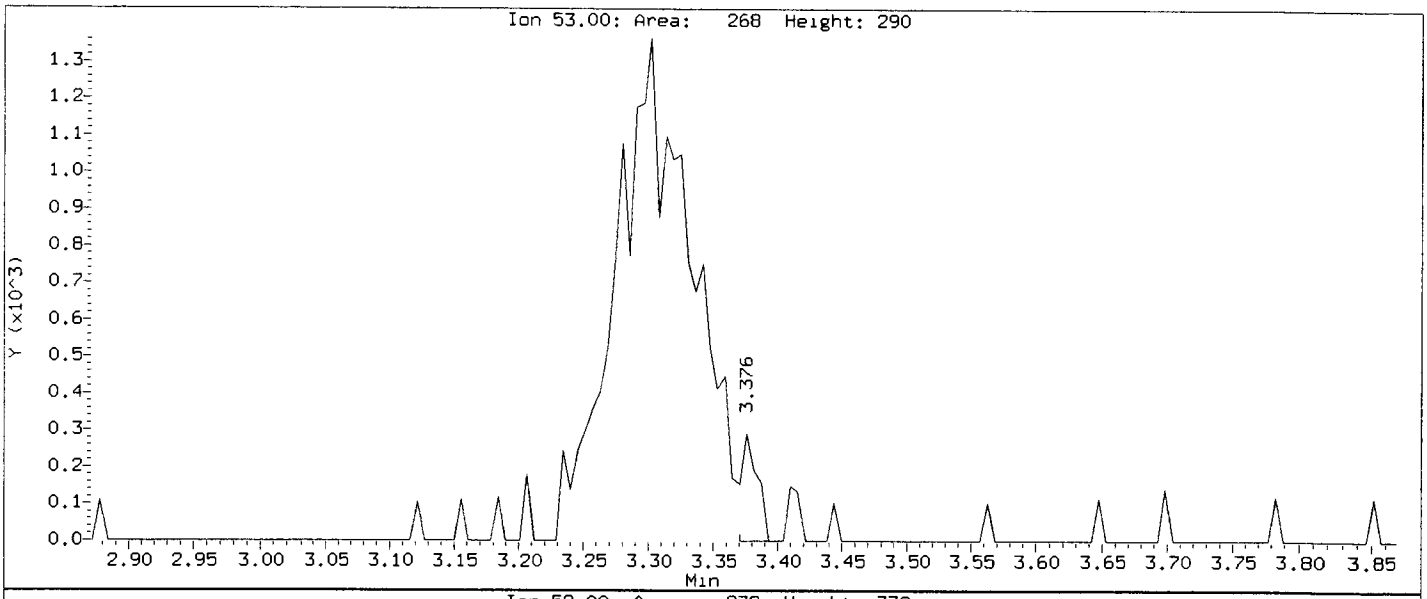


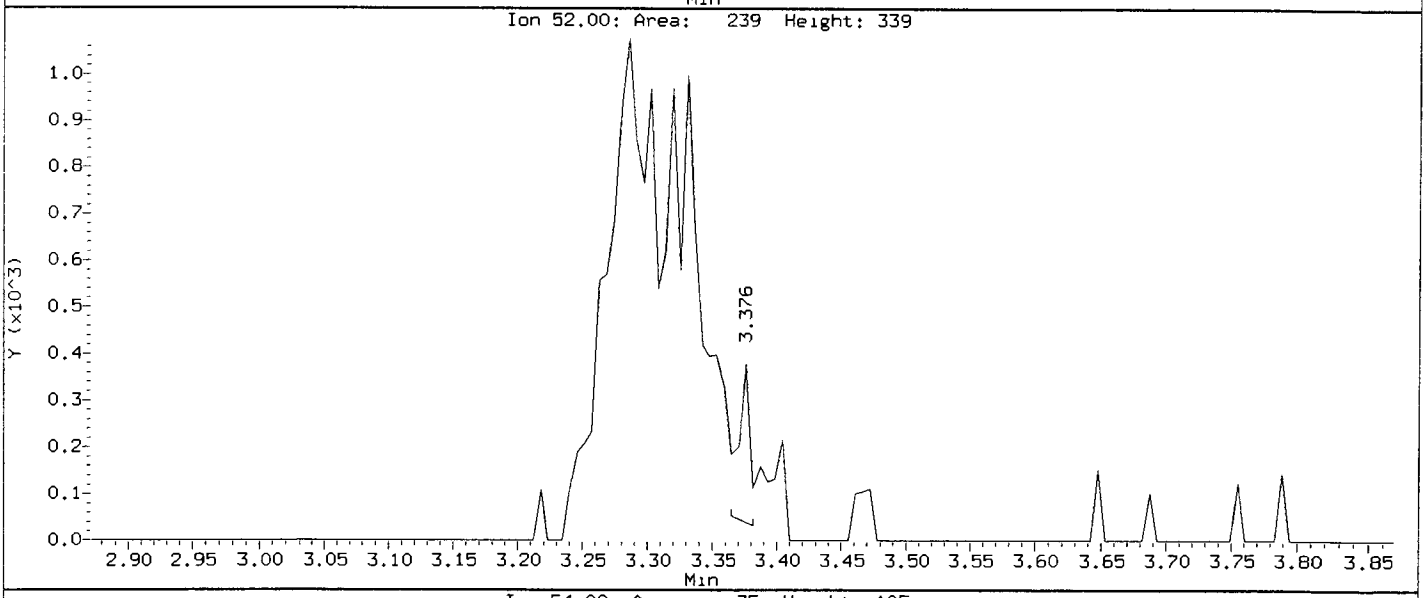


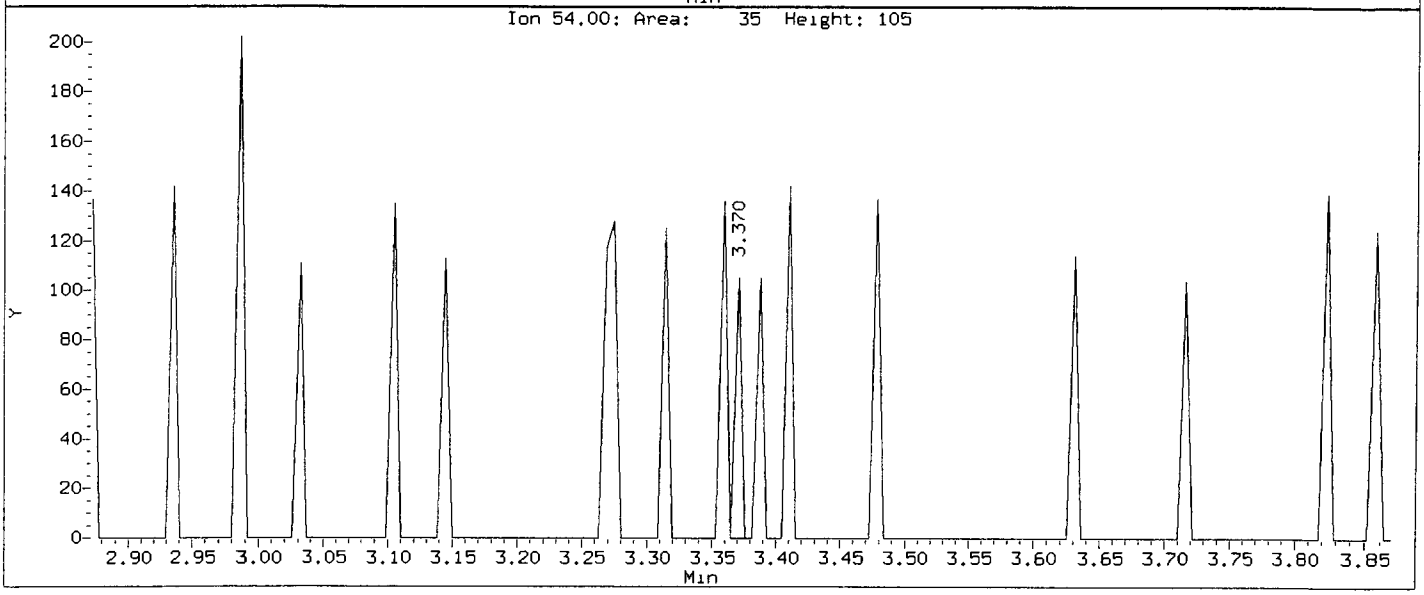
WUTG : 88383

Data File: /chem1/nt5.i/27JUN13.b/0010627.d
Injection Date: 27-JUN-2013 10:43
Instrument: nt5.i
Client Sample ID: VSTD1

Compound: Acrylonitrile
CAS Number:

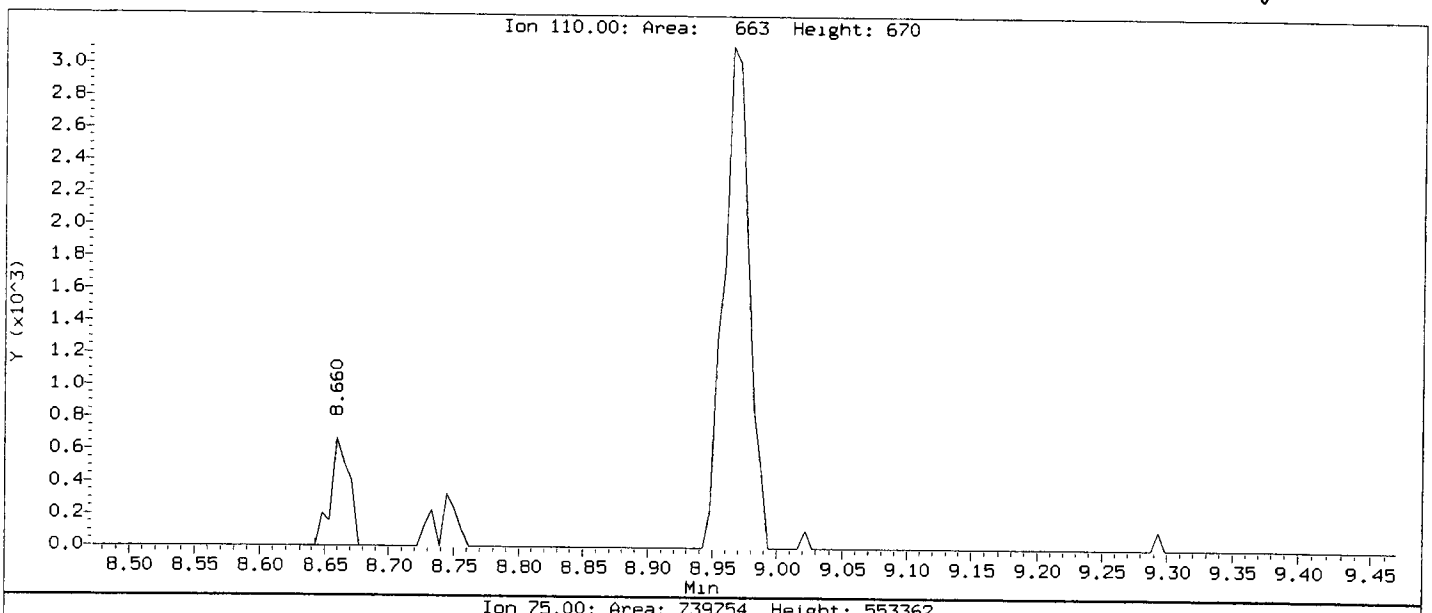


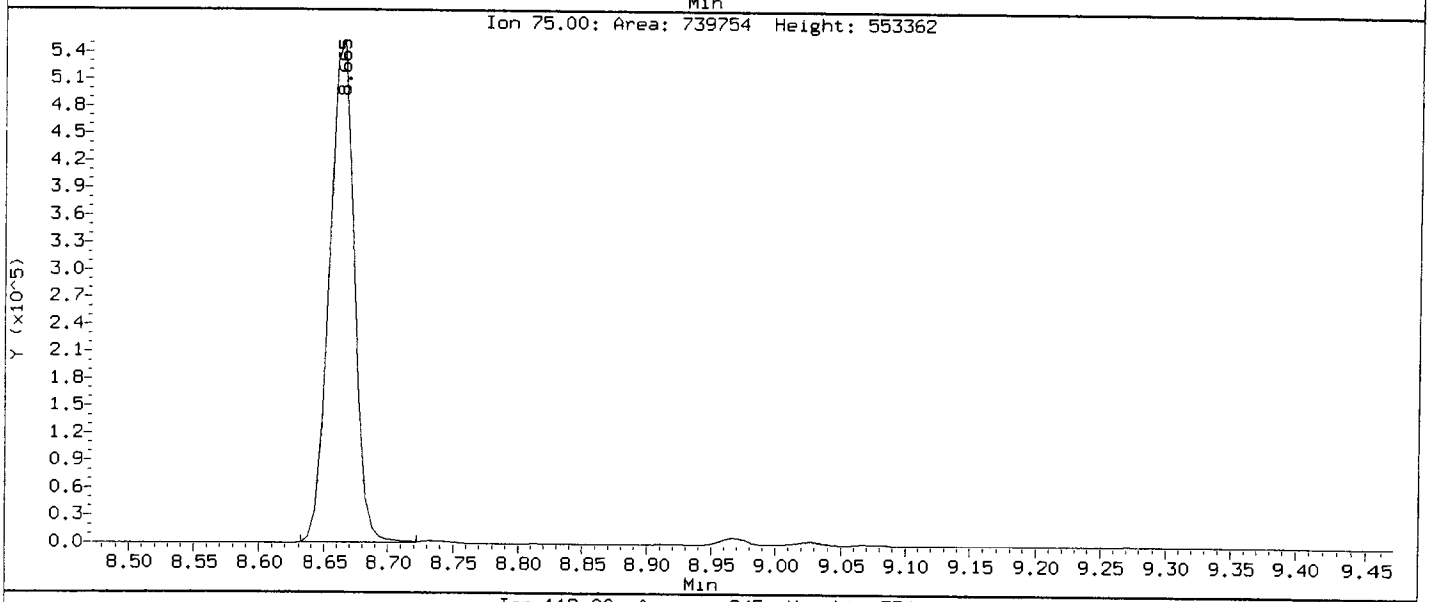


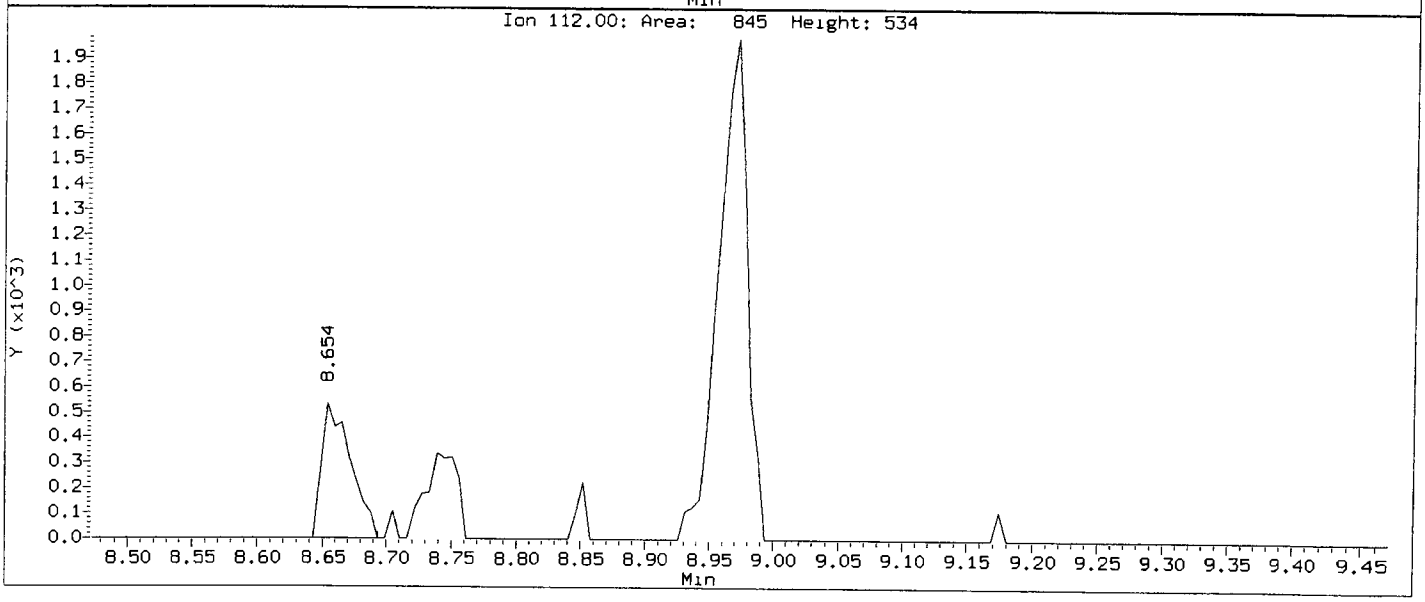


Data File: /chem1/nt5.i/27JUN13.b/0010627.d
Injection Date: 27-JUN-2013 10:43
Instrument: nt5.i
Client Sample ID: VSTD1

Compound: 1,2,3-Trichloropropane
CAS Number:



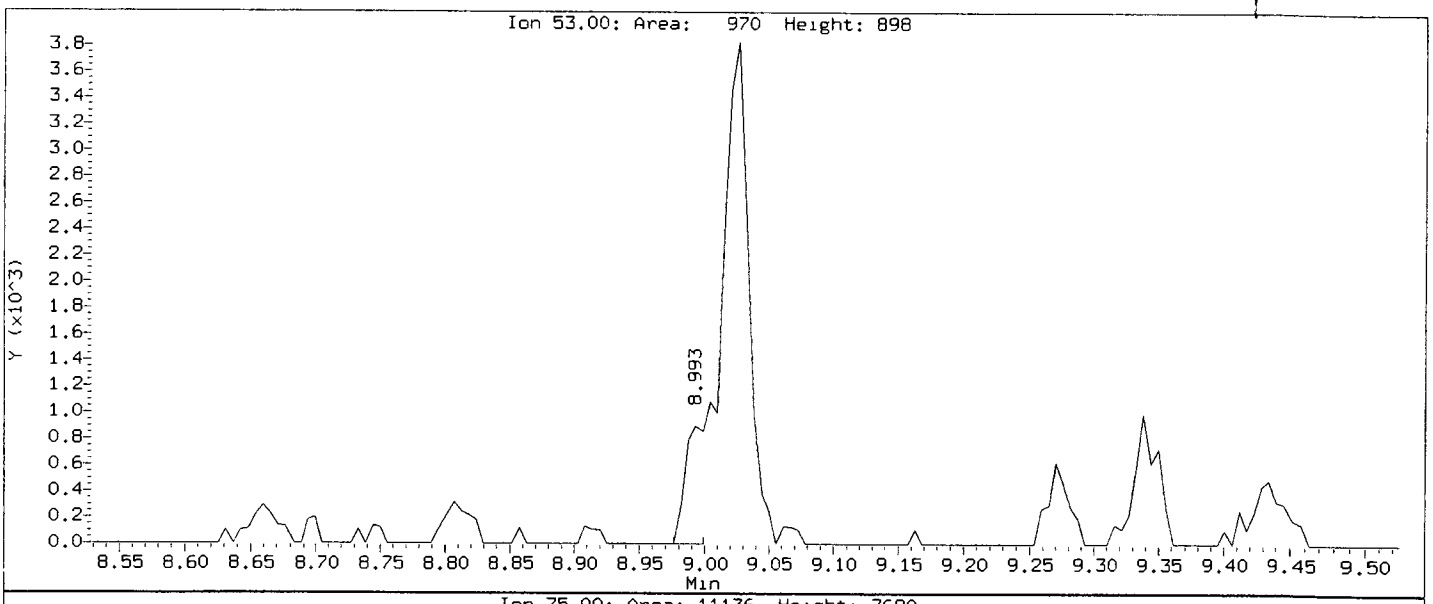


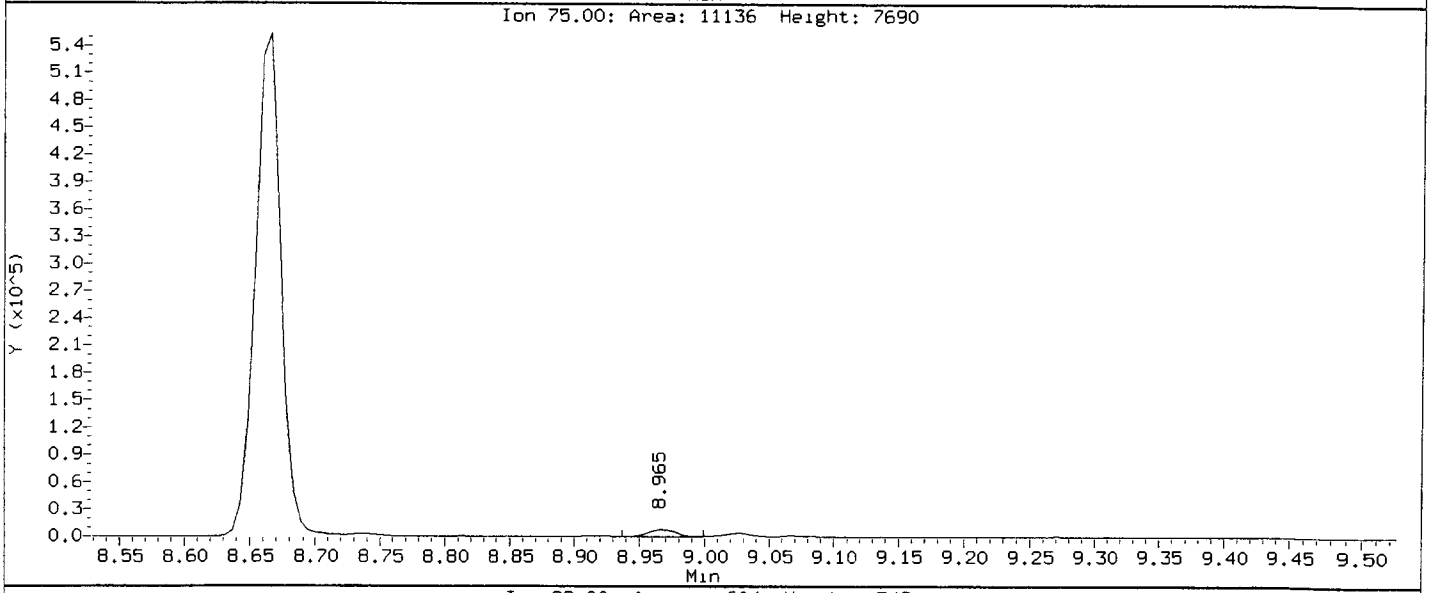


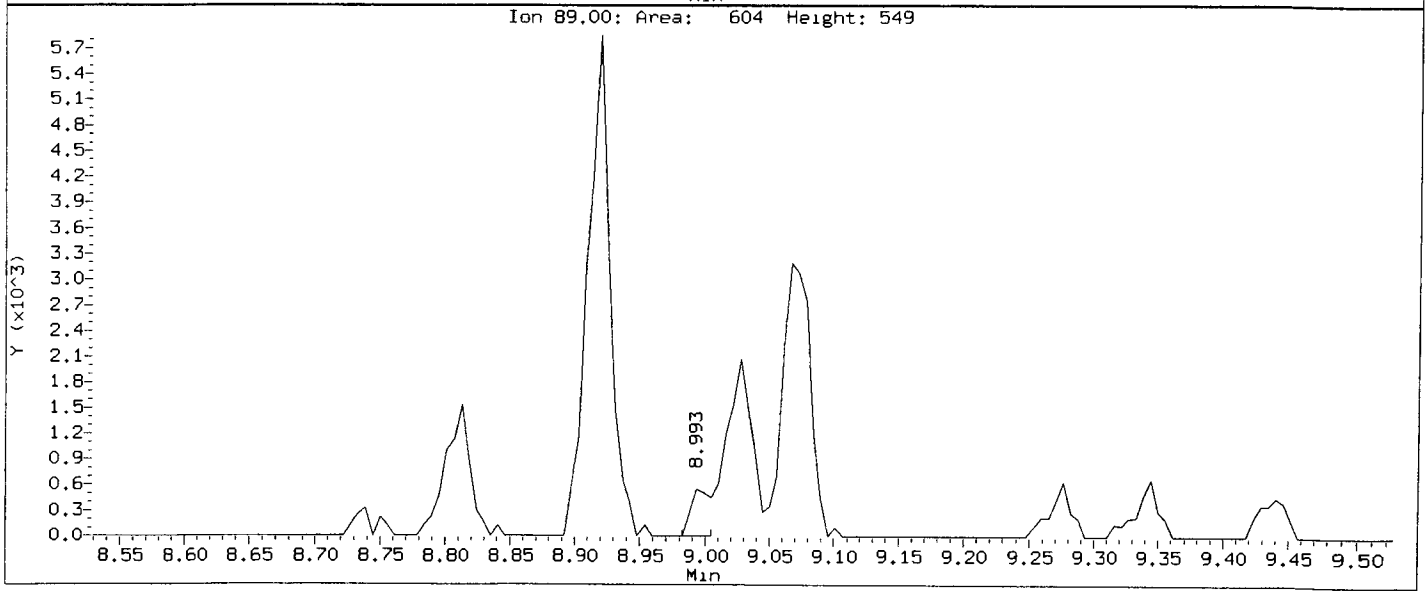
WJTD : 88365

Data File: /chem1/nt5.1/27JUN13.b/0010627.d
Injection Date: 27-JUN-2013 10:43
Instrument: nt5.1
Client Sample ID: VSTD1

Compound: Trans-1,4-Dichloro 2-Butene
CAS Number:



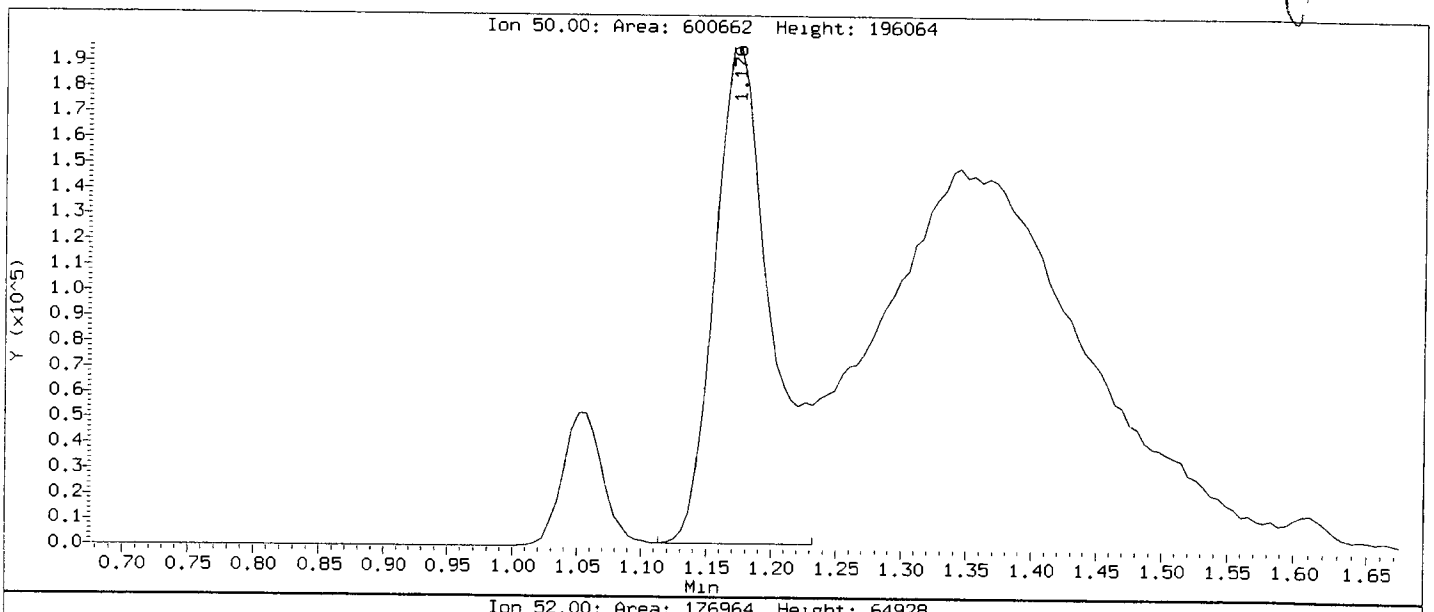


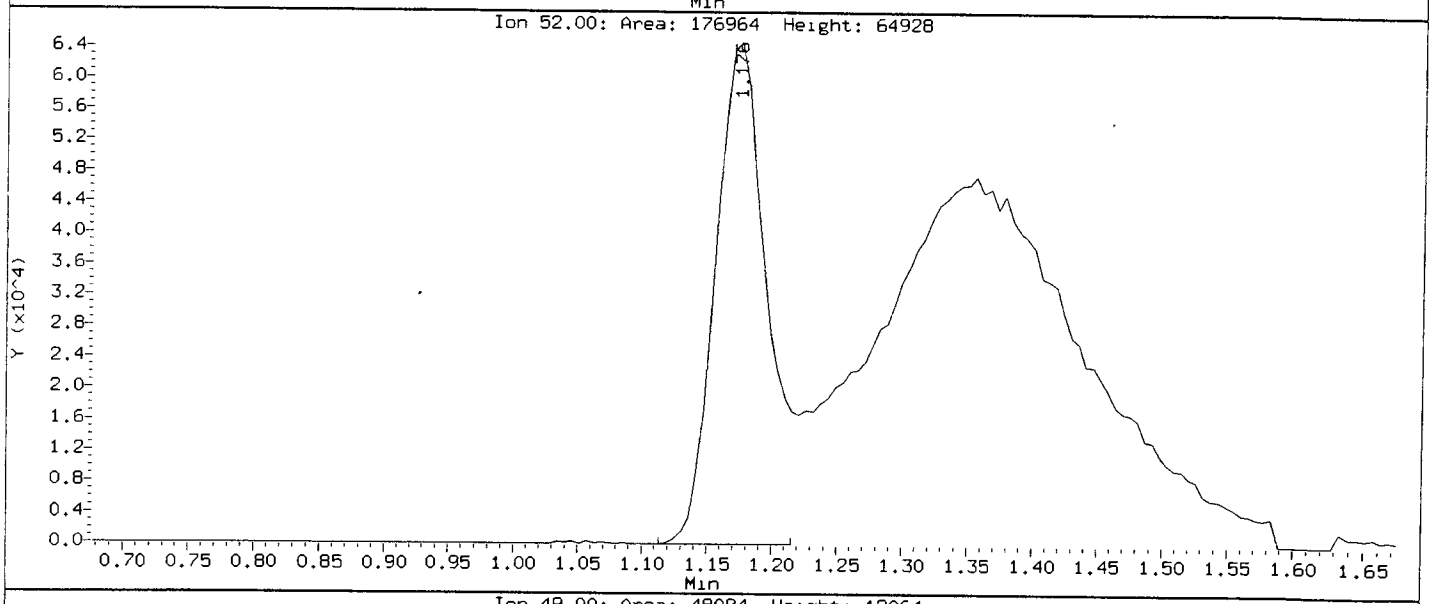


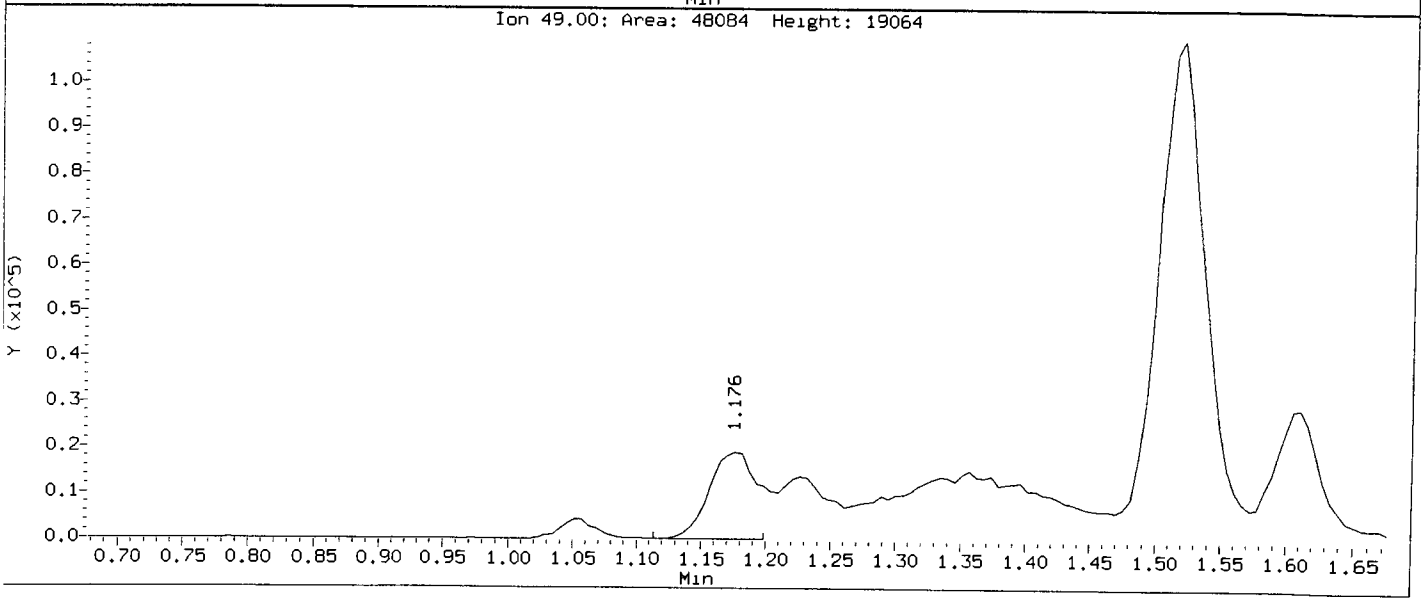
WUTB: 66566

Data File: /chem1/nt5.i/27JUN13.b/1000627.d
Injection Date: 27-JUN-2013 11:55
Instrument: nt5.i
Client Sample ID: VSTD100

Compound: Chloromethane
CAS Number:



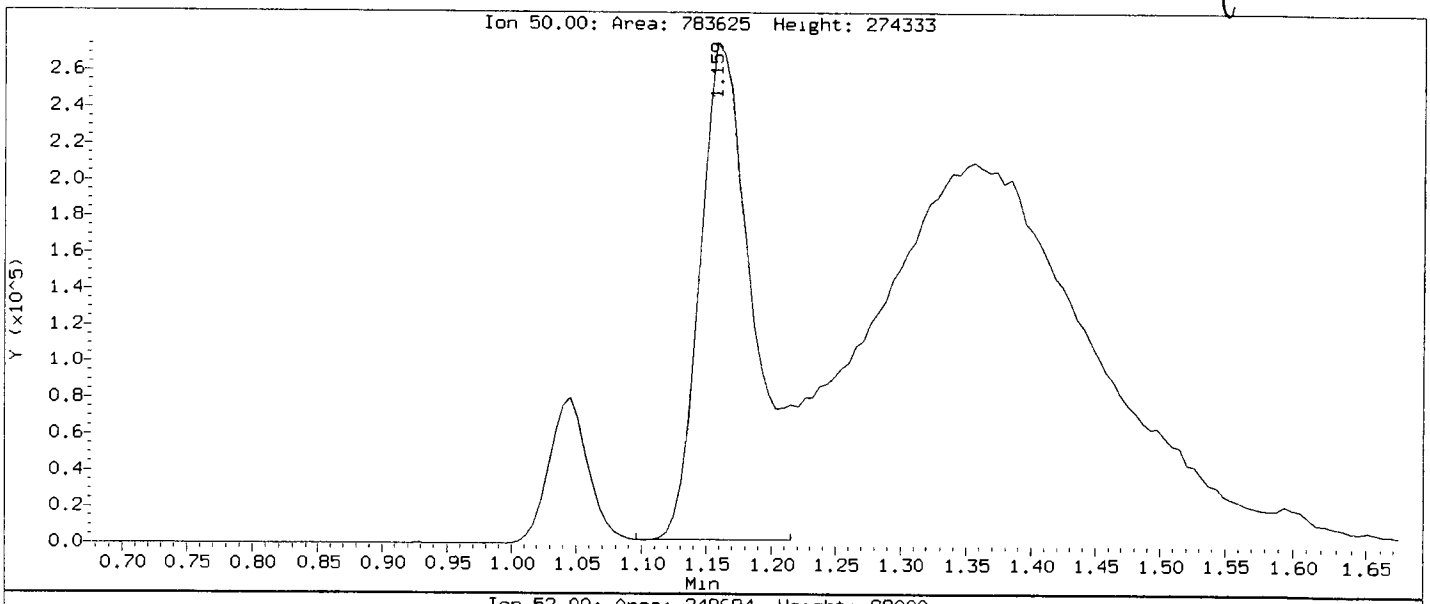


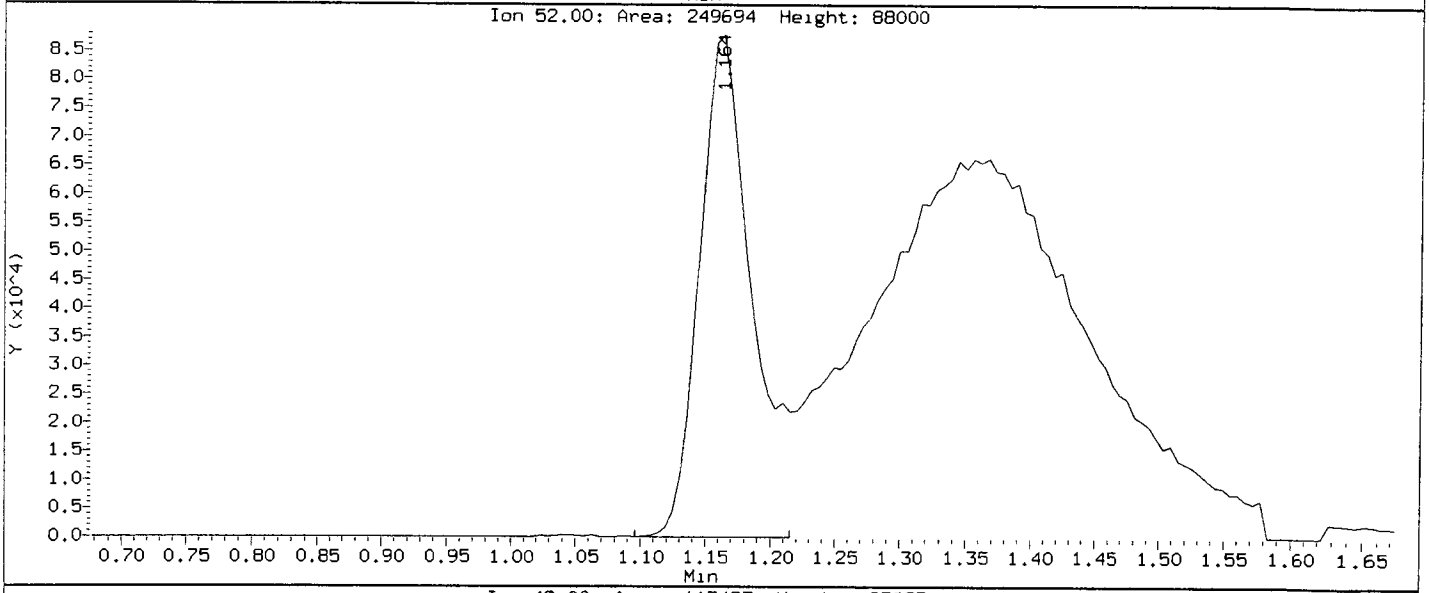


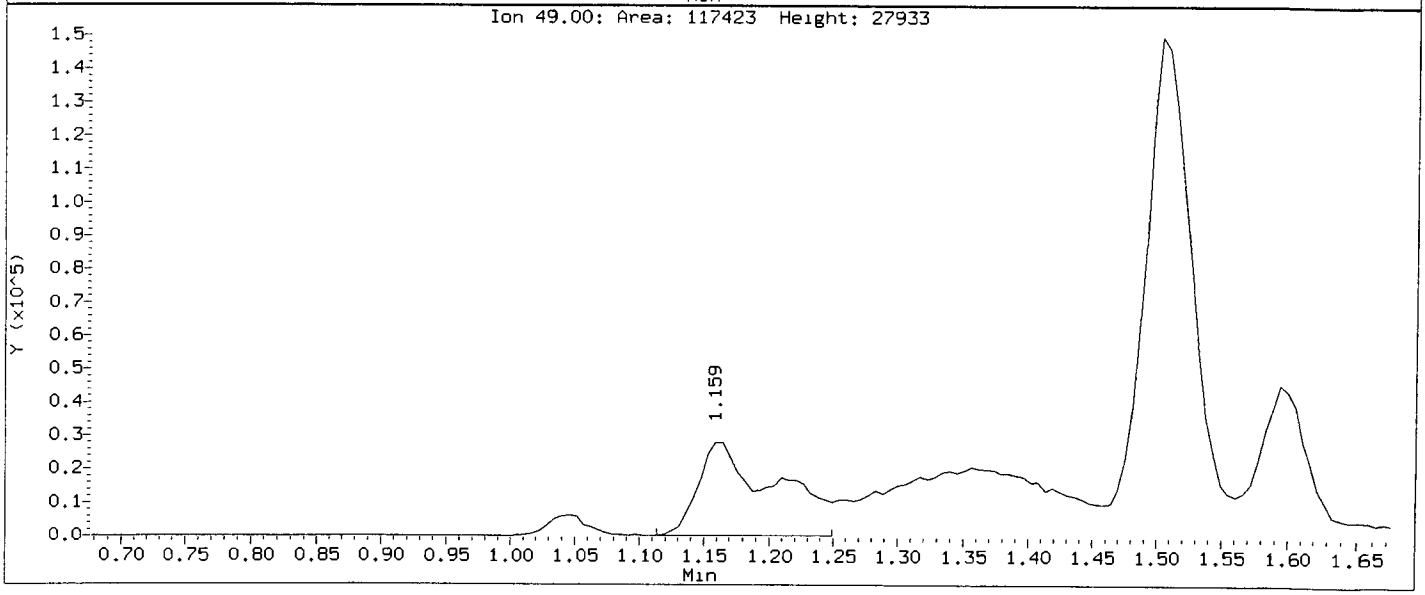
WUTP : 06367

Data File: /chem1/nt5.i/27JUN13.b/1500627.d
Injection Date: 27-JUN-2013 11:31
Instrument: nt5.i
Client Sample ID: VSTD150

Compound: Chloromethane
CAS Number:



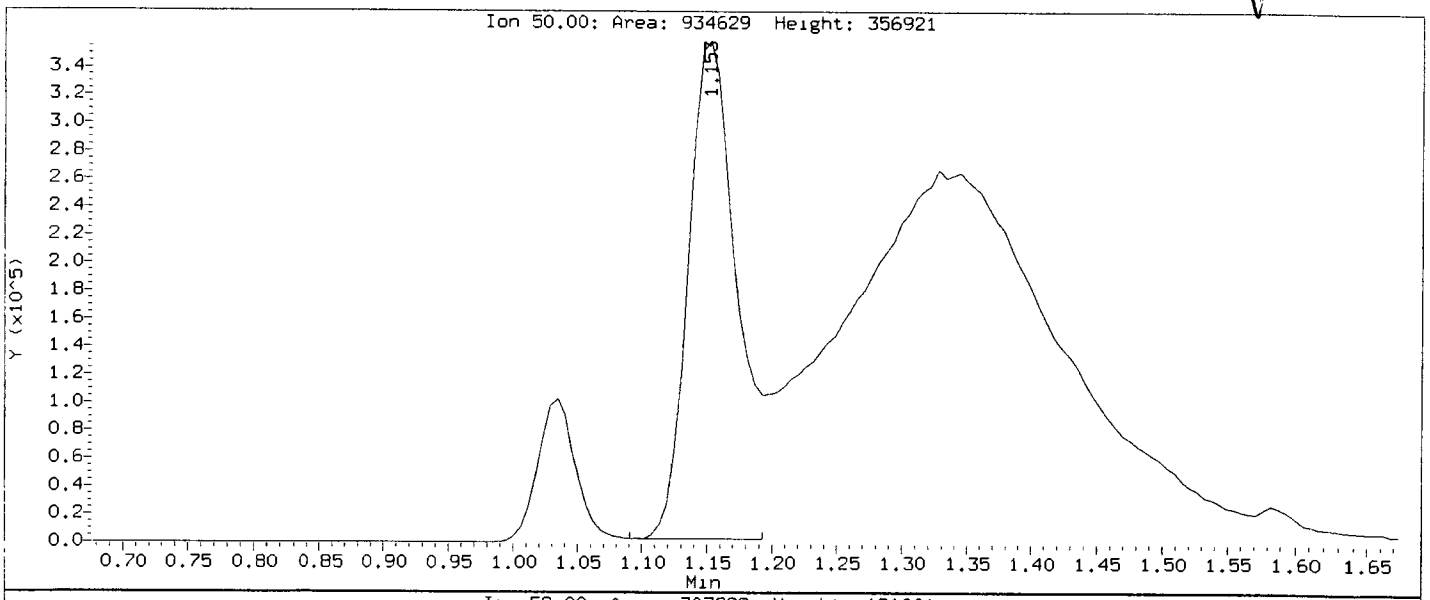


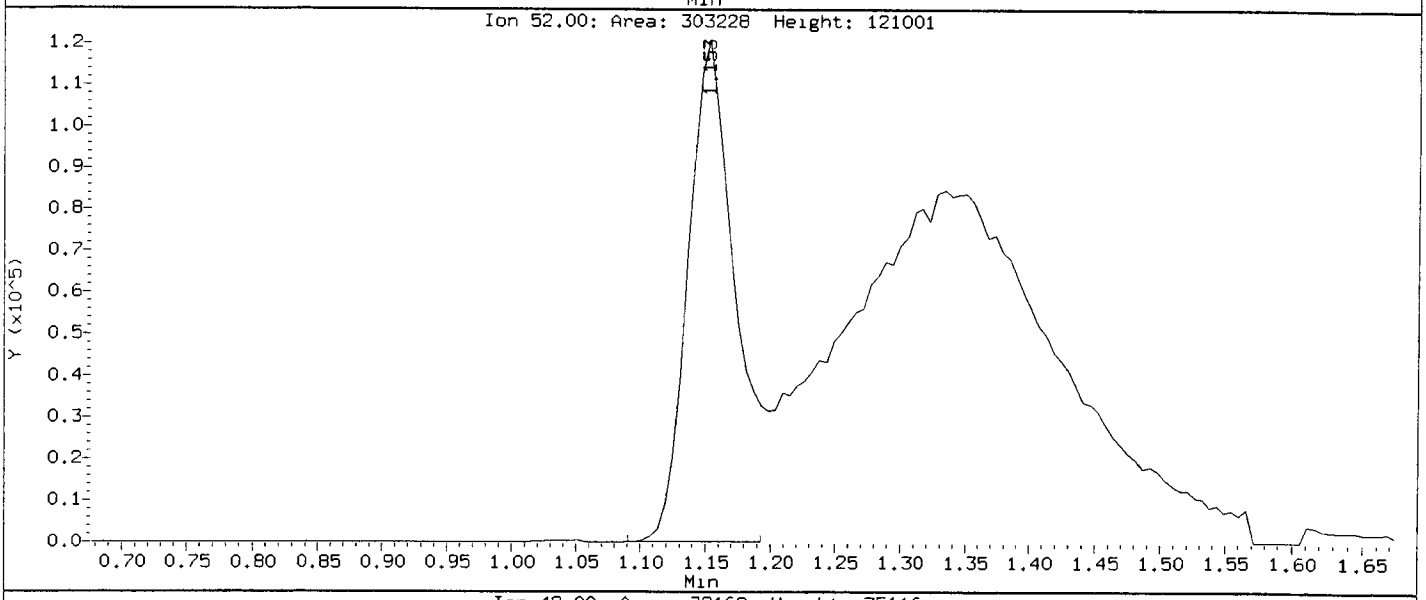


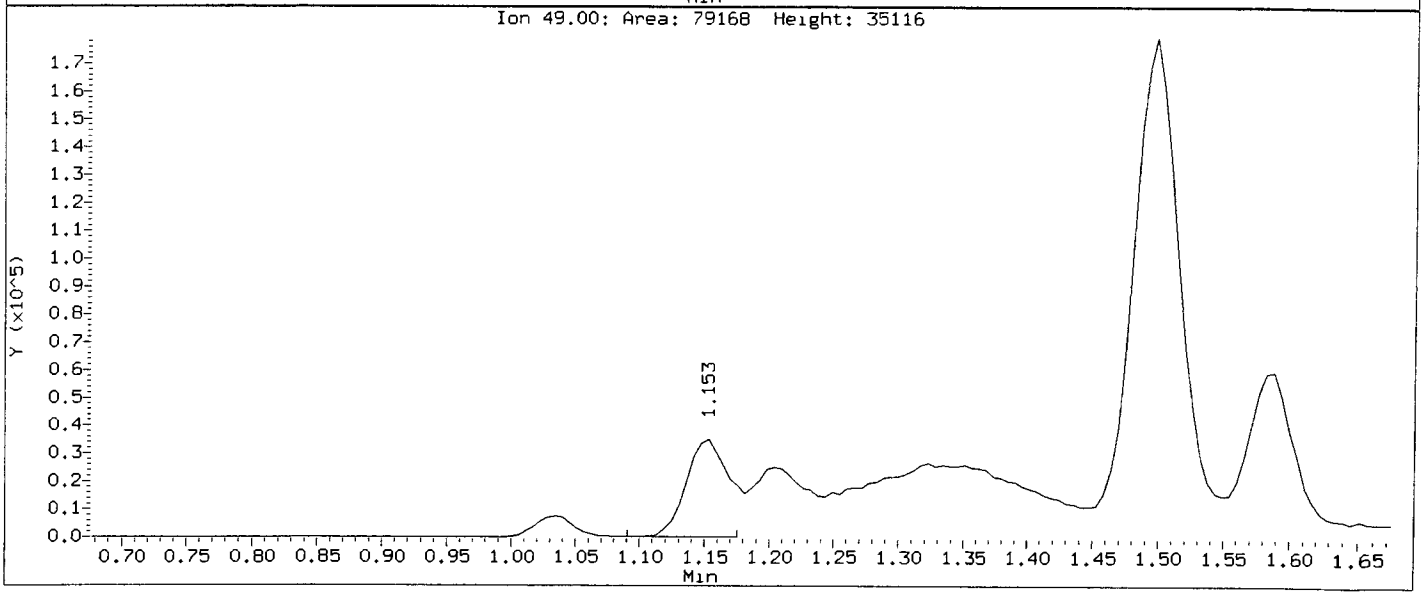
WUTG : 68366

Data File: /chem1/nt5.i/27JUN13.b/2000627.d
Injection Date: 27-JUN-2013 11:07
Instrument: nt5.i
Client Sample ID: VSTD200

Compound: Chloromethane
CAS Number:



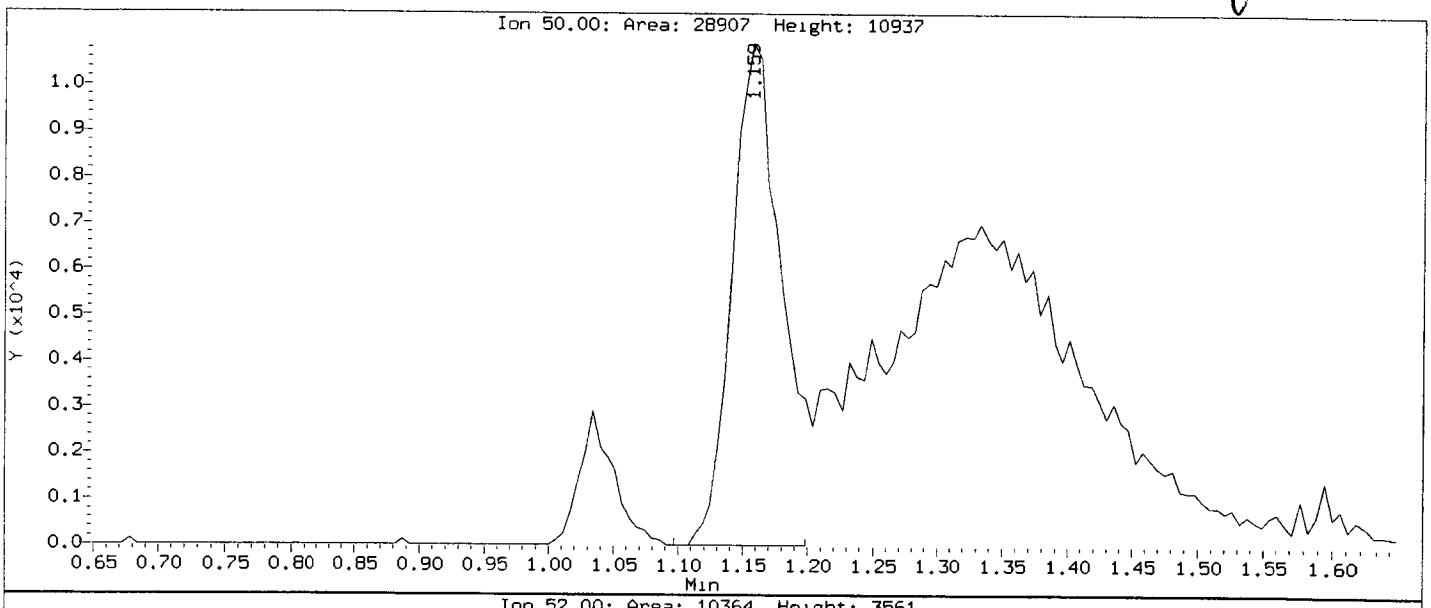


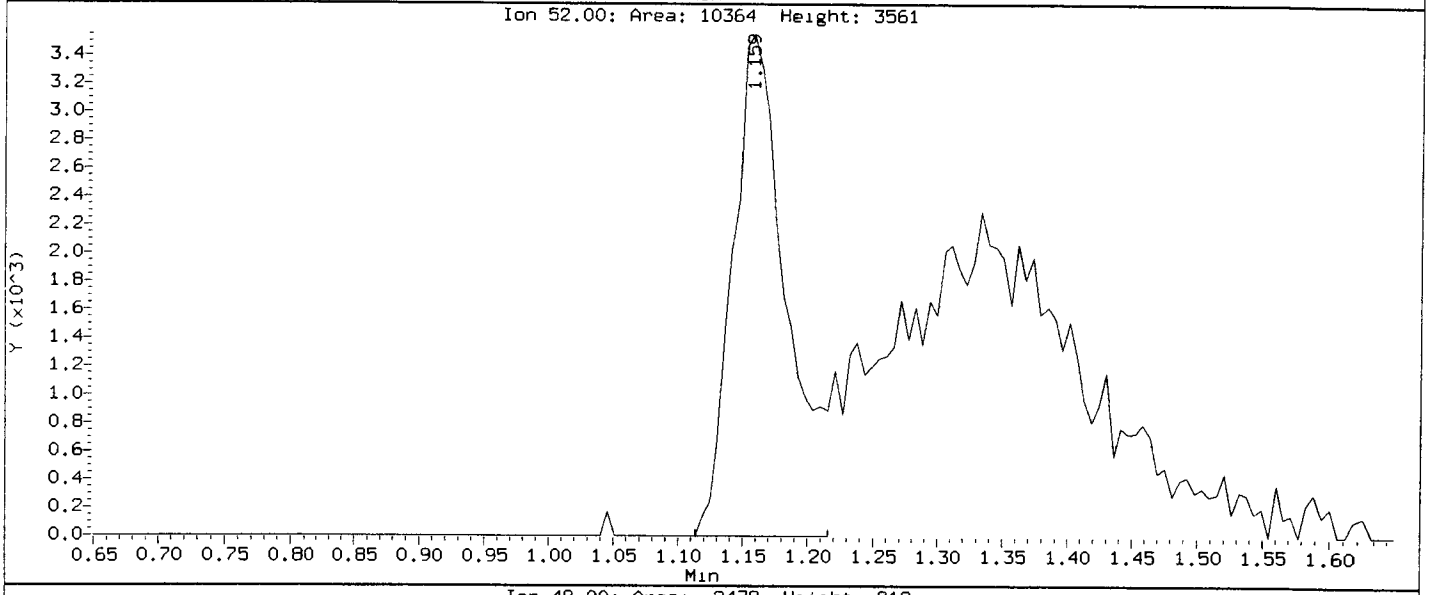


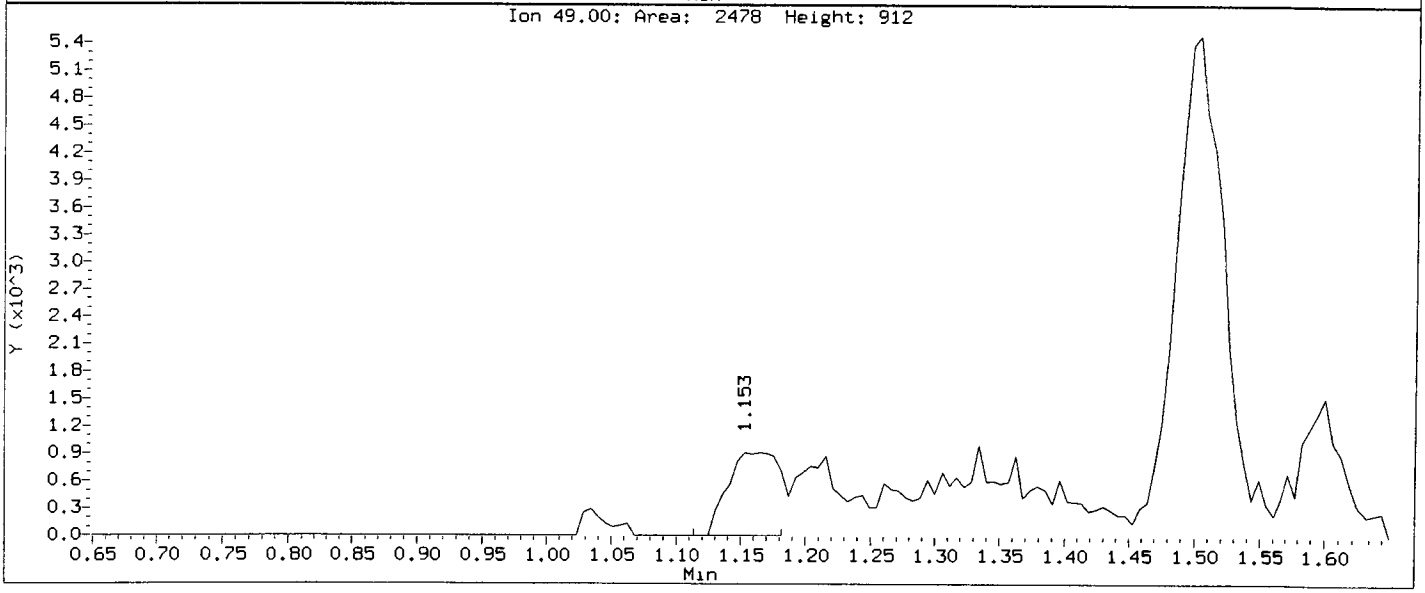
WITG : 89369

Data File: /chem1/nt5.i/27JUN13.b/0050627.d
Injection Date: 27-JUN-2013 13:07
Instrument: nt5.i
Client Sample ID: VSTD5

Compound: Chloromethane
CAS Number:





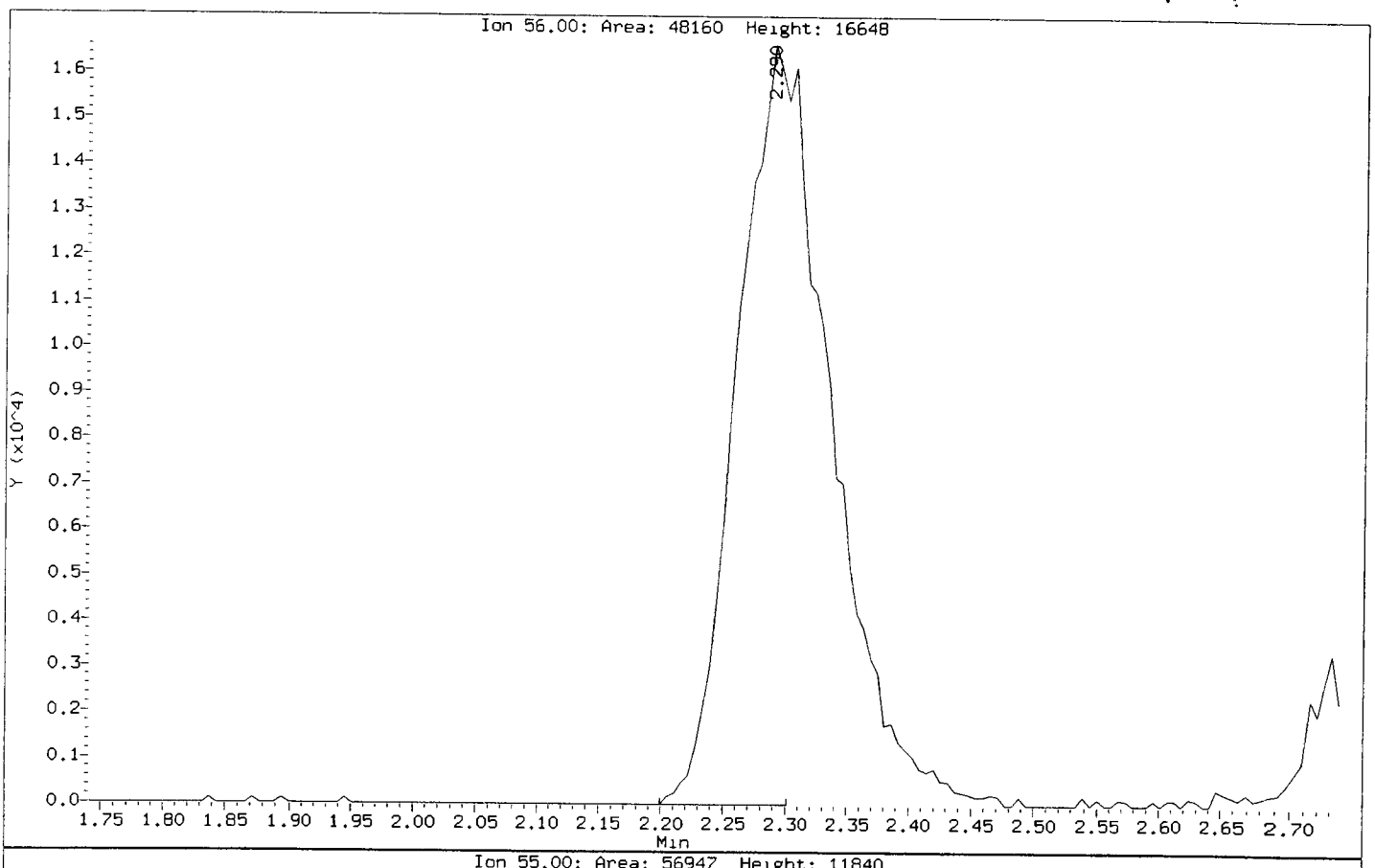


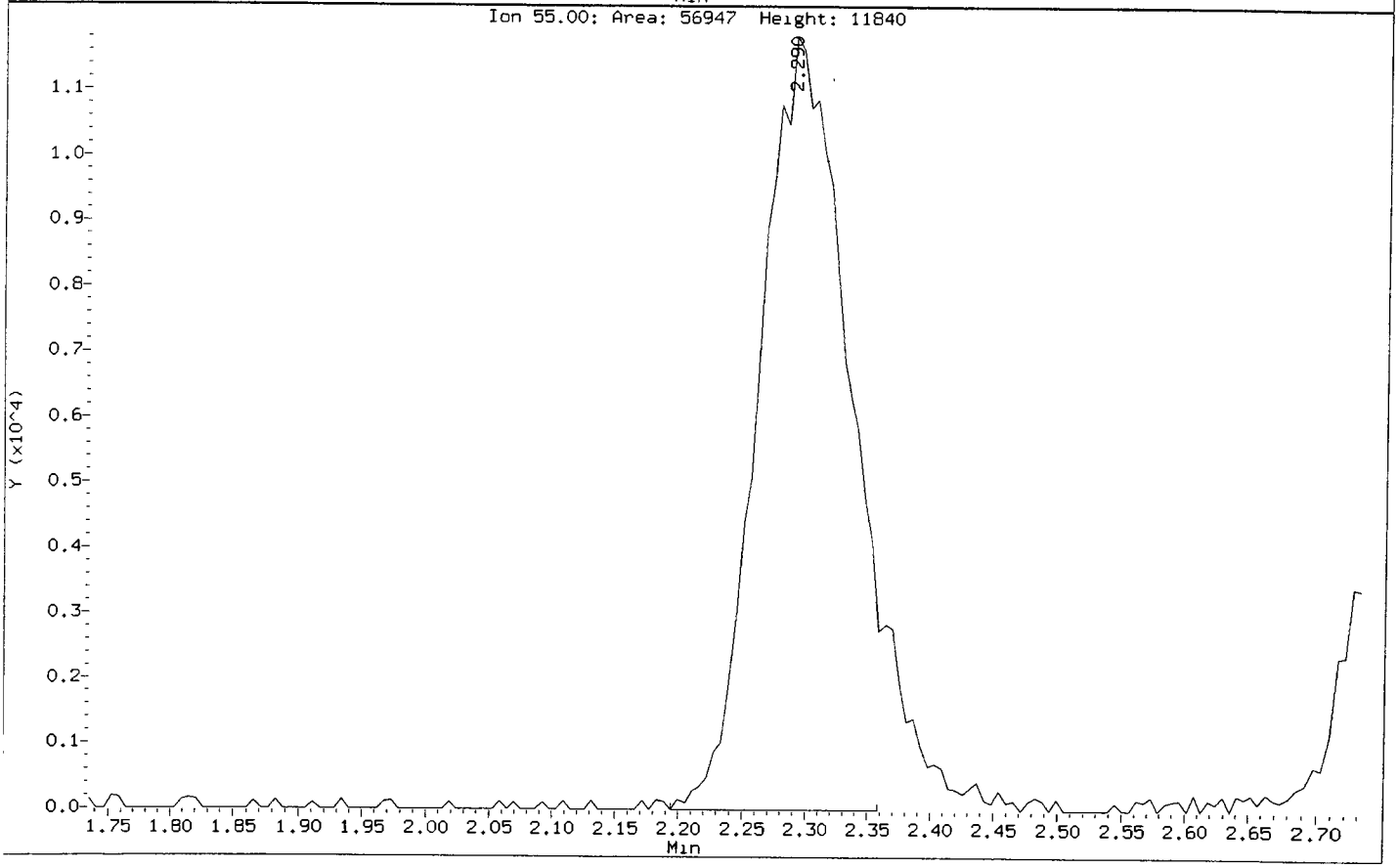
WUTB : 0050

Data File: /chem1/nt5.i/27JUN13.b/0050627.d
Injection Date: 27-JUN-2013 13:07
Instrument: nt5.i
Client Sample ID: VSTD5

Compound: Acrolein
CAS Number:

1/16/14



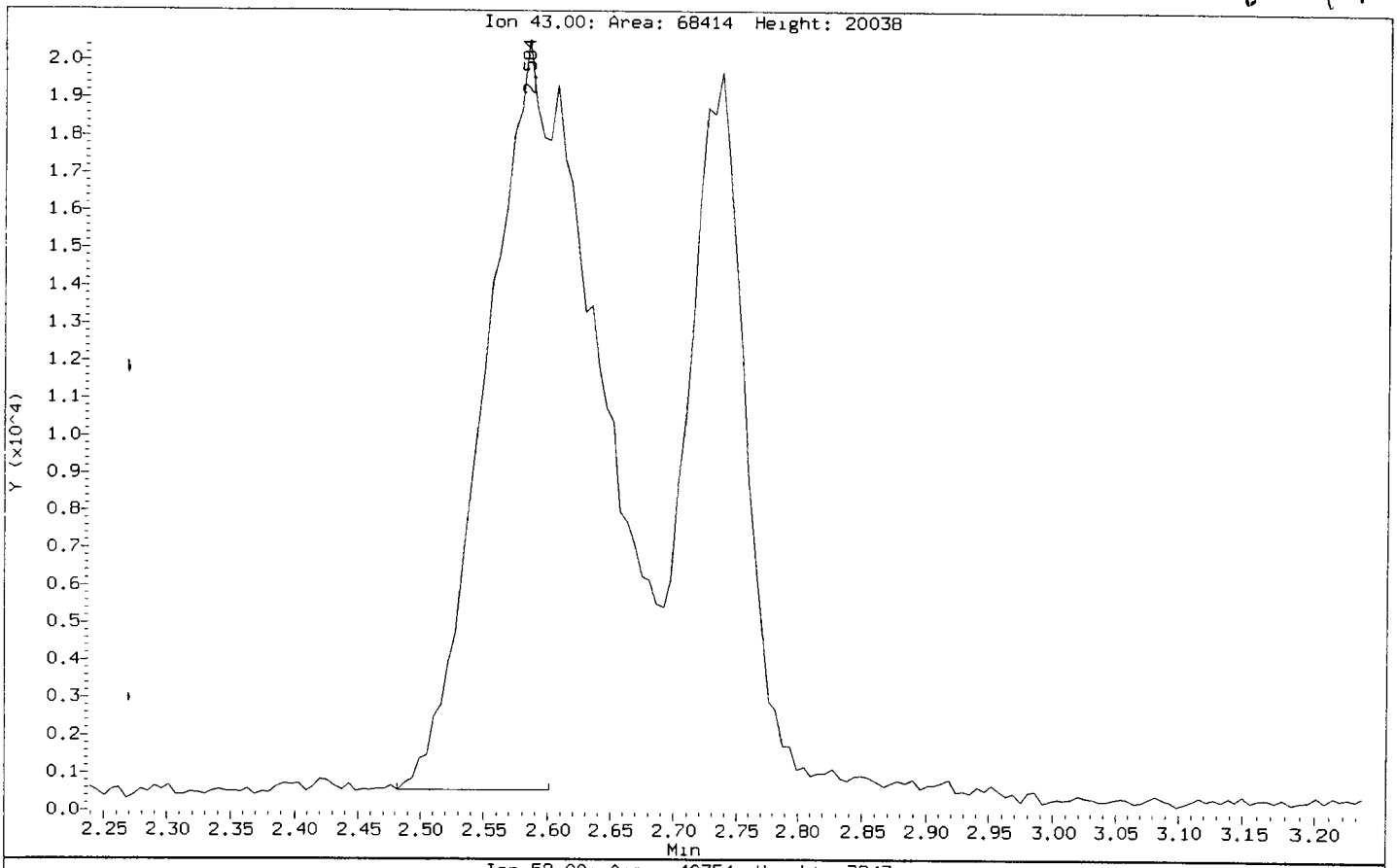


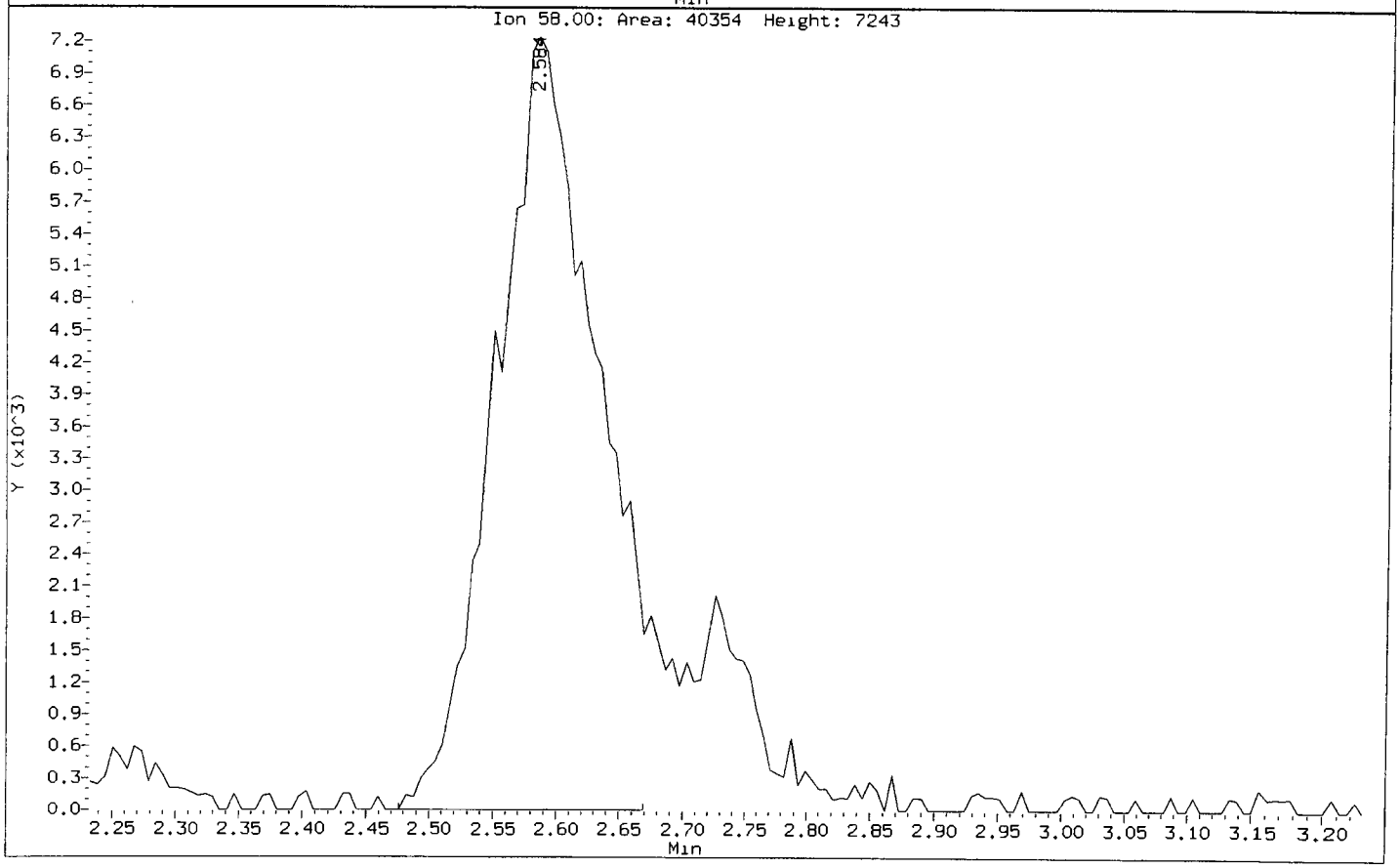
WUTG : 66331

Data File: /chem1/nt5.i/27JUN13.b/0100627.d
Injection Date: 27-JUN-2013 12:43
Instrument: nt5.i
Client Sample ID: VSTD10

Compound: Acetone
CAS Number:

1: 6/14

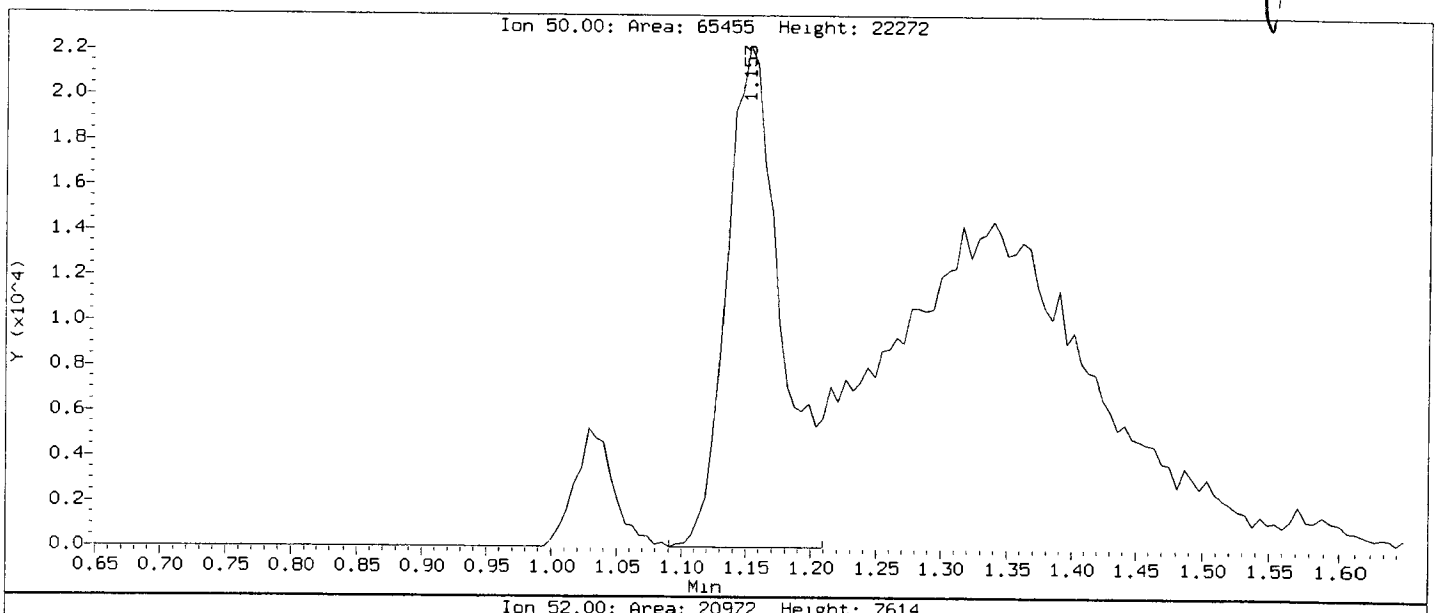


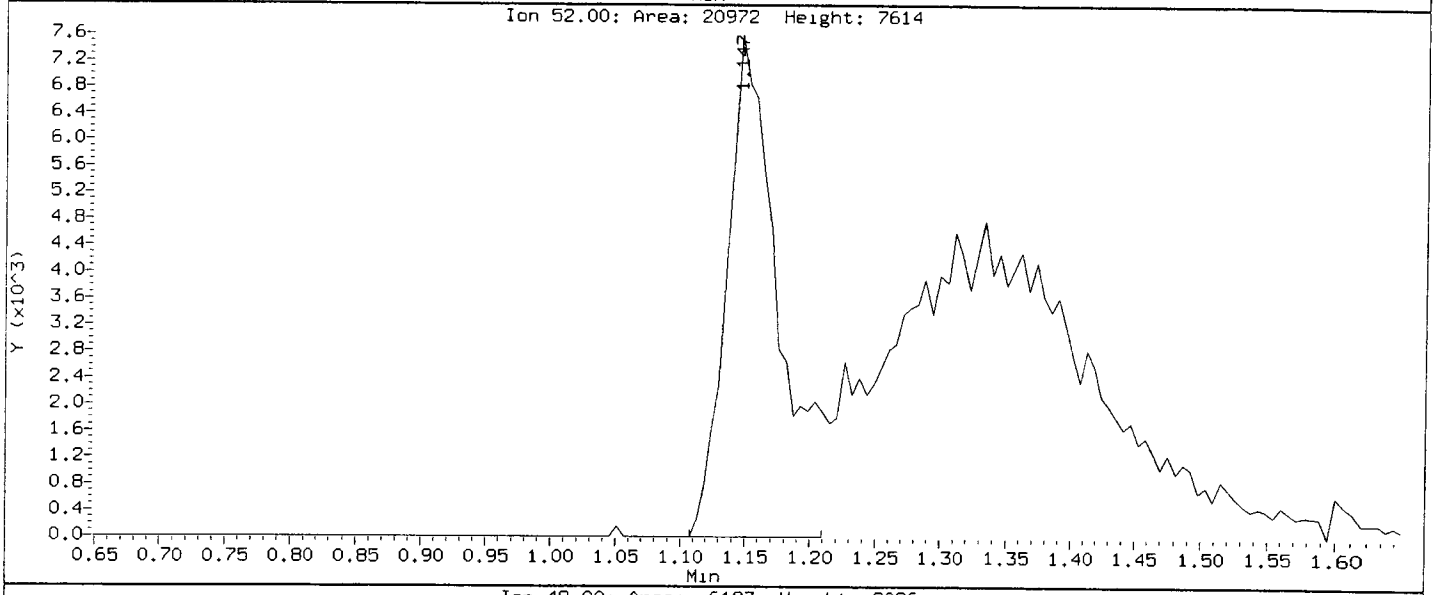


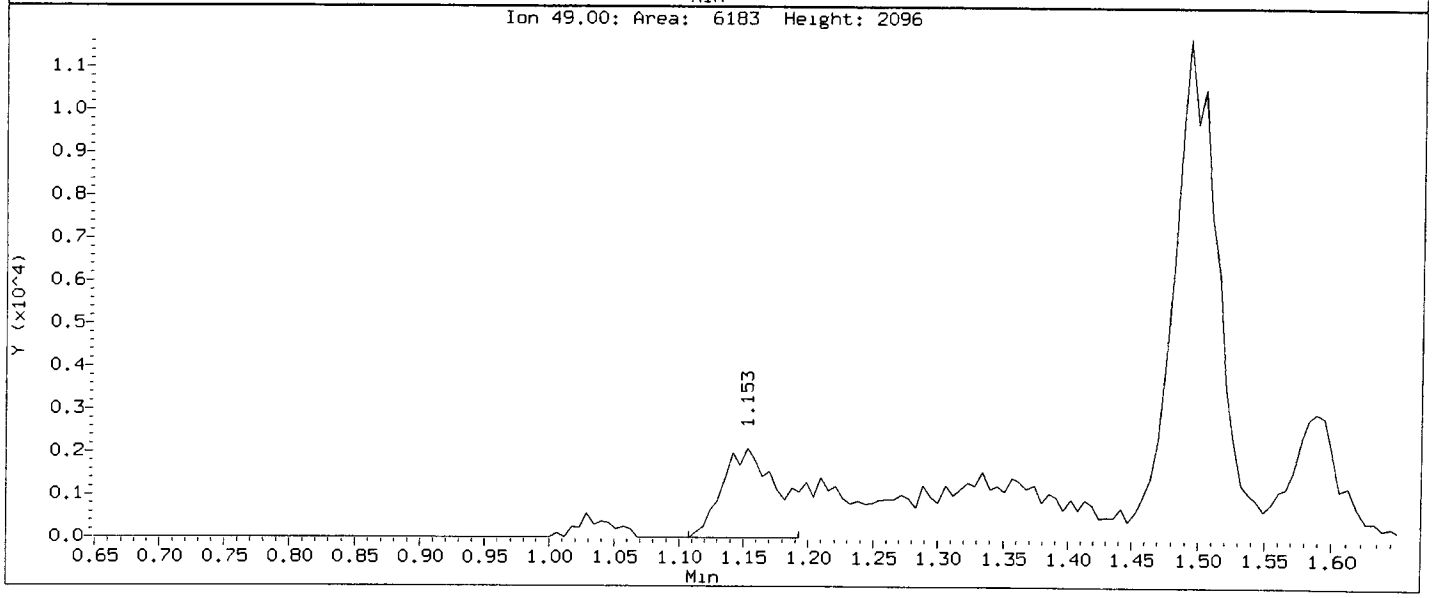
WUTB : 88332

Data File: /chem1/nt5.1/27JUN13.b/0100627.d
Injection Date: 27-JUN-2013 12:43
Instrument: nt5.1
Client Sample ID: VSTD10

Compound: Chloromethane
CAS Number:



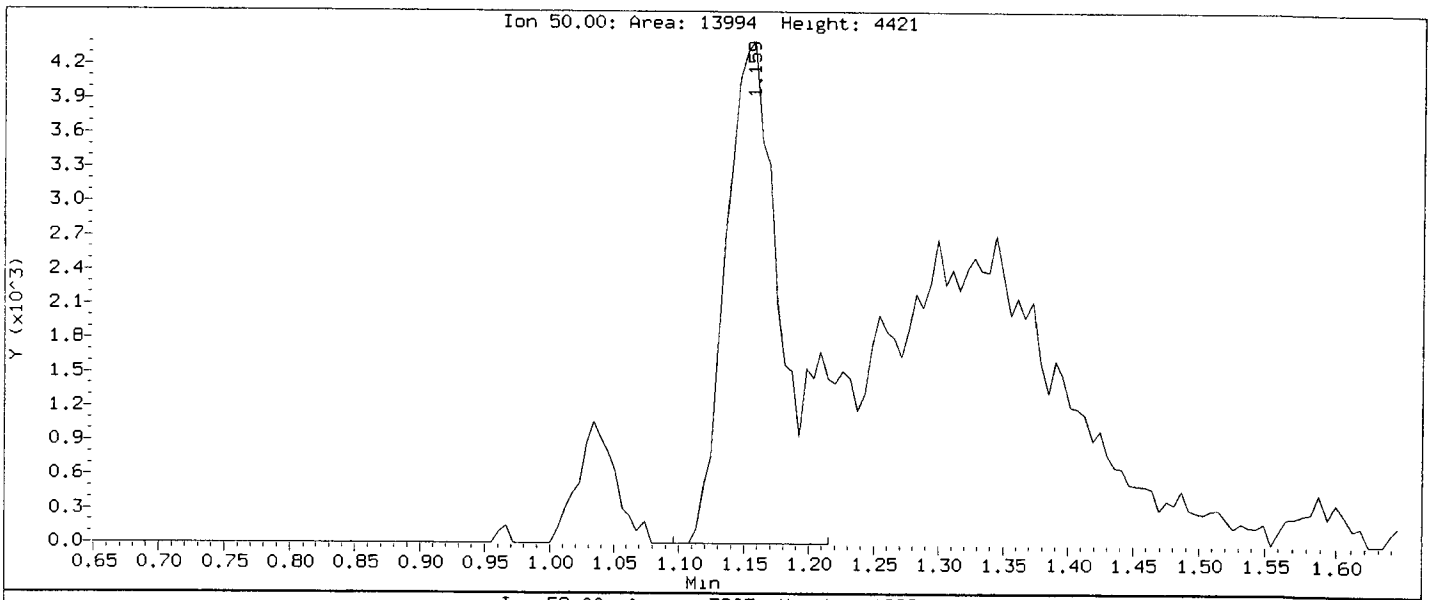


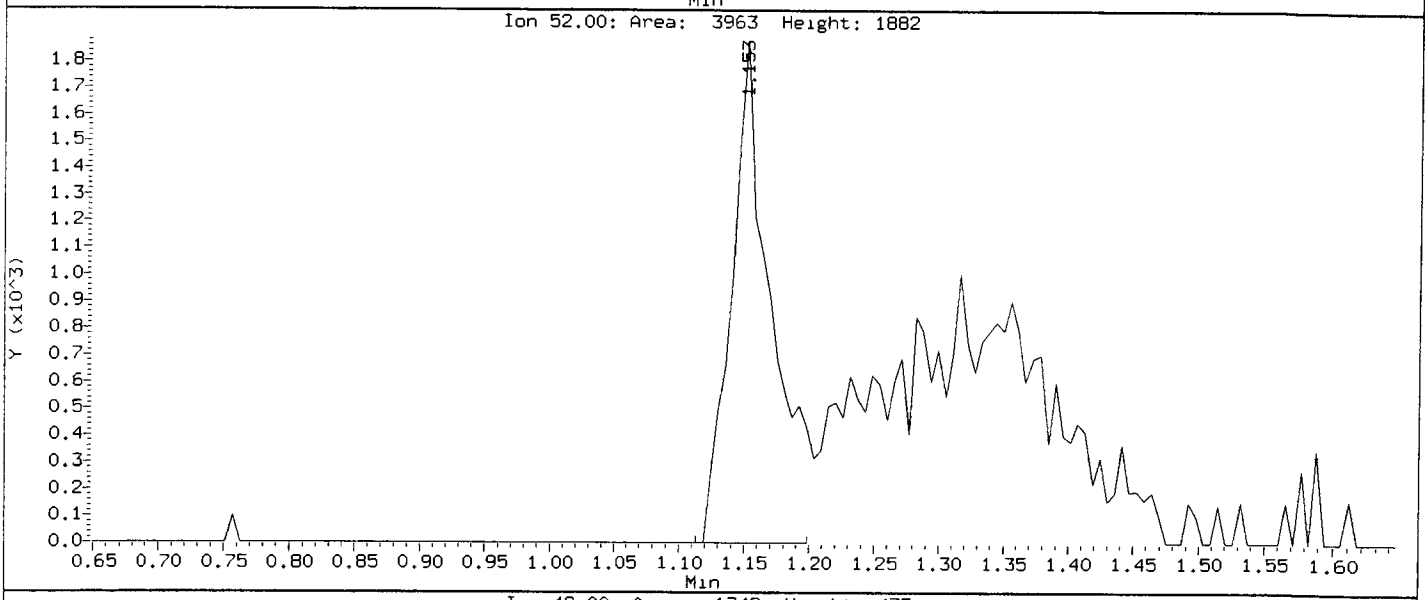


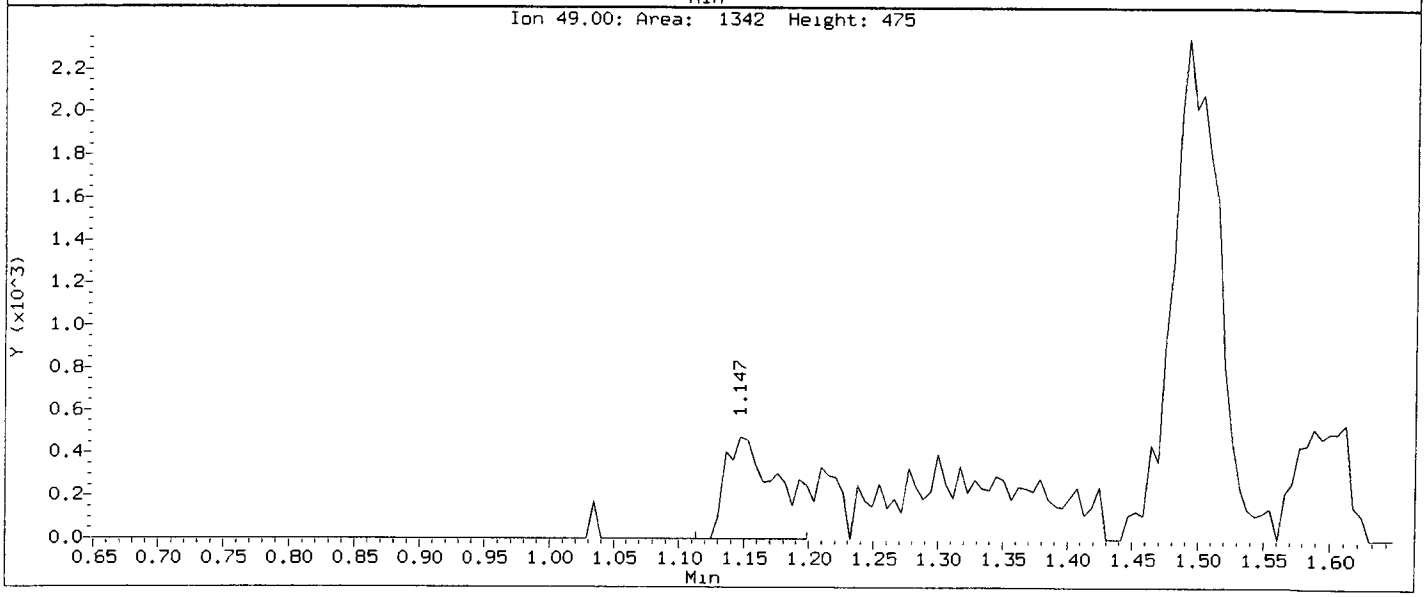
WUTG : 0033

Data File: /chem1/nt5.i/27JUN13.b/0020627.d
Injection Date: 27-JUN-2013 13:30
Instrument: nt5.i
Client Sample ID: VSTD2

Compound: Chloromethane
CAS Number:

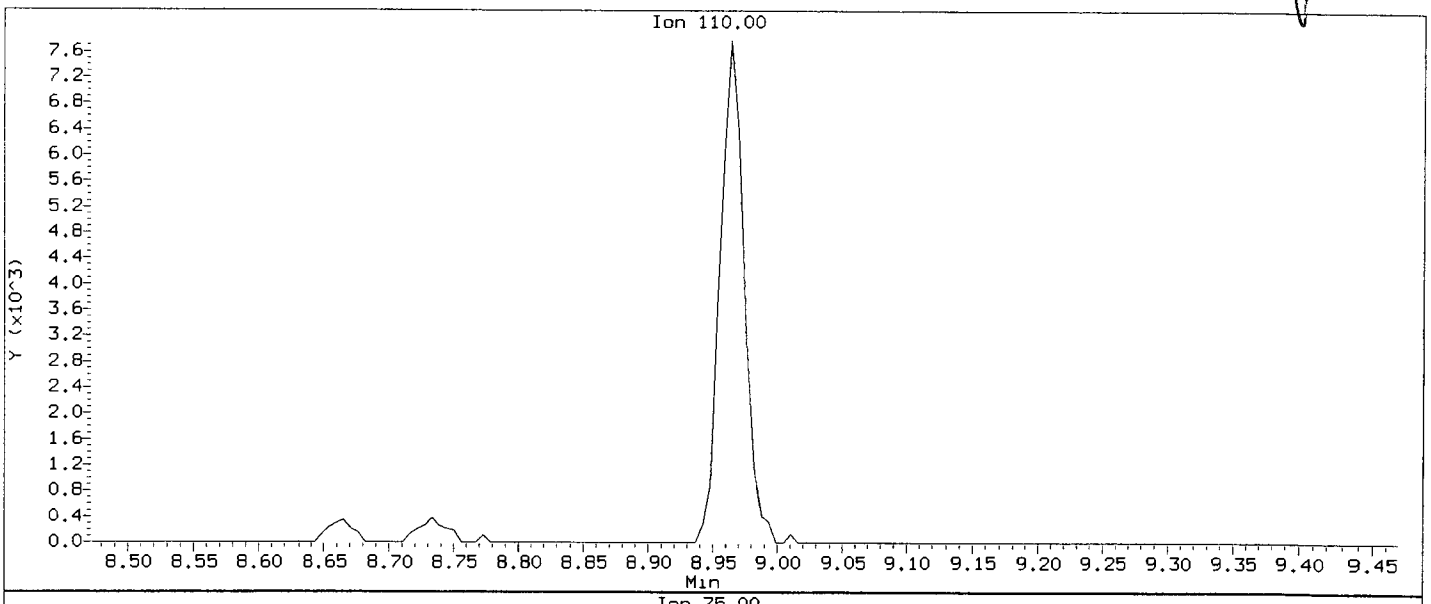


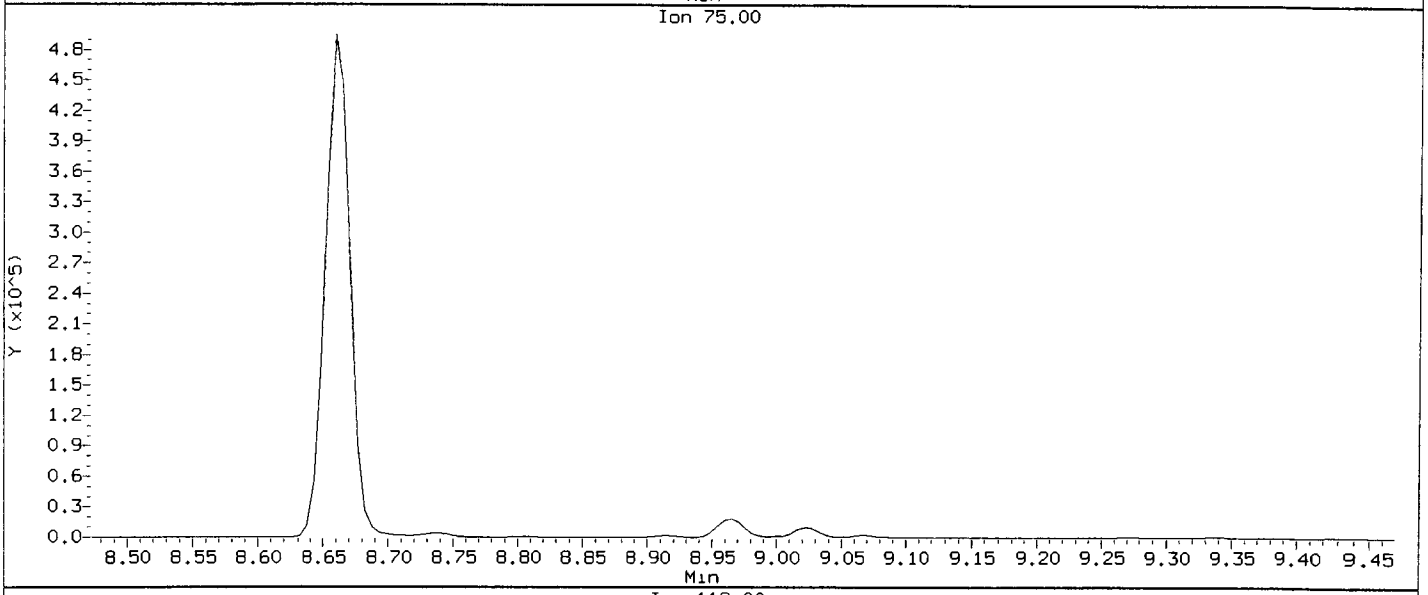


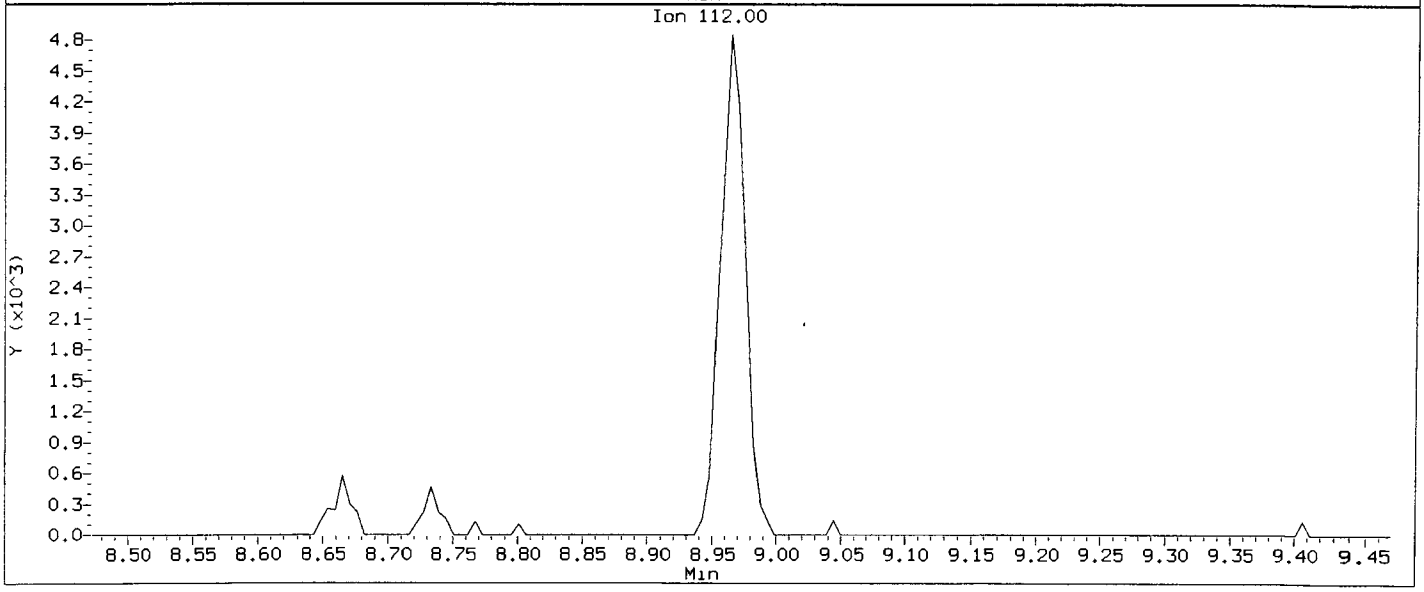


Data File: /chem1/nt5.i/27JUN13.b/0020627.d
Injection Date: 27-JUN-2013 13:30
Instrument: nt5.i
Client Sample ID: VSTD2

Compound: 1,2,3-Trichloropropane
CAS Number:



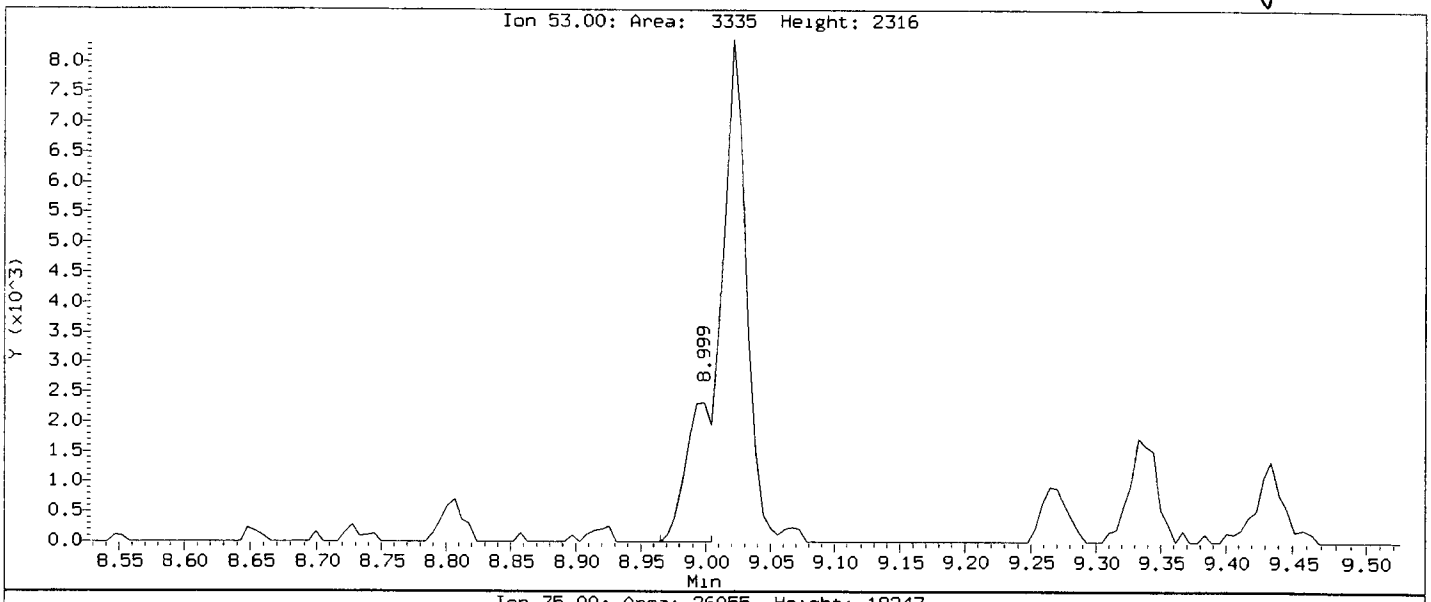


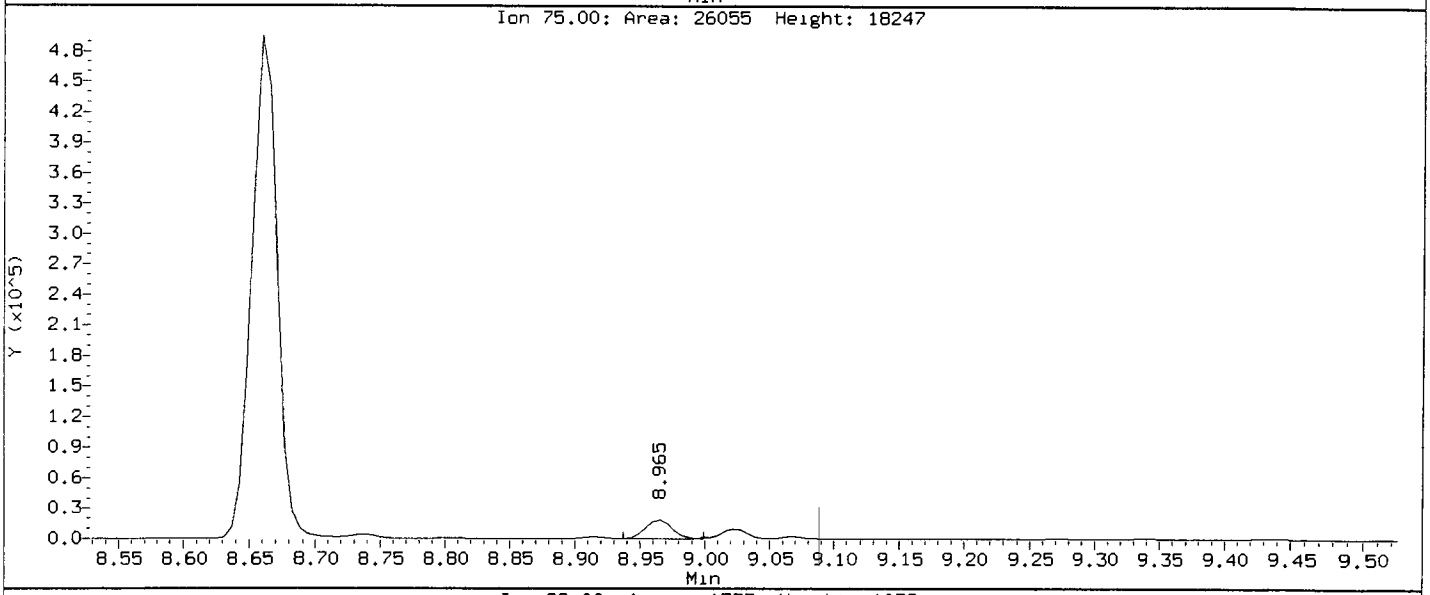


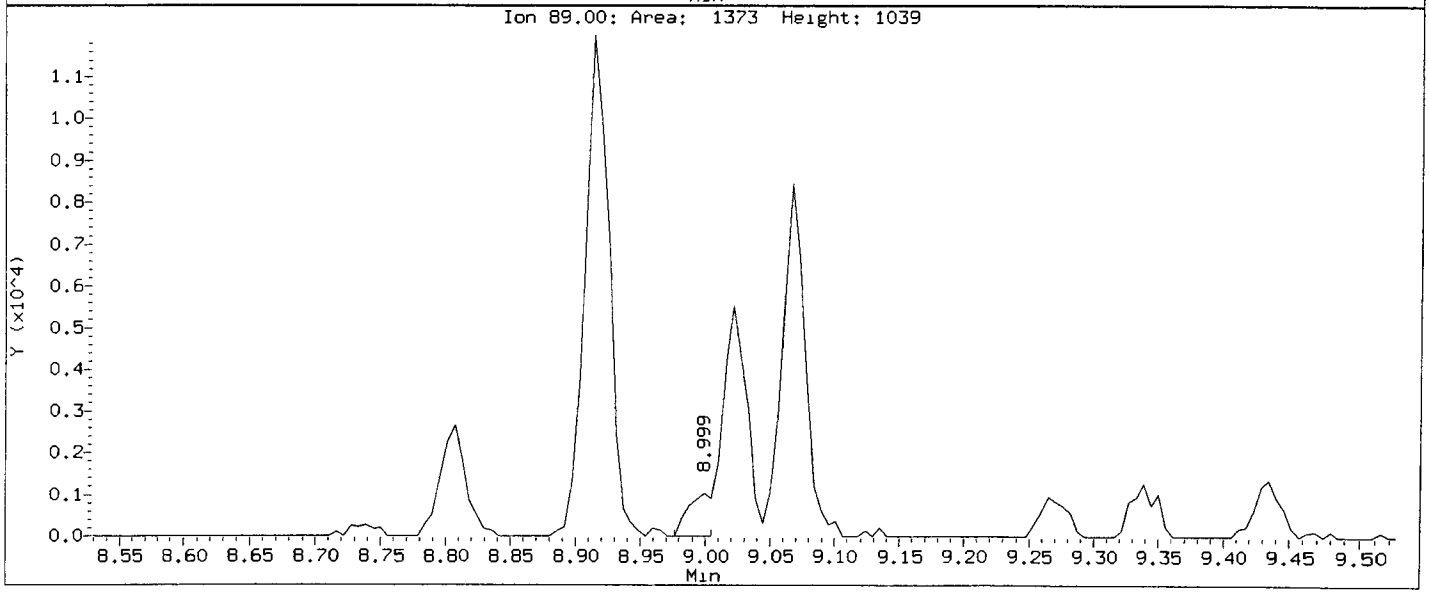
WUTB : 88393

Data File: /chem1/nt5.i/27JUN13.b/0020627.d
Injection Date: 27-JUN-2013 13:30
Instrument: nt5.i
Client Sample ID: VSTD2

Compound: Trans-1,4-Dichloro 2-Butene
CAS Number:







WU70 : 8836

Volatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WU70

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

VOA Analyst Notes / Data Review Checklist

ARI WORK Order: WU78 Client ID: JAIC

METHOD: **NW-TPH**(Gas) **8021B**(BTEX) **NW-VPH**(VPH) **8260C**(VOA) **8260C**(SIM VOA) **524.3**(VOA) **RSK-175**(MEE)

Instrument: NT-2 NT-3 NT-5 NT-7 NT-9 PID-1 PID-2 PID-3 FID-6

Purge Volume (mL) 5 Curve Date: 6/27/13 Analysis Start Date: 6/27/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
PH ≤ 2.0 / 5035 Preserved?	NA / Y / N / ✓	Method Blank In Control?	Y / N / ✓
BFB Tune Meets Criteria?	NA / Y / N / ✓	Surrogate Recovery in Control?	Y / N / ✓
Internal STD within 50-200%?	NA / Y / N / ✓	LCS / LCSD Recovery Met?	Y / N / ✓
CCAL Meets %D	Y / N / ✓	LCS / LCSD RPD ≤30%?	NA / <32%
ICAL Q flag applied?	NA / Y / N / ✓	MS / MSD Recovery Met?	NA / Y / N / NA
CCAL Q Flag applied	NA / Y / N / ✓	MS / MSD RPD ≤30%?	NA / NA
Manual Integrations?	Y / N / ✓	Samples Diluted?	Y / N / ✓
Integration Summary?	Y / N / ✓	Special Analysis Request?	Y / N / ✓

Bubbles/Headspace: None SM (≤ 2mm •) PB (2-4mm ●) LG (> 4mm) Head Space

Detail problems, corrective actions and/or other pertinent information below:

MB - DCM @ 3.00 ug/kg - B flagged in LCS/LCSD/Samples <RL NOT Reported 7/1/13
1,4-DCB, 1,2-DCB, naphthalene J flagged - B flagged in LCS/LCSD/Samples

(Review 1)Analyst: [signature] **Date:** 7/1/13

(Review 2)Reviewer: [signature] **Date:** 7/1/13

Analytical Resources Inc.: Volatile Organics Instrument Log

NT-5 Serial No.:GC=US10228086, MS=US10462818

Date: 6/27b Analysis: SMSC Analyst: B

GC Program: VOA6A Column No: 93845V Column Type: RTX624

Instrument Tune (.U or .CT.): PAT EM Voltage: 1494

Inj. Vol: 5 Calibration File: bfb0627x Curve Date: 6/27b

IS/SS	Ical/Ccal	LCS/ICV
D000643	D000805	D000807
D000644		

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt5.i/27JUN13.b

	Time	Filename	LabID	ClientID	Vial#	pH	DF							
1	1658	bfb0627x.d	BFB0627	BFB0627			1							
2	1746	cc0627.d	CC0627	VSTD50			1	4.67	1620528	5.12	2667896	7.60	2557700	9.67 1358370
3	1930	lcs0627.d	LCS0627	LCS0627			1	4.67	1473161	5.11	2440245	7.60	2335287	9.67 1219894
4	2005	lcs0627a.d	LCS0627	LCC0627			1	4.66	1561743	5.11	2584151	7.60	2491123	9.67 1341563
5	2053	mb0627.d	MB0627	MB0627			1	4.67	1528018	5.12	2529819	7.60	2494290	9.67 1323306
6	2140	wv67d.d	WV67D	UP-TB-01-20130626-W		2 CL 2	1	4.67	1523627	5.12	2521626	7.60	2507425	9.67 1330016
7	2204	wv67a.d	WV67A	UP-CB-B8-20130626-S			1	4.66	1223518	5.11	2004618	7.59	1390109	9.67 349584
8	2228	wv67b.d	WV67B	UP-MHF-165-20130626			1	4.67	1489276	5.11	2446781	7.59	1895964	9.67 581282
9	2252	wv67c.d	WV67C	UP-CB-A6-20130626-S			1	4.67	1475877	5.12	2347847	7.60	1652442	9.67 317209
10	2316	wv78a.d	WV78A	RC-14(20-20.5)			1	4.68	1678327	5.12	2755320	7.60	2749317	9.67 1489122
11	2340	wv78b.d	WV78B	BP-5(20.0-20.75)			1	4.68	1693144	5.12	2797393	7.60	2818418	9.67 1555872
12	0004	wv78c.d	WV78C	BP-3(18.5-19)			1	4.66	1713714	5.11	2812553	7 59	2717770	9.67 1311747
13	0028	wv78d.d	WV78D	BP-2(10-11.5)			1	4.67	1680411	5.12	2793749	7.60	2815082	9.67 1541312
14	0052	wv78e.d	WV78E	Trip Blanks		2 CL	1	4.66	1651980	5.11	2717167	7.59	2741813	9.67 1462284
15	0116	wu70a.d	WU70A	LF-QC-TB-20130619-W		2 CL	1	4.67	1682143	5.12	2783621	7.60	2779448	9.67 1510132
16	0140	wu70b.d	WU70B	LF-TP-001-20130619-			1	4.67	965746	5.12	1645347	7.60	1669959	9.67 857768
17	0204	wu93a.d	WU93A	B101-S-2.5-5			1	4.67	1655238	5.12	2760357	7.60	2780403	9.67 1531783
18	0227	wu93b.d	WU93B	B101-S-5.5			1	4.67	1633537	5 12	2739564	7.60	2768343	9.67 1504601
19	0251	wu93c.d	WU93C	B101-S-10-13			1	4.67	1593465	5.12	2679003	7.60	2733156	9.67 1490322
20	0315	wu93d.d	WU93D	B102-S-5-10			1	4.68	1560110	5.12	2626565	7.60	2655825	9.67 1450825
21	0339	wv02a.d	WV02A	B104-S-5-10			1	4.66	1575023	5.11	2675658	7.59	2706781	9.67 1465067
22	0403	wv67a2.d	WV67A	UP-CB-B8-20130626-S			1	4.67	1389159	5.12	2283262	7 60	1933608	9.67 673495
23	0427	wv67b2.d	WV67B	UP-MHF-165-20130626			1	4.66	1387314	5.11	2314220	7.59	1678117	9.67 522337
24	0451	wv67c2.d	WV67C	UP-CB-A6-20130626-S			1	4.67	1393353	5.12	2310682	7.60	1485534	9.67 310157

Maintenan

6/28/14

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.

WU70:00339

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt5.i/27JUN13.b

ARI Job No.: BFB0 Method: bfb8260.m Instrument: nt5.i Date: 27-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1658	bfb0627x.d	BFB0627	BFB0627	1	NO MANUAL INTEGRATION
1746	cc0627.d	CC0627	VSTD50	1	Chloromethane, Acetone,
1930	lcs0627.d	LCS0627	LCS0627	1	Chloromethane, Acetone,
2005	lcs0627a.d	LCS0627	LCC0627	1	Chloromethane,
2053	mb0627.d	MB0627	MB0627	1	NO MANUAL INTEGRATION
0116	wu70a.d	WU70A	LF-QC-TB-2	1	NO MANUAL INTEGRATION
0140	wu70b.d	WU70B	LF-TP-001-	1	NO MANUAL INTEGRATION
0204	wu93a.d	WU93A	B101-S-2.5	1	NO MANUAL INTEGRATION
0227	wu93b.d	WU93B	B101-S-5.5	1	NO MANUAL INTEGRATION
0251	wu93c.d	WU93C	B101-S-10-	1	NO MANUAL INTEGRATION
0315	wu93d.d	WU93D	B102-S-5-1	1	NO MANUAL INTEGRATION
0339	wv02a.d	WV02A	B104-S-5-1	1	NO MANUAL INTEGRATION

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt5.i/27JUN13.b

Instrument: nt5.i Date: 27-JUN-2013 Method: VO121012S.m

INITIAL CAL: 27-JUN-2013

Compound	%RSD or R^2
Iodomethane	27.8

CONTINUING CAL: 27-JUN-2013

Compound	%D
Acrolein	85.4
Iodomethane	43.7
Acrylonitrile	-23.8

Data File: /chem1/nt5.i/27JUN13.b/bfb0627x.d

Date : 27-JUN-2013 16:58

Client ID: BFB0627

Instrument: nt5.i

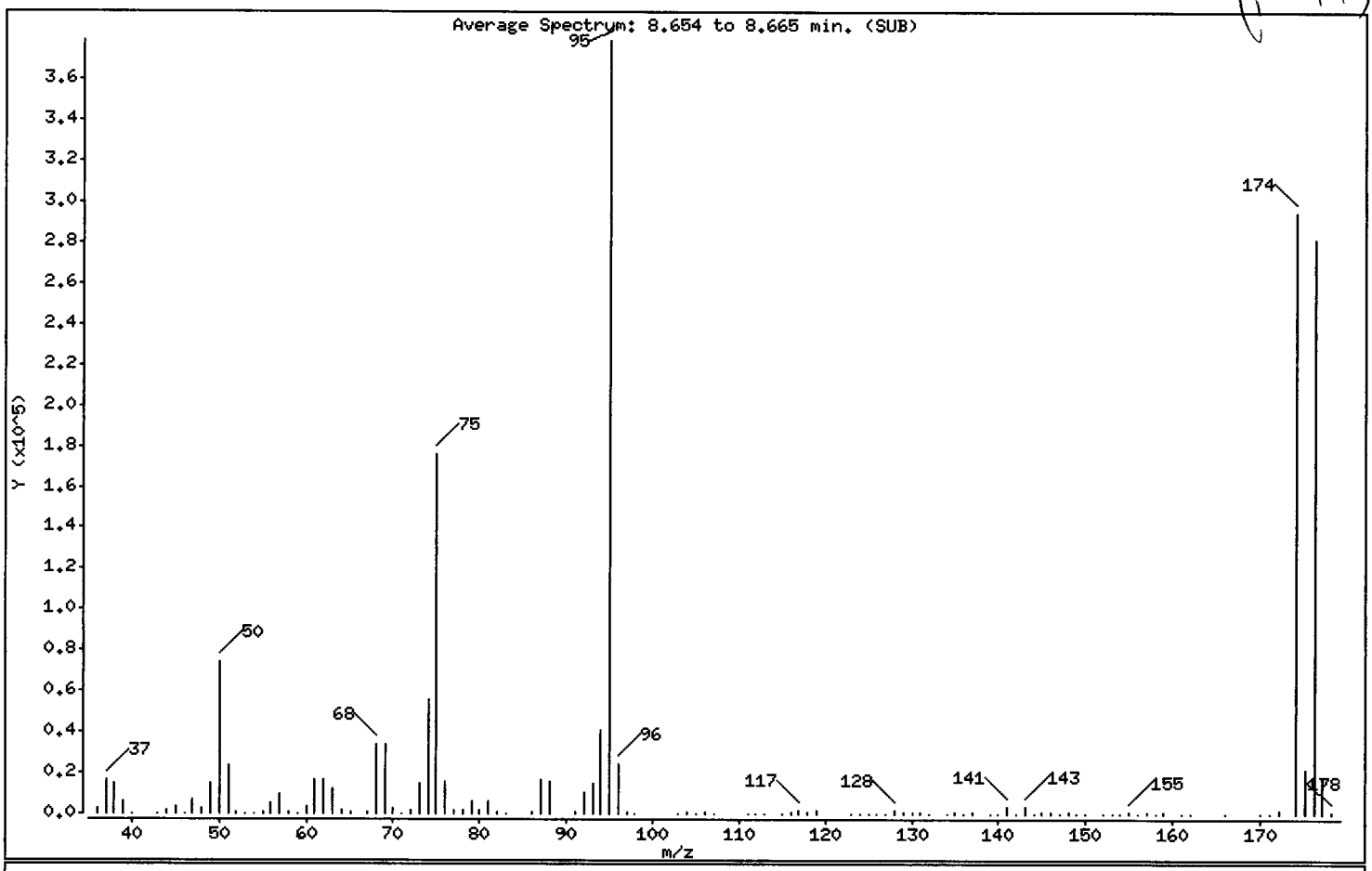
Sample Info: BFB0627,BFB0627,,1,27JUN13,,

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	8.00 - 40.00% of mass 95	19.55
75	30.00 - 66.00% of mass 95	46.54
96	5.00 - 9.00% of mass 95	6.54
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 101.00% of mass 95	77.69
175	4.00 - 9.00% of mass 174	5.70 (7.33)
176	95.00 - 101.00% of mass 174	74.22 (95.53)
177	5.00 - 9.00% of mass 176	4.94 (6.66)

Data File: /chem1/nt5.i/27JUN13.b/bfb0627x.d

Date : 27-JUN-2013 16:58

Client ID: BFB0627

Instrument: nt5.i

Sample Info: BFB0627,BFB0627,,1,27JUN13,,

Operator: PB

Column phase: RTXVMS

Column diameter: 0.18

Data File: bfb0627x.d

Spectrum: Average Spectrum: 8.654 to 8.665 min. (SUB)

Location of Maximum: 95.00

Number of points: 117

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	3047	68.00	34216	106.00	1072	143.00	3664
37.00	16464	69.00	34096	107.00	388	144.00	179
38.00	14818	70.00	2437	108.00	47	145.00	437
39.00	6257	71.00	135	110.00	141	146.00	515
40.00	21	72.00	1725	111.00	204	147.00	218
43.00	209	73.00	14592	112.00	123	148.00	812
44.00	1694	74.00	56184	113.00	215	149.00	201
45.00	3266	75.00	176512	115.00	361	150.00	339
46.00	407	76.00	15529	116.00	1118	152.00	162
47.00	6733	77.00	2171	117.00	1902	153.00	378
48.00	2261	78.00	1415	118.00	977	154.00	157
49.00	15106	79.00	6255	119.00	1340	155.00	819
50.00	74160	80.00	1929	123.00	42	156.00	100
51.00	23472	81.00	6339	124.00	171	157.00	801
52.00	971	82.00	1162	125.00	91	158.00	34
53.00	102	83.00	223	126.00	113	159.00	504
54.00	48	86.00	516	127.00	168	161.00	406
55.00	846	87.00	16520	128.00	1341	162.00	34
56.00	4843	88.00	15418	129.00	466	166.00	33
57.00	9251	91.00	939	130.00	1241	170.00	48
58.00	475	92.00	10095	131.00	491	171.00	307
59.00	54	93.00	14548	132.00	42	172.00	1580
60.00	3152	94.00	41384	134.00	158	174.00	294720
61.00	16568	95.00	379328	135.00	474	175.00	21608
62.00	16344	96.00	24808	136.00	48	176.00	281536
63.00	12191	97.00	805	137.00	530	177.00	18744
64.00	1374	98.00	45	139.00	137	178.00	517
65.00	1181	103.00	131	140.00	285		
66.00	189	104.00	1120	141.00	3068		
67.00	890	105.00	405	142.00	382		

Data File: /chem1/nt5.i/27JUN13.b/bfb0627x.d

Date : 27-JUN-2013 16:58

Client ID: BFB0627

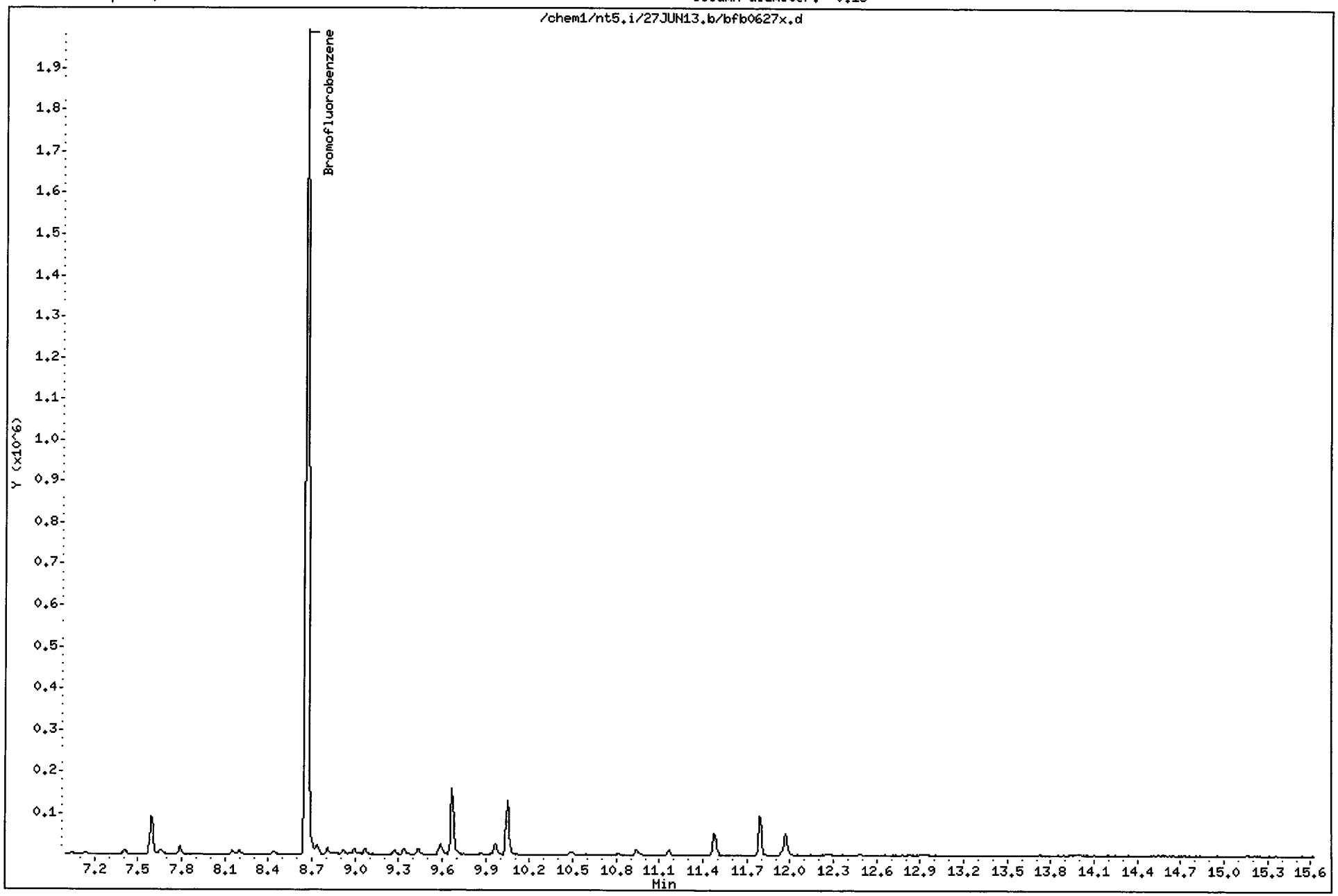
Sample Info: BFB0627,BFB0627,,1,27JUN13,,

Column phase: RTXVMS

Instrument: nt5.i

Operator: PB

Column diameter: 0.18



Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/cc0627.d
Lab Smp Id: CC0627 Client Smp ID: VSTD50
Inj Date : 27-JUN-2013 17:46
Operator : PB Inst ID: nt5.i
Smp Info : CC0627,5,5,0
Misc Info : 13-
Comment :
Method : /chem1/nt5.i/27JUN13.b/VO121012S.m
Meth Date : 28-Jun-2013 07:28 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 11:07 Cal File: 2000627.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 * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
1 Dichlorodifluoromethane	85	1.057	1.057	(0.226)	482667	50.0000	51.226
2 Chloromethane	50	1.176	1.176	(0.252)	940104	50.0000	48.636(M)
3 Vinyl Chloride	62	1.226	1.226	(0.263)	906642	50.0000	52.082
4 Bromomethane	94	1.436	1.436	(0.307)	462414	50.0000	46.346
5 Chloroethane	64	1.521	1.521	(0.326)	552866	50.0000	52.204
6 Trichlorofluoromethane	101	1.611	1.611	(0.345)	969716	50.0000	50.256
7 1,1-Dichloroethene	96	1.973	1.973	(0.422)	645640	50.0000	56.371
8 Carbon Disulfide	76	1.979	1.979	(0.424)	2317563	50.0000	56.506
9 112Trichloro122Trifluoroethane	101	2.018	2.018	(0.432)	641359	50.0000	57.801
10 Iodomethane	142	2.075	2.075	(0.444)	659727	50.0000	71.837
11 Bromoethane	108	2.171	2.171	(0.465)	447582	50.0000	58.503
12 Acrolein	56	2.313	2.313	(0.495)	820623	250.000	463.44
13 Methylene Chloride	84	2.454	2.454	(0.525)	644167	50.0000	45.295
14 Acetone	43	2.742	2.742	(0.587)	647949	250.000	240.43(M)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.590	2.590	(0.554)	637862	50.0000	56.013
	16 Methyl tert butyl ether	73	2.754	2.754	(0.589)	1803028	50.0000	51.362
	17 1,1-Dichloroethane	63	3.201	3.201	(0.685)	1119157	50.0000	42.979
	18 Acrylonitrile	53	3.348	3.348	(0.717)	222709	50.0000	38.088
	19 Vinyl Acetate	43	3.540	3.540	(0.758)	1740734	50.0000	49.525
	20 Cis-1,2-Dichloroethene	96	3.744	3.744	(0.801)	733333	50.0000	49.217
	22 2,2-Dichloropropane	77	3.840	3.840	(0.822)	1070484	50.0000	49.526
	23 Bromochloromethane	128	3.930	3.930	(0.841)	313235	50.0000	48.130
	24 Chloroform	83	4.027	4.027	(0.862)	1137023	50.0000	47.993
	25 Carbon Tetrachloride	117	4.117	4.117	(0.804)	883220	50.0000	48.303
$	27 Dibromofluoromethane	111	4.196	4.196	(0.898)	733220	50.0000	46.991
	26 1,1,1-Trichloroethane	97	4.185	4.185	(0.896)	1045595	50.0000	48.177
	28 1,1-Dichloropropene	75	4.304	4.304	(0.841)	1047523	50.0000	49.758
	29 2-Butanone	72	4.434	4.434	(0.949)	449108	250.000	240.90
	30 Benzene	78	4.530	4.530	(0.885)	2932432	50.0000	50.544
*	31 Pentafluorobenzene	168	4.671	4.671	(1.000)	1620528	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.666	4.666	(0.999)	883514	50.0000	49.827
	33 1,2-Dichloroethane	62	4.728	4.728	(0.924)	907041	50.0000	48.186
	34 Trichloroethene	95	5.067	5.067	(0.990)	731279	50.0000	49.899
*	35 1,4-Difluorobenzene	114	5.118	5.118	(1.000)	2667896	50.0000	
	37 Dibromomethane	93	5.424	5.424	(1.060)	389113	50.0000	48.668
	38 1,2-Dichloropropane	63	5.514	5.514	(1.077)	806933	50.0000	49.017
	39 Bromodichloromethane	83	5.588	5.588	(1.092)	896506	50.0000	49.188
	40 2-Chloroethyl Vinyl Ether	63	6.125	6.125	(1.197)	147483	50.0000	57.542
	41 Cis 1,3-dichloropropene	75	6.137	6.137	(1.199)	1147815	50.0000	50.694
$	42 d8-Toluene	98	6.295	6.295	(1.230)	3286020	50.0000	49.690
	43 Toluene	92	6.335	6.335	(1.238)	1833541	50.0000	49.958
	44 Tetrachloroethene	166	6.646	6.646	(0.875)	764804	50.0000	50.767
	45 4-Methyl-2-Pentanone	58	6.708	6.708	(1.311)	1745972	250.000	251.41
	46 Trans 1,3-Dichloropropene	75	6.702	6.702	(1.309)	1036301	50.0000	49.930
	47 1,1,2-Trichloroethane	97	6.827	6.827	(1.334)	574427	50.0000	48.013
	48 Chlorodibromomethane	129	6.963	6.963	(0.917)	654222	50.0000	49.539
	49 1,3-Dichloropropane	76	7.047	7.047	(0.928)	1059980	50.0000	50.084
	50 1,2-Dibromoethane	107	7.144	7.144	(1.396)	576255	50.0000	49.479
	51 2-Hexanone	43	7.421	7.421	(0.977)	2832502	250.000	256.71
*	52 d5-Chlorobenzene	117	7.596	7.596	(1.000)	2557700	50.0000	
	53 Chlorobenzene	112	7.613	7.613	(1.002)	1843158	50.0000	50.398
	54 Ethyl Benzene	91	7.664	7.664	(1.009)	3319106	50.0000	53.378
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.010)	658235	50.0000	49.661
	56 m,p-xylene	106	7.794	7.794	(1.026)	2491452	100.000	106.73
	57 o-Xylene	106	8.156	8.156	(1.074)	1208943	50.0000	52.474
	58 Styrene	104	8.201	8.201	(1.080)	2034085	50.0000	53.880
	59 Bromoform	173	8.196	8.196	(0.847)	458925	50.0000	48.643
	60 Isopropyl Benzene	105	8.445	8.445	(0.873)	3136263	50.0000	55.663
$	62 4-Bromofluorobenzene	95	8.665	8.665	(1.141)	1368844	50.0000	50.285
	63 Bromobenzene	156	8.739	8.739	(0.903)	763432	50.0000	49.276
	64 N-Propyl Benzene	91	8.812	8.812	(0.911)	3691590	50.0000	54.386

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/Kg)	AMOUNTS ON-COL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	750248	50.0000	48.048
66	2-Chloro Toluene	91	8.920	8.920	(0.922)	2263333	50.0000	52.902
67	1,3,5-Trimethyl Benzene	105	8.999	8.999	(0.930)	2641115	50.0000	54.375
68	1,2,3-Trichloropropane	110	8.971	8.971	(0.927)	236092	50.0000	48.646
69	Trans-1,4-Dichloro 2-Butene	53	9.027	9.027	(0.933)	279066	50.0000	47.400
70	4-Chloro Toluene	91	9.073	9.073	(0.938)	2353830	50.0000	52.856
71	T-Butyl Benzene	119	9.276	9.276	(0.959)	2335076	50.0000	54.124
72	1,2,4-Trimethylbenzene	105	9.338	9.338	(0.965)	2599489	50.0000	54.734
73	S-Butyl Benzene	105	9.440	9.440	(0.976)	3414232	50.0000	55.042
74	4-Isopropyl Toluene	119	9.582	9.582	(0.991)	2825285	50.0000	56.226
75	1,3-Dichlorobenzene	146	9.599	9.599	(0.992)	1441652	50.0000	50.917
* 76	d4-1,4-Dichlorobenzene	152	9.672	9.672	(1.000)	1358370	50.0000	
77	1,4-Dichlorobenzene	146	9.683	9.683	(1.001)	1471030	50.0000	50.227
78	N-Butyl Benzene	91	9.966	9.966	(1.030)	2671184	50.0000	56.649
$ 79	d4-1,2-Dichlorobenzene	152	10.051	10.051	(1.039)	1230583	50.0000	49.668
80	1,2-Dichlorobenzene	146	10.062	10.062	(1.040)	1362295	50.0000	49.339
81	1,2-Dibromo 3-Chloropropane	75	10.809	10.809	(1.118)	145583	50.0000	45.060
82	Hexachloro 1,3-Butadiene	225	11.488	11.488	(1.188)	634932	50.0000	47.857
83	1,2,4-Trichlorobenzene	180	11.477	11.477	(1.187)	1016993	50.0000	49.337
84	Naphthalene	128	11.788	11.788	(1.219)	2086353	50.0000	45.861
85	1,2,3-Trichlorobenzene	180	11.969	11.969	(1.237)	947013	50.0000	46.340

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: cc0627.d
Lab Smp Id: CC0627
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-

Calibration Date: 27-JUN-2013
Calibration Time: 15:48
Client Smp ID: VSTD50
Level: LOW
Sample Type: SOIL

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	1613586	806793	3227172	1620528	0.43
35 1,4-Difluorobenze	2656709	1328354	5313418	2667896	0.42
52 d5-Chlorobenzene	2557235	1278618	5114470	2557700	0.02
76 d4-1,4-Dichlorobe	1374359	687180	2748718	1358370	-1.16

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.65	4.15	5.15	4.67	0.37
35 1,4-Difluorobenze	5.11	4.61	5.61	5.12	0.22
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 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.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt5.i
Lab File ID: cc0627.d
Analysis Type: SOIL
Lab Sample ID: CC0627
Method: /chem1/nt5.i/27JUN13.b/VO121012S.m

Injection Date: 27-JUN-2013 17:46
Init. Cal. Date(s): 27-JUN-2013 27-JUN-2013
Init. Cal. Times: 10:43 15:48
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE	
1 Dichlorodifluoromethane	0.29072	0.29785	0.29785	0.100	2.45103	20.00000	Averaged	
2 Chloromethane	0.59639	0.58012	0.58012	0.100	-2.72731	20.00000	Averaged	
3 Vinyl Chloride	0.53711	0.55947	0.55947	0.100	4.16390	20.00000	Averaged	
4 Bromomethane	0.30784	0.28535	0.28535	0.100	-7.30748	20.00000	Averaged	
5 Chloroethane	0.32676	0.34116	0.34116	0.100	4.40702	20.00000	Averaged	
6 Trichlorofluoromethane	0.59534	0.59840	0.59840	0.100	0.51293	20.00000	Averaged	
7 1,1-Dichloroethene	0.35338	0.39841	0.39841	0.100	12.74289	20.00000	Averaged	
8 Carbon Disulfide	1.26547	1.43013	1.43013	0.010	13.01131	20.00000	Averaged	
9 112Trichloro122Trifluoroeth	0.34236	0.39577	0.39577	0.010	15.60171	20.00000	Averaged	
10 Iodomethane	0.28335	0.40711	0.40711	0.010	43.67414	20.00000	Averaged	<-
11 Bromoethane	0.23605	0.27620	0.27620	0.100	17.00660	20.00000	Averaged	
12 Acrolein	0.05463	0.10128	0.10128	0.000	85.37482	20.00000	Averaged	<-
13 Methylene Chloride	45.29467	50.00000	0.39750	0.010	-9.41065	20.00000	Linear	
14 Acetone	0.08315	0.07997	0.07997	0.001	-3.82739	20.00000	Averaged	
15 Trans-1,2-Dichloroethene	0.35136	0.39361	0.39361	0.010	12.02608	20.00000	Averaged	
16 Methyl tert butyl ether	1.08311	1.11262	1.11262	0.100	2.72447	20.00000	Averaged	
17 1,1-Dichloroethane	0.80343	0.69061	0.69061	0.100	-14.04246	20.00000	Averaged	
18 Acrylonitrile	0.18041	0.13743	0.13743	0.001	-23.82407	20.00000	Averaged	<-
19 Vinyl Acetate	1.08447	1.07418	1.07418	0.010	-0.94922	20.00000	Averaged	
20 Cis-1,2-Dichloroethene	0.45973	0.45253	0.45253	0.010	-1.56607	20.00000	Averaged	
22 2,2-Dichloropropane	0.66689	0.66058	0.66058	0.010	-0.94731	20.00000	Averaged	
23 Bromochloromethane	0.20080	0.19329	0.19329	0.050	-3.74036	20.00000	Averaged	
24 Chloroform	0.73098	0.70164	0.70164	0.100	-4.01452	20.00000	Averaged	
25 Carbon Tetrachloride	0.34268	0.33105	0.33105	0.100	-3.39355	20.00000	Averaged	
$ 27 Dibromofluoromethane	0.48143	0.45246	0.45246	0.100	-6.01838	20.00000	Averaged	
26 1,1,1-Trichloroethane	0.66964	0.64522	0.64522	0.100	-3.64686	20.00000	Averaged	
28 1,1-Dichloropropene	0.39455	0.39264	0.39264	0.010	-0.48308	20.00000	Averaged	
29 2-Butanone	0.05752	0.05543	0.05543	0.001	-3.63855	20.00000	Averaged	
30 Benzene	1.08732	1.09916	1.09916	0.100	1.08887	20.00000	Averaged	
$ 32 d4-1,2-Dichloroethane	0.54709	0.54520	0.54520	0.010	-0.34560	20.00000	Averaged	
33 1,2-Dichloroethane	0.35278	0.33998	0.33998	0.100	-3.62728	20.00000	Averaged	
34 Trichloroethene	0.27466	0.27410	0.27410	0.100	-0.20158	20.00000	Averaged	
37 Dibromomethane	0.14984	0.14585	0.14585	0.010	-2.66308	20.00000	Averaged	
38 1,2-Dichloropropane	0.30852	0.30246	0.30246	0.100	-1.96551	20.00000	Averaged	
39 Bromodichloromethane	0.34158	0.33603	0.33603	0.100	-1.62443	20.00000	Averaged	

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt5.i Injection Date: 27-JUN-2013 17:46
Lab File ID: cc0627.d Init. Cal. Date(s): 27-JUN-2013 27-JUN-2013
Analysis Type: SOIL Init. Cal. Times: 10:43 15:48
Lab Sample ID: CC0627 Quant Type: ISTD
Method: /chem1/nt5.i/27JUN13.b/VO121012S.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
40 2-Chloroethyl Vinyl Ether	0.04803	0.05528	0.05528	0.000	15.08425	20.00000	Averaged
41 Cis 1,3-dichloropropene	0.42434	0.43023	0.43023	0.100	1.38758	20.00000	Averaged
$ 42 d8-Toluene	1.23938	1.23169	1.23169	0.010	-0.62071	20.00000	Averaged
43 Toluene	0.68784	0.68726	0.68726	0.100	-0.08430	20.00000	Averaged
44 Tetrachloroethene	0.29450	0.29902	0.29902	0.100	1.53409	20.00000	Averaged
45 4-Methyl-2-Pentanone	0.13015	0.13089	0.13089	0.000	0.56561	20.00000	Averaged
46 Trans 1,3-Dichloropropene	0.38898	0.38843	0.38843	0.010	-0.13947	20.00000	Averaged
47 1,1,2-Trichloroethane	0.22422	0.21531	0.21531	0.100	-3.97499	20.00000	Averaged
48 Chlorodibromomethane	0.25816	0.25579	0.25579	0.100	-0.92103	20.00000	Averaged
49 1,3-Dichloropropane	0.41373	0.41443	0.41443	0.100	0.16785	20.00000	Averaged
50 1,2-Dibromoethane	0.21827	0.21600	0.21600	0.010	-1.04177	20.00000	Averaged
51 2-Hexanone	0.21570	0.22149	0.22149	0.010	2.68250	20.00000	Averaged
53 Chlorobenzene	0.71494	0.72063	0.72063	0.300	0.79583	20.00000	Averaged
54 Ethyl Benzene	1.21558	1.29769	1.29769	0.100	6.75525	20.00000	Averaged
55 1,1,1,2-Tetrachloroethane	0.25911	0.25735	0.25735	0.010	-0.67852	20.00000	Averaged
56 m,p-xylene	0.45633	0.48705	0.48705	0.100	6.73217	20.00000	Averaged
57 o-Xylene	0.45038	0.47267	0.47267	0.100	4.94885	20.00000	Averaged
58 Styrene	0.73800	0.79528	0.79528	0.100	7.76083	20.00000	Averaged
59 Bromoform	0.34727	0.33785	0.33785	0.100	-2.71319	20.00000	Averaged
60 Isopropyl Benzene	2.07395	2.30884	2.30884	0.010	11.32591	20.00000	Averaged
$ 62 4-Bromofluorobenzene	0.53215	0.53519	0.53519	0.200	0.56982	20.00000	Averaged
63 Bromobenzene	0.57028	0.56202	0.56202	0.010	-1.44747	20.00000	Averaged
64 N-Propyl Benzene	2.49849	2.71766	2.71766	0.010	8.77237	20.00000	Averaged
65 1,1,2,2-Tetrachloroethane	0.57475	0.55231	0.55231	0.300	-3.90303	20.00000	Averaged
66 2-Chloro Toluene	1.57481	1.66621	1.66621	0.010	5.80414	20.00000	Averaged
67 1,3,5-Trimethyl Benzene	1.78790	1.94433	1.94433	0.010	8.74921	20.00000	Averaged
68 1,2,3-Trichloropropane	0.17864	0.17381	0.17381	0.010	-2.70876	20.00000	Averaged
69 Trans-1,4-Dichloro 2-Butene	0.21671	0.20544	0.20544	0.001	-5.20071	20.00000	Averaged
70 4-Chloro Toluene	1.63919	1.73283	1.73283	0.010	5.71277	20.00000	Averaged
71 T-Butyl Benzene	1.58804	1.71903	1.71903	0.010	8.24846	20.00000	Averaged
72 1,2,4-Trimethylbenzene	1.74816	1.91368	1.91368	0.010	9.46850	20.00000	Averaged
73 S-Butyl Benzene	2.28322	2.51348	2.51348	0.010	10.08495	20.00000	Averaged
74 4-Isopropyl Toluene	1.84960	2.07991	2.07991	0.010	12.45191	20.00000	Averaged
75 1,3-Dichlorobenzene	1.04221	1.06131	1.06131	0.100	1.83303	20.00000	Averaged
77 1,4-Dichlorobenzene	1.07805	1.08294	1.08294	0.100	0.45326	20.00000	Averaged

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt5.i Injection Date: 27-JUN-2013 17:46
Lab File ID: cc0627.d Init. Cal. Date(s): 27-JUN-2013 27-JUN-2013
Analysis Type: SOIL Init. Cal. Times: 10:43 15:48
Lab Sample ID: CC0627 Quant Type: ISTD
Method: /chem1/nt5.i/27JUN13.b/VO121012S.m

COMPOUND	RRF / AMOUNT	RF50	CCAL RRF50	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
78 N-Butyl Benzene	1.73566	1.96646	1.96646	0.010	13.29742	20.00000	Averaged
$ 79 d4-1,2-Dichlorobenzene	0.91197	0.90593	0.90593	0.010	-0.66308	20.00000	Averaged
80 1,2-Dichlorobenzene	1.01633	1.00289	1.00289	0.100	-1.32222	20.00000	Averaged
81 1,2-Dibromo 3-Chloropropane	0.11892	0.10717	0.10717	0.010	-9.87915	20.00000	Averaged
82 Hexachloro 1,3-Butadiene	0.48836	0.46742	0.46742	0.010	-4.28653	20.00000	Averaged
83 1,2,4-Trichlorobenzene	0.75875	0.74869	0.74869	0.010	-1.32596	20.00000	Averaged
84 Naphthalene	1.67455	1.53592	1.53592	0.010	-8.27815	20.00000	Averaged
85 1,2,3-Trichlorobenzene	0.75223	0.69717	0.69717	0.010	-7.31962	20.00000	Averaged

Data File: /chem1/nt5.i/27JUN13.b/cc0627.d

Date : 27-JUN-2013 17:46

Client ID: VSTD50

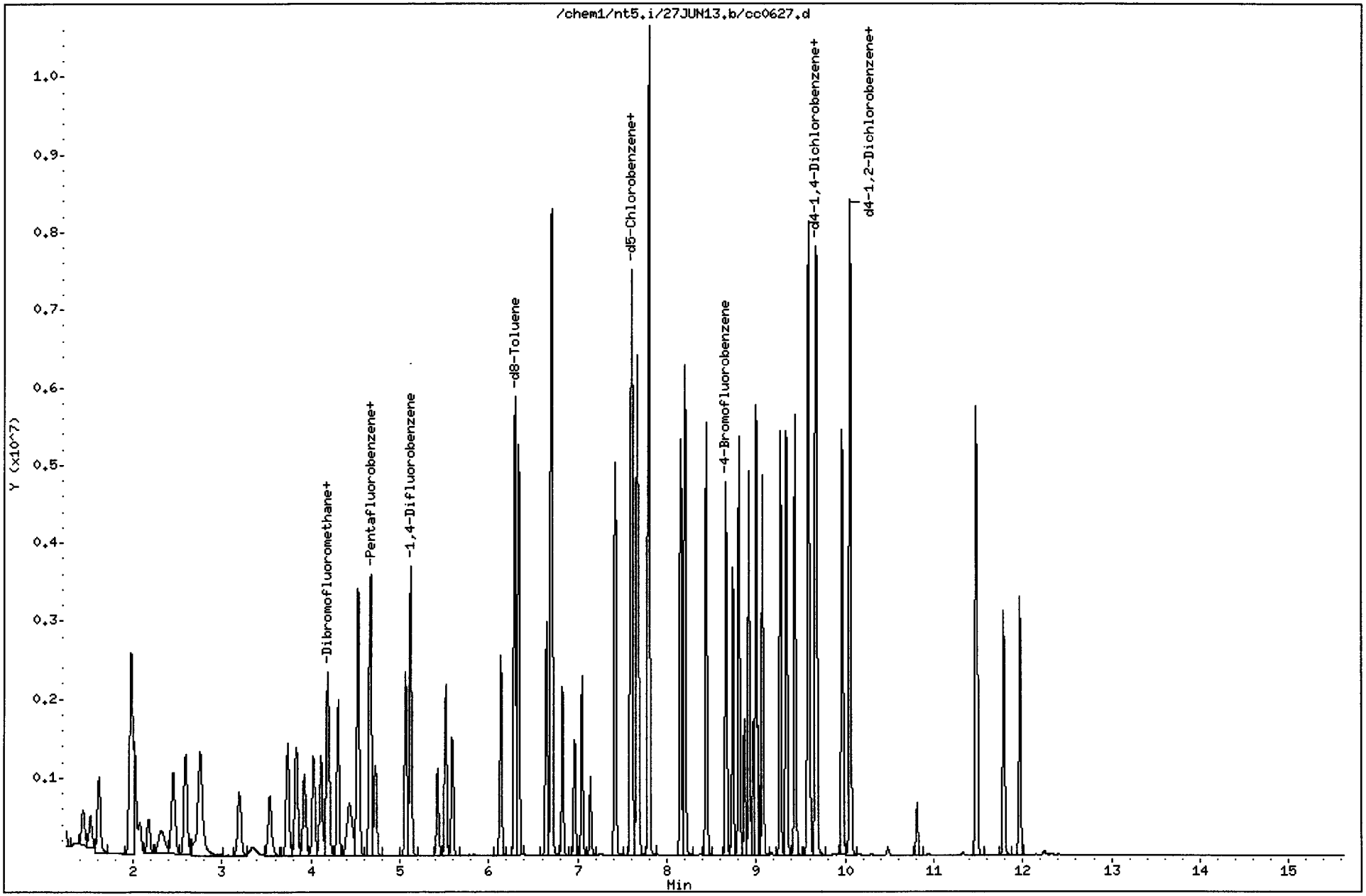
Sample Info: CC0627,5,5,0

Column phase: RTXVMS

Instrument: nt5.i

Operator: PB

Column diameter: 0.18



Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/lcs0627.d
Lab Smp Id: LCS0627 Client Smp ID: LCS0627
Inj Date : 27-JUN-2013 19:30
Operator : PB Inst ID: nt5.i
Smp Info : LCS0627,5,5,0
Misc Info : 13-13121
Comment :
Method : /chem1/nt5.i/27JUN13.b/VO121012S.m
Meth Date : 01-Jul-2013 13:08 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 11:07 Cal File: 2000627.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

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
1 Dichlorodifluoromethane	85	1.045	1.028	(0.224)	482507	56.3312	56.331
2 Chloromethane	50	1.164	1.147	(0.250)	902574	51.3658	51.366(QM)
3 Vinyl Chloride	62	1.215	1.198	(0.260)	907169	57.3252	57.325
4 Bromomethane	94	1.419	1.407	(0.304)	450794	49.7013	49.701
5 Chloroethane	64	1.504	1.492	(0.322)	545946	56.7069	56.707
6 Trichlorofluoromethane	101	1.600	1.583	(0.343)	977177	55.7092	55.709
7 1,1-Dichloroethene	96	1.962	1.945	(0.420)	606384	58.2402	58.240
8 Carbon Disulfide	76	1.962	1.945	(0.420)	2159709	57.9245	57.924
9 112Trichloro122Trifluoroethane	101	2.001	1.990	(0.429)	594213	58.9090	58.909
10 Iodomethane	142	2.058	2.047	(0.441)	593520	71.0929	71.093(R)
11 Bromoethane	108	2.154	2.143	(0.462)	374385	53.8310	53.831
12 Acrolein	56	2.273	2.301	(0.487)	531310	330.066	330.07
13 Methylene Chloride	84	2.431	2.420	(0.521)	508565	39.3370	39.337(Q)
14 Acetone	43	2.618	2.725	(0.561)	559307	228.301	228.30(QM)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.567	2.561	(0.550)	528846	51.0855	51.086
	16 Methyl tert butyl ether	73	2.743	2.725	(0.588)	1634636	51.2234	51.223
	17 1,1-Dichloroethane	63	3.178	3.172	(0.681)	1345746	56.8503	56.850
	18 Acrylonitrile	53	3.308	3.336	(0.709)	276966	52.1054	52.105
	19 Vinyl Acetate	43	3.529	3.517	(0.756)	1648871	51.6046	51.605
	20 Cis-1,2-Dichloroethene	96	3.727	3.721	(0.799)	723734	53.4317	53.432
	22 2,2-Dichloropropane	77	3.823	3.817	(0.819)	1092096	55.5806	55.581
	23 Bromochloromethane	128	3.919	3.908	(0.840)	306005	51.7224	51.722
	24 Chloroform	83	4.015	4.010	(0.861)	1159782	53.8504	53.850
	25 Carbon Tetrachloride	117	4.106	4.094	(0.803)	940256	56.2197	56.220
$	27 Dibromofluoromethane	111	4.185	4.179	(0.897)	732677	51.6532	51.653
	26 1,1,1-Trichloroethane	97	4.174	4.168	(0.895)	1088180	55.1543	55.154
	28 1,1-Dichloropropene	75	4.293	4.287	(0.840)	1043526	54.1929	54.193
	29 2-Butanone	72	4.400	4.428	(0.943)	401170	236.716	236.72
	30 Benzene	78	4.524	4.519	(0.885)	2924508	55.1104	55.110
*	31 Pentafluorobenzene	168	4.666	4.654	(1.000)	1473161	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.655	4.649	(0.998)	826006	51.2439	51.244
	33 1,2-Dichloroethane	62	4.717	4.711	(0.923)	884357	51.3642	51.364
	34 Trichloroethene	95	5.062	5.056	(0.990)	731638	54.5811	54.581
*	35 1,4-Difluorobenzene	114	5.113	5.107	(1.000)	2440245	50.0000	
	37 Dibromomethane	93	5.418	5.412	(1.060)	374957	51.2730	51.273
	38 1,2-Dichloropropane	63	5.509	5.503	(1.077)	799783	53.1152	53.115
	39 Bromodichloromethane	83	5.588	5.582	(1.093)	884832	53.0763	53.076
	40 2-Chloroethyl Vinyl Ether	63	6.120	6.120	(1.197)	141166	60.2157	60.216
	41 Cis 1,3-dichloropropene	75	6.131	6.131	(1.199)	1128039	54.4681	54.468
$	42 d8-Toluene	98	6.289	6.289	(1.230)	3012917	49.8102	49.810
	43 Toluene	92	6.335	6.329	(1.239)	1830999	54.5427	54.543
	44 Tetrachloroethene	166	6.646	6.646	(0.875)	776678	56.4654	56.465
	45 4-Methyl-2-Pentanone	58	6.702	6.702	(1.311)	1606255	252.873	252.87
	46 Trans 1,3-Dichloropropene	75	6.697	6.697	(1.310)	1009179	53.1596	53.160
	47 1,1,2-Trichloroethane	97	6.827	6.827	(1.335)	556506	50.8540	50.854
	48 Chlorodibromomethane	129	6.963	6.962	(0.917)	637267	52.8515	52.851
	49 1,3-Dichloropropane	76	7.047	7.042	(0.928)	1024769	53.0318	53.032
	50 1,2-Dibromoethane	107	7.138	7.138	(1.396)	548646	51.5033	51.503
	51 2-Hexanone	43	7.415	7.415	(0.976)	2580881	256.179	256.18
*	52 d5-Chlorobenzene	117	7.596	7.596	(1.000)	2335287	50.0000	
	53 Chlorobenzene	112	7.607	7.607	(1.001)	1827910	54.7412	54.741
	54 Ethyl Benzene	91	7.658	7.658	(1.008)	3322531	58.5216	58.522
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.010)	649483	53.6672	53.667
	56 m,p-xylene	106	7.794	7.794	(1.026)	2479986	116.359	116.36
	57 o-Xylene	106	8.156	8.156	(1.074)	1205697	57.3178	57.318
	58 Styrene	104	8.201	8.201	(1.080)	2014715	58.4500	58.450
	59 Bromoform	173	8.196	8.196	(0.847)	435781	51.4336	51.434
	60 Isopropyl Benzene	105	8.445	8.445	(0.873)	3121720	61.6941	61.694
$	62 4-Bromofluorobenzene	95	8.665	8.665	(1.141)	1239650	49.8761	49.876
	63 Bromobenzene	156	8.739	8.739	(0.903)	751862	54.0383	54.038
	64 N-Propyl Benzene	91	8.812	8.812	(0.911)	3710799	60.8749	60.875

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
	65 1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	708136	50.4995	50.500
	66 2-Chloro Toluene	91	8.920	8.920	(0.922)	2261655	58.8636	58.864
	67 1,3,5-Trimethyl Benzene	105	9.005	9.005	(0.931)	2641738	60.5612	60.561
	68 1,2,3-Trichloropropane	110	8.971	8.971	(0.927)	217141	49.8196	49.820
	69 Trans-1,4-Dichloro 2-Butene	53	9.027	9.027	(0.933)	268008	50.6888	50.689
	70 4-Chloro Toluene	91	9.073	9.072	(0.938)	2358198	58.9656	58.966
	71 T-Butyl Benzene	119	9.276	9.276	(0.959)	2333920	60.2383	60.238
	72 1,2,4-Trimethylbenzene	105	9.344	9.344	(0.966)	2596908	60.8869	60.887
	73 S-Butyl Benzene	105	9.440	9.440	(0.976)	3414109	61.2884	61.288
	74 4-Isopropyl Toluene	119	9.587	9.587	(0.991)	2849357	63.1419	63.142
	75 1,3-Dichlorobenzene	146	9.599	9.599	(0.992)	1437760	56.5432	56.543
*	76 d4-1,4-Dichlorobenzene	152	9.672	9.672	(1.000)	1219894	50.0000	
	77 1,4-Dichlorobenzene	146	9.684	9.689	(1.001)	1460287	55.5196	55.520
	78 N-Butyl Benzene	91	9.972	9.972	(1.031)	2691791	63.5658	63.566
$	79 d4-1,2-Dichlorobenzene	152	10.057	10.057	(1.040)	1114892	50.1070	50.107
	80 1,2-Dichlorobenzene	146	10.063	10.068	(1.040)	1348829	54.3965	54.397
	81 1,2-Dibromo 3-Chloropropane	75	10.815	10.815	(1.118)	135119	46.5690	46.569
	82 Hexachloro 1,3-Butadiene	225	11.499	11.505	(1.189)	646543	54.2637	54.264
	83 1,2,4-Trichlorobenzene	180	11.488	11.488	(1.188)	1012541	54.6970	54.697
	84 Naphthalene	128	11.799	11.805	(1.220)	2001370	48.9867	48.987
	85 1,2,3-Trichlorobenzene	180	11.980	11.986	(1.239)	931479	50.7541	50.754

QC Flag Legend

Q - Qualifier signal failed the ratio test.
R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: lcs0627.d
Lab Smp Id: LCS0627
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-13121

Calibration Date: 27-JUN-2013
Calibration Time: 15:48
Client Smp ID: LCS0627
Level: LOW
Sample Type: SOIL

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	1613586	806793	3227172	1473161	-8.70
35 1,4-Difluorobenze	2656709	1328354	5313418	2440245	-8.15
52 d5-Chlorobenzene	2557235	1278618	5114470	2335287	-8.68
76 d4-1,4-Dichlorobe	1374359	687180	2748718	1219894	-11.24

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.65	4.15	5.15	4.67	0.25
35 1,4-Difluorobenze	5.11	4.61	5.61	5.11	0.11
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 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:
Sample Matrix: SOLID
Lab Smp Id: LCS0627
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-13121

Client SDG: 27JUN13
Fraction: VOA
Client Smp ID: LCS0627
Operator: PB
SampleType: LCS
Quant Type: ISTD

	SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
1	Dichlorodifluorome	50.000	56.331	112.66	53-148
2	Chloromethane	50.000	51.366	102.73	64-125
3	Vinyl Chloride	50.000	57.325	114.65	63-137
4	Bromomethane	50.000	49.701	99.40	57-136
5	Chloroethane	50.000	56.707	113.41	64-131
6	Trichlorofluoromet	50.000	55.709	111.42	69-132
12	Acrolein	250.00	330.07	132.03	54-137
9	112Trichloro122Tri	50.000	58.909	117.82	74-130
14	Acetone	250.00	228.30	91.32	60-131
7	1,1-Dichloroethene	50.000	58.240	116.48	75-126
11	Bromoethane	50.000	53.831	107.66	76-126
10	Iodomethane	50.000	71.093	142.19*	65-139
13	Methylene Chloride	50.000	39.337	78.67	70-123
8	Carbon Disulfide	50.000	57.924	115.85	71-129
18	Acrylonitrile	50.000	52.105	104.21	67-125
15	Trans-1,2-Dichloro	50.000	51.086	102.17	80-120
19	Vinyl Acetate	50.000	51.605	103.21	60-136
17	1,1-Dichloroethane	50.000	56.850	113.70	80-120
29	2-Butanone	250.00	236.72	94.69	70-120
22	2,2-Dichloropropan	50.000	55.581	111.16	74-123
20	Cis-1,2-Dichloroet	50.000	53.432	106.86	80-120
24	Chloroform	50.000	53.850	107.70	80-120
23	Bromochloromethane	50.000	51.722	103.44	80-120
26	1,1,1-Trichloroeth	50.000	55.154	110.31	77-121
28	1,1-Dichloropropen	50.000	54.193	108.39	80-120
25	Carbon Tetrachlori	50.000	56.220	112.44	77-122
33	1,2-Dichloroethane	50.000	51.364	102.73	76-120
30	Benzene	50.000	55.110	110.22	80-120
34	Trichloroethene	50.000	54.581	109.16	80-120
38	1,2-Dichloropropan	50.000	53.115	106.23	80-120
39	Bromodichlorometha	50.000	53.076	106.15	77-121
37	Dibromomethane	50.000	51.273	102.55	80-120
40	2-Chloroethyl Viny	50.000	60.216	120.43	10-191

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
45 4-Methyl-2-Pentano	250.00	252.87	101.15	67-120
41 Cis 1,3-dichloropr	50.000	54.468	108.94	74-120
43 Toluene	50.000	54.543	109.09	80-120
46 Trans 1,3-Dichloro	50.000	53.160	106.32	65-120
51 2-Hexanone	250.00	256.18	102.47	65-130
47 1,1,2-Trichloroeth	50.000	50.854	101.71	80-120
49 1,3-Dichloropropan	50.000	53.032	106.06	80-120
44 Tetrachloroethene	50.000	56.465	112.93	80-121
48 Chlorodibromometha	50.000	52.851	105.70	64-120
50 1,2-Dibromoethane	50.000	51.503	103.01	75-120
53 Chlorobenzene	50.000	54.741	109.48	80-120
55 1,1,1,2-Tetrachlor	50.000	53.667	107.33	69-121
54 Ethyl Benzene	50.000	58.522	117.04	80-127
56 m,p-xylene	100.00	116.36	116.36	80-125
57 o-Xylene	50.000	57.318	114.64	78-120
58 Styrene	50.000	58.450	116.90	80-123
60 Isopropyl Benzene	50.000	61.694	123.39	80-127
59 Bromoform	50.000	51.434	102.87	60-120
65 1,1,2,2-Tetrachlor	50.000	50.500	101.00	74-120
68 1,2,3-Trichloropro	50.000	49.820	99.64	72-121
69 Trans-1,4-Dichloro	50.000	50.689	101.38	65-126
64 N-Propyl Benzene	50.000	60.875	121.75	80-132
63 Bromobenzene	50.000	54.038	108.08	80-120
67 1,3,5-Trimethyl Be	50.000	60.561	121.12	80-125
66 2-Chloro Toluene	50.000	58.864	117.73	80-125
70 4-Chloro Toluene	50.000	58.966	117.93	80-127
71 T-Butyl Benzene	50.000	60.238	120.48	87-122
72 1,2,4-Trimethylben	50.000	60.887	121.77	80-126
73 S-Butyl Benzene	50.000	61.288	122.58	80-134
74 4-Isopropyl Toluen	50.000	63.142	126.28	80-131
75 1,3-Dichlorobenzen	50.000	56.543	113.09	80-120
77 1,4-Dichlorobenzen	50.000	55.520	111.04	80-120
78 N-Butyl Benzene	50.000	63.566	127.13	80-138
80 1,2-Dichlorobenzen	50.000	54.397	108.79	80-120
81 1,2-Dibromo 3-Chlo	50.000	46.569	93.14	59-120
83 1,2,4-Trichloroben	50.000	54.697	109.39	78-130
82 Hexachloro 1,3-But	50.000	54.264	108.53	76-129
84 Naphthalene	50.000	48.987	97.97	66-120
85 1,2,3-Trichloroben	50.000	50.754	101.51	73-123

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	51.653	103.31	70-130

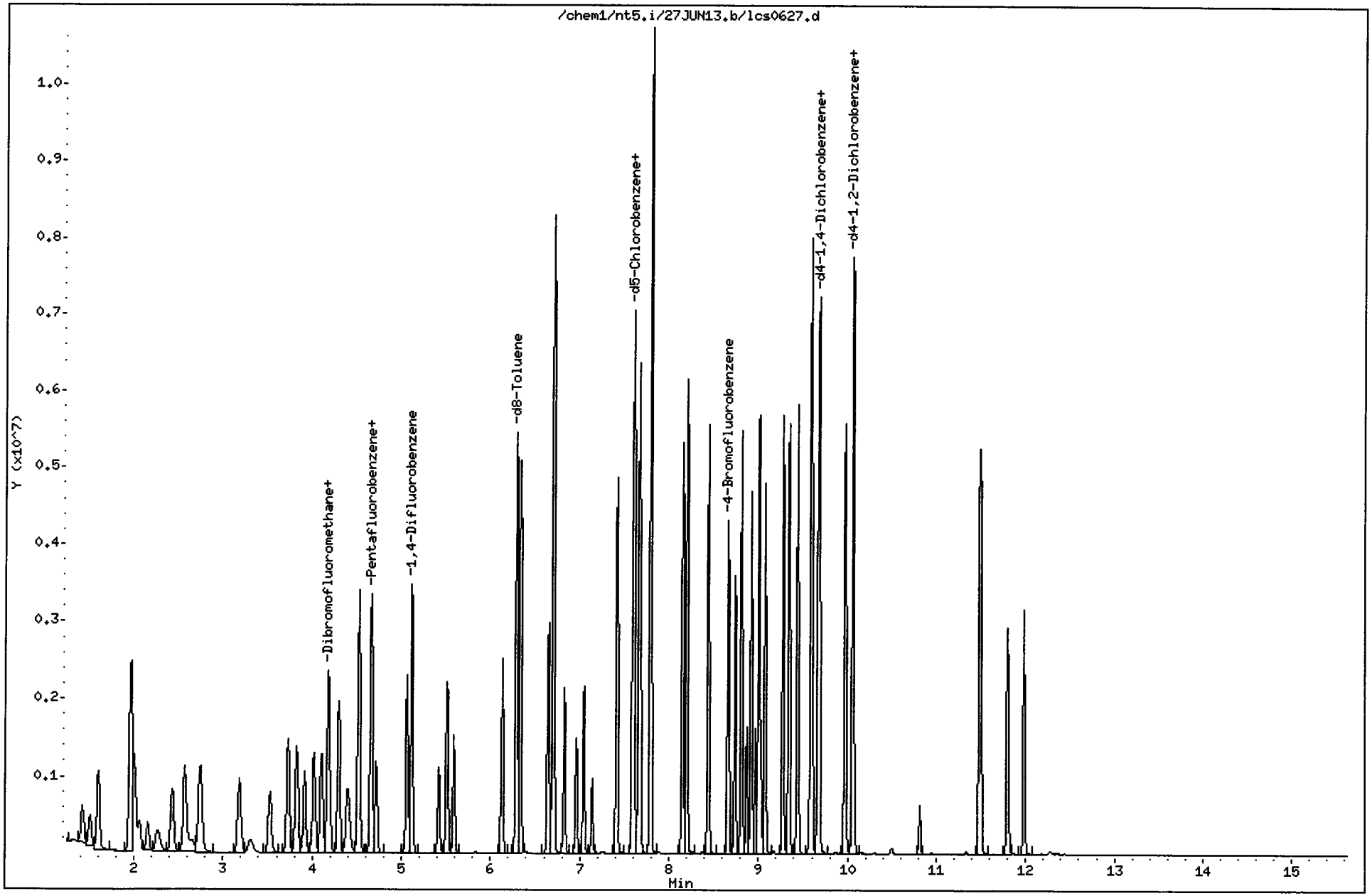
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 32 d4-1,2-Dichloroeth	50.000	51.244	102.49	80-149
$ 42 d8-Toluene	50.000	49.810	99.62	77-120
$ 62 4-Bromofluorobenze	50.000	49.876	99.75	80-120
$ 79 d4-1,2-Dichloroben	50.000	50.107	100.21	80-120

Data File: /chem1/nt5.i/27JUN13.b/lcs0627.d
Date : 27-JUN-2013 19:30
Client ID: LCS0627
Sample Info: LCS0627,5,5,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



CO-ELUTION SUMMARY FOR FILE - lcs0627.d

Lab ID: LCS0627, Method: VO121012S.m, Instrument: nt5.i, Date: 27-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/lcs0627a.d
Lab Smp Id: LCS0627 Client Smp ID: LCC0627
Inj Date : 27-JUN-2013 20:05
Operator : PB Inst ID: nt5.i
Smp Info : LCS0627,5,5,0
Misc Info : 13-13121
Comment :
Method : /chem1/nt5.i/27JUN13.b/VO121012S.m
Meth Date : 01-Jul-2013 13:08 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 11:07 Cal File: 2000627.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 * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
1 Dichlorodifluoromethane	85	1.040	1.028	(0.223)	484805	53.3891	53.389
2 Chloromethane	50	1.159	1.147	(0.249)	945338	50.7480	50.748(QM)
3 Vinyl Chloride	62	1.210	1.198	(0.260)	908552	54.1562	54.156
4 Bromomethane	94	1.413	1.407	(0.303)	453707	47.1852	47.185
5 Chloroethane	64	1.504	1.492	(0.323)	534981	52.4162	52.416
6 Trichlorofluoromethane	101	1.594	1.583	(0.342)	952850	51.2412	51.241
7 1,1-Dichloroethene	96	1.951	1.945	(0.419)	574708	52.0670	52.067
8 Carbon Disulfide	76	1.956	1.945	(0.420)	2063698	52.2100	52.210
9 112Trichloro122Trifluoroethane	101	1.996	1.990	(0.428)	553099	51.7229	51.723
10 Iodomethane	142	2.052	2.047	(0.440)	557186	62.9552	62.955
11 Bromoethane	108	2.149	2.143	(0.461)	356491	48.3508	48.351
12 Acrolein	56	2.262	2.301	(0.485)	522326	306.081	306.08
13 Methylene Chloride	84	2.426	2.420	(0.521)	504365	36.7994	36.799(Q)
14 Acetone	43	2.737	2.725	(0.587)	431152	166.008	166.01(Q)

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	2.562	2.561	(0.550)	520338	47.4127	47.413
	16 Methyl tert butyl ether	73	2.737	2.725	(0.587)	1756140	51.9096	51.910
	17 1,1-Dichloroethane	63	3.178	3.172	(0.682)	1367379	54.4877	54.488
	18 Acrylonitrile	53	3.297	3.336	(0.707)	294196	52.2076	52.208
	19 Vinyl Acetate	43	3.523	3.517	(0.756)	1704730	50.3267	50.327
	20 Cis-1,2-Dichloroethene	96	3.727	3.721	(0.800)	732674	51.0236	51.024
	22 2,2-Dichloropropane	77	3.823	3.817	(0.820)	1068336	51.2874	51.287
	23 Bromochloromethane	128	3.914	3.908	(0.840)	314778	50.1875	50.187
	24 Chloroform	83	4.015	4.010	(0.862)	1175620	51.4897	51.490
	25 Carbon Tetrachloride	117	4.100	4.094	(0.802)	914148	51.6149	51.615
$	27 Dibromofluoromethane	111	4.185	4.179	(0.898)	768140	51.0818	51.082
	26 1,1,1-Trichloroethane	97	4.174	4.168	(0.896)	1073877	51.3421	51.342
	28 1,1-Dichloropropene	75	4.293	4.287	(0.840)	1014196	49.7366	49.737
	29 2-Butanone	72	4.389	4.428	(0.942)	418845	233.127	233.13
	30 Benzene	78	4.519	4.519	(0.884)	2903110	51.6607	51.661
*	31 Pentafluorobenzene	168	4.660	4.654	(1.000)	1561743	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.655	4.649	(0.999)	857853	50.2011	50.201
	33 1,2-Dichloroethane	62	4.711	4.711	(0.921)	902034	49.4733	49.473
	34 Trichloroethene	95	5.056	5.056	(0.989)	716763	50.4937	50.494
*	35 1,4-Difluorobenzene	114	5.113	5.107	(1.000)	2584151	50.0000	
	37 Dibromomethane	93	5.413	5.412	(1.059)	383933	49.5768	49.577
	38 1,2-Dichloropropane	63	5.509	5.503	(1.077)	802102	50.3028	50.303
	39 Bromodichloromethane	83	5.582	5.582	(1.092)	898249	50.8806	50.881
	40 2-Chloroethyl Vinyl Ether	63	6.120	6.120	(1.197)	147867	59.5616	59.562
	41 Cis 1,3-dichloropropene	75	6.131	6.131	(1.199)	1145024	52.2094	52.209
$	42 d8-Toluene	98	6.289	6.289	(1.230)	3189604	49.7947	49.795
	43 Toluene	92	6.329	6.329	(1.238)	1811820	50.9658	50.966
	44 Tetrachloroethene	166	6.646	6.646	(0.875)	751116	51.1910	51.191
	45 4-Methyl-2-Pentanone	58	6.702	6.702	(1.311)	1660158	246.804	246.80
	46 Trans 1,3-Dichloropropene	75	6.697	6.697	(1.310)	1034833	51.4753	51.475
	47 1,1,2-Trichloroethane	97	6.827	6.827	(1.335)	568047	49.0179	49.018
	48 Chlorodibromomethane	129	6.963	6.962	(0.917)	651080	50.6192	50.619
	49 1,3-Dichloropropane	76	7.048	7.042	(0.928)	1051287	51.0007	51.001
	50 1,2-Dibromoethane	107	7.138	7.138	(1.396)	561306	49.7574	49.757
	51 2-Hexanone	43	7.415	7.415	(0.976)	2664562	247.940	247.94
*	52 d5-Chlorobenzene	117	7.596	7.596	(1.000)	2491123	50.0000	
	53 Chlorobenzene	112	7.608	7.607	(1.001)	1819546	51.0820	51.082
	54 Ethyl Benzene	91	7.658	7.658	(1.008)	3264248	53.8984	53.898
	55 1,1,1,2-Tetrachloroethane	131	7.675	7.675	(1.010)	657714	50.9476	50.948
	56 m,p-xylene	106	7.794	7.794	(1.026)	2451104	107.810	107.81
	57 o-Xylene	106	8.156	8.156	(1.074)	1200282	53.4909	53.491
	58 Styrene	104	8.202	8.201	(1.080)	2006436	54.5684	54.568
	59 Bromoform	173	8.196	8.196	(0.847)	448812	48.1675	48.167
	60 Isopropyl Benzene	105	8.445	8.445	(0.873)	3076335	55.2834	55.283
$	62 4-Bromofluorobenzene	95	8.665	8.665	(1.141)	1339107	50.5072	50.507
	63 Bromobenzene	156	8.739	8.739	(0.903)	758060	49.5425	49.543
	64 N-Propyl Benzene	91	8.812	8.812	(0.911)	3619808	53.9968	53.997

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
	65 1,1,2,2-Tetrachloroethane	83	8.869	8.869	(0.917)	731812	47.4549	47.455
	66 2-Chloro Toluene	91	8.920	8.920	(0.922)	2226480	52.6926	52.693
	67 1,3,5-Trimethyl Benzene	105	8.999	9.005	(0.930)	2605455	54.3124	54.312
	68 1,2,3-Trichloropropane	110	8.971	8.971	(0.927)	227663	47.4965	47.497
	69 Trans-1,4-Dichloro 2-Butene	53	9.027	9.027	(0.933)	274488	47.2061	47.206
	70 4-Chloro Toluene	91	9.073	9.072	(0.938)	2318751	52.7210	52.721
	71 T-Butyl Benzene	119	9.276	9.276	(0.959)	2307801	54.1622	54.162
	72 1,2,4-Trimethylbenzene	105	9.344	9.344	(0.966)	2571857	54.8309	54.831
	73 S-Butyl Benzene	105	9.440	9.440	(0.976)	3350948	54.6990	54.699
	74 4-Isopropyl Toluene	119	9.587	9.587	(0.991)	2776478	55.9469	55.947
	75 1,3-Dichlorobenzene	146	9.599	9.599	(0.992)	1424160	50.9289	50.929
*	76 d4-1,4-Dichlorobenzene	152	9.672	9.672	(1.000)	1341563	50.0000	
	77 1,4-Dichlorobenzene	146	9.684	9.689	(1.001)	1459439	50.4551	50.455
	78 N-Butyl Benzene	91	9.972	9.972	(1.031)	2611368	56.0740	56.074
$	79 d4-1,2-Dichlorobenzene	152	10.057	10.057	(1.040)	1209651	49.4353	49.435
	80 1,2-Dichlorobenzene	146	10.063	10.068	(1.040)	1354693	49.6782	49.678
	81 1,2-Dibromo 3-Chloropropane	75	10.815	10.815	(1.118)	146908	46.0402	46.040
	82 Hexachloro 1,3-Butadiene	225	11.499	11.505	(1.189)	643989	49.1475	49.147
	83 1,2,4-Trichlorobenzene	180	11.483	11.488	(1.187)	1015887	49.9008	49.901
	84 Naphthalene	128	11.799	11.805	(1.220)	2137472	47.5732	47.573
	85 1,2,3-Trichlorobenzene	180	11.980	11.986	(1.239)	958717	47.5006	47.501

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: nt5.i
Lab File ID: lcs0627a.d
Lab Smp Id: LCS0627
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-13121

Calibration Date: 27-JUN-2013
Calibration Time: 15:48
Client Smp ID: LCC0627
Level: LOW
Sample Type: SOIL

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	1613586	806793	3227172	1561743	-3.21
35 1,4-Difluorobenze	2656709	1328354	5313418	2584151	-2.73
52 d5-Chlorobenzene	2557235	1278618	5114470	2491123	-2.59
76 d4-1,4-Dichlorobe	1374359	687180	2748718	1341563	-2.39

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.65	4.15	5.15	4.66	0.13
35 1,4-Difluorobenze	5.11	4.61	5.61	5.11	0.11
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 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:
Sample Matrix: SOLID
Lab Smp Id: LCS0627
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-13121

Client SDG: 27JUN13
Fraction: VOA
Client Smp ID: LCC0627
Operator: PB
SampleType: LCSD
Quant Type: ISTD

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
1 Dichlorodifluorome	50.000	53.389	106.78	53-148
2 Chloromethane	50.000	50.748	101.50	64-125
3 Vinyl Chloride	50.000	54.156	108.31	63-137
4 Bromomethane	50.000	47.185	94.37	57-136
5 Chloroethane	50.000	52.416	104.83	64-131
6 Trichlorofluoromet	50.000	51.241	102.48	69-132
12 Acrolein	250.00	306.08	122.43	54-137
9 112Trichloro122Tri	50.000	51.723	103.45	74-130
14 Acetone	250.00	166.01	66.40	60-131
7 1,1-Dichloroethene	50.000	52.067	104.13	75-126
11 Bromoethane	50.000	48.351	96.70	76-126
10 Iodomethane	50.000	62.955	125.91	65-139
13 Methylene Chloride	50.000	36.799	73.60	70-123
8 Carbon Disulfide	50.000	52.210	104.42	71-129
18 Acrylonitrile	50.000	52.208	104.42	67-125
15 Trans-1,2-Dichloro	50.000	47.413	94.83	80-120
19 Vinyl Acetate	50.000	50.327	100.65	60-136
17 1,1-Dichloroethane	50.000	54.488	108.98	80-120
29 2-Butanone	250.00	233.13	93.25	70-120
22 2,2-Dichloropropan	50.000	51.287	102.57	74-123
20 Cis-1,2-Dichloroet	50.000	51.024	102.05	80-120
24 Chloroform	50.000	51.490	102.98	80-120
23 Bromochloromethane	50.000	50.187	100.37	80-120
26 1,1,1-Trichloroeth	50.000	51.342	102.68	77-121
28 1,1-Dichloropropen	50.000	49.737	99.47	80-120
25 Carbon Tetrachlori	50.000	51.615	103.23	77-122
33 1,2-Dichloroethane	50.000	49.473	98.95	76-120
30 Benzene	50.000	51.661	103.32	80-120
34 Trichloroethene	50.000	50.494	100.99	80-120
38 1,2-Dichloropropan	50.000	50.303	100.61	80-120
39 Bromodichlorometha	50.000	50.881	101.76	77-121
37 Dibromomethane	50.000	49.577	99.15	80-120
40 2-Chloroethyl Viny	50.000	59.562	119.12	10-191

SPIKE COMPOUND	CONC ADDED ug/Kg	CONC RECOVERED ug/Kg	% RECOVERED	LIMITS
45 4-Methyl-2-Pentano	250.00	246.80	98.72	67-120
41 Cis 1,3-dichloropr	50.000	52.209	104.42	74-120
43 Toluene	50.000	50.966	101.93	80-120
46 Trans 1,3-Dichloro	50.000	51.475	102.95	65-120
51 2-Hexanone	250.00	247.94	99.18	65-130
47 1,1,2-Trichloroeth	50.000	49.018	98.04	80-120
49 1,3-Dichloropropan	50.000	51.001	102.00	80-120
44 Tetrachloroethene	50.000	51.191	102.38	80-121
48 Chlorodibromometha	50.000	50.619	101.24	64-120
50 1,2-Dibromoethane	50.000	49.757	99.51	75-120
53 Chlorobenzene	50.000	51.082	102.16	80-120
55 1,1,1,2-Tetrachlor	50.000	50.948	101.90	69-121
54 Ethyl Benzene	50.000	53.898	107.80	80-127
56 m,p-xylene	100.00	107.81	107.81	80-125
57 o-Xylene	50.000	53.491	106.98	78-120
58 Styrene	50.000	54.568	109.14	80-123
60 Isopropyl Benzene	50.000	55.283	110.57	80-127
59 Bromoform	50.000	48.167	96.33	60-120
65 1,1,2,2-Tetrachlor	50.000	47.455	94.91	74-120
68 1,2,3-Trichloropro	50.000	47.497	94.99	72-121
69 Trans-1,4-Dichloro	50.000	47.206	94.41	65-126
64 N-Propyl Benzene	50.000	53.997	107.99	80-132
63 Bromobenzene	50.000	49.543	99.09	80-120
67 1,3,5-Trimethyl Be	50.000	54.312	108.62	80-125
66 2-Chloro Toluene	50.000	52.693	105.39	80-125
70 4-Chloro Toluene	50.000	52.721	105.44	80-127
71 T-Butyl Benzene	50.000	54.162	108.32	87-122
72 1,2,4-Trimethylben	50.000	54.831	109.66	80-126
73 S-Butyl Benzene	50.000	54.699	109.40	80-134
74 4-Isopropyl Toluen	50.000	55.947	111.89	80-131
75 1,3-Dichlorobenzen	50.000	50.929	101.86	80-120
77 1,4-Dichlorobenzen	50.000	50.455	100.91	80-120
78 N-Butyl Benzene	50.000	56.074	112.15	80-138
80 1,2-Dichlorobenzen	50.000	49.678	99.36	80-120
81 1,2-Dibromo 3-Chlo	50.000	46.040	92.08	59-120
83 1,2,4-Trichloroben	50.000	49.901	99.80	78-130
82 Hexachloro 1,3-But	50.000	49.147	98.29	76-129
84 Naphthalene	50.000	47.573	95.15	66-120
85 1,2,3-Trichloroben	50.000	47.501	95.00	73-123

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	51.082	102.16	70-130

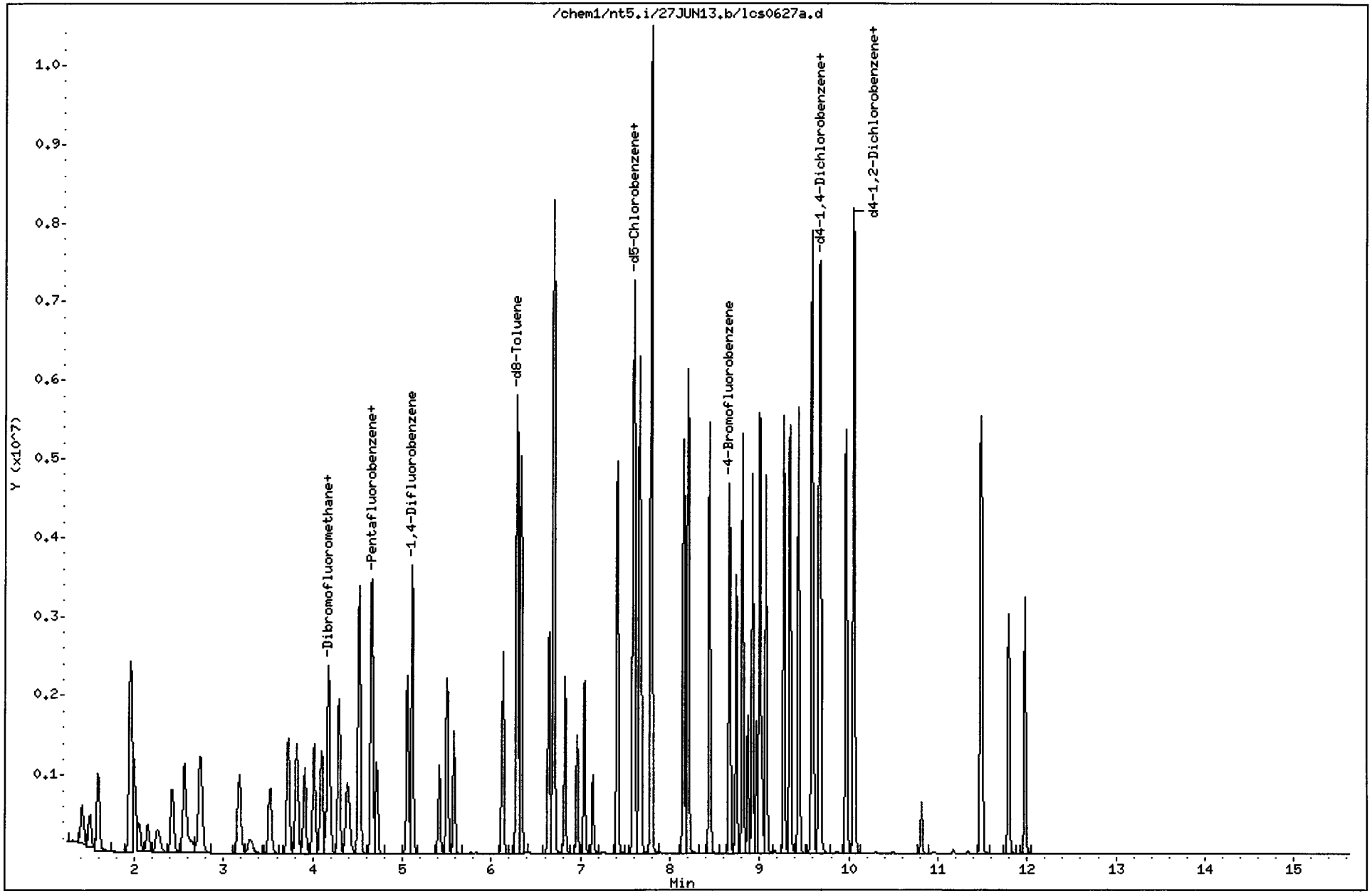
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 32 d4-1,2-Dichloroeth	50.000	50.201	100.40	80-149
$ 42 d8-Toluene	50.000	49.795	99.59	77-120
$ 62 4-Bromofluorobenze	50.000	50.507	101.01	80-120
$ 79 d4-1,2-Dichloroben	50.000	49.435	98.87	80-120

Data File: /chem1/nt5.i/27JUN13.b/lcs0627a.d
Date : 27-JUN-2013 20:05
Client ID: LCC0627
Sample Info: LCS0627,5,5,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



CO-ELUTION SUMMARY FOR FILE - lcs0627a.d

Lab ID: LCS0627, Method: VO121012S.m, Instrument: nt5.i, Date: 27-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/mb0627.d
Lab Smp Id: MB0627 Client Smp ID: MB0627
Inj Date : 27-JUN-2013 20:53
Operator : PB Inst ID: nt5.i
Smp Info : MB0627,5,5,0
Misc Info : 13-13121
Comment :
Method : /chem1/nt5.i/27JUN13.b/VO121012S.m
Meth Date : 01-Jul-2013 13:08 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 11:07 Cal File: 2000627.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 * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.00000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
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	2.454	2.420	(0.525)	44282	3.30220	3.302
14 Acetone	43	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
	15 Trans-1,2-Dichloroethene	96	Compound Not Detected.					
	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.					
$	27 Dibromofluoromethane	111	4.196	4.179	(0.898)	755184	51.3286	51.329
	26 1,1,1-Trichloroethane	97	Compound Not Detected.					
	28 1,1-Dichloropropene	75	Compound Not Detected.					
	29 2-Butanone	72	Compound Not Detected.					
	30 Benzene	78	Compound Not Detected.					
*	31 Pentafluorobenzene	168	4.671	4.654	(1.000)	1528018	50.0000	
$	32 d4-1,2-Dichloroethane	65	4.666	4.649	(0.999)	856260	51.2138	51.214
	33 1,2-Dichloroethane	62	Compound Not Detected.					
	34 Trichloroethene	95	Compound Not Detected.					
*	35 1,4-Difluorobenzene	114	5.124	5.107	(1.000)	2529819	50.0000	
	37 Dibromomethane	93	Compound Not Detected.					
	38 1,2-Dichloropropane	63	Compound Not Detected.					
	39 Bromodichloromethane	83	Compound Not Detected.					
	40 2-Chloroethyl Vinyl Ether	63	Compound Not Detected.					
	41 Cis 1,3-dichloropropene	75	Compound Not Detected.					
$	42 d8-Toluene	98	6.295	6.289	(1.229)	3144627	50.1469	50.147
	43 Toluene	92	Compound Not Detected.					
	44 Tetrachloroethene	166	Compound Not Detected.					
	45 4-Methyl-2-Pentanone	58	Compound Not Detected.					
	46 Trans 1,3-Dichloropropene	75	Compound Not Detected.					
	47 1,1,2-Trichloroethane	97	Compound Not Detected.					
	48 Chlorodibromomethane	129	Compound Not Detected.					
	49 1,3-Dichloropropane	76	Compound Not Detected.					
	50 1,2-Dibromoethane	107	Compound Not Detected.					
	51 2-Hexanone	43	Compound Not Detected.					
*	52 d5-Chlorobenzene	117	7.596	7.596	(1.000)	2494290	50.0000	
	53 Chlorobenzene	112	Compound Not Detected.					
	54 Ethyl Benzene	91	Compound Not Detected.					
	55 1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
	56 m,p-xylene	106	Compound Not Detected.					
	57 o-Xylene	106	Compound Not Detected.					
	58 Styrene	104	Compound Not Detected.					
	59 Bromoform	173	Compound Not Detected.					
	60 Isopropyl Benzene	105	Compound Not Detected.					
$	62 4-Bromofluorobenzene	95	8.665	8.665	(1.141)	1325404	49.9269	49.927
	63 Bromobenzene	156	Compound Not Detected.					
	64 N-Propyl Benzene	91	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					
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.					
69	Trans-1,4-Dichloro 2-Butene	53	Compound Not Detected.					
70	4-Chloro Toluene	91	Compound Not Detected.					
71	T-Butyl Benzene	119	Compound Not Detected.					
72	1,2,4-Trimethylbenzene	105	Compound Not Detected.					
73	S-Butyl Benzene	105	Compound Not Detected.					
74	4-Isopropyl Toluene	119	Compound Not Detected.					
75	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 76	d4-1,4-Dichlorobenzene	152	9.666	9.672	(1.000)	1323306	50.0000	
77	1,4-Dichlorobenzene	146	Compound Not Detected.					
78	N-Butyl Benzene	91	Compound Not Detected.					
$ 79	d4-1,2-Dichlorobenzene	152	10.051	10.057	(1.040)	1213917	50.2940	50.294
80	1,2-Dichlorobenzene	146	Compound Not Detected.					
81	1,2-Dibromo 3-Chloropropane	75	Compound Not Detected.					
82	Hexachloro 1,3-Butadiene	225	Compound Not Detected.					
83	1,2,4-Trichlorobenzene	180	11.477	11.488	(1.187)	14256	0.70992	0.7099
84	Naphthalene	128	11.788	11.805	(1.219)	62233	1.40421	1.404
85	1,2,3-Trichlorobenzene	180	11.969	11.986	(1.238)	15472	0.77715	0.7772

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: mb0627.d
Lab Smp Id: MB0627
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-13121

Calibration Date: 27-JUN-2013
Calibration Time: 15:48
Client Smp ID: MB0627
Level: LOW
Sample Type: SOIL

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	1613586	806793	3227172	1528018	-5.30
35 1,4-Difluorobenze	2656709	1328354	5313418	2529819	-4.78
52 d5-Chlorobenzene	2557235	1278618	5114470	2494290	-2.46
76 d4-1,4-Dichlorobe	1374359	687180	2748718	1323306	-3.71

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.65	4.15	5.15	4.67	0.36
35 1,4-Difluorobenze	5.11	4.61	5.61	5.12	0.33
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	-0.06

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: SOLID
Lab Smp Id: MB0627
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-13121

Client SDG: 27JUN13
Fraction: VOA
Client Smp ID: MB0627
Operator: PB
SampleType: BLANK
Quant Type: ISTD

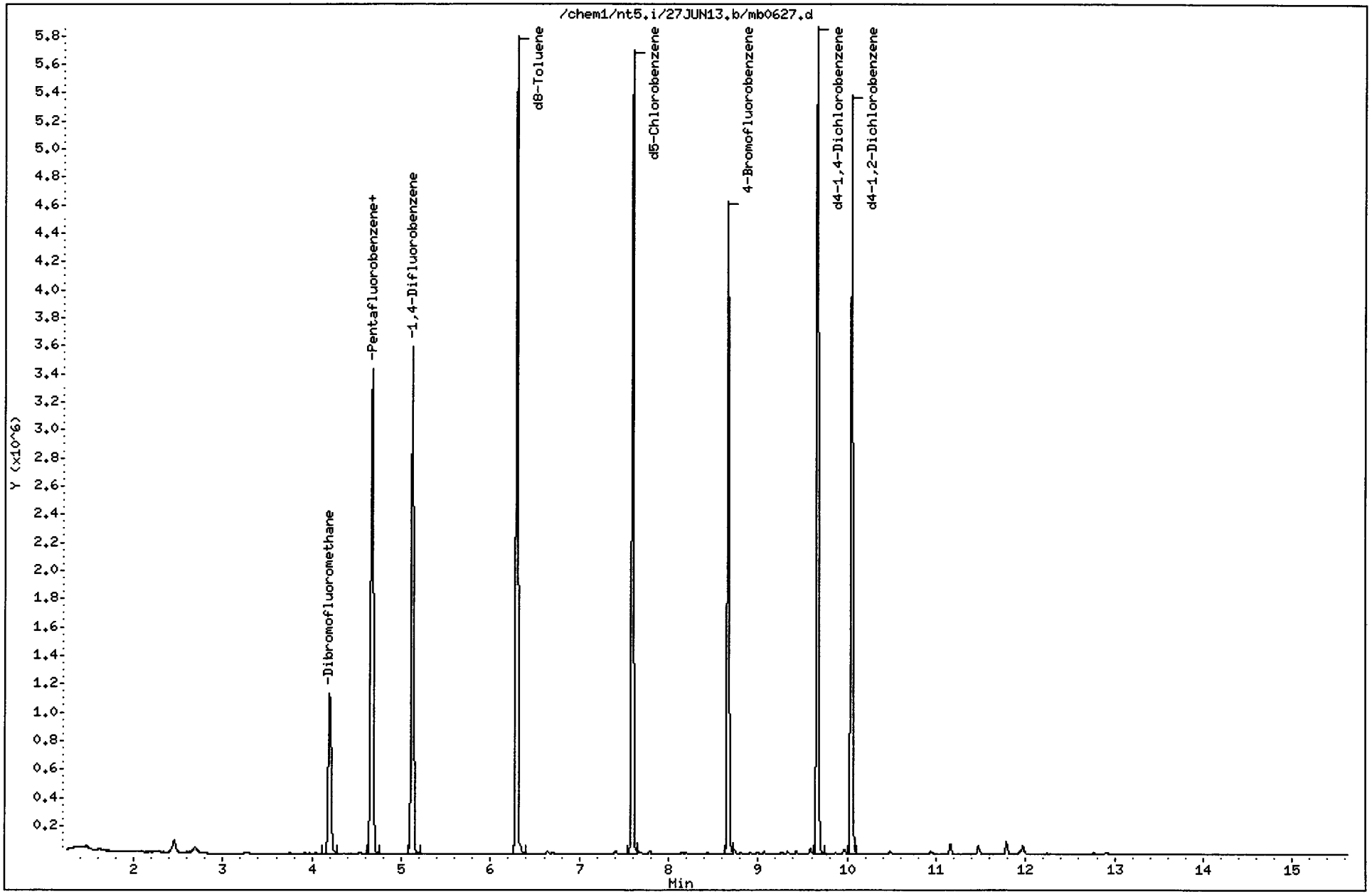
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	51.329	102.66	70-130
$ 32 d4-1,2-Dichloroeth	50.000	51.214	102.43	80-149
$ 42 d8-Toluene	50.000	50.147	100.29	77-120
$ 62 4-Bromofluorobenze	50.000	49.927	99.85	80-120
$ 79 d4-1,2-Dichloroben	50.000	50.294	100.59	80-120

Data File: /chem1/nt5.i/27JUN13.b/mb0627.d
Date : 27-JUN-2013 20:53
Client ID: MB0627
Sample Info: MB0627,5,5,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



CO-ELUTION SUMMARY FOR FILE - mb0627.d

Lab ID: MB0627, Method: VO121012S.m, Instrument: nt5.i, Date: 27-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt5.i/27JUN13.b/mb0627.d

Date : 27-JUN-2013 20:53

Client ID: MB0627

Instrument: nt5.i

Sample Info: MB0627,5,5,0

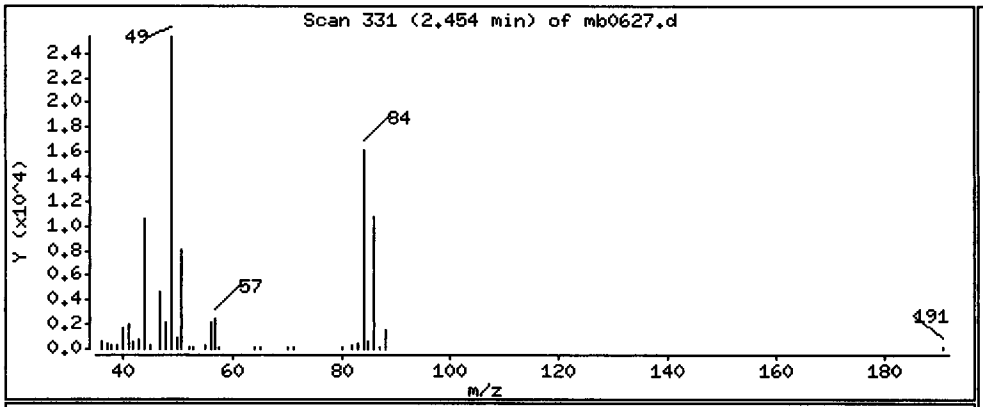
Operator: PB

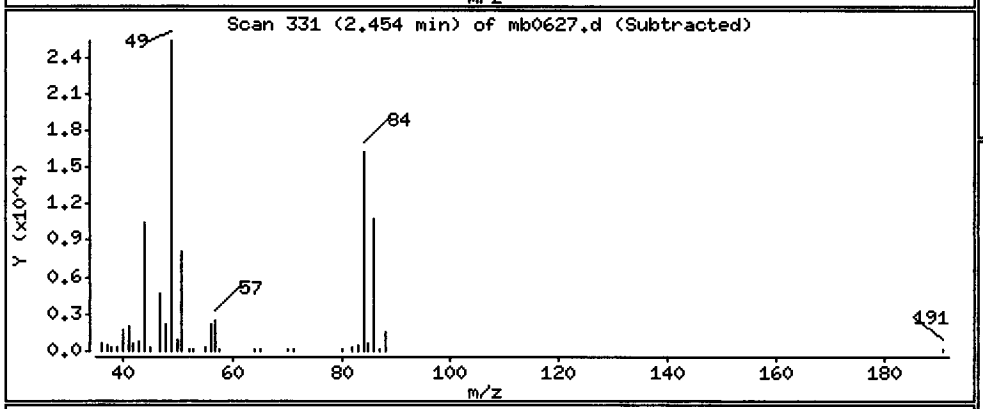
Column phase: RTXVMS

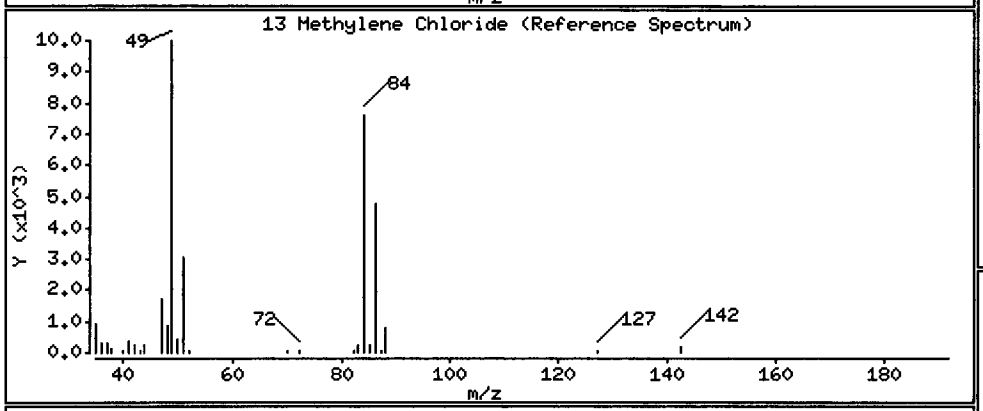
Column diameter: 0.18

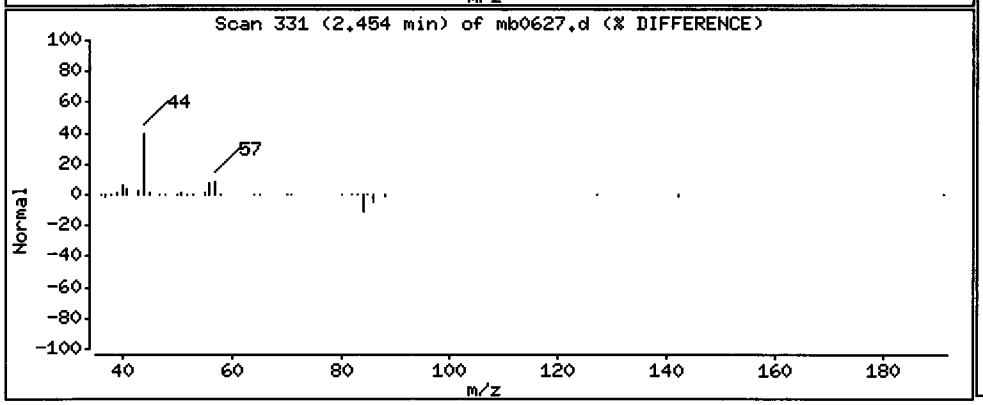
13 Methylene Chloride

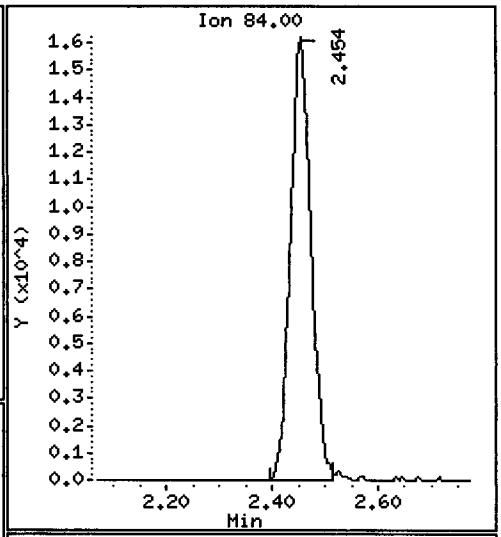
Concentration: 3.302 ug/Kg

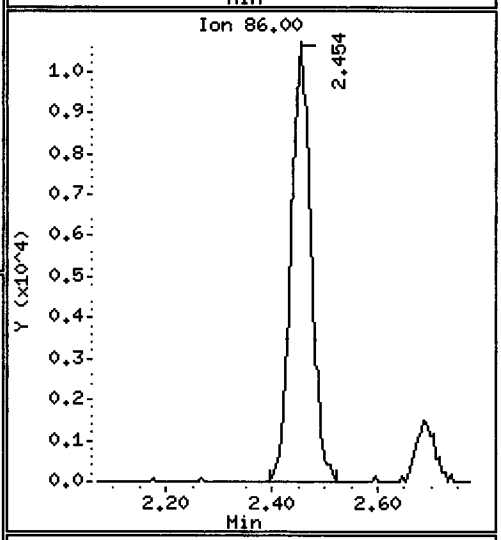


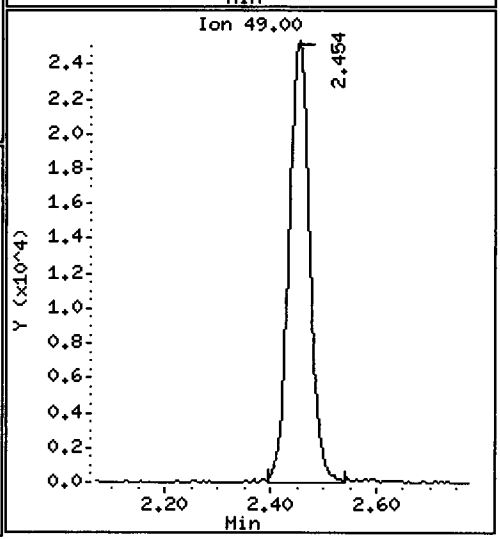












Data File: /chem1/nt5.i/27JUN13.b/mb0627.d

Date : 27-JUN-2013 20:53

Client ID: MB0627

Instrument: nt5.i

Sample Info: MB0627,5,5,0

Operator: PB

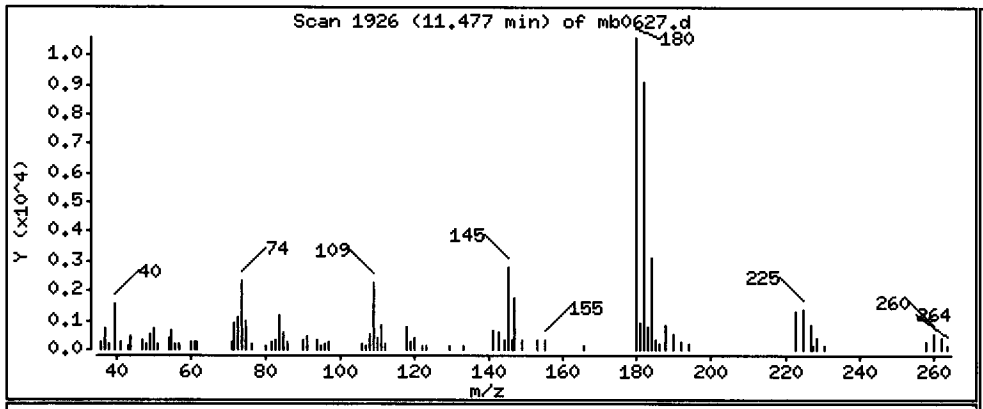
Column phase: RTXVMS

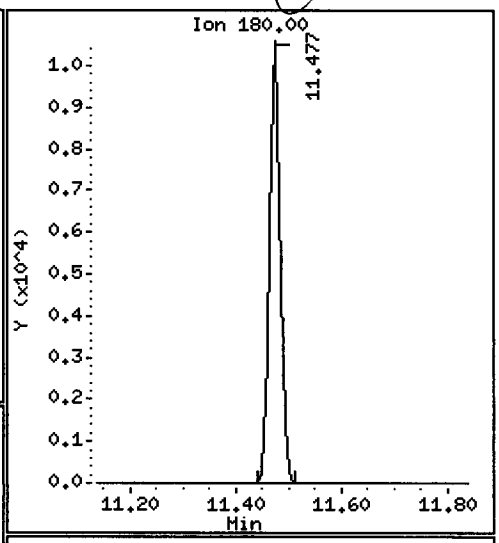
Column diameter: 0.18

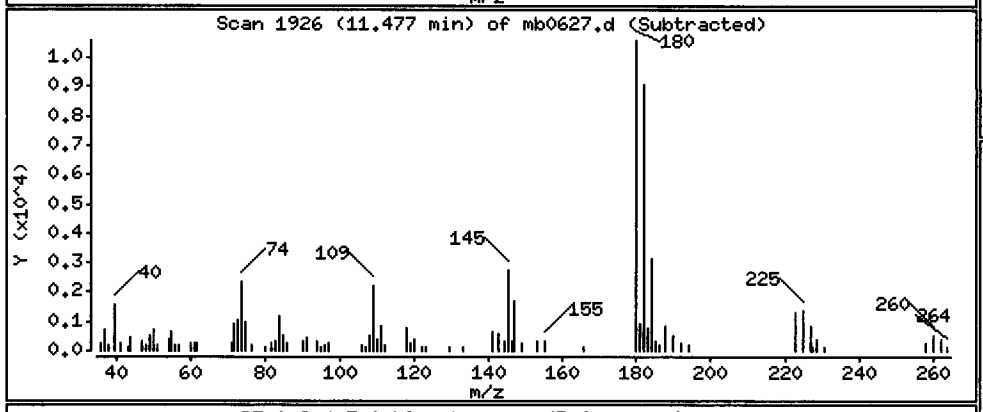
83 1,2,4-Trichlorobenzene

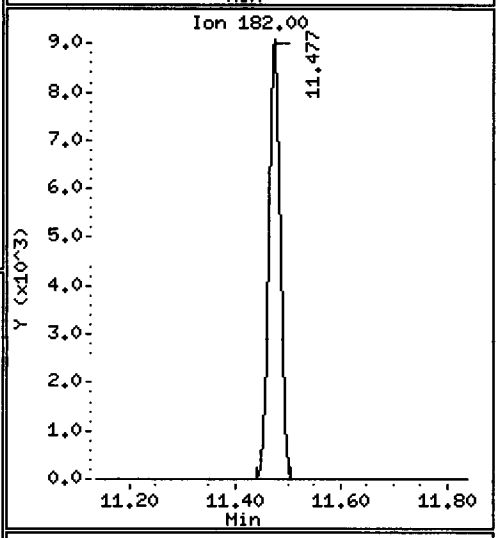
Concentration: 0.7099 ug/Kg

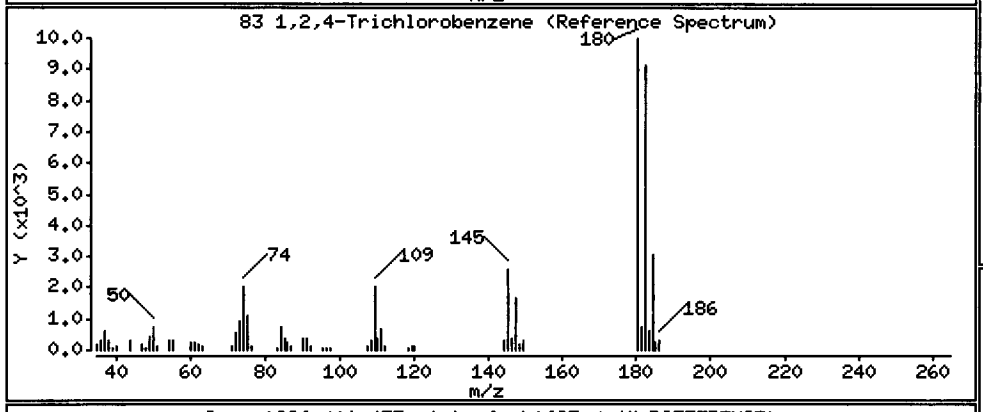
OUR

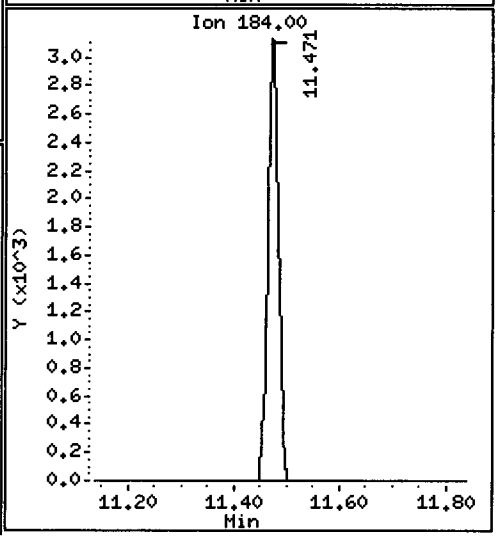


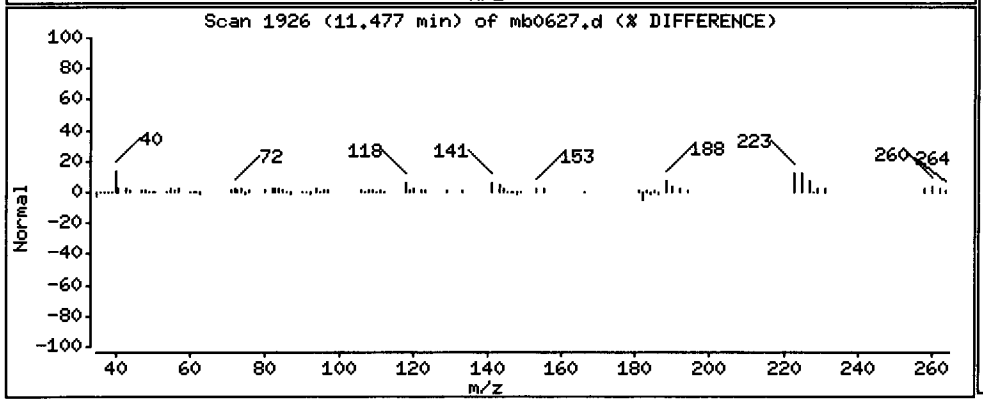












WUTB : 80435

Data File: /chem1/nt5.i/27JUN13.b/mb0627.d

Date : 27-JUN-2013 20:53

Client ID: MB0627

Instrument: nt5.i

Sample Info: MB0627,5,5,0

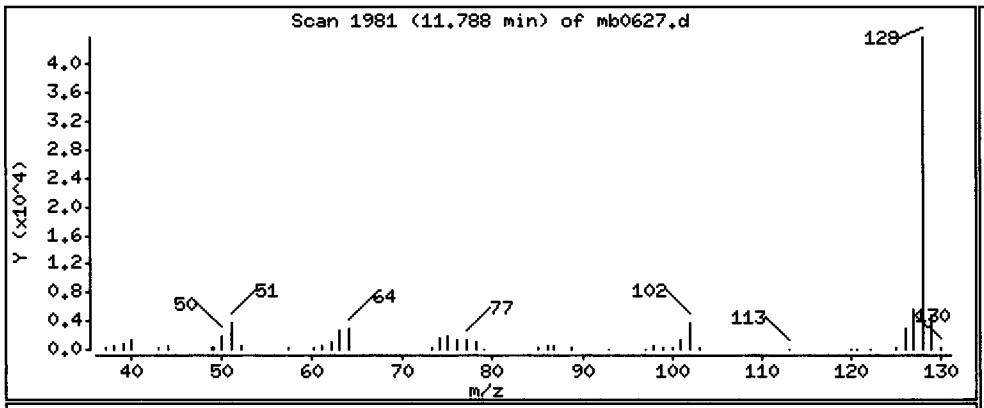
Operator: PB

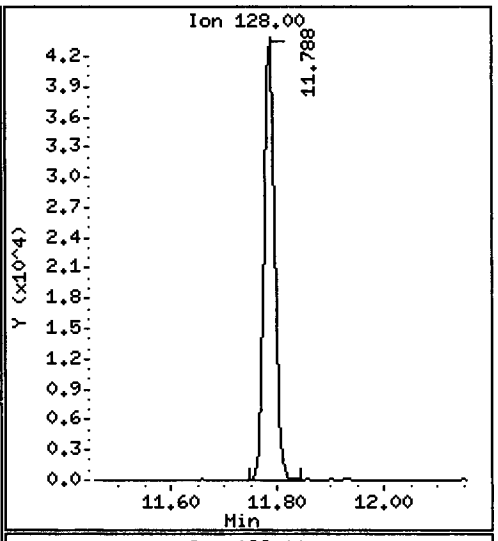
Column phase: RTXVMS

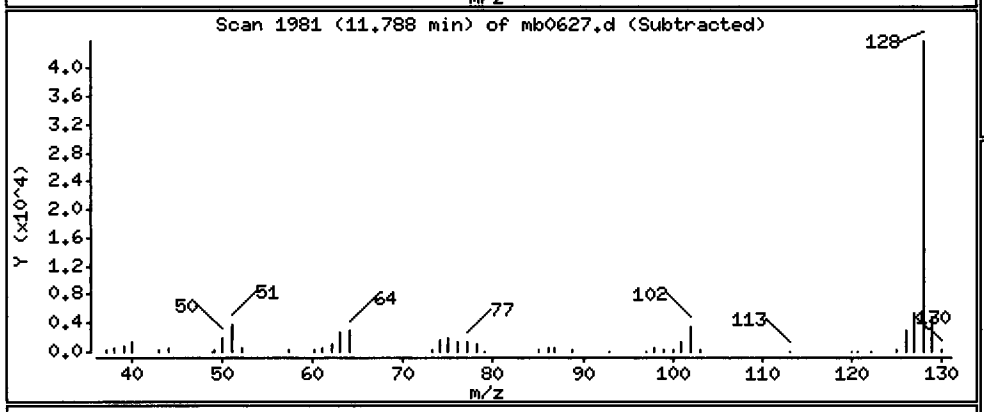
Column diameter: 0.18

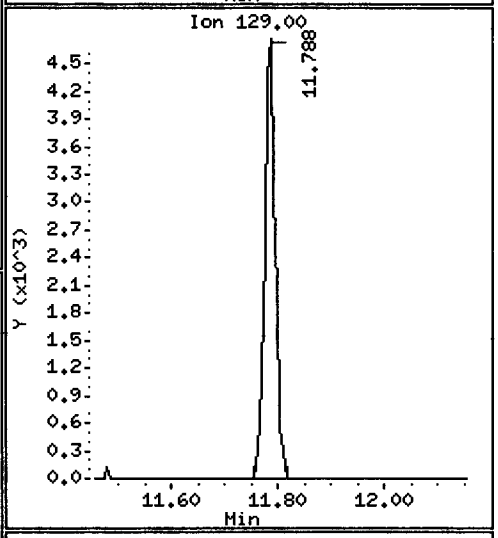
84 Naphthalene

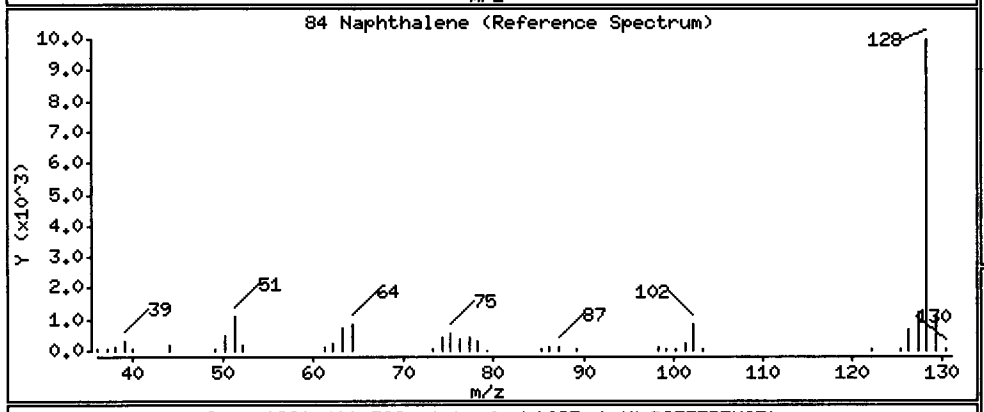
Concentration: 1.404 ug/Kg

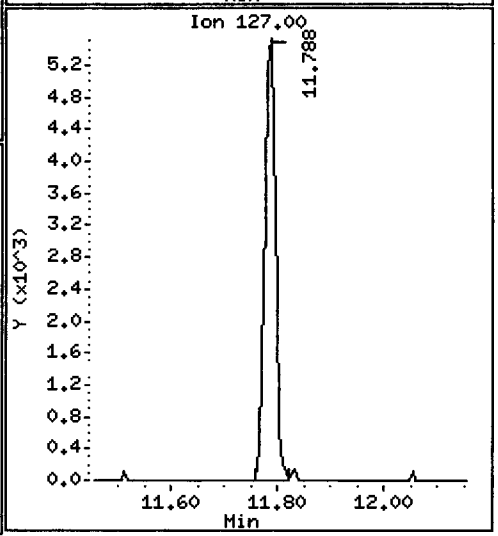


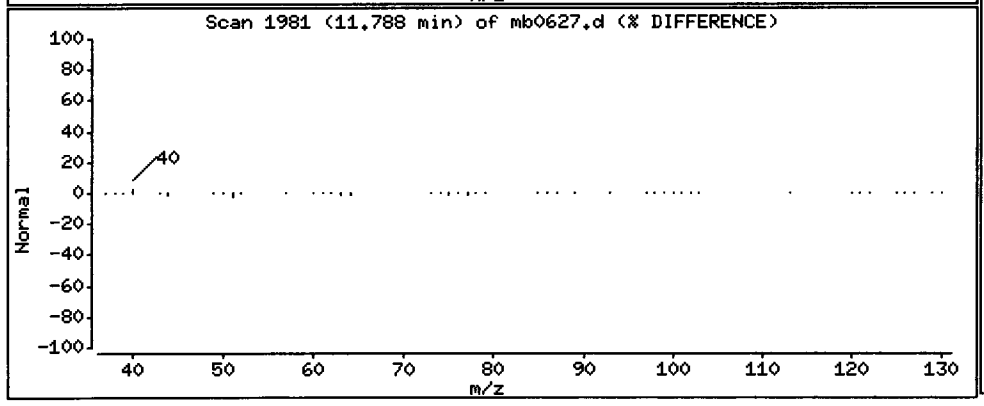












Data File: /chem1/nt5.i/27JUN13.b/mb0627.d

Date : 27-JUN-2013 20:53

Client ID: MB0627

Instrument: nt5.1

Sample Info: MB0627,5,5,0

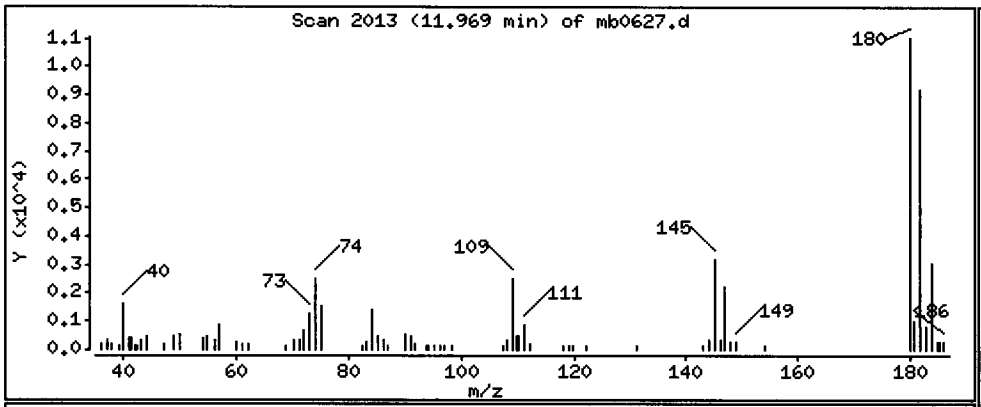
Operator: PB

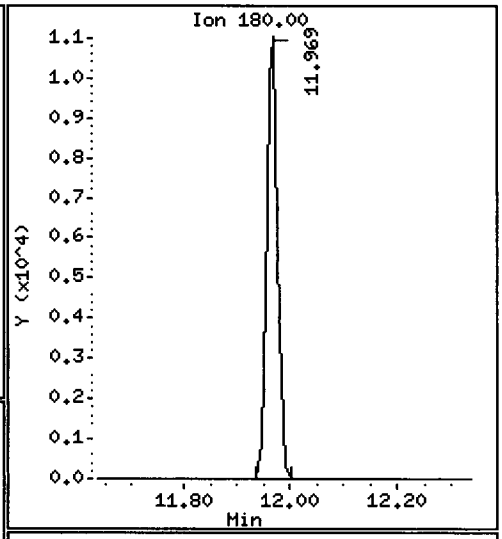
Column phase: RTXVMS

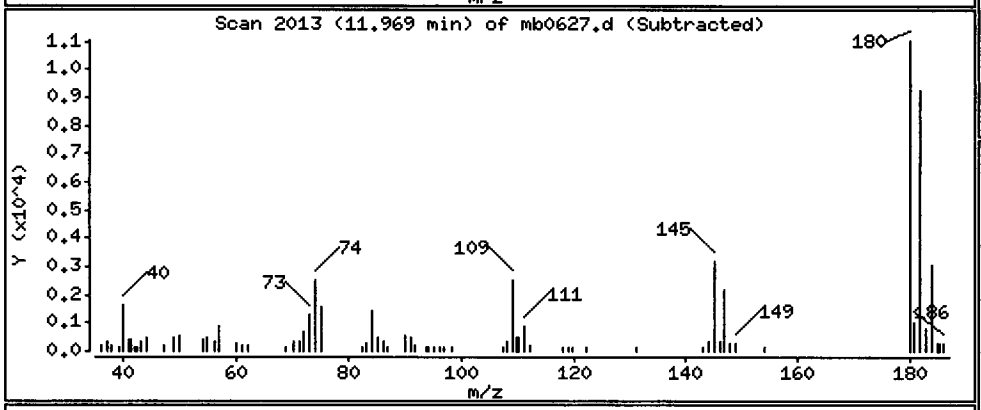
Column diameter: 0.18

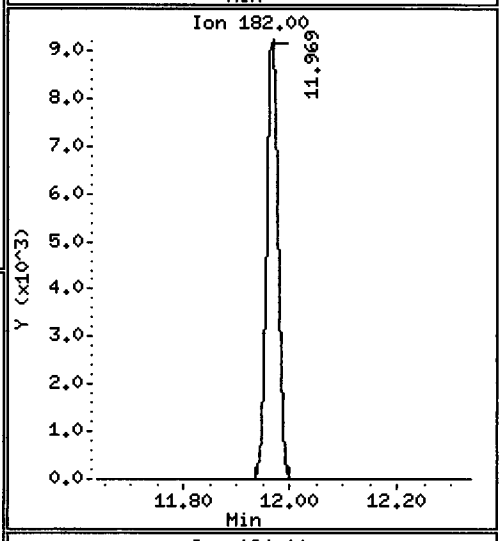
85 1,2,3-Trichlorobenzene

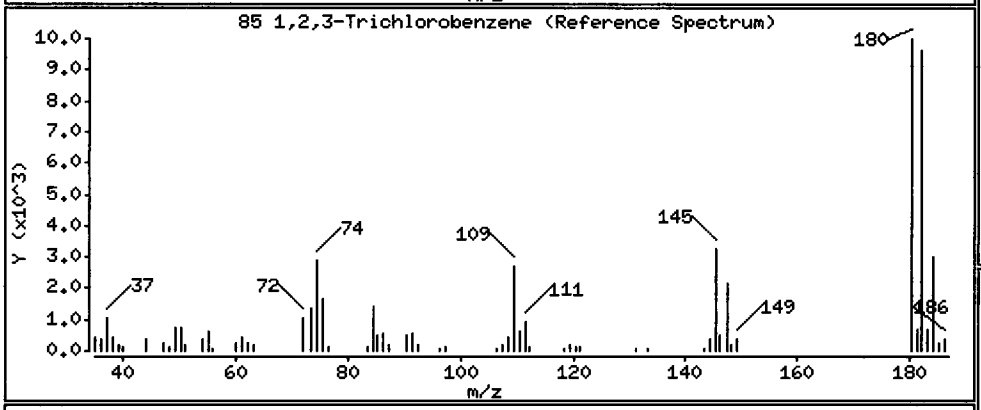
Concentration: 0.7772 ug/Kg

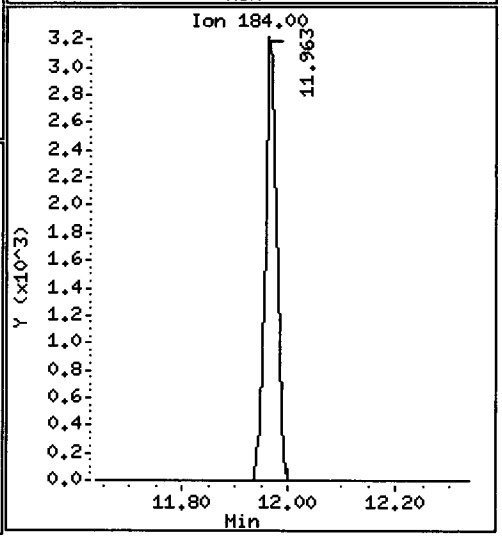


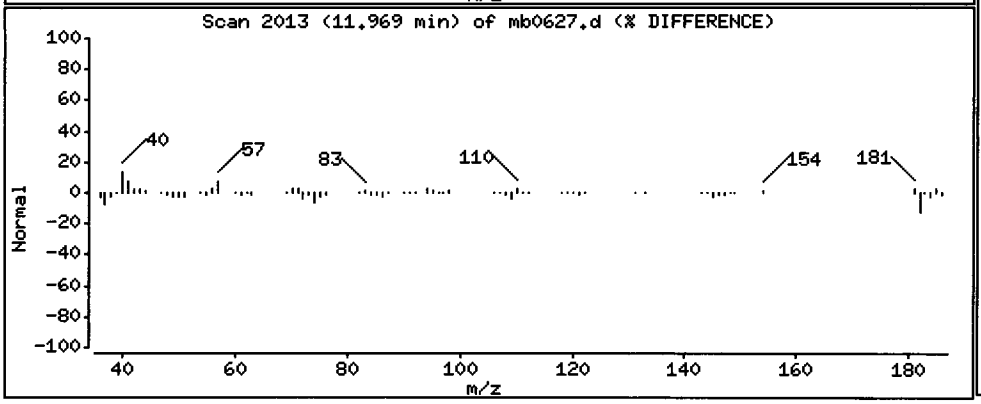












Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/wu70a.d
Lab Smp Id: WU70A Client Smp ID: LF-QC-TB-20130619-W
Inj Date : 28-JUN-2013 01:16
Operator : PB Inst ID: nt5.i
Smp Info : WU70A,5,5,0
Misc Info : 13-13121
Comment :
Method : /chem1/nt5.i/27JUN13.b/VO121012S.m
Meth Date : 01-Jul-2013 13:09 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 11:07 Cal File: 2000627.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	0.00000	Purge Volume (mL)
Sa	0.00000	Sample Amount (mL)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	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	2.431	2.420	(0.521)	18730	1.26876	1.269
14	Acetone	43	Compound Not Detected.					
15	Trans-1,2-Dichloroethene	96	Compound Not Detected.					

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/Kg)	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.					
$	27	Dibromofluoromethane	111	4.191	4.179	(0.898)	836571	51.6506	51.651
	26	1,1,1-Trichloroethane	97	Compound Not Detected.					
	28	1,1-Dichloropropene	75	Compound Not Detected.					
	29	2-Butanone	72	Compound Not Detected.					
	30	Benzene	78	Compound Not Detected.					
*	31	Pentafluorobenzene	168	4.666	4.654	(1.000)	1682143	50.0000	
$	32	d4-1,2-Dichloroethane	65	4.660	4.649	(0.999)	902074	49.0105	49.010
	33	1,2-Dichloroethane	62	Compound Not Detected.					
	34	Trichloroethene	95	Compound Not Detected.					
*	35	1,4-Difluorobenzene	114	5.118	5.107	(1.000)	2783621	50.0000	
	37	Dibromomethane	93	Compound Not Detected.					
	38	1,2-Dichloropropane	63	Compound Not Detected.					
	39	Bromodichloromethane	83	Compound Not Detected.					
	40	2-Chloroethyl Vinyl Ether	63	Compound Not Detected.					
	41	Cis 1,3-dichloropropene	75	Compound Not Detected.					
$	42	d8-Toluene	98	6.289	6.289	(1.229)	3466328	50.2371	50.237
	43	Toluene	92	Compound Not Detected.					
	44	Tetrachloroethene	166	Compound Not Detected.					
	45	4-Methyl-2-Pentanone	58	Compound Not Detected.					
	46	Trans 1,3-Dichloropropene	75	Compound Not Detected.					
	47	1,1,2-Trichloroethane	97	Compound Not Detected.					
	48	Chlorodibromomethane	129	Compound Not Detected.					
	49	1,3-Dichloropropane	76	Compound Not Detected.					
	50	1,2-Dibromoethane	107	Compound Not Detected.					
	51	2-Hexanone	43	Compound Not Detected.					
*	52	d5-Chlorobenzene	117	7.596	7.596	(1.000)	2779448	50.0000	
	53	Chlorobenzene	112	Compound Not Detected.					
	54	Ethyl Benzene	91	Compound Not Detected.					
	55	1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
	56	m,p-xylene	106	Compound Not Detected.					
	57	o-Xylene	106	Compound Not Detected.					
	58	Styrene	104	Compound Not Detected.					
	59	Bromoform	173	Compound Not Detected.					
	60	Isopropyl Benzene	105	Compound Not Detected.					
$	62	4-Bromofluorobenzene	95	8.660	8.665	(1.140)	1474118	49.8319	49.832
	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/Kg)	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.					
69	Trans-1,4-Dichloro 2-Butene	53	Compound Not Detected.					
70	4-Chloro Toluene	91	Compound Not Detected.					
71	T-Butyl Benzene	119	Compound Not Detected.					
72	1,2,4-Trimethylbenzene	105	Compound Not Detected.					
73	S-Butyl Benzene	105	Compound Not Detected.					
74	4-Isopropyl Toluene	119	Compound Not Detected.					
75	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 76	d4-1,4-Dichlorobenzene	152	9.666	9.672	(1.000)	1510132	50.0000	
77	1,4-Dichlorobenzene	146	Compound Not Detected.					
78	N-Butyl Benzene	91	Compound Not Detected.					
$ 79	d4-1,2-Dichlorobenzene	152	10.051	10.057	(1.040)	1380149	50.1071	50.107
80	1,2-Dichlorobenzene	146	Compound Not Detected.					
81	1,2-Dibromo 3-Chloropropane	75	Compound Not Detected.					
82	Hexachloro 1,3-Butadiene	225	Compound Not Detected.					
83	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
84	Naphthalene	128	Compound Not Detected.					
85	1,2,3-Trichlorobenzene	180	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: wu70a.d
Lab Smp Id: WU70A
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-13121

Calibration Date: 27-JUN-2013
Calibration Time: 15:48
Client Smp ID: LF-QC-TB-20130619-W
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	1613586	806793	3227172	1682143	4.25
35 1,4-Difluorobenze	2656709	1328354	5313418	2783621	4.78
52 d5-Chlorobenzene	2557235	1278618	5114470	2779448	8.69
76 d4-1,4-Dichlorobe	1374359	687180	2748718	1510132	9.88

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.65	4.15	5.15	4.67	0.24
35 1,4-Difluorobenze	5.11	4.61	5.61	5.12	0.22
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	-0.06

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: SAIC
Sample Matrix: LIQUID
Lab Smp Id: WU70A
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-13121

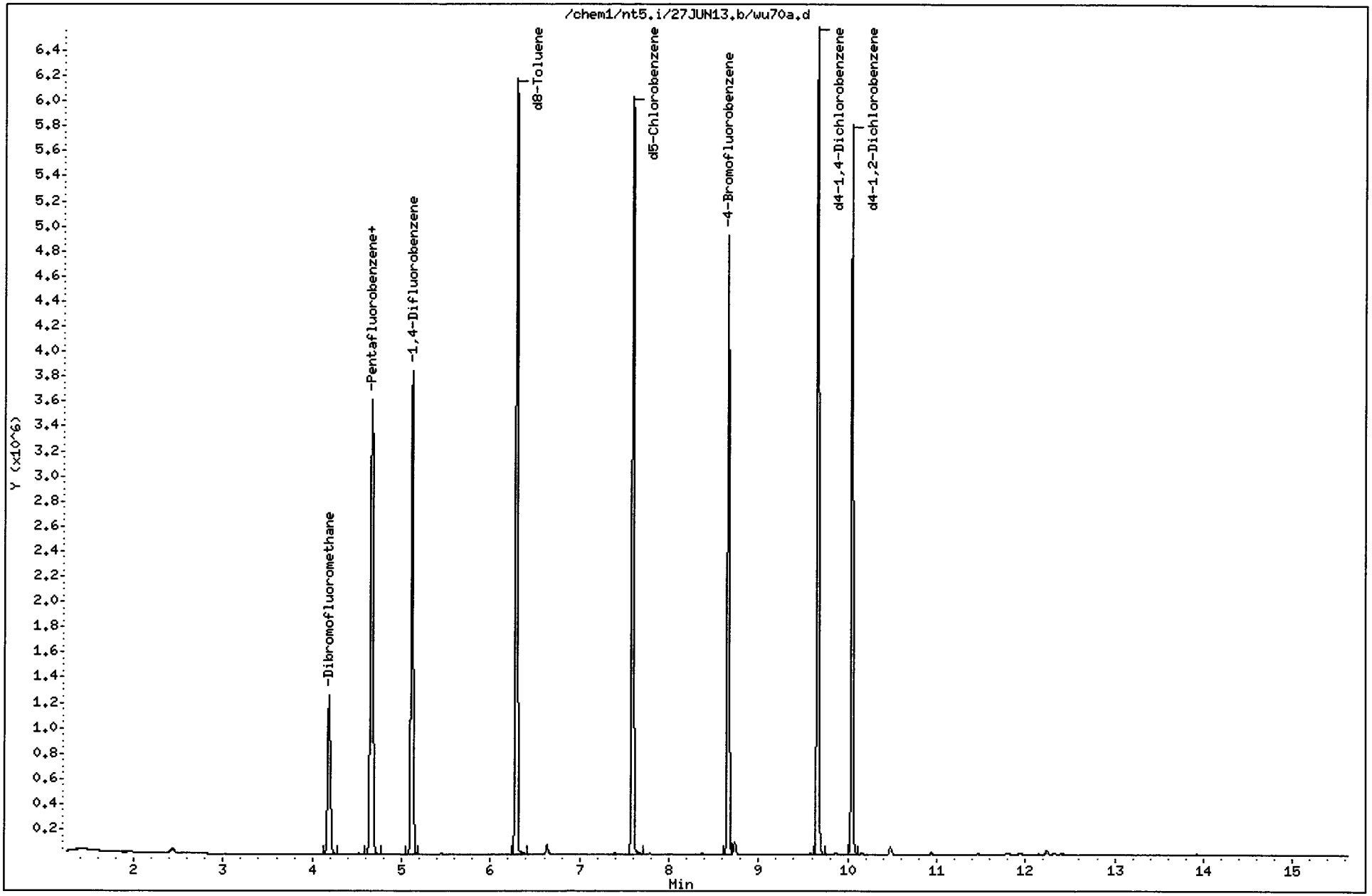
Client SDG: WU70
Fraction: VOA
Client Smp ID: LF-QC-TB-20130619-W
Operator: PB
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	51.651	103.30	30-160
$ 32 d4-1,2-Dichloroeth	50.000	49.010	98.02	75-152
$ 42 d8-Toluene	50.000	50.237	100.47	82-115
$ 62 4-Bromofluorobenze	50.000	49.832	99.66	71-120
$ 79 d4-1,2-Dichloroben	50.000	50.107	100.21	80-121

Data File: /chem1/nt5.i/27JUN13.b/wu70a.d
Date : 28-JUN-2013 01:16
Client ID: LF-QC-TB-20130619-W
Sample Info: WU70A,5,5,0

Instrument: nt5.i
Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



Data File: /chem1/nt5.i/27JUN13.b/wu70a.d

Date : 28-JUN-2013 01:16

Client ID: LF-QC-TB-20130619-W

Instrument: nt5.i

Sample Info: WU70A,5,5,0

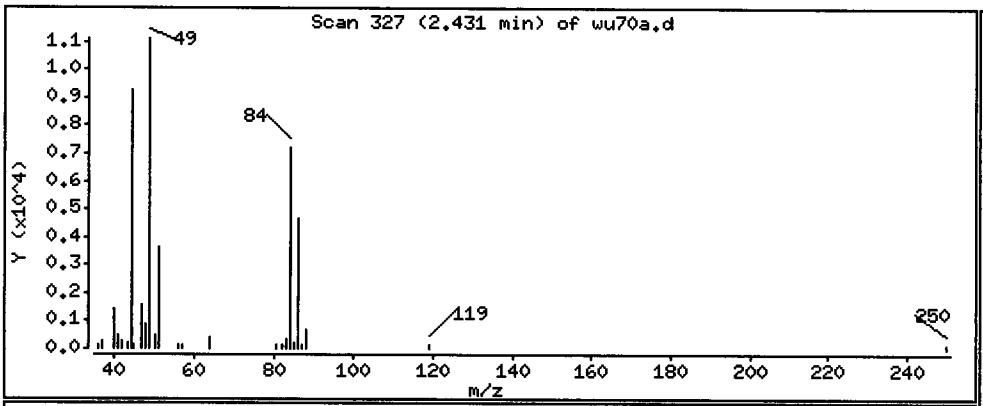
Operator: PB

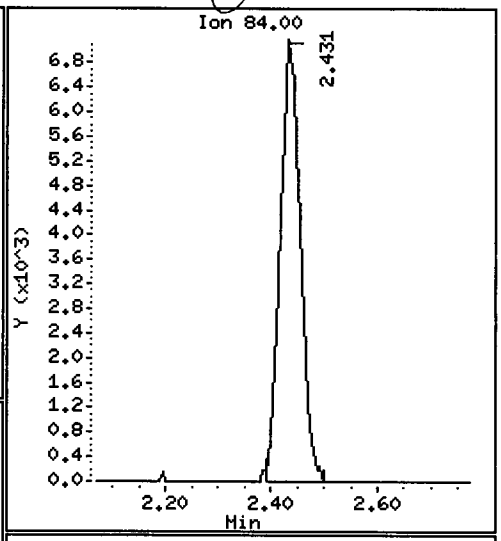
Column phase: RTXVMS

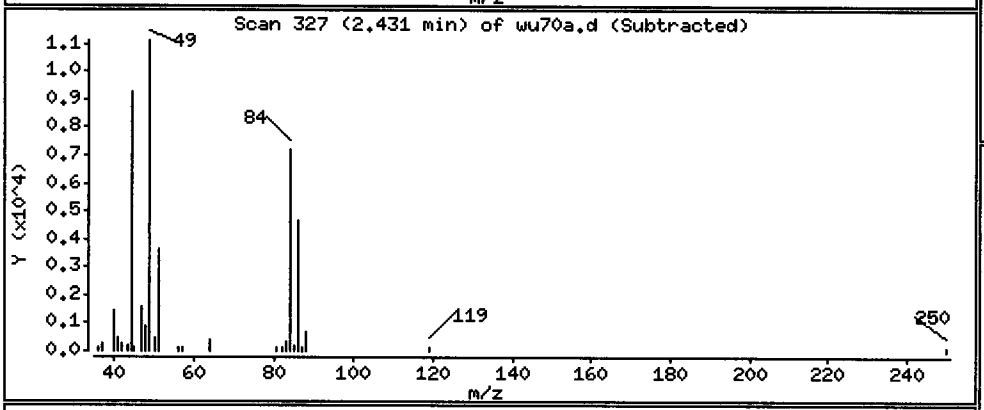
Column diameter: 0.18

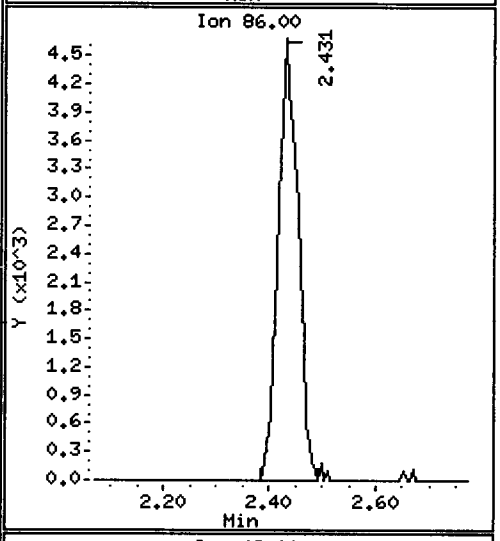
13 Methylene Chloride

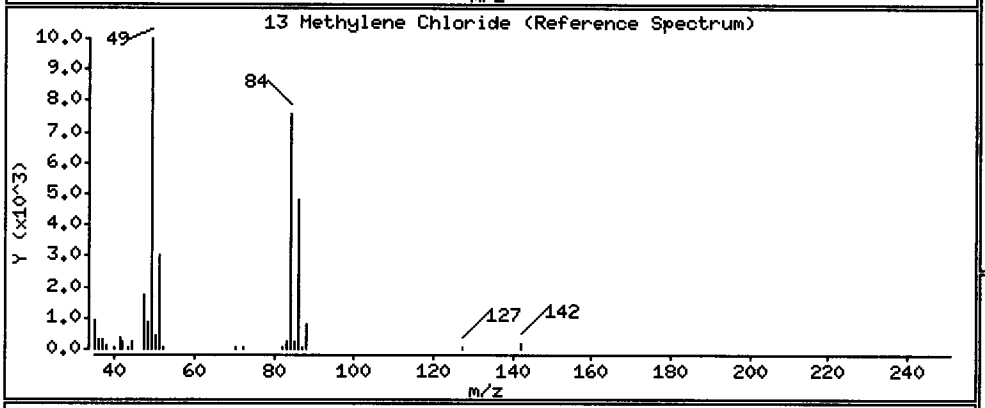
Concentration: 1.269 ug/L

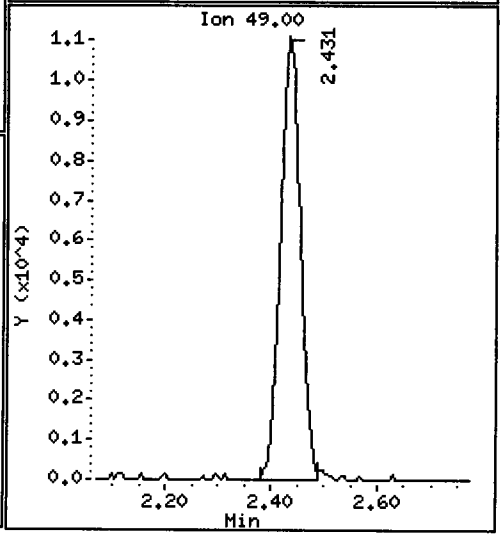


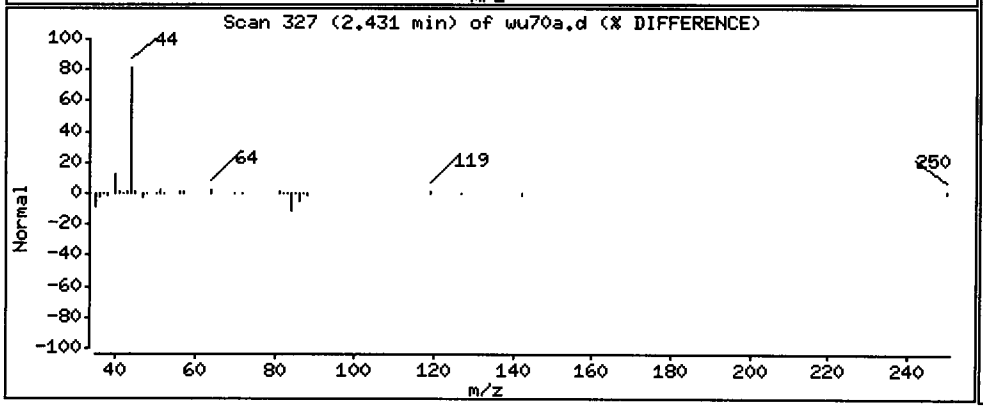












WU70: 28446

CO-ELUTION SUMMARY FOR FILE - wu70a.d

Lab ID: WU70A, Method: VO121012S.m, Instrument: nt5.i, Date: 28-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

8260C

Data file : /chem1/nt5.i/27JUN13.b/wu70b.d
Lab Smp Id: WU70B Client Smp ID: LF-TP-001-20130619-
Inj Date : 28-JUN-2013 01:40
Operator : PB Inst ID: nt5.i
Smp Info : WU70B,5,5.72,0
Misc Info : 13-13122
Comment :
Method : /chem1/nt5.i/27JUN13.b/VO121012S.m
Meth Date : 01-Jul-2013 13:09 patrickb Quant Type: ISTD
Cal Date : 27-JUN-2013 11:07 Cal File: 2000627.d
Als bottle: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: voa.sub
Target Version: 3.50
Processing Host: cserv3

7/1/14

Concentration Formula: Amt * DF * Pv * 1 / (Sa * ((100 - M) / 100)) * CpndVaria

Name	Value	Description
DF	1.00000	Dilution Factor
Pv	5.00000	Purge Volume
Sa	5.72000	Sample Amount
M	0.00000	% Moisture (not decanted)

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
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	1.973	1.945	(0.422)	79482	3.25179	2.842
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	2.443	2.420	(0.523)	13080	1.54330	1.349
14	Acetone	43	Compound Not Detected.					

TB LRL Not Reported BB 7/1/14

			QUANT SIG					CONCENTRATIONS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	ON-COLUMN (ug/Kg)	FINAL (ug/Kg)
	15	Trans-1,2-Dichloroethene	96	Compound Not Detected.					
	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	4.032	4.010	(0.863)	9059	0.64162	0.5609(Q)
	25	Carbon Tetrachloride	117	Compound Not Detected.					
$	27	Dibromofluoromethane	111	4.191	4.179	(0.897)	509351	54.7759	47.881
	26	1,1,1-Trichloroethane	97	Compound Not Detected.					
	28	1,1-Dichloropropene	75	Compound Not Detected.					
	29	2-Butanone	72	Compound Not Detected.					
	30	Benzene	78	Compound Not Detected.					
*	31	Pentafluorobenzene	168	4.671	4.654	(1.000)	965746	50.0000	
$	32	d4-1,2-Dichloroethane	65	4.660	4.649	(0.998)	609053	57.6371	50.382
	33	1,2-Dichloroethane	62	Compound Not Detected.					
	34	Trichloroethene	95	Compound Not Detected.					
*	35	1,4-Difluorobenzene	114	5.118	5.107	(1.000)	1645347	50.0000	
	37	Dibromomethane	93	Compound Not Detected.					
	38	1,2-Dichloropropane	63	Compound Not Detected.					
	39	Bromodichloromethane	83	Compound Not Detected.					
	40	2-Chloroethyl Vinyl Ether	63	Compound Not Detected.					
	41	Cis 1,3-dichloropropene	75	Compound Not Detected.					
$	42	d8-Toluene	98	6.295	6.289	(1.230)	2087616	51.1868	44.744
	43	Toluene	92	Compound Not Detected.					
	44	Tetrachloroethene	166	Compound Not Detected.					
	45	4-Methyl-2-Pentanone	58	Compound Not Detected.					
	46	Trans 1,3-Dichloropropene	75	Compound Not Detected.					
	47	1,1,2-Trichloroethane	97	Compound Not Detected.					
	48	Chlorodibromomethane	129	Compound Not Detected.					
	49	1,3-Dichloropropane	76	Compound Not Detected.					
	50	1,2-Dibromoethane	107	Compound Not Detected.					
	51	2-Hexanone	43	Compound Not Detected.					
*	52	d5-Chlorobenzene	117	7.596	7.596	(1.000)	1669959	50.0000	
	53	Chlorobenzene	112	Compound Not Detected.					
	54	Ethyl Benzene	91	Compound Not Detected.					
	55	1,1,1,2-Tetrachloroethane	131	Compound Not Detected.					
	56	m,p-xylene	106	Compound Not Detected.					
	57	o-Xylene	106	Compound Not Detected.					
	58	Styrene	104	Compound Not Detected.					
	59	Bromoform	173	Compound Not Detected.					
	60	Isopropyl Benzene	105	Compound Not Detected.					
$	62	4-Bromofluorobenzene	95	8.660	8.665	(1.140)	865463	48.6941	42.565
	63	Bromobenzene	156	Compound Not Detected.					
	64	N-Propyl Benzene	91	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/Kg)	CONCENTRATIONS FINAL (ug/Kg)
65	1,1,2,2-Tetrachloroethane	83	Compound Not Detected.					
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.					
69	Trans-1,4-Dichloro 2-Butene	53	Compound Not Detected.					
70	4-Chloro Toluene	91	Compound Not Detected.					
71	T-Butyl Benzene	119	Compound Not Detected.					
72	1,2,4-Trimethylbenzene	105	Compound Not Detected.					
73	S-Butyl Benzene	105	Compound Not Detected.					
74	4-Isopropyl Toluene	119	Compound Not Detected.					
75	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 76	d4-1,4-Dichlorobenzene	152	9.666	9.672	(1.000)	857768	50.0000	
77	1,4-Dichlorobenzene	146	Compound Not Detected.					
78	N-Butyl Benzene	91	Compound Not Detected.					
$ 79	d4-1,2-Dichlorobenzene	152	10.051	10.057	(1.040)	805819	51.5057	45.022
80	1,2-Dichlorobenzene	146	Compound Not Detected.					
81	1,2-Dibromo 3-Chloropropane	75	Compound Not Detected.					
82	Hexachloro 1,3-Butadiene	225	Compound Not Detected.					
83	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
84	Naphthalene	128	Compound Not Detected.					
85	1,2,3-Trichlorobenzene	180	Compound Not Detected.					

QC Flag Legend

Q - Qualifier signal failed the ratio test.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt5.i
Lab File ID: wu70b.d
Lab Smp Id: WU70B
Analysis Type: VOA
Quant Type: ISTD
Operator: PB
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-13122

Calibration Date: 27-JUN-2013
Calibration Time: 15:48
Client Smp ID: LF-TP-001-20130619-
Level: LOW
Sample Type: Sediment

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	1613586	806793	3227172	965746	-40.15
35 1,4-Difluorobenze	2656709	1328354	5313418	1645347	-38.07
52 d5-Chlorobenzene	2557235	1278618	5114470	1669959	-34.70
76 d4-1,4-Dichlorobe	1374359	687180	2748718	857768	-37.59

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
31 Pentafluorobenzen	4.65	4.15	5.15	4.67	0.37
35 1,4-Difluorobenze	5.11	4.61	5.61	5.12	0.22
52 d5-Chlorobenzene	7.60	7.10	8.10	7.60	0.00
76 d4-1,4-Dichlorobe	9.67	9.17	10.17	9.67	-0.06

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: SAIC
Sample Matrix: SOLID
Lab Smp Id: WU70B
Level: LOW
Data Type: MS DATA
SpikeList File: all.spk
Sublist File: voa.sub
Method File: /chem1/nt5.i/27JUN13.b/VO121012S.m
Misc Info: 13-13122

Client SDG: WU70
Fraction: VOA
Client Smp ID: LF-TP-001-20130619-
Operator: PB
SampleType: SAMPLE
Quant Type: ISTD

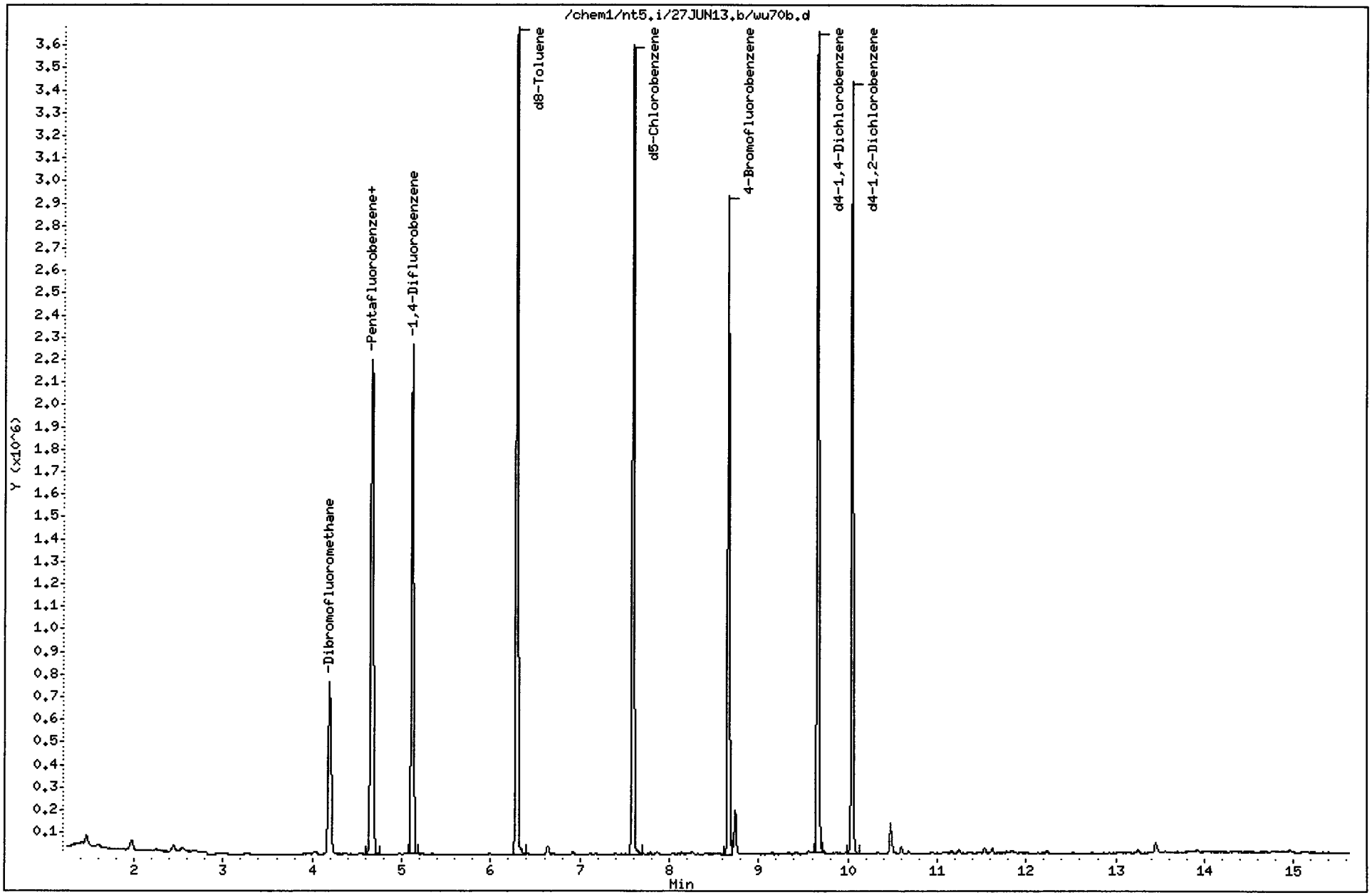
SURROGATE COMPOUND	AMOUNT ADDED ug/Kg	AMOUNT RECOVERED ug/Kg	% RECOVERED	LIMITS
$ 27 Dibromofluorometha	50.000	54.776	109.55	70-130
$ 32 d4-1,2-Dichloroeth	50.000	57.637	115.27	80-149
$ 42 d8-Toluene	50.000	51.187	102.37	77-120
$ 62 4-Bromofluorobenze	50.000	48.694	97.39	80-120
$ 79 d4-1,2-Dichloroben	50.000	51.506	103.01	80-120

Data File: /chem1/nt5.i/27JUN13.b/wu70b.d
Date : 28-JUN-2013 01:40
Client ID: LF-TP-001-20130619-
Sample Info: WU70B,5,5.72,0

Instrument: nt5.i

Operator: PB
Column diameter: 0.18

Column phase: RTXVMS



Data File: /chem1/nt5.i/27JUN13.b/wu70b.d

Date : 28-JUN-2013 01:40

Client ID: LF-TP-001-20130619-

Instrument: nt5.i

Sample Info: WU70B,5,5,72,0

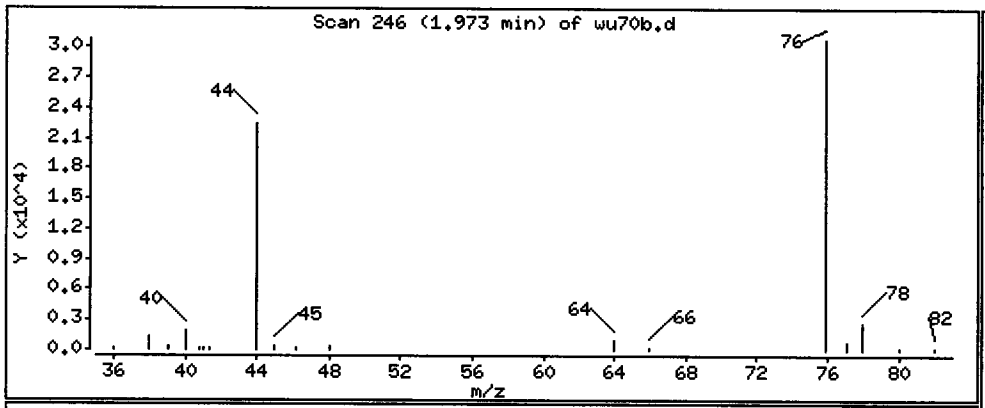
Operator: PB

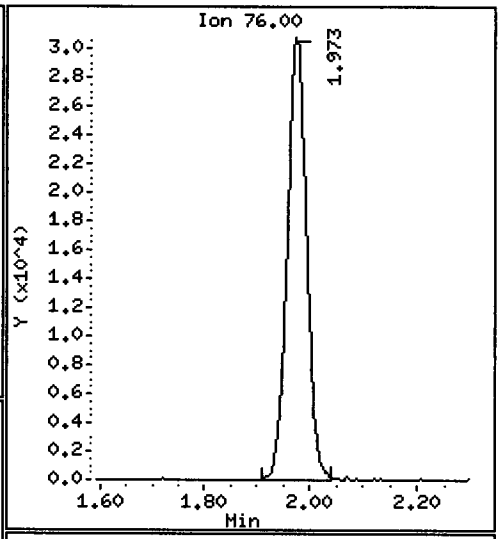
Column phase: RTXVMS

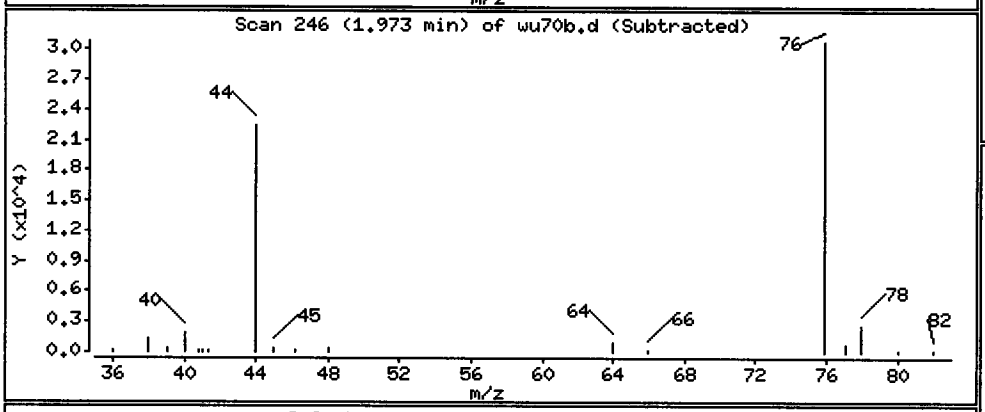
Column diameter: 0.18

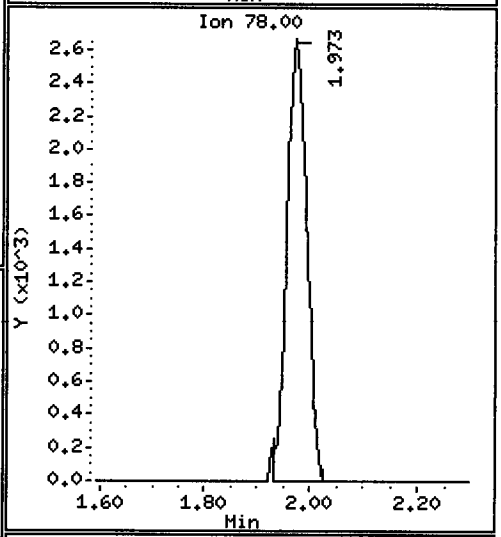
8 Carbon Disulfide

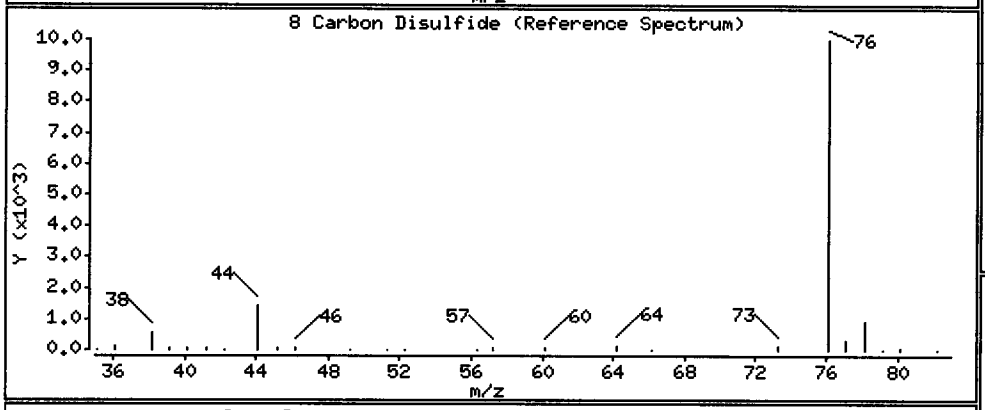
Concentration: 2.842 ug/Kg

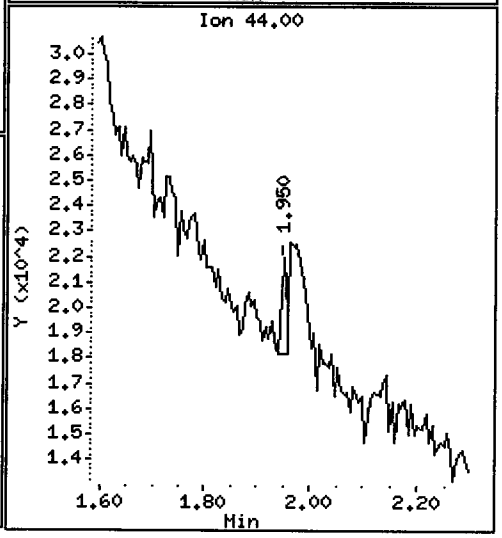


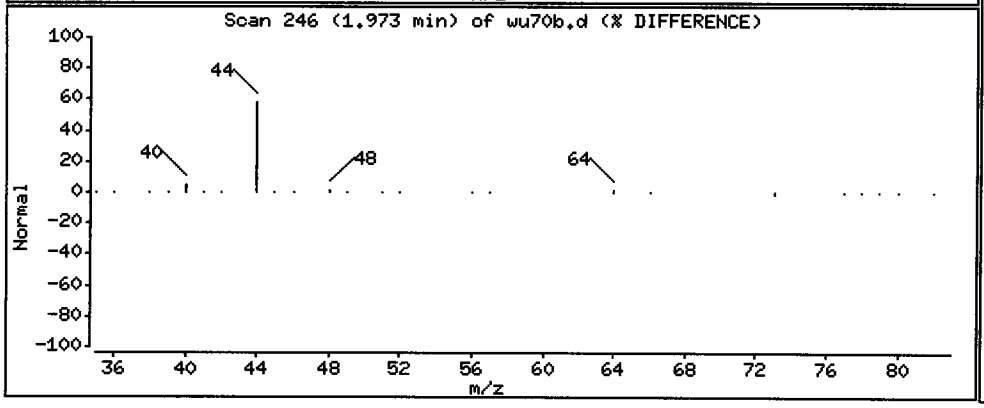












Data File: /chem1/nt5.i/27JUN13.b/wu70b.d

Date : 28-JUN-2013 01:40

Client ID: LF-TP-001-20130619-

Instrument: nt5.i

Sample Info: WU70B,5,5.72,0

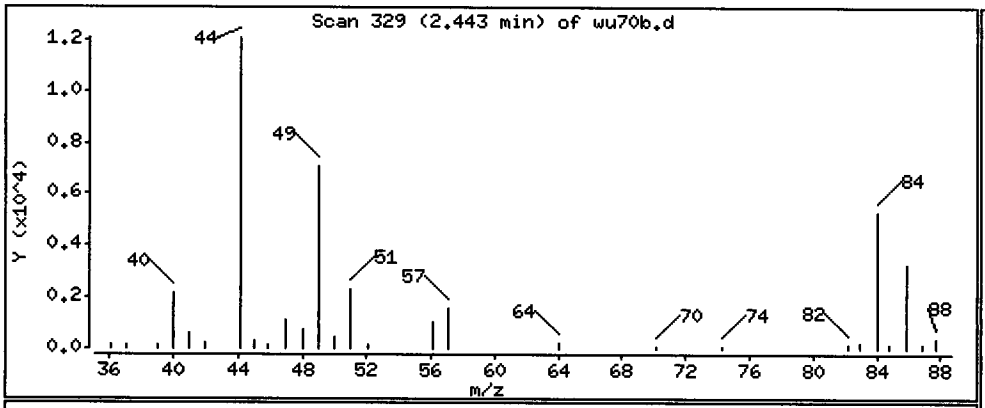
Operator: PB

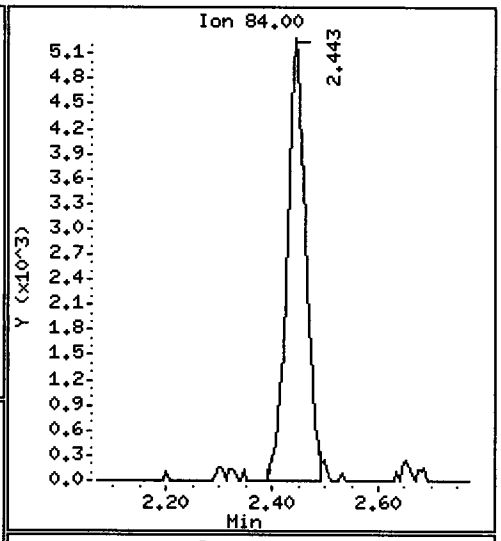
Column phase: RTXVMS

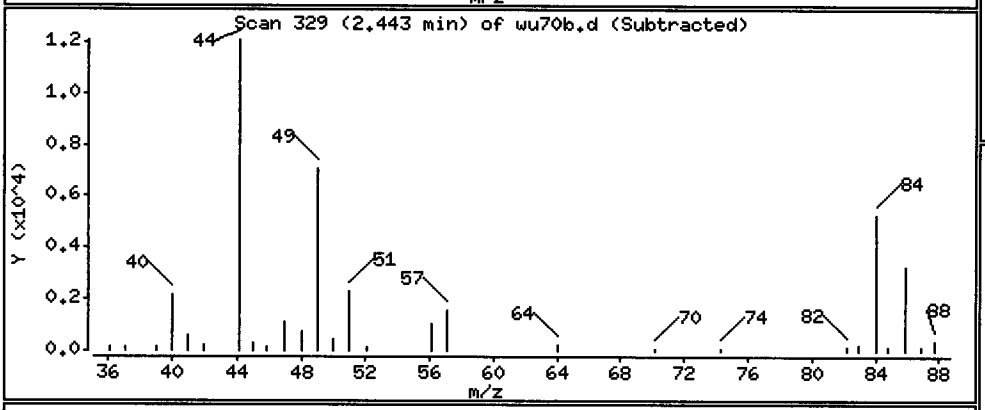
Column diameter: 0.18

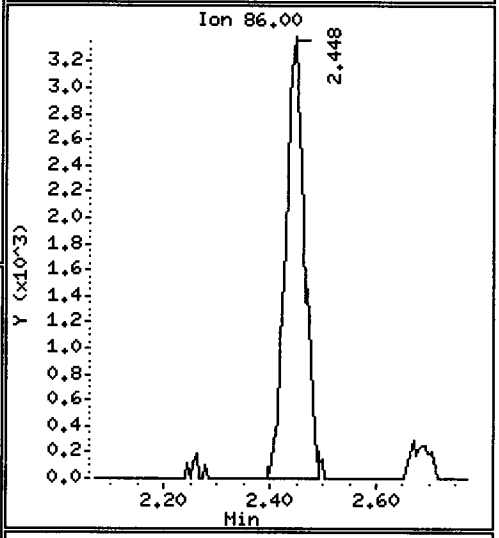
13 Methylene Chloride

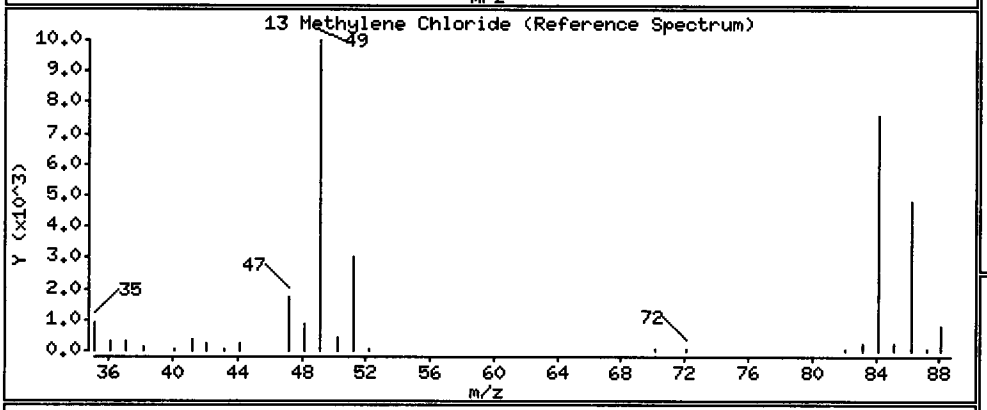
Concentration: 1.349 ug/Kg

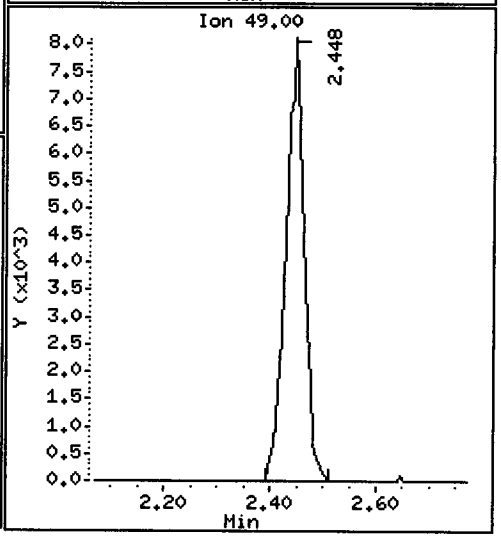


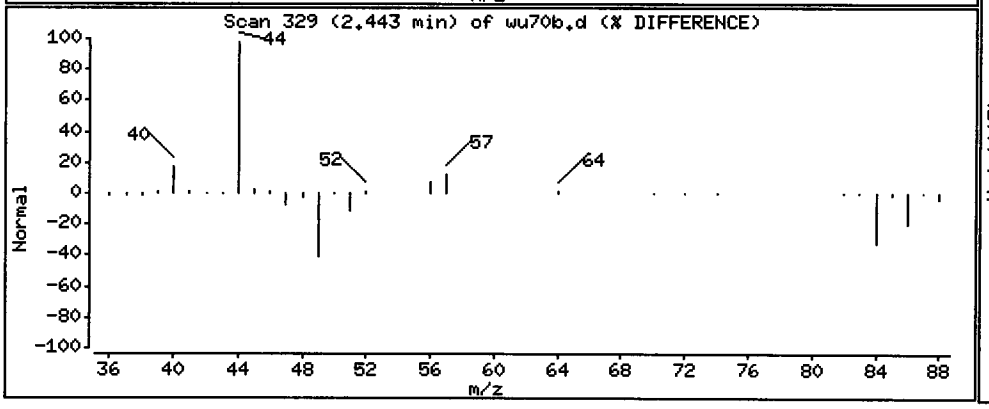












WU70 : 80407

Data File: /chem1/nt5.i/27JUN13.b/wu70b.d

Date : 28-JUN-2013 01:40

Client ID: LF-TP-001-20130619-

Instrument: nt5.i

Sample Info: WU70B,5,5.72,0

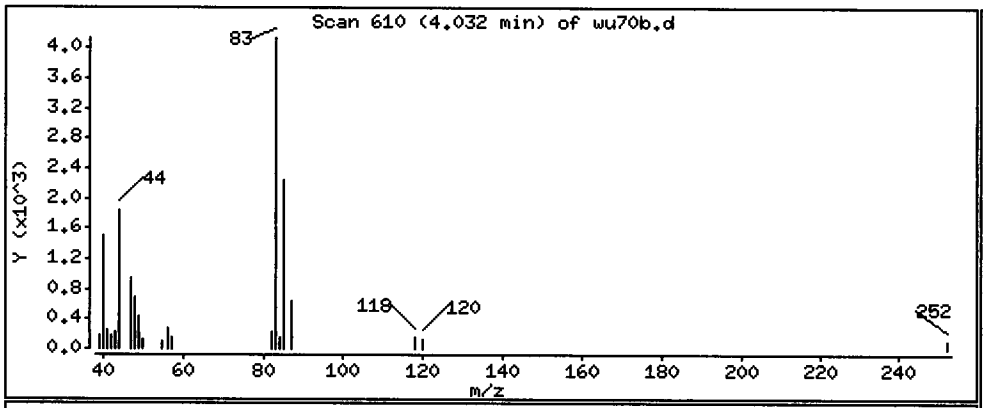
Operator: PB

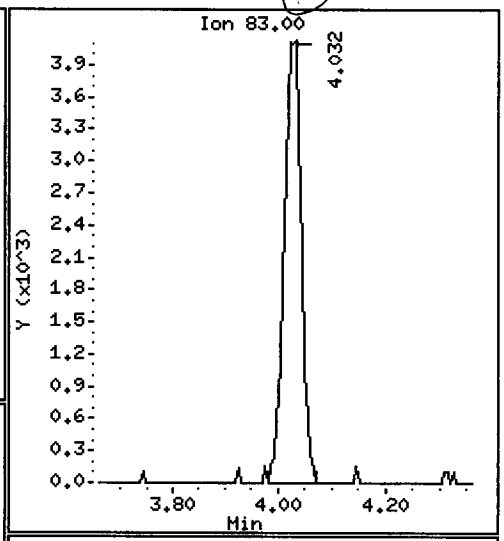
Column phase: RTXVMS

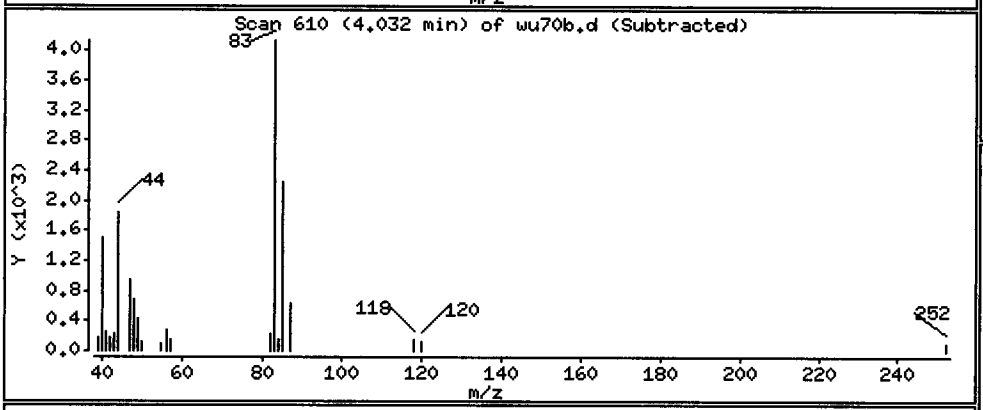
Column diameter: 0.18

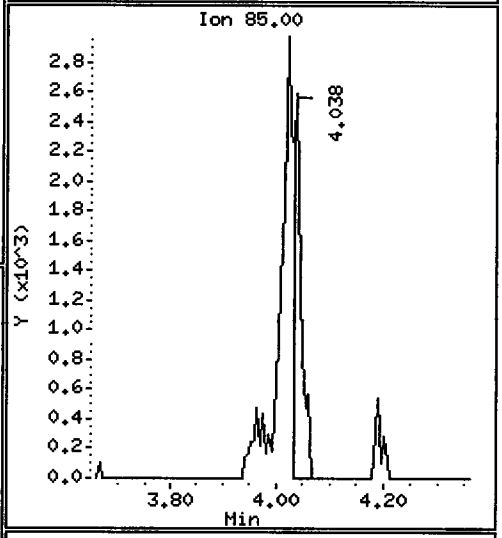
24 Chloroform

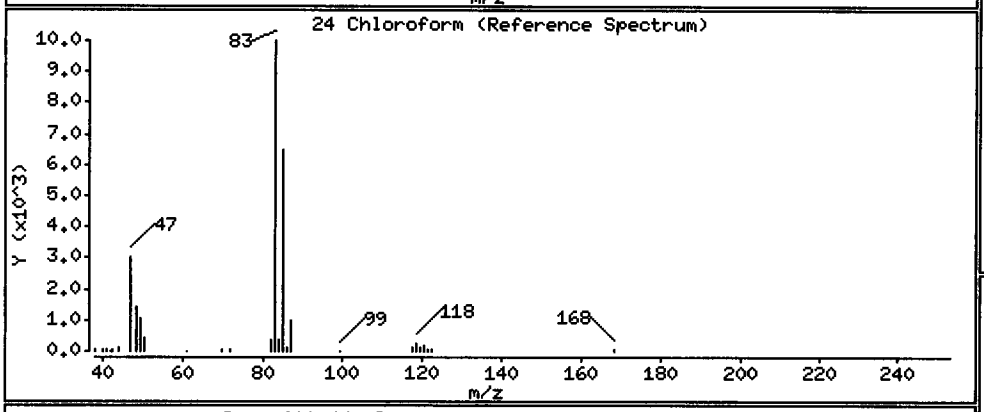
Concentration: 0.5609 ug/Kg

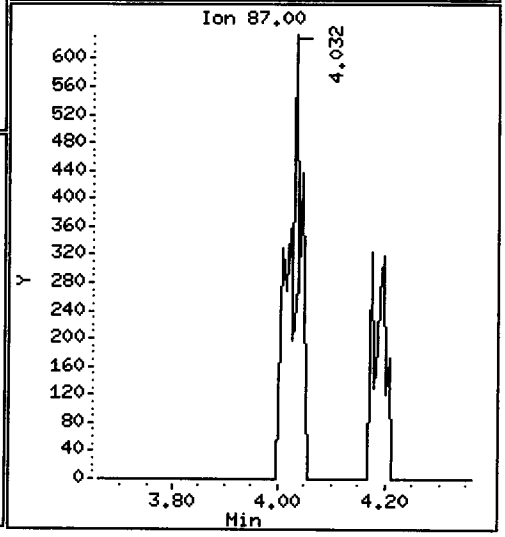


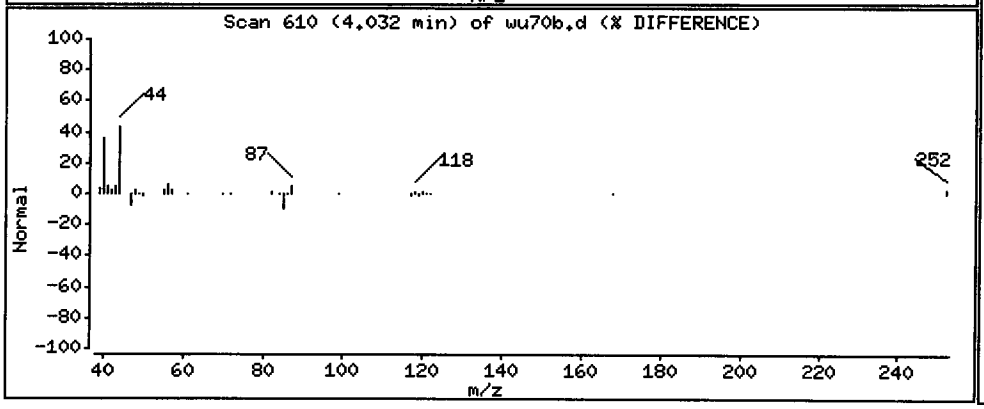












CO-ELUTION SUMMARY FOR FILE - wu70b.d

Lab ID: WU70B, Method: VO121012S.m, Instrument: nt5.i, Date: 28-JUN-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

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. WU70 | Client ID | Prep/Extraction Date | MeOH Lot No. | Analyst

	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 Split Volume (µL)	
1	WU70A	2						5m			
2	B	4	-		WU795-1	40.28	34.56	5.72			
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
					Balance ID:						

Semivolatile Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WU70

Incorporated
Analytical Chemists and Consultants

(8270D) BAN/SIM SVOA PSDDA–Soil/Sediment
Microwave (3546) (SOP # 3304S)

Preparation Test BAN/SIM SVOA PSDDA # 9 (BANSBANSDMP)

PSDDA (5-20ppb)

ARI Job No(s) WU70 Page 1 of 1 Batch set up by: JH

Bottle #	Extraction Requirements	Weight Extracted (eq. to 10g dry wt)	(REQ) GPC (1:1) or 2	Final Effective Volume	Volume to Lab	Comments	Verify Client ID / Analyst/Date
	WU70 MBS	10.00g	(1:1) (Y) / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	YL 06/27/13
	SBS	10.00g	(1:1) (Y) / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	Microwave 1 2 3 YL 06/27/13
	~~SBS Dup~~	~~10.00g~~	(1:1) Y / N	~~1mL~~	~~1mL~~	~~(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)~~	
	QLS WU70	10.00g	(1:1) (Y) / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	KD 80-85°C (1) 2 3 4 5 6 TH 6/28/13
	QLS (SIM)	10.00g	(1:1) (Y) / N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	TurboVap 1 (2) 3 CJZ 7/1/13
8	B	18.02	(1:1) (Y) / N	1mL	1mL		
3	C	13.01	(1:1) (Y) / N	1mL	1mL		GPC Prep Filter (1:1)
3	Cms	13.02	(1:1) (Y) / N	1mL	1mL		
3	Cmsd	13.03	(1:1) (Y) / N	1mL	1mL		CJZ 7/1/13
			(1:1) Y / N	1mL	1mL		Post GPC KD 80-85°C 1 2 3 4 5 6
			(1:1) Y / N	1mL	1mL		7-8 7/2/13
			(1:1) Y / N	1mL	1mL		
			(1:1) Y / N	1mL	1mL		TurboVap 1 2 (3)
Analyst/Date		YL 06/27/13	CJZ 7/1/13	CJZ 7/3/13	CJZ 7/3/13	Reviewed By CJZ 7/3/13	CJZ 7/3/13

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	A (2093-4)	100/150µg/mL	50µL	7/02/13	YL	AC
Full List Spike (Freezer)	7 (2065-5)	100µg/mL	50µL	1/29/14	YL	AC
Base Spike	56(2065-2)	200µg/mL	50µL	7/31/13	YL	AC
Acid Spike	38(B000697)	100/150µg/mL	50µL	12/18/13	YL	AC
QLS Spike (14 in Freezer)	14(B000538)	100/200µg/mL	20µL	1/31/14	YL	AC
SIM QLS Spike (Freezer)	25(B000547)	1µg/mL	50µL	1/31/14	YL	AC
Extraction Time: 1315			Balance ID: B146426 14			

SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessel. Note: do not fill vessel more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 DCM/ACE to the vessels (until solvent is 3" above soil layer after homogenization). 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-rehomogenize while hot then let cool 15 min in cold water. Re-homogenize while cool. 7. Decant 1:1 DCM/ACE into Erlenmeyer flask with sodium sulfate in the bottom and funnel containing pre-deactivated glasswool. 8. Rinse with DCM 9. Microwave a 2nd time using DCM only (until solvent is 3" above soil layer after homogenization). 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with DCM. 11. KD (small ~~or large~~ drying column with pre-deactivated glasswool-Blanks=5g sulfate)) to 5mL at 80- 85°C. 12. GPC Req. 13. (After GPC): KD at 80-85°. 14. TurboVap. 15. Vial in DCM.

A. Need Total Solids Y (N) **B. Archive/Freeze Y (N)**

WU70 : 20462

Reagent and Solutions Identification

(8270D) BAN/SIM SVOA PSDDA–Soil/(Sediment)
Microwave (3546) (SOP # 3304S)

ARI Job No(s) WU70

(8270D) BAN/SIM SVOA PSDDA Soil/Sediment/Solid/Other:	Analyst/Date
Microwave Station: Pre-Deactivated Sodium Sulfate: (H# 157) Anhydrous Sodium Sulfate: (I# 9185 jar date 6/24/13) 1:1 Methylene Chloride/Acetone: (H# 205) Methylene Chloride: (I# 247) 8273 8274/A22 Pre-Deactivated Glasswool: (H# 184)	Microwave CT 6-27-13 YL
Pre-GPC KD Station: Pre-Deactivated Glasswool: (H# 180) Anhydrous Sodium Sulfate: (I# 9185 jar date 6/20/13) Methylene Chloride: (I# 8279)	Pre-GPC KD TH 6/28/13
GPC Filter Prep: Methylene Chloride: (I# 8279)	GPC Filter Prep CSZ 7/1/13
GPC Station: Acetone: (I# 8181) Methylene Chloride: (I# 8279)	GPC CSZ 7/1/13
Post GPC KD Station: Methylene Chloride: (I# B000674	Post GPC KD KF 7/02/13
Vialing Station: Methylene Chloride: (I# ——) B000674 Hexane: (I# N/A)	Vialing CSZ 7/3/13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WU70 Client ID: SAIC

Parameter: BAN/SIM SVOA Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)= AC 6-21-13 ~~A~~ B	AC 6-21-13
☐ Standing Water Decanted (Not shared)= AC 6-21-13 ~~A~~ C	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)? <5% small	
☐ 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)	

WU70:8045

Semivolatile Raw Data
Initial Calibration

ARI Job ID: WU70

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): 07/05/13 Internal Standard ID B000928 Expiration 6/26/14.

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)	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
Supelco	B000112	10/15/13	UltraC	2055-1	12/05/13
	2064-2	01/25/14		2054-1	12/13/13
	B000931	2/20/14		2053-2	08/13/13
	B000676	12/16/13			
	B000943	7/8/14			

Detail problems, corrective actions and/or other pertinent information below:

- Benzoic acid, 2.4 Dinitrophenol, 4 Nitrophenol, 4-Nitroaniline quadratic fit used.
- Low point of the curve dropped for, Benzoic acid, 4 Nitrophenol, 2.4 Dinitrophenol, Benzidine.

Analyst: YZ **Date:** 7/8/13

Reviewer: _____ **Date:** _____

Analytical Resources Inc.: Organics Instrument Log
NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 07/05/13 Analysis: ABN/SIM ABN Analyst: YZ

GC Program: ABN_2L Column No: 252 Column Type: ZB-SemiVolatiles

Instrument Tune (.U or .CT.): BO2284 273254 EM Voltage: 1753

Calibration File: DF 0705 Curve Date: 07/05/13 Injection Vol.: 1ul.
DF 0705A

IS/SS	Ical/Ccal	LCS/ICV
B928	BN2L	
	B931	
	B676	
	B943	
	2004-2.	

Document All Maintenance Tasks In Element

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130705.b

	Time	Filename	LabID	ClientId	DF													
1	1158	df0705.d	DFTPP	DFTPP	1	NO ISTDS FOUND												
2	1214	ic0705a.d	ABN 5		1	8.82	97290	11.49	336205	15.40	202661	18.75	352196	23.85	358983	26.29	381873	25.03	503607
3	1251	ic0705b d	ABN20		1	8.82	74131	11.49	258499	15.40	155750	18.75	276458	23.87	281500	26.30	302445	25.03	417314
4	1328	ic0705c.d	ABN0.2		1	8.82	95267	11.48	346337	15.40	200079	18.74	340574	23.84	361748	26.28	373945	25.03	454960
5	1405	ic0705d.d	ABN1.0		1	8.82	100833	11.48	357288	15.40	215657	18.74	364293	23 84	373625	26.28	391862	25.03	475855
6	1442	ic0705e.d	ABN10		1	8.82	87173	11 49	305989	15.40	183652	18.75	317399	23.86	325381	26.30	345761	25.03	472443
7	1520	ic0705f.d	ABN2.5		1	8.82	89642	11.48	324549	15.40	193500	18.74	327266	23.85	342119	26.28	360085	25.03	455298
8	1557	ic0705g.d	ABN0.5		1	8.82	98080	11.48	355728	15.40	207021	18.74	348812	23.84	357738	26.28	373814	25 03	441979
9	1744	df0705a.d	DFTPP	DFTPP	1	NO ISTDS FOUND												
10	1800	cc0705.d	CC0705		1	8.82	85371	11.48	303328	15.40	182227	18.74	315392	23.85	318568	26.29	339315	25.03	433063
11	1914	wv19mb.d	WV19MBS1	WV19MBS1	1	8.82	76854	11.47	287521	15.39	165976	18.73	276441	23.83	277998	26.27	283394	25.01	349218
12	1951	wv19ab.d	WV19LCSS1		1	NO ISTDS FOUND												
13	2028	wv19abd.d	WV19LCSDS1	WV19LCSD81	1	8.82	77596	11.48	275189	15.40	166090	18.74	278633	23.85	288209	26.29	279494	25.03	385448
14	2105	wv19qls.d	WVQLS		1	8.82	83790	11.48	306529	15.39	181217	18.74	299338	23.84	307627	26.28	305489	25.03	389139
15	2142	wv19a.d	WV19A	201306211100	1	8.82	77315	11.48	292055	15.39	168043	18.74	251626	23.85	252845	26.30	265317	25.03	376702
16	2219	wv19b.d	WV19B	201306211200	1	8.83	82780	11.48	311443	15.40	180556	18.74	263555	23.87	276814	26.33	283219	25.06	412621
17	2256	wu70mb.d	WU70MBS1		1	8.82	97435	11.48	362404	15.40	192642	18.74	316350	23.85	299209	26.30	328376	25.03	443567
18	2333	wu79bsb.d	WU70SB		1	8.82	90316	11.48	326963	15.40	195394	18.74	323078	23.86	310076	26.30	314618	25.03	431439
19	0010	wu70cb.d	WU70B		1	8.82	89501	11.48	331760	15.40	172189	18.77	284215	23.95	287936	26.50	309679	25.16	423427
20	0047	wu70c.d	WU70C		1	8.82	89295	11.49	331746	15.40	178188	18.76	270086	23.88	284246	26.37	300774	25.07	410558
21	0124	wu70cms.d	WU70CMS		1	8.82	85337	11.49	309525	15.40	170794	18.77	265002	23.89	273564	26.39	297945	25.08	399803
22	0200	wu70cmsd.d	WU70CMSD		1	8.83	82652	11.49	297548	15.41	161801	18.77	254399	23.90	265554	26.41	277790	25.09	385562

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 Element

YZ 7/9/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130705.b/ABN.m
Batch File: /chem1/nt10.i/20130705.b
Inst ID: nt10.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	ic0705a	ic0705b	ic0705c	ic0705d	ic0705e	ic0705f	ic0705g
INJ.DATE:	05-JUL-2013	05-JUL-2013	05-JUL-2013	05-JUL-2013	05-JUL-2013	05-JUL-2013	05-JUL-2013
INJ.TIME:	12:14	12:51	13:28	14:05	14:42	15:20	15:57

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	6.343	6.351	6.343	6.343	6.343	6.343	6.343	6.343	3.343-9.343	6.344	0.003
186 Carbaryl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.785	15.785-21.785	+++++	+++++
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.645	5.645-11.645	+++++	+++++
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.455	14.455-20.455	+++++	+++++
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.696	17.696-23.696	+++++	+++++
170 N,N-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.219	16.219-22.219	+++++	+++++
171 2,3-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.559	16.559-22.559	+++++	+++++
172 2,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.559	16.559-22.559	+++++	+++++
173 2,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.949	19.949-25.949	+++++	+++++
174 2,6-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.195	16.195-22.195	+++++	+++++
175 3,4-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.559	16.559-22.559	+++++	+++++
176 3,5-Dimethylaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.503	17.503-23.503	+++++	+++++
177 p-Benzoquinone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.827	4.827-10.827	+++++	+++++
168 Pentachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.842	12.842-18.842	+++++	+++++
145 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.212	44.212-50.212	+++++	+++++
146 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.746	44.746-50.746	+++++	+++++
147 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.216	45.216-51.216	+++++	+++++

Reviewer 1 YZ Date: 7/9/13

Reviewer 2 _____ Date: _____

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130705.b/ABN.m
Batch File: /chem1/nt10.i/20130705.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	148 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.281	44.281-50.281	+++++	+++++
	149 TCMX	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.387	40.387-46.387	+++++	+++++
	150 DCBP	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.989	47.989-53.989	+++++	+++++
	138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	67.733	64.733-70.733	+++++	+++++
	139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.067	62.067-68.067	+++++	+++++
	140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
	141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.487	62.487-68.487	+++++	+++++
	142 1,2-Dibromo-3-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.917	46.917-52.917	+++++	+++++
	135 2,3,5,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.383	13.383-19.383	+++++	+++++
	136 2,3,4,5-tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.317	36.317-42.317	+++++	+++++
$	137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.445	0.000-5.445	+++++	+++++
*	134 Di-n-octylphthalate-d4	25.027	25.035	25.027	25.027	25.035	25.027	25.027	25.027	22.027-28.027	25.029	0.004
	133 Butylatedhydroxytoluen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.571	12.571-18.571	+++++	+++++
	132 3,6-Dimethylphenanthre	+++++	+++++	+++++	+++++	+++++	+++++	+++++	65.450	62.450-68.450	+++++	+++++
	131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	64.400	61.400-67.400	+++++	+++++
	130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	62.100	59.100-65.100	+++++	+++++
	129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.912	51.912-57.912	+++++	+++++
	128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.212	51.212-57.212	+++++	+++++
	127 2-Isopropylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	57.650	54.650-60.650	+++++	+++++
	126 N-Tetradecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.750	53.750-59.750	+++++	+++++
+	144 alpha-Terpineol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.447	8.447-14.447	+++++	+++++
	125 Safrole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.166	49.166-55.166	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130705.b/ABN.m
Batch File: /chem1/nt10.i/20130705.b
Inst ID: nt10.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
124 3,4-Dimethylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.617	47.617-53.617	+++++	+++++
123 Acetophenone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.252	7.252-13.252	+++++	+++++
122 Furfuraldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	43.467	40.467-46.467	+++++	+++++
143 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.697	0.000-5.697	+++++	+++++
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	54.500	51.500-57.500	+++++	+++++
120 2,3,4,6-Tetrachlorophe	16.147	16.162	16.146	16.147	16.155	16.146	16.139	16.147	13.147-19.147	16.149	0.007
178 2-Benzyl-4-Chloropheno	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.963	15.963-21.963	+++++	+++++
119 7,12-Dimethylbenz(a)an	+++++	+++++	+++++	+++++	+++++	+++++	+++++	47.069	44.069-50.069	+++++	+++++
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.215	18.215-24.215	+++++	+++++
117 Butyl Diphenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.761	13.761-19.761	+++++	+++++
116 Dibutyl Phenyl Phospha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.747	15.747-21.747	+++++	+++++
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.923	13.923-19.923	+++++	+++++
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	48.950	45.950-51.950	+++++	+++++
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.341	11.341-17.341	+++++	+++++
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.085	11.085-17.085	+++++	+++++
111 Azobenzene (1,2-DP-Hyd	17.035	17.042	17.026	17.027	17.035	17.026	17.027	17.035	14.035-20.035	17.031	0.006
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.324	14.324-20.324	+++++	+++++
109 3,4,5-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.115	12.115-18.115	+++++	+++++
181 3,4,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.270	12.270-18.270	+++++	+++++
108 4,5,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.519	13.519-19.519	+++++	+++++
184 3,4-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.019	10.019-16.019	+++++	+++++
107 4,5-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.095	11.095-17.095	+++++	+++++
182 4,6-Dichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.118	11.118-17.118	+++++	+++++
185 4-Chloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.572	8.572-14.572	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130705.b/ABN.m
Batch File: /chem1/nt10.i/20130705.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
106	Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.243	6.243-12.243	+++++	+++++
105	1-methylnaphthalene	13.284	13.292	13.284	13.284	13.284	13.284	13.284	13.284	10.284-16.284	13.285	0.003
151	1,2,4,5-Tetrachloroben	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.499	8.499-14.499	+++++	+++++
152	Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.943	27.943-33.943	+++++	+++++
153	Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.642	24.642-30.642	+++++	+++++
154	Diazinon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.953	22.953-28.953	+++++	+++++
155	Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.750	24.750-30.750	+++++	+++++
156	Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.464	23.464-29.464	+++++	+++++
157	Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.099	24.099-30.099	+++++	+++++
158	Ethion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.513	21.513-27.513	+++++	+++++
159	4-Nonylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.132	22.132-28.132	+++++	+++++
160	Tetraethyl Tin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.528	16.528-22.528	+++++	+++++
161	1,2,3-Trichloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	36.246	33.246-39.246	+++++	+++++
162	1,2,3,4-Tetrachloronap	+++++	+++++	+++++	+++++	+++++	+++++	+++++	37.506	34.506-40.506	+++++	+++++
163	1,2,3,5,8-Pentachloron	+++++	+++++	+++++	+++++	+++++	+++++	+++++	38.893	35.893-41.893	+++++	+++++
164	1,2,3,4,6,7-Hexachloro	+++++	+++++	+++++	+++++	+++++	+++++	+++++	39.681	36.681-42.681	+++++	+++++
165	1,2,3,4,5,6,7-Heptachl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	41.123	38.123-44.123	+++++	+++++
166	Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.253	39.253-45.253	+++++	+++++
167	2,2',4,4',5-Pentabromo	+++++	+++++	+++++	+++++	+++++	+++++	+++++	42.033	39.033-45.033	+++++	+++++
$ 2	Phenol-d5	8.075	8.090	8.066	8.067	8.075	8.066	8.067	8.075	5.075-11.075	8.072	0.009
3	Phenol	8.098	8.113	8.090	8.090	8.105	8.090	8.090	8.098	5.098-11.098	8.096	0.010
4	Bis(2-Chloroethyl)ethe	8.299	8.306	8.298	8.298	8.306	8.298	8.298	8.299	5.299-11.299	8.301	0.004
$ 5	2-Chlorophenol-d4	8.360	8.376	8.360	8.360	8.368	8.360	8.360	8.360	5.360-11.360	8.363	0.006

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130705.b/ABN.m
Batch File: /chem1/nt10.i/20130705.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	6 2-Chlorophenol	8.399	8.407	8.391	8.391	8.399	8.391	8.391	8.399	5.399-11.399	8.395	0.006
	7 1,3-Dichlorobenzene	8.716	8.716	8.708	8.708	8.716	8.708	8.708	8.716	5.716-11.716	8.712	0.004
*	8 1,4-Dichlorobenzene-d4	8.825	8.825	8.824	8.825	8.825	8.824	8.825	8.825	5.825-11.825	8.825	0.000
	9 1,4-Dichlorobenzene	8.864	8.864	8.855	8.856	8.864	8.855	8.856	8.864	5.864-11.864	8.859	0.004
$	10 1,2-Dichlorobenzene-d4	9.135	9.135	9.135	9.135	9.135	9.135	9.135	9.135	6.135-12.135	9.135	0.000
	11 Benzyl alcohol	9.089	9.104	9.088	9.089	9.096	9.088	9.089	9.089	6.089-12.089	9.092	0.006
	12 1,2-Dichlorobenzene	9.166	9.166	9.166	9.158	9.166	9.158	9.158	9.166	6.166-12.166	9.163	0.004
	13 2-Methylphenol	9.322	9.329	9.313	9.314	9.322	9.313	9.314	9.322	6.322-12.322	9.318	0.006
	14 2,2'-oxybis(1-Chloropr	9.407	9.399	9.391	9.391	9.407	9.399	9.384	9.407	6.407-12.407	9.397	0.009
	15 4-Methylphenol	9.632	9.648	9.624	9.632	9.640	9.632	9.624	9.632	6.632-12.632	9.633	0.008
	16 N-Nitroso-di-n-propyla	9.655	9.679	9.647	9.648	9.663	9.647	9.648	9.655	6.655-12.655	9.655	0.012
	17 Hexachloroethane	9.865	9.873	9.864	9.865	9.865	9.864	9.865	9.865	6.865-12.865	9.866	0.003
$	18 Nitrobenzene-d5	9.943	9.950	9.934	9.935	9.943	9.934	9.935	9.943	6.943-12.943	9.939	0.006
	19 Nitrobenzene	9.981	9.989	9.973	9.973	9.981	9.981	9.973	9.981	6.981-12.981	9.979	0.006
	20 Isophorone	10.501	10.532	10.493	10.493	10.509	10.501	10.493	10.501	7.501-13.501	10.503	0.014
	21 2-Nitrophenol	10.664	10.672	10.656	10.656	10.664	10.656	10.656	10.664	7.664-13.664	10.661	0.006
	22 2,4-Dimethylphenol	10.772	10.788	10.772	10.764	10.780	10.772	10.772	10.772	7.772-13.772	10.774	0.007
	23 Bis(2-Chloroethoxy)met	10.996	11.004	10.988	10.988	10.996	10.988	10.988	10.996	7.996-13.996	10.992	0.006
	24 Benzoic acid	11.027	11.173	10.834	10.895	11.111	10.957	10.857	11.027	8.027-14.027	10.979	0.130
	25 2,4-Dichlorophenol	11.181	11.188	11.173	11.173	11.181	11.173	11.173	11.181	8.181-14.181	11.177	0.006
	26 1,2,4-Trichlorobenzene	11.374	11.374	11.365	11.366	11.374	11.365	11.373	11.374	8.374-14.374	11.370	0.004
*	27 Naphthalene-d8	11.489	11.489	11.481	11.482	11.489	11.481	11.482	11.489	8.489-14.489	11.485	0.004
	28 Naphthalene	11.536	11.536	11.527	11.528	11.536	11.528	11.528	11.536	8.536-14.536	11.531	0.004
	29 4-Chloroaniline	11.659	11.675	11.643	11.644	11.659	11.651	11.644	11.659	8.659-14.659	11.654	0.012

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130705.b/ABN.m
Batch File: /chem1/nt10.i/20130705.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	30 Hexachlorobutadiene	11.845	11.853	11.844	11.845	11.845	11.844	11.845	11.845	8.845-14.845	11.846	0.003
	31 4-Chloro-3-methylpheno	12.743	12.750	12.734	12.735	12.743	12.734	12.735	12.743	9.743-15.743	12.739	0.006
	32 2-Methylnaphthalene	13.075	13.075	13.067	13.067	13.075	13.067	13.067	13.075	10.075-16.075	13.071	0.004
	33 Hexachlorocyclopentadi	13.455	13.455	13.446	13.447	13.455	13.446	13.447	13.455	10.455-16.455	13.450	0.004
	34 2,4,6-Trichlorophenol	13.702	13.710	13.702	13.694	13.710	13.702	13.694	13.702	10.702-16.702	13.702	0.006
	35 2,4,5-Trichlorophenol	13.772	13.780	13.764	13.764	13.772	13.764	13.764	13.772	10.772-16.772	13.768	0.006
$	36 2-Fluorobiphenyl	13.911	13.919	13.911	13.911	13.911	13.911	13.911	13.911	10.911-16.911	13.912	0.003
	37 2-Chloronaphthalene	14.151	14.159	14.143	14.143	14.151	14.143	14.143	14.151	11.151-17.151	14.148	0.006
	38 2-Nitroaniline	14.375	14.391	14.367	14.368	14.383	14.367	14.368	14.375	11.375-17.375	14.374	0.010
	39 Dimethylphthalate	14.848	14.863	14.839	14.840	14.855	14.839	14.832	14.848	11.848-17.848	14.845	0.011
	40 Acenaphthylene	15.072	15.080	15.072	15.064	15.072	15.072	15.064	15.072	12.072-18.072	15.071	0.005
	41 2,6-Dinitrotoluene	14.948	14.964	14.932	14.933	14.948	14.940	14.933	14.948	11.948-17.948	14.943	0.012
*	42 Acenaphthene-d10	15.397	15.405	15.397	15.397	15.397	15.397	15.397	15.397	12.397-18.397	15.398	0.003
	43 3-Nitroaniline	15.304	15.328	15.288	15.289	15.312	15.288	15.289	15.304	12.304-18.304	15.300	0.016
	44 Acenaphthene	15.474	15.482	15.466	15.467	15.474	15.466	15.467	15.474	12.474-18.474	15.471	0.006
	45 2,4-Dinitrophenol	15.544	15.567	15.536	15.528	15.552	15.536	15.528	15.544	12.544-18.544	15.542	0.014
	46 Dibenzofuran	15.869	15.876	15.860	15.861	15.869	15.860	15.861	15.869	12.869-18.869	15.865	0.006
	47 4-Nitrophenol	15.699	15.737	15.721	15.691	15.714	15.690	15.691	15.699	12.699-18.699	15.706	0.018
	48 2,4-Dinitrotoluene	15.845	15.869	15.830	15.838	15.853	15.837	15.838	15.845	12.845-18.845	15.844	0.013
	49 Fluorene	16.641	16.657	16.633	16.633	16.649	16.633	16.633	16.641	13.641-19.641	16.640	0.010
	50 Diethylphthalate	16.472	16.495	16.456	16.456	16.479	16.456	16.448	16.472	13.472-19.472	16.466	0.017
	51 4-Chlorophenyl-phenyle	16.680	16.688	16.672	16.672	16.680	16.672	16.672	16.680	13.680-19.680	16.676	0.006
	52 4-Nitroaniline	16.680	16.726	16.656	16.657	16.695	16.664	16.649	16.680	13.680-19.680	16.675	0.028
	53 4,6-Dinitro-2-methylph	16.765	16.796	16.749	16.749	16.780	16.756	16.749	16.765	13.765-19.765	16.763	0.018

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130705.b/ABN.m
Batch File: /chem1/nt10.i/20130705.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	54 N-Nitrosodiphenylamine	16.942	16.957	16.934	16.934	16.950	16.934	16.934	16.942	13.942-19.942	16.941	0.010
$	55 2,4,6-Tribromophenol	17.181	17.189	17.165	17.165	17.181	17.173	17.165	17.181	14.181-20.181	17.174	0.010
	56 4-Bromophenyl-phenylet	17.783	17.783	17.782	17.775	17.783	17.775	17.775	17.783	14.783-20.783	17.779	0.004
	57 Hexachlorobenzene	17.883	17.899	17.883	17.883	17.891	17.883	17.883	17.883	14.883-20.883	17.887	0.006
	58 Pentachlorophenol	18.333	18.340	18.332	18.325	18.333	18.332	18.325	18.333	15.333-21.333	18.331	0.005
*	59 Phenanthrene-d10	18.750	18.750	18.742	18.742	18.750	18.742	18.742	18.750	15.750-21.750	18.746	0.004
	60 Phenanthrene	18.797	18.812	18.789	18.789	18.804	18.796	18.789	18.797	15.797-21.797	18.797	0.009
	61 Anthracene	18.913	18.921	18.905	18.905	18.913	18.905	18.905	18.913	15.913-21.913	18.909	0.006
	62 Carbazole	19.261	19.269	19.260	19.261	19.269	19.260	19.261	19.261	16.261-22.261	19.263	0.004
	63 Di-n-butylphthalate	20.104	20.104	20.096	20.096	20.104	20.096	20.096	20.104	17.104-23.104	20.100	0.004
	64 Fluoranthene	21.226	21.234	21.226	21.226	21.234	21.226	21.226	21.226	18.226-24.226	21.228	0.004
	65 Pyrene	21.652	21.659	21.643	21.644	21.652	21.651	21.644	21.652	18.652-24.652	21.649	0.006
$	66 Terphenyl-d14	21.992	22.000	21.992	21.992	21.992	21.992	21.992	21.992	18.992-24.992	21.993	0.003
	67 Butylbenzylphthalate	22.921	22.929	22.921	22.921	22.921	22.921	22.921	22.921	19.921-25.921	22.922	0.003
	68 Benzo(a)anthracene	23.835	23.850	23.827	23.827	23.843	23.827	23.827	23.835	20.835-26.835	23.834	0.010
*	69 Chrysene-d12	23.850	23.866	23.842	23.843	23.858	23.850	23.843	23.850	20.850-26.850	23.850	0.009
	70 3,3'-Dichlorobenzidine	23.804	23.819	23.803	23.796	23.812	23.803	23.796	23.804	20.804-26.804	23.805	0.008
	71 Chrysene	23.897	23.912	23.889	23.889	23.897	23.889	23.889	23.897	20.897-26.897	23.894	0.009
	72 bis(2-Ethylhexyl)phtha	23.974	23.974	23.974	23.974	23.974	23.974	23.966	23.974	20.974-26.974	23.973	0.003
	73 Di-n-octylphthalate	25.043	25.050	25.034	25.035	25.043	25.034	25.035	25.043	22.043-28.043	25.039	0.006
	74 Benzo(b)fluoranthene	25.608	25.623	25.600	25.600	25.615	25.607	25.600	25.608	22.608-28.608	25.608	0.009
	75 Benzo(k)fluoranthene	25.654	25.677	25.646	25.646	25.662	25.654	25.646	25.654	22.654-28.654	25.655	0.011
	187 Total Benzofluoranthen	25.654	25.677	25.646	25.646	25.662	25.654	25.646	25.654	22.654-28.654	25.655	0.011
	76 Benzo(a)pyrene	26.189	26.196	26.173	26.173	26.189	26.180	26.173	26.189	23.189-29.189	26.182	0.010

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130705.b/ABN.m
Batch File: /chem1/nt10.i/20130705.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	77 Perylene-d12	26.289	26.305	26.281	26.281	26.297	26.281	26.281	26.289	23.289-29.289	26.288	0.010
	78 Indeno(1,2,3-cd)pyrene	28.599	28.646	28.583	28.583	28.622	28.583	28.591	28.599	25.599-31.599	28.601	0.024
	79 Dibenzo(a,h)anthracene	28.669	28.708	28.653	28.645	28.677	28.653	28.645	28.669	25.669-31.669	28.664	0.022
	80 Benzo(g,h,i)perylene	29.298	29.376	29.259	29.259	29.329	29.282	29.267	29.298	26.298-32.298	29.296	0.043
$	85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	51.633	48.633-54.633	+++++	+++++
$	86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	63.533	60.533-66.533	+++++	+++++
$	87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	60.273	57.273-63.273	+++++	+++++
$	88 Dibenz(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	78.600	75.600-81.600	+++++	+++++
$	89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	50.841	47.841-53.841	+++++	+++++
	90 N-Nitrosodimethylamine	4.042	4.089	4.050	4.050	4.050	4.042	4.050	4.042	1.042-7.042	4.053	0.016
	91 Aniline	8.160	8.175	8.159	8.159	8.167	8.159	8.159	8.160	5.160-11.160	8.163	0.006
	92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	56.160	53.160-59.160	+++++	+++++
	93 Benzidine	21.512	21.512	21.512	21.505	21.512	21.504	21.505	21.512	18.512-24.512	21.509	0.004
$	95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	52.075	49.075-55.075	+++++	+++++
	96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	49.250	46.250-52.250	+++++	+++++
	97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	61.202	58.202-64.202	+++++	+++++
	98 Retene	22.240	22.248	22.239	22.240	22.240	22.239	22.240	22.240	19.240-25.240	22.241	0.003
	99 Perylene	26.343	26.367	26.328	26.328	26.351	26.335	26.328	26.343	23.343-29.343	26.340	0.015
	100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.411	22.411-28.411	+++++	+++++
	101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.023	23.023-29.023	+++++	+++++
	102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	79.550	76.550-82.550	+++++	+++++
	103 Pyridine	4.112	4.143	4.142	4.127	4.112	4.111	4.135	4.112	1.112-7.112	4.126	0.014
	188 2,6-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.874	8.874-14.874	+++++	+++++
	189 N-Nitrosomethylethylam	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.818	2.818-8.818	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

Average

Calibration File Names:
Level 1: /chem1/nt10.i/20130705.b/ic0705c.d
Level 2: /chem1/nt10.i/20130705.b/ic0705g.d
Level 3: /chem1/nt10.i/20130705.b/ic0705d.d
Level 4: /chem1/nt10.i/20130705.b/ic0705f.d
Level 5: /chem1/nt10.i/20130705.b/ic0705a.d
Level 6: /chem1/nt10.i/20130705.b/ic0705e.d
Level 7: /chem1/nt10.i/20130705.b/ic0705b.d

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2	
186 Carbaryl	+++++	+++++	+++++	+++++	+++++	+++++	+++++						
								AVRG		0.000e+00		0.000e+00	<-
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++						
								AVRG		0.000e+00		0.000e+00	<-
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++						
								AVRG		0.000e+00		0.000e+00	<-
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++						
								AVRG		0.000e+00		0.000e+00	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
163 1,2,3,5,8-Pentachloronaphthal	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
164 1,2,3,4,6,7-Hexachloronaphtha	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
165 1,2,3,4,5,6,7-Heptachloronaph	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
166 Octachloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
167 2,2',4,4',5-Pentabromobipheny	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
3 Phenol	2.04835	2.06134	2.12212	2.14382	2.06885	2.05437					
	2.15081						AVRG		2.09281		2.12293
4 Bis(2-Chloroethyl)ether	1.66668	1.64527	1.63839	1.63414	1.49381	1.51813					
	1.58213						AVRG		1.59694		4.22923

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2
6 2-Chlorophenol	1.52918	1.48230	1.49241	1.51574	1.45093	1.44396	1.53046	AVRG		1.49214		2.37160
7 1,3-Dichlorobenzene	1.63729	1.52904	1.52771	1.49232	1.42663	1.42858	1.49538	AVRG		1.50528		4.76199
9 1,4-Dichlorobenzene	1.72442	1.51697	1.48979	1.48893	1.40050	1.41490	1.46448	AVRG		1.50000		7.16385
11 Benzyl alcohol	0.80532	0.78393	0.81406	0.86522	0.85868	0.88818	0.95593	AVRG		0.85304		6.86458
12 1,2-Dichlorobenzene	1.52561	1.44201	1.46357	1.43128	1.33481	1.33947	1.39600	AVRG		1.41896		4.81199
13 2-Methylphenol	1.55185	1.45016	1.45226	1.54872	1.42896	1.44152	1.52495	AVRG		1.48549		3.62931
14 2,2'-oxybis(1-Chloropropane)	0.48159	0.47480	0.49242	0.47280	0.45721	0.44933	0.47011	AVRG		0.47118		3.06231

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2
15 4-Methylphenol	1.46326	1.46036	1.50272	1.58770	1.46914	1.49047	1.54613	AVRG		1.50282		3.18374
16 N-Nitroso-di-n-propylamine	1.12232	1.03940	1.05136	1.06864	0.99826	1.02354	1.05460	AVRG		1.05116		3.70101
17 Hexachloroethane	0.70791	0.67316	0.65756	0.67761	0.62878	0.63620	0.67555	AVRG		0.66525		4.05857
19 Nitrobenzene	0.44997	0.41863	0.43481	0.43554	0.41993	0.42579	0.44824	AVRG		0.43327		2.91700
20 Isophorone	0.81666	0.76346	0.76951	0.77952	0.76429	0.78707	0.83678	AVRG		0.78818		3.58091
21 2-Nitrophenol	0.27020	0.25894	0.28079	0.28885	0.28617	0.28516	0.29181	AVRG		0.28027		4.17663
22 2,4-Dimethylphenol	0.43325	0.41715	0.43217	0.44095	0.42465	0.41313	0.42449	AVRG		0.42654		2.26531

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
23 Bis(2-Chloroethoxy)methane	0.53630 0.50276	0.48824	0.50850	0.49412	0.47593	0.47547	AVRG		0.49733		4.26676	
24 Benzoic acid	+++++ 0.42614	0.23741	0.27317	0.33968	0.35720	0.38344	AVRG		0.33617		20.82510	<-
25 2,4-Dichlorophenol	0.29925 0.34008	0.30883	0.32212	0.33170	0.32763	0.32356	AVRG		0.32188		4.29398	
26 1,2,4-Trichlorobenzene	0.39089 0.34746	0.35211	0.35634	0.34715	0.33657	0.32680	AVRG		0.35105		5.74722	
28 Naphthalene	1.10228 1.07381	1.02406	1.04281	1.04044	1.01908	1.00924	AVRG		1.04453		3.15698	
29 4-Chloroaniline	0.40596 0.43427	0.44323	0.48284	0.47719	0.50291	0.47832	AVRG		0.46067		7.33665	
30 Hexachlorobutadiene	0.23919 0.20762	0.20265	0.20921	0.20944	0.19871	0.19804	AVRG		0.20927		6.69901	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
31 4-Chloro-3-methylphenol	0.29249	0.32530	0.34437	0.36882	0.37229	0.37696					
	0.41142						AVRG		0.35595		10.91214
32 2-Methylnaphthalene	0.71439	0.66415	0.68968	0.69229	0.67518	0.68177					
	0.73753						AVRG		0.69357		3.59284
33 Hexachlorocyclopentadiene	0.41559	0.40701	0.42135	0.44633	0.44722	0.46168					
	0.50465						AVRG		0.44340		7.53236
34 2,4,6-Trichlorophenol	0.39165	0.41832	0.45149	0.46484	0.46217	0.46811					
	0.54020						AVRG		0.45668		10.16569
35 2,4,5-Trichlorophenol	0.38205	0.40655	0.44401	0.48190	0.47948	0.49680					
	0.51055						AVRG		0.45733		10.52739
37 2-Chloronaphthalene	1.22831	1.14481	1.14810	1.13883	1.12746	1.14019					
	1.22485						AVRG		1.16465		3.67527
38 2-Nitroaniline	0.22341	0.26886	0.30096	0.33178	0.33981	0.34173					
	0.37439						AVRG		0.31156		16.45512

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
39 Dimethylphthalate	1.41294	1.27887	1.31357	1.32061	1.28248	1.24050						
	1.24637						AVRG		1.29933		4.50202	
40 Acenaphthylene	2.02920	1.91575	1.89720	1.89011	1.86250	1.81469						
	1.93283						AVRG		1.90604		3.49013	
41 2,6-Dinitrotoluene	0.26360	0.27617	0.29877	0.30950	0.29740	0.29275						
	0.30961						AVRG		0.29254		5.83352	
43 3-Nitroaniline	0.15704	0.23928	0.26293	0.28165	0.27453	0.29612						
	0.24167						AVRG		0.25046		18.38514	
44 Acenaphthene	1.17723	1.13210	1.10678	1.13010	1.11022	1.12768						
	1.18600						AVRG		1.13859		2.72868	
45 2,4-Dinitrophenol	+++++	0.10999	0.15995	0.22464	0.24953	0.26245						
	0.28903						AVRG		0.21593		31.45766	<-
46 Dibenzofuran	1.62546	1.52441	1.52103	1.54319	1.51773	1.51587						
	1.58591						AVRG		1.54766		2.72767	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
47 4-Nitrophenol	+++++	0.06515	0.10281	0.15995	0.18210	0.19003						
	0.20051						AVRG		0.15009		36.13640	<-
48 2,4-Dinitrotoluene	0.29074	0.34559	0.38175	0.40361	0.40496	0.41051						
	0.42849						AVRG		0.38080		12.50831	
49 Fluorene	1.36146	1.37629	1.35161	1.37531	1.36347	1.34700						
	1.38302						AVRG		1.36545		0.98037	
50 Diethylphthalate	1.42094	1.35824	1.39564	1.48158	1.47074	1.53931						
	1.51472						AVRG		1.45445		4.49745	
51 4-Chlorophenyl-phenylether	0.69632	0.69678	0.67721	0.67441	0.66491	0.63533						
	0.65395						AVRG		0.67127		3.30634	
52 4-Nitroaniline	0.13110	0.18483	0.22720	0.26282	0.25151	0.26280						
	0.23948						AVRG		0.22282		21.81336	<-
53 4,6-Dinitro-2-methylphenol	0.10842	0.15163	0.17552	0.19628	0.19704	0.19594						
	0.19907						AVRG		0.17484		19.44503	

Report Date : 08-Jul-2013 09:49

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
54 N-Nitrosodiphenylamine	0.47220	0.48303	0.51294	0.51191	0.47862	0.46632	AVRG		0.48496		4.03345
	0.46972										
56 4-Bromophenyl-phenylether	0.24189	0.23462	0.23839	0.24613	0.27883	0.23430	AVRG		0.24428		6.47795
	0.23579										
57 Hexachlorobenzene	0.29098	0.25428	0.26940	0.26332	0.24894	0.24824	AVRG		0.26098		5.88308
	0.25172										
58 Pentachlorophenol	0.18742	0.19330	0.19934	0.21746	0.21783	0.21035	AVRG		0.20689		6.57206
	0.22254										
60 Phenanthrene	1.16433	1.05879	1.09886	1.08688	1.04518	1.06071	AVRG		1.08836		3.67985
	1.10376										
61 Anthracene	1.16691	1.11354	1.14345	1.15670	1.12165	1.12444	AVRG		1.14396		2.21970
	1.18104										
62 Carbazole	0.84369	0.87375	0.86553	0.69354	0.50491	0.60982	AVRG		0.72565		19.48930
	0.68832										

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
63 Di-n-butylphthalate	1.24079	1.15980	1.22881	1.30025	1.28391	1.32842					
	1.41590						AVRG		1.27970		6.36801
64 Fluoranthene	1.34021	1.23149	1.33004	1.33098	1.30445	1.33268					
	1.41343						AVRG		1.32618		4.05207
65 Pyrene	1.32661	1.25294	1.31640	1.32062	1.32667	1.34489					
	1.42089						AVRG		1.32986		3.72402
67 Butylbenzylphthalate	0.48697	0.43820	0.50900	0.52681	0.52636	0.52220					
	0.56125						AVRG		0.51011		7.59751
68 Benzo(a)anthracene	1.36719	1.24849	1.24744	1.20418	1.20566	1.19920					
	1.28430						AVRG		1.25092		4.79206
70 3,3'-Dichlorobenzidine	0.50046	0.45685	0.47406	0.38307	0.41590	0.48852					
	0.57452						AVRG		0.47048		13.12119
71 Chrysene	1.21388	1.09946	1.12016	1.10062	1.09446	1.10036					
	1.18168						AVRG		1.13009		4.23469

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
72 bis(2-Ethylhexyl)phthalate	0.49960	0.48719	0.52754	0.52726	0.51219	0.49834					
	0.52704						AVRG		0.51131		3.24622
73 Di-n-octylphthalate	1.05104	0.99717	0.99481	0.96926	0.93597	0.93044					
	0.99999						AVRG		0.98267		4.24103
74 Benzo(b)fluoranthene	1.12070	0.99309	1.08716	1.17970	1.13583	1.18264					
	1.28419						AVRG		1.14047		7.91972
75 Benzo(k)fluoranthene	1.52434	1.38886	1.40188	1.42429	1.34283	1.42713					
	1.54669						AVRG		1.43658		5.11027
187 Total Benzofluoranthenes	1.28733	1.15873	1.22583	1.24754	1.22459	1.23070					
	1.29000						AVRG		1.23782		3.59679
76 Benzo(a)pyrene	1.07481	0.98004	1.02658	1.06353	1.04652	1.06592					
	1.12955						AVRG		1.05528		4.34967
78 Indeno(1,2,3-cd)pyrene	1.14723	1.06485	1.19628	1.26029	1.27906	1.31538					
	1.39245						AVRG		1.23651		8.85735

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
79 Dibenzo(a,h)anthracene	0.86200	0.87736	0.92139	0.96262	0.96361	0.99655					
	1.04964						AVRG		0.94760		6.97889
80 Benzo(g,h,i)perylene	1.04855	0.96840	1.03858	1.05541	1.04706	1.08418					
	1.17064						AVRG		1.05897		5.71660
90 N-Nitrosodimethylamine	0.88719	0.87471	0.94586	0.96616	0.97684	1.00002					
	1.06903						AVRG		0.95998		6.93414
91 Aniline	4.71412	4.41419	4.56232	4.55026	4.29281	4.23955					
	4.25443						AVRG		4.43253		4.10676
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
93 Benzidine	+++++	0.17538	0.24545	0.18586	0.15640	0.16753					
	0.15039						AVRG		0.18017		19.11138
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
98 Retene	0.50997	0.47885	0.52184	0.50944	0.50593	0.50701						
	0.55134						AVRG		0.51205		4.23055	
99 Perylene	1.06818	1.02301	1.02692	1.00725	0.98503	1.02230						
	1.08503						AVRG		1.03110		3.34438	
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
103 Pyridine	0.79881	0.82463	0.85649	0.84790	0.84212	0.85983						
	0.89896						AVRG		0.84696		3.67151	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
188 2,6-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
189 N-Nitrosomethylethylamine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
$ 1 2-Fluorophenol	1.50461	1.45408	1.45413	1.52468	1.48524	1.45768						
	1.53214						AVRG		1.48751		2.26206	
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
$ 2 Phenol-d5	1.93834	1.86648	1.94032	2.05575	2.00554	2.07115						
	2.19203						AVRG		2.00994		5.35765	
$ 5 2-Chlorophenol-d4	1.48215	1.42610	1.40652	1.47890	1.38519	1.41144						
	1.48880						AVRG		1.43987		2.94726	
$ 10 1,2-Dichlorobenzene-d4	1.15171	1.00856	1.02788	1.00676	0.97378	0.96478						
	1.00520						AVRG		1.01981		6.08687	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

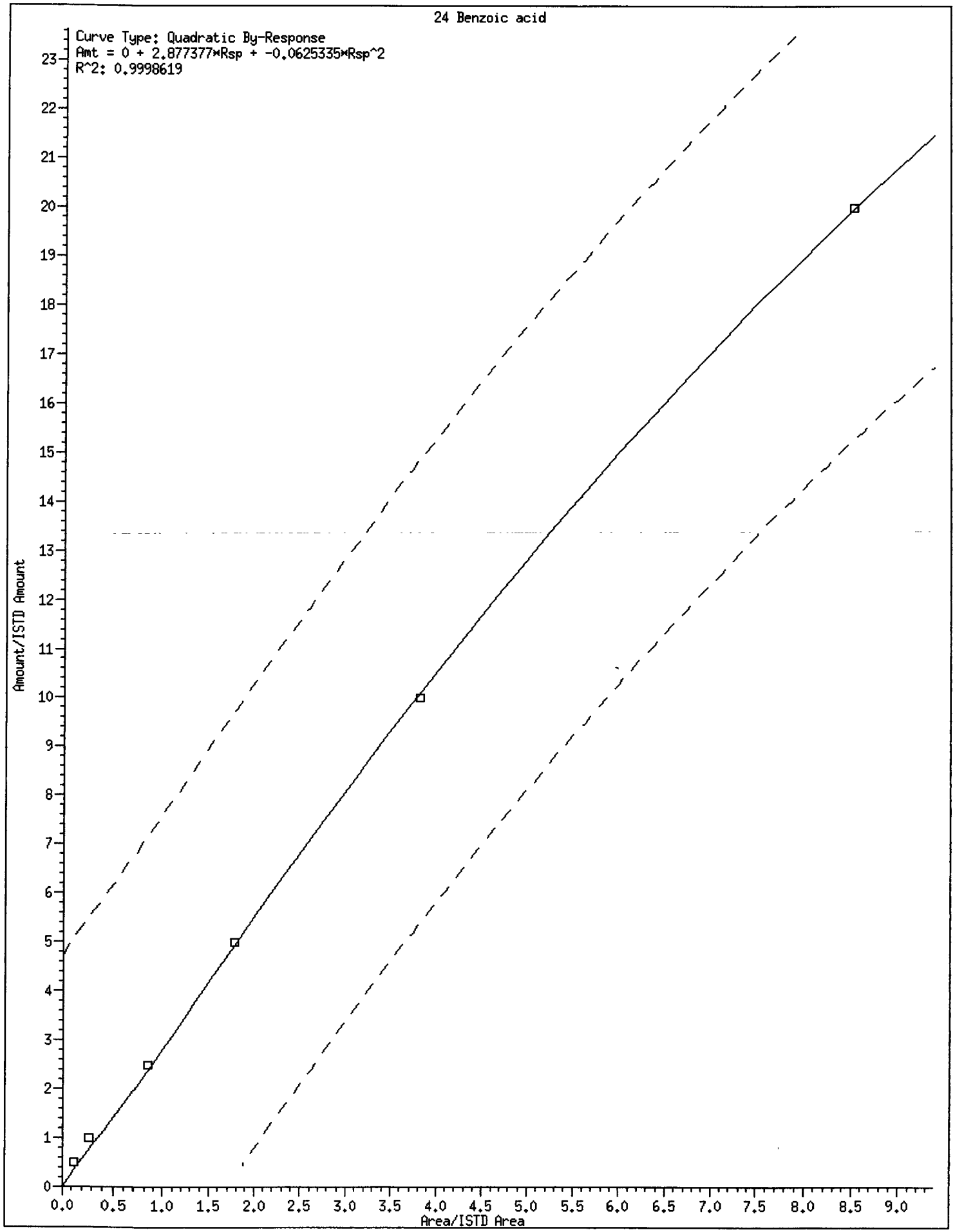
Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
$ 18 Nitrobenzene-d5	0.48964	0.48131	0.48382	0.48386	0.47956	0.48586	AVRG		0.48788		2.19892
	0.51108										
$ 36 2-Fluorobiphenyl	1.55399	1.44403	1.41178	1.45496	1.41903	1.42551	AVRG		1.46259		3.84710
	1.52882										
$ 55 2,4,6-Tribromophenol	0.22061	0.23012	0.24456	0.25443	0.25641	0.25606	AVRG		0.24757		6.95169
	0.27080										
$ 66 Terphenyl-d14	0.73139	0.70499	0.71750	0.71798	0.71546	0.70639	AVRG		0.71984		1.96945
	0.74519										
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
	+++++										
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
	+++++										
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
	+++++										

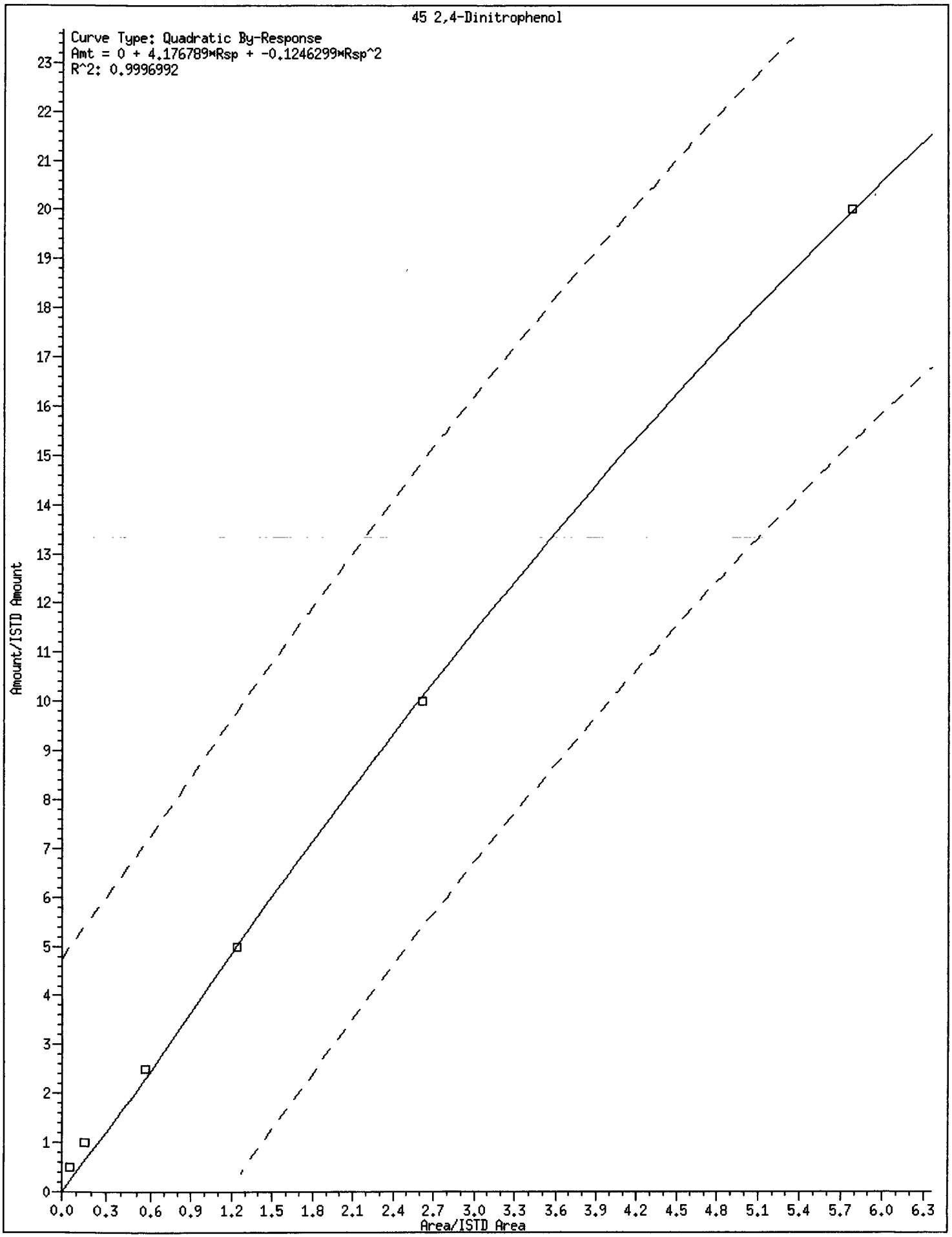
Analytical Resources, Inc.

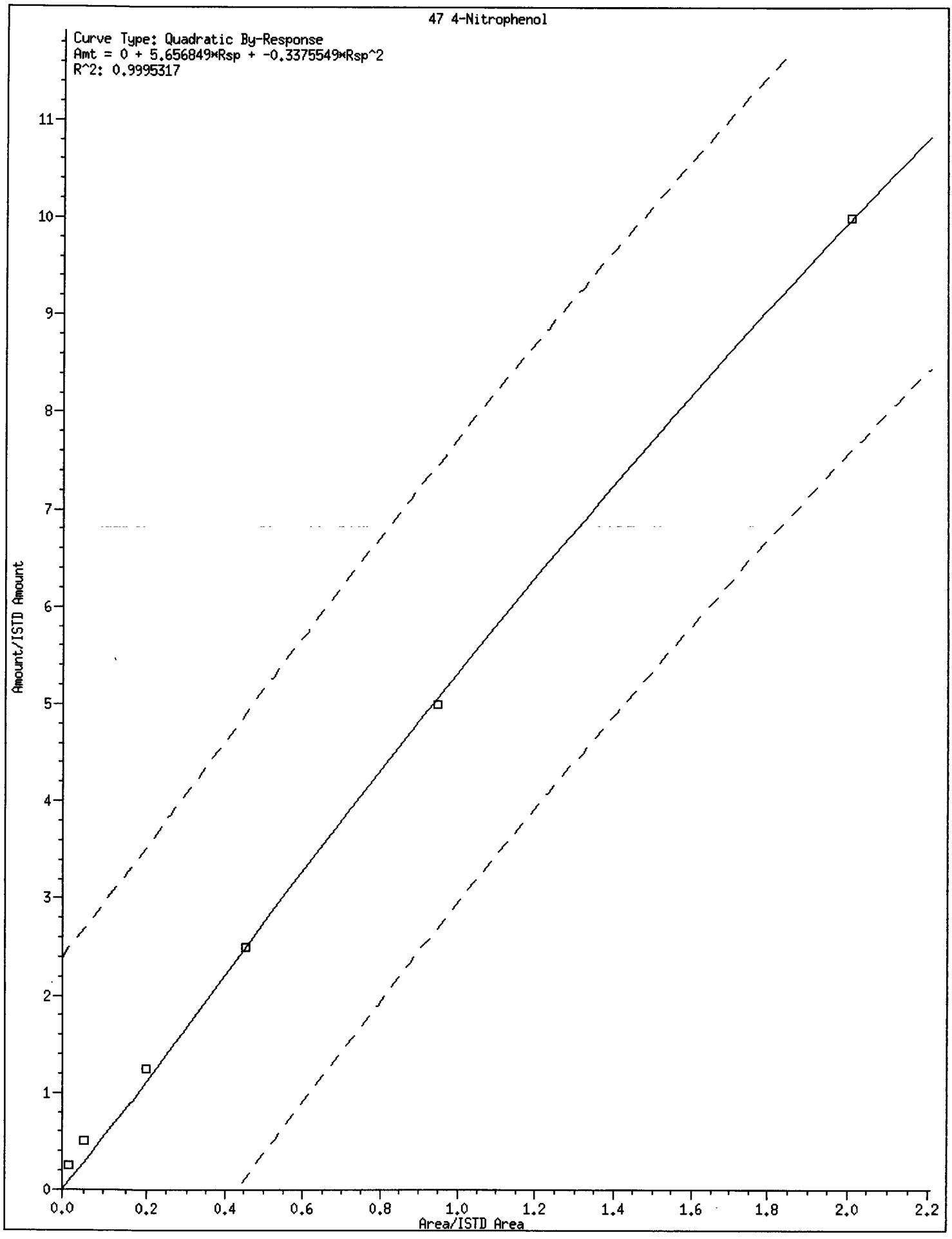
INITIAL CALIBRATION DATA

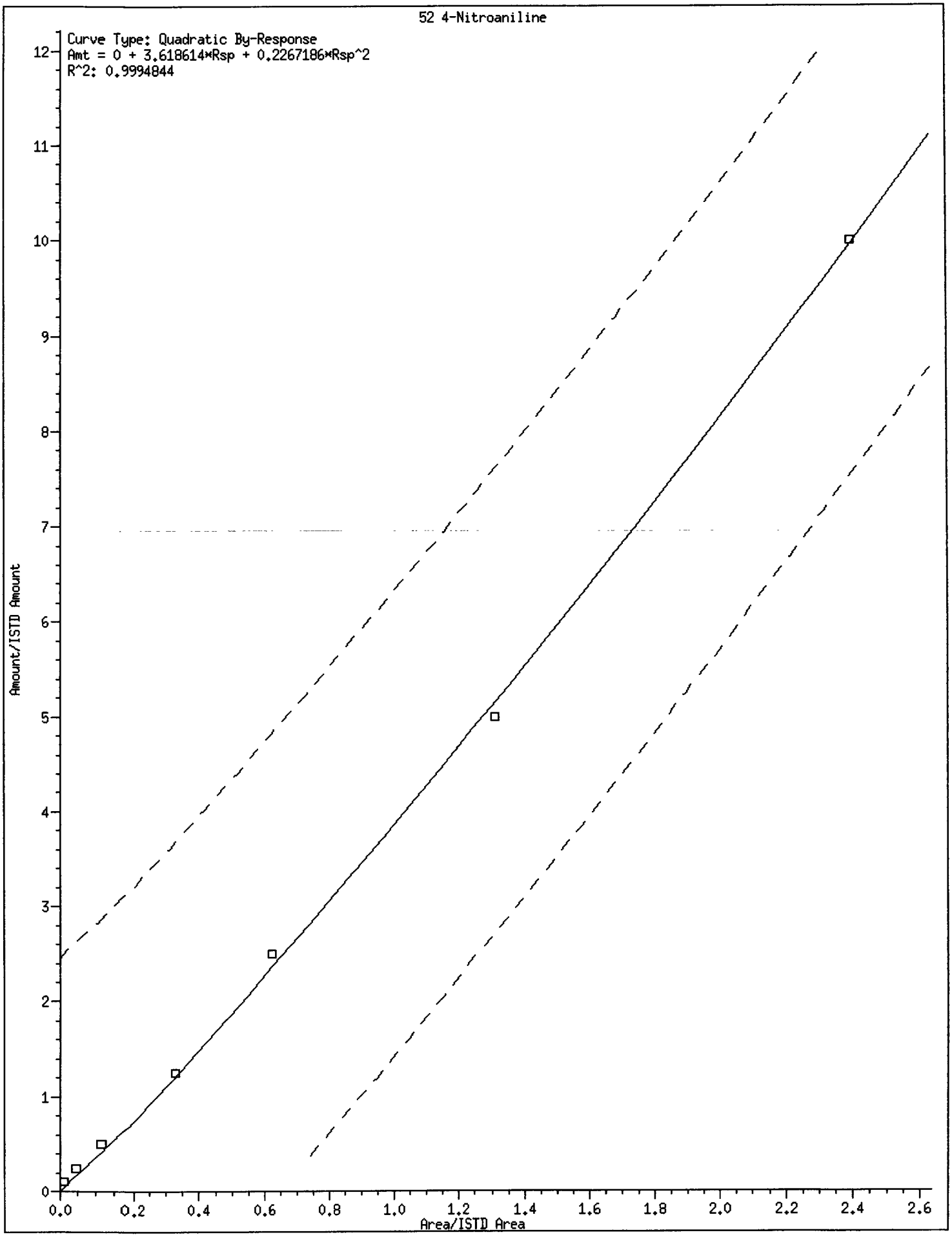
Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response


24 Benzoic acid
Curve Type: Quadratic By-Response
Amt = 0 + 2.877377*Rsp + -0.0625335*Rsp^2
R^2: 0.9998619
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
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
9.0


45 2,4-Dinitrophenol
Curve Type: Quadratic By-Response
Amt = 0 + 4.176789*Rsp + -0.1246299*Rsp^2
R^2: 0.9996992
Amount/ISTD Amount
Area/ISTD Area
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23
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 6.0 6.3


47 4-Nitrophenol
Curve Type: Quadratic By-Response
Amt = 0 + 5.656849*Rsp + -0.3375549*Rsp^2
R^2: 0.9995317
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
2.2


52 4-Nitroaniline
Curve Type: Quadratic By-Response
Amt = 0 + 3.618614*Rsp + 0.2267186*Rsp^2
R^2: 0.9994844
Amount/ISTD Amount
Area/ISTD Area
0
1
2
3
4
5
6
7
8
9
10
11
12
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

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

Calibration File Names:
Level 1: /chem1/nt10.i/20130705.b/ic0705c.d
Level 2: /chem1/nt10.i/20130705.b/ic0705g.d
Level 3: /chem1/nt10.i/20130705.b/ic0705d.d
Level 4: /chem1/nt10.i/20130705.b/ic0705f.d
Level 5: /chem1/nt10.i/20130705.b/ic0705a.d
Level 6: /chem1/nt10.i/20130705.b/ic0705e.d
Level 7: /chem1/nt10.i/20130705.b/ic0705b.d

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
186 Carbaryl	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
179 n-Decane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
180 n-Octadecane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
169 4-tert-Butylphenol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
143 1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
121 Quinoline	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
120 2,3,4,6-Tetrachlorophenol	0.29928	0.32418	0.34266	0.36579	0.37124	0.37507						
	0.40097						AVRG		0.35417		9.71164	
178 2-Benzyl-4-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
119 7,12-Dimethylbenz(a)anthracen	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
118 Triphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
117 Butyl Diphenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
116 Dibutyl Phenyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
115 Tributyl Phosphate	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
114 Beta-Pinene	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	
113 Diphenyl Oxide	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
112 Biphenyl	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
111 Azobenzene (1,2-DP-Hydrazine)	1.48961	1.42702	1.43530	1.43725	1.38216	1.38084						
	1.39954						AVRG		1.42167		2.69237	
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						QUAD	0.000e+00	0.000e+00	0.000e+00	0.000e+00	<-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2	
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
105 1-methylnaphthalene	0.65890	0.61137	0.62068	0.62648	0.62614	0.62047	0.66936	AVRG		0.63334		3.44615	
151 1,2,4,5-Tetrachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
152 Benzo(e)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
153 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
154 Diazinon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
155 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	

Report Date : 08-Jul-2013 09:52

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
163 1,2,3,5,8-Pentachloronaphthal	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
164 1,2,3,4,6,7-Hexachloronaphtha	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
165 1,2,3,4,5,6,7-Heptachloronaph	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
166 Octachloronaphthalene	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
167 2,2',4,4',5-Pentabromobipheny	+++++ +++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00
3 Phenol	2.04835 2.15081	2.06134	2.12212	2.14382	2.06885	2.05437	AVRG		2.09281		2.12293
4 Bis(2-Chloroethyl)ether	1.66668 1.58213	1.64527	1.63839	1.63414	1.49381	1.51813	AVRG		1.59694		4.22923

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
6 2-Chlorophenol	1.52918	1.48230	1.49241	1.51574	1.45093	1.44396					
	1.53046						AVRG		1.49214		2.37160
7 1,3-Dichlorobenzene	1.63729	1.52904	1.52771	1.49232	1.42663	1.42858					
	1.49538						AVRG		1.50528		4.76199
9 1,4-Dichlorobenzene	1.72442	1.51697	1.48979	1.48893	1.40050	1.41490					
	1.46448						AVRG		1.50000		7.16385
11 Benzyl alcohol	0.80532	0.78393	0.81406	0.86522	0.85868	0.88818					
	0.95593						AVRG		0.85304		6.86458
12 1,2-Dichlorobenzene	1.52561	1.44201	1.46357	1.43128	1.33481	1.33947					
	1.39600						AVRG		1.41896		4.81199
13 2-Methylphenol	1.55185	1.45016	1.45226	1.54872	1.42896	1.44152					
	1.52495						AVRG		1.48549		3.62931
14 2,2'-oxybis(1-Chloropropane)	0.48159	0.47480	0.49242	0.47280	0.45721	0.44933					
	0.47011						AVRG		0.47118		3.06231

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
15 4-Methylphenol	1.46326	1.46036	1.50272	1.58770	1.46914	1.49047					
	1.54613						AVRG		1.50282		3.18374
16 N-Nitroso-di-n-propylamine	1.12232	1.03940	1.05136	1.06864	0.99826	1.02354					
	1.05460						AVRG		1.05116		3.70101
17 Hexachloroethane	0.70791	0.67316	0.65756	0.67761	0.62878	0.63620					
	0.67555						AVRG		0.66525		4.05857
19 Nitrobenzene	0.44997	0.41863	0.43481	0.43554	0.41993	0.42579					
	0.44824						AVRG		0.43327		2.91700
20 Isophorone	0.81666	0.76346	0.76951	0.77952	0.76429	0.78707					
	0.83678						AVRG		0.78818		3.58091
21 2-Nitrophenol	0.27020	0.25894	0.28079	0.28885	0.28617	0.28516					
	0.29181						AVRG		0.28027		4.17663
22 2,4-Dimethylphenol	0.43325	0.41715	0.43217	0.44095	0.42465	0.41313					
	0.42449						AVRG		0.42654		2.26531

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
23 Bis(2-Chloroethoxy)methane	0.53630	0.48824	0.50850	0.49412	0.47593	0.47547					
	0.50276						AVRG		0.49733		4.26676
24 Benzoic acid	+++++	42226	97602	275610	600466	1173275					
	2203128						QUAD	0.000e+00	2.87738	-0.06253	0.99986
25 2,4-Dichlorophenol	0.29925	0.30883	0.32212	0.33170	0.32763	0.32356					
	0.34008						AVRG		0.32188		4.29398
26 1,2,4-Trichlorobenzene	0.39089	0.35211	0.35634	0.34715	0.33657	0.32680					
	0.34746						AVRG		0.35105		5.74722
28 Naphthalene	1.10228	1.02406	1.04281	1.04044	1.01908	1.00924					
	1.07381						AVRG		1.04453		3.15698
29 4-Chloroaniline	0.40596	0.44323	0.48284	0.47719	0.50291	0.47832					
	0.43427						AVRG		0.46067		7.33665
30 Hexachlorobutadiene	0.23919	0.20265	0.20921	0.20944	0.19871	0.19804					
	0.20762						AVRG		0.20927		6.69901

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
31 4-Chloro-3-methylphenol	0.29249	0.32530	0.34437	0.36882	0.37229	0.37696					
	0.41142						AVRG		0.35595		10.91214
32 2-Methylnaphthalene	0.71439	0.66415	0.68968	0.69229	0.67518	0.68177					
	0.73753						AVRG		0.69357		3.59284
33 Hexachlorocyclopentadiene	0.41559	0.40701	0.42135	0.44633	0.44722	0.46168					
	0.50465						AVRG		0.44340		7.53236
34 2,4,6-Trichlorophenol	0.39165	0.41832	0.45149	0.46484	0.46217	0.46811					
	0.54020						AVRG		0.45668		10.16569
35 2,4,5-Trichlorophenol	0.38205	0.40655	0.44401	0.48190	0.47948	0.49680					
	0.51055						AVRG		0.45733		10.52739
37 2-Chloronaphthalene	1.22831	1.14481	1.14810	1.13883	1.12746	1.14019					
	1.22485						AVRG		1.16465		3.67527
38 2-Nitroaniline	0.22341	0.26886	0.30096	0.33178	0.33981	0.34173					
	0.37439						AVRG		0.31156		16.45512

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
39 Dimethylphthalate	1.41294	1.27887	1.31357	1.32061	1.28248	1.24050					
	1.24637						AVRG		1.29933		4.50202
40 Acenaphthylene	2.02920	1.91575	1.89720	1.89011	1.86250	1.81469					
	1.93283						AVRG		1.90604		3.49013
41 2,6-Dinitrotoluene	0.26360	0.27617	0.29877	0.30950	0.29740	0.29275					
	0.30961						AVRG		0.29254		5.83352
43 3-Nitroaniline	0.15704	0.23928	0.26293	0.28165	0.27453	0.29612					
	0.24167						AVRG		0.25046		18.38514
44 Acenaphthene	1.17723	1.13210	1.10678	1.13010	1.11022	1.12768					
	1.18600						AVRG		1.13859		2.72868
45 2,4-Dinitrophenol	+++++	11385	34494	108668	252850	481991					
	900339						QUAD	0.000e+00	4.17679	-0.12463	0.99970
46 Dibenzofuran	1.62546	1.52441	1.52103	1.54319	1.51773	1.51587					
	1.58591						AVRG		1.54766		2.72767

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
47 4-Nitrophenol	+++++	3372	11086	38689	92262	174496					
	312295						QUAD	0.000e+00	5.65685	-0.33755	0.99953
48 2,4-Dinitrotoluene	0.29074	0.34559	0.38175	0.40361	0.40496	0.41051					
	0.42849						AVRG		0.38080		12.50831
49 Fluorene	1.36146	1.37629	1.35161	1.37531	1.36347	1.34700					
	1.38302						AVRG		1.36545		0.98037
50 Diethylphthalate	1.42094	1.35824	1.39564	1.48158	1.47074	1.53931					
	1.51472						AVRG		1.45445		4.49745
51 4-Chlorophenyl-phenylether	0.69632	0.69678	0.67721	0.67441	0.66491	0.63533					
	0.65395						AVRG		0.67127		3.30634
52 4-Nitroaniline	2623	9566	24499	63570	127430	241317					
	372993						QUAD	0.000e+00	3.61861	0.22672	0.99948
53 4,6-Dinitro-2-methylphenol	0.10842	0.15163	0.17552	0.19628	0.19704	0.19594					
	0.19907						AVRG		0.17484		19.44503

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

Compound	0.2000 Level 1 / 20 Level 7	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
54 N-Nitrosodiphenylamine	0.47220	0.48303	0.51294	0.51191	0.47862	0.46632					
	0.46972						AVRG		0.48496		4.03345
56 4-Bromophenyl-phenylether	0.24189	0.23462	0.23839	0.24613	0.27883	0.23430					
	0.23579						AVRG		0.24428		6.47795
57 Hexachlorobenzene	0.29098	0.25428	0.26940	0.26332	0.24894	0.24824					
	0.25172						AVRG		0.26098		5.88308
58 Pentachlorophenol	0.18742	0.19330	0.19934	0.21746	0.21783	0.21035					
	0.22254						AVRG		0.20689		6.57206
60 Phenanthrene	1.16433	1.05879	1.09886	1.08688	1.04518	1.06071					
	1.10376						AVRG		1.08836		3.67985
61 Anthracene	1.16691	1.11354	1.14345	1.15670	1.12165	1.12444					
	1.18104						AVRG		1.14396		2.21970
62 Carbazole	0.84369	0.87375	0.86553	0.69354	0.50491	0.60982					
	0.68832						AVRG		0.72565		19.48930

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2
63 Di-n-butylphthalate	1.24079	1.15980	1.22881	1.30025	1.28391	1.32842	1.41590	AVRG		1.27970		6.36801
64 Fluoranthene	1.34021	1.23149	1.33004	1.33098	1.30445	1.33268	1.41343	AVRG		1.32618		4.05207
65 Pyrene	1.32661	1.25294	1.31640	1.32062	1.32667	1.34489	1.42089	AVRG		1.32986		3.72402
67 Butylbenzylphthalate	0.48697	0.43820	0.50900	0.52681	0.52636	0.52220	0.56125	AVRG		0.51011		7.59751
68 Benzo(a)anthracene	1.36719	1.24849	1.24744	1.20418	1.20566	1.19920	1.28430	AVRG		1.25092		4.79206
70 3,3'-Dichlorobenzidine	0.50046	0.45685	0.47406	0.38307	0.41590	0.48852	0.57452	AVRG		0.47048		13.12119
71 Chrysene	1.21388	1.09946	1.12016	1.10062	1.09446	1.10036	1.18168	AVRG		1.13009		4.23469

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
72 bis(2-Ethylhexyl)phthalate	0.49960	0.48719	0.52754	0.52726	0.51219	0.49834					
	0.52704						AVRG		0.51131		3.24622
73 Di-n-octylphthalate	1.05104	0.99717	0.99481	0.96926	0.93597	0.93044					
	0.99999						AVRG		0.98267		4.24103
74 Benzo(b)fluoranthene	1.12070	0.99309	1.08716	1.17970	1.13583	1.18264					
	1.28419						AVRG		1.14047		7.91972
75 Benzo(k)fluoranthene	1.52434	1.38886	1.40188	1.42429	1.34283	1.42713					
	1.54669						AVRG		1.43658		5.11027
187 Total Benzofluoranthenes	1.28733	1.15873	1.22583	1.24754	1.22459	1.23070					
	1.29000						AVRG		1.23782		3.59679
76 Benzo(a)pyrene	1.07481	0.98004	1.02658	1.06353	1.04652	1.06592					
	1.12955						AVRG		1.05528		4.34967
78 Indeno(1,2,3-cd)pyrene	1.14723	1.06485	1.19628	1.26029	1.27906	1.31538					
	1.39245						AVRG		1.23651		8.85735

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2
	20 Level 7										
79 Dibenzo(a,h)anthracene	0.86200	0.87736	0.92139	0.96262	0.96361	0.99655					
	1.04964						AVRG		0.94760		6.97889
80 Benzo(g,h,i)perylene	1.04855	0.96840	1.03858	1.05541	1.04706	1.08418					
	1.17064						AVRG		1.05897		5.71660
90 N-Nitrosodimethylamine	0.88719	0.87471	0.94586	0.96616	0.97684	1.00002					
	1.06903						AVRG		0.95998		6.93414
91 Aniline	4.71412	4.41419	4.56232	4.55026	4.29281	4.23955					
	4.25443						AVRG		4.43253		4.10676
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00
93 Benzidine	+++++	0.17538	0.24545	0.18586	0.15640	0.16753					
	0.15039						AVRG		0.18017		19.11138
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++					
	+++++						AVRG		0.000e+00		0.000e+00

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	20 Level 7	Curve	Coefficients b	m1	m2	%RSD or R^2	
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
98 Retene	0.50997	0.47885	0.52184	0.50944	0.50593	0.50701	0.55134	AVRG		0.51205		4.23055	
99 Perylene	1.06818	1.02301	1.02692	1.00725	0.98503	1.02230	1.08503	AVRG		1.03110		3.34438	
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	<-
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	AVRG		0.000e+00		0.000e+00	
103 Pyridine	0.79881	0.82463	0.85649	0.84790	0.84212	0.85983	0.89896	AVRG		0.84696		3.67151	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

Compound	0.2000 Level 1	0.5000 Level 2	1 Level 3	2 Level 4	5 Level 5	10 Level 6	Curve	Coefficients b	m1	m2	%RSD or R^2	
	20 Level 7											
188 2,6-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
189 N-Nitrosomethylethylamine	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
$ 1 2-Fluorophenol	1.50461	1.45408	1.45413	1.52468	1.48524	1.45768						
	1.53214						AVRG		1.48751		2.26206	
$ 137 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++						
	+++++						AVRG		0.000e+00		0.000e+00	<-
$ 2 Phenol-d5	1.93834	1.86648	1.94032	2.05575	2.00554	2.07115						
	2.19203						AVRG		2.00994		5.35765	
$ 5 2-Chlorophenol-d4	1.48215	1.42610	1.40652	1.47890	1.38519	1.41144						
	1.48880						AVRG		1.43987		2.94726	
$ 10 1,2-Dichlorobenzene-d4	1.15171	1.00856	1.02788	1.00676	0.97378	0.96478						
	1.00520						AVRG		1.01981		6.08687	

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 15:57
Quant Method : ISTD
Origin : Force
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/ABN.m
Cal Date : 08-Jul-2013 09:44 yev

Curve	Formula	Units
Averaged	Amt = Rsp/m1	Response
Quad	Amt = b + m1*Rsp + m2*Rsp^2	Response

Analytical Resources, Inc.

YZ 7/9/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130705.b/ic0705a.d
Lab Smp Id: ABN 5
Inj Date : 05-JUL-2013 12:14
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : ABN 5
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130705.b/ABN.m
Meth Date : 08-Jul-2013 09:52 yev Quant Type: ISTD
Cal Date : 05-JUL-2013 12:14 Cal File: ic0705a.d
Als bottle: 2 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.343	6.343	(0.719)	180624	5.00000	5.413
$	2 Phenol-d5	99	8.075	8.067	(0.915)	243899	5.00000	5.374
	3 Phenol	94	8.098	8.090	(0.918)	251598	5.00000	5.398
$	5 2-Chlorophenol-d4	132	8.360	8.360	(0.947)	168456	5.00000	5.221
	4 Bis(2-Chloroethyl)ether	93	8.299	8.298	(0.940)	181666	5.00000	5.141
	6 2-Chlorophenol	128	8.399	8.391	(0.952)	176451	5.00000	5.301
	7 1,3-Dichlorobenzene	146	8.716	8.708	(0.988)	173496	5.00000	5.191
*	8 1,4-Dichlorobenzene-d4	152	8.825	8.825	(1.000)	97290	4.00000	
	9 1,4-Dichlorobenzene	146	8.864	8.856	(1.004)	170318	5.00000	5.092
$	10 1,2-Dichlorobenzene-d4	152	9.135	9.135	(1.035)	118424	5.00000	5.211
	12 1,2-Dichlorobenzene	146	9.166	9.158	(1.039)	162329	5.00000	5.168
	11 Benzyl alcohol	108	9.089	9.089	(1.030)	104426	5.00000	5.406
	14 2,2'-oxybis(1-Chloropropane)	121	9.407	9.384	(1.066)	55602	5.00000	5.340
	13 2-Methylphenol	108	9.322	9.314	(1.056)	173779	5.00000	5.214
	17 Hexachloroethane	117	9.865	9.865	(1.118)	76468	5.00000	5.150
	16 N-Nitroso-di-n-propylamine	70	9.655	9.648	(1.094)	121401	5.00000	5.175
	15 4-Methylphenol	108	9.632	9.624	(1.091)	178666	5.00000	5.319
$	18 Nitrobenzene-d5	82	9.943	9.935	(0.865)	201536	5.00000	5.347
	19 Nitrobenzene	77	9.981	9.973	(0.869)	176479	5.00000	5.274
	20 Isophorone	82	10.501	10.493	(0.914)	321197	5.00000	5.252
	21 2-Nitrophenol	139	10.664	10.656	(0.928)	120266	5.00000	5.533
	22 2,4-Dimethylphenol	107	10.772	10.772	(0.938)	356924	10.0000	10.87
	23 Bis(2-Chloroethoxy)methane	93	10.996	10.988	(0.957)	200011	5.00000	5.232
	24 Benzoic acid	105	11.027	10.857	(0.960)	600466	20.0000	21.98(M)
	25 2,4-Dichlorophenol	162	11.181	11.173	(0.973)	275380	10.0000	11.06
	26 1,2,4-Trichlorobenzene	180	11.374	11.373	(0.990)	141444	5.00000	5.245
*	27 Naphthalene-d8	136	11.489	11.482	(1.000)	336205	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.536	11.528	(1.004)	428274	5.00000	5.311
	29 4-Chloroaniline	127	11.659	11.644	(1.015)	422699	10.0000	11.97
	30 Hexachlorobutadiene	225	11.845	11.845	(1.031)	83511	5.00000	5.164
	31 4-Chloro-3-methylphenol	107	12.743	12.735	(1.109)	312917	10.0000	11.26
	32 2-Methylnaphthalene	142	13.075	13.067	(1.138)	283749	5.00000	5.284
	33 Hexachlorocyclopentadiene	237	13.455	13.447	(0.874)	226585	10.0000	10.82
	34 2,4,6-Trichlorophenol	196	13.702	13.694	(0.890)	234159	10.0000	10.93
	35 2,4,5-Trichlorophenol	196	13.772	13.764	(0.894)	242930	10.0000	11.26
$	36 2-Fluorobiphenyl	172	13.911	13.911	(0.903)	359477	5.00000	5.253
	37 2-Chloronaphthalene	162	14.151	14.143	(0.919)	285615	5.00000	5.259
	38 2-Nitroaniline	65	14.375	14.368	(0.934)	172165	10.0000	11.68
	39 Dimethylphthalate	163	14.848	14.832	(0.964)	324885	5.00000	5.387
	40 Acenaphthylene	152	15.072	15.064	(0.979)	471821	5.00000	5.328
	41 2,6-Dinitrotoluene	165	14.948	14.933	(0.971)	150680	10.0000	11.08
*	42 Acenaphthene-d10	164	15.397	15.397	(1.000)	202661	4.00000	
	43 3-Nitroaniline	138	15.304	15.289	(0.994)	139092	10.0000	12.02
	44 Acenaphthene	153	15.474	15.467	(1.005)	281247	5.00000	5.289
	45 2,4-Dinitrophenol	184	15.544	15.528	(1.010)	252850	20.0000	20.04
	46 Dibenzofuran	168	15.869	15.861	(1.031)	384480	5.00000	5.325
	47 4-Nitrophenol	109	15.699	15.691	(1.020)	92262	10.0000	9.998
	48 2,4-Dinitrotoluene	165	15.845	15.838	(1.029)	205173	10.0000	11.51
	50 Diethylphthalate	149	16.472	16.448	(1.070)	372576	5.00000	5.443
	49 Fluorene	166	16.641	16.633	(1.081)	345403	5.00000	5.441
	51 4-Chlorophenyl-phenylether	204	16.680	16.672	(1.083)	168439	5.00000	5.430
	52 4-Nitroaniline	138	16.680	16.649	(1.083)	127430	10.0000	12.17
	53 4,6-Dinitro-2-methylphenol	198	16.765	16.749	(0.894)	346975	20.0000	20.24
	54 N-Nitrosodiphenylamine	169	16.942	16.934	(0.904)	210712	5.00000	5.438
$	55 2,4,6-Tribromophenol	330	17.181	17.165	(1.116)	64955	5.00000	5.601
	56 4-Bromophenyl-phenylether	248	17.783	17.775	(0.948)	122754	5.00000	6.177
	57 Hexachlorobenzene	284	17.883	17.883	(0.954)	109594	5.00000	5.221
	58 Pentachlorophenol	266	18.333	18.325	(0.978)	191797	10.0000	11.34
*	59 Phenanthrene-d10	188	18.750	18.742	(1.000)	352196	4.00000	
	60 Phenanthrene	178	18.797	18.789	(1.002)	460136	5.00000	5.234
	61 Anthracene	178	18.913	18.905	(1.009)	493802	5.00000	5.335
	62 Carbazole	167	19.261	19.261	(1.027)	222284	5.00000	4.010
	63 Di-n-butylphthalate	149	20.104	20.096	(1.072)	565236	5.00000	5.388
	64 Fluoranthene	202	21.226	21.226	(1.132)	574279	5.00000	5.333
	65 Pyrene	202	21.652	21.644	(0.908)	595315	5.00000	5.403
$	66 Terphenyl-d14	244	21.992	21.992	(0.922)	321049	5.00000	5.408
	67 Butylbenzylphthalate	149	22.921	22.921	(0.961)	236194	5.00000	5.555
	68 Benzo(a)anthracene	228	23.835	23.827	(0.999)	541016	5.00000	5.254
*	69 Chrysene-d12	240	23.850	23.843	(1.000)	358983	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.804	23.796	(0.998)	373253	10.0000	9.631
	71 Chrysene	228	23.897	23.889	(1.002)	491117	5.00000	5.261
	72 bis(2-Ethylhexyl)phthalate	149	23.974	23.966	(0.958)	322427	5.00000	5.472
*	134 Di-n-octylphthalate-d4	153	25.027	25.027	(1.000)	503607	4.00000	
	73 Di-n-octylphthalate	149	25.043	25.035	(1.001)	589200	5.00000	5.214

	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	25.608	25.600	(0.974)	542179	5.00000	5.325
75	Benzo(k)fluoranthene	252	25.654	25.646	(0.976)	640989	5.00000	5.061
76	Benzo(a)pyrene	252	26.189	26.173	(0.996)	499545	5.00000	5.348
* 77	Perylene-d12	264	26.289	26.281	(1.000)	381873	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.599	28.591	(1.088)	610549	5.00000	5.540
79	Dibenzo(a,h)anthracene	278	28.669	28.645	(1.091)	459973	5.00000	5.482
80	Benzo(g,h,i)perylene	276	29.298	29.267	(1.114)	499803	5.00000	5.333
90	N-Nitrosodimethylamine	74	4.042	4.050	(0.458)	237593	10.0000	10.98
91	Aniline	93	8.160	8.159	(0.925)	522059	5.00000	5.309
93	Benzidine	184	21.512	21.505	(0.902)	140364	10.0000	9.132
103	Pyridine	79	4.112	4.135	(0.466)	204824	10.0000	10.84
105	1-methylnaphthalene	142	13.284	13.284	(1.156)	263138	5.00000	5.356
111	Azobenzene (1,2-DP-Hydrazine)	77	17.035	17.027	(1.106)	350138	5.00000	5.314
187	Total Benzofluoranthenes	252	25.654	25.646	(0.976)	1169092	10.0000	10.71
99	Perylene	252	26.343	26.328	(1.002)	470196	5.00000	5.203
98	Retene	219	22.240	22.240	(0.932)	227025	5.00000	5.376
120	2,3,4,6-Tetrachlorophenol	232	16.147	16.139	(1.049)	94044	5.00000	5.641

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0705a.d
Lab Smp Id: ABN 5
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130705.b/ABN.m
Misc Info:

Calibration Date: 05-JUL-2013
Calibration Time: 12:14

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	97290	48645	194580	97290	0.00
27 Naphthalene-d8	336205	168102	672410	336205	0.00
42 Acenaphthene-d10	202661	101330	405322	202661	0.00
59 Phenanthrene-d10	352196	176098	704392	352196	0.00
69 Chrysene-d12	358983	179492	717966	358983	0.00
134 Di-n-octylphthala	503607	251804	1007214	503607	0.00
77 Perylene-d12	381873	190936	763746	381873	0.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.82	8.32	9.32	8.82	0.00
27 Naphthalene-d8	11.49	10.99	11.99	11.49	0.00
42 Acenaphthene-d10	15.40	14.90	15.90	15.40	0.00
59 Phenanthrene-d10	18.75	18.25	19.25	18.75	0.00
69 Chrysene-d12	23.85	23.35	24.35	23.85	0.00
134 Di-n-octylphthala	25.03	24.53	25.53	25.03	0.00
77 Perylene-d12	26.29	25.79	26.79	26.29	0.00

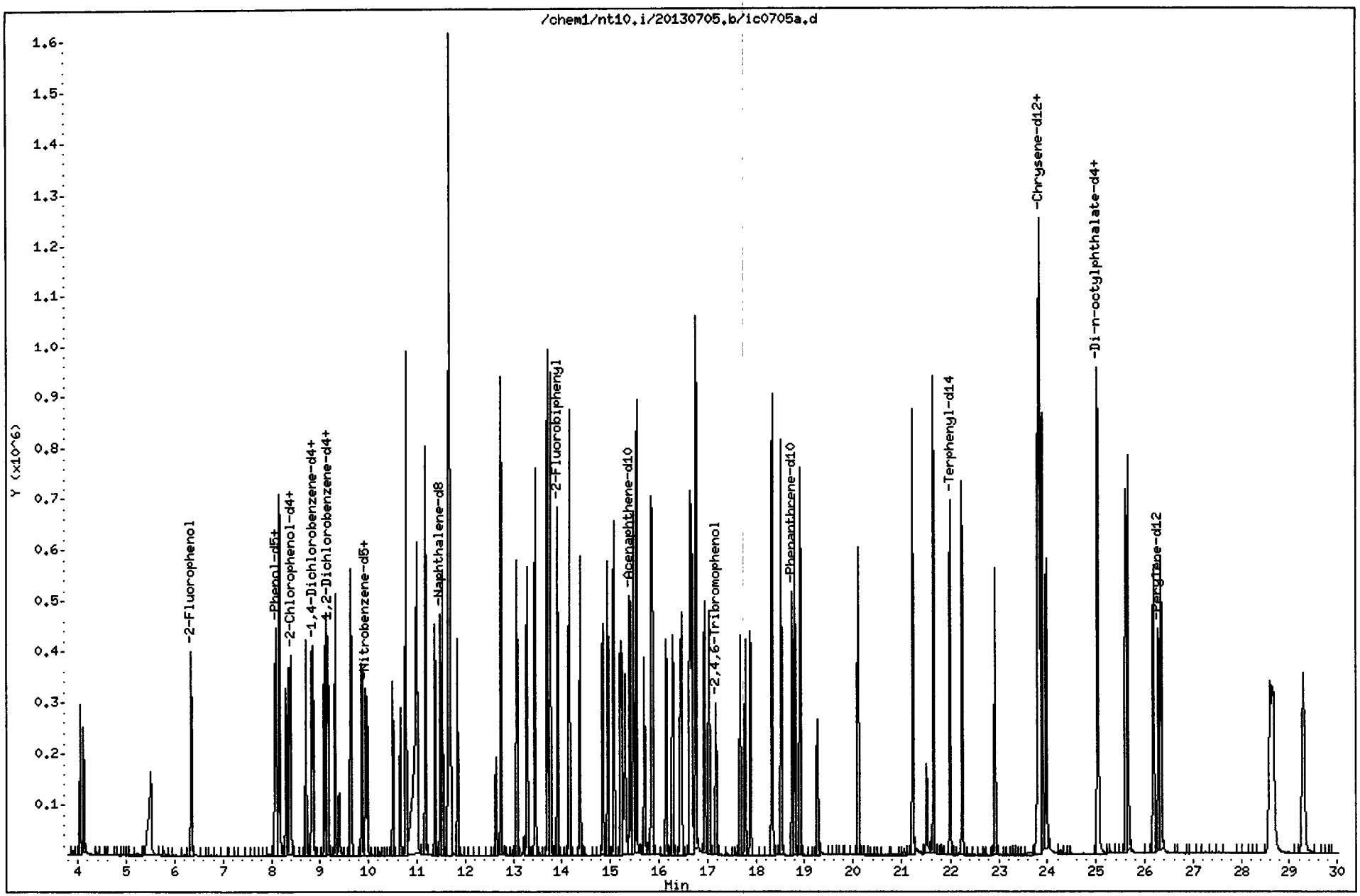
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130705.b/ic0705a.d
Date : 05-JUL-2013 12:14
Client ID:
Sample Info: ABN 5

Instrument: nt10.i

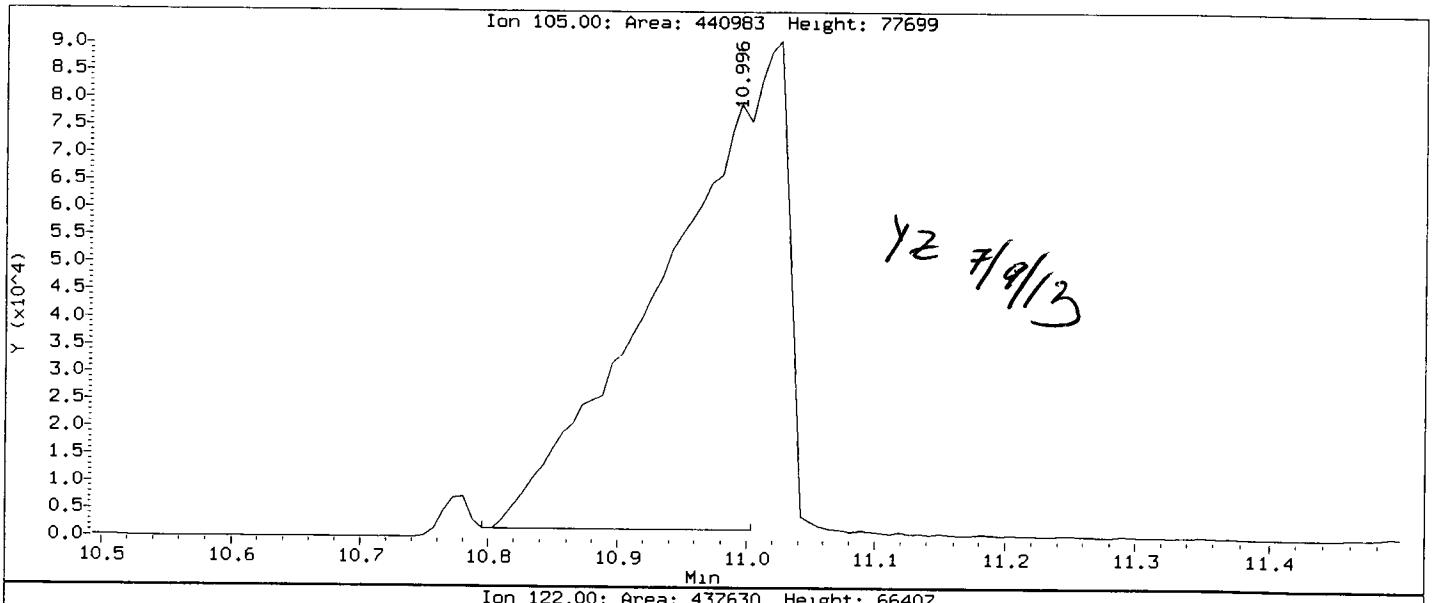
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi

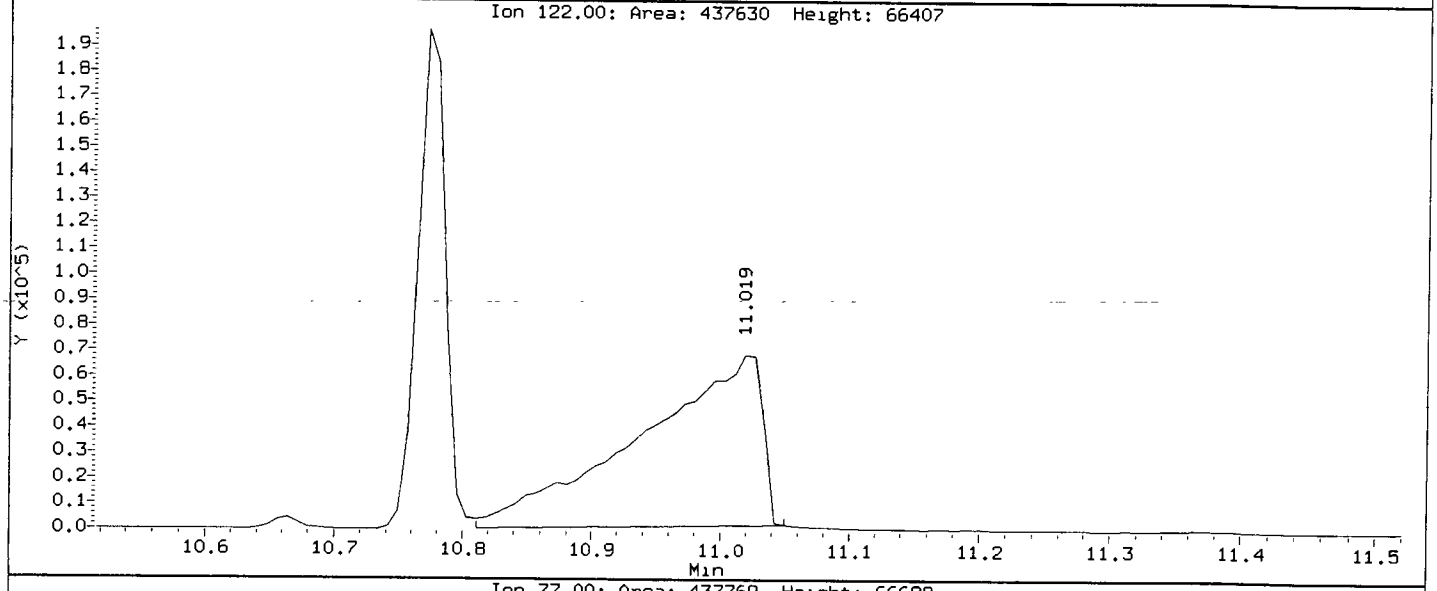


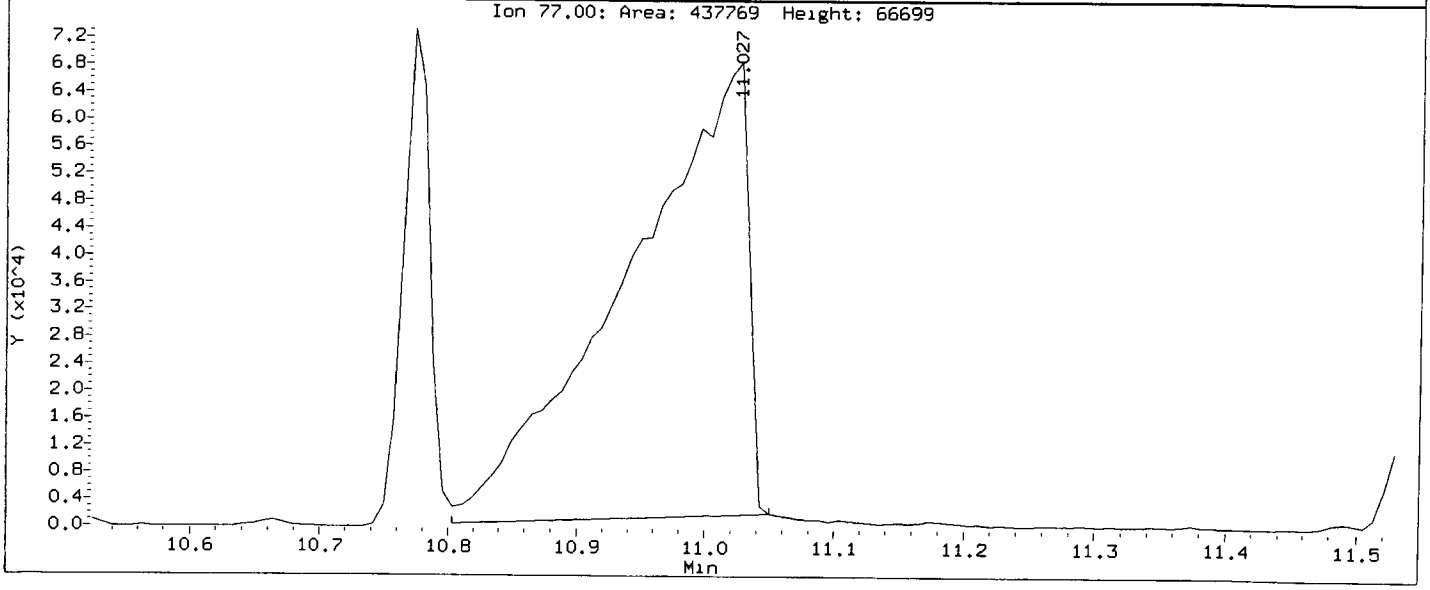
Data File: /chem1/nt10.1/20130705.b/1c0705a.d
Injection Date: 05-JUL-2013 12:14
Instrument: nt10.1
Client Sample ID:

Compound: Benzoic acid
CAS Number: 65-85-0



YZ 7/9/13

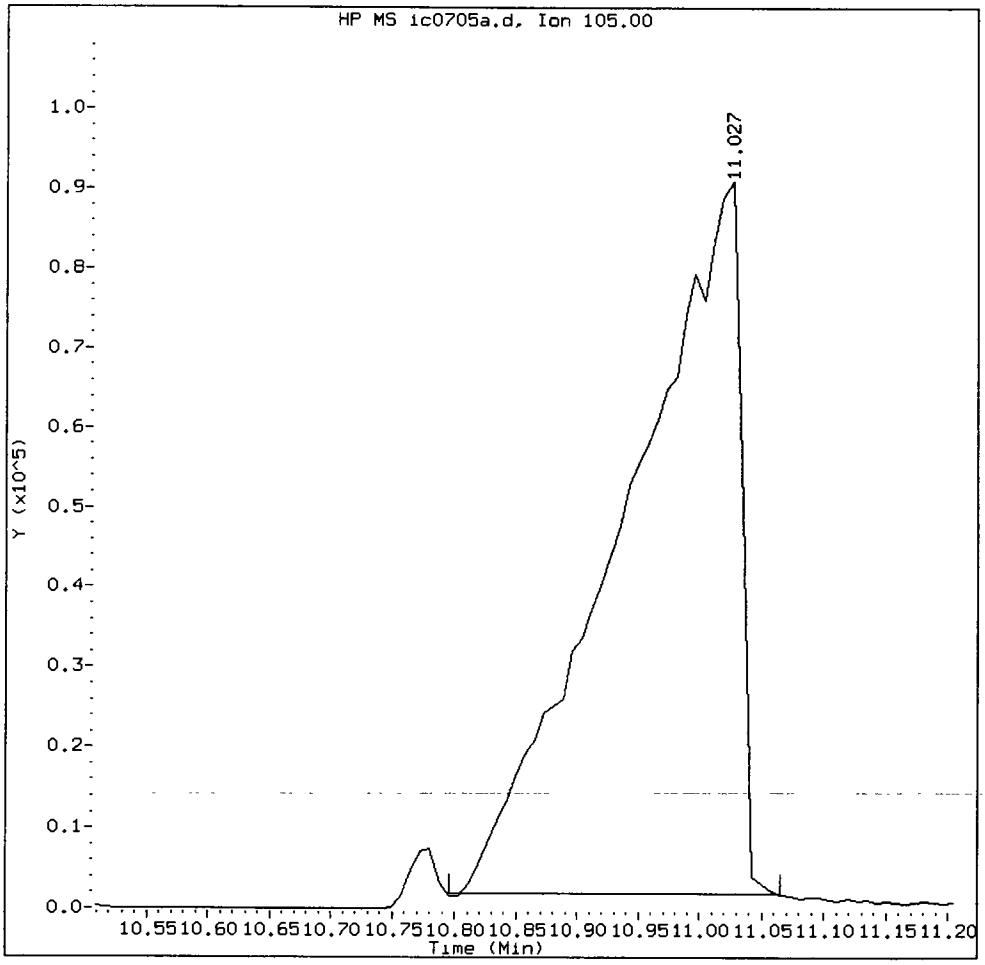




WDS: 86519

ABN 5, /chem1/nt10.i/20130705.b/ic0705a.d

Benzoic acid Amount: 21.98 Area: 600466



MANUAL INTEGRATION for Benzoic acid

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 7/8/13

CO-ELUTION SUMMARY FOR FILE - ic0705a.d

Lab ID: ABN 5, Method: ABN.m, Instrument: nt10.i, Date: 05-JUL-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D YZ 7/9/13

Data file : /chem1/nt10.i/20130705.b/ic0705b.d
Lab Smp Id: ABN20
Inj Date : 05-JUL-2013 12:51
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : ABN20
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130705.b/ABN.m
Meth Date : 08-Jul-2013 09:52 yev Quant Type: ISTD
Cal Date : 05-JUL-2013 12:51 Cal File: ic0705b.d
Als bottle: 3 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.351	6.343	(0.720)	567896	20.0000	22.34
$	2 Phenol-d5	99	8.090	8.067	(0.917)	812488	20.0000	23.49
	3 Phenol	94	8.113	8.090	(0.919)	797207	20.0000	22.45
$	5 2-Chlorophenol-d4	132	8.376	8.360	(0.949)	551833	20.0000	22.45
	4 Bis(2-Chloroethyl)ether	93	8.306	8.298	(0.941)	586424	20.0000	21.78
	6 2-Chlorophenol	128	8.407	8.391	(0.953)	567274	20.0000	22.37
	7 1,3-Dichlorobenzene	146	8.716	8.708	(0.988)	554271	20.0000	21.76
*	8 1,4-Dichlorobenzene-d4	152	8.825	8.825	(1.000)	74131	4.00000	
	9 1,4-Dichlorobenzene	146	8.864	8.856	(1.004)	542816	20.0000	21.30
$	10 1,2-Dichlorobenzene-d4	152	9.135	9.135	(1.035)	372581	20.0000	21.51
	12 1,2-Dichlorobenzene	146	9.166	9.158	(1.039)	517436	20.0000	21.62
	11 Benzyl alcohol	108	9.104	9.089	(1.032)	354320	20.0000	24.07
	14 2,2'-oxybis(1-Chloropropane)	121	9.399	9.384	(1.065)	174247	20.0000	21.96
	13 2-Methylphenol	108	9.329	9.314	(1.057)	565230	20.0000	22.26
	17 Hexachloroethane	117	9.873	9.865	(1.119)	250396	20.0000	22.13
	16 N-Nitroso-di-n-propylamine	70	9.679	9.648	(1.097)	390894	20.0000	21.87
	15 4-Methylphenol	108	9.648	9.624	(1.093)	573079	20.0000	22.39
$	18 Nitrobenzene-d5	82	9.950	9.935	(0.866)	660570	20.0000	22.79
	19 Nitrobenzene	77	9.989	9.973	(0.869)	579344	20.0000	22.52
	20 Isophorone	82	10.532	10.493	(0.917)	1081530	20.0000	23.00
	21 2-Nitrophenol	139	10.672	10.656	(0.929)	377164	20.0000	22.57
	22 2,4-Dimethylphenol	107	10.788	10.772	(0.939)	1097315	40.0000	43.44
	23 Bis(2-Chloroethoxy)methane	93	11.004	10.988	(0.958)	649815	20.0000	22.11
	24 Benzoic acid	105	11.173	10.857	(0.972)	2203128	80.0000	104.9(M)
	25 2,4-Dichlorophenol	162	11.188	11.173	(0.974)	879101	40.0000	45.94
	26 1,2,4-Trichlorobenzene	180	11.374	11.373	(0.990)	449084	20.0000	21.66
*	27 Naphthalene-d8	136	11.489	11.482	(1.000)	258499	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.536	11.528	(1.004)	1387900	20.0000	22.38
	29 4-Chloroaniline	127	11.675	11.644	(1.016)	1122594	40.0000	41.35
	30 Hexachlorobutadiene	225	11.853	11.845	(1.032)	268354	20.0000	21.58
	31 4-Chloro-3-methylphenol	107	12.750	12.735	(1.110)	1063525	40.0000	49.75
	32 2-Methylnaphthalene	142	13.075	13.067	(1.138)	953252	20.0000	23.09
	33 Hexachlorocyclopentadiene	237	13.455	13.447	(0.873)	785989	40.0000	48.86
	34 2,4,6-Trichlorophenol	196	13.710	13.694	(0.890)	841365	40.0000	51.12
	35 2,4,5-Trichlorophenol	196	13.780	13.764	(0.894)	795180	40.0000	47.98
$	36 2-Fluorobiphenyl	172	13.919	13.911	(0.904)	1190565	20.0000	22.64
	37 2-Chloronaphthalene	162	14.159	14.143	(0.919)	953853	20.0000	22.85
	38 2-Nitroaniline	65	14.391	14.368	(0.934)	583118	40.0000	51.48
	39 Dimethylphthalate	163	14.863	14.832	(0.965)	970612	20.0000	20.94
	40 Acenaphthylene	152	15.080	15.064	(0.979)	1505191	20.0000	22.12
	41 2,6-Dinitrotoluene	165	14.964	14.933	(0.971)	482217	40.0000	46.13
*	42 Acenaphthene-d10	164	15.405	15.397	(1.000)	155750	4.00000	
	43 3-Nitroaniline	138	15.328	15.289	(0.995)	376400	40.0000	42.32
	44 Acenaphthene	153	15.482	15.467	(1.005)	923596	20.0000	22.60
	45 2,4-Dinitrophenol	184	15.567	15.528	(1.011)	900339	80.0000	79.93
	46 Dibenzofuran	168	15.876	15.861	(1.031)	1235031	20.0000	22.26
	47 4-Nitrophenol	109	15.737	15.691	(1.022)	312295	40.0000	39.95
	48 2,4-Dinitrotoluene	165	15.869	15.838	(1.030)	667367	40.0000	48.71
	50 Diethylphthalate	149	16.495	16.448	(1.071)	1179592	20.0000	22.42
	49 Fluorene	166	16.657	16.633	(1.081)	1077030	20.0000	22.07
	51 4-Chlorophenyl-phenylether	204	16.688	16.672	(1.083)	509262	20.0000	21.36
	52 4-Nitroaniline	138	16.726	16.649	(1.086)	372993	40.0000	46.35
	53 4,6-Dinitro-2-methylphenol	198	16.796	16.749	(0.896)	1100685	80.0000	79.99
	54 N-Nitrosodiphenylamine	169	16.957	16.934	(0.904)	649284	20.0000	21.35
$	55 2,4,6-Tribromophenol	330	17.189	17.165	(1.116)	210887	20.0000	23.66
	56 4-Bromophenyl-phenylether	248	17.783	17.775	(0.948)	325932	20.0000	20.89
	57 Hexachlorobenzene	284	17.899	17.883	(0.955)	347945	20.0000	21.12
	58 Pentachlorophenol	266	18.340	18.325	(0.978)	615234	40.0000	46.35
*	59 Phenanthrene-d10	188	18.750	18.742	(1.000)	276458	4.00000	
	60 Phenanthrene	178	18.812	18.789	(1.003)	1525718	20.0000	22.11
	61 Anthracene	178	18.921	18.905	(1.009)	1632546	20.0000	22.47
	62 Carbazole	167	19.269	19.261	(1.028)	951457	20.0000	21.87
	63 Di-n-butylphthalate	149	20.104	20.096	(1.072)	1957189	20.0000	23.77
	64 Fluoranthene	202	21.234	21.226	(1.132)	1953767	20.0000	23.12
	65 Pyrene	202	21.659	21.644	(0.908)	1999899	20.0000	23.15
$	66 Terphenyl-d14	244	22.000	21.992	(0.922)	1048859	20.0000	22.53
	67 Butylbenzylphthalate	149	22.929	22.921	(0.961)	789953	20.0000	23.69
	68 Benzo(a)anthracene	228	23.850	23.827	(0.999)	1807656	20.0000	22.39
*	69 Chrysene-d12	240	23.866	23.843	(1.000)	281500	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.819	23.796	(0.998)	1617270	40.0000	53.22
	71 Chrysene	228	23.912	23.889	(1.002)	1663220	20.0000	22.72
	72 bis(2-Ethylhexyl)phthalate	149	23.974	23.966	(0.958)	1099706	20.0000	22.52
*	134 Di-n-octylphthalate-d4	153	25.035	25.027	(1.000)	417314	4.00000	
	73 Di-n-octylphthalate	149	25.050	25.035	(1.001)	2086556	20.0000	22.28

	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	25.623	25.600	(0.974)	1941991	20.0000	24.08
75	Benzo(k)fluoranthene	252	25.677	25.646	(0.976)	2338945	20.0000	23.32(H)
76	Benzo(a)pyrene	252	26.196	26.173	(0.996)	1708140	20.0000	23.09
* 77	Perylene-d12	264	26.305	26.281	(1.000)	302445	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.646	28.591	(1.089)	2105694	20.0000	24.12
79	Dibenzo(a,h)anthracene	278	28.708	28.645	(1.091)	1587297	20.0000	23.89
80	Benzo(g,h,i)perylene	276	29.376	29.267	(1.117)	1770272	20.0000	23.85
90	N-Nitrosodimethylamine	74	4.089	4.050	(0.463)	792484	40.0000	48.08
91	Aniline	93	8.175	8.159	(0.926)	1576926	20.0000	21.05
93	Benzidine	184	21.512	21.505	(0.901)	423352	40.0000	39.86
103	Pyridine	79	4.143	4.135	(0.469)	666408	40.0000	46.30
105	1-methylnaphthalene	142	13.292	13.284	(1.157)	865142	20.0000	22.90
111	Azobenzene (1,2-DP-Hydrazine)	77	17.042	17.027	(1.106)	1089888	20.0000	21.52
187	Total Benzofluoranthenes	252	25.677	25.646	(0.976)	3901526	40.0000	45.13
99	Perylene	252	26.367	26.328	(1.002)	1640808	20.0000	22.93
98	Retene	219	22.248	22.240	(0.932)	776012	20.0000	23.44
120	2,3,4,6-Tetrachlorophenol	232	16.162	16.139	(1.049)	312256	20.0000	24.37

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: nt10.i
Lab File ID: ic0705b.d
Lab Smp Id: ABN20
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130705.b/ABN.m
Misc Info:

Calibration Date: 05-JUL-2013
Calibration Time: 12:14

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	97290	48645	194580	74131	-23.80
27 Naphthalene-d8	336205	168102	672410	258499	-23.11
42 Acenaphthene-d10	202661	101330	405322	155750	-23.15
59 Phenanthrene-d10	352196	176098	704392	276458	-21.50
69 Chrysene-d12	358983	179492	717966	281500	-21.58
134 Di-n-octylphthala	503607	251804	1007214	417314	-17.13
77 Perylene-d12	381873	190936	763746	302445	-20.80

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.82	8.32	9.32	8.82	0.00
27 Naphthalene-d8	11.49	10.99	11.99	11.49	0.00
42 Acenaphthene-d10	15.40	14.90	15.90	15.40	0.05
59 Phenanthrene-d10	18.75	18.25	19.25	18.75	0.00
69 Chrysene-d12	23.85	23.35	24.35	23.87	0.07
134 Di-n-octylphthala	25.03	24.53	25.53	25.03	0.03
77 Perylene-d12	26.29	25.79	26.79	26.30	0.06

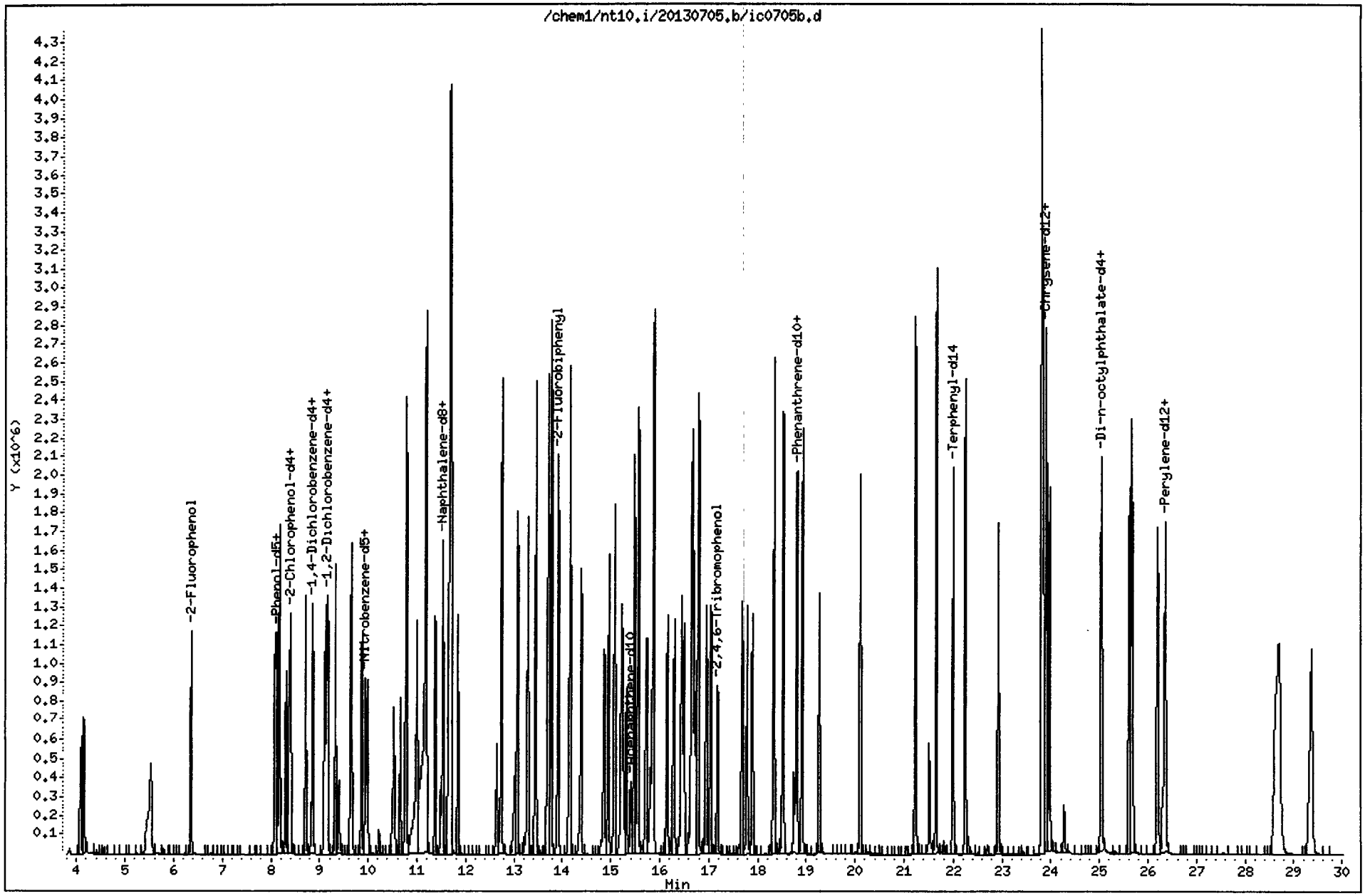
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130705.b/ic0705b.d
Date : 05-JUL-2013 12:51
Client ID:
Sample Info: ABN20

Instrument: nt10.i

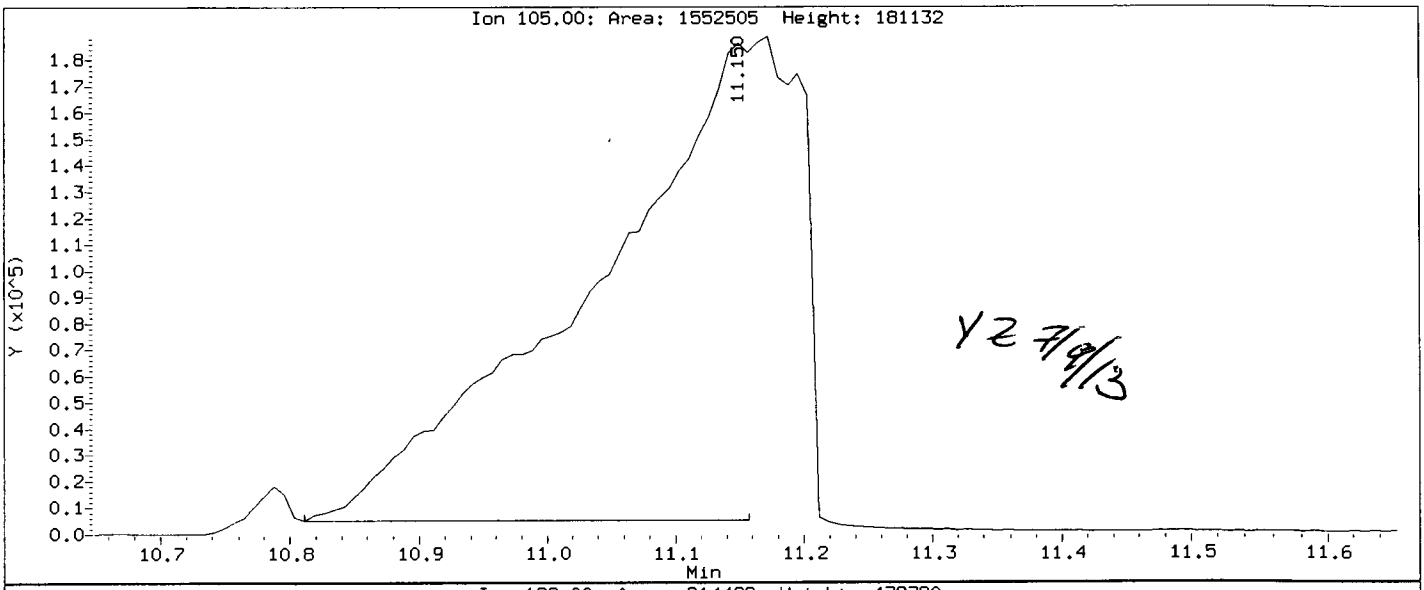
Operator: VTS/YZ
Column diameter: 0.25

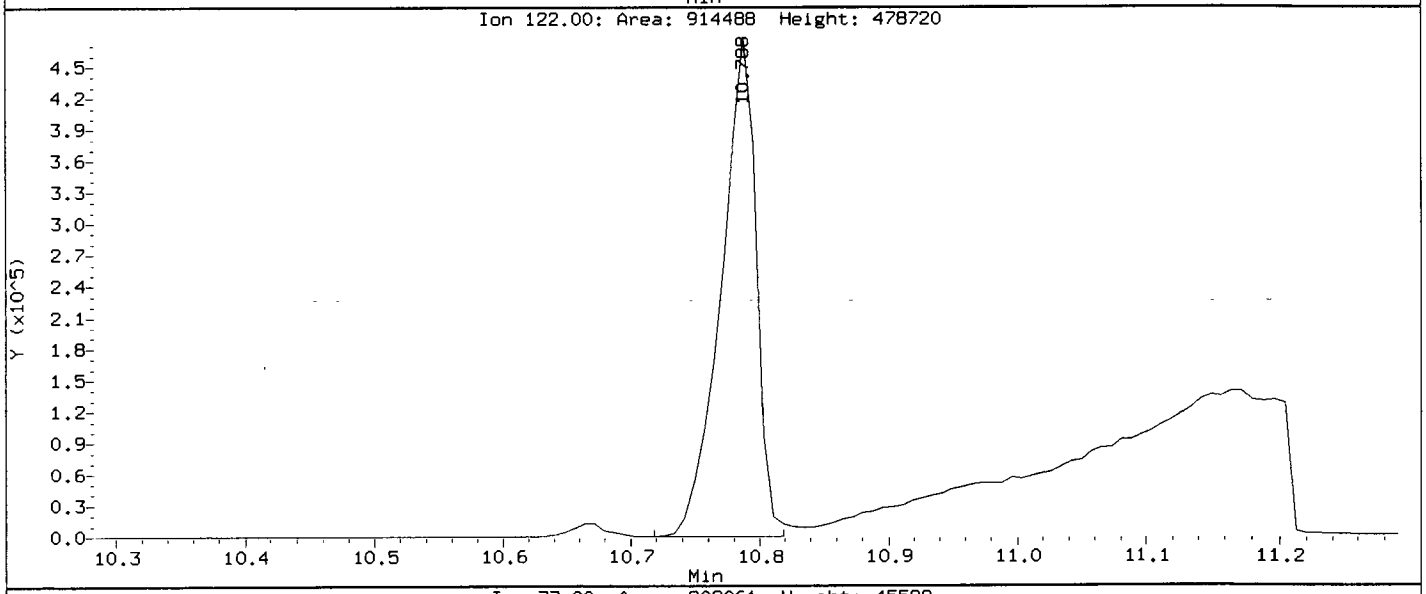
Column phase: ZB-5msi

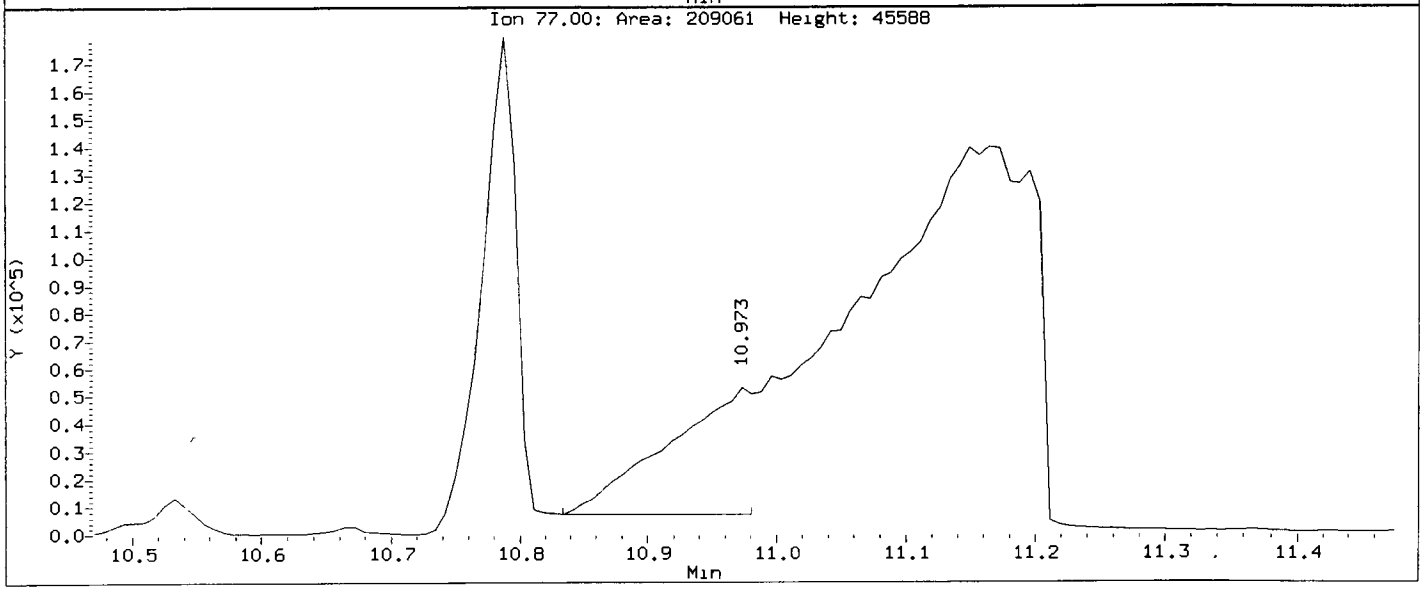


Data File: /chem1/nt10.i/20130705.b/ic0705b.d
Injection Date: 05-JUL-2013 12:51
Instrument: nt10.i
Client Sample ID:

Compound: Benzoic acid
CAS Number: 65-85-0



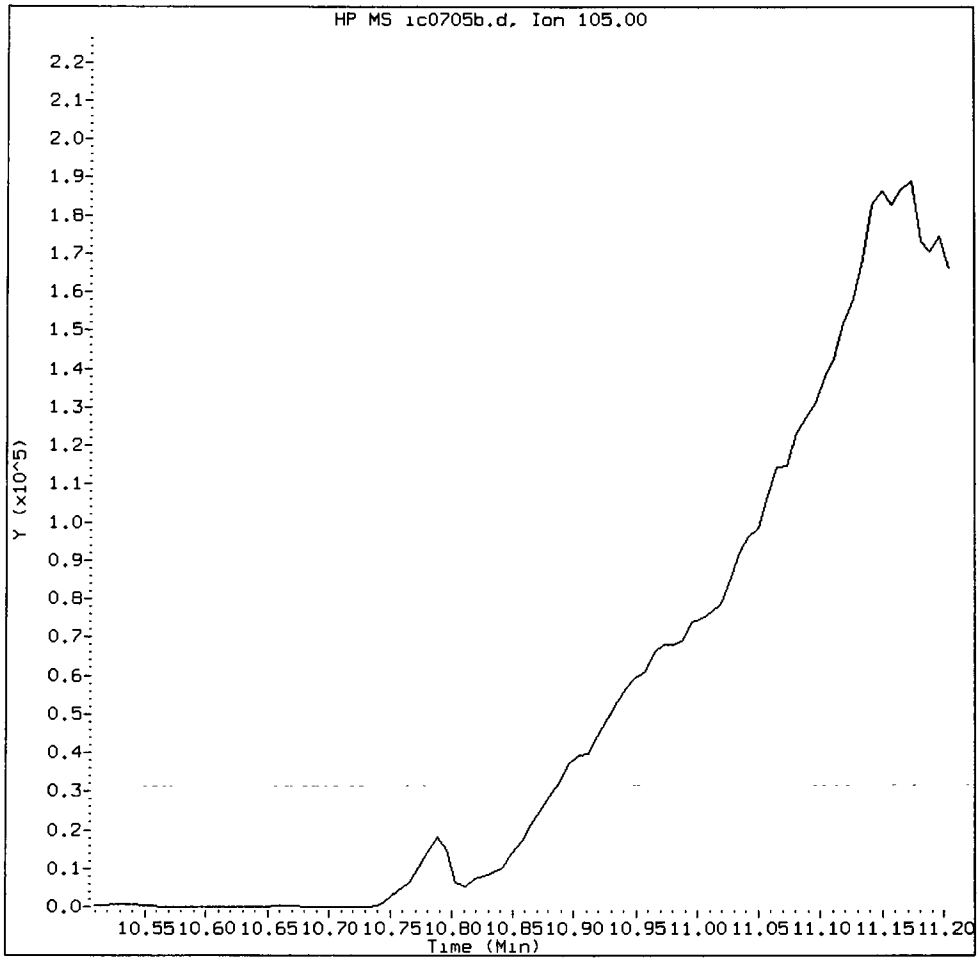




WUTS: 080527

ABN20, /chem1/nt10.i/20130705.b/ic0705b.d

Benzoic acid Amount: 104.89 Area: 2203128



MANUAL INTEGRATION for Benzoic acid

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 7/8/13

CO-ELUTION SUMMARY FOR FILE - ic0705b.d

Lab ID: ABN20, Method: ABN.m, Instrument: nt10.i, Date: 05-JUL-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130705.b/ic0705c.d
Lab Smp Id: ABN0.2
Inj Date : 05-JUL-2013 13:28
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : ABN0.2
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130705.b/ABN.m
Meth Date : 08-Jul-2013 09:52 yev Quant Type: ISTD
Cal Date : 05-JUL-2013 13:28 Cal File: ic0705c.d
Als bottle: 4 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

YZ 7/9/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.343	6.343	(0.719)	7167	0.20000	0.2193
$	2 Phenol-d5	99	8.066	8.067	(0.914)	9233	0.20000	0.2078
	3 Phenol	94	8.090	8.090	(0.917)	9757	0.20000	0.2138
$	5 2-Chlorophenol-d4	132	8.360	8.360	(0.947)	7060	0.20000	0.2235
	4 Bis(2-Chloroethyl)ether	93	8.298	8.298	(0.940)	7939	0.20000	0.2294
	6 2-Chlorophenol	128	8.391	8.391	(0.951)	7284	0.20000	0.2235
	7 1,3-Dichlorobenzene	146	8.708	8.708	(0.987)	7799	0.20000	0.2383
*	8 1,4-Dichlorobenzene-d4	152	8.824	8.825	(1.000)	95267	4.00000	
	9 1,4-Dichlorobenzene	146	8.855	8.856	(1.004)	8214	0.20000	0.2508
$	10 1,2-Dichlorobenzene-d4	152	9.135	9.135	(1.035)	5486	0.20000	0.2465
	12 1,2-Dichlorobenzene	146	9.166	9.158	(1.039)	7267	0.20000	0.2363
	11 Benzyl alcohol	108	9.088	9.089	(1.030)	3836	0.20000	0.2028
	14 2,2'-oxybis(1-Chloropropane)	121	9.391	9.384	(1.064)	2294	0.20000	0.2250
	13 2-Methylphenol	108	9.313	9.314	(1.055)	7392	0.20000	0.2265
	17 Hexachloroethane	117	9.864	9.865	(1.118)	3372	0.20000	0.2319
	16 N-Nitroso-di-n-propylamine	70	9.647	9.648	(1.093)	5346	0.20000	0.2327
	15 4-Methylphenol	108	9.624	9.624	(1.091)	6970	0.20000	0.2119
$	18 Nitrobenzene-d5	82	9.934	9.935	(0.865)	8479	0.20000	0.2184
	19 Nitrobenzene	77	9.973	9.973	(0.869)	7792	0.20000	0.2260
	20 Isophorone	82	10.493	10.493	(0.914)	14142	0.20000	0.2245
	21 2-Nitrophenol	139	10.656	10.656	(0.928)	4679	0.20000	0.2090
	22 2,4-Dimethylphenol	107	10.772	10.772	(0.938)	15005	0.40000	0.4434
	23 Bis(2-Chloroethoxy)methane	93	10.988	10.988	(0.957)	9287	0.20000	0.2358
	24 Benzoic acid	105	10.834	10.857	(0.944)	9959	0.80000	0.3539 (M)
	25 2,4-Dichlorophenol	162	11.173	11.173	(0.973)	10364	0.40000	0.4042
	26 1,2,4-Trichlorobenzene	180	11.365	11.373	(0.990)	6769	0.20000	0.2437
*	27 Naphthalene-d8	136	11.481	11.482	(1.000)	346337	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.527	11.528	(1.004)	19088	0.20000	0.2298
	29 4-Chloroaniline	127	11.643	11.644	(1.014)	14060	0.40000	0.3866
	30 Hexachlorobutadiene	225	11.844	11.845	(1.032)	4142	0.20000	0.2487
	31 4-Chloro-3-methylphenol	107	12.734	12.735	(1.109)	10130	0.40000	0.3537
	32 2-Methylnaphthalene	142	13.067	13.067	(1.138)	12371	0.20000	0.2236
	33 Hexachlorocyclopentadiene	237	13.446	13.447	(0.873)	8315	0.40000	0.4023
	34 2,4,6-Trichlorophenol	196	13.702	13.694	(0.890)	7836	0.40000	0.3706
	35 2,4,5-Trichlorophenol	196	13.764	13.764	(0.894)	7644	0.40000	0.3590
$	36 2-Fluorobiphenyl	172	13.911	13.911	(0.903)	15546	0.20000	0.2301
	37 2-Chloronaphthalene	162	14.143	14.143	(0.919)	12288	0.20000	0.2292
	38 2-Nitroaniline	65	14.367	14.368	(0.933)	4470	0.40000	0.3072
	39 Dimethylphthalate	163	14.839	14.832	(0.964)	14135	0.20000	0.2374
	40 Acenaphthylene	152	15.072	15.064	(0.979)	20300	0.20000	0.2322
	41 2,6-Dinitrotoluene	165	14.932	14.933	(0.970)	5274	0.40000	0.3927
*	42 Acenaphthene-d10	164	15.397	15.397	(1.000)	200079	4.00000	
	43 3-Nitroaniline	138	15.288	15.289	(0.993)	3142	0.40000	0.2750(M)
	44 Acenaphthene	153	15.466	15.467	(1.005)	11777	0.20000	0.2243
	45 2,4-Dinitrophenol	184	15.536	15.528	(1.009)	1260	0.80000	0.1050
	46 Dibenzofuran	168	15.860	15.861	(1.030)	16261	0.20000	0.2281
	47 4-Nitrophenol	109	15.721	15.691	(1.021)	808	0.40000	0.09109(M)
	48 2,4-Dinitrotoluene	165	15.830	15.838	(1.028)	5817	0.40000	0.3305
	50 Diethylphthalate	149	16.456	16.448	(1.069)	14215	0.20000	0.2103
	49 Fluorene	166	16.633	16.633	(1.080)	13620	0.20000	0.2173
	51 4-Chlorophenyl-phenylether	204	16.672	16.672	(1.083)	6966	0.20000	0.2275
	52 4-Nitroaniline	138	16.656	16.649	(1.082)	2623	0.40000	0.2537(H)
	53 4,6-Dinitro-2-methylphenol	198	16.749	16.749	(0.894)	7385	0.80000	0.4486
	54 N-Nitrosodiphenylamine	169	16.934	16.934	(0.904)	8041	0.20000	0.2146
$	55 2,4,6-Tribromophenol	330	17.165	17.165	(1.115)	2207	0.20000	0.1928
	56 4-Bromophenyl-phenylether	248	17.782	17.775	(0.949)	4119	0.20000	0.2143
	57 Hexachlorobenzene	284	17.883	17.883	(0.954)	4955	0.20000	0.2441
	58 Pentachlorophenol	266	18.332	18.325	(0.978)	6383	0.40000	0.3904
*	59 Phenanthrene-d10	188	18.742	18.742	(1.000)	340574	4.00000	
	60 Phenanthrene	178	18.789	18.789	(1.002)	19827	0.20000	0.2332
	61 Anthracene	178	18.905	18.905	(1.009)	19871	0.20000	0.2220
	62 Carbazole	167	19.260	19.261	(1.028)	14367	0.20000	0.2680(M)
	63 Di-n-butylphthalate	149	20.096	20.096	(1.072)	21129	0.20000	0.2083
	64 Fluoranthene	202	21.226	21.226	(1.133)	22822	0.20000	0.2192
	65 Pyrene	202	21.643	21.644	(0.908)	23995	0.20000	0.2161
$	66 Terphenyl-d14	244	21.992	21.992	(0.922)	13229	0.20000	0.2211
	67 Butylbenzylphthalate	149	22.921	22.921	(0.961)	8808	0.20000	0.2056
	68 Benzo(a)anthracene	228	23.827	23.827	(0.999)	24729	0.20000	0.2383
*	69 Chrysene-d12	240	23.842	23.843	(1.000)	361748	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.803	23.796	(0.998)	18104	0.40000	0.4636
	71 Chrysene	228	23.889	23.889	(1.002)	21956	0.20000	0.2334
	72 bis(2-Ethylhexyl)phthalate	149	23.974	23.966	(0.958)	11365	0.20000	0.2135
*	134 Di-n-octylphthalate-d4	153	25.027	25.027	(1.000)	454960	4.00000	
	73 Di-n-octylphthalate	149	25.034	25.035	(1.000)	23909	0.20000	0.2342

	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	25.600	25.600	(0.974)	20954	0.20000	0.2101
75	Benzo(k)fluoranthene	252	25.646	25.646	(0.976)	28501	0.20000	0.2298
76	Benzo(a)pyrene	252	26.173	26.173	(0.996)	20096	0.20000	0.2197
* 77	Perylene-d12	264	26.281	26.281	(1.000)	373945	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.583	28.591	(1.088)	21450	0.20000	0.1987
79	Dibenzo(a,h)anthracene	278	28.653	28.645	(1.090)	16117	0.20000	0.1962
80	Benzo(g,h,i)perylene	276	29.259	29.267	(1.113)	19605	0.20000	0.2136
90	N-Nitrosodimethylamine	74	4.050	4.050	(0.459)	8452	0.40000	0.3990 (M)
91	Aniline	93	8.159	8.159	(0.925)	22455	0.20000	0.2332
93	Benzidine	184	21.512	21.505	(0.902)	13020	0.40000	0.8045 (M)
103	Pyridine	79	4.142	4.135	(0.469)	7610	0.40000	0.4114 (M)
105	1-methylnaphthalene	142	13.284	13.284	(1.157)	11410	0.20000	0.2255
111	Azobenzene (1,2-DP-Hydrazine)	77	17.026	17.027	(1.106)	14902	0.20000	0.2291
187	Total Benzofluoranthenes	252	25.646	25.646	(0.976)	48139	0.40000	0.4504
99	Perylene	252	26.328	26.328	(1.002)	19972	0.20000	0.2257
98	Retene	219	22.239	22.240	(0.933)	9224	0.20000	0.2168
120	2,3,4,6-Tetrachlorophenol	232	16.146	16.139	(1.049)	2994	0.20000	0.1819

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: nt10.i
Lab File ID: ic0705c.d
Lab Smp Id: ABN0.2
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130705.b/ABN.m
Misc Info:

Calibration Date: 05-JUL-2013
Calibration Time: 12:14

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	97290	48645	194580	95267	-2.08
27 Naphthalene-d8	336205	168102	672410	346337	3.01
42 Acenaphthene-d10	202661	101330	405322	200079	-1.27
59 Phenanthrene-d10	352196	176098	704392	340574	-3.30
69 Chrysene-d12	358983	179492	717966	361748	0.77
134 Di-n-octylphthala	503607	251804	1007214	454960	-9.66
77 Perylene-d12	381873	190936	763746	373945	-2.08

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.82	8.32	9.32	8.82	-0.01
27 Naphthalene-d8	11.49	10.99	11.99	11.48	-0.07
42 Acenaphthene-d10	15.40	14.90	15.90	15.40	0.00
59 Phenanthrene-d10	18.75	18.25	19.25	18.74	-0.04
69 Chrysene-d12	23.85	23.35	24.35	23.84	-0.03
134 Di-n-octylphthala	25.03	24.53	25.53	25.03	0.00
77 Perylene-d12	26.29	25.79	26.79	26.28	-0.03

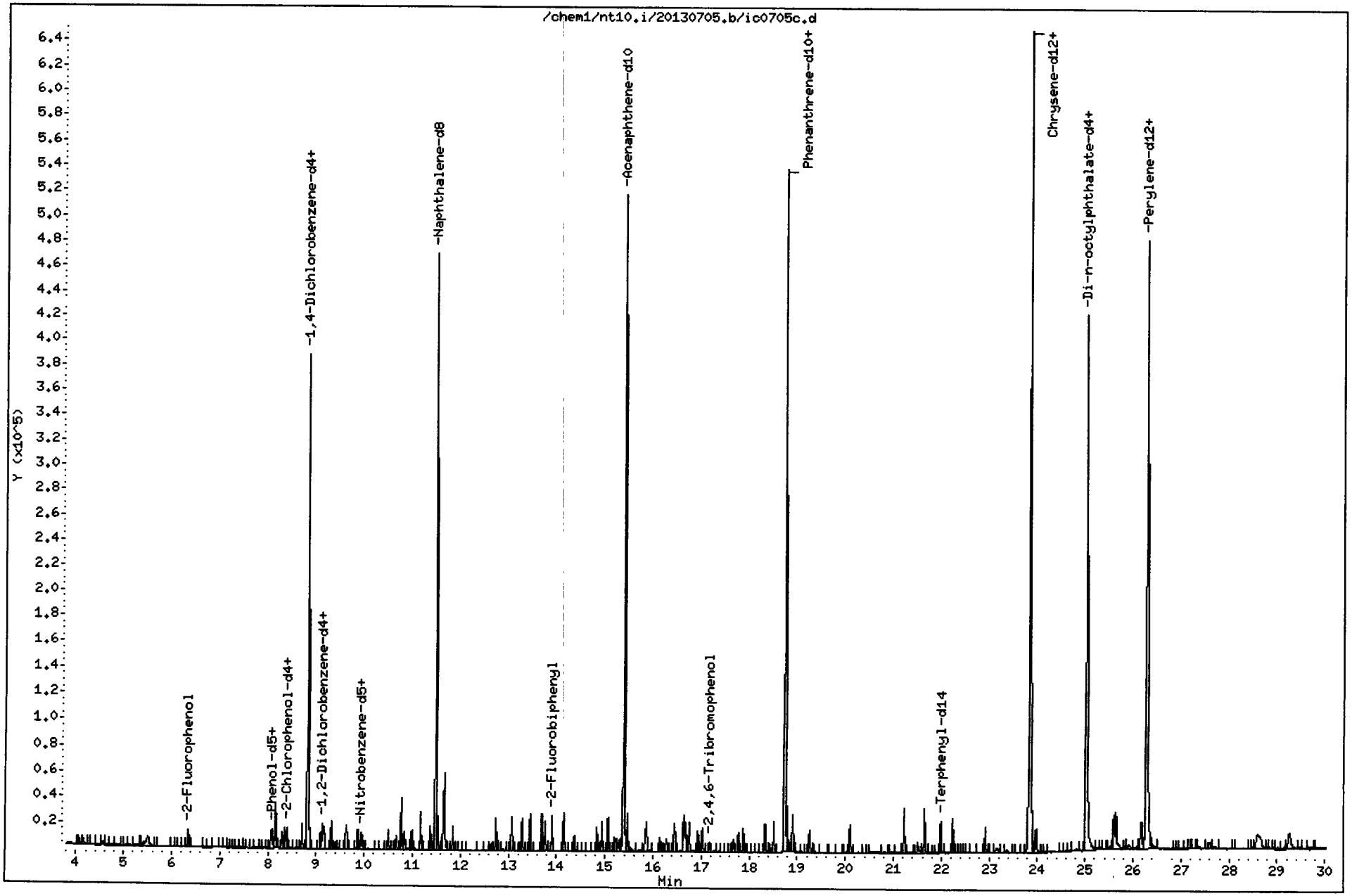
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130705.b/ic0705c.d
Date : 05-JUL-2013 13:28
Client ID:
Sample Info: ABN0.2

Instrument: nt10.i

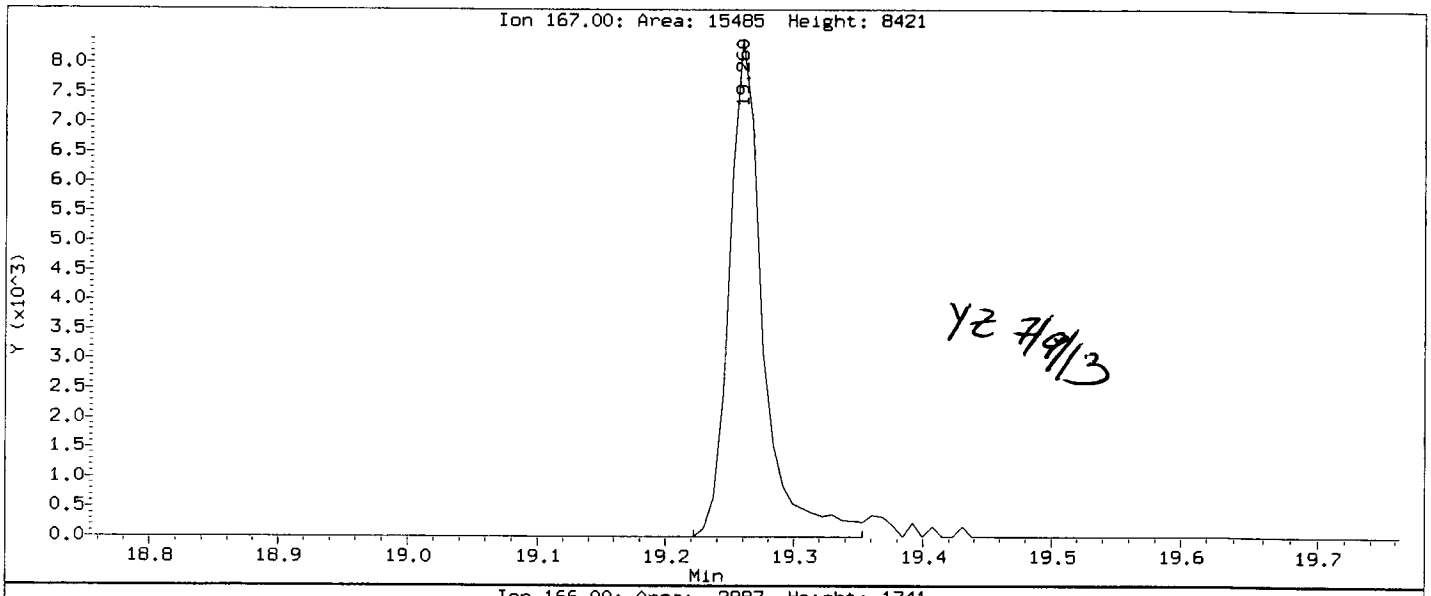
Operator: VTS/YZ
Column diameter: 0.25

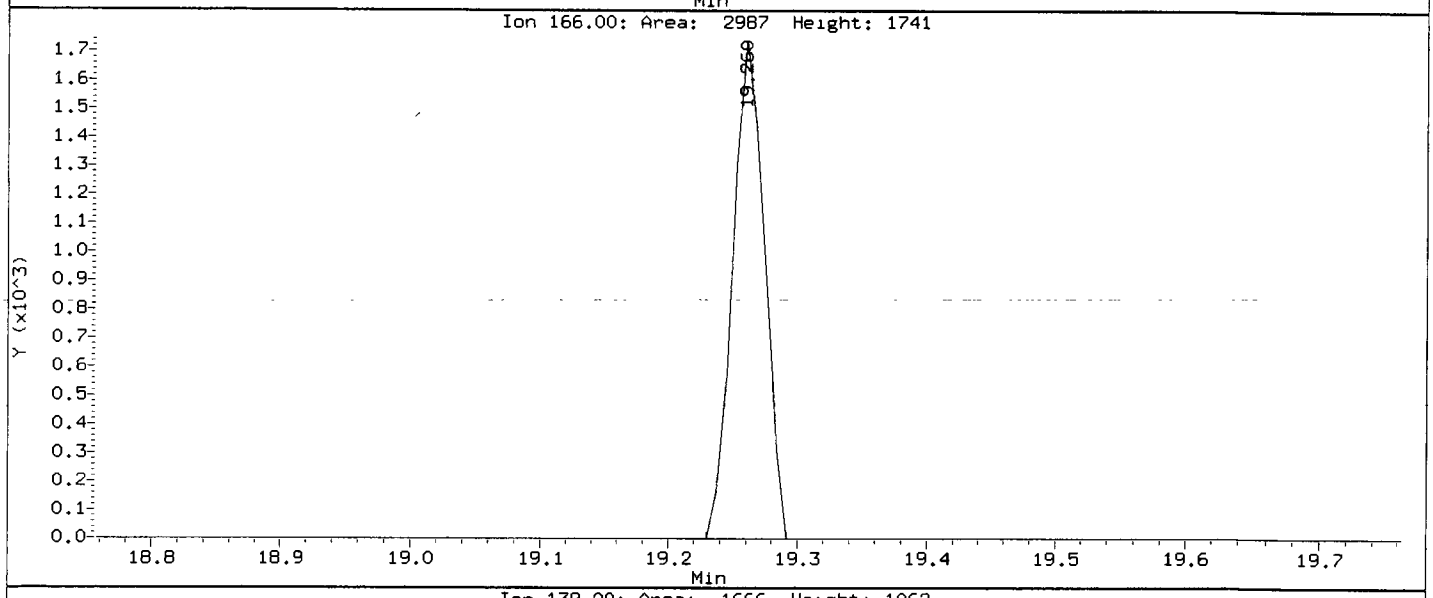
Column phase: ZB-5msi

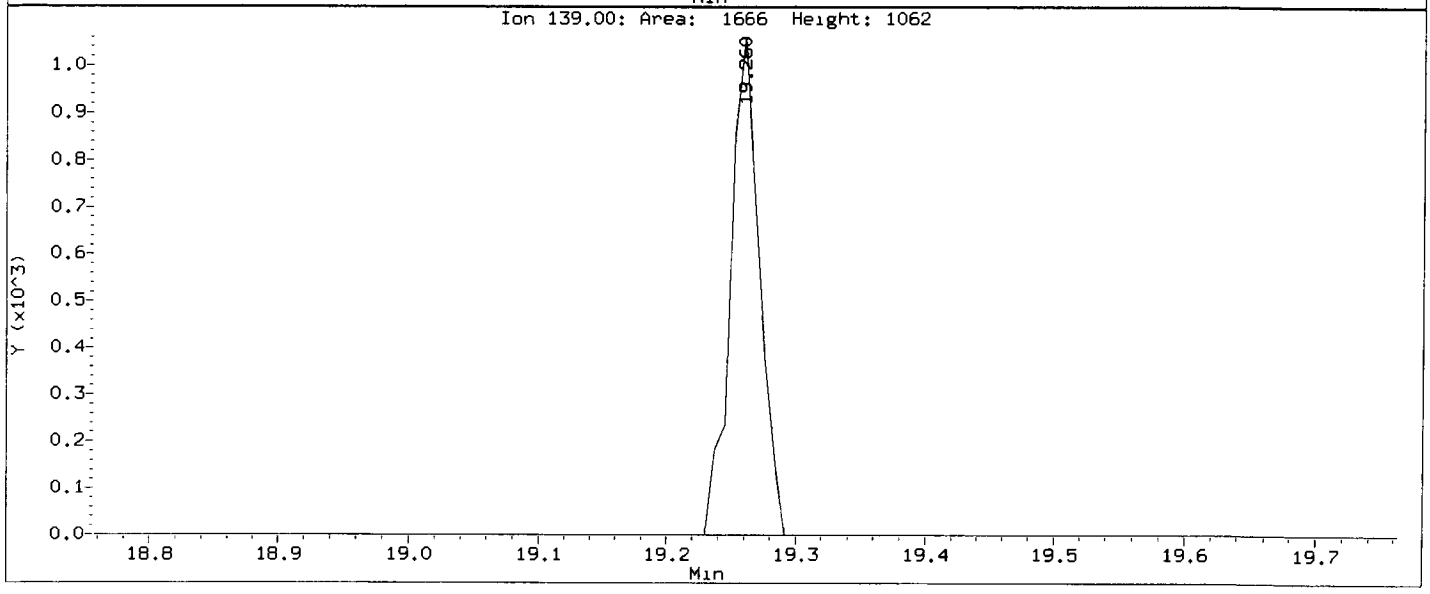


Data File: /chem1/nt10.1/20130705.b/1c0705c.d
Injection Date: 05-JUL-2013 13:28
Instrument: nt10.1
Client Sample ID:

Compound: Carbazole
CAS Number: 86-74-8



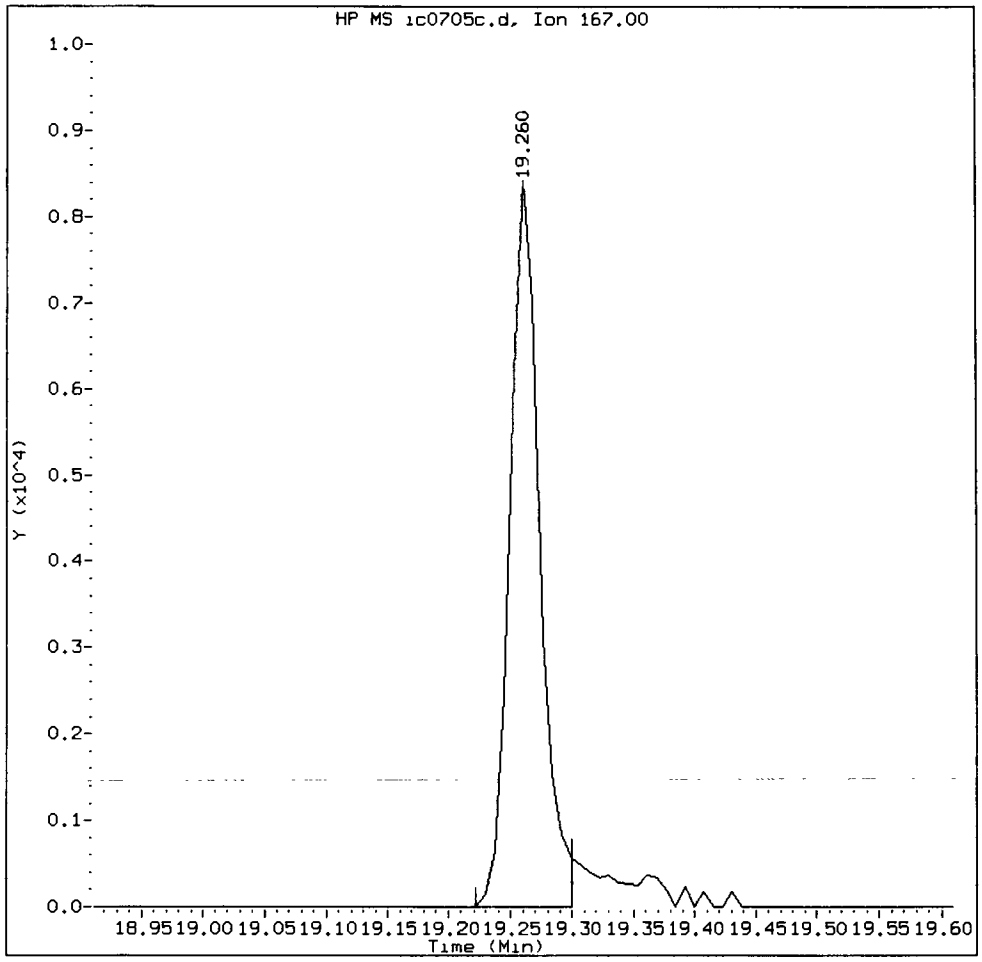




WU79 : 00555

ABN0.2, /chem1/nt10.i/20130705.b/ic0705c.d

Carbazole Amount: 0.27 Area: 14367



MANUAL INTEGRATION for Carbazole

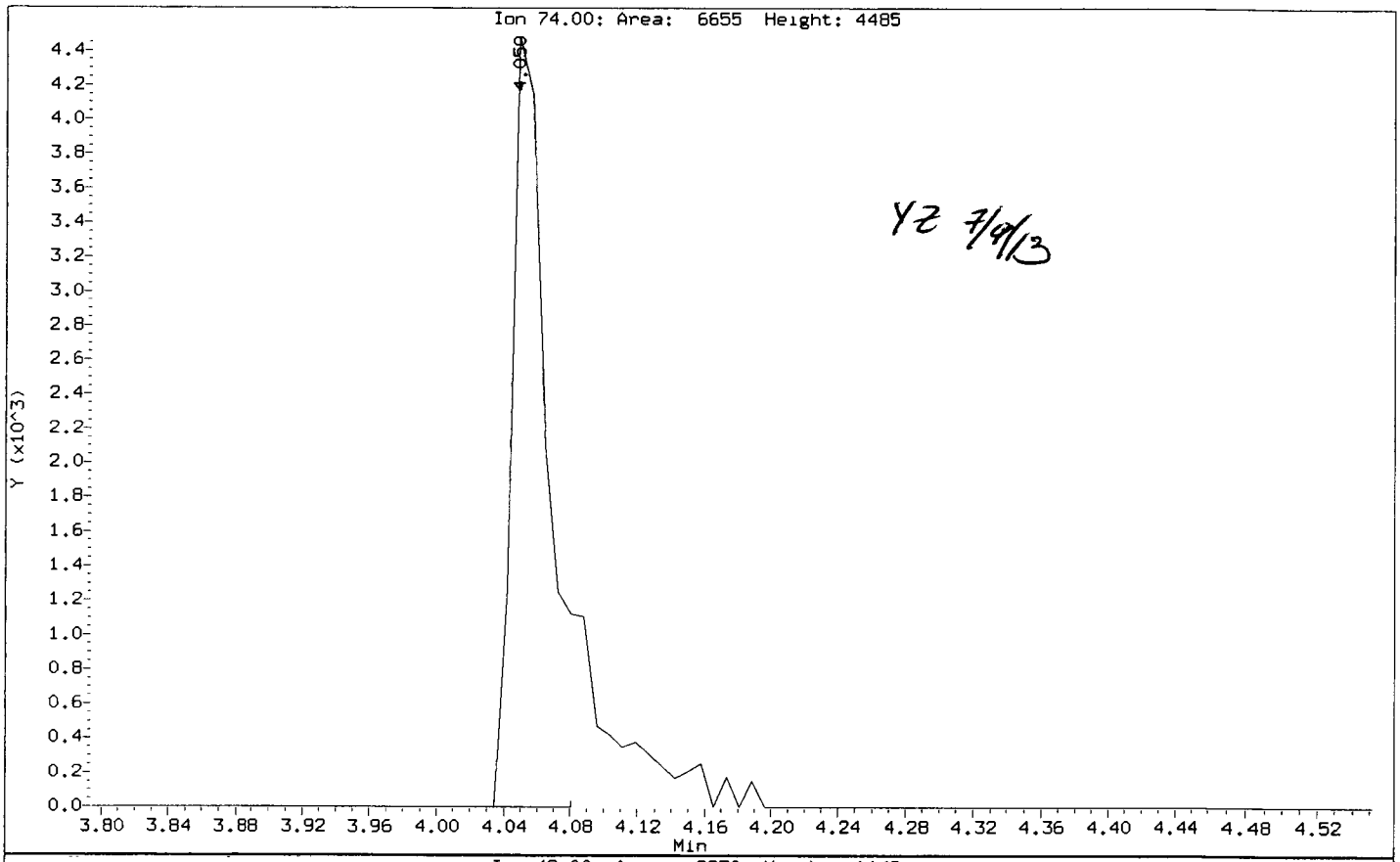
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

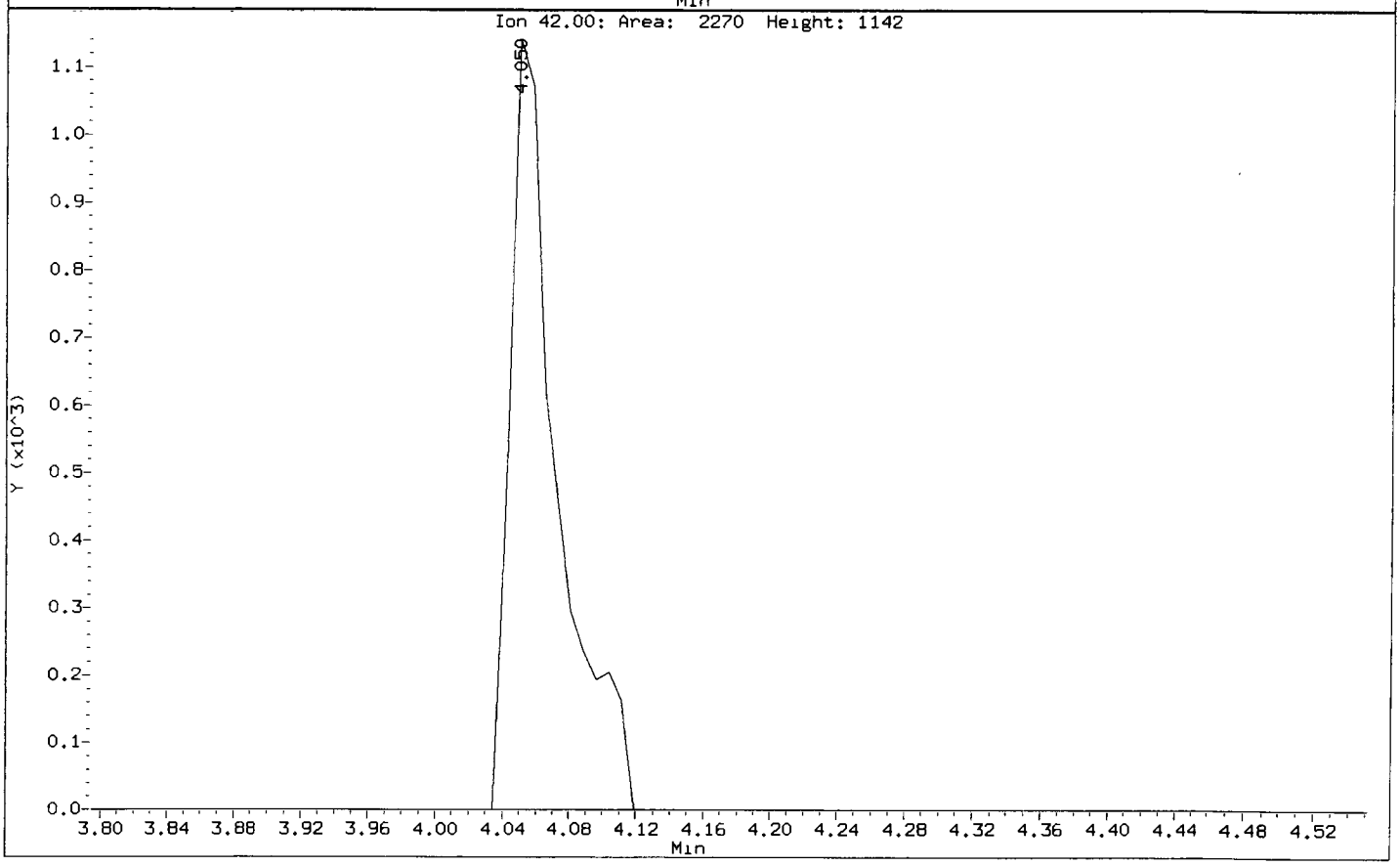
Analyst: YZ Date: 7/9/13

Data File: /chem1/nt10.1/20130705.b/1c0705c.d
Injection Date: 05-JUL-2013 13:28
Instrument: nt10.1
Client Sample ID:

Compound: N-Nitrosodimethylamine
CAS Number:



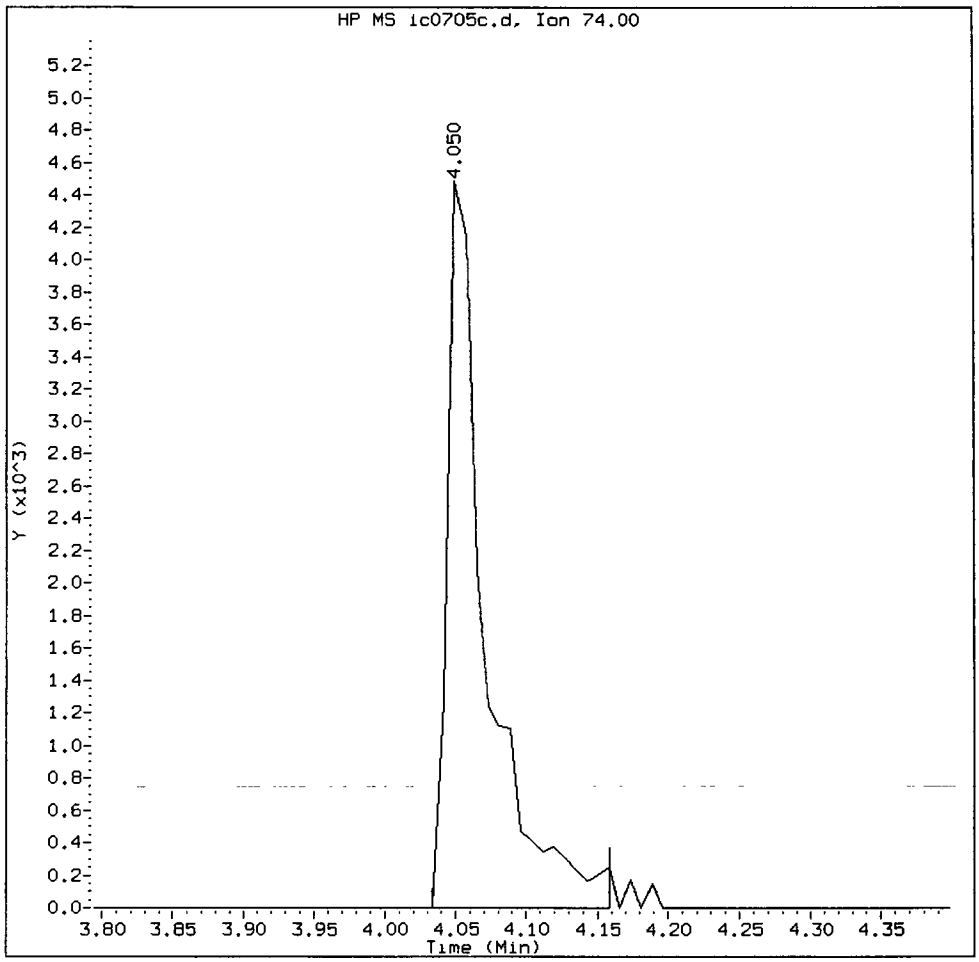
YZ 7/9/13



WUTD : 08037

ABN0.2, /chem1/nt10.i/20130705.b/ic0705c.d

N-Nitrosodimethylamine Amount: 0.40 Area: 8452



MANUAL INTEGRATION for N-Nitrosodimethylamine

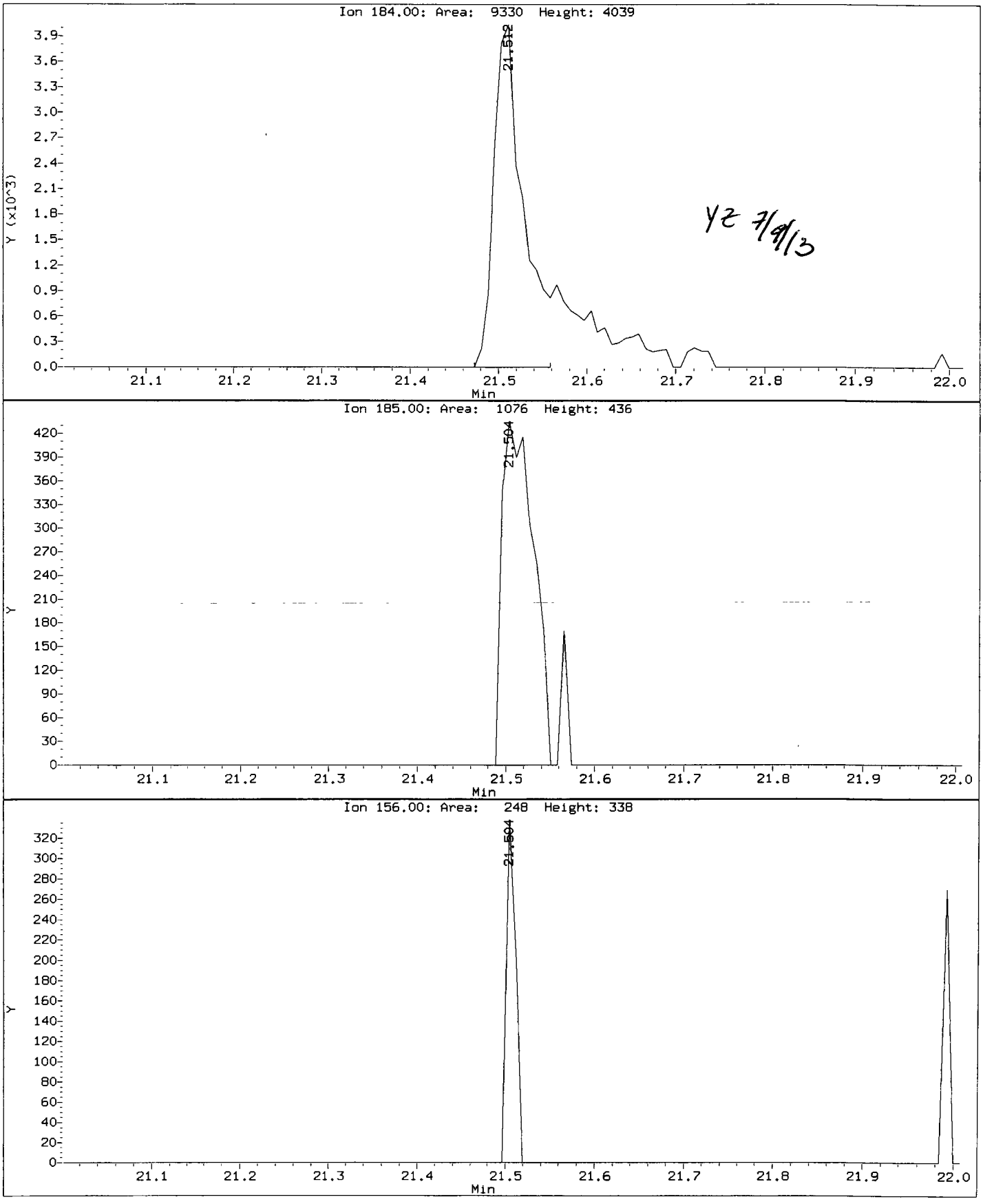
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 7/9/13

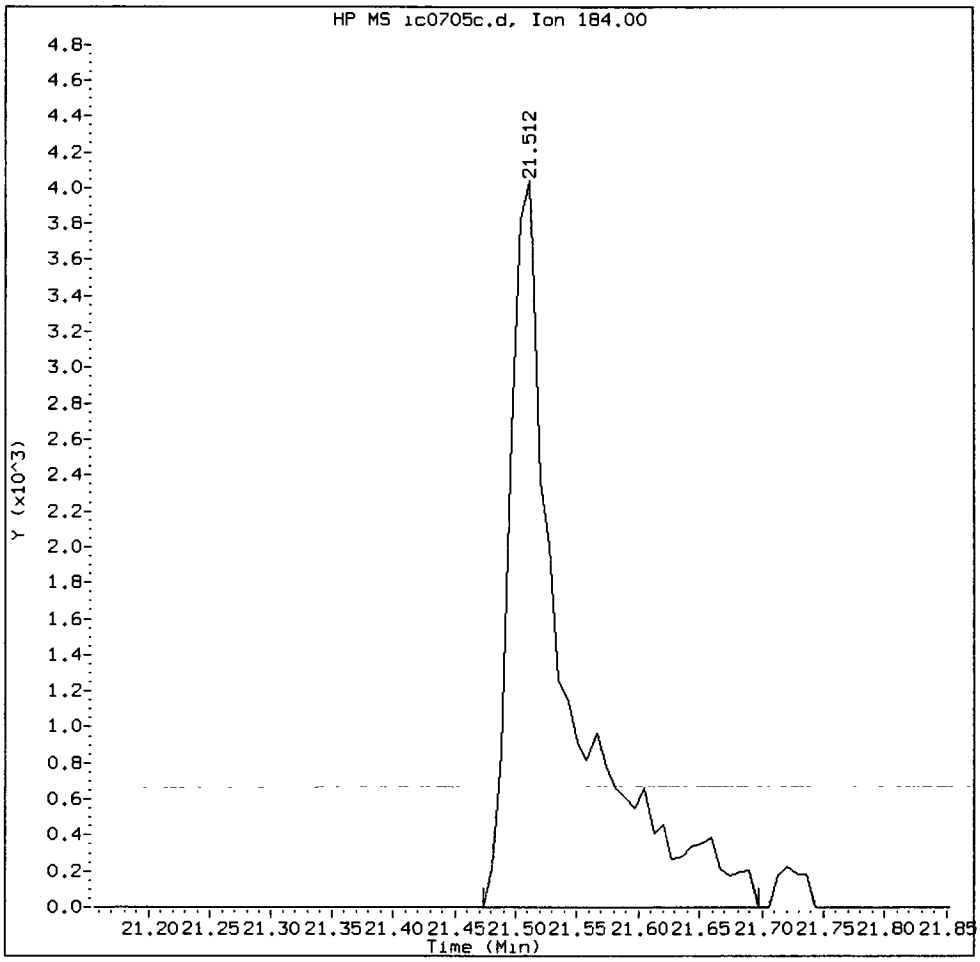
Data File: /chem1/nt10.1/20130705.b/1c0705c.d
Injection Date: 05-JUL-2013 13:28
Instrument: nt10.1
Client Sample ID:

Compound: Benzidine
CAS Number:



ABN0.2, /chem1/nt10.i/20130705.b/ic0705c.d

Benzidine Amount: 0.80 Area: 13020



MANUAL INTEGRATION for Benzidine

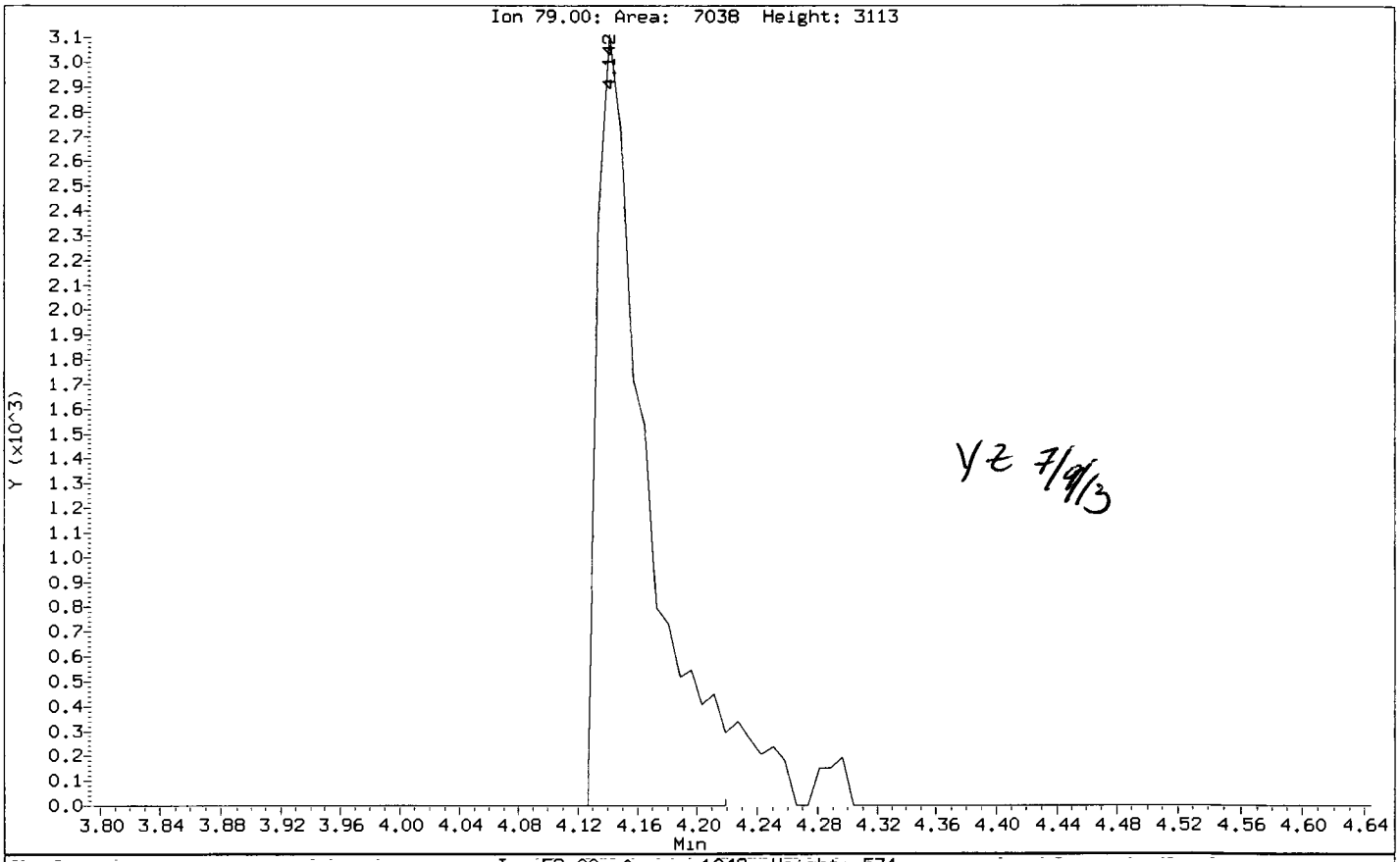
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

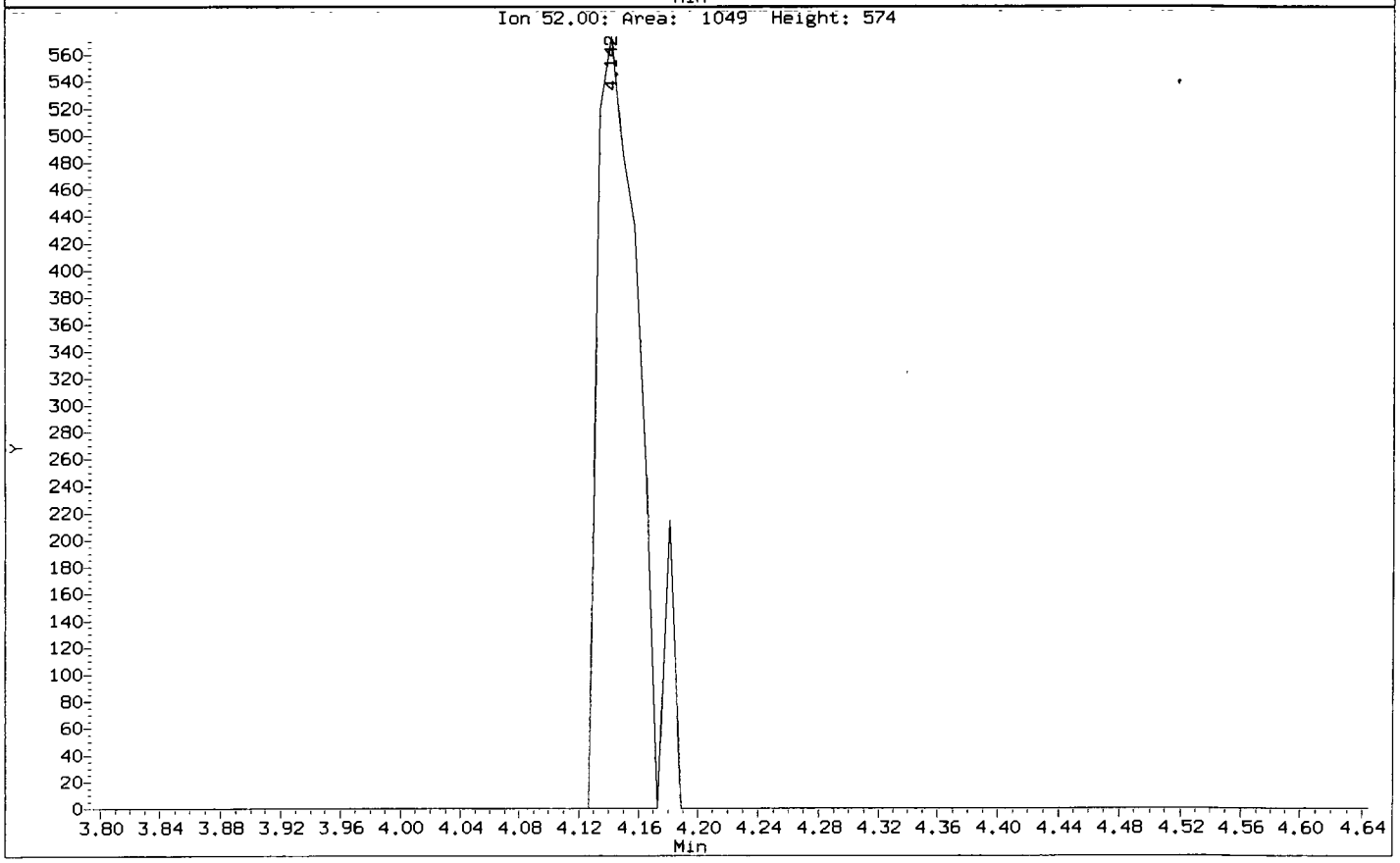
Analyst: JZ Date: 7/9/13

Data File: /chem1/nt10.1/20130705.b/1c0705c.d
Injection Date: 05-JUL-2013 13:28
Instrument: nt10.1
Client Sample ID:

Compound: Pyridine
CAS Number:

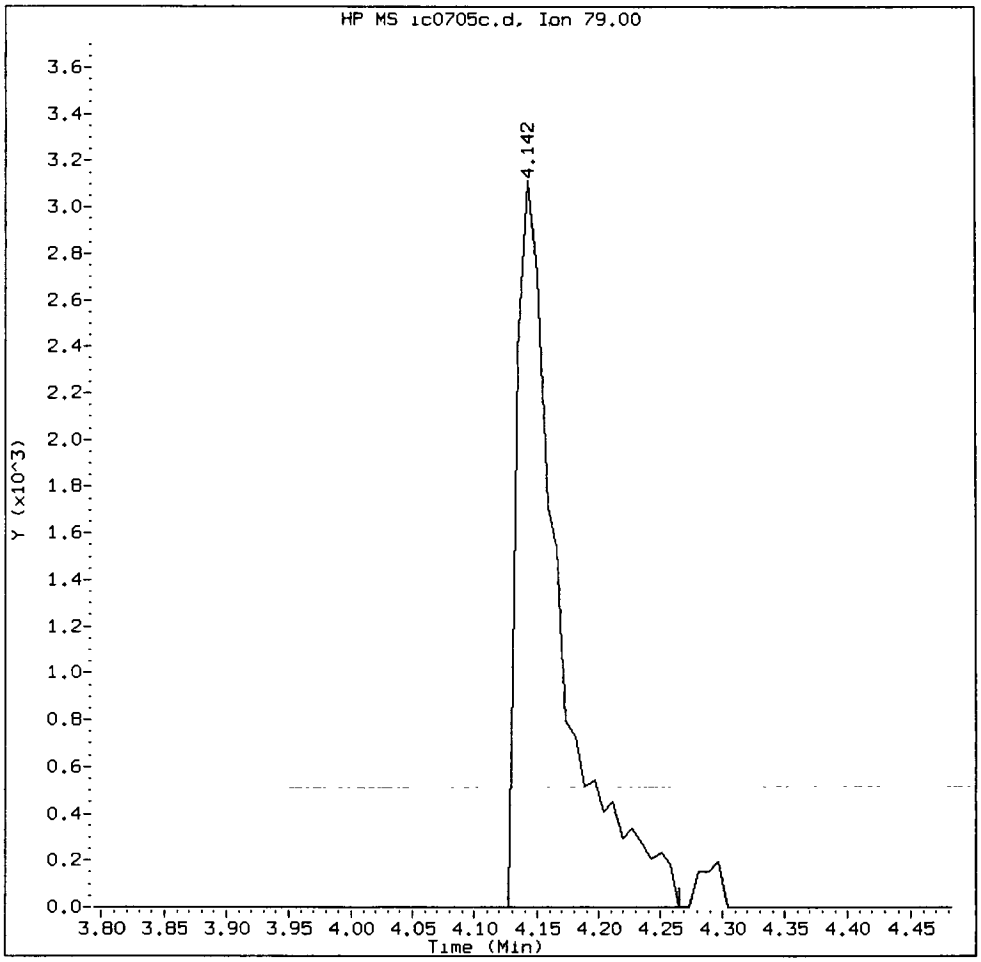


YZ 7/9/13



ABN0.2, /chem1/nt10.i/20130705.b/ic0705c.d

Pyridine Amount: 0.41 Area: 7610



MANUAL INTEGRATION for Pyridine

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: VZ Date: 7/9/13

CO-ELUTION SUMMARY FOR FILE - ic0705c.d

Lab ID: ABN0.2, Method: ABN.m, Instrument: nt10.i, Date: 05-JUL-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130705.b/ic0705d.d
Lab Smp Id: ABN1.0
Inj Date : 05-JUL-2013 14:05
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : ABN1.0
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130705.b/ABN.m
Meth Date : 08-Jul-2013 09:52 yev Quant Type: ISTD
Cal Date : 05-JUL-2013 14:05 Cal File: ic0705d.d
Als bottle: 5 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.343	6.343	(0.719)	36656	1.00000	0.9739
$	2 Phenol-d5	99	8.067	8.067	(0.914)	48912	1.00000	0.9540
	3 Phenol	94	8.090	8.090	(0.917)	53495	1.00000	1.011
$	5 2-Chlorophenol-d4	132	8.360	8.360	(0.947)	35456	1.00000	0.9753
	4 Bis(2-Chloroethyl)ether	93	8.298	8.298	(0.940)	41301	1.00000	1.031
	6 2-Chlorophenol	128	8.391	8.391	(0.951)	37621	1.00000	0.9991
	7 1,3-Dichlorobenzene	146	8.708	8.708	(0.987)	38511	1.00000	1.018
*	8 1,4-Dichlorobenzene-d4	152	8.825	8.825	(1.000)	100833	4.00000	
	9 1,4-Dichlorobenzene	146	8.856	8.856	(1.004)	37555	1.00000	0.9951
$	10 1,2-Dichlorobenzene-d4	152	9.135	9.135	(1.035)	25911	1.00000	1.006
	12 1,2-Dichlorobenzene	146	9.158	9.158	(1.038)	36894	1.00000	1.034
	11 Benzyl alcohol	108	9.089	9.089	(1.030)	20521	1.00000	0.9416
	14 2,2'-oxybis(1-Chloropropane)	121	9.391	9.384	(1.064)	12413	1.00000	1.046
	13 2-Methylphenol	108	9.314	9.314	(1.055)	36609	1.00000	0.9738
	17 Hexachloroethane	117	9.865	9.865	(1.118)	16576	1.00000	0.9904
	16 N-Nitroso-di-n-propylamine	70	9.648	9.648	(1.093)	26503	1.00000	0.9983
	15 4-Methylphenol	108	9.632	9.624	(1.091)	37881	1.00000	0.9952
$	18 Nitrobenzene-d5	82	9.935	9.935	(0.865)	43216	1.00000	0.9895
	19 Nitrobenzene	77	9.973	9.973	(0.869)	38838	1.00000	0.9979
	20 Isophorone	82	10.493	10.493	(0.914)	68734	1.00000	0.9712
	21 2-Nitrophenol	139	10.656	10.656	(0.928)	25081	1.00000	0.9893
	22 2,4-Dimethylphenol	107	10.764	10.772	(0.938)	77204	2.00000	2.019
	23 Bis(2-Chloroethoxy)methane	93	10.988	10.988	(0.957)	45420	1.00000	1.019
	24 Benzoic acid	105	10.895	10.857	(0.949)	97602	4.00000	3.070
	25 2,4-Dichlorophenol	162	11.173	11.173	(0.973)	57544	2.00000	1.988
	26 1,2,4-Trichlorobenzene	180	11.366	11.373	(0.990)	31829	1.00000	1.016
*	27 Naphthalene-d8	136	11.482	11.482	(1.000)	357288	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.528	11.528	(1.004)	93146	1.00000	0.9951
	29 4-Chloroaniline	127	11.644	11.644	(1.014)	86256	2.00000	2.083
	30 Hexachlorobutadiene	225	11.845	11.845	(1.032)	18687	1.00000	0.9945
	31 4-Chloro-3-methylphenol	107	12.735	12.735	(1.109)	61519	2.00000	1.908
	32 2-Methylnaphthalene	142	13.067	13.067	(1.138)	61604	1.00000	0.9874
	33 Hexachlorocyclopentadiene	237	13.447	13.447	(0.873)	45433	2.00000	1.875
	34 2,4,6-Trichlorophenol	196	13.694	13.694	(0.889)	48684	2.00000	1.950
	35 2,4,5-Trichlorophenol	196	13.764	13.764	(0.894)	47877	2.00000	1.906
$	36 2-Fluorobiphenyl	172	13.911	13.911	(0.903)	76115	1.00000	0.9632
	37 2-Chloronaphthalene	162	14.143	14.143	(0.919)	61899	1.00000	0.9830
	38 2-Nitroaniline	65	14.368	14.368	(0.933)	32452	2.00000	1.889
	39 Dimethylphthalate	163	14.840	14.832	(0.964)	70820	1.00000	1.008
	40 Acenaphthylene	152	15.064	15.064	(0.978)	102286	1.00000	0.9962
	41 2,6-Dinitrotoluene	165	14.933	14.933	(0.970)	32216	2.00000	2.024
*	42 Acenaphthene-d10	164	15.397	15.397	(1.000)	215657	4.00000	
	43 3-Nitroaniline	138	15.289	15.289	(0.993)	28351	2.00000	2.084
	44 Acenaphthene	153	15.467	15.467	(1.005)	59671	1.00000	0.9711
	45 2,4-Dinitrophenol	184	15.528	15.528	(1.009)	34494	4.00000	2.657
	46 Dibenzofuran	168	15.861	15.861	(1.030)	82005	1.00000	0.9803
	47 4-Nitrophenol	109	15.691	15.691	(1.019)	11086	2.00000	1.158
	48 2,4-Dinitrotoluene	165	15.838	15.838	(1.029)	41163	2.00000	1.975
	50 Diethylphthalate	149	16.456	16.448	(1.069)	75245	1.00000	0.9491
	49 Fluorene	166	16.633	16.633	(1.080)	72871	1.00000	0.9912
	51 4-Chlorophenyl-phenylether	204	16.672	16.672	(1.083)	36511	1.00000	1.015
	52 4-Nitroaniline	138	16.657	16.649	(1.082)	24499	2.00000	1.983
	53 4,6-Dinitro-2-methylphenol	198	16.749	16.749	(0.894)	63941	4.00000	3.615
	54 N-Nitrosodiphenylamine	169	16.934	16.934	(0.904)	46715	1.00000	1.057
$	55 2,4,6-Tribromophenol	330	17.165	17.165	(1.115)	13185	1.00000	0.9764
	56 4-Bromophenyl-phenylether	248	17.775	17.775	(0.948)	21711	1.00000	0.9695
	57 Hexachlorobenzene	284	17.883	17.883	(0.954)	24535	1.00000	1.028
	58 Pentachlorophenol	266	18.325	18.325	(0.978)	36309	2.00000	1.906
*	59 Phenanthrene-d10	188	18.742	18.742	(1.000)	364293	4.00000	
	60 Phenanthrene	178	18.789	18.789	(1.002)	100077	1.00000	1.005
	61 Anthracene	178	18.905	18.905	(1.009)	104138	1.00000	0.9951
	62 Carbazole	167	19.261	19.261	(1.028)	78827	1.00000	1.235
	63 Di-n-butylphthalate	149	20.096	20.096	(1.072)	111912	1.00000	0.9455
	64 Fluoranthene	202	21.226	21.226	(1.133)	121131	1.00000	0.9911
	65 Pyrene	202	21.644	21.644	(0.908)	122960	1.00000	0.9804
$	66 Terphenyl-d14	244	21.992	21.992	(0.922)	67019	1.00000	0.9933
	67 Butylbenzylphthalate	149	22.921	22.921	(0.961)	47544	1.00000	0.9749
	68 Benzo(a)anthracene	228	23.827	23.827	(0.999)	116519	1.00000	0.9969
*	69 Chrysene-d12	240	23.843	23.843	(1.000)	373625	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.796	23.796	(0.998)	88560	2.00000	2.006
	71 Chrysene	228	23.889	23.889	(1.002)	104630	1.00000	0.9868
	72 bis(2-Ethylhexyl)phthalate	149	23.974	23.966	(0.958)	62758	1.00000	1.024
*	134 Di-n-octylphthalate-d4	153	25.027	25.027	(1.000)	475855	4.00000	
	73 Di-n-octylphthalate	149	25.035	25.035	(1.000)	118346	1.00000	1.015

	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	25.600	25.600	(0.974)	106504	1.00000	0.9332
75	Benzo(k)fluoranthene	252	25.646	25.646	(0.976)	137336	1.00000	0.9705
76	Benzo(a)pyrene	252	26.173	26.173	(0.996)	100569	1.00000	0.9614
* 77	Perylene-d12	264	26.281	26.281	(1.000)	391862	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.583	28.591	(1.088)	117194	1.00000	0.9456
79	Dibenzo(a,h)anthracene	278	28.645	28.645	(1.090)	90264	1.00000	0.9605
80	Benzo(g,h,i)perylene	276	29.259	29.267	(1.113)	101745	1.00000	0.9670
90	N-Nitrosodimethylamine	74	4.050	4.050	(0.459)	47687	2.00000	1.942
91	Aniline	93	8.159	8.159	(0.925)	115008	1.00000	1.029
93	Benzidine	184	21.505	21.505	(0.902)	45853	2.00000	2.716
103	Pyridine	79	4.127	4.135	(0.468)	43181	2.00000	2.014
105	1-methylnaphthalene	142	13.284	13.284	(1.157)	55440	1.00000	0.9744
111	Azobenzene (1,2-DP-Hydrazine)	77	17.027	17.027	(1.106)	77383	1.00000	1.010
187	Total Benzofluoranthenes	252	25.646	25.646	(0.976)	240179	2.00000	1.960
99	Perylene	252	26.328	26.328	(1.002)	100603	1.00000	0.9946
98	Retene	219	22.240	22.240	(0.933)	48743	1.00000	1.008
120	2,3,4,6-Tetrachlorophenol	232	16.147	16.139	(1.049)	18474	1.00000	0.9540

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0705d.d
Lab Smp Id: ABN1.0
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130705.b/ABN.m
Misc Info:

Calibration Date: 05-JUL-2013
Calibration Time: 12:14

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	97290	48645	194580	100833	3.64
27 Naphthalene-d8	336205	168102	672410	357288	6.27
42 Acenaphthene-d10	202661	101330	405322	215657	6.41
59 Phenanthrene-d10	352196	176098	704392	364293	3.43
69 Chrysene-d12	358983	179492	717966	373625	4.08
134 Di-n-octylphthala	503607	251804	1007214	475855	-5.51
77 Perylene-d12	381873	190936	763746	391862	2.62

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.82	8.32	9.32	8.82	0.00
27 Naphthalene-d8	11.49	10.99	11.99	11.48	-0.07
42 Acenaphthene-d10	15.40	14.90	15.90	15.40	0.00
59 Phenanthrene-d10	18.75	18.25	19.25	18.74	-0.04
69 Chrysene-d12	23.85	23.35	24.35	23.84	-0.03
134 Di-n-octylphthala	25.03	24.53	25.53	25.03	0.00
77 Perylene-d12	26.29	25.79	26.79	26.28	-0.03

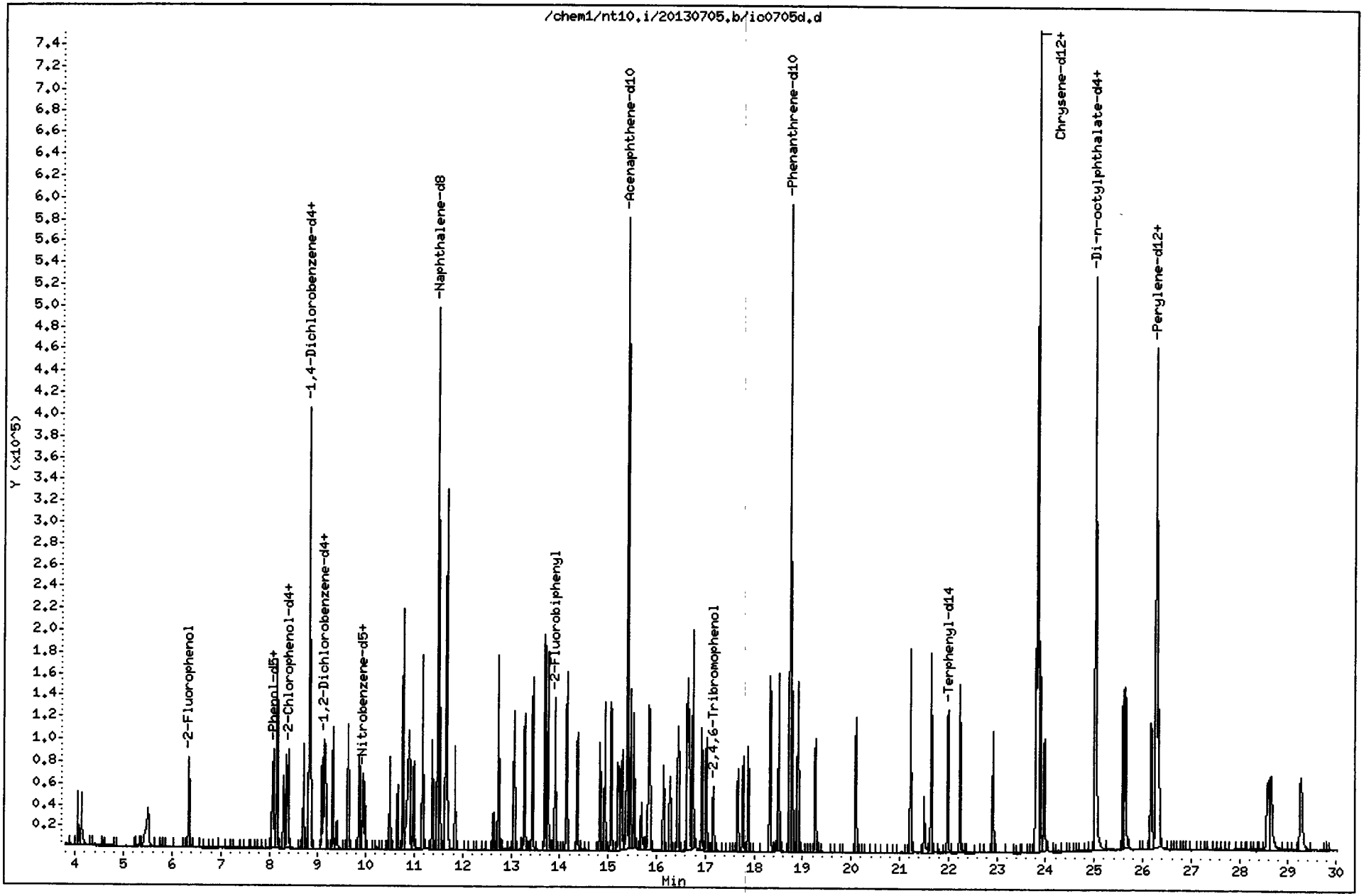
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130705.b/ic0705d.d
Date : 05-JUL-2013 14:05
Client ID:
Sample Info: ABN1.0

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - ic0705d.d

Lab ID: ABN1.0, Method: ABN.m, Instrument: nt10.i, Date: 05-JUL-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 7/9/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130705.b/ic0705e.d
Lab Smp Id: ABN10
Inj Date : 05-JUL-2013 14:42
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : ABN10
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130705.b/ABN.m
Meth Date : 08-Jul-2013 09:52 yev Quant Type: ISTD
Cal Date : 05-JUL-2013 14:42 Cal File: ic0705e.d
Als bottle: 6 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.343	6.343	(0.719)	317675	10.0000	9.763
$	2 Phenol-d5	99	8.075	8.067	(0.915)	451370	10.0000	10.18
	3 Phenol	94	8.105	8.090	(0.918)	447714	10.0000	9.792
$	5 2-Chlorophenol-d4	132	8.368	8.360	(0.948)	307599	10.0000	9.787
	4 Bis(2-Chloroethyl)ether	93	8.306	8.298	(0.941)	330850	10.0000	9.555
	6 2-Chlorophenol	128	8.399	8.391	(0.952)	314686	10.0000	9.666
	7 1,3-Dichlorobenzene	146	8.716	8.708	(0.988)	311335	10.0000	9.516
*	8 1,4-Dichlorobenzene-d4	152	8.825	8.825	(1.000)	87173	4.00000	
	9 1,4-Dichlorobenzene	146	8.864	8.856	(1.004)	308352	10.0000	9.450
$	10 1,2-Dichlorobenzene-d4	152	9.135	9.135	(1.035)	210258	10.0000	9.443
	12 1,2-Dichlorobenzene	146	9.166	9.158	(1.039)	291915	10.0000	9.465
	11 Benzyl alcohol	108	9.096	9.089	(1.031)	193563	10.0000	10.27
	14 2,2'-oxybis(1-Chloropropane)	121	9.407	9.384	(1.066)	97923	10.0000	9.548
	13 2-Methylphenol	108	9.322	9.314	(1.056)	314155	10.0000	9.666
	17 Hexachloroethane	117	9.865	9.865	(1.118)	138648	10.0000	9.582
	16 N-Nitroso-di-n-propylamine	70	9.663	9.648	(1.095)	223062	10.0000	9.719
	15 4-Methylphenol	108	9.640	9.624	(1.092)	324821	10.0000	9.871
$	18 Nitrobenzene-d5	82	9.943	9.935	(0.865)	371668	10.0000	9.936
	19 Nitrobenzene	77	9.981	9.973	(0.869)	325716	10.0000	9.772
	20 Isophorone	82	10.509	10.493	(0.915)	602089	10.0000	9.934
	21 2-Nitrophenol	139	10.664	10.656	(0.928)	218136	10.0000	10.05
	22 2,4-Dimethylphenol	107	10.780	10.772	(0.938)	632062	20.0000	19.30
	23 Bis(2-Chloroethoxy)methane	93	10.996	10.988	(0.957)	363721	10.0000	9.531
	24 Benzoic acid	105	11.111	10.857	(0.967)	1173275	40.0000	43.09 (M)
	25 2,4-Dichlorophenol	162	11.181	11.173	(0.973)	495022	20.0000	19.97
	26 1,2,4-Trichlorobenzene	180	11.374	11.373	(0.990)	249995	10.0000	9.314
*	27 Naphthalene-d8	136	11.489	11.482	(1.000)	305989	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.536	11.528	(1.004)	772040	10.0000	9.631
	29 4-Chloroaniline	127	11.659	11.644	(1.015)	731809	20.0000	20.64
	30 Hexachlorobutadiene	225	11.845	11.845	(1.031)	151498	10.0000	9.414
	31 4-Chloro-3-methylphenol	107	12.743	12.735	(1.109)	576735	20.0000	20.88
	32 2-Methylnaphthalene	142	13.075	13.067	(1.138)	521534	10.0000	9.761
	33 Hexachlorocyclopentadiene	237	13.455	13.447	(0.874)	423944	20.0000	20.54
	34 2,4,6-Trichlorophenol	196	13.710	13.694	(0.890)	429849	20.0000	20.22
	35 2,4,5-Trichlorophenol	196	13.772	13.764	(0.894)	456190	20.0000	21.33
$	36 2-Fluorobiphenyl	172	13.911	13.911	(0.903)	654496	10.0000	9.726
	37 2-Chloronaphthalene	162	14.151	14.143	(0.919)	523495	10.0000	9.762
	38 2-Nitroaniline	65	14.383	14.368	(0.934)	313793	20.0000	21.45
	39 Dimethylphthalate	163	14.855	14.832	(0.965)	569553	10.0000	9.522
	40 Acenaphthylene	152	15.072	15.064	(0.979)	833179	10.0000	9.529
	41 2,6-Dinitrotoluene	165	14.948	14.933	(0.971)	268819	20.0000	19.83
*	42 Acenaphthene-d10	164	15.397	15.397	(1.000)	183652	4.00000	
	43 3-Nitroaniline	138	15.312	15.289	(0.994)	271914	20.0000	23.47
	44 Acenaphthene	153	15.474	15.467	(1.005)	517752	10.0000	9.895
	45 2,4-Dinitrophenol	184	15.552	15.528	(1.010)	481991	40.0000	40.39
	46 Dibenzofuran	168	15.869	15.861	(1.031)	695981	10.0000	9.770
	47 4-Nitrophenol	109	15.714	15.691	(1.021)	174496	20.0000	20.27
	48 2,4-Dinitrotoluene	165	15.853	15.838	(1.030)	376955	20.0000	21.23
	50 Diethylphthalate	149	16.479	16.448	(1.070)	706744	10.0000	10.47
	49 Fluorene	166	16.649	16.633	(1.081)	618450	10.0000	9.878
	51 4-Chlorophenyl-phenylether	204	16.680	16.672	(1.083)	291700	10.0000	9.525
	52 4-Nitroaniline	138	16.695	16.649	(1.084)	241317	20.0000	22.94
	53 4,6-Dinitro-2-methylphenol	198	16.780	16.749	(0.895)	621906	40.0000	39.90
	54 N-Nitrosodiphenylamine	169	16.950	16.934	(0.904)	370021	10.0000	9.609
$	55 2,4,6-Tribromophenol	330	17.181	17.165	(1.116)	117564	10.0000	10.22
	56 4-Bromophenyl-phenylether	248	17.783	17.775	(0.948)	185918	10.0000	9.529
	57 Hexachlorobenzene	284	17.891	17.883	(0.954)	196974	10.0000	9.471
	58 Pentachlorophenol	266	18.333	18.325	(0.978)	333823	20.0000	20.11
*	59 Phenanthrene-d10	188	18.750	18.742	(1.000)	317399	4.00000	
	60 Phenanthrene	178	18.804	18.789	(1.003)	841670	10.0000	9.702
	61 Anthracene	178	18.913	18.905	(1.009)	892238	10.0000	9.786
	62 Carbazole	167	19.269	19.261	(1.028)	483887	10.0000	8.700
	63 Di-n-butylphthalate	149	20.104	20.096	(1.072)	1054099	10.0000	10.22
	64 Fluoranthene	202	21.234	21.226	(1.132)	1057478	10.0000	9.931
	65 Pyrene	202	21.652	21.644	(0.908)	1094005	10.0000	10.02
$	66 Terphenyl-d14	244	21.992	21.992	(0.922)	574614	10.0000	9.779
	67 Butylbenzylphthalate	149	22.921	22.921	(0.961)	424782	10.0000	10.00
	68 Benzo(a)anthracene	228	23.843	23.827	(0.999)	975492	10.0000	9.583
*	69 Chrysene-d12	240	23.858	23.843	(1.000)	325381	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.812	23.796	(0.998)	794783	20.0000	20.67
	71 Chrysene	228	23.897	23.889	(1.002)	895094	10.0000	9.693
	72 bis(2-Ethylhexyl)phthalate	149	23.974	23.966	(0.958)	588588	10.0000	9.670
*	134 Di-n-octylphthalate-d4	153	25.035	25.027	(1.000)	472443	4.00000	
	73 Di-n-octylphthalate	149	25.043	25.035	(1.000)	1098945	10.0000	9.492

	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	25.615	25.600	(0.974)	1022279	10.0000	10.15
75	Benzo(k)fluoranthene	252	25.662	25.646	(0.976)	1233613	10.0000	9.880
76	Benzo(a)pyrene	252	26.189	26.173	(0.996)	921383	10.0000	9.982
* 77	Perylene-d12	264	26.297	26.281	(1.000)	345761	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.622	28.591	(1.088)	1137016	10.0000	10.40
79	Dibenzo(a,h)anthracene	278	28.677	28.645	(1.090)	861423	10.0000	10.39
80	Benzo(g,h,i)perylene	276	29.329	29.267	(1.115)	937171	10.0000	10.09
90	N-Nitrosodimethylamine	74	4.050	4.050	(0.459)	435875	20.0000	20.53
91	Aniline	93	8.167	8.159	(0.925)	923936	10.0000	9.558
93	Benzidine	184	21.512	21.505	(0.902)	272560	20.0000	20.45
103	Pyridine	79	4.112	4.135	(0.466)	374770	20.0000	20.22
105	1-methylnaphthalene	142	13.284	13.284	(1.156)	474641	10.0000	9.740
111	Azobenzene (1,2-DP-Hydrazine)	77	17.035	17.027	(1.106)	633987	10.0000	9.719
187	Total Benzofluoranthenes	252	25.662	25.646	(0.976)	2127642	20.0000	19.68
99	Perylene	252	26.351	26.328	(1.002)	883675	10.0000	9.902
98	Retene	219	22.240	22.240	(0.932)	412426	10.0000	9.796
120	2,3,4,6-Tetrachlorophenol	232	16.155	16.139	(1.049)	172208	10.0000	10.44

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0705e.d
Lab Smp Id: ABN10
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130705.b/ABN.m
Misc Info:

Calibration Date: 05-JUL-2013
Calibration Time: 12:14

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	97290	48645	194580	87173	-10.40
27 Naphthalene-d8	336205	168102	672410	305989	-8.99
42 Acenaphthene-d10	202661	101330	405322	183652	-9.38
59 Phenanthrene-d10	352196	176098	704392	317399	-9.88
69 Chrysene-d12	358983	179492	717966	325381	-9.36
134 Di-n-octylphthala	503607	251804	1007214	472443	-6.19
77 Perylene-d12	381873	190936	763746	345761	-9.46

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.82	8.32	9.32	8.82	0.00
27 Naphthalene-d8	11.49	10.99	11.99	11.49	0.00
42 Acenaphthene-d10	15.40	14.90	15.90	15.40	0.00
59 Phenanthrene-d10	18.75	18.25	19.25	18.75	0.00
69 Chrysene-d12	23.85	23.35	24.35	23.86	0.03
134 Di-n-octylphthala	25.03	24.53	25.53	25.03	0.03
77 Perylene-d12	26.29	25.79	26.79	26.30	0.03

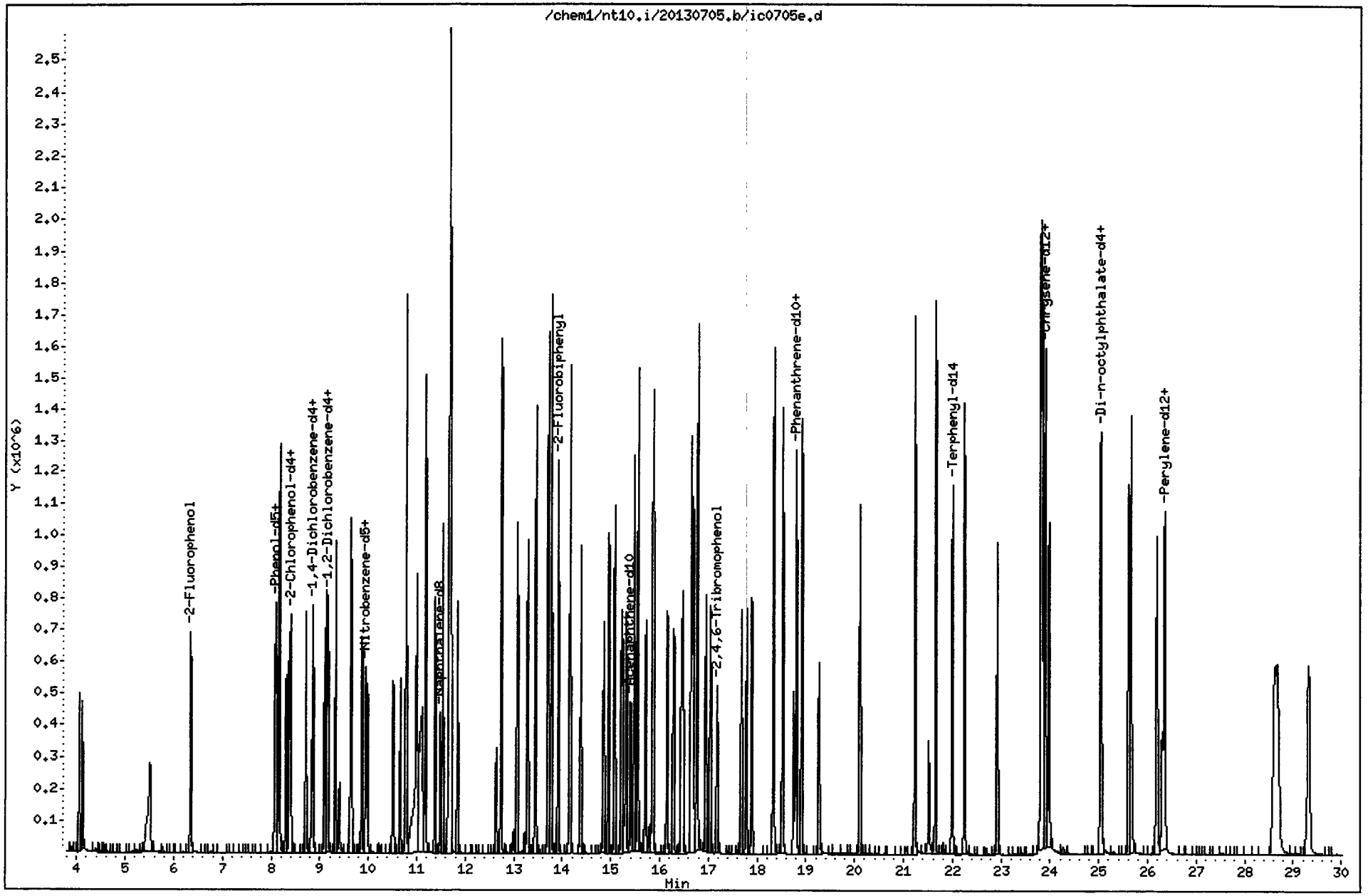
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130705.b/ic0705e.d
Date : 05-JUL-2013 14:42
Client ID:
Sample Info: ABN10

Instrument: nt10.i

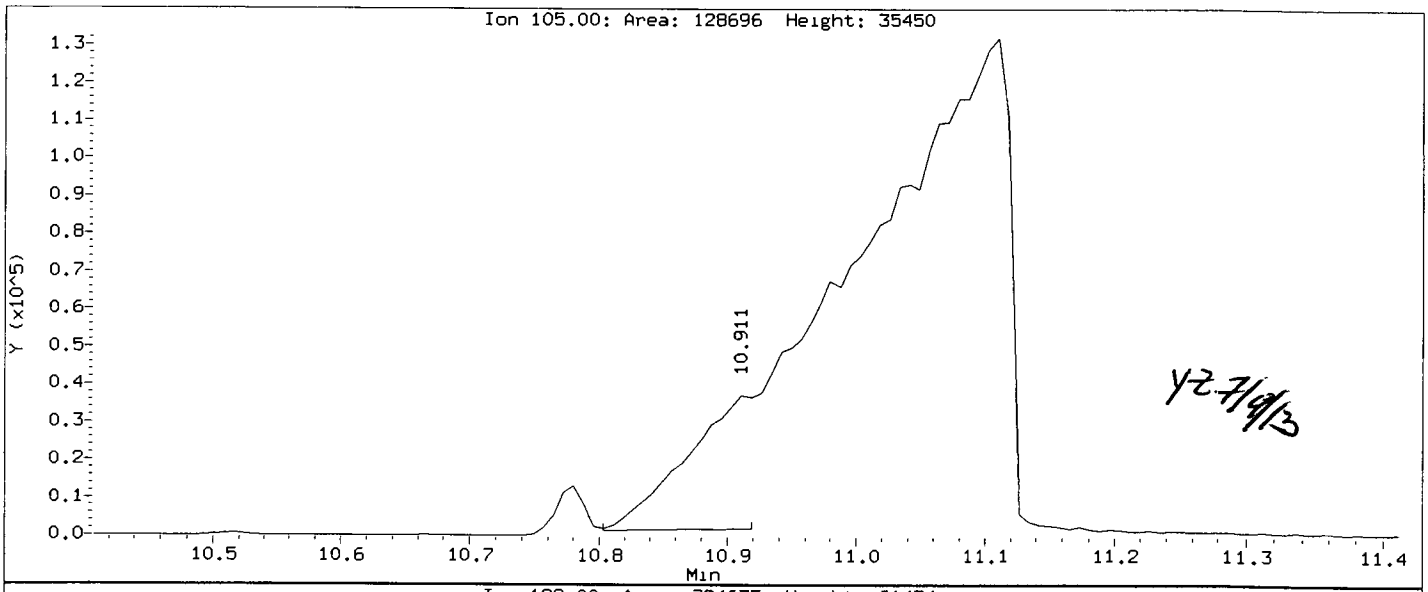
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi

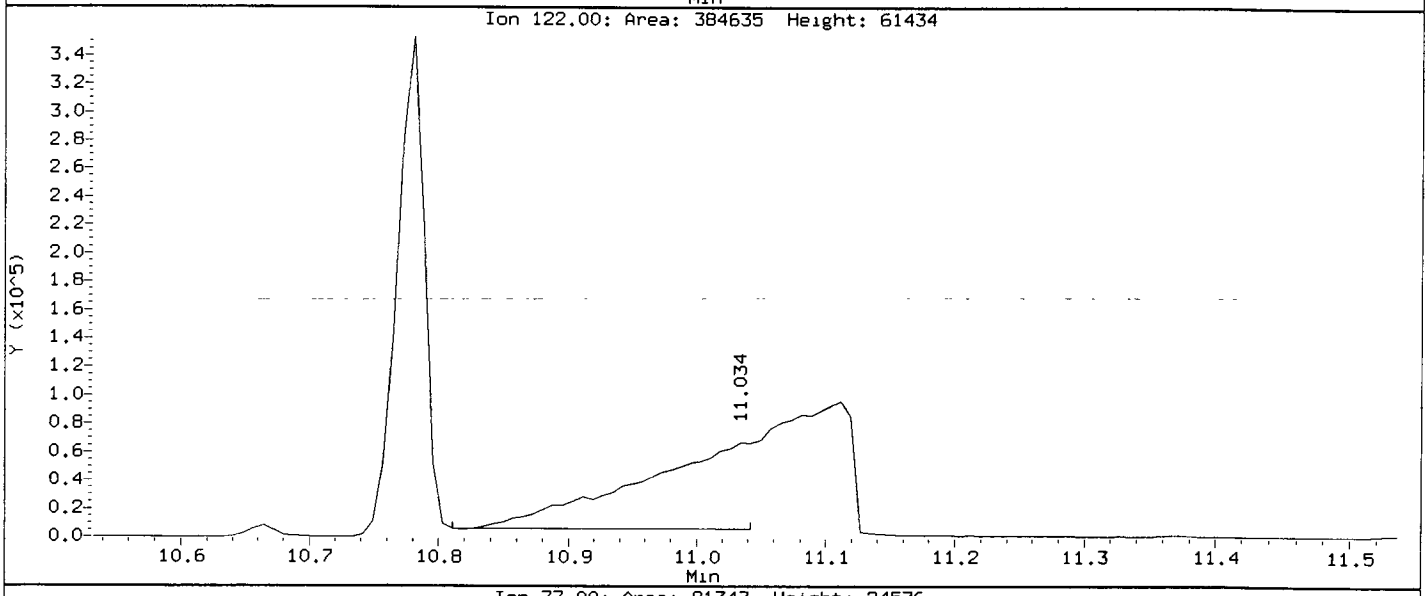


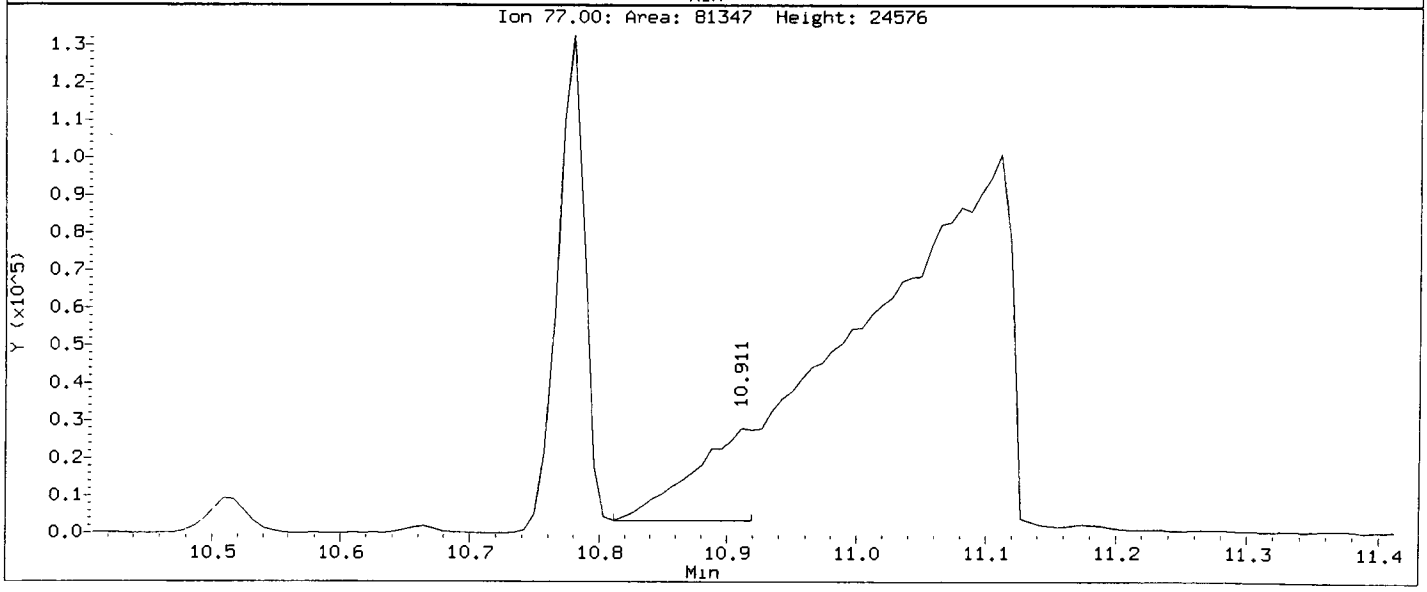
Data File: /chem1/nt10.1/20130705.b/1c0705e.d
Injection Date: 05-JUL-2013 14:42
Instrument: nt10.1
Client Sample ID:

Compound: Benzoic acid
CAS Number: 65-85-0



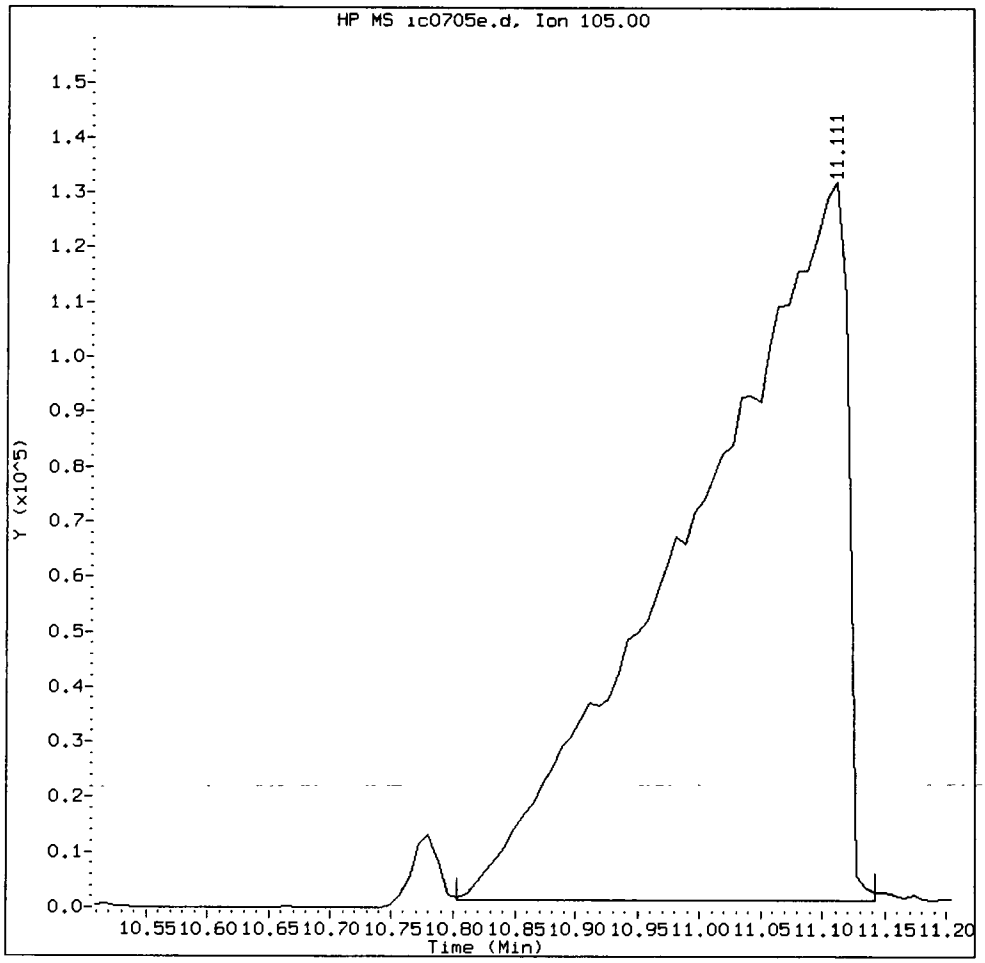
YZ 7/9/13





ABN10, /chem1/nt10.i/20130705.b/ic0705e.d

Benzoic acid Amount: 43.09 Area: 1173275



MANUAL INTEGRATION for Benzoic acid

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: VZ Date: 7/9/13

CO-ELUTION SUMMARY FOR FILE - ic0705e.d

Lab ID: ABN10, Method: ABN.m, Instrument: nt10.i, Date: 05-JUL-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130705.b/ic0705f.d
Lab Smp Id: ABN2.5
Inj Date : 05-JUL-2013 15:20
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : ABN2.5
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130705.b/ABN.m
Meth Date : 08-Jul-2013 09:52 yev Quant Type: ISTD
Cal Date : 05-JUL-2013 15:20 Cal File: ic0705f.d
Als bottle: 7 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

YZ 7/9/13

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.343	6.343	(0.719)	85422	2.50000	2.553
$	2 Phenol-d5	99	8.066	8.067	(0.914)	115176	2.50000	2.527
	3 Phenol	94	8.090	8.090	(0.917)	120110	2.50000	2.555
$	5 2-Chlorophenol-d4	132	8.360	8.360	(0.947)	82857	2.50000	2.564
	4 Bis(2-Chloroethyl)ether	93	8.298	8.298	(0.940)	91555	2.50000	2.571
	6 2-Chlorophenol	128	8.391	8.391	(0.951)	84921	2.50000	2.537
	7 1,3-Dichlorobenzene	146	8.708	8.708	(0.987)	83609	2.50000	2.485
*	8 1,4-Dichlorobenzene-d4	152	8.824	8.825	(1.000)	89642	4.00000	
	9 1,4-Dichlorobenzene	146	8.855	8.856	(1.004)	83419	2.50000	2.486
$	10 1,2-Dichlorobenzene-d4	152	9.135	9.135	(1.035)	56405	2.50000	2.463
	12 1,2-Dichlorobenzene	146	9.158	9.158	(1.038)	80189	2.50000	2.529
	11 Benzyl alcohol	108	9.088	9.089	(1.030)	48475	2.50000	2.502
	14 2,2'-oxybis(1-Chloropropane)	121	9.399	9.384	(1.065)	26489	2.50000	2.512
	13 2-Methylphenol	108	9.313	9.314	(1.055)	86769	2.50000	2.596
	17 Hexachloroethane	117	9.864	9.865	(1.118)	37964	2.50000	2.551
	16 N-Nitroso-di-n-propylamine	70	9.647	9.648	(1.093)	59872	2.50000	2.537
	15 4-Methylphenol	108	9.632	9.624	(1.091)	88953	2.50000	2.629
$	18 Nitrobenzene-d5	82	9.934	9.935	(0.865)	98148	2.50000	2.474
	19 Nitrobenzene	77	9.981	9.973	(0.869)	88347	2.50000	2.499
	20 Isophorone	82	10.501	10.493	(0.915)	158120	2.50000	2.460
	21 2-Nitrophenol	139	10.656	10.656	(0.928)	58591	2.50000	2.544
	22 2,4-Dimethylphenol	107	10.772	10.772	(0.938)	178888	5.00000	5.150
	23 Bis(2-Chloroethoxy)methane	93	10.988	10.988	(0.957)	100229	2.50000	2.476
	24 Benzoic acid	105	10.957	10.857	(0.954)	275610	10.0000	9.544
	25 2,4-Dichlorophenol	162	11.173	11.173	(0.973)	134567	5.00000	5.118
	26 1,2,4-Trichlorobenzene	180	11.365	11.373	(0.990)	70417	2.50000	2.474
*	27 Naphthalene-d8	136	11.481	11.482	(1.000)	324549	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.528	11.528	(1.004)	211046	2.50000	2.482
	29 4-Chloroaniline	127	11.651	11.644	(1.015)	193591	5.00000	5.147
	30 Hexachlorobutadiene	225	11.844	11.845	(1.032)	42484	2.50000	2.489
	31 4-Chloro-3-methylphenol	107	12.734	12.735	(1.109)	149626	5.00000	5.107
	32 2-Methylnaphthalene	142	13.067	13.067	(1.138)	140426	2.50000	2.478
	33 Hexachlorocyclopentadiene	237	13.446	13.447	(0.873)	107955	5.00000	4.965
	34 2,4,6-Trichlorophenol	196	13.702	13.694	(0.890)	112433	5.00000	5.019
	35 2,4,5-Trichlorophenol	196	13.764	13.764	(0.894)	116560	5.00000	5.173
$	36 2-Fluorobiphenyl	172	13.911	13.911	(0.903)	175959	2.50000	2.482
	37 2-Chloronaphthalene	162	14.143	14.143	(0.919)	137727	2.50000	2.438
	38 2-Nitroaniline	65	14.367	14.368	(0.933)	80249	5.00000	5.206
	39 Dimethylphthalate	163	14.839	14.832	(0.964)	159711	2.50000	2.534
	40 Acenaphthylene	152	15.072	15.064	(0.979)	228585	2.50000	2.481
	41 2,6-Dinitrotoluene	165	14.940	14.933	(0.970)	74860	5.00000	5.241
*	42 Acenaphthene-d10	164	15.397	15.397	(1.000)	193500	4.00000	
	43 3-Nitroaniline	138	15.288	15.289	(0.993)	68123	5.00000	5.581
	44 Acenaphthene	153	15.466	15.467	(1.005)	136671	2.50000	2.479
	45 2,4-Dinitrophenol	184	15.536	15.528	(1.009)	108668	10.0000	9.216
	46 Dibenzofuran	168	15.860	15.861	(1.030)	186630	2.50000	2.487
	47 4-Nitrophenol	109	15.690	15.691	(1.019)	38689	5.00000	4.466
	48 2,4-Dinitrotoluene	165	15.837	15.838	(1.029)	97623	5.00000	5.219
	50 Diethylphthalate	149	16.456	16.448	(1.069)	179178	2.50000	2.519
	49 Fluorene	166	16.633	16.633	(1.080)	166327	2.50000	2.521
	51 4-Chlorophenyl-phenylether	204	16.672	16.672	(1.083)	81561	2.50000	2.528
	52 4-Nitroaniline	138	16.664	16.649	(1.082)	63570	5.00000	5.735
	53 4,6-Dinitro-2-methylphenol	198	16.756	16.749	(0.894)	160586	10.0000	10.09
	54 N-Nitrosodiphenylamine	169	16.934	16.934	(0.904)	104707	2.50000	2.637
$	55 2,4,6-Tribromophenol	330	17.173	17.165	(1.115)	30770	2.50000	2.539
	56 4-Bromophenyl-phenylether	248	17.775	17.775	(0.948)	50343	2.50000	2.502
	57 Hexachlorobenzene	284	17.883	17.883	(0.954)	53859	2.50000	2.512
	58 Pentachlorophenol	266	18.332	18.325	(0.978)	88959	5.00000	5.198
*	59 Phenanthrene-d10	188	18.742	18.742	(1.000)	327266	4.00000	
	60 Phenanthrene	178	18.796	18.789	(1.003)	222311	2.50000	2.485
	61 Anthracene	178	18.905	18.905	(1.009)	236592	2.50000	2.517
	62 Carbazole	167	19.260	19.261	(1.028)	141857	2.50000	2.473
	63 Di-n-butylphthalate	149	20.096	20.096	(1.072)	265955	2.50000	2.501
	64 Fluoranthene	202	21.226	21.226	(1.133)	272240	2.50000	2.480
	65 Pyrene	202	21.651	21.644	(0.908)	282381	2.50000	2.459
$	66 Terphenyl-d14	244	21.992	21.992	(0.922)	153522	2.50000	2.485
	67 Butylbenzylphthalate	149	22.921	22.921	(0.961)	112645	2.50000	2.523
	68 Benzo(a)anthracene	228	23.827	23.827	(0.999)	257482	2.50000	2.406
*	69 Chrysene-d12	240	23.850	23.843	(1.000)	342119	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.803	23.796	(0.998)	163821	5.00000	4.051
	71 Chrysene	228	23.889	23.889	(1.002)	235340	2.50000	2.424
	72 bis(2-Ethylhexyl)phthalate	149	23.974	23.966	(0.958)	150037	2.50000	2.558
*	134 Di-n-octylphthalate-d4	153	25.027	25.027	(1.000)	455298	4.00000	
	73 Di-n-octylphthalate	149	25.034	25.035	(1.000)	275815	2.50000	2.472

	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	25.607	25.600	(0.974)	265495	2.50000	2.531
75	Benzo(k)fluoranthene	252	25.654	25.646	(0.976)	320541	2.50000	2.465
76	Benzo(a)pyrene	252	26.180	26.173	(0.996)	239351	2.50000	2.490
* 77	Perylene-d12	264	26.281	26.281	(1.000)	360085	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.583	28.591	(1.088)	283633	2.50000	2.490
79	Dibenzo(a,h)anthracene	278	28.653	28.645	(1.090)	216641	2.50000	2.509
80	Benzo(g,h,i)perylene	276	29.282	29.267	(1.114)	237524	2.50000	2.457
90	N-Nitrosodimethylamine	74	4.042	4.050	(0.458)	108261	5.00000	4.959
91	Aniline	93	8.159	8.159	(0.925)	254934	2.50000	2.565
93	Benzidine	184	21.504	21.505	(0.902)	79484	5.00000	5.224
103	Pyridine	79	4.111	4.135	(0.466)	95009	5.00000	4.984
105	1-methylnaphthalene	142	13.284	13.284	(1.157)	127078	2.50000	2.459
111	Azobenzene (1,2-DP-Hydrazine)	77	17.026	17.027	(1.106)	173817	2.50000	2.529
187	Total Benzofluoranthenes	252	25.654	25.646	(0.976)	561524	5.00000	4.986
99	Perylene	252	26.335	26.328	(1.002)	226684	2.50000	2.439
98	Retene	219	22.239	22.240	(0.932)	108931	2.50000	2.461
120	2,3,4,6-Tetrachlorophenol	232	16.146	16.139	(1.049)	44238	2.50000	2.546

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0705f.d
Lab Smp Id: ABN2.5
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130705.b/ABN.m
Misc Info:

Calibration Date: 05-JUL-2013
Calibration Time: 12:14

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

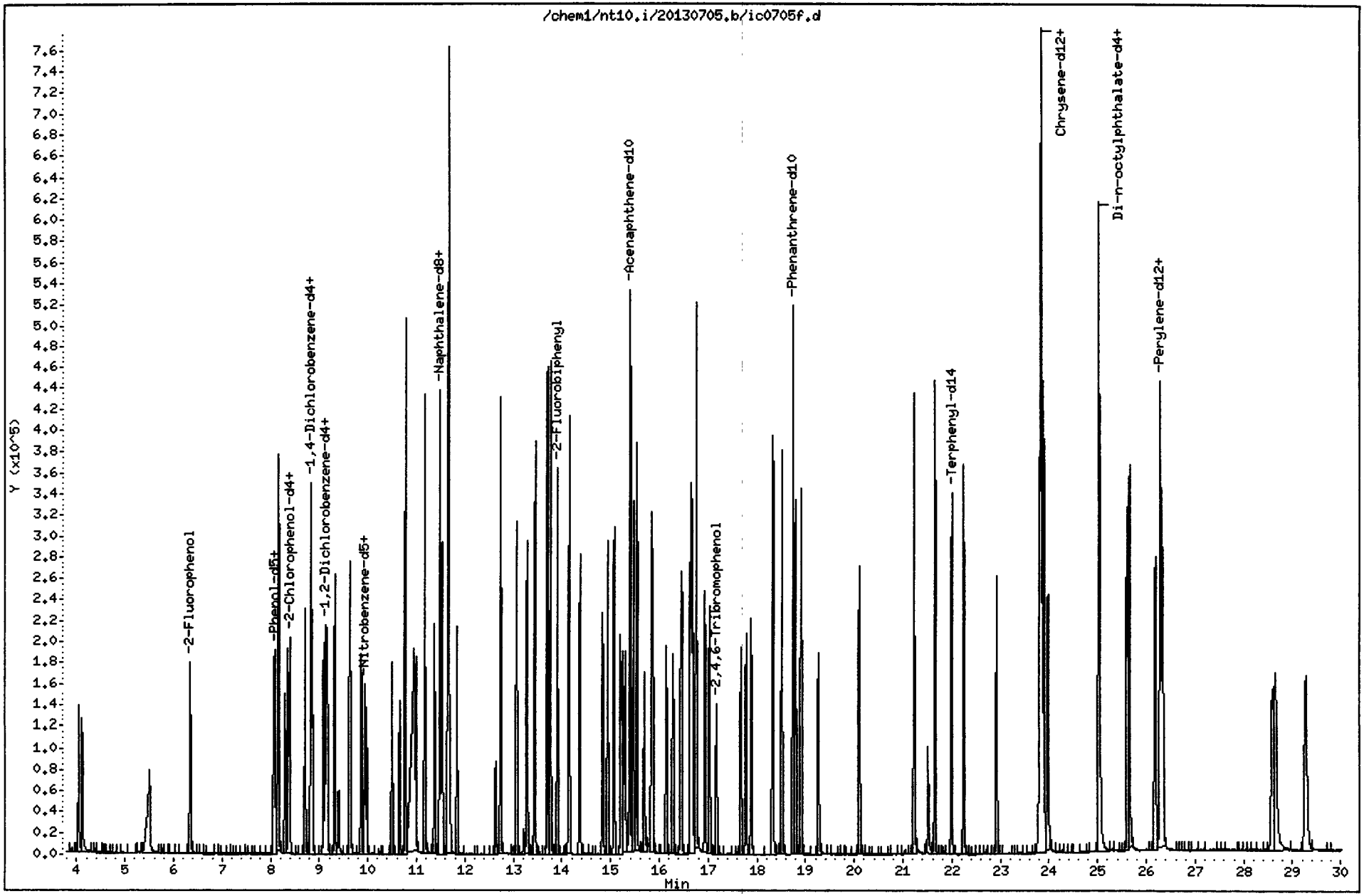
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	97290	48645	194580	89642	-7.86
27 Naphthalene-d8	336205	168102	672410	324549	-3.47
42 Acenaphthene-d10	202661	101330	405322	193500	-4.52
59 Phenanthrene-d10	352196	176098	704392	327266	-7.08
69 Chrysene-d12	358983	179492	717966	342119	-4.70
134 Di-n-octylphthala	503607	251804	1007214	455298	-9.59
77 Perylene-d12	381873	190936	763746	360085	-5.71

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.82	8.32	9.32	8.82	-0.01
27 Naphthalene-d8	11.49	10.99	11.99	11.48	-0.07
42 Acenaphthene-d10	15.40	14.90	15.90	15.40	0.00
59 Phenanthrene-d10	18.75	18.25	19.25	18.74	-0.04
69 Chrysene-d12	23.85	23.35	24.35	23.85	0.00
134 Di-n-octylphthala	25.03	24.53	25.53	25.03	0.00
77 Perylene-d12	26.29	25.79	26.79	26.28	-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: /chem1/nt10.i/20130705.b/ic0705f.d
Date : 05-JUL-2013 15:20
Client ID:
Sample Info: ABN2.5

Instrument: nt10.i
Operator: VTS/YZ
Column phase: ZB-5msi
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - ic0705f.d

Lab ID: ABN2.5, Method: ABN.m, Instrument: nt10.i, Date: 05-JUL-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 7/9/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130705.b/ic0705g.d
Lab Smp Id: ABN0.5
Inj Date : 05-JUL-2013 15:57
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : ABN0.5
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130705.b/ABN.m
Meth Date : 08-Jul-2013 09:52 yev Quant Type: ISTD
Cal Date : 05-JUL-2013 15:57 Cal File: ic0705g.d
Als bottle: 8 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.343	6.343	(0.719)	17827	0.50000	0.4888
$	2 Phenol-d5	99	8.067	8.067	(0.914)	22883	0.50000	0.4643
	3 Phenol	94	8.090	8.090	(0.917)	25272	0.50000	0.4925
$	5 2-Chlorophenol-d4	132	8.360	8.360	(0.947)	17484	0.50000	0.4952
	4 Bis(2-Chloroethyl)ether	93	8.298	8.298	(0.940)	20171	0.50000	0.5151
	6 2-Chlorophenol	128	8.391	8.391	(0.951)	18173	0.50000	0.4967
	7 1,3-Dichlorobenzene	146	8.708	8.708	(0.987)	18746	0.50000	0.5079
*	8 1,4-Dichlorobenzene-d4	152	8.825	8.825	(1.000)	98080	4.00000	
	9 1,4-Dichlorobenzene	146	8.856	8.856	(1.004)	18598	0.50000	0.5057
$	10 1,2-Dichlorobenzene-d4	152	9.135	9.135	(1.035)	12365	0.50000	0.4945
	12 1,2-Dichlorobenzene	146	9.158	9.158	(1.038)	17679	0.50000	0.5081
	11 Benzyl alcohol	108	9.089	9.089	(1.030)	9611	0.50000	0.4595
	14 2,2'-oxybis(1-Chloropropane)	121	9.384	9.384	(1.063)	5821	0.50000	0.5038 (M)
	13 2-Methylphenol	108	9.314	9.314	(1.055)	17779	0.50000	0.4881
	17 Hexachloroethane	117	9.865	9.865	(1.118)	8253	0.50000	0.5059
	16 N-Nitroso-di-n-propylamine	70	9.648	9.648	(1.093)	12743	0.50000	0.4944
	15 4-Methylphenol	108	9.624	9.624	(1.091)	17904	0.50000	0.4859
$	18 Nitrobenzene-d5	82	9.935	9.935	(0.865)	21402	0.50000	0.4933
	19 Nitrobenzene	77	9.973	9.973	(0.869)	18615	0.50000	0.4831
	20 Isophorone	82	10.493	10.493	(0.914)	33948	0.50000	0.4843
	21 2-Nitrophenol	139	10.656	10.656	(0.928)	11514	0.50000	0.4619
	22 2,4-Dimethylphenol	107	10.772	10.772	(0.938)	37098	1.00000	0.9780
	23 Bis(2-Chloroethoxy)methane	93	10.988	10.988	(0.957)	21710	0.50000	0.4909
	24 Benzoic acid	105	10.857	10.857	(0.946)	42226	2.00000	1.412
	25 2,4-Dichlorophenol	162	11.173	11.173	(0.973)	27465	1.00000	0.9595
	26 1,2,4-Trichlorobenzene	180	11.373	11.373	(0.991)	15657	0.50000	0.5015
*	27 Naphthalene-d8	136	11.482	11.482	(1.000)	355728	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
	28 Naphthalene	128	11.528	11.528	(1.004)	45536	0.50000	0.4902
	29 4-Chloroaniline	127	11.644	11.644	(1.014)	39417	1.00000	0.9621
	30 Hexachlorobutadiene	225	11.845	11.845	(1.032)	9011	0.50000	0.4842
	31 4-Chloro-3-methylphenol	107	12.735	12.735	(1.109)	28930	1.00000	0.9139
	32 2-Methylnaphthalene	142	13.067	13.067	(1.138)	29532	0.50000	0.4788
	33 Hexachlorocyclopentadiene	237	13.447	13.447	(0.873)	21065	1.00000	0.9179
	34 2,4,6-Trichlorophenol	196	13.694	13.694	(0.889)	21650	1.00000	0.9160
	35 2,4,5-Trichlorophenol	196	13.764	13.764	(0.894)	21041	1.00000	0.8890
$	36 2-Fluorobiphenyl	172	13.911	13.911	(0.903)	37368	0.50000	0.4937
	37 2-Chloronaphthalene	162	14.143	14.143	(0.919)	29625	0.50000	0.4915
	38 2-Nitroaniline	65	14.368	14.368	(0.933)	13915	1.00000	0.8629
	39 Dimethylphthalate	163	14.832	14.832	(0.963)	33094	0.50000	0.4921
	40 Acenaphthylene	152	15.064	15.064	(0.978)	49575	0.50000	0.5025
	41 2,6-Dinitrotoluene	165	14.933	14.933	(0.970)	14293	1.00000	0.9440
*	42 Acenaphthene-d10	164	15.397	15.397	(1.000)	207021	4.00000	
	43 3-Nitroaniline	138	15.289	15.289	(0.993)	12384	1.00000	0.9554
	44 Acenaphthene	153	15.467	15.467	(1.005)	29296	0.50000	0.4972
	45 2,4-Dinitrophenol	184	15.528	15.528	(1.009)	11385	2.00000	0.9173
	46 Dibenzofuran	168	15.861	15.861	(1.030)	39448	0.50000	0.4925
	47 4-Nitrophenol	109	15.691	15.691	(1.019)	3372	1.00000	0.3682
	48 2,4-Dinitrotoluene	165	15.838	15.838	(1.029)	17886	1.00000	0.9075
	50 Diethylphthalate	149	16.448	16.448	(1.068)	35148	0.50000	0.4669
	49 Fluorene	166	16.633	16.633	(1.080)	35615	0.50000	0.5040
	51 4-Chlorophenyl-phenylether	204	16.672	16.672	(1.083)	18031	0.50000	0.5190
	52 4-Nitroaniline	138	16.649	16.649	(1.081)	9566	1.00000	0.8295
	53 4,6-Dinitro-2-methylphenol	198	16.749	16.749	(0.894)	26445	2.00000	1.564
	54 N-Nitrosodiphenylamine	169	16.934	16.934	(0.904)	21061	0.50000	0.4980
$	55 2,4,6-Tribromophenol	330	17.165	17.165	(1.115)	5955	0.50000	0.4648
	56 4-Bromophenyl-phenylether	248	17.775	17.775	(0.948)	10230	0.50000	0.4802
	57 Hexachlorobenzene	284	17.883	17.883	(0.954)	11087	0.50000	0.4872
	58 Pentachlorophenol	266	18.325	18.325	(0.978)	16856	1.00000	0.9343
*	59 Phenanthrene-d10	188	18.742	18.742	(1.000)	348812	4.00000	
	60 Phenanthrene	178	18.789	18.789	(1.002)	46165	0.50000	0.4864
	61 Anthracene	178	18.905	18.905	(1.009)	48552	0.50000	0.4867
	62 Carbazole	167	19.261	19.261	(1.028)	38097	0.50000	0.6020
	63 Di-n-butylphthalate	149	20.096	20.096	(1.072)	50569	0.50000	0.4532
	64 Fluoranthene	202	21.226	21.226	(1.133)	53695	0.50000	0.4643
	65 Pyrene	202	21.644	21.644	(0.908)	56028	0.50000	0.4711
$	66 Terphenyl-d14	244	21.992	21.992	(0.922)	31525	0.50000	0.4897
	67 Butylbenzylphthalate	149	22.921	22.921	(0.961)	19595	0.50000	0.4295
	68 Benzo(a)anthracene	228	23.827	23.827	(0.999)	55829	0.50000	0.4990
*	69 Chrysene-d12	240	23.843	23.843	(1.000)	357738	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.796	23.796	(0.998)	40858	1.00000	0.9710
	71 Chrysene	228	23.889	23.889	(1.002)	49165	0.50000	0.4864
	72 bis(2-Ethylhexyl)phthalate	149	23.966	23.966	(0.958)	26916	0.50000	0.4764
*	134 Di-n-octylphthalate-d4	153	25.027	25.027	(1.000)	441979	4.00000	
	73 Di-n-octylphthalate	149	25.035	25.035	(1.000)	55091	0.50000	0.5074

	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	25.600	25.600	(0.974)	46404	0.50000	0.4354
75	Benzo(k)fluoranthene	252	25.646	25.646	(0.976)	64897	0.50000	0.4834
76	Benzo(a)pyrene	252	26.173	26.173	(0.996)	45794	0.50000	0.4644
* 77	Perylene-d12	264	26.281	26.281	(1.000)	373814	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.591	28.591	(1.088)	49757	0.50000	0.4306
79	Dibenzo(a,h)anthracene	278	28.645	28.645	(1.090)	40996	0.50000	0.4629
80	Benzo(g,h,i)perylene	276	29.267	29.267	(1.114)	45250	0.50000	0.4572
90	N-Nitrosodimethylamine	74	4.050	4.050	(0.459)	21448	1.00000	0.9112
91	Aniline	93	8.159	8.159	(0.925)	54118	0.50000	0.4979
93	Benzidine	184	21.505	21.505	(0.902)	15685	1.00000	0.9597
103	Pyridine	79	4.135	4.135	(0.469)	20220	1.00000	0.9736
105	1-methylnaphthalene	142	13.284	13.284	(1.157)	27185	0.50000	0.4827
111	Azobenzene (1,2-DP-Hydrazine)	77	17.027	17.027	(1.106)	36928	0.50000	0.5019
187	Total Benzofluoranthenes	252	25.646	25.646	(0.976)	108287	1.00000	0.9361
99	Perylene	252	26.328	26.328	(1.002)	47802	0.50000	0.4961
98	Retene	219	22.240	22.240	(0.933)	21413	0.50000	0.4676
120	2,3,4,6-Tetrachlorophenol	232	16.139	16.139	(1.048)	8389	0.50000	0.4577

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0705g.d
Lab Smp Id: ABN0.5
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130705.b/ABN.m
Misc Info:

Calibration Date: 05-JUL-2013
Calibration Time: 12:14
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	97290	48645	194580	98080	0.81
27 Naphthalene-d8	336205	168102	672410	355728	5.81
42 Acenaphthene-d10	202661	101330	405322	207021	2.15
59 Phenanthrene-d10	352196	176098	704392	348812	-0.96
69 Chrysene-d12	358983	179492	717966	357738	-0.35
134 Di-n-octylphthala	503607	251804	1007214	441979	-12.24
77 Perylene-d12	381873	190936	763746	373814	-2.11

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.82	8.32	9.32	8.82	0.00
27 Naphthalene-d8	11.49	10.99	11.99	11.48	-0.07
42 Acenaphthene-d10	15.40	14.90	15.90	15.40	0.00
59 Phenanthrene-d10	18.75	18.25	19.25	18.74	-0.04
69 Chrysene-d12	23.85	23.35	24.35	23.84	-0.03
134 Di-n-octylphthala	25.03	24.53	25.53	25.03	0.00
77 Perylene-d12	26.29	25.79	26.79	26.28	-0.03

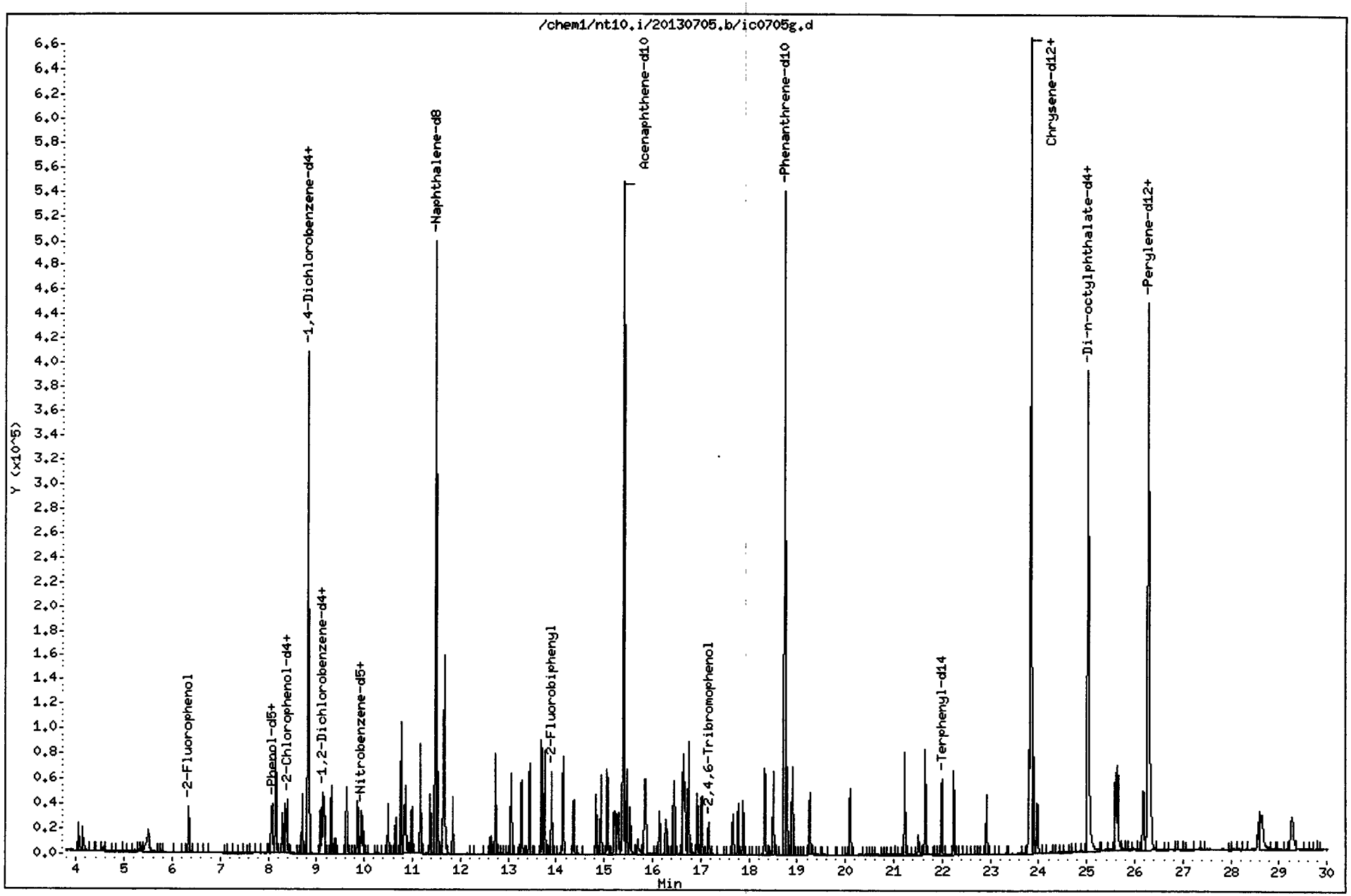
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130705.b/ic0705g.d
Date : 05-JUL-2013 15:57
Client ID:
Sample Info: ABN0.5

Instrument: nt10.i

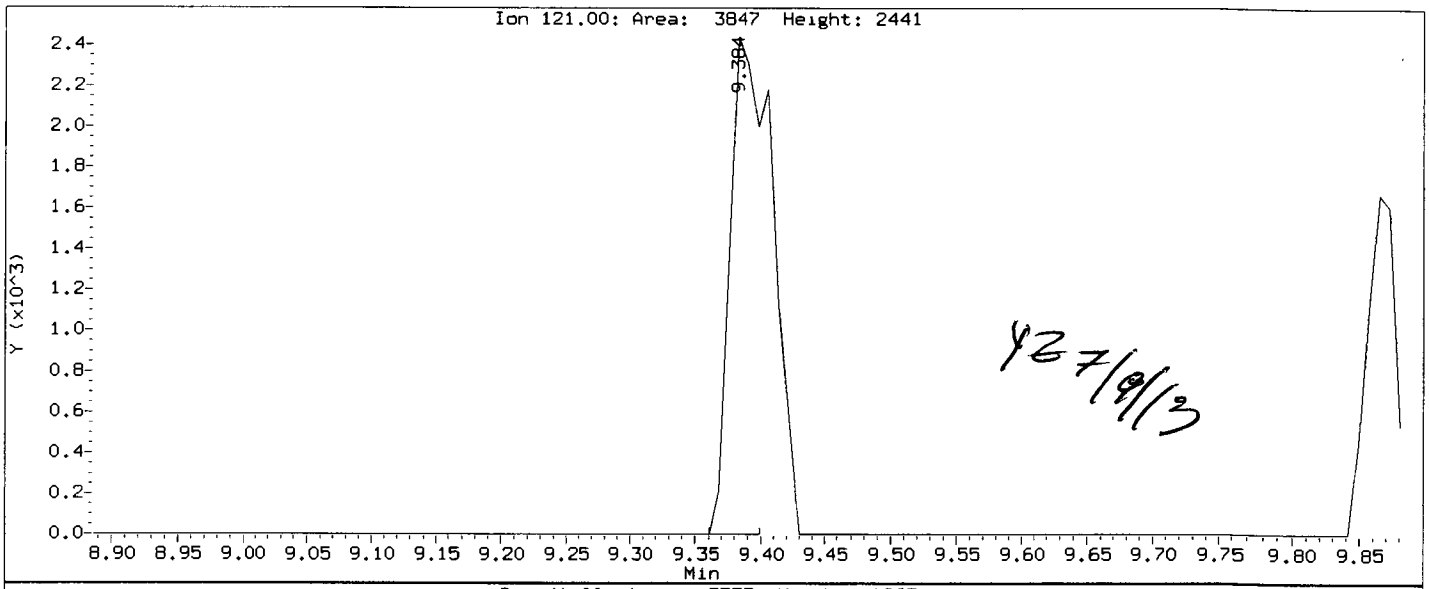
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi

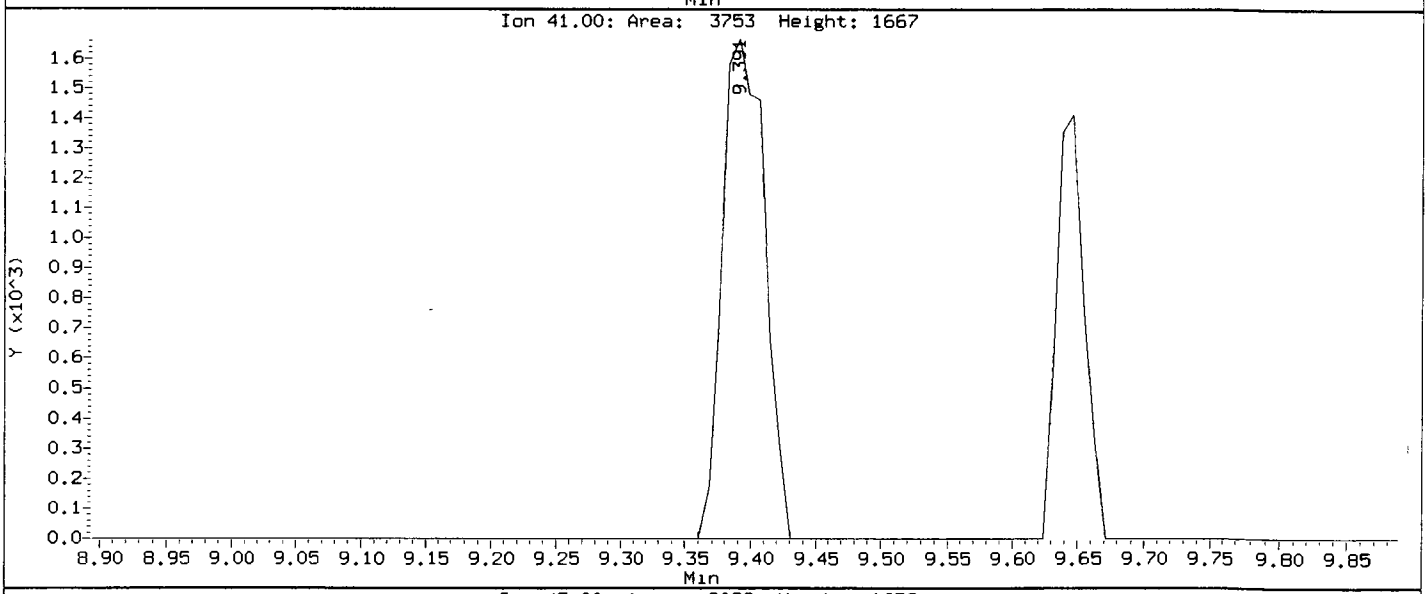


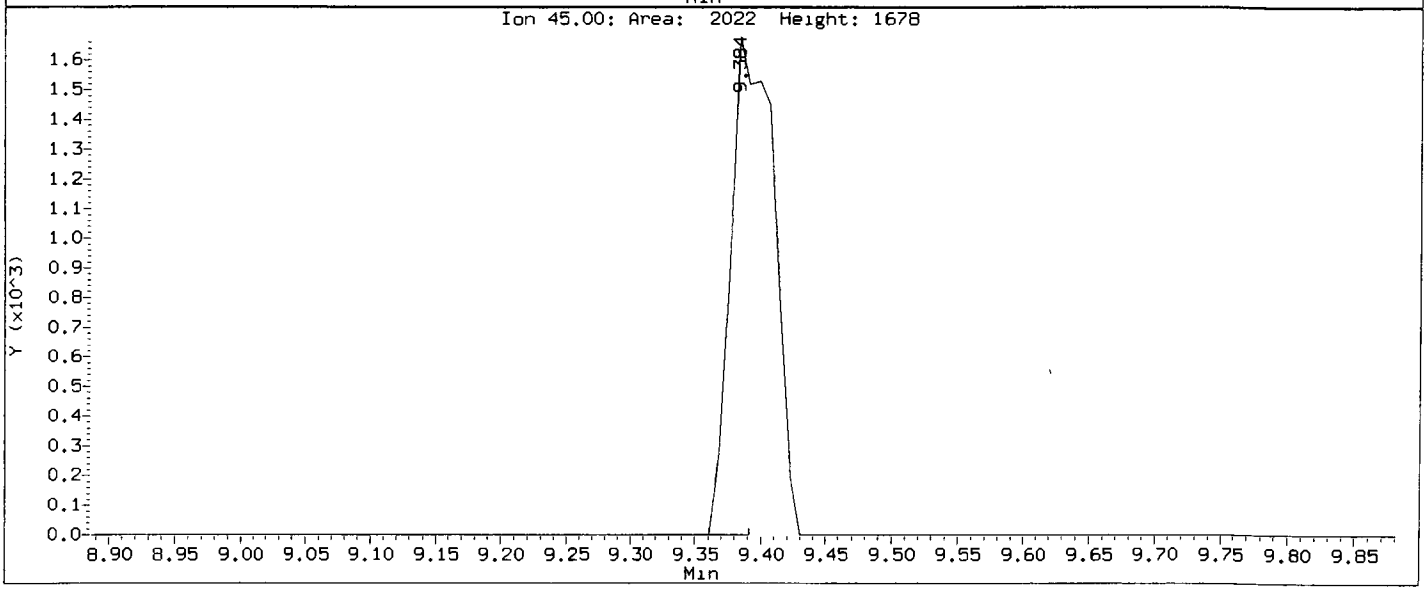
Data File: /chem1/nt10.1/20130705.b/1c0705g.d
Injection Date: 05-JUL-2013 15:57
Instrument: nt10.1
Client Sample ID:

Compound: 2,2'-oxybis(1-Chloropropane)
CAS Number: 108-60-1



7/9/13

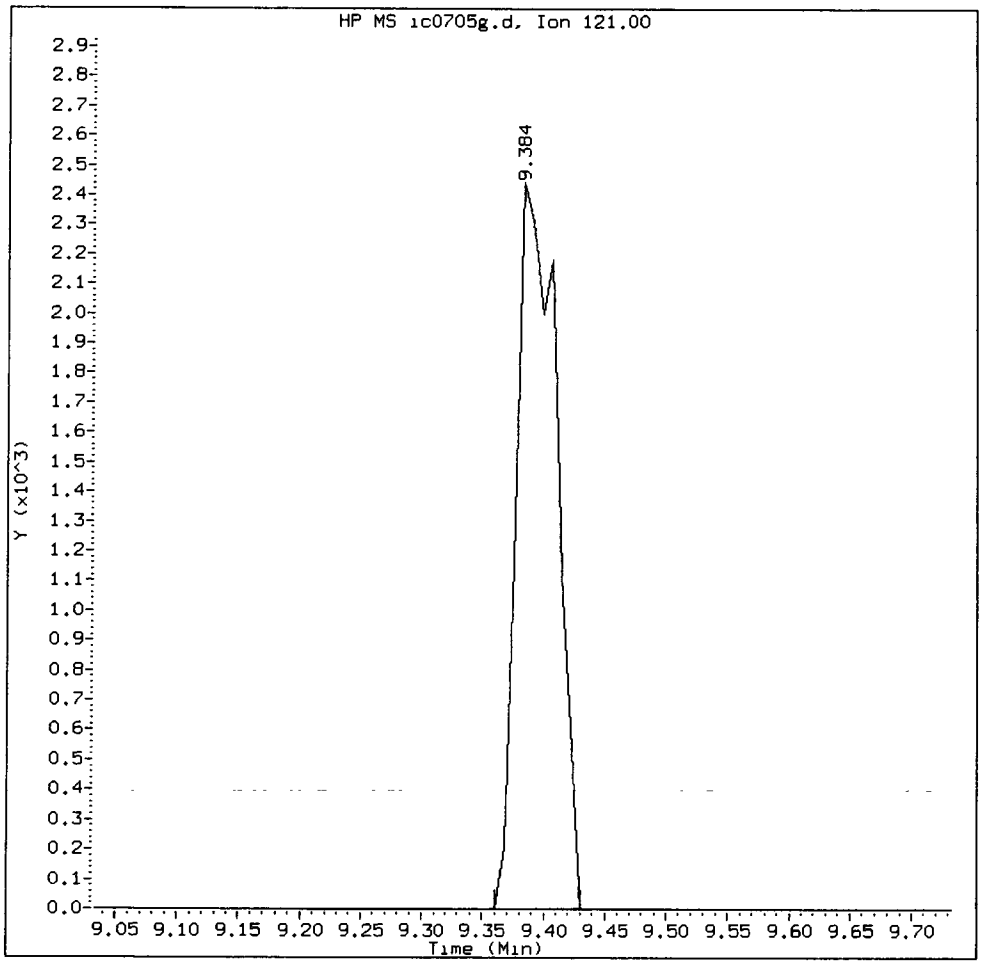




WUTG : 66563

ABN0.5, /chem1/nt10.i/20130705.b/ic0705g.d

2,2'-oxybis(1-Chloropropane) Amount: 0.50 Area: 5821



MANUAL INTEGRATION for 2,2'-oxybis(1-Chloropropane)

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YZ Date: 7/8/13

CO-ELUTION SUMMARY FOR FILE - ic0705g.d

Lab ID: ABN0.5, Method: ABN.m, Instrument: nt10.i, Date: 05-JUL-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt10.i/20130705.b/df0705.d

Date : 05-JUL-2013 11:58

Client ID: DFTPP

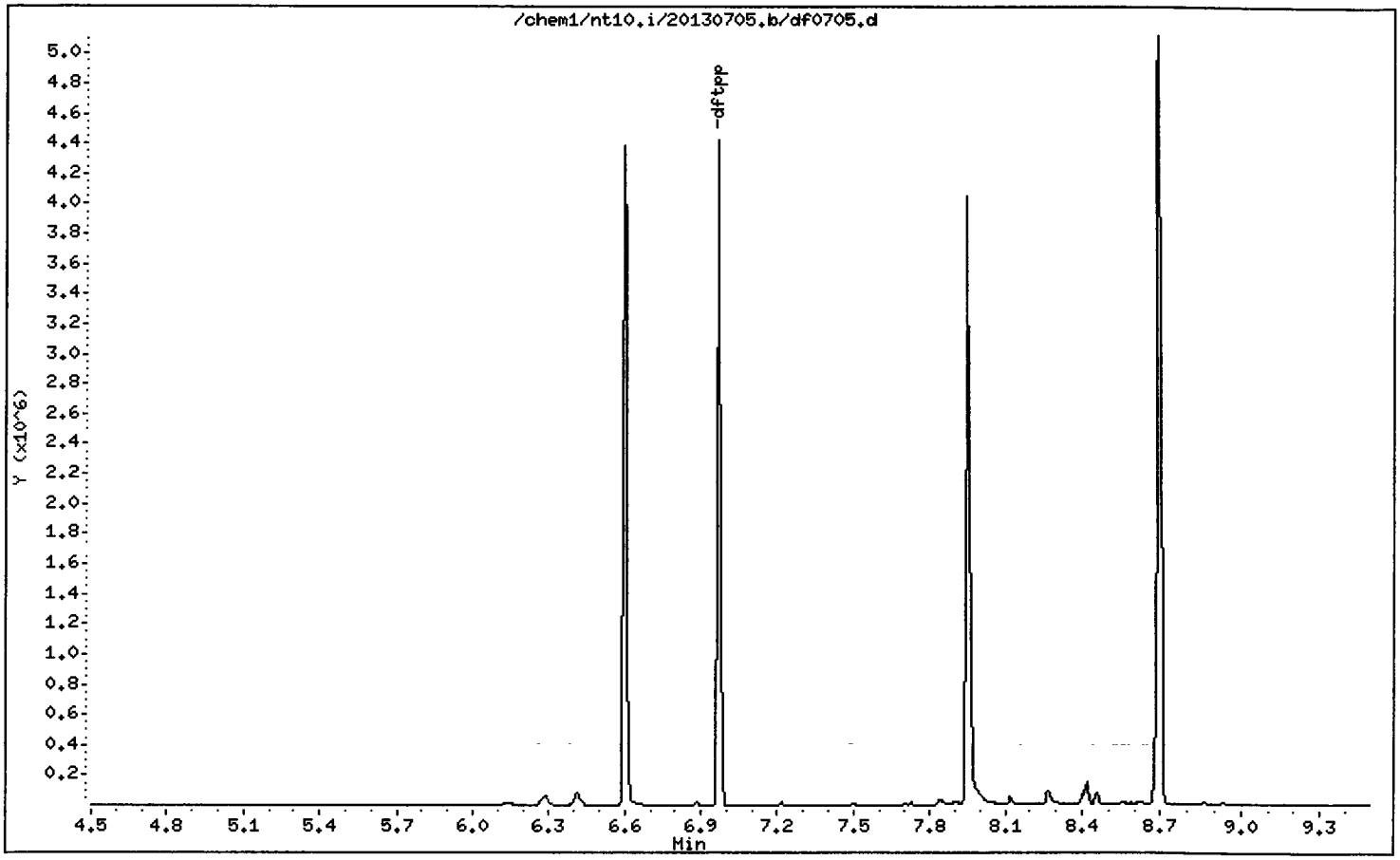
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130705.b/df0705.d

Date : 05-JUL-2013 11:58

Client ID: DFTPP

Instrument: nt10.i

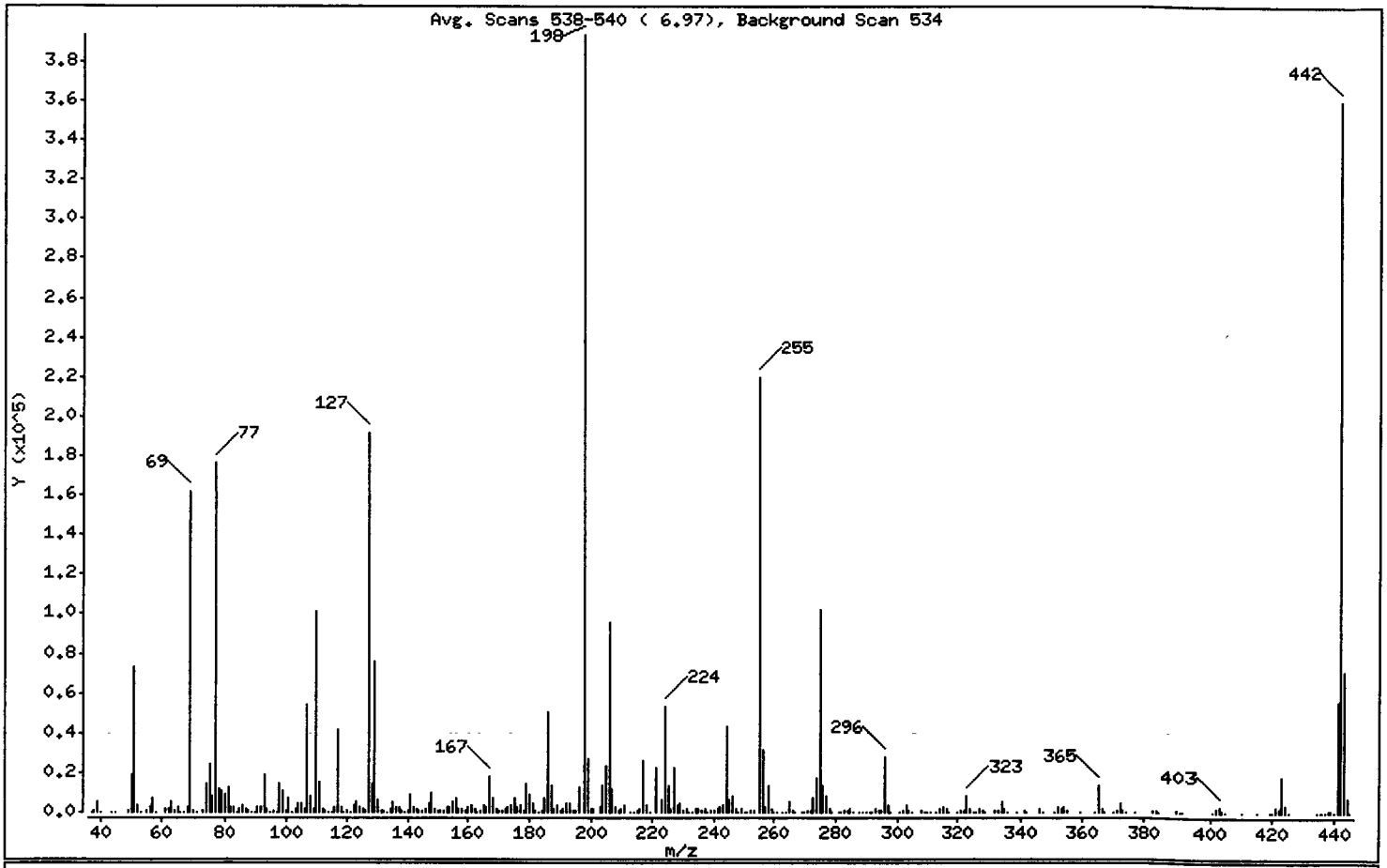
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

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	18.68
68	Less than 2.00% of mass 69	0.58 (1.41)
69	Mass 69 relative abundance	41.18
70	Less than 2.00% of mass 69	0.20 (0.49)
127	10.00 - 80.00% of mass 198	48.78
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.80
275	10.00 - 60.00% of mass 198	25.92
365	Greater than 1.00% of mass 198	3.46
441	0.01 - 24.00% of mass 442	14.28 (15.62)
442	50.00 - 200.00% of mass 198	91.41
443	15.00 - 24.00% of mass 442	18.11 (19.82)

Data File: /chem1/nt10.i/20130705.b/df0705.d

Date : 05-JUL-2013 11:58

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0705.d
Spectrum: Avg. Scans 538-540 (6.97), Background Scan 534
Location of Maximum: 198.00
Number of points: 324

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	342	129.00	75976	214.00	125	305.00	110
38.00	1040	130.00	6256	215.00	1045	308.00	459
39.00	5346	131.00	1191	216.00	2132	309.00	257
40.00	308	132.00	800	217.00	26424	310.00	349
44.00	353	133.00	262	218.00	3296	311.00	54
45.00	62	134.00	2051	219.00	369	313.00	241
49.00	640	135.00	5769	221.00	22896	314.00	1423
50.00	19416	136.00	2315	223.00	5889	315.00	3100
51.00	73520	137.00	2752	224.00	53024	316.00	1570
52.00	3799	138.00	779	225.00	13277	317.00	280
53.00	202	139.00	326	226.00	1552	320.00	136
55.00	685	140.00	833	227.00	22568	321.00	981
56.00	3083	141.00	9074	228.00	3175	322.00	459
57.00	7630	142.00	2792	229.00	4402	323.00	8455
58.00	373	143.00	2090	230.00	665	324.00	1555
61.00	1496	144.00	517	231.00	2088	325.00	154
62.00	1988	145.00	584	232.00	364	326.00	133
63.00	5816	146.00	1571	233.00	402	327.00	1672
64.00	845	147.00	4534	234.00	1470	328.00	765
65.00	2706	148.00	10069	235.00	1567	329.00	130
66.00	98	149.00	2098	236.00	1091	332.00	636
67.00	175	150.00	510	237.00	1612	333.00	926
68.00	2285	151.00	1109	238.00	294	334.00	5871
69.00	162048	152.00	516	239.00	915	335.00	1538
70.00	791	153.00	2866	240.00	729	336.00	163
71.00	120	154.00	2271	241.00	1478	339.00	122
73.00	1103	155.00	5146	242.00	2934	341.00	1117
74.00	14629	156.00	7677	243.00	3386	342.00	235
75.00	24568	157.00	1499	244.00	43160	346.00	1963
76.00	7906	158.00	1623	245.00	6110	347.00	344
77.00	176000	159.00	1198	246.00	8109	351.00	221
78.00	11842	160.00	2784	247.00	1655	352.00	2662
79.00	11234	161.00	4014	248.00	344	353.00	1803
80.00	8875	162.00	1380	249.00	1517	354.00	2462
81.00	12802	163.00	362	250.00	342	355.00	543

Data File: /chem1/nt10.i/20130705.b/df0705.d

Date : 05-JUL-2013 11:58

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0705.d
Spectrum: Avg. Scans 538-540 (6.97), Background Scan 534
Location of Maximum: 198.00
Number of points: 324

m/z	Y	m/z	Y	m/z	Y	m/z	Y
82.00	3111	164.00	546	251.00	400	359.00	218
83.00	2769	165.00	3325	252.00	521	364.00	179
84.00	126	166.00	2868	253.00	1046	365.00	13633
85.00	2011	167.00	17992	255.00	219776	366.00	1819
86.00	3356	168.00	7199	256.00	31640	367.00	55
87.00	1543	169.00	1396	257.00	2327	370.00	282
88.00	619	170.00	546	258.00	13215	371.00	756
89.00	269	171.00	809	259.00	2047	372.00	4549
90.00	66	172.00	1816	260.00	280	373.00	1129
91.00	2759	173.00	2336	261.00	386	374.00	58
92.00	3064	174.00	3798	263.00	79	377.00	144
93.00	19280	175.00	7352	264.00	451	383.00	1233
94.00	1402	176.00	2370	265.00	5091	384.00	456
95.00	374	177.00	3424	266.00	687	385.00	56
96.00	925	178.00	1194	267.00	53	390.00	670
97.00	445	179.00	14281	269.00	54	391.00	437
98.00	14626	180.00	9408	270.00	235	392.00	271
99.00	10957	181.00	4382	271.00	882	401.00	382
100.00	1034	182.00	814	272.00	783	402.00	1900
101.00	7270	183.00	369	273.00	7358	403.00	2829
102.00	376	184.00	1298	274.00	17360	404.00	1083
103.00	2239	185.00	6912	275.00	101976	405.00	59
104.00	4459	186.00	51008	276.00	13565	410.00	57
105.00	4212	187.00	14006	277.00	7944	415.00	77
106.00	1357	188.00	1643	278.00	1358	419.00	59
107.00	54264	189.00	3327	279.00	316	420.00	54
108.00	8260	190.00	569	281.00	110	421.00	2620
109.00	1499	191.00	1470	282.00	195	422.00	2212
110.00	101624	192.00	4487	283.00	921	423.00	18464
111.00	15380	193.00	4949	284.00	612	424.00	3559
112.00	1967	194.00	973	285.00	1401	425.00	334
113.00	630	195.00	824	286.00	203	434.00	55
114.00	65	196.00	12477	288.00	76	435.00	273
115.00	153	198.00	393472	289.00	378	436.00	209
116.00	2794	199.00	26760	290.00	231	437.00	291

Data File: /chem1/nt10.i/20130705.b/df0705.d

Date : 05-JUL-2013 11:58

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

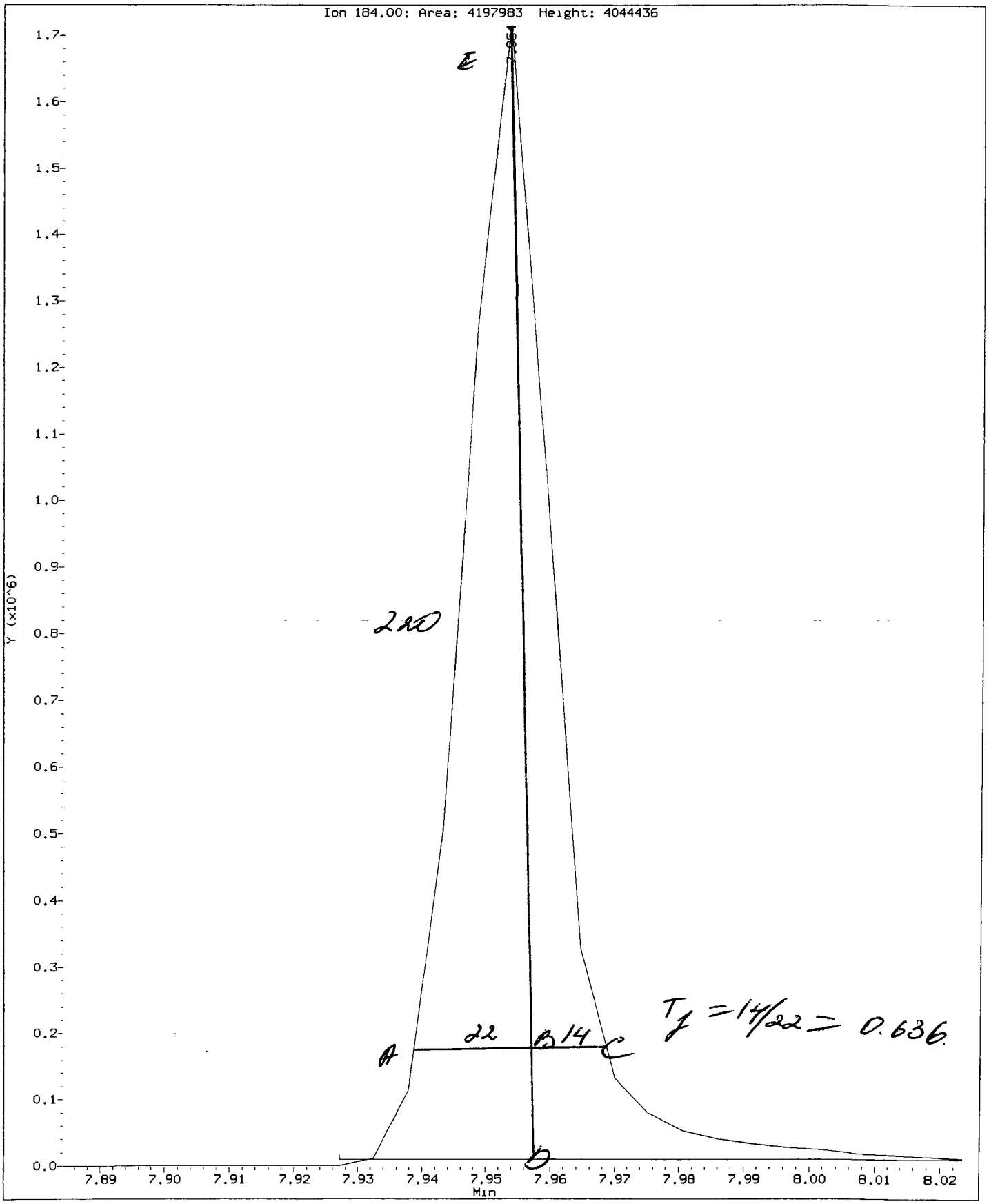
Column diameter: 0.25

Data File: df0705.d
Spectrum: Avg. Scans 538-540 (6.97), Background Scan 534
Location of Maximum: 198.00
Number of points: 324

m/z	Y	m/z	Y	m/z	Y	m/z	Y
117.00	41712	200.00	2091	291.00	319	438.00	520
118.00	3083	201.00	2080	292.00	351	439.00	1063
119.00	429	203.00	2937	293.00	1929	440.00	148
120.00	621	204.00	13721	294.00	516	441.00	56184
121.00	220	205.00	23128	295.00	623	442.00	359680
122.00	3448	206.00	95760	296.00	27928	443.00	71272
123.00	5278	207.00	12074	297.00	4013	444.00	6894
124.00	2438	208.00	3155	298.00	224	445.00	375
125.00	2232	209.00	1120	301.00	303		
126.00	577	210.00	1702	302.00	562		
127.00	191936	211.00	3839	303.00	3222		
128.00	14215	213.00	238	304.00	867		

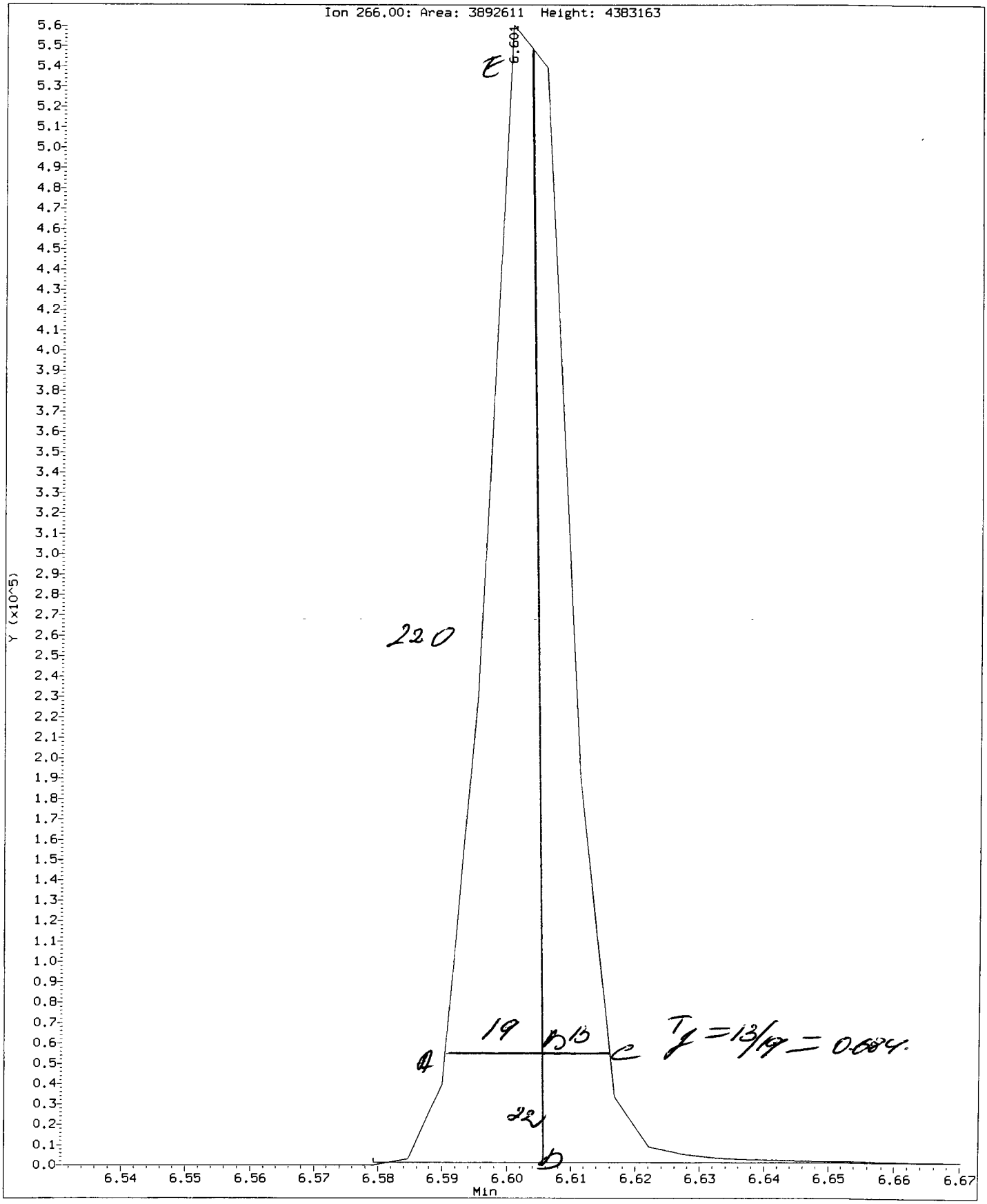
Data File: /chem1/nt10.1/20130705.b/ddt.b/df0705.d
Injection Date: 05-JUL-2013 11:58
Instrument: nt10.1
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Data File: /chem1/nt10.1/20130705.b/ddt.b/df0705.d
Injection Date: 05-JUL-2013 11:58
Instrument: nt10.1
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



WUTB : 08578

Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20130705.b/ddt.b/df0705.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130705.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 05-JUL-2013 11:58 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.601	3892611
Benzidine	7.954	4197982
4,4'-DDE	8.120	5067
4,4'-DDD	8.419	28602
4,4'-DDT	8.697	1102756

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(\ 5067 + 28602) * 100}{(\ 5067 + 28602 + 1102756)}$$

DDT Percent Breakdown = 3.0 %

Semivolatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WU70

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

GC/MS SVOA Analyst Notes / Data Review Checklist

ARI WORK Order: WU770 Client ID: SALS

METHOD: **8270D**(SIM-SVOA) **KRONE**(Butyl Tins) **8270D**(SVOA) **8270D**(OP-Pest)

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date: 07/05/13 Analysis Start Date: 07/05/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
DFTPP Tune met Criteria?	Y / N / ✓	Internal Standard within 50-200%?	Y / N / ✓
DDT Breakdown <20%?	Y / N / ✓	Retention Times within Windows?	Y / N / ✓
Peak Tailing Factor ≤2?	Y / N / ✓	Method Blank in Control?	Y / N / ✓
CCAL Meets %D?	Y / N / ✓	LCS / LCSD Recovery in Control?	Y / N / ✓
ICAL Q Flag applied?	Y / N /	LCS / LCSD RPD ≤ 30%?	NA /
CCAL Q flag applied?	Y / N /	MS / MSD Recovery in Control?	Y / N / ✓
Surrogate Recovery met?	Y / N / ✓	MS / MSD RPD ≤ 30%?	NA / ✓
Manual Integrations?	Y / N /	Samples Diluted?	Y / N /
Integration Summary?	Y / N / ✓	Special Analysis Request?	Y / N /

Detail problems, corrective actions and/or other pertinent information below.

(Review 1) Analyst: YZ **Date:** 7/8/13

(Review 2) Reviewer: MW **Date:** 7/9

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 07/05/13 Analysis: ABN/SIM ABN Analyst: YZ

GC Program: ABN_2 Column No: 252 Column Type: ZB-SemiVolatiles

Instrument Tune (.U or .CT.): B02284 273254 EM Voltage: 1753

Calibration File: DF 0705 Curve Date: 07/05/13 Injection Vol.: 1 uL

DF 0705A

IS/SS	Ical/Ccal	LCS/ICV
B928	B112	
	B931	
	B676	
	B943	
	2004-2.	

Document All Maintenance Tasks In Element

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130705.b

	Time	Filename	LabID	ClientId	DF											
1	1158	df0705.d	DFTPP	DFTPP	1	NO ISTDS FOUND										
2	1214	ic0705a.d	ABN 5		1	8.82	97290	11.49	336205	15.40	202661	18.75	352196	23.85	358983	26.29	381873	25 03	503607
3	1251	ic0705b.d	ABN20		1	8.82	74131	11.49	258499	15 40	155750	18.75	276458	23.87	281500	26 30	302445	25.03	417314
4	1328	ic0705c.d	ABN0.2		1	8 82	95267	11 48	346337	15 40	200079	18.74	340574	23.84	361748	26 28	373945	25.03	454960
5	1405	ic0705d.d	ABN1 0		1	8 82	100833	11.48	357288	15.40	215657	18.74	364293	23 84	373625	26.28	391862	25.03	475855
6	1442	ic0705e.d	ABN10		1	8 82	87173	11.49	305989	15 40	183652	18.75	317399	23.86	325381	26.30	345761	25.03	472443
7	1520	ic0705f.d	ABN2.5		1	8.82	89642	11.48	324549	15.40	193500	18.74	327266	23 85	342119	26 28	360085	25.03	455298
8	1557	ic0705g.d	ABN0.5		1	8.82	98080	11.48	355728	15.40	207021	18.74	348812	23.84	357738	26.28	373814	25 03	441979
9	1744	df0705a.d	DFTPP	DFTPP	1	NO ISTDS FOUND										
10	1800	cc0705.d	CC0705		1	8.82	85371	11.48	303328	15.40	182227	18.74	315392	23.85	318568	26.29	339315	25.03	433063
11	1914	wv19mb.d	WV19MBS1	WV19MBS1	1	8.82	76854	11.47	287521	15.39	165976	18.73	276441	23.83	277998	26.27	283394	25.01	349218
12	1951	wv19sb.d	WV19LCSS1		1	NO ISTDS FOUND										
13	2028	wv19sbd.d	WV19LCSDS1	WV19LCSDS1	1	8.82	77596	11.48	275189	15.40	166090	18.74	278633	23.85	288209	26.29	279494	25.03	385448
14	2105	wv19qls.d	WVQLS		1	8.82	83790	11.48	306529	15.39	181217	18.74	299338	23.84	307627	26.28	305489	25.03	389139
15	2142	wv19a.d	WV19A	201306211100	1	8 82	77315	11.48	292055	15.39	168043	18.74	251626	23 85	252845	26.30	265317	25.03	376702
16	2219	wv19b d	WV19B	201306211200	1	8.83	82780	11.48	311443	15.40	180556	18.74	263555	23 87	276814	26.33	283219	25.06	412621
17	2256	wu70mb.d	WU70MBS1		1	8.82	97435	11.48	362404	15.40	192642	18 74	316350	23.85	299209	26.30	328376	25.03	443567
18	2333	wu79bsb.d	WU70SB		1	8 82	90316	11.48	326963	15.40	195394	18.74	323078	23.86	310076	26 30	314618	25 03	431439
19	0010	wu70cb.d	WU70B		1	8.82	89501	11.48	331760	15 40	172189	18.77	284215	23.95	287936	26.50	309679	25.16	423427
20	0047	wu70c.d	WU70C		1	8.82	89295	11.49	331746	15.40	178188	18 76	270086	23.88	284246	26.37	300774	25.07	410558
21	0124	wu70cms.d	WU70CMS		1	8 82	85337	11.49	309525	15.40	170794	18.77	265002	23.89	273564	26.39	297965	25.08	399803
22	0200	wu70cmsd d	WU70CMSD		1	8 83	82652	11.49	297548	15.41	161801	18 77	254399	23.90	265554	26.41	277790	25.09	385562

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 Element

YZ 7/9/13

WU70_00814

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt10.i/20130705.b

ARI Job No.: WU70 Method: ABN.m Instrument: nt10.i Date: 05-JUL-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2256	wu70mb.d	WU70MBS1	WU70MBS1	1	NO MANUAL INTEGRATION
2333	wu79bsb.d	WU70LCSS1	WU70LCSS1	1	NO MANUAL INTEGRATION
0047	wu70c.d	WU70C	LF-LS-004-	1	Dibenzo(a,h)anthracene,
0010	wu70cb.d	WU70B	LF-TP-001-	1	Benzo(a)pyrene, Indeno(1,2,3-cd)pyrene, Dibenzo(a,h)anthracene, Benzo(g,h,i)perylene,
0124	wu70cms.d	WU70CMS	LF-LS-004-	1	Di-n-octylphthalate, Indeno(1,2,3-cd)pyrene,
0200	wu70cmsd.d	WU70CMSD	LF-LS-004-	1	Di-n-octylphthalate, Benzo(k)fluoranthene, Indeno(1,2,3-cd)pyrene,

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20130705.b

Instrument: nt10.i Date: 05-JUL-2013 Method: ABN.m

INITIAL CAL: 05-JUL-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 05-JUL-2013

Compound	%D
NO Q-FLAGS	

Data File: /chem1/nt10.i/20130705.b/df0705a.d

Date : 05-JUL-2013 17:44

Client ID: DFTPP

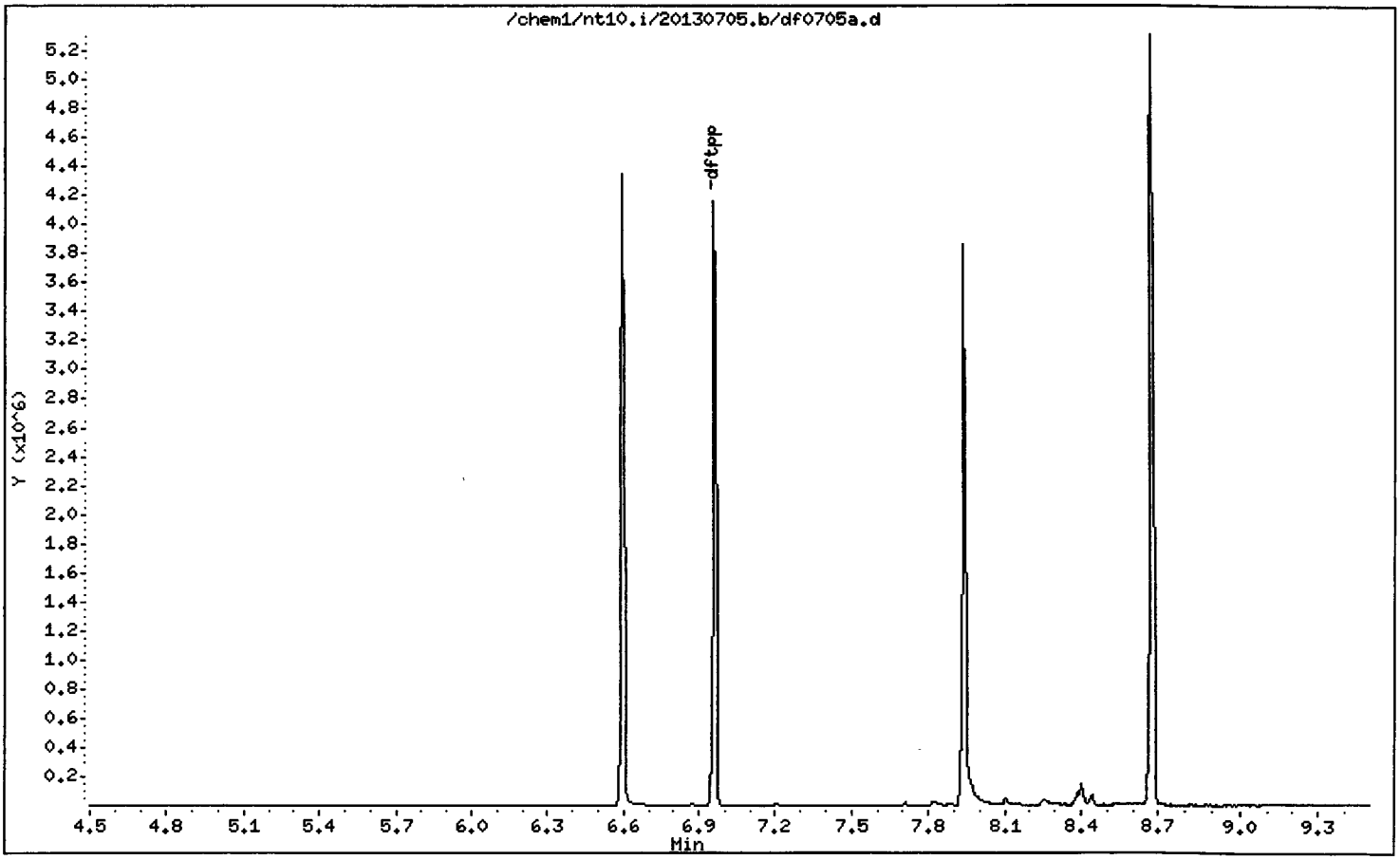
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130705.b/df0705a.d

Date : 05-JUL-2013 17:44

Client ID: DFTPP

Instrument: nt10.i

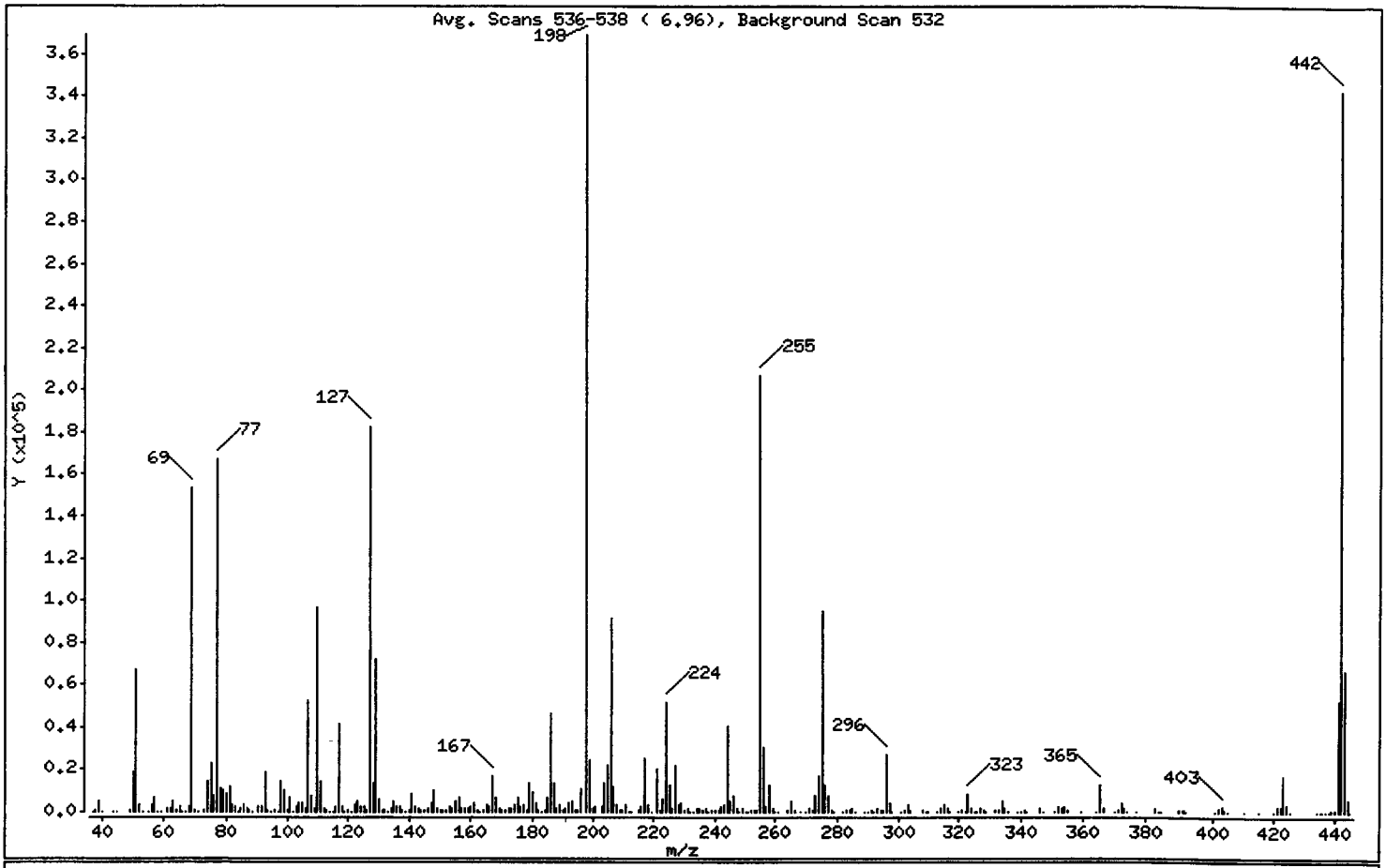
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

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	18.18
68	Less than 2.00% of mass 69	0.63 (1.50)
69	Mass 69 relative abundance	41.56
70	Less than 2.00% of mass 69	0.18 (0.42)
127	10.00 - 80.00% of mass 198	49.35
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.67
275	10.00 - 60.00% of mass 198	25.75
365	Greater than 1.00% of mass 198	3.51
441	0.01 - 24.00% of mass 442	14.34 (15.44)
442	50.00 - 200.00% of mass 198	92.89
443	15.00 - 24.00% of mass 442	18.22 (19.61)

Date : 05-JUL-2013 17:44

Client ID: DFTPP Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi Column diameter: 0.25

Data File: df0705a.d
Spectrum: Avg. Scans 536-538 (6.96), Background Scan 532
Location of Maximum: 198.00
Number of points: 319

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	310	127.00	182144	209.00	961	301.00	337
38.00	949	128.00	13457	210.00	569	302.00	546
39.00	4969	129.00	72280	211.00	3724	303.00	3233
40.00	200	130.00	5967	212.00	257	304.00	823
44.00	304	131.00	1150	213.00	342	308.00	436
45.00	67	132.00	578	215.00	1140	309.00	278
49.00	480	133.00	221	216.00	2258	310.00	354
50.00	18648	134.00	1884	217.00	25776	313.00	252
51.00	67104	135.00	5346	218.00	3018	314.00	1347
52.00	3528	136.00	2138	219.00	355	315.00	3207
53.00	67	137.00	2517	221.00	20568	316.00	1505
55.00	414	138.00	687	222.00	808	317.00	309
56.00	3127	139.00	360	223.00	6158	320.00	162
57.00	6960	140.00	841	224.00	51384	321.00	914
58.00	320	141.00	8749	225.00	12968	322.00	360
59.00	68	142.00	2904	226.00	1351	323.00	8864
61.00	1362	143.00	2011	227.00	21800	324.00	1516
62.00	1787	144.00	441	228.00	3091	325.00	162
63.00	5416	145.00	514	229.00	4540	326.00	144
64.00	815	146.00	1483	230.00	583	327.00	1662
65.00	2821	147.00	4376	231.00	1928	328.00	872
66.00	171	148.00	10153	232.00	360	329.00	142
67.00	211	149.00	1893	233.00	371	332.00	674
68.00	2308	150.00	561	234.00	1473	333.00	964
69.00	153408	151.00	1242	235.00	1557	334.00	5407
70.00	649	152.00	436	236.00	879	335.00	1389
71.00	51	153.00	2650	237.00	1608	336.00	208
73.00	1215	154.00	1987	238.00	196	339.00	126
74.00	14420	155.00	5245	239.00	841	340.00	77
75.00	23240	156.00	6913	240.00	634	341.00	927
76.00	7851	157.00	1433	241.00	1258	342.00	226
77.00	167168	158.00	1501	242.00	2755	346.00	1878
78.00	10712	159.00	1322	243.00	3036	347.00	246
79.00	10302	160.00	2687	244.00	41120	351.00	194
80.00	8302	161.00	3943	245.00	5341	352.00	2580

Date : 05-JUL-2013 17:44

Client ID: DFTPP Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi Column diameter: 0.25

Data File: df0705a.d
Spectrum: Avg. Scans 536-538 (6.96), Background Scan 532
Location of Maximum: 198.00
Number of points: 319

m/z	Y	m/z	Y	m/z	Y	m/z	Y
81.00	12076	162.00	1192	246.00	7781	353.00	1869
82.00	3102	163.00	308	247.00	1483	354.00	2715
83.00	2684	164.00	551	248.00	370	355.00	518
84.00	120	165.00	3148	249.00	1490	359.00	160
85.00	2001	166.00	2509	250.00	297	364.00	67
86.00	3297	167.00	16688	251.00	374	365.00	12969
87.00	1525	168.00	6457	252.00	467	366.00	1853
88.00	589	169.00	1327	253.00	1168	370.00	330
89.00	295	170.00	582	254.00	533	371.00	678
91.00	2702	171.00	771	255.00	207168	372.00	4526
92.00	2807	172.00	1616	256.00	30504	373.00	1284
93.00	18592	173.00	2017	257.00	2305	374.00	56
94.00	1213	174.00	3510	258.00	12405	377.00	139
95.00	288	175.00	6773	259.00	1925	383.00	1278
96.00	897	176.00	2206	260.00	349	384.00	353
97.00	365	177.00	3090	261.00	392	385.00	69
98.00	14031	178.00	1171	264.00	440	390.00	664
99.00	10500	179.00	13361	265.00	4971	391.00	513
100.00	965	180.00	8948	266.00	643	392.00	317
101.00	6753	181.00	4332	268.00	75	401.00	244
102.00	401	182.00	622	270.00	386	402.00	1851
103.00	2338	183.00	363	271.00	1277	403.00	2562
104.00	4223	184.00	1100	272.00	859	404.00	964
105.00	4218	185.00	6679	273.00	7309	405.00	117
106.00	1427	186.00	46848	274.00	16856	410.00	52
107.00	52720	187.00	13638	275.00	95024	415.00	67
108.00	7990	188.00	1438	276.00	12893	420.00	57
109.00	1458	189.00	2995	277.00	7724	421.00	2306
110.00	96480	190.00	557	278.00	1202	422.00	2266
111.00	14501	191.00	1306	279.00	249	423.00	17336
112.00	1721	192.00	4132	282.00	176	424.00	3348
113.00	617	193.00	4760	283.00	877	425.00	272
114.00	71	194.00	1039	284.00	676	434.00	146
115.00	146	195.00	707	285.00	1440	435.00	208
116.00	2692	196.00	11327	286.00	309	436.00	241

Data File: /chem1/nt10.i/20130705.b/df0705a.d

Date : 05-JUL-2013 17:44

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0705a.d

Spectrum: Avg. Scans 536-538 (6.96), Background Scan 532

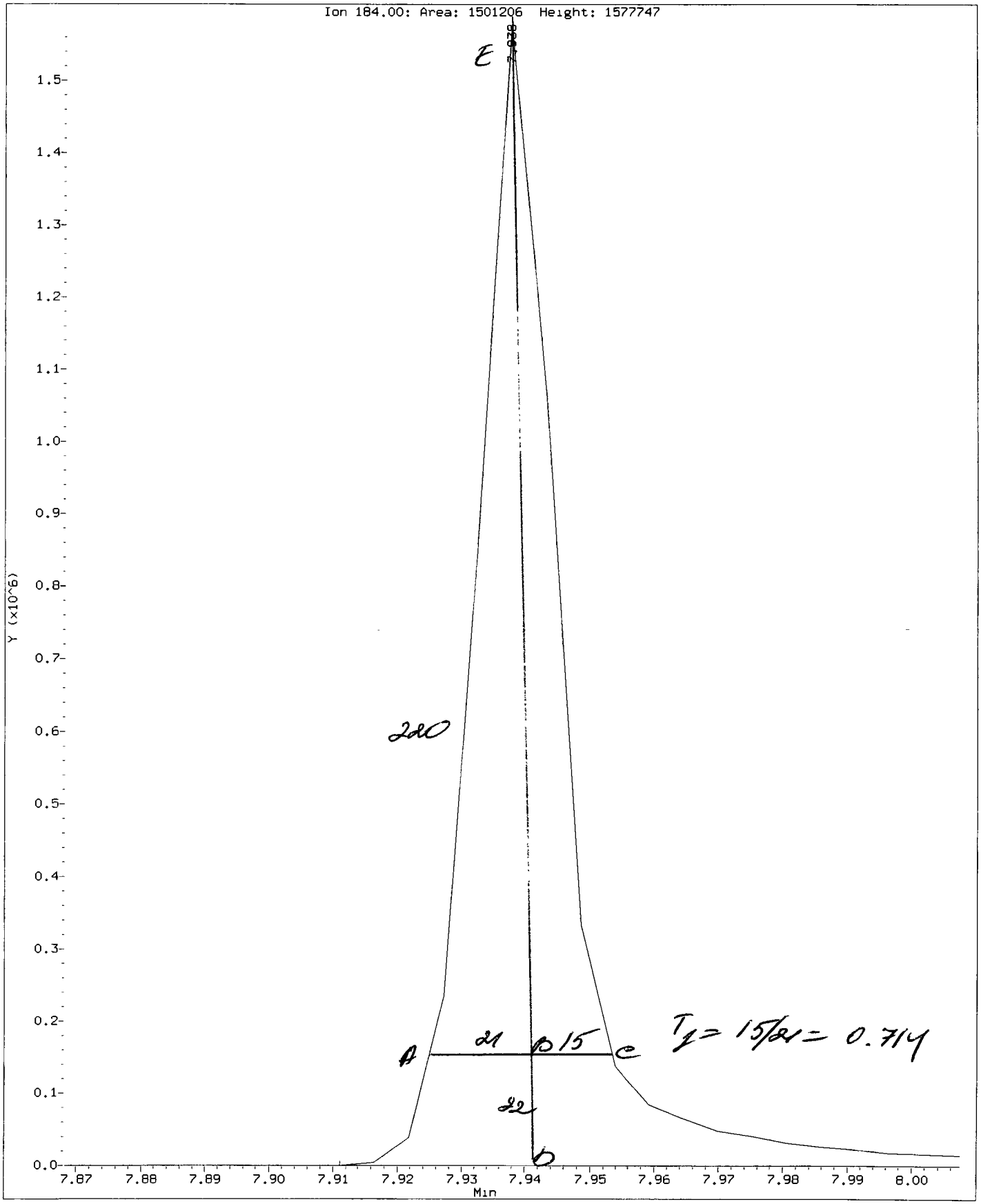
Location of Maximum: 198.00

Number of points: 319

m/z	Y	m/z	Y	m/z	Y	m/z	Y
117.00	41216	198.00	369088	289.00	361	437.00	263
118.00	2790	199.00	24600	290.00	329	438.00	109
119.00	328	200.00	1871	291.00	467	439.00	1016
120.00	508	201.00	2139	292.00	345	440.00	798
121.00	139	203.00	2572	293.00	1842	441.00	52928
122.00	3264	204.00	13204	294.00	498	442.00	342848
123.00	5116	205.00	22312	295.00	592	443.00	67232
124.00	2322	206.00	91232	296.00	27464	444.00	6108
125.00	2169	207.00	12096	297.00	4035	445.00	365
126.00	1149	208.00	3286	298.00	246		

Data File: /chem1/nt10.i/20130705.b/ddt.b/df0705a.d
Injection Date: 05-JUL-2013 17:44
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20130705.b/ddt.b/df0705a.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130705.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 05-JUL-2013 17:44 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.595	469597
Benzidine	7.938	1501205
4,4'-DDE	8.104	4561
4,4'-DDD	8.403	27263
4,4'-DDT	8.676	1020484

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(\ 4561 + 27263) * 100}{(\ 4561 + 27263 + 1020484)}$$

DDT Percent Breakdown = 3.0 %

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i
Lab File ID: cc0705.d
Analysis Type:
Lab Sample ID: CC0705
Method: /chem1/nt10.i/20130705.b/ABN.m

Injection Date: 05-JUL-2013 18:00
Init. Cal. Date(s): 05-JUL-2013 05-JUL-2013
Init. Cal. Times: 12:14 15:20
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 2-Fluorophenol	1.49308	1.48866	1.48866	0.010	-0.29639	20.00000	Averaged
$ 2 Phenol-d5	2.03386	2.06330	2.06330	0.010	1.44746	20.00000	Averaged
3 Phenol	2.09805	2.11138	2.11138	0.100	0.63510	20.00000	Averaged
$ 5 2-Chlorophenol-d4	1.44217	1.39054	1.39054	0.010	-3.57973	20.00000	Averaged
4 Bis(2-Chloroethyl)ether	1.58888	1.59667	1.59667	0.700	0.49030	20.00000	Averaged
6 2-Chlorophenol	1.49378	1.46635	1.46635	0.800	-1.83604	20.00000	Averaged
7 1,3-Dichlorobenzene	1.50132	1.43444	1.43444	0.010	-4.45514	20.00000	Averaged
9 1,4-Dichlorobenzene	1.49717	1.41488	1.41488	0.010	-5.49645	20.00000	Averaged
$ 10 1,2-Dichlorobenzene-d4	1.02169	0.97938	0.97938	0.010	-4.14110	20.00000	Averaged
12 1,2-Dichlorobenzene	1.41512	1.35709	1.35709	0.010	-4.10097	20.00000	Averaged
11 Benzyl alcohol	0.86457	0.87211	0.87211	0.010	0.87255	20.00000	Averaged
14 2,2'-oxybis(1-Chloropropane	0.47058	0.46041	0.46041	0.010	-2.16051	20.00000	Averaged
13 2-Methylphenol	1.49138	1.46498	1.46498	0.700	-1.76966	20.00000	Averaged
17 Hexachloroethane	0.66394	0.64267	0.64267	0.300	-3.20268	20.00000	Averaged
16 N-Nitroso-di-n-propylamine	1.05312	1.03786	1.03786	0.500	-1.44913	20.00000	Averaged
15 4-Methylphenol	1.50990	1.52616	1.52616	0.600	1.07653	20.00000	Averaged
$ 18 Nitrobenzene-d5	0.48897	0.49427	0.49427	0.010	1.08424	20.00000	Averaged
19 Nitrobenzene	0.43571	0.42869	0.42869	0.200	-1.61192	20.00000	Averaged
20 Isophorone	0.79230	0.79202	0.79202	0.300	-0.03572	20.00000	Averaged
21 2-Nitrophenol	0.28383	0.27152	0.27152	0.100	-4.33576	20.00000	Averaged
22 2,4-Dimethylphenol	0.42811	0.42579	0.42579	0.200	-0.54178	20.00000	Averaged
23 Bis(2-Chloroethoxy)methane	0.49885	0.48486	0.48486	0.050	-2.80285	20.00000	Averaged
24 Benzoic acid	0.35593	0.35466	0.35466	0.010	-0.35537	20.00000	Averaged
25 2,4-Dichlorophenol	0.32406	0.32662	0.32662	0.100	0.79039	20.00000	Averaged
26 1,2,4-Trichlorobenzene	0.35087	0.33492	0.33492	0.010	-4.54459	20.00000	Averaged
28 Naphthalene	1.04794	1.01431	1.01431	0.100	-3.20947	20.00000	Averaged
29 4-Chloroaniline	0.46358	0.48508	0.48508	0.010	4.63684	20.00000	Averaged
30 Hexachlorobutadiene	0.21037	0.20129	0.20129	0.010	-4.31436	20.00000	Averaged
31 4-Chloro-3-methylphenol	0.36106	0.37932	0.37932	0.200	5.05667	20.00000	Averaged
32 2-Methylnaphthalene	0.69847	0.68074	0.68074	0.300	-2.53907	20.00000	Averaged
33 Hexachlorocyclopentadiene	0.44947	0.44896	0.44896	0.001	-0.11222	20.00000	Averaged
34 2,4,6-Trichlorophenol	0.46308	0.44836	0.44836	0.200	-3.17740	20.00000	Averaged
35 2,4,5-Trichlorophenol	0.46580	0.48413	0.48413	0.200	3.93458	20.00000	Averaged
$ 36 2-Fluorobiphenyl	1.46568	1.39395	1.39395	0.010	-4.89400	20.00000	Averaged
37 2-Chloronaphthalene	1.16796	1.11581	1.11581	0.700	-4.46499	20.00000	Averaged

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i
Lab File ID: cc0705.d
Analysis Type:
Lab Sample ID: CC0705
Method: /chem1/nt10.i/20130705.b/ABN.m

Injection Date: 05-JUL-2013 18:00
Init. Cal. Date(s): 05-JUL-2013 05-JUL-2013
Init. Cal. Times: 12:14 15:20
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
38 2-Nitroaniline	0.31868	0.34043	0.34043	0.010	6.82453	20.00000	Averaged
39 Dimethylphthalate	1.30274	1.26441	1.26441	0.010	-2.94230	20.00000	Averaged
40 Acenaphthylene	1.90442	1.83740	1.83740	0.900	-3.51901	20.00000	Averaged
41 2,6-Dinitrotoluene	0.29527	0.29782	0.29782	0.100	0.86382	20.00000	Averaged
43 3-Nitroaniline	0.25232	0.30100	0.30100	0.010	19.29327	20.00000	Averaged
44 Acenaphthene	1.13967	1.11187	1.11187	0.100	-2.43943	20.00000	Averaged
45 2,4-Dinitrophenol	20.16259	20.00000	0.25098	0.030	0.81294	20.00000	Quadratic
46 Dibenzofuran	1.55153	1.54151	1.54151	0.800	-0.64615	20.00000	Averaged
47 4-Nitrophenol	10.27555	10.00000	0.18703	0.010	2.75551	20.00000	Quadratic
48 2,4-Dinitrotoluene	0.38667	0.40606	0.40606	0.200	5.01299	20.00000	Averaged
50 Diethylphthalate	1.47049	1.48819	1.48819	0.010	1.20362	20.00000	Averaged
49 Fluorene	1.36365	1.34218	1.34218	0.100	-1.57423	20.00000	Averaged
51 4-Chlorophenyl-phenylether	0.66702	0.65215	0.65215	0.100	-2.22905	20.00000	Averaged
52 4-Nitroaniline	10.20662	10.00000	0.27088	0.010	2.06617	20.00000	Quadratic
53 4,6-Dinitro-2-methylphenol	19.99413	20.00000	0.19515	0.001	-0.02936	20.00000	Quadratic
54 N-Nitrosodiphenylamine	0.48529	0.48239	0.48239	0.010	-0.59684	20.00000	Averaged
$ 55 2,4,6-Tribromophenol	0.25048	0.24840	0.24840	0.010	-0.83052	20.00000	Averaged
56 4-Bromophenyl-phenylether	0.24589	0.26826	0.26826	0.100	9.09872	20.00000	Averaged
57 Hexachlorobenzene	0.26210	0.24625	0.24625	0.100	-6.04794	20.00000	Averaged
58 Pentachlorophenol	0.20916	0.20822	0.20822	0.010	-0.44985	20.00000	Averaged
60 Phenanthrene	1.09329	1.04782	1.04782	0.700	-4.15839	20.00000	Averaged
61 Anthracene	1.14903	1.13036	1.13036	0.700	-1.62534	20.00000	Averaged
62 Carbazole	0.70097	0.60374	0.60374	0.010	-13.87111	20.00000	Averaged
63 Di-n-butylphthalate	1.29968	1.27833	1.27833	0.010	-1.64279	20.00000	Averaged
64 Fluoranthene	1.34196	1.30128	1.30128	0.600	-3.03183	20.00000	Averaged
65 Pyrene	1.34268	1.34733	1.34733	0.600	0.34623	20.00000	Averaged
$ 66 Terphenyl-d14	0.72232	0.71391	0.71391	0.010	-1.16471	20.00000	Averaged
67 Butylbenzylphthalate	0.52210	0.52903	0.52903	0.010	1.32765	20.00000	Averaged
68 Benzo(a)anthracene	1.25133	1.21070	1.21070	0.700	-3.24730	20.00000	Averaged
70 3,3'-Dichlorobenzidine	0.47276	0.42597	0.42597	0.010	-9.89720	20.00000	Averaged
71 Chrysene	1.13520	1.09260	1.09260	0.700	-3.75238	20.00000	Averaged
72 bis(2-Ethylhexyl)phthalate	0.51533	0.52420	0.52420	0.010	1.72222	20.00000	Averaged
73 Di-n-octylphthalate	0.98025	0.95573	0.95573	0.010	-2.50192	20.00000	Averaged
74 Benzo(b)fluoranthene	1.16504	1.14927	1.14927	0.700	-1.35312	20.00000	Averaged
75 Benzo(k)fluoranthene	1.44453	1.37642	1.37642	0.700	-4.71470	20.00000	Averaged

Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i
Lab File ID: cc0705.d
Analysis Type:
Lab Sample ID: CC0705
Method: /chem1/nt10.i/20130705.b/ABN.m

Injection Date: 05-JUL-2013 18:00
Init. Cal. Date(s): 05-JUL-2013 05-JUL-2013
Init. Cal. Times: 12:14 15:20
Quant Type: ISTD

COMPOUND	RRF / AMOUNT	RF5	CCAL RRF5	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
76 Benzo(a)pyrene	1.06782	1.05010	1.05010	0.700	-1.65891	20.00000	Averaged
78 Indeno(1,2,3-cd)pyrene	1.26512	1.28169	1.28169	0.500	1.30982	20.00000	Averaged
79 Dibenzo(a,h)anthracene	0.95930	0.96038	0.96038	0.400	0.11225	20.00000	Averaged
80 Benzo(g,h,i)perylene	1.07407	1.06724	1.06724	0.500	-0.63581	20.00000	Averaged
90 N-Nitrosodimethylamine	0.97419	0.98607	0.98607	0.010	1.21969	20.00000	Averaged
91 Aniline	4.43558	4.41515	4.41515	0.010	-0.46067	20.00000	Averaged
93 Benzidine	10.42446	10.00000	0.17991	0.010	4.24465	20.00000	Quadratic
103 Pyridine	0.85068	0.86884	0.86884	0.010	2.13466	20.00000	Averaged
105 1-methylnaphthalene	0.63700	0.62337	0.62337	0.010	-2.14062	20.00000	Averaged
111 Azobenzene (1,2-DP-Hydrazin	1.42078	1.40817	1.40817	0.010	-0.88782	20.00000	Averaged
187 Total Benzofluoranthenes	1.25100	1.24108	1.24108	0.010	-0.79288	20.00000	Averaged
99 Perylene	1.03245	1.00996	1.00996	0.010	-2.17797	20.00000	Averaged
98 Retene	0.51759	0.50741	0.50741	0.010	-1.96727	20.00000	Averaged
120 2,3,4,6-Tetrachlorophenol	0.35917	0.36059	0.36059	0.010	0.39617	20.00000	Averaged

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 7/9/13

Data file : /chem1/nt10.i/20130705.b/cc0705.d
Lab Smp Id: CC0705
Inj Date : 05-JUL-2013 18:00
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : CC0705
Misc Info :
Comment : 1ul Injection
Method : /chem1/nt10.i/20130705.b/ABN.m
Meth Date : 08-Jul-2013 11:55 yev Quant Type: ISTD
Cal Date : 05-JUL-2013 15:57 Cal File: ic0705g.d
Als bottle: 12 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.343	6.343	(0.719)	158860	5.00000	5.004
$	2 Phenol-d5	99	8.067	8.066	(0.914)	220182	5.00000	5.133
	3 Phenol	94	8.098	8.090	(0.918)	225313	5.00000	5.044
$	5 2-Chlorophenol-d4	132	8.360	8.360	(0.947)	148390	5.00000	4.829
	4 Bis(2-Chloroethyl)ether	93	8.298	8.298	(0.940)	170387	5.00000	4.999
	6 2-Chlorophenol	128	8.391	8.391	(0.951)	156480	5.00000	4.914
	7 1,3-Dichlorobenzene	146	8.708	8.708	(0.987)	153074	5.00000	4.765
*	8 1,4-Dichlorobenzene-d4	152	8.825	8.824	(1.000)	85371	4.00000	
	9 1,4-Dichlorobenzene	146	8.856	8.855	(1.004)	150987	5.00000	4.716
$	10 1,2-Dichlorobenzene-d4	152	9.135	9.135	(1.035)	104513	5.00000	4.802
	12 1,2-Dichlorobenzene	146	9.158	9.158	(1.038)	144820	5.00000	4.782
	11 Benzyl alcohol	108	9.089	9.088	(1.030)	93066	5.00000	5.112
	14 2,2'-oxybis(1-Chloropropane)	121	9.391	9.399	(1.064)	49132	5.00000	4.886
	13 2-Methylphenol	108	9.314	9.313	(1.055)	156334	5.00000	4.931
	17 Hexachloroethane	117	9.865	9.864	(1.118)	68582	5.00000	4.830
	16 N-Nitroso-di-n-propylamine	70	9.648	9.647	(1.093)	110754	5.00000	4.937
	15 4-Methylphenol	108	9.632	9.632	(1.091)	162862	5.00000	5.078
$	18 Nitrobenzene-d5	82	9.942	9.934	(0.866)	187408	5.00000	5.066
	19 Nitrobenzene	77	9.981	9.981	(0.869)	162542	5.00000	4.947
	20 Isophorone	82	10.501	10.501	(0.915)	300303	5.00000	5.024
	21 2-Nitrophenol	139	10.656	10.656	(0.928)	102951	5.00000	4.844
	22 2,4-Dimethylphenol	107	10.772	10.772	(0.938)	322883	10.0000	9.982
	23 Bis(2-Chloroethoxy)methane	93	10.988	10.988	(0.957)	183841	5.00000	4.875
	24 Benzoic acid	105	11.027	10.957	(0.960)	537895	20.0000	19.62
	25 2,4-Dichlorophenol	162	11.173	11.173	(0.973)	247680	10.0000	10.15
	26 1,2,4-Trichlorobenzene	180	11.374	11.365	(0.991)	126989	5.00000	4.770
*	27 Naphthalene-d8	136	11.482	11.481	(1.000)	303328	4.00000	

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
	28 Naphthalene	128	11.528	11.528	(1.004)	384586	5.00000	4.855
	29 4-Chloroaniline	127	11.651	11.651	(1.015)	367845	10.0000	10.53
	30 Hexachlorobutadiene	225	11.845	11.844	(1.032)	76323	5.00000	4.810
	31 4-Chloro-3-methylphenol	107	12.742	12.734	(1.110)	287644	10.0000	10.66
	32 2-Methylnaphthalene	142	13.068	13.067	(1.138)	258109	5.00000	4.908
	33 Hexachlorocyclopentadiene	237	13.447	13.446	(0.873)	204533	10.0000	10.13
	34 2,4,6-Trichlorophenol	196	13.702	13.702	(0.890)	204260	10.0000	9.818
	35 2,4,5-Trichlorophenol	196	13.764	13.764	(0.894)	220552	10.0000	10.59
$	36 2-Fluorobiphenyl	172	13.911	13.911	(0.903)	317519	5.00000	4.765
	37 2-Chloronaphthalene	162	14.151	14.143	(0.919)	254163	5.00000	4.790
	38 2-Nitroaniline	65	14.375	14.367	(0.934)	155088	10.0000	10.93
	39 Dimethylphthalate	163	14.848	14.839	(0.964)	288013	5.00000	4.866
	40 Acenaphthylene	152	15.072	15.072	(0.979)	418531	5.00000	4.820
	41 2,6-Dinitrotoluene	165	14.940	14.940	(0.970)	135678	10.0000	10.18
*	42 Acenaphthene-d10	164	15.397	15.397	(1.000)	182227	4.00000	
	43 3-Nitroaniline	138	15.297	15.288	(0.993)	137127	10.0000	12.02
	44 Acenaphthene	153	15.474	15.466	(1.005)	253265	5.00000	4.883
	45 2,4-Dinitrophenol	184	15.544	15.536	(1.010)	228674	20.0000	20.18
	46 Dibenzofuran	168	15.869	15.860	(1.031)	351130	5.00000	4.980
	47 4-Nitrophenol	109	15.699	15.690	(1.020)	85204	10.0000	10.28
	48 2,4-Dinitrotoluene	165	15.845	15.837	(1.029)	184987	10.0000	10.66
	50 Diethylphthalate	149	16.472	16.456	(1.070)	338985	5.00000	5.116
	49 Fluorene	166	16.641	16.633	(1.081)	305727	5.00000	4.915
	51 4-Chlorophenyl-phenylether	204	16.680	16.672	(1.083)	148550	5.00000	4.858
	52 4-Nitroaniline	138	16.672	16.664	(1.083)	123404	10.0000	10.22
	53 4,6-Dinitro-2-methylphenol	198	16.765	16.756	(0.894)	307745	20.0000	22.32
	54 N-Nitrosodiphenylamine	169	16.942	16.934	(0.904)	190177	5.00000	4.973
$	55 2,4,6-Tribromophenol	330	17.173	17.173	(1.115)	56581	5.00000	5.017
	56 4-Bromophenyl-phenylether	248	17.783	17.775	(0.949)	105759	5.00000	5.491
	57 Hexachlorobenzene	284	17.883	17.883	(0.954)	97080	5.00000	4.718
	58 Pentachlorophenol	266	18.332	18.332	(0.978)	164174	10.0000	10.06
*	59 Phenanthrene-d10	188	18.742	18.742	(1.000)	315392	4.00000	
	60 Phenanthrene	178	18.797	18.796	(1.003)	413094	5.00000	4.814
	61 Anthracene	178	18.913	18.905	(1.009)	445632	5.00000	4.941
	62 Carbazole	167	19.261	19.260	(1.028)	238017	5.00000	4.160
	63 Di-n-butylphthalate	149	20.104	20.096	(1.073)	503969	5.00000	4.995
	64 Fluoranthene	202	21.226	21.226	(1.133)	513016	5.00000	4.906
	65 Pyrene	202	21.652	21.651	(0.908)	536520	5.00000	5.066
$	66 Terphenyl-d14	244	21.992	21.992	(0.922)	284285	5.00000	4.959
	67 Butylbenzylphthalate	149	22.921	22.921	(0.961)	210665	5.00000	5.185
	68 Benzo(a)anthracene	228	23.835	23.827	(0.999)	482111	5.00000	4.839
*	69 Chrysene-d12	240	23.850	23.850	(1.000)	318568	4.00000	
	70 3,3'-Dichlorobenzidine	252	23.804	23.803	(0.998)	339248	10.0000	9.054
	71 Chrysene	228	23.897	23.889	(1.002)	435084	5.00000	4.834
	72 bis(2-Ethylhexyl)phthalate	149	23.974	23.974	(0.958)	283766	5.00000	5.126
*	134 Di-n-octylphthalate-d4	153	25.027	25.027	(1.000)	433063	4.00000	
	73 Di-n-octylphthalate	149	25.035	25.034	(1.000)	517362	5.00000	4.863

	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	25.608	25.607	(0.974)	487457	5.00000	5.039
75	Benzo(k)fluoranthene	252	25.654	25.654	(0.976)	583801	5.00000	4.791
76	Benzo(a)pyrene	252	26.181	26.180	(0.996)	445395	5.00000	4.975
* 77	Perylene-d12	264	26.289	26.281	(1.000)	339315	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.599	28.583	(1.088)	543619	5.00000	5.183
79	Dibenzo(a,h)anthracene	278	28.661	28.653	(1.090)	407339	5.00000	5.067
80	Benzo(g,h,i)perylene	276	29.298	29.282	(1.114)	452664	5.00000	5.039
90	N-Nitrosodimethylamine	74	4.035	4.042	(0.457)	210454	10.0000	10.27
91	Aniline	93	8.159	8.159	(0.925)	471157	5.00000	4.980
93	Benzidine	184	21.512	21.504	(0.902)	143281	10.0000	9.985
103	Pyridine	79	4.104	4.111	(0.465)	185435	10.0000	10.26
105	1-methylnaphthalene	142	13.284	13.284	(1.157)	236356	5.00000	4.921
111	Azobenzene (1,2-DP-Hydrazine)	77	17.034	17.026	(1.106)	320758	5.00000	4.952
187	Total Benzofluoranthenes	252	25.654	25.654	(0.976)	1052791	10.0000	10.03
99	Perylene	252	26.336	26.335	(1.002)	428370	5.00000	4.897
98	Retene	219	22.240	22.239	(0.932)	202054	5.00000	4.955
120	2,3,4,6-Tetrachlorophenol	232	16.147	16.146	(1.049)	82137	5.00000	5.091

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: cc0705.d
Lab Smp Id: CC0705
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130705.b/ABN.m
Misc Info:

Calibration Date: 05-JUL-2013
Calibration Time: 12:14

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	97290	48645	194580	85371	-12.25
27 Naphthalene-d8	336205	168102	672410	303328	-9.78
42 Acenaphthene-d10	202661	101330	405322	182227	-10.08
59 Phenanthrene-d10	352196	176098	704392	315392	-10.45
69 Chrysene-d12	358983	179492	717966	318568	-11.26
134 Di-n-octylphthala	503607	251804	1007214	433063	-14.01
77 Perylene-d12	381873	190936	763746	339315	-11.14

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.82	8.32	9.32	8.82	0.00
27 Naphthalene-d8	11.49	10.99	11.99	11.48	-0.07
42 Acenaphthene-d10	15.40	14.90	15.90	15.40	0.00
59 Phenanthrene-d10	18.75	18.25	19.25	18.74	-0.04
69 Chrysene-d12	23.85	23.35	24.35	23.85	0.00
134 Di-n-octylphthala	25.03	24.53	25.53	25.03	0.00
77 Perylene-d12	26.29	25.79	26.79	26.29	0.00

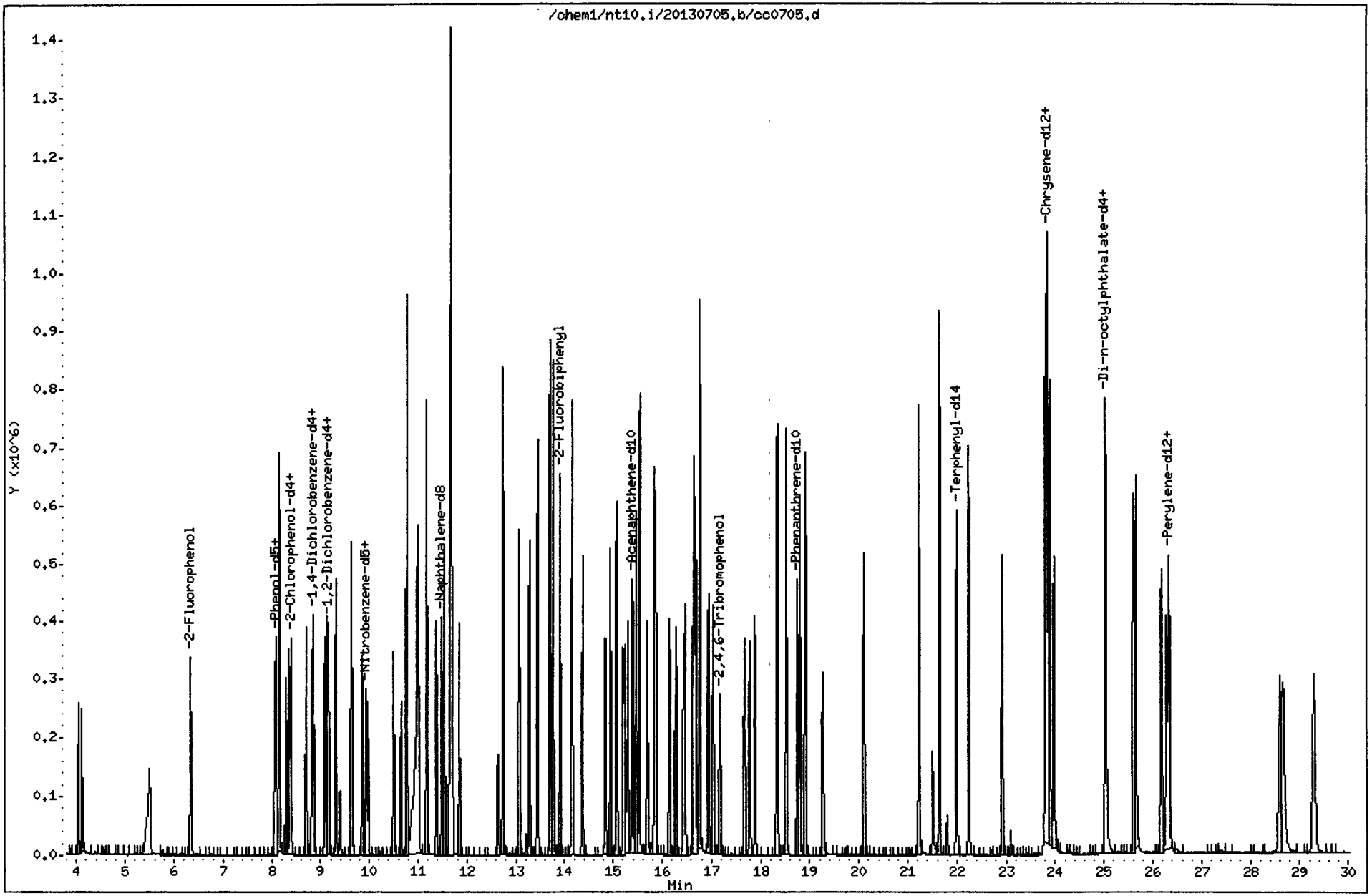
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130705.b/cc0705.d
Date : 05-JUL-2013 18:00
Client ID:
Sample Info: CC0705

Instrument: nt10.i

Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



CO-ELUTION SUMMARY FOR FILE - cc0705.d

Lab ID: CC0705, Method: ABN.m, Instrument: nt10.i, Date: 05-JUL-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

7/9/13

Data file : /chem1/nt10.i/20130705.b/wu70mb.d
Lab Smp Id: WU70MBS1 Client Smp ID: WU70MBS1
Inj Date : 05-JUL-2013 22:56
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WU70MBS1
Misc Info : 13-13123
Comment : 1ul Injection
Method : /chem1/nt10.i/20130705.b/ABN.m
Meth Date : 09-Jul-2013 14:16 yev Quant Type: ISTD
Cal Date : 05-JUL-2013 15:57 Cal File: ic0705g.d
Als bottle: 20 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

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

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$	1	2-Fluorophenol	112	6.358	6.343	(0.721)	169594	4.68054	468.1
$	2	Phenol-d5	99	8.074	8.067	(0.916)	230210	4.70203	470.2
	3	Phenol	94	Compound Not Detected.					
$	5	2-Chlorophenol-d4	132	8.360	8.360	(0.948)	170654	4.86561	486.6
	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	8.817	8.825	(1.000)	97435	4.00000	
	9	1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10	1,2-Dichlorobenzene-d4	152	9.127	9.135	(1.035)	80939	3.25824	325.8
	12	1,2-Dichlorobenzene	146	Compound Not Detected.					
	11	Benzyl alcohol	108	Compound Not Detected.					
	14	2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13	2-Methylphenol	108	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	Compound Not Detected.					
$	18 Nitrobenzene-d5	82	9.934	9.935	(0.865)	142193	3.21689	321.7
	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	11.481	11.482	(1.000)	362404	4.00000	
	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	142	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	13.911	13.911	(0.903)	258319	3.66728	366.7
	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	15.397	15.397	(1.000)	192642	4.00000	
	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	17.173	17.165	(1.115)	60123	5.04258	504.3
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18.742	18.742	(1.000)	316350	4.00000	
	60 Phenanthrene	178	Compound Not Detected.					
	61 Anthracene	178	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	62 Carbazole	167	Compound Not Detected.					
	63 Di-n-butylphthalate	149	Compound Not Detected.					
	64 Fluoranthene	202	Compound Not Detected.					
	65 Pyrene	202	Compound Not Detected.					
$	66 Terphenyl-d14	244	22.000	21.992	(0.922)	257790	4.78755	478.8
	67 Butylbenzylphthalate	149	Compound Not Detected.					
	68 Benzo(a)anthracene	228	Compound Not Detected.					
*	69 Chrysene-d12	240	23.850	23.843	(1.000)	299209	4.00000	
	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	25.034	25.027	(1.000)	443567	4.00000	
	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	26.297	26.281	(1.000)	328376	4.00000	
	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	142	Compound Not Detected.					
	111 Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
	187 Total Benzofluoranthenes	252	Compound Not Detected.					
	99 Perylene	252	Compound Not Detected.					
	98 Retene	219	Compound Not Detected.					
	120 2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wu70mb.d
Lab Smp Id: WU70MBS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130705.b/ABN.m
Misc Info: 13-13123

Calibration Date: 05-JUL-2013
Calibration Time: 12:14
Client Smp ID: WU70MBS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	97290	48645	194580	97435	0.15
27 Naphthalene-d8	336205	168102	672410	362404	7.79
42 Acenaphthene-d10	202661	101330	405322	192642	-4.94
59 Phenanthrene-d10	352196	176098	704392	316350	-10.18
69 Chrysene-d12	358983	179492	717966	299209	-16.65
134 Di-n-octylphthala	503607	251804	1007214	443567	-11.92
77 Perylene-d12	381873	190936	763746	328376	-14.01

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.82	8.32	9.32	8.82	-0.09
27 Naphthalene-d8	11.49	10.99	11.99	11.48	-0.07
42 Acenaphthene-d10	15.40	14.90	15.90	15.40	0.00
59 Phenanthrene-d10	18.75	18.25	19.25	18.74	-0.04
69 Chrysene-d12	23.85	23.35	24.35	23.85	0.00
134 Di-n-octylphthala	25.03	24.53	25.53	25.03	0.03
77 Perylene-d12	26.29	25.79	26.79	26.30	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.

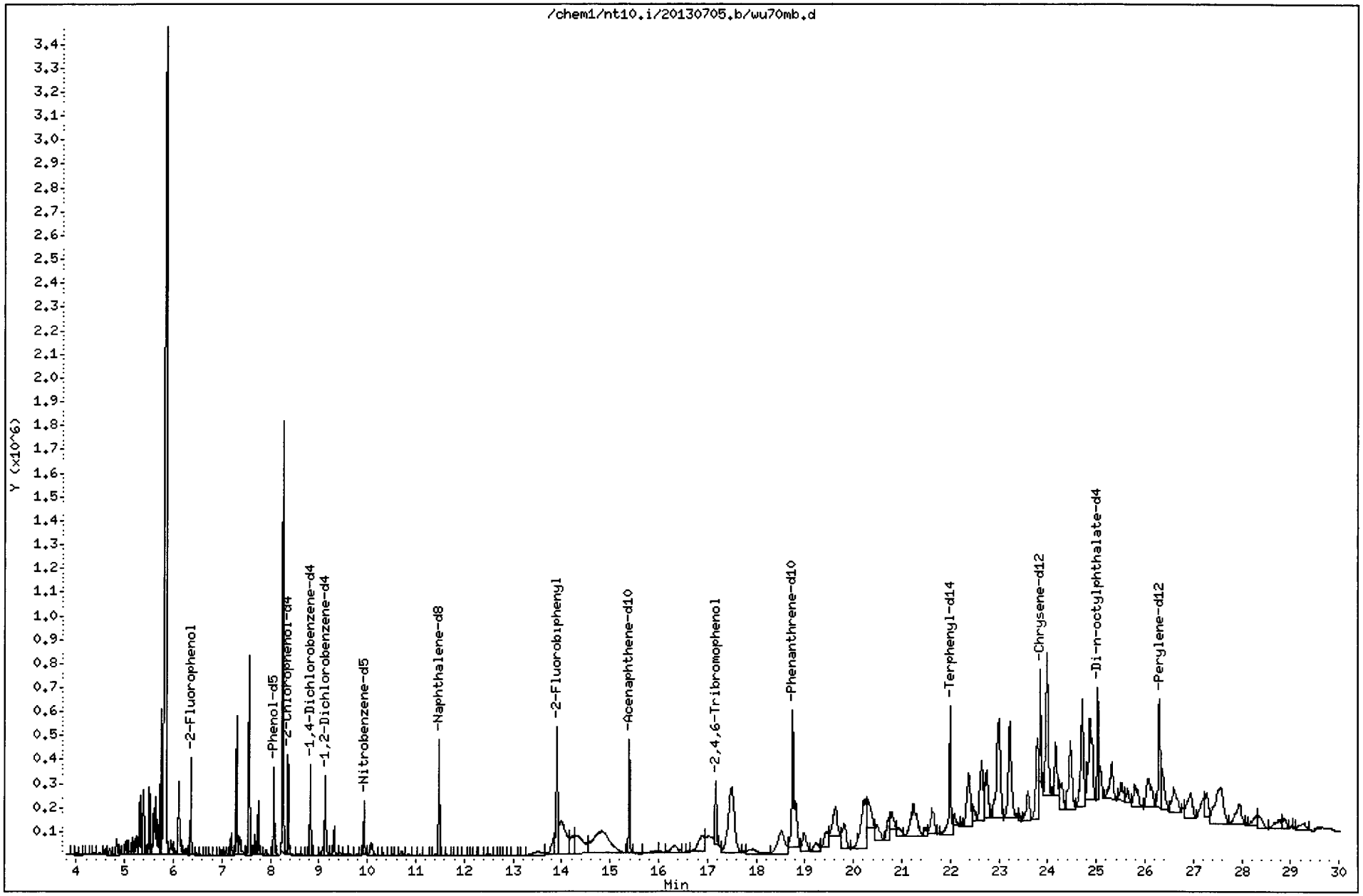
SPIKE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
43	3-Nitroaniline	1500	0.000	*	22-113
44	Acenaphthene	500.0	0.000	*	45-100
45	2,4-Dinitrophenol	2750	0.000	*	10-105
46	Dibenzofuran	500.0	0.000	*	43-103
47	4-Nitrophenol	1500	0.000	*	15-138
48	2,4-Dinitrotoluene	1500	0.000	*	35-127
49	Fluorene	500.0	0.000	*	45-107
50	Diethylphthalate	500.0	0.000	*	50-120
51	4-Chlorophenyl-ph	500.0	0.000	*	32-116
52	4-Nitroaniline	1500	0.000	*	24-125
53	4,6-Dinitro-2-met	2750	0.000	*	24-119
54	N-Nitrosodiphenyl	500.0	0.000	*	36-111
56	4-Bromophenyl-phe	500.0	0.000	*	39-114
57	Hexachlorobenzene	500.0	0.000	*	33-113
58	Pentachlorophenol	1500	0.000	*	16-120
60	Phenanthrene	500.0	0.000	*	49-112
61	Anthracene	500.0	0.000	*	45-106
62	Carbazole	500.0	0.000	*	43-135
63	Di-n-butylphthala	500.0	0.000	*	48-126
64	Fluoranthene	500.0	0.000	*	53-118
65	Pyrene	500.0	0.000	*	48-121
67	Butylbenzylphthal	500.0	0.000	*	45-132
68	Benzo(a)anthracene	500.0	0.000	*	49-115
70	3,3'-Dichlorobenz	1500	0.000	*	10-100
71	Chrysene	500.0	0.000	*	47-115
72	bis(2-Ethylhexyl)	500.0	0.000	*	34-130
73	Di-n-octylphthala	500.0	0.000	*	28-124
74	Benzo(b)fluoranth	500.0	0.000	*	42-132
75	Benzo(k)fluoranth	500.0	0.000	*	39-129
76	Benzo(a)pyrene	500.0	0.000	*	42-113
78	Indeno(1,2,3-cd)p	500.0	0.000	*	42-123
79	Dibenzo(a,h)anthr	500.0	0.000	*	30-133
80	Benzo(g,h,i)peryl	500.0	0.000	*	38-126
91	Aniline	1500	0.000	*	10-134
111	Azobenzene (1,2-D	500.0	0.000	*	35-112
90	N-Nitrosodimethyl	1500	0.000	*	17-100
105	1-methylnaphthale	500.0	0.000	*	42-100
103	Pyridine	1000	0.000	*	10-147
187	Total Benzofluora	1000	0.000	*	30-160

SURROGATE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1	2-Fluorophenol	750.0	468.1	62.41	27-120

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 2 Phenol-d5	750.0	470.2	62.69	29-120
$ 5 2-Chlorophenol-d4	750.0	486.6	64.87	31-120
$ 10 1,2-Dichlorobenzen	500.0	325.8	65.16	32-120
$ 18 Nitrobenzene-d5	500.0	321.7	64.34	30-120
$ 36 2-Fluorobiphenyl	500.0	366.7	73.35	35-120
$ 55 2,4,6-Tribromophen	750.0	504.3	67.23	24-134
$ 66 Terphenyl-d14	500.0	478.8	95.75	37-120

Data File: /chem1/nt10.i/20130705.b/wu70mb.d
Date : 05-JUL-2013 22:56
Client ID: WU70MBS1
Sample Info: WU70MBS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - wu70mb.d

Lab ID: WU70MBS1, Method: ABN.m, Instrument: nt10.i, Date: 05-JUL-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 7/8/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130705.b/wu79bsb.d
Lab Smp Id: WU70LCSS1 Client Smp ID: WU70LCSS1
Inj Date : 05-JUL-2013 23:33
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WU70LCSS1
Misc Info : 13-13123
Comment : 1ul Injection
Method : /chem1/nt10.i/20130705.b/ABN.m
Meth Date : 09-Jul-2013 12:17 yev Quant Type: ISTD
Cal Date : 05-JUL-2013 15:57 Cal File: ic0705g.d
Als bottle: 21 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

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

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	6.359	6.343	(0.721)	170386	5.07306	507.3
$	2 Phenol-d5	99	8.074	8.067	(0.916)	237988	5.24405	524.4
	3 Phenol	94	8.098	8.090	(0.918)	169714	3.59156	359.2
$	5 2-Chlorophenol-d4	132	8.360	8.360	(0.948)	166781	5.13001	513.0
	4 Bis(2-Chloroethyl)ether	93	8.291	8.298	(0.940)	136925	3.79743	379.7
	6 2-Chlorophenol	128	8.391	8.391	(0.952)	113801	3.37779	337.8
	7 1,3-Dichlorobenzene	146	8.708	8.708	(0.988)	120759	3.55302	355.3
*	8 1,4-Dichlorobenzene-d4	152	8.817	8.825	(1.000)	90316	4.00000	
	9 1,4-Dichlorobenzene	146	8.856	8.856	(1.004)	118717	3.50524	350.5
$	10 1,2-Dichlorobenzene-d4	152	9.127	9.135	(1.035)	73922	3.21033	321.0
	12 1,2-Dichlorobenzene	146	9.158	9.158	(1.039)	116148	3.62523	362.5
	11 Benzyl alcohol	108	9.089	9.089	(1.031)	81548	4.23386	423.4
	14 2,2'-oxybis(1-Chloropropane)	121	9.399	9.384	(1.066)	39239	3.68832	368.8
	13 2-Methylphenol	108	9.321	9.314	(1.057)	111353	3.31992	332.0

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	17 Hexachloroethane	117	9.865	9.865	(1.119)	52317	3.48298	348.3
	16 N-Nitroso-di-n-propylamine	70	9.648	9.648	(1.094)	84890	3.57670	357.7
	15 4-Methylphenol	108	9.640	9.624	(1.093)	235145	6.92983	693.0
$	18 Nitrobenzene-d5	82	9.935	9.935	(0.865)	136105	3.41292	341.3
	19 Nitrobenzene	77	9.973	9.973	(0.869)	135710	3.83188	383.2
	20 Isophorone	82	10.493	10.493	(0.914)	246950	3.83304	383.3
	21 2-Nitrophenol	139	10.656	10.656	(0.928)	80596	3.51797	351.8
	22 2,4-Dimethylphenol	107	10.772	10.772	(0.938)	282914	8.11437	811.4
	23 Bis(2-Chloroethoxy)methane	93	10.980	10.988	(0.956)	156729	3.85537	385.5
	24 Benzoic acid	105	11.011	10.857	(0.959)	565771	19.1669	1917
	25 2,4-Dichlorophenol	162	11.173	11.173	(0.973)	311855	11.8528	1185
	26 1,2,4-Trichlorobenzene	180	11.366	11.373	(0.990)	107579	3.74909	374.9
*	27 Naphthalene-d8	136	11.482	11.482	(1.000)	326963	4.00000	
	28 Naphthalene	128	11.528	11.528	(1.004)	301992	3.53700	353.7
	29 4-Chloroaniline	127	11.644	11.644	(1.014)	92549	2.45775	245.8
	30 Hexachlorobutadiene	225	11.837	11.845	(1.031)	62852	3.67433	367.4
	31 4-Chloro-3-methylphenol	107	12.742	12.735	(1.110)	341110	11.7237	1172
	32 2-Methylnaphthalene	142	13.067	13.067	(1.138)	217990	3.84510	384.5
	33 Hexachlorocyclopentadiene	237	13.439	13.447	(0.873)	190095	8.77650	877.6
	34 2,4,6-Trichlorophenol	196	13.702	13.694	(0.890)	237355	10.6398	1064
	35 2,4,5-Trichlorophenol	196	13.772	13.764	(0.894)	257250	11.5152	1152
$	36 2-Fluorobiphenyl	172	13.903	13.911	(0.903)	251999	3.52717	352.7
	37 2-Chloronaphthalene	162	14.143	14.143	(0.919)	227235	3.99419	399.4
	38 2-Nitroaniline	65	14.375	14.368	(0.934)	219989	14.4545	1445
	39 Dimethylphthalate	163	14.840	14.832	(0.964)	285925	4.50485	450.5
	40 Acenaphthylene	152	15.072	15.064	(0.979)	331228	3.55749	355.7
	41 2,6-Dinitrotoluene	165	14.940	14.933	(0.970)	197668	13.8324	1383
*	42 Acenaphthene-d10	164	15.397	15.397	(1.000)	195394	4.00000	
	43 3-Nitroaniline	138	15.297	15.289	(0.993)	97108	7.93721	793.7
	44 Acenaphthene	153	15.467	15.467	(1.005)	217900	3.91778	391.8
	45 2,4-Dinitrophenol	184	15.544	15.528	(1.010)	222420	18.3721	1837
	46 Dibenzofuran	168	15.861	15.861	(1.030)	317931	4.20540	420.5
	47 4-Nitrophenol	109	15.722	15.691	(1.021)	90450	10.1851	1019
	48 2,4-Dinitrotoluene	165	15.845	15.838	(1.029)	267069	14.3572	1436
	50 Diethylphthalate	149	16.464	16.448	(1.069)	323290	4.55032	455.0
	49 Fluorene	166	16.641	16.633	(1.081)	264968	3.97251	397.3
	51 4-Chlorophenyl-phenylether	204	16.680	16.672	(1.083)	136401	4.15975	416.0
	52 4-Nitroaniline	138	16.680	16.649	(1.083)	142897	11.0706	1107
	53 4,6-Dinitro-2-methylphenol	198	16.765	16.749	(0.894)	317937	20.1778	2018
	54 N-Nitrosodiphenylamine	169	16.942	16.934	(0.904)	180206	4.60058	460.1
$	55 2,4,6-Tribromophenol	330	17.173	17.165	(1.115)	70387	5.82028	582.0
	56 4-Bromophenyl-phenylether	248	17.775	17.775	(0.948)	98446	4.98959	499.0
	57 Hexachlorobenzene	284	17.883	17.883	(0.954)	85230	4.04331	404.3
	58 Pentachlorophenol	266	18.332	18.325	(0.978)	199145	11.9174	1192
*	59 Phenanthrene-d10	188	18.742	18.742	(1.000)	323078	4.00000	
	60 Phenanthrene	178	18.797	18.789	(1.003)	383550	4.36317	436.3
	61 Anthracene	178	18.913	18.905	(1.009)	354278	3.83429	383.4

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
62	Carbazole	167	19.269	19.261	(1.028)	347559	5.92997	593.0
63	Di-n-butylphthalate	149	20.104	20.096	(1.073)	504532	4.88128	488.1
64	Fluoranthene	202	21.234	21.226	(1.133)	452747	4.22673	422.7
65	Pyrene	202	21.652	21.644	(0.908)	475180	4.60939	460.9
$ 66	Terphenyl-d14	244	21.992	21.992	(0.922)	291662	5.22677	522.7
67	Butylbenzylphthalate	149	22.929	22.921	(0.961)	209345	5.29406	529.4
68	Benzo(a)anthracene	228	23.835	23.827	(0.999)	401370	4.13910	413.9
* 69	Chrysene-d12	240	23.858	23.843	(1.000)	310076	4.00000	
70	3,3'-Dichlorobenzidine	252	23.812	23.796	(0.998)	167678	4.59752	459.8
71	Chrysene	228	23.897	23.889	(1.002)	354790	4.04995	405.0
72	bis(2-Ethylhexyl)phthalate	149	23.974	23.966	(0.958)	249368	4.52167	452.2
* 134	Di-n-octylphthalate-d4	153	25.027	25.027	(1.000)	431439	4.00000	
73	Di-n-octylphthalate	149	25.042	25.035	(1.001)	420355	3.96598	396.6
74	Benzo(b)fluoranthene	252	25.615	25.600	(0.974)	402353	4.48537	448.5
75	Benzo(k)fluoranthene	252	25.662	25.646	(0.976)	485225	4.29429	429.4
76	Benzo(a)pyrene	252	26.196	26.173	(0.996)	325478	3.92131	392.1
* 77	Perylene-d12	264	26.297	26.281	(1.000)	314618	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.630	28.591	(1.089)	411106	4.22702	422.7
79	Dibenzo(a,h)anthracene	278	28.684	28.645	(1.091)	302319	4.05619	405.6
80	Benzo(g,h,i)perylene	276	29.314	29.267	(1.115)	321620	3.86131	386.1
90	N-Nitrosodimethylamine	74	4.089	4.050	(0.464)	198437	9.15499	915.5
91	Aniline	93	8.159	8.159	(0.925)	97117	0.97037	97.04(R)
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	4.158	4.135	(0.472)	274423	14.3500	1435
105	1-methylnaphthalene	142	13.276	13.284	(1.156)	215426	4.16123	416.1
111	Azobenzene (1,2-DP-Hydrazine)	77	17.034	17.027	(1.106)	273030	3.93151	393.2
187	Total Benzofluoranthenes	252	25.615	25.646	(0.974)	842046	8.64881	864.9
99	Perylene	252	26.351	26.328	(1.002)	169415	2.08894	208.9
98	Retene	219	Compound Not Detected.					
120	2,3,4,6-Tetrachlorophenol	232	16.147	16.139	(1.049)	78437	4.53375	453.4

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wu79bsb.d
Lab Smp Id: WU70LCSS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130705.b/ABN.m
Misc Info: 13-13123

Calibration Date: 05-JUL-2013
Calibration Time: 12:14
Client Smp ID: WU70LCSS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	97290	48645	194580	90316	-7.17
27 Naphthalene-d8	336205	168102	672410	326963	-2.75
42 Acenaphthene-d10	202661	101330	405322	195394	-3.59
59 Phenanthrene-d10	352196	176098	704392	323078	-8.27
69 Chrysene-d12	358983	179492	717966	310076	-13.62
134 Di-n-octylphthala	503607	251804	1007214	431439	-14.33
77 Perylene-d12	381873	190936	763746	314618	-17.61

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.82	8.32	9.32	8.82	-0.09
27 Naphthalene-d8	11.49	10.99	11.99	11.48	-0.07
42 Acenaphthene-d10	15.40	14.90	15.90	15.40	0.00
59 Phenanthrene-d10	18.75	18.25	19.25	18.74	-0.04
69 Chrysene-d12	23.85	23.35	24.35	23.86	0.03
134 Di-n-octylphthala	25.03	24.53	25.53	25.03	0.00
77 Perylene-d12	26.29	25.79	26.79	26.30	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: SAIC
Client SDG: WU70
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WU70LCSS1
Client Smp ID: WU70LCSS1
Level: LOW
Operator: VTS/YZ
Data Type: MS DATA
SampleType: LCS
SpikeList File: PSDDALCS.spk
Quant Type: ISTD
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130705.b/ABN.m
Misc Info: 13-13123

SPIKE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	500.0	359.2	71.83	34-105
4	Bis(2-Chloroethyl)	500.0	379.7	75.95	36-100
6	2-Chlorophenol	500.0	337.8	67.56	39-100
7	1,3-Dichlorobenzen	500.0	355.3	71.06	40-100
9	1,4-Dichlorobenzen	500.0	350.5	70.10	39-100
11	Benzyl alcohol	500.0	423.4	84.68	19-117
12	1,2-Dichlorobenzen	500.0	362.5	72.50	32-100
13	2-Methylphenol	500.0	332.0	66.40	28-100
14	2,2'-oxybis(1-Chlo	500.0	368.8	73.77	32-100
15	4-Methylphenol	1000	693.0	69.30	29-100
16	N-Nitroso-di-n-pro	500.0	357.7	71.53	30-100
17	Hexachloroethane	500.0	348.3	69.66	38-100
19	Nitrobenzene	500.0	383.2	76.64	36-100
20	Isophorone	500.0	383.3	76.66	37-101
21	2-Nitrophenol	500.0	351.8	70.36	37-101
22	2,4-Dimethylphenol	1500	811.4	54.10	10-100
23	Bis(2-Chloroethoxy	500.0	385.5	77.11	39-100
24	Benzoic acid	2750	1917	69.70	10-107
25	2,4-Dichlorophenol	1500	1185	79.02	28-112
26	1,2,4-Trichloroben	500.0	374.9	74.98	35-103
28	Naphthalene	500.0	353.7	70.74	43-100
29	4-Chloroaniline	1500	245.8	16.39	11-100
30	Hexachlorobutadien	500.0	367.4	73.49	37-100
31	4-Chloro-3-methylp	1500	1172	78.16	32-117
32	2-Methylnaphthalen	500.0	384.5	76.90	43-100
33	Hexachlorocyclopen	1500	877.6	58.51	10-103
34	2,4,6-Trichlorophe	1500	1064	70.93	30-113
35	2,4,5-Trichlorophe	1500	1152	76.77	28-118
37	2-Chloronaphthalen	500.0	399.4	79.88	40-100
38	2-Nitroaniline	1500	1445	96.36	31-126
39	Dimethylphthalate	500.0	450.5	90.10	43-114
40	Acenaphthylene	500.0	355.7	71.15	42-102
41	2,6-Dinitrotoluene	1500	1383	92.22	33-123

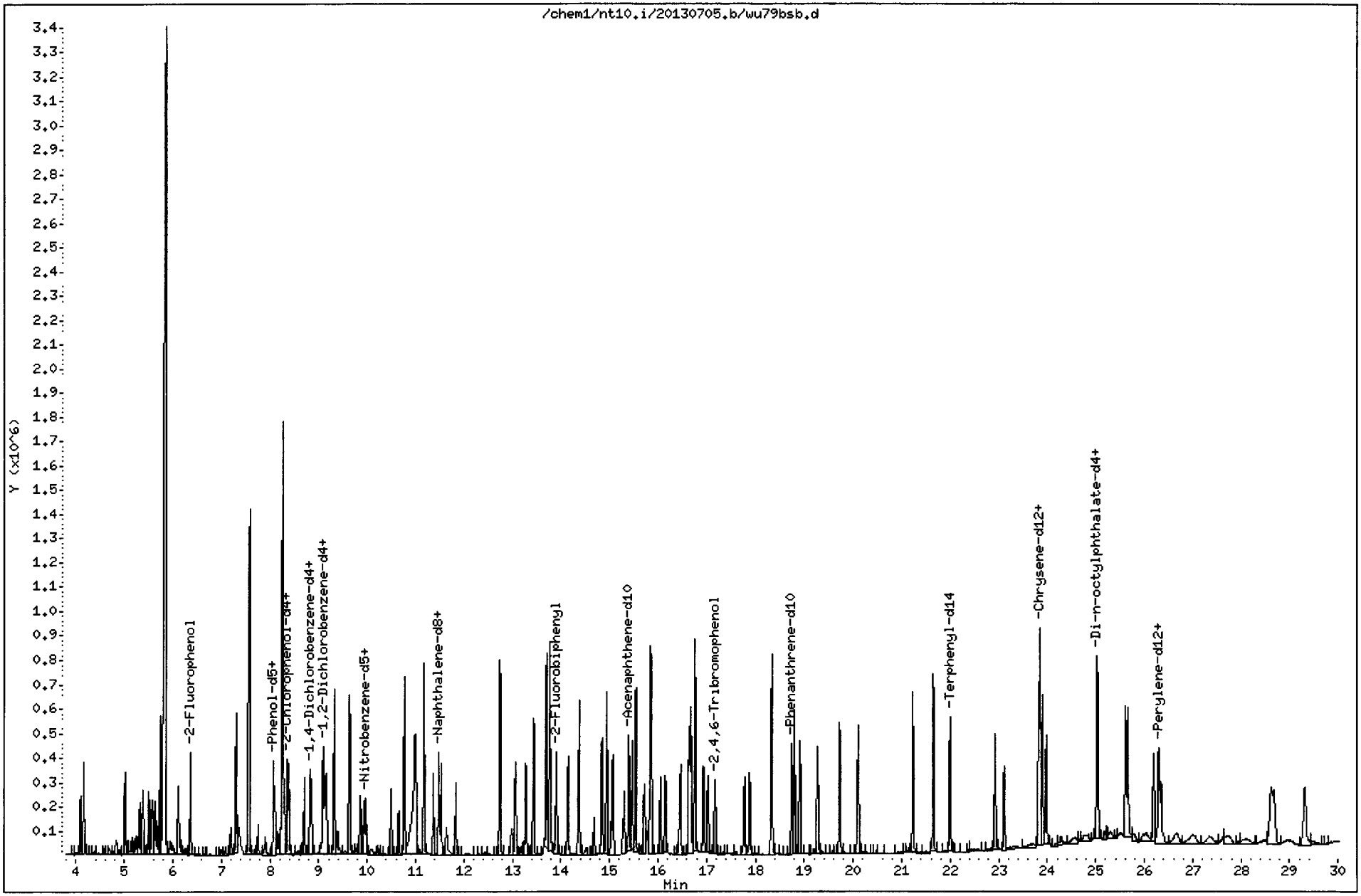
SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
43 3-Nitroaniline	1500	793.7	52.91	22-113
44 Acenaphthene	500.0	391.8	78.36	45-100
45 2,4-Dinitrophenol	2750	1837	66.81	10-105
46 Dibenzofuran	500.0	420.5	84.11	43-103
47 4-Nitrophenol	1500	1019	67.90	15-138
48 2,4-Dinitrotoluene	1500	1436	95.71	35-127
49 Fluorene	500.0	397.3	79.45	45-107
50 Diethylphthalate	500.0	455.0	91.01	50-120
51 4-Chlorophenyl-phe	500.0	416.0	83.20	32-116
52 4-Nitroaniline	1500	1107	73.80	24-125
53 4,6-Dinitro-2-meth	2750	2018	73.37	24-119
54 N-Nitrosodiphenyla	500.0	460.1	92.01	36-111
56 4-Bromophenyl-phen	500.0	499.0	99.79	39-114
57 Hexachlorobenzene	500.0	404.3	80.87	33-113
58 Pentachlorophenol	1500	1192	79.45	16-120
60 Phenanthrene	500.0	436.3	87.26	49-112
61 Anthracene	500.0	383.4	76.69	45-106
62 Carbazole	500.0	593.0	118.60	43-135
63 Di-n-butylphthalat	500.0	488.1	97.63	48-126
64 Fluoranthene	500.0	422.7	84.53	53-118
65 Pyrene	500.0	460.9	92.19	48-121
67 Butylbenzylphthala	500.0	529.4	105.88	45-132
68 Benzo(a)anthracene	500.0	413.9	82.78	49-115
70 3,3'-Dichlorobenzi	1500	459.8	30.65	10-100
71 Chrysene	500.0	405.0	81.00	47-115
72 bis(2-Ethylhexyl)p	500.0	452.2	90.43	34-130
73 Di-n-octylphthalat	500.0	396.6	79.32	28-124
74 Benzo(b)fluoranthe	500.0	448.5	89.71	42-132
75 Benzo(k)fluoranthe	500.0	429.4	85.89	39-129
76 Benzo(a)pyrene	500.0	392.1	78.43	42-113
78 Indeno(1,2,3-cd)py	500.0	422.7	84.54	42-123
79 Dibenzo(a,h)anthra	500.0	405.6	81.12	30-133
80 Benzo(g,h,i)peryle	500.0	386.1	77.23	38-126
91 Aniline	1500	97.04	6.47*	10-134
111 Azobenzene (1,2-DP	500.0	393.2	78.63	35-112
90 N-Nitrosodimethyla	1500	915.5	61.03	17-100
105 1-methylnaphthalen	500.0	416.1	83.22	42-100
103 Pyridine	1000	1435	143.50	10-147
187 Total Benzofluoran	1000	864.9	86.49	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	507.3	67.64	27-120

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 2 Phenol-d5	750.0	524.4	69.92	29-120
$ 5 2-Chlorophenol-d4	750.0	513.0	68.40	31-120
$ 10 1,2-Dichlorobenzen	500.0	321.0	64.21	32-120
$ 18 Nitrobenzene-d5	500.0	341.3	68.26	30-120
$ 36 2-Fluorobiphenyl	500.0	352.7	70.54	35-120
$ 55 2,4,6-Tribromophen	750.0	582.0	77.60	24-134
$ 66 Terphenyl-d14	500.0	522.7	104.54	37-120

Data File: /chem1/nt10.i/20130705.b/wu79bsb.d
Date : 05-JUL-2013 23:33
Client ID: WU70LCSS1
Sample Info: WU70LCSS1
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - wu79bsb.d

Lab ID: WU70LCSS1, Method: ABN.m, Instrument: nt10.i, Date: 05-JUL-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 7/9/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130705.b/wu70cms.d
Lab Smp Id: WU70CMS Client Smp ID: LF-LS-004-20130 MS
Inj Date : 06-JUL-2013 01:24
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WU70CMS
Misc Info : 13-13123
Comment : 1ul Injection
Method : /chem1/nt10.i/20130705.b/ABN.m
Meth Date : 09-Jul-2013 12:17 yev Quant Type: ISTD
Cal Date : 05-JUL-2013 15:57 Cal File: ic0705g.d
Als bottle: 24 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

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

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	13.00000	Weight of sample extracted (g)
M	21.10000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$ 1	2-Fluorophenol	112	6.382	6.343	(0.723)	150047	4.72814	461.0
$ 2	Phenol-d5	99	8.098	8.067	(0.918)	217863	5.08068	495.3
3	Phenol	94	8.121	8.090	(0.920)	208606	4.67219	455.5
$ 5	2-Chlorophenol-d4	132	8.376	8.360	(0.949)	152845	4.97565	485.1
4	Bis(2-Chloroethyl)ether	93	8.298	8.298	(0.940)	133818	3.92780	382.9
6	2-Chlorophenol	128	8.406	8.391	(0.953)	110751	3.47905	339.2
7	1,3-Dichlorobenzene	146	8.716	8.708	(0.988)	114314	3.55963	347.0
* 8	1,4-Dichlorobenzene-d4	152	8.825	8.825	(1.000)	85337	4.00000	
9	1,4-Dichlorobenzene	146	8.863	8.856	(1.004)	116351	3.63582	354.5
$ 10	1,2-Dichlorobenzene-d4	152	9.135	9.135	(1.035)	68667	3.15610	307.7
12	1,2-Dichlorobenzene	146	9.166	9.158	(1.039)	111559	3.68516	359.3
11	Benzyl alcohol	108	9.096	9.089	(1.031)	78723	4.32566	421.7
14	2,2'-oxybis(1-Chloropropane)	121	9.399	9.384	(1.065)	36364	3.61751	352.7
13	2-Methylphenol	108	9.329	9.314	(1.057)	112951	3.56404	347.5

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	17 Hexachloroethane	117	9.865	9.865	(1.118)	49929	3.51794	343.0
	16 N-Nitroso-di-n-propylamine	70	9.655	9.648	(1.094)	91274	4.07006	396.8
	15 4-Methylphenol	108	9.655	9.624	(1.094)	239463	7.46883	728.2
$	18 Nitrobenzene-d5	82	9.942	9.935	(0.865)	122458	3.24371	316.2
	19 Nitrobenzene	77	9.981	9.973	(0.869)	130542	3.89362	379.6
	20 Isophorone	82	10.501	10.493	(0.914)	238875	3.91658	381.8
	21 2-Nitrophenol	139	10.664	10.656	(0.928)	73039	3.36772	328.3
	22 2,4-Dimethylphenol	107	10.780	10.772	(0.938)	292595	8.86482	864.3
	23 Bis(2-Chloroethoxy)methane	93	10.988	10.988	(0.956)	153508	3.98888	388.9
	24 Benzoic acid	105	10.888	10.857	(0.948)	12664	0.47048	45.87(RH)
	25 2,4-Dichlorophenol	162	11.188	11.173	(0.974)	294701	11.8318	1154
	26 1,2,4-Trichlorobenzene	180	11.373	11.373	(0.990)	105160	3.87125	377.4
*	27 Naphthalene-d8	136	11.489	11.482	(1.000)	309525	4.00000	
	28 Naphthalene	128	11.536	11.528	(1.004)	443489	5.48688	534.9(R)
	29 4-Chloroaniline	127	11.713	11.644	(1.019)	21540	0.60425	58.91(R)
	30 Hexachlorobutadiene	225	11.845	11.845	(1.031)	61035	3.76913	367.5
	31 4-Chloro-3-methylphenol	107	12.766	12.735	(1.111)	310203	11.2621	1098
	32 2-Methylnaphthalene	142	13.075	13.067	(1.138)	424350	7.90675	770.9(R)
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					
	34 2,4,6-Trichlorophenol	196	13.717	13.694	(0.890)	196707	10.0877	983.5
	35 2,4,5-Trichlorophenol	196	13.795	13.764	(0.895)	207314	10.6165	1035
$	36 2-Fluorobiphenyl	172	13.919	13.911	(0.904)	241013	3.85928	376.3
	37 2-Chloronaphthalene	162	14.151	14.143	(0.919)	221812	4.46043	434.9
	38 2-Nitroaniline	65	14.391	14.368	(0.934)	183397	13.7859	1344
	39 Dimethylphthalate	163	14.855	14.832	(0.964)	238602	4.30072	419.3
	40 Acenaphthylene	152	15.080	15.064	(0.979)	312564	3.84056	374.4
	41 2,6-Dinitrotoluene	165	14.956	14.933	(0.971)	159401	12.7612	1244
*	42 Acenaphthene-d10	164	15.405	15.397	(1.000)	170794	4.00000	
	43 3-Nitroaniline	138	15.320	15.289	(0.994)	36439	3.40736	332.2
	44 Acenaphthene	153	15.482	15.467	(1.005)	207144	4.26083	415.4
	45 2,4-Dinitrophenol	184	15.559	15.528	(1.010)	89317	8.60070	838.5
	46 Dibenzofuran	168	15.876	15.861	(1.031)	327862	4.96140	483.7
	47 4-Nitrophenol	109	15.652	15.691	(1.016)	15733	2.07291	202.1(R)
	48 2,4-Dinitrotoluene	165	15.861	15.838	(1.030)	209919	12.9103	1259
	50 Diethylphthalate	149	16.471	16.448	(1.069)	282840	4.55437	444.0
	49 Fluorene	166	16.649	16.633	(1.081)	251988	4.32206	421.4
	51 4-Chlorophenyl-phenylether	204	16.687	16.672	(1.083)	115612	4.03359	393.3
	52 4-Nitroaniline	138	16.695	16.649	(1.084)	67860	5.89416	574.6
	53 4,6-Dinitro-2-methylphenol	198	16.788	16.749	(0.895)	194559	15.0787	1470
	54 N-Nitrosodiphenylamine	169	16.950	16.934	(0.903)	169444	5.27385	514.2
$	55 2,4,6-Tribromophenol	330	17.196	17.165	(1.116)	40555	3.83649	374.0
	56 4-Bromophenyl-phenylether	248	17.790	17.775	(0.948)	69816	4.31400	420.6
	57 Hexachlorobenzene	284	17.899	17.883	(0.954)	73077	4.22652	412.1
	58 Pentachlorophenol	266	18.363	18.325	(0.979)	48778	3.55872	347.0
*	59 Phenanthrene-d10	188	18.766	18.742	(1.000)	265002	4.00000	
	60 Phenanthrene	178	18.812	18.789	(1.002)	489571	6.78976	662.0(R)
	61 Anthracene	178	18.928	18.905	(1.009)	345644	4.56067	444.6

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
62	Carbazole	167	19.292	19.261	(1.028)	302425	6.29072	613.3
63	Di-n-butylphthalate	149	20.120	20.096	(1.072)	409001	4.82423	470.3
64	Fluoranthene	202	21.257	21.226	(1.133)	508033	5.78228	563.7
65	Pyrene	202	21.675	21.644	(0.907)	553253	6.08301	593.1(R)
$ 66	Terphenyl-d14	244	22.015	21.992	(0.922)	221878	4.50689	439.4
67	Butylbenzylphthalate	149	22.952	22.921	(0.961)	177508	5.08807	496.1
68	Benzo(a)anthracene	228	23.873	23.827	(0.999)	462999	5.41190	527.6
* 69	Chrysene-d12	240	23.889	23.843	(1.000)	273564	4.00000	
70	3,3'-Dichlorobenzidine	252	23.703	23.796	(0.992)	43500	1.35190	131.8(R)
71	Chrysene	228	23.935	23.889	(1.002)	456217	5.90281	575.5(R)
72	bis(2-Ethylhexyl)phthalate	149	24.013	23.966	(0.957)	512938	10.0368	978.5(R)
* 134	Di-n-octylphthalate-d4	153	25.081	25.027	(1.000)	399803	4.00000	
73	Di-n-octylphthalate	149	25.089	25.035	(1.000)	422464	4.30127	419.3(M)
74	Benzo(b)fluoranthene	252	25.693	25.600	(0.974)	438470	5.16153	503.2(H)
75	Benzo(k)fluoranthene	252	25.731	25.646	(0.975)	375725	3.51128	342.3
76	Benzo(a)pyrene	252	26.281	26.173	(0.996)	441369	5.61512	547.4
* 77	Perylene-d12	264	26.390	26.281	(1.000)	297945	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.847	28.591	(1.093)	379170	4.11682	401.4(M)
79	Dibenzo(a,h)anthracene	278	28.902	28.645	(1.095)	305609	4.32979	422.1
80	Benzo(g,h,i)perylene	276	29.609	29.267	(1.122)	358951	4.55065	443.7
90	N-Nitrosodimethylamine	74	4.089	4.050	(0.463)	198982	9.71575	947.2
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	4.189	4.135	(0.475)	264997	14.6656	1430
105	1-methylnaphthalene	142	13.292	13.284	(1.157)	320880	6.54741	638.3(R)
111	Azobenzene (1,2-DP-Hydrazine)	77	17.042	17.027	(1.106)	253364	4.17380	406.9
187	Total Benzofluoranthenes	252	25.731	25.646	(0.975)	734330	7.96451	776.5
99	Perylene	252	26.436	26.328	(1.002)	184119	2.39729	233.7
98	Retene	219	22.271	22.240	(0.932)	308026	8.79574	857.5
120	2,3,4,6-Tetrachlorophenol	232	16.170	16.139	(1.050)	44096	2.91591	284.3

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wu70cms.d
Lab Smp Id: WU70CMS
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130705.b/ABN.m
Misc Info: 13-13123

Calibration Date: 05-JUL-2013
Calibration Time: 12:14
Client Smp ID: LF-LS-004-20130
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	97290	48645	194580	85337	-12.29
27 Naphthalene-d8	336205	168102	672410	309525	-7.94
42 Acenaphthene-d10	202661	101330	405322	170794	-15.72
59 Phenanthrene-d10	352196	176098	704392	265002	-24.76
69 Chrysene-d12	358983	179492	717966	273564	-23.79
134 Di-n-octylphthala	503607	251804	1007214	399803	-20.61
77 Perylene-d12	381873	190936	763746	297945	-21.98

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.82	8.32	9.32	8.82	0.00
27 Naphthalene-d8	11.49	10.99	11.99	11.49	0.00
42 Acenaphthene-d10	15.40	14.90	15.90	15.40	0.05
59 Phenanthrene-d10	18.75	18.25	19.25	18.77	0.08
69 Chrysene-d12	23.85	23.35	24.35	23.89	0.16
134 Di-n-octylphthala	25.03	24.53	25.53	25.08	0.22
77 Perylene-d12	26.29	25.79	26.79	26.39	0.38

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: SAIC
Client SDG: WU70
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WU70CMS
Client Smp ID: LF-LS-004-20130 MS
Level: LOW
Operator: VTS/YZ
Data Type: MS DATA
SampleType: MS
SpikeList File: PSDDALCS.spk
Quant Type: ISTD
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130705.b/ABN.m
Misc Info: 13-13123

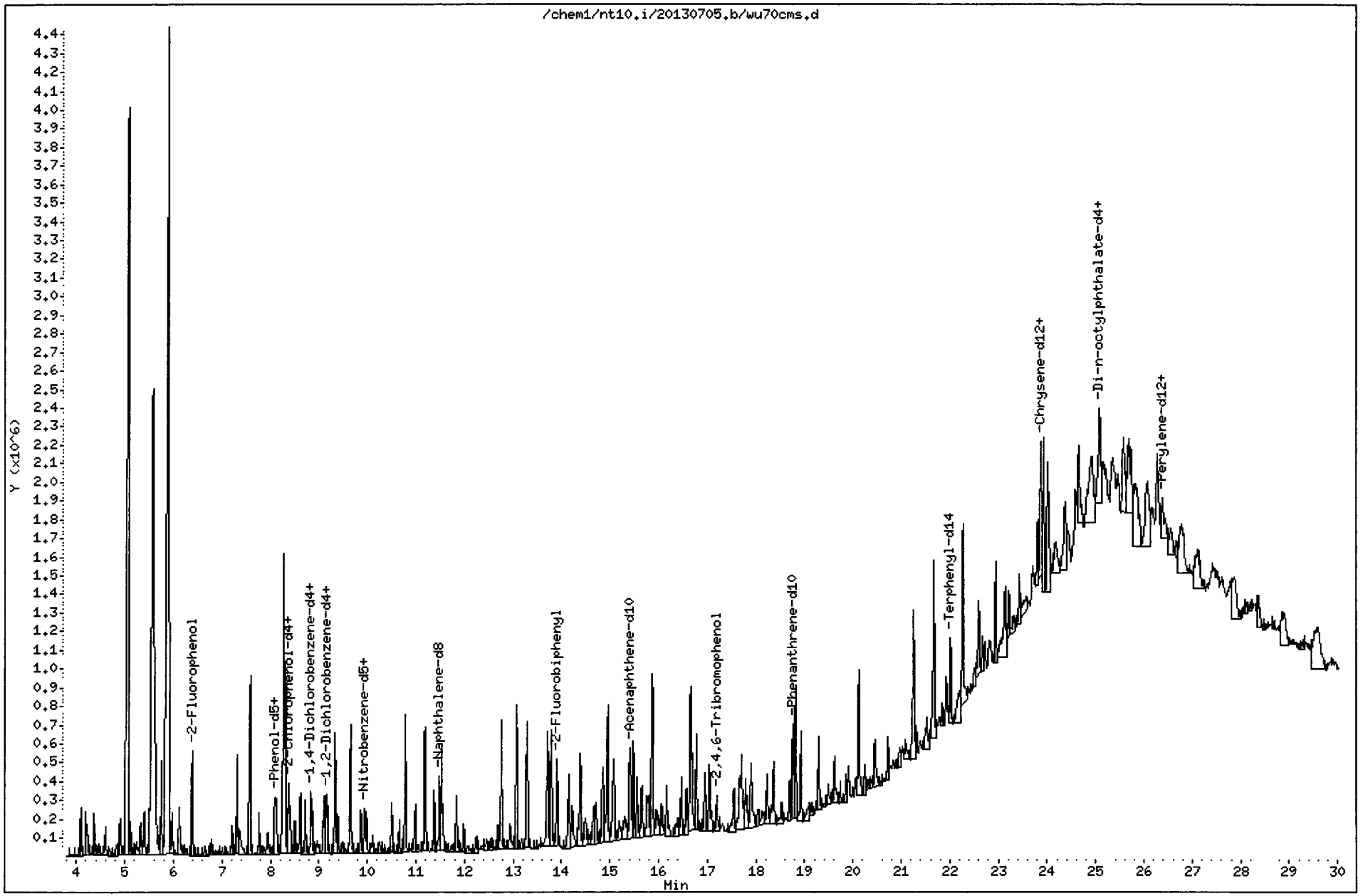
SPIKE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	487.5	455.5	93.44	34-105
4	Bis(2-Chloroethyl)	487.5	382.9	78.56	36-100
6	2-Chlorophenol	487.5	339.2	69.58	39-100
7	1,3-Dichlorobenzen	487.5	347.0	71.19	40-100
9	1,4-Dichlorobenzen	487.5	354.5	72.72	39-100
11	Benzyl alcohol	487.5	421.7	86.51	19-117
12	1,2-Dichlorobenzen	487.5	359.3	73.70	32-100
13	2-Methylphenol	487.5	347.5	71.28	28-100
14	2,2'-oxybis(1-Chlo	487.5	352.7	72.35	32-100
15	4-Methylphenol	974.9	728.2	74.69	29-100
16	N-Nitroso-di-n-pro	487.5	396.8	81.40	30-100
17	Hexachloroethane	487.5	343.0	70.36	38-100
19	Nitrobenzene	487.5	379.6	77.87	36-100
20	Isophorone	487.5	381.8	78.33	37-101
21	2-Nitrophenol	487.5	328.3	67.35	37-101
22	2,4-Dimethylphenol	1462	864.3	59.10	10-100
23	Bis(2-Chloroethoxy	487.5	388.9	79.78	39-100
24	Benzoic acid	2681	45.87	1.71*	10-107
25	2,4-Dichlorophenol	1462	1154	78.88	28-112
26	1,2,4-Trichloroben	487.5	377.4	77.43	35-103
28	Naphthalene	487.5	534.9	109.74*	43-100
29	4-Chloroaniline	1462	58.91	4.03*	11-100
30	Hexachlorobutadien	487.5	367.5	75.38	37-100
31	4-Chloro-3-methylp	1462	1098	75.08	32-117
32	2-Methylnaphthalen	487.5	770.9	158.14*	43-100
33	Hexachlorocyclope	1462	0.000	*	10-103
34	2,4,6-Trichlorophe	1462	983.5	67.25	30-113
35	2,4,5-Trichlorophe	1462	1035	70.78	28-118
37	2-Chloronaphthalen	487.5	434.9	89.21	40-100
38	2-Nitroaniline	1462	1344	91.91	31-126
39	Dimethylphthalate	487.5	419.3	86.01	43-114
40	Acenaphthylene	487.5	374.4	76.81	42-102
41	2,6-Dinitrotoluene	1462	1244	85.07	33-123

SPIKE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
43	3-Nitroaniline	1462	332.2	22.72	22-113
44	Acenaphthene	487.5	415.4	85.22	45-100
45	2,4-Dinitrophenol	2681	838.5	31.28	10-105
46	Dibenzofuran	487.5	483.7	99.23	43-103
47	4-Nitrophenol	1462	202.1	13.82*	15-138
48	2,4-Dinitrotoluene	1462	1259	86.07	35-127
49	Fluorene	487.5	421.4	86.44	45-107
50	Diethylphthalate	487.5	444.0	91.09	50-120
51	4-Chlorophenyl-phe	487.5	393.3	80.67	32-116
52	4-Nitroaniline	1462	574.6	39.29	24-125
53	4,6-Dinitro-2-meth	2681	1470	54.83	24-119
54	N-Nitrosodiphenyla	487.5	514.2	105.48	36-111
56	4-Bromophenyl-phen	487.5	420.6	86.28	39-114
57	Hexachlorobenzene	487.5	412.1	84.53	33-113
58	Pentachlorophenol	1462	347.0	23.72	16-120
60	Phenanthrene	487.5	662.0	135.80*	49-112
61	Anthracene	487.5	444.6	91.21	45-106
62	Carbazole	487.5	613.3	125.81	43-135
63	Di-n-butylphthalat	487.5	470.3	96.48	48-126
64	Fluoranthene	487.5	563.7	115.65	53-118
65	Pyrene	487.5	593.1	121.66*	48-121
67	Butylbenzylphthala	487.5	496.1	101.76	45-132
68	Benzo(a)anthracene	487.5	527.6	108.24	49-115
70	3,3'-Dichlorobenzi	1462	131.8	9.01*	10-100
71	Chrysene	487.5	575.5	118.06*	47-115
72	bis(2-Ethylhexyl)p	487.5	978.5	200.74*	34-130
73	Di-n-octylphthalat	487.5	419.3	86.03	28-124
74	Benzo(b)fluoranthe	487.5	503.2	103.23	42-132
75	Benzo(k)fluoranthe	487.5	342.3	70.23	39-129
76	Benzo(a)pyrene	487.5	547.4	112.30	42-113
78	Indeno(1,2,3-cd)py	487.5	401.4	82.34	42-123
79	Dibenzo(a,h)anthra	487.5	422.1	86.60	30-133
80	Benzo(g,h,i)peryle	487.5	443.7	91.01	38-126
91	Aniline	1462	0.000	*	10-134
111	Azobenzene (1,2-DP	487.5	406.9	83.48	35-112
90	N-Nitrosodimethyla	1462	947.2	64.77	17-100
105	1-methylnaphthalen	487.5	638.3	130.95*	42-100
103	Pyridine	974.9	1430	146.66	10-147
187	Total Benzofluoran	974.9	776.5	79.65	30-160

SURROGATE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1	2-Fluorophenol	731.2	461.0	63.04	27-120

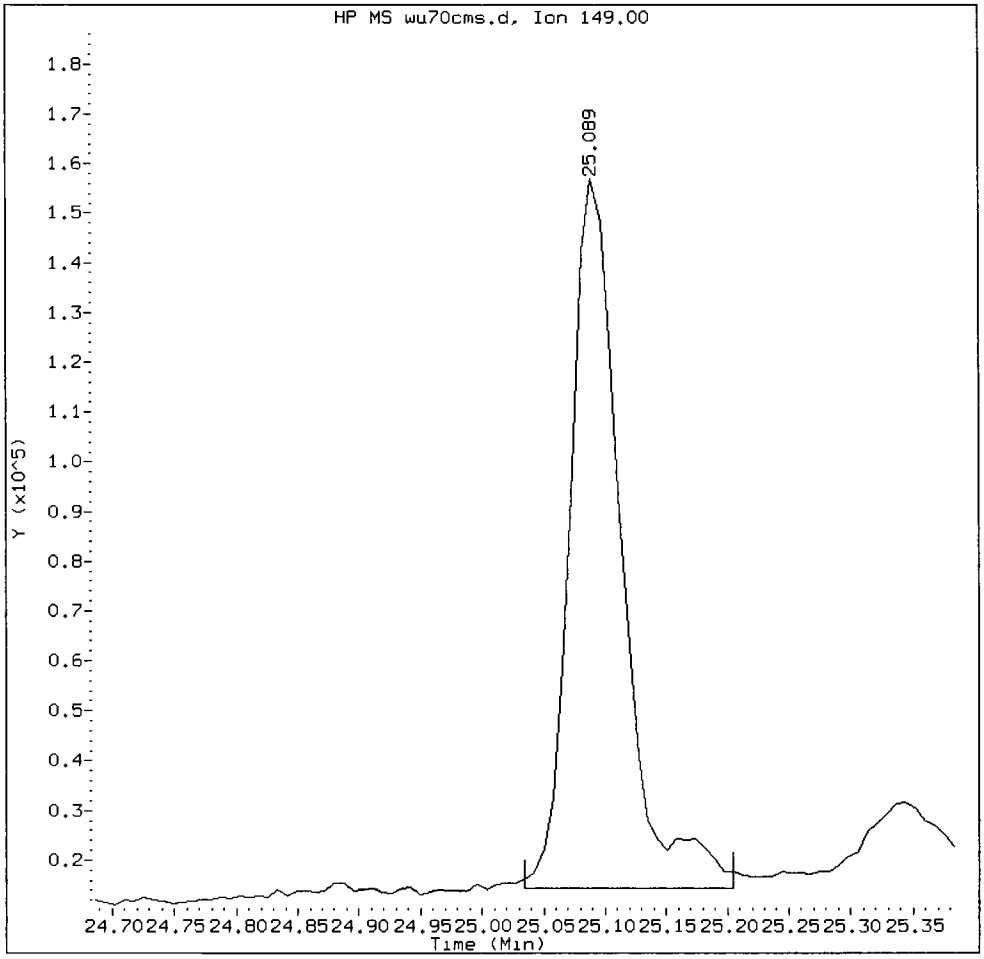
SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 2 Phenol-d5	731.2	495.3	67.74	29-120
$ 5 2-Chlorophenol-d4	731.2	485.1	66.34	31-120
$ 10 1,2-Dichlorobenzen	487.5	307.7	63.12	32-120
$ 18 Nitrobenzene-d5	487.5	316.2	64.87	30-120
$ 36 2-Fluorobiphenyl	487.5	376.3	77.19	35-120
$ 55 2,4,6-Tribromophen	731.2	374.0	51.15	24-134
$ 66 Terphenyl-d14	487.5	439.4	90.14	37-120

Data File: /chem1/nt10.i/20130705.b/wu70cms.d
Date : 06-JUL-2013 01:24
Client ID: LF-LS-004-20130 MS
Instrument: nt10.i
Sample Info: WU70CMS
Volume Injected (uL): 1.0
Operator: VTS/YZ
Column phase: ZB-5msi
Column diameter: 0.25



WU70CMS, /chem1/nt10.i/20130705.b/wu70cms.d

Di-n-octylphthalate Amount: 4.30 Area: 422464



MANUAL INTEGRATION for Di-n-octylphthalate

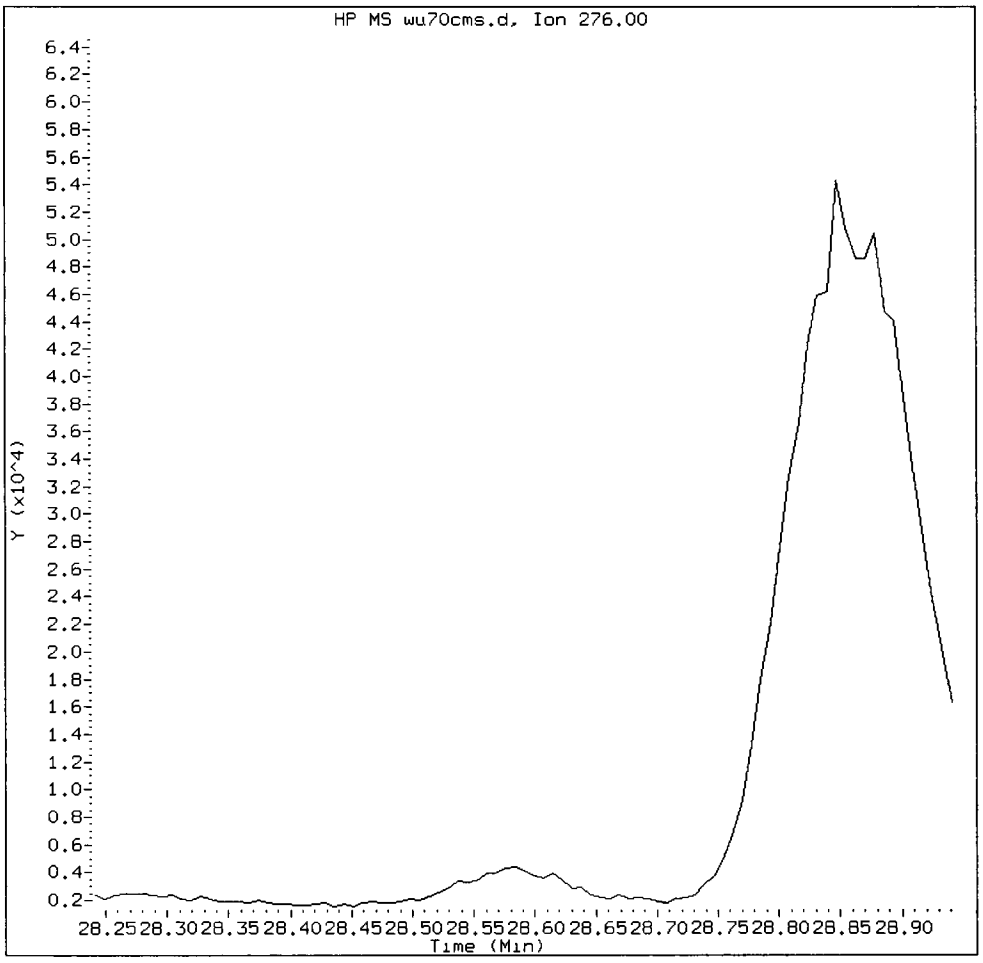
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 7/9/13

WU70CMS, /chem1/nt10.i/20130705.b/wu70cms.d

Indeno(1,2,3-cd)pyrene Amount: 4.12 Area: 379170



MANUAL INTEGRATION for Indeno(1,2,3-cd)pyrene

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 7/9/13

CO-ELUTION SUMMARY FOR FILE - wu70cms.d

Lab ID: WU70CMS, Method: ABN.m, Instrument: nt10.i, Date: 06-JUL-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

1/2 7/9/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130705.b/wu70cmsd.d
Lab Smp Id: WU70CMSD Client Smp ID: LF-LS-004-20130 MSD
Inj Date : 06-JUL-2013 02:00
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WU70CMSD
Misc Info : 13-13123
Comment : 1ul Injection
Method : /chem1/nt10.i/20130705.b/ABN.m
Meth Date : 09-Jul-2013 12:17 yev Quant Type: ISTD
Cal Date : 05-JUL-2013 15:57 Cal File: ic0705g.d
Als bottle: 25 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

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

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	13.00000	Weight of sample extracted (g)
M	21.10000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$ 1	2-Fluorophenol	112	6.382	6.343	(0.723)	145252	4.72574	460.7
$ 2	Phenol-d5	99	8.098	8.067	(0.917)	208734	5.02592	490.0
3	Phenol	94	8.128	8.090	(0.920)	192380	4.44874	433.7
$ 5	2-Chlorophenol-d4	132	8.376	8.360	(0.948)	145749	4.89878	477.6
4	Bis(2-Chloroethyl)ether	93	8.306	8.298	(0.940)	123760	3.75059	365.7
6	2-Chlorophenol	128	8.407	8.391	(0.952)	103863	3.36867	328.4
7	1,3-Dichlorobenzene	146	8.716	8.708	(0.987)	108133	3.47654	338.9
* 8	1,4-Dichlorobenzene-d4	152	8.832	8.825	(1.000)	82652	4.00000	
9	1,4-Dichlorobenzene	146	8.863	8.856	(1.004)	109256	3.52502	343.7
$ 10	1,2-Dichlorobenzene-d4	152	9.135	9.135	(1.034)	65512	3.10891	303.1
12	1,2-Dichlorobenzene	146	9.166	9.158	(1.038)	103735	3.53802	344.9
11	Benzyl alcohol	108	9.096	9.089	(1.030)	71947	4.08176	397.9
14	2,2'-oxybis(1-Chloropropane)	121	9.399	9.384	(1.064)	35459	3.64207	355.1
13	2-Methylphenol	108	9.337	9.314	(1.057)	105767	3.44578	335.9

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	17 Hexachloroethane	117	9.865	9.865	(1.117)	46153	3.35753	327.3
	16 N-Nitroso-di-n-propylamine	70	9.655	9.648	(1.093)	83885	3.86209	376.5
	15 4-Methylphenol	108	9.655	9.624	(1.093)	222533	7.16626	698.7
$	18 Nitrobenzene-d5	82	9.942	9.935	(0.865)	117159	3.22827	314.7
	19 Nitrobenzene	77	9.981	9.973	(0.869)	121472	3.76893	367.4
	20 Isophorone	82	10.509	10.493	(0.915)	220614	3.76278	366.8
	21 2-Nitrophenol	139	10.664	10.656	(0.928)	67220	3.22417	314.3
	22 2,4-Dimethylphenol	107	10.788	10.772	(0.939)	210501	6.63431	646.8
	23 Bis(2-Chloroethoxy)methane	93	10.988	10.988	(0.956)	144746	3.91259	381.5
	24 Benzoic acid	105	10.895	10.857	(0.948)	13324	0.51489	50.20(RH)
	25 2,4-Dichlorophenol	162	11.188	11.173	(0.974)	280208	11.7028	1141
	26 1,2,4-Trichlorobenzene	180	11.373	11.373	(0.990)	99179	3.79804	370.3
*	27 Naphthalene-d8	136	11.489	11.482	(1.000)	297548	4.00000	
	28 Naphthalene	128	11.536	11.528	(1.004)	417688	5.37568	524.1(R)
	29 4-Chloroaniline	127	11.536	11.644	(1.004)	58042	1.69376	165.1
	30 Hexachlorobutadiene	225	11.845	11.845	(1.031)	57725	3.70821	361.5
	31 4-Chloro-3-methylphenol	107	12.766	12.735	(1.111)	288085	10.8801	1061
	32 2-Methylnaphthalene	142	13.075	13.067	(1.138)	397114	7.69711	750.4(R)
	33 Hexachlorocyclopentadiene	237	Compound Not Detected.					
	34 2,4,6-Trichlorophenol	196	13.718	13.694	(0.890)	193509	10.4753	1021
	35 2,4,5-Trichlorophenol	196	13.795	13.764	(0.895)	200115	10.8175	1055
$	36 2-Fluorobiphenyl	172	13.919	13.911	(0.903)	233532	3.94733	384.8
	37 2-Chloronaphthalene	162	14.151	14.143	(0.918)	209800	4.45337	434.2
	38 2-Nitroaniline	65	14.391	14.368	(0.934)	167787	13.3135	1298
	39 Dimethylphthalate	163	14.855	14.832	(0.964)	221733	4.21880	411.3
	40 Acenaphthylene	152	15.080	15.064	(0.978)	279429	3.62425	353.3
	41 2,6-Dinitrotoluene	165	14.956	14.933	(0.970)	153425	12.9654	1264
*	42 Acenaphthene-d10	164	15.412	15.397	(1.000)	161801	4.00000	
	43 3-Nitroaniline	138	15.327	15.289	(0.994)	21678	2.13975	208.6(R)
	44 Acenaphthene	153	15.482	15.467	(1.004)	192315	4.17567	407.1
	45 2,4-Dinitrophenol	184	15.559	15.528	(1.010)	83411	8.48032	826.8
	46 Dibenzofuran	168	15.876	15.861	(1.030)	304175	4.85879	473.7
	47 4-Nitrophenol	109	15.652	15.691	(1.016)	17689	2.45762	239.6
	48 2,4-Dinitrotoluene	165	15.869	15.838	(1.030)	201222	13.0633	1274
	50 Diethylphthalate	149	16.471	16.448	(1.069)	292316	4.96857	484.4
	49 Fluorene	166	16.649	16.633	(1.080)	238831	4.32407	421.6
	51 4-Chlorophenyl-phenylether	204	16.687	16.672	(1.083)	108963	4.01291	391.2
	52 4-Nitroaniline	138	16.695	16.649	(1.083)	54756	5.00224	487.7
	53 4,6-Dinitro-2-methylphenol	198	16.788	16.749	(0.895)	173934	14.0468	1369
	54 N-Nitrosodiphenylamine	169	16.950	16.934	(0.903)	152652	4.94924	482.5
$	55 2,4,6-Tribromophenol	330	17.196	17.165	(1.116)	40684	4.06261	396.1
	56 4-Bromophenyl-phenylether	248	17.790	17.775	(0.948)	67616	4.35219	424.3
	57 Hexachlorobenzene	284	17.907	17.883	(0.954)	69184	4.16814	406.4
	58 Pentachlorophenol	266	18.371	18.325	(0.979)	51702	3.92926	383.1
*	59 Phenanthrene-d10	188	18.766	18.742	(1.000)	254399	4.00000	
	60 Phenanthrene	178	18.820	18.789	(1.003)	447714	6.46805	630.6(R)
	61 Anthracene	178	18.928	18.905	(1.009)	331147	4.55149	443.7

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
62	Carbazole	167	19.292	19.261	(1.028)	288244	6.24563	608.9
63	Di-n-butylphthalate	149	20.120	20.096	(1.072)	389486	4.78552	466.6
64	Fluoranthene	202	21.257	21.226	(1.133)	660878	7.83542	763.9(R)
65	Pyrene	202	21.682	21.644	(0.907)	799775	9.05876	883.2(R)
$ 66	Terphenyl-d14	244	22.015	21.992	(0.921)	213403	4.46549	435.4
67	Butylbenzylphthalate	149	22.952	22.921	(0.960)	197734	5.83879	569.2
68	Benzo(a)anthracene	228	23.881	23.827	(0.999)	646945	7.79011	759.5(R)
* 69	Chrysene-d12	240	23.897	23.843	(1.000)	265554	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	23.943	23.889	(1.002)	683740	9.11348	888.5(R)
72	bis(2-Ethylhexyl)phthalate	149	24.021	23.966	(0.957)	537315	10.9022	1063(R)
* 134	Di-n-octylphthalate-d4	153	25.089	25.027	(1.000)	385562	4.00000	
73	Di-n-octylphthalate	149	25.097	25.035	(1.000)	428240	4.52112	440.8(M)
74	Benzo(b)fluoranthene	252	25.716	25.600	(0.974)	491454	6.20499	605.0
75	Benzo(k)fluoranthene	252	25.739	25.646	(0.975)	457875	4.58946	447.4(M)
76	Benzo(a)pyrene	252	26.305	26.173	(0.996)	526381	7.18252	700.3(R)
* 77	Perylene-d12	264	26.405	26.281	(1.000)	277790	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.886	28.591	(1.094)	377222	4.39283	428.3(M)
79	Dibenzo(a,h)anthracene	278	28.933	28.645	(1.096)	303878	4.61763	450.2
80	Benzo(g,h,i)perylene	276	29.624	29.267	(1.122)	340785	4.63381	451.8
90	N-Nitrosodimethylamine	74	4.089	4.050	(0.463)	181762	9.16325	893.4
91	Aniline	93	Compound Not Detected.					
93	Benzidine	184	Compound Not Detected.					
103	Pyridine	79	4.197	4.135	(0.475)	231325	13.2180	1289
105	1-methylnaphthalene	142	13.292	13.284	(1.157)	308348	6.54496	638.1(R)
111	Azobenzene (1,2-DP-Hydrazine)	77	17.042	17.027	(1.106)	241601	4.20124	409.6
187	Total Benzofluoranthenes	252	25.716	25.646	(0.974)	849234	9.87904	963.2
99	Perylene	252	26.460	26.328	(1.002)	194615	2.71780	265.0
98	Retene	219	22.271	22.240	(0.932)	345759	10.1710	991.6
120	2,3,4,6-Tetrachlorophenol	232	16.170	16.139	(1.049)	42558	2.97063	289.6

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wu70cmsd.d
Lab Smp Id: WU70CMSD
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130705.b/ABN.m
Misc Info: 13-13123

Calibration Date: 05-JUL-2013
Calibration Time: 12:14
Client Smp ID: LF-LS-004-20130
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	97290	48645	194580	82652	-15.05
27 Naphthalene-d8	336205	168102	672410	297548	-11.50
42 Acenaphthene-d10	202661	101330	405322	161801	-20.16
59 Phenanthrene-d10	352196	176098	704392	254399	-27.77
69 Chrysene-d12	358983	179492	717966	265554	-26.03
134 Di-n-octylphthala	503607	251804	1007214	385562	-23.44
77 Perylene-d12	381873	190936	763746	277790	-27.26

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.82	8.32	9.32	8.83	0.09
27 Naphthalene-d8	11.49	10.99	11.99	11.49	0.00
42 Acenaphthene-d10	15.40	14.90	15.90	15.41	0.10
59 Phenanthrene-d10	18.75	18.25	19.25	18.77	0.08
69 Chrysene-d12	23.85	23.35	24.35	23.90	0.19
134 Di-n-octylphthala	25.03	24.53	25.53	25.09	0.25
77 Perylene-d12	26.29	25.79	26.79	26.41	0.44

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: SAIC
Client SDG: WU70
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WU70CMSD
Client Smp ID: LF-LS-004-20130 MSD
Level: LOW
Operator: VTS/YZ
Data Type: MS DATA
SampleType: MSD
SpikeList File: PSDDALCS.spk
Quant Type: ISTD
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130705.b/ABN.m
Misc Info: 13-13123

SPIKE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	487.5	433.7	88.97	34-105
4	Bis(2-Chloroethyl)	487.5	365.7	75.01	36-100
6	2-Chlorophenol	487.5	328.4	67.37	39-100
7	1,3-Dichlorobenzen	487.5	338.9	69.53	40-100
9	1,4-Dichlorobenzen	487.5	343.7	70.50	39-100
11	Benzyl alcohol	487.5	397.9	81.64	19-117
12	1,2-Dichlorobenzen	487.5	344.9	70.76	32-100
13	2-Methylphenol	487.5	335.9	68.92	28-100
14	2,2'-oxybis(1-Chlo	487.5	355.1	72.84	32-100
15	4-Methylphenol	974.9	698.7	71.66	29-100
16	N-Nitroso-di-n-pro	487.5	376.5	77.24	30-100
17	Hexachloroethane	487.5	327.3	67.15	38-100
19	Nitrobenzene	487.5	367.4	75.38	36-100
20	Isophorone	487.5	366.8	75.26	37-101
21	2-Nitrophenol	487.5	314.3	64.48	37-101
22	2,4-Dimethylphenol	1462	646.8	44.23	10-100
23	Bis(2-Chloroethoxy	487.5	381.5	78.25	39-100
24	Benzoic acid	2681	50.20	1.87*	10-107
25	2,4-Dichlorophenol	1462	1141	78.02	28-112
26	1,2,4-Trichloroben	487.5	370.3	75.96	35-103
28	Naphthalene	487.5	524.1	107.51*	43-100
29	4-Chloroaniline	1462	165.1	11.29	11-100
30	Hexachlorobutadien	487.5	361.5	74.16	37-100
31	4-Chloro-3-methylp	1462	1061	72.53	32-117
32	2-Methylnaphthalen	487.5	750.4	153.94*	43-100
33	Hexachlorocyclope	1462	0.000	*	10-103
34	2,4,6-Trichlorophe	1462	1021	69.84	30-113
35	2,4,5-Trichlorophe	1462	1055	72.12	28-118
37	2-Chloronaphthalen	487.5	434.2	89.07	40-100
38	2-Nitroaniline	1462	1298	88.76	31-126
39	Dimethylphthalate	487.5	411.3	84.38	43-114
40	Acenaphthylene	487.5	353.3	72.49	42-102
41	2,6-Dinitrotoluene	1462	1264	86.44	33-123

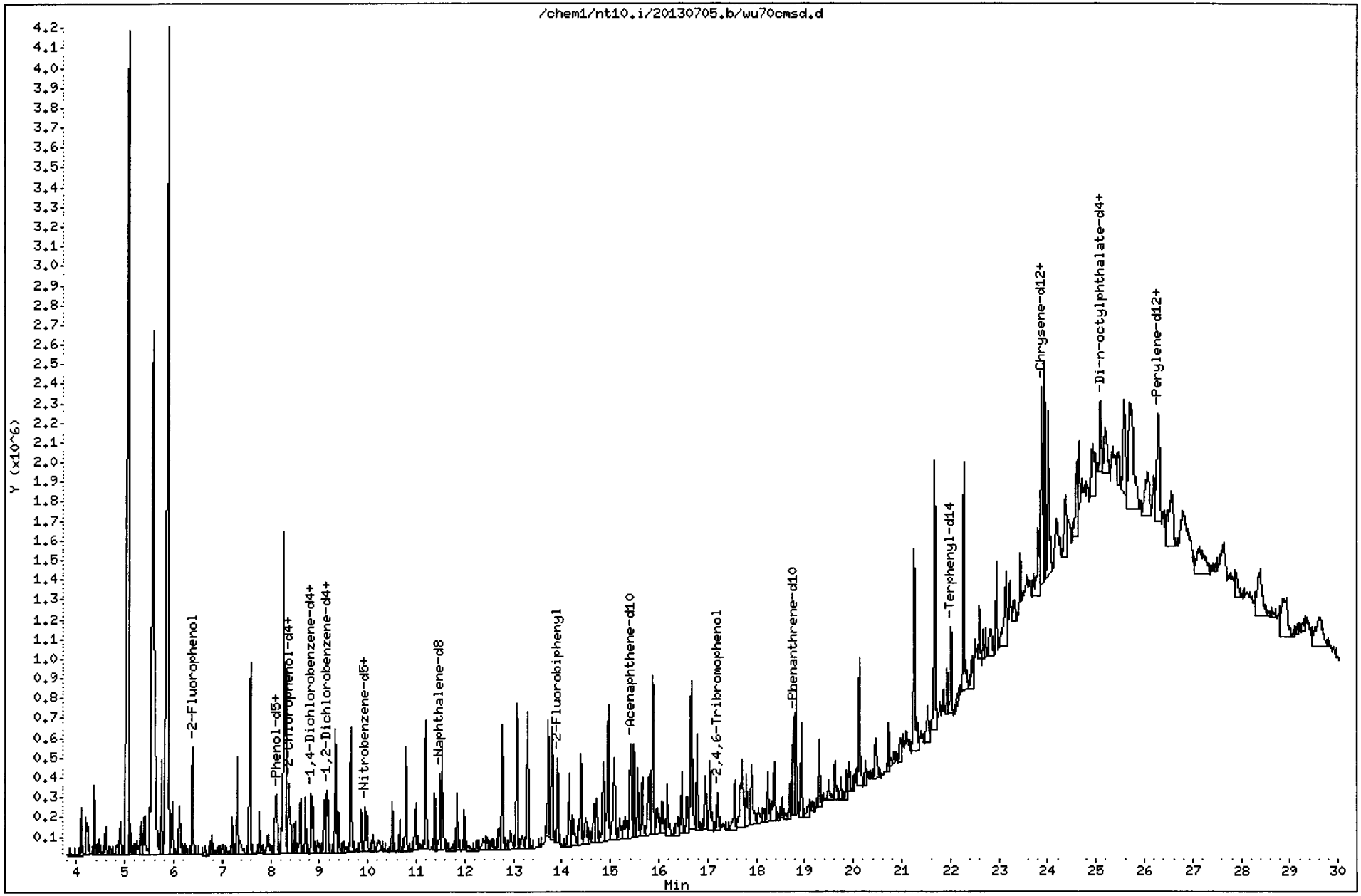
SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
43 3-Nitroaniline	1462	208.6	14.26*	22-113
44 Acenaphthene	487.5	407.1	83.51	45-100
45 2,4-Dinitrophenol	2681	826.8	30.84	10-105
46 Dibenzofuran	487.5	473.7	97.18	43-103
47 4-Nitrophenol	1462	239.6	16.38	15-138
48 2,4-Dinitrotoluene	1462	1274	87.09	35-127
49 Fluorene	487.5	421.6	86.48	45-107
50 Diethylphthalate	487.5	484.4	99.37	50-120
51 4-Chlorophenyl-phe	487.5	391.2	80.26	32-116
52 4-Nitroaniline	1462	487.7	33.35	24-125
53 4,6-Dinitro-2-meth	2681	1369	51.08	24-119
54 N-Nitrosodiphenyla	487.5	482.5	98.98	36-111
56 4-Bromophenyl-phen	487.5	424.3	87.04	39-114
57 Hexachlorobenzene	487.5	406.4	83.36	33-113
58 Pentachlorophenol	1462	383.1	26.20	16-120
60 Phenanthrene	487.5	630.6	129.36*	49-112
61 Anthracene	487.5	443.7	91.03	45-106
62 Carbazole	487.5	608.9	124.91	43-135
63 Di-n-butylphthalat	487.5	466.6	95.71	48-126
64 Fluoranthene	487.5	763.9	156.71*	53-118
65 Pyrene	487.5	883.2	181.18*	48-121
67 Butylbenzylphthala	487.5	569.2	116.78	45-132
68 Benzo(a)anthracene	487.5	759.5	155.80*	49-115
70 3,3'-Dichlorobenz	1462	0.000	*	10-100
71 Chrysene	487.5	888.5	182.27*	47-115
72 bis(2-Ethylhexyl)p	487.5	1063	218.04*	34-130
73 Di-n-octylphthalat	487.5	440.8	90.42	28-124
74 Benzo(b)fluoranthe	487.5	605.0	124.10	42-132
75 Benzo(k)fluoranthe	487.5	447.4	91.79	39-129
76 Benzo(a)pyrene	487.5	700.3	143.65*	42-113
78 Indeno(1,2,3-cd)py	487.5	428.3	87.86	42-123
79 Dibenzo(a,h)anthra	487.5	450.2	92.35	30-133
80 Benzo(g,h,i)peryle	487.5	451.8	92.68	38-126
91 Aniline	1462	0.000	*	10-134
111 Azobenzene (1,2-DP	487.5	409.6	84.02	35-112
90 N-Nitrosodimethyla	1462	893.4	61.09	17-100
105 1-methylnaphthalen	487.5	638.1	130.90*	42-100
103 Pyridine	974.9	1289	132.18	10-147
187 Total Benzofluoran	974.9	963.2	98.79	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	731.2	460.7	63.01	27-120

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 2 Phenol-d5	731.2	490.0	67.01	29-120
$ 5 2-Chlorophenol-d4	731.2	477.6	65.32	31-120
$ 10 1,2-Dichlorobenzen	487.5	303.1	62.18	32-120
$ 18 Nitrobenzene-d5	487.5	314.7	64.57	30-120
$ 36 2-Fluorobiphenyl	487.5	384.8	78.95	35-120
$ 55 2,4,6-Tribromophen	731.2	396.1	54.17	24-134
$ 66 Terphenyl-d14	487.5	435.4	89.31	37-120

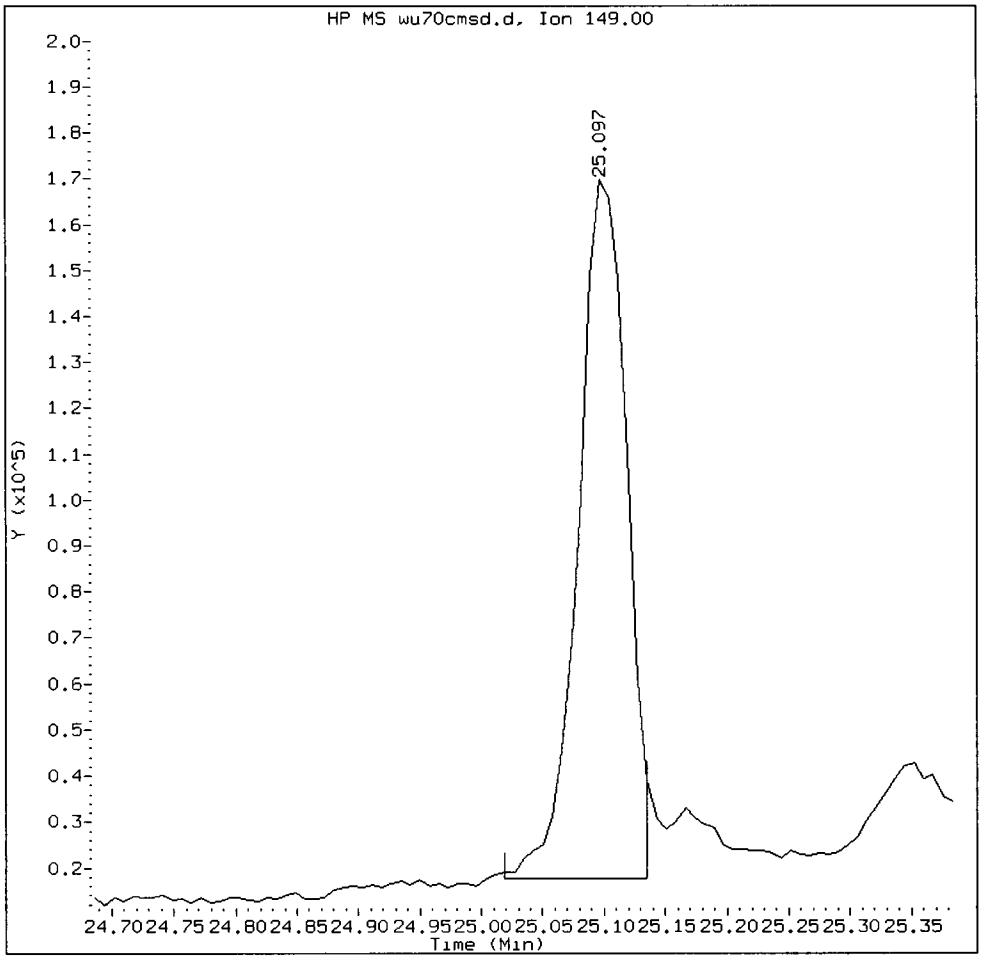
Data File: /chem1/nt10.i/20130705.b/wu70cmsd.d
Date : 06-JUL-2013 02:00
Client ID: LF-LS-004-20130 MSD
Sample Info: WU70CMSD
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



WU70CMSD, /chem1/nt10.i/20130705.b/wu70cmsd.d

Di-n-octylphthalate Amount: 4.52 Area: 428240



MANUAL INTEGRATION for Di-n-octylphthalate

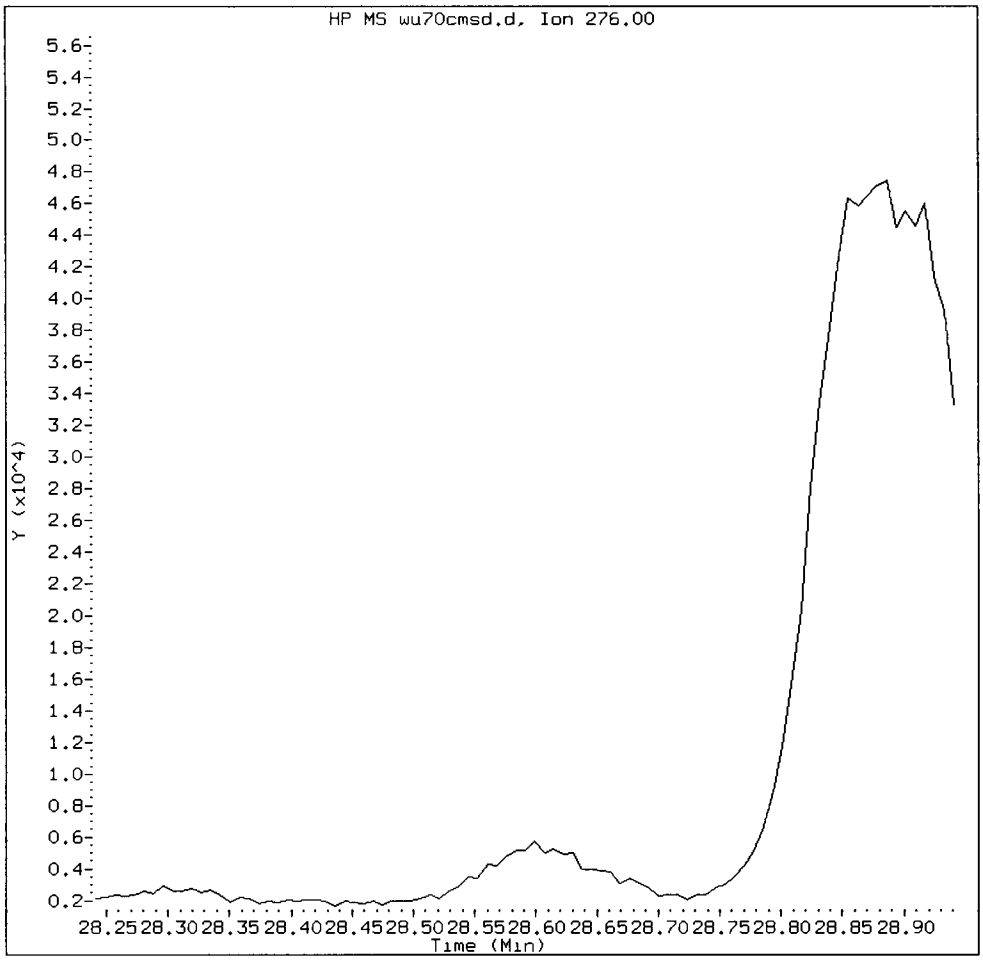
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 7/9/13

WU70CMSD, /chem1/nt10.i/20130705.b/wu70cmsd.d

Indeno(1,2,3-cd)pyrene Amount: 4.39 Area: 377222



MANUAL INTEGRATION for Indeno(1,2,3-cd)pyrene

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 7/9/13

CO-ELUTION SUMMARY FOR FILE - wu70cmsd.d

Lab ID: WU70CMSD, Method: ABN.m, Instrument: nt10.i, Date: 06-JUL-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 7/9/13

Semivolatile Report SW846 Method 8270D

Data file : /chem1/nt10.i/20130705.b/wu70cb.d
Lab Smp Id: WU70B Client Smp ID: LF-TP-001-20130619-
Inj Date : 06-JUL-2013 00:10
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WU70B
Misc Info : 13-13122
Comment : 1ul Injection
Method : /chem1/nt10.i/20130705.b/ABN.m
Meth Date : 09-Jul-2013 14:16 yev Quant Type: ISTD
Cal Date : 05-JUL-2013 15:57 Cal File: ic0705g.d
Als bottle: 22
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

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

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	18.00000	Weight of sample extracted (g)
M	44.30000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	6.374	6.343	(0.722)	166593	5.00529	499.2
$	2 Phenol-d5	99	8.105	8.067	(0.918)	231097	5.13857	512.5
	3 Phenol	94	8.129	8.090	(0.921)	20191	0.43118	43.01
$	5 2-Chlorophenol-d4	132	8.376	8.360	(0.949)	166434	5.16595	515.3
	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	8.825	8.825	(1.000)	89501	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
$	10 1,2-Dichlorobenzene-d4	152	9.135	9.135	(1.035)	74416	3.26121	325.3
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	108	Compound Not Detected.					
	14 2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
	13 2-Methylphenol	108	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	17 Hexachloroethane	117	Compound Not Detected.					
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	9.640	9.624	(1.092)	6204	0.18450 J	18.40
$	18 Nitrobenzene-d5	82	9.935	9.935	(0.865)	141744	3.50293	349.4
	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	11.482	11.482	(1.000)	331760	4.00000	
	28 Naphthalene	128	11.528	11.528	(1.004)	88979	1.02707	102.4
	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	142	13.068	13.067	(1.138)	128536	2.23445	222.9
	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	13.911	13.911	(0.903)	266812	4.23778	422.7
	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	15.405	15.397	(1.000)	172189	4.00000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	15.474	15.467	(1.004)	12501	0.25505	25.44(H)
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	15.869	15.861	(1.030)	16623	0.24951	24.89
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	16.464	16.448	(1.069)	12720	0.20316	20.26
	49 Fluorene	166	16.649	16.633	(1.081)	28212	0.47997	47.87
	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	17.189	17.165	(1.116)	53740	5.04261	503.0
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18.766	18.742	(1.000)	284215	4.00000	
	60 Phenanthrene	178	18.820	18.789	(1.003)	168747	2.18211	217.6
	61 Anthracene	178	18.928	18.905	(1.009)	61469	0.75624	75.43
	62 Carbazole	167	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
63	Di-n-butylphthalate	149	Compound Not Detected.					
64	Fluoranthene	202	21.280	21.226	(1.134)	317656	3.37106	336.2
65	Pyrene	202	21.714	21.644	(0.907)	543809	5.68073	566.6
$ 66	Terphenyl-d14	244	22.054	21.992	(0.921)	257445	4.96833	495.5
67	Butylbenzylphthalate	149	Compound Not Detected.					
68	Benzo(a)anthracene	228	23.936	23.827	(0.999)	172377	1.91431	190.9
* 69	Chrysene-d12	240	23.951	23.843	(1.000)	287936	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	23.990	23.889	(1.002)	215740	2.65205	264.5
72	bis(2-Ethylhexyl)phthalate	149	24.052	23.966	(0.956)	462679	8.54828	852.6
* 134	Di-n-octylphthalate-d4	153	25.159	25.027	(1.000)	423427	4.00000	
73	Di-n-octylphthalate	149	Compound Not Detected.					
74	Benzo(b)fluoranthene	252	25.770	25.600	(0.973)	267205	3.02627	301.8
75	Benzo(k)fluoranthene	252	25.770	25.646	(0.973)	267205	2.40251	239.6
76	Benzo(a)pyrene	252	26.382	26.173	(0.996)	145435	1.78012	177.6(M)
* 77	Perylene-d12	264	26.498	26.281	(1.000)	309679	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	29.073	28.591	(1.097)	62426	0.65211	65.04(M)
79	Dibenzo(a,h)anthracene	278	29.127	28.645	(1.099)	22205	0.30267	30.19(M)
80	Benzo(g,h,i)perylene	276	29.865	29.267	(1.127)	74942	0.91409	91.17(M)
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	142	13.284	13.284	(1.157)	128298	2.44241	243.6
111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
187	Total Benzofluoranthenes	252	25.770	25.646	(0.973)	263910	2.75390	274.7(H)
99	Perylene	252	26.553	26.328	(1.002)	174637	2.18767	218.2
98	Retene	219	22.310	22.240	(0.931)	65328	1.77234	176.8
120	2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

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: nt10.i
Lab File ID: wu70cb.d
Lab Smp Id: WU70B
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130705.b/ABN.m
Misc Info: 13-13122

Calibration Date: 05-JUL-2013
Calibration Time: 12:14
Client Smp ID: LF-TP-001-201306
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

		AREA LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	97290	48645	194580	89501	-8.01
27 Naphthalene-d8	336205	168102	672410	331760	-1.32
42 Acenaphthene-d10	202661	101330	405322	172189	-15.04
59 Phenanthrene-d10	352196	176098	704392	284215	-19.30
69 Chrysene-d12	358983	179492	717966	287936	-19.79
134 Di-n-octylphthala	503607	251804	1007214	423427	-15.92
77 Perylene-d12	381873	190936	763746	309679	-18.91

		RT LIMIT			
COMPOUND	STANDARD	LOWER	UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.82	8.32	9.32	8.82	0.00
27 Naphthalene-d8	11.49	10.99	11.99	11.48	-0.07
42 Acenaphthene-d10	15.40	14.90	15.90	15.40	0.05
59 Phenanthrene-d10	18.75	18.25	19.25	18.77	0.08
69 Chrysene-d12	23.85	23.35	24.35	23.95	0.42
134 Di-n-octylphthala	25.03	24.53	25.53	25.16	0.53
77 Perylene-d12	26.29	25.79	26.79	26.50	0.80

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

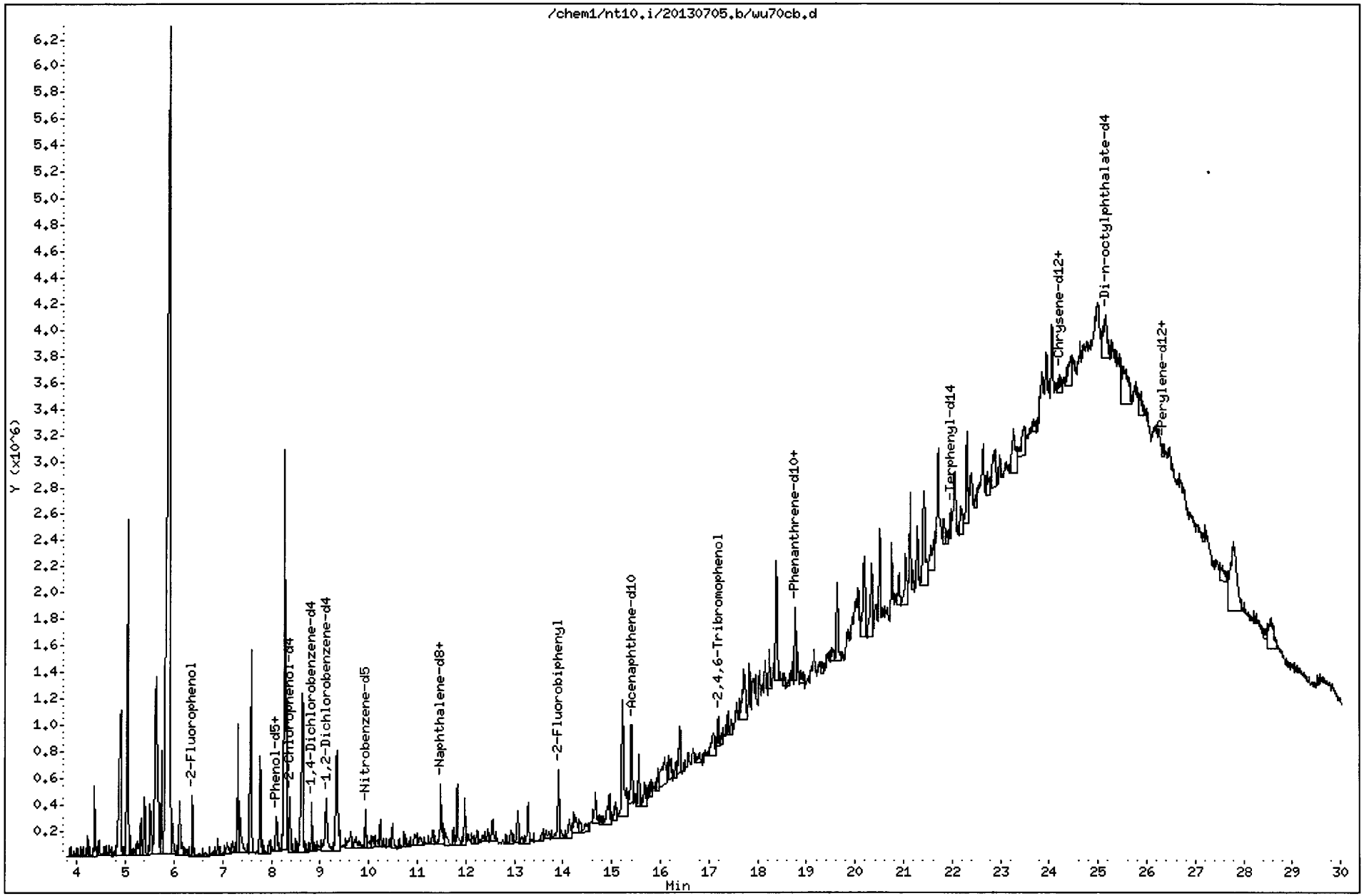
Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WU70B
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDALCS.spk
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130705.b/ABN.m
Misc Info: 13-13122

Client SDG: WU70
Fraction: SV
Client Smp ID: LF-TP-001-20130619-
Operator: VTS/YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	748.1	499.2	66.74	27-120
$ 2 Phenol-d5	748.1	512.5	68.51	29-120
$ 5 2-Chlorophenol-d4	748.1	515.3	68.88	31-120
$ 10 1,2-Dichlorobenzen	498.7	325.3	65.22	32-120
$ 18 Nitrobenzene-d5	498.7	349.4	70.06	30-120
$ 36 2-Fluorobiphenyl	498.7	422.7	84.76	35-120
$ 55 2,4,6-Tribromophen	748.1	503.0	67.23	24-134
$ 66 Terphenyl-d14	498.7	495.5	99.37	37-120

Data File: /chem1/nt10.i/20130705.b/wu70cb.d
Date : 06-JUL-2013 00:10
Client ID: LF-TP-001-20130619-
Sample Info: WU70B
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130705.b/wu70cb.d

Date : 06-JUL-2013 00:10

Client ID: LF-TP-001-20130619-

Instrument: nt10.i

Sample Info: WU70B

Volume Injected (uL): 1.0

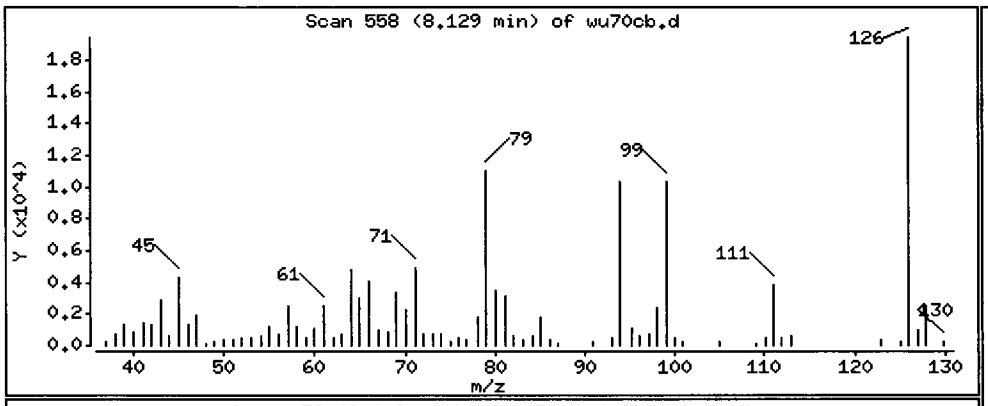
Operator: VTS/YZ

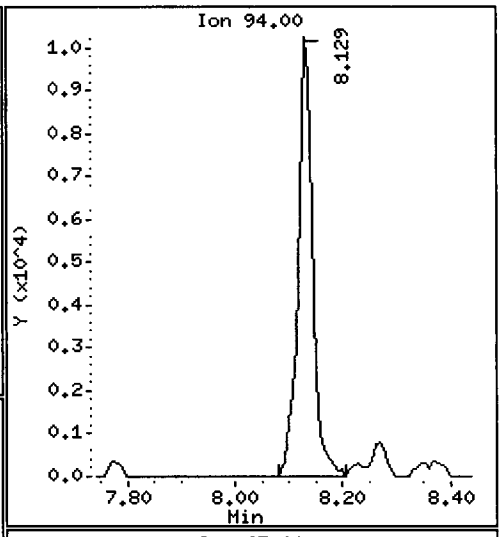
Column phase: ZB-5msi

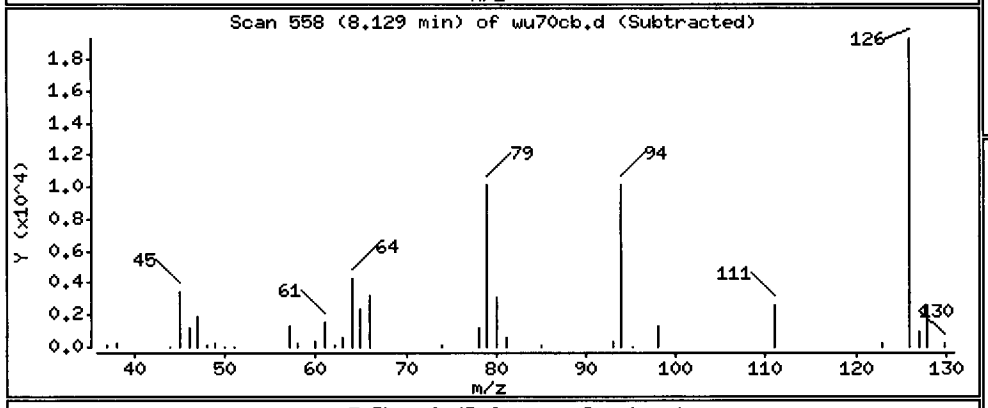
Column diameter: 0.25

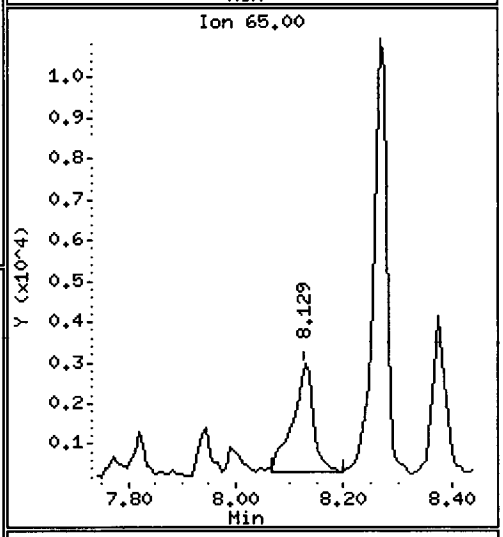
3 Phenol

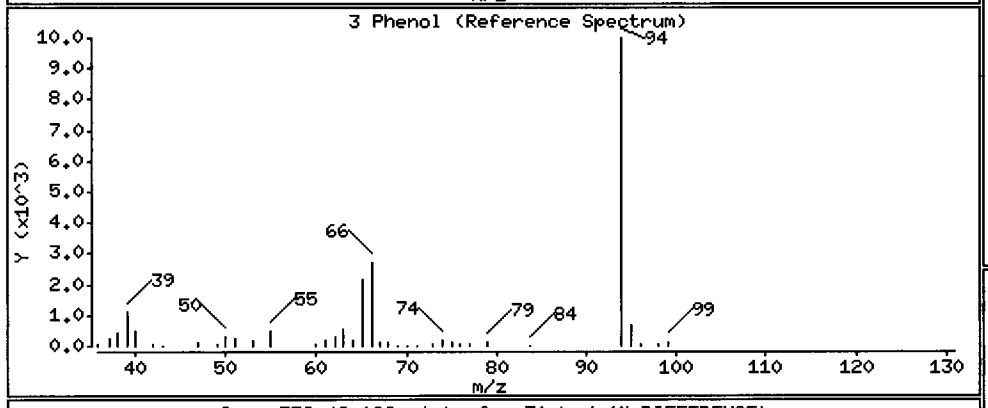
Concentration: 43.01 ug/kg

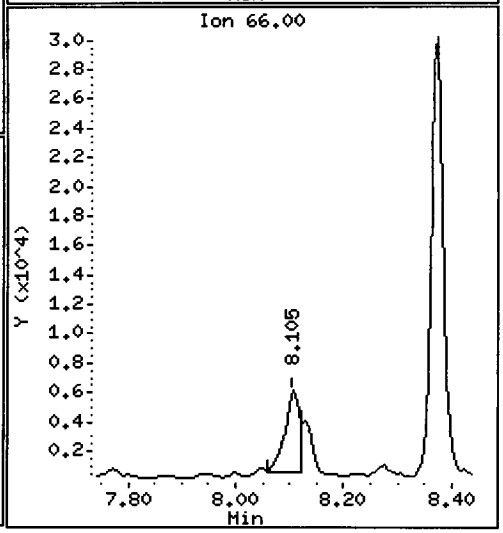


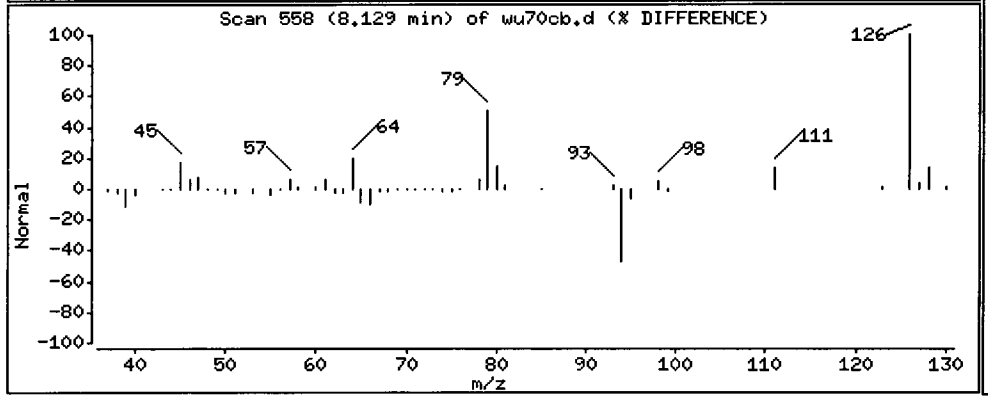












Data File: /chem1/nt10.i/20130705.b/wu70cb.d

Date : 06-JUL-2013 00:10

Client ID: LF-TP-001-20130619-

Instrument: nt10.i

Sample Info: WU70B

Volume Injected (uL): 1.0

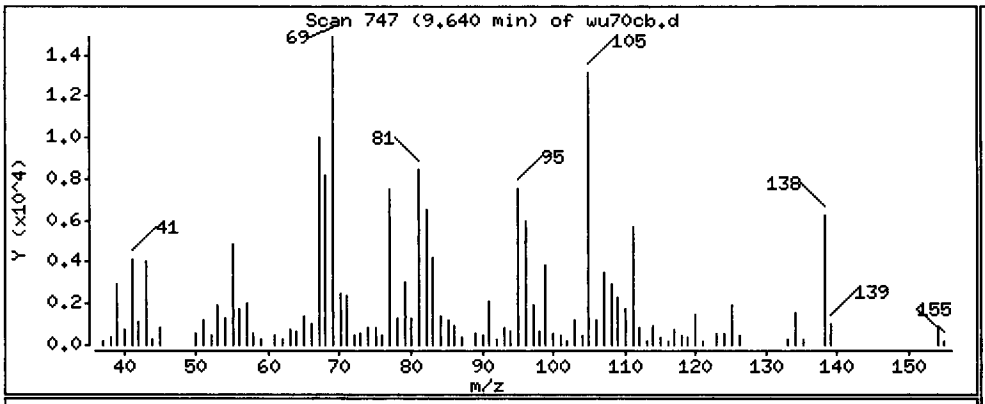
Operator: VTS/YZ

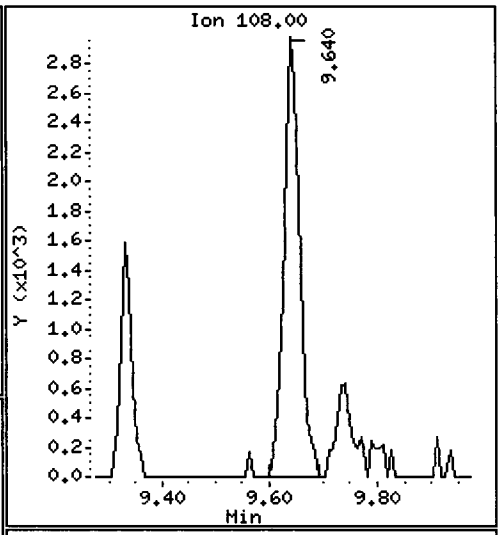
Column phase: ZB-5ms1

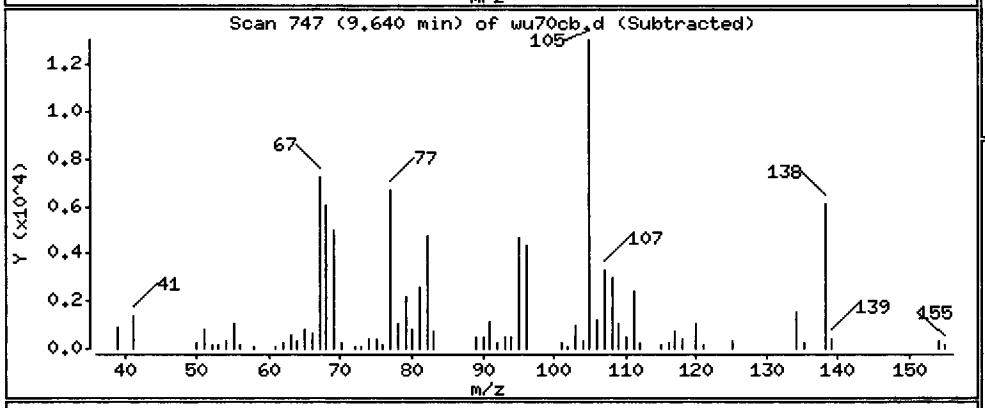
Column diameter: 0.25

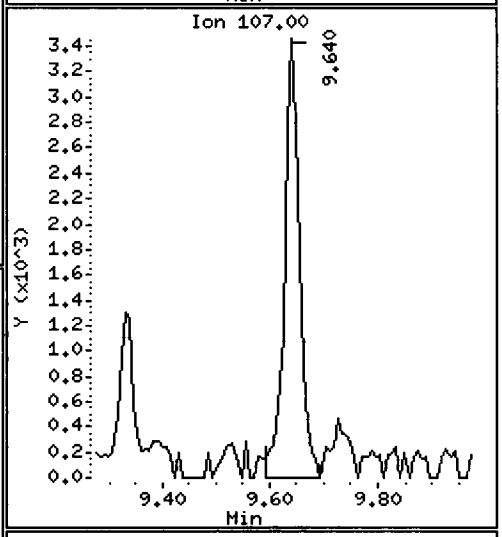
15 4-Methylphenol

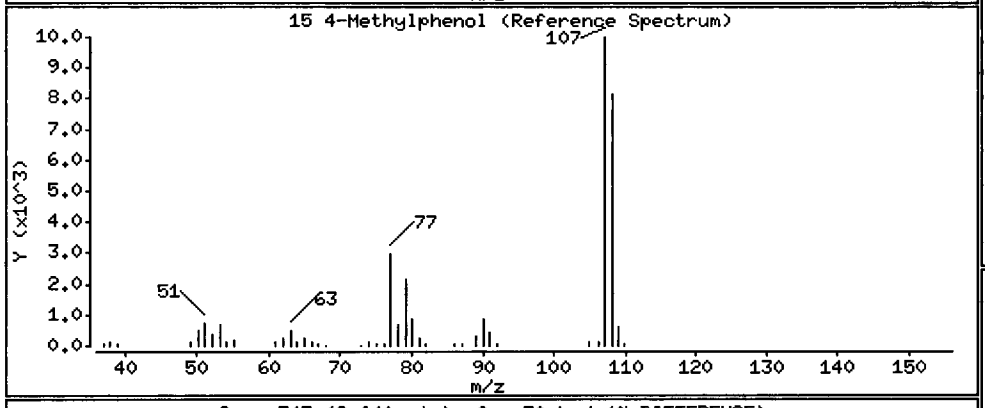
Concentration: 18.40 ug/kg

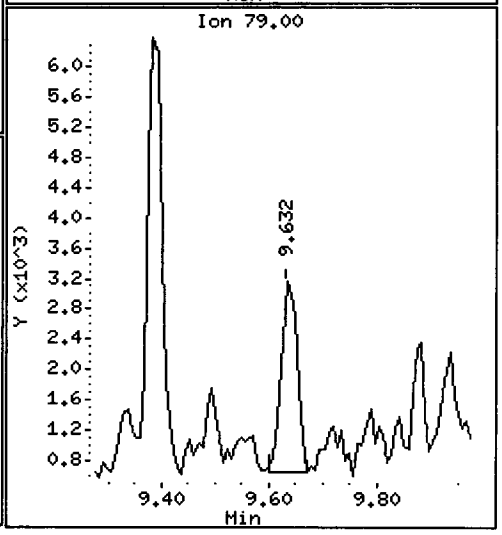


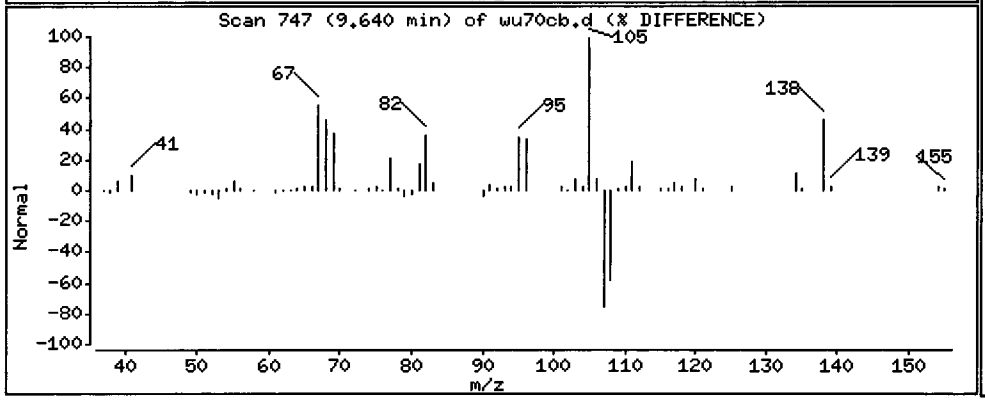












Data File: /chem1/nt10.i/20130705.b/wu70cb.d

Date : 06-JUL-2013 00:10

Client ID: LF-TP-001-20130619-

Instrument: nt10.i

Sample Info: WU70B

Volume Injected (uL): 1.0

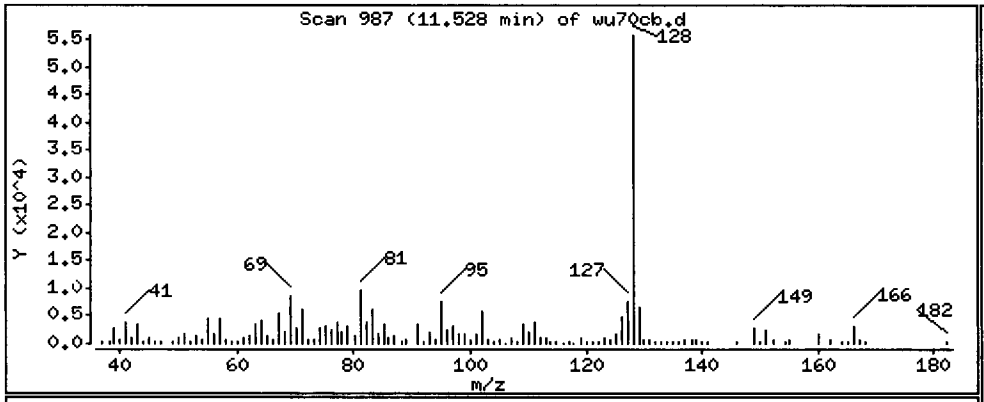
Operator: VTS/YZ

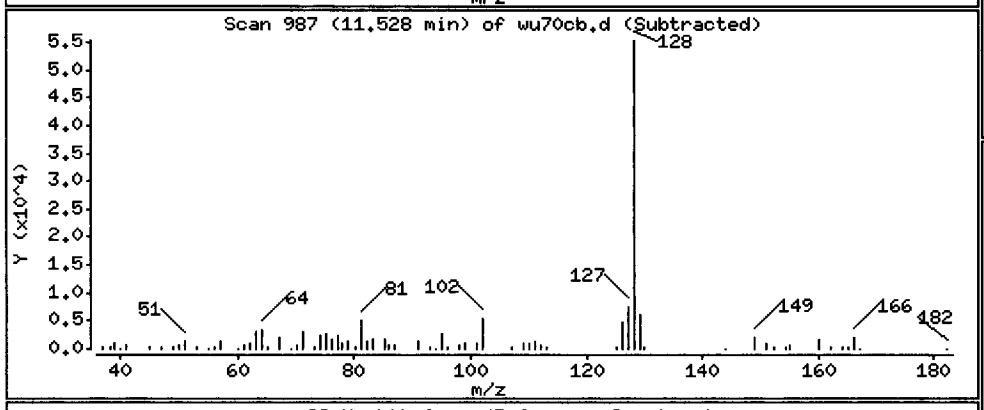
Column phase: ZB-5msi

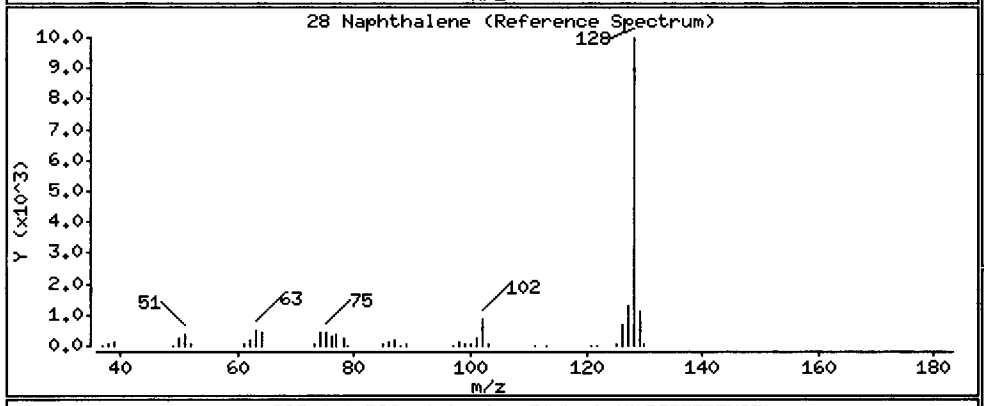
Column diameter: 0.25

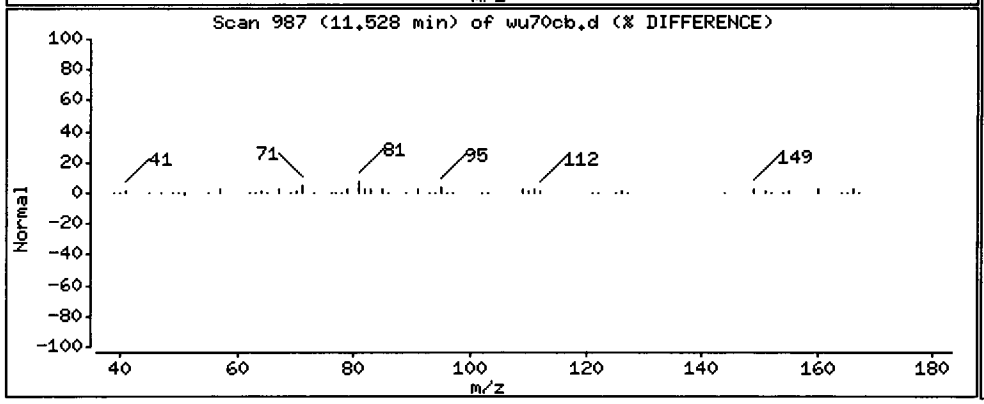
28 Naphthalene

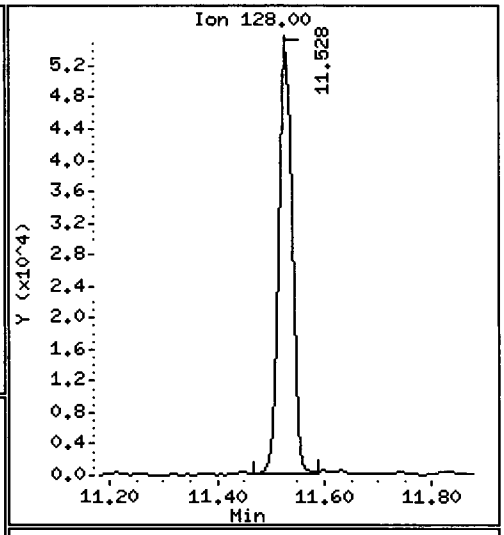
Concentration: 102.4 ug/kg

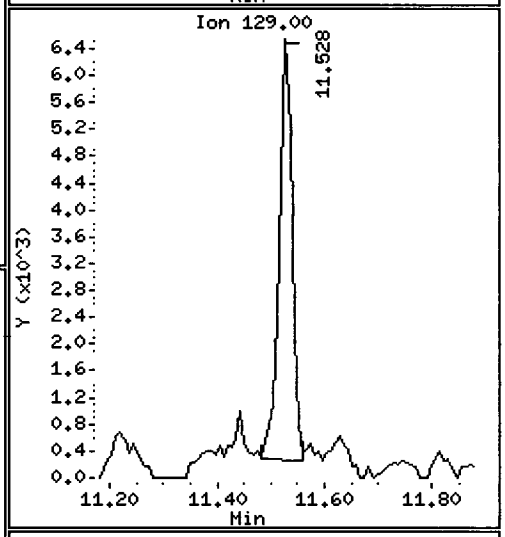


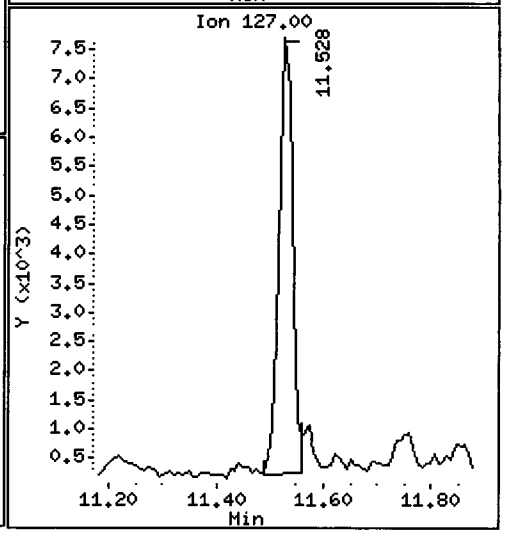












Data File: /chem1/nt10.i/20130705.b/wu70cb.d

Date : 06-JUL-2013 00:10

Client ID: LF-TP-001-20130619-

Instrument: nt10.i

Sample Info: WU70B

Volume Injected (uL): 1.0

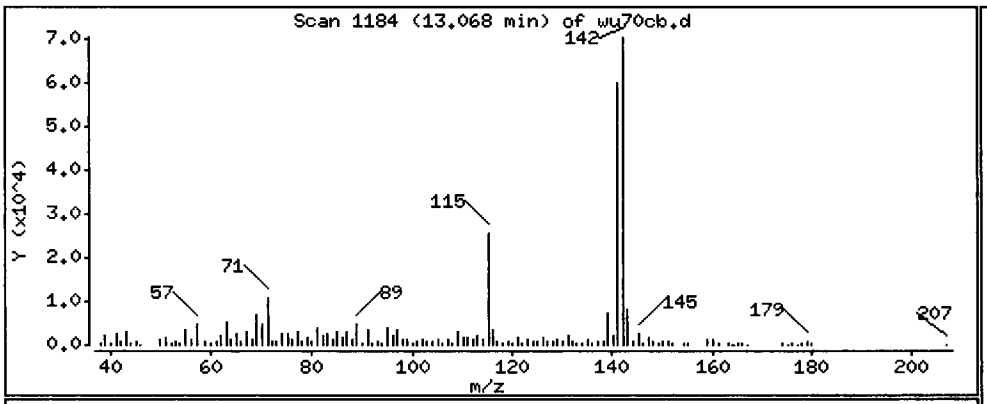
Operator: VTS/YZ

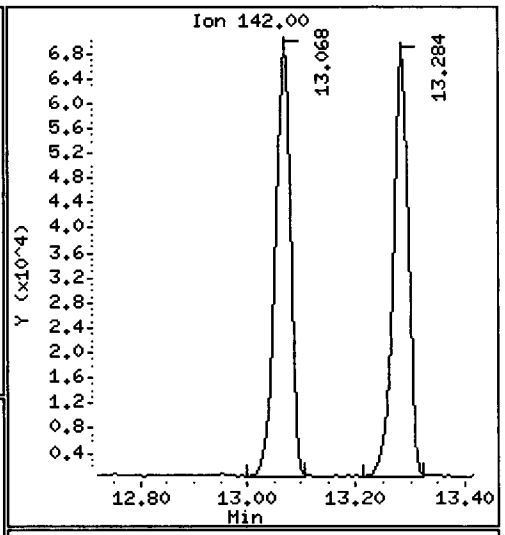
Column phase: ZB-5msi

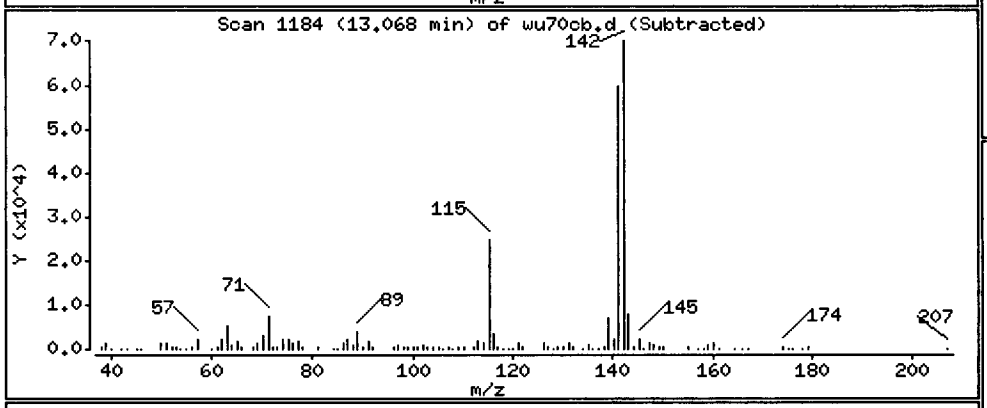
Column diameter: 0.25

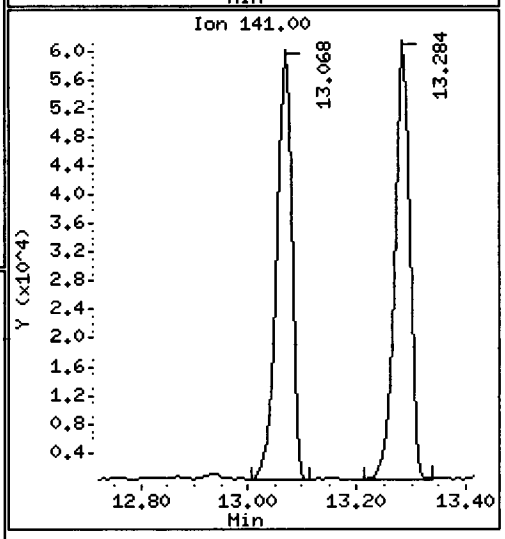
32 2-Methylnaphthalene

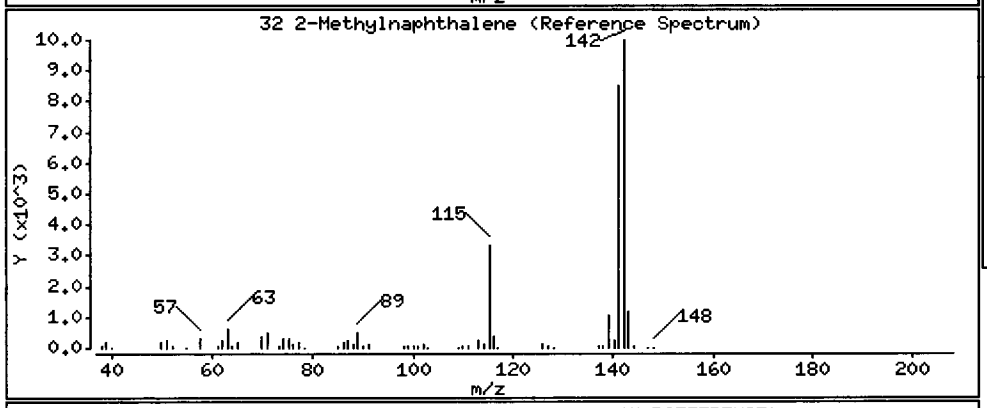
Concentration: 222.9 ug/kg

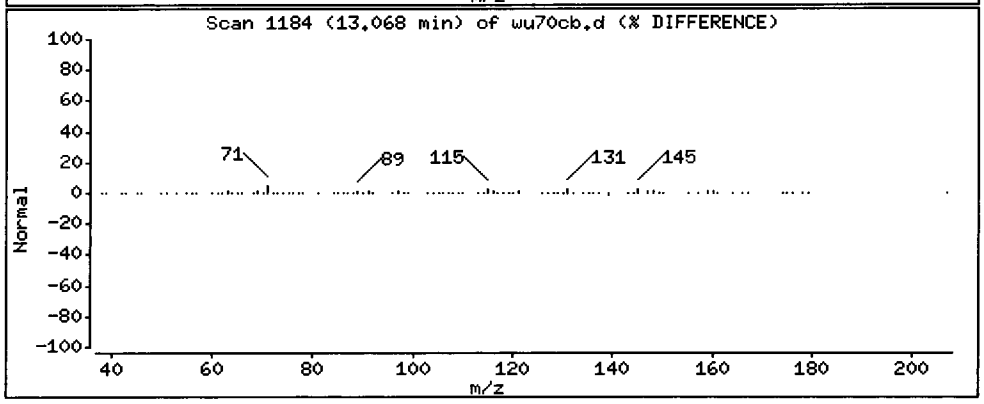












Data File: /chem1/nt10.i/20130705.b/wu70cb.d

Date : 06-JUL-2013 00:10

Client ID: LF-TP-001-20130619-

Instrument: nt10.i

Sample Info: WU70B

Volume Injected (uL): 1.0

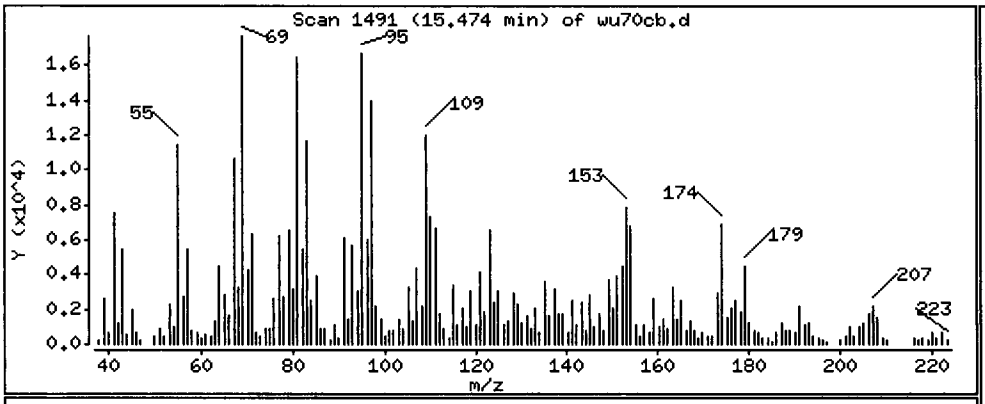
Operator: VTS/YZ

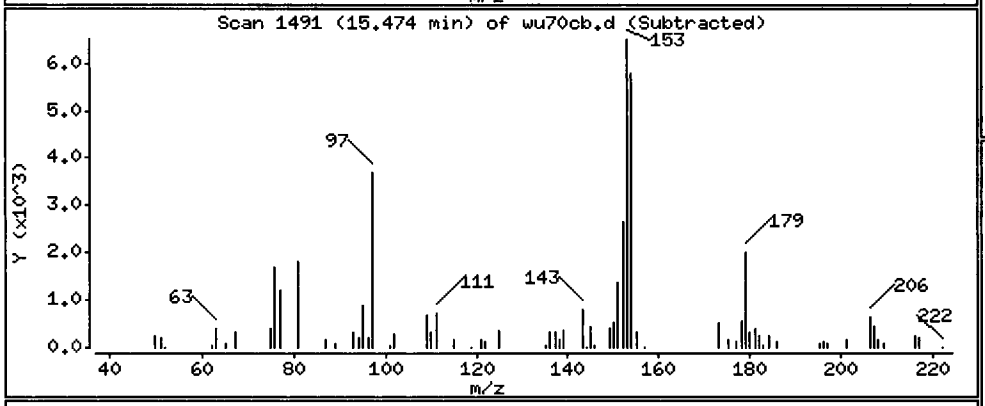
Column phase: ZB-5msi

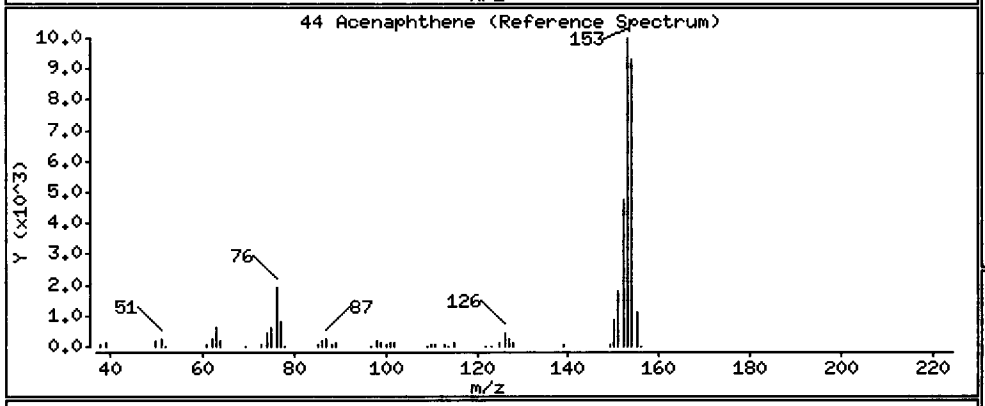
Column diameter: 0.25

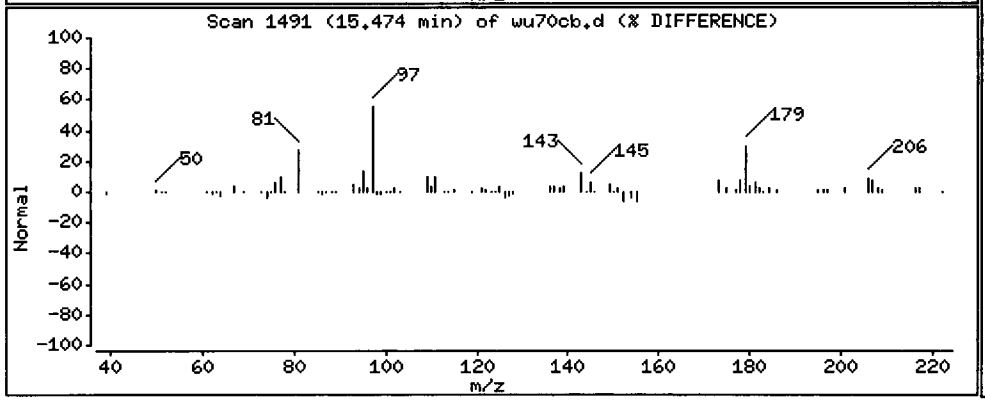
44 Acenaphthene

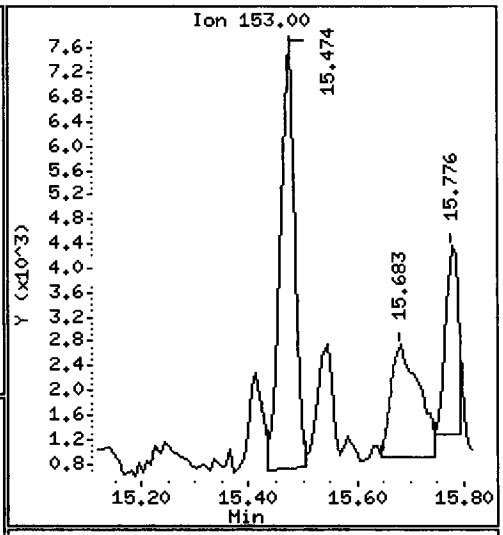
Concentration: 25.44 ug/kg

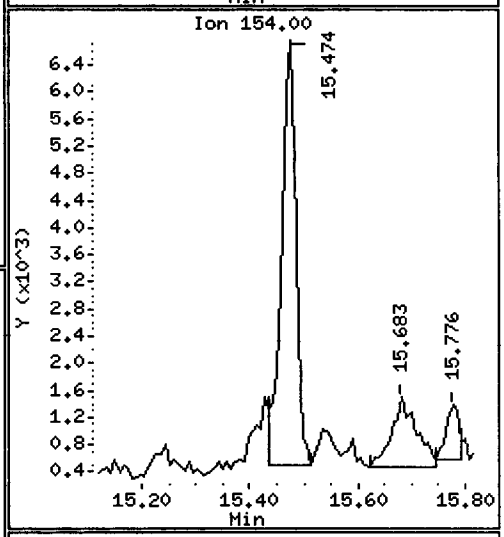


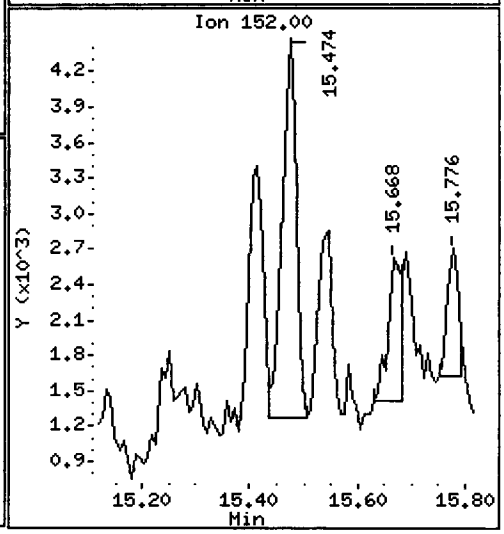












Data File: /chem1/nt10.i/20130705.b/wu70cb.d

Date : 06-JUL-2013 00:10

Client ID: LF-TP-001-20130619-

Instrument: nt10.i

Sample Info: WU70B

Volume Injected (uL): 1.0

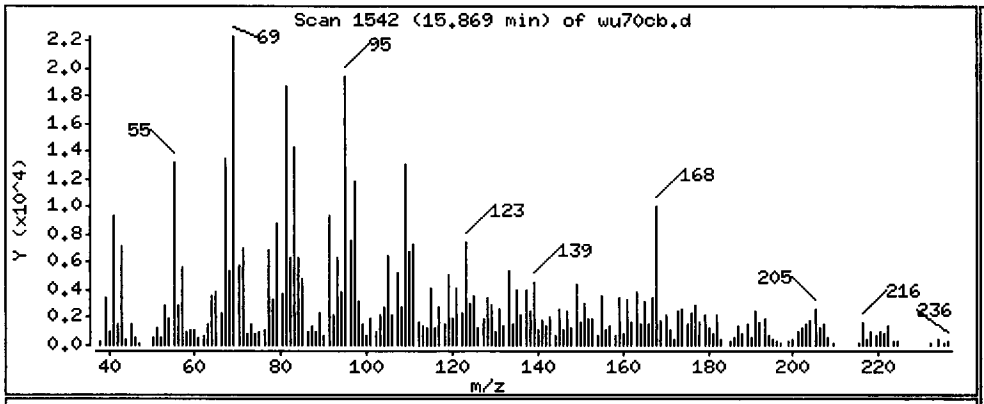
Operator: VTS/YZ

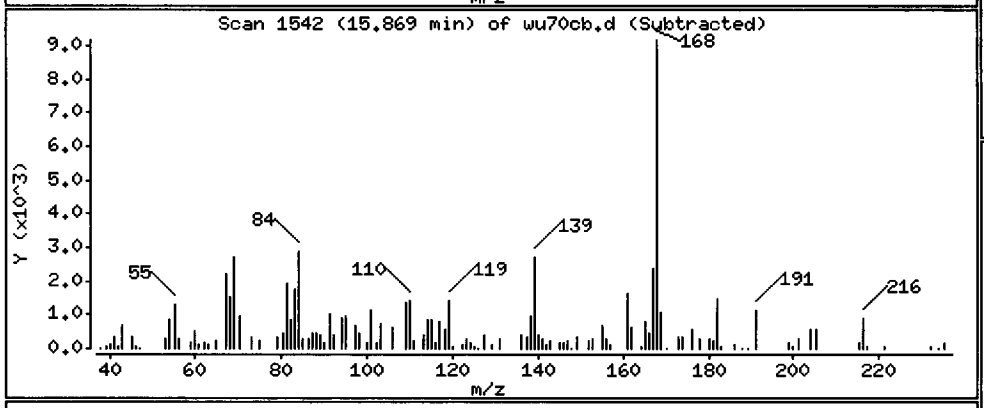
Column phase: ZB-5msi

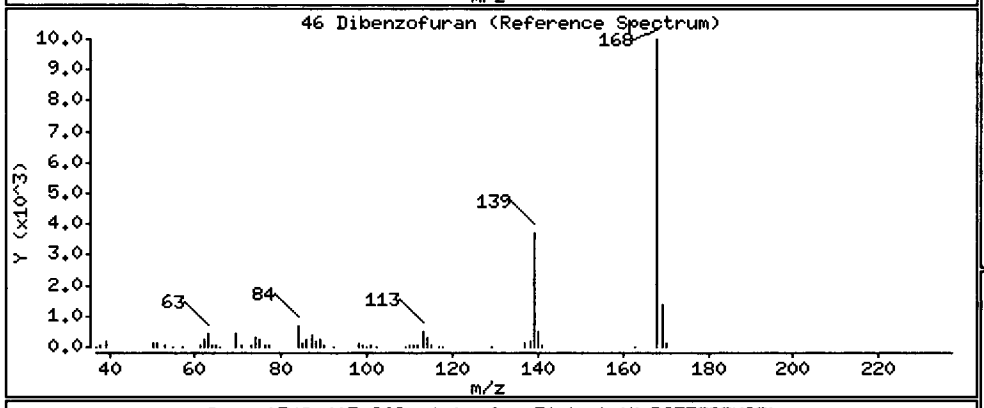
Column diameter: 0.25

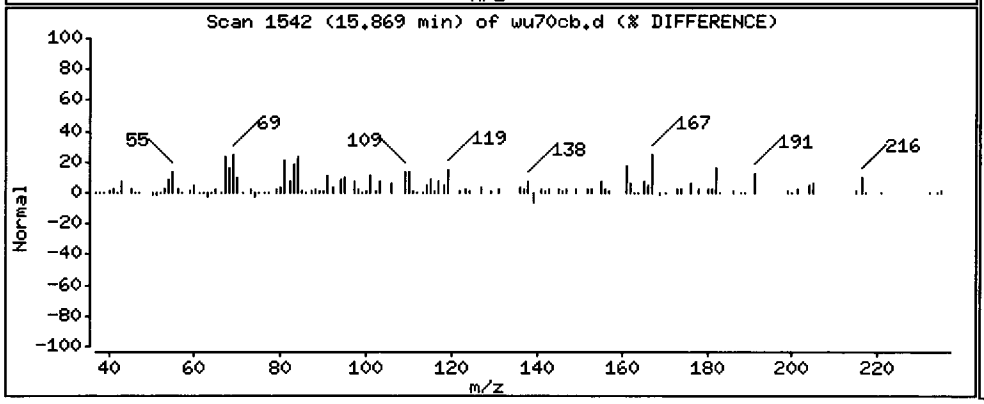
46 Dibenzofuran

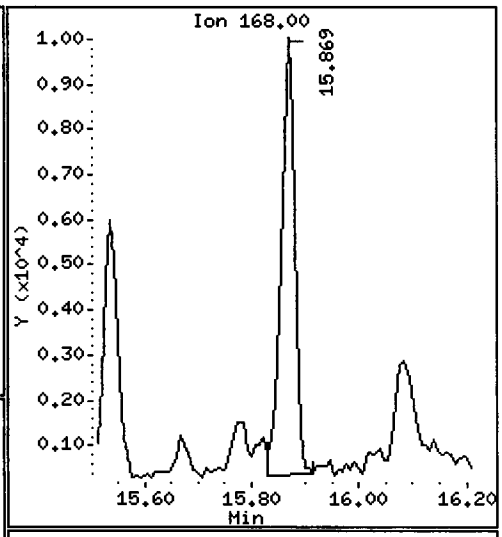
Concentration: 24.89 ug/kg

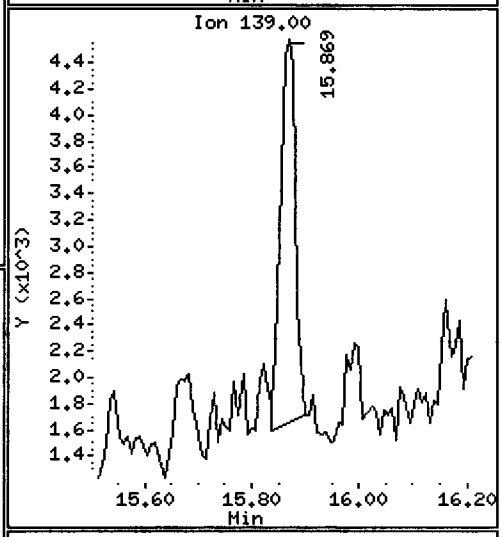


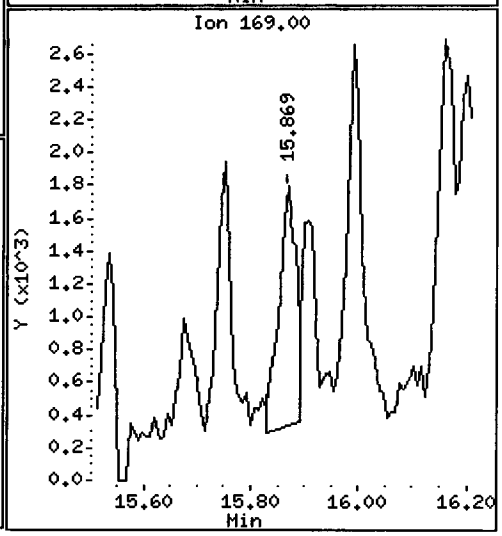












Data File: /chem1/nt10.i/20130705.b/wu70cb.d

Date : 06-JUL-2013 00:10

Client ID: LF-TP-001-20130619-

Instrument: nt10.i

Sample Info: WU70B

Volume Injected (uL): 1.0

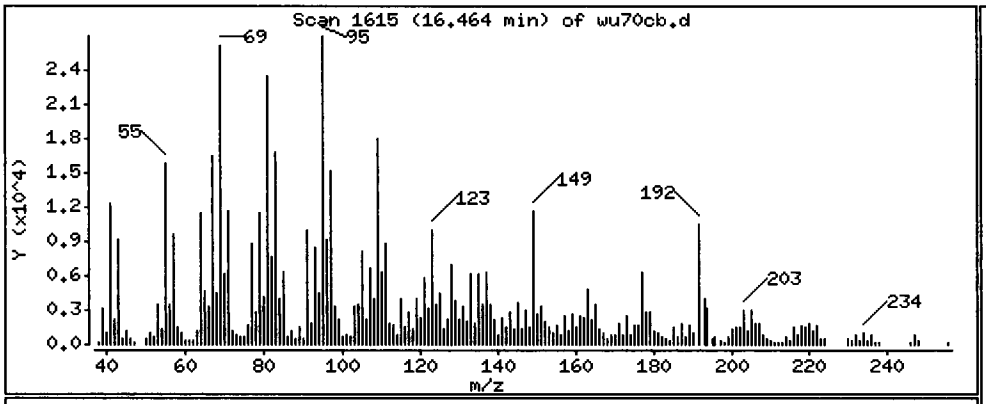
Operator: VTS/YZ

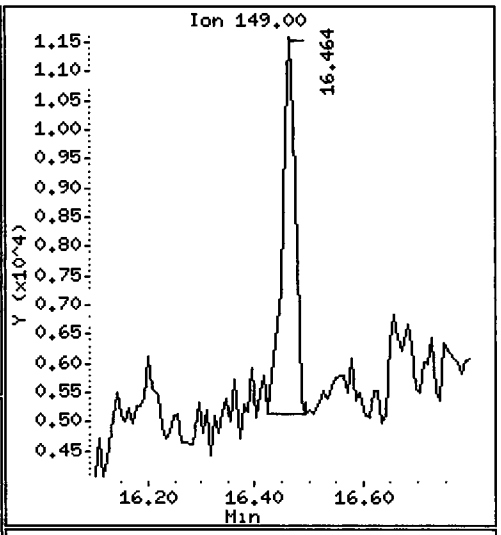
Column phase: ZB-5msi

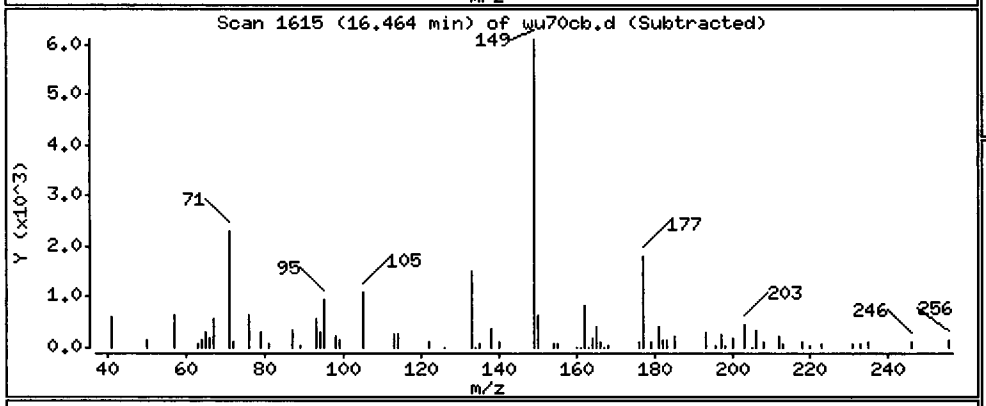
Column diameter: 0.25

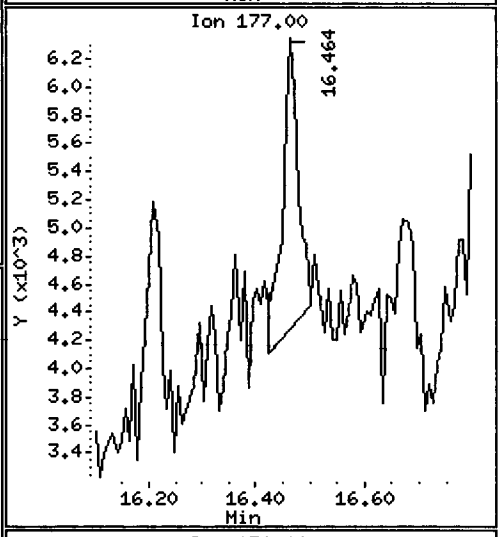
50 Diethylphthalate

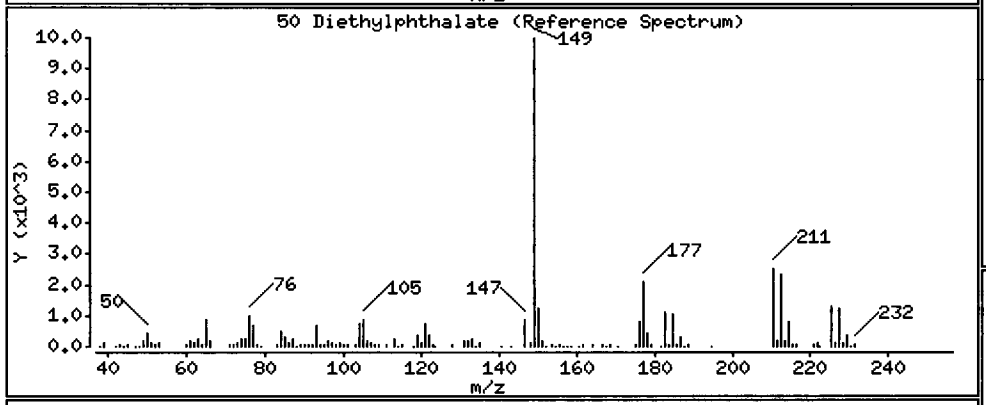
Concentration: 20.26 ug/kg

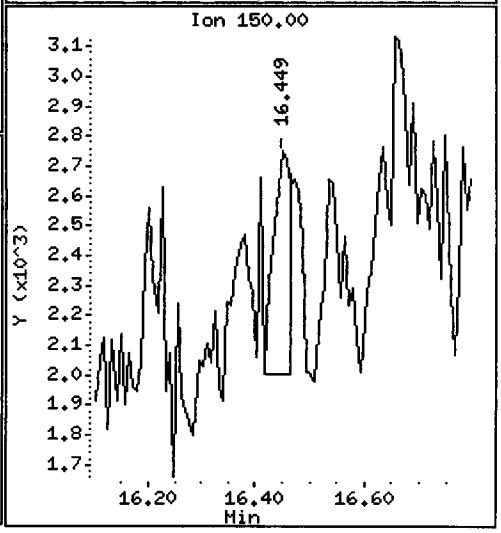


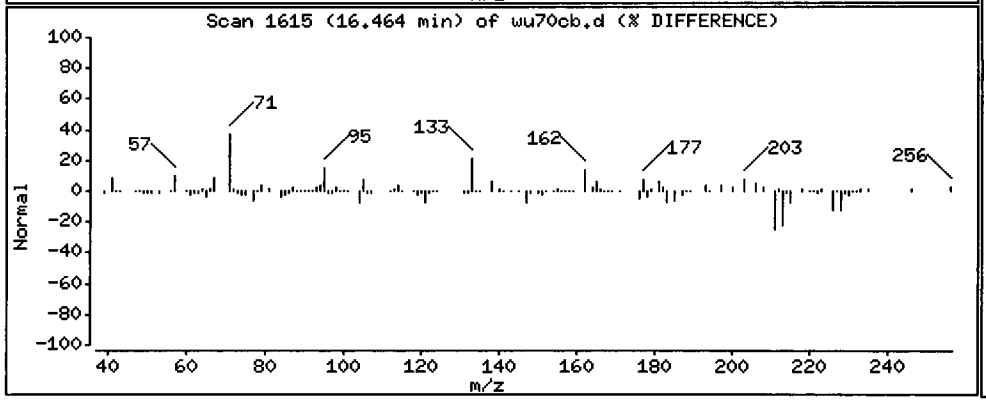












Data File: /chem1/nt10.i/20130705.b/wu70cb.d

Date : 06-JUL-2013 00:10

Client ID: LF-TP-001-20130619-

Instrument: nt10.i

Sample Info: WU70B

Volume Injected (uL): 1.0

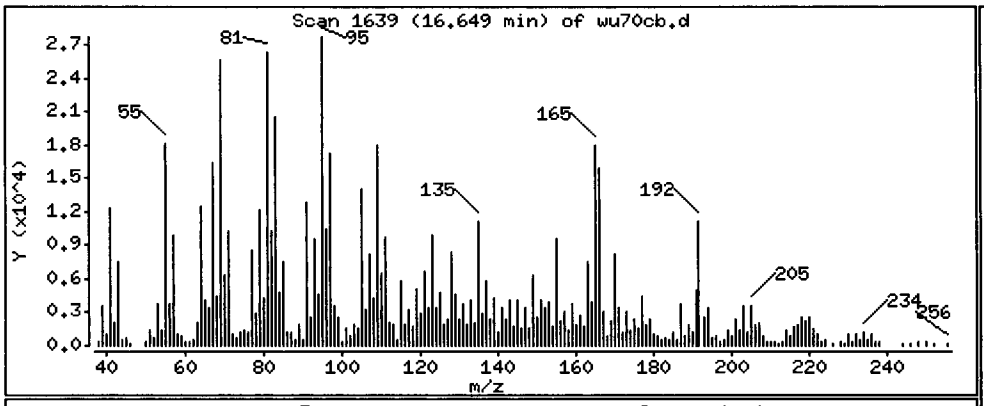
Operator: VTS/YZ

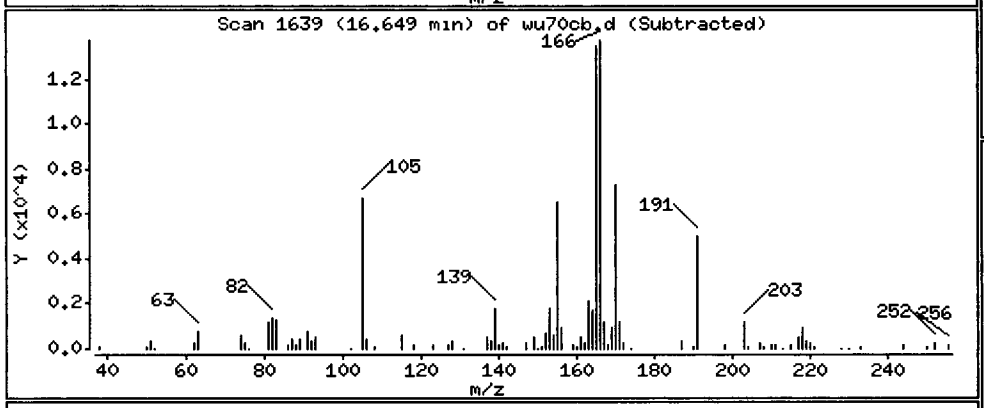
Column phase: ZB-5msi

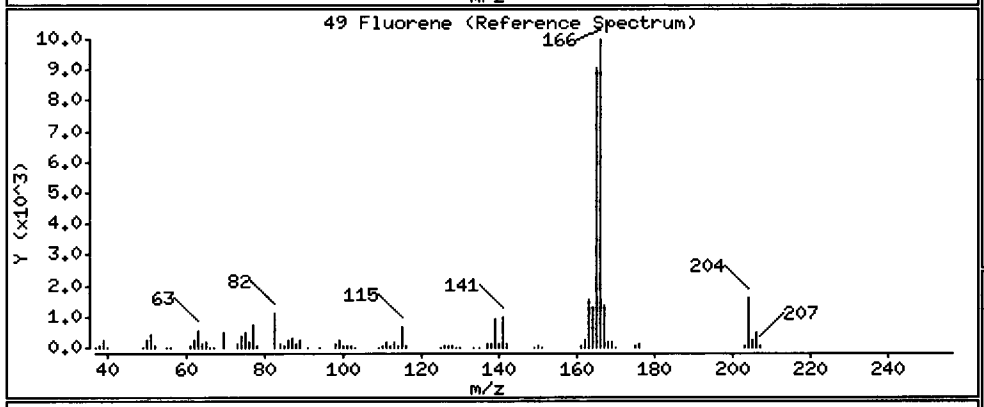
Column diameter: 0.25

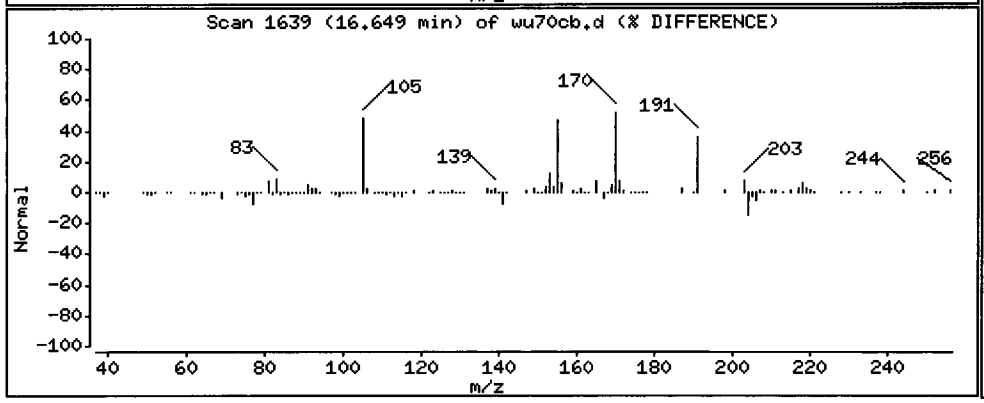
49 Fluorene

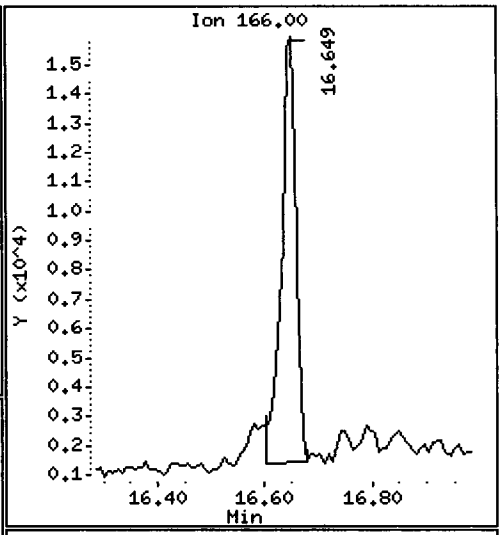
Concentration: 47.87 ug/kg

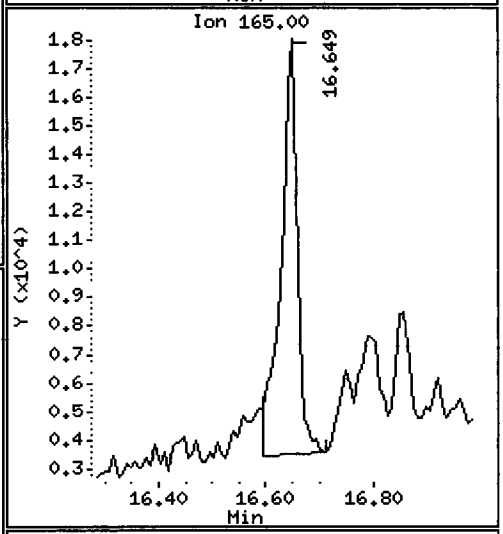


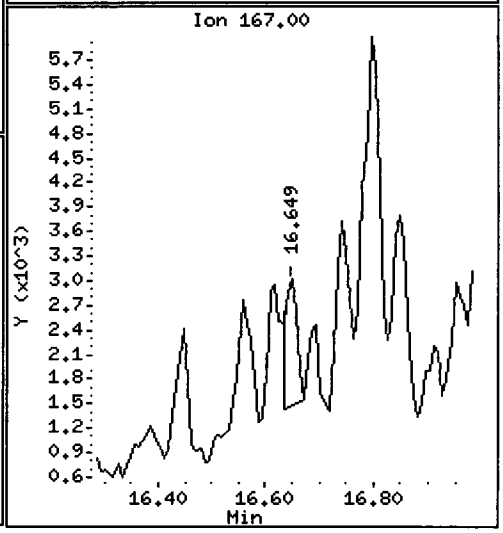












Data File: /chem1/nt10.i/20130705.b/wu70cb.d

Date : 06-JUL-2013 00:10

Client ID: LF-TP-001-20130619-

Instrument: nt10.i

Sample Info: WU70B

Volume Injected (uL): 1.0

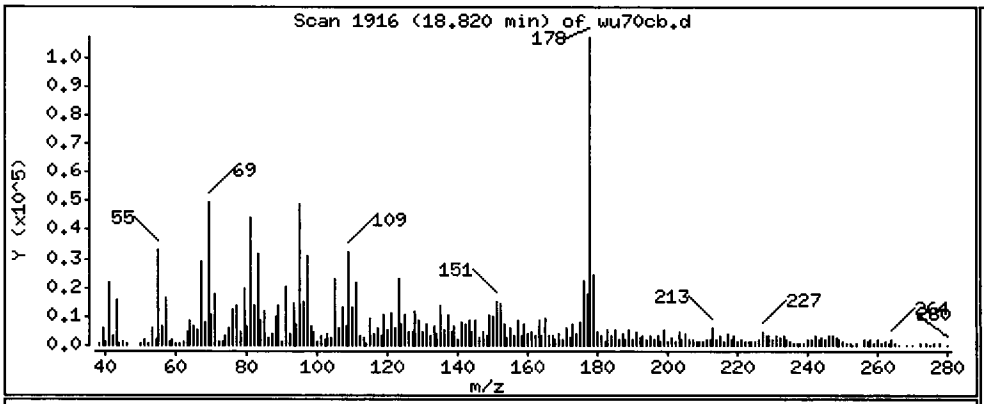
Operator: VTS/YZ

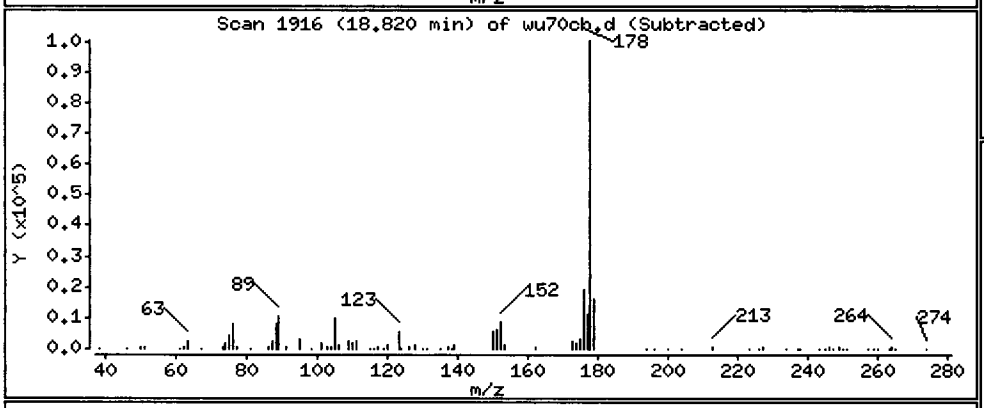
Column phase: ZB-5msi

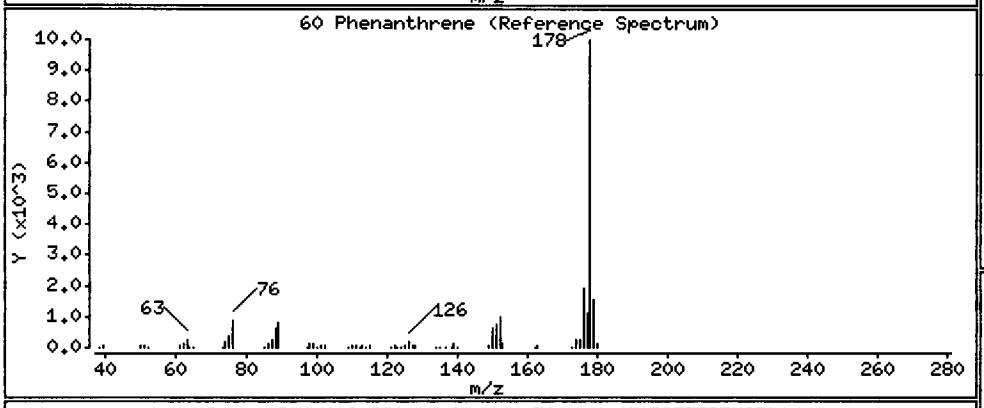
Column diameter: 0.25

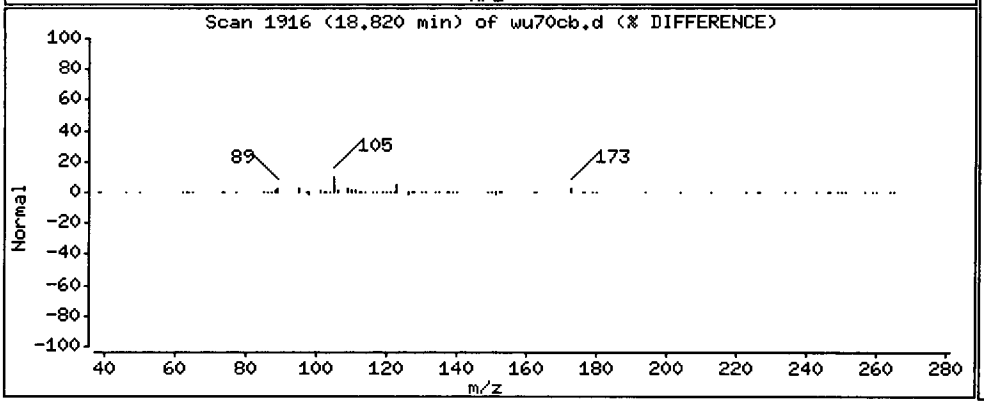
60 Phenanthrene

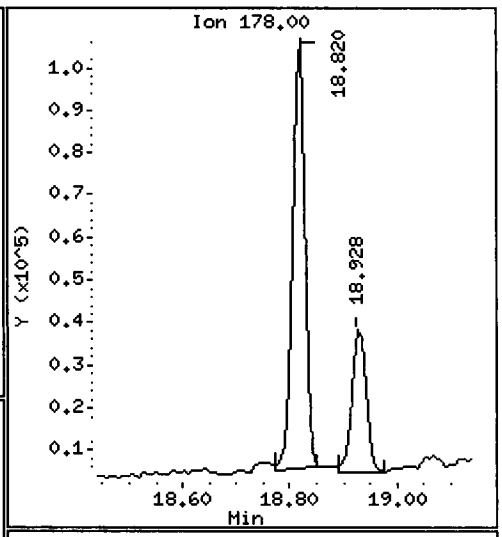
Concentration: 217.6 ug/kg

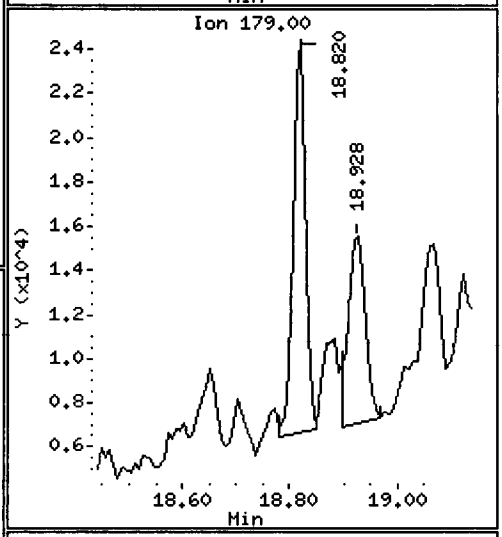


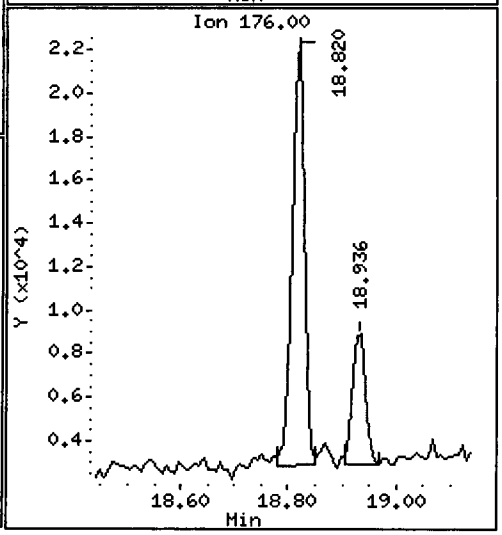












Data File: /chem1/nt10.i/20130705.b/wu70cb.d

Date : 06-JUL-2013 00:10

Client ID: LF-TP-001-20130619-

Instrument: nt10.i

Sample Info: WU70B

Volume Injected (uL): 1.0

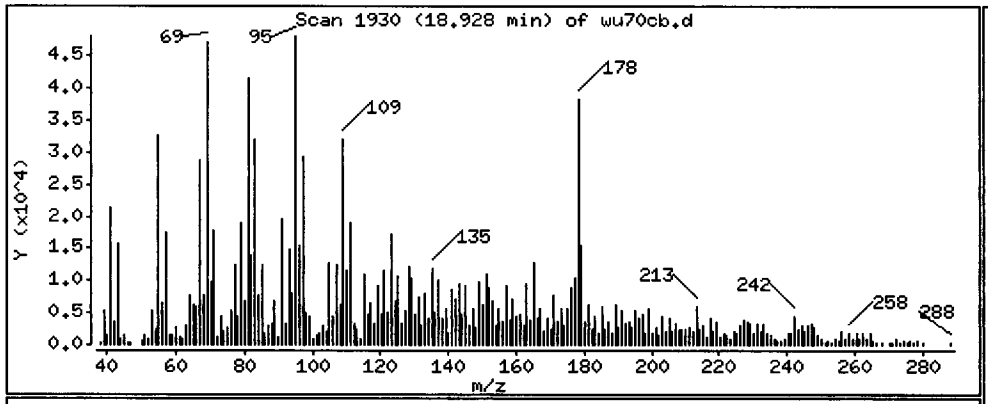
Operator: VTS/YZ

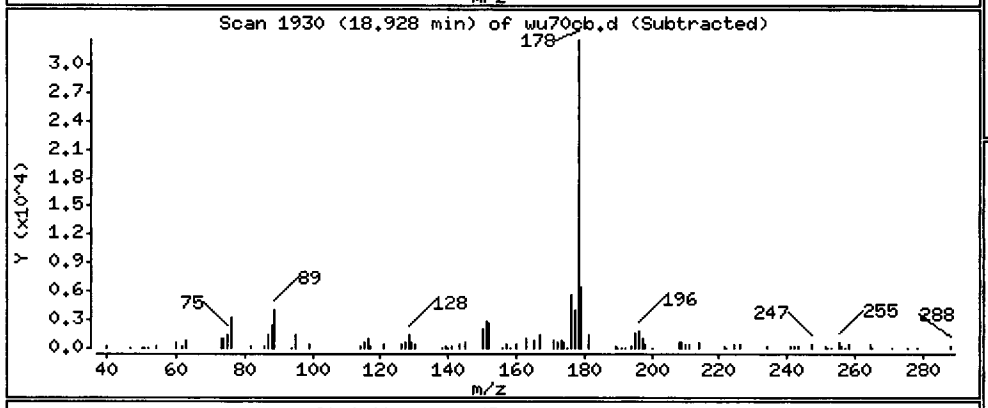
Column phase: ZB-5msi

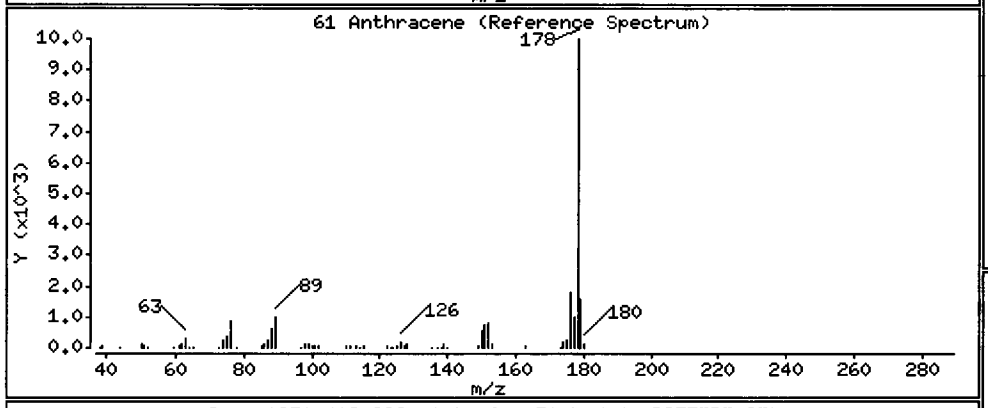
Column diameter: 0.25

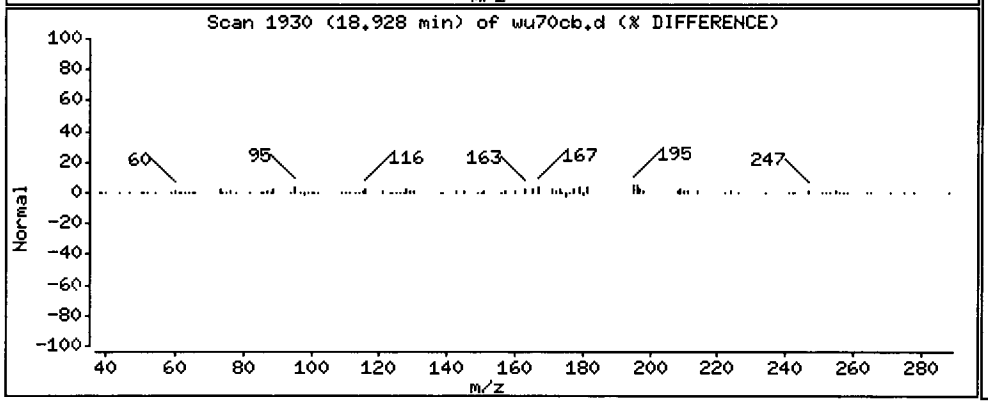
61 Anthracene

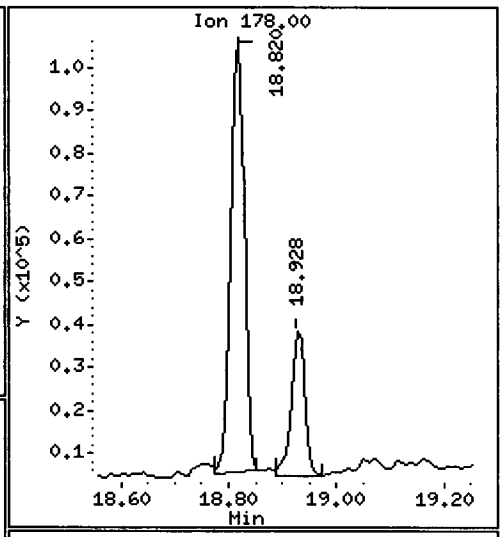
Concentration: 75.43 ug/kg

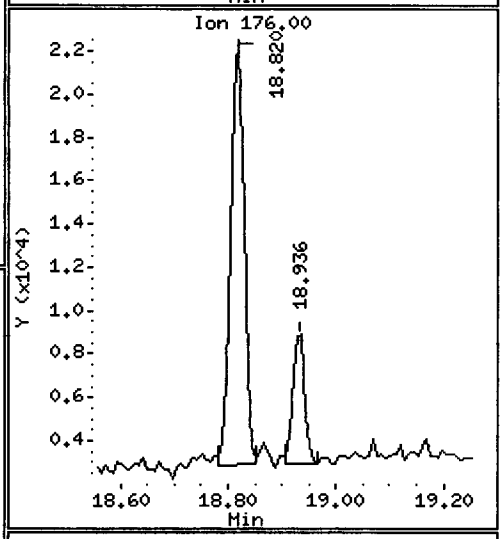


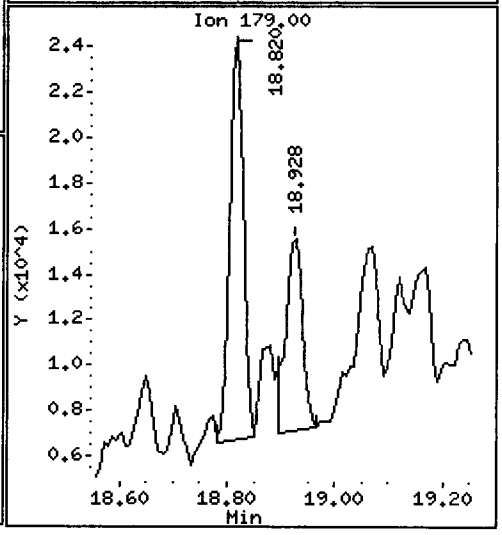












Data File: /chem1/nt10.i/20130705.b/wu70cb.d

Date : 06-JUL-2013 00:10

Client ID: LF-TP-001-20130619-

Instrument: nt10.i

Sample Info: WU70B

Volume Injected (uL): 1.0

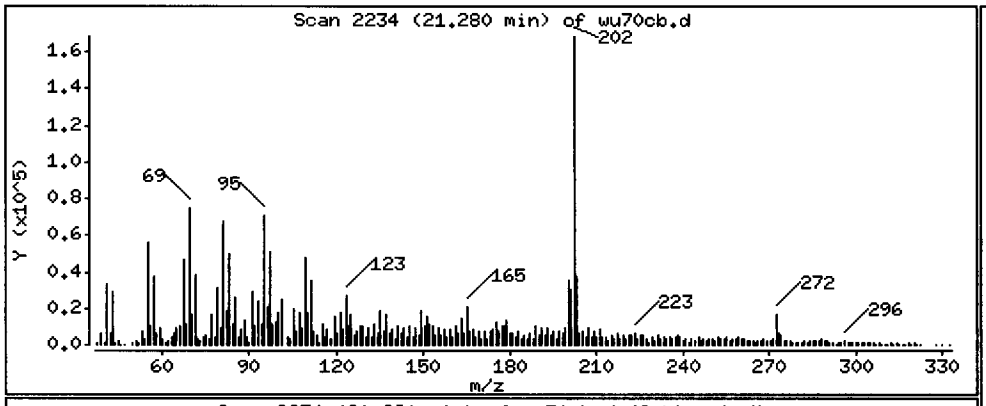
Operator: VTS/YZ

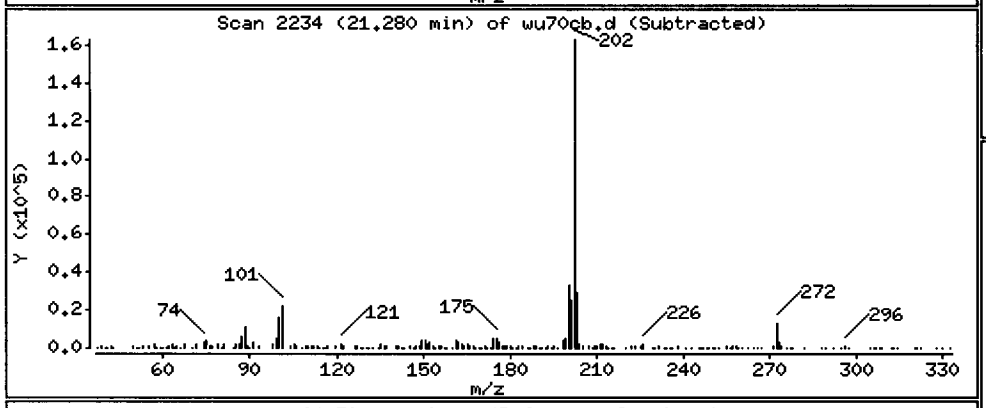
Column phase: ZB-5msi

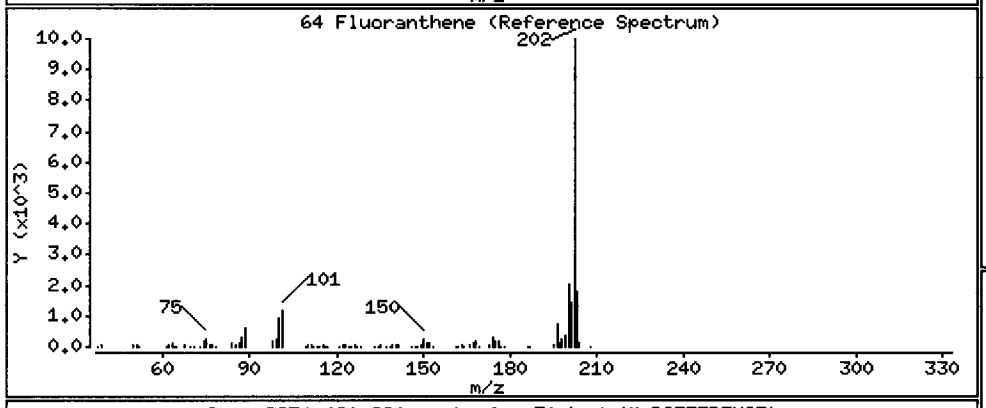
Column diameter: 0.25

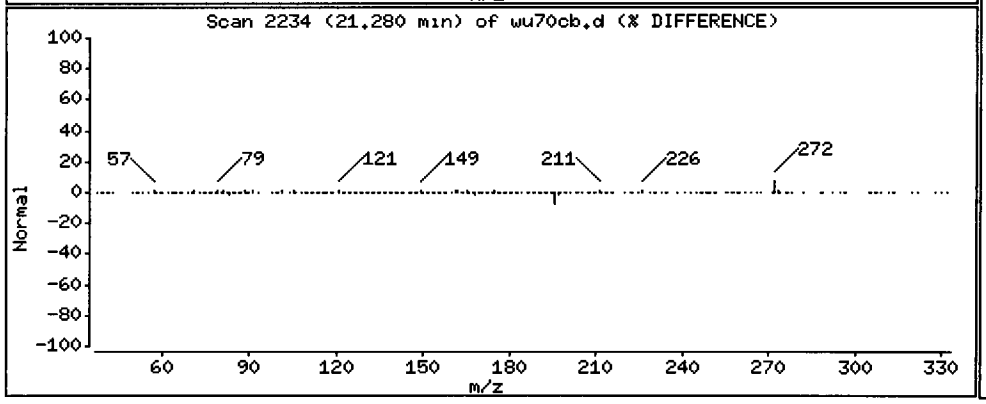
64 Fluoranthene

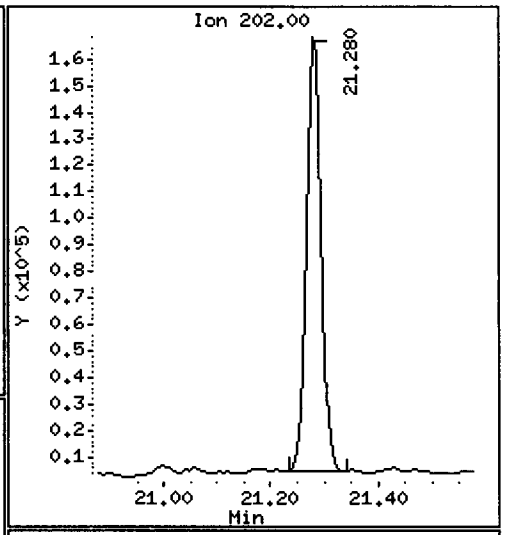
Concentration: 336.2 ug/kg

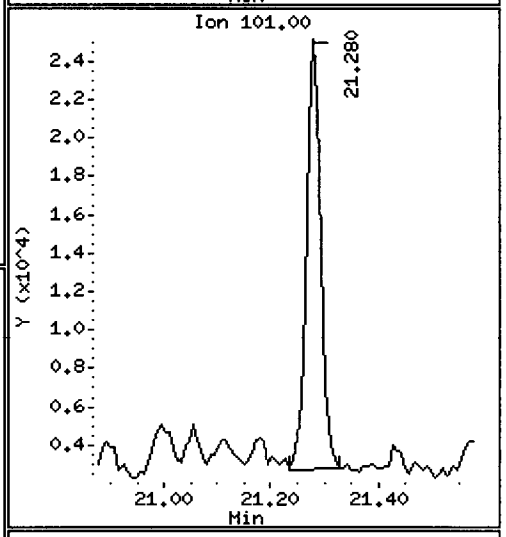


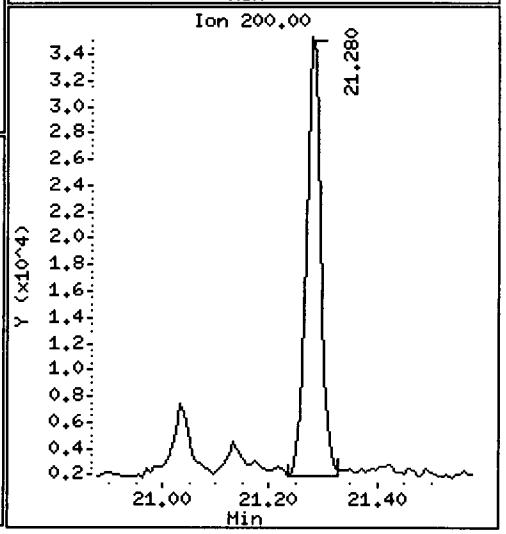












Data File: /chem1/nt10.i/20130705.b/wu70cb.d

Date : 06-JUL-2013 00:10

Client ID: LF-TP-001-20130619-

Instrument: nt10.i

Sample Info: WU70B

Volume Injected (uL): 1.0

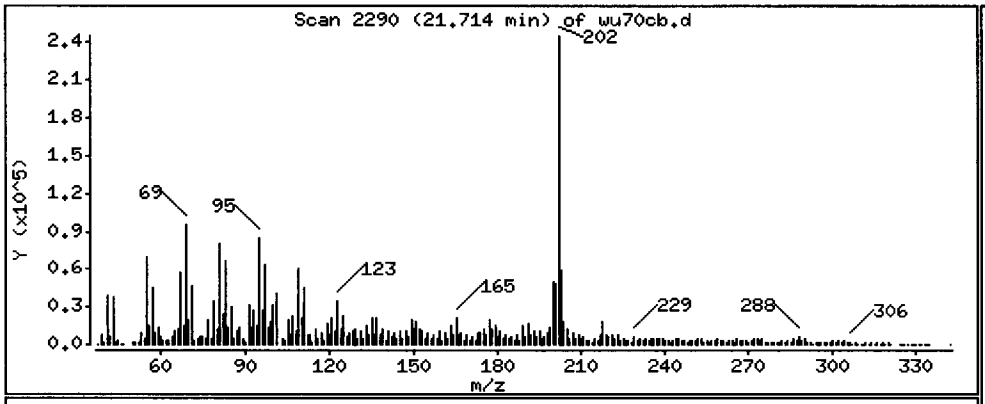
Operator: VTS/YZ

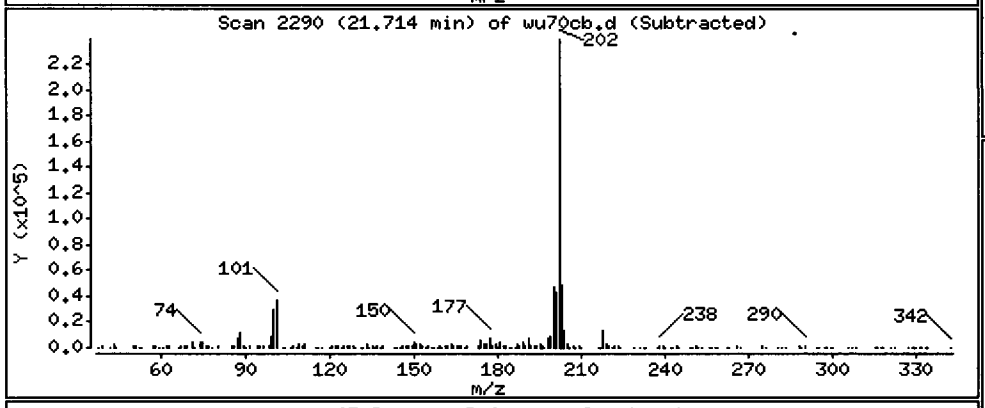
Column phase: ZB-5msi

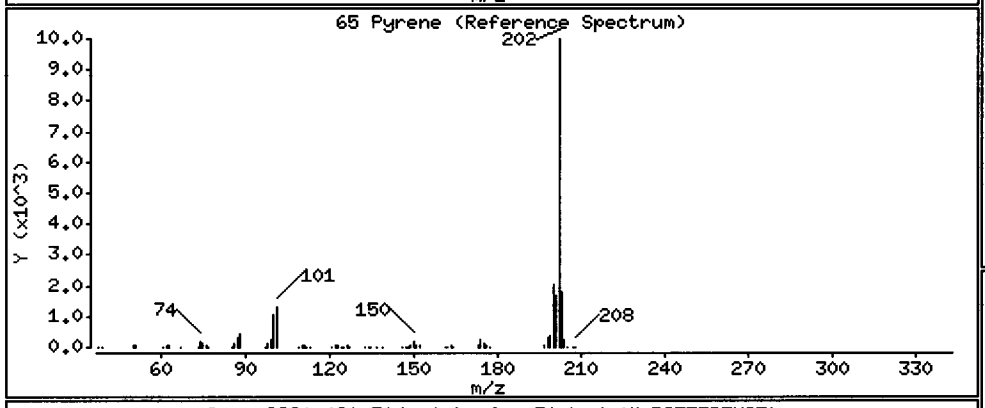
Column diameter: 0.25

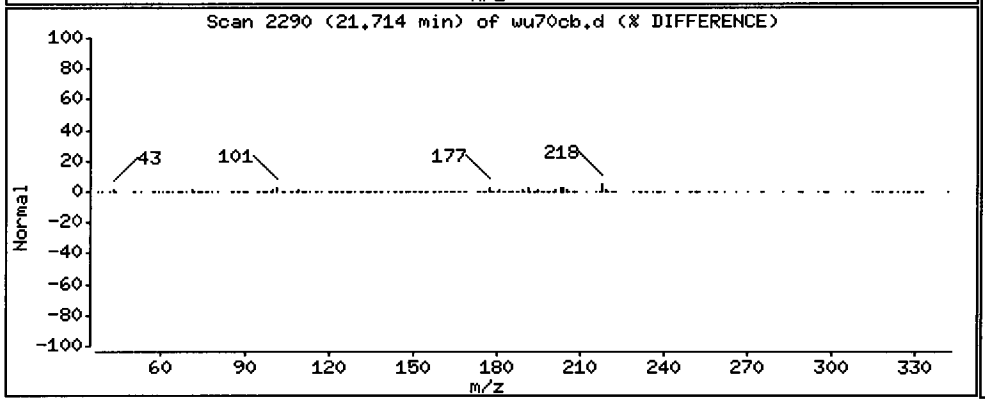
65 Pyrene

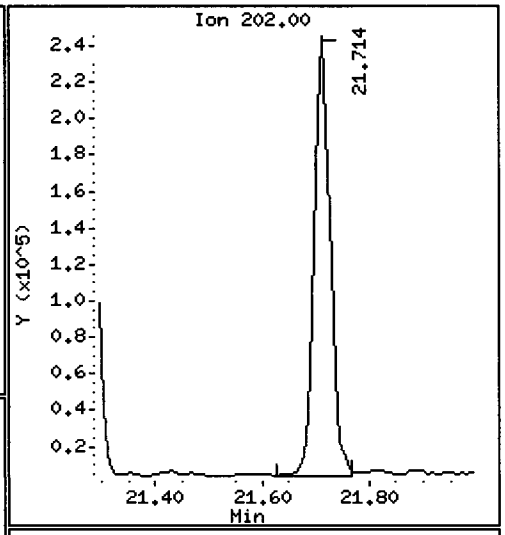
Concentration: 566.6 ug/kg

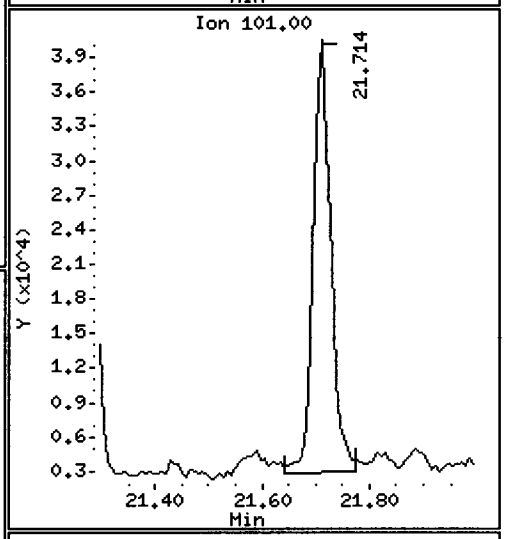


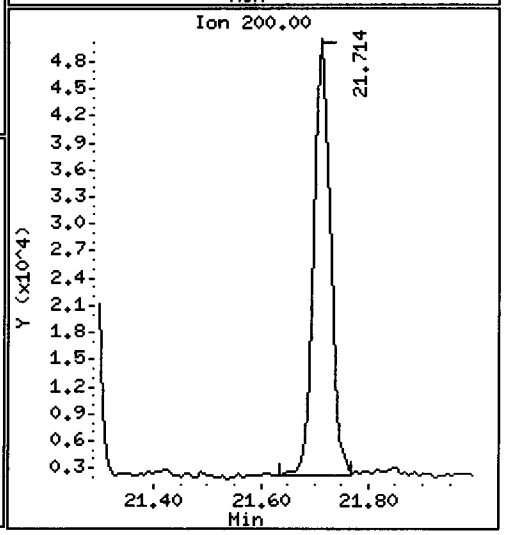












Data File: /chem1/nt10.i/20130705.b/wu70cb.d

Date : 06-JUL-2013 00:10

Client ID: LF-TP-001-20130619-

Instrument: nt10.i

Sample Info: WU70B

Volume Injected (uL): 1.0

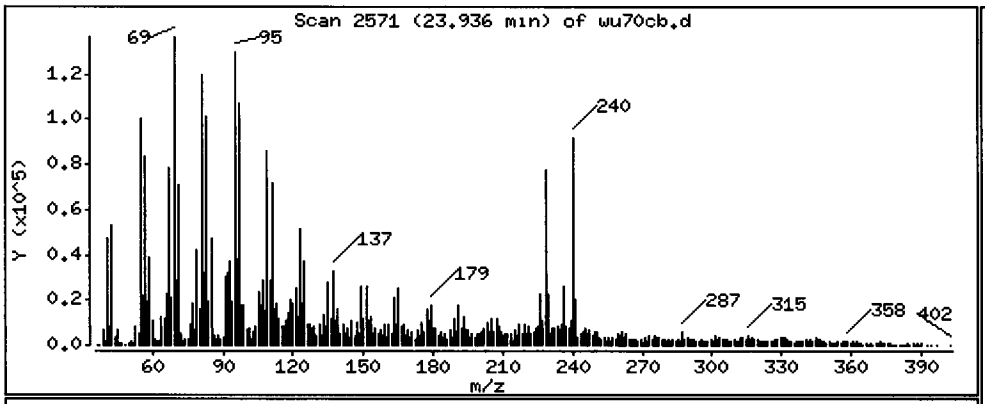
Operator: VTS/YZ

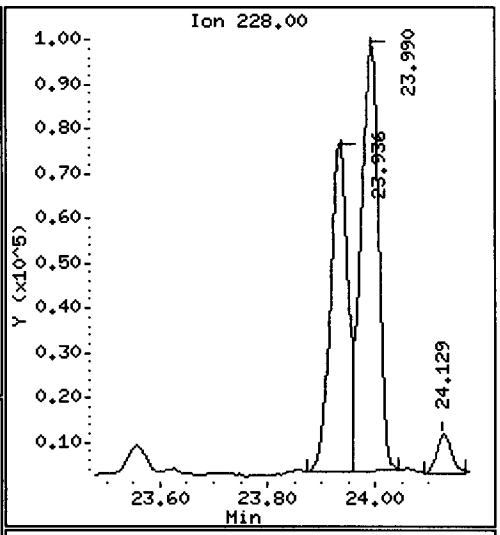
Column phase: ZB-5msi

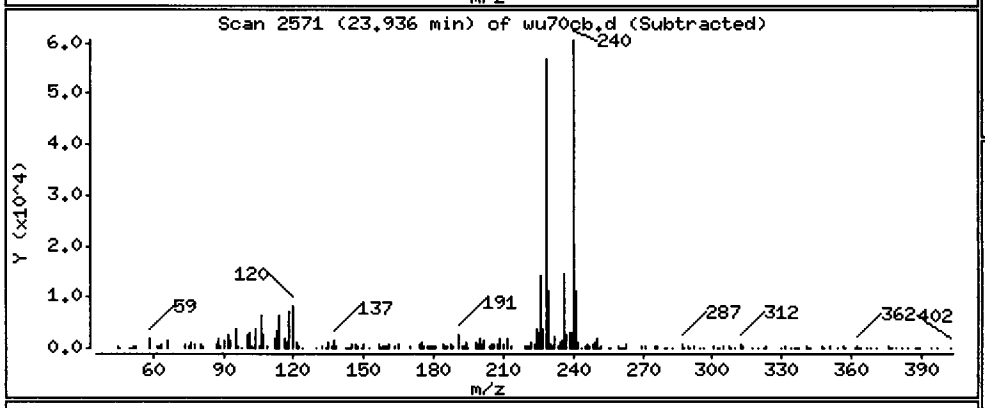
Column diameter: 0.25

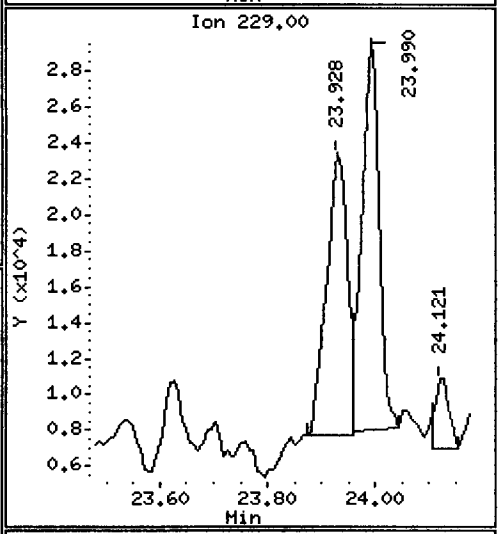
68 Benzo(a)anthracene

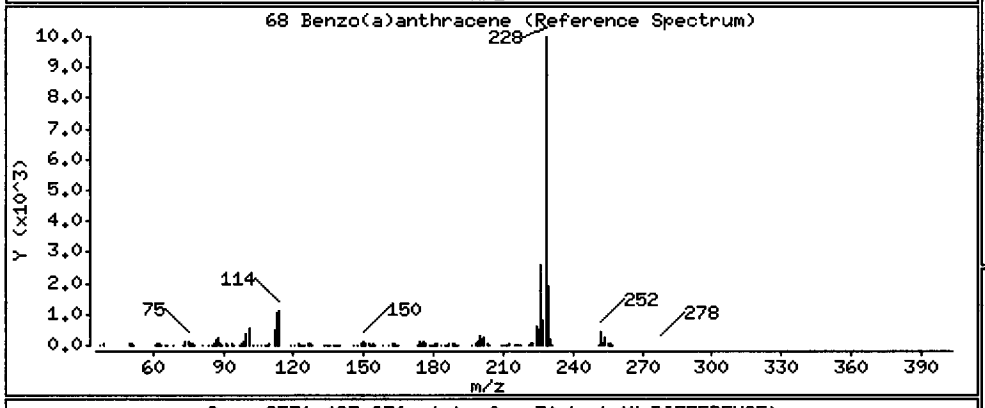
Concentration: 190.9 ug/kg

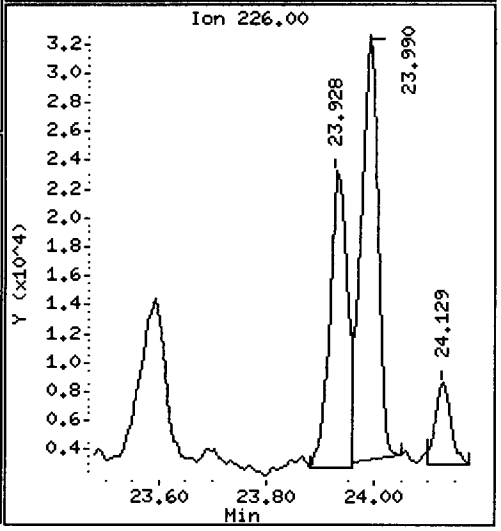


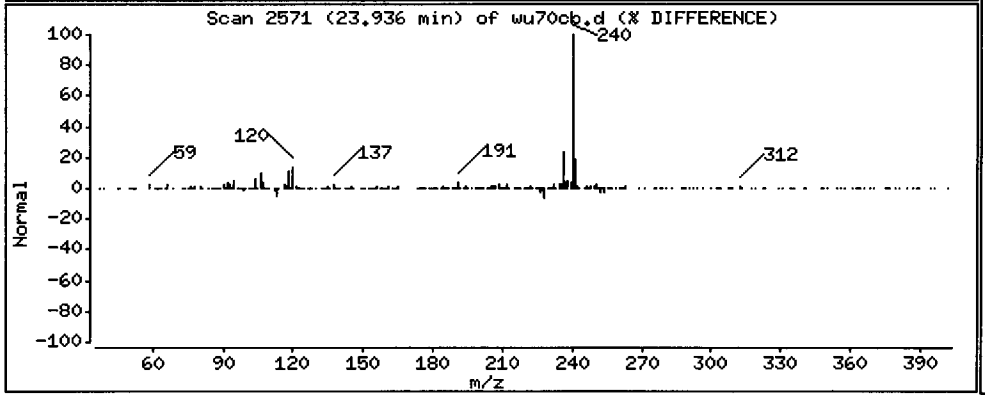












Data File: /chem1/nt10.i/20130705.b/wu70cb.d

Date : 06-JUL-2013 00:10

Client ID: LF-TP-001-20130619-

Instrument: nt10.i

Sample Info: WU70B

Volume Injected (uL): 1.0

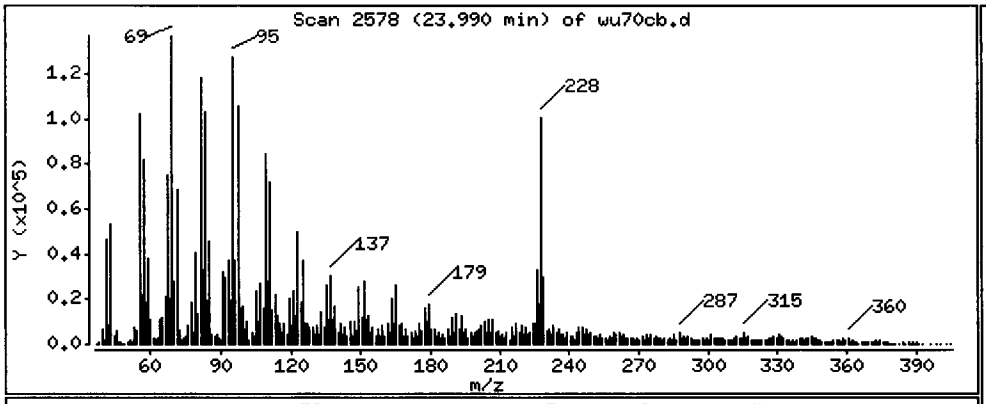
Operator: VTS/YZ

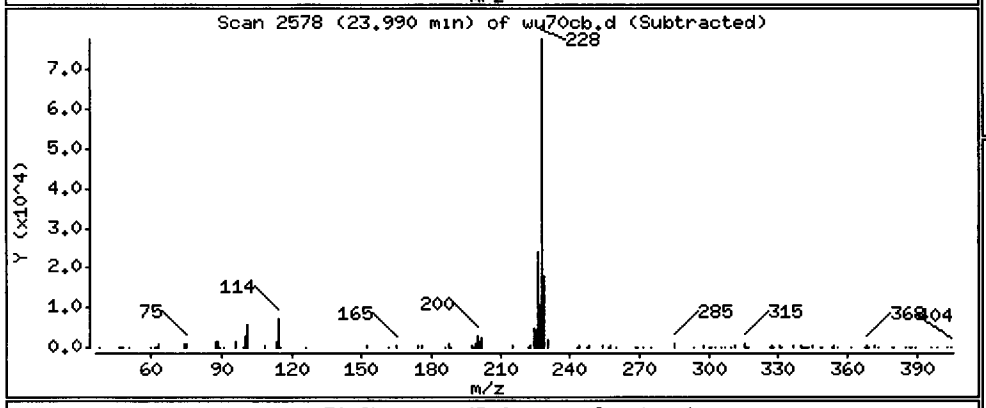
Column phase: ZB-5msi

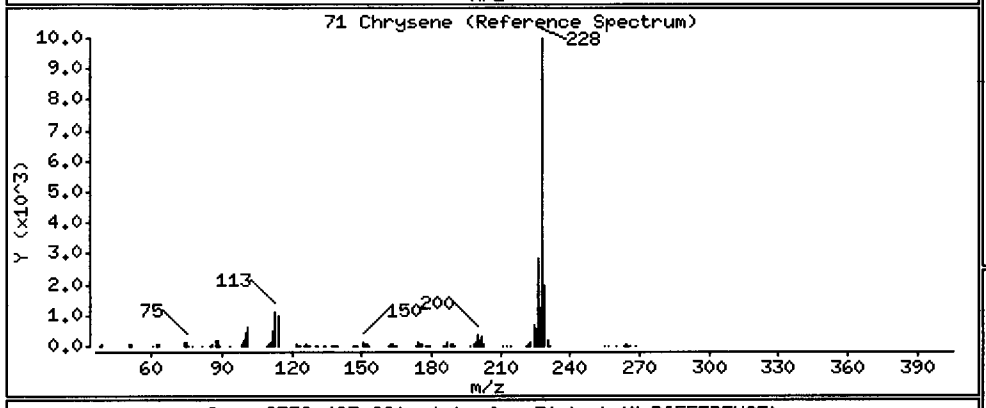
Column diameter: 0.25

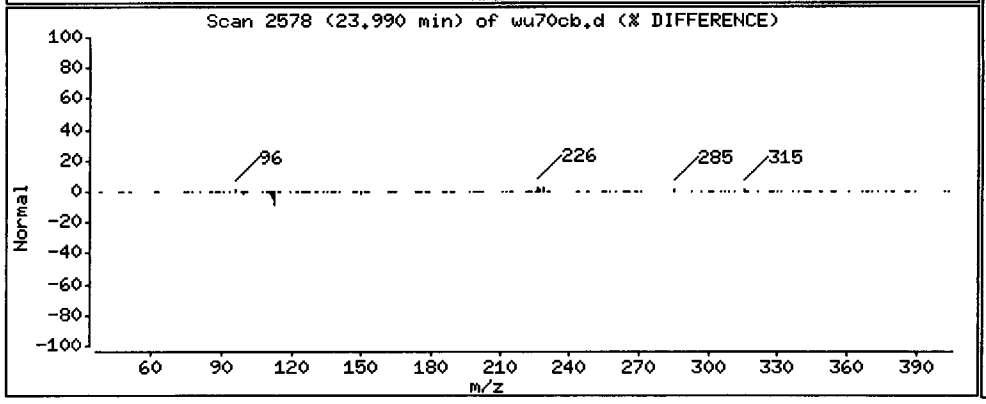
71 Chrysene

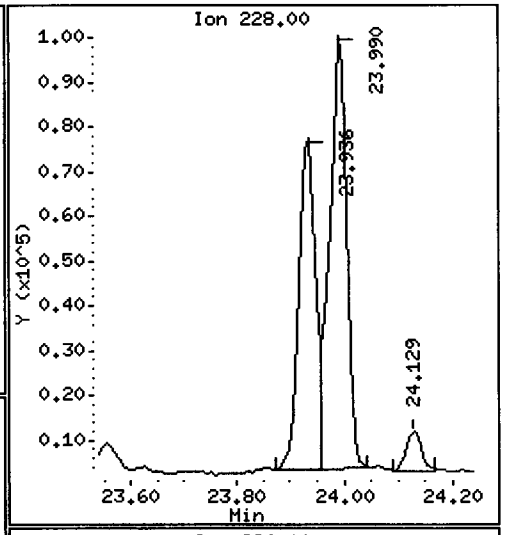
Concentration: 264.5 ug/kg

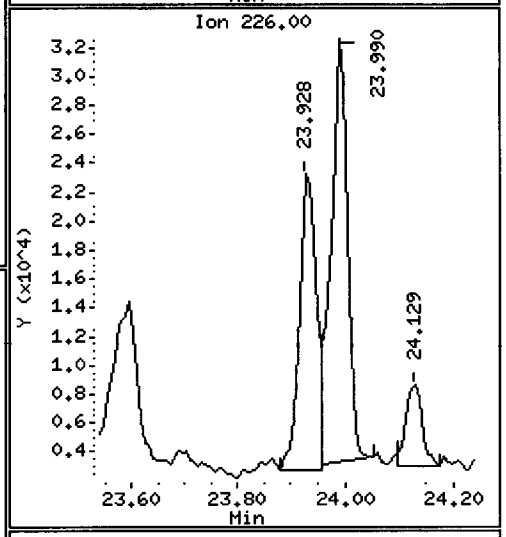


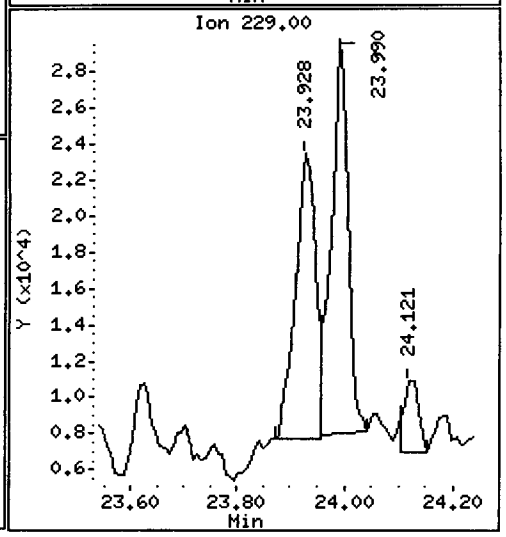












Data File: /chem1/nt10.i/20130705.b/wu70cb.d

Date : 06-JUL-2013 00:10

Client ID: LF-TP-001-20130619-

Instrument: nt10.i

Sample Info: WU70B

Volume Injected (uL): 1.0

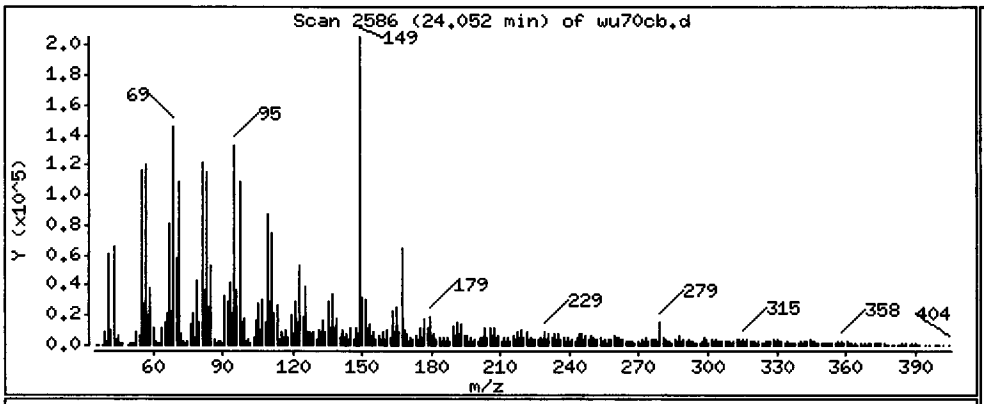
Operator: VTS/YZ

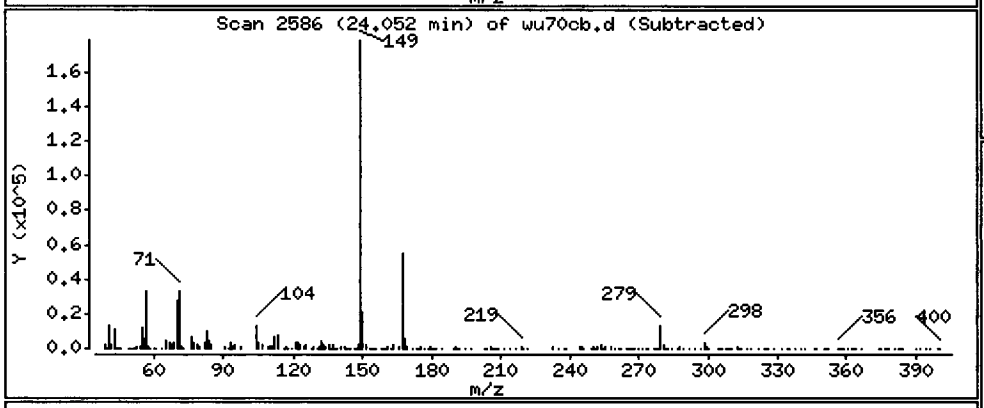
Column phase: ZB-5msi

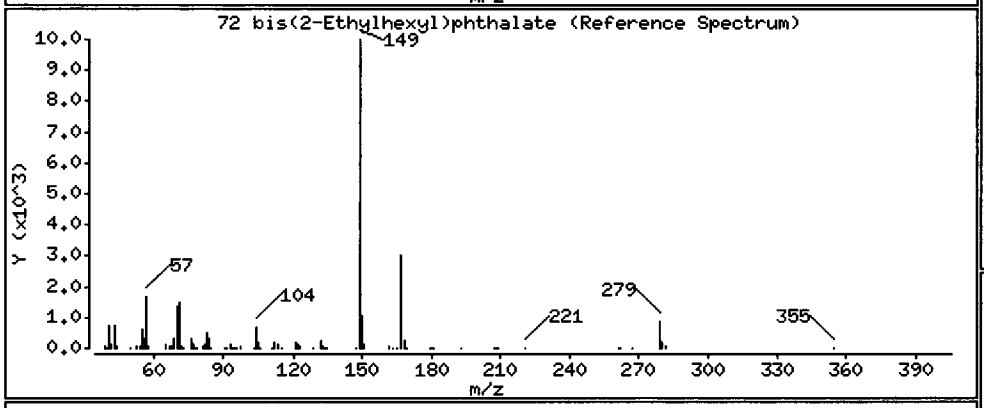
Column diameter: 0.25

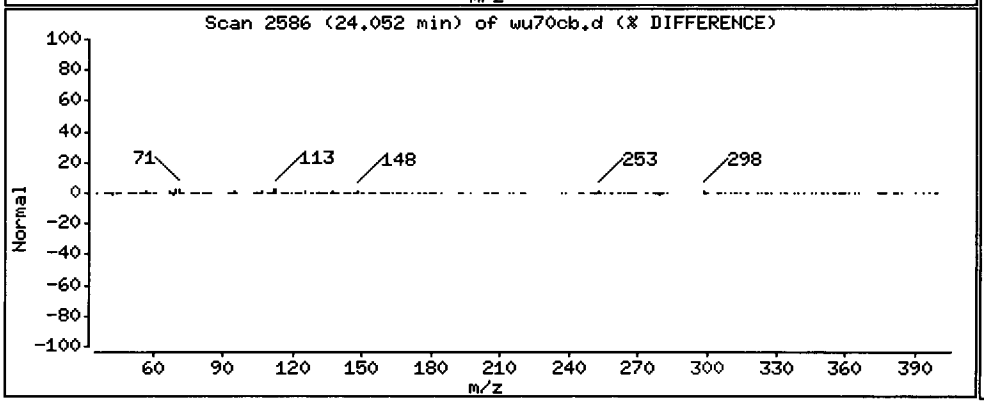
72 bis(2-Ethylhexyl)phthalate

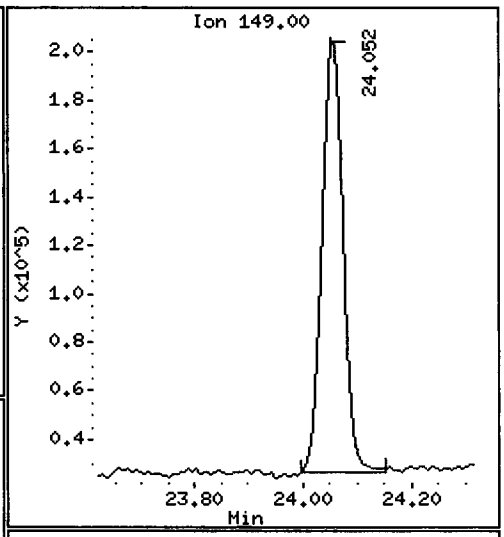
Concentration: 852.6 ug/kg

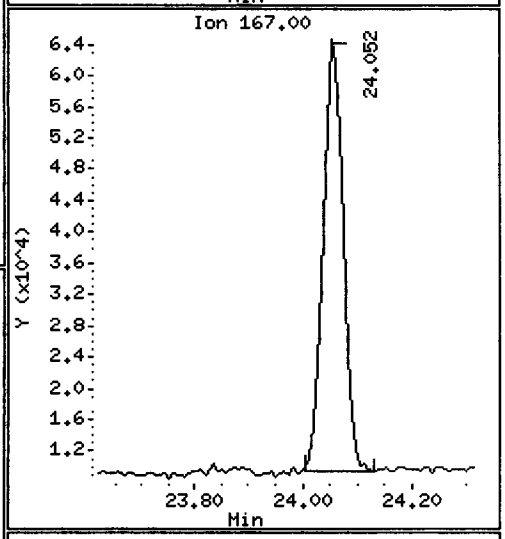


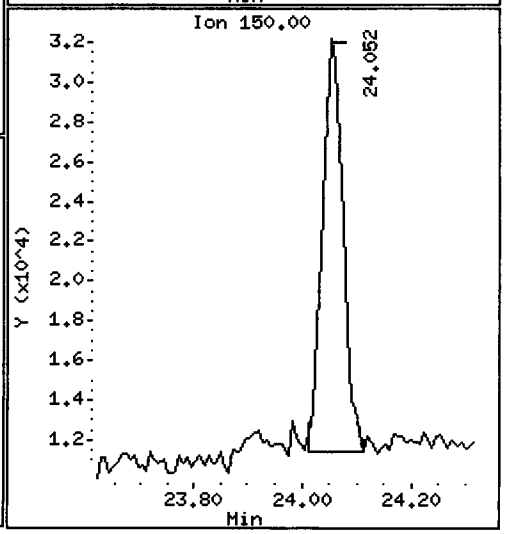












Data File: /chem1/nt10.i/20130705.b/wu70cb.d

Date : 06-JUL-2013 00:10

Client ID: LF-TP-001-20130619-

Instrument: nt10.i

Sample Info: WU70B

Volume Injected (uL): 1.0

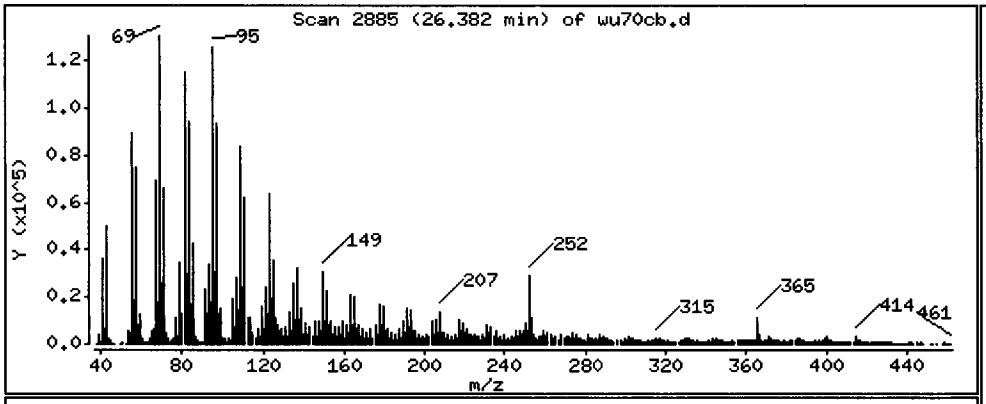
Operator: VTS/YZ

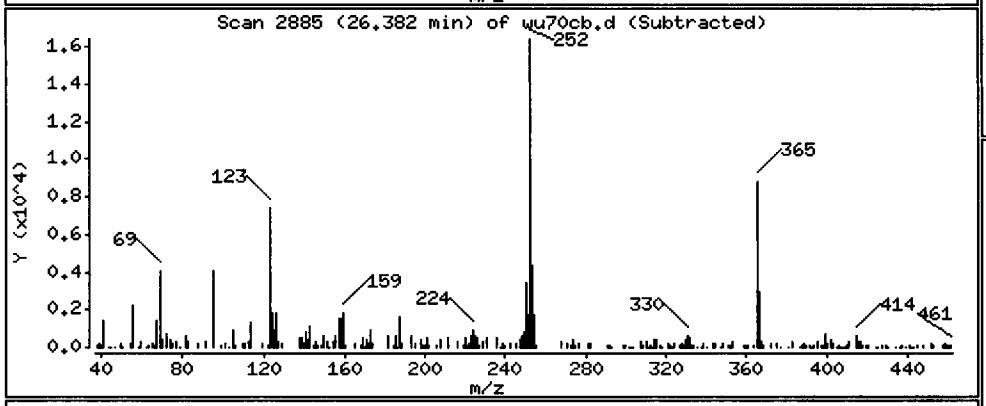
Column phase: ZB-5msi

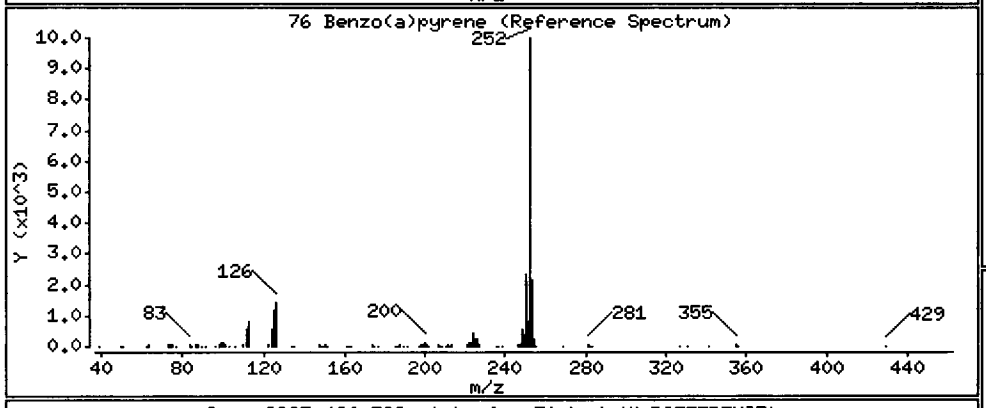
Column diameter: 0.25

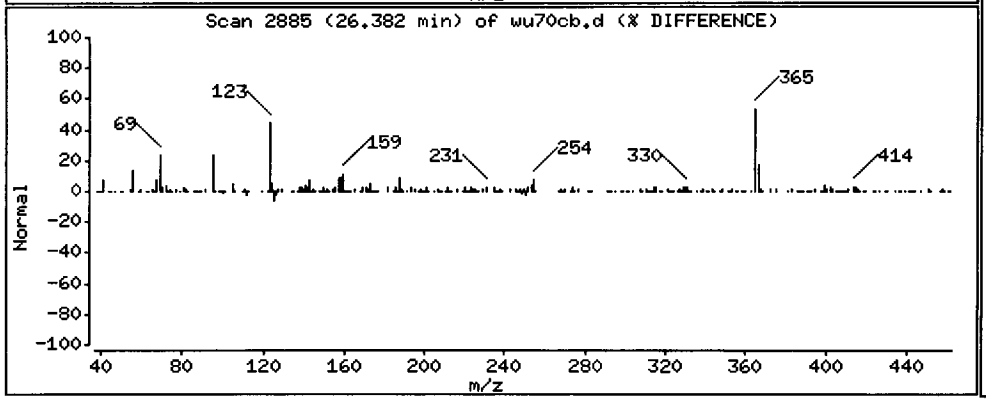
76 Benzo(a)pyrene

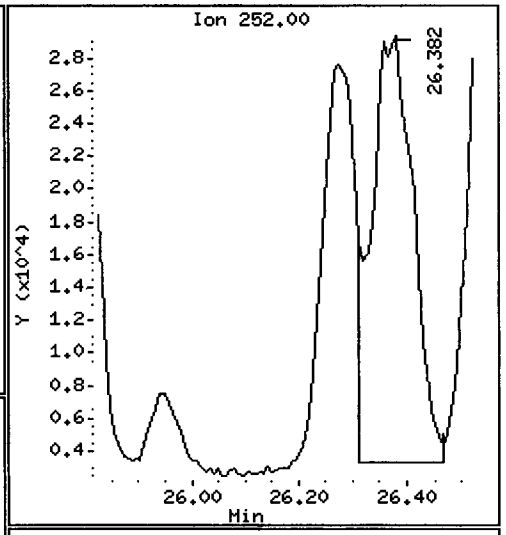
Concentration: 177.6 ug/kg

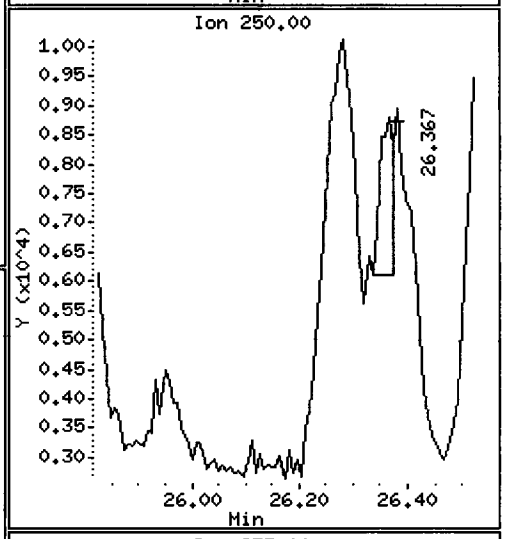


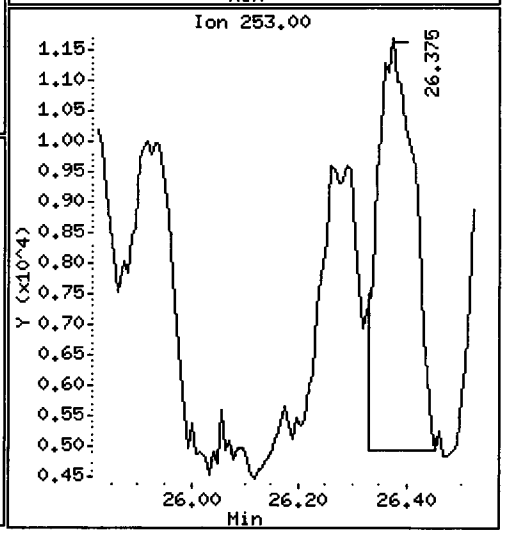












Data File: /chem1/nt10.i/20130705.b/wu70cb.d

Date : 06-JUL-2013 00:10

Client ID: LF-TP-001-20130619-

Instrument: nt10.i

Sample Info: WU70B

Volume Injected (uL): 1.0

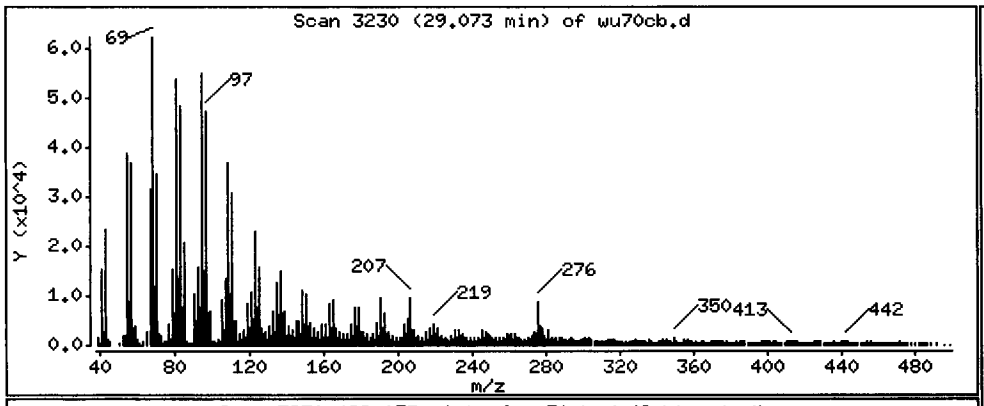
Operator: VTS/YZ

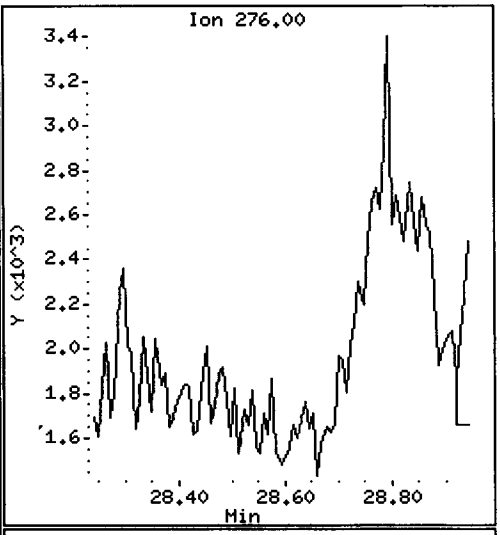
Column phase: ZB-5msi

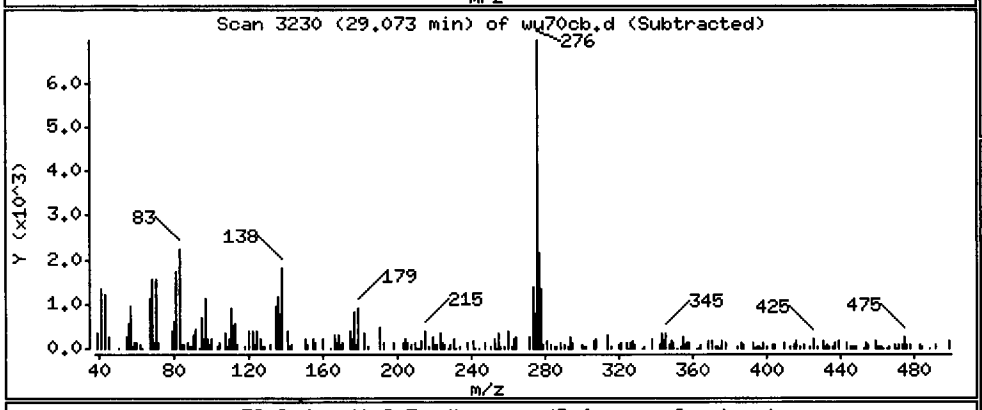
Column diameter: 0.25

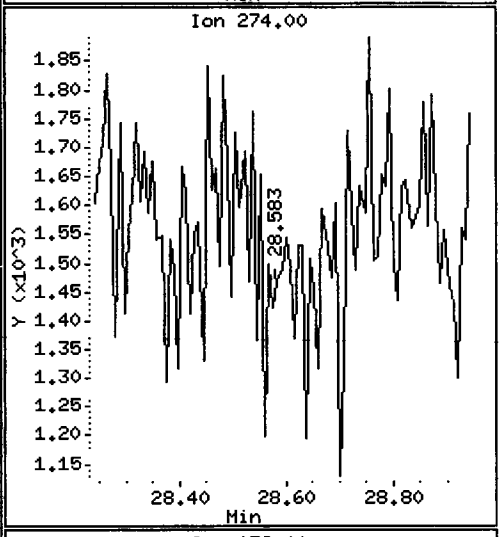
78 Indeno(1,2,3-cd)pyrene

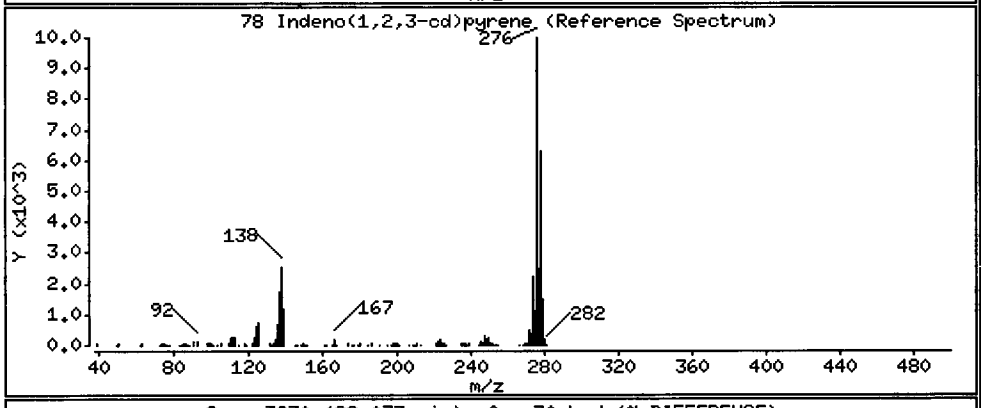
Concentration: 65.04 ug/kg

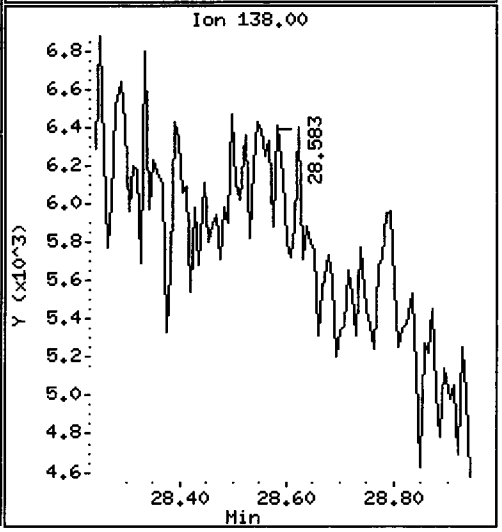


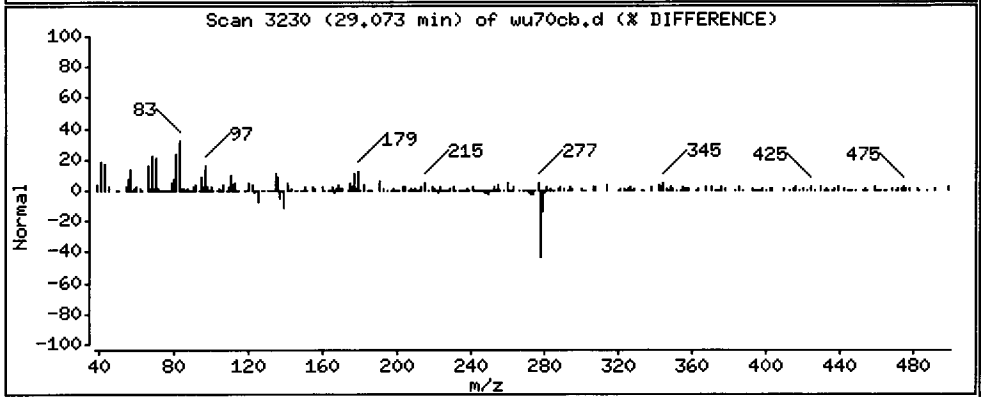












Data File: /chem1/nt10.i/20130705.b/wu70cb.d

Date : 06-JUL-2013 00:10

Client ID: LF-TP-001-20130619-

Instrument: nt10.i

Sample Info: WU70B

Volume Injected (uL): 1.0

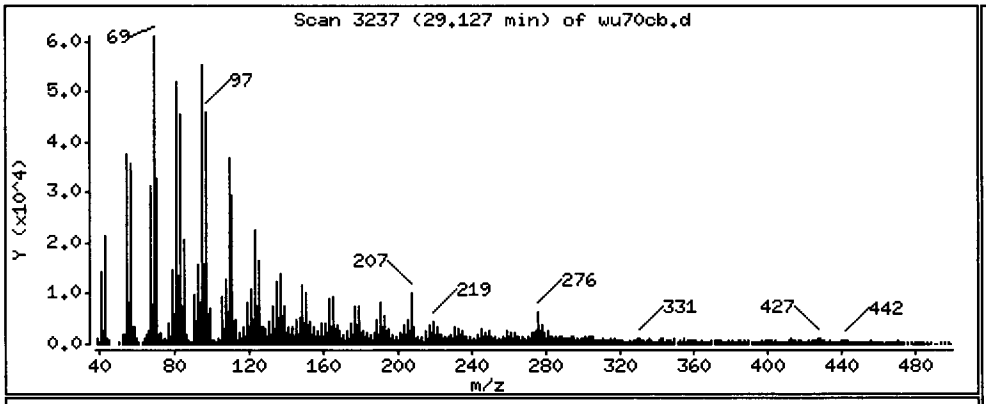
Operator: VTS/YZ

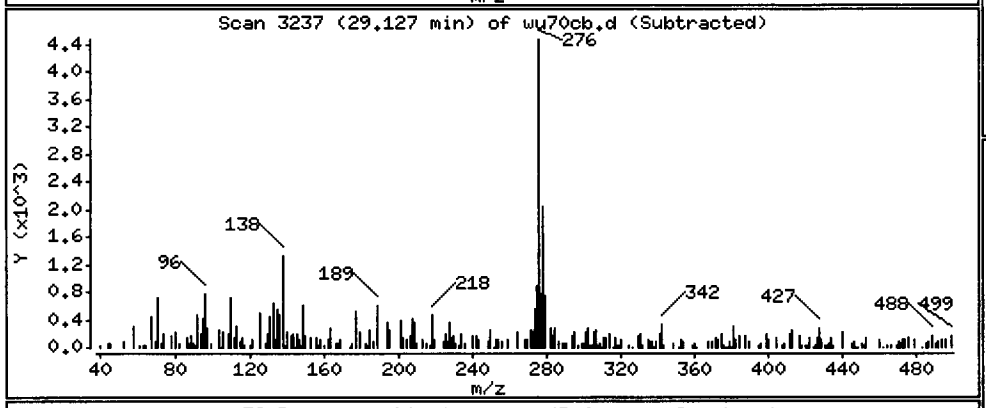
Column phase: ZB-5msi

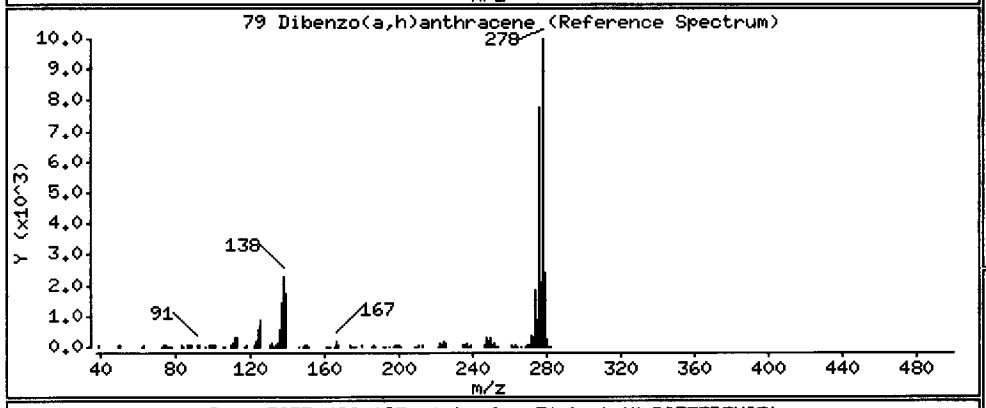
Column diameter: 0.25

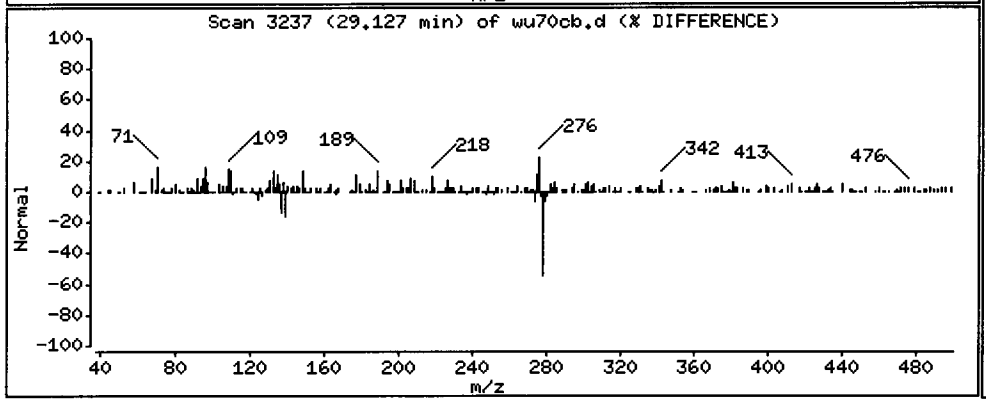
79 Dibenzo(a,h)anthracene

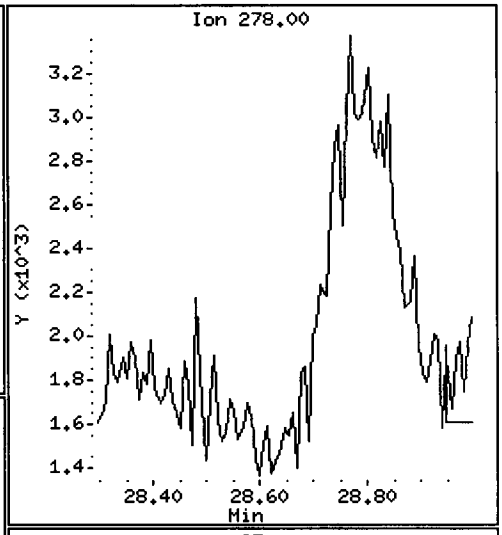
Concentration: 30.19 ug/kg

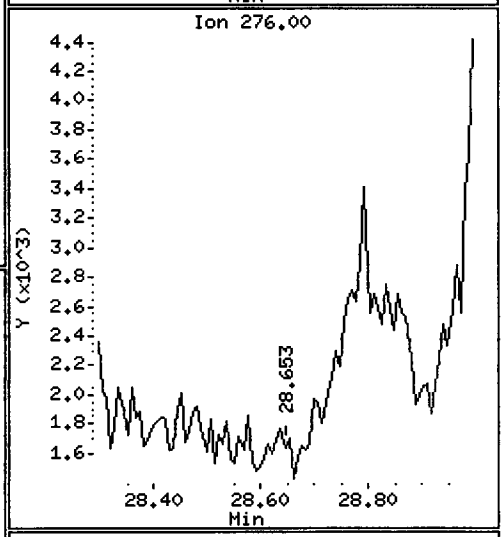


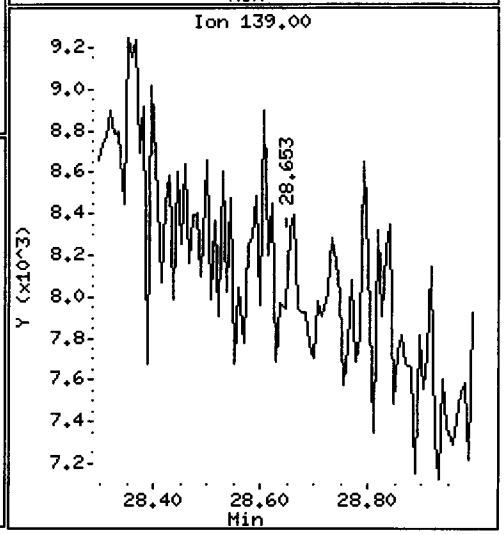












Data File: /chem1/nt10.i/20130705.b/wu70cb.d

Date : 06-JUL-2013 00:10

Client ID: LF-TP-001-20130619-

Instrument: nt10.i

Sample Info: WU70B

Volume Injected (uL): 1.0

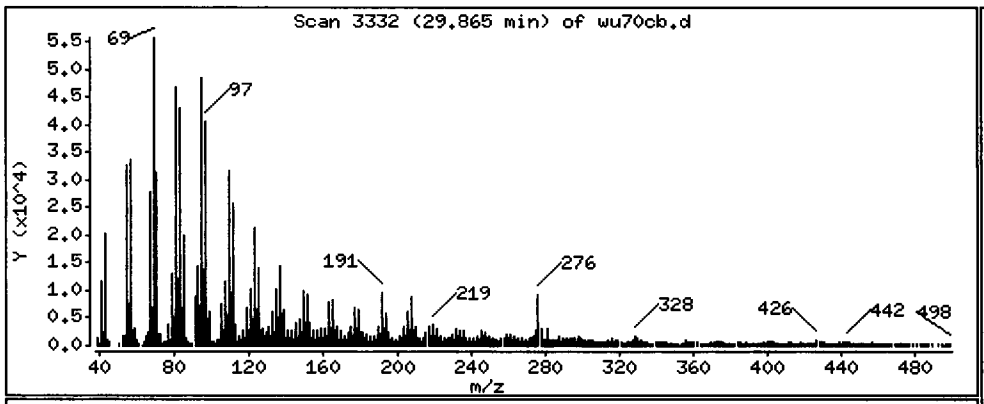
Operator: VTS/YZ

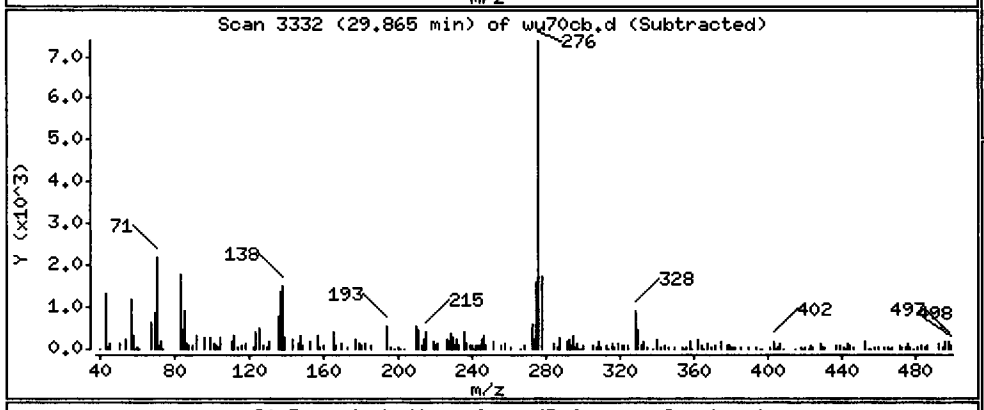
Column phase: ZB-5ms1

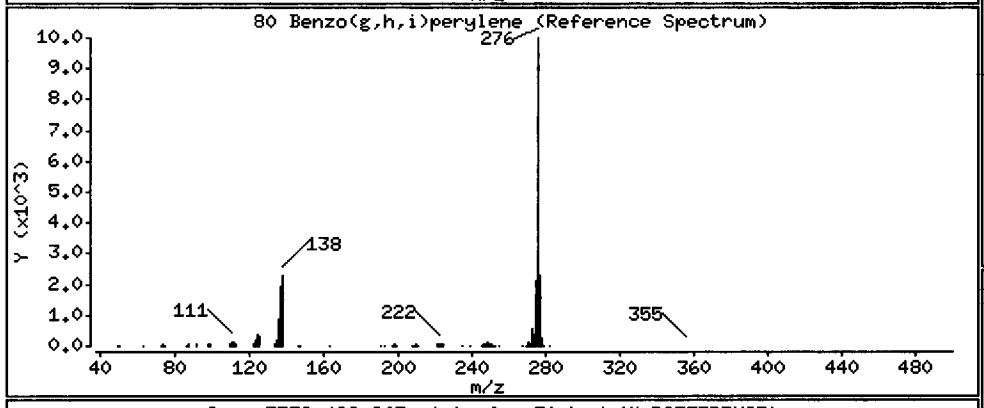
Column diameter: 0.25

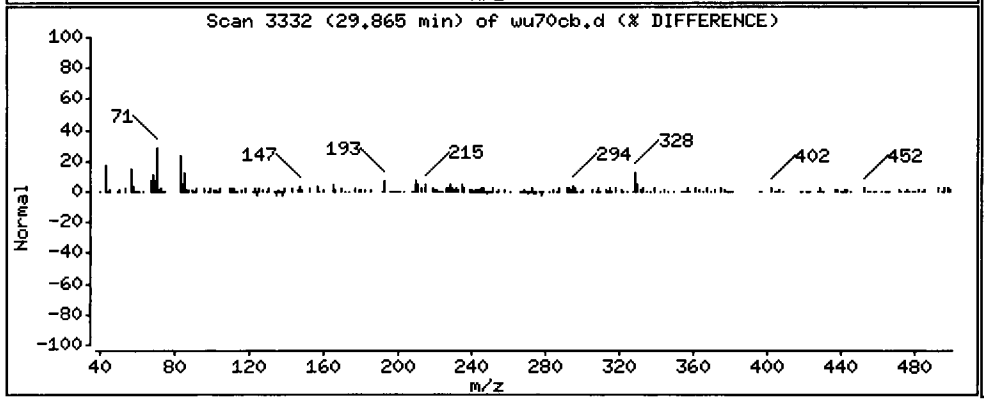
80 Benzo(g,h,i)perylene

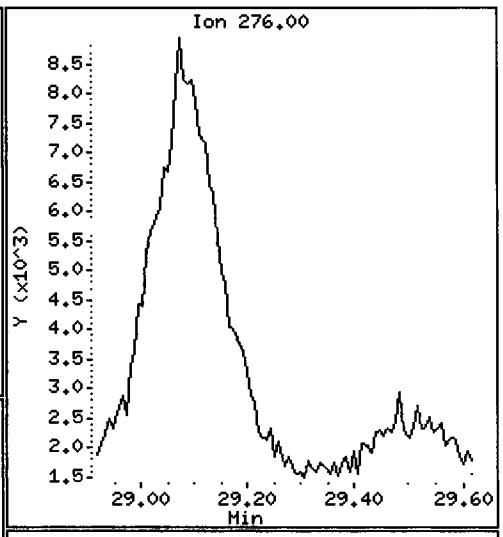
Concentration: 91.17 ug/kg

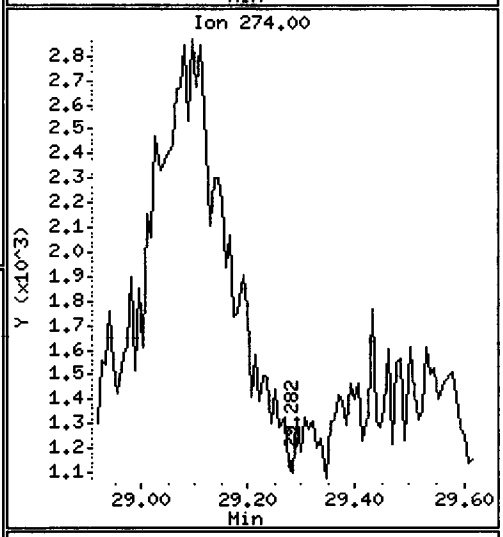


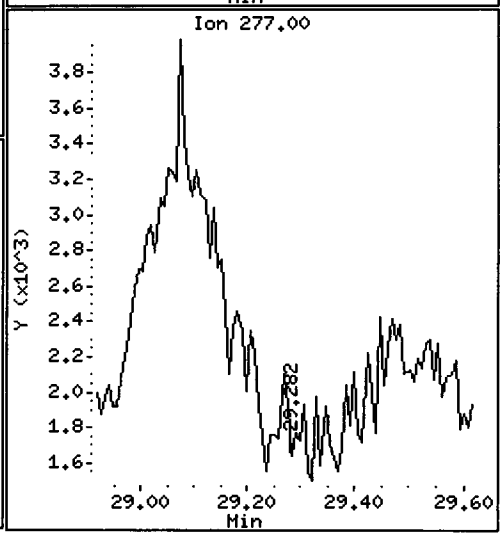












Data File: /chem1/nt10.i/20130705.b/wu70cb.d

Date : 06-JUL-2013 00:10

Client ID: LF-TP-001-20130619-

Instrument: nt10.i

Sample Info: WU70B

Volume Injected (uL): 1.0

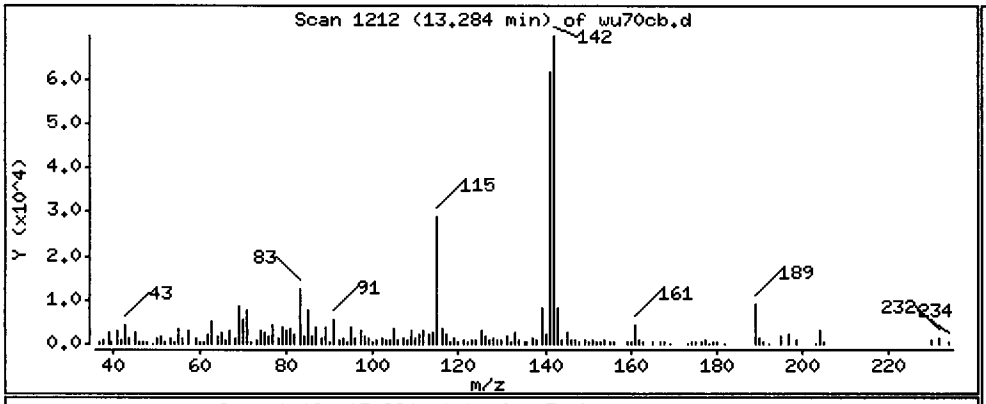
Operator: VTS/YZ

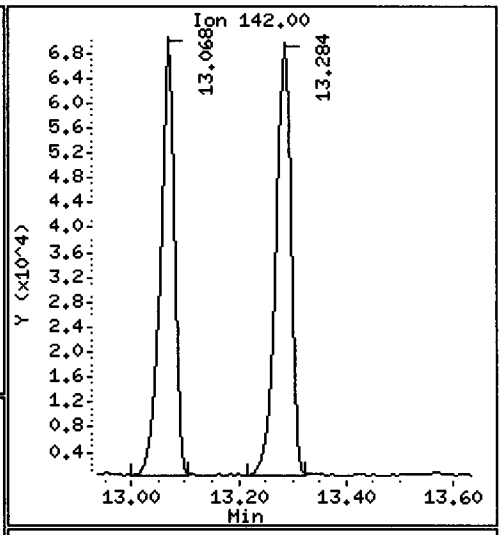
Column phase: ZB-5msi

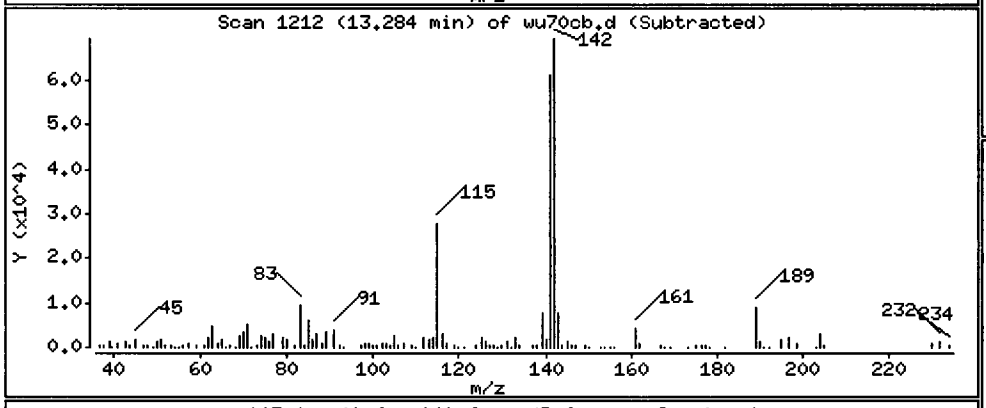
Column diameter: 0.25

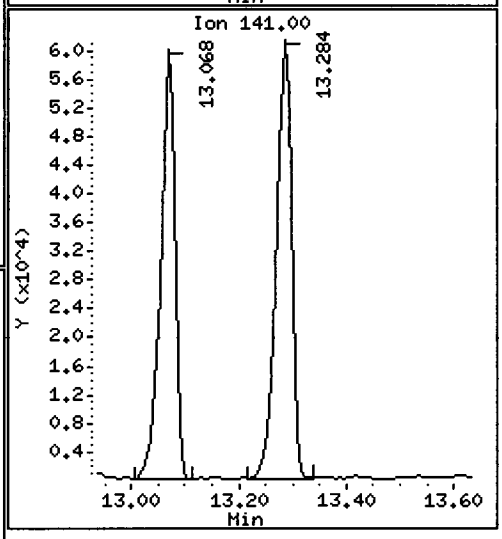
105 1-methylnaphthalene

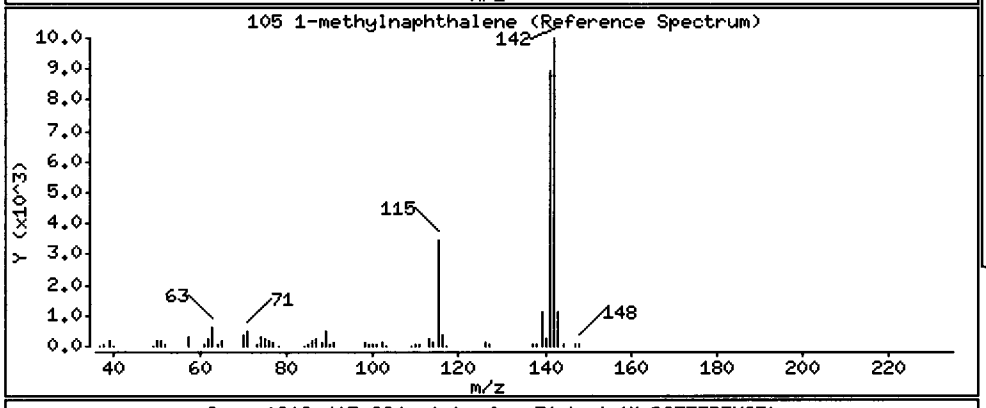
Concentration: 243.6 ug/kg

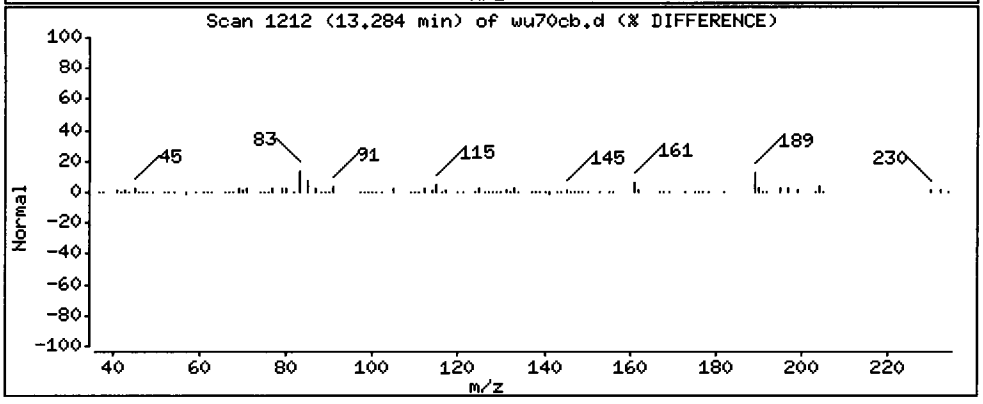












Data File: /chem1/nt10.i/20130705.b/wu70cb.d

Date : 06-JUL-2013 00:10

Client ID: LF-TP-001-20130619-

Instrument: nt10.i

Sample Info: WU70B

Volume Injected (uL): 1.0

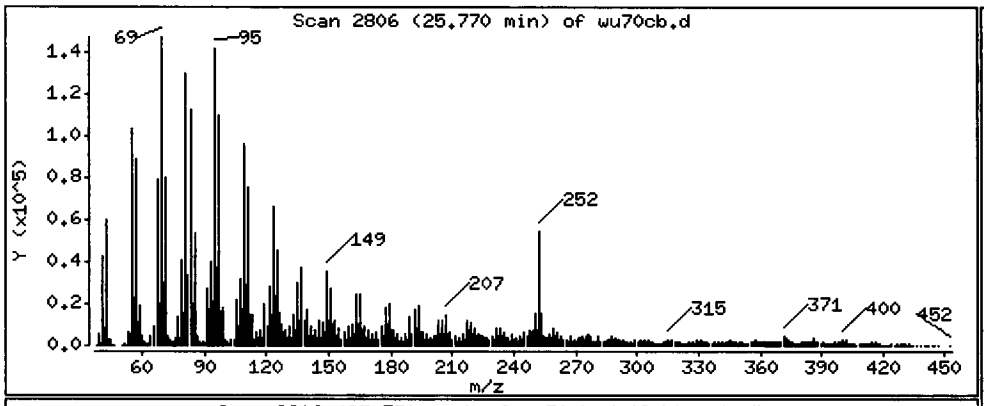
Operator: VTS/YZ

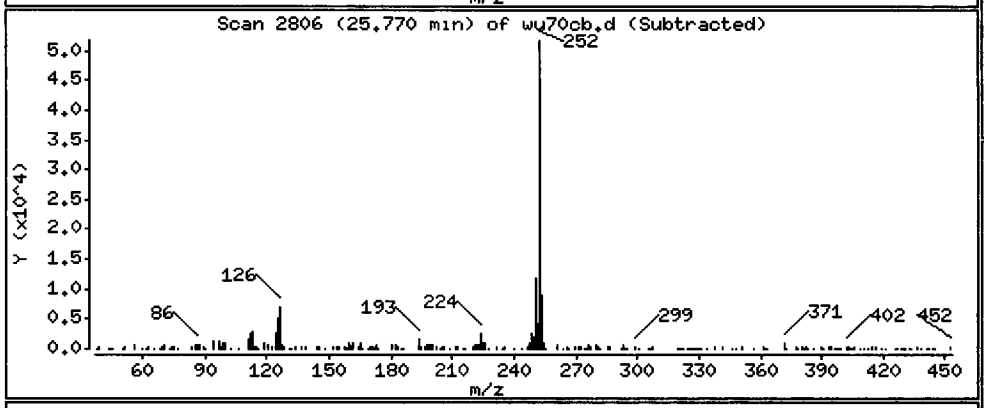
Column phase: ZB-5msi

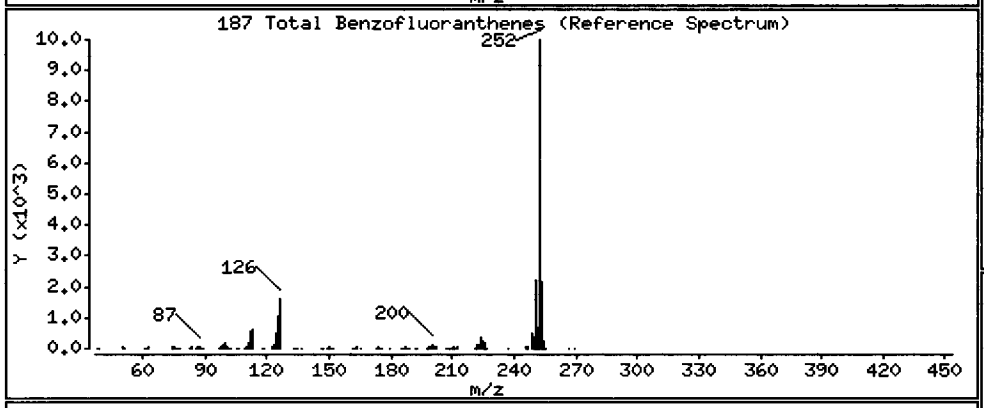
Column diameter: 0.25

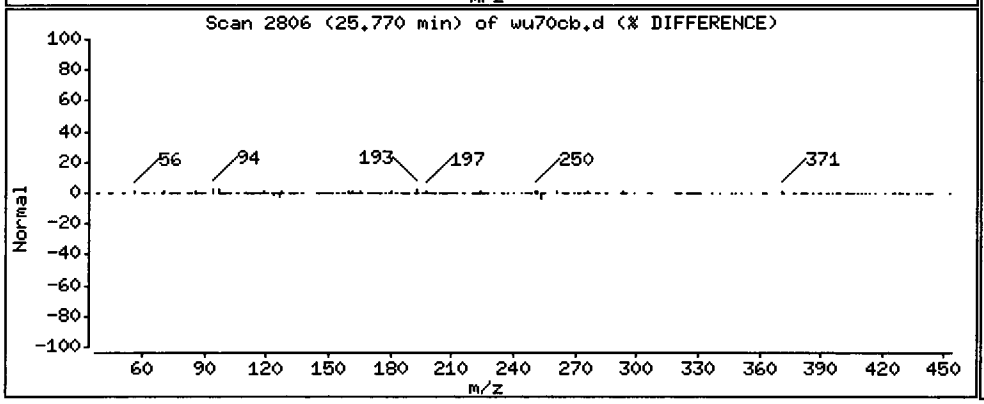
187 Total Benzofluoranthenes

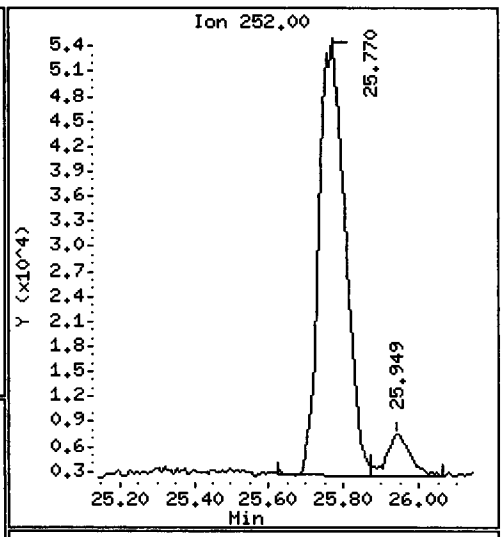
Concentration: 274.7 ug/kg

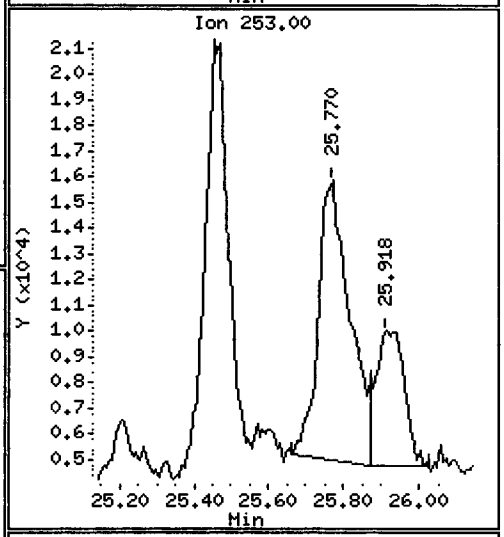


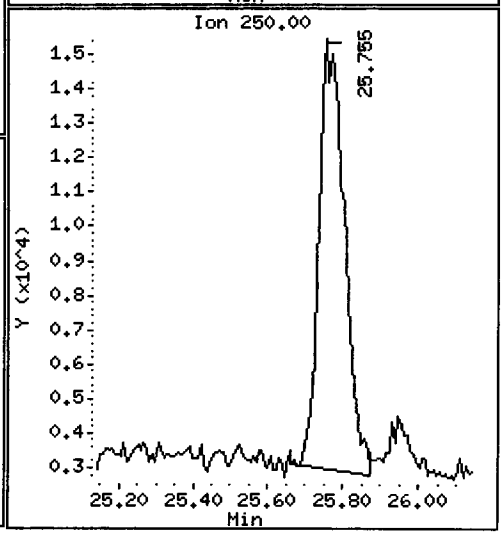






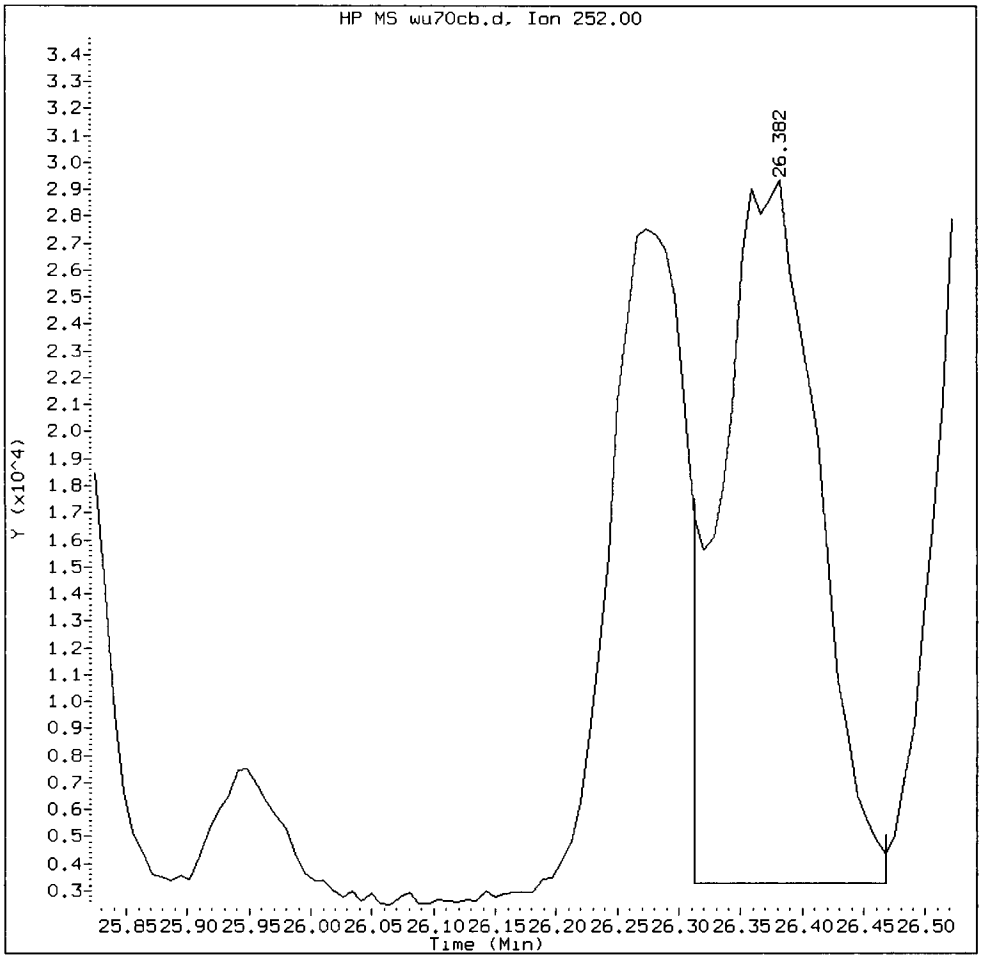






WU70B, /chem1/nt10.i/20130705.b/wu70cb.d

Benzo(a)pyrene Amount: 1.78 Area: 145435



MANUAL INTEGRATION for Benzo(a)pyrene

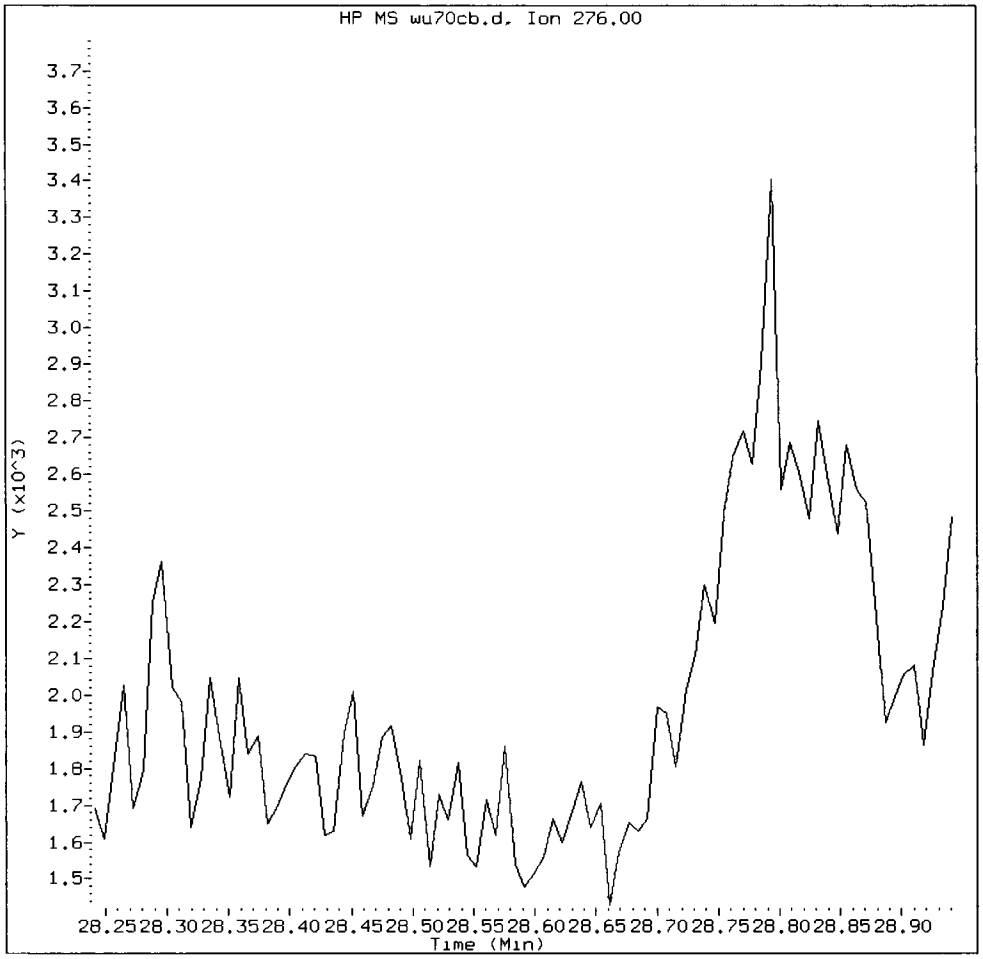
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: VZ Date: 7/9/13

WU70B, /chem1/nt10.i/20130705.b/wu70cb.d

Indeno(1,2,3-cd)pyrene Amount: 0.65 Area: 62426



MANUAL INTEGRATION for Indeno(1,2,3-cd)pyrene

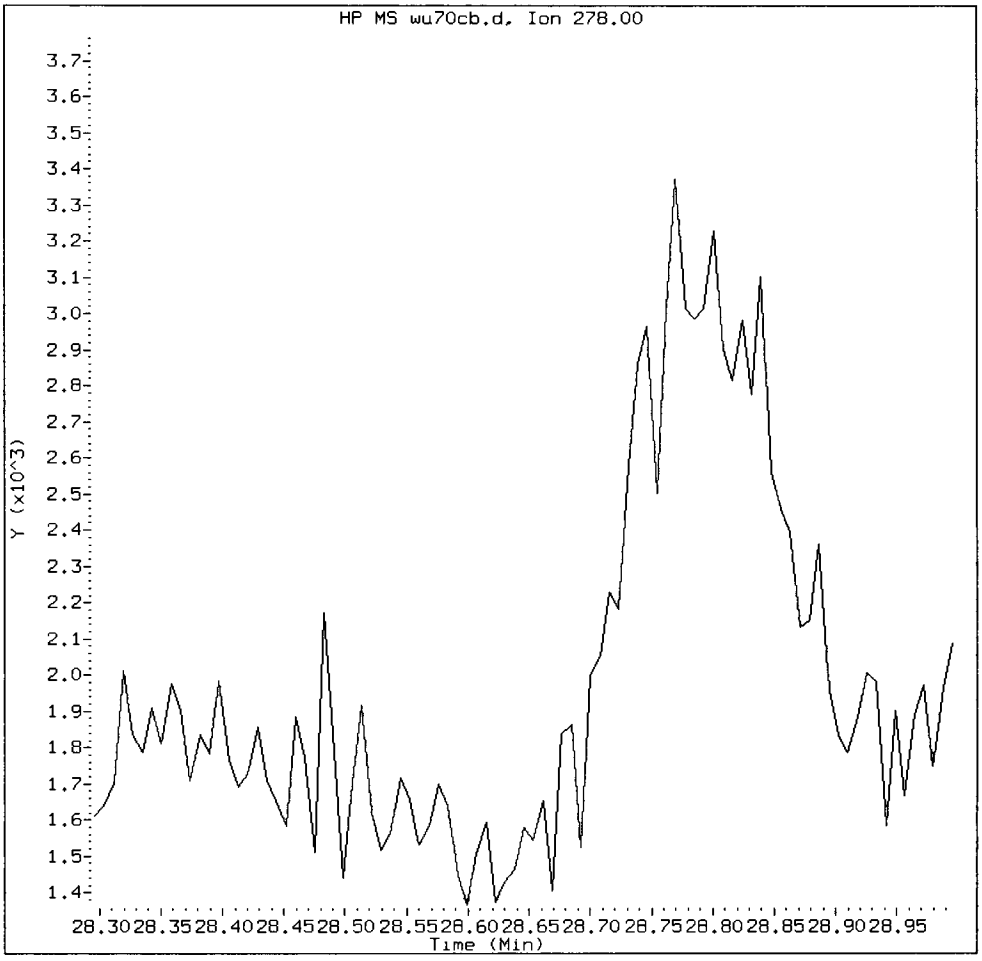
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: JZ Date: 7/9/13

WU70B, /chem1/nt10.i/20130705.b/wu70cb.d

Dibenzo(a,h)anthracene Amount: 0.30 Area: 22205



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

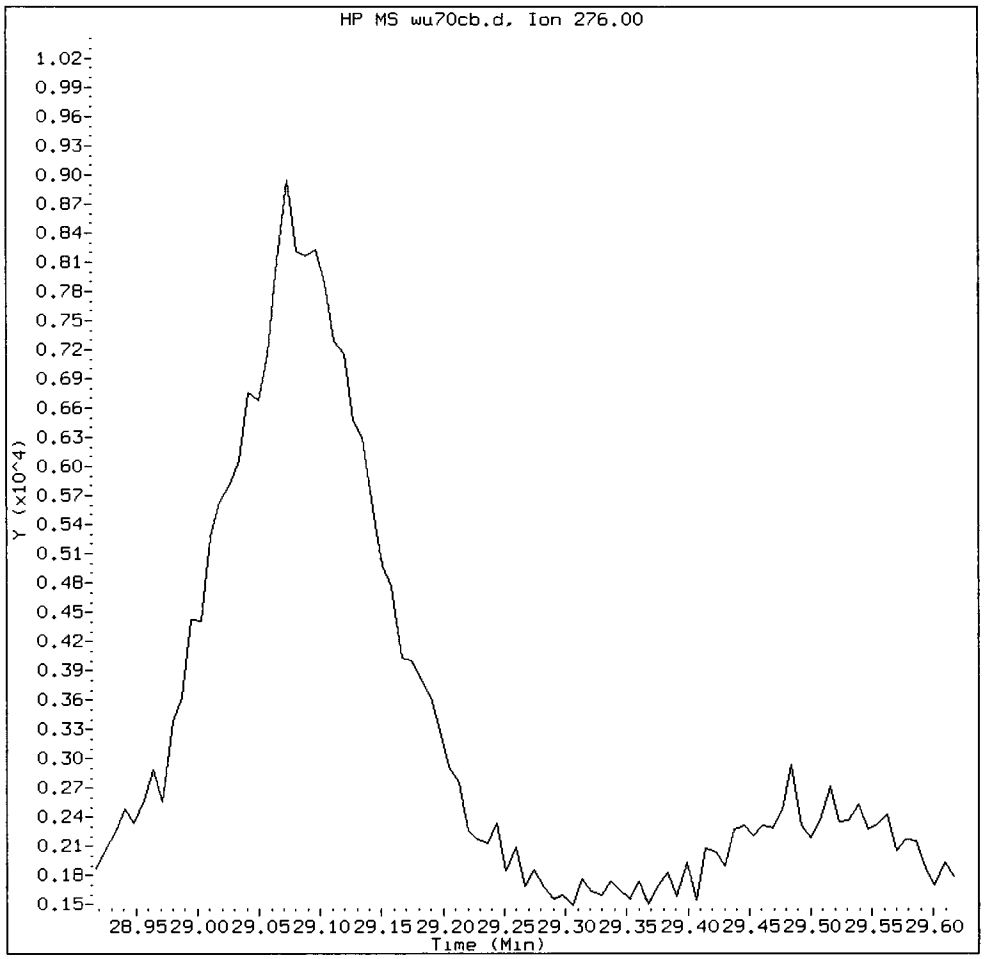
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 7/9/13

WU70B, /chem1/nt10.i/20130705.b/wu70cb.d

Benzo(g,h,i)perylene Amount: 0.91 Area: 74942



MANUAL INTEGRATION for Benzo(g,h,i)perylene

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: JZ Date: 7/9/13

CO-ELUTION SUMMARY FOR FILE - wu70cb.d

Lab ID: WU70B, Method: ABN.m, Instrument: nt10.i, Date: 06-JUL-2013

RT	CO-ELUTION COMPOUNDS
25.770	Benzo(k)fluoranthene and Benzo(b)fluoranthene

Analytical Resources, Inc.

Semivolatile Report SW846 Method 8270D

YZ 7/9/13

Data file : /chem1/nt10.i/20130705.b/wu70c.d
Lab Smp Id: WU70C Client Smp ID: LF-LS-004-20130619-
Inj Date : 06-JUL-2013 00:47
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WU70C
Misc Info : 13-13123
Comment : 1ul Injection
Method : /chem1/nt10.i/20130705.b/ABN.m
Meth Date : 09-Jul-2013 14:16 yev Quant Type: ISTD
Cal Date : 05-JUL-2013 15:57 Cal File: ic0705g.d
Als bottle: 23
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDAICAL.sub
Target Version: 3.50
Processing Host: cserv3

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

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	13.00000	Weight of sample extracted (g)
M	21.10000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$ 1	2-Fluorophenol	112	6.374	6.343	(0.722)	150369	4.52826	441.5
$ 2	Phenol-d5	99	8.090	8.067	(0.917)	220330	4.91046	478.7
3	Phenol	94	8.121	8.090	(0.920)	55670	1.19158	116.2
$ 5	2-Chlorophenol-d4	132	8.368	8.360	(0.948)	158281	4.92422	480.1
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	8.824	8.825	(1.000)	89295	4.00000	
9	1,4-Dichlorobenzene	146	Compound Not Detected.					
$ 10	1,2-Dichlorobenzene-d4	152	9.135	9.135	(1.035)	72019	3.16345	308.4
12	1,2-Dichlorobenzene	146	Compound Not Detected.					
11	Benzyl alcohol	108	Compound Not Detected.					
14	2,2'-oxybis(1-Chloropropane)	121	Compound Not Detected.					
13	2-Methylphenol	108	9.329	9.314	(1.057)	8755	0.26401	25.74
17	Hexachloroethane	117	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	15 4-Methylphenol	108	9.647	9.624	(1.093)	15600	0.46500	45.33
$	18 Nitrobenzene-d5	82	9.942	9.935	(0.865)	132303	3.26975	318.8
	19 Nitrobenzene	77	Compound Not Detected.					
	20 Isophorone	82	Compound Not Detected.					
	21 2-Nitrophenol	139	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	10.780	10.772	(0.938)	7568	0.21393	20.86
	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	11.489	11.482	(1.000)	331746	4.00000	
	28 Naphthalene	128	11.528	11.528	(1.003)	149150	1.72169	167.9
	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	142	13.067	13.067	(1.137)	184664	3.21030	313.0
	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	13.911	13.911	(0.903)	249756	3.83333	373.7
	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	15.405	15.397	(1.000)	178188	4.00000	
	43 3-Nitroaniline	138	Compound Not Detected.					
	44 Acenaphthene	153	15.474	15.467	(1.004)	10353	0.20412	19.90
	45 2,4-Dinitrophenol	184	Compound Not Detected.					
	46 Dibenzofuran	168	15.868	15.861	(1.030)	39000	0.56568	55.15
	47 4-Nitrophenol	109	Compound Not Detected.					
	48 2,4-Dinitrotoluene	165	Compound Not Detected.					
	50 Diethylphthalate	149	16.464	16.448	(1.069)	9247	0.14272 J	13.91
	49 Fluorene	166	16.641	16.633	(1.080)	28066	0.46141	44.98
	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	17.188	17.165	(1.116)	36551	3.31424	323.1
	56 4-Bromophenyl-phenylether	248	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18.758	18.742	(1.000)	270086	4.00000	
	60 Phenanthrene	178	18.812	18.789	(1.003)	163640	2.22677	217.1
	61 Anthracene	178	18.920	18.905	(1.009)	47793	0.61874	60.32
	62 Carbazole	167	19.284	19.261	(1.028)	18651	0.38066	37.11

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
63	Di-n-butylphthalate	149	20.112	20.096	(1.072)	11193	0.12954	12.63
64	Fluoranthene	202	21.249	21.226	(1.133)	132622	1.48105	144.4
65	Pyrene	202	21.675	21.644	(0.908)	176081	1.86325	181.7
$ 66	Terphenyl-d14	244	22.015	21.992	(0.922)	234696	4.58810	447.3
67	Butylbenzylphthalate	149	22.944	22.921	(0.961)	12980	0.35808	34.91
68	Benzo(a)anthracene	228	23.866	23.827	(0.999)	118019	1.32766	129.4
* 69	Chrysene-d12	240	23.881	23.843	(1.000)	284246	4.00000	
70	3,3'-Dichlorobenzidine	252	Compound Not Detected.					
71	Chrysene	228	23.927	23.889	(1.002)	143191	1.78307	173.8
72	bis(2-Ethylhexyl)phthalate	149	24.013	23.966	(0.958)	280644	5.34760	521.4
* 134	Di-n-octylphthalate-d4	153	25.073	25.027	(1.000)	410558	4.00000	
73	Di-n-octylphthalate	149	Compound Not Detected.					
74	Benzo(b)fluoranthene	252	25.677	25.600	(0.974)	118357	1.38016	134.6
75	Benzo(k)fluoranthene	252	25.677	25.646	(0.974)	118357	1.09568	106.8
76	Benzo(a)pyrene	252	26.266	26.173	(0.996)	125862	1.58616	154.6
* 77	Perylene-d12	264	26.374	26.281	(1.000)	300774	4.00000	
78	Indeno(1,2,3-cd)pyrene	276	28.832	28.591	(1.093)	53760	0.57821	56.37
79	Dibenzo(a,h)anthracene	278	28.863	28.645	(1.094)	53562	0.75171	73.29(M)
80	Benzo(g,h,i)perylene	276	29.562	29.267	(1.121)	113076	1.42005	138.4(H)
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	142	13.292	13.284	(1.157)	108253	2.06090	200.9
111	Azobenzene (1,2-DP-Hydrazine)	77	Compound Not Detected.					
187	Total Benzofluoranthenes	252	25.677	25.646	(0.974)	118352	1.27157	124.0
99	Perylene	252	26.428	26.328	(1.002)	25944	0.33462	32.62
98	Retene	219	22.263	22.240	(0.932)	531521	14.6073	1424
120	2,3,4,6-Tetrachlorophenol	232	Compound Not Detected.					

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: nt10.i
Lab File ID: wu70c.d
Lab Smp Id: WU70C
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130705.b/ABN.m
Misc Info: 13-13123

Calibration Date: 05-JUL-2013
Calibration Time: 12:14
Client Smp ID: LF-LS-004-201306
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	97290	48645	194580	89295	-8.22
27 Naphthalene-d8	336205	168102	672410	331746	-1.33
42 Acenaphthene-d10	202661	101330	405322	178188	-12.08
59 Phenanthrene-d10	352196	176098	704392	270086	-23.31
69 Chrysene-d12	358983	179492	717966	284246	-20.82
134 Di-n-octylphthala	503607	251804	1007214	410558	-18.48
77 Perylene-d12	381873	190936	763746	300774	-21.24

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.82	8.32	9.32	8.82	0.00
27 Naphthalene-d8	11.49	10.99	11.99	11.49	0.00
42 Acenaphthene-d10	15.40	14.90	15.90	15.40	0.05
59 Phenanthrene-d10	18.75	18.25	19.25	18.76	0.04
69 Chrysene-d12	23.85	23.35	24.35	23.88	0.13
134 Di-n-octylphthala	25.03	24.53	25.53	25.07	0.18
77 Perylene-d12	26.29	25.79	26.79	26.37	0.32

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.

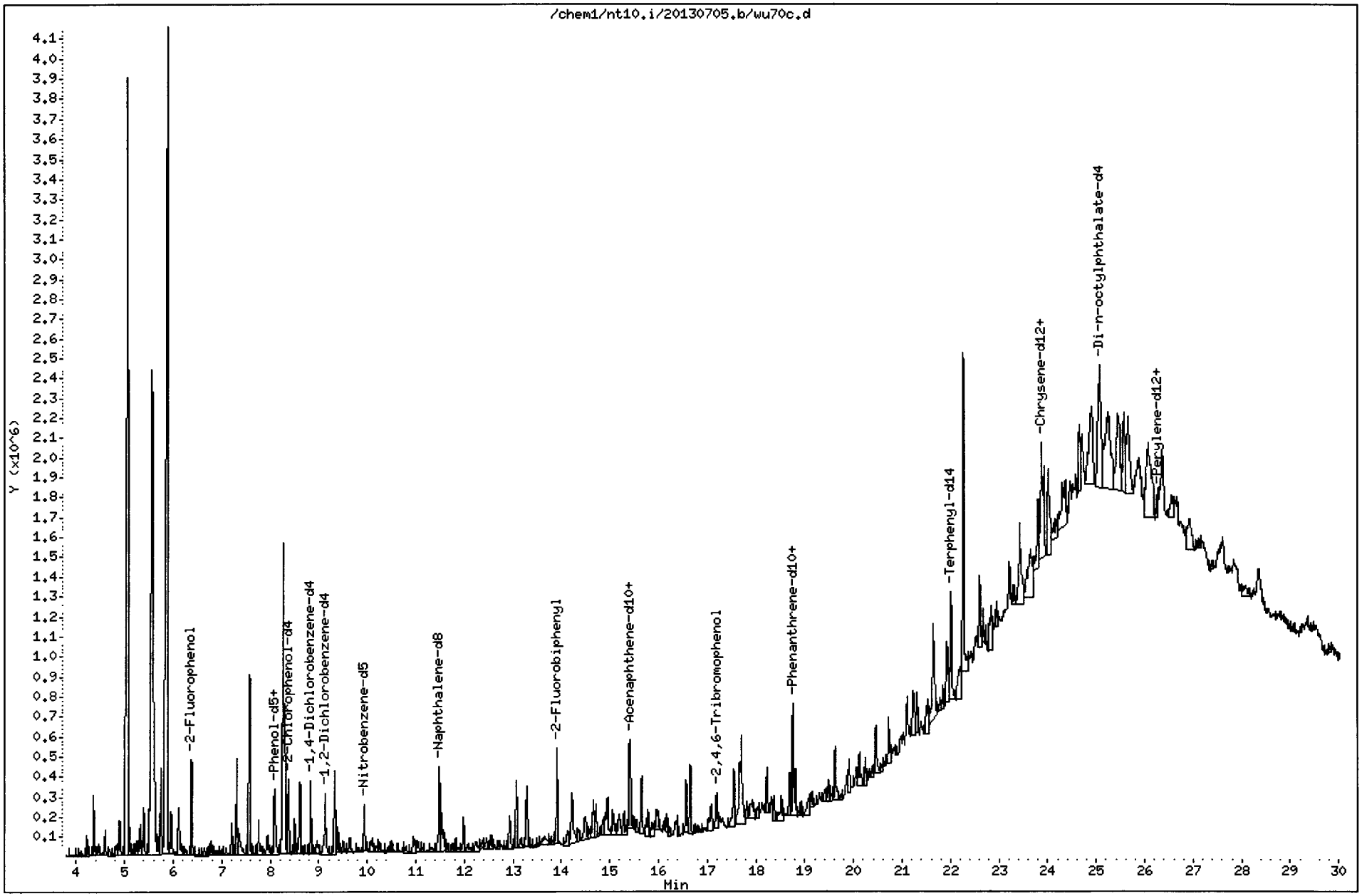
RECOVERY REPORT

Client Name: SAIC
Client SDG: WU70
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WU70C
Client Smp ID: LF-LS-004-20130619-
Level: LOW
Operator: VTS/YZ
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: PSDDALCS.spk
Quant Type: ISTD
Sublist File: PSDDAICAL.sub
Method File: /chem1/nt10.i/20130705.b/ABN.m
Misc Info: 13-13123

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	731.2	441.5	60.38	27-120
$ 2 Phenol-d5	731.2	478.7	65.47	29-120
$ 5 2-Chlorophenol-d4	731.2	480.1	65.66	31-120
$ 10 1,2-Dichlorobenzen	487.5	308.4	63.27	32-120
$ 18 Nitrobenzene-d5	487.5	318.8	65.40	30-120
$ 36 2-Fluorobiphenyl	487.5	373.7	76.67	35-120
$ 55 2,4,6-Tribromophen	731.2	323.1	44.19	24-134
$ 66 Terphenyl-d14	487.5	447.3	91.76	37-120

Data File: /chem1/nt10.i/20130705.b/wu70c.d
Date : 06-JUL-2013 00:47
Client ID: LF-LS-004-20130619-
Sample Info: WU70C
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130705.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

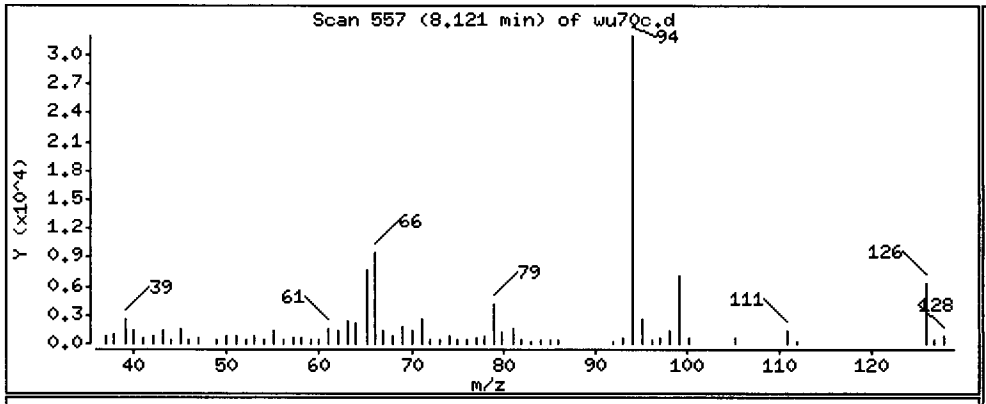
Operator: VTS/YZ

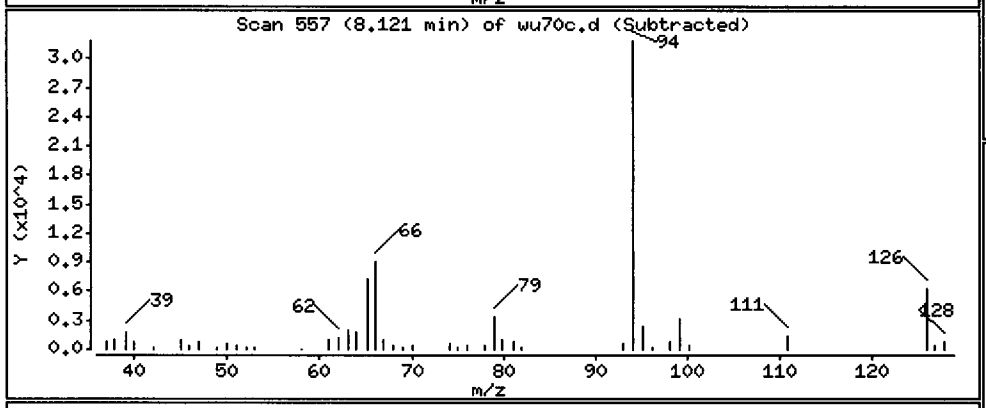
Column phase: ZB-5msi

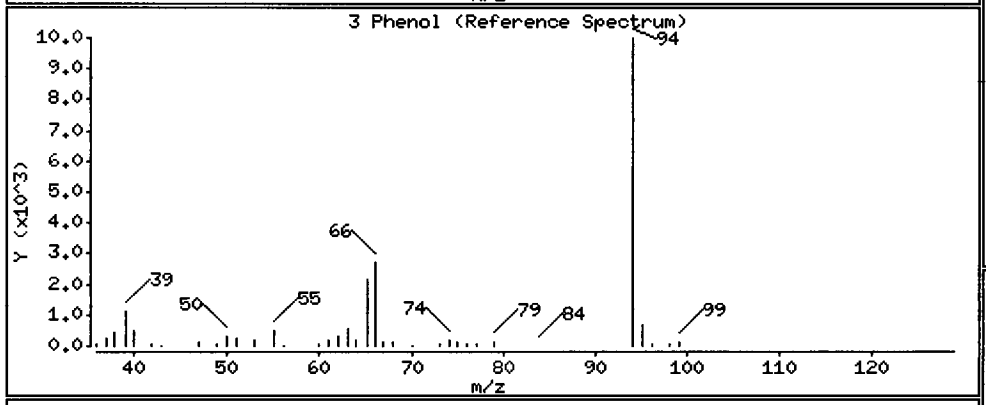
Column diameter: 0.25

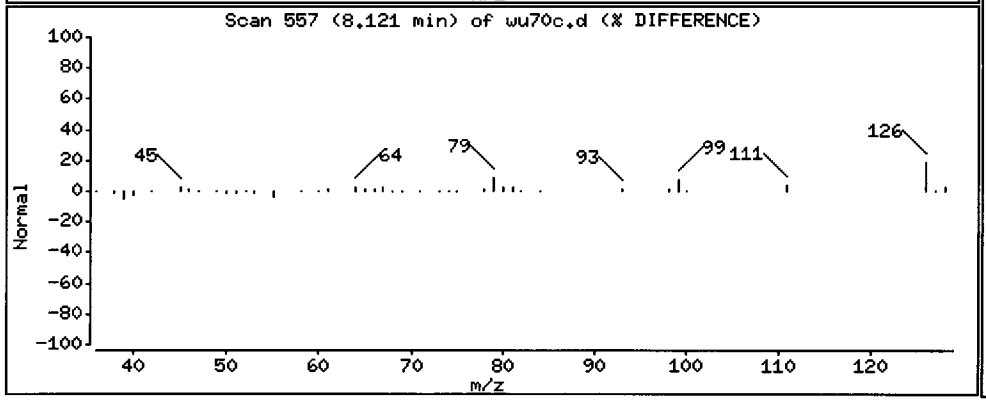
3 Phenol

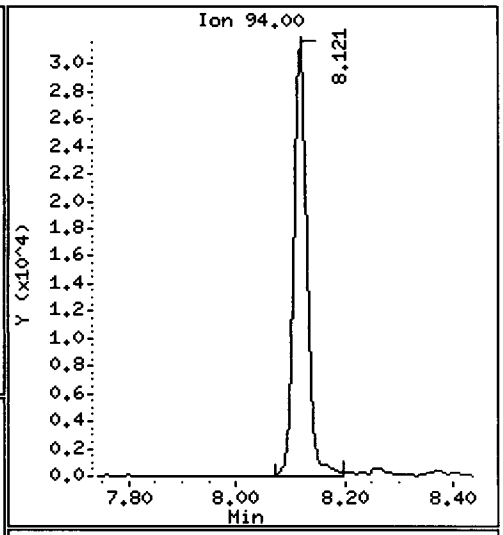
Concentration: 116.2 ug/kg

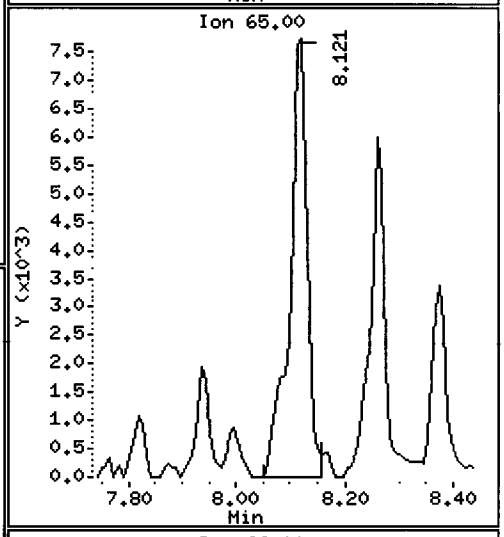


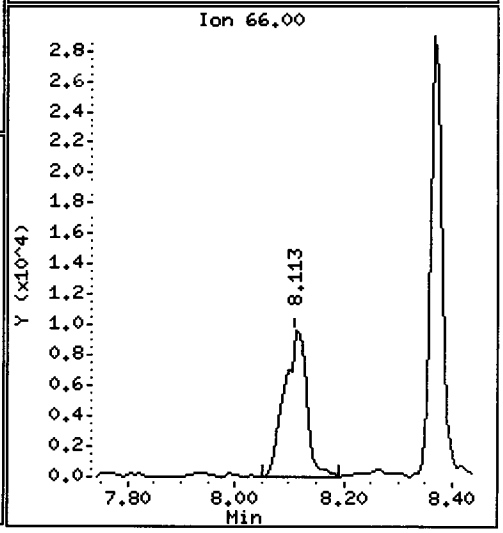












Data File: /chem1/nt10.i/20130705.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

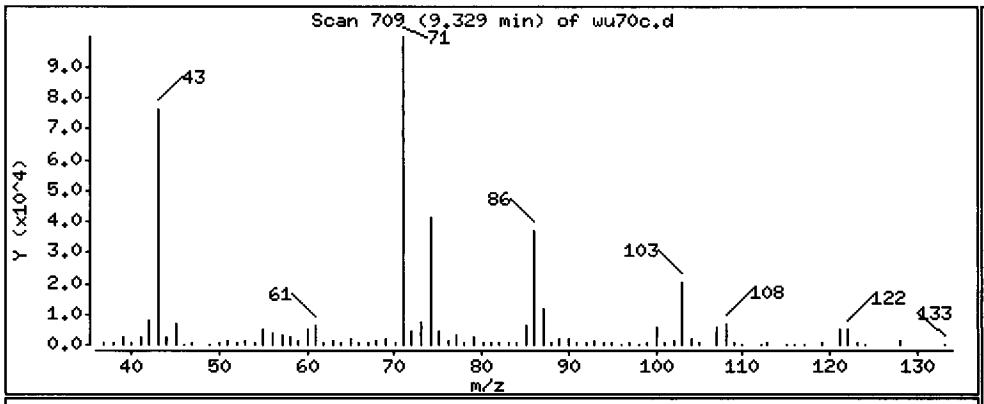
Operator: VTS/YZ

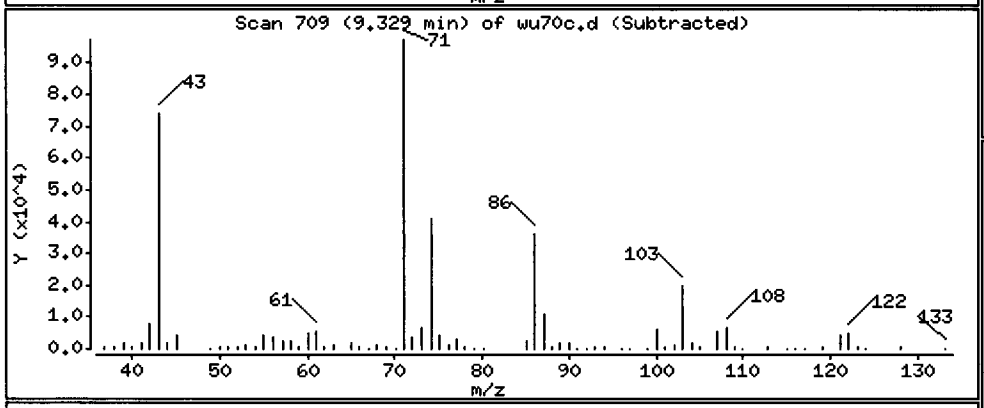
Column phase: ZB-5ms1

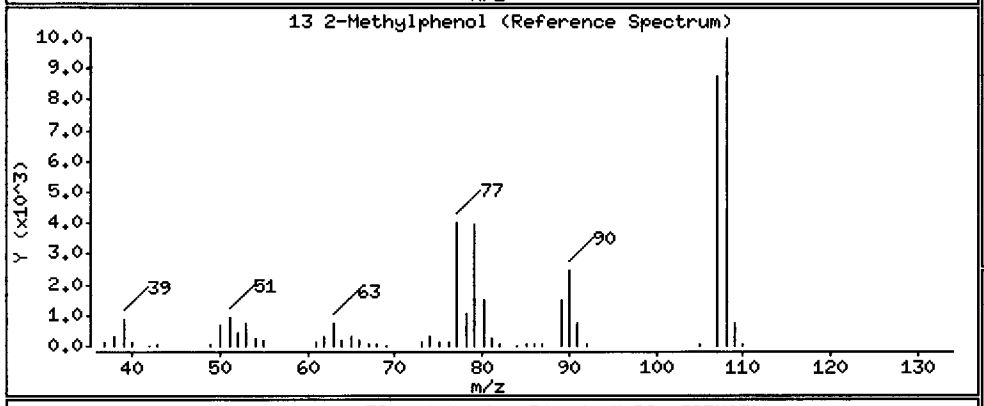
Column diameter: 0.25

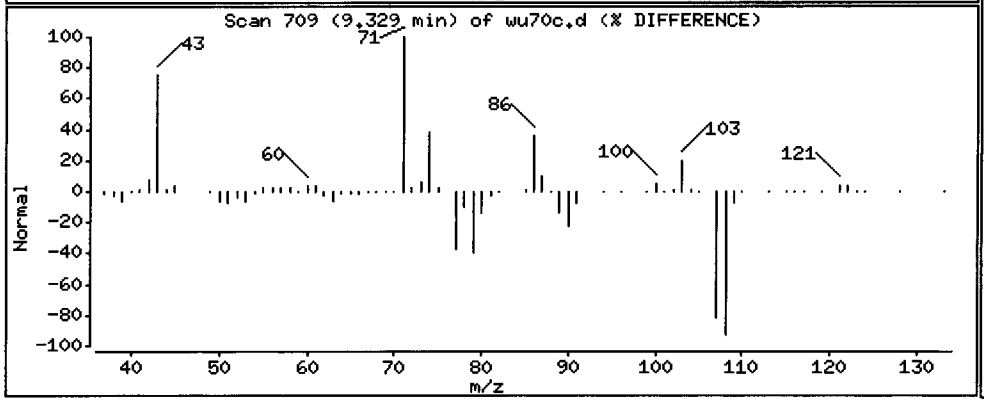
13 2-Methylphenol

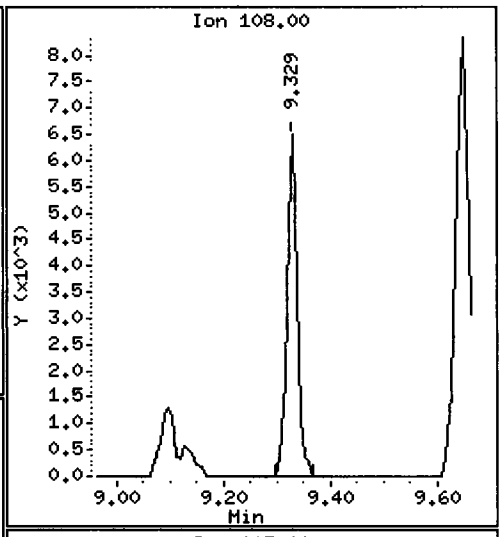
Concentration: 25.74 ug/kg

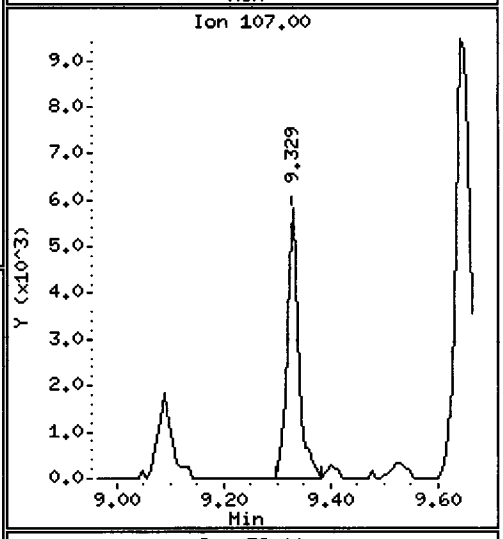


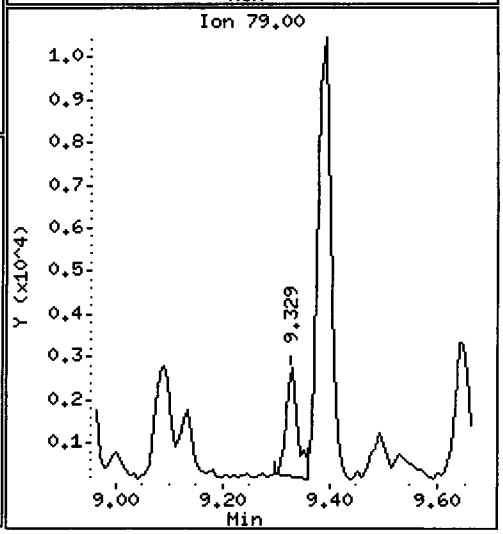












Data File: /chem1/nt10.i/20130705.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

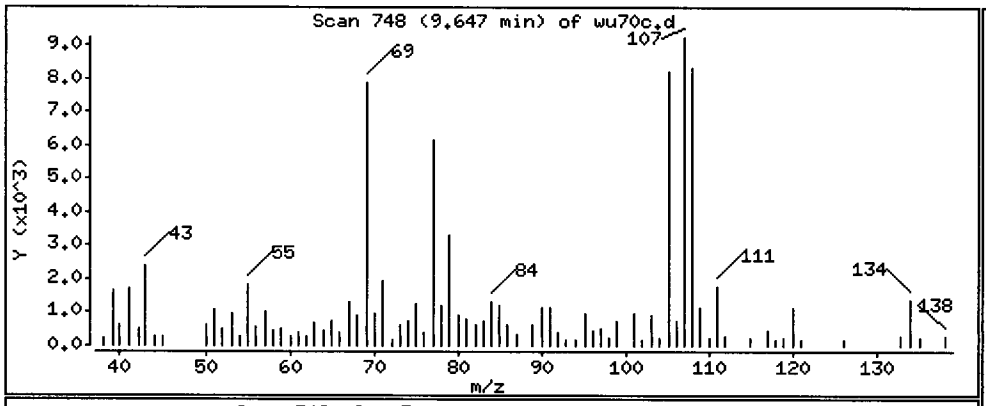
Operator: VTS/YZ

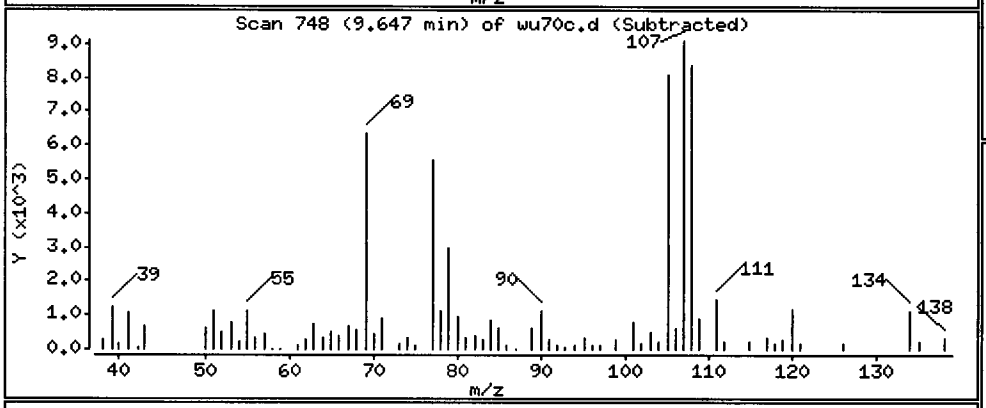
Column phase: ZB-5msi

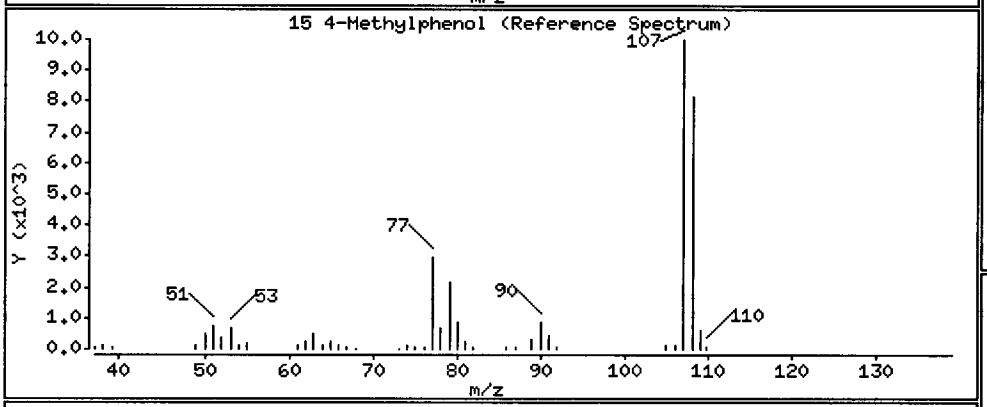
Column diameter: 0.25

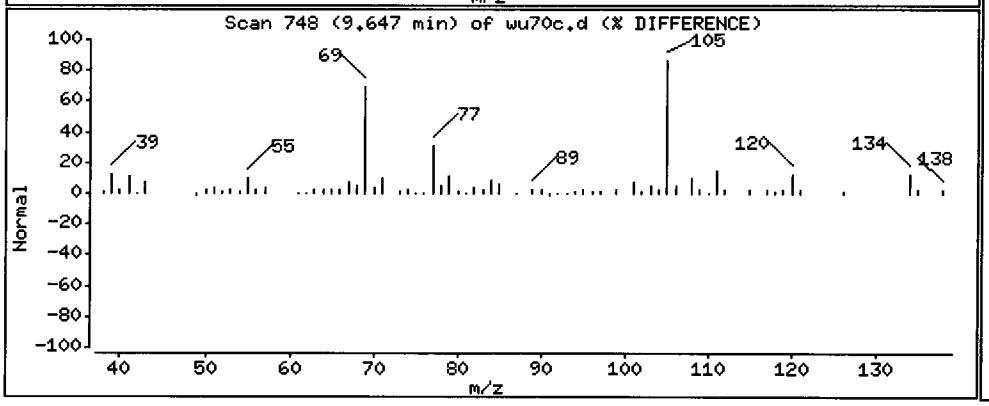
15 4-Methylphenol

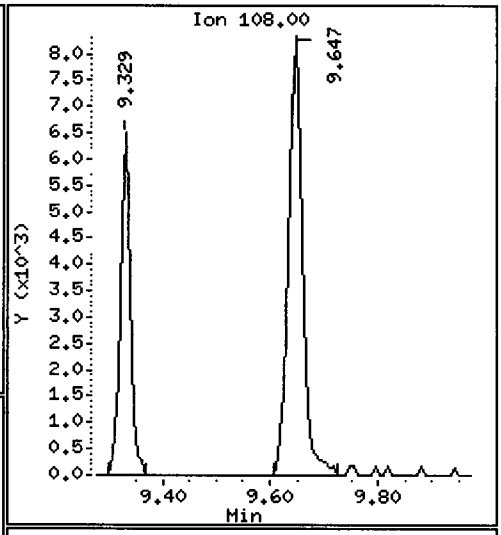
Concentration: 45.33 ug/kg

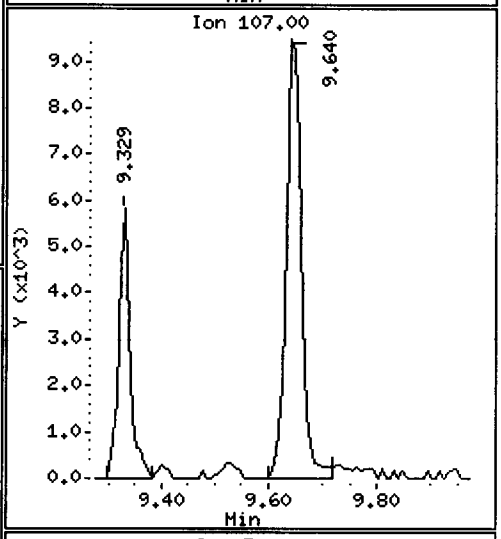


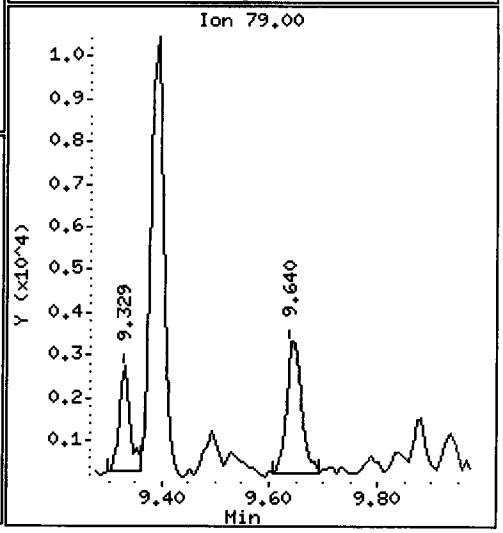












Data File: /chem1/nt10.i/20130705.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

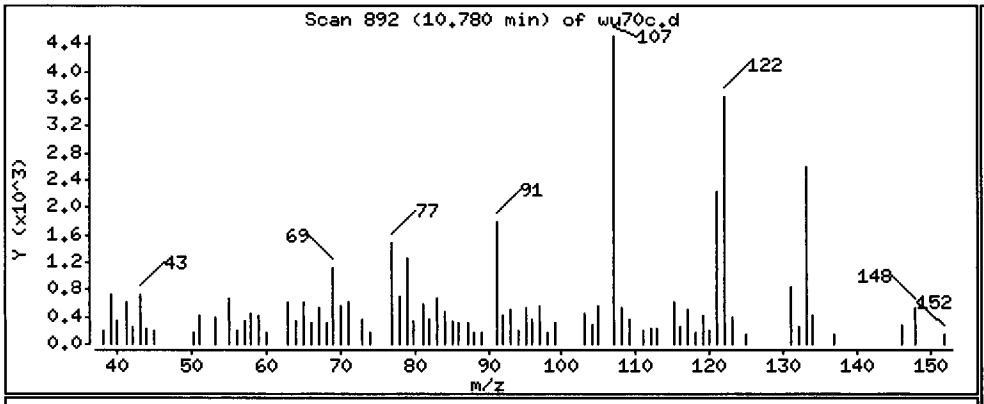
Operator: VTS/YZ

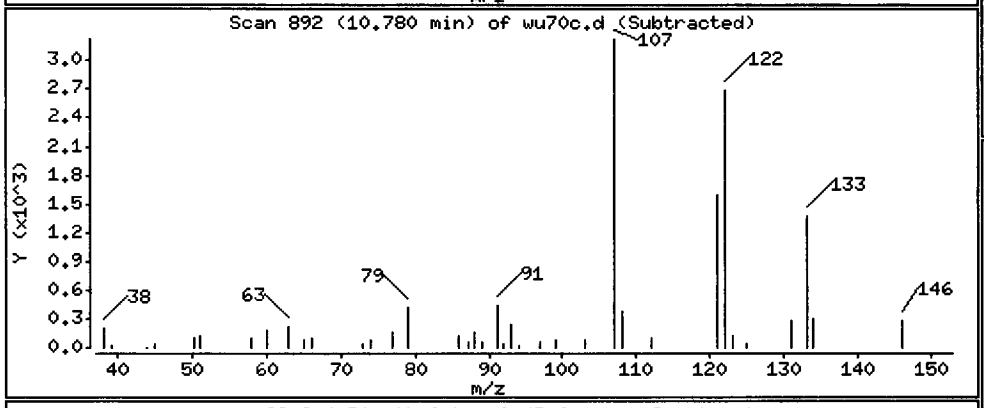
Column phase: ZB-5msi

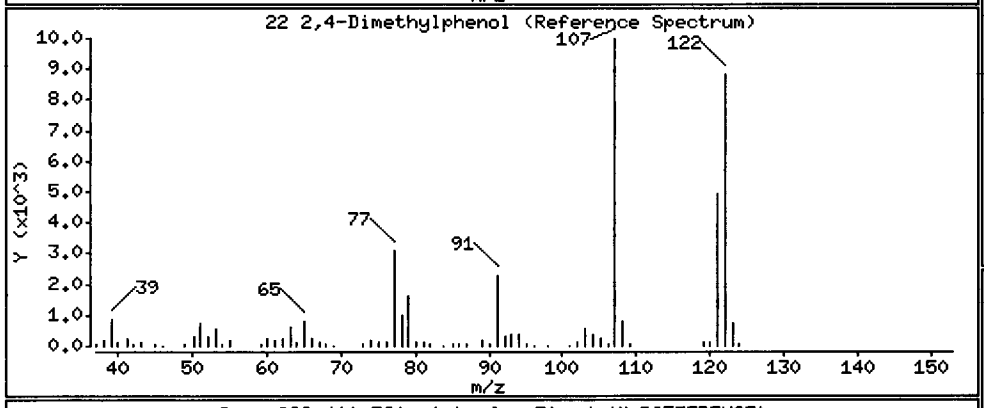
Column diameter: 0.25

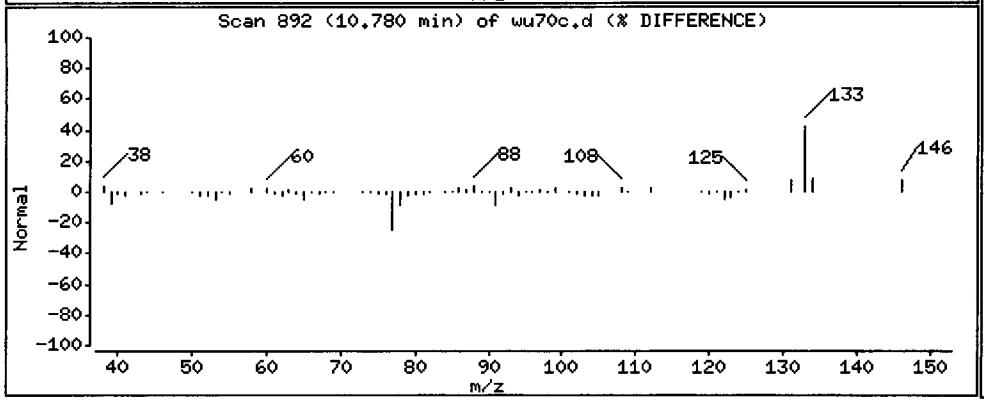
22 2,4-Dimethylphenol

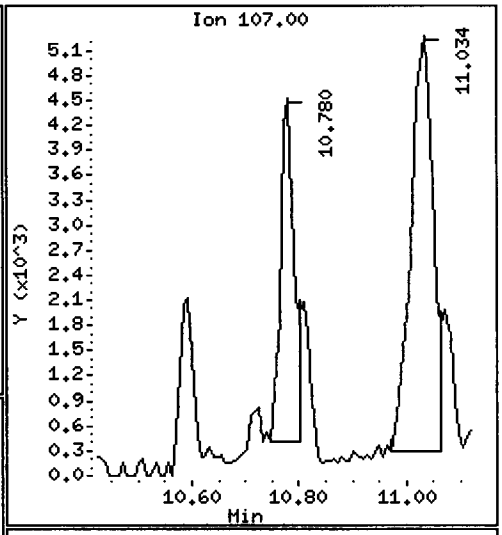
Concentration: 20.86 ug/kg

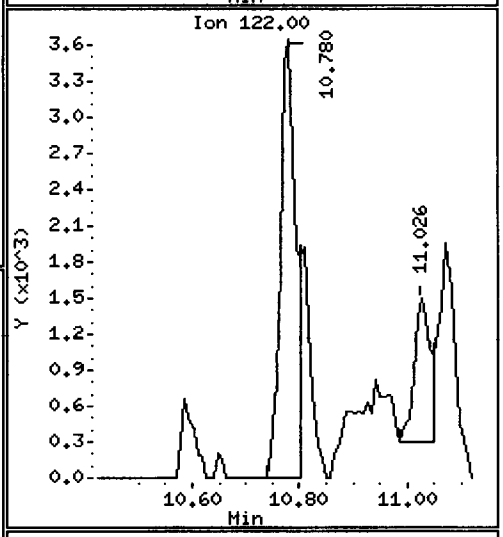


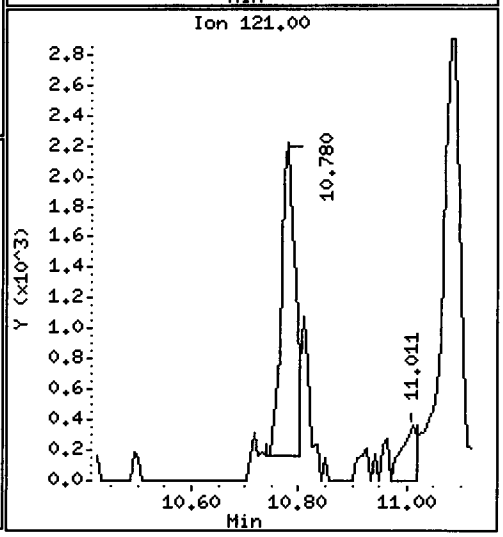












Data File: /chem1/nt10.i/20130705.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

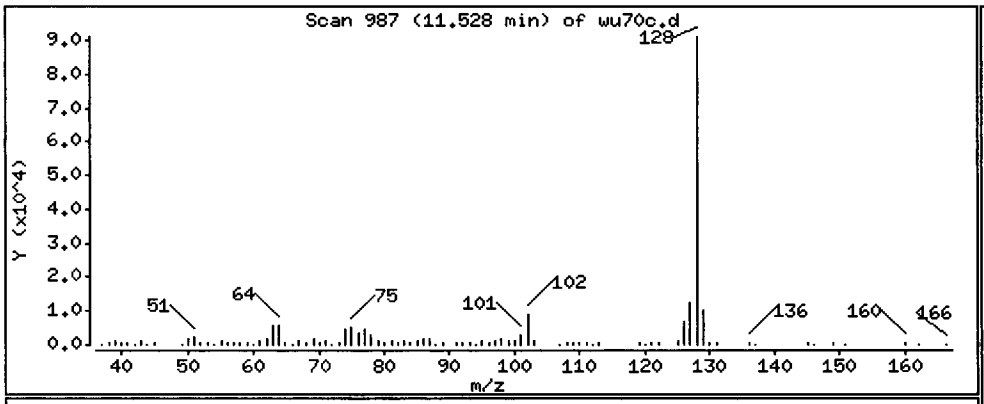
Operator: VTS/YZ

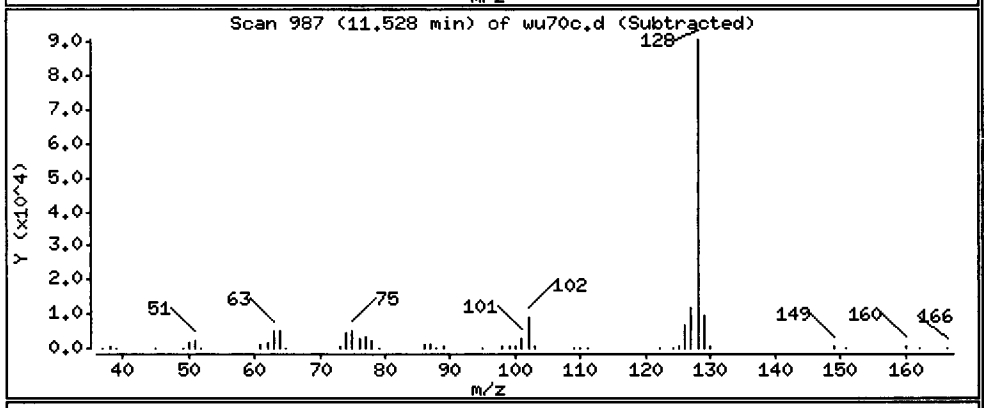
Column phase: ZB-5msi

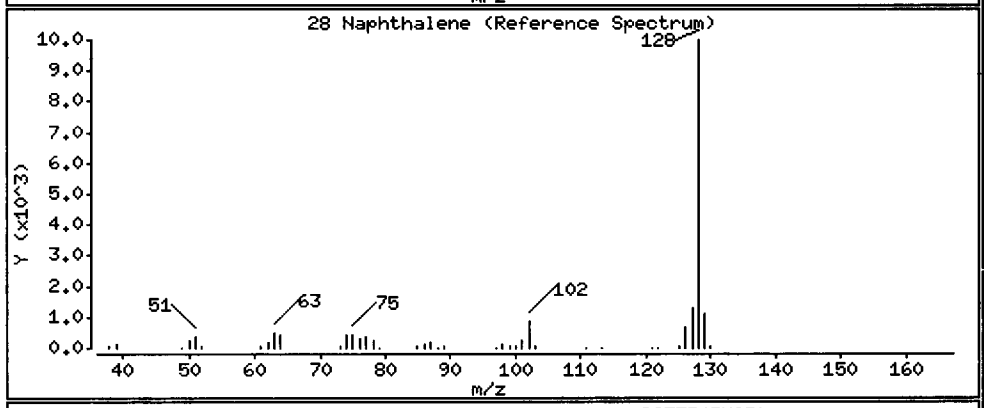
Column diameter: 0.25

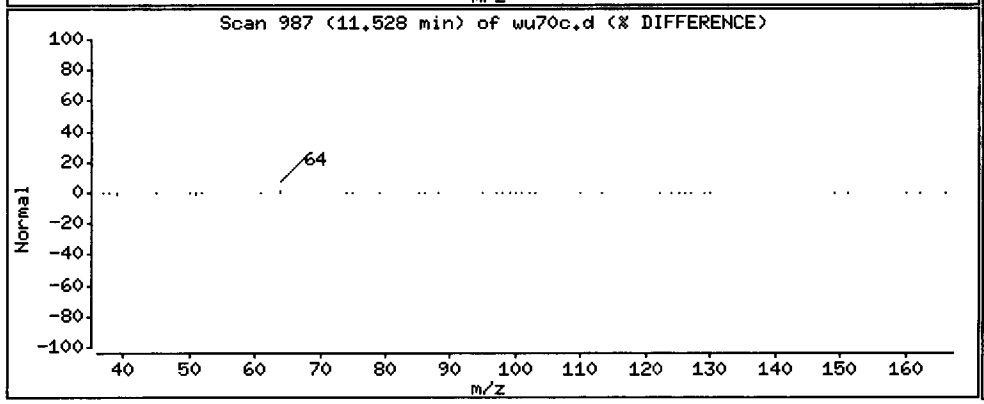
28 Naphthalene

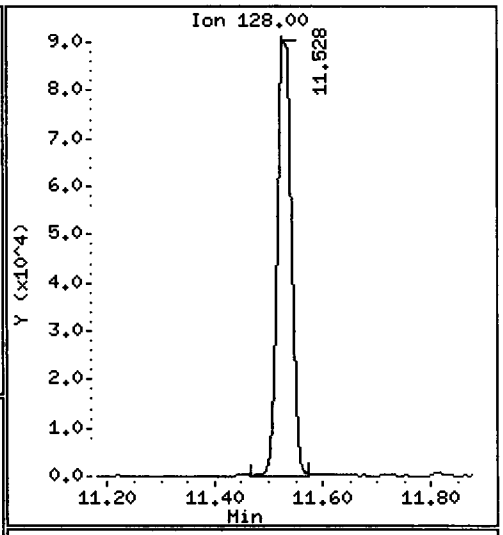
Concentration: 167.9 ug/kg

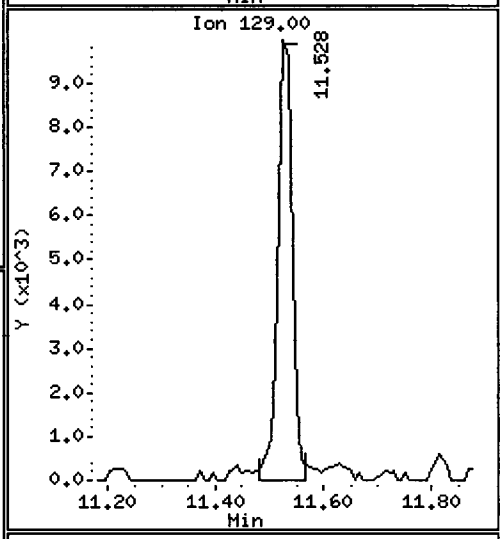


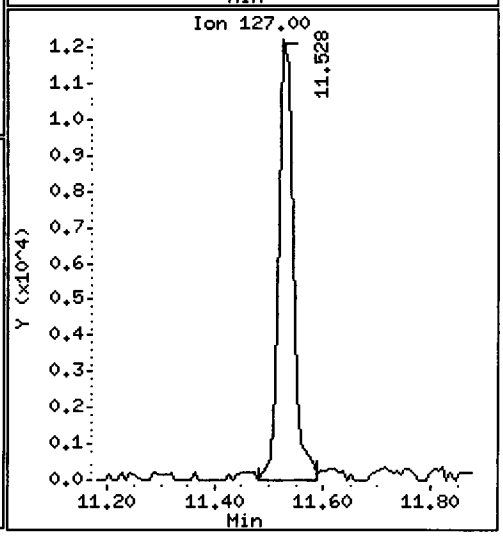












Data File: /chem1/nt10.i/20130705.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

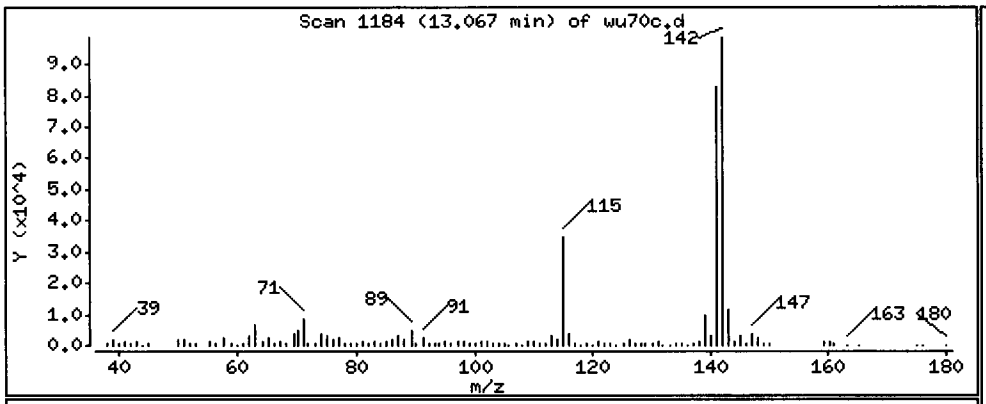
Operator: VTS/YZ

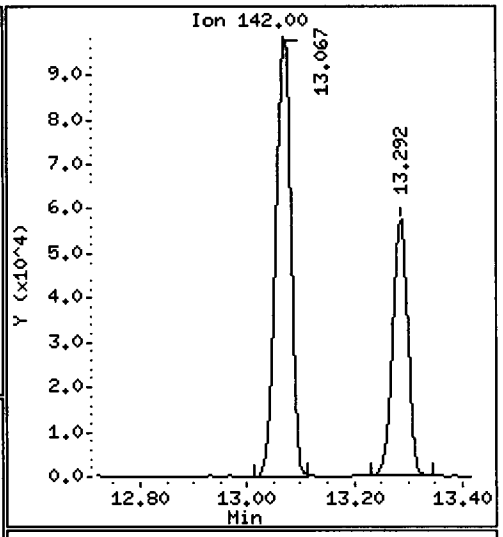
Column phase: ZB-5ms1

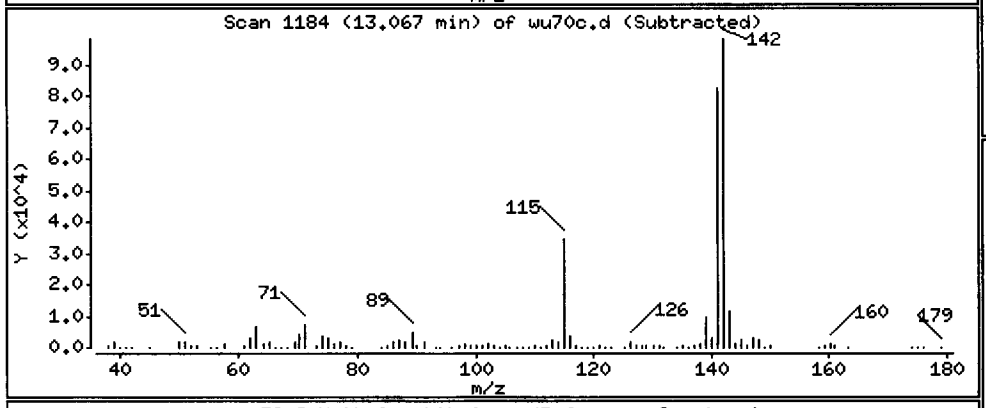
Column diameter: 0.25

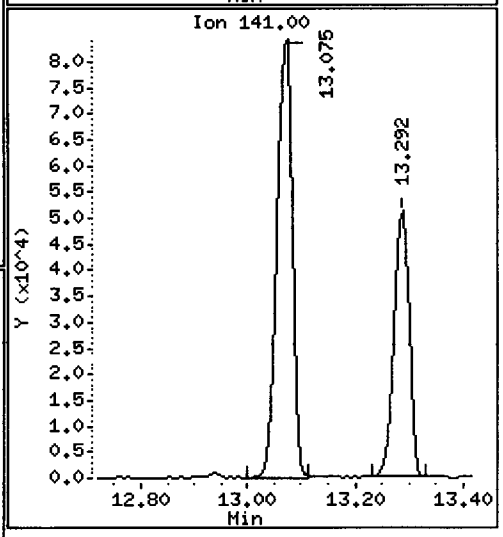
32 2-Methylnaphthalene

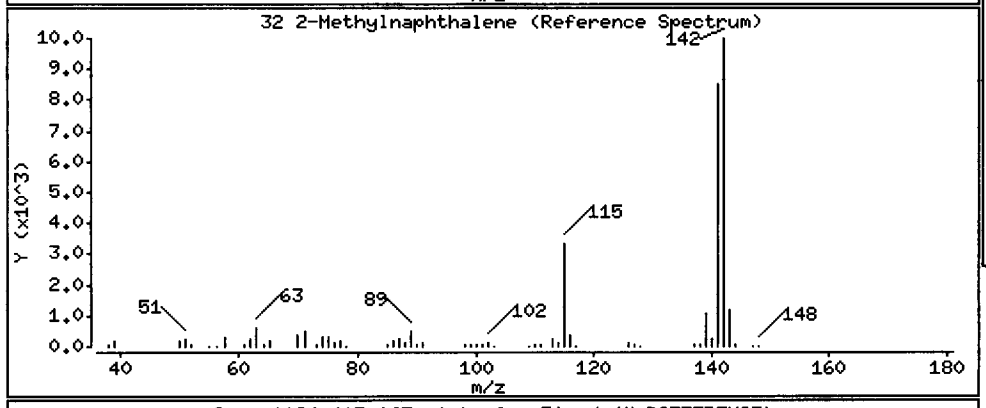
Concentration: 313.0 ug/kg

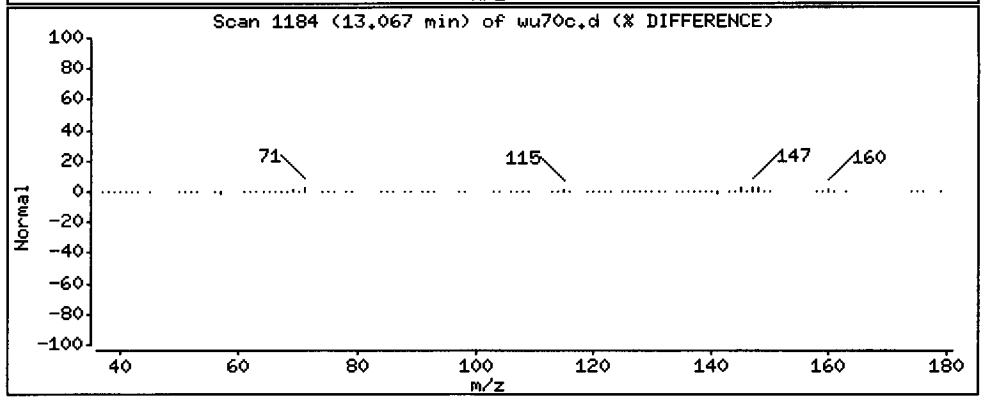












Data File: /chem1/nt10.i/20130705.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

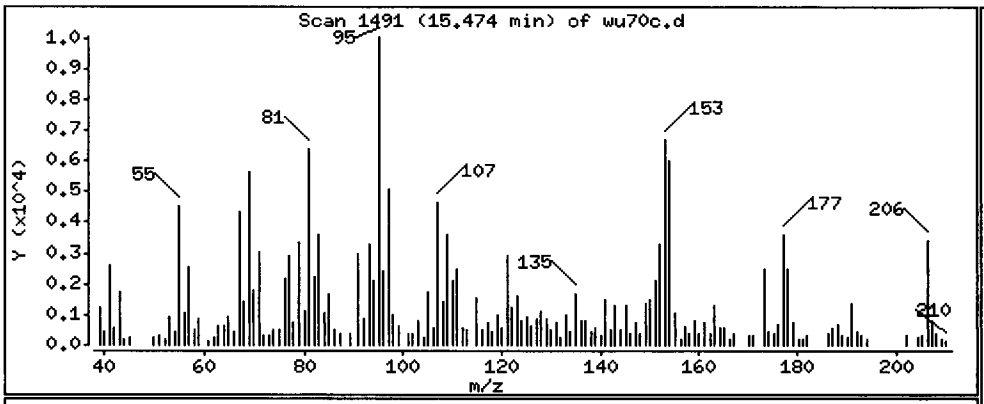
Operator: VTS/YZ

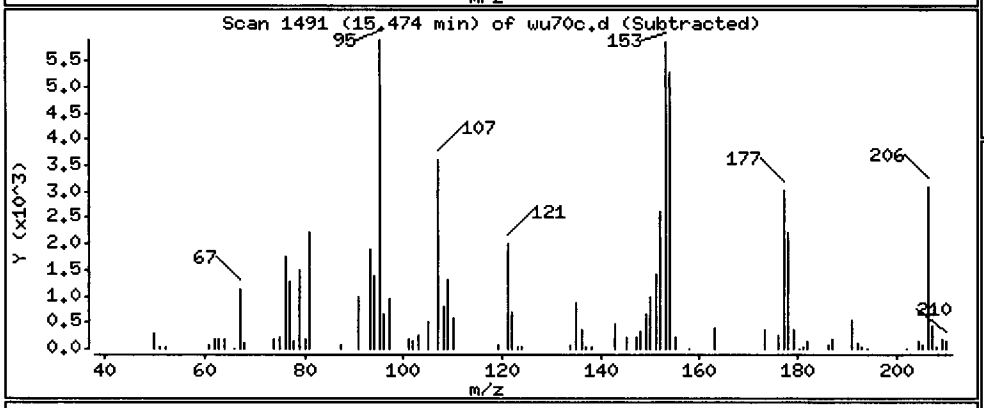
Column phase: ZB-5msi

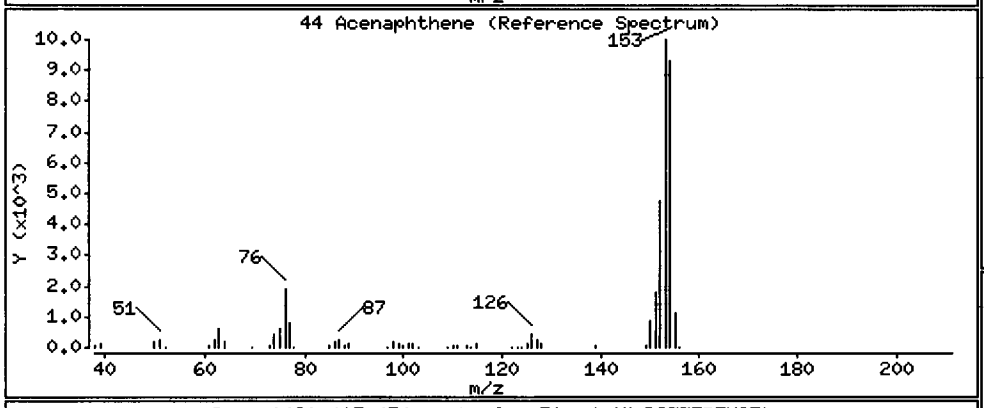
Column diameter: 0.25

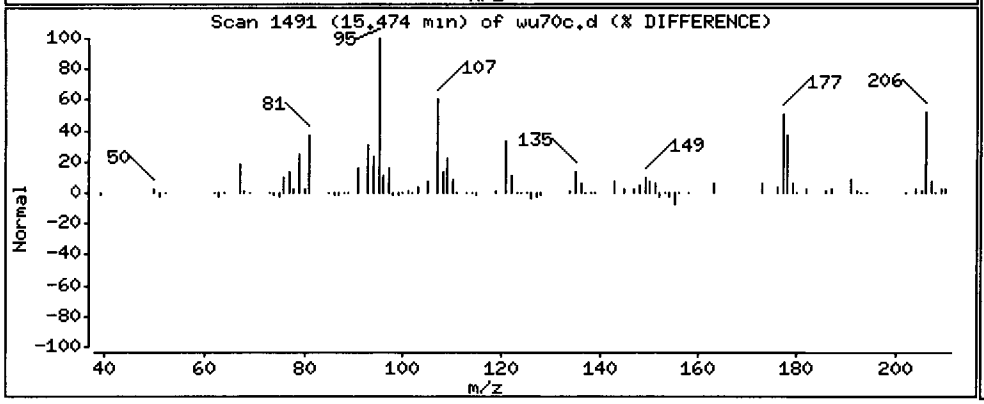
44 Acenaphthene

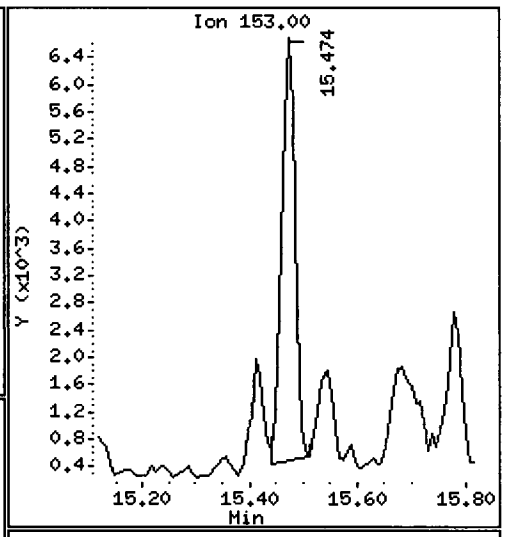
Concentration: 19.90 ug/kg

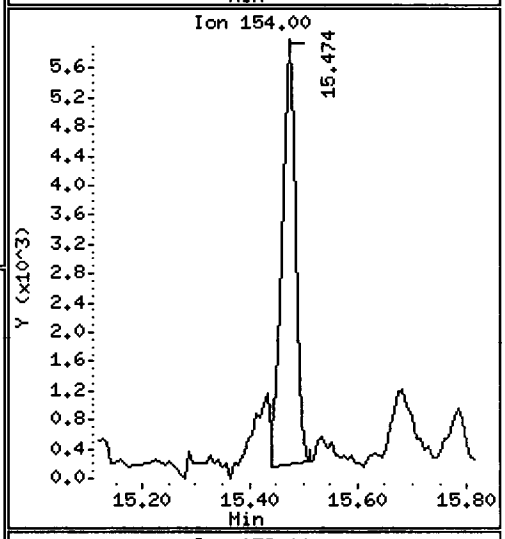


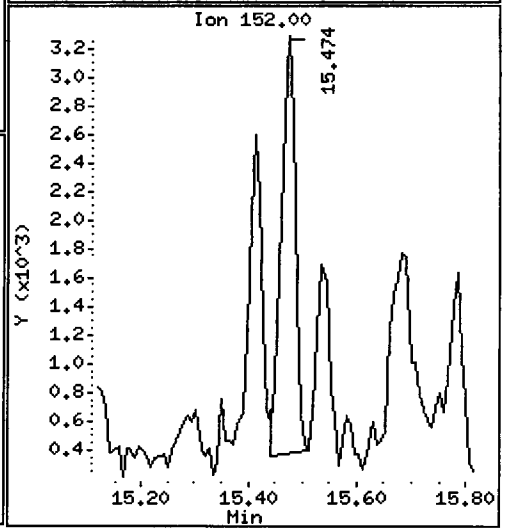












Data File: /chem1/nt10.i/20130705.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

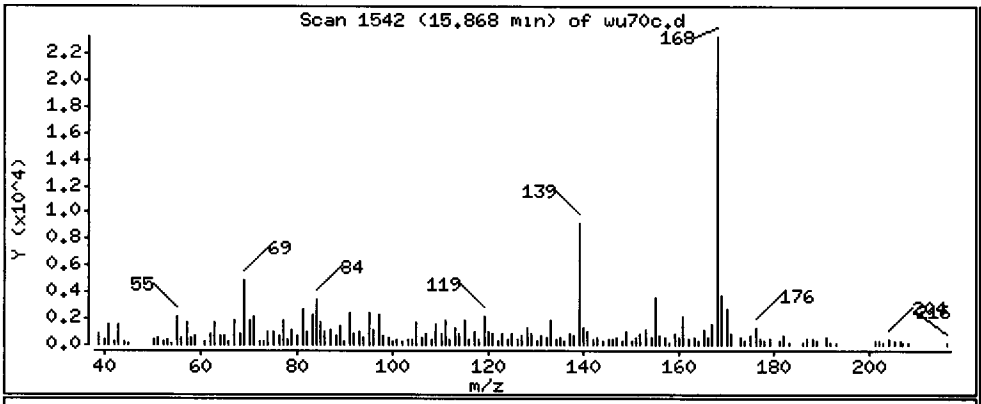
Operator: VTS/YZ

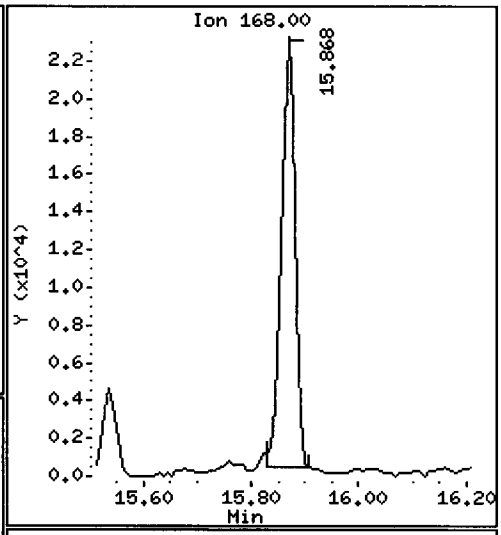
Column phase: ZB-5msi

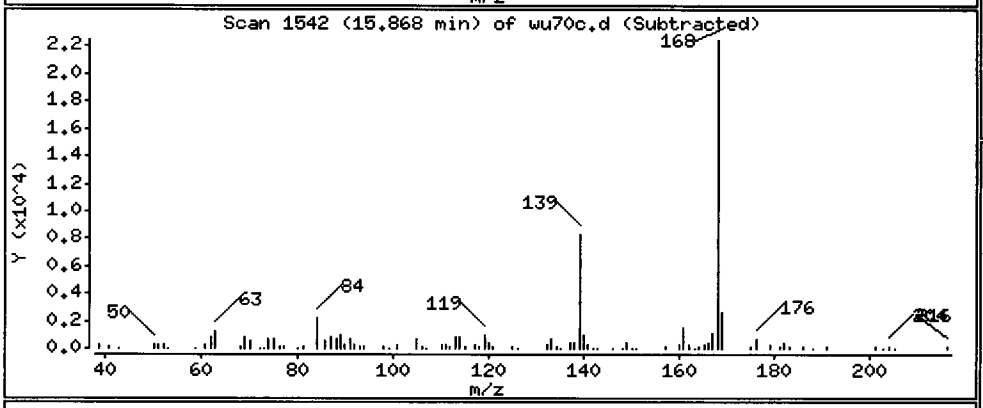
Column diameter: 0.25

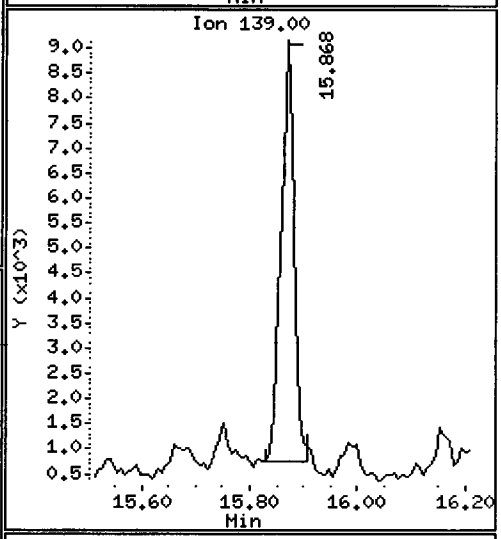
46 Dibenzofuran

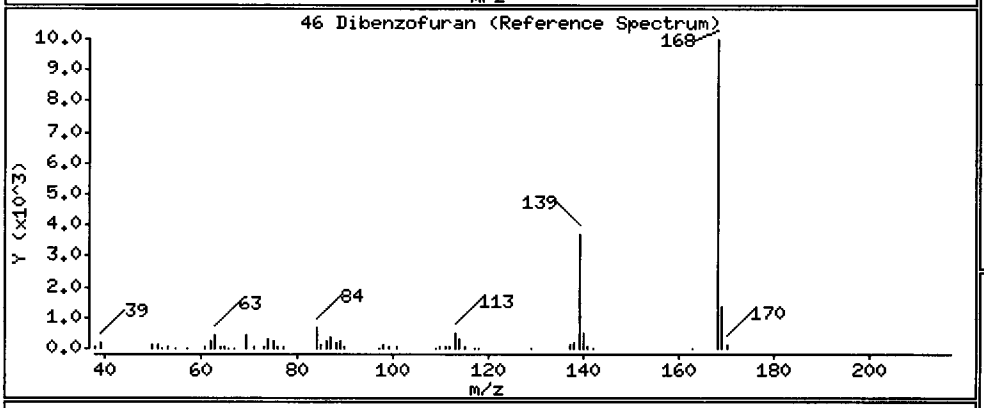
Concentration: 55.15 ug/kg

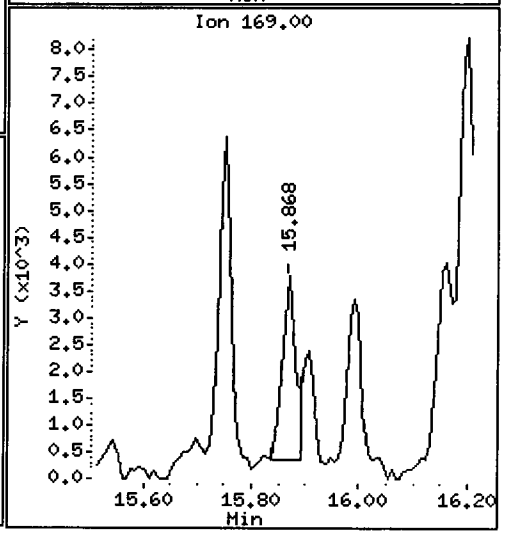


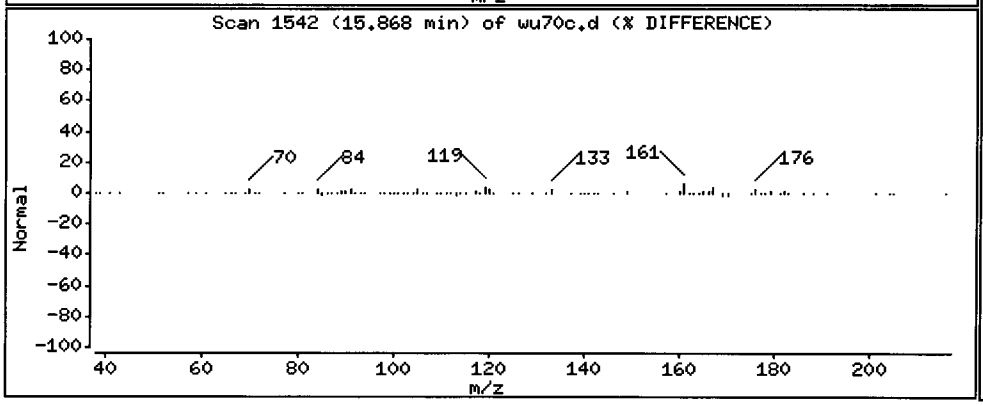












Data File: /chem1/nt10.i/20130705.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

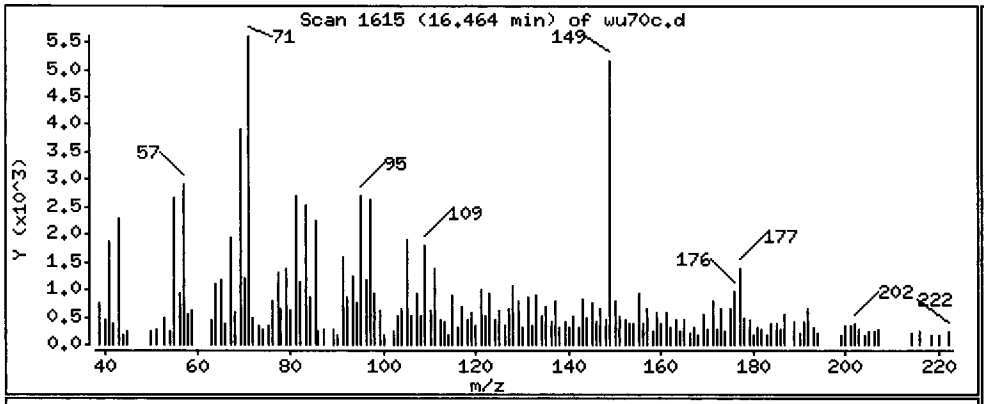
Operator: VTS/YZ

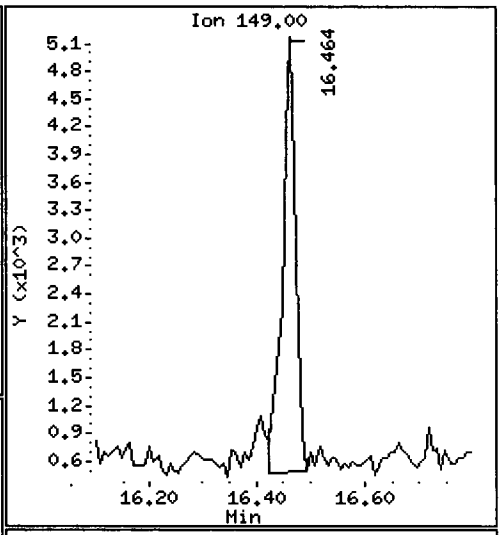
Column phase: ZB-5msi

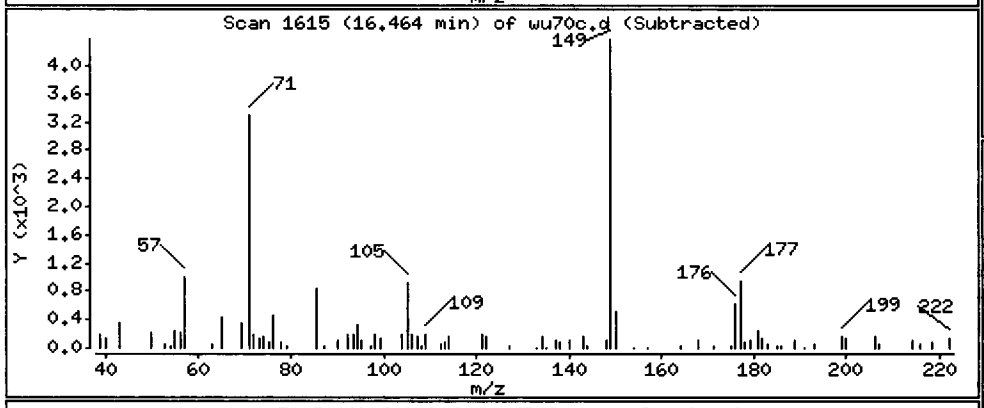
Column diameter: 0.25

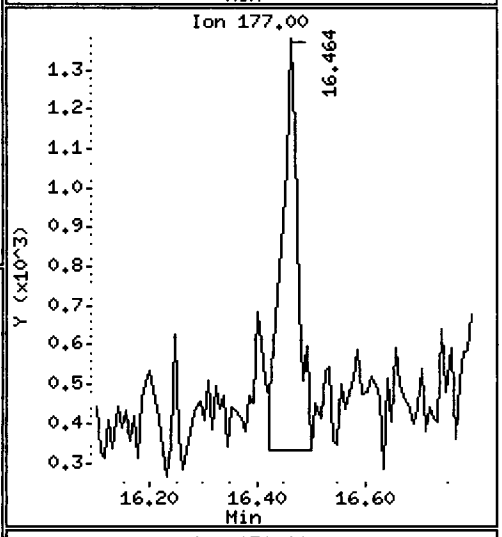
50 Diethylphthalate

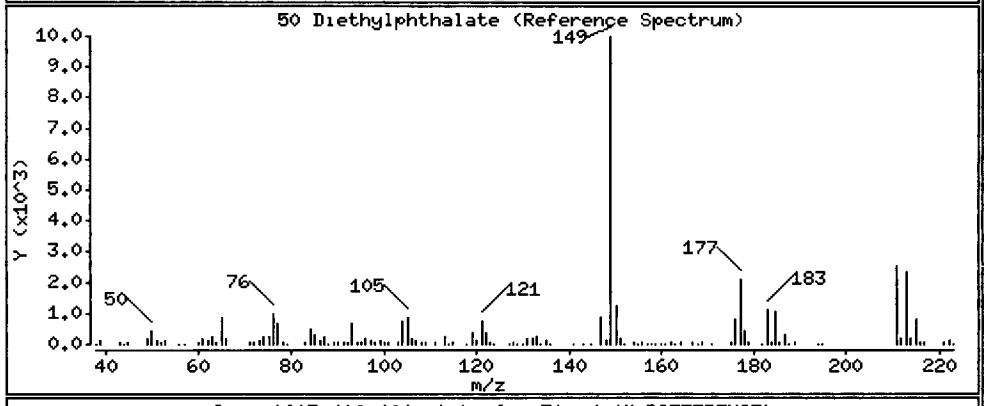
Concentration: 13.91 ug/kg

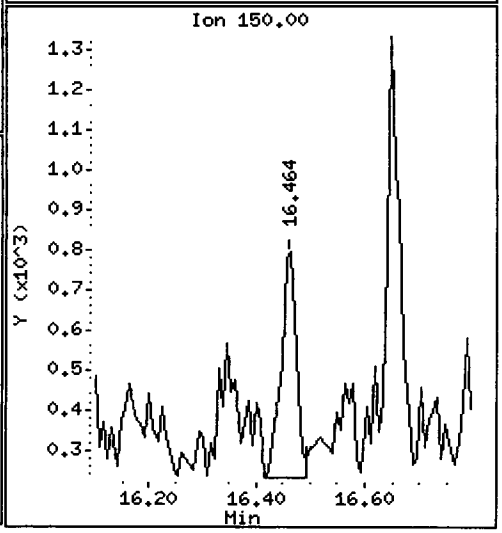


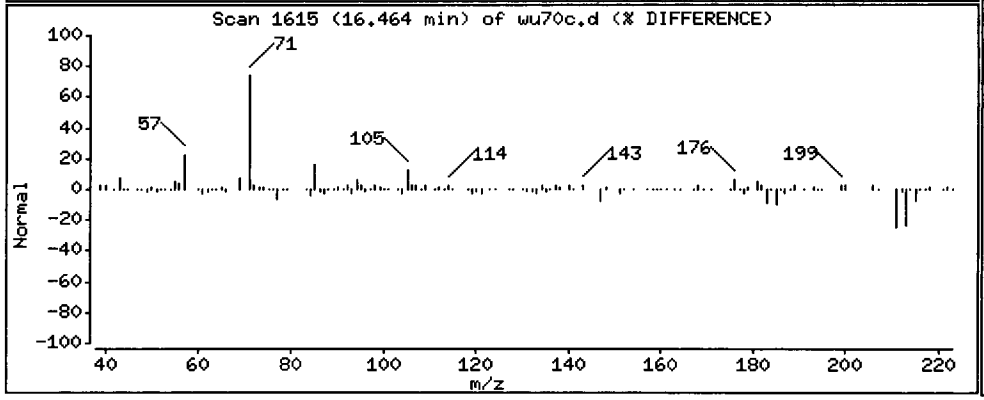












Data File: /chem1/nt10.i/20130705.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

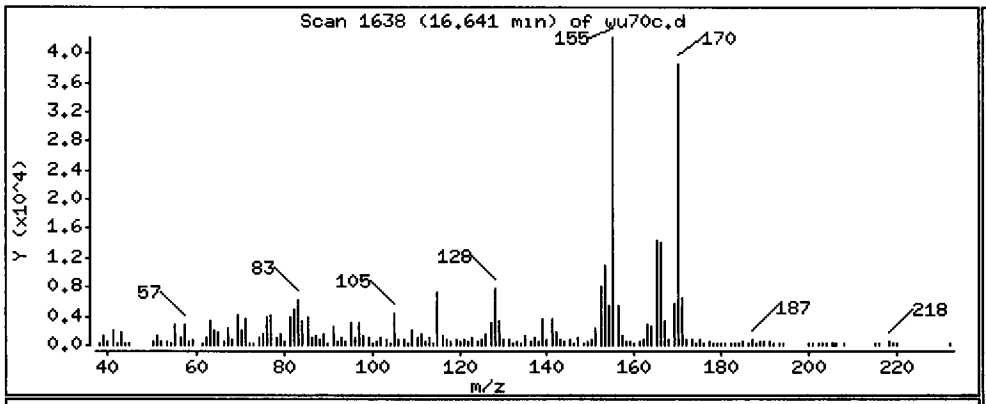
Operator: VTS/YZ

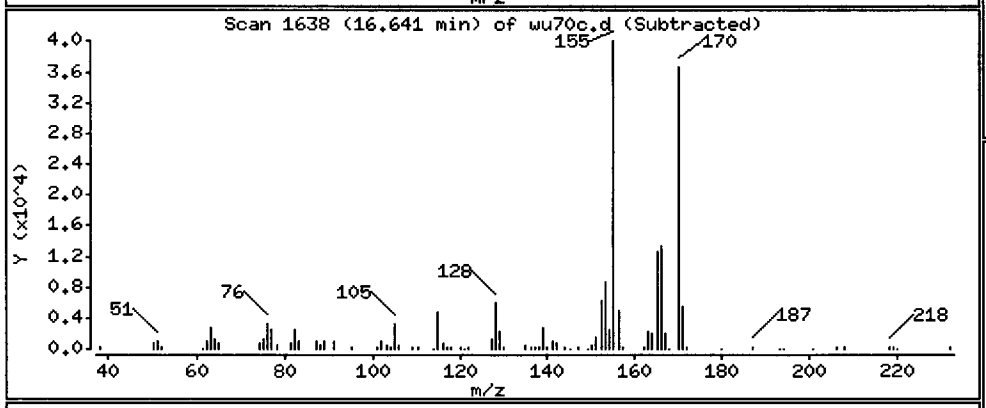
Column phase: ZB-5msi

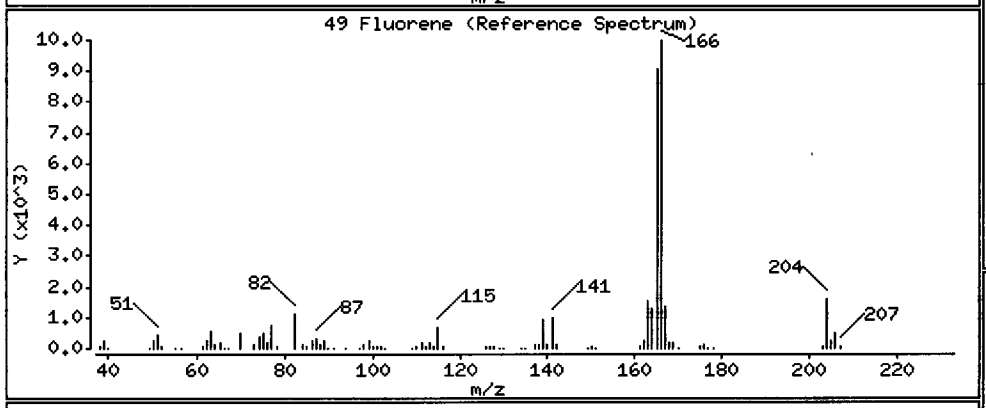
Column diameter: 0.25

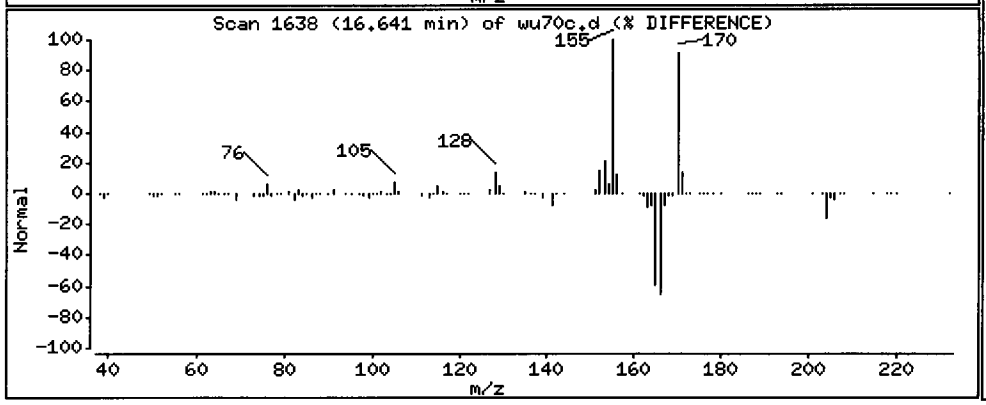
49 Fluorene

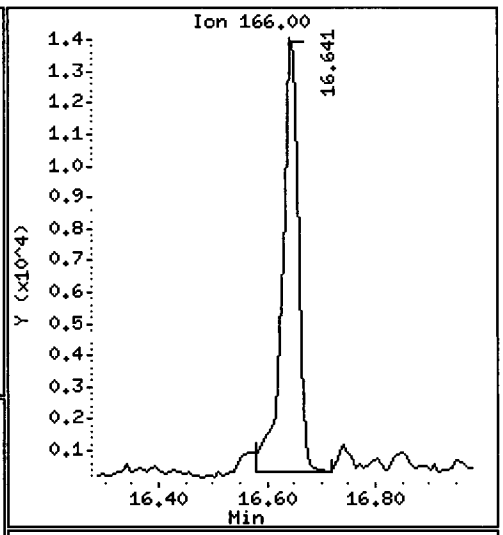
Concentration: 44.98 ug/kg

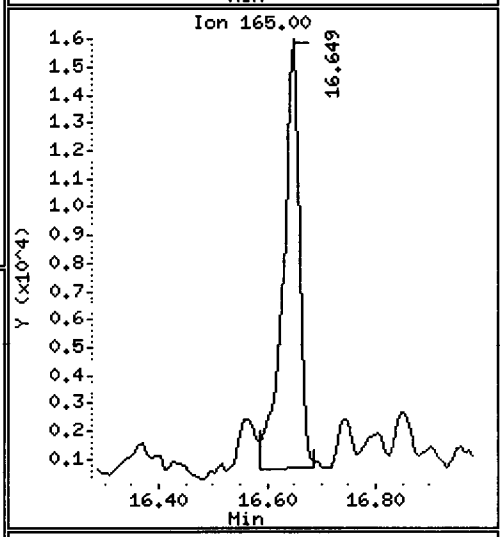


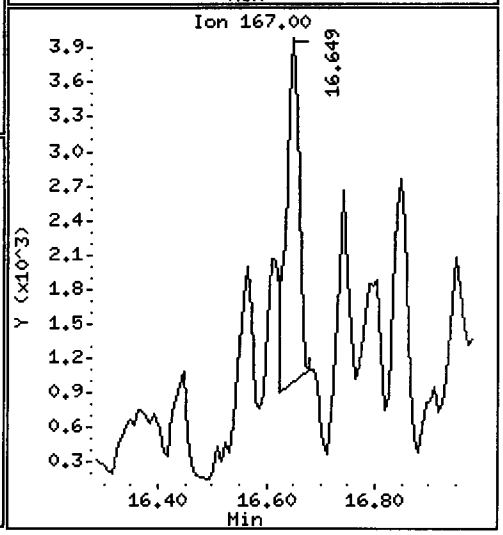












Data File: /chem1/nt10.i/20130705.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

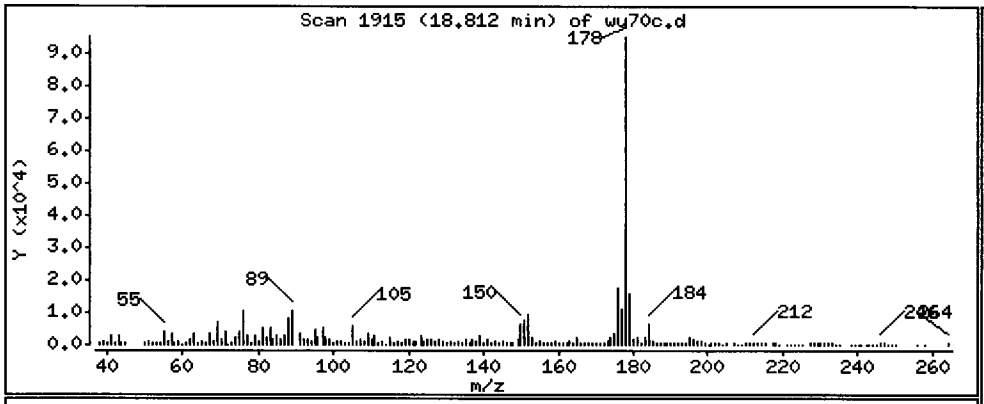
Operator: VTS/YZ

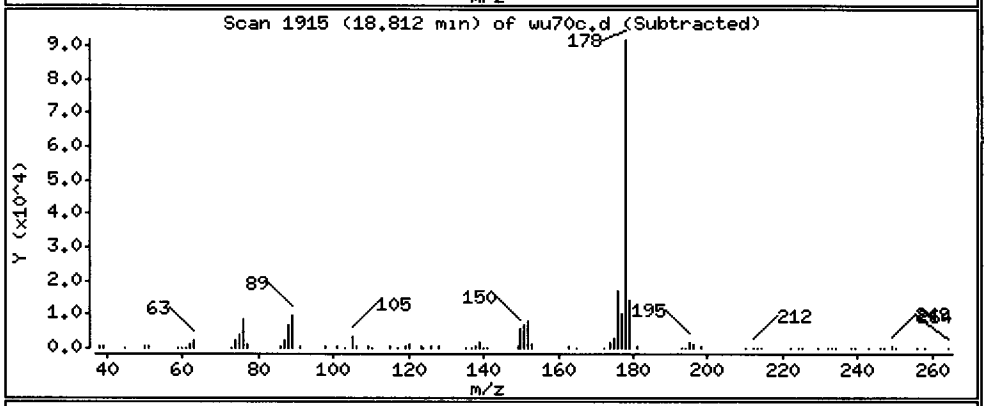
Column phase: ZB-5ms1

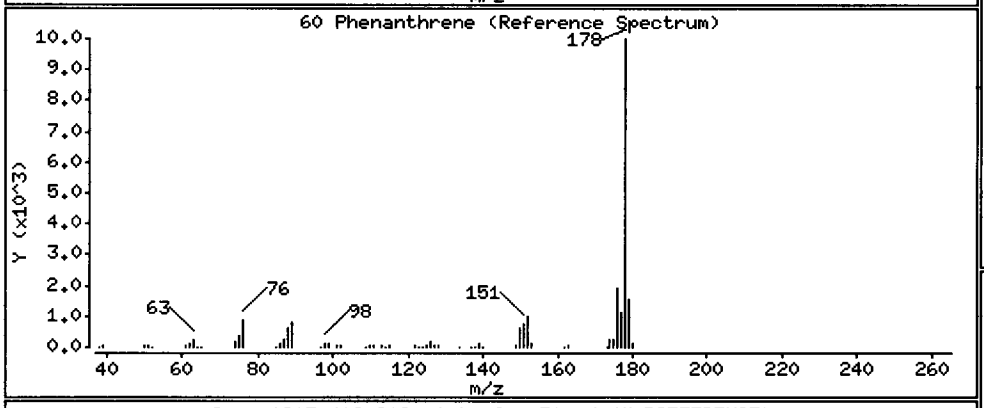
Column diameter: 0.25

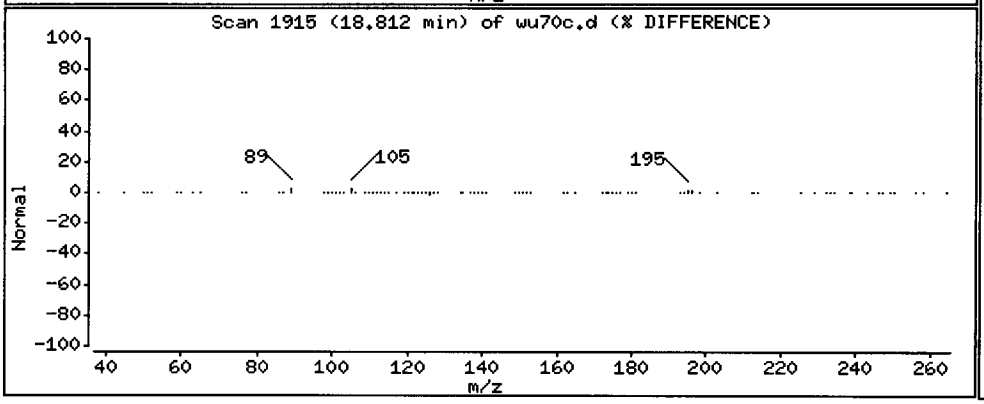
60 Phenanthrene

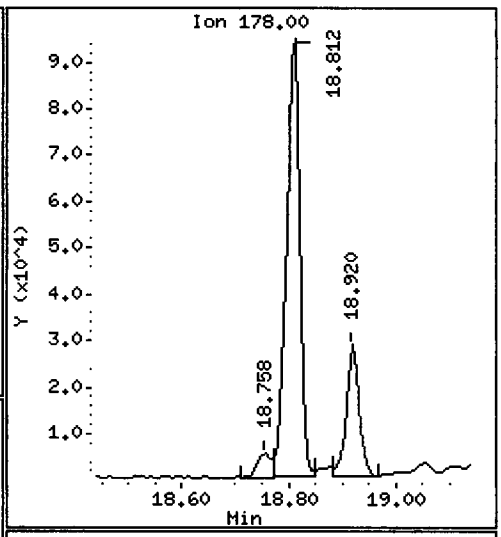
Concentration: 217.1 ug/kg

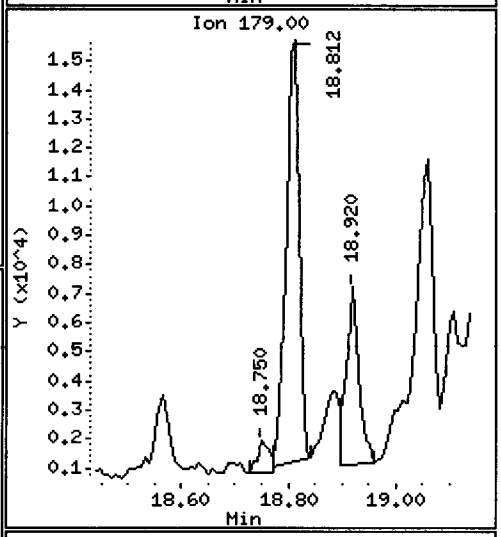


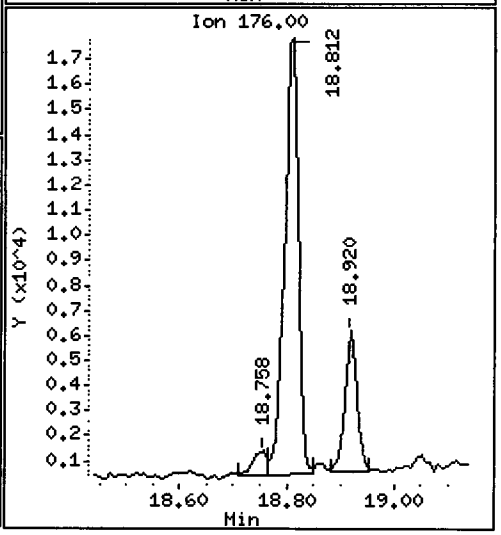












Data File: /chem1/nt10.i/20130705.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

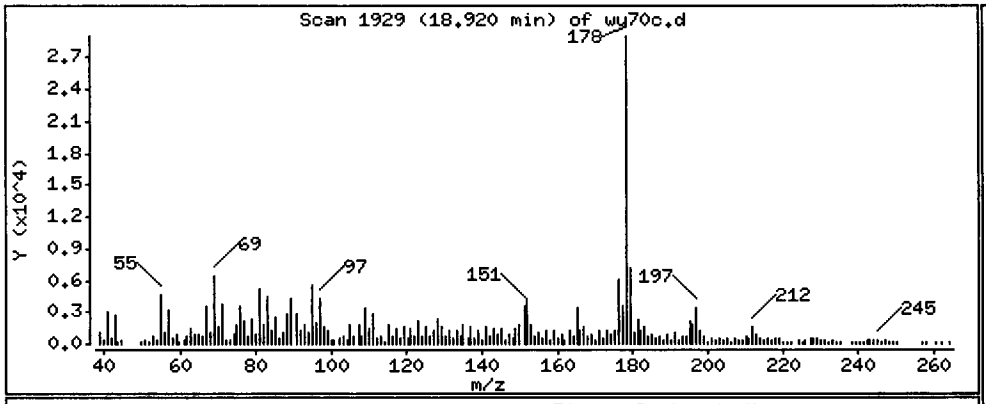
Operator: VTS/YZ

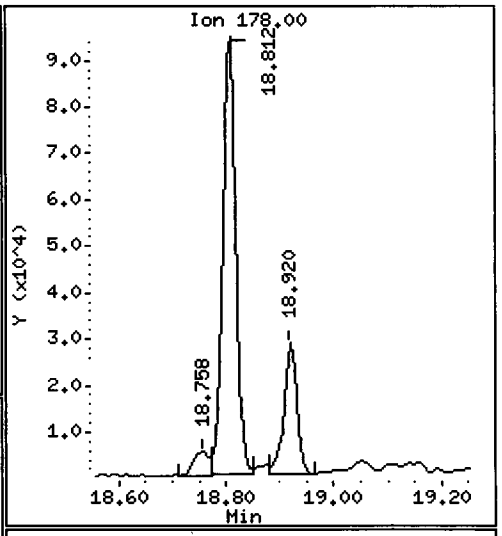
Column phase: ZB-5ms1

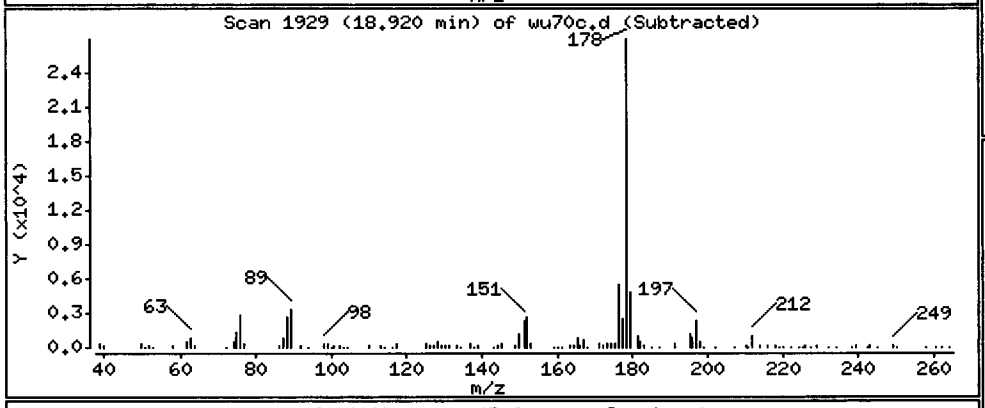
Column diameter: 0.25

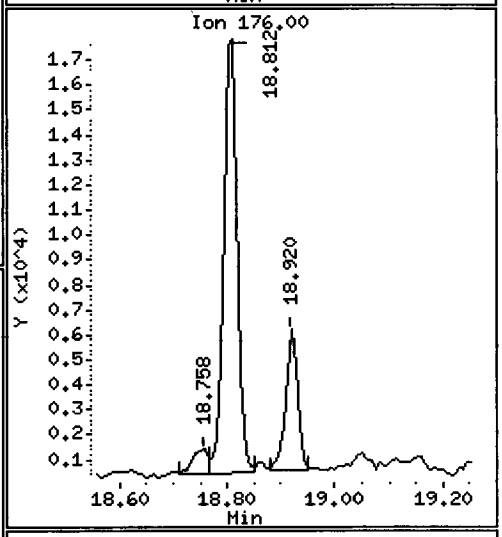
61 Anthracene

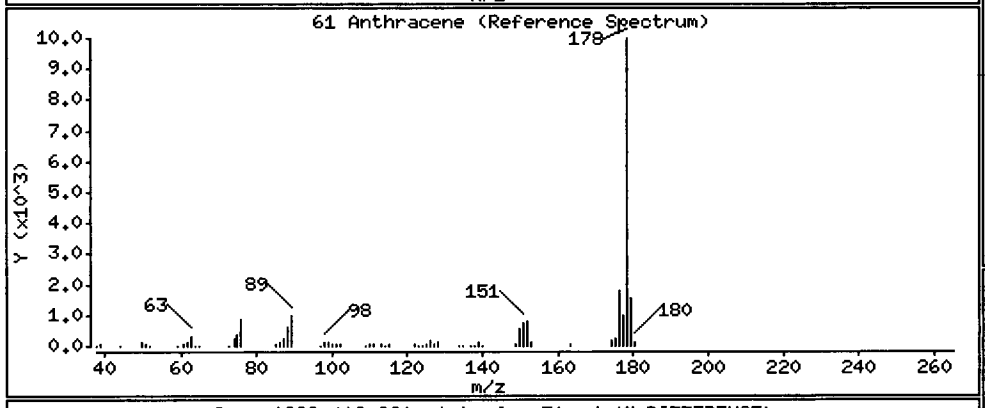
Concentration: 60.32 ug/kg

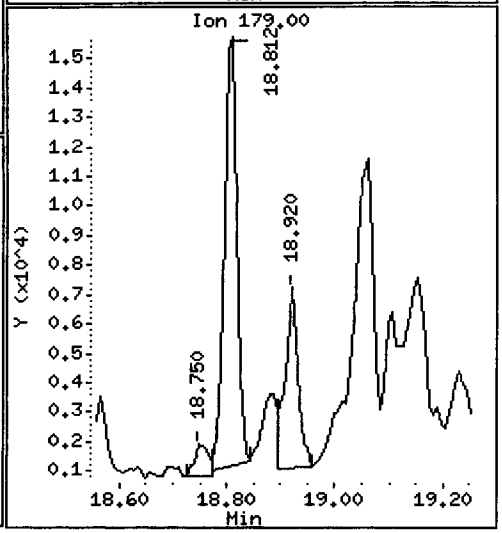


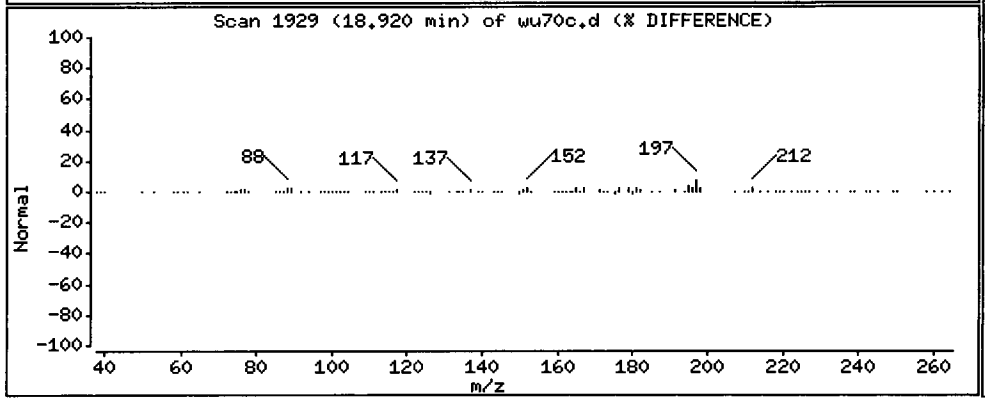












Data File: /chem1/nt10.i/20130705.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

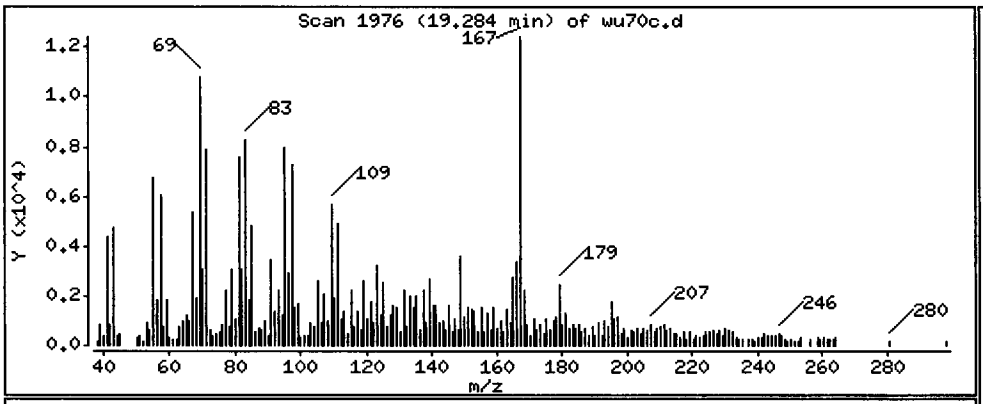
Operator: VTS/YZ

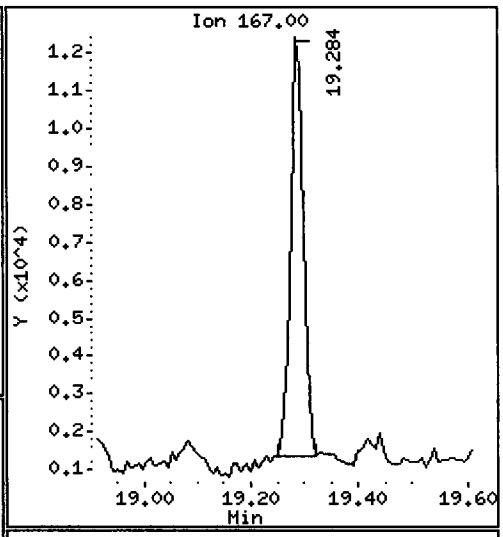
Column phase: ZB-5ms1

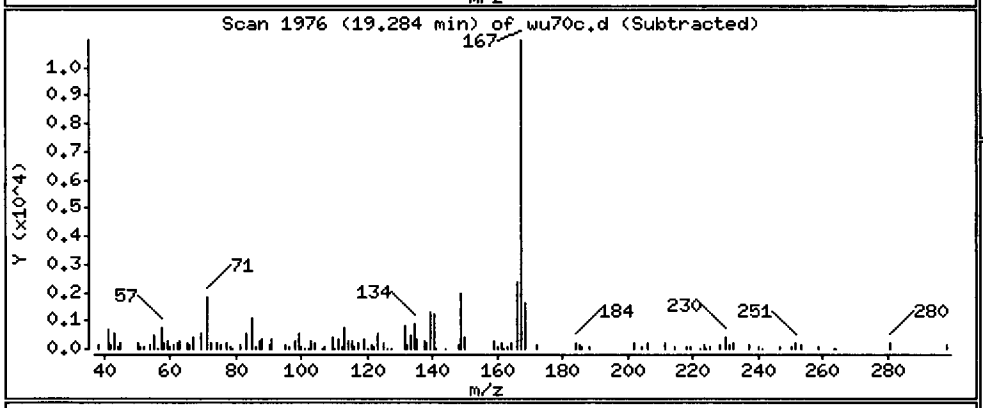
Column diameter: 0.25

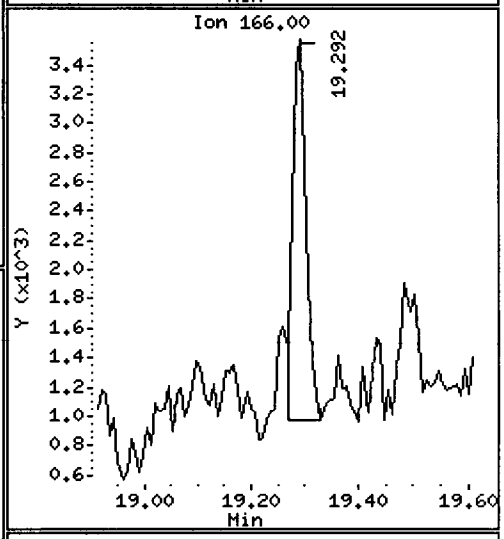
62 Carbazole

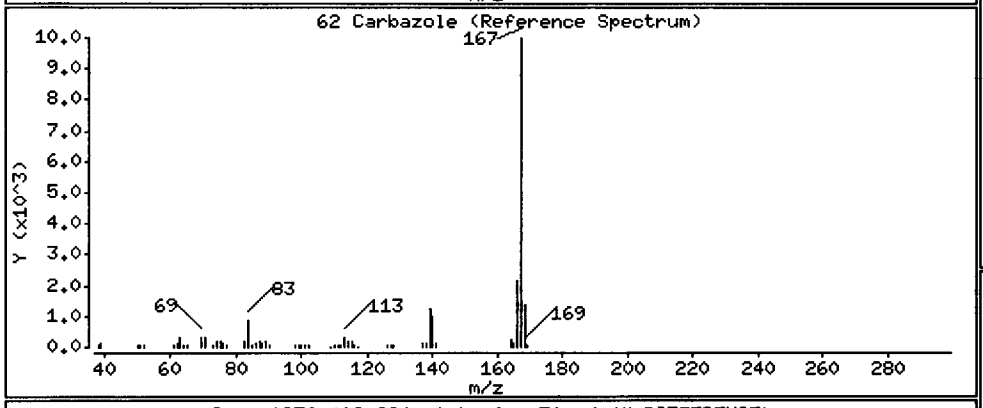
Concentration: 37.11 ug/kg

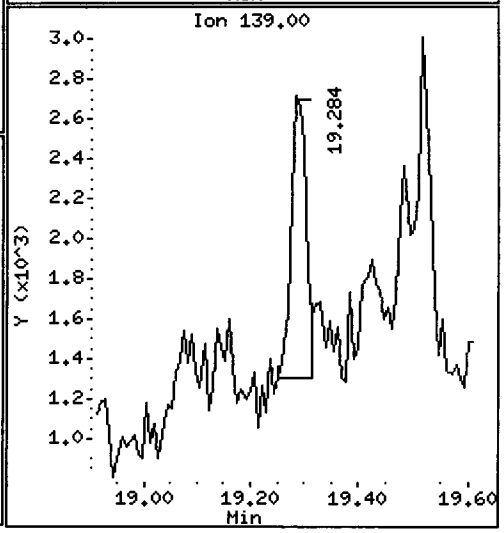


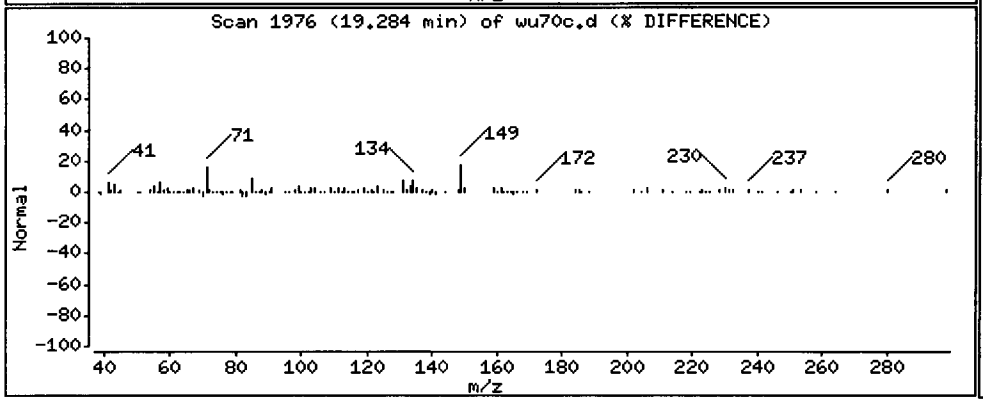












Data File: /chem1/nt10.i/20130705.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

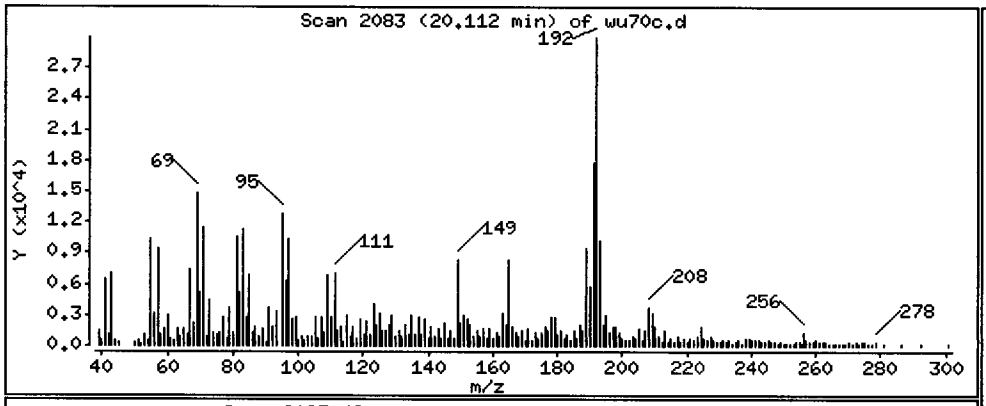
Operator: VTS/YZ

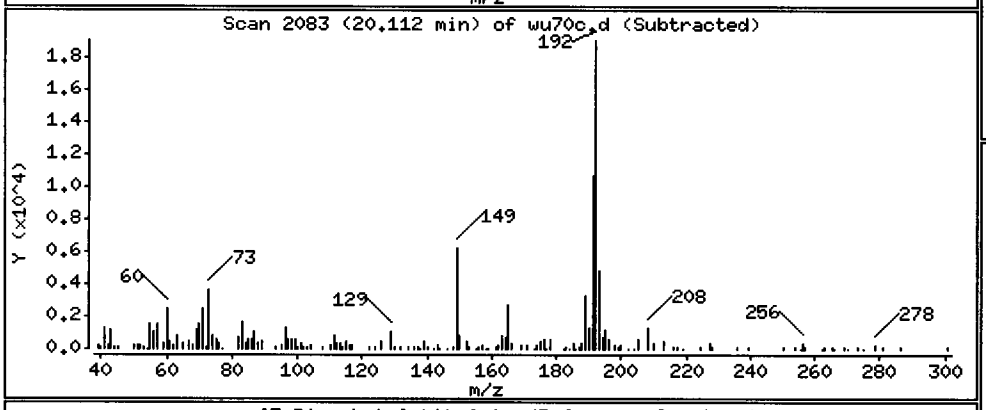
Column phase: ZB-5ms1

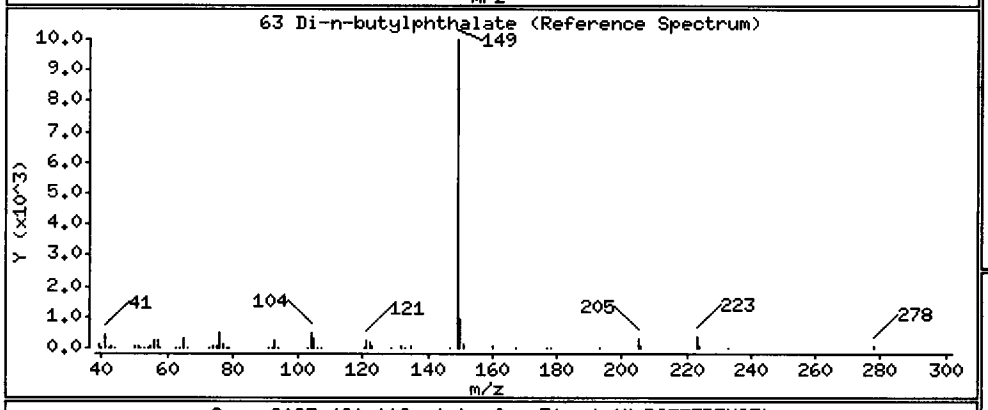
Column diameter: 0.25

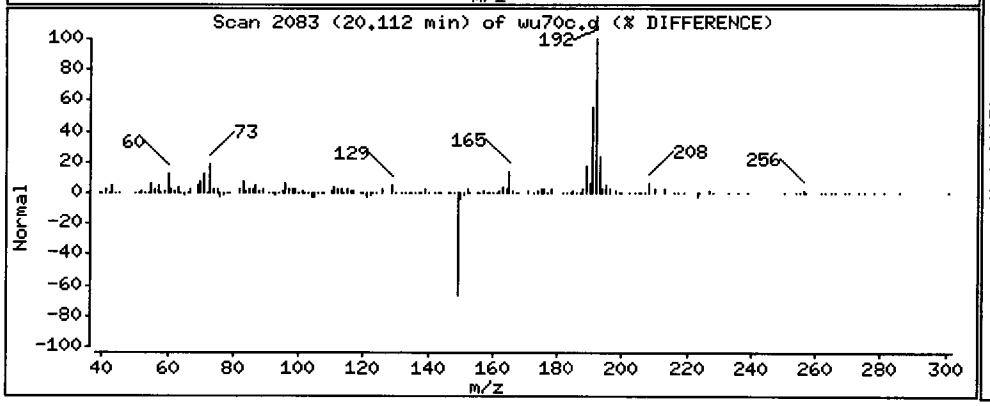
63 Di-n-butylphthalate

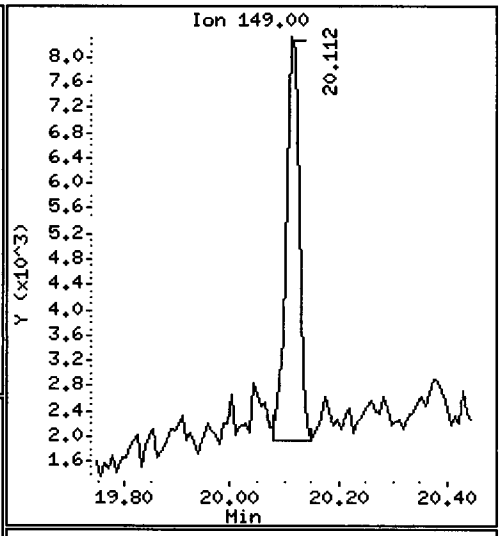
Concentration: 12.63 ug/kg

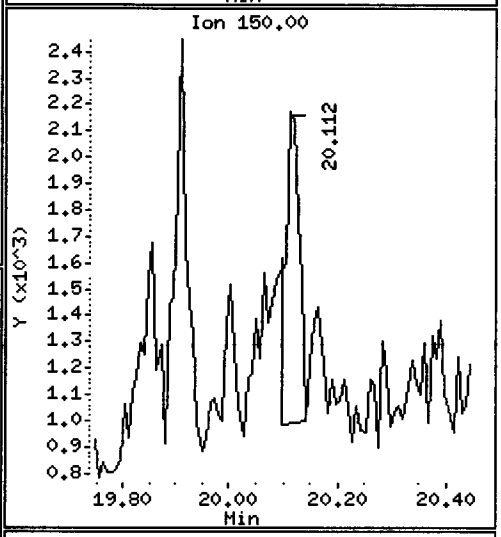


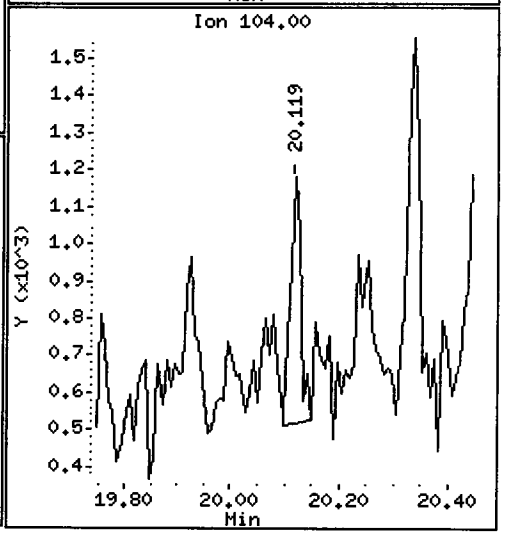












Data File: /chem1/nt10.i/20130705.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

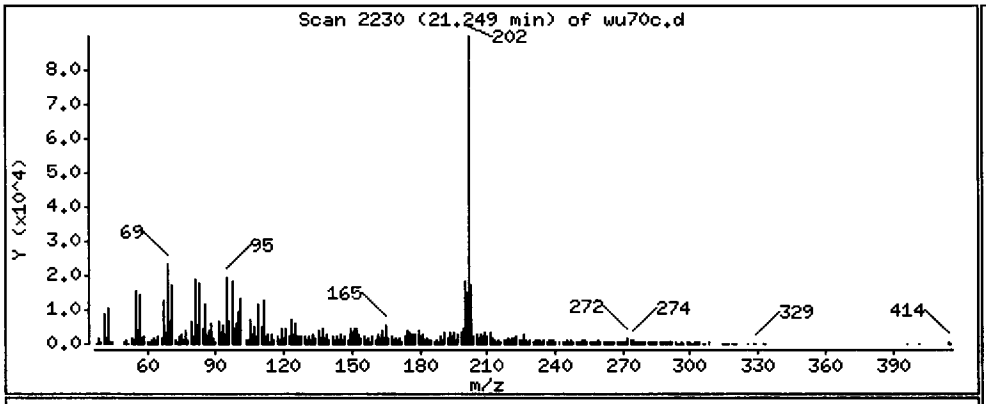
Operator: VTS/YZ

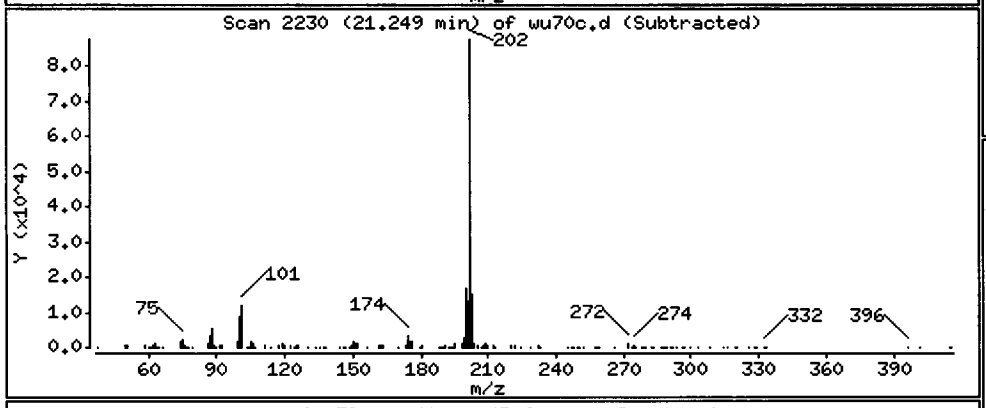
Column phase: ZB-5msi

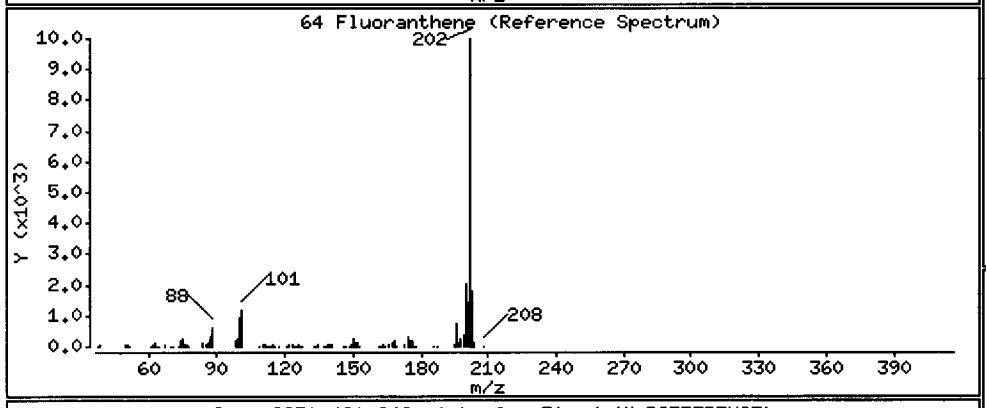
Column diameter: 0.25

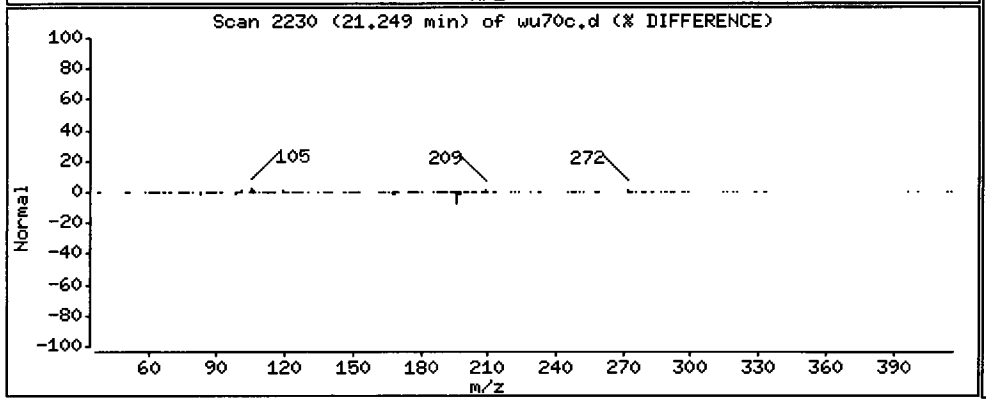
64 Fluoranthene

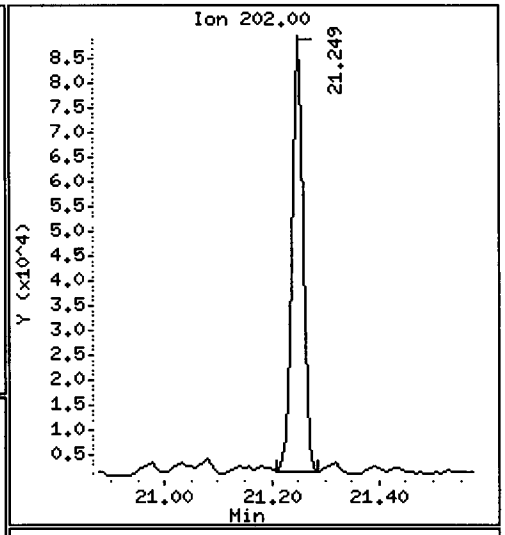
Concentration: 144.4 ug/kg

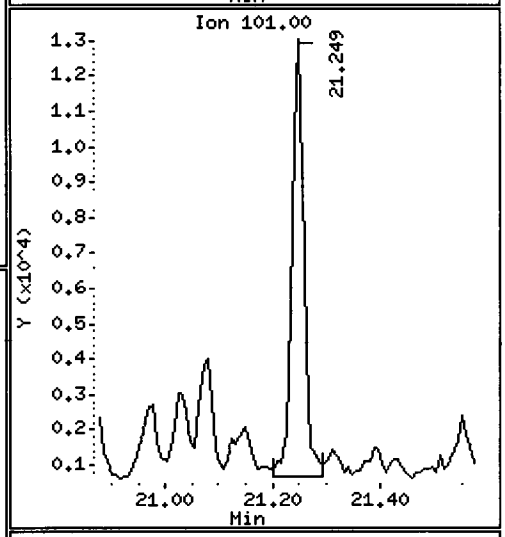


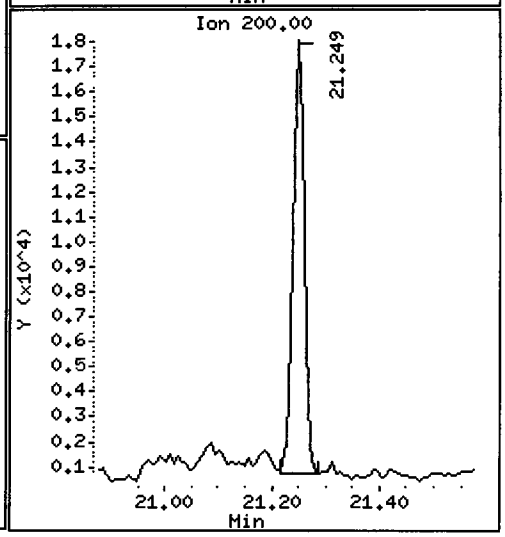












Data File: /chem1/nt10.i/20130705.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

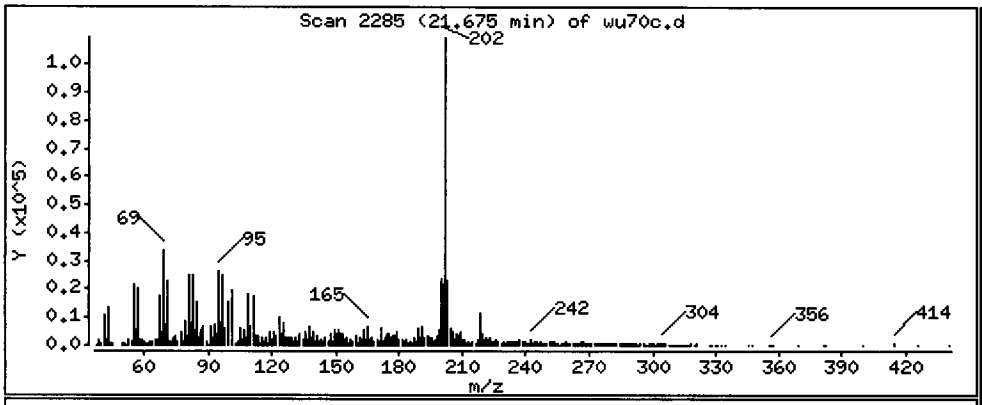
Operator: VTS/YZ

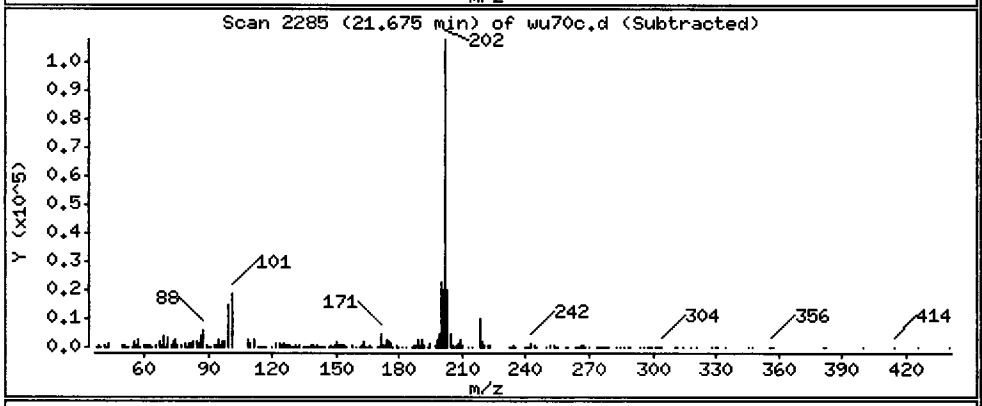
Column phase: ZB-5msi

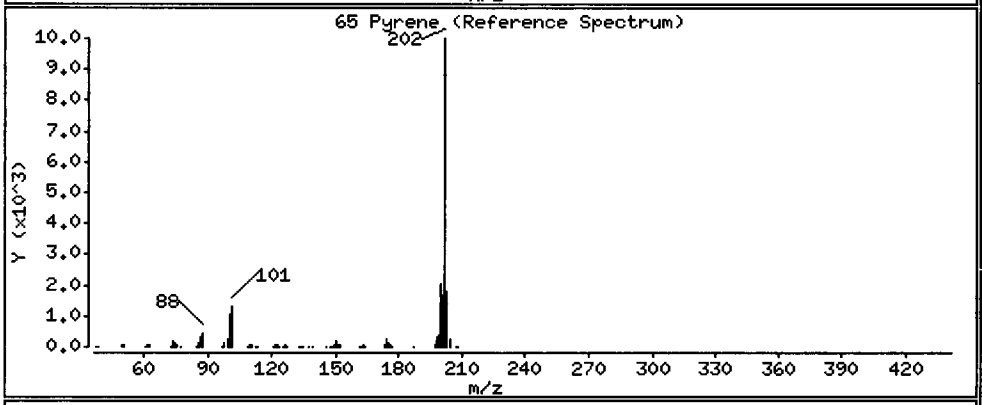
Column diameter: 0.25

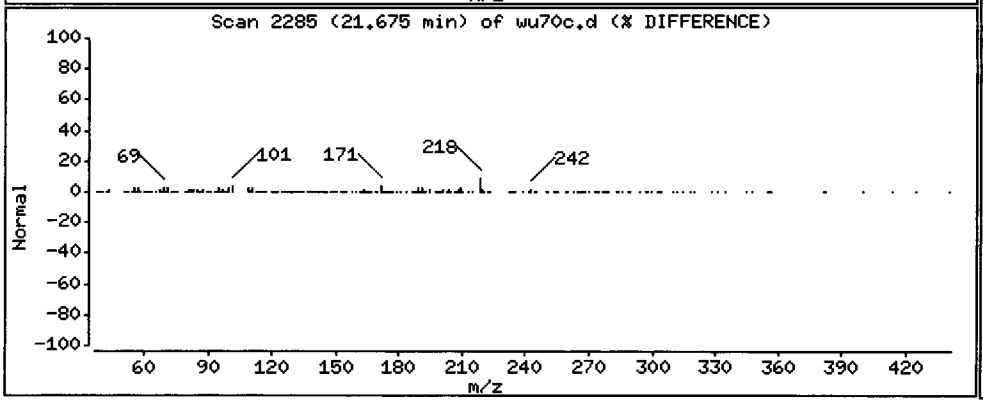
65 Pyrene

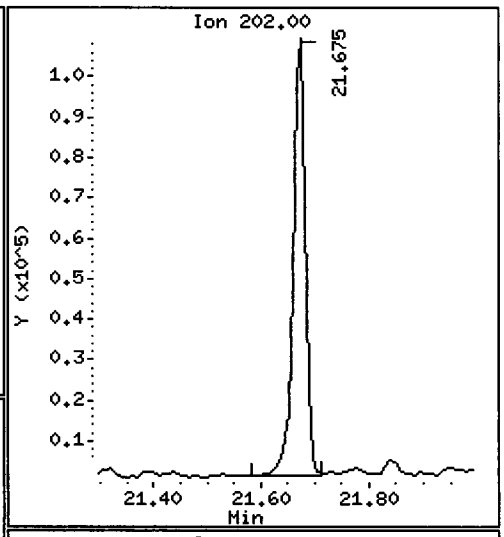
Concentration: 181.7 ug/kg

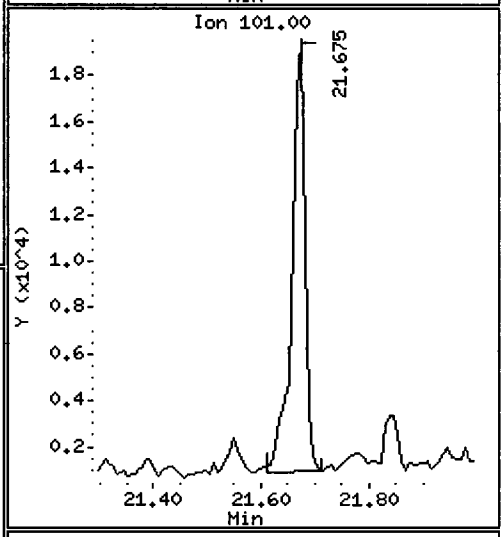


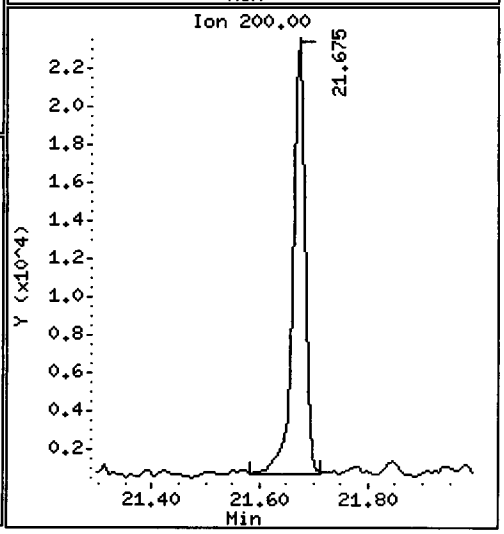












Data File: /chem1/nt10.i/20130705.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

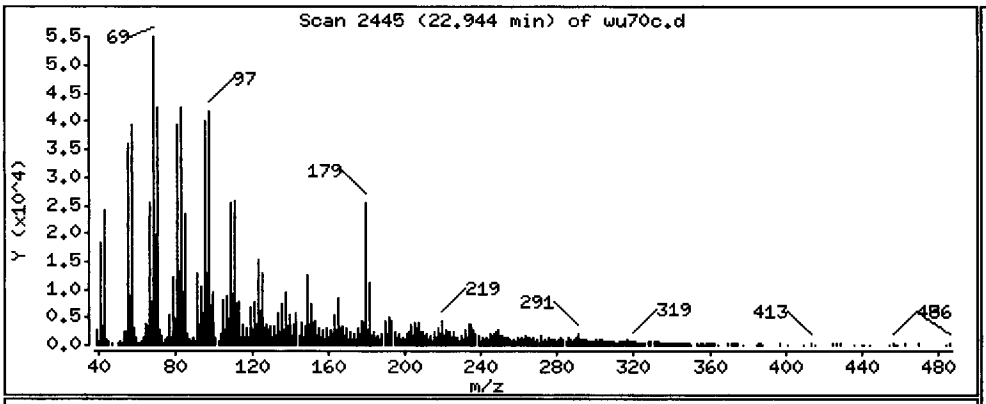
Operator: VTS/YZ

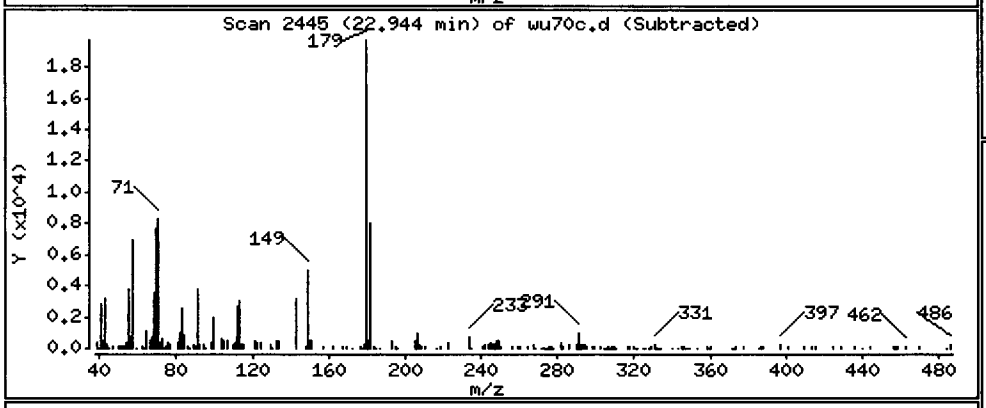
Column phase: ZB-5msi

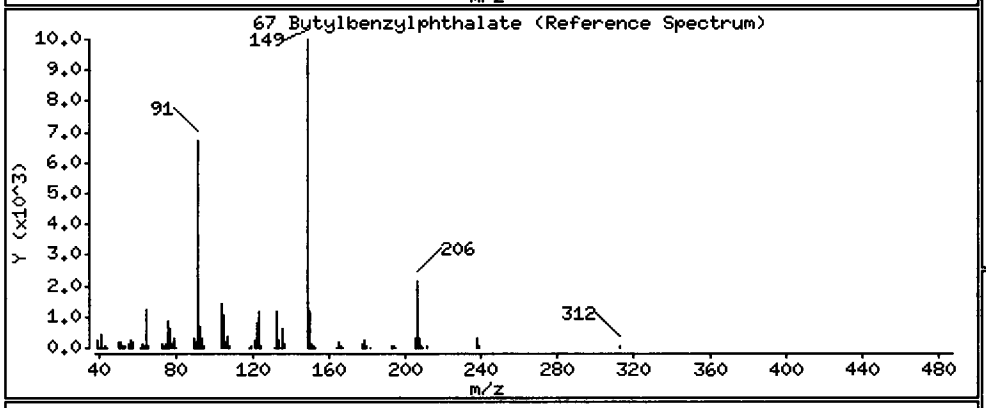
Column diameter: 0.25

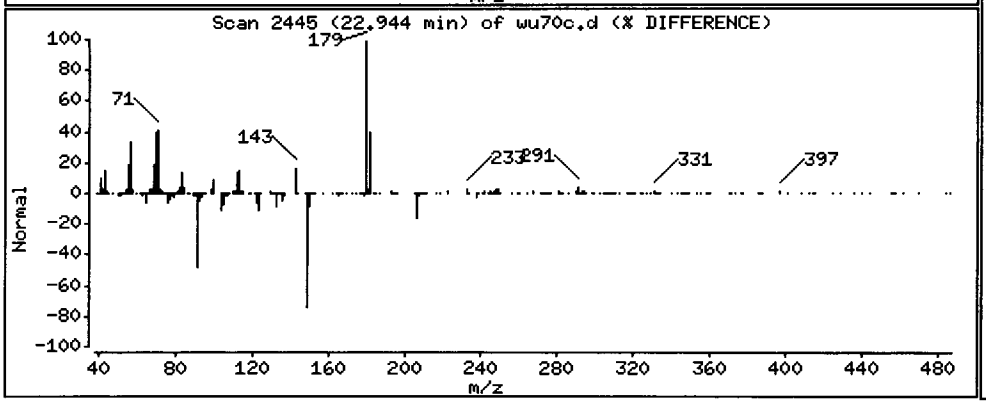
67 Butylbenzylphthalate

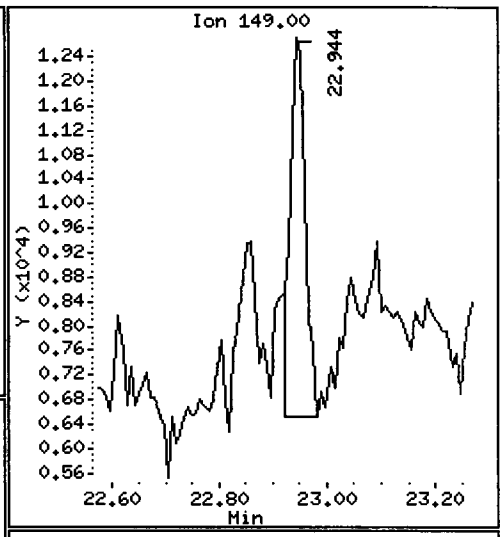
Concentration: 34.91 ug/kg

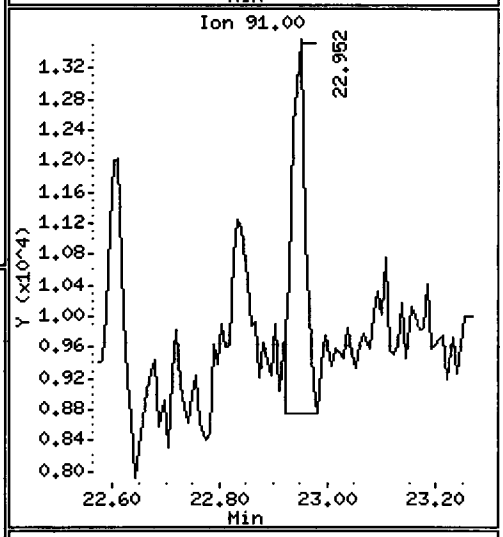


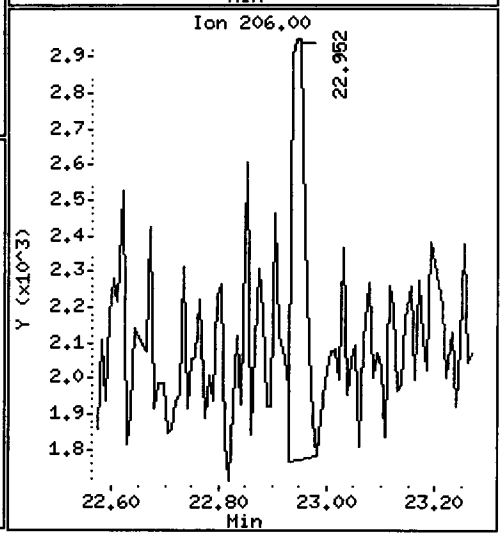












Data File: /chem1/nt10.i/20130705.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

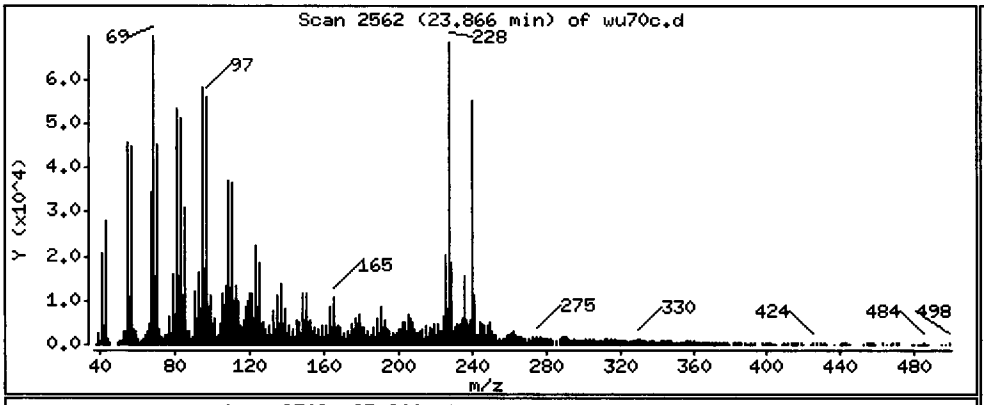
Operator: VTS/YZ

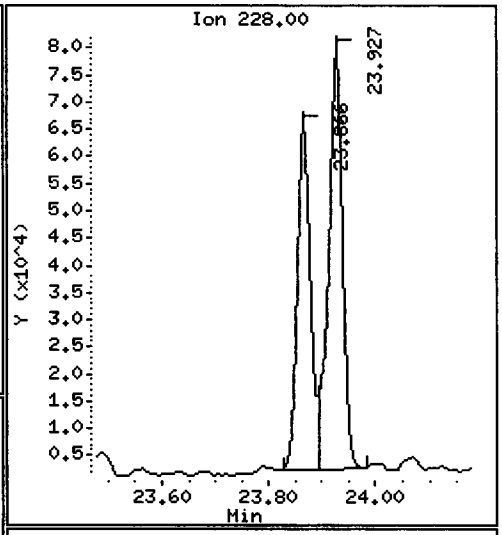
Column phase: ZB-5msi

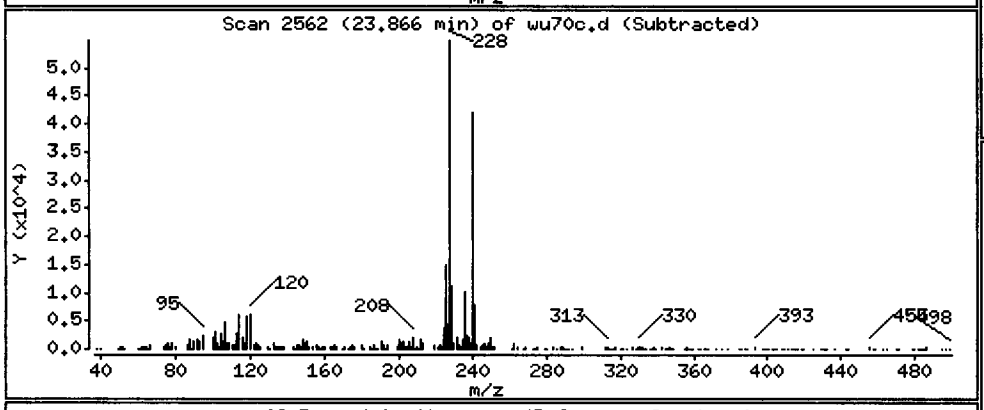
Column diameter: 0.25

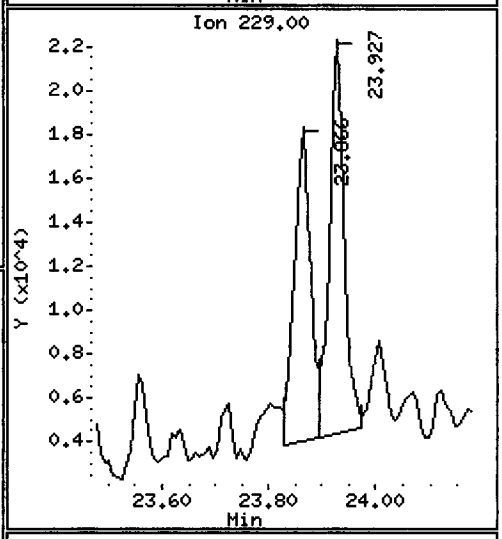
68 Benzo(a)anthracene

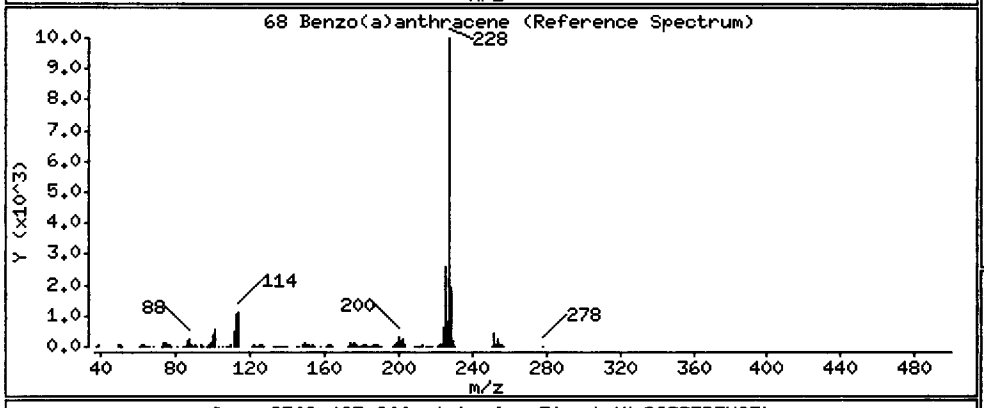
Concentration: 129.4 ug/kg

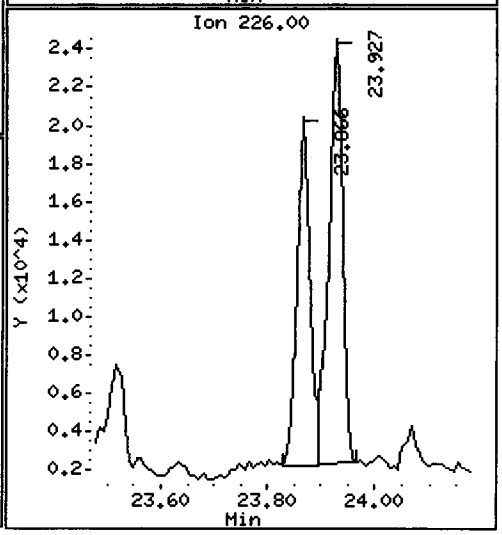


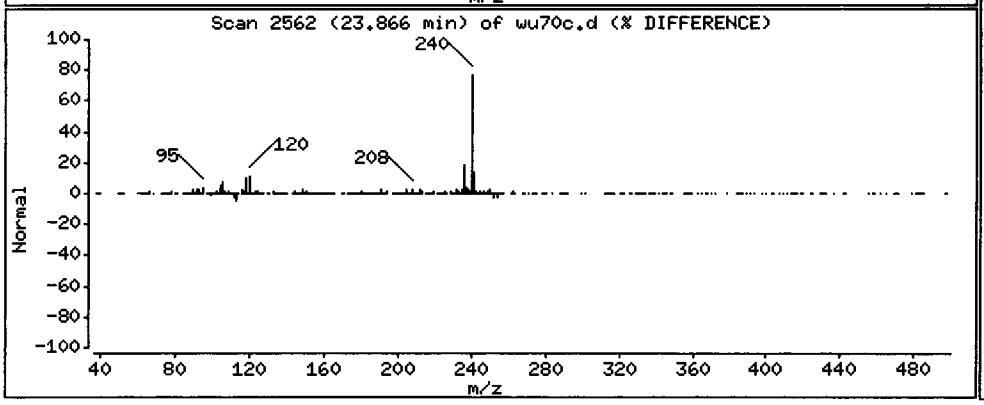












Data File: /chem1/nt10.i/20130705.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

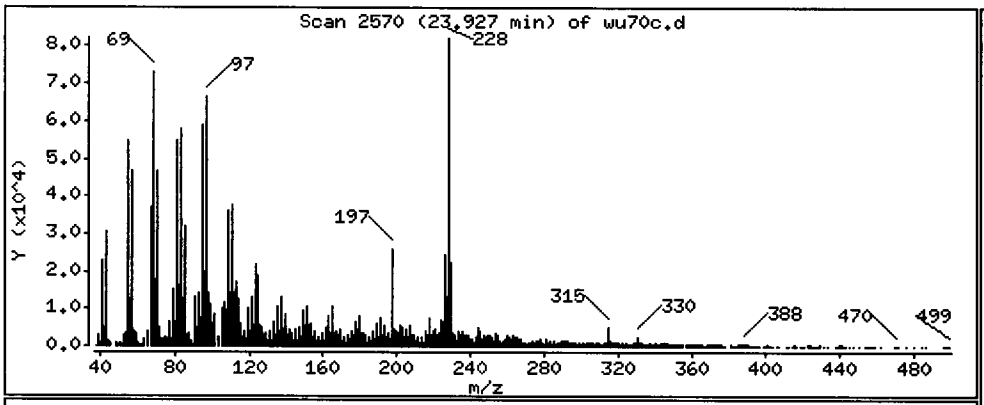
Operator: VTS/YZ

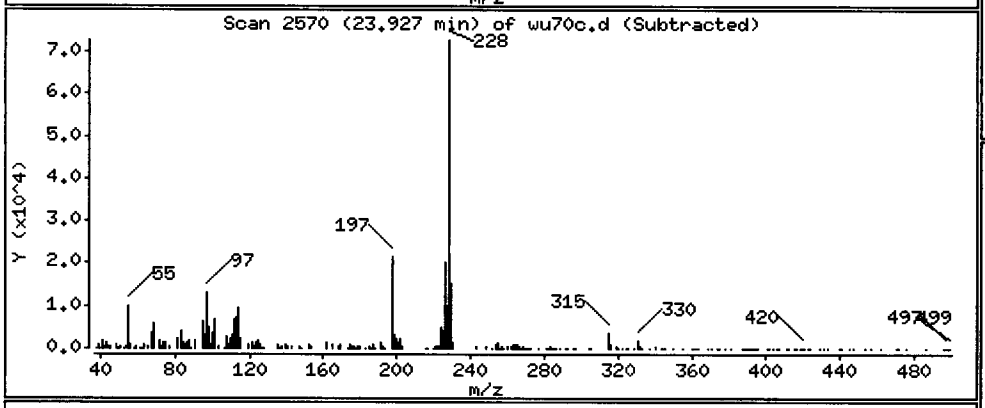
Column phase: ZB-5msi

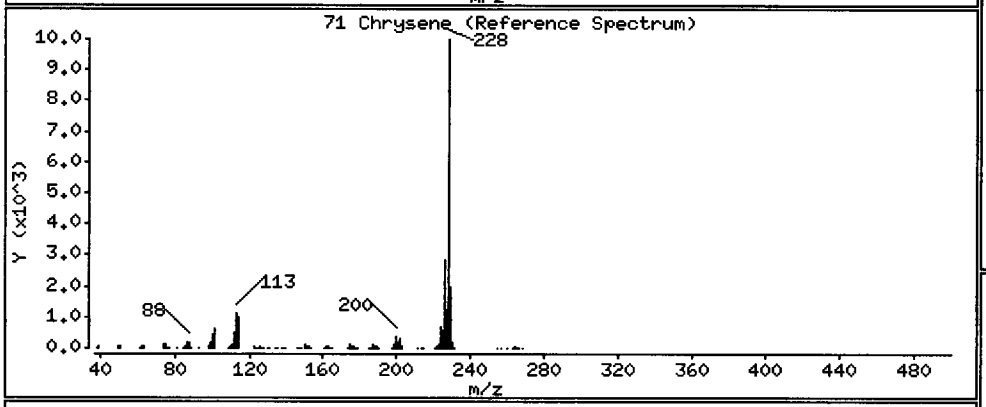
Column diameter: 0.25

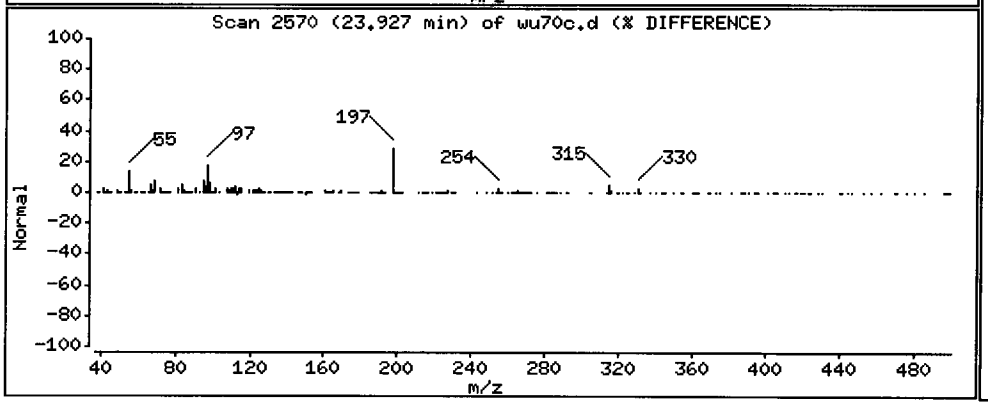
71 Chrysene

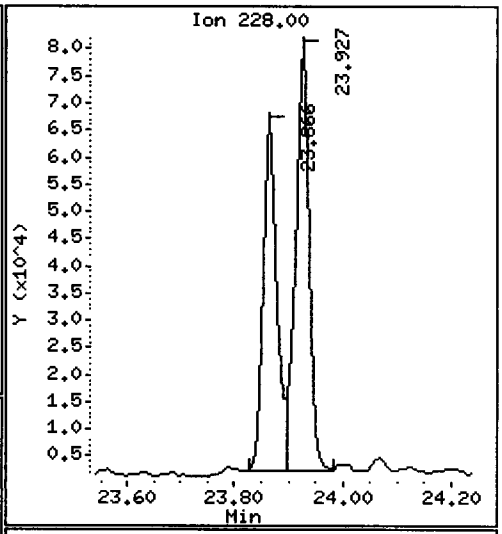
Concentration: 173.8 ug/kg

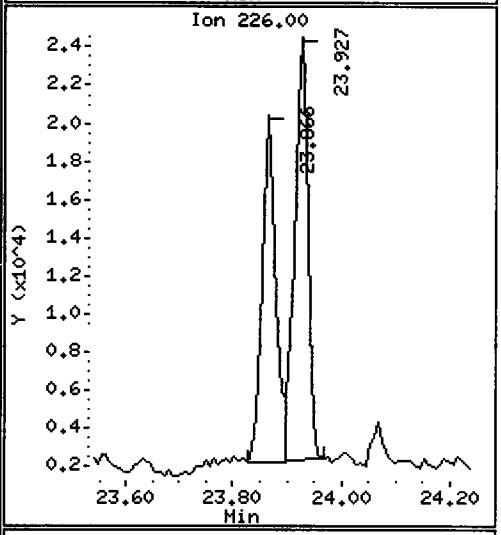


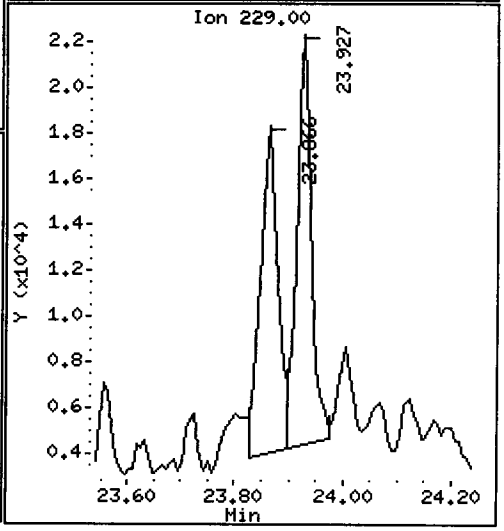












Data File: /chem1/nt10.i/20130705.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

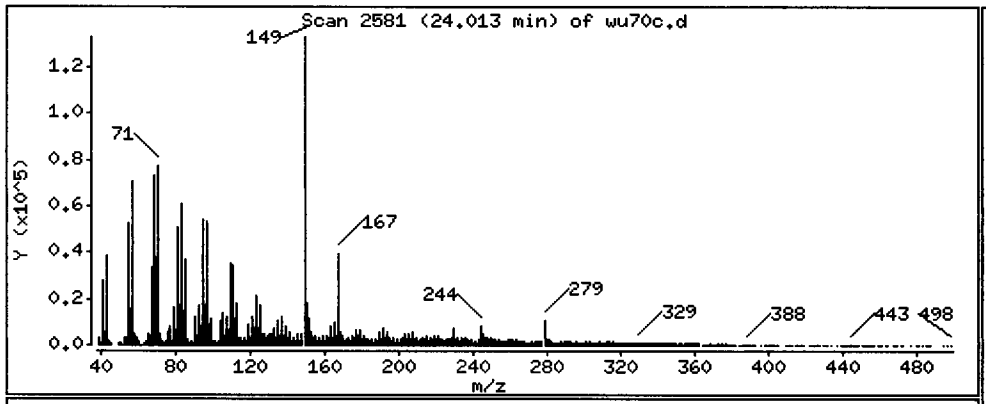
Operator: VTS/YZ

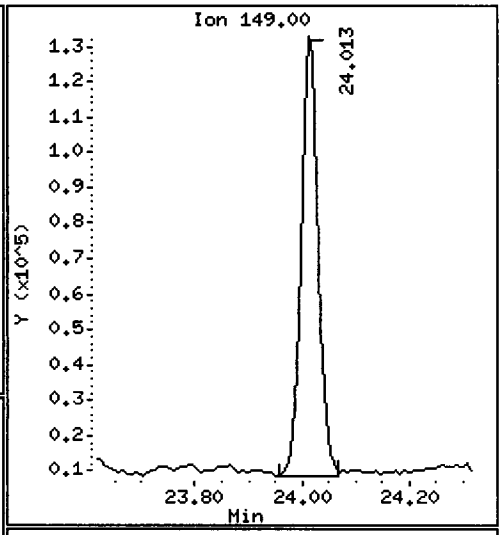
Column phase: ZB-5msi

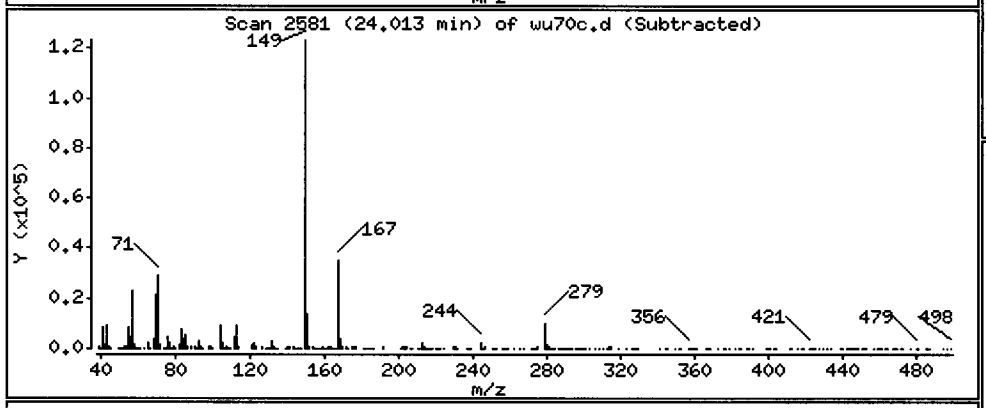
Column diameter: 0.25

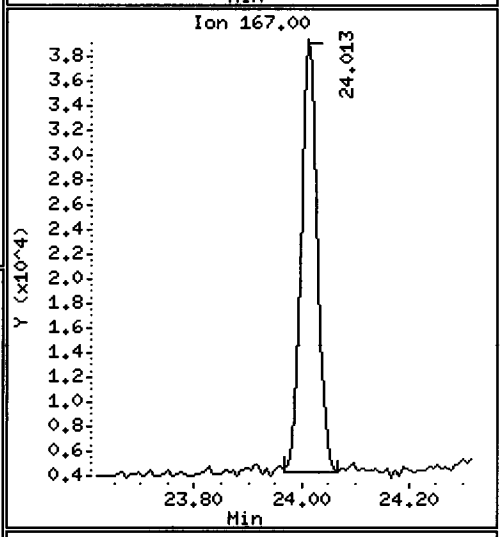
72 bis(2-Ethylhexyl)phthalate

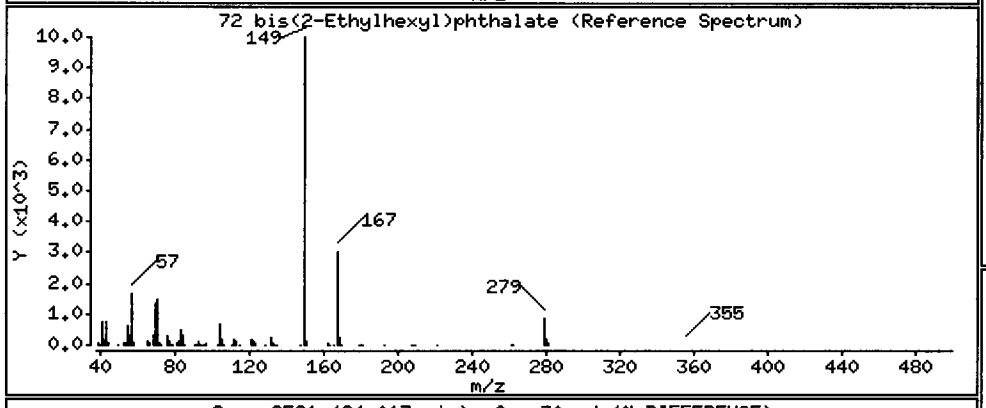
Concentration: 521.4 ug/kg

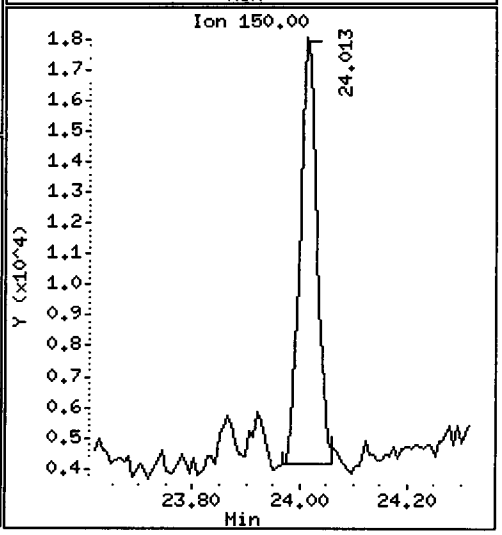


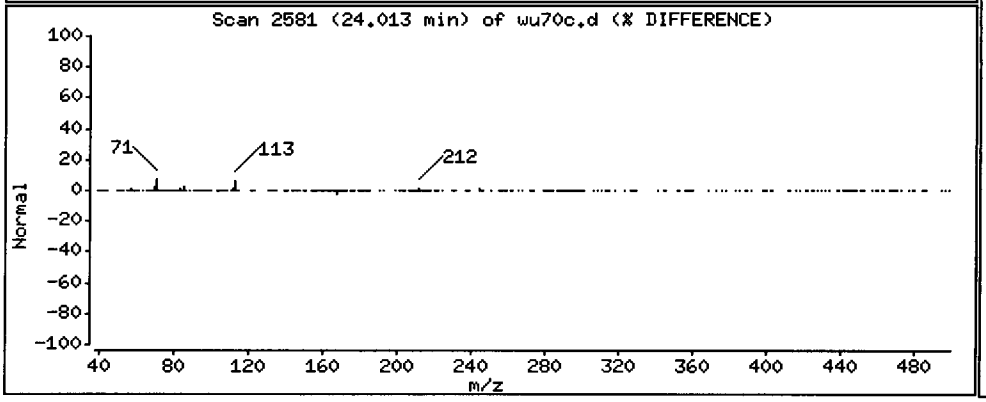












Data File: /chem1/nt10.i/20130705.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

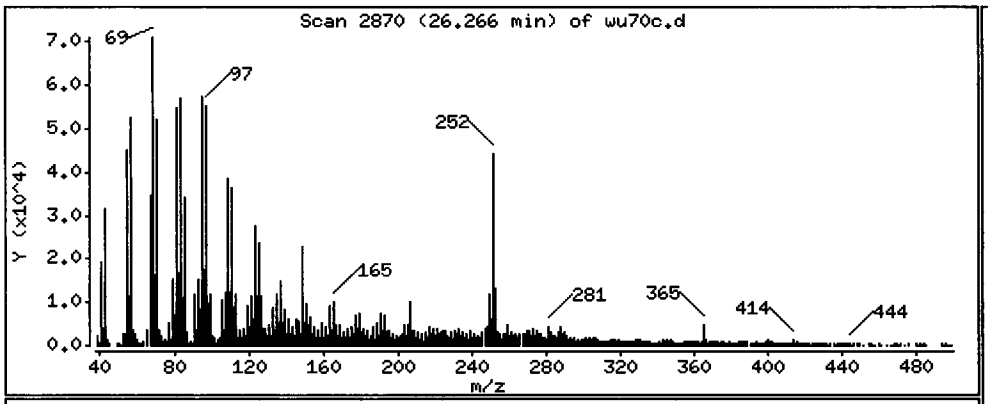
Operator: VTS/YZ

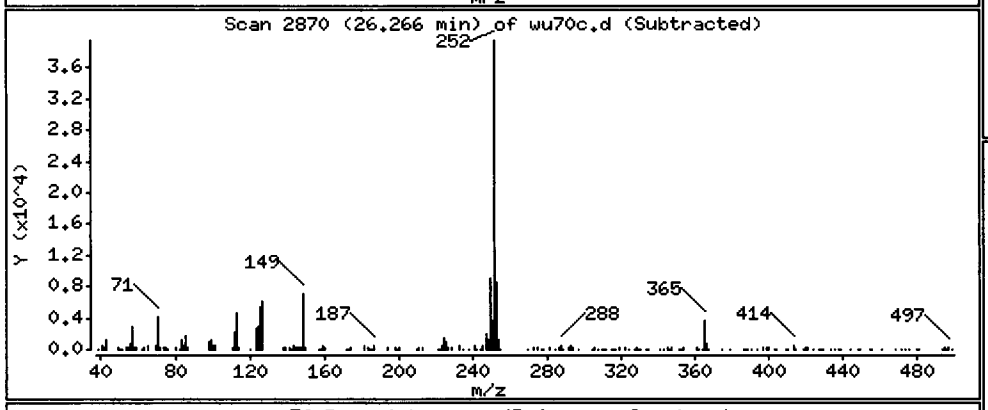
Column phase: ZB-5msi

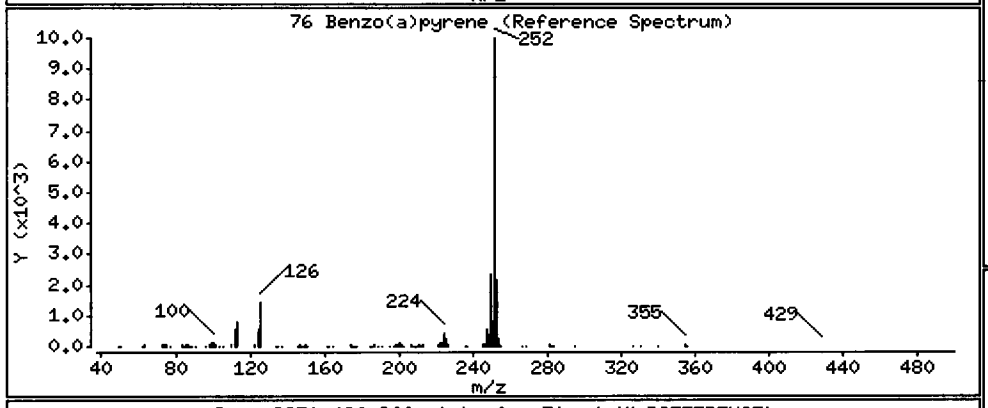
Column diameter: 0.25

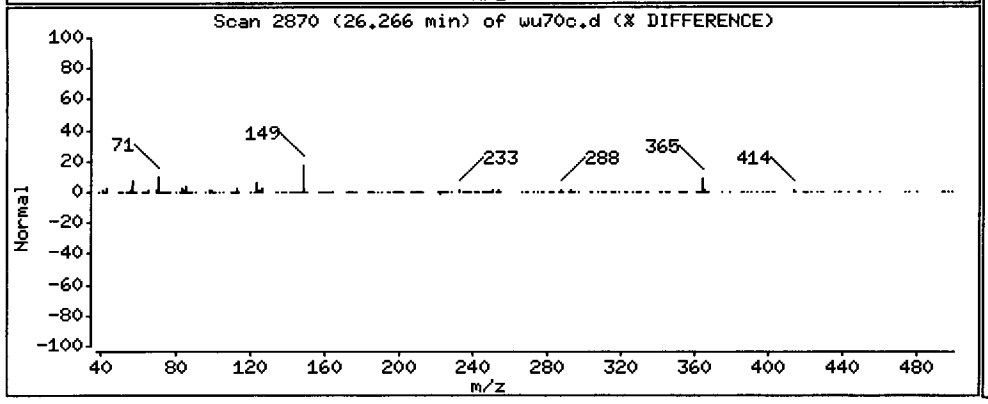
76 Benzo(a)pyrene

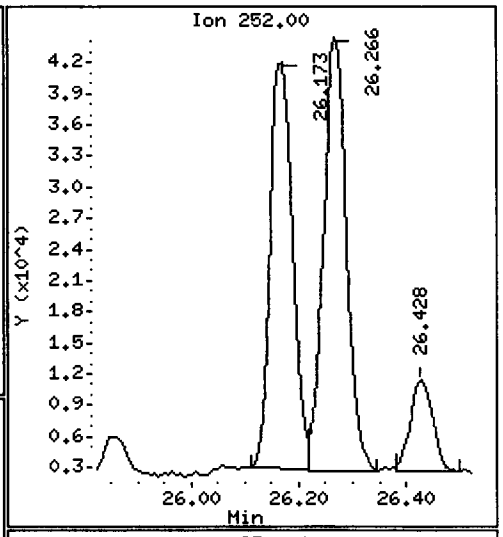
Concentration: 154.6 ug/kg

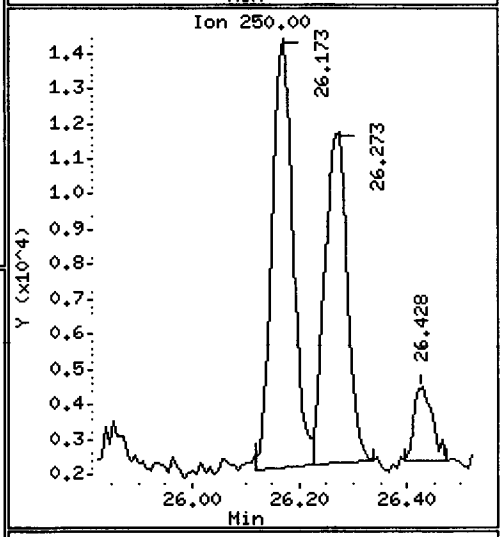


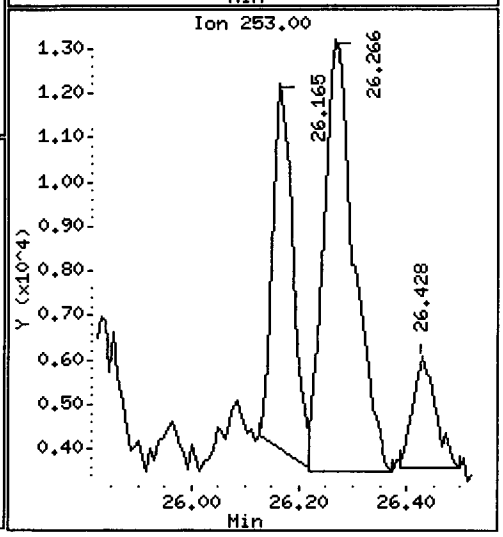












Data File: /chem1/nt10.i/20130705.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

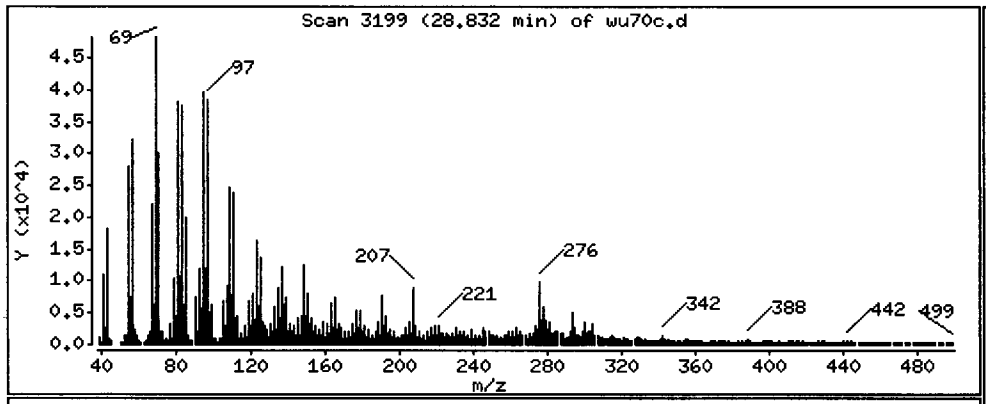
Operator: VTS/YZ

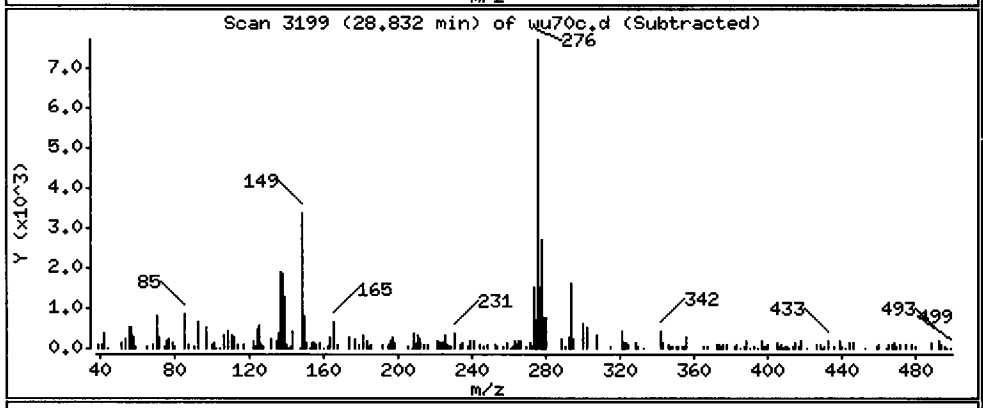
Column phase: ZB-5msi

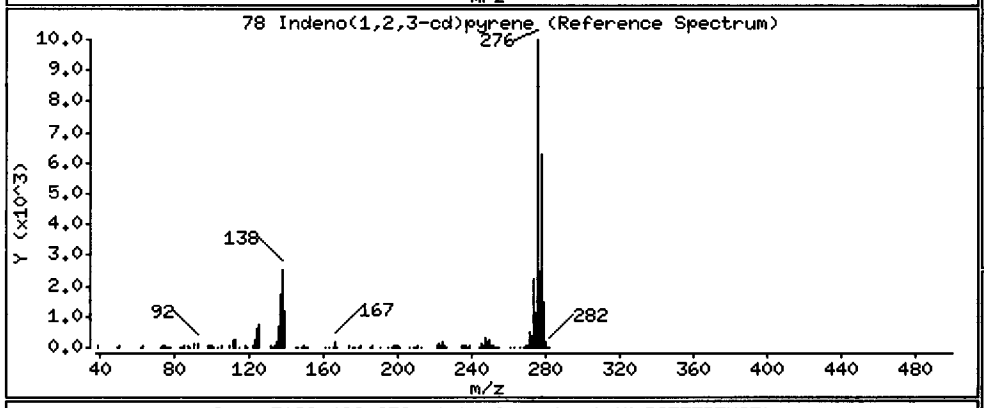
Column diameter: 0.25

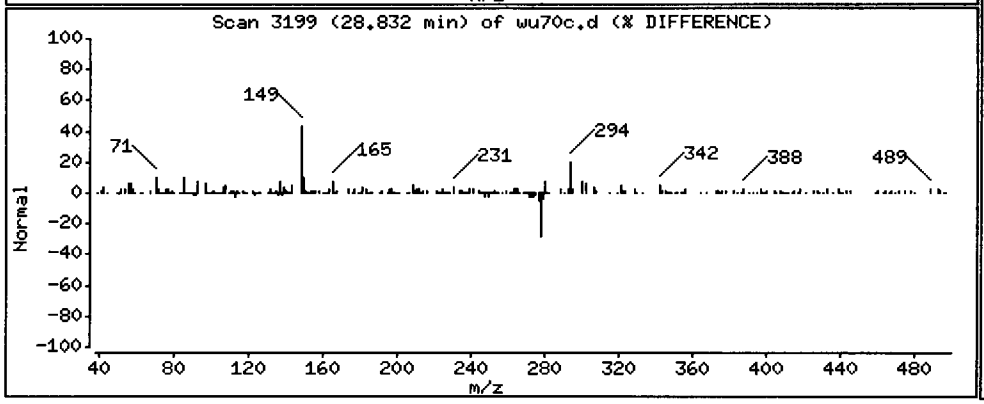
78 Indeno(1,2,3-cd)pyrene

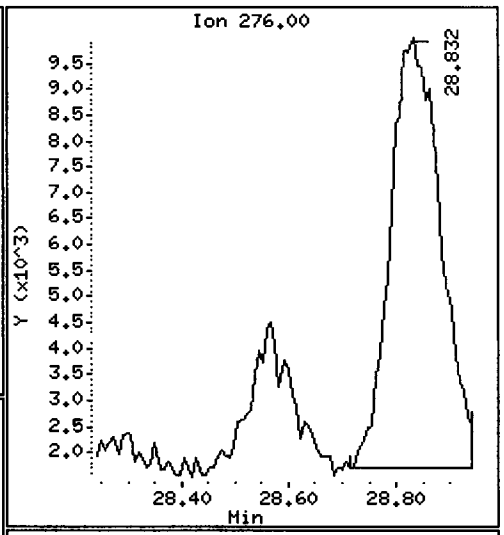
Concentration: 56.37 ug/kg

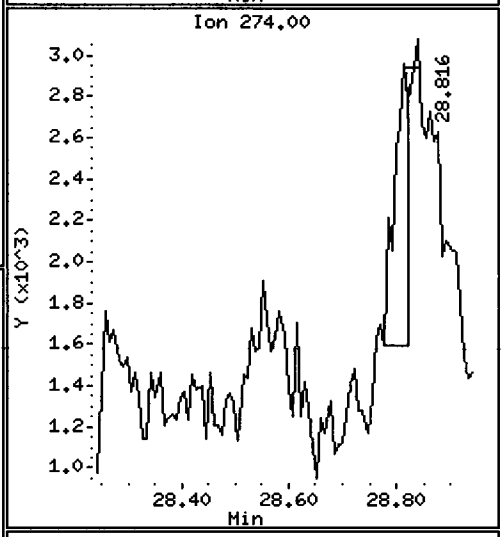


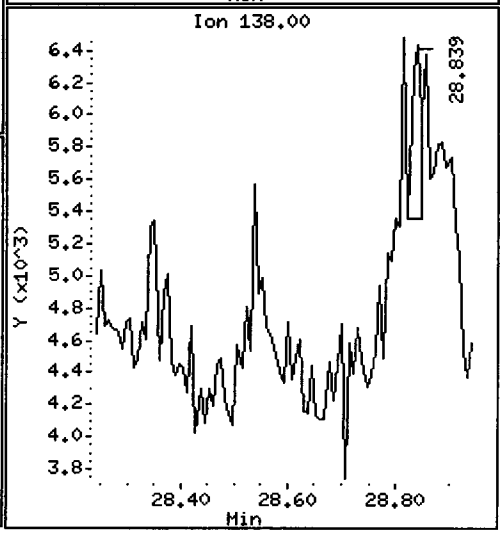












Data File: /chem1/nt10.i/20130705.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

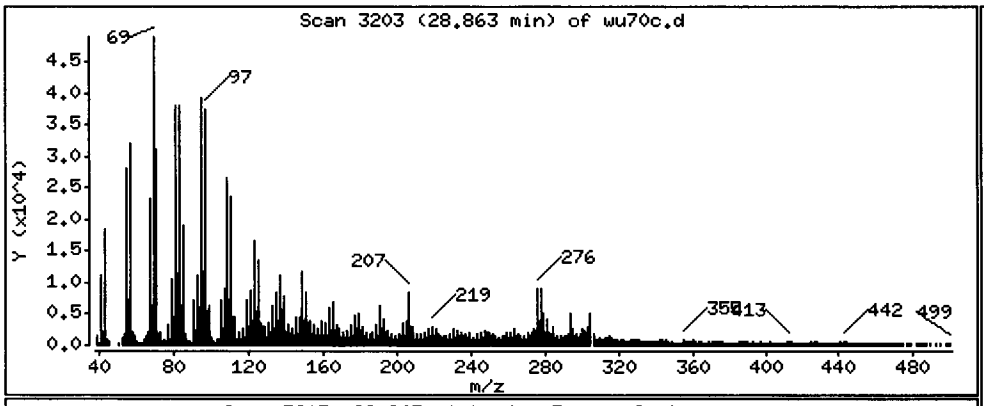
Operator: VTS/YZ

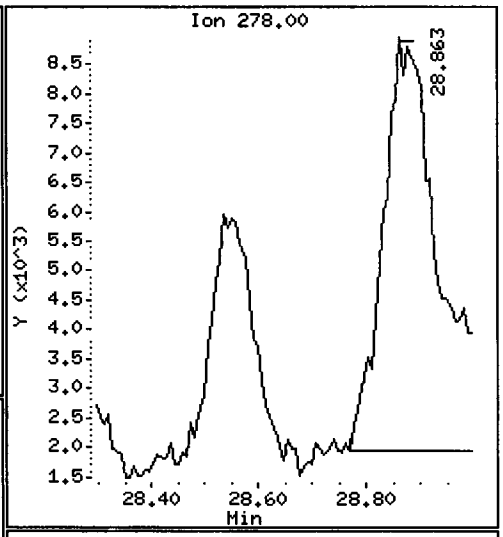
Column phase: ZB-5msi

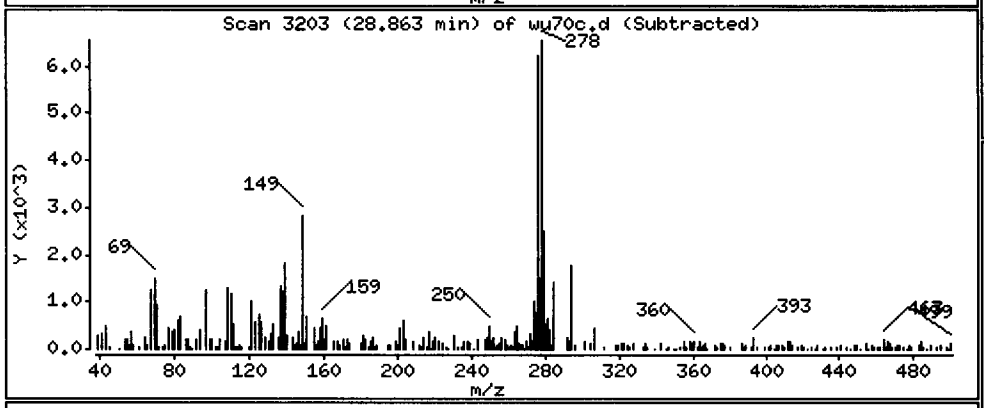
Column diameter: 0.25

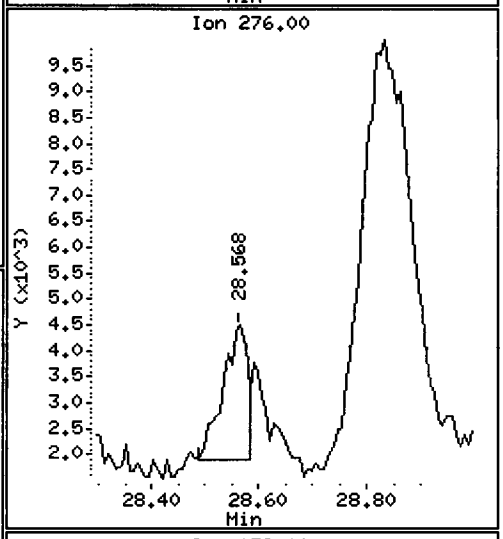
79 Dibenzo(a,h)anthracene

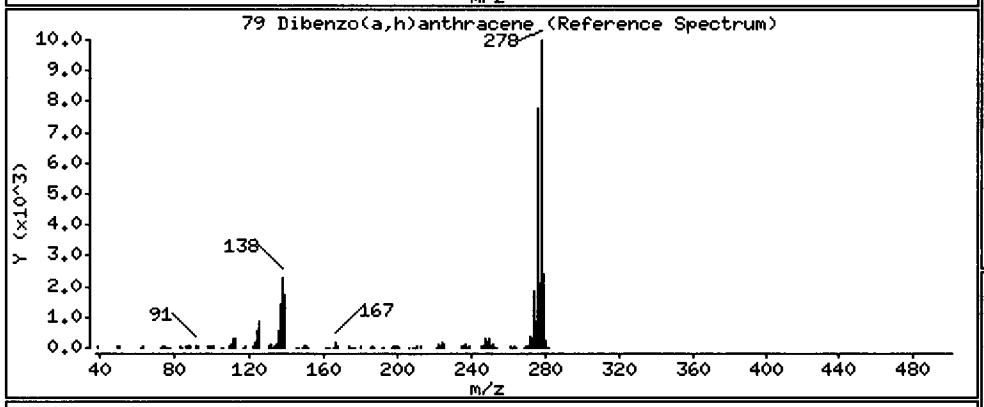
Concentration: 73.29 ug/kg

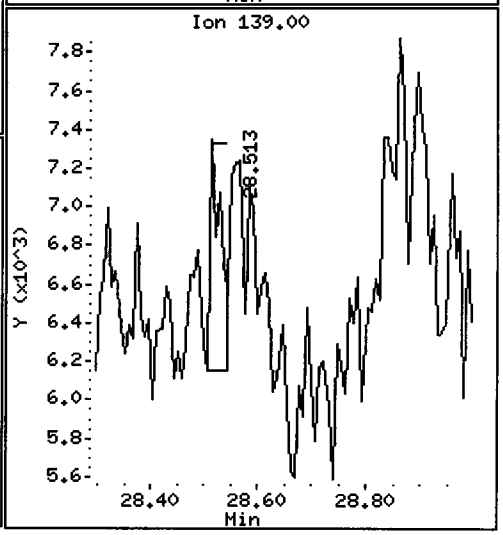


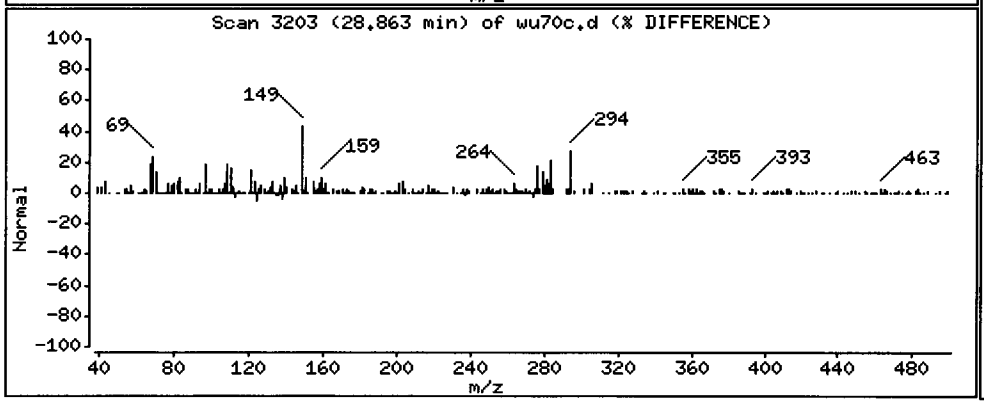












Data File: /chem1/nt10.i/20130705.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

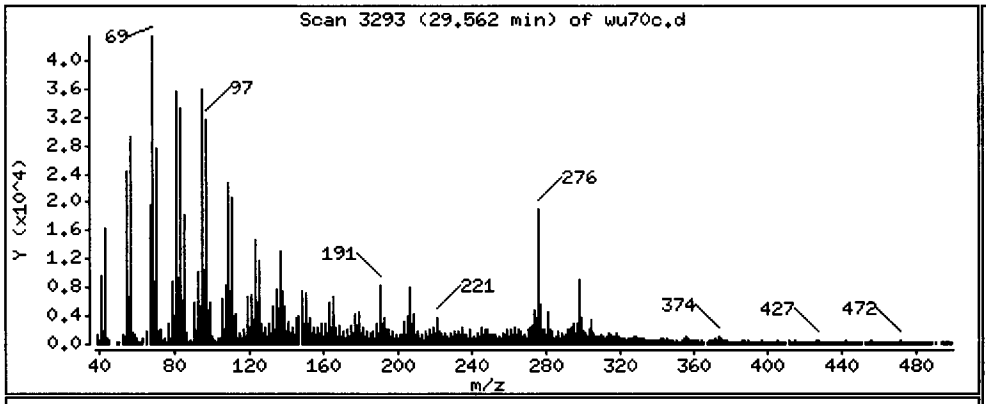
Operator: VTS/YZ

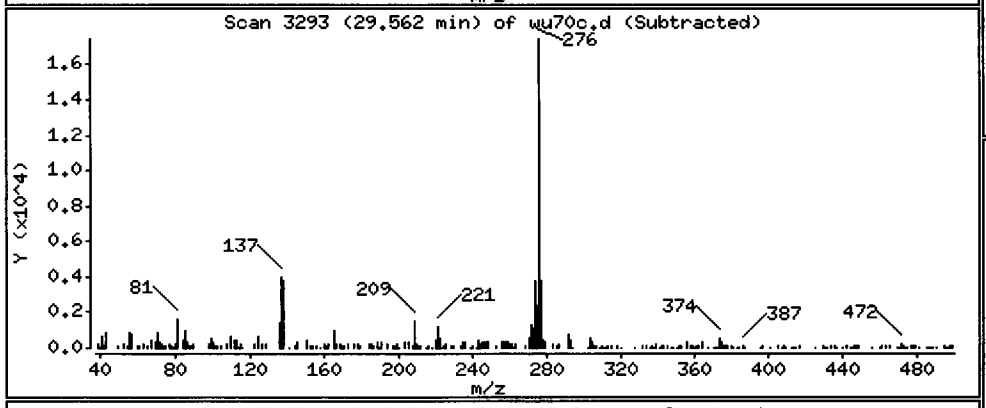
Column phase: ZB-5msi

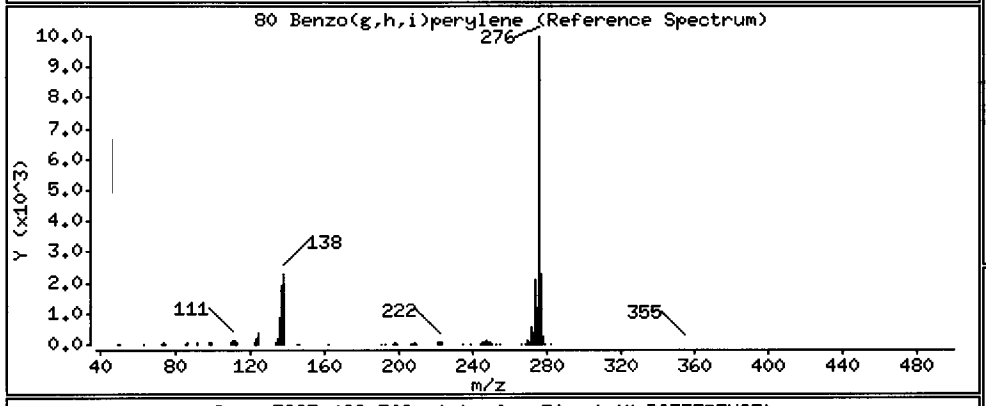
Column diameter: 0.25

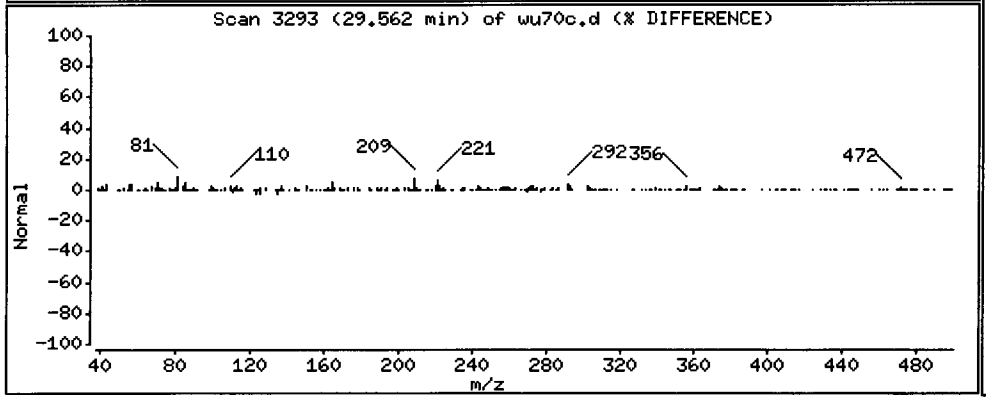
80 Benzo(g,h,i)perylene

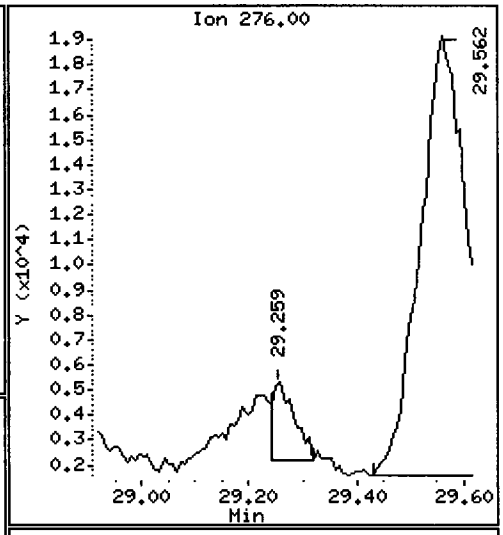
Concentration: 138.4 ug/kg

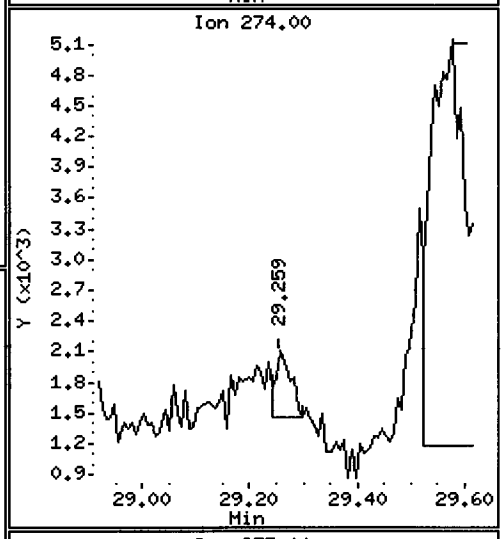


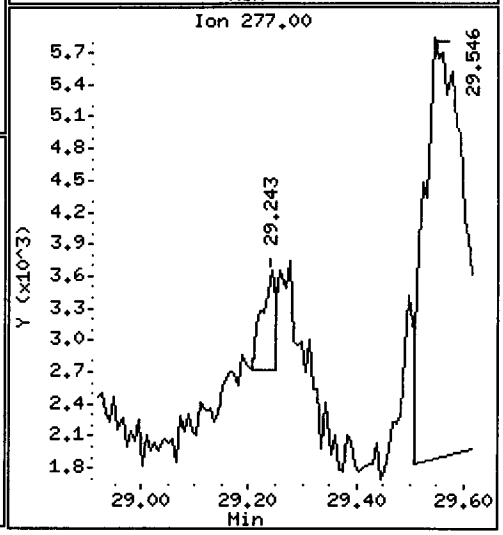












Data File: /chem1/nt10.i/20130705.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

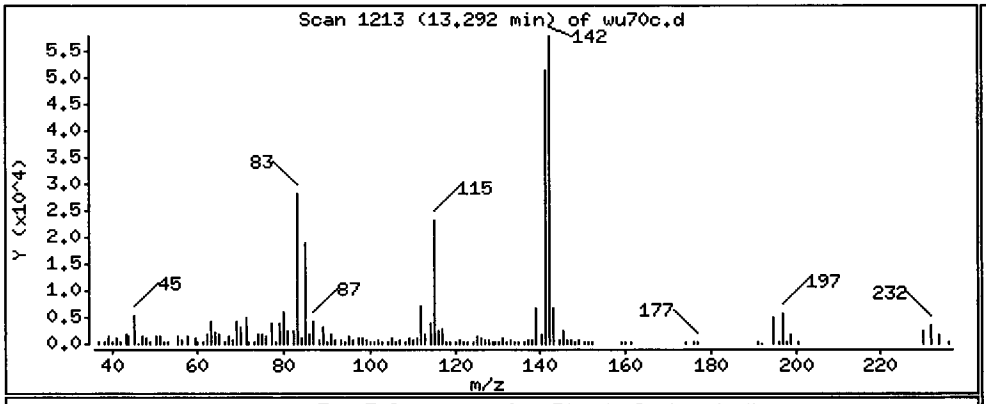
Operator: VTS/YZ

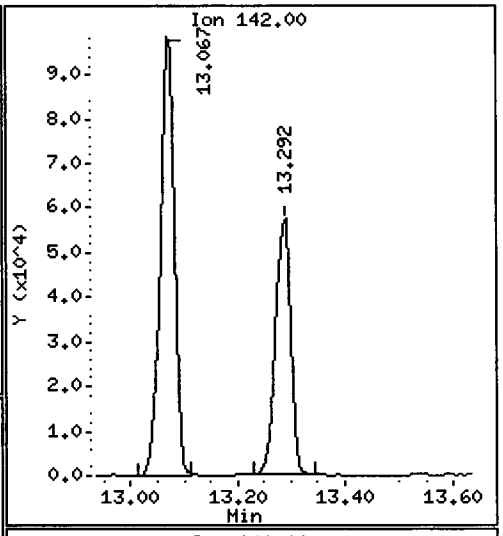
Column phase: ZB-5msi

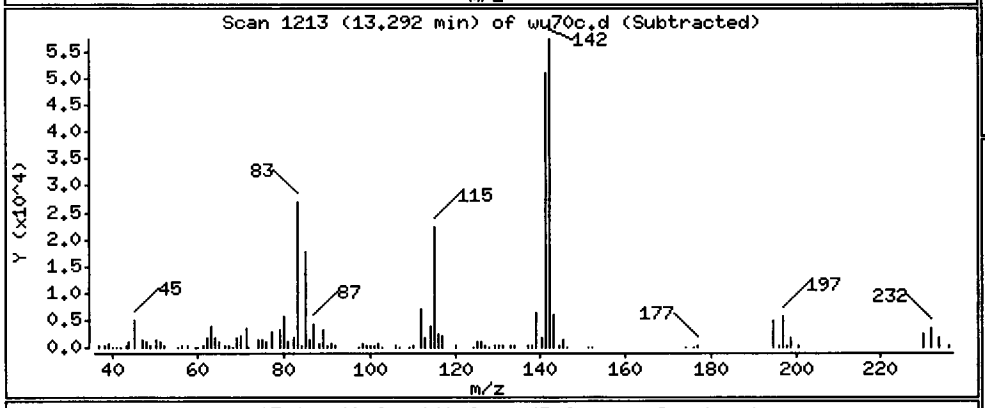
Column diameter: 0.25

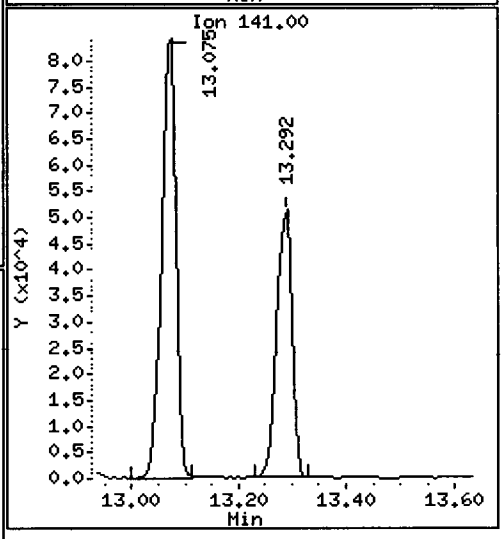
105 1-methylnaphthalene

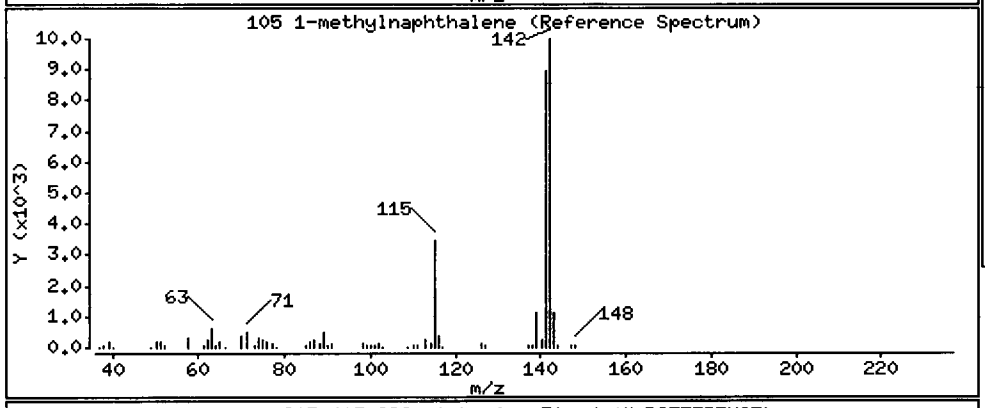
Concentration: 200.9 ug/kg

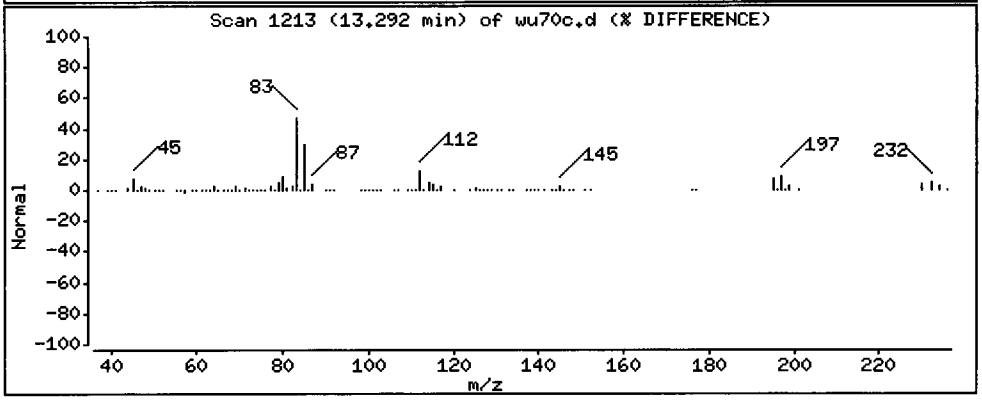












Data File: /chem1/nt10.i/20130705.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

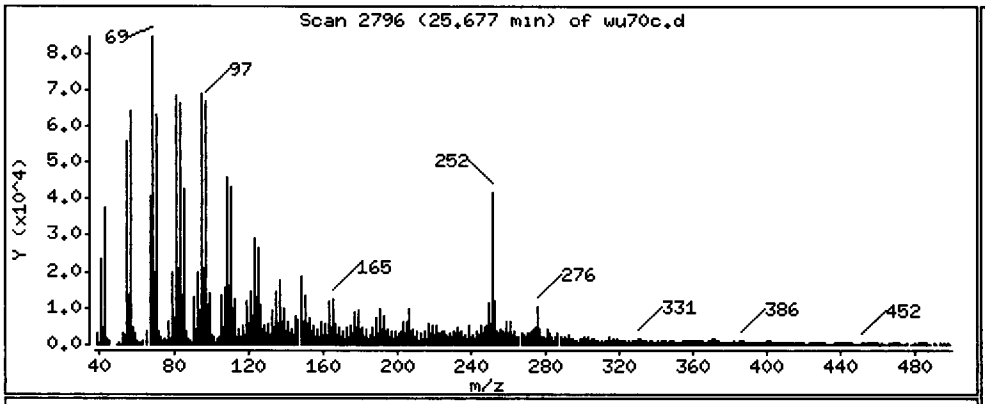
Operator: VTS/YZ

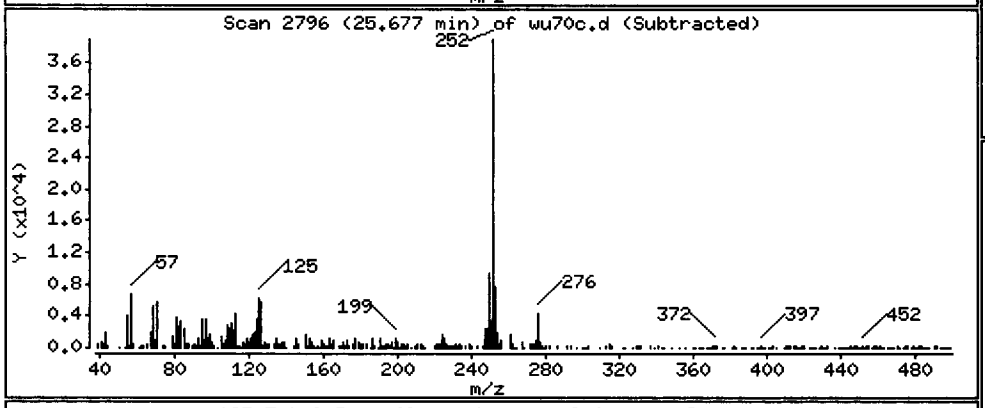
Column phase: ZB-5msi

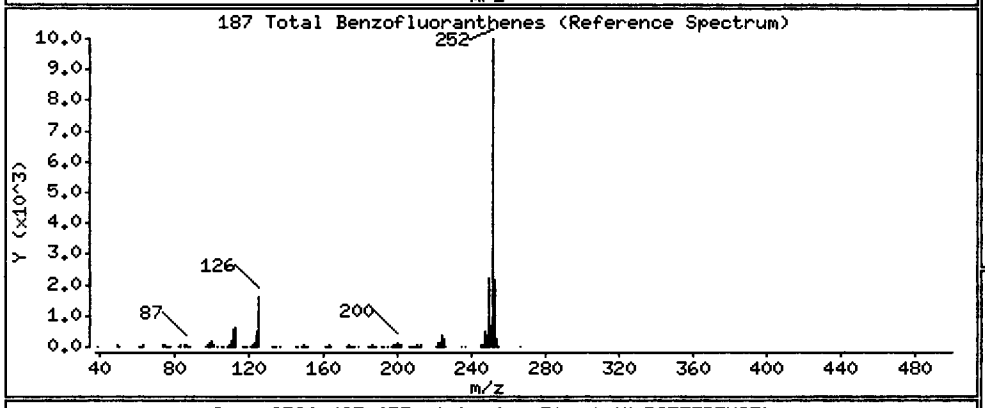
Column diameter: 0.25

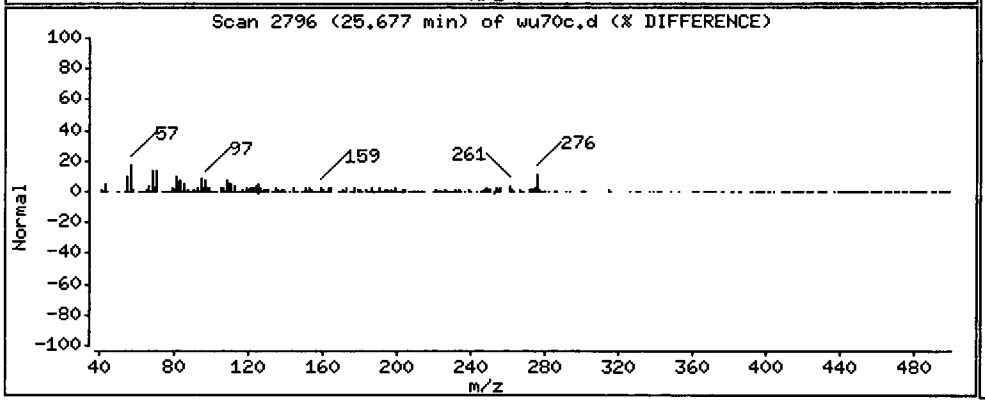
187 Total Benzofluoranthenes

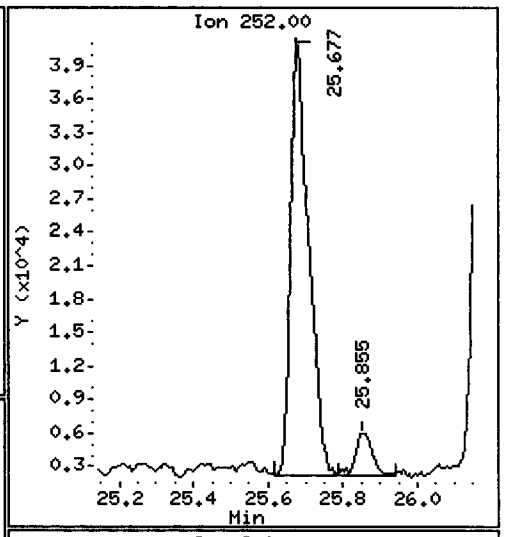
Concentration: 124.0 ug/kg

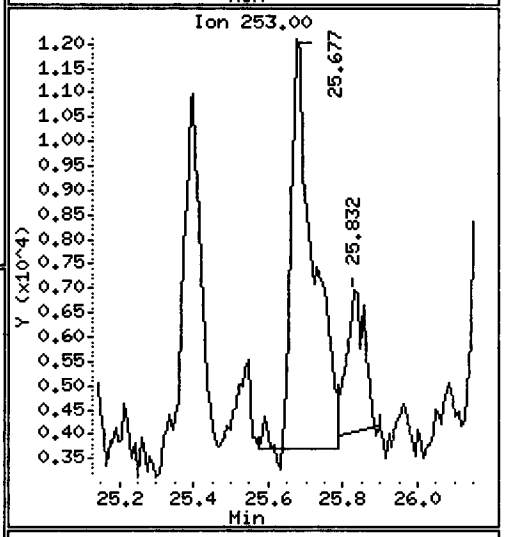


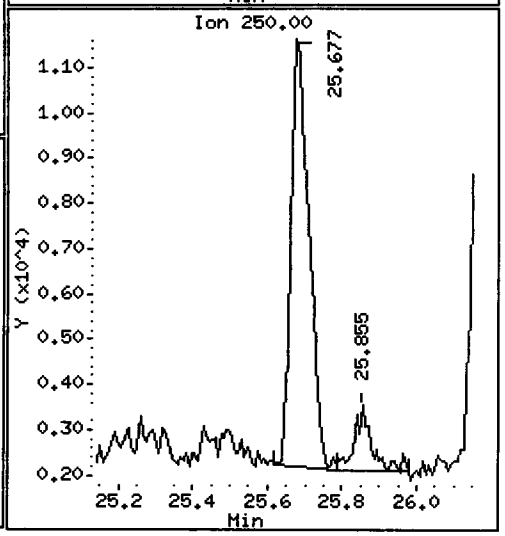






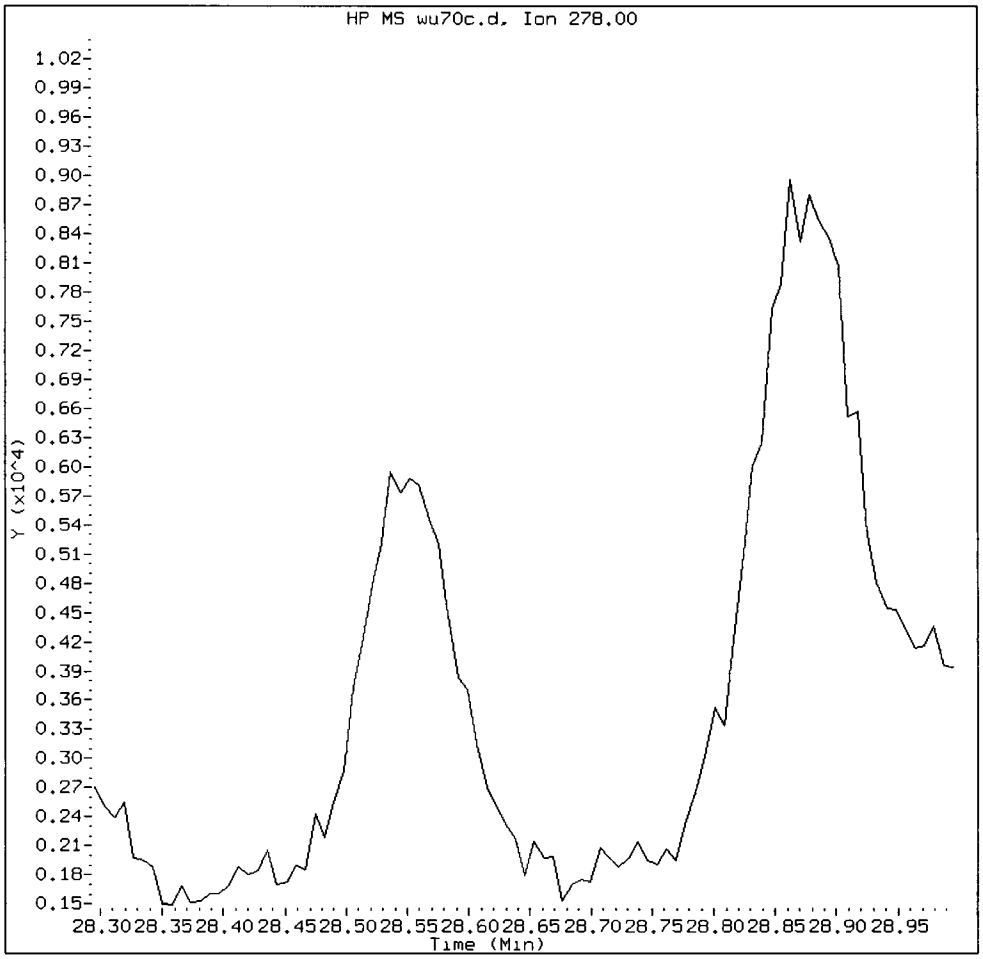






WU70C, /chem1/nt10.i/20130705.b/wu70c.d

Dibenzo(a,h)anthracene Amount: 0.75 Area: 53562



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JZ Date: 7/9/13

CO-ELUTION SUMMARY FOR FILE - wu70c.d

Lab ID: WU70C, Method: ABN.m, Instrument: nt10.i, Date: 06-JUL-2013

RT	CO-ELUTION COMPOUNDS
25.677	Benzo(k)fluoranthene and Benzo(b)fluoranthene

SIM Semivolatile Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WU70

Analytical Chemists and Consultants

(8270D) BAN/SIM SVOA PSDDA–Soil (Sediment) Microwave (3546) (SOP # 3304S)

Preparation Test BAN/SIM SVOA PSDDA # 9 (BANSBANSDMP)

ARI Job No(s) WU70 Page 1 of 1 PSDDA (5-20ppb) Batch set up by: JH

Bottle #	Extraction Requirements	Weight Extracted (eq. to 10g dry wt)	(REQ) GPC (1:1) 1 or 2	Final Effective Volume	Volume to Lab	Comments	Verify Client ID / Analyst/Date
	WU70 MBS	10.00g	(1:1) Y/N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	YL 6/27/13
	SBS	10.00g	(1:1) Y/N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	Microwave 1 2 3 YL 6/27/13
	~~SBS Dup~~	~~10.00g~~	(1:1) Y/N	~~1mL~~	~~1mL~~	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	
	QLS WU70	10.00g	(1:1) Y/N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	KD 80-85°C 1 2 3 4 5 6 Analyst/Date TH 6/28/13
	QLS (SIM)	10.00g	(1:1) Y/N	1mL	1mL	(Use 5g Pre-Deactivated Sodium Sulfate for Blanks)	
8	B	18.02	(1:1) Y/N	1mL	1mL		TurboVap 1 2 3 CJZ 7/1/13 Analyst/Date
3	C	13.01	(1:1) Y/N	1mL	1mL		
3	CMS	13.02	(1:1) Y/N	1mL	1mL		GPC Prep Filter (1:1)
3	CMSD	13.03	(1:1) Y/N	1mL	1mL		CJZ 7/1/13 Analyst/Date
			(1:1) Y/N	1mL	1mL		
			(1:1) Y/N	1mL	1mL		Post GPC KD 80-85°C 1 2 3 4 5 6 Analyst/Date
			(1:1) Y/N	1mL	1mL		
			(1:1) Y/N	1mL	1mL		
Analyst/Date	YL 6/27/13		CJZ 7/1/13	CJZ 7/3/13	CJZ 7/3/13	Reviewed By CJZ 7/3/13	TurboVap 1 2 3 CJZ 7/3/13 Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	A (2093-4)	100/150µg/mL	50µL	7/02/13	YL	AC
Full List Spike (Freezer)	7 (2065-5)	100µg/mL	50µL	1/29/14	YL	AC
Base Spike	56(2065-2)	200µg/mL	50µL	7/31/13	YL	AC
Acid Spike	38(B###697)	100/150µg/mL	50µL	12/18/13	YL	AC
QLS Spike (14 in Freezer)	14(B###538)	100/200µg/mL	20µL	1/31/14	YL	AC
SIM QLS Spike (Freezer)	25(B###547)	1µg/mL	50µL	1/31/14	YL	AC
Extraction Time: 1315				Balance ID: 2146426		

SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessel. Note: do not fill vessel more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 DCM/ACE to the vessels (until solvent is 3" above soil layer after homogenization). 4. Add surr/spike. 5. Microwave on appropriate power setting determined by # of samples. 6. After microwave-rehomogenize while hot then let cool 15 min in cold water. Re-homogenize while cool. 7. Decant 1:1 DCM/ACE into Erlenmeyer flask with sodium sulfate in the bottom and funnel containing pre-deactivated glasswool. 8. Rinse with DCM 9. Microwave a 2nd time using DCM only (until solvent is 3" above soil layer after homogenization). 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with DCM. 11. KD (small ~~or large~~ drying column with pre-deactivated glasswool-Blanks=5g sulfate)) to 5mL at 80- 85°C. 12. GPC Req. 13. (After GPC): KD at 80-85°. 14. TurboVap. 15. Vial in DCM.

A. Need Total Solids Y (N) B. Archive/Freeze Y (N)

WU70 : 66707

SIM Semivolatile Raw Data
Initial Calibration

ARI Job ID: WU70

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC/MS,SVOA Initial Calibration Notes

ARI SOP: **801S**(SIM-PNA) **802S**(Butyl Tins) **804S**(SVOA-8270D) - SIM ABN **805S**(op-Pest)

Instrument: NT-4 NT-6 NT-8 **NT-10** NT11 NT12

Curve Date(s): 07/05/13 Internal Standard ID B000828 Expiration 6/26/14

DFTPP Tune Meets Criteria?	YES / NO	Minimum Response Factors Met/	YES / NO
DDT Breakdown <20%?	YES / NO	ICV Exceeding ±20%? see full scan	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	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
Supelco	B000112	10/15/13	Ultra	see full scan	
	2004-2	09/25/14			
	B000931	2/26/14			
	B000676	12/14/13			
	B000843	7/3/14			

Detail problems, corrective actions and/or other pertinent information below:

- 2 highest points dropped for Diethylphthalate, 5 point curve averaged.

Analyst: YZ **Date:** 7/10/13

Reviewer: _____ **Date:** _____

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 07/05/13 Analysis: ABN/SIM ABN Analyst: YZ

GC Program: ABN_2 Column No: 273254 Column Type: 1753

Instrument Tune (.U or .CT.): DF0705 EM Voltage: 1753

Calibration File: DF0705 Curve Date: 07/05/13 Injection Vol.: 1 uL

DF0705

IS/SS	Ical/Ccal	LCS/ICV
B928	B112	
	B931	
	B676	
	B943	
	20621-2.	

Document All Maintenance Tasks In Element

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130705.b

	Time	Filename	LabID	ClientId	DF											
1	1158	df0705.d	DFTPP	DFTPP	1	NO ISTDS FOUND										
2	1214	ic0705a.d	ABN 5		1	8.83	111410	11.49	383421	15 40	214691	18.75	413058	23.86	430445	26.29	461280
3	1328	ic0705c d	ABN0.2		1	8.83	111165	11 49	393687	15.39	214701	18.74	400447	23.85	429491	26.29	460479
4	1405	ic0705d.d	ABN1.0		1	8.83	115828	11.49	412333	15.39	225152	18.74	415301	23.85	449306	26.28	474708
5	1520	ic0705f.d	ABN2.5		1	8 83	103682	11.49	367429	15.40	204904	18.75	388952	23.85	408222	26.29	440988
6	1557	ic0705g.d	ABN0 5		1	8.83	113136	11.49	406328	15.39	221951	18.74	403977	23.85	429467	26.28	460978
7	1634	ic0705h.d	ABN0.05		1	8.82	111035	11.49	390465	15.39	206716	18.74	382023	23.85	398771	26.29	427996
8	1711	ic0705i.d	ABN0.1		1	8.82	110394	11.49	382969	15.39	206306	18.74	380716	23.85	397194	26.28	421026
9	1744	df0705a.d	DFTPP	DFTPP	1	NO ISTDS FOUND										
10	1837	cc0705a.d	CC0705A		1	8.82	109836	11.49	391053	15.39	213079	18.74	392889	23.85	413365	26.28	444988
11	2256	wu70mb.d	WU70MBS1	WU70MBS1	1	8.82	112074	11.48	421836	15.39	202770	18.75	374893	23.86	356176	26.30	400187
12	2333	wu79bsb.d	WU70LCSS1	WU70LCSS1	1	8.82	103434	11.48	372298	15.39	206356	18.75	376025	23.86	368160	26.29	382348
13	0010	wu70cb.d	WU70B	LF-TP-001-20	1	8.83	102291	11.49	380334	15 40	189141	18.77	332066	23.95	342337	26.50	369420
14	0047	wu70c.d	WU70C	LF-LS-004-20	1	8.83	103329	11.49	380912	15.40	188841	18.76	321554	23.89	330293	26.38	369913
15	0124	wu70cms.d	WU70CMS	LF-LS-004-20	1	8.83	99593	11.49	356715	15.41	184327	18.76	306196	23.89	321952	26.39	362311
16	0200	wu70cmsd.d	WU70CMSD	LF-LS-004-20	1	8.83	94465	11.49	344309	15.41	177233	18.76	300446	23.90	318691	26.41	347460

YZ 7/10/13

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 Element

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130705.b/SIM.b
Inst ID: nt10.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	ic0705a	ic0705c	ic0705d	ic0705f	ic0705g	ic0705h	ic0705i
INJ.DATE:	05-JUL-2013	05-JUL-2013	05-JUL-2013	05-JUL-2013	05-JUL-2013	05-JUL-2013	05-JUL-2013
INJ.TIME:	12:14	13:28	14:05	15:20	15:57	16:34	17:11

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 1 2-Fluorophenol	6.348	6.348	6.348	6.340	6.348	6.341	6.341	6.348	5.848-6.848	6.345	0.004
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	33.580	33.080-34.080	+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	30.873	30.373-31.373	+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.300	30.800-31.800	+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.300	30.800-31.800	+++++	+++++
142 1,2-Dibromo-3-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.496	14.996-15.996	+++++	+++++
135 2,3,5,6-Tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.428	19.928-20.928	+++++	+++++
136 2,3,4,5-tetrachlorophe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.471	19.971-20.971	+++++	+++++
137 NewCpnd_131	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.828	7.328-8.328	+++++	+++++
* 134 Di-n-octylphthalate-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.900	16.400-17.400	+++++	+++++
133 Butylatedhydroxytoluen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.190	13.690-14.690	+++++	+++++
132 3,6-Dimethylphenanthre	+++++	+++++	+++++	+++++	+++++	+++++	+++++	31.262	30.762-31.762	+++++	+++++
131 1-Methylphenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	29.954	29.454-30.454	+++++	+++++
146 Benzo(j)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	23.752	23.252-24.252	+++++	+++++
130 Dibenzothiophene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	27.717	27.217-28.217	+++++	+++++
129 1-Methylfluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.566	20.066-21.066	+++++	+++++
128 N-Hexadecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.796	19.296-20.296	+++++	+++++

Reviewer 1 YZ Date: 7/10/13
Reviewer 2 _____ Date: _____

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130705.b/SIM.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	108 4,5,6-Trichloroguaiaco	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.517	16.017-17.017	+++++	+++++
	107 4,5-Dichloro-2-Methoxy	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.803	14.303-15.303	+++++	+++++
	106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.843	11.343-12.343	+++++	+++++
	105 1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.826	10.326-11.326	+++++	+++++
$	2 Phenol-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.886	6.386-7.386	+++++	+++++
	3 Phenol	8.103	8.095	8.095	8.095	8.095	8.095	8.095	8.103	7.603-8.603	8.096	0.003
	4 Bis(2-Chloroethyl)ethe	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.268	7.768-8.768	+++++	+++++
$	5 2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.087	6.587-7.587	+++++	+++++
	6 2-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.592	8.092-9.092	+++++	+++++
	7 1,3-Dichlorobenzene	8.714	8.713	8.713	8.713	8.713	8.713	8.706	8.714	8.214-9.214	8.712	0.003
*	8 1,4-Dichlorobenzene-d4	8.830	8.829	8.830	8.829	8.830	8.822	8.822	8.830	8.330-9.330	8.827	0.004
	9 1,4-Dichlorobenzene	8.861	8.860	8.861	8.860	8.861	8.861	8.861	8.861	8.361-9.361	8.861	0.000
$	10 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.656	7.156-8.156	+++++	+++++
	11 Benzyl alcohol	9.094	9.085	9.086	9.085	9.086	9.094	9.086	9.094	8.594-9.594	9.088	0.004
	12 1,2-Dichlorobenzene	9.164	9.163	9.163	9.163	9.163	9.163	9.164	9.164	8.664-9.664	9.163	0.000
	13 2-Methylphenol	9.319	9.318	9.319	9.318	9.319	9.319	9.319	9.319	8.819-9.819	9.319	0.000
	14 2,2'-oxybis(1-Chloropr	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.998	8.498-9.498	+++++	+++++
	15 4-Methylphenol	9.637	9.629	9.629	9.629	9.629	9.629	9.629	9.637	9.137-10.137	9.630	0.003
	16 N-Nitroso-di-n-propyla	9.653	9.644	9.653	9.652	9.645	9.645	9.645	9.653	9.153-10.153	9.648	0.004
	17 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.363	8.863-9.863	+++++	+++++
$	18 Nitrobenzene-d5	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.237	7.737-8.737	+++++	+++++
	19 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.696	8.196-9.196	+++++	+++++
	20 Isophorone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.987	8.487-9.487	+++++	+++++
	21 2-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.356	8.856-9.856	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130705.b/SIM.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	22 2,4-Dimethylphenol	10.777	10.769	10.770	10.769	10.770	10.769	10.770	10.777	10.277-11.277	10.771	0.003
	23 Bis(2-Chloroethoxy)met	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.557	9.057-10.057	+++++	+++++
	24 Benzoic acid	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.387	9.887-10.887	+++++	+++++
	25 2,4-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.500	9.000-10.000	+++++	+++++
	26 1,2,4-Trichlorobenzene	11.379	11.370	11.371	11.370	11.371	11.371	11.371	11.379	10.879-11.879	11.372	0.003
*	27 Naphthalene-d8	11.487	11.486	11.487	11.486	11.487	11.486	11.487	11.487	10.987-11.987	11.486	0.000
	28 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.518	9.018-10.018	+++++	+++++
	29 4-Chloroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.911	9.411-10.411	+++++	+++++
	30 Hexachlorobutadiene	11.850	11.842	11.842	11.842	11.842	11.842	11.842	11.850	11.350-12.350	11.843	0.003
	31 4-Chloro-3-methylpheno	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.387	9.887-10.887	+++++	+++++
	32 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.826	10.326-11.326	+++++	+++++
	33 Hexachlorocyclopentadi	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.194	10.694-11.694	+++++	+++++
	34 2,4,6-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.019	10.519-11.519	+++++	+++++
	35 2,4,5-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.386	10.886-11.886	+++++	+++++
$	36 2-Fluorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.091	10.591-11.591	+++++	+++++
	37 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.600	11.100-12.100	+++++	+++++
	38 2-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.805	11.305-12.305	+++++	+++++
	39 Dimethylphthalate	14.853	14.837	14.837	14.844	14.837	14.837	14.837	14.853	14.353-15.353	14.840	0.006
	40 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.232	11.732-12.732	+++++	+++++
	41 2,6-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.177	11.677-12.677	+++++	+++++
*	42 Acenaphthene-d10	15.402	15.394	15.394	15.402	15.394	15.394	15.394	15.402	14.902-15.902	15.396	0.004
	43 3-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.508	12.008-13.008	+++++	+++++
	44 Acenaphthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.578	12.078-13.078	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130705.b/SIM.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	45 2,4-Dinitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.660	12.160-13.160	+++++	+++++
	46 Dibenzofuran	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.756	12.256-13.256	+++++	+++++
	47 4-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.867	12.367-13.367	+++++	+++++
	48 2,4-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.031	12.531-13.531	+++++	+++++
	49 Fluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.248	12.748-13.748	+++++	+++++
	50 Diethylphthalate	16.438	16.438	16.438	16.438	16.438	16.438	16.438	16.438	15.938-16.938	16.438	0.000
	51 4-Chlorophenyl-phenyle	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.368	13.868-14.868	+++++	+++++
	52 4-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.510	13.010-14.010	+++++	+++++
	53 4,6-Dinitro-2-methylph	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.340	12.840-13.840	+++++	+++++
	54 N-Nitrosodiphenylamine	16.947	16.939	16.939	16.939	16.939	16.931	16.932	16.947	16.447-17.447	16.938	0.005
$	55 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.476	12.976-13.976	+++++	+++++
	56 4-Bromophenyl-phenylet	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.191	13.691-14.691	+++++	+++++
	57 Hexachlorobenzene	17.889	17.880	17.881	17.880	17.881	17.881	17.881	17.889	17.389-18.389	17.882	0.003
	58 Pentachlorophenol	18.338	18.329	18.330	18.329	18.330	18.337	18.330	18.338	17.838-18.838	18.332	0.004
*	59 Phenanthrene-d10	18.748	18.739	18.740	18.747	18.740	18.740	18.740	18.748	18.248-19.248	18.742	0.004
	60 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.803	14.303-15.303	+++++	+++++
	61 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.803	14.303-15.303	+++++	+++++
	62 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.290	14.790-15.790	+++++	+++++
	63 Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.986	15.486-16.486	+++++	+++++
	64 Fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.867	16.367-17.367	+++++	+++++
	65 Pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.445	16.945-17.945	+++++	+++++
$	66 Terphenyl-d14	21.990	21.989	21.989	21.989	21.989	21.989	21.990	21.990	21.490-22.490	21.989	0.000
	67 Butylbenzylphthalate	22.926	22.918	22.918	22.918	22.926	22.926	22.919	22.926	22.426-23.426	22.922	0.004
	68 Benzo(a)anthracene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.250	18.750-19.750	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Batch File: /chem1/nt10.i/20130705.b/SIM.b
Inst ID: nt10.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
*	69 Chrysene-d12	23.855	23.847	23.848	23.847	23.848	23.848	23.848	23.855	23.355-24.355	23.849	0.003
	70 3,3'-Dichlorobenzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.276	19.776-20.776	+++++	+++++
	71 Chrysene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.339	19.839-20.839	+++++	+++++
	72 bis(2-Ethylhexyl)phtha	+++++	+++++	+++++	+++++	+++++	+++++	+++++	19.411	18.911-19.911	+++++	+++++
	73 Di-n-octylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.324	19.824-20.824	+++++	+++++
	74 Benzo(b)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.144	20.644-21.644	+++++	+++++
	75 Benzo(k)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.144	20.644-21.644	+++++	+++++
	76 Benzo(a)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	22.373	21.873-22.873	+++++	+++++
*	77 Perylene-d12	26.294	26.286	26.279	26.286	26.279	26.286	26.279	26.294	25.794-26.794	26.284	0.006
	78 Indeno(1,2,3-cd)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	24.378	23.878-24.878	+++++	+++++
	79 Dibenzo(a,h)anthracene	28.666	28.650	28.651	28.658	28.651	28.650	28.651	28.666	28.166-29.166	28.654	0.006
$	85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++	+++++	25.408	24.908-25.908	+++++	+++++
$	86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.238	16.738-17.738	+++++	+++++
$	87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	29.316	28.816-29.816	+++++	+++++
$	88 Dibenz(a,h)anthracene-	+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.007	25.507-26.507	+++++	+++++
$	89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++	+++++	44.609	44.109-45.109	+++++	+++++
	90 N-Nitrosodimethylamine	4.047	4.055	4.047	4.047	4.055	4.078	4.063	16.597	16.097-17.097	+++++	+++++
	91 Aniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.047	3.547-4.547	4.056	0.011
	92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.913	7.413-8.413	+++++	+++++
	93 Benzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.615	21.115-22.115	+++++	+++++
$	95 D10-1-methylnaphthalen	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.089	14.589-15.589	+++++	+++++
	96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.686	17.186-18.186	+++++	+++++
	97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.540	14.040-15.040	+++++	+++++
		+++++	+++++	+++++	+++++	+++++	+++++	+++++	26.957	26.457-27.457	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 17:11
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Cal Date : 10-Jul-2013 11:26 yev
Curve Type : Average

Calibration File Names:
Level 1: /chem1/nt10.i/20130705.b/SIM.b/ic0705h.d
Level 2: /chem1/nt10.i/20130705.b/SIM.b/ic0705i.d
Level 3: /chem1/nt10.i/20130705.b/SIM.b/ic0705c.d
Level 4: /chem1/nt10.i/20130705.b/SIM.b/ic0705g.d
Level 5: /chem1/nt10.i/20130705.b/SIM.b/ic0705d.d
Level 6: /chem1/nt10.i/20130705.b/SIM.b/ic0705f.d
Level 7: /chem1/nt10.i/20130705.b/SIM.b/ic0705a.d

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
	5.000 Level 7							
138 Chlorobenzilate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
139 Isodrin	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
140 Diallate A	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
141 Diallate B	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
142 1,2-Dibromo-3-Chloropropane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
135 2,3,5,6-Tetrachlorophenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 17:11
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Cal Date : 10-Jul-2013 11:26 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	RRF	% RSD
111 Azobenzene (1,2-DP-Hydrazine)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
110 Tetrachloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
109 3,4,5-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
108 4,5,6-Trichloroguaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
107 4,5-Dichloro-2-Methoxyphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
106 Guaiacol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
105 1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
3 Phenol	1.86968	1.86822	2.00927	2.00064	2.02000	2.07720	2.01207	1.97958	4.021
4 Bis(2-Chloroethyl)ether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 17:11
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Cal Date : 10-Jul-2013 11:26 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	RRF	% RSD
6 2-Chlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
7 1,3-Dichlorobenzene	1.71333	1.58559	1.65448	1.54964	1.53908	1.53309	1.43952	1.57353	5.660
9 1,4-Dichlorobenzene	1.63120	1.56385	1.61490	1.48939	1.49853	1.48503	1.40425	1.52674	5.280
11 Benzyl alcohol	0.91575	0.88700	1.02928	1.03642	0.98660	1.07896	1.03907	0.99615	7.085
12 1,2-Dichlorobenzene	1.56996	1.49247	1.55966	1.44180	1.43219	1.43409	1.34741	1.46823	5.353
13 2-Methylphenol	1.39704	1.33630	1.45603	1.46797	1.46017	1.51437	1.43028	1.43745	3.979
14 2,2'-oxybis(1-Chloropropane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
15 4-Methylphenol	1.25078	1.29464	1.44254	1.46790	1.49553	1.54060	1.50400	1.42800	7.778
16 N-Nitroso-di-n-propylamine	0.92151	0.87179	0.97855	0.95573	0.95776	0.98799	0.90904	0.94034	4.407

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 17:11
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Cal Date : 10-Jul-2013 11:26 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	RRF	% RSD
17 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
19 Nitrobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
20 Isophorone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
21 2-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
22 2,4-Dimethylphenol	0.38959	0.38306	0.43108	0.42074	0.42005	0.42916	0.41146	0.41216	4.582
23 Bis(2-Chloroethoxy)methane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
24 Benzoic acid	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
25 2,4-Dichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
26 1,2,4-Trichlorobenzene	0.39440	0.38510	0.40113	0.36607	0.36244	0.36344	0.34443	0.37386	5.414

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 17:11
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Cal Date : 10-Jul-2013 11:26 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	RRF	% RSD
28 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
29 4-Chloroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
30 Hexachlorobutadiene	0.23603	0.23626	0.23521	0.21401	0.21325	0.21495	0.20680	0.22236	5.791
31 4-Chloro-3-methylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
32 2-Methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
33 Hexachlorocyclopentadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
34 2,4,6-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
35 2,4,5-Trichlorophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
37 2-Chloronaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 17:11
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Cal Date : 10-Jul-2013 11:26 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	RRF	% RSD
38 2-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
39 Dimethylphthalate	1.21713	1.20985	1.36506	1.23105	1.25588	1.23152	1.19290	1.24334	4.599
40 Acenaphthylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
41 2,6-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
43 3-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
44 Acenaphthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
45 2,4-Dinitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
46 Dibenzofuran	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
47 4-Nitrophenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 17:11
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Cal Date : 10-Jul-2013 11:26 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	___ RRF	% RSD
48 2,4-Dinitrotoluene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
49 Fluorene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
50 Diethylphthalate	0.19002	0.18691	0.19208	0.17932	0.16464	+++++	+++++	0.18259	6.105
51 4-Chlorophenyl-phenylether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
52 4-Nitroaniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
53 4,6-Dinitro-2-methylphenol	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
54 N-Nitrosodiphenylamine	0.37317	0.41637	0.47966	0.48870	0.50592	0.49866	0.47403	0.46236	10.601
56 4-Bromophenyl-phenylether	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
57 Hexachlorobenzene	0.31475	0.30028	0.31235	0.28435	0.28485	0.27145	0.26117	0.28989	6.972

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 17:11
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Cal Date : 10-Jul-2013 11:26 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
	5.000 Level 7							
58 Pentachlorophenol	0.14910	0.16369	0.20125	0.20500	0.21874	0.21977		
	0.22030						0.19684	14.695
60 Phenanthrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
61 Anthracene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
62 Carbazole	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
63 Di-n-butylphthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
64 Fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
65 Pyrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
67 Butylbenzylphthalate	0.33503	0.33777	0.46506	0.43829	0.48357	0.50255		
	0.50233						0.43780	16.619
68 Benzo(a)anthracene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 17:11
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Cal Date : 10-Jul-2013 11:26 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	___ RRF	% RSD
70 3,3'-Dichlorobenzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
71 Chrysene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
72 bis(2-Ethylhexyl)phthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
73 Di-n-octylphthalate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
74 Benzo(b)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
75 Benzo(k)fluoranthene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
76 Benzo(a)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
78 Indeno(1,2,3-cd)pyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
79 Dibenzo(a,h)anthracene	0.69720	0.71587	0.91878	0.89094	0.96865	0.99829	0.98785	0.88251	14.289

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 17:11
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Cal Date : 10-Jul-2013 11:26 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	RRF	% RSD
80 Benzo(g,h,i)perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
90 N-Nitrosodimethylamine	0.78606	0.83030	0.91612	0.92621	0.94302	0.97517	0.96268	0.90565	7.807
91 Aniline	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
92 1,2-Diphenylhydrazine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
93 Benzidine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
96 p-Cymene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
97 Caffeine	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
98 Retene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++
99 Perylene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 17:11
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Cal Date : 10-Jul-2013 11:26 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
	5.000 Level 7							
100 3-beta-Coprostanol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
101 Cholesterol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
102 beta-Sitosterol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
103 Pyridine	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 1 2-Fluorophenol	1.45035	1.38667	1.47690	1.44690	1.44228	1.49525		
	1.45066						1.44986	2.331
$ 145 d8-1,4-Dioxane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 2 Phenol-d5	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 5 2-Chlorophenol-d4	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 10 1,2-Dichlorobenzene-d4	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 17:11
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Cal Date : 10-Jul-2013 11:26 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	RRF	% RSD
	5.000 Level 7							
$ 18 Nitrobenzene-d5	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 36 2-Fluorobiphenyl	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 55 2,4,6-Tribromophenol	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 66 Terphenyl-d14	0.46342	0.44331	0.50390	0.44710	0.47032	0.46625		
	0.44637						0.46295	4.543
$ 85 p-Cresol-d4	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 86 Anthracene-d10	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 87 Fluoranthene-d10	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 88 Dibenz(a,h)anthracene-d14	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++
$ 89 Diphenyl-d10	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++						+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 05-JUL-2013 12:14
End Cal Date : 05-JUL-2013 17:11
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Cal Date : 10-Jul-2013 11:26 yev
Curve Type : Average

Compound	0.05000 Level 1	0.10000 Level 2	0.20000 Level 3	0.50000 Level 4	1.000 Level 5	2.500 Level 6	5.000 Level 7	___ RRF	% RSD
$ 95 D10-1-methylnaphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130705.b/SIM.b/ic0705a.d
Lab Smp Id: ABN 5
Inj Date : 05-JUL-2013 12:14
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : ABN 5
Misc Info :
Comment :
Method : /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Meth Date : 10-Jul-2013 11:26 yev Quant Type: ISTD
Cal Date : 05-JUL-2013 12:14 Cal File: ic0705a.d
Als bottle: 2 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

YZ 07/10/13

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.348	6.341	(1.000)	202023	5.00000	5.003 (M)
	3	Phenol	94	8.103	8.095	(1.000)	280206	5.00000	5.082
	7	1,3-Dichlorobenzene	146	8.714	8.714	(1.000)	200471	5.00000	4.574 (M)
*	8	1,4-Dichlorobenzene-d4	152	8.830	8.822	(1.000)	111410	4.00000	(M)
	9	1,4-Dichlorobenzene	146	8.861	8.861	(1.000)	195559	5.00000	4.599
	11	Benzyl alcohol	79	9.094	9.086	(1.000)	144704	5.00000	5.215
	12	1,2-Dichlorobenzene	146	9.164	9.164	(1.000)	187643	5.00000	4.589
	13	2-Methylphenol	108	9.319	9.319	(1.000)	199185	5.00000	4.975 (H)
	15	4-Methylphenol	108	9.637	9.629	(1.000)	209451	5.00000	5.266
	16	N-Nitroso-di-n-propylamine	70	9.653	9.645	(1.000)	126595	5.00000	4.834 (H)
	22	2,4-Dimethylphenol	107	10.777	10.770	(0.938)	394410	10.0000	9.983
	26	1,2,4-Trichlorobenzene	180	11.379	11.371	(0.991)	165075	5.00000	4.606
*	27	Naphthalene-d8	136	11.487	11.487	(1.000)	383421	4.00000	
	30	Hexachlorobutadiene	225	11.850	11.842	(1.032)	99115	5.00000	4.650
	39	Dimethylphthalate	163	14.853	14.837	(0.964)	320131	5.00000	4.797
*	42	Acenaphthene-d10	162	15.402	15.394	(1.000)	214691	4.00000	
	50	Diethylphthalate	149	16.438	16.438	(1.067)	12999	5.00000	1.326 (H)
	54	N-Nitrosodiphenylamine	169	16.947	16.939	(0.936)	244750	5.00000	5.126
	57	Hexachlorobenzene	284	17.889	17.881	(0.988)	134850	5.00000	4.505
	58	Pentachlorophenol	266	18.338	18.330	(1.012)	227492	10.0000	11.19
*	59	Phenanthrene-d10	188	18.748	18.740	(1.000)	413058	4.00000	(M)
$	66	Terphenyl-d14	244	21.990	21.990	(0.922)	240172	5.00000	4.821
	67	Butylbenzylphthalate	149	22.926	22.926	(0.961)	270281	5.00000	5.737
*	69	Chrysene-d12	240	23.855	23.848	(1.000)	430445	4.00000	
*	77	Perylene-d12	264	26.294	26.279	(1.000)	461280	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.666	28.643	(1.090)	569592	5.00000	5.597
	90	N-Nitrosodimethylamine	74	4.047	4.047	(1.000)	268130	10.0000	10.63

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: nt10.i
Lab File ID: ic0705a.d
Lab Smp Id: ABN 5
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 05-JUL-2013
Calibration Time: 18:37

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

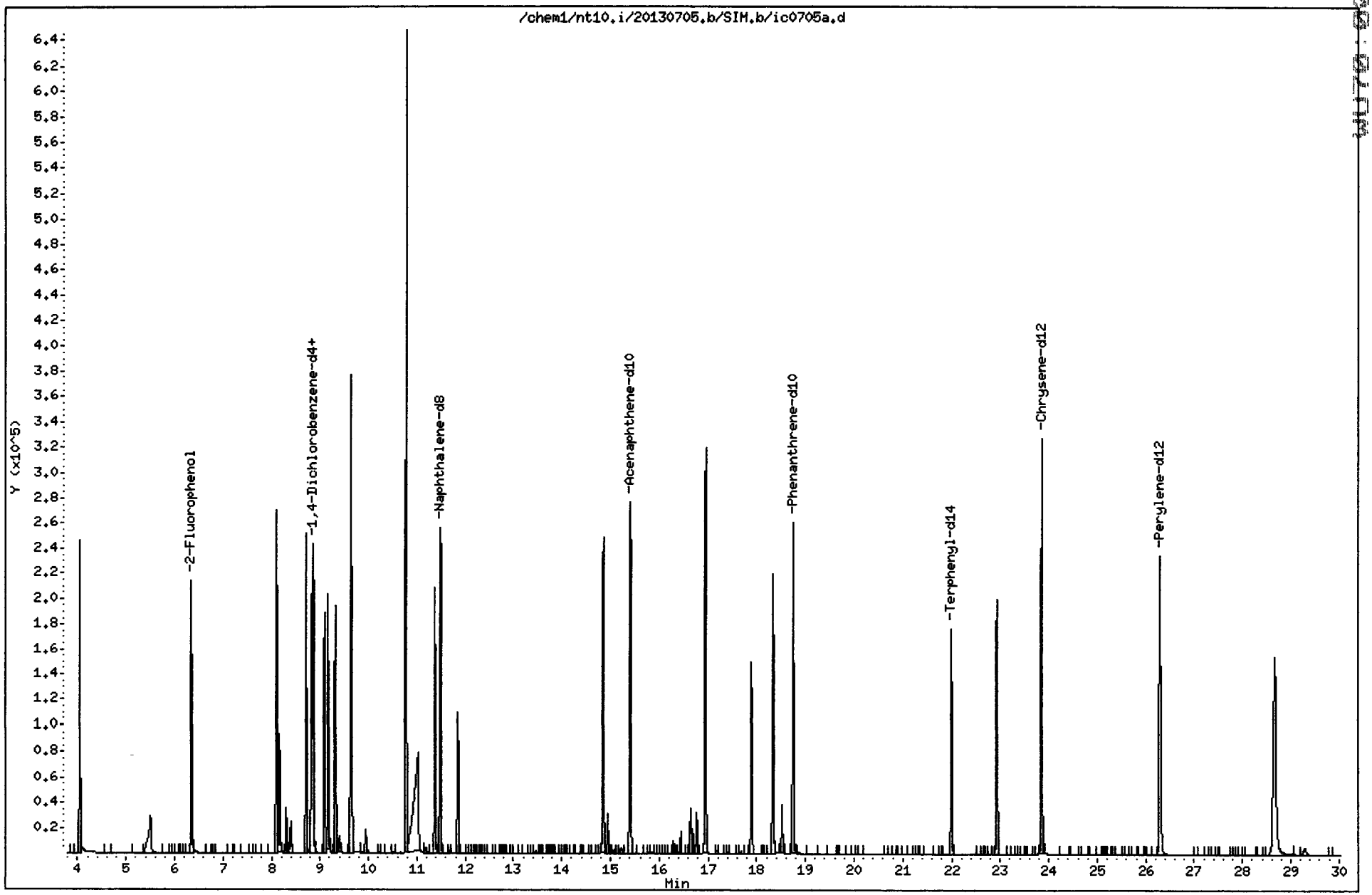
COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	115828	57914	231656	111410	-3.81
27 Naphthalene-d8	412333	206166	824666	383421	-7.01
42 Acenaphthene-d10	225152	112576	450304	214691	-4.65
59 Phenanthrene-d10	415301	207650	830602	413058	-0.54
69 Chrysene-d12	449306	224653	898612	430445	-4.20
77 Perylene-d12	474708	237354	949416	461280	-2.83

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.82	8.32	9.32	8.83	0.09
27 Naphthalene-d8	11.49	10.99	11.99	11.49	0.00
42 Acenaphthene-d10	15.39	14.89	15.89	15.40	0.05
59 Phenanthrene-d10	18.74	18.24	19.24	18.75	0.04
69 Chrysene-d12	23.85	23.35	24.35	23.86	0.03
77 Perylene-d12	26.28	25.78	26.78	26.29	0.06

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.

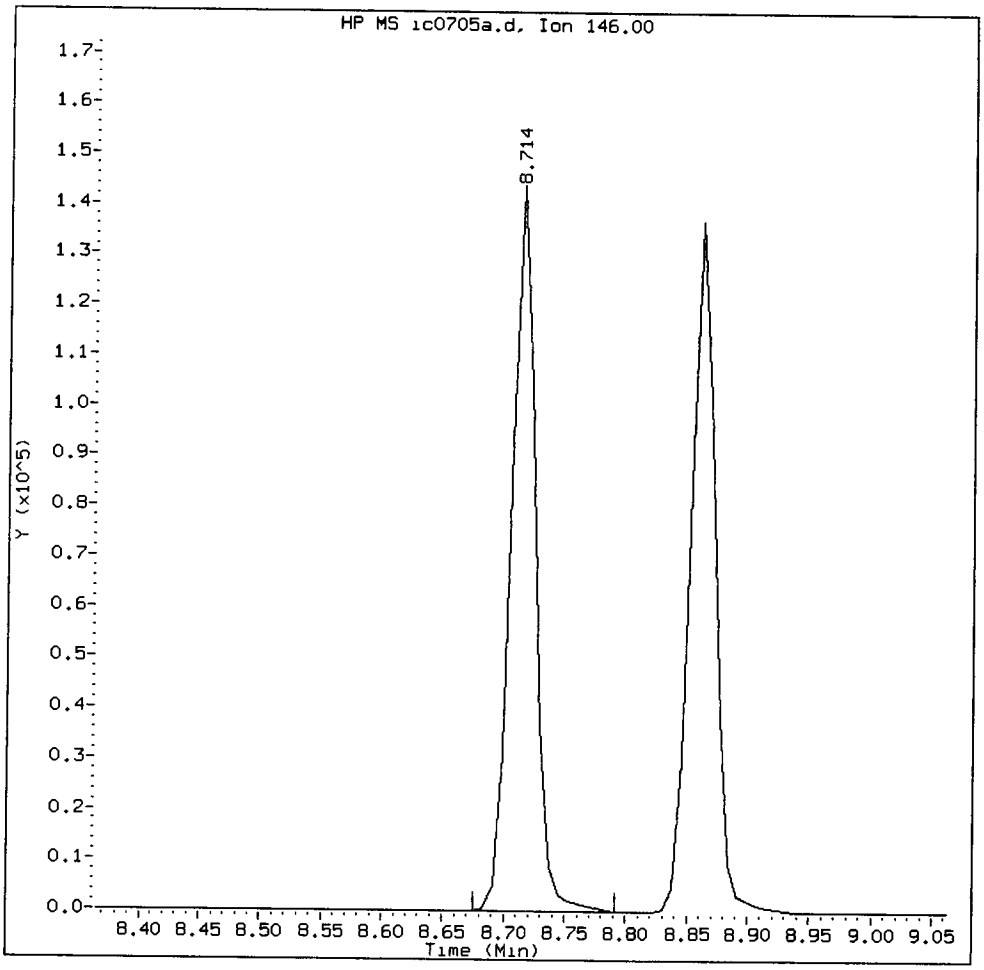
Data File: /chem1/nt10.i/20130705.b/SIM.b/ic0705a.d
Date : 05-JUL-2013 12:14
Client ID:
Sample Info: ABN 5

Instrument: nt10.i
Operator: VTS/YZ
Column phase: ZB-5msi
Column diameter: 0.25



ABN 5, /chem1/nt10.i/20130705.b/SIM.b/ic0705a.d

1,3-Dichlorobenzene Amount: 4.57 Area: 200471



MANUAL INTEGRATION for 1,3-Dichlorobenzene

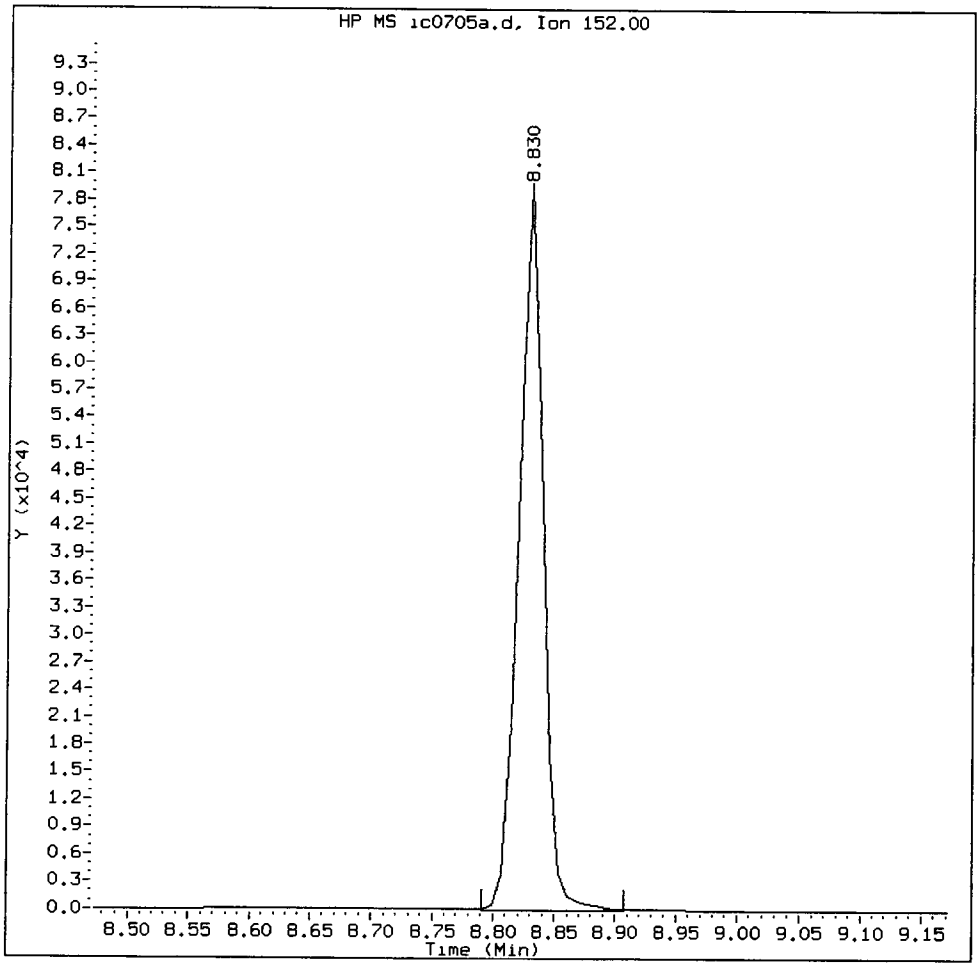
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: 12 Date: 7/10/13

ABN 5, /chem1/nt10.i/20130705.b/SIM.b/ic0705a.d

1,4-Dichlorobenzene-d4 Amount: 4.00 Area: 111410



MANUAL INTEGRATION for 1,4-Dichlorobenzene-d4

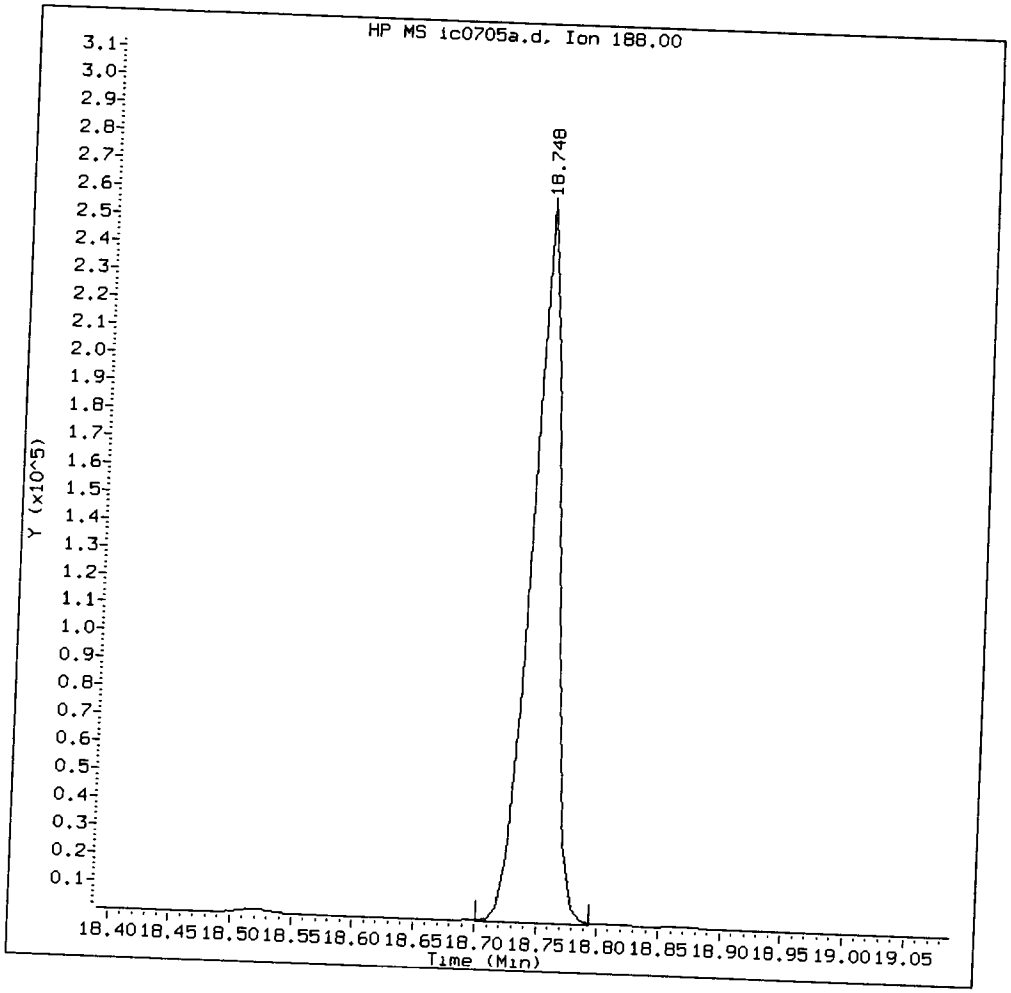
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VE Date: 7/10/13

ABN 5, /chem1/nt10.i/20130705.b/SIM.b/ic0705a.d

Phenanthrene-d10 Amount: 4.00 Area: 413058



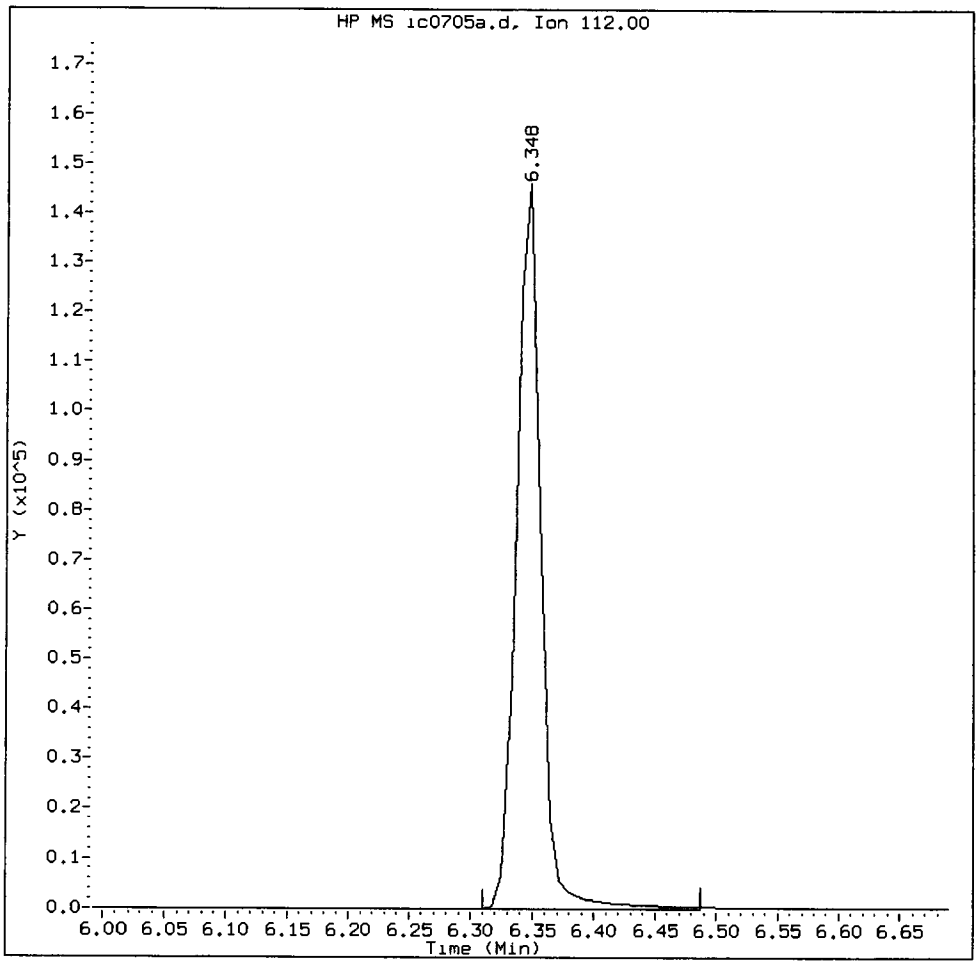
MANUAL INTEGRATION for Phenanthrene-d10

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation ✓
5. Other _____

Analyst: 1/2 Date: 7/10/13

ABN 5, /chem1/nt10.i/20130705.b/SIM.b/ic0705a.d

2-Fluorophenol Amount: 5.00 Area: 202023



MANUAL INTEGRATION for 2-Fluorophenol

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VE Date: 7/10/13

CO-ELUTION SUMMARY FOR FILE - ic0705a.d

Lab ID: ABN 5, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 05-JUL-2013

RT	CO-ELUTION COMPOUNDS
NO CO-ELUTIONS	

Analytical Resources, Inc.

YZ 7/19/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130705.b/SIM.b/ic0705c.d
Lab Smp Id: ABN0.2
Inj Date : 05-JUL-2013 13:28
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : ABN0.2
Misc Info :
Comment :
Method : /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Meth Date : 10-Jul-2013 11:26 yev Quant Type: ISTD
Cal Date : 05-JUL-2013 13:28 Cal File: ic0705c.d
Als bottle: 4 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.348	6.341	(0.719)	8209	0.20000	0.2037 (M)
	3 Phenol	94	8.095	8.095	(0.917)	11168	0.20000	0.2030
	7 1,3-Dichlorobenzene	146	8.713	8.714	(0.987)	9196	0.20000	0.2103
*	8 1,4-Dichlorobenzene-d4	152	8.829	8.822	(1.000)	111165	4.00000	
	9 1,4-Dichlorobenzene	146	8.860	8.861	(1.004)	8976	0.20000	0.2115
	11 Benzyl alcohol	79	9.085	9.086	(1.029)	5721	0.20000	0.2067
	12 1,2-Dichlorobenzene	146	9.163	9.164	(1.038)	8669	0.20000	0.2125
	13 2-Methylphenol	108	9.318	9.319	(1.055)	8093	0.20000	0.2026
	15 4-Methylphenol	108	9.629	9.629	(1.091)	8018	0.20000	0.2020
	16 N-Nitroso-di-n-propylamine	70	9.644	9.645	(1.092)	5439	0.20000	0.2081
	22 2,4-Dimethylphenol	107	10.769	10.770	(0.938)	16971	0.40000	0.4184
	26 1,2,4-Trichlorobenzene	180	11.370	11.371	(0.990)	7896	0.20000	0.2146
*	27 Naphthalene-d8	136	11.486	11.487	(1.000)	393687	4.00000	
	30 Hexachlorobutadiene	225	11.842	11.842	(1.031)	4630	0.20000	0.2116
	39 Dimethylphthalate	163	14.837	14.837	(0.964)	14654	0.20000	0.2196
*	42 Acenaphthene-d10	162	15.394	15.394	(1.000)	214701	4.00000	
	50 Diethylphthalate	149	16.438	16.438	(1.068)	2062	0.20000	0.2104 (M)
	54 N-Nitrosodiphenylamine	169	16.939	16.939	(0.923)	9604	0.20000	0.2075
	57 Hexachlorobenzene	284	17.880	17.881	(0.975)	6254	0.20000	0.2155
	58 Pentachlorophenol	266	18.329	18.330	(0.999)	8059	0.40000	0.4090
*	59 Phenanthrene-d10	188	18.739	18.740	(1.000)	400447	4.00000	(M)
$	66 Terphenyl-d14	244	21.989	21.990	(0.922)	10821	0.20000	0.2177
	67 Butylbenzylphthalate	149	22.918	22.926	(0.961)	9987	0.20000	0.2125
*	69 Chrysene-d12	240	23.847	23.848	(1.000)	429491	4.00000	
*	77 Perylene-d12	264	26.286	26.279	(1.000)	460479	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.650	28.643	(1.090)	21154	0.20000	0.2082
	90 N-Nitrosodimethylamine	74	4.055	4.047	(0.459)	10184	0.40000	0.4046

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0705c.d
Lab Smp Id: ABN0.2
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 05-JUL-2013
Calibration Time: 18:37
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	115828	57914	231656	111165	-4.03
27 Naphthalene-d8	412333	206166	824666	393687	-4.52
42 Acenaphthene-d10	225152	112576	450304	214701	-4.64
59 Phenanthrene-d10	415301	207650	830602	400447	-3.58
69 Chrysene-d12	449306	224653	898612	429491	-4.41
77 Perylene-d12	474708	237354	949416	460479	-3.00

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.82	8.32	9.32	8.83	0.08
27 Naphthalene-d8	11.49	10.99	11.99	11.49	0.00
42 Acenaphthene-d10	15.39	14.89	15.89	15.39	0.00
59 Phenanthrene-d10	18.74	18.24	19.24	18.74	0.00
69 Chrysene-d12	23.85	23.35	24.35	23.85	0.00
77 Perylene-d12	26.28	25.78	26.78	26.29	0.03

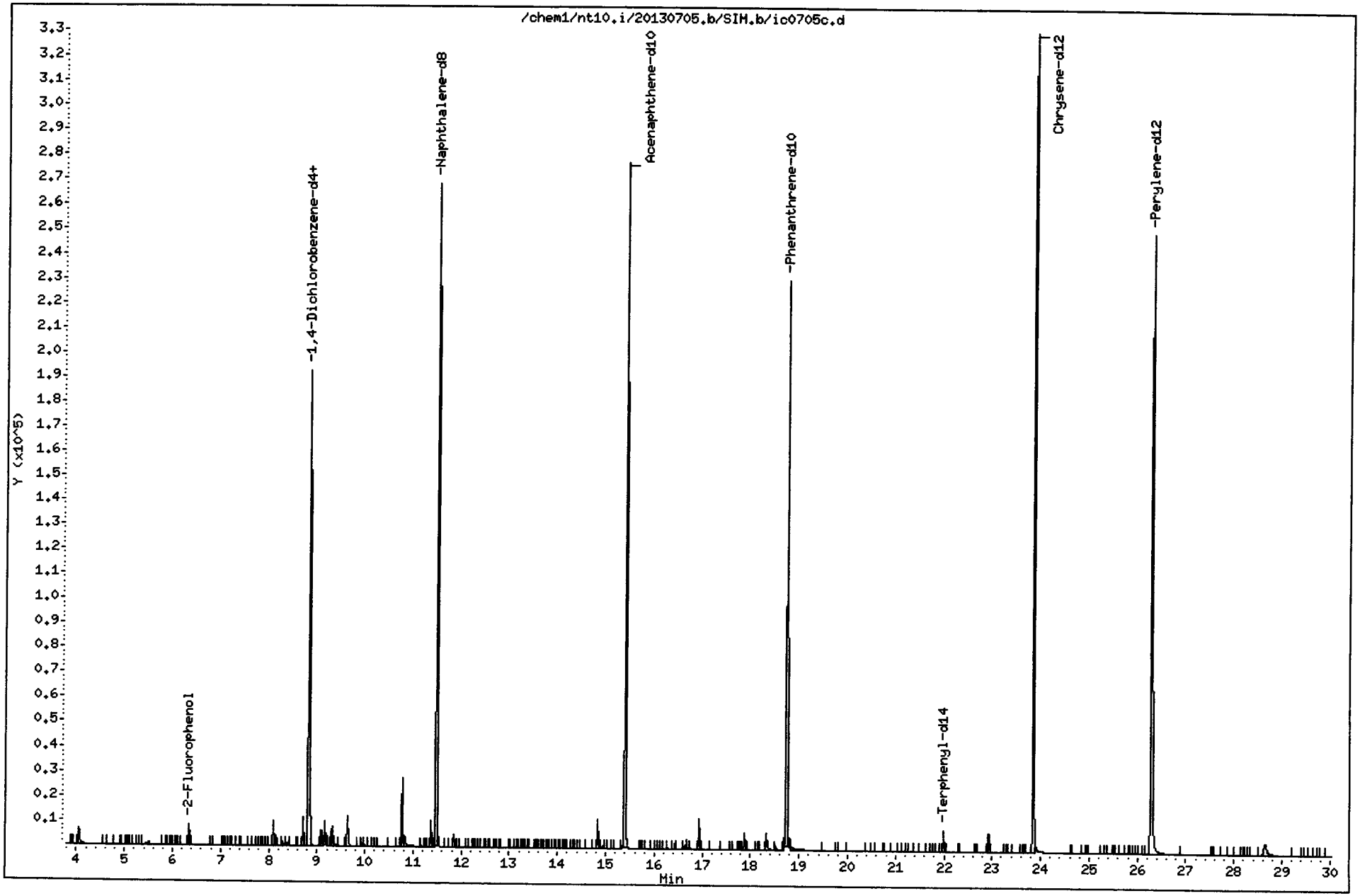
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130705.b/SIM.b/ic0705c.d
Date : 05-JUL-2013 13:28
Client ID:
Sample Info: ABN0.2

Instrument: nt10.i

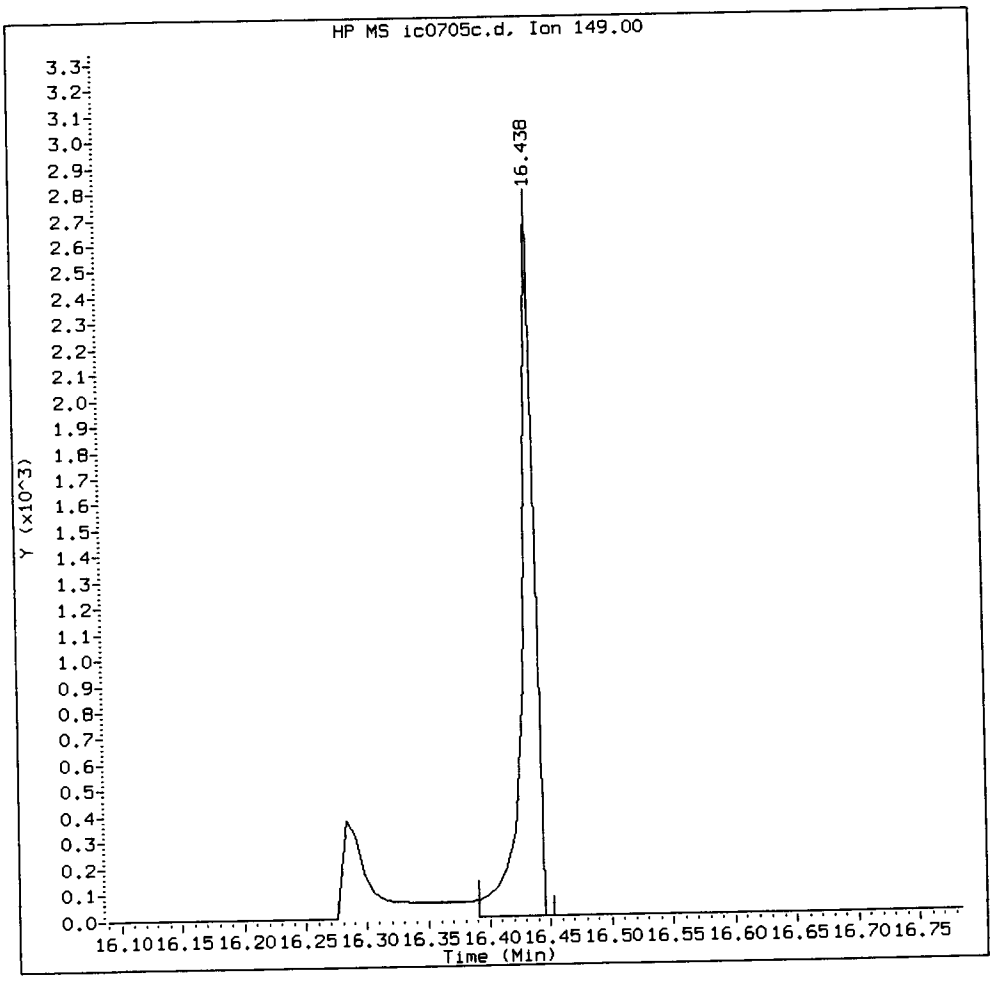
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



ABN0.2, /chem1/nt10.i/20130705.b/SIM.b/ic0705c.d

Diethylphthalate Amount: 0.21 Area: 2062



MANUAL INTEGRATION for Diethylphthalate

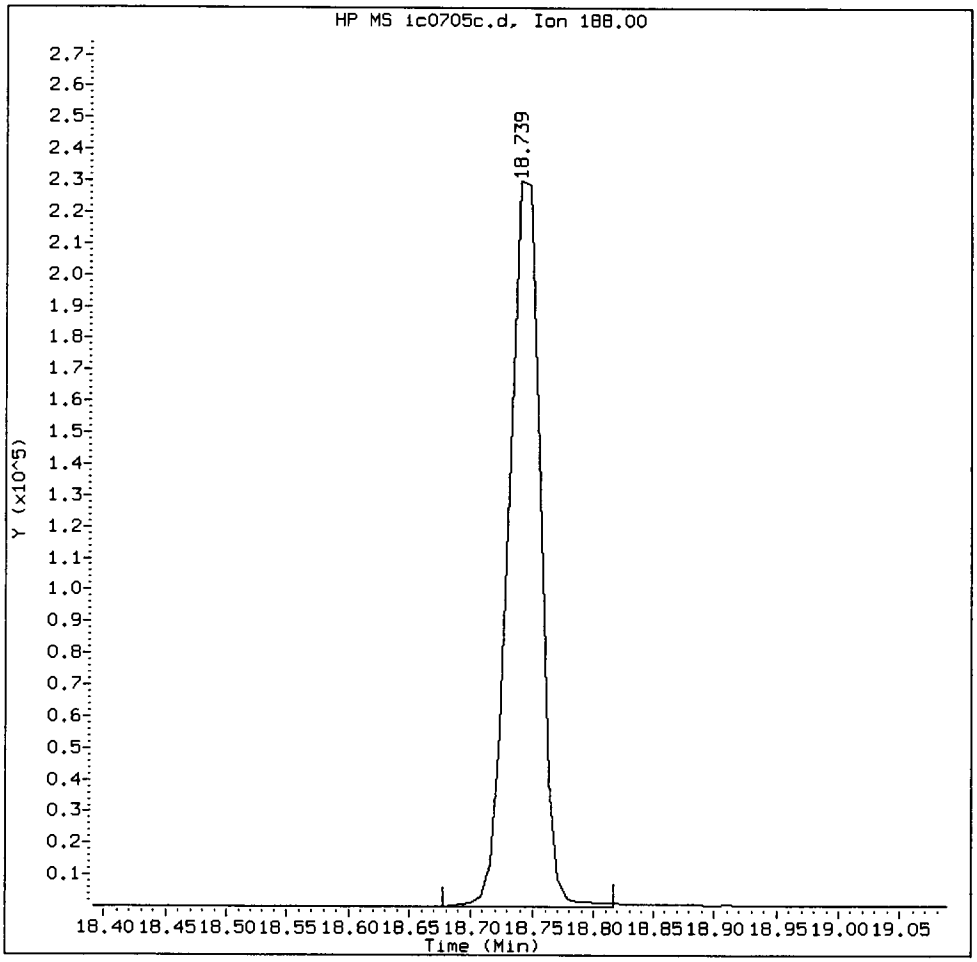
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 7/10/13

ABN0.2, /chem1/nt10.i/20130705.b/SIM.b/ic0705c.d

Phenanthrene-d10 Amount: 4.00 Area: 400447



MANUAL INTEGRATION for Phenanthrene-d10

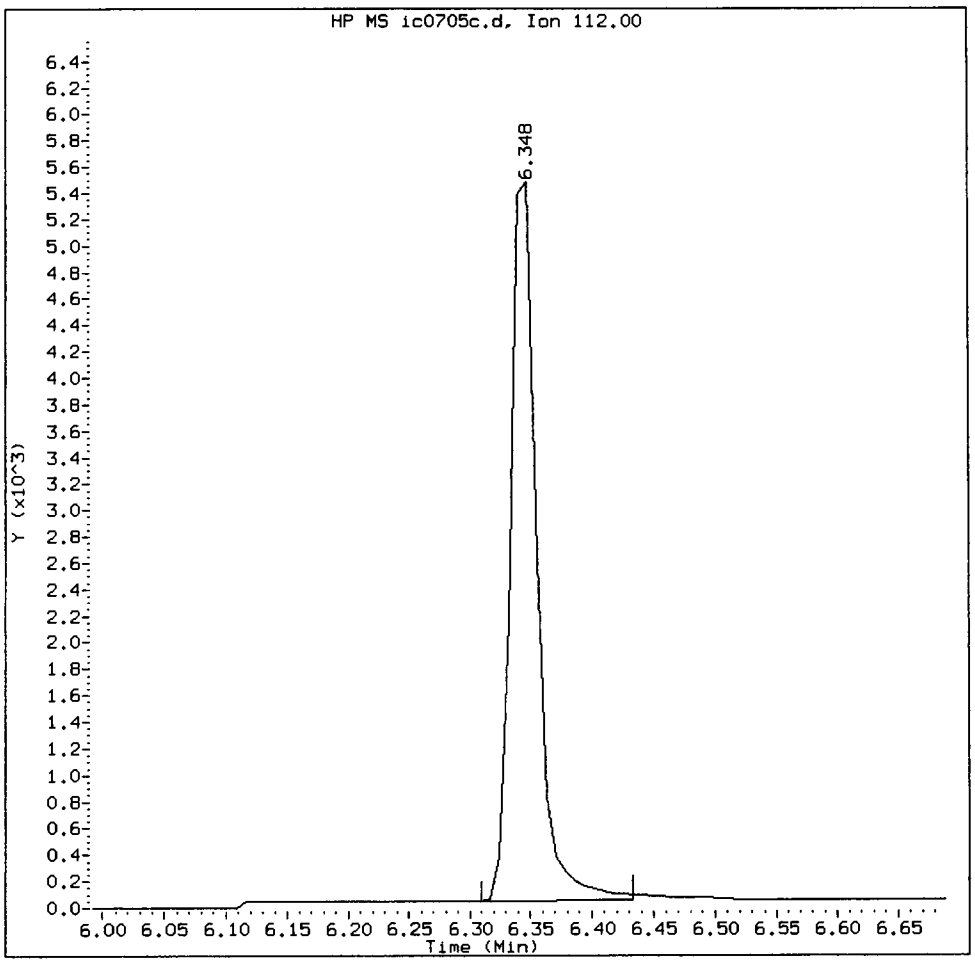
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 7/10/13

ABN0.2, /chem1/nt10.i/20130705.b/SIM.b/ic0705c.d

2-Fluorophenol Amount: 0.20 Area: 8209



MANUAL INTEGRATION for 2-Fluorophenol

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: 1/2 Date: 7/10/13

CO-ELUTION SUMMARY FOR FILE - ic0705c.d

Lab ID: ABN0.2, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 05-JUL-201

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 7/10/13

Data file : /chem1/nt10.i/20130705.b/SIM.b/ic0705d.d
Lab Smp Id: ABN1.0
Inj Date : 05-JUL-2013 14:05
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : ABN1.0
Misc Info :
Comment :
Method : /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Meth Date : 10-Jul-2013 11:26 yev Quant Type: ISTD
Cal Date : 05-JUL-2013 14:05 Cal File: ic0705d.d
Als bottle: 5 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)	
$	1 2-Fluorophenol	112	6.348	6.341	(0.719)	41764	1.00000	0.9948	(M)
	3 Phenol	94	8.095	8.095	(0.917)	58493	1.00000	1.020	
	7 1,3-Dichlorobenzene	146	8.713	8.714	(0.987)	44567	1.00000	0.9781	
*	8 1,4-Dichlorobenzene-d4	152	8.830	8.822	(1.000)	115828	4.00000		
	9 1,4-Dichlorobenzene	146	8.861	8.861	(1.004)	43393	1.00000	0.9815	
	11 Benzyl alcohol	79	9.086	9.086	(1.029)	28569	1.00000	0.9904	
	12 1,2-Dichlorobenzene	146	9.163	9.164	(1.038)	41472	1.00000	0.9755	
	13 2-Methylphenol	108	9.319	9.319	(1.055)	42282	1.00000	1.016	
	15 4-Methylphenol	108	9.629	9.629	(1.091)	43306	1.00000	1.047	
	16 N-Nitroso-di-n-propylamine	70	9.653	9.645	(1.093)	27734	1.00000	1.019	
	22 2,4-Dimethylphenol	107	10.770	10.770	(0.938)	86601	2.00000	2.038	
	26 1,2,4-Trichlorobenzene	180	11.371	11.371	(0.990)	37361	1.00000	0.9694	
*	27 Naphthalene-d8	136	11.487	11.487	(1.000)	412333	4.00000		
	30 Hexachlorobutadiene	225	11.842	11.842	(1.031)	21982	1.00000	0.9590	
	39 Dimethylphthalate	163	14.837	14.837	(0.964)	70691	1.00000	1.010	
*	42 Acenaphthene-d10	162	15.394	15.394	(1.000)	225152	4.00000		
	50 Diethylphthalate	149	16.438	16.438	(1.068)	9267	1.00000	0.9017	(H)
	54 N-Nitrosodiphenylamine	169	16.939	16.939	(0.926)	52527	1.00000	1.094	
	57 Hexachlorobenzene	284	17.881	17.881	(0.978)	29575	1.00000	0.9826	
	58 Pentachlorophenol	266	18.330	18.330	(1.002)	45422	2.00000	2.223	
*	59 Phenanthrene-d10	188	18.740	18.740	(1.000)	415301	4.00000		(M)
$	66 Terphenyl-d14	244	21.989	21.990	(0.922)	52829	1.00000	1.016	
	67 Butylbenzylphthalate	149	22.918	22.926	(0.961)	54318	1.00000	1.105	
*	69 Chrysene-d12	240	23.848	23.848	(1.000)	449306	4.00000		
*	77 Perylene-d12	264	26.279	26.279	(1.000)	474708	4.00000		
	79 Dibenzo(a,h)anthracene	278	28.651	28.643	(1.090)	114956	1.00000	1.098	
	90 N-Nitrosodimethylamine	74	4.047	4.047	(0.458)	54614	2.00000	2.083	

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: nt10.i
Lab File ID: ic0705d.d
Lab Smp Id: ABN1.0
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 05-JUL-2013
Calibration Time: 18:37
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	115828	57914	231656	115828	0.00
27 Naphthalene-d8	412333	206166	824666	412333	0.00
42 Acenaphthene-d10	225152	112576	450304	225152	0.00
59 Phenanthrene-d10	415301	207650	830602	415301	0.00
69 Chrysene-d12	449306	224653	898612	449306	0.00
77 Perylene-d12	474708	237354	949416	474708	0.00

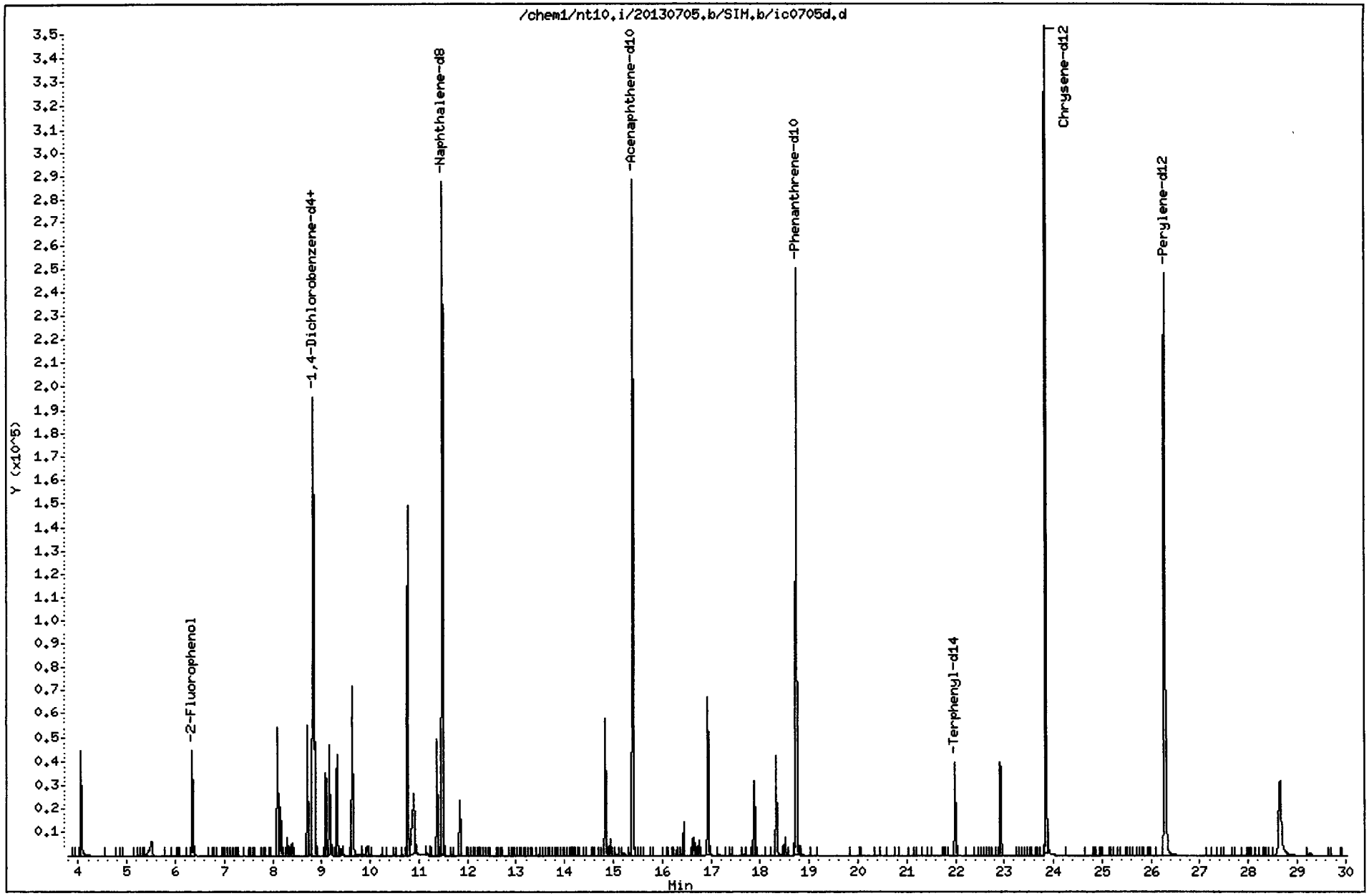
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.82	8.32	9.32	8.83	0.09
27 Naphthalene-d8	11.49	10.99	11.99	11.49	0.00
42 Acenaphthene-d10	15.39	14.89	15.89	15.39	0.00
59 Phenanthrene-d10	18.74	18.24	19.24	18.74	0.00
69 Chrysene-d12	23.85	23.35	24.35	23.85	0.00
77 Perylene-d12	26.28	25.78	26.78	26.28	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/nt10.i/20130705.b/SIM.b/ic0705d.d
Date : 05-JUL-2013 14:05
Client ID:
Sample Info: ABN1.0

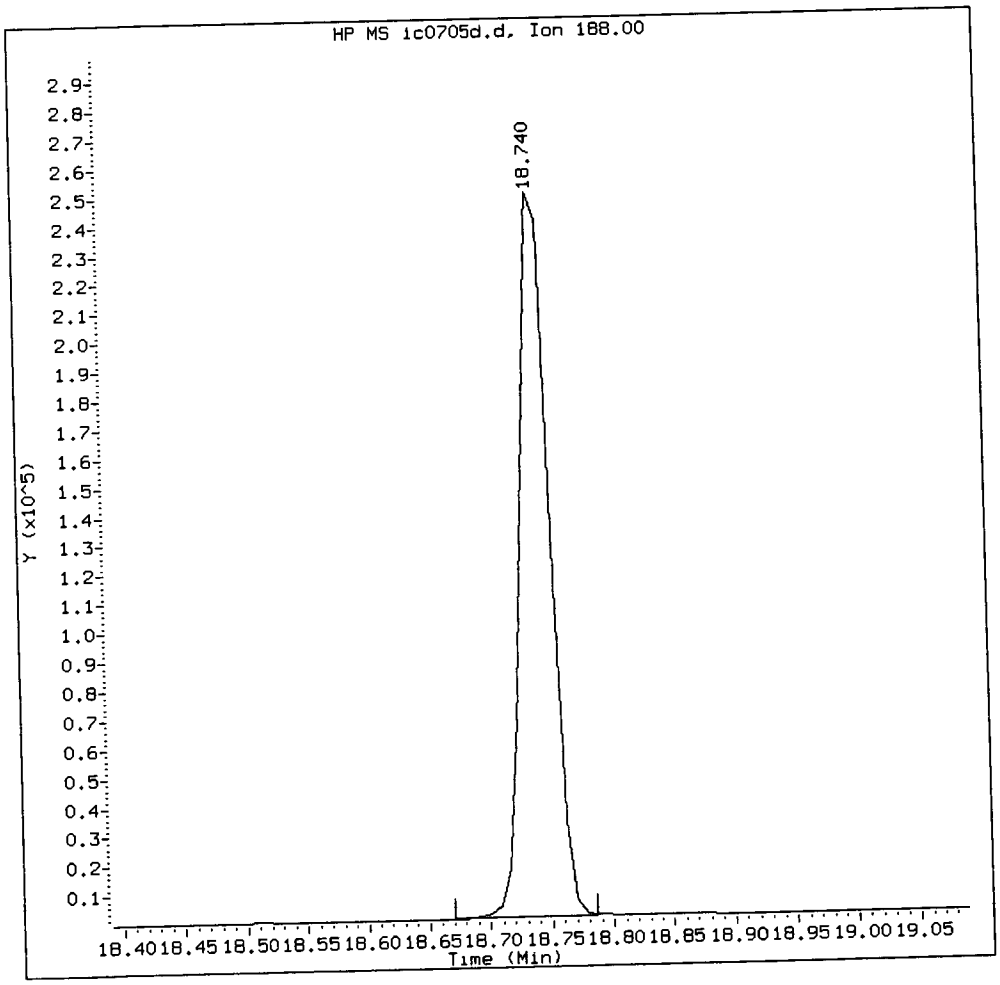
Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



ABN1.0, /chem1/nt10.i/20130705.b/SIM.b/ic0705d.d

Phenanthrene-d10 Amount: 4.00 Area: 415301



MANUAL INTEGRATION for Phenanthrene-d10

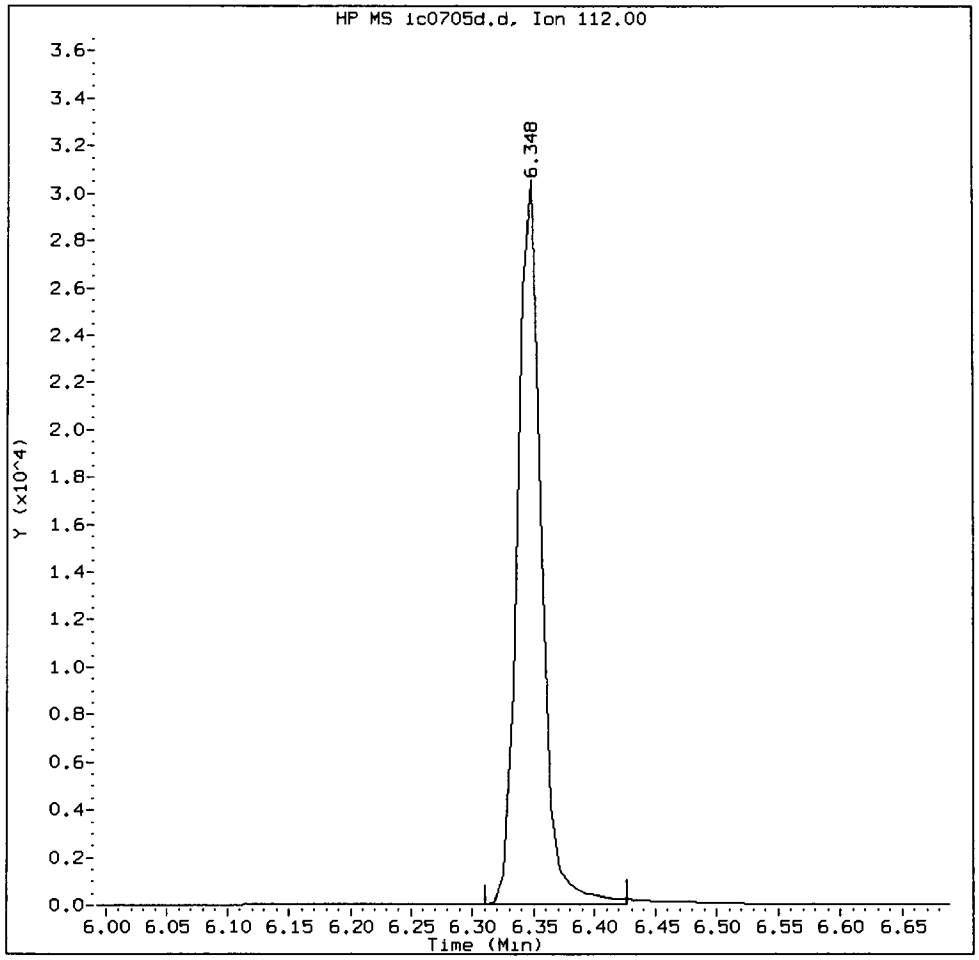
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 7/10/13

ABN1.0, /chem1/nt10.i/20130705.b/SIM.b/ic0705d.d

2-Fluorophenol Amount: 0.99 Area: 41764



MANUAL INTEGRATION for 2-Fluorophenol

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VB Date: 7/10/13

CO-ELUTION SUMMARY FOR FILE - ic0705d.d

Lab ID: ABN1.0, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 05-JUL-201

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 7/9/13

Data file : /chem1/nt10.i/20130705.b/SIM.b/ic0705f.d
Lab Smp Id: ABN2.5
Inj Date : 05-JUL-2013 15:20
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : ABN2.5
Misc Info :
Comment :
Method : /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Meth Date : 10-Jul-2013 11:26 yev Quant Type: ISTD
Cal Date : 05-JUL-2013 15:20 Cal File: ic0705f.d
Als bottle: 7 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.340	6.341	(0.718)	96894	2.50000	2.578 (M)
	3	Phenol	94	8.095	8.095	(0.917)	134605	2.50000	2.623
	7	1,3-Dichlorobenzene	146	8.713	8.714	(0.987)	99346	2.50000	2.436
*	8	1,4-Dichlorobenzene-d4	152	8.829	8.822	(1.000)	103682	4.00000	
	9	1,4-Dichlorobenzene	146	8.860	8.861	(1.004)	96232	2.50000	2.432
	11	Benzyl alcohol	79	9.085	9.086	(1.029)	69918	2.50000	2.708
	12	1,2-Dichlorobenzene	146	9.163	9.164	(1.038)	92931	2.50000	2.442
	13	2-Methylphenol	108	9.318	9.319	(1.055)	98133	2.50000	2.634
	15	4-Methylphenol	108	9.629	9.629	(1.091)	99833	2.50000	2.697
	16	N-Nitroso-di-n-propylamine	70	9.652	9.645	(1.093)	64023	2.50000	2.627
	22	2,4-Dimethylphenol	107	10.769	10.770	(0.938)	197105	5.00000	5.206
	26	1,2,4-Trichlorobenzene	180	11.370	11.371	(0.990)	83461	2.50000	2.430
*	27	Naphthalene-d8	136	11.486	11.487	(1.000)	367429	4.00000	
	30	Hexachlorobutadiene	225	11.842	11.842	(1.031)	49362	2.50000	2.417
	39	Dimethylphthalate	163	14.844	14.837	(0.964)	157714	2.50000	2.476
*	42	Acenaphthene-d10	162	15.402	15.394	(1.000)	204904	4.00000	
	50	Diethylphthalate	149	16.438	16.438	(1.067)	12233	2.50000	1.308 (H)
	54	N-Nitrosodiphenylamine	169	16.939	16.939	(0.904)	121222	2.50000	2.696
	57	Hexachlorobenzene	284	17.880	17.881	(0.954)	65988	2.50000	2.341
	58	Pentachlorophenol	266	18.329	18.330	(0.978)	106851	5.00000	5.583
*	59	Phenanthrene-d10	188	18.747	18.740	(1.000)	388952	4.00000	
$	66	Terphenyl-d14	244	21.989	21.990	(0.922)	118959	2.50000	2.518
	67	Butylbenzylphthalate	149	22.918	22.926	(0.961)	128219	2.50000	2.870
*	69	Chrysene-d12	240	23.847	23.848	(1.000)	408222	4.00000	
*	77	Perylene-d12	264	26.286	26.279	(1.000)	440988	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.658	28.643	(1.090)	275147	2.50000	2.828
	90	N-Nitrosodimethylamine	74	4.047	4.047	(0.458)	126385	5.00000	5.384

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: nt10.i
Lab File ID: ic0705f.d
Lab Smp Id: ABN2.5
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 05-JUL-2013
Calibration Time: 18:37

Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	115828	57914	231656	103682	-10.49
27 Naphthalene-d8	412333	206166	824666	367429	-10.89
42 Acenaphthene-d10	225152	112576	450304	204904	-8.99
59 Phenanthrene-d10	415301	207650	830602	388952	-6.34
69 Chrysene-d12	449306	224653	898612	408222	-9.14
77 Perylene-d12	474708	237354	949416	440988	-7.10

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.82	8.32	9.32	8.83	0.08
27 Naphthalene-d8	11.49	10.99	11.99	11.49	0.00
42 Acenaphthene-d10	15.39	14.89	15.89	15.40	0.05
59 Phenanthrene-d10	18.74	18.24	19.24	18.75	0.04
69 Chrysene-d12	23.85	23.35	24.35	23.85	0.00
77 Perylene-d12	26.28	25.78	26.78	26.29	0.03

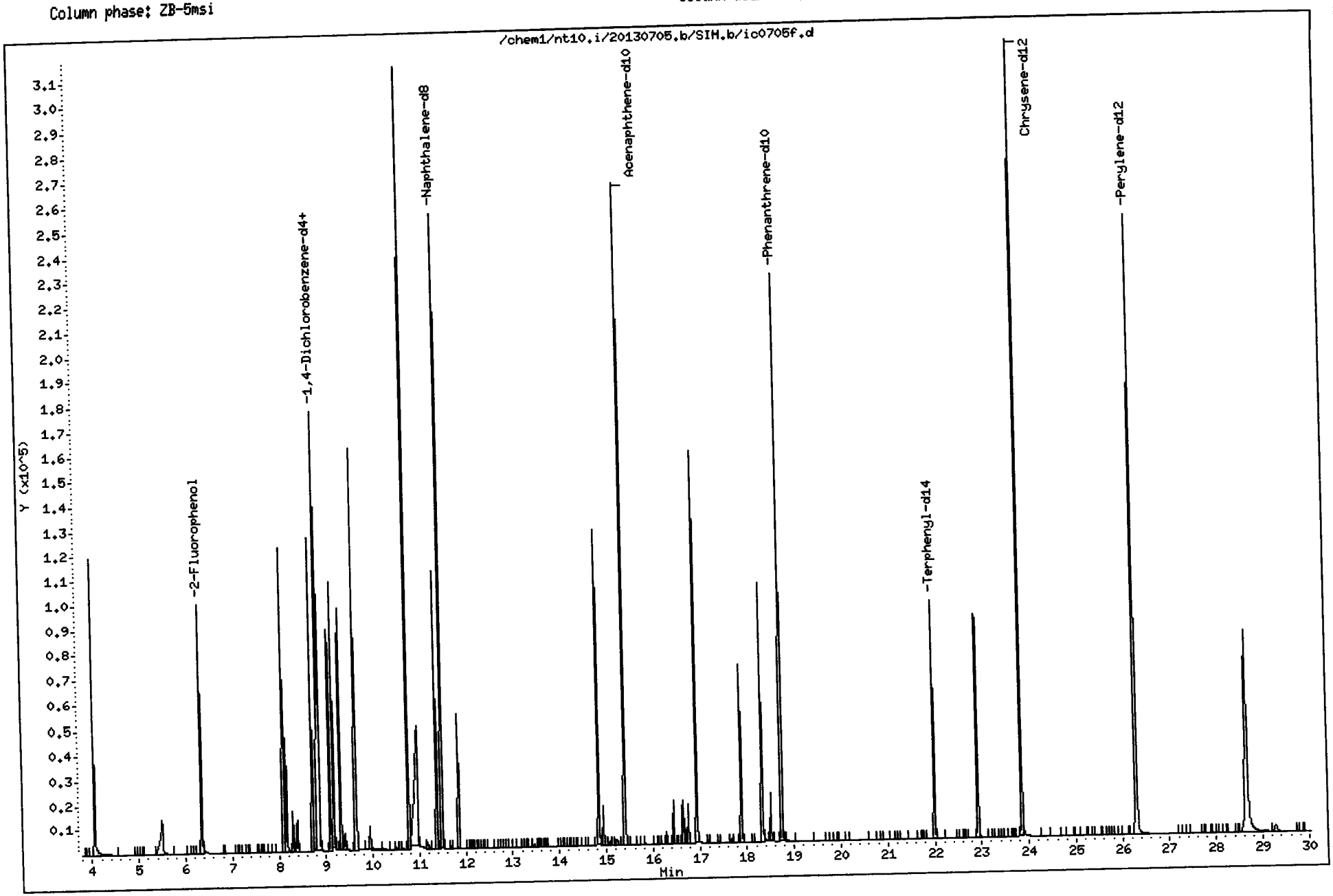
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130705.b/SIM.b/ic0705f.d
Date : 05-JUL-2013 15:20
Client ID:
Sample Info: ABN2.5

Instrument: nt10.i

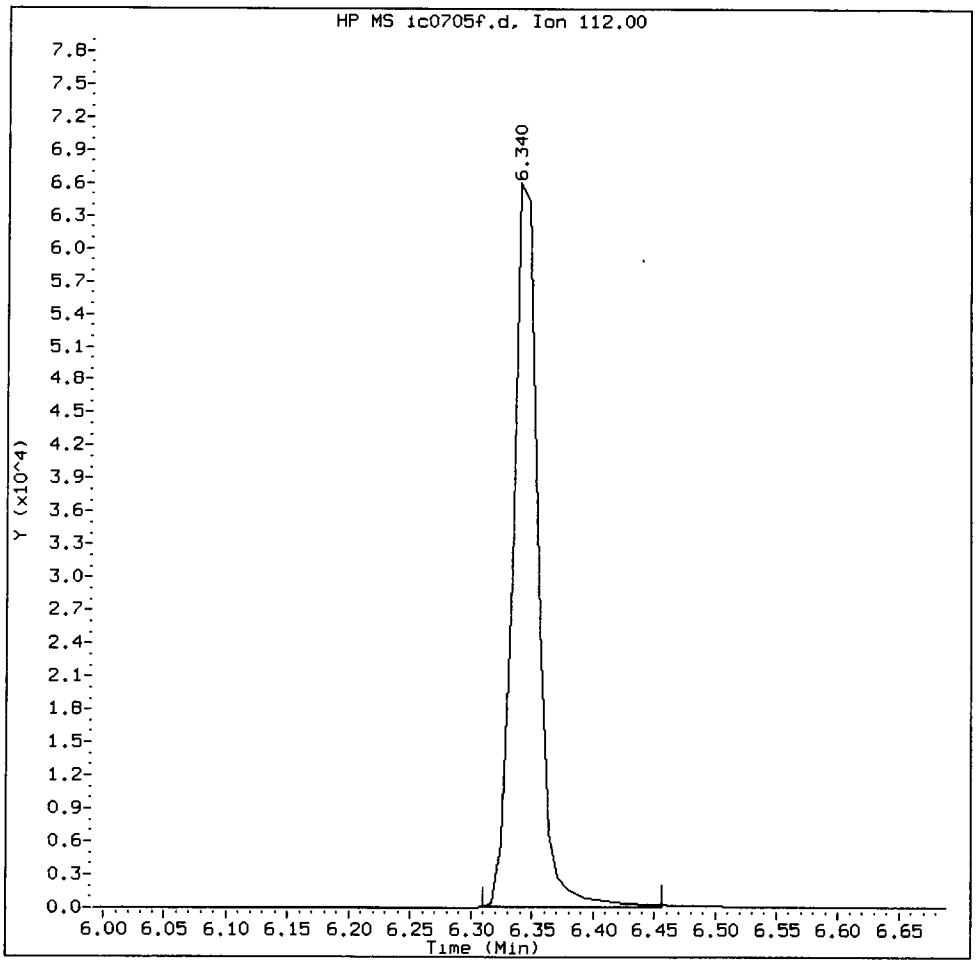
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



ABN2.5, /chem1/nt10.i/20130705.b/SIM.b/ic0705f.d

2-Fluorophenol Amount: 2.58 Area: 96894



MANUAL INTEGRATION for 2-Fluorophenol

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: _____ Date: 7/10/13

CO-ELUTION SUMMARY FOR FILE - ic0705f.d

Lab ID: ABN2.5, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 05-JUL-201

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130705.b/SIM.b/ic0705g.d
Lab Smp Id: ABN0.5
Inj Date : 05-JUL-2013 15:57
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : ABN0.5
Misc Info :
Comment :
Method : /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Meth Date : 10-Jul-2013 11:26 yev Quant Type: ISTD
Cal Date : 05-JUL-2013 15:57 Cal File: ic0705g.d
Als bottle: 8 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1 2-Fluorophenol	112	6.348	6.341	(0.719)	20462	0.50000	0.4990 (M)
	3 Phenol	94	8.095	8.095	(0.917)	28293	0.50000	0.5053
	7 1,3-Dichlorobenzene	146	8.713	8.714	(0.987)	21915	0.50000	0.4924
*	8 1,4-Dichlorobenzene-d4	152	8.830	8.822	(1.000)	113136	4.00000	
	9 1,4-Dichlorobenzene	146	8.861	8.861	(1.004)	21063	0.50000	0.4878
	11 Benzyl alcohol	79	9.086	9.086	(1.029)	14657	0.50000	0.5202
	12 1,2-Dichlorobenzene	146	9.163	9.164	(1.038)	20390	0.50000	0.4910
	13 2-Methylphenol	108	9.319	9.319	(1.055)	20760	0.50000	0.5106
	15 4-Methylphenol	108	9.629	9.629	(1.091)	20759	0.50000	0.5140
	16 N-Nitroso-di-n-propylamine	70	9.645	9.645	(1.092)	13516	0.50000	0.5082
	22 2,4-Dimethylphenol	107	10.770	10.770	(0.938)	42740	1.00000	1.021
	26 1,2,4-Trichlorobenzene	180	11.371	11.371	(0.990)	18593	0.50000	0.4896
*	27 Naphthalene-d8	136	11.487	11.487	(1.000)	406328	4.00000	
	30 Hexachlorobutadiene	225	11.842	11.842	(1.031)	10870	0.50000	0.4812
	39 Dimethylphthalate	163	14.837	14.837	(0.964)	34154	0.50000	0.4951
*	42 Acenaphthene-d10	162	15.394	15.394	(1.000)	221951	4.00000	
	50 Diethylphthalate	149	16.438	16.438	(1.068)	4975	0.50000	0.4910 (MH)
	54 N-Nitrosodiphenylamine	169	16.939	16.939	(0.904)	24678	0.50000	0.5285
	57 Hexachlorobenzene	284	17.881	17.881	(0.954)	14359	0.50000	0.4905
	58 Pentachlorophenol	266	18.330	18.330	(0.978)	20704	1.00000	1.041
*	59 Phenanthrene-d10	188	18.740	18.740	(1.000)	403977	4.00000	
$	66 Terphenyl-d14	244	21.989	21.990	(0.922)	24002	0.50000	0.4829
	67 Butylbenzylphthalate	149	22.926	22.926	(0.961)	23529	0.50000	0.5006
*	69 Chrysene-d12	240	23.848	23.848	(1.000)	429467	4.00000	
*	77 Perylene-d12	264	26.279	26.279	(1.000)	460978	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.651	28.643	(1.090)	51338	0.50000	0.5048
	90 N-Nitrosodimethylamine	74	4.055	4.047	(0.459)	26197	1.00000	1.023

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: nt10.i
Lab File ID: ic0705g.d
Lab Smp Id: ABN0.5
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 05-JUL-2013
Calibration Time: 18:37
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	115828	57914	231656	113136	-2.32
27 Naphthalene-d8	412333	206166	824666	406328	-1.46
42 Acenaphthene-d10	225152	112576	450304	221951	-1.42
59 Phenanthrene-d10	415301	207650	830602	403977	-2.73
69 Chrysene-d12	449306	224653	898612	429467	-4.42
77 Perylene-d12	474708	237354	949416	460978	-2.89

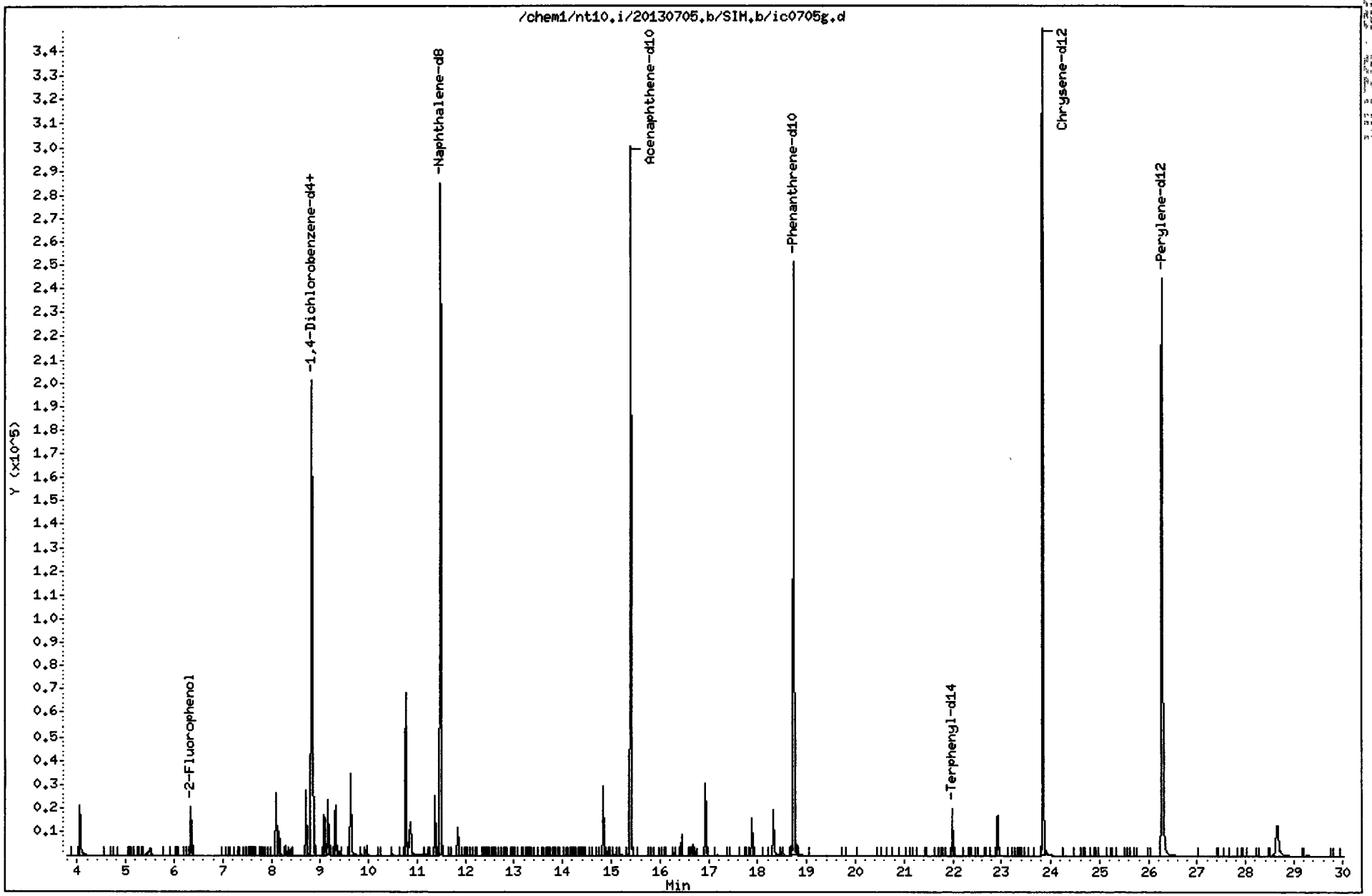
COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.82	8.32	9.32	8.83	0.09
27 Naphthalene-d8	11.49	10.99	11.99	11.49	0.00
42 Acenaphthene-d10	15.39	14.89	15.89	15.39	0.00
59 Phenanthrene-d10	18.74	18.24	19.24	18.74	0.00
69 Chrysene-d12	23.85	23.35	24.35	23.85	0.00
77 Perylene-d12	26.28	25.78	26.78	26.28	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/nt10.i/20130705.b/SIM.b/ic0705g.d
Date : 05-JUL-2013 15:57
Client ID:
Sample Info: ABN0.5

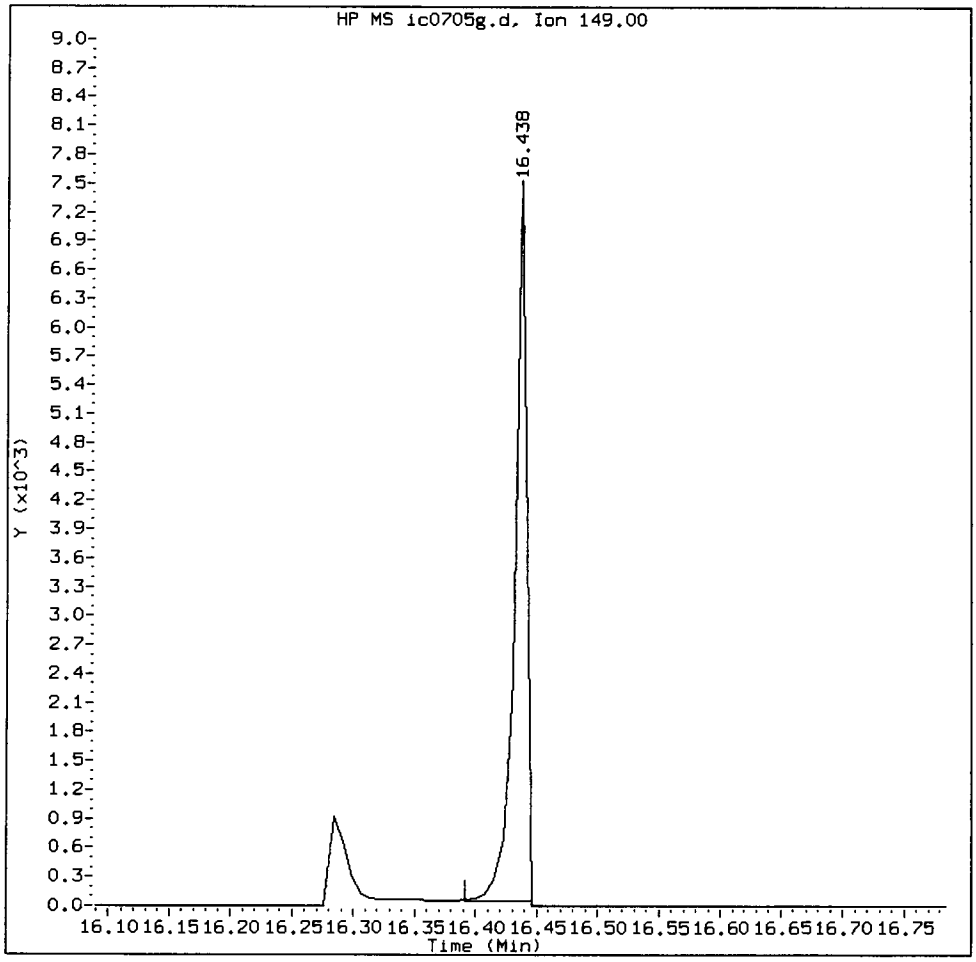
Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25

Column phase: ZB-5msi



ABN0.5, /chem1/nt10.i/20130705.b/SIM.b/ic0705g.d

Diethylphthalate Amount: 0.49 Area: 4975



MANUAL INTEGRATION for Diethylphthalate

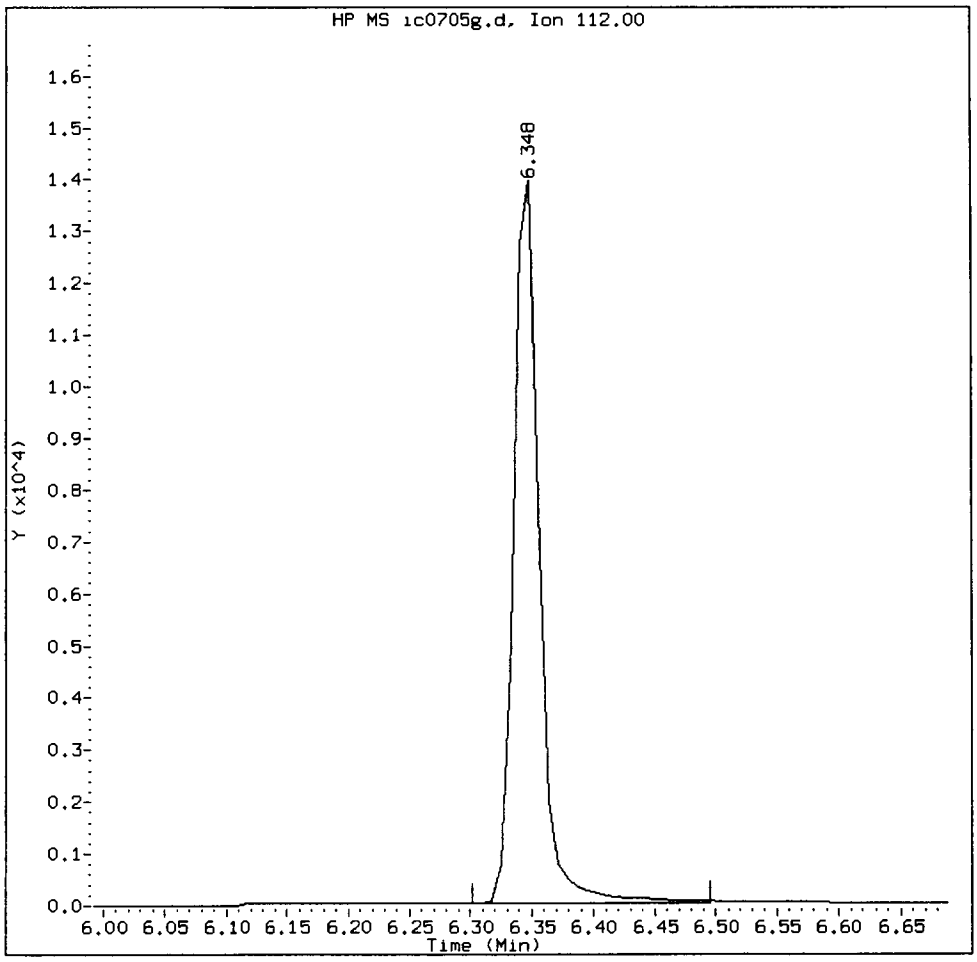
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 7/19/13

ABN0.5, /chem1/nt10.i/20130705.b/SIM.b/ic0705g.d

2-Fluorophenol Amount: 0.50 Area: 20462



MANUAL INTEGRATION for 2-Fluorophenol

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 7/10/13

CO-ELUTION SUMMARY FOR FILE - ic0705g.d

Lab ID: ABN0.5, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 05-JUL-201

RT	CO-ELUTION COMPOUNDS
	NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130705.b/SIM.b/ic0705h.d
Lab Smp Id: ABN0.05
Inj Date : 05-JUL-2013 16:34
Operator : YZ Inst ID: nt10.i
Smp Info : ABN0.05
Misc Info :
Comment :
Method : /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Meth Date : 10-Jul-2013 11:26 yev Quant Type: ISTD
Cal Date : 05-JUL-2013 16:34 Cal File: ic0705h.d
Als bottle: 9 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

YZ 7/10/13

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.341	6.341	(0.719)	2013	0.05000	0.05002 (M)
	3	Phenol	94	8.095	8.095	(0.918)	2595	0.05000	0.04722
	7	1,3-Dichlorobenzene	146	8.713	8.714	(0.988)	2378	0.05000	0.05444
*	8	1,4-Dichlorobenzene-d4	152	8.822	8.822	(1.000)	111035	4.00000	
	9	1,4-Dichlorobenzene	146	8.861	8.861	(1.004)	2264	0.05000	0.05342 (M)
	11	Benzyl alcohol	79	9.094	9.086	(1.031)	1271	0.05000	0.04596 (M)
	12	1,2-Dichlorobenzene	146	9.163	9.164	(1.039)	2179	0.05000	0.05346
	13	2-Methylphenol	108	9.319	9.319	(1.056)	1939	0.05000	0.04859
	15	4-Methylphenol	108	9.629	9.629	(1.091)	1736	0.05000	0.04379
	16	N-Nitroso-di-n-propylamine	70	9.645	9.645	(1.093)	1279	0.05000	0.04900 (M)
	22	2,4-Dimethylphenol	107	10.769	10.770	(0.938)	3803	0.10000	0.09452
	26	1,2,4-Trichlorobenzene	180	11.371	11.371	(0.990)	1925	0.05000	0.05275
*	27	Naphthalene-d8	136	11.486	11.487	(1.000)	390465	4.00000	
	30	Hexachlorobutadiene	225	11.842	11.842	(1.031)	1152	0.05000	0.05307 (M)
	39	Dimethylphthalate	163	14.837	14.837	(0.964)	3145	0.05000	0.04895
*	42	Acenaphthene-d10	162	15.394	15.394	(1.000)	206716	4.00000	
	50	Diethylphthalate	149	16.438	16.438	(1.068)	491	0.05000	0.05203 (MH)
	54	N-Nitrosodiphenylamine	169	16.931	16.939	(0.904)	1782	0.05000	0.04036 (M)
	57	Hexachlorobenzene	284	17.881	17.881	(0.954)	1503	0.05000	0.05429 (M)
	58	Pentachlorophenol	266	18.337	18.330	(0.979)	1424	0.10000	0.07575 (M)
*	59	Phenanthrene-d10	188	18.740	18.740	(1.000)	382023	4.00000	
$	66	Terphenyl-d14	244	21.989	21.990	(0.922)	2310	0.05000	0.05005 (M)
	67	Butylbenzylphthalate	149	22.926	22.926	(0.961)	1670	0.05000	0.03826
*	69	Chrysene-d12	240	23.848	23.848	(1.000)	398771	4.00000	
*	77	Perylene-d12	264	26.286	26.279	(1.000)	427996	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.650	28.643	(1.090)	3730	0.05000	0.03950
	90	N-Nitrosodimethylamine	74	4.078	4.047	(0.462)	2182	0.10000	0.08679

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: nt10.i
Lab File ID: ic0705h.d
Lab Smp Id: ABN0.05
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 05-JUL-2013
Calibration Time: 18:37
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	115828	57914	231656	111035	-4.14
27 Naphthalene-d8	412333	206166	824666	390465	-5.30
42 Acenaphthene-d10	225152	112576	450304	206716	-8.19
59 Phenanthrene-d10	415301	207650	830602	382023	-8.01
69 Chrysene-d12	449306	224653	898612	398771	-11.25
77 Perylene-d12	474708	237354	949416	427996	-9.84

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.82	8.32	9.32	8.82	0.00
27 Naphthalene-d8	11.49	10.99	11.99	11.49	0.00
42 Acenaphthene-d10	15.39	14.89	15.89	15.39	0.00
59 Phenanthrene-d10	18.74	18.24	19.24	18.74	0.00
69 Chrysene-d12	23.85	23.35	24.35	23.85	0.00
77 Perylene-d12	26.28	25.78	26.78	26.29	0.03

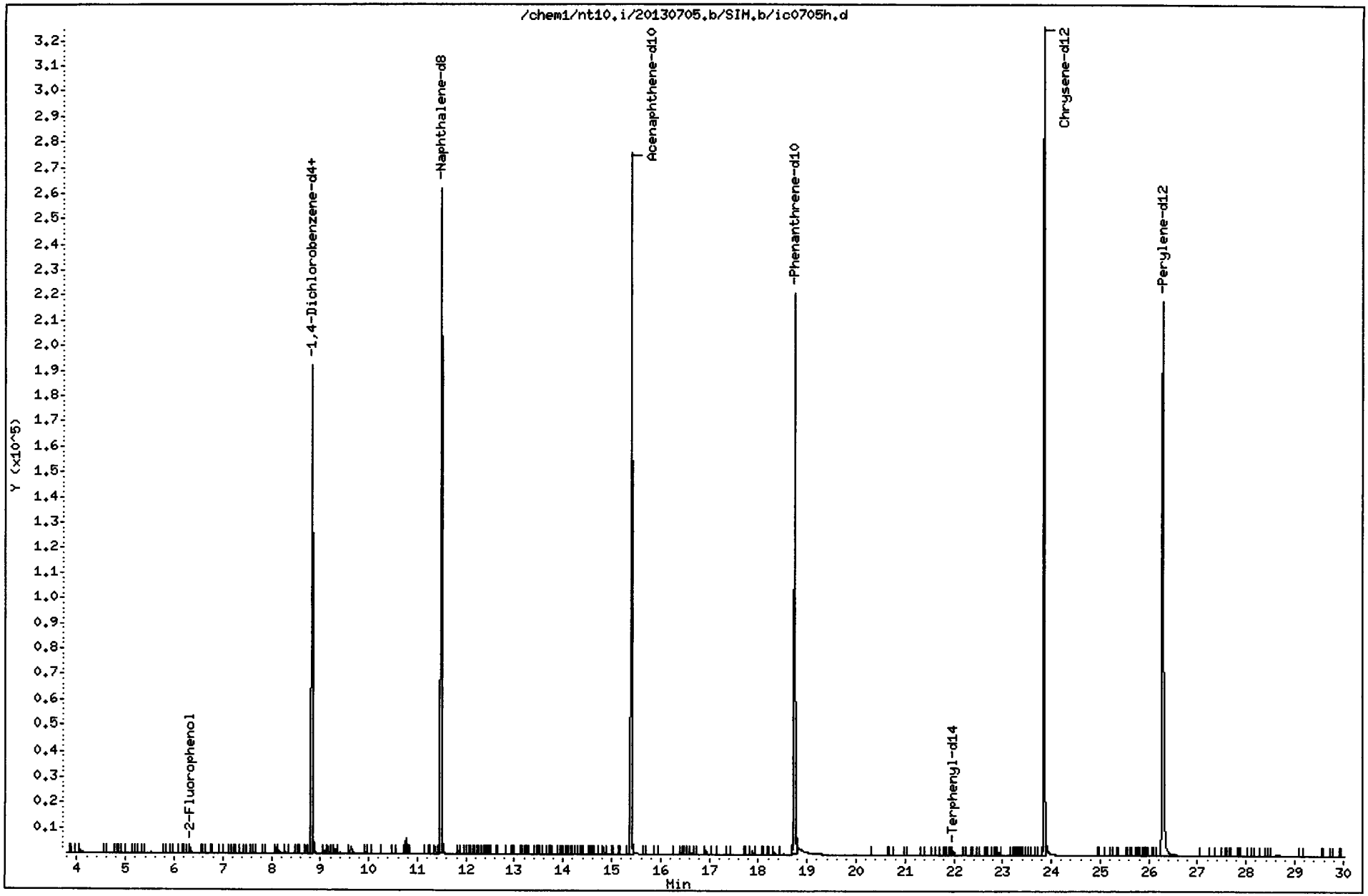
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130705.b/SIM.b/ic0705h.d
Date : 05-JUL-2013 16:34
Client ID:
Sample Info: ABN0.05

Instrument: nt10.i

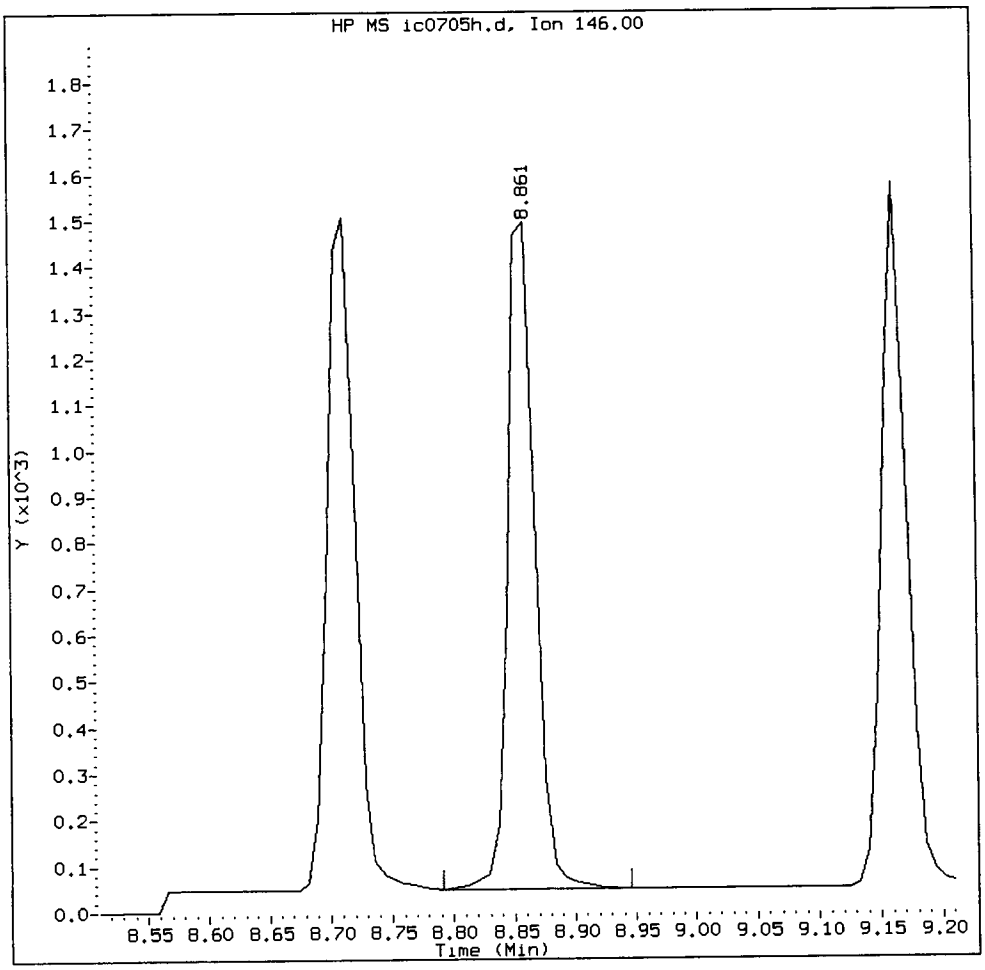
Operator: YZ
Column diameter: 0.25

Column phase: ZB-5msi



ABN0.05, /chem1/nt10.i/20130705.b/SIM.b/ic0705h.d

1,4-Dichlorobenzene Amount: 0.05 Area: 2264



MANUAL INTEGRATION for 1,4-Dichlorobenzene

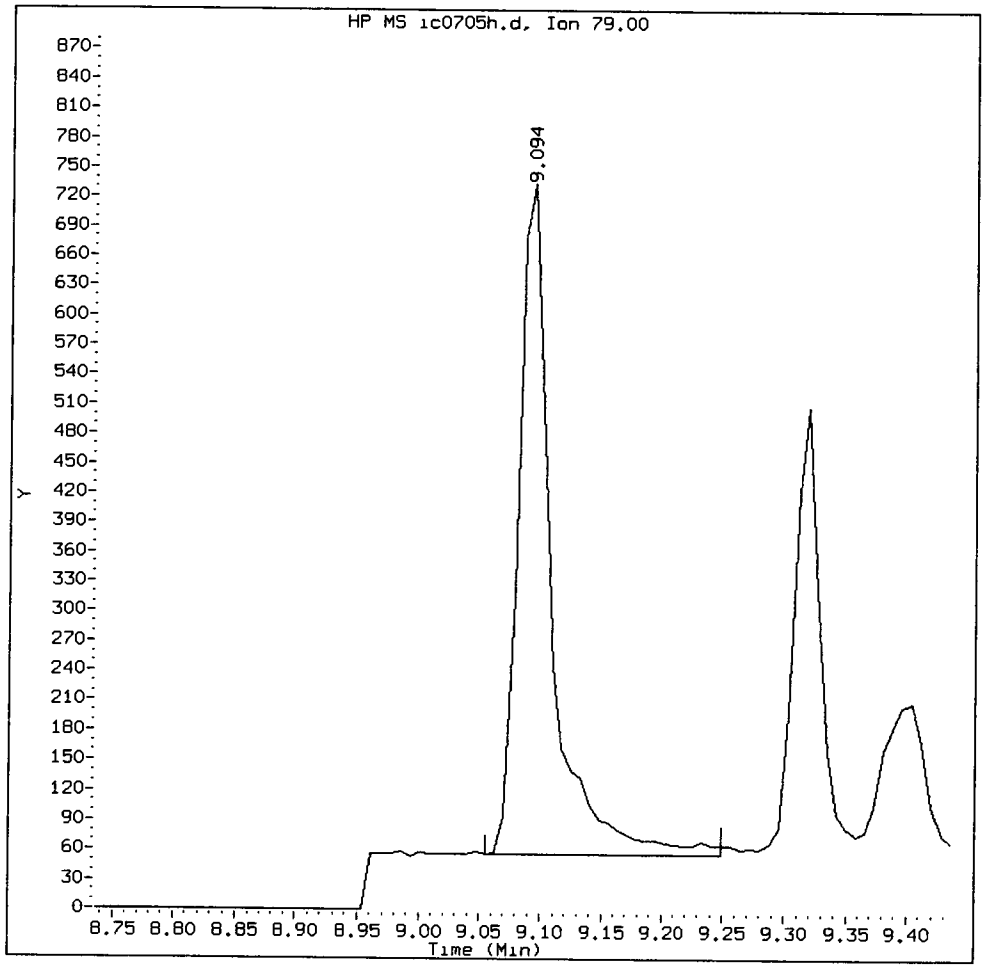
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: JZ Date: 7/10/13

ABN0.05, /chem1/nt10.i/20130705.b/SIM.b/ic0705h.d

Benzyl alcohol Amount: 0.05 Area: 1271



MANUAL INTEGRATION for Benzyl alcohol

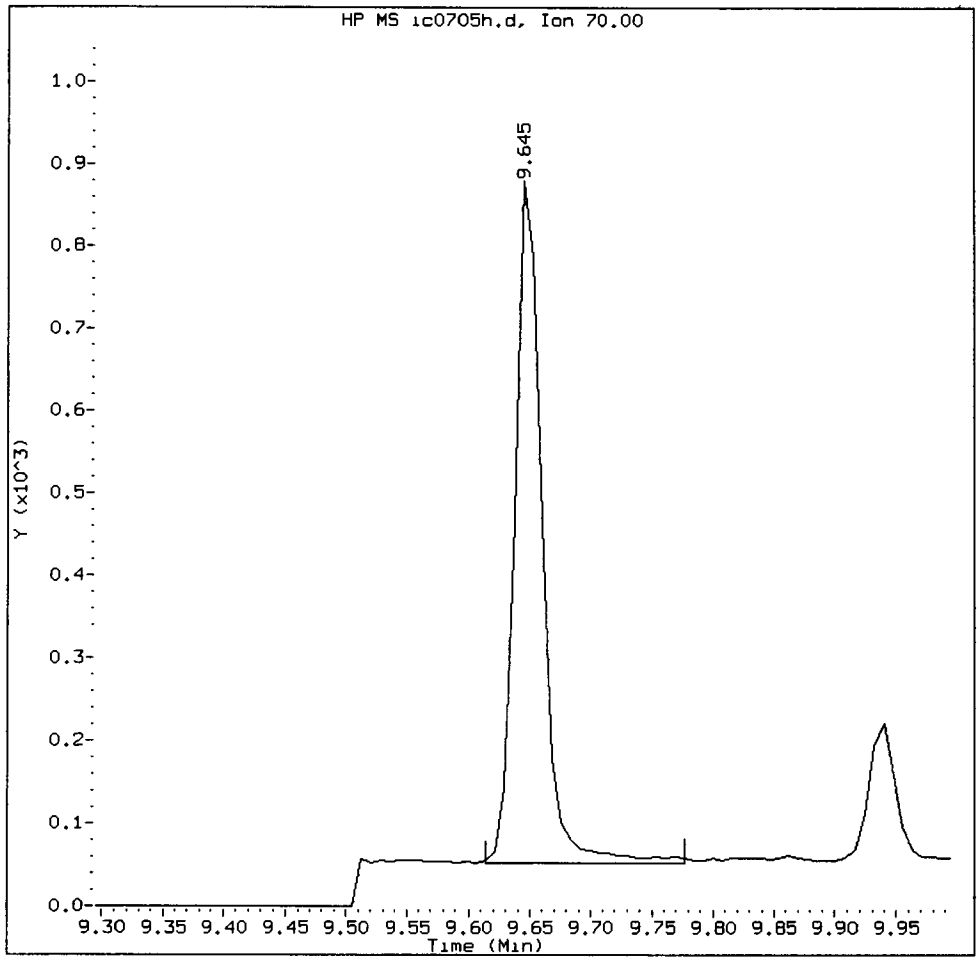
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 7/10/13

ABN0.05, /chem1/nt10.i/20130705.b/SIM.b/ic0705h.d

N-Nitroso-di-n-propylamine Amount: 0.05 Area: 1279



MANUAL INTEGRATION for N-Nitroso-di-n-propylamine

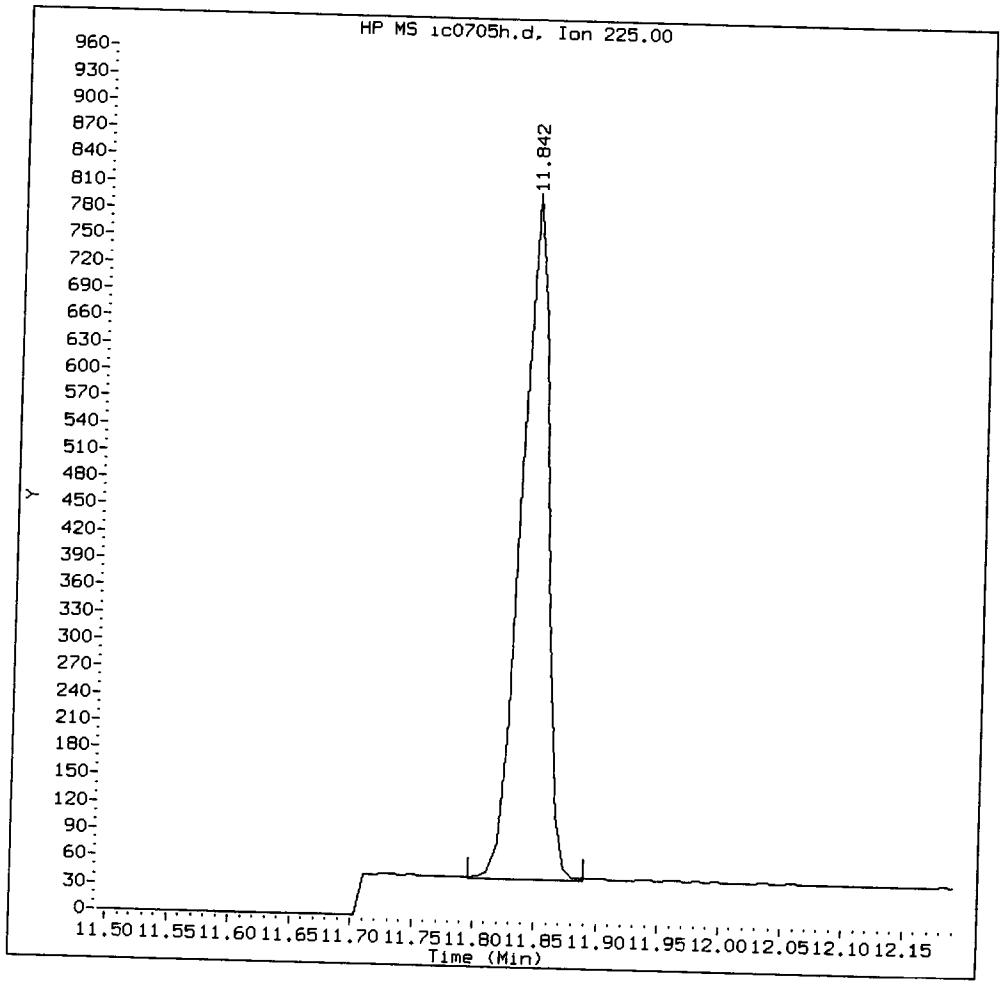
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 7/19/13

ABN0.05, /chem1/nt10.i/20130705.b/SIM.b/ic0705h.d

Hexachlorobutadiene Amount: 0.05 Area: 1152



MANUAL INTEGRATION for Hexachlorobutadiene

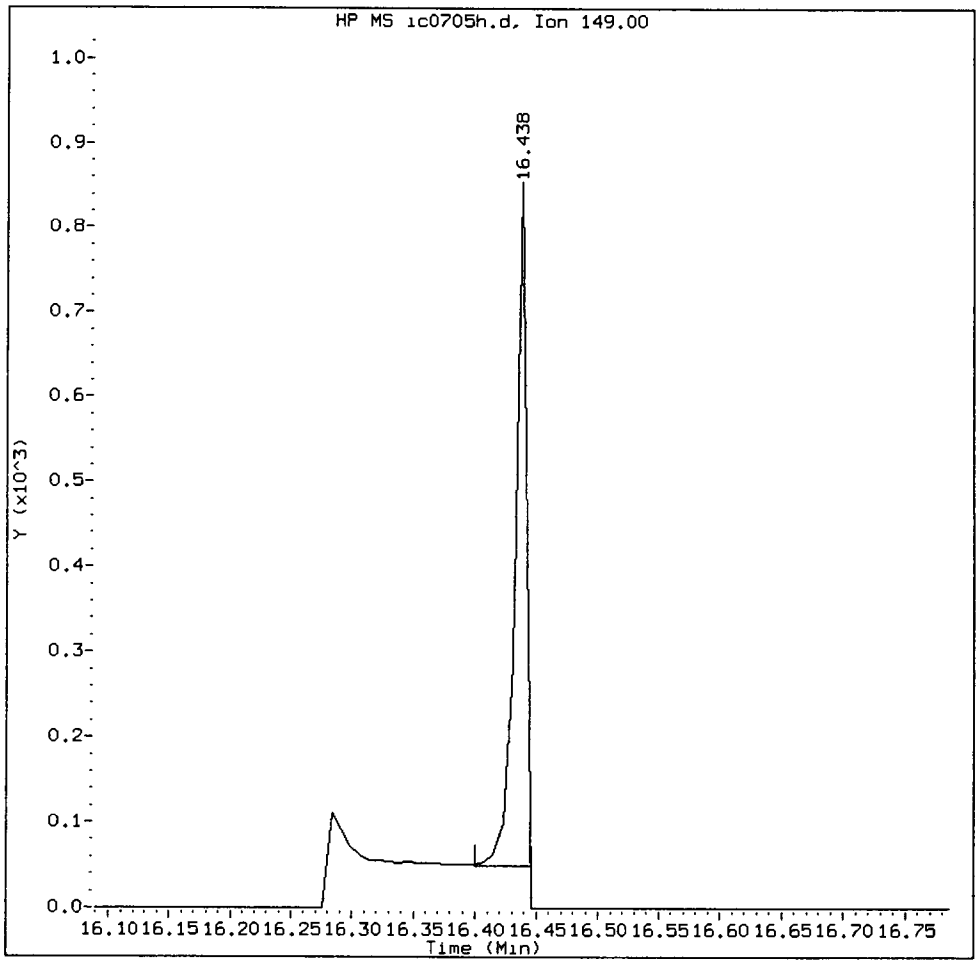
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 7/10/13

ABN0.05, /chem1/nt10.i/20130705.b/SIM.b/ic0705h.d

Diethylphthalate Amount: 0.05 Area: 491



MANUAL INTEGRATION for Diethylphthalate

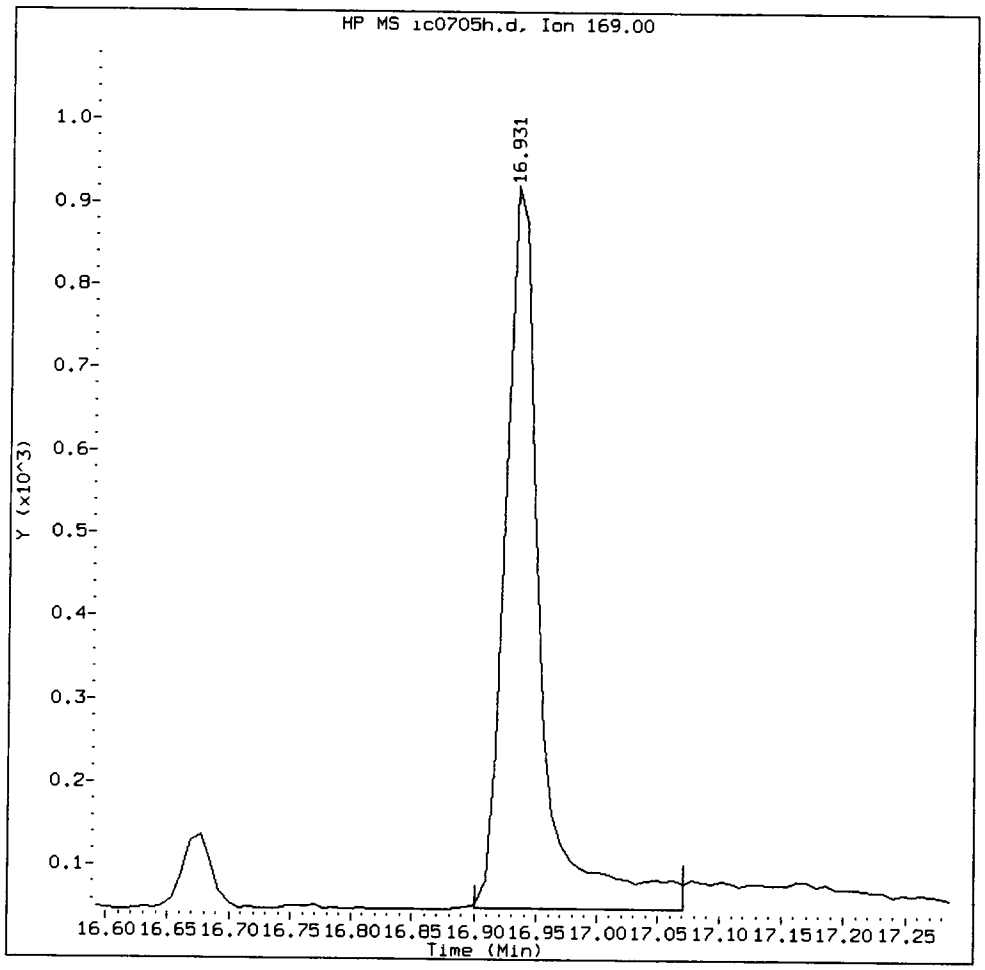
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 7/10/13

ABN0.05, /chem1/nt10.i/20130705.b/SIM.b/ic0705h.d

N-Nitrosodiphenylamine Amount: 0.04 Area: 1782



MANUAL INTEGRATION for N-Nitrosodiphenylamine

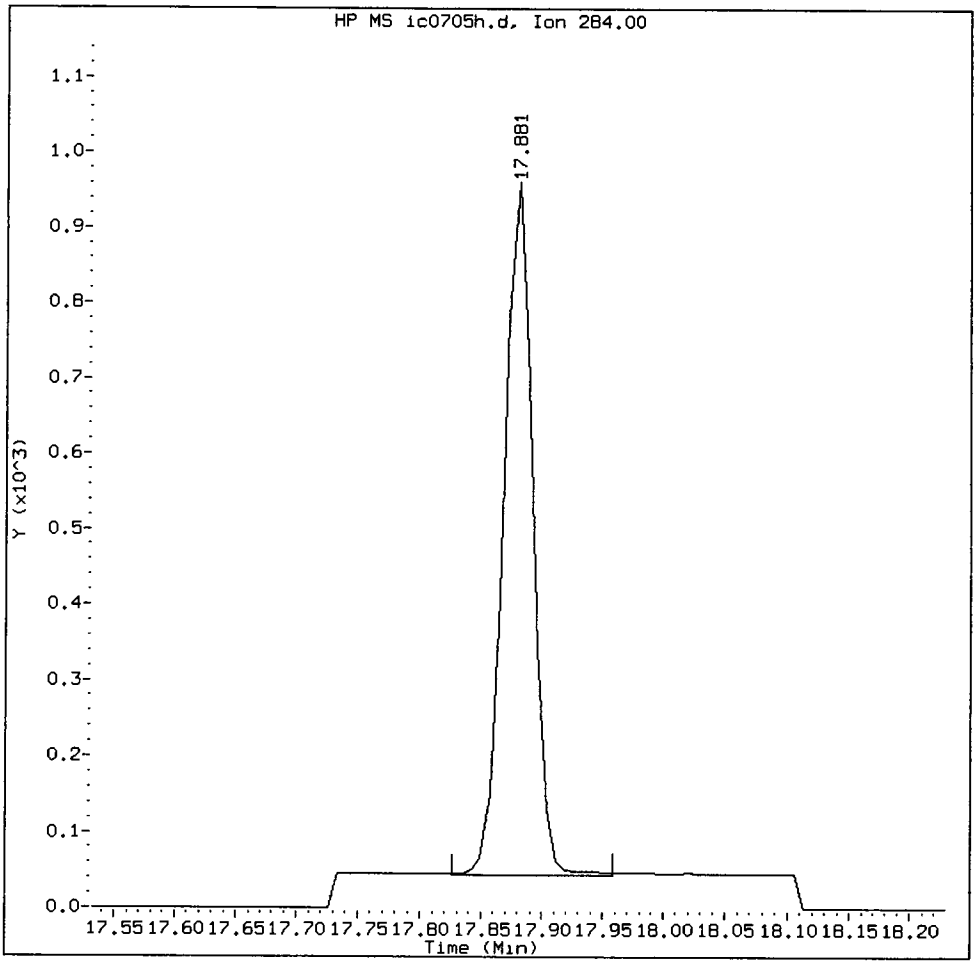
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VJ Date: 7/10/13

ABN0.05, /chem1/nt10.i/20130705.b/SIM.b/ic0705h.d

Hexachlorobenzene Amount: 0.05 Area: 1503



MANUAL INTEGRATION for Hexachlorobenzene

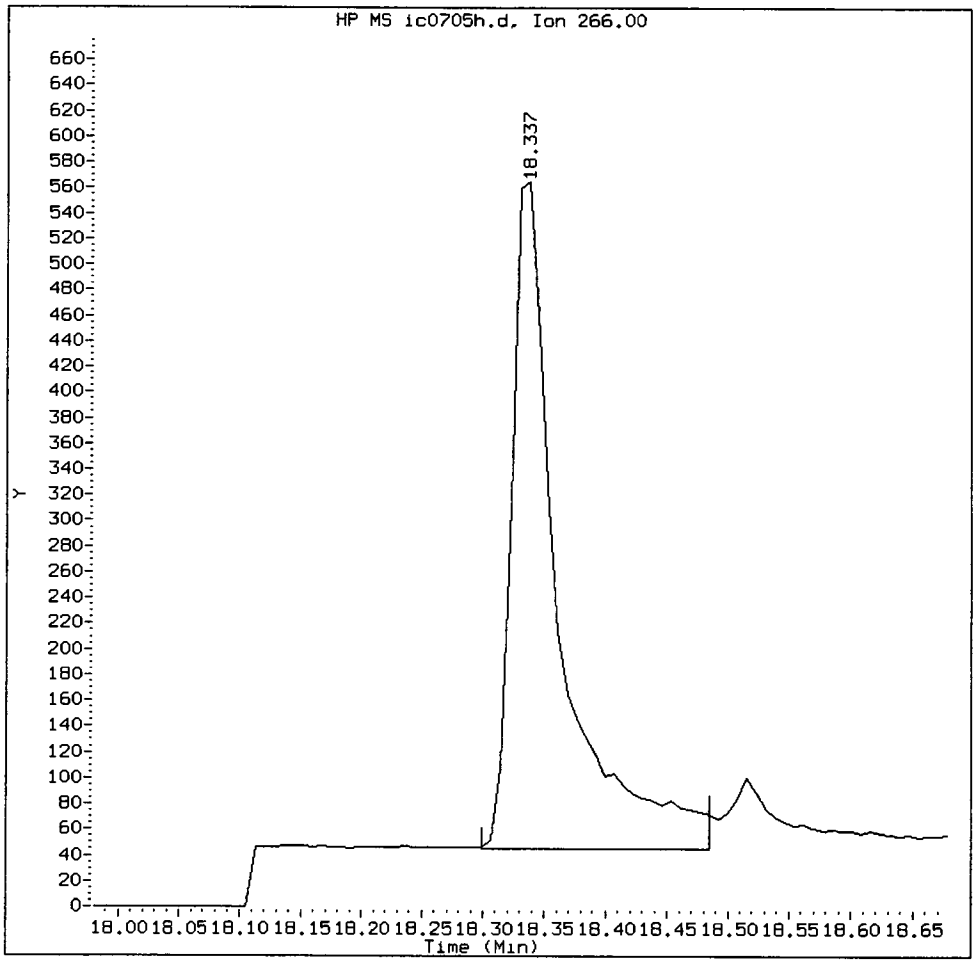
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VR Date: 7/10/13

ABN0.05, /chem1/nt10.i/20130705.b/SIM.b/ic0705h.d

Pentachlorophenol Amount: 0.08 Area: 1424



MANUAL INTEGRATION for Pentachlorophenol

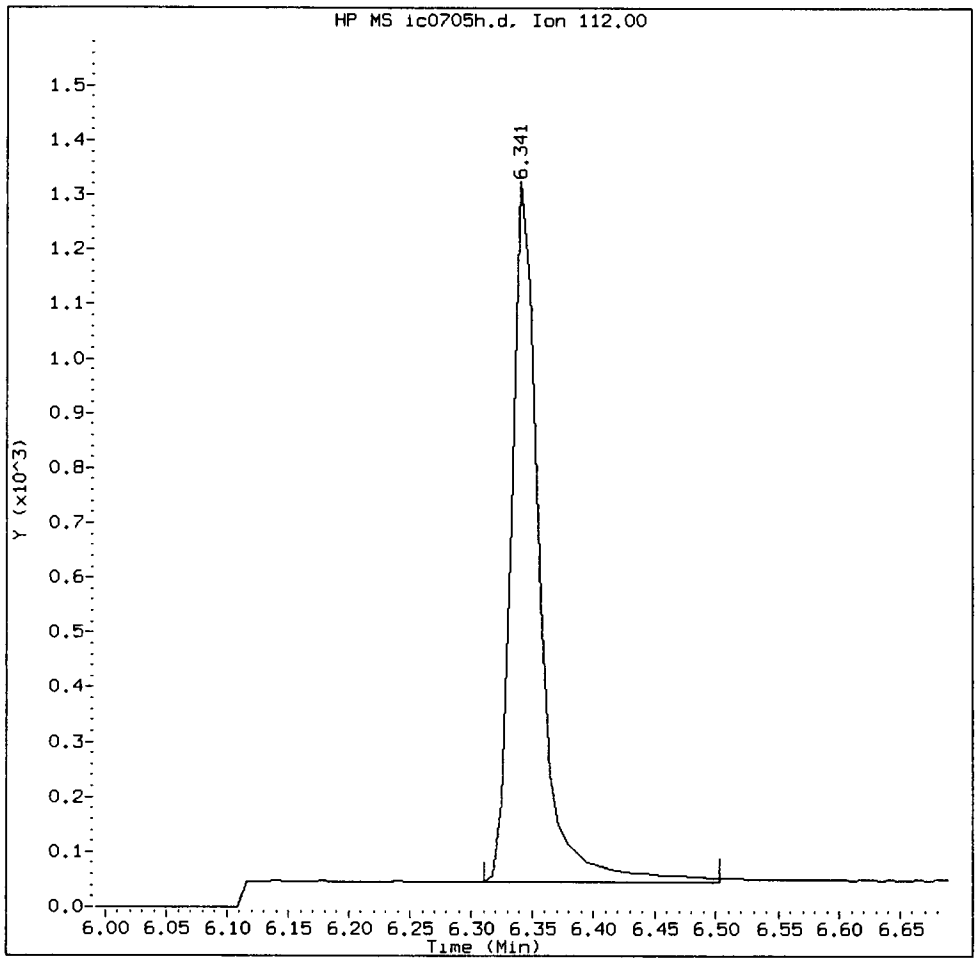
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 7/10/13

ABN0.05, /chem1/nt10.i/20130705.b/SIM.b/ic0705h.d

2-Fluorophenol Amount: 0.05 Area: 2013



MANUAL INTEGRATION for 2-Fluorophenol

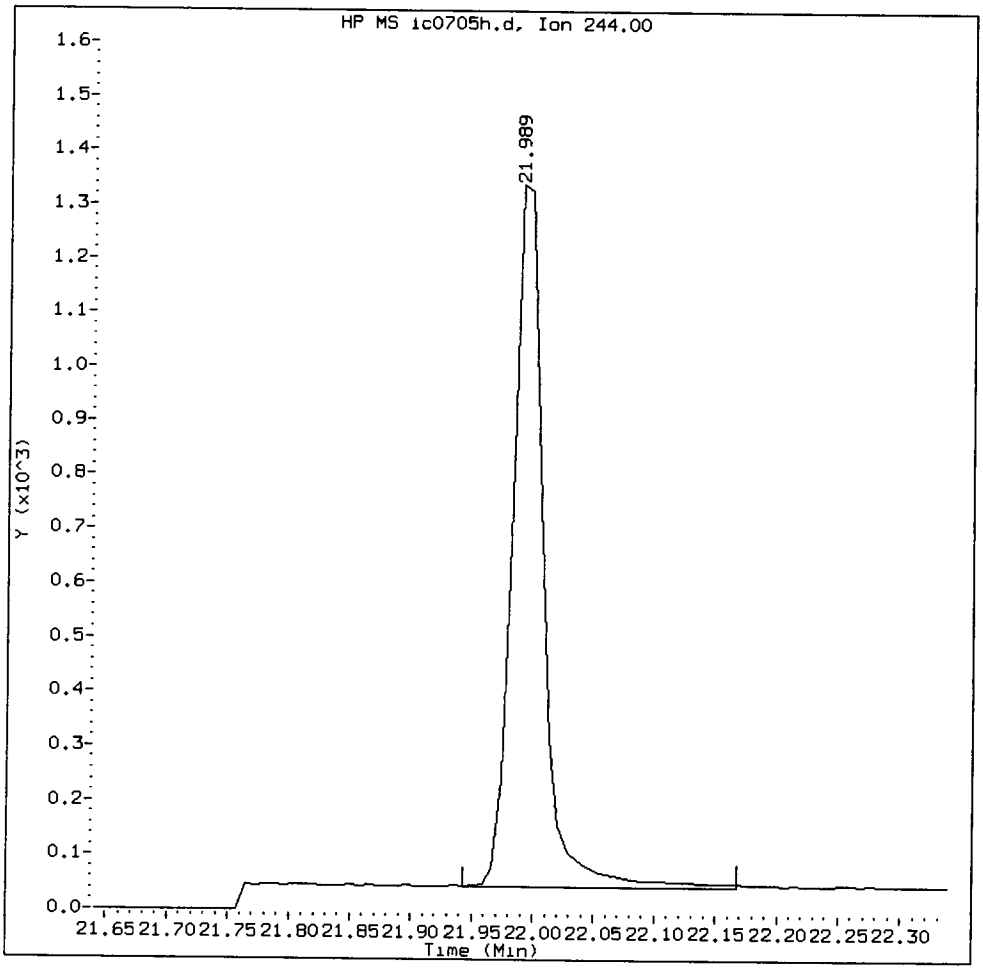
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VL Date: 7/10/13

ABN0.05, /chem1/nt10.i/20130705.b/SIM.b/ic0705h.d

Terphenyl-d14 Amount: 0.05 Area: 2310



MANUAL INTEGRATION for Terphenyl-d14

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 7/9/13

CO-ELUTION SUMMARY FOR FILE - ic0705h.d

Lab ID: ABN0.05, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 05-JUL-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130705.b/SIM.b/ic0705i.d YZ 7/10/13
Lab Smp Id: ABN0.1
Inj Date : 05-JUL-2013 17:11
Operator : YZ Inst ID: nt10.i
Smp Info : ABN0.1
Misc Info :
Comment :
Method : /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Meth Date : 10-Jul-2013 11:26 yev Quant Type: ISTD
Cal Date : 05-JUL-2013 17:11 Cal File: ic0705i.d
Als bottle: 10 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	AMOUNTS CAL-AMT (ug/mL)	AMOUNTS ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.341	6.341	(0.719)	3827	0.10000	0.09564 (M)
	3	Phenol	94	8.095	8.095	(0.918)	5156	0.10000	0.09437
	7	1,3-Dichlorobenzene	146	8.706	8.714	(0.987)	4376	0.10000	0.1008
*	8	1,4-Dichlorobenzene-d4	152	8.822	8.822	(1.000)	110394	4.00000	
	9	1,4-Dichlorobenzene	146	8.861	8.861	(1.004)	4316	0.10000	0.1024
	11	Benzyl alcohol	79	9.086	9.086	(1.030)	2448	0.10000	0.08904 (M)
	12	1,2-Dichlorobenzene	146	9.164	9.164	(1.039)	4119	0.10000	0.1017
	13	2-Methylphenol	108	9.319	9.319	(1.056)	3688	0.10000	0.09296
	15	4-Methylphenol	108	9.629	9.629	(1.091)	3573	0.10000	0.09066
	16	N-Nitroso-di-n-propylamine	70	9.645	9.645	(1.093)	2406	0.10000	0.09271
	22	2,4-Dimethylphenol	107	10.770	10.770	(0.938)	7335	0.20000	0.1859 (M)
	26	1,2,4-Trichlorobenzene	180	11.371	11.371	(0.990)	3687	0.10000	0.1030
*	27	Naphthalene-d8	136	11.487	11.487	(1.000)	382969	4.00000	
	30	Hexachlorobutadiene	225	11.842	11.842	(1.031)	2262	0.10000	0.1063
	39	Dimethylphthalate	163	14.837	14.837	(0.964)	6240	0.10000	0.09731
*	42	Acenaphthene-d10	162	15.394	15.394	(1.000)	206306	4.00000	
	50	Diethylphthalate	149	16.438	16.438	(1.068)	964	0.10000	0.1024
	54	N-Nitrosodiphenylamine	169	16.932	16.939	(0.904)	3963	0.10000	0.09005
	57	Hexachlorobenzene	284	17.881	17.881	(0.954)	2858	0.10000	0.1036
	58	Pentachlorophenol	266	18.330	18.330	(0.978)	3116	0.20000	0.1663
*	59	Phenanthrene-d10	188	18.740	18.740	(1.000)	380716	4.00000	
$	66	Terphenyl-d14	244	21.990	21.990	(0.922)	4402	0.10000	0.09576
	67	Butylbenzylphthalate	149	22.919	22.926	(0.961)	3354	0.10000	0.07715
*	69	Chrysene-d12	240	23.848	23.848	(1.000)	397194	4.00000	
*	77	Perylene-d12	264	26.279	26.279	(1.000)	421026	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.651	28.643	(1.090)	7535	0.10000	0.08112
	90	N-Nitrosodimethylamine	74	4.063	4.047	(0.461)	4583	0.20000	0.1834

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: ic0705i.d
Lab Smp Id: ABN0.1
Analysis Type: SV
Quant Type: ISTD
Operator: YZ
Method File: /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 05-JUL-2013
Calibration Time: 18:37
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	115828	57914	231656	110394	-4.69
27 Naphthalene-d8	412333	206166	824666	382969	-7.12
42 Acenaphthene-d10	225152	112576	450304	206306	-8.37
59 Phenanthrene-d10	415301	207650	830602	380716	-8.33
69 Chrysene-d12	449306	224653	898612	397194	-11.60
77 Perylene-d12	474708	237354	949416	421026	-11.31

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.82	8.32	9.32	8.82	0.00
27 Naphthalene-d8	11.49	10.99	11.99	11.49	0.00
42 Acenaphthene-d10	15.39	14.89	15.89	15.39	0.00
59 Phenanthrene-d10	18.74	18.24	19.24	18.74	0.00
69 Chrysene-d12	23.85	23.35	24.35	23.85	0.00
77 Perylene-d12	26.28	25.78	26.78	26.28	0.00

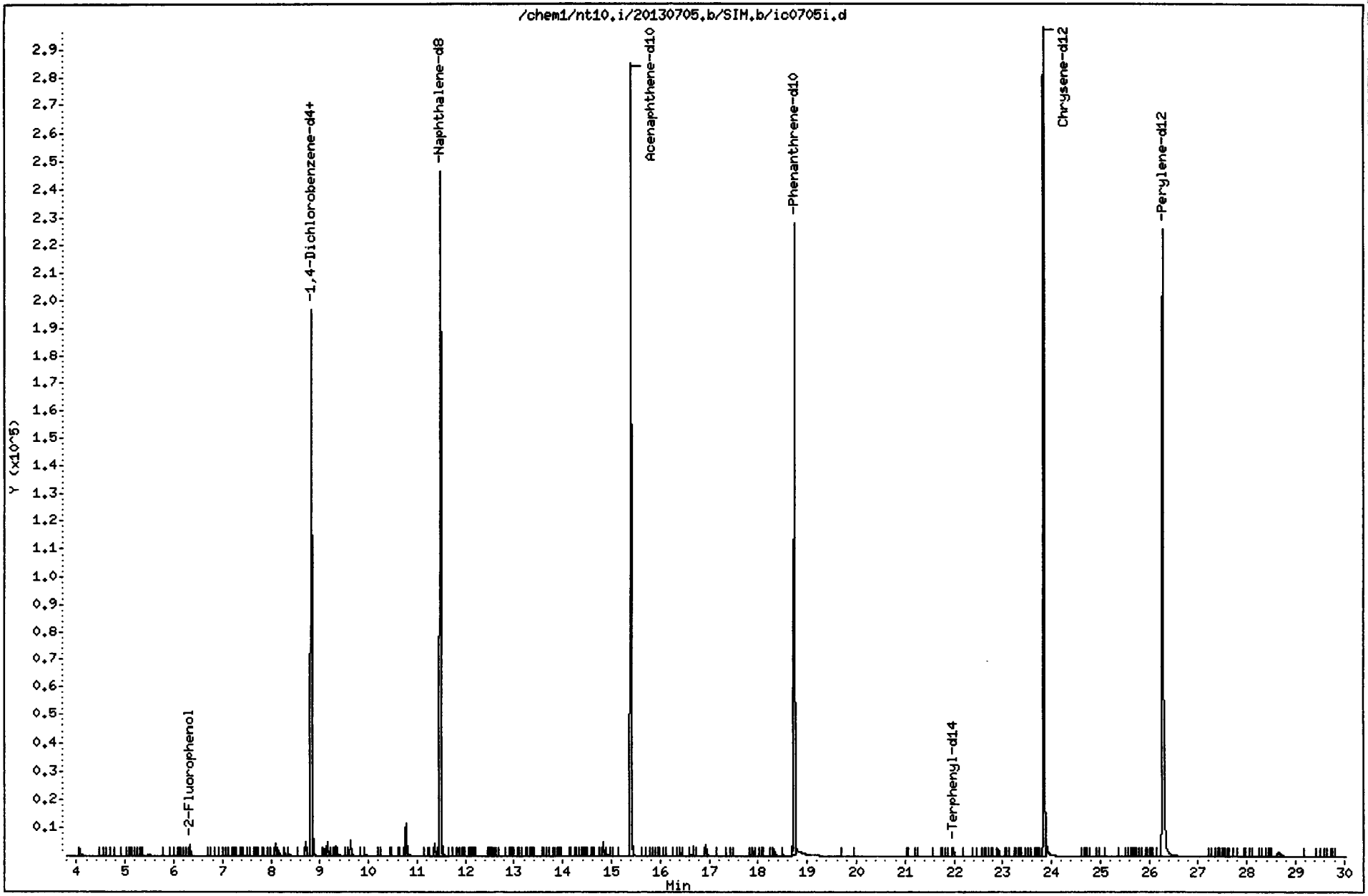
AREA UPPER LIMIT = +100% of internal standard area.
AREA LOWER LIMIT = - 50% of internal standard area.
RT UPPER LIMIT = + 0.50 minutes of internal standard RT.
RT LOWER LIMIT = - 0.50 minutes of internal standard RT.

Data File: /chem1/nt10.i/20130705.b/SIM.b/ic0705i.d
Date : 05-JUL-2013 17:11
Client ID:
Sample Info: ABN0.1

Instrument: nt10.i

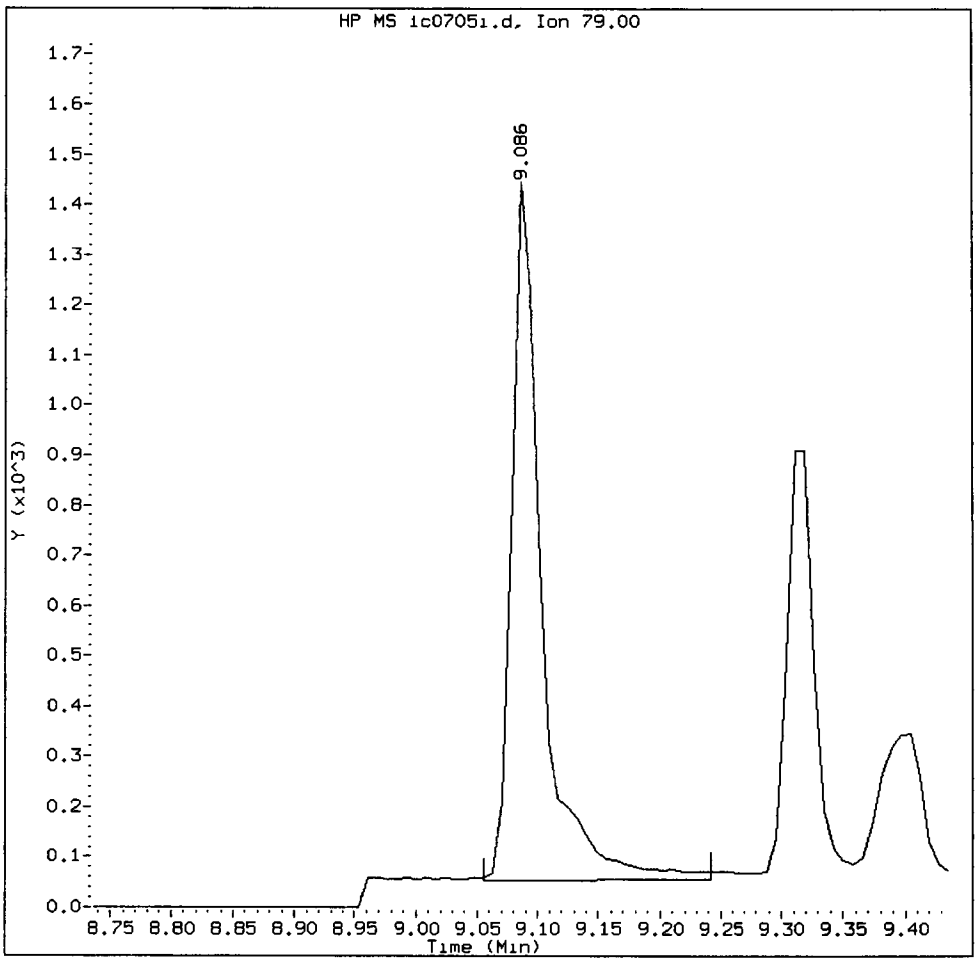
Operator: YZ
Column diameter: 0.25

Column phase: ZB-5msi



ABN0.1, /chem1/nt10.i/20130705.b/SIM.b/ic0705i.d

Benzyl alcohol Amount: 0.09 Area: 2448



MANUAL INTEGRATION for Benzyl alcohol

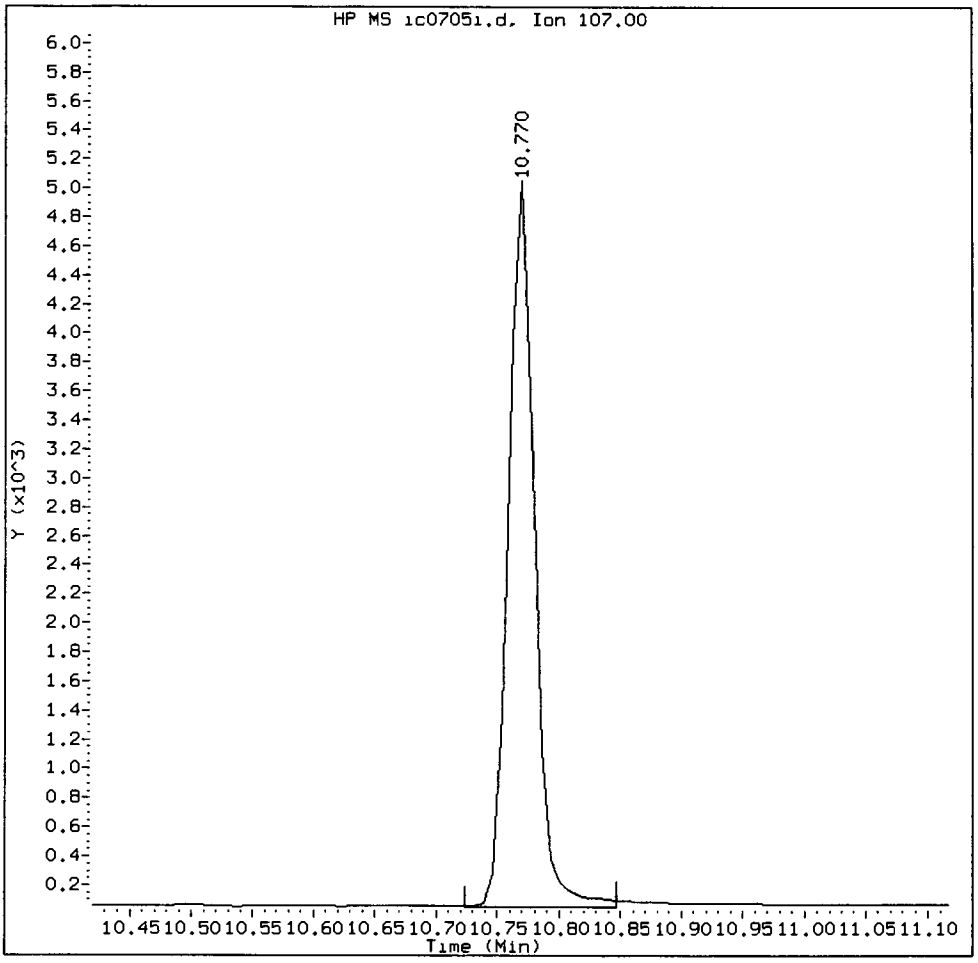
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 7/10/13

ABN0.1, /chem1/nt10.i/20130705.b/SIM.b/ic0705i.d

2,4-Dimethylphenol Amount: 0.19 Area: 7335



MANUAL INTEGRATION for 2,4-Dimethylphenol

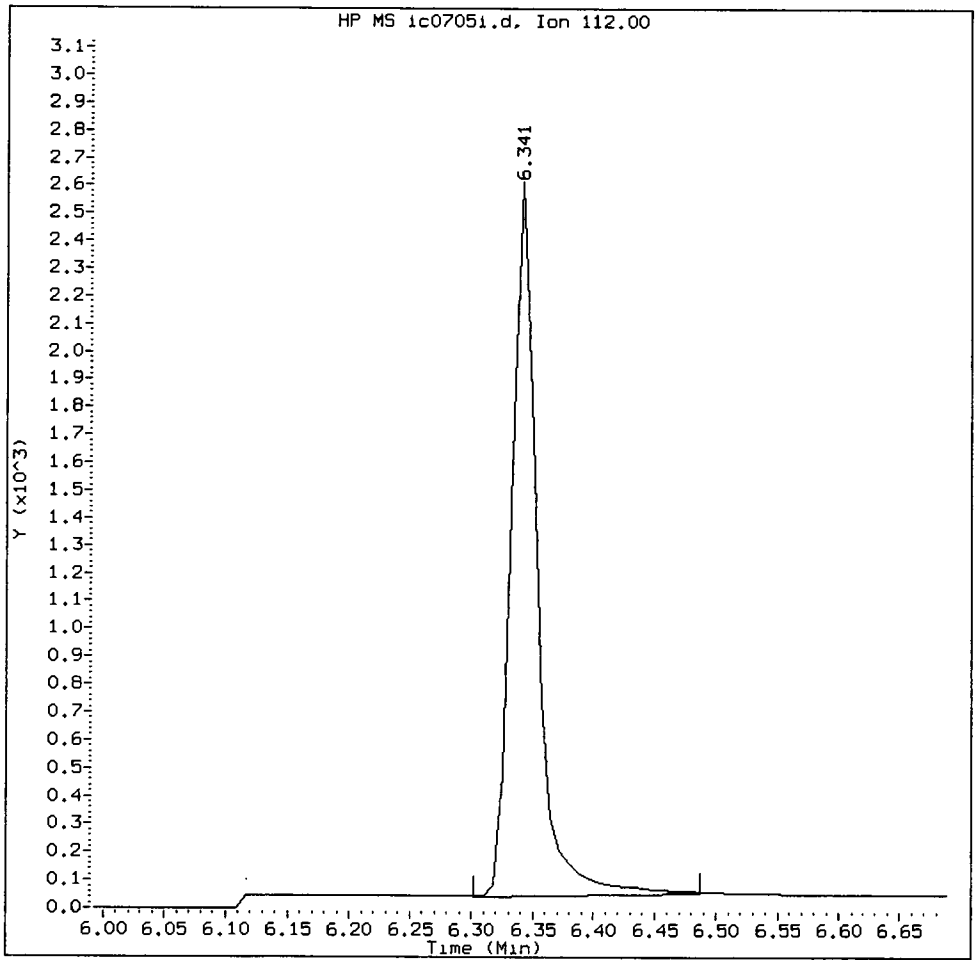
1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 7/10/13

ABN0.1, /chem1/nt10.i/20130705.b/SIM.b/ic0705i.d

2-Fluorophenol Amount: 0.10 Area: 3827



MANUAL INTEGRATION for 2-Fluorophenol

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 7/10/13

CO-ELUTION SUMMARY FOR FILE - ic0705i.d

Lab ID: ABN0.1, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 05-JUL-201

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Data File: /chem1/nt10.i/20130705.b/df0705.d

Date : 05-JUL-2013 11:58

Client ID: DFTPP

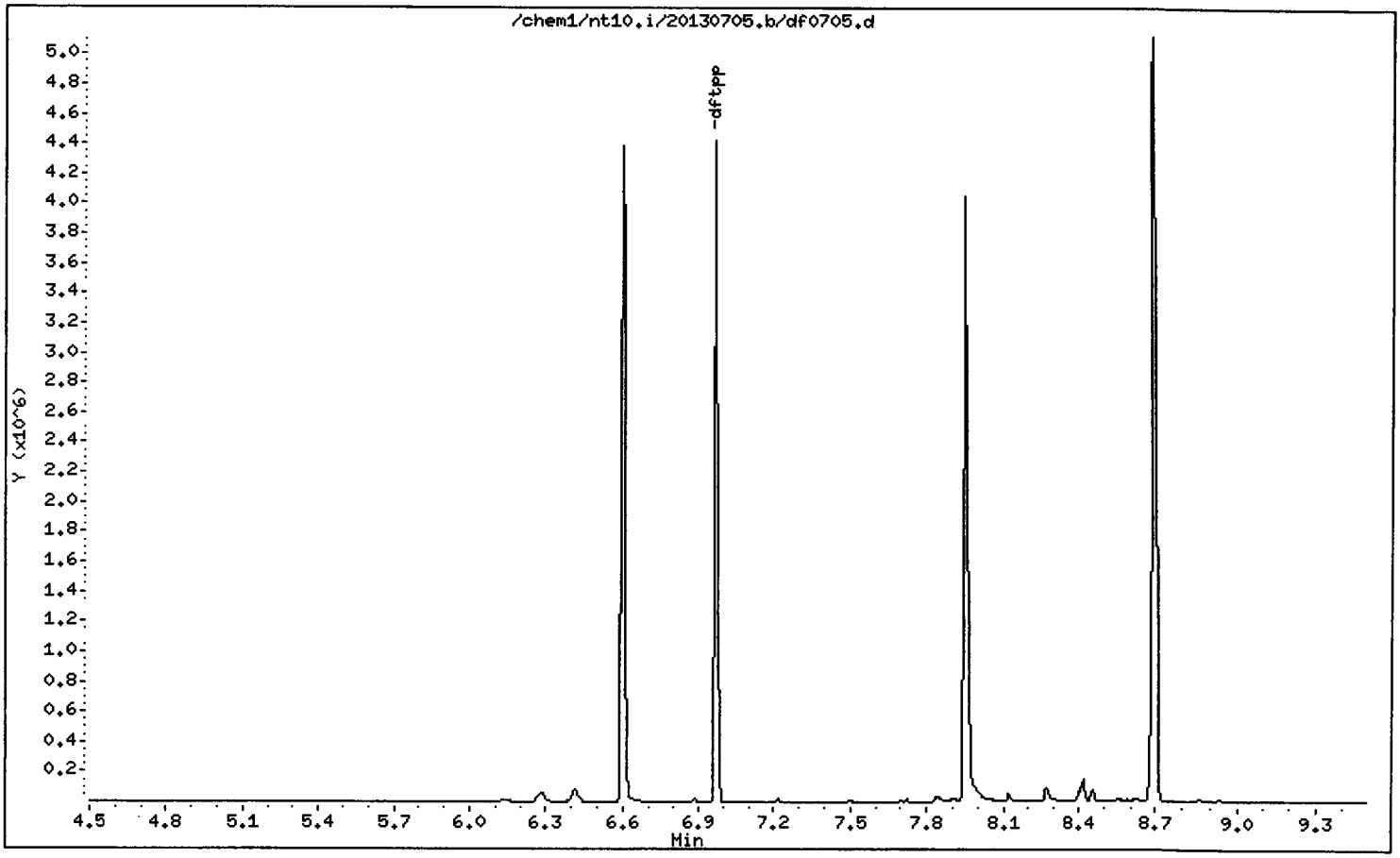
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130705.b/df0705.d

Date : 05-JUL-2013 11:58

Client ID: DFTPP

Instrument: nt10.i

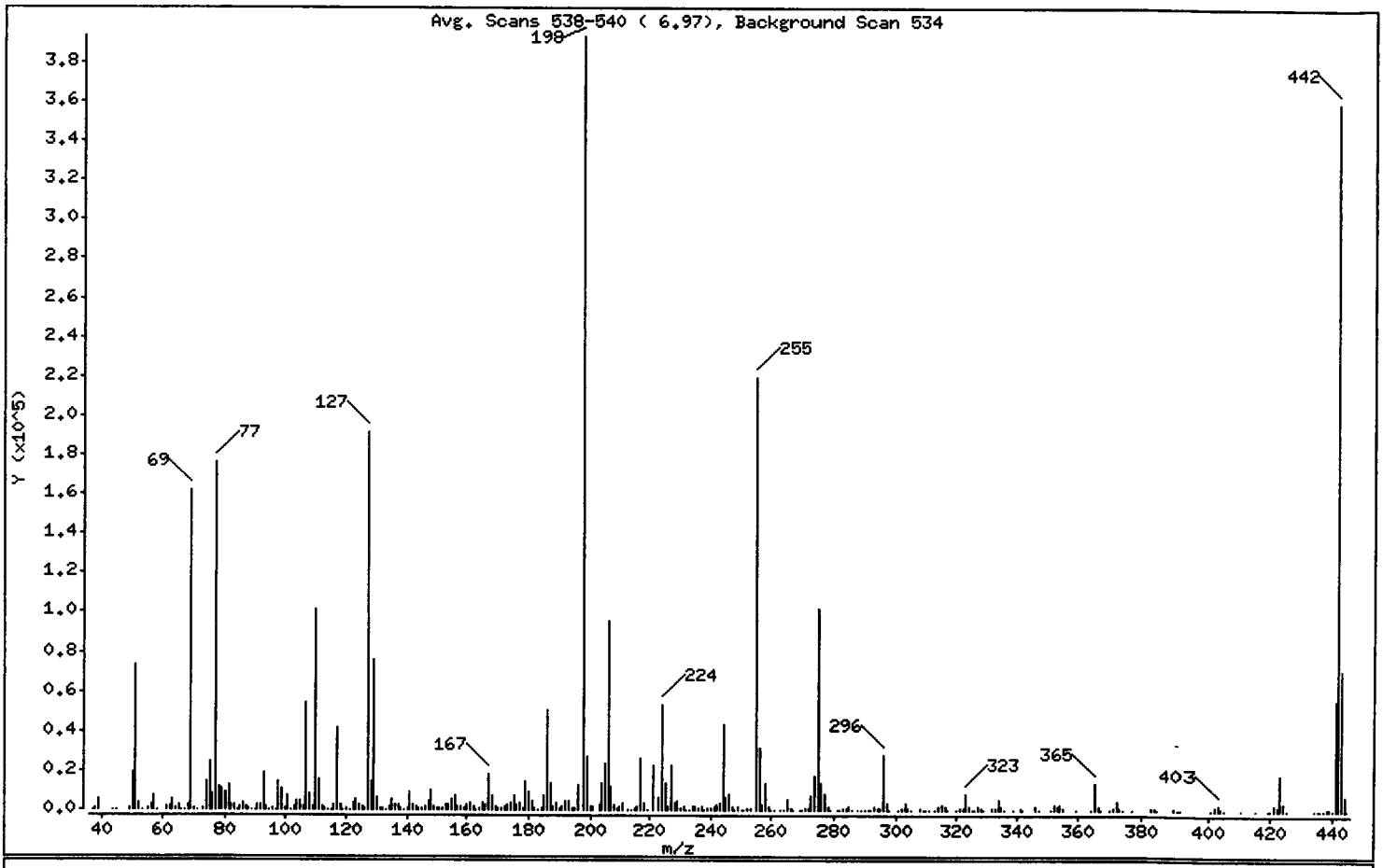
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

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	18.68
68	Less than 2.00% of mass 69	0.58 (1.41)
69	Mass 69 relative abundance	41.18
70	Less than 2.00% of mass 69	0.20 (0.49)
127	10.00 - 80.00% of mass 198	48.78
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.80
275	10.00 - 60.00% of mass 198	25.92
365	Greater than 1.00% of mass 198	3.46
441	0.01 - 24.00% of mass 442	14.28 (15.62)
442	50.00 - 200.00% of mass 198	91.41
443	15.00 - 24.00% of mass 442	18.11 (19.82)

Date : 05-JUL-2013 11:58

Client ID: DFTPP Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi Column diameter: 0.25

Data File: df0705.d
Spectrum: Avg. Scans 538-540 (6.97), Background Scan 534
Location of Maximum: 198.00
Number of points: 324

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	342	129.00	75976	214.00	125	305.00	110
38.00	1040	130.00	6256	215.00	1045	308.00	459
39.00	5346	131.00	1191	216.00	2132	309.00	257
40.00	308	132.00	800	217.00	26424	310.00	349
44.00	353	133.00	262	218.00	3296	311.00	54
45.00	62	134.00	2051	219.00	369	313.00	241
49.00	640	135.00	5769	221.00	22896	314.00	1423
50.00	19416	136.00	2315	223.00	5889	315.00	3100
51.00	73520	137.00	2752	224.00	53024	316.00	1570
52.00	3799	138.00	779	225.00	13277	317.00	280
53.00	202	139.00	326	226.00	1552	320.00	136
55.00	685	140.00	833	227.00	22568	321.00	981
56.00	3083	141.00	9074	228.00	3175	322.00	459
57.00	7630	142.00	2792	229.00	4402	323.00	8455
58.00	373	143.00	2090	230.00	665	324.00	1555
61.00	1496	144.00	517	231.00	2088	325.00	154
62.00	1988	145.00	584	232.00	364	326.00	133
63.00	5816	146.00	1571	233.00	402	327.00	1672
64.00	845	147.00	4534	234.00	1470	328.00	765
65.00	2706	148.00	10069	235.00	1567	329.00	130
66.00	98	149.00	2098	236.00	1091	332.00	636
67.00	175	150.00	510	237.00	1612	333.00	926
68.00	2285	151.00	1109	238.00	294	334.00	5871
69.00	162048	152.00	516	239.00	915	335.00	1538
70.00	791	153.00	2866	240.00	729	336.00	163
71.00	120	154.00	2271	241.00	1478	339.00	122
73.00	1103	155.00	5146	242.00	2934	341.00	1117
74.00	14629	156.00	7677	243.00	3386	342.00	235
75.00	24568	157.00	1499	244.00	43160	346.00	1963
76.00	7906	158.00	1623	245.00	6110	347.00	344
77.00	176000	159.00	1198	246.00	8109	351.00	221
78.00	11842	160.00	2784	247.00	1655	352.00	2662
79.00	11234	161.00	4014	248.00	344	353.00	1803
80.00	8875	162.00	1380	249.00	1517	354.00	2462
81.00	12802	163.00	362	250.00	342	355.00	543

Data File: /chem1/nt10.i/20130705.b/df0705.d

Date : 05-JUL-2013 11:58

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0705.d
Spectrum: Avg. Scans 538-540 (6.97), Background Scan 534
Location of Maximum: 198.00
Number of points: 324

m/z	Y	m/z	Y	m/z	Y	m/z	Y
82.00	3111	164.00	546	251.00	400	359.00	218
83.00	2769	165.00	3325	252.00	521	364.00	179
84.00	126	166.00	2868	253.00	1046	365.00	13633
85.00	2011	167.00	17992	255.00	219776	366.00	1819
86.00	3356	168.00	7199	256.00	31640	367.00	55
87.00	1543	169.00	1396	257.00	2327	370.00	282
88.00	619	170.00	546	258.00	13215	371.00	756
89.00	269	171.00	809	259.00	2047	372.00	4549
90.00	66	172.00	1816	260.00	280	373.00	1129
91.00	2759	173.00	2336	261.00	386	374.00	58
92.00	3064	174.00	3798	263.00	79	377.00	144
93.00	19280	175.00	7352	264.00	451	383.00	1233
94.00	1402	176.00	2370	265.00	5091	384.00	456
95.00	374	177.00	3424	266.00	687	385.00	56
96.00	925	178.00	1194	267.00	53	390.00	670
97.00	445	179.00	14281	269.00	54	391.00	437
98.00	14626	180.00	9408	270.00	235	392.00	271
99.00	10957	181.00	4382	271.00	882	401.00	382
100.00	1034	182.00	814	272.00	783	402.00	1900
101.00	7270	183.00	369	273.00	7358	403.00	2829
102.00	376	184.00	1298	274.00	17360	404.00	1083
103.00	2239	185.00	6912	275.00	101976	405.00	59
104.00	4459	186.00	51008	276.00	13565	410.00	57
105.00	4212	187.00	14006	277.00	7944	415.00	77
106.00	1357	188.00	1643	278.00	1358	419.00	59
107.00	54264	189.00	3327	279.00	316	420.00	54
108.00	8260	190.00	569	281.00	110	421.00	2620
109.00	1499	191.00	1470	282.00	195	422.00	2212
110.00	101624	192.00	4487	283.00	921	423.00	18464
111.00	15380	193.00	4949	284.00	612	424.00	3559
112.00	1967	194.00	973	285.00	1401	425.00	334
113.00	630	195.00	824	286.00	203	434.00	55
114.00	65	196.00	12477	288.00	76	435.00	273
115.00	153	198.00	393472	289.00	378	436.00	209
116.00	2794	199.00	26760	290.00	231	437.00	291

Data File: /chem1/nt10.i/20130705.b/df0705.d

Date : 05-JUL-2013 11:58

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

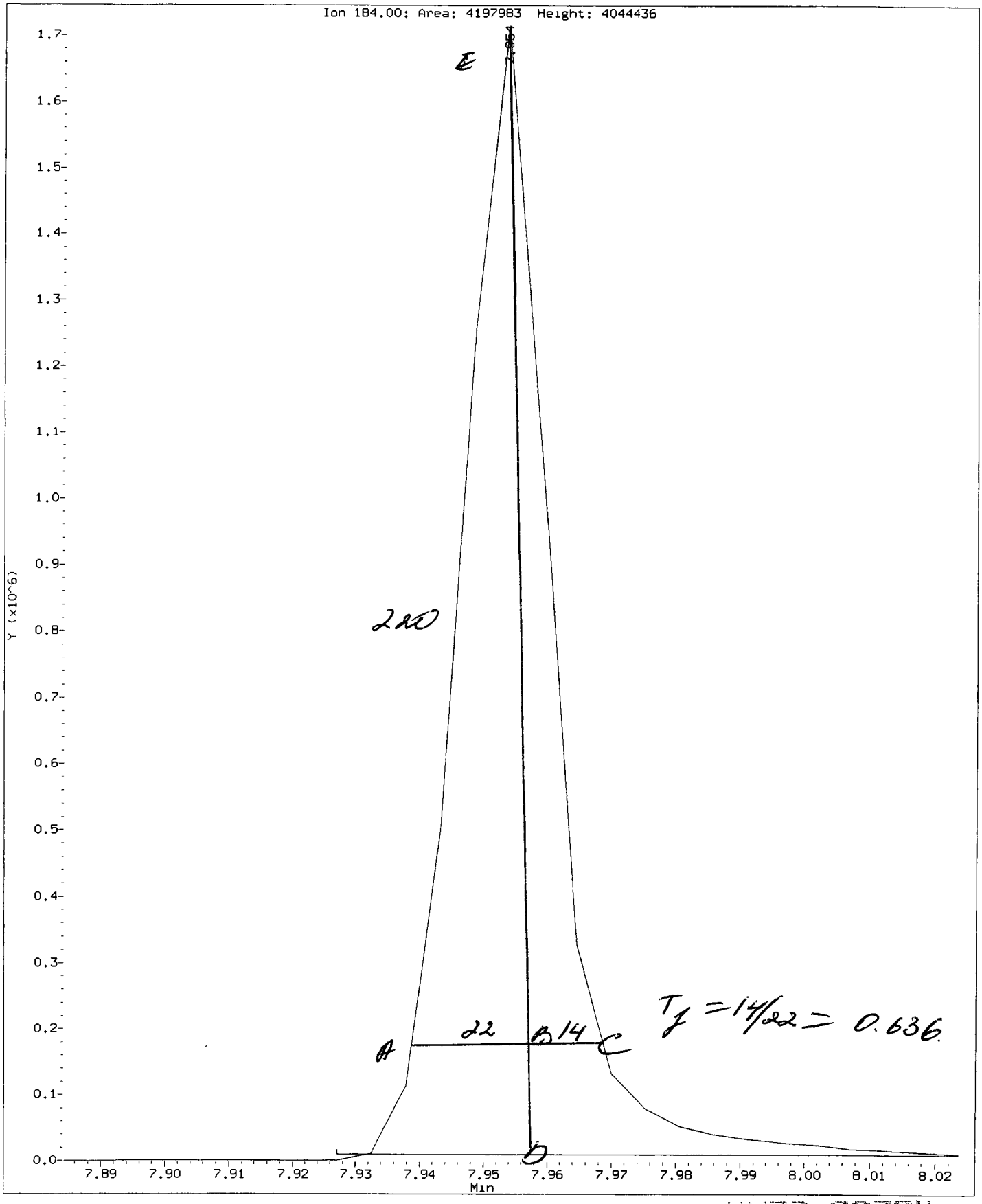
Column diameter: 0.25

Data File: df0705.d
Spectrum: Avg. Scans 538-540 (6.97), Background Scan 534
Location of Maximum: 198.00
Number of points: 324

m/z	Y	m/z	Y	m/z	Y	m/z	Y
117.00	41712	200.00	2091	291.00	319	438.00	520
118.00	3083	201.00	2080	292.00	351	439.00	1063
119.00	429	203.00	2937	293.00	1929	440.00	148
120.00	621	204.00	13721	294.00	516	441.00	56184
121.00	220	205.00	23128	295.00	623	442.00	359680
122.00	3448	206.00	95760	296.00	27928	443.00	71272
123.00	5278	207.00	12074	297.00	4013	444.00	6894
124.00	2438	208.00	3155	298.00	224	445.00	375
125.00	2232	209.00	1120	301.00	303		
126.00	577	210.00	1702	302.00	562		
127.00	191936	211.00	3839	303.00	3222		
128.00	14215	213.00	238	304.00	867		

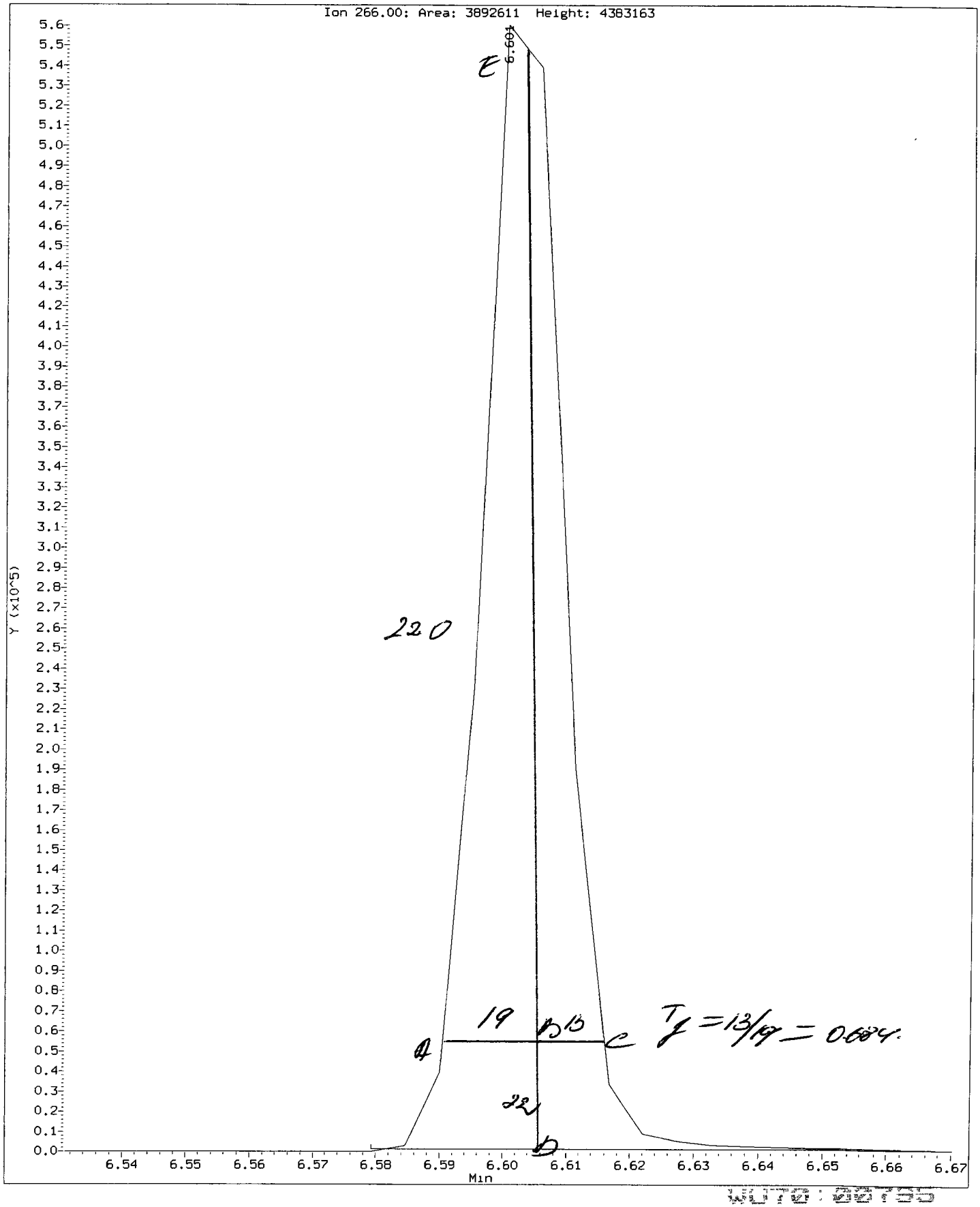
Data File: /chem1/nt10.1/20130705.b/ddt.b/df0705.d
Injection Date: 05-JUL-2013 11:58
Instrument: nt10.1
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Data File: /chem1/nt10.1/20130705.b/ddt.b/df0705.d
Injection Date: 05-JUL-2013 11:58
Instrument: nt10.1
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20130705.b/ddt.b/df0705.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130705.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 05-JUL-2013 11:58 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.601	3892611
Benzidine	7.954	4197982
4,4'-DDE	8.120	5067
4,4'-DDD	8.419	28602
4,4'-DDT	8.697	1102756

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(\ 5067 + 28602) * 100}{(\ 5067 + 28602 + 1102756)}$$

DDT Percent Breakdown = 3.0 %

SIM Semivolatile Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WU70

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

GC/MS SVOA Analyst Notes / Data Review Checklist

ARI WORK Order: WU70 Client ID: SAIC

METHOD: **8270D**(SIM-SVOA) **KRONE**(Butyl Tins) **8270D**(SVOA) **8270D**(OP-Pest)

Instrument: NT-4 NT-6 NT-8 NT-10 NT11 NT12

Curve Date: 07/05/13 Analysis Start Date: 07/05/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
DFTPP Tune met Criteria?	Y / N / ✓	Internal Standard within 50-200%?	Y / N / ✓
DDT Breakdown <20%?	Y / N / ✓	Retention Times within Windows?	Y / N / ✓
Peak Tailing Factor ≤2?	Y / N / ✓	Method Blank in Control?	Y / N / ✓
CCAL Meets %D?	Y / N / ✓	LCS / LCSD Recovery in Control?	Y / N / ✓
ICAL Q Flag applied?	Y / N	LCS / LCSD RPD ≤ 30%?	NA /
CCAL Q flag applied?	Y / N	MS / MSD Recovery in Control?	Y / N / ✓
Surrogate Recovery met?	Y / N / ✓	MS / MSD RPD ≤ 30%?	NA / ✓
Manual Integrations?	Y / N / ✓	Samples Diluted?	Y / N
Integration Summary?	Y / N / ✓	Special Analysis Request?	Y / N /

Detail problems, corrective actions and/or other pertinent information below.

- LCS: Diethylphthalate recovery below QC, okay in MS/MSD.

(Review 1) Analyst: YZ **Date:** 7/10/13.

(Review 2) Reviewer: MW **Date:** 7/10

Analytical Resources Inc.: Organics Instrument Log

NT-10 Serial No.:GC=CN10837018, MS= US83131105

Date: 07/05/13 Analysis: ~~ABN~~ SIM ABN Analyst: YZ

GC Program: ABN_2 Column No: 273254 Column Type: 1753

Instrument Tune (.U or .CT.): DF0705 EM Voltage: 1753

Calibration File: DF0705A Curve Date: 07/05/13 Injection Vol.: 1 uL
DF0705

IS/SS	Ical/Ccal	LCS/ICV
B928	B112	
	B931	
	B676	
	B943	
	20641-2.	

Document All Maintenance Tasks In Element

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem1/nt10.i/20130705.b

	Time	Filename	LabID	ClientId	DF									
1	1158	df0705.d	DFTPP	DFTPP	1	NO ISTDS FOUND								
2	1214	ic0705a.d	ABN 5		1	8.83	111410	11.49	383421	15 40	214691	18.75	413058	23.86	430445	26.29	461280
3	1328	ic0705c.d	ABN0 2		1	8.83	111165	11.49	393687	15.39	214701	18.74	400447	23 85	429491	26 29	460479
4	1405	ic0705d d	ABN1.0		1	8 83	115828	11.49	412333	15.39	225152	18.74	415301	23.85	449306	26 28	474708
5	1520	ic0705f.d	ABN2.5		1	8.83	103682	11 49	367429	15 40	204904	18.75	388952	23.85	408222	26 29	440988
6	1557	ic0705g.d	ABN0.5		1	8 83	113136	11.49	406328	15.39	221951	18.74	403977	23.85	429467	26.28	460978
7	1634	ic0705h.d	ABN0.05		1	8.82	111035	11 49	390465	15.39	206716	18.74	382023	23.85	398771	26.29	427996
8	1711	ic0705i.d	ABN0 1		1	8 82	110394	11.49	382969	15.39	206306	18.74	380716	23.85	397194	26.28	421026
9	1744	df0705a.d	DFTPP	DFTPP	1	NO ISTDS FOUND								
10	1837	cc0705a d	CC0705A		1	8.82	109836	11.49	391053	15.39	213079	18.74	392889	23.85	413365	26.28	444988
11	2256	wu70mb.d	WU70MBS1	WU70MBS1	1	8.82	112074	11.48	421836	15.39	202770	18 75	374893	23.86	356176	26.30	400187
12	2333	wu79bsb.d	WU70LCSS1	WU70LCSS1	1	8.82	103434	11.48	372298	15.39	206356	18.75	376025	23 86	368160	26.29	382348
13	0010	wu70cb.d	WU70B	LF-TP-001-20	1	8.83	102291	11.49	380334	15 40	189141	18.77	332066	23.95	342337	26.50	369420
14	0047	wu70c.d	WU70C	LF-LS-004-20	1	8.83	103329	11.49	380912	15.40	188841	18.76	321554	23.89	330293	26.38	369913
15	0124	wu70cms d	WU70CMS	LF-LS-004-20	1	8.83	99593	11 49	356715	15.41	184327	18.76	306196	23 89	321952	26.39	362311
16	0200	wu70cmsd.d	WU70CMSD	LF-LS-004-20	1	8.83	94445	11.49	344309	15 41	177233	18 76	300446	23.90	318691	26 41	347460

YZ 7/10/13

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 Element

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem1/nt10.i/20130705.b/SIM.b

ARI Job No.: WU70 Method: SIM.b/SIMABN2.m Instrument: nt10.i Date: 05-JUL-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2256	wu70mb.d	WU70MBS1	WU70MBS1	1	NO MANUAL INTEGRATION
2333	wu79bsb.d	WU70LCSS1	WU70LCSS1	1	NO MANUAL INTEGRATION
0047	wu70c.d	WU70C	LF-LS-004-	1	1,4-Dichlorobenzene, Benzyl alcohol, Dimethylphthalate, Dibenzo(a,h)anthracene,
0010	wu70cb.d	WU70B	LF-TP-001-	1	Benzyl alcohol, Dibenzo(a,h)anthracene,
0124	wu70cms.d	WU70CMS	LF-LS-004-	1	Dibenzo(a,h)anthracene,
0200	wu70cmsd.d	WU70CMSD	LF-LS-004-	1	Dibenzo(a,h)anthracene,

Q-FLAG SUMMARY FOR DATABATCH - /chem1/nt10.i/20130705.b/SIM.b

Instrument: nt10.i Date: 05-JUL-2013 Method: SIM.b/SIMABN2.m

INITIAL CAL: 05-JUL-2013

Compound	%RSD or R^2
NO Q-FLAGS	

CONTINUING CAL: 05-JUL-2013

Compound	%D
NO Q-FLAGS	

Data File: /chem1/nt10.i/20130705.b/df0705a.d

Date : 05-JUL-2013 17:44

Client ID: DFTPP

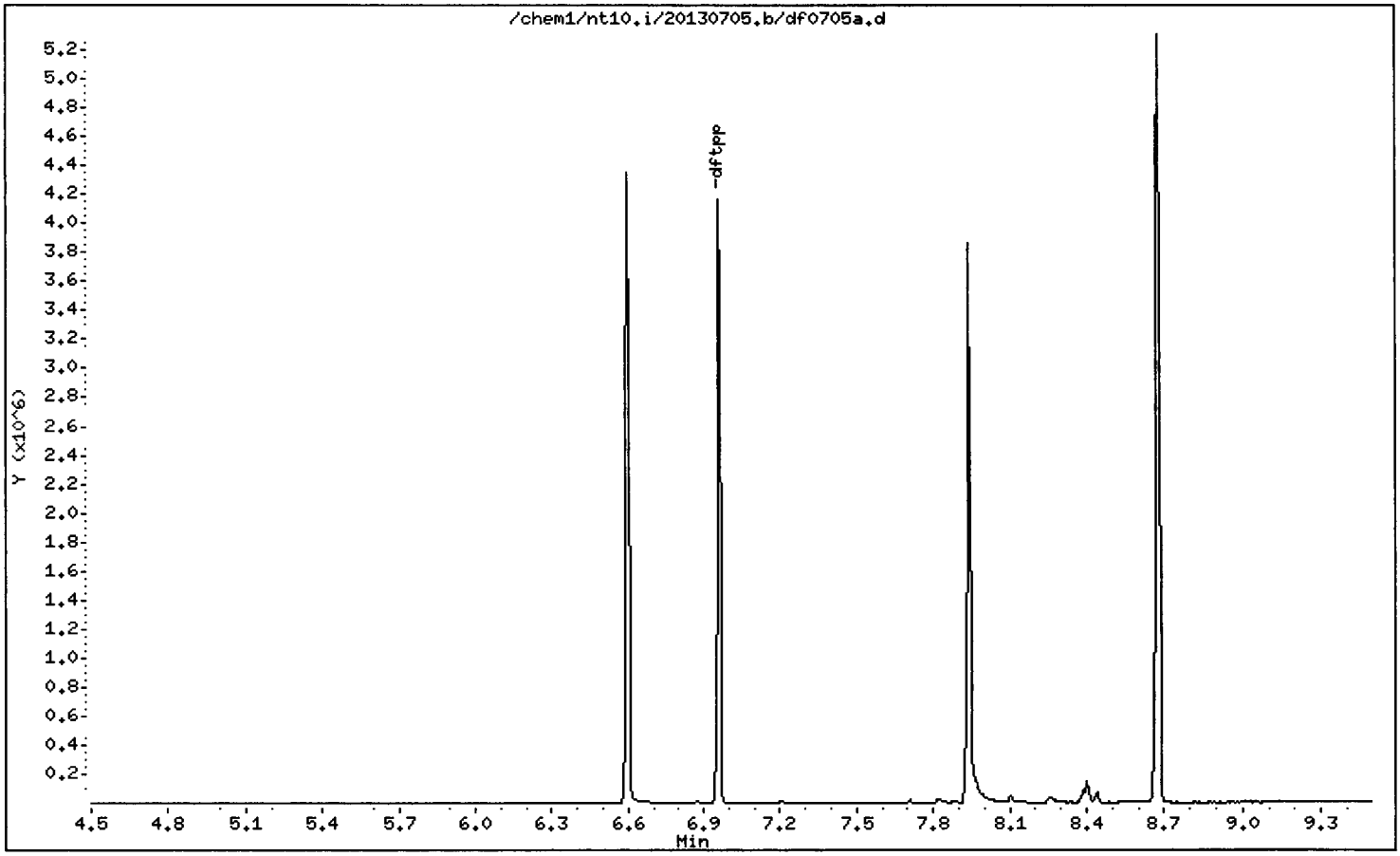
Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25



Data File: /chem1/nt10.i/20130705.b/df0705a.d

Date : 05-JUL-2013 17:44

Client ID: DFTPP

Instrument: nt10.i

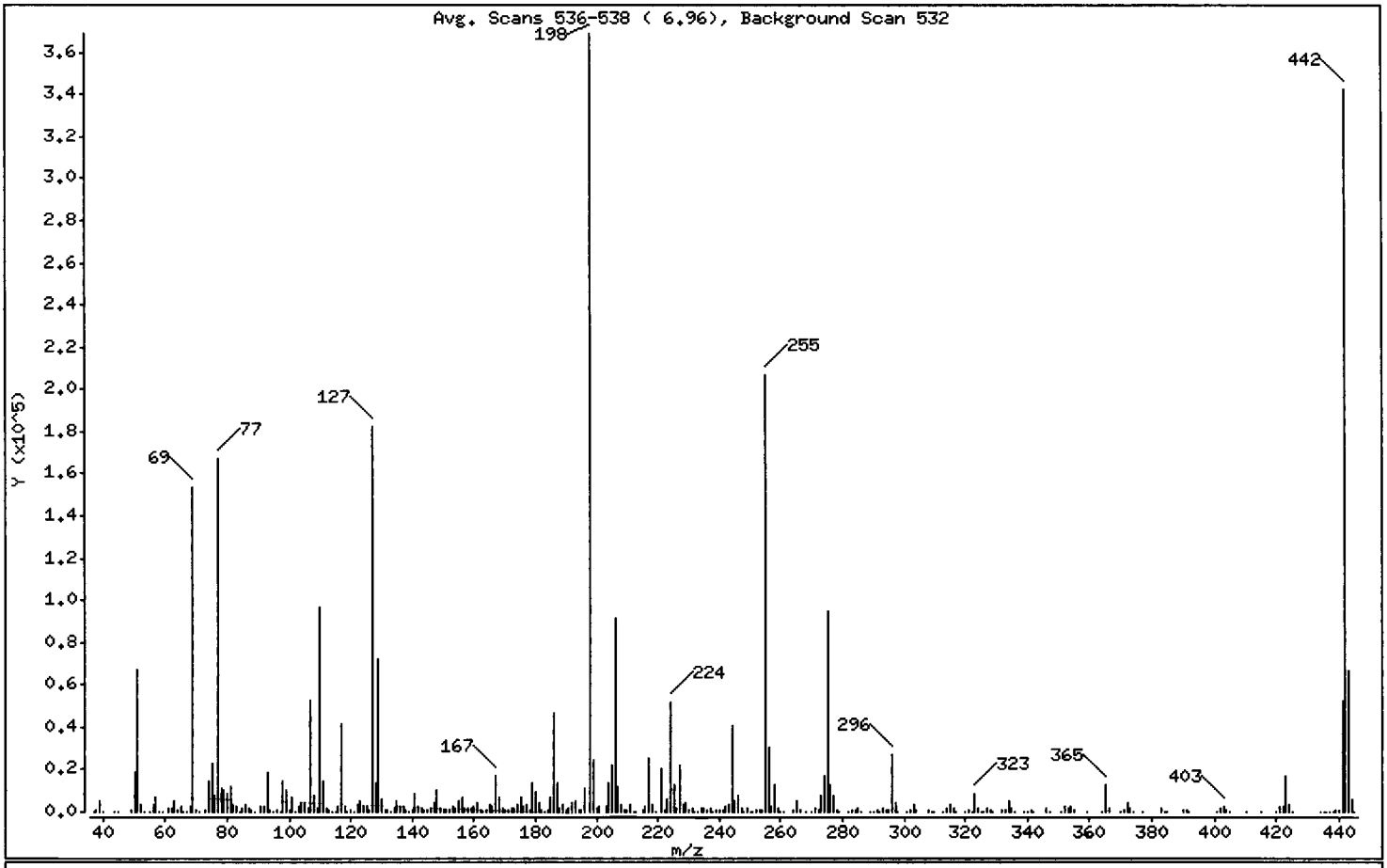
Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

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	18.18
68	Less than 2.00% of mass 69	0.63 (1.50)
69	Mass 69 relative abundance	41.56
70	Less than 2.00% of mass 69	0.18 (0.42)
127	10.00 - 80.00% of mass 198	49.35
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	6.67
275	10.00 - 60.00% of mass 198	25.75
365	Greater than 1.00% of mass 198	3.51
441	0.01 - 24.00% of mass 442	14.34 (15.44)
442	50.00 - 200.00% of mass 198	92.89
443	15.00 - 24.00% of mass 442	18.22 (19.61)

Date : 05-JUL-2013 17:44

Client ID: DFTPP Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi Column diameter: 0.25

Data File: df0705a.d
Spectrum: Avg. Scans 536-538 (6.96), Background Scan 532
Location of Maximum: 198.00
Number of points: 319

m/z	Y	m/z	Y	m/z	Y	m/z	Y
37.00	310	127.00	182144	209.00	961	301.00	337
38.00	949	128.00	13457	210.00	569	302.00	546
39.00	4969	129.00	72280	211.00	3724	303.00	3233
40.00	200	130.00	5967	212.00	257	304.00	823
44.00	304	131.00	1150	213.00	342	308.00	436
45.00	67	132.00	578	215.00	1140	309.00	278
49.00	480	133.00	221	216.00	2258	310.00	354
50.00	18648	134.00	1884	217.00	25776	313.00	252
51.00	67104	135.00	5346	218.00	3018	314.00	1347
52.00	3528	136.00	2138	219.00	355	315.00	3207
53.00	67	137.00	2517	221.00	20568	316.00	1505
55.00	414	138.00	687	222.00	808	317.00	309
56.00	3127	139.00	360	223.00	6158	320.00	162
57.00	6960	140.00	841	224.00	51384	321.00	914
58.00	320	141.00	8749	225.00	12968	322.00	360
59.00	68	142.00	2904	226.00	1351	323.00	8864
61.00	1362	143.00	2011	227.00	21800	324.00	1516
62.00	1787	144.00	441	228.00	3091	325.00	162
63.00	5416	145.00	514	229.00	4540	326.00	144
64.00	815	146.00	1483	230.00	583	327.00	1662
65.00	2821	147.00	4376	231.00	1928	328.00	872
66.00	171	148.00	10153	232.00	360	329.00	142
67.00	211	149.00	1893	233.00	371	332.00	674
68.00	2308	150.00	561	234.00	1473	333.00	964
69.00	153408	151.00	1242	235.00	1557	334.00	5407
70.00	649	152.00	436	236.00	879	335.00	1389
71.00	51	153.00	2650	237.00	1608	336.00	208
73.00	1215	154.00	1987	238.00	196	339.00	126
74.00	14420	155.00	5245	239.00	841	340.00	77
75.00	23240	156.00	6913	240.00	634	341.00	927
76.00	7851	157.00	1433	241.00	1258	342.00	226
77.00	167168	158.00	1501	242.00	2755	346.00	1878
78.00	10712	159.00	1322	243.00	3036	347.00	246
79.00	10302	160.00	2687	244.00	41120	351.00	194
80.00	8302	161.00	3943	245.00	5341	352.00	2580

Date : 05-JUL-2013 17:44

Client ID: DFTPP Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5ms1 Column diameter: 0.25

Data File: df0705a.d
Spectrum: Avg. Scans 536-538 (6.96), Background Scan 532
Location of Maximum: 198.00
Number of points: 319

m/z	Y	m/z	Y	m/z	Y	m/z	Y
81.00	12076	162.00	1192	246.00	7781	353.00	1869
82.00	3102	163.00	308	247.00	1483	354.00	2715
83.00	2684	164.00	551	248.00	370	355.00	518
84.00	120	165.00	3148	249.00	1490	359.00	160
85.00	2001	166.00	2509	250.00	297	364.00	67
86.00	3297	167.00	16688	251.00	374	365.00	12969
87.00	1525	168.00	6457	252.00	467	366.00	1853
88.00	589	169.00	1327	253.00	1168	370.00	330
89.00	295	170.00	582	254.00	533	371.00	678
91.00	2702	171.00	771	255.00	207168	372.00	4526
92.00	2807	172.00	1616	256.00	30504	373.00	1284
93.00	18592	173.00	2017	257.00	2305	374.00	56
94.00	1213	174.00	3510	258.00	12405	377.00	139
95.00	288	175.00	6773	259.00	1925	383.00	1278
96.00	897	176.00	2206	260.00	349	384.00	353
97.00	365	177.00	3090	261.00	392	385.00	69
98.00	14031	178.00	1171	264.00	440	390.00	664
99.00	10500	179.00	13361	265.00	4971	391.00	513
100.00	965	180.00	8948	266.00	643	392.00	317
101.00	6753	181.00	4332	268.00	75	401.00	244
102.00	401	182.00	622	270.00	386	402.00	1851
103.00	2338	183.00	363	271.00	1277	403.00	2562
104.00	4223	184.00	1100	272.00	859	404.00	964
105.00	4218	185.00	6679	273.00	7309	405.00	117
106.00	1427	186.00	46848	274.00	16856	410.00	52
107.00	52720	187.00	13638	275.00	95024	415.00	67
108.00	7990	188.00	1438	276.00	12893	420.00	57
109.00	1458	189.00	2995	277.00	7724	421.00	2306
110.00	96480	190.00	557	278.00	1202	422.00	2266
111.00	14501	191.00	1306	279.00	249	423.00	17336
112.00	1721	192.00	4132	282.00	176	424.00	3348
113.00	617	193.00	4760	283.00	877	425.00	272
114.00	71	194.00	1039	284.00	676	434.00	146
115.00	146	195.00	707	285.00	1440	435.00	208
116.00	2692	196.00	11327	286.00	309	436.00	241

Data File: /chem1/nt10.i/20130705.b/df0705a.d

Date : 05-JUL-2013 17:44

Client ID: DFTPP

Instrument: nt10.i

Sample Info: DFTPP

Operator: YZ

Column phase: ZB-5msi

Column diameter: 0.25

Data File: df0705a.d

Spectrum: Avg. Scans 536-538 (6,96), Background Scan 532

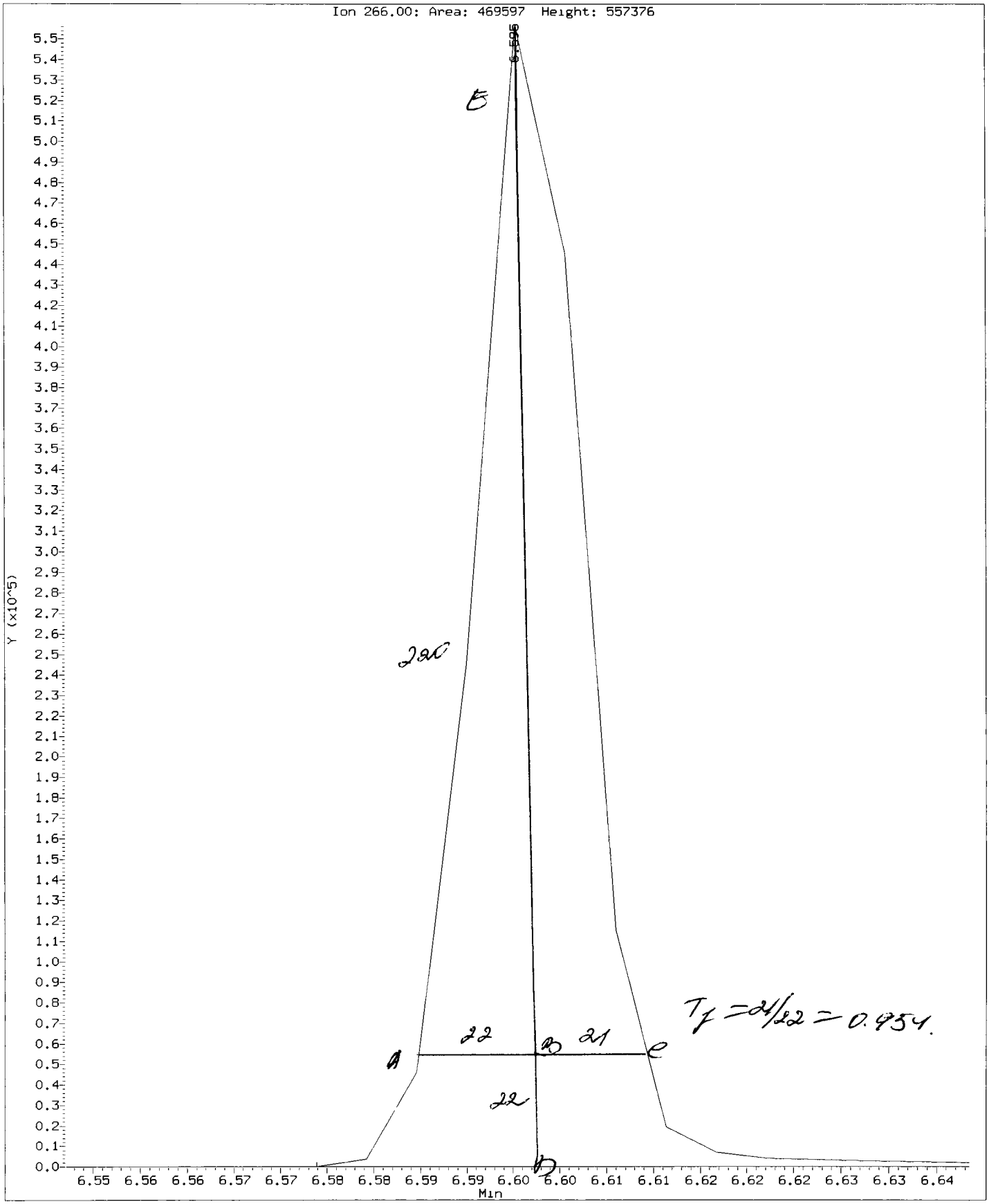
Location of Maximum: 198.00

Number of points: 319

m/z	Y	m/z	Y	m/z	Y	m/z	Y
117.00	41216	198.00	369088	289.00	361	437.00	263
118.00	2790	199.00	24600	290.00	329	438.00	109
119.00	328	200.00	1871	291.00	467	439.00	1016
120.00	508	201.00	2139	292.00	345	440.00	798
121.00	139	203.00	2572	293.00	1842	441.00	52928
122.00	3264	204.00	13204	294.00	498	442.00	342848
123.00	5116	205.00	22312	295.00	592	443.00	67232
124.00	2322	206.00	91232	296.00	27464	444.00	6108
125.00	2169	207.00	12096	297.00	4035	445.00	365
126.00	1149	208.00	3286	298.00	246		

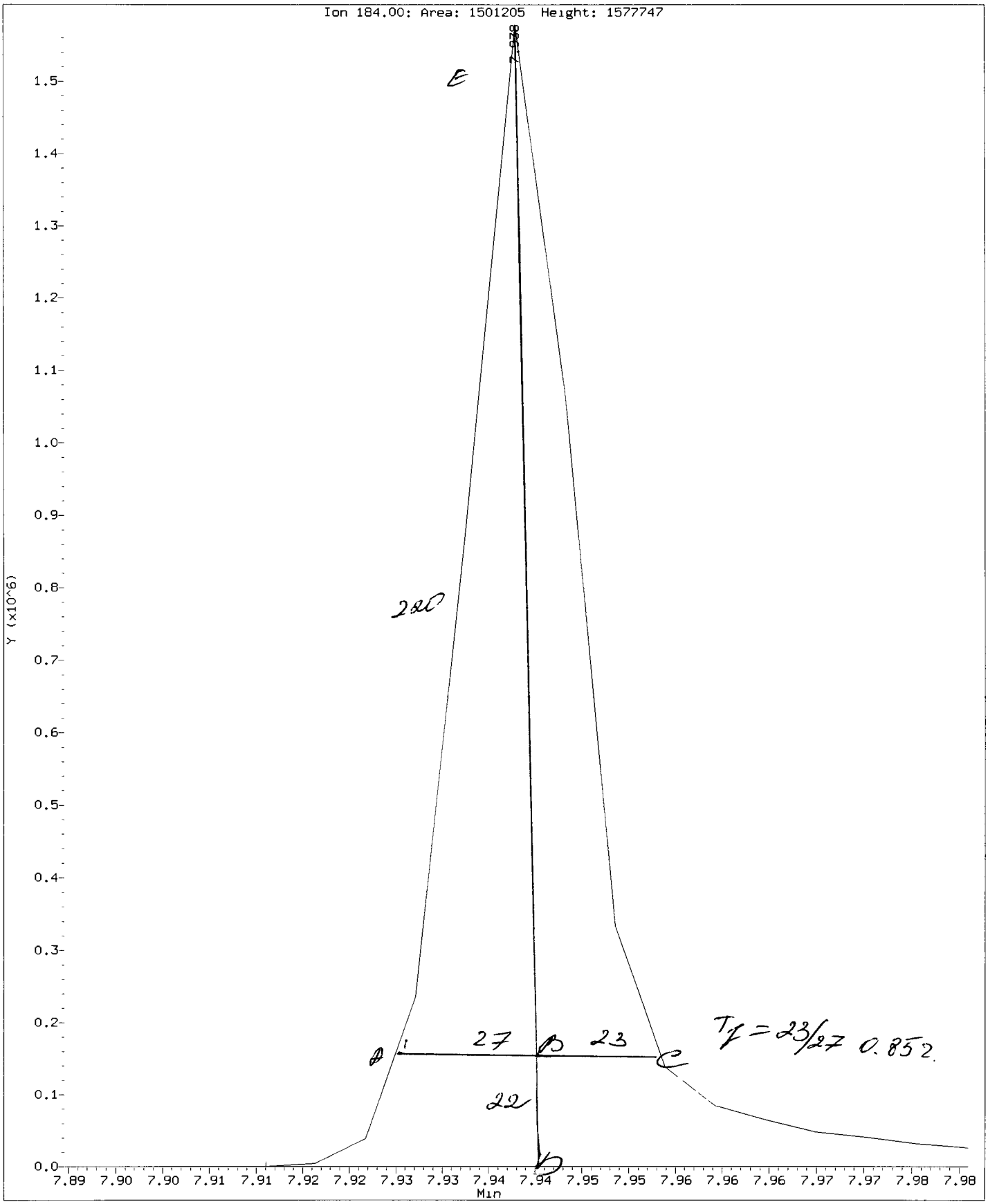
Data File: /chem1/nt10.i/20130705.b/ddt.b/df0705a.d
Injection Date: 05-JUL-2013 17:44
Instrument: nt10.i
Client Sample ID: DFTPP

Compound: Pentachlorophenol
CAS Number: 87-86-5



Data File: /chem1/nt10.1/20130705.b/ddt.b/df0705a.d
Injection Date: 05-JUL-2013 17:44
Instrument: nt10.1
Client Sample ID: DFTPP

Compound: Benzidine
CAS Number:



Analytical Resources, Inc.

CONTINUING CALIBRATION COMPOUNDS

Instrument ID: nt10.i Injection Date: 05-JUL-2013 18:37
Lab File ID: cc0705a.d Init. Cal. Date(s): 05-JUL-2013 05-JUL-2013
Analysis Type: Init. Cal. Times: 12:14 17:11
Lab Sample ID: CC0705A Quant Type: ISTD
Method: /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m

COMPOUND	RRF / AMOUNT	RF1	MIN RRF	%D / %DRIFT	MAX %D / %DRIFT	CURVE TYPE
$ 1 2-Fluorophenol	1.44986	1.47868	0.010	1.98768	20.00000	Averaged
3 Phenol	1.97958	2.05983	0.010	4.05410	20.00000	Averaged
7 1,3-Dichlorobenzene	1.57353	1.53378	0.010	-2.52646	20.00000	Averaged
9 1,4-Dichlorobenzene	1.52674	1.48232	0.010	-2.90928	20.00000	Averaged
11 Benzyl alcohol	0.99615	1.01566	0.010	1.95801	20.00000	Averaged
12 1,2-Dichlorobenzene	1.46823	1.43053	0.010	-2.56730	20.00000	Averaged
13 2-Methylphenol	1.43745	1.50519	0.010	4.71236	20.00000	Averaged
15 4-Methylphenol	1.42800	1.52755	0.010	6.97149	20.00000	Averaged
16 N-Nitroso-di-n-propylamine	0.94034	0.97972	0.050	4.18747	20.00000	Averaged
22 2,4-Dimethylphenol	0.41216	0.43509	0.010	5.56180	20.00000	Averaged
26 1,2,4-Trichlorobenzene	0.37386	0.35927	0.010	-3.90276	20.00000	Averaged
30 Hexachlorobutadiene	0.22236	0.21367	0.010	-3.90777	20.00000	Averaged
39 Dimethylphthalate	1.24334	1.24684	0.010	0.28166	20.00000	Averaged
50 Diethylphthalate	0.18259	0.15983	0.010	-12.46725	20.00000	Averaged
54 N-Nitrosodiphenylamine	0.46236	0.50188	0.010	8.54815	20.00000	Averaged
57 Hexachlorobenzene	0.28989	0.27856	0.010	-3.90634	20.00000	Averaged
58 Pentachlorophenol	0.19684	0.21387	0.005	8.65181	20.00000	Averaged
$ 66 Terphenyl-d14	0.46295	0.46638	0.010	0.73955	20.00000	Averaged
67 Butylbenzylphthalate	0.43780	0.46848	0.010	7.00708	20.00000	Averaged
79 Dibenzo(a,h)anthracene	0.88251	0.95194	0.010	7.86666	20.00000	Averaged
90 N-Nitrosodimethylamine	0.90565	0.95076	0.010	4.98116	20.00000	Averaged

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 7/14/13

Data file : /chem1/nt10.i/20130705.b/SIM.b/cc0705a.d
Lab Smp Id: CC0705A
Inj Date : 05-JUL-2013 18:37
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : CC0705A
Misc Info :
Comment :
Method : /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Meth Date : 10-Jul-2013 11:26 yev Quant Type: ISTD
Cal Date : 05-JUL-2013 17:11 Cal File: ic0705i.d
Als bottle: 13 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50

			QUANT SIG					AMOUNTS	
		Compounds	MASS	RT	EXP RT	REL RT	RESPONSE	CAL-AMT (ug/mL)	ON-COL (ug/mL)
$	1	2-Fluorophenol	112	6.341	6.341	(0.719)	40603	1.00000	1.020
	3	Phenol	94	8.095	8.095	(0.918)	56561	1.00000	1.041
	7	1,3-Dichlorobenzene	146	8.714	8.714	(0.988)	42116	1.00000	0.9747
*	8	1,4-Dichlorobenzene-d4	152	8.822	8.822	(1.000)	109836	4.00000	
	9	1,4-Dichlorobenzene	146	8.861	8.861	(1.004)	40703	1.00000	0.9709
	11	Benzyl alcohol	79	9.086	9.086	(1.030)	27889	1.00000	1.020
	12	1,2-Dichlorobenzene	146	9.164	9.164	(1.039)	39281	1.00000	0.9743
	13	2-Methylphenol	108	9.319	9.319	(1.056)	41331	1.00000	1.047
	15	4-Methylphenol	108	9.629	9.629	(1.091)	41945	1.00000	1.070
	16	N-Nitroso-di-n-propylamine	70	9.645	9.645	(1.093)	26902	1.00000	1.042
	22	2,4-Dimethylphenol	107	10.770	10.770	(0.938)	85071	2.00000	2.111(M)
	26	1,2,4-Trichlorobenzene	180	11.371	11.371	(0.990)	35123	1.00000	0.9610
*	27	Naphthalene-d8	136	11.487	11.487	(1.000)	391053	4.00000	
	30	Hexachlorobutadiene	225	11.842	11.842	(1.031)	20889	1.00000	0.9609
	39	Dimethylphthalate	163	14.837	14.837	(0.964)	66419	1.00000	1.003
*	42	Acenaphthene-d10	162	15.394	15.394	(1.000)	213079	4.00000	
	50	Diethylphthalate	149	16.438	16.438	(1.068)	8514	1.00000	0.8753
	54	N-Nitrosodiphenylamine	169	16.939	16.939	(0.904)	49296	1.00000	1.085
	57	Hexachlorobenzene	284	17.881	17.881	(0.954)	27361	1.00000	0.9609
	58	Pentachlorophenol	266	18.330	18.330	(0.978)	42013	2.00000	2.173
*	59	Phenanthrene-d10	188	18.740	18.740	(1.000)	392889	4.00000	
$	66	Terphenyl-d14	244	21.990	21.990	(0.922)	48196	1.00000	1.007
	67	Butylbenzylphthalate	149	22.926	22.926	(0.961)	48413	1.00000	1.070
*	69	Chrysene-d12	240	23.848	23.848	(1.000)	413365	4.00000	
*	77	Perylene-d12	264	26.279	26.279	(1.000)	444988	4.00000	
	79	Dibenzo(a,h)anthracene	278	28.643	28.643	(1.090)	105900	1.00000	1.079
	90	N-Nitrosodimethylamine	74	4.047	4.047	(0.459)	52214	2.00000	2.100

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: cc0705a.d
Lab Smp Id: CC0705A
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Misc Info:

Calibration Date: 05-JUL-2013
Calibration Time: 14:05
Level:
Sample Type:

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	115828	57914	231656	109836	-5.17
27 Naphthalene-d8	412333	206166	824666	391053	-5.16
42 Acenaphthene-d10	225152	112576	450304	213079	-5.36
59 Phenanthrene-d10	415301	207650	830602	392889	-5.40
69 Chrysene-d12	449306	224653	898612	413365	-8.00
77 Perylene-d12	474708	237354	949416	444988	-6.26

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.82	8.32	9.32	8.82	0.00
27 Naphthalene-d8	11.49	10.99	11.99	11.49	0.00
42 Acenaphthene-d10	15.39	14.89	15.89	15.39	0.00
59 Phenanthrene-d10	18.74	18.24	19.24	18.74	0.00
69 Chrysene-d12	23.85	23.35	24.35	23.85	0.00
77 Perylene-d12	26.28	25.78	26.78	26.28	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/nt10.i/20130705.b/SIM.b/cc0705a.d

Date : 05-JUL-2013 18:37

Client ID:

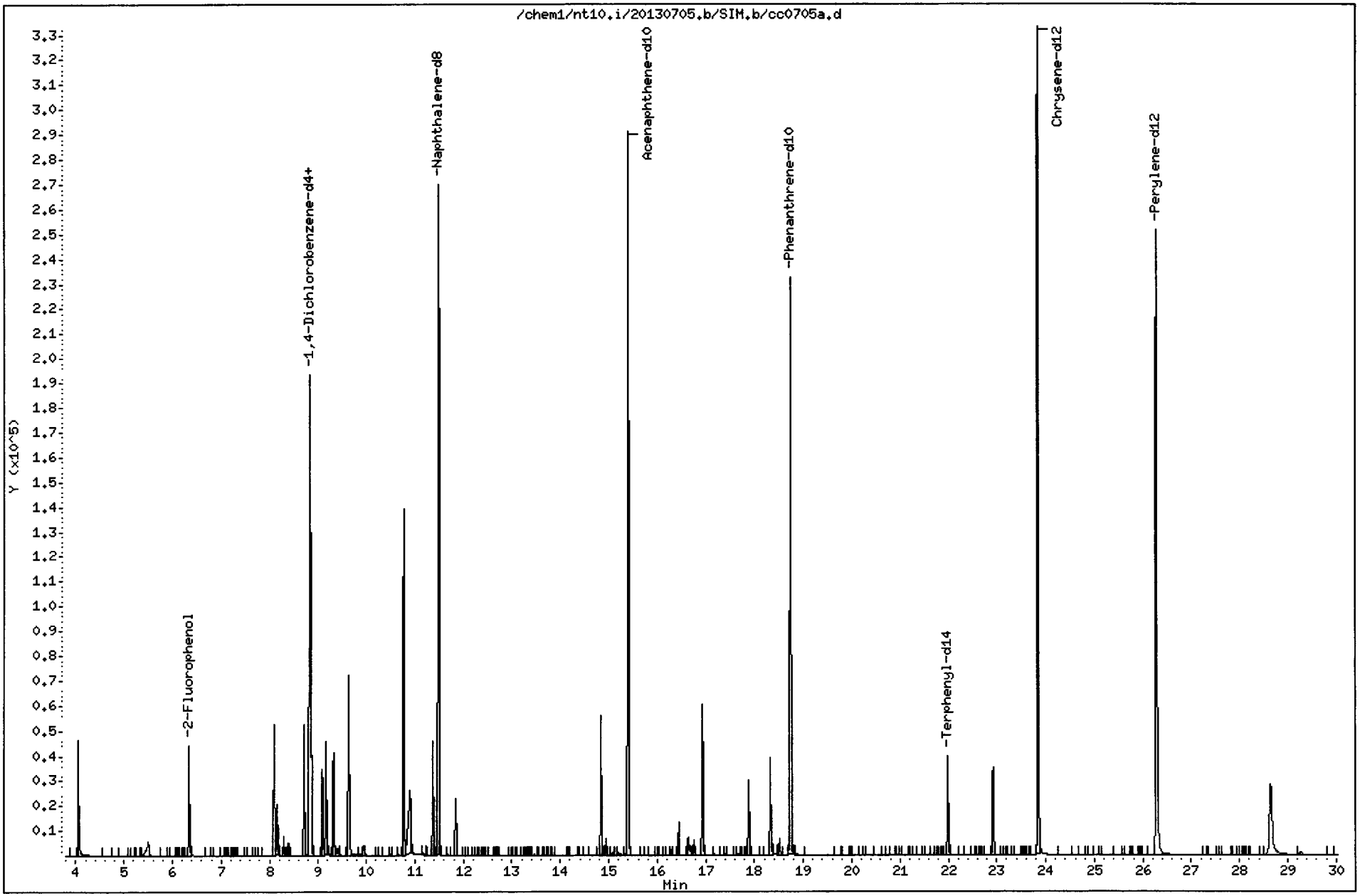
Sample Info: CC0705A

Instrument: nt10.i

Operator: VTS/YZ

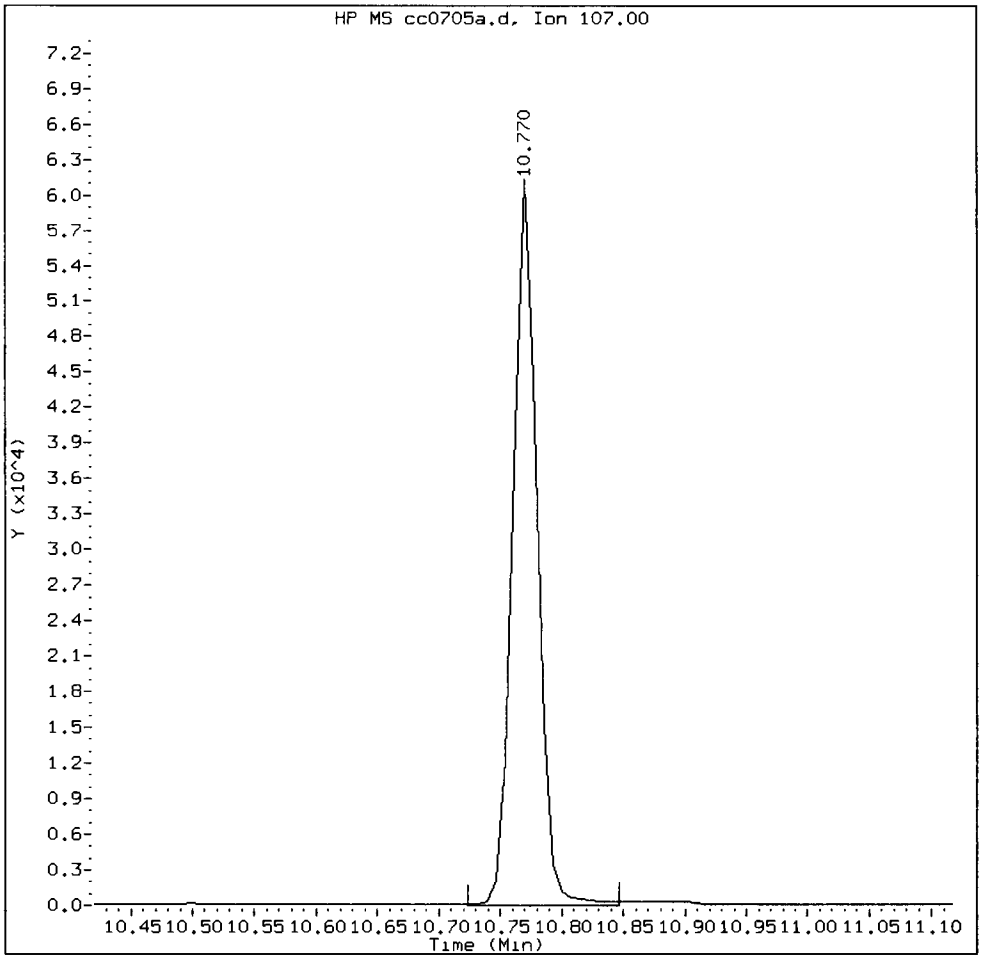
Column phase: ZB-5msi

Column diameter: 0.25



CC0705A, /chem1/nt10.i/20130705.b/SIM.b/cc0705a.d

2,4-Dimethylphenol Amount: 2.11 Area: 85071



MANUAL INTEGRATION for 2,4-Dimethylphenol

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VB Date: 7/10/13

CO-ELUTION SUMMARY FOR FILE - cc0705a.d

Lab ID: CC0705A, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 05-JUL-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources Inc.
ABN by sw846 8270C
DDT Breakdown Report

Data file: /chem1/nt10.i/20130705.b/ddt.b/df0705a.d ARI ID: DFTPP
Method: /chem1/nt10.i/20130705.b/ddt.b/sw846ddt.m Misc: 11-
Analysis Date: 05-JUL-2013 17:44 Instrument: nt10.i

COMPOUND	RT	AREA
Pentachlorophenol	6.595	469597
Benzidine	7.938	1501205
4,4'-DDE	8.104	4561
4,4'-DDD	8.403	27263
4,4'-DDT	8.676	1020484

$$\text{DDT Percent Breakdown} = \frac{(\text{DDE Area} + \text{DDD Area}) * 100}{(\text{DDE Area} + \text{DDD Area} + \text{DDT Area})}$$

$$\text{DDT Percent Breakdown} = \frac{(\ 4561 + 27263) * 100}{(\ 4561 + 27263 + 1020484)}$$

DDT Percent Breakdown = 3.0 %

WLTB : 02615

Analytical Resources, Inc.

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130705.b/SIM.b/wu70mb.d
Lab Smp Id: WU70MBS1 Client Smp ID: WU70MBS1
Inj Date : 05-JUL-2013 22:56
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WU70MBS1
Misc Info : 13-13123
Comment :
Method : /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Meth Date : 10-Jul-2013 13:58 yev Quant Type: ISTD
Cal Date : 05-JUL-2013 17:11 Cal File: ic0705i.d
Als bottle: 20 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

YZ 7/11/13

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

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$ 1	2-Fluorophenol	112	6.363	6.341	(0.721)	190514	4.68982	469.0
3	Phenol	94	Compound Not Detected.					
7	1,3-Dichlorobenzene	146	Compound Not Detected.					
* 8	1,4-Dichlorobenzene-d4	152	8.822	8.822	(1.000)	112074	4.00000	
9	1,4-Dichlorobenzene	146	Compound Not Detected.					
11	Benzyl alcohol	79	Compound Not Detected.					
12	1,2-Dichlorobenzene	146	Compound Not Detected.					
13	2-Methylphenol	108	Compound Not Detected.					
15	4-Methylphenol	108	Compound Not Detected.					
16	N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
22	2,4-Dimethylphenol	107	Compound Not Detected.					
26	1,2,4-Trichlorobenzene	180	Compound Not Detected.					
* 27	Naphthalene-d8	136	11.479	11.487	(1.000)	421836	4.00000	
30	Hexachlorobutadiene	225	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	39 Dimethylphthalate	163	Compound Not Detected.					
*	42 Acenaphthene-d10	162	15.394	15.394	(1.000)	202770	4.00000	
	50 Diethylphthalate	149	16.438	16.438	(1.068)	977	0.10555	10.56(R)
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18.747	18.740	(1.000)	374893	4.00000	
$	66 Terphenyl-d14	244	21.997	21.990	(0.922)	201918	4.89816	489.8
	67 Butylbenzylphthalate	149	Compound Not Detected.					
*	69 Chrysene-d12	240	23.855	23.848	(1.000)	356176	4.00000	
*	77 Perylene-d12	264	26.302	26.279	(1.000)	400187	4.00000	
	79 Dibenzo(a,h)anthracene	278	Compound Not Detected.					
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wu70mb.d
Lab Smp Id: WU70MBS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Misc Info: 13-13123

Calibration Date: 05-JUL-2013
Calibration Time: 18:37
Client Smp ID: WU70MBS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	115828	57914	231656	112074	-3.24
27 Naphthalene-d8	412333	206166	824666	421836	2.30
42 Acenaphthene-d10	225152	112576	450304	202770	-9.94
59 Phenanthrene-d10	415301	207650	830602	374893	-9.73
69 Chrysene-d12	449306	224653	898612	356176	-20.73
77 Perylene-d12	474708	237354	949416	400187	-15.70

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.82	8.32	9.32	8.82	-0.01
27 Naphthalene-d8	11.49	10.99	11.99	11.48	-0.07
42 Acenaphthene-d10	15.39	14.89	15.89	15.39	0.00
59 Phenanthrene-d10	18.74	18.24	19.24	18.75	0.04
69 Chrysene-d12	23.85	23.35	24.35	23.86	0.03
77 Perylene-d12	26.28	25.78	26.78	26.30	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

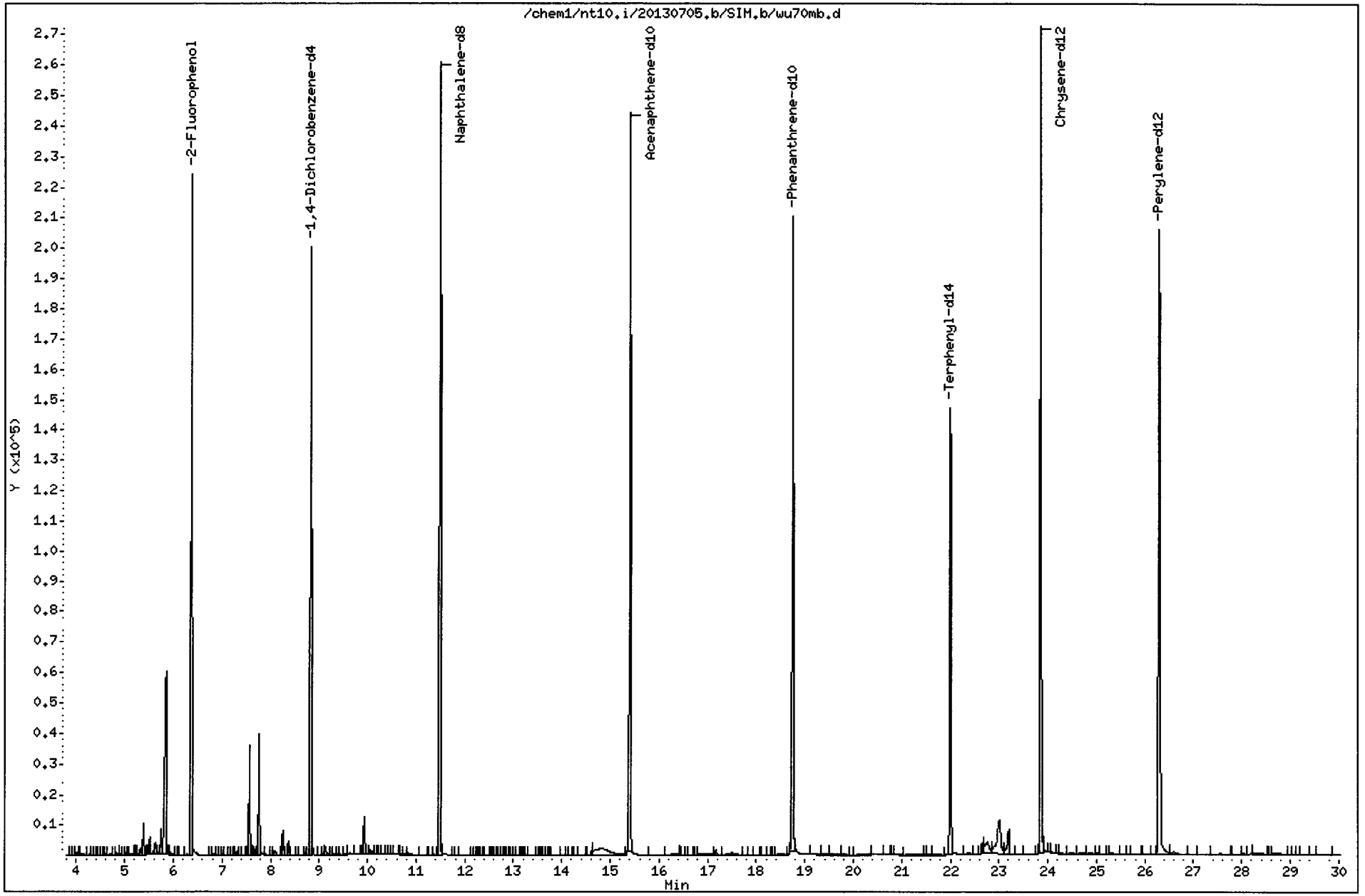
Client Name: SAIC
Client SDG: WU70
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WU70MBS1
Client Smp ID: WU70MBS1
Level: LOW
Operator: VTS/YZ
Data Type: MS DATA
SampleType: BLANK
SpikeList File: PSDDALCS.spk
Quant Type: ISTD
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Misc Info: 13-13123

SPIKE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3	Phenol	500.0	0.000	*	30-160
7	1,3-Dichlorobenze	500.0	0.000	*	30-100
9	1,4-Dichlorobenze	500.0	0.000	*	36-100
11	Benzyl alcohol	1000	0.000	*	25-123
12	1,2-Dichlorobenze	500.0	0.000	*	36-100
13	2-Methylphenol	500.0	0.000	*	26-100
15	4-Methylphenol	1000	0.000	*	30-160
16	N-Nitroso-di-n-pr	500.0	0.000	*	30-160
22	2,4-Dimethylphenol	1000	0.000	*	10-103
26	1,2,4-Trichlorobe	500.0	0.000	*	35-100
30	Hexachlorobutadie	500.0	0.000	*	34-100
39	Dimethylphthalate	500.0	0.000	*	38-112
50	Diethylphthalate	500.0	10.56	2.11*	55-104
54	N-Nitrosodiphenyl	500.0	0.000	*	36-111
57	Hexachlorobenzene	500.0	0.000	*	32-106
58	Pentachlorophenol	1000	0.000	*	26-106
67	Butylbenzylphthal	500.0	0.000	*	32-142
79	Dibenzo(a,h)anthr	500.0	0.000	*	28-125
90	N-Nitrosodimethyl	1000	0.000	*	30-160

SURROGATE	COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1	2-Fluorophenol	750.0	469.0	62.53	30-160
$ 66	Terphenyl-d14	500.0	489.8	97.96	30-160

Data File: /chem1/nt10.i/20130705.b/SIM.b/wu70mb.d
Date : 05-JUL-2013 22:56
Client ID: WU70MBS1
Sample Info: WU70MBS1
Volume Injected (uL): 1.0
Column phase: ZB-5ms1

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130705.b/SIM.b/wu70mb.d

Date : 05-JUL-2013 22:56

Client ID: WU70MBS1

Instrument: nt10.i

Sample Info: WU70MBS1

Volume Injected (uL): 1.0

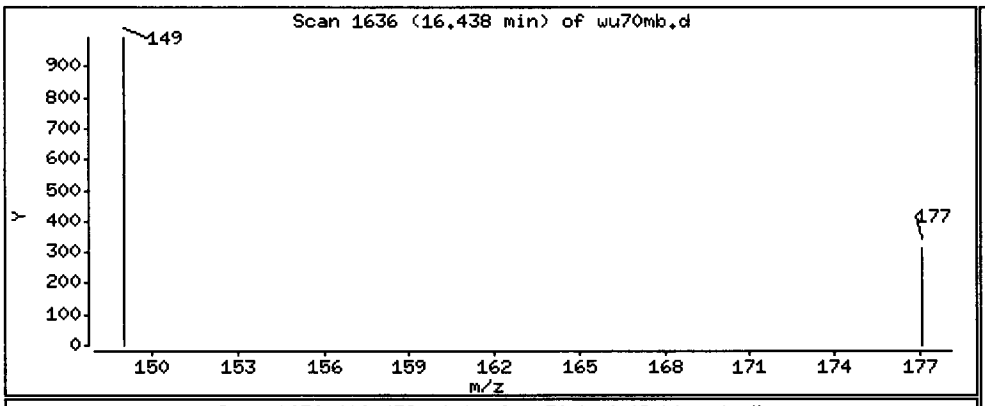
Operator: VTS/YZ

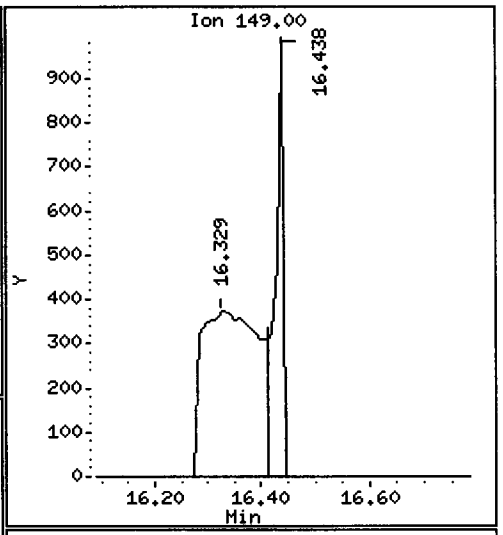
Column phase: ZB-5msi

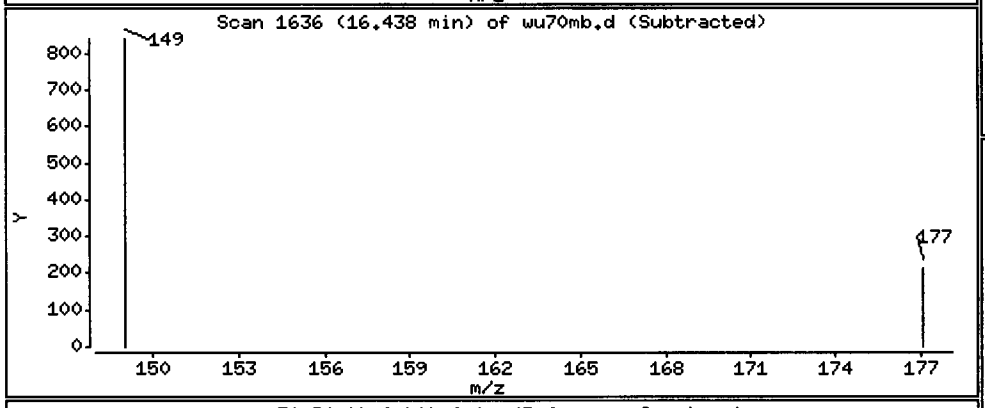
Column diameter: 0.25

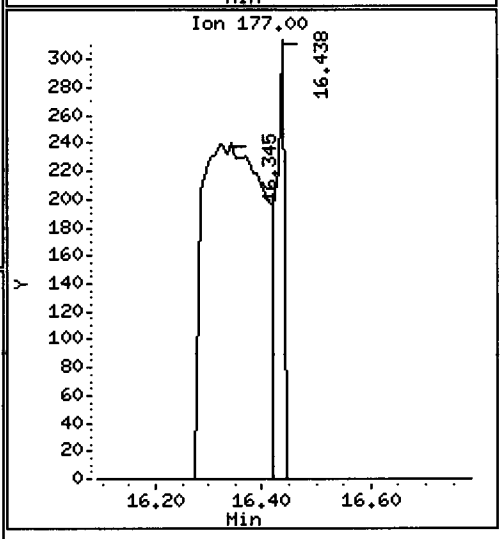
50 Diethylphthalate

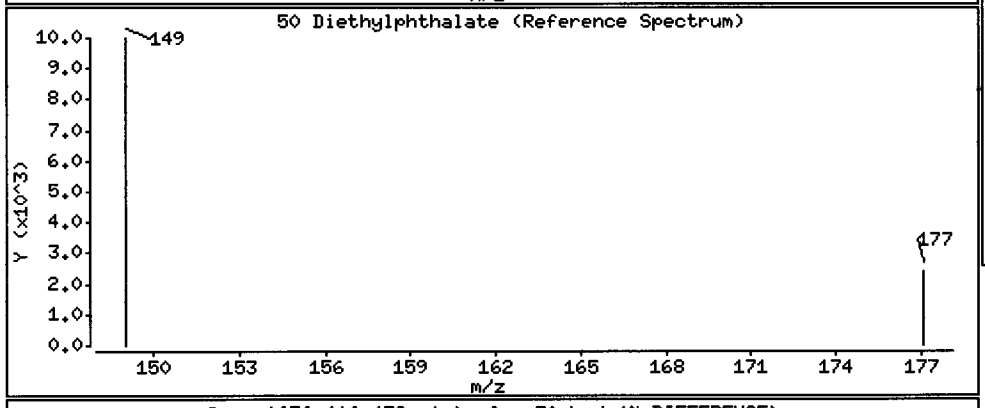
Concentration: 10.56 ug/kg

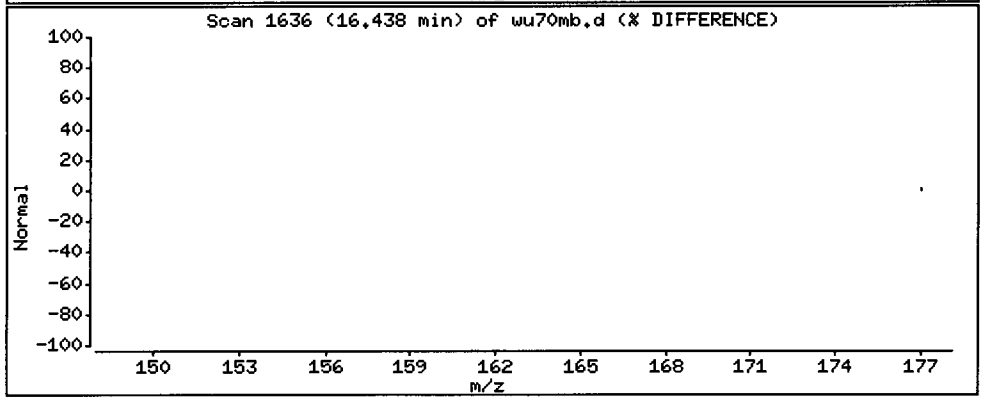












CO-ELUTION SUMMARY FOR FILE - wu70mb.d

Lab ID: WU70MBS1, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 05-JUL-2

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

METHOD 8270D-SIM

YZ 7/11/13

Data file : /chem1/nt10.i/20130705.b/SIM.b/wu79bsb.d
Lab Smp Id: WU70LCSS1 Client Smp ID: WU70LCSS1
Inj Date : 05-JUL-2013 23:33
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WU70LCSS1
Misc Info : 13-13123
Comment :
Method : /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Meth Date : 10-Jul-2013 11:26 yev Quant Type: ISTD
Cal Date : 05-JUL-2013 17:11 Cal File: ic0705i.d
Als bottle: 21 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

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

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	10.00000	Weight of sample extracted (g)
M	0.00000	% Moisture

Cpnd Variable Local Compound Variable

		Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1	2-Fluorophenol	112	6.364	6.341	(0.721)	190239	5.07423	507.4
	3	Phenol	94	8.103	8.095	(0.918)	190038	3.71248	371.2
	7	1,3-Dichlorobenzene	146	8.706	8.714	(0.987)	138897	3.41361	341.4
*	8	1,4-Dichlorobenzene-d4	152	8.822	8.822	(1.000)	103434	4.00000	
	9	1,4-Dichlorobenzene	146	8.853	8.861	(1.004)	136734	3.46345	346.3
	11	Benzyl alcohol	79	9.094	9.086	(1.031)	118114	4.58534	458.5
	12	1,2-Dichlorobenzene	146	9.163	9.164	(1.039)	133098	3.50570	350.6
	13	2-Methylphenol	108	9.319	9.319	(1.056)	123920	3.33384	333.4
	15	4-Methylphenol	108	9.637	9.629	(1.092)	265314	7.18504	718.5
	16	N-Nitroso-di-n-propylamine	70	9.645	9.645	(1.093)	88256	3.62958	363.0
	22	2,4-Dimethylphenol	107	10.777	10.770	(0.939)	317534	8.27733	827.7
	26	1,2,4-Trichlorobenzene	180	11.371	11.371	(0.991)	123722	3.55559	355.6
*	27	Naphthalene-d8	136	11.479	11.487	(1.000)	372298	4.00000	
	30	Hexachlorobutadiene	225	11.842	11.842	(1.032)	72944	3.52456	352.5

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	39 Dimethylphthalate	163	14.845	14.837	(0.964)	283256	4.41603	441.6
*	42 Acenaphthene-d10	162	15.394	15.394	(1.000)	206356	4.00000	
	50 Diethylphthalate	149	16.438	16.438	(1.068)	19511	2.07129	207.1(R)
	54 N-Nitrosodiphenylamine	169	16.939	16.939	(0.904)	205157	4.72009	472.0
	57 Hexachlorobenzene	284	17.888	17.881	(0.954)	104772	3.84469	384.5
	58 Pentachlorophenol	266	18.337	18.330	(0.978)	238934	12.9126	1291(R)
*	59 Phenanthrene-d10	188	18.748	18.740	(1.000)	376025	4.00000	
$	66 Terphenyl-d14	244	21.997	21.990	(0.922)	215168	5.04968	505.0
	67 Butylbenzylphthalate	149	22.926	22.926	(0.961)	237074	5.88344	588.3
*	69 Chrysene-d12	240	23.855	23.848	(1.000)	368160	4.00000	
*	77 Perylene-d12	264	26.294	26.279	(1.000)	382348	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.682	28.643	(1.091)	373301	4.42527	442.5
	90 N-Nitrosodimethylamine	74	4.094	4.047	(0.464)	217454	9.28546	928.5

QC Flag Legend

R - Spike/Surrogate failed recovery limits.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wu79bsb.d
Lab Smp Id: WU70LCSS1
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Misc Info: 13-13123

Calibration Date: 05-JUL-2013
Calibration Time: 18:37
Client Smp ID: WU70LCSS1
Level: LOW
Sample Type: Solid

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	115828	57914	231656	103434	-10.70
27 Naphthalene-d8	412333	206166	824666	372298	-9.71
42 Acenaphthene-d10	225152	112576	450304	206356	-8.35
59 Phenanthrene-d10	415301	207650	830602	376025	-9.46
69 Chrysene-d12	449306	224653	898612	368160	-18.06
77 Perylene-d12	474708	237354	949416	382348	-19.46

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.82	8.32	9.32	8.82	0.00
27 Naphthalene-d8	11.49	10.99	11.99	11.48	-0.07
42 Acenaphthene-d10	15.39	14.89	15.89	15.39	0.00
59 Phenanthrene-d10	18.74	18.24	19.24	18.75	0.04
69 Chrysene-d12	23.85	23.35	24.35	23.86	0.03
77 Perylene-d12	26.28	25.78	26.78	26.29	0.06

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: SAIC
Client SDG: WU70
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WU70LCSS1
Client Smp ID: WU70LCSS1
Level: LOW
Operator: VTS/YZ
Data Type: MS DATA
SampleType: LCS
SpikeList File: PSDDALCS.spk
Quant Type: ISTD
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Misc Info: 13-13123

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3 Phenol	500.0	371.2	74.25	30-160
7 1,3-Dichlorobenzen	500.0	341.4	68.27	30-100
9 1,4-Dichlorobenzen	500.0	346.3	69.27	36-100
11 Benzyl alcohol	1000	458.5	45.85	25-123
12 1,2-Dichlorobenzen	500.0	350.6	70.11	36-100
13 2-Methylphenol	500.0	333.4	66.68	26-100
15 4-Methylphenol	1000	718.5	71.85	30-160
16 N-Nitroso-di-n-pro	500.0	363.0	72.59	30-160
22 2,4-Dimethylphenol	1000	827.7	82.77	10-103
26 1,2,4-Trichloroben	500.0	355.6	71.11	35-100
30 Hexachlorobutadien	500.0	352.5	70.49	34-100
39 Dimethylphthalate	500.0	441.6	88.32	38-112
50 Diethylphthalate	500.0	207.1	41.43*	55-104
54 N-Nitrosodiphenyla	500.0	472.0	94.40	36-111
57 Hexachlorobenzene	500.0	384.5	76.89	32-106
58 Pentachlorophenol	1000	1291	129.13*	26-106
67 Butylbenzylphthala	500.0	588.3	117.67	32-142
79 Dibenzo(a,h)anthra	500.0	442.5	88.51	28-125
90 N-Nitrosodimethyla	1000	928.5	92.85	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	750.0	507.4	67.66	30-160
$ 66 Terphenyl-d14	500.0	505.0	100.99	30-160

Data File: /chem1/nt10.i/20130705.b/SIM.b/wu79bsb.d

Date : 05-JUL-2013 23:33

Client ID: WU70LCSS1

Instrument: nt10.i

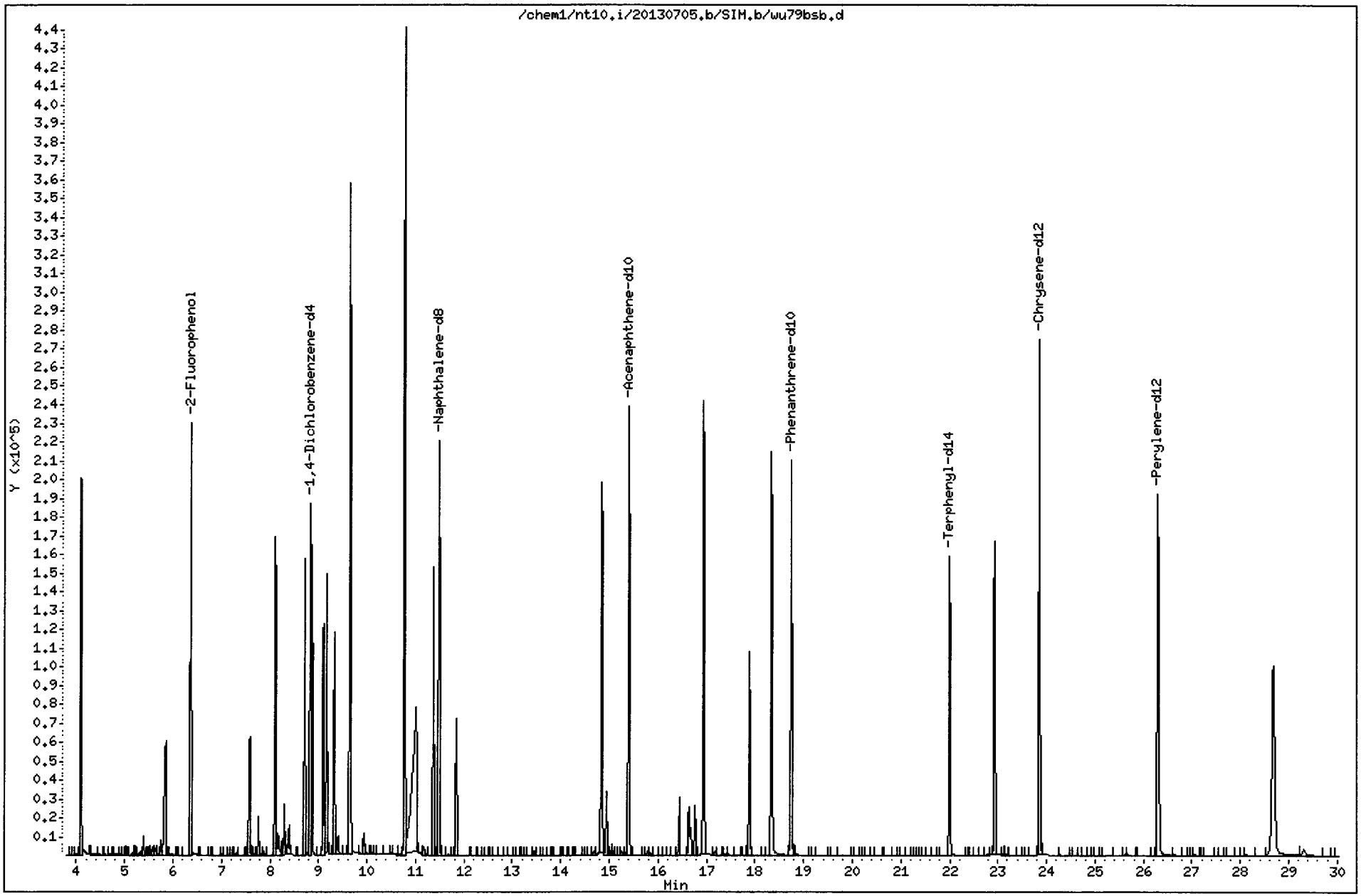
Sample Info: WU70LCSS1

Volume Injected (uL): 1.0

Operator: VTS/YZ

Column phase: ZB-5msi

Column diameter: 0.25



CO-ELUTION SUMMARY FOR FILE - wu79bsb.d

Lab ID: WU70LCSS1, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 05-JUL-

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 7/11/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130705.b/SIM.b/wu70cb.d
Lab Smp Id: WU70B Client Smp ID: LF-TP-001-20130619-
Inj Date : 06-JUL-2013 00:10
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WU70B
Misc Info : 13-13122
Comment :
Method : /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Meth Date : 10-Jul-2013 13:58 yev Quant Type: ISTD
Cal Date : 05-JUL-2013 17:11 Cal File: ic0705i.d
Als bottle: 22
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

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

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	18.03000	Weight of sample extracted (g)
M	44.30000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$	1 2-Fluorophenol	112	6.379	6.341	(0.722)	188318	5.07912	505.8
	3 Phenol	94	8.134	8.095	(0.921)	22414	0.44276	44.09
	7 1,3-Dichlorobenzene	146	Compound Not Detected.					
*	8 1,4-Dichlorobenzene-d4	152	8.830	8.822	(1.000)	102291	4.00000	
	9 1,4-Dichlorobenzene	146	Compound Not Detected.					
	11 Benzyl alcohol	79	9.094	9.086	(1.030)	3465	0.13602	13.54(M)
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	13 2-Methylphenol	108	9.334	9.319	(1.057)	2609	0.07097	7.067
	15 4-Methylphenol	108	9.645	9.629	(1.092)	6220	0.17033	16.96
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	Compound Not Detected.					
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.487	11.487	(1.000)	380334	4.00000	
	30 Hexachlorobutadiene	225	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	39 Dimethylphthalate	163	Compound Not Detected.					
*	42 Acenaphthene-d10	162	15.402	15.394	(1.000)	189141	4.00000	
	50 Diethylphthalate	149	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18.771	18.740	(1.000)	332066	4.00000	
$	66 Terphenyl-d14	244	22.059	21.990	(0.921)	190018	4.79583	477.5
	67 Butylbenzylphthalate	149	22.988	22.926	(0.960)	18801	0.50178	49.96(H)
*	69 Chrysene-d12	240	23.948	23.848	(1.000)	342337	4.00000	
*	77 Perylene-d12	264	26.496	26.279	(1.000)	369420	4.00000	
	79 Dibenzo(a,h)anthracene	278	29.132	28.643	(1.099)	22992	0.28210	28.09(M)
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

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: nt10.i
Lab File ID: wu70cb.d
Lab Smp Id: WU70B
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Misc Info: 13-13122

Calibration Date: 05-JUL-2013
Calibration Time: 18:37
Client Smp ID: LF-TP-001-201306
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	115828	57914	231656	102291	-11.69
27 Naphthalene-d8	412333	206166	824666	380334	-7.76
42 Acenaphthene-d10	225152	112576	450304	189141	-15.99
59 Phenanthrene-d10	415301	207650	830602	332066	-20.04
69 Chrysene-d12	449306	224653	898612	342337	-23.81
77 Perylene-d12	474708	237354	949416	369420	-22.18

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.82	8.32	9.32	8.83	0.09
27 Naphthalene-d8	11.49	10.99	11.99	11.49	0.00
42 Acenaphthene-d10	15.39	14.89	15.89	15.40	0.05
59 Phenanthrene-d10	18.74	18.24	19.24	18.77	0.17
69 Chrysene-d12	23.85	23.35	24.35	23.95	0.42
77 Perylene-d12	26.28	25.78	26.78	26.50	0.83

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.

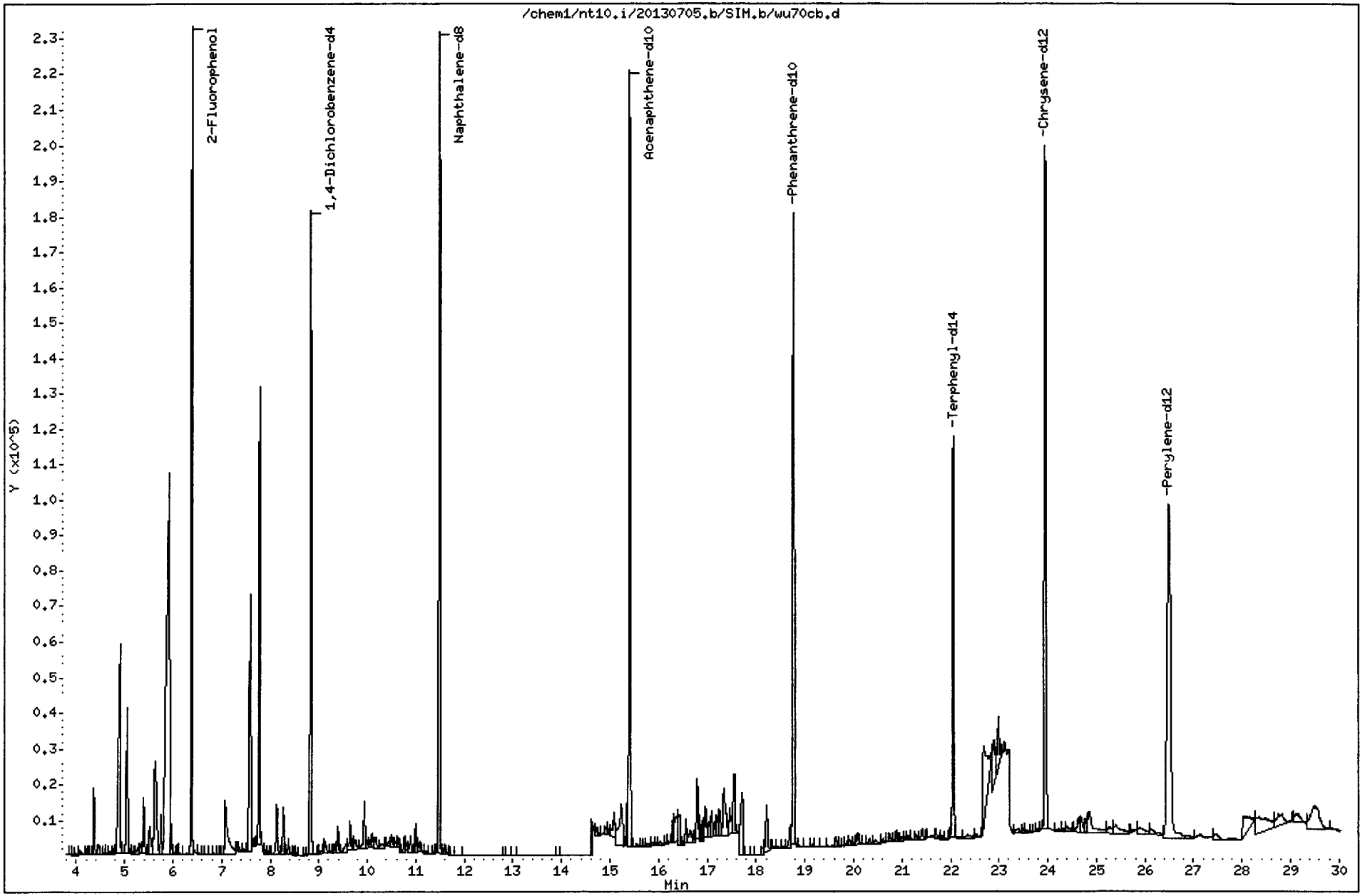
RECOVERY REPORT

Client Name: SAIC
Client SDG: WU70
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WU70B
Client Smp ID: LF-TP-001-20130619-
Level: LOW
Operator: VTS/YZ
Data Type: MS DATA
SampleType: SAMPLE
SpikeList File: PSDDALCS.spk
Quant Type: ISTD
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Misc Info: 13-13122

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	746.8	505.8	67.72	30-160
$ 66 Terphenyl-d14	497.9	477.5	95.92	30-160

Data File: /chem1/nt10.i/20130705.b/SIM.b/wu70cb.d
Date : 06-JUL-2013 00:10
Client ID: LF-TP-001-20130619-
Sample Info: WU70B
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130705.b/SIM.b/wu70cb.d

Date : 06-JUL-2013 00:10

Client ID: LF-TP-001-20130619-

Instrument: nt10.i

Sample Info: WU70B

Volume Injected (uL): 1.0

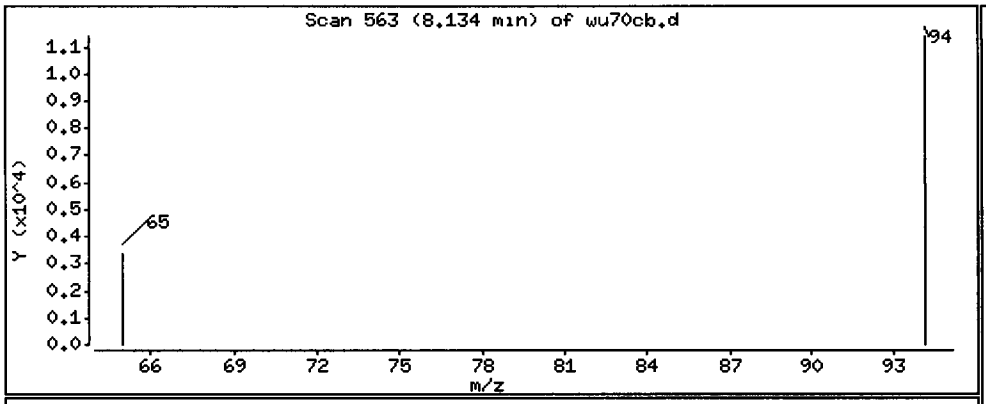
Operator: VTS/YZ

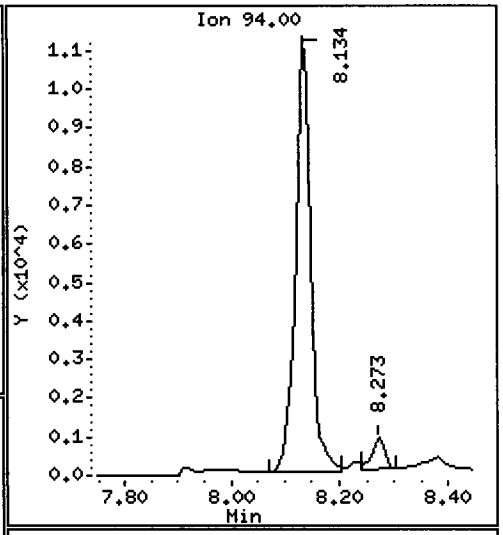
Column phase: ZB-5msi

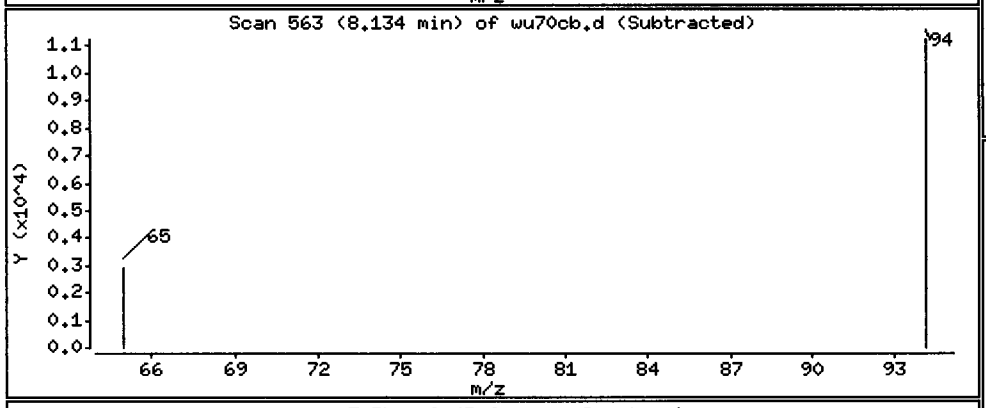
Column diameter: 0.25

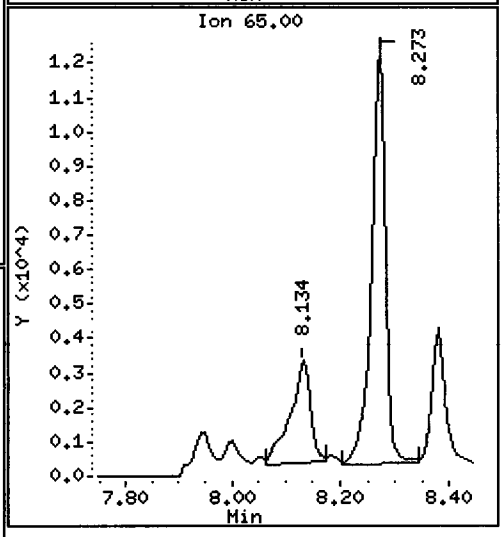
3 Phenol

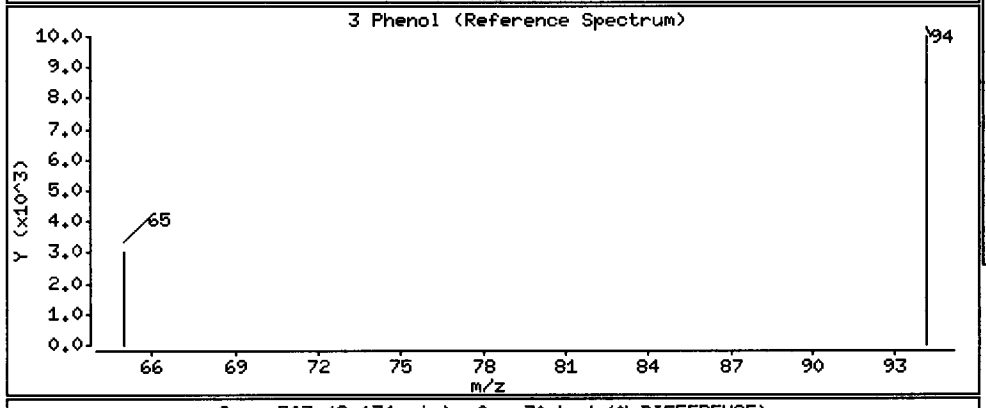
Concentration: 44.09 ug/kg

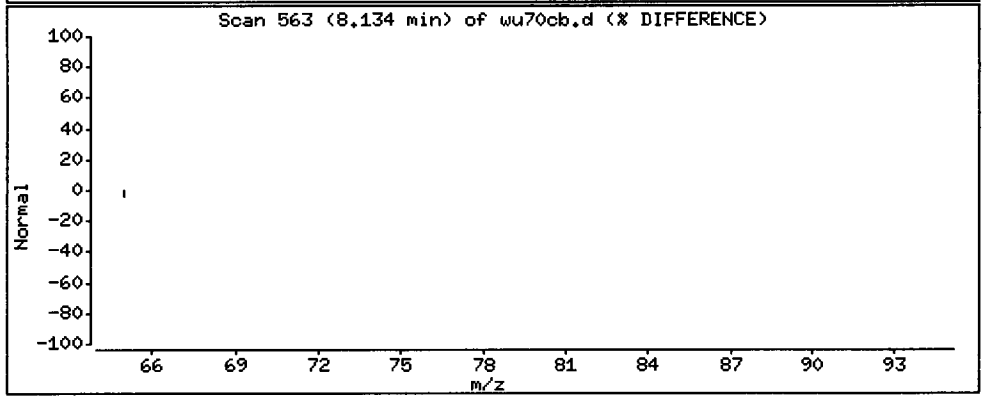












Data File: /chem1/nt10.i/20130705.b/SIM.b/wu70cb.d

Date : 06-JUL-2013 00:10

Client ID: LF-TP-001-20130619-

Instrument: nt10.i

Sample Info: WU70B

Volume Injected (uL): 1.0

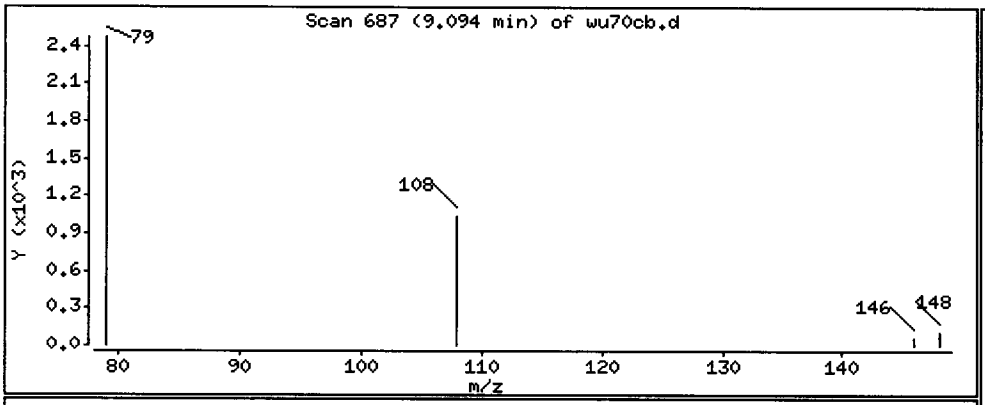
Operator: VTS/YZ

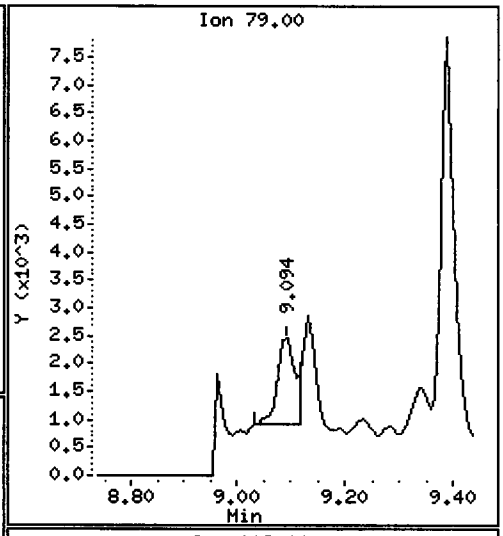
Column phase: ZB-5msi

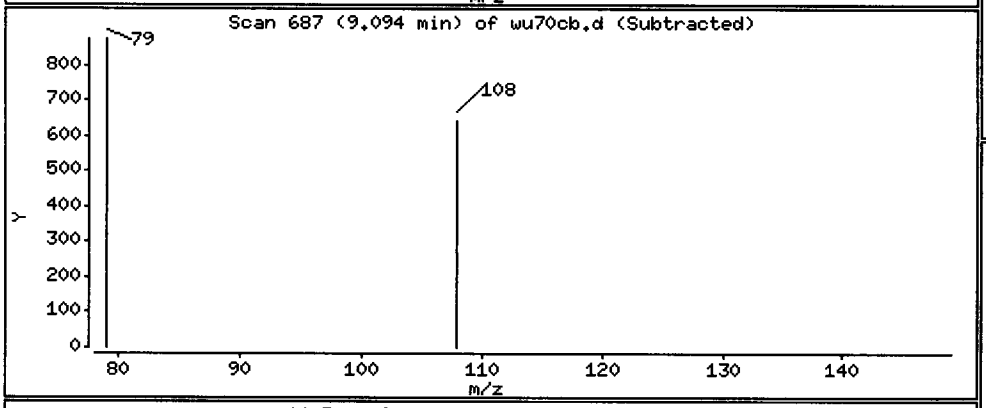
Column diameter: 0.25

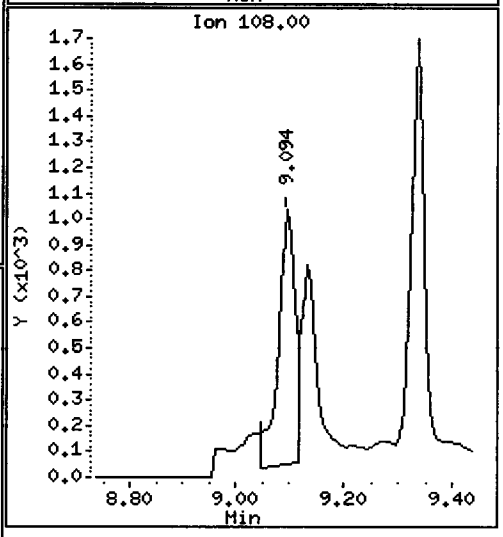
11 Benzyl alcohol

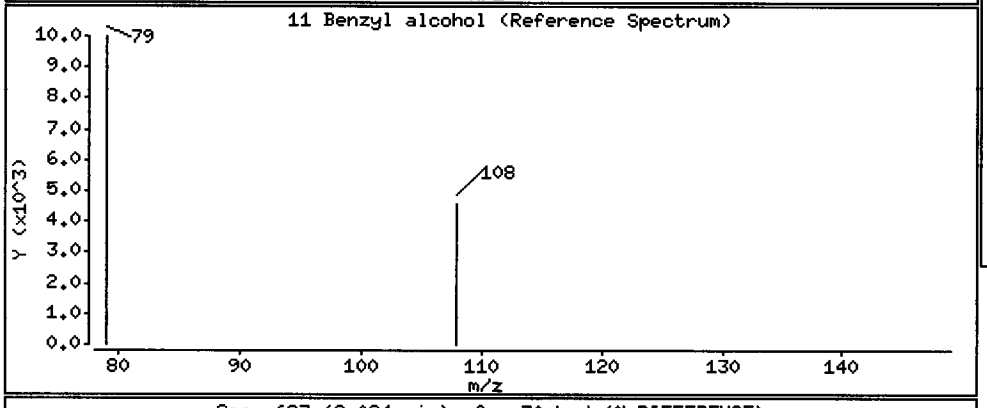
Concentration: 13.54 ug/kg

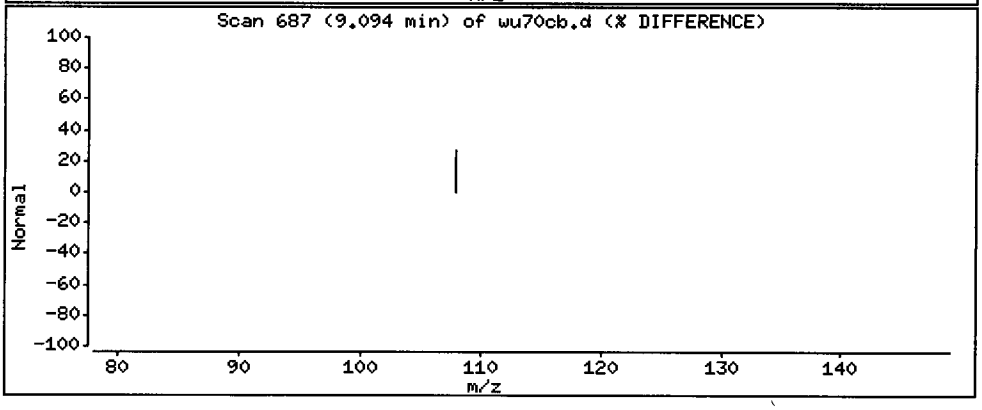












Data File: /chem1/nt10.i/20130705.b/SIM.b/wu70cb.d

Date : 06-JUL-2013 00:10

Client ID: LF-TP-001-20130619-

Instrument: nt10.i

Sample Info: WU70B

Volume Injected (uL): 1.0

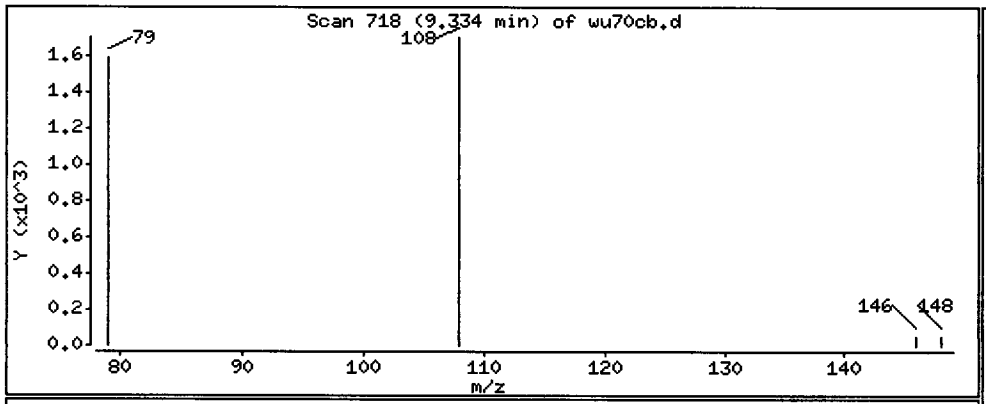
Operator: VTS/YZ

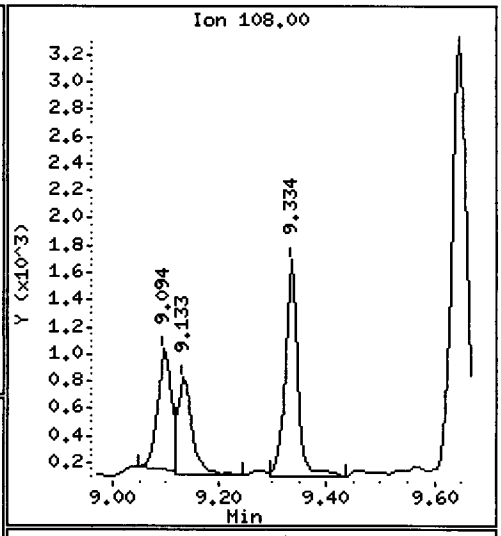
Column phase: ZB-5msi

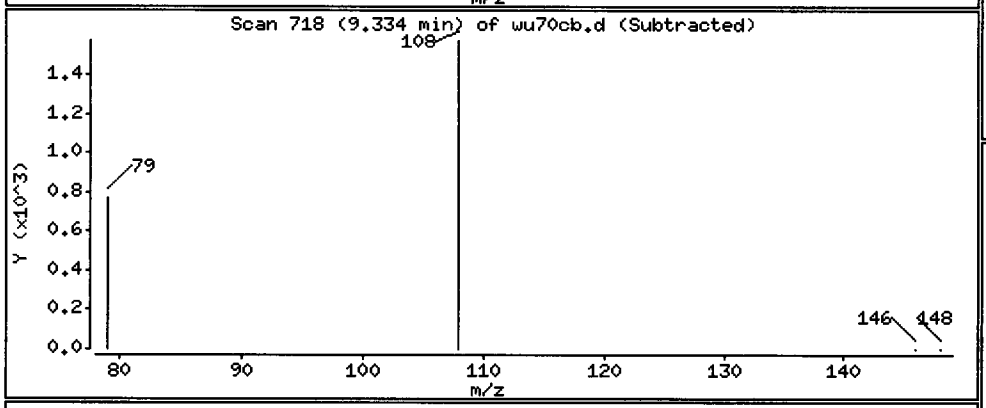
Column diameter: 0.25

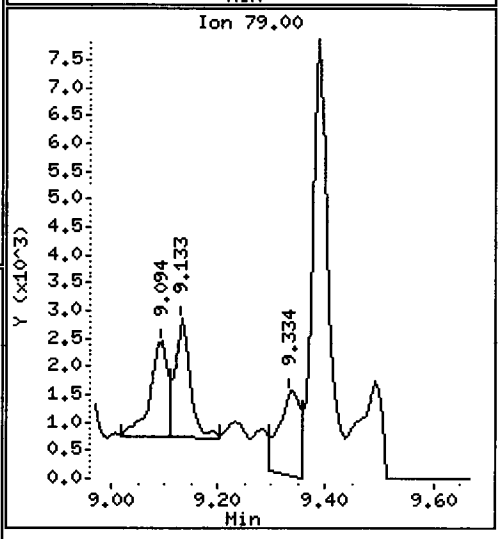
13 2-Methylphenol

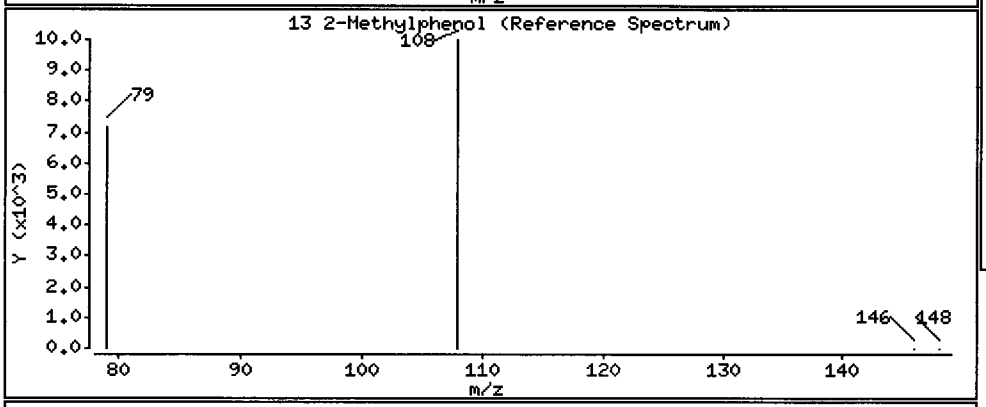
Concentration: 7.067 ug/kg

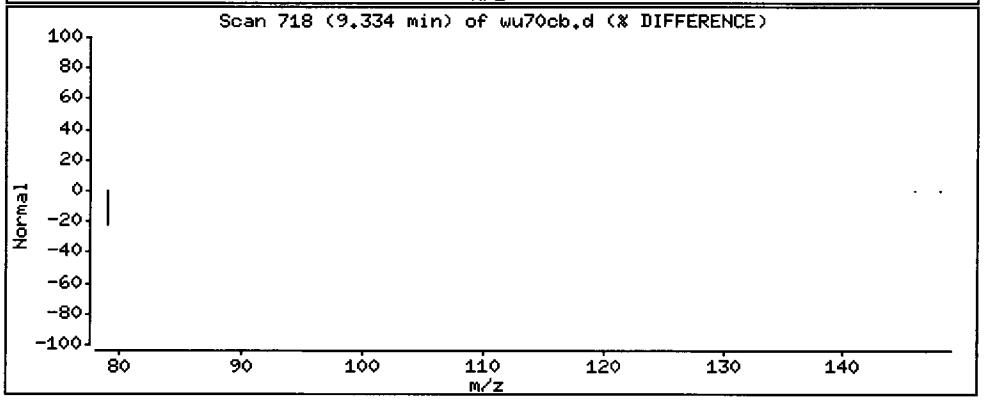












Data File: /chem1/nt10.i/20130705.b/SIM.b/wu70cb.d

Date : 06-JUL-2013 00:10

Client ID: LF-TP-001-20130619-

Instrument: nt10.i

Sample Info: WU70B

Volume Injected (uL): 1.0

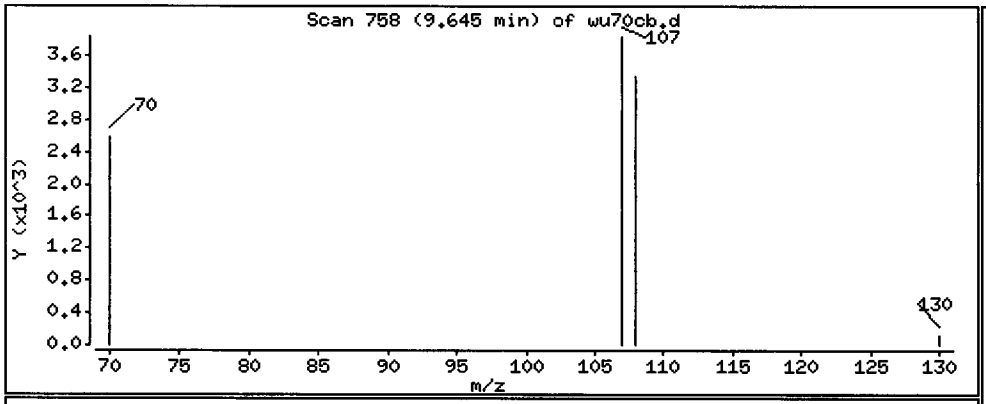
Operator: VTS/YZ

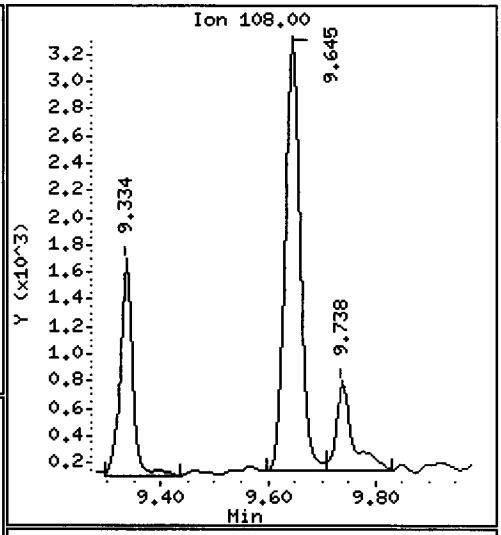
Column phase: ZB-5msi

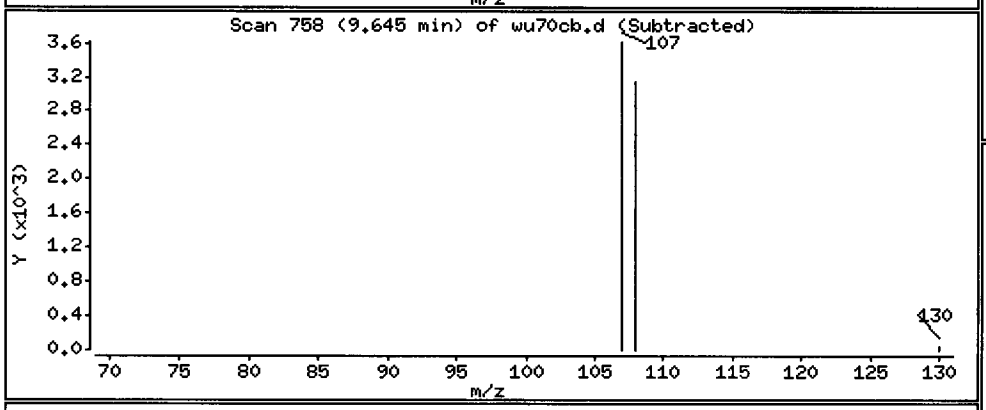
Column diameter: 0.25

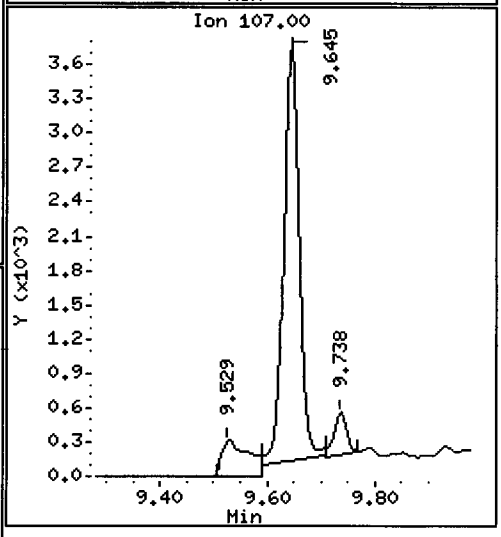
15 4-Methylphenol

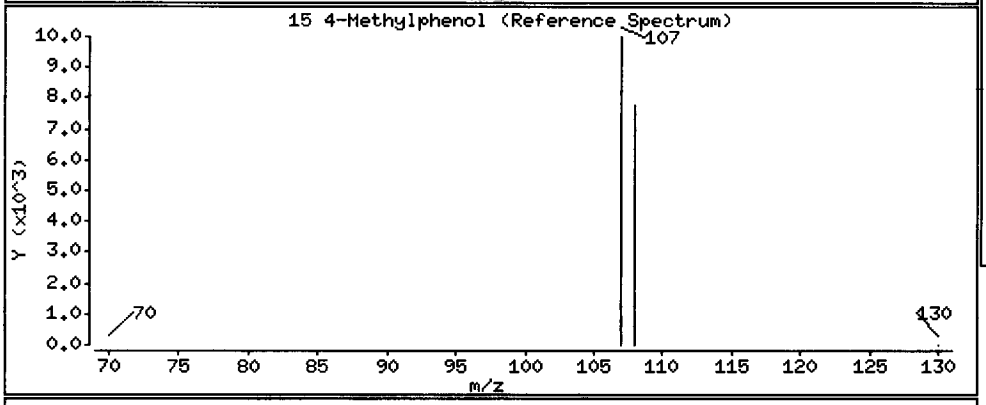
Concentration: 16.96 ug/kg

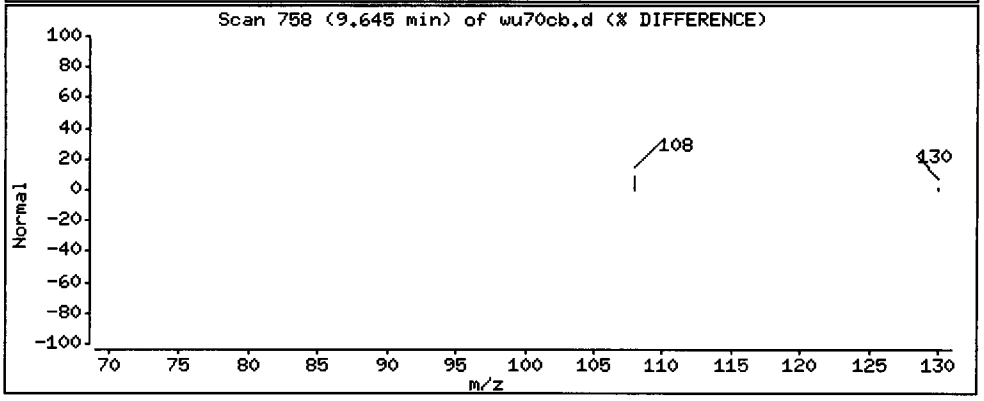












Data File: /chem1/nt10.i/20130705.b/SIM.b/wu70cb.d

Date : 06-JUL-2013 00:10

Client ID: LF-TP-001-20130619-

Instrument: nt10.i

Sample Info: WU70B

Volume Injected (uL): 1.0

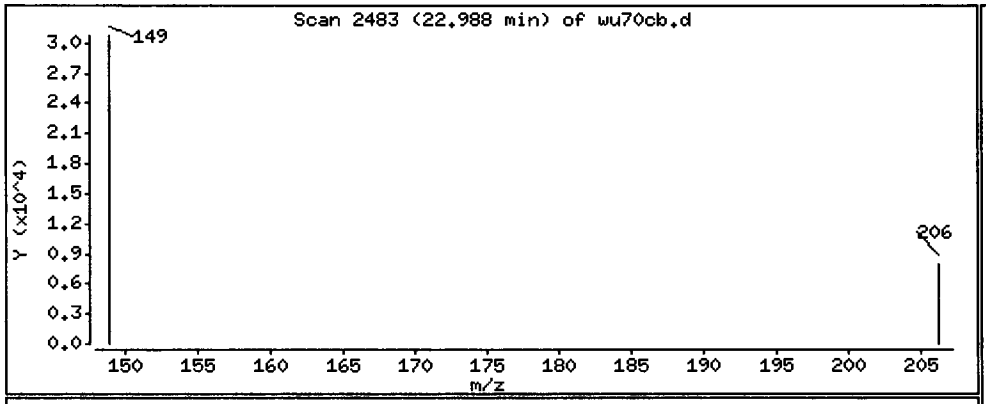
Operator: VTS/YZ

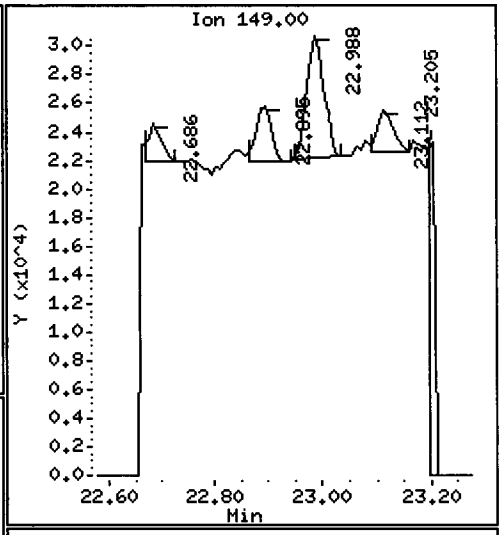
Column phase: ZB-5msi

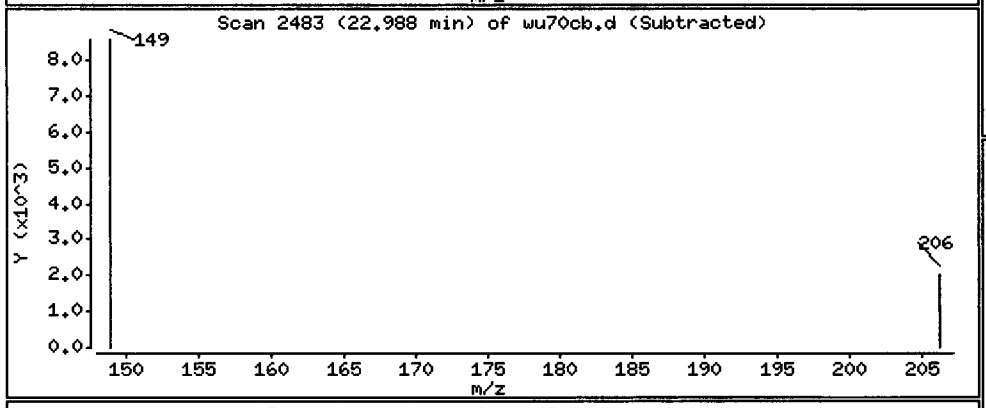
Column diameter: 0.25

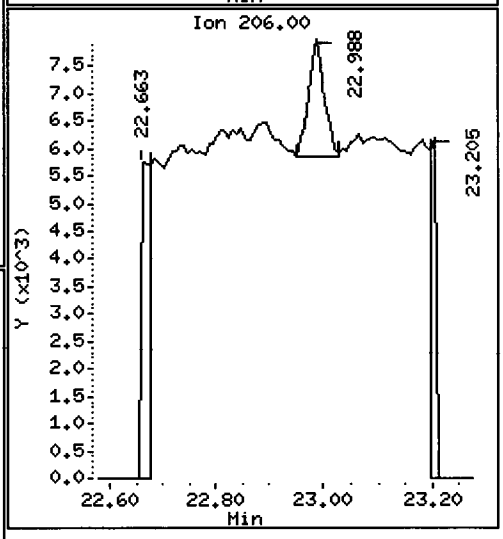
67 Butylbenzylphthalate

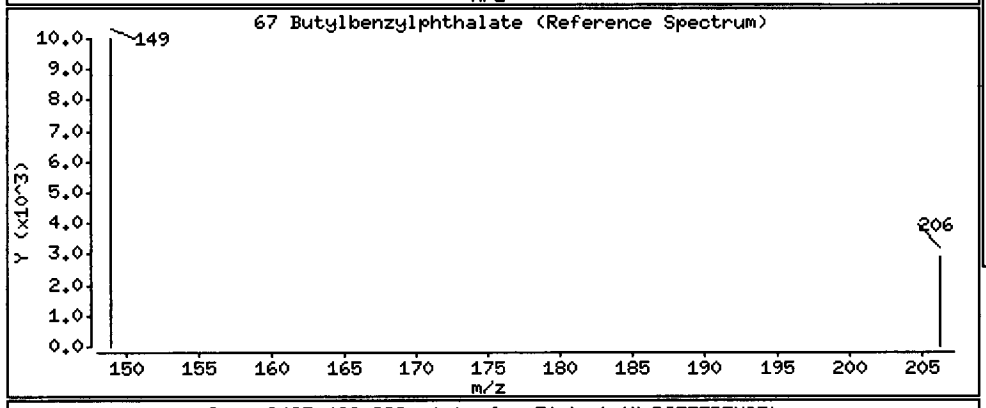
Concentration: 49.96 ug/kg

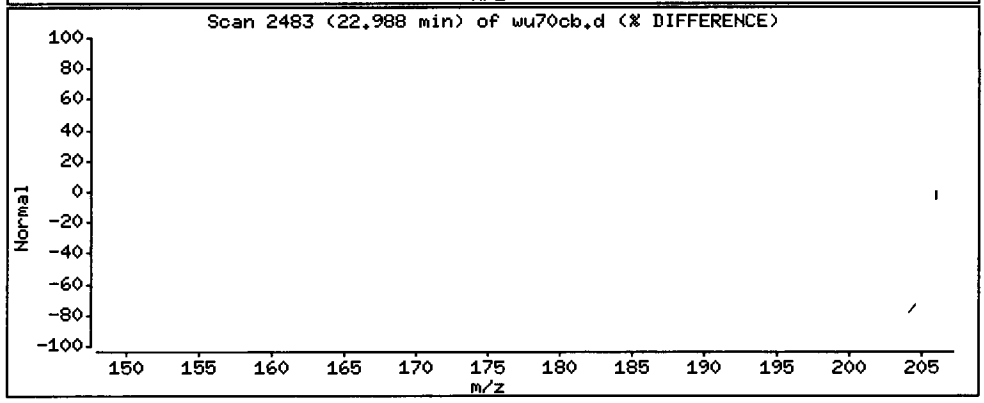












Data File: /chem1/nt10.i/20130705.b/SIM.b/wu70cb.d

Date : 06-JUL-2013 00:10

Client ID: LF-TP-001-20130619-

Instrument: nt10.i

Sample Info: WU70B

Volume Injected (uL): 1.0

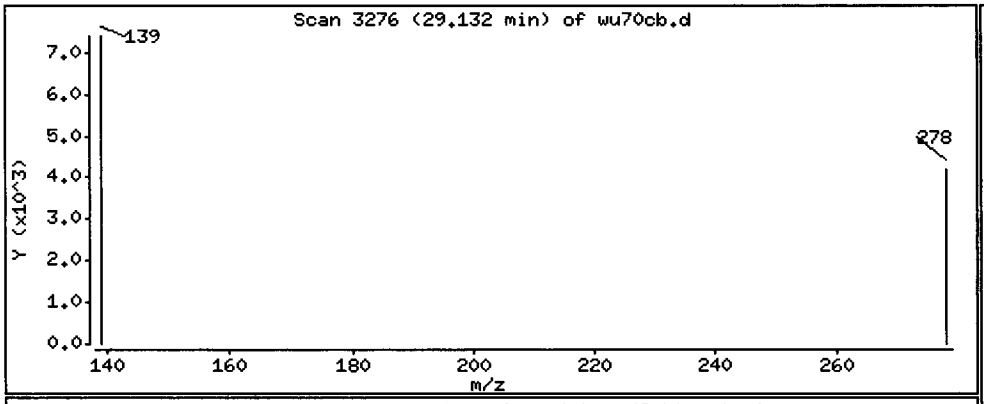
Operator: VTS/YZ

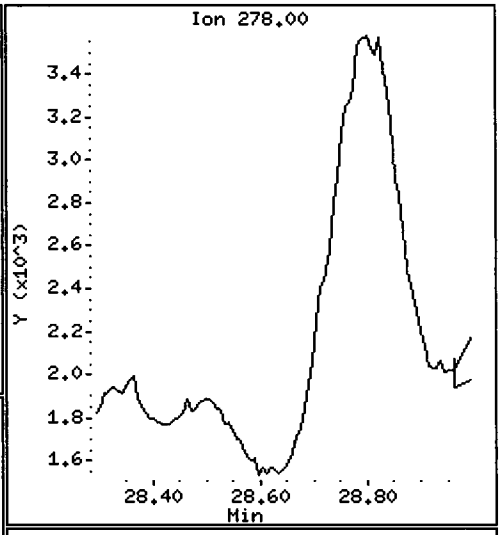
Column phase: ZB-5msi

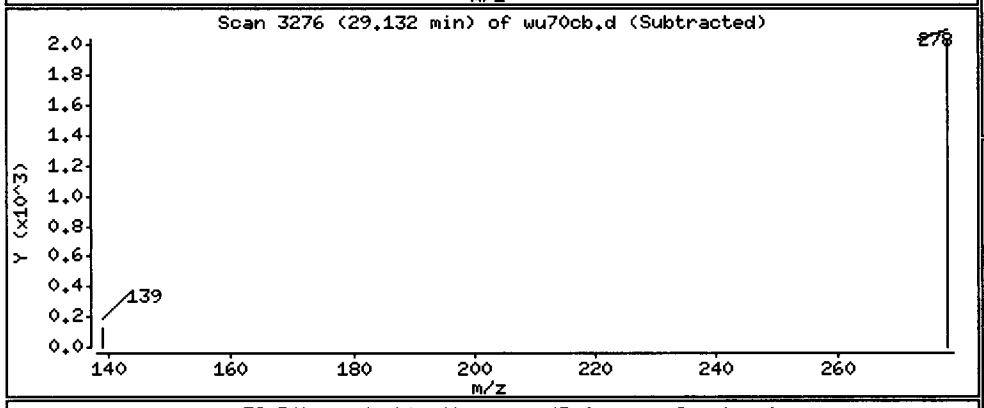
Column diameter: 0.25

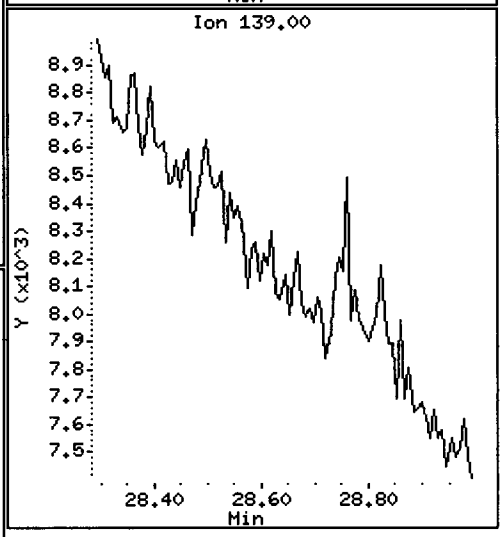
79 Dibenzo(a,h)anthracene

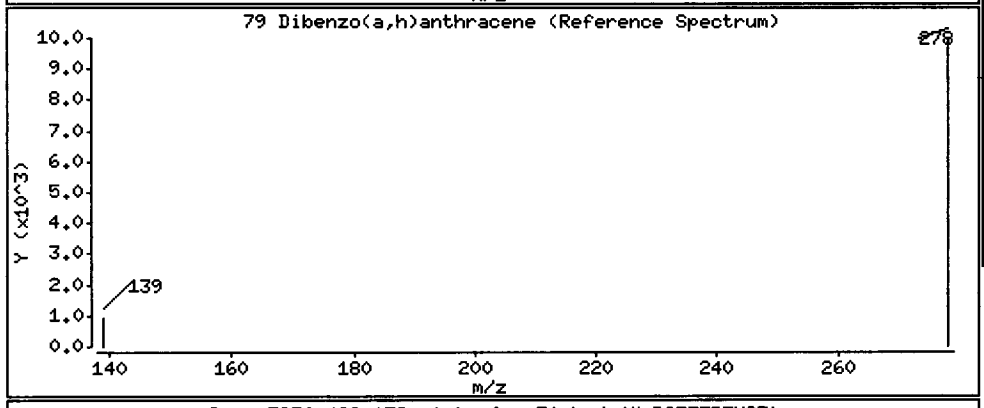
Concentration: 28.09 ug/kg

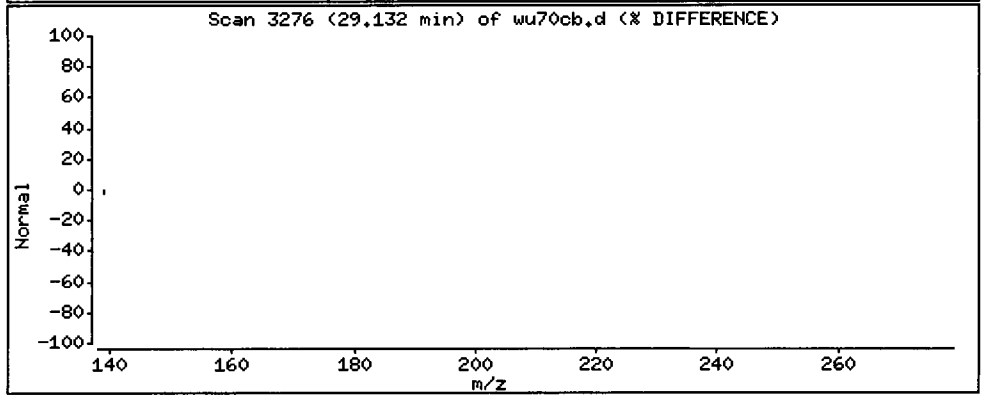






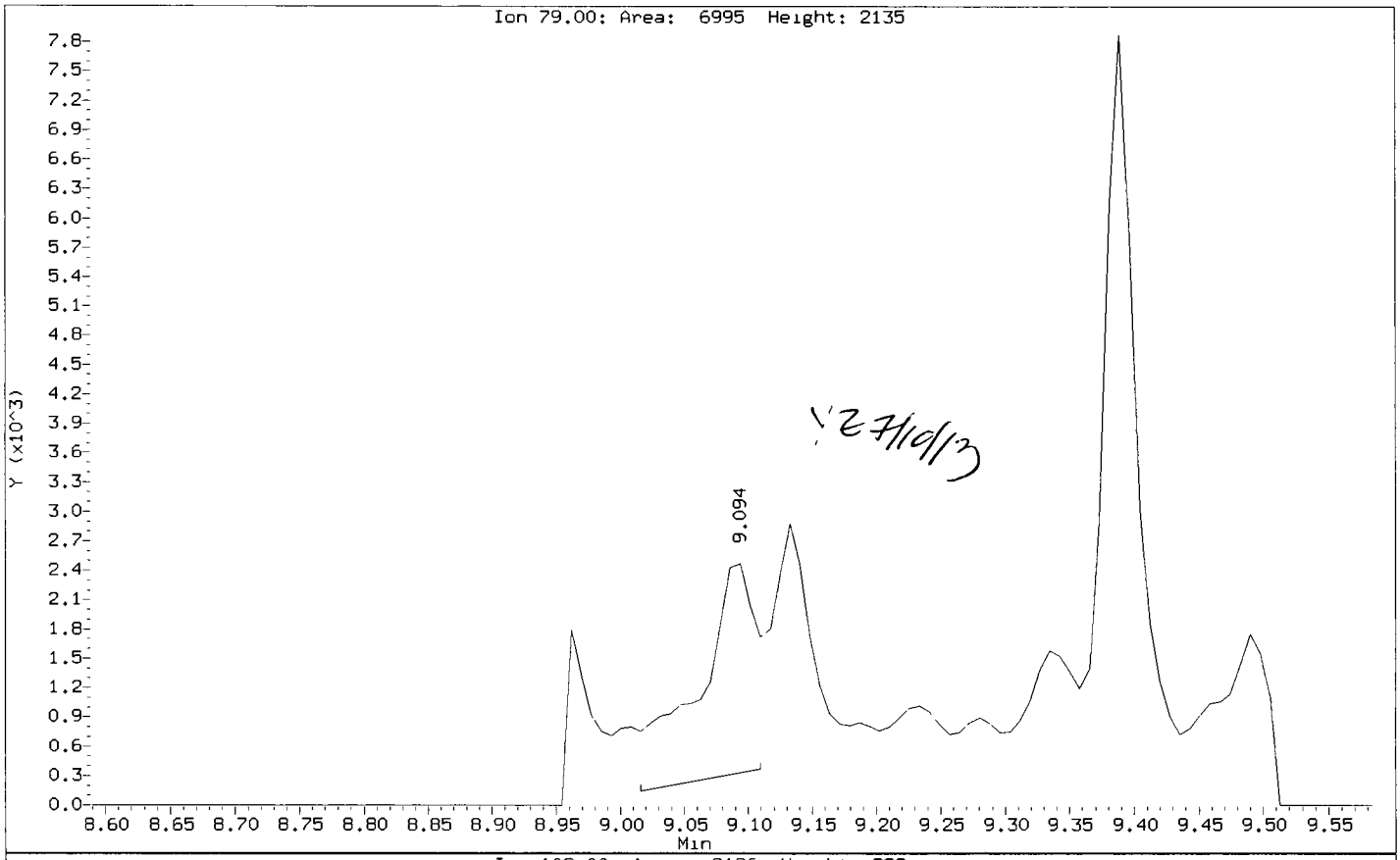


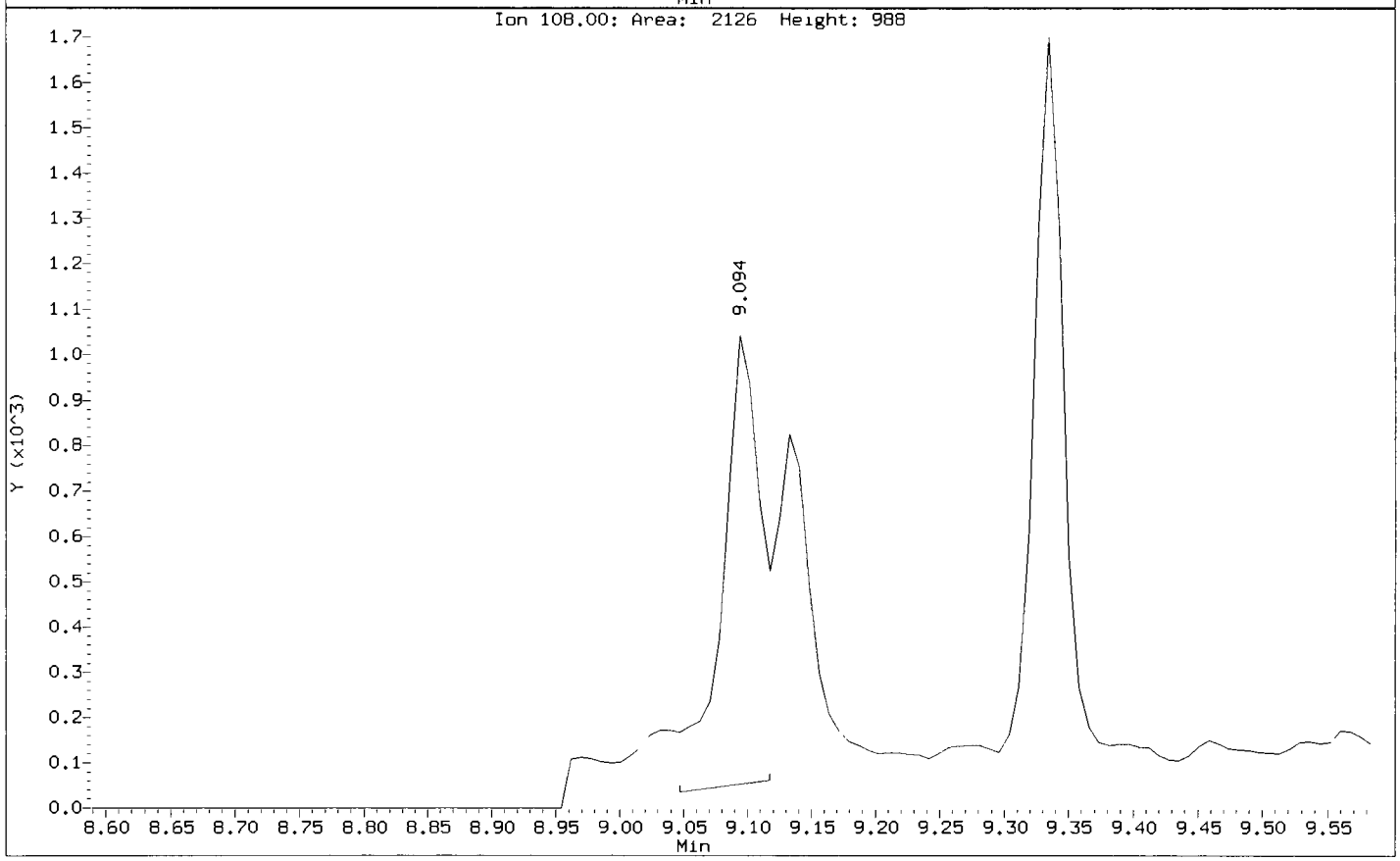




Data File: /chem1/nt10.i/20130705.b/SIM.b/wu70cb.d
Injection Date: 06-JUL-2013 00:10
Instrument: nt10.i
Client Sample ID: LF-TP-001-20130619-

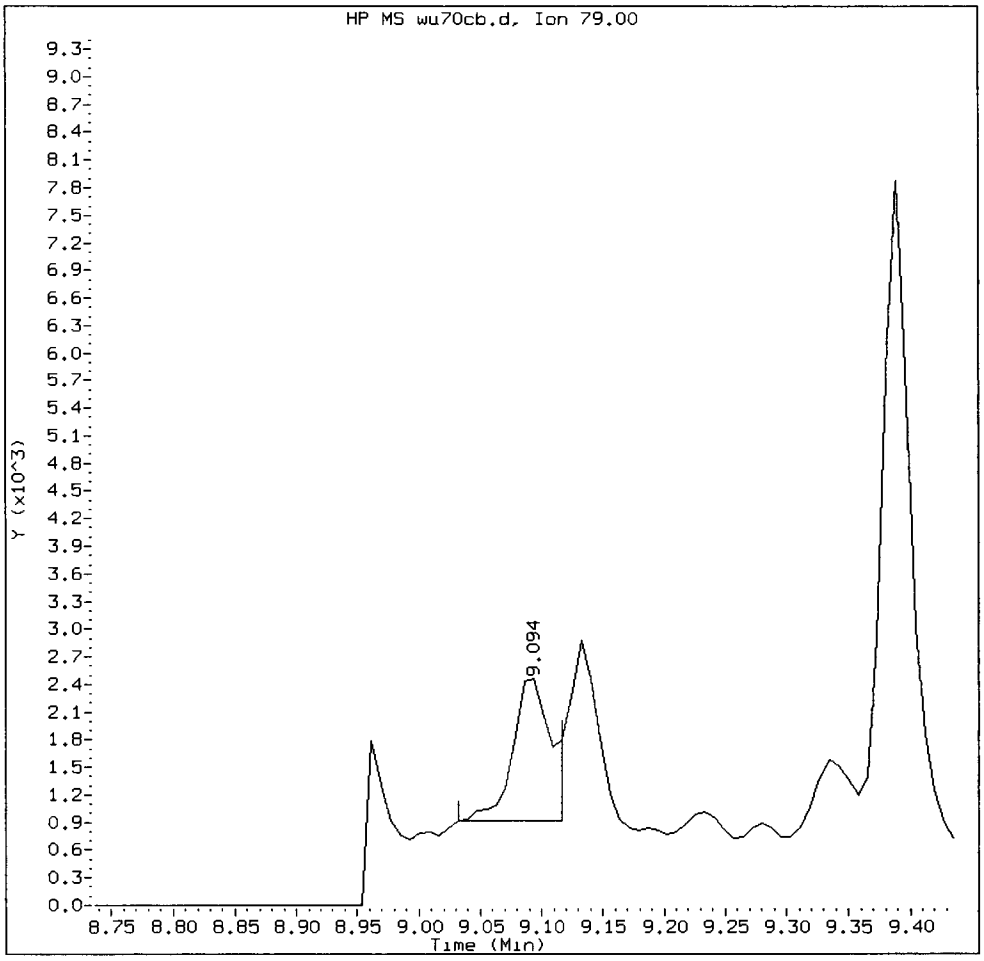
Compound: Benzyl alcohol
CAS Number: 100-51-6





WU70B, /chem1/nt10.i/20130705.b/SIM.b/wu70cb.d

Benzyl alcohol Amount: 0.14 Area: 3465



MANUAL INTEGRATION for Benzyl alcohol

1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

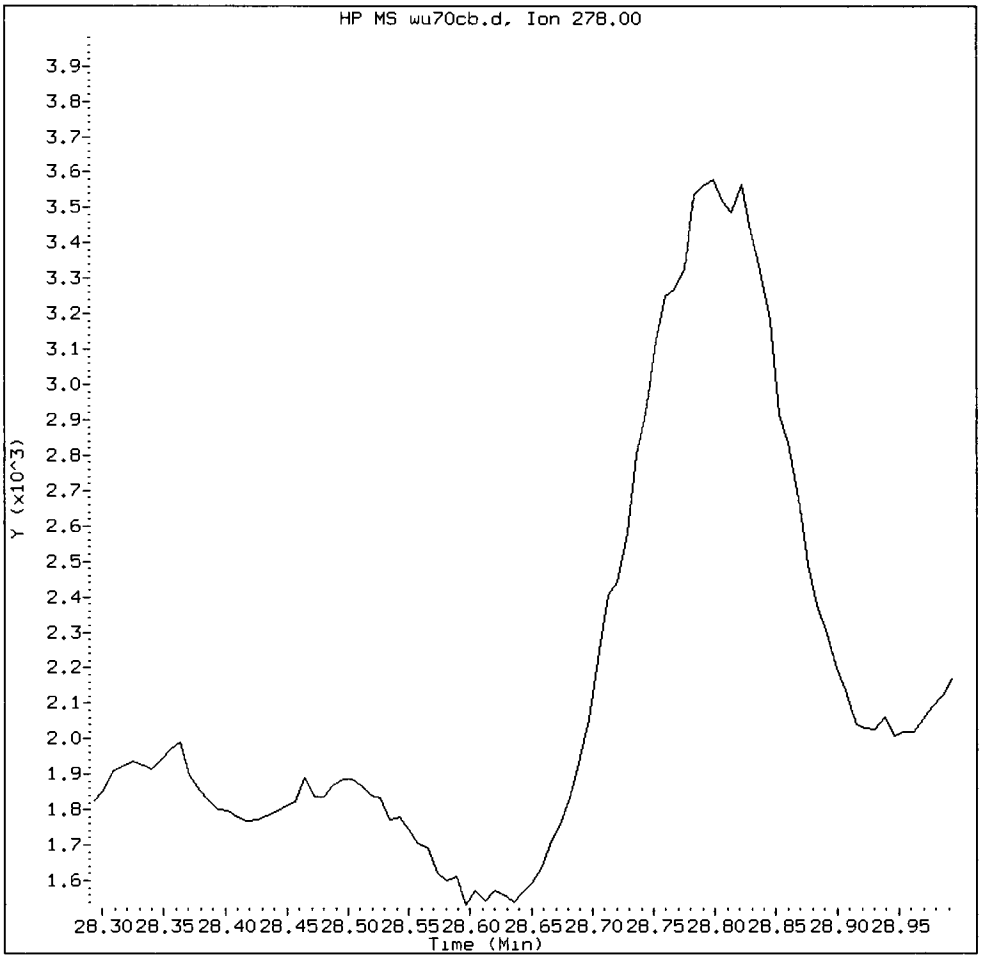
5. Other _____

Analyst: VZ Date: 7/11/13

WU70B:20042

WU70B, /chem1/nt10.i/20130705.b/SIM.b/wu70cb.d

Dibenzo(a,h)anthracene Amount: 0.28 Area: 22992



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: YZ Date: 7/10/13

CO-ELUTION SUMMARY FOR FILE - wu70cb.d

Lab ID: WU70B, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 06-JUL-2013

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

YZ 7/11/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130705.b/SIM.b/wu70c.d
Lab Smp Id: WU70C Client Smp ID: LF-LS-004-20130619-
Inj Date : 06-JUL-2013 00:47
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WU70C
Misc Info : 13-13123
Comment :
Method : /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Meth Date : 10-Jul-2013 13:58 yev Quant Type: ISTD
Cal Date : 05-JUL-2013 17:11 Cal File: ic0705i.d
Als bottle: 23
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

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

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	13.00000	Weight of sample extracted (g)
M	21.10000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
$	1 2-Fluorophenol	112	6.379	6.341	(0.722)	171997	4.59233	447.7
	3 Phenol	94	8.126	8.095	(0.920)	61108	1.19499	116.5
	~~7 1,3-Dichlorobenzene~~	~~146~~	~~8.861~~	~~8.714~~	~~(1.004)~~	~~1755~~	~~0.04318~~	4.209
*	8 1,4-Dichlorobenzene-d4	152	8.830	8.822	(1.000)	103329	4.00000	
	9 1,4-Dichlorobenzene	146	8.861	8.861	(1.004)	1534	0.03890	3.792(M)
	11 Benzyl alcohol	79	9.093	9.086	(1.030)	5375	0.20888	20.36(M)
	12 1,2-Dichlorobenzene	146	Compound Not Detected.					
	13 2-Methylphenol	108	9.334	9.319	(1.057)	9406	0.25331	24.70
	15 4-Methylphenol	108	9.652	9.629	(1.093)	17541	0.47552	46.36
	16 N-Nitroso-di-n-propylamine	70	Compound Not Detected.					
	22 2,4-Dimethylphenol	107	10.777	10.770	(0.938)	12185	0.31045	30.27
	26 1,2,4-Trichlorobenzene	180	Compound Not Detected.					
*	27 Naphthalene-d8	136	11.486	11.487	(1.000)	380912	4.00000	
	30 Hexachlorobutadiene	225	Compound Not Detected.					

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
	39 Dimethylphthalate	163	14.876	14.837	(0.966)	3384	0.05765	5.621(M)
*	42 Acenaphthene-d10	162	15.402	15.394	(1.000)	188841	4.00000	
	50 Diethylphthalate	149	Compound Not Detected.					
	54 N-Nitrosodiphenylamine	169	Compound Not Detected.					
	57 Hexachlorobenzene	284	Compound Not Detected.					
	58 Pentachlorophenol	266	Compound Not Detected.					
*	59 Phenanthrene-d10	188	18.755	18.740	(1.000)	321554	4.00000	
$	66 Terphenyl-d14	244	22.012	21.990	(0.922)	173661	4.54282	442.9
	67 Butylbenzylphthalate	149	22.949	22.926	(0.961)	14073	0.38929	37.95
*	69 Chrysene-d12	240	23.886	23.848	(1.000)	330293	4.00000	
*	77 Perylene-d12	264	26.379	26.279	(1.000)	369913	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.868	28.643	(1.094)	65178	0.79862	77.86(M)
	90 N-Nitrosodimethylamine	74	Compound Not Detected.					

QC Flag Legend

M - Compound response manually integrated.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wu70c.d
Lab Smp Id: WU70C
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Misc Info: 13-13123

Calibration Date: 05-JUL-2013
Calibration Time: 18:37
Client Smp ID: LF-LS-004-201306
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	115828	57914	231656	103329	-10.79
27 Naphthalene-d8	412333	206166	824666	380912	-7.62
42 Acenaphthene-d10	225152	112576	450304	188841	-16.13
59 Phenanthrene-d10	415301	207650	830602	321554	-22.57
69 Chrysene-d12	449306	224653	898612	330293	-26.49
77 Perylene-d12	474708	237354	949416	369913	-22.08

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.82	8.32	9.32	8.83	0.08
27 Naphthalene-d8	11.49	10.99	11.99	11.49	0.00
42 Acenaphthene-d10	15.39	14.89	15.89	15.40	0.05
59 Phenanthrene-d10	18.74	18.24	19.24	18.76	0.08
69 Chrysene-d12	23.85	23.35	24.35	23.89	0.16
77 Perylene-d12	26.28	25.78	26.78	26.38	0.38

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

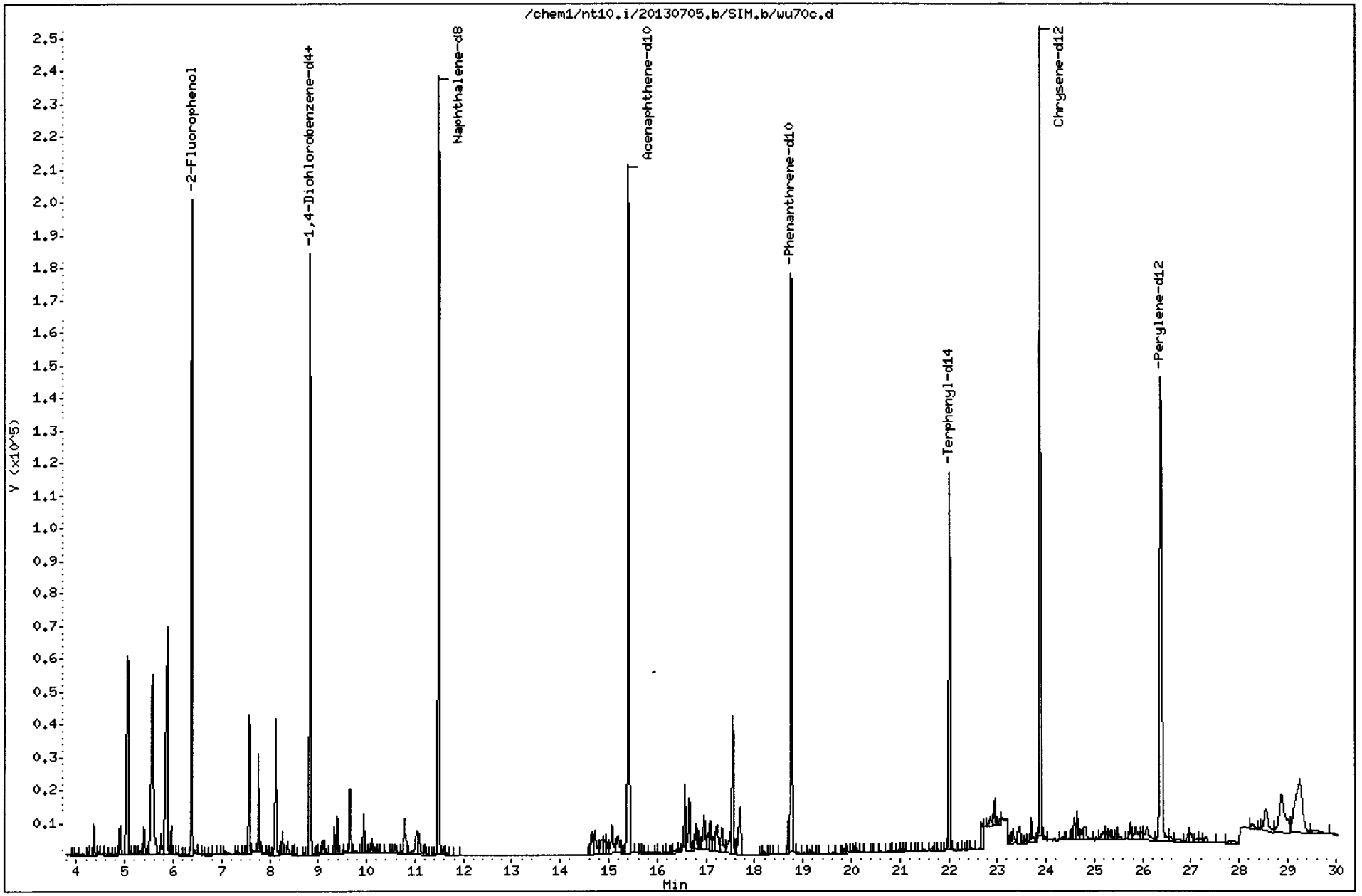
Client Name: SAIC
Sample Matrix: SOLID
Lab Smp Id: WU70C
Level: LOW
Data Type: MS DATA
SpikeList File: PSDDALCS.spk
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Misc Info: 13-13123

Client SDG: WU70
Fraction: SV
Client Smp ID: LF-LS-004-20130619-
Operator: VTS/YZ
SampleType: SAMPLE
Quant Type: ISTD

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	731.2	447.7	61.23	30-160
$ 66 Terphenyl-d14	487.5	442.9	90.86	30-160

Data File: /chem1/nt10.i/20130705.b/SIM.b/wu70c.d
Date : 06-JUL-2013 00:47
Client ID: LF-LS-004-20130619-
Sample Info: WU70C
Volume Injected (uL): 1.0
Column phase: ZB-5msi

Instrument: nt10.i
Operator: VTS/YZ
Column diameter: 0.25



Data File: /chem1/nt10.i/20130705.b/SIM.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

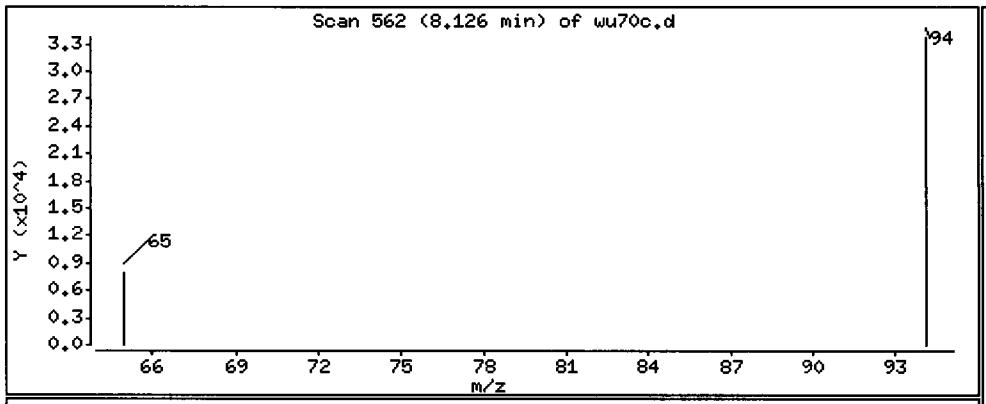
Operator: VTS/YZ

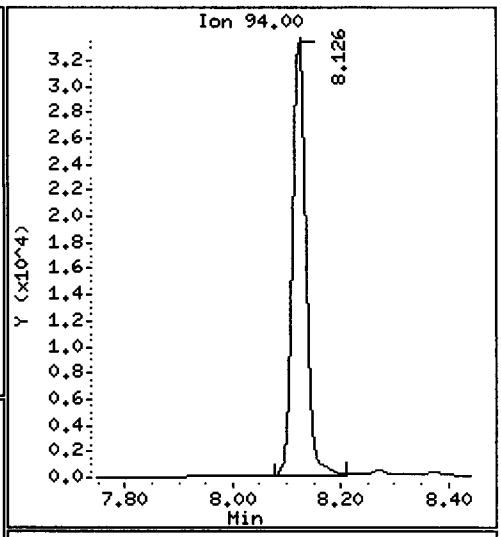
Column phase: ZB-5msi

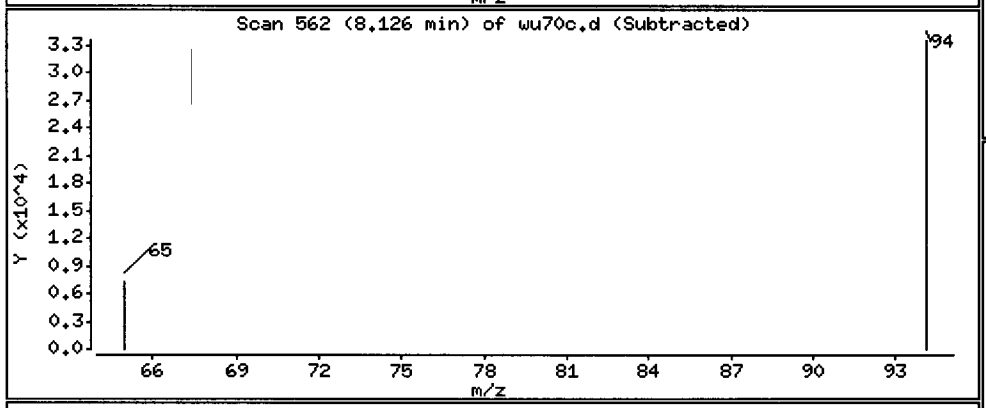
Column diameter: 0.25

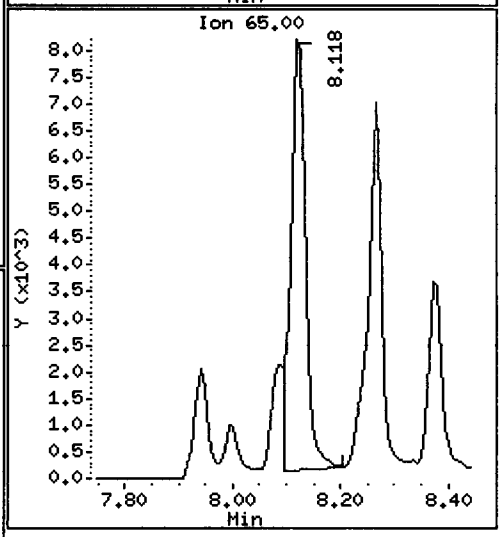
3 Phenol

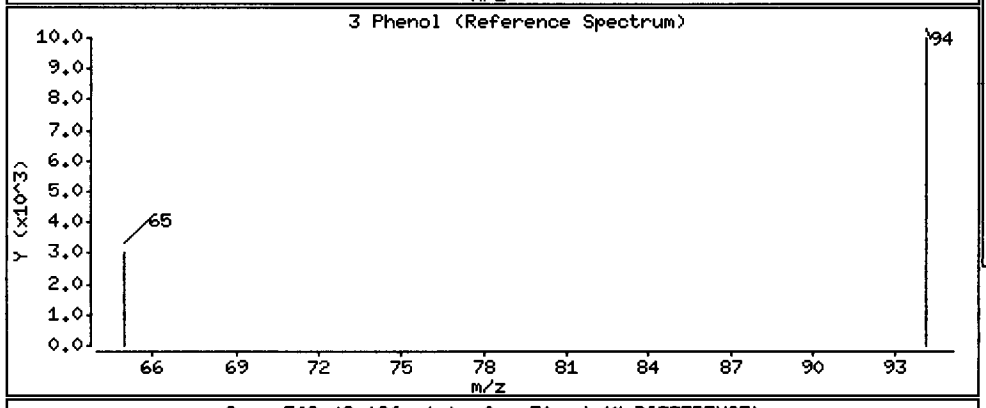
Concentration: 116.5 ug/kg

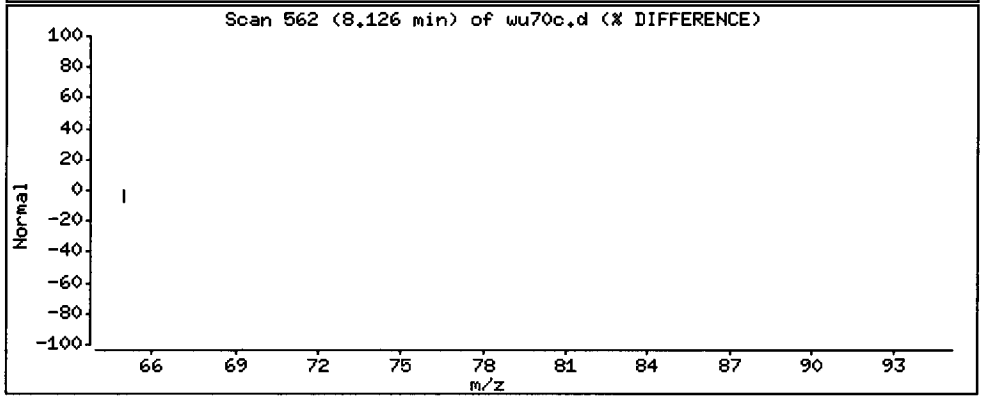












Data File: /chem1/nt10.i/20130705.b/SIM.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

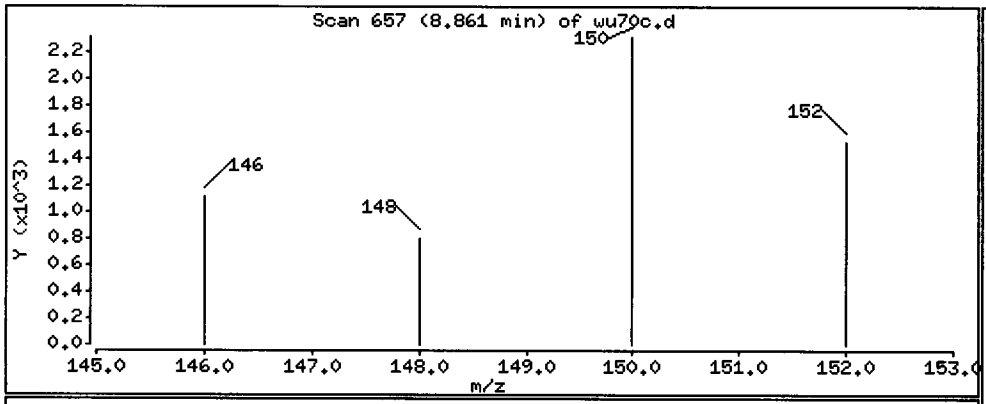
Operator: VTS/YZ

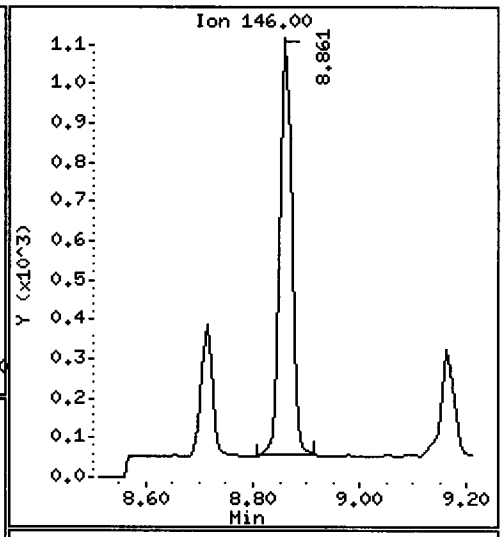
Column phase: ZB-5msi

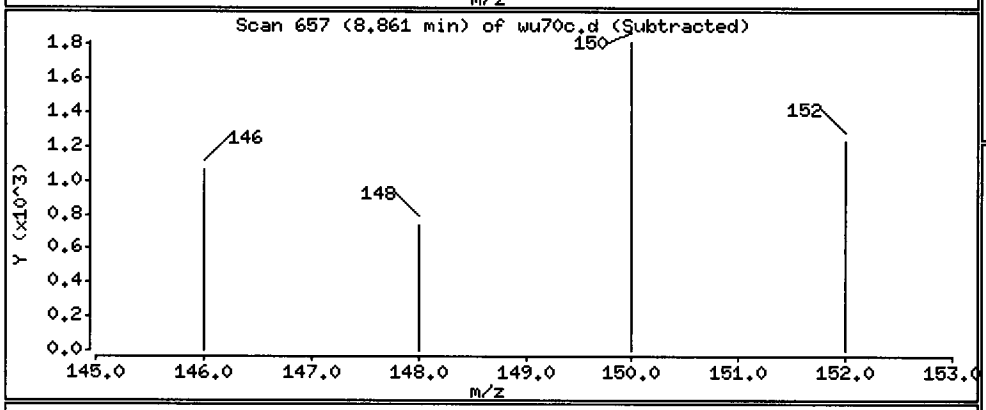
Column diameter: 0.25

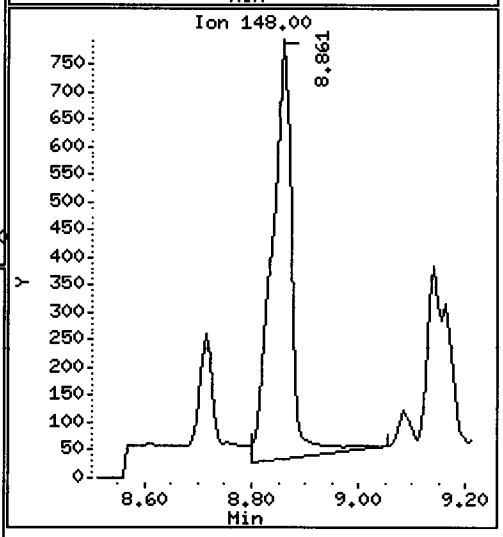
9 1,4-Dichlorobenzene

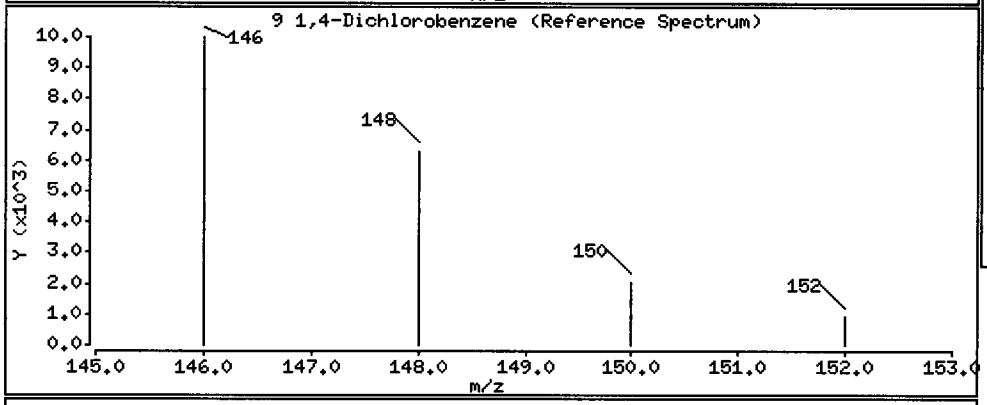
Concentration: 3.792 ug/kg

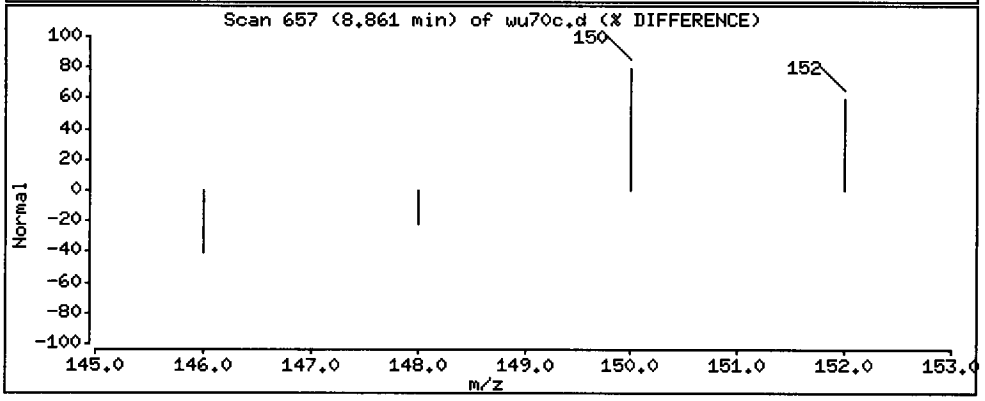












Data File: /chem1/nt10.i/20130705.b/SIM.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

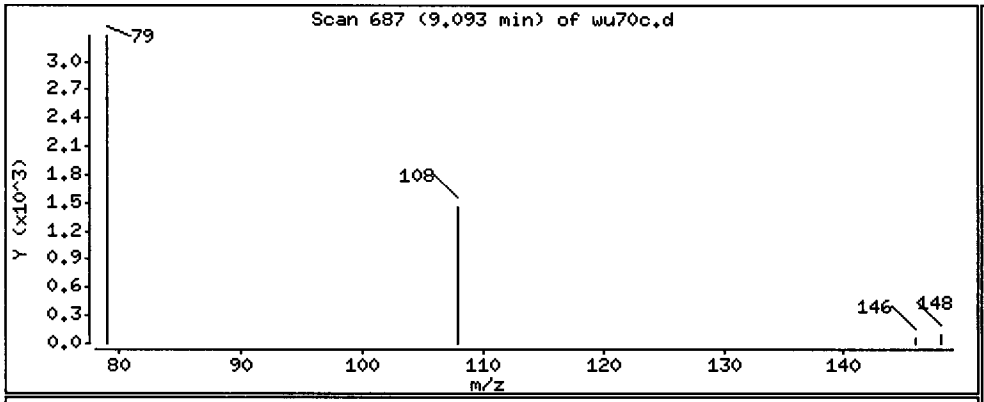
Operator: VTS/YZ

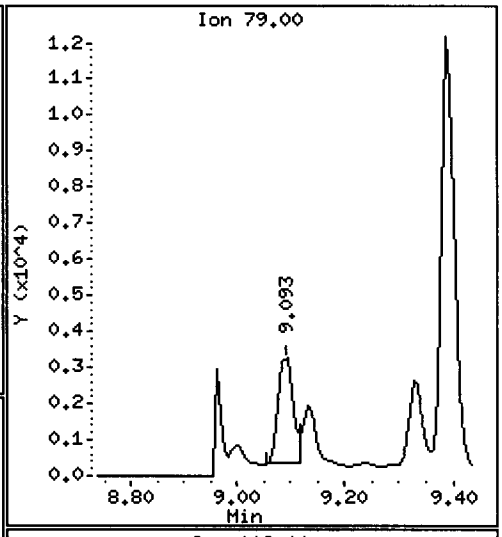
Column phase: ZB-5msi

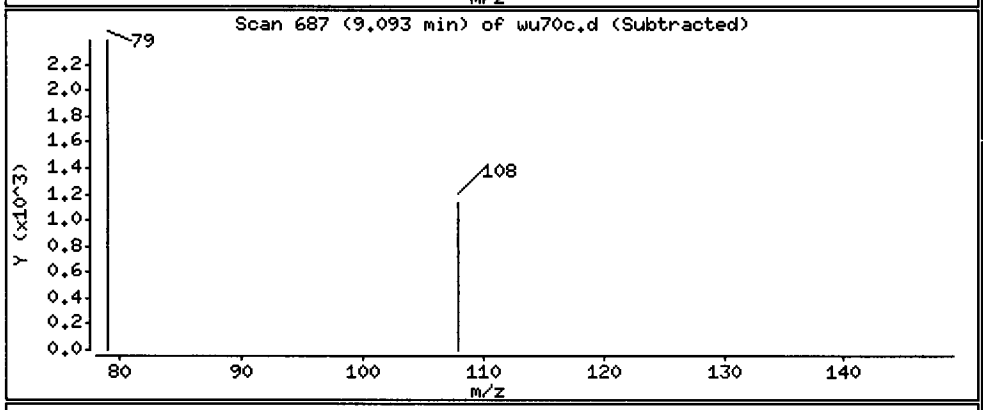
Column diameter: 0.25

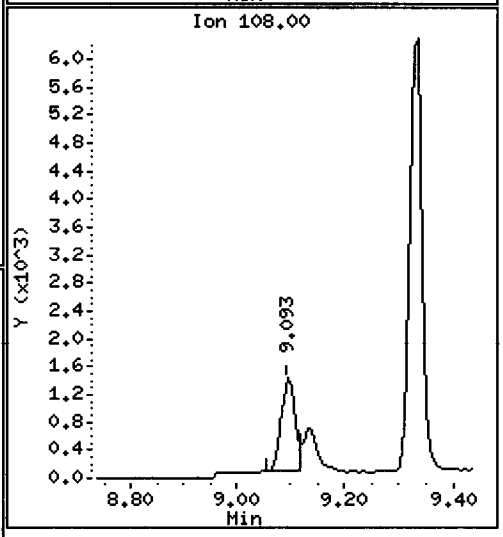
11 Benzyl alcohol

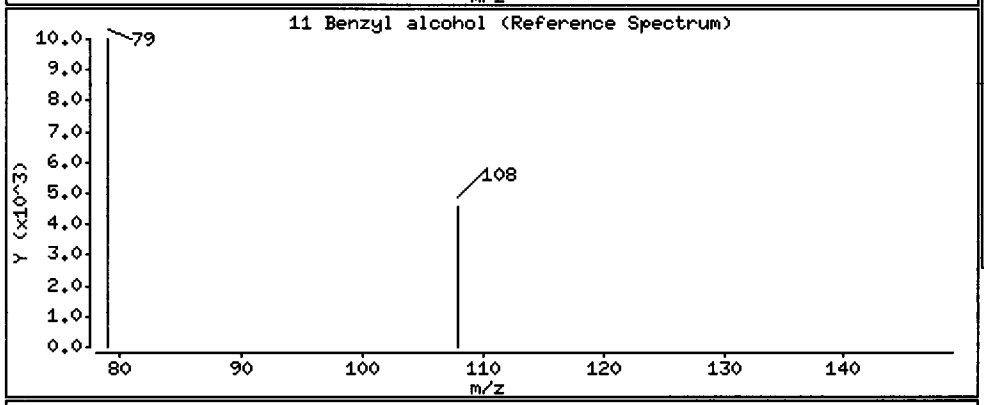
Concentration: 20.36 ug/kg

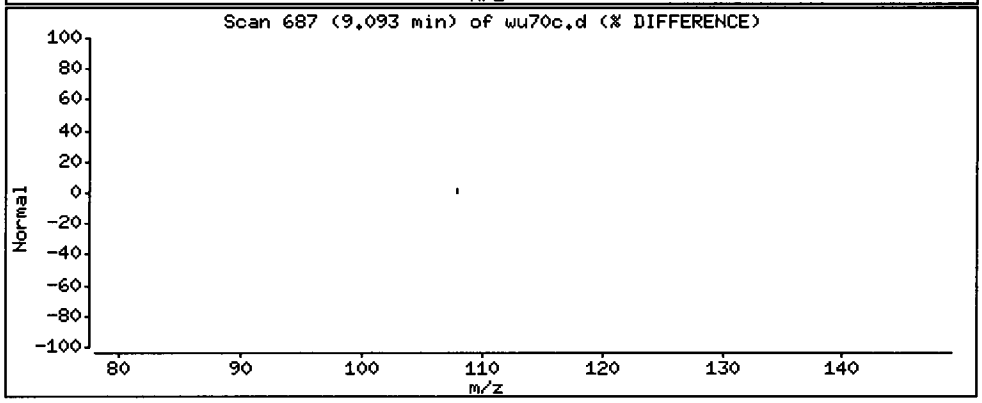












Data File: /chem1/nt10.i/20130705.b/SIM.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

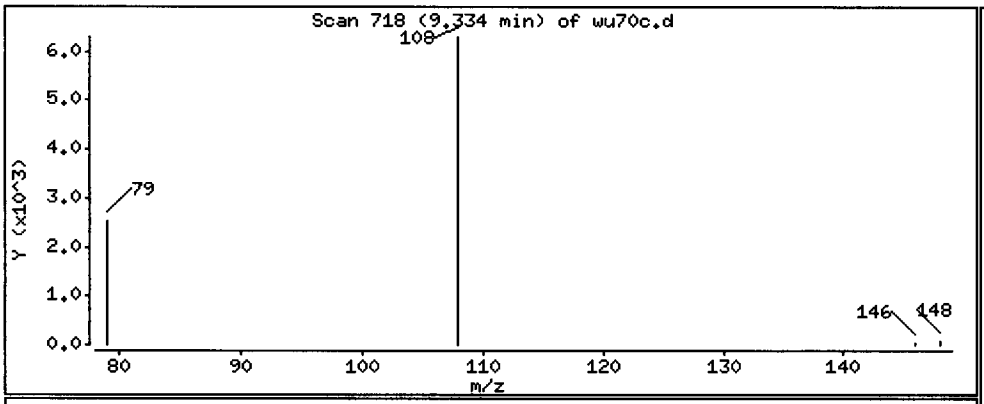
Operator: VTS/YZ

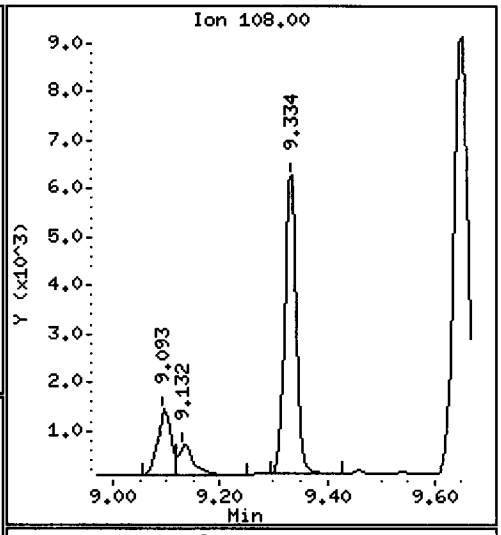
Column phase: ZB-5msi

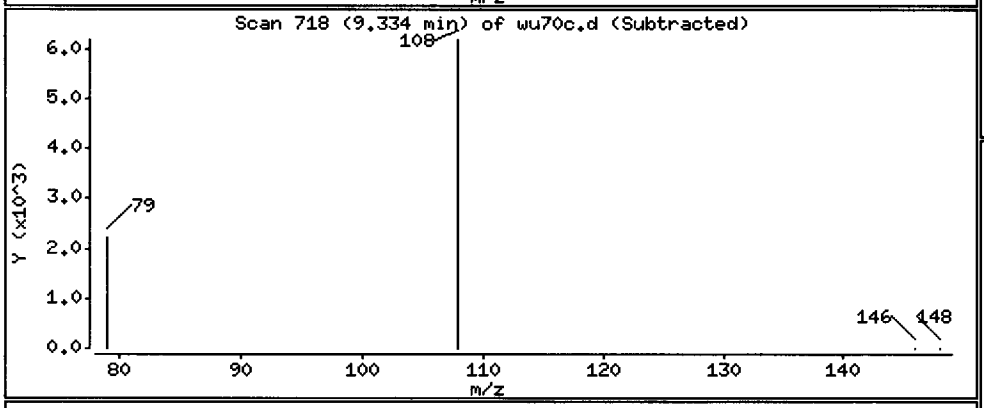
Column diameter: 0.25

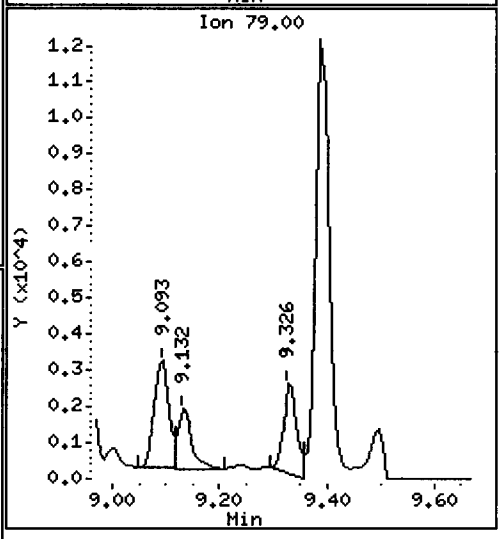
13 2-Methylphenol

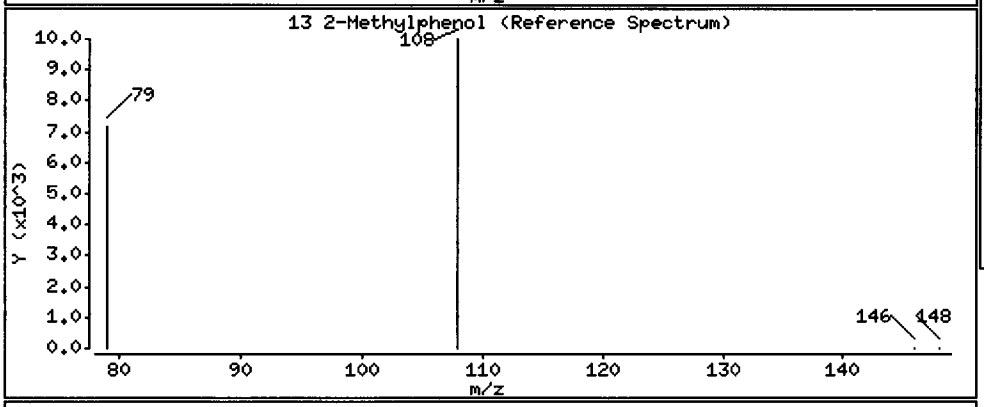
Concentration: 24.70 ug/kg

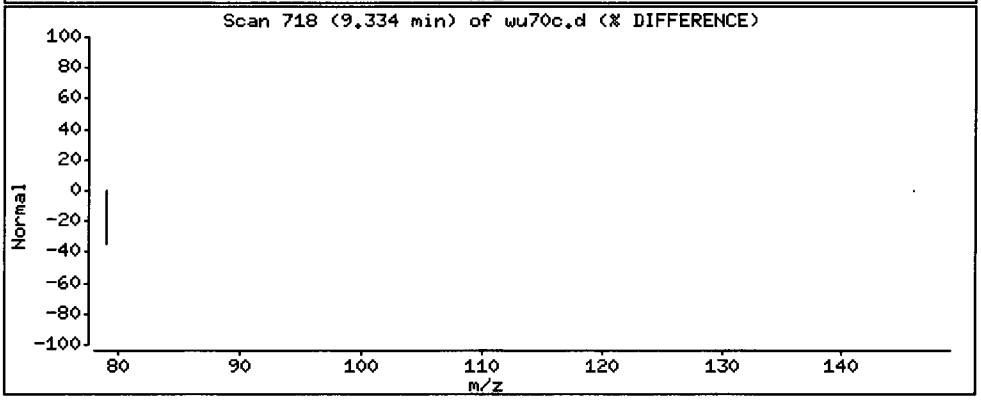












Data File: /chem1/nt10.i/20130705.b/SIM.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

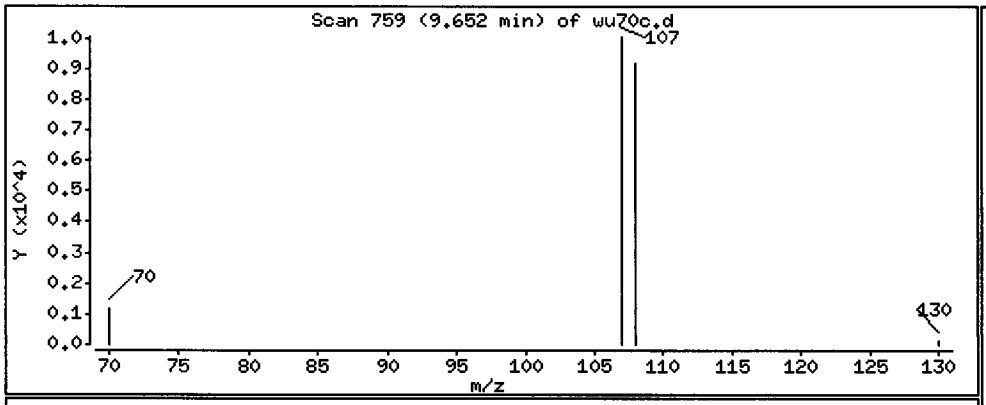
Operator: VTS/YZ

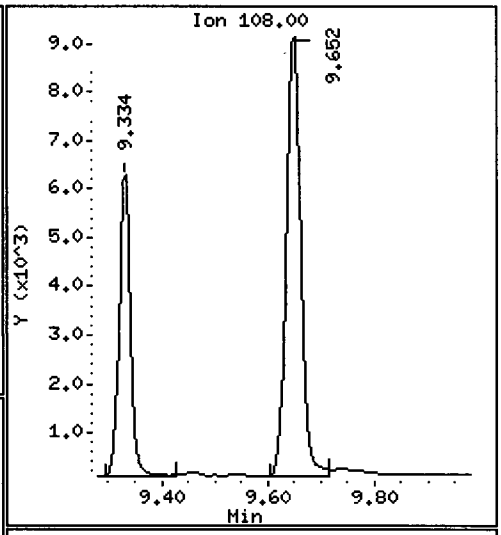
Column phase: ZB-5msi

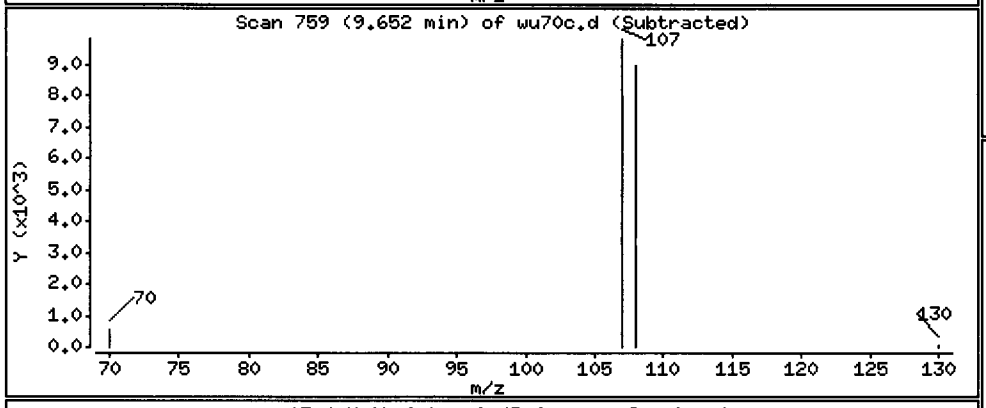
Column diameter: 0.25

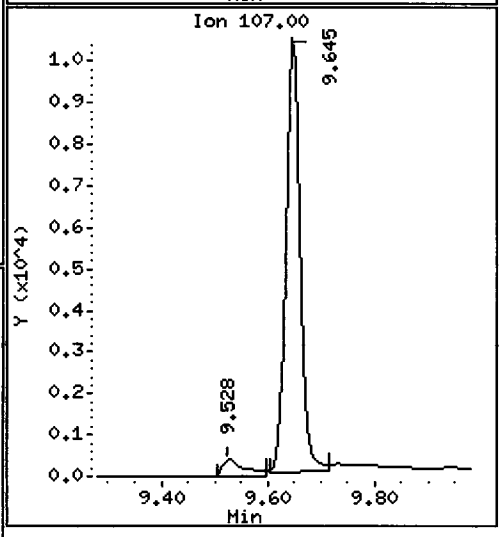
15 4-Methylphenol

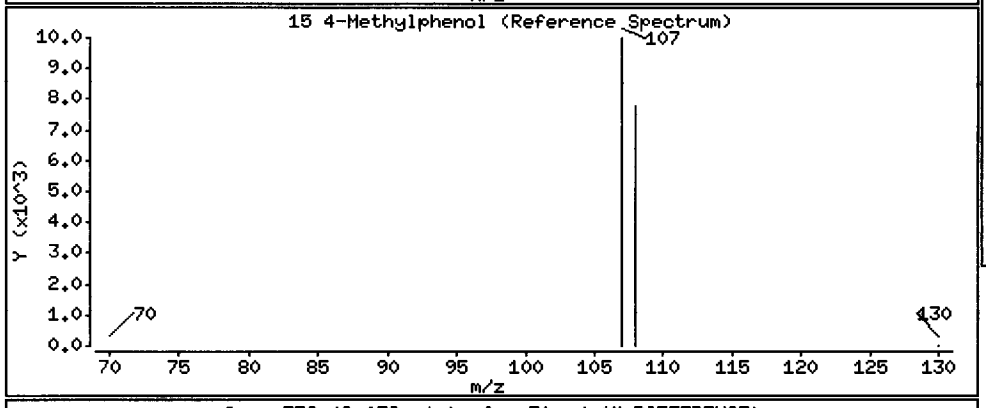
Concentration: 46.36 ug/kg

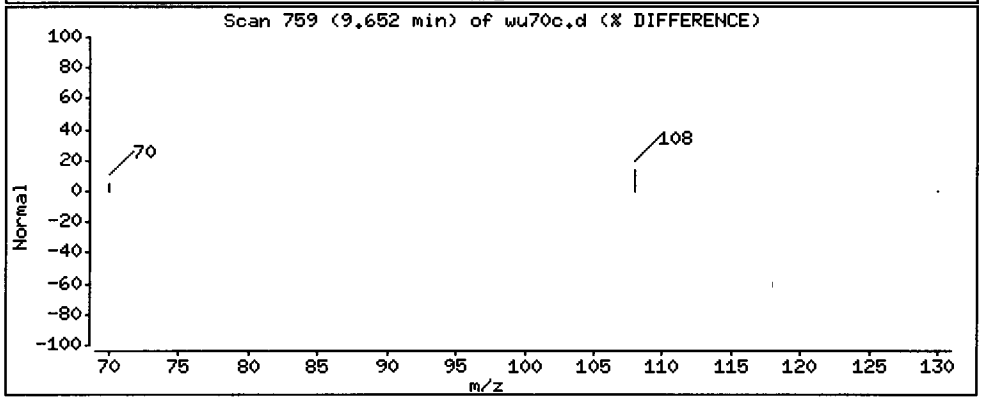












Data File: /chem1/nt10.i/20130705.b/SIM.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

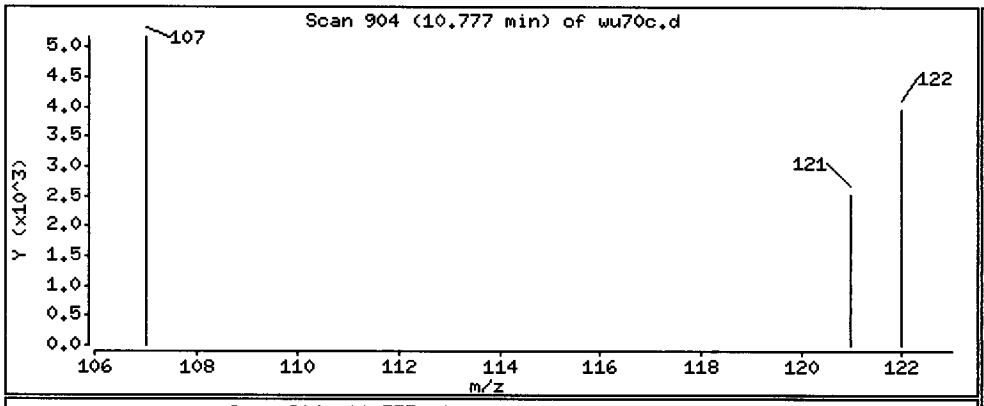
Operator: VTS/YZ

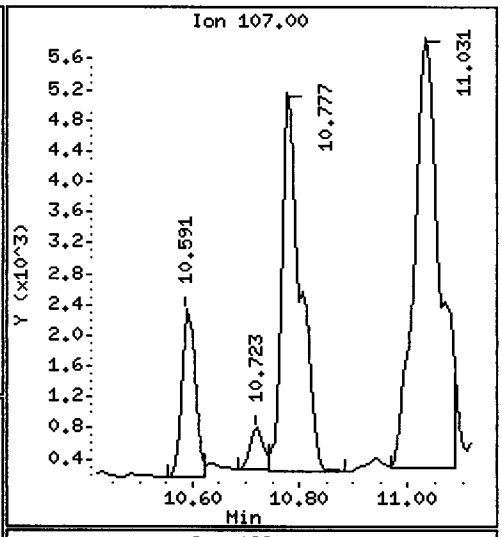
Column phase: ZB-5msi

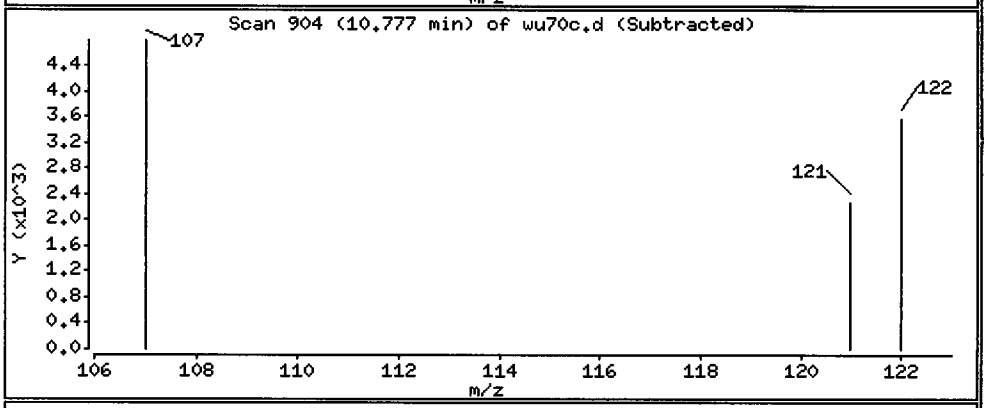
Column diameter: 0.25

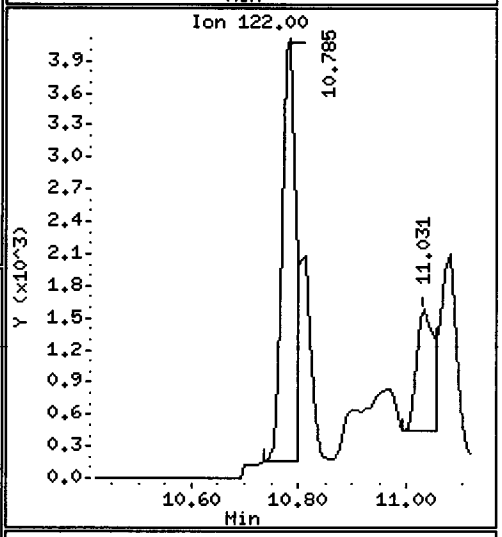
22 2,4-Dimethylphenol

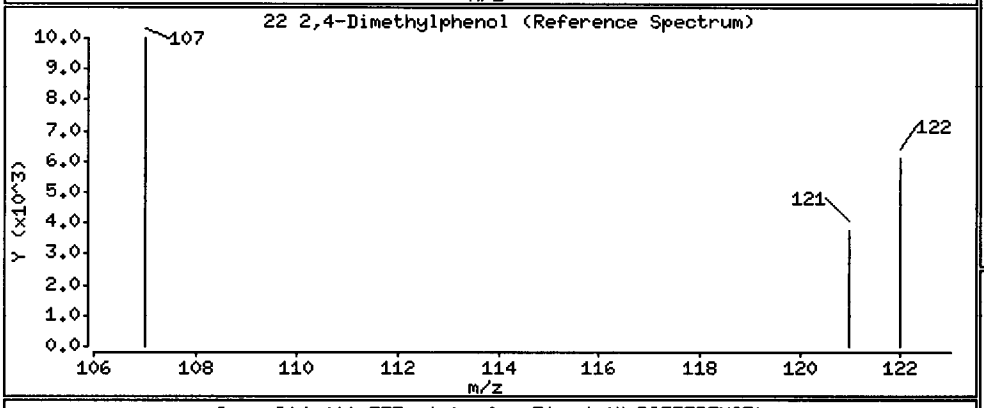
Concentration: 30.27 ug/kg

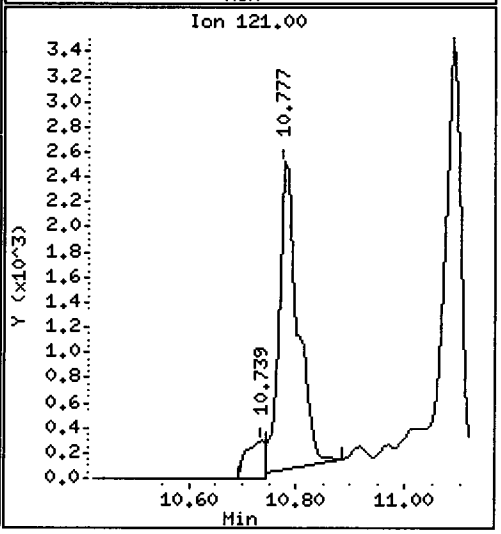


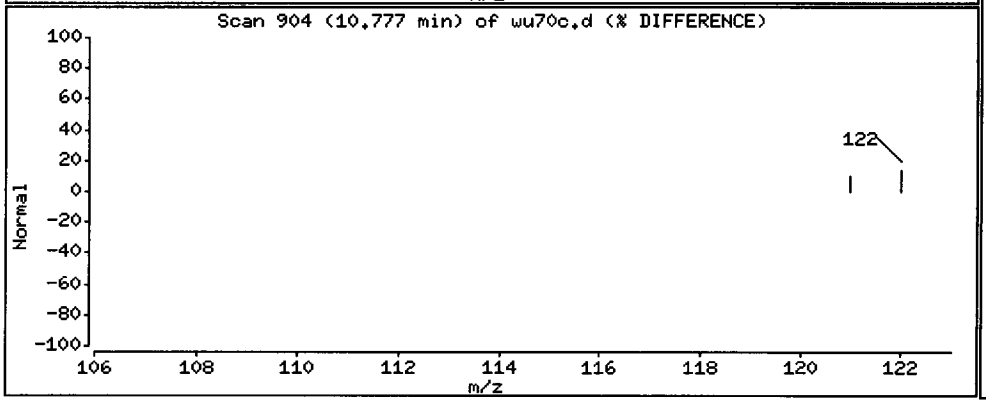












Data File: /chem1/nt10.i/20130705.b/SIM.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

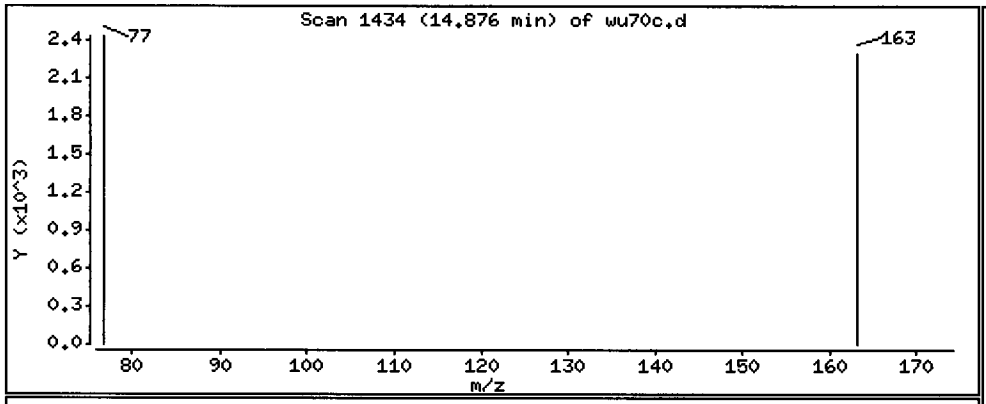
Operator: VTS/YZ

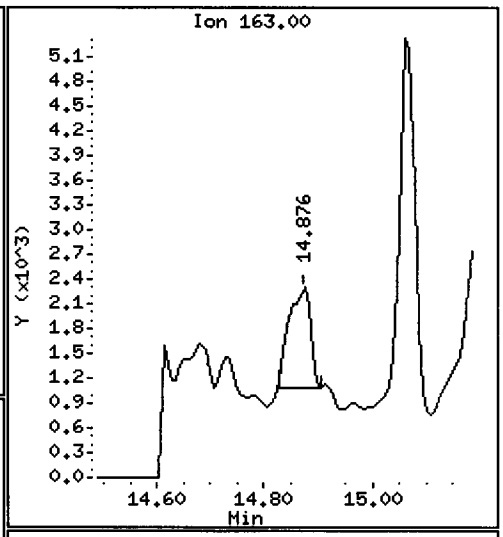
Column phase: ZB-5msi

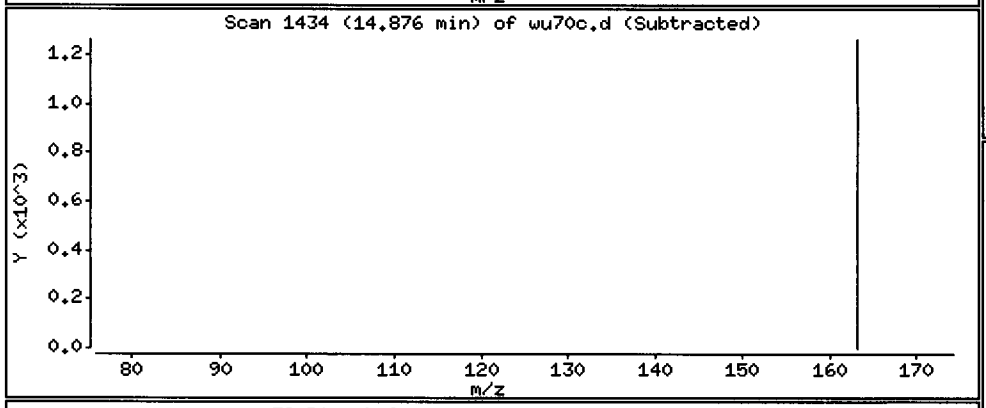
Column diameter: 0.25

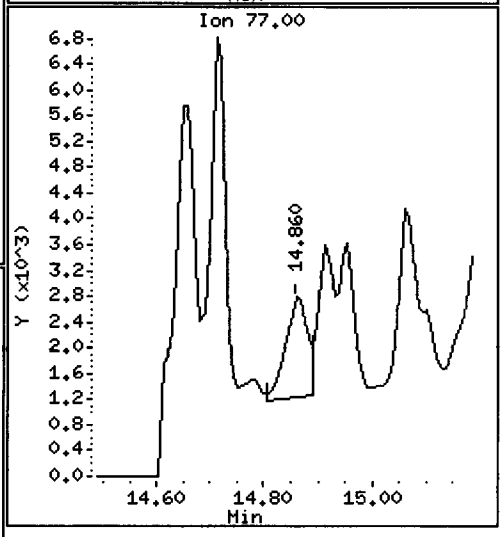
39 Dimethylphthalate

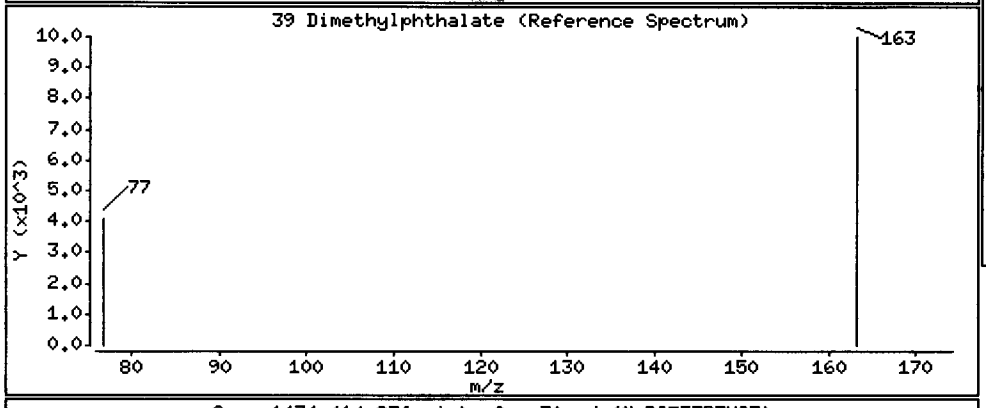
Concentration: 5.621 ug/kg

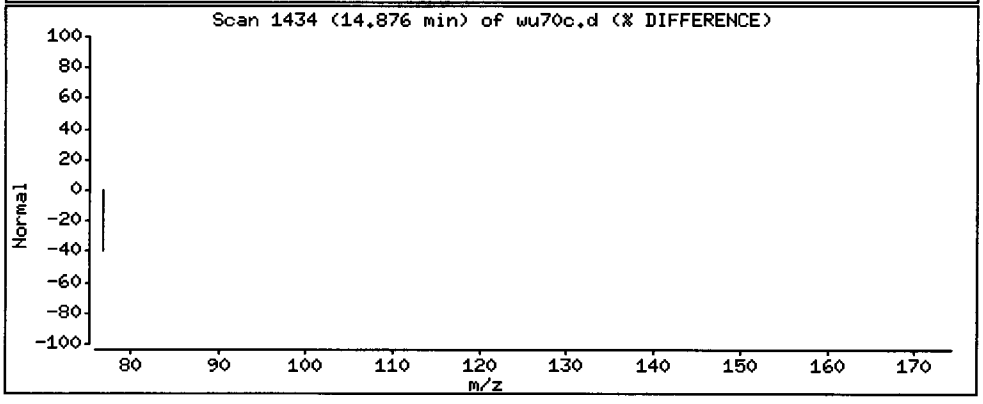












Data File: /chem1/nt10.i/20130705.b/SIM.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

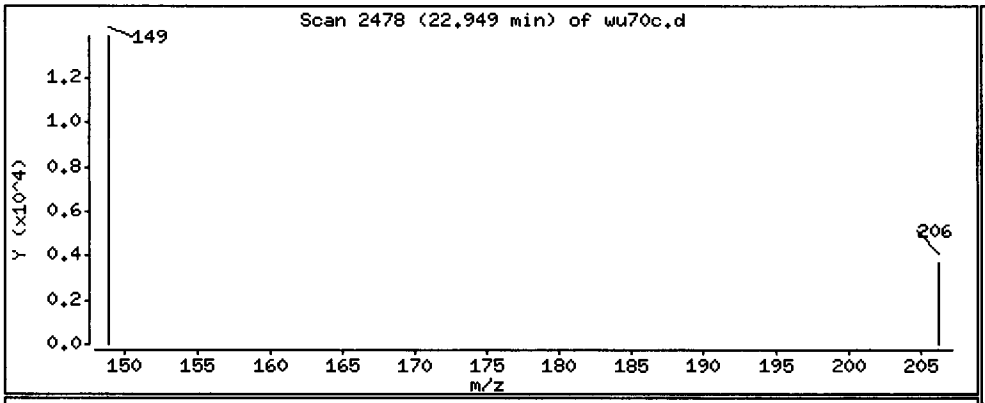
Operator: VTS/YZ

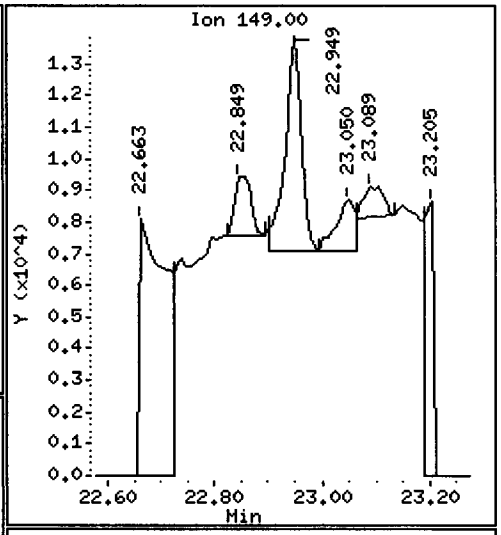
Column phase: ZB-5msi

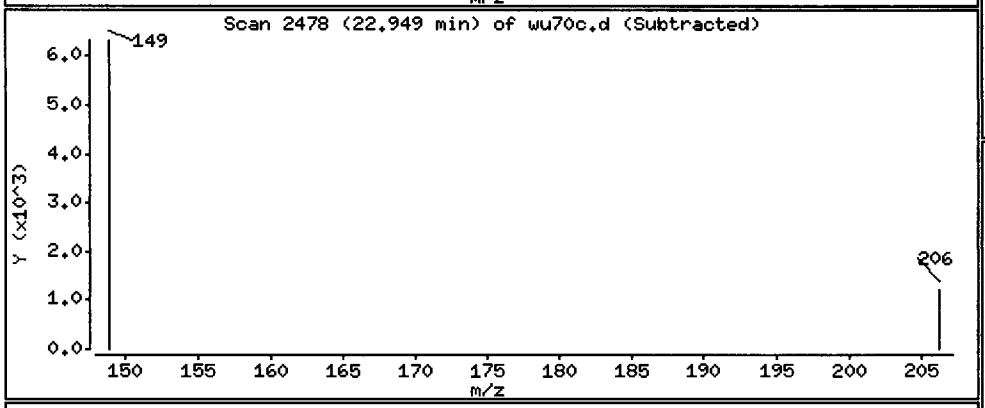
Column diameter: 0.25

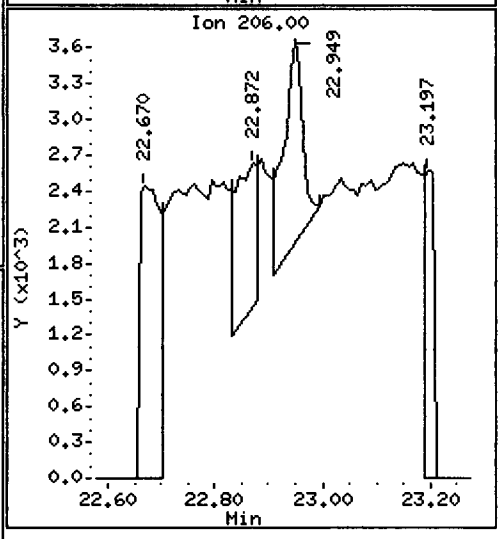
67 Butylbenzylphthalate

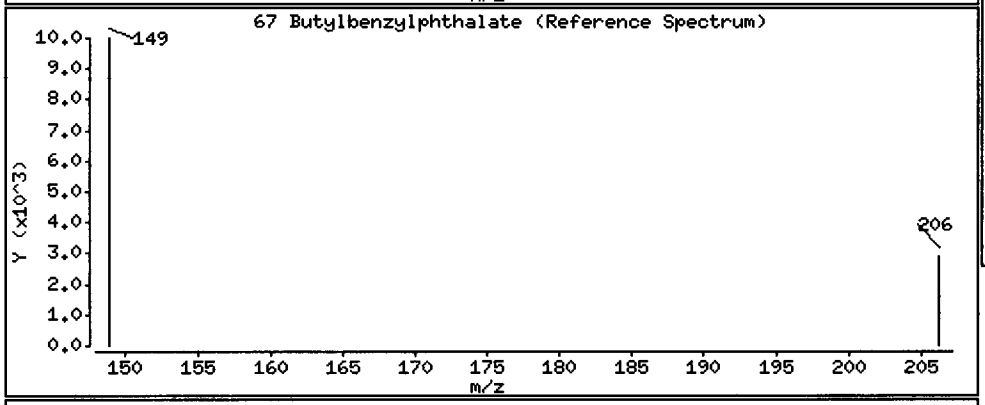
Concentration: 37.95 ug/kg

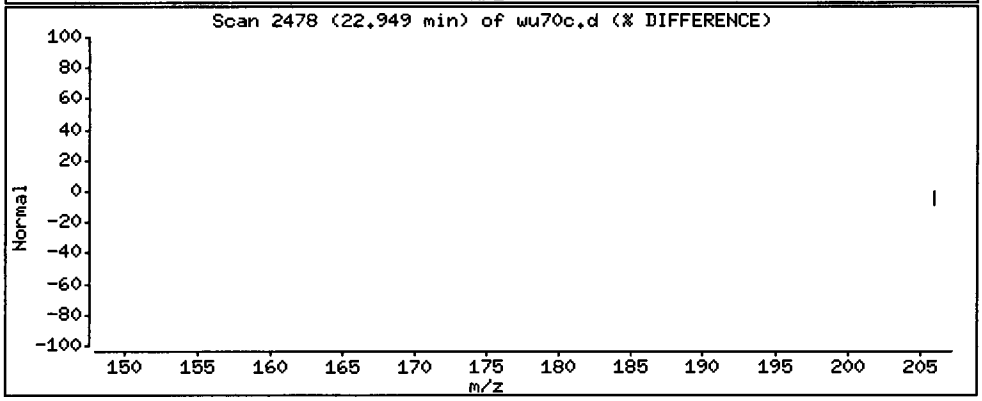












Data File: /chem1/nt10.i/20130705.b/SIM.b/wu70c.d

Date : 06-JUL-2013 00:47

Client ID: LF-LS-004-20130619-

Instrument: nt10.i

Sample Info: WU70C

Volume Injected (uL): 1.0

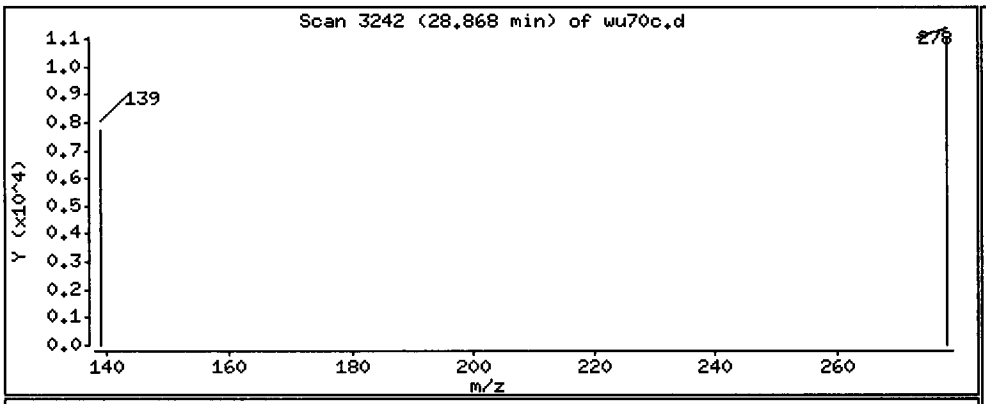
Operator: VTS/YZ

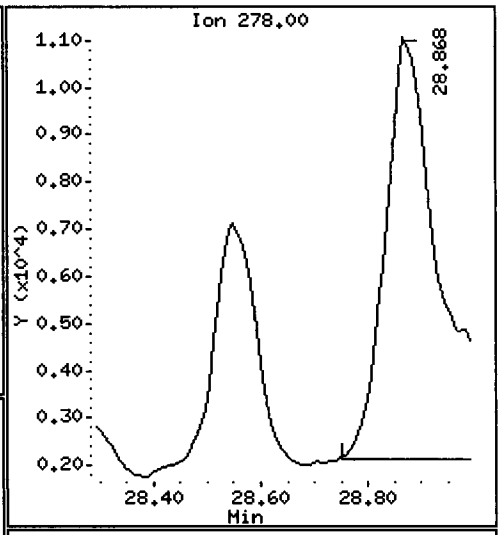
Column phase: ZB-5msi

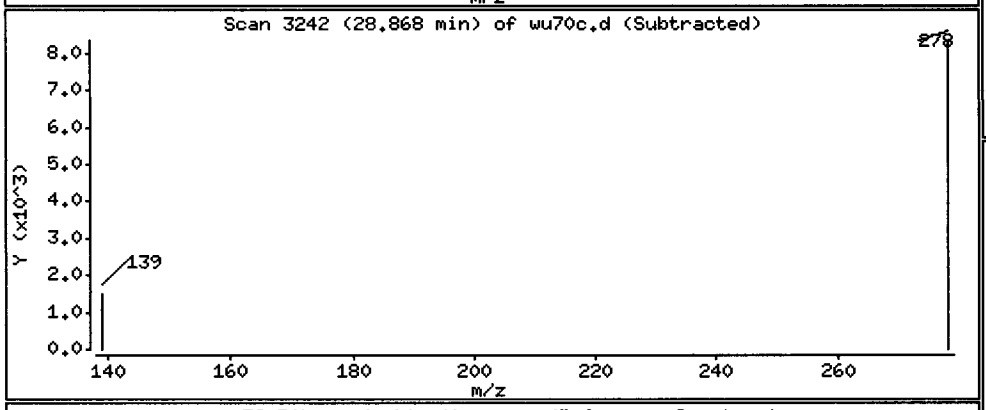
Column diameter: 0.25

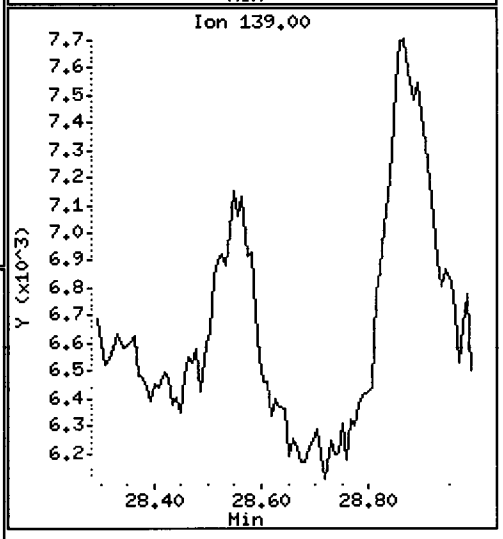
79 Dibenzo(a,h)anthracene

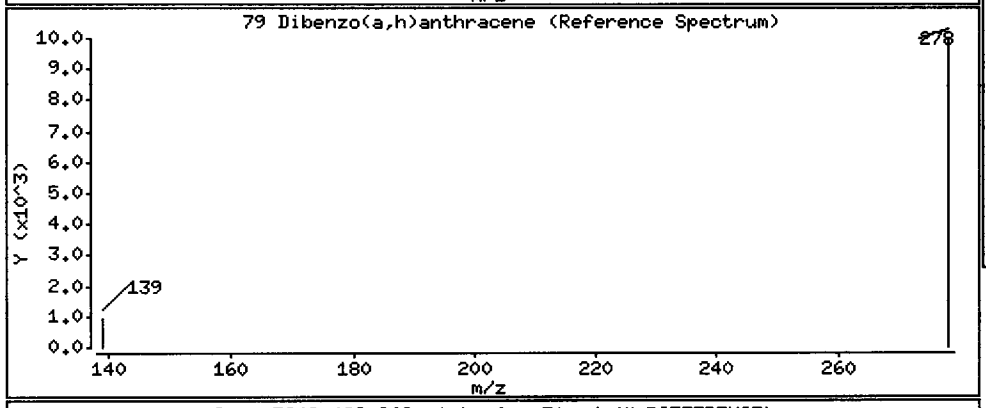
Concentration: 77.86 ug/kg

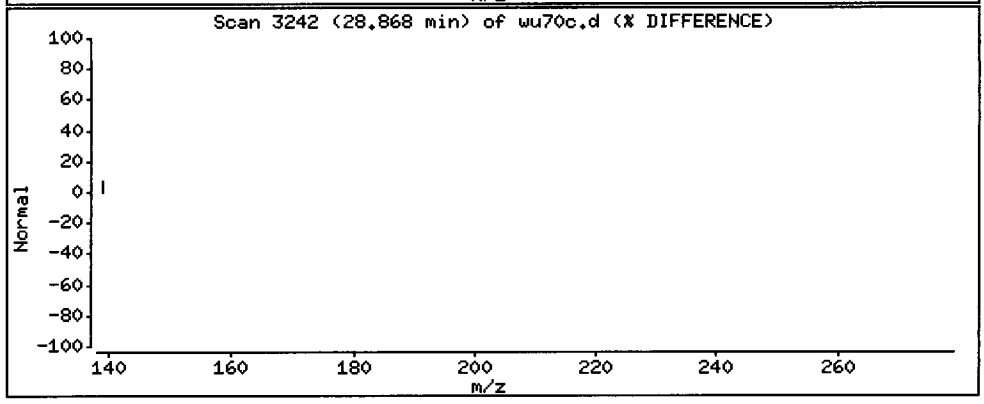






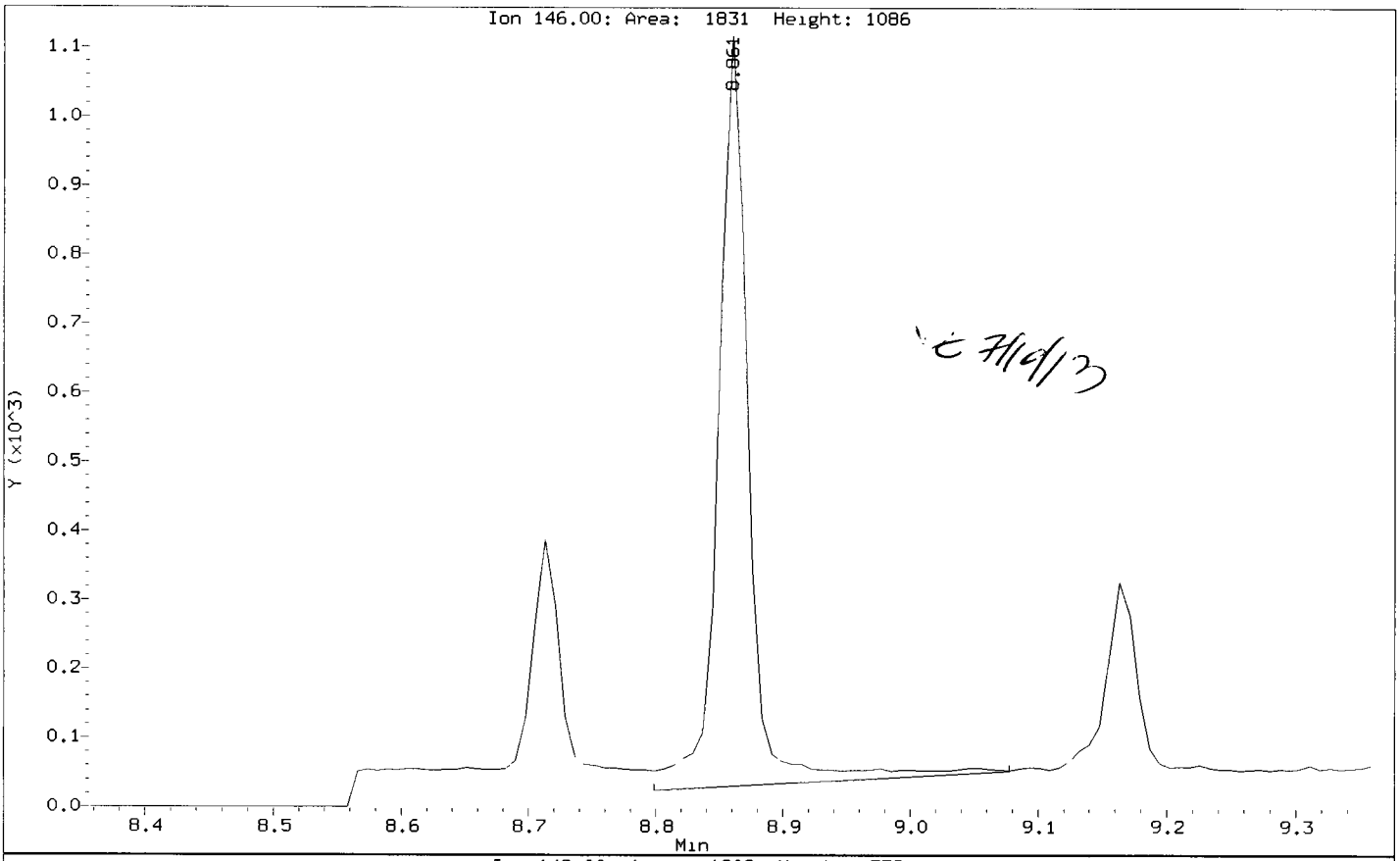


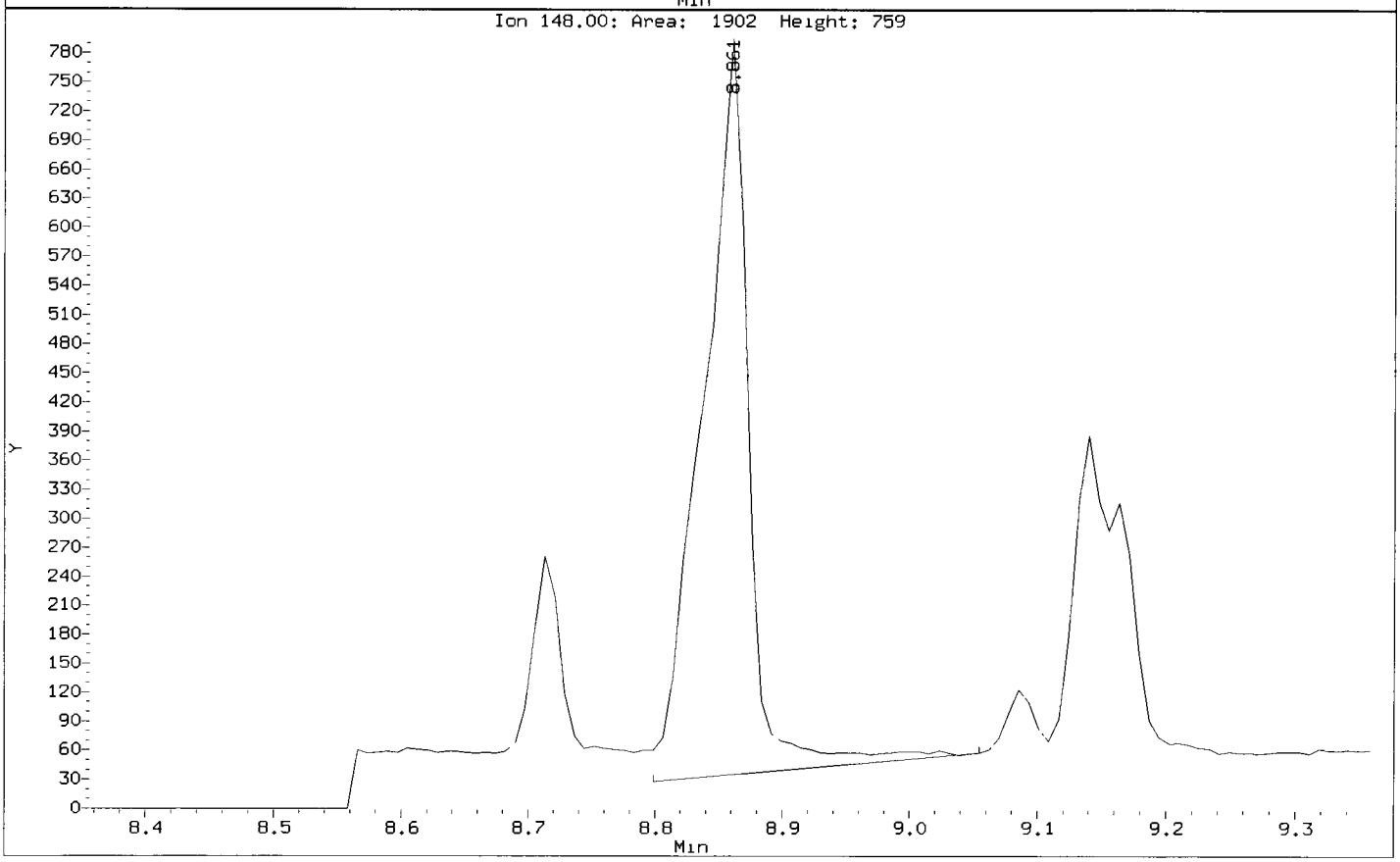




Data File: /chem1/nt10.1/20130705.b/SIM.b/wu70c.d
Injection Date: 06-JUL-2013 00:47
Instrument: nt10.1
Client Sample ID: LF-LS-004-20130619-

Compound: 1,4-Dichlorobenzene
CAS Number: 106-46-7

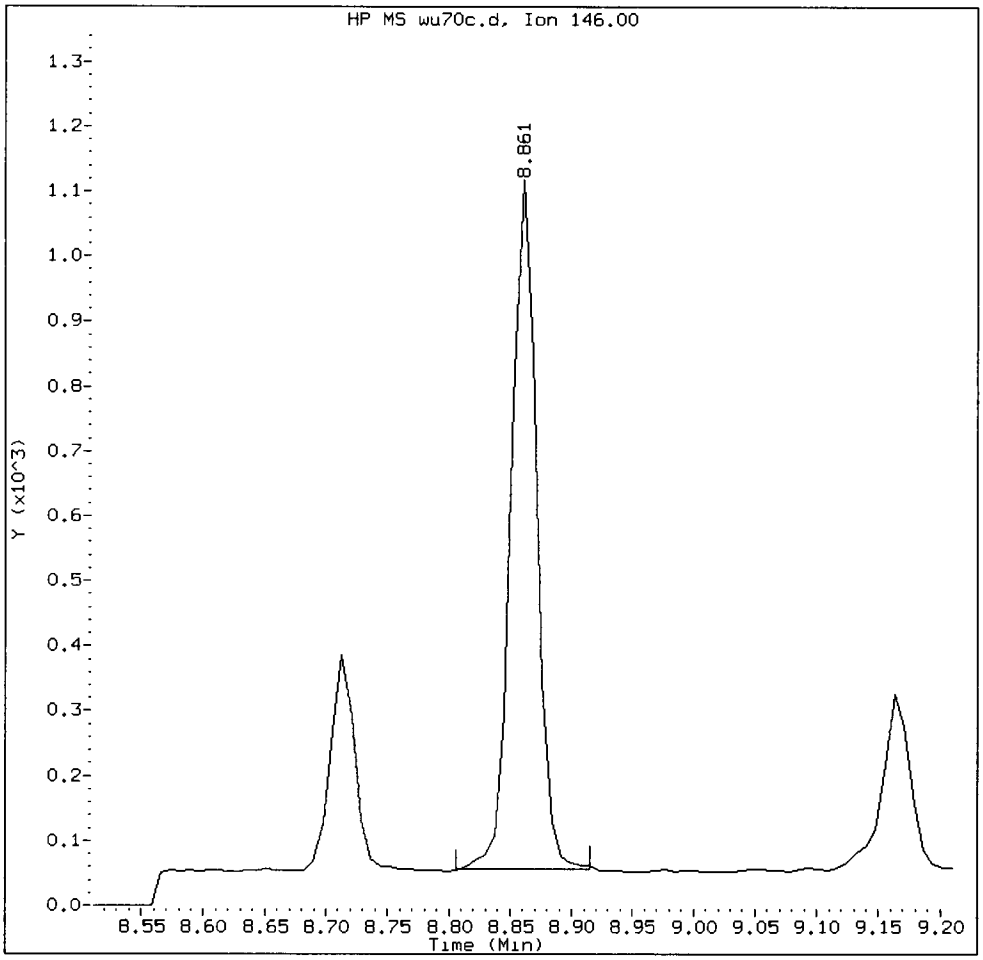




WU70 : 06606

WU70C, /chem1/nt10.i/20130705.b/SIM.b/wu70c.d

1,4-Dichlorobenzene Amount: 0.04 Area: 1534



MANUAL INTEGRATION for 1,4-Dichlorobenzene

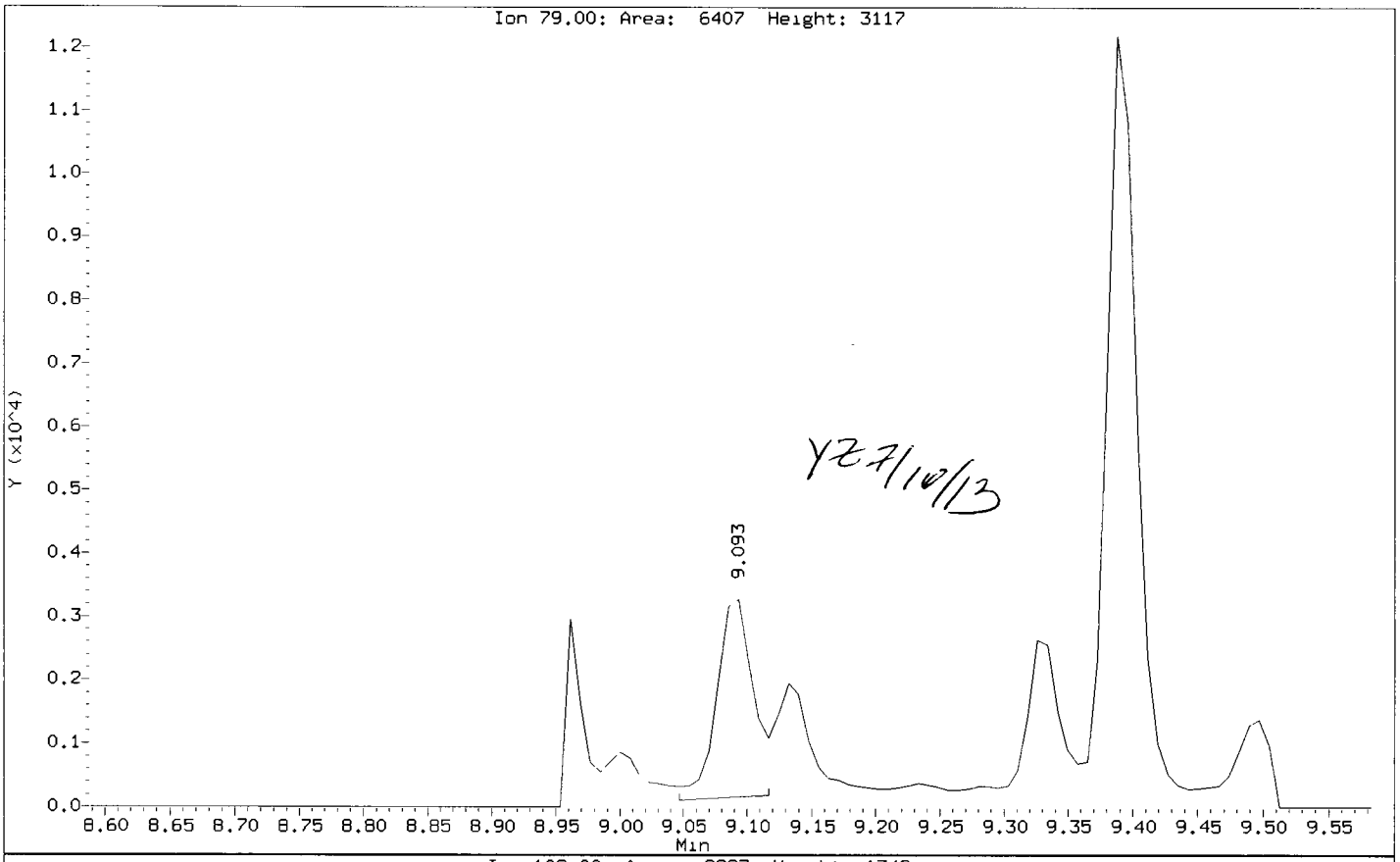
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

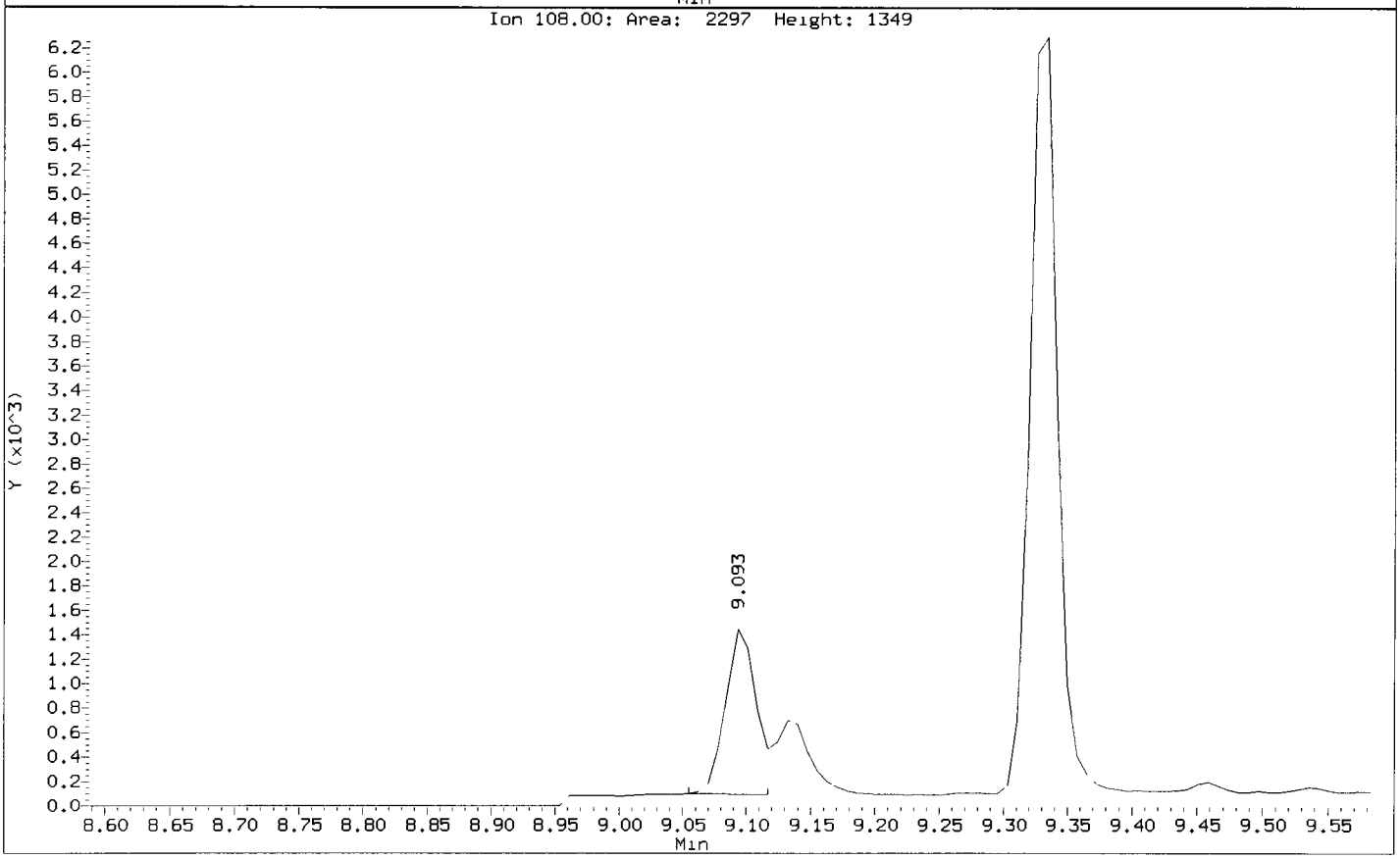
Analyst: VE Date: 7/10/13

Data File: /chem1/nt10.1/20130705.b/SIM.b/wu70c.d
Injection Date: 06-JUL-2013 00:47
Instrument: nt10.1
Client Sample ID: LF-LS-004-20130619-

Compound: Benzyl alcohol
CAS Number: 100-51-6

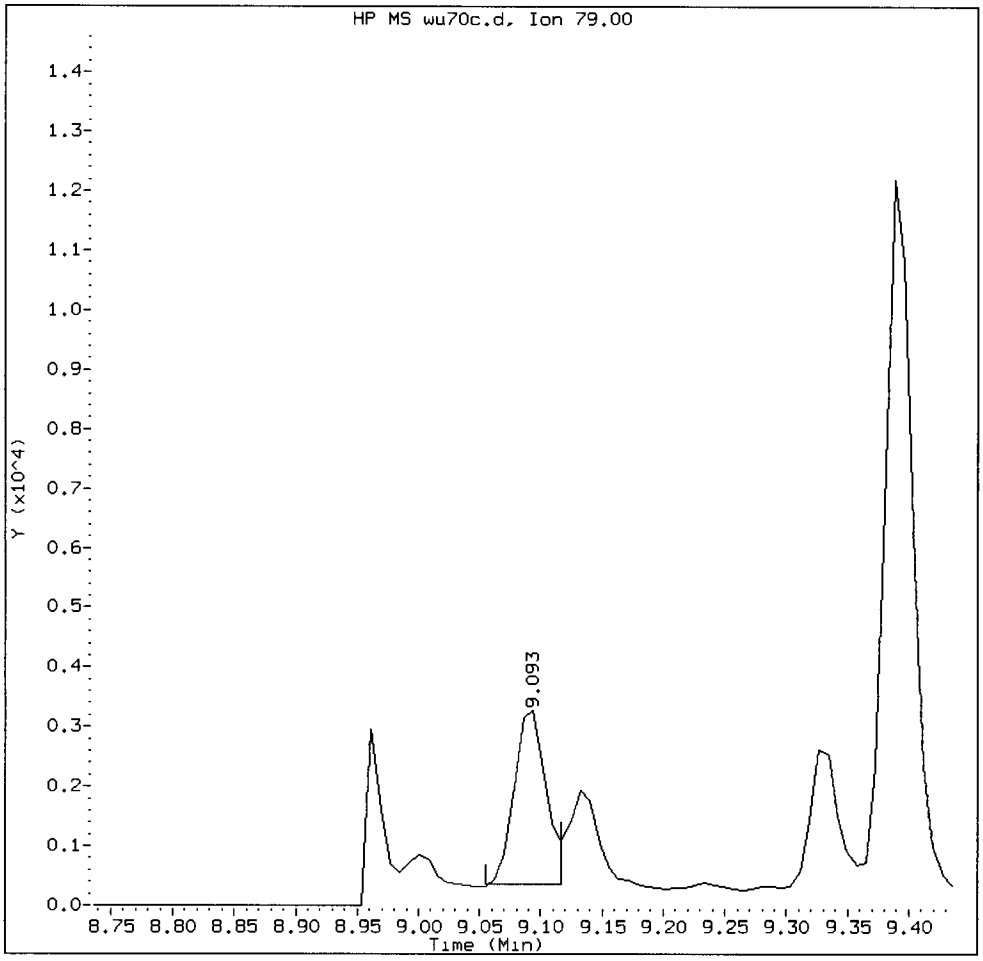


YZ 7/10/13



WU70C, /chem1/nt10.i/20130705.b/SIM.b/wu70c.d

Benzyl alcohol Amount: 0.21 Area: 5375



MANUAL INTEGRATION for Benzyl alcohol

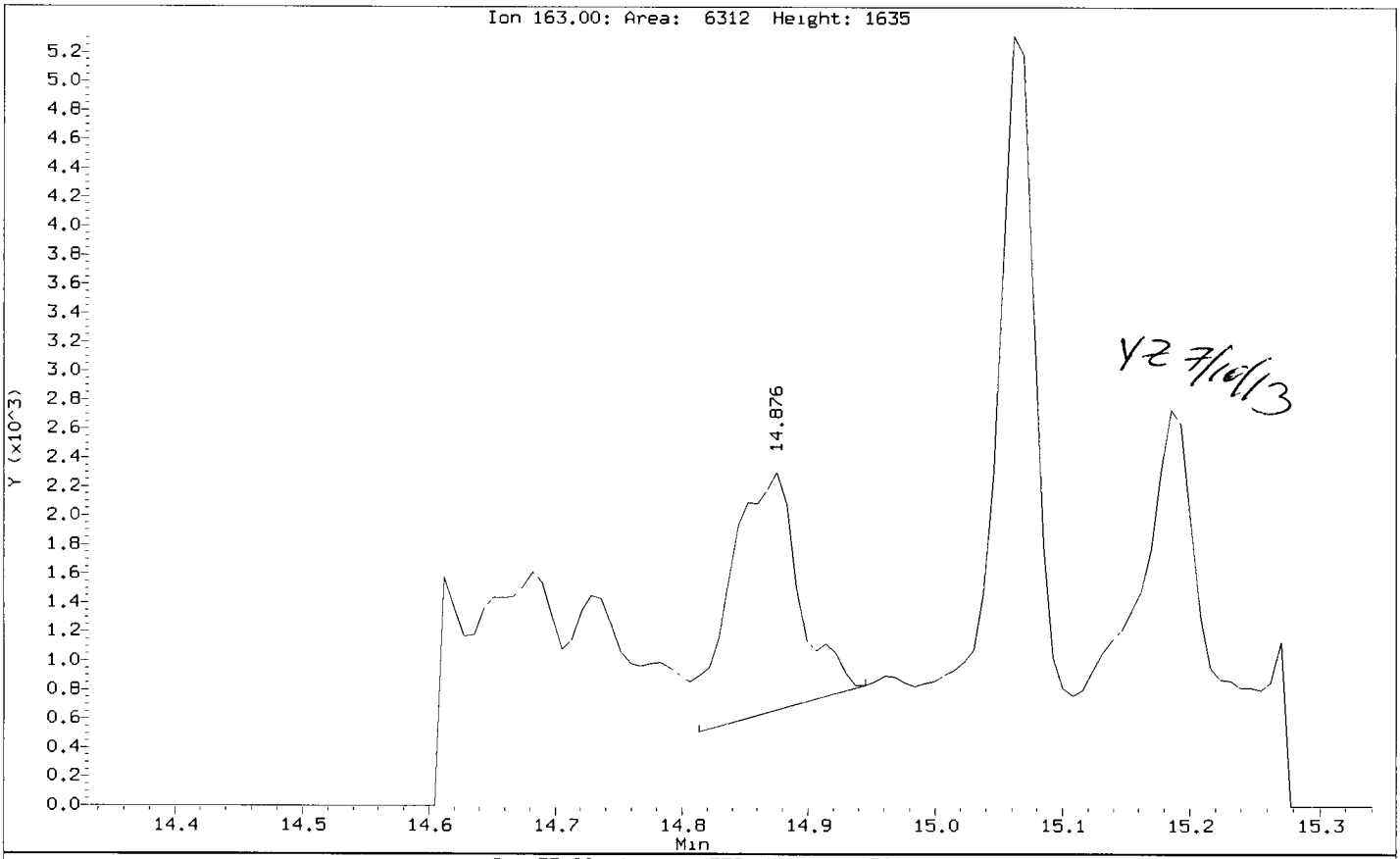
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

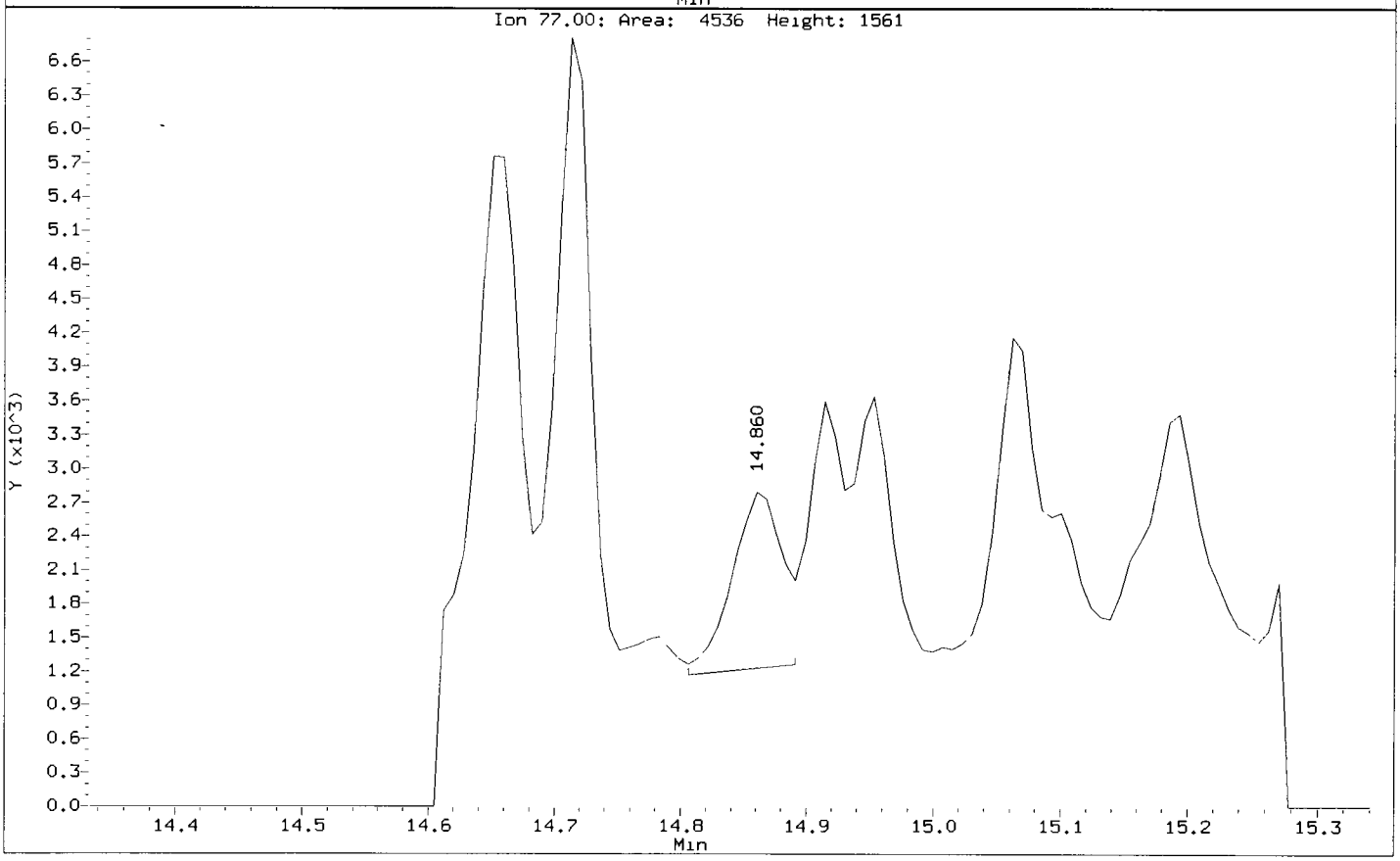
Analyst: VZ Date: 7/10/13

Data File: /chem1/nt10.i/20130705.b/SIM.b/wu70c.d
Injection Date: 06-JUL-2013 00:47
Instrument: nt10.i
Client Sample ID: LF-LS-004-20130619-

Compound: Dimethylphthalate
CAS Number: 131-11-3



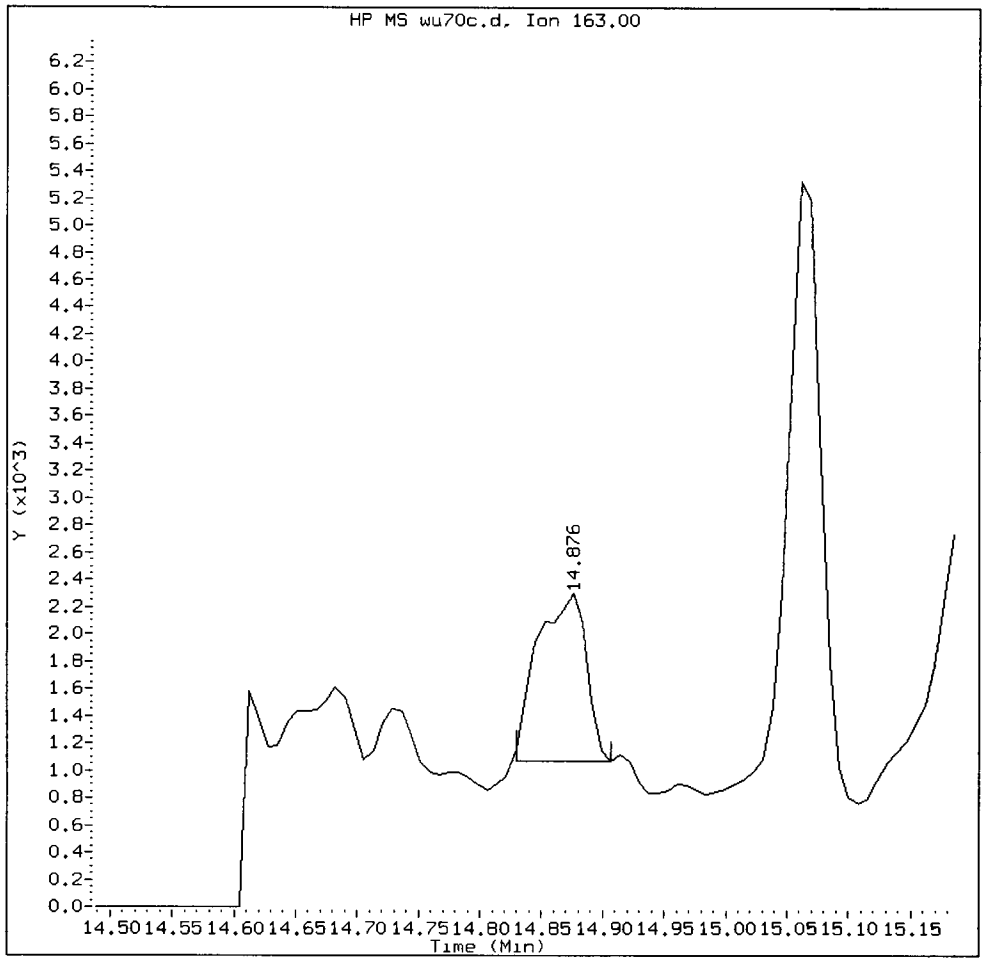
Y2 7/16/13



WU70 : 88803

WU70C, /chem1/nt10.i/20130705.b/SIM.b/wu70c.d

Dimethylphthalate Amount: 0.06 Area: 3384



MANUAL INTEGRATION for Dimethylphthalate

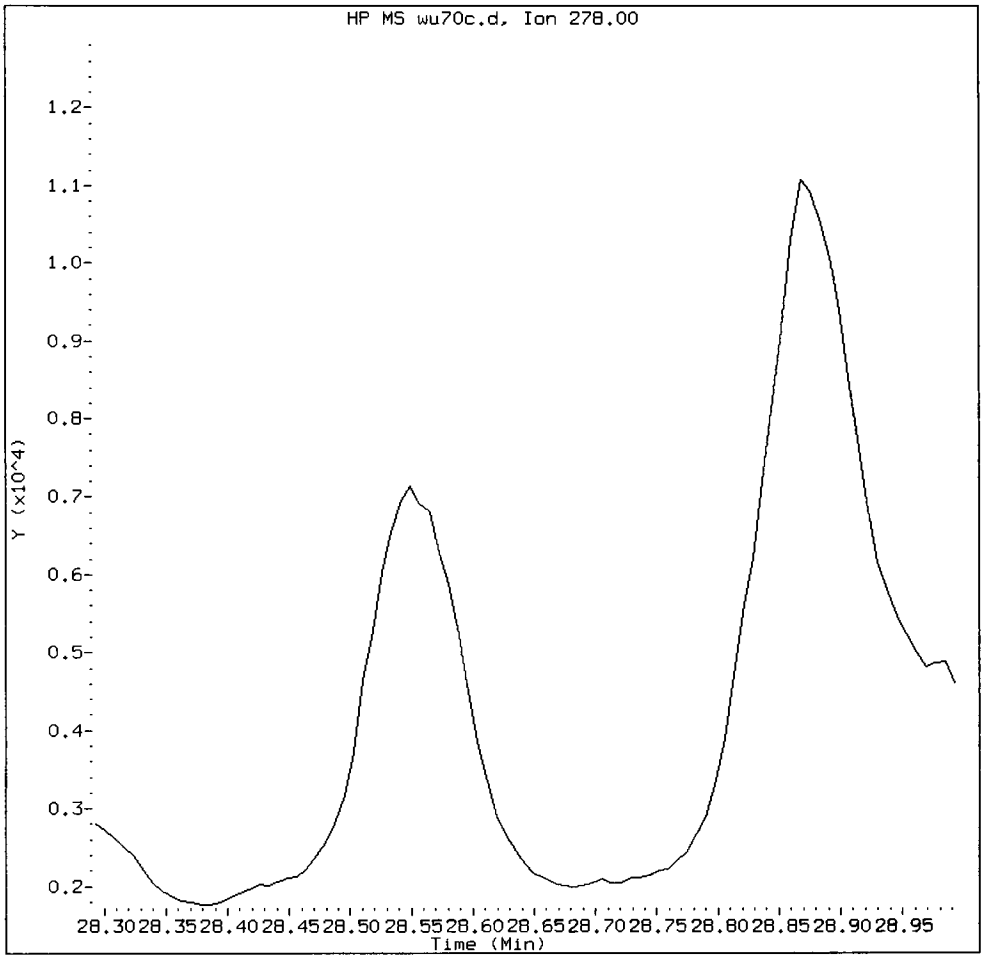
1. Baseline correction ✓
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: VZ Date: 7/19/13

WU70C, /chem1/nt10.i/20130705.b/SIM.b/wu70c.d

Dibenzo(a,h)anthracene Amount: 0.80 Area: 65178



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 7/10/13

CO-ELUTION SUMMARY FOR FILE - wu70c.d

Lab ID: WU70C, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 06-JUL-2013

RT	CO-ELUTION COMPOUNDS
8.861	1,4-Dichlorobenzene and ~~1,3-Dichlorobenzene~~

Analytical Resources, Inc. YZ 7/10/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130705.b/SIM.b/wu70cms.d
Lab Smp Id: WU70CMS Client Smp ID: LF-LS-004-20130 MS
Inj Date : 06-JUL-2013 01:24
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WU70CMS
Misc Info : 13-13123
Comment :
Method : /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Meth Date : 10-Jul-2013 11:26 yev Quant Type: ISTD
Cal Date : 05-JUL-2013 17:11 Cal File: ic0705i.d
Als bottle: 24 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

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

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	13.02000	Weight of sample extracted (g)
M	21.10000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	6.387	6.341	(0.723)	174654	4.83820	471.0
	3 Phenol	94	8.126	8.095	(0.920)	231152	4.68981	456.5
	7 1,3-Dichlorobenzene	146	8.713	8.714	(0.987)	133501	3.40753	331.7
*	8 1,4-Dichlorobenzene-d4	152	8.830	8.822	(1.000)	99593	4.00000	
	9 1,4-Dichlorobenzene	146	8.861	8.861	(1.004)	133896	3.52237	342.9
	11 Benzyl alcohol	79	9.101	9.086	(1.031)	116081	4.68021	455.6
	12 1,2-Dichlorobenzene	146	9.171	9.164	(1.039)	127929	3.49951	340.7
	13 2-Methylphenol	108	9.334	9.319	(1.057)	129500	3.61833	352.2
	15 4-Methylphenol	108	9.653	9.629	(1.093)	276704	7.78250	757.6
	16 N-Nitroso-di-n-propylamine	70	9.653	9.645	(1.093)	92404	3.94673	384.2
	22 2,4-Dimethylphenol	107	10.785	10.770	(0.939)	322034	8.76135	852.9
	26 1,2,4-Trichlorobenzene	180	11.378	11.371	(0.991)	122162	3.66412	356.7
*	27 Naphthalene-d8	136	11.487	11.487	(1.000)	356715	4.00000	
	30 Hexachlorobutadiene	225	11.842	11.842	(1.031)	71209	3.59104	349.6

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
	39 Dimethylphthalate	163	14.853	14.837	(0.964)	237862	4.15151	404.1
*	42 Acenaphthene-d10	162	15.410	15.394	(1.000)	184327	4.00000	
	50 Diethylphthalate	149	16.415	16.438	(1.065)	27358	3.25142	316.5
	54 N-Nitrosodiphenylamine	169	16.955	16.939	(0.904)	206689	5.83981	568.5(R)
	57 Hexachlorobenzene	284	17.904	17.881	(0.954)	89655	4.04024	393.3
	58 Pentachlorophenol	266	18.368	18.330	(0.979)	61389	4.07422	396.6
*	59 Phenanthrene-d10	188	18.763	18.740	(1.000)	306196	4.00000	
$	66 Terphenyl-d14	244	22.013	21.990	(0.921)	174486	4.68266	455.8
	67 Butylbenzylphthalate	149	22.949	22.926	(0.960)	213389	6.05571	589.5
*	69 Chrysene-d12	240	23.894	23.848	(1.000)	321952	4.00000	
*	77 Perylene-d12	264	26.395	26.279	(1.000)	362311	4.00000	
	79 Dibenzo(a,h)anthracene	278	28.915	28.643	(1.095)	364289	4.55726	443.6(MH)
	90 N-Nitrosodimethylamine	74	4.094	4.047	(0.464)	219333	9.72690	946.9

QC Flag Legend

R - Spike/Surrogate failed recovery limits.
M - Compound response manually integrated.
H - Operator selected an alternate compound hit.

Analytical Resources, Inc.

INTERNAL STANDARD COMPOUNDS
AREA AND RT SUMMARY

Instrument ID: nt10.i
Lab File ID: wu70cms.d
Lab Smp Id: WU70CMS
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Misc Info: 13-13123

Calibration Date: 05-JUL-2013
Calibration Time: 18:37
Client Smp ID: LF-LS-004-20130
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	115828	57914	231656	99593	-14.02
27 Naphthalene-d8	412333	206166	824666	356715	-13.49
42 Acenaphthene-d10	225152	112576	450304	184327	-18.13
59 Phenanthrene-d10	415301	207650	830602	306196	-26.27
69 Chrysene-d12	449306	224653	898612	321952	-28.34
77 Perylene-d12	474708	237354	949416	362311	-23.68

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.82	8.32	9.32	8.83	0.09
27 Naphthalene-d8	11.49	10.99	11.99	11.49	0.00
42 Acenaphthene-d10	15.39	14.89	15.89	15.41	0.10
59 Phenanthrene-d10	18.74	18.24	19.24	18.76	0.12
69 Chrysene-d12	23.85	23.35	24.35	23.89	0.19
77 Perylene-d12	26.28	25.78	26.78	26.39	0.44

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: SAIC
Client SDG: WU70
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WU70CMS
Client Smp ID: LF-LS-004-20130 MS
Level: LOW
Operator: VTS/YZ
Data Type: MS DATA
SampleType: MS
SpikeList File: PSDDALCS.spk
Quant Type: ISTD
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Misc Info: 13-13123

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3 Phenol	486.7	456.5	93.80	30-160
7 1,3-Dichlorobenzen	486.7	331.7	68.15	30-100
9 1,4-Dichlorobenzen	486.7	342.9	70.45	36-100
11 Benzyl alcohol	973.4	455.6	46.80	25-123
12 1,2-Dichlorobenzen	486.7	340.7	69.99	36-100
13 2-Methylphenol	486.7	352.2	72.37	26-100
15 4-Methylphenol	973.4	757.6	77.83	30-160
16 N-Nitroso-di-n-pro	486.7	384.2	78.93	30-160
22 2,4-Dimethylphenol	973.4	852.9	87.61	10-103
26 1,2,4-Trichloroben	486.7	356.7	73.28	35-100
30 Hexachlorobutadien	486.7	349.6	71.82	34-100
39 Dimethylphthalate	486.7	404.1	83.03	38-112
50 Diethylphthalate	486.7	316.5	65.03	55-104
54 N-Nitrosodiphenyla	486.7	568.5	116.80*	36-111
57 Hexachlorobenzene	486.7	393.3	80.80	32-106
58 Pentachlorophenol	973.4	396.6	40.74	26-106
67 Butylbenzylphthala	486.7	589.5	121.11	32-142
79 Dibenzo(a,h)anthra	486.7	443.6	91.15	28-125
90 N-Nitrosodimethyla	973.4	946.9	97.27	30-160

SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	730.1	471.0	64.51	30-160
$ 66 Terphenyl-d14	486.7	455.8	93.65	30-160

Data File: /chem1/nt10.i/20130705.b/SIM.b/wu70cms.d

Date : 06-JUL-2013 01:24

Client ID: LF-LS-004-20130 MS

Instrument: nt10.i

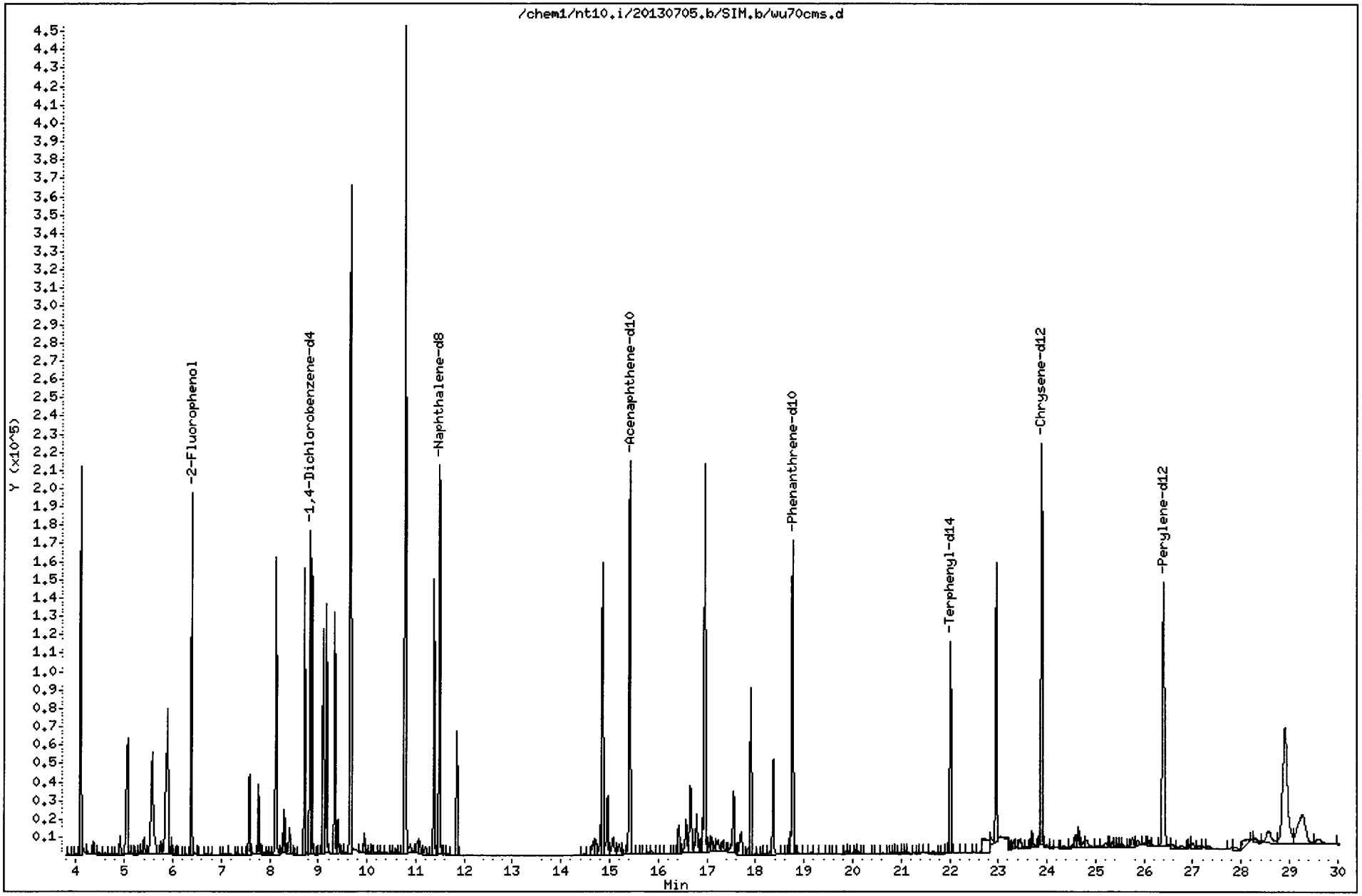
Sample Info: WU70CMS

Volume Injected (uL): 1.0

Operator: VTS/YZ

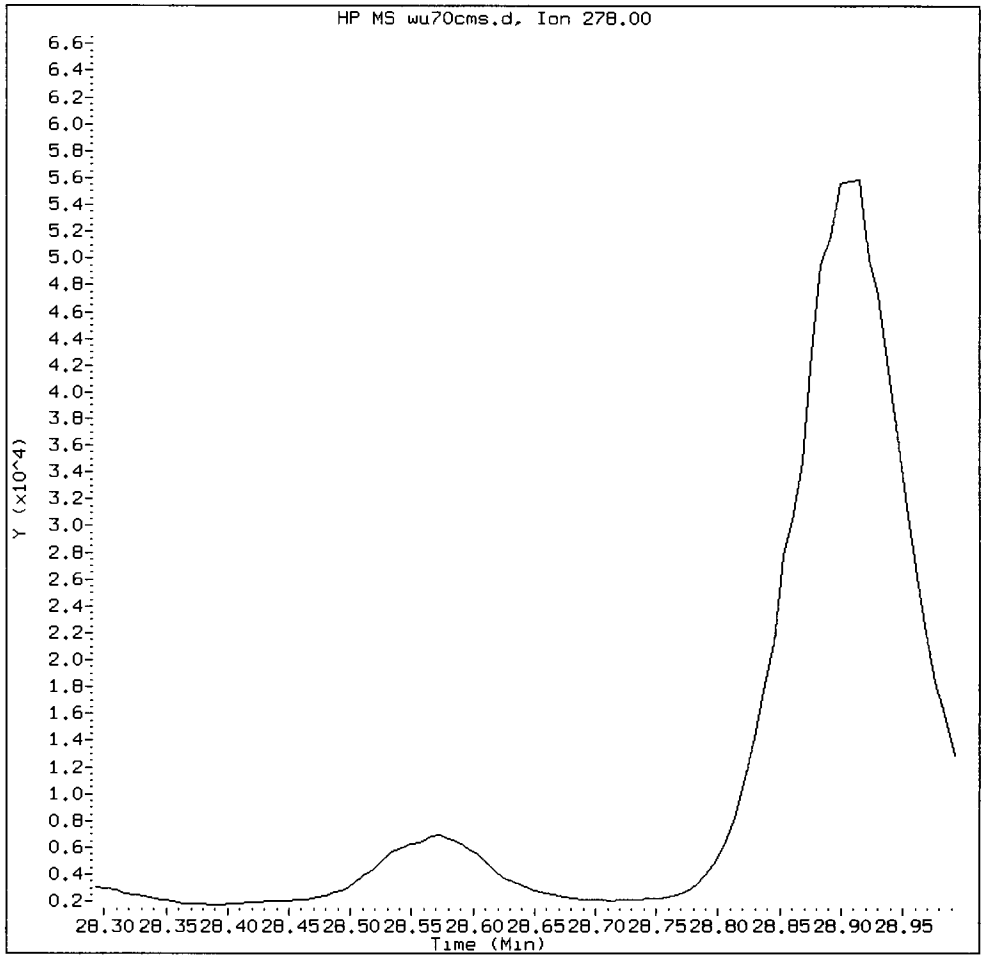
Column phase: ZB-5msi

Column diameter: 0.25



WU70CMS, /chem1/nt10.i/20130705.b/SIM.b/wu70cms.d

Dibenzo(a,h)anthracene Amount: 4.56 Area: 364289



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

1. Baseline correction
2. Poor chromatography
3. Peak not found ✓
4. Totals calculation

5. Other _____

Analyst: VZ Date: 7/10/13

CO-ELUTION SUMMARY FOR FILE - wu70cms.d

Lab ID: WU70CMS, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 06-JUL-20

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Analytical Resources, Inc.

yz 7/10/13

METHOD 8270D-SIM

Data file : /chem1/nt10.i/20130705.b/SIM.b/wu70cmsd.d
Lab Smp Id: WU70CMSD Client Smp ID: LF-LS-004-20130 MSD
Inj Date : 06-JUL-2013 02:00
Operator : VTS/YZ Inst ID: nt10.i
Smp Info : WU70CMSD
Misc Info : 13-13123
Comment :
Method : /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Meth Date : 10-Jul-2013 11:26 yev Quant Type: ISTD
Cal Date : 05-JUL-2013 17:11 Cal File: ic0705i.d
Als bottle: 25 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP RTE Compound Sublist: PSDDA.sub
Target Version: 3.50
Processing Host: cserv3

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

Name	Value	Description
DF	1.00000	Dilution Factor
Vt	1000.00000	Volume of final extract (uL)
Ws	13.00000	Weight of sample extracted (g)
M	21.10000	% Moisture

Cpnd Variable Local Compound Variable

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	CONCENTRATIONS FINAL (ug/kg)
$	1 2-Fluorophenol	112	6.387	6.341	(0.723)	165923	4.84688	472.5
	3 Phenol	94	8.134	8.095	(0.921)	219468	4.69547	457.8
	7 1,3-Dichlorobenzene	146	8.721	8.714	(0.988)	124482	3.35052	326.7
*	8 1,4-Dichlorobenzene-d4	152	8.830	8.822	(1.000)	94445	4.00000	
	9 1,4-Dichlorobenzene	146	8.861	8.861	(1.004)	123605	3.42889	334.3
	11 Benzyl alcohol	79	9.101	9.086	(1.031)	106495	4.52776	441.4
	12 1,2-Dichlorobenzene	146	9.171	9.164	(1.039)	120034	3.46252	337.6
	13 2-Methylphenol	108	9.334	9.319	(1.057)	121847	3.59007	350.0
	15 4-Methylphenol	108	9.660	9.629	(1.094)	258092	7.65470	746.3
	16 N-Nitroso-di-n-propylamine	70	9.653	9.645	(1.093)	85826	3.86559	376.9
	22 2,4-Dimethylphenol	107	10.785	10.770	(0.938)	236694	6.67160	650.4
	26 1,2,4-Trichlorobenzene	180	11.379	11.371	(0.990)	115246	3.58123	349.2
*	27 Naphthalene-d8	136	11.494	11.487	(1.000)	344309	4.00000	
	30 Hexachlorobutadiene	225	11.850	11.842	(1.031)	67083	3.50486	341.7

	Compounds	QUANT SIG MASS	RT	EXP RT	REL RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ug/mL)	FINAL (ug/kg)
39	Dimethylphthalate	163	14.860	14.837	(0.964)	225165	4.08720	398.5
* 42	Acenaphthene-d10	162	15.410	15.394	(1.000)	177233	4.00000	
50	Diethylphthalate	149	16.415	16.438	(1.065)	32972	4.07548	397.3
54	N-Nitrosodiphenylamine	169	16.955	16.939	(0.904)	178775	5.14779	501.9
57	Hexachlorobenzene	284	17.904	17.881	(0.954)	84609	3.88582	378.8
58	Pentachlorophenol	266	18.368	18.330	(0.979)	65804	4.45081	433.9
* 59	Phenanthrene-d10	188	18.763	18.740	(1.000)	300446	4.00000	
$ 66	Terphenyl-d14	244	22.020	21.990	(0.921)	165627	4.49039	437.8
67	Butylbenzylphthalate	149	22.957	22.926	(0.960)	226630	6.49728	633.4
* 69	Chrysene-d12	240	23.902	23.848	(1.000)	318691	4.00000	
* 77	Perylene-d12	264	26.410	26.279	(1.000)	347460	4.00000	
79	Dibenzo(a,h)anthracene	278	28.938	28.643	(1.096)	369505	4.82009	469.9(MH)
90	N-Nitrosodimethylamine	74	4.094	4.047	(0.464)	200096	9.35747	912.3

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: nt10.i
Lab File ID: wu70cmsd.d
Lab Smp Id: WU70CMSD
Analysis Type: SV
Quant Type: ISTD
Operator: VTS/YZ
Method File: /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Misc Info: 13-13123

Calibration Date: 05-JUL-2013
Calibration Time: 18:37
Client Smp ID: LF-LS-004-20130
Level: LOW
Sample Type: Sediment

Test Mode:
Use Initial Calibration Level 5.

COMPOUND	STANDARD	AREA LIMIT LOWER	AREA LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	115828	57914	231656	94445	-18.46
27 Naphthalene-d8	412333	206166	824666	344309	-16.50
42 Acenaphthene-d10	225152	112576	450304	177233	-21.28
59 Phenanthrene-d10	415301	207650	830602	300446	-27.66
69 Chrysene-d12	449306	224653	898612	318691	-29.07
77 Perylene-d12	474708	237354	949416	347460	-26.81

COMPOUND	STANDARD	RT LIMIT LOWER	RT LIMIT UPPER	SAMPLE	%DIFF
8 1,4-Dichlorobenze	8.82	8.32	9.32	8.83	0.09
27 Naphthalene-d8	11.49	10.99	11.99	11.49	0.07
42 Acenaphthene-d10	15.39	14.89	15.89	15.41	0.10
59 Phenanthrene-d10	18.74	18.24	19.24	18.76	0.12
69 Chrysene-d12	23.85	23.35	24.35	23.90	0.23
77 Perylene-d12	26.28	25.78	26.78	26.41	0.50

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.

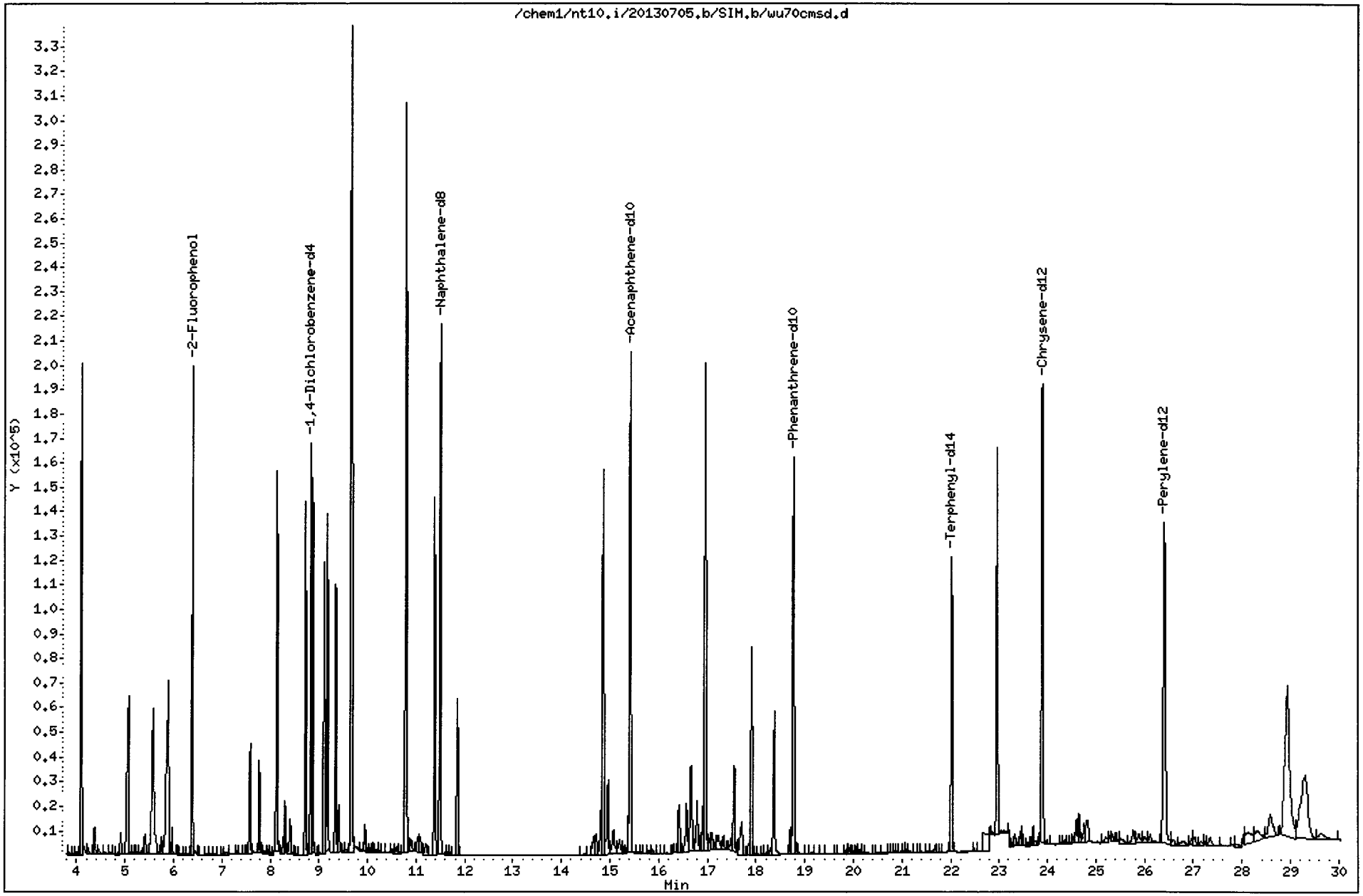
RECOVERY REPORT

Client Name: SAIC
Client SDG: WU70
Sample Matrix: SOLID
Fraction: SV
Lab Smp Id: WU70CMSD
Client Smp ID: LF-LS-004-20130 MSD
Level: LOW
Operator: VTS/YZ
Data Type: MS DATA
SampleType: MSD
SpikeList File: PSDDALCS.spk
Quant Type: ISTD
Sublist File: PSDDA.sub
Method File: /chem1/nt10.i/20130705.b/SIM.b/SIMABN2.m
Misc Info: 13-13123

SPIKE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
3 Phenol	487.5	457.8	93.91	30-160
7 1,3-Dichlorobenzen	487.5	326.7	67.01	30-100
9 1,4-Dichlorobenzen	487.5	334.3	68.58	36-100
11 Benzyl alcohol	974.9	441.4	45.28	25-123
12 1,2-Dichlorobenzen	487.5	337.6	69.25	36-100
13 2-Methylphenol	487.5	350.0	71.80	26-100
15 4-Methylphenol	974.9	746.3	76.55	30-160
16 N-Nitroso-di-n-pro	487.5	376.9	77.31	30-160
22 2,4-Dimethylphenol	974.9	650.4	66.72	10-103
26 1,2,4-Trichloroben	487.5	349.2	71.62	35-100
30 Hexachlorobutadien	487.5	341.7	70.10	34-100
39 Dimethylphthalate	487.5	398.5	81.74	38-112
50 Diethylphthalate	487.5	397.3	81.51	55-104
54 N-Nitrosodiphenyla	487.5	501.9	102.96	36-111
57 Hexachlorobenzene	487.5	378.8	77.72	32-106
58 Pentachlorophenol	974.9	433.9	44.51	26-106
67 Butylbenzylphthala	487.5	633.4	129.95	32-142
79 Dibenzo(a,h)anthra	487.5	469.9	96.40	28-125
90 N-Nitrosodimethyla	974.9	912.3	93.57	30-160

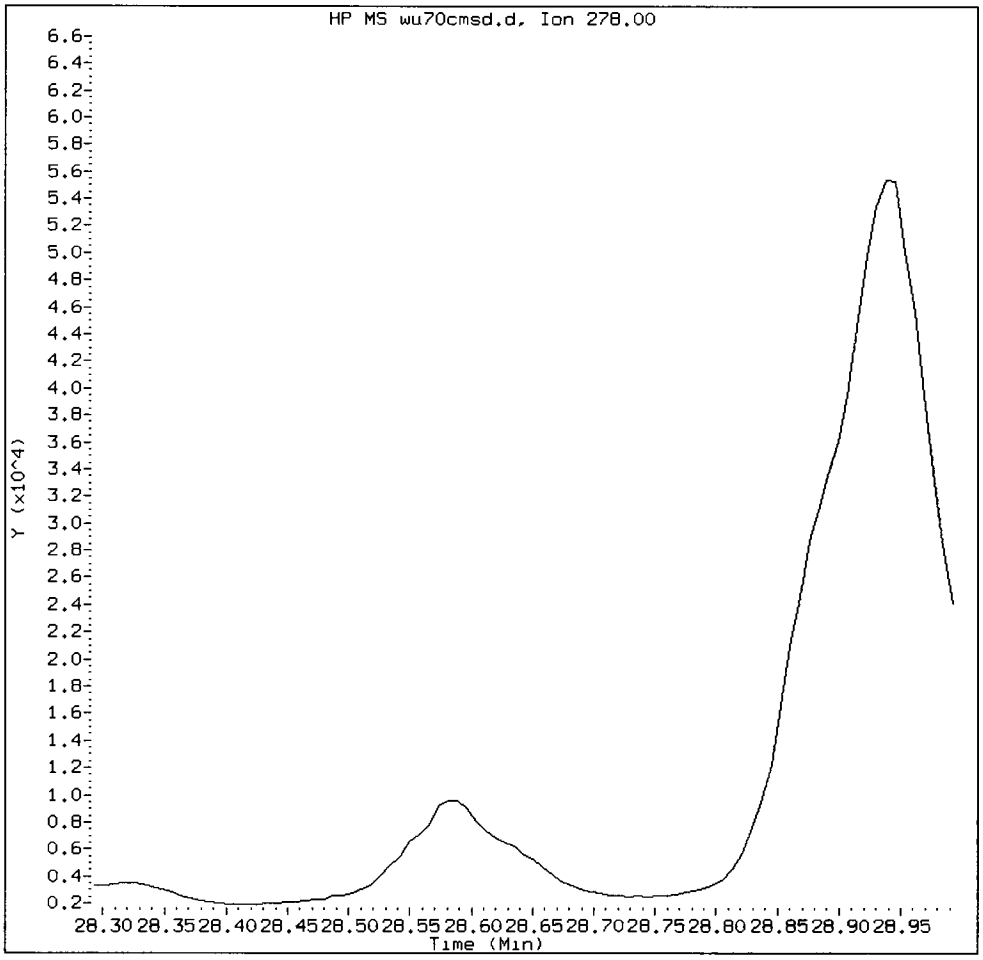
SURROGATE COMPOUND	CONC ADDED ug/kg	CONC RECOVERED ug/kg	% RECOVERED	LIMITS
$ 1 2-Fluorophenol	731.2	472.5	64.63	30-160
$ 66 Terphenyl-d14	487.5	437.8	89.81	30-160

Data File: /chem1/nt10.i/20130705.b/SIM.b/wu70cmsd.d
Date : 06-JUL-2013 02:00
Client ID: LF-LS-004-20130 MSD
Instrument: nt10.i
Sample Info: WU70CMSD
Volume Injected (uL): 1.0
Operator: VTS/YZ
Column phase: ZB-5msi
Column diameter: 0.25



WU70CMSD, /chem1/nt10.i/20130705.b/SIM.b/wu70cmsd.d

Dibenzo(a,h)anthracene Amount: 4.82 Area: 369505



MANUAL INTEGRATION for Dibenzo(a,h)anthracene

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: _____

CO-ELUTION SUMMARY FOR FILE - wu70cmsd.d

Lab ID: WU70CMSD, Method: SIM.b/SIMABN2.m, Instrument: nt10.i, Date: 06-JUL-2

RT	CO-ELUTION COMPOUNDS

NO CO-ELUTIONS

Dioxin Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WU70

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Dioxin / Furan Bench Sheet EPA Methods 8290A & 1613B
Solid Samples

ARI Job No(s) WU70		
Matrix (circle one)	Soil (Sediment) Oil Tissue	
Extraction Method	Start Time/Date:	End Time/Date:
Soxhlet	1110 6/27/13	0509 6/28/13

Reagent / Standard	NA	ID / Lot Number	Initials	Date
Analytical Balance		SN 24650344	M	6/27/13
Purified Sand		I8025	M	6/27/13
Toluene		I8282	M	6/27/13
Hexane		B000677	M	6/28/13
CH_2Cl_2		B000788	M	6/28/13
H_2SO_4		I8263	M	6/28/13
Na_2SO_4		I8130	M	6/28/13
Glasswool		5/18/12	M	6/28/13
10 % $AgNO_3$	/			
Basic Silica		H142	M	6/28/13
Acid Silica		H166	M	6/28/13
0% Silica		I8035	M	6/26/13
Activated Florisil		H127	M	6/28/13
Dual Carbon Column	/			
Other ( )	/			
Nonane		I8006	M	6/28/13

Bottle ID	ARI Sample ID	Sample Weight (eq to dry wt)	Roto Vap 45 °C	Final Vol.	H20 Trap Vol (mL)	Comments
6/27/13	WU70MB	10.00g	(1) 2	10uL	1.0	
↓	OPR	10.00g	1 (2)	10uL	1.0	
~~—~~	~~QLS~~	~~10.00g~~	~~1 / 2~~	~~10uL~~	~~—~~	
10	B	18.13	(1) 2	10uL	7.8	
2	C	13.02	1 (2)	10uL	4.5	
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
			1 / 2	10uL		
Prep Analyst/Date		M 6/27/13	M 6/28/13	M 6/28/13	M 6/28/13	

Reagent / Standard	Vol	ID / Lot Number	Solution Conc.	Expiration Date	Initials	Date	Witness
Recovery Standard	1.0 mL	B000395	2/4ng/mL	5/20/14	M	6/27/13	PD
Ongoing Precision /Recovery	20 µL	M 6/27/13 B000206I-3	10/50/100ng/mL	2/2/14	M	6/27/13	PD
QLS Standard	10 µL	21/	0.5/2.5/5ng/mL				
Clean-up Standard	1.0 mL	B000394	0.8ng/mL	5/20/14	M	6/28/13	PD
Internal Standard	10 µL		200ng/mL				

Supervisor Review: 6/28/13

Bench Sheet No.: 00057

Verify Client ID	
Analyst/Date	M 6/27/13
Acid Clean	
(Y)/N	
Analyst/Date	M 6/28/13
Silica-Florisil	
(Y)/N	
Analyst/Date	M 6/28/13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WU70 Client ID: SAIC

Parameter: Dioxin Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)= AC 6-21-13 A B	AC 6-21-13
☐ Standing Water Decanted (Not shared)= AC 6-21-13 A C	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)? <5% small	
☐ 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)	

3056F

Revision 009
08/14/12

Reviewed 6/25/13

WU70 : 00663

Dioxin Raw Data
Initial Calibration

ARI Job ID: WU70

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

HR-GC/MS Analyst Notes / Data Review Checklist

ARI Work Order:_____ Client ID: _____

METHOD: **1613B** (Dioxins) **8290A** (Dioxins)

Instrument: **AutoSpec01** 6/20/13 CURVE

Curve Date: 6/20/13 Analysis Start Date: _____

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Resolution Check > 10,000ppm	(Y) / N / _____	Signal / Noise ≥ 2.5?	Y / N / _____
TCDD / TCDF Resolution ≤ 25%	(Y) / N / _____	Extraction STD Limits Met?	Y / N / _____
PCDF Windows Verified	(Y) / N / _____	Cleanup STD Limits Met?	Y / N / _____
CCV Meets %D Limits?	Y / N / _____	Method Blank in Control?	Y / N / _____
~~CCV Ion Ratios within Limits?~~	~~Y / N / _____~~	~~OPR Recovery Limits Met?~~	~~Y / N / _____~~
CCV RRT within Limits?	Y / N / _____	Values Exceeding Curve Range?	Y / N / _____
Manual Integrations for Samples?	Y / N / _____	Samples Diluted?	Y / N / _____
~~Special Analysis Request?~~	~~Y / N / _____~~	~~Duplicate Sample RPD ≤ 25%?~~	~~NA / _____~~

~~**Detail problems, corrective actions and/or other pertinent information below:**~~

- TCDD/TCDF low point is CS1. All others CSL.
- All %RSD < 20%.
- Man. Int. in CSL for PF, OF, HD, HPD, and OD.

(Review 1)Analyst: _____ Date: 6/21/13

(Review 2)Reviewer: _____ Date: _____

WU78 : 88685

Analytical Resources Inc.: Organics Instrument Log

AutoSpec01 Serial No.:GC=CN10921030, MS=P764

Date: 6/20/13 Analysis: Dioxins Analyst: JH

GC Program: 8290C Column No: F7822 Column Type: RTX-Dioxin2

Inj Vol: 1ul Instrument Tune (IPR): JUN713_1-5 Detector Voltage: 350

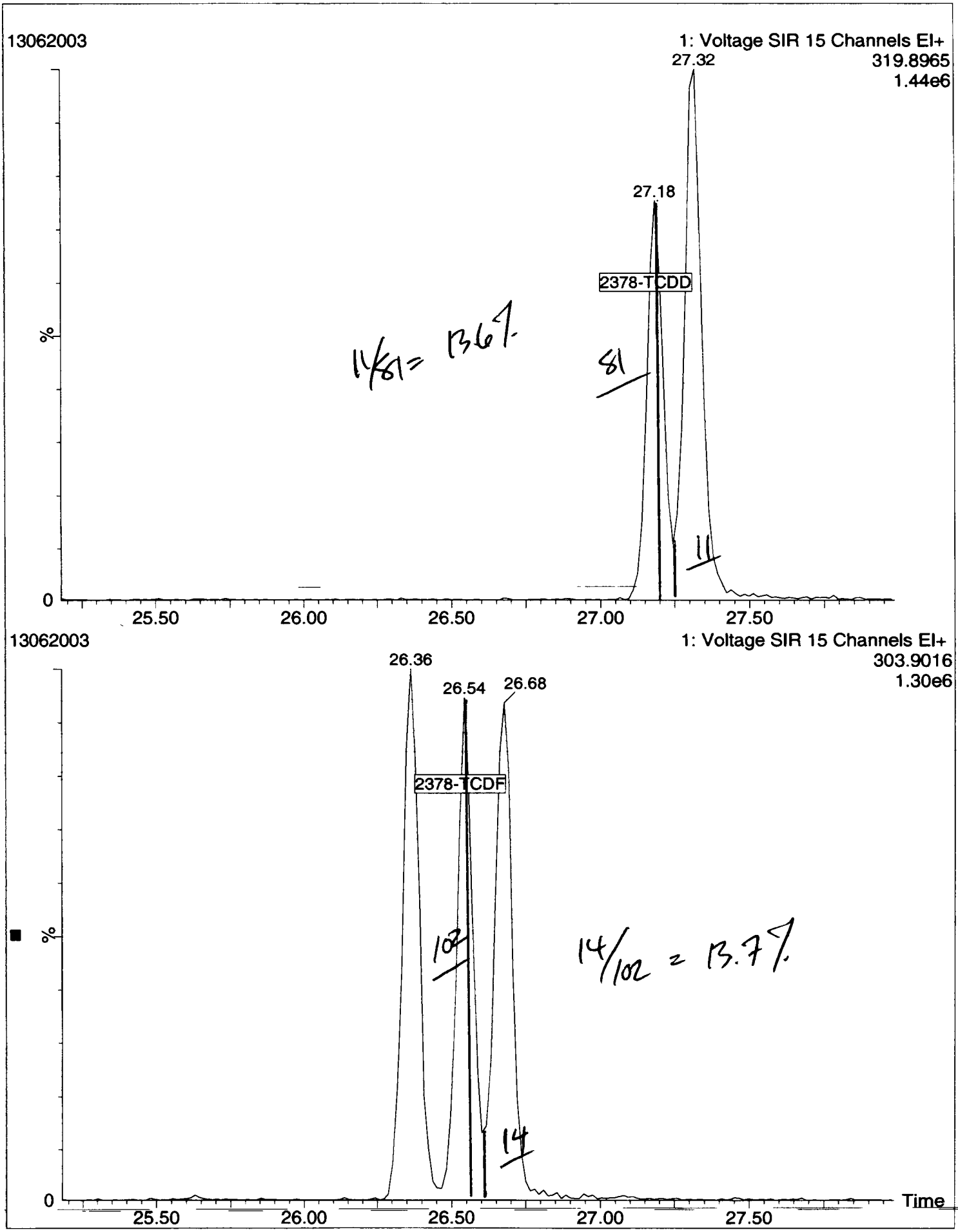
Resolution Check Files: 09:53, 19:03 Curve Date: 6/20/13

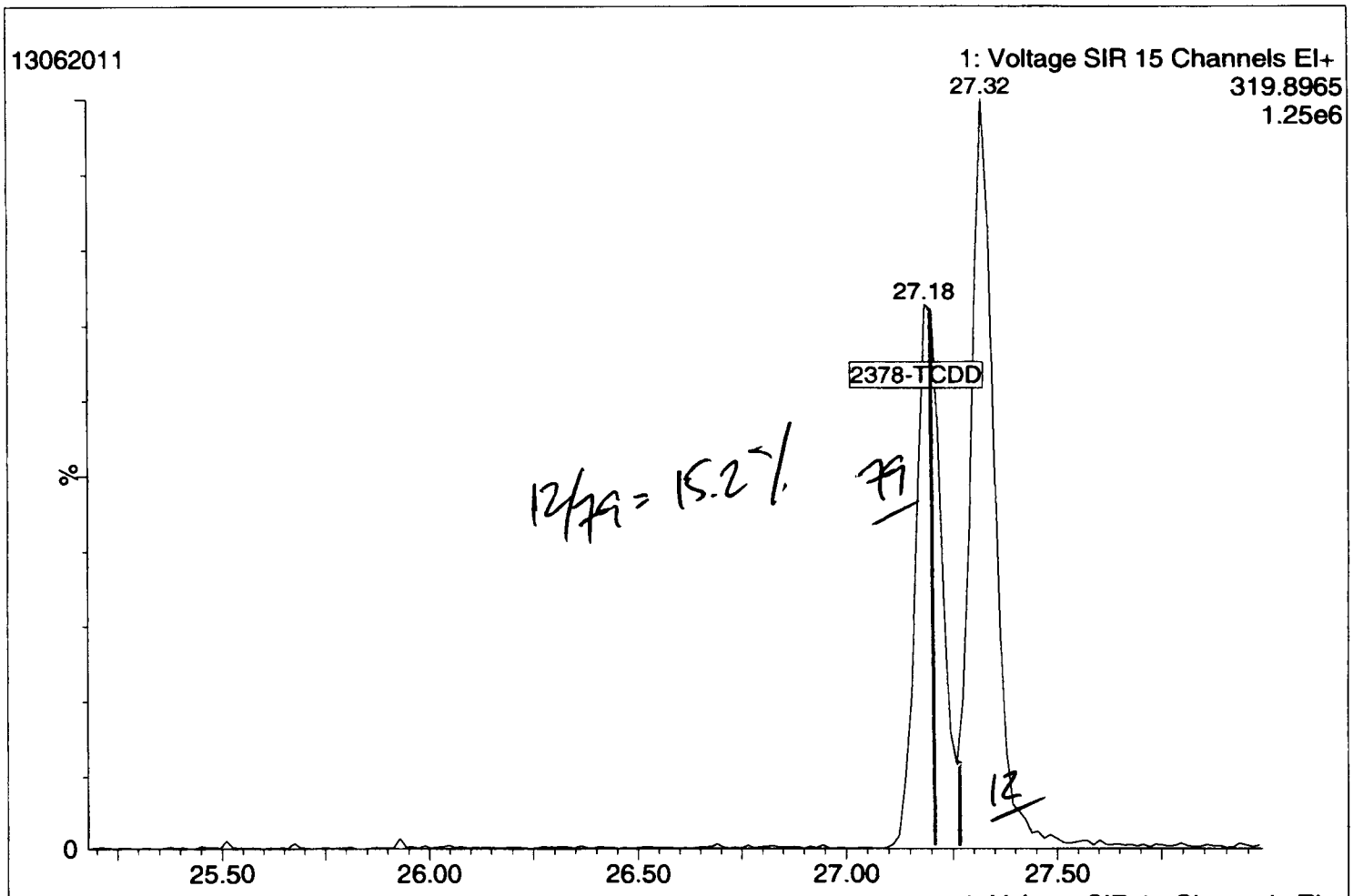
IS/SS	Ical/Ccal	LCS/ICV
	I8145-8149	
I8144	I8155	I7583
	I7708	
	PB17-2	

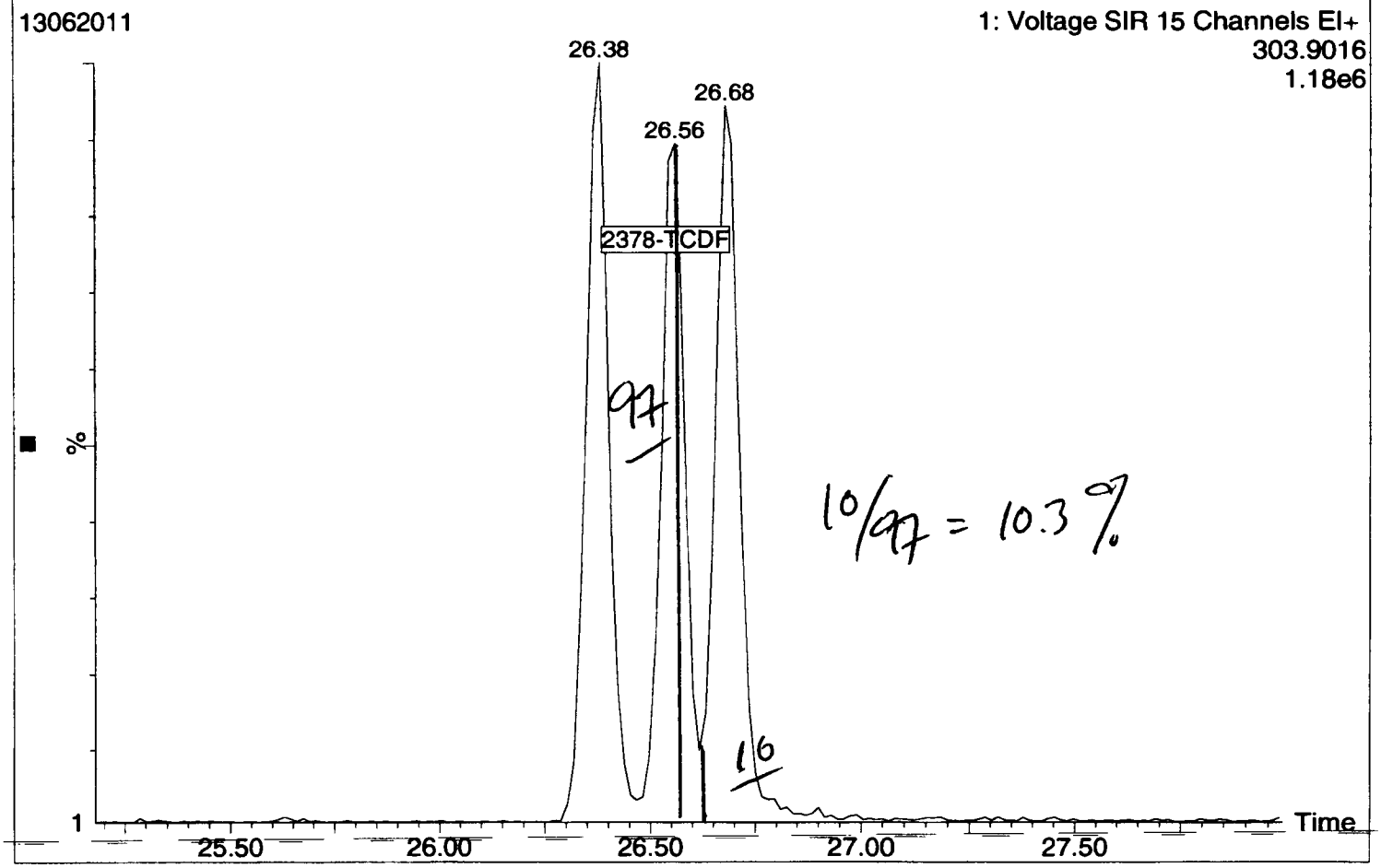
1	20-Jun-13	09:56:57	13062002	CS3WD
2	20-Jun-13	10:48:30	13062003	ISC01
3	20-Jun-13	12:34:03	13062004	CSL
4	20-Jun-13	13:43:04	13062005	CS1
5	20-Jun-13	14:33:31	13062006	CS2
6	20-Jun-13	15:25:46	13062007	CS3
7	20-Jun-13	16:18:06	13062008	CS4
8	20-Jun-13	17:10:20	13062009	CS5
9	20-Jun-13	18:02:47	13062010	ICV
10	20-Jun-13	19:03:14	13062011	ISC02

JH 6/21/13

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

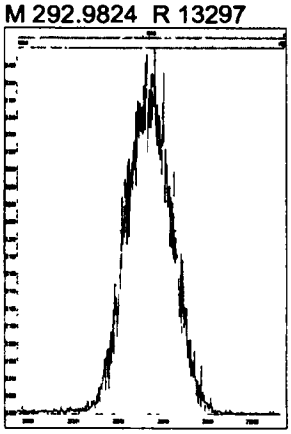

13062003
1: Voltage SIR 15 Channels EI+
27.32
319.8965
1.44e6
27.18
2378-TCDD
%
11/81= 13.6%
81
11
0
25.50
26.00
26.50
27.00
27.50
13062003
1: Voltage SIR 15 Channels EI+
303.9016
1.30e6
26.36
26.54
26.68
2378-TCDF
%
102
14/102 = 13.7%
14
0
Time
25.50
26.00
26.50
27.00
27.50


13062011
1: Voltage SIR 15 Channels EI+
319.8965
1.25e6
27.32
27.18
2378-TCDD
12/79 = 15.2%
79
12
%
0
25.50
26.00
26.50
27.00
27.50

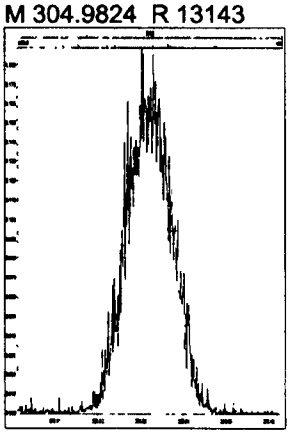

13062011
1: Voltage SIR 15 Channels EI+
303.9016
1.18e6
26.38
26.68
26.56
2378-TCDF
97
16
10/97 = 10.3%
%
1
Time
25.50
26.00
26.50
27.00
27.50

Printed: Thursday, June 20, 2013 09:53:14 Pacific Daylight Time

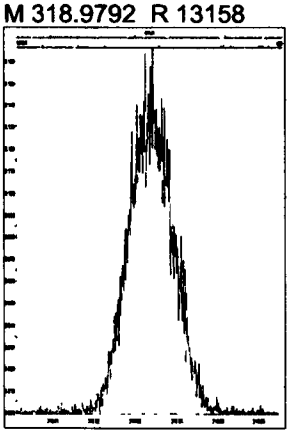
M 292.9824 R 13297



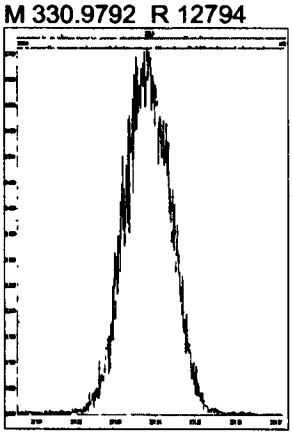
M 304.9824 R 13143



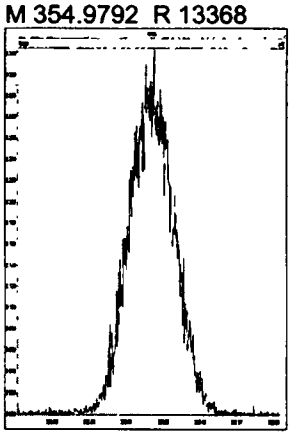
M 318.9792 R 13158



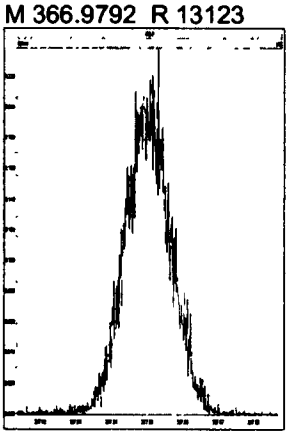
M 330.9792 R 12794



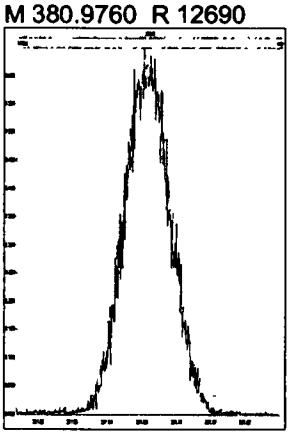
M 354.9792 R 13368



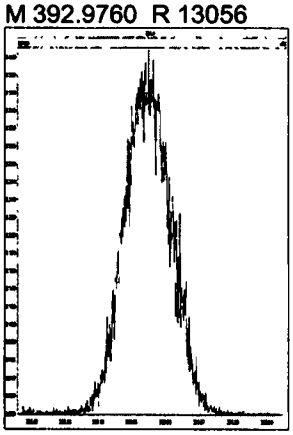
M 366.9792 R 13123



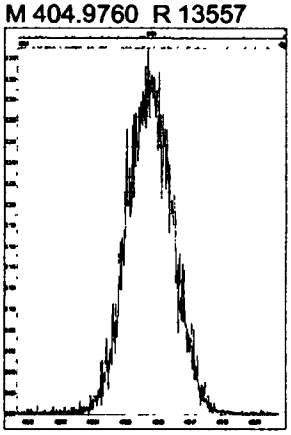
M 380.9760 R 12690



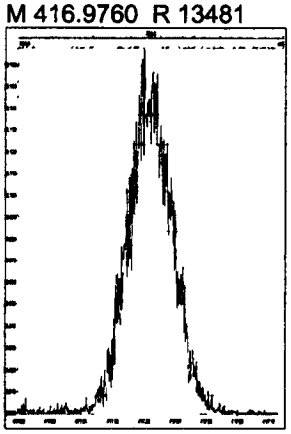
M 392.9760 R 13056



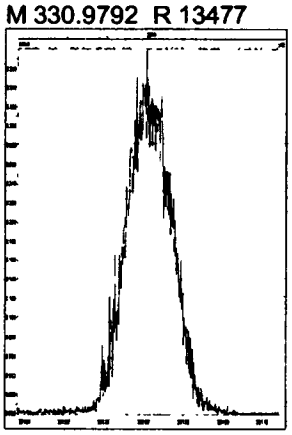
M 404.9760 R 13557



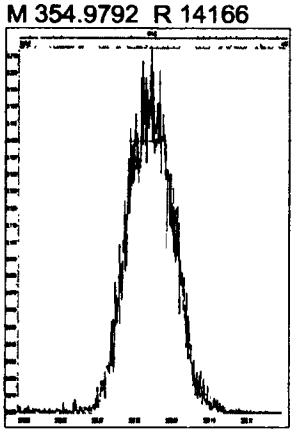
M 416.9760 R 13481



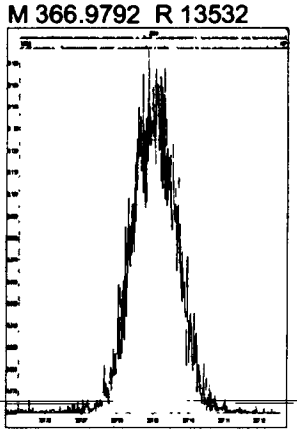
M 330.9792 R 13477



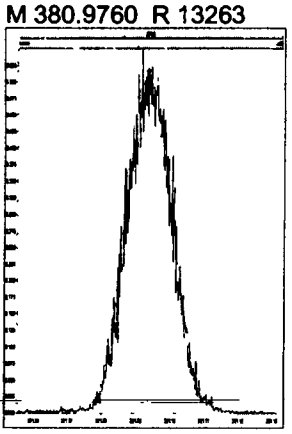
M 354.9792 R 14166



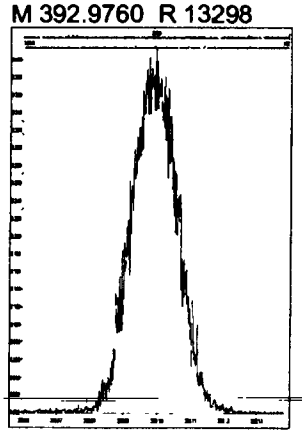
M 366.9792 R 13532



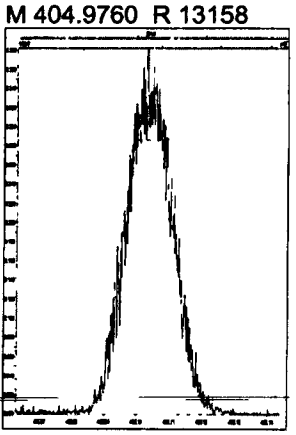
M 380.9760 R 13263



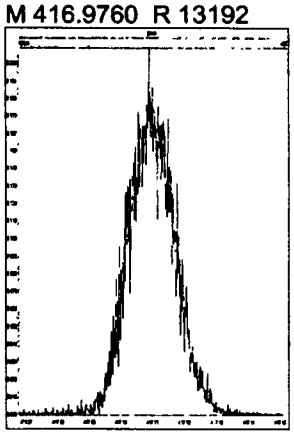
M 392.9760 R 13298



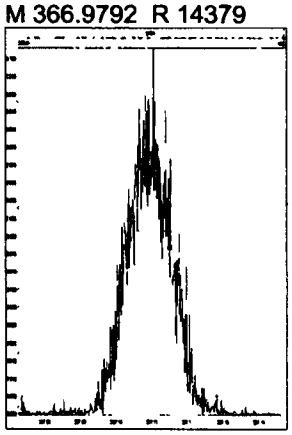
M 404.9760 R 13158



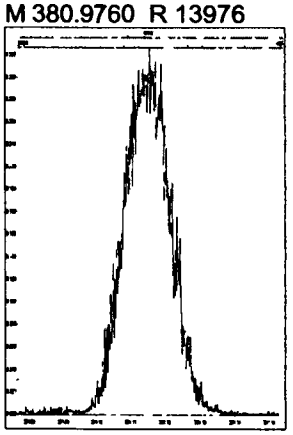
M 416.9760 R 13192



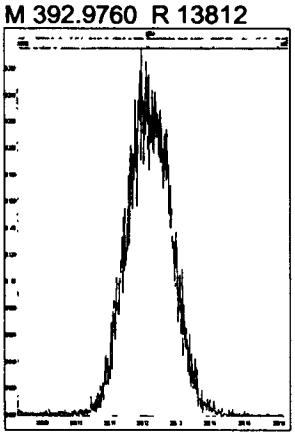
M 366.9792 R 14379



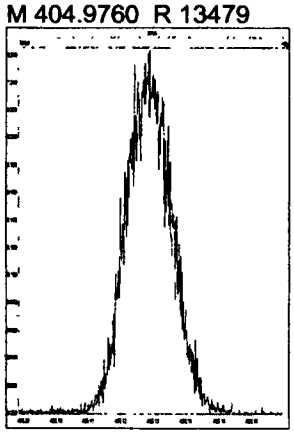
M 380.9760 R 13976



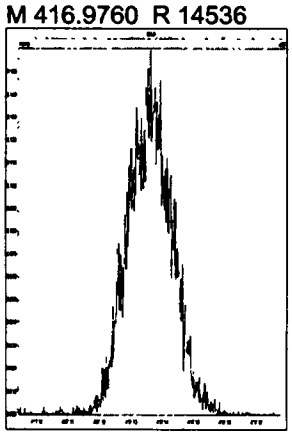
M 392.9760 R 13812



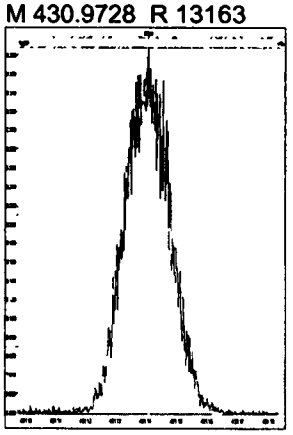
M 404.9760 R 13479



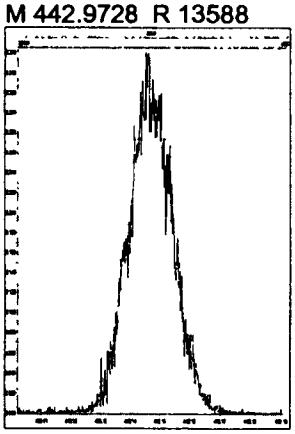
M 416.9760 R 14536



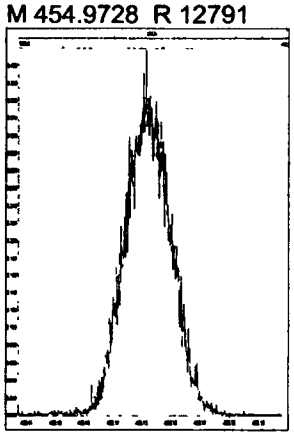
M 430.9728 R 13163



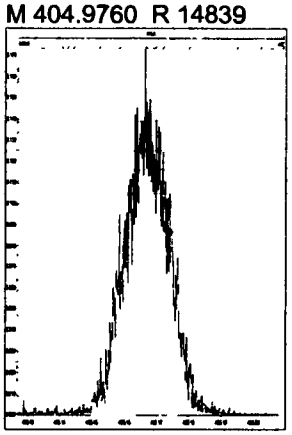
M 442.9728 R 13588



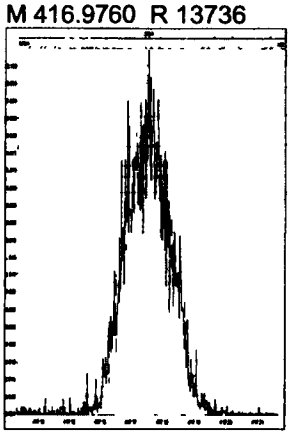
M 454.9728 R 12791



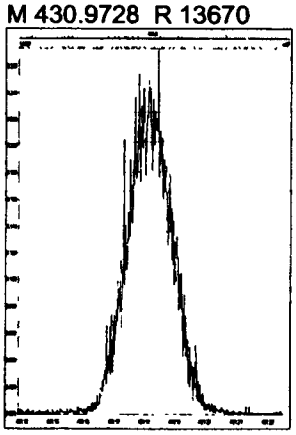
M 404.9760 R 14839



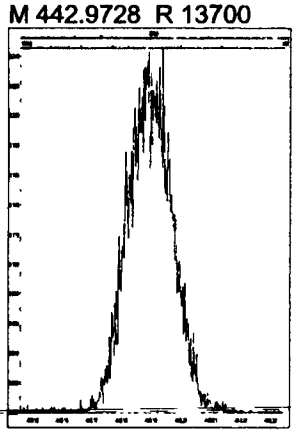
M 416.9760 R 13736



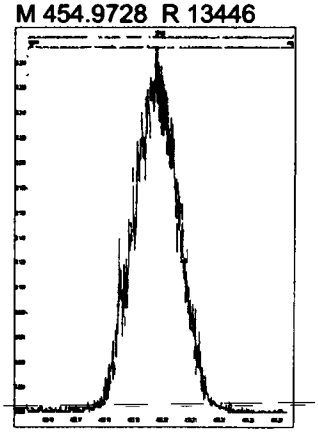
M 430.9728 R 13670



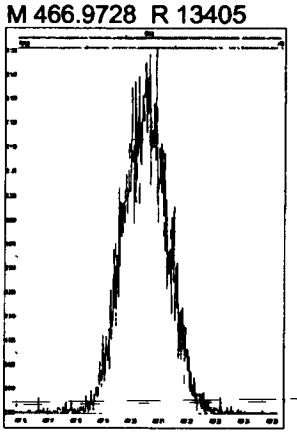
M 442.9728 R 13700



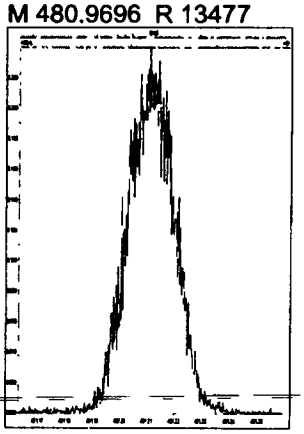
M 454.9728 R 13446



M 466.9728 R 13405

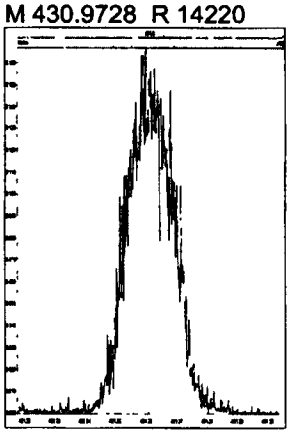


M 480.9696 R 13477

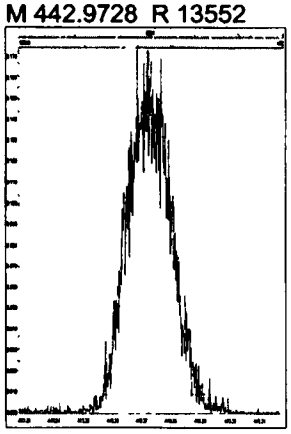


Printed: Thursday, June 20, 2013 09:53:14 Pacific Daylight Time

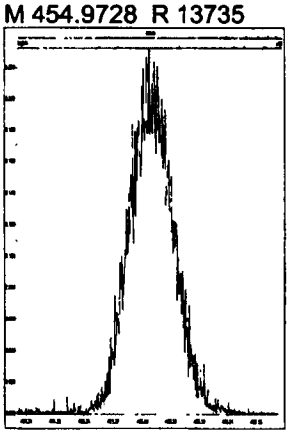
M 430.9728 R 14220



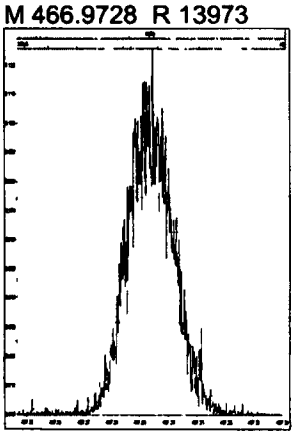
M 442.9728 R 13552



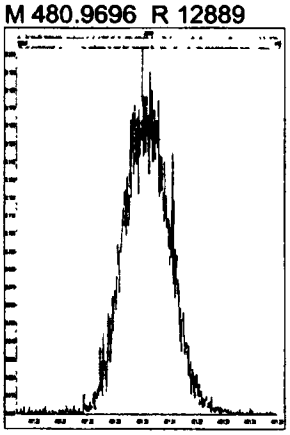
M 454.9728 R 13735



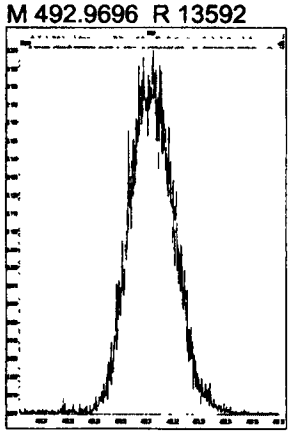
M 466.9728 R 13973



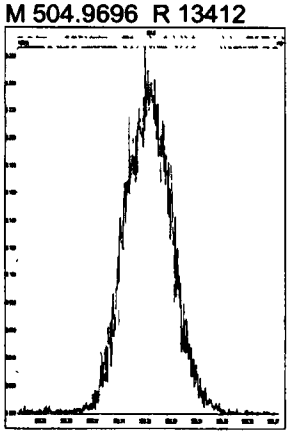
M 480.9696 R 12889



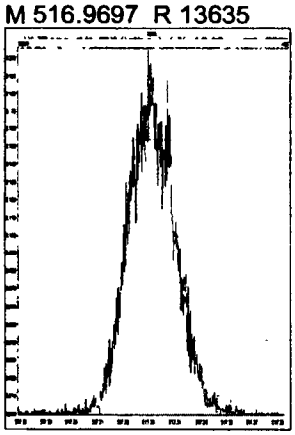
M 492.9696 R 13592



M 504.9696 R 13412

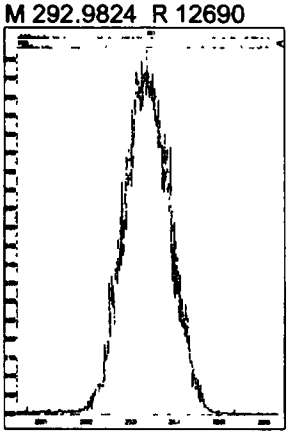


M 516.9697 R 13635

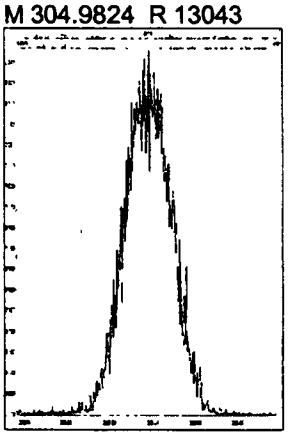


Printed: Thursday, June 20, 2013 19:03:13 Pacific Daylight Time

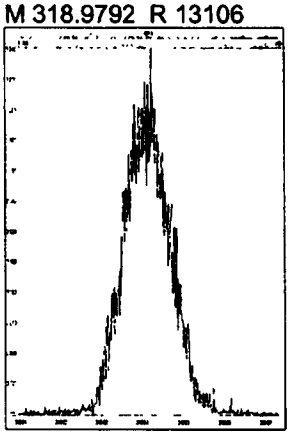
M 292.9824 R 12690



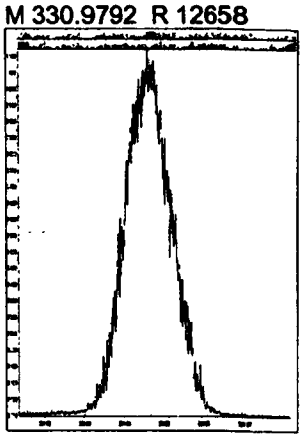
M 304.9824 R 13043



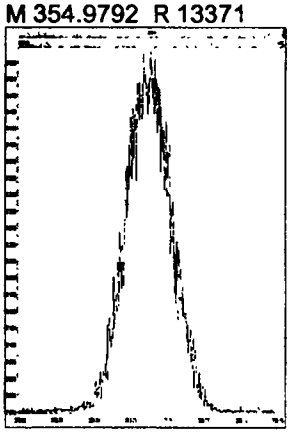
M 318.9792 R 13106



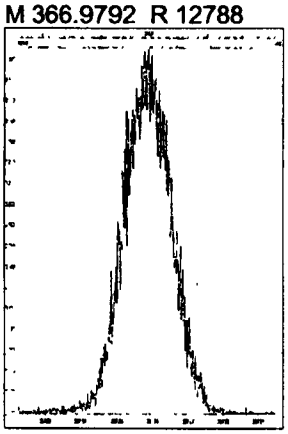
M 330.9792 R 12658



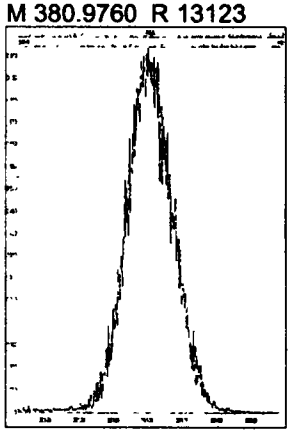
M 354.9792 R 13371



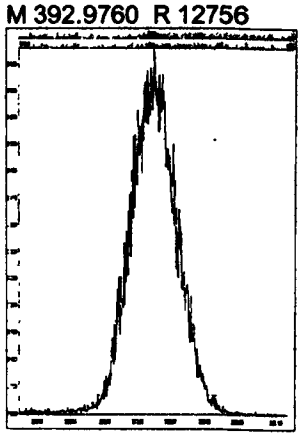
M 366.9792 R 12788



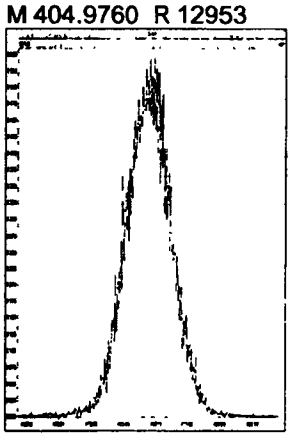
M 380.9760 R 13123



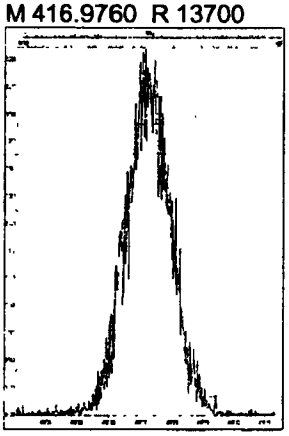
M 392.9760 R 12756



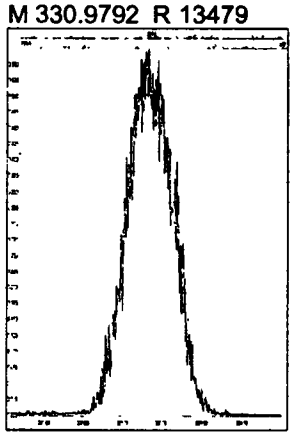
M 404.9760 R 12953



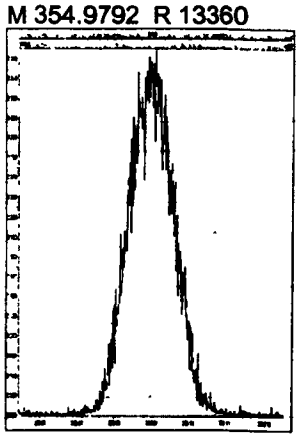
M 416.9760 R 13700



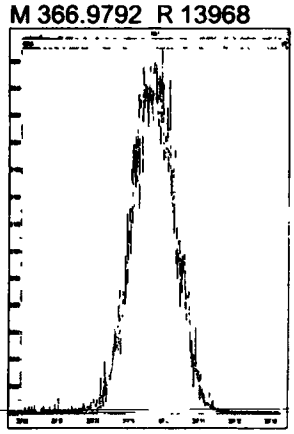
M 330.9792 R 13479



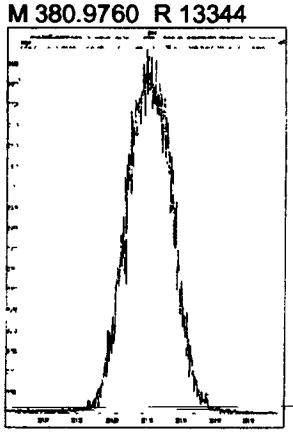
M 354.9792 R 13360



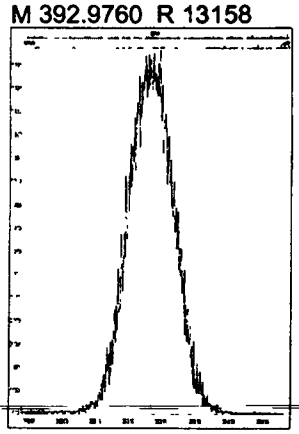
M 366.9792 R 13968



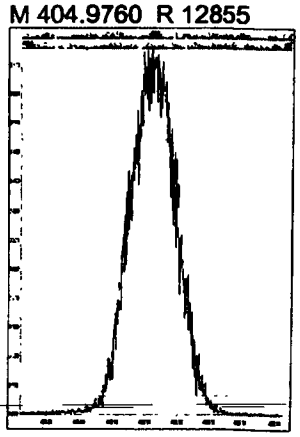
M 380.9760 R 13344



M 392.9760 R 13158

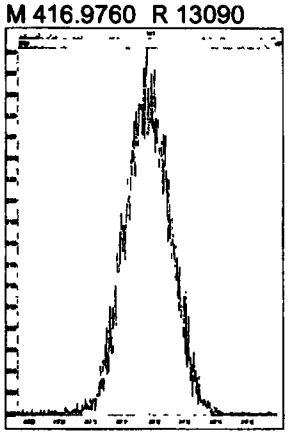


M 404.9760 R 12855

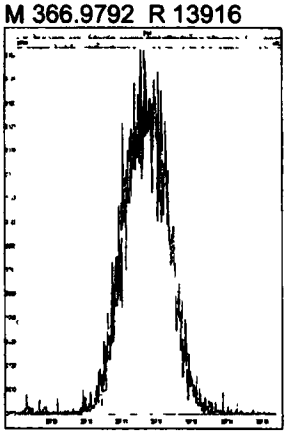


Printed: Thursday, June 20, 2013 19:03:13 Pacific Daylight Time

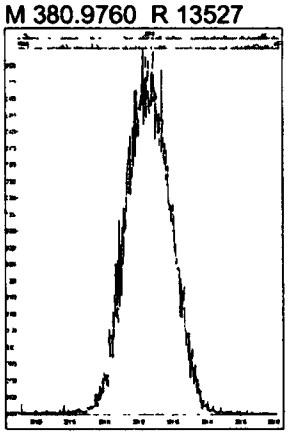
M 416.9760 R 13090



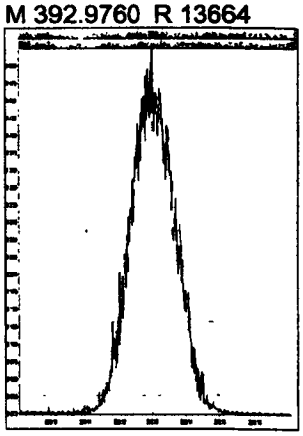
M 366.9792 R 13916



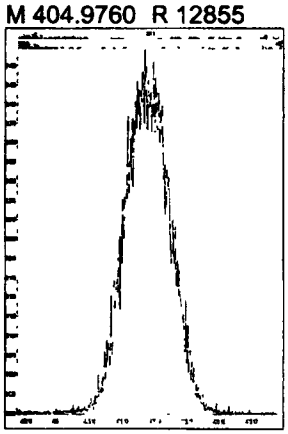
M 380.9760 R 13527



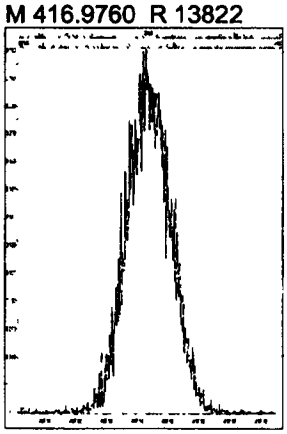
M 392.9760 R 13664



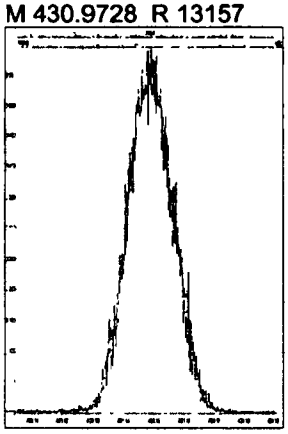
M 404.9760 R 12855



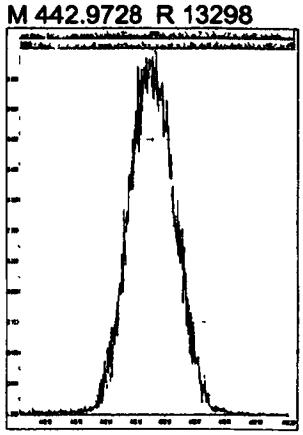
M 416.9760 R 13822



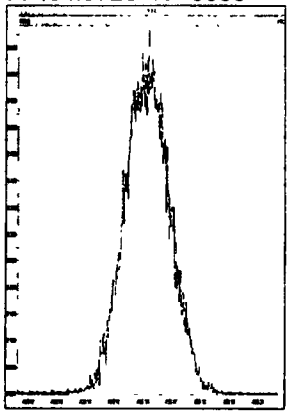
M 430.9728 R 13157



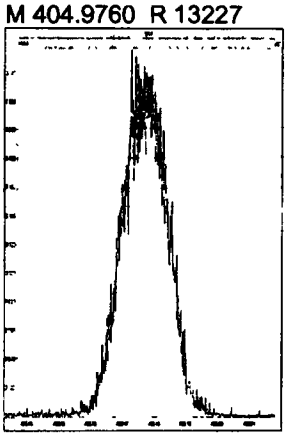
M 442.9728 R 13298



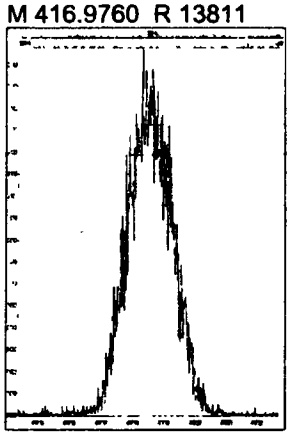
M 454.9728 R 13055



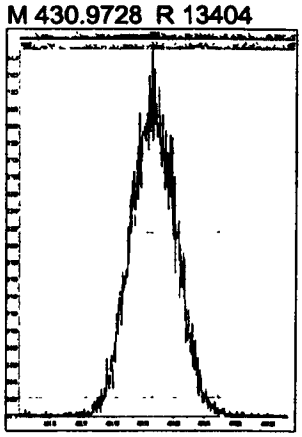
M 404.9760 R 13227



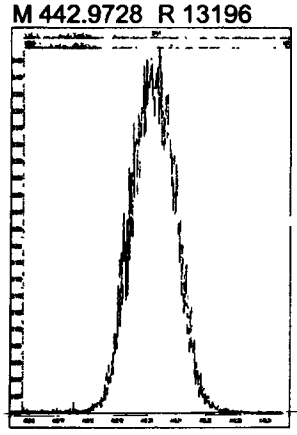
M 416.9760 R 13811



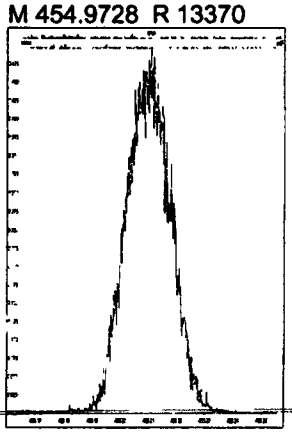
M 430.9728 R 13404



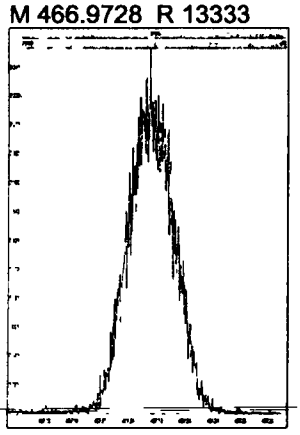
M 442.9728 R 13196



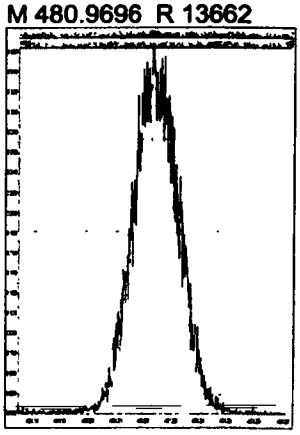
M 454.9728 R 13370



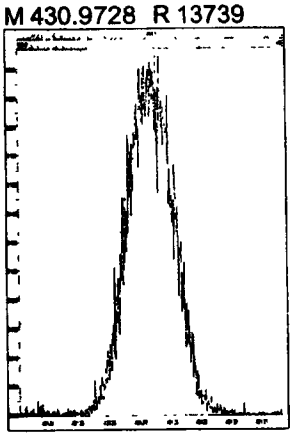
M 466.9728 R 13333



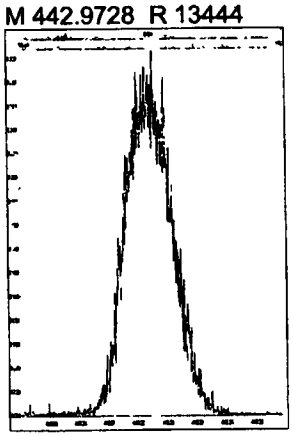
M 480.9696 R 13662



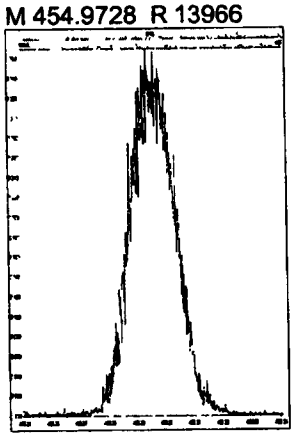
M 430.9728 R 13739



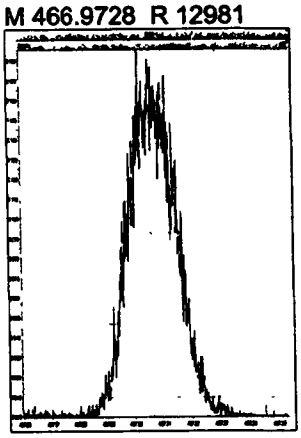
M 442.9728 R 13444



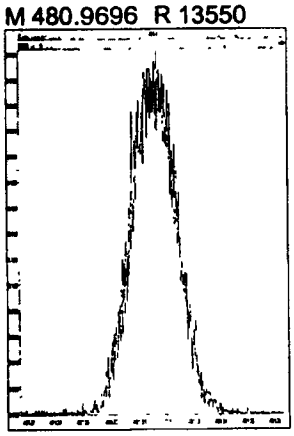
M 454.9728 R 13966



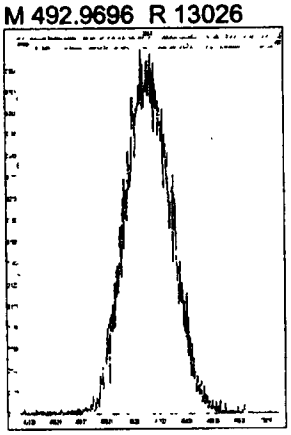
M 466.9728 R 12981



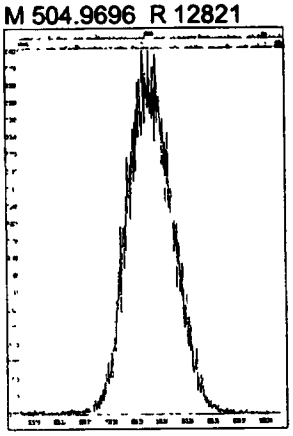
M 480.9696 R 13550



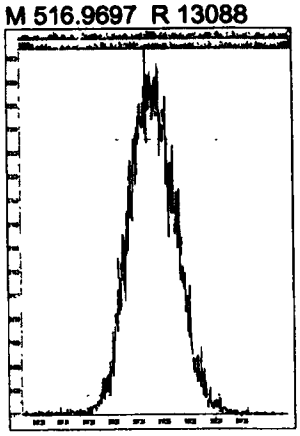
M 492.9696 R 13026

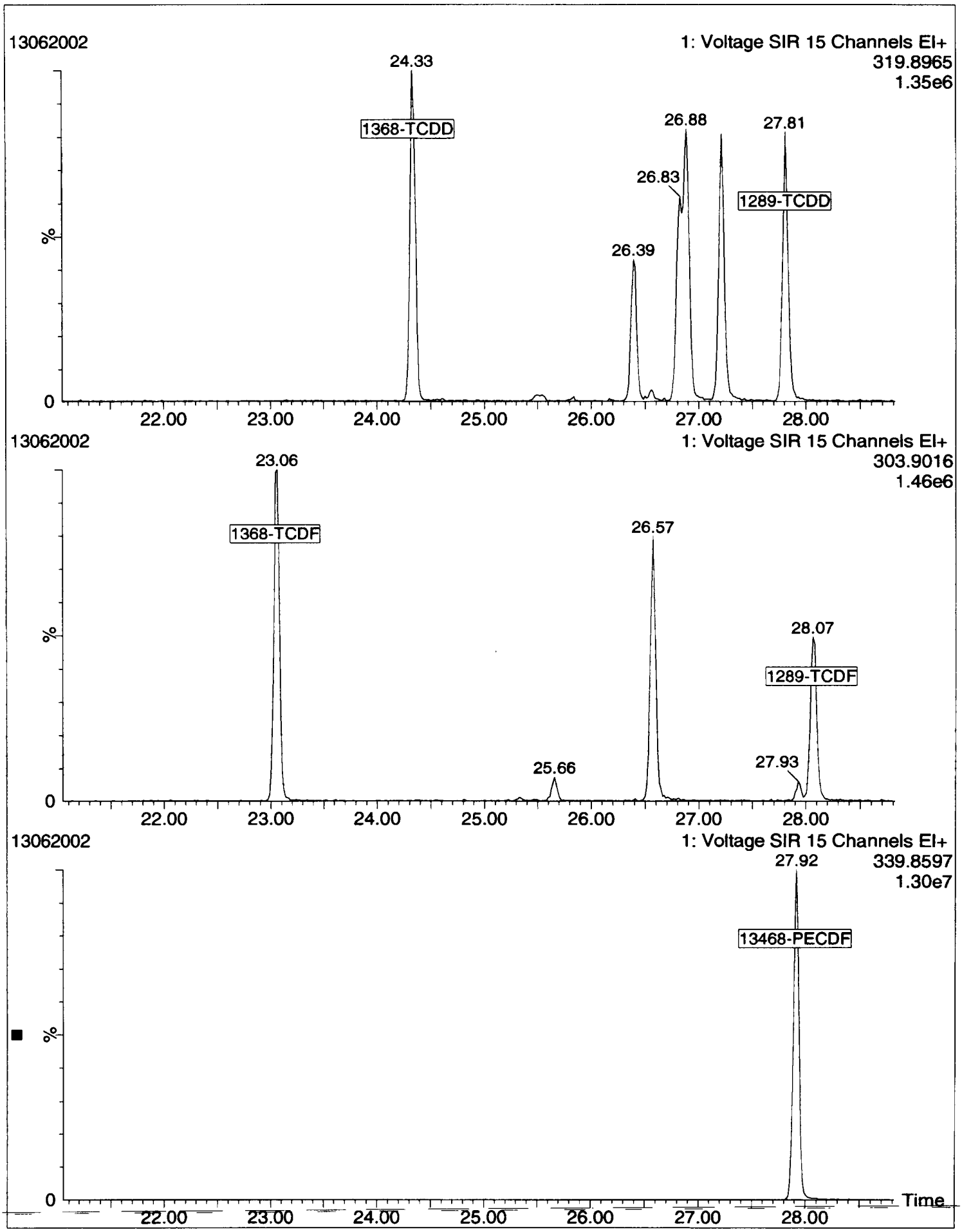


M 504.9696 R 12821

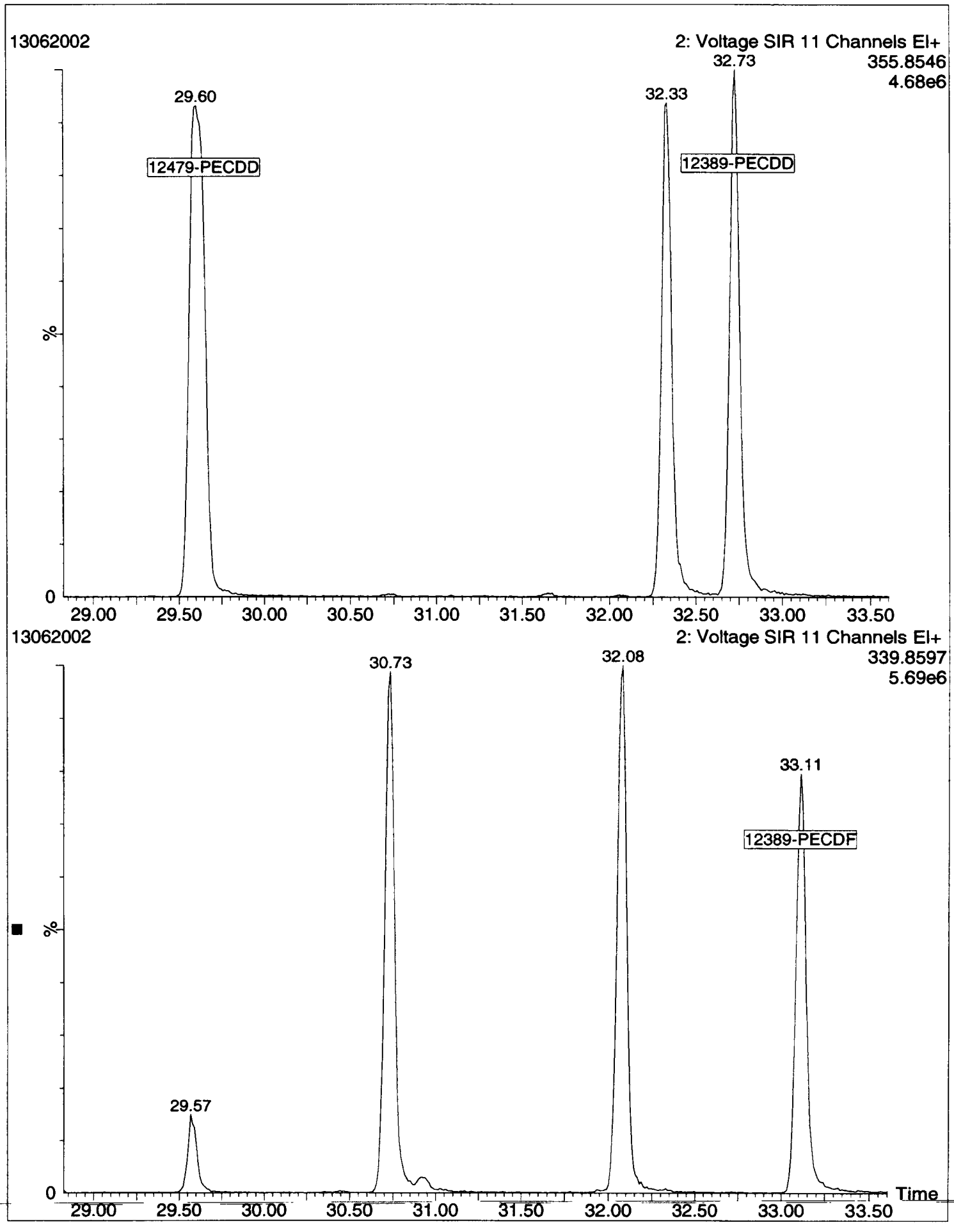


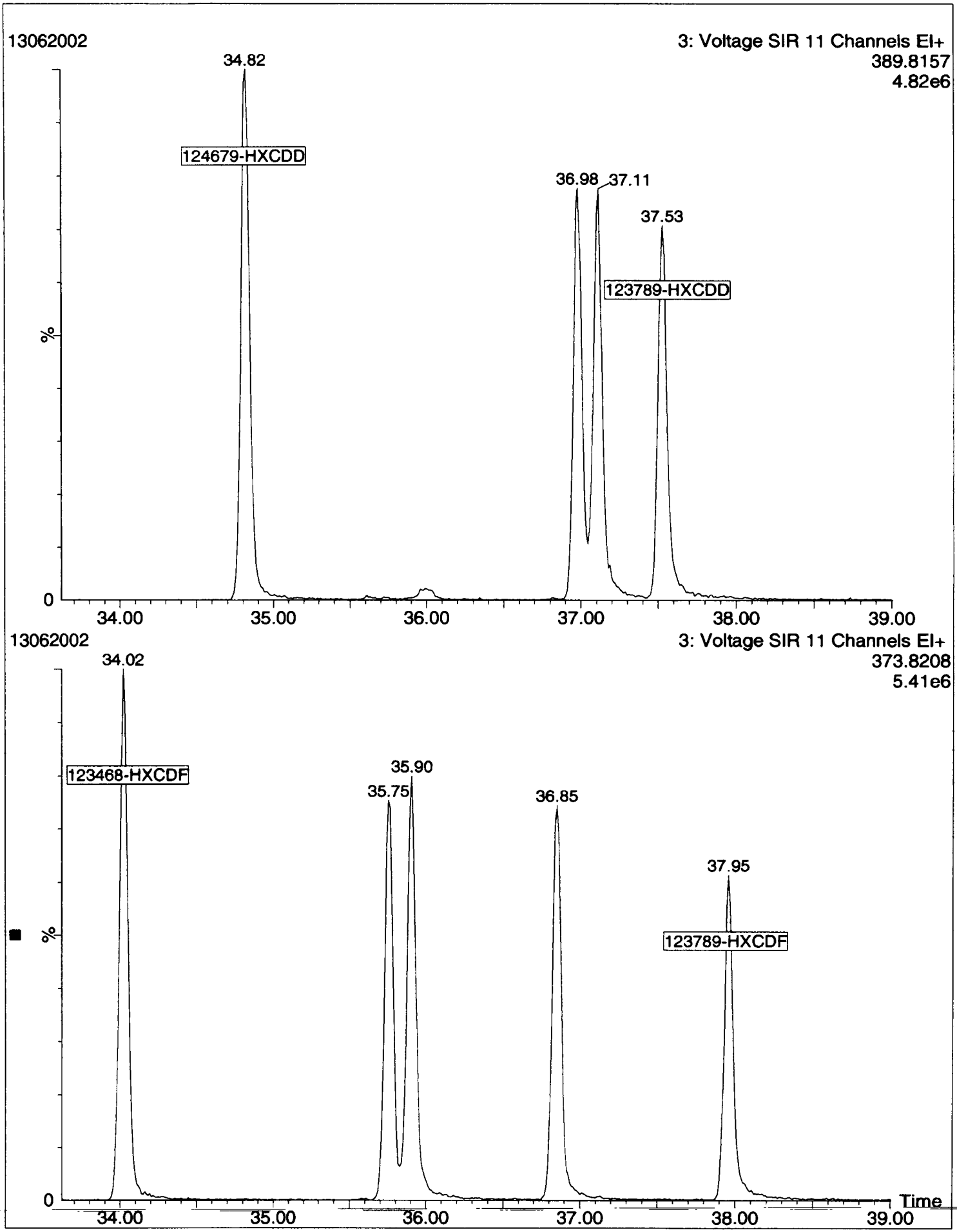
M 516.9697 R 13088

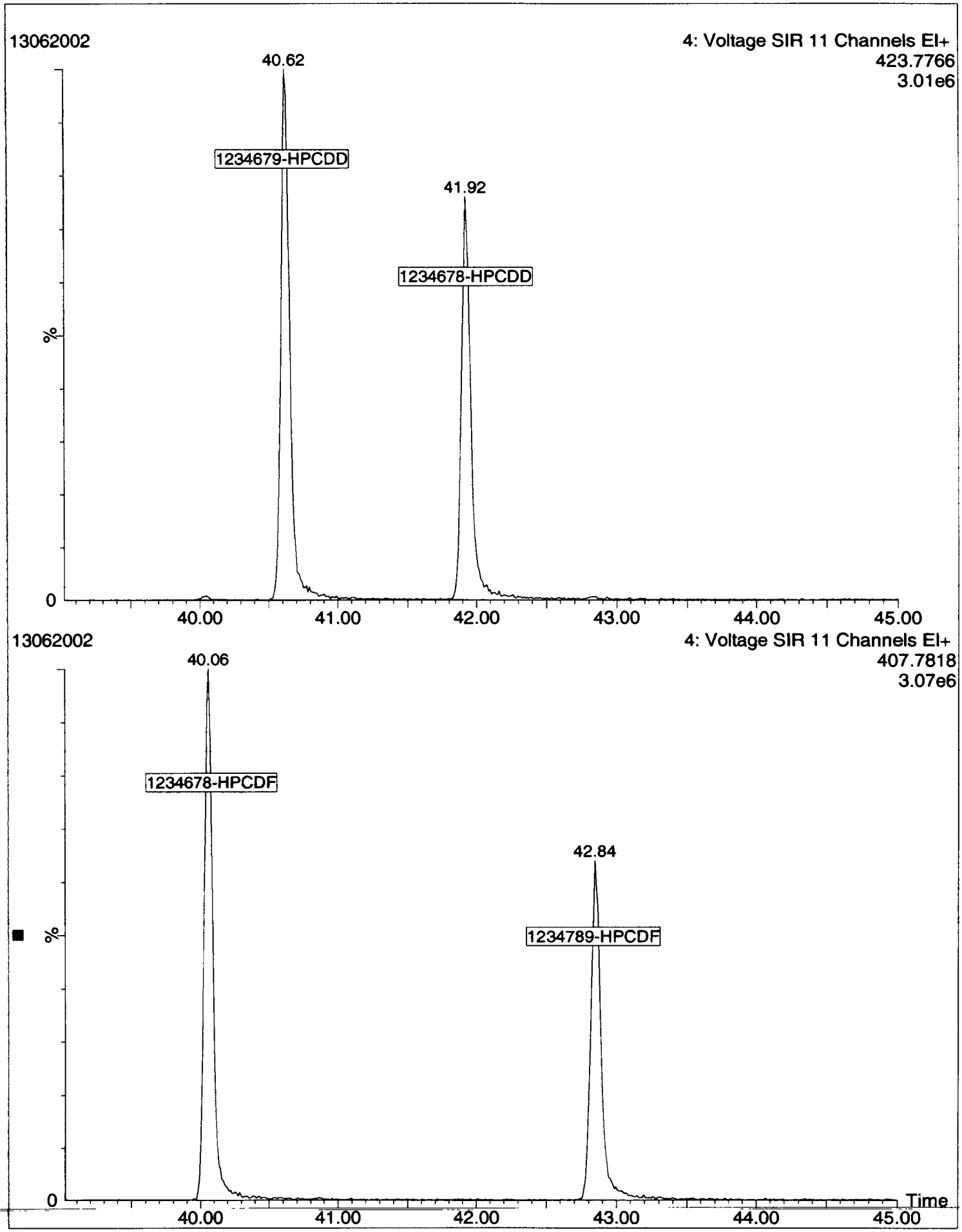



13062002
1: Voltage SIR 15 Channels EI+
319.8965
1.35e6
24.33
1368-TCDD
26.88
27.81
26.83
1289-TCDD
26.39
%
0
22.00
23.00
24.00
25.00
26.00
27.00
28.00
13062002
1: Voltage SIR 15 Channels EI+
303.9016
1.46e6
23.06
1368-TCDF
26.57
28.07
1289-TCDF
25.66
27.93
%
0
22.00
23.00
24.00
25.00
26.00
27.00
28.00
13062002
1: Voltage SIR 15 Channels EI+
339.8597
1.30e7
27.92
13468-PECDF
%
0
Time
22.00
23.00
24.00
25.00
26.00
27.00
28.00

WUTG : 69635


13062002
2: Voltage SIR 11 Channels EI+
355.8546
4.68e6
29.60
12479-PECDD
32.33
32.73
12389-PECDD
%
0
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50
33.00
33.50
13062002
2: Voltage SIR 11 Channels EI+
339.8597
5.69e6
30.73
32.08
33.11
12389-PECDF
29.57
%
0
Time
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50
33.00
33.50


13062002
3: Voltage SIR 11 Channels EI+
389.8157
4.82e6
34.82
124679-HXCDD
36.98
37.11
37.53
123789-HXCDD
%
0
34.00
35.00
36.00
37.00
38.00
39.00
13062002
3: Voltage SIR 11 Channels EI+
373.8208
5.41e6
34.02
123468-HXCDF
35.90
35.75
36.85
37.95
123789-HXCDF
%
0
Time
34.00
35.00
36.00
37.00
38.00
39.00


13062002
4: Voltage SIR 11 Channels EI+
423.7766
3.01e6
40.62
1234679-HPCDD
41.92
1234678-HPCDD
%
0
40.00
41.00
42.00
43.00
44.00
45.00
13062002
4: Voltage SIR 11 Channels EI+
407.7818
3.07e6
40.06
1234678-HPCDF
42.84
1234789-HPCDF
%
0
Time
40.00
41.00
42.00
43.00
44.00
45.00

WUTG : 86636

aset: P:\DIOXIN8290.PRO\130620IC.qld
t Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
ited: Friday, June 21, 2013 09:17:03 Pacific Daylight Time

Process Extract		
Process Integrate		
Process Calibrate		
Process Quantify		
Dataset Created		
Peak deleted	Sample:13062004, Compound:TF, RT:26.556	1
Peak deleted	Sample:13062004, Compound:TF, RT:26.556	1
Peak deleted	Sample:13062004, Compound:TD, RT:27.184	1
Peak deleted	Sample:13062004, Compound:TD, RT:27.184	1
Dataset Saved	Saved to 'P:\DIOXIN8290.PRO\130620IC.qld'	
Pre modification peak	Sample:13062004, Compound:PF, RT:30.720	1
Peak modified	Sample:13062004, Compound:PF, RT:30.720	1
Pre modification peak	Sample:13062004, Compound:OF, RT:48.295	1
Peak modified	Sample:13062004, Compound:OF, RT:48.295	1
Pre modification peak	Sample:13062004, Compound:OF, RT:48.295	1
Peak modified	Sample:13062004, Compound:OF, RT:48.295	1
Pre modification peak	Sample:13062004, Compound:HD, RT:37.089	1
Peak modified	Sample:13062004, Compound:HD, RT:37.089	1
Pre modification peak	Sample:13062004, Compound:HD, RT:37.516	1
Peak modified	Sample:13062004, Compound:HD, RT:37.516	1
Pre modification peak	Sample:13062004, Compound:HPD, RT:41.901	1
Peak modified	Sample:13062004, Compound:HPD, RT:41.901	1
Pre modification peak	Sample:13062004, Compound:OD, RT:48.044	1
Peak modified	Sample:13062004, Compound:OD, RT:48.044	1
Pre modification peak	Sample:13062004, Compound:OD, RT:48.044	1
Peak modified	Sample:13062004, Compound:OD, RT:48.044	1
Dataset Saved	Saved to 'P:\DIOXIN8290.PRO\130620IC.qld'	

Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:47 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 19 Jun 2013 11:39:43
Calibration: 21 Jun 2013 09:11:11

ID: CSL, Name: 13062004, Date: 20-Jun-2013, Time: 12:34:03, Conditions: AUTOSPEC01, User: pk

2378-TCDF					0.771		0.770				
12378-PeCDF	30.709	1.001	3.91e3	2.92e3	0.814	1.339	1.550	53.1	NO	0.499	0.499
23478-PeCDF	32.046	1.000	4.42e3	2.65e3	0.837	1.664	1.550	59.8	NO	0.517	0.517
123478-HxCDF	35.740	1.001	3.20e3	2.45e3	0.967	1.304	1.240	55.3	NO	0.526	0.526
234678-HxCDF	36.836	1.001	2.88e3	2.20e3	1.000	1.307	1.240	47.1	NO	0.451	0.451
123678-HxCDF	35.883	1.000	3.29e3	2.61e3	0.951	1.259	1.240	54.1	NO	0.509	0.509
123789-HxCDF	37.954	1.001	2.09e3	1.57e3	0.874	1.333	1.240	35.9	NO	0.440	0.440
1234678-HpCDF	40.048	1.000	1.94e3	1.82e3	1.072	1.064	1.050	58.5	NO	0.416	0.416
1234789-HpCDF	42.821	1.000	1.49e3	1.61e3	1.085	0.928	1.050	44.1	NO	0.467	0.467
OCDF	48.295	1.006	2.66e3	2.95e3	0.878	0.905	0.890	26.0	NO	0.933	0.933
2378-TCDD					0.936		0.770				
12378-PeCDD	32.309	1.001	3.72e3	2.22e3	0.894	1.677	1.550	49.0	NO	0.529	0.529
123478-HxCDD	36.968	1.001	2.91e3	2.05e3	0.898	1.420	1.240	28.7	NO	0.522	0.522
123678-HxCDD	37.089	1.000	2.62e3	1.96e3	0.818	1.339	1.240	24.6	NO	0.468	0.468
123789-HxCDD	37.516	1.012	2.42e3	1.76e3	0.789	1.380	1.240	23.1	NO	0.469	0.469
1234678-HpCDD	41.911	1.000	1.59e3	1.63e3	0.879	0.978	1.050	24.9	NO	0.456	0.456
OCDD	48.044	1.001	2.64e3	3.19e3	0.875	0.827	0.890	69.2	NO	0.972	0.972
13C-2378-TCDF	26.527	1.007	9.91e5	1.30e6	1.190	0.762	0.770	5699.6	NO		100.147
13C-12378-PeCDF	30.687	1.165	1.01e6	6.72e5	0.904	1.500	1.550	3834.6	NO		96.592
13C-23478-PeCDF	32.035	1.216	9.93e5	6.40e5	0.877	1.551	1.550	3828.8	NO		96.785
13C-123478-HxCDF	35.718	0.953	3.68e5	7.42e5	1.096	0.496	0.510	1462.9	NO		96.060
13C-123678-HxCDF	35.872	0.957	4.04e5	8.14e5	1.187	0.496	0.510	1583.2	NO		97.300
13C-234678-HxCDF	36.814	0.982	3.76e5	7.50e5	1.040	0.501	0.510	1475.5	NO		102.739
13C-123789-HxCDF	37.933	1.012	3.14e5	6.40e5	0.941	0.491	0.510	1211.4	NO		96.125
13C-1234678-HpCDF	40.037	1.068	2.55e5	5.87e5	0.825	0.434	0.440	1226.5	NO		96.631
13C-1234789-HpCDF	42.821	1.142	1.82e5	4.30e5	0.609	0.423	0.440	735.1	NO		95.354
13C-1234-TCDD	26.347	0.000	8.39e5	1.09e6	1.000	0.773	0.770	1459.7	NO		100.000
13C-2378-TCDD	27.169	1.031	7.65e5	9.86e5	0.920	0.776	0.770	1328.9	NO		98.967
13C-12378-PeCDD	32.287	1.225	7.64e5	4.90e5	0.669	1.559	1.550	3950.8	NO		97.331
13C-123478-HxCDD	36.946	0.985	5.82e5	4.75e5	1.032	1.225	1.240	2623.5	NO		97.140
13C-123678-HxCDD	37.078	0.989	6.68e5	5.31e5	1.146	1.257	1.240	2814.0	NO		99.242
13C-1234678-HpCDD	41.901	1.118	4.09e5	3.94e5	0.789	1.036	1.050	2429.1	NO		96.467
13C-OCDD	47.999	1.280	6.38e5	7.32e5	0.696	0.872	0.890	2166.8	NO		186.526

Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:47 Pacific Daylight Time

ID: CSL, Name: 13062004, Date: 20-Jun-2013, Time: 12:34:03, Conditions: AUTOSPEC01, User: pk

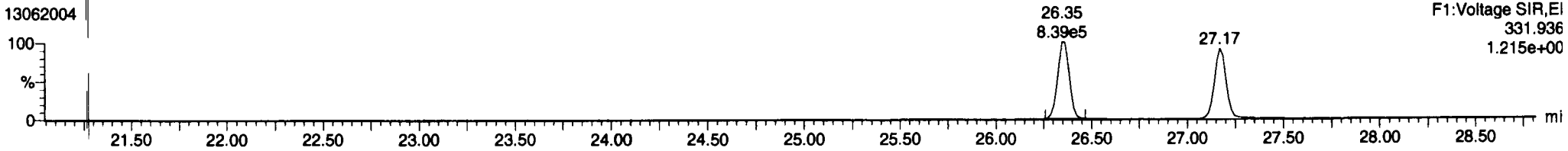
13C-123789-HxCDD	37.494	0.000	5.84e5	4.71e5	1.000	1.241	1.240	2572.0	NO		100.000
Total-tetrafurans			1.78e2		0.771						0.031
Total-penta1			0.00e0								
Total-pentafurans			8.52e3		0.826						1.055
Total-hexafurans			1.15e4		0.948						1.926
Total-heptafurans			3.43e3		1.079						0.883
Total-Furans			2.63e4		0.925						4.840
Total-tetradioxins			2.42e3		0.936						0.184
Total-pentadioxins			5.44e3		0.894						0.715
Total-hexadioxins			9.94e3		0.835						1.717
Total-heptadioxins			1.59e3		0.879						0.456
Total-Dioxins			2.22e4		0.870						4.067
Total-TEQ			4.85e4								8.907
37CL-2378-TCDD	27.199	1.032	2.06e3		1.000			15.8			0.107
FUNCTION1 PFK			6.33e5								
FUNCTION2 PFK			2.63e5								0.000
FUNCTION3 PFK			9.12e4								0.000
FUNCTION4 PFK			7.46e5								
FUNCTION5 PFK			6.89e4								
FUNCTION1 HXCDPE			7.38e1								0.000
FUNCTION1 HPCDPE			1.31e3								0.000
FUNCTION2 HPCDPE			6.06e2								0.000
FUNCTION3 OCDPE			1.12e2								0.000
FUNCTION4 NCDPE			7.37e1								0.000
FUNCTION5 DCDPE			0.00e0								

Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:47 Pacific Daylight Time

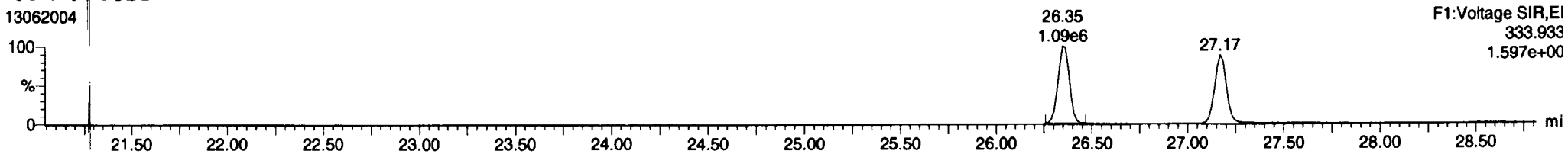
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 19 Jun 2013 11:39:43
Calibration: 21 Jun 2013 09:11:11

ID: CSL, Name: 13062004, Date: 20-Jun-2013, Time: 12:34:03, Conditions: AUTOSPEC01, User: pk

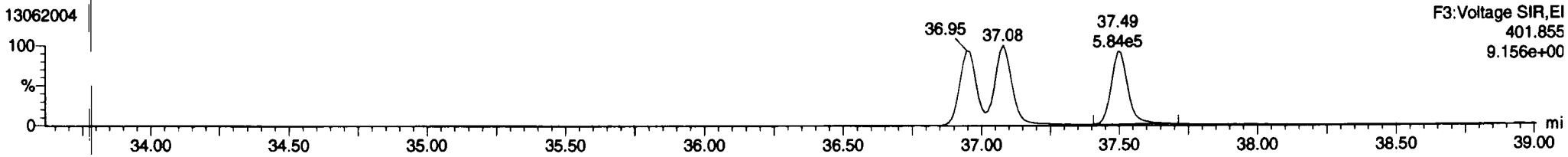
13C-1234-TCDD



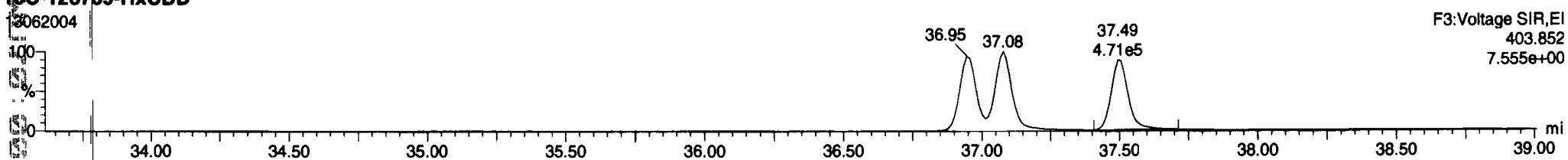
13C-1234-TCDD



13C-123789-HxCDD



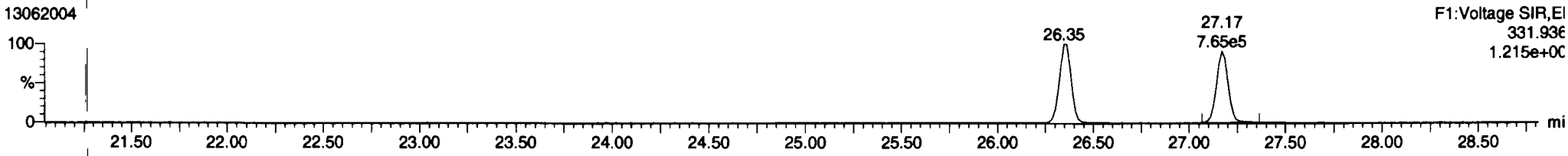
13C-123789-HxCDD



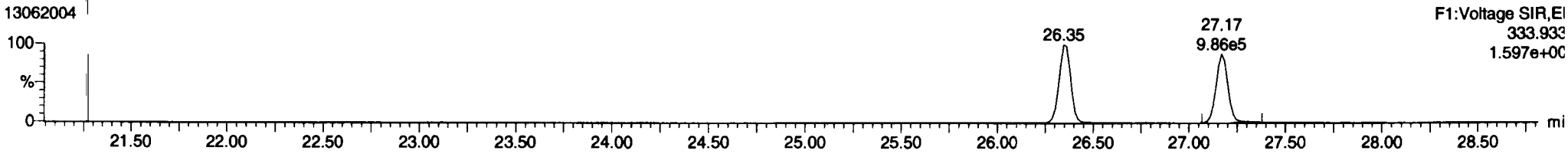
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:47 Pacific Daylight Time

ID: CSL, Name: 13062004, Date: 20-Jun-2013, Time: 12:34:03, Conditions: AUTOSPEC01, User: pk

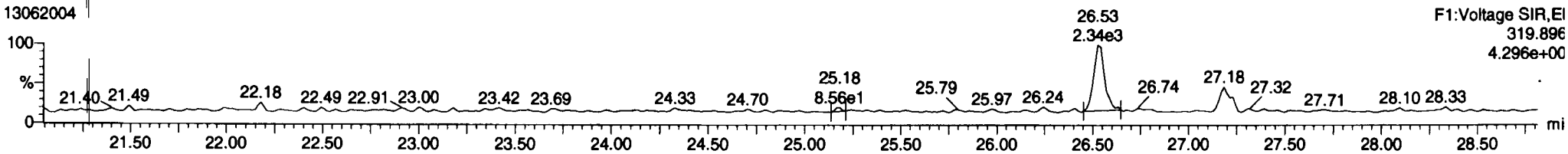
13C-2378-TCDD



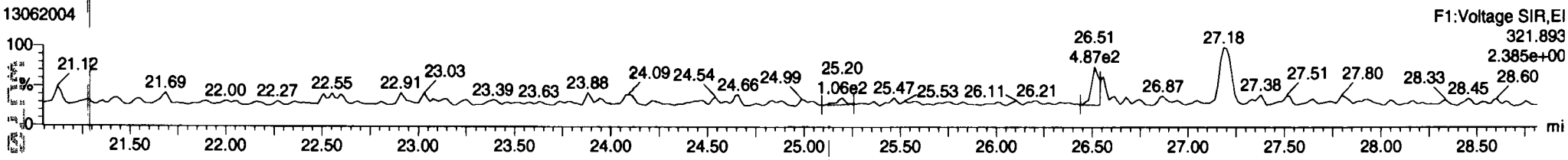
13C-2378-TCDD



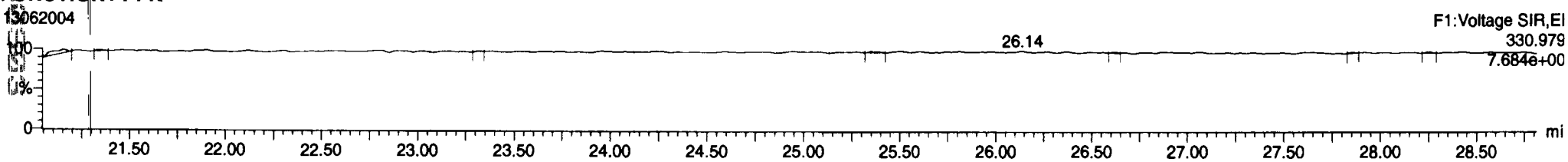
Total-tetradioxins



Total-tetradioxins



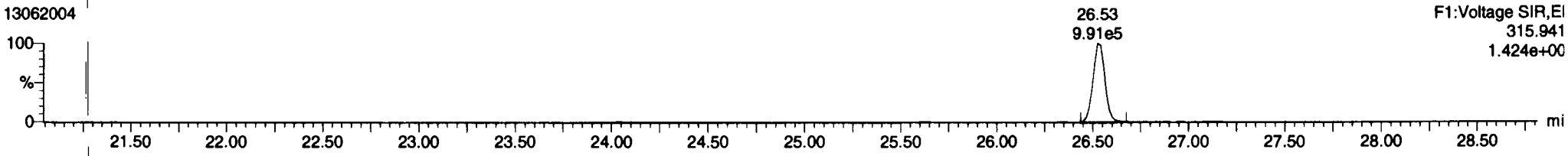
FUNCTION1 PFK



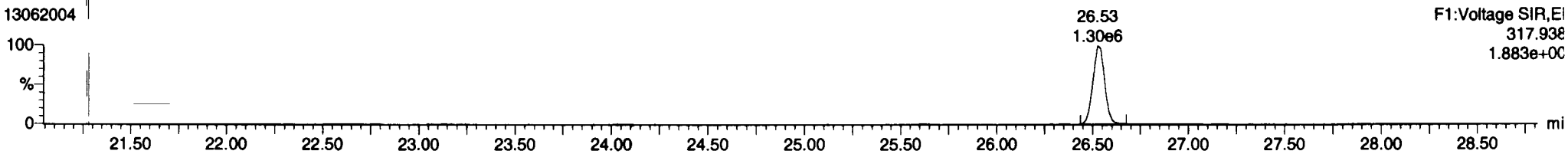
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:47 Pacific Daylight Time

ID: CSL, Name: 13062004, Date: 20-Jun-2013, Time: 12:34:03, Conditions: AUTOSPEC01, User: pk

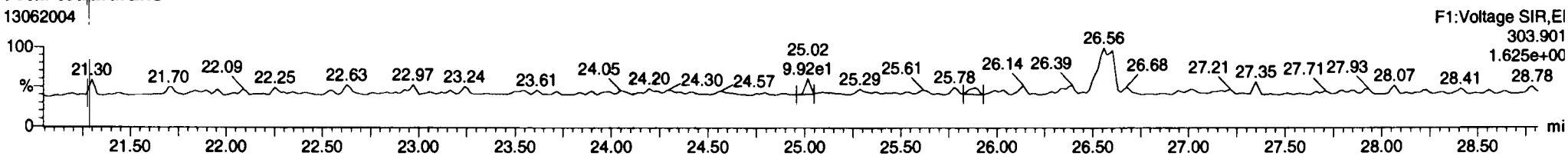
13C-2378-TCDF



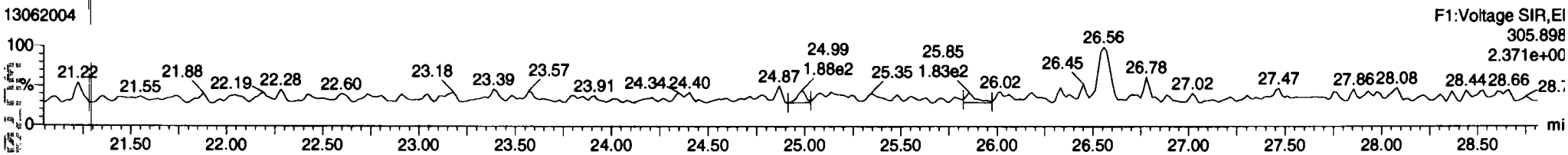
13C-2378-TCDF



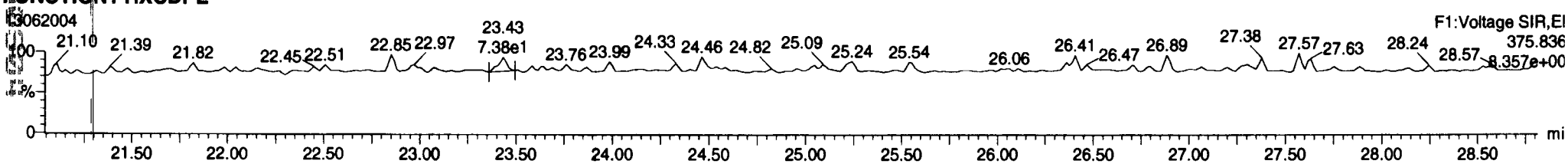
Total-tetrafurans



Total-tetrafurans



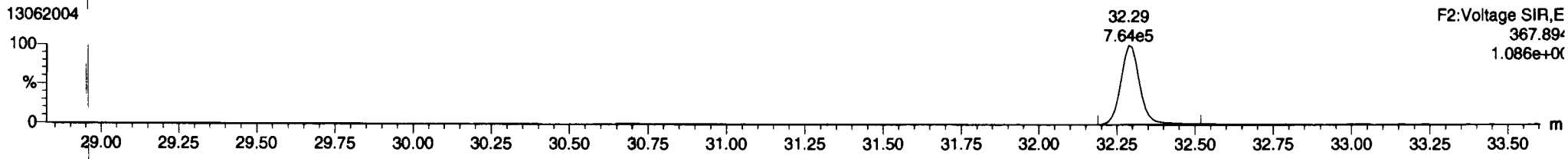
FUNCTION1 HXCDPE



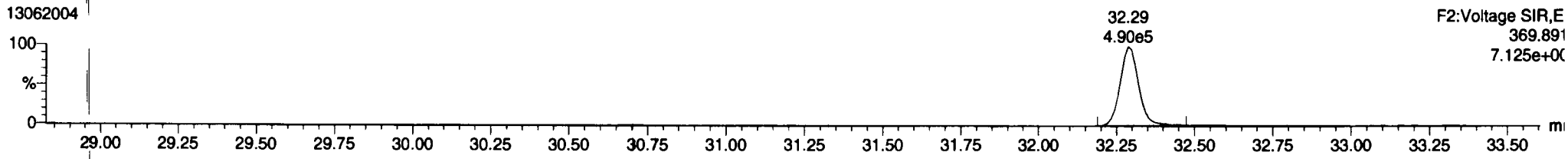
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:47 Pacific Daylight Time

ID: CSL, Name: 13062004, Date: 20-Jun-2013, Time: 12:34:03, Conditions: AUTOSPEC01, User: pk

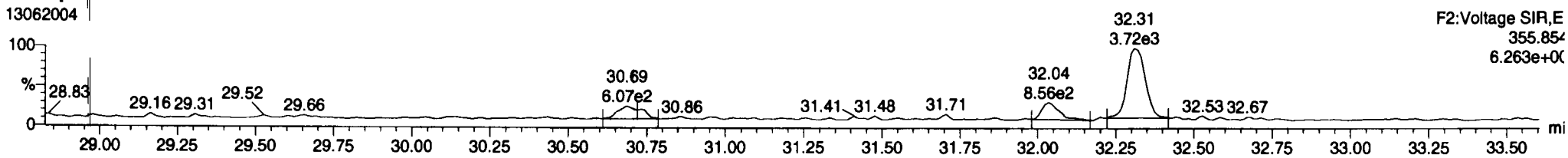
13C-12378-PeCDD



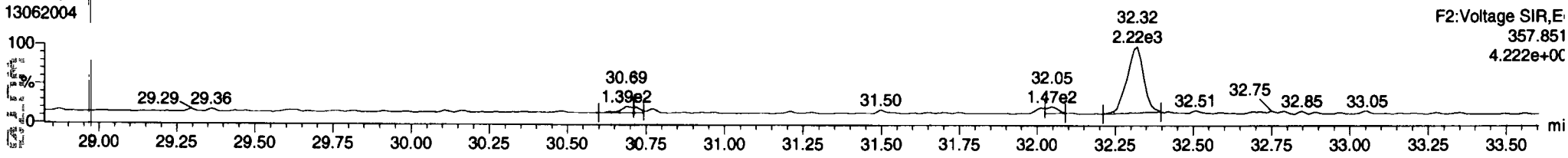
13C-12378-PeCDD



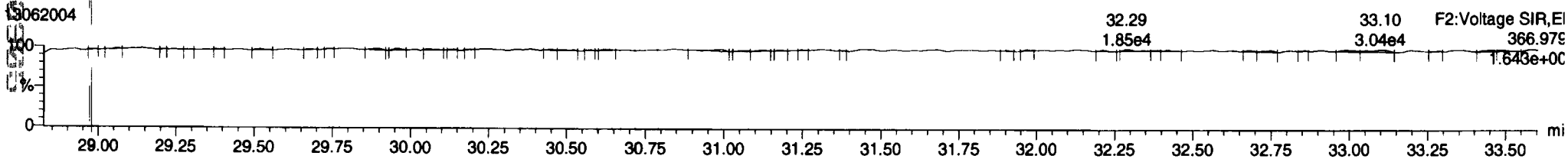
Total-pentadioxins



Total-pentadioxins



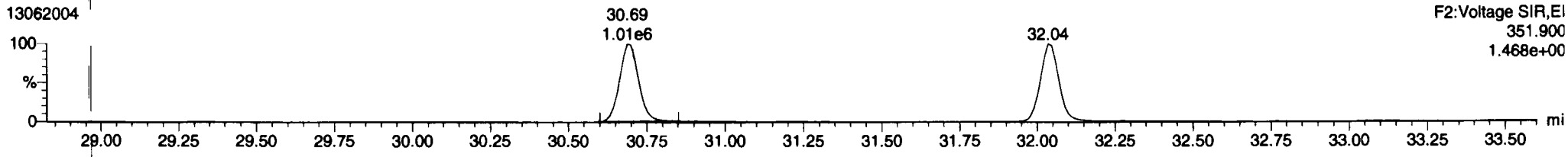
FUNCTION2 PFK



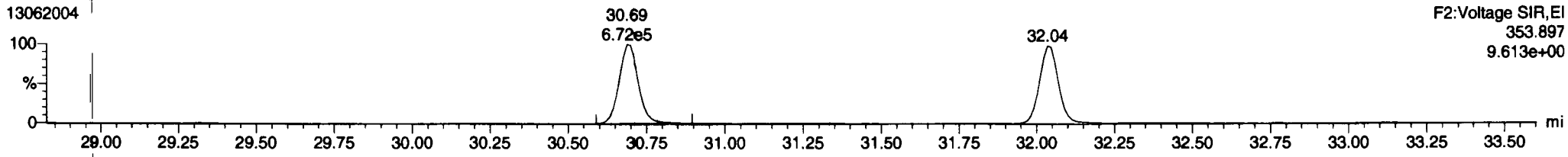
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:47 Pacific Daylight Time

ID: CSL, Name: 13062004, Date: 20-Jun-2013, Time: 12:34:03, Conditions: AUTOSPEC01, User: pk

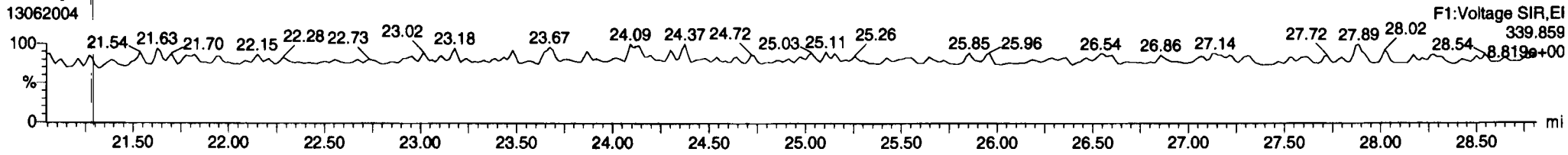
13C-12378-PeCDF



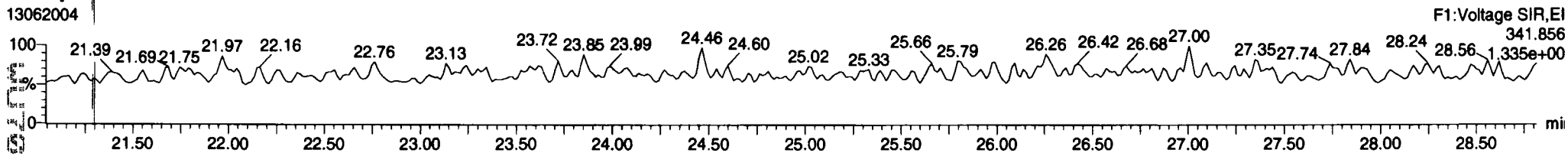
13C-12378-PeCDF



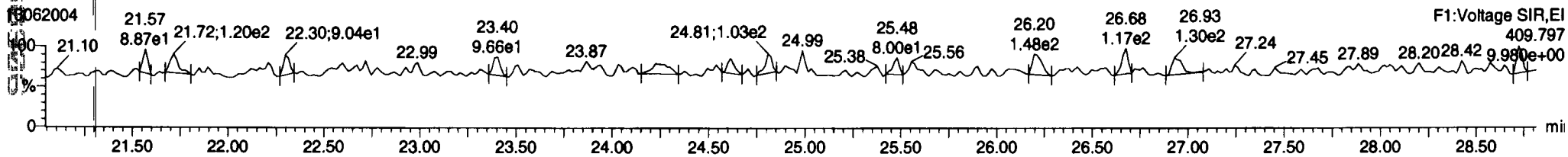
Total-penta1



Total-penta1



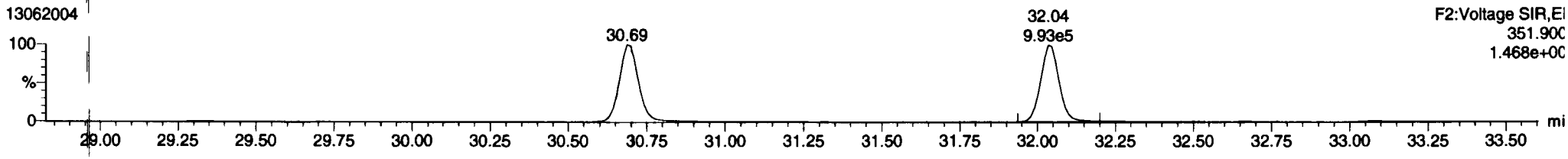
FUNCTION1 HPCDPE



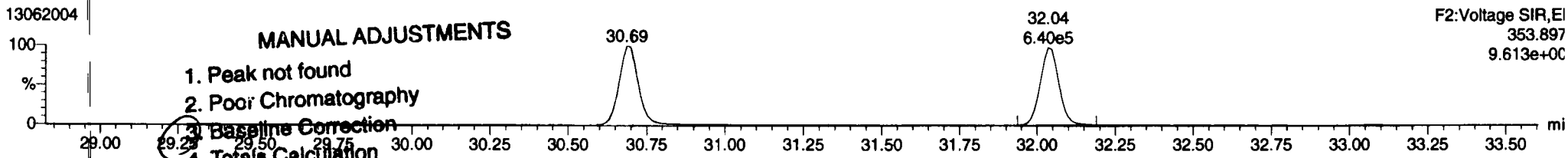
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:47 Pacific Daylight Time

ID: CSL, Name: 13062004, Date: 20-Jun-2013, Time: 12:34:03, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF



13C-23478-PeCDF

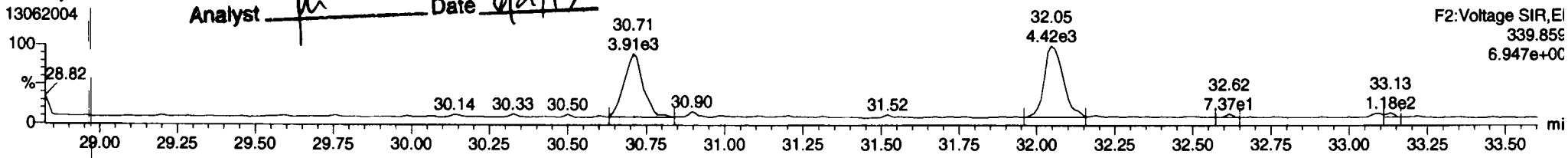


MANUAL ADJUSTMENTS

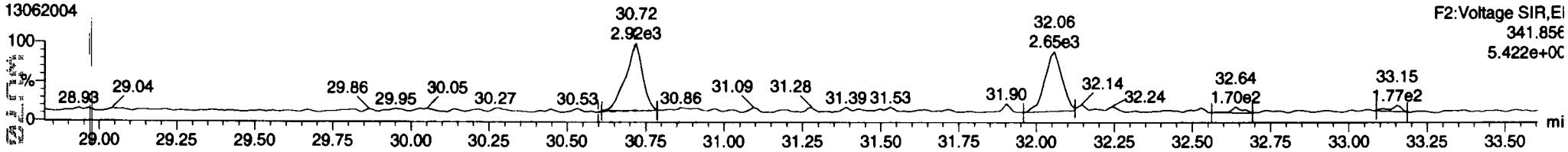
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other

Analyst _____ Date 6/21/13

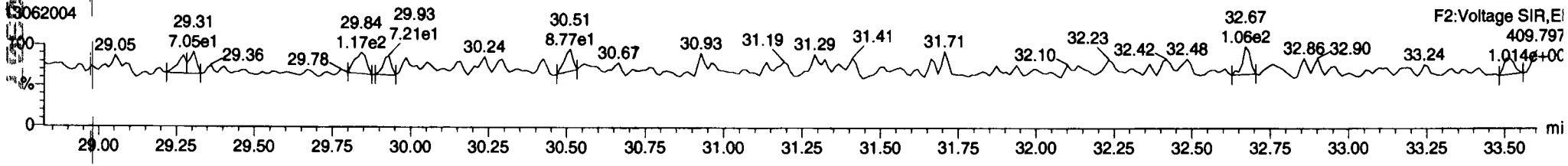
Total-pentafurans



Total-pentafurans



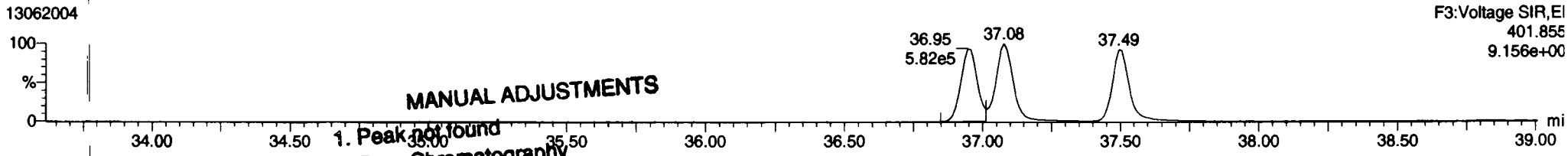
FUNCTION2 HPCDPE



Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:47 Pacific Daylight Time

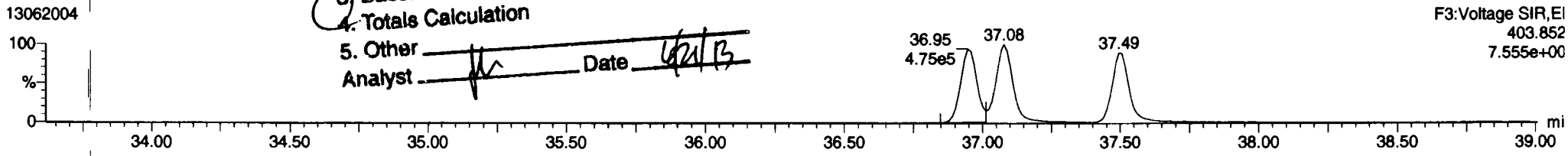
ID: CSL, Name: 13062004, Date: 20-Jun-2013, Time: 12:34:03, Conditions: AUTOSPEC01, User: pk

13C-123478-HxCDD

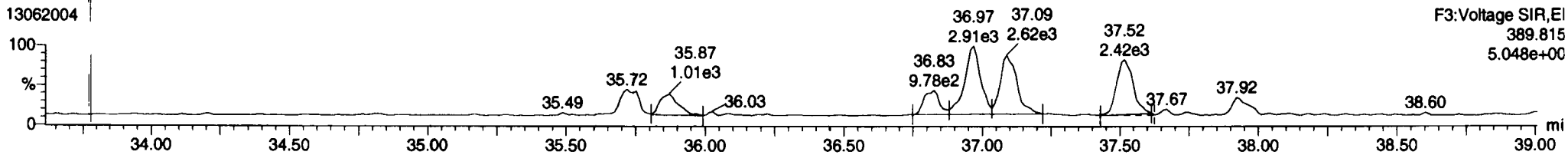


MANUAL ADJUSTMENTS
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other
Analyst _____ Date 6/21/13

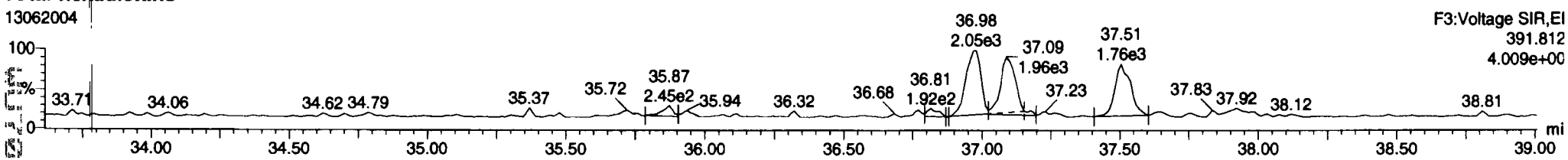
13C-123478-HxCDD



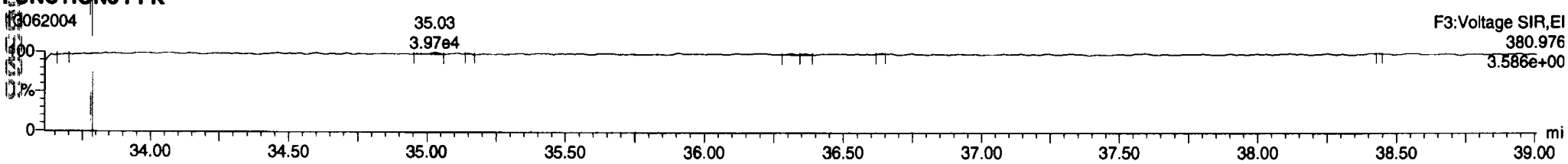
Total-hexadioxins



Total-hexadioxins



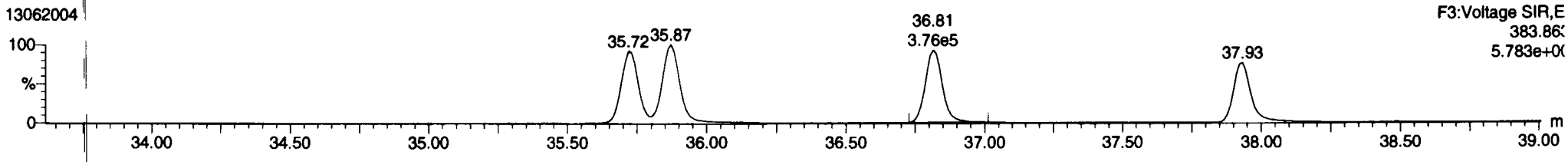
FUNCTION3 PFK



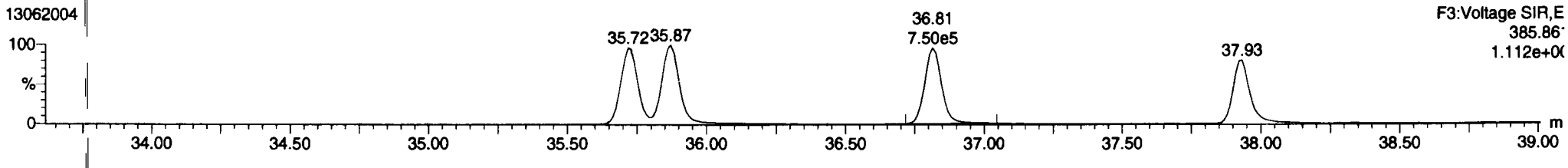
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:47 Pacific Daylight Time

ID: CSL, Name: 13062004, Date: 20-Jun-2013, Time: 12:34:03, Conditions: AUTOSPEC01, User: pk

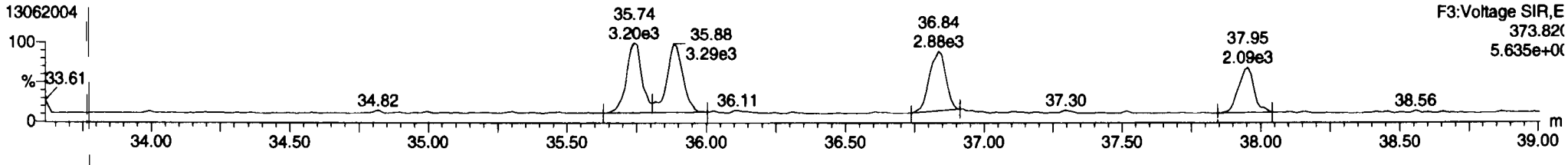
13C-234678-HxCDF



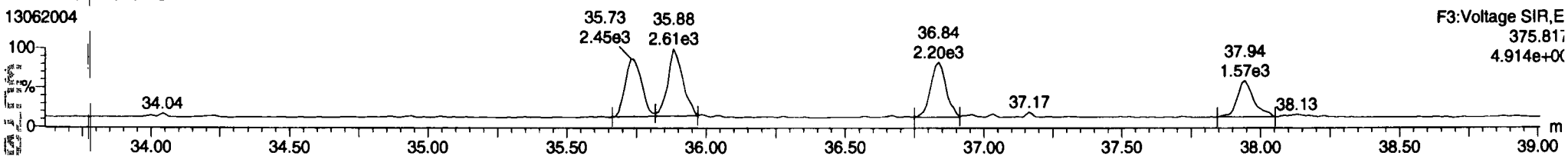
13C-234678-HxCDF



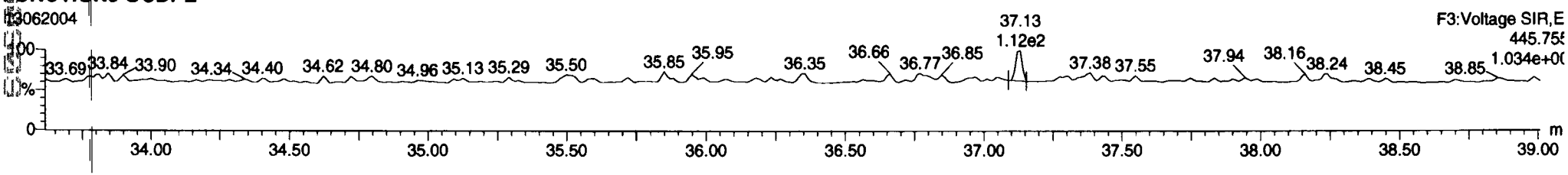
Total-hexafurans



Total-hexafurans



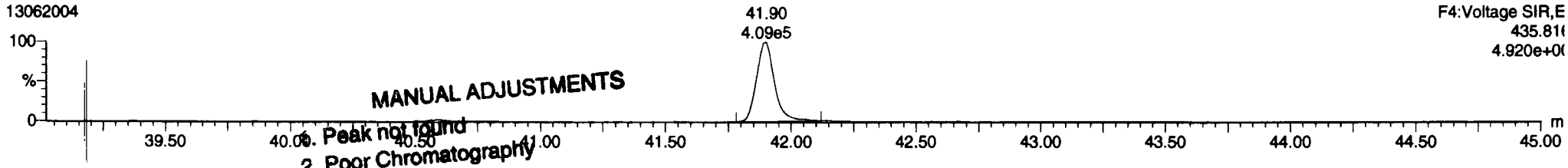
FUNCTION3 OCDPE



Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:47 Pacific Daylight Time

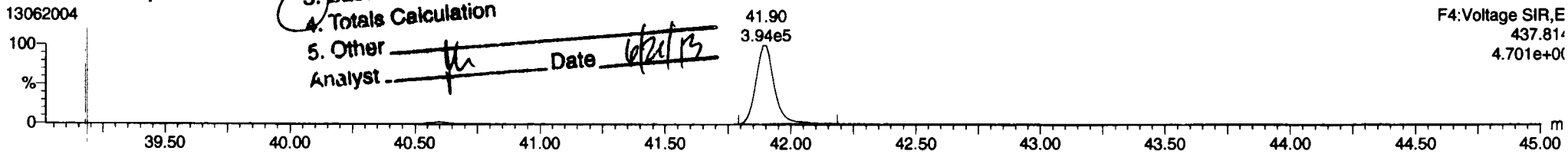
ID: CSL, Name: 13062004, Date: 20-Jun-2013, Time: 12:34:03, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDD

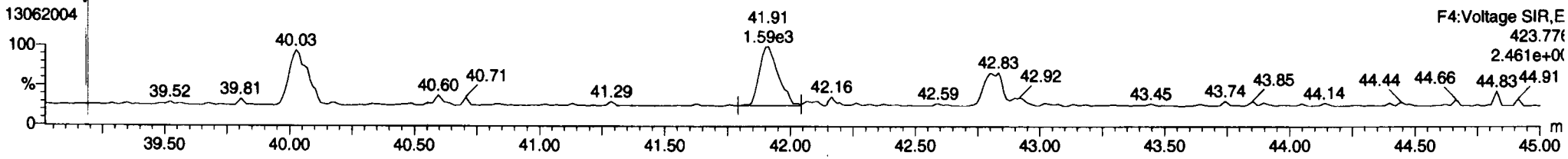


MANUAL ADJUSTMENTS
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other
Analyst
Date 6/21/13

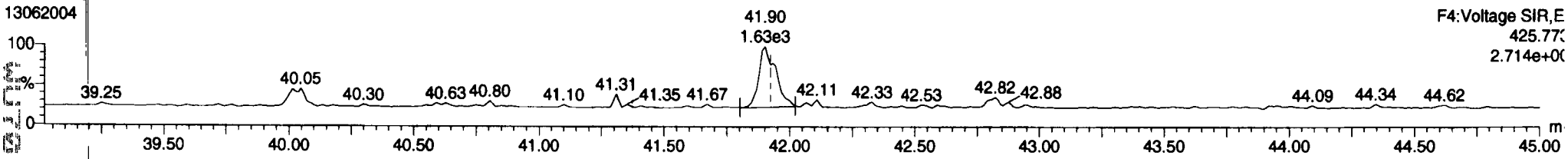
13C-1234678-HpCDD



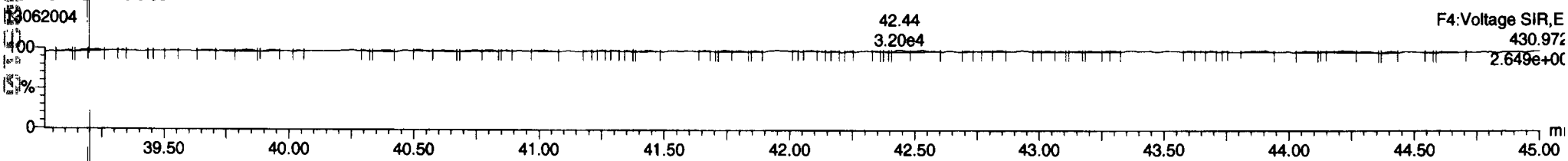
Total-heptadioxins



Total-heptadioxins



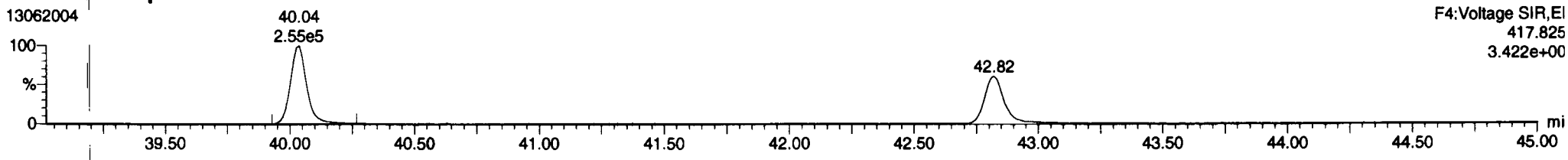
FUNCTION4 PFK



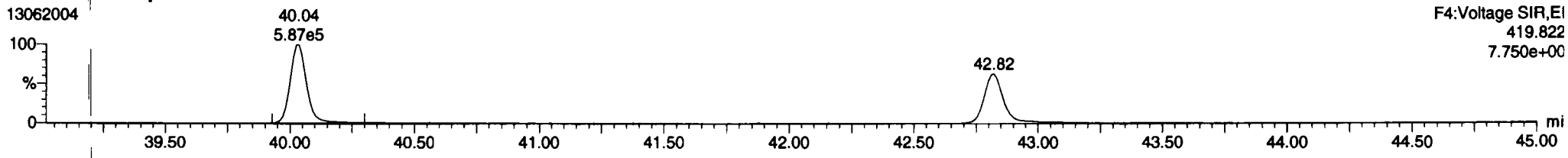
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:47 Pacific Daylight Time

ID: CSL, Name: 13062004, Date: 20-Jun-2013, Time: 12:34:03, Conditions: AUTOSPEC01, User: pk

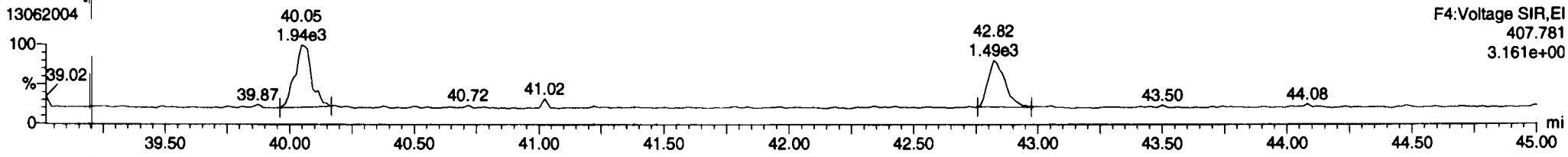
13C-1234678-HpCDF



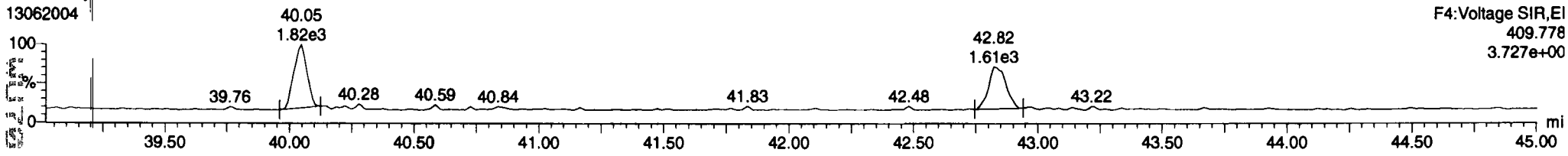
13C-1234678-HpCDF



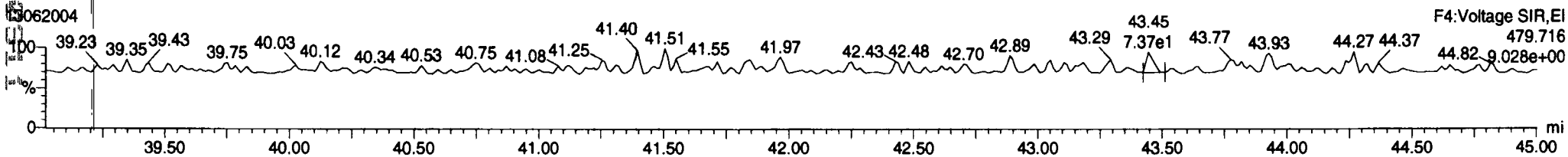
Total-heptafurans



Total-heptafurans



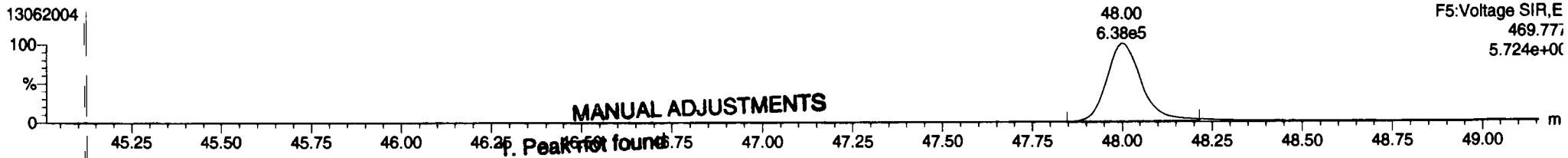
FUNCTION4 NCDPE



Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:47 Pacific Daylight Time

ID: CSL, Name: 13062004, Date: 20-Jun-2013, Time: 12:34:03, Conditions: AUTOSPEC01, User: pk

13C-OCDD

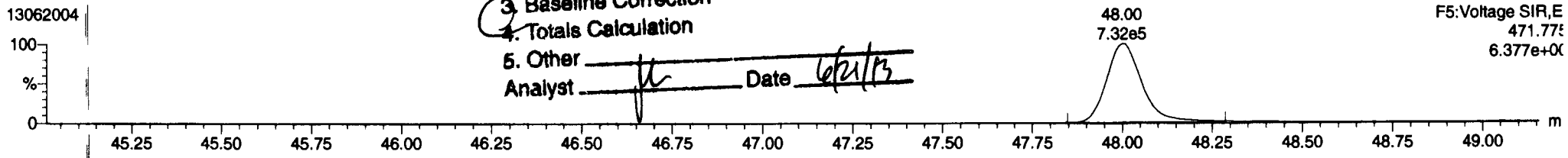


MANUAL ADJUSTMENTS

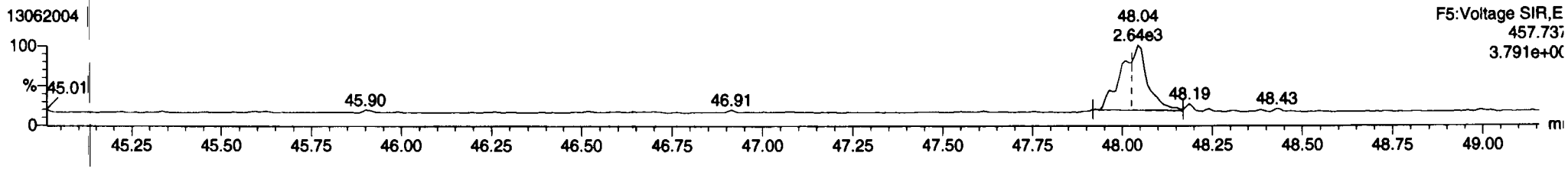
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other

Analyst _____ Date 6/21/13

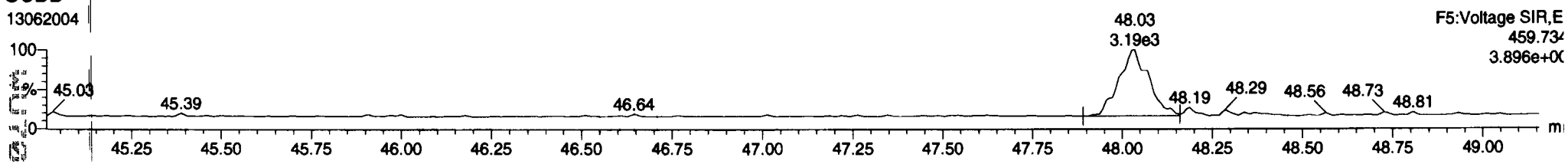
13C-OCDD



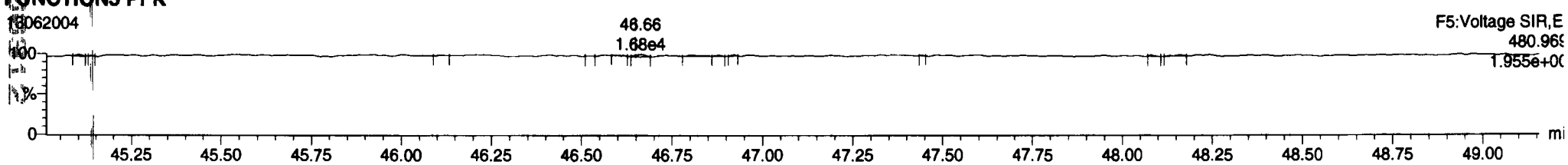
OCDD



OCDD



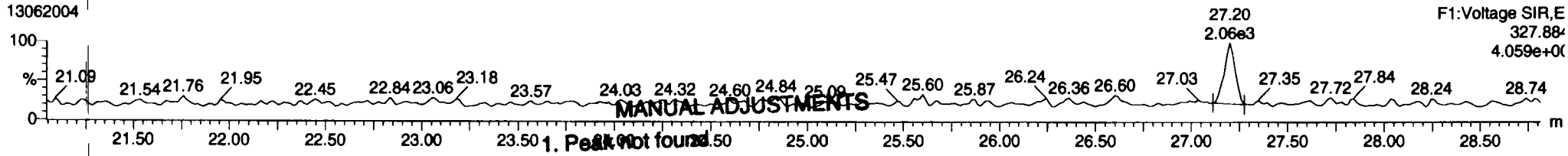
FUNCTION5 PFK



Dataset: P:\DIOXIN8290.PRO\T13062010.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:47 Pacific Daylight Time

ID: CSL, Name: 13062004, Date: 20-Jun-2013, Time: 12:34:03, Conditions: AUTOSPEC01, User: pk

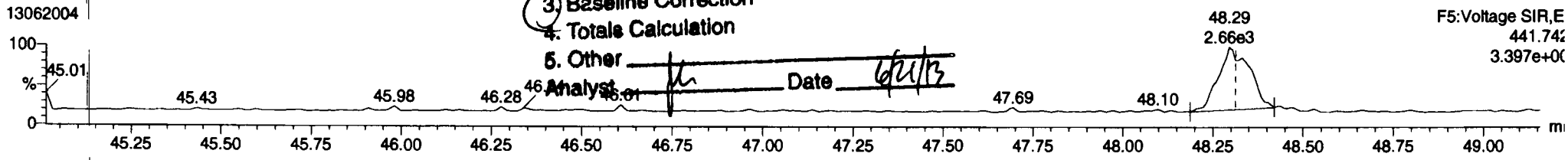
37CL-2378-TCDD



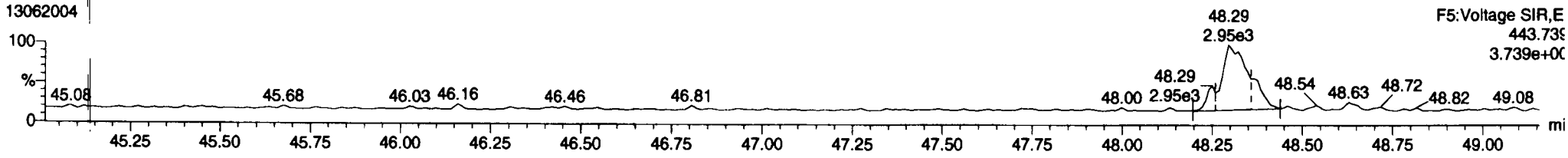
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other

Analyst _____ Date 6/21/13

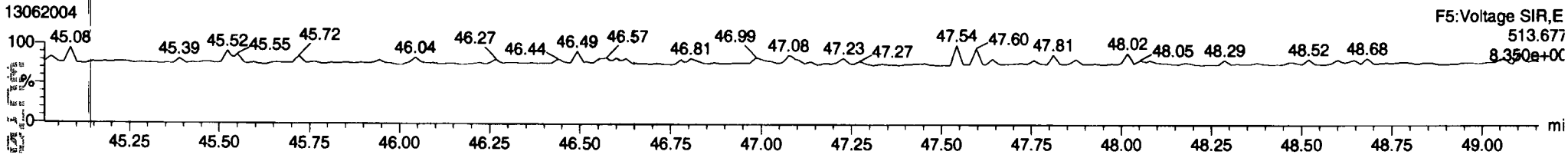
OCDF



OCDF



FUNCTION5 DCDPE



STD CCAL

Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:58 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 19 Jun 2013 11:39:43
Calibration: 21 Jun 2013 09:11:11

ID: CS1, Name: 13062005, Date: 20-Jun-2013, Time: 13:43:04, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.571	1.001	3.39e3	4.57e3	0.771	0.741	0.770	108.4	NO	0.506	0.506
12378-PeCDF	30.730	1.001	1.96e4	1.17e4	0.814	1.678	1.550	319.8	NO	2.498	2.498
23478-PeCDF	32.068	1.000	1.96e4	1.23e4	0.837	1.590	1.550	311.3	NO	2.549	2.549
123478-HxCDF	35.761	1.001	1.38e4	1.19e4	0.967	1.160	1.240	185.0	NO	2.488	2.488
234678-HxCDF	36.847	1.001	1.48e4	1.12e4	1.000	1.318	1.240	200.4	NO	2.578	2.578
123678-HxCDF	35.904	1.001	1.56e4	1.23e4	0.951	1.269	1.240	219.7	NO	2.571	2.571
123789-HxCDF	37.965	1.001	1.10e4	9.24e3	0.874	1.193	1.240	155.3	NO	2.540	2.540
1234678-HpCDF	40.069	1.001	1.14e4	1.09e4	1.072	1.043	1.050	230.0	NO	2.620	2.620
1234789-HpCDF	42.853	1.001	7.93e3	7.99e3	1.085	0.991	1.050	160.7	NO	2.524	2.524
OCDF	48.339	1.007	1.20e4	1.37e4	0.878	0.880	0.890	90.7	NO	4.703	4.703
2378-TCDD	27.214	1.001	3.45e3	4.38e3	0.936	0.787	0.770	68.4	NO	0.539	0.539
12378-PeCDD	32.320	1.000	1.49e4	1.02e4	0.894	1.464	1.550	242.1	NO	2.565	2.565
123478-HxCDD	36.978	1.000	1.30e4	9.92e3	0.898	1.309	1.240	167.2	NO	2.684	2.684
123678-HxCDD	37.110	1.001	1.30e4	1.03e4	0.818	1.259	1.240	158.0	NO	2.610	2.610
123789-HxCDD	37.526	1.012	1.11e4	9.39e3	0.789	1.185	1.240	123.0	NO	2.547	2.547
1234678-HpCDD	41.921	1.000	7.96e3	7.98e3	0.879	0.998	1.050	141.6	NO	2.478	2.478
OCDD	48.025	1.000	1.32e4	1.31e4	0.875	1.004	0.890	180.2	NO	4.811	4.811
13C-2378-TCDF	26.556	1.007	8.80e5	1.16e6	1.190	0.759	0.770	4801.4	NO		99.953
13C-12378-PeCDF	30.709	1.164	9.32e5	6.04e5	0.904	1.544	1.550	3581.4	NO		99.104
13C-23478-PeCDF	32.057	1.215	9.07e5	5.90e5	0.877	1.538	1.550	3564.2	NO		99.532
13C-123478-HxCDF	35.739	0.953	3.54e5	7.11e5	1.096	0.498	0.510	1871.9	NO		104.247
13C-123678-HxCDF	35.882	0.956	3.84e5	7.57e5	1.187	0.507	0.510	2008.2	NO		103.077
13C-234678-HxCDF	36.825	0.982	3.37e5	6.69e5	1.040	0.504	0.510	1756.6	NO		103.811
13C-123789-HxCDF	37.943	1.011	3.09e5	6.04e5	0.941	0.512	0.510	1601.9	NO		104.100
13C-1234678-HpCDF	40.047	1.067	2.38e5	5.57e5	0.825	0.428	0.440	1404.1	NO		103.392
13C-1234789-HpCDF	42.831	1.142	1.75e5	4.06e5	0.609	0.431	0.440	825.3	NO		102.334
13C-1234-TCDD	26.377	0.000	7.53e5	9.61e5	1.000	0.783	0.770	1601.0	NO		100.000
13C-2378-TCDD	27.184	1.031	6.76e5	8.75e5	0.920	0.773	0.770	1336.1	NO		98.419
13C-12378-PeCDD	32.309	1.225	6.67e5	4.27e5	0.669	1.561	1.550	3244.6	NO		95.342
13C-123478-HxCDD	36.967	0.985	5.19e5	4.31e5	1.032	1.204	1.240	3631.4	NO		98.821
13C-123678-HxCDD	37.088	0.989	5.95e5	4.94e5	1.146	1.204	1.240	3906.8	NO		101.963
13C-1234678-HpCDD	41.910	1.117	3.65e5	3.67e5	0.789	0.997	1.050	2460.7	NO		99.505
13C-OCDD	48.016	1.280	5.86e5	6.61e5	0.696	0.886	0.890	2252.2	NO		192.064

Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:58 Pacific Daylight Time

ID: CS1, Name: 13062005, Date: 20-Jun-2013, Time: 13:43:04, Conditions: AUTOSPEC01, User: pk

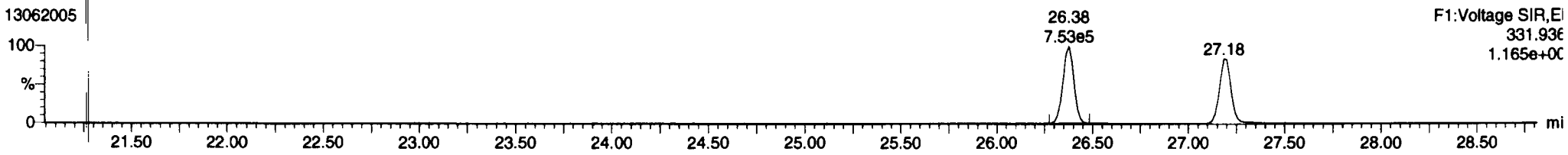
13C-123789-HxCDD	37.515	0.000	5.12e5	4.20e5	1.000	1.218	1.240	3509.6	NO		100.000
Total-tetrafurans			3.49e3		0.771						0.518
Total-penta1			1.78e2								0.029
Total-pentafurans			4.00e4		0.826						5.139
Total-hexafurans			5.52e4		0.948						10.196
Total-heptafurans			1.95e4		1.079						5.195
Total-Furans			1.31e5		0.925						25.802
Total-tetradioxins			5.86e3		0.936						0.736
Total-pentadioxins			1.65e4		0.894						2.759
Total-hexadioxins			3.91e4		0.835						8.151
Total-heptadioxins			7.96e3		0.879						2.478
Total-Dioxins			8.26e4		0.870						18.945
Total-TEQ			2.13e5								44.746
37CL-2378-TCDD	27.214	1.032	8.74e3		1.000			53.1			0.510
FUNCTION1 PFK			2.91e6								
FUNCTION2 PFK			3.10e5								0.000
FUNCTION3 PFK			6.91e6								0.000
FUNCTION4 PFK			2.20e5								
FUNCTION5 PFK			1.91e5								
FUNCTION1 HXCDPE			0.00e0								
FUNCTION1 HPCDPE			1.37e3								0.000
FUNCTION2 HPCDPE			6.10e2								0.000
FUNCTION3 OCDPE			0.00e0								
FUNCTION4 NCDPE			0.00e0								
FUNCTION5 DCDPE			0.00e0								

Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:58 Pacific Daylight Time

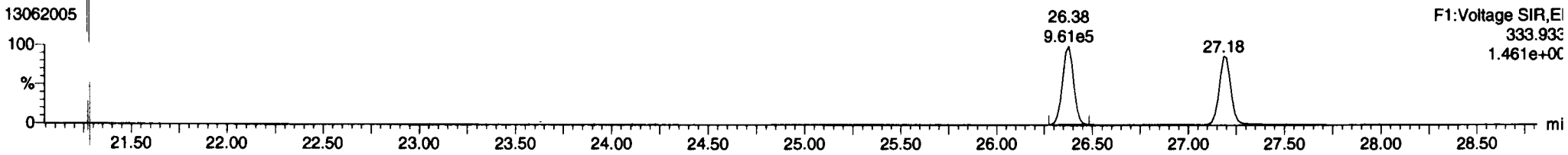
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 19 Jun 2013 11:39:43
Calibration: 21 Jun 2013 09:11:11

ID: CS1, Name: 13062005, Date: 20-Jun-2013, Time: 13:43:04, Conditions: AUTOSPEC01, User: pk

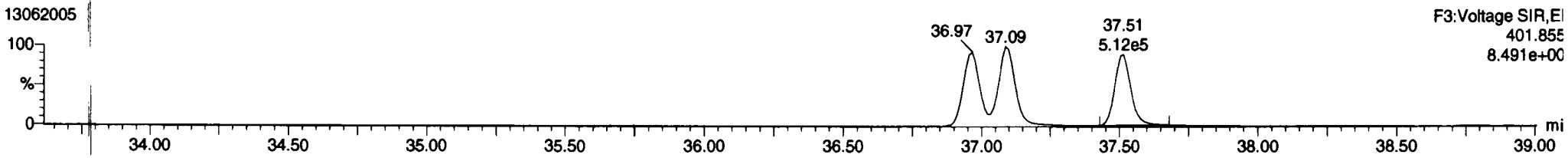
13C-1234-TCDD



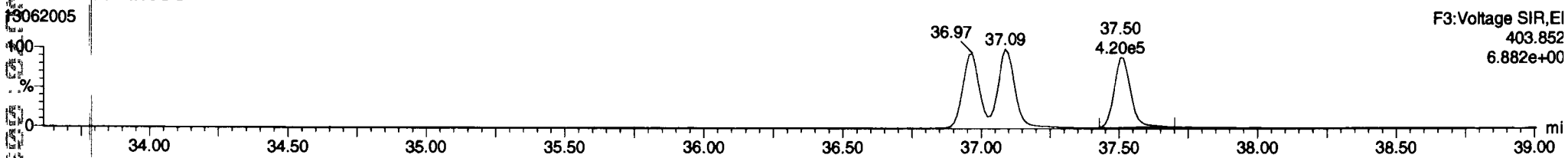
13C-1234-TCDD



13C-123789-HxCDD



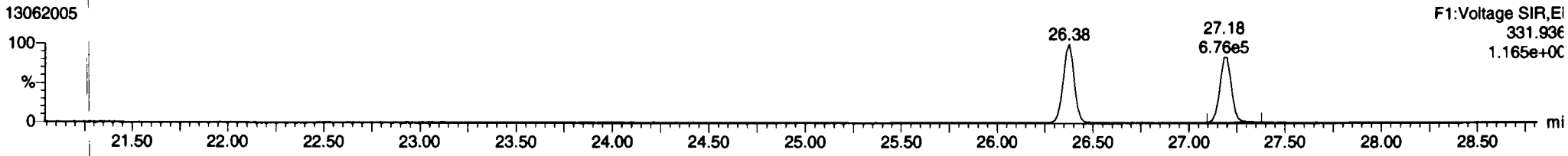
13C-123789-HxCDD



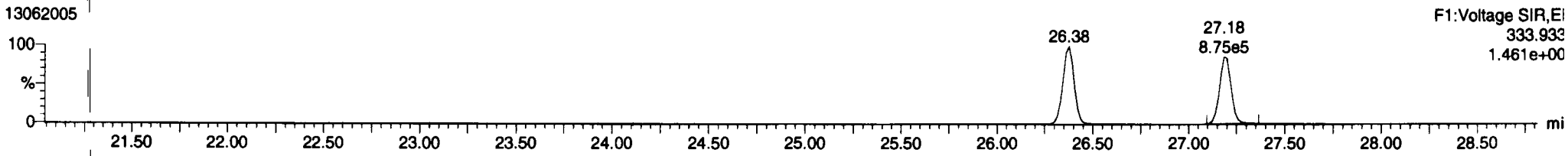
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:58 Pacific Daylight Time

ID: CS1, Name: 13062005, Date: 20-Jun-2013, Time: 13:43:04, Conditions: AUTOSPEC01, User: pk

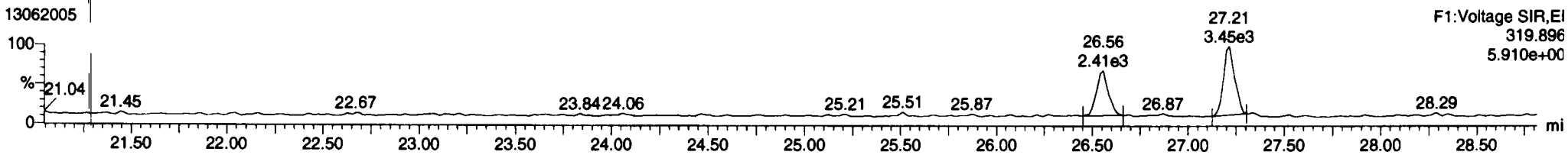
13C-2378-TCDD



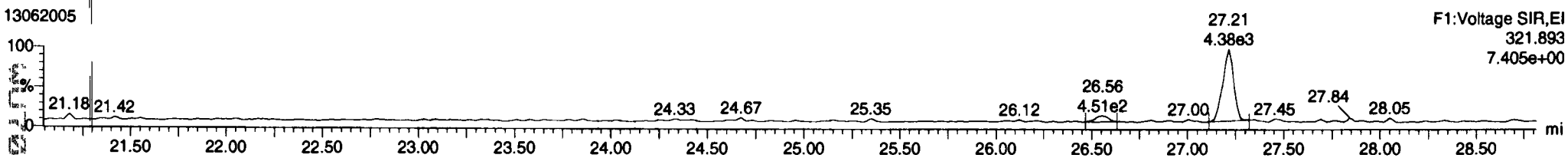
13C-2378-TCDD



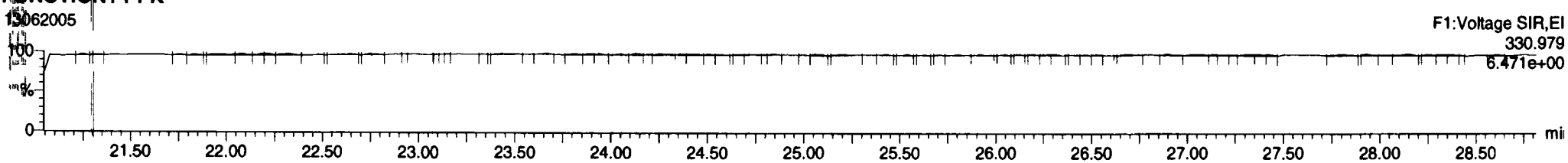
Total-tetradioxins



Total-tetradioxins



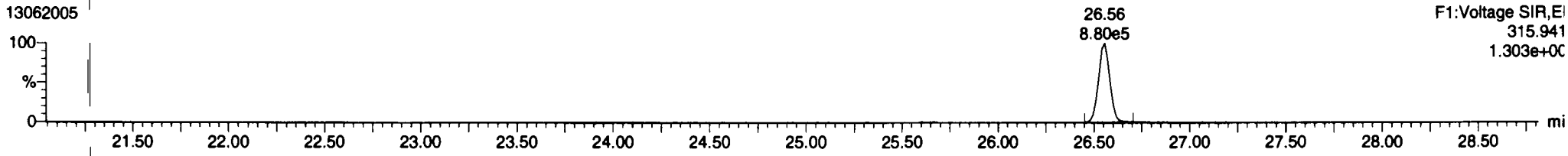
FUNCTION1 PFK



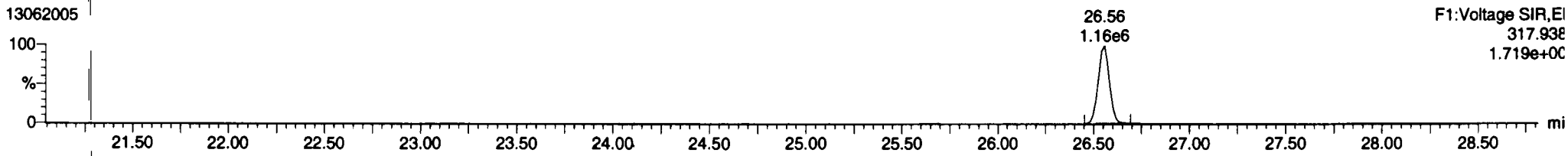
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:58 Pacific Daylight Time

ID: CS1, Name: 13062005, Date: 20-Jun-2013, Time: 13:43:04, Conditions: AUTOSPEC01, User: pk

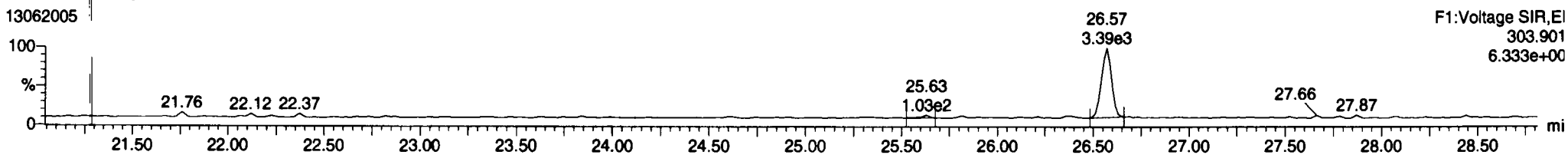
13C-2378-TCDF



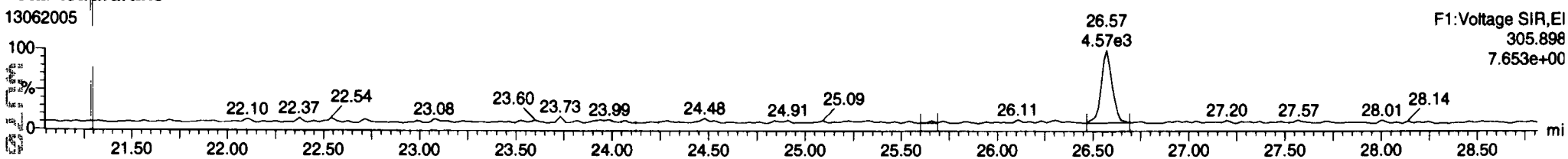
13C-2378-TCDF



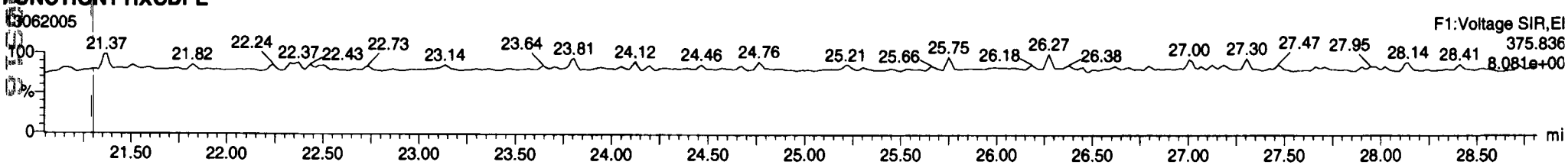
Total-tetrafurans



Total-tetrafurans



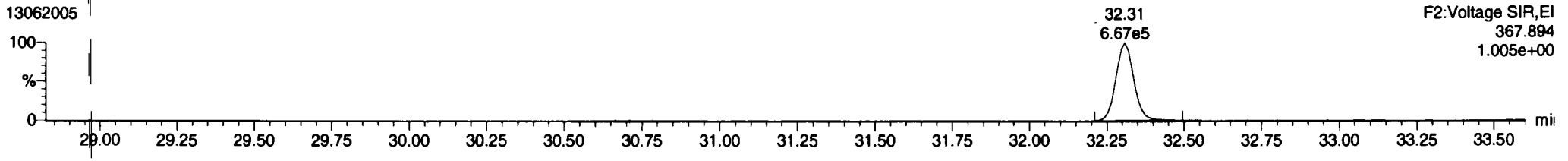
FUNCTION1 HXCDPE



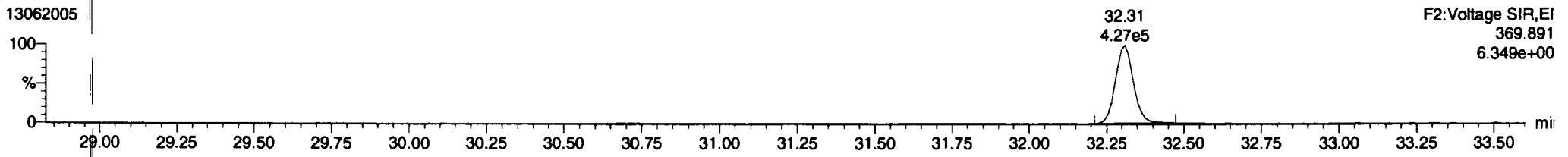
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:58 Pacific Daylight Time

ID: CS1, Name: 13062005, Date: 20-Jun-2013, Time: 13:43:04, Conditions: AUTOSPEC01, User: pk

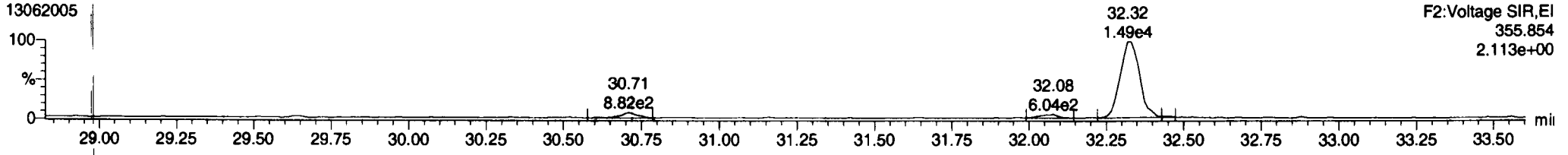
13C-12378-PeCDD



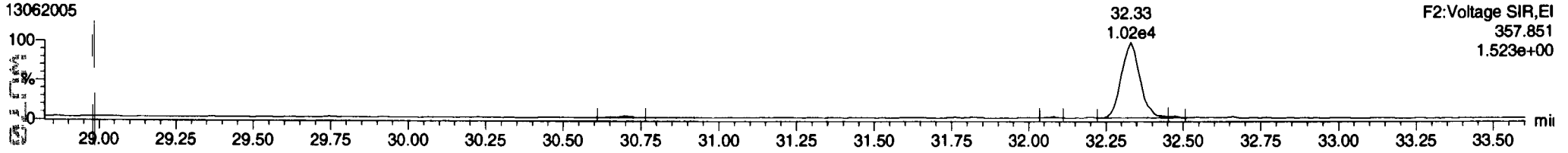
13C-12378-PeCDD



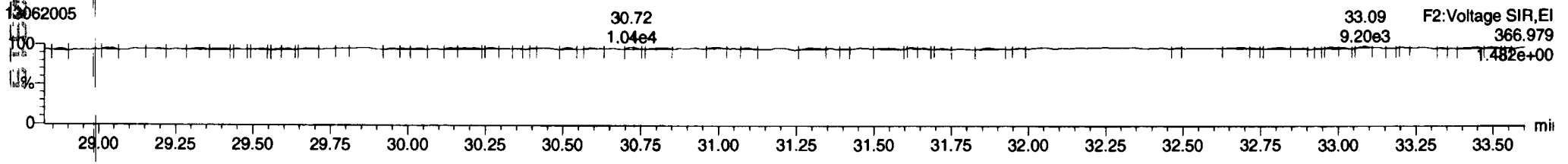
Total-pentadioxins



Total-pentadioxins



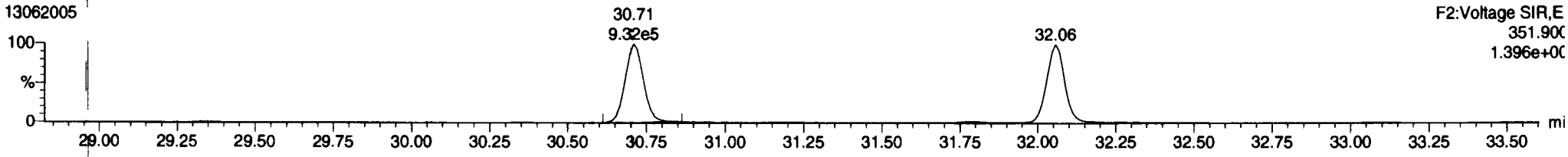
FUNCTION2 PFK



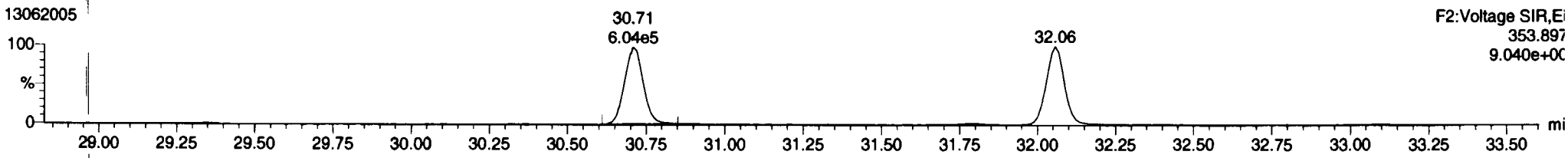
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:58 Pacific Daylight Time

ID: CS1, Name: 13062005, Date: 20-Jun-2013, Time: 13:43:04, Conditions: AUTOSPEC01, User: pk

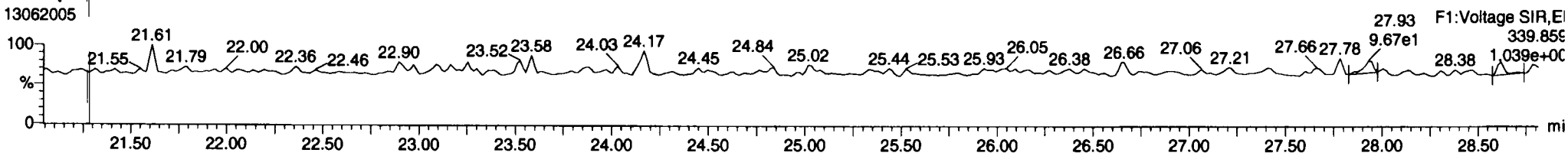
13C-12378-PeCDF



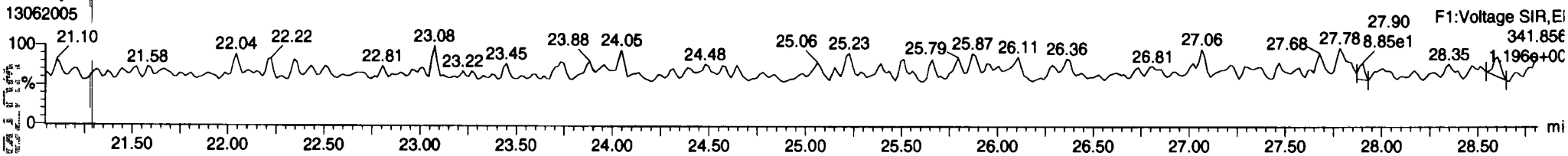
13C-12378-PeCDF



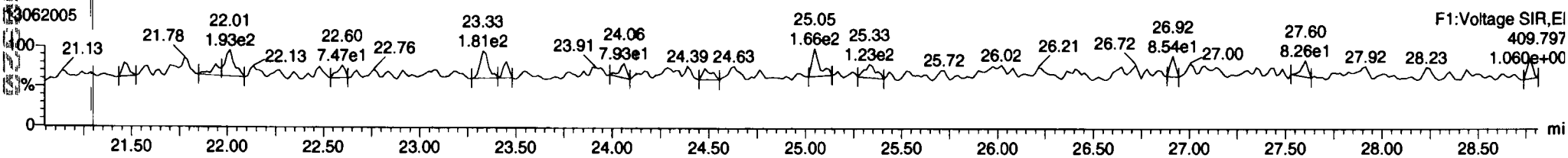
Total-penta1



Total-penta1



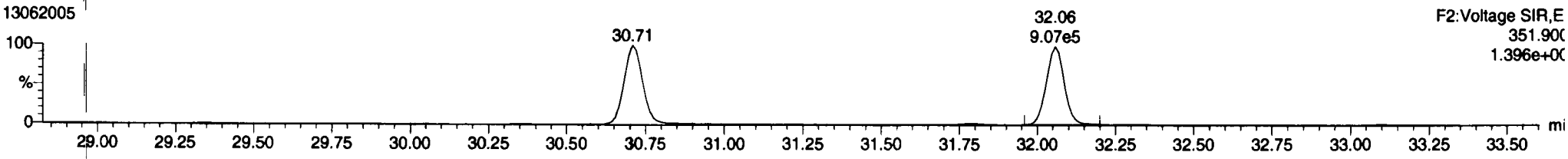
FUNCTION1 HPCDPE



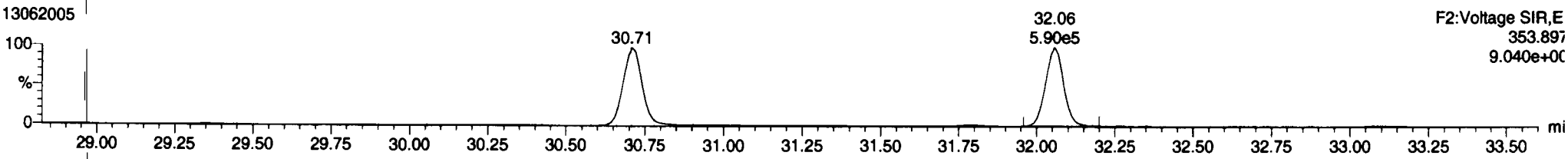
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:58 Pacific Daylight Time

ID: CS1, Name: 13062005, Date: 20-Jun-2013, Time: 13:43:04, Conditions: AUTOSPEC01, User: pk

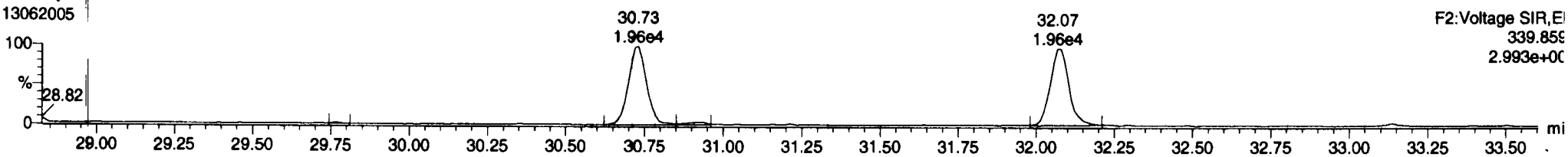
13C-23478-PeCDF



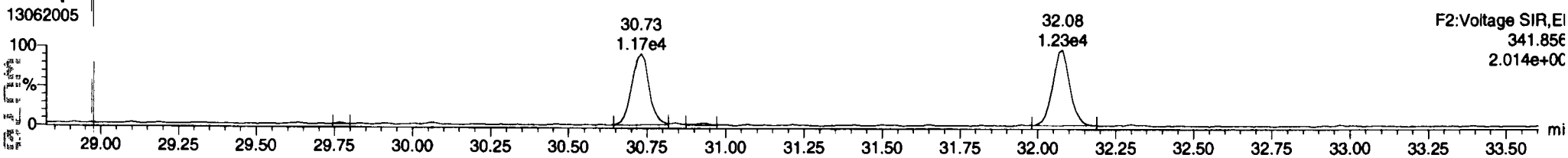
13C-23478-PeCDF



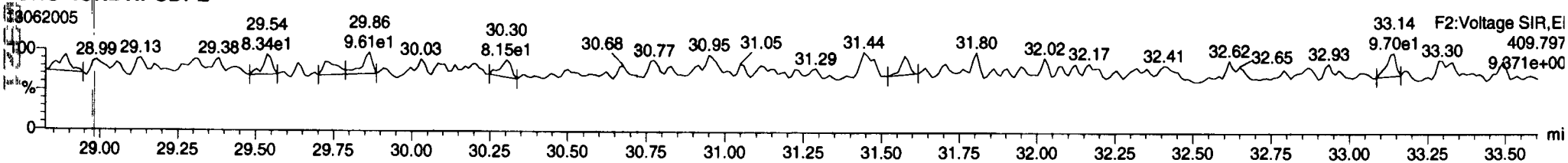
Total-pentafurans



Total-pentafurans



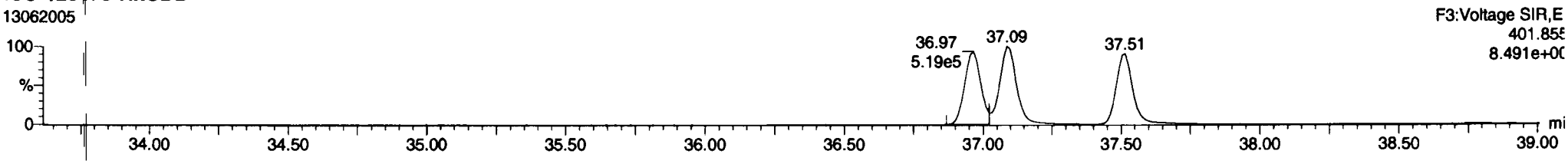
FUNCTION2 HPCDPE



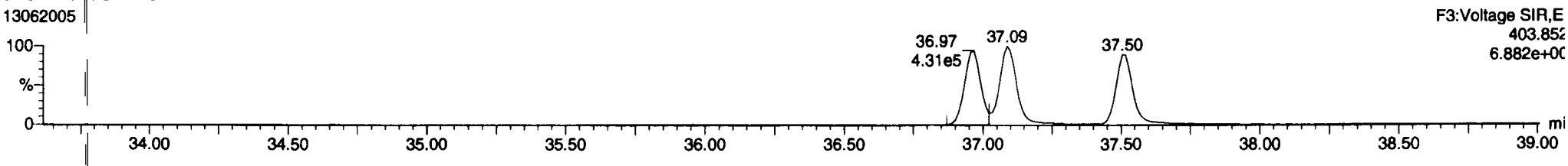
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:58 Pacific Daylight Time

ID: CS1, Name: 13062005, Date: 20-Jun-2013, Time: 13:43:04, Conditions: AUTOSPEC01, User: pk

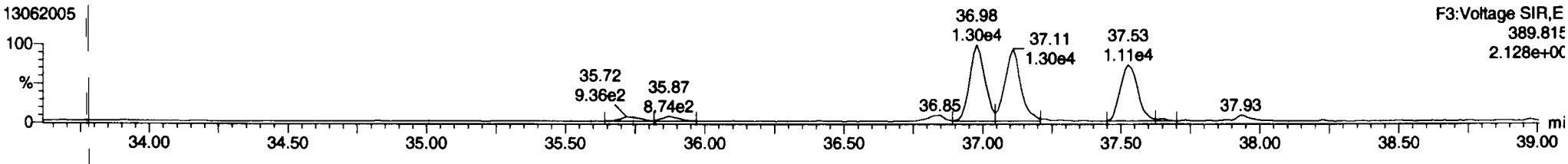
13C-123478-HxCDD



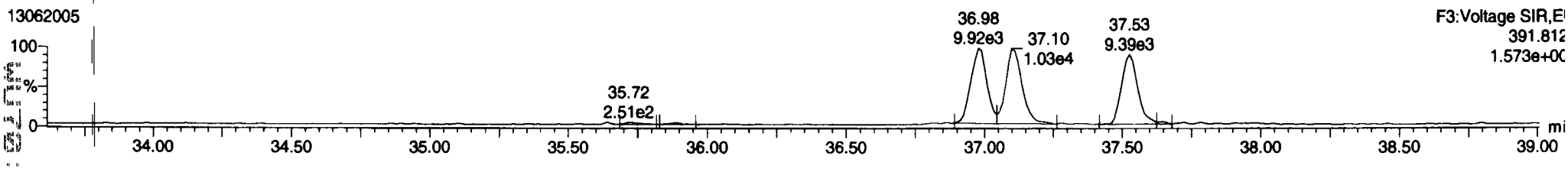
13C-123478-HxCDD



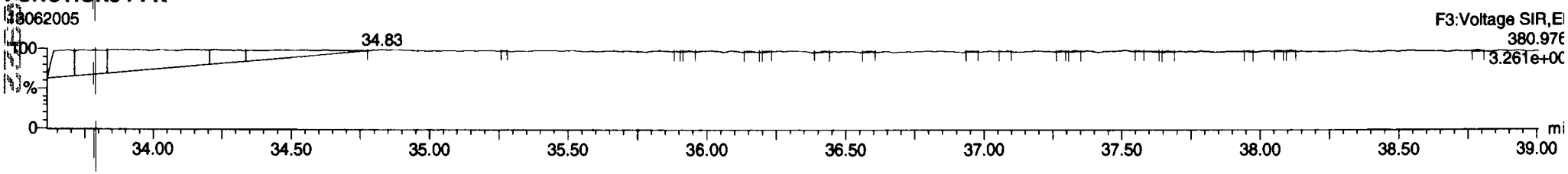
Total-hexadioxins



Total-hexadioxins



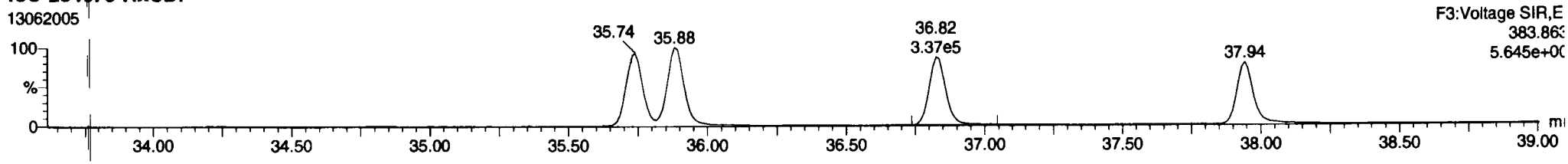
FUNCTION3 PFK



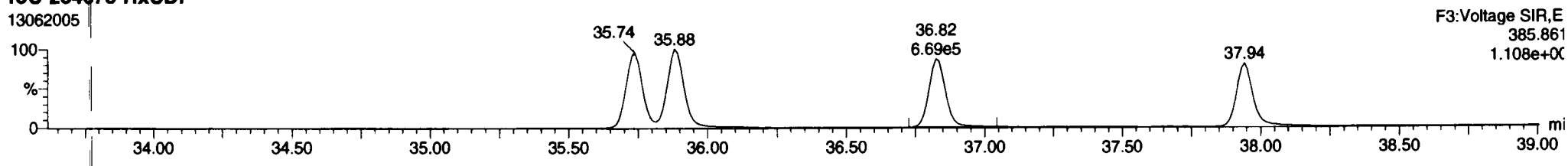
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:58 Pacific Daylight Time

ID: CS1, Name: 13062005, Date: 20-Jun-2013, Time: 13:43:04, Conditions: AUTOSPEC01, User: pk

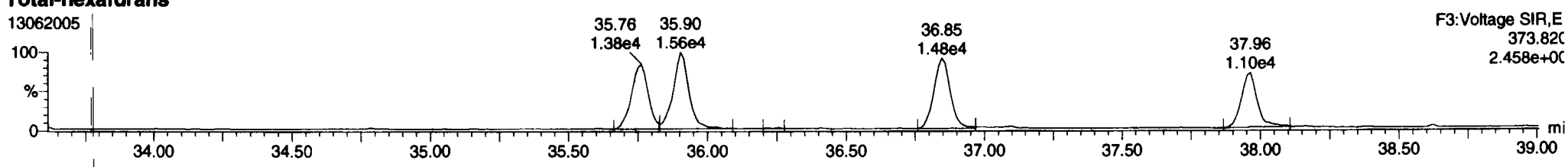
13C-234678-HxCDF



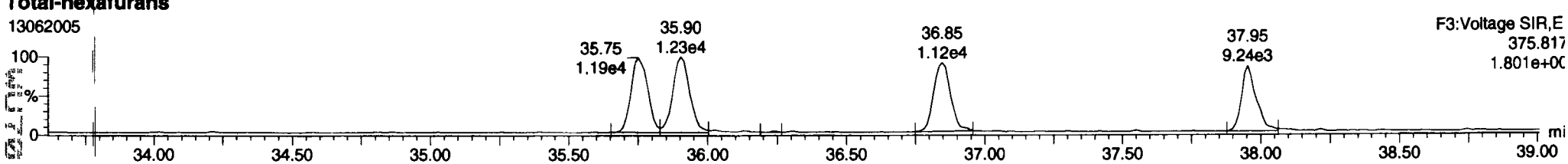
13C-234678-HxCDF



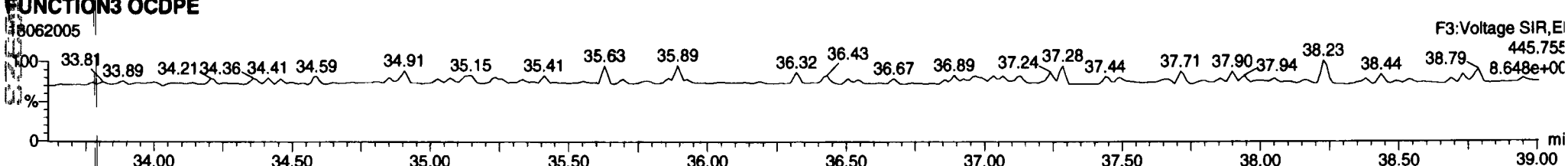
Total-hexafurans



Total-hexafurans



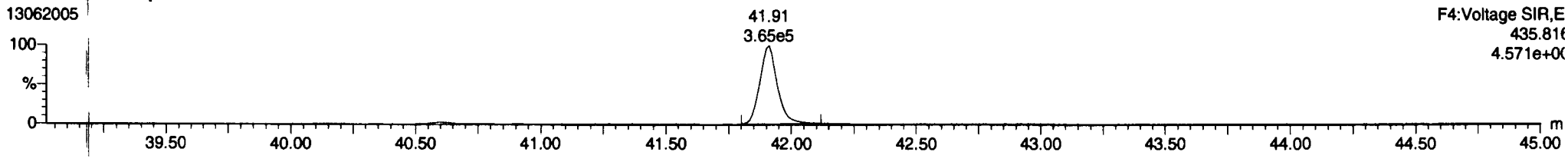
FUNCTION3 OCDPE



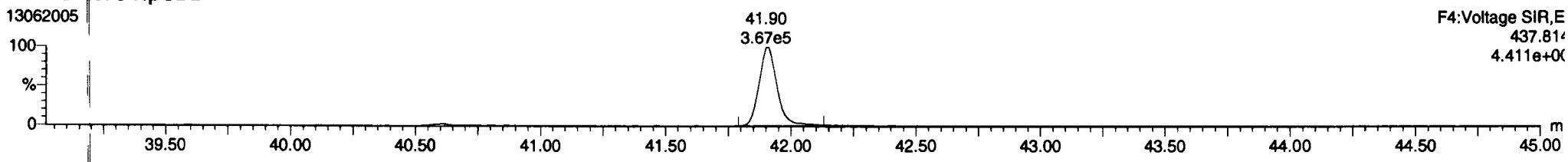
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:58 Pacific Daylight Time

ID: CS1, Name: 13062005, Date: 20-Jun-2013, Time: 13:43:04, Conditions: AUTOSPEC01, User: pk

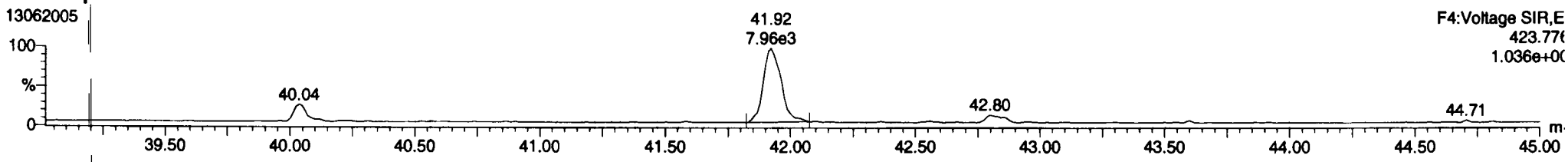
13C-1234678-HpCDD



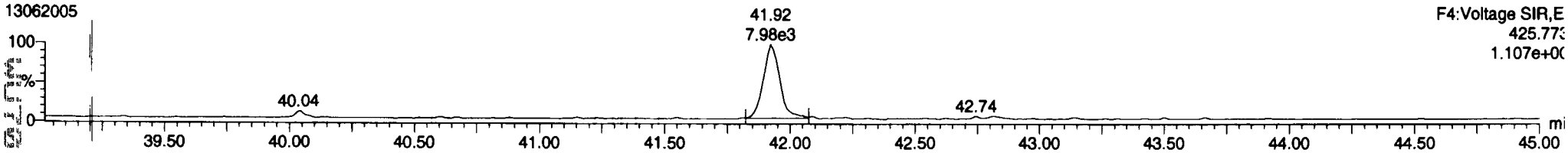
13C-1234678-HpCDD



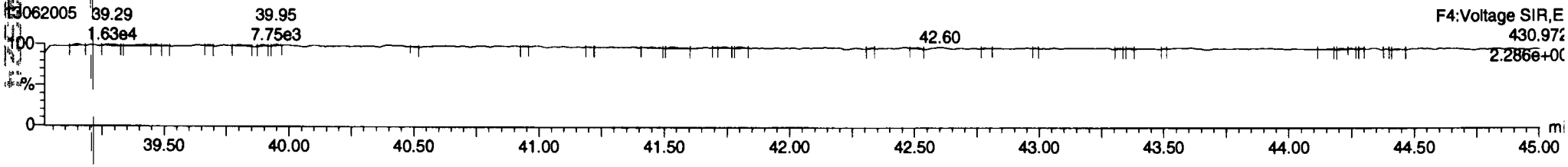
Total-heptadioxins



Total-heptadioxins



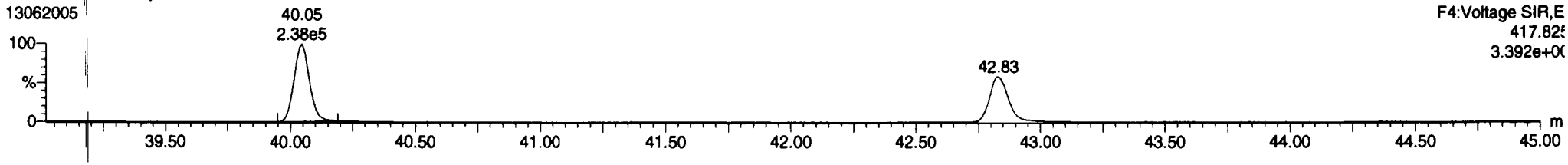
FUNCTION4 PFK



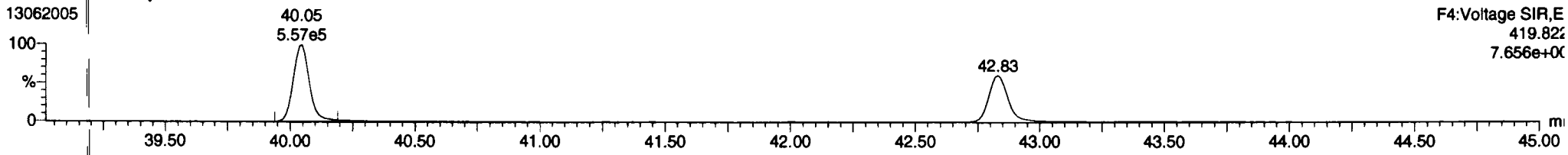
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:58 Pacific Daylight Time

ID: CS1, Name: 13062005, Date: 20-Jun-2013, Time: 13:43:04, Conditions: AUTOSPEC01, User: pk

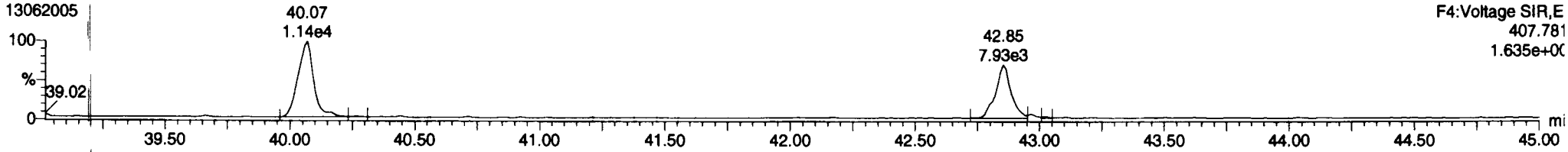
13C-1234678-HpCDF



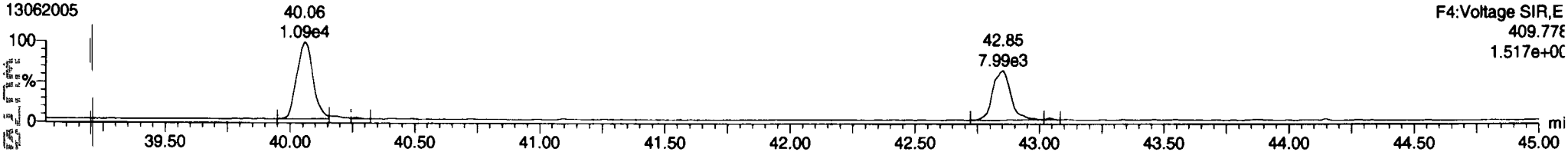
13C-1234678-HpCDF



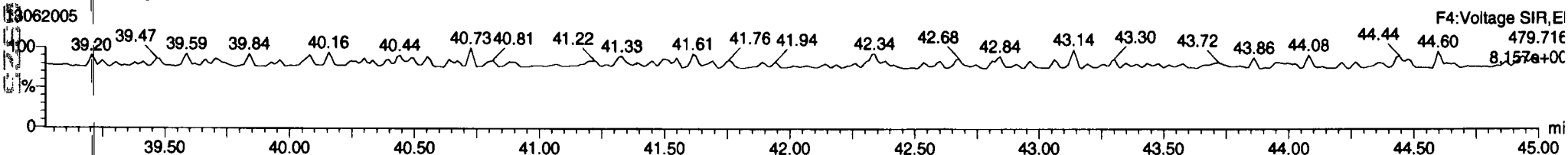
Total-heptafurans



Total-heptafurans



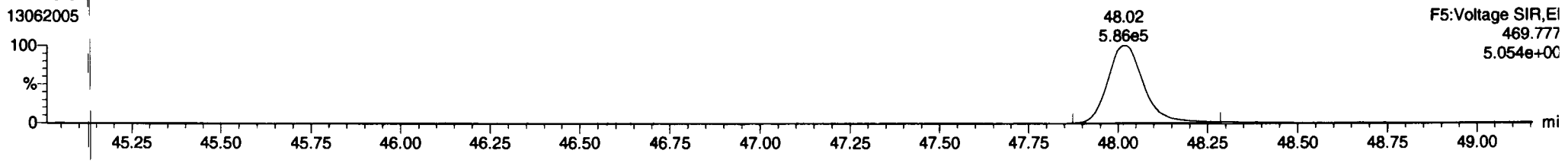
FUNCTION4 NCDPE



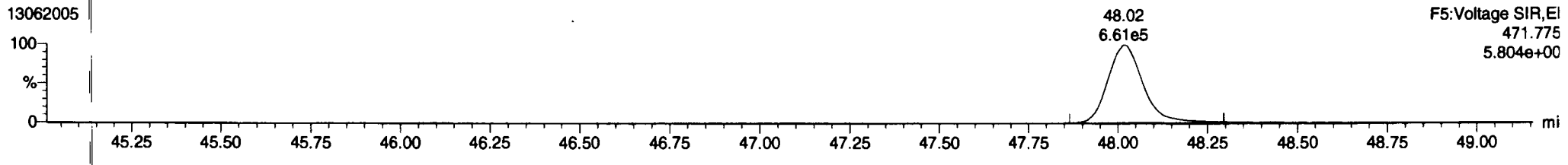
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:58 Pacific Daylight Time

ID: CS1, Name: 13062005, Date: 20-Jun-2013, Time: 13:43:04, Conditions: AUTOSPEC01, User: pk

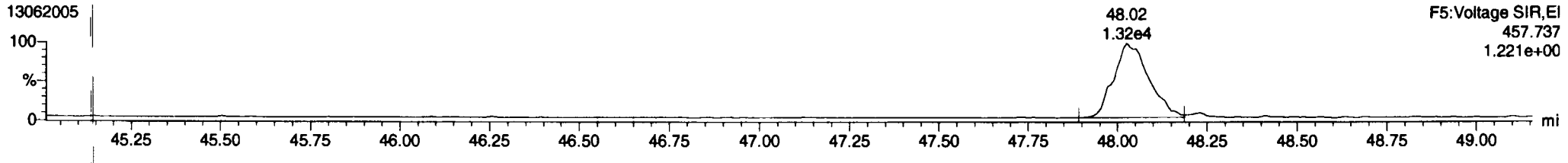
13C-OCDD



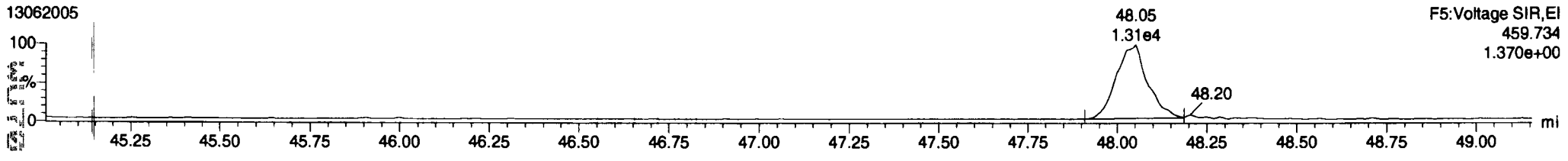
13C-OCDD



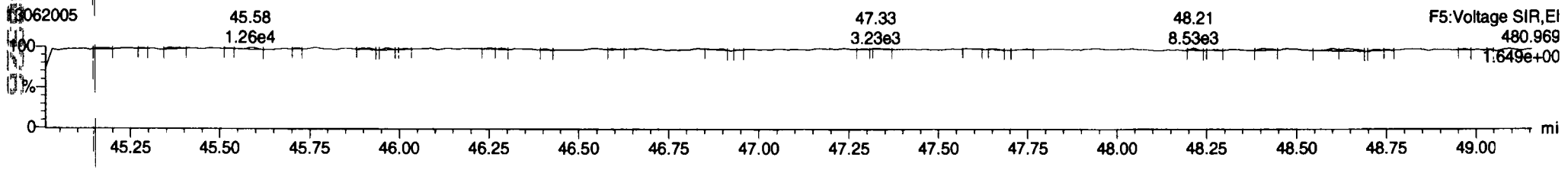
OCDD



OCDD



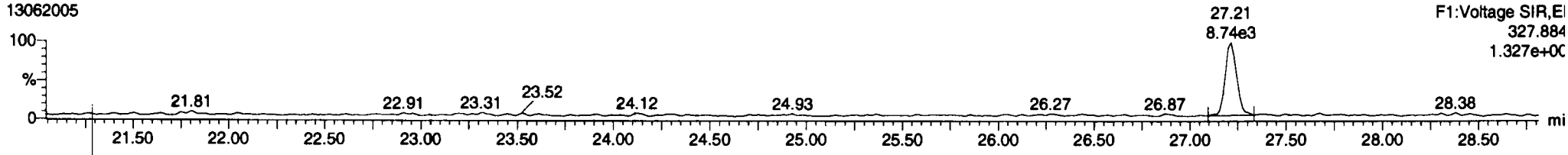
FUNCTION5 PFK



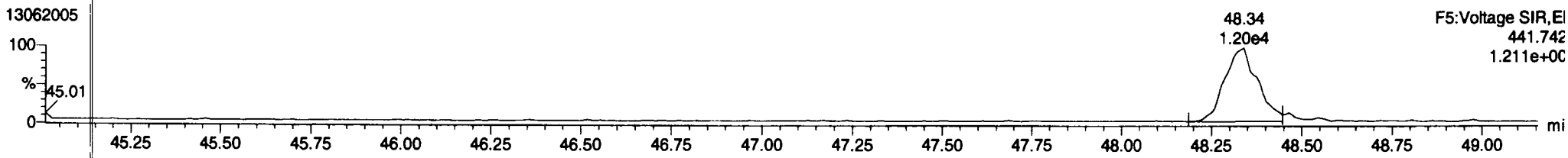
Dataset: P:\DIOXIN8290.PRO\13062010.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:15:58 Pacific Daylight Time

ID: CS1, Name: 13062005, Date: 20-Jun-2013, Time: 13:43:04, Conditions: AUTOSPEC01, User: pk

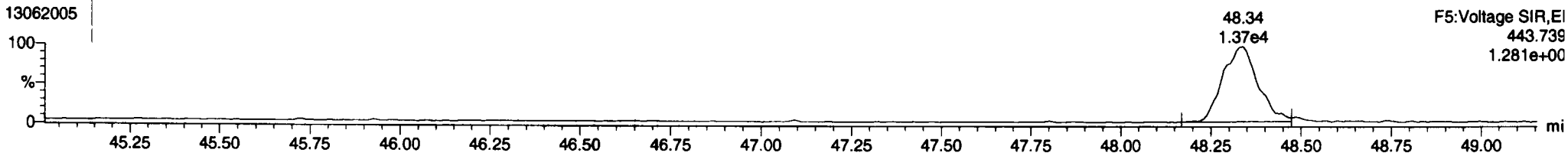
37CL-2378-TCDD



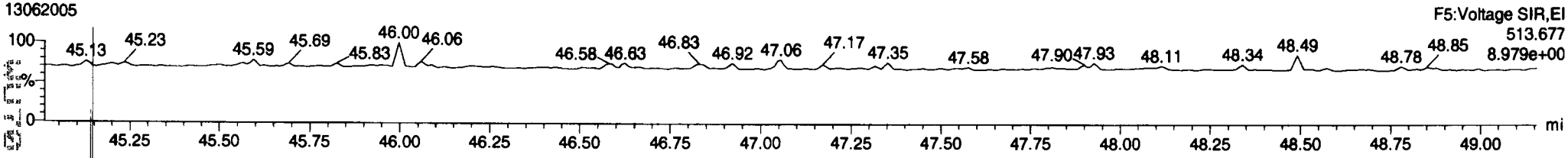
OCDF



OCDF



FUNCTION5 DCDPE



Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:07 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 19 Jun 2013 11:39:43
Calibration: 21 Jun 2013 09:11:11

ID: CS2, Name: 13062006, Date: 20-Jun-2013, Time: 14:33:31, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.542	1.001	1.63e4	2.11e4	0.771	0.770	0.770	255.6	NO	1.941	1.941
12378-PeCDF	30.698	1.000	8.78e4	5.86e4	0.814	1.498	1.550	684.0	NO	9.754	9.754
23478-PeCDF	32.046	1.000	8.53e4	5.82e4	0.837	1.465	1.550	680.6	NO	9.597	9.597
123478-HxCDF	35.729	1.000	6.68e4	5.32e4	0.967	1.256	1.240	743.0	NO	9.783	9.783
234678-HxCDF	36.825	1.001	6.41e4	5.44e4	1.000	1.178	1.240	712.3	NO	9.898	9.898
123678-HxCDF	35.883	1.001	7.18e4	5.73e4	0.951	1.253	1.240	775.0	NO	9.695	9.695
123789-HxCDF	37.943	1.001	5.31e4	4.26e4	0.874	1.246	1.240	582.5	NO	9.793	9.793
1234678-HpCDF	40.037	1.000	5.23e4	5.15e4	1.072	1.017	1.050	661.4	NO	10.040	10.040
1234789-HpCDF	42.821	1.000	3.59e4	3.83e4	1.085	0.938	1.050	402.7	NO	9.563	9.563
OCDF	48.313	1.007	6.36e4	7.40e4	0.878	0.860	0.890	482.0	NO	19.414	19.414
2378-TCDD	27.184	1.001	1.54e4	1.90e4	0.936	0.808	0.770	203.9	NO	1.901	1.901
12378-PeCDD	32.298	1.000	6.88e4	4.74e4	0.894	1.452	1.550	744.9	NO	9.612	9.612
123478-HxCDD	36.957	1.000	5.83e4	4.61e4	0.898	1.265	1.240	587.9	NO	9.706	9.706
123678-HxCDD	37.088	1.000	5.86e4	4.87e4	0.818	1.203	1.240	573.1	NO	9.967	9.967
123789-HxCDD	37.505	1.012	5.43e4	4.55e4	0.789	1.194	1.240	531.6	NO	10.063	10.063
1234678-HpCDD	41.911	1.001	4.14e4	3.98e4	0.879	1.039	1.050	444.3	NO	9.931	9.931
OCDD	48.017	1.000	6.54e4	7.51e4	0.875	0.871	0.890	542.0	NO	19.887	19.887
13C-2378-TCDF	26.527	1.007	1.08e6	1.42e6	1.190	0.760	0.770	6130.1	NO		98.347
13C-12378-PeCDF	30.687	1.165	1.12e6	7.25e5	0.904	1.542	1.550	3121.2	NO		95.493
13C-23478-PeCDF	32.035	1.216	1.08e6	7.08e5	0.877	1.526	1.550	3003.9	NO		95.501
13C-123478-HxCDF	35.718	0.953	4.24e5	8.44e5	1.096	0.502	0.510	1169.6	NO		98.937
13C-123678-HxCDF	35.861	0.956	4.79e5	9.20e5	1.187	0.520	0.510	1235.1	NO		100.725
13C-234678-HxCDF	36.803	0.982	4.01e5	7.97e5	1.040	0.503	0.510	1072.3	NO		98.459
13C-123789-HxCDF	37.921	1.011	3.70e5	7.49e5	0.941	0.493	0.510	997.6	NO		101.636
13C-1234678-HpCDF	40.026	1.068	2.80e5	6.84e5	0.825	0.410	0.440	1624.4	NO		99.908
13C-1234789-HpCDF	42.810	1.142	2.18e5	4.96e5	0.609	0.440	0.440	1043.5	NO		100.255
13C-1234-TCDD	26.347	0.000	9.37e5	1.20e6	1.000	0.783	0.770	2204.5	NO		100.000
13C-2378-TCDD	27.169	1.031	8.38e5	1.10e6	0.920	0.764	0.770	1897.3	NO		98.595
13C-12378-PeCDD	32.287	1.225	8.27e5	5.25e5	0.669	1.577	1.550	4868.3	NO		94.642
13C-123478-HxCDD	36.946	0.985	6.72e5	5.26e5	1.032	1.276	1.240	3069.2	NO		99.263
13C-123678-HxCDD	37.077	0.989	7.22e5	5.94e5	1.146	1.215	1.240	3225.0	NO		98.210
13C-1234678-HpCDD	41.889	1.117	4.73e5	4.57e5	0.789	1.036	1.050	2083.2	NO		100.781
13C-OCDD	47.999	1.280	7.66e5	8.49e5	0.696	0.902	0.890	3110.7	NO		198.271

Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:07 Pacific Daylight Time

ID: CS2, Name: 13062006, Date: 20-Jun-2013, Time: 14:33:31, Conditions: AUTOSPEC01, User: pk

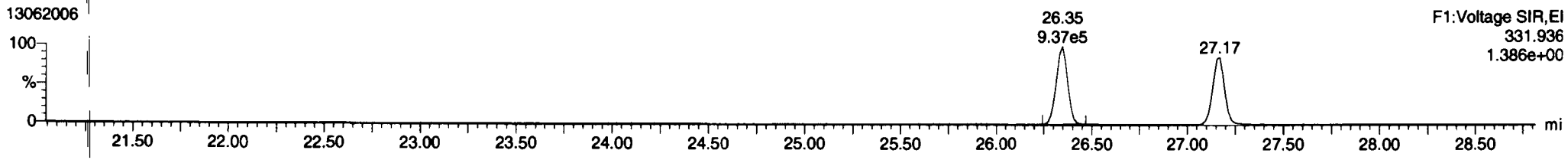
13C-123789-HxCDD	37.494	0.000	6.40e5	5.29e5	1.000	1.209	1.240	2895.7	NO		100.000
Total-tetrafurans			1.66e4		0.771						1.992
Total-penta1			7.39e1								0.011
Total-pentafurans			1.76e5		0.826						19.608
Total-hexafurans			2.58e5		0.948						39.507
Total-heptafurans			8.94e4		1.079						19.765
Total-Furans			6.04e5		0.925						100.314
Total-tetradioxins			1.84e4		0.936						2.156
Total-pentadioxins			7.05e4		0.894						9.819
Total-hexadioxins			1.74e5		0.835						30.107
Total-heptadioxins			4.17e4		0.879						9.992
Total-Dioxins			3.70e5		0.870						71.960
Total-TEQ			9.74e5								172.275
37CL-2378-TCDD	27.184	1.032	3.90e4		1.000			307.8			1.826
FUNCTION1 PFK			0.00e0								
FUNCTION2 PFK			1.90e5								0.000
FUNCTION3 PFK			1.95e5								0.000
FUNCTION4 PFK			4.18e5								
FUNCTION5 PFK			4.59e6								
FUNCTION1 HXCDPE			3.17e2								0.000
FUNCTION1 HPCDPE			7.54e2								0.000
FUNCTION2 HPCDPE			6.99e2								0.000
FUNCTION3 OCDPE			0.00e0								
FUNCTION4 NCDPE			1.56e2								0.000
FUNCTION5 DCDPE			0.00e0								

Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:07 Pacific Daylight Time

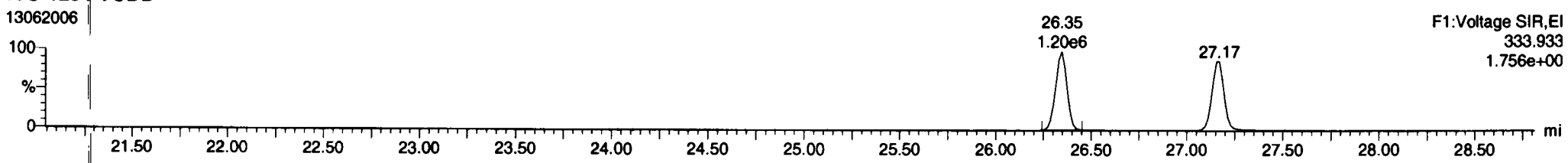
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 19 Jun 2013 11:39:43
Calibration: 21 Jun 2013 09:11:11

ID: CS2, Name: 13062006, Date: 20-Jun-2013, Time: 14:33:31, Conditions: AUTOSPEC01, User: pk

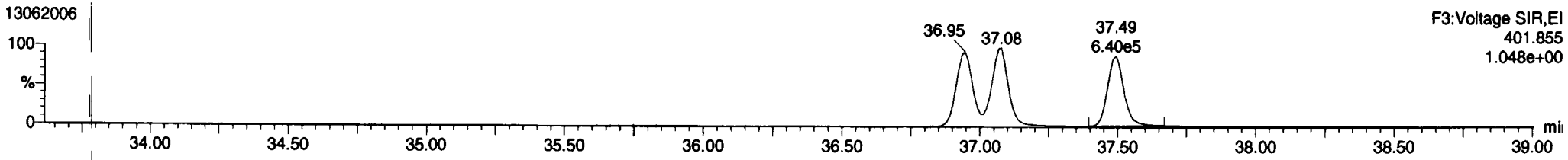
13C-1234-TCDD



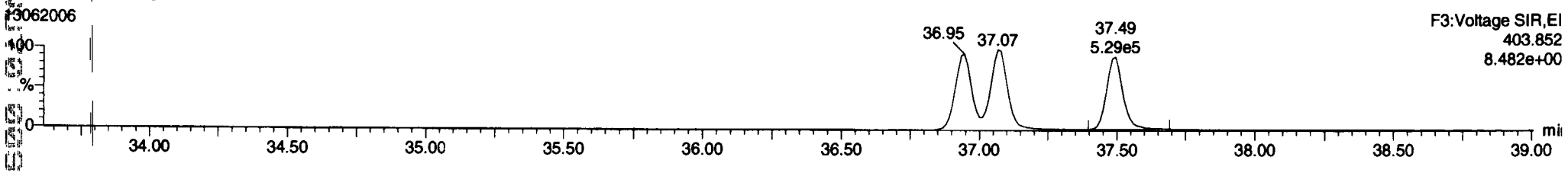
13C-1234-TCDD



13C-123789-HxCDD



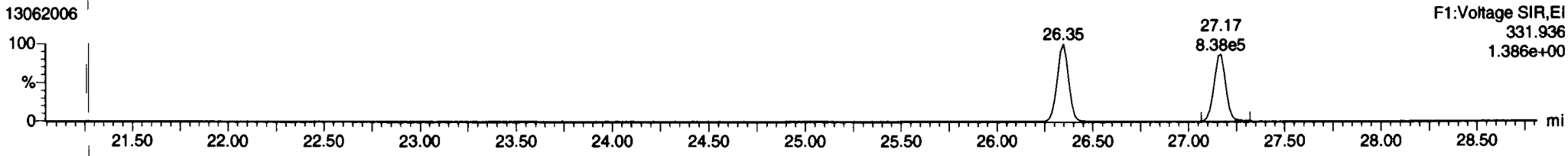
13C-123789-HxCDD



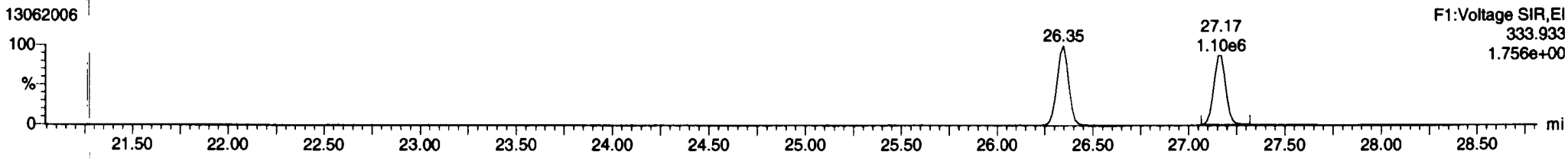
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:07 Pacific Daylight Time

ID: CS2, Name: 13062006, Date: 20-Jun-2013, Time: 14:33:31, Conditions: AUTOSPEC01, User: pk

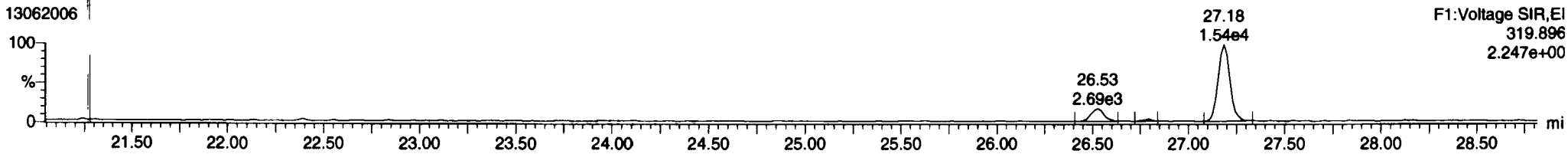
13C-2378-TCDD



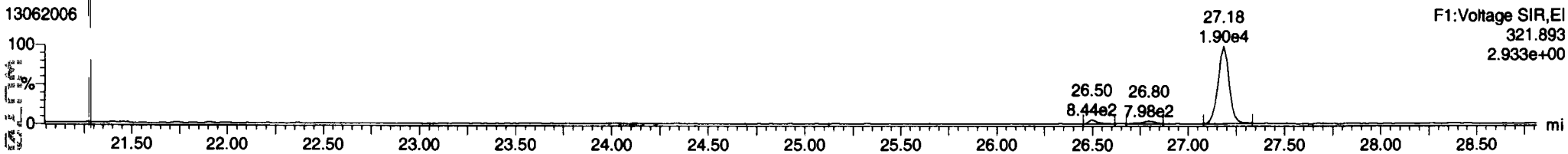
13C-2378-TCDD



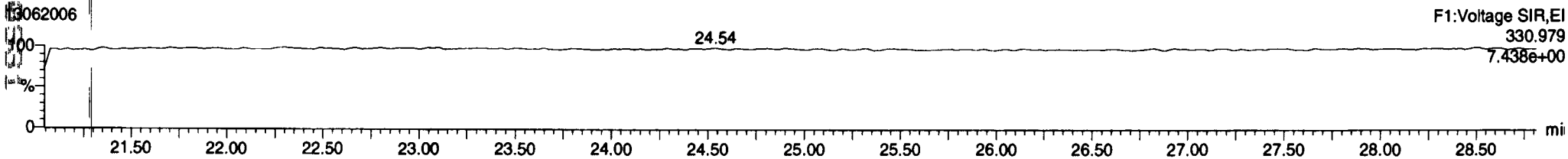
Total-tetradioxins



Total-tetradioxins



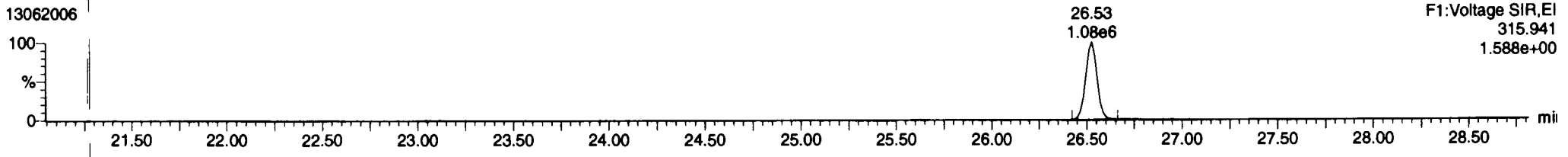
FUNCTION1 PFK



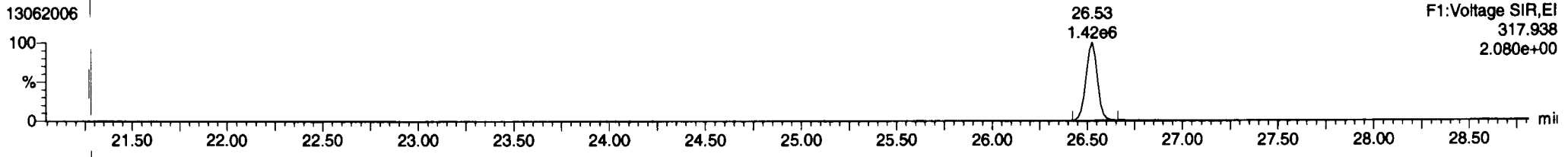
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:07 Pacific Daylight Time

ID: CS2, Name: 13062006, Date: 20-Jun-2013, Time: 14:33:31, Conditions: AUTOSPEC01, User: pk

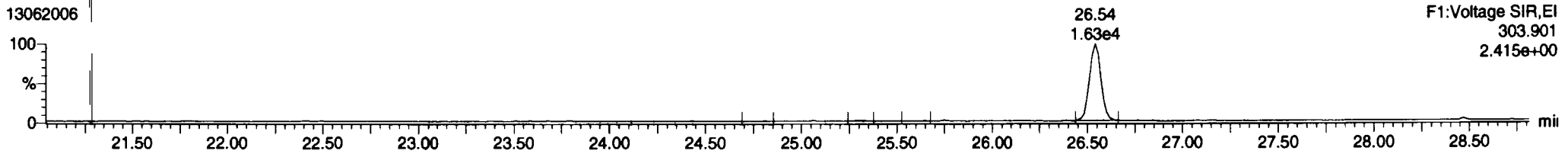
13C-2378-TCDF



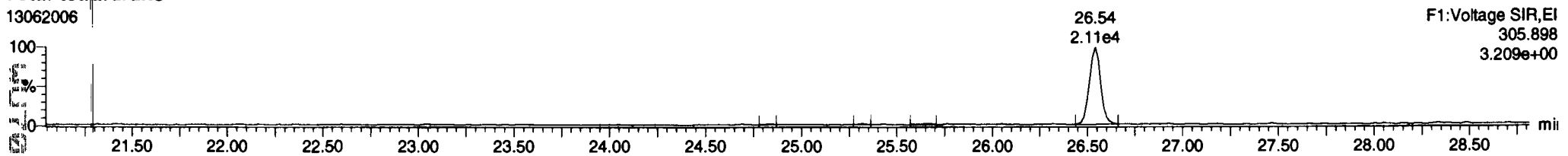
13C-2378-TCDF



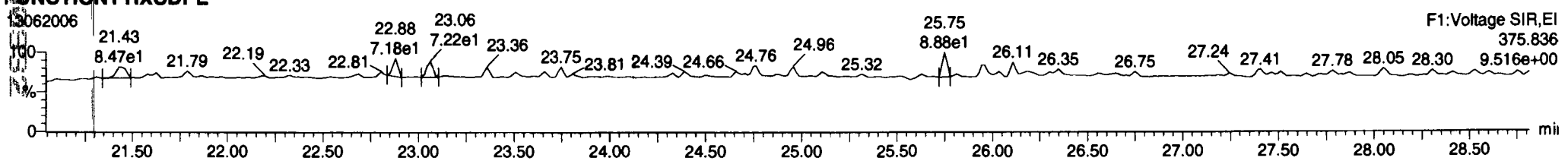
Total-tetrafurans



Total-tetrafurans



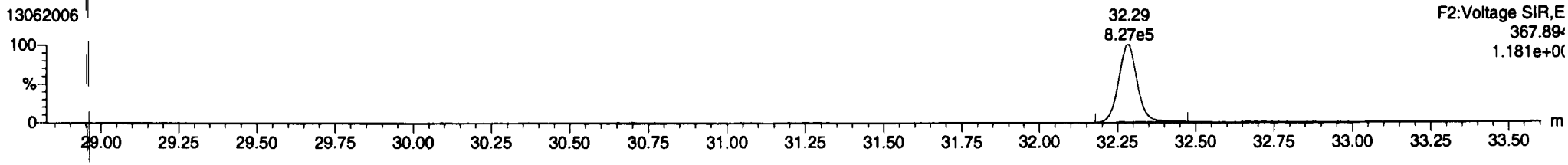
FUNCTION1 HXCDPE



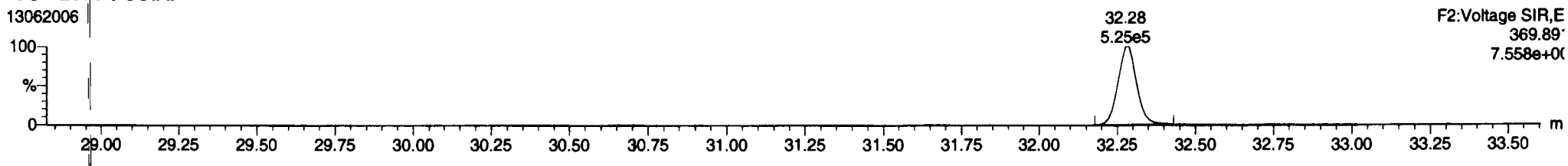
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:07 Pacific Daylight Time

ID: CS2, Name: 13062006, Date: 20-Jun-2013, Time: 14:33:31, Conditions: AUTOSPEC01, User: pk

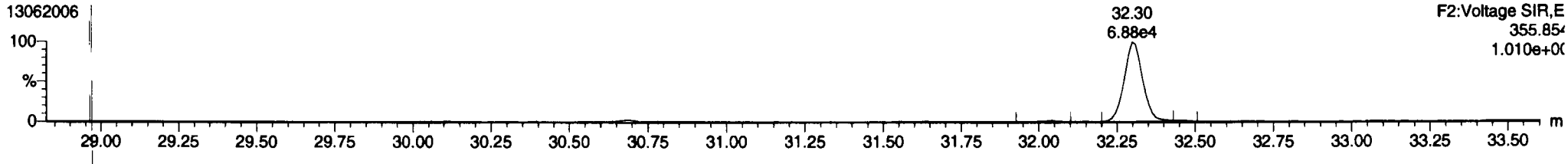
13C-12378-PeCDD



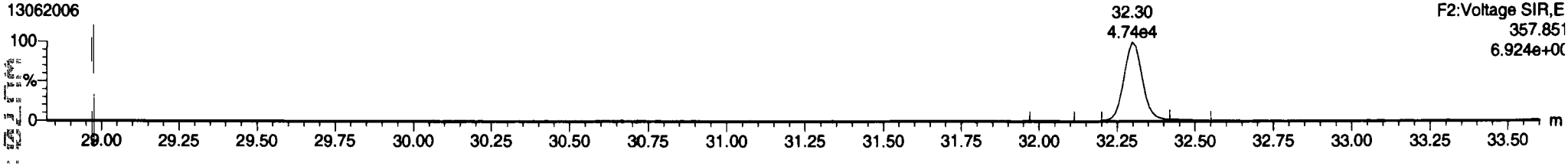
13C-12378-PeCDD



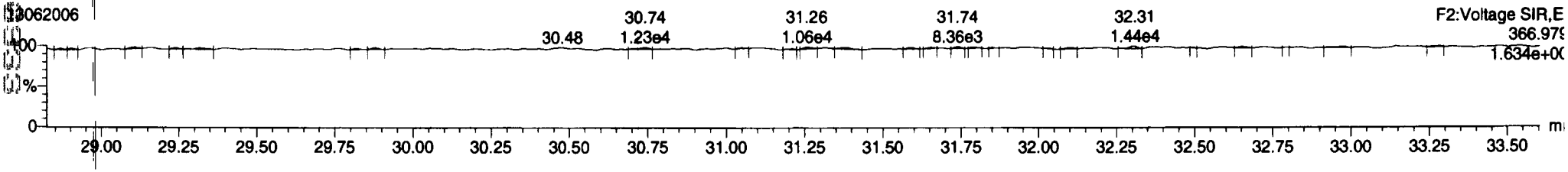
Total-pentadioxins



Total-pentadioxins



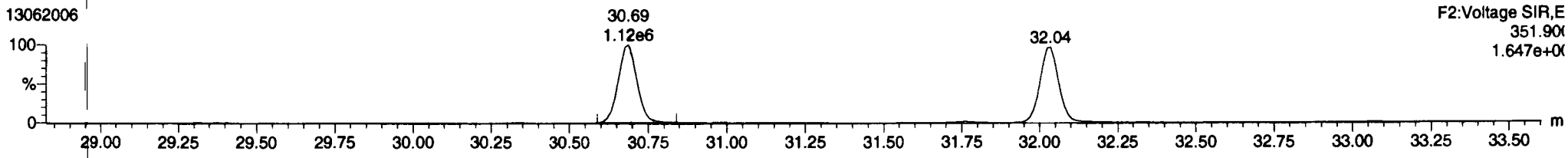
FUNCTION2 PFK



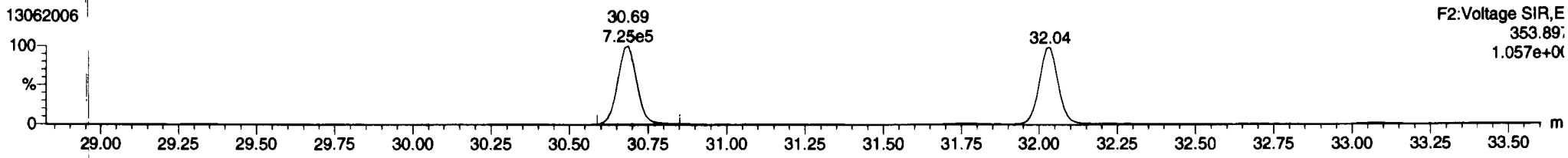
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:07 Pacific Daylight Time

ID: CS2, Name: 13062006, Date: 20-Jun-2013, Time: 14:33:31, Conditions: AUTOSPEC01, User: pk

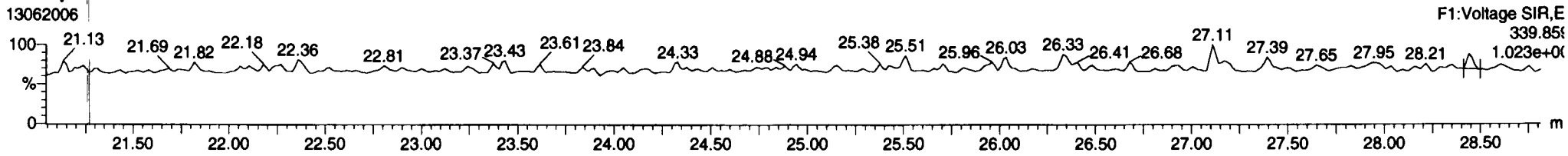
13C-12378-PeCDF



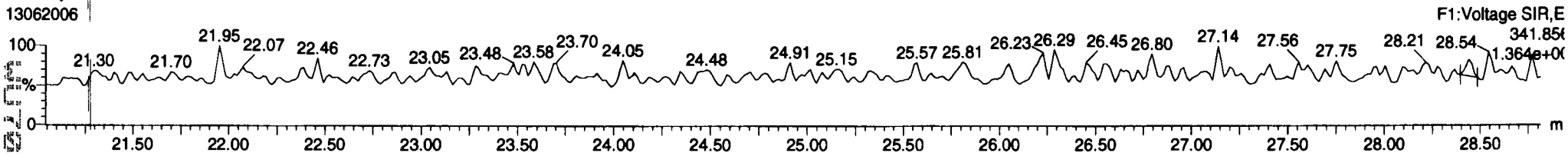
13C-12378-PeCDF



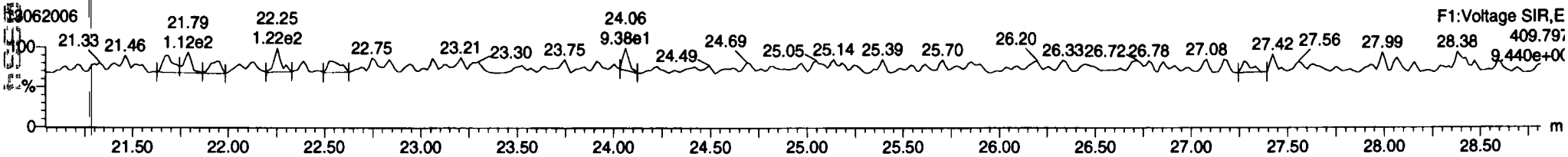
Total-penta1



Total-penta1



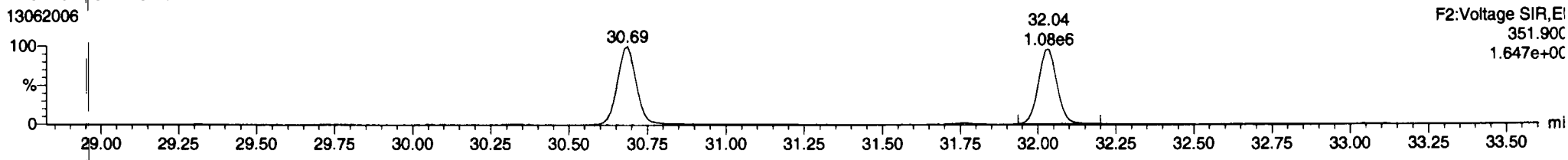
FUNCTION1 HPCDPE



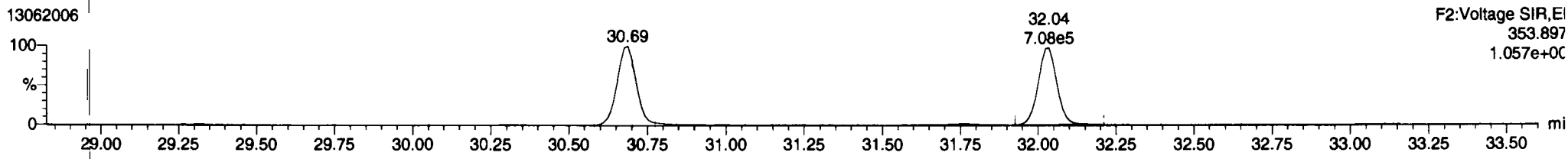
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:07 Pacific Daylight Time

ID: CS2, Name: 13062006, Date: 20-Jun-2013, Time: 14:33:31, Conditions: AUTOSPEC01, User: pk

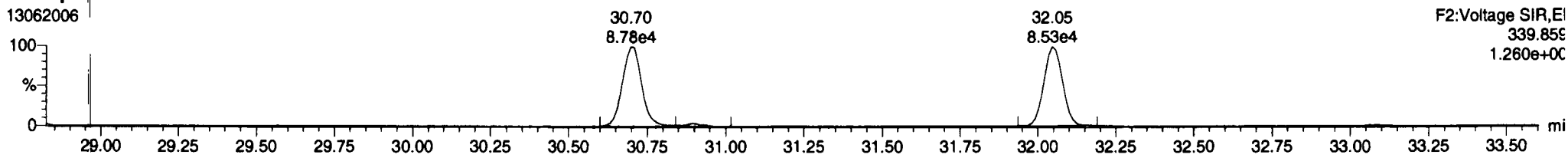
13C-23478-PeCDF



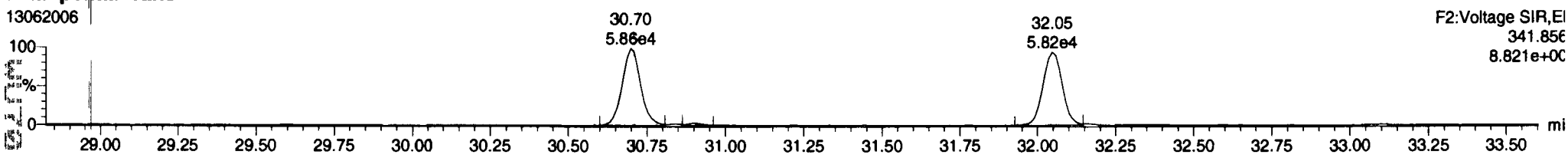
13C-23478-PeCDF



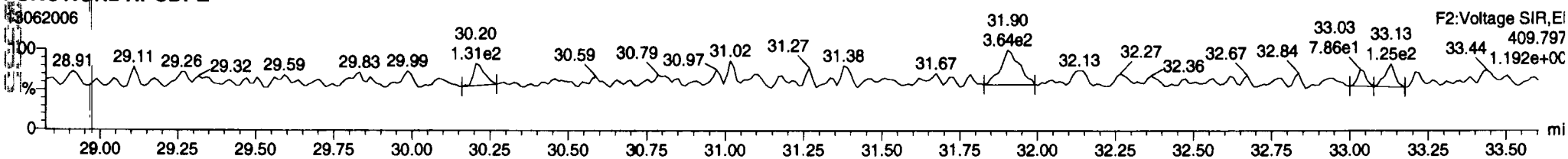
Total-pentafurans



Total-pentafurans



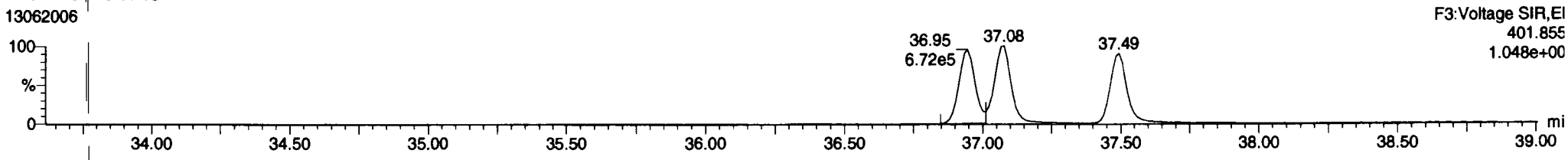
FUNCTION2 HPCDPE



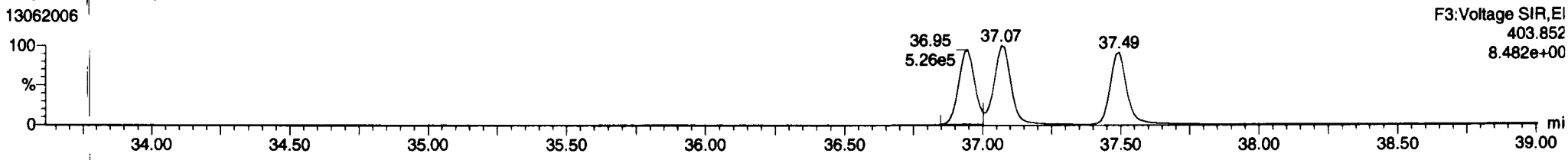
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:07 Pacific Daylight Time

ID: CS2, Name: 13062006, Date: 20-Jun-2013, Time: 14:33:31, Conditions: AUTOSPEC01, User: pk

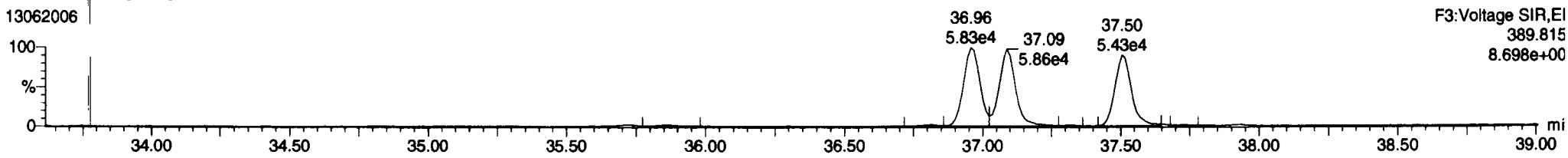
13C-123478-HxCDD



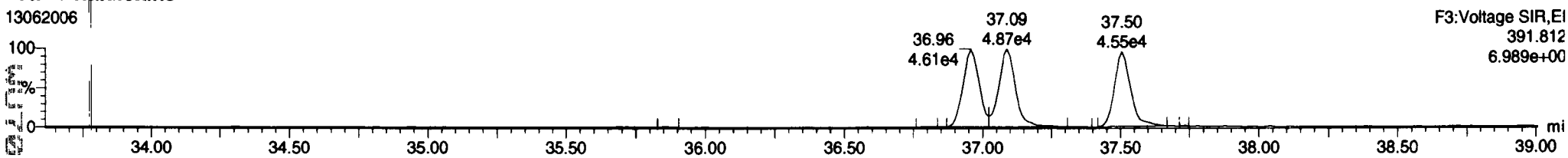
13C-123478-HxCDD



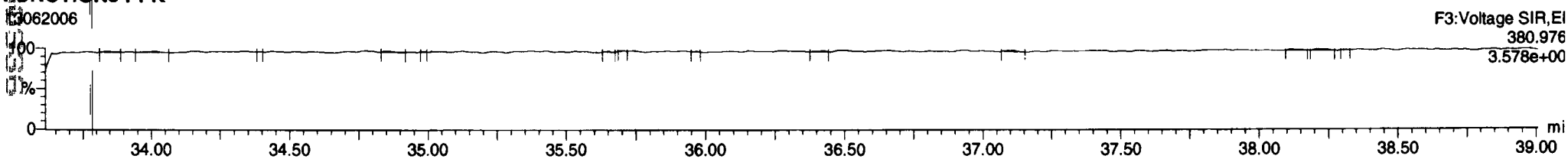
Total-hexadioxins



Total-hexadioxins



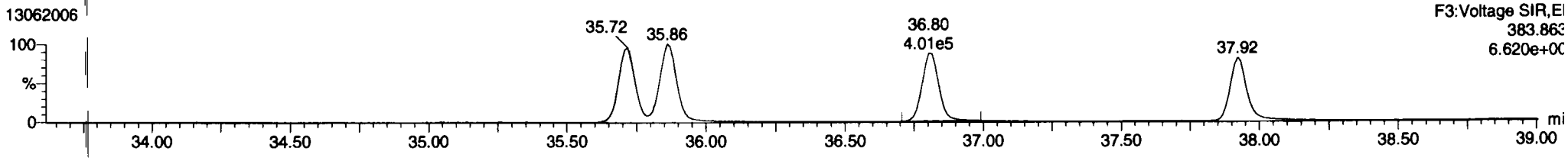
FUNCTION3 PFK



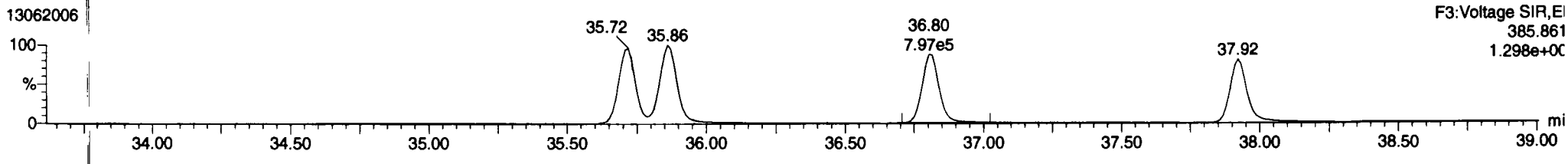
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:07 Pacific Daylight Time

ID: CS2, Name: 13062006, Date: 20-Jun-2013, Time: 14:33:31, Conditions: AUTOSPEC01, User: pk

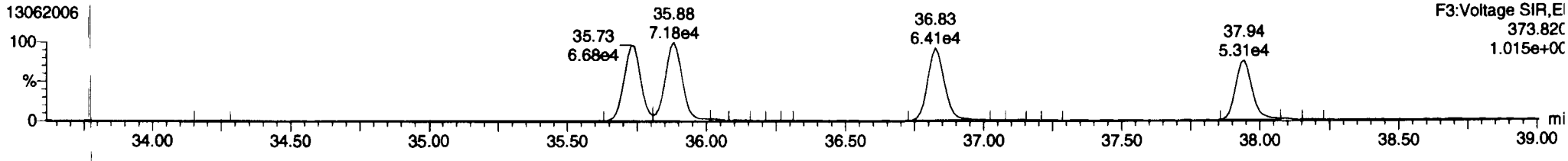
13C-234678-HxCDF



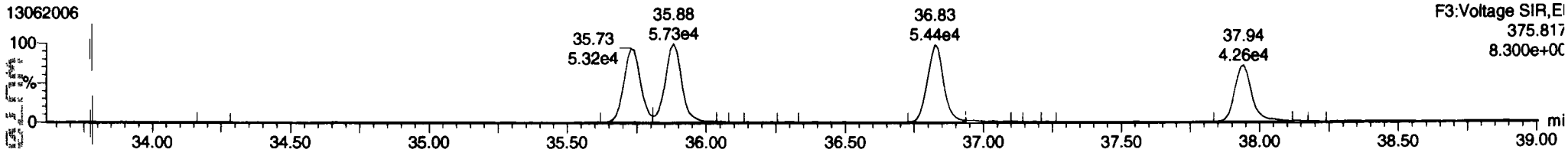
13C-234678-HxCDF



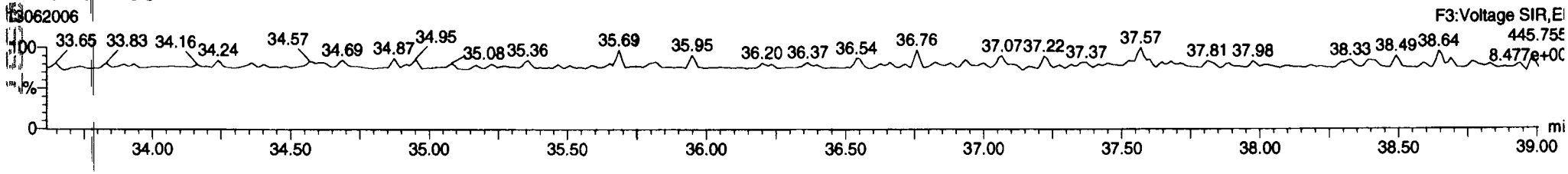
Total-hexafurans



Total-hexafurans



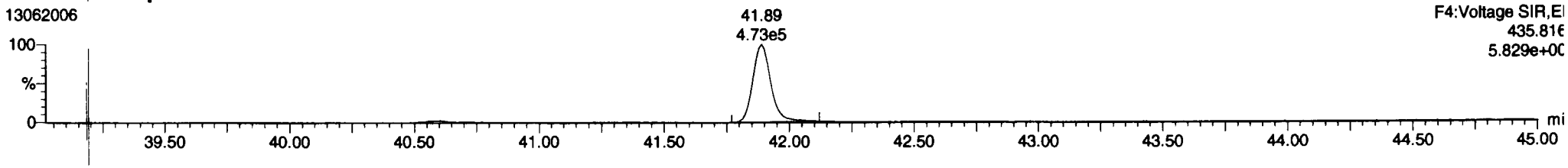
FUNCTION3 OCDPE



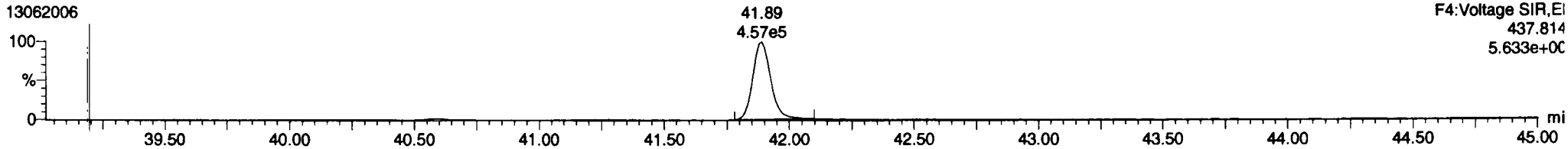
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:07 Pacific Daylight Time

ID: CS2, Name: 13062006, Date: 20-Jun-2013, Time: 14:33:31, Conditions: AUTOSPEC01, User: pk

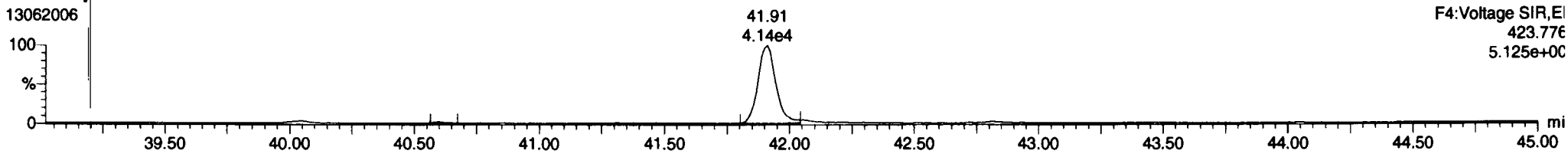
13C-1234678-HpCDD



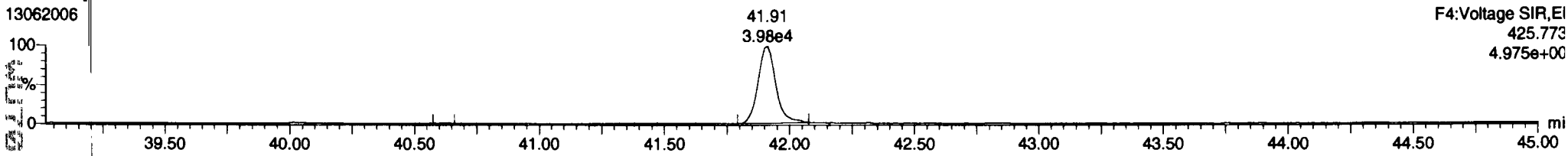
13C-1234678-HpCDD



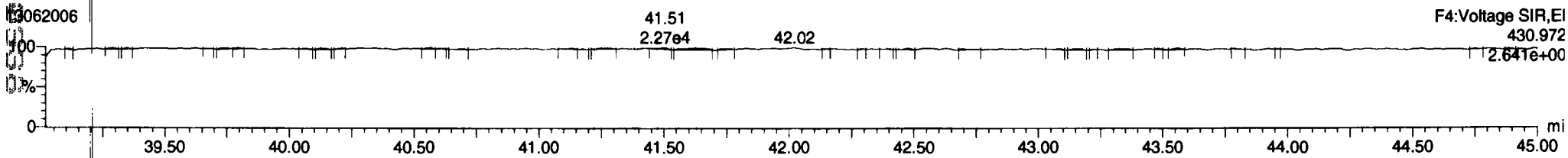
Total-heptadioxins



Total-heptadioxins



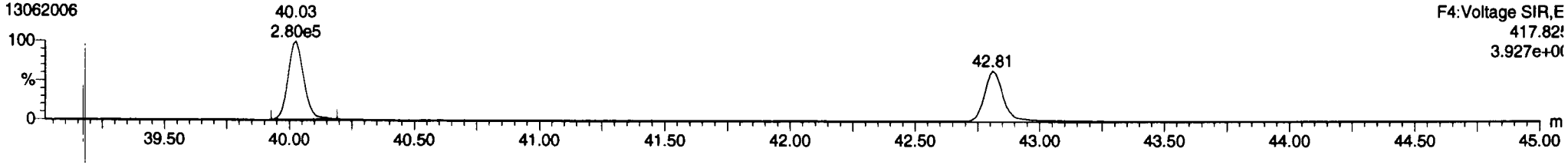
FUNCTION4 PFK



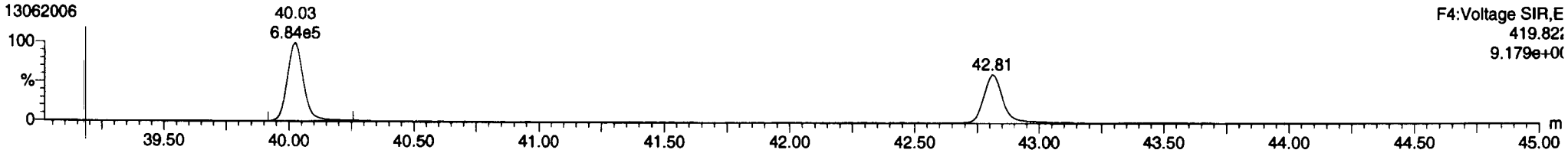
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:07 Pacific Daylight Time

ID: CS2, Name: 13062006, Date: 20-Jun-2013, Time: 14:33:31, Conditions: AUTOSPEC01, User: pk

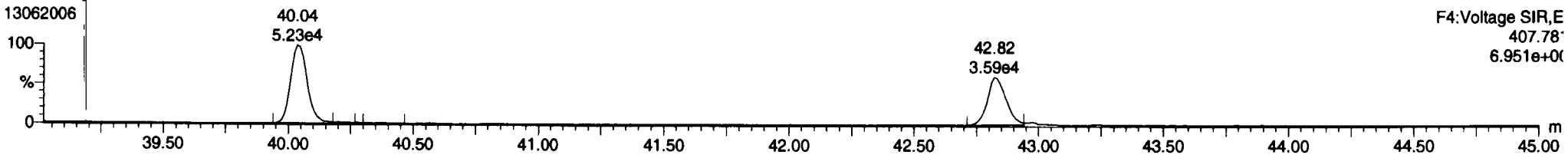
13C-1234678-HpCDF



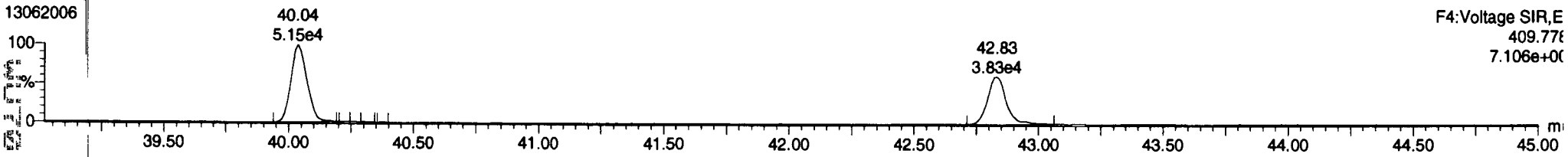
13C-1234678-HpCDF



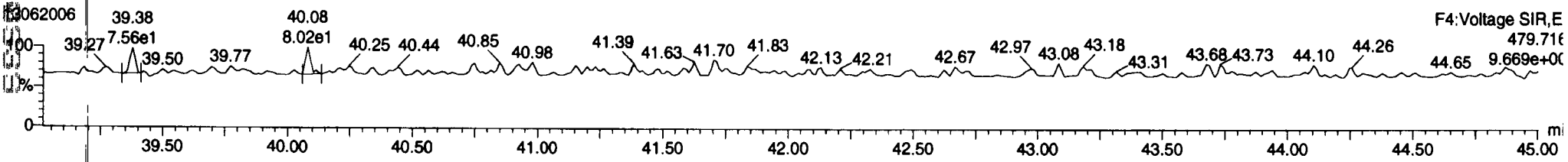
Total-heptafurans



Total-heptafurans



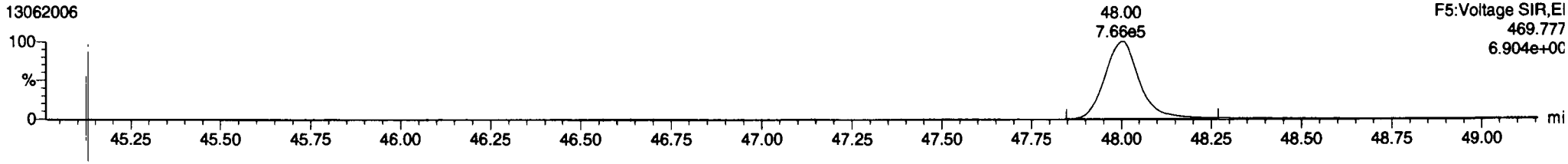
FUNCTION4 NCDPE



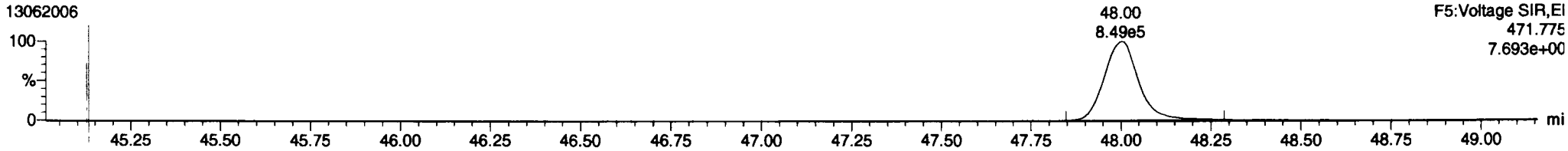
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:07 Pacific Daylight Time

ID: CS2, Name: 13062006, Date: 20-Jun-2013, Time: 14:33:31, Conditions: AUTOSPEC01, User: pk

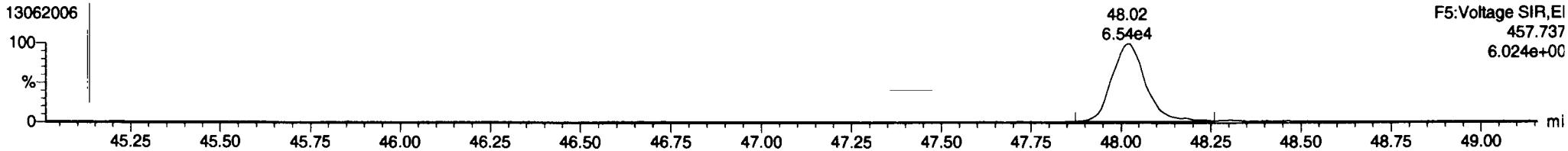
13C-OCDD



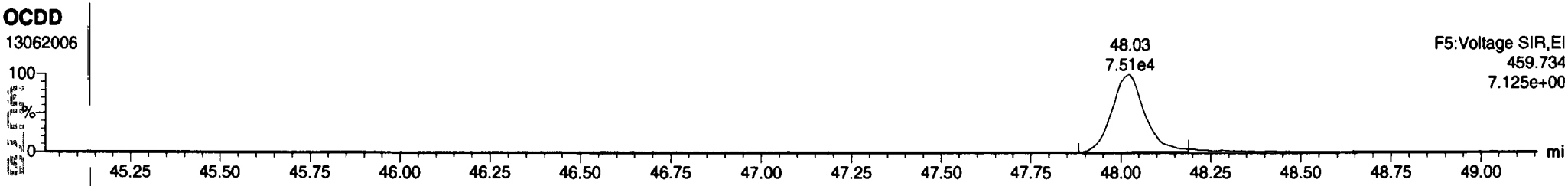
13C-OCDD



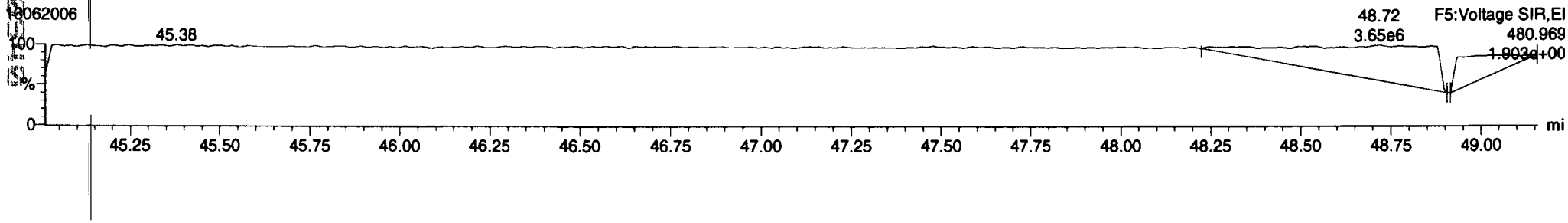
OCDD



OCDD



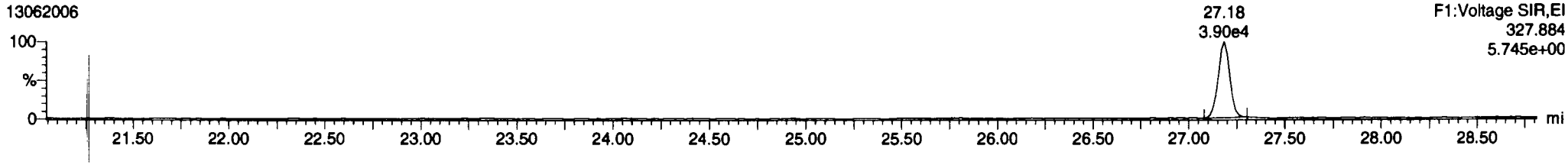
FUNCTION5 PFK



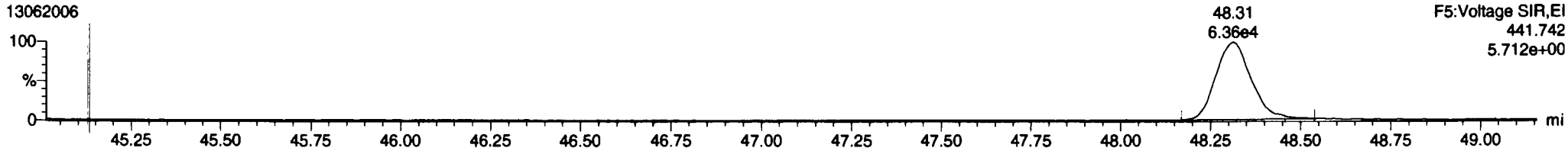
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:07 Pacific Daylight Time

ID: CS2, Name: 13062006, Date: 20-Jun-2013, Time: 14:33:31, Conditions: AUTOSPEC01, User: pk

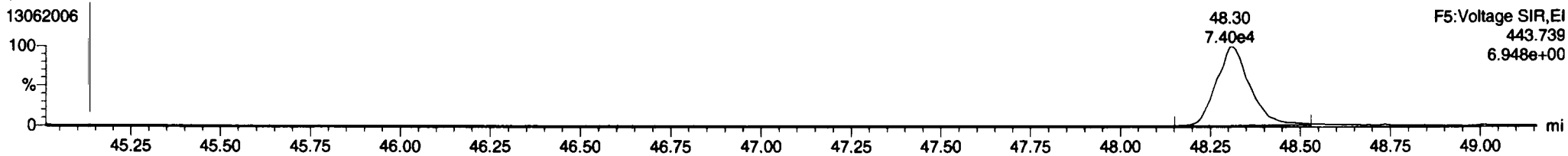
37CL-2378-TCDD



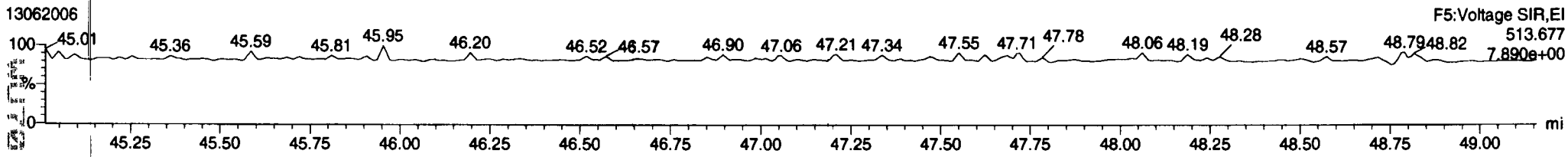
OCDF



OCDF



FUNCTION5 DCDPE



Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:17 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 19 Jun 2013 11:39:43
Calibration: 21 Jun 2013 09:11:11

ID: CS3, Name: 13062007, Date: 20-Jun-2013, Time: 15:25:46, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.541	1.001	6.92e4	9.60e4	0.771	0.721	0.770	700.8	NO	10.223	10.223
12378-PeCDF	30.698	1.000	4.03e5	2.63e5	0.814	1.533	1.550	2517.6	NO	52.226	52.226
23478-PeCDF	32.046	1.000	3.81e5	2.54e5	0.837	1.497	1.550	2498.0	NO	50.326	50.326
123478-HxCDF	35.740	1.001	2.87e5	2.37e5	0.967	1.212	1.240	915.1	NO	49.374	49.374
234678-HxCDF	36.825	1.000	2.89e5	2.36e5	1.000	1.228	1.240	880.7	NO	52.879	52.879
123678-HxCDF	35.882	1.000	3.09e5	2.53e5	0.951	1.220	1.240	950.7	NO	50.482	50.482
123789-HxCDF	37.943	1.001	2.25e5	1.82e5	0.874	1.237	1.240	691.5	NO	52.895	52.895
1234678-HpCDF	40.037	1.000	2.24e5	2.23e5	1.072	1.002	1.050	1203.5	NO	53.242	53.242
1234789-HpCDF	42.832	1.001	1.62e5	1.60e5	1.085	1.017	1.050	727.3	NO	52.767	52.767
OCDF	48.313	1.007	2.67e5	3.00e5	0.878	0.887	0.890	1640.9	NO	105.609	105.609
2378-TCDD	27.184	1.001	6.41e4	8.31e4	0.936	0.772	0.770	534.0	NO	9.738	9.738
12378-PeCDD	32.309	1.001	3.02e5	1.98e5	0.894	1.526	1.550	1753.6	NO	48.762	48.762
123478-HxCDD	36.957	1.000	2.39e5	1.92e5	0.898	1.241	1.240	879.8	NO	48.200	48.200
123678-HxCDD	37.088	1.000	2.53e5	2.10e5	0.818	1.201	1.240	890.0	NO	51.555	51.555
123789-HxCDD	37.505	1.012	2.31e5	1.88e5	0.789	1.231	1.240	838.7	NO	50.697	50.697
1234678-HpCDD	41.911	1.001	1.68e5	1.65e5	0.879	1.019	1.050	971.0	NO	52.104	52.104
OCDD	48.017	1.000	2.51e5	2.86e5	0.875	0.875	0.890	1288.0	NO	100.292	100.292
13C-2378-TCDF	26.526	1.007	9.06e5	1.19e6	1.190	0.762	0.770	4575.5	NO		100.217
13C-12378-PeCDF	30.687	1.165	9.50e5	6.17e5	0.904	1.539	1.550	2244.1	NO		98.537
13C-23478-PeCDF	32.035	1.216	9.17e5	5.91e5	0.877	1.551	1.550	2236.0	NO		97.772
13C-123478-HxCDF	35.718	0.953	3.73e5	7.25e5	1.096	0.514	0.510	1475.1	NO		106.323
13C-123678-HxCDF	35.871	0.957	4.05e5	7.66e5	1.187	0.529	0.510	1478.3	NO		104.740
13C-234678-HxCDF	36.814	0.982	3.37e5	6.55e5	1.040	0.514	0.510	1319.5	NO		101.388
13C-123789-HxCDF	37.921	1.011	3.03e5	5.79e5	0.941	0.522	0.510	1167.2	NO		99.538
13C-1234678-HpCDF	40.026	1.068	2.41e5	5.43e5	0.825	0.443	0.440	1640.5	NO		100.840
13C-1234789-HpCDF	42.810	1.142	1.70e5	3.93e5	0.609	0.433	0.440	989.6	NO		98.126
13C-1234-TCDD	26.347	0.000	7.71e5	9.87e5	1.000	0.782	0.770	1154.4	NO		100.000
13C-2378-TCDD	27.169	1.031	7.07e5	9.08e5	0.920	0.779	0.770	1030.9	NO		99.844
13C-12378-PeCDD	32.287	1.225	6.93e5	4.54e5	0.669	1.527	1.550	2843.4	NO		97.520
13C-123478-HxCDD	36.945	0.985	5.51e5	4.45e5	1.032	1.238	1.240	3475.9	NO		102.599
13C-123678-HxCDD	37.077	0.989	5.96e5	5.03e5	1.146	1.185	1.240	3611.9	NO		101.814
13C-1234678-HpCDD	41.889	1.117	3.71e5	3.55e5	0.789	1.044	1.050	2125.8	NO		97.822
13C-OCDD	47.999	1.280	5.71e5	6.52e5	0.696	0.875	0.890	2143.5	NO		186.569

Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:17 Pacific Daylight Time

ID: CS3, Name: 13062007, Date: 20-Jun-2013, Time: 15:25:46, Conditions: AUTOSPEC01, User: pk

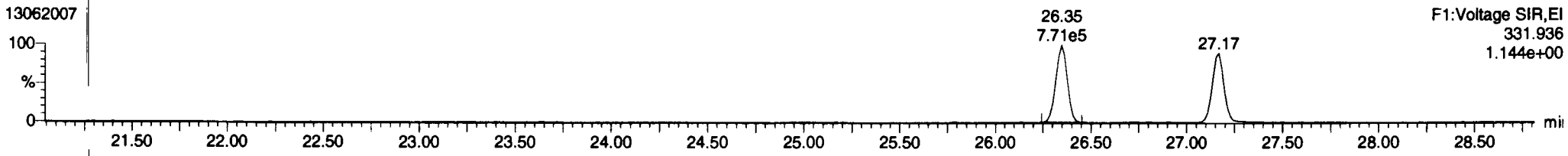
13C-123789-HxCDD	37.493	0.000	5.21e5	4.21e5	1.000	1.239	1.240	3324.8	NO	100.000
Total-tetrafurans			2.31e5		0.771					33.314
Total-penta1			7.91e5							93.600
Total-pentafurans			1.18e6		0.826					154.517
Total-hexafurans			1.48e6		0.948					273.776
Total-heptafurans			3.90e5		1.079					106.697
Total-Furans			4.34e6		0.925					767.513
Total-tetradioxins			3.69e5		0.936					56.443
Total-pentadioxins			1.10e6		0.894					176.461
Total-hexadioxins			1.07e6		0.835					222.516
Total-heptadioxins			3.76e5		0.879					115.808
Total-Dioxins			3.16e6		0.870					671.520
Total-TEQ			7.50e6							1439.032
37CL-2378-TCDD	27.184	1.032	1.67e5		1.000			962.1		9.525
FUNCTION1 PFK			4.06e7							
FUNCTION2 PFK			1.01e5							0.000
FUNCTION3 PFK			3.91e5							0.000
FUNCTION4 PFK			5.85e5							
FUNCTION5 PFK			2.06e5							
FUNCTION1 HXCDPE			1.78e2							0.000
FUNCTION1 HPCDPE			1.09e3							0.000
FUNCTION2 HPCDPE			1.78e3							0.000
FUNCTION3 OCDPE			8.07e1							0.000
FUNCTION4 NCDPE			8.74e1							0.000
FUNCTION5 DCDPE			0.00e0							

Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:17 Pacific Daylight Time

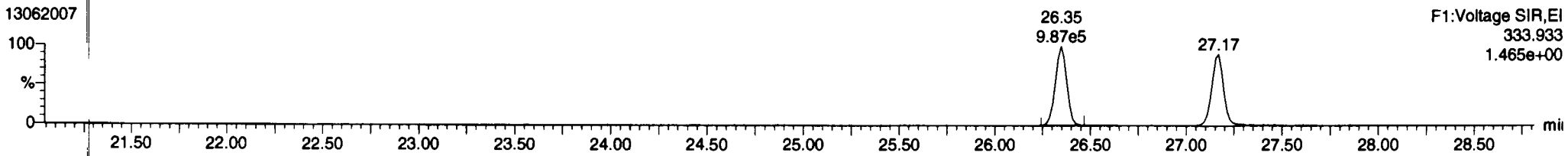
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 19 Jun 2013 11:39:43
Calibration: 21 Jun 2013 09:11:11

ID: CS3, Name: 13062007, Date: 20-Jun-2013, Time: 15:25:46, Conditions: AUTOSPEC01, User: pk

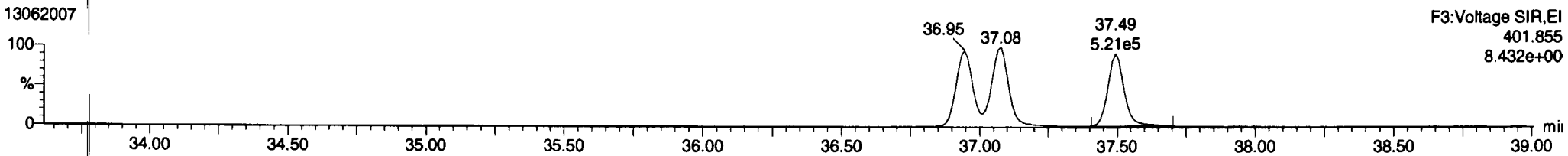
13C-1234-TCDD



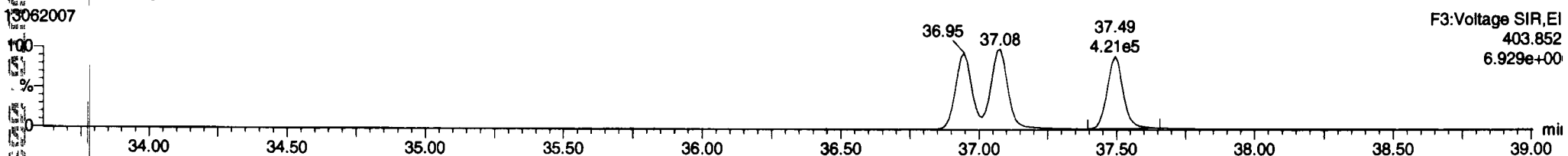
13C-1234-TCDD



13C-123789-HxCDD



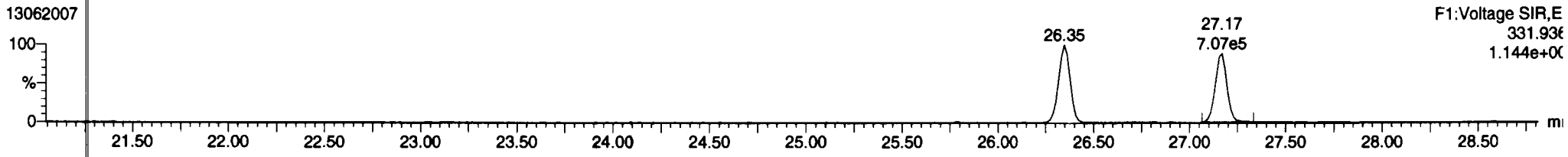
13C-123789-HxCDD



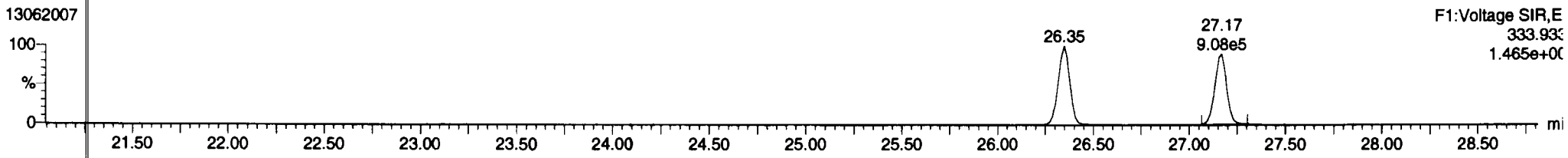
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:17 Pacific Daylight Time

ID: CS3, Name: 13062007, Date: 20-Jun-2013, Time: 15:25:46, Conditions: AUTOSPEC01, User: pk

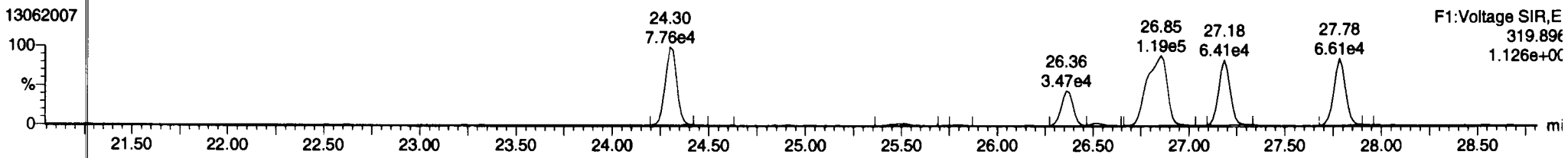
13C-2378-TCDD



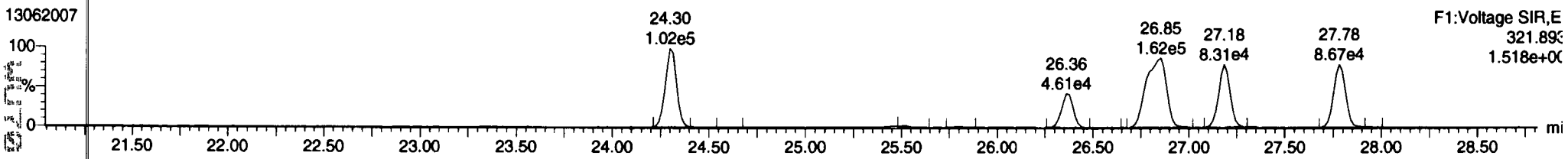
13C-2378-TCDD



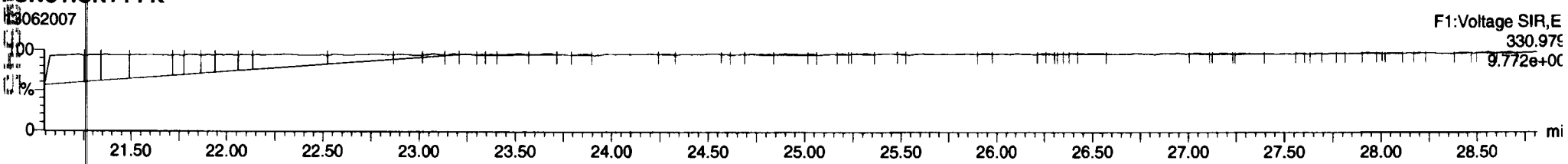
Total-tetradioxins



Total-tetradioxins



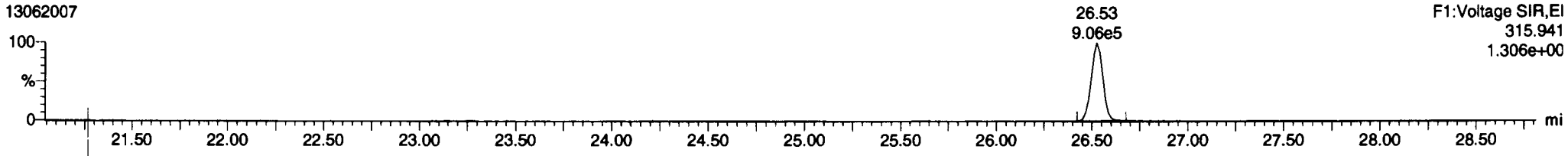
FUNCTION1 PFK



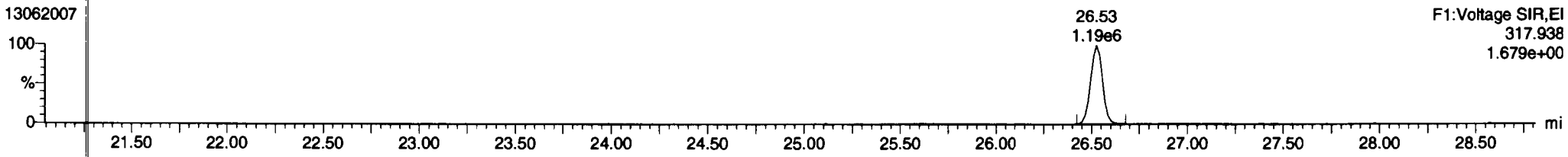
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:17 Pacific Daylight Time

ID: CS3, Name: 13062007, Date: 20-Jun-2013, Time: 15:25:46, Conditions: AUTOSPEC01, User: pk

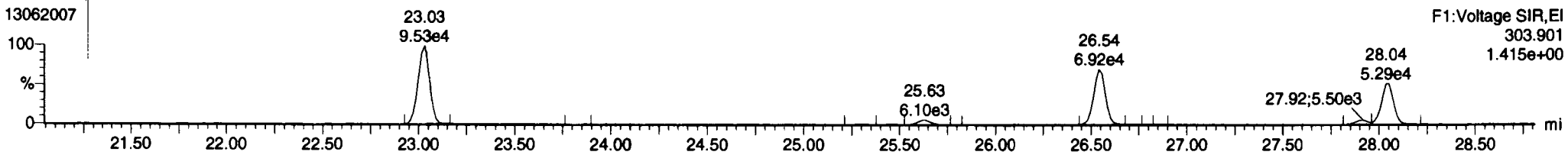
13C-2378-TCDF



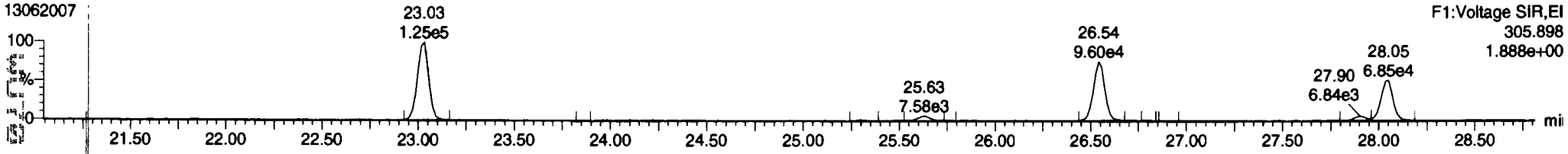
13C-2378-TCDF



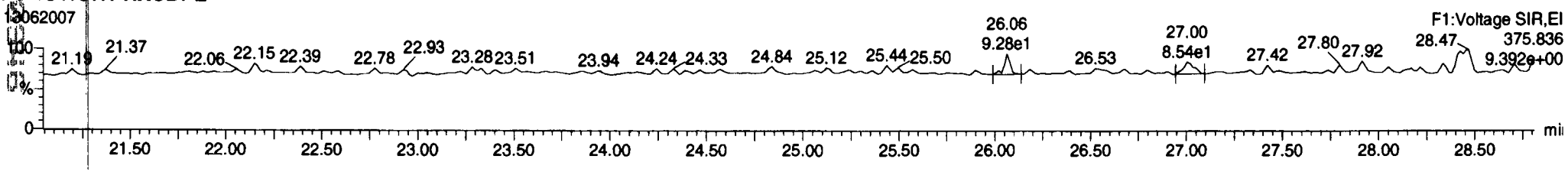
Total-tetrafurans



Total-tetrafurans



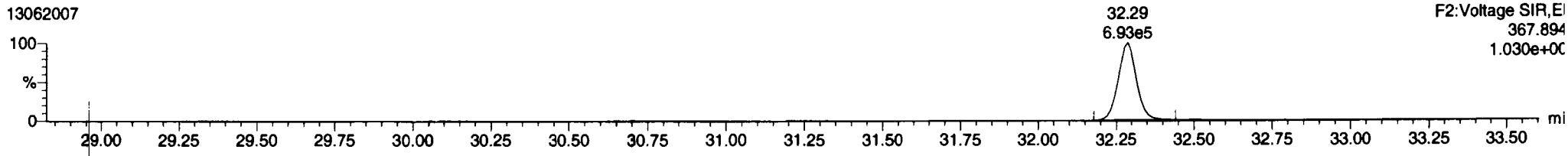
FUNCTION1 HXCDPE



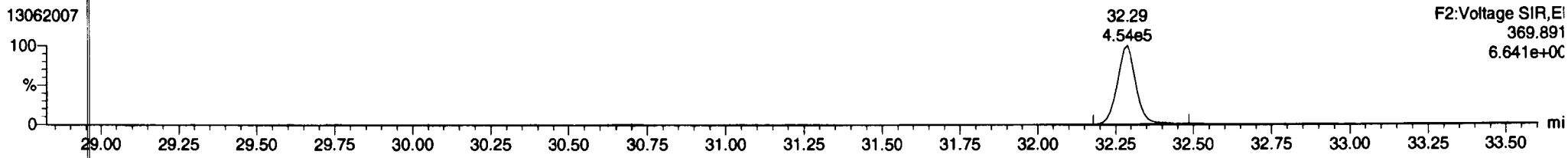
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:17 Pacific Daylight Time

ID: CS3, Name: 13062007, Date: 20-Jun-2013, Time: 15:25:46, Conditions: AUTOSPEC01, User: pk

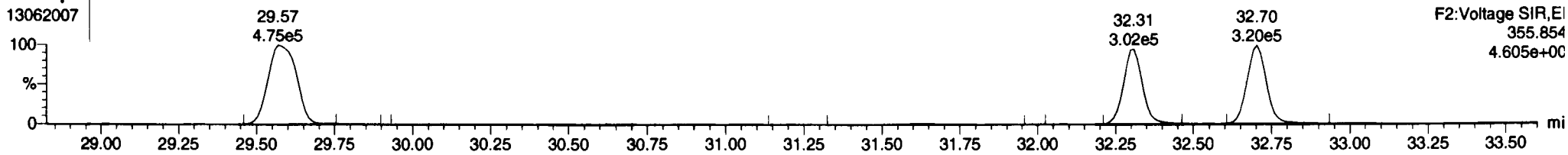
13C-12378-PeCDD



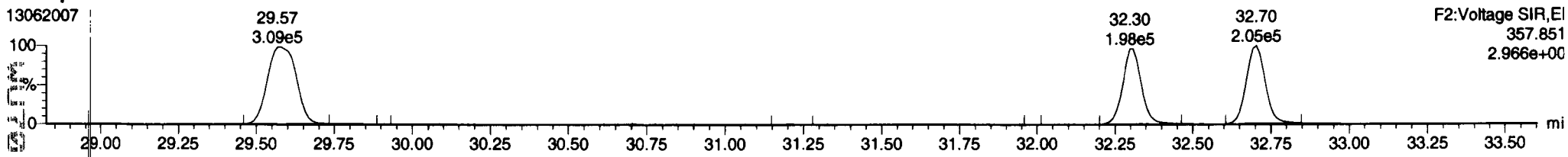
13C-12378-PeCDD



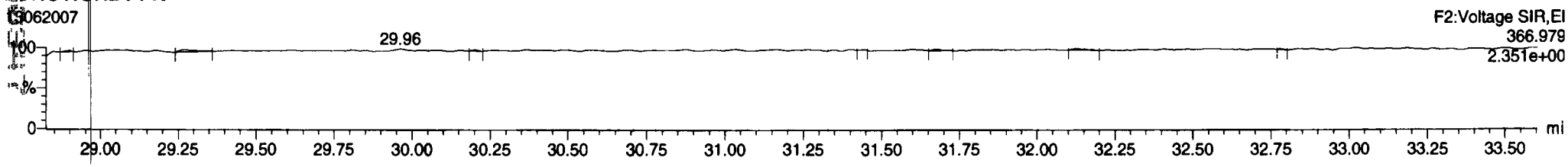
Total-pentadioxins



Total-pentadioxins



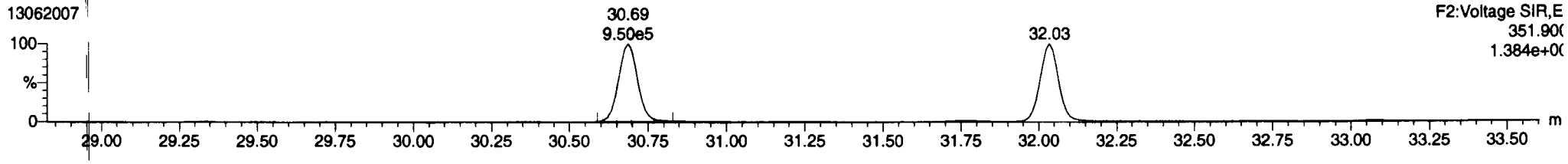
FUNCTION2 PFK



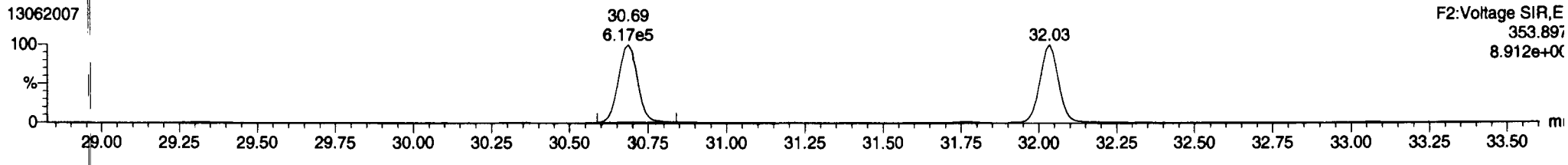
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:17 Pacific Daylight Time

ID: CS3, Name: 13062007, Date: 20-Jun-2013, Time: 15:25:46, Conditions: AUTOSPEC01, User: pk

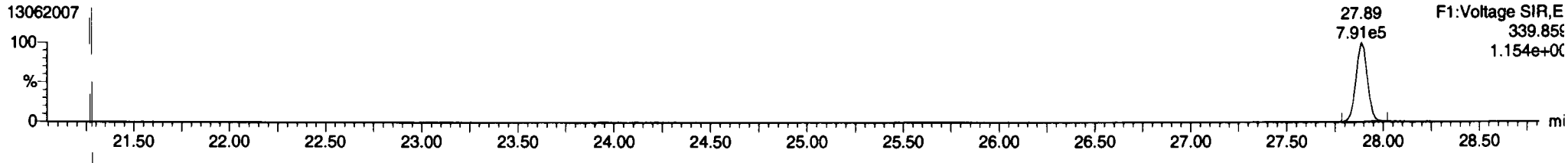
13C-12378-PeCDF



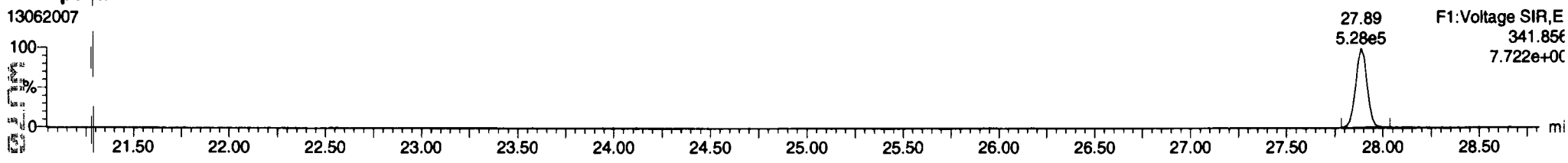
13C-12378-PeCDF



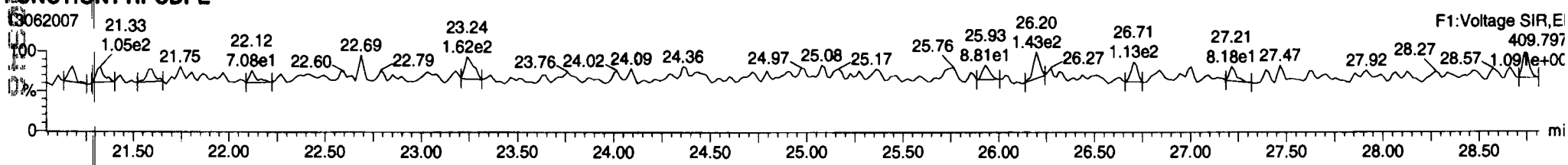
Total-penta1



Total-penta1



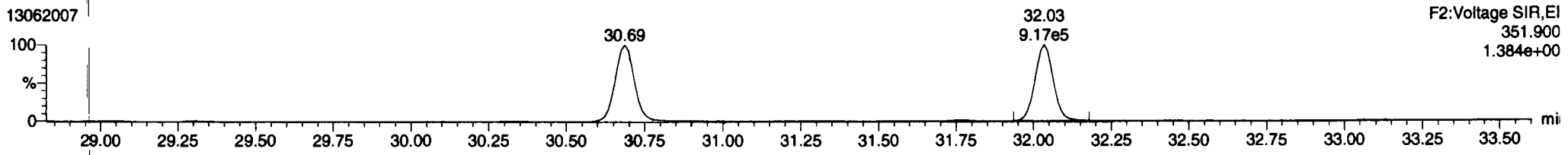
FUNCTION1 HPCDPE



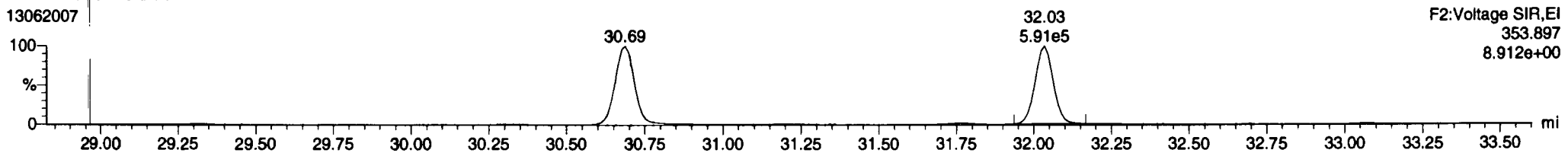
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:17 Pacific Daylight Time

ID: CS3, Name: 13062007, Date: 20-Jun-2013, Time: 15:25:46, Conditions: AUTOSPEC01, User: pk

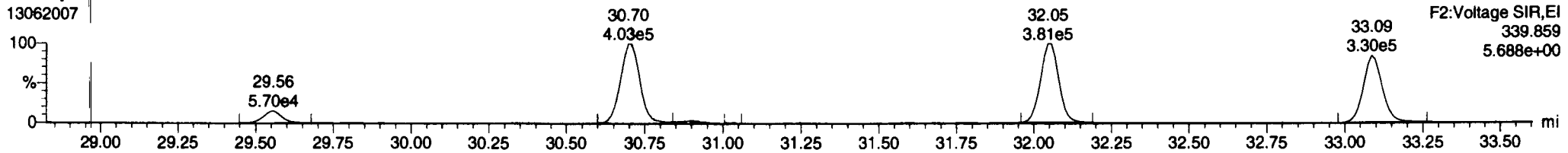
13C-23478-PeCDF



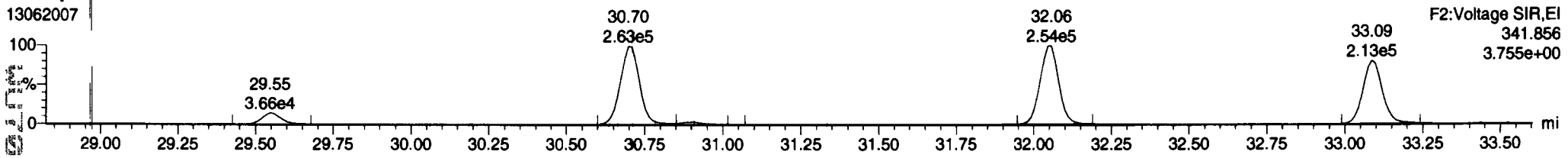
13C-23478-PeCDF



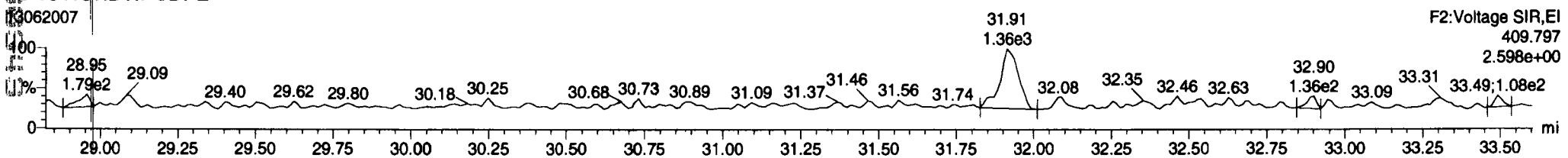
Total-pentafurans



Total-pentafurans



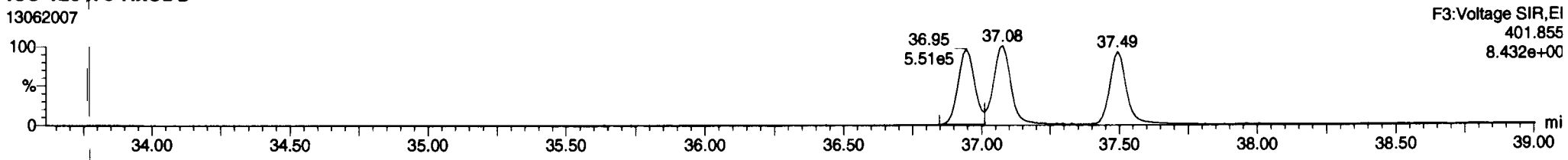
FUNCTION2 HPCDPE



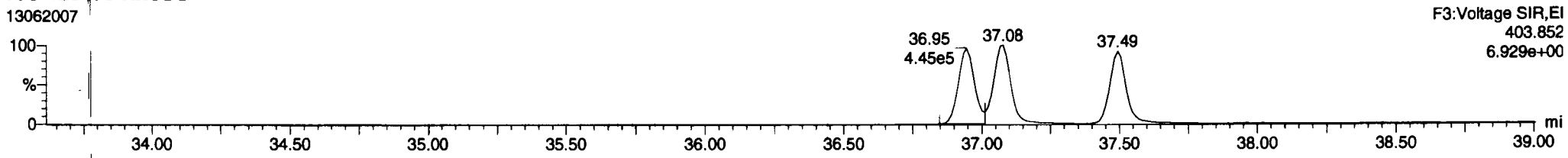
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:17 Pacific Daylight Time

ID: CS3, Name: 13062007, Date: 20-Jun-2013, Time: 15:25:46, Conditions: AUTOSPEC01, User: pk

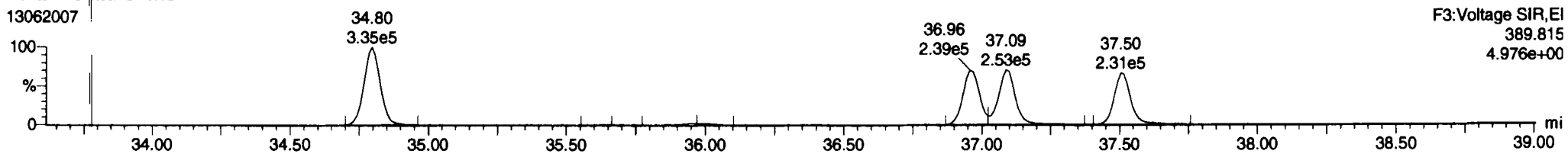
13C-123478-HxCDD



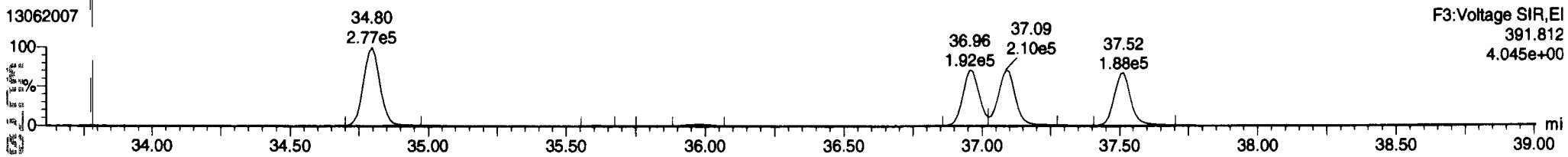
13C-123478-HxCDD



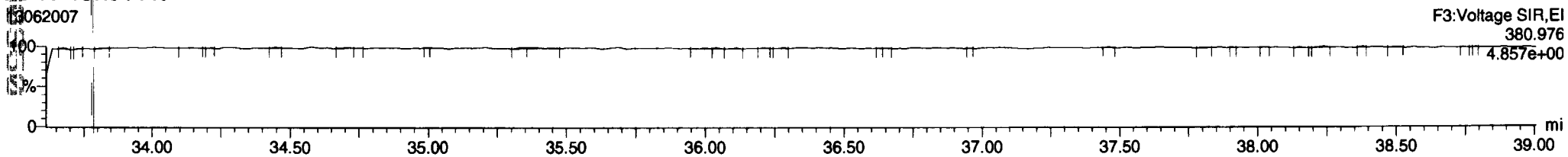
Total-hexadioxins



Total-hexadioxins



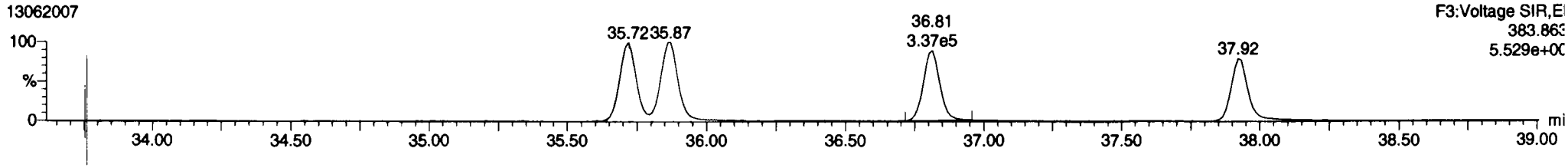
FUNCTION3 PFK



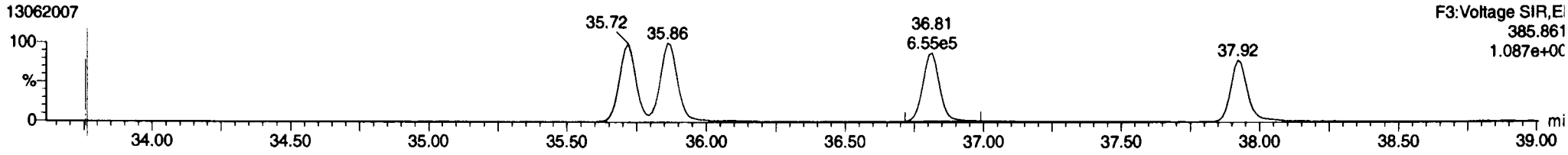
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:17 Pacific Daylight Time

ID: CS3, Name: 13062007, Date: 20-Jun-2013, Time: 15:25:46, Conditions: AUTOSPEC01, User: pk

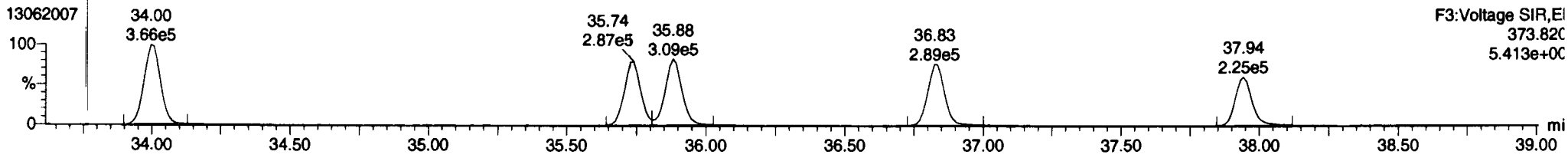
13C-234678-HxCDF



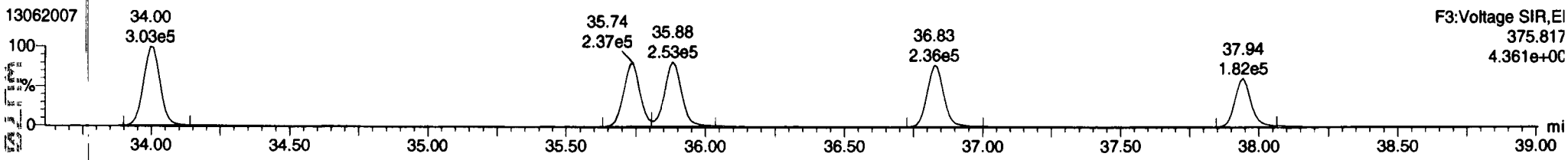
13C-234678-HxCDF



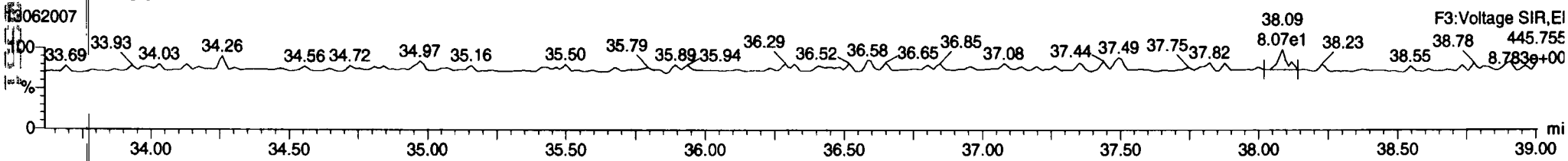
Total-hexafurans



Total-hexafurans



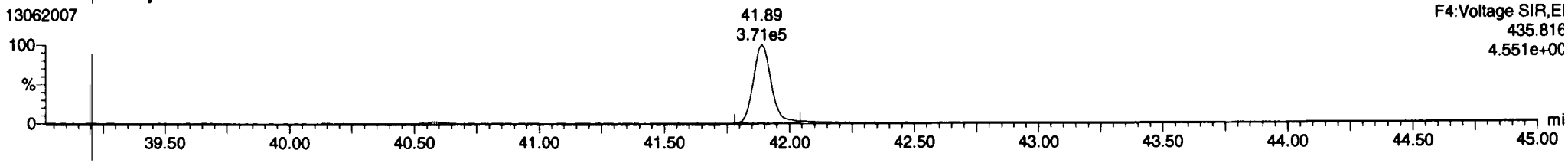
FUNCTION3 OCDPE



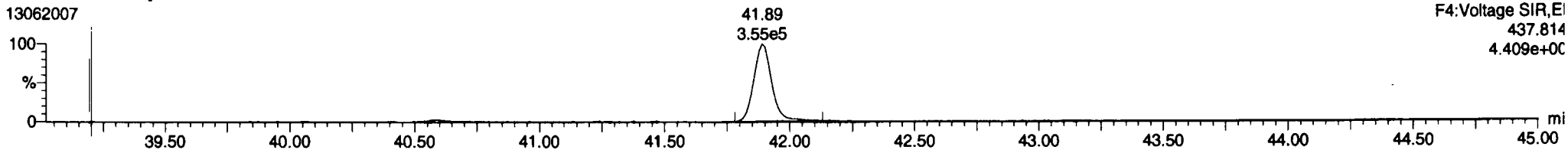
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:17 Pacific Daylight Time

ID: CS3, Name: 13062007, Date: 20-Jun-2013, Time: 15:25:46, Conditions: AUTOSPEC01, User: pk

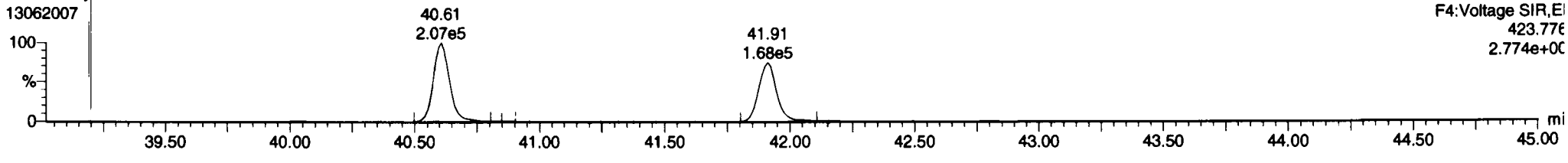
13C-1234678-HpCDD



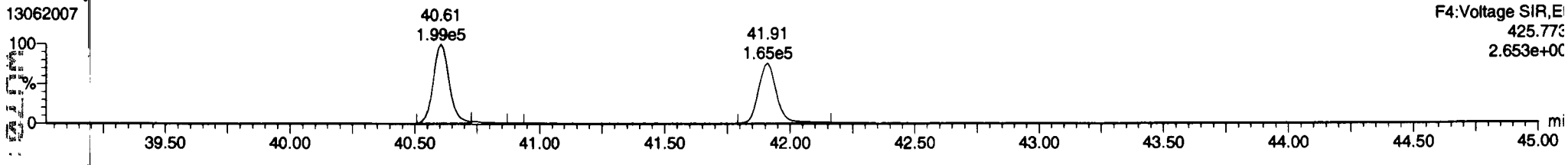
13C-1234678-HpCDD



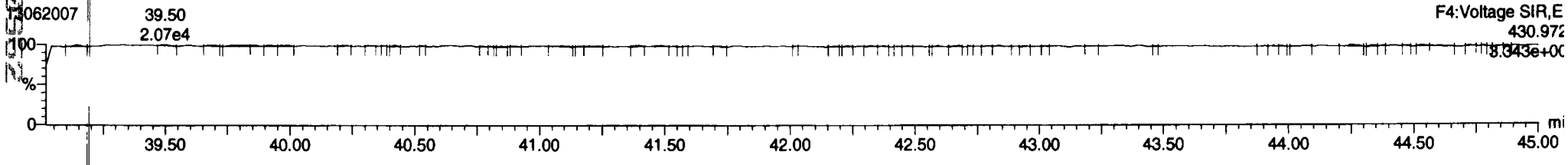
Total-heptadioxins



Total-heptadioxins



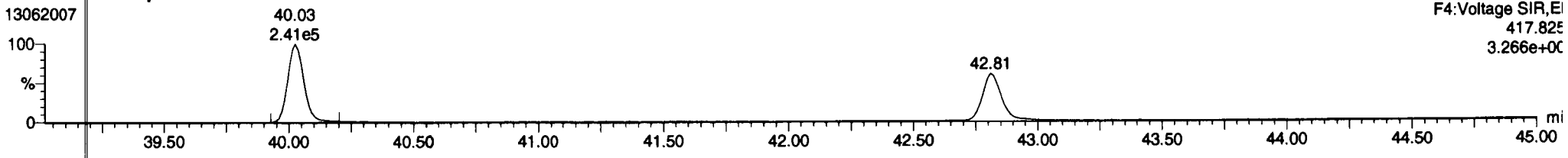
FUNCTION4 PFK



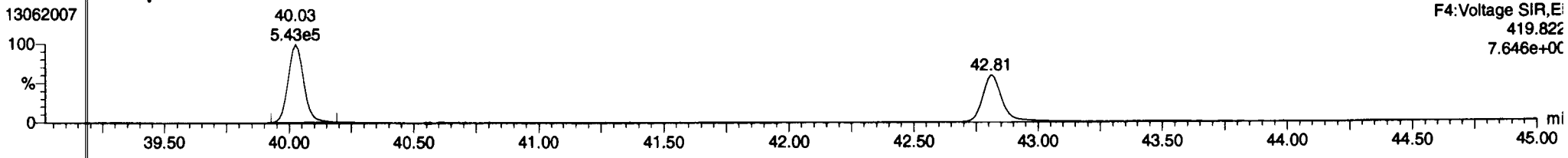
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:17 Pacific Daylight Time

ID: CS3, Name: 13062007, Date: 20-Jun-2013, Time: 15:25:46, Conditions: AUTOSPEC01, User: pk

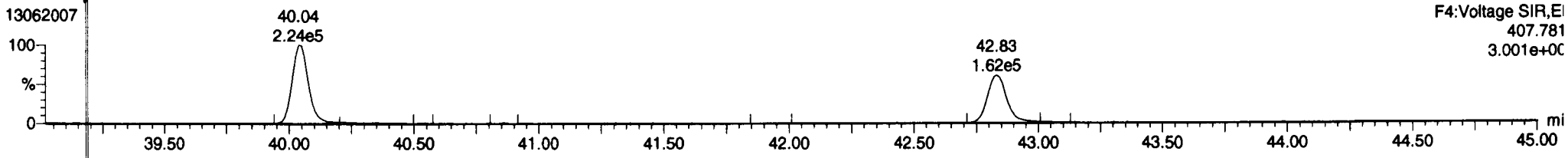
13C-1234678-HpCDF



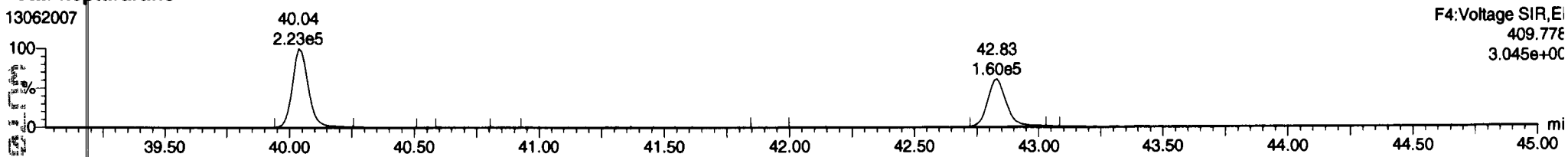
13C-1234678-HpCDF



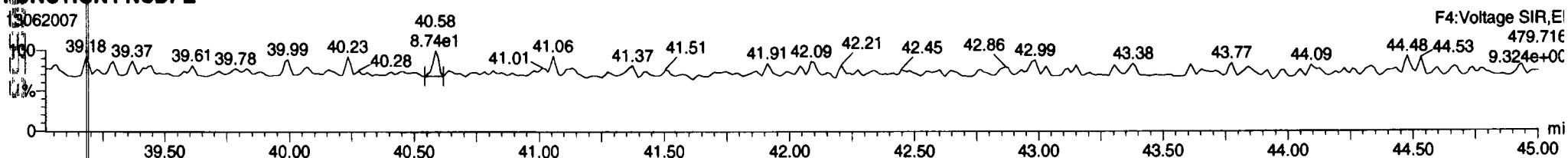
Total-heptafurans



Total-heptafurans



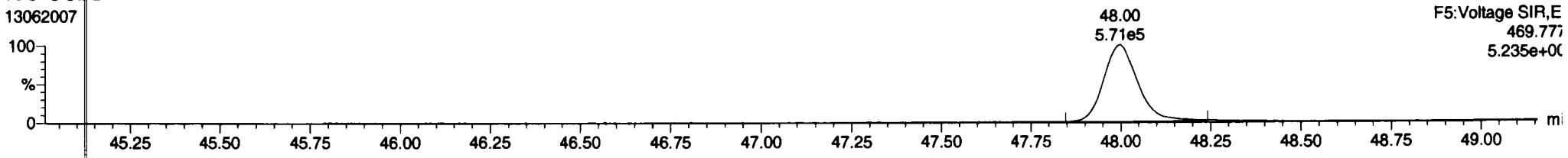
FUNCTION4 NCDPE



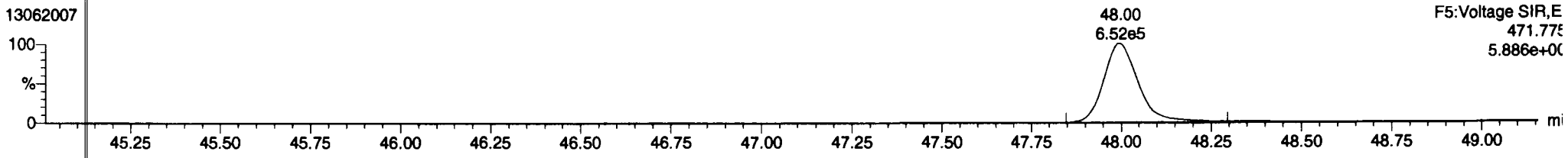
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:17 Pacific Daylight Time

ID: CS3, Name: 13062007, Date: 20-Jun-2013, Time: 15:25:46, Conditions: AUTOSPEC01, User: pk

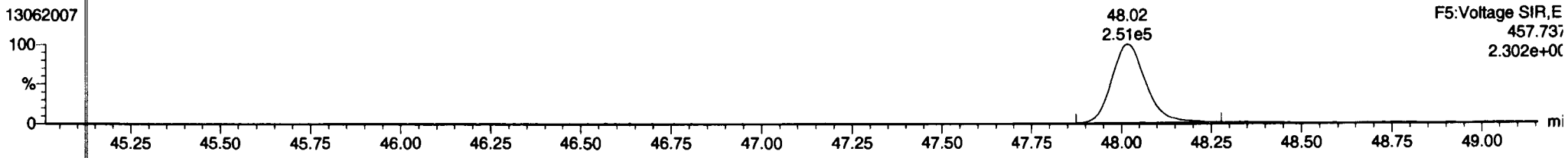
13C-OCDD



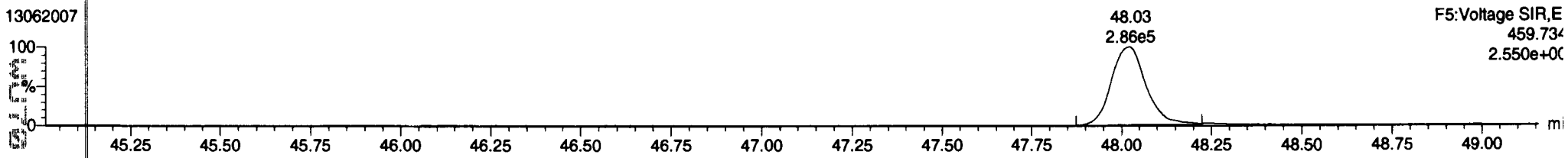
13C-OCDD



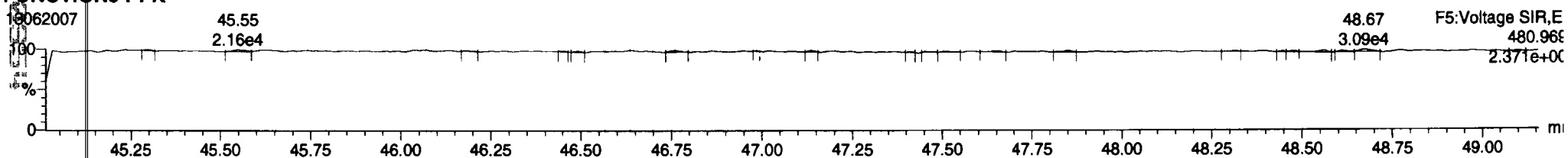
OCDD



OCDD



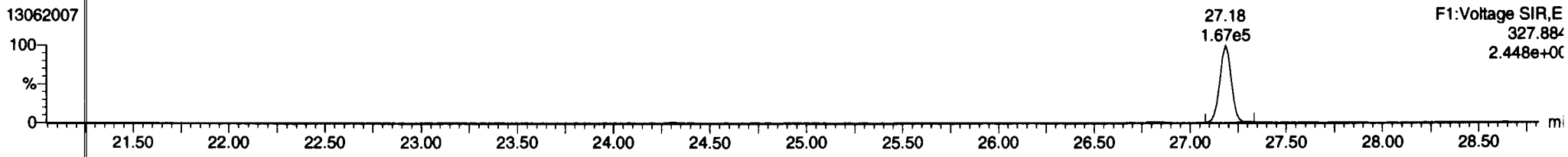
FUNCTION5 PFK



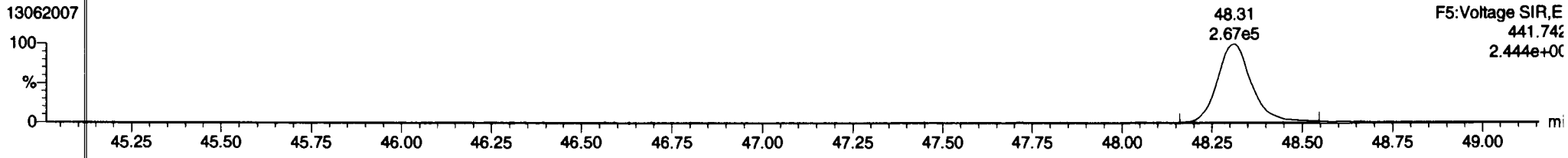
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:17 Pacific Daylight Time

ID: CS3, Name: 13062007, Date: 20-Jun-2013, Time: 15:25:46, Conditions: AUTOSPEC01, User: pk

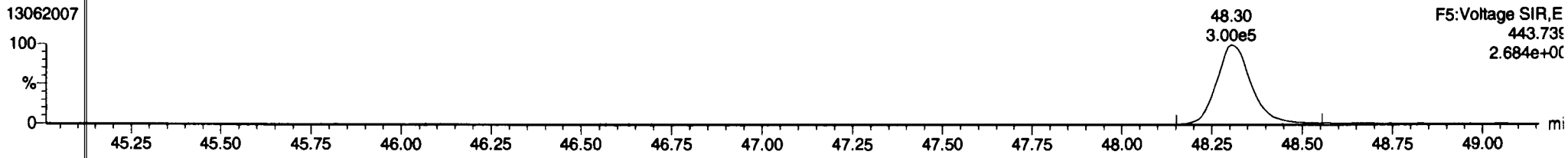
37CL-2378-TCDD



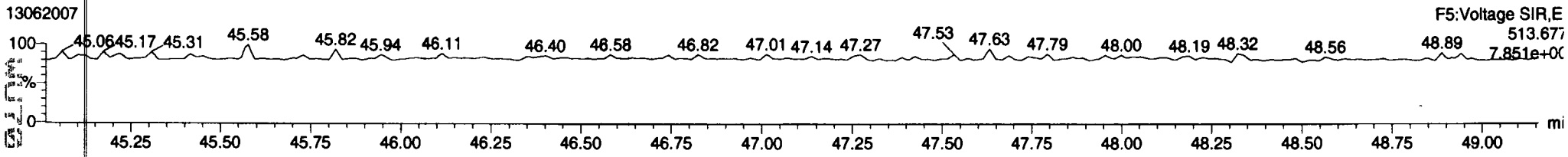
OCDF



OCDF



FUNCTION5 DCDPE



Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:27 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 19 Jun 2013 11:39:43
Calibration: 21 Jun 2013 09:11:11

ID: CS4, Name: 13062008, Date: 20-Jun-2013, Time: 16:18:06, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.541	1.001	3.29e5	4.56e5	0.771	0.722	0.770	3551.3	NO	39.672	39.672
12378-PeCDF	30.708	1.001	1.92e6	1.28e6	0.814	1.500	1.550	5774.3	NO	198.470	198.470
23478-PeCDF	32.057	1.001	1.90e6	1.26e6	0.837	1.503	1.550	5819.6	NO	198.211	198.211
123478-HxCDF	35.739	1.001	1.49e6	1.23e6	0.967	1.211	1.240	5174.4	NO	198.885	198.885
234678-HxCDF	36.835	1.001	1.48e6	1.23e6	1.000	1.204	1.240	5034.0	NO	200.498	200.498
123678-HxCDF	35.882	1.000	1.56e6	1.30e6	0.951	1.196	1.240	5347.9	NO	193.507	193.507
123789-HxCDF	37.943	1.001	1.23e6	1.06e6	0.874	1.161	1.240	4273.6	NO	206.255	206.255
1234678-HpCDF	40.047	1.001	1.20e6	1.20e6	1.072	0.997	1.050	3926.8	NO	202.012	202.012
1234789-HpCDF	42.831	1.000	8.97e5	9.28e5	1.085	0.966	1.050	2551.2	NO	201.009	201.009
OCDF	48.312	1.007	1.72e6	1.92e6	0.878	0.899	0.890	6961.5	NO	416.342	416.342
2378-TCDD	27.184	1.001	3.18e5	4.20e5	0.936	0.756	0.770	2678.5	NO	39.771	39.771
12378-PeCDD	32.309	1.001	1.57e6	1.06e6	0.894	1.486	1.550	6613.4	NO	197.395	197.395
123478-HxCDD	36.956	1.000	1.31e6	1.07e6	0.898	1.217	1.240	7029.4	NO	193.003	193.003
123678-HxCDD	37.088	1.000	1.34e6	1.10e6	0.818	1.220	1.240	6938.9	NO	195.546	195.546
123789-HxCDD	37.515	1.012	1.28e6	1.03e6	0.789	1.241	1.240	6605.2	NO	202.145	202.145
1234678-HpCDD	41.910	1.001	9.98e5	9.79e5	0.879	1.019	1.050	3838.4	NO	208.413	208.413
OCDD	48.016	1.000	1.67e6	1.93e6	0.875	0.870	0.890	5187.3	NO	412.845	412.845
13C-2378-TCDF	26.526	1.007	1.10e6	1.47e6	1.190	0.747	0.770	5175.0	NO		100.615
13C-12378-PeCDF	30.687	1.165	1.18e6	7.90e5	0.904	1.498	1.550	4416.0	NO		101.849
13C-23478-PeCDF	32.035	1.216	1.16e6	7.52e5	0.877	1.537	1.550	4404.1	NO		101.437
13C-123478-HxCDF	35.718	0.953	4.76e5	9.39e5	1.096	0.507	0.510	1667.3	NO		97.197
13C-123678-HxCDF	35.871	0.957	5.24e5	1.03e6	1.187	0.507	0.510	1764.0	NO		98.662
13C-234678-HxCDF	36.814	0.982	4.62e5	8.88e5	1.040	0.520	0.510	1572.2	NO		97.722
13C-123789-HxCDF	37.921	1.011	4.26e5	8.39e5	0.941	0.508	0.510	1496.0	NO		101.271
13C-1234678-HpCDF	40.025	1.068	3.33e5	7.76e5	0.825	0.429	0.440	1647.7	NO		101.114
13C-1234789-HpCDF	42.820	1.142	2.52e5	5.85e5	0.609	0.432	0.440	1049.1	NO		103.428
13C-1234-TCDD	26.347	0.000	9.36e5	1.21e6	1.000	0.775	0.770	1447.2	NO		100.000
13C-2378-TCDD	27.169	1.031	8.68e5	1.11e6	0.920	0.780	0.770	1281.0	NO		100.427
13C-12378-PeCDD	32.287	1.225	8.98e5	5.90e5	0.669	1.521	1.550	3048.3	NO		103.692
13C-123478-HxCDD	36.945	0.985	7.57e5	6.17e5	1.032	1.226	1.240	4122.1	NO		100.215
13C-123678-HxCDD	37.077	0.989	8.41e5	6.88e5	1.146	1.222	1.240	4182.3	NO		100.523
13C-1234678-HpCDD	41.889	1.117	5.42e5	5.37e5	0.789	1.010	1.050	2690.6	NO		102.986
13C-OCDD	47.998	1.280	9.38e5	1.05e6	0.696	0.890	0.890	3097.0	NO		215.411

Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:27 Pacific Daylight Time

ID: CS4, Name: 13062008, Date: 20-Jun-2013, Time: 16:18:06, Conditions: AUTOSPEC01, User: pk

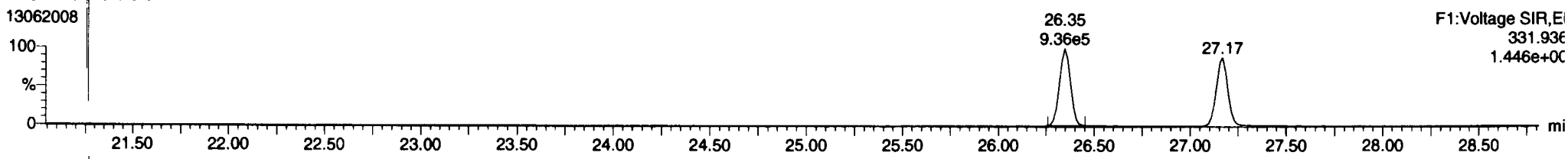
13C-123789-HxCDD	37.493	0.000	7.31e5	5.98e5	1.000	1.222	1.240	3829.6	NO	100.000
Total-tetrafurans			3.35e5		0.771					40.449
Total-penta1			5.11e2							0.061
Total-pentafurans			3.90e6		0.826					406.193
Total-hexafurans			5.76e6		0.948					800.027
Total-heptafurans			2.10e6		1.079					403.021
Total-Furans			1.38e7		0.925					2066.093
Total-tetradioxins			3.29e5		0.936					41.108
Total-pentadioxins			1.58e6		0.894					198.153
Total-hexadioxins			3.93e6		0.835					590.790
Total-heptadioxins			1.00e6		0.879					209.414
Total-Dioxins			8.52e6		0.870					1452.309
Total-TEQ			2.23e7							3518.402
37CL-2378-TCDD	27.184	1.032	8.59e5		1.000			4912.1		40.043
FUNCTION1 PFK			2.00e6							
FUNCTION2 PFK			2.97e5							0.000
FUNCTION3 PFK			9.03e5							0.000
FUNCTION4 PFK			6.42e5							
FUNCTION5 PFK			3.10e5							
FUNCTION1 HXCDPE			3.06e2							0.000
FUNCTION1 HPCDPE			1.35e3							0.000
FUNCTION2 HPCDPE			5.16e3							0.000
FUNCTION3 OCDPE			7.26e1							0.000
FUNCTION4 NCDPE			2.00e2							0.000
FUNCTION5 DCDPE			0.00e0							

Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:27 Pacific Daylight Time

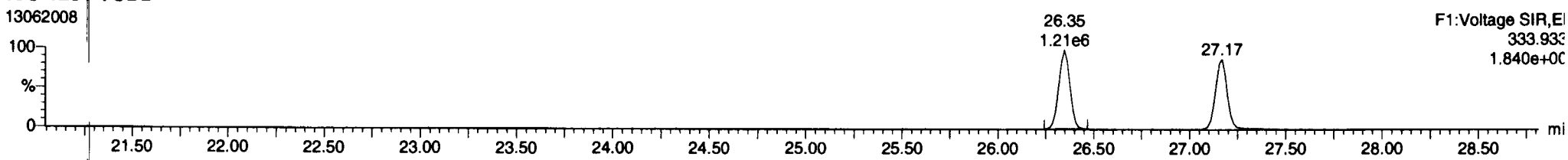
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 19 Jun 2013 11:39:43
Calibration: 21 Jun 2013 09:11:11

ID: CS4, Name: 13062008, Date: 20-Jun-2013, Time: 16:18:06, Conditions: AUTOSPEC01, User: pk

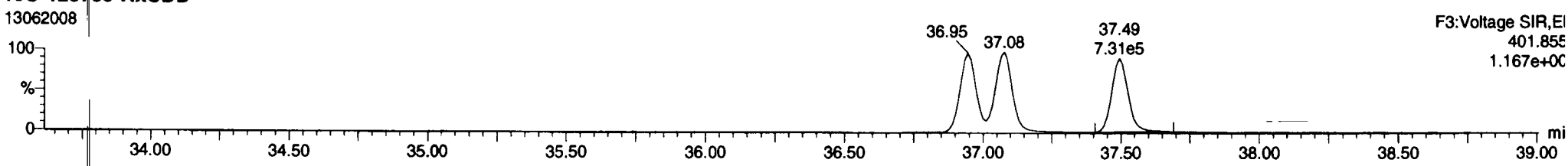
13C-1234-TCDD



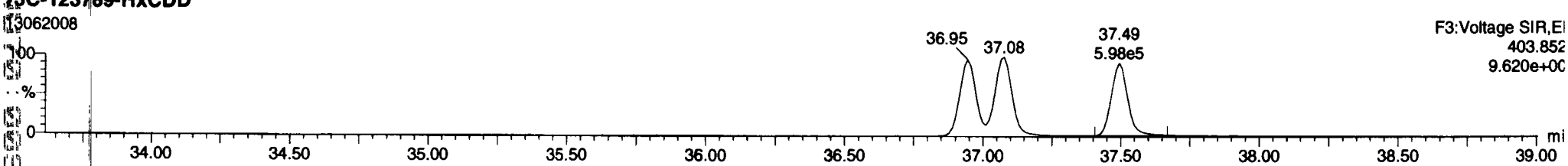
13C-1234-TCDD



13C-123789-HxCDD



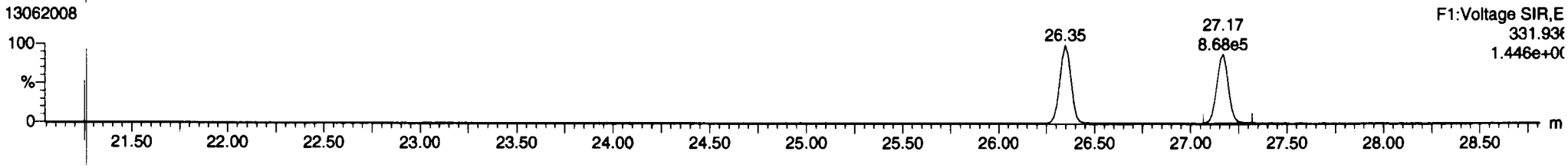
13C-123789-HxCDD



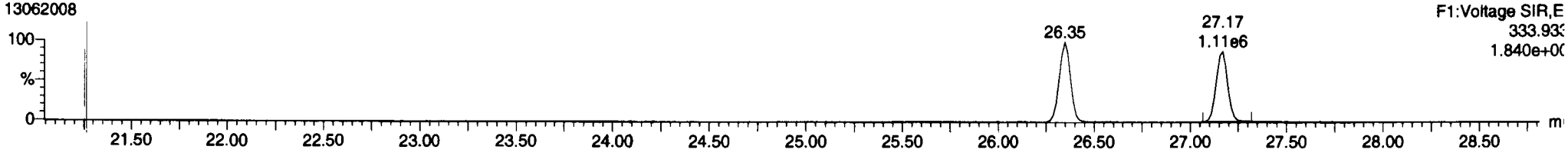
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:27 Pacific Daylight Time

ID: CS4, Name: 13062008, Date: 20-Jun-2013, Time: 16:18:06, Conditions: AUTOSPEC01, User: pk

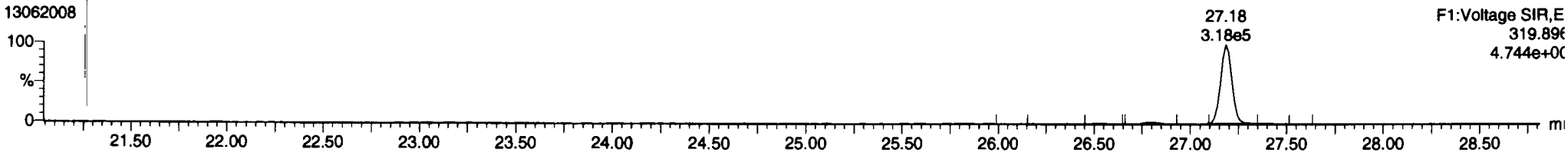
13C-2378-TCDD



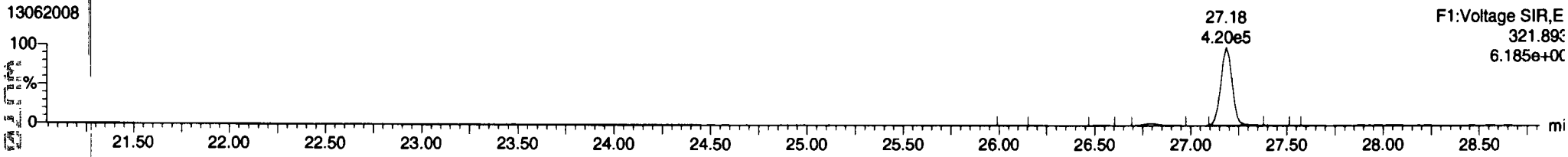
13C-2378-TCDD



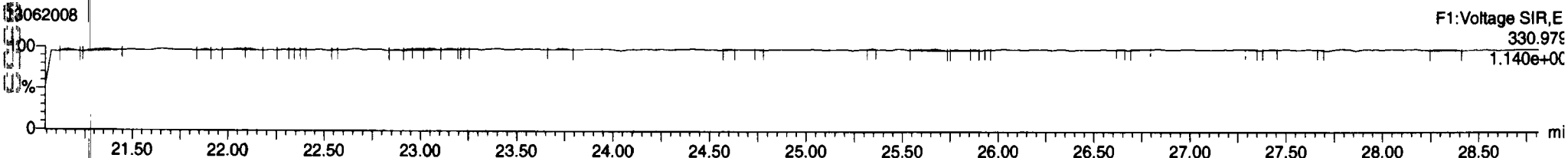
Total-tetradioxins



Total-tetradioxins



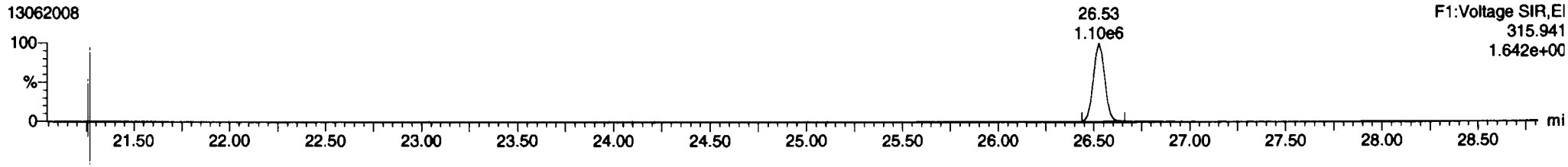
FUNCTION1 PFK



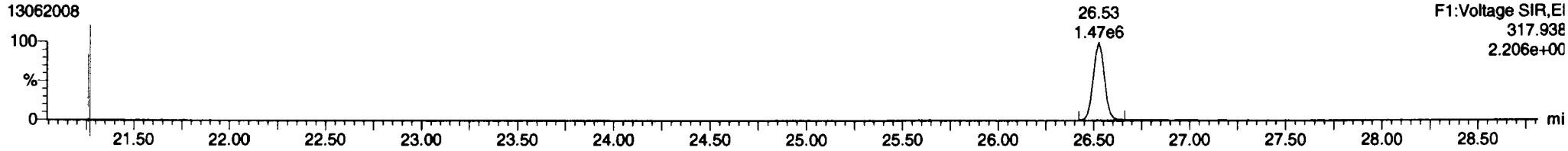
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:27 Pacific Daylight Time

ID: CS4, Name: 13062008, Date: 20-Jun-2013, Time: 16:18:06, Conditions: AUTOSPEC01, User: pk

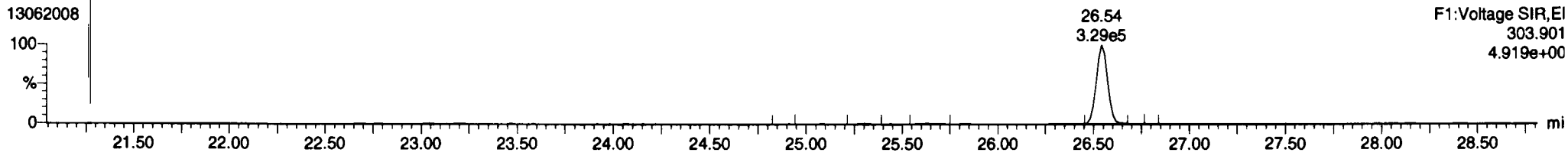
13C-2378-TCDF



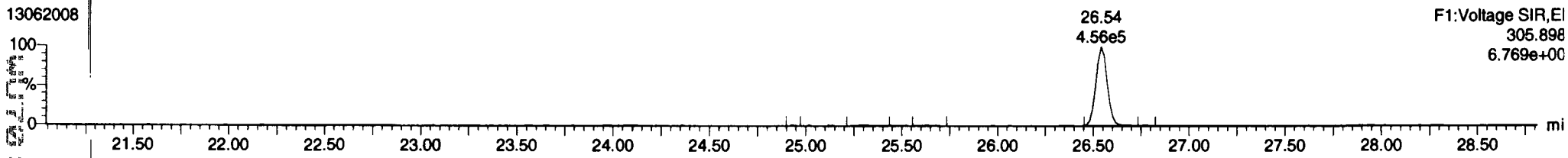
13C-2378-TCDF



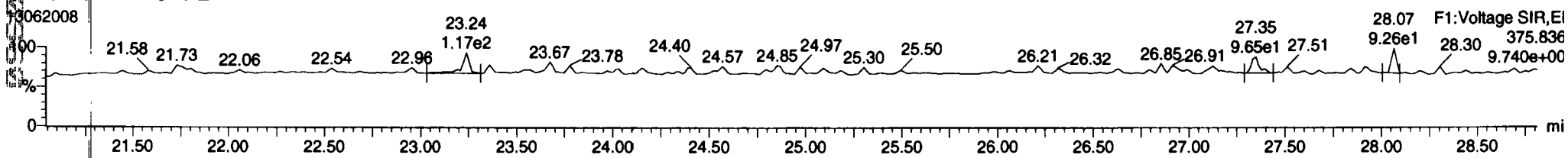
Total-tetrafurans



Total-tetrafurans



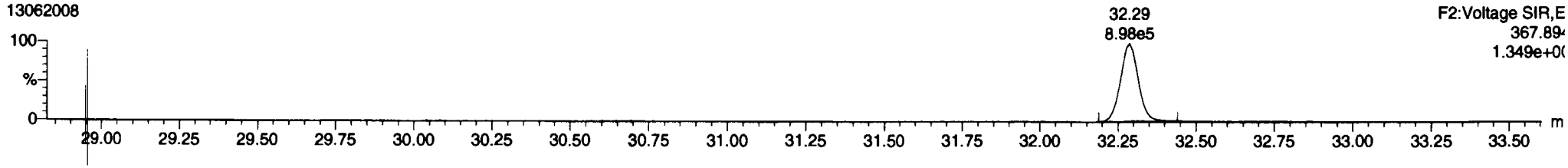
FUNCTION1 HXCDPE



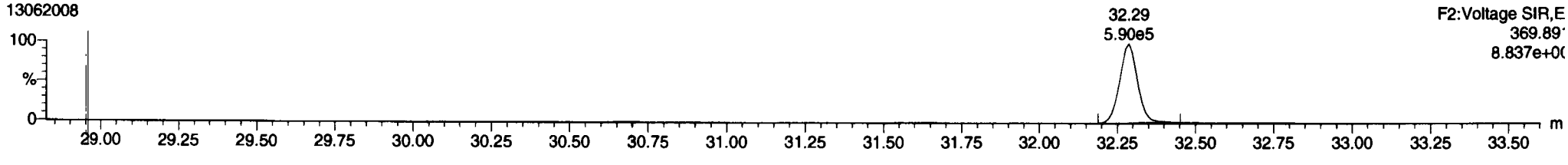
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:27 Pacific Daylight Time

ID: CS4, Name: 13062008, Date: 20-Jun-2013, Time: 16:18:06, Conditions: AUTOSPEC01, User: pk

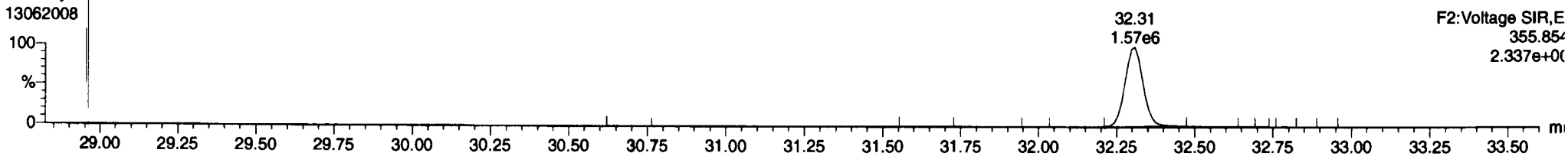
13C-12378-PeCDD



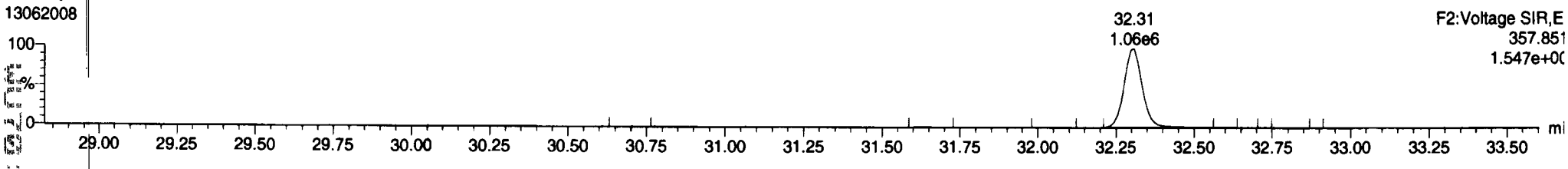
13C-12378-PeCDD



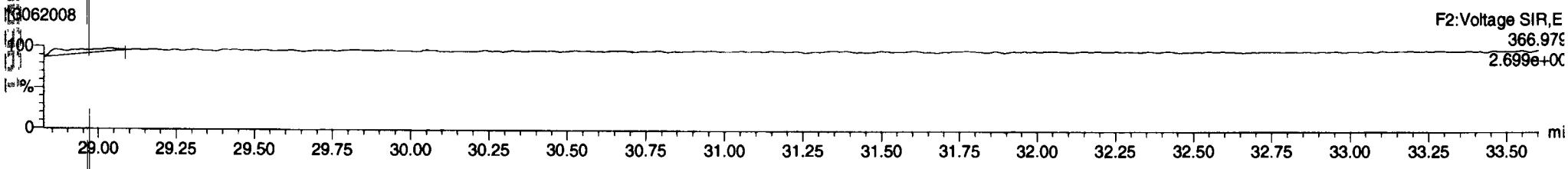
Total-pentadioxins



Total-pentadioxins



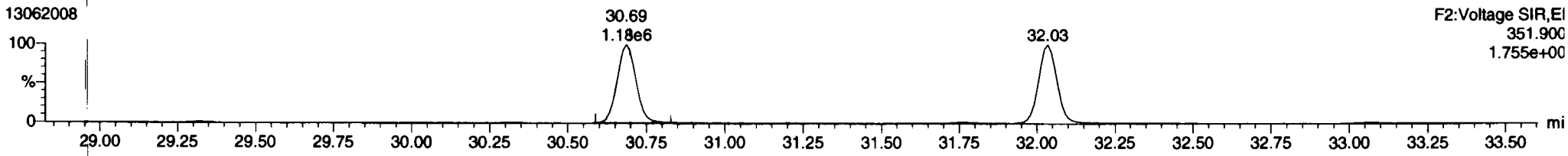
FUNCTION2 PFK



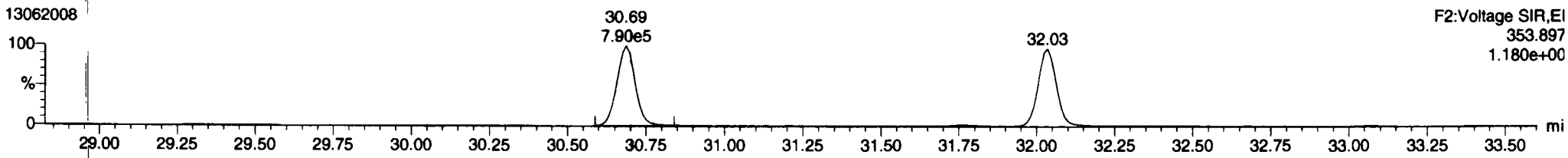
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:27 Pacific Daylight Time

ID: CS4, Name: 13062008, Date: 20-Jun-2013, Time: 16:18:06, Conditions: AUTOSPEC01, User: pk

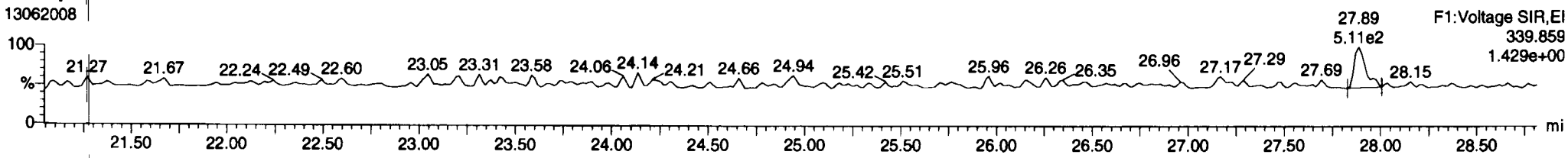
13C-12378-PeCDF



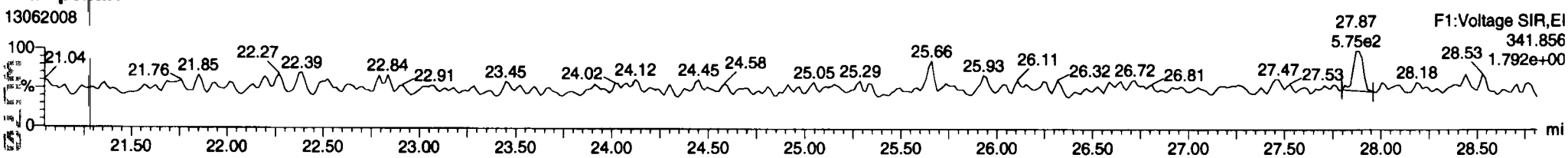
13C-12378-PeCDF



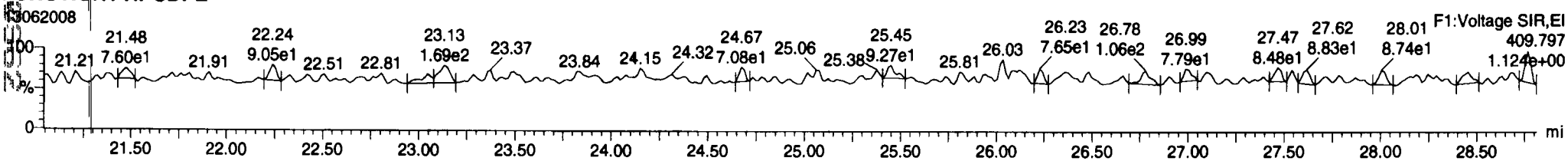
Total-penta1



Total-penta1



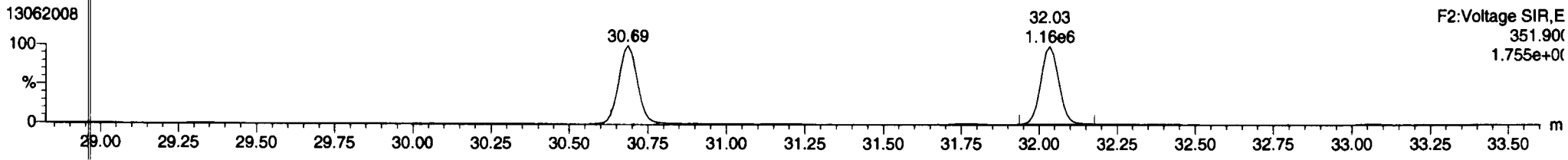
FUNCTION1 HPCDPE



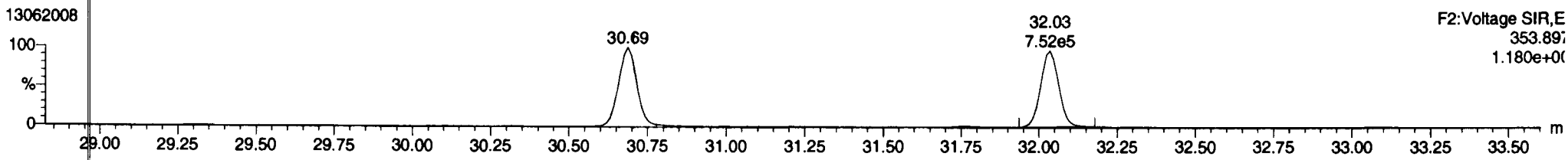
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:27 Pacific Daylight Time

ID: CS4, Name: 13062008, Date: 20-Jun-2013, Time: 16:18:06, Conditions: AUTOSPEC01, User: pk

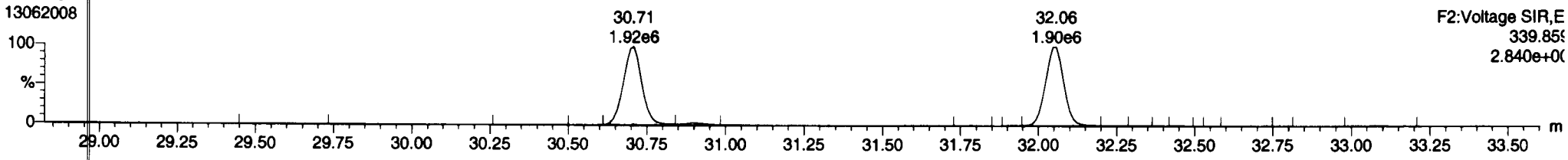
13C-23478-PeCDF



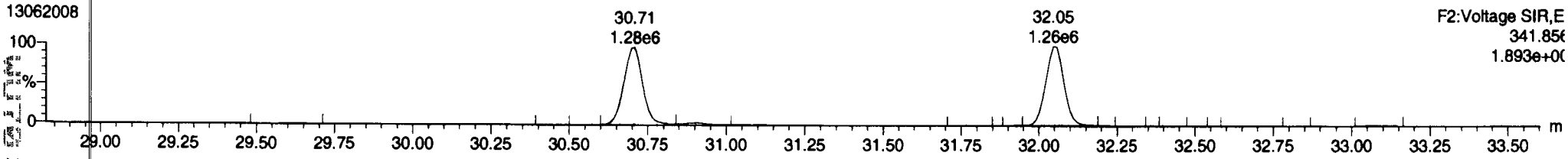
13C-23478-PeCDF



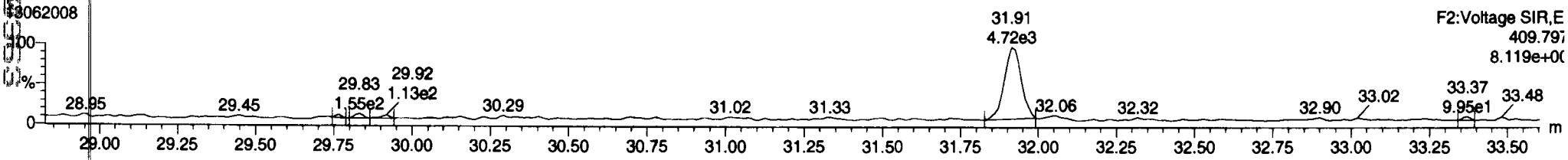
Total-pentafurans



Total-pentafurans



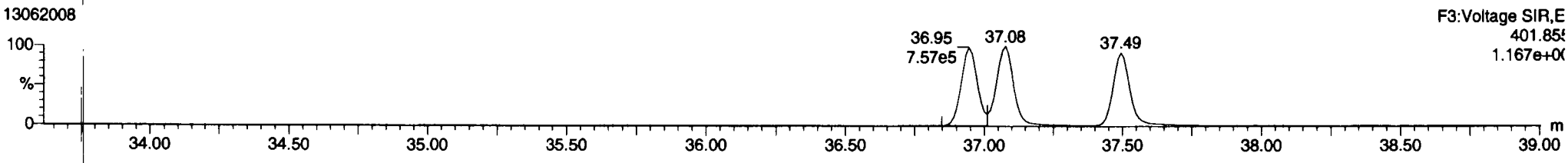
FUNCTION2 HPCDPE



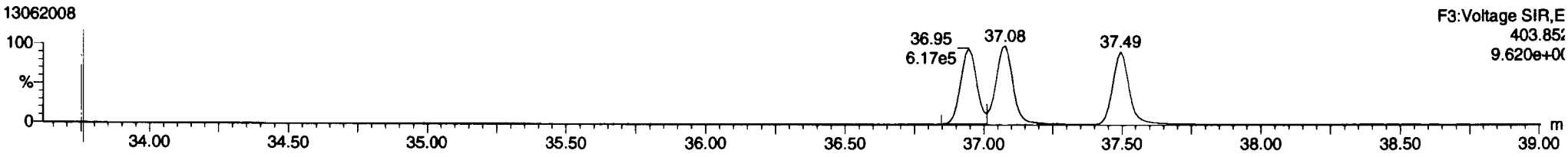
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:27 Pacific Daylight Time

ID: CS4, Name: 13062008, Date: 20-Jun-2013, Time: 16:18:06, Conditions: AUTOSPEC01, User: pk

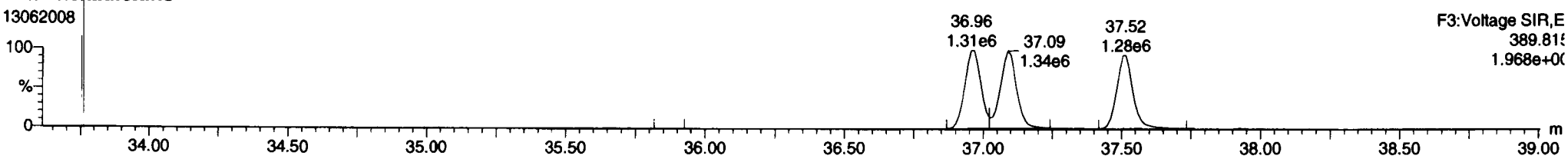
13C-123478-HxCDD



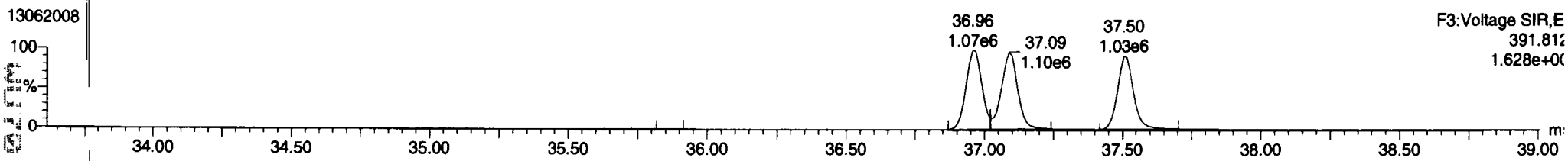
13C-123478-HxCDD



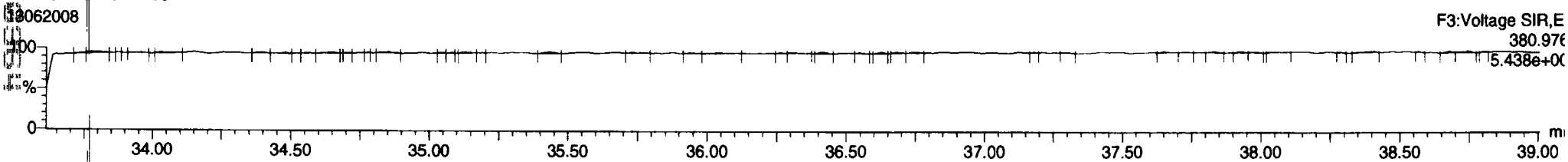
Total-hexadioxins



Total-hexadioxins



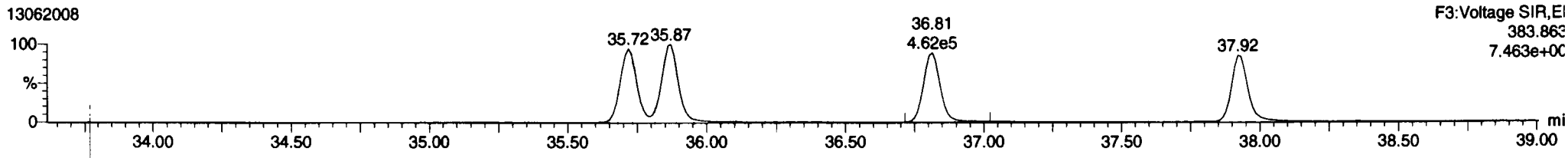
FUNCTION3 PFK



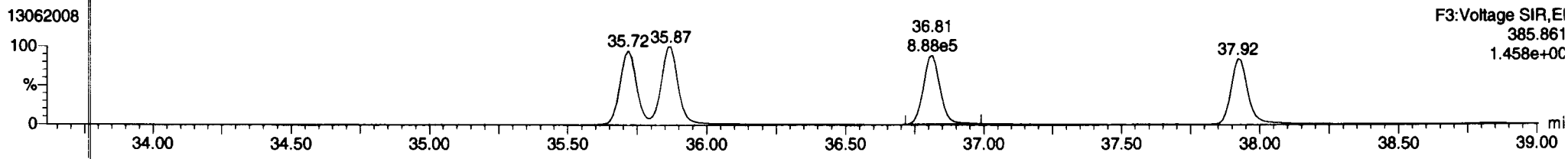
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:27 Pacific Daylight Time

ID: CS4, Name: 13062008, Date: 20-Jun-2013, Time: 16:18:06, Conditions: AUTOSPEC01, User: pk

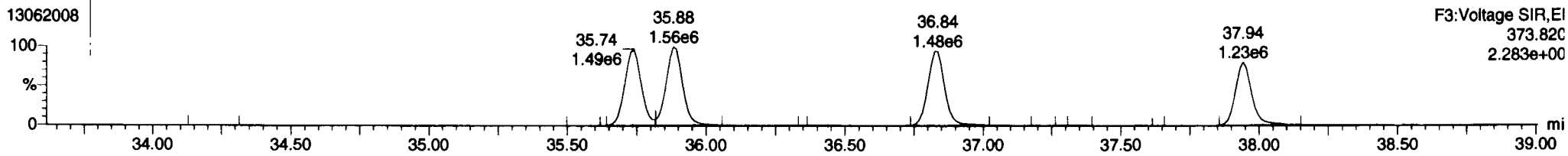
13C-234678-HxCDF



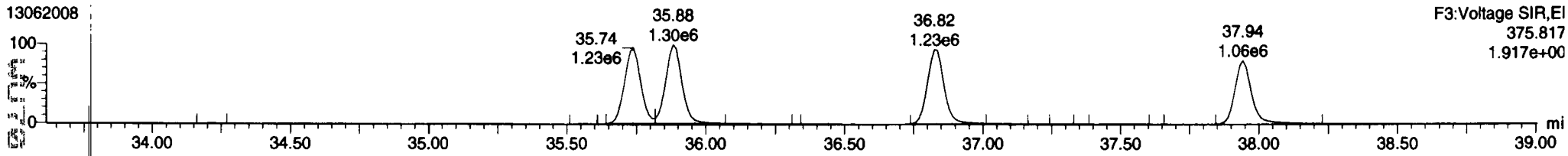
13C-234678-HxCDF



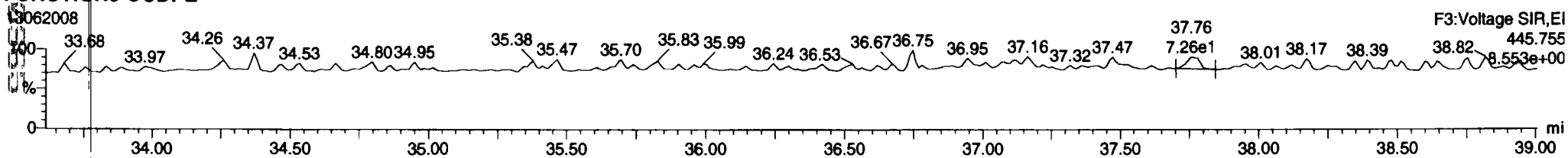
Total-hexafurans



Total-hexafurans



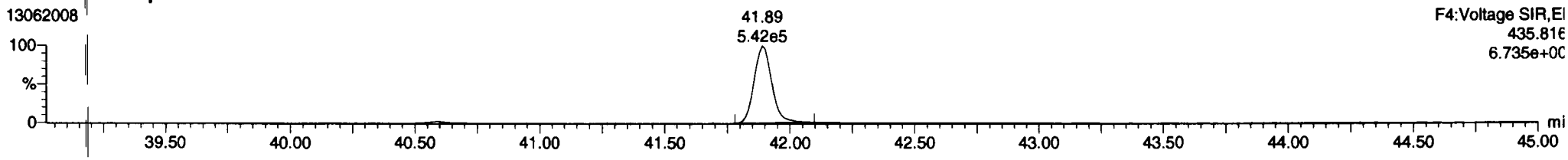
FUNCTION3 OCDPE



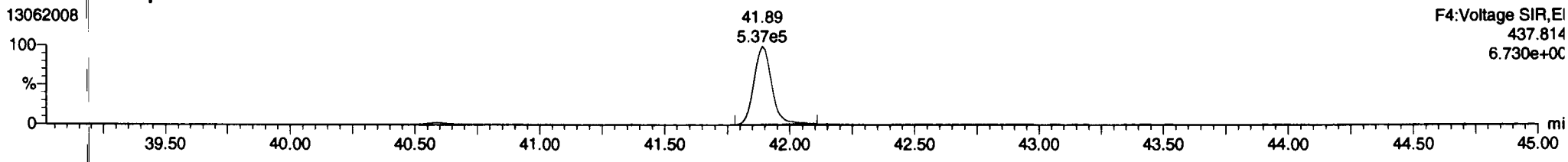
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:27 Pacific Daylight Time

ID: CS4, Name: 13062008, Date: 20-Jun-2013, Time: 16:18:06, Conditions: AUTOSPEC01, User: pk

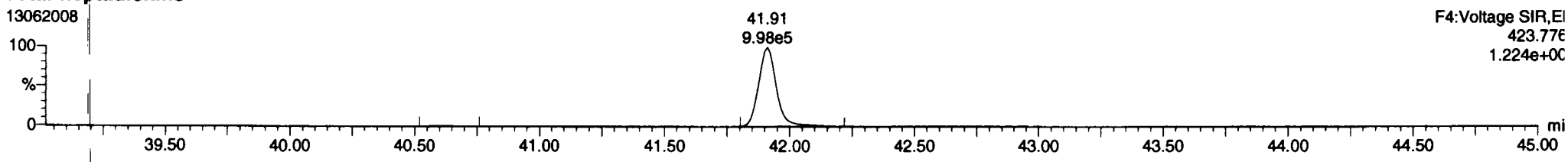
13C-1234678-HpCDD



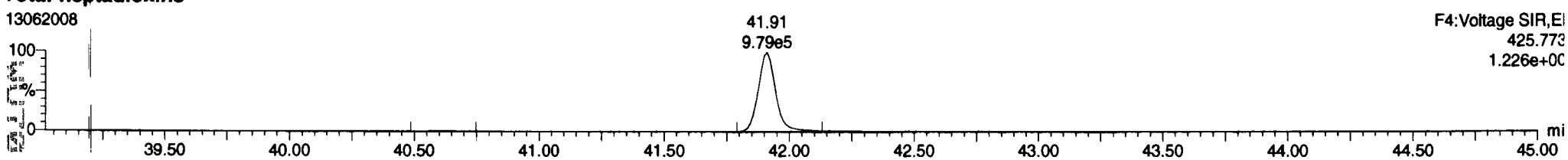
13C-1234678-HpCDD



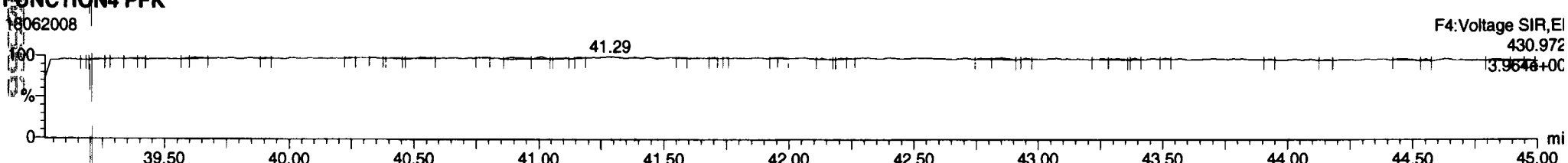
Total-heptadioxins



Total-heptadioxins



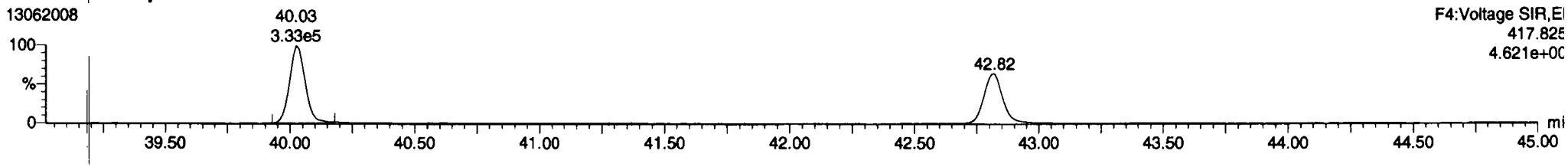
FUNCTION4 PFK



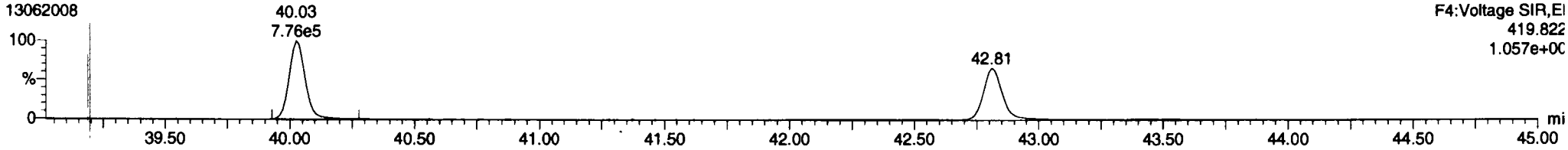
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:27 Pacific Daylight Time

ID: CS4, Name: 13062008, Date: 20-Jun-2013, Time: 16:18:06, Conditions: AUTOSPEC01, User: pk

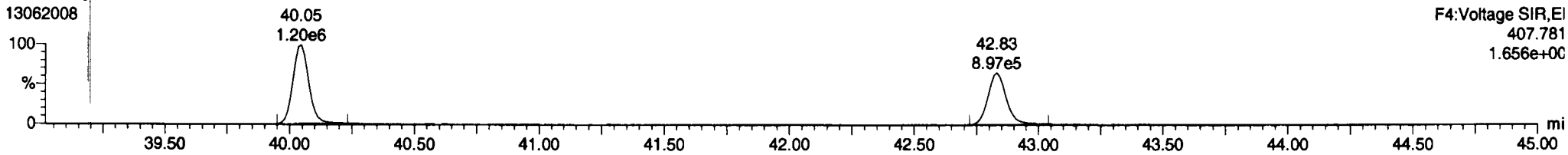
13C-1234678-HpCDF



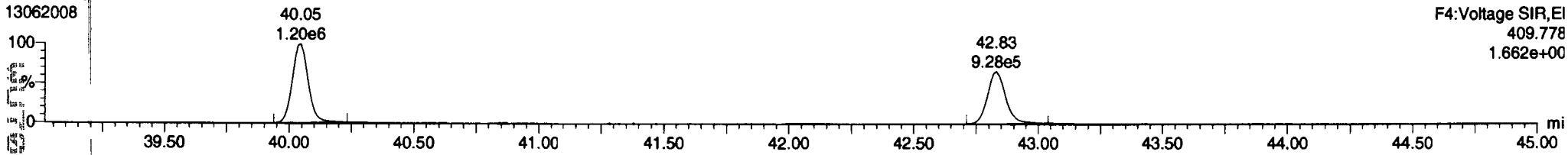
13C-1234678-HpCDF



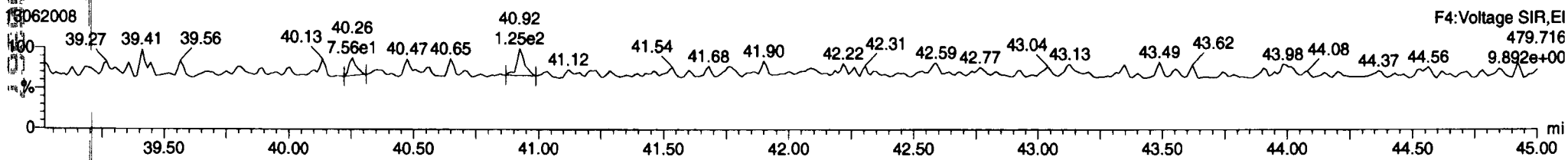
Total-heptafurans



Total-heptafurans



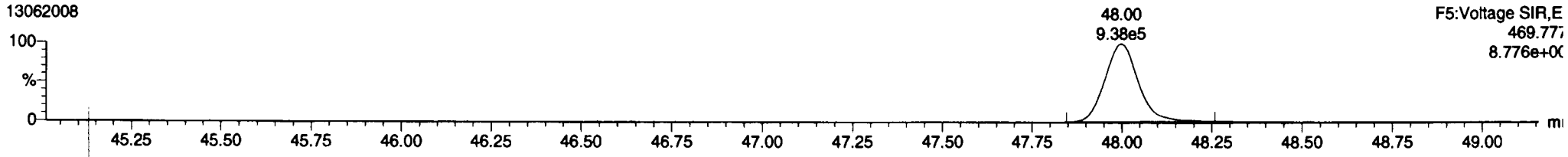
FUNCTION4 NCDPE



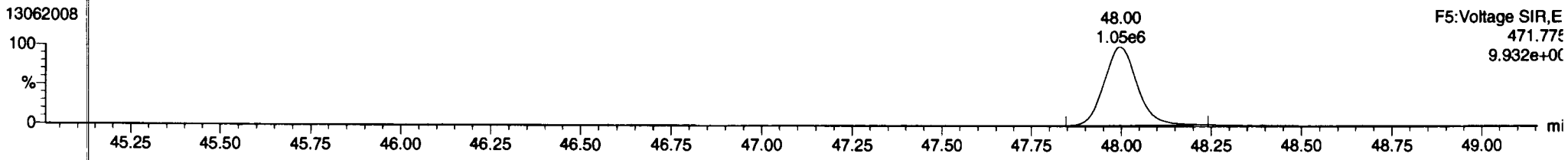
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:27 Pacific Daylight Time

ID: CS4, Name: 13062008, Date: 20-Jun-2013, Time: 16:18:06, Conditions: AUTOSPEC01, User: pk

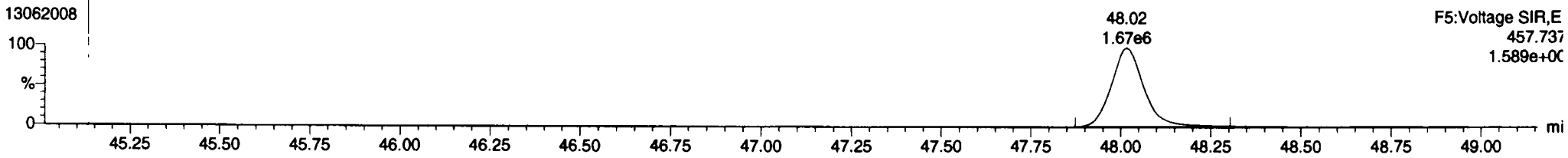
13C-OCDD



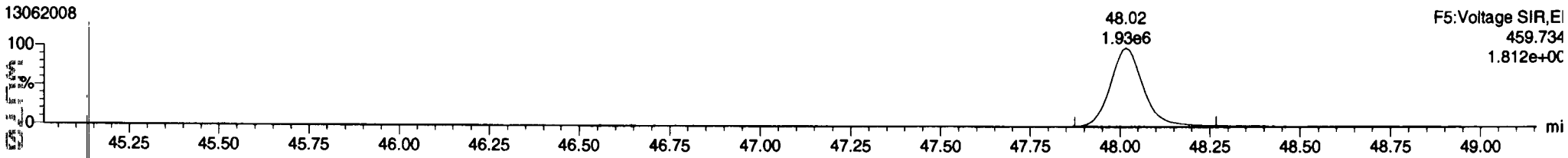
13C-OCDD



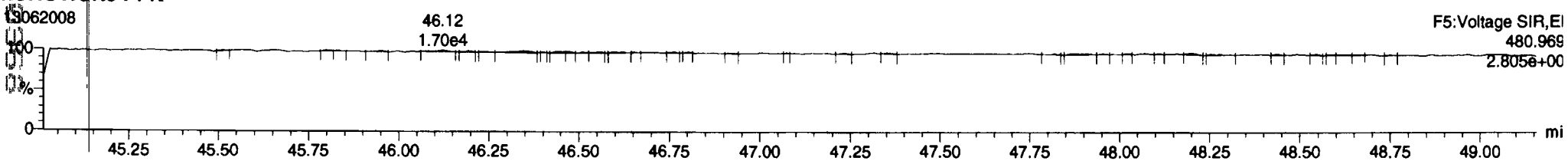
OCDD



OCDD



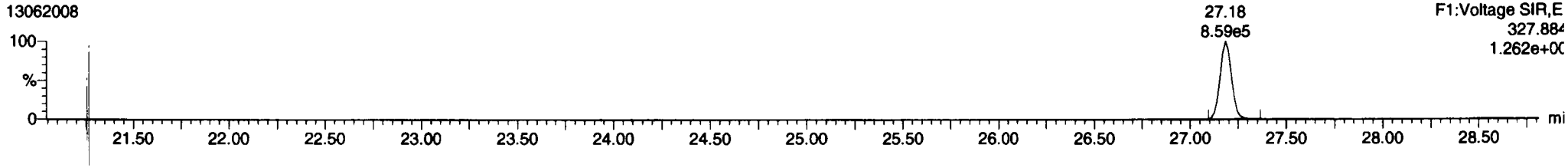
FUNCTION5 PFK



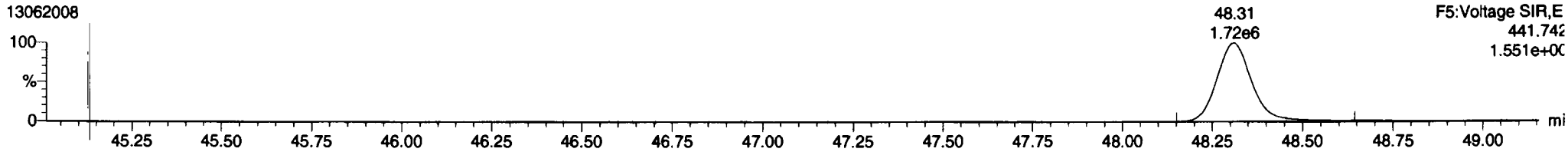
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:27 Pacific Daylight Time

ID: CS4, Name: 13062008, Date: 20-Jun-2013, Time: 16:18:06, Conditions: AUTOSPEC01, User: pk

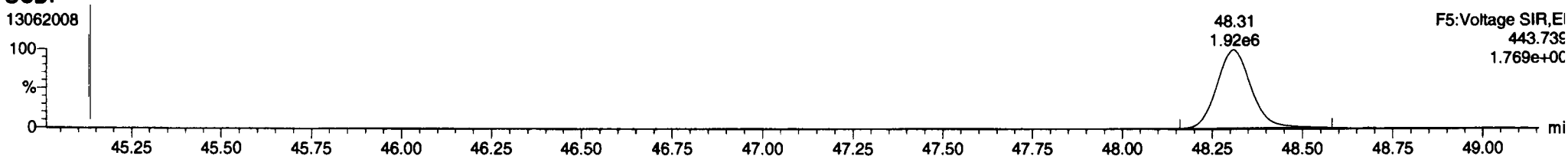
37CL-2378-TCDD



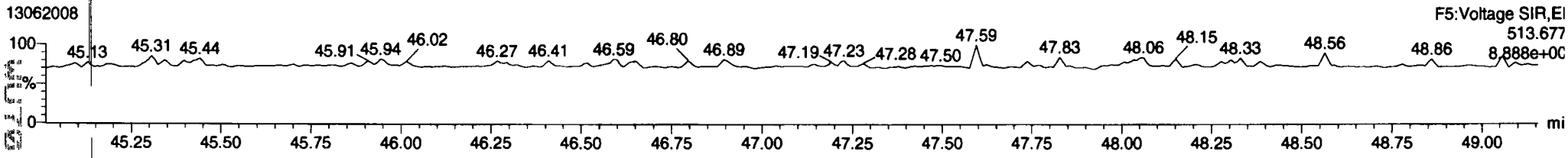
OCDF



OCDF



FUNCTION5 DCDPE



Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:37 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 19 Jun 2013 11:39:43
Calibration: 21 Jun 2013 09:11:11

ID: CS5, Name: 13062009, Date: 20-Jun-2013, Time: 17:10:20, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.542	1.001	1.99e6	2.71e6	0.771	0.737	0.770	13651.5	NO	200.666	200.666
12378-PeCDF	30.698	1.000	1.20e7	8.04e6	0.814	1.495	1.550	25651.3	NO	991.273	991.273
23478-PeCDF	32.046	1.000	1.20e7	8.05e6	0.837	1.492	1.550	26286.6	NO	988.851	988.851
123478-HxCDF	35.740	1.001	9.38e6	7.78e6	0.967	1.205	1.240	19176.7	NO	991.965	991.965
234678-HxCDF	36.825	1.000	9.28e6	7.74e6	1.000	1.199	1.240	18694.7	NO	1017.255	1017.255
123678-HxCDF	35.883	1.000	9.96e6	8.28e6	0.951	1.203	1.240	20103.0	NO	1007.214	1007.214
123789-HxCDF	37.943	1.001	7.60e6	6.33e6	0.874	1.200	1.240	15719.9	NO	1036.352	1036.352
1234678-HpCDF	40.048	1.001	7.58e6	7.58e6	1.072	1.001	1.050	14395.1	NO	1040.368	1040.368
1234789-HpCDF	42.832	1.001	5.74e6	5.86e6	1.085	0.980	1.050	9218.9	NO	1040.155	1040.155
OCDF	48.313	1.007	1.12e7	1.28e7	0.878	0.880	0.890	34078.6	NO	2116.479	2116.479
2378-TCDD	27.184	1.001	1.95e6	2.59e6	0.936	0.751	0.770	11861.9	NO	200.565	200.565
12378-PeCDD	32.298	1.000	1.01e7	6.67e6	0.894	1.515	1.550	33744.3	NO	991.908	991.908
123478-HxCDD	36.957	1.000	8.57e6	7.01e6	0.898	1.223	1.240	24918.5	NO	982.326	982.326
123678-HxCDD	37.089	1.000	8.60e6	7.09e6	0.818	1.214	1.240	24693.1	NO	1015.101	1015.101
123789-HxCDD	37.505	1.012	8.03e6	6.56e6	0.789	1.223	1.240	23170.6	NO	1011.546	1011.546
1234678-HpCDD	41.911	1.001	6.12e6	6.04e6	0.879	1.014	1.050	12131.4	NO	1019.042	1019.042
OCDD	48.017	1.000	1.08e7	1.26e7	0.875	0.859	0.890	22567.2	NO	2072.682	2072.682
13C-2378-TCDF	26.527	1.007	1.31e6	1.73e6	1.190	0.758	0.770	7806.2	NO		100.721
13C-12378-PeCDF	30.687	1.165	1.51e6	9.75e5	0.904	1.550	1.550	5819.0	NO		108.425
13C-23478-PeCDF	32.035	1.216	1.48e6	9.48e5	0.877	1.556	1.550	5854.9	NO		108.972
13C-123478-HxCDF	35.718	0.953	6.02e5	1.19e6	1.096	0.507	0.510	2340.0	NO		97.235
13C-123678-HxCDF	35.872	0.957	6.41e5	1.26e6	1.187	0.508	0.510	2393.5	NO		95.496
13C-234678-HxCDF	36.814	0.982	5.64e5	1.11e6	1.040	0.508	0.510	2123.0	NO		95.882
13C-123789-HxCDF	37.922	1.011	5.21e5	1.02e6	0.941	0.513	0.510	2009.0	NO		97.330
13C-1234678-HpCDF	40.026	1.068	4.14e5	9.46e5	0.825	0.437	0.440	2076.5	NO		98.114
13C-1234789-HpCDF	42.810	1.142	3.13e5	7.15e5	0.609	0.437	0.440	1322.9	NO		100.503
13C-1234-TCDD	26.347	0.000	1.12e6	1.42e6	1.000	0.790	0.770	2139.4	NO		100.000
13C-2378-TCDD	27.169	1.031	1.05e6	1.37e6	0.920	0.766	0.770	1926.7	NO		103.748
13C-12378-PeCDD	32.287	1.225	1.14e6	7.48e5	0.669	1.529	1.550	4483.9	NO		111.472
13C-123478-HxCDD	36.946	0.985	9.79e5	7.87e5	1.032	1.245	1.240	7123.6	NO		101.963
13C-123678-HxCDD	37.077	0.989	1.04e6	8.45e5	1.146	1.235	1.240	7563.5	NO		98.248
13C-1234678-HpCDD	41.889	1.117	6.95e5	6.62e5	0.789	1.050	1.050	3879.3	NO		102.439
13C-OCDD	47.999	1.280	1.21e6	1.38e6	0.696	0.878	0.890	3848.7	NO		221.159

Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:37 Pacific Daylight Time

ID: CS5, Name: 13062009, Date: 20-Jun-2013, Time: 17:10:20, Conditions: AUTOSPEC01, User: pk

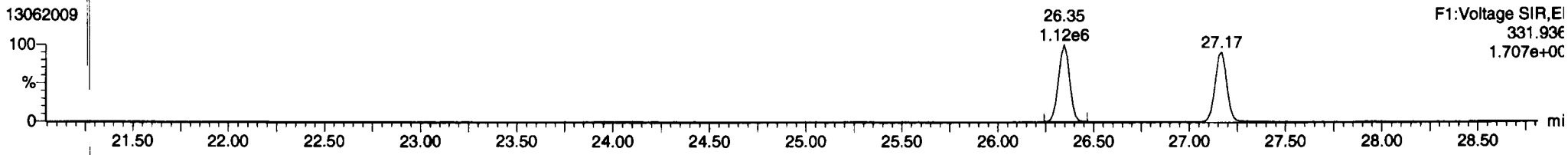
13C-123789-HxCDD	37.494	0.000	9.20e5	7.58e5	1.000	1.214	1.240	6785.6	NO	100.000
Total-tetrafurans			2.03e6		0.771					204.331
Total-penta1			1.46e2							0.011
Total-pentafurans			2.44e7		0.826					2011.927
Total-hexafurans			3.63e7		0.948					4058.443
Total-heptafurans			1.33e7		1.079					2081.399
Total-Furans			8.73e7		0.925					10472.589
Total-tetradioxins			2.01e6		0.936					206.232
Total-pentadioxins			1.01e7		0.894					994.237
Total-hexadioxins			2.52e7		0.835					3009.311
Total-heptadioxins			6.14e6		0.879					1023.165
Total-Dioxins			5.43e7		0.870					7305.627
Total-TEQ			1.42e8							17778.216
37CL-2378-TCDD	27.184	1.032	5.29e6		1.000			29971.4		208.668
FUNCTION1 PFK			2.10e5							
FUNCTION2 PFK			1.56e6							0.000
FUNCTION3 PFK			1.23e6							0.000
FUNCTION4 PFK			8.47e5							
FUNCTION5 PFK			3.29e6							
FUNCTION1 HXCDPE			2.68e2							0.000
FUNCTION1 HPCDPE			1.49e3							0.000
FUNCTION2 HPCDPE			2.91e4							0.000
FUNCTION3 OCDPE			4.23e2							0.000
FUNCTION4 NCDPE			3.37e2							0.000
FUNCTION5 DCDPE			7.33e1							0.000

Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:37 Pacific Daylight Time

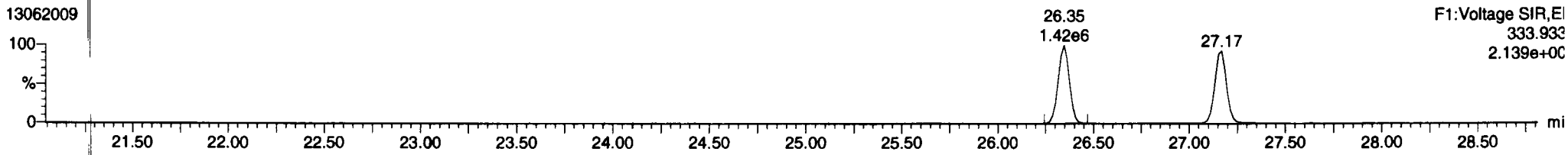
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 19 Jun 2013 11:39:43
Calibration: 21 Jun 2013 09:11:11

ID: CS5, Name: 13062009, Date: 20-Jun-2013, Time: 17:10:20, Conditions: AUTOSPEC01, User: pk

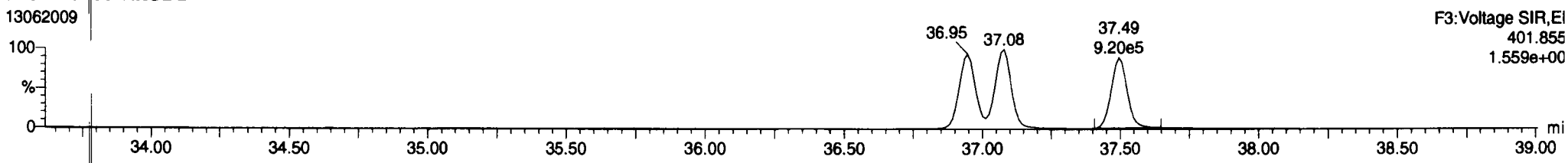
13C-1234-TCDD



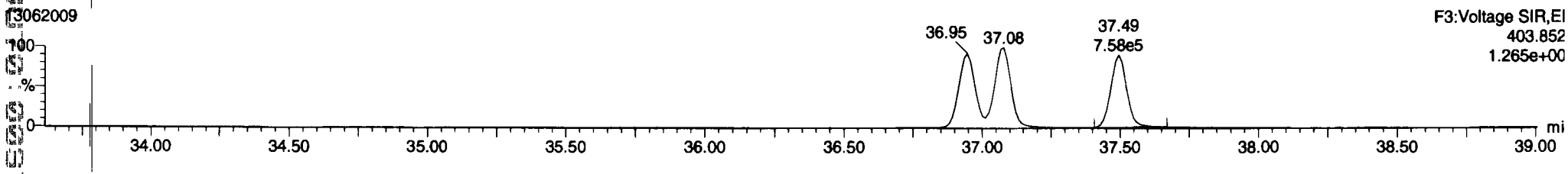
13C-1234-TCDD



13C-123789-HxCDD



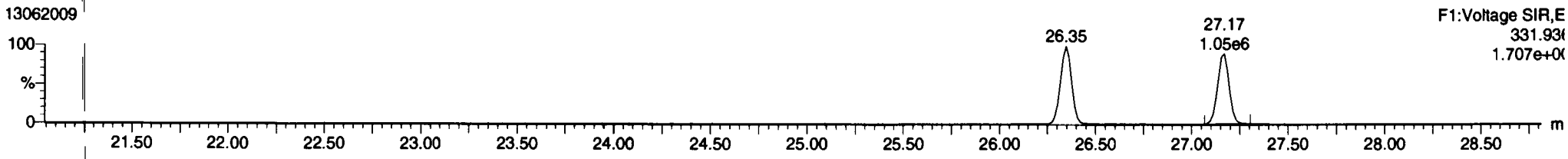
13C-123789-HxCDD



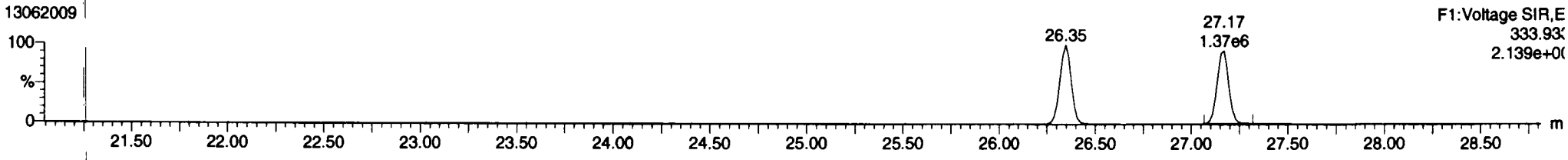
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:37 Pacific Daylight Time

ID: CS5, Name: 13062009, Date: 20-Jun-2013, Time: 17:10:20, Conditions: AUTOSPEC01, User: pk

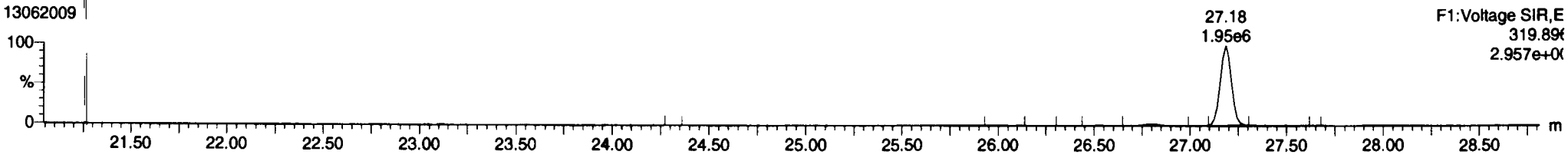
13C-2378-TCDD



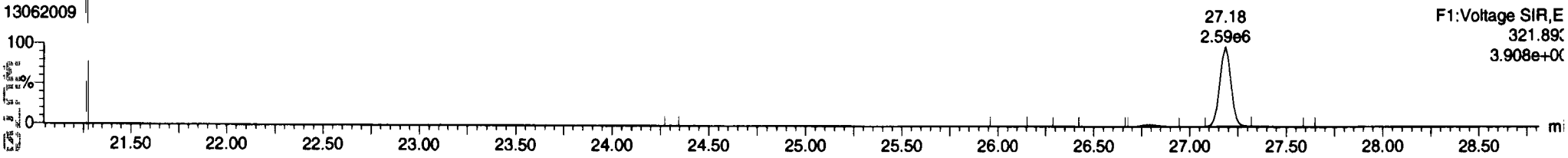
13C-2378-TCDD



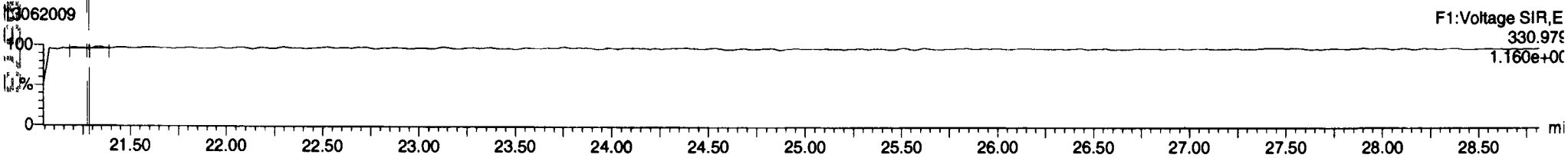
Total-tetradioxins



Total-tetradioxins



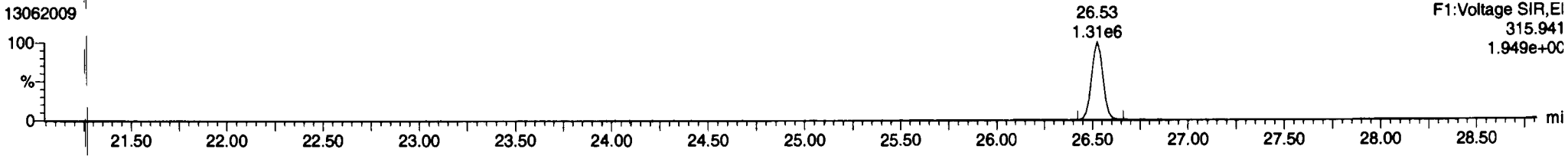
FUNCTION1 PFK



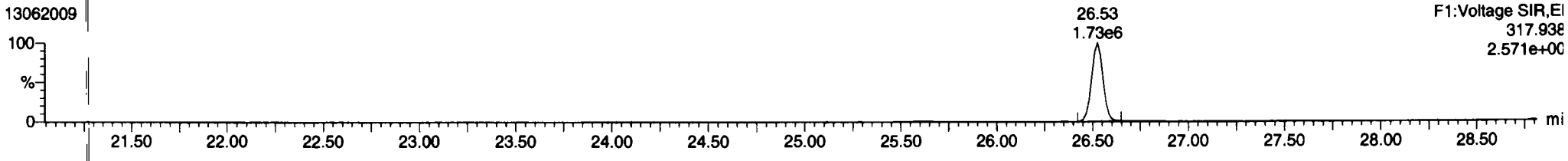
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:37 Pacific Daylight Time

ID: CS5, Name: 13062009, Date: 20-Jun-2013, Time: 17:10:20, Conditions: AUTOSPEC01, User: pk

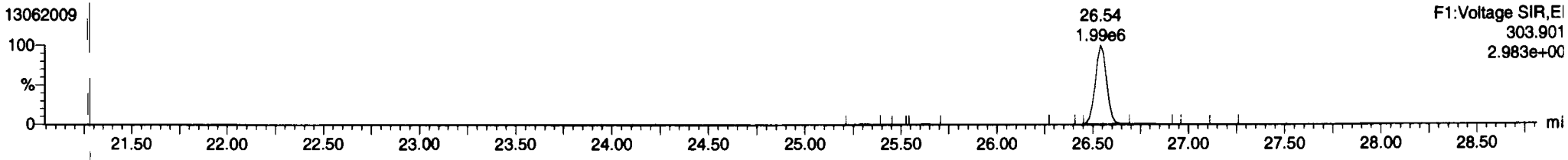
13C-2378-TCDF



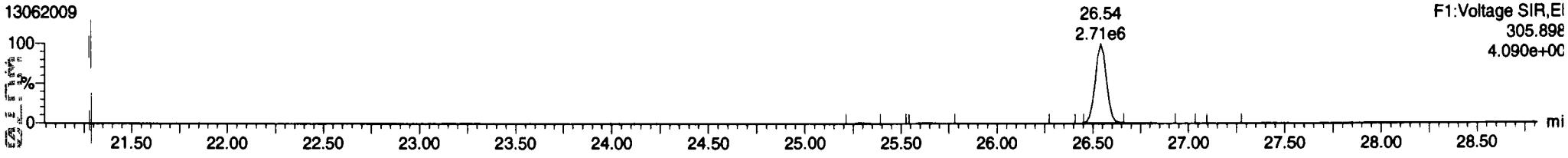
13C-2378-TCDF



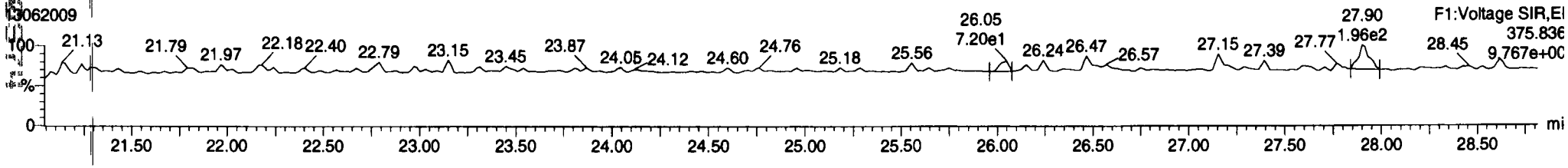
Total-tetrafurans



Total-tetrafurans



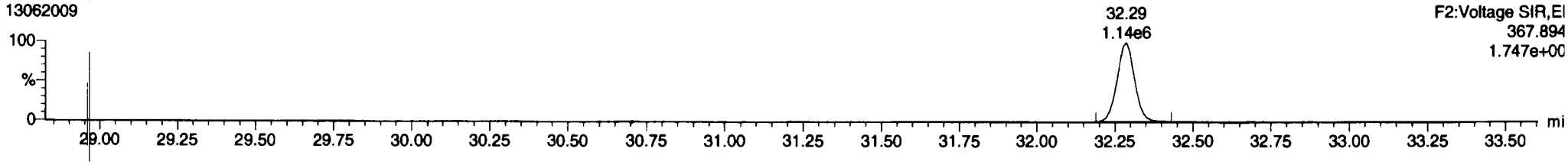
FUNCTION1 HXCDPE



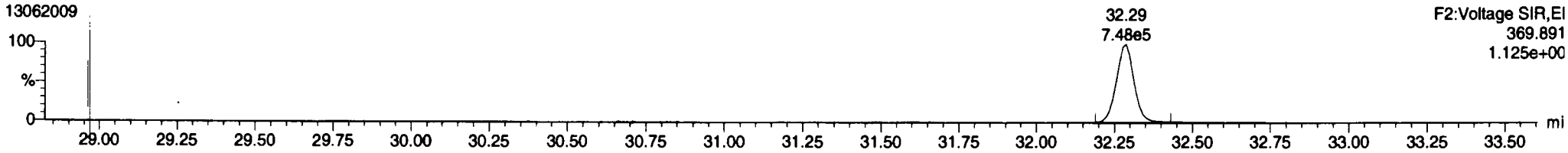
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:37 Pacific Daylight Time

ID: CS5, Name: 13062009, Date: 20-Jun-2013, Time: 17:10:20, Conditions: AUTOSPEC01, User: pk

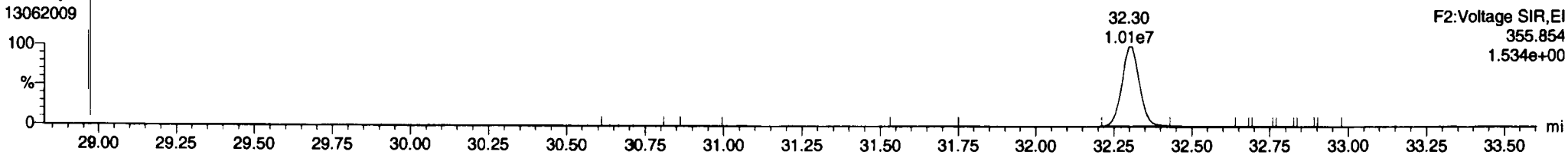
13C-12378-PeCDD



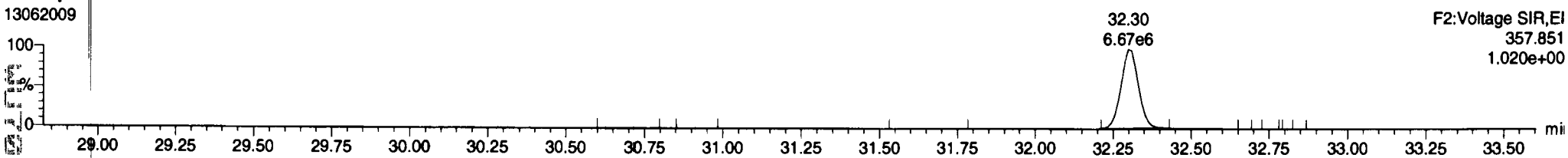
13C-12378-PeCDD



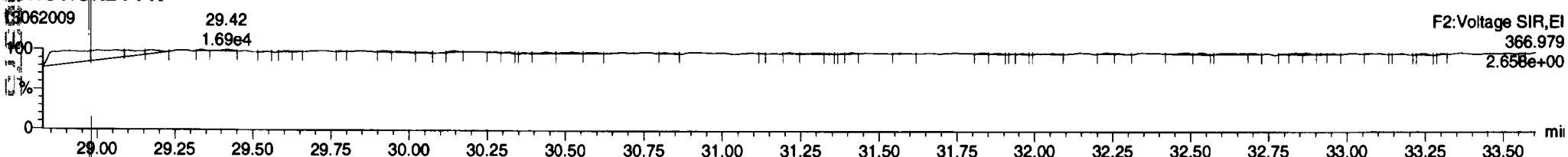
Total-pentadioxins



Total-pentadioxins



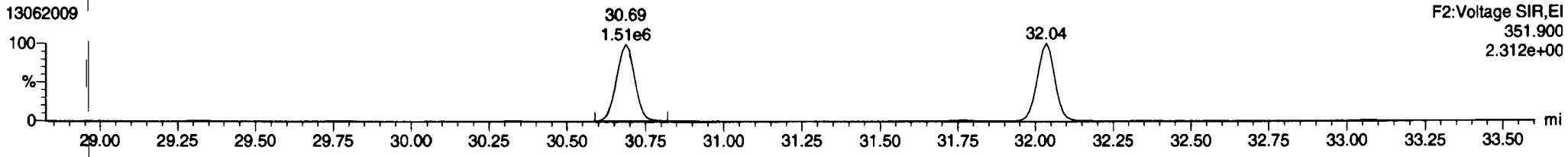
FUNCTION2 PFK



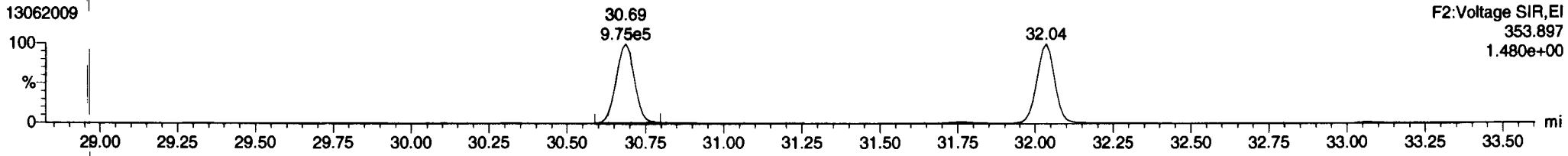
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:37 Pacific Daylight Time

ID: CS5, Name: 13062009, Date: 20-Jun-2013, Time: 17:10:20, Conditions: AUTOSPEC01, User: pk

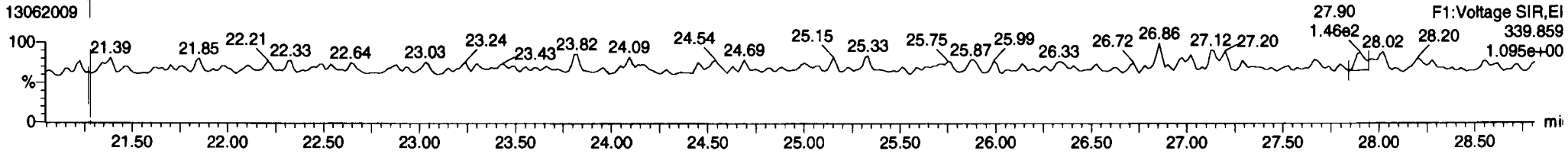
13C-12378-PeCDF



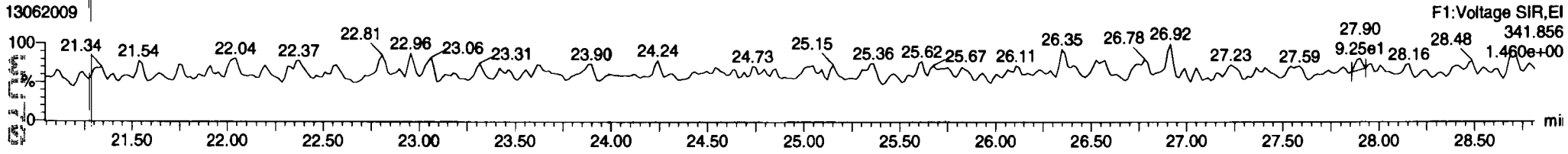
13C-12378-PeCDF



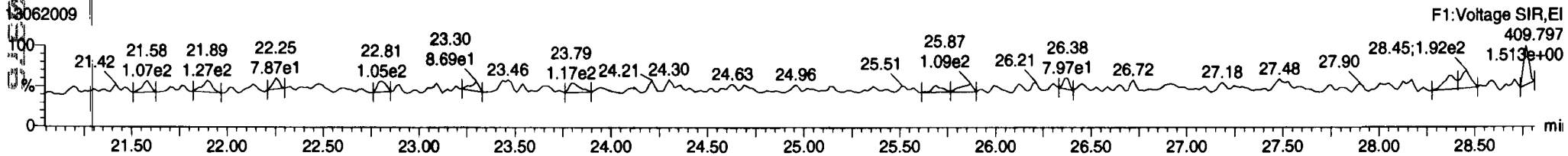
Total-penta1



Total-penta1



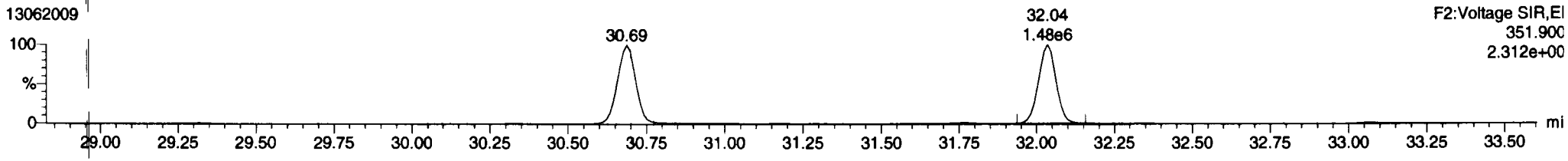
FUNCTION1 HPCDPE



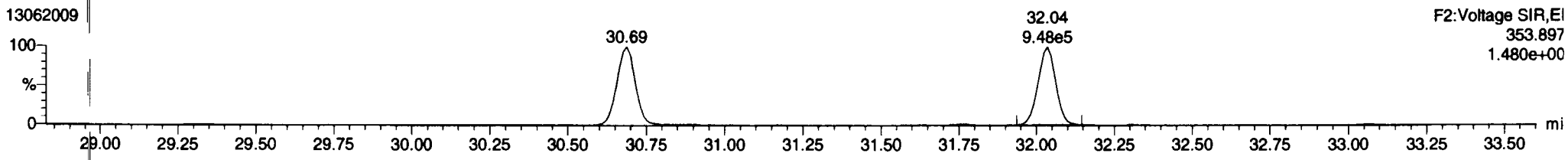
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:37 Pacific Daylight Time

ID: CS5, Name: 13062009, Date: 20-Jun-2013, Time: 17:10:20, Conditions: AUTOSPEC01, User: pk

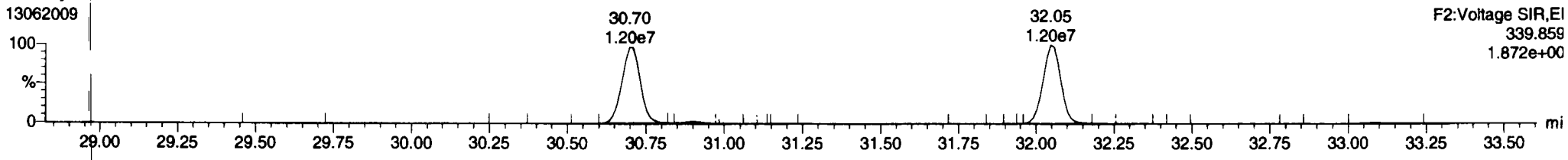
13C-23478-PeCDF



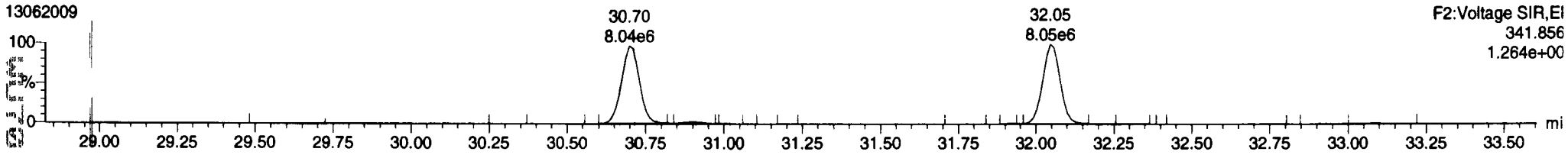
13C-23478-PeCDF



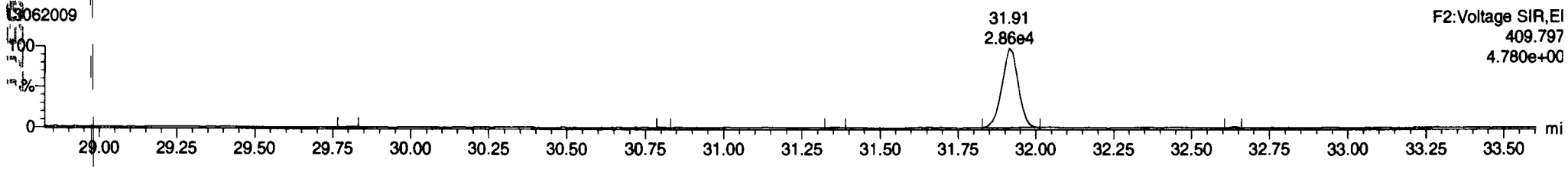
Total-pentafurans



Total-pentafurans



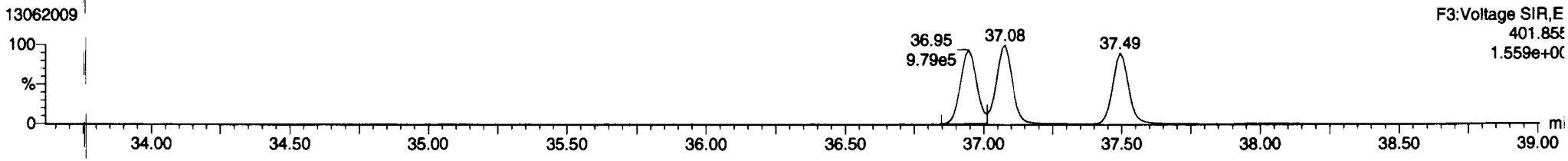
FUNCTION2 HPCDPE



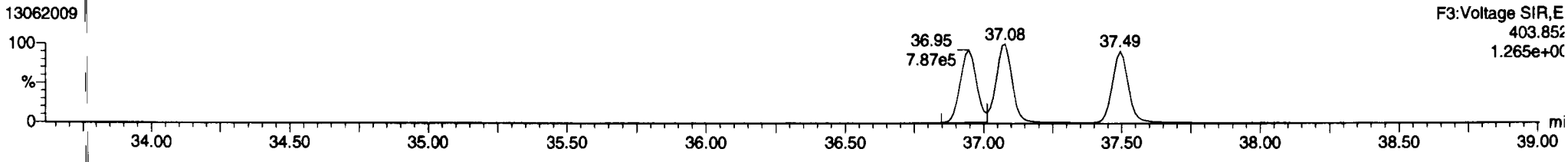
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:37 Pacific Daylight Time

ID: CS5, Name: 13062009, Date: 20-Jun-2013, Time: 17:10:20, Conditions: AUTOSPEC01, User: pk

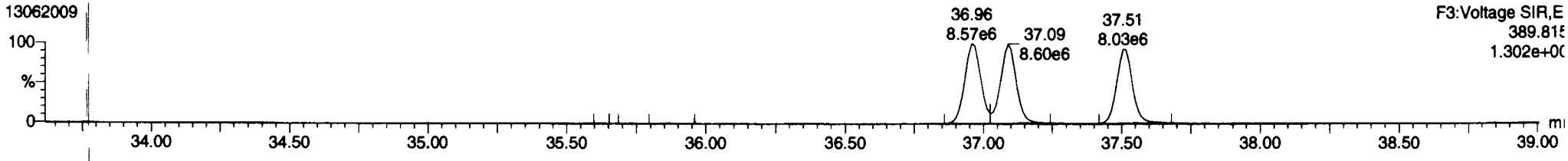
13C-123478-HxCDD



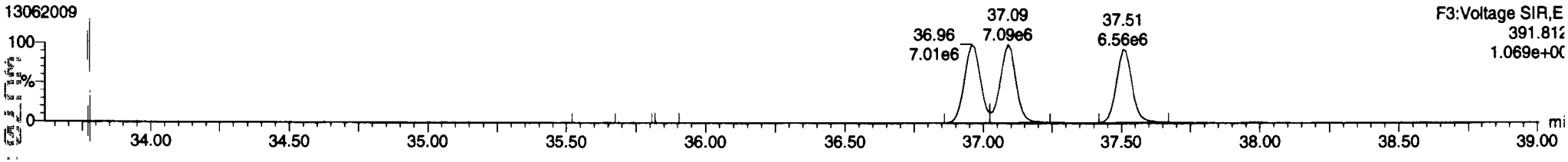
13C-123478-HxCDD



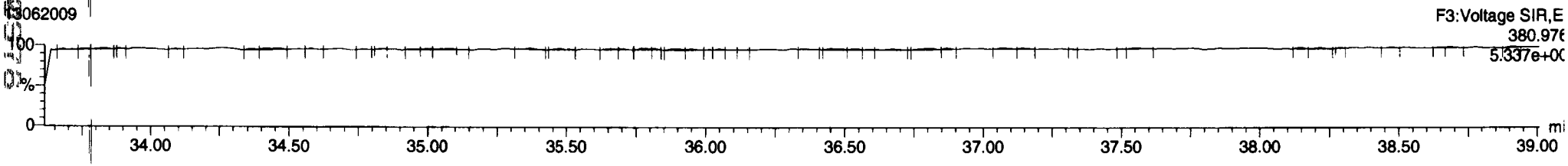
Total-hexadioxins



Total-hexadioxins



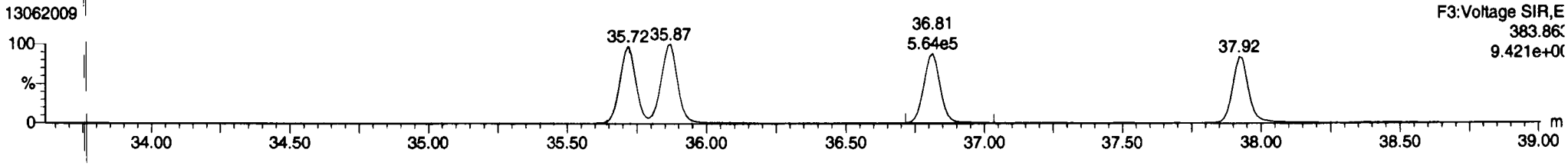
FUNCTION3 PFK



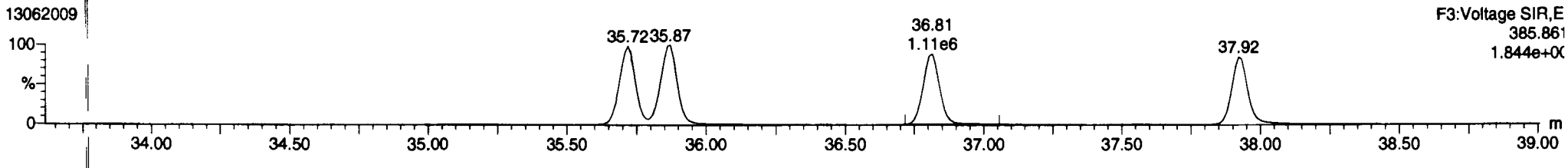
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:37 Pacific Daylight Time

ID: CS5, Name: 13062009, Date: 20-Jun-2013, Time: 17:10:20, Conditions: AUTOSPEC01, User: pk

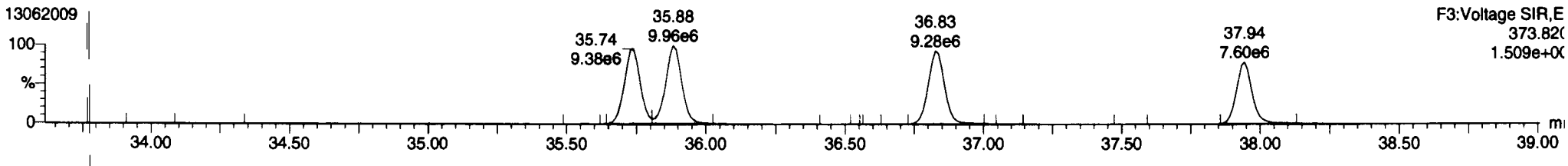
13C-234678-HxCDF



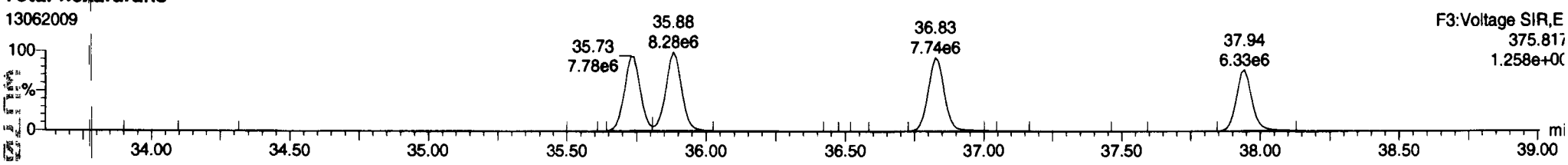
13C-234678-HxCDF



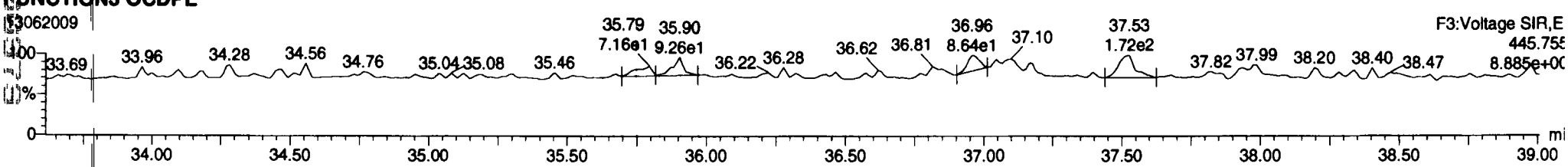
Total-hexafurans



Total-hexafurans



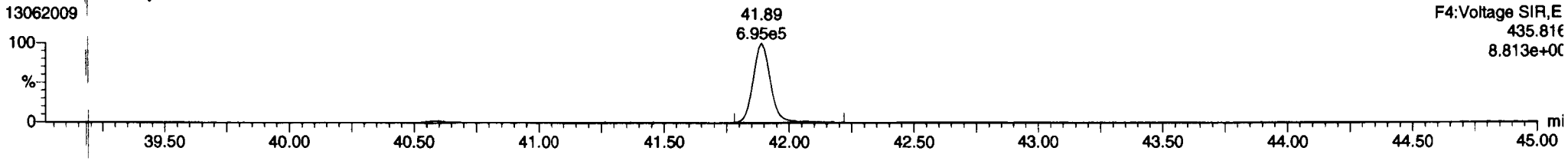
FUNCTION3 OCDPE



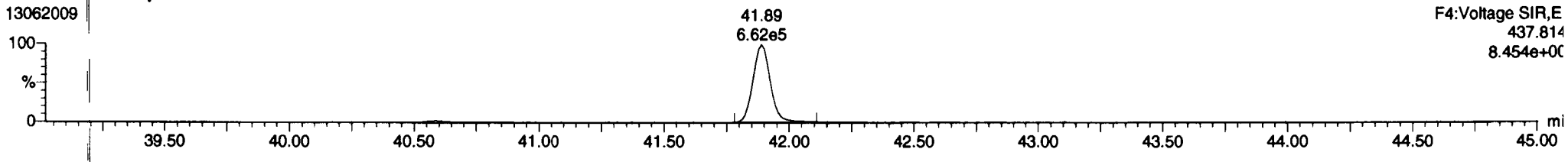
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:37 Pacific Daylight Time

ID: CS5, Name: 13062009, Date: 20-Jun-2013, Time: 17:10:20, Conditions: AUTOSPEC01, User: pk

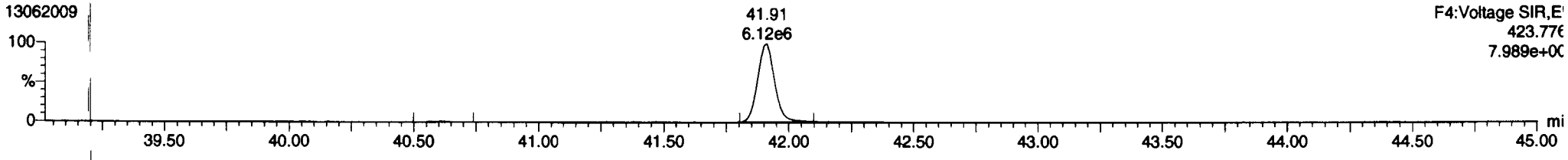
13C-1234678-HpCDD



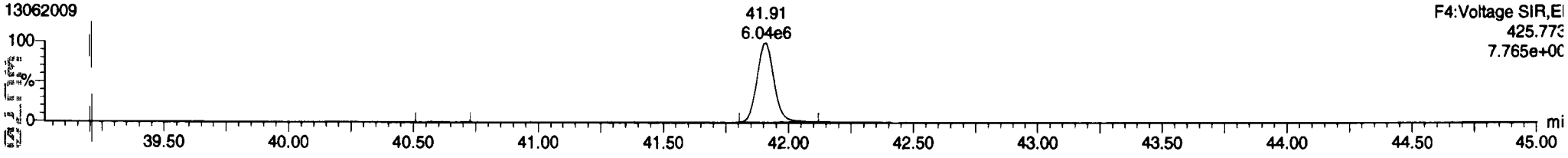
13C-1234678-HpCDD



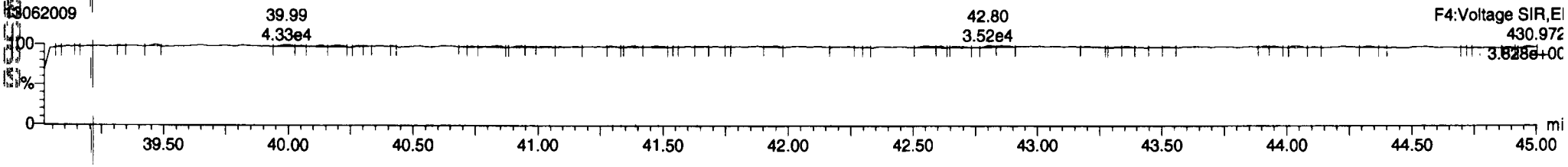
Total-heptadioxins



Total-heptadioxins



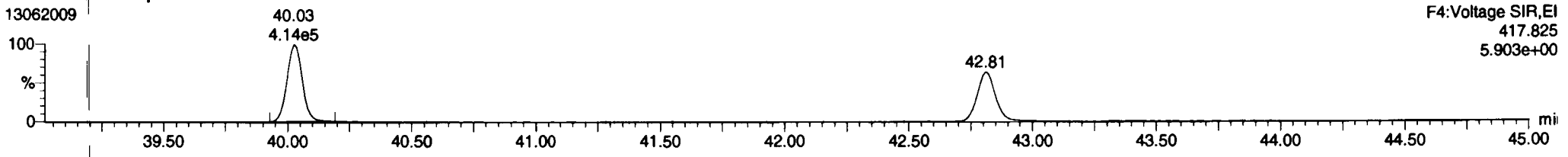
FUNCTION4 PFK



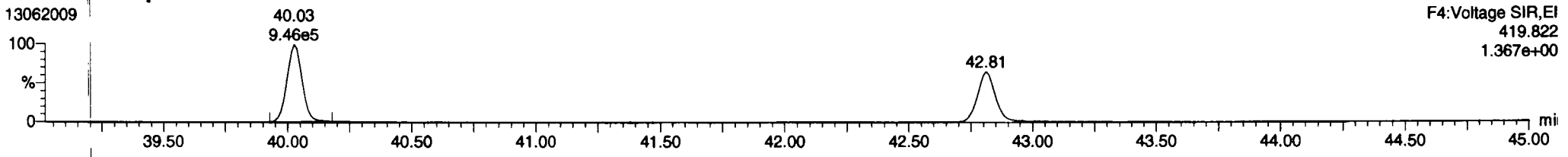
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:37 Pacific Daylight Time

ID: CS5, Name: 13062009, Date: 20-Jun-2013, Time: 17:10:20, Conditions: AUTOSPEC01, User: pk

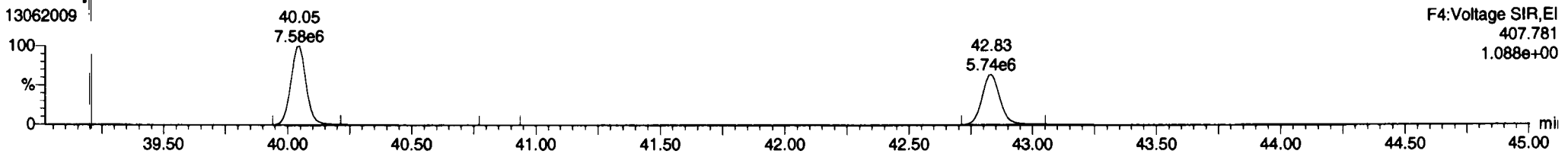
13C-1234678-HpCDF



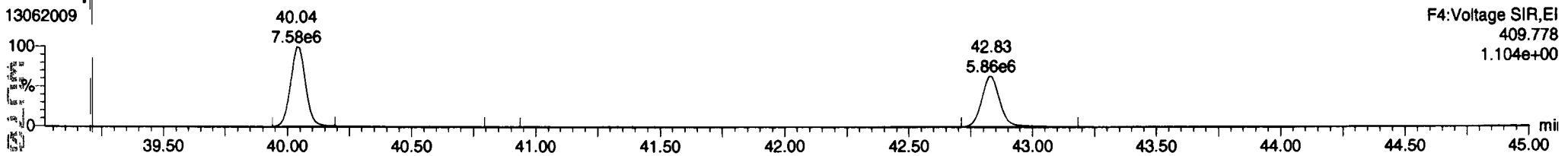
13C-1234678-HpCDF



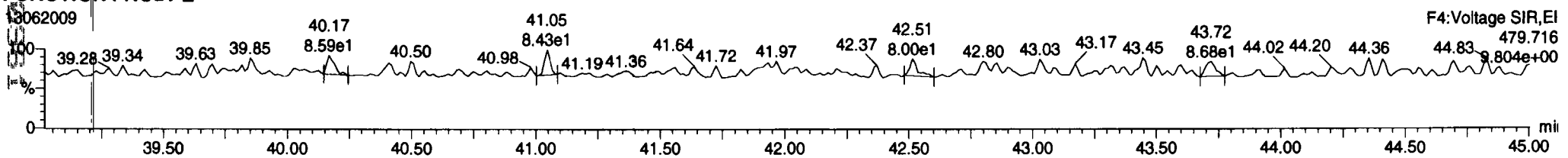
Total-heptafurans



Total-heptafurans



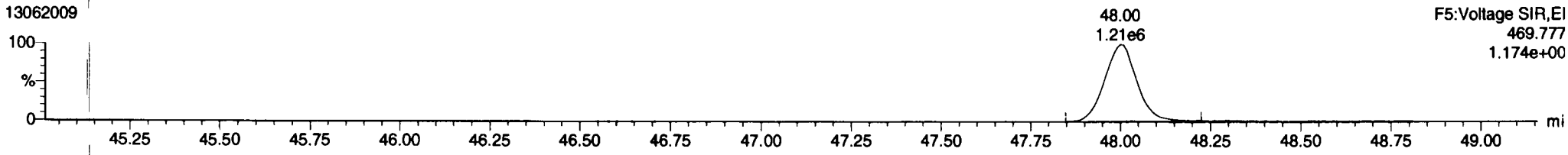
FUNCTION4 NCDPE



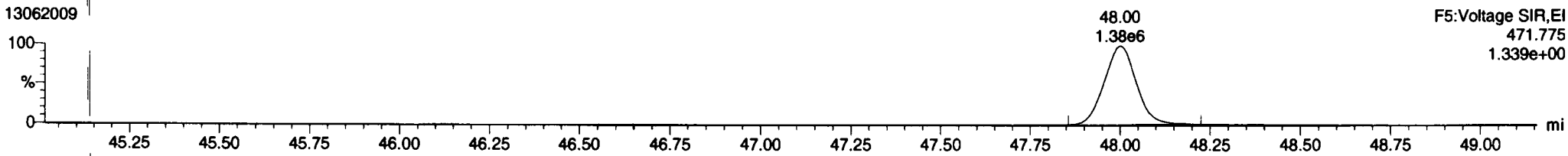
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:37 Pacific Daylight Time

ID: CS5, Name: 13062009, Date: 20-Jun-2013, Time: 17:10:20, Conditions: AUTOSPEC01, User: pk

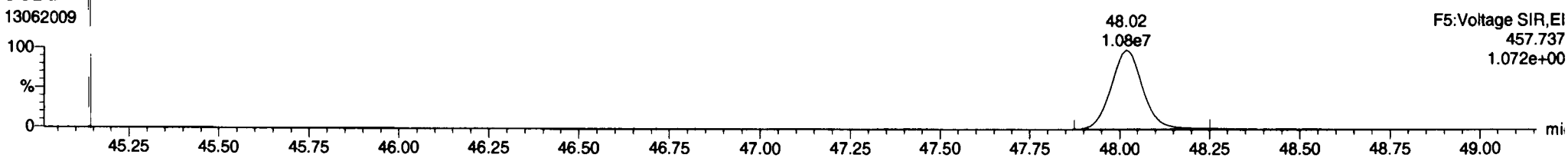
13C-OCDD



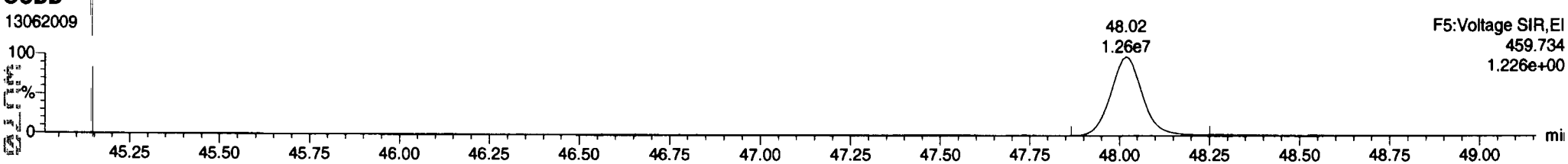
13C-OCDD



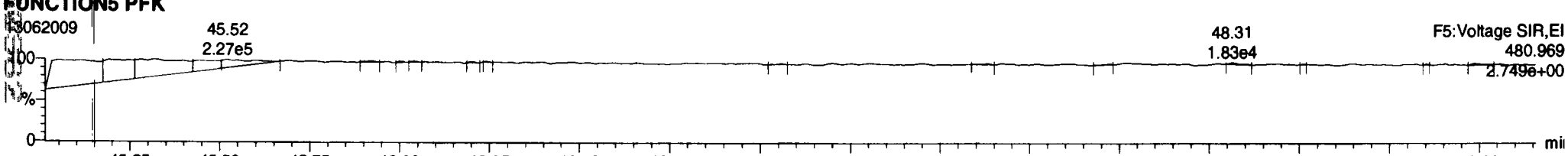
OCDD



OCDD



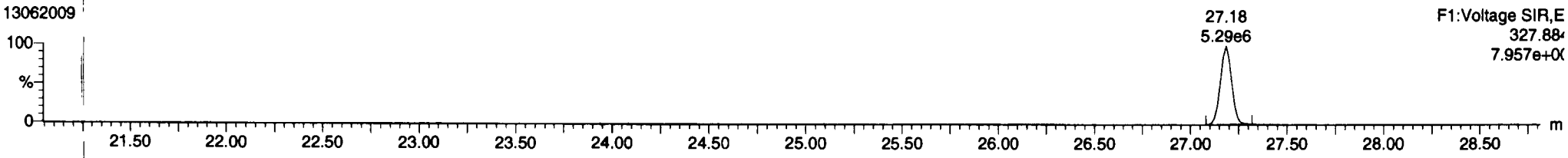
FUNCTION5 PFK



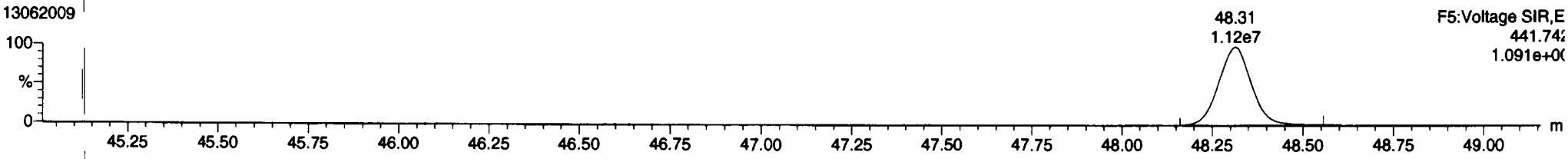
Dataset: P:\DIOXIN8290.PRO\130620IC.qld
Last Altered: Friday, June 21, 2013 09:11:12 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:16:37 Pacific Daylight Time

ID: CS5, Name: 13062009, Date: 20-Jun-2013, Time: 17:10:20, Conditions: AUTOSPEC01, User: pk

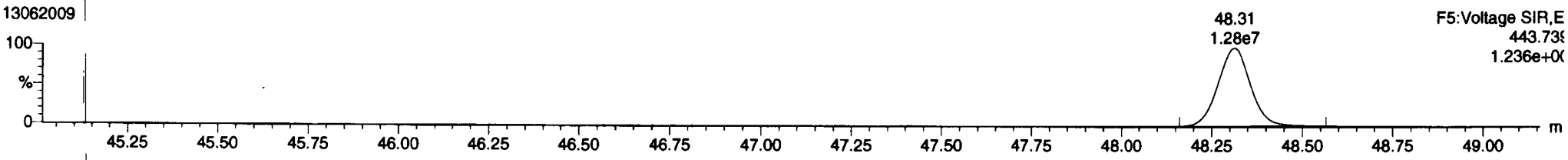
37CL-2378-TCDD



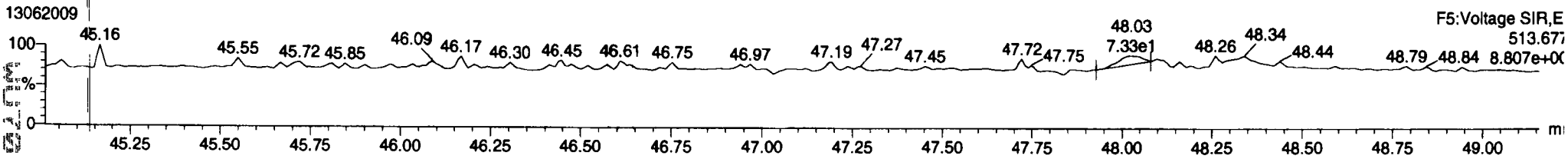
OCDF



OCDF



FUNCTION5 DCDPE



Dataset: P:\DIOXIN8290.PRO\130620ICV.qld
Last Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 19 Jun 2013 11:39:43
Calibration: P:\DIOXIN8290.PRO\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

ID: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.527	1.001	7.27e4	9.92e4	0.771	0.733	0.770	964.7	1082	2458	1.04e6	1.47e6	NO	10.483	10.483
12378-PeCDF	30.687	1.001	4.09e5	2.70e5	0.814	1.513	1.550	1513.7	3954	3207	5.99e6	3.95e6	NO	52.749	52.749
23478-PeCDF	32.035	1.001	3.77e5	2.52e5	0.837	1.495	1.550	1414.0	3954	3207	5.59e6	3.76e6	NO	49.530	49.530
123478-HxCDF	35.719	1.001	3.04e5	2.53e5	0.967	1.198	1.240	1310.4	3406	3938	4.46e6	3.75e6	NO	54.677	54.677
234678-HxCDF	36.815	1.001	2.83e5	2.38e5	1.000	1.192	1.240	1199.5	3406	3938	4.09e6	3.44e6	NO	48.942	48.942
123678-HxCDF	35.872	1.001	3.20e5	2.69e5	0.951	1.187	1.240	1331.4	3406	3938	4.53e6	3.70e6	NO	50.900	50.900
123789-HxCDF	37.922	1.000	2.53e5	2.00e5	0.874	1.261	1.240	1058.0	3406	3938	3.60e6	2.89e6	NO	58.502	58.502
1234678-HpCDF	40.027	1.001	2.21e5	2.25e5	1.072	0.984	1.050	1379.6	2218	2150	3.06e6	3.09e6	NO	56.162	56.162
1234789-HpCDF	42.811	1.000	1.65e5	1.71e5	1.085	0.967	1.050	896.4	2218	2150	1.99e6	1.97e6	NO	51.305	51.305
OCDF	48.287	1.006	2.94e5	3.36e5	0.878	0.874	0.890	1481.4	1755	1580	2.60e6	3.00e6	NO	116.175	116.175
2378-TCDD	27.169	1.001	7.09e4	9.33e4	0.936	0.761	0.770	662.2	1540	1765	1.02e6	1.33e6	NO	9.703	9.703
12378-PeCDD	32.287	1.001	3.23e5	2.20e5	0.894	1.469	1.550	2156.6	2231	1469	4.81e6	3.19e6	NO	46.891	46.891
123478-HxCDD	36.946	1.001	2.55e5	2.12e5	0.898	1.206	1.240	2877.3	1300	2184	3.74e6	3.10e6	NO	51.561	51.561
123678-HxCDD	37.078	1.001	2.51e5	2.11e5	0.818	1.189	1.240	2686.9	1300	2184	3.49e6	2.92e6	NO	56.248	56.248
123789-HxCDD	37.494	1.012	2.58e5	2.07e5	0.789	1.244	1.240	2835.2	1300	2184	3.68e6	3.03e6	NO	58.440	58.440
1234678-HpCDD	41.890	1.001	1.82e5	1.84e5	0.879	0.987	1.050	1148.6	1936	1775	2.22e6	2.24e6	NO	51.874	51.874
OCDD	48.000	1.000	2.90e5	3.31e5	0.875	0.875	0.890	1382.2	1876	1416	2.59e6	3.01e6	NO	114.929	114.929
13C-2378-TCDF	26.512	1.007	9.24e5	1.20e6	1.190	0.769	0.770	4630.0	2872	5745	1.33e7	1.75e7	NO		88.728
13C-12378-PeCDF	30.665	1.165	9.61e5	6.20e5	0.904	1.549	1.550	3637.5	3697	3419	1.34e7	8.78e6	NO		86.772
13C-23478-PeCDF	32.014	1.216	9.22e5	5.98e5	0.877	1.543	1.550	3603.4	3697	3419	1.33e7	8.70e6	NO		85.979
13C-123478-HxCDF	35.697	0.953	3.56e5	6.98e5	1.096	0.510	0.510	1954.5	2624	3948	5.13e6	1.02e7	NO		91.749
13C-123678-HxCDF	35.850	0.957	4.09e5	8.07e5	1.187	0.507	0.510	2229.3	2624	3948	5.85e6	1.13e7	NO		97.757
13C-234678-HxCDF	36.793	0.982	3.56e5	7.08e5	1.040	0.504	0.510	1922.0	2624	3948	5.04e6	1.02e7	NO		97.721
13C-123789-HxCDF	37.911	1.012	3.06e5	5.80e5	0.941	0.527	0.510	1692.7	2624	3948	4.44e6	8.52e6	NO		89.850
13C-1234678-HpCDF	40.005	1.068	2.25e5	5.16e5	0.825	0.435	0.440	1426.4	2202	3934	3.14e6	7.11e6	NO		85.698
13C-1234789-HpCDF	42.800	1.142	1.83e5	4.21e5	0.609	0.434	0.440	968.2	2202	3934	2.13e6	4.75e6	NO		94.675
13C-1234-TCDD	26.332	0.000	8.83e5	1.13e6	1.000	0.780	0.770	1525.2	8518	3597	1.30e7	1.66e7	NO		100.000
13C-2378-TCDD	27.154	1.031	7.95e5	1.01e6	0.920	0.786	0.770	1288.1	8518	3597	1.10e7	1.38e7	NO		97.536
13C-12378-PeCDD	32.266	1.225	7.83e5	5.12e5	0.669	1.531	1.550	3485.1	3280	3004	1.14e7	7.53e6	NO		96.037
13C-123478-HxCDD	36.924	0.985	5.64e5	4.45e5	1.032	1.267	1.240	2837.2	2862	2203	8.12e6	6.52e6	NO		93.349
13C-123678-HxCDD	37.056	0.989	5.56e5	4.49e5	1.146	1.237	1.240	2751.8	2862	2203	7.88e6	6.33e6	NO		83.771
13C-1234678-HpCDD	41.868	1.117	4.14e5	3.90e5	0.789	1.061	1.050	2369.1	2107	2074	4.99e6	4.81e6	NO		97.245
13C-OCDD	47.982	1.280	5.70e5	6.65e5	0.696	0.857	0.890	1516.8	3418	2770	5.18e6	5.80e6	NO		169.334

Dataset: P:\DIOXIN8290.PRO\130620ICV.qld
Last Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

ID: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

13C-123789-HxCDD	37.473	0.000	5.73e5	4.74e5	1.000	1.209	1.240	2869.6	2862	2203	8.21e6	6.79e6	NO	100.000
Total-tetrafurans			7.40e4		0.771				1082		1.07e6			10.628
Total-penta1			9.20e1						1267		2.67e3			0.014
Total-pentafurans			7.92e5		0.826				3954		1.17e7			102.988
Total-hexafurans			1.16e6		0.948				3406		1.67e7			213.316
Total-heptafurans			3.87e5		1.079				2218		5.05e6			107.467
Total-Furans			2.71e6		0.925				1082		3.71e7			550.588
Total-tetradioxins			7.36e4		0.936				1540		1.05e6			9.883
Total-pentadioxins			3.24e5		0.894				2231		4.83e6			47.037
Total-hexadioxins			7.66e5		0.835				1300		1.10e7			166.569
Total-heptadioxins			1.84e5		0.879				1936		2.26e6			52.466
Total-Dioxins			1.64e6		0.870				1540		2.17e7			390.884
Total-TEQ			4.34e6						1540		5.88e7			941.472
37CL-2378-TCDD	27.169	1.032	1.88e5		1.000			1152.1	2351		2.71e6			9.355
FUNCTION1 PFK			9.69e5						929300		1.43e7			
FUNCTION2 PFK			0.00e0						280568		0.00e0			
FUNCTION3 PFK			1.38e6						474927		3.61e7			0.000
FUNCTION4 PFK			6.37e5						349700		2.03e7			
FUNCTION5 PFK			2.58e4						260854		1.20e6			
FUNCTION1 HXCDPE			0.00e0						447		0.00e0			
FUNCTION1 HPCDPE			1.38e3						1158		3.12e4			0.000
FUNCTION2 HPCDPE			1.05e3						1629		3.12e4			0.000
FUNCTION3 OCDPE			1.71e2						483		4.86e3			0.000
FUNCTION4 NCDPE			1.21e2						901		3.04e3			0.000
FUNCTION5 DCDPE			1.28e2						887		4.50e3			0.000

aset: P:\DIOXIN8290.PRO\130620ICV.qld
t Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
ted: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

hod: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 19 Jun 2013 11:39:43
bration: P:\DIOXIN8290.PRO\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

	35 Total-tetrafurans	303.9016	26.77	490.234	0.771	0.030		1.35	0.77	YES	7.6
	1 2378-TCDF	303.9016	26.53	171897.196	0.771	10.483	10.483	0.73	0.77	NO	964.7
	35 Total-tetrafurans	303.9016	25.63	1511.026	0.771	0.092		1.54	0.77	YES	12.3
	35 Total-tetrafurans	303.9016	24.05	368.851	0.771	0.022		0.69	0.77	NO	2.7

	36 Total-penta1	339.8597	27.96	201.103		0.014		0.84	1.55	YES	2.1

	2 12378-PeCDF	339.8597	30.69	679150.626	0.814	52.749	52.749	1.51	1.55	NO	1513.7
	3 23478-PeCDF	339.8597	32.04	629740.063	0.837	49.530	49.530	1.49	1.55	NO	1414.0
	37 Total-pentafurans	339.8597	31.77	3146.333	0.826	0.246		1.67	1.55	NO	7.4
	37 Total-pentafurans	339.8597	31.17	1913.626	0.826	0.150		1.15	1.55	YES	4.3
	37 Total-pentafurans	339.8597	30.99	2441.165	0.826	0.191		2.27	1.55	YES	6.6
	37 Total-pentafurans	339.8597	30.87	1577.613	0.826	0.123		2.07	1.55	YES	5.3

	7 123789-HxCDF	373.8208	37.92	452788.891	0.874	58.502	58.502	1.26	1.24	NO	1058.0
	5 234678-HxCDF	373.8208	36.81	520942.032	1.000	48.942	48.942	1.19	1.24	NO	1199.5
	38 Total-hexafurans	373.8208	36.10	2942.745	0.948	0.294		0.10	1.24	YES	2.5
	6 123678-HxCDF	373.8208	35.87	588824.907	0.951	50.900	50.900	1.19	1.24	NO	1331.4
	4 123478-HxCDF	373.8208	35.72	556921.016	0.967	54.677	54.677	1.20	1.24	NO	1310.4

F

	9 1234789-HpCDF	407.7818	42.81	336346.297	1.085	51.305	51.305	0.97	1.05	NO	896.4
	8 1234678-HpCDF	407.7818	40.03	446120.485	1.072	56.162	56.162	0.98	1.05	NO	1379.6

aset: P:\DIOXIN8290.PRO\130620ICV.qld
t Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
ited: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

ans,TF,PP,PF,HF,HPF,OF

	35 Total-tetrafurans	303.9016	26.77	490.234	0.771	0.030		1.35	0.77	YES	7.6
	1 2378-TCDF	303.9016	26.53	171897.196	0.771	10.483	10.483	0.73	0.77	NO	964.7
	35 Total-tetrafurans	303.9016	25.63	1511.026	0.771	0.092		1.54	0.77	YES	12.3
	35 Total-tetrafurans	303.9016	24.05	368.851	0.771	0.022		0.69	0.77	NO	2.7
	2 12378-PeCDF	339.8597	30.69	679150.626	0.814	52.749	52.749	1.51	1.55	NO	1513.7
	3 23478-PeCDF	339.8597	32.04	629740.063	0.837	49.530	49.530	1.49	1.55	NO	1414.0
	37 Total-pentafurans	339.8597	31.77	3146.333	0.826	0.246		1.67	1.55	NO	7.4
	37 Total-pentafurans	339.8597	31.17	1913.626	0.826	0.150		1.15	1.55	YES	4.3
	37 Total-pentafurans	339.8597	30.99	2441.165	0.826	0.191		2.27	1.55	YES	6.6
	37 Total-pentafurans	339.8597	30.87	1577.613	0.826	0.123		2.07	1.55	YES	5.3
	7 123789-HxCDF	373.8208	37.92	452788.891	0.874	58.502	58.502	1.26	1.24	NO	1058.0
	5 234678-HxCDF	373.8208	36.81	520942.032	1.000	48.942	48.942	1.19	1.24	NO	1199.5
	38 Total-hexafurans	373.8208	36.10	2942.745	0.948	0.294		0.10	1.24	YES	2.5
	6 123678-HxCDF	373.8208	35.87	588824.907	0.951	50.900	50.900	1.19	1.24	NO	1331.4
	4 123478-HxCDF	373.8208	35.72	556921.016	0.967	54.677	54.677	1.20	1.24	NO	1310.4
	9 1234789-HpCDF	407.7818	42.81	336346.297	1.085	51.305	51.305	0.97	1.05	NO	896.4
	8 1234678-HpCDF	407.7818	40.03	446120.485	1.072	56.162	56.162	0.98	1.05	NO	1379.6
	10 OCDF	441.7428	48.29	629633.844	0.878	116.175	116....	0.87	0.89	NO	1481.4
	36 Total-penta1	339.8597	27.96	201.103		0.014		0.84	1.55	YES	2.1

	11 2378-TCDD	319.8965	27.17	164188.547	0.936	9.703	9.703	0.76	0.77	NO	662.2
	41 Total-tetradioxins	319.8965	26.51	3041.078	0.936	0.180		7.38	0.77	YES	21.9

	42 Total-pentadioxins	355.8546	30.68	1132.363	0.894	0.098		2.03	1.55	YES	5.8
	42 Total-pentadioxins	355.8546	32.67	557.934	0.894	0.048		0.63	1.55	YES	2.6
	12 12378-PeCDD	355.8546	32.29	543091.515	0.894	46.891	46.891	1.47	1.55	NO	2156.6

	43 Total-hexadioxins	389.8157	37.69	1274.852	0.835	0.152		14.33	1.24	YES	20.6
	15 123789-HxCDD	389.8157	37.49	464626.126	0.789	58.440	58.440	1.24	1.24	NO	2835.2
	43 Total-hexadioxins	389.8157	37.36	416.272	0.835	0.050		0.39	1.24	YES	3.8
	14 123678-HxCDD	389.8157	37.08	462369.922	0.818	56.248	56.248	1.19	1.24	NO	2686.9
	13 123478-HxCDD	389.8157	36.95	466934.297	0.898	51.561	51.561	1.21	1.24	NO	2877.3
	43 Total-hexadioxins	389.8157	35.86	990.018	0.835	0.118		2.93	1.24	YES	11.7

D

	44 Total-heptadioxins	423.7766	42.12	2193.248	0.879	0.310		1.38	1.05	YES	13.8
	16 1234678-HpCDD	423.7766	41.89	366483.797	0.879	51.874	51.874	0.99	1.05	NO	1148.6
	44 Total-heptadioxins	423.7766	40.60	1989.886	0.879	0.282		0.74	1.05	YES	7.3

aset: P:\DIOXIN8290.PRO\130620ICV.qld
t Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
ted: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

xins,TD,PD,HD,HPD,OD

	11	2378-TCDD	319.8965	27.17	164188.547	0.936	9.703	9.703	0.76	0.77	NO	662.2
	41	Total-tetradioxins	319.8965	26.51	3041.078	0.936	0.180		7.38	0.77	YES	21.9
	42	Total-pentadioxins	355.8546	30.68	1132.363	0.894	0.098		2.03	1.55	YES	5.8
	42	Total-pentadioxins	355.8546	32.67	557.934	0.894	0.048		0.63	1.55	YES	2.6
	12	12378-PeCDD	355.8546	32.29	543091.515	0.894	46.891	46.891	1.47	1.55	NO	2156.6
	43	Total-hexadioxins	389.8157	37.69	1274.852	0.835	0.152		14.33	1.24	YES	20.6
	15	123789-HxCDD	389.8157	37.49	464626.126	0.789	58.440	58.440	1.24	1.24	NO	2835.2
	43	Total-hexadioxins	389.8157	37.36	416.272	0.835	0.050		0.39	1.24	YES	3.8
	14	123678-HxCDD	389.8157	37.08	462369.922	0.818	56.248	56.248	1.19	1.24	NO	2686.9
	13	123478-HxCDD	389.8157	36.95	466934.297	0.898	51.561	51.561	1.21	1.24	NO	2877.3
	43	Total-hexadioxins	389.8157	35.86	990.018	0.835	0.118		2.93	1.24	YES	11.7
	44	Total-heptadioxins	423.7766	42.12	2193.248	0.879	0.310		1.38	1.05	YES	13.8
	16	1234678-HpCDD	423.7766	41.89	366483.797	0.879	51.874	51.874	0.99	1.05	NO	1148.6
	44	Total-heptadioxins	423.7766	40.60	1989.886	0.879	0.282		0.74	1.05	YES	7.3
	17	OCDD	457.7377	48.00	621102.376	0.875	114.929	114....	0.88	0.89	NO	1382.2

...aset: P:\DIOXIN8290.PRO\130620ICV.qld
...t Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
...ted: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

...alTEQ,Furans,Dioxins

	35 Total-tetrafurans	303.9016	26.77	490.234	0.771	0.030		1.35	0.77	YES	7.6
	1 2378-TCDF	303.9016	26.53	171897.196	0.771	10.483	10.483	0.73	0.77	NO	964.7
	35 Total-tetrafurans	303.9016	25.63	1511.026	0.771	0.092		1.54	0.77	YES	12.3
	35 Total-tetrafurans	303.9016	24.05	368.851	0.771	0.022		0.69	0.77	NO	2.7
	2 12378-PeCDF	339.8597	30.69	679150.626	0.814	52.749	52.749	1.51	1.55	NO	1513.7
	3 23478-PeCDF	339.8597	32.04	629740.063	0.837	49.530	49.530	1.49	1.55	NO	1414.0
	37 Total-pentafurans	339.8597	31.77	3146.333	0.826	0.246		1.67	1.55	NO	7.4
	37 Total-pentafurans	339.8597	31.17	1913.626	0.826	0.150		1.15	1.55	YES	4.3
	37 Total-pentafurans	339.8597	30.99	2441.165	0.826	0.191		2.27	1.55	YES	6.6
	37 Total-pentafurans	339.8597	30.87	1577.613	0.826	0.123		2.07	1.55	YES	5.3
	7 123789-HxCDF	373.8208	37.92	452788.891	0.874	58.502	58.502	1.26	1.24	NO	1058.0
	5 234678-HxCDF	373.8208	36.81	520942.032	1.000	48.942	48.942	1.19	1.24	NO	1199.5
	38 Total-hexafurans	373.8208	36.10	2942.745	0.948	0.294		0.10	1.24	YES	2.5
	6 123678-HxCDF	373.8208	35.87	588824.907	0.951	50.900	50.900	1.19	1.24	NO	1331.4
	4 123478-HxCDF	373.8208	35.72	556921.016	0.967	54.677	54.677	1.20	1.24	NO	1310.4
	9 1234789-HpCDF	407.7818	42.81	336346.297	1.085	51.305	51.305	0.97	1.05	NO	896.4
	8 1234678-HpCDF	407.7818	40.03	446120.485	1.072	56.162	56.162	0.98	1.05	NO	1379.6
	10 OCDF	441.7428	48.29	629633.844	0.878	116.175	116....	0.87	0.89	NO	1481.4
	36 Total-penta1	339.8597	27.96	201.103		0.014		0.84	1.55	YES	2.1
	11 2378-TCDD	319.8965	27.17	164188.547	0.936	9.703	9.703	0.76	0.77	NO	662.2
	41 Total-tetradioxins	319.8965	26.51	3041.078	0.936	0.180		7.38	0.77	YES	21.9
	42 Total-pentadioxins	355.8546	30.68	1132.363	0.894	0.098		2.03	1.55	YES	5.8
	42 Total-pentadioxins	355.8546	32.67	557.934	0.894	0.048		0.63	1.55	YES	2.6
	12 12378-PeCDD	355.8546	32.29	543091.515	0.894	46.891	46.891	1.47	1.55	NO	2156.6
	43 Total-hexadioxins	389.8157	37.69	1274.852	0.835	0.152		14.33	1.24	YES	20.6
	15 123789-HxCDD	389.8157	37.49	464626.126	0.789	58.440	58.440	1.24	1.24	NO	2835.2
	43 Total-hexadioxins	389.8157	37.36	416.272	0.835	0.050		0.39	1.24	YES	3.8
	14 123678-HxCDD	389.8157	37.08	462369.922	0.818	56.248	56.248	1.19	1.24	NO	2686.9
	13 123478-HxCDD	389.8157	36.95	466934.297	0.898	51.561	51.561	1.21	1.24	NO	2877.3
	43 Total-hexadioxins	389.8157	35.86	990.018	0.835	0.118		2.93	1.24	YES	11.7
	44 Total-heptadioxins	423.7766	42.12	2193.248	0.879	0.310		1.38	1.05	YES	13.8
	16 1234678-HpCDD	423.7766	41.89	366483.797	0.879	51.874	51.874	0.99	1.05	NO	1148.6
	44 Total-heptadioxins	423.7766	40.60	1989.886	0.879	0.282		0.74	1.05	YES	7.3
	17 OCDD	457.7377	48.00	621102.376	0.875	114.929	114....	0.88	0.89	NO	1382.2

...K1

	48 FUNCTION1 PFK	330.9792	28.50	0.000							1.5
	48 FUNCTION1 PFK	330.9792	28.08	0.000							2.0
	48 FUNCTION1 PFK	330.9792	27.90	0.000							2.0
	48 FUNCTION1 PFK	330.9792	27.75	0.000							1.9
	48 FUNCTION1 PFK	330.9792	26.83	0.000							1.9
	48 FUNCTION1 PFK	330.9792	24.99	0.000							1.6
	48 FUNCTION1 PFK	330.9792	23.00	0.000							1.6
	48 FUNCTION1 PFK	330.9792	21.92	0.000							2.0
	48 FUNCTION1 PFK	330.9792	21.31	0.000							1.1

taset: P:\DIOXIN8290.PRO\130620ICV.qld
t Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
nted: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

K2

aset: P:\DIOXIN8290.PRO\130620ICV.qld
t Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
ted: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

K3

	50 FUNCTION3 PFK	380.9760	34.18	0.000	0.000					0.5
	50 FUNCTION3 PFK	380.9760	34.05	0.000	0.000					1.7
	50 FUNCTION3 PFK	380.9760	33.90	0.000	0.000					2.4
	50 FUNCTION3 PFK	380.9760	33.82	0.000	0.000					2.6
	50 FUNCTION3 PFK	380.9760	33.73	0.000	0.000					2.5
	50 FUNCTION3 PFK	380.9760	35.33	0.000	0.000					1.5
	50 FUNCTION3 PFK	380.9760	35.28	0.000	0.000					0.4
	50 FUNCTION3 PFK	380.9760	35.21	0.000	0.000					1.4
	50 FUNCTION3 PFK	380.9760	35.18	0.000	0.000					1.4
	50 FUNCTION3 PFK	380.9760	35.12	0.000	0.000					0.9
	50 FUNCTION3 PFK	380.9760	35.07	0.000	0.000					0.5
	50 FUNCTION3 PFK	380.9760	35.02	0.000	0.000					2.4
	50 FUNCTION3 PFK	380.9760	34.97	0.000	0.000					1.3
	50 FUNCTION3 PFK	380.9760	34.76	0.000	0.000					0.9
	50 FUNCTION3 PFK	380.9760	34.69	0.000	0.000					1.4
	50 FUNCTION3 PFK	380.9760	34.61	0.000	0.000					1.4
	50 FUNCTION3 PFK	380.9760	34.58	0.000	0.000					1.2
	50 FUNCTION3 PFK	380.9760	34.43	0.000	0.000					0.7
	50 FUNCTION3 PFK	380.9760	34.37	0.000	0.000					0.4
	50 FUNCTION3 PFK	380.9760	34.27	0.000	0.000					0.6
	50 FUNCTION3 PFK	380.9760	34.24	0.000	0.000					0.8
	50 FUNCTION3 PFK	380.9760	36.77	0.000	0.000					0.7
	50 FUNCTION3 PFK	380.9760	36.67	0.000	0.000					1.0
	50 FUNCTION3 PFK	380.9760	36.62	0.000	0.000					0.8
	50 FUNCTION3 PFK	380.9760	36.57	0.000	0.000					1.3
	50 FUNCTION3 PFK	380.9760	36.52	0.000	0.000					0.7
	50 FUNCTION3 PFK	380.9760	36.28	0.000	0.000					1.1
	50 FUNCTION3 PFK	380.9760	36.23	0.000	0.000					1.1
	50 FUNCTION3 PFK	380.9760	36.07	0.000	0.000					1.4
	50 FUNCTION3 PFK	380.9760	35.90	0.000	0.000					0.7
	50 FUNCTION3 PFK	380.9760	35.87	0.000	0.000					0.7
	50 FUNCTION3 PFK	380.9760	35.83	0.000	0.000					0.5
	50 FUNCTION3 PFK	380.9760	35.70	0.000	0.000					1.2
	50 FUNCTION3 PFK	380.9760	35.59	0.000	0.000					2.2
	50 FUNCTION3 PFK	380.9760	35.55	0.000	0.000					2.7
	50 FUNCTION3 PFK	380.9760	35.49	0.000	0.000					1.2
	50 FUNCTION3 PFK	380.9760	35.44	0.000	0.000					0.9
	50 FUNCTION3 PFK	380.9760	38.45	0.000	0.000					1.9
	50 FUNCTION3 PFK	380.9760	38.29	0.000	0.000					0.6
	50 FUNCTION3 PFK	380.9760	38.16	0.000	0.000					0.7
	50 FUNCTION3 PFK	380.9760	38.12	0.000	0.000					1.2
	50 FUNCTION3 PFK	380.9760	38.08	0.000	0.000					1.6
	50 FUNCTION3 PFK	380.9760	37.89	0.000	0.000					1.1
	50 FUNCTION3 PFK	380.9760	37.86	0.000	0.000					1.3
	50 FUNCTION3 PFK	380.9760	37.81	0.000	0.000					2.5
	50 FUNCTION3 PFK	380.9760	37.71	0.000	0.000					2.2
	50 FUNCTION3 PFK	380.9760	37.64	0.000	0.000					1.7
	50 FUNCTION3 PFK	380.9760	37.56	0.000	0.000					1.1
	50 FUNCTION3 PFK	380.9760	37.52	0.000	0.000					1.2

aset: P:\DIOXIN8290.PRO\130620ICV.qld
t Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
ted: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

(3

[redacted]	50	FUNCTION3 PFK	380.9760	37.28	0.000	0.000				1.0
[redacted]	50	FUNCTION3 PFK	380.9760	37.03	0.000	0.000				1.5
[redacted]	50	FUNCTION3 PFK	380.9760	36.96	0.000	0.000				1.5
[redacted]	50	FUNCTION3 PFK	380.9760	36.85	0.000	0.000				0.6
[redacted]	50	FUNCTION3 PFK	380.9760	38.95	0.000	0.000				1.2
[redacted]	50	FUNCTION3 PFK	380.9760	38.79	0.000	0.000				1.4
[redacted]	50	FUNCTION3 PFK	380.9760	38.71	0.000	0.000				1.5
[redacted]	50	FUNCTION3 PFK	380.9760	38.67	0.000	0.000				2.3
[redacted]	50	FUNCTION3 PFK	380.9760	38.58	0.000	0.000				2.0
[redacted]	50	FUNCTION3 PFK	380.9760	38.49	0.000	0.000				0.9

set: P:\DIOXIN8290.PRO\130620ICV.qld
t Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
ted: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

64

	51 FUNCTION4 PFK	430.9728	39.94	0.000						1.9
	51 FUNCTION4 PFK	430.9728	39.71	0.000						1.2
	51 FUNCTION4 PFK	430.9728	39.68	0.000						1.2
	51 FUNCTION4 PFK	430.9728	39.59	0.000						1.0
	51 FUNCTION4 PFK	430.9728	39.38	0.000						0.9
	51 FUNCTION4 PFK	430.9728	39.34	0.000						1.8
	51 FUNCTION4 PFK	430.9728	39.23	0.000						1.8
	51 FUNCTION4 PFK	430.9728	39.14	0.000						0.6
	51 FUNCTION4 PFK	430.9728	39.10	0.000						0.8
	51 FUNCTION4 PFK	430.9728	42.02	0.000						1.5
	51 FUNCTION4 PFK	430.9728	41.93	0.000						1.2
	51 FUNCTION4 PFK	430.9728	41.70	0.000						0.7
	51 FUNCTION4 PFK	430.9728	41.44	0.000						0.5
	51 FUNCTION4 PFK	430.9728	41.36	0.000						0.9
	51 FUNCTION4 PFK	430.9728	41.20	0.000						1.9
	51 FUNCTION4 PFK	430.9728	40.91	0.000						1.7
	51 FUNCTION4 PFK	430.9728	40.87	0.000						1.3
	51 FUNCTION4 PFK	430.9728	40.73	0.000						0.9
	51 FUNCTION4 PFK	430.9728	40.68	0.000						1.5
	51 FUNCTION4 PFK	430.9728	40.60	0.000						1.7
	51 FUNCTION4 PFK	430.9728	40.49	0.000						1.7
	51 FUNCTION4 PFK	430.9728	40.29	0.000						1.0
	51 FUNCTION4 PFK	430.9728	40.21	0.000						0.9
	51 FUNCTION4 PFK	430.9728	40.03	0.000						0.5
	51 FUNCTION4 PFK	430.9728	39.98	0.000						1.9
	51 FUNCTION4 PFK	430.9728	43.64	0.000						1.1
	51 FUNCTION4 PFK	430.9728	43.36	0.000						0.4
	51 FUNCTION4 PFK	430.9728	43.25	0.000						0.6
	51 FUNCTION4 PFK	430.9728	43.16	0.000						1.1
	51 FUNCTION4 PFK	430.9728	43.13	0.000						0.8
	51 FUNCTION4 PFK	430.9728	43.01	0.000						1.5
	51 FUNCTION4 PFK	430.9728	42.95	0.000						0.8
	51 FUNCTION4 PFK	430.9728	42.82	0.000						2.5
	51 FUNCTION4 PFK	430.9728	42.73	0.000						2.2
	51 FUNCTION4 PFK	430.9728	42.64	0.000						2.3
	51 FUNCTION4 PFK	430.9728	42.59	0.000						1.4
	51 FUNCTION4 PFK	430.9728	42.55	0.000						0.5
	51 FUNCTION4 PFK	430.9728	42.34	0.000						1.3
	51 FUNCTION4 PFK	430.9728	42.28	0.000						0.3
	51 FUNCTION4 PFK	430.9728	42.16	0.000						1.1
	51 FUNCTION4 PFK	430.9728	42.12	0.000						1.8
	51 FUNCTION4 PFK	430.9728	44.88	0.000						0.8
	51 FUNCTION4 PFK	430.9728	44.81	0.000						1.5
	51 FUNCTION4 PFK	430.9728	44.62	0.000						1.3
	51 FUNCTION4 PFK	430.9728	44.53	0.000						1.5
	51 FUNCTION4 PFK	430.9728	43.73	0.000						2.0

ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

K5

	52	FUNCTION5 PFK	480.9696	48.29	0.000						1.3
	52	FUNCTION5 PFK	480.9696	46.82	0.000						1.4
	52	FUNCTION5 PFK	480.9696	45.08	0.000						1.9

HERS1

HERS2

	54	FUNCTION1 HPCD...	409.7974	23.75	0.000	0.000					1.8
	54	FUNCTION1 HPCD...	409.7974	23.22	0.000	0.000					2.3
	54	FUNCTION1 HPCD...	409.7974	22.97	0.000	0.000					1.7
	54	FUNCTION1 HPCD...	409.7974	22.76	0.000	0.000					2.3
	54	FUNCTION1 HPCD...	409.7974	21.31	0.000	0.000					1.9
	54	FUNCTION1 HPCD...	409.7974	28.69	0.000	0.000					2.1
	54	FUNCTION1 HPCD...	409.7974	28.41	0.000	0.000					3.3
	54	FUNCTION1 HPCD...	409.7974	27.33	0.000	0.000					1.4
	54	FUNCTION1 HPCD...	409.7974	26.80	0.000	0.000					2.4
	54	FUNCTION1 HPCD...	409.7974	26.72	0.000	0.000					2.4
	54	FUNCTION1 HPCD...	409.7974	25.45	0.000	0.000					1.6
	54	FUNCTION1 HPCD...	409.7974	25.17	0.000	0.000					1.1
	54	FUNCTION1 HPCD...	409.7974	24.15	0.000	0.000					2.7

HERS3

	55	FUNCTION2 HPCD...	409.7974	32.67	0.000	0.000					1.8
	55	FUNCTION2 HPCD...	409.7974	32.29	0.000	0.000					3.2
	55	FUNCTION2 HPCD...	409.7974	31.89	0.000	0.000					1.5
	55	FUNCTION2 HPCD...	409.7974	29.67	0.000	0.000					2.0
	55	FUNCTION2 HPCD...	409.7974	29.50	0.000	0.000					1.6
	55	FUNCTION2 HPCD...	409.7974	29.44	0.000	0.000					2.1
	55	FUNCTION2 HPCD...	409.7974	29.10	0.000	0.000					4.2
	55	FUNCTION2 HPCD...	409.7974	33.29	0.000	0.000					2.7

HERS4

	56	FUNCTION3 OCDPE	445.7555	38.45	0.000	0.000					4.0
	56	FUNCTION3 OCDPE	445.7555	36.85	0.000	0.000					6.0

HERS5

	57	FUNCTION4 NCDPE	479.7165	43.97	0.000	0.000					3.4

aset: P:\DIOXIN8290.PRO\130620ICV.qld
t Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
ted: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

HERS6

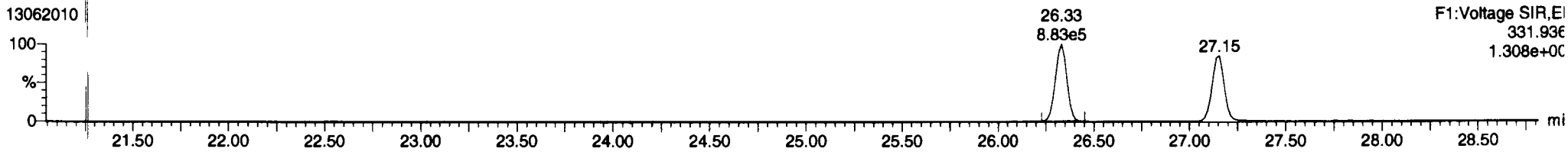
	58	FUNCTION5 DCDPE	513.6775	47.00	0.000	0.000					5.1

Dataset: P:\DIOXIN8290.PRO\130620ICV.qld
Last Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

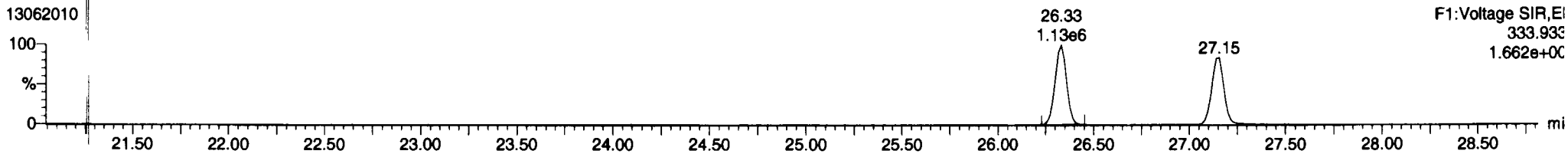
Method: P:\DIOXIN8290.PRO\MethDB\Dioxin130617.mdb 19 Jun 2013 11:39:43
Calibration: P:\DIOXIN8290.PRO\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

ID: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

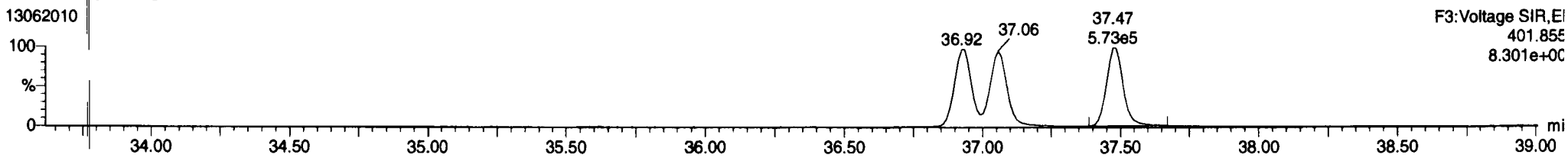
13C-1234-TCDD



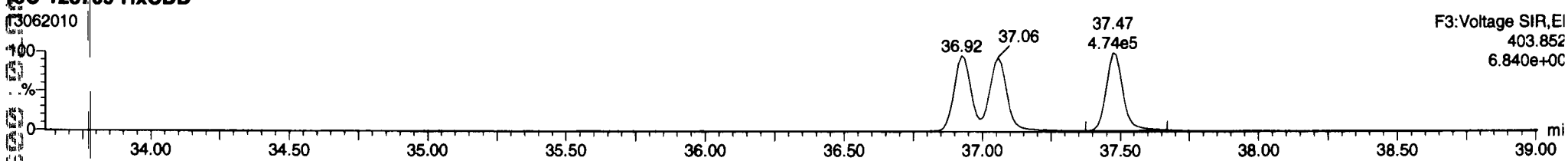
13C-1234-TCDD



13C-123789-HxCDD



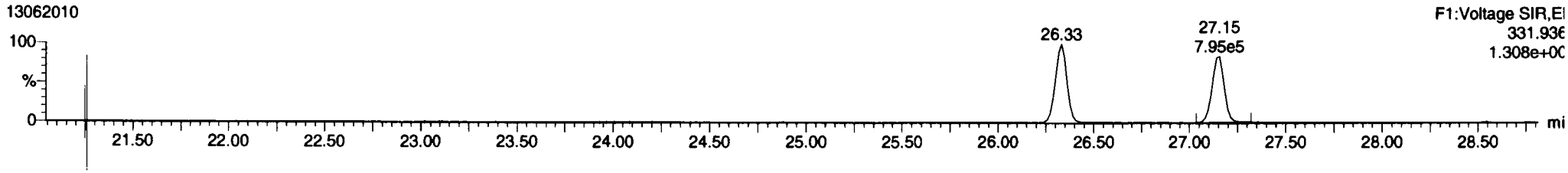
13C-123789-HxCDD



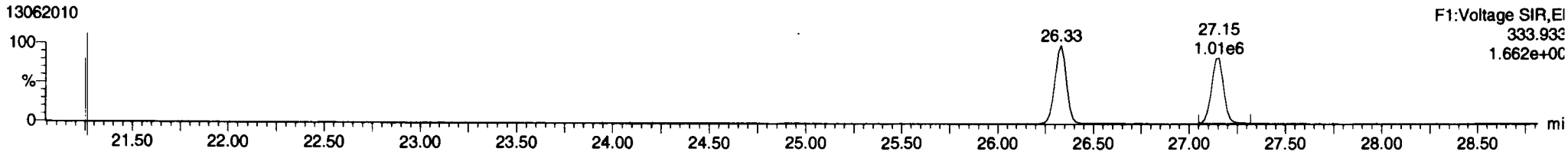
Dataset: P:\DIOXIN8290.PRO\130620ICV.qld
Last Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

ID: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

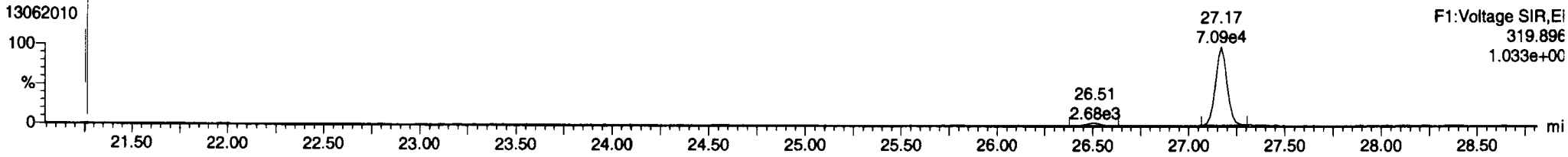
13C-2378-TCDD



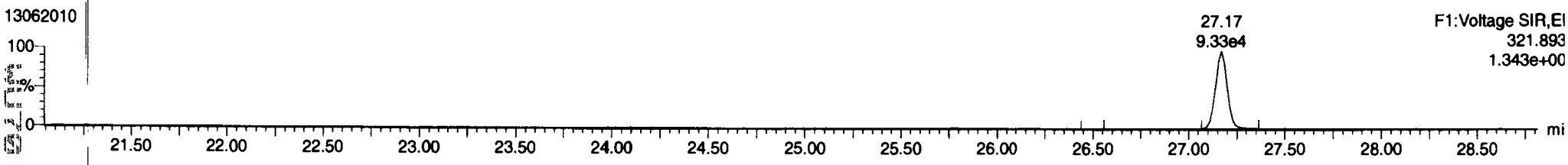
13C-2378-TCDD



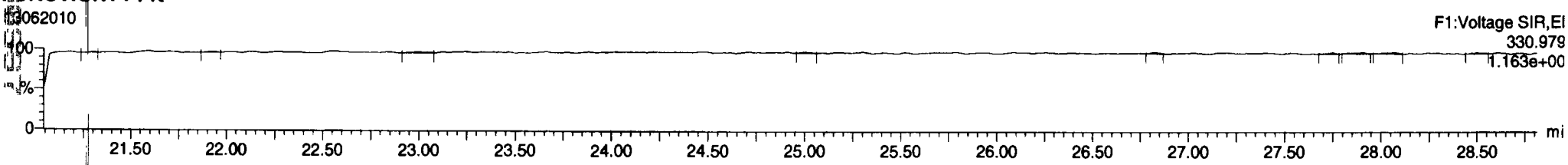
Total-tetradioxins



Total-tetradioxins



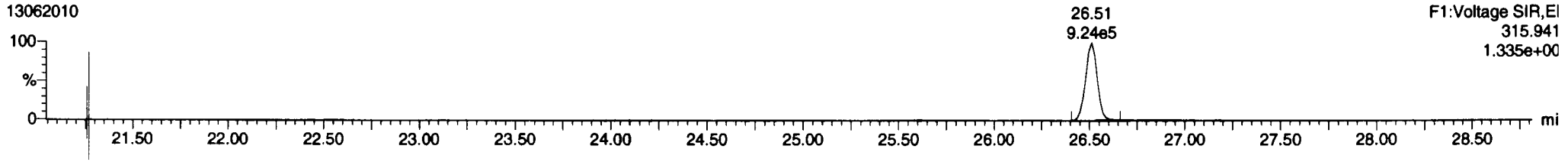
FUNCTION1 PFK



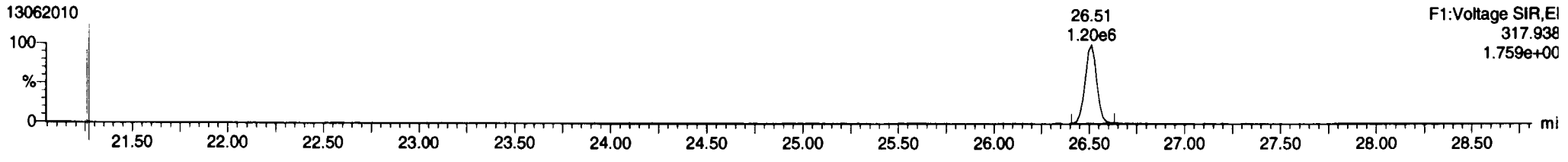
Dataset: P:\DIOXIN8290.PRO\130620ICV.qld
Last Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

ID: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

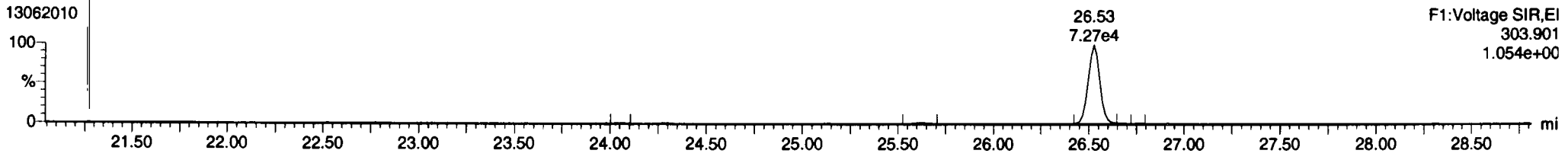
13C-2378-TCDF



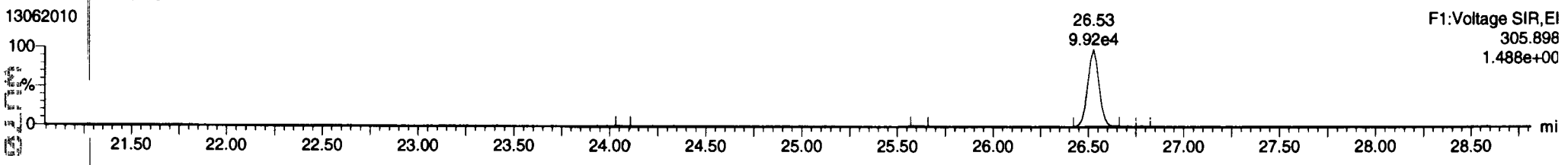
13C-2378-TCDF



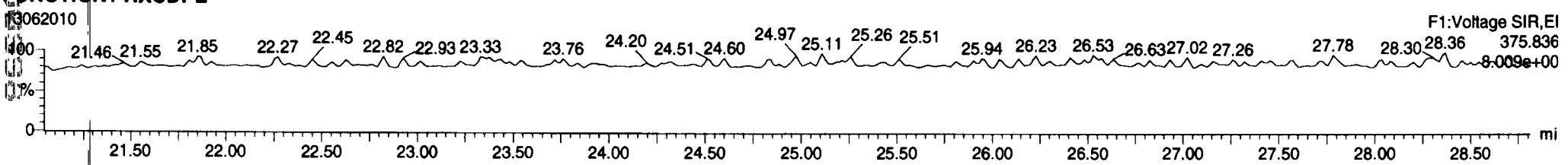
Total-tetrafurans



Total-tetrafurans



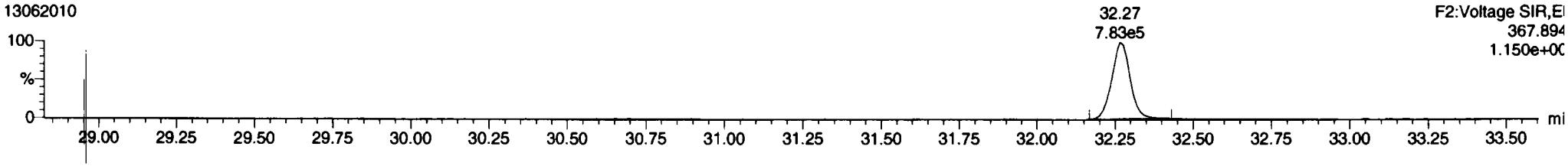
FUNCTION1 HXCDPE



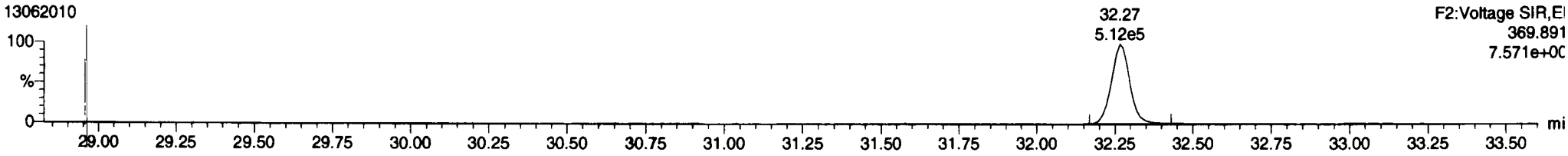
Dataset: P:\DIOXIN8290.PRO\130620ICV.qld
Last Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

ID: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

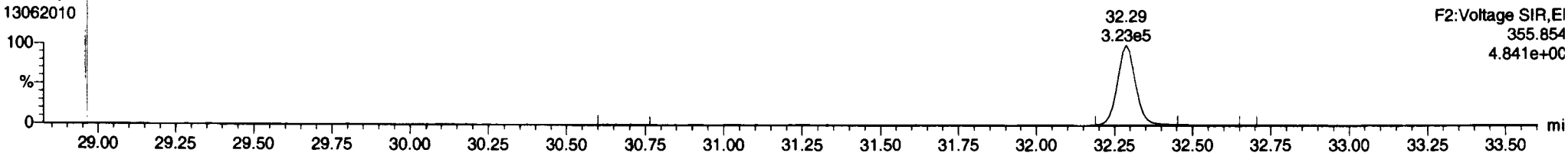
13C-12378-PeCDD



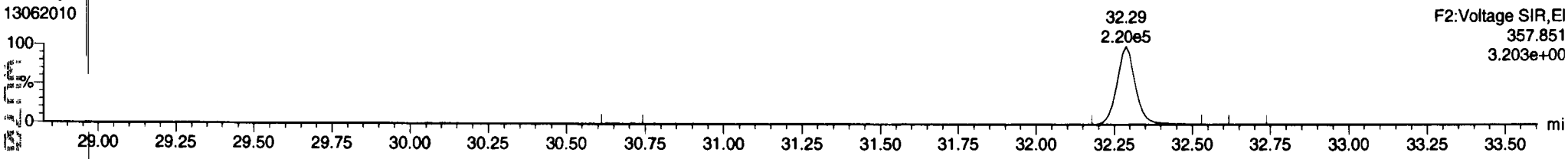
13C-12378-PeCDD



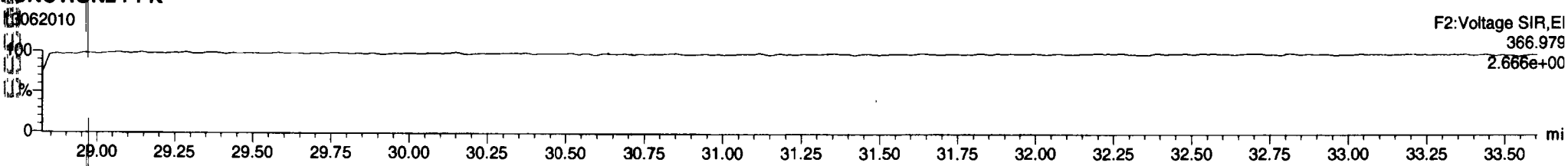
Total-pentadioxins



Total-pentadioxins



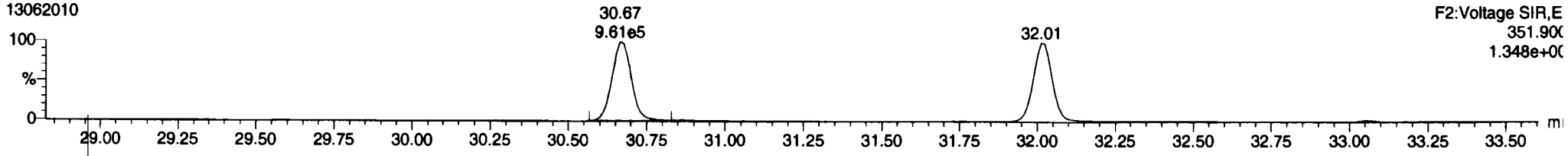
FUNCTION2 PFK



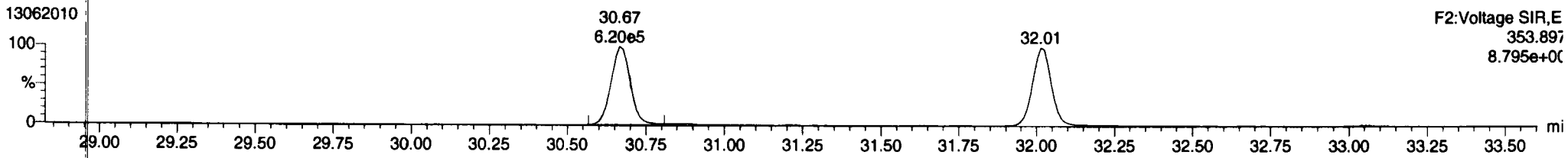
Dataset: P:\DIOXIN8290.PRO\130620ICV.qld
Last Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

ID: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

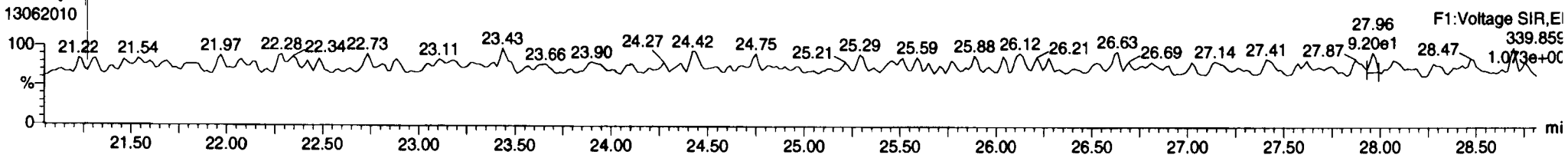
13C-12378-PeCDF



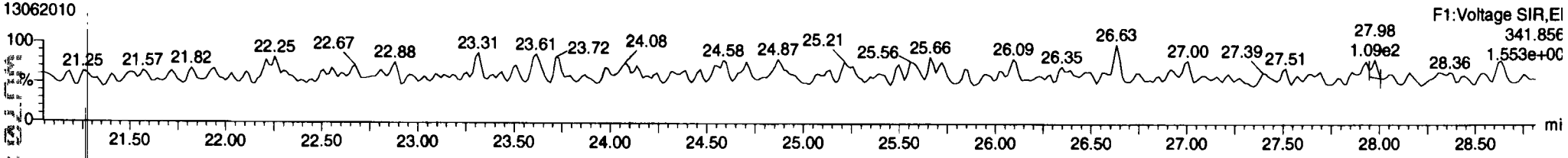
13C-12378-PeCDF



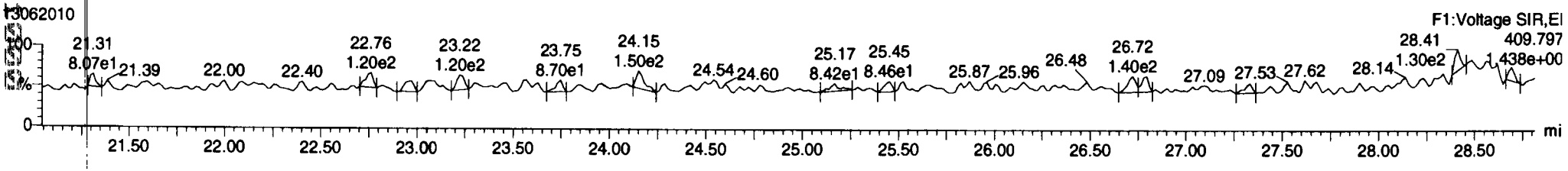
Total-penta1



Total-penta1



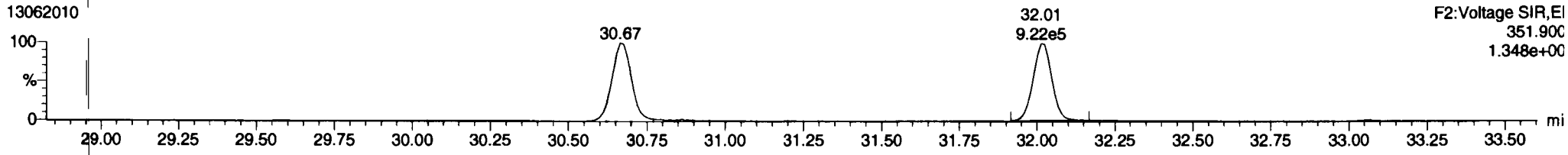
FUNCTION1 HPCDPE



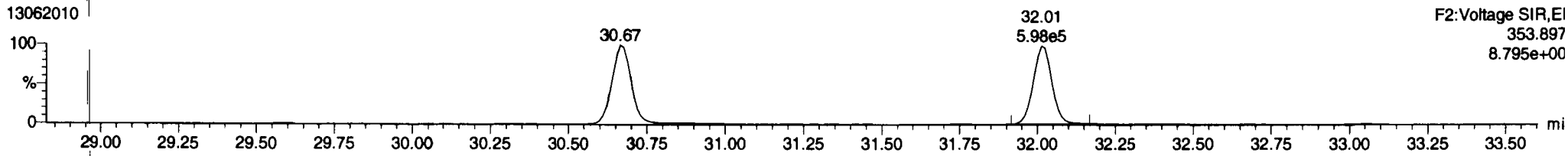
Dataset: P:\DIOXIN6290.PRO\130620ICV.qld
Last Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

ID: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

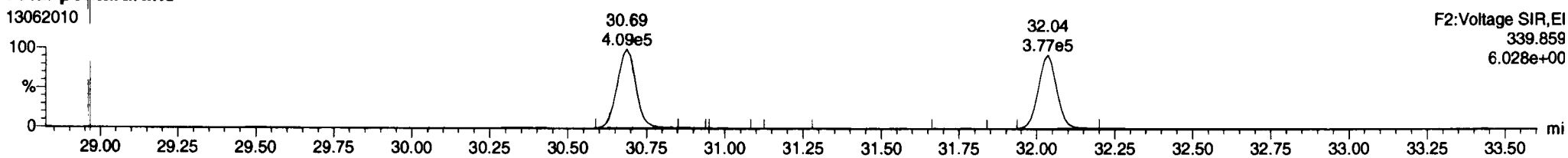
13C-23478-PeCDF



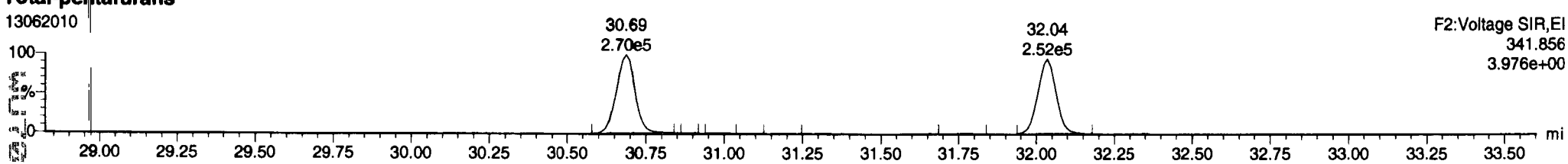
13C-23478-PeCDF



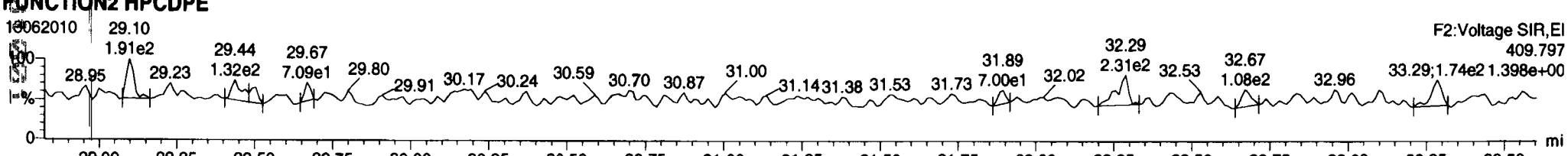
Total-pentafurans



Total-pentafurans



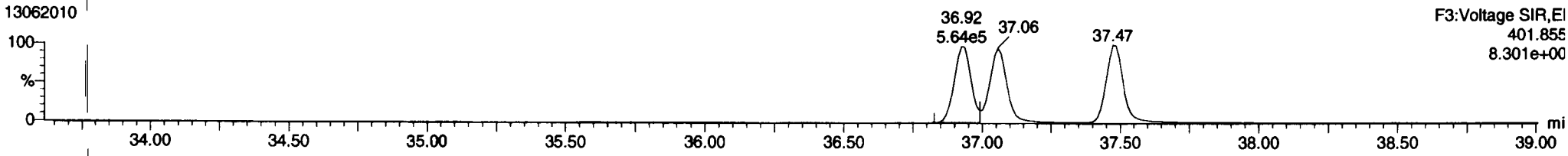
FUNCTION2 HPCDPE



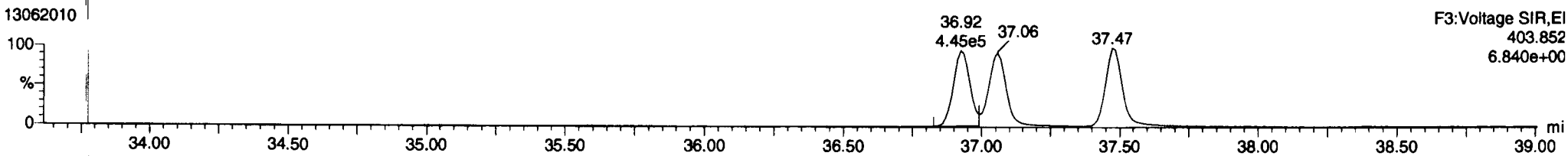
Dataset: P:\DIOXIN8290.PRO\130620ICV.qld
Last Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

ID: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

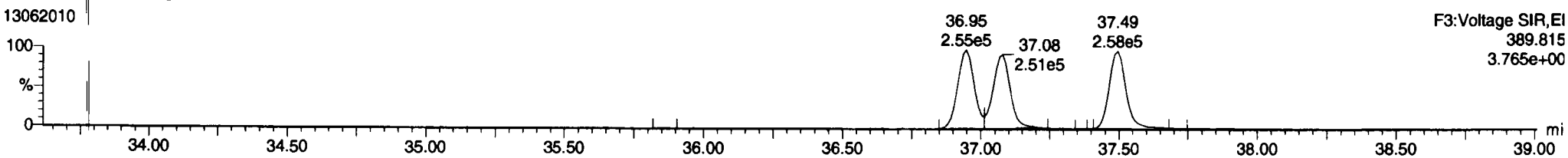
13C-123478-HxCDD



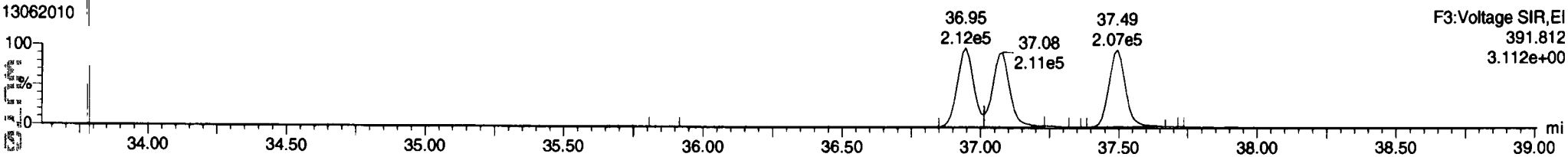
13C-123478-HxCDD



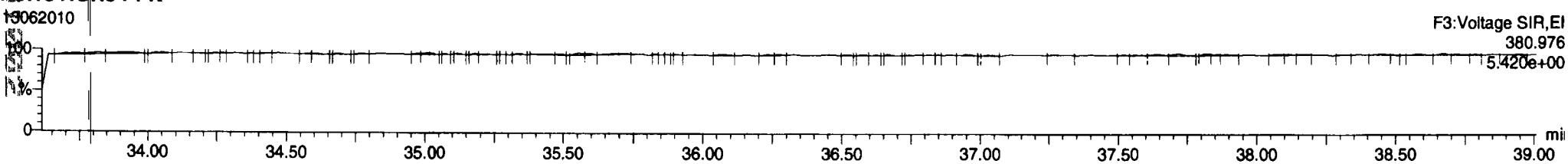
Total-hexadioxins



Total-hexadioxins



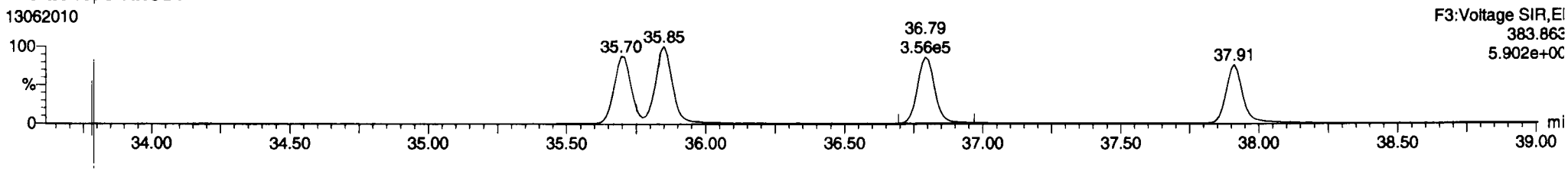
FUNCTION3 PFK



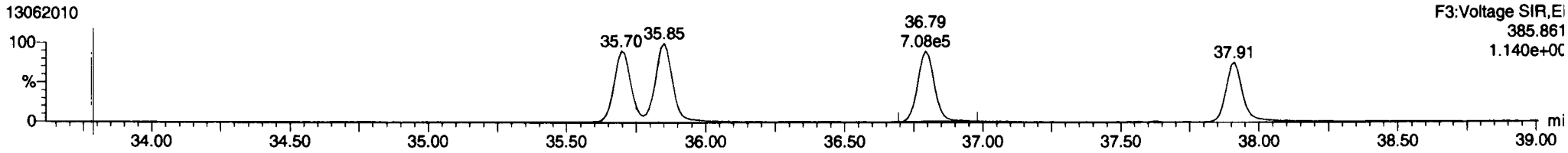
Dataset: P:\DIOXIN8290.PRO\130620ICV.qld
Last Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

ID: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

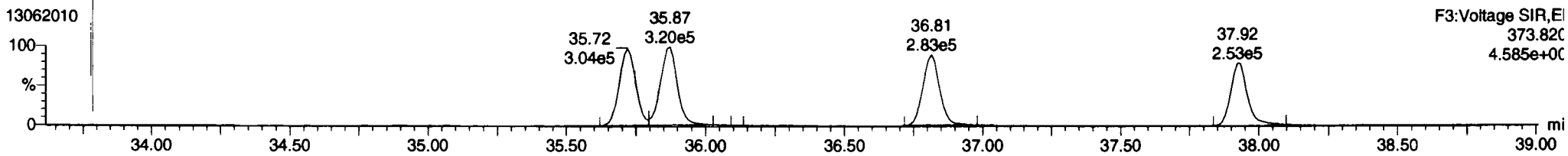
13C-234678-HxCDF



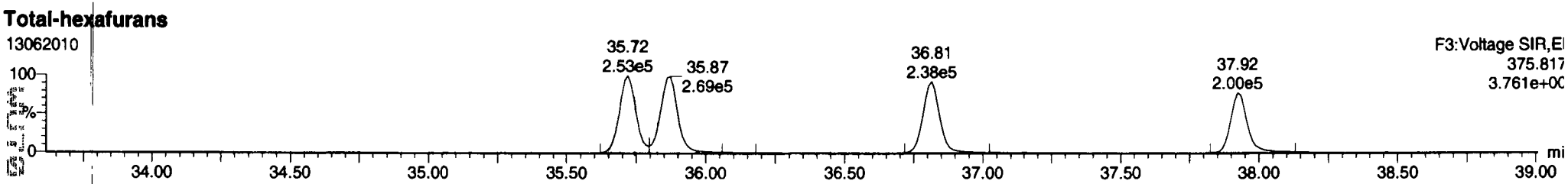
13C-234678-HxCDF



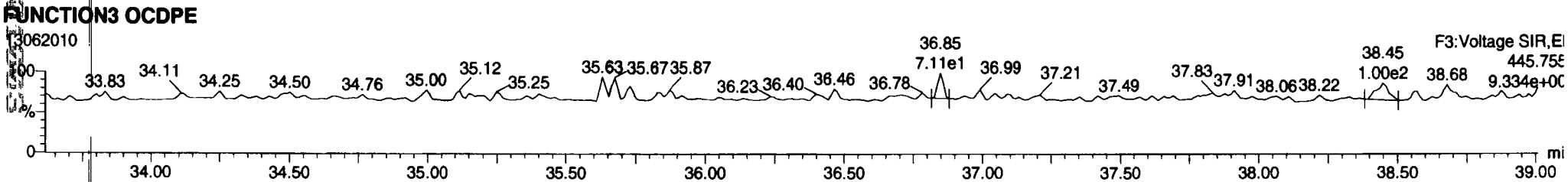
Total-hexafurans



Total-hexafurans



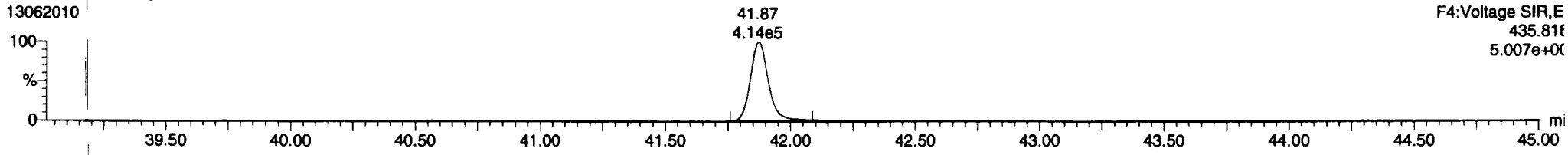
FUNCTION3 OCDPE



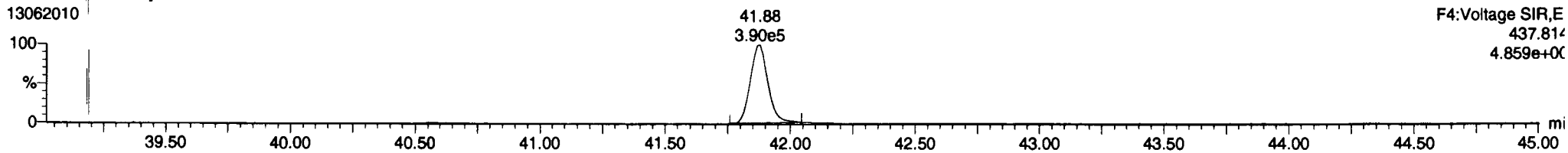
Dataset: P:\DIOXIN8290.PRO\130620ICV.qld
Last Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

ID: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

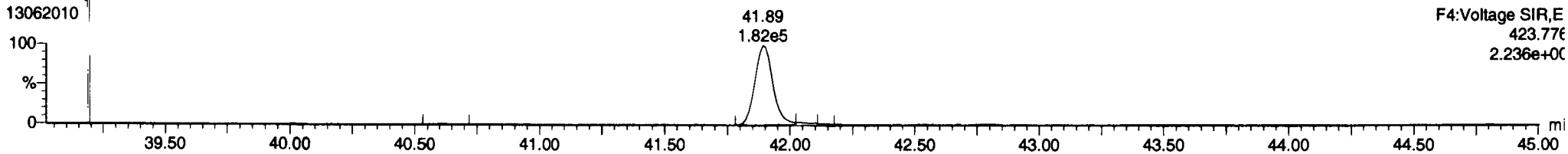
13C-1234678-HpCDD



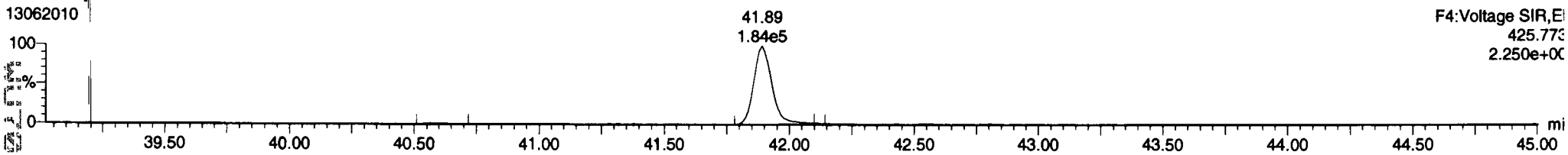
13C-1234678-HpCDD



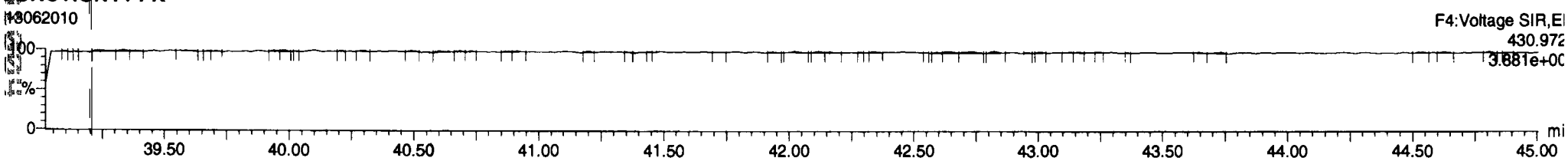
Total-heptadioxins



Total-heptadioxins



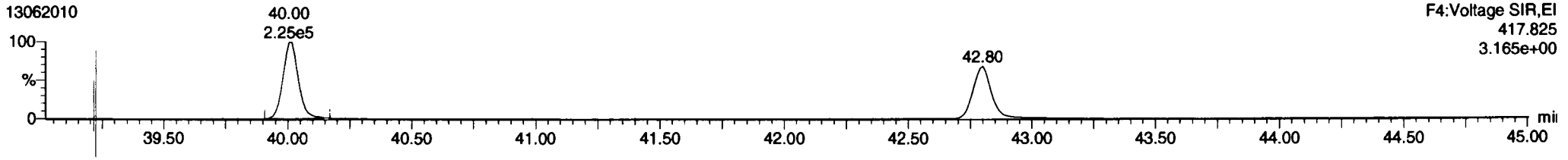
FUNCTION4 PFK



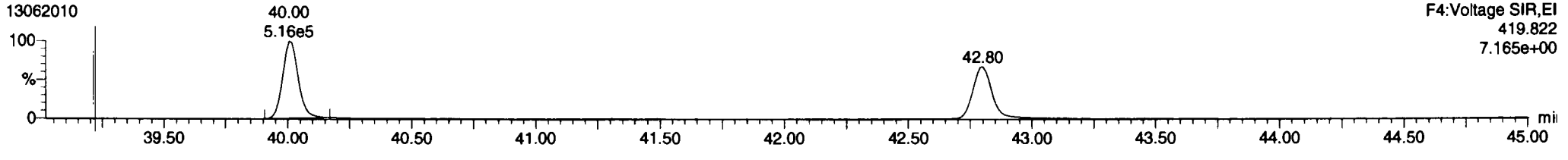
Dataset: P:\DIOXIN8290.PRO\130620ICV.qld
Last Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

ID: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

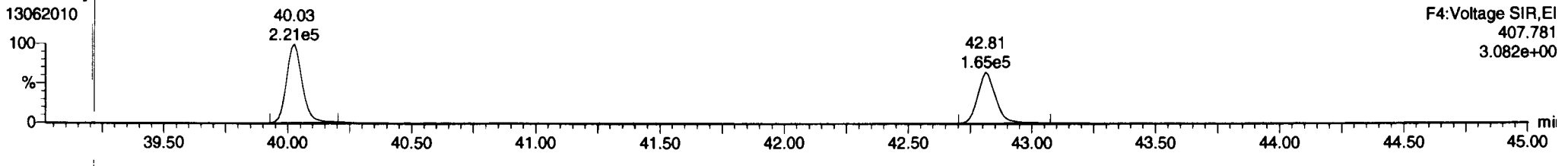
13C-1234678-HpCDF



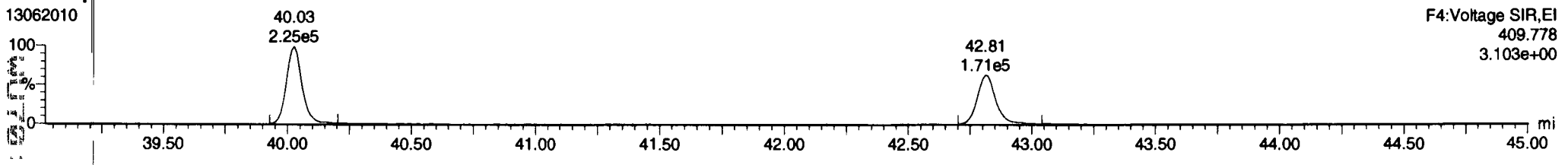
13C-1234678-HpCDF



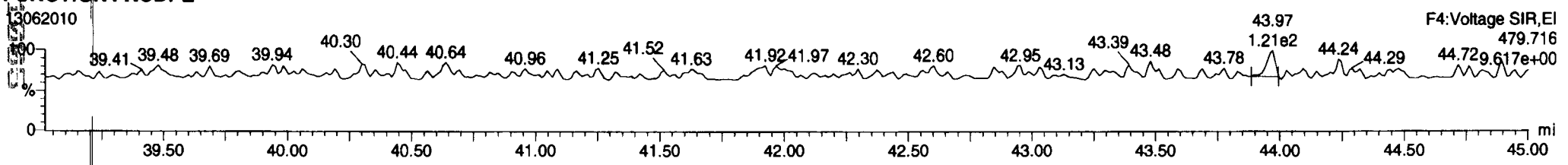
Total-heptafurans



Total-heptafurans



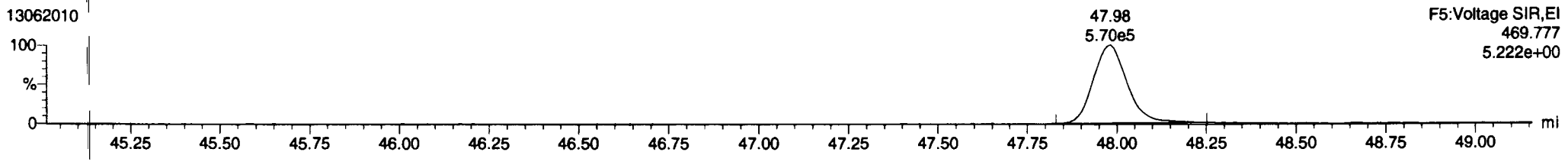
FUNCTION4 NCDPE



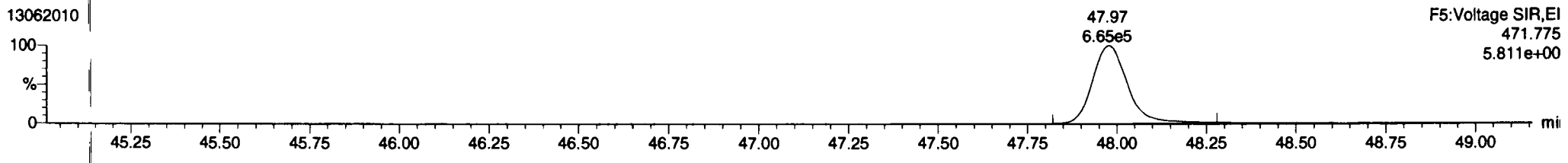
Dataset: P:\DIOXIN8290.PRO\130620ICV.qld
Last Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

ID: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

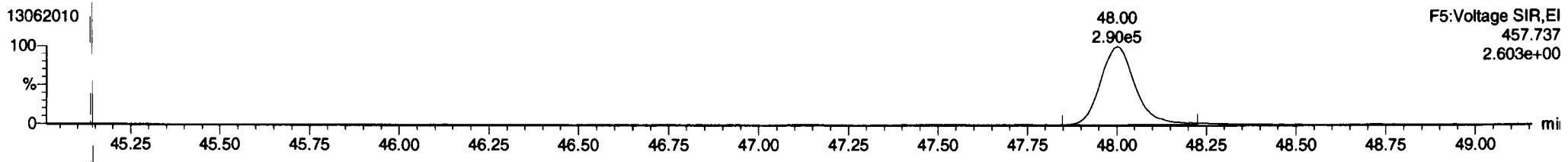
13C-OCDD



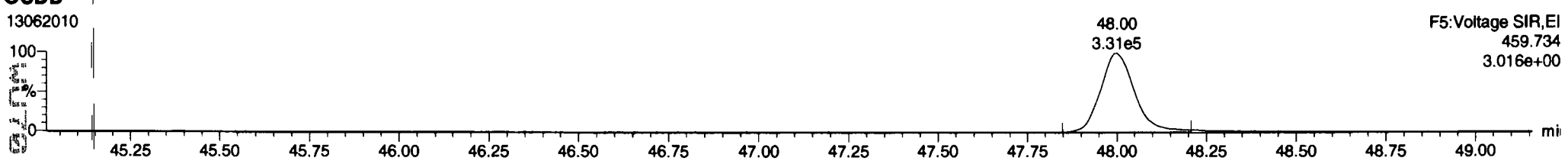
13C-OCDD



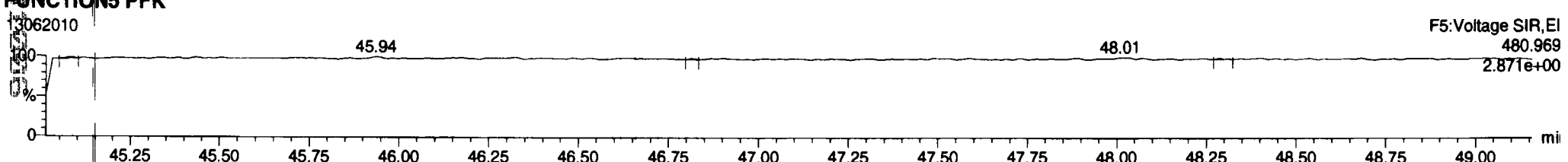
OCDD



OCDD



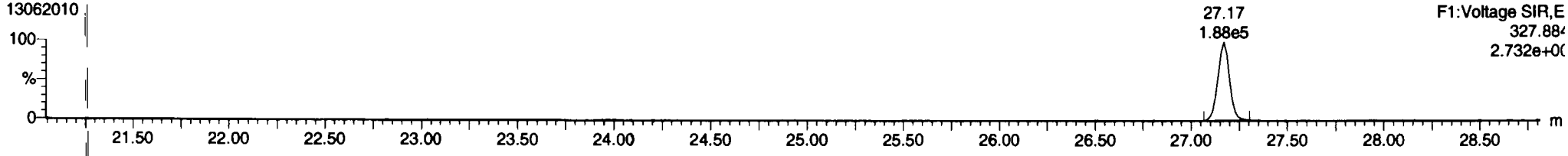
FUNCTION5 PFK



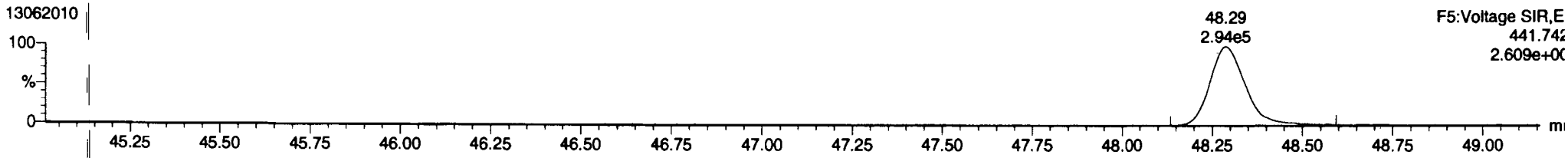
Dataset: P:\DIOXIN8290.PRO\130620ICV.qld
Last Altered: Friday, June 21, 2013 09:18:09 Pacific Daylight Time
Printed: Friday, June 21, 2013 09:19:04 Pacific Daylight Time

ID: ICV, Name: 13062010, Date: 20-Jun-2013, Time: 18:02:47, Conditions: AUTOSPEC01, User: pk

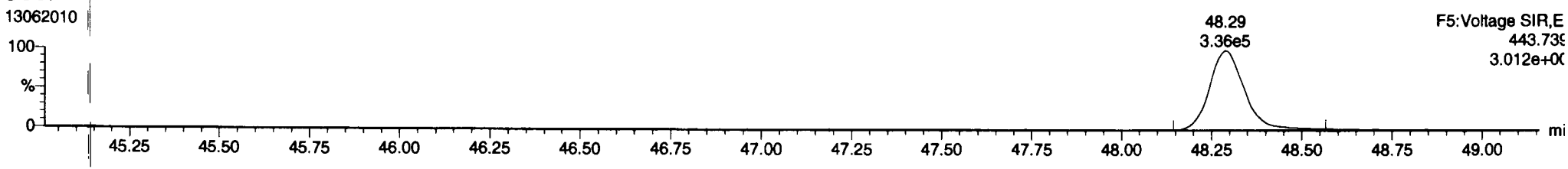
37CL-2378-TCDD



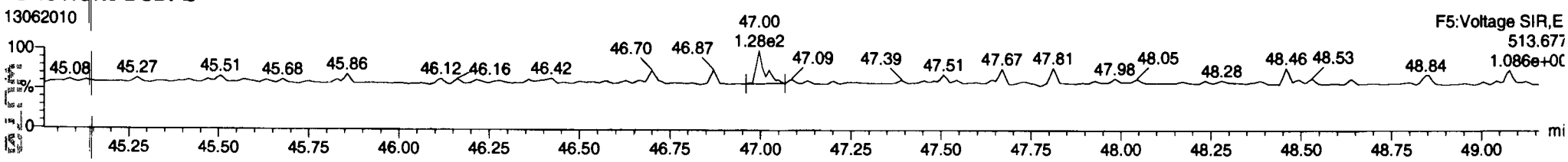
OCDF



OCDF



FUNCTION5 DCDPE



Dioxin Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WU70

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

HR-GC/MS Analyst Notes / Data Review Checklist

ARI Work Order: WU70 Client ID: SAIC

METHOD: **1613B** (Dioxins) **8290A** (Dioxins)

Instrument: **AutoSpec01**

Curve Date: 6/20/13 Analysis Start Date: 7/1/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Resolution Check > 10,000ppm	(Y) / N / ✓	Signal / Noise ≥ 2.5?	(Y) / N / ✓
TCDD / TCDF Resolution ≤ 25%	(Y) / N / ✓	Extraction STD Limits Met?	(Y) / N / ✓
PCDF Windows Verified	(Y) / N / ✓	Cleanup STD Limits Met?	(Y) / N / ✓
CCV Meets %D Limits?	(Y) / N / ✓	Method Blank in Control?	(Y) / N / ✓
CCV Ion Ratios within Limits?	(Y) / N / ✓	OPR Recovery Limits Met?	Y / (N) / ✓
CCV RRT within Limits?	(Y) / N / ✓	Values Exceeding Curve Range?	Y / (N) / ✓
Manual Integrations for Samples?	(Y) / N / ✓	Samples Diluted?	Y / N /
Special Analysis Request?	Y / N /	Duplicate Sample RPD ≤ 25%?	NA /

Detail problems, corrective actions and/or other pertinent information below:

- HpF high in OPR

(Review 1)Analyst: [signature] **Date:** 7/2/13

(Review 2)Reviewer: [signature] **Date:** 7/3

Analytical Resources Inc.: Organics Instrument Log

AutoSpec01 Serial No.:GC=CN10921030, MS=P764

Date: 7/1/13 Analysis: Dioxins Analyst: MK

GC Program: 8290C Column No: I7822 Column Type: RTX Dioxin 2

Inj Vol: 1ul Instrument Tune (IPR): Jun1713_1-5 Detector Voltage: 350

Resolution Check Files: 10:14, 20:08 Curve Date: 6/20/13

IS/SS	Ical/Ccal	LCS/ICV
IS144	I7708 1997-2	

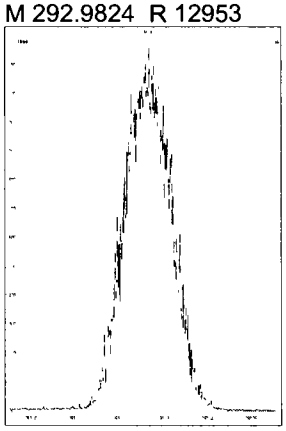
1	01-Jul-13	10:24:23	13070102	CS3
2	01-Jul-13	11:15:08	13070103	ISC01
3	01-Jul-13	12:11:25	13070104	WU10N 5X
4	01-Jul-13	13:01:53	13070105	WU10Q 5X
5	01-Jul-13	13:54:09	13070106	WU10R 5X
6	01-Jul-13	14:46:35	13070107	WU10T 5X
7	01-Jul-13	15:38:50	13070108	WU70MBS
8	01-Jul-13	16:31:17	13070109	WU70OPR
9	01-Jul-13	17:23:33	13070110	WU70B
10	01-Jul-13	18:16:01	13070111	WU70C
11	01-Jul-13	19:08:16	13070116	CS3

MK 7/2/13

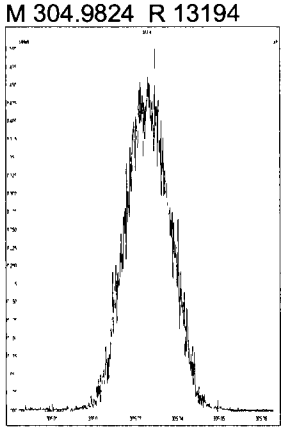
Every line must contain information or be lined out. Make all entries legible.
Start a new page for each QC period. Document All Maintenance Tasks In StarLIMS

Printed: Monday, July 01, 2013 10:14:51 Pacific Daylight Time

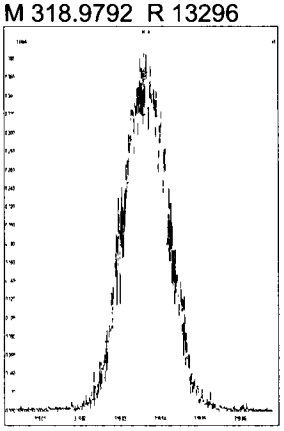
M 292.9824 R 12953



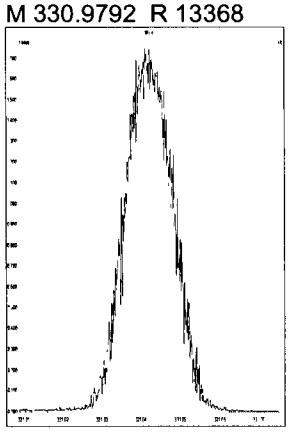
M 304.9824 R 13194



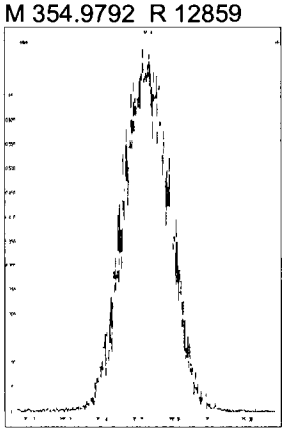
M 318.9792 R 13296



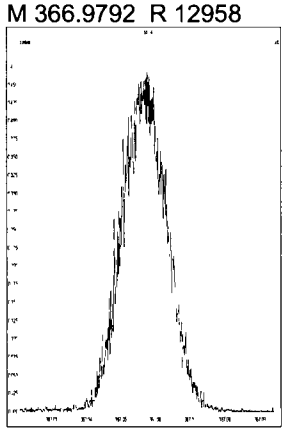
M 330.9792 R 13368



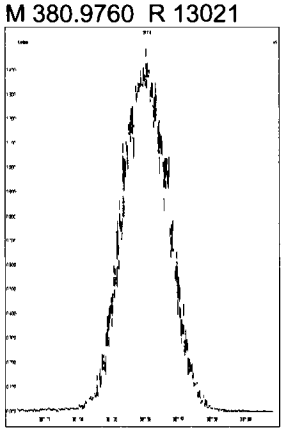
M 354.9792 R 12859



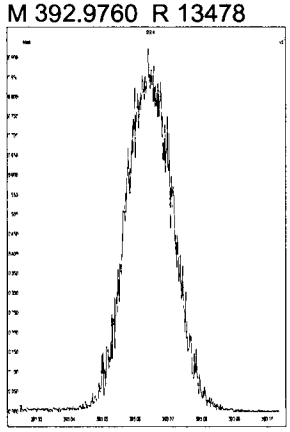
M 366.9792 R 12958



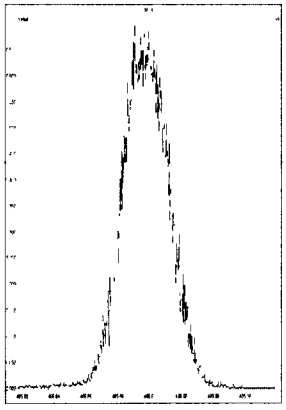
M 380.9760 R 13021



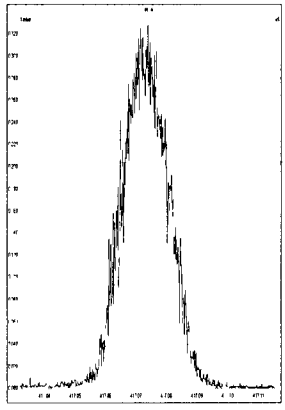
M 392.9760 R 13478



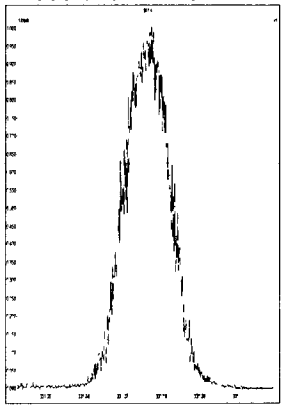
M 404.9760 R 12661



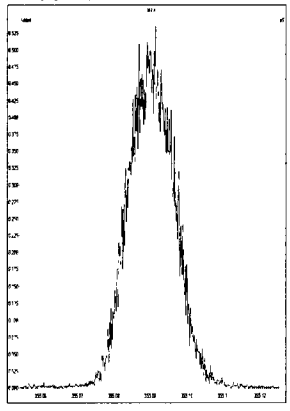
M 416.9760 R 12755



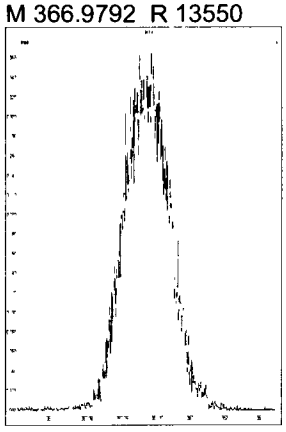
M 330.9792 R 13412



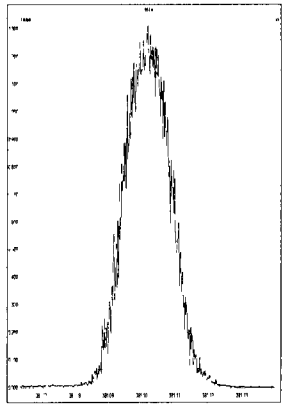
M 354.9792 R 12755



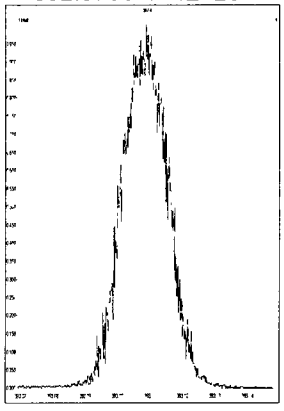
M 366.9792 R 13550



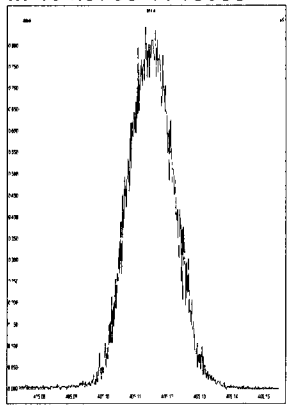
M 380.9760 R 12961



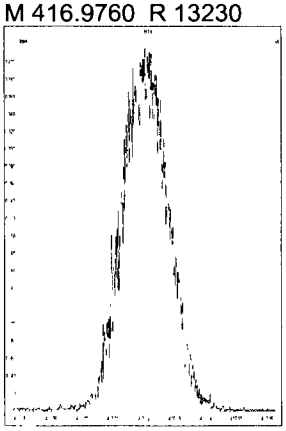
M 392.9760 R 12825



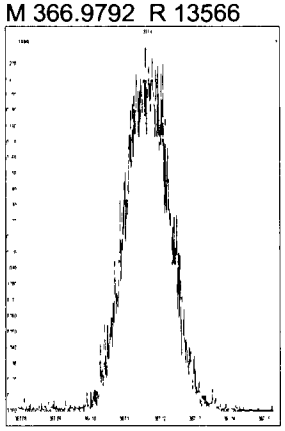
M 404.9760 R 13088



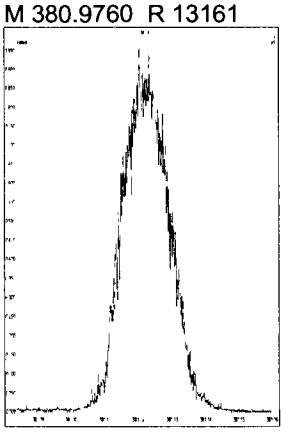
M 416.9760 R 13230



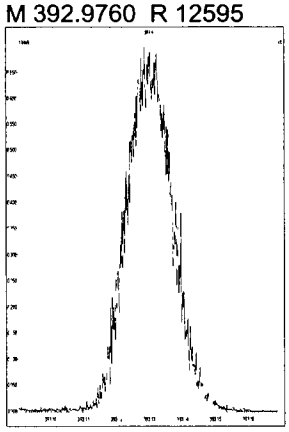
M 366.9792 R 13566



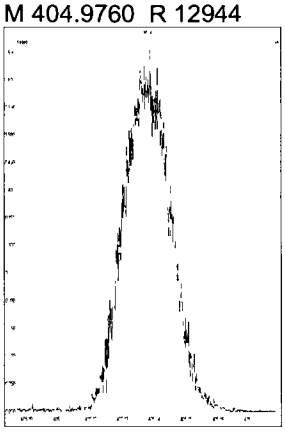
M 380.9760 R 13161



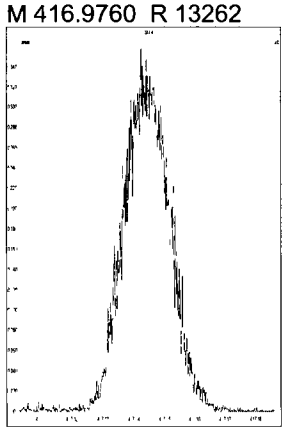
M 392.9760 R 12595



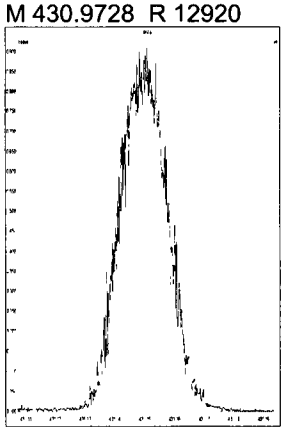
M 404.9760 R 12944



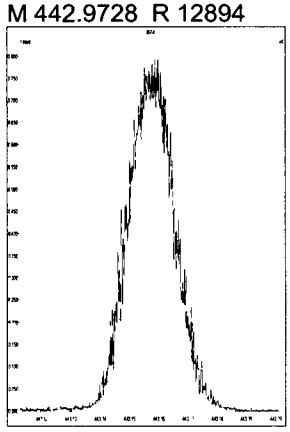
M 416.9760 R 13262



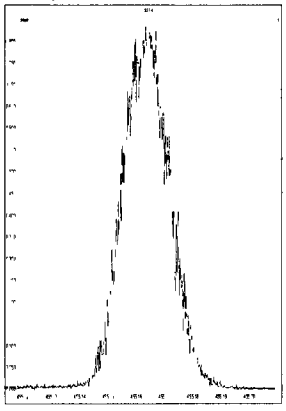
M 430.9728 R 12920



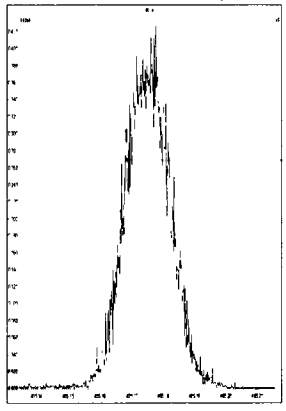
M 442.9728 R 12894



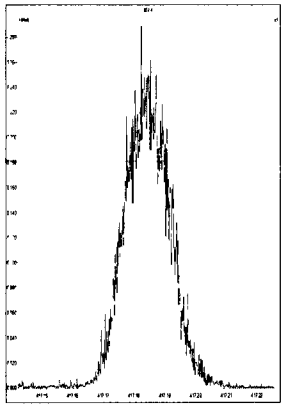
M 454.9728 R 12634



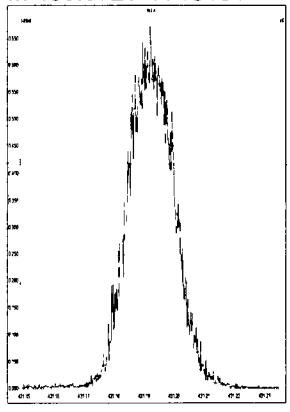
M 404.9760 R 13055



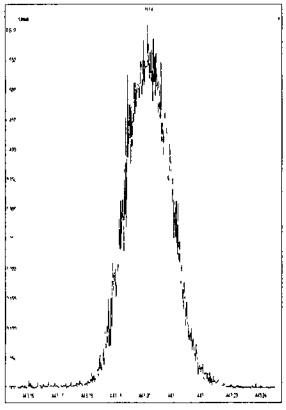
M 416.9760 R 13623



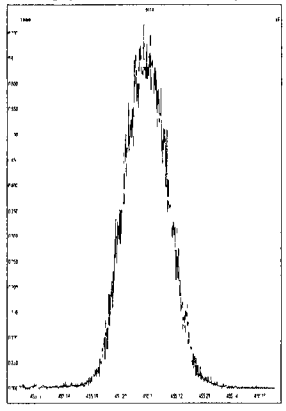
M 430.9728 R 13181



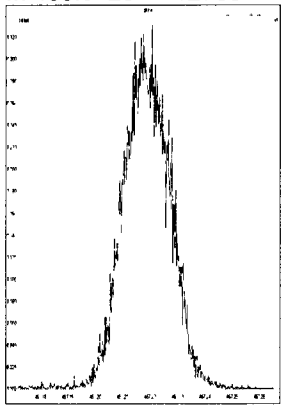
M 442.9728 R 13440



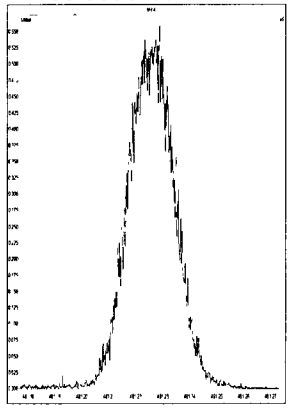
M 454.9728 R 13193



M 466.9728 R 12788

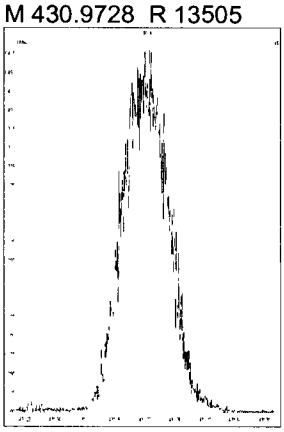


M 480.9696 R 13023

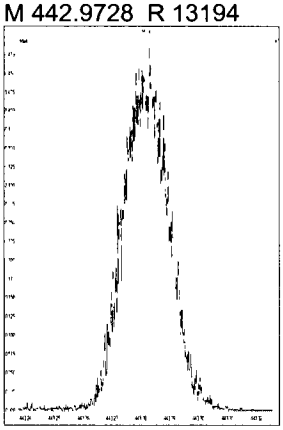


Printed: Monday, July 01, 2013 10:14:51 Pacific Daylight Time

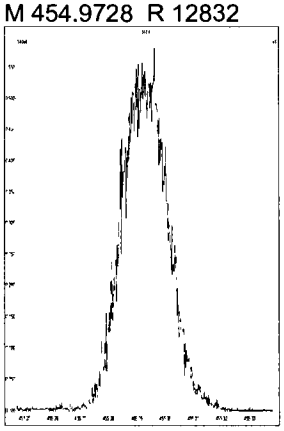
M 430.9728 R 13505



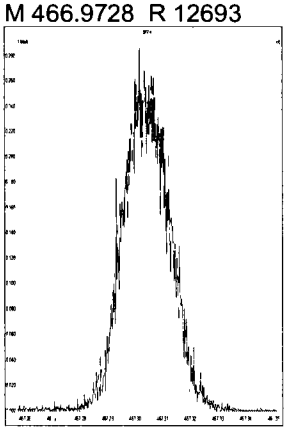
M 442.9728 R 13194



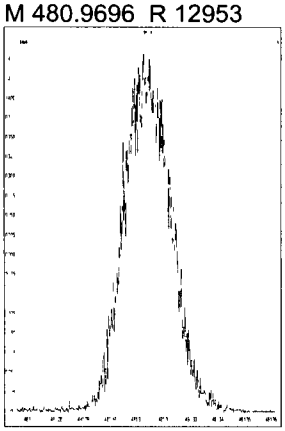
M 454.9728 R 12832



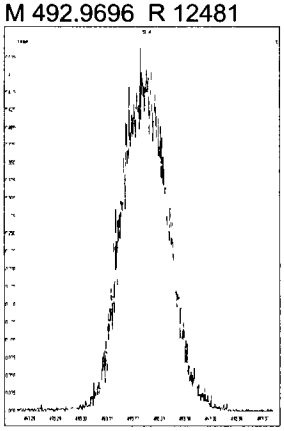
M 466.9728 R 12693



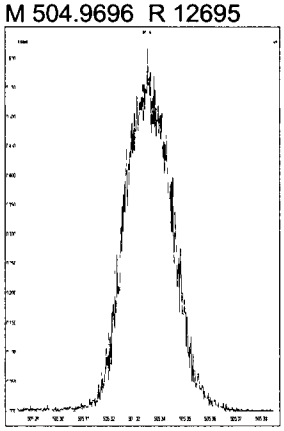
M 480.9696 R 12953



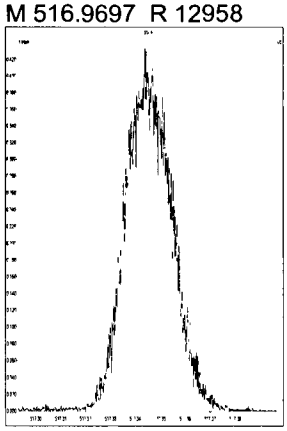
M 492.9696 R 12481

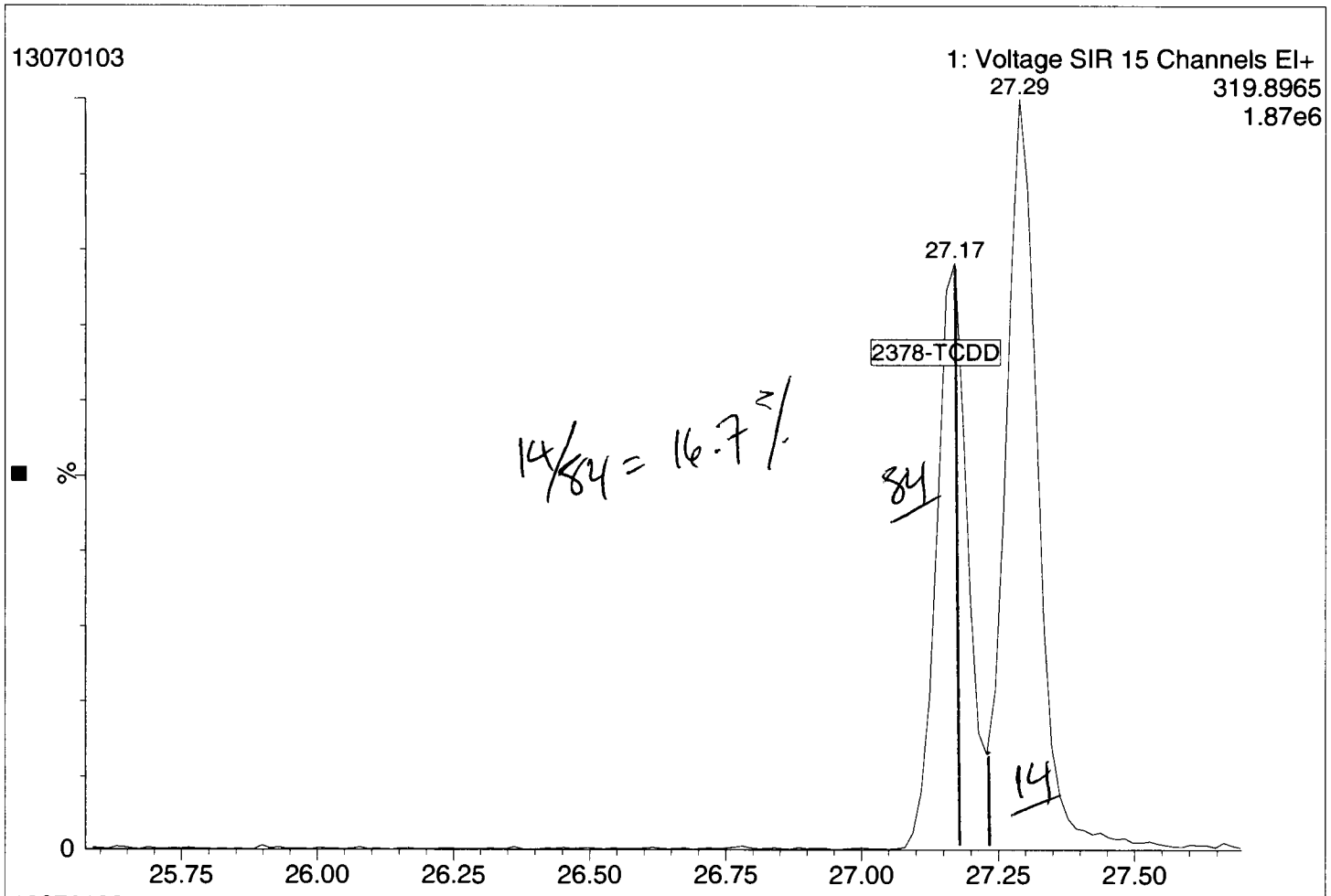


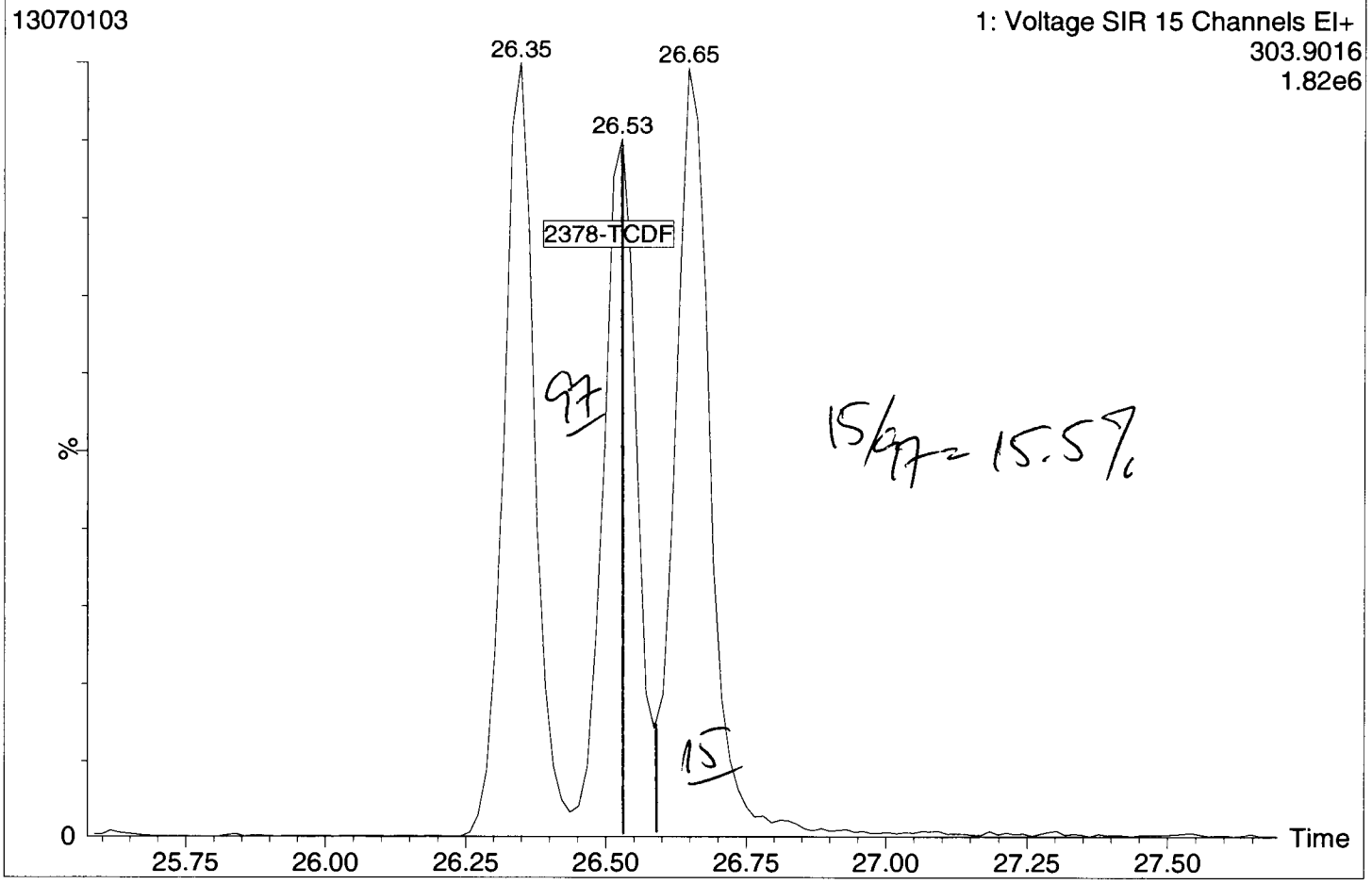
M 504.9696 R 12695

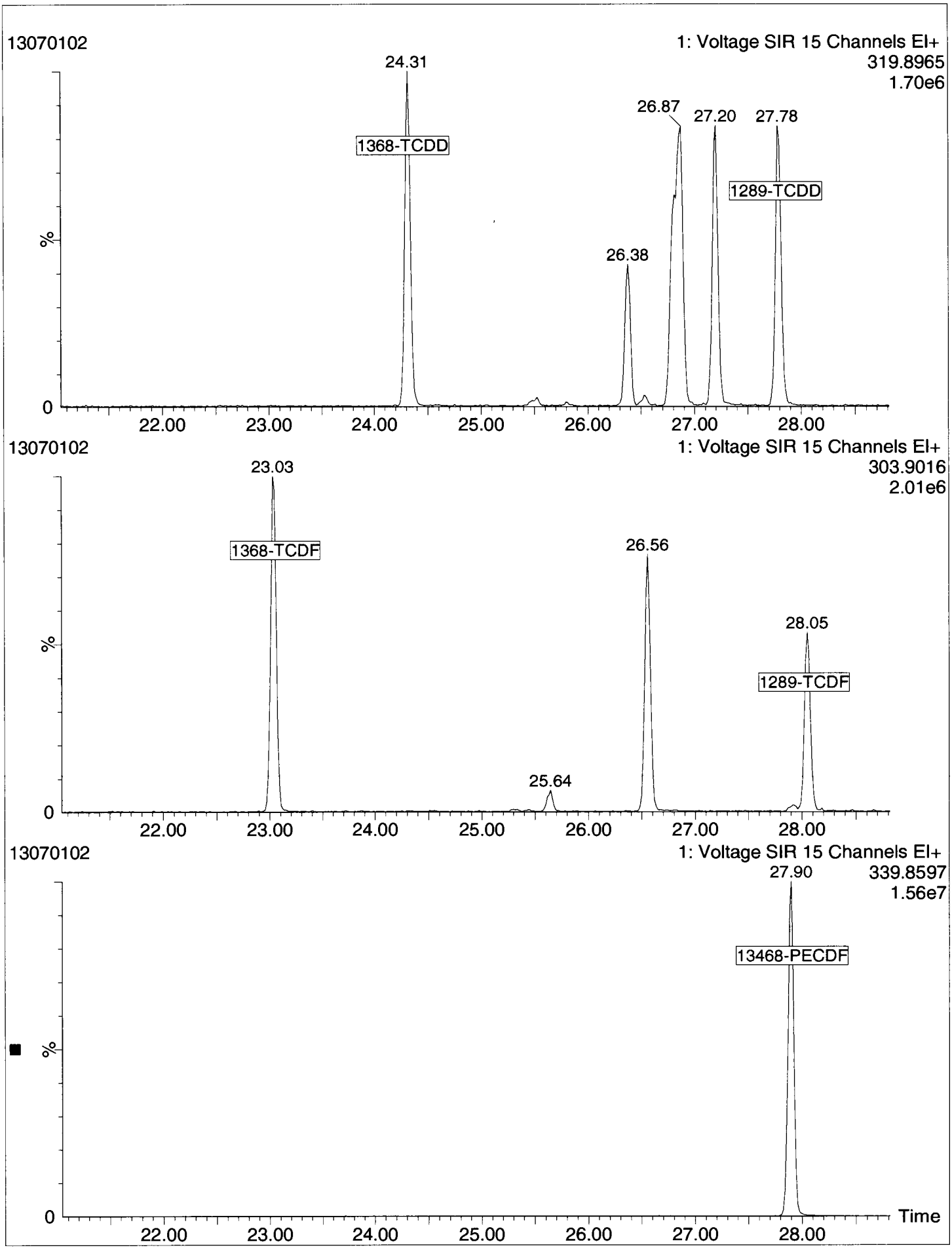


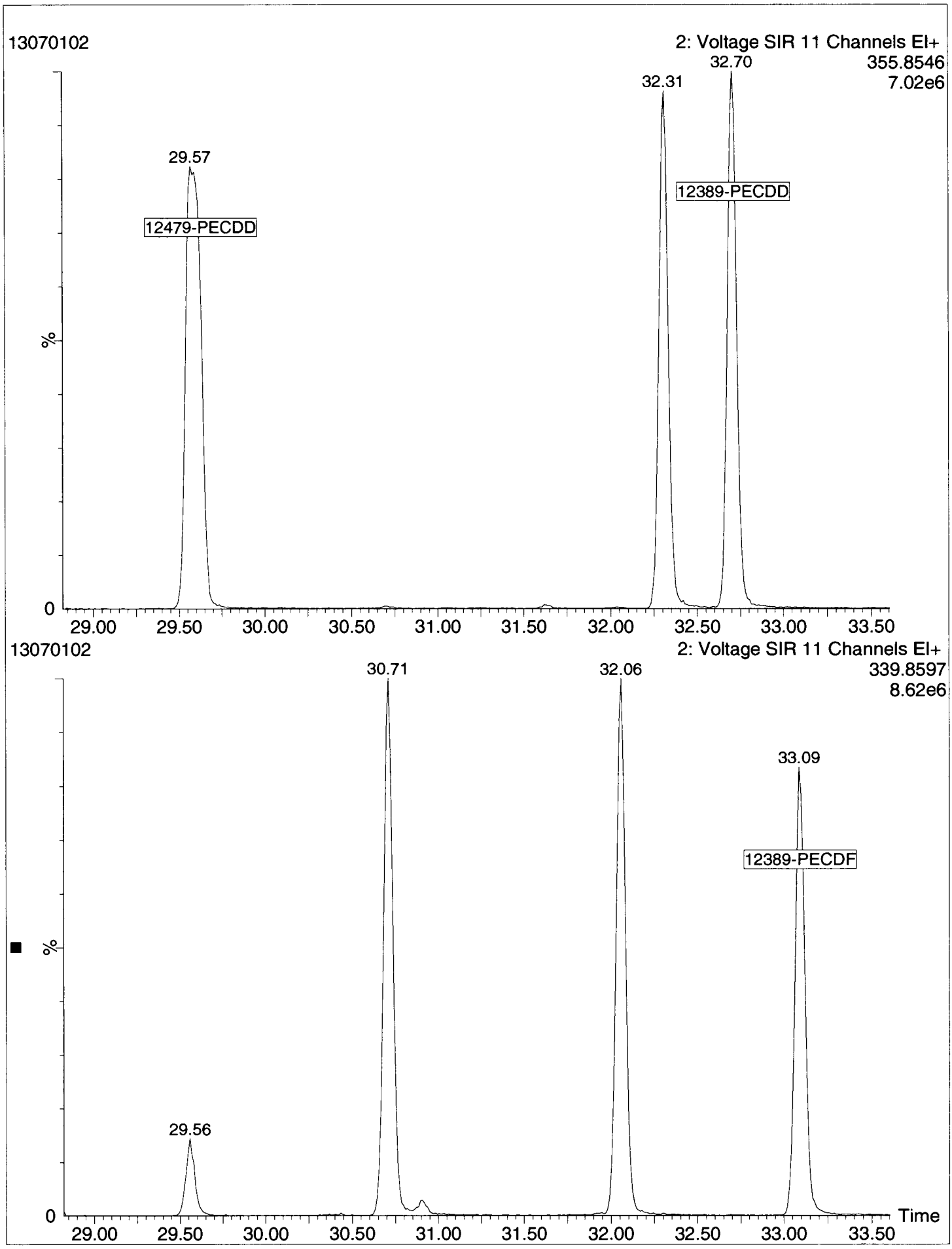
M 516.9697 R 12958

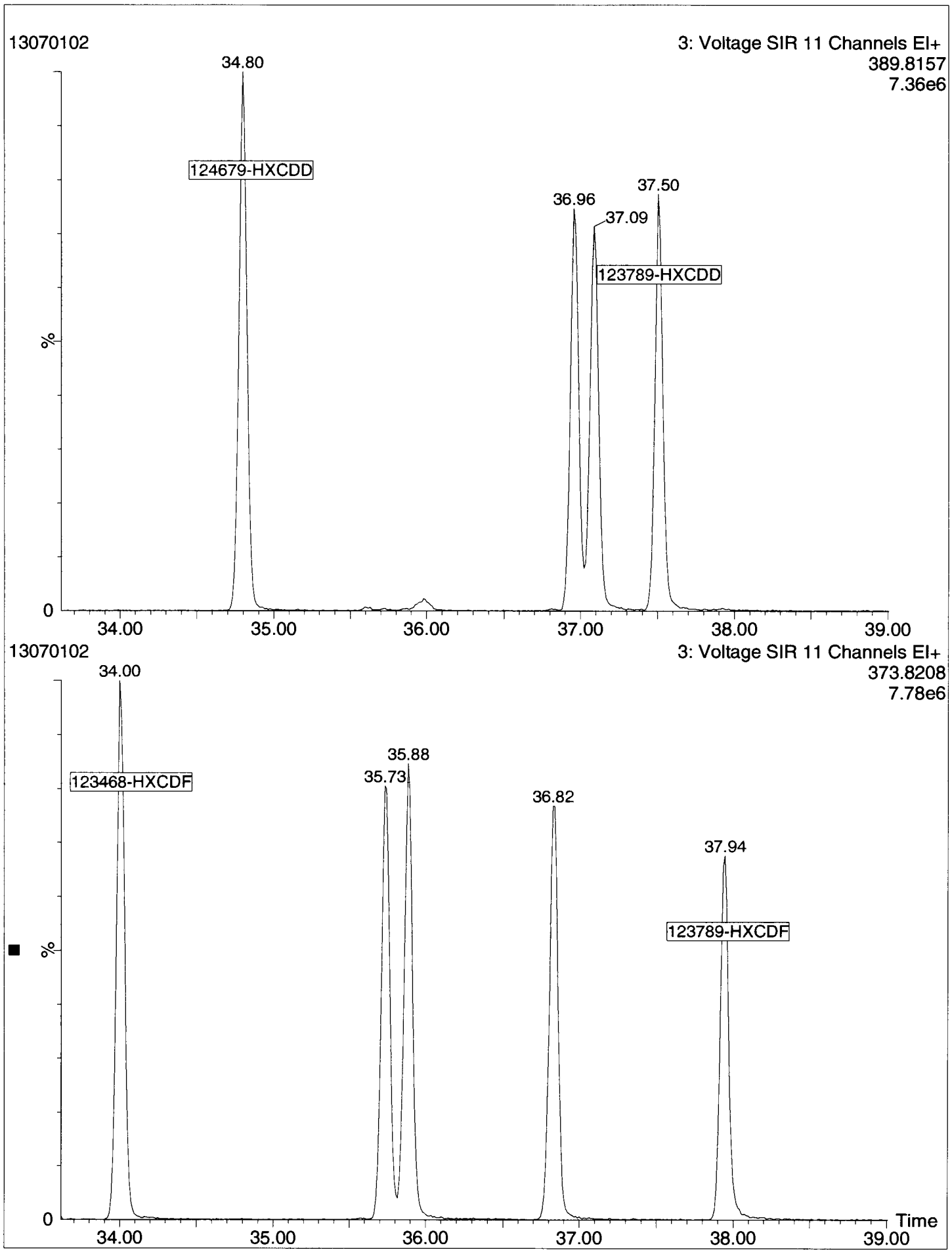


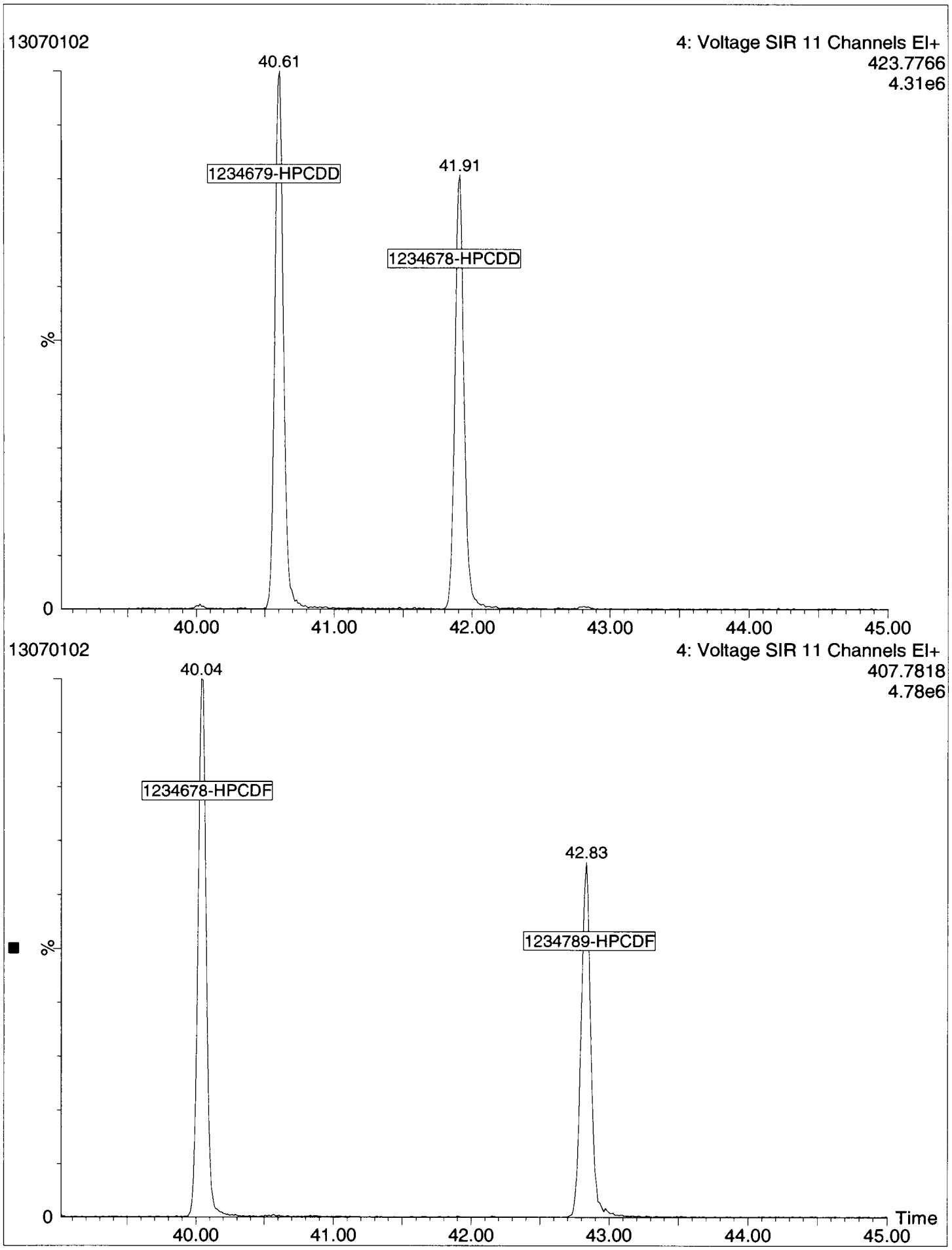

13070103
1: Voltage SIR 15 Channels EI+
319.8965
1.87e6
27.29
27.17
2378-TCDD
84
14
14/84 = 16.7%
%
0
25.75
26.00
26.25
26.50
26.75
27.00
27.25
27.50


13070103
1: Voltage SIR 15 Channels EI+
303.9016
1.82e6
26.35
26.65
26.53
2378-TCDF
97
15
15/97 = 15.5%
%
0
Time
25.75
26.00
26.25
26.50
26.75
27.00
27.25
27.50


13070102
1: Voltage SIR 15 Channels EI+
319.8965
1.70e6
24.31
1368-TCDD
26.87
27.20
27.78
1289-TCDD
26.38
%
0
22.00
23.00
24.00
25.00
26.00
27.00
28.00
13070102
1: Voltage SIR 15 Channels EI+
303.9016
2.01e6
23.03
1368-TCDF
26.56
28.05
1289-TCDF
25.64
%
0
22.00
23.00
24.00
25.00
26.00
27.00
28.00
13070102
1: Voltage SIR 15 Channels EI+
339.8597
1.56e7
27.90
13468-PECDF
%
0
Time
22.00
23.00
24.00
25.00
26.00
27.00
28.00


13070102
2: Voltage SIR 11 Channels EI+
355.8546
7.02e6
32.70
32.31
29.57
12389-PECDD
12479-PECDD
%
0
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50
33.00
33.50
13070102
2: Voltage SIR 11 Channels EI+
339.8597
8.62e6
30.71
32.06
33.09
12389-PECDF
29.56
%
0
Time
29.00
29.50
30.00
30.50
31.00
31.50
32.00
32.50
33.00
33.50


13070102
3: Voltage SIR 11 Channels EI+
389.8157
7.36e6
34.80
124679-HXCDD
36.96
37.09
37.50
123789-HXCDD
%
0
34.00
35.00
36.00
37.00
38.00
39.00
13070102
3: Voltage SIR 11 Channels EI+
373.8208
7.78e6
34.00
123468-HXCDF
35.88
35.73
36.82
37.94
123789-HXCDF
%
0
Time
34.00
35.00
36.00
37.00
38.00
39.00


13070102
4: Voltage SIR 11 Channels EI+
423.7766
4.31e6
40.61
1234679-HPCDD
41.91
1234678-HPCDD
%
0
40.00
41.00
42.00
43.00
44.00
45.00
13070102
4: Voltage SIR 11 Channels EI+
407.7818
4.78e6
40.04
1234678-HPCDF
42.83
1234789-HPCDF
%
0
Time
40.00
41.00
42.00
43.00
44.00
45.00

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130617.mdb 28 Jun 2013 10:21:28
Calibration: P:\DIOXIN8290.pro\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

ID: CS3, Name: 13070102, Date: 01-Jul-2013, Time: 10:24:23, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.556	1.001	9.35e4	1.23e5	0.771	0.761	0.770	1064.3	NO	10.259	10.259
12378-PeCDF	30.708	1.001	5.32e5	3.46e5	0.814	1.540	1.550	2000.8	NO	51.607	51.607
23478-PeCDF	32.057	1.001	5.20e5	3.45e5	0.837	1.509	1.550	1985.6	NO	51.041	51.041
123478-HxCDF	35.739	1.001	4.01e5	3.34e5	0.967	1.199	1.240	1324.7	NO	50.763	50.763
234678-HxCDF	36.836	1.001	3.94e5	3.21e5	1.000	1.227	1.240	1271.4	NO	51.112	51.112
123678-HxCDF	35.882	1.000	4.08e5	3.40e5	0.951	1.201	1.240	1370.9	NO	50.262	50.262
123789-HxCDF	37.943	1.001	3.34e5	2.70e5	0.874	1.239	1.240	1116.9	NO	52.231	52.231
1234678-HpCDF	40.036	1.000	3.25e5	3.25e5	1.072	1.001	1.050	2189.6	NO	53.045	53.045
1234789-HpCDF	42.831	1.000	2.52e5	2.52e5	1.085	1.000	1.050	1449.8	NO	51.692	51.692
OCDF	48.304	1.006	4.25e5	4.73e5	0.878	0.899	0.890	3206.2	NO	103.535	103.535
2378-TCDD	27.198	1.001	8.47e4	1.12e5	0.936	0.753	0.770	602.7	NO	10.052	10.052
12378-PeCDD	32.309	1.001	4.19e5	2.74e5	0.894	1.529	1.550	2170.8	NO	49.864	49.864
123478-HxCDD	36.956	1.000	3.43e5	2.80e5	0.898	1.226	1.240	1872.4	NO	49.374	49.374
123678-HxCDD	37.088	1.000	3.38e5	2.84e5	0.818	1.189	1.240	1791.5	NO	51.104	51.104
123789-HxCDD	37.504	1.012	3.37e5	2.68e5	0.789	1.260	1.240	1900.1	NO	52.979	52.979
1234678-HpCDD	41.910	1.000	2.61e5	2.53e5	0.879	1.034	1.050	1482.0	NO	51.540	51.540
OCDD	48.016	1.000	4.09e5	4.68e5	0.875	0.873	0.890	1639.1	NO	101.358	101.358
13C-2378-TCDF	26.541	1.007	1.19e6	1.55e6	1.190	0.765	0.770	4978.0	NO		104.793
13C-12378-PeCDF	30.686	1.164	1.27e6	8.19e5	0.904	1.548	1.550	4702.2	NO		105.263
13C-23478-PeCDF	32.035	1.215	1.23e6	7.93e5	0.877	1.553	1.550	4540.8	NO		105.250
13C-123478-HxCDF	35.718	0.953	5.04e5	9.93e5	1.096	0.508	0.510	1776.3	NO		100.157
13C-123678-HxCDF	35.871	0.957	5.32e5	1.03e6	1.187	0.516	0.510	1809.7	NO		96.551
13C-234678-HxCDF	36.814	0.982	4.74e5	9.23e5	1.040	0.514	0.510	1628.2	NO		98.583
13C-123789-HxCDF	37.921	1.011	4.44e5	8.79e5	0.941	0.505	0.510	1567.1	NO		103.051
13C-1234678-HpCDF	40.025	1.067	3.51e5	7.92e5	0.825	0.443	0.440	2417.3	NO		101.563
13C-1234789-HpCDF	42.809	1.142	2.70e5	6.29e5	0.609	0.430	0.440	1511.5	NO		108.222
13C-1234-TCDD	26.362	0.000	9.61e5	1.23e6	1.000	0.780	0.770	1226.7	NO		100.000
13C-2378-TCDD	27.169	1.031	9.11e5	1.18e6	0.920	0.770	0.770	1167.8	NO		103.801
13C-12378-PeCDD	32.287	1.225	9.45e5	6.09e5	0.669	1.550	1.550	3832.4	NO		105.847
13C-123478-HxCDD	36.945	0.985	7.78e5	6.26e5	1.032	1.244	1.240	3683.3	NO		99.789
13C-123678-HxCDD	37.077	0.989	8.21e5	6.67e5	1.146	1.230	1.240	3704.3	NO		95.268
13C-1234678-HpCDD	41.889	1.117	5.72e5	5.63e5	0.789	1.015	1.050	3430.1	NO		105.513
13C-OCDD	47.999	1.280	9.26e5	1.05e6	0.696	0.882	0.890	4137.7	NO		208.129

ID: CS3, Name: 13070102, Date: 01-Jul-2013, Time: 10:24:23, Conditions: AUTOSPEC01, User: pk

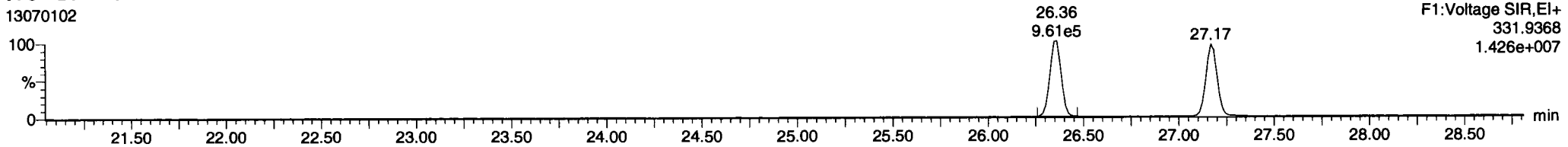
13C-123789-HxCDD	37.493	0.000	7.51e5	6.13e5	1.000	1.225	1.240	3585.6	NO		100.000
Total-tetrafurans			2.94e5		0.771						32.202
Total-penta1			9.47e5								83.315
Total-pentafurans			1.60e6		0.826						155.906
Total-hexafurans			2.01e6		0.948						267.580
Total-heptafurans			5.78e5		1.079						104.828
Total-Furans			5.85e6		0.925						747.407
Total-tetradioxins			4.80e5		0.936						56.487
Total-pentadioxins			1.46e6		0.894						173.855
Total-hexadioxins			1.48e6		0.835						222.435
Total-heptadioxins			5.63e5		0.879						110.966
Total-Dioxins			4.39e6		0.870						665.101
Total-TEQ			1.02e7								1412.508
37CL-2378-TCDD	27.198	1.032	2.25e5		1.000			793.0			10.250
FUNCTION1 PFK			2.44e6								
FUNCTION2 PFK			1.28e5								0.000
FUNCTION3 PFK			6.74e5								0.000
FUNCTION4 PFK			3.70e5								
FUNCTION5 PFK			5.44e5								
FUNCTION1 HXCDPE			5.46e2								0.000
FUNCTION1 HPCDPE			2.74e3								0.000
FUNCTION2 HPCDPE			3.04e3								0.000
FUNCTION3 OCDPE			2.94e2								0.000
FUNCTION4 NCDPE			9.09e2								0.000
FUNCTION5 DCDPE			0.00e0								

Dataset: P:\DIOXIN8290.PRO\130701OPEN.qld
Last Altered: Monday, July 01, 2013 11:18:19 Pacific Daylight Time
Printed: Monday, July 01, 2013 16:09:29 Pacific Daylight Time

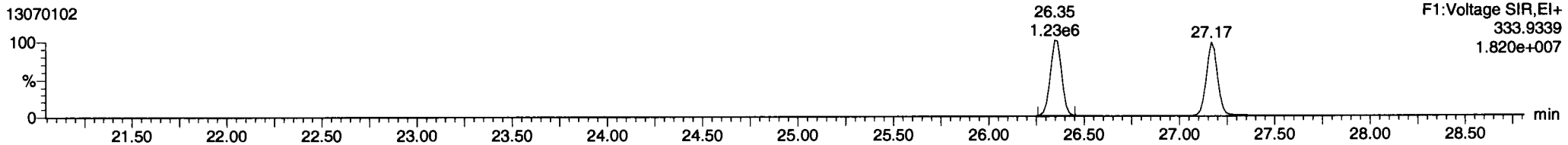
Method: P:\DIOXIN8290.pro\MethDB\Dioxin130617.mdb 28 Jun 2013 10:21:28
Calibration: P:\DIOXIN8290.pro\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

ID: CS3, Name: 13070102, Date: 01-Jul-2013, Time: 10:24:23, Conditions: AUTOSPEC01, User: pk

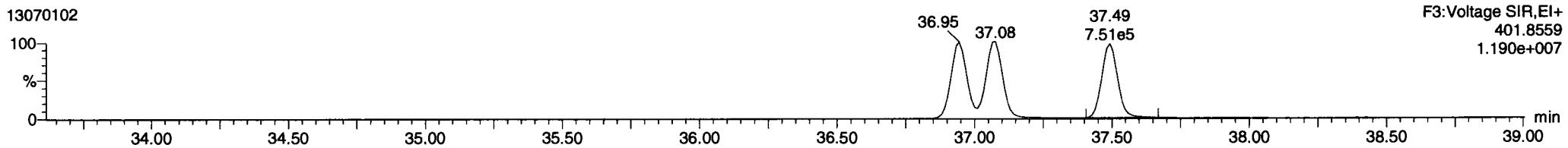
13C-1234-TCDD



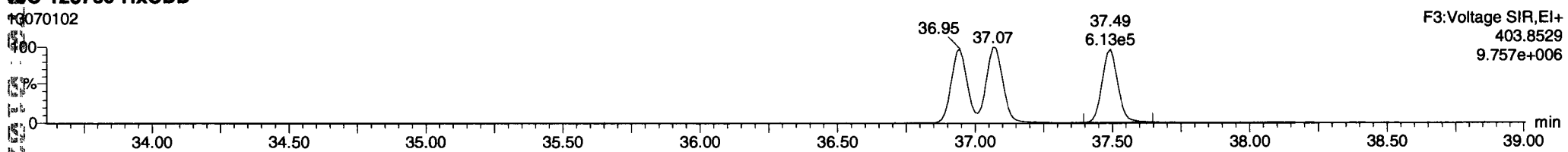
13C-1234-TCDD



13C-123789-HxCDD



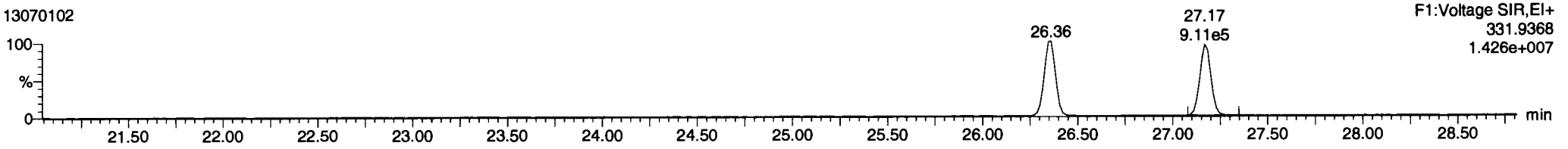
13C-123789-HxCDD



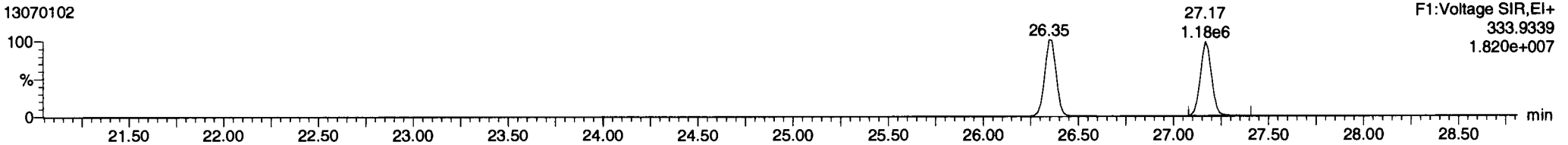
Dataset: P:\DIOXIN8290.PRO\130701OPEN.qld
Last Altered: Monday, July 01, 2013 11:18:19 Pacific Daylight Time
Printed: Monday, July 01, 2013 16:09:29 Pacific Daylight Time

ID: CS3, Name: 13070102, Date: 01-Jul-2013, Time: 10:24:23, Conditions: AUTOSPEC01, User: pk

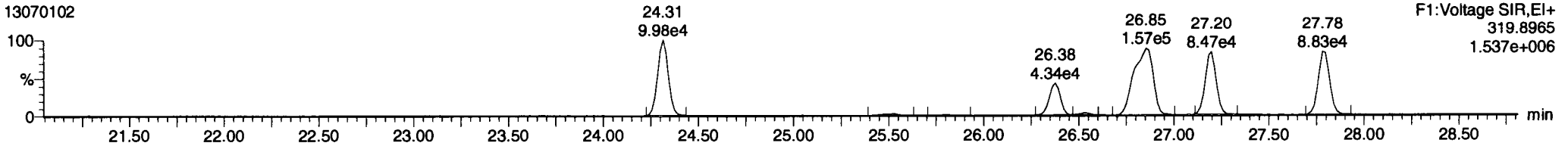
13C-2378-TCDD



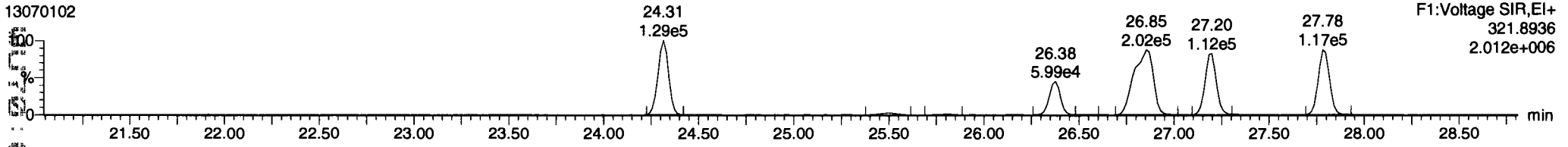
13C-2378-TCDD



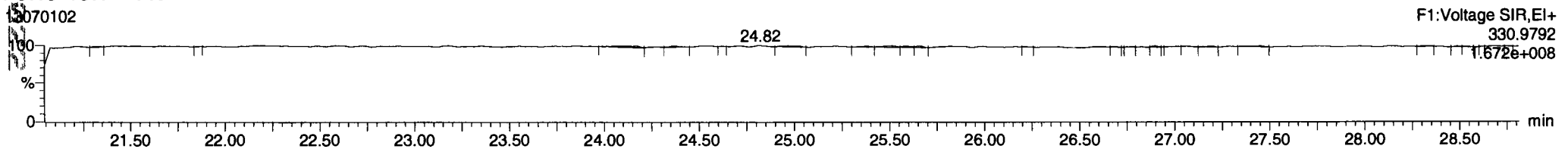
Total-tetradioxins



Total-tetradioxins

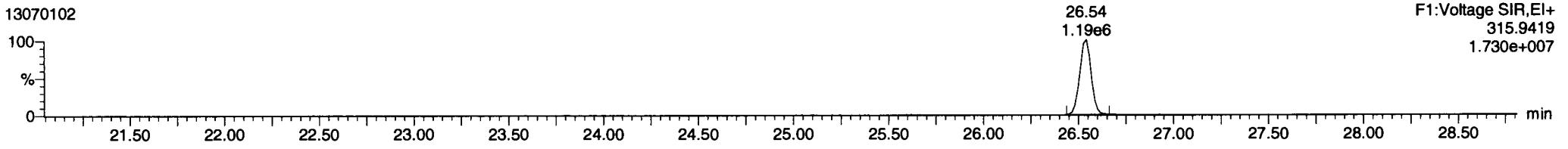


FUNCTION1 PFK

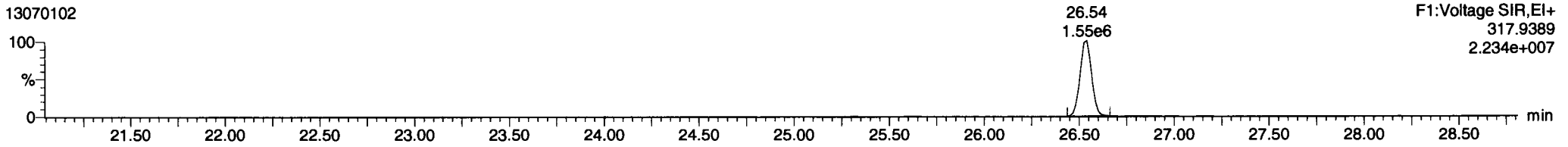


ID: CS3, Name: 13070102, Date: 01-Jul-2013, Time: 10:24:23, Conditions: AUTOSPEC01, User: pk

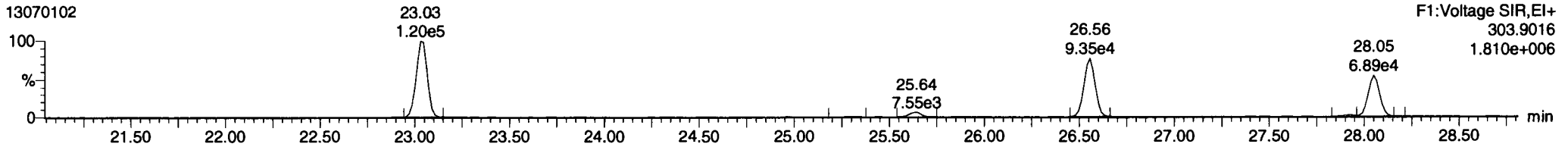
13C-2378-TCDF



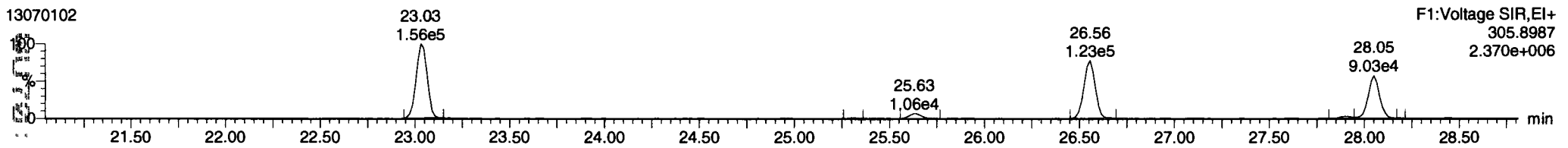
13C-2378-TCDF



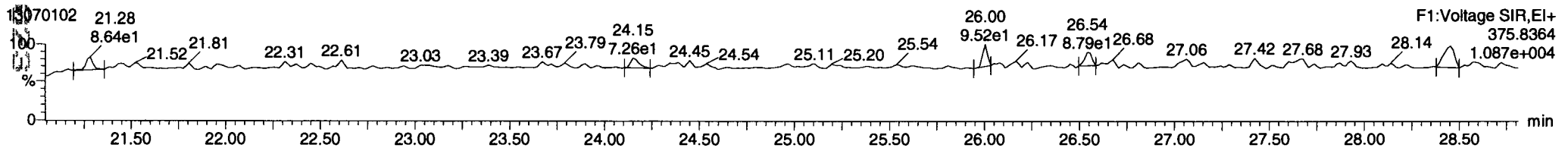
Total-tetrafurans



Total-tetrafurans

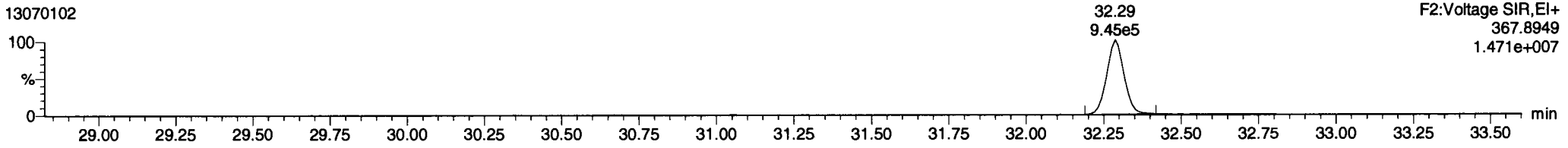


FUNCTION1 HXCDPE

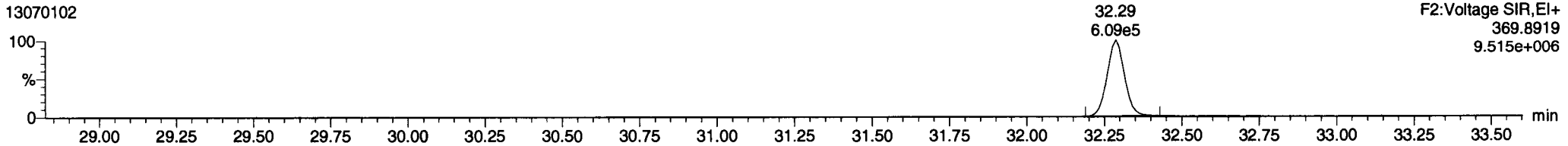


ID: CS3, Name: 13070102, Date: 01-Jul-2013, Time: 10:24:23, Conditions: AUTOSPEC01, User: pk

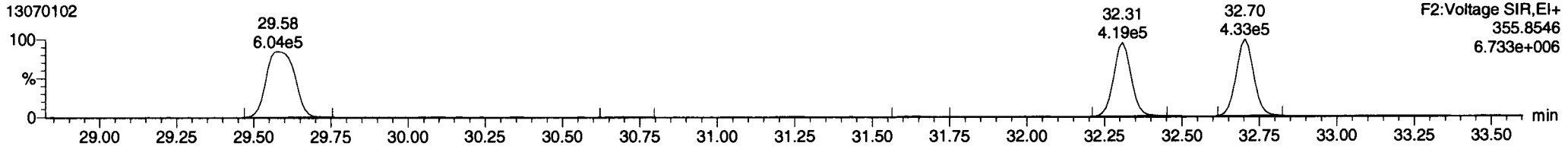
13C-12378-PeCDD



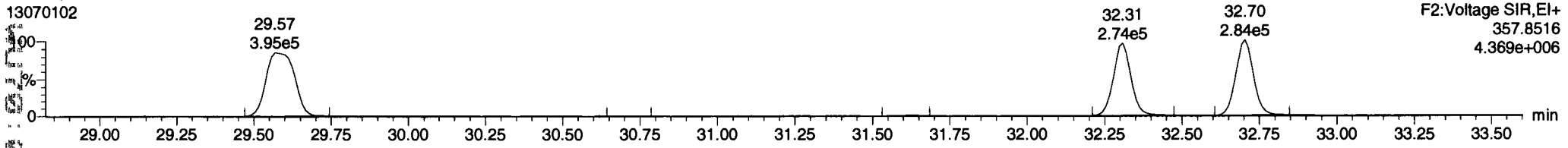
13C-12378-PeCDD



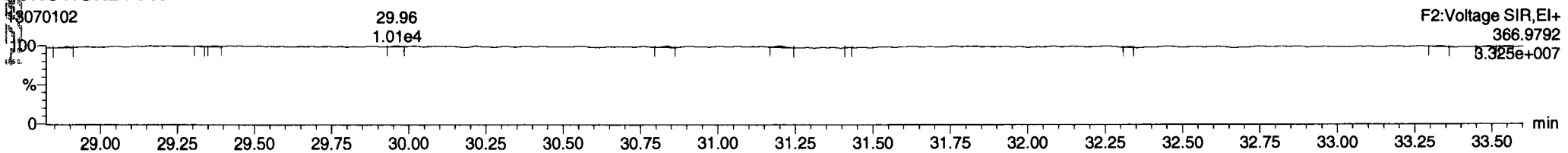
Total-pentadioxins



Total-pentadioxins



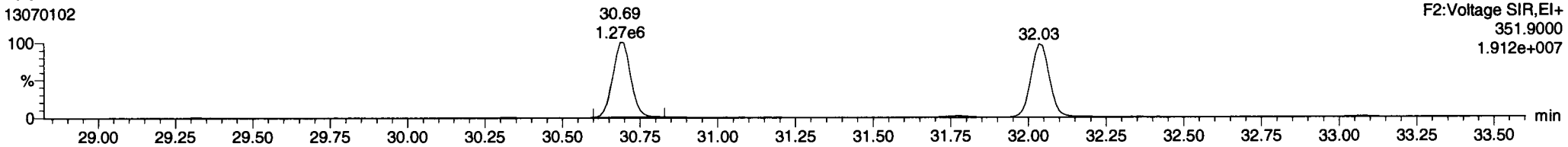
FUNCTION2 PFK



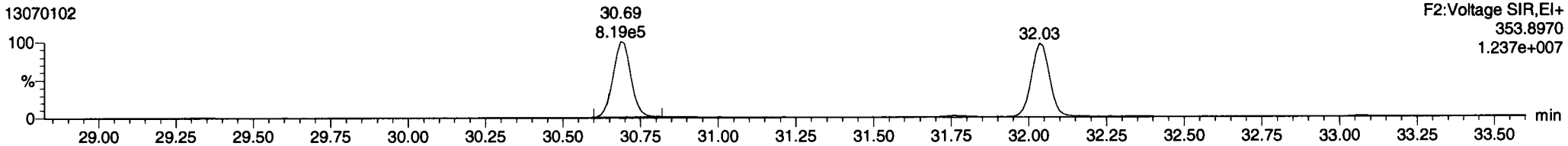
Dataset: P:\DIOXIN8290.PRO\130701OPEN.qld
Last Altered: Monday, July 01, 2013 11:18:19 Pacific Daylight Time
Printed: Monday, July 01, 2013 16:09:29 Pacific Daylight Time

ID: CS3, Name: 13070102, Date: 01-Jul-2013, Time: 10:24:23, Conditions: AUTOSPEC01, User: pk

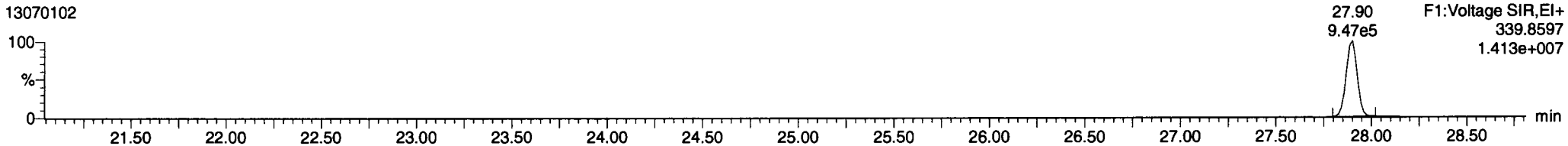
13C-12378-PeCDF



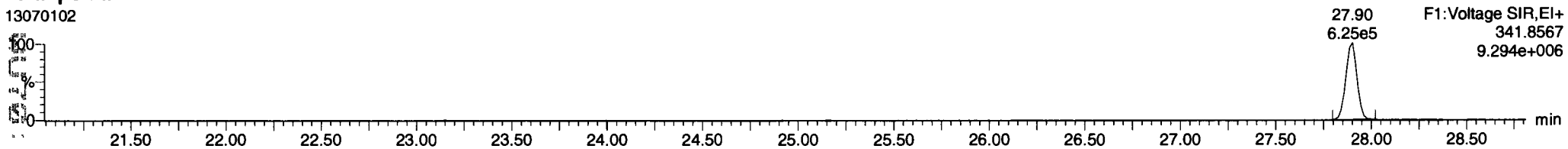
13C-12378-PeCDF



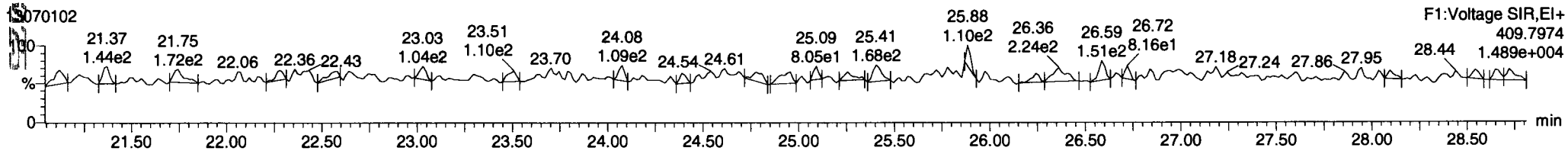
Total-penta1



Total-penta1



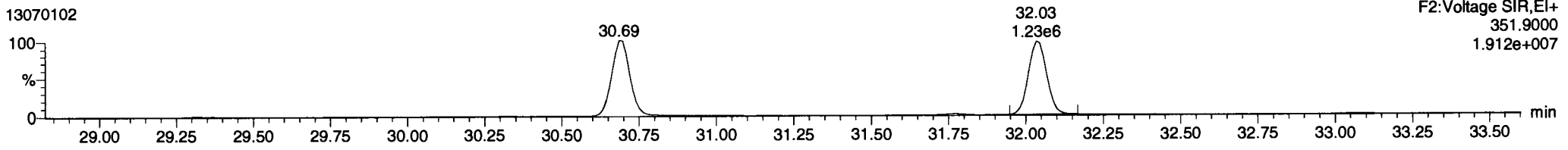
FUNCTION1 HPCDPE



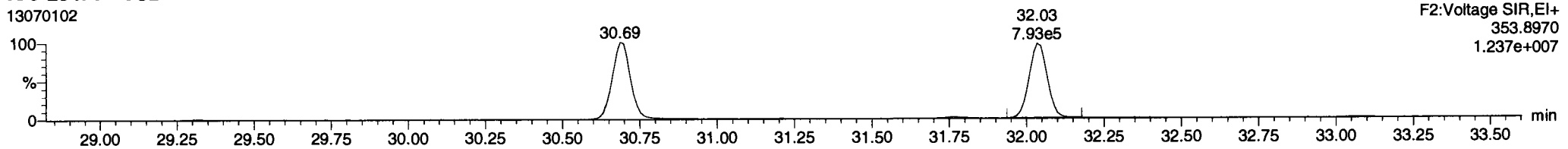
Dataset: P:\DIOXIN8290.PRO\130701OPEN.qld
Last Altered: Monday, July 01, 2013 11:18:19 Pacific Daylight Time
Printed: Monday, July 01, 2013 16:09:29 Pacific Daylight Time

ID: CS3, Name: 13070102, Date: 01-Jul-2013, Time: 10:24:23, Conditions: AUTOSPEC01, User: pk

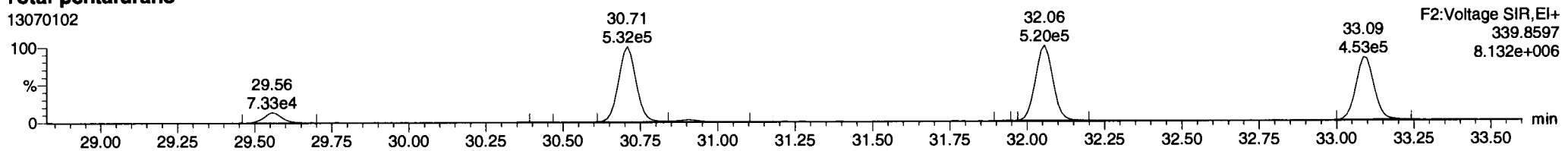
13C-23478-PeCDF



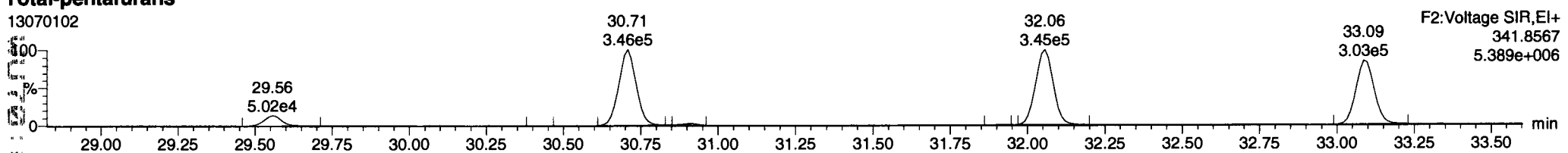
13C-23478-PeCDF



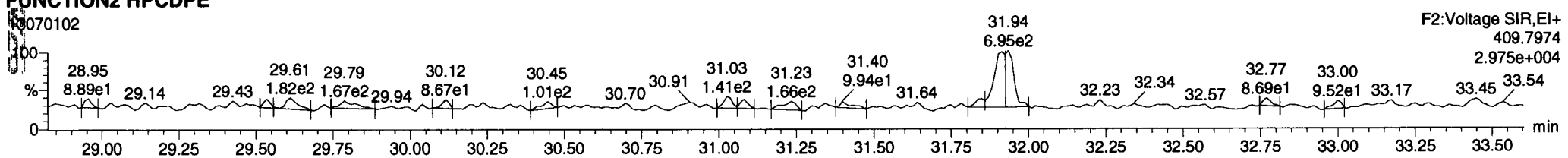
Total-pentafurans



Total-pentafurans

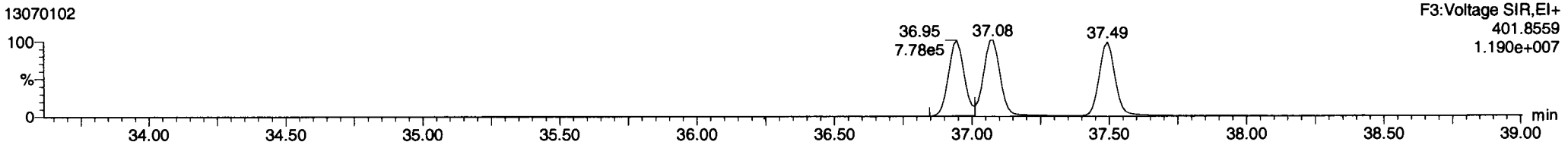


FUNCTION2 HPCDPE

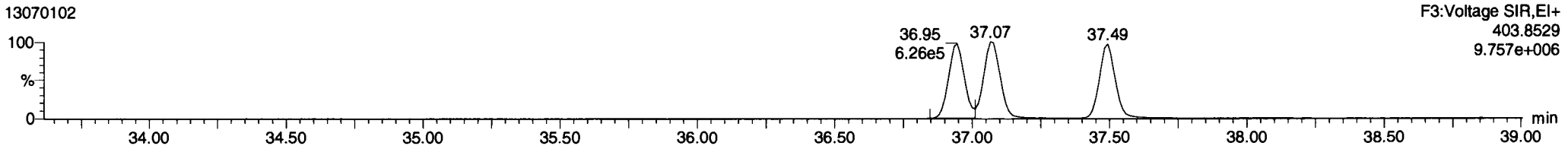


ID: CS3, Name: 13070102, Date: 01-Jul-2013, Time: 10:24:23, Conditions: AUTOSPEC01, User: pk

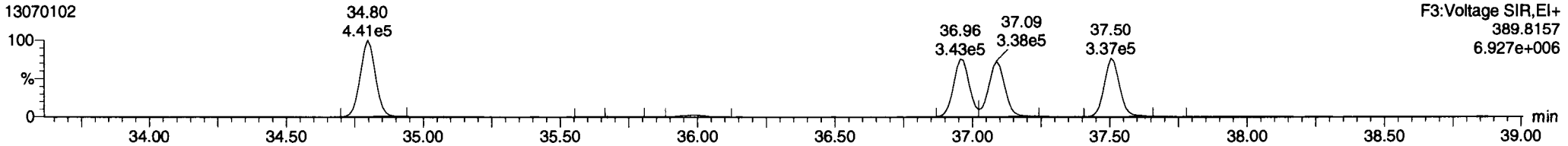
13C-123478-HxCDD



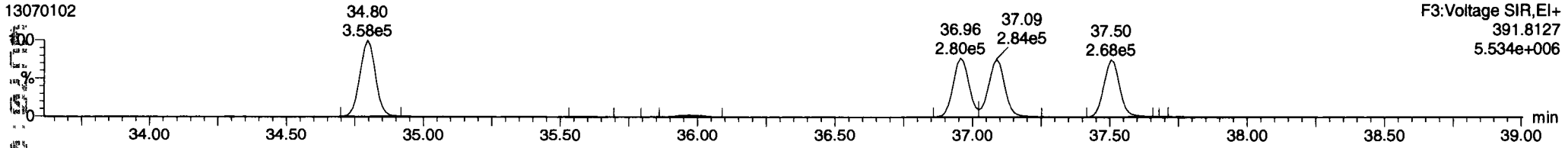
13C-123478-HxCDD



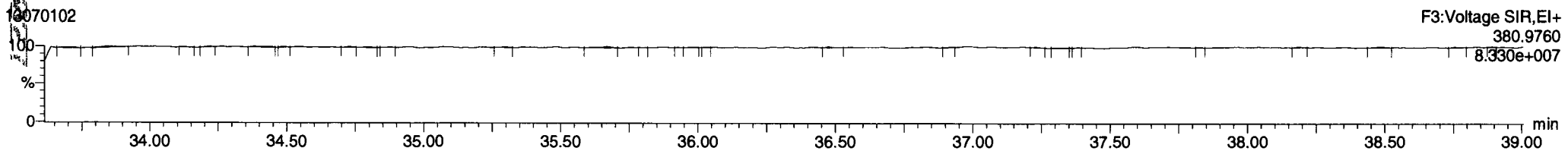
Total-hexadioxins



Total-hexadioxins

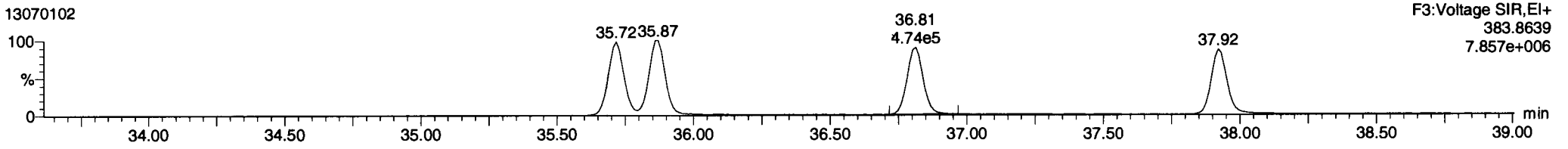


FUNCTION3 PFK

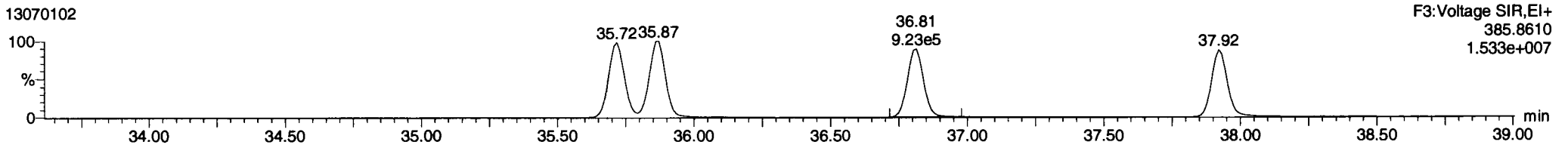


ID: CS3, Name: 13070102, Date: 01-Jul-2013, Time: 10:24:23, Conditions: AUTOSPEC01, User: pk

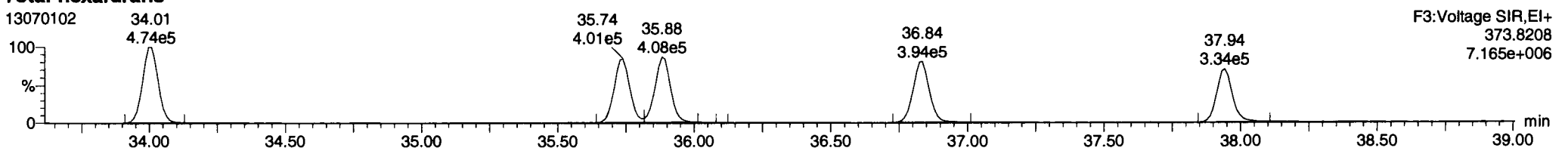
13C-234678-HxCDF



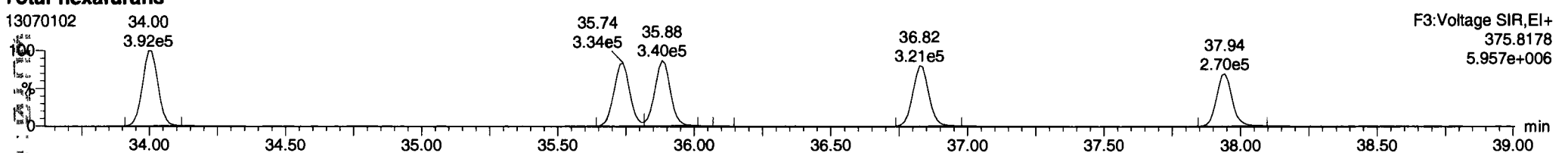
13C-234678-HxCDF



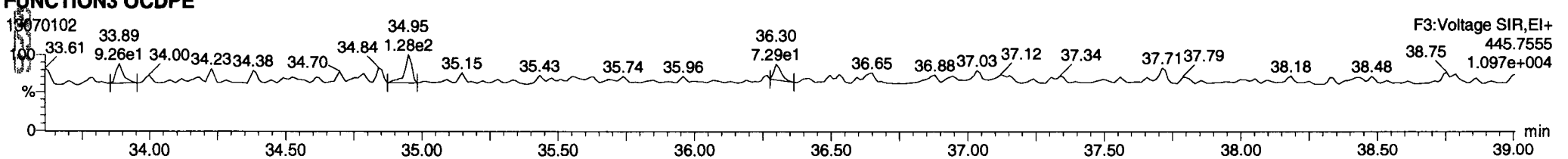
Total-hexafurans



Total-hexafurans

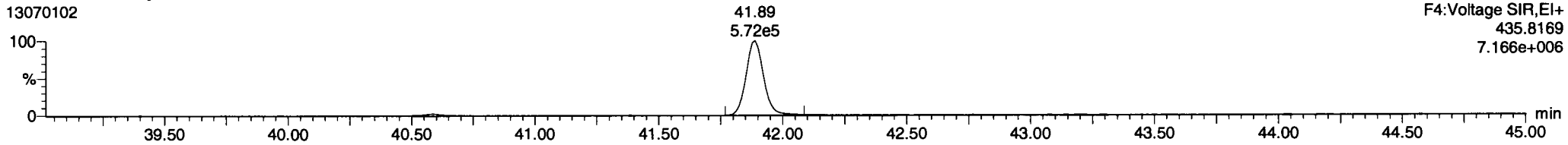


FUNCTION3 OCDPE

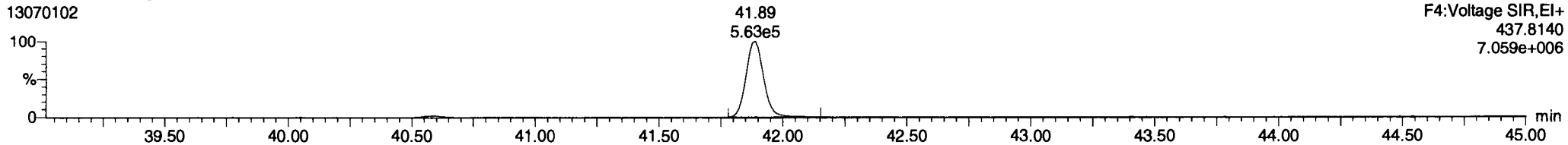


ID: CS3, Name: 13070102, Date: 01-Jul-2013, Time: 10:24:23, Conditions: AUTOSPEC01, User: pk

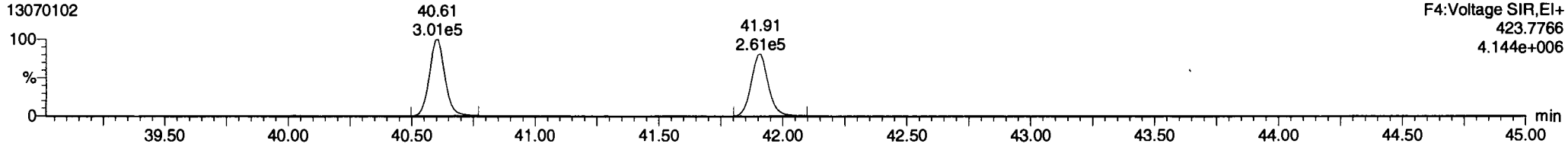
13C-1234678-HpCDD



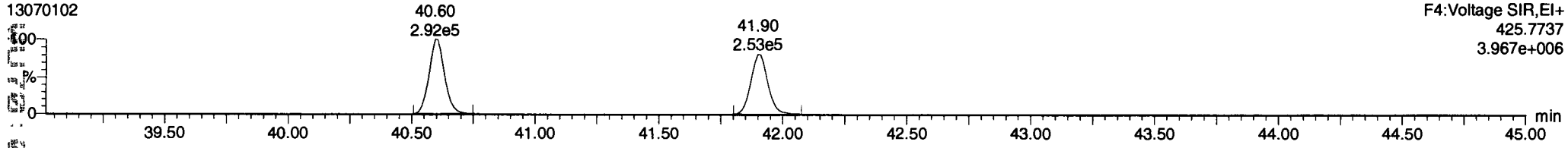
13C-1234678-HpCDD



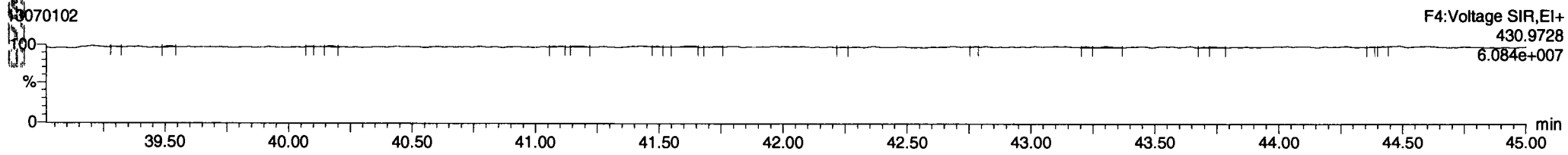
Total-heptadioxins



Total-heptadioxins

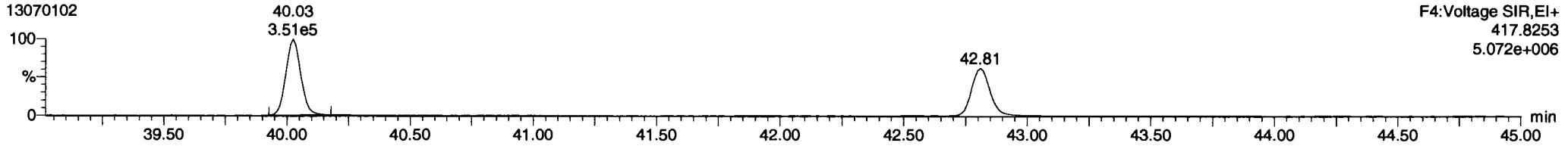


FUNCTION4 PFK

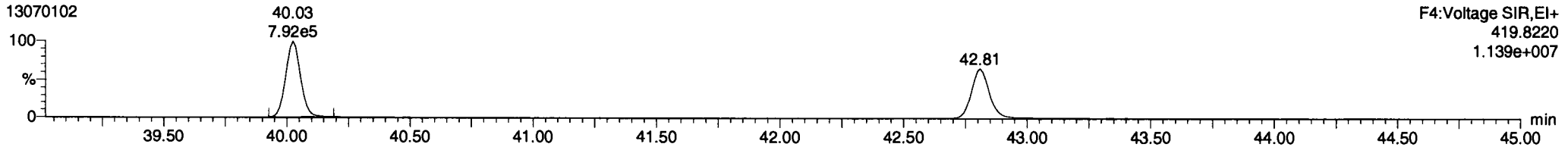


ID: CS3, Name: 13070102, Date: 01-Jul-2013, Time: 10:24:23, Conditions: AUTOSPEC01, User: pk

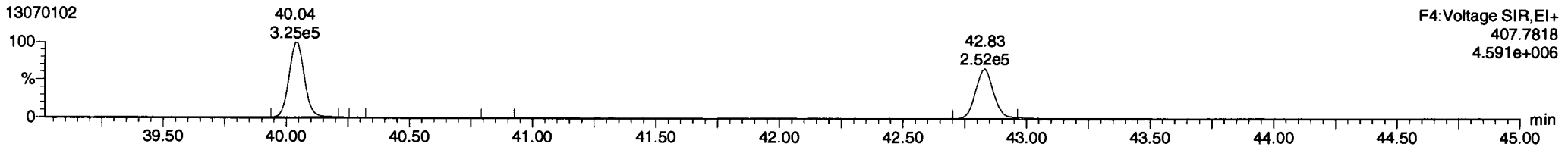
13C-1234678-HpCDF



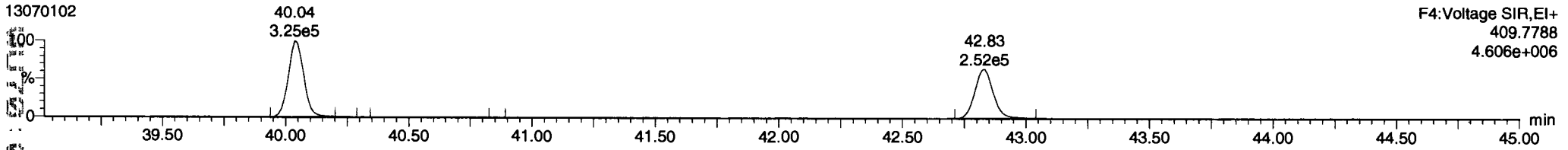
13C-1234678-HpCDF



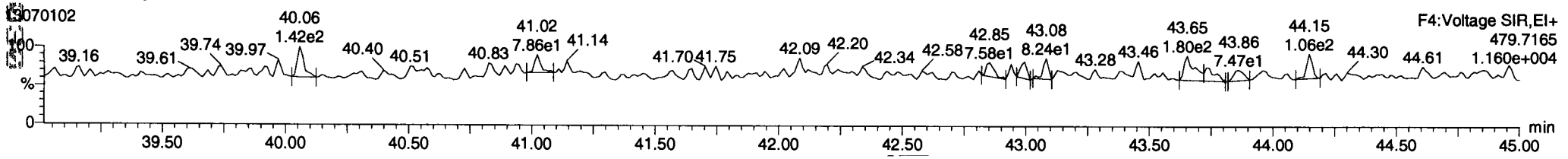
Total-heptafurans



Total-heptafurans



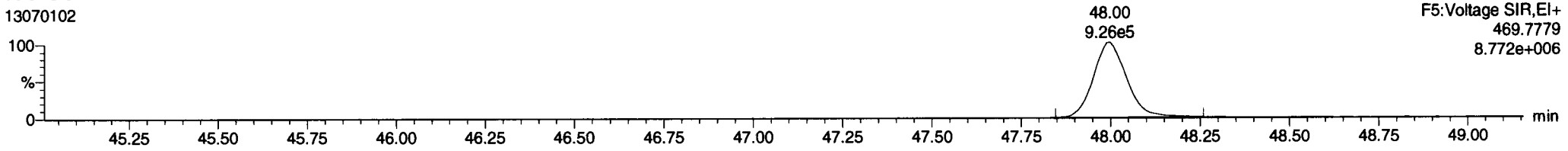
FUNCTION4 NCDPE



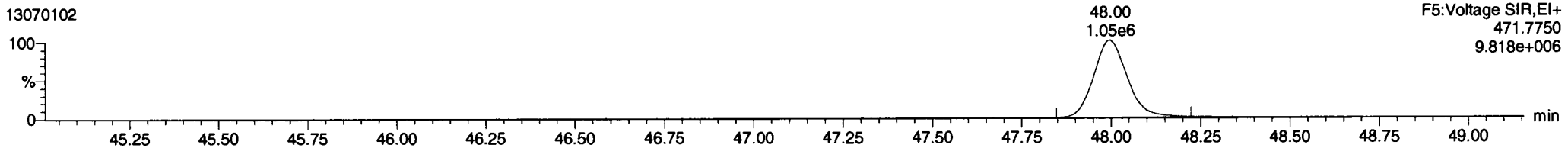
Dataset: P:\DIOXIN8290.PRO\130701OPEN.qld
Last Altered: Monday, July 01, 2013 11:18:19 Pacific Daylight Time
Printed: Monday, July 01, 2013 16:09:29 Pacific Daylight Time

ID: CS3, Name: 13070102, Date: 01-Jul-2013, Time: 10:24:23, Conditions: AUTOSPEC01, User: pk

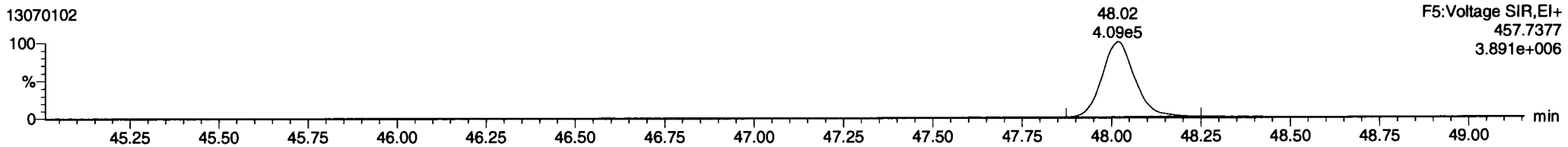
13C-OCDD



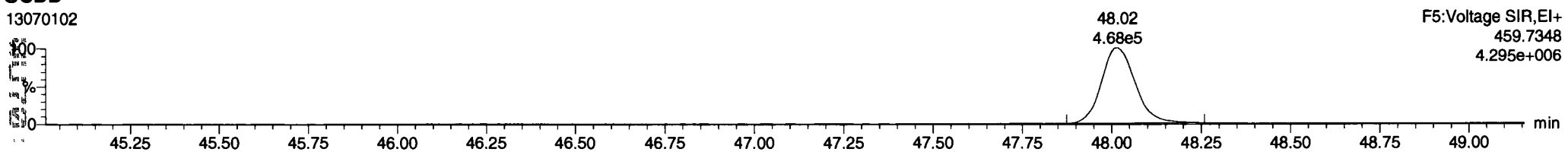
13C-OCDD



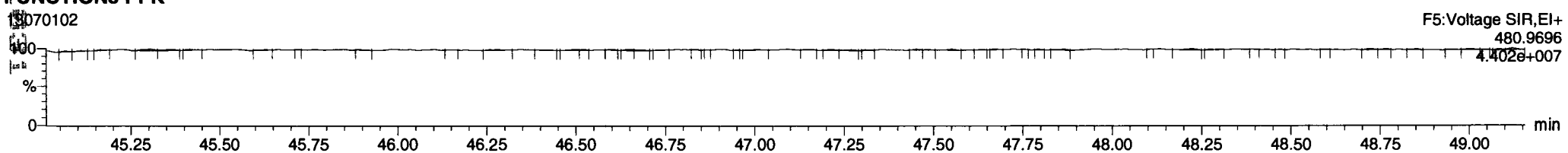
OCDD



OCDD



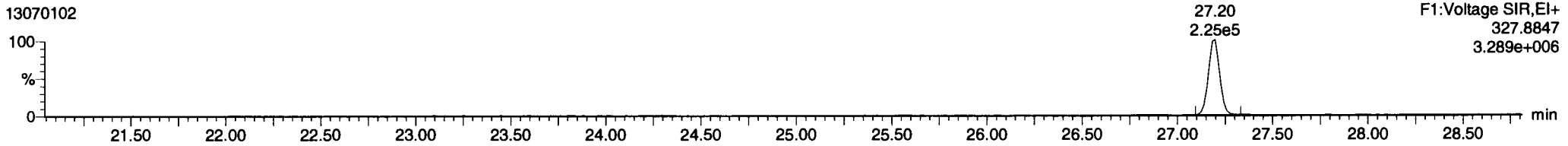
FUNCTION5 PFK



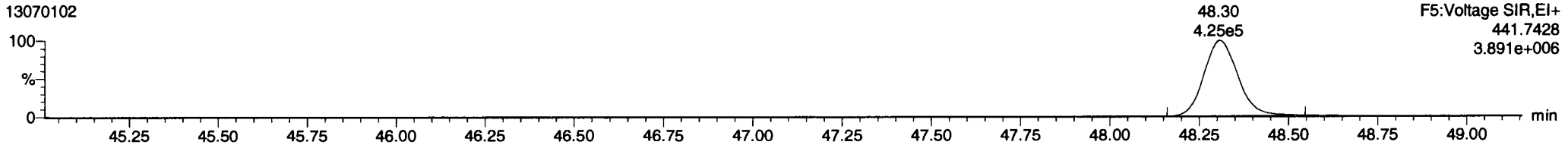
Dataset: P:\DIOXIN8290.PRO\130701OPEN.qld
Last Altered: Monday, July 01, 2013 11:18:19 Pacific Daylight Time
Printed: Monday, July 01, 2013 16:09:29 Pacific Daylight Time

ID: CS3, Name: 13070102, Date: 01-Jul-2013, Time: 10:24:23, Conditions: AUTOSPEC01, User: pk

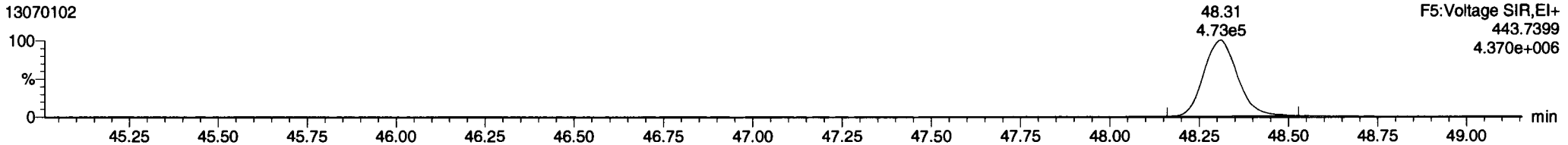
37CL-2378-TCDD



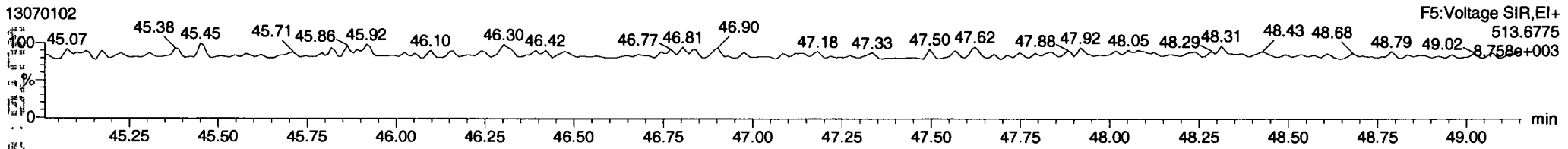
OCDF



OCDF



FUNCTION5 DCDPE



ARI
CDD/CDF EDL DATA
HIGH RESOLUTION

Lab.Sample ID: WU70MBS
Lab.File ID: 13070108
Date Analysed: 01-Jul-13

Target Analytes	Selected Ions	Peak RT	Conc	EMPC	EDL
2378-TCDD	320/322	0.00			0.024
12378-PeCDD	356/358	0.00			0.038
123478-HxCDD	390/392	0.00			0.038
123678-HxCDD	390/392	0.00			0.039
123789-HxCDD	390/392	0.00			0.042
1234678-HpCDD	424/426	41.90	0.646		
OCDD	458/460	47.97	4.02		
2378-TCDF	304/306	0.00			0.025
12378-PeCDF	340/342	0.00			0.029
23478-PeCDF	340/342	0.00			0.032
123478-HxCDF	374/376	0.00			0.024
234678-HxCDF	374/376	0.00			0.024
123678-HxCDF	374/376	0.00			0.021
123789-HxCDF	374/376	0.00			0.029
1234678-HpCDF	408/410	40.00	0.309	0.255	
1234789-HpCDF	408/410	0.00			0.056
OCDF	442/444	48.28	0.673		

Note: EDLs are on column values. Final EDL values are corrected for final volume of the extract (normally 20ul) and amount of sample extracted.

Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:27 Pacific Daylight Time

7/2/13

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130617.mdb 28 Jun 2013 10:21:28
Calibration: P:\DIOXIN8290.pro\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

ID: WU70MBS, Name: 13070108, Date: 01-Jul-2013, Time: 15:38:50, Conditions: AUTOSPEC01, User: pk

2378-TCDF					0.771		0.770		900	1689					
12378-PeCDF					0.814		1.550		1232	1763					
23478-PeCDF					0.837		1.550		1232	1763					
123478-HxCDF					0.967		1.240		790	942					
234678-HxCDF					1.000		1.240		790	942					
123678-HxCDF					0.951		1.240		790	942					
123789-HxCDF					0.874		1.240		790	942					
1234678-HpCDF	40.003	1.000	1.83e3	1.23e3	1.072	1.487	1.050	32.1	888	1169	2.85e4	2.17e4	YES	0.255	0.309
1234789-HpCDF					1.085		1.050		888	1169					
OCDF	48.276	1.007	2.02e3	2.63e3	0.878	0.768	0.890	26.5	874	959	2.32e4	2.83e4	NO	0.673	0.673
2378-TCDD					0.936		0.770		1521	1019					
12378-PeCDD					0.894		1.550		2295	704					
123478-HxCDD					0.898		1.240		1184	1488					
123678-HxCDD					0.818		1.240		1184	1488					
123789-HxCDD					0.789		1.240		1184	1488					
1234678-HpCDD	41.900	1.001	2.77e3	3.09e3	0.879	0.896	1.050	22.1	1565	963	3.45e4	3.99e4	NO	0.646	0.646
OCDD	47.971	1.000	1.31e4	1.46e4	0.875	0.897	0.890	69.8	1620	1109	1.13e5	1.40e5	NO	4.016	4.016
13C-2378-TCDF	26.511	1.007	9.68e5	1.27e6	1.190	0.764	0.770	5937.8	2474	5333	1.47e7	1.91e7	NO		94.081
13C-12378-PeCDF	30.665	1.165	1.23e6	7.91e5	0.904	1.549	1.550	6968.5	2784	2979	1.94e7	1.24e7	NO		111.700
13C-23478-PeCDF	32.013	1.216	1.06e6	6.92e5	0.877	1.536	1.550	5999.8	2784	2979	1.67e7	1.08e7	NO		100.259
13C-123478-HxCDF	35.696	0.953	4.31e5	8.36e5	1.096	0.515	0.510	2219.0	2912	3377	6.46e6	1.28e7	NO		89.815
13C-123678-HxCDF	35.838	0.956	4.94e5	9.80e5	1.187	0.504	0.510	2545.5	2912	3377	7.41e6	1.47e7	NO		96.379
13C-234678-HxCDF	36.792	0.982	4.16e5	8.02e5	1.040	0.518	0.510	2147.8	2912	3377	6.25e6	1.20e7	NO		91.028
13C-123789-HxCDF	37.899	1.011	3.66e5	7.15e5	0.941	0.512	0.510	1972.0	2912	3377	5.74e6	1.11e7	NO		89.293
13C-1234678-HpCDF	40.003	1.068	2.83e5	6.40e5	0.825	0.443	0.440	2238.2	1800	2025	4.03e6	9.11e6	NO		86.840
13C-1234789-HpCDF	42.787	1.142	2.25e5	4.95e5	0.609	0.455	0.440	1466.7	1800	2025	2.64e6	6.01e6	NO		91.824
13C-1234-TCDD	26.317	0.000	8.75e5	1.12e6	1.000	0.781	0.770	1517.8	8688	3068	1.32e7	1.69e7	NO		100.000
13C-2378-TCDD	27.139	1.031	8.14e5	1.03e6	0.920	0.788	0.770	1461.1	8688	3068	1.27e7	1.61e7	NO		100.620
13C-12378-PeCDD	32.265	1.226	8.80e5	5.63e5	0.669	1.564	1.550	4722.5	2869	1705	1.36e7	8.66e6	NO		108.005
13C-123478-HxCDD	36.923	0.985	7.32e5	5.78e5	1.032	1.268	1.240	4008.0	2735	2283	1.10e7	8.84e6	NO		98.647
13C-123678-HxCDD	37.044	0.989	7.75e5	6.35e5	1.146	1.221	1.240	4228.8	2735	2283	1.16e7	9.41e6	NO		95.569
13C-1234678-HpCDD	41.856	1.117	5.25e5	5.06e5	0.789	1.036	1.050	4480.8	1495	1788	6.70e6	6.54e6	NO		101.536
13C-OCDD	47.962	1.280	7.37e5	8.36e5	0.696	0.881	0.890	4409.1	1592	2148	7.02e6	7.96e6	NO		175.459

Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:27 Pacific Daylight Time

ID: WU70MBS, Name: 13070108, Date: 01-Jul-2013, Time: 15:38:50, Conditions: AUTOSPEC01, User: pk

13C-123789-HxCDD	37.471	0.000	7.09e5	5.78e5	1.000	1.225	1.240	4010.4	2735	2283	1.10e7	9.02e6	NO	100.000
Total-tetrafurans			0.00e0		0.771				900		0.00e0			
Total-penta1			8.14e2						988		1.33e4			0.084
Total-pentafurans			1.61e2		0.826				1232		4.25e3			0.021
Total-hexafurans			1.99e3		0.948				790		3.90e4			0.334
Total-heptafurans			5.02e3		1.079				888		8.19e4			0.988
Total-Furans			1.02e4		0.925				900		1.67e5			2.126
Total-tetradioxins			3.09e3		0.936				1521		4.41e4			0.238
Total-pentadioxins			1.09e3		0.894				2295		1.59e4			0.102
Total-hexadioxins			4.10e3		0.835				1184		6.80e4			0.505
Total-heptadioxins			5.27e3		0.879				1565		6.90e4			1.232
Total-Dioxins			2.66e4		0.870				1521		3.10e5			6.093
Total-TEQ			3.69e4						1521		4.77e5			8.219
37CL-2378-TCDD	27.169	1.032	8.34e5		1.000			4074.0	3058		1.25e7			41.781
FUNCTION1 PFK			4.18e6						779427		6.25e7			
FUNCTION2 PFK			2.91e4						261237		5.74e5			0.000
FUNCTION3 PFK			5.46e5						489686		1.34e7			0.000
FUNCTION4 PFK			3.15e5						404843		1.17e7			
FUNCTION5 PFK			3.58e5						276955		1.28e7			
FUNCTION1 HXCDPE			7.78e1						494		1.81e3			0.000
FUNCTION1 HPCDPE			1.46e3						1030		3.29e4			0.000
FUNCTION2 HPCDPE			3.49e2						1421		9.43e3			0.000
FUNCTION3 OCDPE			7.95e1						625		1.67e3			0.000
FUNCTION4 NCDPE			8.16e1						851		2.01e3			0.000
FUNCTION5 DCDPE			0.00e0						539		0.00e0			

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:27 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130617.mdb 28 Jun 2013 10:21:28
Calibration: P:\DIOXIN8290.pro\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

ID: WU70MBS, Name: 13070108, Date: 01-Jul-2013, Time: 15:38:50, Conditions: AUTOSPEC01, User: pk

TF

PP

	36	Total-penta1	339.8597	27.95	1456.700		0.084		1.27	1.55	YES	13.4

PF

	37	Total-pentafurans	339.8597	29.60	323.295	0.826	0.021		0.99	1.55	YES	3.4

HF

	38	Total-hexafurans	373.8208	35.06	2319.718	0.948	0.194		1.07	1.24	NO	30.5
	38	Total-hexafurans	373.8208	34.18	1053.416	0.948	0.088		0.81	1.24	YES	12.4
	38	Total-hexafurans	373.8208	33.96	611.901	0.948	0.051		1.11	1.24	NO	6.4

HPF

	39	Total-heptafurans	407.7818	40.84	6015.289	1.079	0.679		1.13	1.05	NO	60.2
	8	1234678-HpCDF	407.7818	40.00	3059.338	1.072	0.309	0.255	1.49	1.05	YES	32.1

Furans,TF,PP,PF,HF,HPF,OF

	40	Total-Furans	303.9016	22.39	256.376	0.925	0.012		0.78	0.77	NO	2.1
	40	Total-Furans	303.9016	22.18	280.625	0.925	0.014		0.77	0.77	NO	3.9
	37	Total-pentafurans	339.8597	29.60	323.295	0.826	0.021		0.99	1.55	YES	3.4
	38	Total-hexafurans	373.8208	35.06	2319.718	0.948	0.194		1.07	1.24	NO	30.5
	38	Total-hexafurans	373.8208	34.18	1053.416	0.948	0.088		0.81	1.24	YES	12.4
	38	Total-hexafurans	373.8208	33.96	611.901	0.948	0.051		1.11	1.24	NO	6.4
	39	Total-heptafurans	407.7818	40.84	6015.289	1.079	0.679		1.13	1.05	NO	60.2
	8	1234678-HpCDF	407.7818	40.00	3059.338	1.072	0.309	0.255	1.49	1.05	YES	32.1
	10	OCDF	441.7428	48.28	4647.690	0.878	0.673	0.673	0.77	0.89	NO	26.5
	36	Total-penta1	339.8597	27.95	1456.700		0.084		1.27	1.55	YES	13.4

TD

	41	Total-tetradioxins	319.8965	26.50	4108.751	0.936	0.238		3.05	0.77	YES	29.0

Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:27 Pacific Daylight Time

ID: WU70MBS, Name: 13070108, Date: 01-Jul-2013, Time: 15:38:50, Conditions: AUTOSPEC01, User: pk

PD

	42	Total-pentadioxins	355.8546	32.01	1322.717	0.894	0.102		4.59	1.55	YES	6.9

HD

	43	Total-hexadioxins	389.8157	34.79	724.052	0.835	0.064		0.73	1.24	YES	5.6
	43	Total-hexadioxins	389.8157	36.79	1657.616	0.835	0.146		2.28	1.24	YES	14.8
	43	Total-hexadioxins	389.8157	35.84	1797.329	0.835	0.158		3.39	1.24	YES	17.5
	43	Total-hexadioxins	389.8157	35.70	1551.101	0.835	0.137		4.17	1.24	YES	19.5

HPD

	16	1234678-HpCDD	423.7766	41.90	5857.394	0.879	0.646	0.646	0.90	1.05	NO	22.1
	44	Total-heptadioxins	423.7766	40.57	5308.419	0.879	0.586		0.89	1.05	NO	22.0

Dioxins,TD,PD,HD,HPD,OD

	41	Total-tetradioxins	319.8965	26.50	4108.751	0.936	0.238		3.05	0.77	YES	29.0
	43	Total-hexadioxins	389.8157	34.79	724.052	0.835	0.064		0.73	1.24	YES	5.6
	42	Total-pentadioxins	355.8546	32.01	1322.717	0.894	0.102		4.59	1.55	YES	6.9
	43	Total-hexadioxins	389.8157	36.79	1657.616	0.835	0.146		2.28	1.24	YES	14.8
	43	Total-hexadioxins	389.8157	35.84	1797.329	0.835	0.158		3.39	1.24	YES	17.5
	43	Total-hexadioxins	389.8157	35.70	1551.101	0.835	0.137		4.17	1.24	YES	19.5
	16	1234678-HpCDD	423.7766	41.90	5857.394	0.879	0.646	0.646	0.90	1.05	NO	22.1
	44	Total-heptadioxins	423.7766	40.57	5308.419	0.879	0.586		0.89	1.05	NO	22.0
	17	OCDD	457.7377	47.97	27638.516	0.875	4.016	4.016	0.90	0.89	NO	69.8

Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:27 Pacific Daylight Time

ID: WU70MBS, Name: 13070108, Date: 01-Jul-2013, Time: 15:38:50, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

	40 Total-Furans	303.9016	22.39	256.376	0.925	0.012		0.78	0.77	NO	2.1
	40 Total-Furans	303.9016	22.18	280.625	0.925	0.014		0.77	0.77	NO	3.9
	37 Total-pentafurans	339.8597	29.60	323.295	0.826	0.021		0.99	1.55	YES	3.4
	38 Total-hexafurans	373.8208	35.06	2319.718	0.948	0.194		1.07	1.24	NO	30.5
	38 Total-hexafurans	373.8208	34.18	1053.416	0.948	0.088		0.81	1.24	YES	12.4
	38 Total-hexafurans	373.8208	33.96	611.901	0.948	0.051		1.11	1.24	NO	6.4
	39 Total-heptafurans	407.7818	40.84	6015.289	1.079	0.679		1.13	1.05	NO	60.2
	8 1234678-HpCDF	407.7818	40.00	3059.338	1.072	0.309	0.255	1.49	1.05	YES	32.1
	10 OCDF	441.7428	48.28	4647.690	0.878	0.673	0.673	0.77	0.89	NO	26.5
	36 Total-penta1	339.8597	27.95	1456.700		0.084		1.27	1.55	YES	13.4
	41 Total-tetradioxins	319.8965	26.50	4108.751	0.936	0.238		3.05	0.77	YES	29.0
	43 Total-hexadioxins	389.8157	34.79	724.052	0.835	0.064		0.73	1.24	YES	5.6
	42 Total-pentadioxins	355.8546	32.01	1322.717	0.894	0.102		4.59	1.55	YES	6.9
	43 Total-hexadioxins	389.8157	36.79	1657.616	0.835	0.146		2.28	1.24	YES	14.8
	43 Total-hexadioxins	389.8157	35.84	1797.329	0.835	0.158		3.39	1.24	YES	17.5
	43 Total-hexadioxins	389.8157	35.70	1551.101	0.835	0.137		4.17	1.24	YES	19.5
	16 1234678-HpCDD	423.7766	41.90	5857.394	0.879	0.646	0.646	0.90	1.05	NO	22.1
	44 Total-heptadioxins	423.7766	40.57	5308.419	0.879	0.586		0.89	1.05	NO	22.0
	17 OCDD	457.7377	47.97	27638.516	0.875	4.016	4.016	0.90	0.89	NO	69.8

Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:27 Pacific Daylight Time

ID: WU70MBS, Name: 13070108, Date: 01-Jul-2013, Time: 15:38:50, Conditions: AUTOSPEC01, User: pk

PFK1

[redacted]	48 FUNCTION1 PFK	330.9792	23.78	0.000							2.1
[redacted]	48 FUNCTION1 PFK	330.9792	23.15	0.000							1.6
[redacted]	48 FUNCTION1 PFK	330.9792	23.00	0.000							1.3
[redacted]	48 FUNCTION1 PFK	330.9792	22.96	0.000							1.2
[redacted]	48 FUNCTION1 PFK	330.9792	22.87	0.000							1.8
[redacted]	48 FUNCTION1 PFK	330.9792	22.37	0.000							0.6
[redacted]	48 FUNCTION1 PFK	330.9792	22.22	0.000							2.5
[redacted]	48 FUNCTION1 PFK	330.9792	22.04	0.000							2.6
[redacted]	48 FUNCTION1 PFK	330.9792	21.85	0.000							2.8
[redacted]	48 FUNCTION1 PFK	330.9792	21.75	0.000							1.5
[redacted]	48 FUNCTION1 PFK	330.9792	21.64	0.000							1.3
[redacted]	48 FUNCTION1 PFK	330.9792	21.45	0.000							1.9
[redacted]	48 FUNCTION1 PFK	330.9792	21.36	0.000							3.0
[redacted]	48 FUNCTION1 PFK	330.9792	21.22	0.000							3.2
[redacted]	48 FUNCTION1 PFK	330.9792	21.15	0.000							2.9
[redacted]	48 FUNCTION1 PFK	330.9792	26.30	0.000							1.6
[redacted]	48 FUNCTION1 PFK	330.9792	26.17	0.000							0.3
[redacted]	48 FUNCTION1 PFK	330.9792	25.88	0.000							0.5
[redacted]	48 FUNCTION1 PFK	330.9792	25.78	0.000							0.0
[redacted]	48 FUNCTION1 PFK	330.9792	25.57	0.000							0.6
[redacted]	48 FUNCTION1 PFK	330.9792	25.50	0.000							1.0
[redacted]	48 FUNCTION1 PFK	330.9792	25.42	0.000							2.0
[redacted]	48 FUNCTION1 PFK	330.9792	25.32	0.000							2.4
[redacted]	48 FUNCTION1 PFK	330.9792	25.18	0.000							2.3
[redacted]	48 FUNCTION1 PFK	330.9792	24.99	0.000							2.1
[redacted]	48 FUNCTION1 PFK	330.9792	24.93	0.000							1.5
[redacted]	48 FUNCTION1 PFK	330.9792	24.36	0.000							1.0
[redacted]	48 FUNCTION1 PFK	330.9792	24.20	0.000							1.2
[redacted]	48 FUNCTION1 PFK	330.9792	24.08	0.000							2.0
[redacted]	48 FUNCTION1 PFK	330.9792	23.97	0.000							2.2
[redacted]	48 FUNCTION1 PFK	330.9792	23.88	0.000							2.6
[redacted]	48 FUNCTION1 PFK	330.9792	28.51	0.000							1.9
[redacted]	48 FUNCTION1 PFK	330.9792	28.32	0.000							1.9
[redacted]	48 FUNCTION1 PFK	330.9792	28.20	0.000							2.1
[redacted]	48 FUNCTION1 PFK	330.9792	28.13	0.000							1.1
[redacted]	48 FUNCTION1 PFK	330.9792	28.04	0.000							2.1
[redacted]	48 FUNCTION1 PFK	330.9792	27.84	0.000							1.6
[redacted]	48 FUNCTION1 PFK	330.9792	27.71	0.000							1.3
[redacted]	48 FUNCTION1 PFK	330.9792	27.63	0.000							0.3
[redacted]	48 FUNCTION1 PFK	330.9792	27.50	0.000							0.9
[redacted]	48 FUNCTION1 PFK	330.9792	27.18	0.000							1.4
[redacted]	48 FUNCTION1 PFK	330.9792	27.14	0.000							1.5
[redacted]	48 FUNCTION1 PFK	330.9792	26.99	0.000							1.2
[redacted]	48 FUNCTION1 PFK	330.9792	26.91	0.000							0.5
[redacted]	48 FUNCTION1 PFK	330.9792	26.66	0.000							0.8
[redacted]	48 FUNCTION1 PFK	330.9792	26.50	0.000							1.8
[redacted]	48 FUNCTION1 PFK	330.9792	26.39	0.000							2.3
[redacted]	48 FUNCTION1 PFK	330.9792	28.68	0.000							2.2
[redacted]	48 FUNCTION1 PFK	330.9792	28.62	0.000							1.7

Quantify Totals Report MassLynx 4.1 SCN 714
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:27 Pacific Daylight Time

ID: WU70MBS, Name: 13070108, Date: 01-Jul-2013, Time: 15:38:50, Conditions: AUTOSPEC01, User: pk

PFK2

	49 FUNCTION2 PFK	366.9792	28.99	0.000	0.000					2.2

PFK3

	50 FUNCTION3 PFK	380.9760	36.90	0.000	0.000					1.8
	50 FUNCTION3 PFK	380.9760	36.05	0.000	0.000					1.0
	50 FUNCTION3 PFK	380.9760	35.61	0.000	0.000					2.1
	50 FUNCTION3 PFK	380.9760	35.54	0.000	0.000					1.7
	50 FUNCTION3 PFK	380.9760	35.02	0.000	0.000					1.5
	50 FUNCTION3 PFK	380.9760	34.14	0.000	0.000					1.3
	50 FUNCTION3 PFK	380.9760	34.06	0.000	0.000					1.8
	50 FUNCTION3 PFK	380.9760	33.83	0.000	0.000					1.7
	50 FUNCTION3 PFK	380.9760	33.78	0.000	0.000					0.6
	50 FUNCTION3 PFK	380.9760	33.73	0.000	0.000					1.2
	50 FUNCTION3 PFK	380.9760	33.69	0.000	0.000					3.3
	50 FUNCTION3 PFK	380.9760	38.64	0.000	0.000					1.2
	50 FUNCTION3 PFK	380.9760	37.87	0.000	0.000					1.6
	50 FUNCTION3 PFK	380.9760	37.81	0.000	0.000					1.4
	50 FUNCTION3 PFK	380.9760	37.77	0.000	0.000					1.8
	50 FUNCTION3 PFK	380.9760	37.70	0.000	0.000					1.3
	50 FUNCTION3 PFK	380.9760	37.07	0.000	0.000					0.6
	50 FUNCTION3 PFK	380.9760	37.02	0.000	0.000					1.1

Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:27 Pacific Daylight Time

D: WU70MBS, Name: 13070108, Date: 01-Jul-2013, Time: 15:38:50, Conditions: AUTOSPEC01, User: pk

PFK4

	51	FUNCTION4 PFK	430.9728	40.09	0.000					0.9
	51	FUNCTION4 PFK	430.9728	39.83	0.000					0.6
	51	FUNCTION4 PFK	430.9728	39.79	0.000					0.5
	51	FUNCTION4 PFK	430.9728	39.62	0.000					1.4
	51	FUNCTION4 PFK	430.9728	39.41	0.000					1.5
	51	FUNCTION4 PFK	430.9728	39.33	0.000					2.0
	51	FUNCTION4 PFK	430.9728	39.14	0.000					1.4
	51	FUNCTION4 PFK	430.9728	39.09	0.000					1.0
	51	FUNCTION4 PFK	430.9728	43.97	0.000					0.4
	51	FUNCTION4 PFK	430.9728	43.69	0.000					0.7
	51	FUNCTION4 PFK	430.9728	42.81	0.000					2.0
	51	FUNCTION4 PFK	430.9728	42.63	0.000					0.6
	51	FUNCTION4 PFK	430.9728	42.35	0.000					1.5
	51	FUNCTION4 PFK	430.9728	41.84	0.000					0.9
	51	FUNCTION4 PFK	430.9728	41.79	0.000					1.0
	51	FUNCTION4 PFK	430.9728	41.75	0.000					0.4
	51	FUNCTION4 PFK	430.9728	41.59	0.000					0.6
	51	FUNCTION4 PFK	430.9728	41.02	0.000					0.8
	51	FUNCTION4 PFK	430.9728	40.76	0.000					1.7
	51	FUNCTION4 PFK	430.9728	40.68	0.000					1.3
	51	FUNCTION4 PFK	430.9728	40.61	0.000					1.7
	51	FUNCTION4 PFK	430.9728	40.46	0.000					1.3
	51	FUNCTION4 PFK	430.9728	40.30	0.000					1.4
	51	FUNCTION4 PFK	430.9728	40.23	0.000					0.5
	51	FUNCTION4 PFK	430.9728	44.68	0.000					1.3
	51	FUNCTION4 PFK	430.9728	44.28	0.000					1.2

ID: WU70MBS, Name: 13070108, Date: 01-Jul-2013, Time: 15:38:50, Conditions: AUTOSPEC01, User: pk

PFK5

	52	FUNCTION5 PFK	480.9696	46.68	0.000						0.5
	52	FUNCTION5 PFK	480.9696	46.63	0.000						1.8
	52	FUNCTION5 PFK	480.9696	46.58	0.000						0.4
	52	FUNCTION5 PFK	480.9696	46.45	0.000						1.4
	52	FUNCTION5 PFK	480.9696	46.21	0.000						0.6
	52	FUNCTION5 PFK	480.9696	46.13	0.000						0.9
	52	FUNCTION5 PFK	480.9696	46.09	0.000						1.6
	52	FUNCTION5 PFK	480.9696	45.90	0.000						2.3
	52	FUNCTION5 PFK	480.9696	45.77	0.000						2.0
	52	FUNCTION5 PFK	480.9696	45.69	0.000						1.2
	52	FUNCTION5 PFK	480.9696	45.57	0.000						1.3
	52	FUNCTION5 PFK	480.9696	45.42	0.000						0.3
	52	FUNCTION5 PFK	480.9696	45.38	0.000						1.6
	52	FUNCTION5 PFK	480.9696	48.24	0.000						1.2
	52	FUNCTION5 PFK	480.9696	48.17	0.000						1.2
	52	FUNCTION5 PFK	480.9696	48.12	0.000						2.0
	52	FUNCTION5 PFK	480.9696	48.05	0.000						2.3
	52	FUNCTION5 PFK	480.9696	48.01	0.000						1.1
	52	FUNCTION5 PFK	480.9696	47.85	0.000						0.6
	52	FUNCTION5 PFK	480.9696	47.79	0.000						0.6
	52	FUNCTION5 PFK	480.9696	47.76	0.000						1.5
	52	FUNCTION5 PFK	480.9696	47.61	0.000						0.3
	52	FUNCTION5 PFK	480.9696	47.49	0.000						0.5
	52	FUNCTION5 PFK	480.9696	47.35	0.000						1.0
	52	FUNCTION5 PFK	480.9696	47.29	0.000						1.3
	52	FUNCTION5 PFK	480.9696	47.24	0.000						1.0
	52	FUNCTION5 PFK	480.9696	47.12	0.000						0.9
	52	FUNCTION5 PFK	480.9696	46.90	0.000						0.5
	52	FUNCTION5 PFK	480.9696	46.72	0.000						1.0
	52	FUNCTION5 PFK	480.9696	49.08	0.000						0.7
	52	FUNCTION5 PFK	480.9696	49.03	0.000						1.1
	52	FUNCTION5 PFK	480.9696	48.99	0.000						0.6
	52	FUNCTION5 PFK	480.9696	48.95	0.000						1.3
	52	FUNCTION5 PFK	480.9696	48.92	0.000						0.9
	52	FUNCTION5 PFK	480.9696	48.89	0.000						0.4
	52	FUNCTION5 PFK	480.9696	48.81	0.000						1.5
	52	FUNCTION5 PFK	480.9696	48.72	0.000						1.6
	52	FUNCTION5 PFK	480.9696	48.63	0.000						1.3
	52	FUNCTION5 PFK	480.9696	48.47	0.000						1.0
	52	FUNCTION5 PFK	480.9696	48.45	0.000						0.8
	52	FUNCTION5 PFK	480.9696	48.37	0.000						0.9
	52	FUNCTION5 PFK	480.9696	48.32	0.000						1.0

ETHERS1

	53	FUNCTION1 HXCD...	375.8364	27.08	0.000	0.000					3.7

D: WU70MBS, Name: 13070108, Date: 01-Jul-2013, Time: 15:38:50, Conditions: AUTOSPEC01, User: pk

ETHERS2

	54	FUNCTION1 HPCD...	409.7974	28.33	0.000	0.000					1.9
	54	FUNCTION1 HPCD...	409.7974	28.02	0.000	0.000					1.8
	54	FUNCTION1 HPCD...	409.7974	27.74	0.000	0.000					1.7
	54	FUNCTION1 HPCD...	409.7974	27.59	0.000	0.000					3.0
	54	FUNCTION1 HPCD...	409.7974	26.69	0.000	0.000					3.9
	54	FUNCTION1 HPCD...	409.7974	26.14	0.000	0.000					1.9
	54	FUNCTION1 HPCD...	409.7974	26.06	0.000	0.000					1.8
	54	FUNCTION1 HPCD...	409.7974	25.51	0.000	0.000					2.9
	54	FUNCTION1 HPCD...	409.7974	25.38	0.000	0.000					1.6
	54	FUNCTION1 HPCD...	409.7974	24.64	0.000	0.000					3.0
	54	FUNCTION1 HPCD...	409.7974	24.03	0.000	0.000					2.5
	54	FUNCTION1 HPCD...	409.7974	22.33	0.000	0.000					1.9
	54	FUNCTION1 HPCD...	409.7974	22.16	0.000	0.000					2.1
	54	FUNCTION1 HPCD...	409.7974	21.37	0.000	0.000					2.0

ETHERS3

	55	FUNCTION2 HPCD...	409.7974	30.06	0.000	0.000					1.8
	55	FUNCTION2 HPCD...	409.7974	33.40	0.000	0.000					1.3
	55	FUNCTION2 HPCD...	409.7974	32.55	0.000	0.000					1.5
	55	FUNCTION2 HPCD...	409.7974	31.42	0.000	0.000					2.0

ETHERS4

	56	FUNCTION3 OCDPE	445.7555	37.98	0.000	0.000					2.7

ETHERS5

	57	FUNCTION4 NCDPE	479.7165	42.62	0.000	0.000					2.4

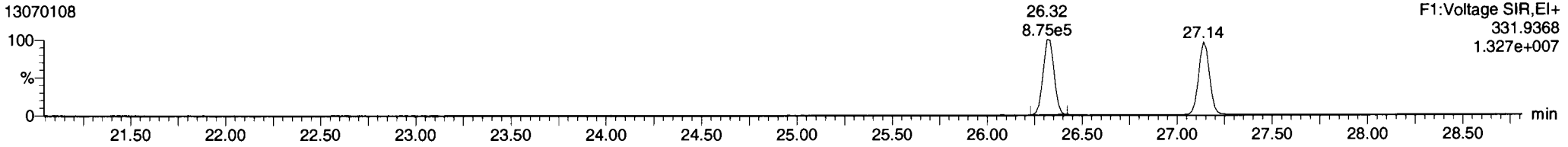
ETHERS6

Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:27 Pacific Daylight Time

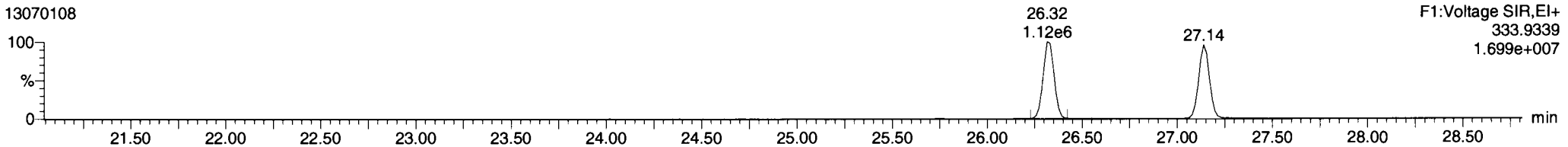
Method: P:\DIOXIN8290.pro\MethDB\Dioxin130617.mdb 28 Jun 2013 10:21:28
Calibration: P:\DIOXIN8290.pro\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

ID: WU70MBS, Name: 13070108, Date: 01-Jul-2013, Time: 15:38:50, Conditions: AUTOSPEC01, User: pk

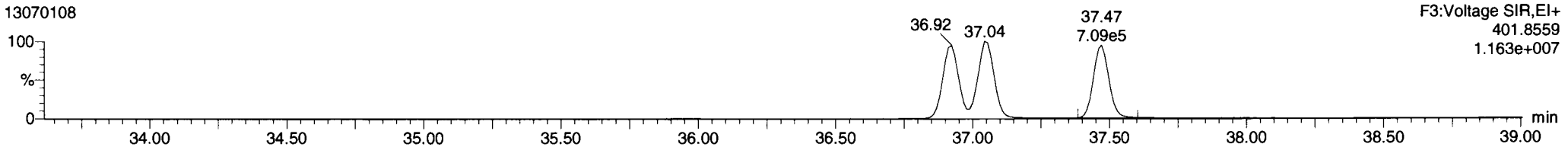
13C-1234-TCDD



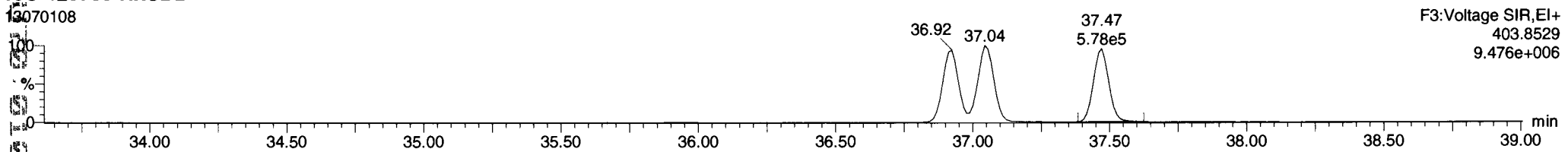
13C-1234-TCDD



13C-123789-HxCDD

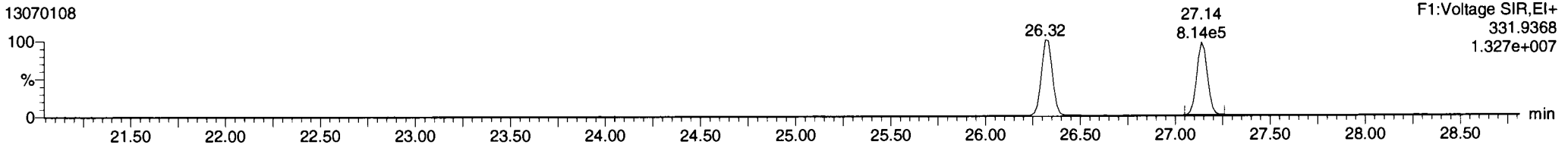


13C-123789-HxCDD

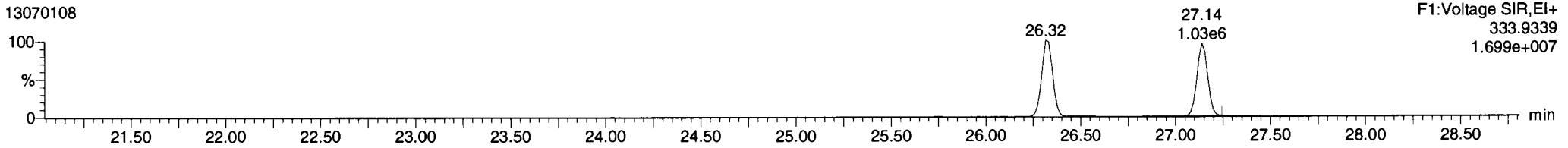


ID: WU70MBS, Name: 13070108, Date: 01-Jul-2013, Time: 15:38:50, Conditions: AUTOSPEC01, User: pk

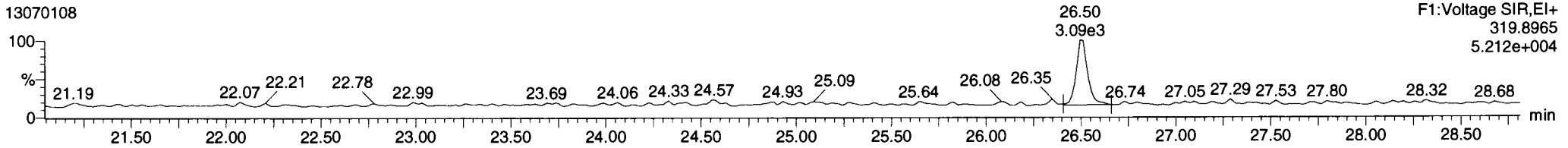
13C-2378-TCDD



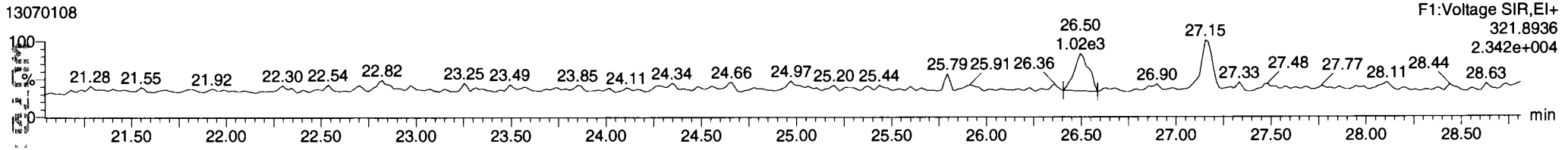
13C-2378-TCDD



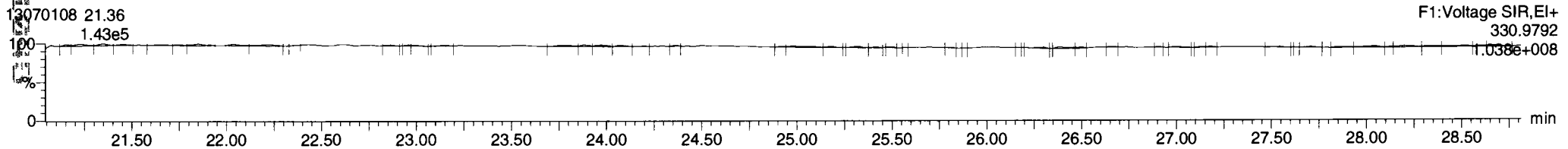
Total-tetradioxins



Total-tetradioxins



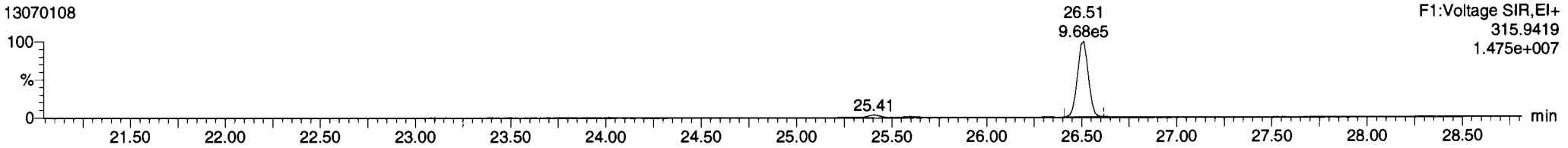
FUNCTION1 PFK



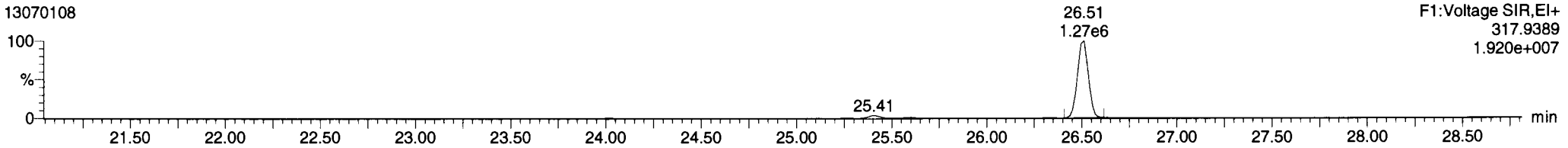
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:27 Pacific Daylight Time

ID: WU70MBS, Name: 13070108, Date: 01-Jul-2013, Time: 15:38:50, Conditions: AUTOSPEC01, User: pk

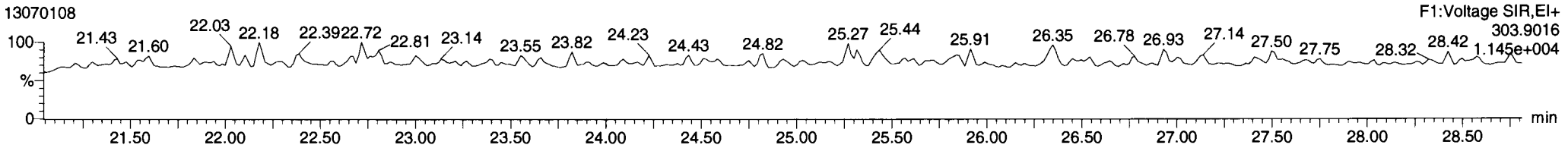
13C-2378-TCDF



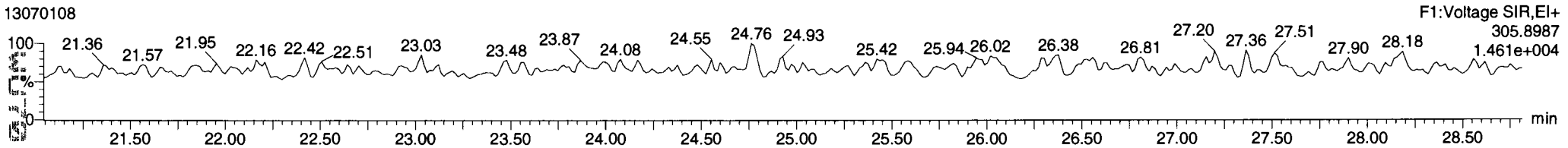
13C-2378-TCDF



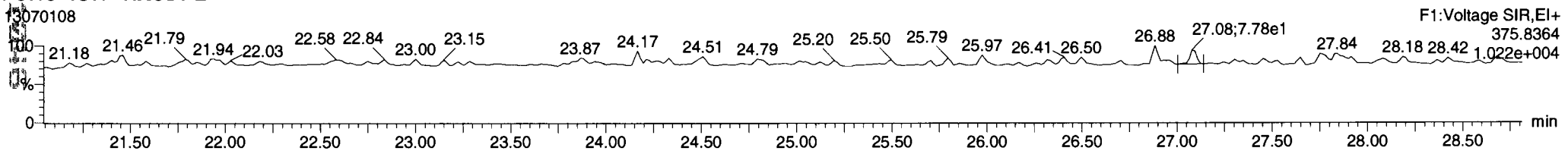
Total-tetrafurans



Total-tetrafurans



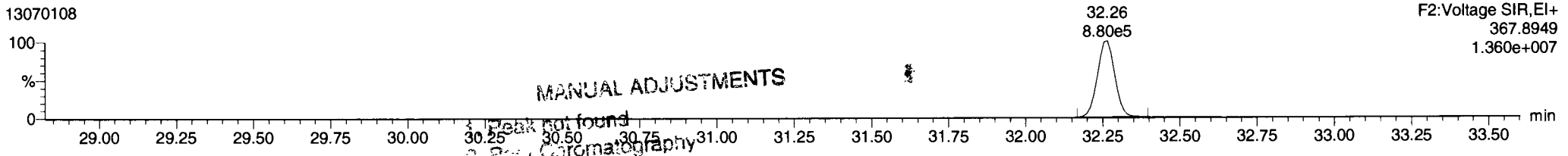
FUNCTION1 HXCDPE



Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:27 Pacific Daylight Time

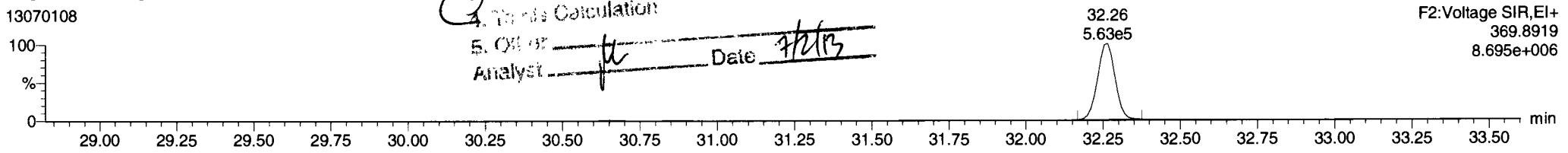
ID: WU70MBS, Name: 13070108, Date: 01-Jul-2013, Time: 15:38:50, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD

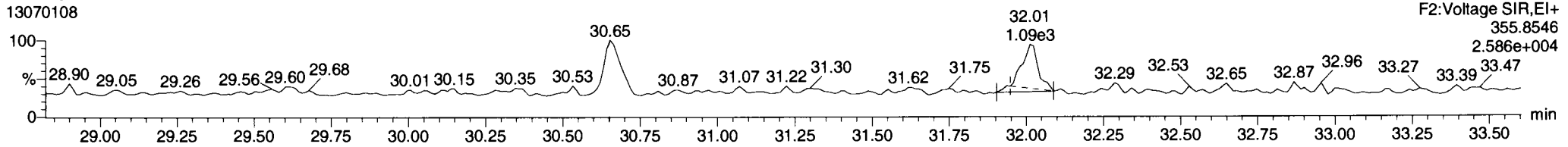


MANUAL ADJUSTMENTS
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Ratio Calculation
5. Other
Analyst Date 7/2/13

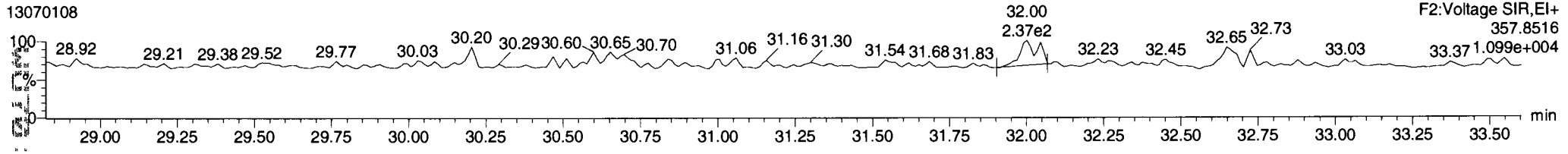
13C-12378-PeCDD



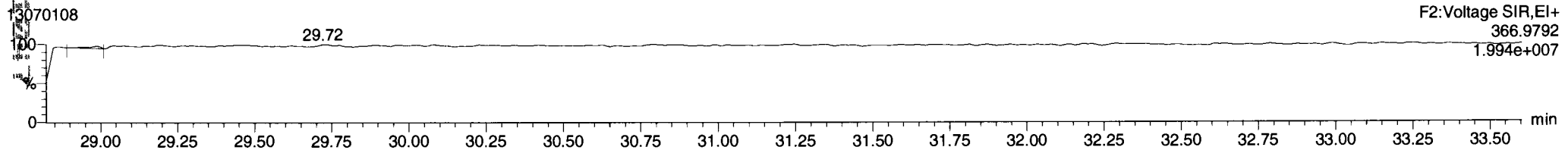
Total-pentadioxins



Total-pentadioxins



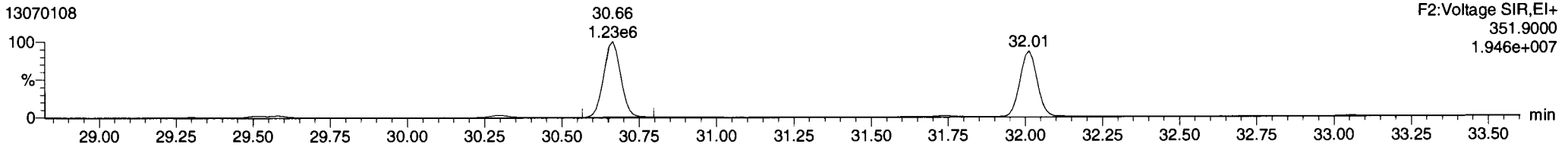
FUNCTION2 PFK



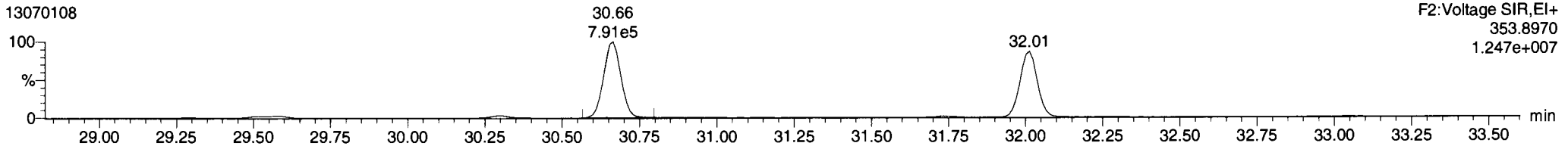
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:27 Pacific Daylight Time

ID: WU70MBS, Name: 13070108, Date: 01-Jul-2013, Time: 15:38:50, Conditions: AUTOSPEC01, User: pk

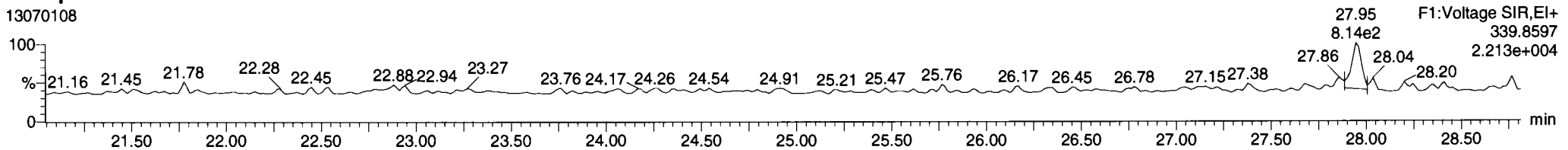
13C-12378-PeCDF



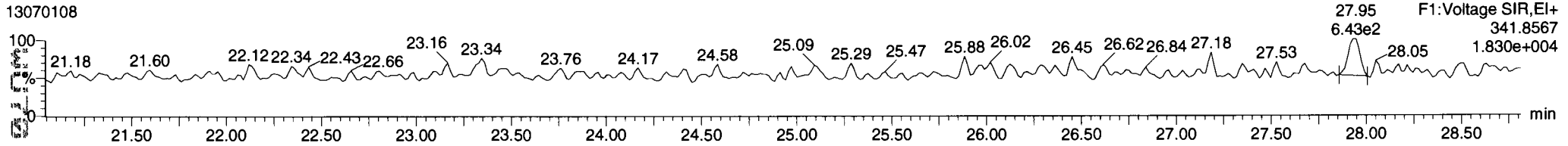
13C-12378-PeCDF



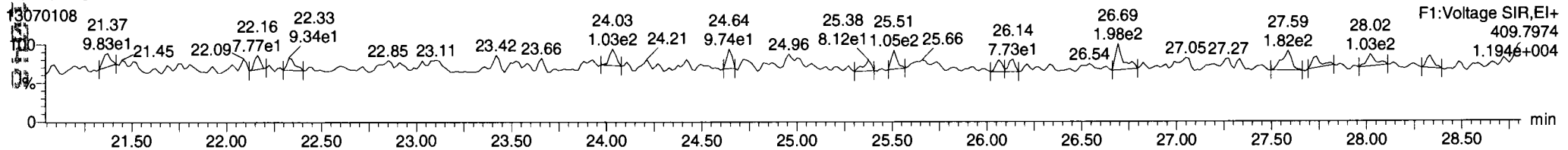
Total-penta1



Total-penta1



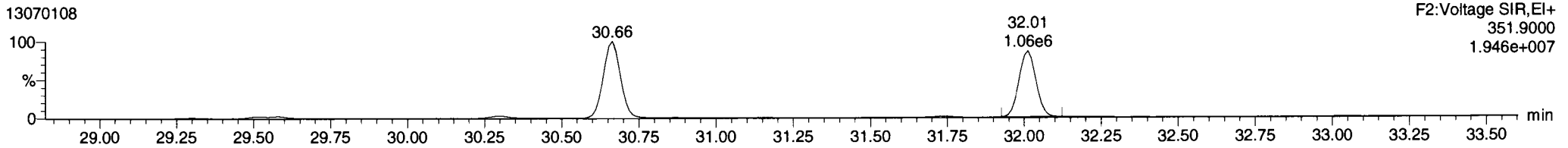
FUNCTION1 HPCDPE



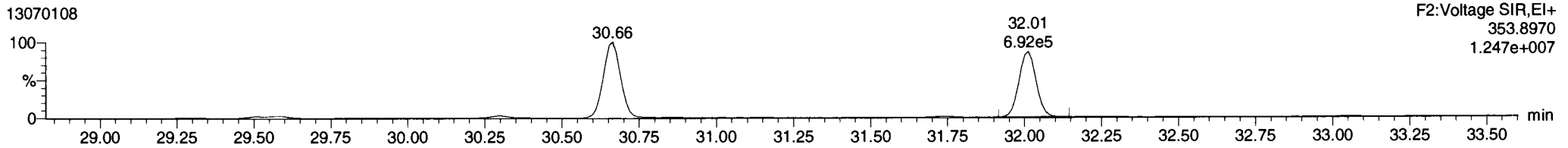
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:27 Pacific Daylight Time

ID: WU70MBS, Name: 13070108, Date: 01-Jul-2013, Time: 15:38:50, Conditions: AUTOSPEC01, User: pk

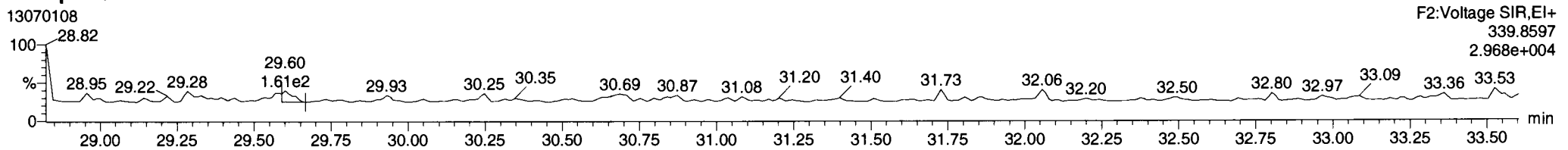
13C-23478-PeCDF



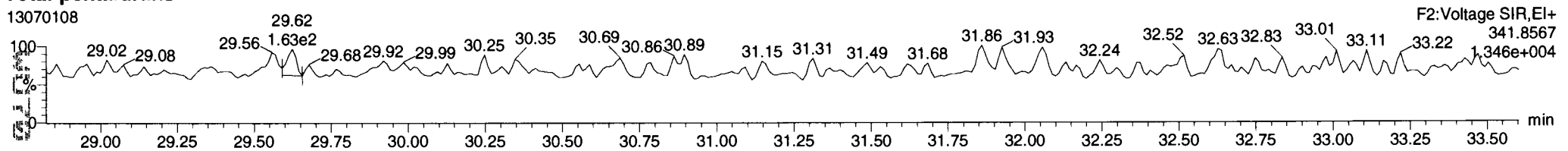
13C-23478-PeCDF



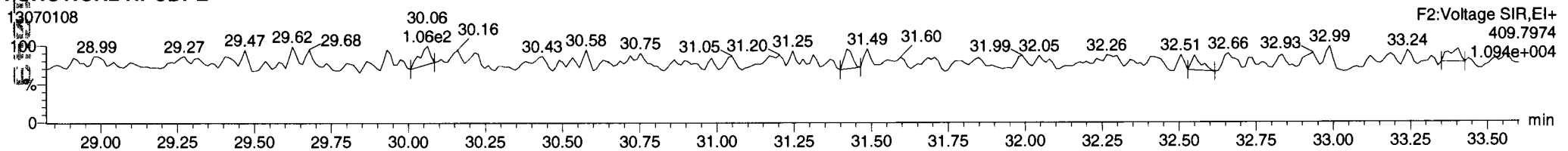
Total-pentafurans



Total-pentafurans



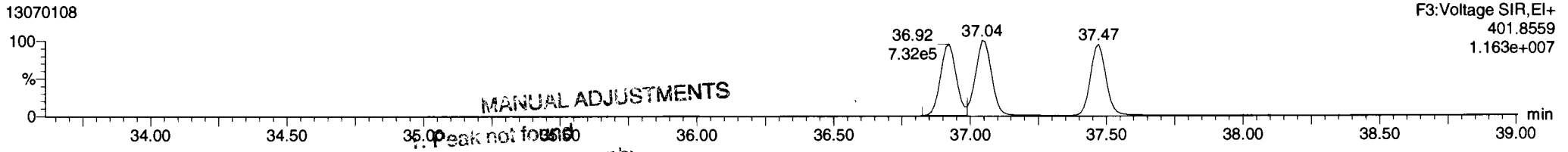
FUNCTION2 HPCDPE



Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:27 Pacific Daylight Time

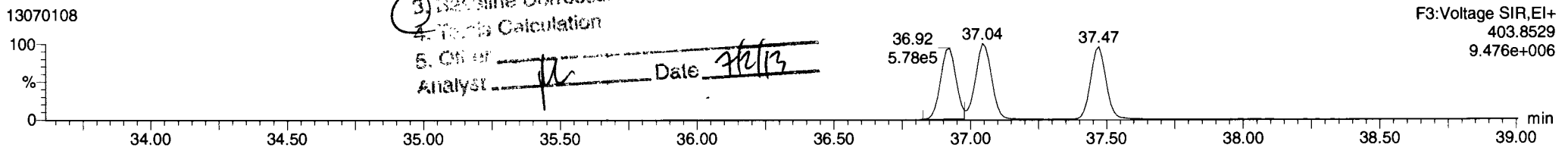
ID: WU70MBS, Name: 13070108, Date: 01-Jul-2013, Time: 15:38:50, Conditions: AUTOSPEC01, User: pk

13C-123478-HxCDD

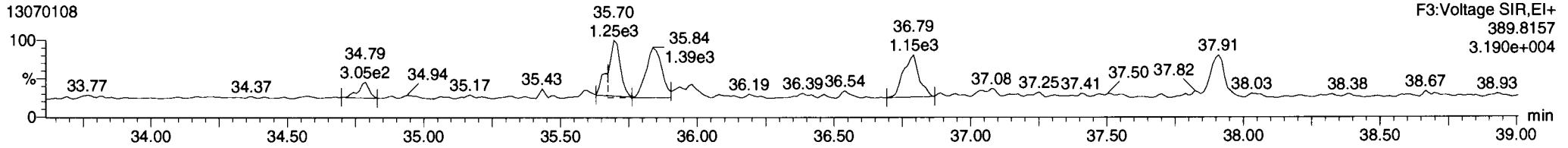


MANUAL ADJUSTMENTS
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Theory Calculation
5. Other
Analyst _____ Date 7/2/13

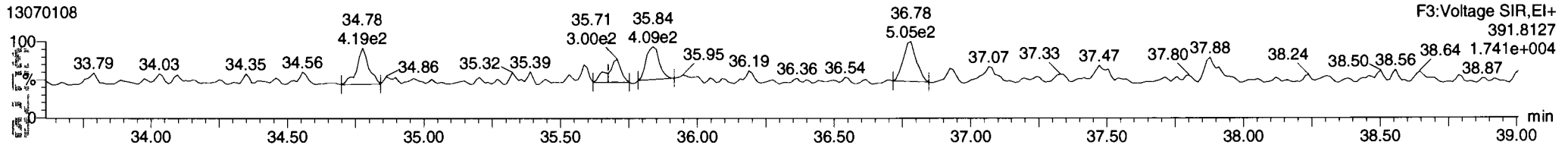
13C-123478-HxCDD



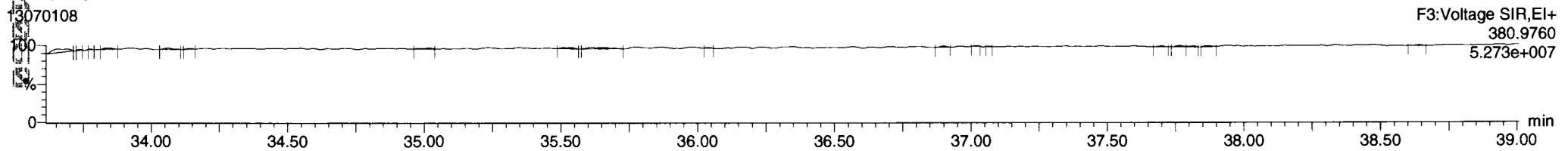
Total-hexadioxins



Total-hexadioxins



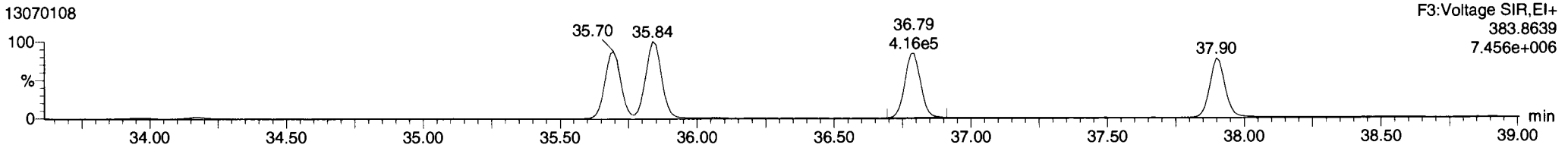
FUNCTION3 PFK



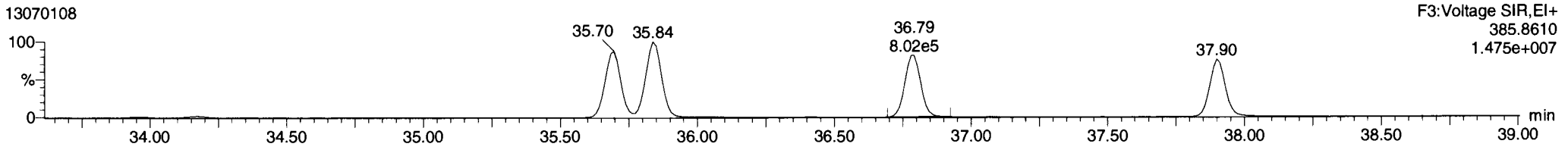
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:27 Pacific Daylight Time

ID: WU70MBS, Name: 13070108, Date: 01-Jul-2013, Time: 15:38:50, Conditions: AUTOSPEC01, User: pk

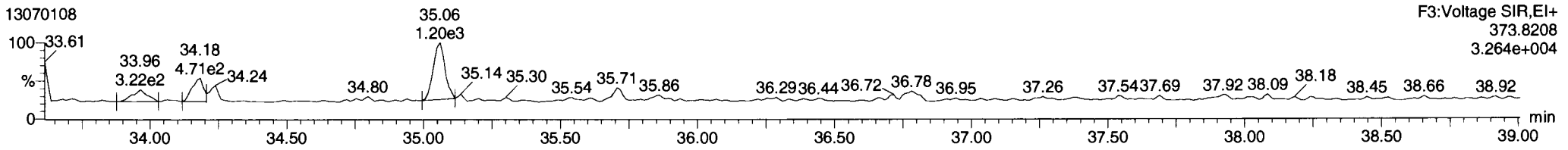
13C-234678-HxCDF



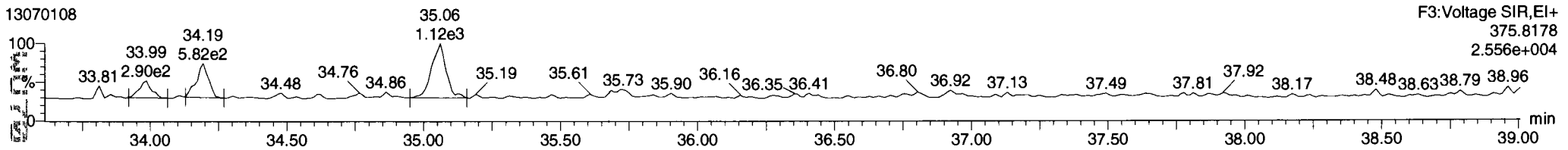
13C-234678-HxCDF



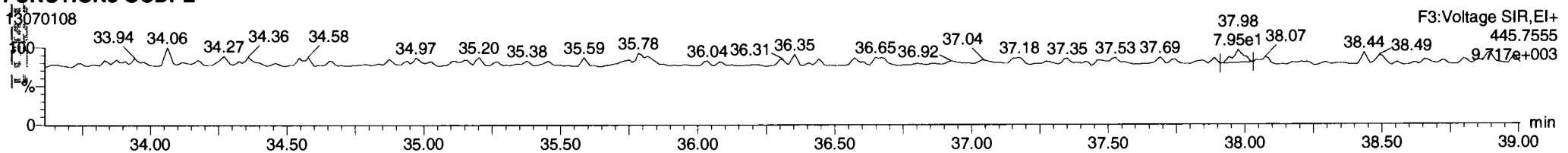
Total-hexafurans



Total-hexafurans



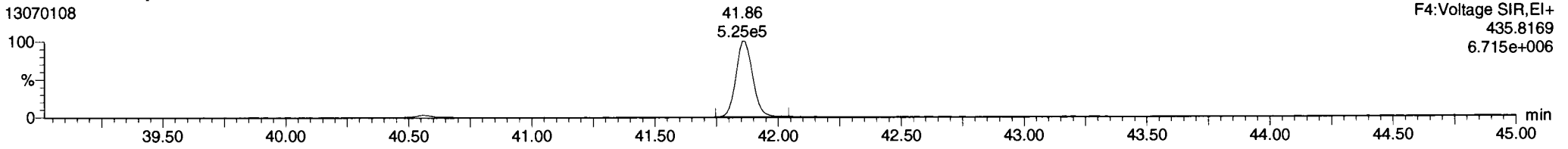
FUNCTION3 OCDPE



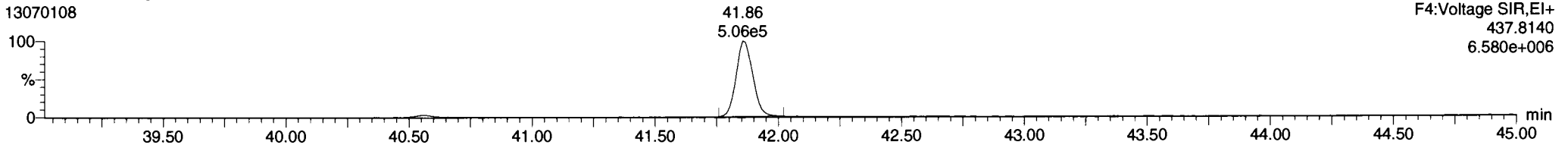
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:27 Pacific Daylight Time

ID: WU70MBS, Name: 13070108, Date: 01-Jul-2013, Time: 15:38:50, Conditions: AUTOSPEC01, User: pk

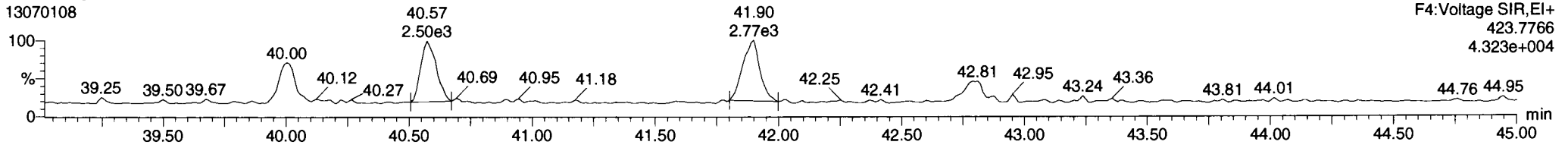
13C-1234678-HpCDD



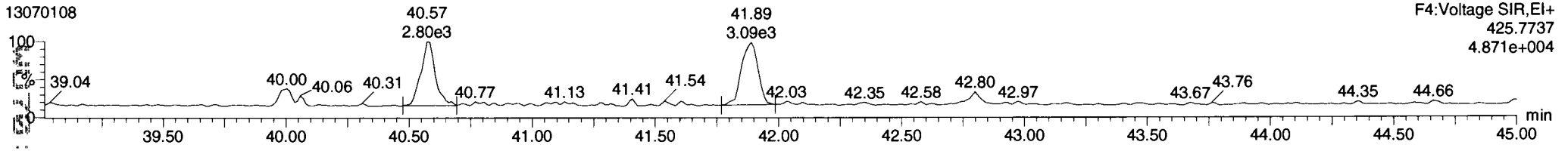
13C-1234678-HpCDD



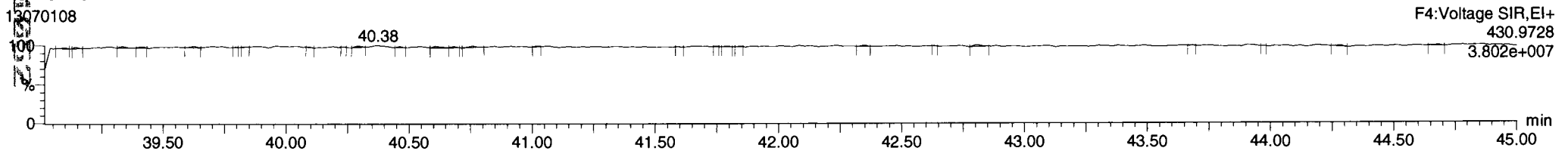
Total-heptadioxins



Total-heptadioxins



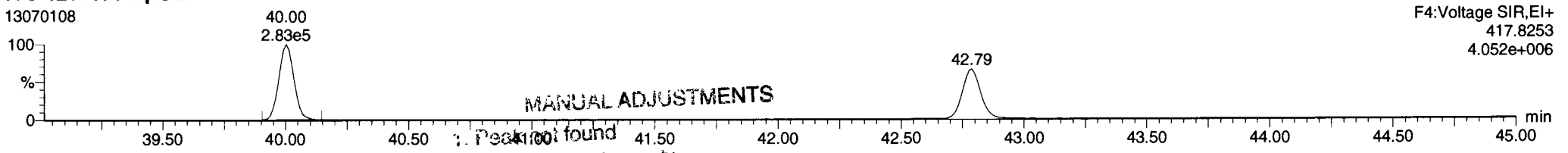
FUNCTION4 PFK



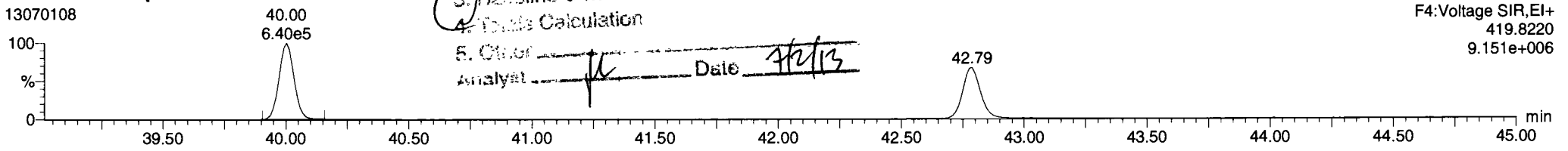
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:27 Pacific Daylight Time

ID: WU70MBS, Name: 13070108, Date: 01-Jul-2013, Time: 15:38:50, Conditions: AUTOSPEC01, User: pk

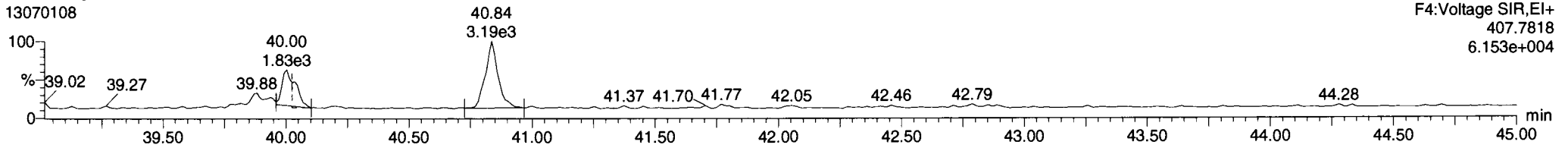
13C-1234678-HpCDF



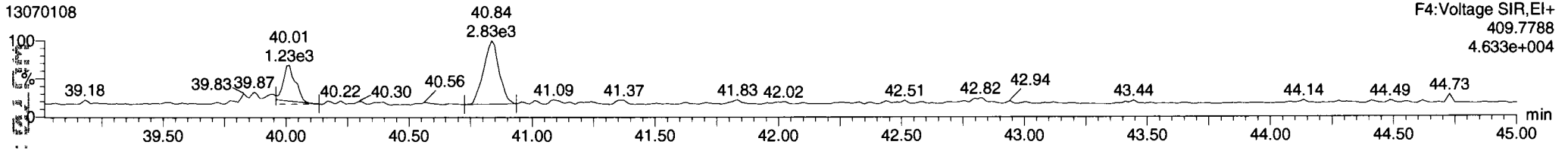
13C-1234678-HpCDF



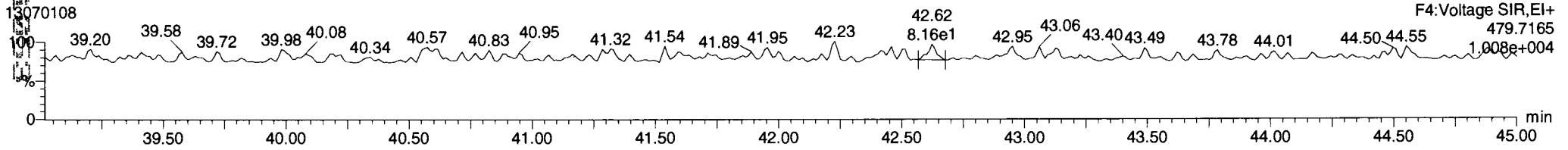
Total-heptafurans



Total-heptafurans



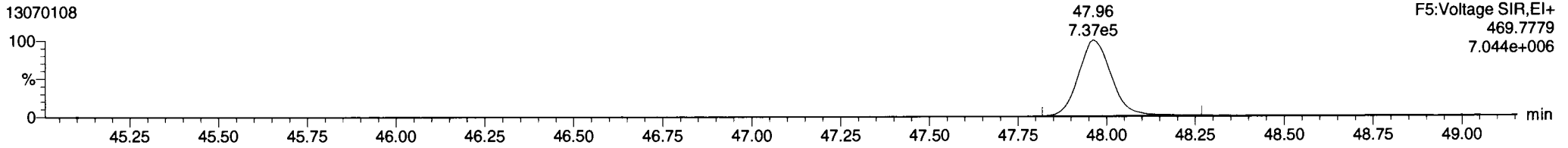
FUNCTION4 NCDPE



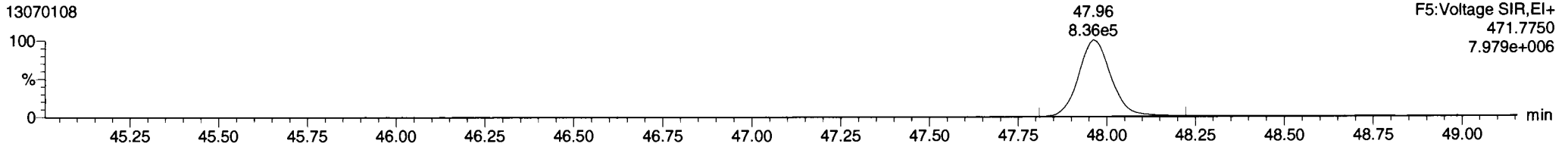
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:27 Pacific Daylight Time

ID: WU70MBS, Name: 13070108, Date: 01-Jul-2013, Time: 15:38:50, Conditions: AUTOSPEC01, User: pk

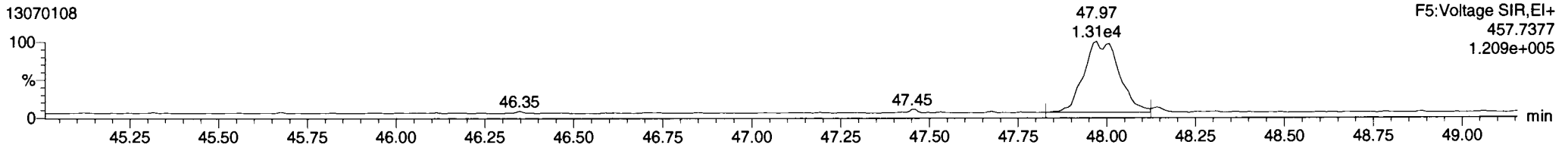
13C-OCDD



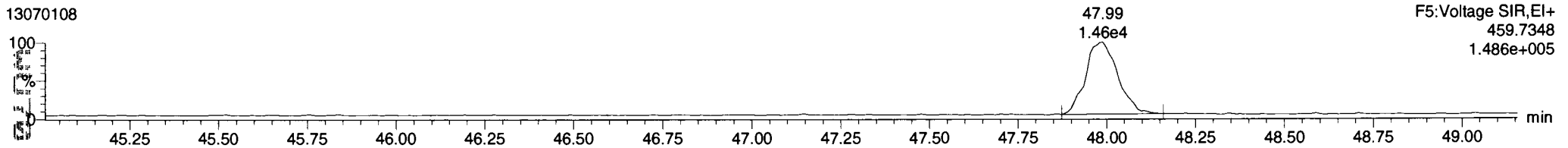
13C-OCDD



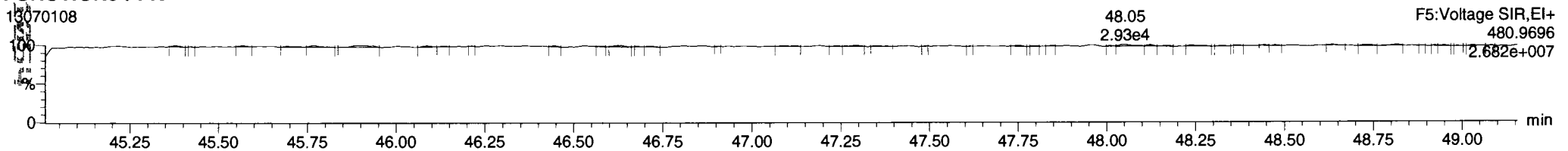
OCDD



OCDD



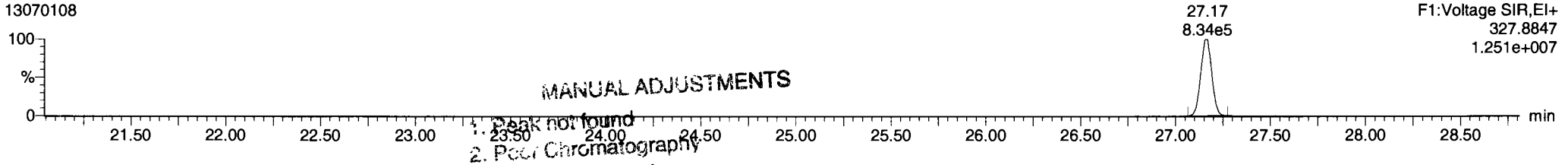
FUNCTION5 PFK



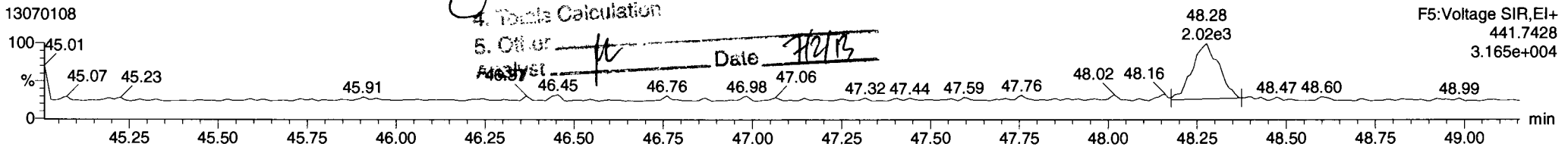
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:27 Pacific Daylight Time

ID: WU70MBS, Name: 13070108, Date: 01-Jul-2013, Time: 15:38:50, Conditions: AUTOSPEC01, User: pk

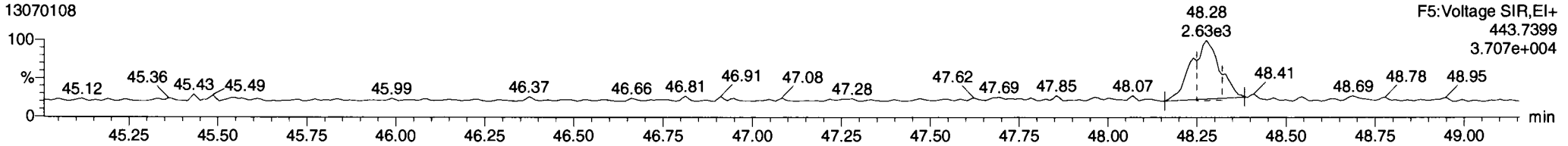
37CL-2378-TCDD



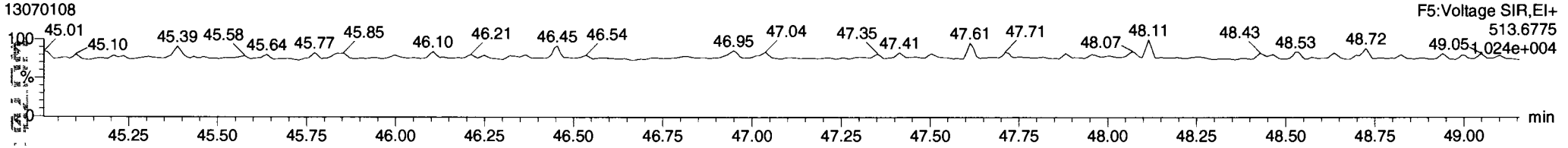
OCDF



OCDF



FUNCTION5 DCDPE



Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:46 Pacific Daylight Time

7/2/13

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130617.mdb 28 Jun 2013 10:21:28
Calibration: P:\DIOXIN8290.pro\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

ID: WU70OPR, Name: 13070109, Date: 01-Jul-2013, Time: 16:31:17, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.511	1.001	7.50e4	9.95e4	0.771	0.754	0.770	956.4	1181	2088	1.13e6	1.50e6	NO	11.508	11.508
12378-PeCDF	30.676	1.001	4.11e5	2.67e5	0.814	1.536	1.550	3295.1	1958	2277	6.45e6	4.18e6	NO	51.957	51.957
23478-PeCDF	32.024	1.001	3.61e5	2.34e5	0.837	1.545	1.550	2857.5	1958	2277	5.60e6	3.65e6	NO	52.532	52.532
123478-HxCDF	35.707	1.001	2.63e5	2.16e5	0.967	1.219	1.240	2067.5	1917	2532	3.96e6	3.24e6	NO	51.266	51.266
234678-HxCDF	36.803	1.001	2.60e5	2.16e5	1.000	1.204	1.240	1984.6	1917	2532	3.80e6	3.23e6	NO	52.360	52.360
123678-HxCDF	35.849	1.000	2.96e5	2.48e5	0.951	1.192	1.240	2320.8	1917	2532	4.45e6	3.70e6	NO	51.118	51.118
123789-HxCDF	37.910	1.000	2.02e5	1.64e5	0.874	1.232	1.240	1620.2	1917	2532	3.11e6	2.54e6	NO	53.155	53.155
1234678-HpCDF	40.014	1.001	2.51e5	2.39e5	1.072	1.048	1.050	1983.1	1786	1707	3.54e6	3.37e6	NO	68.226	68.226
1234789-HpCDF	42.799	1.001	1.47e5	1.43e5	1.085	1.030	1.050	1019.4	1786	1707	1.82e6	1.69e6	NO	52.917	52.917
OCDF	48.268	1.006	2.24e5	2.51e5	0.878	0.891	0.890	951.1	2120	1213	2.02e6	2.27e6	NO	97.093	97.093
2378-TCDD	27.154	1.001	6.59e4	8.61e4	0.936	0.766	0.770	624.0	1615	1217	1.01e6	1.32e6	NO	10.747	10.747
12378-PeCDD	32.276	1.001	3.17e5	2.04e5	0.894	1.552	1.550	2717.1	1847	1261	5.02e6	3.23e6	NO	52.037	52.037
123478-HxCDD	36.923	1.000	2.46e5	2.02e5	0.898	1.217	1.240	2285.8	1628	3244	3.72e6	3.11e6	NO	50.572	50.572
123678-HxCDD	37.055	1.000	2.54e5	2.00e5	0.818	1.269	1.240	2303.4	1628	3244	3.75e6	2.90e6	NO	52.946	52.946
123789-HxCDD	37.482	1.012	2.44e5	1.95e5	0.789	1.256	1.240	2367.9	1628	3244	3.85e6	2.96e6	NO	54.668	54.668
1234678-HpCDD	41.878	1.001	1.80e5	1.75e5	0.879	1.026	1.050	2059.2	1113	1644	2.29e6	2.31e6	NO	53.824	53.824
OCDD	47.980	1.000	2.49e5	2.84e5	0.875	0.878	0.890	1241.5	1884	1450	2.34e6	2.70e6	NO	109.187	109.187
13C-2378-TCDF	26.497	1.007	8.52e5	1.12e6	1.190	0.764	0.770	4293.7	3077	4797	1.32e7	1.73e7	NO		94.542
13C-12378-PeCDF	30.654	1.165	9.77e5	6.26e5	0.904	1.560	1.550	6083.4	2486	2112	1.51e7	9.77e6	NO		101.354
13C-23478-PeCDF	32.002	1.216	8.20e5	5.33e5	0.877	1.538	1.550	5157.1	2486	2112	1.28e7	8.34e6	NO		88.145
13C-123478-HxCDF	35.685	0.953	3.27e5	6.40e5	1.096	0.511	0.510	2286.5	2160	3295	4.94e6	9.72e6	NO		90.303
13C-123678-HxCDF	35.838	0.957	3.82e5	7.37e5	1.187	0.519	0.510	2604.9	2160	3295	5.63e6	1.09e7	NO		96.531
13C-234678-HxCDF	36.781	0.982	3.08e5	5.99e5	1.040	0.515	0.510	2144.3	2160	3295	4.63e6	9.09e6	NO		89.384
13C-123789-HxCDF	37.899	1.012	2.69e5	5.19e5	0.941	0.519	0.510	1921.3	2160	3295	4.15e6	7.88e6	NO		85.774
13C-1234678-HpCDF	39.993	1.068	2.05e5	4.66e5	0.825	0.440	0.440	2090.5	1407	2062	2.94e6	6.67e6	NO		83.164
13C-1234789-HpCDF	42.777	1.142	1.52e5	3.53e5	0.609	0.431	0.440	1315.4	1407	2062	1.85e6	4.29e6	NO		84.974
13C-1234-TCDD	26.317	0.000	7.67e5	9.82e5	1.000	0.780	0.770	1462.1	8282	2982	1.21e7	1.56e7	NO		100.000
13C-2378-TCDD	27.139	1.031	6.63e5	8.47e5	0.920	0.783	0.770	1240.8	8282	2982	1.03e7	1.30e7	NO		93.913
13C-12378-PeCDD	32.254	1.226	6.80e5	4.39e5	0.669	1.550	1.550	3672.5	2920	1992	1.07e7	6.89e6	NO		95.575
13C-123478-HxCDD	36.912	0.985	5.47e5	4.39e5	1.032	1.245	1.240	3878.2	2180	2936	8.45e6	6.76e6	NO		97.896
13C-123678-HxCDD	37.044	0.989	5.75e5	4.73e5	1.146	1.215	1.240	3980.9	2180	2936	8.68e6	7.12e6	NO		93.662
13C-1234678-HpCDD	41.856	1.117	3.81e5	3.70e5	0.789	1.028	1.050	3240.1	1505	2218	4.87e6	4.73e6	NO		97.535
13C-OCDD	47.963	1.280	5.23e5	5.92e5	0.696	0.883	0.890	2643.2	1842	2783	4.87e6	5.52e6	NO		164.056

Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:46 Pacific Daylight Time

ID: WU70OPR, Name: 13070109, Date: 01-Jul-2013, Time: 16:31:17, Conditions: AUTOSPEC01, User: pk

13C-123789-HxCDD	37.460	0.000	5.36e5	4.41e5	1.000	1.216	1.240	3852.5	2180	2936	8.40e6	6.87e6	NO	100.000
Total-tetrafurans			9.50e4		0.771				1181		1.45e6			14.536
Total-penta1			7.15e2						831		1.15e4			0.080
Total-pentafurans			8.24e5		0.826				1958		1.29e7			111.589
Total-hexafurans			1.03e6		0.948				1917		1.55e7			210.784
Total-heptafurans			4.01e5		1.079				1786		5.40e6			122.043
Total-Furans			2.58e6		0.925				1181		3.73e7			556.137
Total-tetradioxins			7.09e4		0.936				1615		1.08e6			11.399
Total-pentadioxins			3.22e5		0.894				1847		5.10e6			52.755
Total-hexadioxins			7.44e5		0.835				1628		1.13e7			158.362
Total-heptadioxins			1.84e5		0.879				1113		2.35e6			55.170
Total-Dioxins			1.57e6		0.870				1615		2.22e7			386.873
Total-TEQ			4.15e6						1615		5.95e7			943.010
37CL-2378-TCDD	27.154	1.032	6.80e5		1.000			3397.6	3089		1.05e7			38.852
FUNCTION1 PFK			3.15e5						872827		6.38e6			
FUNCTION2 PFK			0.00e0						208903		0.00e0			
FUNCTION3 PFK			8.60e5						477828		2.52e7			0.000
FUNCTION4 PFK			1.98e5						312241		6.66e6			
FUNCTION5 PFK			3.90e5						298238		1.29e7			
FUNCTION1 HXCDPE			0.00e0						450		0.00e0			
FUNCTION1 HPCDPE			1.09e3						1126		2.11e4			0.000
FUNCTION2 HPCDPE			1.07e3						1338		3.17e4			0.000
FUNCTION3 OCDPE			0.00e0						449		0.00e0			
FUNCTION4 NCDPE			1.46e2						761		3.17e3			0.000
FUNCTION5 DCDPE			7.46e1						382		4.17e3			0.000

Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:46 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130617.mdb 28 Jun 2013 10:21:28
Calibration: P:\DIOXIN8290.pro\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

D: WU70OPR, Name: 13070109, Date: 01-Jul-2013, Time: 16:31:17, Conditions: AUTOSPEC01, User: pk

TF

	35	Total-tetrafurans	303.9016	26.71	564.483	0.771	0.037		0.23	0.77	YES	2.9
	1	2378-TCDF	303.9016	26.51	174550.883	0.771	11.508	11.508	0.75	0.77	NO	956.4
	35	Total-tetrafurans	303.9016	26.33	1598.664	0.771	0.105		0.79	0.77	NO	11.5
	35	Total-tetrafurans	303.9016	25.60	5998.380	0.771	0.395		0.73	0.77	NO	35.1
	35	Total-tetrafurans	303.9016	25.42	32965.780	0.771	2.173		0.77	0.77	NO	192.2
	35	Total-tetrafurans	303.9016	25.27	3538.929	0.771	0.233		0.74	0.77	NO	17.7
	35	Total-tetrafurans	303.9016	24.03	1267.921	0.771	0.084		1.59	0.77	YES	9.1

PP

	36	Total-penta1	339.8597	27.95	1088.299		0.080		1.92	1.55	YES	13.8

PF

	37	Total-pentafurans	339.8597	30.87	14630.837	0.826	1.199		1.72	1.55	NO	83.1
	2	12378-PeCDF	339.8597	30.68	678359.156	0.814	51.957	51.957	1.54	1.55	NO	3295.1
	37	Total-pentafurans	339.8597	30.31	25139.373	0.826	2.061		1.39	1.55	NO	119.4
	37	Total-pentafurans	339.8597	29.59	28089.162	0.826	2.302		1.38	1.55	NO	121.4
	37	Total-pentafurans	339.8597	29.52	13533.268	0.826	1.109		1.75	1.55	NO	84.6
	37	Total-pentafurans	339.8597	33.06	5216.378	0.826	0.428		1.65	1.55	NO	26.2
	3	23478-PeCDF	339.8597	32.02	594454.781	0.837	52.532	52.532	1.55	1.55	NO	2857.5

HF

	7	123789-HxCDF	373.8208	37.91	366085.719	0.874	53.155	53.155	1.23	1.24	NO	1620.2
	5	234678-HxCDF	373.8208	36.80	475180.203	1.000	52.360	52.360	1.20	1.24	NO	1984.6
	6	123678-HxCDF	373.8208	35.85	544294.922	0.951	51.118	51.118	1.19	1.24	NO	2320.8
	4	123478-HxCDF	373.8208	35.71	479072.501	0.967	51.266	51.266	1.22	1.24	NO	2067.5
	38	Total-hexafurans	373.8208	35.55	1074.475	0.948	0.120		0.75	1.24	YES	3.4
	38	Total-hexafurans	373.8208	35.06	1640.607	0.948	0.183		1.13	1.24	NO	6.8
	38	Total-hexafurans	373.8208	34.18	16084.953	0.948	1.795		1.12	1.24	NO	67.4
	38	Total-hexafurans	373.8208	33.96	7056.492	0.948	0.787		1.20	1.24	NO	33.5

HPF

	9	1234789-HpCDF	407.7818	42.80	290236.110	1.085	52.917	52.917	1.03	1.05	NO	1019.4
	39	Total-heptafurans	407.7818	40.83	5708.451	1.079	0.900		0.98	1.05	NO	23.7
	8	1234678-HpCDF	407.7818	40.01	490234.532	1.072	68.226	68.226	1.05	1.05	NO	1983.1

Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:46 Pacific Daylight Time

D: WU70OPR, Name: 13070109, Date: 01-Jul-2013, Time: 16:31:17, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	35	Total-tetrafurans	303.9016	26.71	564.483	0.771	0.037		0.23	0.77	YES	2.9
	1	2378-TCDF	303.9016	26.51	174550.883	0.771	11.508	11.508	0.75	0.77	NO	956.4
	35	Total-tetrafurans	303.9016	26.33	1598.664	0.771	0.105		0.79	0.77	NO	11.5
	35	Total-tetrafurans	303.9016	25.60	5998.380	0.771	0.395		0.73	0.77	NO	35.1
	35	Total-tetrafurans	303.9016	25.42	32965.780	0.771	2.173		0.77	0.77	NO	192.2
	35	Total-tetrafurans	303.9016	25.27	3538.929	0.771	0.233		0.74	0.77	NO	17.7
	35	Total-tetrafurans	303.9016	24.03	1267.921	0.771	0.084		1.59	0.77	YES	9.1
	40	Total-Furans	303.9016	22.16	206.807	0.925	0.011		0.64	0.77	YES	1.8
	37	Total-pentafurans	339.8597	30.87	14630.837	0.826	1.199		1.72	1.55	NO	83.1
	2	12378-PeCDF	339.8597	30.68	678359.156	0.814	51.957	51.957	1.54	1.55	NO	3295.1
	37	Total-pentafurans	339.8597	30.31	25139.373	0.826	2.061		1.39	1.55	NO	119.4
	37	Total-pentafurans	339.8597	29.59	28089.162	0.826	2.302		1.38	1.55	NO	121.4
	37	Total-pentafurans	339.8597	29.52	13533.268	0.826	1.109		1.75	1.55	NO	84.6
	37	Total-pentafurans	339.8597	33.06	5216.378	0.826	0.428		1.65	1.55	NO	26.2
	3	23478-PeCDF	339.8597	32.02	594454.781	0.837	52.532	52.532	1.55	1.55	NO	2857.5
	7	123789-HxCDF	373.8208	37.91	366085.719	0.874	53.155	53.155	1.23	1.24	NO	1620.2
	5	234678-HxCDF	373.8208	36.80	475180.203	1.000	52.360	52.360	1.20	1.24	NO	1984.6
	6	123678-HxCDF	373.8208	35.85	544294.922	0.951	51.118	51.118	1.19	1.24	NO	2320.8
	4	123478-HxCDF	373.8208	35.71	479072.501	0.967	51.266	51.266	1.22	1.24	NO	2067.5
	38	Total-hexafurans	373.8208	35.55	1074.475	0.948	0.120		0.75	1.24	YES	3.4
	38	Total-hexafurans	373.8208	35.06	1640.607	0.948	0.183		1.13	1.24	NO	6.8
	38	Total-hexafurans	373.8208	34.18	16084.953	0.948	1.795		1.12	1.24	NO	67.4
	38	Total-hexafurans	373.8208	33.96	7056.492	0.948	0.787		1.20	1.24	NO	33.5
	9	1234789-HpCDF	407.7818	42.80	290236.110	1.085	52.917	52.917	1.03	1.05	NO	1019.4
	39	Total-heptafurans	407.7818	40.83	5708.451	1.079	0.900		0.98	1.05	NO	23.7
	8	1234678-HpCDF	407.7818	40.01	490234.532	1.072	68.226	68.226	1.05	1.05	NO	1983.1
	10	OCDF	441.7428	48.27	475214.859	0.878	97.093	97.093	0.89	0.89	NO	951.1
	36	Total-penta1	339.8597	27.95	1088.299		0.080		1.92	1.55	YES	13.8

TD

	41	Total-tetradioxins	319.8965	27.32	745.744	0.936	0.053		1.96	0.77	YES	5.4
	11	2378-TCDD	319.8965	27.15	152011.664	0.936	10.747	10.747	0.77	0.77	NO	624.0
	41	Total-tetradioxins	319.8965	26.77	4838.259	0.936	0.342		0.64	0.77	YES	13.5
	41	Total-tetradioxins	319.8965	26.50	2651.718	0.936	0.187		3.32	0.77	YES	17.5
	41	Total-tetradioxins	319.8965	25.78	982.409	0.936	0.069		1.60	0.77	YES	5.7

PD

	42	Total-pentadioxins	355.8546	32.66	535.744	0.894	0.054		1.98	1.55	YES	4.7
	12	12378-PeCDD	355.8546	32.28	520714.563	0.894	52.037	52.037	1.55	1.55	NO	2717.1
	42	Total-pentadioxins	355.8546	31.61	822.700	0.894	0.082		2.96	1.55	YES	4.7
	42	Total-pentadioxins	355.8546	31.04	1605.931	0.894	0.160		1.09	1.55	YES	6.7
	42	Total-pentadioxins	355.8546	30.88	1287.816	0.894	0.129		4.53	1.55	YES	10.3
	42	Total-pentadioxins	355.8546	30.65	2931.755	0.894	0.293		3.14	1.55	YES	18.5

ID: WU70OPR, Name: 13070109, Date: 01-Jul-2013, Time: 16:31:17, Conditions: AUTOSPEC01, User: pk

HD

	15 123789-HxCDD	389.8157	37.48	438895.781	0.789	54.668	54.668	1.26	1.24	NO	2367.9
	14 123678-HxCDD	389.8157	37.06	453589.610	0.818	52.946	52.946	1.27	1.24	NO	2303.4
	13 123478-HxCDD	389.8157	36.92	447693.656	0.898	50.572	50.572	1.22	1.24	NO	2285.8
	43 Total-hexadioxins	389.8157	35.97	1495.851	0.835	0.176		0.65	1.24	YES	8.1

HPD

	16 1234678-HpCDD	423.7766	41.88	355509.125	0.879	53.824	53.824	1.03	1.05	NO	2059.2
	44 Total-heptadioxins	423.7766	40.58	8892.880	0.879	1.346		0.94	1.05	NO	56.4

Dioxins,TD,PD,HD,HPD,OD

	41 Total-tetradioxins	319.8965	27.32	745.744	0.936	0.053		1.96	0.77	YES	5.4
	11 2378-TCDD	319.8965	27.15	152011.664	0.936	10.747	10.747	0.77	0.77	NO	624.0
	41 Total-tetradioxins	319.8965	26.77	4838.259	0.936	0.342		0.64	0.77	YES	13.5
	41 Total-tetradioxins	319.8965	26.50	2651.718	0.936	0.187		3.32	0.77	YES	17.5
	41 Total-tetradioxins	319.8965	25.78	982.409	0.936	0.069		1.60	0.77	YES	5.7
	42 Total-pentadioxins	355.8546	32.66	535.744	0.894	0.054		1.98	1.55	YES	4.7
	12 12378-PeCDD	355.8546	32.28	520714.563	0.894	52.037	52.037	1.55	1.55	NO	2717.1
	42 Total-pentadioxins	355.8546	31.61	822.700	0.894	0.082		2.96	1.55	YES	4.7
	42 Total-pentadioxins	355.8546	31.04	1605.931	0.894	0.160		1.09	1.55	YES	6.7
	42 Total-pentadioxins	355.8546	30.88	1287.816	0.894	0.129		4.53	1.55	YES	10.3
	42 Total-pentadioxins	355.8546	30.65	2931.755	0.894	0.293		3.14	1.55	YES	18.5
	15 123789-HxCDD	389.8157	37.48	438895.781	0.789	54.668	54.668	1.26	1.24	NO	2367.9
	14 123678-HxCDD	389.8157	37.06	453589.610	0.818	52.946	52.946	1.27	1.24	NO	2303.4
	13 123478-HxCDD	389.8157	36.92	447693.656	0.898	50.572	50.572	1.22	1.24	NO	2285.8
	43 Total-hexadioxins	389.8157	35.97	1495.851	0.835	0.176		0.65	1.24	YES	8.1
	16 1234678-HpCDD	423.7766	41.88	355509.125	0.879	53.824	53.824	1.03	1.05	NO	2059.2
	44 Total-heptadioxins	423.7766	40.58	8892.880	0.879	1.346		0.94	1.05	NO	56.4
	17 OCDD	457.7377	47.98	532877.750	0.875	109.187	109....	0.88	0.89	NO	1241.5

Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:46 Pacific Daylight Time

D: WU70OPR, Name: 13070109, Date: 01-Jul-2013, Time: 16:31:17, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

		Name										
	35	Total-tetrafurans	303.9016	26.71	564.483	0.771	0.037		0.23	0.77	YES	2.9
	1	2378-TCDF	303.9016	26.51	174550.883	0.771	11.508	11.508	0.75	0.77	NO	956.4
	35	Total-tetrafurans	303.9016	26.33	1598.664	0.771	0.105		0.79	0.77	NO	11.5
	35	Total-tetrafurans	303.9016	25.60	5998.380	0.771	0.395		0.73	0.77	NO	35.1
	35	Total-tetrafurans	303.9016	25.42	32965.780	0.771	2.173		0.77	0.77	NO	192.2
	35	Total-tetrafurans	303.9016	25.27	3538.929	0.771	0.233		0.74	0.77	NO	17.7
	35	Total-tetrafurans	303.9016	24.03	1267.921	0.771	0.084		1.59	0.77	YES	9.1
	40	Total-Furans	303.9016	22.16	206.807	0.925	0.011		0.64	0.77	YES	1.8
	37	Total-pentafurans	339.8597	30.87	14630.837	0.826	1.199		1.72	1.55	NO	83.1
	2	12378-PeCDF	339.8597	30.68	678359.156	0.814	51.957	51.957	1.54	1.55	NO	3295.1
	37	Total-pentafurans	339.8597	30.31	25139.373	0.826	2.061		1.39	1.55	NO	119.4
	37	Total-pentafurans	339.8597	29.59	28089.162	0.826	2.302		1.38	1.55	NO	121.4
	37	Total-pentafurans	339.8597	29.52	13533.268	0.826	1.109		1.75	1.55	NO	84.6
	37	Total-pentafurans	339.8597	33.06	5216.378	0.826	0.428		1.65	1.55	NO	26.2
	3	23478-PeCDF	339.8597	32.02	594454.781	0.837	52.532	52.532	1.55	1.55	NO	2857.5
	7	123789-HxCDF	373.8208	37.91	366085.719	0.874	53.155	53.155	1.23	1.24	NO	1620.2
	5	234678-HxCDF	373.8208	36.80	475180.203	1.000	52.360	52.360	1.20	1.24	NO	1984.6
	6	123678-HxCDF	373.8208	35.85	544294.922	0.951	51.118	51.118	1.19	1.24	NO	2320.8
	4	123478-HxCDF	373.8208	35.71	479072.501	0.967	51.266	51.266	1.22	1.24	NO	2067.5
	38	Total-hexafurans	373.8208	35.55	1074.475	0.948	0.120		0.75	1.24	YES	3.4
	38	Total-hexafurans	373.8208	35.06	1640.607	0.948	0.183		1.13	1.24	NO	6.8
	38	Total-hexafurans	373.8208	34.18	16084.953	0.948	1.795		1.12	1.24	NO	67.4
	38	Total-hexafurans	373.8208	33.96	7056.492	0.948	0.787		1.20	1.24	NO	33.5
	9	1234789-HpCDF	407.7818	42.80	290236.110	1.085	52.917	52.917	1.03	1.05	NO	1019.4
	39	Total-heptafurans	407.7818	40.83	5708.451	1.079	0.900		0.98	1.05	NO	23.7
	8	1234678-HpCDF	407.7818	40.01	490234.532	1.072	68.226	68.226	1.05	1.05	NO	1983.1
	10	OCDF	441.7428	48.27	475214.859	0.878	97.093	97.093	0.89	0.89	NO	951.1
	36	Total-penta1	339.8597	27.95	1088.299		0.080		1.92	1.55	YES	13.8
	41	Total-tetradioxins	319.8965	27.32	745.744	0.936	0.053		1.96	0.77	YES	5.4
	11	2378-TCDD	319.8965	27.15	152011.664	0.936	10.747	10.747	0.77	0.77	NO	624.0
	41	Total-tetradioxins	319.8965	26.77	4838.259	0.936	0.342		0.64	0.77	YES	13.5
	41	Total-tetradioxins	319.8965	26.50	2651.718	0.936	0.187		3.32	0.77	YES	17.5
	41	Total-tetradioxins	319.8965	25.78	982.409	0.936	0.069		1.60	0.77	YES	5.7
	42	Total-pentadioxins	355.8546	32.66	535.744	0.894	0.054		1.98	1.55	YES	4.7
	12	12378-PeCDD	355.8546	32.28	520714.563	0.894	52.037	52.037	1.55	1.55	NO	2717.1
	42	Total-pentadioxins	355.8546	31.61	822.700	0.894	0.082		2.96	1.55	YES	4.7
	42	Total-pentadioxins	355.8546	31.04	1605.931	0.894	0.160		1.09	1.55	YES	6.7
	42	Total-pentadioxins	355.8546	30.88	1287.816	0.894	0.129		4.53	1.55	YES	10.3
	42	Total-pentadioxins	355.8546	30.65	2931.755	0.894	0.293		3.14	1.55	YES	18.5
	15	123789-HxCDD	389.8157	37.48	438895.781	0.789	54.668	54.668	1.26	1.24	NO	2367.9
	14	123678-HxCDD	389.8157	37.06	453589.610	0.818	52.946	52.946	1.27	1.24	NO	2303.4
	13	123478-HxCDD	389.8157	36.92	447693.656	0.898	50.572	50.572	1.22	1.24	NO	2285.8
	43	Total-hexadioxins	389.8157	35.97	1495.851	0.835	0.176		0.65	1.24	YES	8.1
	16	1234678-HpCDD	423.7766	41.88	355509.125	0.879	53.824	53.824	1.03	1.05	NO	2059.2
	44	Total-heptadioxins	423.7766	40.58	8892.880	0.879	1.346		0.94	1.05	NO	56.4
	17	OCDD	457.7377	47.98	532877.750	0.875	109.187	109....	0.88	0.89	NO	1241.5

Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:46 Pacific Daylight Time

D: WU70OPR, Name: 13070109, Date: 01-Jul-2013, Time: 16:31:17, Conditions: AUTOSPEC01, User: pk

PFK1

[redacted]	48	FUNCTION1 PFK	330.9792	23.52	0.000							1.5
[redacted]	48	FUNCTION1 PFK	330.9792	22.19	0.000							1.7
[redacted]	48	FUNCTION1 PFK	330.9792	21.86	0.000							2.1
[redacted]	48	FUNCTION1 PFK	330.9792	21.24	0.000							2.0

PFK2

[redacted]												

Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:46 Pacific Daylight Time

ID: WU70OPR, Name: 13070109, Date: 01-Jul-2013, Time: 16:31:17, Conditions: AUTOSPEC01, User: pk

PFK3

[redacted]	50	FUNCTION3 PFK	380.9760	34.65	0.000	0.000					0.5
[redacted]	50	FUNCTION3 PFK	380.9760	34.41	0.000	0.000					0.4
[redacted]	50	FUNCTION3 PFK	380.9760	34.28	0.000	0.000					1.0
[redacted]	50	FUNCTION3 PFK	380.9760	34.22	0.000	0.000					1.2
[redacted]	50	FUNCTION3 PFK	380.9760	34.03	0.000	0.000					0.7
[redacted]	50	FUNCTION3 PFK	380.9760	33.99	0.000	0.000					1.1
[redacted]	50	FUNCTION3 PFK	380.9760	33.83	0.000	0.000					0.7
[redacted]	50	FUNCTION3 PFK	380.9760	33.80	0.000	0.000					1.2
[redacted]	50	FUNCTION3 PFK	380.9760	33.74	0.000	0.000					1.4
[redacted]	50	FUNCTION3 PFK	380.9760	33.70	0.000	0.000					1.3
[redacted]	50	FUNCTION3 PFK	380.9760	36.21	0.000	0.000					1.1
[redacted]	50	FUNCTION3 PFK	380.9760	36.16	0.000	0.000					1.6
[redacted]	50	FUNCTION3 PFK	380.9760	36.05	0.000	0.000					1.7
[redacted]	50	FUNCTION3 PFK	380.9760	35.97	0.000	0.000					1.8
[redacted]	50	FUNCTION3 PFK	380.9760	35.66	0.000	0.000					1.4
[redacted]	50	FUNCTION3 PFK	380.9760	35.61	0.000	0.000					1.6
[redacted]	50	FUNCTION3 PFK	380.9760	35.52	0.000	0.000					1.1
[redacted]	50	FUNCTION3 PFK	380.9760	35.45	0.000	0.000					0.3
[redacted]	50	FUNCTION3 PFK	380.9760	35.42	0.000	0.000					0.6
[redacted]	50	FUNCTION3 PFK	380.9760	35.26	0.000	0.000					1.0
[redacted]	50	FUNCTION3 PFK	380.9760	35.21	0.000	0.000					1.0
[redacted]	50	FUNCTION3 PFK	380.9760	35.15	0.000	0.000					1.2
[redacted]	50	FUNCTION3 PFK	380.9760	35.08	0.000	0.000					0.8
[redacted]	50	FUNCTION3 PFK	380.9760	35.01	0.000	0.000					1.4
[redacted]	50	FUNCTION3 PFK	380.9760	34.75	0.000	0.000					0.8
[redacted]	50	FUNCTION3 PFK	380.9760	34.69	0.000	0.000					0.7
[redacted]	50	FUNCTION3 PFK	380.9760	37.78	0.000	0.000					1.0
[redacted]	50	FUNCTION3 PFK	380.9760	37.65	0.000	0.000					1.5
[redacted]	50	FUNCTION3 PFK	380.9760	37.61	0.000	0.000					1.6
[redacted]	50	FUNCTION3 PFK	380.9760	37.59	0.000	0.000					1.4
[redacted]	50	FUNCTION3 PFK	380.9760	37.34	0.000	0.000					0.9
[redacted]	50	FUNCTION3 PFK	380.9760	37.26	0.000	0.000					1.9
[redacted]	50	FUNCTION3 PFK	380.9760	37.20	0.000	0.000					1.1
[redacted]	50	FUNCTION3 PFK	380.9760	37.14	0.000	0.000					0.3
[redacted]	50	FUNCTION3 PFK	380.9760	37.10	0.000	0.000					0.6
[redacted]	50	FUNCTION3 PFK	380.9760	37.01	0.000	0.000					0.8
[redacted]	50	FUNCTION3 PFK	380.9760	36.91	0.000	0.000					1.1
[redacted]	50	FUNCTION3 PFK	380.9760	36.85	0.000	0.000					1.4
[redacted]	50	FUNCTION3 PFK	380.9760	36.73	0.000	0.000					0.7
[redacted]	50	FUNCTION3 PFK	380.9760	36.65	0.000	0.000					2.0
[redacted]	50	FUNCTION3 PFK	380.9760	36.47	0.000	0.000					1.4
[redacted]	50	FUNCTION3 PFK	380.9760	36.30	0.000	0.000					0.8
[redacted]	50	FUNCTION3 PFK	380.9760	38.84	0.000	0.000					0.5
[redacted]	50	FUNCTION3 PFK	380.9760	38.59	0.000	0.000					1.4
[redacted]	50	FUNCTION3 PFK	380.9760	38.53	0.000	0.000					0.8
[redacted]	50	FUNCTION3 PFK	380.9760	38.49	0.000	0.000					0.9
[redacted]	50	FUNCTION3 PFK	380.9760	38.39	0.000	0.000					0.3
[redacted]	50	FUNCTION3 PFK	380.9760	38.25	0.000	0.000					0.5
[redacted]	50	FUNCTION3 PFK	380.9760	38.22	0.000	0.000					0.9

Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:46 Pacific Daylight Time

D: WU70PR, Name: 13070109, Date: 01-Jul-2013, Time: 16:31:17, Conditions: AUTOSPEC01, User: pk

PFK3

[redacted]	50	FUNCTION3 PFK	380.9760	38.18	0.000	0.000	[redacted]	[redacted]	[redacted]	[redacted]	0.5
[redacted]	50	FUNCTION3 PFK	380.9760	37.89	0.000	0.000	[redacted]	[redacted]	[redacted]	[redacted]	0.9

PFK4

[redacted]	51	FUNCTION4 PFK	430.9728	40.87	0.000	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	0.9
[redacted]	51	FUNCTION4 PFK	430.9728	39.82	0.000	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	1.3
[redacted]	51	FUNCTION4 PFK	430.9728	39.60	0.000	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	0.5
[redacted]	51	FUNCTION4 PFK	430.9728	39.43	0.000	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	0.5
[redacted]	51	FUNCTION4 PFK	430.9728	39.39	0.000	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	1.3
[redacted]	51	FUNCTION4 PFK	430.9728	39.24	0.000	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	1.9
[redacted]	51	FUNCTION4 PFK	430.9728	44.97	0.000	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	0.7
[redacted]	51	FUNCTION4 PFK	430.9728	44.77	0.000	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	0.5
[redacted]	51	FUNCTION4 PFK	430.9728	43.75	0.000	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	1.8
[redacted]	51	FUNCTION4 PFK	430.9728	43.36	0.000	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	1.5
[redacted]	51	FUNCTION4 PFK	430.9728	42.22	0.000	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	1.4
[redacted]	51	FUNCTION4 PFK	430.9728	42.13	0.000	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	1.7
[redacted]	51	FUNCTION4 PFK	430.9728	42.10	0.000	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	1.0
[redacted]	51	FUNCTION4 PFK	430.9728	41.63	0.000	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	1.6
[redacted]	51	FUNCTION4 PFK	430.9728	41.58	0.000	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	0.9
[redacted]	51	FUNCTION4 PFK	430.9728	41.41	0.000	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	0.7
[redacted]	51	FUNCTION4 PFK	430.9728	41.35	0.000	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	1.1
[redacted]	51	FUNCTION4 PFK	430.9728	41.30	0.000	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	1.4
[redacted]	51	FUNCTION4 PFK	430.9728	41.09	0.000	[redacted]	[redacted]	[redacted]	[redacted]	[redacted]	0.8

D: WU70OPR, Name: 13070109, Date: 01-Jul-2013, Time: 16:31:17, Conditions: AUTOSPEC01, User: pk

PFK5

	52	FUNCTION5 PFK	480.9696	45.24	0.000						1.0
	52	FUNCTION5 PFK	480.9696	45.03	0.000						6.7
	52	FUNCTION5 PFK	480.9696	46.78	0.000						1.4
	52	FUNCTION5 PFK	480.9696	46.74	0.000						1.1
	52	FUNCTION5 PFK	480.9696	46.72	0.000						0.5
	52	FUNCTION5 PFK	480.9696	46.68	0.000						0.4
	52	FUNCTION5 PFK	480.9696	46.64	0.000						0.7
	52	FUNCTION5 PFK	480.9696	46.59	0.000						1.2
	52	FUNCTION5 PFK	480.9696	46.54	0.000						1.1
	52	FUNCTION5 PFK	480.9696	46.47	0.000						0.4
	52	FUNCTION5 PFK	480.9696	46.40	0.000						0.4
	52	FUNCTION5 PFK	480.9696	46.18	0.000						0.6
	52	FUNCTION5 PFK	480.9696	45.95	0.000						0.3
	52	FUNCTION5 PFK	480.9696	45.85	0.000						1.1
	52	FUNCTION5 PFK	480.9696	45.70	0.000						1.4
	52	FUNCTION5 PFK	480.9696	45.62	0.000						1.5
	52	FUNCTION5 PFK	480.9696	45.55	0.000						0.7
	52	FUNCTION5 PFK	480.9696	45.39	0.000						2.0
	52	FUNCTION5 PFK	480.9696	48.58	0.000						0.5
	52	FUNCTION5 PFK	480.9696	48.50	0.000						0.9
	52	FUNCTION5 PFK	480.9696	48.42	0.000						1.3
	52	FUNCTION5 PFK	480.9696	48.34	0.000						0.4
	52	FUNCTION5 PFK	480.9696	48.18	0.000						1.5
	52	FUNCTION5 PFK	480.9696	48.14	0.000						1.8
	52	FUNCTION5 PFK	480.9696	48.02	0.000						1.8
	52	FUNCTION5 PFK	480.9696	47.53	0.000						1.3
	52	FUNCTION5 PFK	480.9696	47.47	0.000						1.0
	52	FUNCTION5 PFK	480.9696	47.38	0.000						0.8
	52	FUNCTION5 PFK	480.9696	47.33	0.000						0.6
	52	FUNCTION5 PFK	480.9696	47.26	0.000						0.8
	52	FUNCTION5 PFK	480.9696	47.15	0.000						1.0
	52	FUNCTION5 PFK	480.9696	46.99	0.000						0.8
	52	FUNCTION5 PFK	480.9696	46.91	0.000						0.8
	52	FUNCTION5 PFK	480.9696	46.87	0.000						0.8
	52	FUNCTION5 PFK	480.9696	49.04	0.000						0.8
	52	FUNCTION5 PFK	480.9696	48.79	0.000						1.2
	52	FUNCTION5 PFK	480.9696	48.73	0.000						1.4
	52	FUNCTION5 PFK	480.9696	48.66	0.000						1.3

ETHERS1

Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:46 Pacific Daylight Time

D: WU70OPR, Name: 13070109, Date: 01-Jul-2013, Time: 16:31:17, Conditions: AUTOSPEC01, User: pk

ETHERS2

	54	FUNCTION1 HPCD...	409.7974	27.83	0.000	0.000					1.8
	54	FUNCTION1 HPCD...	409.7974	27.72	0.000	0.000					2.0
	54	FUNCTION1 HPCD...	409.7974	26.94	0.000	0.000					3.8
	54	FUNCTION1 HPCD...	409.7974	26.29	0.000	0.000					1.5
	54	FUNCTION1 HPCD...	409.7974	25.94	0.000	0.000					2.3
	54	FUNCTION1 HPCD...	409.7974	25.33	0.000	0.000					1.5
	54	FUNCTION1 HPCD...	409.7974	24.79	0.000	0.000					1.8
	54	FUNCTION1 HPCD...	409.7974	22.96	0.000	0.000					1.5
	54	FUNCTION1 HPCD...	409.7974	22.40	0.000	0.000					1.0
	54	FUNCTION1 HPCD...	409.7974	22.16	0.000	0.000					1.5

ETHERS3

	55	FUNCTION2 HPCD...	409.7974	33.57	0.000	0.000					2.4
	55	FUNCTION2 HPCD...	409.7974	33.17	0.000	0.000					2.8
	55	FUNCTION2 HPCD...	409.7974	32.56	0.000	0.000					1.7
	55	FUNCTION2 HPCD...	409.7974	32.12	0.000	0.000					2.6
	55	FUNCTION2 HPCD...	409.7974	31.64	0.000	0.000					3.6
	55	FUNCTION2 HPCD...	409.7974	31.19	0.000	0.000					3.5
	55	FUNCTION2 HPCD...	409.7974	30.98	0.000	0.000					2.6
	55	FUNCTION2 HPCD...	409.7974	30.81	0.000	0.000					1.5
	55	FUNCTION2 HPCD...	409.7974	29.61	0.000	0.000					1.9
	55	FUNCTION2 HPCD...	409.7974	29.11	0.000	0.000					1.2

ETHERS4

ETHERS5

	57	FUNCTION4 NCDPE	479.7165	44.37	0.000	0.000					2.1
	57	FUNCTION4 NCDPE	479.7165	41.87	0.000	0.000					2.0

ETHERS6

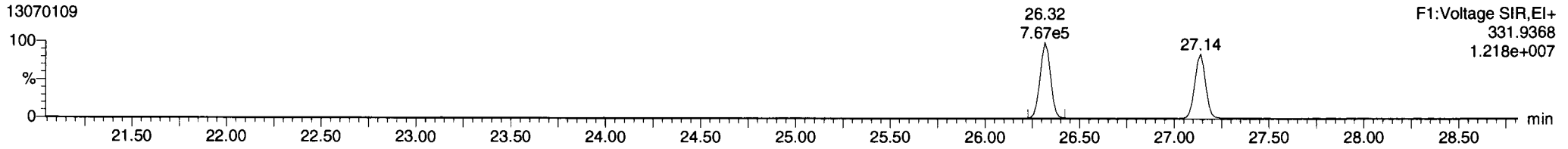
	58	FUNCTION5 DCDPE	513.6775	48.35	0.000	0.000					10.9

Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:46 Pacific Daylight Time

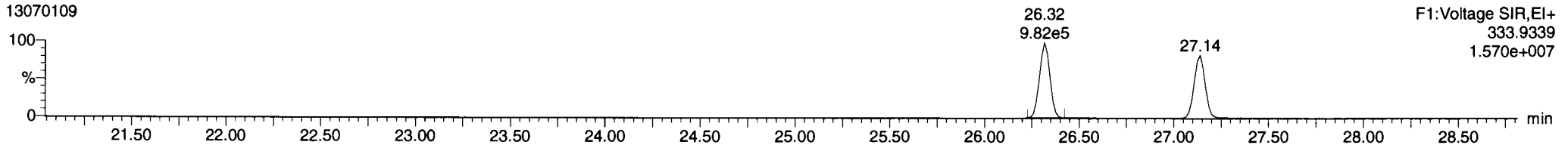
Method: P:\DIOXIN8290.pro\MethDB\Dioxin130617.mdb 28 Jun 2013 10:21:28
Calibration: P:\DIOXIN8290.pro\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

ID: WU70OPR, Name: 13070109, Date: 01-Jul-2013, Time: 16:31:17, Conditions: AUTOSPEC01, User: pk

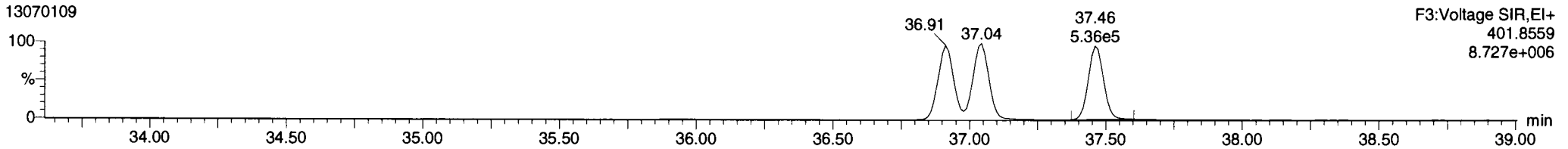
13C-1234-TCDD



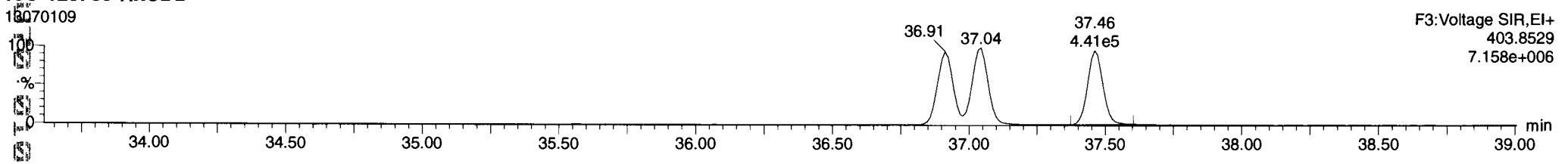
13C-1234-TCDD



13C-123789-HxCDD



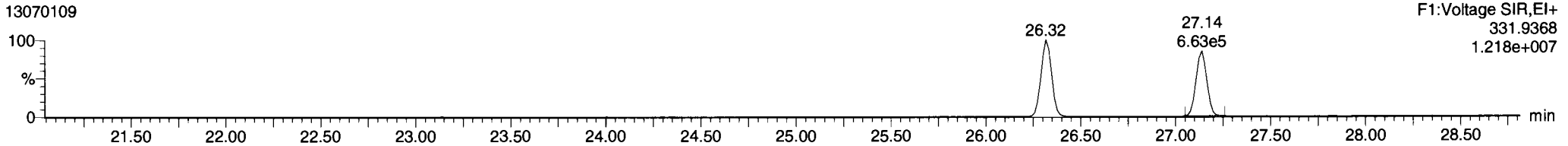
13C-123789-HxCDD



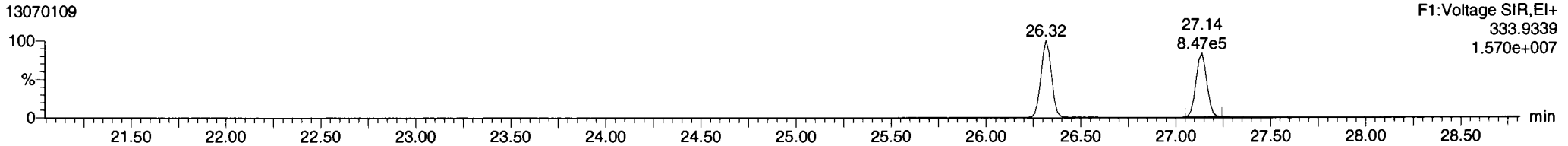
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:46 Pacific Daylight Time

ID: WU70OPR, Name: 13070109, Date: 01-Jul-2013, Time: 16:31:17, Conditions: AUTOSPEC01, User: pk

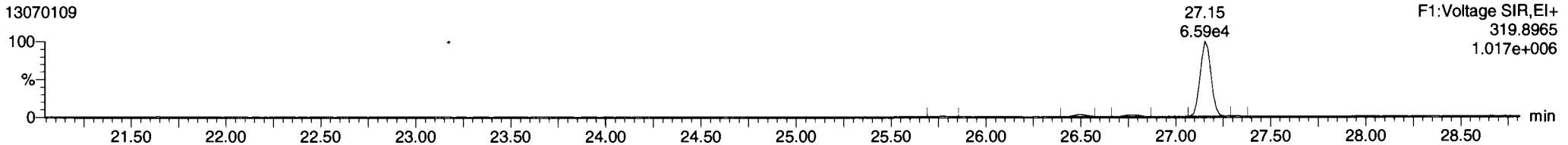
13C-2378-TCDD



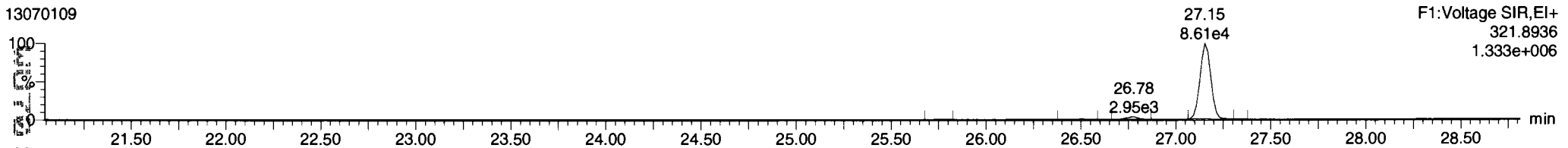
13C-2378-TCDD



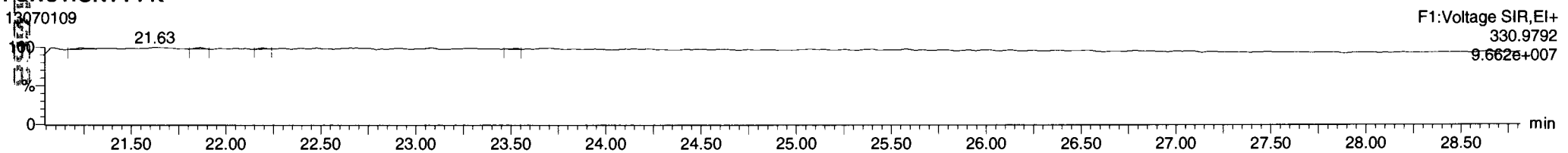
Total-tetradioxins



Total-tetradioxins



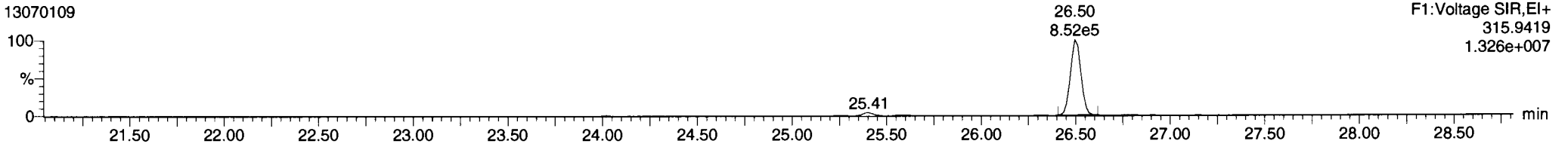
FUNCTION1 PFK



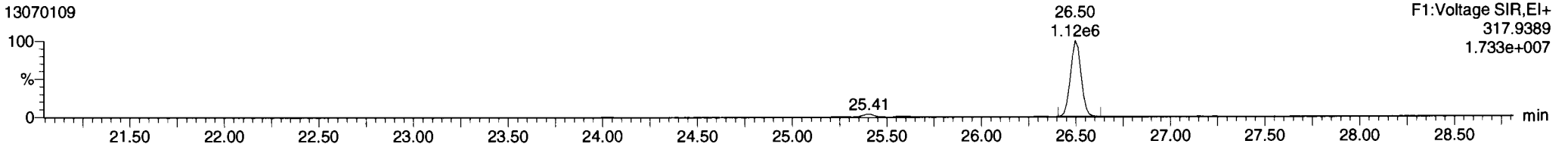
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:46 Pacific Daylight Time

ID: WU70OPR, Name: 13070109, Date: 01-Jul-2013, Time: 16:31:17, Conditions: AUTOSPEC01, User: pk

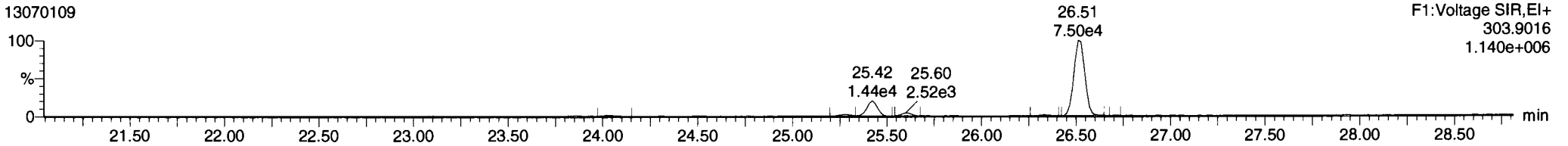
13C-2378-TCDF



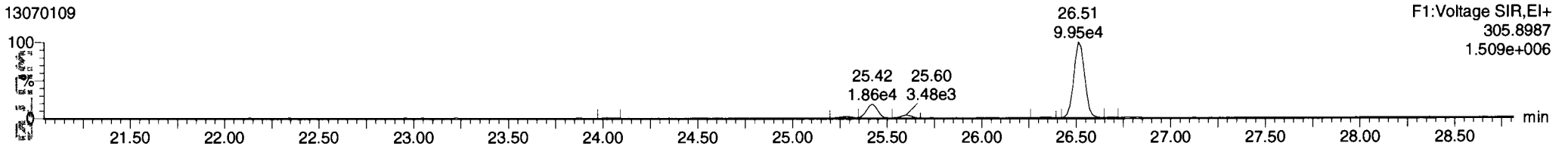
13C-2378-TCDF



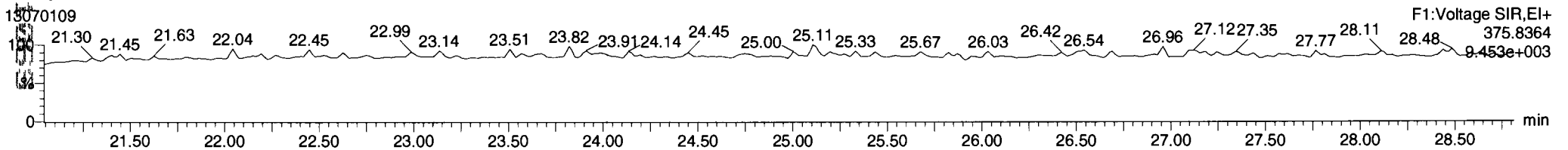
Total-tetrafurans



Total-tetrafurans



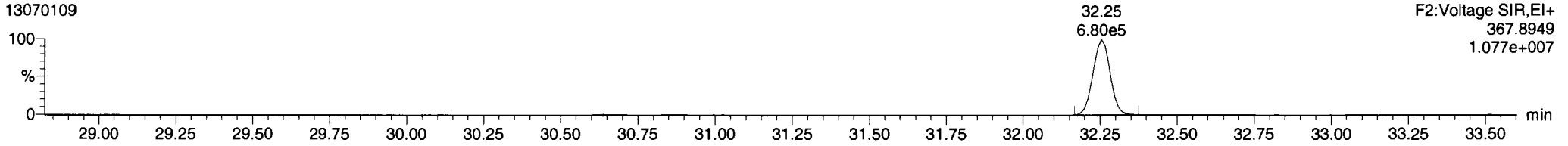
FUNCTION1 HXCDPE



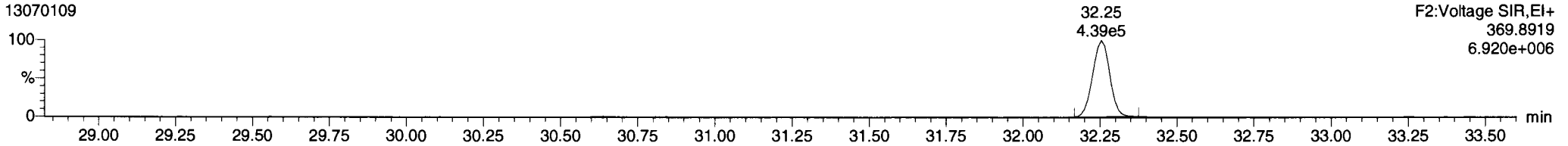
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:46 Pacific Daylight Time

ID: WU70OPR, Name: 13070109, Date: 01-Jul-2013, Time: 16:31:17, Conditions: AUTOSPEC01, User: pk

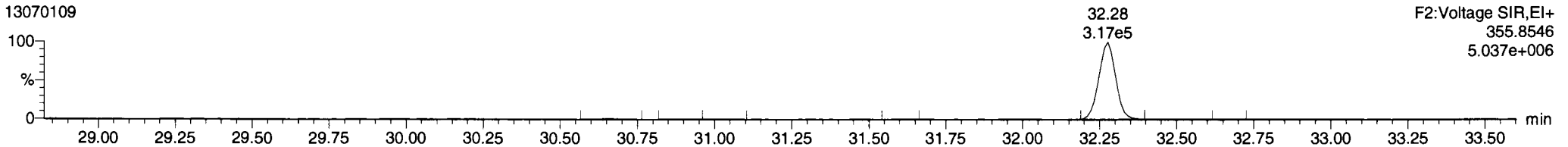
13C-12378-PeCDD



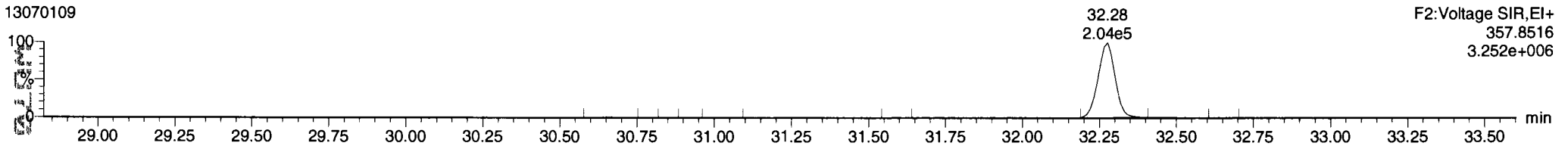
13C-12378-PeCDD



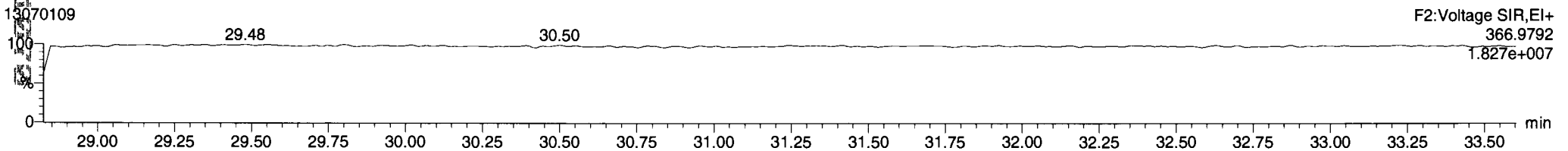
Total-pentadioxins



Total-pentadioxins



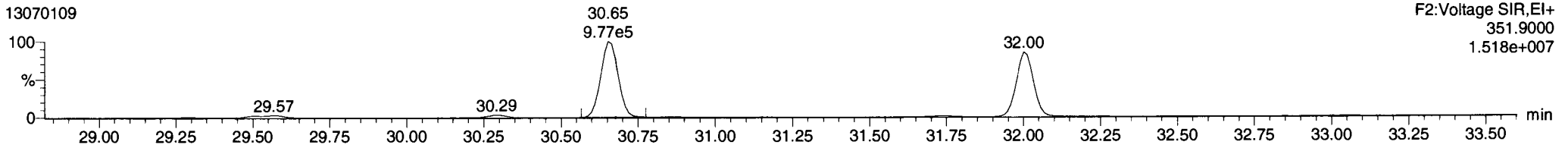
FUNCTION2 PFK



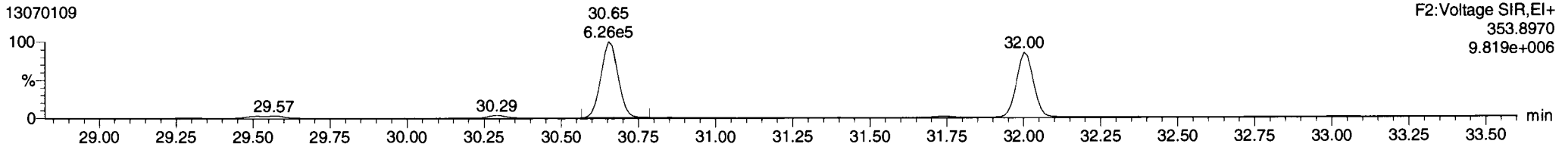
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:46 Pacific Daylight Time

ID: WU70OPR, Name: 13070109, Date: 01-Jul-2013, Time: 16:31:17, Conditions: AUTOSPEC01, User: pk

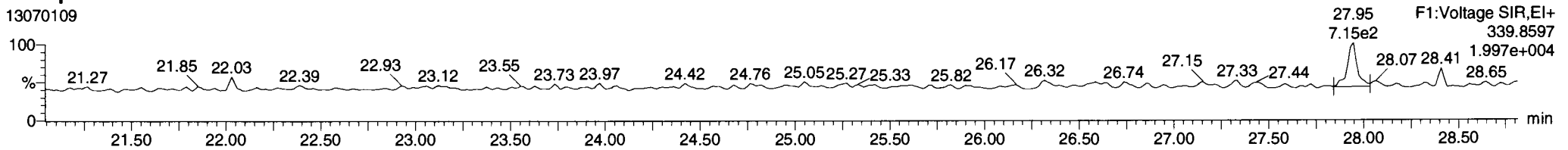
13C-12378-PeCDF



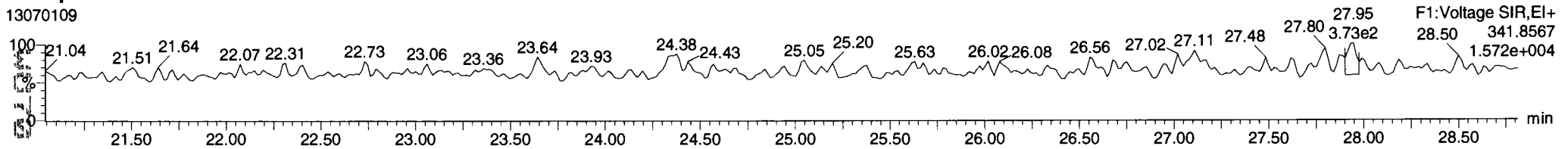
13C-12378-PeCDF



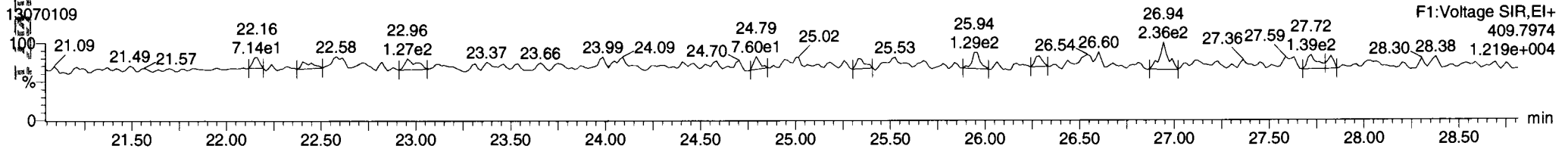
Total-penta1



Total-penta1



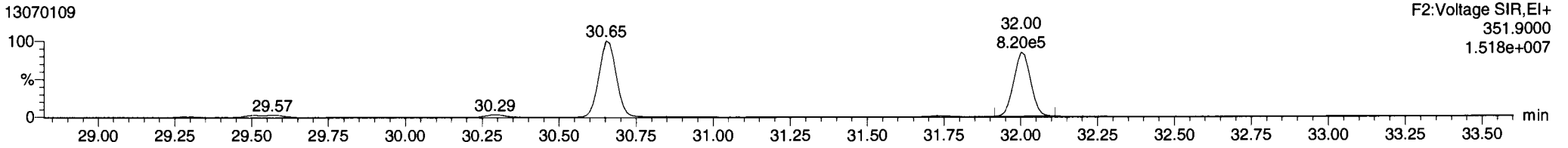
FUNCTION1 HPCDPE



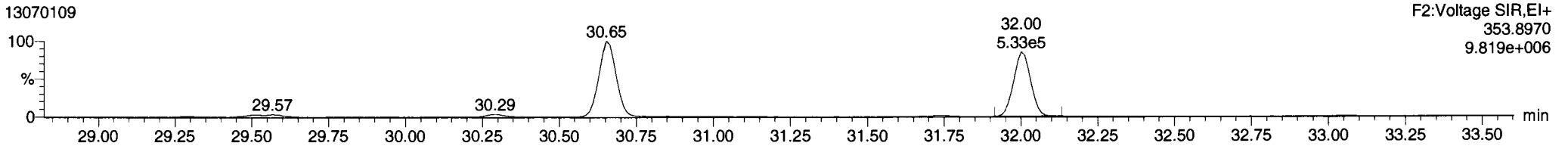
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:46 Pacific Daylight Time

ID: WU70OPR, Name: 13070109, Date: 01-Jul-2013, Time: 16:31:17, Conditions: AUTOSPEC01, User: pk

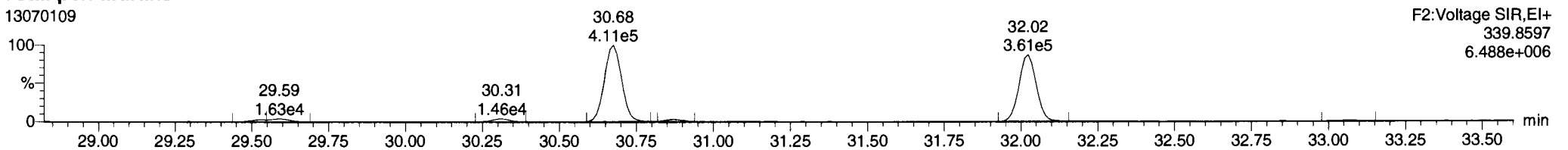
13C-23478-PeCDF



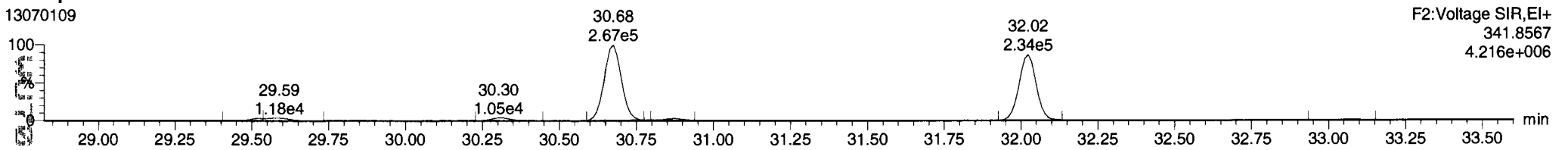
13C-23478-PeCDF



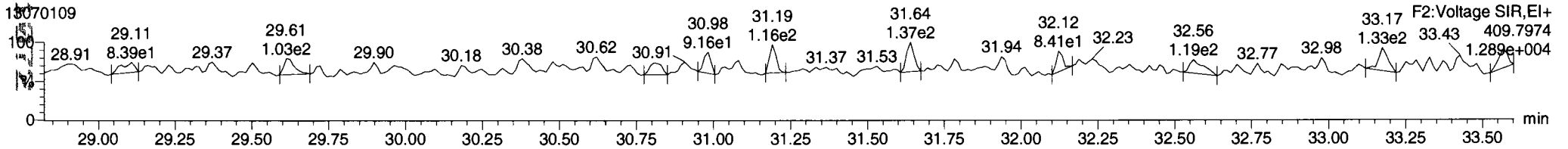
Total-pentafurans



Total-pentafurans



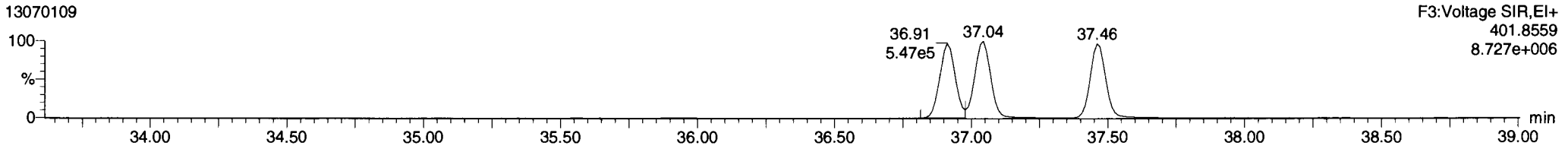
FUNCTION2 HPCDPE



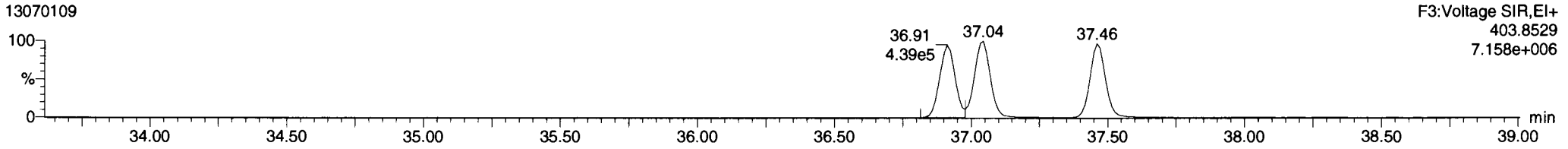
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:46 Pacific Daylight Time

ID: WU70OPR, Name: 13070109, Date: 01-Jul-2013, Time: 16:31:17, Conditions: AUTOSPEC01, User: pk

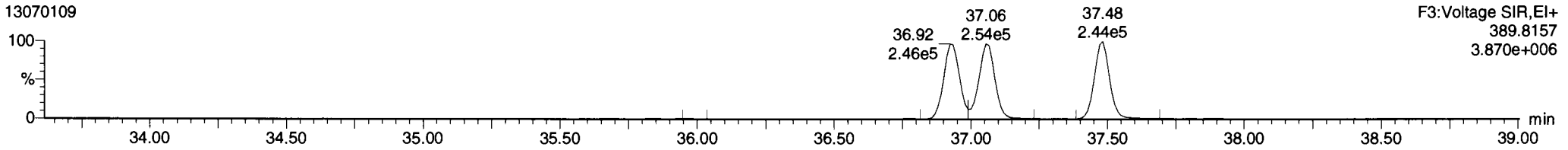
13C-123478-HxCDD



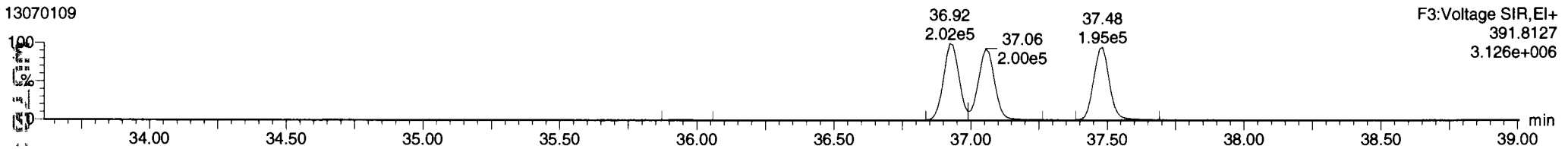
13C-123478-HxCDD



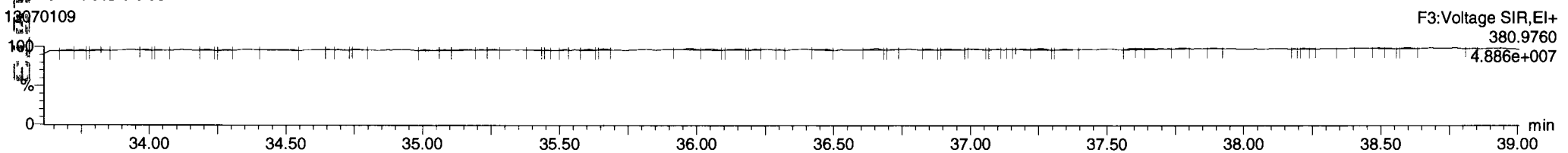
Total-hexadioxins



Total-hexadioxins



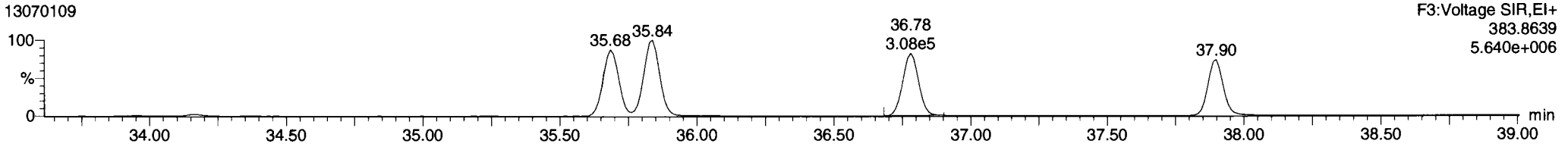
FUNCTION3 PFK



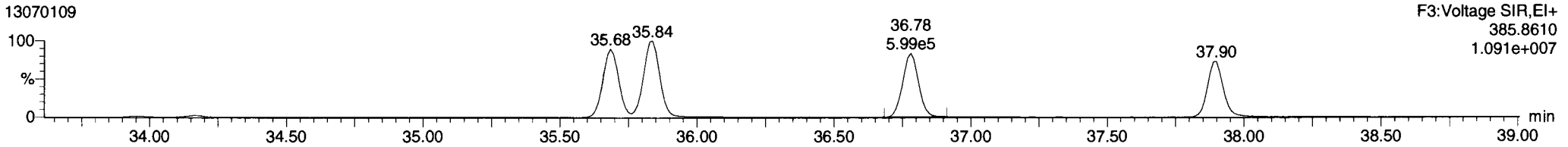
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:46 Pacific Daylight Time

ID: WU70OPR, Name: 13070109, Date: 01-Jul-2013, Time: 16:31:17, Conditions: AUTOSPEC01, User: pk

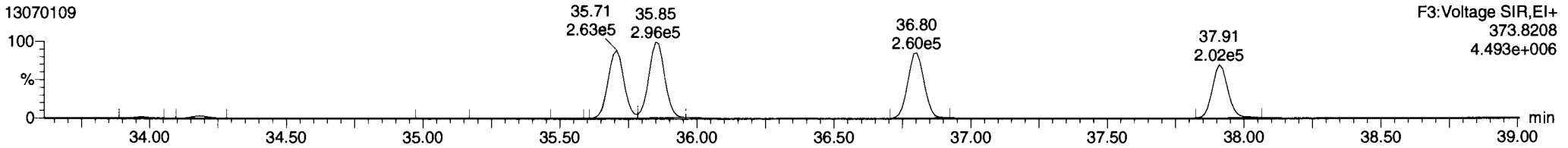
13C-234678-HxCDF



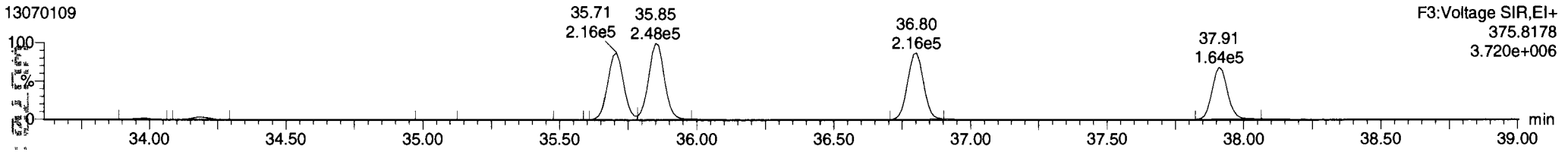
13C-234678-HxCDF



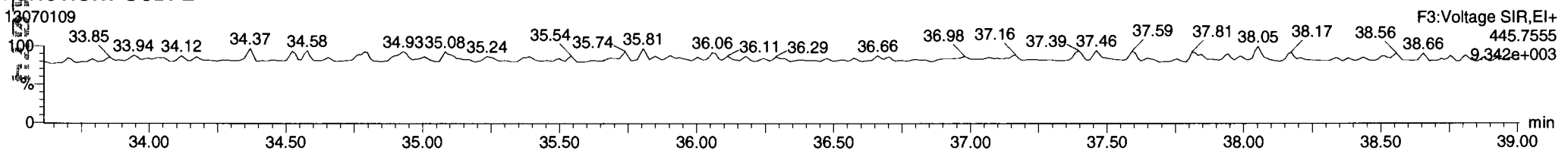
Total-hexafurans



Total-hexafurans



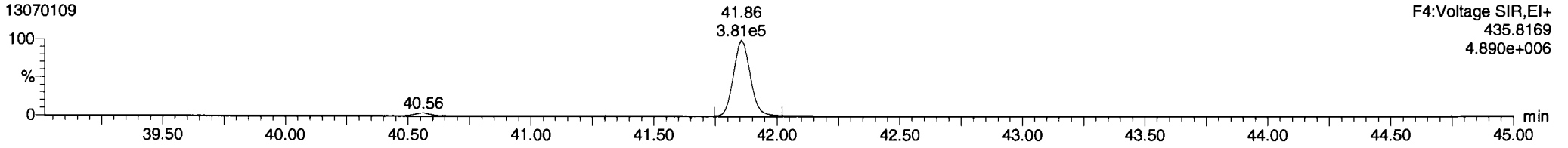
FUNCTION3 OCDPE



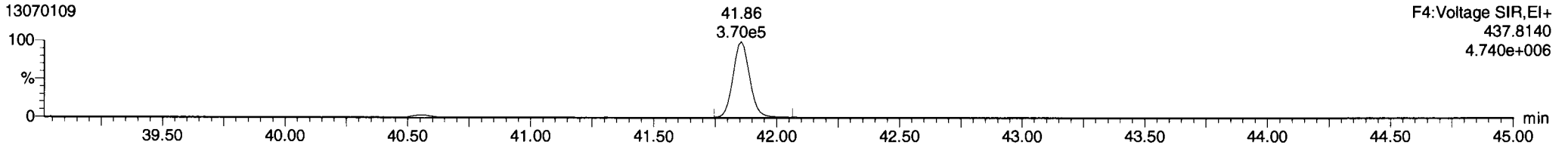
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:46 Pacific Daylight Time

ID: WU70OPR, Name: 13070109, Date: 01-Jul-2013, Time: 16:31:17, Conditions: AUTOSPEC01, User: pk

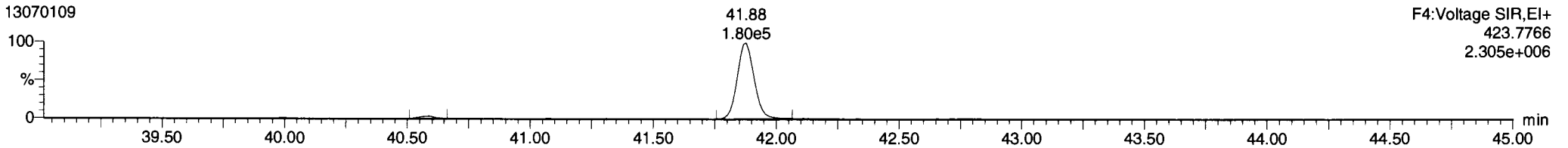
13C-1234678-HpCDD



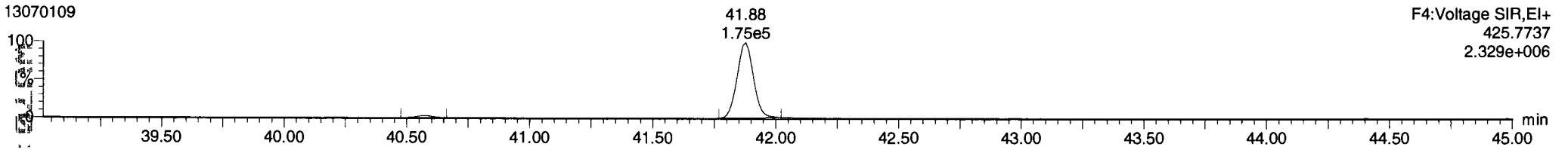
13C-1234678-HpCDD



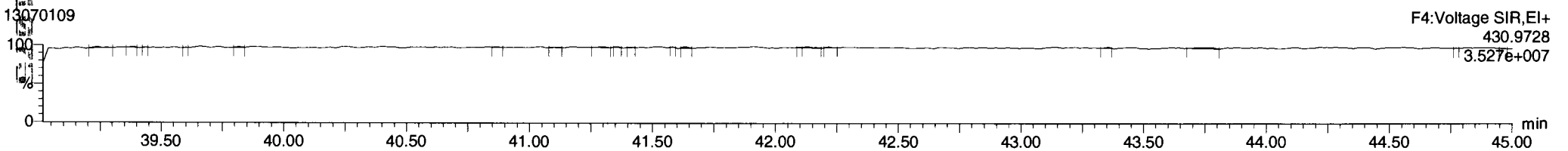
Total-heptadioxins



Total-heptadioxins



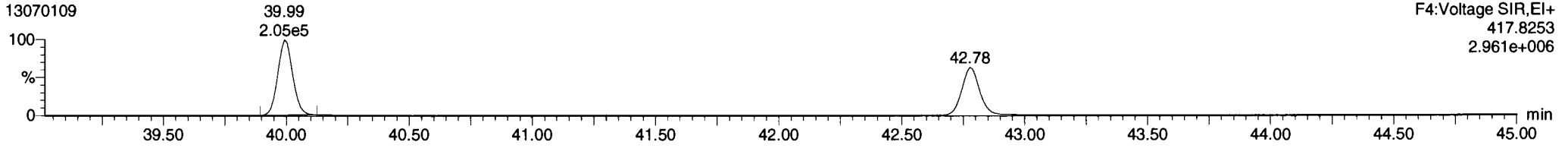
FUNCTION4 PFK



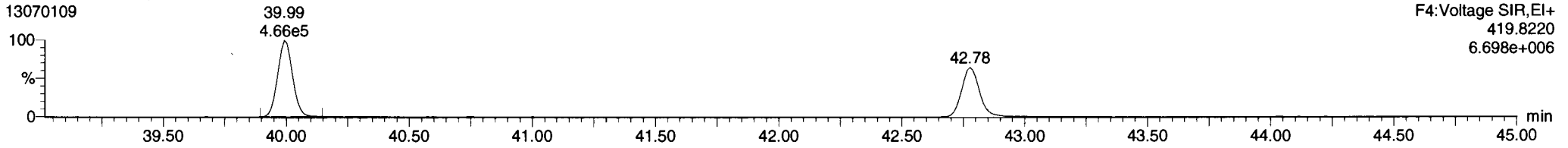
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:46 Pacific Daylight Time

ID: WU70OPR, Name: 13070109, Date: 01-Jul-2013, Time: 16:31:17, Conditions: AUTOSPEC01, User: pk

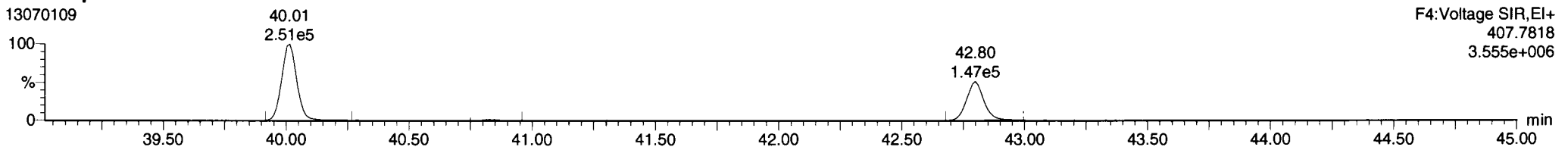
13C-1234678-HpCDF



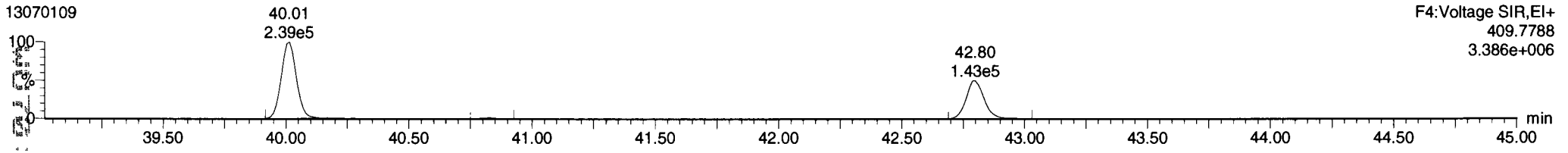
13C-1234678-HpCDF



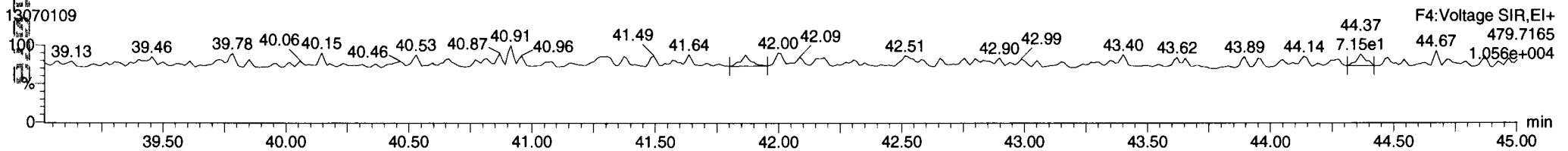
Total-heptafurans



Total-heptafurans



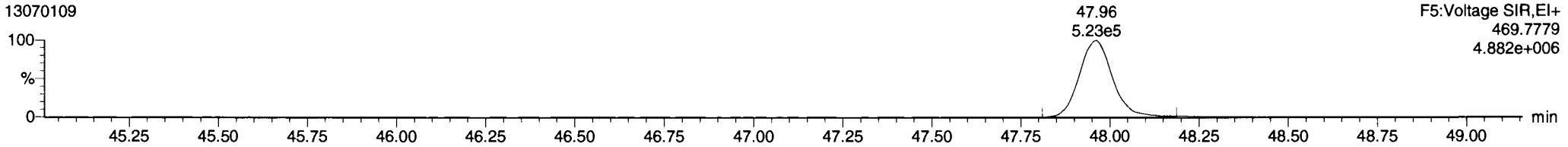
FUNCTION4 NCDPE



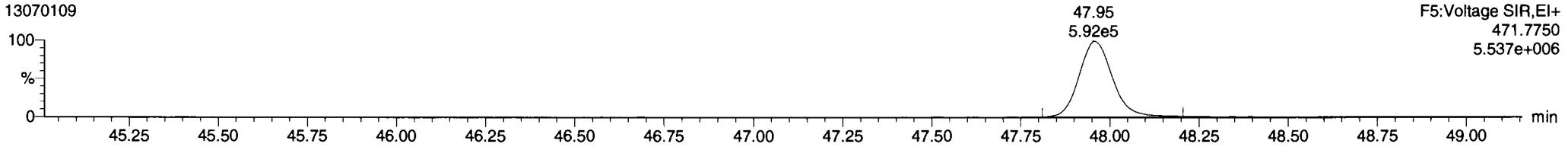
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:46 Pacific Daylight Time

ID: WU70OPR, Name: 13070109, Date: 01-Jul-2013, Time: 16:31:17, Conditions: AUTOSPEC01, User: pk

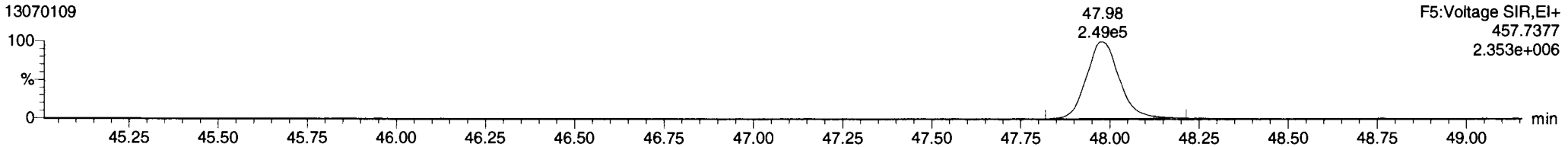
13C-OCDD



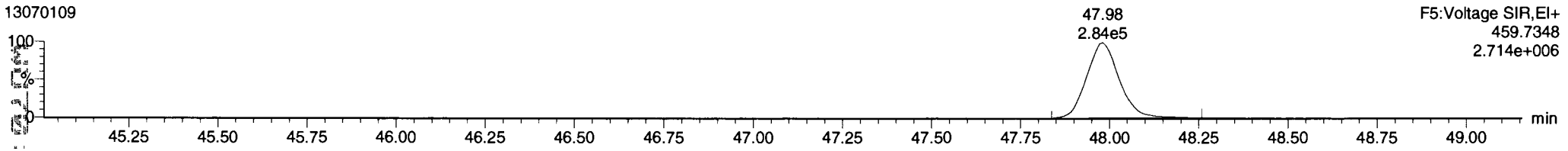
13C-OCDD



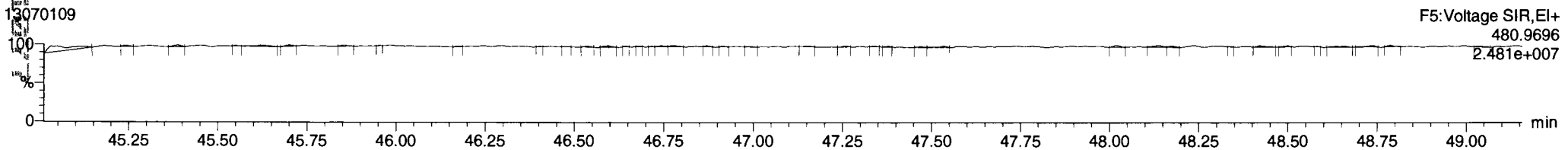
OCDD



OCDD



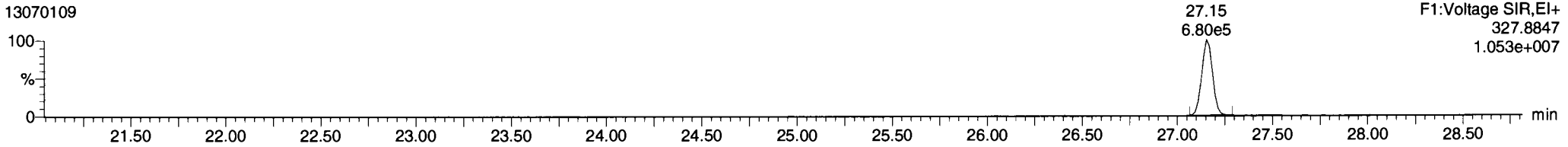
FUNCTION5 PFK



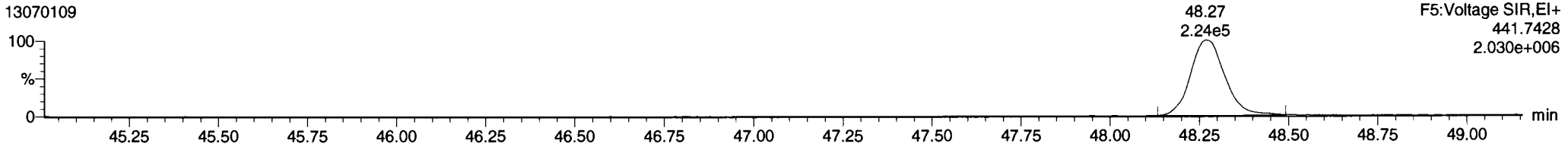
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:40:46 Pacific Daylight Time

ID: WU70OPR, Name: 13070109, Date: 01-Jul-2013, Time: 16:31:17, Conditions: AUTOSPEC01, User: pk

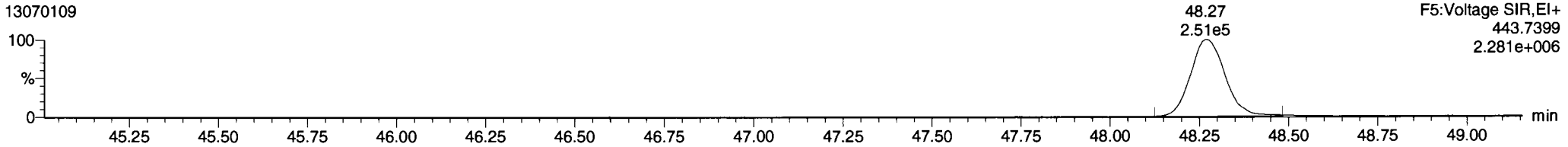
37CL-2378-TCDD



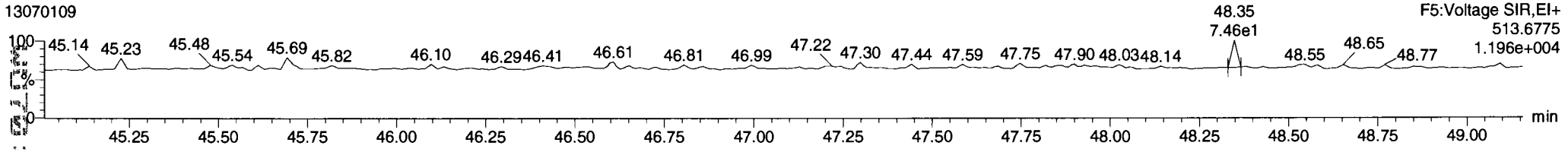
OCDF



OCDF



FUNCTION5 DCDPE



Quantify Sample Summary Report **MassLynx 4.1 SCN 714**
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:06 Pacific Daylight Time

7/2/13

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130617.mdb 28 Jun 2013 10:21:28
Calibration: P:\DIOXIN8290.pro\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

ID: WU70B, Name: 13070110, Date: 01-Jul-2013, Time: 17:23:33, Conditions: AUTOSPEC01, User: pk

Name	RT	RRT						S/N							
2378-TCDF	26.526	1.001	2.05e3	2.91e3	0.771	0.702	0.770	17.1	1936	1737	3.31e4	4.38e4	NO	0.260	0.260	
12378-PeCDF	30.687	1.000	2.43e3	2.05e3	0.814	1.189	1.550	28.1	1305	3455	3.67e4	2.77e4	YES	0.202	0.227	X
23478-PeCDF	32.035	1.000	3.22e3	1.64e3	0.837	1.960	1.550	39.6	1305	3455	5.17e4	2.87e4	YES	0.225	0.261	
123478-HxCDF	35.751	1.001	2.76e3	2.47e3	0.967	1.114	1.240	23.5	1576	1459	3.70e4	3.86e4	NO	0.313	0.313	
234678-HxCDF	36.825	1.000	3.11e3	2.52e3	1.000	1.233	1.240	24.0	1576	1459	3.78e4	2.82e4	NO	0.344	0.344	
123678-HxCDF	35.871	1.000	2.37e3	2.06e3	0.951	1.150	1.240	25.7	1576	1459	4.05e4	3.18e4	NO	0.259	0.259	
123789-HxCDF	37.943	1.001	1.21e3	1.03e3	0.874	1.169	1.240	10.9	1576	1459	1.72e4	1.63e4	NO	0.151	0.151	
1234678-HpCDF	40.048	1.001	1.07e4	1.05e4	1.072	1.018	1.050	175.9	867	1467	1.52e5	1.60e5	NO	1.711	1.711	B
1234789-HpCDF	42.843	1.001	1.07e3	1.29e3	1.085	0.827	1.050	16.9	867	1467	1.47e4	1.79e4	YES	0.203	0.230	
OCDF	48.331	1.007	1.46e4	1.97e4	0.878	0.742	0.890	242.0	628	1065	1.52e5	1.83e5	YES	3.977	4.397	B
2378-TCDD	27.184	1.001	4.91e2	2.13e3	0.936	0.231	0.770	4.6	1580	1644	7.22e3	3.05e4	YES	0.056	0.131	
12378-PeCDD	32.287	1.000	2.27e3	1.68e3	0.894	1.346	1.550	17.0	2027	1347	3.44e4	2.31e4	NO	0.265	0.265	
123478-HxCDD	36.978	1.001	2.00e3	1.90e3	0.898	1.052	1.240	23.3	1324	1323	3.09e4	2.59e4	YES	0.246	0.266	
123678-HxCDD	37.099	1.000	3.94e3	2.95e3	0.818	1.338	1.240	48.7	1324	1323	6.44e4	4.81e4	NO	0.498	0.498	
123789-HxCDD	37.515	1.012	3.44e3	2.42e3	0.789	1.421	1.240	35.4	1324	1323	4.68e4	3.89e4	NO	0.446	0.446	
1234678-HpCDD	41.911	1.001	4.84e4	4.57e4	0.879	1.059	1.050	577.7	1101	1527	6.36e5	6.00e5	NO	8.724	8.724	
OCDD	48.035	1.000	2.65e5	3.00e5	0.875	0.884	0.890	2505.7	995	976	2.49e6	2.82e6	NO	72.504	72.504	
13C-2378-TCDF	26.511	1.007	1.06e6	1.42e6	1.190	0.749	0.770	6030.7	2680	4422	1.62e7	2.17e7	NO		80.450	
13C-12378-PeCDF	30.676	1.165	1.48e6	9.50e5	0.904	1.556	1.550	6588.5	3457	2113	2.28e7	1.47e7	NO		103.843	
13C-23478-PeCDF	32.024	1.216	1.36e6	8.67e5	0.877	1.567	1.550	6124.4	3457	2113	2.12e7	1.36e7	NO		98.132	
13C-123478-HxCDF	35.718	0.952	5.87e5	1.14e6	1.096	0.516	0.510	4047.5	2160	3907	8.74e6	1.68e7	NO		91.123	
13C-123678-HxCDF	35.860	0.956	6.02e5	1.20e6	1.187	0.503	0.510	4132.9	2160	3907	8.93e6	1.75e7	NO		87.653	
13C-234678-HxCDF	36.825	0.982	5.59e5	1.08e6	1.040	0.520	0.510	3776.1	2160	3907	8.16e6	1.57e7	NO		91.050	
13C-123789-HxCDF	37.921	1.011	5.73e5	1.13e6	0.941	0.509	0.510	4167.7	2160	3907	9.00e6	1.73e7	NO		104.461	
13C-1234678-HpCDF	40.026	1.067	3.54e5	8.01e5	0.825	0.442	0.440	3157.5	1580	2086	4.99e6	1.13e7	NO		80.952	
13C-1234789-HpCDF	42.810	1.141	2.89e5	6.58e5	0.609	0.439	0.440	2268.5	1580	2086	3.58e6	8.03e6	NO		90.029	
13C-1234-TCDD	26.332	0.000	1.13e6	1.45e6	1.000	0.780	0.770	1970.4	9036	2832	1.78e7	2.31e7	NO		100.000	
13C-2378-TCDD	27.154	1.031	9.34e5	1.20e6	0.920	0.776	0.770	1589.0	9036	2832	1.44e7	1.84e7	NO		89.849	
13C-12378-PeCDD	32.276	1.226	1.01e6	6.51e5	0.669	1.556	1.550	5016.9	3116	1659	1.56e7	9.99e6	NO		96.190	
13C-123478-HxCDD	36.957	0.985	9.10e5	7.24e5	1.032	1.258	1.240	5233.2	2574	2201	1.35e7	1.07e7	NO		91.655	
13C-123678-HxCDD	37.088	0.989	9.48e5	7.46e5	1.146	1.271	1.240	5400.8	2574	2201	1.39e7	1.13e7	NO		85.550	
13C-1234678-HpCDD	41.889	1.117	6.23e5	6.03e5	0.789	1.034	1.050	2864.4	2826	1791	8.09e6	7.92e6	NO		89.945	
13C-OCDD	48.017	1.280	8.35e5	9.44e5	0.696	0.884	0.890	4484.2	1813	1586	8.13e6	9.15e6	NO		147.905	

Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:06 Pacific Daylight Time

ID: WU70B, Name: 13070110, Date: 01-Jul-2013, Time: 17:23:33, Conditions: AUTOSPEC01, User: pk

13C-123789-HxCDD	37.505	0.000	9.55e5	7.73e5	1.000	1.236	1.240	5879.1	2574	2201	1.51e7	1.22e7	NO		100.000
Total-tetrafurans			3.07e4		0.771				1936		4.72e5				3.735
Total-penta1			1.88e4						812		2.49e5				1.458
Total-pentafurans			2.76e4		0.826				1305		4.29e5				2.296
Total-hexafurans			3.08e4		0.948				1576		4.27e5				3.400
Total-heptafurans			2.63e4		1.079				867		3.64e5				4.637
Total-Furans			1.49e5		0.925				1936		2.09e6				19.923
Total-tetradioxins			2.66e4		0.936				1580		4.12e5				2.980
Total-pentadioxins			3.27e4		0.894				2027		4.58e5				3.568
Total-hexadioxins			5.11e4		0.835				1324		8.14e5				6.475
Total-heptadioxins			1.06e5		0.879				1101		1.45e6				18.990
Total-Dioxins			4.81e5		0.870				1580		5.63e6				104.517
Total-TEQ			6.30e5						1580		7.72e6				124.440
37CL-2378-TCDD	27.169	1.032	9.21e5		1.000			5543.9	2529		1.40e7				35.622
FUNCTION1 PFK			3.07e6						802416		4.71e7				
FUNCTION2 PFK			1.59e5						255237		4.91e6				0.000
FUNCTION3 PFK			9.98e5						435353		2.13e7				0.000
FUNCTION4 PFK			6.54e5						321178		1.86e7				
FUNCTION5 PFK			1.85e5						235817		6.62e6				
FUNCTION1 HXCDPE			1.85e2						419		4.48e3				0.000
FUNCTION1 HPCDPE			1.85e3						1303		4.00e4				0.000
FUNCTION2 HPCDPE			1.63e3						1467		4.11e4				0.000
FUNCTION3 OCDPE			1.82e2						789		4.84e3				0.000
FUNCTION4 NCDPE			3.16e3						974		6.37e4				0.000
FUNCTION5 DCDPE			0.00e0						378		0.00e0				

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130617.mdb 28 Jun 2013 10:21:28
Calibration: P:\DIOXIN8290.pro\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

ID: WU70B, Name: 13070110, Date: 01-Jul-2013, Time: 17:23:33, Conditions: AUTOSPEC01, User: pk

TF

	Name						EMPC				
35	Total-tetrafurans	303.9016	24.76	2633.760	0.771	0.138		0.59	0.77	YES	8.5
35	Total-tetrafurans	303.9016	24.61	2717.145	0.771	0.142		0.72	0.77	NO	9.1
35	Total-tetrafurans	303.9016	24.52	2406.629	0.771	0.126		0.80	0.77	NO	8.0
35	Total-tetrafurans	303.9016	24.36	1838.476	0.771	0.096		1.08	0.77	YES	6.8
35	Total-tetrafurans	303.9016	24.26	1962.976	0.771	0.103		0.68	0.77	NO	7.2
35	Total-tetrafurans	303.9016	24.17	1429.518	0.771	0.075		1.24	0.77	YES	6.5
35	Total-tetrafurans	303.9016	24.11	1262.673	0.771	0.066		1.16	0.77	YES	6.7
35	Total-tetrafurans	303.9016	24.02	4397.550	0.771	0.230		0.52	0.77	YES	7.8
35	Total-tetrafurans	303.9016	23.85	6871.294	0.771	0.360		0.79	0.77	NO	21.4
35	Total-tetrafurans	303.9016	23.27	2174.225	0.771	0.114		0.66	0.77	NO	7.8
35	Total-tetrafurans	303.9016	23.00	1654.894	0.771	0.087		0.68	0.77	NO	6.3
35	Total-tetrafurans	303.9016	26.75	6547.759	0.771	0.343		0.74	0.77	NO	23.6
35	Total-tetrafurans	303.9016	26.66	3007.180	0.771	0.158		0.96	0.77	YES	13.3
1	2378-TCDF	303.9016	26.53	4958.751	0.771	0.260	0.260	0.70	0.77	NO	17.1
35	Total-tetrafurans	303.9016	26.35	1738.084	0.771	0.091		0.97	0.77	YES	9.6
35	Total-tetrafurans	303.9016	26.30	3816.332	0.771	0.200		0.77	0.77	NO	12.9
35	Total-tetrafurans	303.9016	26.14	732.263	0.771	0.038		0.85	0.77	NO	4.3
35	Total-tetrafurans	303.9016	26.02	2630.404	0.771	0.138		0.71	0.77	NO	8.7
35	Total-tetrafurans	303.9016	25.82	1879.036	0.771	0.098		0.70	0.77	NO	4.3
35	Total-tetrafurans	303.9016	25.61	3578.555	0.771	0.188		0.86	0.77	NO	13.3
35	Total-tetrafurans	303.9016	25.42	4747.378	0.771	0.249		0.64	0.77	YES	14.7
35	Total-tetrafurans	303.9016	25.29	1890.678	0.771	0.099		0.89	0.77	YES	7.1
35	Total-tetrafurans	303.9016	25.20	6398.073	0.771	0.335		0.77	0.77	NO	18.8

PP

	Name						EMPC				
36	Total-penta1	339.8597	27.95	31119.091		1.458		1.53	1.55	NO	306.4

PF

	Name						EMPC				
37	Total-pentafurans	339.8597	30.09	1666.361	0.826	0.087		1.31	1.55	YES	10.1
37	Total-pentafurans	339.8597	29.60	6012.707	0.826	0.313		2.04	1.55	YES	41.9
37	Total-pentafurans	339.8597	29.52	6474.344	0.826	0.337		1.57	1.55	NO	51.7
37	Total-pentafurans	339.8597	29.42	4449.741	0.826	0.232		1.54	1.55	NO	29.6
37	Total-pentafurans	339.8597	29.32	1243.331	0.826	0.065		2.54	1.55	YES	10.9
3	23478-PeCDF	339.8597	32.03	4867.754	0.837	0.261	0.225	1.96	1.55	YES	39.6
37	Total-pentafurans	339.8597	31.88	1607.660	0.826	0.084		1.85	1.55	YES	11.6
37	Total-pentafurans	339.8597	31.78	3464.396	0.826	0.180		2.20	1.55	YES	28.4
37	Total-pentafurans	339.8597	30.99	1587.144	0.826	0.083		2.02	1.55	YES	13.9
37	Total-pentafurans	339.8597	30.90	2258.036	0.826	0.118		1.24	1.55	YES	15.7
2	12378-PeCDF	339.8597	30.69	4481.255	0.814	0.227	0.202	1.19	1.55	YES	28.1
37	Total-pentafurans	339.8597	30.39	1817.129	0.826	0.095		2.24	1.55	YES	18.5
37	Total-pentafurans	339.8597	30.34	4162.657	0.826	0.217		1.46	1.55	NO	28.5

ID: WU70B, Name: 13070110, Date: 01-Jul-2013, Time: 17:23:33, Conditions: AUTOSPEC01, User: pk

HF

	5	234678-HxCDF	373.8208	36.82	5634.484	1.000	0.344	0.344	1.23	1.24	NO	24.0
	38	Total-hexafurans	373.8208	36.27	578.291	0.948	0.036		1.48	1.24	YES	4.1
	6	123678-HxCDF	373.8208	35.87	4434.212	0.951	0.259	0.259	1.15	1.24	NO	25.7
	4	123478-HxCDF	373.8208	35.75	5229.947	0.967	0.313	0.313	1.11	1.24	NO	23.5
	38	Total-hexafurans	373.8208	35.56	3091.089	0.948	0.190		1.65	1.24	YES	17.8
	38	Total-hexafurans	373.8208	35.08	12077.973	0.948	0.743		1.23	1.24	NO	56.6
	38	Total-hexafurans	373.8208	34.76	908.959	0.948	0.056		2.80	1.24	YES	9.2
	38	Total-hexafurans	373.8208	34.22	15983.872	0.948	0.983		1.26	1.24	NO	70.4
	38	Total-hexafurans	373.8208	33.99	5261.091	0.948	0.324		1.17	1.24	NO	28.5
	7	123789-HxCDF	373.8208	37.94	2237.961	0.874	0.151	0.151	1.17	1.24	NO	10.9

HPF

	9	1234789-HpCDF	407.7818	42.84	2361.975	1.085	0.230	0.203	0.83	1.05	YES	16.9
	39	Total-heptafurans	407.7818	40.86	29494.386	1.079	2.602		0.90	1.05	NO	214.3
	39	Total-heptafurans	407.7818	40.56	1069.388	1.079	0.094		0.91	1.05	NO	12.9
	8	1234678-HpCDF	407.7818	40.05	21173.064	1.072	1.711	1.711	1.02	1.05	NO	175.9

Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:06 Pacific Daylight Time

D: WU70B, Name: 13070110, Date: 01-Jul-2013, Time: 17:23:33, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	35	Total-tetrafurans	303.9016	24.76	2633.760	0.771	0.138		0.59	0.77	YES	8.5
	35	Total-tetrafurans	303.9016	24.61	2717.145	0.771	0.142		0.72	0.77	NO	9.1
	35	Total-tetrafurans	303.9016	24.52	2406.629	0.771	0.126		0.80	0.77	NO	8.0
	35	Total-tetrafurans	303.9016	24.36	1838.476	0.771	0.096		1.08	0.77	YES	6.8
	35	Total-tetrafurans	303.9016	24.26	1962.976	0.771	0.103		0.68	0.77	NO	7.2
	35	Total-tetrafurans	303.9016	24.17	1429.518	0.771	0.075		1.24	0.77	YES	6.5
	35	Total-tetrafurans	303.9016	24.11	1262.673	0.771	0.066		1.16	0.77	YES	6.7
	35	Total-tetrafurans	303.9016	24.02	4397.550	0.771	0.230		0.52	0.77	YES	7.8
	35	Total-tetrafurans	303.9016	23.85	6871.294	0.771	0.360		0.79	0.77	NO	21.4
	35	Total-tetrafurans	303.9016	23.27	2174.225	0.771	0.114		0.66	0.77	NO	7.8
	35	Total-tetrafurans	303.9016	23.00	1654.894	0.771	0.087		0.68	0.77	NO	6.3
	35	Total-tetrafurans	303.9016	26.75	6547.759	0.771	0.343		0.74	0.77	NO	23.6
	35	Total-tetrafurans	303.9016	26.66	3007.180	0.771	0.158		0.96	0.77	YES	13.3
	1	2378-TCDF	303.9016	26.53	4958.751	0.771	0.260	0.260	0.70	0.77	NO	17.1
	35	Total-tetrafurans	303.9016	26.35	1738.084	0.771	0.091		0.97	0.77	YES	9.6
	35	Total-tetrafurans	303.9016	26.30	3816.332	0.771	0.200		0.77	0.77	NO	12.9
	35	Total-tetrafurans	303.9016	26.14	732.263	0.771	0.038		0.85	0.77	NO	4.3
	35	Total-tetrafurans	303.9016	26.02	2630.404	0.771	0.138		0.71	0.77	NO	8.7
	35	Total-tetrafurans	303.9016	25.82	1879.036	0.771	0.098		0.70	0.77	NO	4.3
	35	Total-tetrafurans	303.9016	25.61	3578.555	0.771	0.188		0.86	0.77	NO	13.3
	35	Total-tetrafurans	303.9016	25.42	4747.378	0.771	0.249		0.64	0.77	YES	14.7
	35	Total-tetrafurans	303.9016	25.29	1890.678	0.771	0.099		0.89	0.77	YES	7.1
	35	Total-tetrafurans	303.9016	25.20	6398.073	0.771	0.335		0.77	0.77	NO	18.8
	37	Total-pentafurans	339.8597	30.09	1666.361	0.826	0.087		1.31	1.55	YES	10.1
	37	Total-pentafurans	339.8597	29.60	6012.707	0.826	0.313		2.04	1.55	YES	41.9
	37	Total-pentafurans	339.8597	29.52	6474.344	0.826	0.337		1.57	1.55	NO	51.7
	37	Total-pentafurans	339.8597	29.42	4449.741	0.826	0.232		1.54	1.55	NO	29.6
	37	Total-pentafurans	339.8597	29.32	1243.331	0.826	0.065		2.54	1.55	YES	10.9
	3	23478-PeCDF	339.8597	32.03	4867.754	0.837	0.261	0.225	1.96	1.55	YES	39.6
	37	Total-pentafurans	339.8597	31.88	1607.660	0.826	0.084		1.85	1.55	YES	11.6
	37	Total-pentafurans	339.8597	31.78	3464.396	0.826	0.180		2.20	1.55	YES	28.4
	37	Total-pentafurans	339.8597	30.99	1587.144	0.826	0.083		2.02	1.55	YES	13.9
	37	Total-pentafurans	339.8597	30.90	2258.036	0.826	0.118		1.24	1.55	YES	15.7
	2	12378-PeCDF	339.8597	30.69	4481.255	0.814	0.227	0.202	1.19	1.55	YES	28.1
	37	Total-pentafurans	339.8597	30.39	1817.129	0.826	0.095		2.24	1.55	YES	18.5
	37	Total-pentafurans	339.8597	30.34	4162.657	0.826	0.217		1.46	1.55	NO	28.5
	5	234678-HxCDF	373.8208	36.82	5634.484	1.000	0.344	0.344	1.23	1.24	NO	24.0
	38	Total-hexafurans	373.8208	36.27	578.291	0.948	0.036		1.48	1.24	YES	4.1
	6	123678-HxCDF	373.8208	35.87	4434.212	0.951	0.259	0.259	1.15	1.24	NO	25.7
	4	123478-HxCDF	373.8208	35.75	5229.947	0.967	0.313	0.313	1.11	1.24	NO	23.5
	38	Total-hexafurans	373.8208	35.56	3091.089	0.948	0.190		1.65	1.24	YES	17.8
	38	Total-hexafurans	373.8208	35.08	12077.973	0.948	0.743		1.23	1.24	NO	56.6
	38	Total-hexafurans	373.8208	34.76	908.959	0.948	0.056		2.80	1.24	YES	9.2
	38	Total-hexafurans	373.8208	34.22	15983.872	0.948	0.983		1.26	1.24	NO	70.4
	38	Total-hexafurans	373.8208	33.99	5261.091	0.948	0.324		1.17	1.24	NO	28.5
	7	123789-HxCDF	373.8208	37.94	2237.961	0.874	0.151	0.151	1.17	1.24	NO	10.9
	9	1234789-HpCDF	407.7818	42.84	2361.975	1.085	0.230	0.203	0.83	1.05	YES	16.9
	39	Total-heptafurans	407.7818	40.86	29494.386	1.079	2.602		0.90	1.05	NO	214.3
	39	Total-heptafurans	407.7818	40.56	1069.388	1.079	0.094		0.91	1.05	NO	12.9

Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:06 Pacific Daylight Time

D: WU70B, Name: 13070110, Date: 01-Jul-2013, Time: 17:23:33, Conditions: AUTOSPEC01, User: pk

Furans,TF,PP,PF,HF,HPF,OF

	8	1234678-HpCDF	407.7818	40.05	21173.064	1.072	1.711	1.711	1.02	1.05	NO	175.9
	10	OCDF	441.7428	48.33	34333.806	0.878	4.397	3.977	0.74	0.89	YES	242.0
	36	Total-penta1	339.8597	27.95	31119.091		1.458		1.53	1.55	NO	306.4

TD

	41	Total-tetradioxins	319.8965	25.78	3424.332	0.936	0.171		1.05	0.77	YES	17.1
	41	Total-tetradioxins	319.8965	25.50	2374.254	0.936	0.119		0.99	0.77	YES	12.9
	41	Total-tetradioxins	319.8965	25.29	936.711	0.936	0.047		0.64	0.77	YES	4.0
	41	Total-tetradioxins	319.8965	24.76	1170.081	0.936	0.058		0.55	0.77	YES	3.7
	41	Total-tetradioxins	319.8965	24.57	15103.867	0.936	0.755		0.75	0.77	NO	62.8
	41	Total-tetradioxins	319.8965	24.29	21972.733	0.936	1.098		0.75	0.77	NO	88.7
	41	Total-tetradioxins	319.8965	27.32	1531.262	0.936	0.077		0.46	0.77	YES	5.8
	11	2378-TCDD	319.8965	27.18	2617.770	0.936	0.131	0.056	0.23	0.77	YES	4.6
	41	Total-tetradioxins	319.8965	26.78	2823.777	0.936	0.141		0.67	0.77	NO	7.0
	41	Total-tetradioxins	319.8965	26.51	3864.013	0.936	0.193		6.05	0.77	YES	34.9
	41	Total-tetradioxins	319.8965	26.35	3026.059	0.936	0.151		0.77	0.77	NO	16.1
	41	Total-tetradioxins	319.8965	26.15	782.343	0.936	0.039		0.54	0.77	YES	3.2

PD

	42	Total-pentadioxins	355.8546	31.21	1223.644	0.894	0.082		2.30	1.55	YES	6.8
	42	Total-pentadioxins	355.8546	31.18	671.132	0.894	0.045		1.42	1.55	NO	4.8
	42	Total-pentadioxins	355.8546	31.04	11538.270	0.894	0.775		1.49	1.55	NO	47.9
	42	Total-pentadioxins	355.8546	30.90	2627.390	0.894	0.176		1.22	1.55	YES	11.2
	42	Total-pentadioxins	355.8546	30.69	14302.012	0.894	0.960		1.86	1.55	YES	68.8
	42	Total-pentadioxins	355.8546	30.09	1488.493	0.894	0.100		1.29	1.55	YES	5.6
	42	Total-pentadioxins	355.8546	29.59	11234.444	0.894	0.754		1.53	1.55	NO	33.6
	42	Total-pentadioxins	355.8546	32.69	759.676	0.894	0.051		1.27	1.55	YES	4.9
	12	12378-PeCDD	355.8546	32.29	3948.525	0.894	0.265	0.265	1.35	1.55	NO	17.0
	42	Total-pentadioxins	355.8546	32.02	1508.198	0.894	0.101		4.99	1.55	YES	9.6
	42	Total-pentadioxins	355.8546	31.61	3832.261	0.894	0.257		1.36	1.55	NO	15.5

HD

	43	Total-hexadioxins	389.8157	35.97	12076.794	0.835	0.869		2.32	1.24	YES	87.6
	43	Total-hexadioxins	389.8157	35.71	2567.037	0.835	0.185		5.66	1.24	YES	24.6
	43	Total-hexadioxins	389.8157	35.61	30765.910	0.835	2.215		1.12	1.24	NO	186.1
	43	Total-hexadioxins	389.8157	34.80	14530.357	0.835	1.046		1.20	1.24	NO	100.0
	15	123789-HxCDD	389.8157	37.52	5857.593	0.789	0.446	0.446	1.42	1.24	NO	35.4
	43	Total-hexadioxins	389.8157	37.30	1108.554	0.835	0.080		1.39	1.24	NO	9.6
	14	123678-HxCDD	389.8157	37.10	6891.568	0.818	0.498	0.498	1.34	1.24	NO	48.7
	13	123478-HxCDD	389.8157	36.98	3895.818	0.898	0.266	0.246	1.05	1.24	YES	23.3
	43	Total-hexadioxins	389.8157	36.82	1924.355	0.835	0.139		4.91	1.24	YES	17.5
	43	Total-hexadioxins	389.8157	35.99	10166.502	0.835	0.732		0.86	1.24	YES	81.9

D: WU70B, Name: 13070110, Date: 01-Jul-2013, Time: 17:23:33, Conditions: AUTOSPEC01, User: pk

HPD

	16 1234678-HpCDD	423.7766	41.91	94028.184	0.879	8.724	8.724	1.06	1.05	NO	577.7
	44 Total-heptadioxins	423.7766	40.61	110644.285	0.879	10.266		1.07	1.05	NO	739.0

Dioxins,TD,PD,HD,HPD,OD

	41 Total-tetradioxins	319.8965	25.78	3424.332	0.936	0.171		1.05	0.77	YES	17.1
	41 Total-tetradioxins	319.8965	25.50	2374.254	0.936	0.119		0.99	0.77	YES	12.9
	41 Total-tetradioxins	319.8965	25.29	936.711	0.936	0.047		0.64	0.77	YES	4.0
	41 Total-tetradioxins	319.8965	24.76	1170.081	0.936	0.058		0.55	0.77	YES	3.7
	41 Total-tetradioxins	319.8965	24.57	15103.867	0.936	0.755		0.75	0.77	NO	62.8
	41 Total-tetradioxins	319.8965	24.29	21972.733	0.936	1.098		0.75	0.77	NO	88.7
	41 Total-tetradioxins	319.8965	27.32	1531.262	0.936	0.077		0.46	0.77	YES	5.8
	11 2378-TCDD	319.8965	27.18	2617.770	0.936	0.131	0.056	0.23	0.77	YES	4.6
	41 Total-tetradioxins	319.8965	26.78	2823.777	0.936	0.141		0.67	0.77	NO	7.0
	41 Total-tetradioxins	319.8965	26.51	3864.013	0.936	0.193		6.05	0.77	YES	34.9
	41 Total-tetradioxins	319.8965	26.35	3026.059	0.936	0.151		0.77	0.77	NO	16.1
	41 Total-tetradioxins	319.8965	26.15	782.343	0.936	0.039		0.54	0.77	YES	3.2
	42 Total-pentadioxins	355.8546	31.21	1223.644	0.894	0.082		2.30	1.55	YES	6.8
	42 Total-pentadioxins	355.8546	31.18	671.132	0.894	0.045		1.42	1.55	NO	4.8
	42 Total-pentadioxins	355.8546	31.04	11538.270	0.894	0.775		1.49	1.55	NO	47.9
	42 Total-pentadioxins	355.8546	30.90	2627.390	0.894	0.176		1.22	1.55	YES	11.2
	42 Total-pentadioxins	355.8546	30.69	14302.012	0.894	0.960		1.86	1.55	YES	68.8
	42 Total-pentadioxins	355.8546	30.09	1488.493	0.894	0.100		1.29	1.55	YES	5.6
	42 Total-pentadioxins	355.8546	29.59	11234.444	0.894	0.754		1.53	1.55	NO	33.6
	42 Total-pentadioxins	355.8546	32.69	759.676	0.894	0.051		1.27	1.55	YES	4.9
	12 12378-PeCDD	355.8546	32.29	3948.525	0.894	0.265	0.265	1.35	1.55	NO	17.0
	42 Total-pentadioxins	355.8546	32.02	1508.198	0.894	0.101		4.99	1.55	YES	9.6
	42 Total-pentadioxins	355.8546	31.61	3832.261	0.894	0.257		1.36	1.55	NO	15.5
	43 Total-hexadioxins	389.8157	35.97	12076.794	0.835	0.869		2.32	1.24	YES	87.6
	43 Total-hexadioxins	389.8157	35.71	2567.037	0.835	0.185		5.66	1.24	YES	24.6
	43 Total-hexadioxins	389.8157	35.61	30765.910	0.835	2.215		1.12	1.24	NO	186.1
	43 Total-hexadioxins	389.8157	34.80	14530.357	0.835	1.046		1.20	1.24	NO	100.0
	15 123789-HxCDD	389.8157	37.52	5857.593	0.789	0.446	0.446	1.42	1.24	NO	35.4
	43 Total-hexadioxins	389.8157	37.30	1108.554	0.835	0.080		1.39	1.24	NO	9.6
	14 123678-HxCDD	389.8157	37.10	6891.568	0.818	0.498	0.498	1.34	1.24	NO	48.7
	13 123478-HxCDD	389.8157	36.98	3895.818	0.898	0.266	0.246	1.05	1.24	YES	23.3
	43 Total-hexadioxins	389.8157	36.82	1924.355	0.835	0.139		4.91	1.24	YES	17.5
	16 1234678-HpCDD	423.7766	41.91	94028.184	0.879	8.724	8.724	1.06	1.05	NO	577.7
	44 Total-heptadioxins	423.7766	40.61	110644.285	0.879	10.266		1.07	1.05	NO	739.0
	17 OCDD	457.7377	48.03	564492.032	0.875	72.504	72.504	0.88	0.89	NO	2505.7
	43 Total-hexadioxins	389.8157	35.99	10166.502	0.835	0.732		0.86	1.24	YES	81.9

ID: WU70B, Name: 13070110, Date: 01-Jul-2013, Time: 17:23:33, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

	35	Total-tetrafurans	303.9016	24.76	2633.760	0.771	0.138		0.59	0.77	YES	8.5
	35	Total-tetrafurans	303.9016	24.61	2717.145	0.771	0.142		0.72	0.77	NO	9.1
	35	Total-tetrafurans	303.9016	24.52	2406.629	0.771	0.126		0.80	0.77	NO	8.0
	35	Total-tetrafurans	303.9016	24.36	1838.476	0.771	0.096		1.08	0.77	YES	6.8
	35	Total-tetrafurans	303.9016	24.26	1962.976	0.771	0.103		0.68	0.77	NO	7.2
	35	Total-tetrafurans	303.9016	24.17	1429.518	0.771	0.075		1.24	0.77	YES	6.5
	35	Total-tetrafurans	303.9016	24.11	1262.673	0.771	0.066		1.16	0.77	YES	6.7
	35	Total-tetrafurans	303.9016	24.02	4397.550	0.771	0.230		0.52	0.77	YES	7.8
	35	Total-tetrafurans	303.9016	23.85	6871.294	0.771	0.360		0.79	0.77	NO	21.4
	35	Total-tetrafurans	303.9016	23.27	2174.225	0.771	0.114		0.66	0.77	NO	7.8
	35	Total-tetrafurans	303.9016	23.00	1654.894	0.771	0.087		0.68	0.77	NO	6.3
	35	Total-tetrafurans	303.9016	26.75	6547.759	0.771	0.343		0.74	0.77	NO	23.6
	35	Total-tetrafurans	303.9016	26.66	3007.180	0.771	0.158		0.96	0.77	YES	13.3
	1	2378-TCDF	303.9016	26.53	4958.751	0.771	0.260	0.260	0.70	0.77	NO	17.1
	35	Total-tetrafurans	303.9016	26.35	1738.084	0.771	0.091		0.97	0.77	YES	9.6
	35	Total-tetrafurans	303.9016	26.30	3816.332	0.771	0.200		0.77	0.77	NO	12.9
	35	Total-tetrafurans	303.9016	26.14	732.263	0.771	0.038		0.85	0.77	NO	4.3
	35	Total-tetrafurans	303.9016	26.02	2630.404	0.771	0.138		0.71	0.77	NO	8.7
	35	Total-tetrafurans	303.9016	25.82	1879.036	0.771	0.098		0.70	0.77	NO	4.3
	35	Total-tetrafurans	303.9016	25.61	3578.555	0.771	0.188		0.86	0.77	NO	13.3
	35	Total-tetrafurans	303.9016	25.42	4747.378	0.771	0.249		0.64	0.77	YES	14.7
	35	Total-tetrafurans	303.9016	25.29	1890.678	0.771	0.099		0.89	0.77	YES	7.1
	35	Total-tetrafurans	303.9016	25.20	6398.073	0.771	0.335		0.77	0.77	NO	18.8
	37	Total-pentafurans	339.8597	30.09	1666.361	0.826	0.087		1.31	1.55	YES	10.1
	37	Total-pentafurans	339.8597	29.60	6012.707	0.826	0.313		2.04	1.55	YES	41.9
	37	Total-pentafurans	339.8597	29.52	6474.344	0.826	0.337		1.57	1.55	NO	51.7
	37	Total-pentafurans	339.8597	29.42	4449.741	0.826	0.232		1.54	1.55	NO	29.6
	37	Total-pentafurans	339.8597	29.32	1243.331	0.826	0.065		2.54	1.55	YES	10.9
	3	23478-PeCDF	339.8597	32.03	4867.754	0.837	0.261	0.225	1.96	1.55	YES	39.6
	37	Total-pentafurans	339.8597	31.88	1607.660	0.826	0.084		1.85	1.55	YES	11.6
	37	Total-pentafurans	339.8597	31.78	3464.396	0.826	0.180		2.20	1.55	YES	28.4
	37	Total-pentafurans	339.8597	30.99	1587.144	0.826	0.083		2.02	1.55	YES	13.9
	37	Total-pentafurans	339.8597	30.90	2258.036	0.826	0.118		1.24	1.55	YES	15.7
	2	12378-PeCDF	339.8597	30.69	4481.255	0.814	0.227	0.202	1.19	1.55	YES	28.1
	37	Total-pentafurans	339.8597	30.39	1817.129	0.826	0.095		2.24	1.55	YES	18.5
	37	Total-pentafurans	339.8597	30.34	4162.657	0.826	0.217		1.46	1.55	NO	28.5
	5	234678-HxCDF	373.8208	36.82	5634.484	1.000	0.344	0.344	1.23	1.24	NO	24.0
	38	Total-hexafurans	373.8208	36.27	578.291	0.948	0.036		1.48	1.24	YES	4.1
	6	123678-HxCDF	373.8208	35.87	4434.212	0.951	0.259	0.259	1.15	1.24	NO	25.7
	4	123478-HxCDF	373.8208	35.75	5229.947	0.967	0.313	0.313	1.11	1.24	NO	23.5
	38	Total-hexafurans	373.8208	35.56	3091.089	0.948	0.190		1.65	1.24	YES	17.8
	38	Total-hexafurans	373.8208	35.08	12077.973	0.948	0.743		1.23	1.24	NO	56.6
	38	Total-hexafurans	373.8208	34.76	908.959	0.948	0.056		2.80	1.24	YES	9.2
	38	Total-hexafurans	373.8208	34.22	15983.872	0.948	0.983		1.26	1.24	NO	70.4
	38	Total-hexafurans	373.8208	33.99	5261.091	0.948	0.324		1.17	1.24	NO	28.5
	7	123789-HxCDF	373.8208	37.94	2237.961	0.874	0.151	0.151	1.17	1.24	NO	10.9
	9	1234789-HpCDF	407.7818	42.84	2361.975	1.085	0.230	0.203	0.83	1.05	YES	16.9
	39	Total-heptafurans	407.7818	40.86	29494.386	1.079	2.602		0.90	1.05	NO	214.3
	39	Total-heptafurans	407.7818	40.56	1069.388	1.079	0.094		0.91	1.05	NO	9.9

Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:06 Pacific Daylight Time

ID: WU70B, Name: 13070110, Date: 01-Jul-2013, Time: 17:23:33, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

	8 1234678-HpCDF	407.7818	40.05	21173.064	1.072	1.711	1.711	1.02	1.05	NO	175.9
	10 OCDF	441.7428	48.33	34333.806	0.878	4.397	3.977	0.74	0.89	YES	242.0
	36 Total-penta1	339.8597	27.95	31119.091		1.458		1.53	1.55	NO	306.4
	41 Total-tetradioxins	319.8965	25.78	3424.332	0.936	0.171		1.05	0.77	YES	17.1
	41 Total-tetradioxins	319.8965	25.50	2374.254	0.936	0.119		0.99	0.77	YES	12.9
	41 Total-tetradioxins	319.8965	25.29	936.711	0.936	0.047		0.64	0.77	YES	4.0
	41 Total-tetradioxins	319.8965	24.76	1170.081	0.936	0.058		0.55	0.77	YES	3.7
	41 Total-tetradioxins	319.8965	24.57	15103.867	0.936	0.755		0.75	0.77	NO	62.8
	41 Total-tetradioxins	319.8965	24.29	21972.733	0.936	1.098		0.75	0.77	NO	88.7
	41 Total-tetradioxins	319.8965	27.32	1531.262	0.936	0.077		0.46	0.77	YES	5.8
	11 2378-TCDD	319.8965	27.18	2617.770	0.936	0.131	0.056	0.23	0.77	YES	4.6
	41 Total-tetradioxins	319.8965	26.78	2823.777	0.936	0.141		0.67	0.77	NO	7.0
	41 Total-tetradioxins	319.8965	26.51	3864.013	0.936	0.193		6.05	0.77	YES	34.9
	41 Total-tetradioxins	319.8965	26.35	3026.059	0.936	0.151		0.77	0.77	NO	16.1
	41 Total-tetradioxins	319.8965	26.15	782.343	0.936	0.039		0.54	0.77	YES	3.2
	42 Total-pentadioxins	355.8546	31.21	1223.644	0.894	0.082		2.30	1.55	YES	6.8
	42 Total-pentadioxins	355.8546	31.18	671.132	0.894	0.045		1.42	1.55	NO	4.8
	42 Total-pentadioxins	355.8546	31.04	11538.270	0.894	0.775		1.49	1.55	NO	47.9
	42 Total-pentadioxins	355.8546	30.90	2627.390	0.894	0.176		1.22	1.55	YES	11.2
	42 Total-pentadioxins	355.8546	30.69	14302.012	0.894	0.960		1.86	1.55	YES	68.8
	42 Total-pentadioxins	355.8546	30.09	1488.493	0.894	0.100		1.29	1.55	YES	5.6
	42 Total-pentadioxins	355.8546	29.59	11234.444	0.894	0.754		1.53	1.55	NO	33.6
	42 Total-pentadioxins	355.8546	32.69	759.676	0.894	0.051		1.27	1.55	YES	4.9
	12 12378-PeCDD	355.8546	32.29	3948.525	0.894	0.265	0.265	1.35	1.55	NO	17.0
	42 Total-pentadioxins	355.8546	32.02	1508.198	0.894	0.101		4.99	1.55	YES	9.6
	42 Total-pentadioxins	355.8546	31.61	3832.261	0.894	0.257		1.36	1.55	NO	15.5
	43 Total-hexadioxins	389.8157	35.97	12076.794	0.835	0.869		2.32	1.24	YES	87.6
	43 Total-hexadioxins	389.8157	35.71	2567.037	0.835	0.185		5.66	1.24	YES	24.6
	43 Total-hexadioxins	389.8157	35.61	30765.910	0.835	2.215		1.12	1.24	NO	186.1
	43 Total-hexadioxins	389.8157	34.80	14530.357	0.835	1.046		1.20	1.24	NO	100.0
	15 123789-HxCDD	389.8157	37.52	5857.593	0.789	0.446	0.446	1.42	1.24	NO	35.4
	43 Total-hexadioxins	389.8157	37.30	1108.554	0.835	0.080		1.39	1.24	NO	9.6
	14 123678-HxCDD	389.8157	37.10	6891.568	0.818	0.498	0.498	1.34	1.24	NO	48.7
	13 123478-HxCDD	389.8157	36.98	3895.818	0.898	0.266	0.246	1.05	1.24	YES	23.3
	43 Total-hexadioxins	389.8157	36.82	1924.355	0.835	0.139		4.91	1.24	YES	17.5
	16 1234678-HpCDD	423.7766	41.91	94028.184	0.879	8.724	8.724	1.06	1.05	NO	577.7
	44 Total-heptadioxins	423.7766	40.61	110644.285	0.879	10.266		1.07	1.05	NO	739.0
	17 OCDD	457.7377	48.03	564492.032	0.875	72.504	72.504	0.88	0.89	NO	2505.7
	43 Total-hexadioxins	389.8157	35.99	10166.502	0.835	0.732		0.86	1.24	YES	81.9

Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:06 Pacific Daylight Time

ID: WU70B, Name: 13070110, Date: 01-Jul-2013, Time: 17:23:33, Conditions: AUTOSPEC01, User: pk

PFK1

[redacted]	Fl	Name	[redacted]	RT	[redacted]	RRF M	[redacted]	Fit	EMPR	[redacted]	[redacted]	[redacted]	S/N
[redacted]	48	FUNCTION1 PFK	330.9792	21.85	0.000								2.8
[redacted]	48	FUNCTION1 PFK	330.9792	21.60	0.000								0.5
[redacted]	48	FUNCTION1 PFK	330.9792	21.51	0.000								2.1
[redacted]	48	FUNCTION1 PFK	330.9792	21.42	0.000								0.8
[redacted]	48	FUNCTION1 PFK	330.9792	21.34	0.000								2.5
[redacted]	48	FUNCTION1 PFK	330.9792	21.25	0.000								0.8
[redacted]	48	FUNCTION1 PFK	330.9792	24.90	0.000								1.7
[redacted]	48	FUNCTION1 PFK	330.9792	24.43	0.000								0.5
[redacted]	48	FUNCTION1 PFK	330.9792	24.37	0.000								0.6
[redacted]	48	FUNCTION1 PFK	330.9792	24.15	0.000								0.4
[redacted]	48	FUNCTION1 PFK	330.9792	24.03	0.000								2.0
[redacted]	48	FUNCTION1 PFK	330.9792	23.96	0.000								1.5
[redacted]	48	FUNCTION1 PFK	330.9792	23.82	0.000								2.6
[redacted]	48	FUNCTION1 PFK	330.9792	23.54	0.000								1.1
[redacted]	48	FUNCTION1 PFK	330.9792	23.19	0.000								2.1
[redacted]	48	FUNCTION1 PFK	330.9792	23.03	0.000								0.4
[redacted]	48	FUNCTION1 PFK	330.9792	22.87	0.000								0.5
[redacted]	48	FUNCTION1 PFK	330.9792	22.76	0.000								2.4
[redacted]	48	FUNCTION1 PFK	330.9792	22.48	0.000								2.6
[redacted]	48	FUNCTION1 PFK	330.9792	22.33	0.000								2.8
[redacted]	48	FUNCTION1 PFK	330.9792	22.24	0.000								1.7
[redacted]	48	FUNCTION1 PFK	330.9792	22.09	0.000								1.3
[redacted]	48	FUNCTION1 PFK	330.9792	27.44	0.000								1.1
[redacted]	48	FUNCTION1 PFK	330.9792	27.26	0.000								0.4
[redacted]	48	FUNCTION1 PFK	330.9792	27.02	0.000								0.4
[redacted]	48	FUNCTION1 PFK	330.9792	26.74	0.000								1.1
[redacted]	48	FUNCTION1 PFK	330.9792	26.68	0.000								1.5
[redacted]	48	FUNCTION1 PFK	330.9792	26.53	0.000								3.1
[redacted]	48	FUNCTION1 PFK	330.9792	26.42	0.000								0.9
[redacted]	48	FUNCTION1 PFK	330.9792	26.20	0.000								0.4
[redacted]	48	FUNCTION1 PFK	330.9792	26.06	0.000								0.8
[redacted]	48	FUNCTION1 PFK	330.9792	25.96	0.000								1.7
[redacted]	48	FUNCTION1 PFK	330.9792	25.85	0.000								1.0
[redacted]	48	FUNCTION1 PFK	330.9792	25.79	0.000								1.4
[redacted]	48	FUNCTION1 PFK	330.9792	25.63	0.000								2.2
[redacted]	48	FUNCTION1 PFK	330.9792	25.53	0.000								0.9
[redacted]	48	FUNCTION1 PFK	330.9792	25.44	0.000								1.8
[redacted]	48	FUNCTION1 PFK	330.9792	25.02	0.000								1.0
[redacted]	48	FUNCTION1 PFK	330.9792	28.65	0.000								1.1
[redacted]	48	FUNCTION1 PFK	330.9792	28.60	0.000								1.2
[redacted]	48	FUNCTION1 PFK	330.9792	28.05	0.000								1.1
[redacted]	48	FUNCTION1 PFK	330.9792	27.69	0.000								1.4
[redacted]	48	FUNCTION1 PFK	330.9792	27.48	0.000								0.7

Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:06 Pacific Daylight Time

D: WU70B, Name: 13070110, Date: 01-Jul-2013, Time: 17:23:33, Conditions: AUTOSPEC01, User: pk

PFK2

		Name									
	49	FUNCTION2 PFK	366.9792	31.34	0.000	0.000					0.8
	49	FUNCTION2 PFK	366.9792	31.22	0.000	0.000					0.8
	49	FUNCTION2 PFK	366.9792	31.04	0.000	0.000					1.7
	49	FUNCTION2 PFK	366.9792	30.87	0.000	0.000					1.5
	49	FUNCTION2 PFK	366.9792	30.82	0.000	0.000					0.7
	49	FUNCTION2 PFK	366.9792	29.78	0.000	0.000					1.7
	49	FUNCTION2 PFK	366.9792	29.03	0.000	0.000					1.0
	49	FUNCTION2 PFK	366.9792	28.95	0.000	0.000					0.9
	49	FUNCTION2 PFK	366.9792	28.91	0.000	0.000					0.5
	49	FUNCTION2 PFK	366.9792	28.88	0.000	0.000					0.6
	49	FUNCTION2 PFK	366.9792	33.42	0.000	0.000					0.7
	49	FUNCTION2 PFK	366.9792	33.38	0.000	0.000					1.2
	49	FUNCTION2 PFK	366.9792	32.86	0.000	0.000					1.1
	49	FUNCTION2 PFK	366.9792	32.23	0.000	0.000					1.4
	49	FUNCTION2 PFK	366.9792	32.09	0.000	0.000					0.4
	49	FUNCTION2 PFK	366.9792	31.87	0.000	0.000					0.7
	49	FUNCTION2 PFK	366.9792	31.80	0.000	0.000					1.2
	49	FUNCTION2 PFK	366.9792	31.55	0.000	0.000					0.9
	49	FUNCTION2 PFK	366.9792	31.49	0.000	0.000					1.4

Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:06 Pacific Daylight Time

D: WU70B, Name: 13070110, Date: 01-Jul-2013, Time: 17:23:33, Conditions: AUTOSPEC01, User: pk

PFK3

	50	FUNCTION3 PFK	380.9760	34.16	0.000	0.000				0.5
	50	FUNCTION3 PFK	380.9760	34.12	0.000	0.000				0.7
	50	FUNCTION3 PFK	380.9760	34.07	0.000	0.000				0.8
	50	FUNCTION3 PFK	380.9760	33.95	0.000	0.000				1.3
	50	FUNCTION3 PFK	380.9760	33.84	0.000	0.000				2.1
	50	FUNCTION3 PFK	380.9760	33.78	0.000	0.000				1.2
	50	FUNCTION3 PFK	380.9760	36.43	0.000	0.000				1.5
	50	FUNCTION3 PFK	380.9760	36.32	0.000	0.000				1.3
	50	FUNCTION3 PFK	380.9760	36.21	0.000	0.000				0.8
	50	FUNCTION3 PFK	380.9760	35.56	0.000	0.000				1.3
	50	FUNCTION3 PFK	380.9760	35.49	0.000	0.000				1.9
	50	FUNCTION3 PFK	380.9760	35.42	0.000	0.000				1.1
	50	FUNCTION3 PFK	380.9760	35.35	0.000	0.000				1.1
	50	FUNCTION3 PFK	380.9760	35.05	0.000	0.000				1.9
	50	FUNCTION3 PFK	380.9760	35.01	0.000	0.000				2.1
	50	FUNCTION3 PFK	380.9760	34.93	0.000	0.000				2.1
	50	FUNCTION3 PFK	380.9760	34.86	0.000	0.000				1.8
	50	FUNCTION3 PFK	380.9760	34.81	0.000	0.000				2.1
	50	FUNCTION3 PFK	380.9760	34.62	0.000	0.000				1.7
	50	FUNCTION3 PFK	380.9760	34.51	0.000	0.000				1.9
	50	FUNCTION3 PFK	380.9760	34.45	0.000	0.000				1.7
	50	FUNCTION3 PFK	380.9760	34.39	0.000	0.000				1.3
	50	FUNCTION3 PFK	380.9760	38.73	0.000	0.000				0.5
	50	FUNCTION3 PFK	380.9760	38.48	0.000	0.000				0.6
	50	FUNCTION3 PFK	380.9760	38.44	0.000	0.000				0.5
	50	FUNCTION3 PFK	380.9760	38.14	0.000	0.000				1.2
	50	FUNCTION3 PFK	380.9760	37.82	0.000	0.000				6.6
	50	FUNCTION3 PFK	380.9760	37.72	0.000	0.000				3.1
	50	FUNCTION3 PFK	380.9760	37.48	0.000	0.000				1.5
	50	FUNCTION3 PFK	380.9760	37.38	0.000	0.000				0.7
	50	FUNCTION3 PFK	380.9760	36.74	0.000	0.000				1.0
	50	FUNCTION3 PFK	380.9760	36.61	0.000	0.000				0.7

Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:06 Pacific Daylight Time

ID: WU70B, Name: 13070110, Date: 01-Jul-2013, Time: 17:23:33, Conditions: AUTOSPEC01, User: pk

PFK4

	51 FUNCTION4 PFK	430.9728	39.46	0.000						1.1
	51 FUNCTION4 PFK	430.9728	39.35	0.000						0.7
	51 FUNCTION4 PFK	430.9728	39.23	0.000						1.4
	51 FUNCTION4 PFK	430.9728	39.17	0.000						1.8
	51 FUNCTION4 PFK	430.9728	39.13	0.000						0.6
	51 FUNCTION4 PFK	430.9728	41.68	0.000						0.7
	51 FUNCTION4 PFK	430.9728	41.35	0.000						1.5
	51 FUNCTION4 PFK	430.9728	41.19	0.000						0.8
	51 FUNCTION4 PFK	430.9728	41.13	0.000						1.1
	51 FUNCTION4 PFK	430.9728	40.83	0.000						1.2
	51 FUNCTION4 PFK	430.9728	40.72	0.000						1.7
	51 FUNCTION4 PFK	430.9728	40.64	0.000						1.1
	51 FUNCTION4 PFK	430.9728	40.47	0.000						0.5
	51 FUNCTION4 PFK	430.9728	40.43	0.000						0.9
	51 FUNCTION4 PFK	430.9728	40.39	0.000						0.6
	51 FUNCTION4 PFK	430.9728	40.34	0.000						0.6
	51 FUNCTION4 PFK	430.9728	40.23	0.000						1.7
	51 FUNCTION4 PFK	430.9728	40.14	0.000						0.4
	51 FUNCTION4 PFK	430.9728	39.94	0.000						1.2
	51 FUNCTION4 PFK	430.9728	39.86	0.000						1.1
	51 FUNCTION4 PFK	430.9728	39.70	0.000						2.1
	51 FUNCTION4 PFK	430.9728	43.72	0.000						1.6
	51 FUNCTION4 PFK	430.9728	43.46	0.000						0.6
	51 FUNCTION4 PFK	430.9728	43.24	0.000						1.3
	51 FUNCTION4 PFK	430.9728	43.18	0.000						0.8
	51 FUNCTION4 PFK	430.9728	42.97	0.000						1.6
	51 FUNCTION4 PFK	430.9728	42.92	0.000						1.0
	51 FUNCTION4 PFK	430.9728	42.83	0.000						1.6
	51 FUNCTION4 PFK	430.9728	42.80	0.000						1.9
	51 FUNCTION4 PFK	430.9728	42.58	0.000						0.9
	51 FUNCTION4 PFK	430.9728	42.43	0.000						1.5
	51 FUNCTION4 PFK	430.9728	42.34	0.000						1.5
	51 FUNCTION4 PFK	430.9728	42.28	0.000						1.0
	51 FUNCTION4 PFK	430.9728	42.25	0.000						1.2
	51 FUNCTION4 PFK	430.9728	41.92	0.000						1.3
	51 FUNCTION4 PFK	430.9728	41.87	0.000						0.5
	51 FUNCTION4 PFK	430.9728	41.71	0.000						0.4
	51 FUNCTION4 PFK	430.9728	44.91	0.000						1.8
	51 FUNCTION4 PFK	430.9728	44.78	0.000						1.0
	51 FUNCTION4 PFK	430.9728	44.74	0.000						0.6
	51 FUNCTION4 PFK	430.9728	44.71	0.000						0.5
	51 FUNCTION4 PFK	430.9728	44.66	0.000						0.4
	51 FUNCTION4 PFK	430.9728	44.61	0.000						1.7
	51 FUNCTION4 PFK	430.9728	44.56	0.000						1.8
	51 FUNCTION4 PFK	430.9728	44.50	0.000						0.8
	51 FUNCTION4 PFK	430.9728	44.40	0.000						1.5
	51 FUNCTION4 PFK	430.9728	44.25	0.000						1.2
	51 FUNCTION4 PFK	430.9728	44.21	0.000						0.5
	51 FUNCTION4 PFK	430.9728	44.10	0.000						WU70: 01093

D: WU70B, Name: 13070110, Date: 01-Jul-2013, Time: 17:23:33, Conditions: AUTOSPEC01, User: pk

PFK4

	51	FUNCTION4 PFK	430.9728	43.94	0.000						0.9
	51	FUNCTION4 PFK	430.9728	43.76	0.000						2.4

PFK5

	52	FUNCTION5 PFK	480.9696	45.10	0.000						0.6
	52	FUNCTION5 PFK	480.9696	48.92	0.000						2.1
	52	FUNCTION5 PFK	480.9696	48.83	0.000						0.9
	52	FUNCTION5 PFK	480.9696	48.80	0.000						1.8
	52	FUNCTION5 PFK	480.9696	48.69	0.000						1.8
	52	FUNCTION5 PFK	480.9696	48.33	0.000						1.1
	52	FUNCTION5 PFK	480.9696	48.22	0.000						1.4
	52	FUNCTION5 PFK	480.9696	47.74	0.000						1.4
	52	FUNCTION5 PFK	480.9696	47.13	0.000						1.0
	52	FUNCTION5 PFK	480.9696	46.86	0.000						2.0
	52	FUNCTION5 PFK	480.9696	46.46	0.000						2.0
	52	FUNCTION5 PFK	480.9696	46.42	0.000						1.6
	52	FUNCTION5 PFK	480.9696	46.23	0.000						0.5
	52	FUNCTION5 PFK	480.9696	45.93	0.000						1.8
	52	FUNCTION5 PFK	480.9696	45.72	0.000						1.0
	52	FUNCTION5 PFK	480.9696	45.59	0.000						1.4
	52	FUNCTION5 PFK	480.9696	45.51	0.000						1.9
	52	FUNCTION5 PFK	480.9696	49.12	0.000						1.4
	52	FUNCTION5 PFK	480.9696	49.03	0.000						0.9
	52	FUNCTION5 PFK	480.9696	48.99	0.000						1.4

ETHERS1

	53	FUNCTION1 HXCD...	375.8364	27.62	0.000	0.000					5.1
	53	FUNCTION1 HXCD...	375.8364	21.79	0.000	0.000					5.5

ID: WU70B, Name: 13070110, Date: 01-Jul-2013, Time: 17:23:33, Conditions: AUTOSPEC01, User: pk

ETHERS2

	#	Name	Trace	RT	Abs Resp	Rel M...	S/N
	54	FUNCTION1 HPCD...	409.7974	25.33	0.000	0.000	1.6
	54	FUNCTION1 HPCD...	409.7974	24.82	0.000	0.000	2.9
	54	FUNCTION1 HPCD...	409.7974	24.15	0.000	0.000	2.0
	54	FUNCTION1 HPCD...	409.7974	23.87	0.000	0.000	2.1
	54	FUNCTION1 HPCD...	409.7974	23.61	0.000	0.000	1.8
	54	FUNCTION1 HPCD...	409.7974	23.28	0.000	0.000	1.6
	54	FUNCTION1 HPCD...	409.7974	22.19	0.000	0.000	2.1
	54	FUNCTION1 HPCD...	409.7974	22.13	0.000	0.000	1.6
	54	FUNCTION1 HPCD...	409.7974	21.73	0.000	0.000	1.1
	54	FUNCTION1 HPCD...	409.7974	28.75	0.000	0.000	1.1
	54	FUNCTION1 HPCD...	409.7974	28.53	0.000	0.000	1.7
	54	FUNCTION1 HPCD...	409.7974	28.33	0.000	0.000	3.3
	54	FUNCTION1 HPCD...	409.7974	27.89	0.000	0.000	1.3
	54	FUNCTION1 HPCD...	409.7974	27.38	0.000	0.000	1.3
	54	FUNCTION1 HPCD...	409.7974	26.45	0.000	0.000	2.2
	54	FUNCTION1 HPCD...	409.7974	25.64	0.000	0.000	1.4
	54	FUNCTION1 HPCD...	409.7974	25.50	0.000	0.000	1.7

ETHERS3

	#	Name	Trace	RT	Abs Resp	Rel M...	S/N
	55	FUNCTION2 HPCD...	409.7974	31.63	0.000	0.000	1.6
	55	FUNCTION2 HPCD...	409.7974	30.81	0.000	0.000	1.5
	55	FUNCTION2 HPCD...	409.7974	30.66	0.000	0.000	2.7
	55	FUNCTION2 HPCD...	409.7974	30.27	0.000	0.000	1.4
	55	FUNCTION2 HPCD...	409.7974	30.08	0.000	0.000	1.5
	55	FUNCTION2 HPCD...	409.7974	30.04	0.000	0.000	1.6
	55	FUNCTION2 HPCD...	409.7974	29.77	0.000	0.000	2.2
	55	FUNCTION2 HPCD...	409.7974	33.32	0.000	0.000	1.1
	55	FUNCTION2 HPCD...	409.7974	33.12	0.000	0.000	2.7
	55	FUNCTION2 HPCD...	409.7974	32.93	0.000	0.000	1.8
	55	FUNCTION2 HPCD...	409.7974	32.44	0.000	0.000	1.5
	55	FUNCTION2 HPCD...	409.7974	32.21	0.000	0.000	4.2
	55	FUNCTION2 HPCD...	409.7974	31.86	0.000	0.000	2.5
	55	FUNCTION2 HPCD...	409.7974	31.78	0.000	0.000	1.8

ETHERS4

	#	Name	Trace	RT	Abs Resp	Rel M...	S/N
	56	FUNCTION3 OCDPE	445.7555	38.50	0.000	0.000	3.0
	56	FUNCTION3 OCDPE	445.7555	37.16	0.000	0.000	3.2

Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:06 Pacific Daylight Time

D: WU70B, Name: 13070110, Date: 01-Jul-2013, Time: 17:23:33, Conditions: AUTOSPEC01, User: pk

ETHERS5

[redacted]	57	FUNCTION4 NCDPE	479.7165	41.87	0.000	0.000					5.3
[redacted]	57	FUNCTION4 NCDPE	479.7165	41.64	0.000	0.000					3.9
[redacted]	57	FUNCTION4 NCDPE	479.7165	41.57	0.000	0.000					3.3
[redacted]	57	FUNCTION4 NCDPE	479.7165	39.80	0.000	0.000					2.6
[redacted]	57	FUNCTION4 NCDPE	479.7165	39.62	0.000	0.000					32.9
[redacted]	57	FUNCTION4 NCDPE	479.7165	43.29	0.000	0.000					3.4
[redacted]	57	FUNCTION4 NCDPE	479.7165	42.05	0.000	0.000					3.8
[redacted]	57	FUNCTION4 NCDPE	479.7165	41.91	0.000	0.000					10.3

ETHERS6

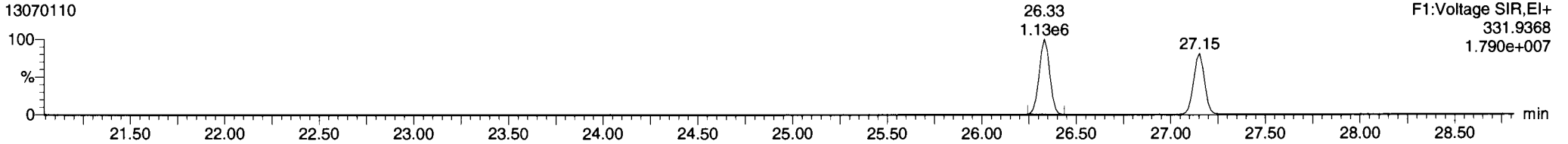
[redacted]											

Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:06 Pacific Daylight Time

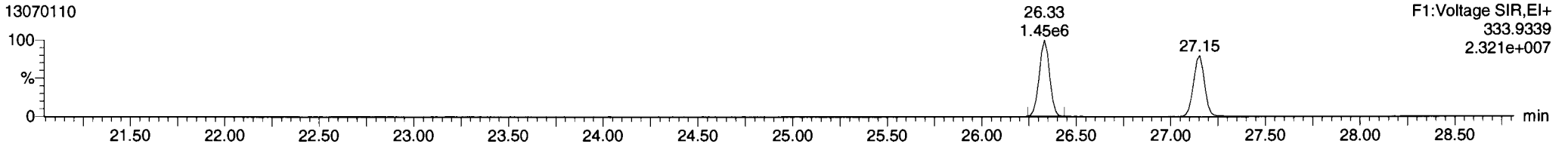
Method: P:\DIOXIN8290.pro\MethDB\Dioxin130617.mdb 28 Jun 2013 10:21:28
Calibration: P:\DIOXIN8290.pro\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

ID: WU70B, Name: 13070110, Date: 01-Jul-2013, Time: 17:23:33, Conditions: AUTOSPEC01, User: pk

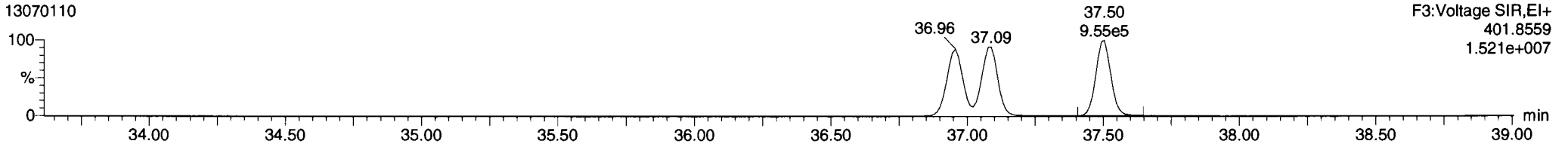
13C-1234-TCDD



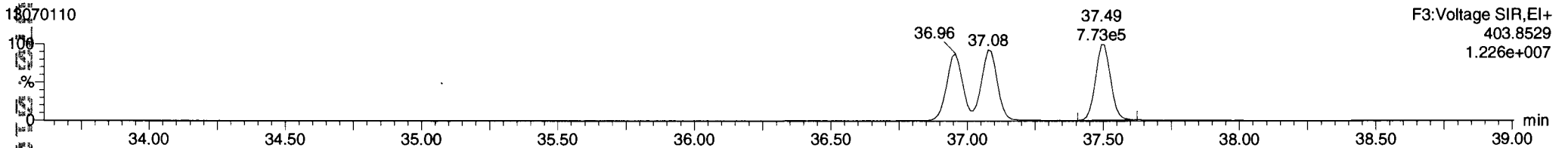
13C-1234-TCDD



13C-123789-HxCDD



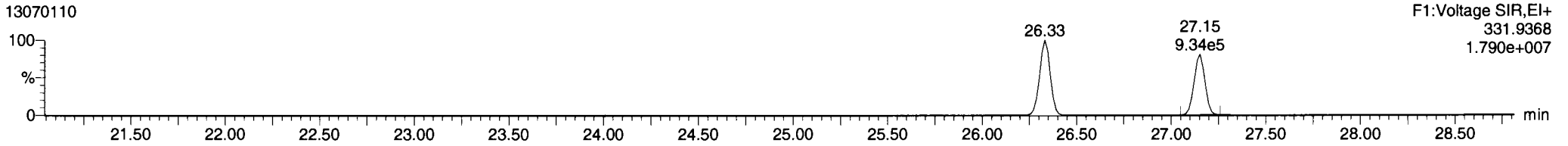
13C-123789-HxCDD



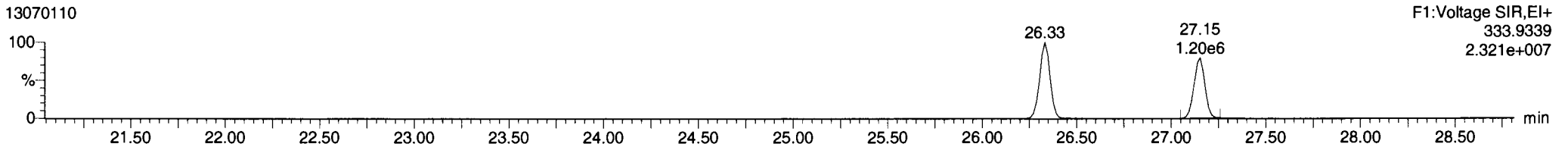
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:06 Pacific Daylight Time

ID: WU70B, Name: 13070110, Date: 01-Jul-2013, Time: 17:23:33, Conditions: AUTOSPEC01, User: pk

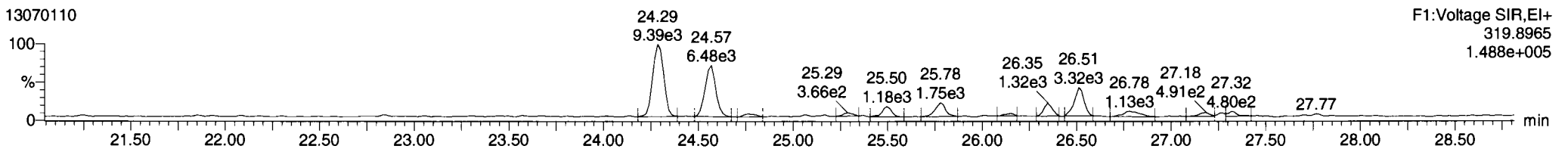
13C-2378-TCDD



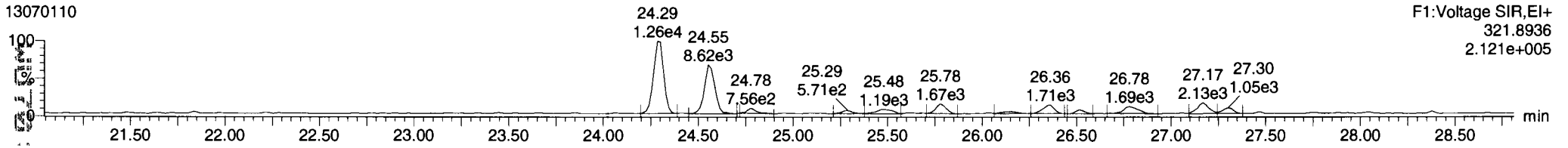
13C-2378-TCDD



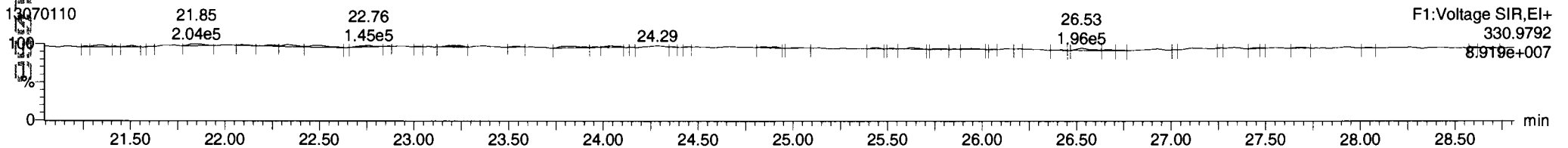
Total-tetradioxins



Total-tetradioxins



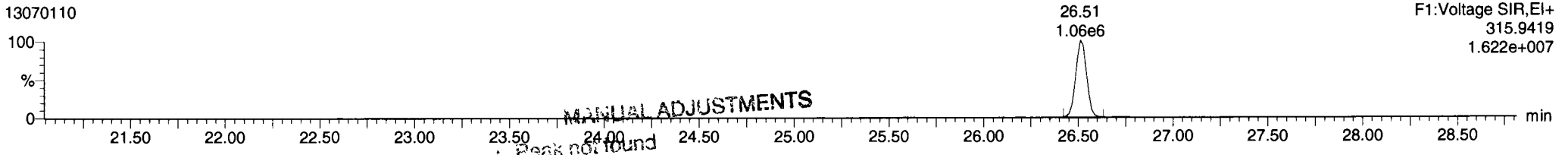
FUNCTION1 PFK



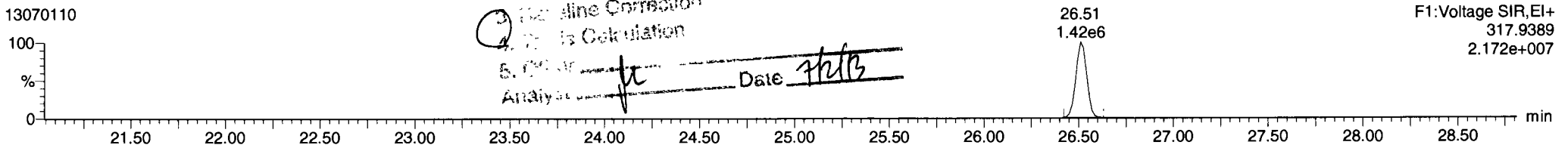
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:06 Pacific Daylight Time

ID: WU70B, Name: 13070110, Date: 01-Jul-2013, Time: 17:23:33, Conditions: AUTOSPEC01, User: pk

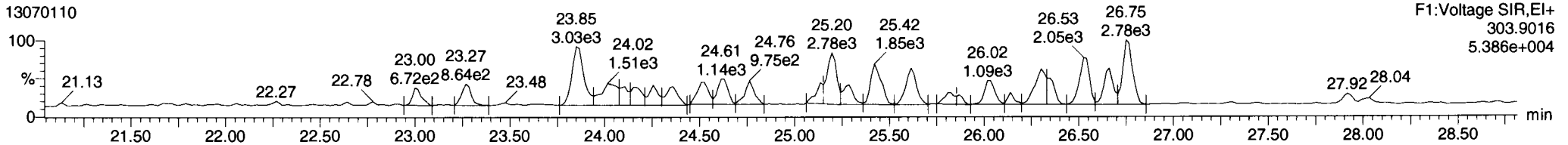
13C-2378-TCDF



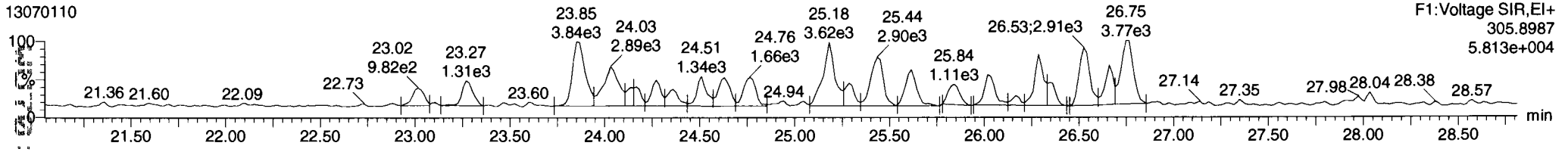
13C-2378-TCDF



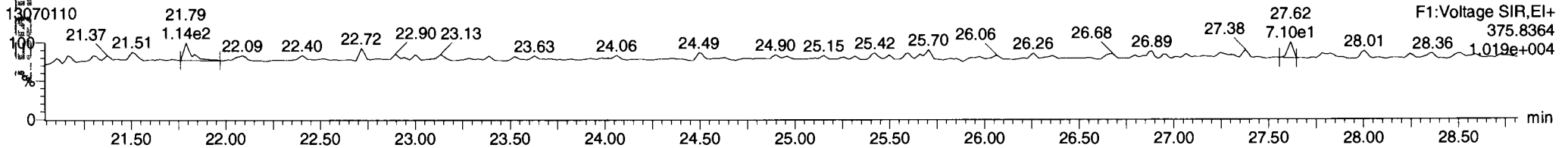
Total-tetrafurans



Total-tetrafurans



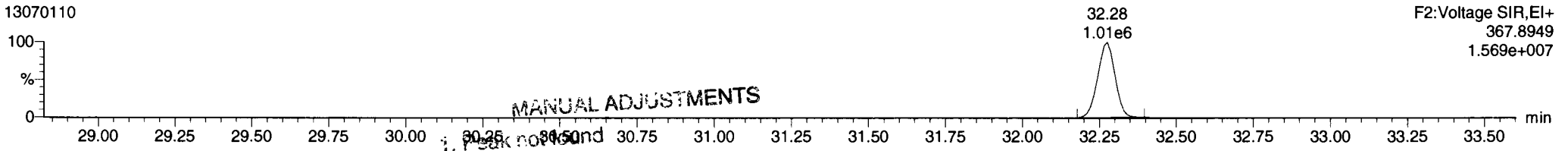
FUNCTION1 HXCDPE



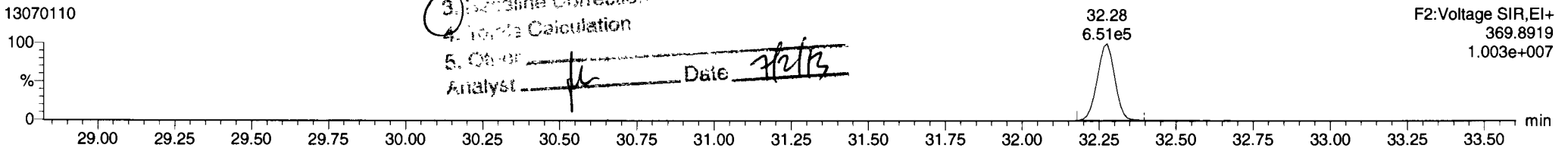
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:06 Pacific Daylight Time

ID: WU70B, Name: 13070110, Date: 01-Jul-2013, Time: 17:23:33, Conditions: AUTOSPEC01, User: pk

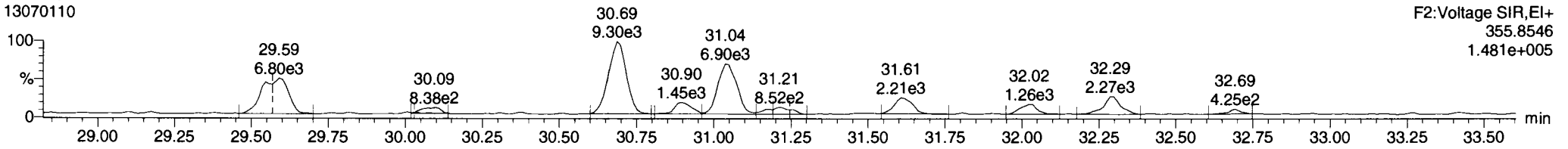
13C-12378-PeCDD



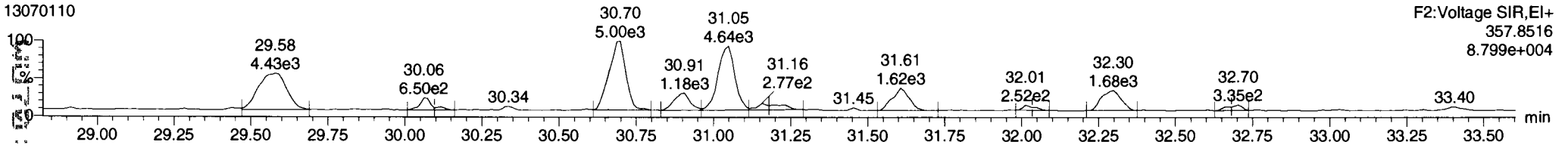
13C-12378-PeCDD



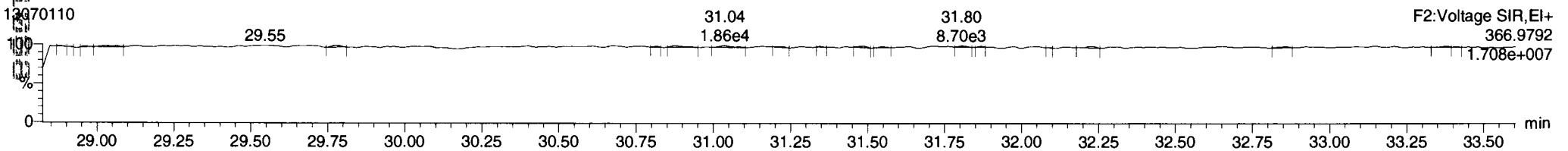
Total-pentadioxins



Total-pentadioxins



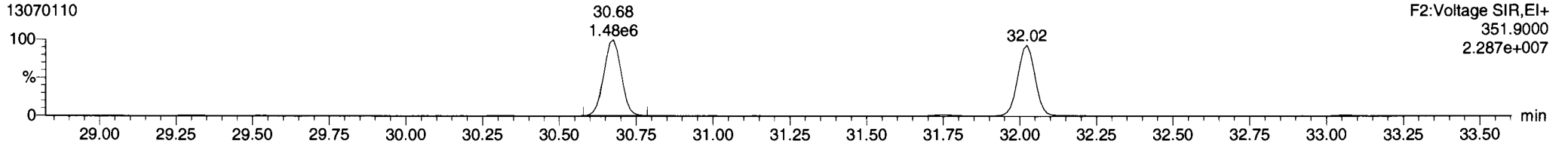
FUNCTION2 PFK



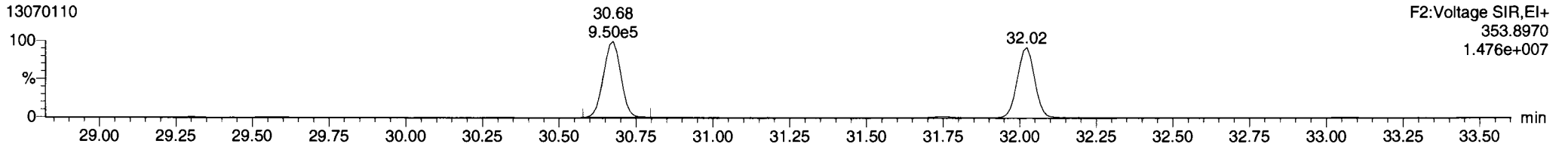
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:06 Pacific Daylight Time

ID: WU70B, Name: 13070110, Date: 01-Jul-2013, Time: 17:23:33, Conditions: AUTOSPEC01, User: pk

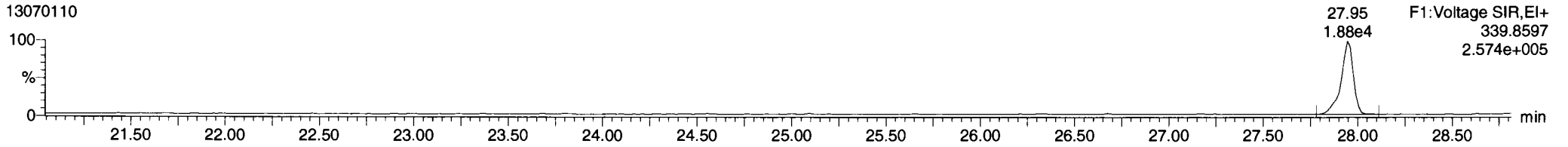
13C-12378-PeCDF



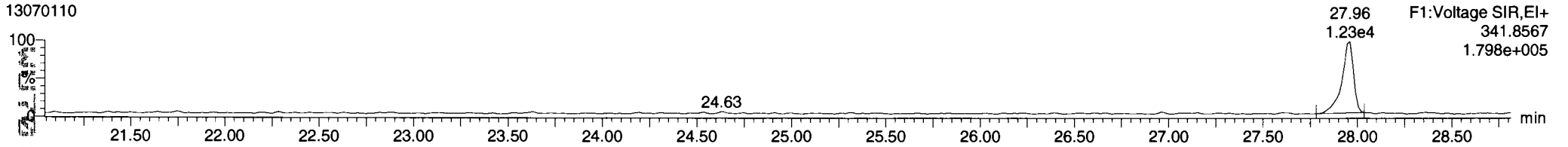
13C-12378-PeCDF



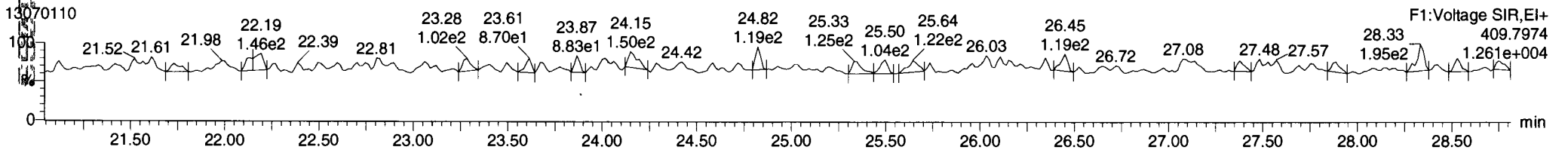
Total-penta1



Total-penta1



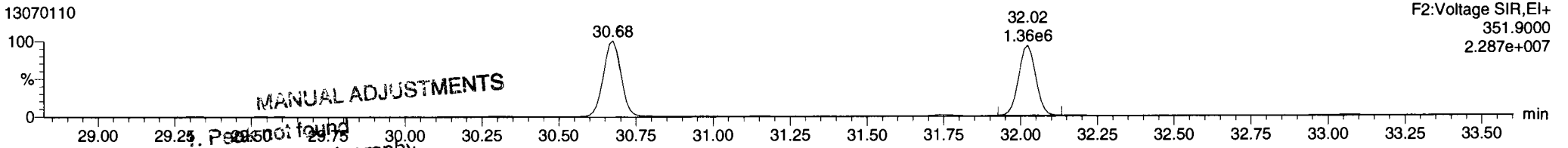
FUNCTION1 HPCDPE



Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:06 Pacific Daylight Time

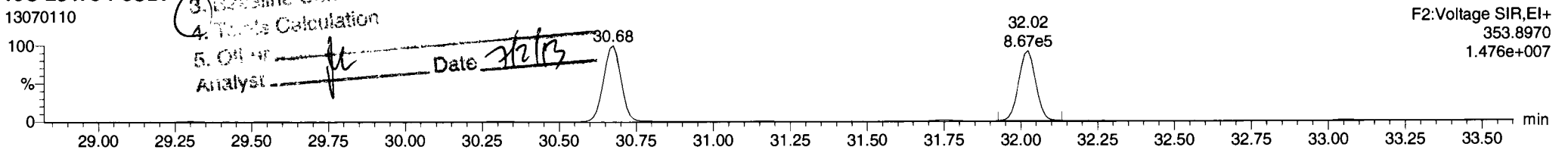
ID: WU70B, Name: 13070110, Date: 01-Jul-2013, Time: 17:23:33, Conditions: AUTOSPEC01, User: pk

13C-23478-PeCDF

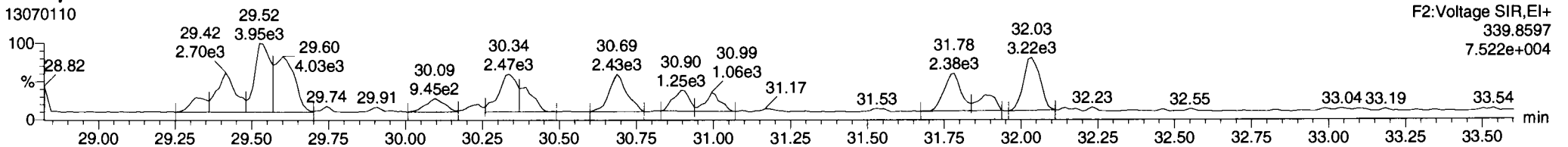


MANUAL ADJUSTMENTS
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Tools Calculation
5. Other
Analyst Date 7/2/13

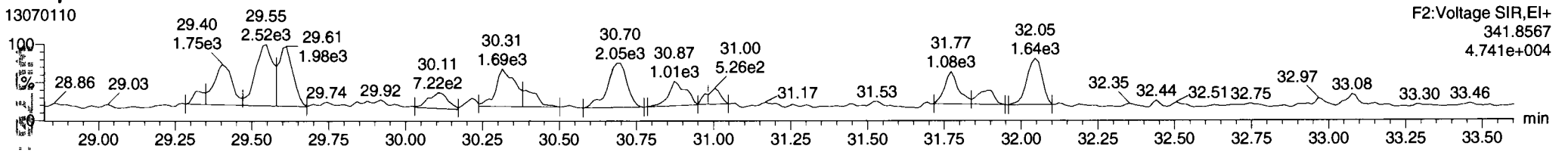
13C-23478-PeCDF



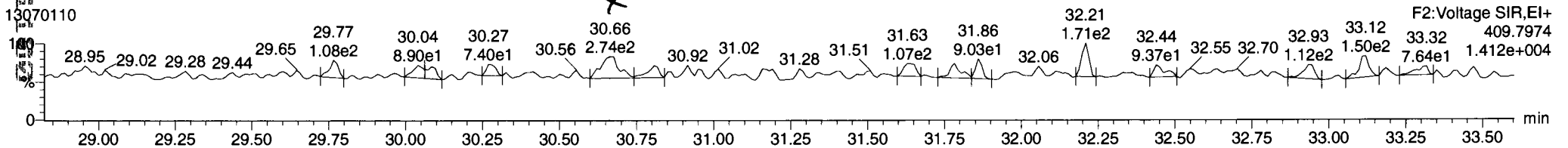
Total-pentafurans



Total-pentafurans



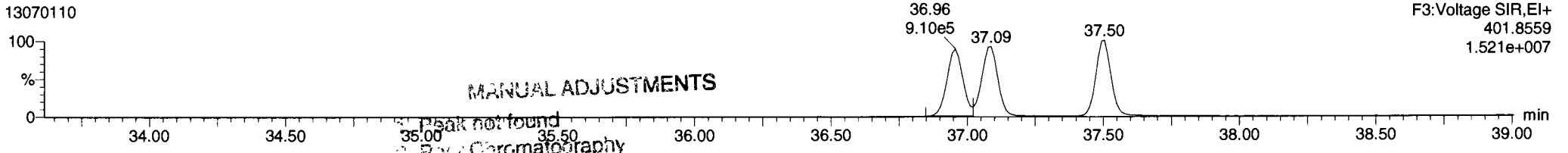
FUNCTION2 HPCDPE



Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:06 Pacific Daylight Time

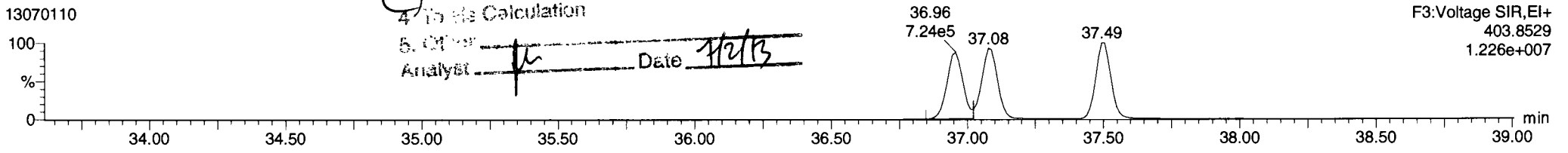
ID: WU70B, Name: 13070110, Date: 01-Jul-2013, Time: 17:23:33, Conditions: AUTOSPEC01, User: pk

13C-123478-HxCDD

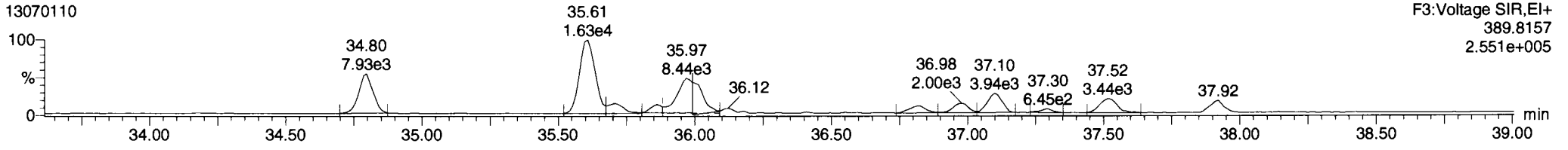


MANUAL ADJUSTMENTS
2. Peak not found
3. Poor Chromatography
4. Baseline Correction
5. To Re Calculation
Other
Analyst _____ Date 7/2/13

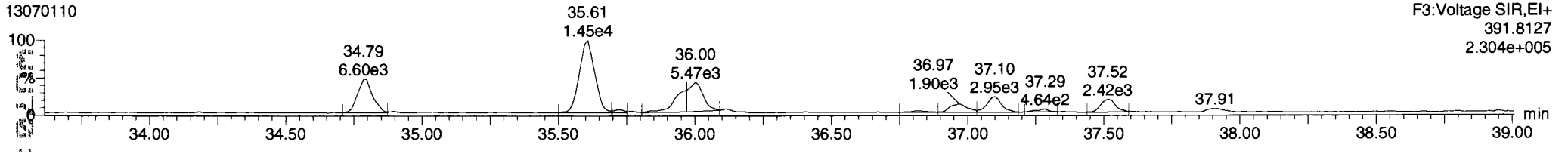
13C-123478-HxCDD



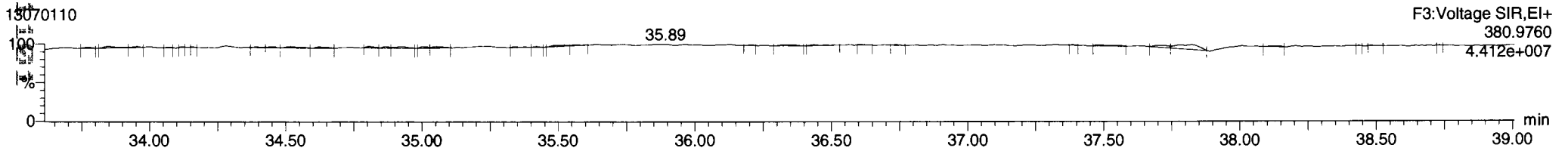
Total-hexadioxins



Total-hexadioxins

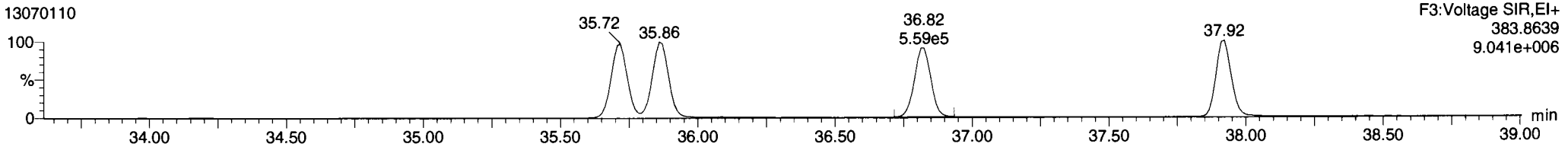


FUNCTION3 PFK

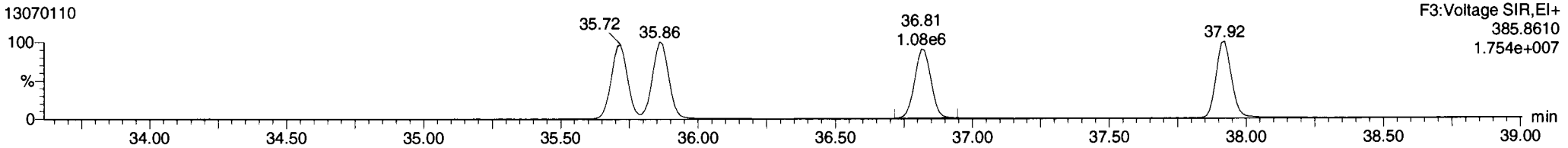


ID: WU70B, Name: 13070110, Date: 01-Jul-2013, Time: 17:23:33, Conditions: AUTOSPEC01, User: pk

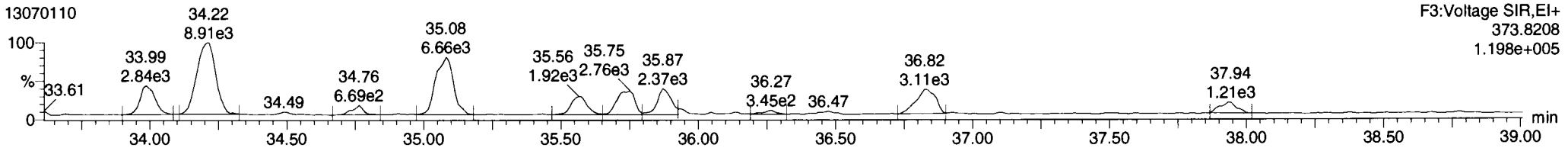
13C-234678-HxCDF



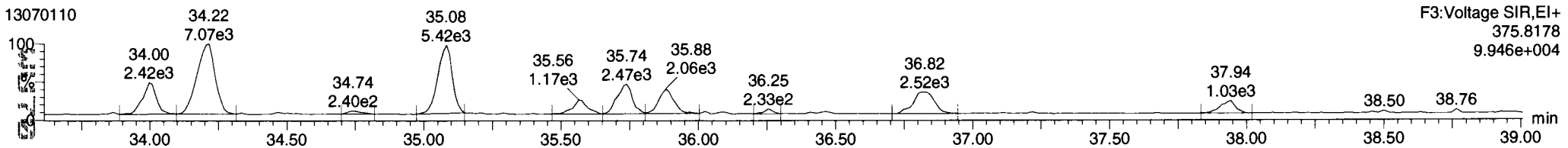
13C-234678-HxCDF



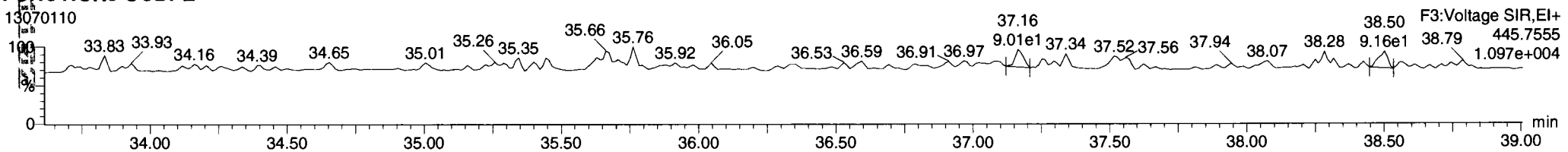
Total-hexafurans



Total-hexafurans



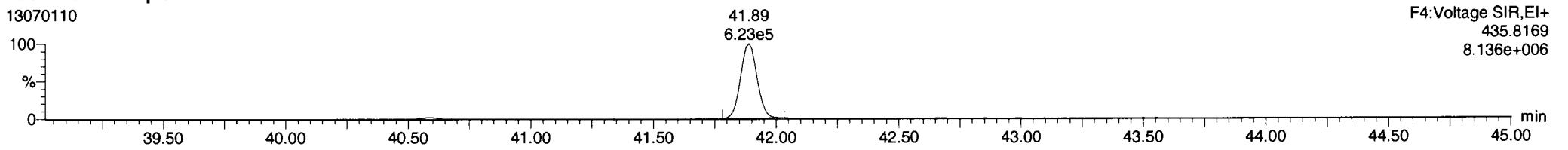
FUNCTION3 OCDPE



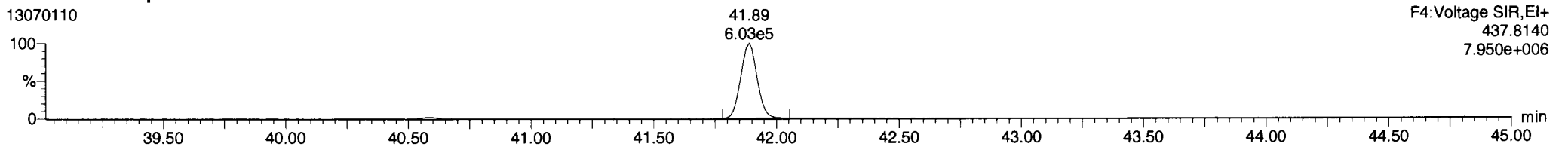
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:06 Pacific Daylight Time

ID: WU70B, Name: 13070110, Date: 01-Jul-2013, Time: 17:23:33, Conditions: AUTOSPEC01, User: pk

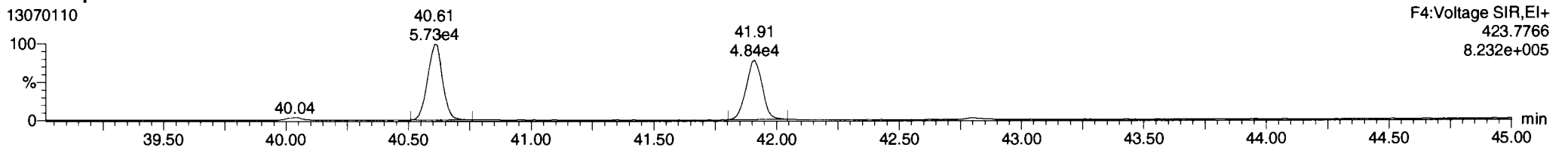
13C-1234678-HpCDD



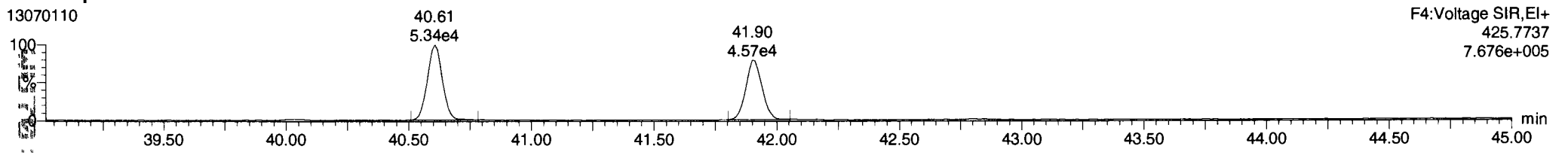
13C-1234678-HpCDD



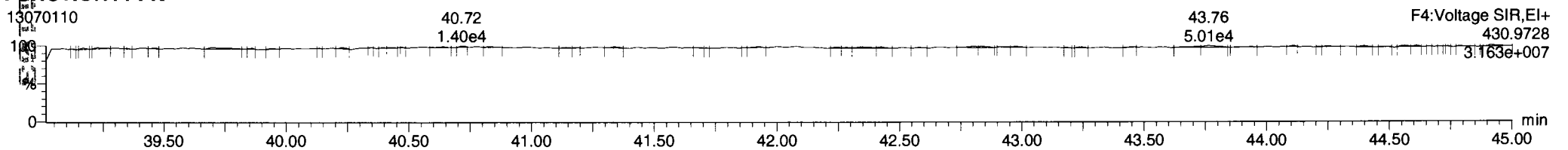
Total-heptadioxins



Total-heptadioxins



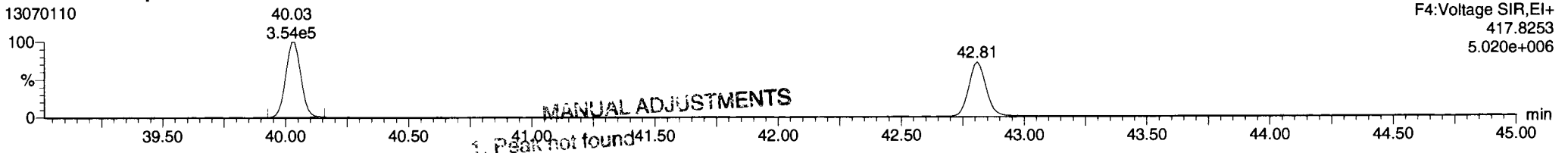
FUNCTION4 PFK



Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:06 Pacific Daylight Time

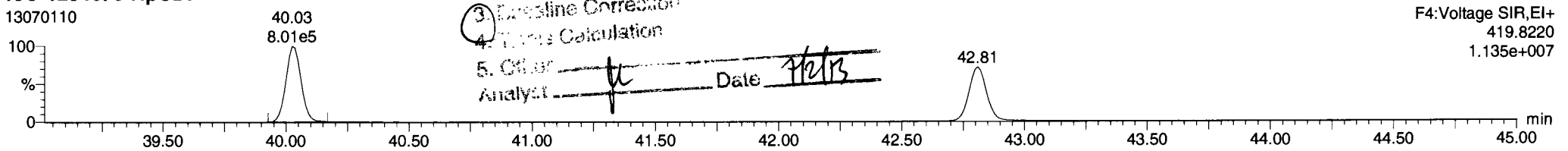
ID: WU70B, Name: 13070110, Date: 01-Jul-2013, Time: 17:23:33, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDF

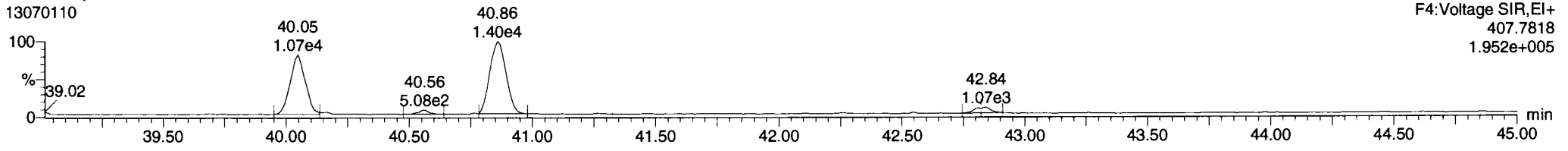


MANUAL ADJUSTMENTS
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Other Calculation
5. Other
Analyst _____ Date 7/2/13

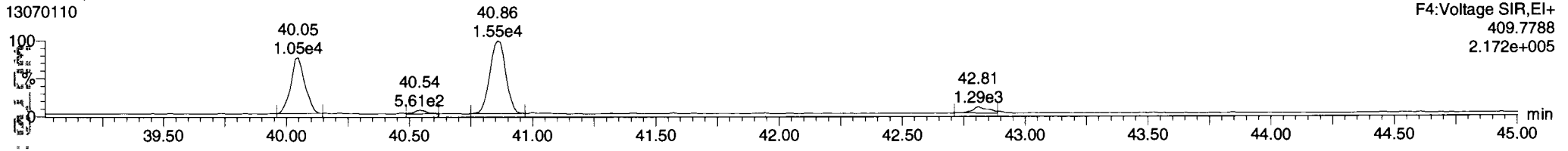
13C-1234678-HpCDF



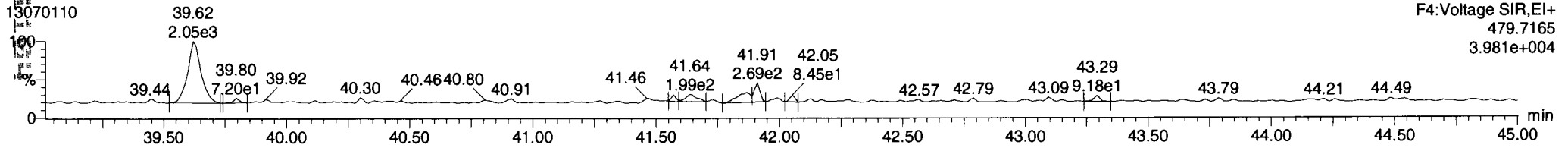
Total-heptafurans



Total-heptafurans



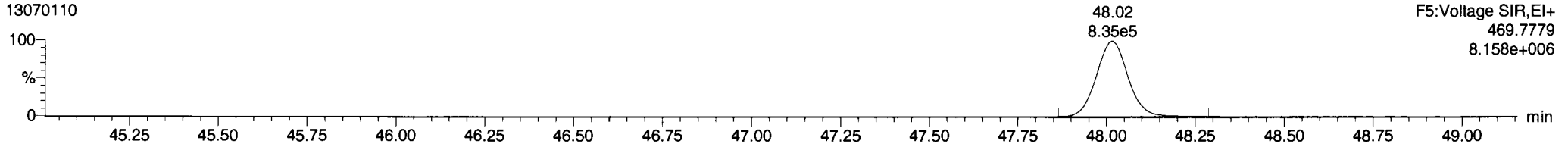
FUNCTION4 NCDPE



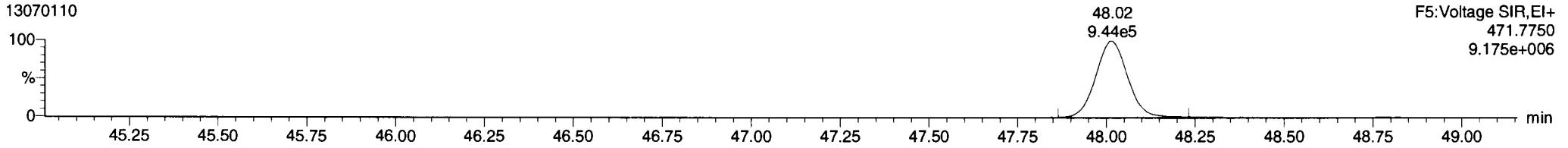
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:06 Pacific Daylight Time

ID: WU70B, Name: 13070110, Date: 01-Jul-2013, Time: 17:23:33, Conditions: AUTOSPEC01, User: pk

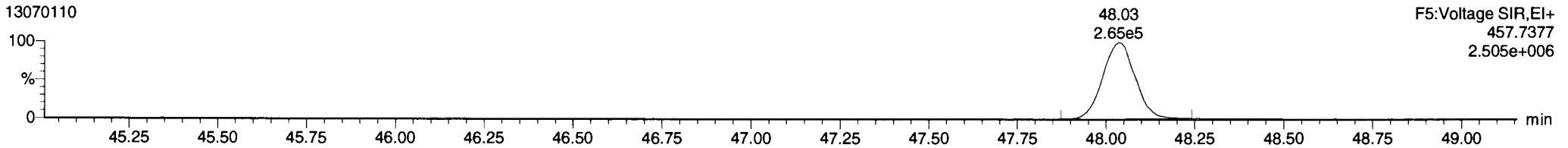
13C-OCDD



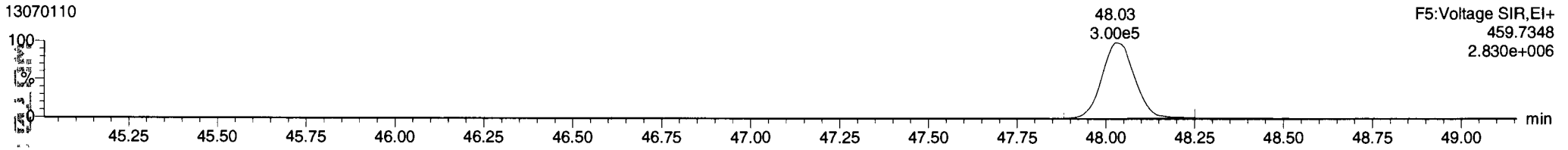
13C-OCDD



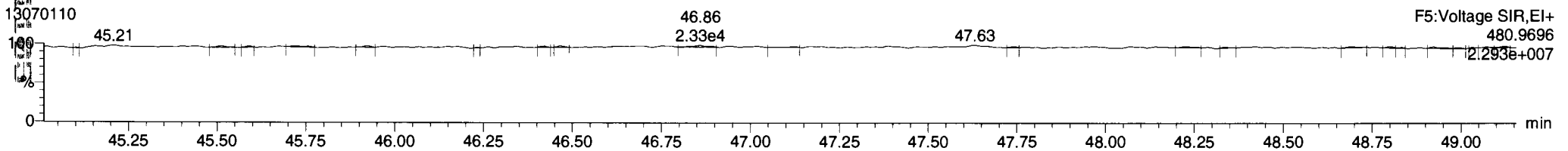
OCDD



OCDD



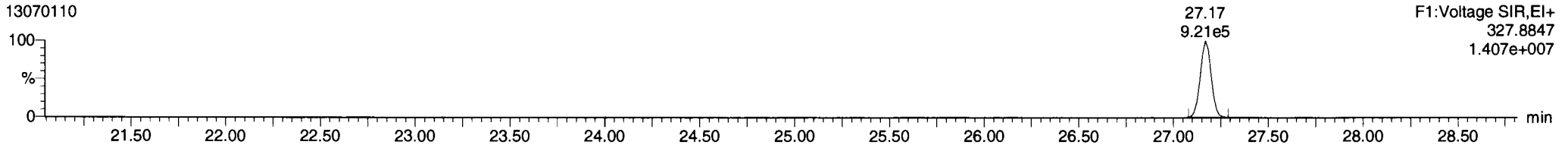
FUNCTION5 PFK



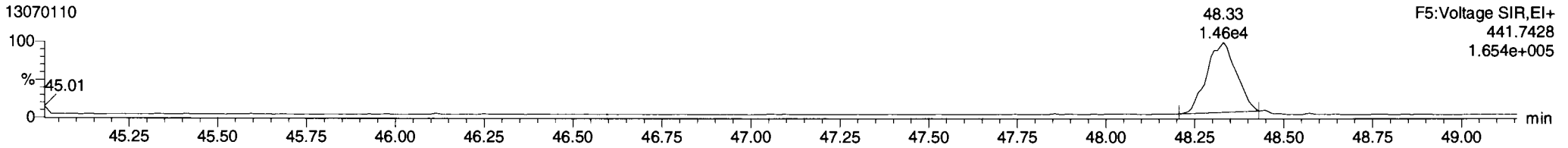
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:06 Pacific Daylight Time

ID: WU70B, Name: 13070110, Date: 01-Jul-2013, Time: 17:23:33, Conditions: AUTOSPEC01, User: pk

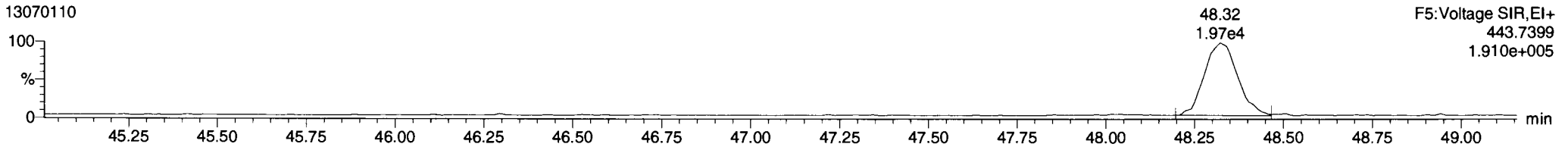
37CL-2378-TCDD



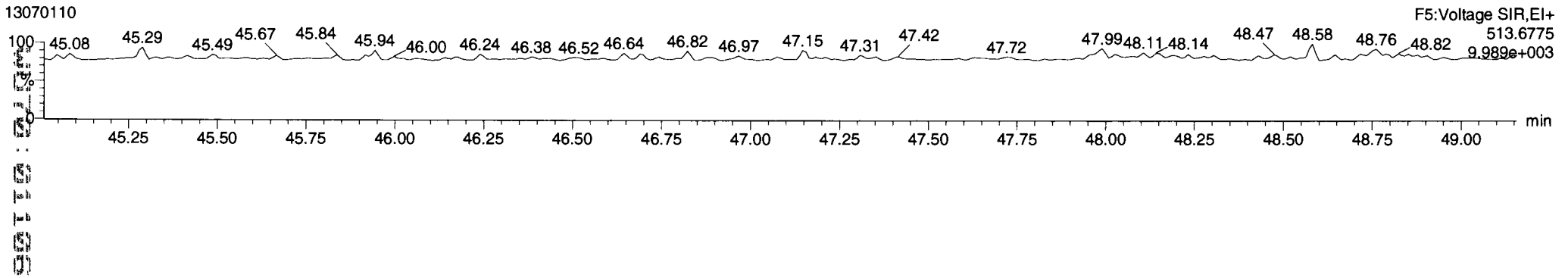
OCDF



OCDF



FUNCTION5 DCDPE



Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:32 Pacific Daylight Time

JL 7/2/13

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130617.mdb 28 Jun 2013 10:21:28
Calibration: P:\DIOXIN8290.pro\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

ID: WU70C, Name: 13070111, Date: 01-Jul-2013, Time: 18:16:01, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.527	1.001	1.52e3	1.69e3	0.771	0.900	0.770	10.3	2663	1893	2.74e4	2.56e4	YES	0.234	0.251	
12378-PeCDF	30.676	1.000	1.88e3	1.20e3	0.814	1.570	1.550	13.0	2305	2713	2.99e4	2.22e4	NO	0.181	0.181	
23478-PeCDF	32.024	1.000	1.34e3	1.28e3	0.837	1.041	1.550	10.2	2305	2713	2.34e4	2.34e4	YES	0.133	0.159	
123478-HxCDF	35.729	1.001	2.99e3	2.05e3	0.967	1.454	1.240	19.3	2099	841	4.05e4	2.88e4	YES	0.352	0.386	
234678-HxCDF	36.814	1.000	1.65e3	1.45e3	1.000	1.137	1.240	8.9	2099	841	1.87e4	1.65e4	NO	0.238	0.238	
123678-HxCDF	35.882	1.001	1.60e3	1.24e3	0.951	1.294	1.240	12.6	2099	841	2.65e4	2.00e4	NO	0.209	0.209	
123789-HxCDF	37.899	1.000	8.28e2	6.06e2	0.874	1.365	1.240	7.3	2099	841	1.54e4	1.01e4	NO	0.132	0.132	
1234678-HpCDF	40.069	1.001	1.14e4	1.07e4	1.072	1.070	1.050	198.4	776	676	1.54e5	1.54e5	NO	2.266	2.266	B
1234789-HpCDF	42.875	1.001	1.55e3	1.51e3	1.085	1.030	1.050	24.4	776	676	1.90e4	1.63e4	NO	0.397	0.397	
OCDF	48.403	1.007	1.37e4	1.58e4	0.878	0.867	0.890	145.5	864	1639	1.26e5	1.41e5	NO	5.576	5.576	B
2378-TCDD	27.139	1.000	2.62e2	1.38e3	0.936	0.190	0.770	3.2	1701	1460	5.40e3	1.96e4	YES	0.040	0.110	
12378-PeCDD	32.276	1.000	1.12e3	9.05e2	0.894	1.235	1.550	10.6	2110	1822	2.24e4	1.29e4	YES	0.140	0.154	
123478-HxCDD	36.956	1.001	1.18e3	8.03e2	0.898	1.471	1.240	16.8	1243	1864	2.09e4	1.21e4	YES	0.153	0.169	
123678-HxCDD	37.088	1.001	2.87e3	2.55e3	0.818	1.128	1.240	34.8	1243	1864	4.33e4	3.55e4	NO	0.484	0.484	
123789-HxCDD	37.505	1.012	2.18e3	1.62e3	0.789	1.349	1.240	25.8	1243	1864	3.21e4	2.41e4	NO	0.360	0.360	
1234678-HpCDD	41.933	1.001	5.09e4	5.02e4	0.879	1.015	1.050	541.5	1249	1194	6.76e5	6.39e5	NO	12.028	12.028	
OCDD	48.106	1.000	2.39e5	2.72e5	0.875	0.878	0.890	2004.6	1102	745	2.21e6	2.61e6	NO	97.013	97.013	
13C-2378-TCDF	26.511	1.007	7.10e5	9.46e5	1.190	0.751	0.770	4690.4	2408	5241	1.13e7	1.50e7	NO		60.774	
13C-12378-PeCDF	30.665	1.165	1.27e6	8.17e5	0.904	1.550	1.550	7074.6	2850	3196	2.02e7	1.31e7	NO		100.589	
13C-23478-PeCDF	32.013	1.216	1.20e6	7.77e5	0.877	1.543	1.550	6668.1	2850	3196	1.90e7	1.23e7	NO		98.362	
13C-123478-HxCDF	35.707	0.953	4.57e5	8.94e5	1.096	0.511	0.510	3040.7	2299	3694	6.99e6	1.35e7	NO		83.821	
13C-123678-HxCDF	35.860	0.957	4.85e5	9.48e5	1.187	0.511	0.510	3122.5	2299	3694	7.18e6	1.41e7	NO		82.035	
13C-234678-HxCDF	36.803	0.982	4.42e5	8.55e5	1.040	0.516	0.510	2939.6	2299	3694	6.76e6	1.32e7	NO		84.868	
13C-123789-HxCDF	37.910	1.011	4.24e5	8.19e5	0.941	0.518	0.510	2848.0	2299	3694	6.55e6	1.26e7	NO		89.896	
13C-1234678-HpCDF	40.048	1.068	2.79e5	6.31e5	0.825	0.442	0.440	2873.7	1347	1529	3.87e6	8.81e6	NO		75.017	
13C-1234789-HpCDF	42.832	1.143	2.20e5	4.90e5	0.609	0.449	0.440	1885.8	1347	1529	2.54e6	5.88e6	NO		79.314	
13C-1234-TCDD	26.332	0.000	1.01e6	1.28e6	1.000	0.786	0.770	1625.6	9601	2496	1.56e7	1.97e7	NO		100.000	
13C-2378-TCDD	27.139	1.031	6.97e5	8.99e5	0.920	0.775	0.770	1114.0	9601	2496	1.07e7	1.40e7	NO		75.796	
13C-12378-PeCDD	32.265	1.225	8.96e5	5.74e5	0.669	1.562	1.550	5666.9	2518	1817	1.43e7	9.12e6	NO		95.873	
13C-123478-HxCDD	36.935	0.985	7.26e5	5.80e5	1.032	1.251	1.240	4133.5	2631	1382	1.09e7	8.85e6	NO		86.078	
13C-123678-HxCDD	37.066	0.989	7.54e5	6.16e5	1.146	1.224	1.240	4354.2	2631	1382	1.15e7	9.24e6	NO		81.297	
13C-1234678-HpCDD	41.911	1.118	4.89e5	4.68e5	0.789	1.045	1.050	5244.5	1201	1047	6.30e6	6.03e6	NO		82.437	
13C-OCDD	48.089	1.283	5.66e5	6.36e5	0.696	0.889	0.890	3577.8	1471	1754	5.26e6	5.88e6	NO		117.430	

Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:32 Pacific Daylight Time

ID: WU70C, Name: 13070111, Date: 01-Jul-2013, Time: 18:16:01, Conditions: AUTOSPEC01, User: pk

Name														
13C-123789-HxCDD	37.482	0.000	8.13e5	6.57e5	1.000	1.237	1.240	4892.3	2631	1382	1.29e7	1.05e7	NO	100.000
Total-tetrafurans			1.27e4		0.771				2663		1.82e5			2.244
Total-penta1			1.52e4						708		2.28e5			1.411
Total-pentafurans			1.43e4		0.826				2305		2.21e5			1.408
Total-hexafurans			2.93e4		0.948				2099		4.25e5			4.141
Total-heptafurans			3.20e4		1.079				776		4.45e5			6.854
Total-Furans			1.17e5		0.925				2663		1.63e6			21.653
Total-tetradioxins			2.02e4		0.936				1701		3.22e5			2.906
Total-pentadioxins			3.22e4		0.894				2110		4.83e5			4.120
Total-hexadioxins			4.95e4		0.835				1243		7.84e5			7.941
Total-heptadioxins			1.55e5		0.879				1249		2.06e6			36.664
Total-Dioxins			4.95e5		0.870				1701		5.85e6			148.643
Total-TEQ			6.12e5						1701		7.48e6			170.296
37CL-2378-TCDD	27.169	1.032	7.08e5		1.000			5138.0	2128		1.09e7			30.921
FUNCTION1 PFK			6.88e5						828560		1.24e7			
FUNCTION2 PFK			2.00e3						209136		1.83e5			0.000
FUNCTION3 PFK			2.98e7						425193		1.87e8			0.000
FUNCTION4 PFK			8.23e5						360537		1.97e7			
FUNCTION5 PFK			0.00e0						272692		0.00e0			
FUNCTION1 HXCDPE			1.78e2						536		3.56e3			0.000
FUNCTION1 HPCDPE			3.59e2						1020		7.46e3			0.000
FUNCTION2 HPCDPE			5.05e2						1293		1.41e4			0.000
FUNCTION3 OCDPE			8.04e1						660		2.73e3			0.000
FUNCTION4 NCDPE			6.66e2						813		1.30e4			0.000
FUNCTION5 DCDPE			9.19e1						438		3.20e3			0.000

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130617.mdb 28 Jun 2013 10:21:28
Calibration: P:\DIOXIN8290.pro\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

ID: WU70C, Name: 13070111, Date: 01-Jul-2013, Time: 18:16:01, Conditions: AUTOSPEC01, User: pk

TF

		Name	Trace	RT	Area	RRT	Conc	EMPC	Ion Ratio	Lib Ratio	Qual	S/N
	35	Total-tetrafurans	303.9016	25.20	2349.048	0.771	0.184		0.84	0.77	NO	4.7
	35	Total-tetrafurans	303.9016	24.76	1069.066	0.771	0.084		0.72	0.77	NO	3.3
	35	Total-tetrafurans	303.9016	24.63	1908.578	0.771	0.149		0.98	0.77	YES	5.1
	35	Total-tetrafurans	303.9016	24.17	774.179	0.771	0.061		0.70	0.77	NO	2.7
	35	Total-tetrafurans	303.9016	23.85	4327.798	0.771	0.339		0.68	0.77	NO	9.1
	35	Total-tetrafurans	303.9016	26.75	4032.446	0.771	0.316		0.77	0.77	NO	9.5
	35	Total-tetrafurans	303.9016	26.66	1924.145	0.771	0.151		0.98	0.77	YES	4.7
	1	2378-TCDF	303.9016	26.53	3203.898	0.771	0.251	0.234	0.90	0.77	YES	10.3
	35	Total-tetrafurans	303.9016	26.32	3033.776	0.771	0.238		0.70	0.77	NO	4.4
	35	Total-tetrafurans	303.9016	26.03	1026.256	0.771	0.080		1.32	0.77	YES	3.6
	35	Total-tetrafurans	303.9016	25.63	2682.608	0.771	0.210		0.68	0.77	NO	5.5
	35	Total-tetrafurans	303.9016	25.41	2313.936	0.771	0.181		0.75	0.77	NO	5.4

PP

		Name	Trace	RT	Area	RRT	Conc	EMPC	Ion Ratio	Lib Ratio	Qual	S/N
	36	Total-penta1	339.8597	27.95	26254.490		1.411		1.38	1.55	NO	322.0

PF

		Name	Trace	RT	Area	RRT	Conc	EMPC	Ion Ratio	Lib Ratio	Qual	S/N
	37	Total-pentafurans	339.8597	31.75	1766.854	0.826	0.105		1.69	1.55	NO	8.1
	37	Total-pentafurans	339.8597	30.88	2032.938	0.826	0.121		1.40	1.55	NO	7.3
	2	12378-PeCDF	339.8597	30.68	3079.479	0.814	0.181	0.181	1.57	1.55	NO	13.0
	37	Total-pentafurans	339.8597	30.31	3001.282	0.826	0.179		1.62	1.55	NO	7.9
	37	Total-pentafurans	339.8597	29.59	6419.958	0.826	0.383		1.73	1.55	NO	31.0
	37	Total-pentafurans	339.8597	29.54	4670.548	0.826	0.279		1.52	1.55	NO	18.5
	3	23478-PeCDF	339.8597	32.02	2621.236	0.837	0.159	0.133	1.04	1.55	YES	10.2

HF

		Name	Trace	RT	Area	RRT	Conc	EMPC	Ion Ratio	Lib Ratio	Qual	S/N
	7	123789-HxCDF	373.8208	37.90	1433.742	0.874	0.132	0.132	1.37	1.24	NO	7.3
	5	234678-HxCDF	373.8208	36.81	3092.556	1.000	0.238	0.238	1.14	1.24	NO	8.9
	6	123678-HxCDF	373.8208	35.88	2842.569	0.951	0.209	0.209	1.29	1.24	NO	12.6
	4	123478-HxCDF	373.8208	35.73	5039.528	0.967	0.386	0.352	1.45	1.24	YES	19.3
	38	Total-hexafurans	373.8208	35.55	1612.537	0.948	0.128		1.58	1.24	YES	8.1
	38	Total-hexafurans	373.8208	35.07	17041.566	0.948	1.350		1.23	1.24	NO	68.4
	38	Total-hexafurans	373.8208	34.75	580.500	0.948	0.046		4.34	1.24	YES	3.0
	38	Total-hexafurans	373.8208	34.19	15760.371	0.948	1.249		1.21	1.24	NO	57.3
	38	Total-hexafurans	373.8208	33.99	5090.435	0.948	0.403		1.16	1.24	NO	17.3

D: WU70C, Name: 13070111, Date: 01-Jul-2013, Time: 18:16:01, Conditions: AUTOSPEC01, User: pk

HPF

	9	1234789-HpCDF	407.7818	42.88	3062.352	1.085	0.397	0.397	1.03	1.05	NO	24.4
	39	Total-heptafurans	407.7818	40.88	35777.512	1.079	4.093		1.05	1.05	NO	337.5
	39	Total-heptafurans	407.7818	40.56	689.965	1.079	0.079		4.41	1.05	YES	8.9
	39	Total-heptafurans	407.7818	40.18	158.792	1.079	0.018		1.12	1.05	NO	4.3
	8	1234678-HpCDF	407.7818	40.07	22120.824	1.072	2.266	2.266	1.07	1.05	NO	198.4

Furans,TF,PP,PF,HF,HPF,OF

	35	Total-tetrafurans	303.9016	25.20	2349.048	0.771	0.184		0.84	0.77	NO	4.7
	35	Total-tetrafurans	303.9016	24.76	1069.066	0.771	0.084		0.72	0.77	NO	3.3
	35	Total-tetrafurans	303.9016	24.63	1908.578	0.771	0.149		0.98	0.77	YES	5.1
	35	Total-tetrafurans	303.9016	24.17	774.179	0.771	0.061		0.70	0.77	NO	2.7
	35	Total-tetrafurans	303.9016	23.85	4327.798	0.771	0.339		0.68	0.77	NO	9.1
	40	Total-Furans	303.9016	28.36	316.865	0.925	0.021		1.87	0.77	YES	1.6
	35	Total-tetrafurans	303.9016	26.75	4032.446	0.771	0.316		0.77	0.77	NO	9.5
	35	Total-tetrafurans	303.9016	26.66	1924.145	0.771	0.151		0.98	0.77	YES	4.7
	1	2378-TCDF	303.9016	26.53	3203.898	0.771	0.251	0.234	0.90	0.77	YES	10.3
	35	Total-tetrafurans	303.9016	26.32	3033.776	0.771	0.238		0.70	0.77	NO	4.4
	35	Total-tetrafurans	303.9016	26.03	1026.256	0.771	0.080		1.32	0.77	YES	3.6
	35	Total-tetrafurans	303.9016	25.63	2682.608	0.771	0.210		0.68	0.77	NO	5.5
	35	Total-tetrafurans	303.9016	25.41	2313.936	0.771	0.181		0.75	0.77	NO	5.4
	37	Total-pentafurans	339.8597	31.75	1766.854	0.826	0.105		1.69	1.55	NO	8.1
	37	Total-pentafurans	339.8597	30.88	2032.938	0.826	0.121		1.40	1.55	NO	7.3
	2	12378-PeCDF	339.8597	30.68	3079.479	0.814	0.181	0.181	1.57	1.55	NO	13.0
	37	Total-pentafurans	339.8597	30.31	3001.282	0.826	0.179		1.62	1.55	NO	7.9
	37	Total-pentafurans	339.8597	29.59	6419.958	0.826	0.383		1.73	1.55	NO	31.0
	37	Total-pentafurans	339.8597	29.54	4670.548	0.826	0.279		1.52	1.55	NO	18.5
	3	23478-PeCDF	339.8597	32.02	2621.236	0.837	0.159	0.133	1.04	1.55	YES	10.2
	7	123789-HxCDF	373.8208	37.90	1433.742	0.874	0.132	0.132	1.37	1.24	NO	7.3
	5	234678-HxCDF	373.8208	36.81	3092.556	1.000	0.238	0.238	1.14	1.24	NO	8.9
	6	123678-HxCDF	373.8208	35.88	2842.569	0.951	0.209	0.209	1.29	1.24	NO	12.6
	4	123478-HxCDF	373.8208	35.73	5039.528	0.967	0.386	0.352	1.45	1.24	YES	19.3
	38	Total-hexafurans	373.8208	35.55	1612.537	0.948	0.128		1.58	1.24	YES	8.1
	38	Total-hexafurans	373.8208	35.07	17041.566	0.948	1.350		1.23	1.24	NO	68.4
	38	Total-hexafurans	373.8208	34.75	580.500	0.948	0.046		4.34	1.24	YES	3.0
	38	Total-hexafurans	373.8208	34.19	15760.371	0.948	1.249		1.21	1.24	NO	57.3
	38	Total-hexafurans	373.8208	33.99	5090.435	0.948	0.403		1.16	1.24	NO	17.3
	9	1234789-HpCDF	407.7818	42.88	3062.352	1.085	0.397	0.397	1.03	1.05	NO	24.4
	39	Total-heptafurans	407.7818	40.88	35777.512	1.079	4.093		1.05	1.05	NO	337.5
	39	Total-heptafurans	407.7818	40.56	689.965	1.079	0.079		4.41	1.05	YES	8.9
	39	Total-heptafurans	407.7818	40.18	158.792	1.079	0.018		1.12	1.05	NO	4.3
	8	1234678-HpCDF	407.7818	40.07	22120.824	1.072	2.266	2.266	1.07	1.05	NO	198.4
	10	OCDF	441.7428	48.40	29415.029	0.878	5.576	5.576	0.87	0.89	NO	145.5
	36	Total-penta1	339.8597	27.95	26254.490		1.411		1.38	1.55	NO	322.0

D: WU70C, Name: 13070111, Date: 01-Jul-2013, Time: 18:16:01, Conditions: AUTOSPEC01, User: pk

TD

	#	Name	Mass	RT	Abundance	RRF Mtd	Conc	EMPC	Ion Ratio	Ion Ratio Lower	Int Std	S/N
	41	Total-tetradioxins	319.8965	24.57	15826.708	0.936	1.059		0.81	0.77	NO	60.6
	41	Total-tetradioxins	319.8965	24.29	15406.963	0.936	1.031		0.81	0.77	NO	66.4
	41	Total-tetradioxins	319.8965	27.27	663.327	0.936	0.044		0.72	0.77	NO	4.6
	11	2378-TCDD	319.8965	27.14	1643.131	0.936	0.110	0.040	0.19	0.77	YES	3.2
	41	Total-tetradioxins	319.8965	26.80	2206.422	0.936	0.148		0.66	0.77	NO	7.4
	41	Total-tetradioxins	319.8965	26.51	2901.938	0.936	0.194		6.37	0.77	YES	26.0
	41	Total-tetradioxins	319.8965	26.35	2573.038	0.936	0.172		1.25	0.77	YES	12.5
	41	Total-tetradioxins	319.8965	25.76	2214.651	0.936	0.148		0.64	0.77	YES	8.8

PD

	#	Name	Mass	RT	Abundance	RRF Mtd	Conc	EMPC	Ion Ratio	Ion Ratio Lower	Int Std	S/N
	42	Total-pentadioxins	355.8546	31.04	14294.560	0.894	1.088		1.46	1.55	NO	63.2
	42	Total-pentadioxins	355.8546	30.89	1385.062	0.894	0.105		1.80	1.55	YES	9.6
	42	Total-pentadioxins	355.8546	30.69	17123.047	0.894	1.303		1.47	1.55	NO	70.9
	42	Total-pentadioxins	355.8546	30.07	961.309	0.894	0.073		1.60	1.55	NO	5.0
	42	Total-pentadioxins	355.8546	29.58	11695.221	0.894	0.890		1.54	1.55	NO	37.3
	12	12378-PeCDD	355.8546	32.28	2023.596	0.894	0.154	0.140	1.24	1.55	YES	10.6
	42	Total-pentadioxins	355.8546	31.61	4631.935	0.894	0.352		1.50	1.55	NO	19.6
	42	Total-pentadioxins	355.8546	31.19	1040.090	0.894	0.079		1.09	1.55	YES	5.2
	42	Total-pentadioxins	355.8546	31.20	550.516	0.894	0.042		1.43	1.55	NO	3.5
	42	Total-pentadioxins	355.8546	30.92	445.418	0.894	0.034		0.51	1.55	YES	3.8

HD

	#	Name	Mass	RT	Abundance	RRF Mtd	Conc	EMPC	Ion Ratio	Ion Ratio Lower	Int Std	S/N
	43	Total-hexadioxins	389.8157	36.09	2266.511	0.835	0.203		1.14	1.24	NO	13.5
	43	Total-hexadioxins	389.8157	35.99	11979.896	0.835	1.073		1.39	1.24	NO	96.3
	43	Total-hexadioxins	389.8157	35.94	9811.652	0.835	0.879		1.16	1.24	NO	65.9
	43	Total-hexadioxins	389.8157	35.70	1437.630	0.835	0.129		4.06	1.24	YES	14.3
	43	Total-hexadioxins	389.8157	35.60	28051.275	0.835	2.512		1.24	1.24	NO	198.3
	43	Total-hexadioxins	389.8157	34.79	22142.232	0.835	1.983		1.22	1.24	NO	152.7
	15	123789-HxCDD	389.8157	37.50	3797.577	0.789	0.360	0.360	1.35	1.24	NO	25.8
	43	Total-hexadioxins	389.8157	37.25	1681.483	0.835	0.151		1.47	1.24	YES	12.2
	14	123678-HxCDD	389.8157	37.09	5418.215	0.818	0.484	0.484	1.13	1.24	NO	34.8
	13	123478-HxCDD	389.8157	36.96	1983.950	0.898	0.169	0.153	1.47	1.24	YES	16.8

HPD

	#	Name	Mass	RT	Abundance	RRF Mtd	Conc	EMPC	Ion Ratio	Ion Ratio Lower	Int Std	S/N
	16	1234678-HpCDD	423.7766	41.93	101112.824	0.879	12.028	12.028	1.01	1.05	NO	541.5
	44	Total-heptadioxins	423.7766	40.62	207106.164	0.879	24.636		1.00	1.05	NO	1104.3

Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:32 Pacific Daylight Time

ID: WU70C, Name: 13070111, Date: 01-Jul-2013, Time: 18:16:01, Conditions: AUTOSPEC01, User: pk

Dioxins,TD,PD,HD,HPD,OD

	#	Name	Mass	RT	Abs Resp	Abs M...	Conc	Ex/PS	R. Ra...	R. Res	11 R...	S/N
	41	Total-tetradioxins	319.8965	24.57	15826.708	0.936	1.059		0.81	0.77	NO	60.6
	41	Total-tetradioxins	319.8965	24.29	15406.963	0.936	1.031		0.81	0.77	NO	66.4
	41	Total-tetradioxins	319.8965	27.27	663.327	0.936	0.044		0.72	0.77	NO	4.6
	11	2378-TCDD	319.8965	27.14	1643.131	0.936	0.110	0.040	0.19	0.77	YES	3.2
	41	Total-tetradioxins	319.8965	26.80	2206.422	0.936	0.148		0.66	0.77	NO	7.4
	41	Total-tetradioxins	319.8965	26.51	2901.938	0.936	0.194		6.37	0.77	YES	26.0
	41	Total-tetradioxins	319.8965	26.35	2573.038	0.936	0.172		1.25	0.77	YES	12.5
	41	Total-tetradioxins	319.8965	25.76	2214.651	0.936	0.148		0.64	0.77	YES	8.8
	42	Total-pentadioxins	355.8546	31.04	14294.560	0.894	1.088		1.46	1.55	NO	63.2
	42	Total-pentadioxins	355.8546	30.89	1385.062	0.894	0.105		1.80	1.55	YES	9.6
	42	Total-pentadioxins	355.8546	30.69	17123.047	0.894	1.303		1.47	1.55	NO	70.9
	42	Total-pentadioxins	355.8546	30.07	961.309	0.894	0.073		1.60	1.55	NO	5.0
	42	Total-pentadioxins	355.8546	29.58	11695.221	0.894	0.890		1.54	1.55	NO	37.3
	12	12378-PeCDD	355.8546	32.28	2023.596	0.894	0.154	0.140	1.24	1.55	YES	10.6
	42	Total-pentadioxins	355.8546	31.61	4631.935	0.894	0.352		1.50	1.55	NO	19.6
	42	Total-pentadioxins	355.8546	31.19	1040.090	0.894	0.079		1.09	1.55	YES	5.2
	43	Total-hexadioxins	389.8157	36.09	2266.511	0.835	0.203		1.14	1.24	NO	13.5
	43	Total-hexadioxins	389.8157	35.99	11979.896	0.835	1.073		1.39	1.24	NO	96.3
	43	Total-hexadioxins	389.8157	35.94	9811.652	0.835	0.879		1.16	1.24	NO	65.9
	43	Total-hexadioxins	389.8157	35.70	1437.630	0.835	0.129		4.06	1.24	YES	14.3
	43	Total-hexadioxins	389.8157	35.60	28051.275	0.835	2.512		1.24	1.24	NO	198.3
	43	Total-hexadioxins	389.8157	34.79	22142.232	0.835	1.983		1.22	1.24	NO	152.7
	15	123789-HxCDD	389.8157	37.50	3797.577	0.789	0.360	0.360	1.35	1.24	NO	25.8
	43	Total-hexadioxins	389.8157	37.25	1681.483	0.835	0.151		1.47	1.24	YES	12.2
	14	123678-HxCDD	389.8157	37.09	5418.215	0.818	0.484	0.484	1.13	1.24	NO	34.8
	13	123478-HxCDD	389.8157	36.96	1983.950	0.898	0.169	0.153	1.47	1.24	YES	16.8
	16	1234678-HpCDD	423.7766	41.93	101112.824	0.879	12.028	12.028	1.01	1.05	NO	541.5
	44	Total-heptadioxins	423.7766	40.62	207106.164	0.879	24.636		1.00	1.05	NO	1104.3
	17	OCDD	457.7377	48.11	510332.078	0.875	97.013	97.013	0.88	0.89	NO	2004.6
	42	Total-pentadioxins	355.8546	31.20	550.516	0.894	0.042		1.43	1.55	NO	3.5
	42	Total-pentadioxins	355.8546	30.92	445.418	0.894	0.034		0.51	1.55	YES	3.8

ID: WU70C, Name: 13070111, Date: 01-Jul-2013, Time: 18:16:01, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

	35	Total-tetrafurans	303.9016	25.20	2349.048	0.771	0.184		0.84	0.77	NO	4.7
	35	Total-tetrafurans	303.9016	24.76	1069.066	0.771	0.084		0.72	0.77	NO	3.3
	35	Total-tetrafurans	303.9016	24.63	1908.578	0.771	0.149		0.98	0.77	YES	5.1
	35	Total-tetrafurans	303.9016	24.17	774.179	0.771	0.061		0.70	0.77	NO	2.7
	35	Total-tetrafurans	303.9016	23.85	4327.798	0.771	0.339		0.68	0.77	NO	9.1
	40	Total-Furans	303.9016	28.36	316.865	0.925	0.021		1.87	0.77	YES	1.6
	35	Total-tetrafurans	303.9016	26.75	4032.446	0.771	0.316		0.77	0.77	NO	9.5
	35	Total-tetrafurans	303.9016	26.66	1924.145	0.771	0.151		0.98	0.77	YES	4.7
	1	2378-TCDF	303.9016	26.53	3203.898	0.771	0.251	0.234	0.90	0.77	YES	10.3
	35	Total-tetrafurans	303.9016	26.32	3033.776	0.771	0.238		0.70	0.77	NO	4.4
	35	Total-tetrafurans	303.9016	26.03	1026.256	0.771	0.080		1.32	0.77	YES	3.6
	35	Total-tetrafurans	303.9016	25.63	2682.608	0.771	0.210		0.68	0.77	NO	5.5
	35	Total-tetrafurans	303.9016	25.41	2313.936	0.771	0.181		0.75	0.77	NO	5.4
	37	Total-pentafurans	339.8597	31.75	1766.854	0.826	0.105		1.69	1.55	NO	8.1
	37	Total-pentafurans	339.8597	30.88	2032.938	0.826	0.121		1.40	1.55	NO	7.3
	2	12378-PeCDF	339.8597	30.68	3079.479	0.814	0.181	0.181	1.57	1.55	NO	13.0
	37	Total-pentafurans	339.8597	30.31	3001.282	0.826	0.179		1.62	1.55	NO	7.9
	37	Total-pentafurans	339.8597	29.59	6419.958	0.826	0.383		1.73	1.55	NO	31.0
	37	Total-pentafurans	339.8597	29.54	4670.548	0.826	0.279		1.52	1.55	NO	18.5
	3	23478-PeCDF	339.8597	32.02	2621.236	0.837	0.159	0.133	1.04	1.55	YES	10.2
	7	123789-HxCDF	373.8208	37.90	1433.742	0.874	0.132	0.132	1.37	1.24	NO	7.3
	5	234678-HxCDF	373.8208	36.81	3092.556	1.000	0.238	0.238	1.14	1.24	NO	8.9
	6	123678-HxCDF	373.8208	35.88	2842.569	0.951	0.209	0.209	1.29	1.24	NO	12.6
	4	123478-HxCDF	373.8208	35.73	5039.528	0.967	0.386	0.352	1.45	1.24	YES	19.3
	38	Total-hexafurans	373.8208	35.55	1612.537	0.948	0.128		1.58	1.24	YES	8.1
	38	Total-hexafurans	373.8208	35.07	17041.566	0.948	1.350		1.23	1.24	NO	68.4
	38	Total-hexafurans	373.8208	34.75	580.500	0.948	0.046		4.34	1.24	YES	3.0
	38	Total-hexafurans	373.8208	34.19	15760.371	0.948	1.249		1.21	1.24	NO	57.3
	38	Total-hexafurans	373.8208	33.99	5090.435	0.948	0.403		1.16	1.24	NO	17.3
	9	1234789-HpCDF	407.7818	42.88	3062.352	1.085	0.397	0.397	1.03	1.05	NO	24.4
	39	Total-heptafurans	407.7818	40.88	35777.512	1.079	4.093		1.05	1.05	NO	337.5
	39	Total-heptafurans	407.7818	40.56	689.965	1.079	0.079		4.41	1.05	YES	8.9
	39	Total-heptafurans	407.7818	40.18	158.792	1.079	0.018		1.12	1.05	NO	4.3
	8	1234678-HpCDF	407.7818	40.07	22120.824	1.072	2.266	2.266	1.07	1.05	NO	198.4
	10	OCDF	441.7428	48.40	29415.029	0.878	5.576	5.576	0.87	0.89	NO	145.5
	36	Total-penta1	339.8597	27.95	26254.490		1.411		1.38	1.55	NO	322.0
	41	Total-tetradioxins	319.8965	24.57	15826.708	0.936	1.059		0.81	0.77	NO	60.6
	41	Total-tetradioxins	319.8965	24.29	15406.963	0.936	1.031		0.81	0.77	NO	66.4
	41	Total-tetradioxins	319.8965	27.27	663.327	0.936	0.044		0.72	0.77	NO	4.6
	11	2378-TCDD	319.8965	27.14	1643.131	0.936	0.110	0.040	0.19	0.77	YES	3.2
	41	Total-tetradioxins	319.8965	26.80	2206.422	0.936	0.148		0.66	0.77	NO	7.4
	41	Total-tetradioxins	319.8965	26.51	2901.938	0.936	0.194		6.37	0.77	YES	26.0
	41	Total-tetradioxins	319.8965	26.35	2573.038	0.936	0.172		1.25	0.77	YES	12.5
	41	Total-tetradioxins	319.8965	25.76	2214.651	0.936	0.148		0.64	0.77	YES	8.8
	42	Total-pentadioxins	355.8546	31.04	14294.560	0.894	1.088		1.46	1.55	NO	63.2
	42	Total-pentadioxins	355.8546	30.89	1385.062	0.894	0.105		1.80	1.55	YES	9.6
	42	Total-pentadioxins	355.8546	30.69	17123.047	0.894	1.303		1.47	1.55	NO	70.9
	42	Total-pentadioxins	355.8546	30.07	961.309	0.894	0.073		1.60	1.55	NO	5.0
	42	Total-pentadioxins	355.8546	29.58	11695.221	0.894	0.890		1.54	1.55	NO	37.3

D: WU70C, Name: 13070111, Date: 01-Jul-2013, Time: 18:16:01, Conditions: AUTOSPEC01, User: pk

TotalTEQ,Furans,Dioxins

		Name	Trace	RT	Area	RRF	Conc	EMPC	Ion Ratio	Ion Ratio Lower	Ions Ref	S/N
	12	12378-PeCDD	355.8546	32.28	2023.596	0.894	0.154	0.140	1.24	1.55	YES	10.6
	42	Total-pentadioxins	355.8546	31.61	4631.935	0.894	0.352		1.50	1.55	NO	19.6
	42	Total-pentadioxins	355.8546	31.19	1040.090	0.894	0.079		1.09	1.55	YES	5.2
	43	Total-hexadioxins	389.8157	36.09	2266.511	0.835	0.203		1.14	1.24	NO	13.5
	43	Total-hexadioxins	389.8157	35.99	11979.896	0.835	1.073		1.39	1.24	NO	96.3
	43	Total-hexadioxins	389.8157	35.94	9811.652	0.835	0.879		1.16	1.24	NO	65.9
	43	Total-hexadioxins	389.8157	35.70	1437.630	0.835	0.129		4.06	1.24	YES	14.3
	43	Total-hexadioxins	389.8157	35.60	28051.275	0.835	2.512		1.24	1.24	NO	198.3
	43	Total-hexadioxins	389.8157	34.79	22142.232	0.835	1.983		1.22	1.24	NO	152.7
	15	123789-HxCDD	389.8157	37.50	3797.577	0.789	0.360	0.360	1.35	1.24	NO	25.8
	43	Total-hexadioxins	389.8157	37.25	1681.483	0.835	0.151		1.47	1.24	YES	12.2
	14	123678-HxCDD	389.8157	37.09	5418.215	0.818	0.484	0.484	1.13	1.24	NO	34.8
	13	123478-HxCDD	389.8157	36.96	1983.950	0.898	0.169	0.153	1.47	1.24	YES	16.8
	16	1234678-HpCDD	423.7766	41.93	101112.824	0.879	12.028	12.028	1.01	1.05	NO	541.5
	44	Total-heptadioxins	423.7766	40.62	207106.164	0.879	24.636		1.00	1.05	NO	1104.3
	17	OCDD	457.7377	48.11	510332.078	0.875	97.013	97.013	0.88	0.89	NO	2004.6
	42	Total-pentadioxins	355.8546	31.20	550.516	0.894	0.042		1.43	1.55	NO	3.5
	42	Total-pentadioxins	355.8546	30.92	445.418	0.894	0.034		0.51	1.55	YES	3.8

PFK1

		Name	Trace	RT	Area	RRF	Conc	EMPC	Ion Ratio	Ion Ratio Lower	Ions Ref	S/N
	48	FUNCTION1 PFK	330.9792	28.35	0.000							1.6
	48	FUNCTION1 PFK	330.9792	27.51	0.000							1.5
	48	FUNCTION1 PFK	330.9792	26.02	0.000							1.0
	48	FUNCTION1 PFK	330.9792	25.14	0.000							2.2
	48	FUNCTION1 PFK	330.9792	23.88	0.000							2.5
	48	FUNCTION1 PFK	330.9792	22.49	0.000							1.8
	48	FUNCTION1 PFK	330.9792	22.34	0.000							2.2
	48	FUNCTION1 PFK	330.9792	22.12	0.000							0.5
	48	FUNCTION1 PFK	330.9792	21.43	0.000							1.7

PFK2

		Name	Trace	RT	Area	RRF	Conc	EMPC	Ion Ratio	Ion Ratio Lower	Ions Ref	S/N
	49	FUNCTION2 PFK	366.9792	33.49	0.000		0.000					0.9

Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:32 Pacific Daylight Time

D: WU70C, Name: 13070111, Date: 01-Jul-2013, Time: 18:16:01, Conditions: AUTOSPEC01, User: pk

PFK3

		Name									
[redacted]	50	FUNCTION3 PFK	380.9760	33.72	0.000	0.000					1.0
[redacted]	50	FUNCTION3 PFK	380.9760	36.75	0.000	0.000					3.0
[redacted]	50	FUNCTION3 PFK	380.9760	36.57	0.000	0.000					0.5
[redacted]	50	FUNCTION3 PFK	380.9760	36.33	0.000	0.000					1.7
[redacted]	50	FUNCTION3 PFK	380.9760	36.11	0.000	0.000					1.7
[redacted]	50	FUNCTION3 PFK	380.9760	36.06	0.000	0.000					0.7
[redacted]	50	FUNCTION3 PFK	380.9760	35.83	0.000	0.000					3.0
[redacted]	50	FUNCTION3 PFK	380.9760	35.61	0.000	0.000					0.4
[redacted]	50	FUNCTION3 PFK	380.9760	35.25	0.000	0.000					0.5
[redacted]	50	FUNCTION3 PFK	380.9760	35.02	0.000	0.000					2.4
[redacted]	50	FUNCTION3 PFK	380.9760	34.90	0.000	0.000					2.6
[redacted]	50	FUNCTION3 PFK	380.9760	34.72	0.000	0.000					1.2
[redacted]	50	FUNCTION3 PFK	380.9760	34.54	0.000	0.000					2.0
[redacted]	50	FUNCTION3 PFK	380.9760	34.18	0.000	0.000					1.3
[redacted]	50	FUNCTION3 PFK	380.9760	34.06	0.000	0.000					0.5
[redacted]	50	FUNCTION3 PFK	380.9760	33.88	0.000	0.000					1.8
[redacted]	50	FUNCTION3 PFK	380.9760	33.77	0.000	0.000					0.4
[redacted]	50	FUNCTION3 PFK	380.9760	38.58	0.000	0.000					67.1
[redacted]	50	FUNCTION3 PFK	380.9760	38.50	0.000	0.000					92.4
[redacted]	50	FUNCTION3 PFK	380.9760	38.48	0.000	0.000					97.7
[redacted]	50	FUNCTION3 PFK	380.9760	37.87	0.000	0.000					42.5
[redacted]	50	FUNCTION3 PFK	380.9760	37.84	0.000	0.000					43.4
[redacted]	50	FUNCTION3 PFK	380.9760	37.72	0.000	0.000					35.0
[redacted]	50	FUNCTION3 PFK	380.9760	37.45	0.000	0.000					22.1
[redacted]	50	FUNCTION3 PFK	380.9760	37.29	0.000	0.000					14.3

ID: WU70C, Name: 13070111, Date: 01-Jul-2013, Time: 18:16:01, Conditions: AUTOSPEC01, User: pk

PFK4

	51	FUNCTION4 PFK	430.9728	40.05	0.000						1.4
	51	FUNCTION4 PFK	430.9728	39.98	0.000						1.3
	51	FUNCTION4 PFK	430.9728	39.83	0.000						0.7
	51	FUNCTION4 PFK	430.9728	39.70	0.000						2.2
	51	FUNCTION4 PFK	430.9728	39.51	0.000						1.1
	51	FUNCTION4 PFK	430.9728	39.43	0.000						0.5
	51	FUNCTION4 PFK	430.9728	39.26	0.000						0.8
	51	FUNCTION4 PFK	430.9728	41.92	0.000						1.6
	51	FUNCTION4 PFK	430.9728	41.83	0.000						1.5
	51	FUNCTION4 PFK	430.9728	41.78	0.000						1.0
	51	FUNCTION4 PFK	430.9728	41.53	0.000						1.9
	51	FUNCTION4 PFK	430.9728	41.31	0.000						1.0
	51	FUNCTION4 PFK	430.9728	41.22	0.000						2.1
	51	FUNCTION4 PFK	430.9728	41.18	0.000						2.4
	51	FUNCTION4 PFK	430.9728	41.11	0.000						1.0
	51	FUNCTION4 PFK	430.9728	41.01	0.000						0.6
	51	FUNCTION4 PFK	430.9728	40.91	0.000						0.9
	51	FUNCTION4 PFK	430.9728	40.85	0.000						1.4
	51	FUNCTION4 PFK	430.9728	40.81	0.000						1.4
	51	FUNCTION4 PFK	430.9728	40.58	0.000						0.3
	51	FUNCTION4 PFK	430.9728	40.35	0.000						1.1
	51	FUNCTION4 PFK	430.9728	40.15	0.000						0.8
	51	FUNCTION4 PFK	430.9728	40.10	0.000						0.5
	51	FUNCTION4 PFK	430.9728	44.25	0.000						1.2
	51	FUNCTION4 PFK	430.9728	44.07	0.000						1.3
	51	FUNCTION4 PFK	430.9728	43.97	0.000						0.8
	51	FUNCTION4 PFK	430.9728	43.88	0.000						1.1
	51	FUNCTION4 PFK	430.9728	43.76	0.000						2.4
	51	FUNCTION4 PFK	430.9728	43.53	0.000						1.9
	51	FUNCTION4 PFK	430.9728	43.46	0.000						2.3
	51	FUNCTION4 PFK	430.9728	43.41	0.000						1.6
	51	FUNCTION4 PFK	430.9728	43.18	0.000						1.0
	51	FUNCTION4 PFK	430.9728	43.11	0.000						1.5
	51	FUNCTION4 PFK	430.9728	43.06	0.000						2.3
	51	FUNCTION4 PFK	430.9728	43.01	0.000						1.1
	51	FUNCTION4 PFK	430.9728	42.83	0.000						1.5
	51	FUNCTION4 PFK	430.9728	42.71	0.000						1.8
	51	FUNCTION4 PFK	430.9728	42.28	0.000						1.2
	51	FUNCTION4 PFK	430.9728	42.08	0.000						0.8
	51	FUNCTION4 PFK	430.9728	44.91	0.000						0.6
	51	FUNCTION4 PFK	430.9728	44.87	0.000						0.6
	51	FUNCTION4 PFK	430.9728	44.54	0.000						1.3
	51	FUNCTION4 PFK	430.9728	44.39	0.000						0.4
	51	FUNCTION4 PFK	430.9728	44.32	0.000						0.6

PFK5

ID: WU70C, Name: 13070111, Date: 01-Jul-2013, Time: 18:16:01, Conditions: AUTOSPEC01, User: pk

ETHERS1

	#	Name	Trace	RT	Abs.Resp	RRF M...	ppt	EMPC	1° Rati...	1° Rati...	1° R...	S/N
	53	FUNCTION1 HXCD...	375.8364	24.87	0.000	0.000						4.8
	53	FUNCTION1 HXCD...	375.8364	23.51	0.000	0.000						1.8

ETHERS2

	#	Name	Trace	RT	Abs.Resp	RRF M...	ppt	EMPC	1° Rati...	1° Rati...	1° R...	S/N
	54	FUNCTION1 HPCD...	409.7974	26.29	0.000	0.000						2.2
	54	FUNCTION1 HPCD...	409.7974	24.60	0.000	0.000						2.2
	54	FUNCTION1 HPCD...	409.7974	23.67	0.000	0.000						1.3
	54	FUNCTION1 HPCD...	409.7974	23.40	0.000	0.000						1.5

ETHERS3

	#	Name	Trace	RT	Abs.Resp	RRF M...	ppt	EMPC	1° Rati...	1° Rati...	1° R...	S/N
	55	FUNCTION2 HPCD...	409.7974	29.05	0.000	0.000						1.5
	55	FUNCTION2 HPCD...	409.7974	32.06	0.000	0.000						1.4
	55	FUNCTION2 HPCD...	409.7974	31.73	0.000	0.000						2.8
	55	FUNCTION2 HPCD...	409.7974	30.79	0.000	0.000						3.9
	55	FUNCTION2 HPCD...	409.7974	30.41	0.000	0.000						1.4

ETHERS4

	#	Name	Trace	RT	Abs.Resp	RRF M...	ppt	EMPC	1° Rati...	1° Rati...	1° R...	S/N
	56	FUNCTION3 OCDPE	445.7555	37.80	0.000	0.000						4.1

ETHERS5

	#	Name	Trace	RT	Abs.Resp	RRF M...	ppt	EMPC	1° Rati...	1° Rati...	1° R...	S/N
	57	FUNCTION4 NCDPE	479.7165	42.03	0.000	0.000						2.7
	57	FUNCTION4 NCDPE	479.7165	41.94	0.000	0.000						3.0
	57	FUNCTION4 NCDPE	479.7165	41.87	0.000	0.000						2.8
	57	FUNCTION4 NCDPE	479.7165	41.82	0.000	0.000						1.9
	57	FUNCTION4 NCDPE	479.7165	39.61	0.000	0.000						5.6

ETHERS6

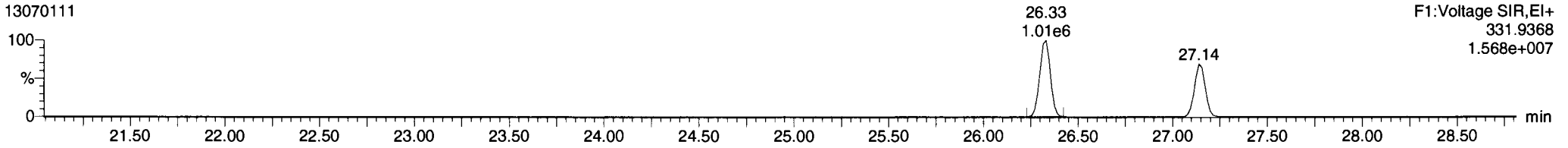
	#	Name	Trace	RT	Abs.Resp	RRF M...	ppt	EMPC	1° Rati...	1° Rati...	1° R...	S/N
	58	FUNCTION5 DCDPE	513.6775	48.25	0.000	0.000						7.3

Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:32 Pacific Daylight Time

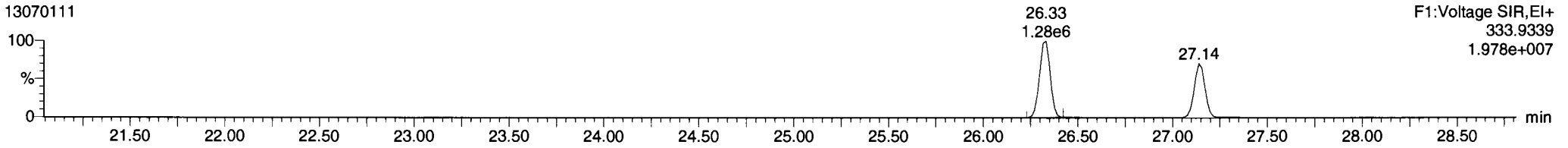
Method: P:\DIOXIN8290.pro\MethDB\Dioxin130617.mdb 28 Jun 2013 10:21:28
Calibration: P:\DIOXIN8290.pro\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

ID: WU70C, Name: 13070111, Date: 01-Jul-2013, Time: 18:16:01, Conditions: AUTOSPEC01, User: pk

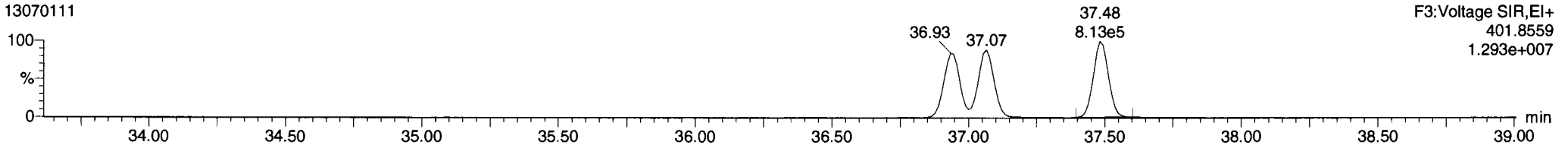
13C-1234-TCDD



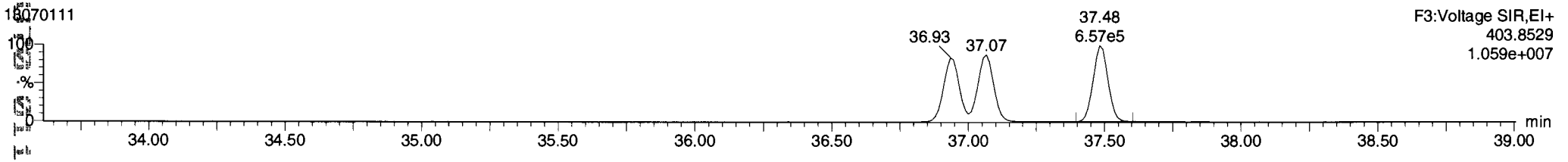
13C-1234-TCDD



13C-123789-HxCDD



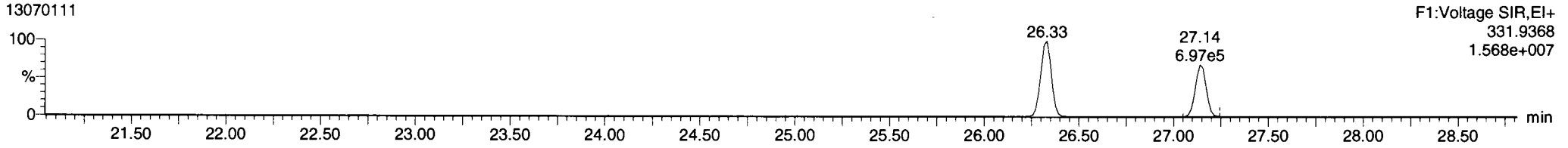
13C-123789-HxCDD



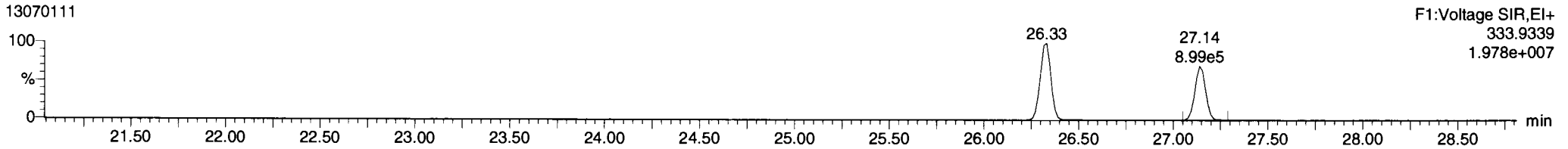
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:32 Pacific Daylight Time

ID: WU70C, Name: 13070111, Date: 01-Jul-2013, Time: 18:16:01, Conditions: AUTOSPEC01, User: pk

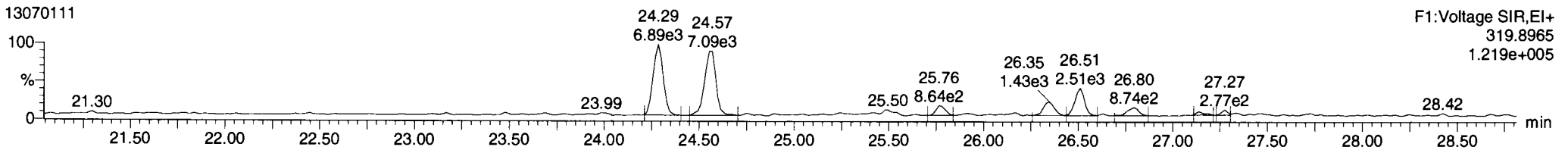
13C-2378-TCDD



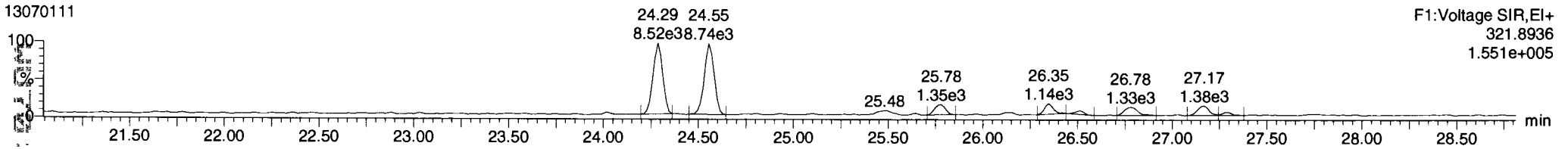
13C-2378-TCDD



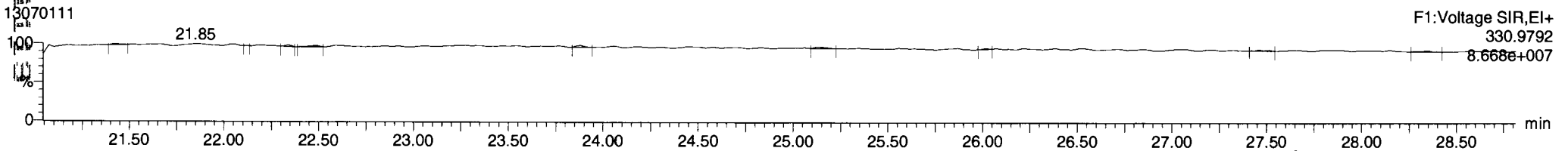
Total-tetradioxins



Total-tetradioxins



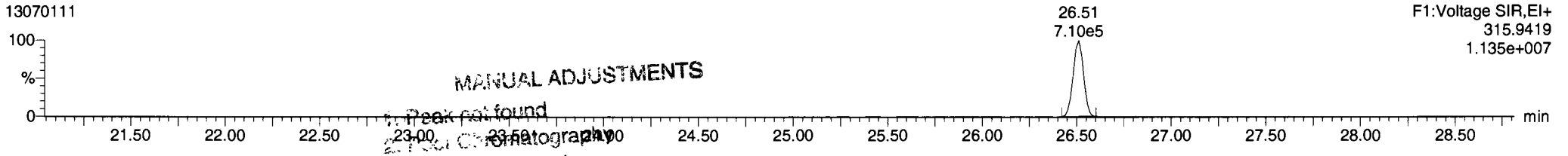
FUNCTION1 PFK



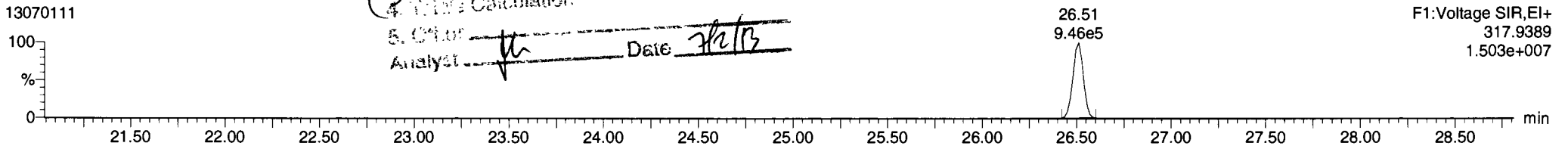
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:32 Pacific Daylight Time

ID: WU70C, Name: 13070111, Date: 01-Jul-2013, Time: 18:16:01, Conditions: AUTOSPEC01, User: pk

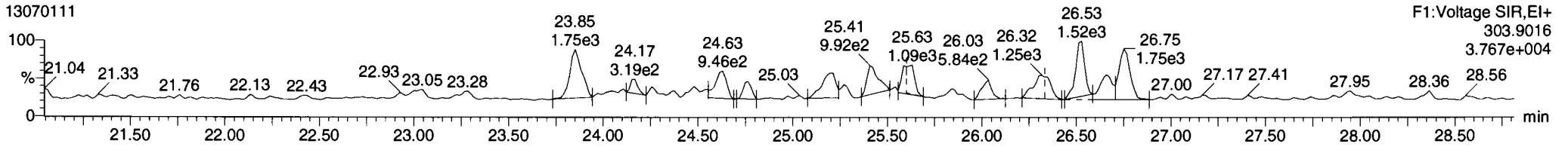
13C-2378-TCDF



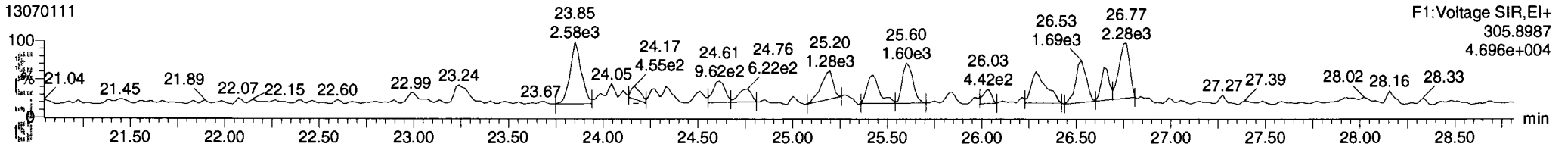
13C-2378-TCDF



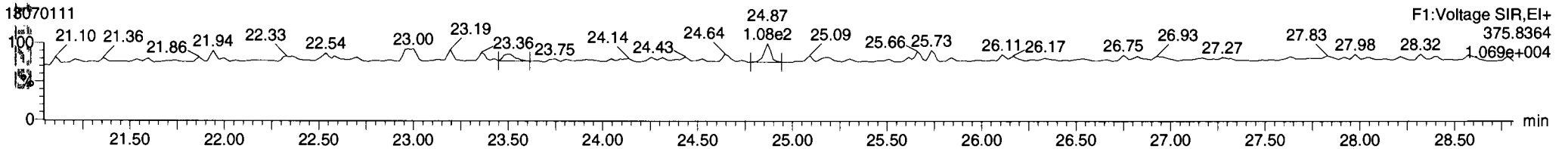
Total-tetrafurans



Total-tetrafurans



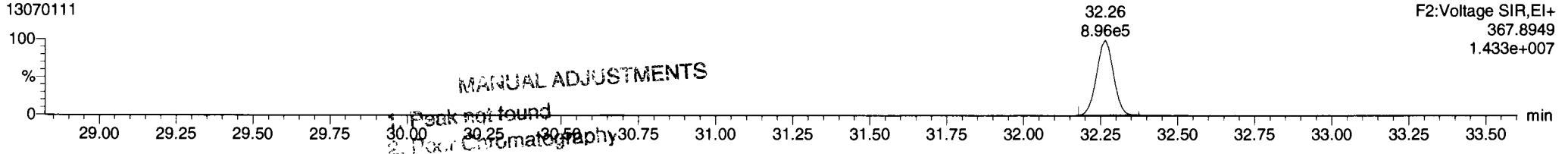
FUNCTION1 HXCDPE



Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:32 Pacific Daylight Time

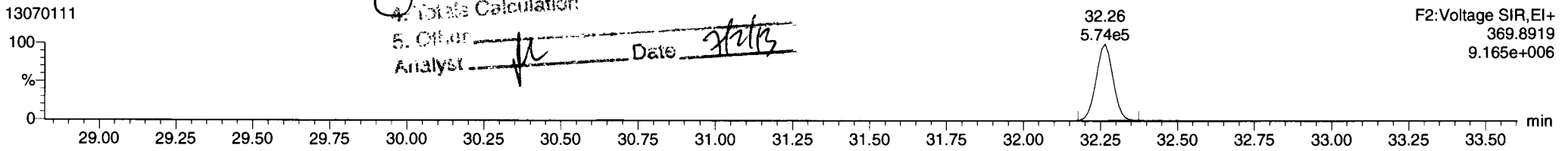
ID: WU70C, Name: 13070111, Date: 01-Jul-2013, Time: 18:16:01, Conditions: AUTOSPEC01, User: pk

13C-12378-PeCDD

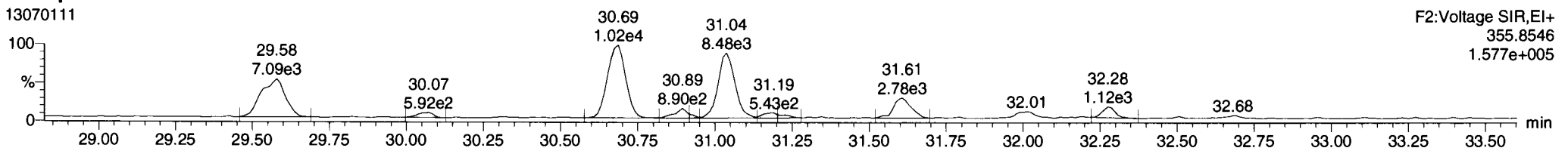


MANUAL ADJUSTMENTS
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other
Analyst _____ Date 7/2/13

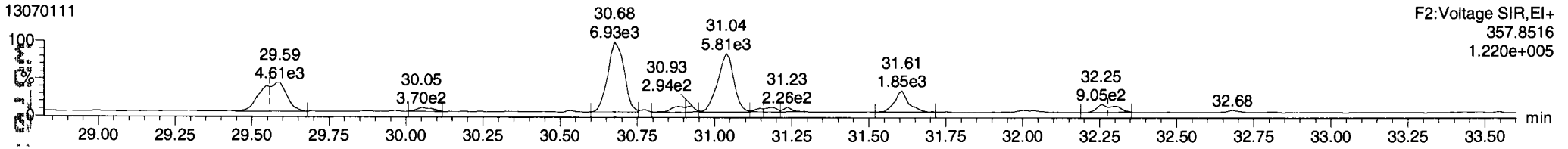
13C-12378-PeCDD



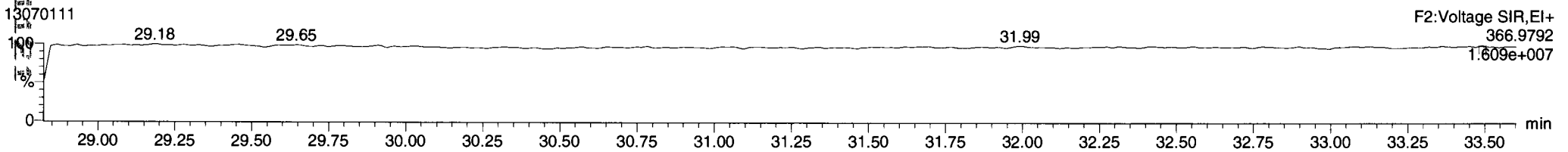
Total-pentadioxins



Total-pentadioxins

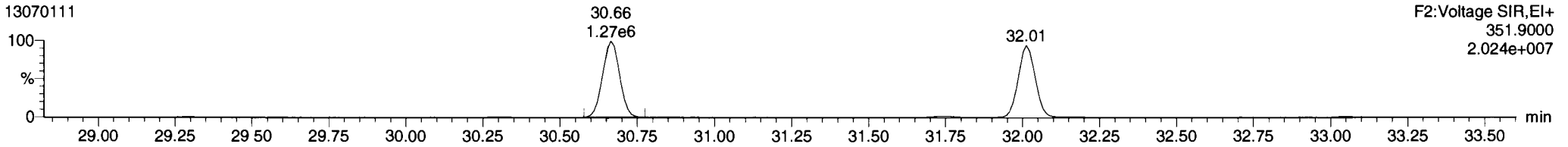


FUNCTION2 PFK

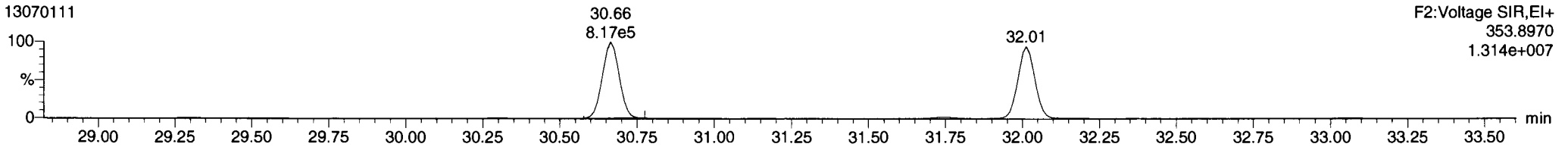


ID: WU70C, Name: 13070111, Date: 01-Jul-2013, Time: 18:16:01, Conditions: AUTOSPEC01, User: pk

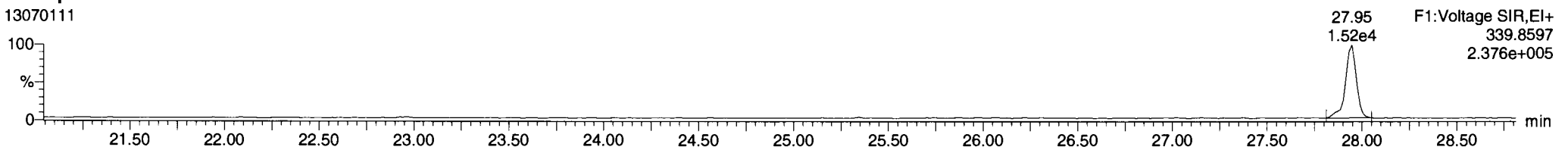
13C-12378-PeCDF



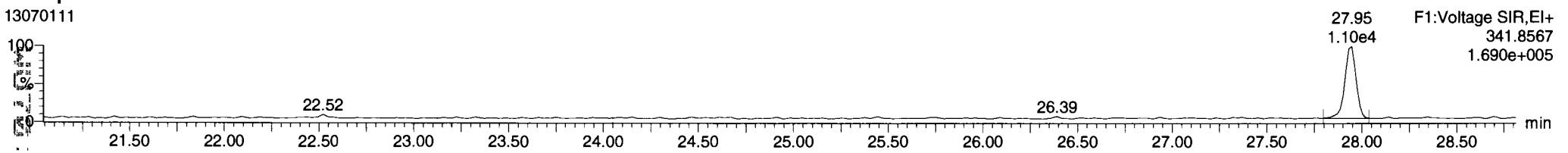
13C-12378-PeCDF



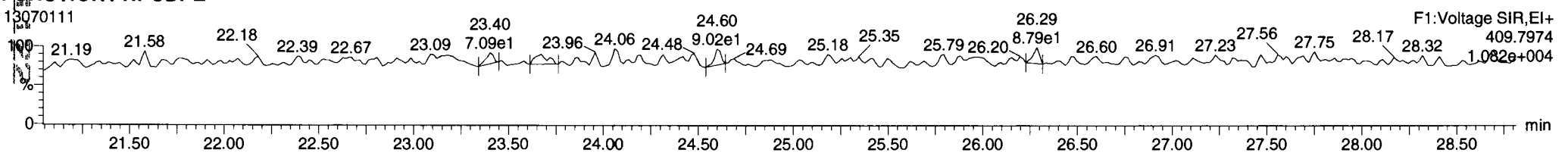
Total-penta1



Total-penta1



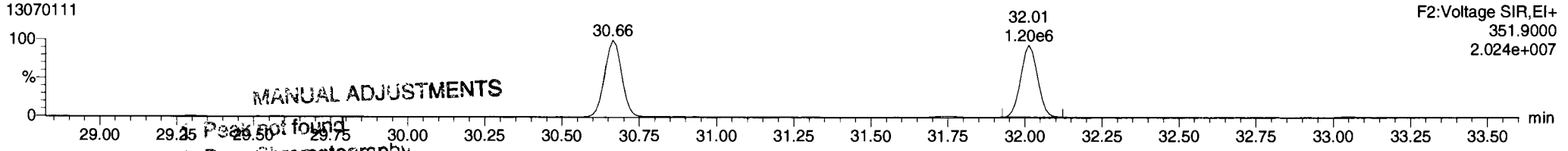
FUNCTION1 HPCDPE



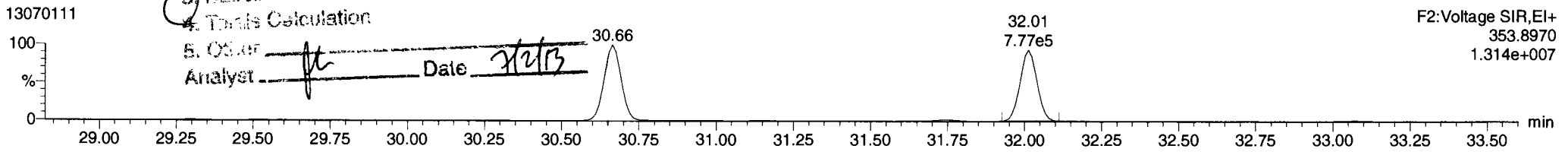
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:32 Pacific Daylight Time

ID: WU70C, Name: 13070111, Date: 01-Jul-2013, Time: 18:16:01, Conditions: AUTOSPEC01, User: pk

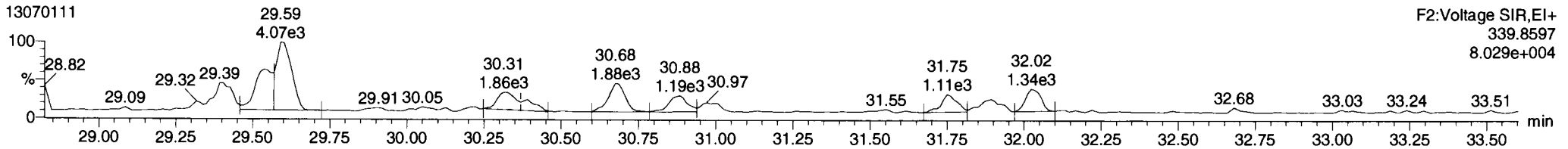
13C-23478-PeCDF



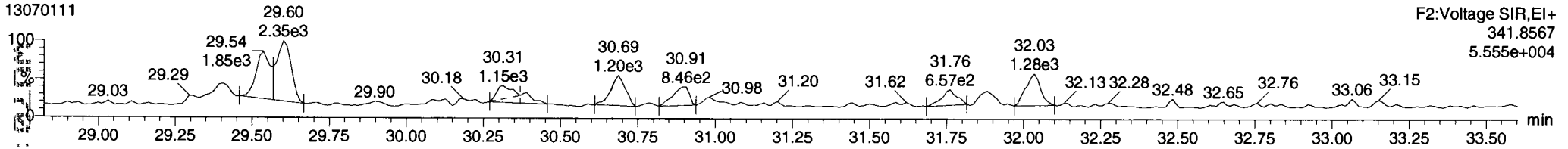
13C-23478-PeCDF



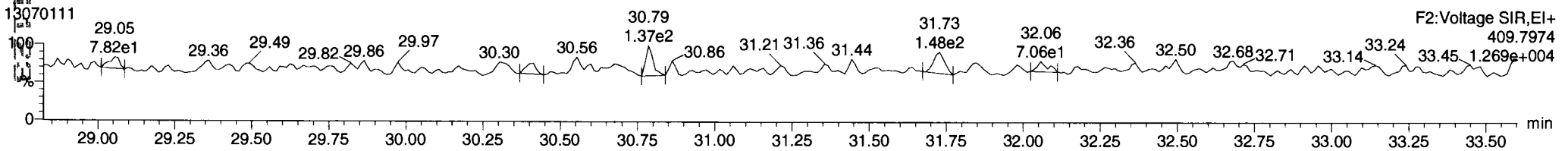
Total-pentafurans



Total-pentafurans



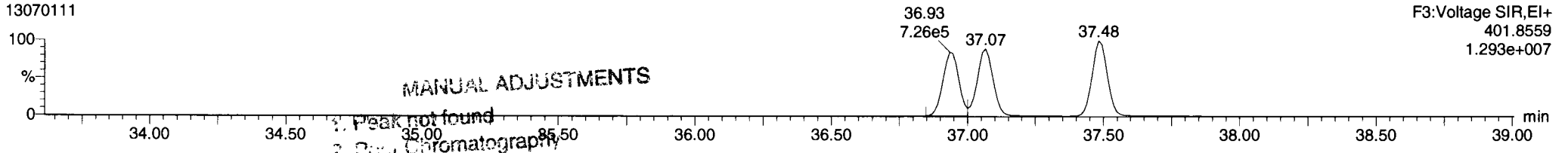
FUNCTION2 HPCDPE



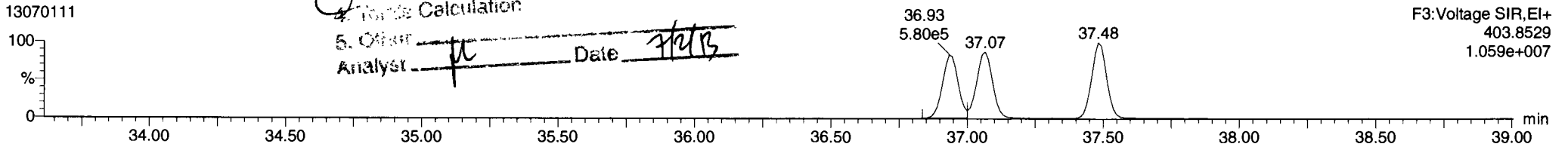
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:32 Pacific Daylight Time

ID: WU70C, Name: 13070111, Date: 01-Jul-2013, Time: 18:16:01, Conditions: AUTOSPEC01, User: pk

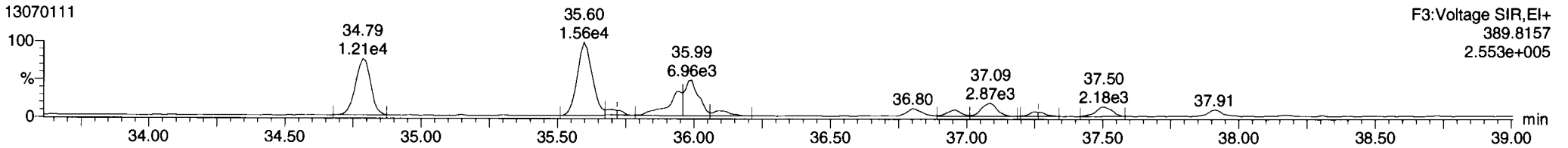
13C-123478-HxCDD



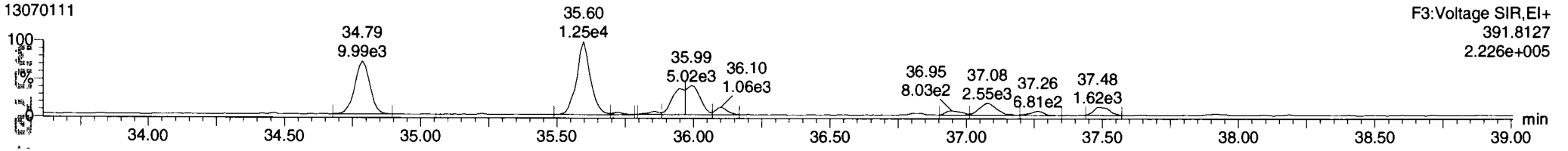
13C-123478-HxCDD



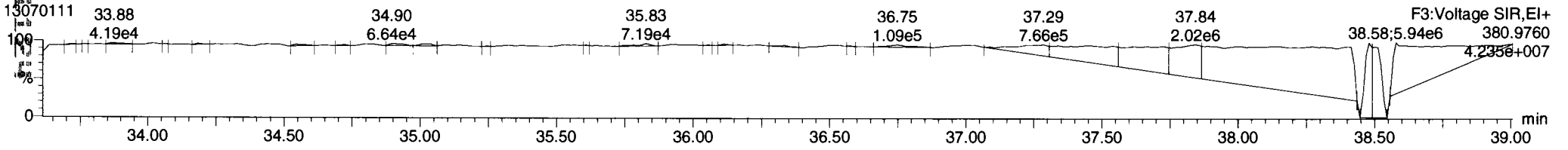
Total-hexadioxins



Total-hexadioxins



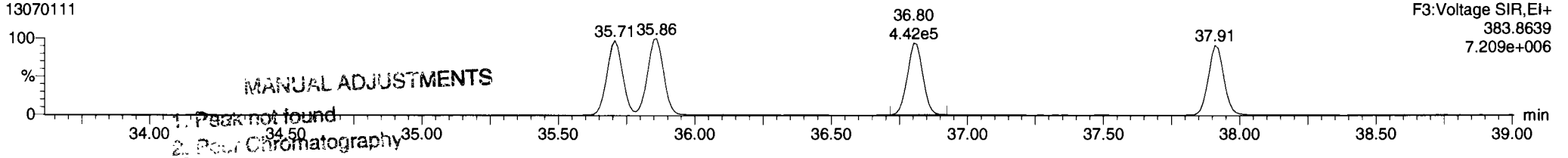
FUNCTION3 PFK



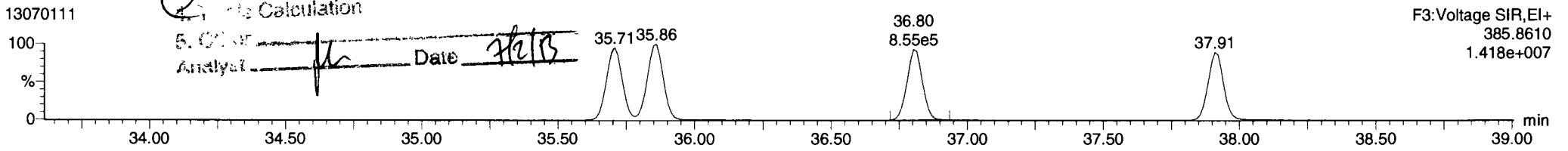
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:32 Pacific Daylight Time

ID: WU70C, Name: 13070111, Date: 01-Jul-2013, Time: 18:16:01, Conditions: AUTOSPEC01, User: pk

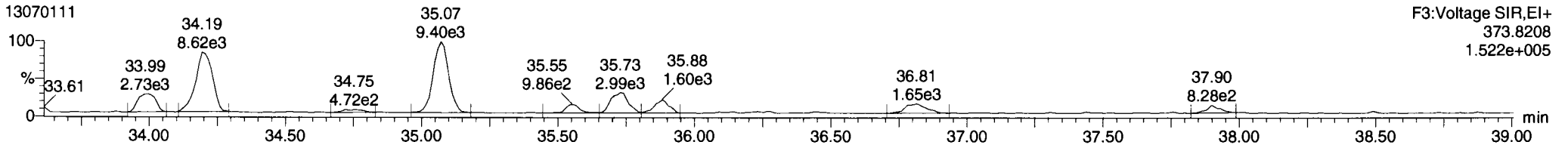
13C-234678-HxCDF



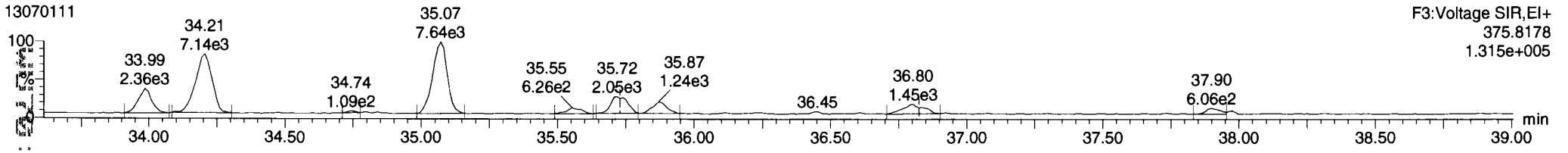
13C-234678-HxCDF



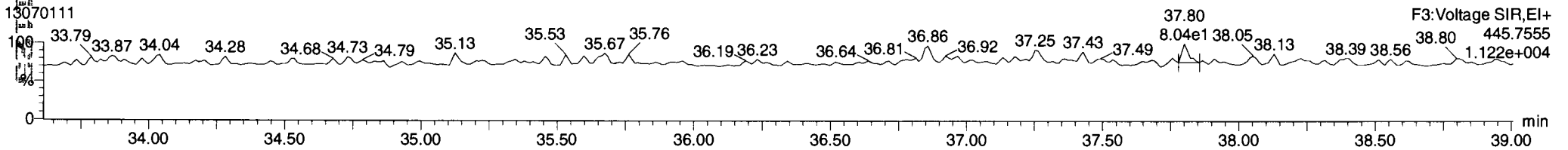
Total-hexafurans



Total-hexafurans



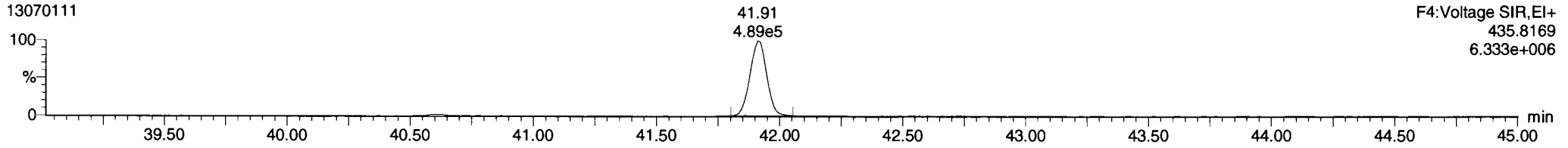
FUNCTION3 OCDPE



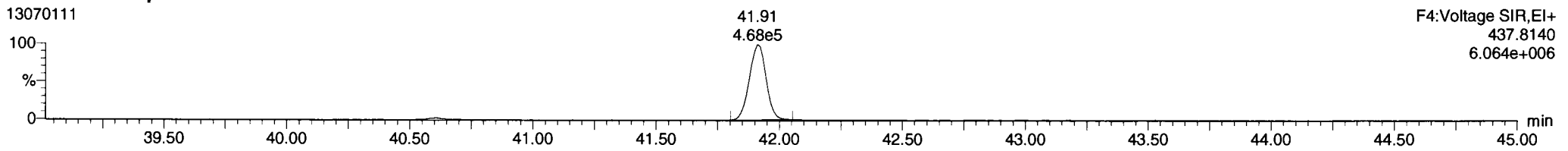
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:32 Pacific Daylight Time

ID: WU70C, Name: 13070111, Date: 01-Jul-2013, Time: 18:16:01, Conditions: AUTOSPEC01, User: pk

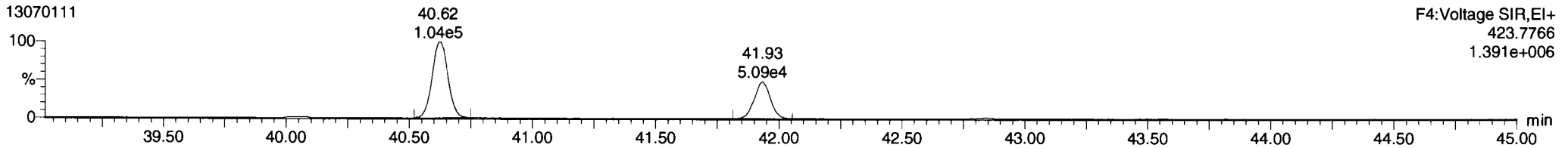
13C-1234678-HpCDD



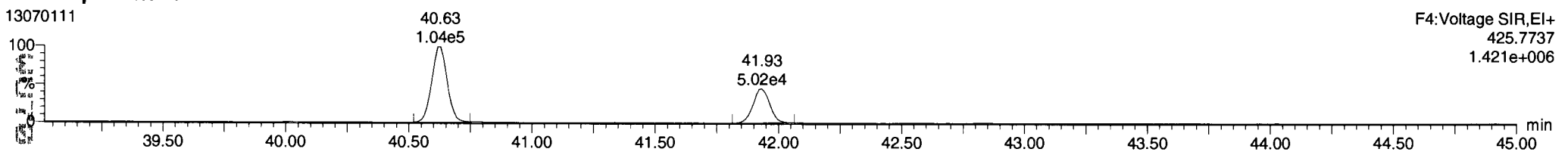
13C-1234678-HpCDD



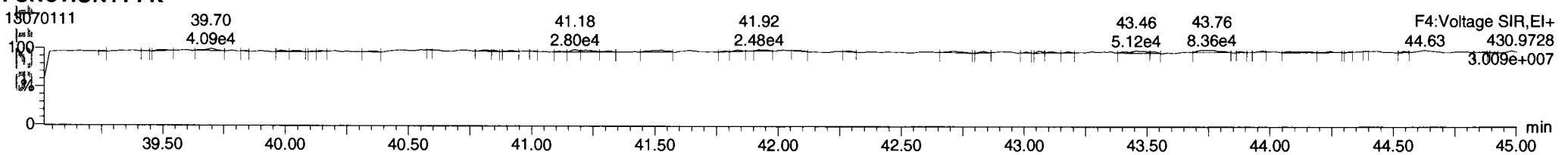
Total-heptadioxins



Total-heptadioxins



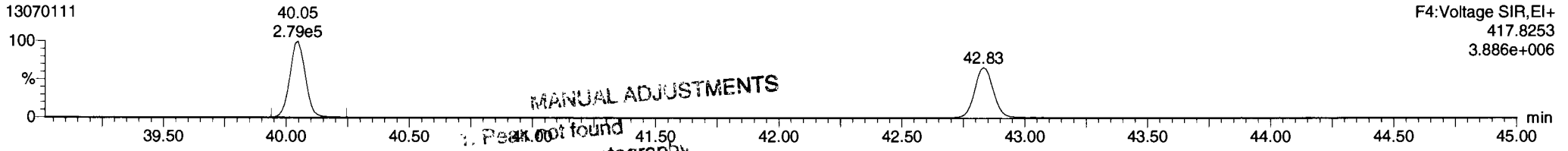
FUNCTION4 PFK



Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:32 Pacific Daylight Time

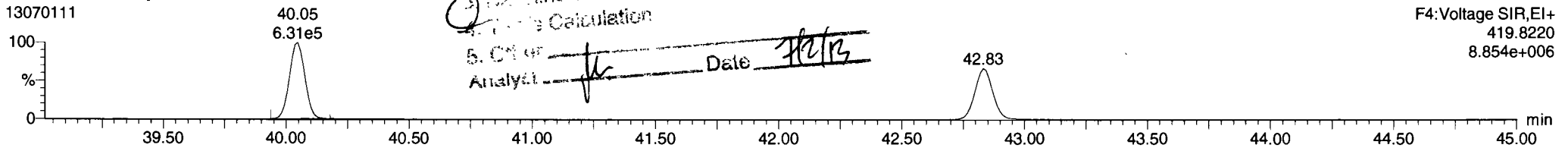
ID: WU70C, Name: 13070111, Date: 01-Jul-2013, Time: 18:16:01, Conditions: AUTOSPEC01, User: pk

13C-1234678-HpCDF

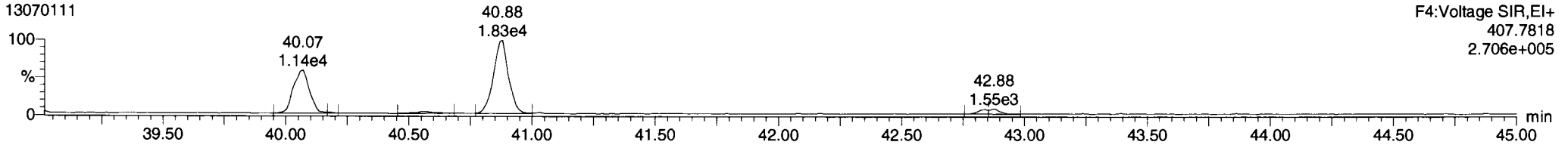


MANUAL ADJUSTMENTS
1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Area Calculation
5. Other
Analyst _____ Date 7/2/13

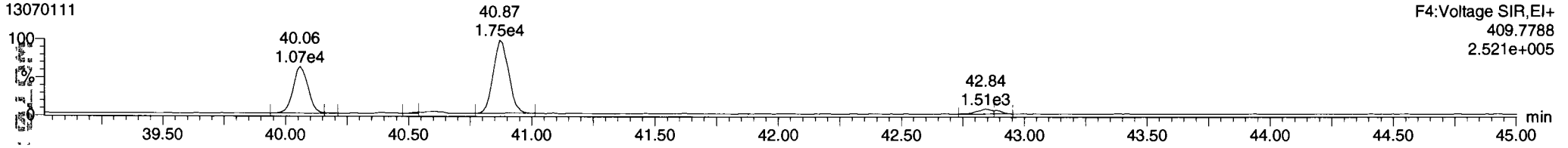
13C-1234678-HpCDF



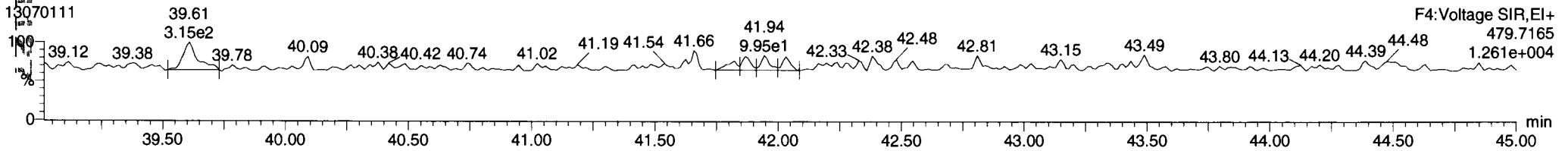
Total-heptafurans



Total-heptafurans



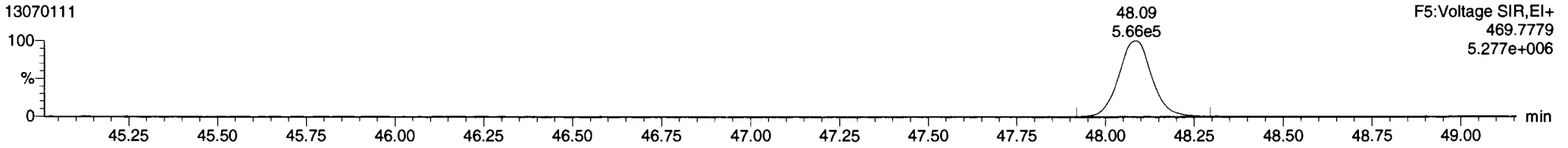
FUNCTION4 NCDPE



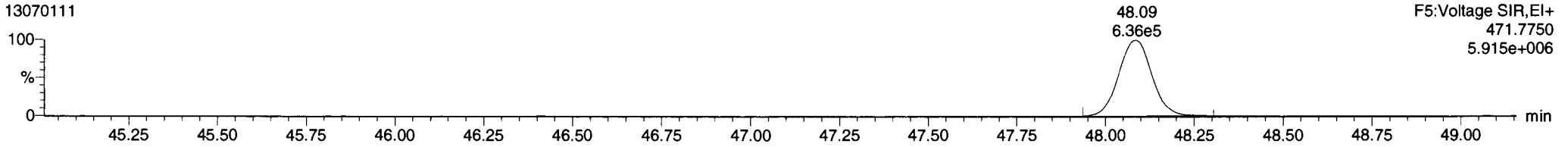
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:32 Pacific Daylight Time

ID: WU70C, Name: 13070111, Date: 01-Jul-2013, Time: 18:16:01, Conditions: AUTOSPEC01, User: pk

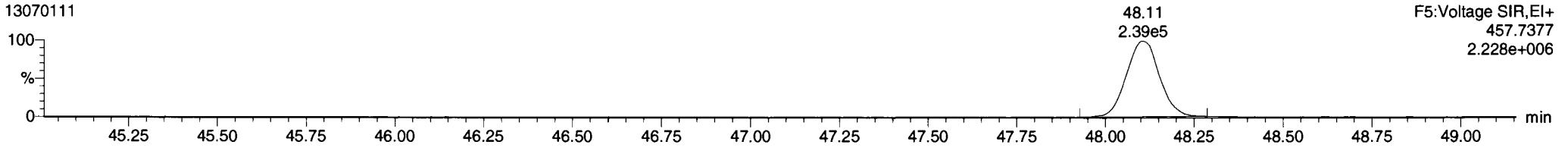
13C-OCDD



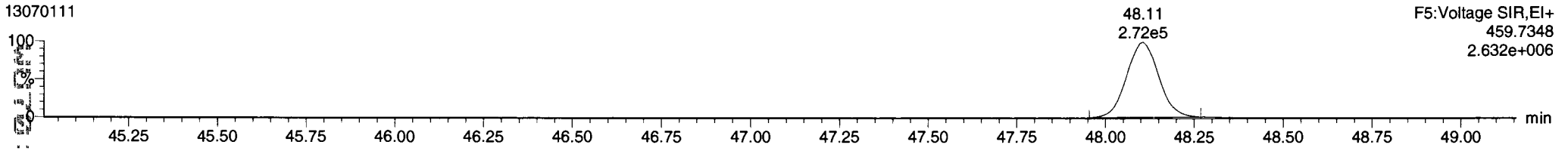
13C-OCDD



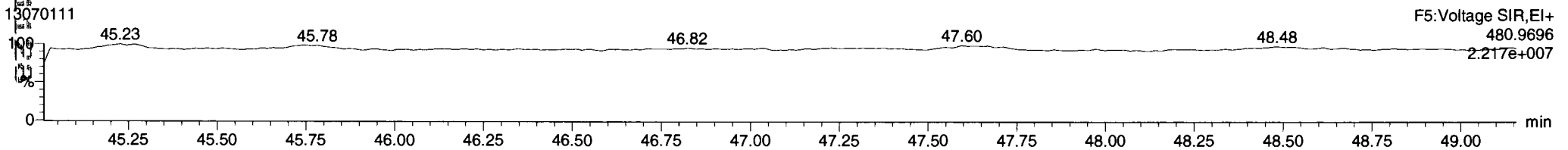
OCDD



OCDD



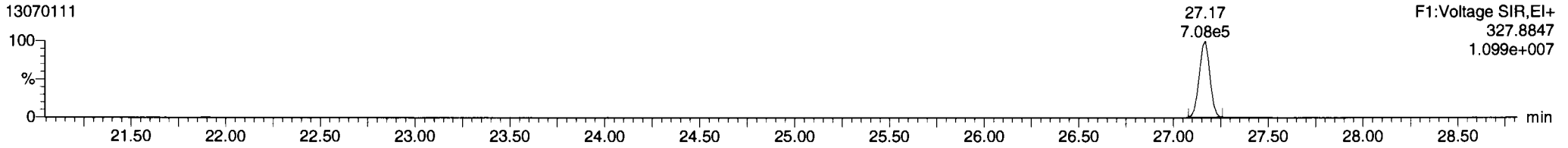
FUNCTION5 PFK



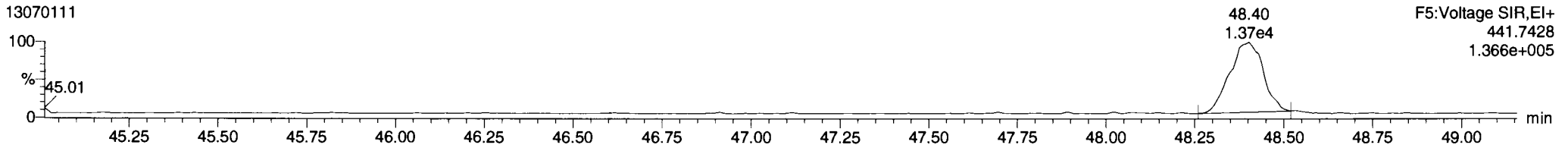
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 10:39:56 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 10:41:32 Pacific Daylight Time

ID: WU70C, Name: 13070111, Date: 01-Jul-2013, Time: 18:16:01, Conditions: AUTOSPEC01, User: pk

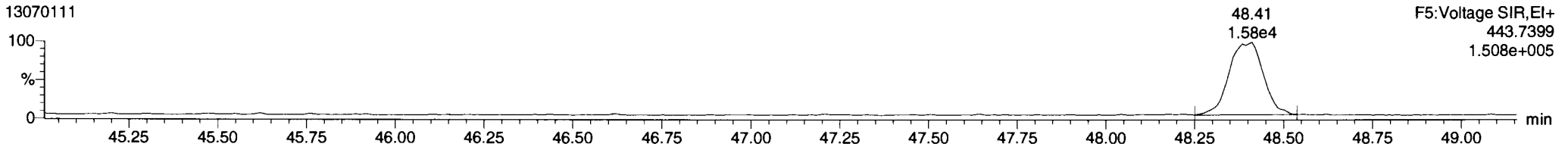
37CL-2378-TCDD



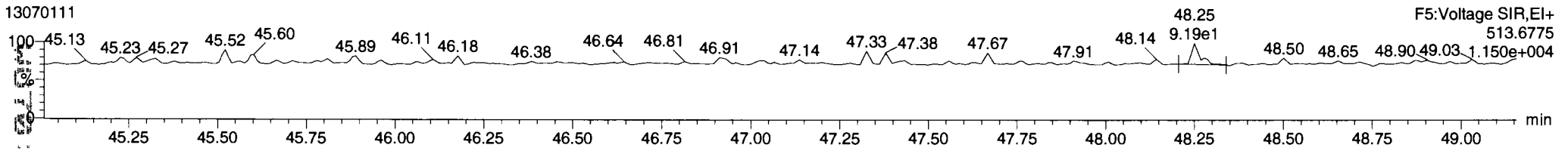
OCDF



OCDF

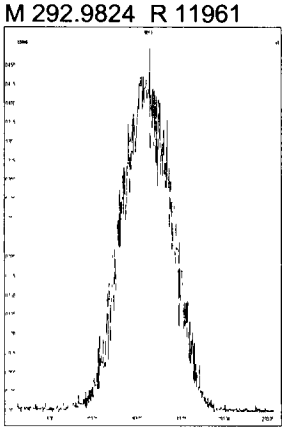


FUNCTION5 DCDPE

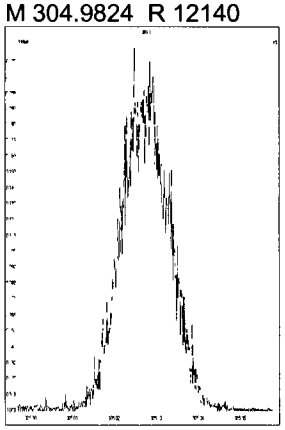


Printed: Monday, July 01, 2013 20:08:44 Pacific Daylight Time

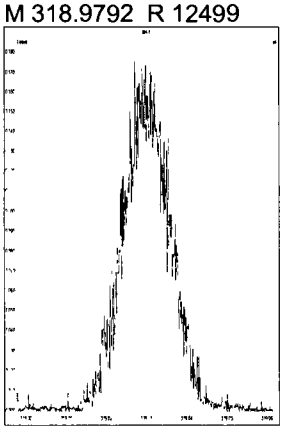
M 292.9824 R 11961



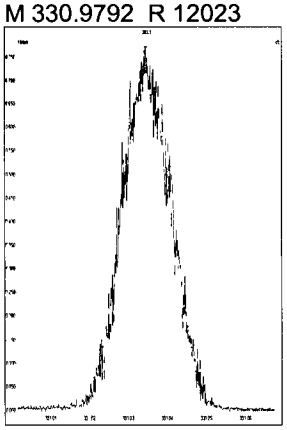
M 304.9824 R 12140



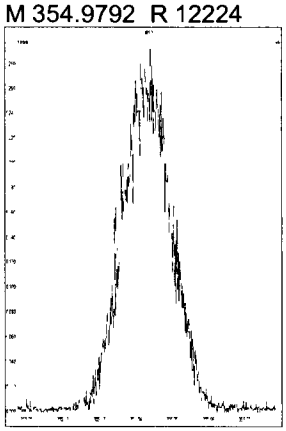
M 318.9792 R 12499



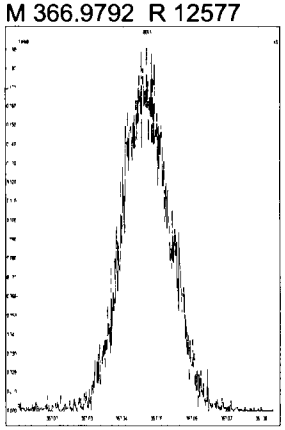
M 330.9792 R 12023



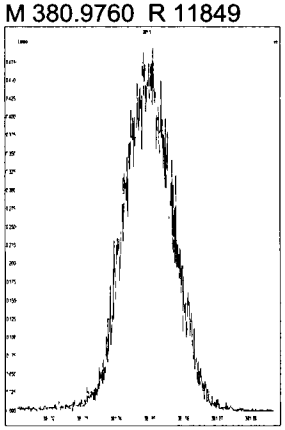
M 354.9792 R 12224



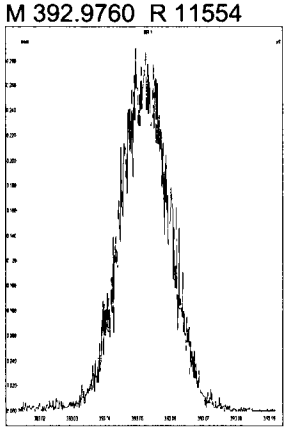
M 366.9792 R 12577



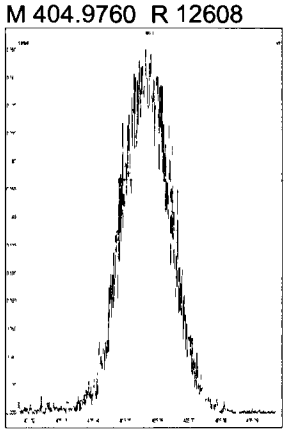
M 380.9760 R 11849



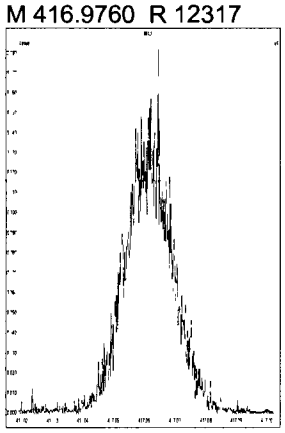
M 392.9760 R 11554



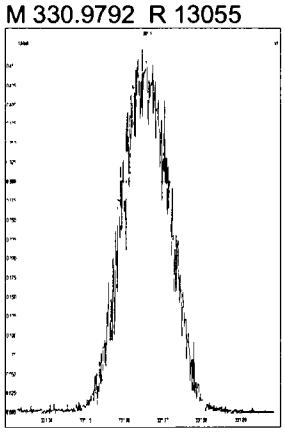
M 404.9760 R 12608



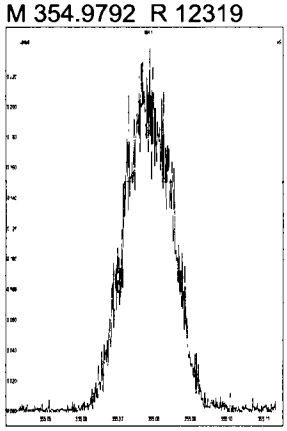
M 416.9760 R 12317



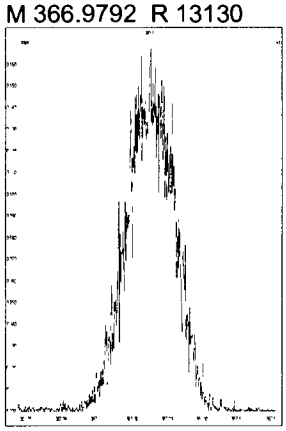
M 330.9792 R 13055



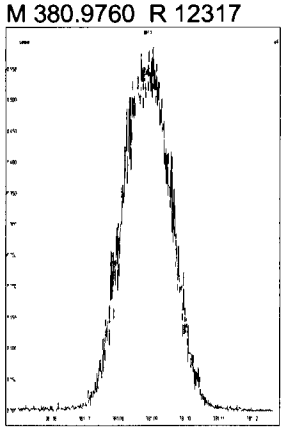
M 354.9792 R 12319



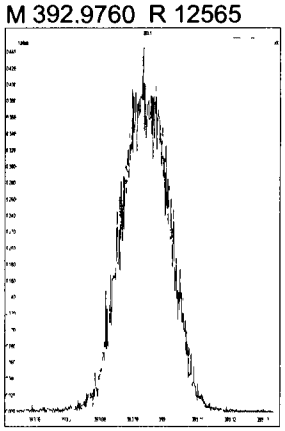
M 366.9792 R 13130



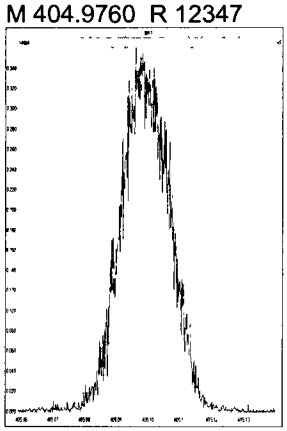
M 380.9760 R 12317



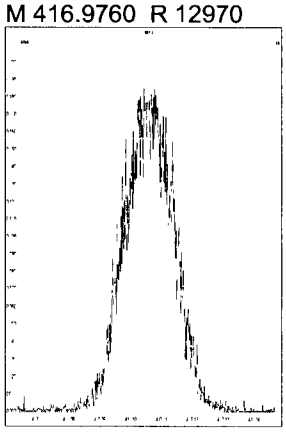
M 392.9760 R 12565



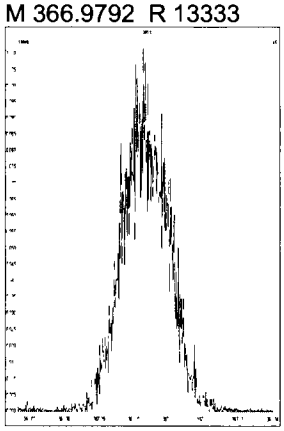
M 404.9760 R 12347



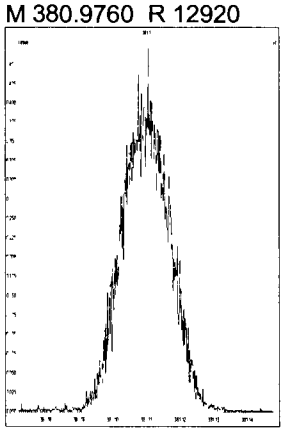
M 416.9760 R 12970



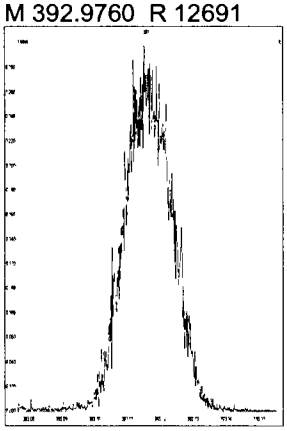
M 366.9792 R 13333



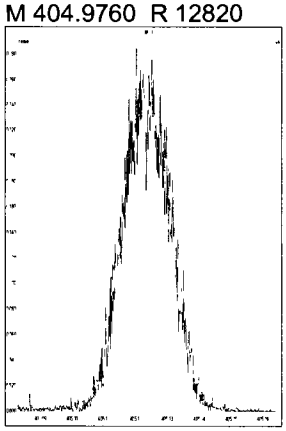
M 380.9760 R 12920



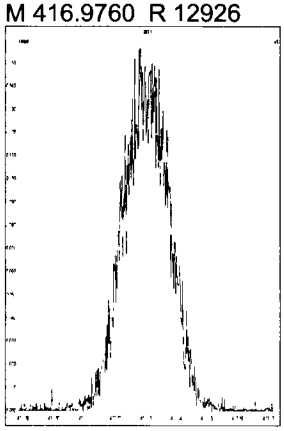
M 392.9760 R 12691



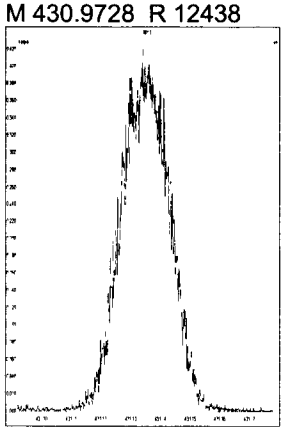
M 404.9760 R 12820



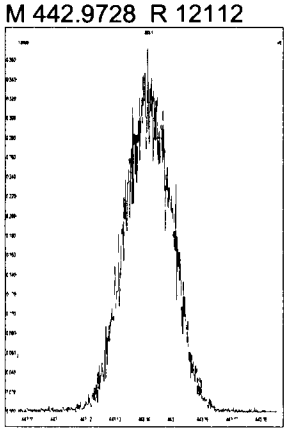
M 416.9760 R 12926



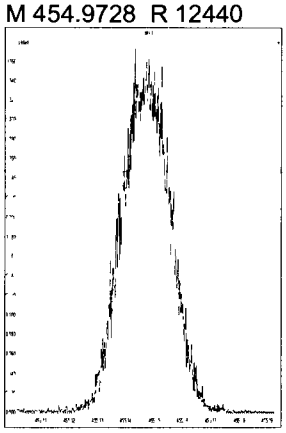
M 430.9728 R 12438



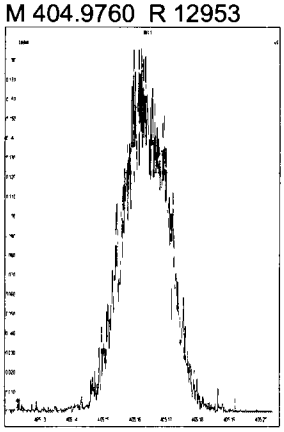
M 442.9728 R 12112



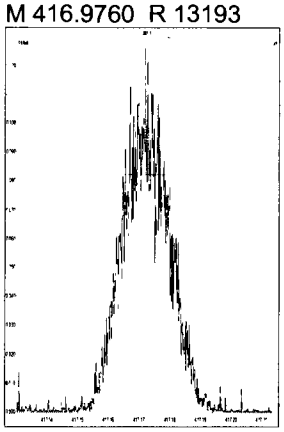
M 454.9728 R 12440



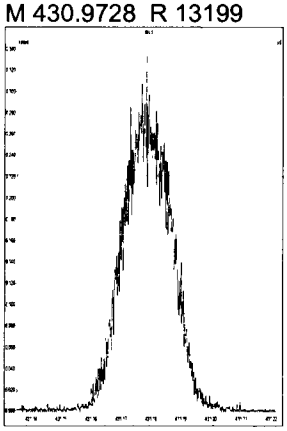
M 404.9760 R 12953



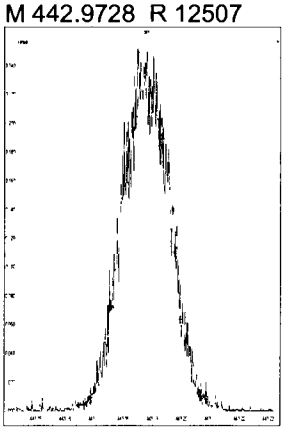
M 416.9760 R 13193



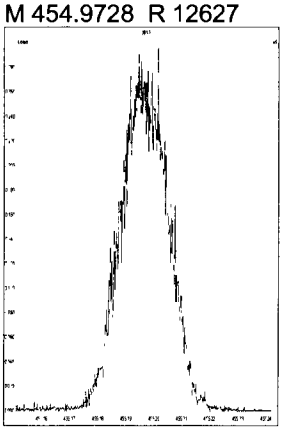
M 430.9728 R 13199



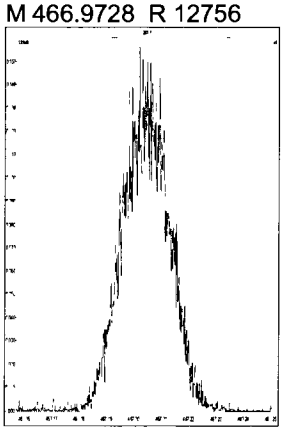
M 442.9728 R 12507



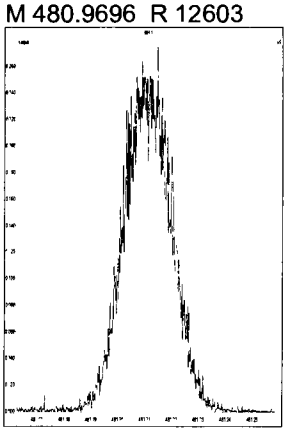
M 454.9728 R 12627



M 466.9728 R 12756

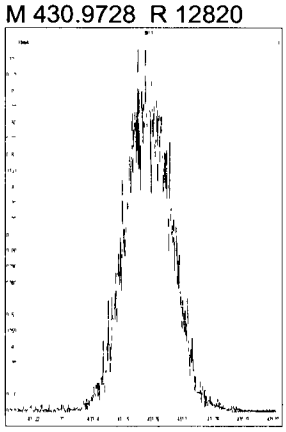


M 480.9696 R 12603

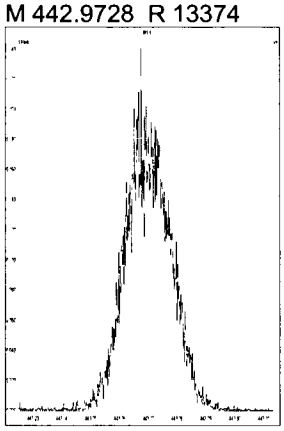


Printed: Monday, July 01, 2013 20:08:44 Pacific Daylight Time

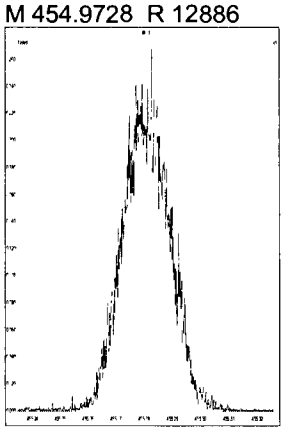
M 430.9728 R 12820



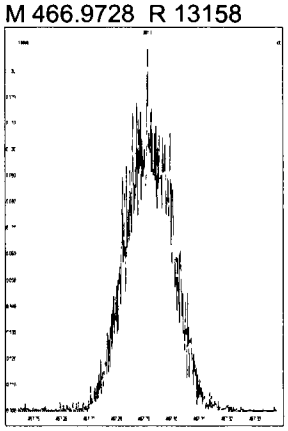
M 442.9728 R 13374



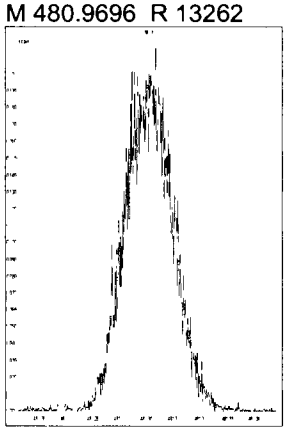
M 454.9728 R 12886



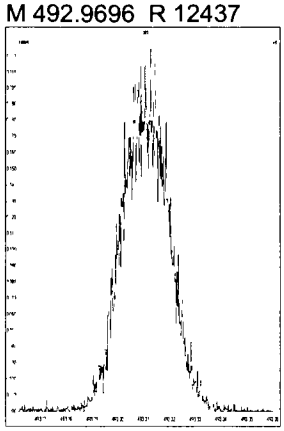
M 466.9728 R 13158



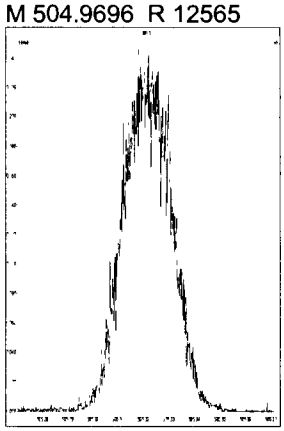
M 480.9696 R 13262



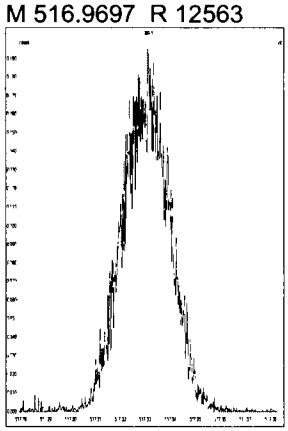
M 492.9696 R 12437



M 504.9696 R 12565



M 516.9697 R 12563



Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 09:15:48 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 09:17:49 Pacific Daylight Time

Method: P:\DIOXIN8290.pro\MethDB\Dioxin130617.mdb 28 Jun 2013 10:21:28
Calibration: P:\DIOXIN8290.pro\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

ID: CS3, Name: 13070116, Date: 01-Jul-2013, Time: 19:08:16, Conditions: AUTOSPEC01, User: pk

2378-TCDF	26.526	1.001	1.13e5	1.47e5	0.771	0.768	0.770	537.3	NO	10.465	10.465
12378-PeCDF	30.676	1.000	6.36e5	4.16e5	0.814	1.531	1.550	3072.2	NO	51.607	51.607
23478-PeCDF	32.024	1.000	6.05e5	3.96e5	0.837	1.530	1.550	2959.1	NO	50.754	50.754
123478-HxCDF	35.707	1.000	4.89e5	4.02e5	0.967	1.216	1.240	2610.7	NO	51.511	51.511
234678-HxCDF	36.803	1.000	4.44e5	3.71e5	1.000	1.196	1.240	2293.9	NO	51.688	51.688
123678-HxCDF	35.860	1.001	4.98e5	4.15e5	0.951	1.199	1.240	2619.7	NO	50.393	50.393
123789-HxCDF	37.921	1.001	3.80e5	3.12e5	0.874	1.220	1.240	2089.5	NO	52.346	52.346
1234678-HpCDF	40.015	1.000	3.76e5	3.67e5	1.072	1.024	1.050	2688.3	NO	51.958	51.958
1234789-HpCDF	42.799	1.000	3.06e5	3.03e5	1.085	1.012	1.050	1858.4	NO	53.565	53.565
OCDF	48.277	1.007	4.72e5	5.32e5	0.878	0.887	0.890	3918.0	NO	107.565	107.565
2378-TCDD	27.169	1.001	9.60e4	1.28e5	0.936	0.752	0.770	558.5	NO	10.204	10.204
12378-PeCDD	32.276	1.000	4.76e5	3.15e5	0.894	1.512	1.550	2620.7	NO	50.959	50.959
123478-HxCDD	36.935	1.000	3.81e5	3.07e5	0.898	1.243	1.240	1505.8	NO	49.825	49.825
123678-HxCDD	37.066	1.001	3.89e5	3.14e5	0.818	1.239	1.240	1499.2	NO	50.449	50.449
123789-HxCDD	37.483	1.012	4.09e5	3.28e5	0.789	1.245	1.240	1611.5	NO	57.624	57.624
1234678-HpCDD	41.878	1.000	2.92e5	2.90e5	0.879	1.007	1.050	1888.3	NO	52.744	52.744
OCDD	47.990	1.001	4.56e5	5.16e5	0.875	0.883	0.890	1824.4	NO	104.324	104.324
13C-2378-TCDF	26.496	1.007	1.40e6	1.83e6	1.190	0.762	0.770	5214.0	NO		107.220
13C-12378-PeCDF	30.664	1.165	1.53e6	9.75e5	0.904	1.567	1.550	6939.1	NO		109.235
13C-23478-PeCDF	32.013	1.216	1.43e6	9.24e5	0.877	1.551	1.550	6435.3	NO		106.092
13C-123478-HxCDF	35.696	0.953	6.07e5	1.18e6	1.096	0.513	0.510	2348.1	NO		97.248
13C-123678-HxCDF	35.838	0.956	6.39e5	1.27e6	1.187	0.505	0.510	2488.9	NO		95.591
13C-234678-HxCDF	36.792	0.982	5.33e5	1.04e6	1.040	0.512	0.510	2042.0	NO		90.340
13C-123789-HxCDF	37.899	1.011	5.17e5	9.96e5	0.941	0.519	0.510	2040.7	NO		95.837
13C-1234678-HpCDF	40.004	1.068	4.07e5	9.26e5	0.825	0.440	0.440	3266.8	NO		96.223
13C-1234789-HpCDF	42.788	1.142	3.20e5	7.28e5	0.609	0.440	0.440	2156.4	NO		102.502
13C-1234-TCDD	26.317	0.000	1.12e6	1.41e6	1.000	0.790	0.770	2085.6	NO		100.000
13C-2378-TCDD	27.139	1.031	1.02e6	1.32e6	0.920	0.774	0.770	1933.8	NO		100.402
13C-12378-PeCDD	32.265	1.226	1.05e6	6.80e5	0.669	1.552	1.550	4689.7	NO		102.290
13C-123478-HxCDD	36.924	0.985	8.60e5	6.78e5	1.032	1.269	1.240	4295.9	NO		88.822
13C-123678-HxCDD	37.044	0.989	9.29e5	7.75e5	1.146	1.198	1.240	4663.2	NO		88.647
13C-1234678-HpCDD	41.867	1.117	6.41e5	6.15e5	0.789	1.043	1.050	4098.5	NO		94.876
13C-OCDD	47.963	1.280	9.99e5	1.13e6	0.696	0.885	0.890	5310.4	NO		182.080

Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 09:15:48 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 09:17:49 Pacific Daylight Time

ID: CS3, Name: 13070116, Date: 01-Jul-2013, Time: 19:08:16, Conditions: AUTOSPEC01, User: pk

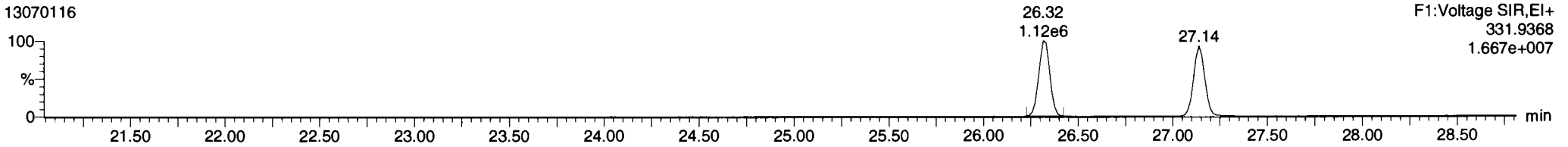
13C-123789-HxCDD	37.472	0.000	9.21e5	7.57e5	1.000	1.217	1.240	4747.5	NO		100.000
Total-tetrafurans			3.37e5		0.771						31.097
Total-penta1			1.03e6								76.775
Total-pentafurans			1.84e6		0.826						151.725
Total-hexafurans			2.40e6		0.948						271.946
Total-heptafurans			6.83e5		1.079						105.651
Total-Furans			6.76e6		0.925						744.759
Total-tetradioxins			5.60e5		0.936						59.193
Total-pentadioxins			1.66e6		0.894						177.474
Total-hexadioxins			1.70e6		0.835						228.623
Total-heptadioxins			6.28e5		0.879						112.717
Total-Dioxins			5.01e6		0.870						682.331
Total-TEQ			1.18e7								1427.090
37CL-2378-TCDD	27.154	1.032	2.57e5		1.000			1887.8			10.147
FUNCTION1 PFK			2.98e6								
FUNCTION2 PFK			1.53e5								0.000
FUNCTION3 PFK			1.96e5								0.000
FUNCTION4 PFK			9.93e4								
FUNCTION5 PFK			1.64e5								
FUNCTION1 HXCDPE			4.87e2								0.000
FUNCTION1 HPCDPE			1.28e3								0.000
FUNCTION2 HPCDPE			2.00e3								0.000
FUNCTION3 OCDPE			0.00e0								
FUNCTION4 NCDPE			3.16e2								0.000
FUNCTION5 DCDPE			0.00e0								

Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 09:15:48 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 09:17:49 Pacific Daylight Time

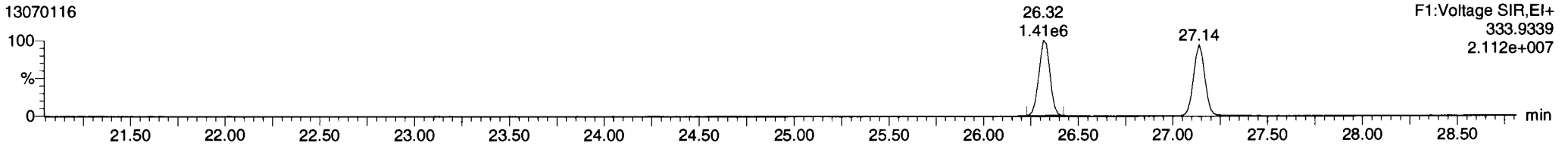
Method: P:\DIOXIN8290.pro\MethDB\Dioxin130617.mdb 28 Jun 2013 10:21:28
Calibration: P:\DIOXIN8290.pro\CurveDB\130620ICAL.cdb 21 Jun 2013 09:11:11

ID: CS3, Name: 13070116, Date: 01-Jul-2013, Time: 19:08:16, Conditions: AUTOSPEC01, User: pk

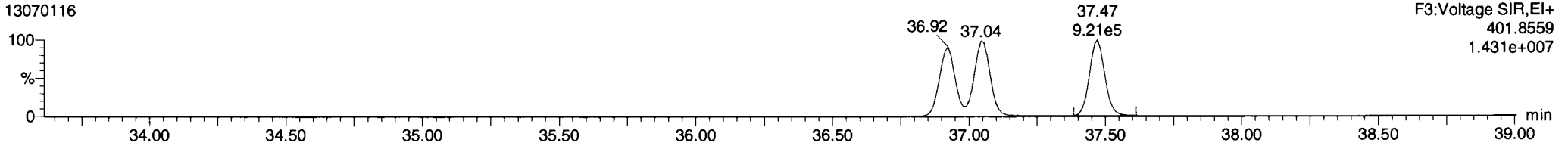
13C-1234-TCDD



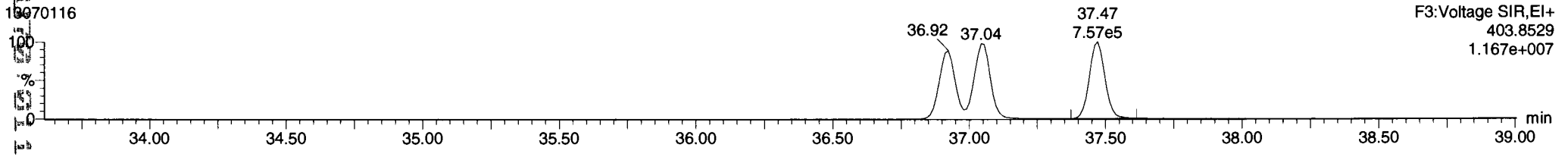
13C-1234-TCDD



13C-123789-HxCDD



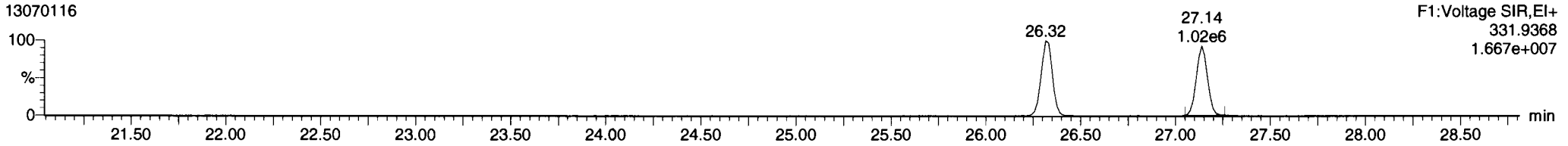
13C-123789-HxCDD



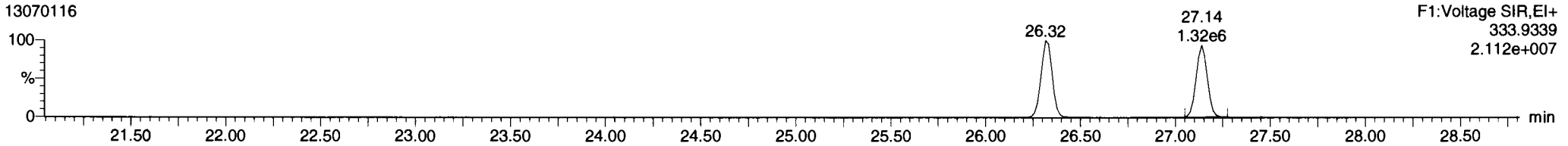
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 09:15:48 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 09:17:49 Pacific Daylight Time

ID: CS3, Name: 13070116, Date: 01-Jul-2013, Time: 19:08:16, Conditions: AUTOSPEC01, User: pk

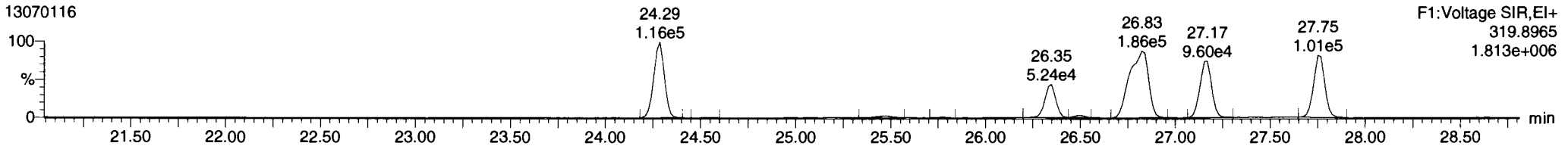
13C-2378-TCDD



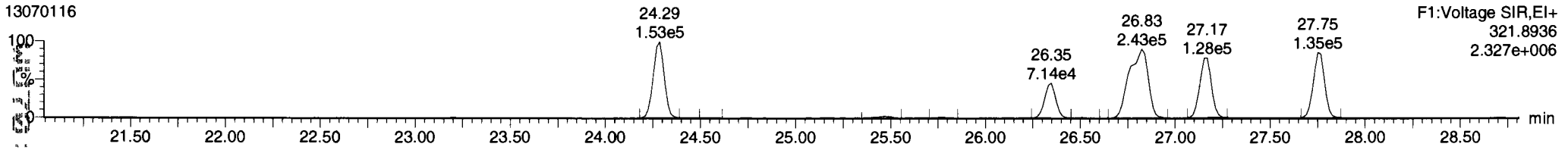
13C-2378-TCDD



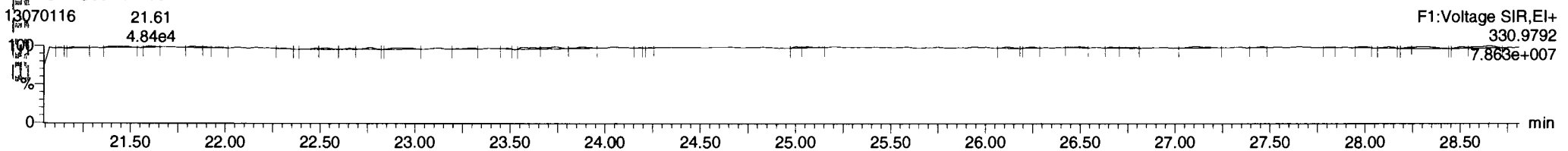
Total-tetradioxins



Total-tetradioxins



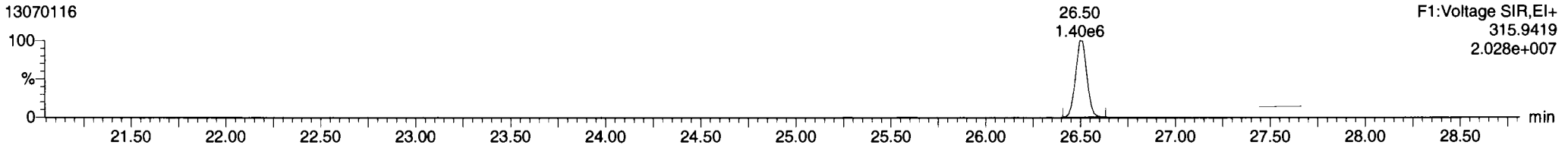
FUNCTION1 PFK



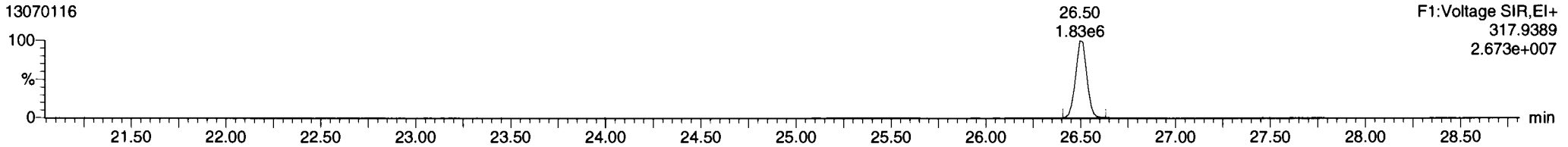
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 09:15:48 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 09:17:49 Pacific Daylight Time

ID: CS3, Name: 13070116, Date: 01-Jul-2013, Time: 19:08:16, Conditions: AUTOSPEC01, User: pk

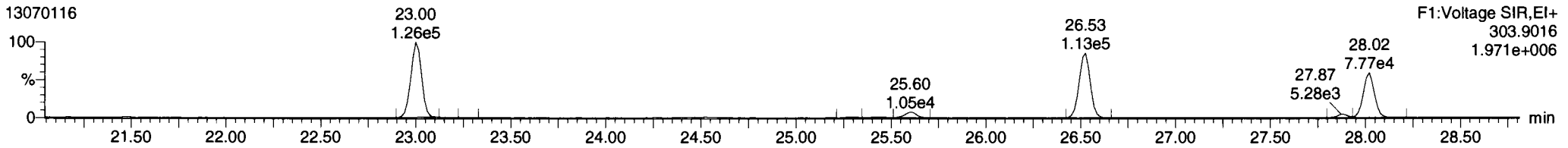
13C-2378-TCDF



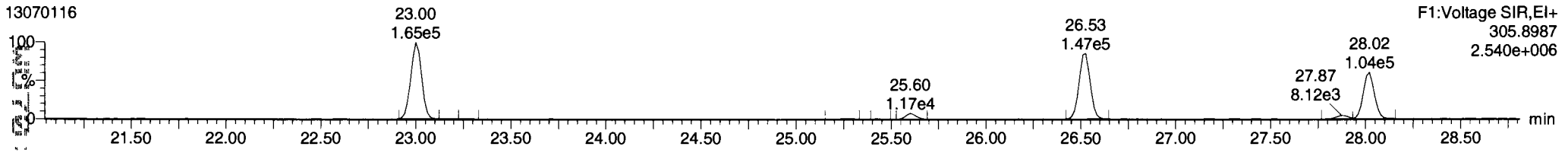
13C-2378-TCDF



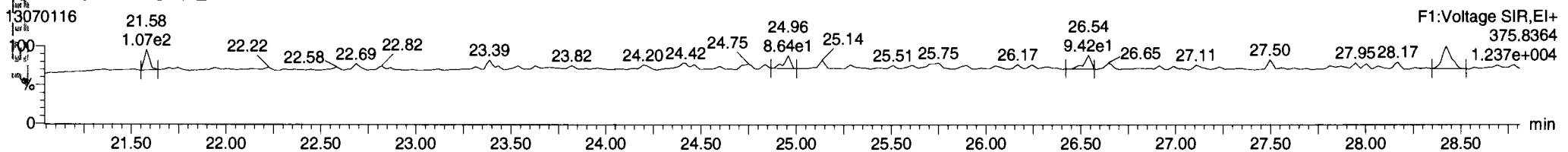
Total-tetrafurans



Total-tetrafurans



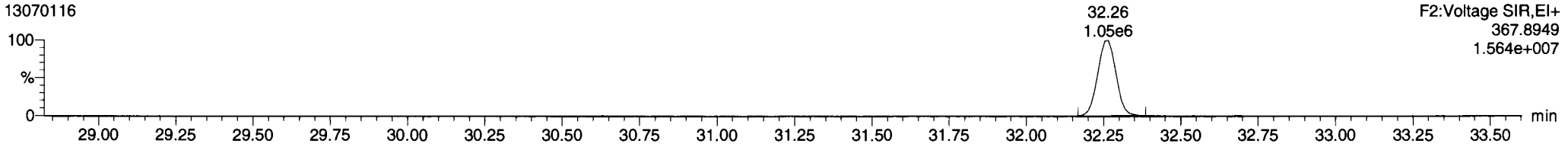
FUNCTION1 HXCDPE



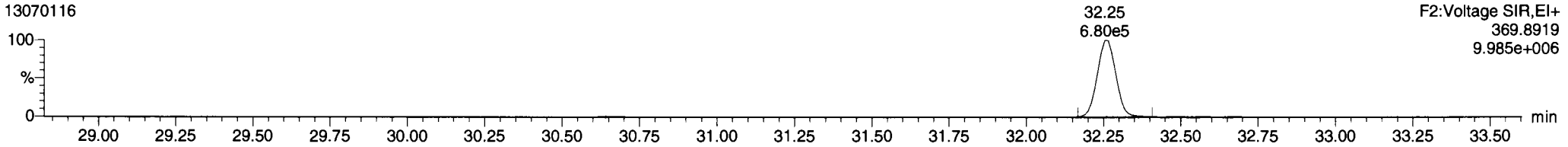
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 09:15:48 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 09:17:49 Pacific Daylight Time

ID: CS3, Name: 13070116, Date: 01-Jul-2013, Time: 19:08:16, Conditions: AUTOSPEC01, User: pk

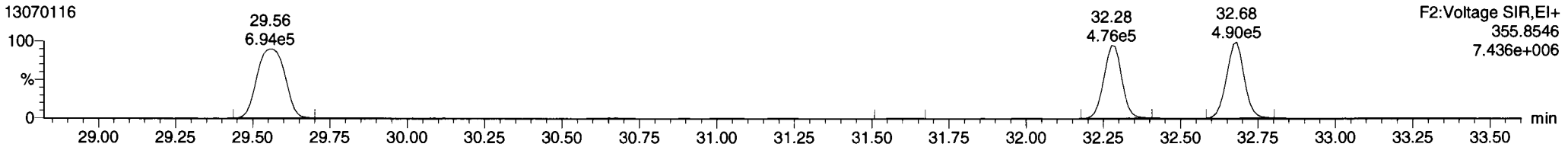
13C-12378-PeCDD



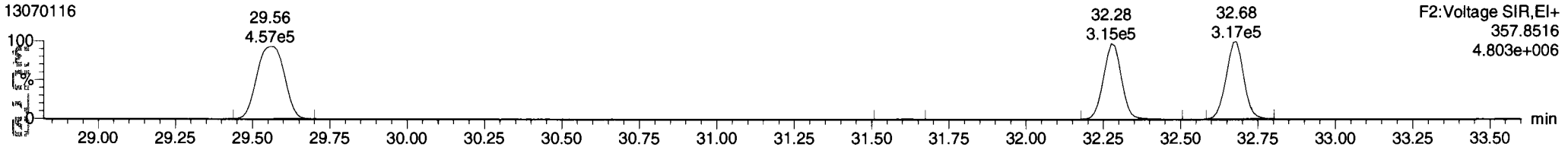
13C-12378-PeCDD



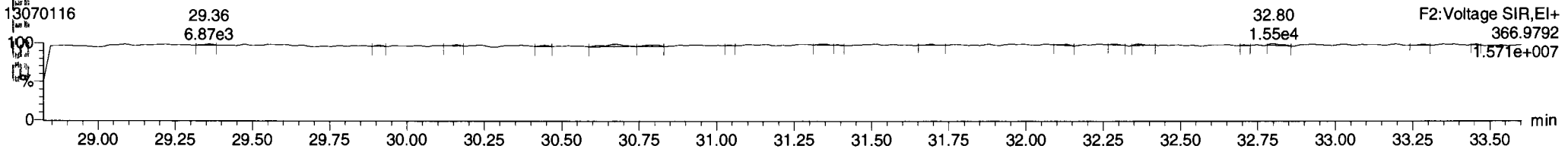
Total-pentadioxins



Total-pentadioxins



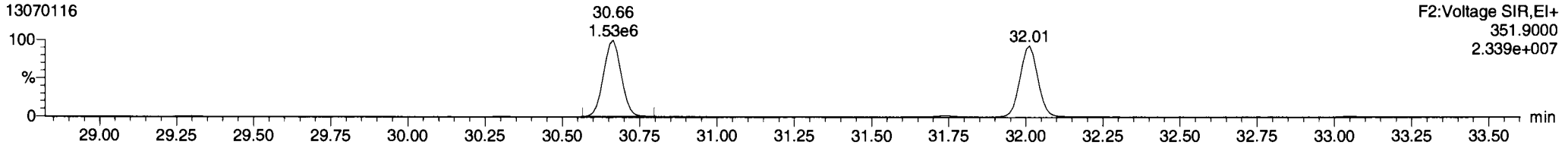
FUNCTION2 PFK



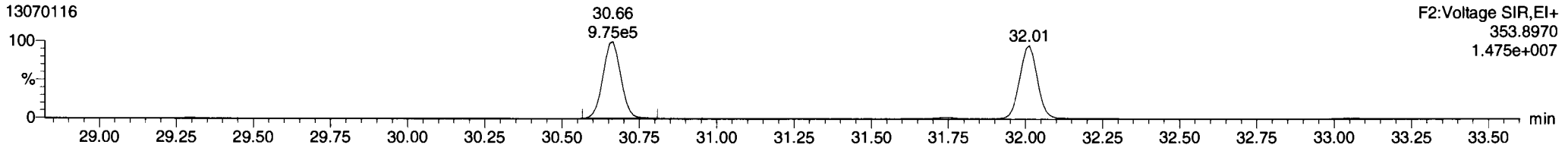
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 09:15:48 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 09:17:49 Pacific Daylight Time

ID: CS3, Name: 13070116, Date: 01-Jul-2013, Time: 19:08:16, Conditions: AUTOSPEC01, User: pk

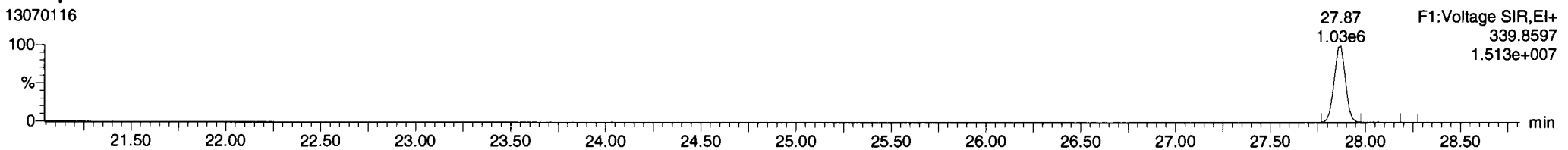
13C-12378-PeCDF



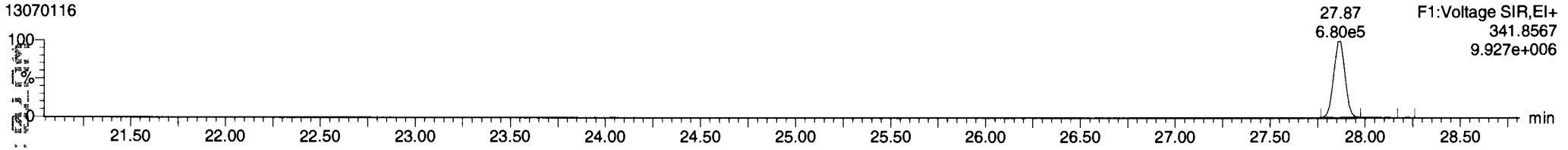
13C-12378-PeCDF



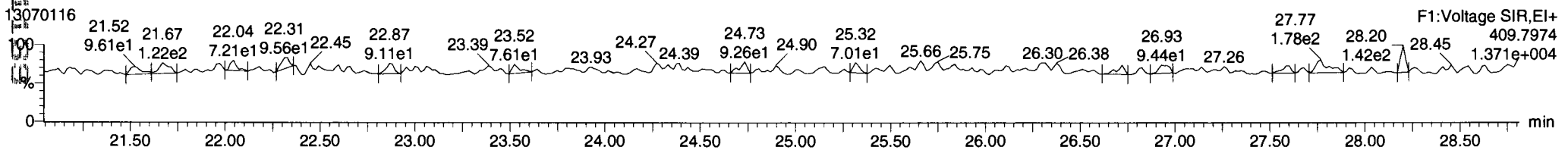
Total-penta1



Total-penta1



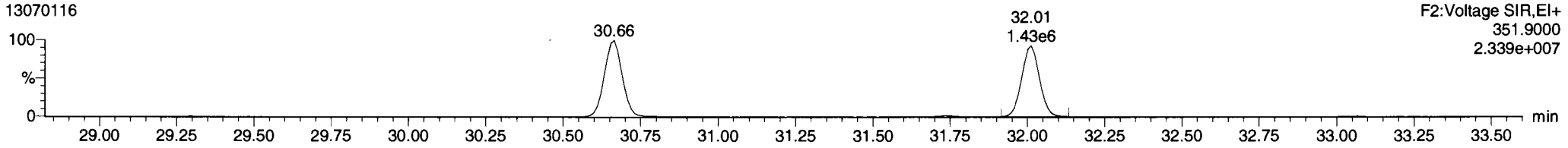
FUNCTION1 HPCDPE



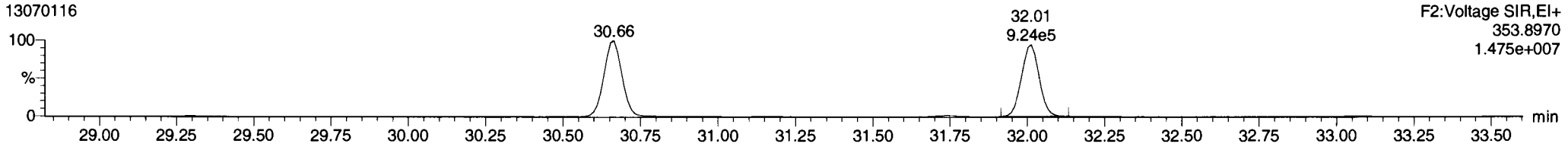
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 09:15:48 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 09:17:49 Pacific Daylight Time

ID: CS3, Name: 13070116, Date: 01-Jul-2013, Time: 19:08:16, Conditions: AUTOSPEC01, User: pk

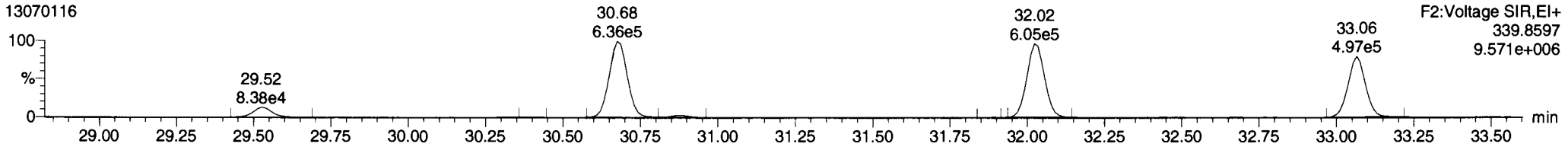
13C-23478-PeCDF



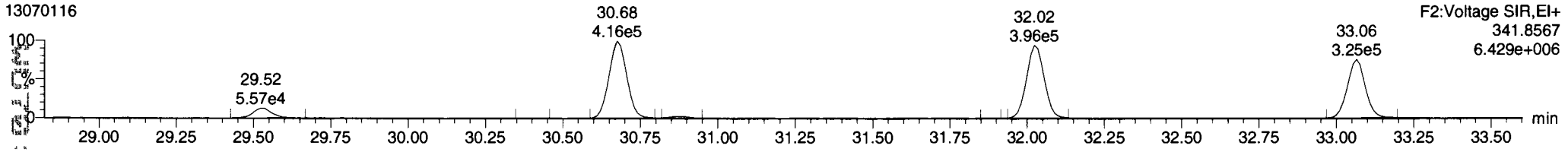
13C-23478-PeCDF



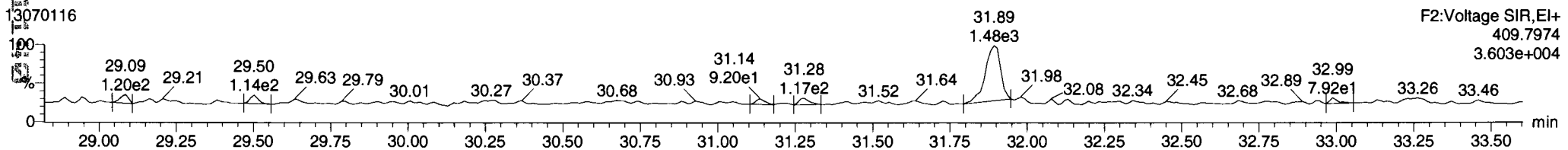
Total-pentafurans



Total-pentafurans



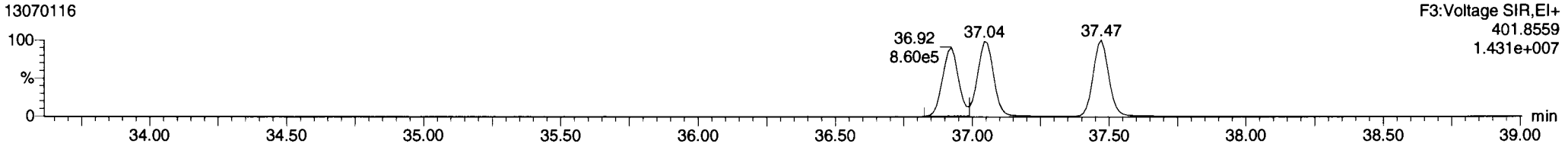
FUNCTION2 HPCDPE



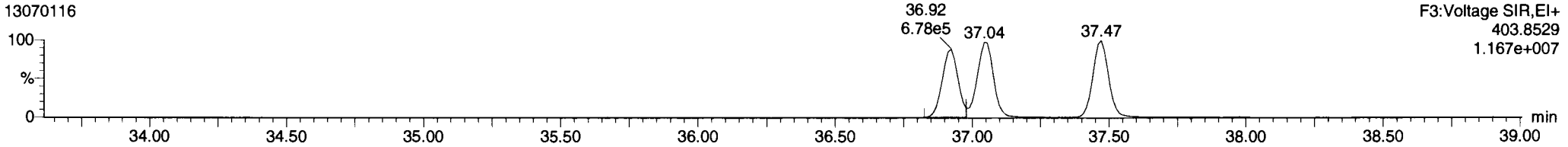
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 09:15:48 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 09:17:49 Pacific Daylight Time

ID: CS3, Name: 13070116, Date: 01-Jul-2013, Time: 19:08:16, Conditions: AUTOSPEC01, User: pk

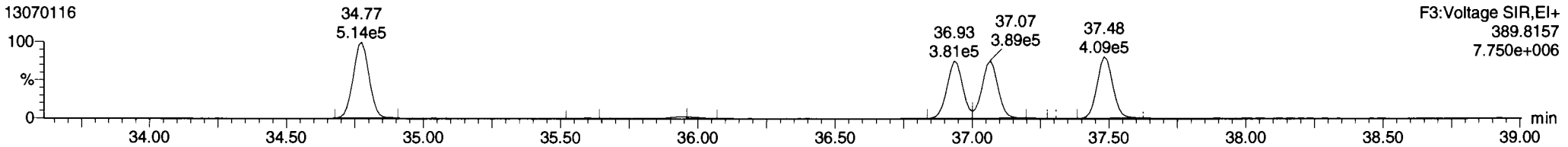
13C-123478-HxCDD



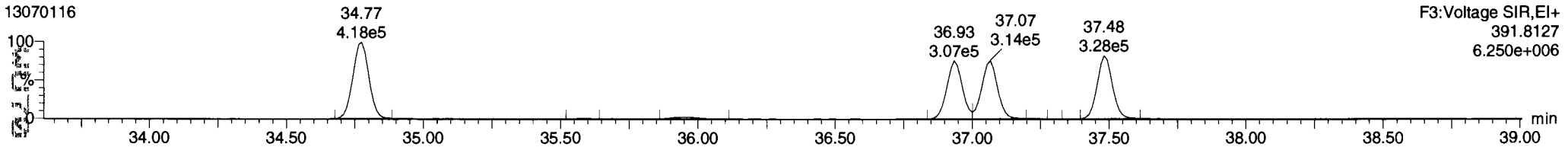
13C-123478-HxCDD



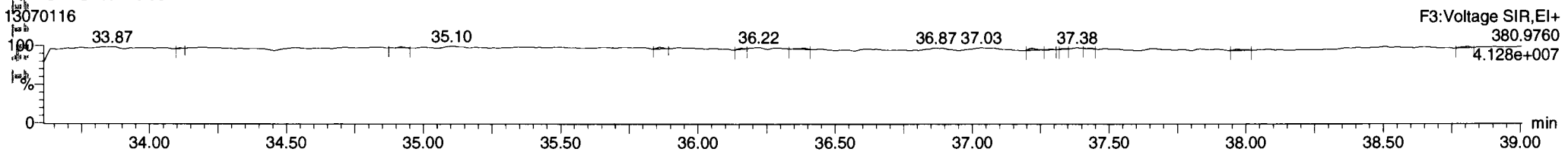
Total-hexadioxins



Total-hexadioxins

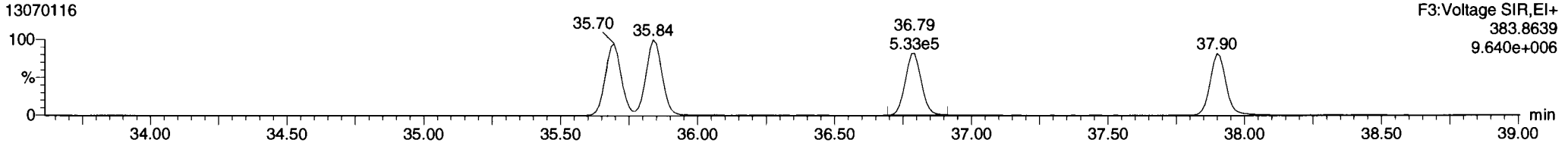


FUNCTION3 PFK

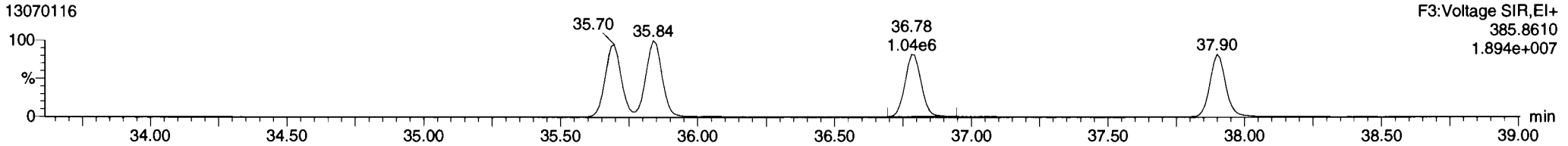


ID: CS3, Name: 13070116, Date: 01-Jul-2013, Time: 19:08:16, Conditions: AUTOSPEC01, User: pk

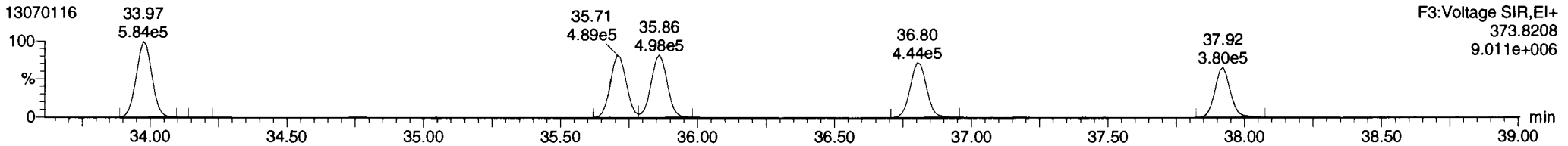
13C-234678-HxCDF



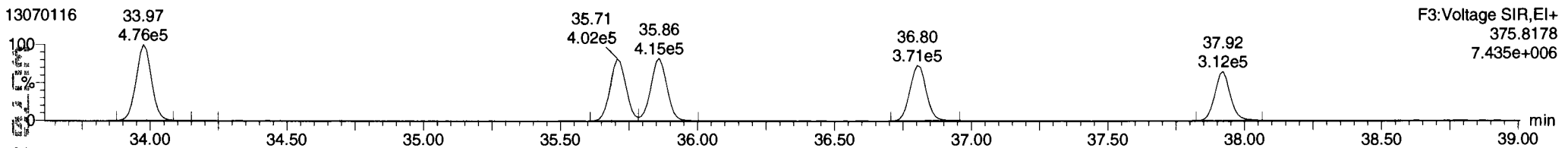
13C-234678-HxCDF



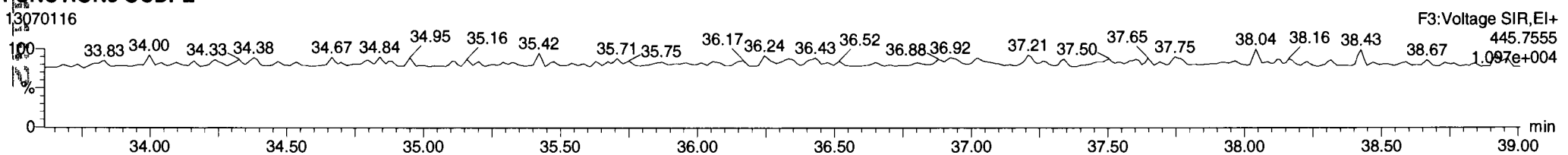
Total-hexafurans



Total-hexafurans



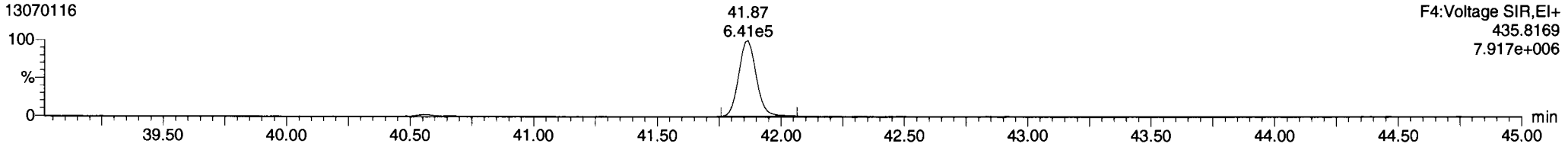
FUNCTION3 OCDPE



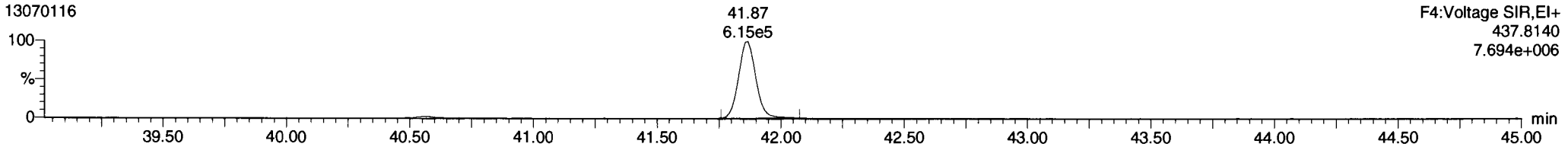
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 09:15:48 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 09:17:49 Pacific Daylight Time

ID: CS3, Name: 13070116, Date: 01-Jul-2013, Time: 19:08:16, Conditions: AUTOSPEC01, User: pk

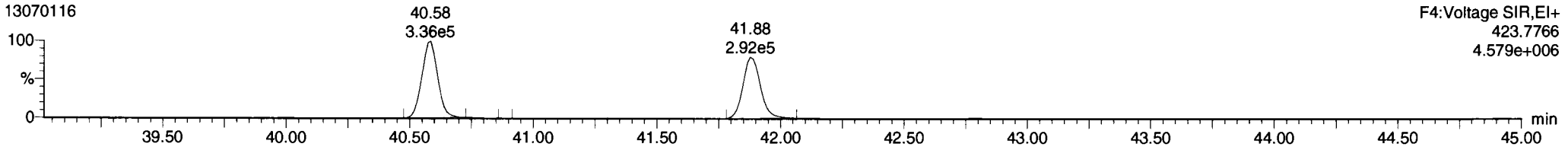
13C-1234678-HpCDD



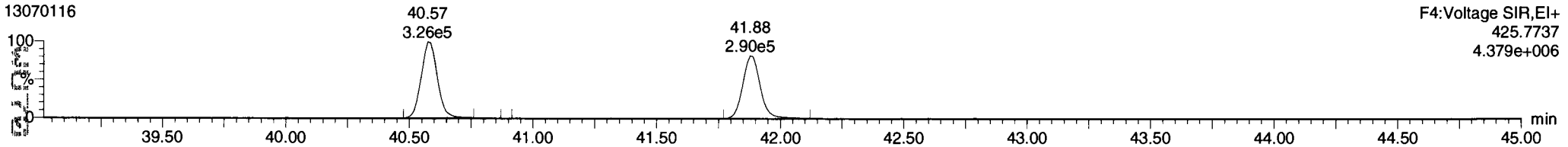
13C-1234678-HpCDD



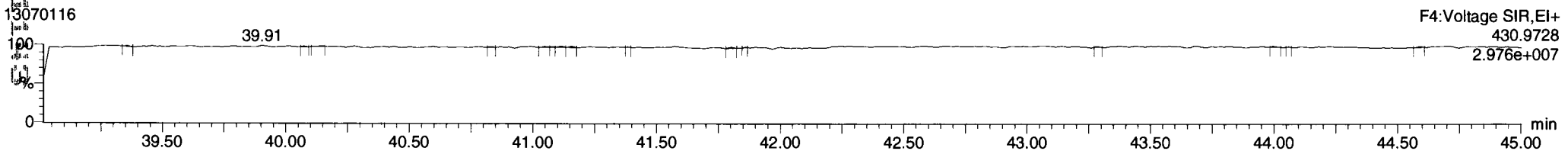
Total-heptadioxins



Total-heptadioxins



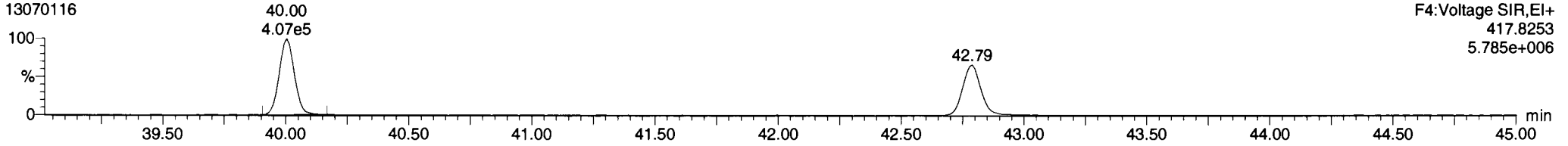
FUNCTION4 PFK



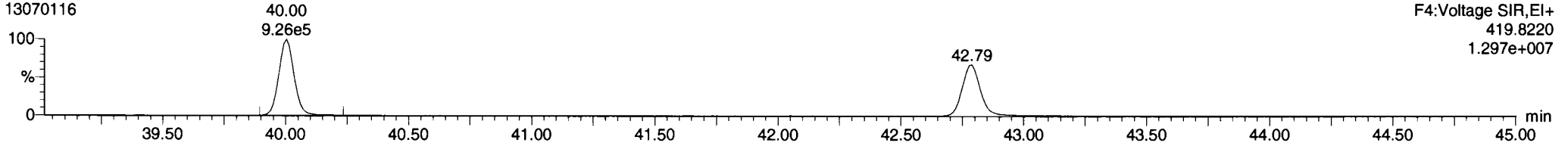
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 09:15:48 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 09:17:49 Pacific Daylight Time

ID: CS3, Name: 13070116, Date: 01-Jul-2013, Time: 19:08:16, Conditions: AUTOSPEC01, User: pk

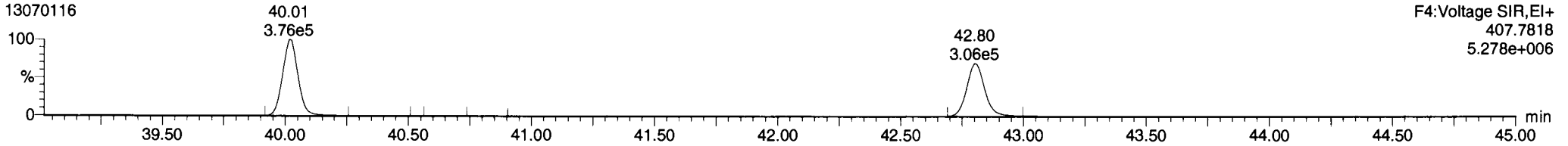
13C-1234678-HpCDF



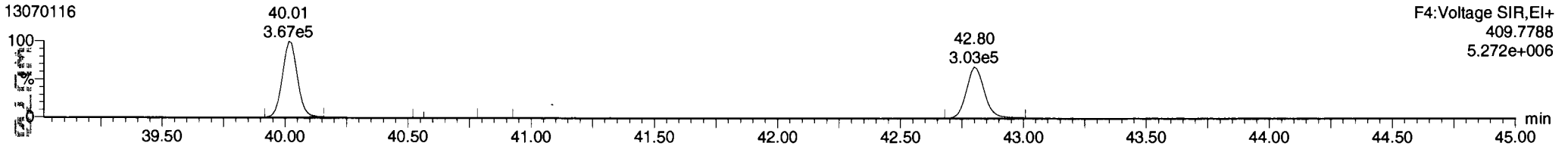
13C-1234678-HpCDF



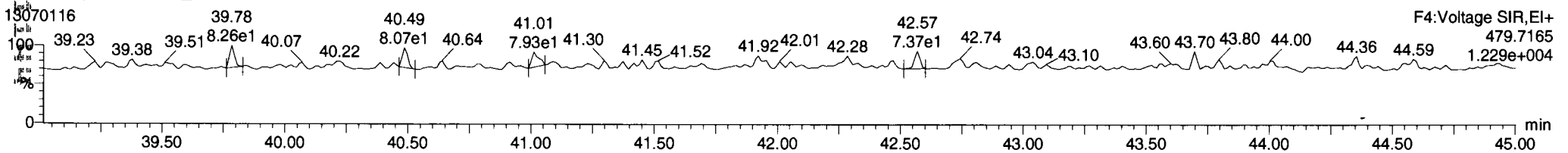
Total-heptafurans



Total-heptafurans



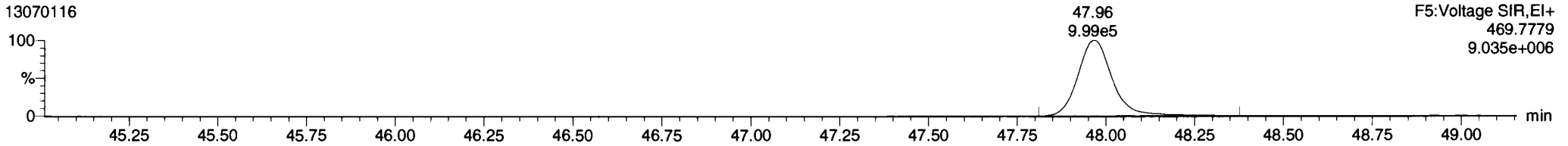
FUNCTION4 NCDPE



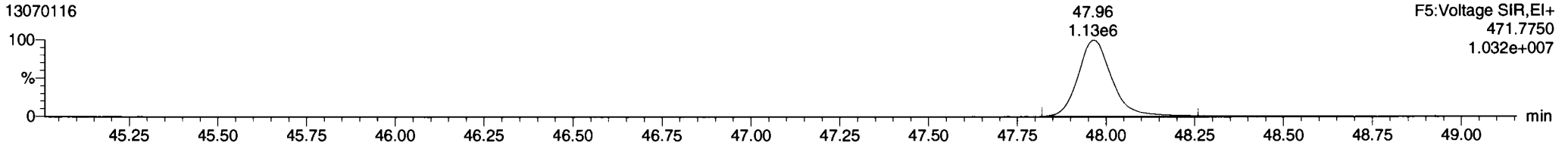
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 09:15:48 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 09:17:49 Pacific Daylight Time

ID: CS3, Name: 13070116, Date: 01-Jul-2013, Time: 19:08:16, Conditions: AUTOSPEC01, User: pk

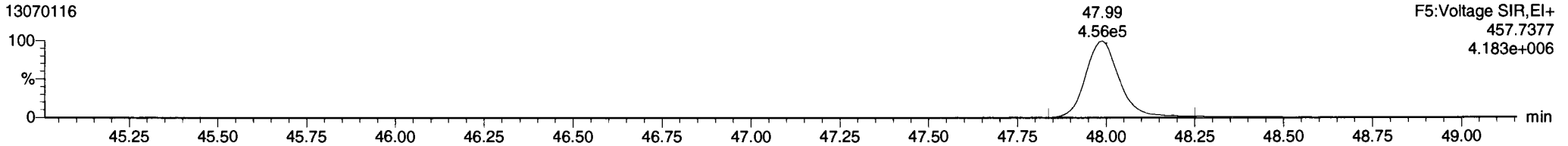
13C-OCDD



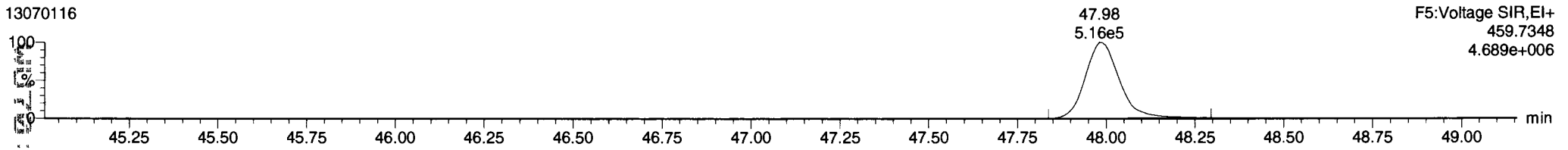
13C-OCDD



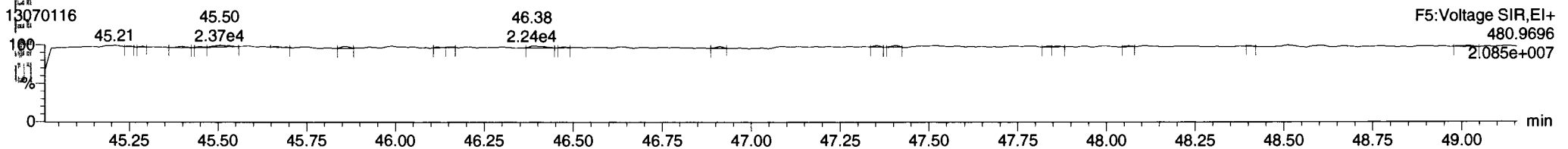
OCDD



OCDD



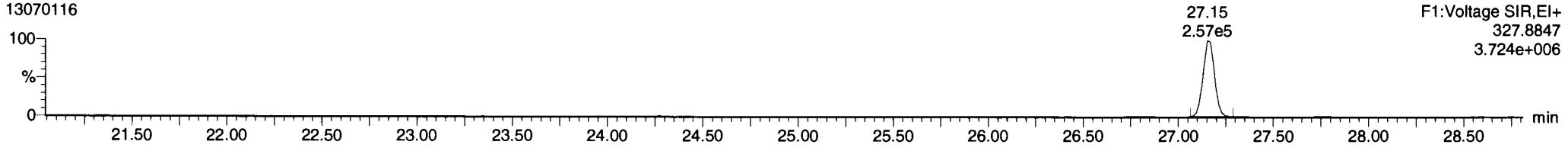
FUNCTION5 PFK



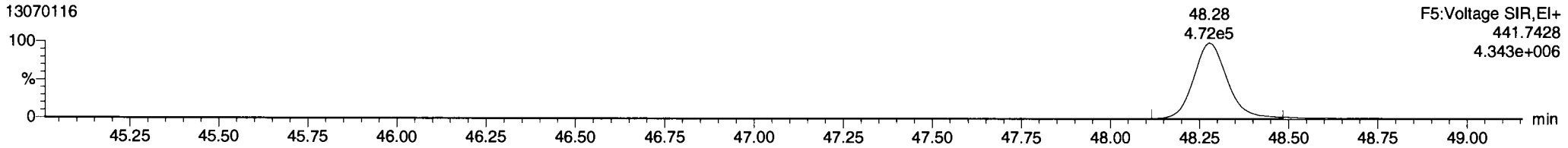
Dataset: P:\DIOXIN8290.PRO\130701DATA2.qld
Last Altered: Tuesday, July 02, 2013 09:15:48 Pacific Daylight Time
Printed: Tuesday, July 02, 2013 09:17:49 Pacific Daylight Time

ID: CS3, Name: 13070116, Date: 01-Jul-2013, Time: 19:08:16, Conditions: AUTOSPEC01, User: pk

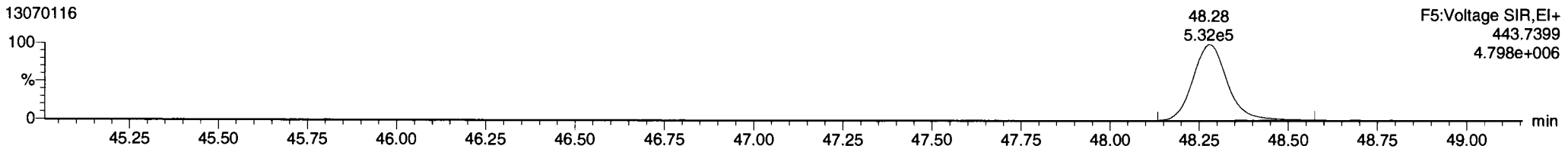
37CL-2378-TCDD



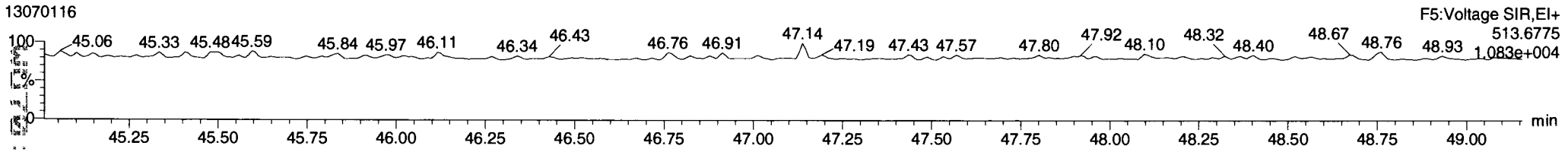
OCDF



OCDF



FUNCTION5 DCDPE



Pesticide Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WU70

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(8081B) Pest PSDDA – Soil (Sed)
Microwave (3546) (SOP # 3304S)

Preparation Test Pest # 5 (PESSDMP)

PSDDA (1-2ppb)

ARI Job No(s) WU70 Page 1 of 1 Batch set up by: ~~SK~~

Bottle #	ARI Sample I.D.	Weight Extracted (eq. to 12.5 dry wt)	(REQ) Sulfur Clean 2mL+0.5mL Ethyl Acetate 1 2 (3) very high sulfur	(REQ) Silica Gel Clean (1:2.5)	Final Effective Volume	Volume to Lab	Comment	Verify Client ID
	WU70 MBS	12.5g	2.5mL	(1:2.5) 1mL	2.5mL	1mL	(10g Actual Wt)	YL 06/27/13 Analyst/Date
	SBS	12.5g	2.5mL	(1:2.5) 1mL	2.5mL	1mL	(10g Actual Wt)	Microwave (1) 2 3 YL/CT 06/27/13 Analyst/Date
	~~SBS Dup.~~	~~12.5g~~	~~2.5mL~~	~~(1:2.5) 1mL~~	~~2.5mL~~	~~1mL~~	~~(10g Actual Wt)~~	
	WU70 QLS	12.5g	2.5mL	(1:2.5) 1mL	2.5mL	1mL	(10g Actual Wt)	KD 100°C Hexane Exchange (2 X 20mL) 1 2 3 4 5 6 RR 07/01/13 Analyst/Date
8	B	23.06	2.5mL	(1:2.5) 1mL	2.5mL	1mL	SEE Notes	
8	Bms	23.03	2.5mL	(1:2.5) 1mL	2.5mL	1mL		
8	Bmsd	23.02	2.5mL	(1:2.5) 1mL	2.5mL	1mL		
3	C	16.01	2.5mL	(1:2.5) 1mL	2.5mL	1mL		TurboVap 1 (2) 3 Pre-Cleanups
			2.5mL	(1:2.5) 1mL	2.5mL	1mL		
			2.5mL	(1:2.5) 1mL	2.5mL	1mL		
			2.5mL	(1:2.5) 1mL	2.5mL	1mL		CSZ 7/1/13 Analyst/Date
			2.5mL	(1:2.5) 1mL	2.5mL	1mL		TurboVap 1 2 (3) Post Cleanups
			2.5mL	(1:2.5) 1mL	2.5mL	1mL		
			2.5mL	(1:2.5) 1mL	2.5mL	1mL		
Analyst/Date YL 06/27/13			CSZ 7/1/13	CSZ 7/1/13	CSZ 7/1/13	CSZ 7/1/13	Reviewed By CSZ 7/1/13	CSZ 7/1/13 Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	N (B060151)	2µg/mL	50µL	4/30/14	YL	AC
Spike	3 (B060650)	0.5/1/5µg/mL	100µL	12/09/13	YL	AC
QLS Spike	10 (B060567)	0.25-2.5µg/mL	25µL	12/18/13	YL	AC
Extraction Time: 13:05			Balance ID: B1464614			

SPECIAL INSTRUCTIONS: 1. Weigh into beakers-lightly dry with Sodium Sulfate. 2. Transfer to microwave vessel.
Note: do not fill vessel more than 2/3rd full. Some samples may require two vessels).
3. Add 1:1 Hex/ACE to the vessels (until solvent is 3" 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. Re-homogenize while cool. 7. Decant 1:1 Hex/ACE into Erlenmeyer flask with sodium sulfate in the bottom and funnel containing neutral glasswool. 8. Rinse with Hexane 9. Microwave a 2nd time using 8:2 Hex/Ace (until solvent is 3" above soil layer after homogenization). 10. Let cool and decant the solvent then empty the soil into the funnel and rinse with Hexane. 11. KD (~~Smaller~~ Large drying column) to 5mL at 100°C. 12. Exchange to Hexane (2 X with 20mL) 13. TurboVap. 14. Clean-ups. 15. TurboVap. 16. Vial in Hexane.
A. Need Total Solids Y (N) B. Archive/Freeze Y (N)

WU70:0116

Reagent and Solutions Identification

(8081B) Pest PSDDA – Soil/Sed
Microwave (3546) (SOP # 3304S)

ARI Job No(s) WU70

(8081B) Pest PSDDA Soil/Sediment/Solid/Other:	Analyst/Date
Microwave Station: Anhydrous Sodium Sulfate: (I# 8444 jar date 3/3/13) Neutral Glasswool: (I# 7998 + jar date 5/7/13) 1:1 Hexane/Acetone: (H# 205) 80:20 Hexane/Acetone: (H# 210) Hexane: (I# 9281)	Microwave CT 06/27/13 YL
KD Station: Hexane: (I# 8881) Anhydrous Sodium Sulfate: (I# 9215 + jar date 5/20/13) Neutral Glasswool: (I# 7998 + jar date 5/15/13)	KD RR 07/01/13
Vialing Station: Hexane: (I#) B000677 Ethyl Acetate: (I# 6079) Tetrabutylammonium hydrogensulfate (TBAS): (H# 190) Sodium Sulfite: (I# 7704) Silica Gel (SPE) Darts: (I# 8127)	Vialing CSR 7/1/13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WU70 Client ID: SAIC

Parameter: Pest PSDDA Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)= ~~A~~ B (AC 6-21-13)	AC 6-21-13
☐ Standing Water Decanted (Not shared)= ~~B~~ C (AC 6-21-13)	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)? C<5% small	
☐ 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). GC analyst, (Centrifuge#1 used for all Centrifugations) Sample pre-screens indicate possible aroclor activity.	~~AH~~ 6/24/13 CSZ 7/1/13
Concentrated Blanks and Extracts ~~5mL~~ (CSZ 7/1/13) 3.5mL (4mL F.C.V.) and did sulfur clean-up - In Error, After Sulfur Clean, I tranfer Rinsed Blanks and Extract into turbo tubes and the Concentrated to 2.5mL (F.C.V) took 1mL for SPE clean-up.	CSZ 7/1/13

3056F

Revision 009
08/14/12

Pesticide Raw Data
Initial Calibration

ARI Job ID: WU70

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): 06/19/13 Internal Standard ID 2506-1 Expiration 07/26/13

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
DS	B370	08/29/13	INDA ICV 06/24/13	2023-1	05/16/13
IB	1982-2	05/16/13	WND ICV	2064-1	01/17/14
INDA	B339	12/10/13	HCB/HCBD	1886-2	05/28/12
Toxaphene	B558	09/29/14			
WND	B559	07/27/13			

Restek

Detail problems, corrective actions and/or other pertinent information below:

Analyst: JK **Date:** 06/24/13

Reviewer: VD **Date:** 6/25/13

Analytical Resources Inc.: Organics Instrument Log

ECD6 Serial No.: US00007128

Date: 06/19/13 Analysis: Pest Analyst: JR

Column 1 Serial No.: 108562 4 Column Type: CLP1

Column 2 Serial No.: 109 4709 Column Type: CLP2

GC Method: Pest ICal Date: 2µL (ul.inj)

IS	Ical/Ccal	ICV
2006-1	B339	2083-1
	B559	2064-1
	B959	1836-2
	B370	

Document All Maintenance Tasks In StarLIMS

	Inject Date/Time	Filename	DF	LabID
1	19-JUN-2013 17:21	0619a010.d	1	IB
2	19-JUN-2013 17:39	0619a011.d	1	DS
3	19-JUN-2013 17:57	0619a012.d	1	INDAE
4	19-JUN-2013 18:14	0619a013.d	1	INDAA
5	19-JUN-2013 18:32	0619a014.d	1	INDAB
6	19-JUN-2013 18:50	0619a015.d	1	INDAC
7	19-JUN-2013 19:08	0619a016.d	1	INDAD
8	19-JUN-2013 19:26	0619a017.d	1	INDAF
9	19-JUN-2013 19:44	0619a018.d	1	INDAG
10	19-JUN-2013 20:01	0619a019.d	1	INDA ICV
11	19-JUN-2013 20:19	0619a020.d	1	HCB/HCBD
12	19-JUN-2013 23:17	0619a030.d	1	TOXAPHENE
13	19-JUN-2013 20:55	0619a022.d	1	WNDE
14	19-JUN-2013 21:13	0619a023.d	1	WNDA
15	19-JUN-2013 21:30	0619a024.d	1	WNDB
16	19-JUN-2013 21:48	0619a025.d	1	WNDC
17	19-JUN-2013 22:06	0619a026.d	1	WNDD
18	19-JUN-2013 22:24	0619a027.d	1	WNDF
19	19-JUN-2013 22:42	0619a028.d	1	WNDG
20	19-JUN-2013 22:59	0619a029.d	1	WND ICV
21	19-JUN-2013 23:35	0619a031.d	1	TECHCHLOR
22	19-JUN-2013 23:53	0619a032.d	1	TECH ICV
23	20-JUN-2013 00:10	0619a033.d	1	DS
24	20-JUN-2013 00:28	0619a034.d	1	INDAE#1
25	20-JUN-2013 00:46	0619a035.d	1	WNDE#1
26	20-JUN-2013 01:04	0619a036.d	1	WT36MBS1
27	20-JUN-2013 01:22	0619a037.d	1	WT36LCS1
28	20-JUN-2013 01:40	0619a038.d	1	WT36LCSDS
29	20-JUN-2013 01:57	0619a039.d	1	WT36A
30	20-JUN-2013 02:15	0619a040.d	1	WS91A
31	20-JUN-2013 02:33	0619a041.d	1	WS91AMS
32	20-JUN-2013 02:51	0619a042.d	1	WS91AMSD
33	20-JUN-2013 03:09	0619a043.d	1	WT53MBW1
34	20-JUN-2013 03:26	0619a044.d	1	WT53LCSW1
35	20-JUN-2013 03:44	0619a045.d	1	WT53LCSDW
36	20-JUN-2013 04:02	0619a046.d	1	DS
37	20-JUN-2013 04:20	0619a047.d	1	INDAE#2
38	20-JUN-2013 04:38	0619a048.d	1	WNDE#2
39	20-JUN-2013 04:55	0619a049.d	1	WT53QLS
40	20-JUN-2013 05:13	0619a050.d	1	WT53A
41	20-JUN-2013 05:31	0619a051.d	1	WT53B
42	20-JUN-2013 05:49	0619a052.d	1	WT53C
43	20-JUN-2013 06:07	0619a053.d	1	WT53D
44	20-JUN-2013 06:24	0619a054.d	1	WT53E
45	20-JUN-2013 06:42	0619a055.d	1	WT07MBW1
46	20-JUN-2013 07:00	0619a056.d	1	WT07LCSW1
47	20-JUN-2013 07:18	0619a057.d	1	WT07LCSDW
48	20-JUN-2013 07:36	0619a058.d	1	WT07QLS
49	20-JUN-2013 07:53	0619a059.d	1	DS
50	20-JUN-2013 08:11	0619a060.d	1	INDAE#3
51	20-JUN-2013 08:29	0619a061.d	1	WNDE#3
52	20-JUN-2013 08:47	0619a062.d	1	WT07A
53	20-JUN-2013 09:05	0619a063.d	1	WT07B
54	20-JUN-2013 09:23	0619a064.d	1	WS90MBW1
55	20-JUN-2013 09:41	0619a065.d	1	WS90LCSS1
56	20-JUN-2013 09:59	0619a066.d	1	WS90LCSDS1
57	20-JUN-2013 10:16	0619a067.d	1	WS90QLS
58	20-JUN-2013 10:34	0619a068.d	1	WS90A
59	20-JUN-2013 10:52	0619a069.d	1	WS90B
60	20-JUN-2013 11:11	0619a070.d	1	DS
61	20-JUN-2013 11:28	0619a071.d	1	INDAE#4
62	20-JUN-2013 11:46	0619a072.d	1	WNDE#4

06/25/13

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/ecd6.i/20130619PEST.b/ical-1.b

ARI Job No.: IB Method: PEST0619.m Instrument: ecd6.i Date: 19-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1721	0619a010.d	IB		1	NO MANUAL INTEGRATION
1739	0619a011.d	DS		1	NO MANUAL INTEGRATION
1757	0619a012.d	INDAE		1	NO MANUAL INTEGRATION
1814	0619a013.d	INDAA		1	NO MANUAL INTEGRATION
1832	0619a014.d	INDAB		1	NO MANUAL INTEGRATION
1850	0619a015.d	INDAC		1	NO MANUAL INTEGRATION
1908	0619a016.d	INDAD		1	NO MANUAL INTEGRATION
1926	0619a017.d	INDAF		1	NO MANUAL INTEGRATION
1944	0619a018.d	INDAG		1	NO MANUAL INTEGRATION
2001	0619a019.d	INDA ICV		1	NO MANUAL INTEGRATION
2019	0619a020.d	HCB/HCBD ICV		1	NO MANUAL INTEGRATION
2317	0619a030.d	TOXAPHENE		1	NO MANUAL INTEGRATION
2055	0619a022.d	WNDE		1	NO MANUAL INTEGRATION
2113	0619a023.d	WNDA		1	NO MANUAL INTEGRATION
2130	0619a024.d	WNDB		1	NO MANUAL INTEGRATION
2148	0619a025.d	WNDC		1	NO MANUAL INTEGRATION
2206	0619a026.d	WNDD		1	NO MANUAL INTEGRATION
2224	0619a027.d	WNDF		1	NO MANUAL INTEGRATION
2242	0619a028.d	WNDG		1	NO MANUAL INTEGRATION
2259	0619a029.d	WND ICV		1	NO MANUAL INTEGRATION

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a023.d
Level 2: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a024.d
Level 3: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a025.d
Level 4: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a026.d
Level 5: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a030.d
Level 6: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a027.d
Level 7: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a028.d
Level 8: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a030.d

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
1 Hexachlorobutadiene	1.90255	1.82746	1.72475	1.80538	1.63952	1.70403		
	1.70205	+++++					1.75796	5.148
3 Hexachlorobenzene	1.48607	1.38489	1.25065	1.29219	1.15823	1.18938		
	1.17400	+++++					1.27649	9.523
4 alpha-BHC	1.54387	1.55472	1.51023	1.66746	1.57221	1.68013		
	1.70242	+++++					1.60443	4.784
5 gamma-BHC (Lindane)	1.43893	1.45162	1.38660	1.51406	1.41885	1.50915		
	1.52105	+++++					1.46289	3.596
6 beta-BHC	0.72267	0.69399	0.62885	0.65445	0.59777	0.61724		
	0.61539	+++++					0.64719	7.088
7 delta-BHC	1.31076	1.33767	1.29222	1.44170	1.36734	1.47377		
	1.50098	+++++					1.38921	5.957

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
8 Heptachlor	1.46111	1.44992	1.37073	1.46029	1.33959	1.38629		
	1.35896	+++++					1.40384	3.694
9 Aldrin	1.38090	1.38032	1.30360	1.42040	1.31018	1.37139		
	1.35489	+++++					1.36024	3.048
38 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
11 Heptachlor epoxide b	1.37134	1.33627	1.22935	1.30893	1.18548	1.21388		
	1.18211	+++++					1.26105	6.081
12 gamma-Chlordane	1.34452	1.32741	1.23423	1.33704	1.23398	1.29746		
	1.29333	+++++					1.29542	3.551
13 alpha-Chlordane	1.35279	1.31541	1.21079	1.29571	1.18577	1.23709		
	1.22879	+++++					1.26091	4.844
14 Endosulfan I	1.29513	1.26141	1.15224	1.22045	1.10253	1.12302		
	1.09618	+++++					1.17871	6.801
15 4,4'-DDE	1.01389	0.98313	0.90492	0.95484	0.88046	0.93369		
	0.96207	+++++					0.94757	4.806

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
16 Dieldrin	1.28716	1.29785	1.22354	1.30837	1.19093	1.21674		
	1.19385	+++++					1.24549	4.066
17 Endrin	1.26711	1.27002	1.20537	1.25522	1.15780	1.15955		
	1.12413	+++++					1.20560	4.958
18 4,4'-DDD	1.20014	1.19876	1.14202	1.17837	1.10056	1.13288		
	1.10599	+++++					1.15125	3.621
19 Endosulfan II	1.28259	1.26594	1.19796	1.24319	1.13952	1.14153		
	1.10718	+++++					1.19684	5.775
20 4,4'-DDT	1.15079	1.15997	1.10760	1.17386	1.09155	1.13724		
	1.12168	+++++					1.13467	2.595
21 Endrin aldehyde	1.02599	1.01548	0.94464	0.98095	0.88920	0.89428		
	0.87136	+++++					0.94598	6.675
22 Methoxychlor	0.60895	0.59288	0.53434	0.53623	0.48400	0.49787		
	0.50489	+++++					0.53702	8.891
23 Endosulfan sulfate	1.12427	1.11725	1.04391	1.08924	0.99727	1.02307		
	1.00241	+++++					1.05677	5.047
24 Endrin ketone	1.47123	1.40999	1.29907	1.33968	1.20839	1.24100		
	1.21628	+++++					1.31223	7.673

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	___ RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
26 Aroclor-1016(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
27 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	___ RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
28 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
29 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	___ RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(6)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
30 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
31 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
32 Aroclor-1260(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
33 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	___ RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
34 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
35 Toxaphene(1)	+++++	+++++	+++++	+++++	0.05135	+++++		
	+++++	0.05135					0.05135	0.000
(2)	+++++	+++++	+++++	+++++	0.03543	+++++		
	+++++	+++++					0.03543	0.000
(3)	+++++	+++++	+++++	+++++	0.05845	+++++		
	+++++	+++++					0.05845	0.000
(4)	+++++	+++++	+++++	+++++	0.05954	+++++		
	+++++	+++++					0.05954	0.000
(5)	+++++	+++++	+++++	+++++	0.03954	+++++		
	+++++	+++++					0.03954	0.000
(6)	+++++	+++++	+++++	+++++	0.03356	+++++		
	+++++	+++++					0.03356	0.000
39 2,4-DDE	0.87274	0.86308	0.83381	0.82491	0.81805	0.80267		
	0.74462	+++++					0.82284	5.152
40 2,4-DDD	0.77761	0.77575	0.74597	0.74361	0.73419	0.72905		
	0.68555	+++++					0.74168	4.206
41 2,4-DDT	0.88597	0.88005	0.86843	0.85814	0.85985	0.84955		
	0.80325	+++++					0.85789	3.174

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
43 Oxychlordane	1.15065	1.13104	1.11190	1.08121	1.07576	1.03688		
	0.95359	+++++					1.07729	6.160
44 trans-Nonachlor	1.35198	1.34250	1.32180	1.31589	1.32536	1.33307		
	1.26444	+++++					1.32215	2.140
45 cis-Nonachlor	1.49934	1.50007	1.44006	1.44337	1.45793	1.46723		
	1.40485	+++++					1.45898	2.327
46 Mirex	0.98377	0.93549	0.90240	0.86728	0.86159	0.86043		
	0.82136	+++++					0.89033	6.139
47 bis-(2-ethylhexyl) Phthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
59 Tech-Chlordane(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
48 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
49 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
50 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
51 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
55 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
56 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
60 Kepone	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
61 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Cal Date : 24-Jun-2013 16:04 yev
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
$ 2 Tetrachloro-m-xylene	1.15603	1.13307	1.06647	1.12441	1.02482	1.05901		
	1.04003	+++++					1.08626	4.688
$ 25 Decachlorobiphenyl	1.13367	1.09978	0.99247	1.01808	0.91736	0.94702		
	0.93976	+++++					1.00688	8.224

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a023.d
Level 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a024.d
Level 3: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a025.d
Level 4: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a026.d
Level 5: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a030.d
Level 6: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a027.d
Level 7: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a028.d
Level 8: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a030.d/0619a030.cdf

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
1 Hexachlorobutadiene	1.77542	1.77383	1.66890	1.76599	1.56096	1.58663		
	1.45961	+++++					1.65591	7.511
3 Hexachlorobenzene	1.90014	1.75831	1.56896	1.61188	1.42856	1.42008		
	1.34315	+++++					1.57587	12.689
4 alpha-BHC	1.89067	1.95848	1.86011	2.02052	1.85761	1.92559		
	1.86606	+++++					1.91129	3.192
5 gamma-BHC (Lindane)	1.71793	1.72173	1.63161	1.77057	1.62732	1.68032		
	1.68059	+++++					1.69001	3.036
6 beta-BHC	1.05921	0.95999	0.81135	0.80846	0.72028	0.73231		
	0.70444	+++++					0.82800	16.171
7 delta-BHC	1.64820	1.66251	1.57188	1.72634	1.59922	1.65937		
	1.66482	+++++					1.64748	3.028

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
8 Heptachlor	1.93228	1.79619	1.66661	1.72620	1.52645	1.48015		
	1.34701	+++++					1.63927	12.258
37 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
9 Aldrin	1.83405	1.66591	1.53672	1.62235	1.44396	1.43019		
	1.33013	+++++					1.55190	10.956
10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
11 Heptachlor epoxide b	1.81675	1.63979	1.40438	1.43813	1.26288	1.22389		
	1.11487	+++++					1.41439	17.374
12 gamma-Chlordane	1.82983	1.64233	1.46128	1.50701	1.34625	1.35044		
	1.28248	+++++					1.48852	12.951
13 alpha-Chlordane	1.60468	1.49416	1.35051	1.40092	1.25024	1.25659		
	1.19492	+++++					1.36457	10.765
14 Endosulfan I	1.51918	1.41686	1.27203	1.32343	1.17177	1.14586		
	1.04761	+++++					1.27096	12.890
15 4,4'-DDE	1.53674	1.45951	1.32415	1.36063	1.17900	1.14945		
	1.02941	+++++					1.29127	13.988

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
16 Dieldrin	1.59950	1.45277	1.32593	1.35123	1.15396	1.10181		
	0.99360	+++++					1.28269	16.499
17 Endrin	1.90141	1.86720	1.72775	1.74870	1.52078	1.45639		
	1.32506	+++++					1.64961	13.234
18 4,4'-DDD	2.10942	1.99577	1.81214	1.84639	1.60315	1.58015		
	1.48408	+++++					1.77587	12.988
19 Endosulfan II	1.97192	1.91679	1.77518	1.83122	1.58158	1.56461		
	1.45551	+++++					1.72812	11.340
20 4,4'-DDT	1.74714	1.69628	1.59021	1.63006	1.43826	1.47388		
	1.43879	+++++					1.57352	8.000
21 Endrin aldehyde	1.58468	1.51144	1.33959	1.35940	1.19370	1.18610		
	1.11175	+++++					1.32666	13.257
22 Endosulfan sulfate	1.73214	1.64211	1.47745	1.51465	1.34424	1.33317		
	1.25492	+++++					1.47124	11.811
23 Methoxychlor	0.73051	0.70763	0.62021	0.60272	0.52386	0.51201		
	0.40225	+++++					0.58560	19.746
24 Endrin ketone	1.63883	1.60020	1.48325	1.53566	1.34995	1.36416		
	1.32073	+++++					1.47040	8.684

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	___ RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
26 Aroclor-1016(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
27 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
28 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
29 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
30 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
31 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	___ RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
32 Aroclor-1260(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
33 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
34 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
35 Toxaphene(1)	+++++	+++++	+++++	+++++	0.05597	+++++		
	+++++	+++++					0.05597	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
(2)	+++++	+++++	+++++	+++++	0.08258	+++++		
	+++++	+++++					0.08258	0.000
(3)	+++++	+++++	+++++	+++++	0.09061	+++++		
	+++++	+++++					0.09061	0.000
(4)	+++++	+++++	+++++	+++++	0.06531	+++++		
	+++++	+++++					0.06531	0.000
(5)	+++++	+++++	+++++	+++++	0.08305	+++++		
	+++++	+++++					0.08305	0.000
38 2,4-DDE	0.80626	0.82048	0.79847	0.78354	0.75300	0.69902		
	0.61137	+++++					0.75316	9.901
39 2,4-DDD	1.13292	1.14334	1.11231	1.09801	1.08138	1.03514		
	0.92519	+++++					1.07547	7.001
40 2,4-DDT	1.20070	1.21618	1.21055	1.20015	1.18944	1.14928		
	1.03688	+++++					1.17188	5.412
41 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
42 Oxychlordane	1.05303	1.08292	1.07870	1.07429	1.05167	1.01445		
	0.94342	+++++					1.04264	4.756

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
43 trans-Nonachlor	1.98806	2.04006	2.05919	2.05043	2.00581	1.96863		
	1.70892	+++++					1.97444	6.167
44 cis-Nonachlor	2.06223	2.12219	2.13854	2.12945	2.10040	2.07532		
	1.76577	+++++					2.05627	6.378
45 Mirex	1.11651	1.05520	0.99593	0.98159	0.96129	0.94571		
	0.90853	+++++					0.99497	7.061
46 bis-(2-ethylhexyl) Phthalate	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
56 Tech-Chlordane(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
47 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
48 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 19-JUN-2013 17:57
End Cal Date : 19-JUN-2013 23:17
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Cal Date : 24-Jun-2013 12:16 jrains
Curve Type : Average

Compound	1.250 Level 1	2.500 Level 2	5.000 Level 3	10.000 Level 4	20.000 Level 5	40.000 Level 6	___ RRF	% RSD
	80.000 Level 7	0.000e+00 Level 8						
49 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
50 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
51 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
53 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
54 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
57 Kepone	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
58 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++					+++++	+++++
$ 2 Tetrachloro-m-xylene	1.53064	1.48891	1.36733	1.41327	1.22546	1.18954		
	1.04722	+++++					1.32319	13.239
$ 25 Decachlorobiphenyl	1.47476	1.42068	1.29648	1.32353	1.16810	1.19962		
	1.16903	+++++					1.29317	9.469

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Batch File: /chem2/ecd6.i/20130619PEST.b/wical-1.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0619a022	0619a023	0619a024	0619a025	0619a026	0619a027	0619a028
INJ.DATE:	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013
INJ.TIME:	20:55	21:13	21:30	21:48	22:06	22:24	22:42

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.312	2.262-2.362	+++++	+++++
*	54 1Bromo-2nitrobenzene	3.131	3.131	3.130	3.131	3.131	3.130	3.130	3.130	3.080-3.180	3.131	0.000
*	58 Hexabromobiphenyl	8.927	8.927	8.927	8.926	8.928	8.927	8.927	8.927	8.877-8.977	8.927	0.000
$	2 Tetrachloro-m-xylene	3.800	3.800	3.800	3.800	3.800	3.799	3.799	3.799	3.749-3.849	3.800	0.000
	3 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.140	4.090-4.190	+++++	+++++
	4 alpha-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.286	4.236-4.336	+++++	+++++
	5 gamma-BHC (Lindane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.569	4.519-4.619	+++++	+++++
	6 beta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.644	4.594-4.694	+++++	+++++
	7 delta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.813	4.763-4.863	+++++	+++++
	8 Heptachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.015	4.965-5.065	+++++	+++++
	9 Aldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.307	5.257-5.357	+++++	+++++
	38 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627	13.577-13.677	+++++	+++++
	10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.869	10.819-10.919	+++++	+++++
	11 Heptachlor epoxide b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.883	5.832-5.933	+++++	+++++
	12 gamma-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.002	5.952-6.052	+++++	+++++
	13 alpha-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.126	6.076-6.176	+++++	+++++
	14 Endosulfan I	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.260	6.210-6.310	+++++	+++++

Reviewer 1 _____ Date: 06/24/13 06/25/13

Reviewer 2 _____ Date: 6/25/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Batch File: /chem2/ecd6.i/20130619PEST.b/wical-1.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	15 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.184	6.134-6.234	+++++	+++++
	16 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.483	6.433-6.533	+++++	+++++
	17 Endrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.701	6.651-6.751	+++++	+++++
	18 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.740	6.690-6.790	+++++	+++++
	19 Endosulfan II	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.906	6.856-6.956	+++++	+++++
	20 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.998	6.948-7.048	+++++	+++++
	21 Endrin aldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.284	7.234-7.334	+++++	+++++
	22 Methoxychlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.424	7.374-7.474	+++++	+++++
	23 Endosulfan sulfate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.674	7.624-7.724	+++++	+++++
	24 Endrin ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.930	7.880-7.980	+++++	+++++
$	25 Decachlorobiphenyl	8.777	8.777	8.777	8.776	8.777	8.776	8.777	8.777	8.727-8.827	8.777	0.000
	26 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.715-3.815	+++++	+++++
	27 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.881	4.831-4.931	+++++	+++++
	28 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.359	5.309-5.409	+++++	+++++
	29 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.715-3.815	+++++	+++++
	30 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.418	4.368-4.468	+++++	+++++
	31 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.257	5.207-5.307	+++++	+++++
	32 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.045	5.995-6.095	+++++	+++++
	33 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.301	8.251-8.351	+++++	+++++
	34 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.259	11.209-11.309	+++++	+++++
	35 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.958	6.908-7.008	+++++	+++++
	39 2,4-DDE	5.862	5.863	5.863	5.863	5.863	5.861	5.861	5.861	5.811-5.911	5.862	0.001

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Batch File: /chem2/ecd6.i/20130619PEST.b/wical-1.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD	6.349	6.350	6.350	6.350	6.350	6.348	6.348	6.348	6.298-6.398	6.349	0.001
41 2,4-DDT	6.587	6.587	6.587	6.588	6.588	6.587	6.587	6.587	6.537-6.637	6.588	0.000
42 Hexachloroethane	1.758	1.758	1.758	1.759	1.758	1.756	1.758	1.758	1.708-1.808	1.758	0.001
43 Oxychlordane	5.787	5.787	5.787	5.787	5.788	5.787	5.787	5.787	5.737-5.837	5.787	0.000
44 trans-Nonachlor	6.110	6.110	6.110	6.110	6.111	6.110	6.110	6.110	6.060-6.160	6.110	0.000
45 cis-Nonachlor	6.726	6.726	6.727	6.727	6.727	6.726	6.727	6.727	6.677-6.777	6.726	0.000
46 Mirex	7.601	7.601	7.600	7.601	7.601	7.601	7.601	7.601	7.551-7.651	7.601	0.000
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.156	20.106-20.206	+++++	+++++
59 Tech-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.935	4.885-4.985	+++++	+++++
48 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.319	6.269-6.369	+++++	+++++
49 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.936	9.886-9.986	+++++	+++++
50 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.891	11.841-11.941	+++++	+++++
51 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.827	14.777-14.877	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.750	9.700-9.800	+++++	+++++
55 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.107	9.057-9.157	+++++	+++++
56 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.251	10.201-10.301	+++++	+++++
60 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.581	6.531-6.631	+++++	+++++
61 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.953	6.903-7.003	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Batch File: /chem2/ecd6.i/20130619PEST.b/ical-1.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0619a012	0619a013	0619a014	0619a015	0619a016	0619a017	0619a018
INJ.DATE:	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013
INJ.TIME:	17:57	18:14	18:32	18:50	19:08	19:26	19:44

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene	2.311	2.310	2.311	2.311	2.310	2.311	2.312	2.312	2.262-2.362	2.311	0.001
*	54 1Bromo-2nitrobenzene	3.130	3.130	3.131	3.130	3.130	3.130	3.131	3.130	3.080-3.180	3.130	0.000
*	58 Hexabromobiphenyl	8.927	8.927	8.927	8.926	8.927	8.927	8.927	8.927	8.877-8.977	8.927	0.000
$	2 Tetrachloro-m-xylene	3.799	3.799	3.800	3.799	3.799	3.799	3.799	3.799	3.749-3.849	3.799	0.000
	3 Hexachlorobenzene	4.140	4.141	4.141	4.141	4.140	4.140	4.140	4.140	4.090-4.190	4.140	0.001
	4 alpha-BHC	4.286	4.286	4.286	4.286	4.286	4.286	4.286	4.286	4.236-4.336	4.286	0.000
	5 gamma-BHC (Lindane)	4.569	4.568	4.569	4.568	4.568	4.569	4.569	4.569	4.519-4.619	4.569	0.000
	6 beta-BHC	4.645	4.646	4.646	4.645	4.645	4.644	4.644	4.644	4.594-4.694	4.645	0.001
	7 delta-BHC	4.814	4.815	4.815	4.815	4.814	4.814	4.813	4.813	4.763-4.863	4.814	0.001
	8 Heptachlor	5.014	5.014	5.015	5.014	5.014	5.015	5.015	5.015	4.965-5.065	5.014	0.000
	9 Aldrin	5.307	5.307	5.307	5.307	5.306	5.307	5.307	5.307	5.257-5.357	5.307	0.000
	38 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	13.627	13.577-13.677	+++++	+++++
	10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.869	10.819-10.919	+++++	+++++
	11 Heptachlor epoxide b	5.882	5.882	5.883	5.882	5.881	5.882	5.883	5.883	5.832-5.933	5.882	0.000
	12 gamma-Chlordane	6.002	6.002	6.002	6.002	6.001	6.002	6.002	6.002	5.952-6.052	6.002	0.000
	13 alpha-Chlordane	6.126	6.127	6.126	6.126	6.126	6.126	6.126	6.126	6.076-6.176	6.126	0.000
	14 Endosulfan I	6.260	6.259	6.259	6.259	6.259	6.259	6.260	6.260	6.210-6.310	6.259	0.000

Reviewer 1 _____ Date: 06/25/13
Reviewer 2 _____ Date: 6/25/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Batch File: /chem2/ecd6.i/20130619PEST.b/ical-1.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	15 4,4'-DDE	6.183	6.184	6.183	6.182	6.182	6.184	6.184	6.184	6.134-6.234	6.183	0.001
	16 Dieldrin	6.482	6.482	6.482	6.482	6.482	6.482	6.483	6.483	6.433-6.533	6.482	0.000
	17 Endrin	6.701	6.701	6.700	6.700	6.700	6.700	6.701	6.701	6.651-6.751	6.700	0.000
	18 4,4'-DDD	6.741	6.743	6.743	6.742	6.741	6.740	6.740	6.740	6.690-6.790	6.741	0.001
	19 Endosulfan II	6.906	6.907	6.907	6.906	6.906	6.906	6.906	6.906	6.856-6.956	6.906	0.000
	20 4,4'-DDT	6.999	7.000	7.000	6.999	6.999	6.998	6.998	6.998	6.948-7.048	6.999	0.001
	21 Endrin aldehyde	7.284	7.284	7.284	7.283	7.283	7.283	7.284	7.284	7.234-7.334	7.284	0.000
	22 Methoxychlor	7.425	7.425	7.425	7.424	7.424	7.424	7.424	7.424	7.374-7.474	7.425	0.000
	23 Endosulfan sulfate	7.674	7.675	7.674	7.674	7.674	7.674	7.674	7.674	7.624-7.724	7.674	0.000
	24 Endrin ketone	7.930	7.929	7.930	7.929	7.929	7.929	7.930	7.930	7.880-7.980	7.929	0.000
$	25 Decachlorobiphenyl	8.777	8.777	8.777	8.776	8.777	8.777	8.777	8.777	8.727-8.827	8.777	0.000
	26 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.715-3.815	+++++	+++++
	27 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.881	4.831-4.931	+++++	+++++
	28 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.359	5.309-5.409	+++++	+++++
	29 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	3.765	3.715-3.815	+++++	+++++
	30 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.418	4.368-4.468	+++++	+++++
	31 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.257	5.207-5.307	+++++	+++++
	32 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.045	5.995-6.095	+++++	+++++
	33 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.301	8.251-8.351	+++++	+++++
	34 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.259	11.209-11.309	+++++	+++++
	35 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.958	6.908-7.008	+++++	+++++
	39 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.861	5.811-5.911	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Batch File: /chem2/ecd6.i/20130619PEST.b/ical-1.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
40 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.348	6.298-6.398	+++++	+++++
41 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.587	6.537-6.637	+++++	+++++
42 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.758	1.708-1.808	+++++	+++++
43 Oxychlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.787	5.737-5.837	+++++	+++++
44 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.110	6.060-6.160	+++++	+++++
45 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.727	6.677-6.777	+++++	+++++
46 Mirex	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.601	7.551-7.651	+++++	+++++
47 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	20.156	20.106-20.206	+++++	+++++
59 Tech-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.935	4.885-4.985	+++++	+++++
48 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.319	6.269-6.369	+++++	+++++
49 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.936	9.886-9.986	+++++	+++++
50 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.891	11.841-11.941	+++++	+++++
51 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.827	14.777-14.877	+++++	+++++
53 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.750	9.700-9.800	+++++	+++++
55 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.107	9.057-9.157	+++++	+++++
56 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	10.251	10.201-10.301	+++++	+++++
60 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.581	6.531-6.631	+++++	+++++
61 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.953	6.903-7.003	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Batch File: /chem2/ecd6.i/20130619PEST.b/ical-2.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0619a012	0619a013	0619a014	0619a015	0619a016	0619a017	0619a018
INJ.DATE:	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013
INJ.TIME:	17:57	18:14	18:32	18:50	19:08	19:26	19:44

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene	2.467	2.467	2.468	2.467	2.467	2.468	2.469	2.469	2.419-2.519	2.468	0.001
*	52 1Bromo-2nitrobenzene	3.300	3.300	3.300	3.299	3.299	3.300	3.300	3.299	3.249-3.349	3.300	0.000
*	55 Hexabromobiphenyl	10.289	10.288	10.289	10.289	10.289	10.289	10.289	10.288	10.238-10.338	10.289	0.000
$	2 Tetrachloro-m-xylene	4.127	4.127	4.127	4.127	4.126	4.127	4.128	4.128	4.079-4.178	4.127	0.001
	3 Hexachlorobenzene	4.586	4.586	4.587	4.586	4.586	4.586	4.586	4.586	4.536-4.636	4.586	0.000
	4 alpha-BHC	4.709	4.709	4.709	4.709	4.708	4.709	4.710	4.710	4.660-4.760	4.709	0.001
	5 gamma-BHC (Lindane)	5.066	5.065	5.065	5.065	5.065	5.066	5.066	5.066	5.016-5.116	5.065	0.000
	6 beta-BHC	5.138	5.139	5.139	5.139	5.138	5.138	5.138	5.138	5.088-5.188	5.138	0.001
	7 delta-BHC	5.449	5.450	5.450	5.449	5.449	5.450	5.450	5.450	5.400-5.500	5.450	0.000
	8 Heptachlor	5.529	5.528	5.529	5.528	5.528	5.529	5.529	5.529	5.479-5.579	5.529	0.001
	37 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.538-14.638	+++++	+++++
	9 Aldrin	5.867	5.866	5.867	5.866	5.866	5.867	5.867	5.867	5.817-5.917	5.867	0.001
	10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.630-12.730	+++++	+++++
	11 Heptachlor epoxide b	6.422	6.421	6.421	6.420	6.420	6.421	6.422	6.422	6.372-6.472	6.421	0.001
	12 gamma-Chlordane	6.604	6.604	6.604	6.603	6.603	6.604	6.604	6.604	6.554-6.654	6.604	0.000
	13 alpha-Chlordane	6.742	6.741	6.742	6.741	6.741	6.742	6.742	6.742	6.692-6.792	6.741	0.001
	14 Endosulfan I	6.809	6.808	6.809	6.808	6.808	6.808	6.809	6.809	6.759-6.859	6.808	0.000

Reviewer 1 _____ Date: 06/25/13
Reviewer 2 _____ Date: 6/25/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Batch File: /chem2/ecd6.i/20130619PEST.b/ical-2.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	15 4,4'-DDE	6.868	6.869	6.869	6.868	6.868	6.869	6.870	6.870	6.820-6.920	6.869	0.001
	16 Dieldrin	7.066	7.066	7.065	7.065	7.066	7.067	7.067	7.067	7.017-7.117	7.066	0.001
	17 Endrin	7.355	7.355	7.355	7.355	7.355	7.356	7.356	7.356	7.306-7.406	7.355	0.001
	18 4,4'-DDD	7.407	7.408	7.407	7.407	7.407	7.406	7.407	7.407	7.357-7.457	7.407	0.001
	19 Endosulfan II	7.544	7.544	7.544	7.544	7.544	7.545	7.545	7.545	7.495-7.595	7.544	0.001
	20 4,4'-DDT	7.695	7.694	7.694	7.694	7.694	7.694	7.694	7.694	7.644-7.744	7.694	0.000
	21 Endrin aldehyde	7.842	7.841	7.841	7.841	7.841	7.842	7.843	7.843	7.793-7.893	7.842	0.000
	22 Endosulfan sulfate	8.087	8.087	8.086	8.087	8.087	8.087	8.087	8.087	8.037-8.137	8.087	0.000
	23 Methoxychlor	8.277	8.277	8.277	8.277	8.277	8.277	8.282	8.282	8.232-8.332	8.278	0.002
	24 Endrin ketone	8.578	8.577	8.577	8.577	8.577	8.578	8.578	8.578	8.528-8.628	8.577	0.001
$	25 Decachlorobiphenyl	9.725	9.724	9.725	9.724	9.725	9.724	9.725	9.725	9.675-9.775	9.724	0.000
	26 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.180	4.130-4.230	+++++	+++++
	27 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.051	5.001-5.101	+++++	+++++
	28 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.171	5.121-5.221	+++++	+++++
	29 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.970	4.920-5.020	+++++	+++++
	30 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.285	5.235-5.335	+++++	+++++
	31 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.968	5.918-6.018	+++++	+++++
	32 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.767	6.717-6.817	+++++	+++++
	33 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.714	9.664-9.764	+++++	+++++
	34 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.791	11.741-11.841	+++++	+++++
	35 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.291	7.241-7.341	+++++	+++++
	38 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.580	6.530-6.630	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Batch File: /chem2/ecd6.i/20130619PEST.b/ical-2.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
39 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.065	7.015-7.115	+++++	+++++
40 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.353	7.303-7.403	+++++	+++++
41 Hexachloroethane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1.726	1.676-1.776	+++++	+++++
42 Oxychlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.332	6.282-6.382	+++++	+++++
43 trans-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.690	6.640-6.740	+++++	+++++
44 cis-Nonachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.415	7.365-7.465	+++++	+++++
45 Mirex	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.564	8.514-8.614	+++++	+++++
46 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.499	21.449-21.549	+++++	+++++
56 Tech-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.378	5.328-5.428	+++++	+++++
47 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.871	4.821-4.921	+++++	+++++
48 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.640	6.590-6.690	+++++	+++++
49 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.115	8.065-8.165	+++++	+++++
50 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.286	11.236-11.336	+++++	+++++
51 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.527	6.477-6.577	+++++	+++++
53 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.342	6.292-6.392	+++++	+++++
54 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.841	6.791-6.891	+++++	+++++
57 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.336	7.286-7.386	+++++	+++++
58 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.745	7.695-7.795	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Batch File: /chem2/ecd6.i/20130619PEST.b/wical-2.b
Inst ID: ecd6.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07
FILENAME:	0619a022	0619a023	0619a024	0619a025	0619a026	0619a027	0619a028
INJ.DATE:	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013	19-JUN-2013
INJ.TIME:	20:55	21:13	21:30	21:48	22:06	22:24	22:42

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Hexachlorobutadiene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	2.469	2.419-2.519	+++++	+++++
*	52 1Bromo-2nitrobenzene	3.300	3.300	3.300	3.300	3.300	3.300	3.299	3.299	3.249-3.349	3.300	0.000
*	55 Hexabromobiphenyl	10.289	10.289	10.289	10.288	10.290	10.289	10.288	10.288	10.238-10.338	10.289	0.000
$	2 Tetrachloro-m-xylene	4.127	4.126	4.127	4.127	4.127	4.127	4.127	4.128	4.079-4.178	4.127	0.000
	3 Hexachlorobenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.586	4.536-4.636	+++++	+++++
	4 alpha-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.710	4.660-4.760	+++++	+++++
	5 gamma-BHC (Lindane)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.066	5.016-5.116	+++++	+++++
	6 beta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.138	5.088-5.188	+++++	+++++
	7 delta-BHC	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.450	5.400-5.500	+++++	+++++
	8 Heptachlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.529	5.479-5.579	+++++	+++++
	37 Chlorthalonil	+++++	+++++	+++++	+++++	+++++	+++++	+++++	14.588	14.538-14.638	+++++	+++++
	9 Aldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.867	5.817-5.917	+++++	+++++
	10 Heptachlor Epoxide a	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.680	12.630-12.730	+++++	+++++
	11 Heptachlor epoxide b	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.422	6.372-6.472	+++++	+++++
	12 gamma-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.604	6.554-6.654	+++++	+++++
	13 alpha-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.742	6.692-6.792	+++++	+++++
	14 Endosulfan I	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.809	6.759-6.859	+++++	+++++

Reviewer 1 _____ Date: 06/25/13
Reviewer 2 _____ Date: 6/25/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Batch File: /chem2/ecd6.i/20130619PEST.b/wical-2.b
Inst ID: ecd6.i

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	15 4,4'-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.870	6.820-6.920	+++++	+++++
	16 Dieldrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.067	7.017-7.117	+++++	+++++
	17 Endrin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.356	7.306-7.406	+++++	+++++
	18 4,4'-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.407	7.357-7.457	+++++	+++++
	19 Endosulfan II	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.545	7.495-7.595	+++++	+++++
	20 4,4'-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.694	7.644-7.744	+++++	+++++
	21 Endrin aldehyde	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.843	7.793-7.893	+++++	+++++
	22 Endosulfan sulfate	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.087	8.037-8.137	+++++	+++++
	23 Methoxychlor	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.282	8.232-8.332	+++++	+++++
	24 Endrin ketone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.578	8.528-8.628	+++++	+++++
$	25 Decachlorobiphenyl	9.725	9.725	9.725	9.724	9.725	9.725	9.724	9.725	9.675-9.775	9.725	0.000
	26 Aroclor-1016	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.180	4.130-4.230	+++++	+++++
	27 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.051	5.001-5.101	+++++	+++++
	28 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.171	5.121-5.221	+++++	+++++
	29 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.970	4.920-5.020	+++++	+++++
	30 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.285	5.235-5.335	+++++	+++++
	31 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.968	5.918-6.018	+++++	+++++
	32 Aroclor-1260	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.767	6.717-6.817	+++++	+++++
	33 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.714	9.664-9.764	+++++	+++++
	34 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.791	11.741-11.841	+++++	+++++
	35 Toxaphene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.291	7.241-7.341	+++++	+++++
	38 2,4-DDE	6.580	6.580	6.580	6.580	6.581	6.580	6.580	6.580	6.530-6.630	6.580	0.000

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd6.i/20130619PEST.b/PEST0619B.m
Batch File: /chem2/ecd6.i/20130619PEST.b/wical-2.b
Inst ID: ecd6.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	EXPEC RT	RT WINDOW	AVG RT	STD DEV
39 2,4-DDD	7.065	7.065	7.065	7.066	7.066	7.065	7.065	7.065	7.015-7.115	7.065	0.000
40 2,4-DDT	7.352	7.352	7.352	7.352	7.352	7.352	7.353	7.353	7.303-7.403	7.352	0.000
41 Hexachloroethane	1.727	1.726	1.727	1.727	1.726	1.726	1.726	1.726	1.676-1.776	1.727	0.000
42 Oxychlordane	6.331	6.331	6.331	6.331	6.332	6.332	6.332	6.332	6.282-6.382	6.331	0.001
43 trans-Nonachlor	6.688	6.688	6.687	6.688	6.689	6.688	6.690	6.690	6.640-6.740	6.688	0.001
44 cis-Nonachlor	7.412	7.411	7.412	7.412	7.413	7.412	7.415	7.415	7.365-7.465	7.412	0.001
45 Mirex	8.564	8.564	8.564	8.563	8.565	8.565	8.564	8.564	8.514-8.614	8.564	0.000
46 bis-(2-ethylhexyl) Pht	+++++	+++++	+++++	+++++	+++++	+++++	+++++	21.499	21.449-21.549	+++++	+++++
56 Tech-Chlordane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	5.378	5.328-5.428	+++++	+++++
47 Trifluralin	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.871	4.821-4.921	+++++	+++++
48 Dacthal	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.640	6.590-6.690	+++++	+++++
49 Oxadiazon	+++++	+++++	+++++	+++++	+++++	+++++	+++++	8.115	8.065-8.165	+++++	+++++
50 Kelthane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	11.286	11.236-11.336	+++++	+++++
51 Chlorpyrifos	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.527	6.477-6.577	+++++	+++++
53 Methyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.342	6.292-6.392	+++++	+++++
54 Ethyl Parathion	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.841	6.791-6.891	+++++	+++++
57 Kepone	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.336	7.286-7.386	+++++	+++++
58 1-Chloropyrene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	7.745	7.695-7.795	+++++	+++++

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a010.d ARI ID: IB
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a010.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Compound Sublist: wpest
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar
Injection Date: 19-JUN-2013 17:21
Report Date: 06/25/2013 09:50
Matrix: NONE
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.131	-0.001	5445201	3.300	0.000	27743026	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.272	-0.014	1237	4.712	0.002	5841	0.0113	0.0088	25.0	alpha-BHC
----			5.142	0.003	6031	0.0000	0.0210	---	beta-BHC
4.809	-0.005	1463	5.464	0.014	13614	0.0155	0.0238	42.5*	delta-BHC
----			5.068	0.001	9540	0.0000	0.0163	---	gamma-BHC (Lindane)
----			5.545	0.015	13162	0.0000	0.0232	---	Heptachlor
5.324	0.017	1263	5.852	-0.015	17483	0.0136	0.0325	81.7*	Aldrin
5.892	0.010	3416	6.400	-0.022	27268	0.0398	0.0556	33.1	Heptachlor epoxide b
6.299	0.039	1341	6.782	-0.027	5404	0.0167	0.0123	30.7	Endosulfan I
6.464	-0.018	5067	7.109	0.042	9944	0.0598	0.0224	91.1*	Dieldrin
6.180	-0.004	2407	6.869	-0.001	3466	0.0373	0.0077	131.3*	4,4'-DDE
6.667	-0.034	3562	7.373	0.017	23753	0.0502	0.0729	36.9	Endrin
6.913	0.007	2185	7.551	0.006	5567	0.0310	0.0163	62.1*	Endosulfan II
6.763	0.023	2946	----			0.0434	0.0000	---	4,4'-DDD
7.675	0.001	1856	8.088	0.001	2732	0.0298	0.0094	104.2*	Endosulfan sulfate
6.979	-0.019	7544	7.708	0.013	39804	0.1129	0.1280	12.6	4,4'-DDT
7.383	-0.041	1252	8.259	-0.023	37348	0.0396	0.3227	156.3*	Methoxychlor
7.926	-0.004	15142	8.585	0.007	30994	0.1959	0.1066	59.0*	Endrin ketone
7.303	0.019	3898	7.834	-0.008	11414	0.0700	0.0435	46.6*	Endrin aldehyde
5.988	-0.014	2452	6.626	0.021	24027	0.0278	0.0465	50.4*	gamma-Chlordane
6.127	0.000	4338	6.744	0.002	3096	0.0505	0.0065	154.2*	alpha-Chlordane
2.312	0.000	3453	2.469	-0.001	3790	0.0289	0.0066	125.5*	Hexachlorobutadiene
4.139	0.000	39886	4.583	-0.003	14742	0.4591	0.0270	177.8*	Hexachlorobenzene
5.755	-0.031	1280	6.335	0.003	10455	0.0202	0.0289	35.6	Oxychlordane
----			6.571	-0.009	7079	0.0000	0.0271	---	2,4-DDE
----			6.687	-0.004	4941	0.0000	0.0127	---	trans-Nonachlor
6.335	-0.014	2519	7.045	-0.019	15599	0.0577	0.0734	24.0	2,4-DDD
6.587	0.000	1121	----			0.0222	0.0000	---	2,4-DDT
6.717	-0.010	8796	7.412	-0.003	4224	0.1024	0.0104	163.1*	cis-Nonachlor
7.576	-0.024	8765	8.535	-0.029	217054	0.1671	1.1037	147.4*	Mirex
8.927	0.000	4712338	10.289	0.001	15811694	80.0000	80.0000	0.0	Hexabromobiphenyl
1.757	-0.001	3388	1.727	0.001	198727	0.0000	0.0000	---	Hexachloroethane
6.562	-0.019	2192	7.316	-0.020	7938	0.0000	0.0000	---	Kepone
3.800	0.000	2775489	4.127	-0.001	17285223	37.5388	37.6693	0.3	Tetrachloro-m-xylen
8.777	0.000	2204810	9.726	0.001	9380530	37.1748	36.7014	1.3	Decachlorobiphenyl

06/25/13

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

WI70:0130

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	93.8	94.2	93.8~	130- 0
Decachlorobiphenyl	92.9	91.8	91.8~	130- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

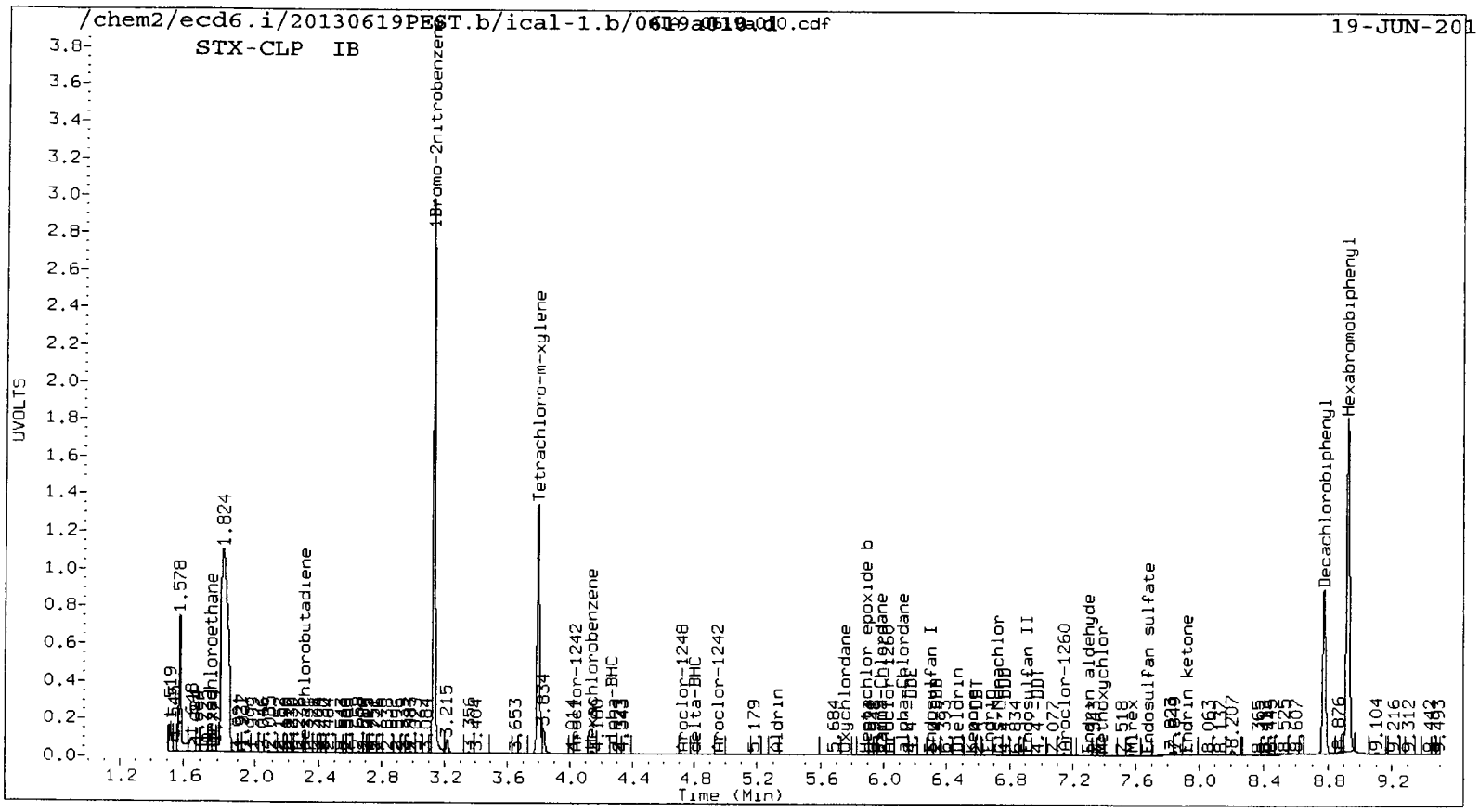
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5445201	-2.6
Hexabromobiphenyl	4870538	4712338	-3.2

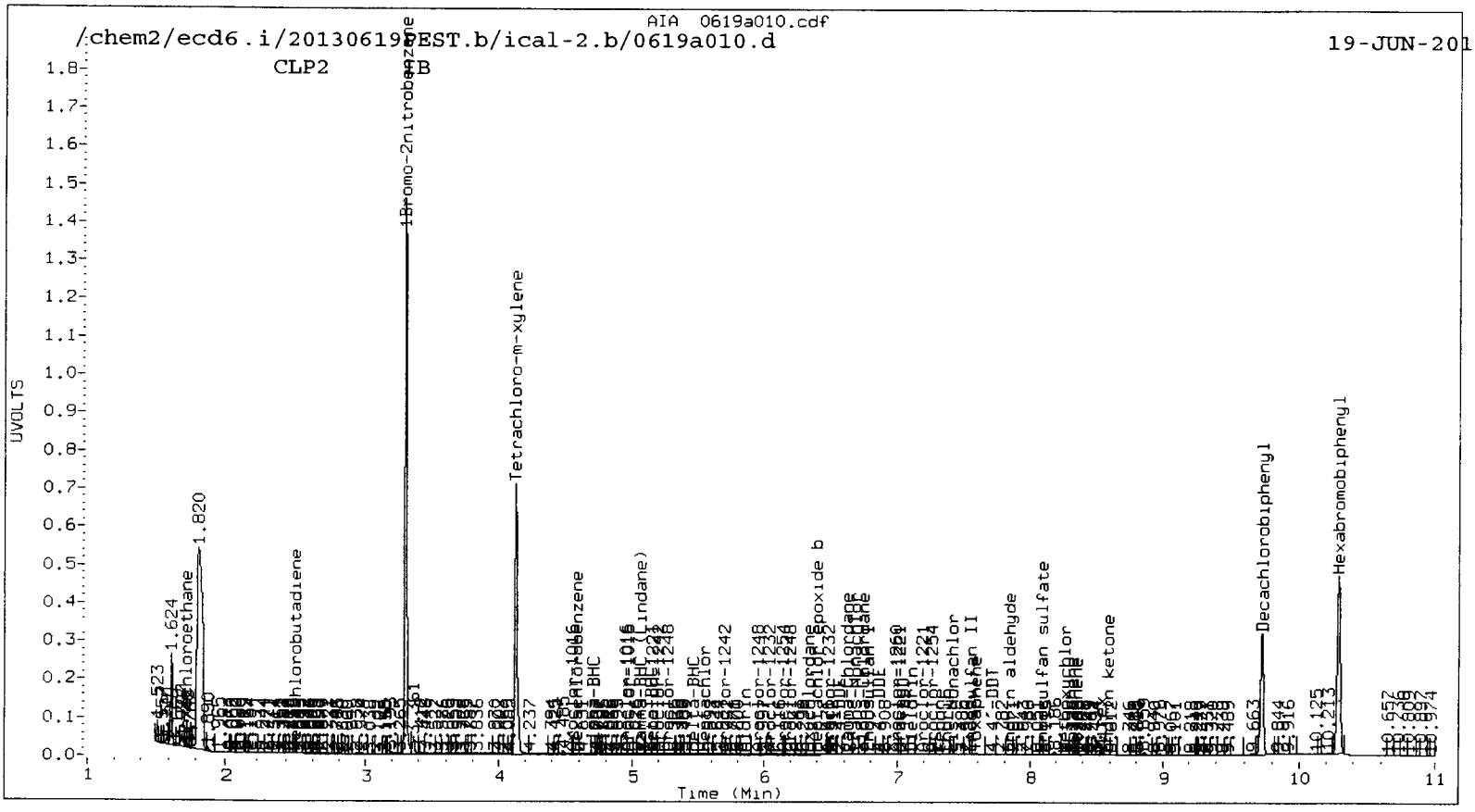
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	27743026	-2.0
Hexabromobiphenyl	16454599	15811694	-3.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col				CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.979	0.020	7544	2.5	1	7.316	0.025	7938	0.7
Toxaphene	2	---			0.000	2	7.586	-0.029	150016	9.2
Toxaphene	3	7.303	0.035	3898	1.1	3	7.834	-0.012	11414	0.6
Toxaphene	4	7.576	-0.016	8765	2.5	4	8.317	0.003	5589	0.4
Toxaphene	5	7.675	0.043	1856	0.8	5	8.352	-0.001	1996	0.1
Toxaphene	6	7.926	0.012	15142	7.7	NS	---			----
Total STX-CLPAve (5 peaks): 2.916						Total CLP2Ave (5 peaks): 2.220				RPD = 27
Corrected Ave (4 peaks): 1.731						Corrected Ave (4 peaks): 0.477				RPD = 114*


/chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a010.d
STX-CLP IB
19-JUN-201
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl
1.824
1.578
3.215
3.653
3.834
5.179
7.518
8.876
Hexachlorobutadiene
Hexachlorobenzene
Aldrin
Endosulfan sulfate
Endrin ketone


AIA 0619a010.cdf
/chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a010.d
CLP2 2B
19-JUN-201
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl
1.820
1.624
4.237
9.663
10.125
10.213
Hexachlorobutadiene
Hexachlorobenzene
Aldrin
Endosulfan sulfate
Endrin ketone

7E

8081 DDT/ENDRIN BREAKDOWN VERIFICATION SUMMARY

Lab ID: DS ARI Job No.: 20130619PEST

Analysis Date: 19-JUN-2013 17:39 Init. Calib. Date: 19-JUN-2013

GC Column: STX-CLP1 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4'-DDE	6.186	95936
Endrin	6.701	6813037
4,4'-DDD	6.742	278389
4,4'-DDT	7.000	6738589
Endrin ketone	7.930	275869
Endrin aldehyde	7.284	115494

DDT Percent Breakdown = 5.3 %
((95936+278389) * 100)/(95936+278389+6738589)

Endrin Percent Breakdown = 5.4 %
((115494+275869) * 100)/(115494+275869+6813037)

GC Column: STX-CLP2 ID: 0.53(mm)

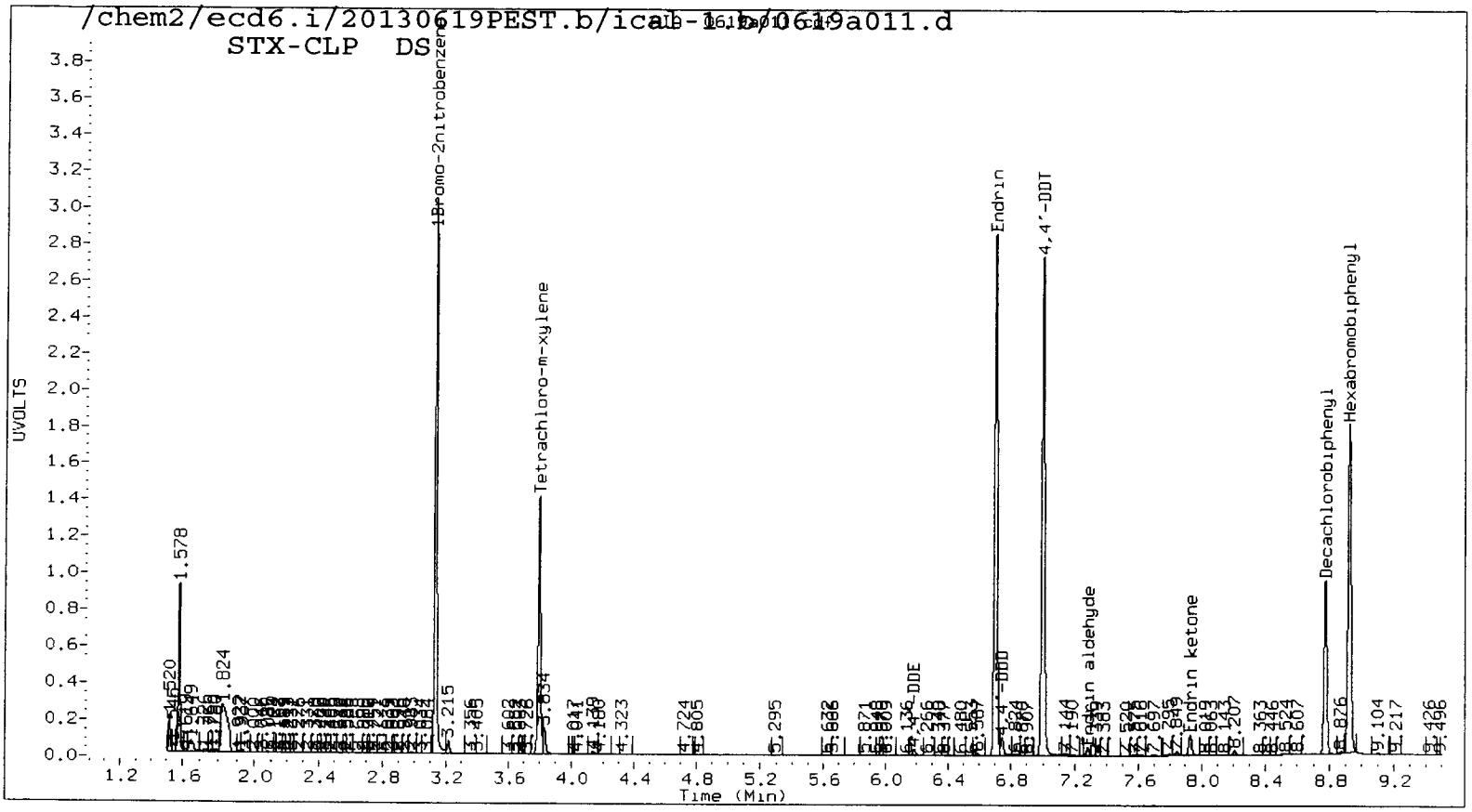
06/25/13

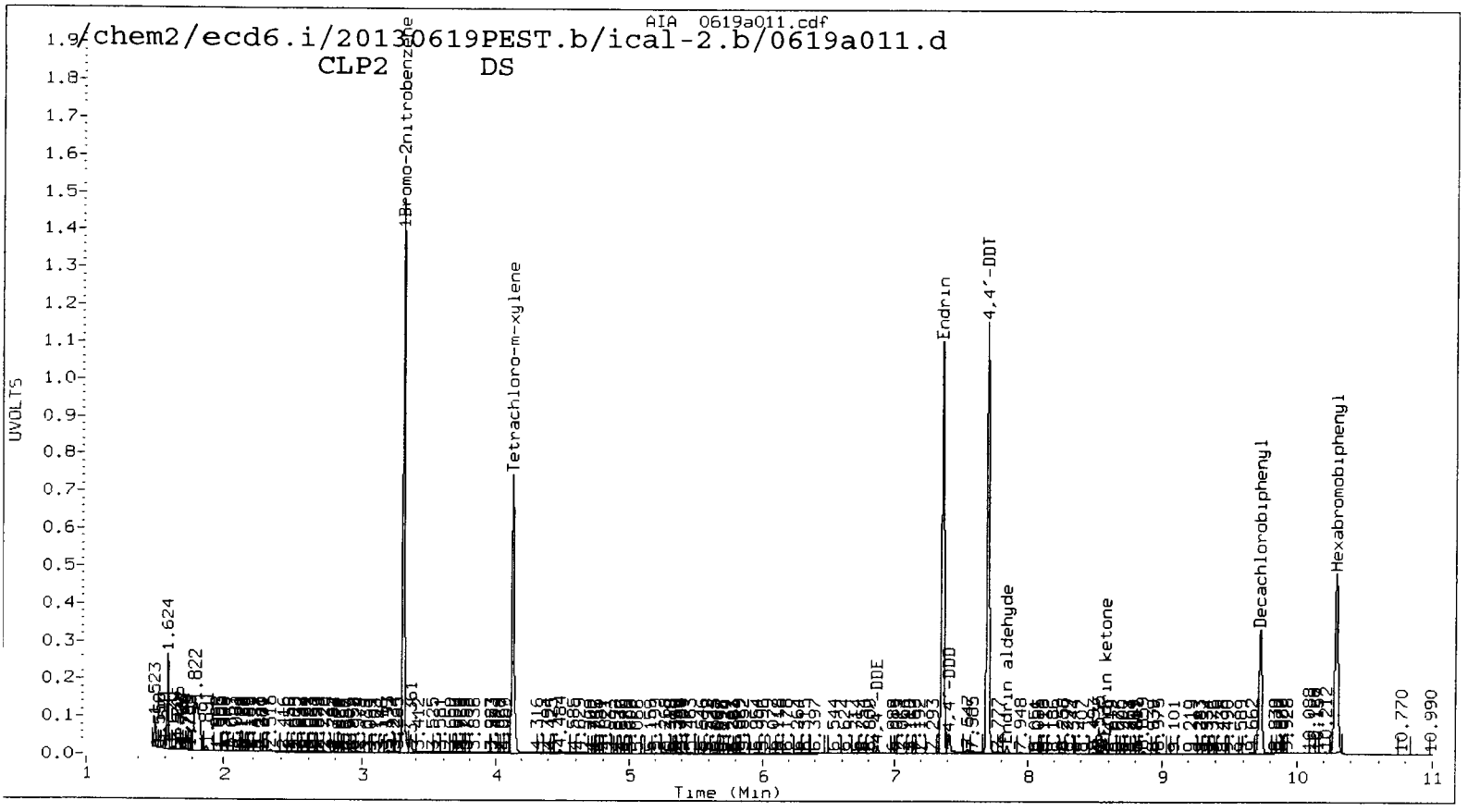
COMPOUND	RT	AREA
4,4'-DDE	6.869	489895
Endrin	7.356	27988972
4,4'-DDD	7.407	1891401
4,4'-DDT	7.695	28478839
Endrin ketone	8.578	1018617
Endrin aldehyde	7.842	619288

DDT Percent Breakdown = 7.7 %
((489895+1891401) * 100)/(489895+1891401+28478839)

Endrin Percent Breakdown = 5.5 %
((619288+1018617) * 100)/(619288+1018617+27988972)

Form VII Pest-1


/chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a011.d
STX-CLP DS
UWDLTS
Time (Min)
1.578
3.215
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0619a011.cdf
/chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a011.d
CLP2 DS
UWDLTS
Time (Min)
1.624
Tetrachloro-m-xylene
Endrin
4,4'-DDT
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a012.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a012.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar

Injection Date: 19-JUN-2013 17:57
Report Date: 06/25/2013 09:50
Matrix: NONE
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.130	-0.001	5590801	3.300	0.000	28320361	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.286	0.000	2197479	4.709	-0.001	13152047	19.5983	19.4383	0.8	alpha-BHC
4.645	0.001	835510	5.138	0.000	5099619	18.4728	17.3979	6.0	beta-BHC
4.814	0.001	1911138	5.449	-0.001	11322606	19.6853	19.4141	1.4	delta-BHC
4.569	0.000	1983131	5.066	-0.001	11521601	19.3979	19.2581	0.7	gamma-BHC (Lindane)
5.014	0.000	1872342	5.529	-0.001	10807405	19.0846	18.6236	2.4	Heptachlor
5.307	0.000	1831236	5.867	0.000	10223350	19.2639	18.6089	3.5	Aldrin
5.882	0.000	1656941	6.422	0.000	8941275	18.8014	17.8576	5.1	Heptachlor epoxide b
6.260	0.000	1541002	6.809	0.000	8296243	18.7074	18.4391	1.4	Endosulfan I
6.482	0.000	3329129	7.066	-0.001	16340234	38.2478	35.9857	6.1	Dieldrin
6.183	-0.001	2461228	6.868	-0.002	16694923	37.1669	36.5223	1.7	4,4'-DDE
6.701	0.000	2819551	7.355	-0.001	12511920	38.4140	36.8761	4.1	Endrin
6.906	0.001	2775029	7.544	-0.001	13012156	38.0841	36.6083	4.0	Endosulfan II
6.741	0.001	2680166	7.407	0.000	13189613	38.2390	36.1096	5.7	4,4'-DDD
7.674	0.000	2428615	8.087	0.000	11059493	37.7476	36.5472	3.2	Endosulfan sulfate
6.999	0.001	2658216	7.695	0.000	11832997	38.4799	36.5617	5.1	4,4'-DDT
7.425	0.000	5893323	8.277	-0.005	21549834	180.2526	178.9147	0.7	Methoxychlor
7.930	0.000	2942761	8.578	-0.001	11106420	36.8347	36.7234	0.3	Endrin ketone
7.284	0.000	2165447	7.842	-0.001	9820893	37.5991	35.9909	4.4	Endrin aldehyde
6.002	0.000	1724732	6.604	0.000	9531588	19.0513	18.0885	5.2	gamma-Chlordane
6.126	0.000	1657348	6.742	0.000	8851820	18.8082	18.3243	2.6	alpha-Chlordane
2.311	-0.001	2291552	2.467	-0.002	11051717	18.6525	18.8532	1.1	Hexachlorobutadiene
4.140	0.001	1618855	4.586	0.000	10114339	18.1471	18.1305	0.1	Hexachlorobenzene
8.927	0.000	4870538	10.289	0.001	16454599	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	2864775	4.127	-0.002	17352669	37.7374	37.0454	1.9	Tetrachloro-m-xylen
8.777	-0.001	2234017	9.725	0.000	9610334	36.4437	36.1314	0.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	94.3	92.6	92.6~	115- 0
Decachlorobiphenyl	91.1	90.3	90.3~	115- 0

WU12:0195

~ Indicates recovery outside QC Limits

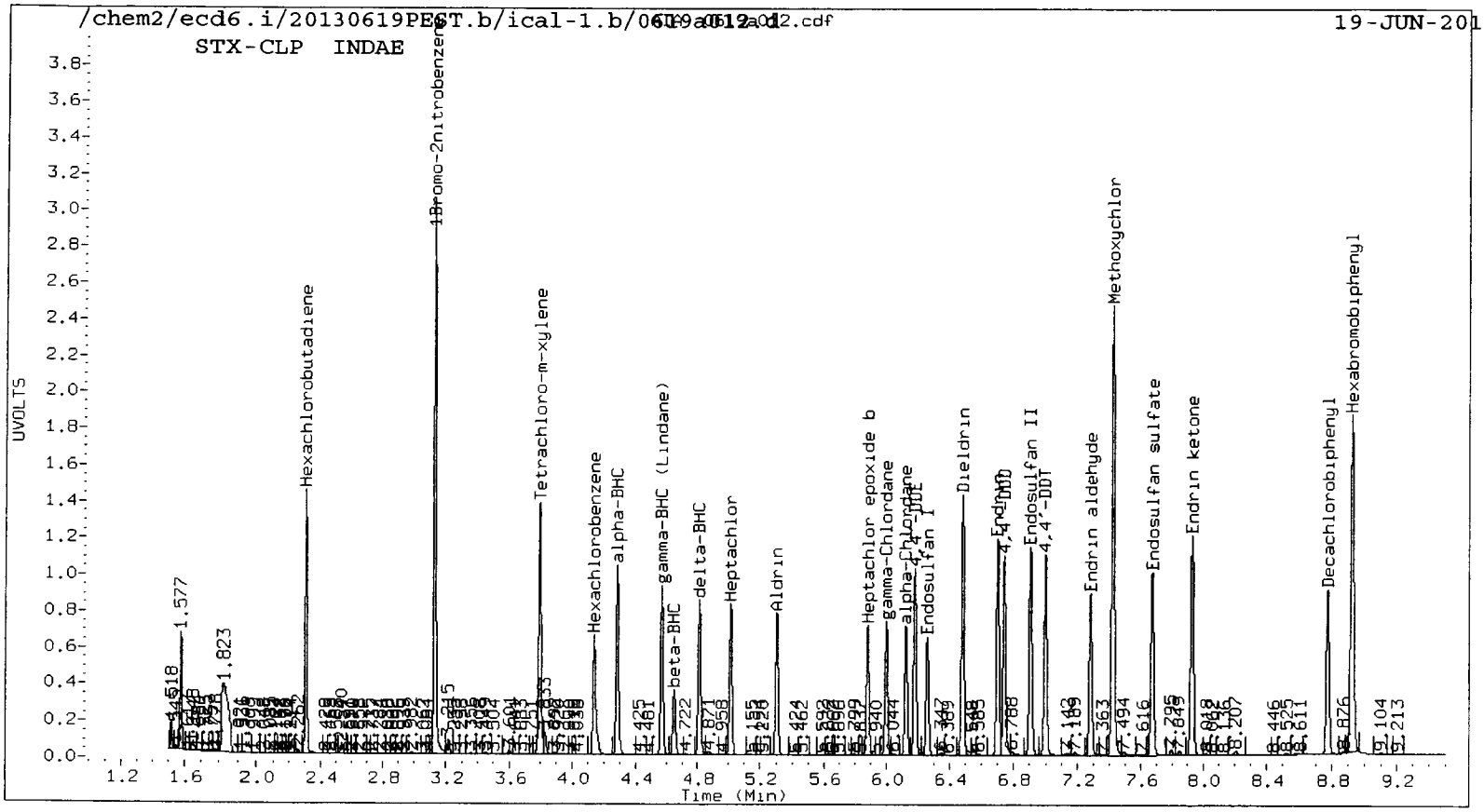
INTERNAL STANDARD SUMMARY

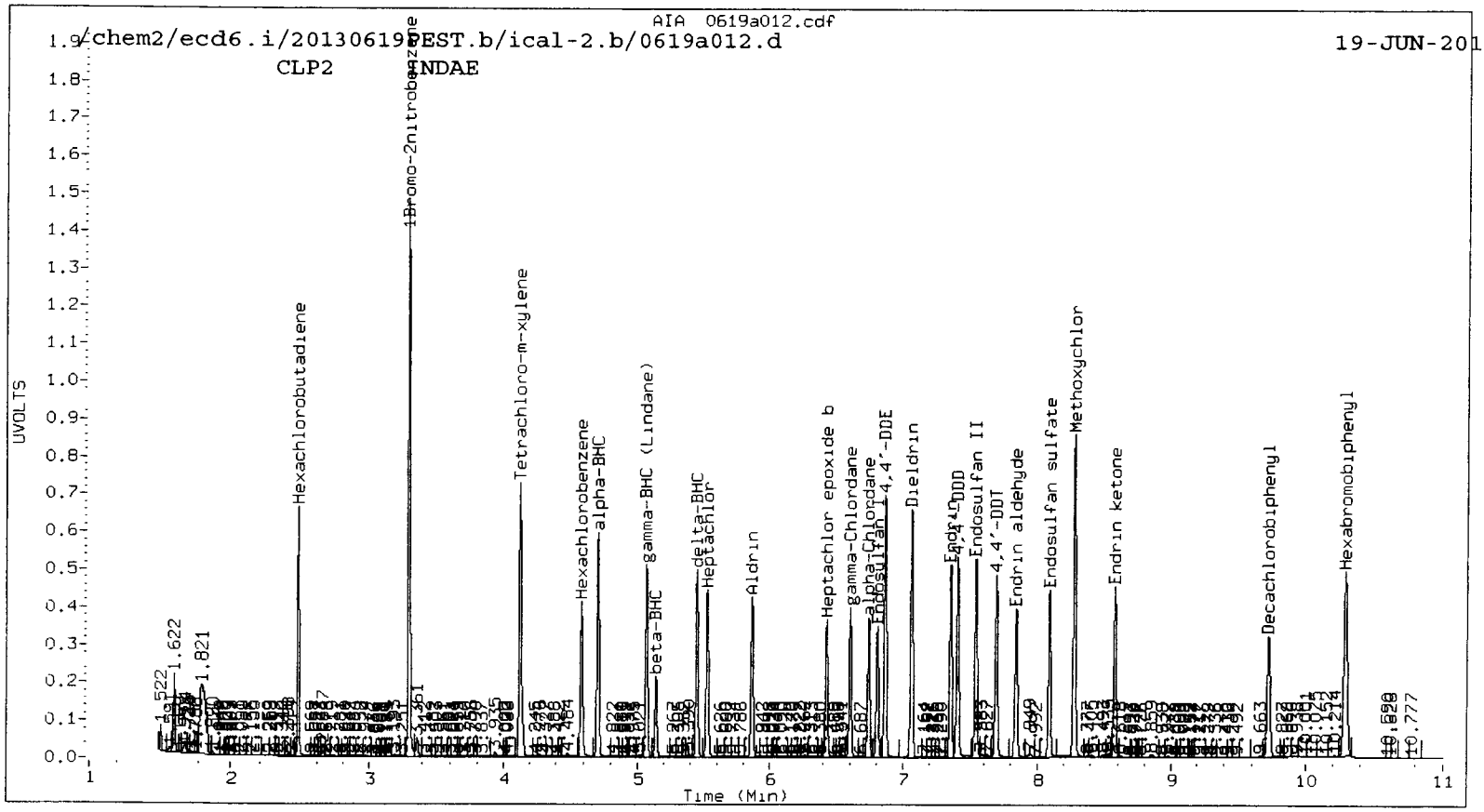
Column 1			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5590801	0.0
Hexabromobiphenyl	4870538	4870538	0.0

Column 2			
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28320361	0.0
Hexabromobiphenyl	16454599	16454599	0.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a012.d
AIA 0619a012.cdf
19-JUN-201
STX-CLP INDAE
UVOLTS
Time (Min)
1.577
1.823
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


/chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a012.d
AIA 0619a012.cdf
19-JUN-201
CLP2 INDAE
UVOLTS
Time (Min)
1.622
1.821
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a013.d ARI ID: INDAA
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a013.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 18:14
Compound Sublist: INDA Report Date: 06/25/2013 09:50
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.130	-0.001	5443407	3.300	0.000	27626455	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.286	0.000	131311	4.709	-0.001	816134	1.2028	1.2365	2.8	alpha-BHC
4.646	0.002	61465	5.139	0.001	457221	1.3958	1.5990	13.6	beta-BHC
4.815	0.002	111484	5.450	0.000	711469	1.1794	1.2506	5.9	delta-BHC
4.568	0.000	122386	5.065	-0.001	741566	1.2295	1.2706	3.3	gamma-BHC (Lindane)
5.014	-0.001	124272	5.528	-0.001	834093	1.3010	1.4734	12.4	Heptachlor
5.307	0.000	117450	5.866	-0.001	791691	1.2690	1.4773	15.2	Aldrin
5.882	0.000	116637	6.421	-0.001	784226	1.3593	1.6056	16.6	Heptachlor epoxide b
6.259	-0.001	110155	6.808	-0.001	655773	1.3735	1.4941	8.4	Endosulfan I
6.482	-0.001	218954	7.066	-0.002	1380894	2.5836	3.1175	18.7	Dieldrin
6.184	0.000	172469	6.869	-0.001	1326712	2.6750	2.9753	10.6	4,4'-DDE
6.701	0.000	188353	7.355	-0.001	955890	2.6276	2.8816	9.2	Endrin
6.907	0.001	190654	7.544	-0.001	991338	2.6791	2.8527	6.3	Endosulfan II
6.743	0.003	178398	7.408	0.001	1060462	2.6062	2.9696	13.0	4,4'-DDD
7.675	0.000	167119	8.087	-0.001	870793	2.6597	2.9433	10.1	Endosulfan sulfate
7.000	0.002	171062	7.694	0.000	878337	2.5355	2.7759	9.0	4,4'-DDT
7.425	0.001	452591	8.277	-0.005	1836243	14.1742	15.5933	9.5	Methoxychlor
7.929	0.000	218694	8.577	-0.001	823887	2.8029	2.7864	0.6	Endrin ketone
7.284	0.001	152510	7.841	-0.001	796663	2.7114	2.9862	9.6	Endrin aldehyde
6.002	0.000	114356	6.604	-0.001	789869	1.2974	1.5366	16.9	gamma-Chlordane
6.127	0.000	115059	6.741	-0.001	692681	1.3411	1.4699	9.2	alpha-Chlordane
2.310	-0.002	161818	2.467	-0.002	766383	1.3528	1.3402	0.9	Hexachlorobutadiene
4.141	0.001	126395	4.586	0.000	820221	1.4552	1.5072	3.5	Hexachlorobenzene
8.927	-0.001	4756712	10.288	0.000	16087272	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	196648	4.127	-0.002	1321445	2.6606	2.8919	8.3	Tetrachloro-m-xylene
8.777	-0.001	168517	9.724	-0.001	741403	2.8148	2.8511	1.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	6.7	7.2	6.7~	115- 0
Decachlorobiphenyl	7.0	7.1	7.0~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

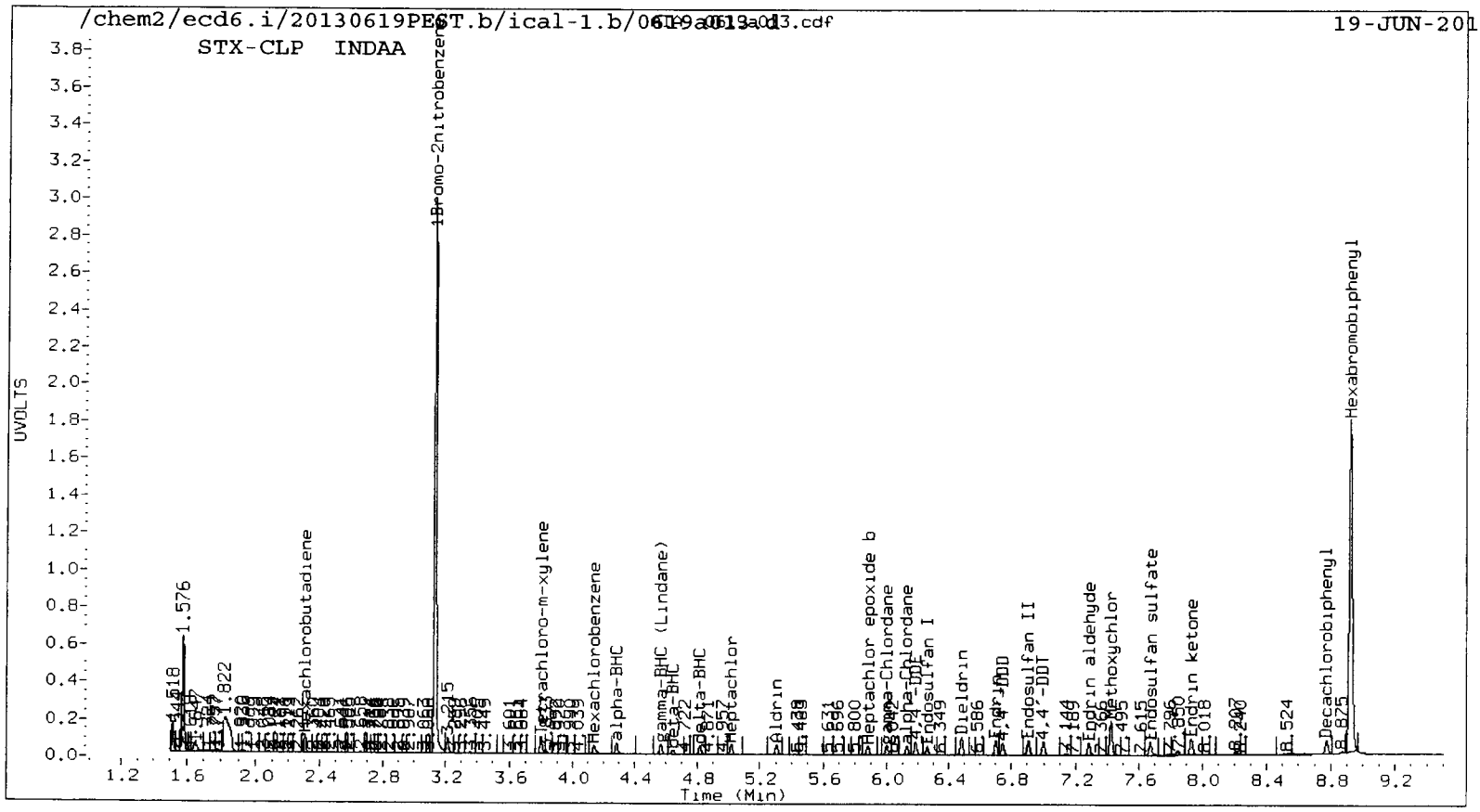
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5443407	-2.6
Hexabromobiphenyl	4870538	4756712	-2.3

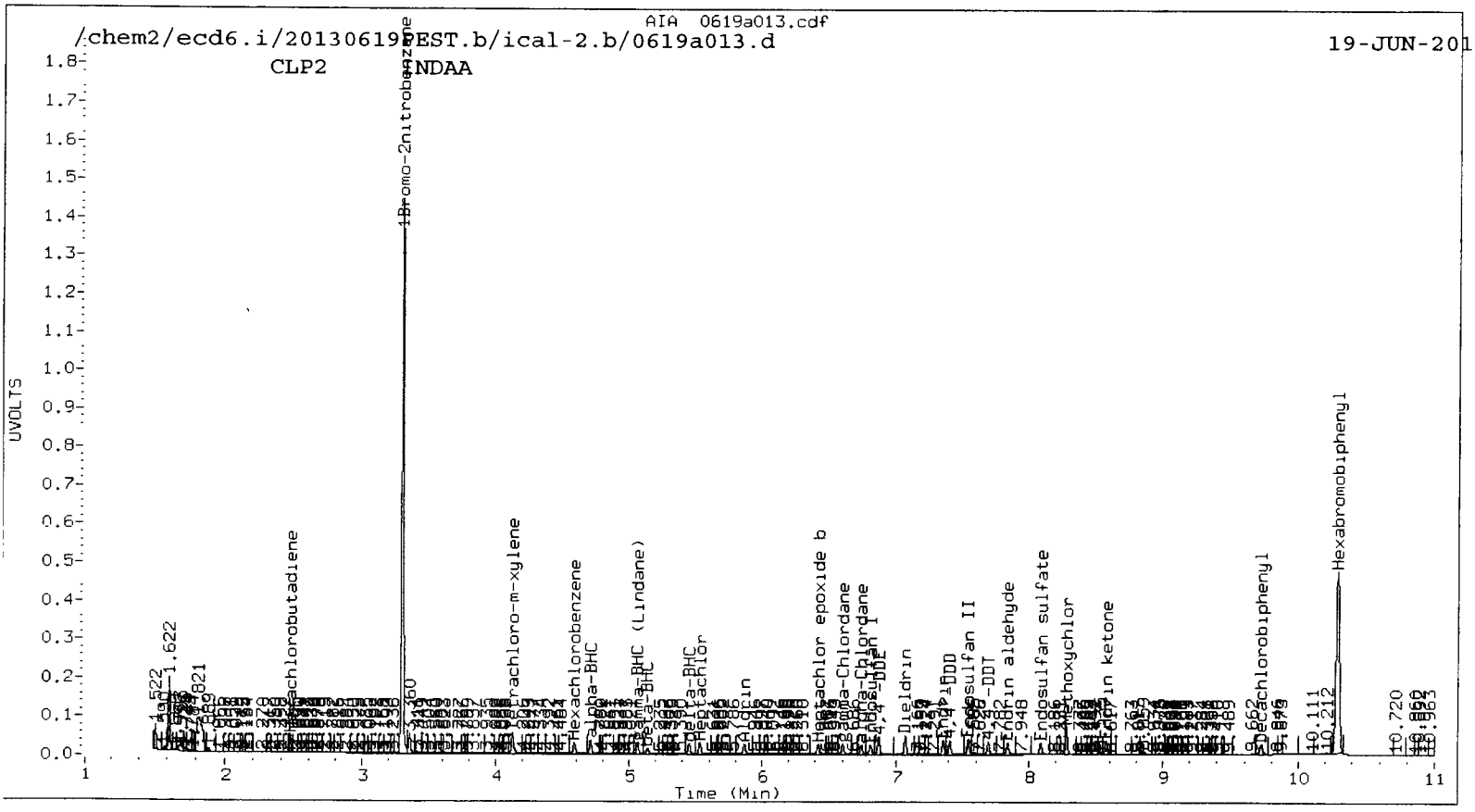
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	27626455	-2.5
Hexabromobiphenyl	16454599	16087272	-2.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a013.d
0619a013.cdf
19-JUN-201
STX-CLP INDAA
UVOLTS
Time (Min)
1.576
1.518
1.822
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
Alpha-BHC
Gamma-BHC (Lindane)
Beta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
Gamma-Chlordane
Alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endosulfan II
4,4'-DDD
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0619a013.cdf
/chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a013.d
19-JUN-201
CLP2 INDAA
UVOLTS
Time (Min)
1.622
1.522
1.821
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
Alpha-BHC
Gamma-BHC (Lindane)
Beta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
Gamma-Chlordane
Alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endosulfan II
4,4'-DDD
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a014.d ARI ID: INDAB
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a014.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 18:32
Compound Sublist: INDA Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.131	-0.001	5578569	3.300	0.001	28124817	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.286	0.000	271034	4.709	-0.001	1721306	2.4225	2.5617	5.6	alpha-BHC
4.646	0.002	120984	5.139	0.001	843735	2.6808	2.8985	7.8	beta-BHC
4.815	0.002	233196	5.450	0.000	1461179	2.4073	2.5228	4.7	delta-BHC
4.569	0.000	253061	5.065	-0.001	1513233	2.4807	2.5469	2.6	gamma-BHC (Lindane)
5.015	0.000	252765	5.529	-0.001	1578669	2.5821	2.7393	5.9	Heptachlor
5.307	0.000	240632	5.867	-0.001	1464165	2.5369	2.6837	5.6	Aldrin
5.883	0.000	232952	6.421	-0.001	1441216	2.6491	2.8984	9.0	Heptachlor epoxide b
6.259	0.000	219902	6.809	0.000	1245281	2.6754	2.7870	4.1	Endosulfan I
6.482	0.000	452509	7.065	-0.002	2553673	5.2102	5.6630	8.3	Dieldrin
6.183	-0.001	342779	6.869	-0.001	2565531	5.1876	5.6514	8.6	4,4'-DDE
6.700	-0.001	387178	7.355	-0.001	1913011	5.2672	5.6595	7.2	Endrin
6.907	0.001	385932	7.544	-0.001	1963811	5.2886	5.5459	4.7	Endosulfan II
6.743	0.003	365453	7.407	0.001	2044731	5.2064	5.6191	7.6	4,4'-DDD
7.674	0.000	340604	8.086	-0.001	1682393	5.2861	5.5807	5.4	Endosulfan sulfate
7.000	0.002	353629	7.694	0.000	1737896	5.1115	5.3901	5.3	4,4'-DDT
7.425	0.001	903724	8.277	-0.005	3624930	27.6004	30.2095	9.0	Methoxychlor
7.930	0.000	429848	8.577	-0.001	1639454	5.3725	5.4414	1.3	Endrin ketone
7.284	0.000	309578	7.841	-0.001	1548519	5.3673	5.6964	5.9	Endrin aldehyde
6.002	0.000	231407	6.604	-0.001	1443449	2.5617	2.7583	7.4	gamma-Chlordane
6.126	0.000	229315	6.742	0.000	1313218	2.6081	2.7374	4.8	alpha-Chlordane
2.311	-0.001	318581	2.468	-0.002	1559023	2.5988	2.6780	3.0	Hexachlorobutadiene
4.141	0.002	241429	4.587	0.000	1545377	2.7123	2.7894	2.8	Hexachlorobenzene
8.927	0.000	4877747	10.289	0.001	16392538	80.0000	80.0000	0.0	Hexabromobiphenyl
3.800	0.001	395058	4.127	-0.001	2617199	5.2155	5.6262	7.6	Tetrachloro-m-xylene
8.777	-0.001	335277	9.725	0.000	1455538	5.4613	5.4930	0.6	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

6/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	13.0	14.1	13.0~	115- 0
Decachlorobiphenyl	13.7	13.7	13.7~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

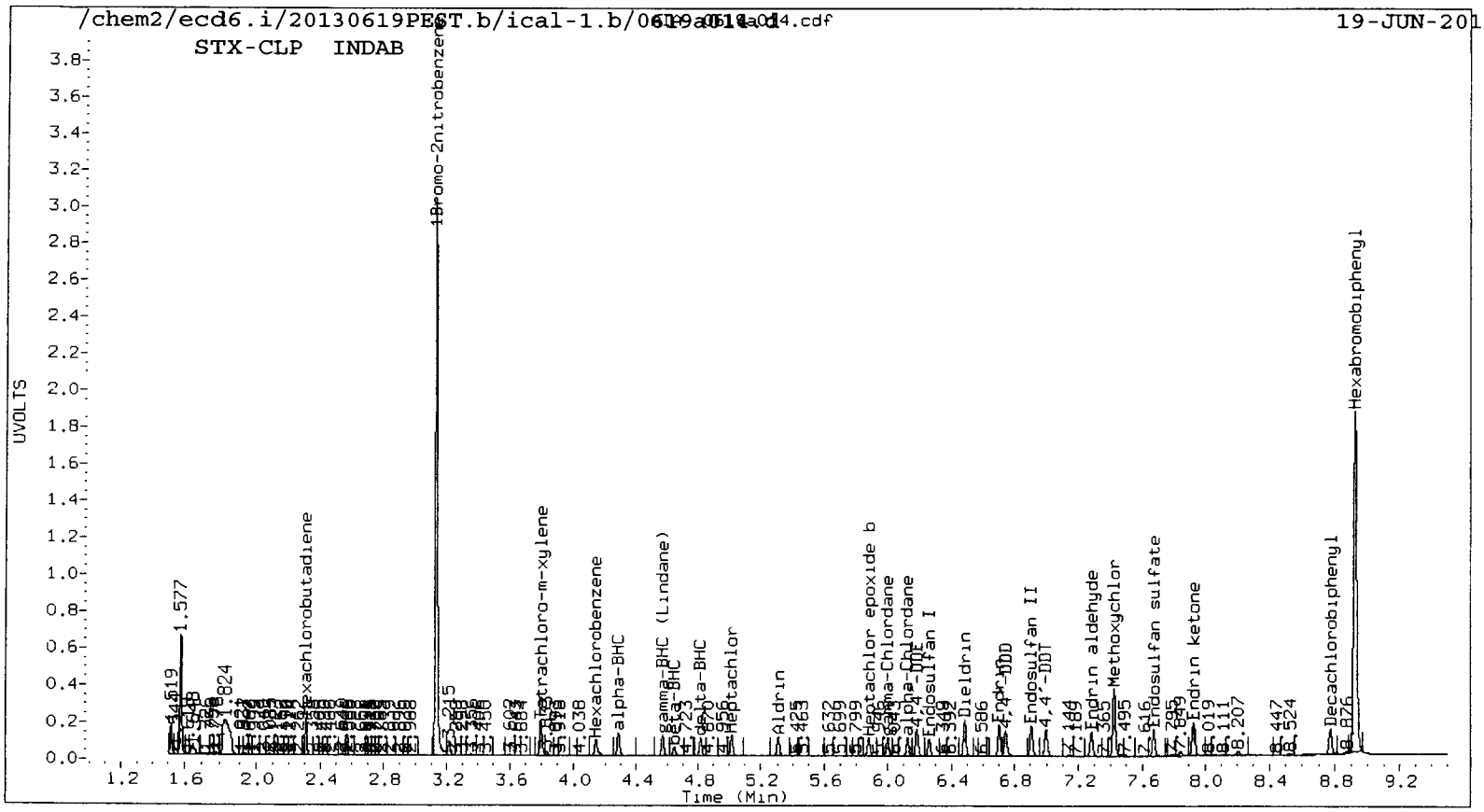
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5578569	-0.2
Hexabromobiphenyl	4870538	4877747	0.1

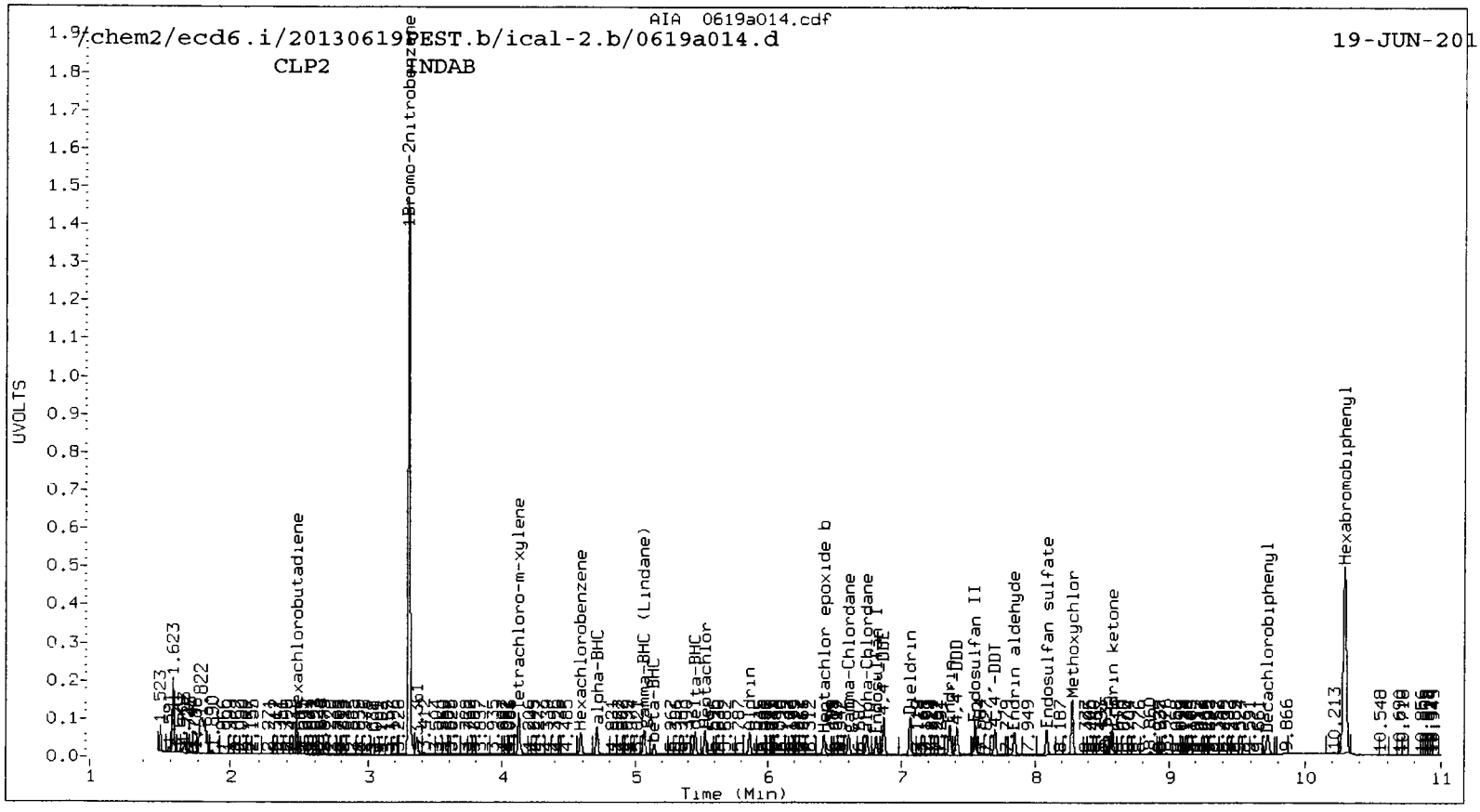
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28124817	-0.7
Hexabromobiphenyl	16454599	16392538	-0.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a014.d
0619a014.cdf
19-JUN-201
STX-CLP INDAB
UVOLTS
Time (Min)
1.577
1-Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0619a014.cdf
/chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a014.d
19-JUN-201
CLP2 INDAB
UVOLTS
Time (Min)
1-Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
Heptachlor
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a015.d ARI ID: INDAC
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a015.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 18:50
Compound Sublist: INDA Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.130	-0.001	5651084	3.299	0.000	28473248	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.286	0.000	533404	4.709	-0.001	3310204	4.7064	4.8661	3.3	alpha-BHC
4.645	0.001	222104	5.139	0.000	1443860	4.8583	4.8994	0.8	beta-BHC
4.815	0.001	456403	5.449	-0.001	2797279	4.6509	4.7706	2.5	delta-BHC
4.568	0.000	489737	5.065	-0.001	2903570	4.7392	4.8272	1.8	gamma-BHC (Lindane)
5.014	-0.001	484132	5.528	-0.001	2965857	4.8821	5.0834	4.0	Heptachlor
5.307	-0.001	460422	5.866	-0.001	2734717	4.7918	4.9511	3.3	Aldrin
5.882	-0.001	434196	6.420	-0.002	2499209	4.8743	4.9646	1.8	Heptachlor epoxide b
6.259	-0.001	406962	6.808	-0.001	2263684	4.8877	5.0042	2.4	Endosulfan I
6.482	-0.001	864291	7.065	-0.002	4719193	9.8238	10.3371	5.1	Dieldrin
6.182	-0.002	639222	6.868	-0.002	4712850	9.5499	10.2546	7.1	4,4'-DDE
6.700	-0.001	739889	7.355	-0.002	3566322	9.9981	10.4737	4.6	Endrin
6.906	0.000	735342	7.544	-0.002	3664235	10.0093	10.2723	2.6	Endosulfan II
6.742	0.002	701003	7.407	0.000	3740522	9.9198	10.2042	2.8	4,4'-DDD
7.674	-0.001	640784	8.087	-0.001	3049684	9.8783	10.0422	1.6	Endosulfan sulfate
6.999	0.001	679878	7.694	0.000	3282418	9.7614	10.1061	3.5	4,4'-DDT
7.424	0.000	1639957	8.277	-0.005	6401010	49.7500	52.9550	6.2	Methoxychlor
7.929	0.000	797409	8.577	-0.002	3061655	9.8997	10.0874	1.9	Endrin ketone
7.283	0.000	579846	7.841	-0.001	2765107	9.9858	10.0974	1.1	Endrin aldehyde
6.002	-0.001	435922	6.603	-0.001	2600459	4.7638	4.9085	3.0	gamma-Chlordane
6.126	-0.001	427644	6.741	-0.002	2403332	4.8013	4.9485	3.0	alpha-Chlordane
2.311	-0.001	609169	2.467	-0.002	2969940	4.9055	5.0392	2.7	Hexachlorobutadiene
4.141	0.001	441722	4.586	0.000	2792079	4.8988	4.9781	1.6	Hexachlorobenzene
8.926	-0.001	4910634	10.289	0.000	16513179	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	753339	4.127	-0.002	4866543	9.8178	10.3336	5.1	Tetrachloro-m-xylene
8.776	-0.001	609208	9.724	-0.001	2676119	9.8569	10.0256	1.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	24.5	25.8	24.5~	115- 0
Decachlorobiphenyl	24.6	25.1	24.6~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

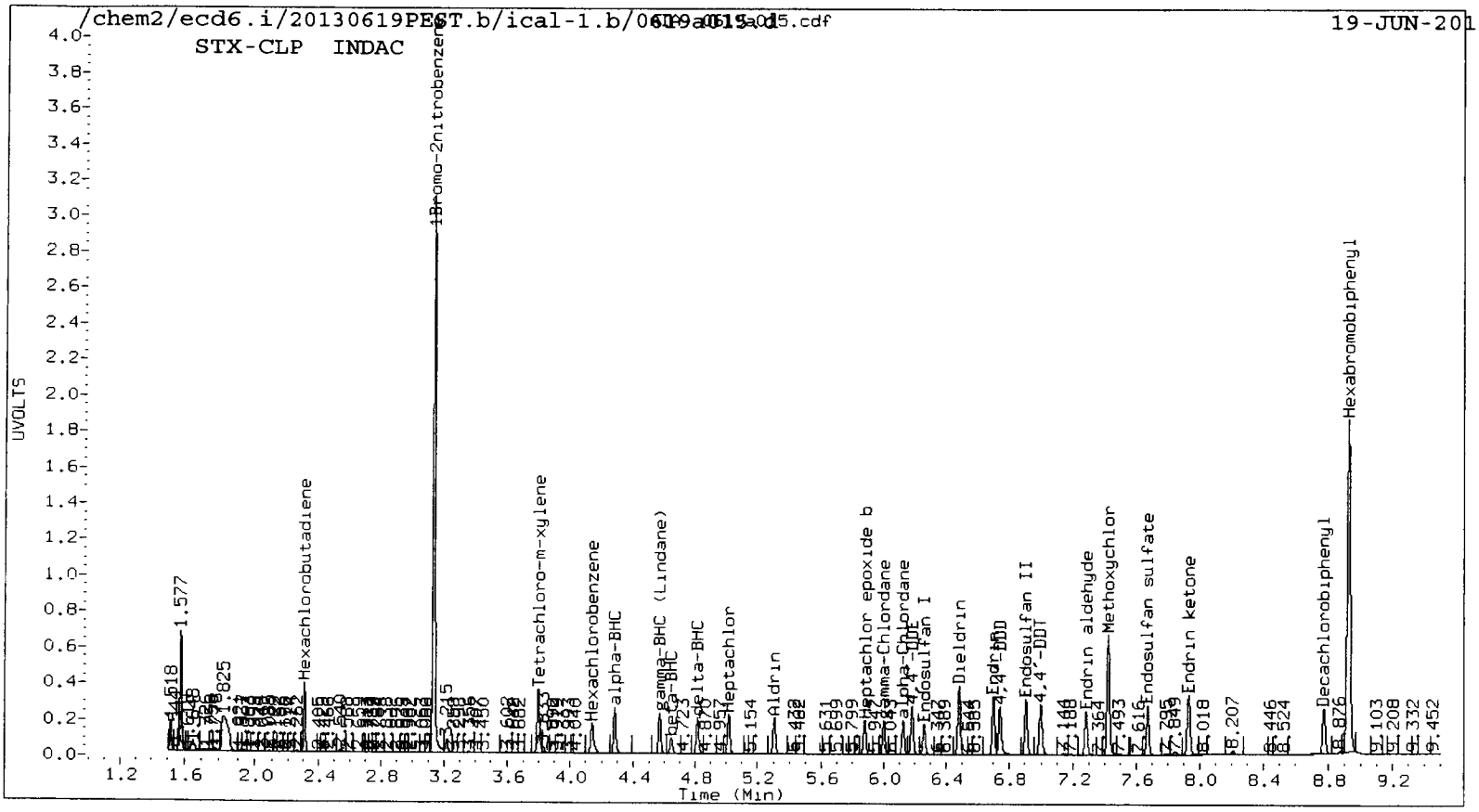
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5651084	1.1
Hexabromobiphenyl	4870538	4910634	0.8

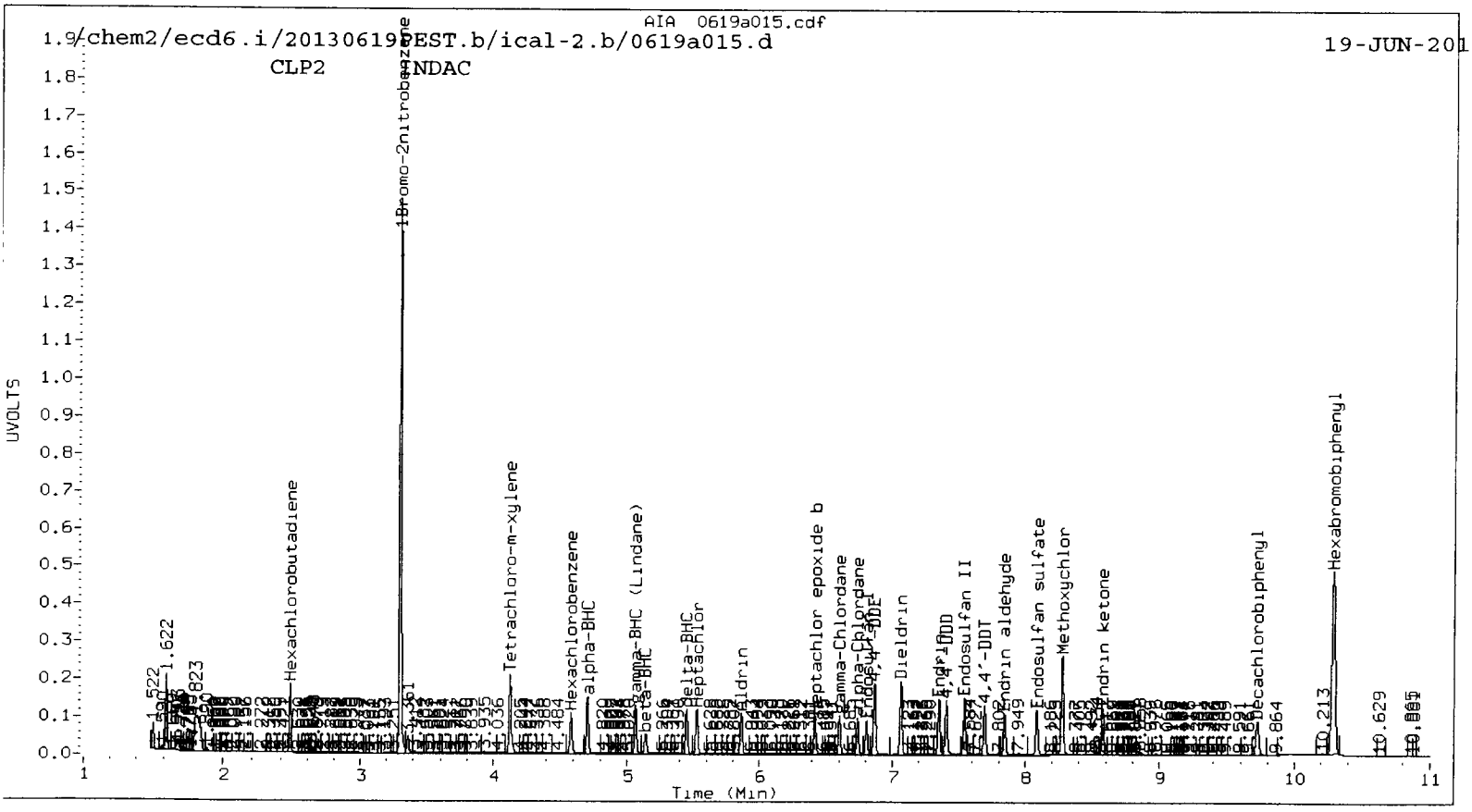
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28473248	0.5
Hexabromobiphenyl	16454599	16513179	0.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a015.d
0619a015.cdf
19-JUN-201
STX-CLP INDAC
UVOLTS
Time (Min)
1.577
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0619a015.cdf
/chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a015.d
19-JUN-201
CLP2 INDAC
UVOLTS
Time (Min)
1.622
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a016.d ARI ID: INDAD
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a016.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Injection Date: 19-JUN-2013 19:08
Compound Sublist: INDA
Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul
Matrix: NONE
Operator: ar
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.130	-0.002	5597417	3.299	0.000	28402073	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.286	-0.001	1166684	4.708	-0.002	7173359	10.3928	10.5715	1.7	alpha-BHC
4.645	0.001	457904	5.138	0.000	2870240	10.1121	9.7639	3.5	beta-BHC
4.814	0.000	1008727	5.449	-0.001	6128970	10.3779	10.4787	1.0	delta-BHC
4.568	0.000	1059355	5.065	-0.002	6285992	10.3498	10.4767	1.2	gamma-BHC (Lindane)
5.014	-0.001	1021731	5.528	-0.001	6128452	10.4021	10.5303	1.2	Heptachlor
5.306	-0.001	993823	5.866	-0.002	5759762	10.4423	10.4540	0.1	Aldrin
5.881	-0.001	915825	6.420	-0.002	5105747	10.3796	10.1679	2.1	Heptachlor epoxide b
6.259	-0.001	853922	6.808	-0.001	4698518	10.3541	10.4128	0.6	Endosulfan I
6.482	-0.001	1830874	7.066	-0.002	9594439	21.0097	21.0688	0.3	Dieldrin
6.182	-0.002	1336155	6.868	-0.002	9661210	20.1534	21.0743	4.5	4,4'-DDE
6.700	-0.001	1543295	7.355	-0.001	7307158	20.8231	21.2013	1.8	Endrin
6.906	0.000	1528510	7.544	-0.001	7652018	20.7745	21.1933	2.0	Endosulfan II
6.741	0.001	1448815	7.407	0.000	7715403	20.4712	20.7942	1.6	4,4'-DDD
7.674	0.000	1339229	8.087	-0.001	6329186	20.6145	20.5902	0.1	Endosulfan sulfate
6.999	0.000	1443267	7.694	-0.001	6811436	20.6908	20.7187	0.1	4,4'-DDT
7.424	0.000	3296480	8.277	-0.005	12592818	99.8523	102.9243	3.0	Methoxychlor
7.929	0.000	1647140	8.577	-0.001	6416942	20.4182	20.8876	2.3	Endrin ketone
7.283	0.000	1206079	7.841	-0.001	5680432	20.7392	20.4935	1.2	Endrin aldehyde
6.001	-0.001	935499	6.603	-0.001	5350283	10.3213	10.1242	1.9	gamma-Chlordane
6.126	-0.001	906578	6.741	-0.001	4973613	10.2760	10.2663	0.1	alpha-Chlordane
2.310	-0.002	1263182	2.467	-0.002	6269724	10.2697	10.6648	3.8	Hexachlorobutadiene
4.140	0.000	904118	4.586	-0.001	5722607	10.1230	10.2285	1.0	Hexachlorobenzene
8.927	0.000	4918023	10.289	0.001	16714534	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	1573454	4.126	-0.002	10034915	20.7024	21.3614	3.1	Tetrachloro-m-xylen
8.777	-0.001	1251738	9.725	0.000	5530544	20.2226	20.4695	1.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower Limits
Tetrachloro-m-xylene	51.8	53.4	51.8~ 115- 0
Decachlorobiphenyl	50.6	51.2	50.6~ 115- 0

WI70:81207

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

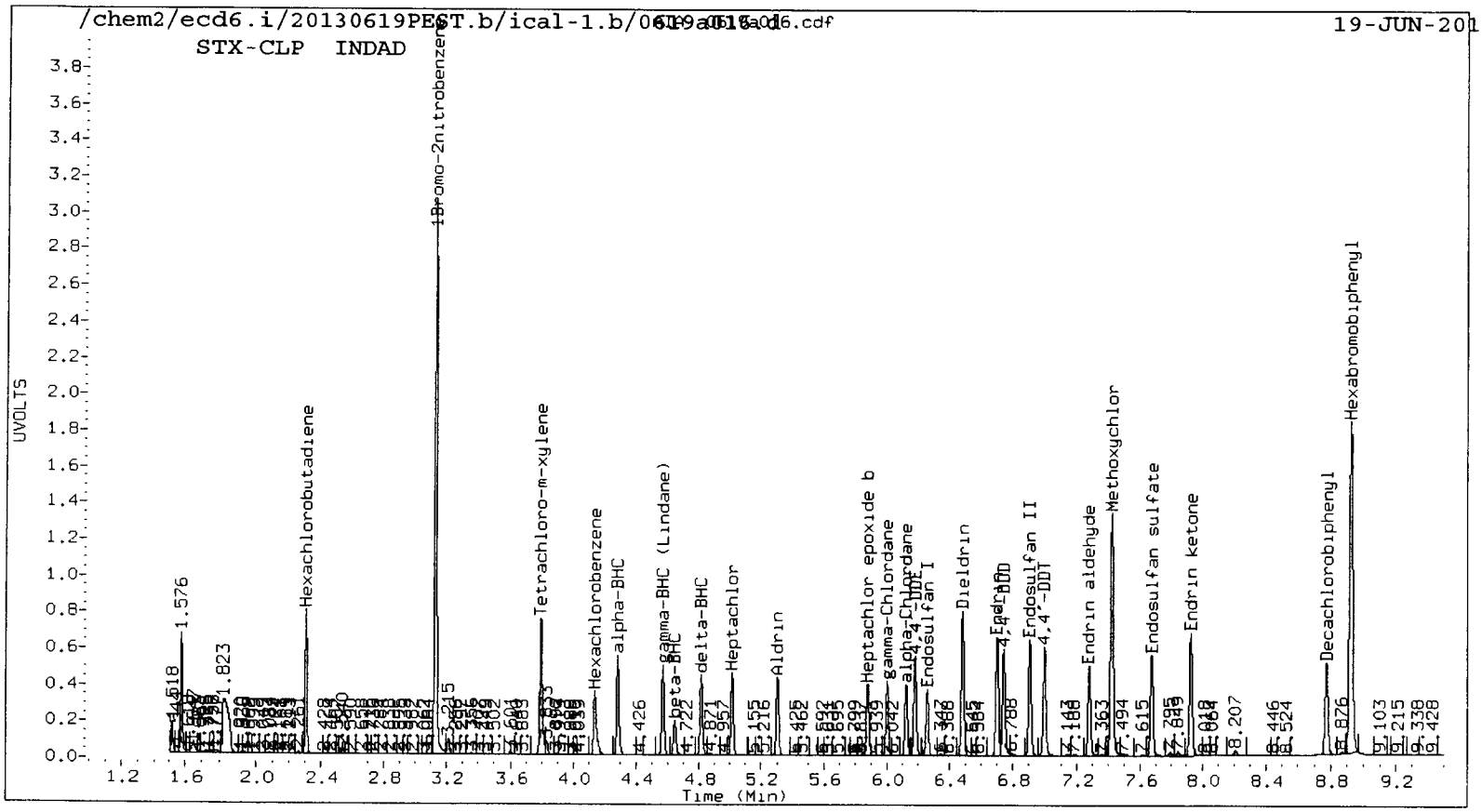
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5597417	0.1
Hexabromobiphenyl	4870538	4918023	1.0

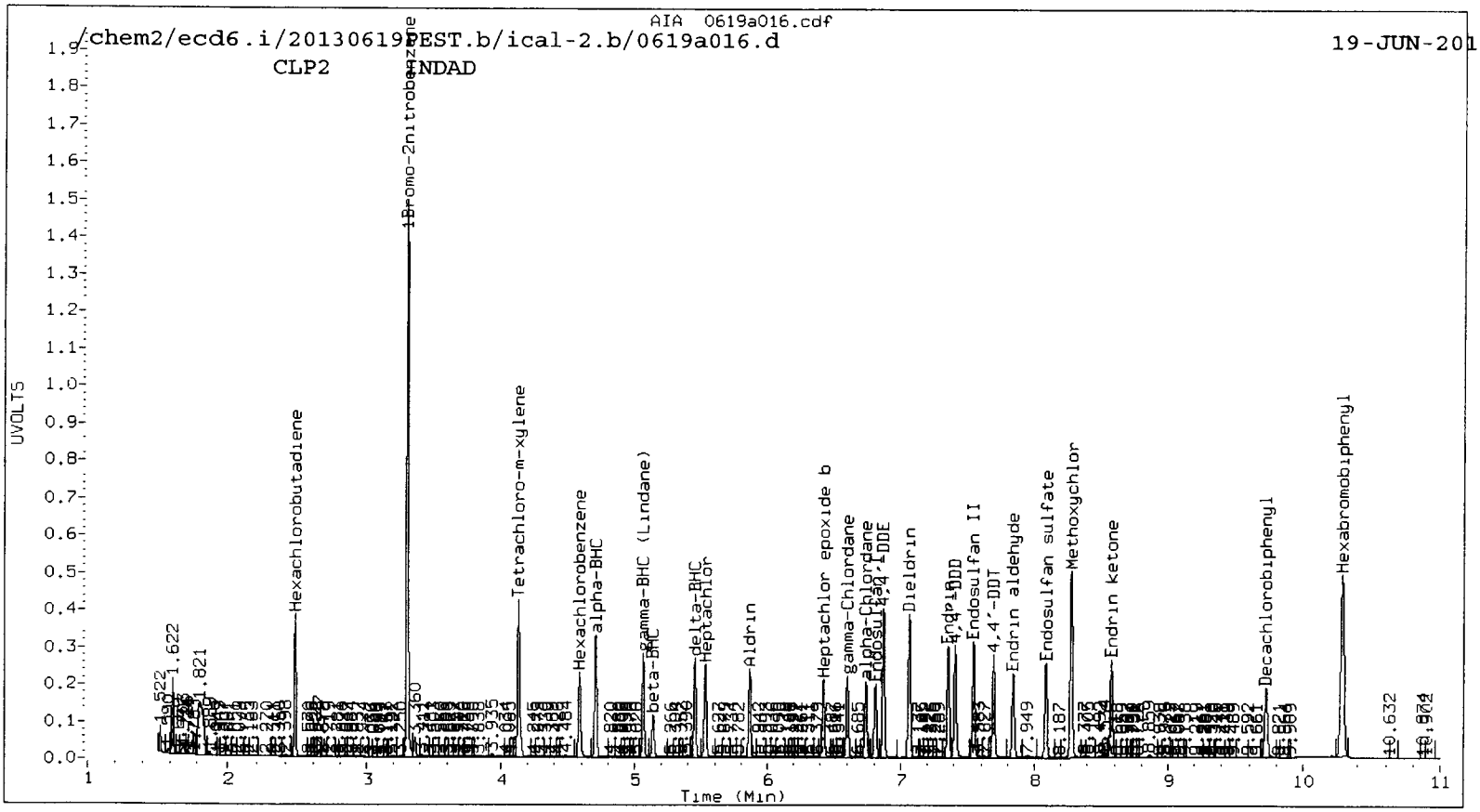
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28402073	0.3
Hexabromobiphenyl	16454599	16714534	1.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a016.d
STX-CLP INDAD
19-JUN-201
UVOLTS
Time (Min)
1.576
1.823
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0619a016.cdf
/chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a016.d
CLP2 INDAD
19-JUN-201
UVOLTS
Time (Min)
1.622
1.821
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
7.949
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
10.632

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a017.d ARI ID: INDAF
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a017.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 19:26
Compound Sublist: INDA Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.130	-0.001	5751246	3.300	0.000	29146657	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.286	0.000	4831430	4.709	-0.001	28062312	41.8872	40.2993	3.9	alpha-BHC
4.644	0.000	1774946	5.138	-0.001	10672180	38.1486	35.3770	7.5	beta-BHC
4.814	0.000	4238006	5.450	0.000	24182583	42.4349	40.2888	5.2	delta-BHC
4.569	0.000	4339740	5.066	-0.001	24487912	41.2647	39.7707	3.7	gamma-BHC (Lindane)
5.015	0.000	3986440	5.529	0.000	21570666	39.4998	36.1173	8.9	Heptachlor
5.307	0.000	3943610	5.867	-0.001	20842596	40.3280	36.8629	9.0	Aldrin
5.882	0.000	3490657	6.421	-0.001	17836183	38.5037	34.6127	10.6	Heptachlor epoxide
6.259	0.000	3229378	6.808	-0.001	16698987	38.1102	36.0627	5.5	Endosulfan I
6.482	0.000	6997753	7.067	0.000	32113961	78.1531	68.7187	12.8	Dieldrin
6.184	-0.001	5369897	6.869	-0.001	33502698	78.8284	71.2136	10.2	4,4'-DDE
6.700	-0.001	5893266	7.356	-0.001	25263950	76.9443	70.6293	8.6	Endrin
6.906	0.000	5801680	7.545	-0.001	27141373	76.3028	72.4309	5.2	Endosulfan II
6.740	0.000	5757700	7.406	0.000	27410859	78.7235	71.1830	10.1	4,4'-DDD
7.674	0.000	5199603	8.087	-0.001	23126577	77.4483	72.4924	6.6	Endosulfan sulfate
6.998	0.000	5779869	7.694	0.000	25567397	80.1811	74.9342	6.8	4,4'-DDT
7.424	0.000	12651909	8.277	-0.004	44409139	370.8413	349.7334	5.9	Methoxychlor
7.929	0.000	6307219	8.578	-0.001	23664020	75.6572	74.2197	1.9	Endrin ketone
7.283	0.000	4545058	7.842	-0.001	20575239	75.6274	71.5236	5.6	Endrin aldehyde
6.002	0.000	3731013	6.604	0.000	19680475	40.0629	36.2896	9.9	gamma-Chlordane
6.126	0.000	3557417	6.742	-0.001	18312770	39.2446	36.8348	6.3	alpha-Chlordane
2.311	-0.001	4900160	2.468	-0.001	23122415	38.7729	38.3265	1.2	Hexachlorobutadiene
4.140	0.000	3420199	4.586	0.000	20695310	37.2703	36.0457	3.3	Hexachlorobenzene
8.927	0.000	5082371	10.289	0.001	17347014	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	6090602	4.127	-0.002	34671082	77.9926	71.9193	8.1	Tetrachloro-m-xylen
8.777	-0.001	4813124	9.724	-0.001	20809777	75.2444	74.2124	1.4	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13
06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	195.0	179.8	179.8~	115- 0
Decachlorobiphenyl	188.1	185.5	185.5~	115- 0

WU78:01210

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

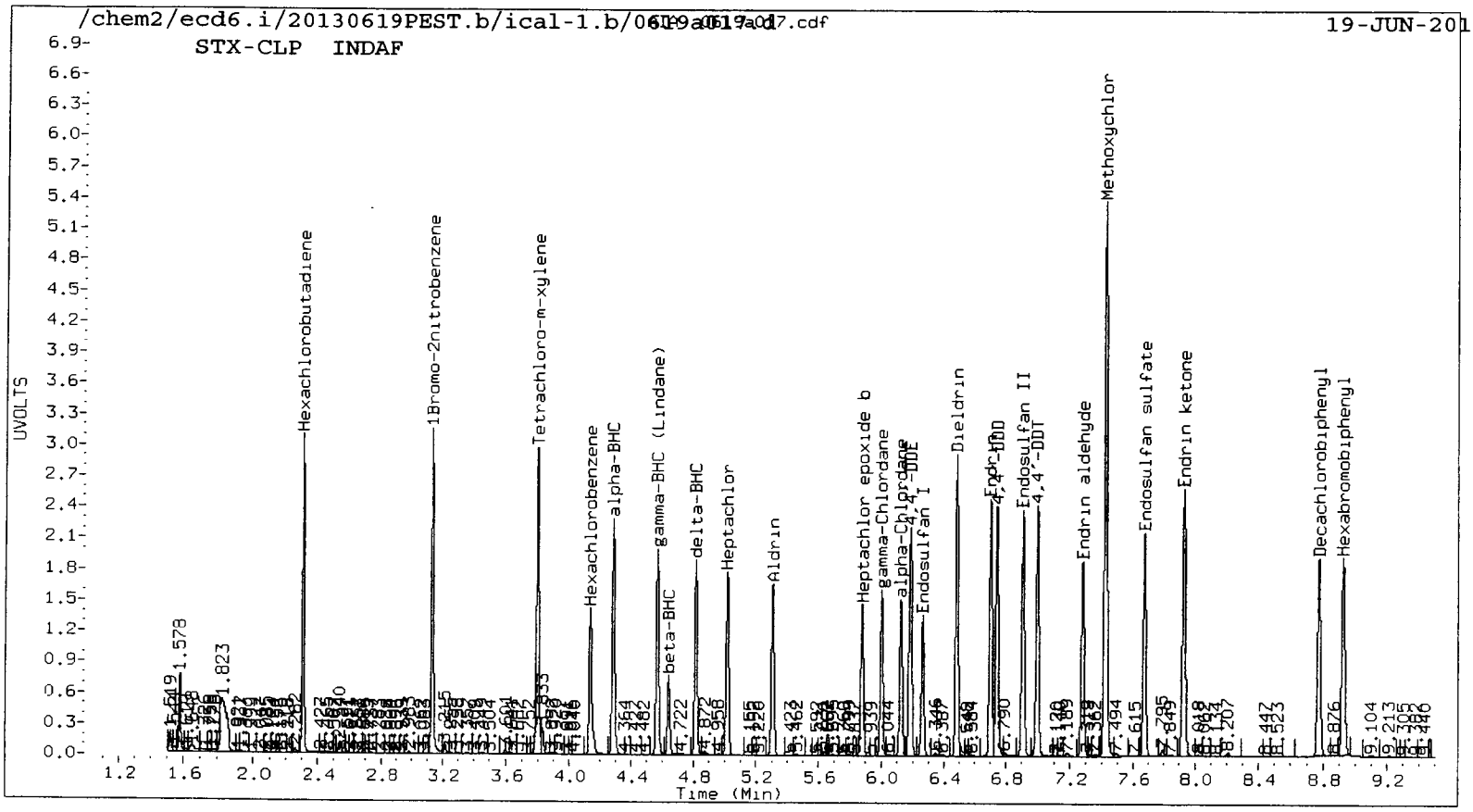
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5751246	2.9
Hexabromobiphenyl	4870538	5082371	4.3

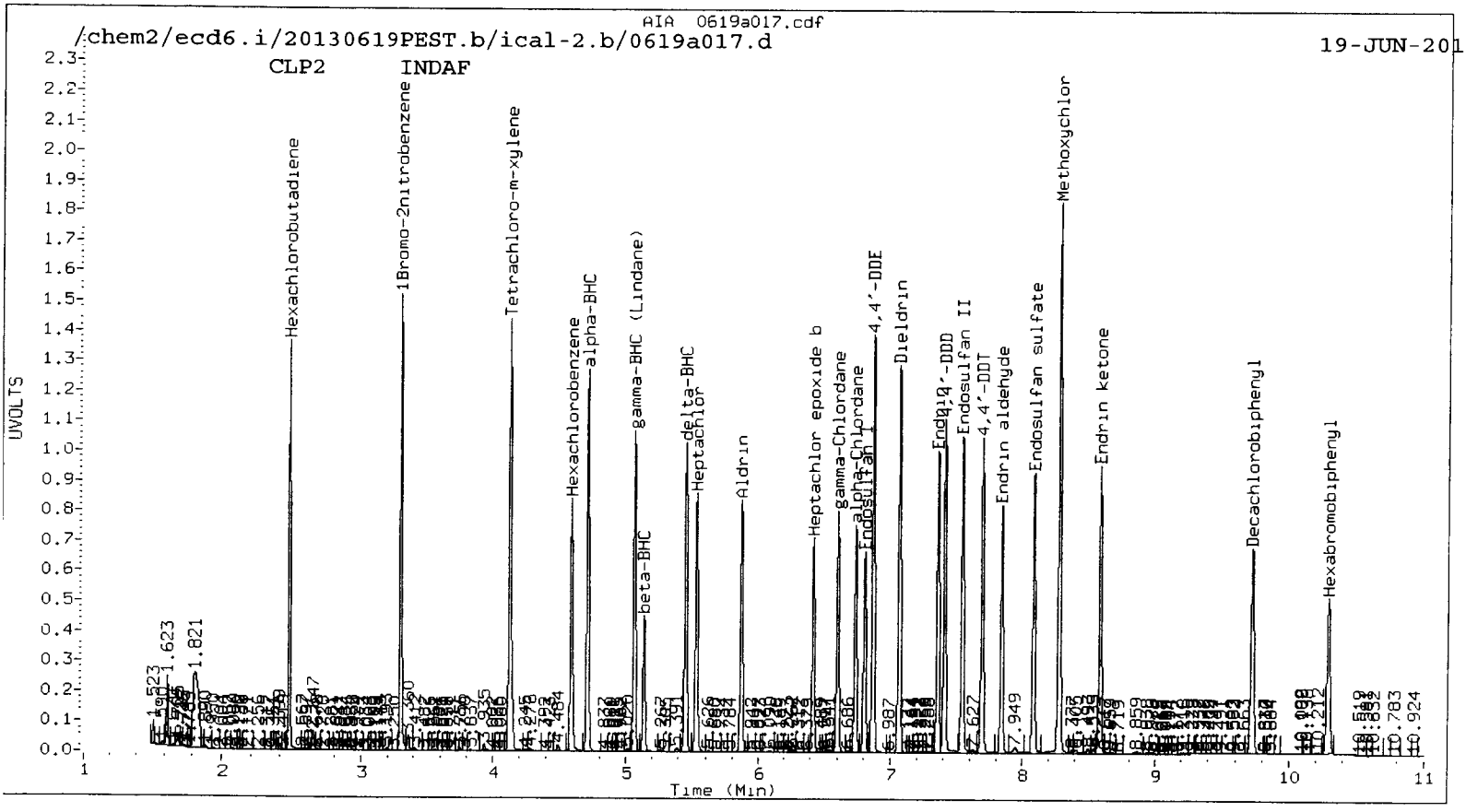
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	29146657	2.9
Hexabromobiphenyl	16454599	17347014	5.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a017.d
STX-CLP INDAF
19-JUN-201
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0619a017.cdf
/chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a017.d
CLP2 INDAF
19-JUN-201
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a018.d ARI ID: INDAG
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a018.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Injection Date: 19-JUN-2013 19:44
Compound Sublist: INDA
Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul
Matrix: NONE
Operator: ar
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.131	-0.001	5601251	3.300	0.001	28311756	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.286	0.000	9535674	4.710	0.000	52831349	84.8857	78.1067	8.3	alpha-BHC
4.644	0.000	3446963	5.138	0.000	19944043	76.0689	68.0618	11.1	beta-BHC
4.813	0.000	8407388	5.450	0.000	47133896	86.4369	80.8420	6.7	delta-BHC
4.569	0.000	8519760	5.066	0.000	47580501	83.1801	79.5541	4.5	gamma-BHC (Lindane)
5.015	0.000	7611890	5.529	0.000	38136107	77.4425	65.7370	16.4	Heptachlor
5.307	0.000	7589069	5.867	0.000	37658349	79.6852	68.5679	15.0	Aldrin
5.883	0.000	6621317	6.422	0.000	31564056	74.9924	63.0591	17.3	Heptachlor epoxide
6.260	0.000	6139988	6.809	0.000	29659615	74.3988	65.9410	12.1	Endosulfan I
6.483	0.000	13374054	7.067	0.000	56261276	153.3655	123.9403	21.2	Dieldrin
6.184	0.000	10777552	6.870	0.000	58288946	162.4477	127.5532	24.1	4,4'-DDE
6.701	0.000	11315372	7.356	0.000	45268029	149.1881	128.5208	14.9	Endrin
6.906	0.000	11144702	7.545	0.000	49724483	148.0130	134.7600	9.4	Endosulfan II
6.740	0.000	11132759	7.407	0.000	50700725	153.7104	133.7107	13.9	4,4'-DDD
7.674	0.000	10090121	8.087	0.000	42871891	151.7690	136.4747	10.6	Endosulfan sulfat
6.998	0.000	11290652	7.694	0.000	49153383	158.1677	146.3004	7.8	4,4'-DDT
7.424	0.000	25410659	8.282	0.000	68710958	752.1298	549.5270	31.1	Methoxychlor
7.930	0.000	12242959	8.578	0.000	45120219	148.3008	143.7144	3.1	Endrin ketone
7.284	0.000	8770972	7.843	0.000	37980609	147.3779	134.0802	9.4	Endrin aldehyde
6.002	0.000	7244242	6.604	0.000	36309167	79.8704	68.9264	14.7	gamma-Chlordane
6.126	0.000	6882735	6.742	0.000	33830196	77.9620	70.0537	10.7	alpha-Chlordane
2.312	0.000	9533617	2.469	0.000	41324182	77.4557	70.5167	9.4	Hexachlorobutadiene
4.140	0.000	6575895	4.586	0.000	38026898	73.5771	68.1858	7.6	Hexachlorobenzene
8.927	0.000	5032937	10.289	0.001	17081518	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	11650961	4.128	0.000	59297060	153.1904	126.6289	19.0	Tetrachloro-m-xyl
8.777	0.000	9459476	9.725	0.000	39937738	149.3341	144.6407	3.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	383.0	316.6	316.6~	115- 0
Decachlorobiphenyl	373.3	361.6	361.6~	115- 0

WU78:01213

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

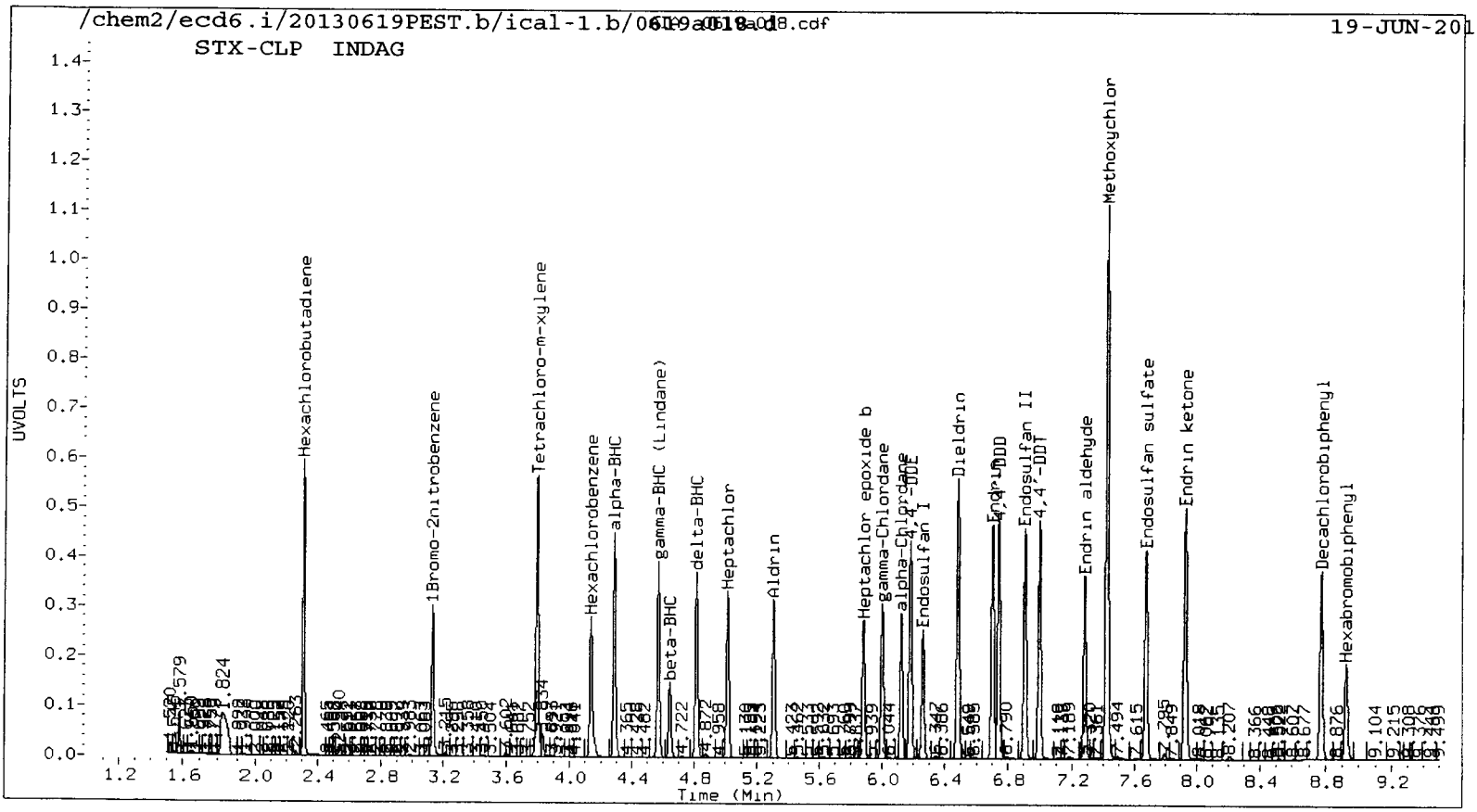
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5601251	0.2
Hexabromobiphenyl	4870538	5032937	3.3

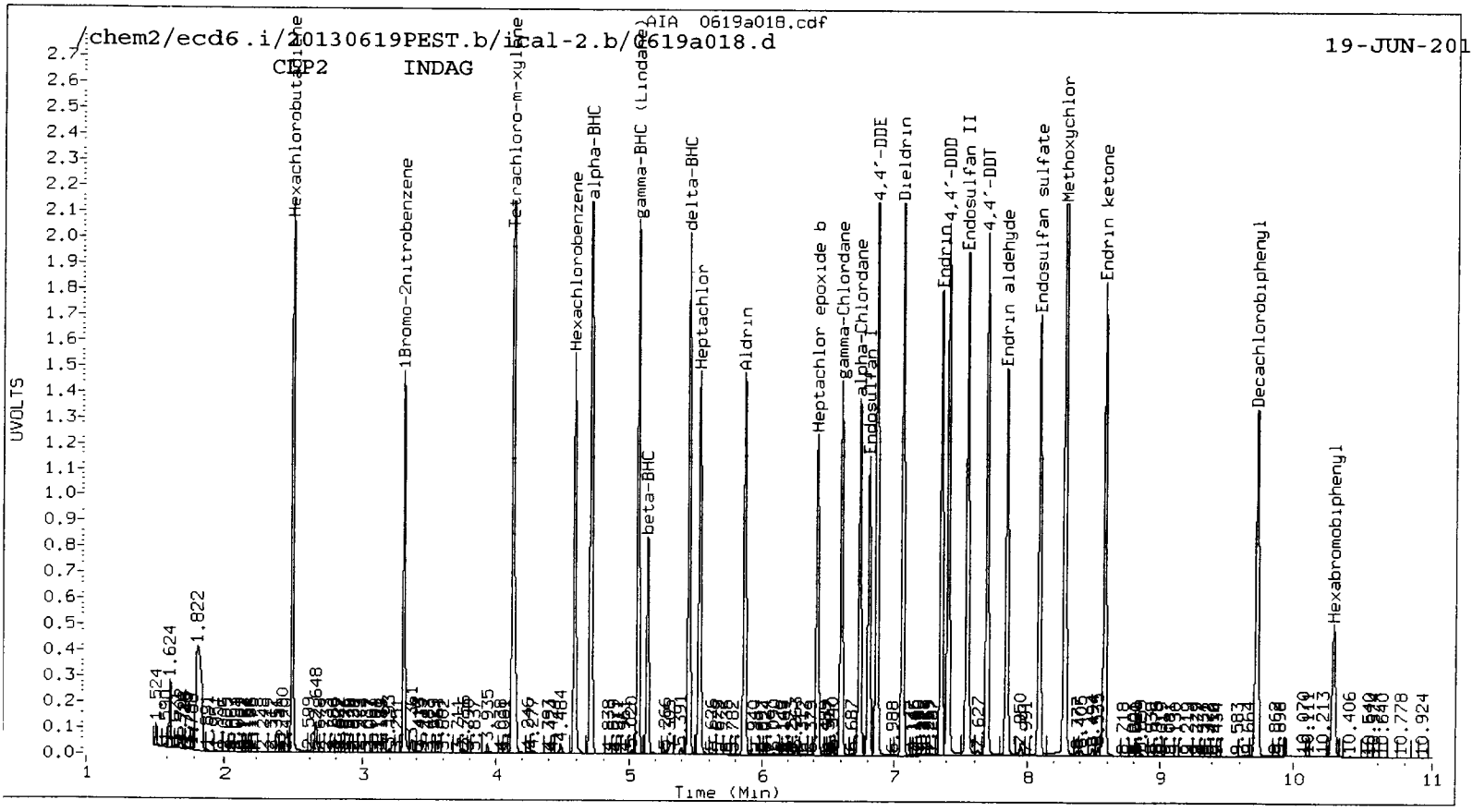
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28311756	0.0
Hexabromobiphenyl	16454599	17081518	3.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a018.d
STX-CLP INDAG
19-JUN-201
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


/chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a018.d
CLP2 INDAG
19-JUN-201
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a019.d ARI ID: INDA ICV
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a019.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Injection Date: 19-JUN-2013 20:01
Compound Sublist: INDA
Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul
Matrix: NONE
Operator: ar
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.130	-0.001	5662321	3.300	0.000	28347211	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.286	0.000	4855154	4.710	0.000	27588708	42.7540	40.7366	4.8	alpha-BHC
4.645	0.001	1822898	5.139	0.000	10652715	39.7945	36.3084	9.2	beta-BHC
4.814	0.001	4184696	5.450	0.000	23785579	42.5591	40.7450	4.4	delta-BHC
4.569	0.000	4344523	5.066	0.000	24367918	41.9589	40.6919	3.1	gamma-BHC (Lindane)
5.015	0.000	3968184	5.530	0.000	21193899	39.9364	36.4872	9.0	Heptachlor
5.307	0.000	4065594	5.867	-0.001	21069990	42.2283	38.3160	9.7	Aldrin
5.882	0.000	3520931	6.422	0.000	17669895	39.4476	35.2570	11.2	Heptachlor epoxide
6.260	0.000	3339914	6.809	0.000	16390864	40.0336	36.3956	9.5	Endosulfan I
6.482	0.000	3635982	7.067	-0.001	17715883	41.2455	38.9783	5.7	Dieldrin
6.186	0.001	3446918	6.870	0.000	17845149	51.3943	39.0016	27.4	4,4'-DDE
6.701	0.000	3061363	7.356	0.000	13742736	40.4364	38.9338	3.8	Endrin
6.907	0.001	2960864	7.545	0.000	14554305	39.3951	39.3599	0.1	Endosulfan II
6.742	0.002	2998582	7.408	0.001	14669806	41.4771	38.6054	7.2	4,4'-DDD
7.675	0.000	2678851	8.087	0.000	12153450	40.3671	38.6057	4.5	Endosulfan sulfate
6.999	0.001	2896942	7.695	0.000	13011033	40.6566	38.6434	5.1	4,4'-DDT
7.425	0.001	1399039	8.277	-0.005	5503814	41.4857	43.9237	5.7	Methoxychlor
7.930	0.000	3140634	8.578	0.000	12066382	38.1124	38.3511	0.6	Endrin ketone
7.284	0.000	2303678	7.842	-0.001	10586002	38.7792	37.2912	3.9	Endrin aldehyde
6.002	0.000	3758964	6.605	0.000	19267024	40.9970	36.5292	11.5	gamma-Chlordane
6.126	0.000	3606097	6.742	0.000	18191702	40.4064	37.6232	7.1	alpha-Chlordane
2.294	-0.017	4300	2.454	-0.016	8293	0.0346	0.0141	83.9*	Hexachlorobutadiene
4.139	-0.001	47437	4.597	0.011	15351	0.5250	0.0275	180.1*	Hexachlorobenzene
8.927	0.000	5023768	10.289	0.000	17118059	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	3012987	4.127	-0.002	18593722	39.1884	39.6573	1.2	Tetrachloro-m-xylen
8.777	0.000	2476257	9.725	0.000	10738704	39.1633	38.8089	0.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	98.0	99.1	98.0~	115- 0
Decachlorobiphenyl	97.9	97.0	97.0~	115- 0

~ Indicates recovery outside QC Limits

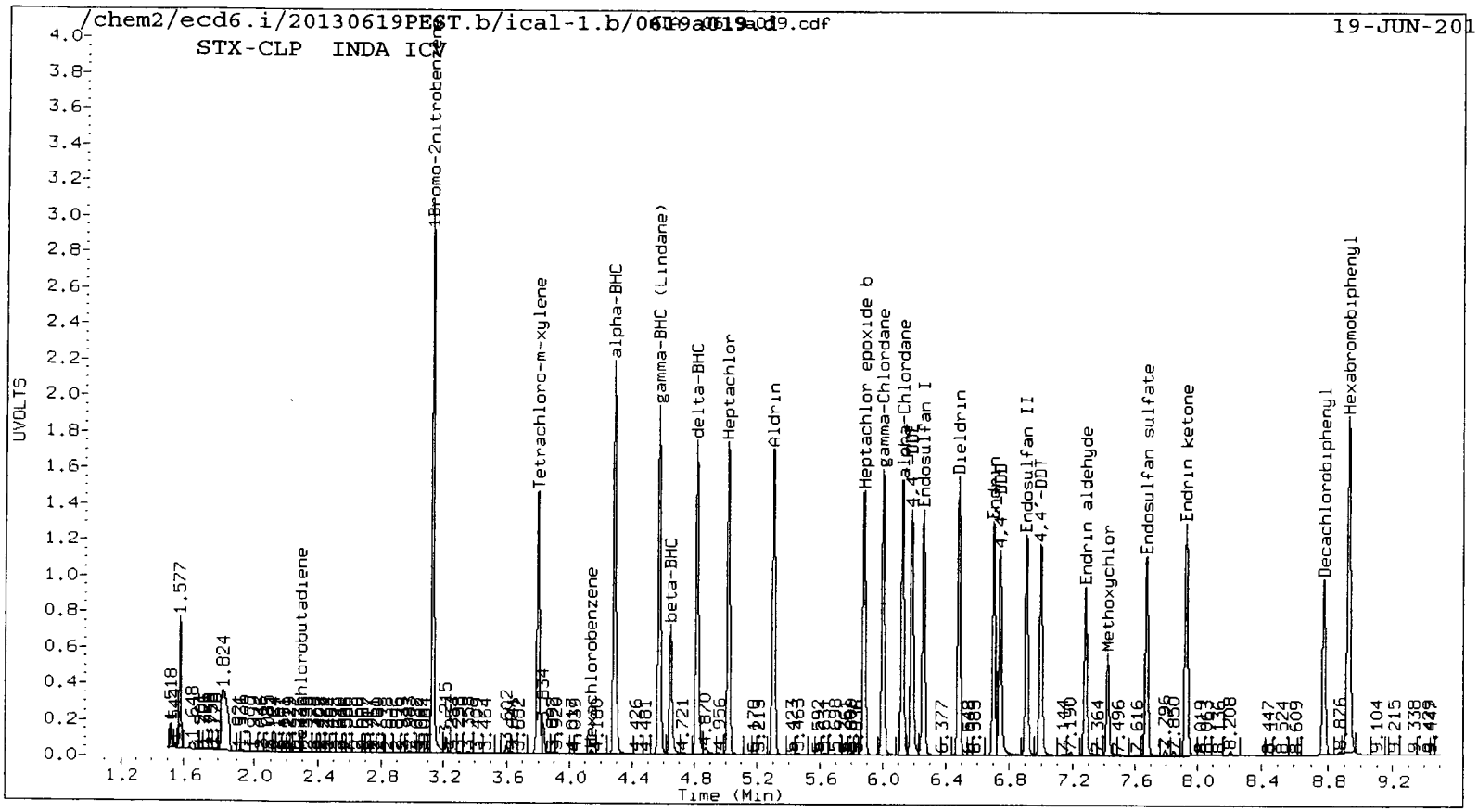
INTERNAL STANDARD SUMMARY

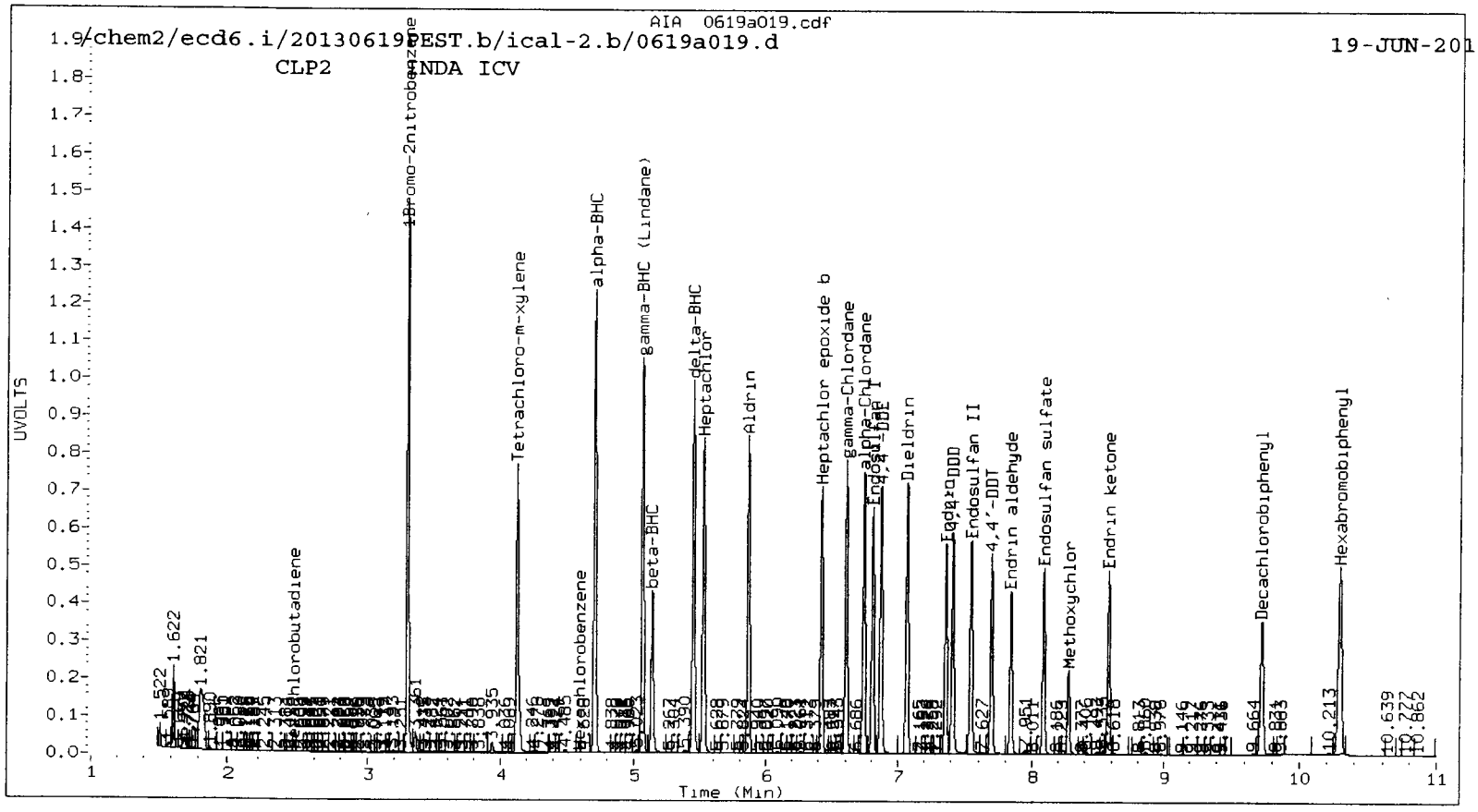
Standard Cpnd	Column 1 Standard Area*	Column 1 Sample Area	Column 1 %D
Bromo-Nitrobenzene	5590801	5662321	1.3
Hexabromobiphenyl	4870538	5023768	3.1

Standard Cpnd	Column 2 Standard Area*	Column 2 Sample Area	Column 2 %D
Bromo-Nitrobenzene	28320361	28347211	0.1
Hexabromobiphenyl	16454599	17118059	4.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a019.d
AIA 0619a019.cdf
19-JUN-201
STX-CLP INDA ICV
UVOLTS
Time (Min)
1.577
1.824
1,2,4-Trichlorobutadiene
1-Bromo-2-nitrobenzene
Tetrachloro-m-xylene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


/chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a019.d
AIA 0619a019.cdf
19-JUN-201
CLP2 INDA ICV
UVOLTS
Time (Min)
1.622
1.821
1,2,4-Trichlorobutadiene
1-Bromo-2-nitrobenzene
Tetrachloro-m-xylene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a020.d ARI ID: HCB/HCBD ICV
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a020.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 20:19
Compound Sublist: wpest Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.131	-0.001	5825856	3.300	0.000	29136306	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.270	-0.016	15741	----			0.1347	0.0000	---	alpha-BHC
4.638	-0.006	6185	5.153	0.015	34366	0.1312	0.1140	14.1	beta-BHC
4.807	-0.007	7827	5.460	0.010	55686	0.0774	0.0928	18.1	delta-BHC
4.568	-0.001	6365	5.039	-0.027	48784	0.0597	0.0793	28.1	gamma-BHC (Lindane)
5.011	-0.004	3542	5.532	0.003	24053	0.0346	0.0403	15.1	Heptachlor
5.321	0.014	5699	5.852	-0.016	197176	0.0575	0.3489	143.4*	Aldrin
5.889	0.006	6810	6.421	-0.001	28673	0.0742	0.0557	28.5	Heptachlor epoxide b
6.261	0.001	2191	6.806	-0.004	50626	0.0255	0.1094	124.3*	Endosulfan I
6.470	-0.013	6721	7.043	-0.024	10216	0.0741	0.0219	108.9*	Dieldrin
6.184	-0.001	7689	6.868	-0.002	52897	0.1114	0.1125	0.9	4,4'-DDE
6.664	-0.038	4458	7.355	-0.001	17421	0.0557	0.0477	15.5	Endrin
6.907	0.001	3007	7.523	-0.022	46924	0.0379	0.1227	105.6*	Endosulfan II
6.736	-0.004	11288	7.408	0.001	34975	0.1478	0.0890	49.7*	4,4'-DDD
7.676	0.001	2737	8.087	0.000	30094	0.0390	0.0924	81.2*	Endosulfan sulfate
6.996	-0.002	4564	7.702	0.008	61753	0.0606	0.1773	98.1*	4,4'-DDT
7.429	0.004	2297	8.277	-0.004	19064	0.0645	0.1471	78.1*	Methoxychlor
7.924	-0.005	12452	8.574	-0.004	24754	0.1430	0.0761	61.1*	Endrin ketone
7.285	0.001	3329	7.841	-0.001	51003	0.0530	0.1737	106.4*	Endrin aldehyde
5.977	-0.025	27144	6.612	0.007	182548	0.2877	0.3367	15.7	gamma-Chlordane
6.121	-0.005	10392	6.743	0.001	26109	0.1132	0.0525	73.2*	alpha-Chlordane
2.311	-0.001	5901418	2.469	-0.001	26560599	46.0975	44.0411	4.6	Hexachlorobutadiene
4.139	-0.001	3444301	4.585	-0.001	18722188	37.0522	32.6206	12.7	Hexachlorobenzene
5.786	-0.001	2264	6.329	-0.003	59974	0.0317	0.1579	133.2*	Oxychlordane
----			6.572	-0.008	30438	0.0000	0.1110	---	2,4-DDE
----			6.685	-0.005	39610	0.0000	0.0906	---	trans-Nonachlor
6.347	-0.001	4676	7.062	-0.003	27477	0.0950	0.1154	19.4	2,4-DDD
6.587	0.000	5399	7.371	0.018	18445	0.0949	0.0711	28.6	2,4-DDT
----			----			0.0000	0.0000	---	cis-Nonachlor
7.597	-0.004	2451	8.534	-0.030	243505	0.0415	1.1056	185.5*	Mirex
8.926	-0.001	5307615	10.289	0.000	17708234	80.0000	80.0000	0.0	Hexabromobiphenyl
1.759	0.001	2077	1.727	0.001	136283	0.0000	0.0000	---	Hexachloroethane
6.553	-0.028	5051	7.331	-0.006	21984	0.0000	0.0000	---	Kepone
3.799	0.000	3282589	4.126	-0.002	18514400	41.4965	38.4186	7.7	Tetrachloro-m-xylen
8.776	-0.001	2787558	9.725	0.000	11737142	41.7290	41.0035	1.8	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13

WJ70:01219

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	103.7	96.0	96.0~	130- 0
Decachlorobiphenyl	104.3	102.5	102.5~	130- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

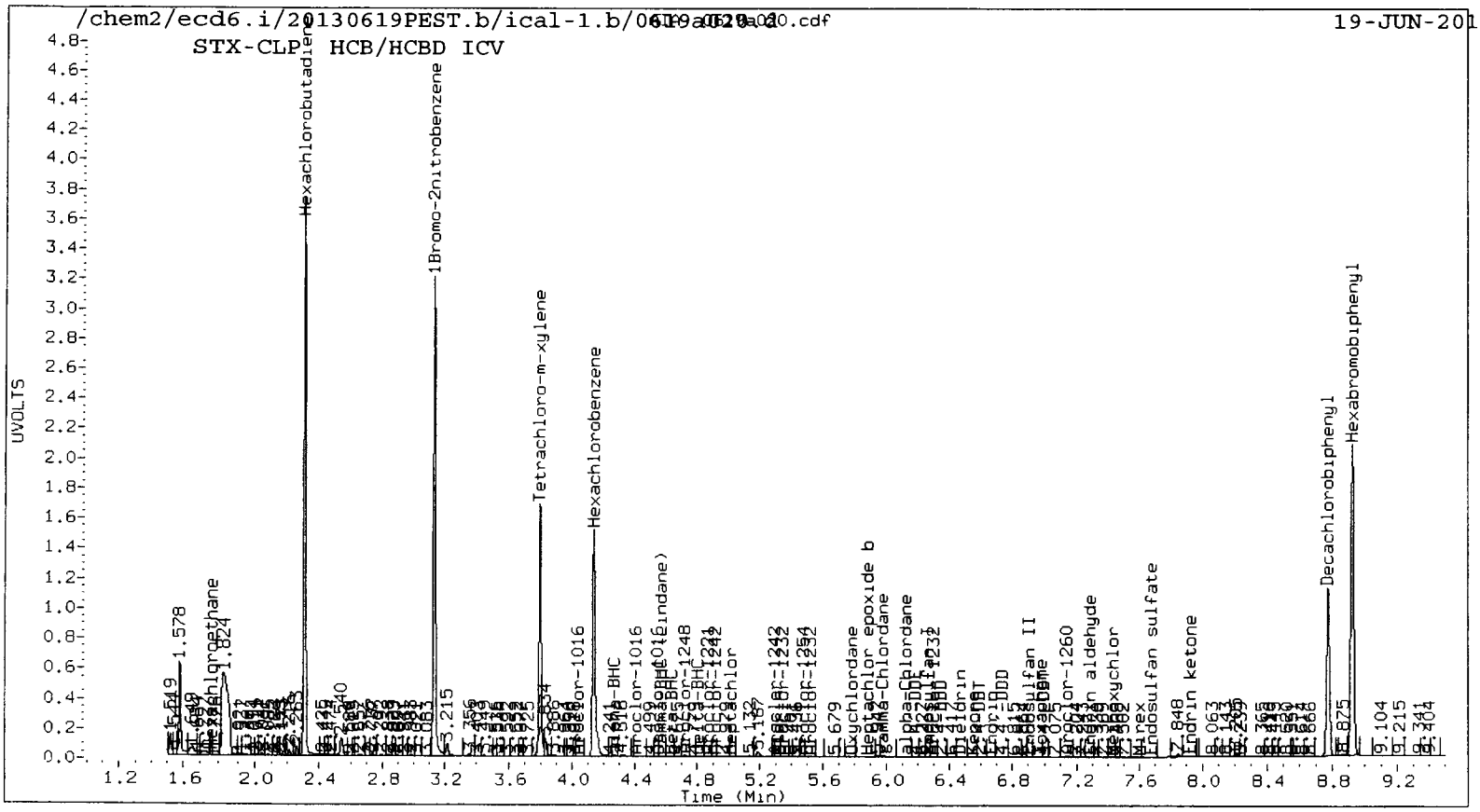
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5825856	4.2
Hexabromobiphenyl	4870538	5307615	9.0

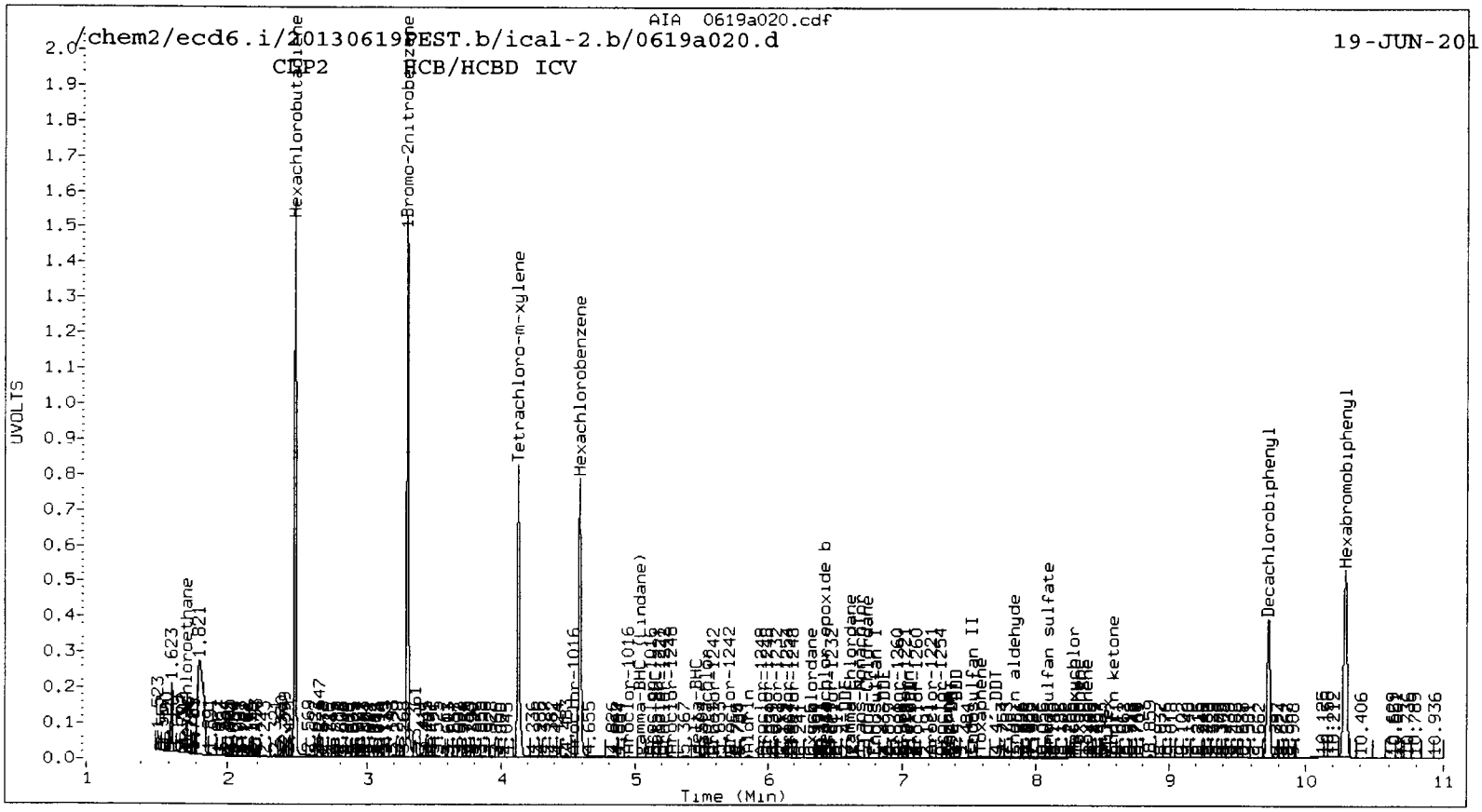
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	29136306	2.9
Hexabromobiphenyl	16454599	17708234	7.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.977	0.019	5656	1.7	1	7.285	-0.006	21029	1.7
Toxaphene	2	6.996	-0.013	4564	1.9	2	7.584	-0.031	161753	8.8
Toxaphene	3	7.285	0.018	3329	0.9	3	7.841	-0.005	51003	2.5
Toxaphene	4	7.597	0.004	2451	0.6	4	8.313	-0.001	27940	1.9
Toxaphene	5	---			0.000	5	8.374	0.022	31267	1.7
Toxaphene	6	7.924	0.011	12452	5.6	NS	---			----
Total STX-CLPAve (5 peaks): 2.135						Total CLP2Ave (5 peaks): 3.345				RPD = 44*
Corrected Ave (4 peaks): 1.270						Corrected Ave (4 peaks): 1.968				RPD = 43*


/chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a020.d
AIA 0619a020.cdf
19-JUN-201
STX-CLP1 HCB/HCBD ICV
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
Decachlorobiphenyl
Hexabromobiphenyl


/chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a020.d
AIA 0619a020.cdf
19-JUN-201
CCP2 HCB/HCBD ICV
UVOLTS
Time (Min)
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a030.d ARI ID: TOXAPHENE
Data file 2: /chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a030.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 23:17
Compound Sublist: TOXAPH Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.132	0.000	6058478	3.301	0.001	29930668	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.927	0.000	5799142	10.289	0.000	19105364	80.0000	80.0000	0.0	Hexabromobiphenyl
3.800	0.001	2712292	4.127	-0.001	16671590	32.9707	33.6765	2.1	Tetrachloro-m-xylen
8.777	0.000	2659985	9.724	0.000	11618435	36.4442	37.6206	3.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	82.4	84.2	82.4~	150- 0
Decachlorobiphenyl	91.1	94.1	91.1~	150- 0

~ Indicates recovery outside QC Limits

6/25/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	6058478	8.4
Hexabromobiphenyl	4870538	5799142	19.1

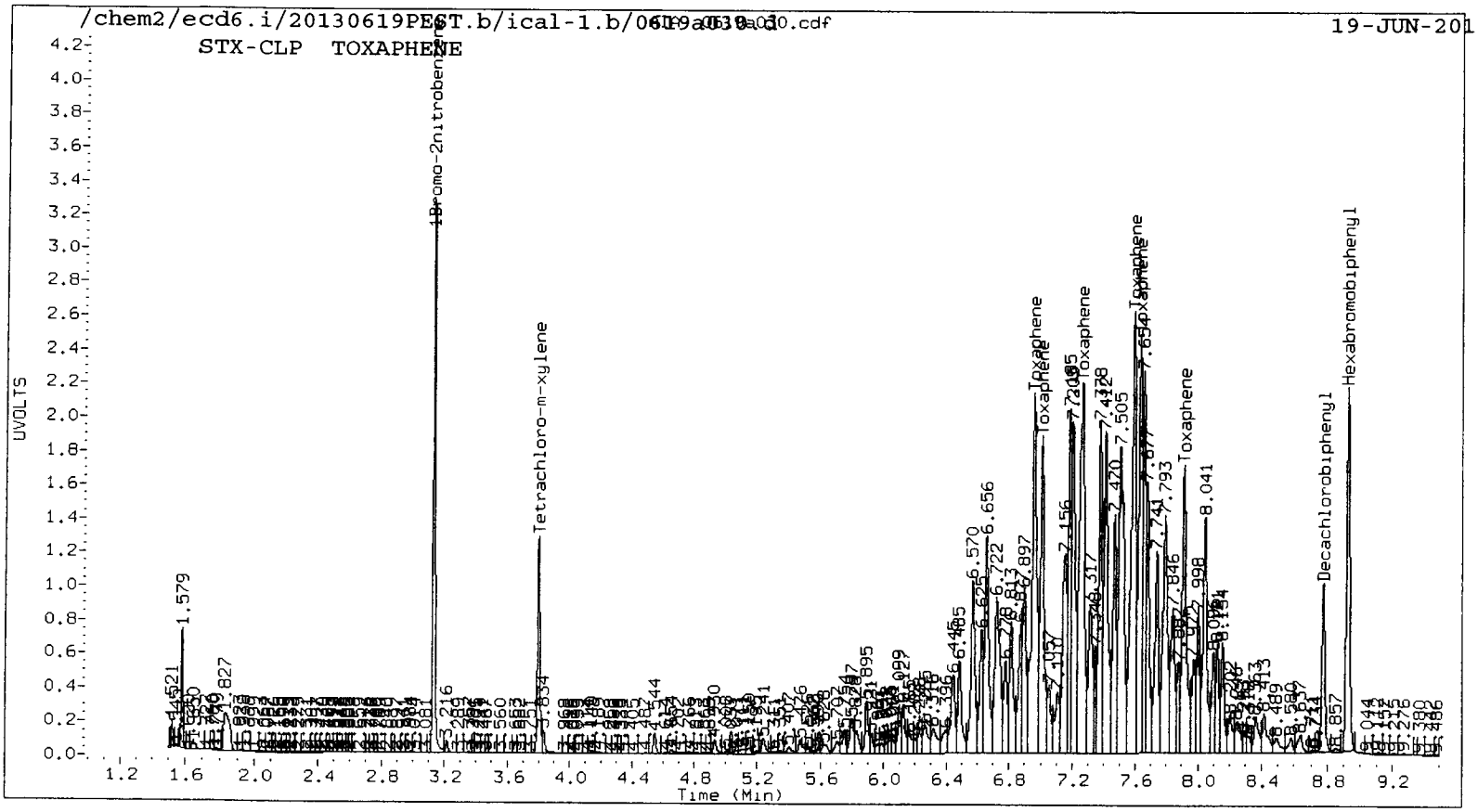
Column 2

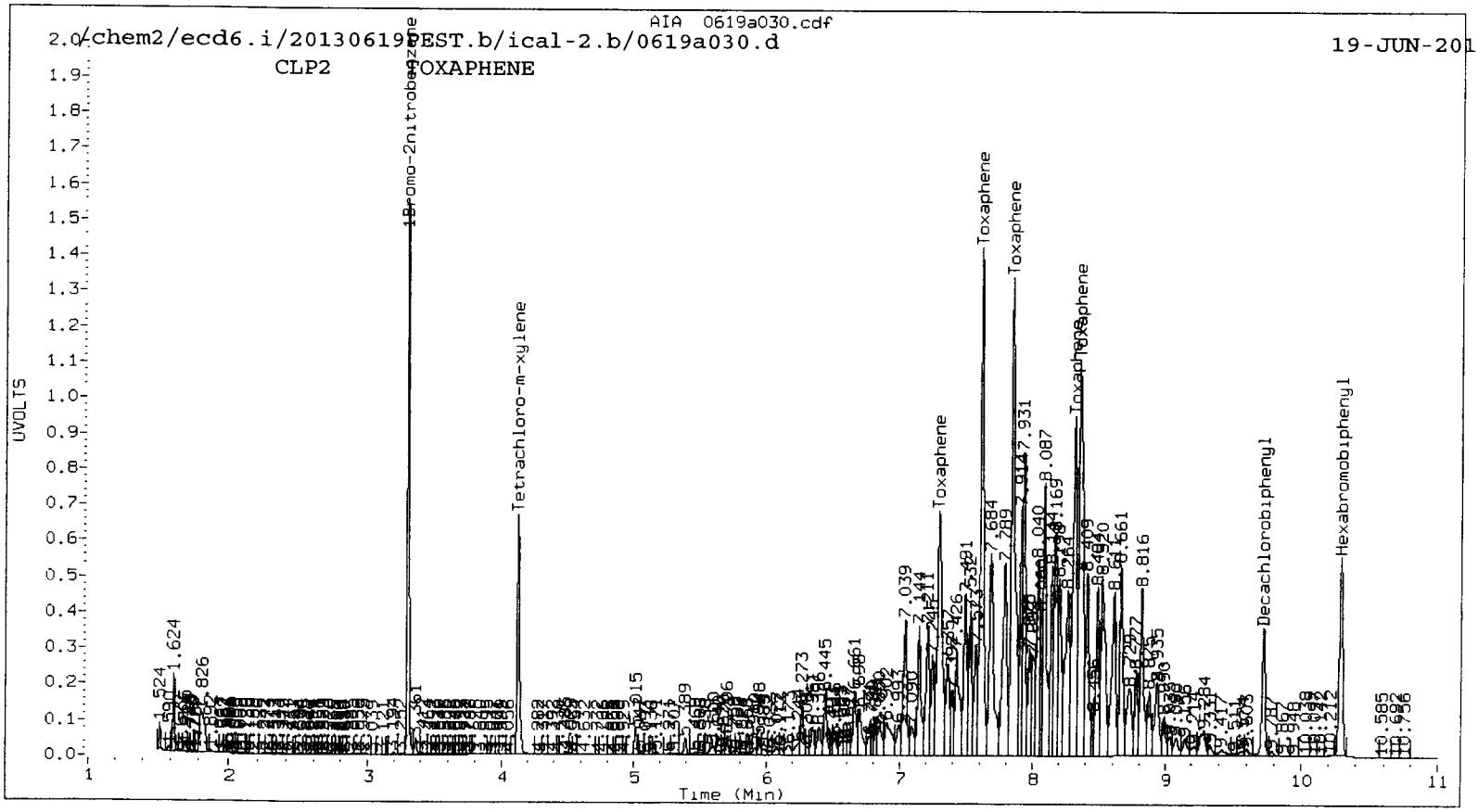
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	29930668	5.7
Hexabromobiphenyl	16454599	19105364	16.1

WU70:01222

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount	
Toxaphene	1	6.958	0.000	9305172	2500.0	1	7.291	0.000	33416871	2500.0	
Toxaphene	2	7.010	0.000	6420857	2500.0	2	7.615	0.000	49303313	2500.0	
Toxaphene	3	7.267	0.000	10593063	2500.0	3	7.846	0.000	54099773	2500.0	
Toxaphene	4	7.593	0.000	10790117	2500.0	4	8.314	0.000	38993888	2500.0	
Toxaphene	5	7.632	0.000	7165051	2500.0	5	8.353	0.000	49587064	2500.0	
Toxaphene	6	7.913	0.000	6082441	2500.0	NS	---			----	
Total STX-CLPAve (6 peaks): 2500.000						Total CLP2Ave (5 peaks): 2500.000				RPD = 0	
Corrected Ave (6 peaks): 2500.000						Corrected Ave (5 peaks): 2500.000				RPD = 0	


/chem2/ecd6.i/20130619PEST.b/ical-1.b/0619a030.d
STX-CLP TOXAPHENE
19-JUN-201
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0619a030.cdf
/chem2/ecd6.i/20130619PEST.b/ical-2.b/0619a030.d
CLP2 TOXAPHENE
19-JUN-201
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a022.d ARI ID: WNDE
Data file 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a022.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 20:55
Compound Sublist: WND Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.758	0.001	1274	1.727	0.001	146749	0.0000	0.0000	---	Hexachloroethane
3.131	-0.001	5981300	3.300	0.000	29422294	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.787	0.000	2908033	6.331	-0.001	15471323	39.9432	40.3466	1.0	Oxychlordane
5.862	0.001	2211390	6.580	0.000	11077550	39.7672	39.9916	0.6	2,4-DDE
6.110	0.000	3582762	6.688	-0.002	18301689	40.0972	40.6354	1.3	trans-Nonachlor
6.349	0.001	1984688	7.065	0.000	9866849	39.5962	40.2197	1.6	2,4-DDD
6.587	0.000	2324382	7.352	-0.001	10852842	40.0914	40.5992	1.3	2,4-DDT
6.726	0.000	3941134	7.412	-0.003	19164808	39.9713	40.8584	2.2	cis-Nonachlor
7.601	0.000	2329092	8.564	-0.001	8771162	38.7089	38.6461	0.2	Mirex
8.927	0.000	5406477	10.289	0.001	18248706	80.0000	80.0000	0.0	Hexabromobiphenyl
3.800	0.000	3055226	4.127	-0.002	18478701	37.6186	37.9718	0.9	Tetrachloro-m-xylen
8.777	0.000	2538730	9.725	0.000	10820368	37.3092	36.6812	1.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	94.0	94.9	94.0~	150- 0
Decachlorobiphenyl	93.3	91.7	91.7~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

	Column 1		
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5981300	7.0
Hexabromobiphenyl	4870538	5406477	11.0

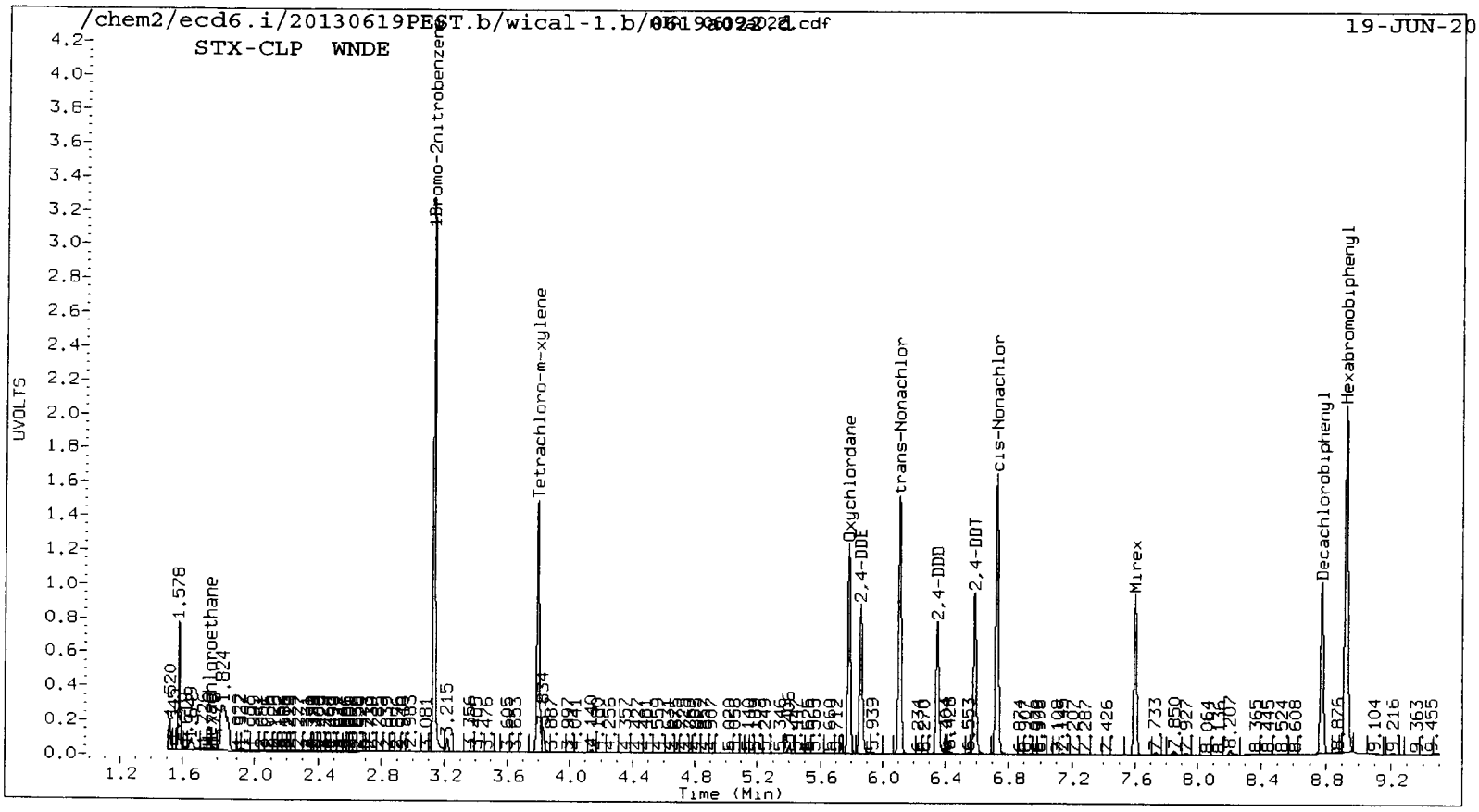
WJT6:01225

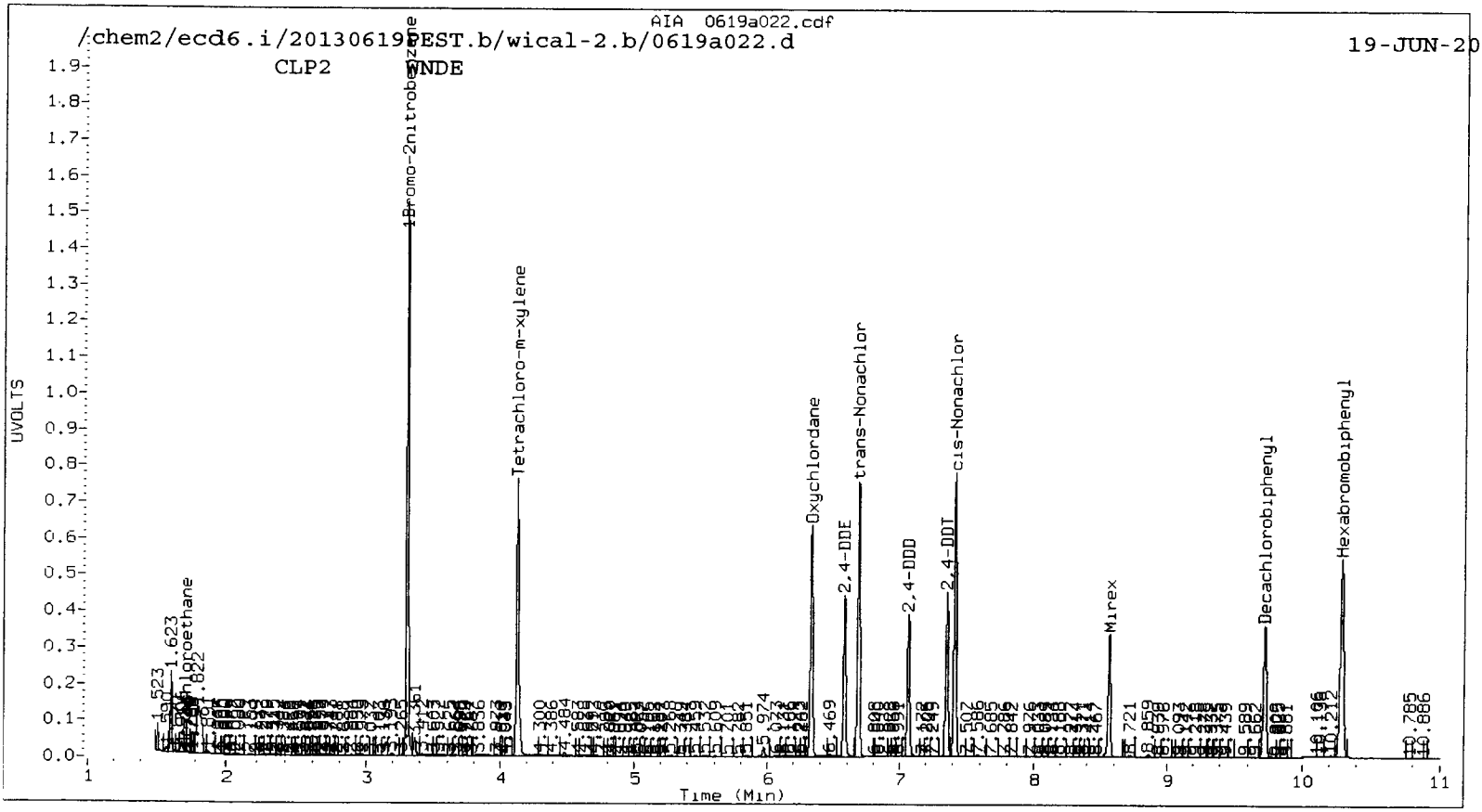
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	29422294	3.9
Hexabromobiphenyl	16454599	18248706	10.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a022.d
AIA 0619a022.cdf
19-JUN-20
STX-CLP WNDE
UVOLTS
Time (Min)
1.578
Hexachloroethane
3.215
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl


/chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a022.d
AIA 0619a022.cdf
19-JUN-20
CLP2 WNDE
UVOLTS
Time (Min)
1.623
Hexachloroethane
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a023.d ARI ID: WNDA
Data file 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a023.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 21:13
Compound Sublist: WND Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.758	0.001	735	1.726	0.000	123087	0.0000	0.0000	---	Hexachloroethane
3.131	-0.001	5831093	3.300	0.001	28731894	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.787	0.000	186864	6.331	-0.002	945490	2.6702	2.5249	5.6	Oxychlordane
5.863	0.001	141733	6.580	0.000	723920	2.6516	2.6763	0.9	2,4-DDE
6.110	-0.001	219560	6.688	-0.002	1094437	2.5564	2.5172	1.5	trans-Nonachlor
6.350	0.002	126284	7.065	0.000	623677	2.6211	2.6335	0.5	2,4-DDD
6.587	0.000	143881	7.352	-0.001	660992	2.5818	2.5615	0.8	2,4-DDT
6.726	-0.001	243492	7.411	-0.004	1135268	2.5692	2.5072	2.4	cis-Nonachlor
7.601	0.000	159764	8.564	-0.001	614646	2.7624	2.8054	1.5	Mirex
8.927	-0.001	5196778	10.289	0.001	17616180	80.0000	80.0000	0.0	Hexabromobiphenyl
3.800	0.001	185150	4.126	-0.002	1188081	2.3385	2.5000	6.7	Tetrachloro-m-xylene
8.777	-0.001	172900	9.725	0.000	734360	2.6435	2.5789	2.5	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

6/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	5.8	6.3	5.8~	150- 0
Decachlorobiphenyl	6.6	6.4	6.4~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

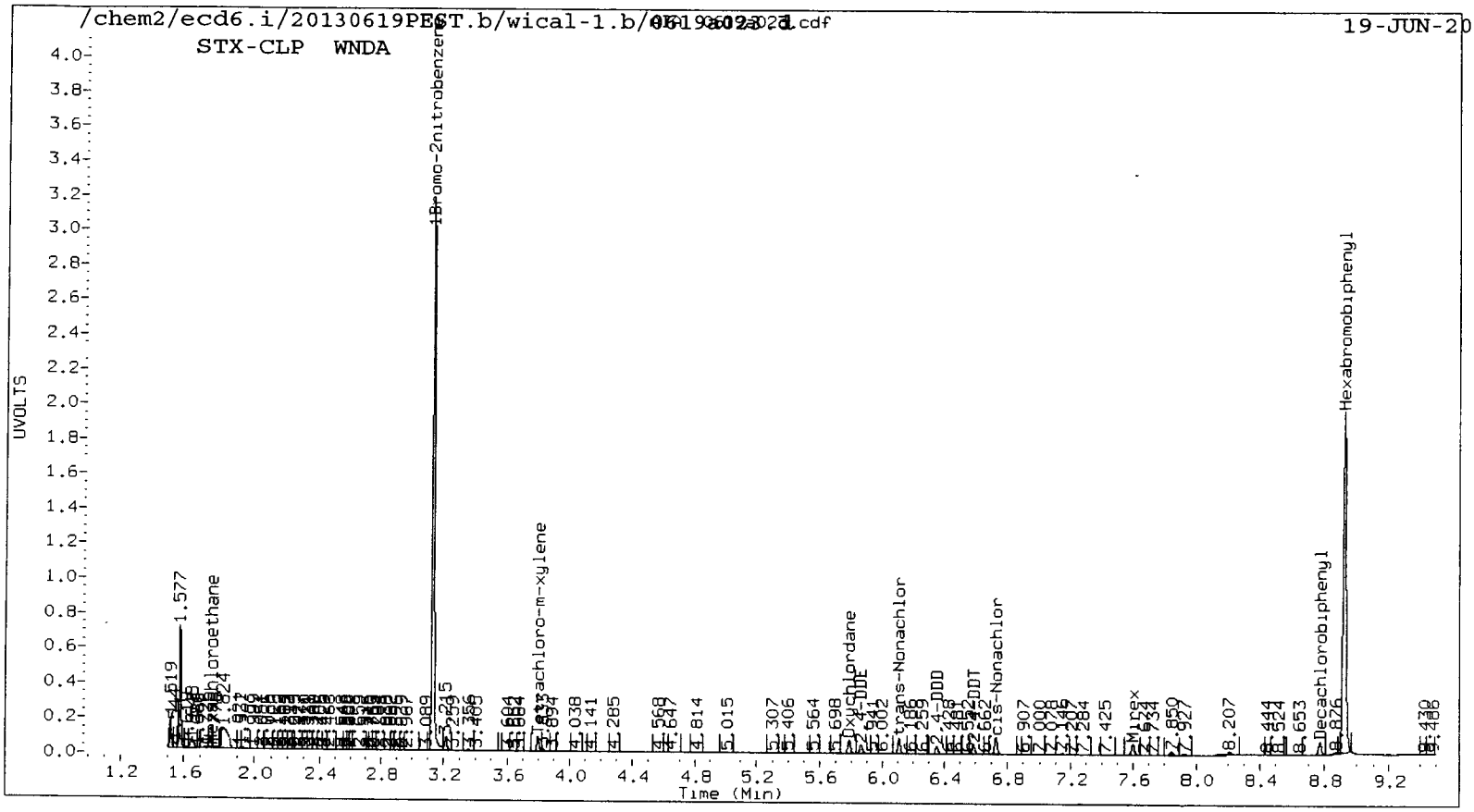
	Column 1		
	Standard	Sample	
Standard Cpnd	Area*	Area	%D
Bromo-Nitrobenzene	5590801	5831093	4.3
Hexabromobiphenyl	4870538	5196778	6.7

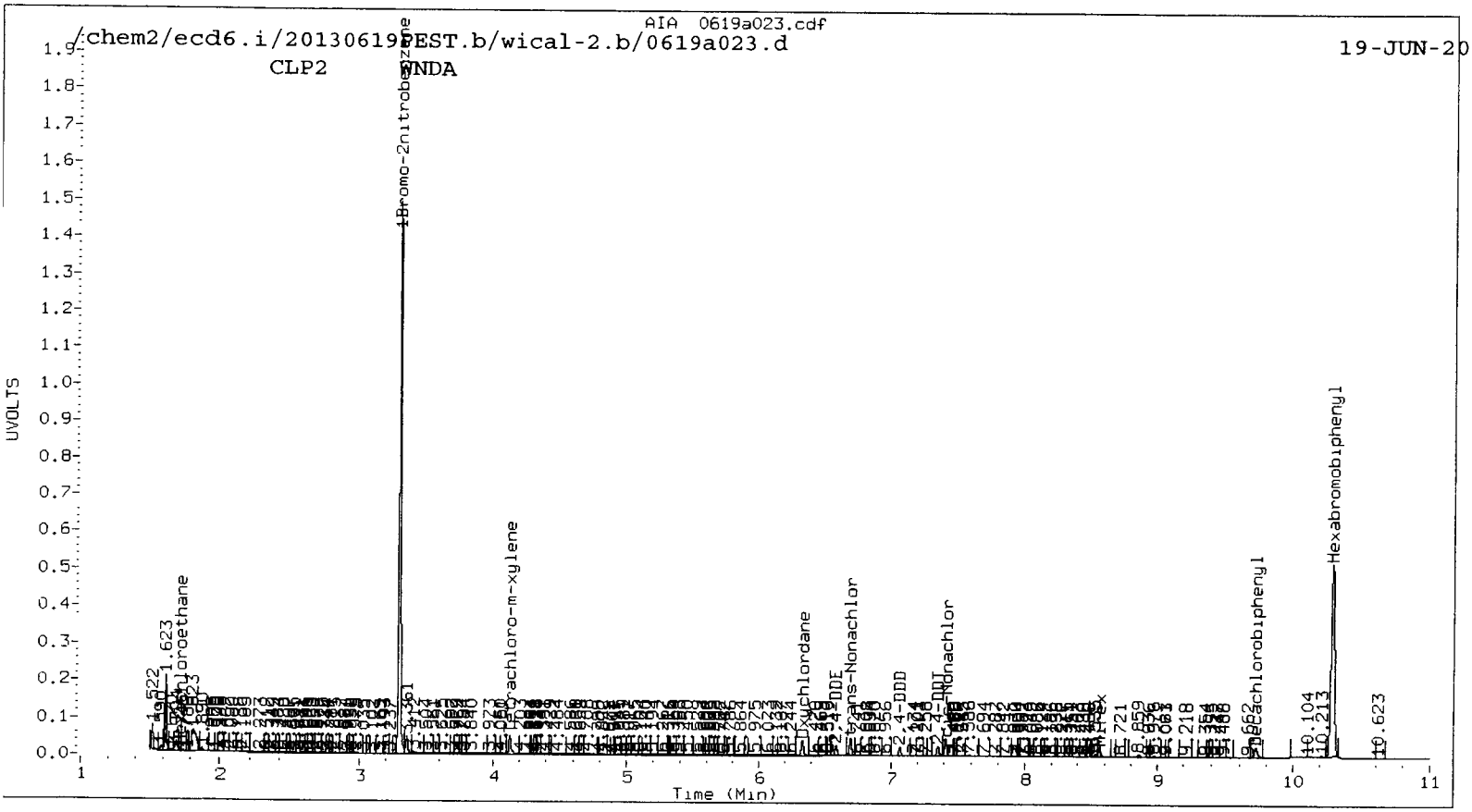
WU79:01220

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28731894	1.5
Hexabromobiphenyl	16454599	17616180	7.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a023.d
STX-CLP WNDA
19-JUN-20
1Bromo-2nitrobenzene
Hexachloroethane
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)


AIA 0619a023.cdf
/chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a023.d
CLP2 WNDA
19-JUN-20
1Bromo-2nitrobenzene
Hexachloroethane
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a024.d ARI ID: WNDB
Data file 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a024.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 21:30
Compound Sublist: WND Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.758	0.000	821	1.727	0.001	125733	0.0000	0.0000	---	Hexachloroethane
3.130	-0.001	5811438	3.300	0.000	28704362	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.787	0.000	370207	6.331	-0.002	1942777	5.2495	5.1931	1.1	Oxychlordane
5.863	0.001	282499	6.580	0.000	1471963	5.2445	5.4469	3.8	2,4-DDE
6.110	-0.001	439420	6.687	-0.003	2255304	5.0770	5.1662	1.7	trans-Nonachlor
6.350	0.002	253914	7.065	0.001	1263973	5.2297	5.3155	1.6	2,4-DDD
6.587	0.000	288053	7.352	-0.001	1344496	5.1291	5.1890	1.2	2,4-DDT
6.727	0.000	490995	7.412	-0.004	2346101	5.1408	5.1603	0.4	cis-Nonachlor
7.600	0.000	306200	8.564	0.000	1166537	5.2536	5.3027	0.9	Mirex
8.927	0.000	5237048	10.289	0.001	17688146	80.0000	80.0000	0.0	Hexabromobiphenyl
3.800	0.000	369366	4.127	-0.002	2455096	4.6809	5.1712	10.0	Tetrachloro-m-xylene
8.777	0.000	341718	9.725	0.000	1439576	5.1844	5.0348	2.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

6/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower Limits
Tetrachloro-m-xylene	11.7	12.9	11.7~ 150- 0
Decachlorobiphenyl	13.0	12.6	12.6~ 150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

	Column 1		
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5811438	3.9
Hexabromobiphenyl	4870538	5237048	7.5

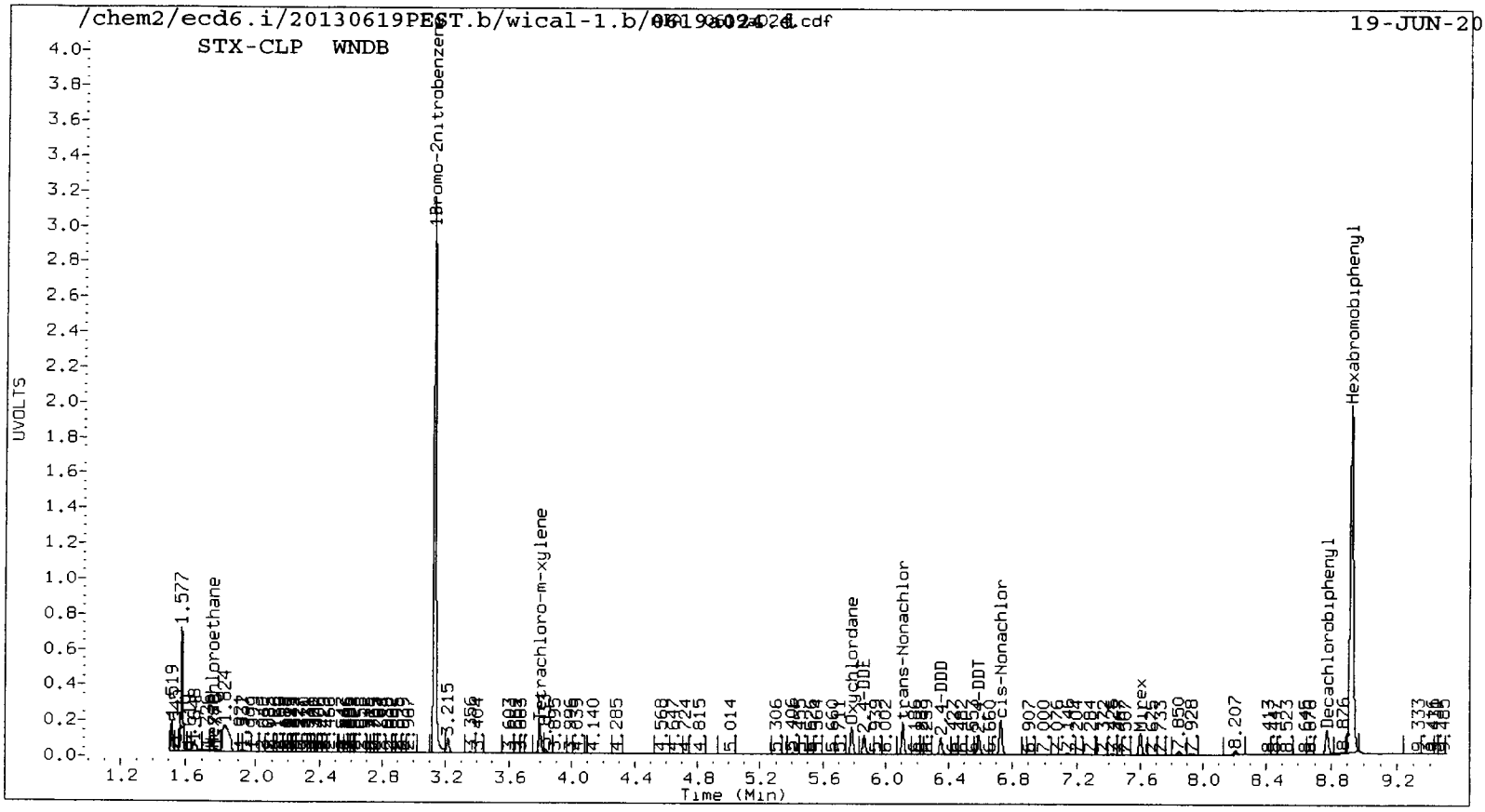
WLT8:01231

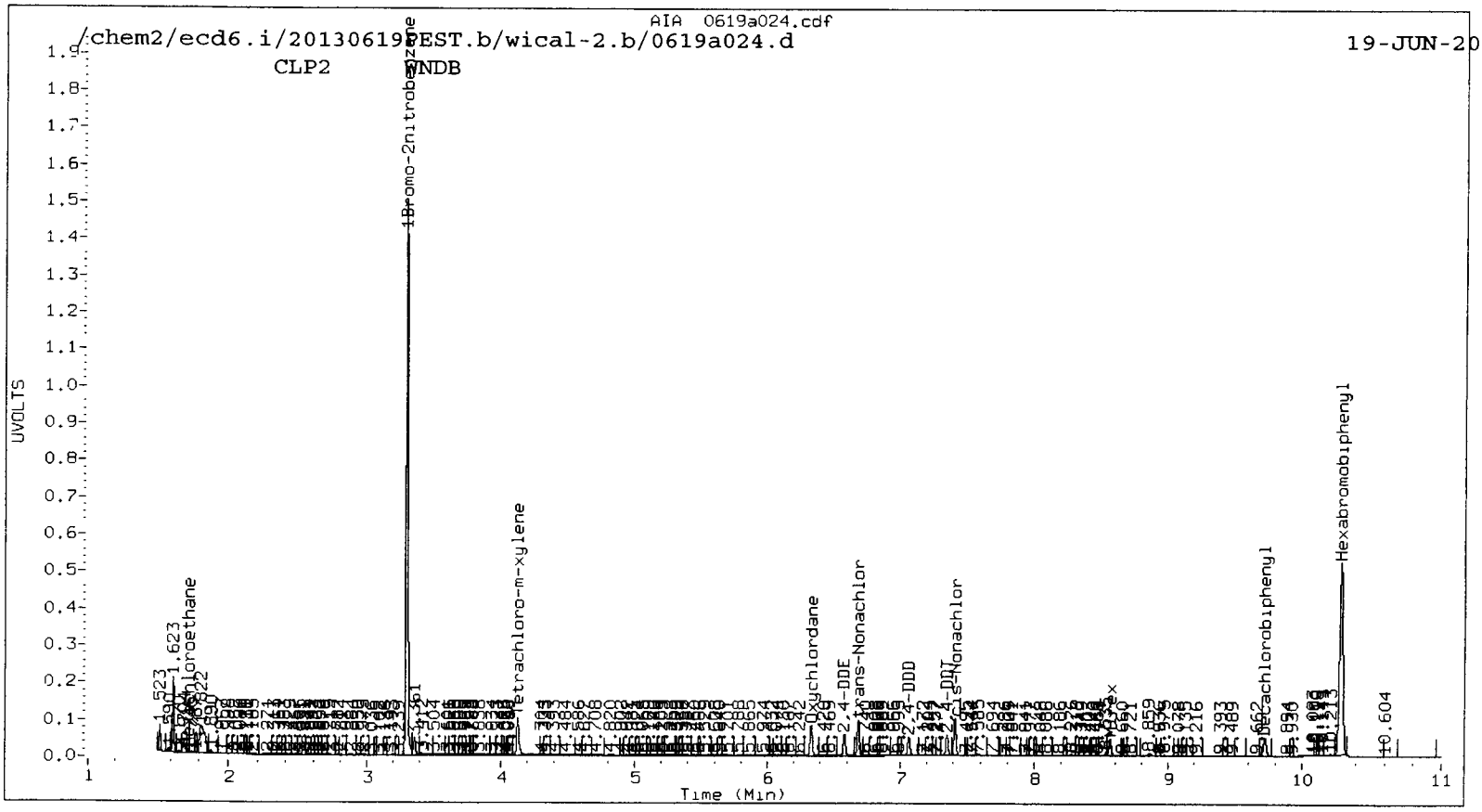
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28704362	1.4
Hexabromobiphenyl	16454599	17688146	7.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a024.d
STX-CLP WNDB
19-JUN-20
UVOLTS
Time (Min)
1.577
1,2,4,5-Tetrachloro-m-xylene
3.215
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0619a024.cdf
/chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a024.d
CLP2 WNDB
19-JUN-20
UVOLTS
Time (Min)
1,2,4,5-Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a025.d ARI ID: WNDC
Data file 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a025.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 21:48
Compound Sublist: WND Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.759	0.001	791	1.727	0.001	131582	0.0000	0.0000	---	Hexachloroethane
3.131	-0.001	5920700	3.300	0.001	29296978	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.787	0.000	743037	6.331	-0.001	3950329	10.3213	10.3459	0.2	Oxychlordane
5.863	0.001	557203	6.580	0.000	2924113	10.1333	10.6016	4.5	2,4-DDE
6.110	0.000	883302	6.688	-0.002	4661405	9.9973	10.4292	4.2	trans-Nonachlor
6.350	0.002	498501	7.066	0.001	2517945	10.0579	10.3425	2.8	2,4-DDD
6.588	0.001	580337	7.352	0.000	2740346	10.1229	10.3300	2.0	2,4-DDT
6.727	0.000	962333	7.412	-0.003	4841041	9.8703	10.4001	5.2	cis-Nonachlor
7.601	0.000	603038	8.563	-0.001	2254506	10.1356	10.0097	1.2	Mirex
8.926	-0.001	5346075	10.288	0.000	18109694	80.0000	80.0000	0.0	Hexabromobiphenyl
3.800	0.001	744789	4.127	-0.001	4872540	9.2644	10.0554	8.2	Tetrachloro-m-xylene
8.776	-0.001	647176	9.724	-0.001	2804700	9.6184	9.5810	0.4	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

6/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower Limits
Tetrachloro-m-xylene	23.2	25.1	23.2~ 150- 0
Decachlorobiphenyl	24.0	24.0	24.0~ 150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

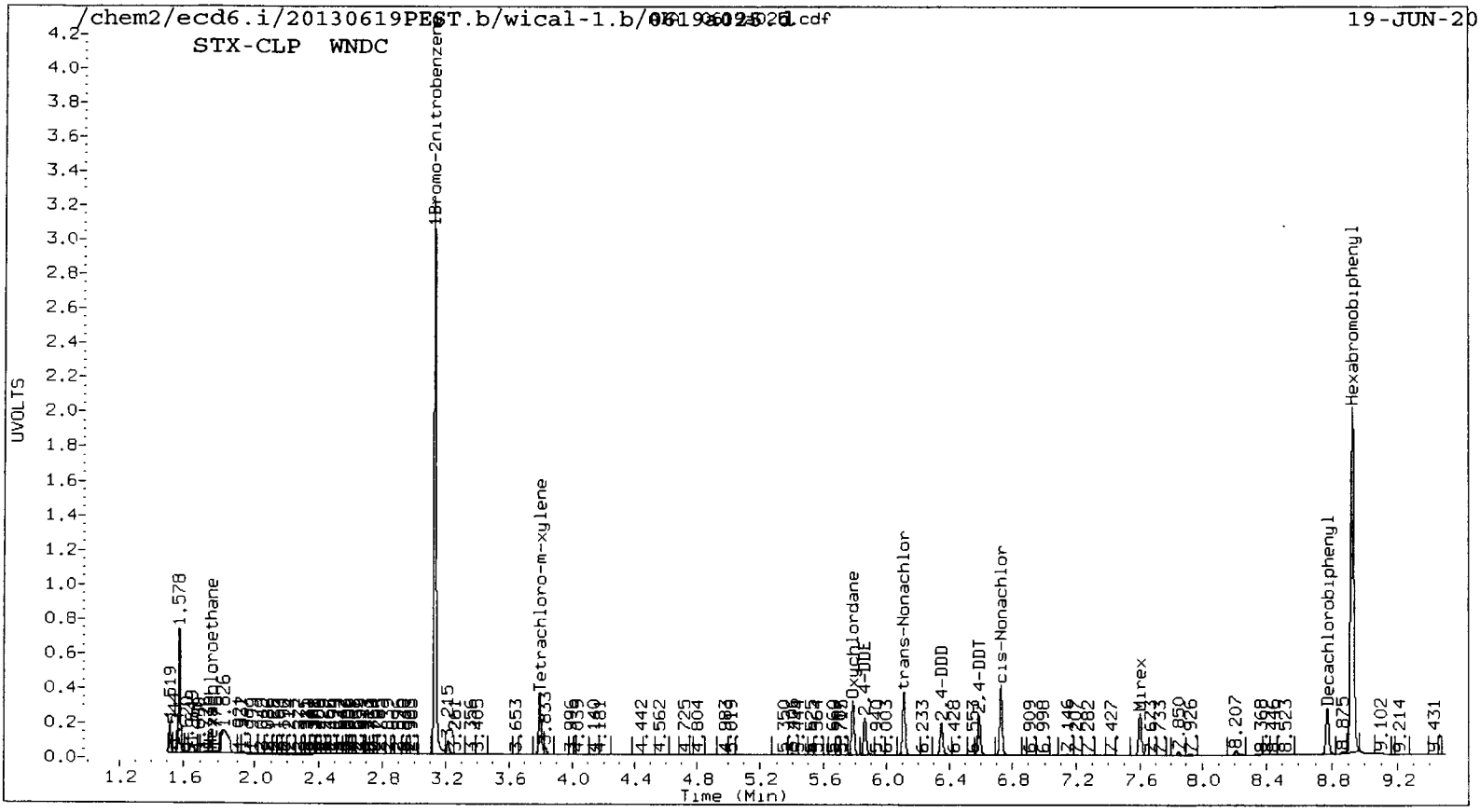
	Column 1		
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5920700	5.9
Hexabromobiphenyl	4870538	5346075	9.8

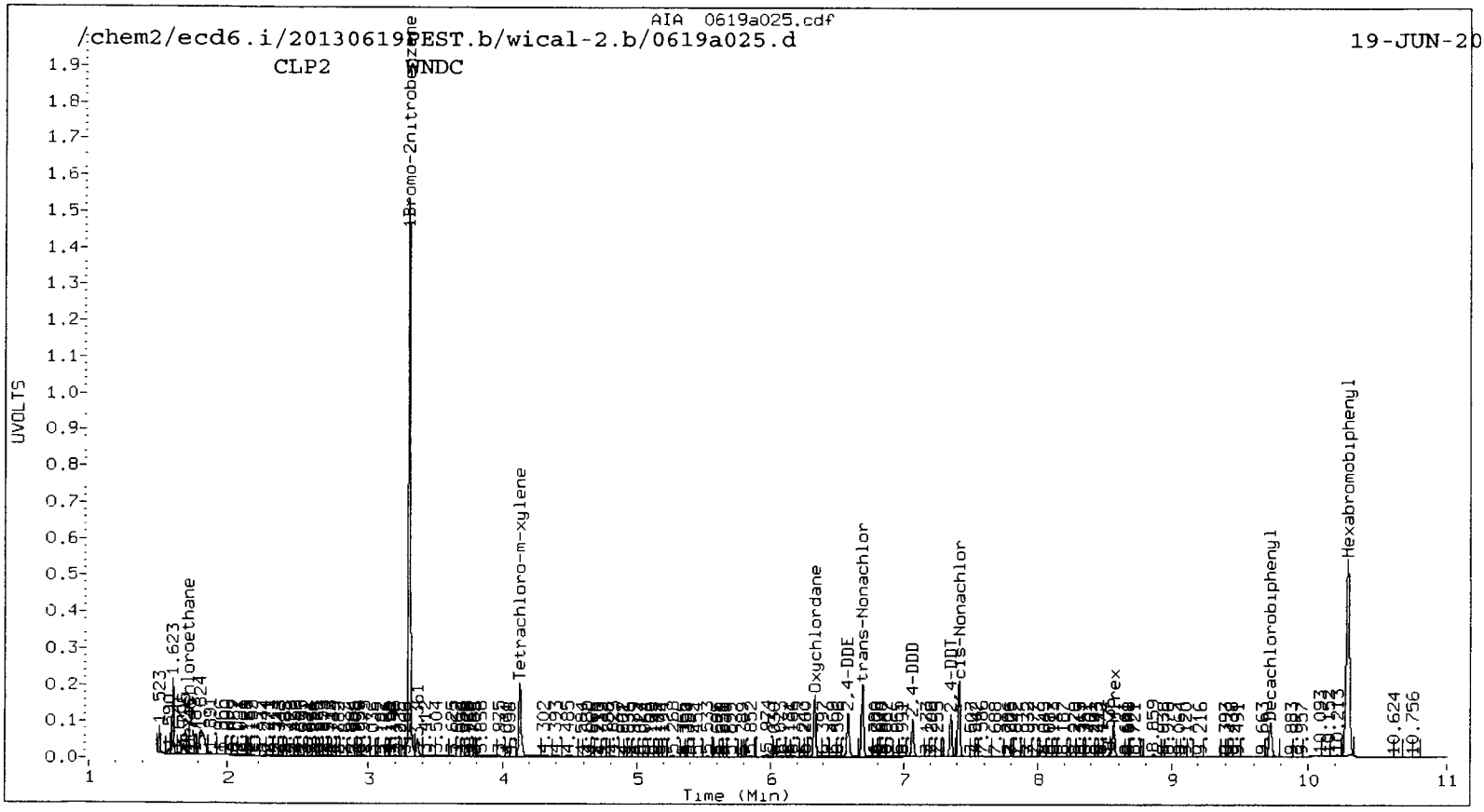
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	29296978	3.4
Hexabromobiphenyl	16454599	18109694	10.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

			STX-CLP Col				CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a025.d
19-JUN-20
STX-CLP WNDC
UVOLTS
Time (Min)
1.578
1,3-Dichloroethane
1-Bromo-2-nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
4,4'-DDE
trans-Nonachlor
2,4'-DDD
2,4'-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0619a025.cdf
/chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a025.d
19-JUN-20
CLP2 WNDC
UVOLTS
Time (Min)
1.623
1,3-Dichloroethane
1-Bromo-2-nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
4,4'-DDE
trans-Nonachlor
2,4'-DDD
2,4'-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a026.d ARI ID: WNDD
Data file 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a026.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 22:06
Compound Sublist: WND Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.758	0.001	1046	1.726	0.001	140170	0.0000	0.0000	---	Hexachloroethane
3.131	-0.001	5825954	3.300	0.001	28828761	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.788	0.001	1417285	6.332	-0.001	7742609	20.0729	20.6071	2.6	Oxychlordane
5.863	0.001	1081320	6.581	0.001	5647091	20.0504	20.8065	3.7	2,4-DDE
6.111	0.000	1724901	6.689	-0.002	9125838	19.9053	20.7697	4.3	trans-Nonachlor
6.350	0.002	974743	7.066	0.001	4886930	20.0521	20.4193	1.8	2,4-DDD
6.588	0.001	1124874	7.352	0.000	5341498	20.0058	20.4824	2.4	2,4-DDT
6.727	0.000	1892006	7.413	-0.003	9477549	19.7860	20.7118	4.6	cis-Nonachlor
7.601	0.000	1136859	8.565	0.000	4368778	19.4823	19.7312	1.3	Mirex
8.928	0.000	5243309	10.290	0.001	17802786	80.0000	80.0000	0.0	Hexabromobiphenyl
3.800	0.001	1458232	4.127	-0.001	9366030	18.4338	19.6425	6.3	Tetrachloro-m-xylene
8.777	0.000	1240181	9.725	0.000	5343942	18.7929	18.5698	1.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	46.1	49.1	46.1~	150- 0
Decachlorobiphenyl	47.0	46.4	46.4~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

	Column 1		
	Standard	Sample	
Standard Cpnd	Area*	Area	%D
Bromo-Nitrobenzene	5590801	5825954	4.2
Hexabromobiphenyl	4870538	5243309	7.7

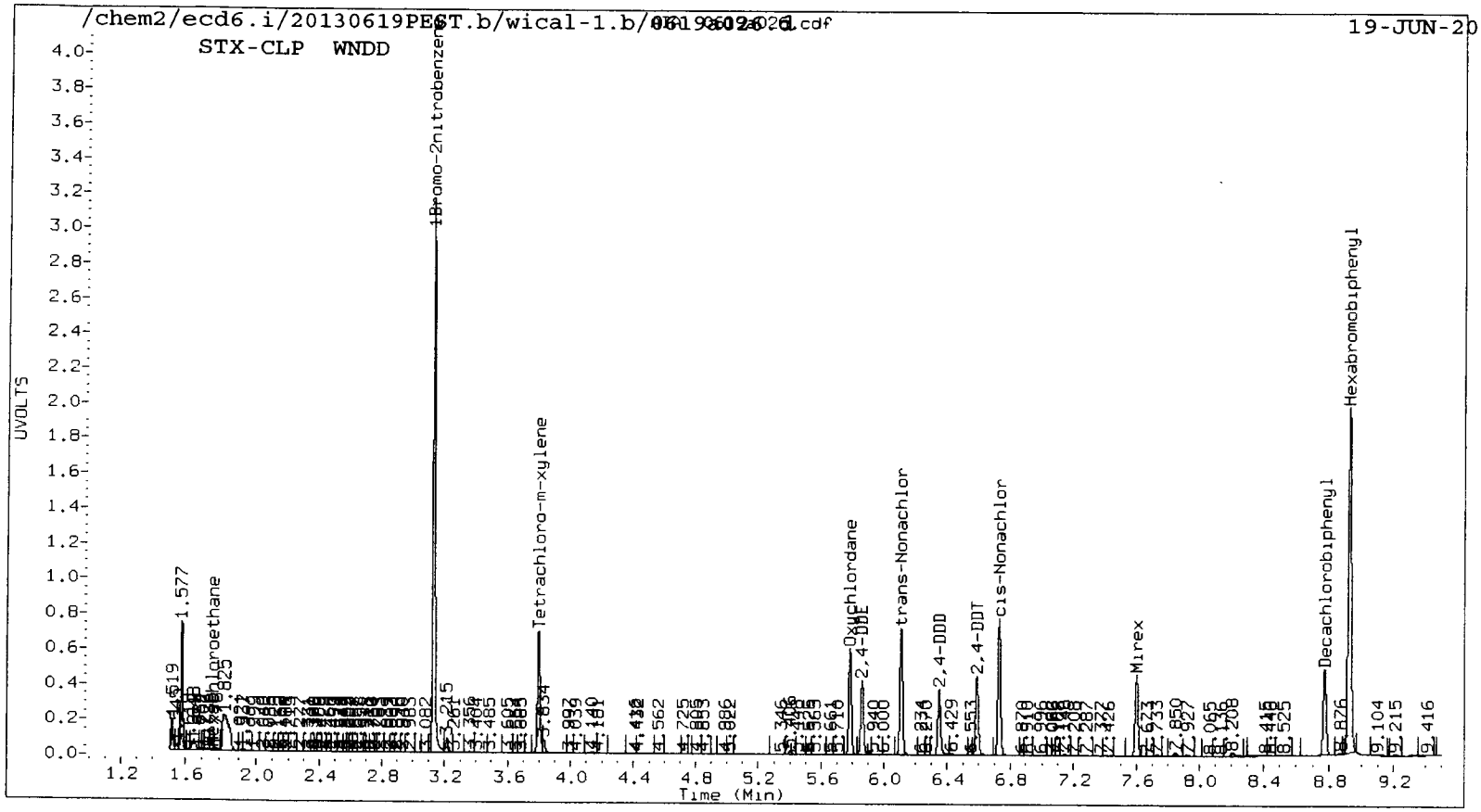
WU79:01237

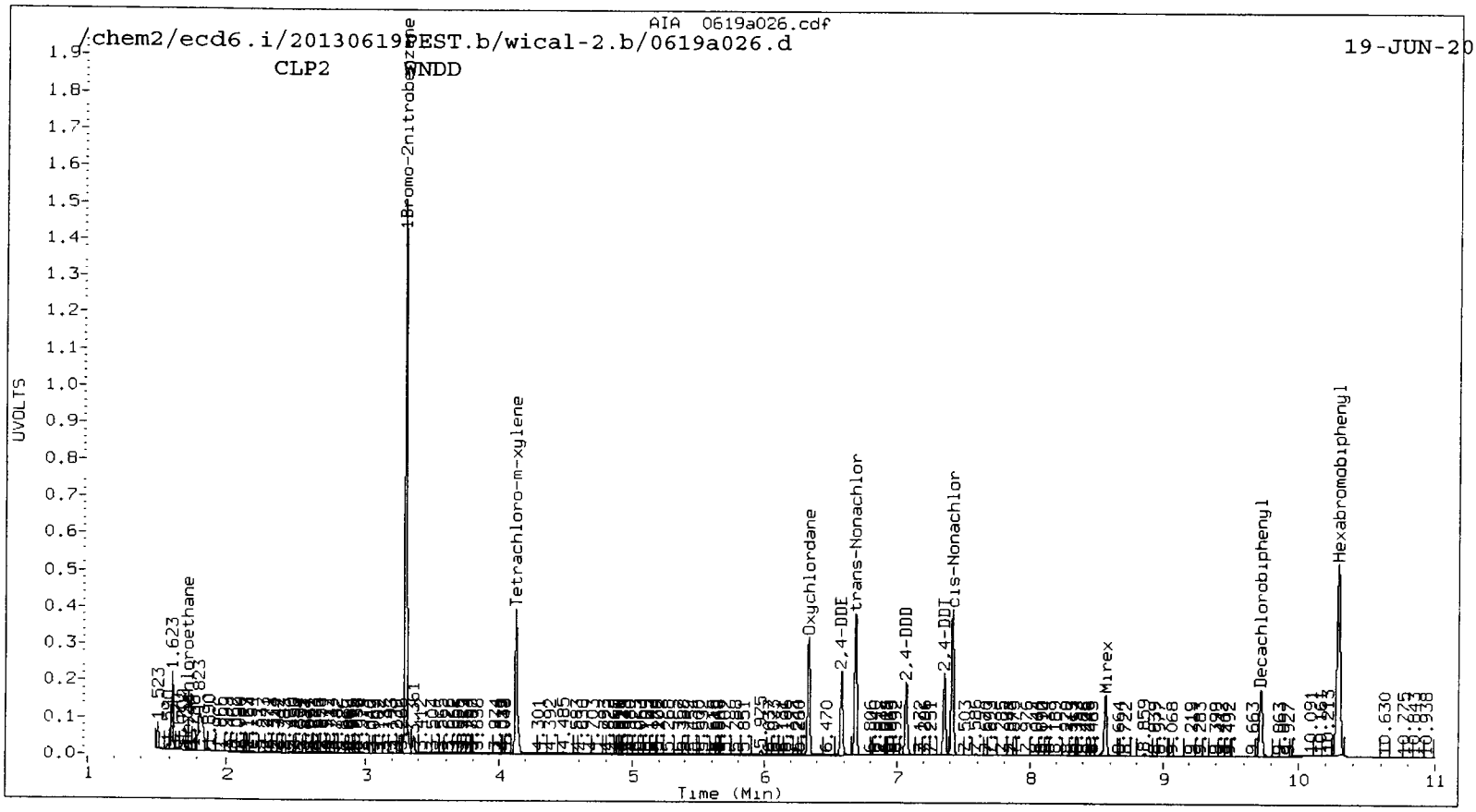
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28828761	1.8
Hexabromobiphenyl	16454599	17802786	8.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a026.d
STX-CLP WNDD
19-JUN-20
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0619a026.cdf
/chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a026.d
CLP2 WNDD
19-JUN-20
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
Cis-Nonachlor
Mirex
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a027.d ARI ID: WNDF
Data file 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a027.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 22:24
Compound Sublist: WND Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.756	-0.001	1746	1.726	0.000	191313	0.0000	0.0000	---	Hexachloroethane
3.130	-0.001	5852777	3.300	0.000	28874628	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.787	0.000	5496120	6.332	-0.001	29291826	76.9993	77.8369	1.1	Oxychlordane
5.861	0.000	4254664	6.580	-0.001	20183802	78.0390	74.2485	5.0	2,4-DDE
6.110	0.000	7066116	6.688	-0.002	35122691	80.6611	79.7644	1.1	trans-Nonachlor
6.348	0.000	3864434	7.065	0.000	18468214	78.6383	77.0003	2.1	2,4-DDD
6.587	0.000	4503164	7.352	-0.001	20504517	79.2224	78.4569	1.0	2,4-DDT
6.726	0.000	7777229	7.412	-0.003	37026269	80.4524	80.7412	0.4	cis-Nonachlor
7.601	0.000	4560804	8.565	0.000	16872664	77.3130	76.0396	1.7	Mirex
8.927	0.000	5300626	10.289	0.000	17841215	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	6041881	4.127	-0.002	34519068	76.0265	72.2785	5.1	Tetrachloro-m-xylen
8.776	-0.001	5004883	9.725	0.000	21145178	75.0205	73.3197	2.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	190.1	180.7	180.7~	150- 0
Decachlorobiphenyl	187.6	183.3	183.3~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

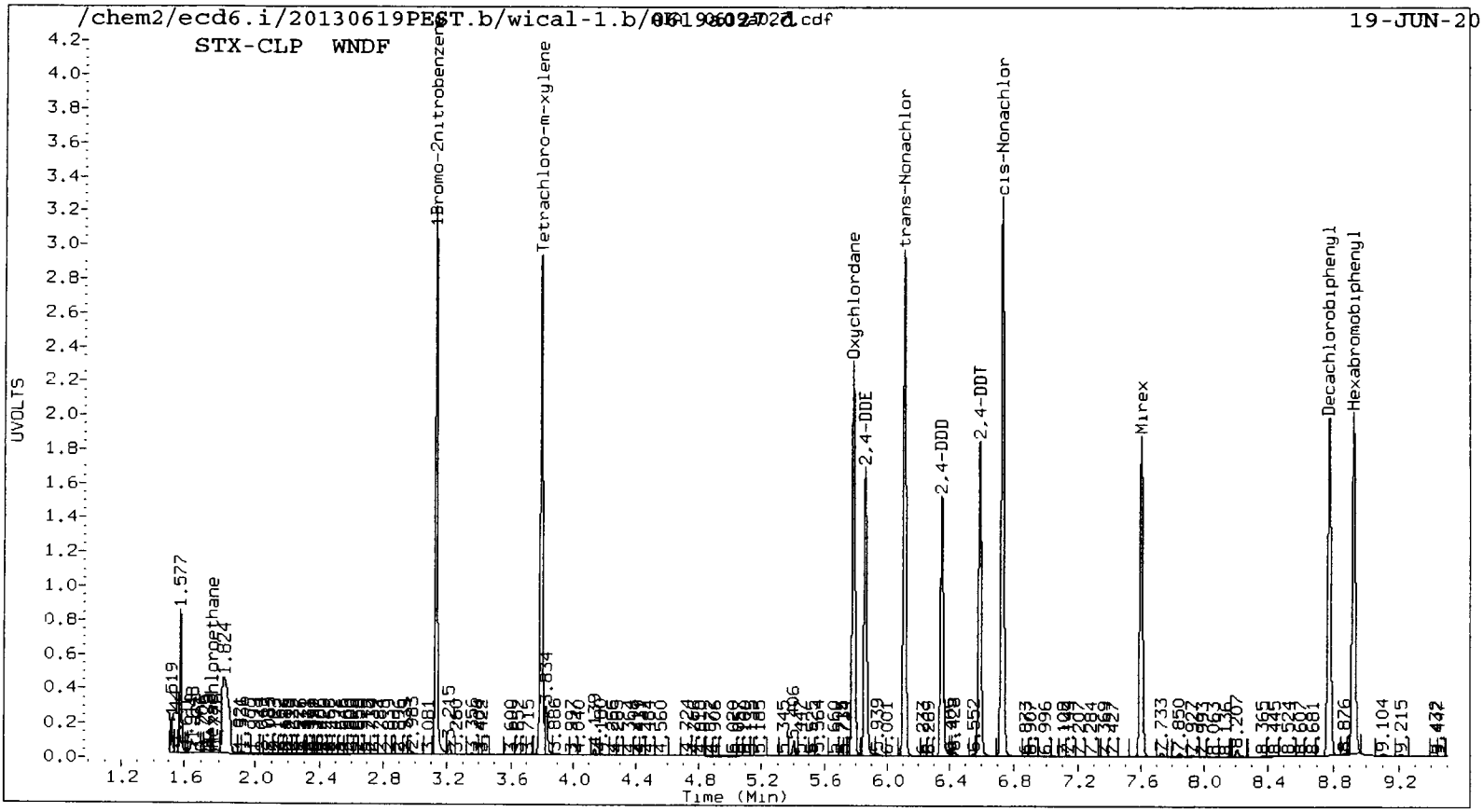
	Column 1		
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5852777	4.7
Hexabromobiphenyl	4870538	5300626	8.8

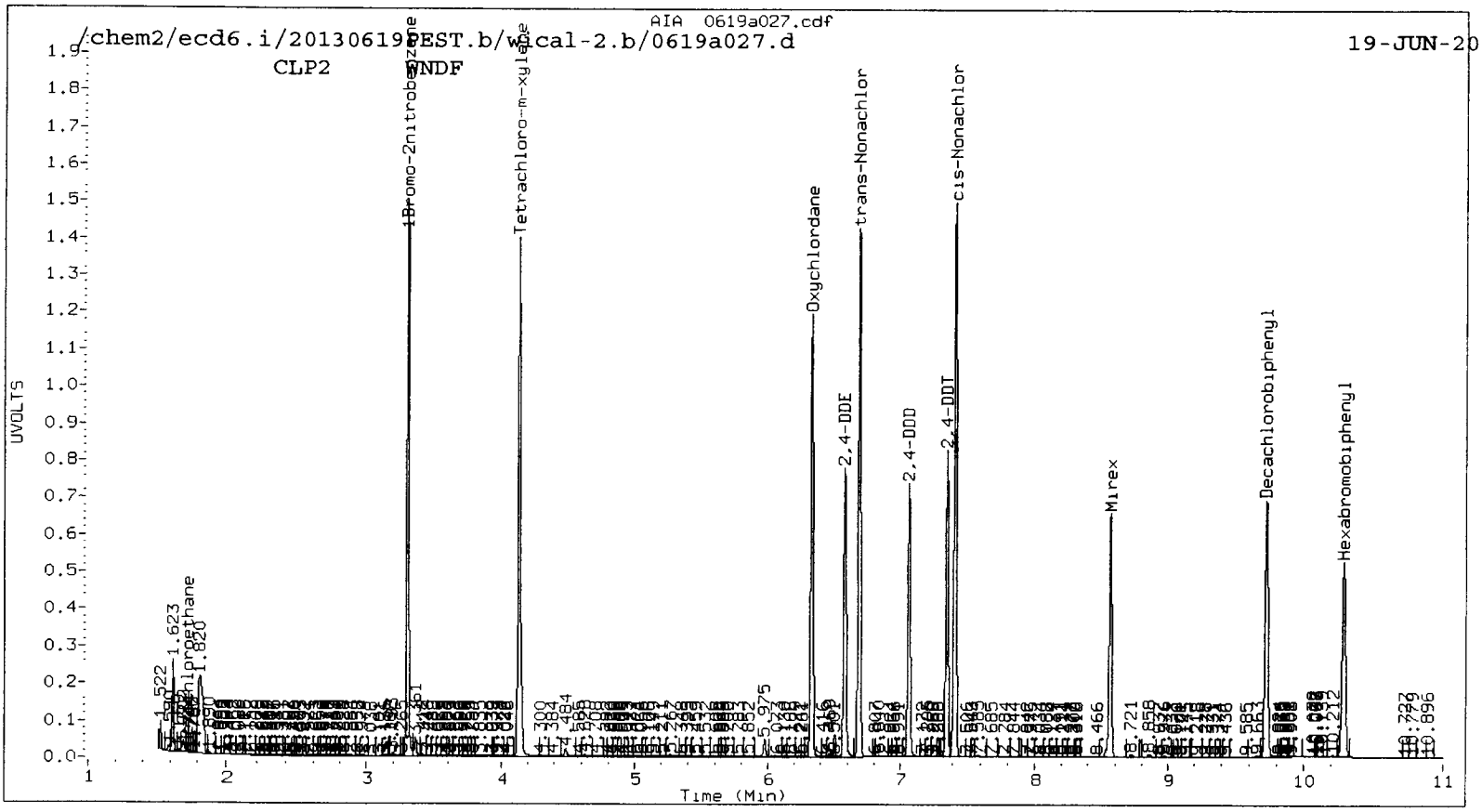
WU13:01249

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28874628	2.0
Hexabromobiphenyl	16454599	17841215	8.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a027.d
STX-CLP WNDF
19-JUN-20
UVOLTS
Time (Min)
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
trans-Nonachlor
cis-Nonachlor
2,4-DDE
2,4-DDD
2,4-DDT
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
1.577
1.824


AIA 0619a027.cdf
/chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a027.d
CLP2 WNDF
19-JUN-20
UVOLTS
Time (Min)
1-Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
trans-Nonachlor
cis-Nonachlor
2,4-DDE
2,4-DDD
2,4-DDT
Mirex
Decachlorobiphenyl
Hexabromobiphenyl
1.522
1.623
1.820

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a028.d ARI ID: WNDG
Data file 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a028.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 22:42
Compound Sublist: WND Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.758	0.000	2172	1.726	0.000	459344	0.0000	0.0000	---	Hexachloroethane
3.130	-0.001	5777001	3.299	0.000	28352573	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.787	0.000	10041452	6.332	0.000	53496498	141.6274	144.7734	2.2	Oxychlordane
5.861	0.000	7841014	6.580	0.000	34667644	144.7901	129.8772	10.9	2,4-DDE
6.110	0.000	13314783	6.690	0.000	60674113	153.0163	138.4836	10.0	trans-Nonachlor
6.348	0.000	7219024	7.065	0.000	32848121	147.8928	137.6422	7.2	2,4-DDD
6.587	0.000	8458360	7.353	0.000	36813655	149.8087	141.5676	5.7	2,4-DDT
6.727	0.000	14793375	7.415	0.000	62692268	154.0642	137.3955	11.4	cis-Nonachlor
7.601	0.000	8649046	8.564	0.000	32256718	147.6044	146.0999	1.0	Mirex
8.927	0.000	5265103	10.288	0.000	17752152	80.0000	80.0000	0.0	Hexabromobiphenyl
3.799	0.000	11433536	4.127	-0.002	59324331	145.7582	126.5048	14.1	Tetrachloro-m-xyl
8.777	-0.001	9543559	9.724	0.000	40008772	144.0181	139.4241	3.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	364.4	316.3	316.3~	150- 0
Decachlorobiphenyl	360.0	348.6	348.6~	150- 0

~ Indicates recovery outside QC Limits

06/25/13

INTERNAL STANDARD SUMMARY

	Column 1		
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5777001	3.3
Hexabromobiphenyl	4870538	5265103	8.1

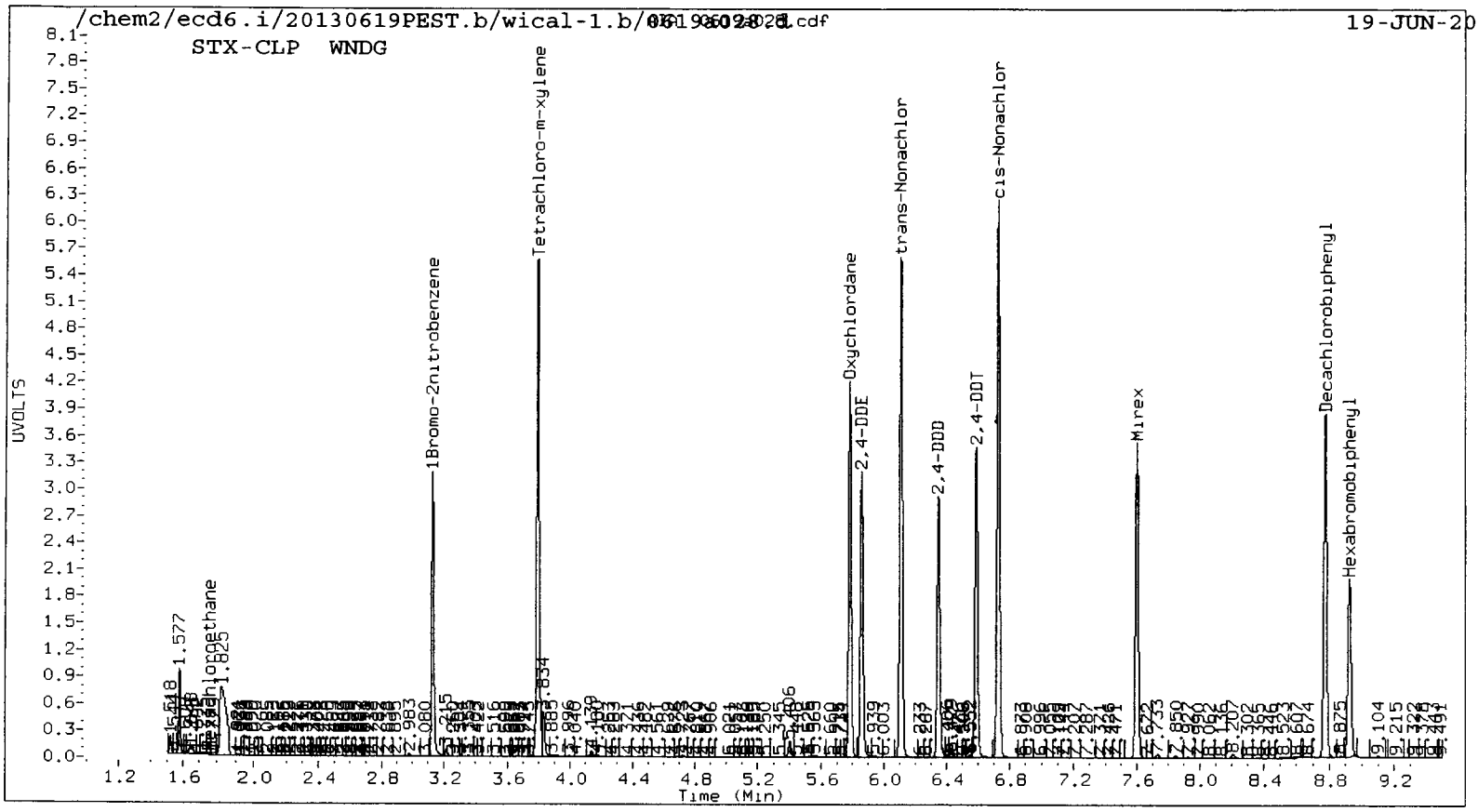
WI78:012443

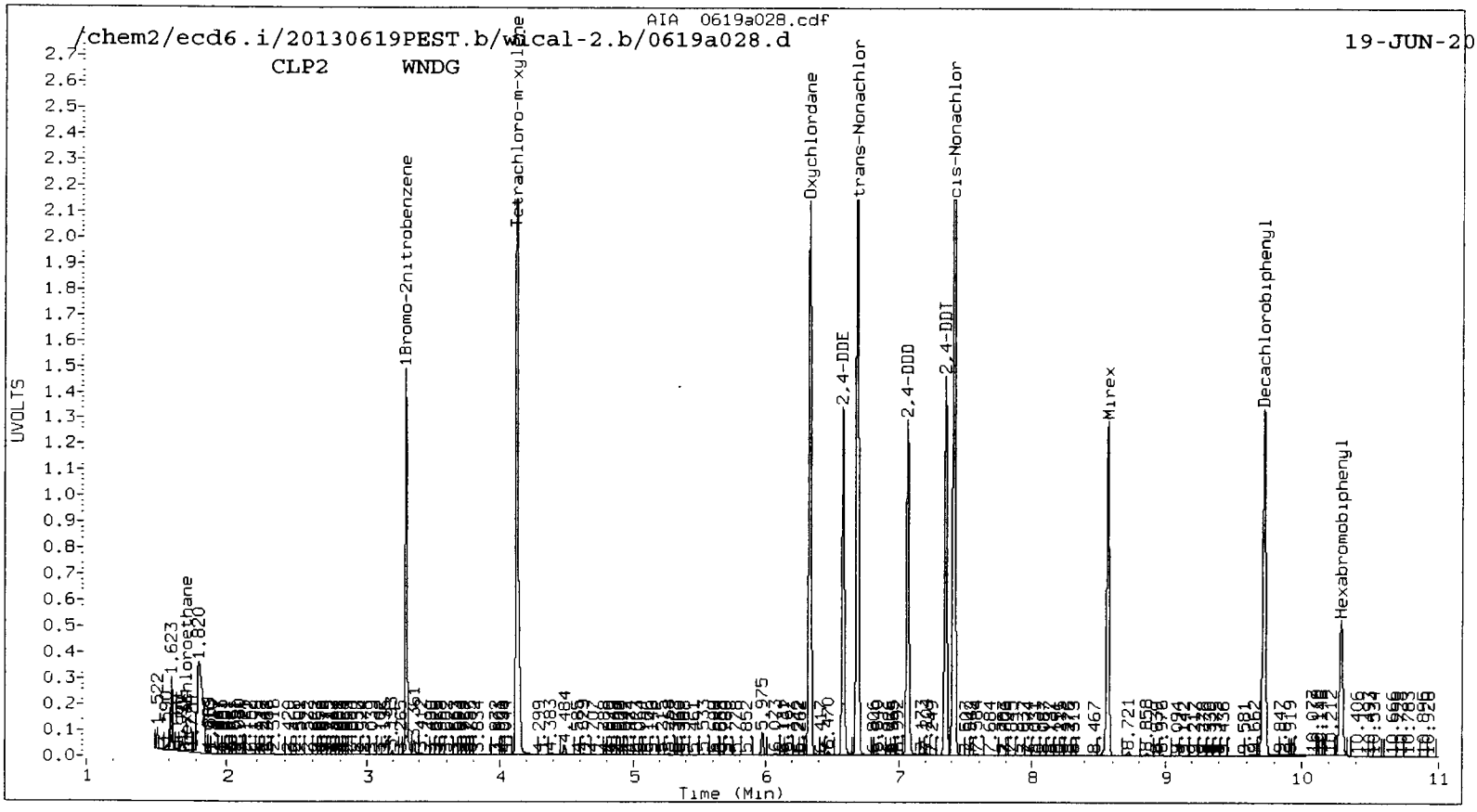
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28352573	0.1
Hexabromobiphenyl	16454599	17752152	7.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a028.d
STX-CLP WNDG
19-JUN-20
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
trans-Nonachlor
cis-Nonachlor
2,4-DDE
2,4-DDD
2,4-DDT
Mirex
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0619a028.cdf
/chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a028.d
CLP2 WNDG
19-JUN-20
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Oxychlordane
trans-Nonachlor
cis-Nonachlor
2,4-DDE
2,4-DDD
2,4-DDT
Mirex
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a029.d ARI ID: WND ICV
Data file 2: /chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a029.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 19-JUN-2013 22:59
Compound Sublist: WND Report Date: 06/25/2013 09:51
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
1.758	0.001	826	1.726	0.000	153413	0.0000	0.0000	---	Hexachloroethane
3.130	-0.001	5841693	3.299	0.000	28922276	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
5.787	0.000	3597148	6.331	-0.001	17914975	49.2350	47.5269	3.5	Oxychlordane
5.861	-0.001	2932889	6.580	0.000	14207629	52.5566	52.1783	0.7	2,4-DDE
6.110	-0.001	4035811	6.688	-0.002	19905533	45.0090	44.7751	0.5	trans-Nonachlor
6.348	0.000	2687997	7.064	0.000	12861642	53.4395	53.1136	0.6	2,4-DDD
6.587	0.000	3215633	7.353	0.000	14586359	55.2691	55.2803	0.0	2,4-DDT
6.726	0.000	4401299	7.413	-0.002	20968088	44.4816	45.2883	1.8	cis-Nonachlor
7.598	-0.002	1170	8.574	0.010	45639	0.0194	0.2037	165.3*	Mirex
8.926	-0.001	5425526	10.289	0.000	18012862	80.0000	80.0000	0.0	Hexabromobiphenyl
3.797	-0.002	17239	4.129	0.001	47453	0.2173	0.0992	74.6*	Tetrachloro-m-xylene
8.780	0.003	7350	9.727	0.003	5151	0.1076	0.0177	143.5*	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

06/25/13

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	0.5	0.2	0.2~	150- 0
Decachlorobiphenyl	0.3	0.0	0.0~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

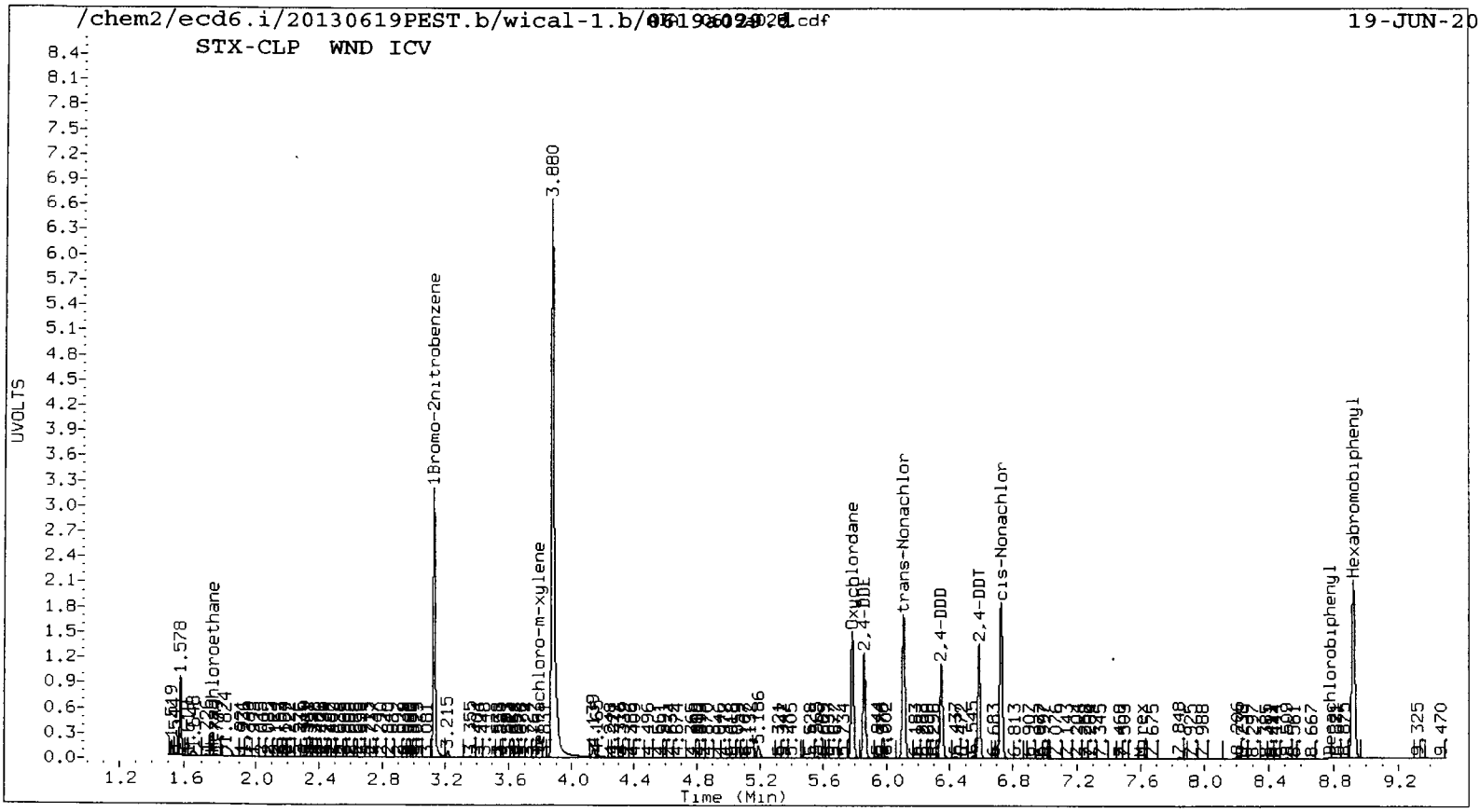
	Column 1		
	Standard	Sample	
Standard Cpnd	Area*	Area	%D
Bromo-Nitrobenzene	5590801	5841693	4.5
Hexabromobiphenyl	4870538	5425526	11.4

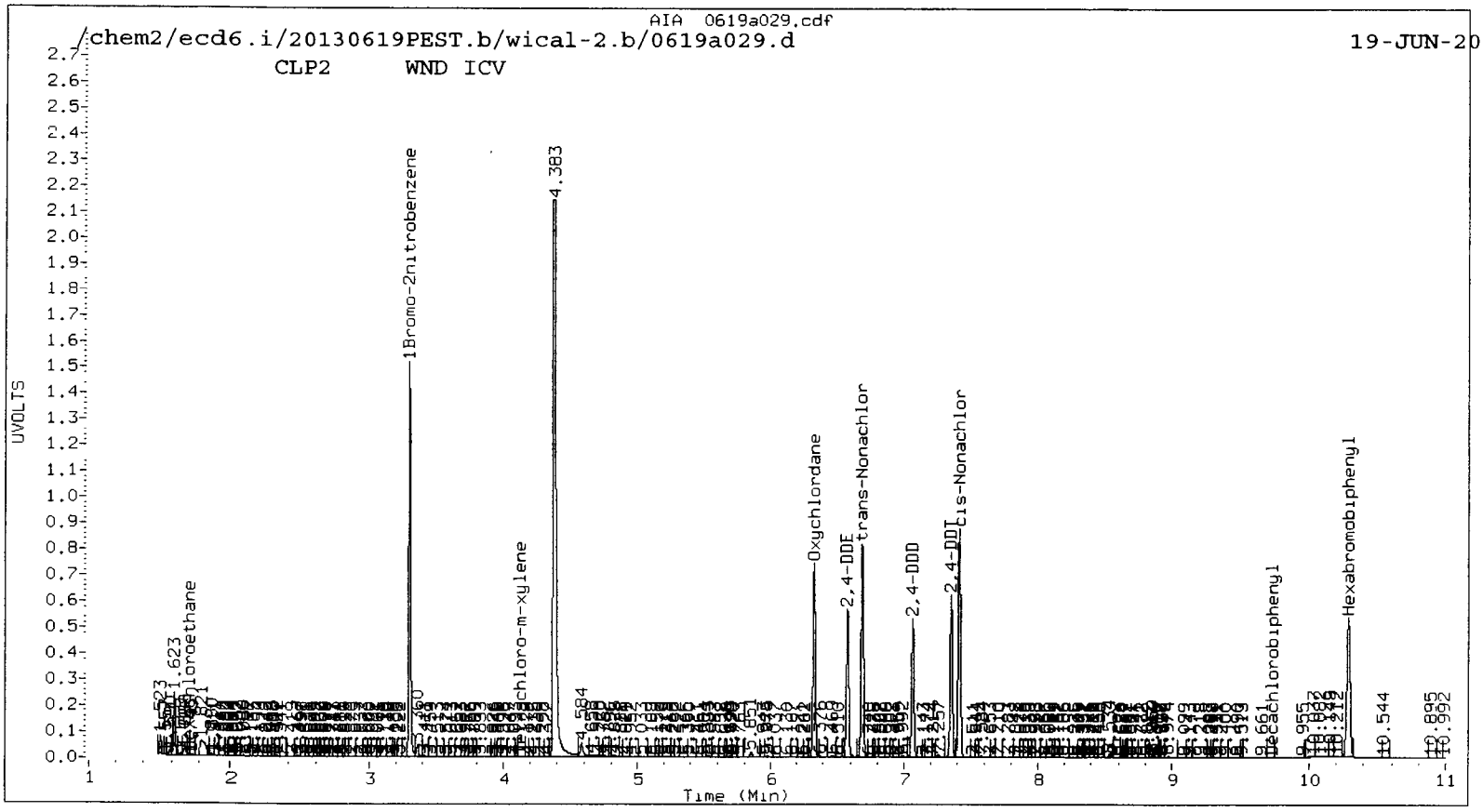
WLI78:012513

Standard Cpnd	Column 2 Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	28922276	2.1
Hexabromobiphenyl	16454599	18012862	9.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/wical-1.b/0619a029.d
19-JUN-20
STX-CLP WND ICV
UVOLTS
Time (Min)
1.578
Chloroethane
3.215
1Bromo-2nitrobenzene
3.880
chloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0619a029.cdf
/chem2/ecd6.i/20130619PEST.b/wical-2.b/0619a029.d
19-JUN-20
CLP2 WND ICV
UVOLTS
Time (Min)
1.623
Chloroethane
1Bromo-2nitrobenzene
4.383
chloro-m-xylene
Oxychlordane
2,4-DDE
trans-Nonachlor
2,4-DDD
2,4-DDT
cis-Nonachlor
Decachlorobiphenyl
Hexabromobiphenyl

Pesticide Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WU70

Analytical Resources, Incorporated
Analytical Chemists and Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WU70 Client ID: SAIS

METHOD: **8082A**(PCB) **8151A**(Herb) **NW-TPH**(TPH-D) **NW-TPH**(HCID) **8041A**(PCP)
8081B(PEST) **8015B**(Dir Inj) **NW-EPH**(EPH) **8082A**(PBDE) **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: 06/19/13 Analysis Start Date: 07/05/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Endrin/DDT B.D. ≤15%?	NA / Y / N / ✓	Method Blank in Control?	Y / N / ✓
Retention times within Windows?	Y / N / ✓	LCS / LCSD Recovery in Control?	Y / N /
CCAL met %D Criteria?	Y / N / ✓	LCS / LCSD RPD ≤30%?	NA / LCS only ✓
Surrogate Recovery in Control?	Y / N / ✓	MS / MSD Recovery in Control?	Y / N /
Internal STD. within 50-200%?	NA / Y / N / ✓	MS / MSD RPD ≤30%? (5x DIL)	NA / X See Form III
Manual Integrations?	Y / N / ✓	Samples Diluted?	Y / N / 5x
Integration Summary?	Y / N / ✓	Special Analysis Request?	Y / N / ✓

Detail problems, corrective actions and/or other pertinent information below

- All samples were run @ 5x dilution due to dark color of the extracts.

- Samples were run twice on 07/02/13 and 07/05/13. Closing ccals failed on both column in the first run. Closing ccals - okay on CCP_1 column, and failed on CCP_2 column in the second run.

Second 07/05/13 run reported.

(Review 1) Analyst: YZ **Date:** 7/8/13

(Review 2) Reviewer: [illegible] **Date:** 7/8/13

Analytical Resources Inc.: Organics Instrument Log

ECD6 Serial No.: US00007128

Date: 07/05/13 Analysis: Pest Analyst: YB

Column 1 Serial No.: 1085624 Column Type: CC1

Column 2 Serial No.: 109 4709 Column Type: CC2

GC Method: Pest ICal Date:

IS	Ical/Ccal	ICV
2006-1	B339	
	B339	
	B370	

GC LOG SUMMARY FOR DATABATCH - /chem2/ecd6.i/20130619PEST.b/0705-1.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	05-JUL-2013 11:40	0705a002.d	1	DS	
2	05-JUL-2013 11:58	0705a003.d	1	INDAE	
3	05-JUL-2013 12:16	0705a004.d	1	TOXAPH	
4	05-JUL-2013 12:33	0705a005.d	1	DS	
5	05-JUL-2013 12:51	0705a006.d	1	INDAE	
6	05-JUL-2013 13:09	0705a007.d	1	TOXAPH	
7	05-JUL-2013 13:27	0705a008.d	1	WU65MBW1	
8	05-JUL-2013 13:45	0705a009.d	1	WU65LCSW1	
9	05-JUL-2013 14:02	0705a010.d	1	WU65LCSDW1	
10	05-JUL-2013 14:20	0705a011.d	1	WU65QLS	
11	05-JUL-2013 14:38	0705a012.d	1	WU65A	
12	05-JUL-2013 14:56	0705a013.d	1	WU65B	
13	05-JUL-2013 15:14	0705a014.d	1	WV55MBW1	
14	05-JUL-2013 15:31	0705a015.d	1	WV55LCSW1	
15	05-JUL-2013 15:49	0705a016.d	1	WV55LCSDW1	
16	05-JUL-2013 16:07	0705a017.d	1	WV55QLS	
17	05-JUL-2013 16:25	0705a018.d	1	WV55A	
18	05-JUL-2013 16:43	0705a019.d	1	WV55B	
19	05-JUL-2013 17:00	0705a020.d	1	WV55C	
20	05-JUL-2013 17:18	0705a021.d	1	WV55D	
21	05-JUL-2013 17:36	0705a022.d	1	WV55E	
22	05-JUL-2013 17:54	0705a023.d	1	WV55F	
23	05-JUL-2013 18:12	0705a024.d	1	DS	
24	05-JUL-2013 18:29	0705a025.d	1	INDAE	
25	05-JUL-2013 18:47	0705a026.d	1	TOXAPH	
26	05-JUL-2013 19:05	0705a027.d	1	WV19MBS1	WV19MBS1
27	05-JUL-2013 19:23	0705a028.d	1	WV19LCSS1	WV19LCSS1
28	05-JUL-2013 19:41	0705a029.d	1	WV19LCSDS1	WV19LCSDS1
29	05-JUL-2013 19:58	0705a030.d	1	WV19QLS	
30	05-JUL-2013 20:16	0705a031.d	1	WV19A	201306211100
31	05-JUL-2013 20:34	0705a032.d	1	WV19B	201306211200
32	05-JUL-2013 20:52	0705a033.d	1	DS	
33	05-JUL-2013 21:10	0705a034.d	1	INDAE	
34	05-JUL-2013 21:27	0705a035.d	1	TOXAPH	
35	05-JUL-2013 21:45	0705a036.d	1	WU70MBS1	
36	05-JUL-2013 22:03	0705a037.d	1	WU70LCSS1	
37	05-JUL-2013 22:21	0705a038.d	1	WU70QLS	
38	05-JUL-2013 22:39	0705a039.d	1	WU70B	5
39	05-JUL-2013 22:56	0705a040.d	1	WU79BMS	5
40	05-JUL-2013 23:14	0705a041.d	1	WU70BMSD	5
41	05-JUL-2013 23:32	0705a042.d	1	WU70C	5
42	05-JUL-2013 23:50	0705a043.d	1	DS	
	06-JUL-2013 00:08	0705a044.d	1	INDAE	

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a034.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a034.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m
Compound Sublist: INDA
Instrument, Inj. Vol.: ecd6.i, 1ul
Operator: ar
Injection Date: 05-JUL-2013 21:10
Report Date: 07/08/2013 14:38
Matrix: NONE
Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.124	-0.007	6241944	3.300	0.001	31779643	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.277	-0.009	2757546	4.709	-0.001	14440737	22.0278	19.0197	14.7	alpha-BHC
4.636	-0.008	1005077	5.140	0.002	5426165	19.9037	16.4969	18.7	beta-BHC
4.806	-0.008	2357991	5.451	0.001	12496631	21.7543	19.0948	13.0	delta-BHC
4.559	-0.010	2466008	5.066	0.000	12665354	21.6049	18.8655	13.5	gamma-BHC (Lindane)
5.004	-0.011	2349530	5.529	0.000	11738208	21.4503	18.0257	17.4	Heptachlor
5.295	-0.012	2276751	5.867	0.000	10768131	21.4521	17.4670	20.5	Aldrin
5.869	-0.014	2022826	6.421	-0.001	9101538	20.5587	16.1990	23.7	Heptachlor epoxide b
6.245	-0.015	1856248	6.809	0.000	8075228	20.1837	15.9942	23.2	Endosulfan I
6.467	-0.015	4010144	7.066	-0.001	15839925	41.2657	31.0867	28.1	Dieldrin
6.169	-0.015	3000327	6.869	-0.001	15964467	40.5814	31.1227	26.4	4,4'-DDE
6.685	-0.016	3466873	7.355	-0.001	12378934	43.3163	42.9464	0.9	Endrin
6.891	-0.015	3294179	7.544	-0.001	12971863	41.4598	42.9591	3.6	Endosulfan II
6.727	-0.013	3171441	7.407	0.000	12396115	41.4959	39.9484	3.8	4,4'-DDD
7.657	-0.018	2898140	8.086	-0.001	11020357	41.3099	42.8684	3.7	Endosulfan sulfate
6.983	-0.015	3122461	7.694	0.000	11129995	41.4519	40.4808	2.4	4,4'-DDT
7.408	-0.016	7001315	8.276	-0.005	20719580	196.3834	202.4911	3.1	Methoxychlor
7.911	-0.018	3534660	8.577	-0.002	10533476	40.5745	40.9980	1.0	Endrin ketone
7.267	-0.017	2626335	7.842	-0.001	9982469	41.8199	43.0628	2.9	Endrin aldehyde
5.988	-0.014	2112616	6.604	0.000	9144613	20.9016	15.4651	29.9	gamma-Chlordane
6.112	-0.014	2003537	6.742	-0.001	8555323	20.3650	15.7827	25.4	alpha-Chlordane
2.305	-0.006	2863453	2.467	-0.002	10877080	20.8762	16.5355	23.2	Hexachlorobutadiene
4.133	-0.007	1983130	4.587	0.001	12420650	19.9115	19.8411	0.4	Hexachlorobenzene
8.906	-0.021	5310961	10.286	-0.003	13978626	80.0000	80.0000	0.0	Hexabromobiphenyl
3.793	-0.006	3507695	4.128	-0.001	20099613	41.3863	38.2389	7.9	Tetrachloro-m-xylen
8.756	-0.022	2656633	9.722	-0.002	9433234	39.7440	41.7474	4.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	103.5	95.6	95.6~	115- 0
Decachlorobiphenyl	99.4	104.4	99.4~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

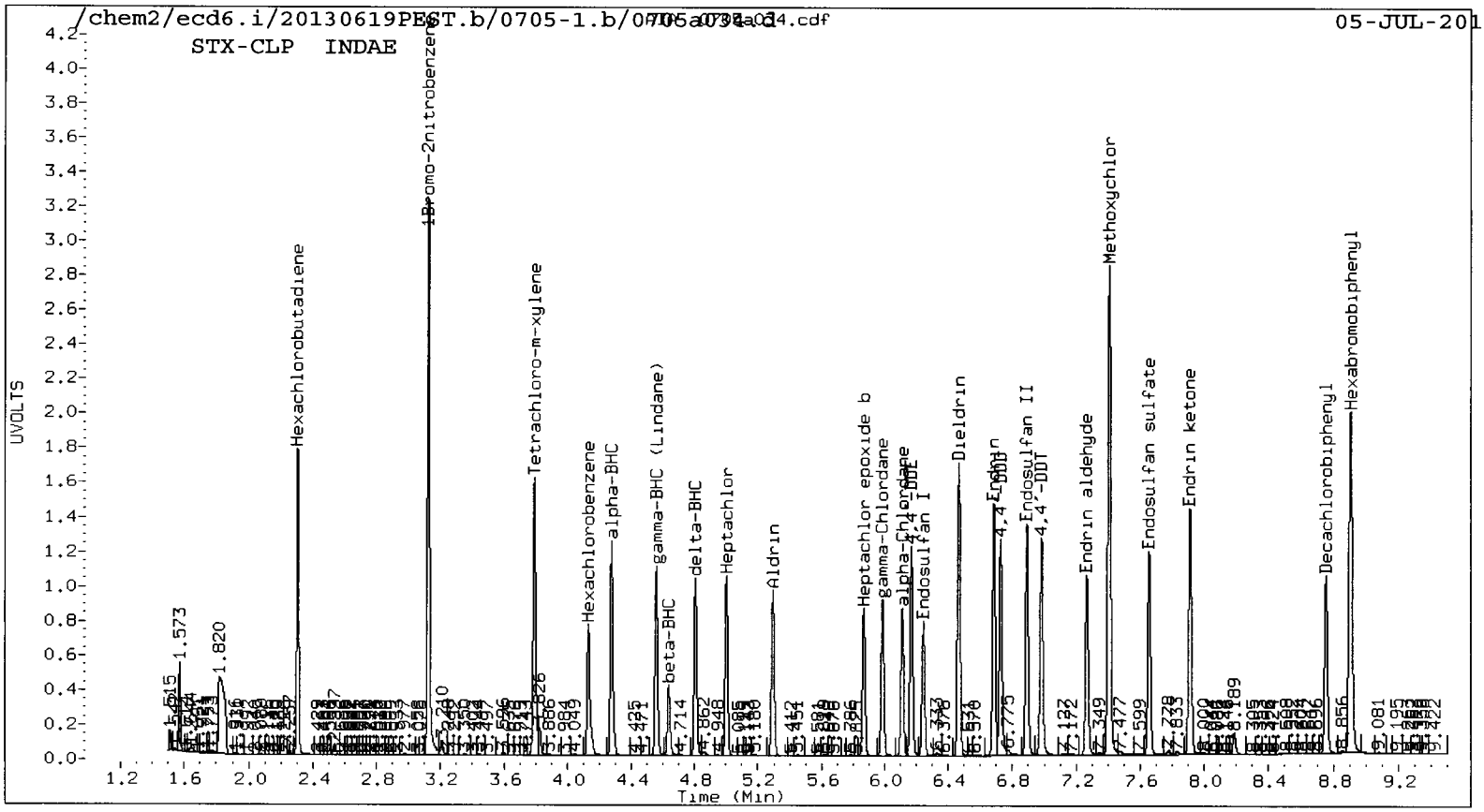
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	6241944	11.6
Hexabromobiphenyl	4870538	5310961	9.0

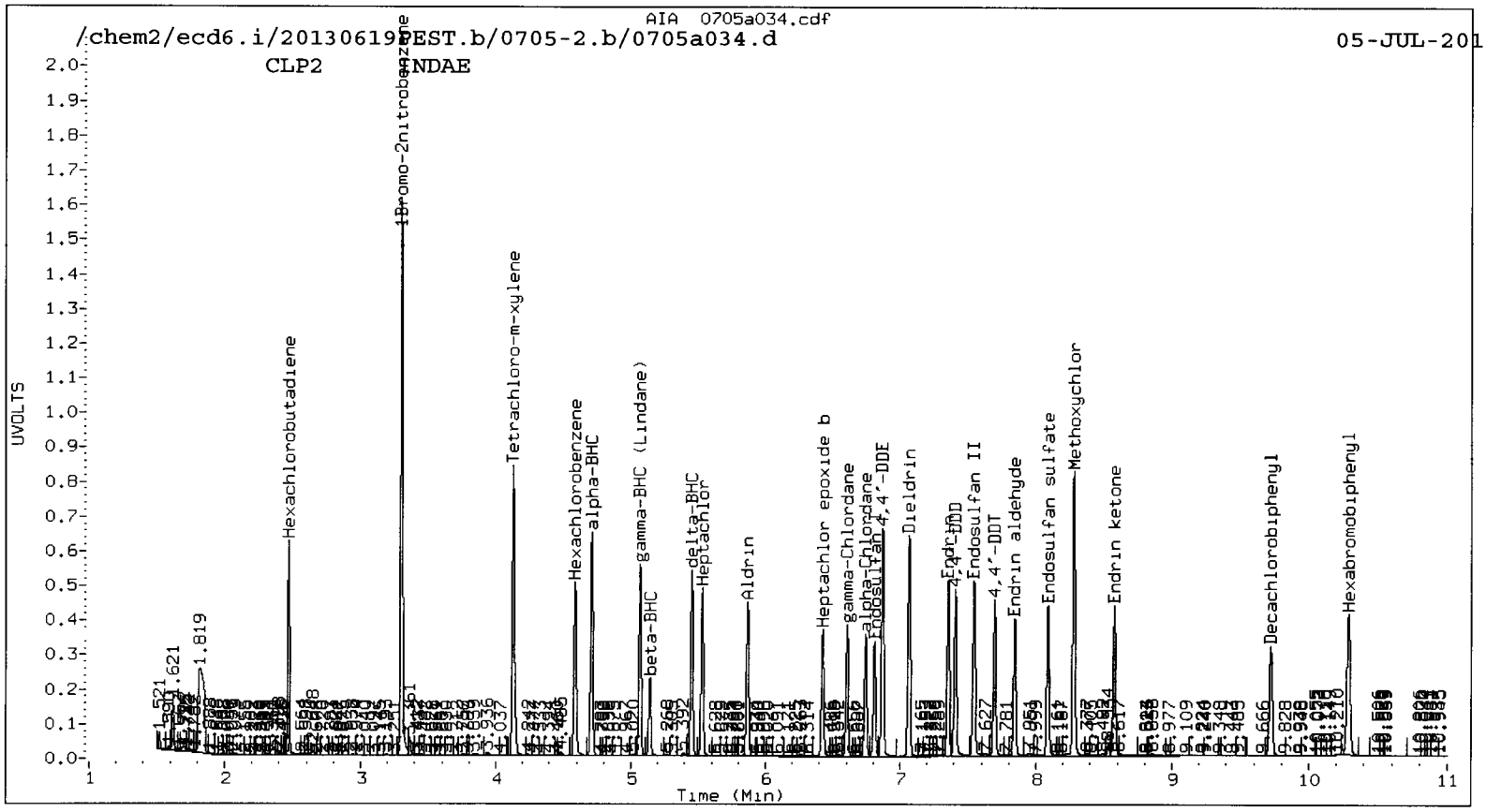
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	31779643	12.2
Hexabromobiphenyl	16454599	13978626	-15.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a034.d
0705a034.cdf
05-JUL-201
STX-CLP INDAE
UVOLTS
Time (Min)
1.573
1.820
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0705a034.cdf
/chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a034.d
05-JUL-201
CLP2 INDAE
UVOLTS
Time (Min)
1.521
1.621
1.819
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
Endrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a035.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a035.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 05-JUL-2013 21:27
Compound Sublist: TOXAPH Report Date: 07/08/2013 14:38
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.125	-0.007	5930187	3.301	0.001	30566341	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.907	-0.020	5415221	10.287	-0.002	14534555	80.0000	80.0000	0.0	Hexabromobiphenyl
3.793	-0.006	2515708	4.129	0.000	15638258	31.2426	30.9323	1.0	Tetrachloro-m-xylen
8.756	-0.021	2323504	9.723	-0.002	8600439	34.0911	36.6060	7.1	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	78.1	77.3	77.3~	150- 0
Decachlorobiphenyl	85.2	91.5	85.2~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

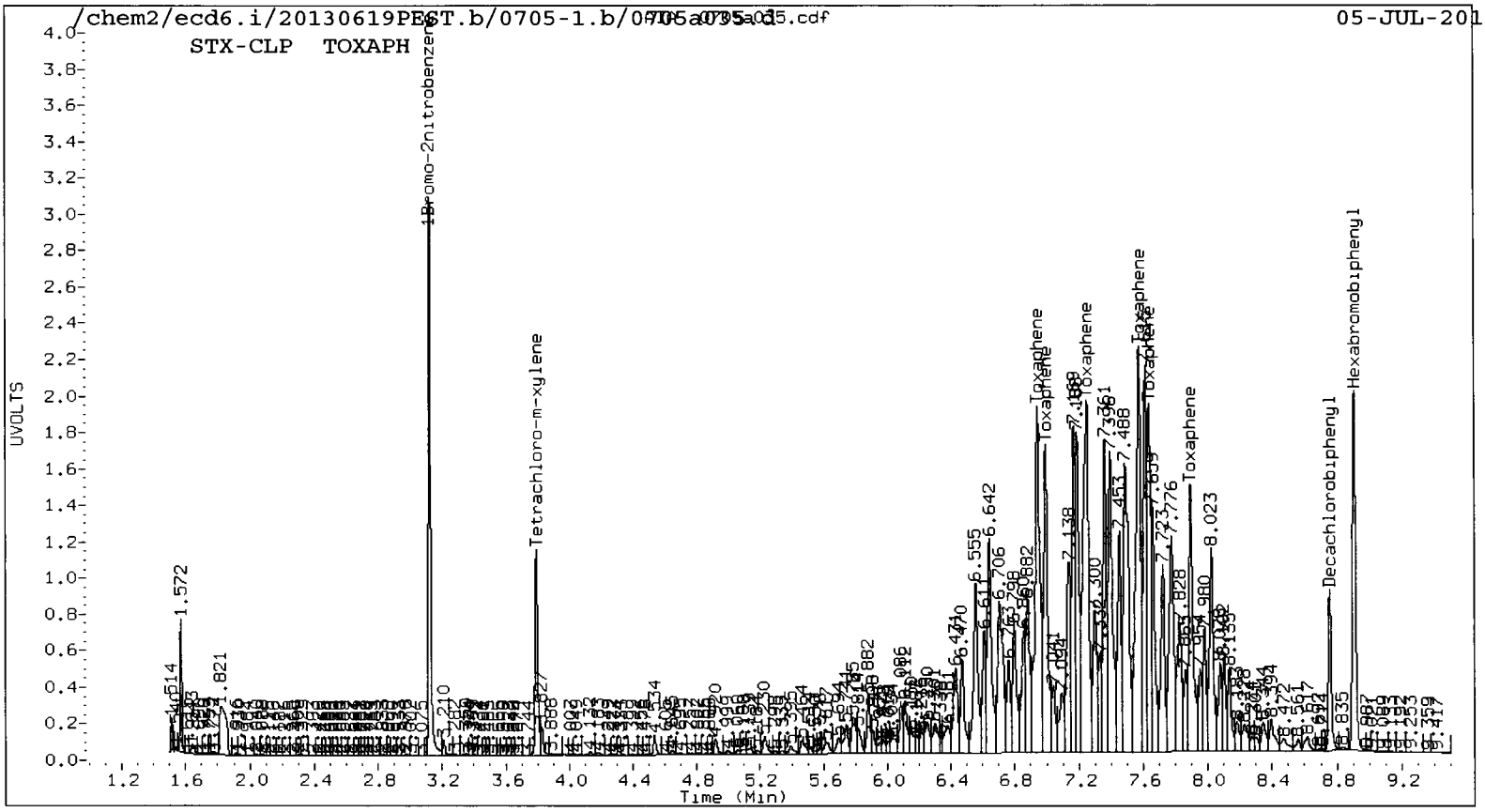
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5930187	6.1
Hexabromobiphenyl	4870538	5415221	11.2

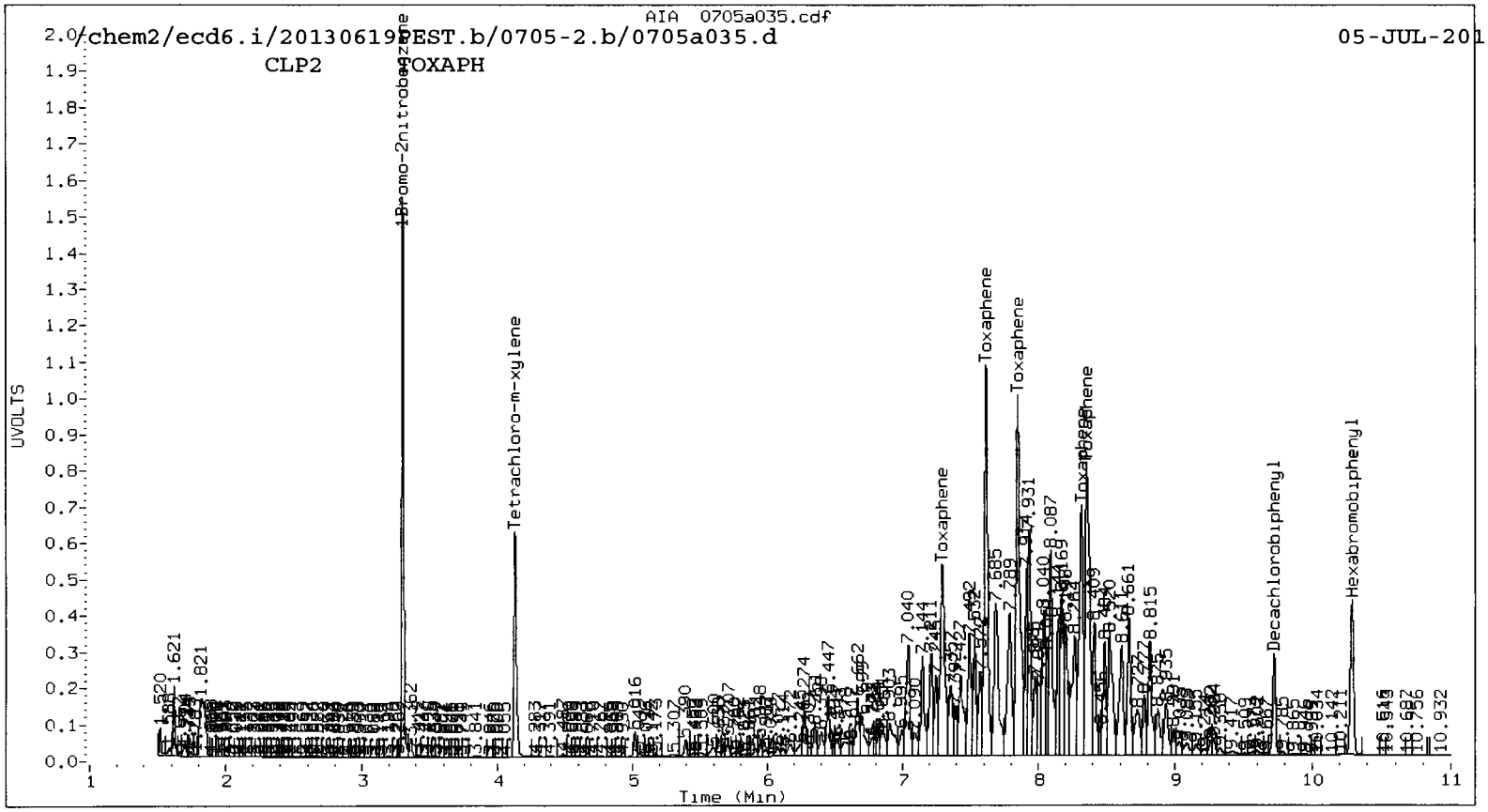
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	30566341	7.9
Hexabromobiphenyl	16454599	14534555	-11.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.943	-0.015	8319613	2393.7	1	7.292	0.001	25639182	2521.3
Toxaphene	2	6.994	-0.016	5864580	2445.3	2	7.616	0.001	37373290	2491.0
Toxaphene	3	7.251	-0.016	9291967	2348.4	3	7.846	0.000	40241910	2444.4
Toxaphene	4	7.576	-0.017	9301424	2307.9	4	8.314	0.000	28040465	2363.1
Toxaphene	5	7.637	0.005	4993335	1865.8	5	8.353	0.000	35980833	2384.5
Toxaphene	6	7.895	-0.018	5177467	2278.9	NS	---			----
Total STX-CLPAve (6 peaks): 2273.323						Total CLP2Ave (5 peaks): 2440.879				RPD = 7
Corrected Ave (6 peaks): 2273.323						Corrected Ave (5 peaks): 2440.879				RPD = 7


/chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a035.d
05-JUL-201
STX-CLP TOXAPH
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
1.572
1.821
6.555
6.642
8.023
UVOLTS
Time (Min)


AIA 0705a035.cdf
/chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a035.d
05-JUL-201
CLP2 TOXAPH
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
1.621
1.821
7.040
7.931
8.087
8.815
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

1/2 7/8/13

Data file 1: /chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a036.d ARI ID: WU70MBS1
Data file 2: /chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a036.d Client ID: WU70MBS1
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 05-JUL-2013 21:45
Compound Sublist: wpest Report Date: 07/08/2013 14:38
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.123	-0.008	7174722	3.300	0.000	35714024	80.0000	80.0000	IS 0.0	1Bromo-2nitrobenzen
4.275	-0.011	3599	4.710	0.000	36889	0.0250	0.0432	53.4*	alpha-BHC
4.609	-0.035	3337	5.155	0.017	76139	0.0575	0.2060	112.7*	beta-BHC
4.779	-0.034	19564	5.461	0.011	59444	0.1570	0.0808	64.1*	delta-BHC
4.552	-0.016	7180	5.044	-0.022	132552	0.0547	0.1757	105.0*	gamma-BHC (Lindane)
5.004	-0.011	9705	5.530	0.000	60002	0.0771	0.0820	6.2	Heptachlor
5.316	0.008	64849	5.851	-0.017	329113	0.5316	0.4750	11.2	Aldrin
5.885	0.002	29405	6.415	-0.007	114161	0.2600	0.1808	35.9	Heptachlor epoxide b
6.243	-0.017	9843	6.809	0.000	91518	0.0931	0.1613	53.6*	Endosulfan I
6.447	-0.035	2325	7.104	0.037	86950	0.0208	0.1518	151.8*	Dieldrin
6.170	-0.014	17825	6.869	-0.001	155702	0.2098	0.3701	25.2	4,4'-DDE
----			7.370	0.014	138897	0.0000	0.3866	---	Endrin
6.904	-0.001	16035	7.549	0.004	102288	0.1751	0.2718	43.3*	Endosulfan II
6.744	0.004	7169	7.402	-0.005	110288	0.0814	0.2851	111.2*	4,4'-DDD
7.657	-0.017	19385	8.087	0.000	126969	0.2397	0.3962	49.2*	Endosulfan sulfate
6.990	-0.008	28086	7.703	0.008	296350	0.3235	0.8647	91.1*	4,4'-DDT
7.396	-0.028	21347	8.292	0.010	215297	0.5195	1.6880	105.9*	Methoxychlor
7.906	-0.024	38516	8.610	0.032	158976	0.3836	0.4964	25.6	Endrin ketone
7.261	-0.023	25436	7.842	0.000	245215	0.3514	0.8487	82.9*	Endrin aldehyde
5.986	-0.016	15659	6.609	0.004	185479	0.1348	0.2791	69.7*	gamma-Chlordane
6.136	0.010	25395	6.743	0.000	93393	0.2246	0.1533	37.7	alpha-Chlordane
2.289	-0.023	5563	2.466	-0.003	447480	0.0353	0.6053	178.0*	Hexachlorobutadiene
4.131	-0.009	72896	4.568	-0.019	343163	0.6368	0.4878	26.5	Hexachlorobenzene
5.767	-0.020	7578	6.321	-0.011	96209	0.0919	0.2067	76.9*	Oxychlordane
5.843	-0.019	10775	6.570	-0.010	113182	0.1711	0.3366	65.2*	2,4-DDE
6.086	-0.025	4533	6.661	-0.029	216475	0.0448	0.5034	167.3*	trans-Nonachlor
6.318	-0.030	6716	7.062	-0.003	250761	0.1183	1.0705	160.2*	2,4-DDD
6.586	-0.001	2095	----			0.0319	0.0000	---	2,4-DDT
6.703	-0.024	2043	7.453	0.037	119888	0.0183	0.2677	174.4*	cis-Nonachlor
7.577	-0.024	34162	8.564	0.000	217488	0.5014	1.0036	66.7*	Mirex
8.905	-0.023	6121490	10.286	-0.003	17423932	80.0000	80.0000	IS 0.0	Hexabromobiphenyl
1.748	-0.010	126122	1.765	0.039	172446378	0.0000	0.0000	---	Hexachloroethane
6.553	-0.028	1818	7.294	-0.042	241931	0.0000	0.0000	---	Kepone
3.791	-0.008	2365930	4.126	-0.002	12139283	24.2858	20.5504	16.7	Tetrachloro-m-xylen
8.755	-0.022	2481400	9.723	-0.002	9571396	32.2072	33.9831	5.4	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	60.7	51.4	51.4	42-112
Decachlorobiphenyl	80.5	85.0	80.5	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

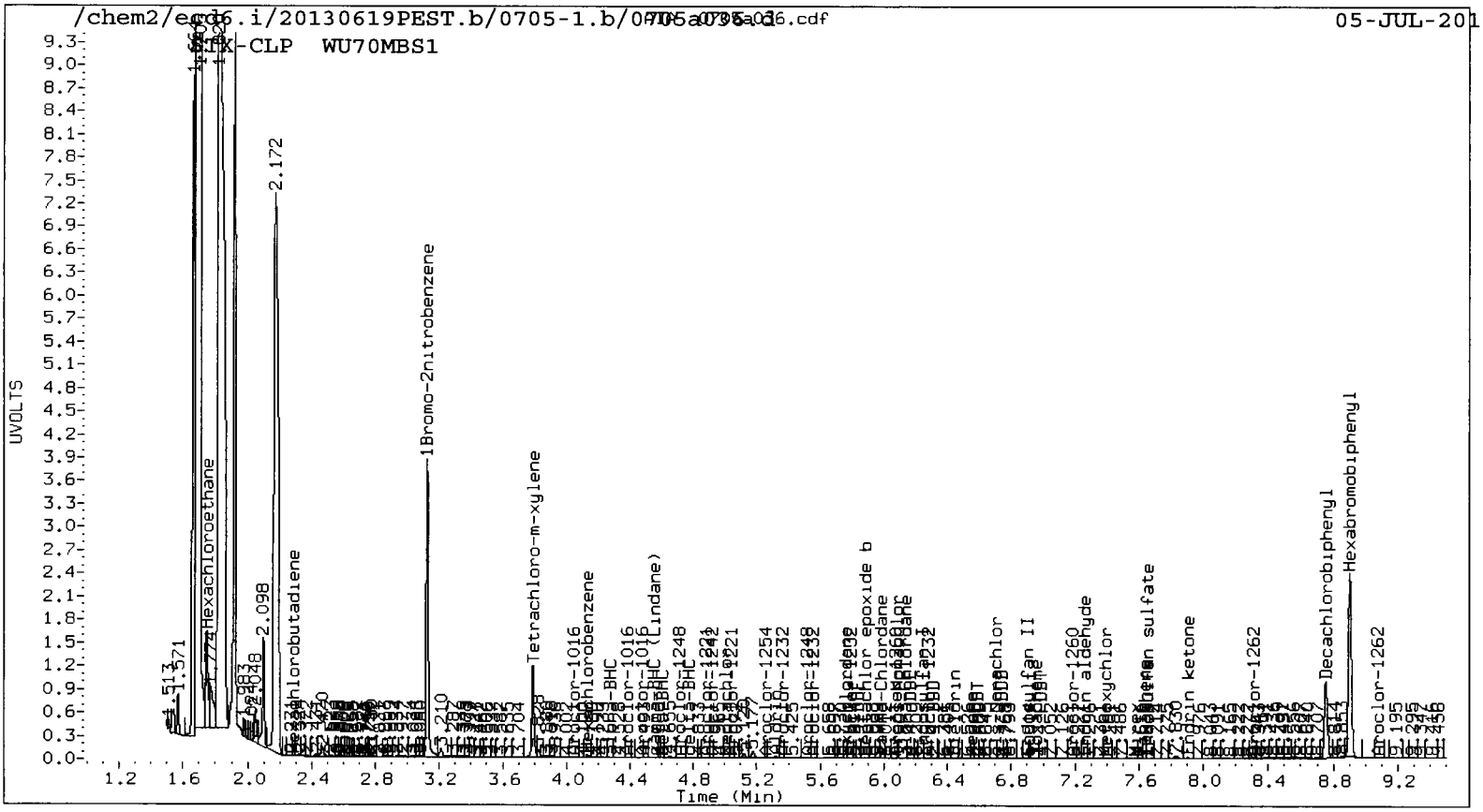
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	7174722	28.3
Hexabromobiphenyl	4870538	6121490	25.7

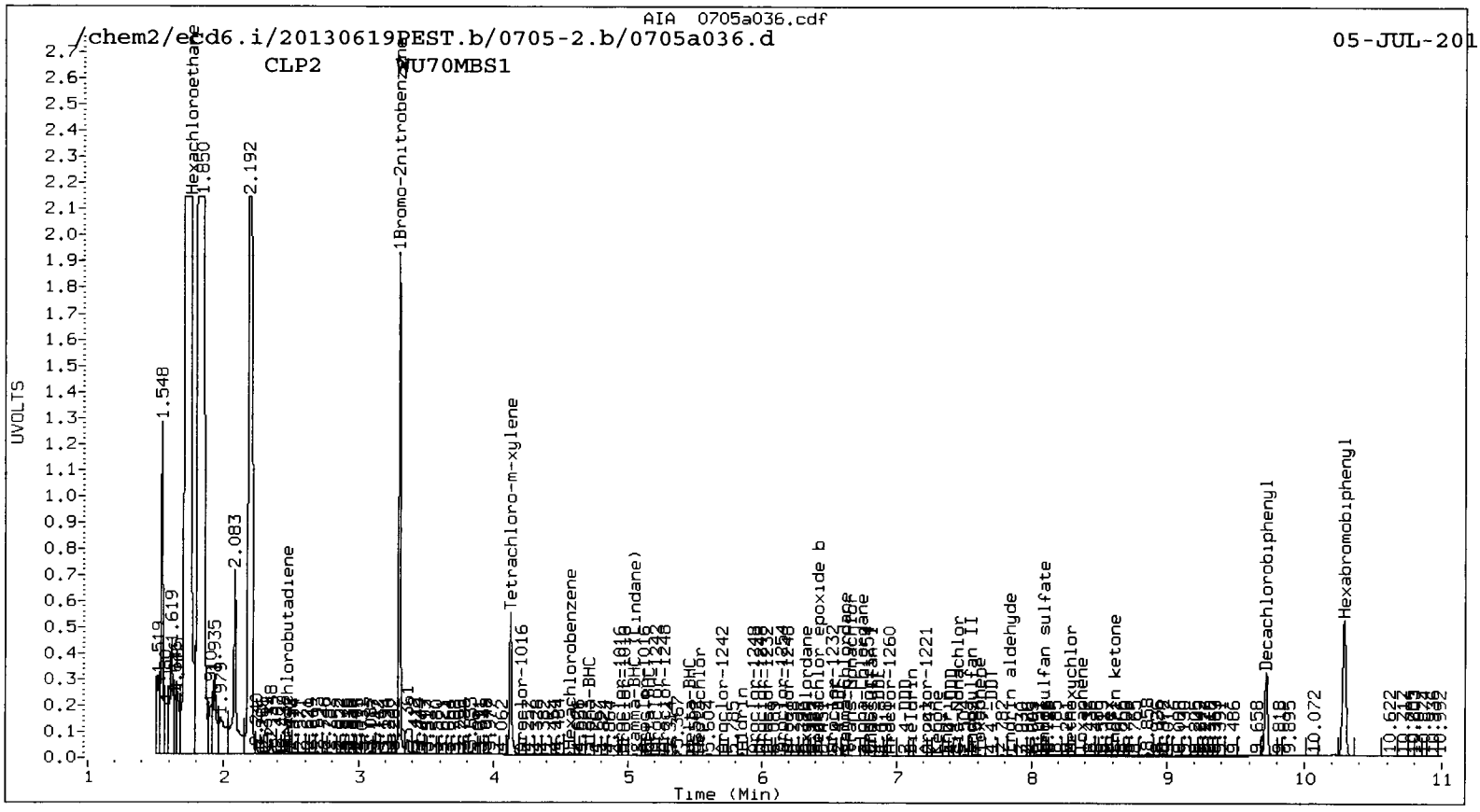
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	35714024	26.1
Hexabromobiphenyl	16454599	17423932	5.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col				CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.961	0.002	32607	8.3	1	7.294	0.003	241931	19.8
Toxaphene	2	6.990	-0.020	28086	10.4	2	7.616	0.001	162912	9.1
Toxaphene	3	7.261	-0.006	25436	5.7	3	7.842	-0.004	245215	12.4
Toxaphene	4	7.577	-0.015	34162	7.5	4	8.292	-0.022	215297	15.1
Toxaphene	5	7.639	0.007	11272	3.7	5	8.368	0.016	277343	15.3
Toxaphene	6	7.906	-0.008	38516	15.0	NS	---			----
Total STX-CLPAve (6 peaks): 8.428						Total CLP2Ave (5 peaks): 14.359				RPD = 52*
Corrected Ave (5 peaks): 7.114						Corrected Ave (5 peaks): 14.359				RPD = 67*


/chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a036.d
0705a036.cdf
05-JUL-201
TFX-CLP WU70MBS1
UVOLTS
Time (Min)
1.571
Hexachloroethane
2.172
2.098
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0705a036.cdf
/chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a036.d
05-JUL-201
CLP2 WU70MBS1
UVOLTS
Time (Min)
1.548
Hexachloroethane
1.850
2.192
2.083
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobutadiene
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 7/8/13

Data file 1: /chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a037.d ARI ID: WU70LCSS1
Data file 2: /chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a037.d Client ID: WU70LCSS1
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 05-JUL-2013 22:03
Compound Sublist: wpest Report Date: 07/08/2013 14:38
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.124	-0.008	7203385	3.300	0.000	35891983	80.0000	80.0000 IS	0.0	1Bromo-2nitrobenzen
4.276	-0.010	1819106	4.709	-0.001	9193705	12.5918	10.7215	16.0	alpha-BHC
4.635	-0.009	819349	5.140	0.001	3954921	14.0601	10.6463	27.6	beta-BHC
4.804	-0.010	660455	5.449	-0.001	3318518	5.2799	4.4897	16.2	delta-BHC
4.558	-0.010	1796824	5.065	-0.001	8581629	13.6410	11.3181	18.6	gamma-BHC (Lindane)
5.004	-0.011	1749515	5.529	0.000	8495810	13.8405	11.5517	18.0	Heptachlor
5.295	-0.012	1689895	5.867	-0.001	7740876	13.7974	11.1178	21.5	Aldrin
5.869	-0.014	1737219	6.421	-0.001	7867323	15.2994	12.3980	21.0	Heptachlor epoxide b
6.245	-0.015	1623533	6.809	0.000	6804963	15.2971	11.9340	24.7	Endosulfan I
6.467	-0.015	3390642	7.066	-0.001	14888087	30.2340	25.8709	15.6	Dieldrin
6.170	-0.014	3158541	6.869	-0.001	14059835	37.0193	24.2692	41.6*	4,4'-DDE
6.685	-0.016	2947521	7.356	-0.001	11762808	31.1538	31.6778	1.7	Endrin
6.891	-0.015	2875637	7.544	-0.001	11523508	30.6164	29.6235	3.3	Endosulfan II
6.726	-0.014	2702580	7.407	0.000	11432159	29.9136	28.5984	4.5	4,4'-DDD
7.657	-0.018	2214986	8.087	-0.001	9057411	26.7083	27.3492	2.4	Endosulfan sulfate
6.983	-0.015	2727074	7.694	0.000	9466603	30.6256	26.7268	13.6	4,4'-DDT
7.407	-0.017	6134368	8.276	-0.005	19515412	145.5579	148.0479	1.7	Methoxychlor
7.911	-0.019	3148619	8.577	-0.001	11152338	30.5750	33.6943	9.7	Endrin ketone
7.267	-0.017	1754678	7.842	-0.001	7435503	23.6359	24.8986	5.2	Endrin aldehyde
5.989	-0.013	1760569	6.605	0.000	7962494	15.0937	11.9231	23.5	gamma-Chlordane
6.112	-0.014	1679076	6.742	0.000	7265459	14.7891	11.8675	21.9	alpha-Chlordane
2.304	-0.007	1821804	2.466	-0.003	7503819	11.5092	10.1004	13.0	Hexachlorobutadiene
4.131	-0.008	1480176	4.586	-0.001	8951937	12.8780	12.6616	1.7	Hexachlorobenzene
5.787	0.000	15437	6.320	-0.013	83181	0.1826	0.1778	2.6	Oxychlordane
----			6.542	-0.038	243931	0.0000	0.7219	---	2,4-DDE
6.069	-0.041	3699	6.685	-0.005	71233	0.0357	0.1603	127.2*	trans-Nonachlor
6.334	-0.014	48548	----			0.8341	0.0000	---	2,4-DDD
6.571	-0.017	32020	----			0.4756	0.0000	---	2,4-DDT
6.774	0.048	98616	----			0.8613	0.0000	---	cis-Nonachlor
7.598	-0.003	27844	----			0.3985	0.0000	---	Mirex
8.904	-0.023	6278158	10.286	-0.003	18007976	80.0000	80.0000	0.0	Hexabromobiphenyl
1.748	-0.010	124655	1.765	0.039	178268347	0.0000	0.0000	---	Hexachloroethane
6.622	0.041	13103	7.289	-0.047	116854	0.0000	0.0000	---	Kepone
3.791	-0.008	2361882	4.127	-0.002	12325965	24.1477	20.7630	15.1	Tetrachloro-m-xylen
8.755	-0.022	2507870	9.723	-0.002	9861199	31.7385	33.8765	6.5	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	60.4	51.9	51.9	42-112
Decachlorobiphenyl	79.3	84.7	79.3	59-123
4,4'-DDE	0.0	0.0	0.0~	0- 0
Endrin	1246153.2	0.0	0.0~	10-200
4,4'-DDD	0.0	0.0	0.0~	0- 0
4,4'-DDT	1225025.2	0.0	0.0~	0- 0
Endrin ketone	0.0	0.0	0.0~	0- 0
Endrin aldehyde	0.0	0.0	0.0~	0- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	7203385	28.8
Hexabromobiphenyl	4870538	6278158	28.9

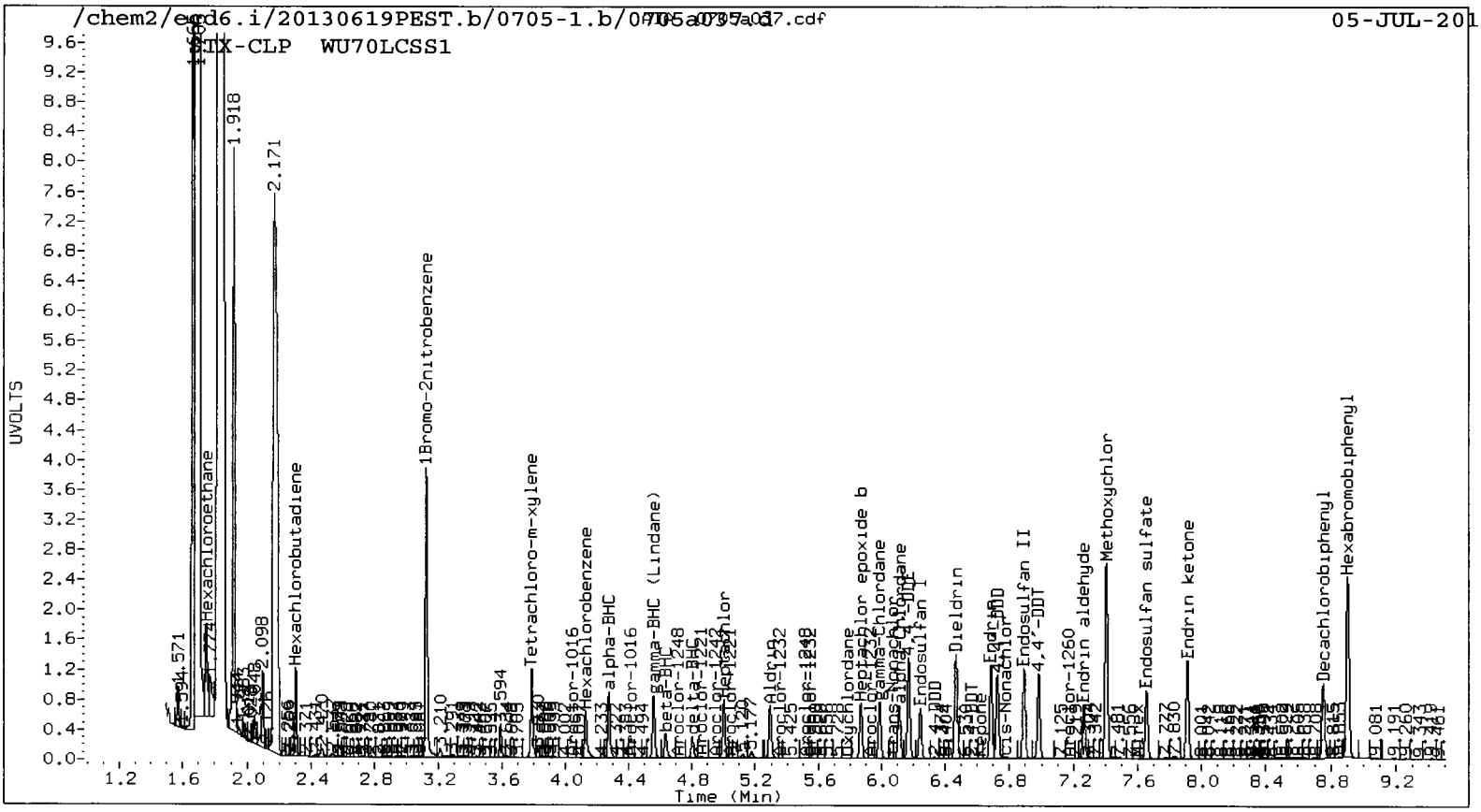
Column 2

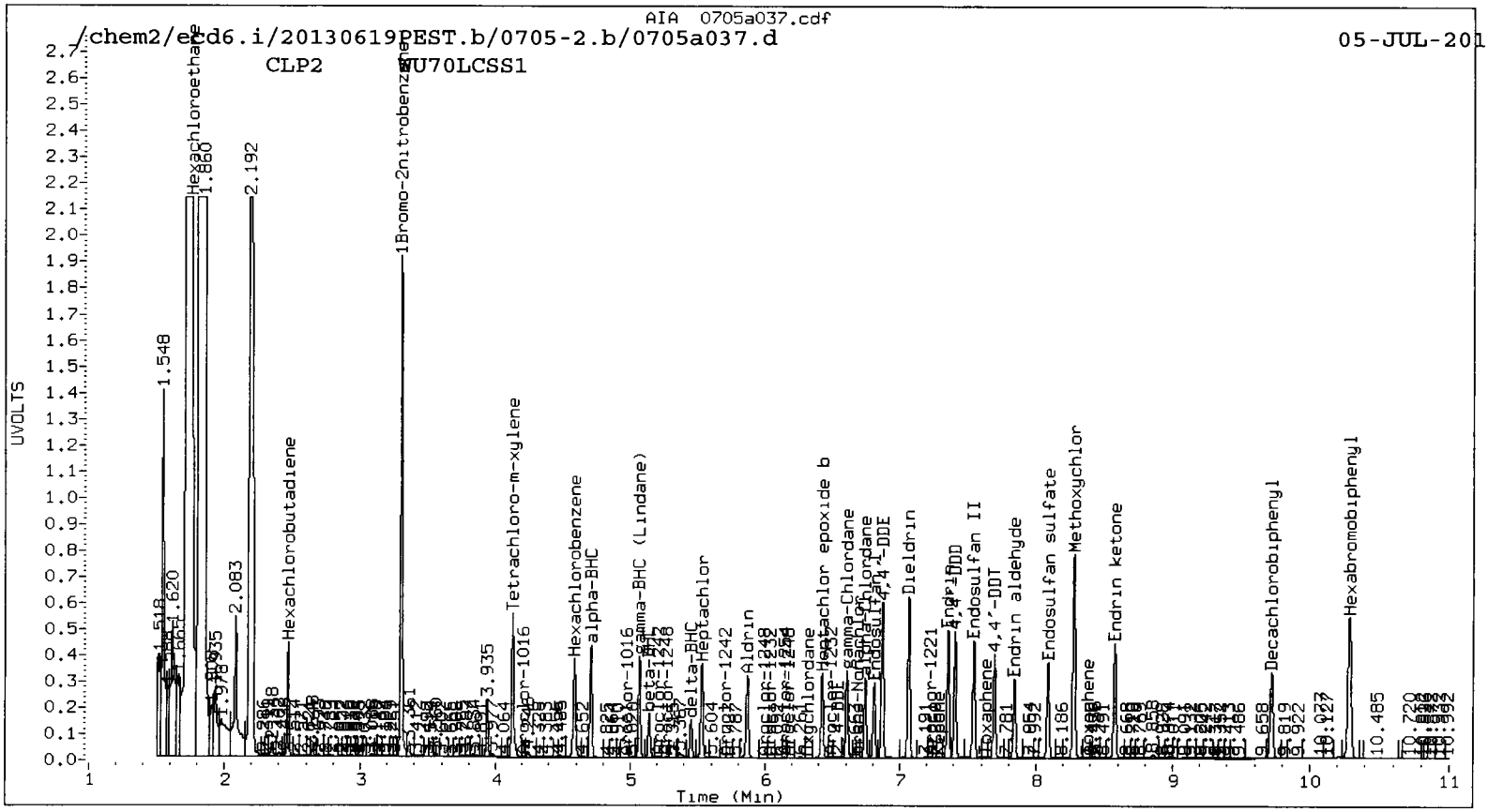
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	35891983	26.7
Hexabromobiphenyl	16454599	18007976	9.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.983	0.025	2727074	676.8	1	7.289	-0.002	116854	9.3
Toxaphene	2	---			0.000	2	7.626	0.011	251457	13.5
Toxaphene	3	7.267	0.000	1754678	382.5	3	7.842	-0.004	7435503	364.5
Toxaphene	4	7.598	0.005	27844	6.0	4	8.276	-0.037	19515412	1327.4
Toxaphene	5	7.657	0.024	2214986	713.9	5	8.377	0.024	309944	16.6
Toxaphene	6	7.911	-0.002	3148619	1195.4	NS	---			----

Total STX-CLPAve (5 peaks): 594.905 Total CLP2Ave (5 peaks): 346.270 RPD = 53*
Corrected Ave (4 peaks): 444.781 Corrected Ave (4 peaks): 100.980 RPD = 126*


/chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a037.d
05-JUL-201
TIX-CLP WU70LCSS1
UVOLTS
Time (Min)
1Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
Heptachlor
Aldrin
Heptachlor epoxide b
Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0705a037.cdf
/chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a037.d
05-JUL-201
CLP2 WU70LCSS1
UVOLTS
Time (Min)
Hexachloroethane
1Bromo-2nitrobenzene
Hexachlorobutadiene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
Heptachlor
Aldrin
Heptachlor epoxide b
Chlordane
Endosulfan I
4,4'-DDE
Dieldrin
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

42 7/8/13

Data file 1: /chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a039.d ARI ID: WU70B
Data file 2: /chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a039.d Client ID: LF-TP-001-20130619-
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 05-JUL-2013 22:39
Compound Sublist: wpest Report Date: 07/08/2013 14:38
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 5.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.123	-0.009	5489362	3.299	0.000	22025553	80.0000	80.0000 IS	0.0	1Bromo-2nitrobenzen
4.264	-0.023	328179	4.695	-0.016	445381	2.9810	0.8464	111.5*	alpha-BHC
4.632	-0.013	111567	5.141	0.002	183299	2.5123	0.8041	103.0*	beta-BHC
4.788	-0.026	39078	5.457	0.007	218667	0.4100	0.4821	16.2	delta-BHC
4.567	-0.002	8466	5.055	-0.011	339958	0.0843	0.7306	158.6*	gamma-BHC (Lindane)
4.999	-0.016	105781	5.537	0.007	114006	1.0981	0.2526	125.2*	Heptachlor
5.285	-0.022	14519	5.862	-0.006	659577	0.1556	1.5437	163.4*	Aldrin
5.862	-0.021	211763	6.402	-0.020	343482	2.4473	0.8821	94.0*	Heptachlor epoxide b
6.234	-0.026	434527	6.809	0.000	108665	5.3725	0.3105	178.1*	Endosulfan I
6.488	0.006	63307	7.107	0.039	146740	0.7408	0.4155	56.3*	Dieldrin
6.171	-0.013	313601	6.890	0.019	236419	4.8232	0.6650	151.5*	4,4'-DDE
6.672	-0.029	19196	7.369	0.013	126297	0.2476	0.6619	91.1*	Endrin
6.919	0.013	25396	7.528	-0.017	422246	0.3300	2.1125	146.0*	Endosulfan II
6.749	0.009	10559	7.405	-0.001	15946	0.1426	0.0776	59.0*	4,4'-DDD
7.654	-0.021	69892	8.050	-0.037	1305414	1.0286	7.6711	152.7*	Endosulfan sulfate
6.993	-0.005	101538	7.687	-0.008	162666	1.3917	0.8938	43.6*	4,4'-DDT
7.403	-0.021	73426	8.284	0.002	107618	2.1264	1.5888	28.9	Methoxychlor
7.900	-0.030	78749	8.583	0.005	400083	0.9333	2.3524	86.4*	Endrin ketone
7.265	-0.019	53235	7.837	-0.006	113813	0.8752	0.7417	16.5	Endrin aldehyde
5.987	-0.015	88435	6.606	0.002	218307	0.9949	0.5327	60.5*	gamma-Chlordane
6.120	-0.007	287406	6.714	-0.028	430758	3.3219	1.1466	97.4*	alpha-Chlordane
2.316	0.005	19666	2.457	-0.013	251190	0.1630	0.5510	108.7*	Hexachlorobutadiene
4.131	-0.009	38814	4.565	-0.022	892058	0.4431	2.0561	129.1*	Hexachlorobenzene
5.796	0.009	66941	6.316	-0.016	9901809	0.9664	34.4940	189.1*	Oxychlordane
5.904	0.043	57720	6.571	-0.009	146768	1.0910	0.7078	42.6*	2,4-DDE
----			6.683	-0.007	770177	0.0000	3.3724	---	trans-Nonachlor
6.333	-0.015	328641	7.048	-0.017	274588	6.8913	2.2074	103.0*	2,4-DDD
6.584	-0.003	29222	7.350	-0.003	301035	0.5298	2.2209	123.0*	2,4-DDT
6.715	-0.012	121353	7.445	0.030	89148	1.2936	0.3748	110.1*	cis-Nonachlor
7.599	-0.001	61222	8.540	-0.025	149419	1.0694	1.2984	19.3	Mirex
8.909	-0.018	5143914	10.288	-0.001	9253280	80.0000	80.0000	0.0	Hexabromobiphenyl
1.751	-0.007	28979	1.719	-0.007	12713891	0.0000	0.0000	---	Hexachloroethane
6.537	-0.044	51594	7.316	-0.020	164159	0.0000	0.0000	---	Kepone
3.790	-0.009	547436	4.126	-0.002	1904159	7.3446	5.2269	33.7	Tetrachloro-m-xylene
8.759	-0.018	499560	9.725	0.000	1084839	7.7163	7.2528	6.2	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	18.4	13.1	13.1~	42-112
Decachlorobiphenyl	19.3	18.1	18.1~	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5489362	-1.8
Hexabromobiphenyl	4870538	5143914	5.6

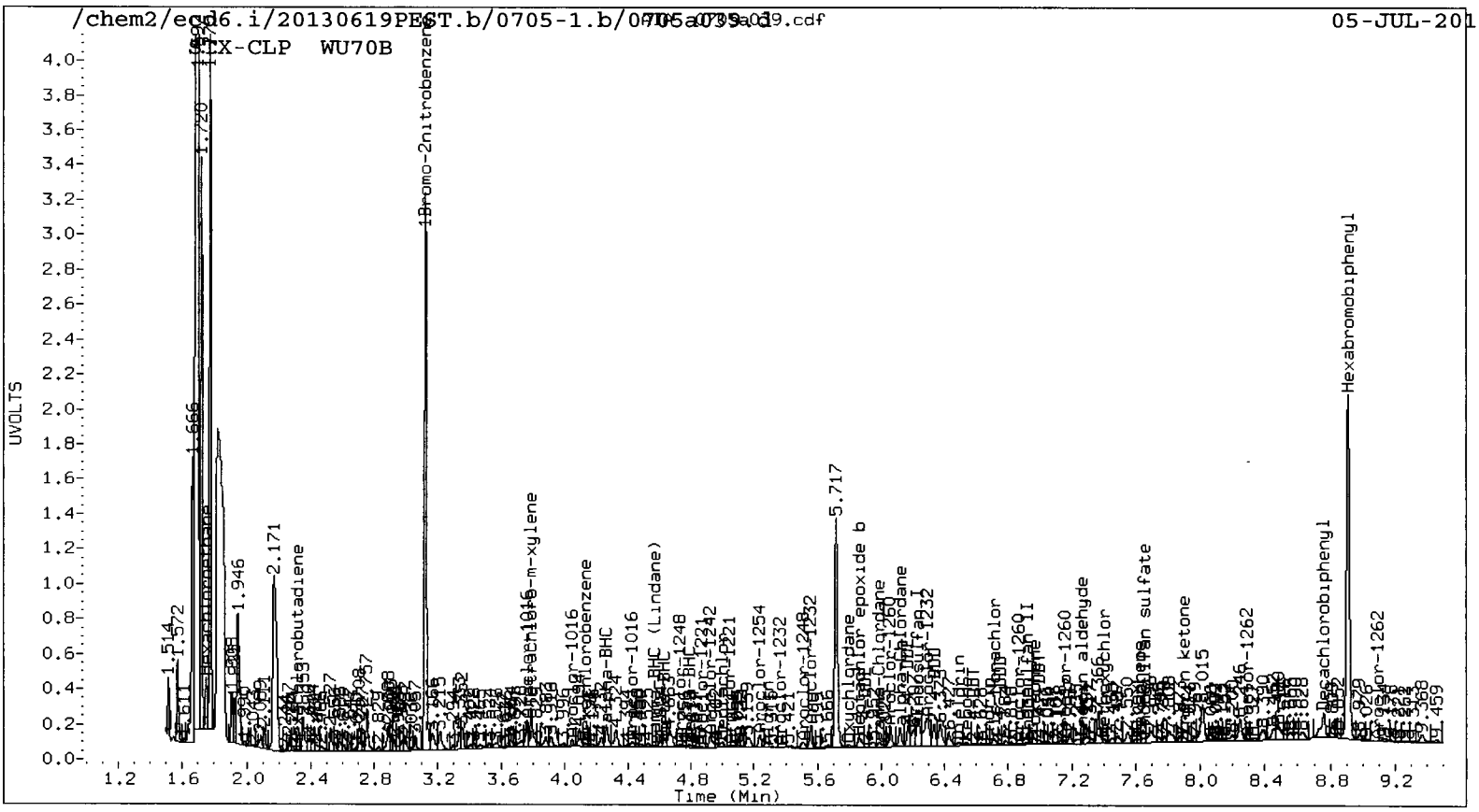
Column 2

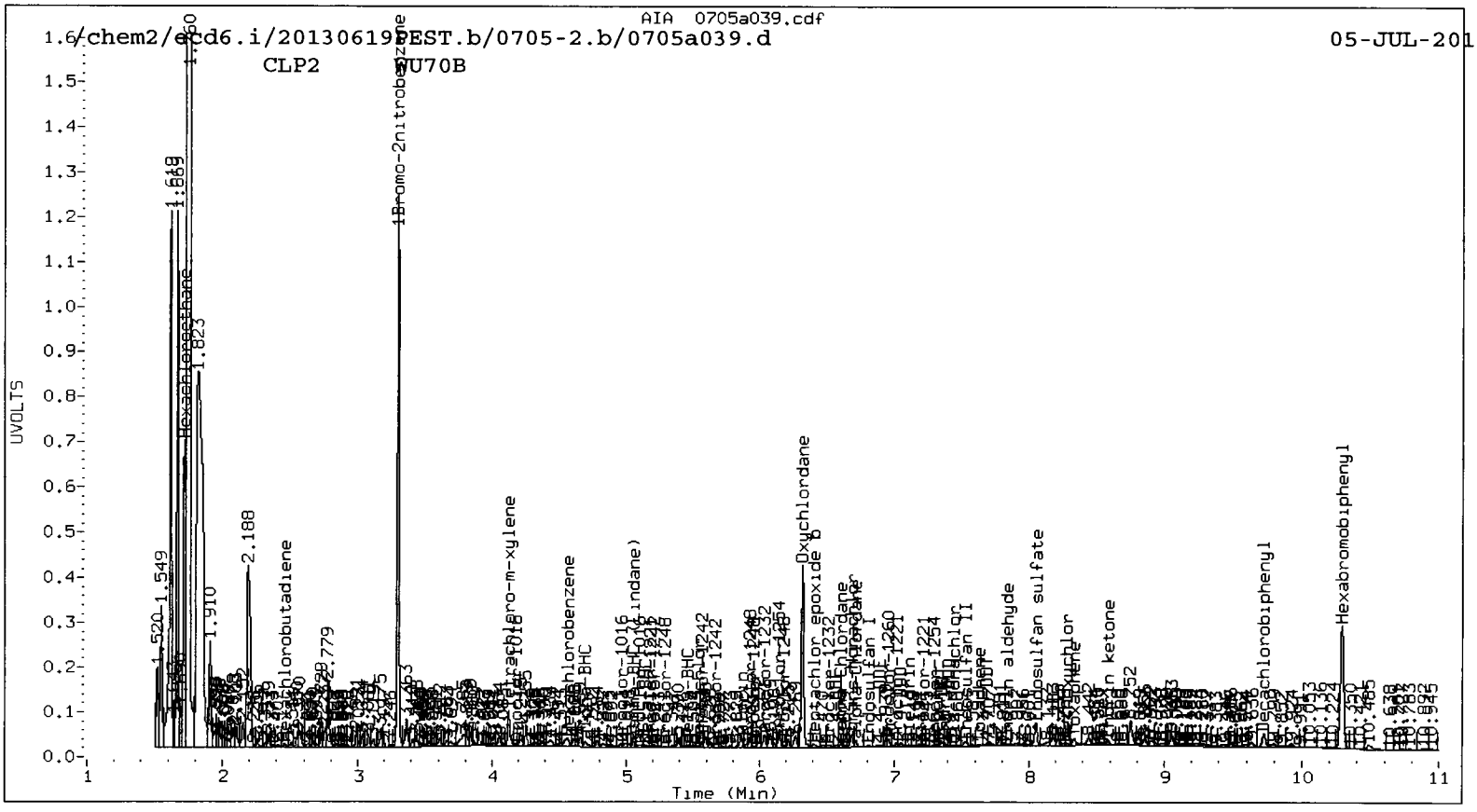
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	22025553	-22.2
Hexabromobiphenyl	16454599	9253280	-43.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

Cpnd	STX-CLP Col Peak#	RT	Shift	Height	Amount	CLP2 Col Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.963	0.004	123816	37.5	1	7.293	0.002	78234	12.1
Toxaphene	2	6.993	-0.017	101538	44.6	2	7.634	0.019	159884	16.7
Toxaphene	3	7.265	-0.002	53235	14.2	3	7.837	-0.009	113813	10.9
Toxaphene	4	7.599	0.007	61222	16.0	4	8.336	0.023	543078	71.9
Toxaphene	5	7.626	-0.006	49662	19.5	5	---			0.0
Toxaphene	6	7.900	-0.014	78749	36.5	NS	---			----

Total STX-CLPAve (6 peaks): 28.042 Total CLP2Ave (4 peaks): 27.893 RPD = 1
Corrected Ave (6 peaks): 28.042 Corrected Ave (3 peaks): 13.228 RPD = 72*


/chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a039.d
0705a039.cdf
05-JUL-201
TCX-CLP WU70B
UVOLTS
Time (Min)
1.514
1.572
1.666
1.720
1.946
2.171
1Bromo-2nitrobenzene
Hexachlorobutadiene
1016-m-xylene
Pentachlorobenzene
alpha-BHC
1016
gamma-BHC (Lindane)
1248
1242
1221
1254
1232
5.717
Oxychlordane
Heptachlor epoxide b
Chlordane
Endosulfan I
1260
Endosulfan II
4,4'-DDD
Endrin aldehyde
Endosulfan sulfate
4,4'-DDT
Endrin ketone
1262
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0705a039.cdf
/chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a039.d
05-JUL-201
CLP2 WU70B
UVOLTS
Time (Min)
1.520
1.549
1.618
1.660
1.823
1.910
2.188
2.779
1Bromo-2nitrobenzene
Hexachlorobutadiene
1016-m-xylene
Pentachlorobenzene
alpha-BHC
1016
gamma-BHC (Lindane)
1248
1242
1221
1254
1232
Oxychlordane
Heptachlor epoxide b
Chlordane
Endosulfan I
1260
Endosulfan II
4,4'-DDD
Endrin aldehyde
Endosulfan sulfate
4,4'-DDT
Endrin ketone
1262
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a040.d ARI ID: WU79BMS
Data file 2: /chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a040.d Client ID: 5
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 05-JUL-2013 22:56
Compound Sublist: wpest Report Date: 07/08/2013 14:38
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 5.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.123	-0.009	6599131	3.299	-0.001	25067171	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.267	-0.019	459417	4.707	-0.003	762289	3.4713	1.2729	92.7*	alpha-BHC
4.633	-0.011	246891	5.139	0.001	462326	4.6246	1.7820	88.7*	beta-BHC
4.798	-0.015	133267	5.450	0.000	224451	1.1629	0.4348	91.1*	delta-BHC
4.558	-0.010	148282	5.058	-0.008	558577	1.2288	1.0548	15.2	gamma-BHC (Lindane)
5.003	-0.012	262692	5.529	-0.001	343809	2.2685	0.6693	108.9*	Heptachlor
5.296	-0.012	206603	5.865	-0.002	733266	1.8413	1.5079	19.9	Aldrin
5.868	-0.015	289405	6.420	-0.002	835742	2.7821	1.8858	38.4	Heptachlor epoxide b
6.237	-0.023	232458	6.808	-0.001	376322	2.3908	0.9450	86.7*	Endosulfan I
6.468	-0.015	472999	7.066	-0.002	1217804	4.6039	3.0300	41.2*	Dieldrin
6.170	-0.014	491137	6.868	-0.002	1275064	6.2834	3.1514	66.4*	4,4'-DDE
6.685	-0.016	365498	7.355	-0.001	1362918	4.3629	6.4275	38.3	Endrin
6.890	-0.015	174498	7.543	-0.002	928305	2.0982	4.1790	66.3*	Endosulfan II
6.724	-0.016	301767	7.406	-0.001	789996	3.7722	3.4607	8.6	4,4'-DDD
7.656	-0.018	159358	8.086	-0.001	421109	2.1701	2.2267	2.6	Endosulfan sulfate
6.983	-0.015	287758	7.694	-0.001	1114469	3.6496	5.5100	40.6*	4,4'-DDT
7.407	-0.018	419613	8.276	-0.006	1381783	11.2447	18.3566	48.1*	Methoxychlor
7.910	-0.019	332089	8.577	-0.001	1057781	3.6419	5.5965	42.3*	Endrin ketone
7.267	-0.017	156226	7.840	-0.003	549221	2.3766	3.2206	30.2	Endrin aldehyde
5.988	-0.014	258994	6.604	0.000	798928	2.4237	1.7129	34.4	gamma-Chlordane
6.115	-0.012	263976	6.742	0.000	574127	2.5380	1.3428	61.6*	alpha-Chlordane
2.304	-0.007	324757	2.466	-0.003	1356157	2.2395	2.6137	15.4	Hexachlorobutadiene
4.130	-0.009	298414	4.585	-0.002	962076	2.8340	1.9484	37.0	Hexachlorobenzene
5.791	0.004	56713	6.316	-0.016	8963422	0.7576	27.4362	189.3*	Oxychlordane
5.903	0.042	49873	6.571	-0.009	124790	0.8722	0.5288	49.0*	2,4-DDE
----			6.683	-0.007	708703	0.0000	2.7924	---	trans-Nonachlor
6.331	-0.018	194819	7.101	0.036	179875	3.7801	1.3011	97.6*	2,4-DDD
6.590	0.002	6018	----			0.1010	0.0000	---	2,4-DDT
----			----			0.0000	0.0000	---	cis-Nonachlor
7.597	-0.004	82634	8.538	-0.026	276387	1.3357	2.1610	47.2*	Mirex
8.906	-0.021	5559059	10.287	-0.002	10283404	80.0000	80.0000	0.0	Hexabromobiphenyl
1.751	-0.007	29137	1.719	-0.007	10296343	0.0000	0.0000	---	Hexachloroethane
6.536	-0.045	41630	7.312	-0.024	229431	0.0000	0.0000	---	Kepone
3.791	-0.009	572235	4.126	-0.002	1930171	6.3862	4.6554	31.4	Tetrachloro-m-xylene
8.756	-0.021	438615	9.724	-0.001	1002446	6.2690	6.0306	3.9	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	16.0	11.6	11.6~	130- 0
Decachlorobiphenyl	15.7	15.1	15.1~	130- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

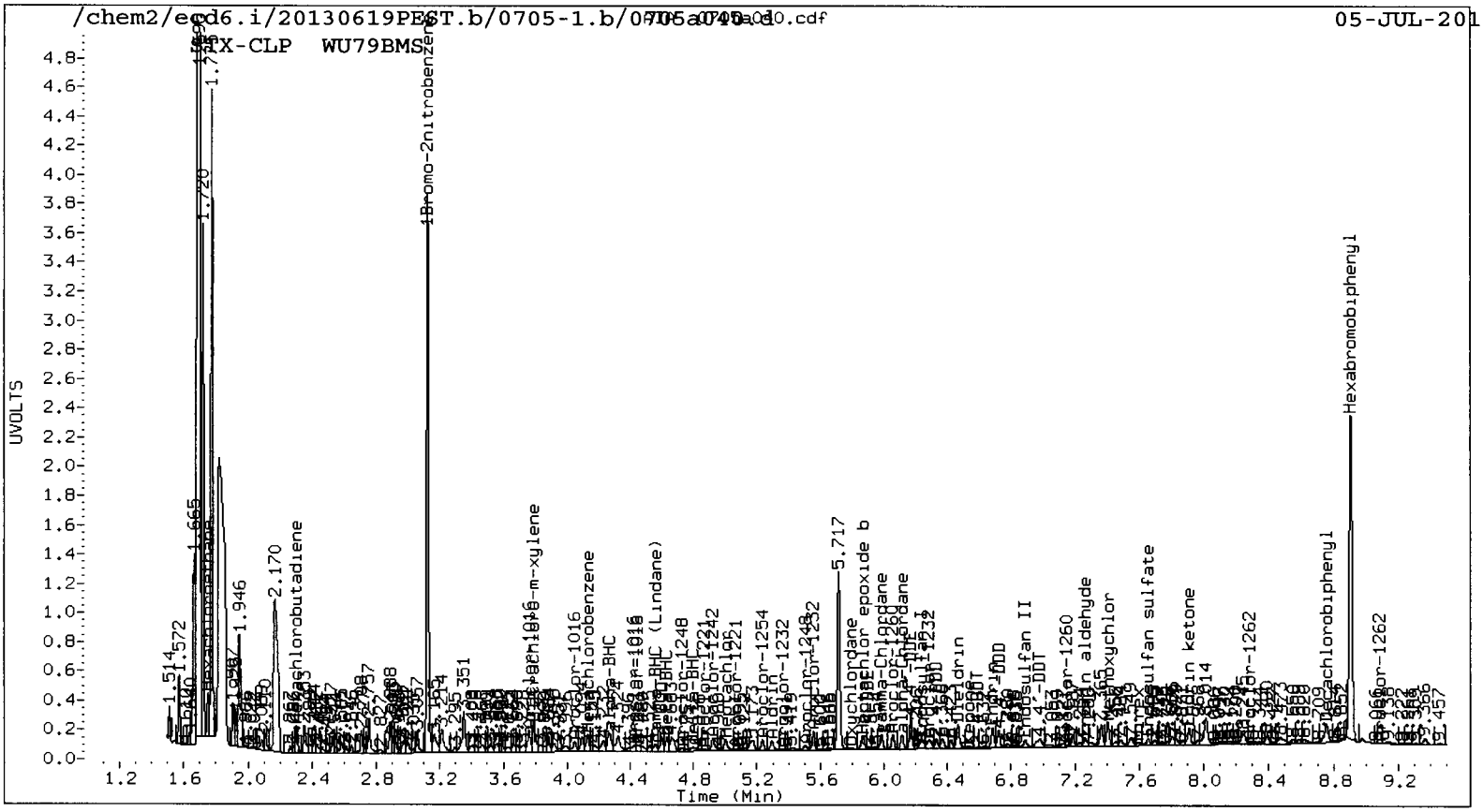
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	6599131	18.0
Hexabromobiphenyl	4870538	5559059	14.1

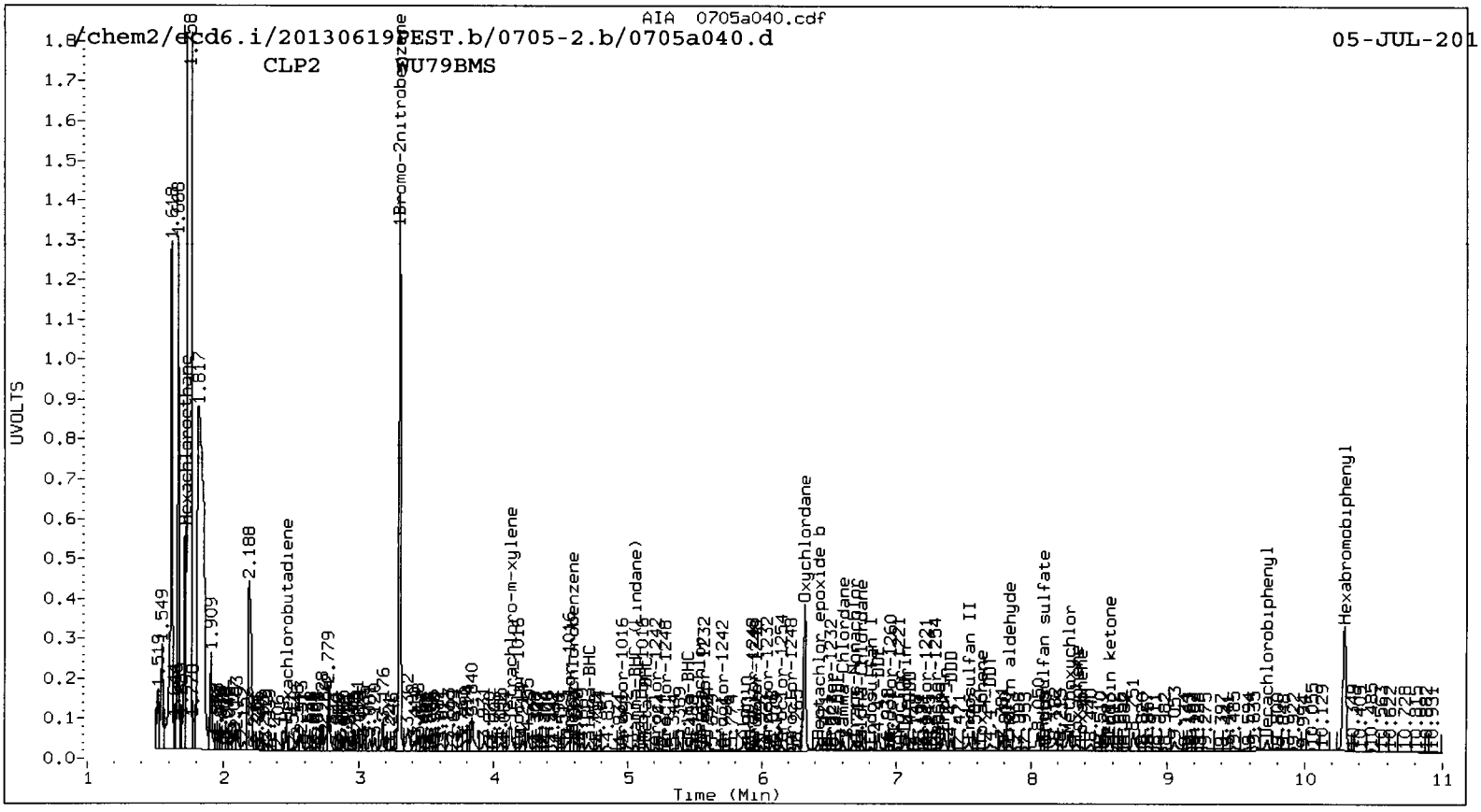
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	25067171	-11.5
Hexabromobiphenyl	16454599	10283404	-37.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col				CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.983	0.025	287758	80.7	1	7.288	-0.003	187252	26.0
Toxaphene	2	---			0.000	2	7.629	0.014	369795	34.8
Toxaphene	3	7.267	0.000	156226	38.5	3	7.840	-0.006	549221	47.2
Toxaphene	4	7.597	0.004	82634	20.0	4	8.336	0.022	745041	88.7
Toxaphene	5	7.656	0.024	159358	58.0	5	8.365	0.012	397159	37.2
Toxaphene	6	7.910	-0.003	332089	142.4	NS	---			----
Total STX-CLPAve (5 peaks): 67.896						Total CLP2Ave (5 peaks): 46.793				RPD = 37
Corrected Ave (4 peaks): 49.272						Corrected Ave (4 peaks): 36.305				RPD = 30


/chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a040.d
AIA 0705a040.cdf
05-JUL-201
MIX-CLP WU79BMS
UVOLTS
Time (Min)
1-Bromo-2nitrobenzene
Hexachlorobutadiene
Hexachlorobenzene
Hexachlorocyclopentadiene
Hexachlorobiphenyl


AIA 0705a040.cdf
/chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a040.d
05-JUL-201
CLP2 WU79BMS
UVOLTS
Time (Min)
1-Bromo-2nitrobenzene
Hexachlorobutadiene
Hexachlorobenzene
Hexachlorocyclopentadiene
Hexachlorobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 7/2/13

Data file 1: /chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a041.d ARI ID: WU70BMSD
Data file 2: /chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a041.d Client ID: LF-TP-001-20130 MSD
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 05-JUL-2013 23:14
Compound Sublist: wpest Report Date: 07/08/2013 14:38
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 5.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.123	-0.009	6139422	3.299	0.000	23361382	80.0000	80.0000 IS	0.0	1Bromo-2nitrobenzen
4.266	-0.020	546590	4.708	-0.002	569023	4.4392	1.0195	125.3*	alpha-BHC
4.633	-0.011	267557	5.139	0.001	424163	5.3870	1.7542	101.7*	beta-BHC
4.797	-0.016	147101	5.450	0.000	239544	1.3798	0.4979	93.9*	delta-BHC
4.558	-0.010	158222	5.058	-0.009	476748	1.4093	0.9660	37.3	gamma-BHC (Lindane)
5.002	-0.013	432598	5.530	0.000	349924	4.0154	0.7310	138.4*	Heptachlor
5.295	-0.012	227838	5.865	-0.003	761250	2.1826	1.6798	26.0	Aldrin
5.868	-0.014	321718	6.420	-0.001	782373	3.3243	1.8943	54.8*	Heptachlor epoxide b
6.237	-0.023	249428	6.808	-0.001	208547	2.7574	0.5619	132.3*	Endosulfan I
6.467	-0.015	509409	7.066	-0.002	1102147	5.3295	2.9425	57.7*	Dieldrin
6.170	-0.014	572026	6.869	-0.002	1105411	7.8662	2.9316	91.4*	4,4'-DDE
6.686	-0.015	377610	7.355	-0.001	1128412	4.8045	5.7574	18.0	Endrin
6.891	-0.015	120096	7.543	-0.002	573959	1.5392	2.7954	58.0*	Endosulfan II
6.724	-0.016	323797	7.406	-0.001	603864	4.3143	2.8620	40.5*	4,4'-DDD
7.656	-0.018	115390	8.086	-0.002	187933	1.6749	1.0751	43.6*	Endosulfan sulfate
6.984	-0.014	184822	7.694	0.000	649890	2.4986	3.4763	32.7	4,4'-DDT
7.407	-0.017	341077	8.276	-0.006	751875	9.7425	10.8066	10.4	Methoxychlor
7.910	-0.019	275276	8.578	0.000	728278	3.2178	4.1687	25.7	Endrin ketone
7.267	-0.017	136505	7.840	-0.002	309486	2.2135	1.9635	12.0	Endrin aldehyde
5.988	-0.014	276912	6.605	0.000	718185	2.7854	1.6522	51.1*	gamma-Chlordane
6.115	-0.011	286839	6.742	-0.001	507443	2.9643	1.2735	79.8*	alpha-Chlordane
2.305	-0.007	328263	2.466	-0.003	1419751	2.4332	2.9361	18.7	Hexachlorobutadiene
4.130	-0.010	321254	4.585	-0.002	851917	3.2794	1.8513	55.7*	Hexachlorobenzene
5.791	0.004	78183	6.316	-0.016	9416956	~~1.1132~~	~~30.9291~~	186.1*	Oxychlordane
5.903	0.042	56886	6.572	-0.008	73666	1.0605	0.3349	104.0*	2,4-DDE
----			6.683	-0.007	678607	0.0000	2.8928	---	trans-Nonachlor
6.331	-0.017	216522	7.107	0.042	103447	4.4781	0.8096	138.8*	2,4-DDD
6.591	0.004	4927	----			0.0881	0.0000	---	2,4-DDT
----			7.448	0.033	42115	0.0000	0.1724	---	cis-Nonachlor
7.599	-0.002	28017	8.539	-0.026	149521	~~0.4827~~	~~1.2648~~	89.5*	Mirex
8.907	-0.020	5215325	10.287	-0.001	9504897	80.0000	80.0000 IS	0.0	Hexabromobiphenyl
1.750	-0.007	29864	1.719	-0.007	11990788	~~0.0000~~	~~0.0000~~	---	Hexachloroethane
6.537	-0.044	44652	7.311	-0.026	69632	~~0.0000~~	~~0.0000~~	---	Kepone
3.791	-0.009	651656	4.126	-0.002	1736966	7.8171	4.4953	54.0*	Tetrachloro-m-xylene
8.757	-0.020	564079	9.724	-0.001	943742	8.5935	6.1424	33.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	19.5	11.2	11.2~	42-112
Decachlorobiphenyl	21.5	15.4	15.4~	59-123
4,4'-DDE	0.0	0.0	0.0~	0- 0
Endrin	960901.5	230.3	230.3~	10-200
4,4'-DDD	0.0	0.0	0.0~	0- 0
4,4'-DDT	499715.3	139.1	139.1~	0- 0
Endrin ketone	0.0	0.0	0.0~	0- 0
Endrin aldehyde	0.0	0.0	0.0~	0- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	6139422	9.8
Hexabromobiphenyl	4870538	5215325	7.1

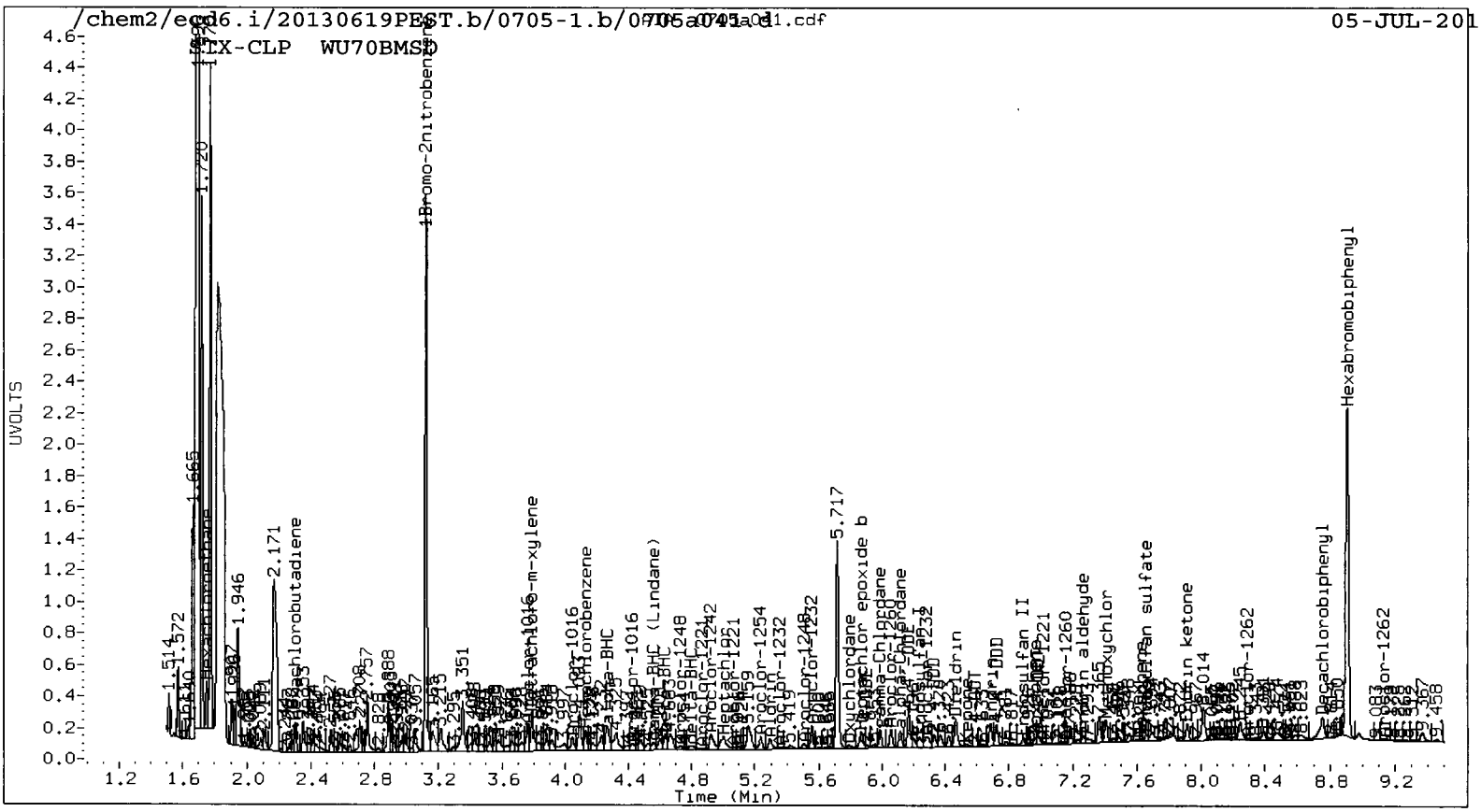
Column 2

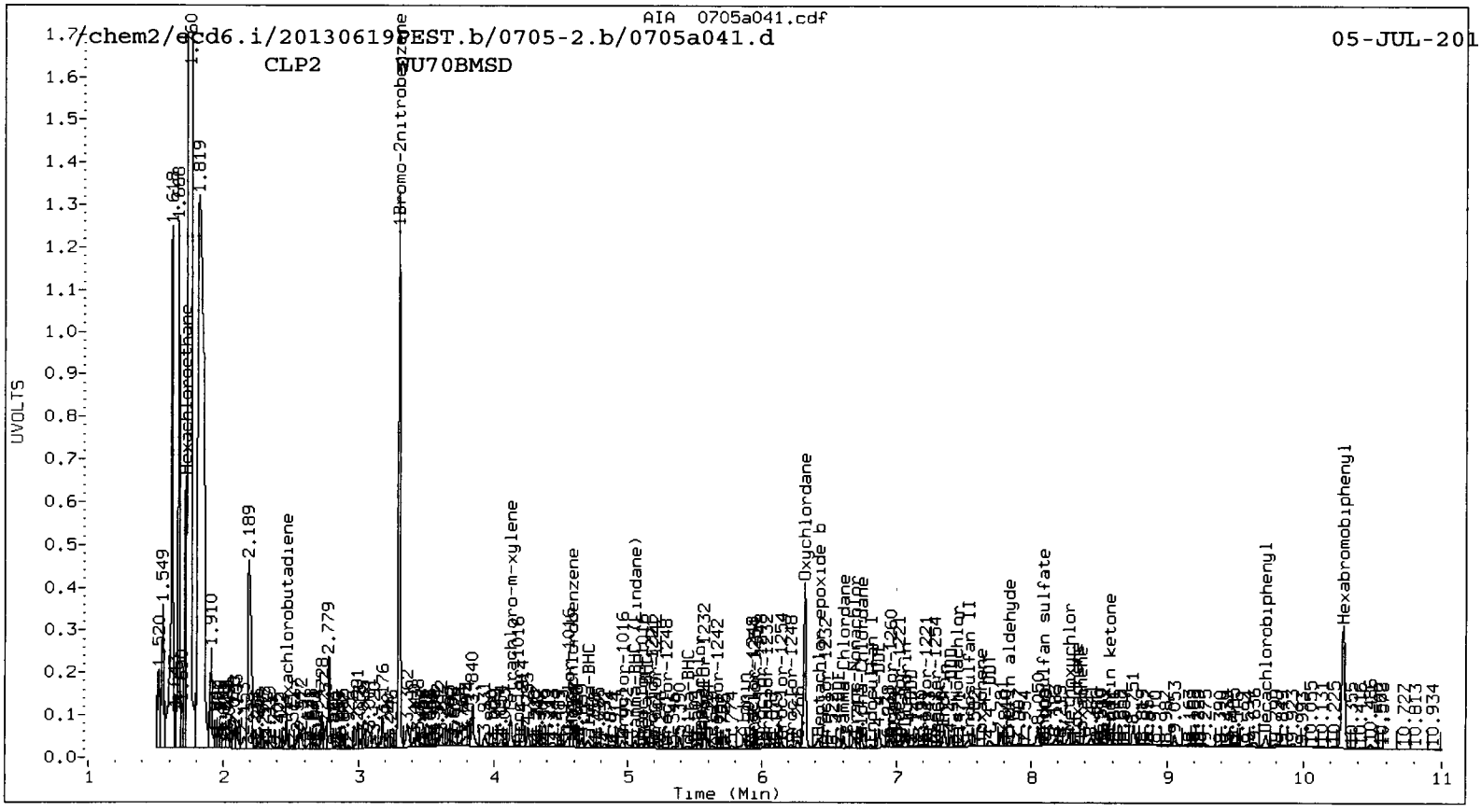
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	23361382	-17.5
Hexabromobiphenyl	16454599	9504897	-42.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.963	0.005	99550	29.7	1	7.290	-0.002	72834	11.0
Toxaphene	2	7.017	0.007	34133	14.8	2	7.631	0.016	102345	10.4
Toxaphene	3	7.267	0.000	136505	35.8	3	7.840	-0.006	309486	28.7
Toxaphene	4	7.599	0.006	28017	7.2	4	8.336	0.022	376811	48.6
Toxaphene	5	7.626	-0.006	12046	4.7	5	8.366	0.013	50888	5.2
Toxaphene	6	7.910	-0.003	275276	125.8	NS	---			----

Total STX-CLPAve (6 peaks): 36.340 Total CLP2Ave (5 peaks): 20.770 RPD = 55*
Corrected Ave (5 peaks): 18.446 Corrected Ave (4 peaks): 13.822 RPD = 29


/chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a041.d
0705a041.cdf
05-JUL-201
TIX-CLP WU70BMSD
1Bromo-2nitrobenzene
Hexachlorocyclohexane
Hexachlorobutadiene
Pentachloronitrobenzene
Heptachlor
Aldrin
Isodrin
Oxychlordane
Heptachlor epoxide b
Chlordane
Endosulfan II
Endrin aldehyde
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)


AIA 0705a041.cdf
/chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a041.d
05-JUL-201
CLP2 WU70BMSD
1Bromo-2nitrobenzene
Hexachlorocyclohexane
Hexachlorobutadiene
Pentachloronitrobenzene
Heptachlor
Aldrin
Isodrin
Oxychlordane
Heptachlor epoxide b
Chlordane
Endosulfan II
Endrin aldehyde
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl
UVOLTS
Time (Min)

WU70-0127

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

Data file 1: /chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a042.d ARI ID: WU70C
Data file 2: /chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a042.d Client ID: LF-LS-004-20130619-
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 05-JUL-2013 23:32
Compound Sublist: wpest Report Date: 07/08/2013 14:38
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: SOIL
Operator: ar Dilution Factor: 5.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.123	-0.009	5583150	3.299	0.000	21998848	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.266	-0.020	80312	4.695	-0.015	20558	0.7172	0.0391	179.3*	alpha-BHC
4.631	-0.013	38137	5.136	-0.002	75142	0.8444	0.3300	87.6*	beta-BHC
4.806	-0.007	118464	5.458	0.008	171061	1.2219	0.3776	105.6*	delta-BHC
4.564	-0.005	32041	5.054	-0.012	280521	0.3138	0.6036	63.2*	gamma-BHC (Lindane)
4.999	-0.016	27600	5.531	0.001	75225	0.2817	0.1669	51.2*	Heptachlor
5.309	0.002	57326	5.858	-0.009	97588	0.6039	0.2287	90.1*	Aldrin
5.902	0.020	168333	6.438	0.016	49124	1.9127	0.1263	175.2*	Heptachlor epoxide b
6.233	-0.027	77879	6.790	-0.019	47262	0.9467	0.1352	150.0*	Endosulfan I
6.474	-0.009	18119	7.108	0.040	108548	0.2085	0.2077	38.5	Dieldrin
6.167	-0.017	142486	6.848	-0.022	158216	2.1546	0.4456	131.5*	4,4'-DDE
6.698	-0.003	151279	7.371	0.014	553126	2.0647	2.9412	35.0	Endrin
6.911	0.005	61915	7.526	-0.019	720167	0.8512	3.6554	124.4*	Endosulfan II
6.750	0.010	27646	7.406	-0.001	91391	0.3951	0.4514	13.3	4,4'-DDD
7.658	-0.017	21940	8.114	0.027	287773	0.3416	1.7157	133.6*	Endosulfan sulfate
6.982	-0.016	88864	7.705	0.011	952668	1.2887	5.8106	121.9*	4,4'-DDT
7.443	0.019	84954	8.282	0.000	191577	2.6030	2.8696	9.7	Methoxychlor
7.898	-0.032	75308	8.586	0.007	561363	0.9443	3.3488	112.0*	Endrin ketone
7.255	-0.029	34802	7.840	-0.003	330601	0.6053	2.1858	113.2*	Endrin aldehyde
5.982	-0.020	98360	6.606	0.002	64274	1.0880	0.1570	149.5*	gamma-Chlordane
6.123	-0.003	82894	6.758	0.016	44825	0.9420	0.1195	155.0*	alpha-Chlordane
2.300	-0.012	25407	2.470	0.001	71001	0.2071	0.1559	28.2	Hexachlorobutadiene
4.133	-0.007	53185	4.564	-0.022	229777	0.5970	0.5302	11.8	Hexachlorobenzene
5.775	-0.012	1720	6.322	-0.010	649689	0.0263	2.2660	195.4*	Oxychlordane
5.857	-0.005	39090	6.570	-0.010	346454	0.7817	1.6728	72.6*	2,4-DDE
----			6.682	-0.008	481720	0.0000	2.1401	---	trans-Nonachlor
6.325	-0.023	93257	7.045	-0.019	241278	2.0689	1.9679	5.0	2,4-DDD
6.591	0.004	34837	----			0.6682	0.0000	---	2,4-DDT
6.713	-0.014	98627	7.452	0.036	243020	1.1123	1.0367	7.0	cis-Nonachlor
7.597	-0.004	105957	8.538	-0.027	302828	1.9582	2.6697	30.7	Mirex
8.906	-0.021	4861915	10.287	-0.002	9120439	80.0000	80.0000	0.0	Hexabromobiphenyl
1.748	-0.009	13473	1.719	-0.007	10182976	0.0000	0.0000	---	Hexachloroethane
6.536	-0.045	133262	7.316	-0.020	220601	0.0000	0.0000	---	Kepone
3.790	-0.009	447951	4.126	-0.003	1939536	5.9089	5.3305	10.3	Tetrachloro-m-xylene
8.756	-0.022	474590	9.724	-0.001	1041983	7.7558	7.0677	9.3	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	14.8	13.3	13.3~	42-112
Decachlorobiphenyl	19.4	17.7	17.7~	59-123

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

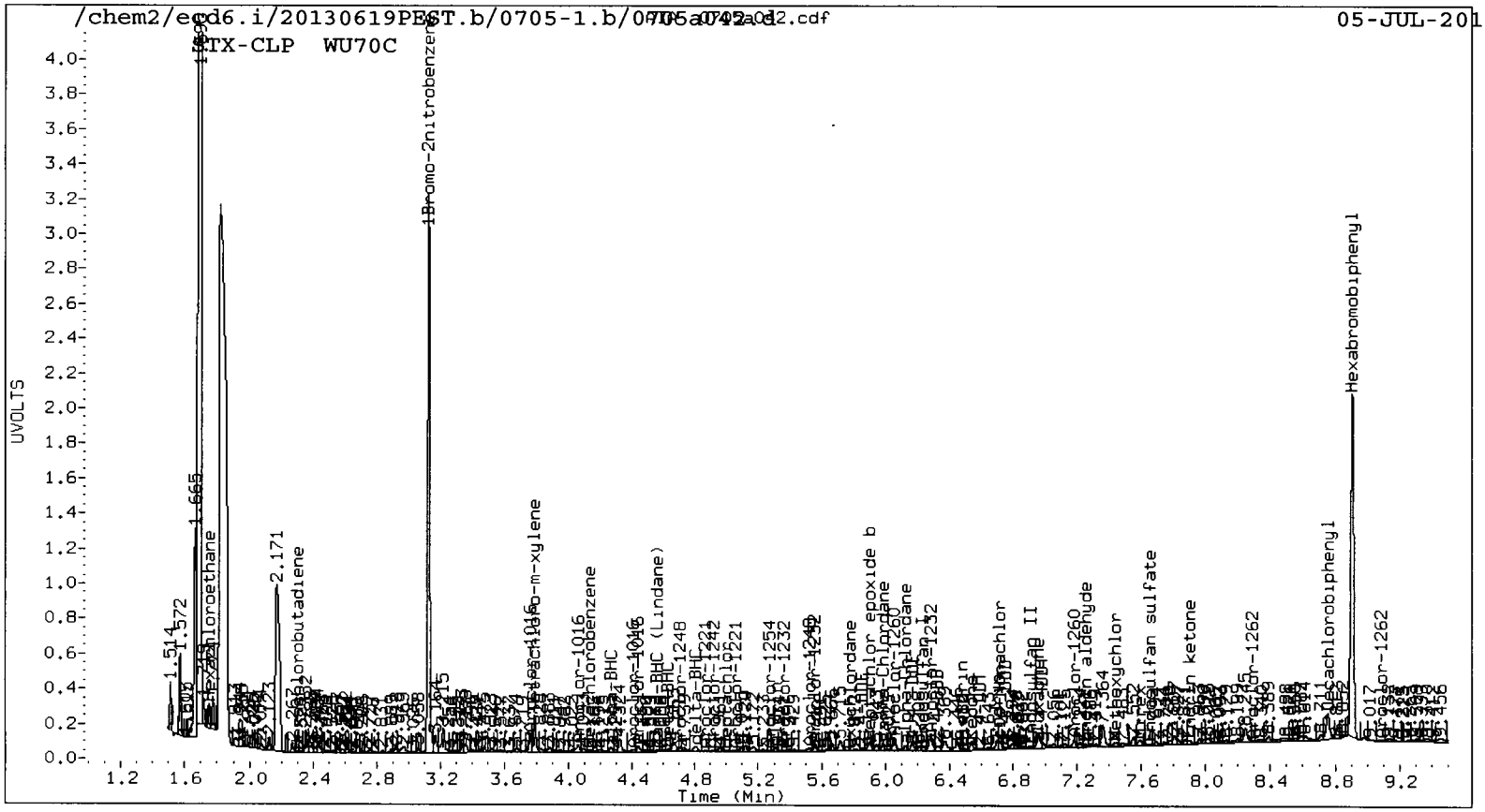
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	5583150	-0.1
Hexabromobiphenyl	4870538	4861915	-0.2

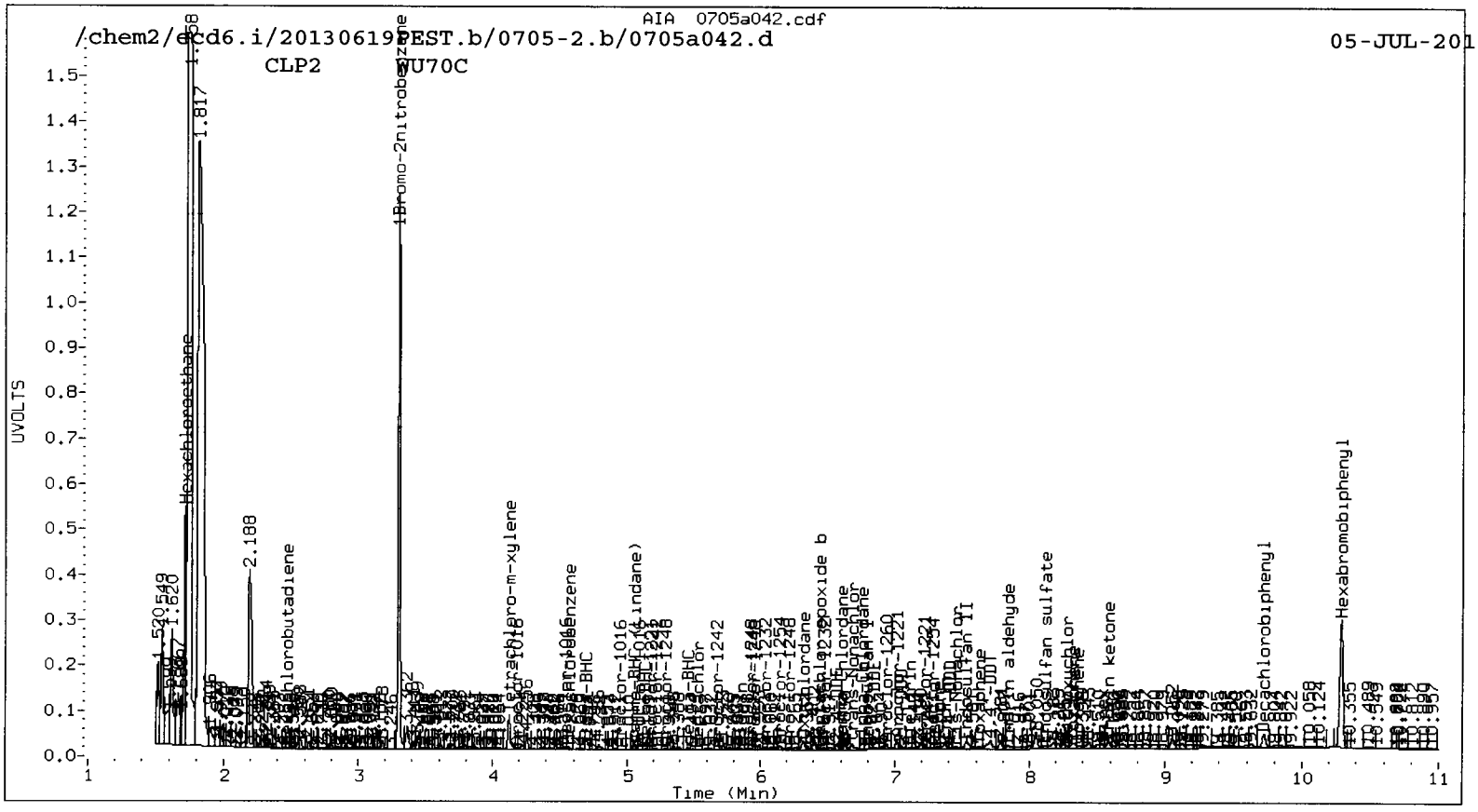
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	21998848	-22.3
Hexabromobiphenyl	16454599	9120439	-44.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col				CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.959	0.001	233809	74.9	1	7.282	-0.009	108744	17.0
Toxaphene	2	6.982	-0.028	88864	41.3	2	7.625	0.009	213434	22.7
Toxaphene	3	7.255	-0.012	34802	9.8	3	7.840	-0.006	330601	32.0
Toxaphene	4	7.597	0.004	105957	29.3	4	8.323	0.010	572037	76.8
Toxaphene	5	7.658	0.026	21940	9.1	5	8.362	0.009	256343	27.1
Toxaphene	6	7.898	-0.015	75308	36.9	NS	---			----
Total STX-CLPAve (6 peaks): 33.554						Total CLP2Ave (5 peaks): 35.123				RPD = 5
Corrected Ave (5 peaks): 25.280						Corrected Ave (4 peaks): 24.697				RPD = 2


/chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a042.d
0705a042.cdf
05-JUL-201
TX-CLP WU70C
UVOLTS
Time (Min)
1.514
1.572
1.665
2.171
1Bromo-2nitrobenzene
Hexachlorobutadiene
Hexachloroethane
Hexabromobiphenyl


AIA 0705a042.cdf
/chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a042.d
05-JUL-201
CLP2 WU70C
UVOLTS
Time (Min)
1.520
1.817
2.188
1Bromo-2nitrobenzene
Hexachloroethane
Hexachlorobutadiene
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 7/8/13

Data file 1: /chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a044.d ARI ID: INDAE
Data file 2: /chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a044.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 06-JUL-2013 00:08
Compound Sublist: INDA Report Date: 07/08/2013 14:39
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col			CLP2 Col			STX-CLP	CLP2		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
3.124	-0.007	6311156	3.301	0.001	31658820	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
4.277	-0.009	2729640	4.710	0.000	13511671	21.5657	17.8640	18.8	alpha-BHC
4.636	-0.008	981868	5.140	0.002	4880413	19.2309	14.8943	25.4	beta-BHC
4.805	-0.008	2299218	5.451	0.001	11047642	20.9795	16.9452	21.3	delta-BHC
4.559	-0.010	2416425	5.066	0.000	11665633	20.9383	17.4427	18.2	gamma-BHC (Lindane)
5.003	-0.011	2277340	5.530	0.000	10317391	20.5632	15.9043	25.6	Heptachlor
5.295	-0.012	2224527	5.867	0.000	9320664	20.7302	15.1767	30.9	Aldrin
5.869	-0.014	1948192	6.421	-0.001	7638609	19.5831	13.6471	35.7	Heptachlor epoxide b
6.244	-0.015	1770838	6.809	0.000	6326592	19.0438	12.5786	40.9*	Endosulfan I
6.467	-0.016	3779809	7.066	-0.001	12304209	38.4690	24.2398	45.4*	Dieldrin
6.169	-0.015	2937358	6.869	-0.001	12311001	39.2940	24.0919	48.0*	4,4'-DDE
6.685	-0.016	3213818	7.355	-0.001	8968481	42.0478	38.5869	8.6	Endrin
6.890	-0.016	3042021	7.545	0.000	9531255	40.0913	39.1453	2.4	Endosulfan II
6.726	-0.014	2955913	7.407	0.000	8990343	40.4994	35.9309	12.0	4,4'-DDD
7.656	-0.018	2598602	8.087	0.000	7566404	38.7867	36.5013	6.1	Endosulfan sulfate
6.983	-0.015	2777452	7.694	0.000	7999967	38.6102	36.0844	6.8	4,4'-DDT
7.408	-0.017	6586138	8.277	-0.005	16032266	193.4480	194.3110	0.4	Methoxychlor
7.911	-0.018	3186172	8.577	-0.001	7978677	38.2986	38.5123	0.6	Endrin ketone
7.266	-0.017	2387972	7.842	-0.001	7145496	39.8172	38.2274	4.1	Endrin aldehyde
5.989	-0.014	2007198	6.604	0.000	7419079	19.6408	12.5948	43.7*	gamma-Chlordane
6.112	-0.015	1894531	6.742	0.000	6720645	19.0458	12.4454	41.9*	alpha-Chlordane
2.306	-0.006	2882740	2.468	-0.001	10361299	20.7863	15.8115	27.2	Hexachlorobutadiene
4.133	-0.007	1969833	4.587	0.001	11684719	19.5611	18.7367	4.3	Hexachlorobenzene
8.905	-0.022	5071834	10.287	-0.002	11271638	80.0000	80.0000	0.0	Hexabromobiphenyl
3.793	-0.007	3506922	4.128	0.000	18914441	40.9234	36.1215	12.5	Tetrachloro-m-xylen
8.755	-0.022	2465616	9.723	-0.002	7304993	38.6255	40.0928	3.7	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	102.3	90.3	90.3~	115- 0
Decachlorobiphenyl	96.6	100.2	96.6~	115- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

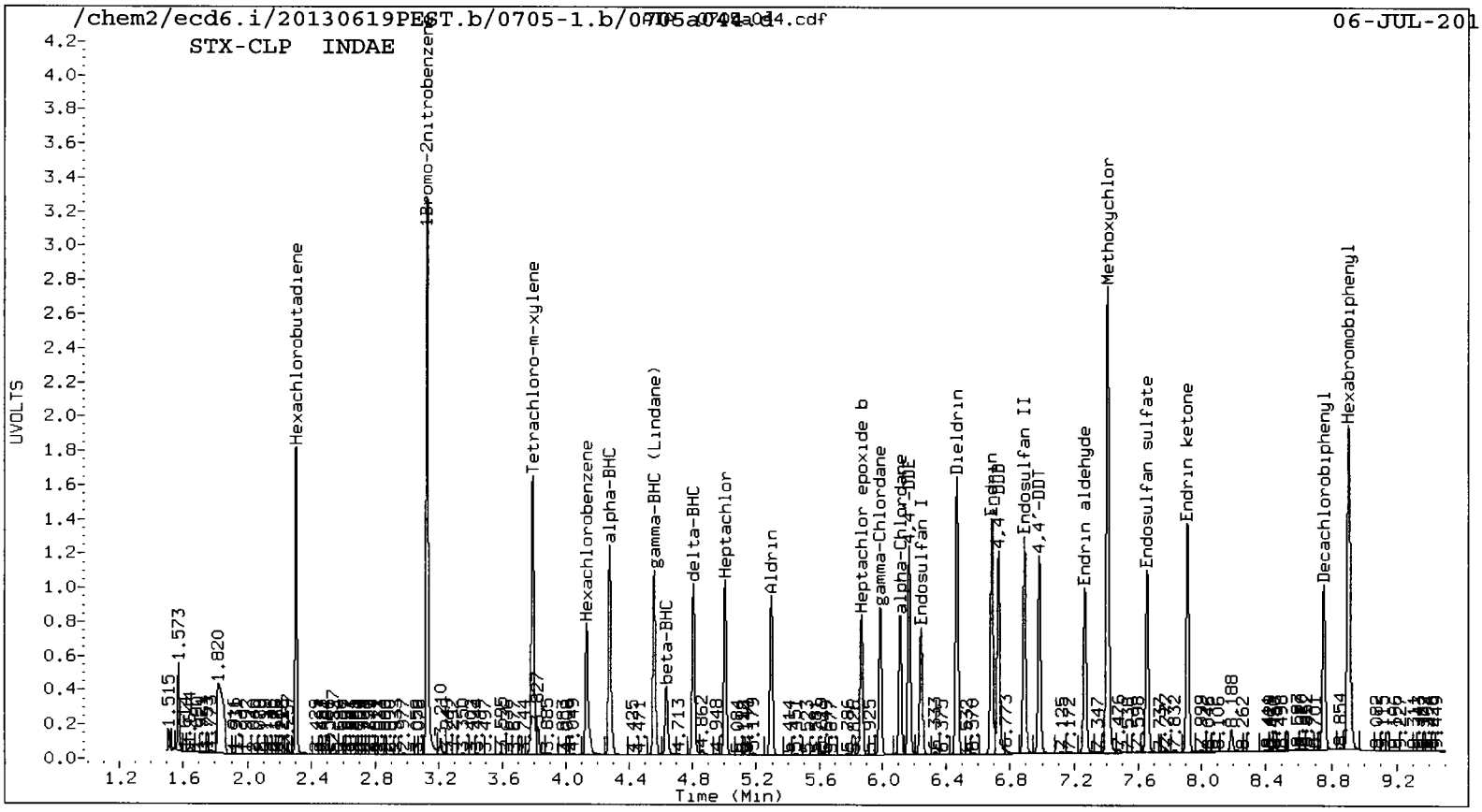
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	6311156	12.9
Hexabromobiphenyl	4870538	5071834	4.1

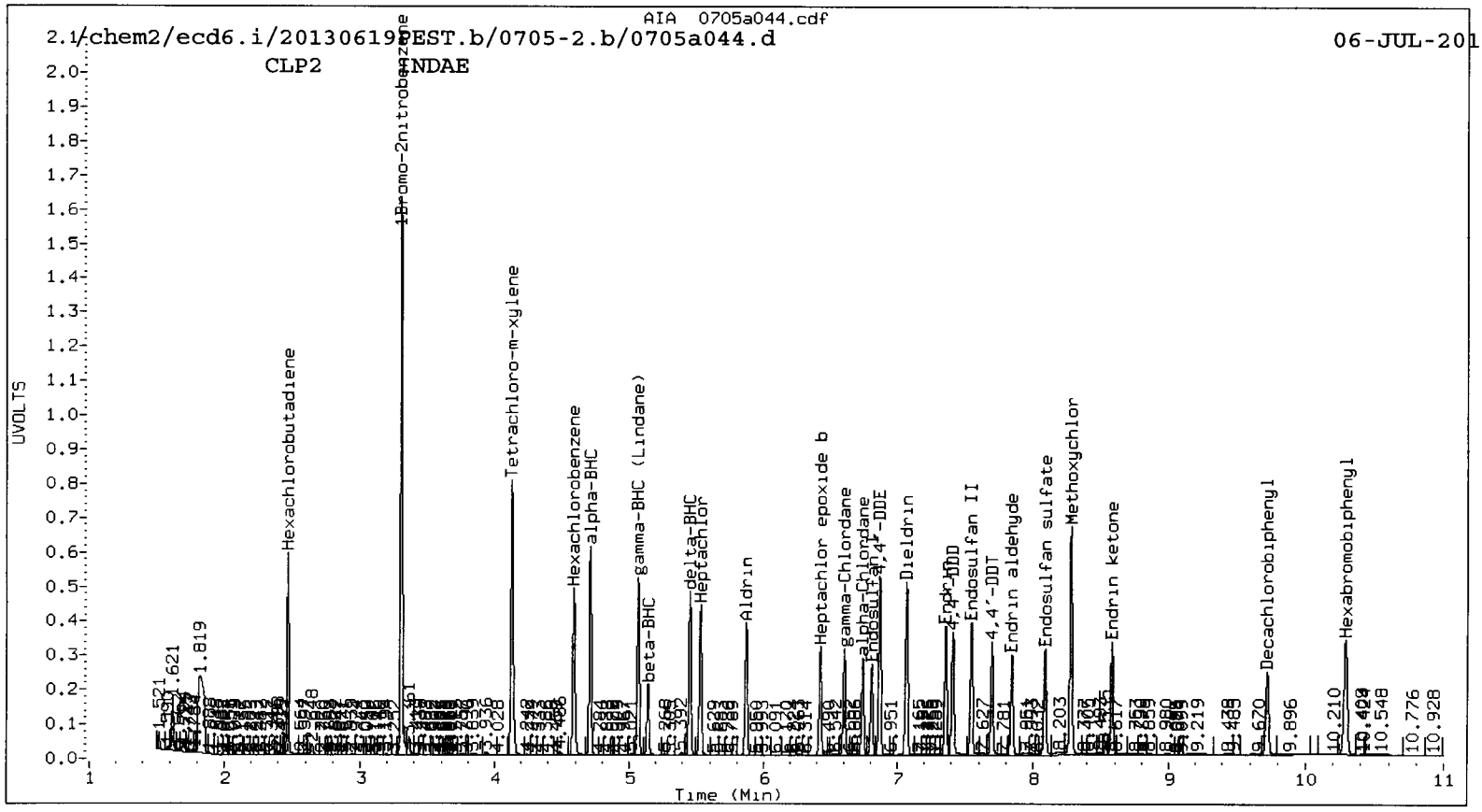
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	31658820	11.8
Hexabromobiphenyl	16454599	11271638	-31.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

	STX-CLP Col					CLP2 Col				
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount


/chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a044.d
STX-CLP INDAE
06-JUL-201
UVOLTS
Time (Min)
1.515
1.573
1.820
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Endosulfan I
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Methoxychlor
Endosulfan sulfate
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl


AIA 0705a044.cdf
2.1/chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a044.d
CLP2 INDAE
06-JUL-201
UVOLTS
Time (Min)
1.621
1.819
Hexachlorobutadiene
1Bromo-2nitrobenzene
Tetrachloro-m-xylene
Hexachlorobenzene
alpha-BHC
gamma-BHC (Lindane)
beta-BHC
delta-BHC
Heptachlor
Aldrin
Heptachlor epoxide b
gamma-Chlordane
alpha-Chlordane
4,4'-DDE
Dieldrin
4,4'-DDD
Endosulfan II
4,4'-DDT
Endrin aldehyde
Endosulfan sulfate
Methoxychlor
Endrin ketone
Decachlorobiphenyl
Hexabromobiphenyl

Analytical Resources Inc.
Dual Column 8081 Pesticide Quantitation Report

YZ 7/8/13

Data file 1: /chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a045.d ARI ID: TOXAPH
Data file 2: /chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a045.d Client ID:
Method: /chem2/ecd6.i/20130619PEST.b/PEST0619.m Injection Date: 06-JUL-2013 00:25
Compound Sublist: TOXAPH Report Date: 07/08/2013 14:39
Instrument, Inj. Vol.: ecd6.i, 1ul Matrix: NONE
Operator: ar Dilution Factor: 1.000

STX-CLP Col RT	Shift	Response	CLP2 Col RT	Shift	Response	STX-CLP on col	CLP2 on col	RPD	Compound/Flag
3.124	-0.008	6031202	3.300	0.000	30222299	80.0000	80.0000	0.0	1Bromo-2nitrobenzen
8.905	-0.022	5254952	10.285	-0.004	11692651	80.0000	80.0000	0.0	Hexabromobiphenyl
3.792	-0.007	2563044	4.128	-0.001	15336232	31.2973	30.6802	2.0	Tetrachloro-m-xylen
8.755	-0.022	2217782	9.721	-0.004	6798577	33.5323	35.9699	7.0	Decachlorobiphenyl

* Indicates RPD > 40%
A Indicates Peak Height was used for Column 1 quantitation instead of Area
B Indicates Peak Height was used for Column 2 quantitation instead of Area
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE/SPIKE PERCENT RECOVERY

SURR/SPIKE	Col1	Col2	Lower	Limits
Tetrachloro-m-xylene	78.2	76.7	76.7~	150- 0
Decachlorobiphenyl	83.8	89.9	83.8~	150- 0

~ Indicates recovery outside QC Limits

INTERNAL STANDARD SUMMARY

Column 1

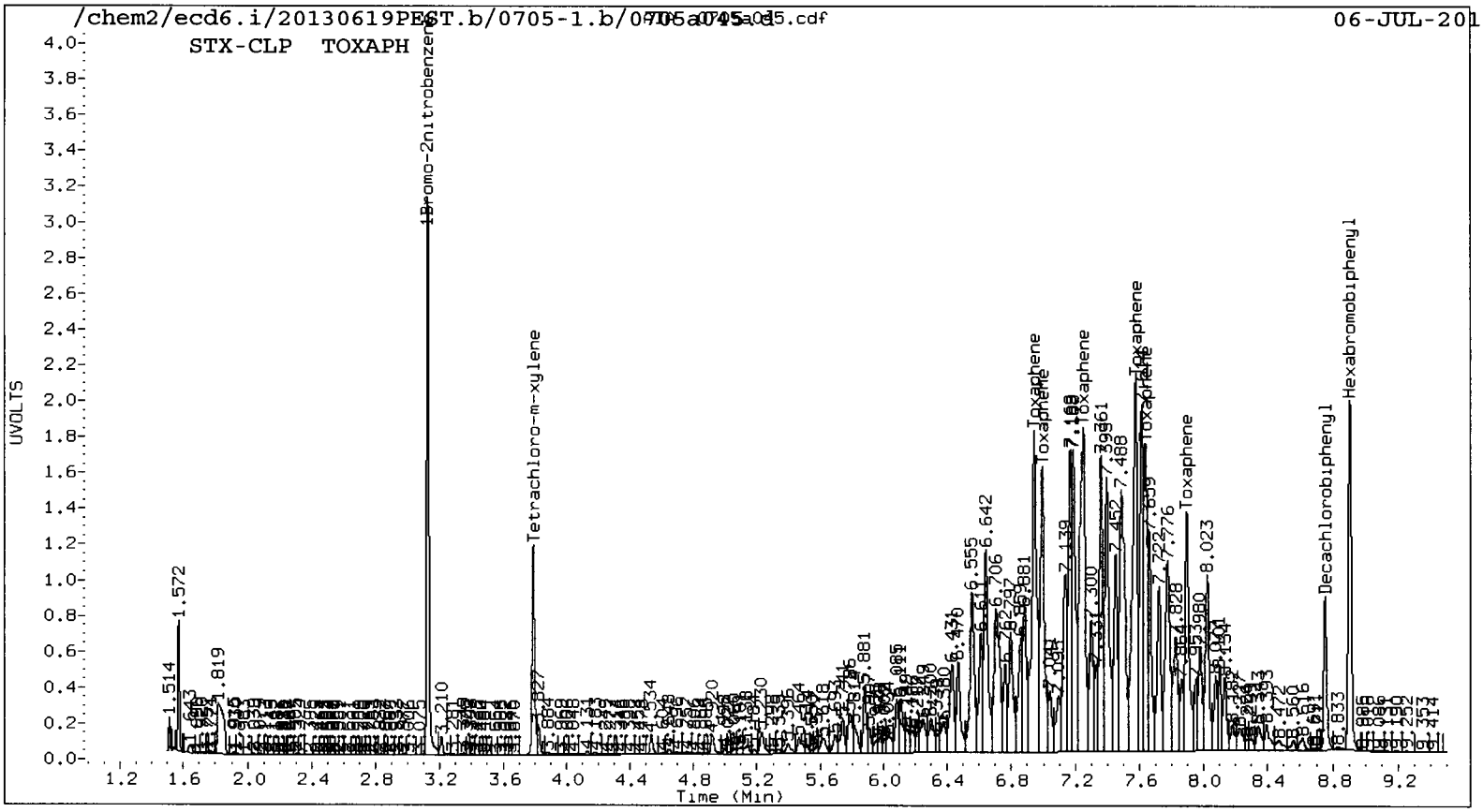
Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	5590801	6031202	7.9
Hexabromobiphenyl	4870538	5254952	7.9

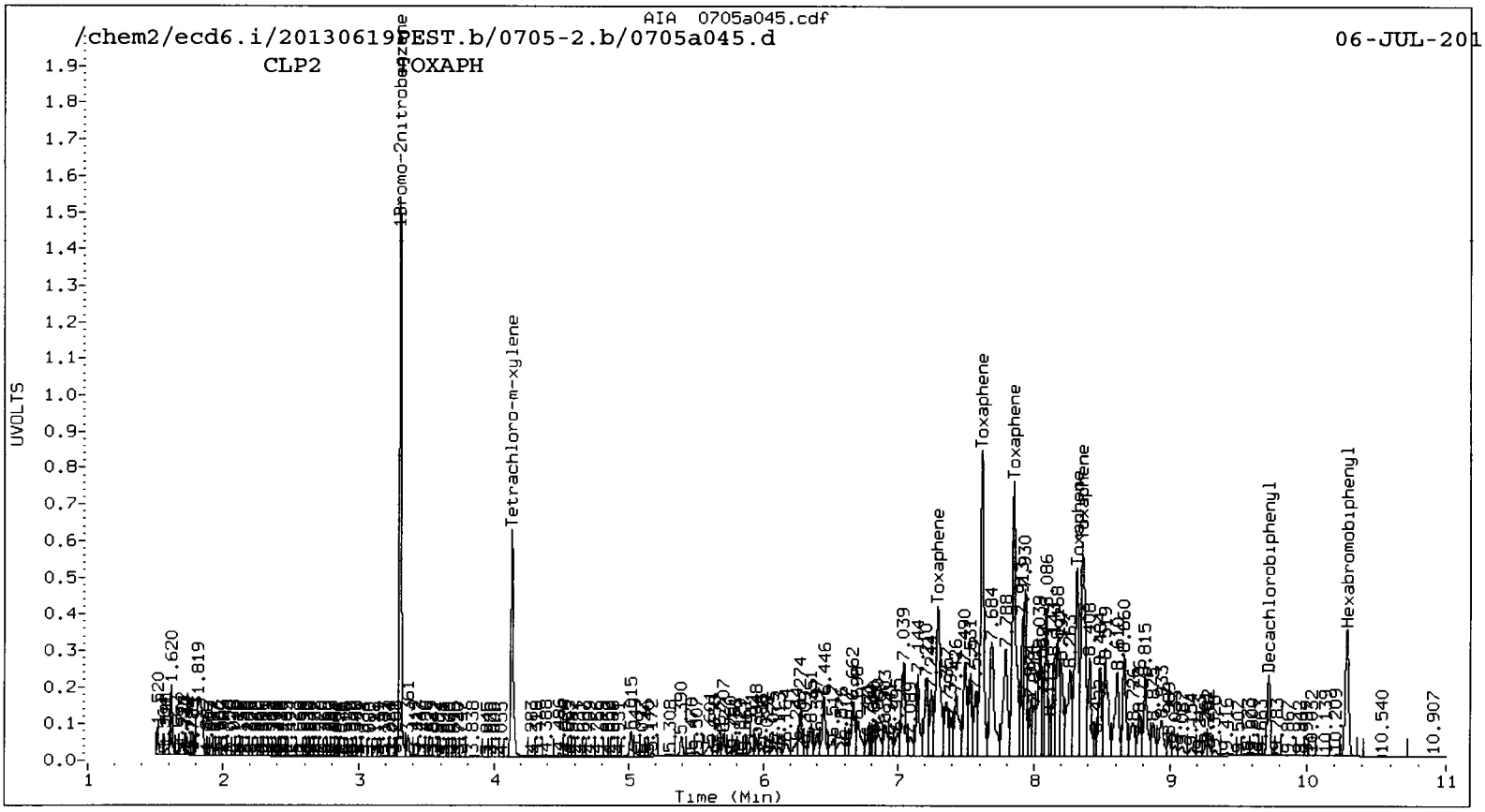
Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	28320361	30222299	6.7
Hexabromobiphenyl	16454599	11692651	-28.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 19-JUN-2013
<- Indicates standard response outside Limits (-50 to +100%)

		STX-CLP Col					CLP2 Col			
Cpnd	Peak#	RT	Shift	Height	Amount	Peak#	RT	Shift	Height	Amount
Toxaphene	1	6.942	-0.016	7858853	2330.1	1	7.291	-0.001	19734132	2412.3
Toxaphene	2	6.994	-0.016	5534075	2377.9	2	7.615	-0.001	28846659	2390.0
Toxaphene	3	7.250	-0.017	8721979	2271.6	3	7.845	-0.001	29790997	2249.4
Toxaphene	4	7.575	-0.017	8575184	2192.6	4	8.313	-0.001	20225043	2118.7
Toxaphene	5	7.636	0.004	4443778	1711.1	5	8.351	-0.001	25912275	2134.6
Toxaphene	6	7.894	-0.019	4691815	2128.1	NS	---			----
Total STX-CLPAve (6 peaks): 2168.548						Total CLP2Ave (5 peaks): 2261.022				RPD = 4
Corrected Ave (6 peaks): 2168.548						Corrected Ave (5 peaks): 2261.022				RPD = 4


/chem2/ecd6.i/20130619PEST.b/0705-1.b/0705a045.d
0705a045.cdf
06-JUL-201
STX-CLP TOXAPH
UVOLTS
Time (Min)
1.572
1.514
1.819
3.210
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
8.023


AIA 0705a045.cdf
/chem2/ecd6.i/20130619PEST.b/0705-2.b/0705a045.d
06-JUL-201
CLP2 TOXAPH
UVOLTS
Time (Min)
1.620
1.819
Tetrachloro-m-xylene
Toxaphene
Decachlorobiphenyl
Hexabromobiphenyl
10.540
10.907

PCB Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WU70

Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(8082A) PCB – Soil / Sediment
Microwave (3546) (SOP # 3304S)

Preparation Test PCB PSDDA # 19 (PCBSDMP4)

ARI Job No(s) WU70 Page 1 of 1 PSDDA (4ppb) Batch set up by: ~~SH~~

Bottle #	ARI Sample I.D.	Weight Extracted (eq. to 12.5g dry wt)	(REQ) Acid Clean (2.5mL)	(REQ) Sulfur Clean (2.5mL) very high sulfur 1 2 3	(REQ) Silica Gel Clean (1:2.5)	Extraction Final Volume	Volume to Lab	Comments	Verify Client ID
	MBS WU70	12.50g	2.5mL	2.5mL	1mL	2.5mL	1mL	(10g Actual W)	YL 06/27/13 Analyst/Date
	SBS	12.50g	2.5mL	2.5mL	1mL	2.5mL	1mL	(10g Actual Wt)	Microwave 1 2 3 YL/CT 06/27/13 Analyst/Date
	~~SBSDup~~	~~12.50g~~	~~2.5mL~~	~~2.5mL~~	~~1mL~~	~~2.5mL~~	~~1mL~~	~~(10g Actual Wt)~~	
	~~QLS~~	~~12.50g~~	~~2.5mL~~	~~2.5mL~~	~~1mL~~	~~2.5mL~~	~~1mL~~	~~(10g Actual Wt)~~	
8	WU70B	23.02	2.5mL	2.5mL	1mL	2.5mL	1mL		KD 100°C Hexane Exchange (2 X 20mL) 1 2 3 4 5 6 TH 6/28/13 Analyst/Date
3	C	16.02	2.5mL	2.5mL	1mL	2.5mL	1mL		
3	CMS	16.02	2.5mL	2.5mL	1mL	2.5mL	1mL		
3	CMSD	16.02	2.5mL	2.5mL	1mL	2.5mL	1mL		
			2.5mL	2.5mL	1mL	2.5mL	1mL		TurboVap 1 2 3 Pre-Cleanups SP 7/2/13 Analyst/Date
			2.5mL	2.5mL	1mL	2.5mL	1mL		
			2.5mL	2.5mL	1mL	2.5mL	1mL		
			2.5mL	2.5mL	1mL	2.5mL	1mL		
			2.5mL	2.5mL	1mL	2.5mL	1mL		
			2.5mL	2.5mL	1mL	2.5mL	1mL		
			2.5mL	2.5mL	1mL	2.5mL	1mL		
Analyst/Date	YL 06/27/13		SP 7/2/13	SP 7/2/13	SP 7/2/13	SP 7/2/13	CSZ 7/3/13	Reviewed By CSZ 7/3/13	TurboVap 1 2 Post Cleanups CSZ 7/3/13 Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	N(B###151)	2µg/mL	50µL	4/30/14	YL	AC
Spike	1 (2074-4)	20µg/mL	63µL	10/31/13	YL	AC
~~QLS Spike~~	5 ( )	~~2µg/mL~~	~~25µL~~			

Extraction Time: 13:05 Balance ID: B14642614

SPECIAL INSTRUCTIONS: 1. Weigh soil/sed into beakers-lightly dry with sodium sulfate. 2. Transfer to microwave vessel(s). Note: (do not fill vessels more than 2/3rd full. Some samples may require two vessels). 3. Add 1:1 Hexane/Acetone until the solvent layer is 3" inches above the 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 cool vessels in cold water 15 minutes. Re-homogenize while cool. 7. Decant 1:1 Hex/Ace into E. flask with sodium sulfate in bottom+ funnel with neutral glasswool plug. 8. Rinse with Hexane. 9. Add 8:2 Hexane/Acetone to the vessel 3"inches above the soil layer after homogenization. Microwave a 2nd time. 10. Let cool and decant solvent then empty the soil into the funnel and rinse with Hexane. 11. KD (~~Snyder~~ Large Drying Column) on 100° bath. (Blanks=only 5g Sodium Sulfate). 12. Exchange (2 X with 20mL) Hexane. 13. TurboVap. 14. Clean-ups. 15. TurboVap. 16. Vial with Hexane.

A. Need Total Solids Y (N) B. ~~Archive~~/Freeze Y / N

Reagent and Solutions Identification

(8082A) PCB – Soil (Sediment)
Microwave (3546) (SOP # 3304S)

ARI Job No(s) WU70

(8082A) PCB PSDDA (4ppb) Soil/Sediment/Solid/Other:	Analyst/Date
Microwave Station: Anhydrous Sodium Sulfate: (I# 9185 + jar date 6/20/13) Neutral Glasswool: (I# 7998 + jar date 5/7/13) 1:1 Hexane/Acetone: (H# 249) 80:20 Hexane/Acetone: (H# 214) Hexane: (I# 8281)	Microwave CT 6/27/13 YL
KD Station: Hexane: (I# 8281) Anhydrous Sodium Sulfate: (I# 9185 + jar date 6/20/13) Neutral Glasswool: (I# 7998 + jar date 5/15/13)	KD TH 6/28/13
Vialing Station: Hexane: (I# B004677 Concentrated Sulfuric Acid: (I# B000505 Tetrabutylammonium hydrogensulfate (TBAS): (H# 190) Sodium Sulfite: (I# 7764) Silica Gel (SPE) Darts: (I# 8127)	Vialing SP 7/2/13

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WU79 Client ID: SAIC

Parameter: PCB PSDDA (4ppb) Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)= AC 6-21-13 B	AC 6-21-13
☐ Standing Water Decanted (Not shared)= AC 6-21-13 C	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)? <5% small	
☐ 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). GC analyst,	
(Centrifuge#1 used for all Centrifugations) Sample pre-screens indicate	
possible aroclor activity.	SH 6/25/13

3056F

Revision 009
08/14/12

WU79:01285

PCB Raw Data
Initial Calibration

ARI Job ID: WU70

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): 07/03/13 Internal Standard ID 2006-1 Expiration 07/18/13

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
AR1660	B161	01/30/14	AR1660	B182	04/30/14
AR1242	B165		AR1242	B190	
AR1248	B172		AR1248	B191	
AR1254	B173		AR1262	B192	
AR1262	B174		AR3268	B194	
AR3268	B175		AR1254	B192	

Detail problems, corrective actions and/or other pertinent information below:

Analyst: JC **Date:** 07/04/13

Reviewer: [signature] **Date:** 7/6/13

WI78:01267

6F

8082 INITIAL CALIBRATION OF AROCLOR 1016/1260

Lab Name: ANALYTICAL RESOURCES INC Client:

ARI Job No.: 20130703 Project:

GC Column: ZB5 Instrument ID: ECD5

Calibration Date: 07/03/13

SURROGATES

	RT WIN	LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
TCX	4.29- 4.49	1.2887	1.2847	1.3663	1.2713	1.2237	1.1747	1.2682	5.1
DCB	12.71-12.91	1.4131	1.2967	1.1943	1.0201	0.9595	0.9046	1.1314	17.9

Aroclor-1016 Peak	RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1	5.94- 6.14	0.0428	0.0397	0.0401	0.0356	0.0332	0.0311	0.0371	12.2
2	6.34- 6.54	0.1334	0.1237	0.1245	0.1097	0.1023	0.0961	0.1150	12.6
3	6.49- 6.69	0.0593	0.0549	0.0547	0.0483	0.0450	0.0419	0.0507	13.2
4	6.61- 6.81	0.0433	0.0401	0.0406	0.0357	0.0337	0.0318	0.0375	12.0

AROCLOR AVERAGE %RSD = 12.5

Aroclor-1260 Peak	RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1	9.85-10.05	0.0568	0.0510	0.0492	0.0431	0.0395	0.0367	0.0461	16.5
2	10.17-10.37	0.0572	0.0511	0.0493	0.0434	0.0397	0.0370	0.0463	16.4
3	10.54-10.74	0.1454	0.1274	0.1227	0.1096	0.0994	0.0941	0.1164	16.5
4	10.94-11.14	0.0759	0.0676	0.0654	0.0581	0.0536	0.0502	0.0618	15.5
5	11.13-11.33	0.0421	0.0371	0.0356	0.0314	0.0293	0.0276	0.0338	16.1

AROCLOR AVERAGE %RSD = 16.2

6F

8082 INITIAL CALIBRATION OF AROCLOR 1016/1260

Lab Name: ANALYTICAL RESOURCES INC Client:

ARI Job No.: 20130703 Project:

GC Column: ZB35 Instrument ID: ECD5

Calibration Date: 07/03/13

SURROGATES

RT WIN	LVL1	LVL2	LVL3	LVL4	LVL5	LVL6	MEAN	%RSD
TCX 4.28- 4.48	1.0544	1.0395	1.1072	1.0521	1.0254	0.9928	1.0452	3.6
DCB 13.08-13.28	1.1388	1.1031	1.0982	0.9840	0.9302	0.8805	1.0224	10.3

Aroclor-1016 Peak RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1 6.04- 6.24	0.0506	0.0491	0.0490	0.0434	0.0401	0.0369	0.0448	12.5
2 6.68- 6.88	0.1074	0.1034	0.1032	0.0943	0.0887	0.0833	0.0967	9.8
3 7.06- 7.26	0.0269	0.0261	0.0266	0.0248	0.0237	0.0226	0.0251	6.8
4 7.23- 7.43	0.0257	0.0245	0.0245	0.0223	0.0209	0.0199	0.0230	10.0

AROCLOR AVERAGE %RSD = 9.8

Aroclor-1260 Peak RT WIN	LVL1 .02	LVL2 0.05	LVL3 0.1	LVL4 .25	LVL5 0.5	LVL6 1.0	MEAN	%RSD R^2
1 10.14-10.34	0.0505	0.0475	0.0477	0.0435	0.0403	0.0380	0.0446	10.8
2 10.59-10.79	0.0585	0.0575	0.0579	0.0535	0.0497	0.0472	0.0540	8.8
3 10.86-11.06	0.1130	0.1162	0.1168	0.1073	0.0996	0.0946	0.1079	8.5
4 11.38-11.58	0.0416	0.0360	0.0337	0.0325	0.0289	0.0278	0.0334	15.0

AROCLOR AVERAGE %RSD = 10.8

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client:

ARI Job No.: 20130703 Project:

GC Column: ZB5 Instrument ID: ECD5

Calibration Date: 07/03/13

Aroclor-1221			
Peak	RT	RT WIN	Cal Factor
1	4.752	4.65- 4.85	0.01773
2	4.929	4.83- 5.03	0.01226
3	5.037	4.94- 5.14	0.03508

Aroclor-1232			
Peak	RT	RT WIN	Cal Factor
1	4.752	4.65- 4.85	0.01173
2	4.927	4.83- 5.03	0.00874
3	6.036	5.94- 6.14	0.01521
4	6.443	6.34- 6.54	0.04704

Aroclor-1242			
Peak	RT	RT WIN	Cal Factor
1	6.036	5.94- 6.14	0.02980
2	6.443	6.34- 6.54	0.09171
3	6.593	6.49- 6.69	0.04055
4	7.851	7.75- 7.95	0.04939

Aroclor-1248			
Peak	RT	RT WIN	Cal Factor
1	6.442	6.34- 6.54	0.05866
2	7.420	7.32- 7.52	0.06464
3	7.853	7.75- 7.95	0.08238
4	8.089	7.99- 8.19	0.05894

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client:

ARI Job No.: 20130703 Project:

GC Column: ZB5 Instrument ID: ECD5

Calibration Date: 07/03/13

Aroclor-1254			
Peak	RT	RT WIN	Cal Factor
1	8.173	8.07- 8.27	0.07876
2	8.545	8.44- 8.64	0.05179
3	8.682	8.58- 8.78	0.10721
4	9.035	8.94- 9.14	0.11563
5	9.344	9.24- 9.44	0.04608

Aroclor-1262			
Peak	RT	RT WIN	Cal Factor
1	10.265	10.16-10.36	0.05612
2	10.641	10.54-10.74	0.13402
3	11.041	10.94-11.14	0.04734
4	11.230	11.13-11.33	0.06340
5	11.900	11.80-12.00	0.05675

Aroclor-1268			
Peak	RT	RT WIN	Cal Factor
1	11.157	11.06-11.26	0.13519
2	11.229	11.13-11.33	0.14100
3	11.614	11.51-11.71	0.11654
4	12.406	12.31-12.51	0.33352

6G

8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client:

ARI Job No.: 20130703 Project:

GC Column: ZB35 Instrument ID: ECD5

Calibration Date: 07/03/13

Aroclor-1221			
Peak	RT	RT WIN	Cal Factor
1	3.674	3.57- 3.77	0.00817
2	5.069	4.97- 5.17	0.01390
3	5.321	5.22- 5.42	0.00780
4	5.436	5.34- 5.54	0.02424

Aroclor-1232			
Peak	RT	RT WIN	Cal Factor
1	5.069	4.97- 5.17	0.00855
2	5.320	5.22- 5.42	0.00488
3	5.435	5.33- 5.53	0.01718
4	6.141	6.04- 6.24	0.02036

Aroclor-1242			
Peak	RT	RT WIN	Cal Factor
1	6.140	6.04- 6.24	0.03618
2	6.776	6.68- 6.88	0.07854
3	6.985	6.88- 7.08	0.03260
4	8.214	8.11- 8.31	0.02747

Aroclor-1248			
Peak	RT	RT WIN	Cal Factor
1	6.773	6.67- 6.87	0.04949
2	7.683	7.58- 7.78	0.04068
3	8.214	8.11- 8.31	0.04227
4	8.560	8.46- 8.66	0.05526

6G
8082 INITIAL CALIBRATION OF SINGLE POINT PCBs

Lab Name: ANALYTICAL RESOURCES INC Client:

ARI Job No.: 20130703 Project:

GC Column: ZB35 Instrument ID: ECD5

Calibration Date: 07/03/13

Aroclor-1254			
Peak	RT	RT WIN	Cal Factor
1	8.275	8.18- 8.38	0.03803
2	8.452	8.35- 8.55	0.04750
3	8.973	8.87- 9.07	0.03683
4	9.123	9.02- 9.22	0.07927
5	9.909	9.81-10.01	0.04678

Aroclor-1262			
Peak	RT	RT WIN	Cal Factor
1	10.237	10.14-10.34	0.07110
2	10.686	10.59-10.79	0.06717
3	10.961	10.86-11.06	0.13338
4	11.543	11.44-11.64	0.09440
5	12.282	12.18-12.38	0.05282

Aroclor-1268			
Peak	RT	RT WIN	Cal Factor
1	11.481	11.38-11.58	0.14220
2	11.548	11.45-11.65	0.13750
3	11.944	11.84-12.04	0.11292
4	12.765	12.67-12.87	0.33071

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd5.i/20130703.b/PCB1.m
Batch File: /chem2/ecd5.i/20130703.b/ical-1.b
Inst ID: ecd5.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0703b006	0703b007	0703b008	0703b009	0703b010	0703b011
INJ.DATE:	03-JUL-2013	03-JUL-2013	03-JUL-2013	03-JUL-2013	03-JUL-2013	03-JUL-2013
INJ.TIME:	14:29	14:48	15:08	15:28	15:47	16:07

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 41 IS-BNB	2.230	2.229	2.229	2.228	2.229	2.227	2.228	2.128-2.328	2.229	0.001
$ 1 Tetrachloro-m-xylene	4.383	4.382	4.383	4.382	4.383	4.383	4.383	4.283-4.483	4.383	0.000
2 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	4.752	4.652-4.852	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	6.035	5.935-6.135	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	4.752	4.652-4.852	+++++	+++++
7 Aroclor-1016	6.035	6.035	6.037	6.035	6.035	6.035	6.035	5.935-6.135	6.036	0.001
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	6.440	6.340-6.540	+++++	+++++
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	8.171	8.071-8.271	+++++	+++++
9 Aroclor-1260	9.947	9.948	9.949	9.947	9.948	9.948	9.948	9.848-10.048	9.948	0.001
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	10.265	10.165-10.365	+++++	+++++
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	11.157	11.057-11.257	+++++	+++++
$ 13 Decachlorobiphenyl	12.811	12.811	12.811	12.811	12.810	12.811	12.812	12.712-12.912	12.811	0.000
* 12 IS-HBBP	13.175	13.175	13.175	13.174	13.175	13.174	13.175	13.075-13.275	13.175	0.000
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	8.136	8.086-8.186	+++++	+++++
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	8.688	8.638-8.738	+++++	+++++
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	9.191	9.141-9.241	+++++	+++++
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	8.570	8.470-8.670	+++++	+++++

Reviewer 1 _____ Date: 07/04/13
Reviewer 2 _____ Date: 7/6/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd5.i/20130703.b/PCB1.m
Batch File: /chem2/ecd5.i/20130703.b/ical-1.b
Inst ID: ecd5.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	9.144	9.044-9.244	+++++	+++++
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	9.656	9.556-9.756	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd5.i/20130703.b/PCB2.m
Batch File: /chem2/ecd5.i/20130703.b/ical-2.b
Inst ID: ecd5.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0703b006	0703b007	0703b008	0703b009	0703b010	0703b011
INJ.DATE:	03-JUL-2013	03-JUL-2013	03-JUL-2013	03-JUL-2013	03-JUL-2013	03-JUL-2013
INJ.TIME:	14:29	14:48	15:08	15:28	15:47	16:07

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
* 40 IS-BNB	2.708	2.706	2.704	2.705	2.707	2.703	2.703	2.603-2.803	2.705	0.002
$ 2 Tetrachloro-m-xylene	4.387	4.386	4.384	4.386	4.386	4.385	4.384	4.284-4.484	4.386	0.001
1 Aroclor-1221	+++++	+++++	+++++	+++++	+++++	+++++	3.674	3.574-3.774	+++++	+++++
4 Aroclor-1232	+++++	+++++	+++++	+++++	+++++	+++++	5.069	4.969-5.169	+++++	+++++
3 Aroclor-1242	+++++	+++++	+++++	+++++	+++++	+++++	6.140	6.040-6.240	+++++	+++++
6 Aroclor-1248	+++++	+++++	+++++	+++++	+++++	+++++	6.773	6.673-6.873	+++++	+++++
7 Aroclor-1016	6.142	6.141	6.141	6.141	6.142	6.140	6.141	6.041-6.241	6.141	0.001
8 Aroclor-1254	+++++	+++++	+++++	+++++	+++++	+++++	8.275	8.175-8.375	+++++	+++++
10 Aroclor-1262	+++++	+++++	+++++	+++++	+++++	+++++	10.237	10.137-10.337	+++++	+++++
9 Aroclor-1260	10.237	10.237	10.238	10.237	10.236	10.236	10.236	10.136-10.336	10.237	0.001
11 Aroclor-1268	+++++	+++++	+++++	+++++	+++++	+++++	11.481	11.381-11.581	+++++	+++++
$ 13 Decachlorobiphenyl	13.179	13.178	13.178	13.178	13.177	13.177	13.177	13.077-13.277	13.178	0.001
* 12 IS-HBBP	14.047	14.045	14.046	14.046	14.046	14.046	14.046	13.946-14.146	14.046	0.000
41 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	8.538	8.488-8.588	+++++	+++++
42 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	9.223	9.173-9.273	+++++	+++++
44 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	8.926	8.826-9.026	+++++	+++++
45 4,4-DDD/2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	9.689	9.589-9.789	+++++	+++++

Reviewer 1 _____ Date: 07/04/13
Reviewer 2 _____ Date: 7/6/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem2/ecd5.i/20130703.b/PCB2.m
Batch File: /chem2/ecd5.i/20130703.b/ical-2.b
Inst ID: ecd5.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
46 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	10.124	10.024-10.224	+++++	+++++

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd5.i/20130703.b/ical-2.b

ARI Job No.: IB Method: PCB2.m Instrument: ecd5.i Date: 03-JUL-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1409	0703b005.d	IB		1	NO MANUAL INTEGRATION
1429	0703b006.d	0.25PPM	AR1660	1	NO MANUAL INTEGRATION
1448	0703b007.d	0.02PPM	AR1660	1	NO MANUAL INTEGRATION
1508	0703b008.d	0.05PPM	AR1660	1	NO MANUAL INTEGRATION
1528	0703b009.d	1 PPM	AR1660	1	NO MANUAL INTEGRATION
1547	0703b010.d	0.1PPM	AR1660	1	NO MANUAL INTEGRATION
1607	0703b011.d	0.5PPM	AR1660	1	NO MANUAL INTEGRATION
1627	0703b012.d	AR1242		1	NO MANUAL INTEGRATION
1646	0703b013.d	AR1248		1	NO MANUAL INTEGRATION
1706	0703b014.d	AR1254		1	NO MANUAL INTEGRATION
1726	0703b015.d	AR2162		1	NO MANUAL INTEGRATION
1746	0703b016.d	AR3268		1	NO MANUAL INTEGRATION
1806	0703b017.d	AR1242ICV		1	NO MANUAL INTEGRATION
1825	0703b018.d	AR1248ICV		1	NO MANUAL INTEGRATION
1845	0703b019.d	AR1254ICV		1	NO MANUAL INTEGRATION
1905	0703b020.d	AR2162ICV		1	NO MANUAL INTEGRATION
1925	0703b021.d	AR3268ICV		1	NO MANUAL INTEGRATION
1945	0703b022.d	AR1660ICV		1	NO MANUAL INTEGRATION
1409	0703b005.d	IB		1	NO MANUAL INTEGRATION
1429	0703b006.d	0.25PPM	AR1660	1	NO MANUAL INTEGRATION

1448 0703b007.d 0.02PPM AR1660 1 NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd5.i/20130703.b/ical-2.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1508	0703b008.d	0.05PPM	AR1660	1	NO MANUAL INTEGRATION
1528	0703b009.d	1 PPM	AR1660	1	NO MANUAL INTEGRATION
1547	0703b010.d	0.1PPM	AR1660	1	NO MANUAL INTEGRATION
1607	0703b011.d	0.5PPM	AR1660	1	NO MANUAL INTEGRATION
1627	0703b012.d	AR1242		1	NO MANUAL INTEGRATION
1646	0703b013.d	AR1248		1	NO MANUAL INTEGRATION
1706	0703b014.d	AR1254		1	NO MANUAL INTEGRATION
1726	0703b015.d	AR2162		1	NO MANUAL INTEGRATION
1746	0703b016.d	AR3268		1	NO MANUAL INTEGRATION
1806	0703b017.d	AR1242ICV		1	NO MANUAL INTEGRATION
1825	0703b018.d	AR1248ICV		1	NO MANUAL INTEGRATION
1845	0703b019.d	AR1254ICV		1	NO MANUAL INTEGRATION
1905	0703b020.d	AR2162ICV		1	NO MANUAL INTEGRATION
1925	0703b021.d	AR3268ICV		1	NO MANUAL INTEGRATION
1945	0703b022.d	AR1660ICV		1	NO MANUAL INTEGRATION

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 03-JUL-2013 20:06
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130703.b/PCB1.m
Cal Date : 04-Jul-2013 08:54 jrains
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd5.i/20130703.b/ical-1.b/0703b007.d
Level 2: /chem2/ecd5.i/20130703.b/ical-1.b/0703b008.d
Level 3: /chem2/ecd5.i/20130703.b/ical-1.b/0703b010.d
Level 4: /chem2/ecd5.i/20130703.b/ical-1.b/0703b006.d
Level 5: /chem2/ecd5.i/20130703.b/ical-1.b/0703b011.d
Level 6: /chem2/ecd5.i/20130703.b/ical-1.b/0703b009.d
Level 7: /chem2/ecd5.i/20130703.b/ical-1.b/0703b016.d
Level 8: /chem2/ecd5.i/20130703.b/ddt-1.b/0703b023.d

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
2 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.01773	+++++	0.01773	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.01226	+++++	0.01226	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.03508	+++++	0.03508	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.02980	+++++	0.02980	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.09171	+++++	0.09171	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.04055	+++++	0.04055	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 03-JUL-2013 20:06
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130703.b/PCB1.m
Cal Date : 04-Jul-2013 08:54 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.04939	+++++	0.04939	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.01173	+++++	0.01173	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.00874	+++++	0.00874	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.01521	+++++	0.01521	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.04704	+++++	0.04704	0.000
7 Aroclor-1016(1)	0.04278	0.03966	0.04009	0.03563	0.03318	0.03107	+++++	+++++	0.03707	12.161
(2)	0.13339	0.12370	0.12453	0.10968	0.10234	0.09614	+++++	+++++	0.11496	12.598
(3)	0.05932	0.05490	0.05470	0.04828	0.04501	0.04194	+++++	+++++	0.05069	13.170
(4)	0.04331	0.04012	0.04058	0.03570	0.03370	0.03177	+++++	+++++	0.03753	11.951

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 03-JUL-2013 20:06
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130703.b/PCB1.m
Cal Date : 04-Jul-2013 08:54 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05866	+++++					0.05866	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06464	+++++					0.06464	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.08238	+++++					0.08238	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05894	+++++					0.05894	0.000
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.07876	+++++					0.07876	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05179	+++++					0.05179	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.10721	+++++					0.10721	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.11563	+++++					0.11563	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04608	+++++					0.04608	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 03-JUL-2013 20:06
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130703.b/PCB1.m
Cal Date : 04-Jul-2013 08:54 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
9 Aroclor-1260(1)	0.05676	0.05104	0.04922	0.04315	0.03948	0.03666		
	+++++	+++++					0.04605	16.523
(2)	0.05718	0.05112	0.04930	0.04342	0.03971	0.03704		
	+++++	+++++					0.04630	16.393
(3)	0.14537	0.12740	0.12272	0.10955	0.09937	0.09410		
	+++++	+++++					0.11642	16.453
(4)	0.07589	0.06760	0.06541	0.05809	0.05357	0.05020		
	+++++	+++++					0.06179	15.541
(5)	0.04211	0.03713	0.03557	0.03136	0.02928	0.02760		
	+++++	+++++					0.03384	16.082
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05612	+++++					0.05612	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.13402	+++++					0.13402	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04734	+++++					0.04734	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.06340	+++++					0.06340	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 03-JUL-2013 20:06
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130703.b/PCB1.m
Cal Date : 04-Jul-2013 08:54 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
(5)	+++++	+++++	+++++	+++++	+++++	+++++	0.05675	+++++	0.05675	0.000
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.13519	+++++	0.13519	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.14100	+++++	0.14100	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.11654	+++++	0.11654	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.33352	+++++	0.33352	0.000
42 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	993	993	0.000
43 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	975	975	0.000
44 2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1220	1220	0.000
46 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1492	1492	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 07-MAY-2013 16:39
End Cal Date : 03-JUL-2013 20:06
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130703.b/PCB1.m
Cal Date : 04-Jul-2013 08:54 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
47 4,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1136	1136	0.000
48 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++	+++++	1463	1463	0.000
$ 1 Tetrachloro-m-xylene	1.28875	1.28475	1.36631	1.27134	1.22367	1.17468	+++++	+++++	1.26825	5.117
$ 13 Decachlorobiphenyl	1.41313	1.29674	1.19430	1.02013	0.95950	0.90461	+++++	+++++	1.13140	17.854

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-JUL-2013 14:29
End Cal Date : 03-JUL-2013 20:06
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130703.b/PCB2.m
Cal Date : 04-Jul-2013 07:07 jrains
Curve Type : Average

Calibration File Names:
Level 1: /chem2/ecd5.i/20130703.b/ical-2.b/0703b007.d
Level 2: /chem2/ecd5.i/20130703.b/ical-2.b/0703b008.d
Level 3: /chem2/ecd5.i/20130703.b/ical-2.b/0703b010.d
Level 4: /chem2/ecd5.i/20130703.b/ical-2.b/0703b006.d
Level 5: /chem2/ecd5.i/20130703.b/ical-2.b/0703b011.d
Level 6: /chem2/ecd5.i/20130703.b/ical-2.b/0703b009.d
Level 7: /chem2/ecd5.i/20130703.b/ical-2.b/0703b016.d
Level 8: /chem2/ecd5.i/20130703.b/ddt-2.b/0703b023.d

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
1 Aroclor-1221(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00817	+++++	0.00817	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.01390	+++++	0.01390	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.00780	+++++	0.00780	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.02424	+++++	0.02424	0.000
4 Aroclor-1232(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.00855	+++++	0.00855	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.00488	+++++	0.00488	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-JUL-2013 14:29
End Cal Date : 03-JUL-2013 20:06
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130703.b/PCB2.m
Cal Date : 04-Jul-2013 07:07 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	___ RRF	% RSD
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.01718	+++++	0.01718	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.02036	+++++	0.02036	0.000
3 Aroclor-1242(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.03618	+++++	0.03618	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.07854	+++++	0.07854	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.03260	+++++	0.03260	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.02747	+++++	0.02747	0.000
6 Aroclor-1248(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.04949	+++++	0.04949	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.04068	+++++	0.04068	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.04227	+++++	0.04227	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-JUL-2013 14:29
End Cal Date : 03-JUL-2013 20:06
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130703.b/PCB2.m
Cal Date : 04-Jul-2013 07:07 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.05526	+++++					0.05526	0.000
7 Aroclor-1016(1)	0.05055	0.04915	0.04898	0.04339	0.04005	0.03692		
	+++++	+++++					0.04484	12.460
(2)	0.10739	0.10341	0.10320	0.09428	0.08875	0.08328		
	+++++	+++++					0.09672	9.818
(3)	0.02692	0.02612	0.02659	0.02481	0.02374	0.02261		
	+++++	+++++					0.02513	6.823
(4)	0.02573	0.02450	0.02445	0.02225	0.02091	0.01987		
	+++++	+++++					0.02295	10.037
8 Aroclor-1254(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03803	+++++					0.03803	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.04750	+++++					0.04750	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.03683	+++++					0.03683	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.07927	+++++					0.07927	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-JUL-2013 14:29
End Cal Date : 03-JUL-2013 20:06
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130703.b/PCB2.m
Cal Date : 04-Jul-2013 07:07 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	250.000 Level 7	0.000e+00 Level 8	RRF	% RSD
(5)	+++++	+++++	+++++	+++++	+++++	+++++	0.04678	+++++	0.04678	0.000
10 Aroclor-1262(1)	+++++	+++++	+++++	+++++	+++++	+++++	0.07110	+++++	0.07110	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++	0.06717	+++++	0.06717	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++	0.13338	+++++	0.13338	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++	0.09440	+++++	0.09440	0.000
(5)	+++++	+++++	+++++	+++++	+++++	+++++	0.05282	+++++	0.05282	0.000
9 Aroclor-1260(1)	0.05048	0.04749	0.04772	0.04348	0.04029	0.03805	+++++	+++++	0.04458	10.778
(2)	0.05854	0.05745	0.05789	0.05345	0.04970	0.04717	+++++	+++++	0.05403	8.797
(3)	0.11301	0.11625	0.11680	0.10731	0.09963	0.09462	+++++	+++++	0.10794	8.492

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-JUL-2013 14:29
End Cal Date : 03-JUL-2013 20:06
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130703.b/PCB2.m
Cal Date : 04-Jul-2013 07:07 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
(4)	0.04162	0.03597	0.03373	0.03249	0.02891	0.02780		
	+++++	+++++					0.03342	15.046
11 Aroclor-1268(1)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.14220	+++++					0.14220	0.000
(2)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.13750	+++++					0.13750	0.000
(3)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.11292	+++++					0.11292	0.000
(4)	+++++	+++++	+++++	+++++	+++++	+++++		
	0.33071	+++++					0.33071	0.000
41 2,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	741					741	0.000
42 2,4-DDD	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	706					706	0.000
44 4,4-DDE	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1197					1197	0.000
45 4,4-DDD/2,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	542					542	0.000

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 03-JUL-2013 14:29
End Cal Date : 03-JUL-2013 20:06
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem2/ecd5.i/20130703.b/PCB2.m
Cal Date : 04-Jul-2013 07:07 jrains
Curve Type : Average

Compound	20.000 Level 1	50.000 Level 2	100.000 Level 3	250.000 Level 4	500.000 Level 5	1000.000 Level 6	RRF	% RSD
	250.000 Level 7	0.000e+00 Level 8						
46 4,4-DDT	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	1119					1119	0.000
$ 2 Tetrachloro-m-xylene	1.05441	1.03947	1.10720	1.05213	1.02539	0.99279		
	+++++	+++++					1.04523	3.618
$ 13 Decachlorobiphenyl	1.13883	1.10305	1.09815	0.98398	0.93017	0.88048		
	+++++	+++++					1.02244	10.343

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130703.b/ical-1.b/0703b005.d
Data file 2: 20130703.b/ical-2.b/0703b005.d
Method: /chem2/ecd5.i/20130703.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: IB
Client ID:
Injection Date: 03-JUL-2013 14:09
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.382	-0.003	34898935	4.386	0.002	8963144	41.1	42.7	3.7	Tetrachloro-m-xylen
12.812	0.000	45585886	13.178	0.002	8347328	35.0	37.0	5.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	102.8	106.7
Decachlorobiphenyl	87.4	92.4

JM 07/04/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	54036699	53520042	-1.0
Hexabromobiphenyl	94298658	92213476	-2.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	16218104	16075309	-0.9
Hexabromobiphenyl	17872840	17671217	-1.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

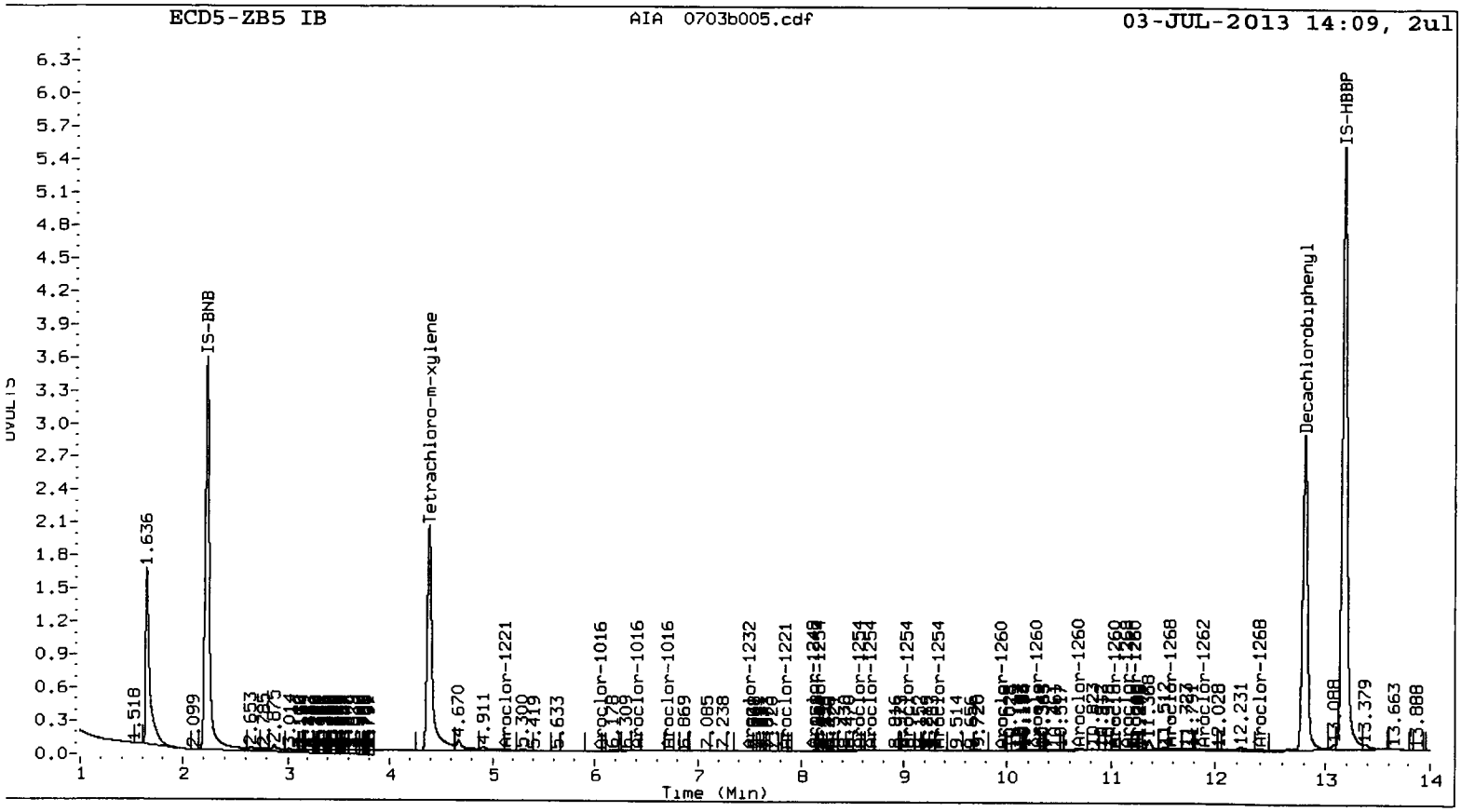
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.059	0.021	14068	0.6	1	---			0.0
Aroclor-1016	2	6.411	-0.034	11475	0.1	2	---			0.0
Aroclor-1016	3	6.706	0.111	12189	0.4	3	---			0.0
Aroclor-1016	4	---			0.0	4	---			0.0
Total Col1Ave (3 peaks):					0.4	Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	5.137	0.385	142181	12.0	1	---			0.0
Aroclor-1221	2	6.411	1.482	11475	1.4	2	5.085	0.016	113158	40.5
Aroclor-1221	3	7.856	2.819	17623	0.8	3	5.441	0.120	21232	13.6
Aroclor-1221	NS	---			----	4	---			0.0
Total Col1Ave (3 peaks):					4.7	Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	6.059	1.307	14068	1.8	1	5.085	0.016	113158	65.9
Aroclor-1232	2	6.411	1.484	11475	2.0	2	---			0.0
Aroclor-1232	3	7.502	1.466	85693	8.4	3	5.441	0.007	21232	6.1
Aroclor-1232	4	7.856	1.413	17623	0.6	4	---			0.0
Total Col1Ave (4 peaks):					3.2	Col2Ave: <3 Quant Peaks				
Aroclor-1242	1	6.059	0.023	14068	0.7	1	---			0.0
Aroclor-1242	2	6.411	-0.033	11475	0.2	2	---			0.0
Aroclor-1242	3	6.706	0.113	12189	0.4	3	---			0.0
Aroclor-1242	4	7.856	0.005	17623	0.5	4	---			0.0
Total Col1Ave (4 peaks):					0.5	Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	6.411	-0.031	11475	0.3	1	---			0.0
Aroclor-1248	2	7.502	0.081	85693	2.0	2	---			0.0
Aroclor-1248	3	7.856	0.003	17623	0.3	3	---			0.0
Aroclor-1248	4	8.123	0.034	87008	2.2	4	---			0.0
Total Col1Ave (4 peaks):					1.2	Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	8.175	0.003	22222	0.4	1	---			0.0
Aroclor-1254	2	8.565	0.021	18205	0.5	2	---			0.0
Aroclor-1254	3	8.683	0.001	23665	0.3	3	---			0.0
Aroclor-1254	4	9.037	0.002	96151	1.2	4	---			0.0
Aroclor-1254	5	9.342	-0.002	67517	2.2	5	---			0.0
Total Col1Ave (5 peaks):					0.9	Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	9.948	-0.001	65245	1.2	1	---			0.0
Aroclor-1260	2	10.289	0.023	135866	2.5	2	---			0.0
Aroclor-1260	3	10.689	0.047	565085	4.2	3	10.962	0.001	18300	0.8
Aroclor-1260	4	11.041	-0.002	105802	1.5	4	11.438	-0.043	45823	6.2
Aroclor-1260	5	11.231	0.000	78034	2.0	NS	---			----
Total Col1Ave (5 peaks):					2.3	Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	10.289	0.024	135866	2.1	1	---			0.0
Aroclor-1262	2	10.689	0.048	565085	3.7	2	---			0.0
Aroclor-1262	3	11.041	0.000	105802	1.9	3	10.962	0.000	18300	0.6
Aroclor-1262	4	11.231	0.000	78034	1.1	4	---			0.0
Aroclor-1262	5	11.891	-0.009	570061	8.7	5	12.319	0.037	65970	5.7
Total Col1Ave (5 peaks):					3.5	Col2Ave: <3 Quant Peaks				
Aroclor-1268	1	11.159	0.002	141320	0.9	1	11.438	-0.043	45823	1.5
Aroclor-1268	2	11.231	0.002	78034	0.5	2	---			0.0
Aroclor-1268	3	11.581	-0.033	381764	2.8	3	11.947	0.003	55703	2.2
Aroclor-1268	4	12.400	-0.006	365109	0.9	4	12.704	-0.062	10814	0.1
Total Col1Ave (4 peaks):					1.3	Total Col2Ave (3 peaks):				1.3 RPD = 1
Corrected Ave (3 peaks):					0.8	Corrected Ave: < 3 Peaks				

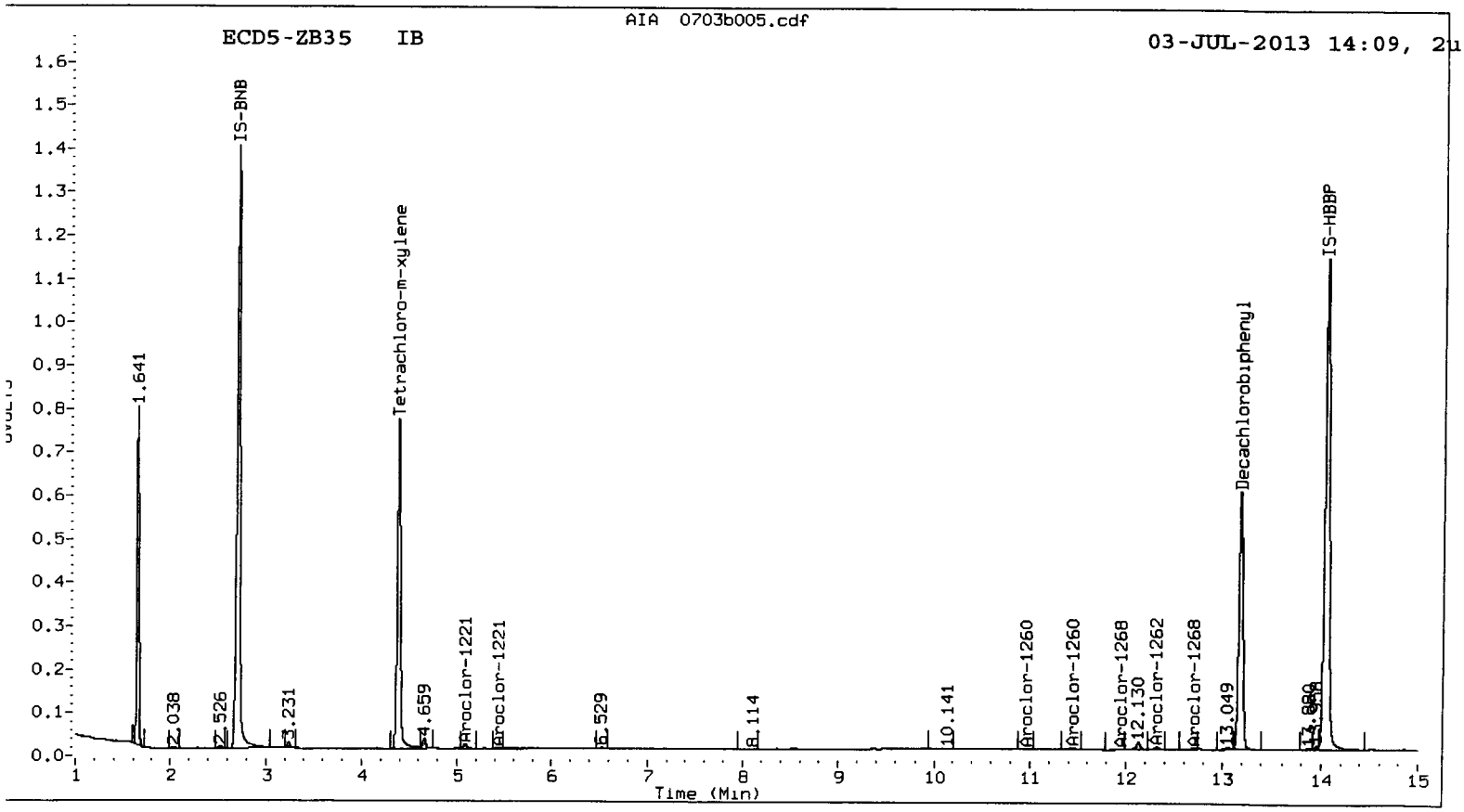
Total PCB Area Col1 (4.485 - 12.712) = 11583983 Col1 Total PCB = 0.0 ppm*

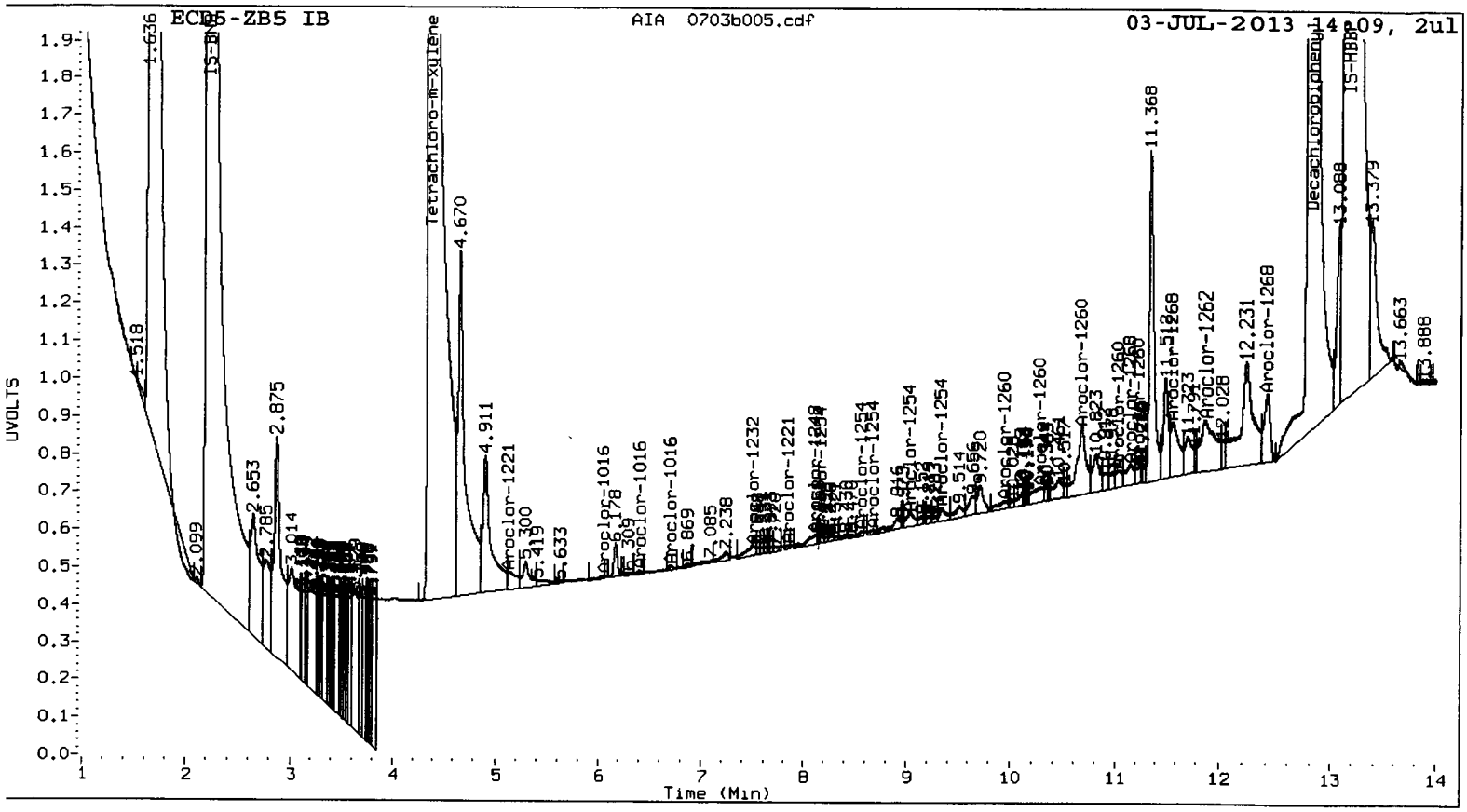
Total PCB Area Col2 (4.484 - 13.077) = 996709 Col2 Total PCB = 0.0 ppm*

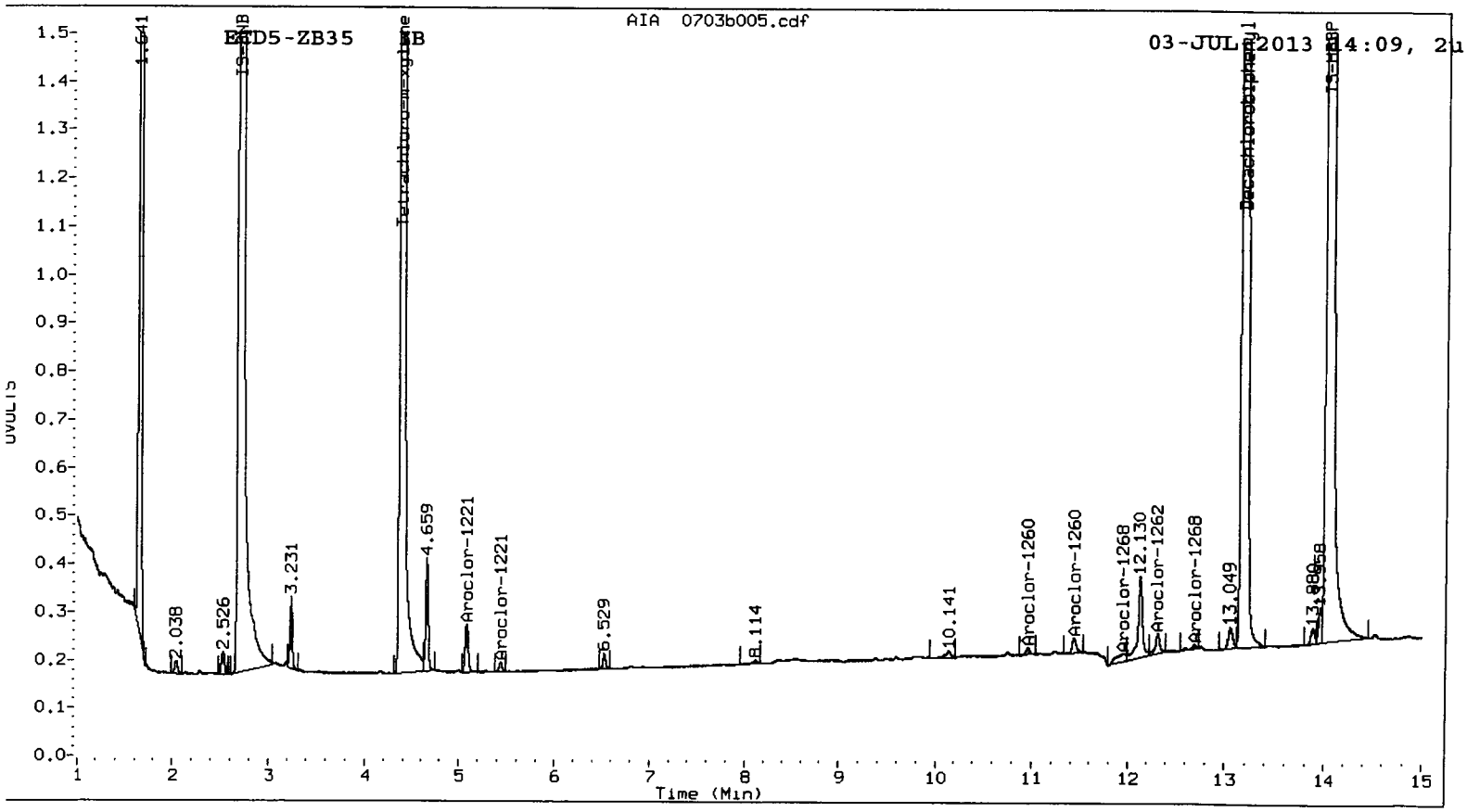
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 IB
AIA 0703b005.cdf
03-JUL-2013 14:09, 2ul
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
1.636
Time (Min)


ECD5-ZB35 IB
AIA 0703b005.cdf
03-JUL-2013 14:09, 2u
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
1.641
Time (Min)


ECD5-ZB5 IB
AIA 0703b005.cdf
03-JUL-2013 14:09, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBB
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


ECD5-ZB35
AIA 0703b005.cdf
03-JUL-2013 14:09, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1260
Aroclor-1268
Aroclor-1262

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130703.b/ical-1.b/0703b006.d
Data file 2: 20130703.b/ical-2.b/0703b006.d
Method: /chem2/ecd5.i/20130703.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.25PPM AR1660
Client ID:
Injection Date: 03-JUL-2013 14:29
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.383	-0.002	17174740	4.387	0.003	4265899	20.0	20.1	0.4	Tetrachloro-m-xylen
12.811	-0.001	24049275	13.179	0.002	4396614	18.0	19.2	6.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	50.1	50.3
Decachlorobiphenyl	45.1	48.1

07/04/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	54036699	54036699	0.0
Hexabromobiphenyl	94298658	94298658	0.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	16218104	16218104	0.0
Hexabromobiphenyl	17872840	17872840	0.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

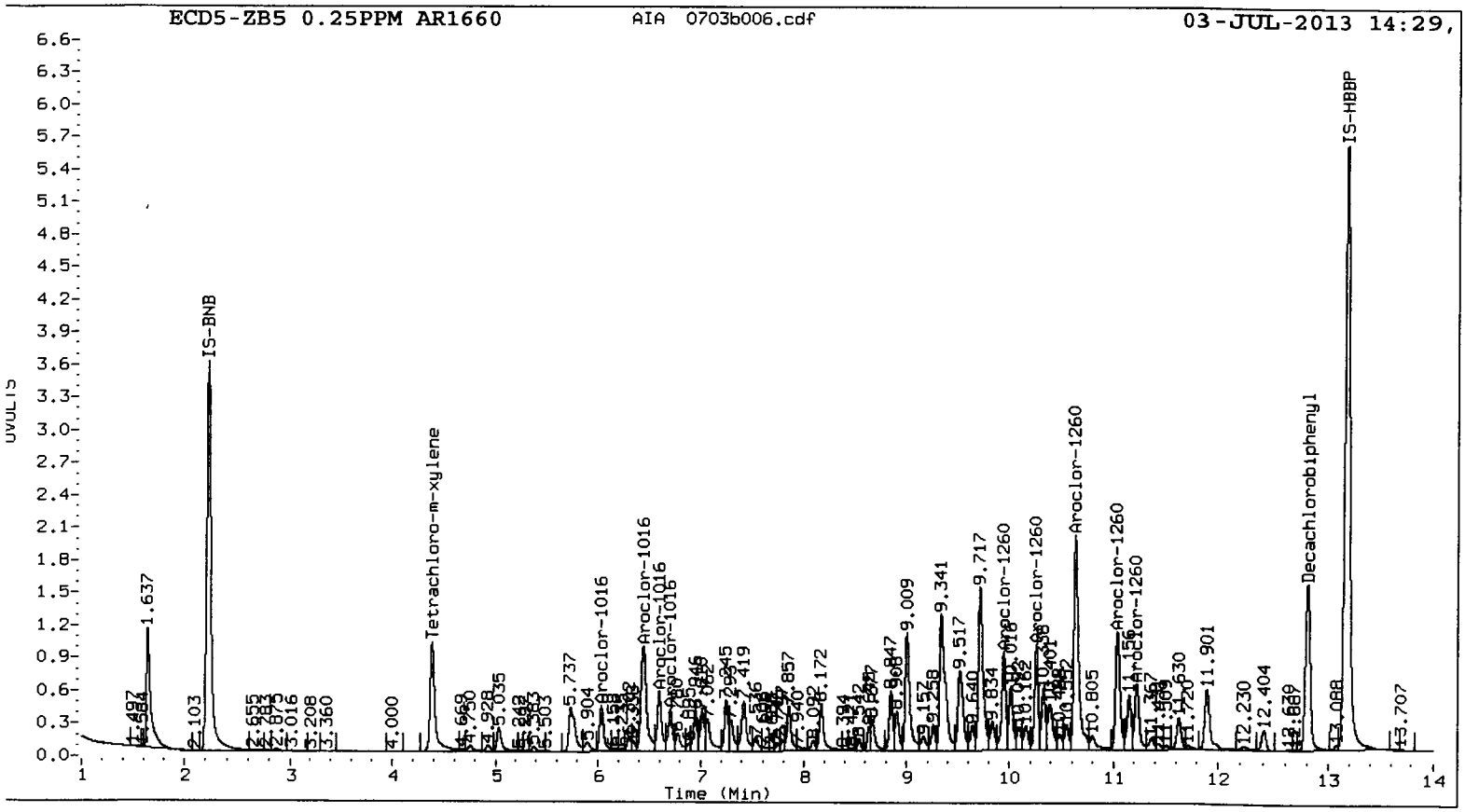
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.035	-0.002	6016062	240.3	1	6.142	0.001	2198994	241.9
Aroclor-1016	2	6.443	-0.002	18520452	238.5	2	6.777	0.001	4778022	243.7
Aroclor-1016	3	6.593	-0.002	8153013	238.1	3	7.162	0.000	1257439	246.8
Aroclor-1016	4	6.704	-0.002	6029259	237.8	4	7.336	0.001	1127718	242.4
Total Col1Ave (4 peaks):					238.7	Total Col2Ave (4 peaks):				243.7 RPD = 2
Corrected Ave (3 peaks):					238.2	Corrected Ave (3 peaks):				242.7 RPD = 2
Aroclor-1260	1	9.947	-0.002	12715118	234.2	1	10.237	0.001	2428641	243.8
Aroclor-1260	2	10.264	-0.002	12795309	234.5	2	10.687	0.001	2985591	247.3
Aroclor-1260	3	10.640	-0.002	32283324	235.3	3	10.962	0.001	5993746	248.6
Aroclor-1260	4	11.041	-0.002	17118446	235.0	4	11.482	0.001	1814921	243.1
Aroclor-1260	5	11.230	-0.001	9239905	231.6	NS	---			----
Total Col1Ave (5 peaks):					234.1	Total Col2Ave (4 peaks):				245.7 RPD = 5
Corrected Ave (4 peaks):					233.8	Corrected Ave (3 peaks):				244.7 RPD = 5

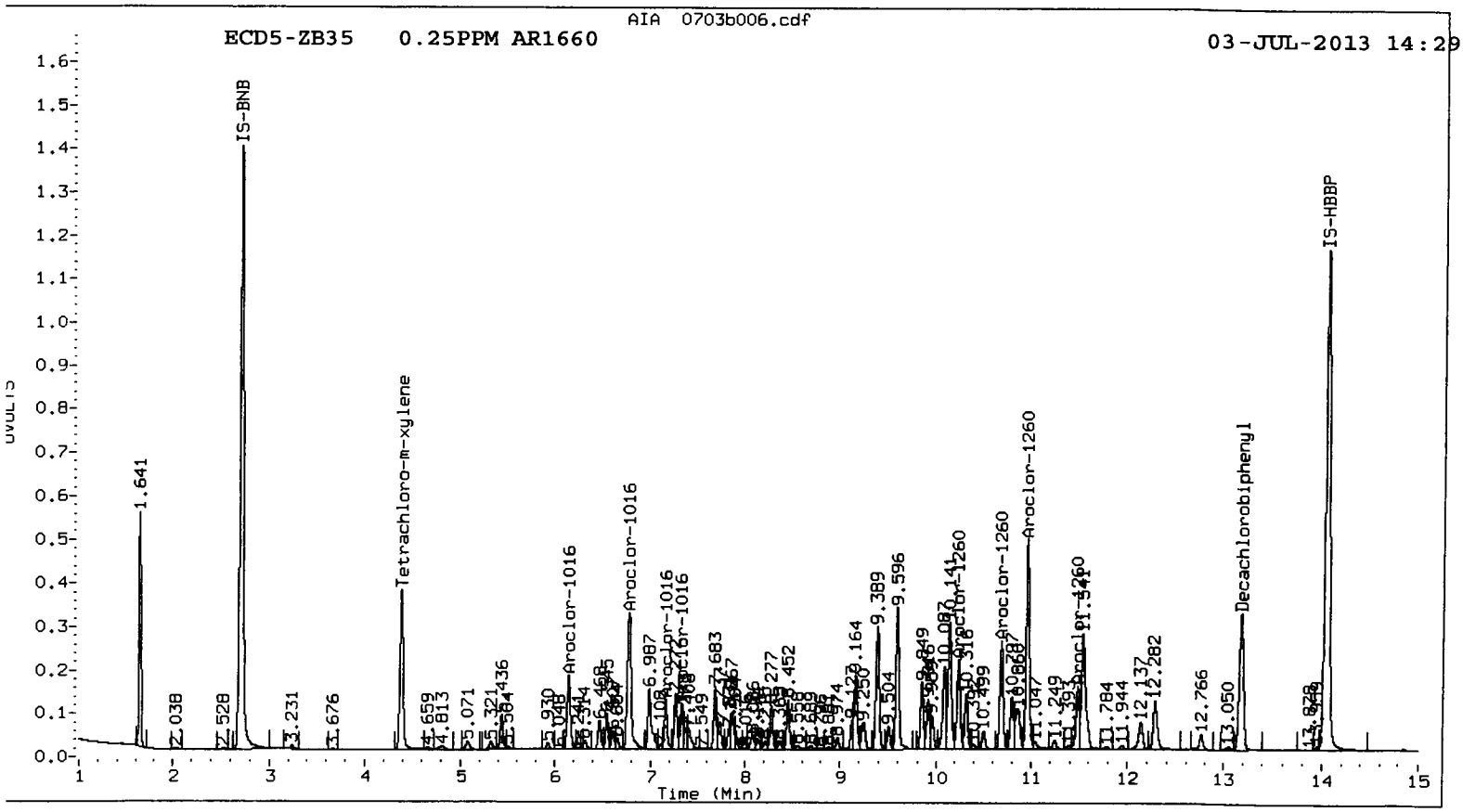
Total PCB Area Col1 (4.485 - 12.712) = 378489171 Col1 Total PCB = 0.6 ppm*

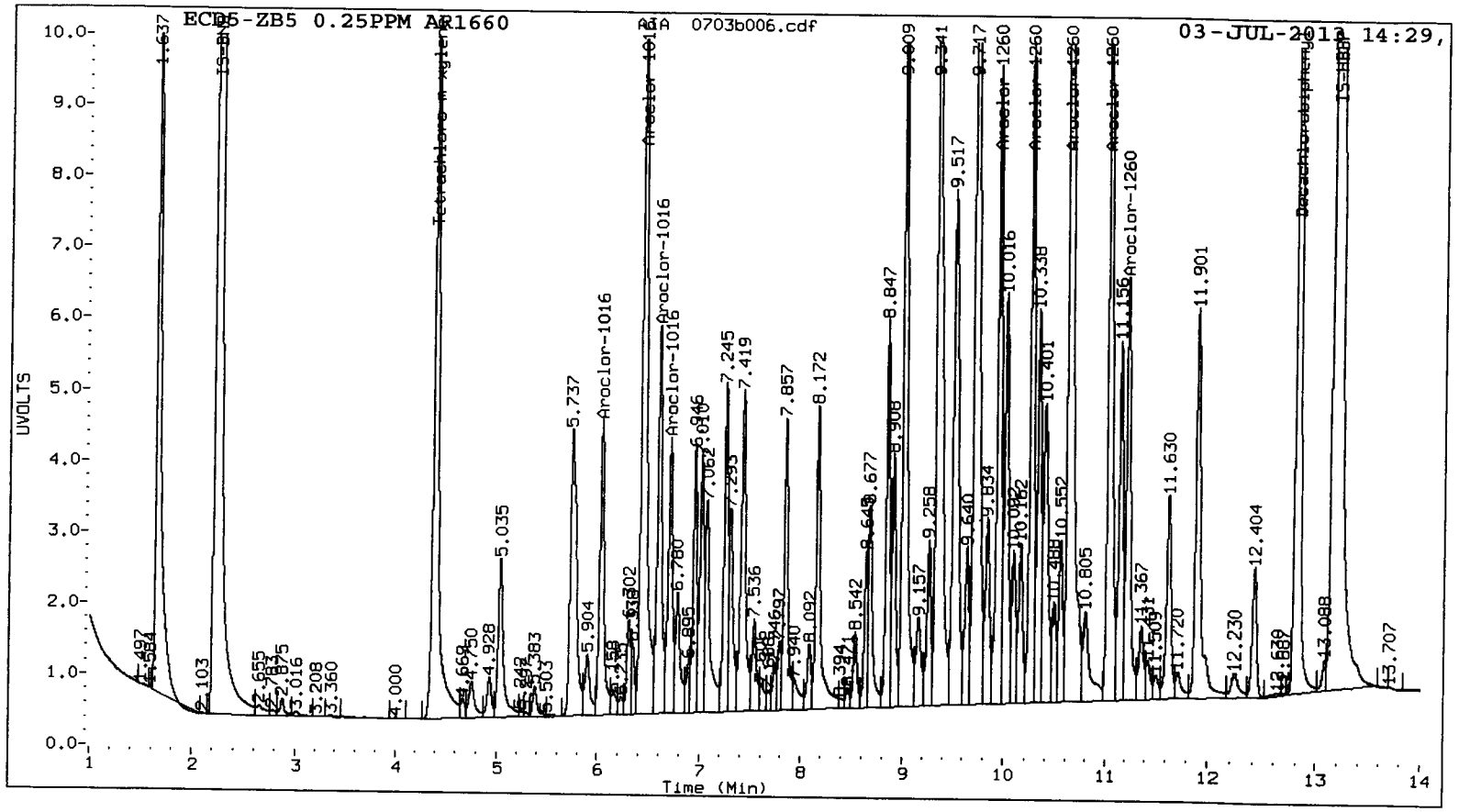
Total PCB Area Col2 (4.484 - 13.077) = 74483694 Col2 Total PCB = 0.6 ppm*

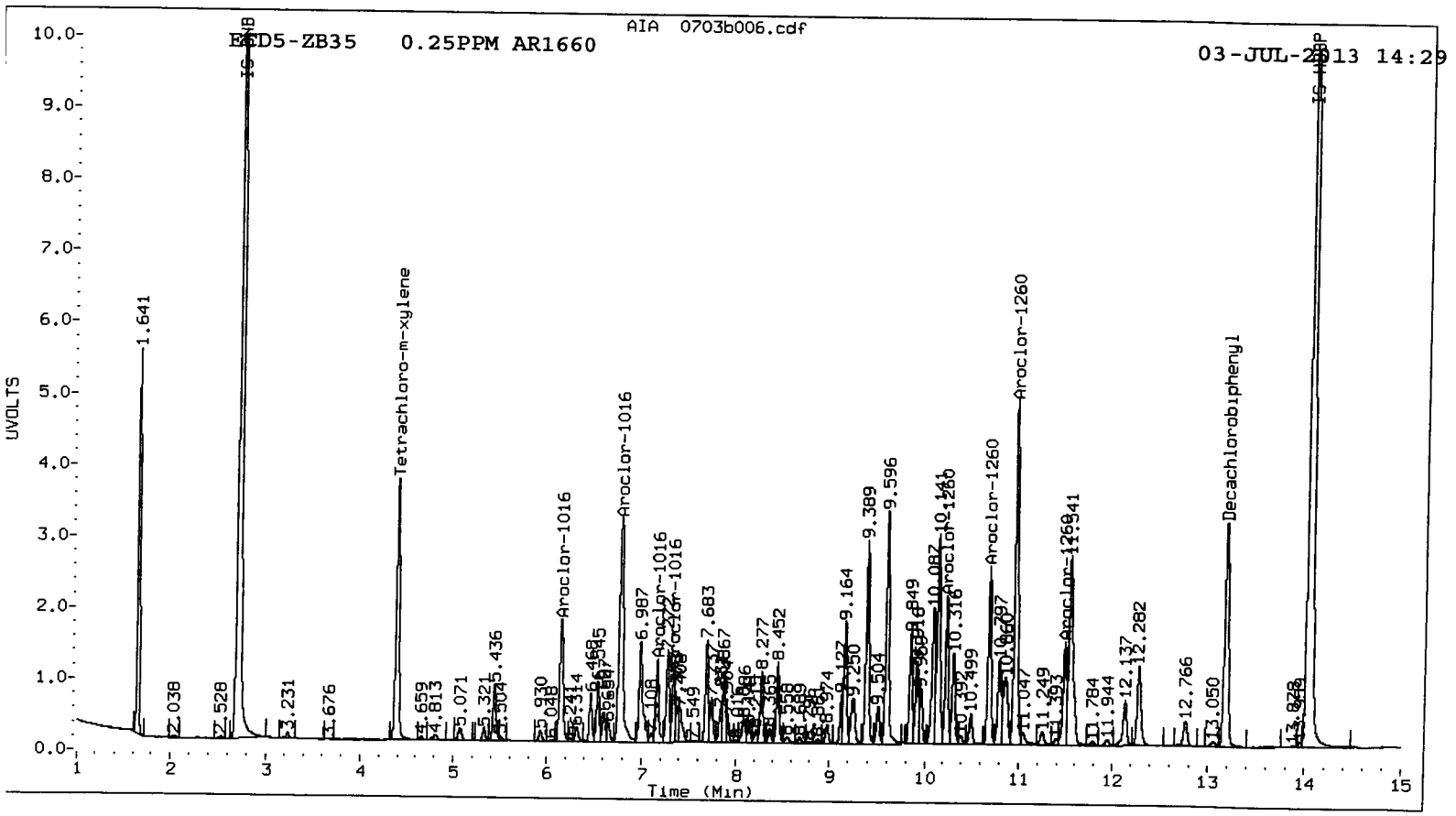
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 0.25PPM AR1660
AIA 0703b006.cdf
03-JUL-2013 14:29,
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)


AIA 0703b006.cdf
ECD5-ZB35 0.25PPM AR1660
03-JUL-2013 14:29
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD5-ZB5 0.25PPM AR1660
AIA 0703b006.cdf
03-JUL-2013 14:29,
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl


ECD5-ZB35 0.25PPM AR1660
AIA 0703b006.cdf
03-JUL-2013 14:29
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130703.b/ical-1.b/0703b007.d
Data file 2: 20130703.b/ical-2.b/0703b007.d
Method: /chem2/ecd5.i/20130703.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.02PPM AR1660
Client ID:
Injection Date: 03-JUL-2013 14:48
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.382	-0.003	1461360	4.386	0.002	353036	1.6	1.6	0.7	Tetrachloro-m-xylen
12.811	-0.001	2783434	13.178	0.001	423564	2.0	1.8	11.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	4.1	4.0
Decachlorobiphenyl	5.0	4.5

7/04/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	54036699	56696922	4.9
Hexabromobiphenyl	94298658	98484852	4.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	16218104	16740971	3.2
Hexabromobiphenyl	17872840	18596529	4.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

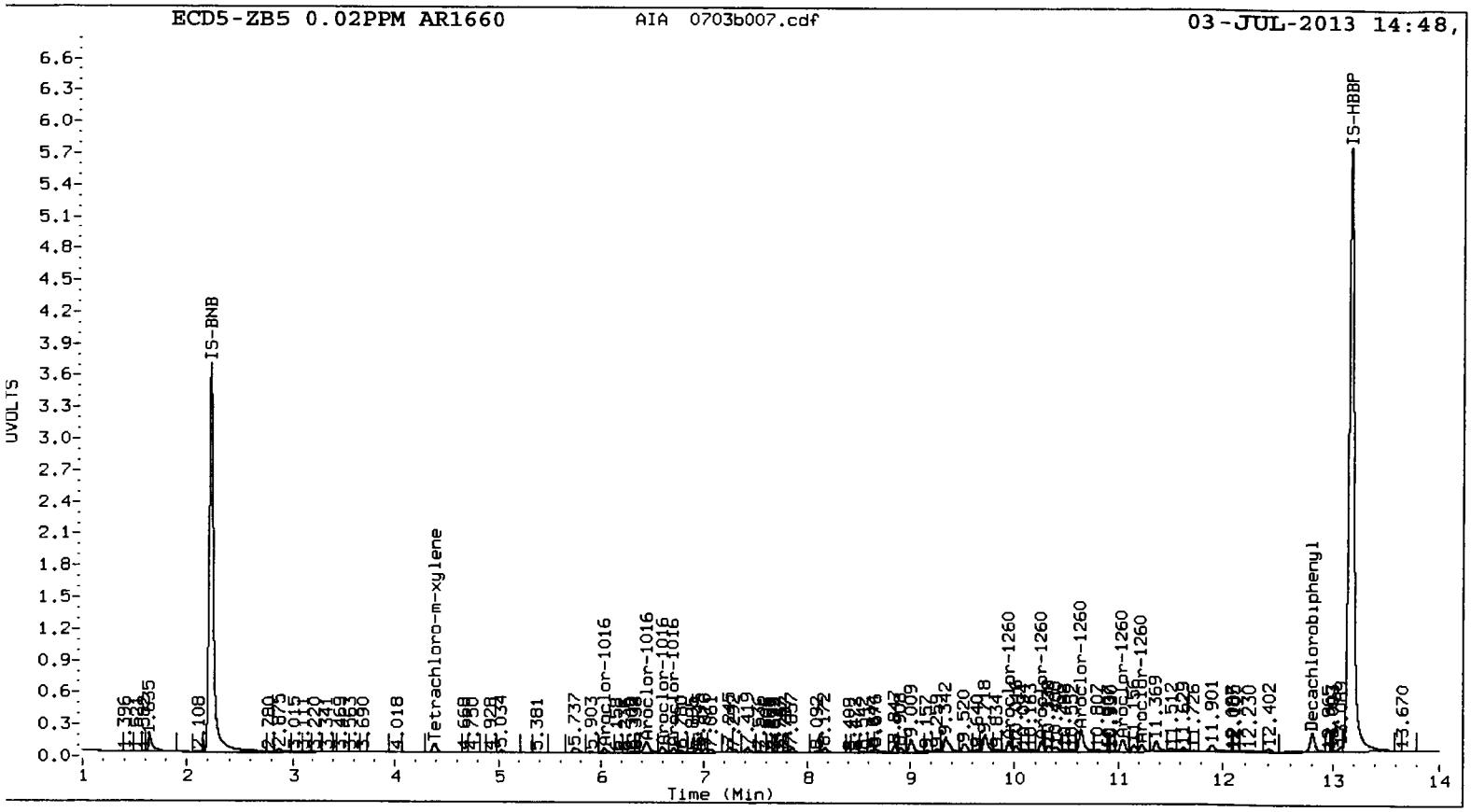
		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.035	-0.003	606310	23.1	1	6.141	0.000	211569	22.5
Aroclor-1016	2	6.442	-0.003	1890668	23.2	2	6.777	0.000	449474	22.2
Aroclor-1016	3	6.593	-0.002	840830	23.4	3	7.162	0.000	112651	21.4
Aroclor-1016	4	6.704	-0.003	613846	23.1	4	7.335	0.000	107693	22.4
	Total Col1Ave (4 peaks):				23.2	Total Col2Ave (4 peaks):			22.1	RPD = 5
	Corrected Ave (3 peaks):				23.1	Corrected Ave (3 peaks):			22.0	RPD = 5
Aroclor-1260	1	9.948	-0.001	1397551	24.7	1	10.237	0.001	234696	22.6
Aroclor-1260	2	10.265	-0.001	1407853	24.7	2	10.686	0.000	272138	21.7
Aroclor-1260	3	10.641	-0.001	3579248	25.0	3	10.962	0.001	525400	20.9
Aroclor-1260	4	11.042	-0.001	1868516	24.6	4	11.481	0.000	193478	24.9
Aroclor-1260	5	11.230	-0.001	1036819	24.9	NS	---			----
	Total Col1Ave (5 peaks):				24.8	Total Col2Ave (4 peaks):			22.5	RPD = 9
	Corrected Ave (4 peaks):				24.7	Corrected Ave (3 peaks):			21.8	RPD = 13

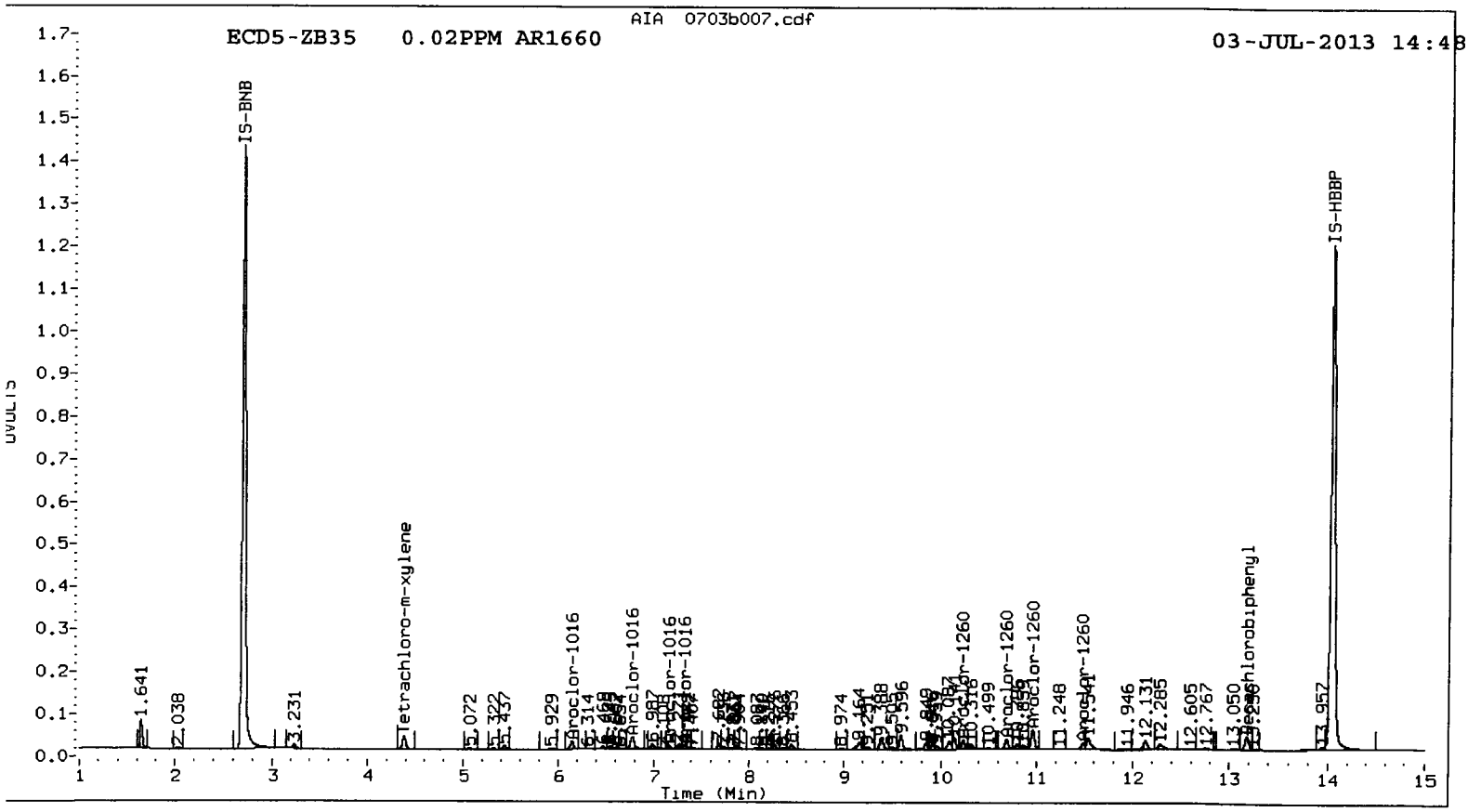
Total PCB Area Col1 (4.485 - 12.712) = 44112297 Col1 Total PCB = 0.1 ppm*

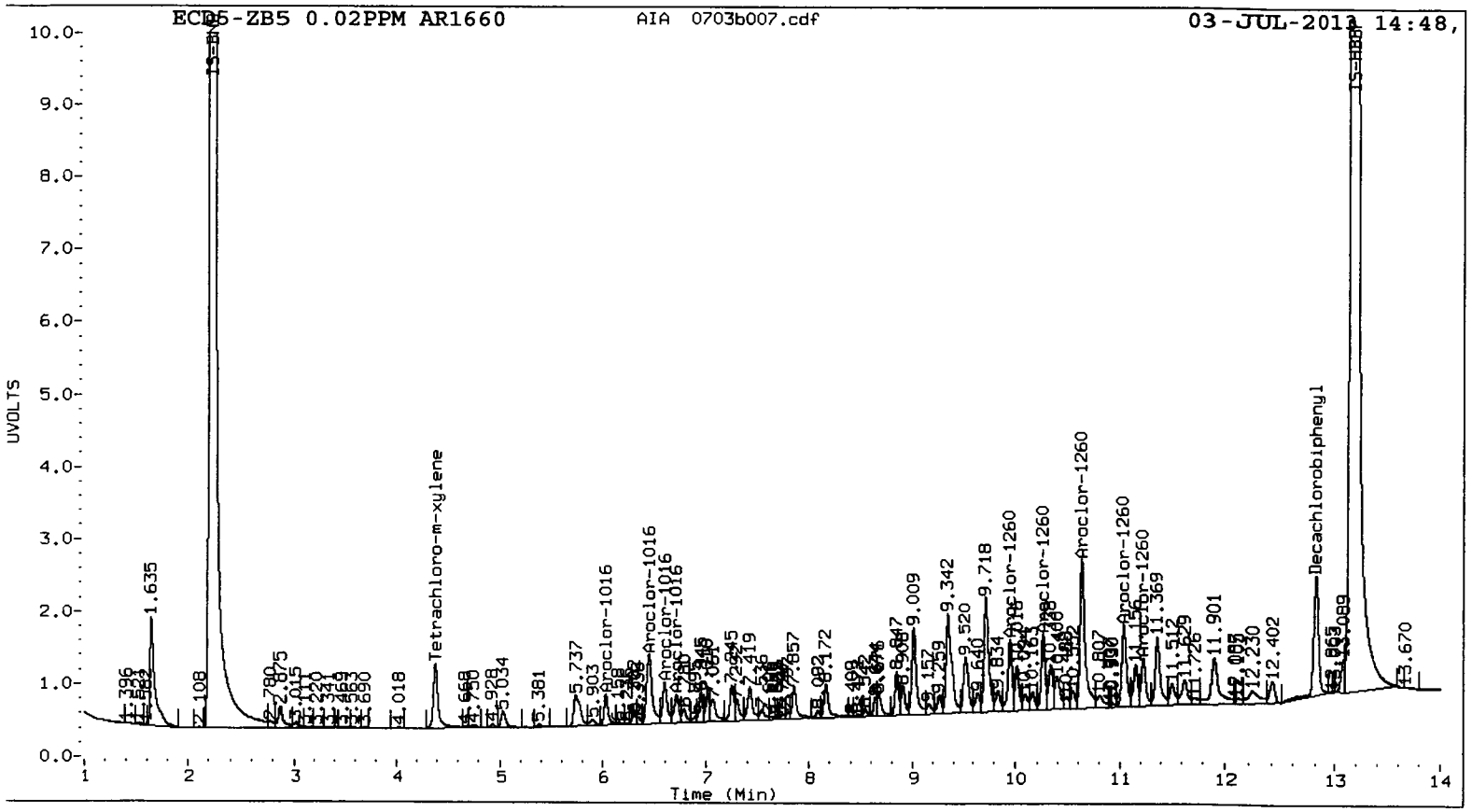
Total PCB Area Col2 (4.484 - 13.077) = 7322265 Col2 Total PCB = 0.1 ppm*

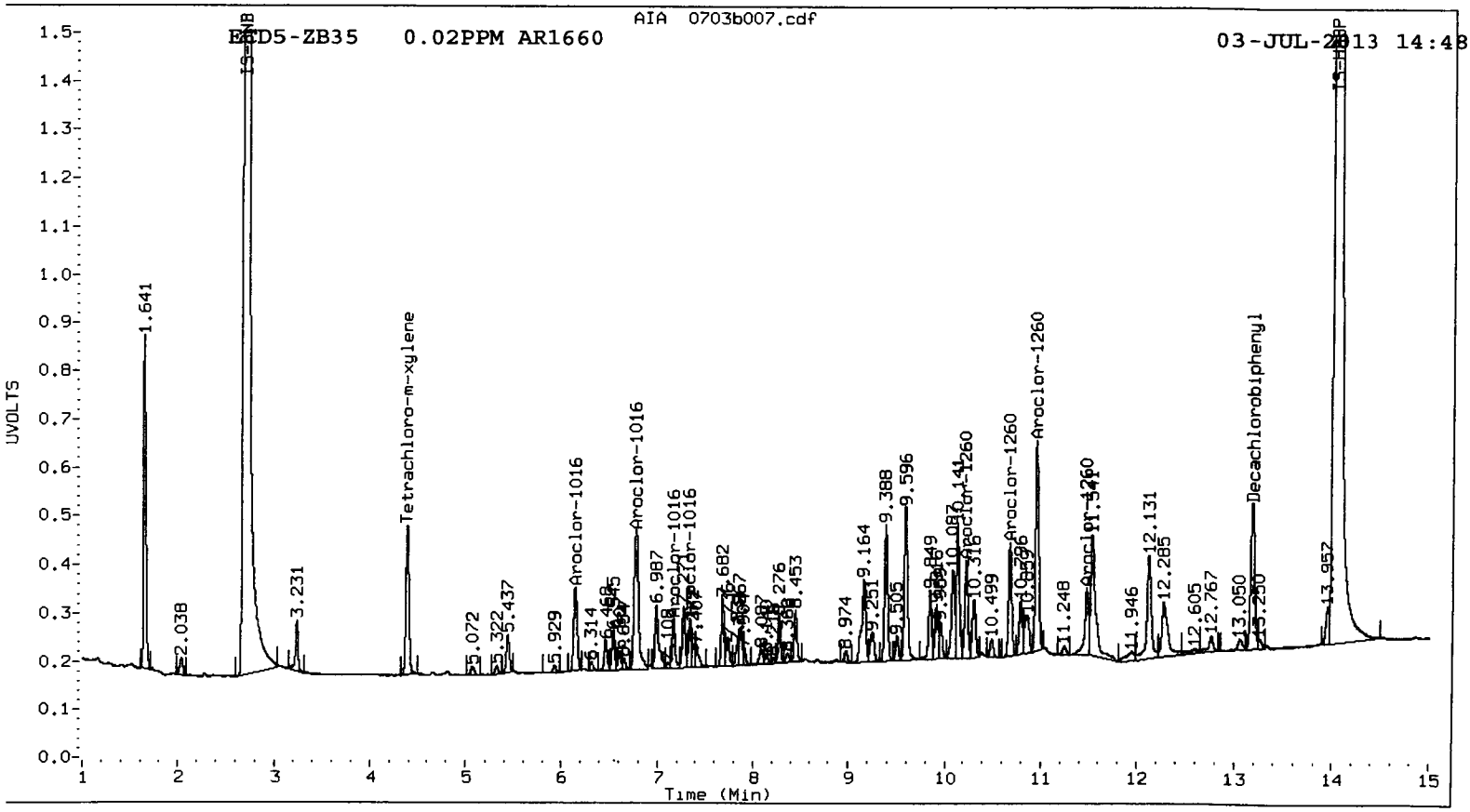
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 0.02PPM AR1660
AIA 0703b007.cdf
03-JUL-2013 14:48,
UVOLTS
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)


AIA 0703b007.cdf
ECD5-ZB35 0.02PPM AR1660
03-JUL-2013 14:48
UVOLTS
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD5-ZB5 0.02PPM AR1660
AIA 0703b007.cdf
03-JUL-2013 14:48,
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl


AIA 0703b007.cdf
ECD5-ZB35 0.02PPM AR1660
03-JUL-2013 14:48
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130703.b/ical-1.b/0703b008.d
Data file 2: 20130703.b/ical-2.b/0703b008.d
Method: /chem2/ecd5.i/20130703.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.05PPM AR1660
Client ID:
Injection Date: 03-JUL-2013 15:08
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	Shift	Response	ZB35 Col RT	Shift	Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.383	-0.002	3434272	4.384	0.000	815369	4.1	4.0	1.8	Tetrachloro-m-xylen
12.811	-0.001	6081954	13.178	0.001	974596	4.6	4.3	6.0	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	10.1	9.9
Decachlorobiphenyl	11.5	10.8

JA 07/04/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	54036699	53462228	-1.1
Hexabromobiphenyl	94298658	93803582	-0.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	16218104	15688123	-3.3
Hexabromobiphenyl	17872840	17670872	-1.1

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

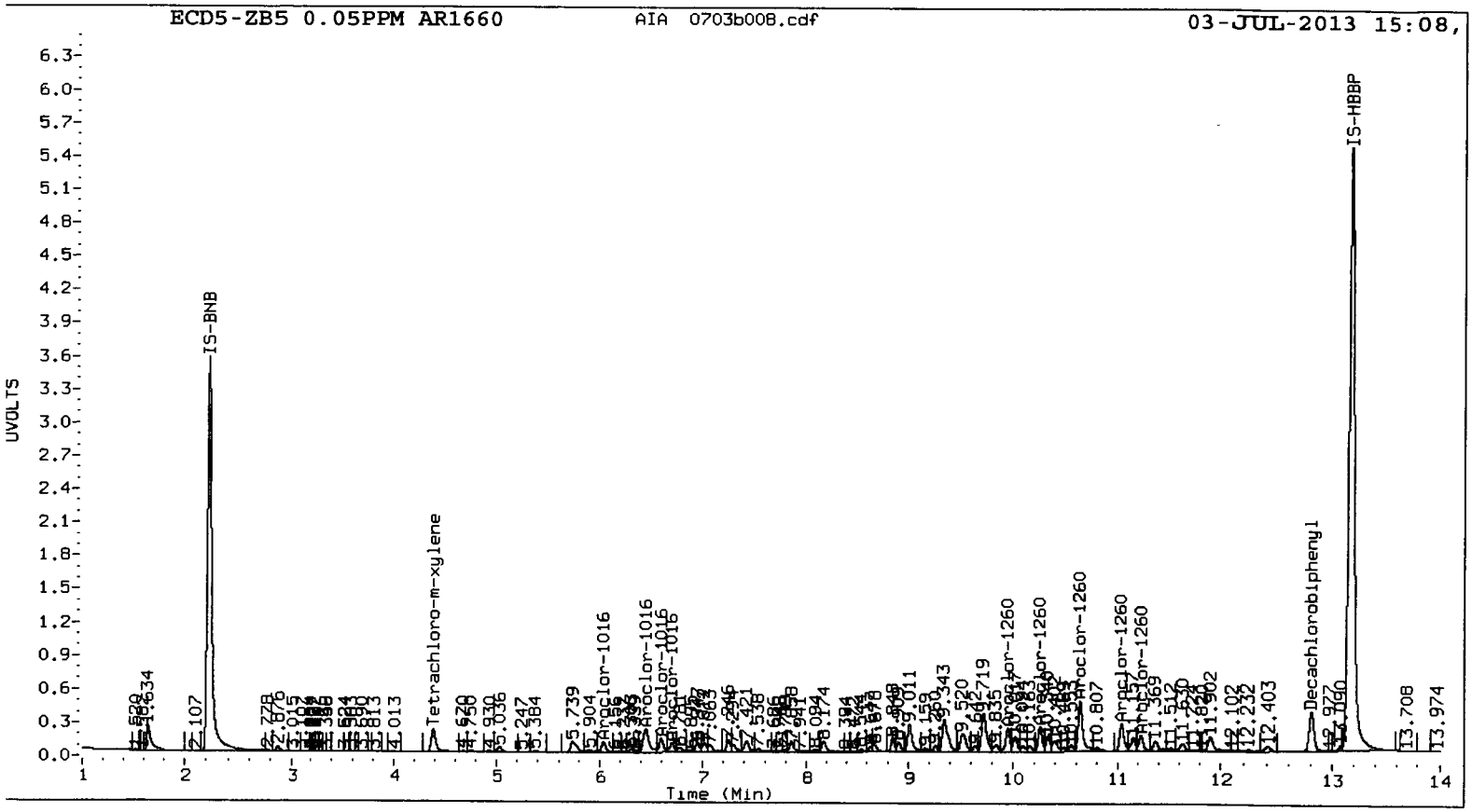
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.037	-0.001	1325077	53.5	1	6.141	0.000	481883	54.8
Aroclor-1016	2	6.445	0.000	4133211	53.8	2	6.777	0.001	1013907	53.5
Aroclor-1016	3	6.594	-0.001	1834277	54.1	3	7.163	0.001	256102	52.0
Aroclor-1016	4	6.705	-0.001	1340500	53.4	4	7.335	0.000	240176	53.4
	Total Col1Ave (4 peaks):				53.7	Total Col2Ave (4 peaks):			53.4	RPD = 1
	Corrected Ave (3 peaks):				53.6	Corrected Ave (3 peaks):			52.9	RPD = 1
Aroclor-1260	1	9.949	0.000	2992175	55.4	1	10.238	0.001	524459	53.3
Aroclor-1260	2	10.266	0.000	2996938	55.2	2	10.687	0.001	634498	53.2
Aroclor-1260	3	10.641	0.000	7468939	54.7	3	10.962	0.001	1283872	53.8
Aroclor-1260	4	11.042	-0.001	3963056	54.7	4	11.482	0.001	397209	53.8
Aroclor-1260	5	11.231	0.000	2176556	54.9	NS	---			----
	Total Col1Ave (5 peaks):				55.0	Total Col2Ave (4 peaks):			53.5	RPD = 3
	Corrected Ave (4 peaks):				54.9	Corrected Ave (3 peaks):			53.4	RPD = 3

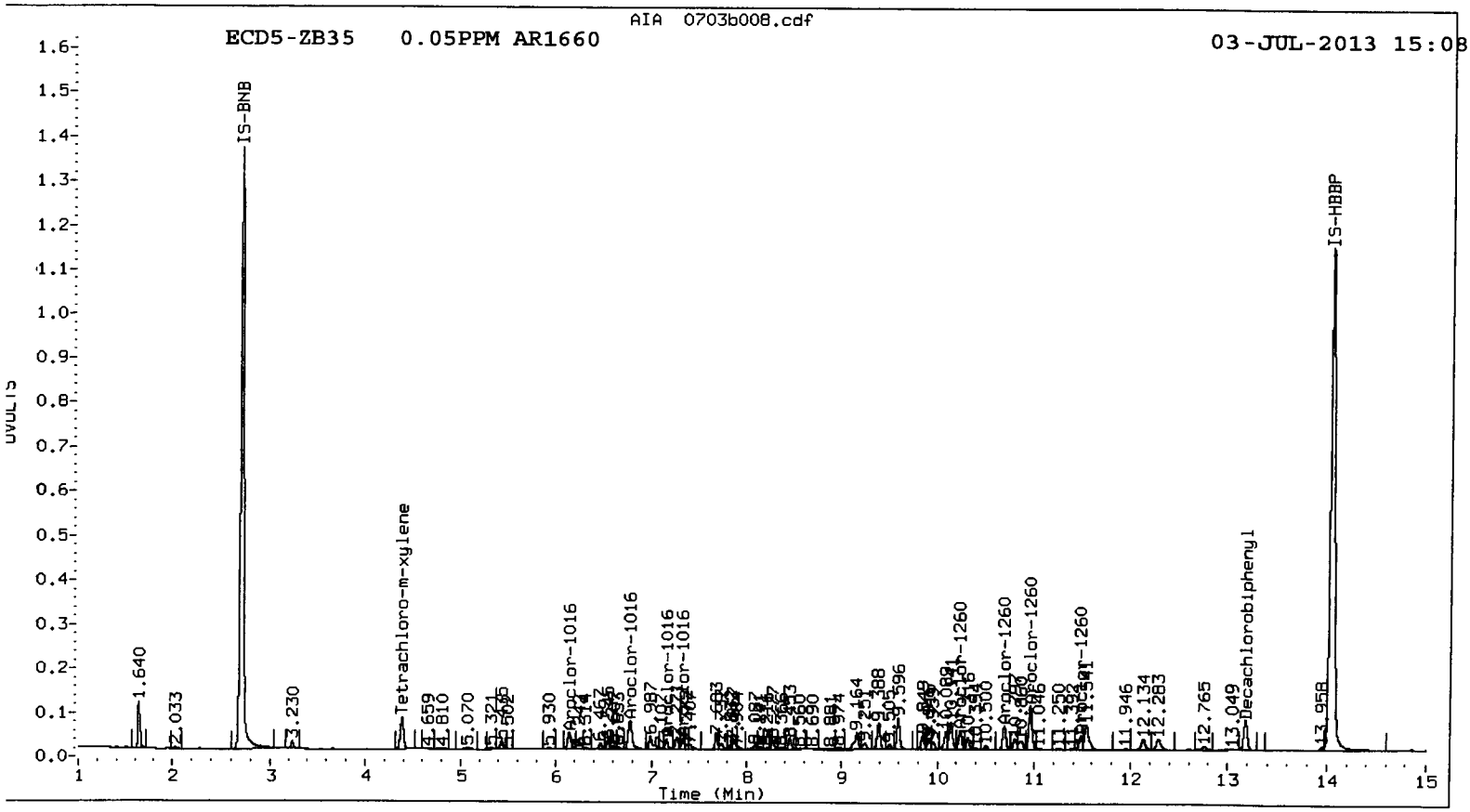
Total PCB Area Col1 (4.485 - 12.712) = 89879986 Col1 Total PCB = 0.2 ppm*

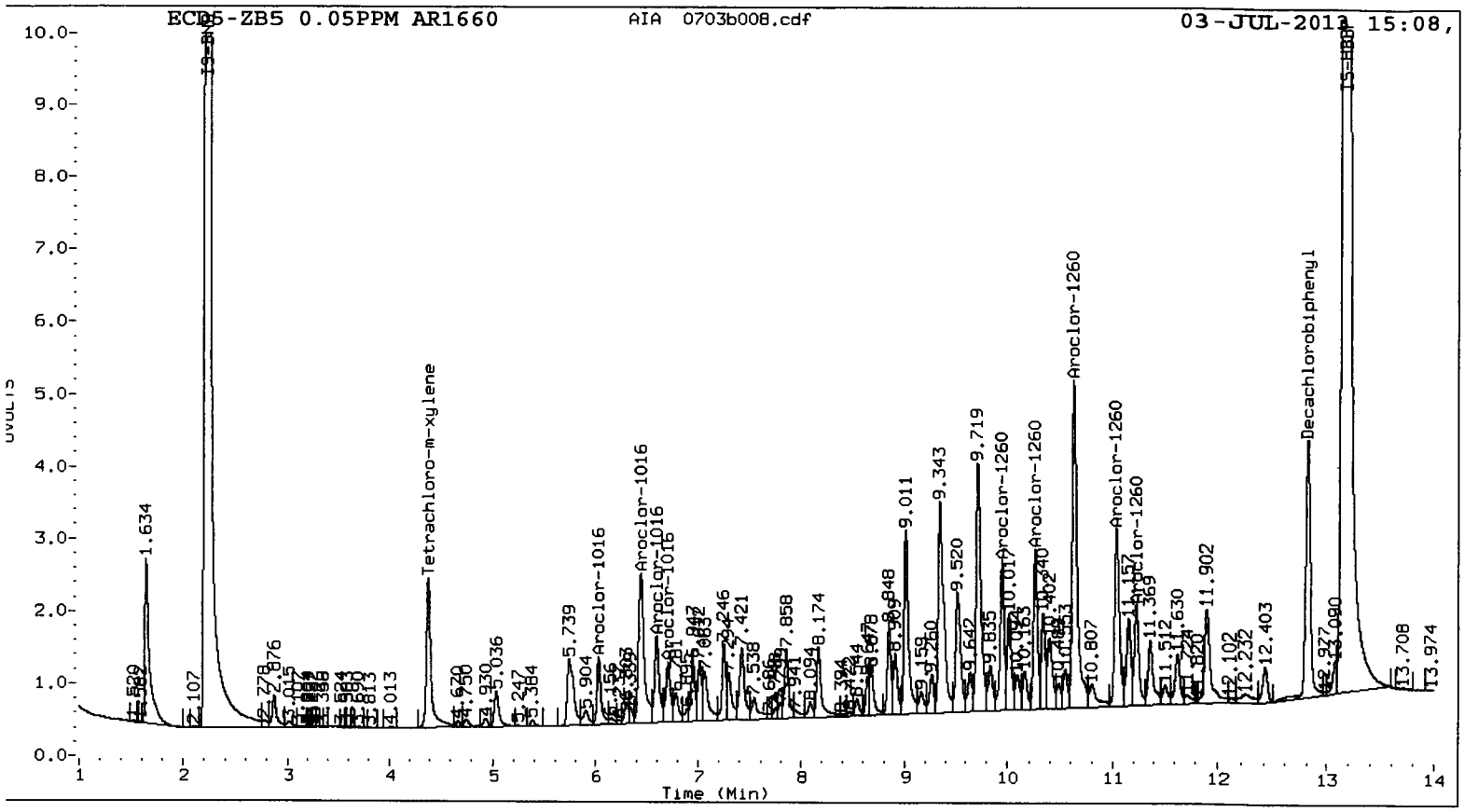
Total PCB Area Col2 (4.484 - 13.077) = 16175245 Col2 Total PCB = 0.1 ppm*

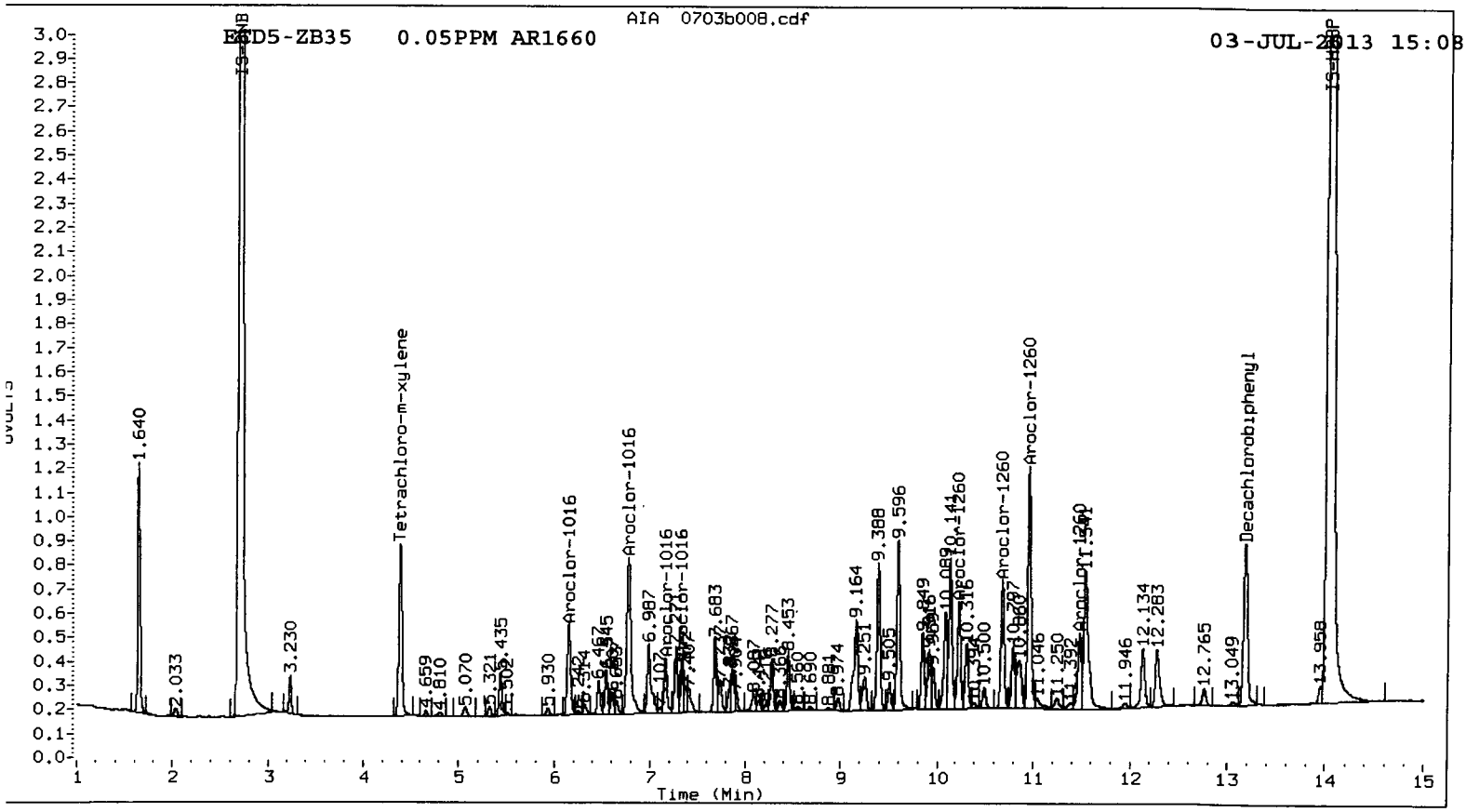
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 0.05PPM AR1660
AIA 0703b008.cdf
03-JUL-2013 15:08,
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
UVOLTS
Time (Min)


AIA 0703b008.cdf
ECD5-ZB35 0.05PPM AR1660
03-JUL-2013 15:08
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD5-ZB5 0.05PPM AR1660
AIA 0703b008.cdf
03-JUL-2013 15:08,
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
Time (Min)


AIA 0703b008.cdf
ECD5-ZB35 0.05PPM AR1660
03-JUL-2013 15:08
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130703.b/ical-1.b/0703b009.d
Data file 2: 20130703.b/ical-2.b/0703b009.d
Method: /chem2/ecd5.i/20130703.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 1 PPM AR1660
Client ID:
Injection Date: 03-JUL-2013 15:28
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.382	-0.003	61958086	4.386	0.002	15710902	74.1	76.0	2.5	Tetrachloro-m-xylen
12.811	-0.001	84408431	13.178	0.002	15664687	64.0	68.9	7.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	185.2	190.0
Decachlorobiphenyl	159.9	172.2

JK 07/04/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	54036699	52744763	-2.4
Hexabromobiphenyl	94298658	93309532	-1.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	16218104	15825033	-2.4
Hexabromobiphenyl	17872840	17790996	-0.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

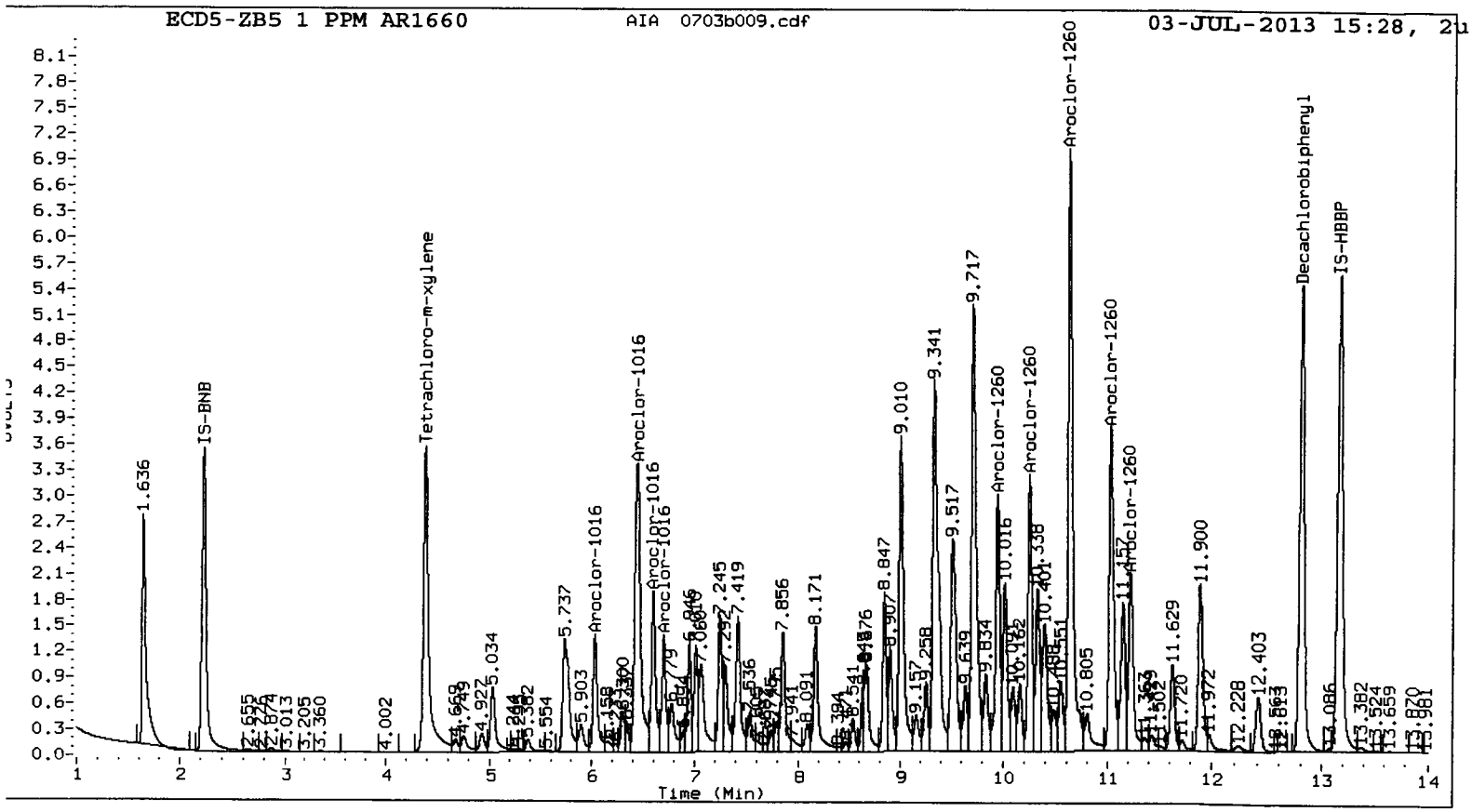
		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.035	-0.003	20483574	838.2	1	6.141	0.000	7302922	823.4
Aroclor-1016	2	6.442	-0.003	63387812	836.3	2	6.776	0.000	16473936	861.1
Aroclor-1016	3	6.592	-0.003	27651714	827.4	3	7.161	-0.001	4471886	899.5
Aroclor-1016	4	6.703	-0.004	20943893	846.4	4	7.335	0.000	3929871	865.6
	Total Col1Ave (4 peaks):				837.1	Total Col2Ave (4 peaks):			862.4	RPD = 3
	Corrected Ave (3 peaks):				833.9	Corrected Ave (3 peaks):			850.0	RPD = 2
Aroclor-1260	1	9.947	-0.002	42761625	796.1	1	10.237	0.000	8460903	853.4
Aroclor-1260	2	10.265	-0.001	43207725	800.2	2	10.685	0.000	10490526	873.0
Aroclor-1260	3	10.641	-0.001	109760355	808.3	3	10.961	0.000	21041727	876.6
Aroclor-1260	4	11.040	-0.002	58555801	812.4	4	11.481	0.000	6183460	832.0
Aroclor-1260	5	11.230	-0.001	32189243	815.5	NS	---			----
	Total Col1Ave (5 peaks):				806.5	Total Col2Ave (4 peaks):			858.7	RPD = 6
	Corrected Ave (4 peaks):				804.3	Corrected Ave (3 peaks):			852.8	RPD = 6

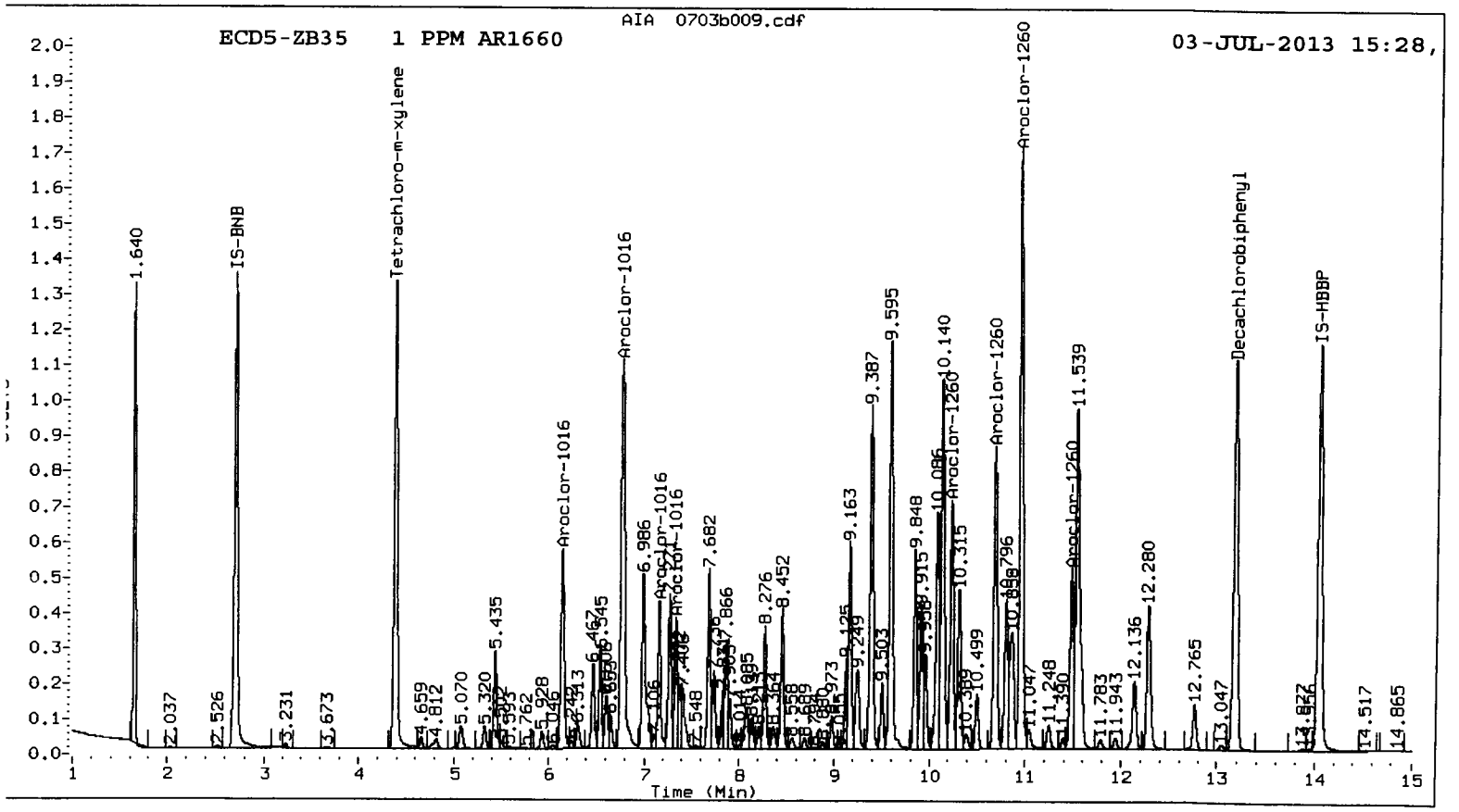
Total PCB Area Col1 (4.485 - 12.712) = 1287663282 Col1 Total PCB = 2.2 ppm*

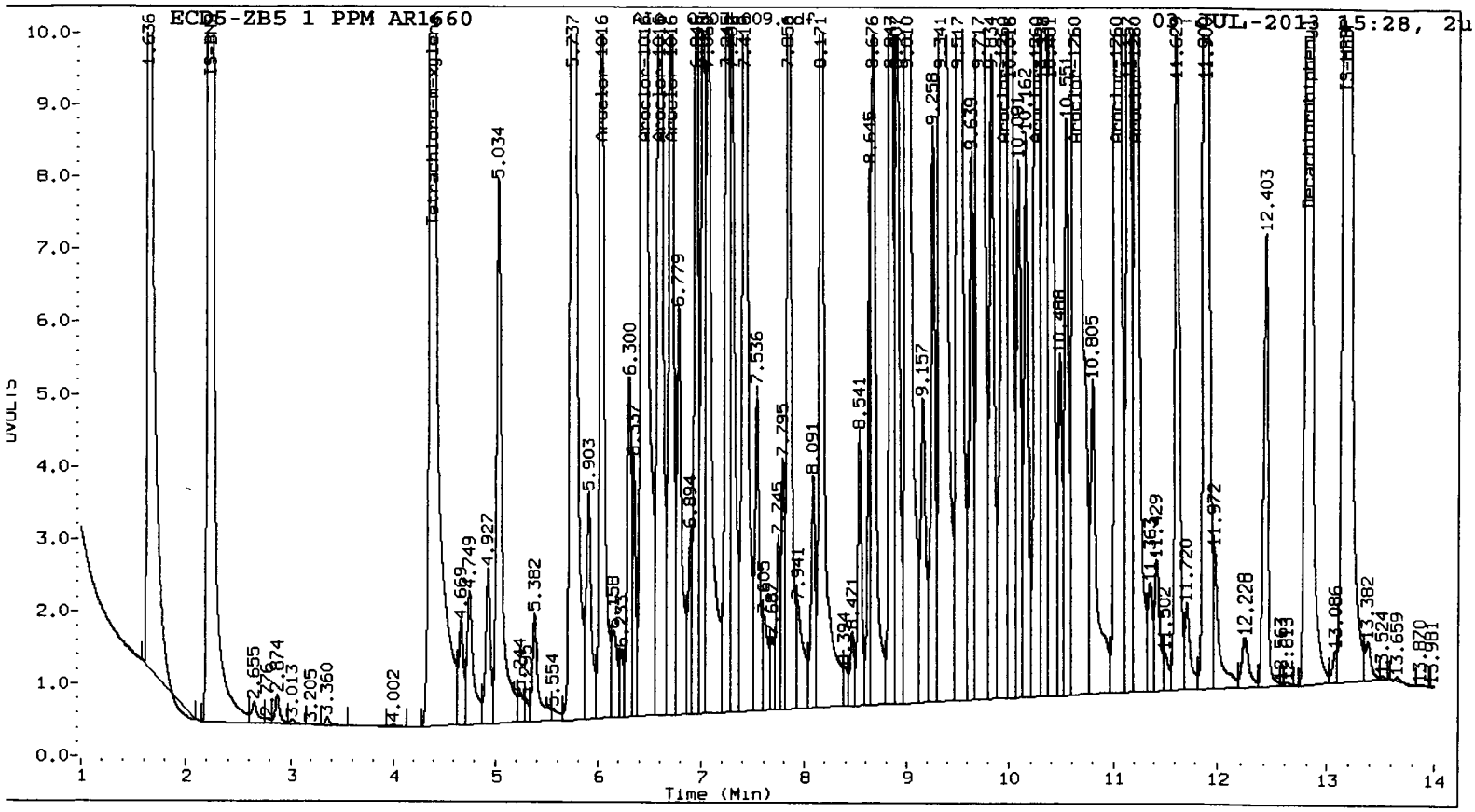
Total PCB Area Col2 (4.484 - 13.077) = 259916623 Col2 Total PCB = 2.0 ppm*

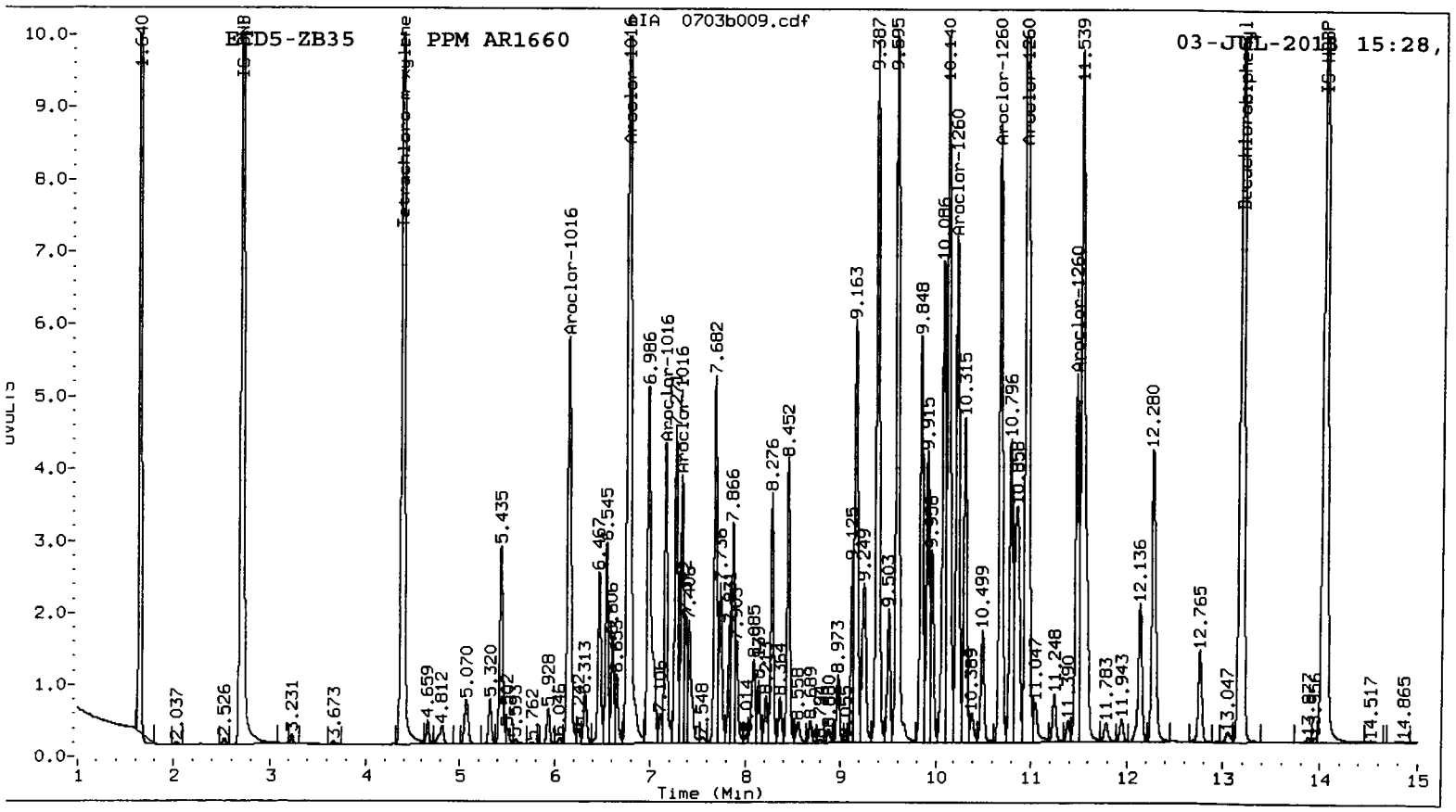
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 1 PPM AR1660
AIA 0703b009.cdf
03-JUL-2013 15:28, 2
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)


AIA 0703b009.cdf
ECD5-ZB35 1 PPM AR1660
03-JUL-2013 15:28,
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD5-ZB5 1 PPM AR1660
03-JUL-2013 15:28, 21
UVOLTS
Time (Min)


ECD5-ZB35 PPM AR1660
03-JUL-2013 15:28,
UVOLTS
Time (Min)

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130703.b/ical-1.b/0703b010.d
Data file 2: 20130703.b/ical-2.b/0703b010.d
Method: /chem2/ecd5.i/20130703.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.1PPM AR1660
Client ID:
Injection Date: 03-JUL-2013 15:47
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.383	-0.003	7627889	4.386	0.002	1822954	8.6	8.5	1.7	Tetrachloro-m-xylen
12.810	-0.002	11831062	13.177	0.000	2038025	8.4	8.6	1.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	21.5	21.2
Decachlorobiphenyl	21.1	21.5

JR 07/04/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	54036699	55828494	3.3
Hexabromobiphenyl	94298658	99062417	5.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	16218104	16464468	1.5
Hexabromobiphenyl	17872840	18558687	3.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

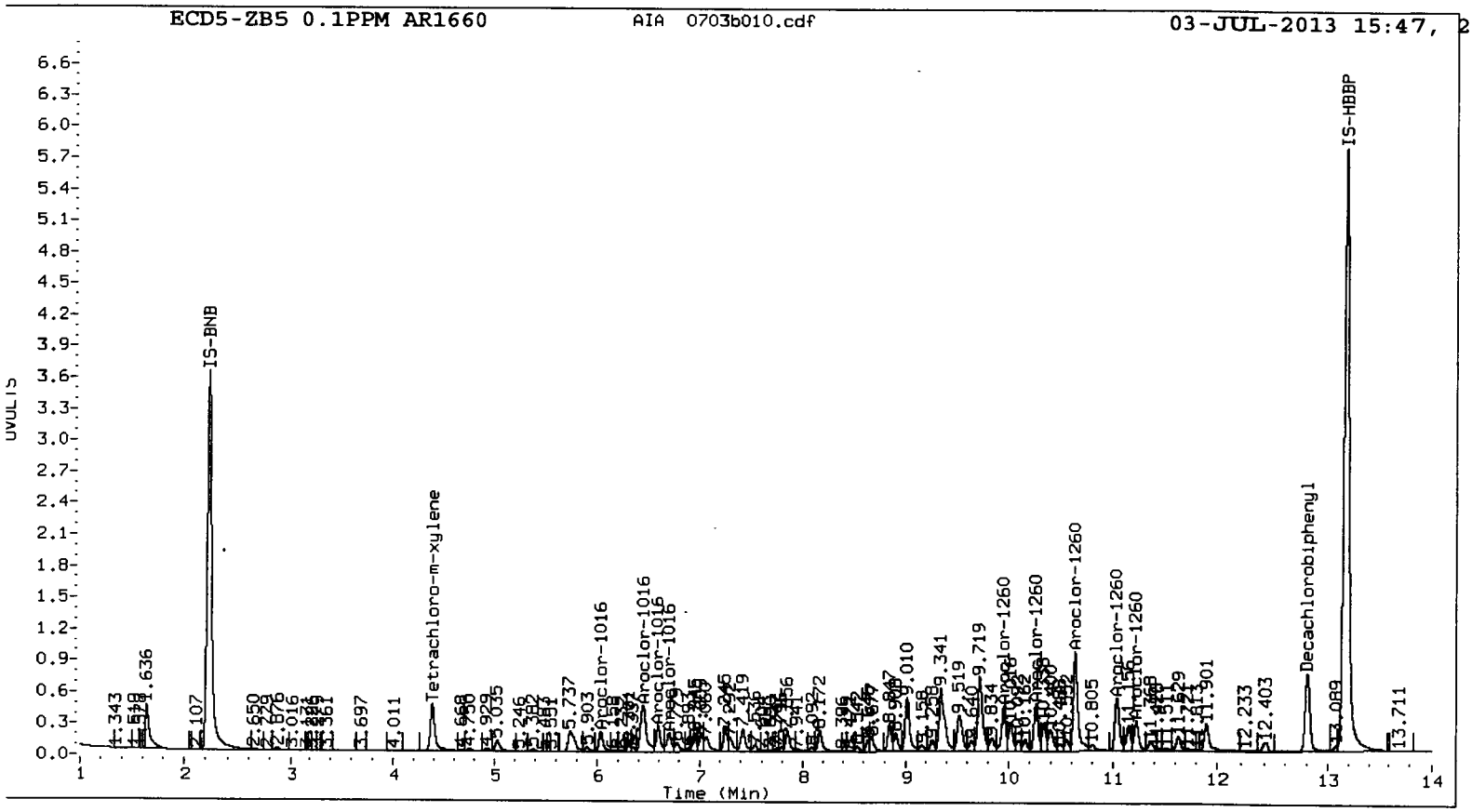
		ZB5 Col				ZB35 Col				
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.035	-0.003	2797833	108.2	1	6.142	0.001	1007945	109.2
Aroclor-1016	2	6.442	-0.002	8690341	108.3	2	6.776	0.000	2123874	106.7
Aroclor-1016	3	6.592	-0.003	3817029	107.9	3	7.162	0.000	547280	105.8
Aroclor-1016	4	6.703	-0.003	2832082	108.1	4	7.335	0.000	503240	106.5
	Total Col1Ave (4 peaks):				108.1	Total Col2Ave (4 peaks):			107.1	RPD = 1
	Corrected Ave (3 peaks):				108.1	Corrected Ave (3 peaks):			106.4	RPD = 2
Aroclor-1260	1	9.948	-0.001	6095307	106.9	1	10.236	0.000	1106988	107.0
Aroclor-1260	2	10.265	-0.001	6105149	106.5	2	10.686	0.000	1343013	107.1
Aroclor-1260	3	10.641	-0.001	15196549	105.4	3	10.962	0.001	2709520	108.2
Aroclor-1260	4	11.041	-0.002	8099000	105.8	4	11.481	0.000	782457	100.9
Aroclor-1260	5	11.230	-0.001	4405146	105.1	NS	---			----
	Total Col1Ave (5 peaks):				106.0	Total Col2Ave (4 peaks):			105.8	RPD = 0
	Corrected Ave (4 peaks):				105.7	Corrected Ave (3 peaks):			105.0	RPD = 1

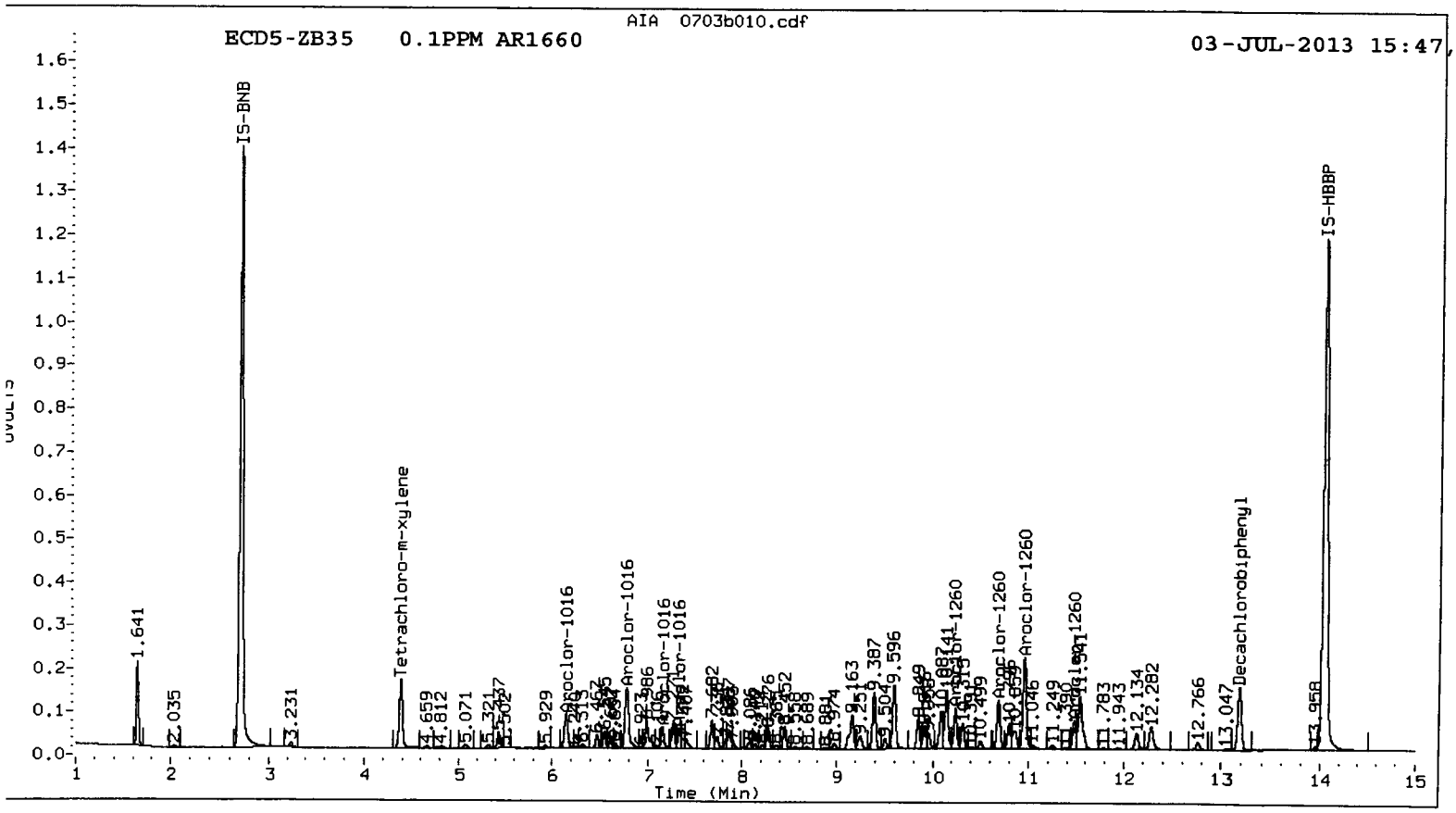
Total PCB Area Col1 (4.485 - 12.712) = 180131465 Col1 Total PCB = 0.3 ppm*

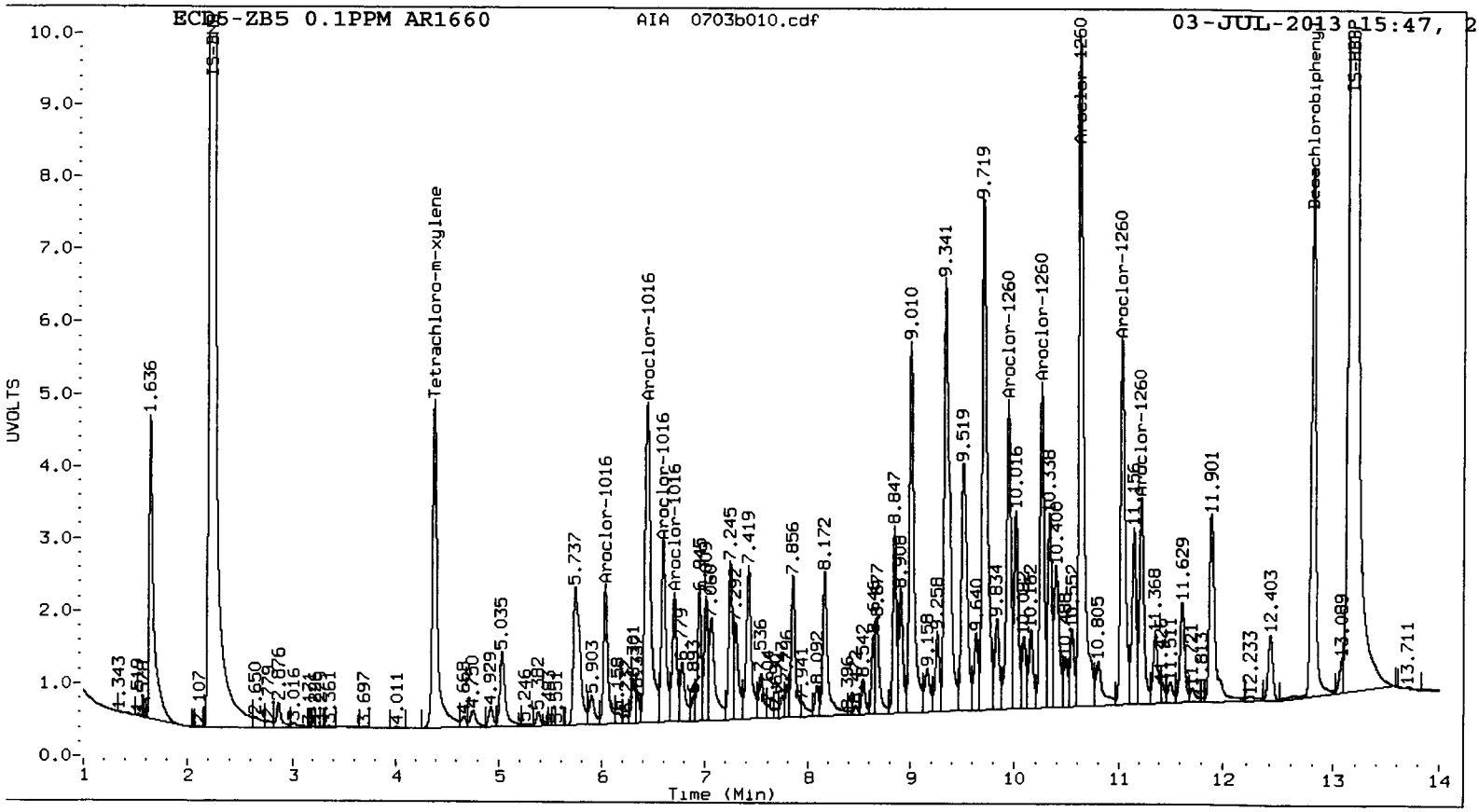
Total PCB Area Col2 (4.484 - 13.077) = 33476498 Col2 Total PCB = 0.3 ppm*

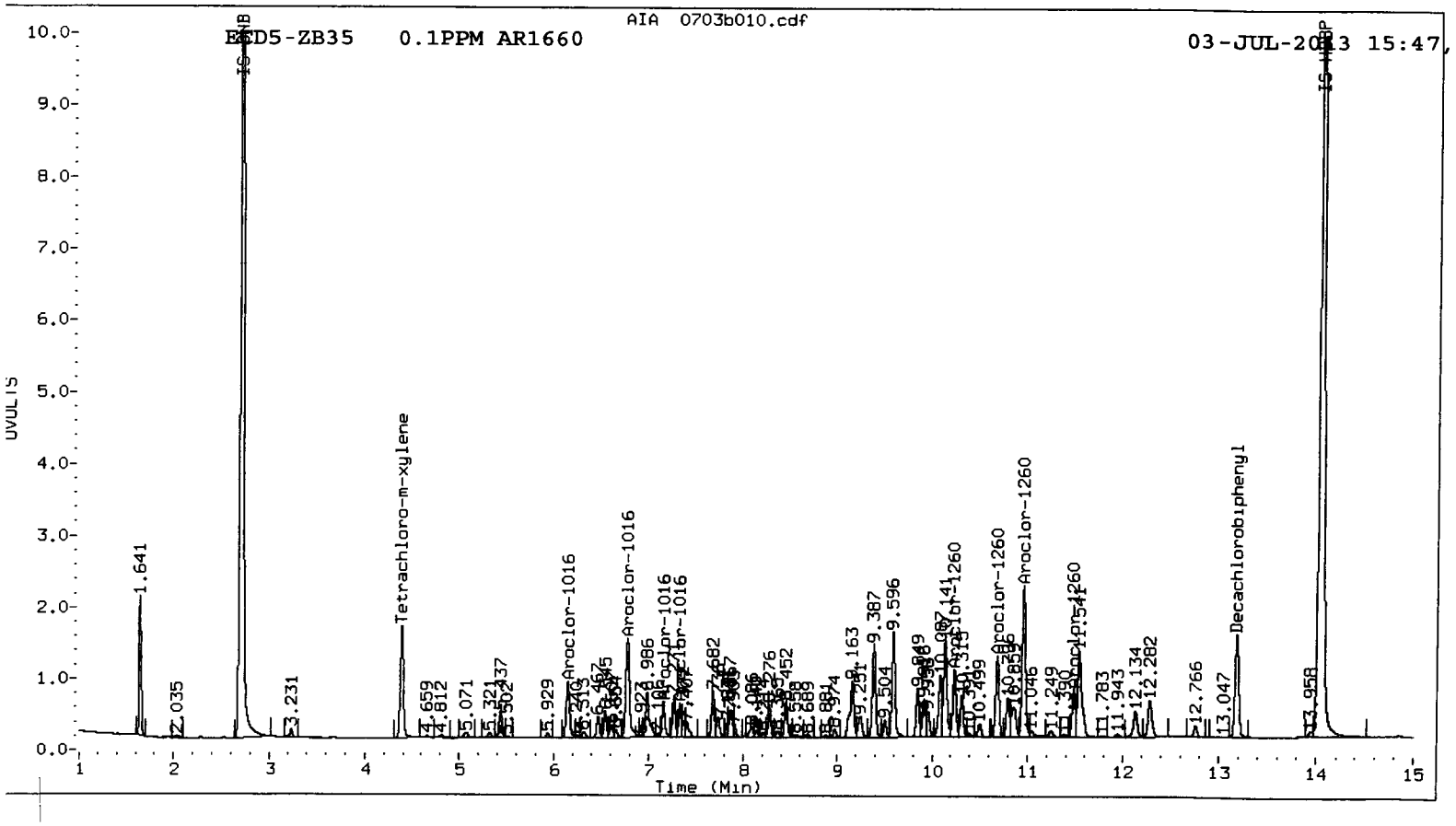
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 0.1PPM AR1660
AIA 0703b010.cdf
03-JUL-2013 15:47,
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)


AIA 0703b010.cdf
ECD5-ZB35 0.1PPM AR1660
03-JUL-2013 15:47,
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD5-ZB5 0.1PPM AR1660
AIA 0703b010.cdf
03-JUL-2013 15:47,
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl


ECD5-ZB35 0.1PPM AR1660
AIA 0703b010.cdf
03-JUL-2013 15:47,
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130703.b/ical-1.b/0703b011.d
Data file 2: 20130703.b/ical-2.b/0703b011.d
Method: /chem2/ecd5.i/20130703.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: 0.5PPM AR1660
Client ID:
Injection Date: 03-JUL-2013 16:07
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.383	-0.003	33723174	4.385	0.001	8394999	38.6	39.2	1.7	Tetrachloro-m-xylen
12.811	-0.001	46995341	13.177	0.000	8619345	33.9	36.4	7.0	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	96.5	98.1
Decachlorobiphenyl	84.8	91.0

jk 07/04/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	54036699	55117944	2.0
Hexabromobiphenyl	94298658	97957899	3.9

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	16218104	16374217	1.0
Hexabromobiphenyl	17872840	18532815	3.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

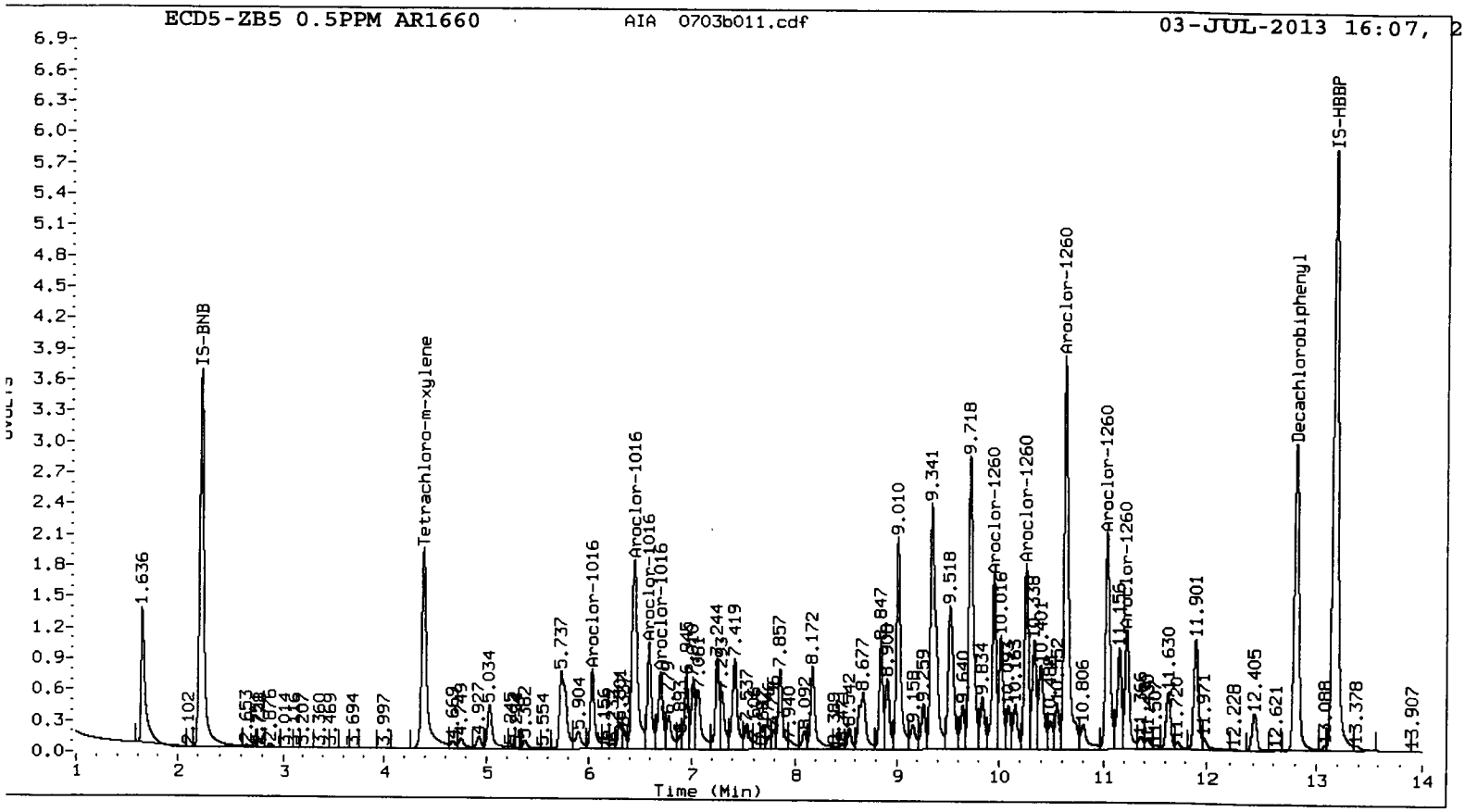
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.035	-0.003	11430774	447.6	1	6.140	-0.001	4098690	446.6
Aroclor-1016	2	6.442	-0.003	35254814	445.1	2	6.776	0.000	9082134	458.8
Aroclor-1016	3	6.592	-0.003	15505701	444.0	3	7.161	-0.001	2429751	472.4
Aroclor-1016	4	6.703	-0.003	11610427	449.0	4	7.334	-0.001	2140039	455.6
Total Col1Ave (4 peaks):					446.4	Total Col2Ave (4 peaks):			458.3	RPD = 3
Corrected Ave (3 peaks):					445.6	Corrected Ave (3 peaks):			453.7	RPD = 2
Aroclor-1260	1	9.948	-0.001	24168150	428.6	1	10.236	0.000	4666466	451.8
Aroclor-1260	2	10.265	-0.001	24312566	428.9	2	10.685	0.000	5757246	459.9
Aroclor-1260	3	10.640	-0.001	60837064	426.8	3	10.960	-0.001	11540437	461.5
Aroclor-1260	4	11.041	-0.001	32798615	433.5	4	11.481	0.000	3349187	432.6
Aroclor-1260	5	11.230	-0.001	17929306	432.7	NS	---			----
Total Col1Ave (5 peaks):					430.1	Total Col2Ave (4 peaks):			451.5	RPD = 5
Corrected Ave (4 peaks):					429.2	Corrected Ave (3 peaks):			448.1	RPD = 4

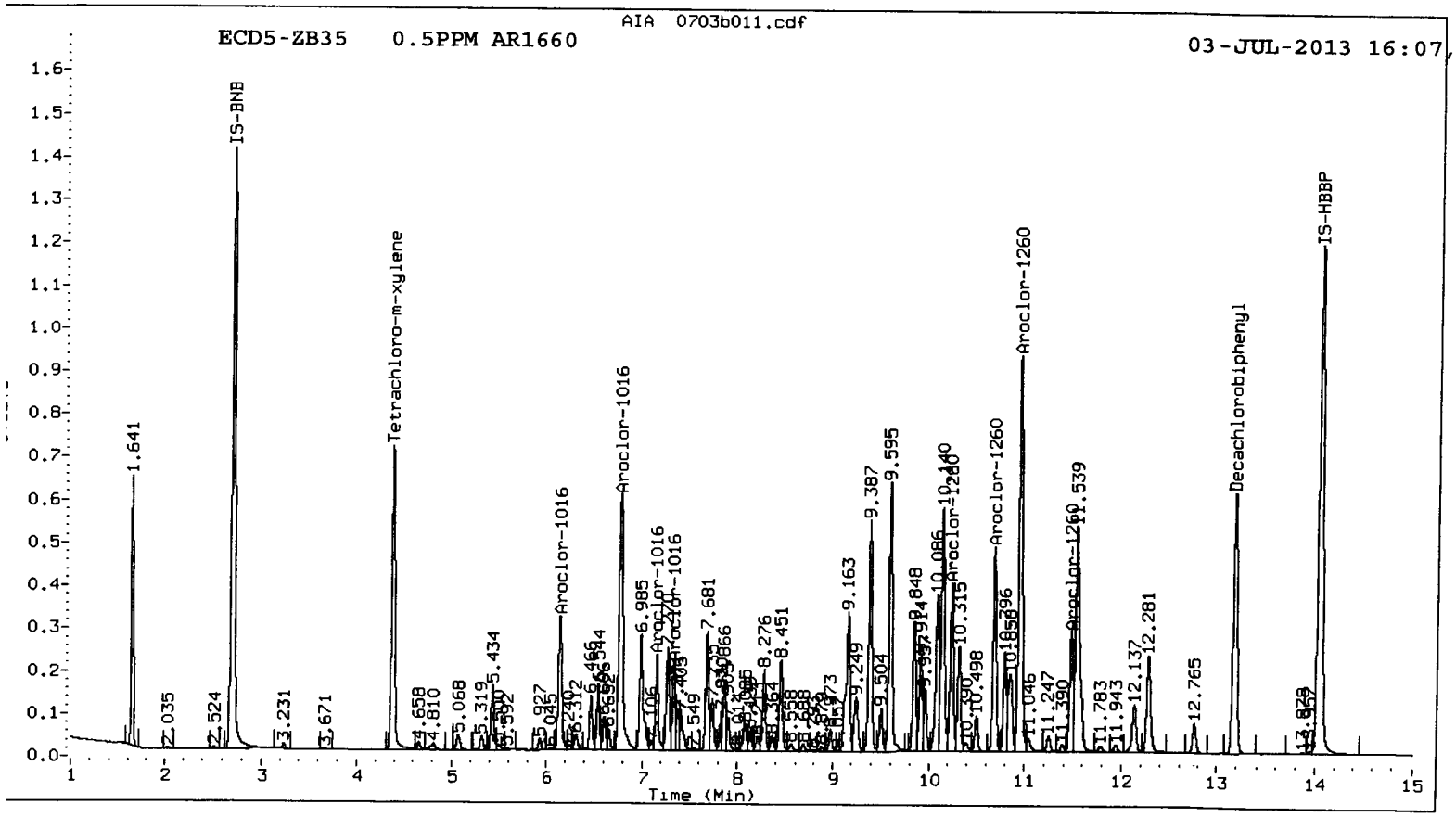
Total PCB Area Col1 (4.485 - 12.712) = 719170898 Col1 Total PCB = 1.2 ppm*

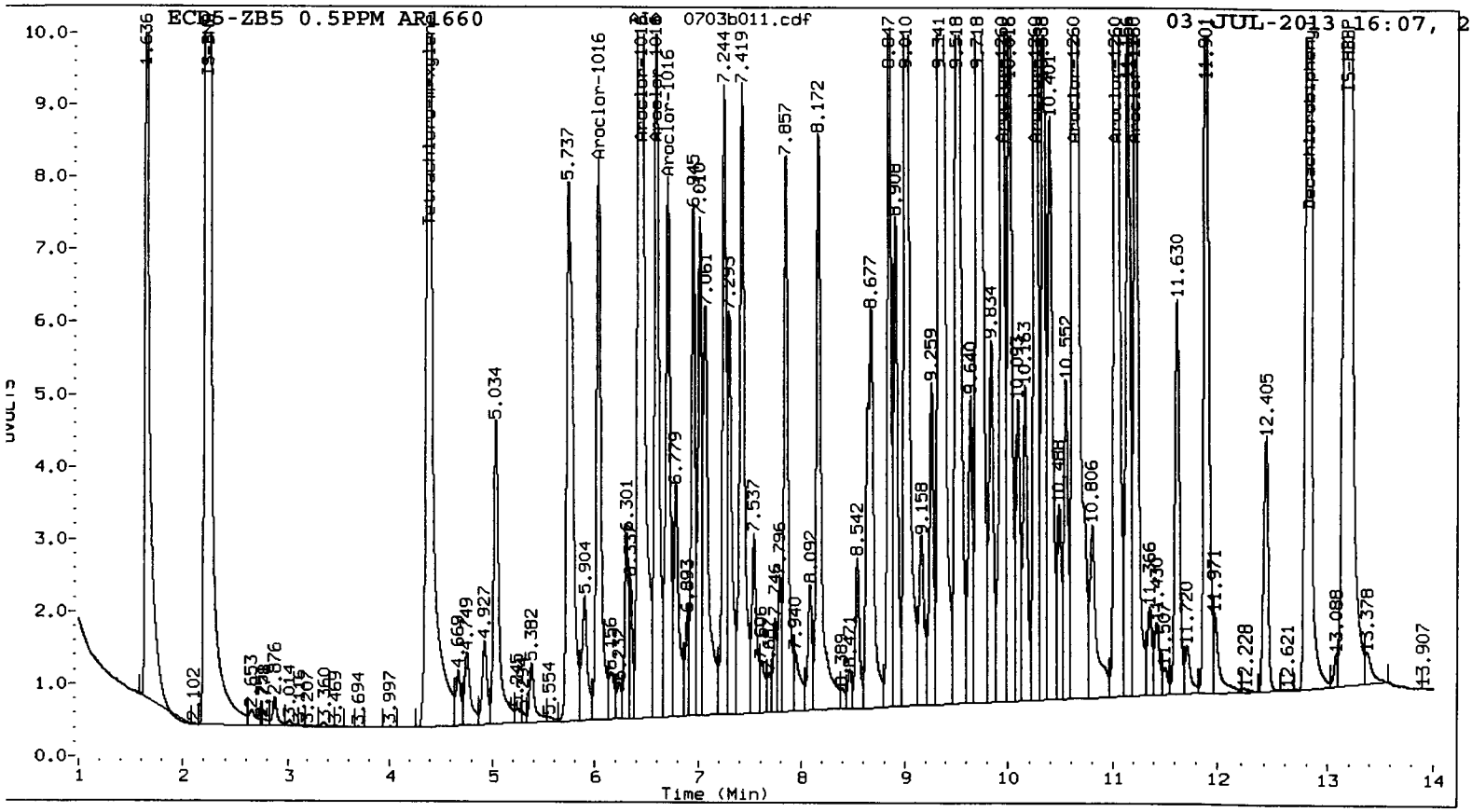
Total PCB Area Col2 (4.484 - 13.077) = 142538164 Col2 Total PCB = 1.1 ppm*

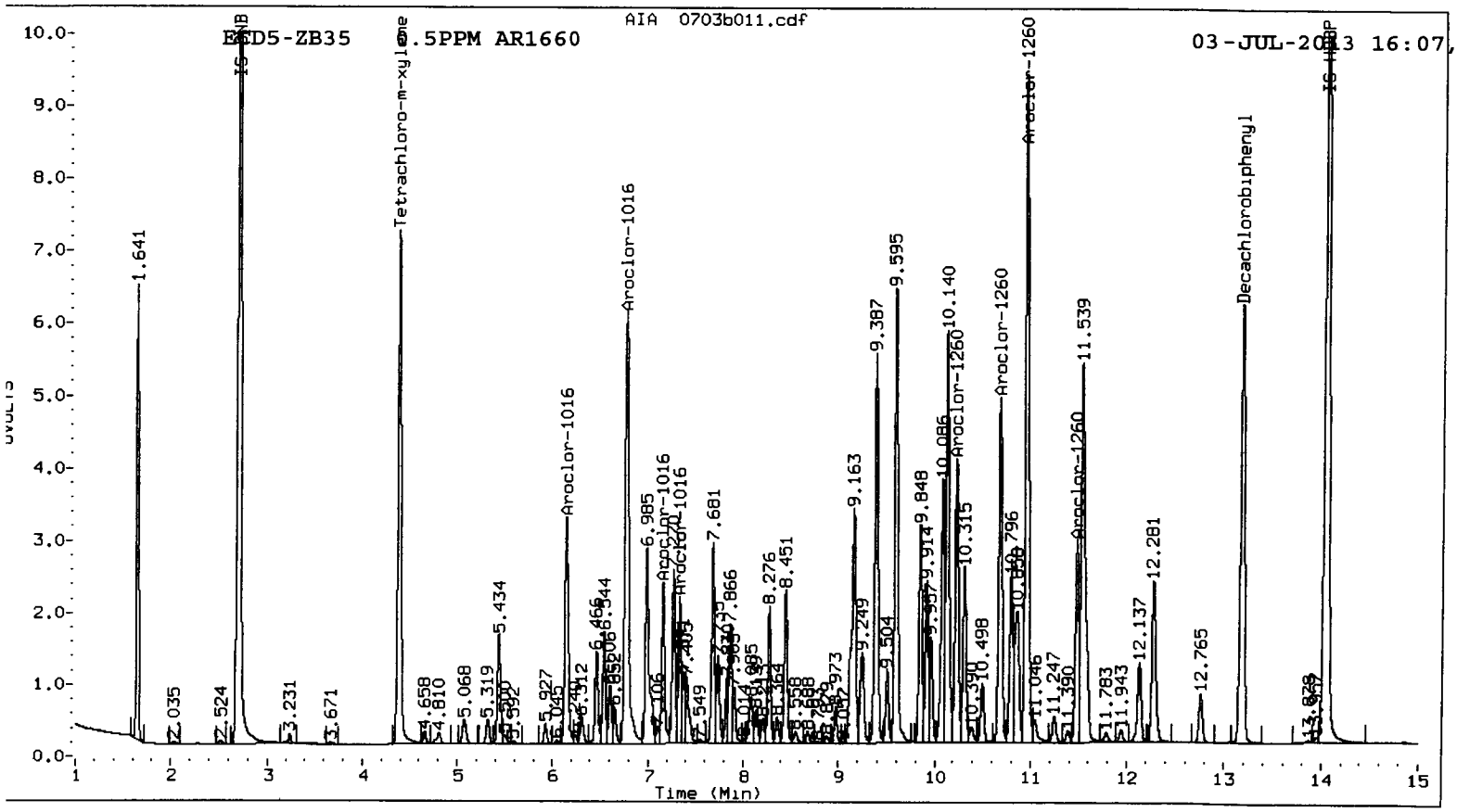
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 0.5PPM AR1660
AIA 0703b011.cdf
03-JUL-2013 16:07,
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD5-ZB35 0.5PPM AR1660
AIA 0703b011.cdf
03-JUL-2013 16:07,
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD5-ZB5 0.5PPM AR1660
0703b011.cdf
03-JUL-2013 16:07,
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD5-ZB35
0.5PPM AR1660
AIA 0703b011.cdf
03-JUL-2013 16:07,
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130703.b/ical-1.b/0703b012.d
Data file 2: 20130703.b/ical-2.b/0703b012.d
Method: /chem2/ecd5.i/20130703.b/PCB1.m
Compound Sublist: AR1242
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242
Client ID:
Injection Date: 03-JUL-2013 16:27
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.382	-0.003	33948982	4.386	0.002	8518334	39.6	40.8	3.0	Tetrachloro-m-xylen
12.810	-0.002	49546262	13.177	0.001	9027000	36.5	39.0	6.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	98.9	101.9
Decachlorobiphenyl	91.3	97.5

jk 07/04/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	54036699	54135509	0.2
Hexabromobiphenyl	94298658	95980403	1.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	16218104	15988032	-1.4
Hexabromobiphenyl	17872840	18116079	1.4

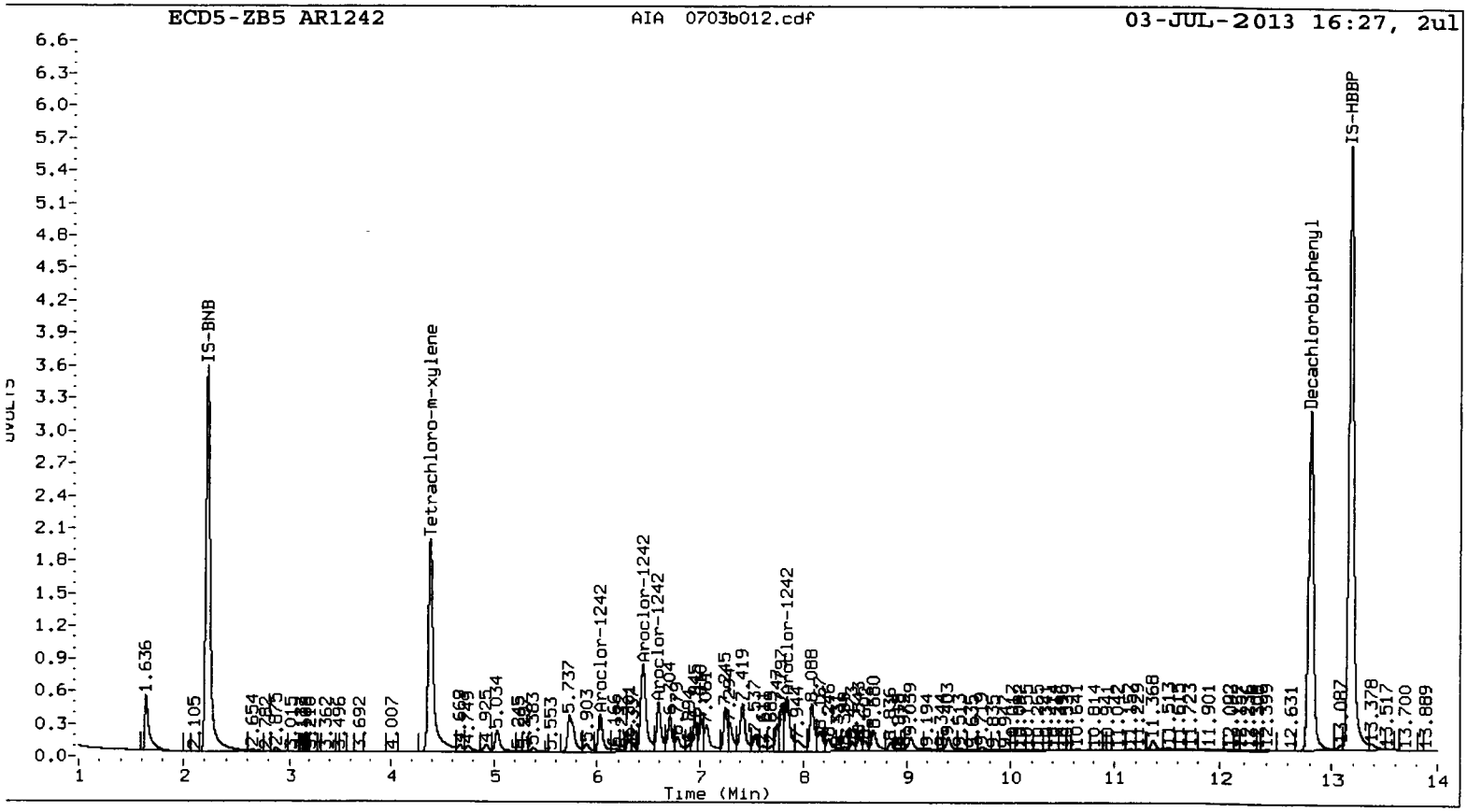
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

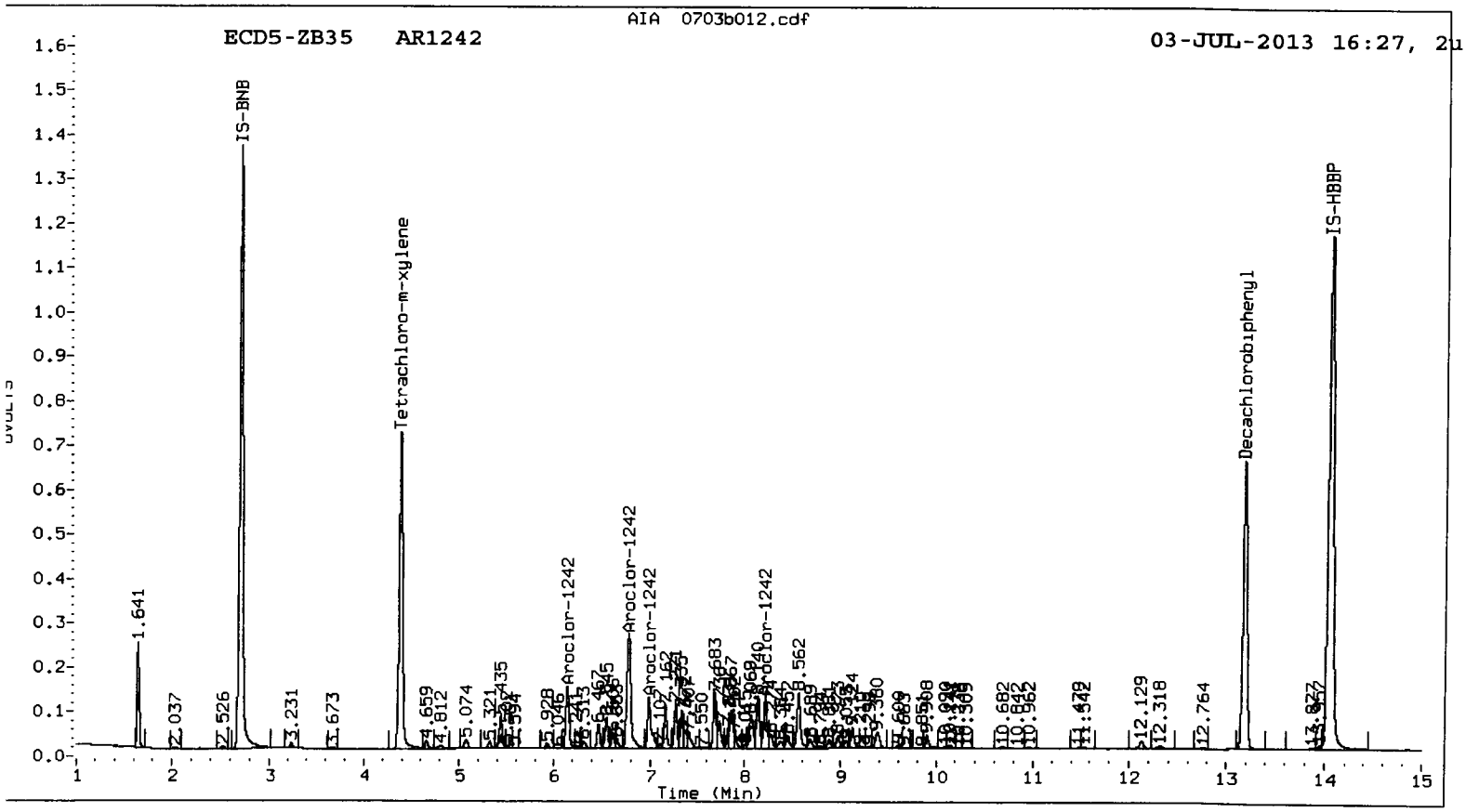
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	6.035	-0.001	5042012	250.0	1	6.141	0.001	1807698	250.0
Aroclor-1242	2	6.442	-0.001	15514609	250.0	2	6.777	0.001	3923945	250.0
Aroclor-1242	3	6.592	-0.001	6859525	250.0	3	6.986	0.001	1628924	250.0
Aroclor-1242	4	7.850	-0.001	8355036	250.0	4	8.214	0.001	1372434	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

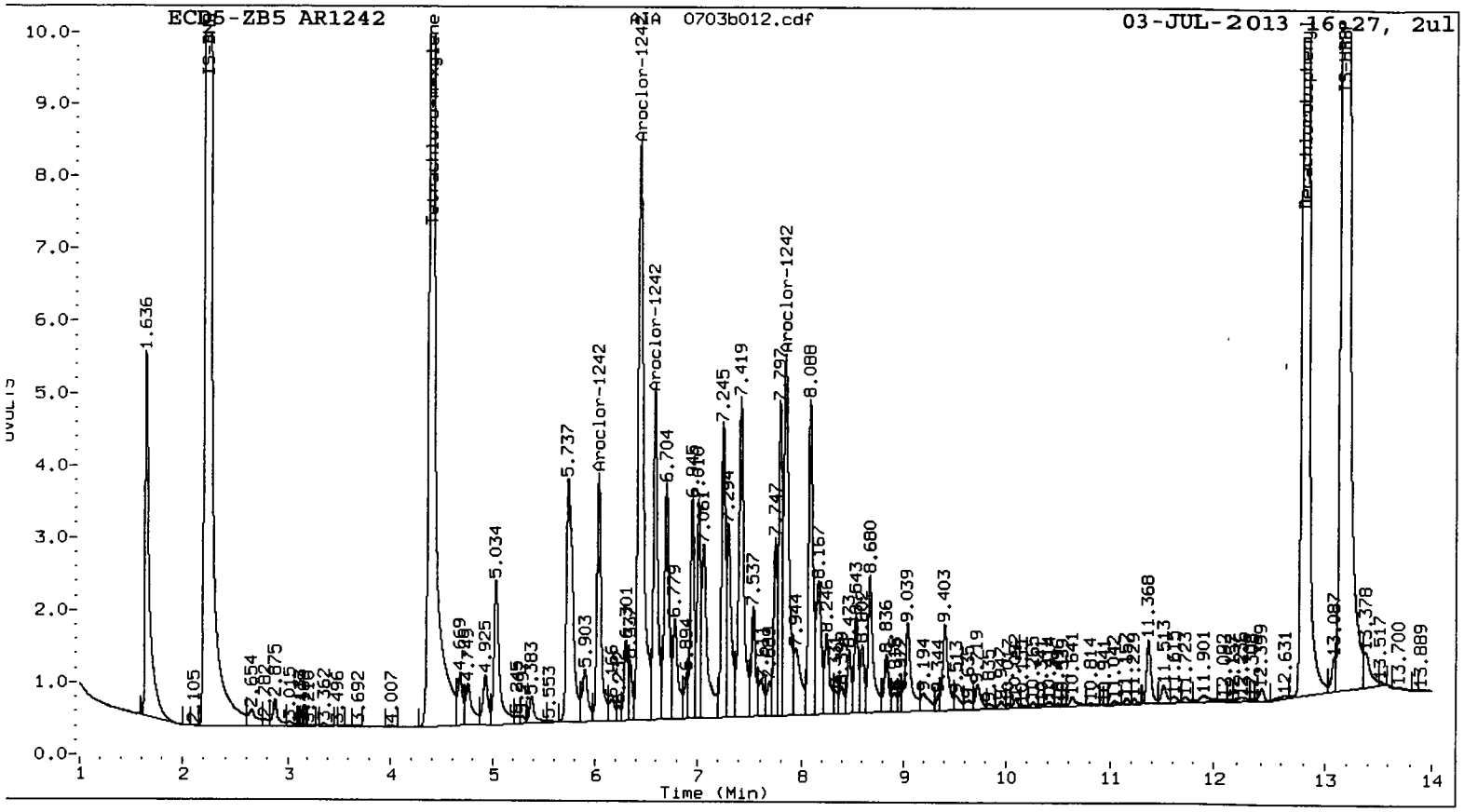
Total PCB Area Col1 (4.485 - 12.712) = 143040914 Col1 Total PCB = 0.2 ppm*

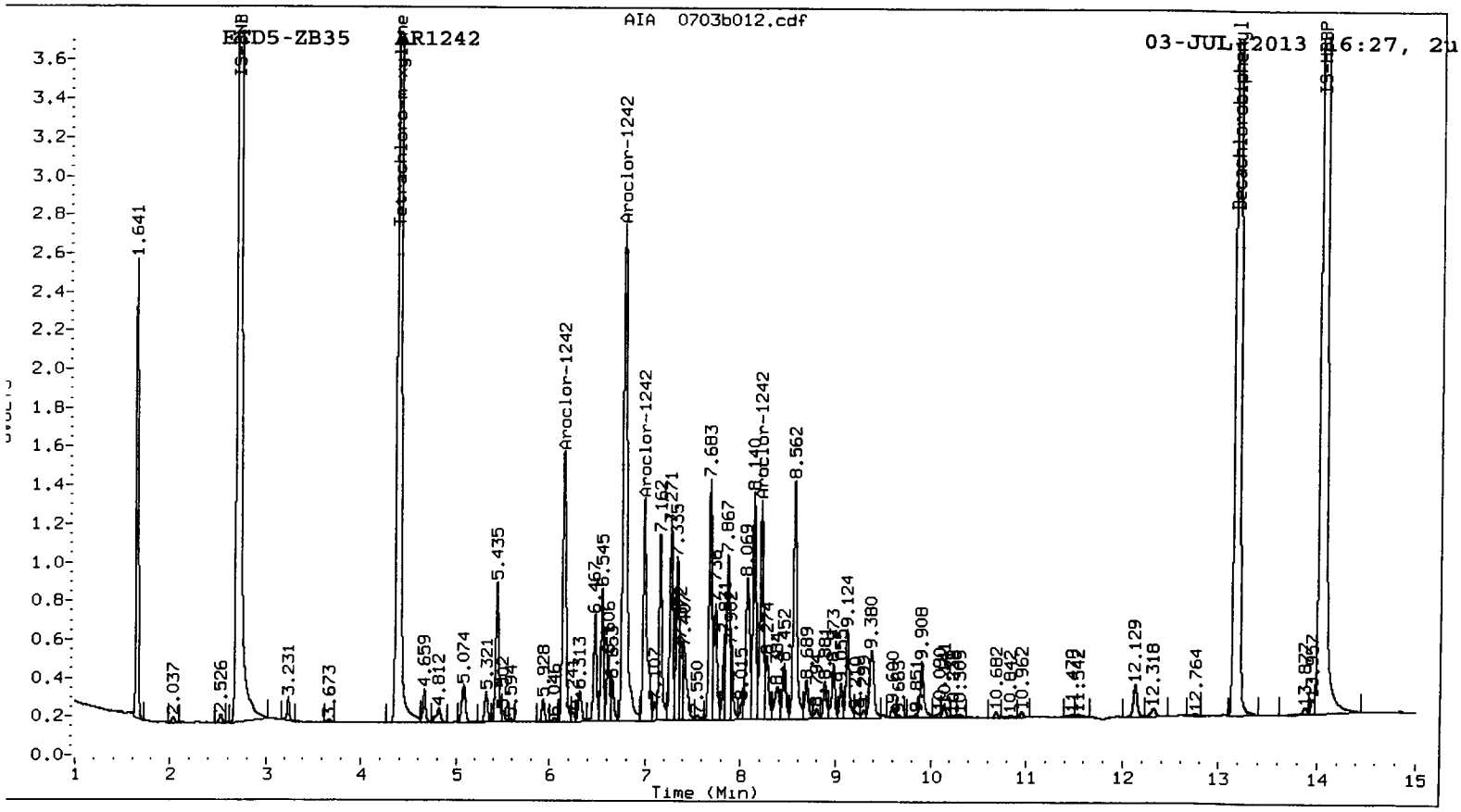
Total PCB Area Col2 (4.484 - 13.077) = 29284062 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR1242
AIA 0703b012.cdf
03-JUL-2013 16:27, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Aroclor-1242
Aroclor-1242
Aroclor-1242
Decachlorobiphenyl
IS-HBBP
1.636
5.737
5.903
12.631
13.087
13.378
13.517
13.700
13.889
Time (Min)


AIA 0703b012.cdf
ECD5-ZB35 AR1242
03-JUL-2013 16:27, 2u
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Aroclor-1242
Aroclor-1242
Decachlorobiphenyl
IS-HBBP
1.641
Time (Min)


ECD5-ZB5 AR1242
AIA 0703b012.cdf
03-JUL-2013 16:27, 2ul
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl
Time (Min)


ECD5-ZB35
AR1242
AIA 0703b012.cdf
03-JUL-2013 16:27, 2u
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130703.b/ical-1.b/0703b013.d
Data file 2: 20130703.b/ical-2.b/0703b013.d
Method: /chem2/ecd5.i/20130703.b/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 03-JUL-2013 16:46
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.383	-0.002	33096055	4.387	0.003	8361622	38.4	39.7	3.5	Tetrachloro-m-xylen
12.812	-0.001	46342259	13.177	0.000	8449225	33.8	36.1	6.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	95.9	99.3
Decachlorobiphenyl	84.5	90.3

JC 07/04/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	54036699	54435899	0.7
Hexabromobiphenyl	94298658	96914111	2.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	16218104	16106147	-0.7
Hexabromobiphenyl	17872840	18310071	2.4

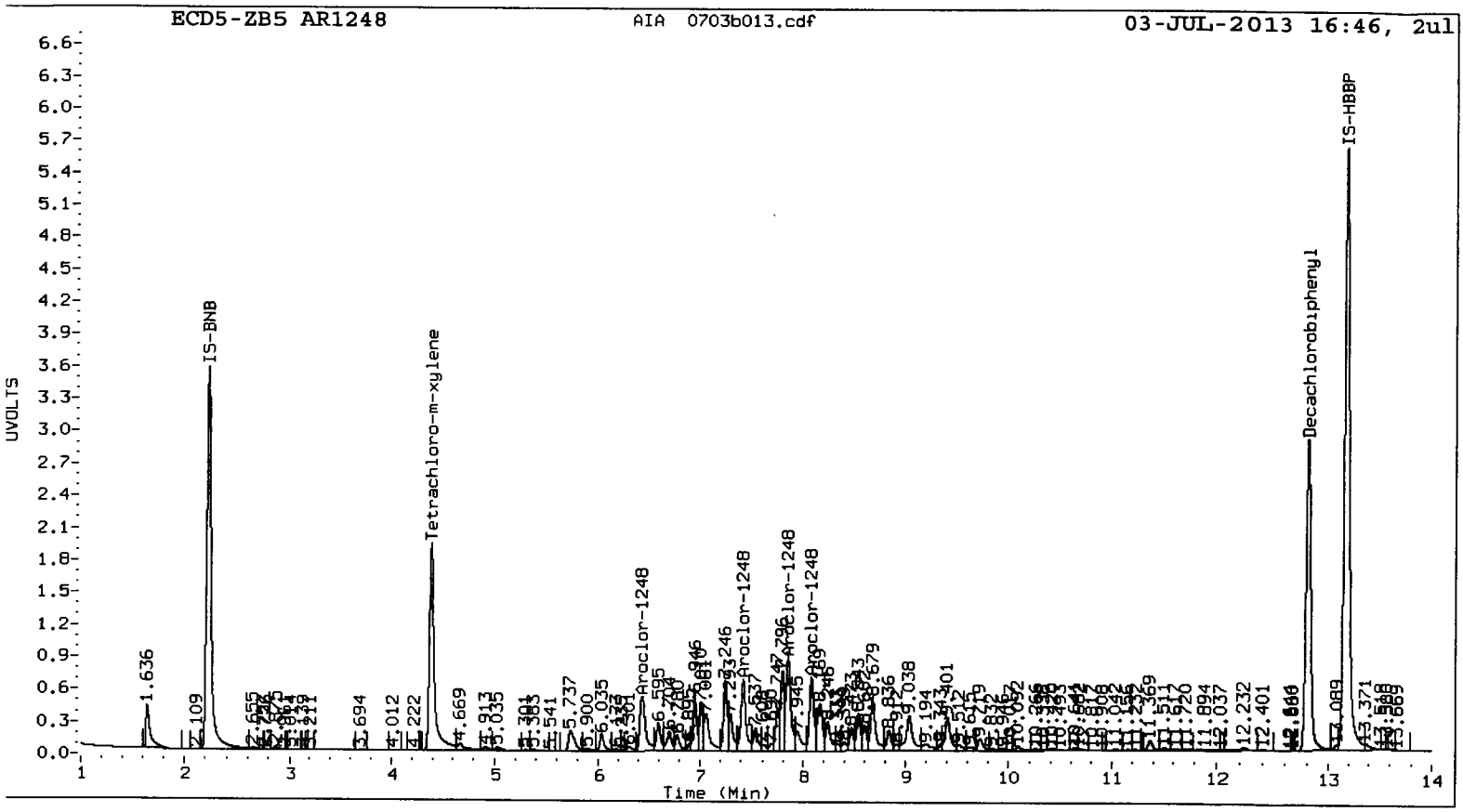
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

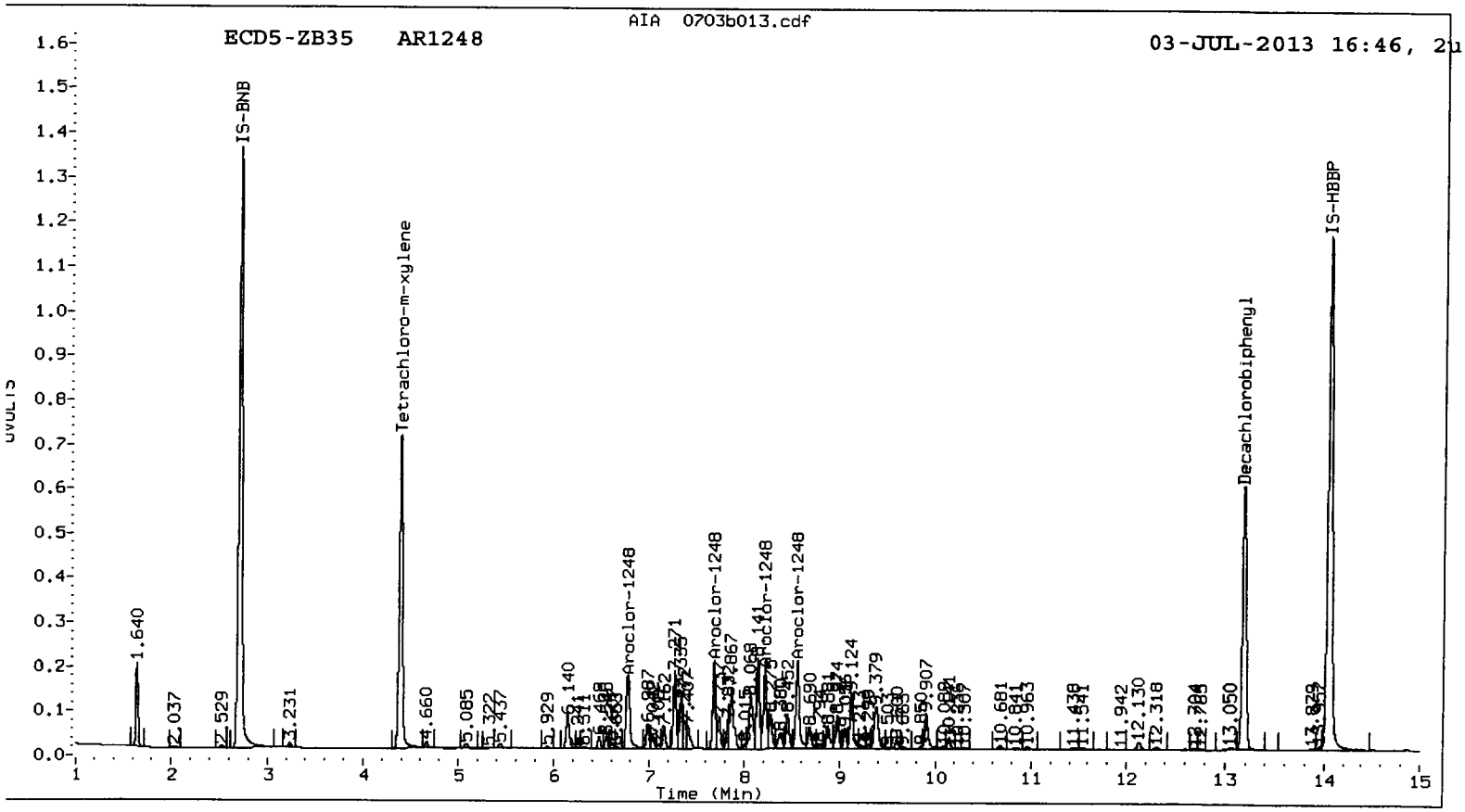
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1248	1	6.440	-0.002	9979282	250.0	1	6.774	0.001	2491080	250.0
Aroclor-1248	2	7.419	-0.002	10996556	250.0	2	7.683	0.000	2047679	250.0
Aroclor-1248	3	7.851	-0.002	14014287	250.0	3	8.215	0.000	2127638	250.0
Aroclor-1248	4	8.088	-0.002	10025979	250.0	4	8.561	0.001	2781133	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

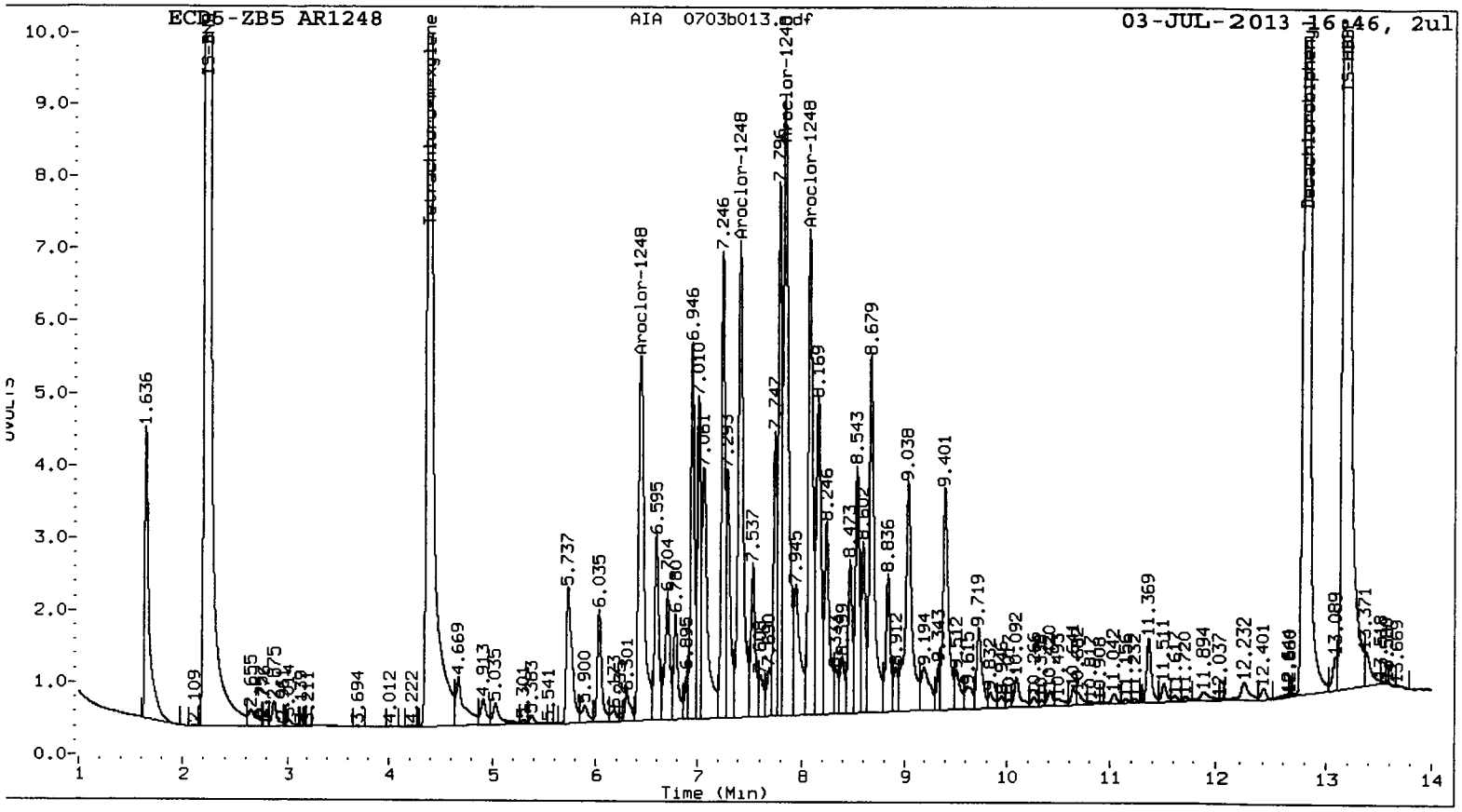
Total PCB Area Col1 (4.485 - 12.712) = 183408959 Col1 Total PCB = 0.3 ppm*

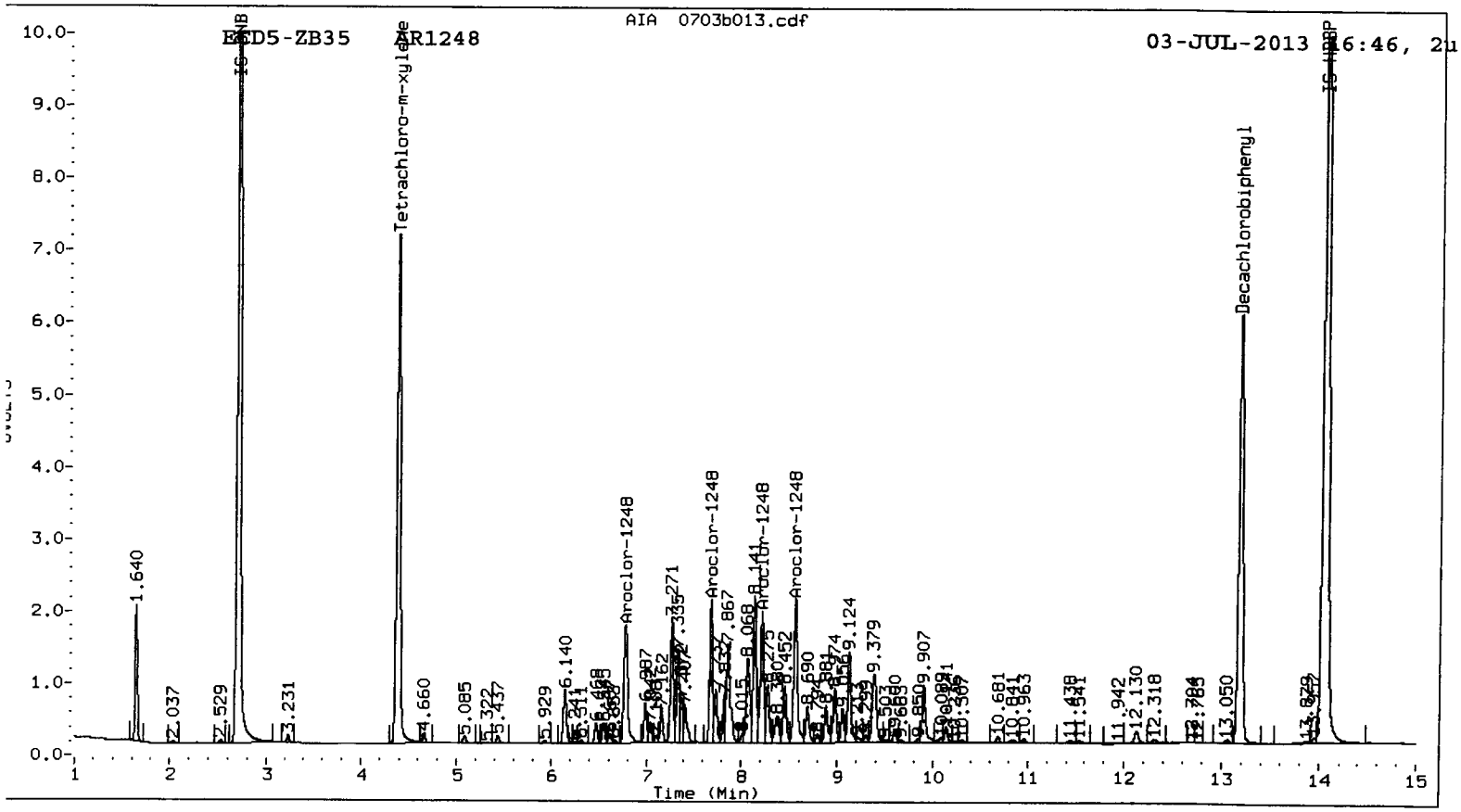
Total PCB Area Col2 (4.484 - 13.077) = 36120998 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR1248
AIA 0703b013.cdf
03-JUL-2013 16:46, 2ul
UVOLTS
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
Time (Min)


AIA 0703b013.cdf
ECD5-ZB35 AR1248
03-JUL-2013 16:46, 2u
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD5-ZB5 AR1248
AIA 0703b013.cdf
03-JUL-2013 16:46, 2ul
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1248
1.636
4.669
5.737
6.035
6.595
6.946
7.246
7.537
8.169
8.679
9.038
9.401
9.719
Time (Min)


ECD5-ZB35 AR1248
AIA 0703b013.cdf
03-JUL-2013 16:46, 2u
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1248
1.640
4.660
6.140
7.867
9.124
9.379
Time (Min)

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130703.b/ical-1.b/0703b014.d
Data file 2: 20130703.b/ical-2.b/0703b014.d
Method: /chem2/ecd5.i/20130703.b/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 03-JUL-2013 17:06
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.382	-0.003	32781457	4.385	0.001	8273177	39.0	40.4	3.7	Tetrachloro-m-xylen
12.812	0.000	46859209	13.178	0.002	8565495	34.3	37.0	7.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	97.5	101.1
Decachlorobiphenyl	85.6	92.5

JK 24/04/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	54036699	53047932	-1.8
Hexabromobiphenyl	94298658	96734318	2.6

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	16218104	15655814	-3.5
Hexabromobiphenyl	17872840	18111026	1.3

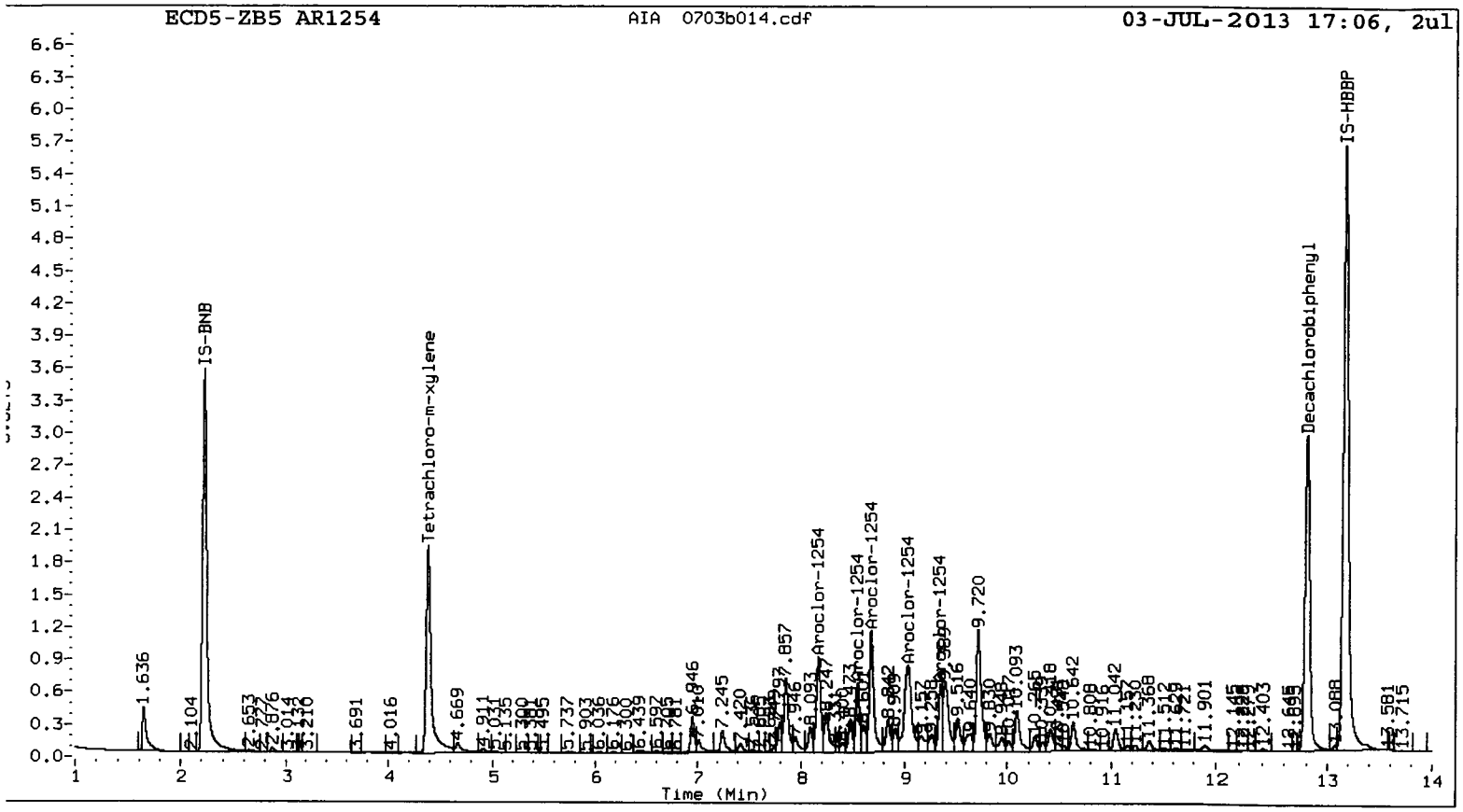
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

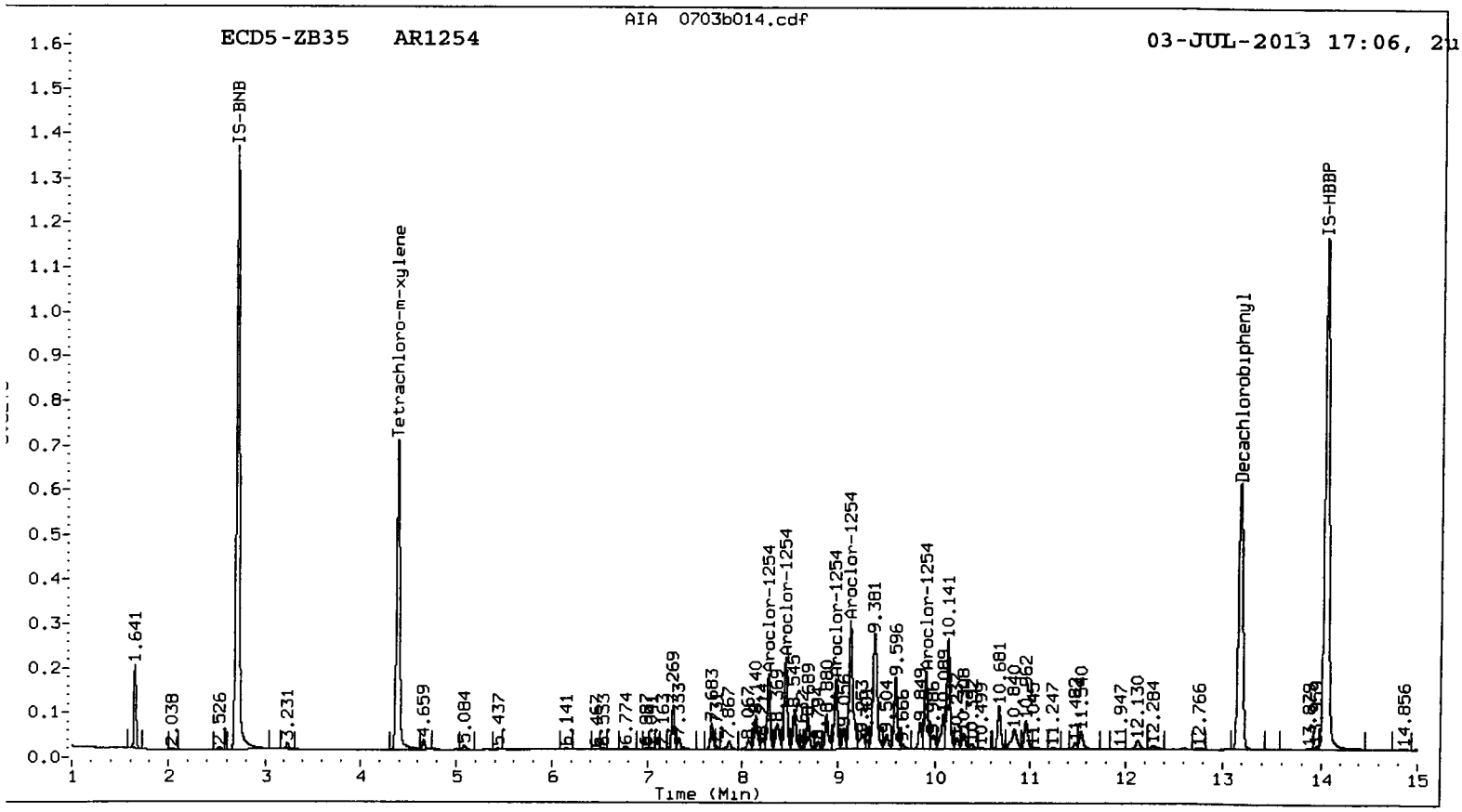
		ZB5 Col					ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	8.171	-0.002	13056743	250.0	1	8.276	0.001	1860363	250.0
Aroclor-1254	2	8.543	-0.002	8585370	250.0	2	8.453	0.001	2323729	250.0
Aroclor-1254	3	8.680	-0.002	17772057	250.0	3	8.974	0.001	1801773	250.0
Aroclor-1254	4	9.034	-0.001	19168635	250.0	4	9.124	0.001	3878430	250.0
Aroclor-1254	5	9.343	-0.001	7639206	250.0	5	9.911	0.002	2288893	250.0
Total Col1Ave (5 peaks):					250.0	Total Col2Ave (5 peaks):			250.0	RPD = 0
Corrected Ave (4 peaks):					250.0	Corrected Ave (4 peaks):			250.0	RPD = 0

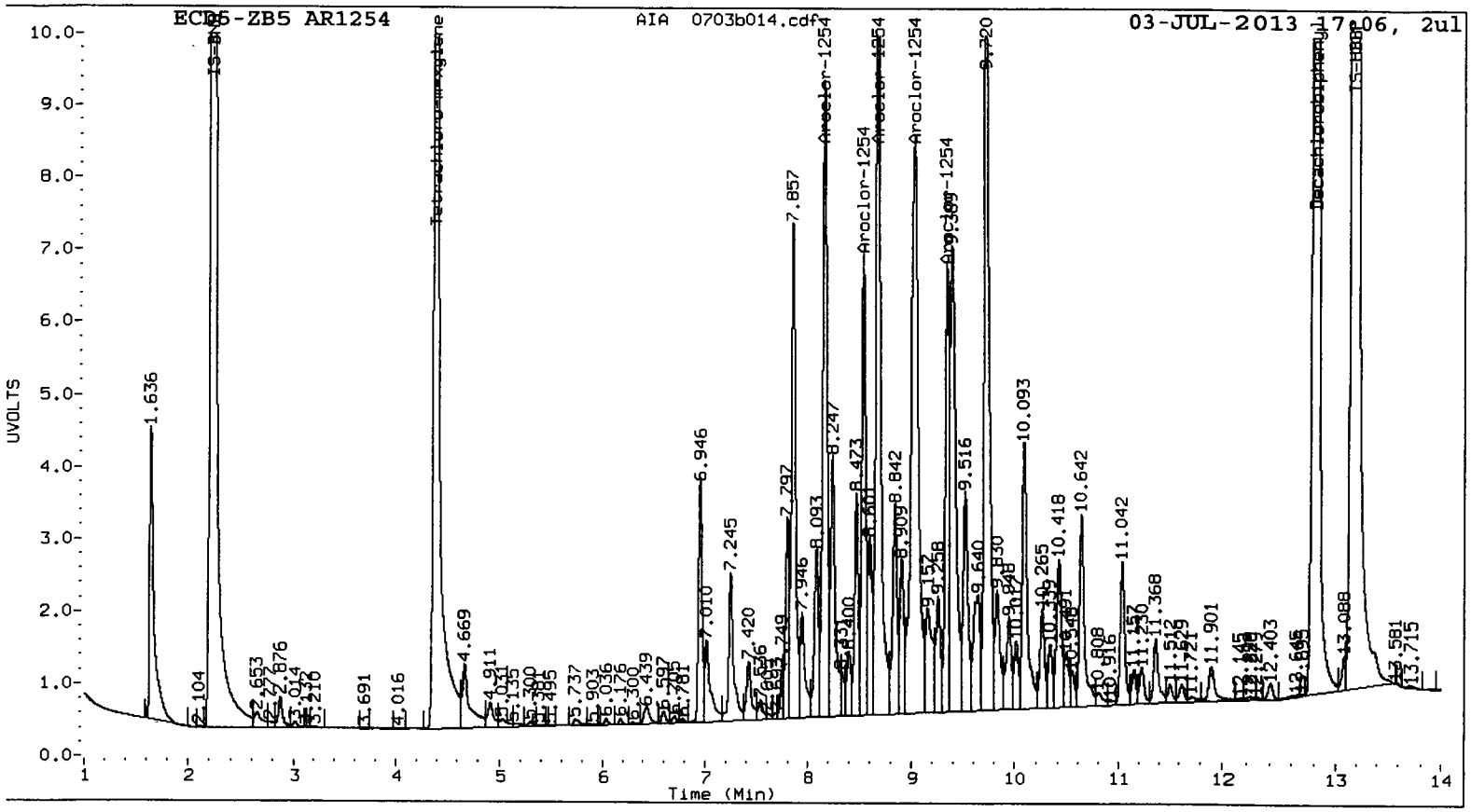
Total PCB Area Col1 (4.485 - 12.712) = 205135668 Col1 Total PCB = 0.3 ppm*

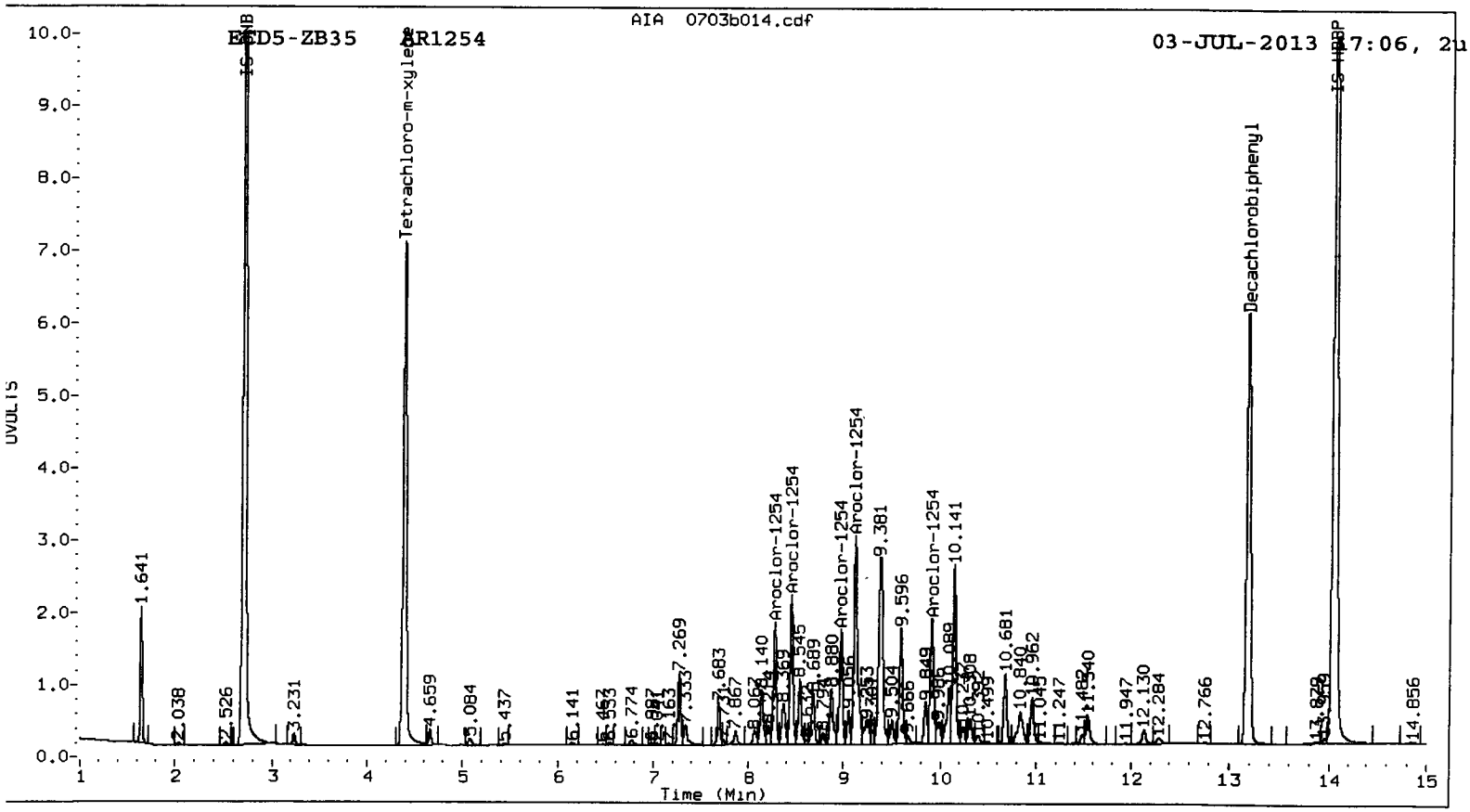
Total PCB Area Col2 (4.484 - 13.077) = 38389369 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR1254
AIA 0703b014.cdf
03-JUL-2013 17:06, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1254
Decachlorobiphenyl
IS-HBBP
Time (Min)


AIA 0703b014.cdf
ECD5-ZB35 AR1254
03-JUL-2013 17:06, 2u
IS-BNB
Tetrachloro-m-xylene
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1254
Aroclor-1254
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD5-ZB5 AR1254
AIA 0703b014.cdf
03-JUL-2013 17:06, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl


AIA 0703b014.cdf
03-JUL-2013 17:06, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1254
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130703.b/ical-1.b/0703b015.d
Data file 2: 20130703.b/ical-2.b/0703b015.d
Method: /chem2/ecd5.i/20130703.b/PCB1.m
Compound Sublist: AR2162
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162
Client ID:
Injection Date: 03-JUL-2013 17:26
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.383	-0.002	33795287	4.386	0.002	8457680	39.7	41.2	3.5	Tetrachloro-m-xylen
12.810	-0.002	47358268	13.178	0.002	8670679	34.7	37.0	6.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	99.3	102.9
Decachlorobiphenyl	86.7	92.6

JL 07/04/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	54036699	53657519	-0.7
Hexabromobiphenyl	94298658	96593672	2.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	16218104	15729801	-3.0
Hexabromobiphenyl	17872840	18312081	2.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1221	1	4.752	0.000	2972131	250.0	1	3.674	0.000	401711	250.0
Aroclor-1221	2	4.929	0.000	2056331	250.0	2	5.069	0.000	683302	250.0
Aroclor-1221	3	5.037	0.000	5881955	250.0	3	5.321	0.000	383274	250.0
Aroclor-1221	NS	---			----	4	5.436	0.000	1191511	250.0
	Total Col1Ave (3 peaks):				250.0	Total Col2Ave (4 peaks):			250.0	RPD = 0
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):			250.0	
Aroclor-1262	1	10.265	0.000	16938888	250.0	1	10.237	0.000	4068521	250.0
Aroclor-1262	2	10.641	0.000	40453132	250.0	2	10.686	0.000	3843678	250.0
Aroclor-1262	3	11.041	0.000	14289366	250.0	3	10.961	0.000	7632545	250.0
Aroclor-1262	4	11.230	0.000	19136146	250.0	4	11.543	0.000	5402021	250.0
Aroclor-1262	5	11.900	0.000	17130647	250.0	5	12.282	0.000	3022886	250.0
	Total Col1Ave (5 peaks):				250.0	Total Col2Ave (5 peaks):			250.0	RPD = 0
	Corrected Ave (4 peaks):				250.0	Corrected Ave (4 peaks):			250.0	RPD = 0

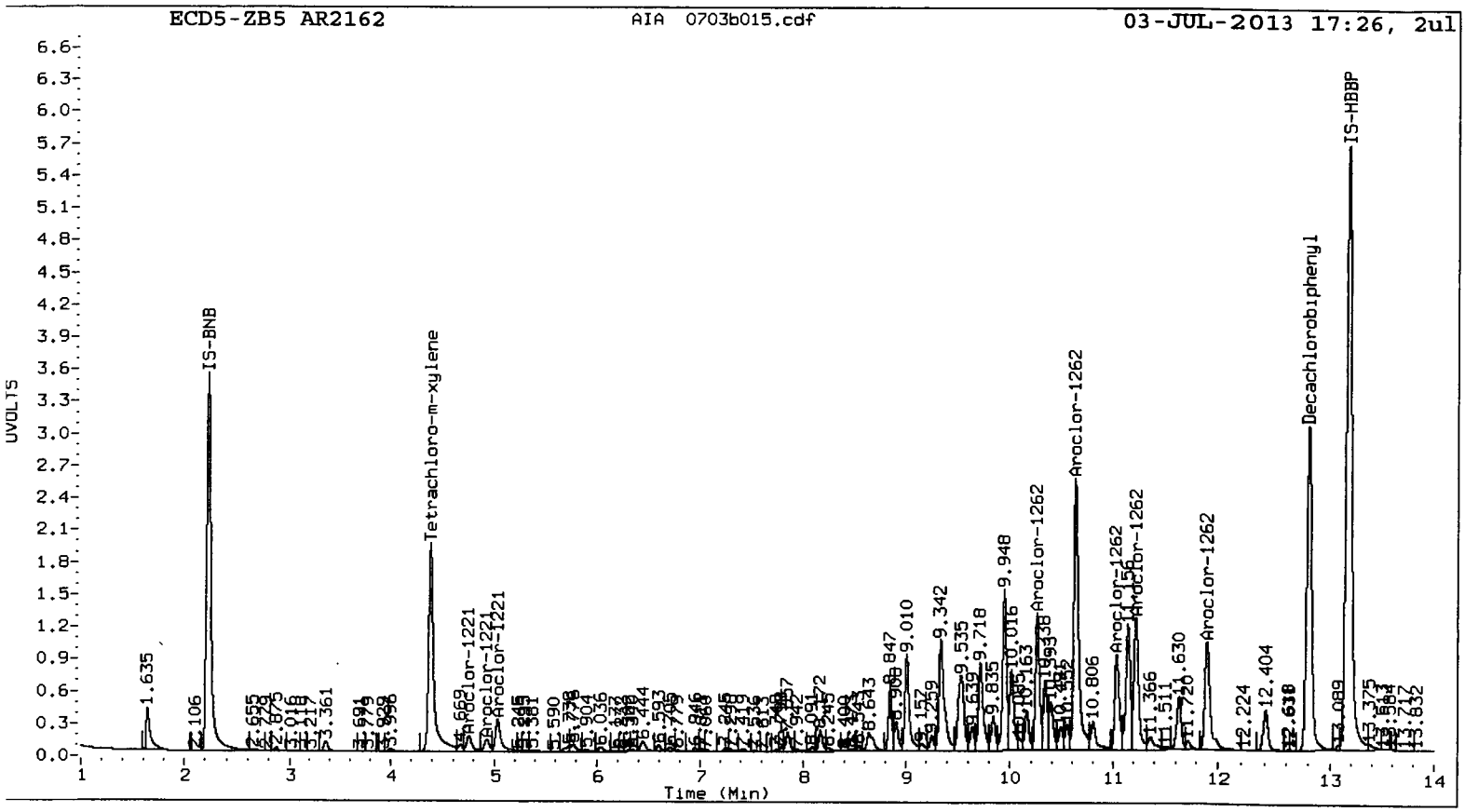
Total PCB Area Col1 (4.485 - 12.712) = 319996534 Col1 Total PCB = 0.5 ppm*

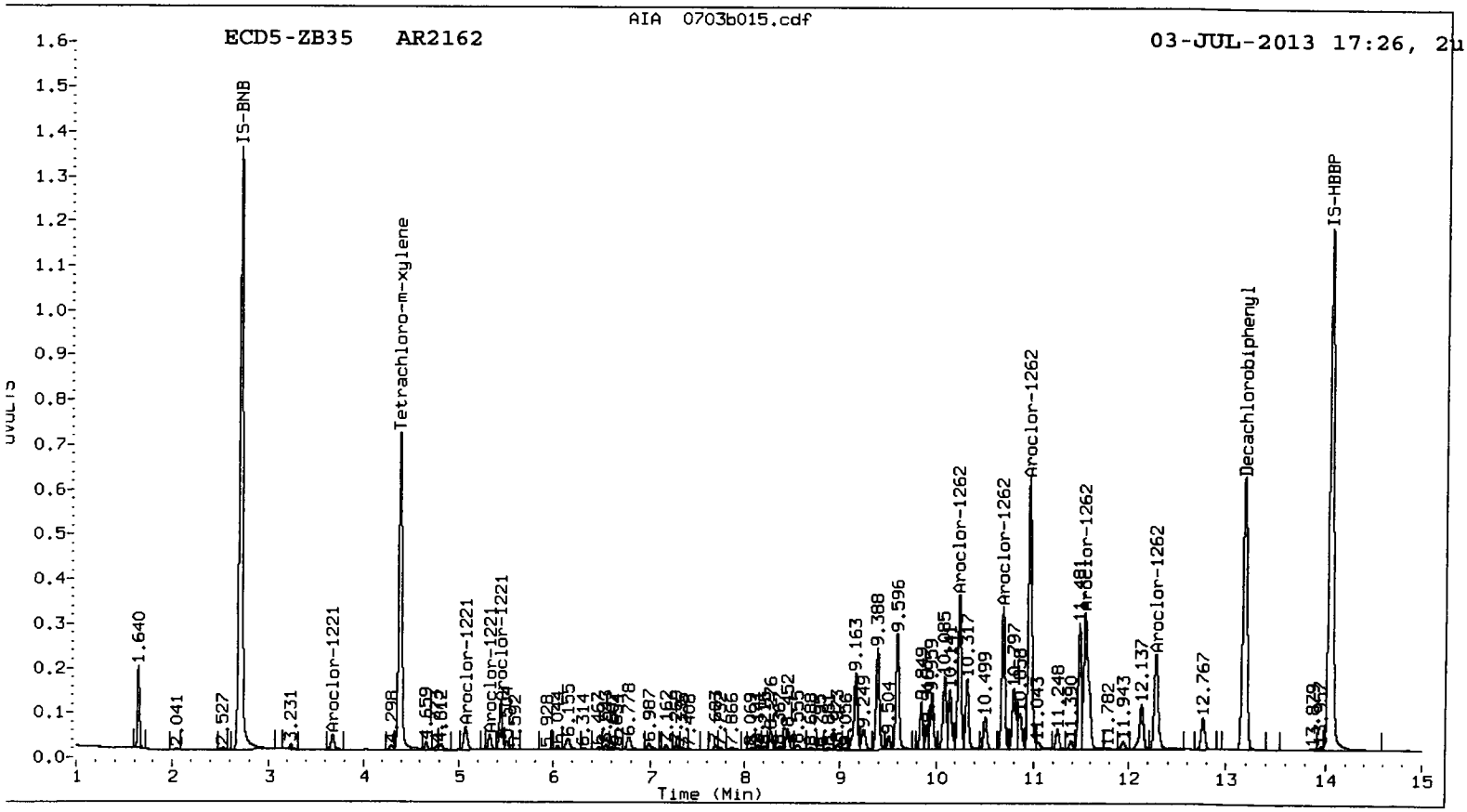
Total PCB Area Col2 (4.484 - 13.077) = 59703992 Col2 Total PCB = 0.5 ppm*

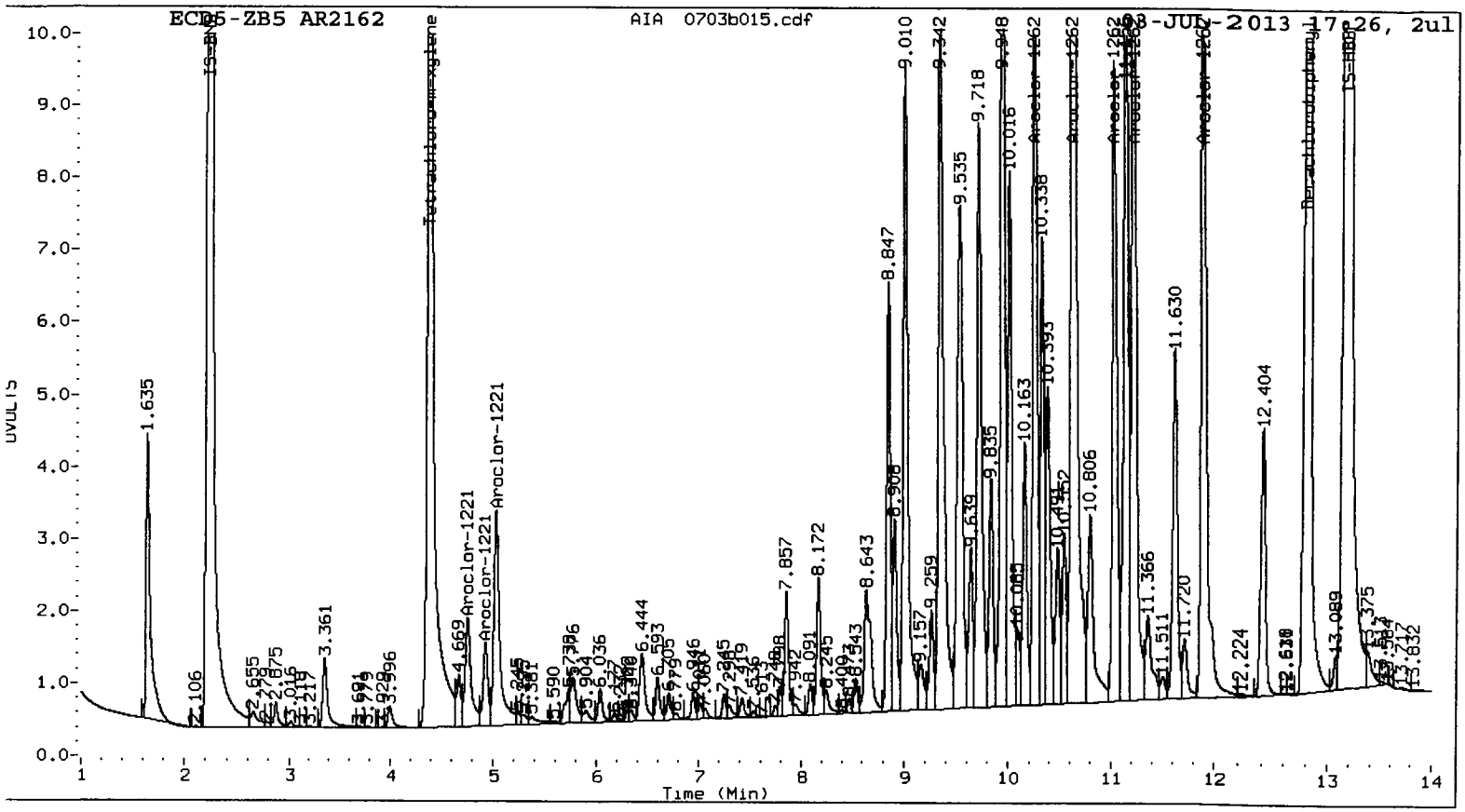
* Quantitated against AR1660 0.25ppm in Ical

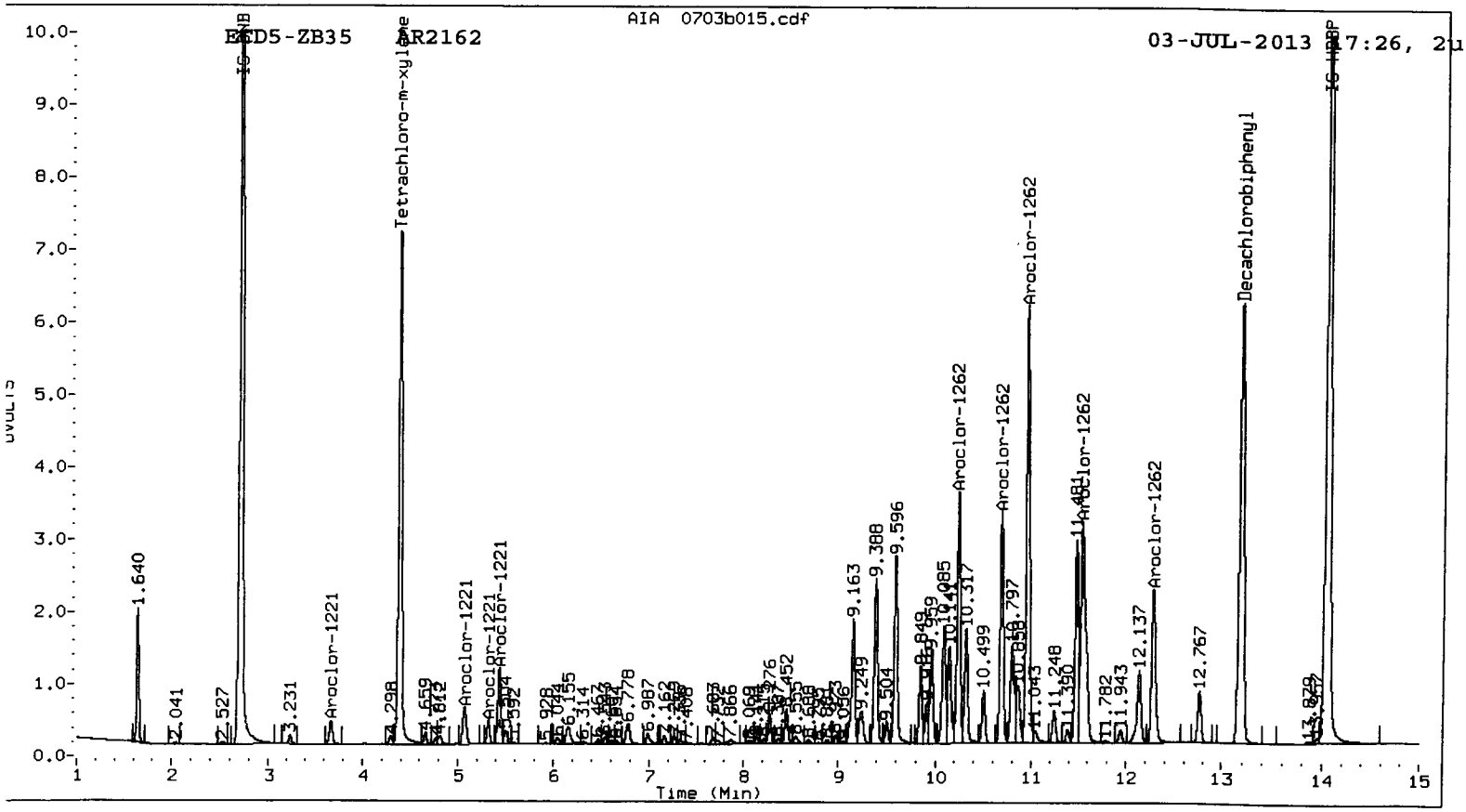
PCB-Form 10 Mod.

PCB-Form 10 Mod.


ECD5-ZB5 AR2162
AIA 0703b015.cdf
03-JUL-2013 17:26, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1221
Aroclor-1262
1.635
9.342
9.948
10.806
12.404


AIA 0703b015.cdf
ECD5-ZB35 AR2162
03-JUL-2013 17:26, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
IS-HBBP
Decachlorobiphenyl
Aroclor-1221
Aroclor-1262
1.640
9.163
9.388
9.596
10.317
10.499
12.137
12.767


ECD5-ZB5 AR2162
AIA 0703b015.cdf
03-JUL-2013 17:26, 2ul
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
Time (Min)


ECD5-ZB35 AR2162
AIA 0703b015.cdf
03-JUL-2013 17:26, 2u
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1262
Decachlorobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130703.b/ical-1.b/0703b016.d
Data file 2: 20130703.b/ical-2.b/0703b016.d
Method: /chem2/ecd5.i/20130703.b/PCB1.m
Compound Sublist: AR3268
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268
Client ID:
Injection Date: 03-JUL-2013 17:46
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.383	-0.002	33370274	4.385	0.001	8365969	39.0	40.7	4.3	Tetrachloro-m-xylen
12.812	-0.001	66974996	13.178	0.001	12269934	48.3	51.9	7.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	97.5	101.8
Decachlorobiphenyl	120.8	129.7

JC 07/04/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	54036699	53977722	-0.1
Hexabromobiphenyl	94298658	98041539	4.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	16218104	15722713	-3.1
Hexabromobiphenyl	17872840	18502994	3.5

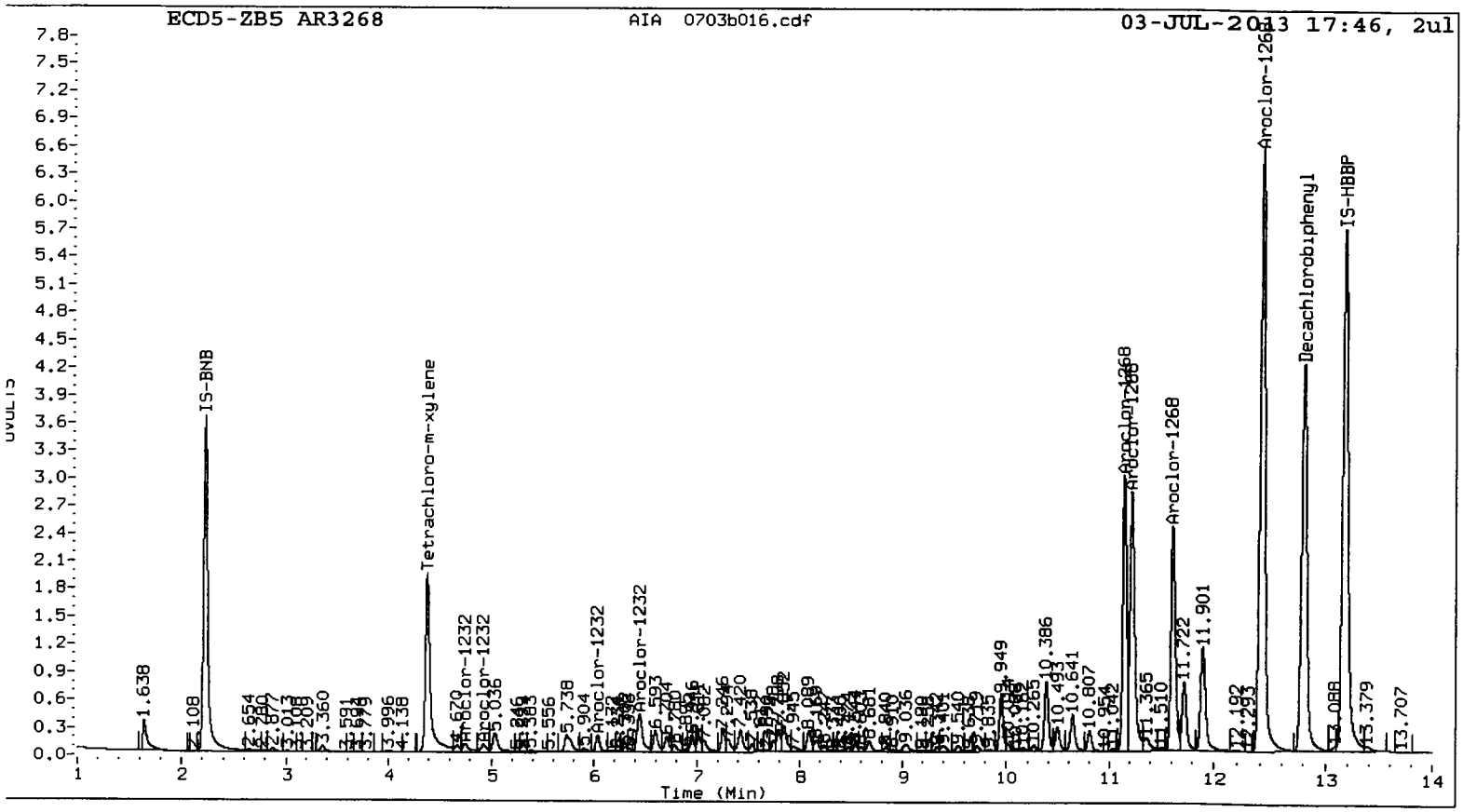
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

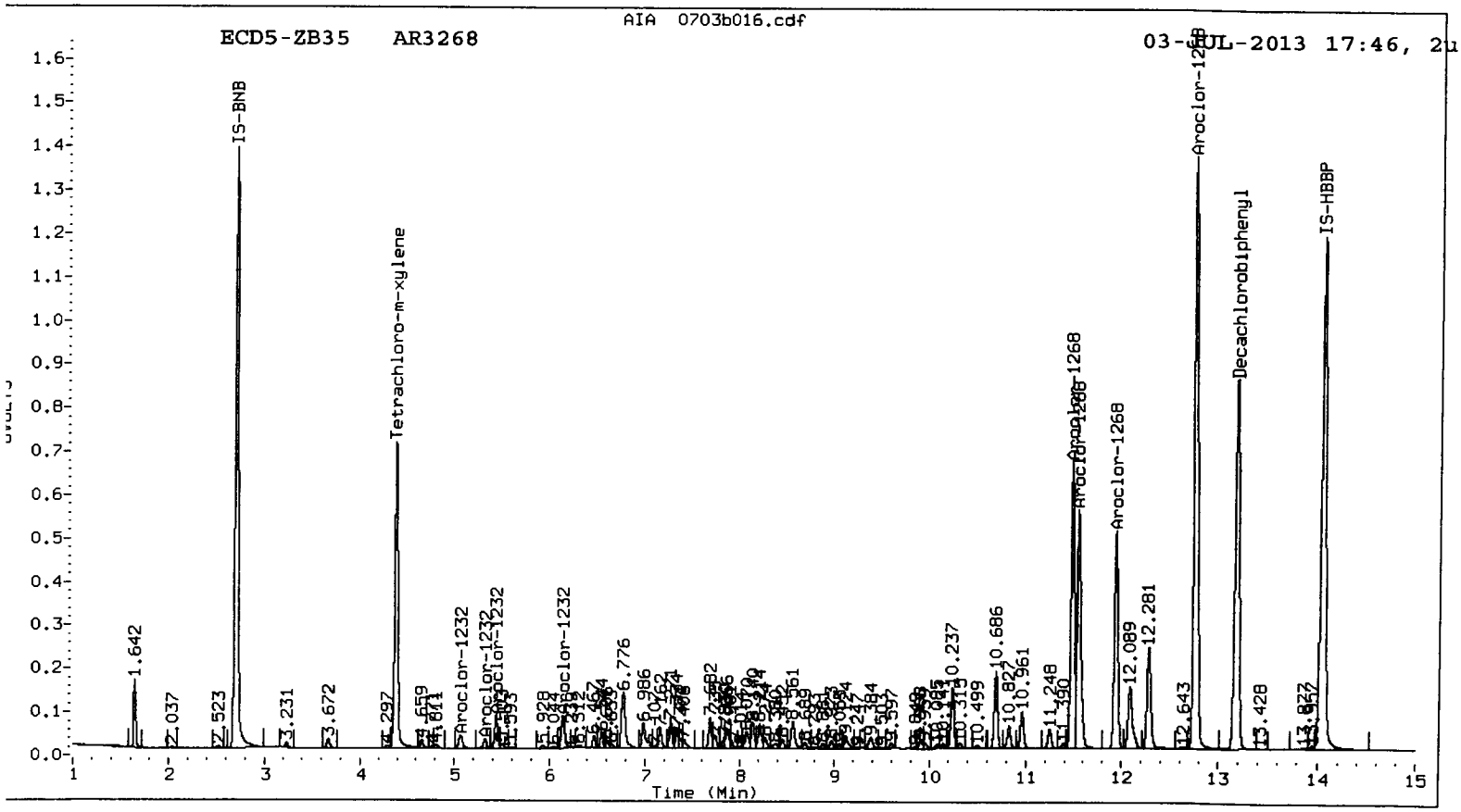
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1232	1	4.752	0.000	1978784	250.0	1	5.069	0.000	419886	250.0
Aroclor-1232	2	4.927	0.000	1474995	250.0	2	5.320	0.000	239679	250.0
Aroclor-1232	3	6.036	0.000	2565372	250.0	3	5.435	0.000	844205	250.0
Aroclor-1232	4	6.443	0.000	7934394	250.0	4	6.141	0.000	1000582	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0
Aroclor-1268	1	11.157	0.000	41418280	250.0	1	11.481	0.000	8222029	250.0
Aroclor-1268	2	11.229	0.000	43199647	250.0	2	11.548	0.000	7950421	250.0
Aroclor-1268	3	11.614	0.000	35704350	250.0	3	11.944	0.000	6529419	250.0
Aroclor-1268	4	12.406	0.000	102184406	250.0	4	12.765	0.000	19122376	250.0
Total Col1Ave (4 peaks):					250.0	Total Col2Ave (4 peaks):				250.0 RPD = 0
Corrected Ave (3 peaks):					250.0	Corrected Ave (3 peaks):				250.0 RPD = 0

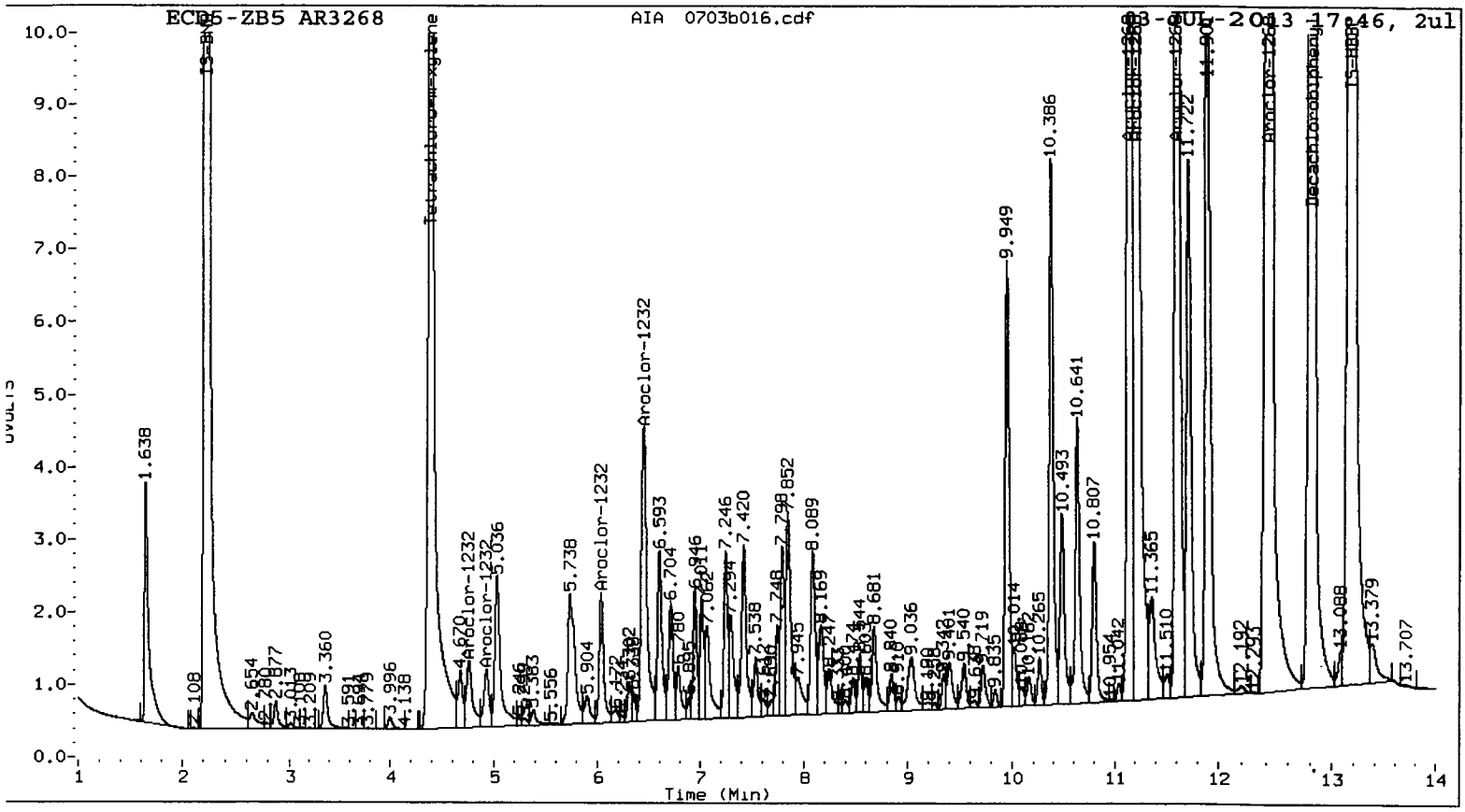
Total PCB Area Col1 (4.485 - 12.712) = 372386289 Col1 Total PCB = 0.6 ppm*

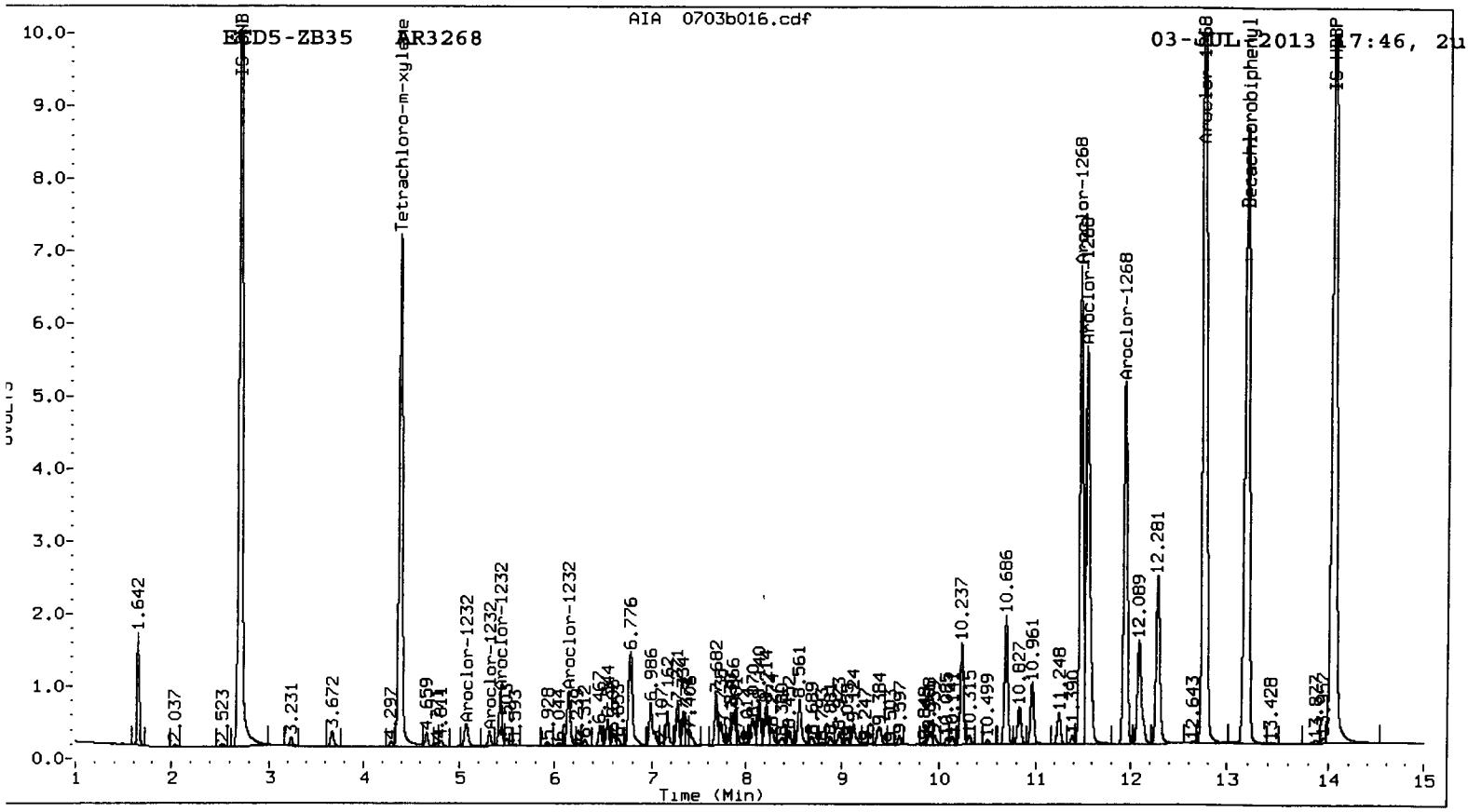
Total PCB Area Col2 (4.484 - 13.077) = 70759028 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR3268
AIA 0703b016.cdf
03-JUL-2013 17:46, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD5-ZB35 AR3268
AIA 0703b016.cdf
03-JUL-2013 17:46, 2u
IS-BNB
Tetrachloro-m-xylene
Aroclor-1232
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD5-ZB5 AR3268
AIA 0703b016.cdf
03-JUL-2013 17:46, 2ul
Time (Min)


ECD5-ZB35 AR3268
AIA 0703b016.cdf
03-JUL-2013 17:46, 2u
Time (Min)

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130703.b/ical-1.b/0703b017.d
Data file 2: 20130703.b/ical-2.b/0703b017.d
Method: /chem2/ecd5.i/20130703.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242ICV
Client ID:
Injection Date: 03-JUL-2013 18:06
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.385	-0.001	33875336	4.385	0.001	8444165	38.0	39.4	3.5	Tetrachloro-m-xylen
12.811	-0.002	47528909	13.177	0.001	8569798	32.8	35.1	6.8	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	95.1	98.5
Decachlorobiphenyl	81.9	87.6

JL 07/04/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	54036699	56163010	3.9
Hexabromobiphenyl	94298658	102610444	8.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	16218104	16401495	1.1
Hexabromobiphenyl	17872840	19129346	7.0

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount
Aroclor-1016	1	6.036	-0.002	4752293	182.6	1	6.141	0.000	1709380	185.9
Aroclor-1016	2	6.444	-0.001	14549475	180.3	2	6.776	0.000	3652568	184.2
Aroclor-1016	3	6.593	-0.002	6473994	181.9	3	7.161	-0.001	963644	187.0
Aroclor-1016	4	6.705	-0.002	4747668	180.2	4	7.335	0.000	882008	187.4
Total Col1Ave (4 peaks):					181.3	Total Col2Ave (4 peaks):				186.2 RPD = 3
Corrected Ave (3 peaks):					180.8	Corrected Ave (3 peaks):				185.7 RPD = 3
Aroclor-1221	1	5.036	0.284	3559247	286.0	1	3.670	-0.004	10097	6.0
Aroclor-1221	2	6.444	1.515	14549475	1690.0	2	5.075	0.006	255562	89.7
Aroclor-1221	3	7.851	2.815	7963907	323.4	3	5.321	0.000	169303	105.9
Aroclor-1221	NS	---			----	4	5.435	-0.001	766452	154.2
Total Col1Ave (3 peaks):					766.5	Total Col2Ave (4 peaks):				89.0 RPD = 158*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				67.2
Aroclor-1232	1	6.036	1.284	4752293	577.0	1	5.075	0.006	255562	145.9
Aroclor-1232	2	6.444	1.517	14549475	2370.1	2	5.321	0.000	169303	169.3
Aroclor-1232	3	7.419	1.384	7235447	677.7	3	5.435	0.001	766452	217.6
Aroclor-1232	4	7.851	1.408	7963907	241.2	4	6.141	0.000	1709380	409.4
Total Col1Ave (4 peaks):					966.5	Total Col2Ave (4 peaks):				235.5 RPD = 122*
Corrected Ave (3 peaks):					498.6	Corrected Ave (3 peaks):				177.6 RPD = 95*
Aroclor-1242	1	6.036	0.000	4752293	227.1	1	6.141	0.001	1709380	230.4
Aroclor-1242	2	6.444	0.000	14549475	226.0	2	6.776	0.000	3652568	226.8
Aroclor-1242	3	6.593	0.000	6473994	227.4	3	6.986	0.001	1522667	227.8
Aroclor-1242	4	7.851	0.000	7963907	229.7	4	8.213	0.000	1195394	212.3
Total Col1Ave (4 peaks):					227.6	Total Col2Ave (4 peaks):				224.3 RPD = 1
Corrected Ave (3 peaks):					226.8	Corrected Ave (3 peaks):				222.8 RPD = 2
Aroclor-1248	1	6.444	0.002	14549475	353.3	1	6.776	0.003	3652568	360.0
Aroclor-1248	2	7.419	-0.001	7235447	159.4	2	7.682	-0.001	1295448	155.3
Aroclor-1248	3	7.851	-0.002	7963907	137.7	3	8.213	-0.001	1195394	137.9
Aroclor-1248	4	8.088	-0.002	5890494	142.4	4	8.560	0.000	1524461	134.6
Total Col1Ave (4 peaks):					198.2	Total Col2Ave (4 peaks):				196.9 RPD = 1
Corrected Ave (3 peaks):					146.5	Corrected Ave (3 peaks):				142.6 RPD = 3
Aroclor-1254	1	8.169	-0.003	3813603	69.0	1	8.274	-0.001	501379	64.3
Aroclor-1254	2	8.543	-0.002	2212375	60.8	2	8.452	0.000	474445	48.7
Aroclor-1254	3	8.680	-0.002	3973980	52.8	3	8.973	0.000	431337	57.1
Aroclor-1254	4	9.037	0.002	3742159	46.1	4	9.123	0.000	727700	44.8
Aroclor-1254	5	9.343	-0.001	720736	22.3	5	9.907	-0.002	452048	47.1
Total Col1Ave (5 peaks):					50.2	Total Col2Ave (5 peaks):				52.4 RPD = 4
Corrected Ave (4 peaks):					45.5	Corrected Ave (4 peaks):				49.4 RPD = 8
Aroclor-1260	1	9.946	-0.003	212312	3.6	1	10.236	0.000	14764	1.4
Aroclor-1260	2	10.264	-0.002	158510	2.7	2	10.681	-0.004	97361	7.5
Aroclor-1260	3	10.641	-0.001	372816	2.5	3	10.962	0.001	56692	2.2
Aroclor-1260	4	11.042	-0.001	243785	3.1	4	11.479	-0.002	28519	3.6
Aroclor-1260	5	11.229	-0.001	55901	1.3	NS	---			----
Total Col1Ave (5 peaks):					2.6	Total Col2Ave (4 peaks):				3.7 RPD = 33
Corrected Ave (4 peaks):					2.4	Corrected Ave (3 peaks):				2.4 RPD = 0
Aroclor-1262	1	10.264	-0.001	158510	2.2	1	10.236	-0.001	14764	0.9
Aroclor-1262	2	10.641	0.000	372816	2.2	2	10.681	-0.005	97361	6.1
Aroclor-1262	3	11.042	0.000	243785	4.0	3	10.962	0.001	56692	1.8
Aroclor-1262	4	11.229	-0.001	55901	0.7	4	11.540	-0.003	42630	1.9
Aroclor-1262	5	11.902	0.002	171156	2.4	5	12.318	0.035	69959	5.5
Total Col1Ave (5 peaks):					2.3	Total Col2Ave (5 peaks):				3.2 RPD = 34
Corrected Ave (4 peaks):					1.9	Corrected Ave (4 peaks):				2.5 RPD = 30
Aroclor-1268	1	11.156	-0.001	93412	0.5	1	11.479	-0.002	28519	0.8

Aroclor-1268	2	11.229	0.000	55901	0.3	2	11.540	-0.008	42630	1.3
Aroclor-1268	3	11.611	-0.002	164478	1.1	3	---			0.0
Aroclor-1268	4	12.401	-0.004	251455	0.6	4	12.765	-0.001	18803	0.2

Total Col1Ave (4 peaks): 0.6 Total Col2Ave (3 peaks): 0.8 RPD = 22

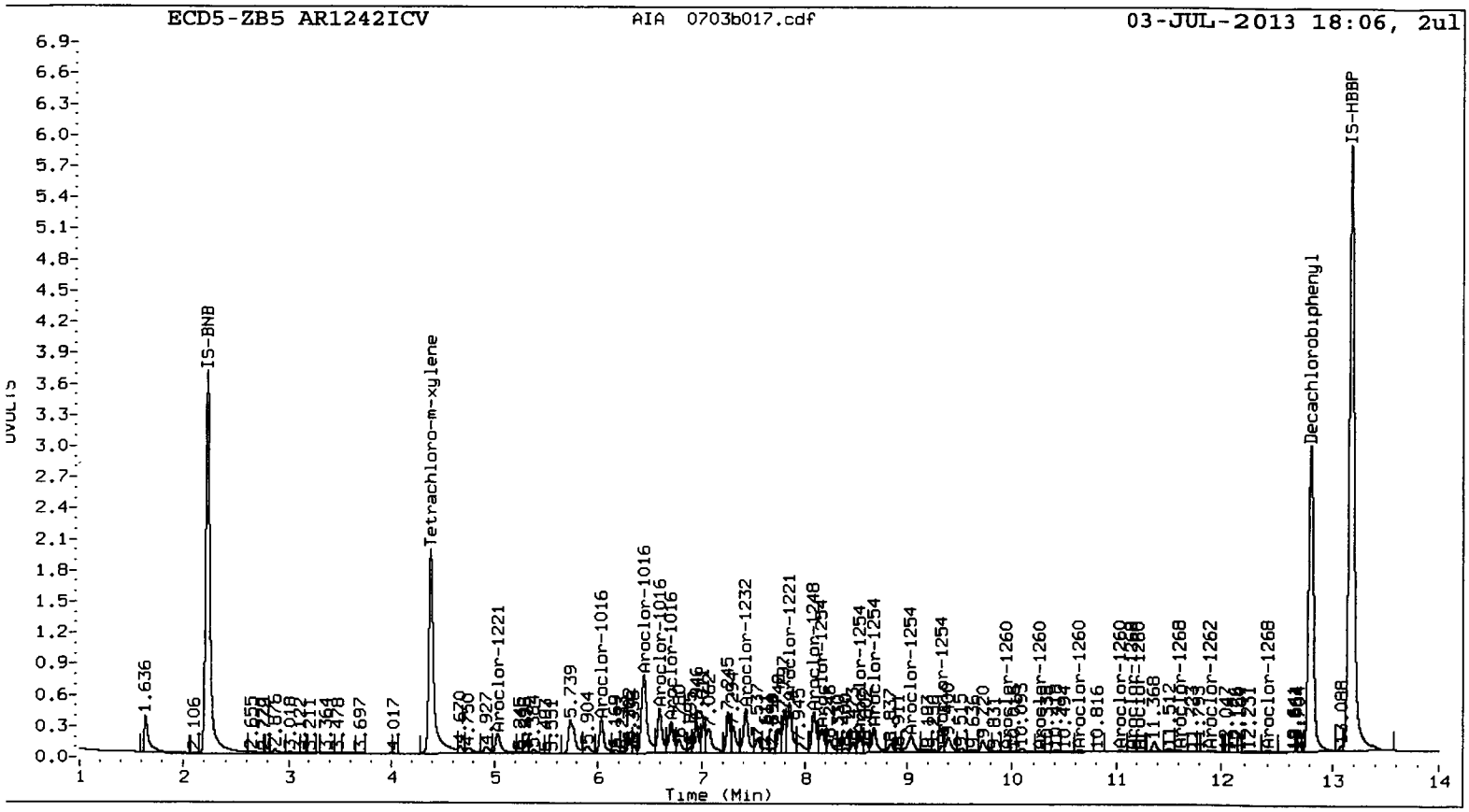
Corrected Ave (3 peaks): 0.5 Corrected Ave: < 3 Peaks

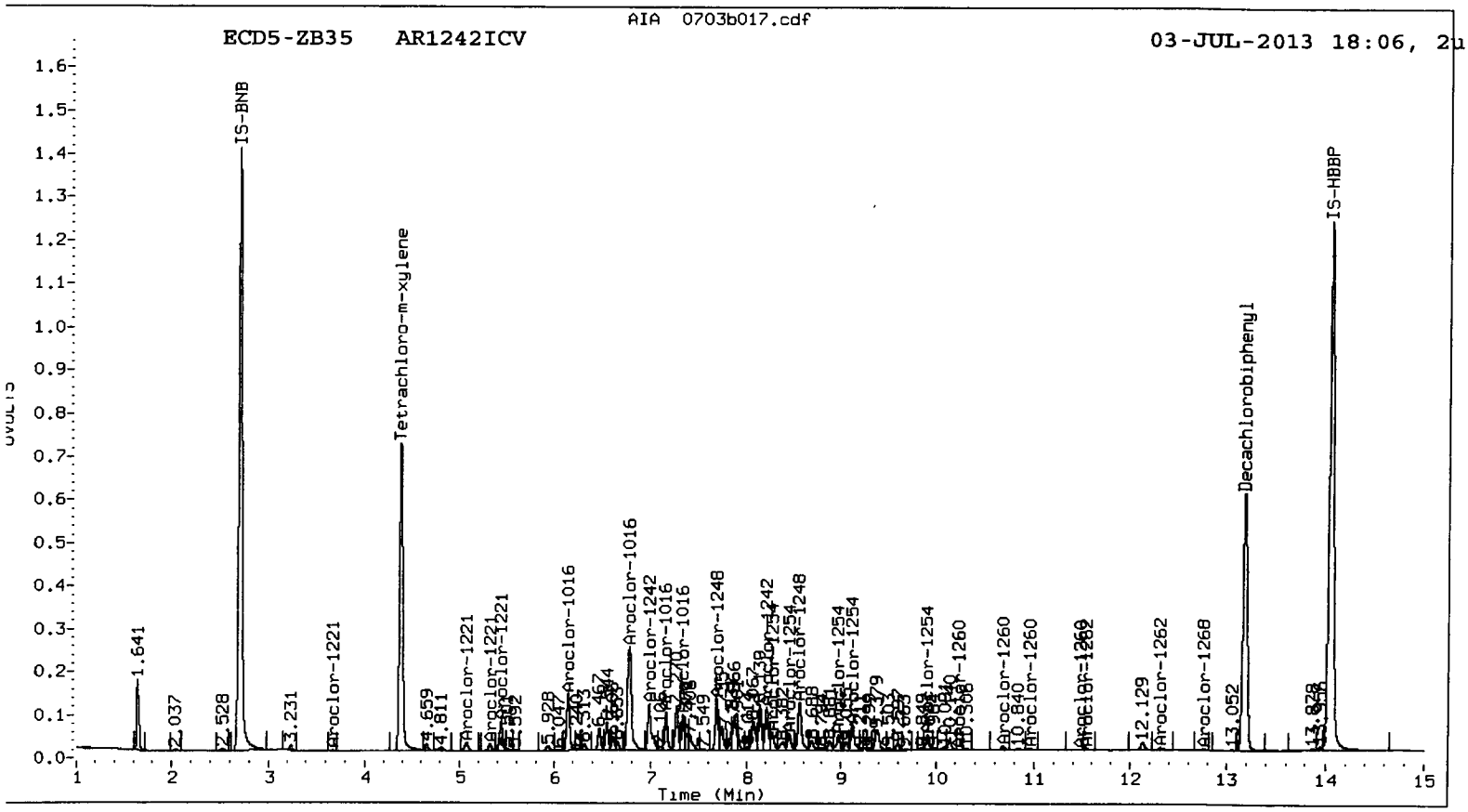
Total PCB Area Col1 (4.485 - 12.712) = 143238049 Col1 Total PCB = 0.2 ppm*

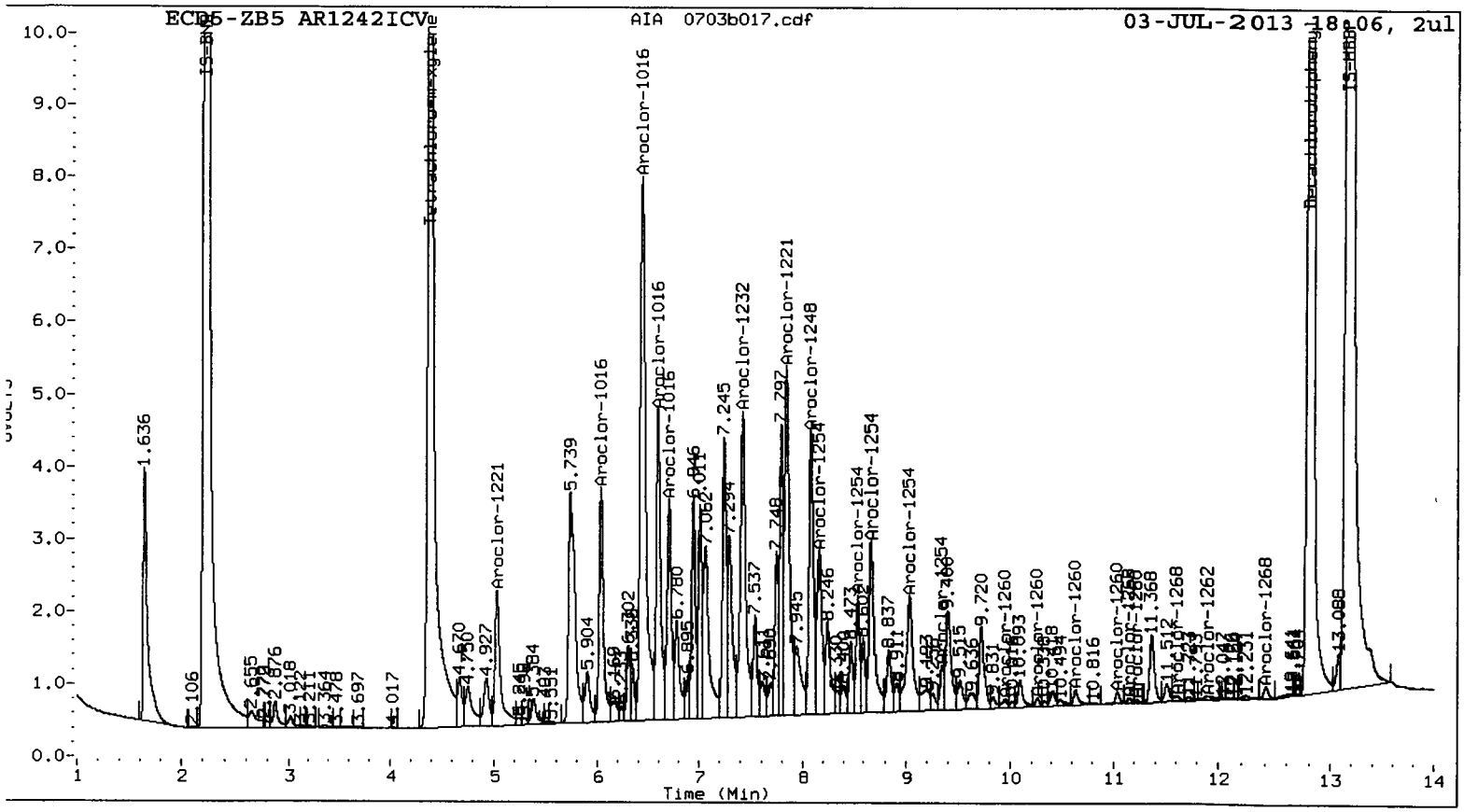
Total PCB Area Col2 (4.484 - 13.077) = 29021675 Col2 Total PCB = 0.2 ppm*

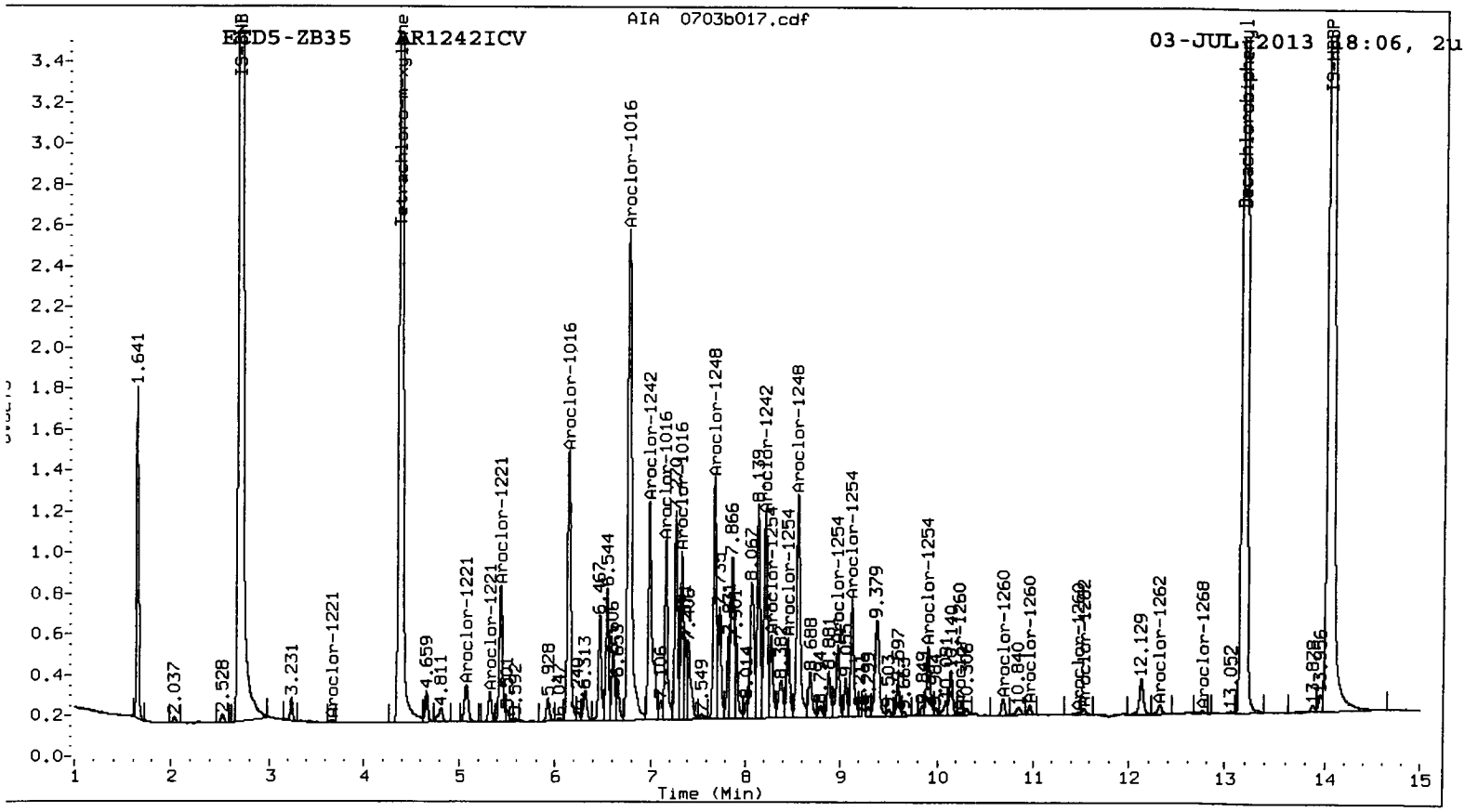
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 AR1242ICV
AIA 0703b017.cdf
03-JUL-2013 18:06, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
Time (Min)


AIA 0703b017.cdf
ECD5-ZB35 AR1242ICV
03-JUL-2013 18:06, 2u
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD5-ZB5 AR1242ICV
AIA 0703b017.cdf
03-JUL-2013 18:06, 2ul
Time (Min)


ECD5-ZB35 AR1242ICV
AIA 0703b017.cdf
03-JUL-2013 18:06, 2u
Time (Min)

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130703.b/ical-1.b/0703b018.d
Data file 2: 20130703.b/ical-2.b/0703b018.d
Method: /chem2/ecd5.i/20130703.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248ICV
Client ID:
Injection Date: 03-JUL-2013 18:25
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.383	-0.003	33148376	4.386	0.002	8231744	37.6	38.9	3.3	Tetrachloro-m-xylen
12.811	-0.001	46715494	13.177	0.000	8423296	32.5	34.9	7.0	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	94.1	97.3
Decachlorobiphenyl	81.3	87.2

07/04/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	54036699	55572423	2.8
Hexabromobiphenyl	94298658	101536066	7.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	16218104	16195879	-0.1
Hexabromobiphenyl	17872840	18895684	5.7

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.034	-0.004	2487627	96.6	1	6.139	-0.001	947175	104.3
Aroclor-1016	2	6.439	-0.006	10269585	128.6	2	6.773	-0.003	2511715	128.3
Aroclor-1016	3	6.594	-0.001	4106310	116.6	3	7.162	0.000	538516	105.8
Aroclor-1016	4	6.703	-0.004	3095546	118.7	4	7.334	-0.001	1289302	277.5
Total Col1Ave (4 peaks):					115.1	Total Col2Ave (4 peaks):				154.0 RPD = 29
Corrected Ave (3 peaks):					110.7	Corrected Ave (3 peaks):				112.8 RPD = 2
Aroclor-1221	1	5.035	0.282	1077114	87.5	1	---			0.0
Aroclor-1221	2	6.439	1.510	10269585	1205.5	2	5.083	0.014	130384	46.3
Aroclor-1221	3	7.851	2.814	13404831	550.1	3	5.321	0.000	33650	21.3
Aroclor-1221	NS	---			----	4	5.436	0.000	188191	38.3
Total Col1Ave (3 peaks):					614.4	Total Col2Ave (3 peaks):				35.3 RPD = 178*
Corrected Ave: < 3 Peaks						Corrected Ave: < 3 Peaks				
Aroclor-1232	1	6.034	1.283	2487627	305.3	1	5.083	0.014	130384	75.4
Aroclor-1232	2	6.439	1.512	10269585	1690.7	2	5.321	0.001	33650	34.1
Aroclor-1232	3	7.418	1.382	10457425	989.9	3	5.436	0.002	188191	54.1
Aroclor-1232	4	7.851	1.408	13404831	410.2	4	6.139	-0.002	947175	229.7
Total Col1Ave (4 peaks):					849.0	Total Col2Ave (4 peaks):				98.3 RPD = 158*
Corrected Ave (3 peaks):					568.5	Corrected Ave (3 peaks):				54.5 RPD = 165*
Aroclor-1242	1	6.034	-0.002	2487627	120.2	1	6.139	-0.001	947175	129.3
Aroclor-1242	2	6.439	-0.004	10269585	161.2	2	6.773	-0.002	2511715	158.0
Aroclor-1242	3	6.594	0.001	4106310	145.8	3	6.986	0.001	626382	94.9
Aroclor-1242	4	7.851	-0.001	13404831	390.7	4	8.214	0.000	1963737	353.1
Total Col1Ave (4 peaks):					204.5	Total Col2Ave (4 peaks):				183.8 RPD = 11
Corrected Ave (3 peaks):					142.4	Corrected Ave (3 peaks):				127.4 RPD = 11
Aroclor-1248	1	6.439	-0.002	10269585	252.0	1	6.773	0.000	2511715	250.7
Aroclor-1248	2	7.418	-0.003	10457425	232.9	2	7.682	0.000	1956255	237.5
Aroclor-1248	3	7.851	-0.002	13404831	234.2	3	8.214	0.000	1963737	229.5
Aroclor-1248	4	8.087	-0.003	9422637	230.2	4	8.559	-0.001	2574866	230.2
Total Col1Ave (4 peaks):					237.3	Total Col2Ave (4 peaks):				237.0 RPD = 0
Corrected Ave (3 peaks):					232.4	Corrected Ave (3 peaks):				232.4 RPD = 0
Aroclor-1254	1	8.168	-0.005	7214551	131.9	1	8.275	0.000	940134	122.1
Aroclor-1254	2	8.542	-0.003	4392567	122.1	2	8.452	0.000	873663	90.9
Aroclor-1254	3	8.679	-0.003	7855789	105.5	3	8.973	0.000	877279	117.7
Aroclor-1254	4	9.037	0.002	6894080	85.8	4	9.123	0.000	1439340	89.7
Aroclor-1254	5	9.342	-0.002	815303	25.5	5	9.906	-0.003	1024577	108.2
Total Col1Ave (5 peaks):					94.1	Total Col2Ave (5 peaks):				105.7 RPD = 12
Corrected Ave (4 peaks):					84.7	Corrected Ave (4 peaks):				101.6 RPD = 18
Aroclor-1260	1	9.946	-0.003	467686	8.0	1	10.236	-0.001	57850	5.5
Aroclor-1260	2	10.263	-0.003	317702	5.4	2	10.681	-0.004	121385	9.5
Aroclor-1260	3	10.640	-0.002	650097	4.4	3	10.962	0.001	94396	3.7
Aroclor-1260	4	11.040	-0.002	225699	2.9	4	11.482	0.000	45320	5.7
Aroclor-1260	5	11.228	-0.002	219290	5.1	NS	---			----
Total Col1Ave (5 peaks):					5.2	Total Col2Ave (4 peaks):				6.1 RPD = 17
Corrected Ave (4 peaks):					4.4	Corrected Ave (3 peaks):				5.0 RPD = 11
Aroclor-1262	1	10.263	-0.002	317702	4.5	1	10.236	-0.002	57850	3.4
Aroclor-1262	2	10.640	-0.001	650097	3.8	2	10.681	-0.005	121385	7.7
Aroclor-1262	3	11.040	-0.001	225699	3.8	3	10.962	0.000	94396	3.0
Aroclor-1262	4	11.228	-0.002	219290	2.7	4	11.542	-0.001	68021	3.1
Aroclor-1262	5	11.901	0.001	295197	4.1	5	12.317	0.035	94831	7.6
Total Col1Ave (5 peaks):					3.8	Total Col2Ave (5 peaks):				4.9 RPD = 27
Corrected Ave (4 peaks):					3.6	Corrected Ave (4 peaks):				4.3 RPD = 17
Aroclor-1268	1	11.156	-0.001	231587	1.3	1	11.482	0.001	45320	1.3

Aroclor-1268 2	11.228	0.000	219290	1.2	2	11.542	-0.005	68021	2.1
Aroclor-1268 3	11.624	0.010	176435	1.2	3	---			0.0
Aroclor-1268 4	12.402	-0.004	282394	0.7	4	12.764	-0.001	21997	0.3

Total Col1Ave (4 peaks): 1.1 Total Col2Ave (3 peaks): 1.2 RPD = 11

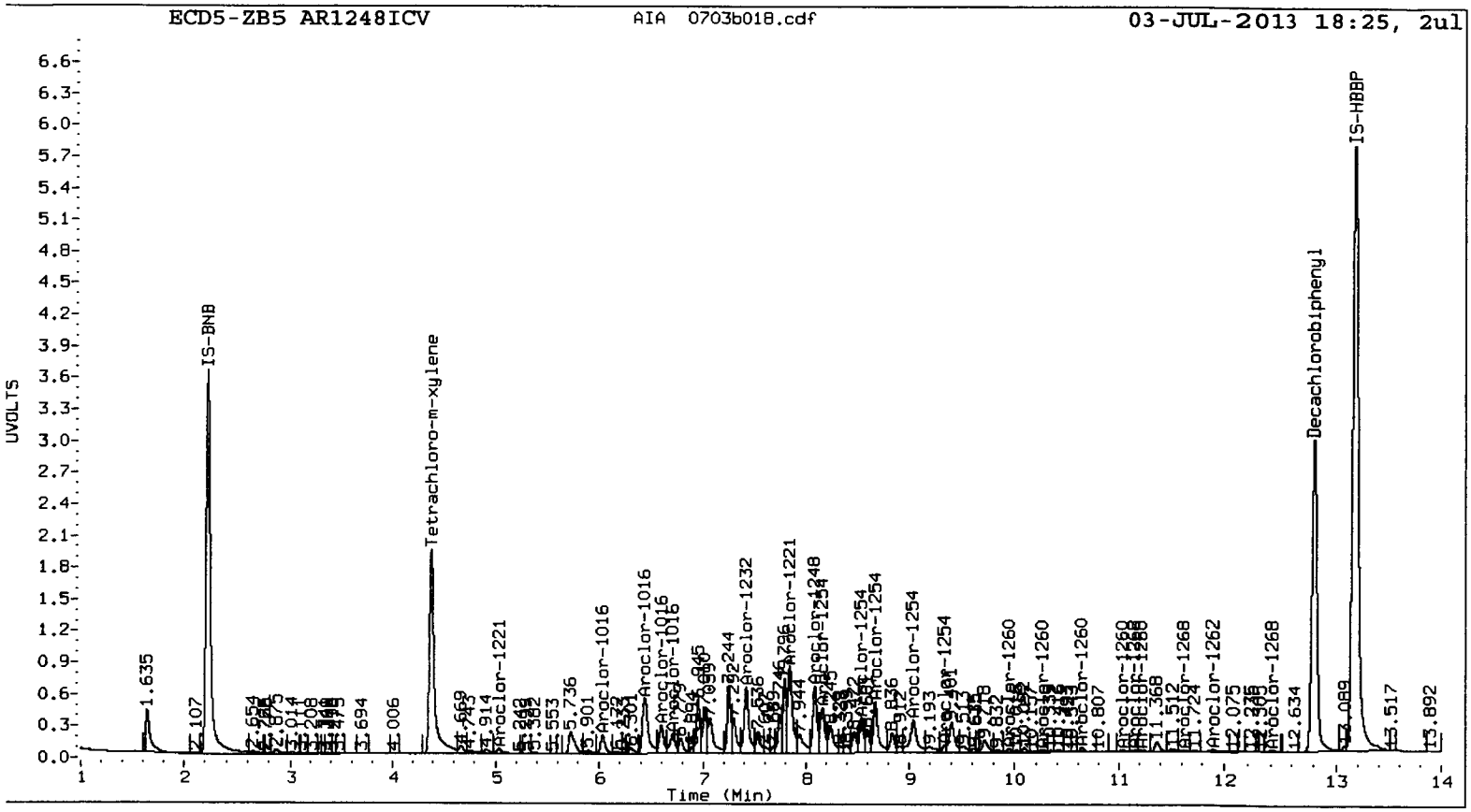
Corrected Ave (3 peaks): 1.0 Corrected Ave: < 3 Peaks

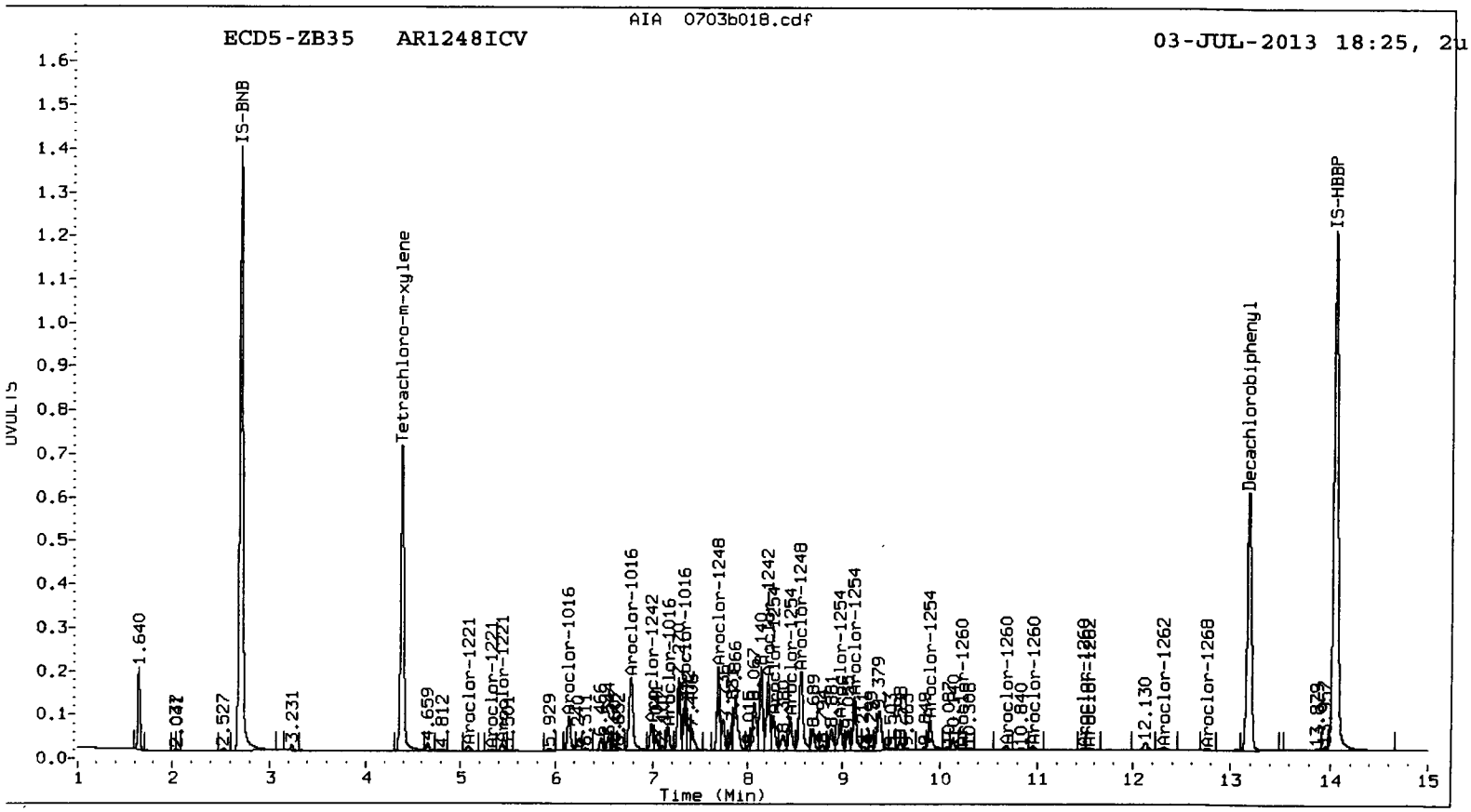
Total PCB Area Col1 (4.485 - 12.712) = 178952170 Col1 Total PCB = 0.3 ppm*

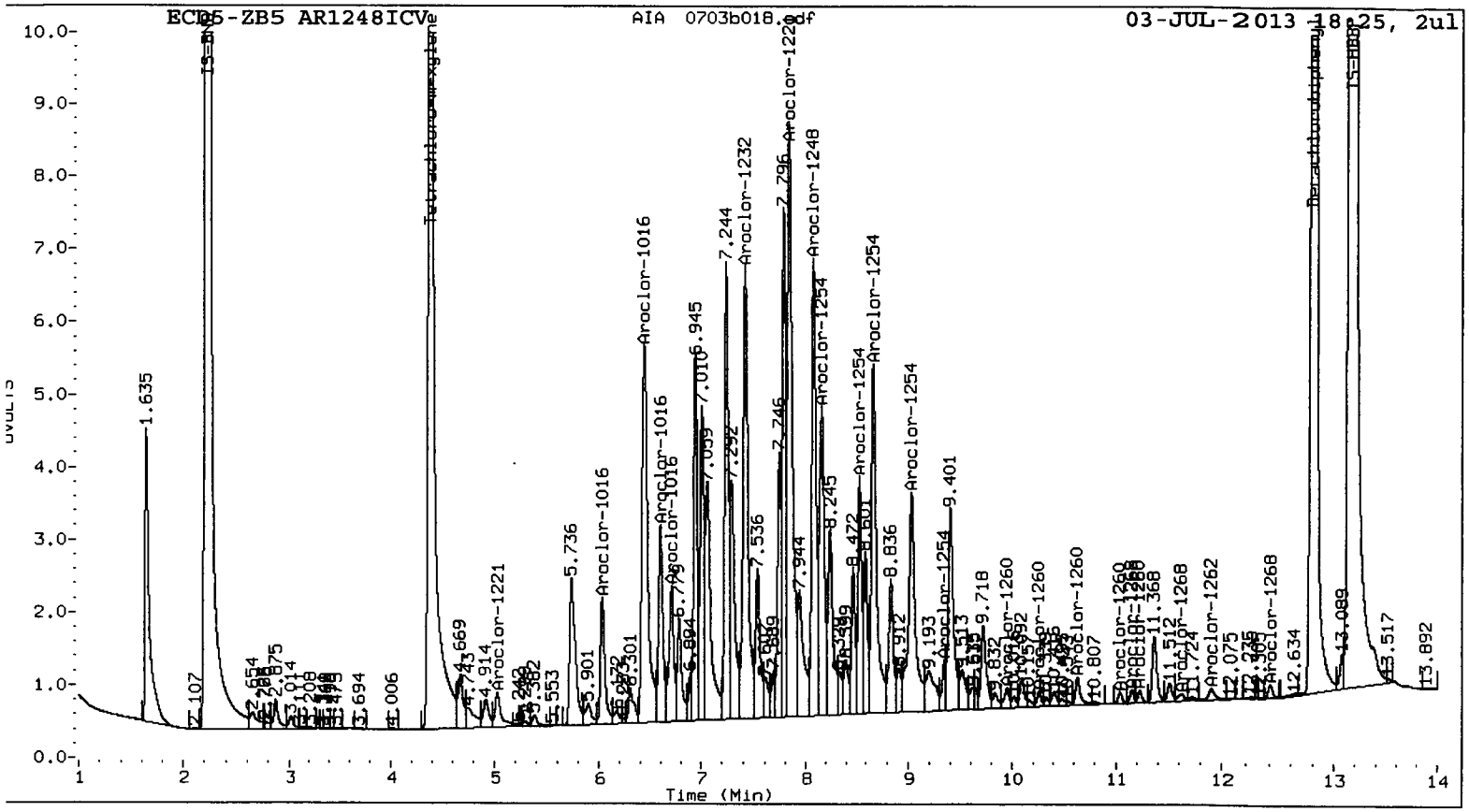
Total PCB Area Col2 (4.484 - 13.077) = 34999166 Col2 Total PCB = 0.3 ppm*

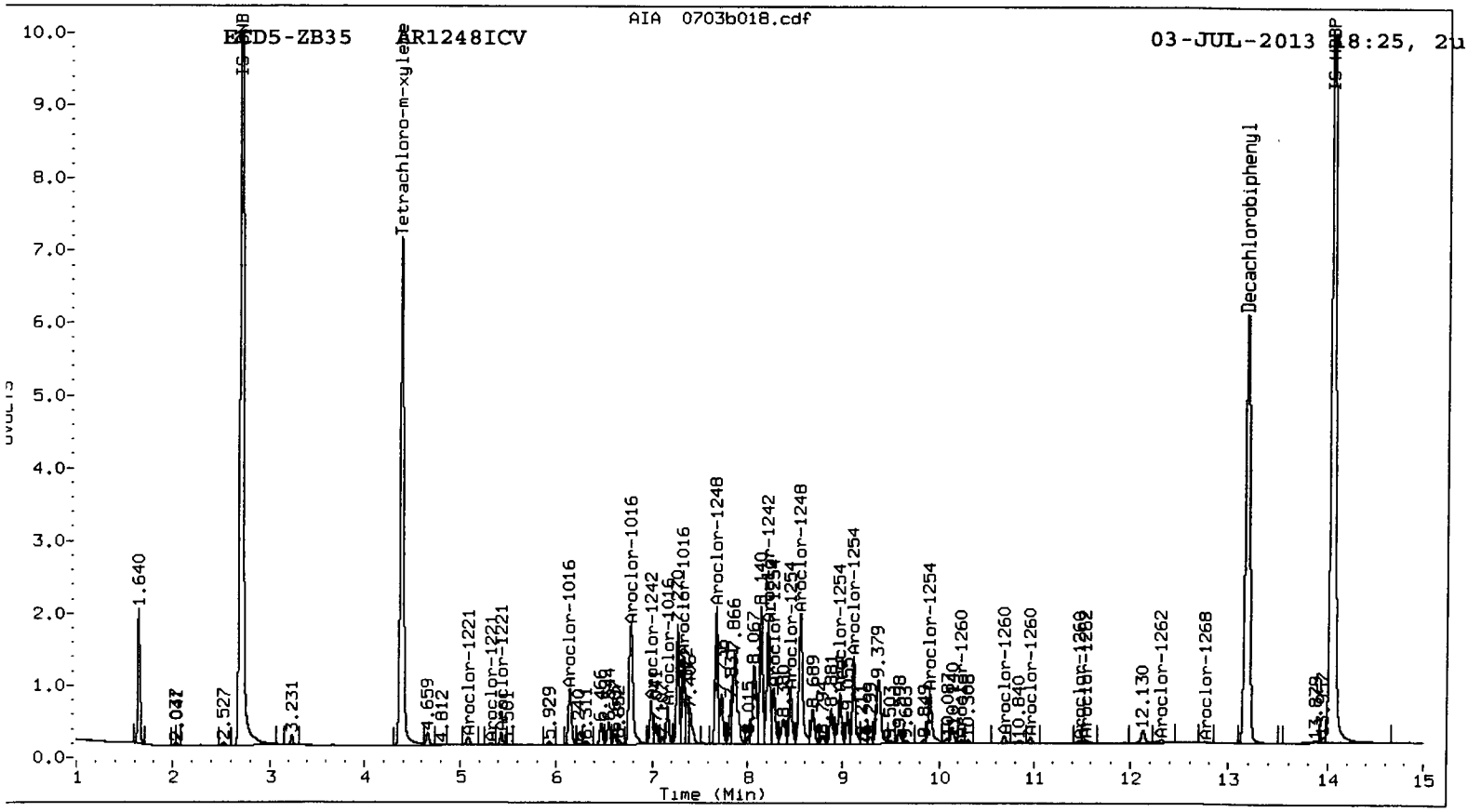
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 AR1248ICV
AIA 0703b018.cdf
03-JUL-2013 18:25, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


AIA 0703b018.cdf
ECD5-ZB35 AR1248ICV
03-JUL-2013 18:25, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 AR1248ICV
AIA 0703b018.cdf
03-JUL-2013 18:25, 2ul
Time (Min)


ECD5-ZB35 AR1248ICV
AIA 0703b018.cdf
03-JUL-2013 18:25, 2u
Tetrachloro-m-xylene
Decachlorobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130703.b/ical-1.b/0703b019.d
Data file 2: 20130703.b/ical-2.b/0703b019.d
Method: /chem2/ecd5.i/20130703.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254ICV
Client ID:
Injection Date: 03-JUL-2013 18:45
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.383	-0.002	33879804	4.385	0.001	8419508	37.5	38.7	3.1	Tetrachloro-m-xylen
12.812	-0.001	48228488	13.176	-0.001	8698046	33.2	35.1	5.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	93.7	96.7
Decachlorobiphenyl	82.9	87.7

JL 07/04/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	54036699	57013429	5.5
Hexabromobiphenyl	94298658	102851159	9.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	16218104	16668049	2.8
Hexabromobiphenyl	17872840	19397719	8.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.037	-0.001	87692	3.3	1	6.138	-0.003	30226	3.2
Aroclor-1016	2	6.435	-0.010	368167	4.5	2	6.770	-0.007	80386	4.0
Aroclor-1016	3	6.599	0.005	209355	5.8	3	7.161	-0.001	12610	2.4
Aroclor-1016	4	6.703	-0.003	88067	3.3	4	7.333	-0.002	466392	97.5
	Total Col1Ave (4 peaks):			4.2		Total Col2Ave (4 peaks):			26.8	RPD = 146*
	Corrected Ave (3 peaks):			3.7		Corrected Ave (3 peaks):			3.2	RPD = 14
Aroclor-1221	1	5.032	0.279	368927	29.2	1	---			0.0
Aroclor-1221	2	6.435	1.506	368167	42.1	2	5.083	0.014	108643	37.5
Aroclor-1221	3	7.856	2.820	11484790	459.4	3	---			0.0
Aroclor-1221	NS	---			----	4	5.437	0.001	29637	5.9
	Total Col1Ave (3 peaks):			176.9		Col2Ave: <3 Quant Peaks				
Aroclor-1232	1	6.037	1.285	87692	10.5	1	5.083	0.014	108643	61.0
Aroclor-1232	2	6.435	1.508	368167	59.1	2	---			0.0
Aroclor-1232	3	7.420	1.384	1847441	170.5	3	5.437	0.003	29637	8.3
Aroclor-1232	4	7.856	1.413	11484790	342.6	4	6.138	-0.003	30226	7.1
	Total Col1Ave (4 peaks):			145.7		Total Col2Ave (3 peaks):			25.5	RPD = 140*
	Corrected Ave (3 peaks):			80.0		Corrected Ave: < 3 Peaks				
Aroclor-1242	1	6.037	0.001	87692	4.1	1	6.138	-0.002	30226	4.0
Aroclor-1242	2	6.435	-0.008	368167	5.6	2	6.770	-0.006	80386	4.9
Aroclor-1242	3	6.599	0.006	209355	7.2	3	6.987	0.002	15548	2.3
Aroclor-1242	4	7.856	0.005	11484790	326.3	4	8.212	-0.001	382010	66.7
	Total Col1Ave (4 peaks):			85.8		Total Col2Ave (4 peaks):			19.5	RPD = 126*
	Corrected Ave (3 peaks):			5.7		Corrected Ave (3 peaks):			3.7	RPD = 41*
Aroclor-1248	1	6.435	-0.006	368167	8.8	1	6.770	-0.004	80386	7.8
Aroclor-1248	2	7.420	-0.001	1847441	40.1	2	7.682	0.000	704247	83.1
Aroclor-1248	3	7.856	0.003	11484790	195.6	3	8.212	-0.002	382010	43.4
Aroclor-1248	4	8.092	0.003	3755519	89.4	4	8.544	-0.016	1433343	124.5
	Total Col1Ave (4 peaks):			83.5		Total Col2Ave (4 peaks):			64.7	RPD = 25
	Corrected Ave (3 peaks):			46.1		Corrected Ave (3 peaks):			44.8	RPD = 3
Aroclor-1254	1	8.170	-0.002	15438034	275.0	1	8.275	0.000	2157870	272.4
Aroclor-1254	2	8.543	-0.002	10600421	287.2	2	8.452	0.000	2736302	276.5
Aroclor-1254	3	8.679	-0.003	20918220	273.8	3	8.973	0.000	2183545	284.6
Aroclor-1254	4	9.033	-0.002	23068554	279.9	4	9.123	-0.001	4457500	269.9
Aroclor-1254	5	9.342	-0.002	8275936	252.0	5	9.910	0.000	2278742	285.1
	Total Col1Ave (5 peaks):			273.6		Total Col2Ave (5 peaks):			277.7	RPD = 1
	Corrected Ave (4 peaks):			270.2		Corrected Ave (4 peaks):			275.8	RPD = 2
Aroclor-1260	1	9.945	-0.005	2144740	36.2	1	10.235	-0.001	224782	20.8
Aroclor-1260	2	10.264	-0.002	1825197	30.7	2	10.680	-0.006	1289406	98.4
Aroclor-1260	3	10.640	-0.002	3909872	26.1	3	10.961	0.000	724887	27.7
Aroclor-1260	4	11.041	-0.002	3213607	40.5	4	11.481	0.000	90294	11.1
Aroclor-1260	5	11.228	-0.003	251400	5.8	NS	---			----
	Total Col1Ave (5 peaks):			27.8		Total Col2Ave (4 peaks):			39.5	RPD = 35
	Corrected Ave (4 peaks):			24.7		Corrected Ave (3 peaks):			19.9	RPD = 22
Aroclor-1262	1	10.264	-0.001	1825197	25.3	1	10.235	-0.002	224782	13.0
Aroclor-1262	2	10.640	-0.001	3909872	22.7	2	10.680	-0.007	1289406	79.2
Aroclor-1262	3	11.041	0.000	3213607	52.8	3	10.961	0.000	724887	22.4
Aroclor-1262	4	11.228	-0.002	251400	3.1	4	11.538	-0.005	507613	22.2
Aroclor-1262	5	11.901	0.001	275356	3.8	5	12.317	0.035	86973	6.8
	Total Col1Ave (5 peaks):			21.5		Total Col2Ave (5 peaks):			28.7	RPD = 29
	Corrected Ave (4 peaks):			13.7		Corrected Ave (4 peaks):			16.1	RPD = 16
Aroclor-1268	1	11.152	-0.005	250362	1.4	1	11.481	0.001	90294	2.6
Aroclor-1268	2	11.228	-0.001	251400	1.4	2	11.538	-0.010	507613	15.2

Aroclor-1268 3	11.626	0.012	227520	1.5	3	---	0.0
Aroclor-1268 4	12.399	-0.007	207735	0.5	4	---	0.0

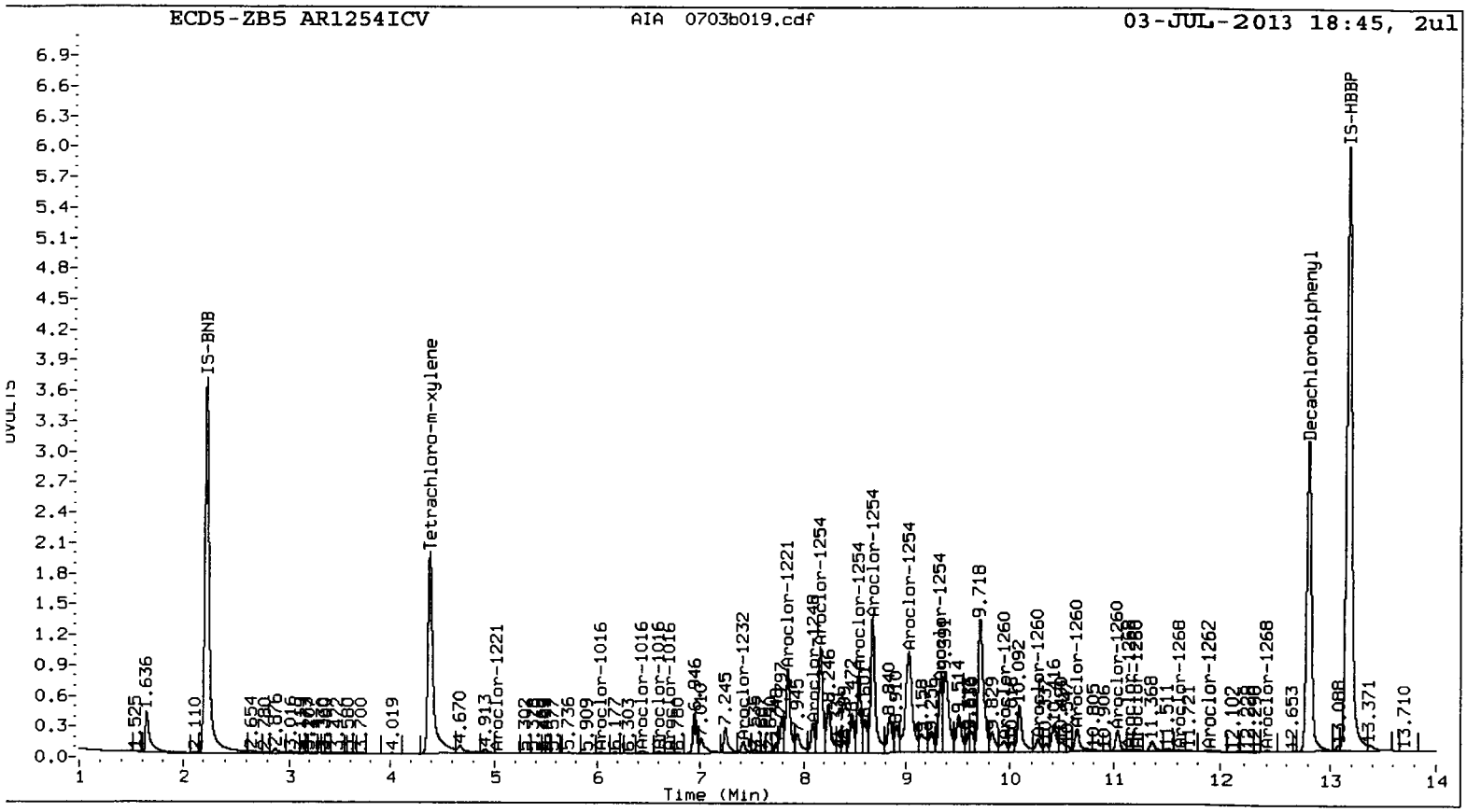
Total Col1Ave (4 peaks): 1.2 Col2Ave: <3 Quant Peaks

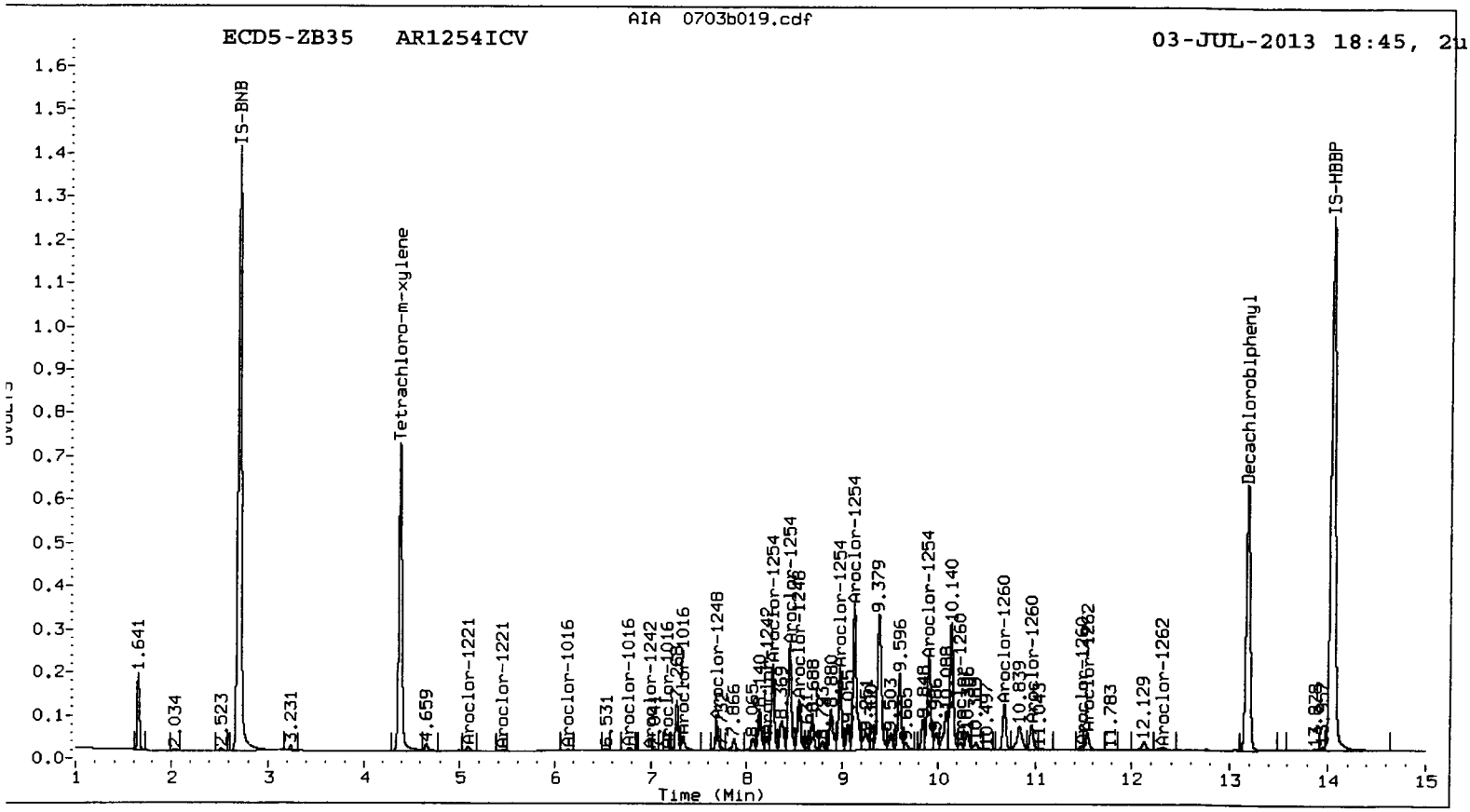
Total PCB Area Col1 (4.485 - 12.712) = 238533771 Col1 Total PCB = 0.4 ppm*

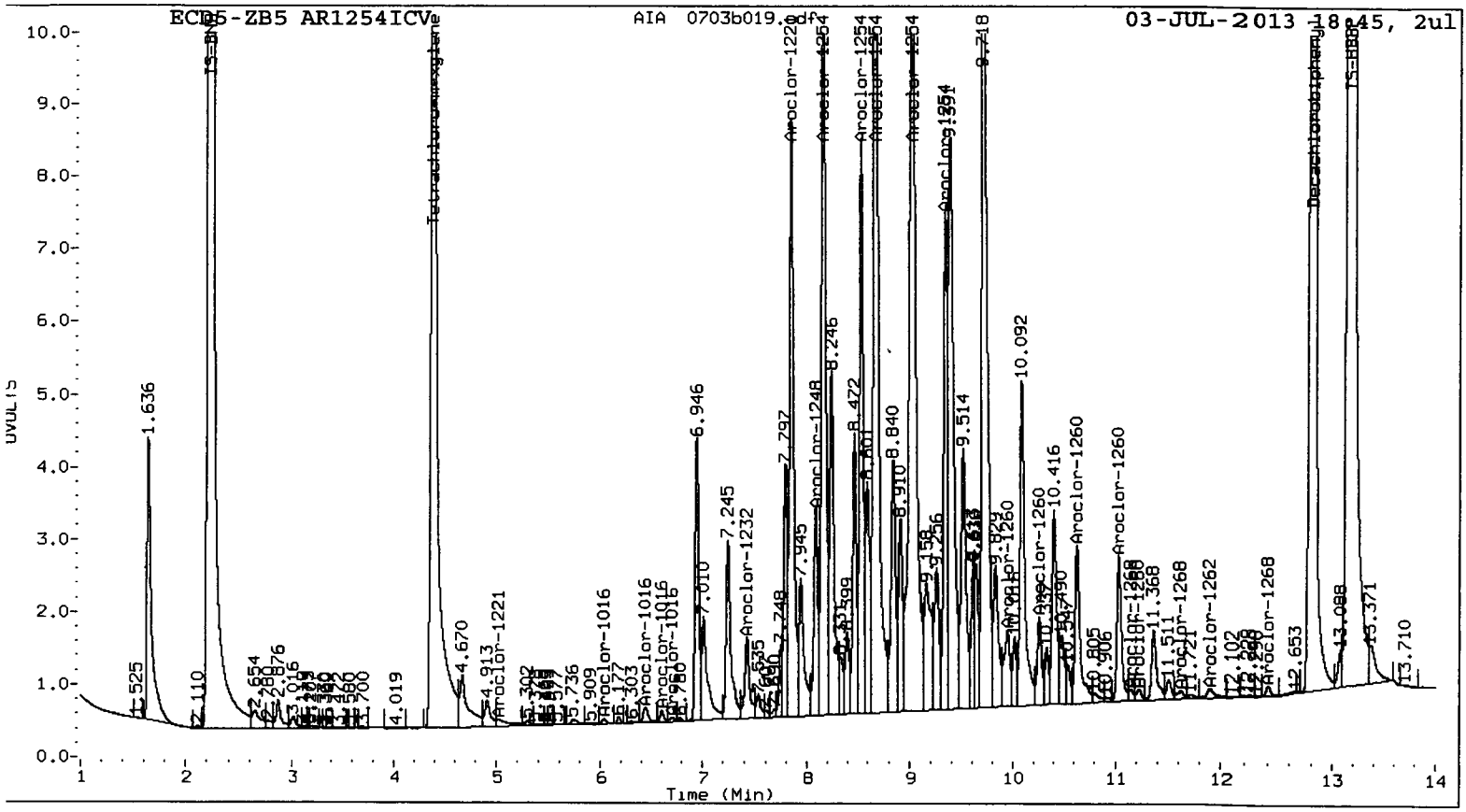
Total PCB Area Col2 (4.484 - 13.077) = 44580609 Col2 Total PCB = 0.3 ppm*

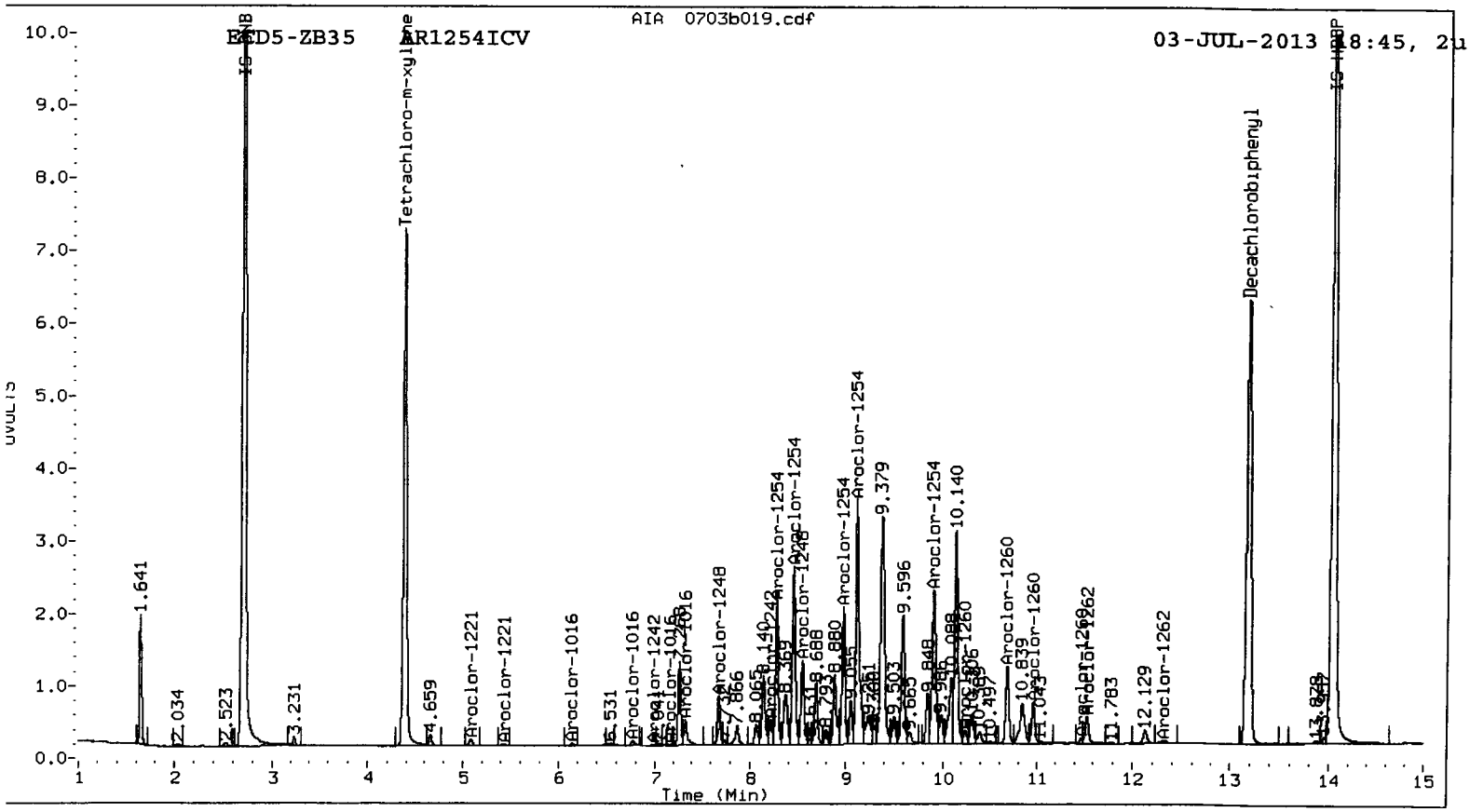
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 AR1254ICV
AIA 0703b019.cdf
03-JUL-2013 18:45, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
Time (Min)


AIA 0703b019.cdf
ECD5-ZB35 AR1254ICV
03-JUL-2013 18:45, 2u
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD5-ZB5 AR1254ICV
AIA 0703b019.cdf
03-JUL-2013 18:45, 2ul
Time (Min)


AIA 0703b019.cdf
ECD5-ZB35 AR1254ICV
03-JUL-2013 18:45, 2u
Tetrachloro-m-xylene
Decachlorobiphenyl
Time (Min)

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130703.b/ical-1.b/0703b020.d
Data file 2: 20130703.b/ical-2.b/0703b020.d
Method: /chem2/ecd5.i/20130703.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR2162ICV
Client ID:
Injection Date: 03-JUL-2013 19:05
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.382	-0.003	34817132	4.384	0.000	8570104	38.4	39.8	3.5	Tetrachloro-m-xylen
12.810	-0.002	49252917	13.176	0.000	8900757	33.7	35.8	6.0	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	96.0	99.5
Decachlorobiphenyl	84.4	89.6

JL 07/04/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	54036699	57197105	5.8
Hexabromobiphenyl	94298658	103206649	9.4

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	16218104	16487800	1.7
Hexabromobiphenyl	17872840	19438480	8.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1016	1	6.035	-0.002	650745	24.6	1	6.153	0.012	405306	43.9
Aroclor-1016	2	6.443	-0.002	1554361	18.9	2	6.776	0.000	369909	18.6
Aroclor-1016	3	6.592	-0.003	738896	20.4	3	7.160	-0.002	97551	18.8
Aroclor-1016	4	6.704	-0.003	481230	17.9	4	7.334	-0.001	54203	11.5
Total Col1Ave (4 peaks):					20.4	Total Col2Ave (4 peaks):				23.2 RPD = 13
Corrected Ave (3 peaks):					19.1	Corrected Ave (3 peaks):				16.3 RPD = 16
Aroclor-1221	1	4.752	-0.001	3220910	254.2	1	3.671	-0.002	428651	254.5
Aroclor-1221	2	4.928	-0.001	2192750	250.1	2	5.066	-0.003	726212	253.5
Aroclor-1221	3	5.035	-0.001	6398034	255.1	3	5.319	-0.002	414434	257.9
Aroclor-1221	NS	---			----	4	5.434	-0.002	1268750	254.0
Total Col1Ave (3 peaks):					253.1	Total Col2Ave (4 peaks):				255.0 RPD = 1
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				254.0
Aroclor-1232	1	4.752	0.000	3220910	384.0	1	5.066	-0.003	726212	412.3
Aroclor-1232	2	4.928	0.001	2192750	350.7	2	5.319	-0.001	414434	412.2
Aroclor-1232	3	6.035	-0.001	650745	59.8	3	5.434	-0.001	1268750	358.3
Aroclor-1232	4	6.443	0.000	1554361	46.2	4	6.153	0.012	405306	96.6
Total Col1Ave (4 peaks):					210.2	Total Col2Ave (4 peaks):				319.9 RPD = 41*
Corrected Ave (3 peaks):					152.3	Corrected Ave (3 peaks):				289.0 RPD = 62*
Aroclor-1242	1	6.035	-0.001	650745	30.5	1	6.153	0.013	405306	54.4
Aroclor-1242	2	6.443	0.000	1554361	23.7	2	6.776	0.000	369909	22.9
Aroclor-1242	3	6.592	-0.001	738896	25.5	3	6.986	0.001	166789	24.8
Aroclor-1242	4	7.857	0.005	2300528	65.2	4	8.214	0.000	60418	10.7
Total Col1Ave (4 peaks):					36.2	Total Col2Ave (4 peaks):				28.2 RPD = 25
Corrected Ave (3 peaks):					26.6	Corrected Ave (3 peaks):				19.4 RPD = 31
Aroclor-1248	1	6.443	0.002	1554361	37.1	1	6.776	0.003	369909	36.3
Aroclor-1248	2	7.419	-0.002	381128	8.2	2	7.682	-0.001	88385	10.5
Aroclor-1248	3	7.857	0.004	2300528	39.1	3	8.214	0.000	60418	6.9
Aroclor-1248	4	8.090	0.001	470451	11.2	4	8.553	-0.007	128023	11.2
Total Col1Ave (4 peaks):					23.9	Total Col2Ave (4 peaks):				16.2 RPD = 38
Corrected Ave (3 peaks):					18.8	Corrected Ave (3 peaks):				9.6 RPD = 65*
Aroclor-1254	1	8.172	-0.001	2501098	44.4	1	8.275	0.000	434378	55.4
Aroclor-1254	2	8.542	-0.002	440809	11.9	2	8.451	0.000	509624	52.1
Aroclor-1254	3	8.643	-0.039	3551735	46.3	3	8.973	0.000	106197	14.0
Aroclor-1254	4	9.009	-0.026	13464448	162.9	4	9.162	0.039	2158702	132.1
Aroclor-1254	5	9.341	-0.003	17588578	533.8	5	9.915	0.006	535577	55.5
Total Col1Ave (5 peaks):					159.9	Total Col2Ave (5 peaks):				61.8 RPD = 88*
Corrected Ave (4 peaks):					66.4	Corrected Ave (4 peaks):				44.3 RPD = 40
Aroclor-1260	1	9.948	-0.001	20604291	346.8	1	10.236	-0.001	4078720	376.5
Aroclor-1260	2	10.264	-0.002	17673130	295.9	2	10.686	0.000	3971389	302.5
Aroclor-1260	3	10.640	-0.002	41225259	274.5	3	10.960	-0.001	7527188	287.0
Aroclor-1260	4	11.041	-0.002	14275590	179.1	4	11.481	-0.001	3773414	464.7
Aroclor-1260	5	11.229	-0.002	19812414	453.8	NS	---			----
Total Col1Ave (5 peaks):					310.0	Total Col2Ave (4 peaks):				357.7 RPD = 14
Corrected Ave (4 peaks):					274.1	Corrected Ave (3 peaks):				322.0 RPD = 16
Aroclor-1262	1	10.264	-0.001	17673130	244.1	1	10.236	-0.002	4078720	236.1
Aroclor-1262	2	10.640	-0.001	41225259	238.4	2	10.686	0.000	3971389	243.3
Aroclor-1262	3	11.041	-0.001	14275590	233.8	3	10.960	-0.001	7527188	232.3
Aroclor-1262	4	11.229	-0.001	19812414	242.3	4	11.542	-0.001	5488084	239.3
Aroclor-1262	5	11.901	0.000	17347883	236.9	5	12.281	-0.001	3055027	238.0
Total Col1Ave (5 peaks):					239.1	Total Col2Ave (5 peaks):				237.8 RPD = 1
Corrected Ave (4 peaks):					237.9	Corrected Ave (4 peaks):				236.4 RPD = 1
Aroclor-1268	1	11.155	-0.002	17879048	102.5	1	11.481	0.000	3773414	109.2

Aroclor-1268	2	11.229	0.000	19812414	108.9	2	11.542	-0.006	5488084	164.3
Aroclor-1268	3	11.629	0.015	7899033	52.5	3	11.942	-0.002	233904	8.5
Aroclor-1268	4	12.403	-0.003	6181902	14.4	4	12.765	0.000	1063744	13.2

Total Col1Ave (4 peaks): 69.6 Total Col2Ave (4 peaks): 73.8 RPD = 6

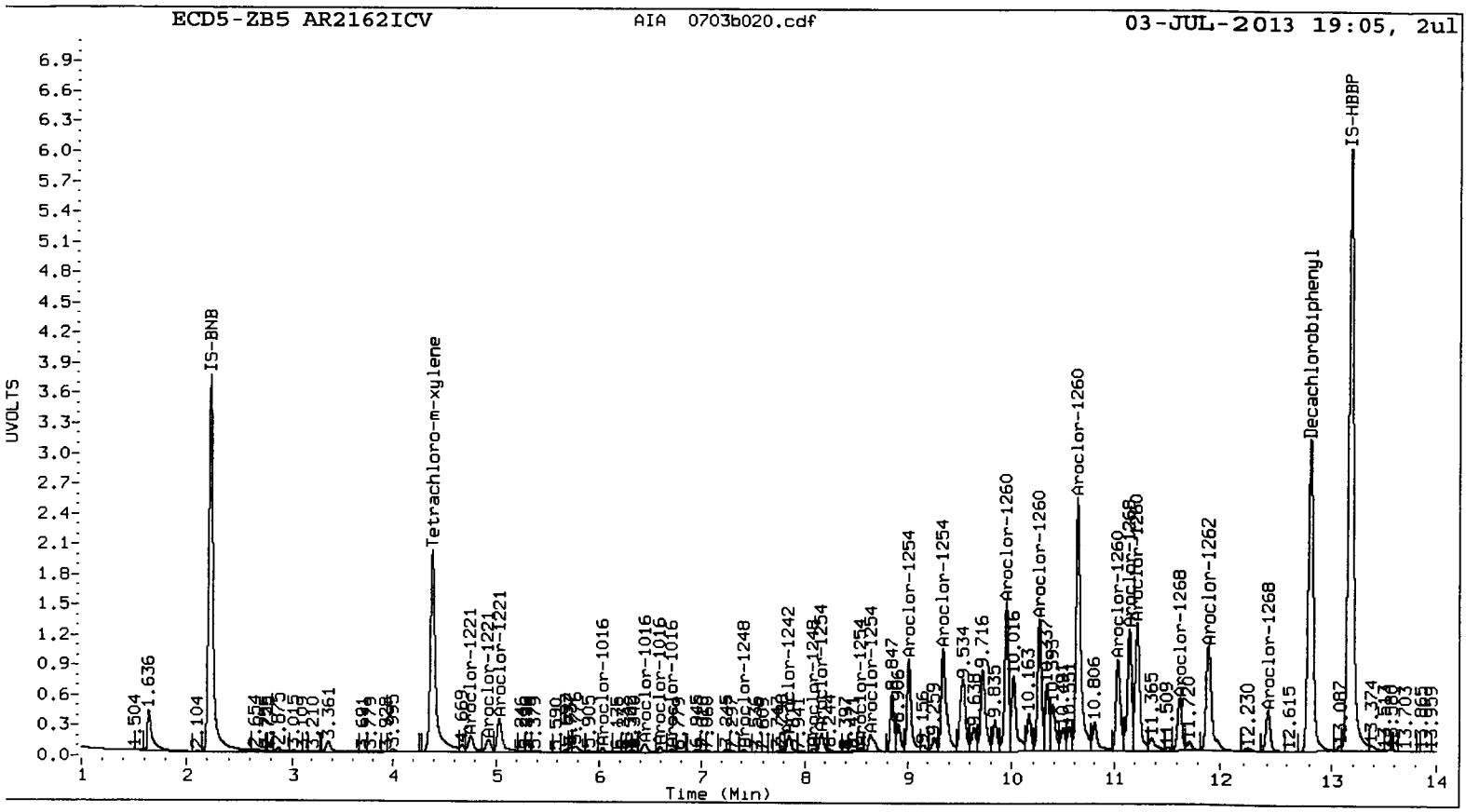
Corrected Ave (3 peaks): 56.5 Corrected Ave (3 peaks): 43.7 RPD = 26

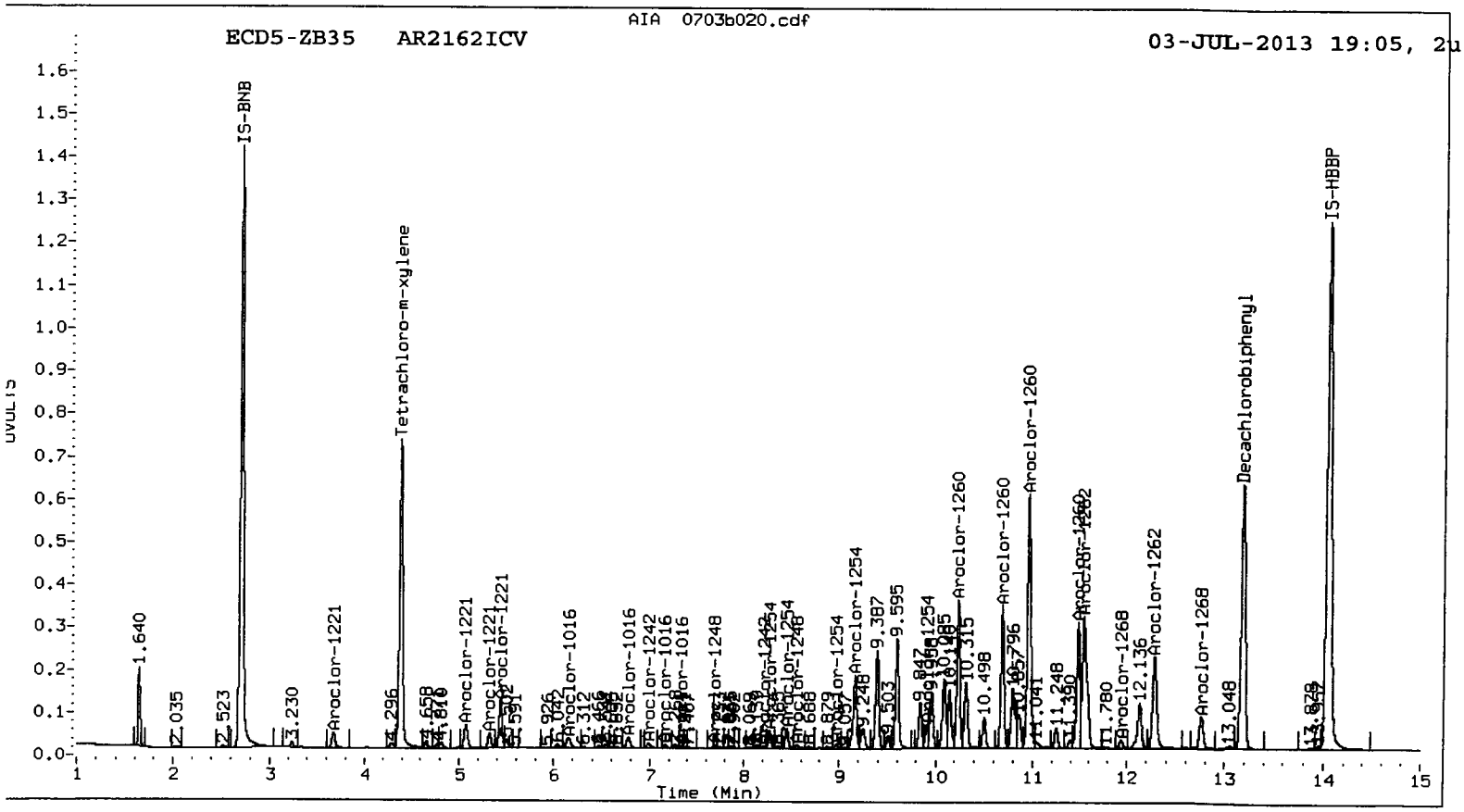
Total PCB Area Col1 (4.485 - 12.712) = 325741877 Col1 Total PCB = 0.5 ppm*

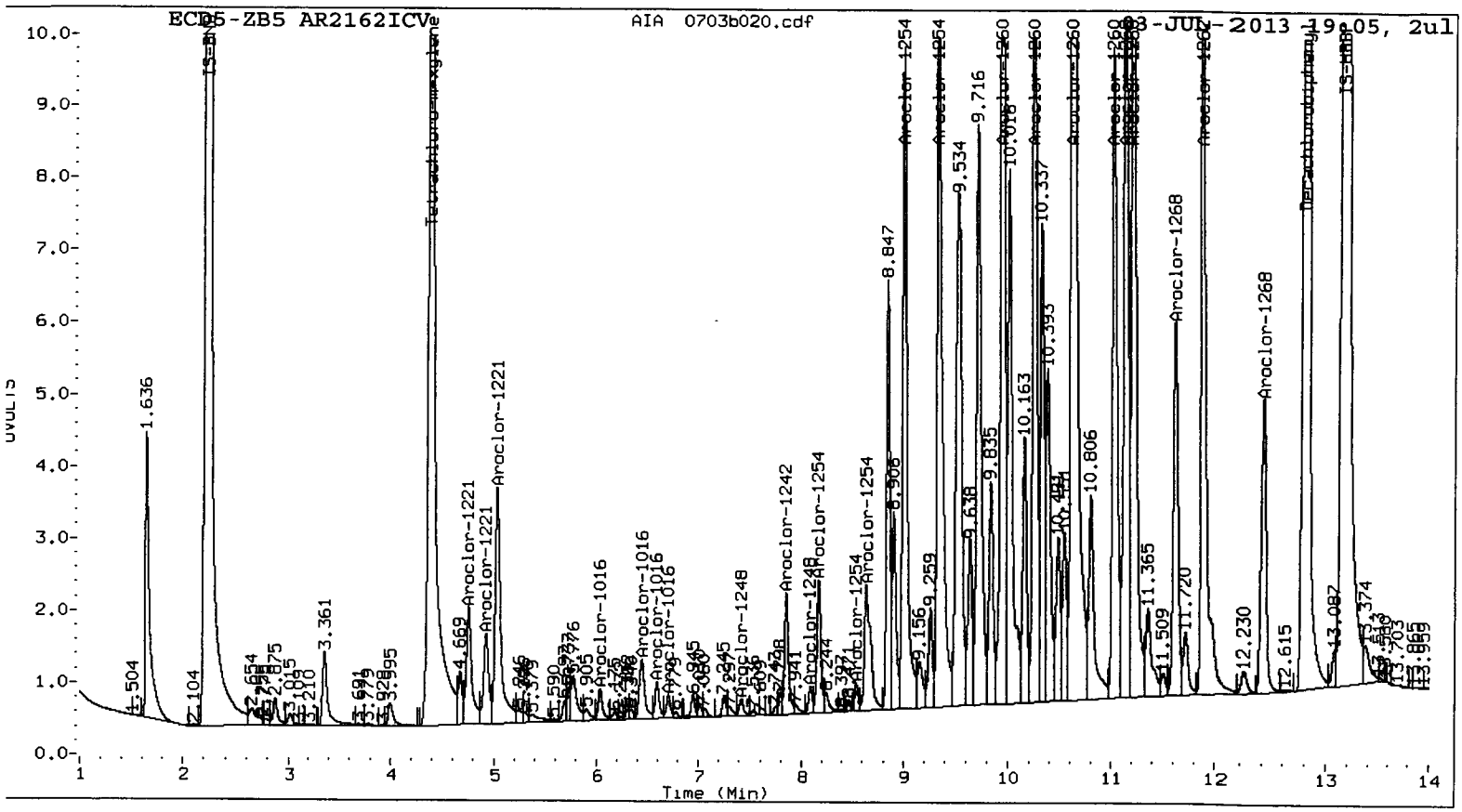
Total PCB Area Col2 (4.484 - 13.077) = 60244924 Col2 Total PCB = 0.5 ppm*

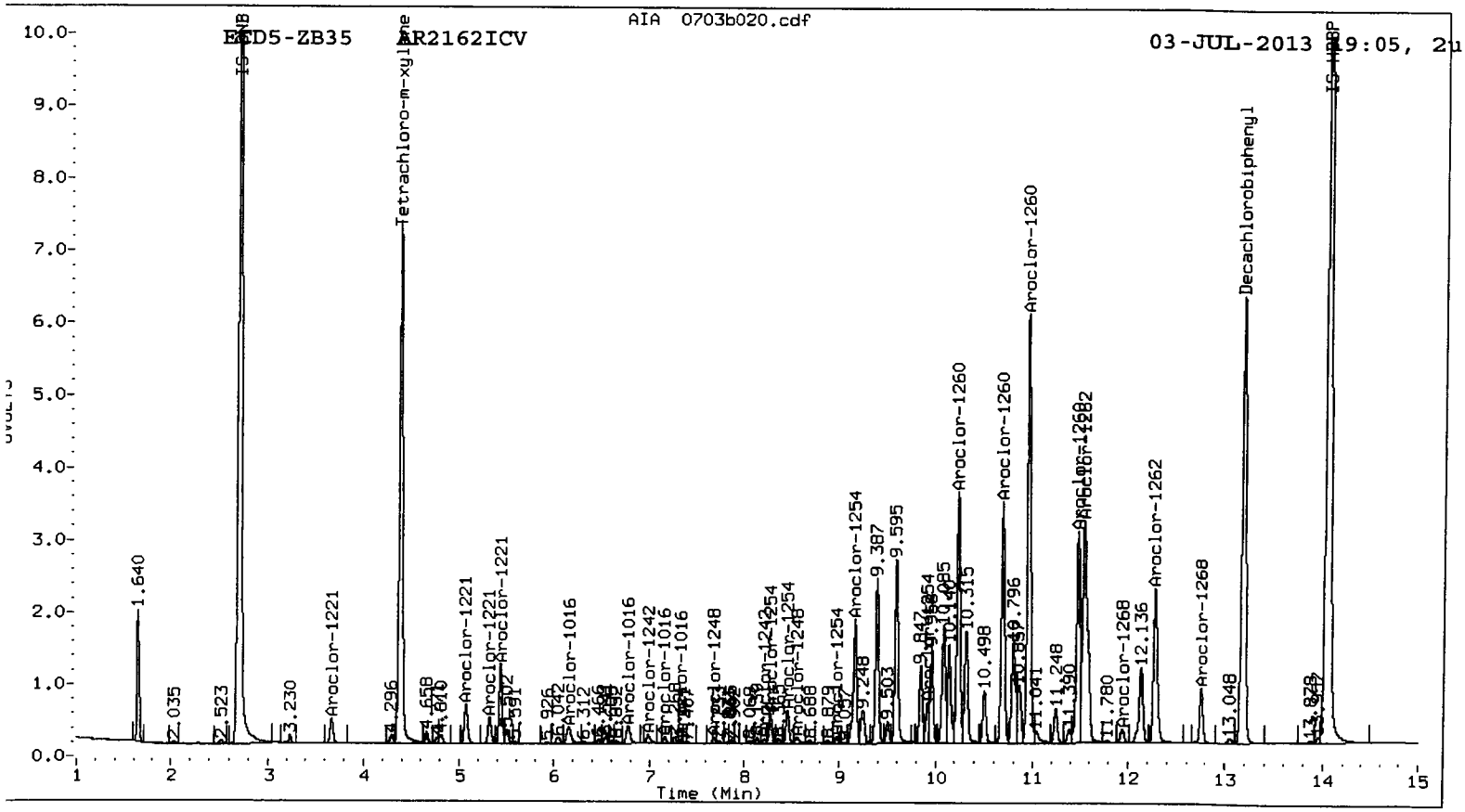
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 AR2162ICV
AIA 0703b020.cdf
03-JUL-2013 19:05, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


AIA 0703b020.cdf
ECD5-ZB35 AR2162ICV
03-JUL-2013 19:05, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


ECD5-ZB5 AR2162ICV
AIA 0703b020.cdf
03-JUL-2013 19:05, 2ul
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Time (Min)


ECD5-ZB35 AR2162ICV
AIA 0703b020.cdf
03-JUL-2013 19:05, 2u
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Time (Min)

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130703.b/ical-1.b/0703b021.d
Data file 2: 20130703.b/ical-2.b/0703b021.d
Method: /chem2/ecd5.i/20130703.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR3268ICV
Client ID:
Injection Date: 03-JUL-2013 19:25
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.383	-0.003	34238626	4.383	-0.001	8491587	38.5	40.0	3.9	Tetrachloro-m-xylen
12.811	-0.001	64201497	13.176	0.000	11606471	44.5	47.1	5.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	96.2	100.0
Decachlorobiphenyl	111.3	117.7

JL 07/04/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	54036699	56119865	3.9
Hexabromobiphenyl	94298658	101966563	8.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	16218104	16248647	0.2
Hexabromobiphenyl	17872840	19282994	7.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.035	-0.003	2935120	112.9	1	6.140	-0.001	1117765	122.7
Aroclor-1016	2	6.443	-0.001	8931055	110.7	2	6.775	-0.001	2203758	112.2
Aroclor-1016	3	6.592	-0.003	3930911	110.5	3	7.160	-0.002	581340	113.9
Aroclor-1016	4	6.704	-0.003	2931309	111.3	4	7.334	-0.001	466525	100.1
Total Col1Ave (4 peaks):					111.4	Total Col2Ave (4 peaks):			112.2	RPD = 1
Corrected Ave (3 peaks):					110.9	Corrected Ave (3 peaks):			108.7	RPD = 2
Aroclor-1221	1	4.751	-0.001	2232579	179.6	1	3.670	-0.004	247253	149.0
Aroclor-1221	2	4.927	-0.002	1641001	190.8	2	5.068	-0.001	459242	162.7
Aroclor-1221	3	5.035	-0.001	4915160	199.7	3	5.318	-0.003	276415	174.5
Aroclor-1221	NS	---			----	4	5.433	-0.003	1010522	205.3
Total Col1Ave (3 peaks):					190.0	Total Col2Ave (4 peaks):			172.9	RPD = 9
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			162.1	
Aroclor-1232	1	4.751	0.000	2232579	271.3	1	5.068	-0.001	459242	264.6
Aroclor-1232	2	4.927	0.000	1641001	267.5	2	5.318	-0.002	276415	279.0
Aroclor-1232	3	6.035	-0.001	2935120	275.1	3	5.433	-0.001	1010522	289.6
Aroclor-1232	4	6.443	0.000	8931055	270.7	4	6.140	-0.001	1117765	270.2
Total Col1Ave (4 peaks):					271.1	Total Col2Ave (4 peaks):			275.8	RPD = 2
Corrected Ave (3 peaks):					269.8	Corrected Ave (3 peaks):			271.3	RPD = 1
Aroclor-1242	1	6.035	-0.001	2935120	140.4	1	6.140	0.000	1117765	152.1
Aroclor-1242	2	6.443	0.000	8931055	138.8	2	6.775	0.000	2203758	138.2
Aroclor-1242	3	6.592	-0.001	3930911	138.2	3	6.985	0.000	912303	137.8
Aroclor-1242	4	7.851	-0.001	4331431	125.0	4	8.213	-0.001	672107	120.5
Total Col1Ave (4 peaks):					135.6	Total Col2Ave (4 peaks):			137.1	RPD = 1
Corrected Ave (3 peaks):					134.0	Corrected Ave (3 peaks):			132.1	RPD = 1
Aroclor-1248	1	6.443	0.002	8931055	217.0	1	6.775	0.002	2203758	219.2
Aroclor-1248	2	7.419	-0.001	3955482	87.2	2	7.681	-0.002	708395	85.7
Aroclor-1248	3	7.851	-0.002	4331431	74.9	3	8.213	-0.001	672107	78.3
Aroclor-1248	4	8.088	-0.001	3287014	79.5	4	8.560	0.000	801719	71.4
Total Col1Ave (4 peaks):					114.7	Total Col2Ave (4 peaks):			113.7	RPD = 1
Corrected Ave (3 peaks):					80.6	Corrected Ave (3 peaks):			78.5	RPD = 3
Aroclor-1254	1	8.168	-0.005	1669980	30.2	1	8.273	-0.002	220518	28.6
Aroclor-1254	2	8.543	-0.001	766008	21.1	2	8.451	0.000	192353	19.9
Aroclor-1254	3	8.680	-0.002	1505128	20.0	3	8.972	-0.001	149418	20.0
Aroclor-1254	4	9.013	-0.022	1788158	22.0	4	9.124	0.000	237157	14.7
Aroclor-1254	5	9.341	-0.003	1206792	37.3	5	9.908	-0.001	141210	14.9
Total Col1Ave (5 peaks):					26.1	Total Col2Ave (5 peaks):			19.6	RPD = 29
Corrected Ave (4 peaks):					23.3	Corrected Ave (4 peaks):			17.4	RPD = 29
Aroclor-1260	1	9.948	-0.001	11544740	196.7	1	10.237	0.000	2295114	213.6
Aroclor-1260	2	10.264	-0.002	1984485	33.6	2	10.686	0.001	2588448	198.7
Aroclor-1260	3	10.641	-0.001	9822538	66.2	3	10.960	-0.001	1741662	66.9
Aroclor-1260	4	11.042	-0.001	846994	10.8	4	11.481	0.000	8891458	1103.8
Aroclor-1260	5	11.228	-0.002	50923509	1180.6	NS	---			----
Total Col1Ave (5 peaks):					297.6	Total Col2Ave (4 peaks):			395.8	RPD = 28
Corrected Ave (4 peaks):					76.8	Corrected Ave (3 peaks):			159.8	RPD = 70*
Aroclor-1262	1	10.264	-0.001	1984485	27.7	1	10.237	-0.001	2295114	133.9
Aroclor-1262	2	10.641	0.000	9822538	57.5	2	10.686	0.000	2588448	159.9
Aroclor-1262	3	11.042	0.001	846994	14.0	3	10.960	-0.001	1741662	54.2
Aroclor-1262	4	11.228	-0.002	50923509	630.2	4	11.547	0.004	9435801	414.7
Aroclor-1262	5	11.901	0.000	19773547	273.4	5	12.281	-0.001	3490785	274.2
Total Col1Ave (5 peaks):					200.6	Total Col2Ave (5 peaks):			207.4	RPD = 3
Corrected Ave (4 peaks):					93.2	Corrected Ave (4 peaks):			155.5	RPD = 50*
Aroclor-1268	1	11.157	0.000	45013343	261.2	1	11.481	0.000	8891458	259.4

Aroclor-1268	2	11.228	-0.001	50923509	283.4	2	11.547	-0.001	94358[illegible]01	284.7
Aroclor-1268	3	11.614	0.000	35159379	236.7	3	11.943	-0.001	62983[illegible]97	231.4
Aroclor-1268	4	12.405	-0.001	94589865	222.5	4	12.765	0.000	17518464	219.9

Total Col1Ave (4 peaks): 251.0 Total Col2Ave (4 peaks): 248.9 RPD = 1

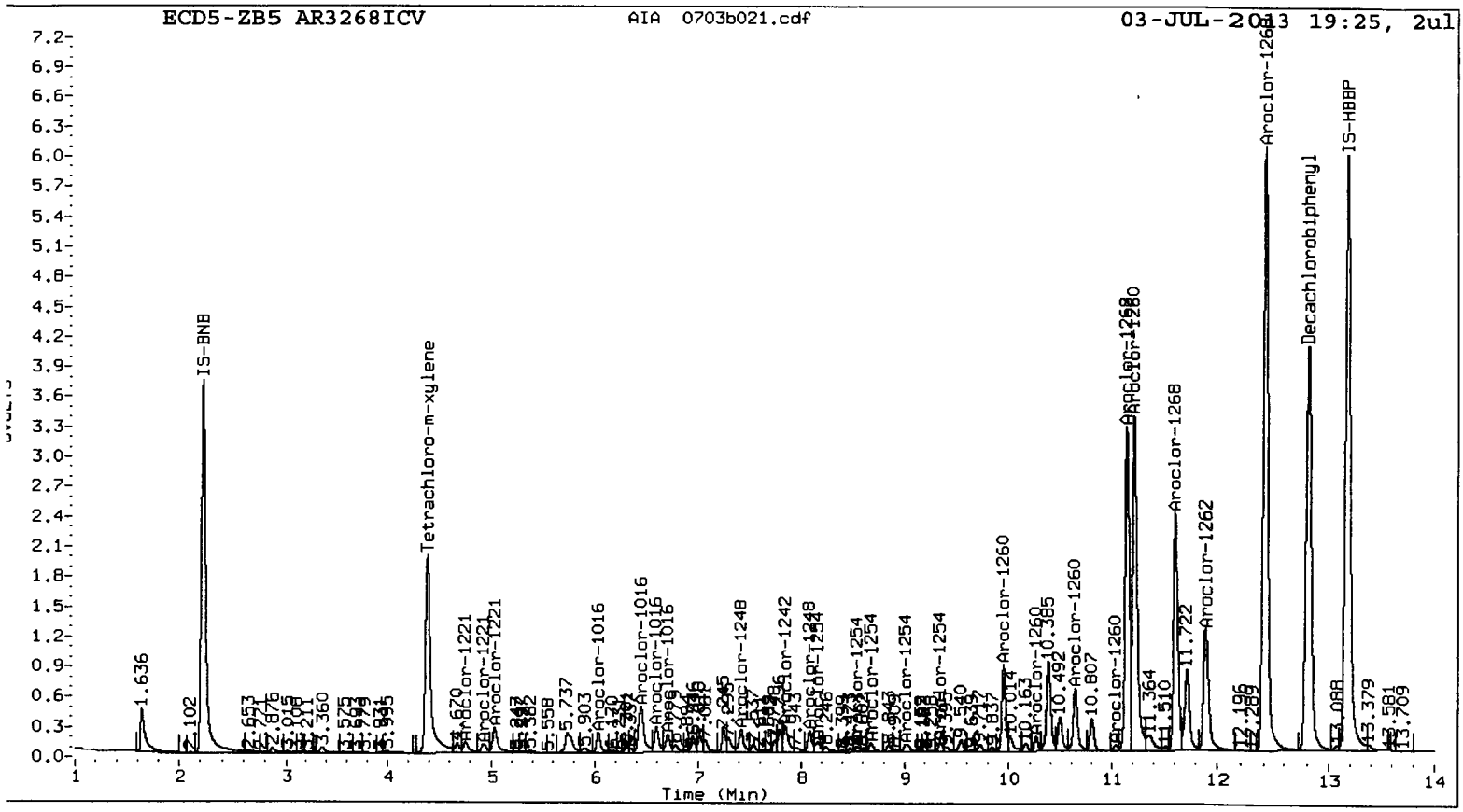
Corrected Ave (3 peaks): 240.2 Corrected Ave (3 peaks): 236.9 RPD = 1

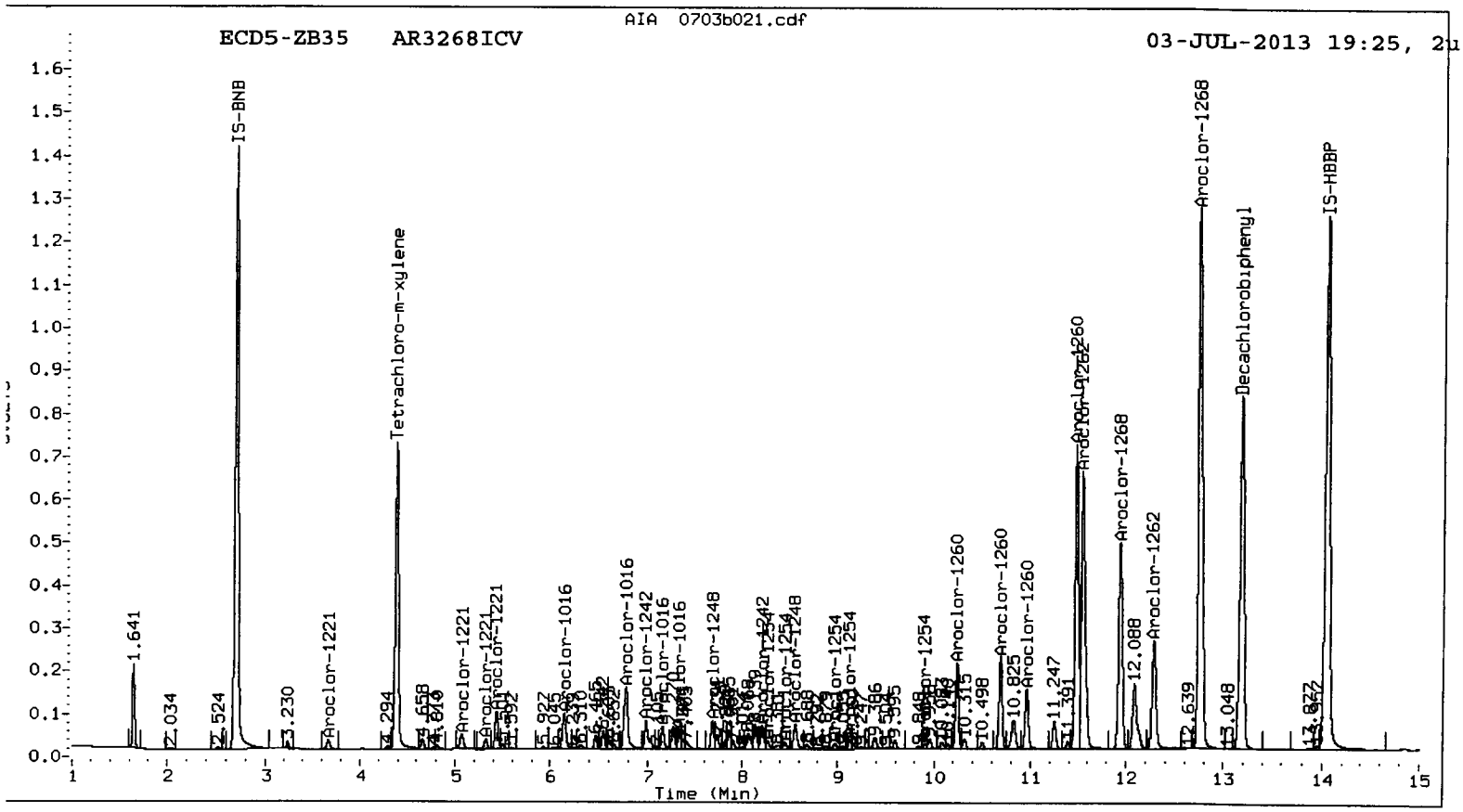
Total PCB Area Col1 (4.485 - 12.712) = 398221379 Col1 Total PCB = 0.6 ppm*

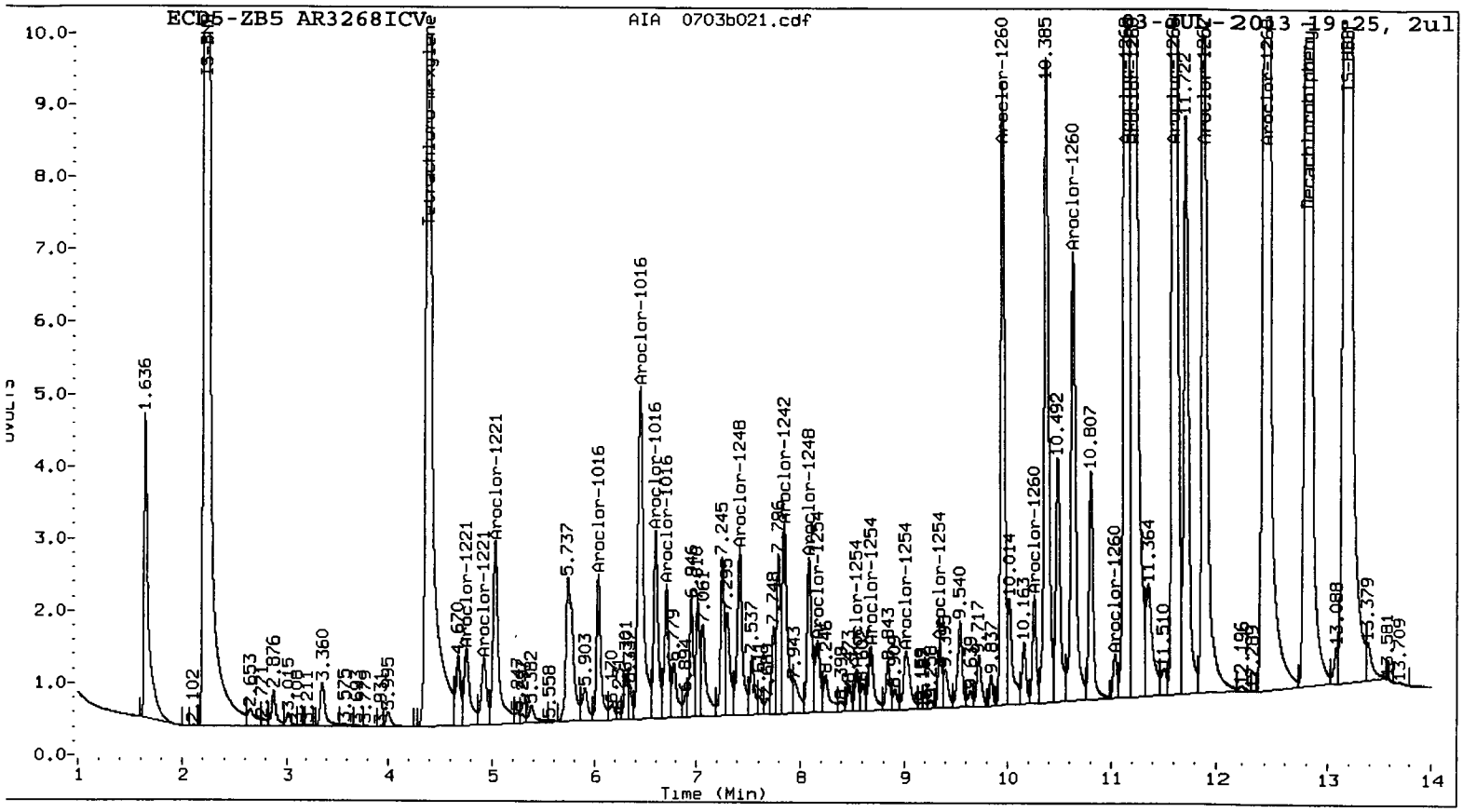
Total PCB Area Col2 (4.484 - 13.077) = 74782560 Col2 Total PCB = 0.6 ppm*

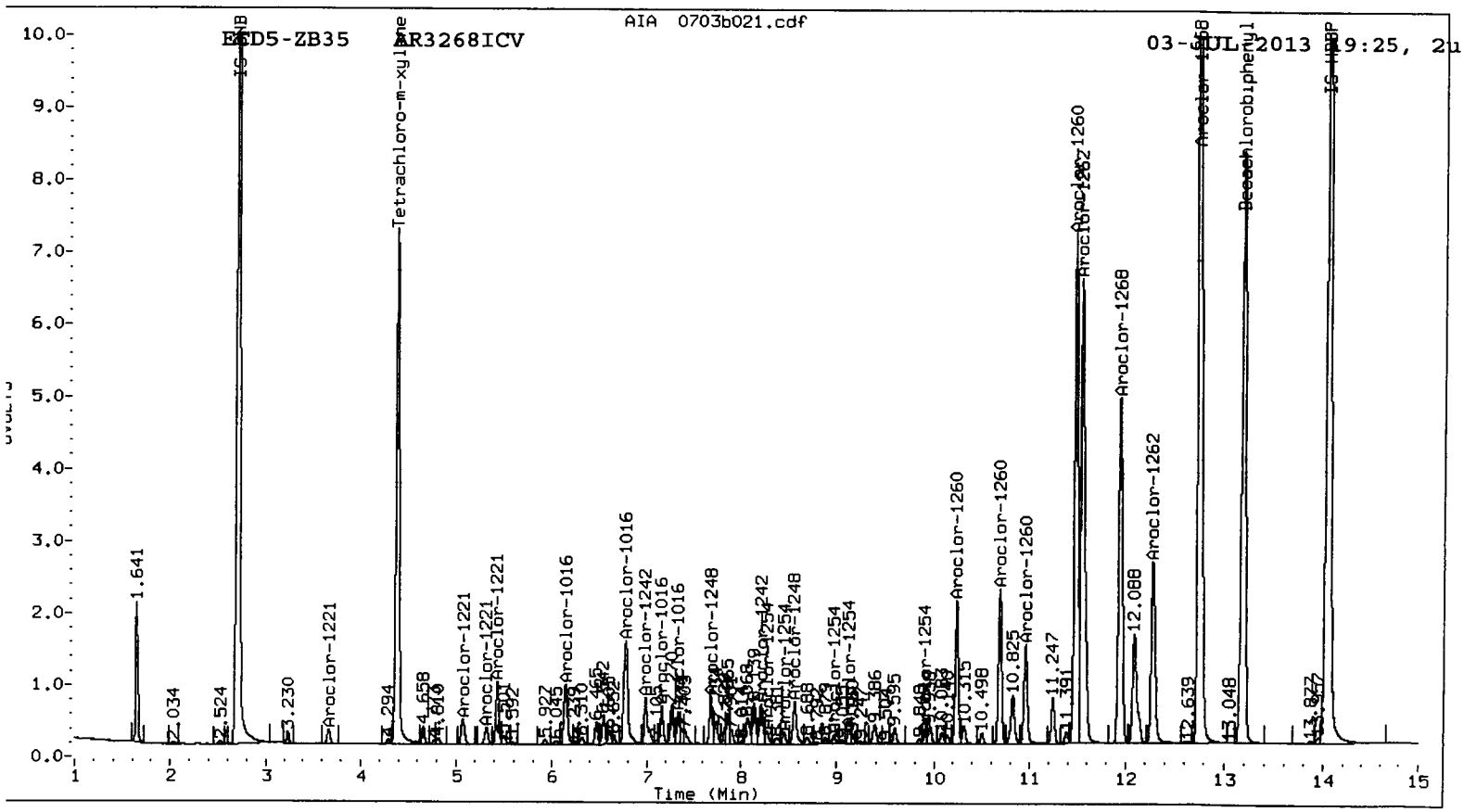
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 AR3268ICV
AIA 0703b021.cdf
03-JUL-2013 19:25, 2ul
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
Time (Min)


AIA 0703b021.cdf
ECD5-ZB35 AR3268ICV
03-JUL-2013 19:25, 2u
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP
Time (Min)


ECD5-ZB5 AR3268ICV
AIA 0703b021.cdf
03-JUL-2013 19:25, 2ul
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Time (Min)


ECD5-ZB35
AR3268ICV
AIA 0703b021.cdf
03-JUL-2013 19:25, 2u
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Time (Min)

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130703.b/ical-1.b/0703b022.d
Data file 2: 20130703.b/ical-2.b/0703b022.d
Method: /chem2/ecd5.i/20130703.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660ICV
Client ID:
Injection Date: 03-JUL-2013 19:45
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.383	-0.002	33979359	4.383	-0.001	8419762	38.1	39.4	3.4	Tetrachloro-m-xylen
12.811	-0.002	49238719	13.177	0.000	8895965	33.7	35.7	5.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	95.2	98.5
Decachlorobiphenyl	84.3	89.1

JL 07/04/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	54036699	56309514	4.2
Hexabromobiphenyl	94298658	103219670	9.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	16218104	16360135	0.9
Hexabromobiphenyl	17872840	19522763	9.2

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount	
Aroclor-1016	1	6.035	-0.003	6078801	233.0	1	6.140	-0.001	2179242	237.7	
Aroclor-1016	2	6.442	-0.003	18784962	232.1	2	6.775	-0.002	4706669	238.0	
Aroclor-1016	3	6.592	-0.003	8277474	232.0	3	7.160	-0.002	1230178	239.4	
Aroclor-1016	4	6.704	-0.003	6178496	233.9	4	7.333	-0.002	1108897	236.3	
	Total Col1Ave (4 peaks):				232.8		Total Col2Ave (4 peaks):			237.8	RPD = 2
	Corrected Ave (3 peaks):				232.4		Corrected Ave (3 peaks):			237.3	RPD = 2
Aroclor-1221	1	5.034	0.282	4538217	363.8	1	3.670	-0.004	13997	8.4	
Aroclor-1221	2	6.442	1.513	18784962	2176.2	2	5.071	0.002	305528	107.5	
Aroclor-1221	3	7.856	2.820	5519038	223.5	3	5.318	-0.003	222720	139.7	
Aroclor-1221	NS	---			----	4	5.433	-0.003	983342	198.4	
	Total Col1Ave (3 peaks):				921.2		Total Col2Ave (4 peaks):			113.5	RPD = 156*
	Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			85.2	
Aroclor-1232	1	6.035	1.283	6078801	736.2	1	5.071	0.002	305528	174.8	
Aroclor-1232	2	6.442	1.515	18784962	3052.1	2	5.318	-0.002	222720	223.3	
Aroclor-1232	3	7.419	1.383	8804763	822.5	3	5.433	-0.001	983342	279.9	
Aroclor-1232	4	7.856	1.414	5519038	166.7	4	6.140	-0.002	2179242	523.3	
	Total Col1Ave (4 peaks):				1194.4		Total Col2Ave (4 peaks):			300.3	RPD = 120*
	Corrected Ave (3 peaks):				575.1		Corrected Ave (3 peaks):			226.0	RPD = 87*
Aroclor-1242	1	6.035	-0.001	6078801	289.8	1	6.140	-0.001	2179242	294.5	
Aroclor-1242	2	6.442	-0.001	18784962	291.0	2	6.775	-0.001	4706669	293.0	
Aroclor-1242	3	6.592	-0.001	8277474	290.0	3	6.984	0.000	1940463	291.0	
Aroclor-1242	4	7.856	0.005	5519038	158.8	4	8.213	-0.001	199735	35.6	
	Total Col1Ave (4 peaks):				257.4		Total Col2Ave (4 peaks):			228.5	RPD = 12
	Corrected Ave (3 peaks):				246.2		Corrected Ave (3 peaks):			206.5	RPD = 18
Aroclor-1248	1	6.442	0.000	18784962	454.9	1	6.775	0.001	4706669	465.0	
Aroclor-1248	2	7.419	-0.002	8804763	193.5	2	7.680	-0.002	1548235	186.1	
Aroclor-1248	3	7.856	0.003	5519038	95.2	3	8.213	-0.002	199735	23.1	
Aroclor-1248	4	8.092	0.003	989534	23.9	4	8.559	-0.001	88586	7.8	
	Total Col1Ave (4 peaks):				191.9		Total Col2Ave (4 peaks):			170.5	RPD = 12
	Corrected Ave (3 peaks):				104.2		Corrected Ave (3 peaks):			72.3	RPD = 36
Aroclor-1254	1	8.172	-0.001	5743803	103.6	1	8.274	-0.001	924588	118.9	
Aroclor-1254	2	8.542	-0.002	767825	21.1	2	8.450	-0.001	949834	97.8	
Aroclor-1254	3	8.675	-0.007	2711132	35.9	3	8.972	-0.001	153664	20.4	
Aroclor-1254	4	9.009	-0.026	16223545	199.3	4	9.162	0.039	2433228	150.1	
Aroclor-1254	5	9.341	-0.003	23453171	723.1	5	9.914	0.005	1103328	115.3	
	Total Col1Ave (5 peaks):				216.6		Total Col2Ave (5 peaks):			100.5	RPD = 73*
	Corrected Ave (4 peaks):				90.0		Corrected Ave (4 peaks):			88.1	RPD = 2
Aroclor-1260	1	9.948	-0.001	15122450	254.5	1	10.236	-0.001	2874725	264.2	
Aroclor-1260	2	10.264	-0.002	14952899	250.3	2	10.686	0.000	3270139	248.0	
Aroclor-1260	3	10.640	-0.002	37137745	247.2	3	10.961	0.000	6839123	259.6	
Aroclor-1260	4	11.041	-0.002	18635112	233.7	4	11.481	0.000	2038141	249.9	
Aroclor-1260	5	11.230	-0.001	11683534	267.6	NS	---			----	
	Total Col1Ave (5 peaks):				250.7		Total Col2Ave (4 peaks):			255.4	RPD = 2
	Corrected Ave (4 peaks):				246.5		Corrected Ave (3 peaks):			252.5	RPD = 2
Aroclor-1262	1	10.264	-0.001	14952899	206.5	1	10.236	-0.002	2874725	165.7	
Aroclor-1262	2	10.640	-0.001	37137745	214.8	2	10.686	-0.001	3270139	199.5	
Aroclor-1262	3	11.041	0.000	18635112	305.1	3	10.961	0.000	6839123	210.1	
Aroclor-1262	4	11.230	0.000	11683534	142.8	4	11.541	-0.002	4802357	208.5	
Aroclor-1262	5	11.900	0.000	10361375	141.5	5	12.281	-0.001	2027163	157.3	
	Total Col1Ave (5 peaks):				202.1		Total Col2Ave (5 peaks):			188.2	RPD = 7
	Corrected Ave (4 peaks):				176.4		Corrected Ave (4 peaks):			182.7	RPD = 4
Aroclor-1268	1	11.156	-0.001	9282786	53.2	1	11.481	0.000	2038141	58.7	

Aroclor-1268 2	11.230	0.001	11683534	64.2	2	11.541	-0.007	4802357	143.1
Aroclor-1268 3	11.630	0.017	5207040	34.6	3	11.944	0.000	68745	2.5
Aroclor-1268 4	12.404	-0.002	2468824	5.7	4	12.766	0.000	384198	4.8

Total Col1Ave (4 peaks): 39.5 Total Col2Ave (4 peaks): 52.3 RPD = 28

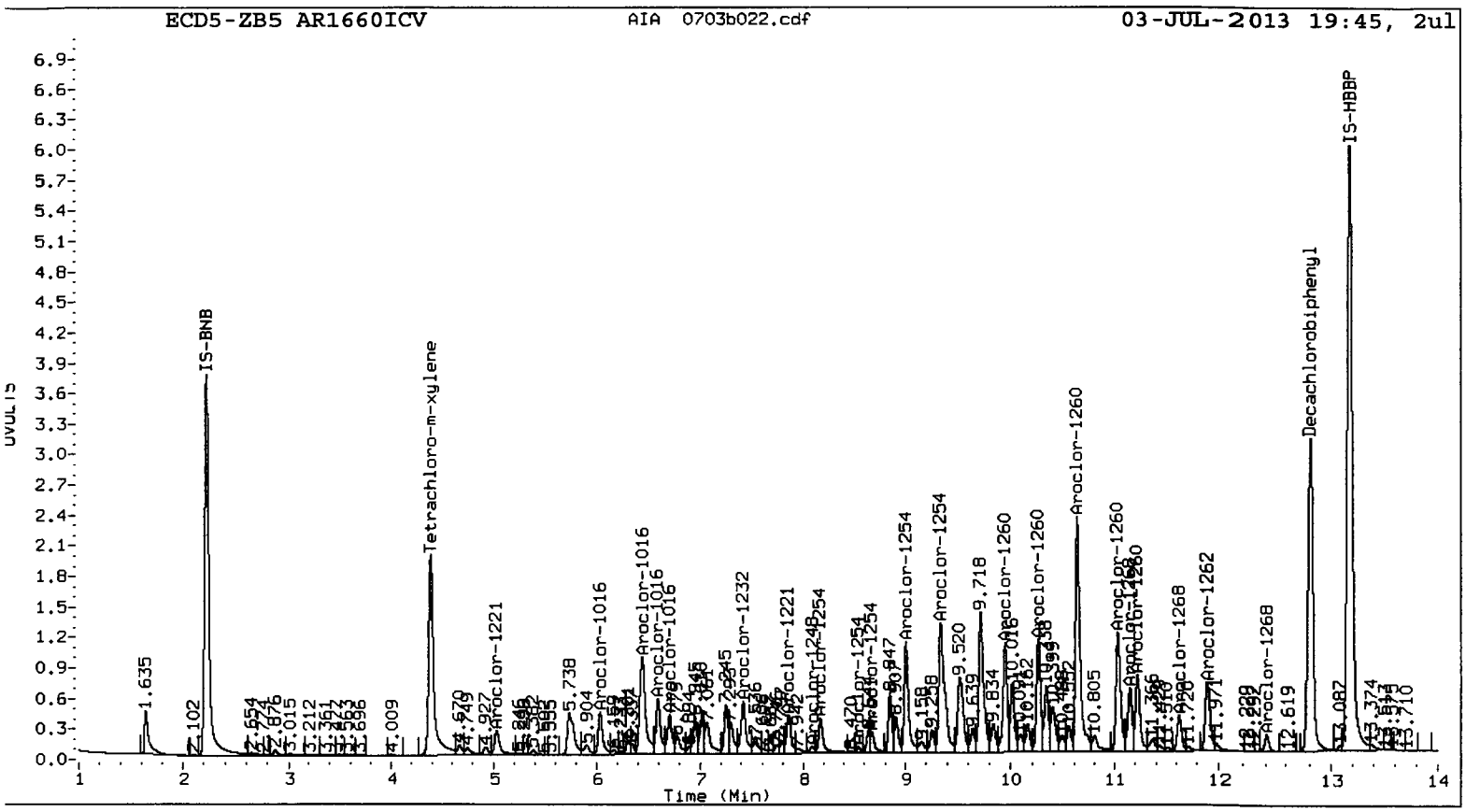
Corrected Ave (3 peaks): 31.2 Corrected Ave (3 peaks): 22.0 RPD = 35

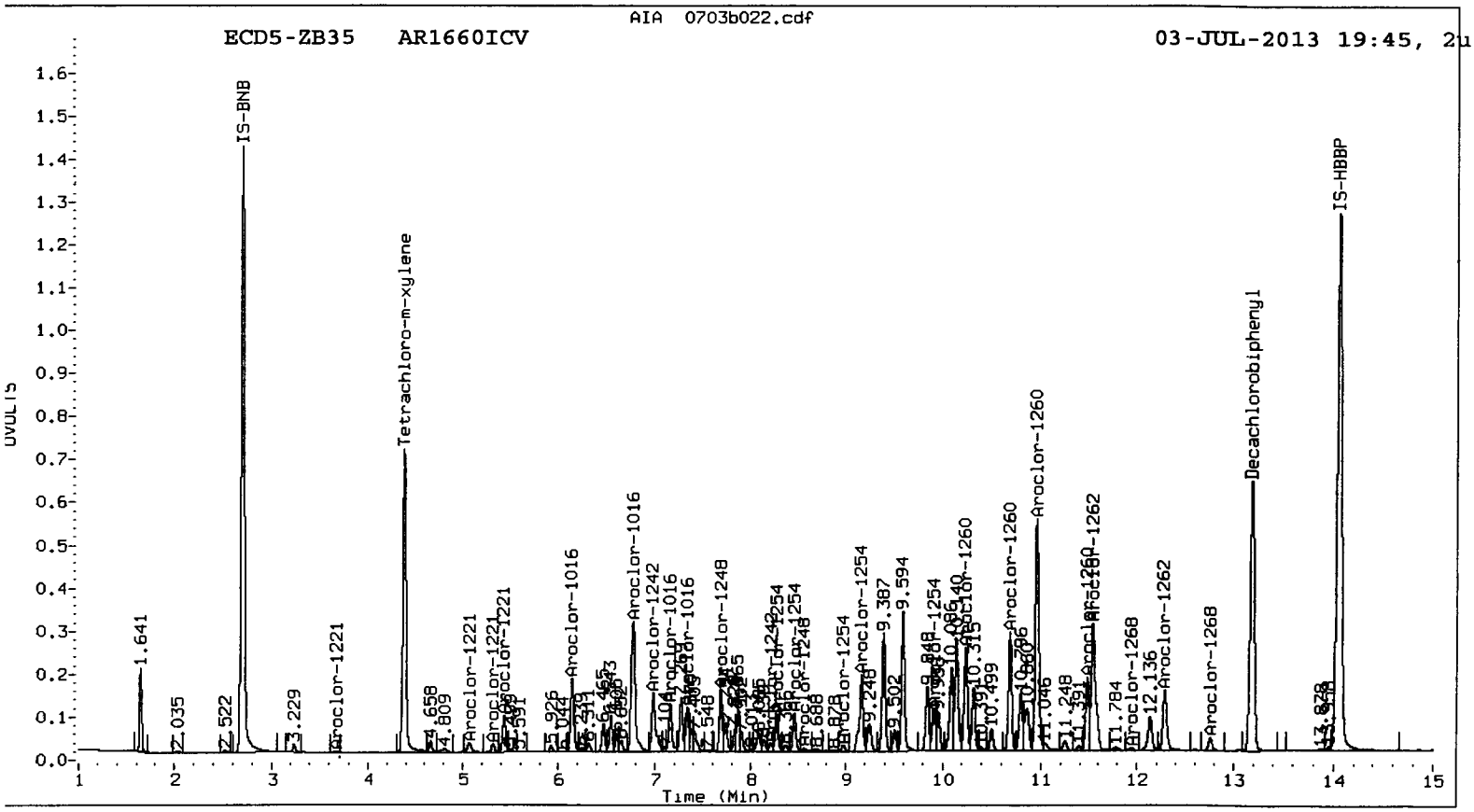
Total PCB Area Col1 (4.485 - 12.712) = 400911500 Col1 Total PCB = 0.6 ppm*

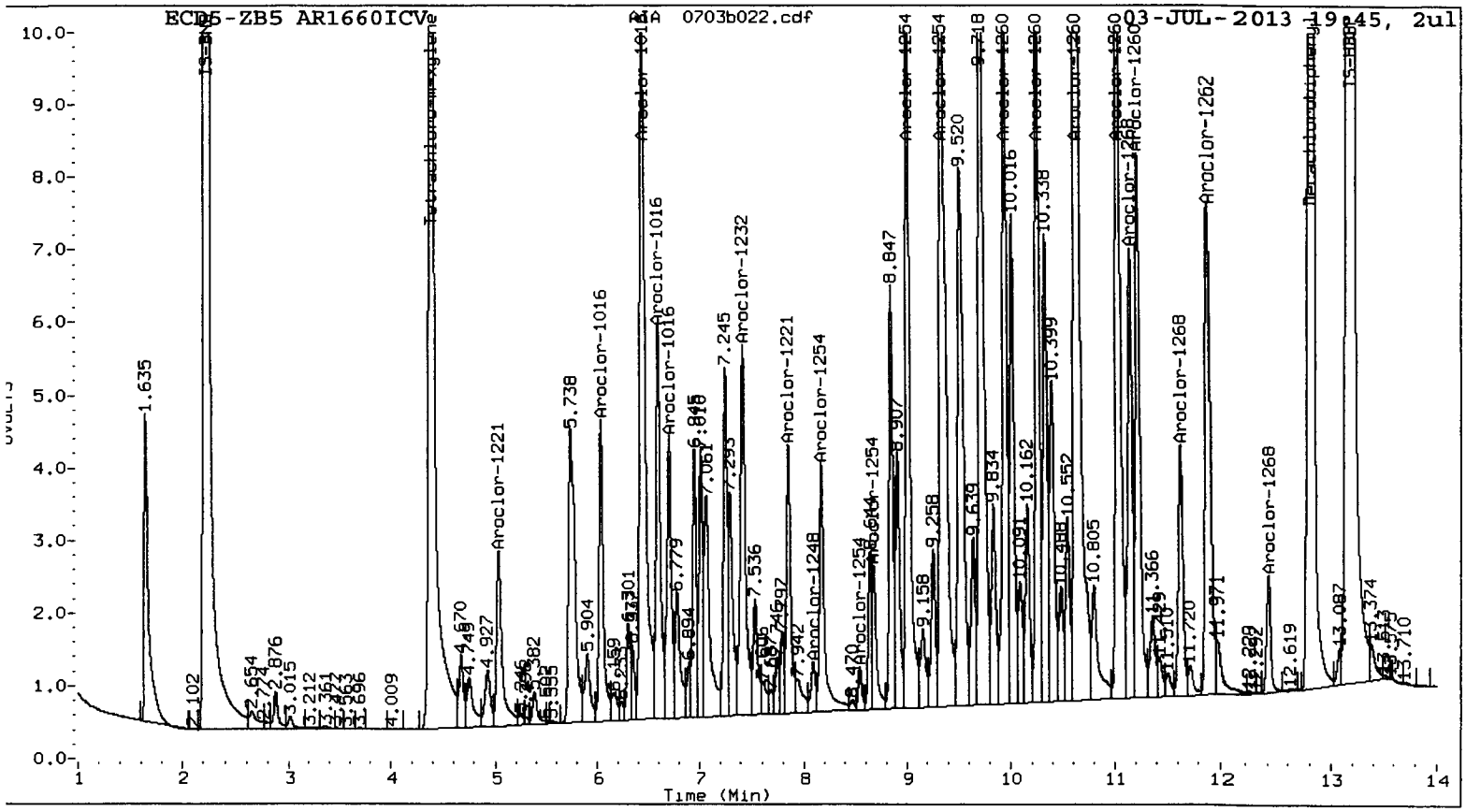
Total PCB Area Col2 (4.484 - 13.077) = 76413007 Col2 Total PCB = 0.6 ppm*

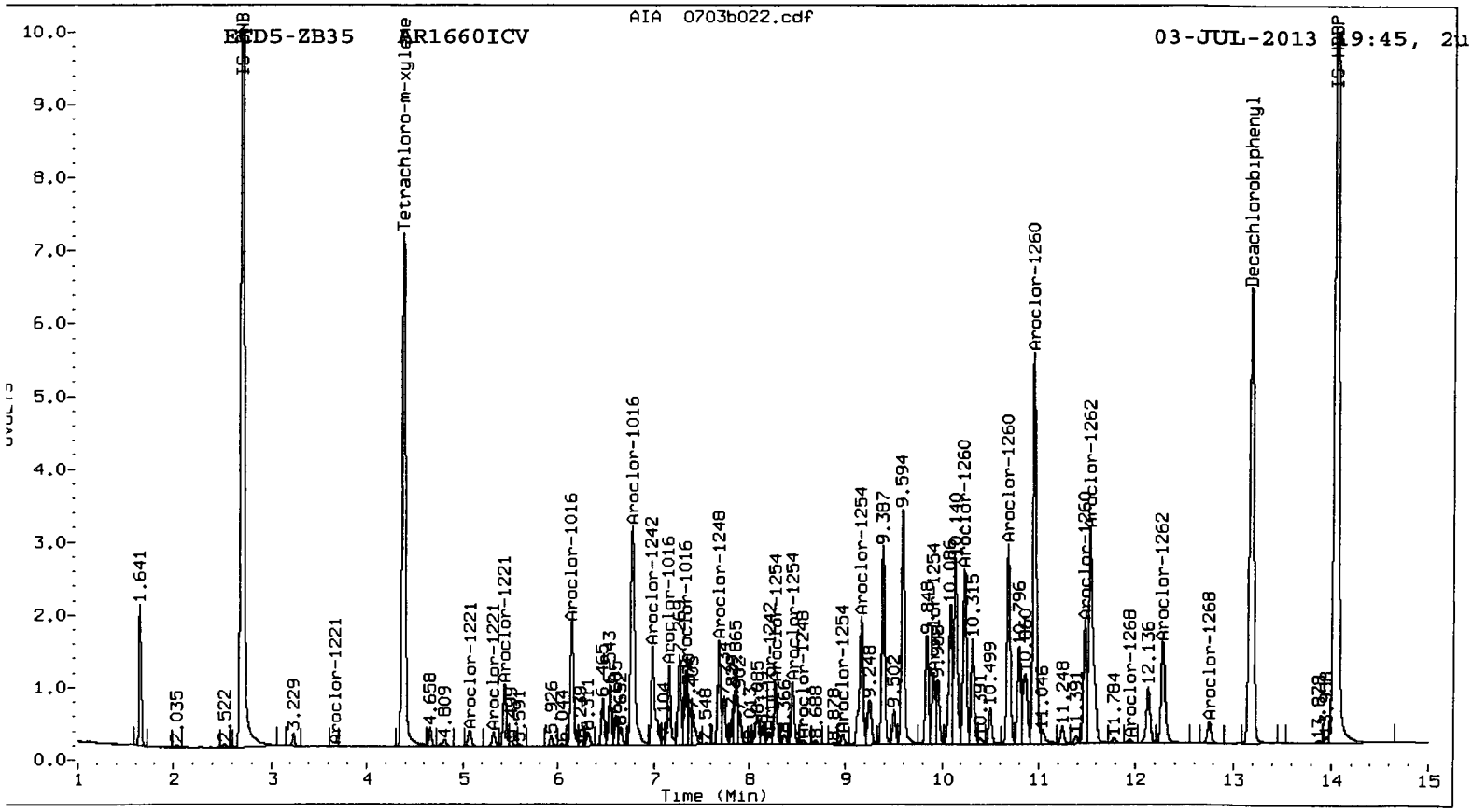
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 AR1660ICV
AIA 0703b022.cdf
03-JUL-2013 19:45, 2ul
UVUL15
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1232
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


AIA 0703b022.cdf
ECD5-ZB35 AR1660ICV
03-JUL-2013 19:45, 2u
UVUL15
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 AR1660ICV
AIA 0703b022.cdf
03-JUL-2013 19:45, 2ul
Time (Min)


ECD5-ZB35 AR1660ICV
AIA 0703b022.cdf
03-JUL-2013 19:45, 2u
Tetrachloro-m-xylene
Decachlorobiphenyl
Time (Min)

Analytical Resources Inc.
8082 DDT SCREEN REPORT

Data file 1: 20130703.b/ddt-1.b/0703b023.d ARI ID: DDT

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
8.136	0.000	68737588	8.538	0.000	15062709	0.100	0.100	0.0	2,4-DDE
8.688	0.000	67495725	9.223	0.000	14365019	0.100	0.100	0.0	2,4-DDD
9.191	0.000	84408432	9.689	0.000	22056145	0.100	0.200#	66.7*	2,4-DDT
8.570	0.000	103264216	8.926	0.000	24354188	0.100	0.100	0.0	4,4-DDE
9.144	0.000	78645576	9.689	0.000	22056145	0.100	0.200#	66.7*	4,4-DDD
9.656	0.000	101267327	10.124	0.000	22757800	0.100	0.100	0.0	4,4-DDT

\# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

07/04/13

7E

8082 DDT BREAKDOWN VERIFICATION SUMMARY

Lab ID: DDT BD

Analysis Date: 03-JUL-2013 20:26 Init. Calib. Date: 07-MAY-2013

GC Column: ZB5 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4-DDE	8.573	687261
4,4-DDD	9.154	2653927
4,4-DDT	9.657	100897009

Col 1: 4,4-DDT Percent Breakdown = 3.2 %

GC Column: ZB35 ID: 0.53(mm)

COMPOUND	RT	AREA
4,4-DDE	8.928	137189
4,4-DDD/2,4-DDT	9.699	587803
4,4-DDT	10.126	22761875

Col 2: 4,4-DDT Percent Breakdown = 3.1 %

\# Indicates value is from co-eluting peaks
* Indicates RPD > 40%

07/24/13

PCB Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WU70

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WHW10 Client ID: TIPTEC composite

METHOD: **8082A**(PCB) **8151A**(Herb) **NW-TPH**(TPH-D) **NW-TPH**(HCID) **8041A**(PCP)
8081B(PEST) **8015B**(Dir Inj) **NW-EPH**(EPH) **8082A**(PBDE) **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: 02/02/13 Analysis Start Date: 02/03/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Endrin/DDT B.D. ≤15%?	NA / Y / N / ____	Method Blank in Control?	Y / N / ____
Retention times within Windows?	Y / N / ____	LCS / LCSD Recovery in Control?	Y / N / ____
CCAL met %D Criteria?	Y / N / ____	LCS / LCSD RPD ≤30%?	NA / ____
Surrogate Recovery in Control?	Y / N / ____	MS / MSD Recovery in Control?	Y / N / ____
Internal STD. within 50-200%? NA	Y / N / ____	MS / MSD RPD ≤30%?	NA / ____
Manual Integrations?	Y / N / ____	Samples Diluted?	Y / N / ____
Integration Summary?	Y / N / ____	Special Analysis Request?	Y / N / ____

Detail problems, corrective actions and/or other pertinent information below

skimmed oily baseline rise, unint w/ est - it
y-flag is for AR1016→1248 range.

(Review 1) Analyst: [signature] **Date:** 02/05/13

(Review 2) Reviewer: MW **Date:** 2/8

Analytical Resources Inc.: Organics Instrument Log

ECD-5 Serial No.: US00034118

Date: 07/03/13 Analysis: PCB Analyst: JL

Column 1 Serial No.: 196398 Column Type: 2B5

Column 2 Serial No.: 1822759 Column Type: ZB35

GC Method: PCB2 ICal Date: 07/03/13 Injection Volume: 2µL

IS	Ical/Ccal	ICV
1006-1	B161	B182
	163	191
	172	192
	173	193
	174	194
	175	
	207	

Document All Maintenance Tasks In StarLIMS

	Inject Date/Time	Filename	DF	LabID
1	03-JUL-2013 14:09	0703b005.d	1	IB
2	03-JUL-2013 14:29	0703b006.d	1	0.25PPM A
3	03-JUL-2013 14:48	0703b007.d	1	0.02PPM A
4	03-JUL-2013 15:08	0703b008.d	1	0.05PPM A
5	03-JUL-2013 15:28	0703b009.d	1	1 PPM AR1
6	03-JUL-2013 15:47	0703b010.d	1	0.1PPM AR
7	03-JUL-2013 16:07	0703b011.d	1	0.5PPM AR
8	03-JUL-2013 16:27	0703b012.d	1	AR1242
9	03-JUL-2013 16:46	0703b013.d	1	AR1248
10	03-JUL-2013 17:06	0703b014.d	1	AR1254
11	03-JUL-2013 17:26	0703b015.d	1	AR2162
12	03-JUL-2013 17:46	0703b016.d	1	AR3268
13	03-JUL-2013 18:06	0703b017.d	1	AR1242ICV
14	03-JUL-2013 18:25	0703b018.d	1	AR1248ICV
15	03-JUL-2013 18:45	0703b019.d	1	AR1254ICV
16	03-JUL-2013 19:05	0703b020.d	1	AR2162ICV
17	03-JUL-2013 19:25	0703b021.d	1	AR3268ICV
18	03-JUL-2013 19:45	0703b022.d	1	AR1660ICV
19	03-JUL-2013 20:46	0703b025.d	1	AR1660
20	03-JUL-2013 21:06	0703b026.d	1	42ICVAT25
21	03-JUL-2013 21:26	0703b027.d	1	48ICVAT25
22	03-JUL-2013 21:47	0703b028.d	1	54ICVAT25
23	03-JUL-2013 22:07	0703b029.d	1	AR1242
24	03-JUL-2013 22:27	0703b030.d	1	AR1660
25	03-JUL-2013 22:47	0703b031.d	1	WV14MBS1
26	03-JUL-2013 23:08	0703b032.d	1	WV14LCSS1
27	03-JUL-2013 23:28	0703b033.d	1	WV14LCSDS
28	03-JUL-2013 23:48	0703b034.d	5	WV14A
29	04-JUL-2013 00:08	0703b035.d	5	WV14C
30	04-JUL-2013 00:29	0703b036.d	20	WV14D
31	04-JUL-2013 00:49	0703b037.d	5	WV14E
32	04-JUL-2013 01:09	0703b038.d	5	WV14G
33	04-JUL-2013 01:29	0703b039.d	1	WV14GMS
34	04-JUL-2013 01:50	0703b040.d	1	WV14GMSD
35	04-JUL-2013 02:10	0703b041.d	1	AR1248
36	04-JUL-2013 02:30	0703b042.d	1	AR1660
37	04-JUL-2013 02:51	0703b043.d	5	WV14H
38	04-JUL-2013 03:11	0703b044.d	10	WV14I
39	04-JUL-2013 03:31	0703b045.d	10	WV14J
40	04-JUL-2013 03:51	0703b046.d	5	WV14K
41	04-JUL-2013 04:12	0703b047.d	10	WV14L
42	04-JUL-2013 04:32	0703b048.d	5	WV14M
43	04-JUL-2013 04:52	0703b049.d	10	WV14N
44	04-JUL-2013 06:07	0703b050.d	10	WV14O
45	04-JUL-2013 06:27	0703b051.d	20	WV14P
46	04-JUL-2013 06:47	0703b052.d	1	AR1254
47	04-JUL-2013 07:07	0703b053.d	1	AR1660
48	04-JUL-2013 07:28	0703b054.d	1	WV42MBS1
49	04-JUL-2013 07:48	0703b055.d	1	WV42LCSS:
50	04-JUL-2013 08:08	0703b056.d	1	WV42A
51	04-JUL-2013 08:29	0703b057.d	1	WV42B
52	04-JUL-2013 08:49	0703b058.d	25	WV14A
53	04-JUL-2013 09:09	0703b059.d	25	WV14K
54	04-JUL-2013 09:29	0703b060.d	1	WU70MBS1
55	04-JUL-2013 09:50	0703b061.d	1	WU70LCSS1
56	04-JUL-2013 10:10	0703b062.d	1	AR1248
57	04-JUL-2013 10:30	0703b063.d	1	AR1660
58	04-JUL-2013 10:50	0703b064.d	1	WU70B
59	04-JUL-2013 11:11	0703b065.d	1	WU70C
60	04-JUL-2013 11:31	0703b066.d	1	WU70CMS
61	04-JUL-2013 11:51	0703b067.d	1	WU70CMSD
62	04-JUL-2013 12:11	0703b068.d	5	WU70C
63	04-JUL-2013 12:32	0703b069.d	1	AR1242
64	04-JUL-2013 12:52	0703b070.d	1	AR1660

7/3/13

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/ecd5.i/20130703.b/0703-1.b

ARI Job No.: AR16 Method: PCB1.m Instrument: ecd5.i Date: 03-JUL-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
2046	0703b025.d	AR1660		1	NO MANUAL INTEGRATION
2106	0703b026.d	42ICVAT25		1	NO MANUAL INTEGRATION
2126	0703b027.d	48ICVAT25		1	NO MANUAL INTEGRATION
2147	0703b028.d	54ICVAT25		1	NO MANUAL INTEGRATION
2207	0703b029.d	AR1242		1	NO MANUAL INTEGRATION
2227	0703b030.d	AR1660		1	NO MANUAL INTEGRATION
2247	0703b031.d	WV14MBS1	WV14MBS1	1	Aroclor-1016, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268,
2308	0703b032.d	WV14LCSS1	WV14LCSS1	1	NO MANUAL INTEGRATION
2328	0703b033.d	WV14LCSDS1	WV14LCSDS1	1	NO MANUAL INTEGRATION
2348	0703b034.d	WV14A	CB-3.11C-0	5	NO MANUAL INTEGRATION
0008	0703b035.d	WV14C	MFC-SI-SUR	5	Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268,
0029	0703b036.d	WV14D	MFC-SI-QSD	20	NO MANUAL INTEGRATION
0049	0703b037.d	WV14E	MFC-SI-SUR	5	NO MANUAL INTEGRATION
0109	0703b038.d	WV14G	MFC-SI-SUR	5	Aroclor-1262, Aroclor-1268, IS-HBBP, Decachlorobiphenyl,
0129	0703b039.d	WV14GMS	MFC-SI-SUR	1	NO MANUAL INTEGRATION
0150	0703b040.d	WV14GMSD	MFC-SI-SUR	1	NO MANUAL INTEGRATION
0210	0703b041.d	AR1248		1	NO MANUAL INTEGRATION
0230	0703b042.d	AR1660		1	NO MANUAL INTEGRATION
0251	0703b043.d	WV14H	CB-1.11C-0	5	Aroclor-1262, Aroclor-1268, IS-HBBP, Decachlorobiphenyl,
0311	0703b044.d	WV14I	CB-1.3Cb-0	10	Aroclor-1262, IS-HBBP, Decachlorobiphenyl,

0331 0703b045.d WV14J MFC-SI-MOS 10 NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd5.i/20130703.b/0703-1.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0351	0703b046.d	WV14K	MFC-SI-MOS	5	NO MANUAL INTEGRATION
0412	0703b047.d	WV14L	MFC-SI-SUR	10	NO MANUAL INTEGRATION
0432	0703b048.d	WV14M	MFC-SI-SUR	5	NO MANUAL INTEGRATION
0452	0703b049.d	WV14N	MFC-SI-MOS	10	Aroclor-1262, Aroclor-1268, IS-HBBP, Decachlorobiphenyl,
0607	0703b050.d	WV14O	MFC-SI-MOS	10	Aroclor-1262, Aroclor-1268, IS-HBBP, Decachlorobiphenyl,
0627	0703b051.d	WV14P	MFC-SI-SUR	20	Aroclor-1262, Aroclor-1268, IS-HBBP, Decachlorobiphenyl,
0647	0703b052.d	AR1254		1	NO MANUAL INTEGRATION
0707	0703b053.d	AR1660		1	NO MANUAL INTEGRATION
0728	0703b054.d	WV42MBS1	WV42MBS1	1	NO MANUAL INTEGRATION
0748	0703b055.d	WV42LCSS1	WV42LCSS1	1	NO MANUAL INTEGRATION
0808	0703b056.d	WV42A	CS-061813<	1	Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268,
0829	0703b057.d	WV42B	HL-061813<	1	Aroclor-1016, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268,
0849	0703b058.d	WV14A	CB-3.11C-0	25	NO MANUAL INTEGRATION
0909	0703b059.d	WV14K	MFC-SI-MOS	25	NO MANUAL INTEGRATION
0929	0703b060.d	WU70MBS1	WU70MBS1	1	NO MANUAL INTEGRATION
0950	0703b061.d	WU70LCSS1	WU70LCSS1	1	NO MANUAL INTEGRATION
1010	0703b062.d	AR1248		1	NO MANUAL INTEGRATION
1030	0703b063.d	AR1660		1	NO MANUAL INTEGRATION
1050	0703b064.d	WU70B	LF-TP-001-	1	NO MANUAL INTEGRATION
1111	0703b065.d	WU70C	LF-LS-004-	1	NO MANUAL INTEGRATION
1131	0703b066.d	WU70CMS	LF-LS-004-	1	Aroclor-1016, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260,

					Aroclor-1262, Aroclor-1268,
1151	0703b067.d	WU70CMSD	LF-LS-004-	1	Aroclor-1016, Aroclor-1232, Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268, IS-HBBP, Decachlorobiphenyl,

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem2/ecd5.i/20130703.b/0703-1.b

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
1211	0703b068.d	WU70C	LF-LS-004-	5	Aroclor-1242, Aroclor-1248, Aroclor-1254, Aroclor-1260, Aroclor-1262, Aroclor-1268,
1232	0703b069.d	AR1242		1	NO MANUAL INTEGRATION
1252	0703b070.d	AR1660		1	NO MANUAL INTEGRATION

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130703.b/0703-1.b/0703b052.d
Data file 2: 20130703.b/0703-2.b/0703b052.d
Method: /chem2/ecd5.i/20130703.b/PCB1.m
Compound Sublist: AR1254
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1254
Client ID:
Injection Date: 04-JUL-2013 06:47
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.384	-0.002	34044519	4.384	-0.002	8205580	38.1	40.4	6.1	Tetrachloro-m-xylen
12.813	-0.001	52860123	13.178	0.000	8248784	37.8	36.7	3.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	95.1	101.1
Decachlorobiphenyl	94.6	91.7

JP 07/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	54036699	56438684	4.4
Hexabromobiphenyl	94298658	98781645	4.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	16218104	15531331	-4.2
Hexabromobiphenyl	17872840	17586351	-1.6

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

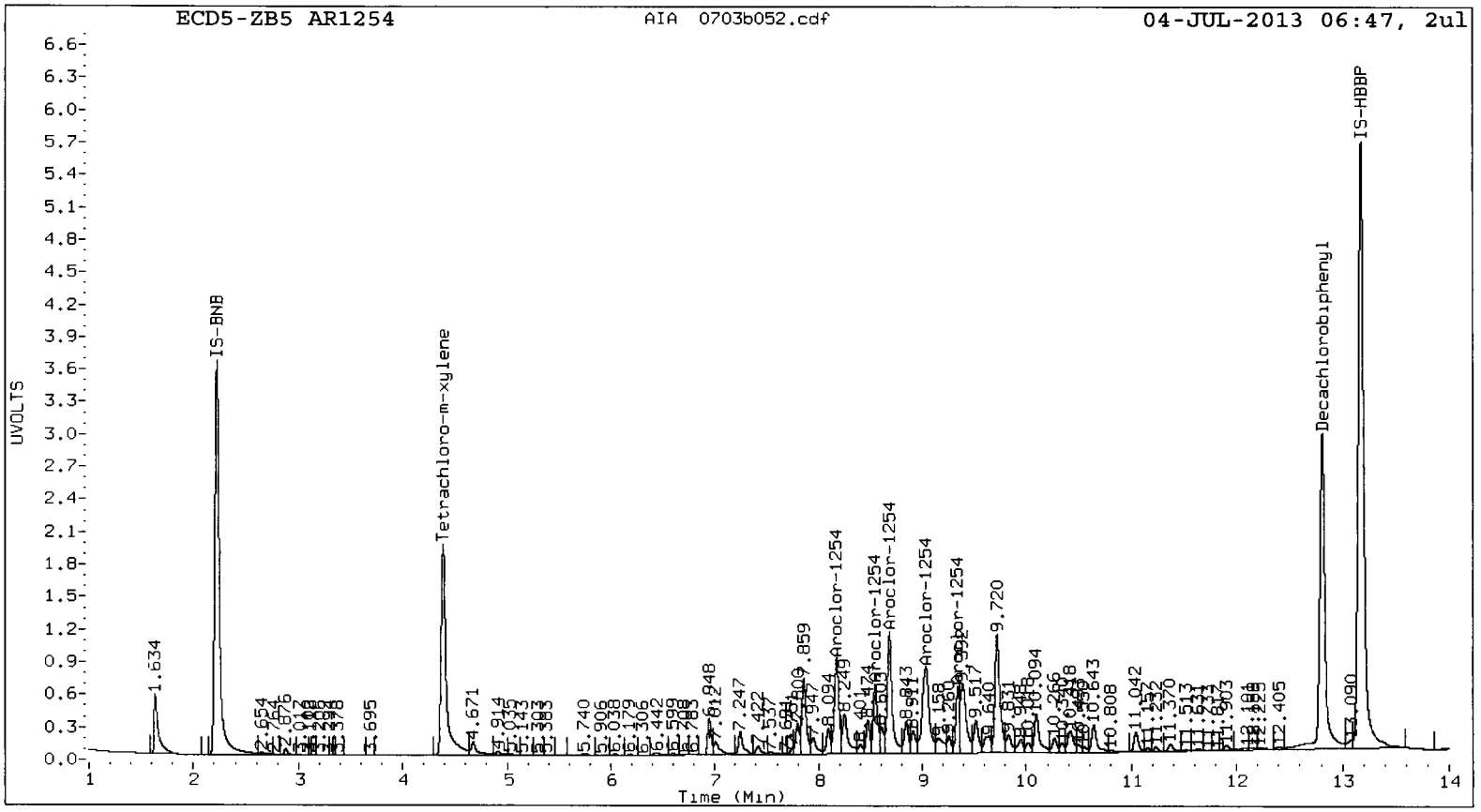
WLT06:01411

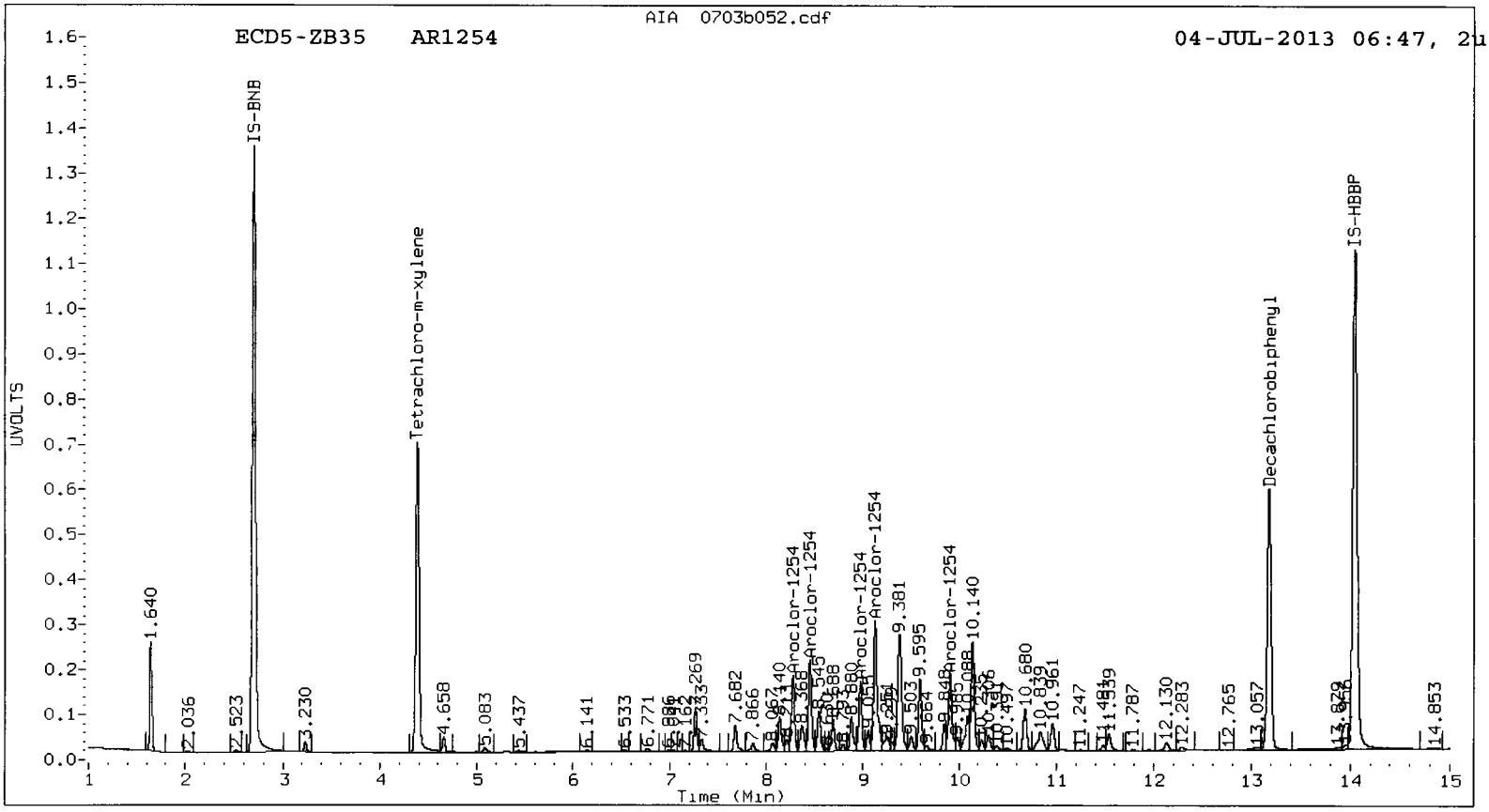
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1254	1	8.173	0.000	13354314	240.3	1	8.275	0.000	1854709	251.2
Aroclor-1254	2	8.545	0.000	8639862	236.5	2	8.452	0.000	2304696	249.9
Aroclor-1254	3	8.682	0.000	18267924	241.5	3	8.973	0.000	1770846	247.7
Aroclor-1254	4	9.035	0.000	19167868	235.0	4	9.123	0.000	3806018	247.3
Aroclor-1254	5	9.344	0.000	7442476	228.9	5	9.909	0.000	2235309	246.1
Total Col1Ave (5 peaks):					236.4	Total Col2Ave (5 peaks):				248.5 RPD = 5
Corrected Ave (4 peaks):					235.2	Corrected Ave (4 peaks):				247.8 RPD = 5

Total PCB Area Col1 (4.487 - 12.714) = 205138277 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (4.486 - 13.078) = 37598238 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR1254
AIA 0703b052.cdf
04-JUL-2013 06:47, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1254
1.634
4.671
9.720
12.405
13.090


AIA 0703b052.cdf
ECD5-ZB35 AR1254
04-JUL-2013 06:47, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP
Aroclor-1254
1.640
4.658
9.381
10.140
12.765
13.057
14.853

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130703.b/0703-1.b/0703b053.d
Data file 2: 20130703.b/0703-2.b/0703b053.d
Method: /chem2/ecd5.i/20130703.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 04-JUL-2013 07:07
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.385	-0.001	34622335	4.384	-0.002	8354010	37.6	39.7	5.4	Tetrachloro-m-xylen
12.812	-0.002	49763115	13.177	-0.002	8190239	34.5	34.6	0.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	94.1	99.3
Decachlorobiphenyl	86.3	86.6

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	54036699	58040153	7.4
Hexabromobiphenyl	94298658	101959934	8.1

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	16218104	16101729	-0.7
Hexabromobiphenyl	17872840	18509226	3.6

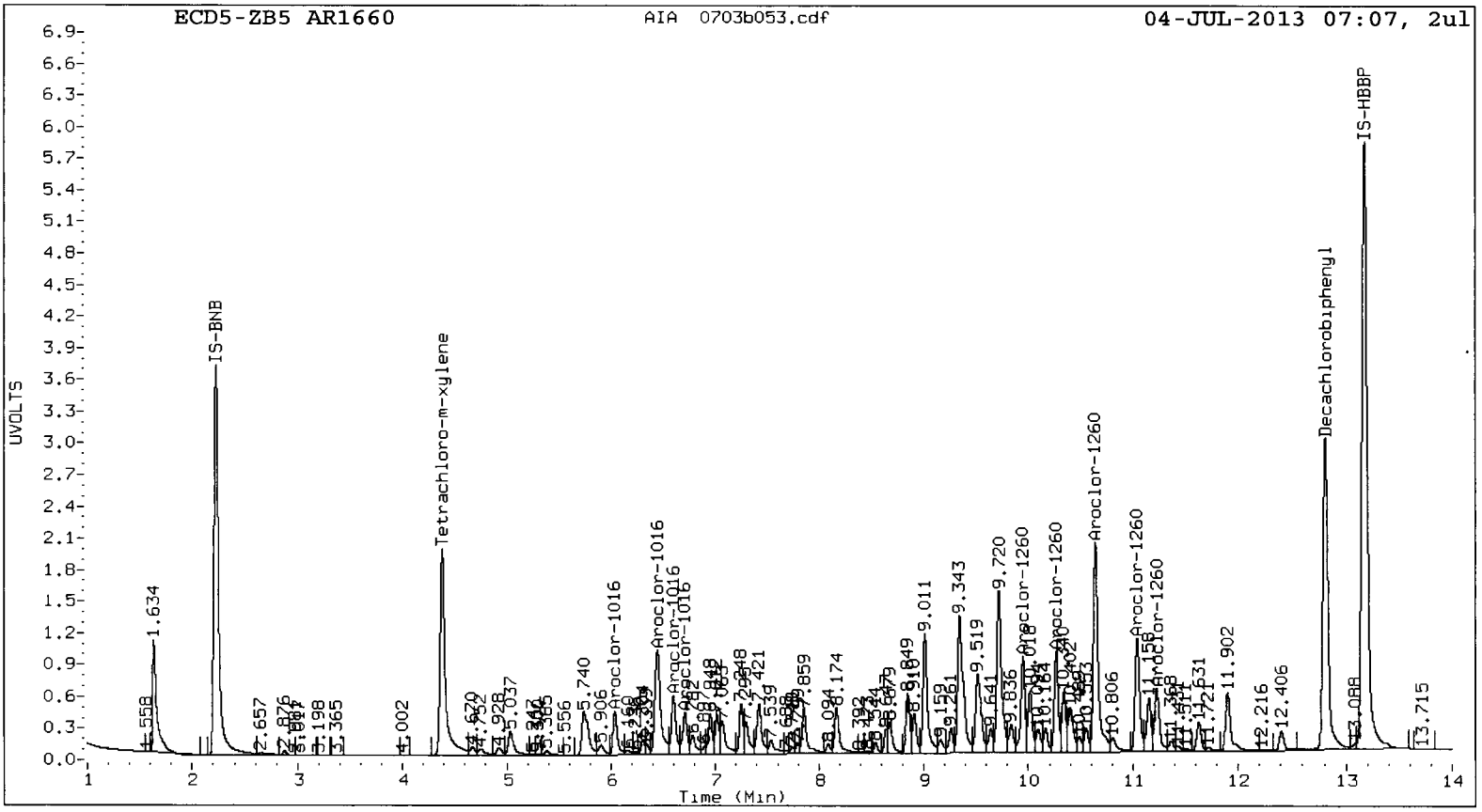
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

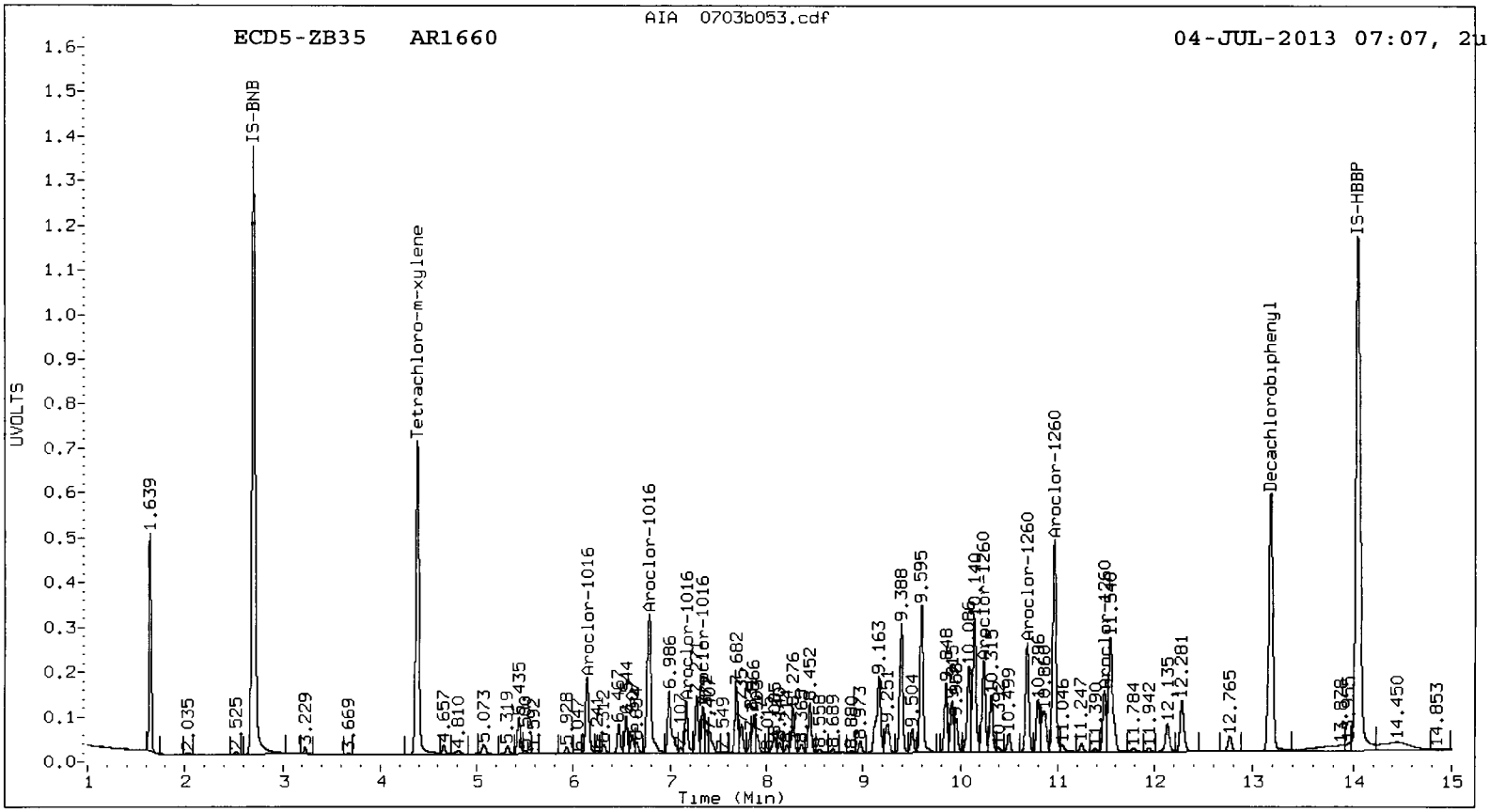
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.038	-0.001	6254814	232.6	1	6.141	-0.002	2187265	242.4
Aroclor-1016	2	6.445	-0.002	19509734	233.9	2	6.776	-0.001	4783110	245.7
Aroclor-1016	3	6.595	-0.001	8570297	233.0	3	7.162	-0.001	1244099	246.0
Aroclor-1016	4	6.706	-0.001	6411935	235.5	4	7.335	-0.001	1133682	245.4
Total Col1Ave (4 peaks):					233.8	Total Col2Ave (4 peaks):				244.9 RPD = 5
Corrected Ave (3 peaks):					233.2	Corrected Ave (3 peaks):				244.5 RPD = 5
Aroclor-1260	1	9.949	-0.001	12837226	218.7	1	10.236	-0.001	2426878	235.3
Aroclor-1260	2	10.266	-0.001	12829428	217.4	2	10.685	-0.001	2950735	236.0
Aroclor-1260	3	10.642	-0.001	32528553	219.2	3	10.961	0.000	5889956	235.9
Aroclor-1260	4	11.042	0.000	17003951	215.9	4	11.481	-0.001	1636351	211.6
Aroclor-1260	5	11.231	-0.002	9473928	219.7	NS	---			----
Total Col1Ave (5 peaks):					218.2	Total Col2Ave (4 peaks):				229.7 RPD = 5
Corrected Ave (4 peaks):					217.8	Corrected Ave (3 peaks):				227.6 RPD = 4

Total PCB Area Col1 (4.487 - 12.714) = 389766801 Col1 Total PCB = 0.6 ppm*

Total PCB Area Col2 (4.486 - 13.078) = 73734783 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR1660
AIA 0703b053.cdf
04-JUL-2013 07:07, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP


AIA 0703b053.cdf
ECD5-ZB35 AR1660
04-JUL-2013 07:07, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130703.b/0703-1.b/0703b060.d
Data file 2: 20130703.b/0703-2.b/0703b060.d
Method: /chem2/ecd5.i/20130703.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WU70MBS1
Client ID: WU70MBS1
Injection Date: 04-JUL-2013 09:29
Ical Date: 07-MAY-2013
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.384	-0.002	26916492	4.384	-0.001	6381726	27.3	28.1	3.0	Tetrachloro-m-xylen
12.812	-0.002	50174944	13.176	-0.002	7986090	34.6	35.4	2.4	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	68.3	70.4
Decachlorobiphenyl	86.5	88.6

07/04/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	54036699	62189736	15.1
Hexabromobiphenyl	94298658	102522787	8.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	16218104	17353568	7.0
Hexabromobiphenyl	17872840	17631285	-1.4

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

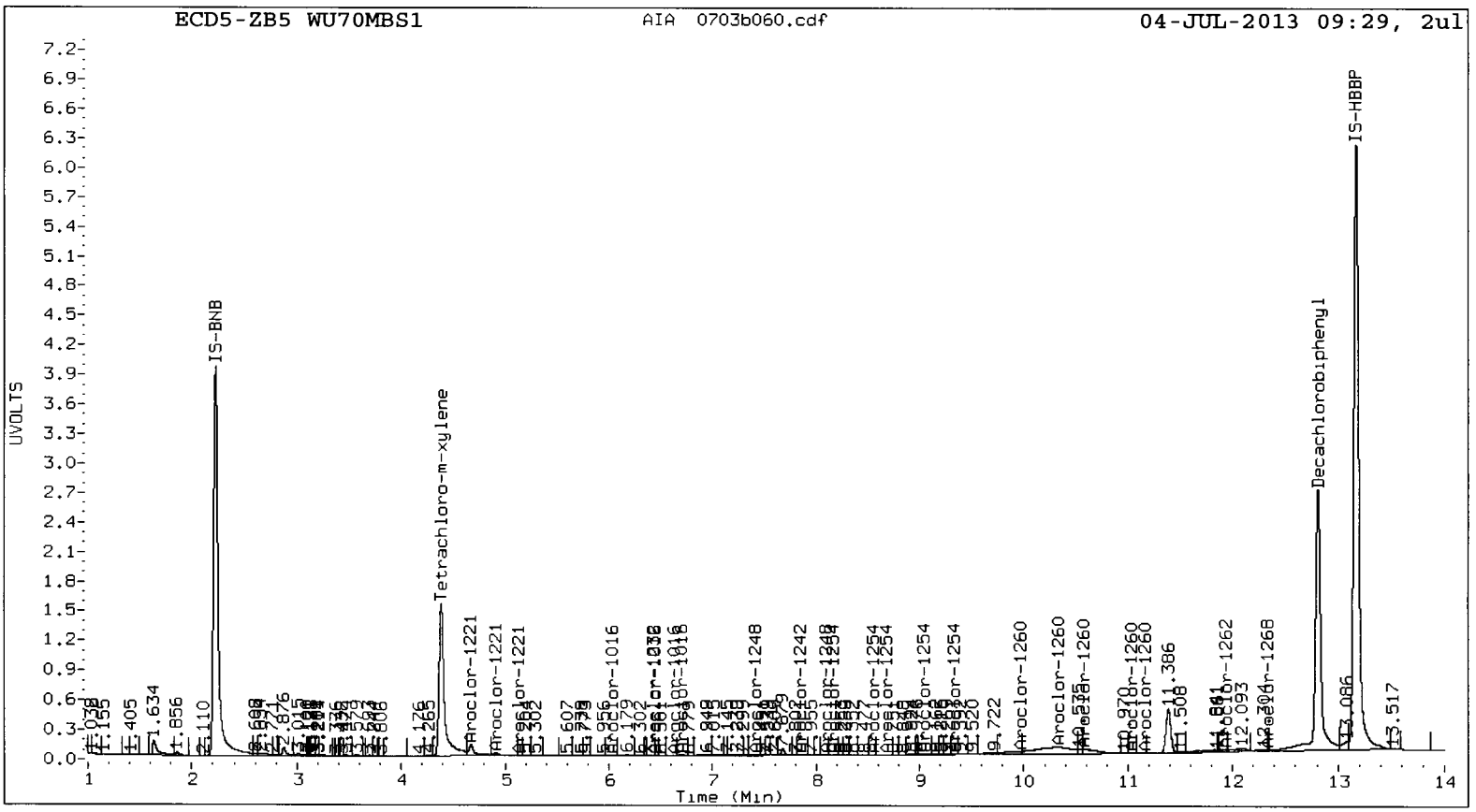
Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.035	-0.004	49036	1.7	1	---			0.0
Aroclor-1016	2	6.449	0.002	27905	0.3	2	---			0.0
Aroclor-1016	3	6.628	0.032	80886	2.1	3	---			0.0
Aroclor-1016	4	6.705	-0.002	114979	3.9	4	---			0.0
	Total Col1Ave (4 peaks):				2.0	Col2Ave: <3 Quant Peaks				
Aroclor-1221	1	4.671	-0.082	2359295	171.2	1	3.654	-0.019	16211	9.1
Aroclor-1221	2	4.913	-0.016	715348	75.0	2	5.083	0.014	84529	28.0
Aroclor-1221	3	5.132	0.095	35002	1.3	3	5.343	0.022	12810	7.6
Aroclor-1221	NS	---			----	4	5.439	0.002	16370	3.1
	Total Col1Ave (3 peaks):				82.5	Total Col2Ave (4 peaks):			12.0	RPD = 149*
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):			6.6	
Aroclor-1232	1	4.671	-0.081	2359295	258.7	1	5.083	0.014	84529	45.6
Aroclor-1232	2	4.913	-0.014	715348	105.2	2	5.343	0.023	12810	12.1
Aroclor-1232	3	6.035	-0.001	49036	4.1	3	5.439	0.004	16370	4.4
Aroclor-1232	4	6.437	-0.006	49450	1.4	4	---			0.0
	Total Col1Ave (4 peaks):				92.4	Total Col2Ave (3 peaks):			20.7	RPD = 127*
	Corrected Ave (3 peaks):				36.0	Corrected Ave: < 3 Peaks				
Aroclor-1242	1	6.035	-0.003	49036	2.1	1	---			0.0
Aroclor-1242	2	6.449	0.003	27905	0.4	2	---			0.0
Aroclor-1242	3	6.628	0.032	80886	2.6	3	---			0.0
Aroclor-1242	4	7.857	0.003	85164	2.2	4	---			0.0
	Total Col1Ave (4 peaks):				1.8	Col2Ave: <3 Quant Peaks				
Aroclor-1248	1	6.437	-0.005	49450	1.1	1	---			0.0
Aroclor-1248	2	7.421	0.000	85522	1.7	2	---			0.0
Aroclor-1248	3	7.857	0.003	85164	1.3	3	---			0.0
Aroclor-1248	4	8.100	0.010	54980	1.2	4	---			0.0
	Total Col1Ave (4 peaks):				1.3	Col2Ave: <3 Quant Peaks				
Aroclor-1254	1	8.171	-0.002	92046	1.5	1	---			0.0
Aroclor-1254	2	8.552	0.007	26391	0.7	2	---			0.0
Aroclor-1254	3	8.683	0.001	111579	1.3	3	8.973	0.000	238379	29.8
Aroclor-1254	4	9.051	0.016	209834	2.3	4	9.124	0.000	22847	1.3
Aroclor-1254	5	9.344	0.000	105978	3.0	5	---			0.0
	Total Col1Ave (5 peaks):				1.8	Col2Ave: <3 Quant Peaks				
Aroclor-1260	1	9.973	0.022	1734394	29.4	1	10.143	-0.094	18719	1.9
Aroclor-1260	2	10.331	0.064	8149961	137.4	2	10.630	-0.056	11958	1.0
Aroclor-1260	3	10.581	-0.062	2053321	13.8	3	---			0.0
Aroclor-1260	4	11.031	-0.011	51221	0.6	4	---			0.0
Aroclor-1260	5	11.163	-0.069	14448	0.3	NS	---			----
	Total Col1Ave (5 peaks):				36.3	Col2Ave: <3 Quant Peaks				
Aroclor-1262	1	10.331	0.066	8149961	113.3	1	10.143	-0.095	18719	1.2
Aroclor-1262	2	10.581	-0.060	2053321	12.0	2	10.630	-0.056	11958	0.8
Aroclor-1262	3	11.031	-0.010	51221	0.8	3	---			0.0
Aroclor-1262	4	11.163	-0.067	14448	0.2	4	---			0.0
Aroclor-1262	5	11.938	0.038	511037	7.0	5	12.316	0.033	26352	2.3
	Total Col1Ave (5 peaks):				26.7	Total Col2Ave (3 peaks):			1.4	RPD = 180*
	Corrected Ave (4 peaks):				5.0	Corrected Ave: < 3 Peaks				
Aroclor-1268	1	11.163	0.006	14448	0.1	1	---			0.0
Aroclor-1268	2	---			0.0	2	---			0.0
Aroclor-1268	3	---			0.0	3	---			0.0
Aroclor-1268	4	12.341	-0.065	56497	0.1	4	---			0.0
	Col1Ave: <3 Quant Peaks					Col2Ave: <3 Quant Peaks				

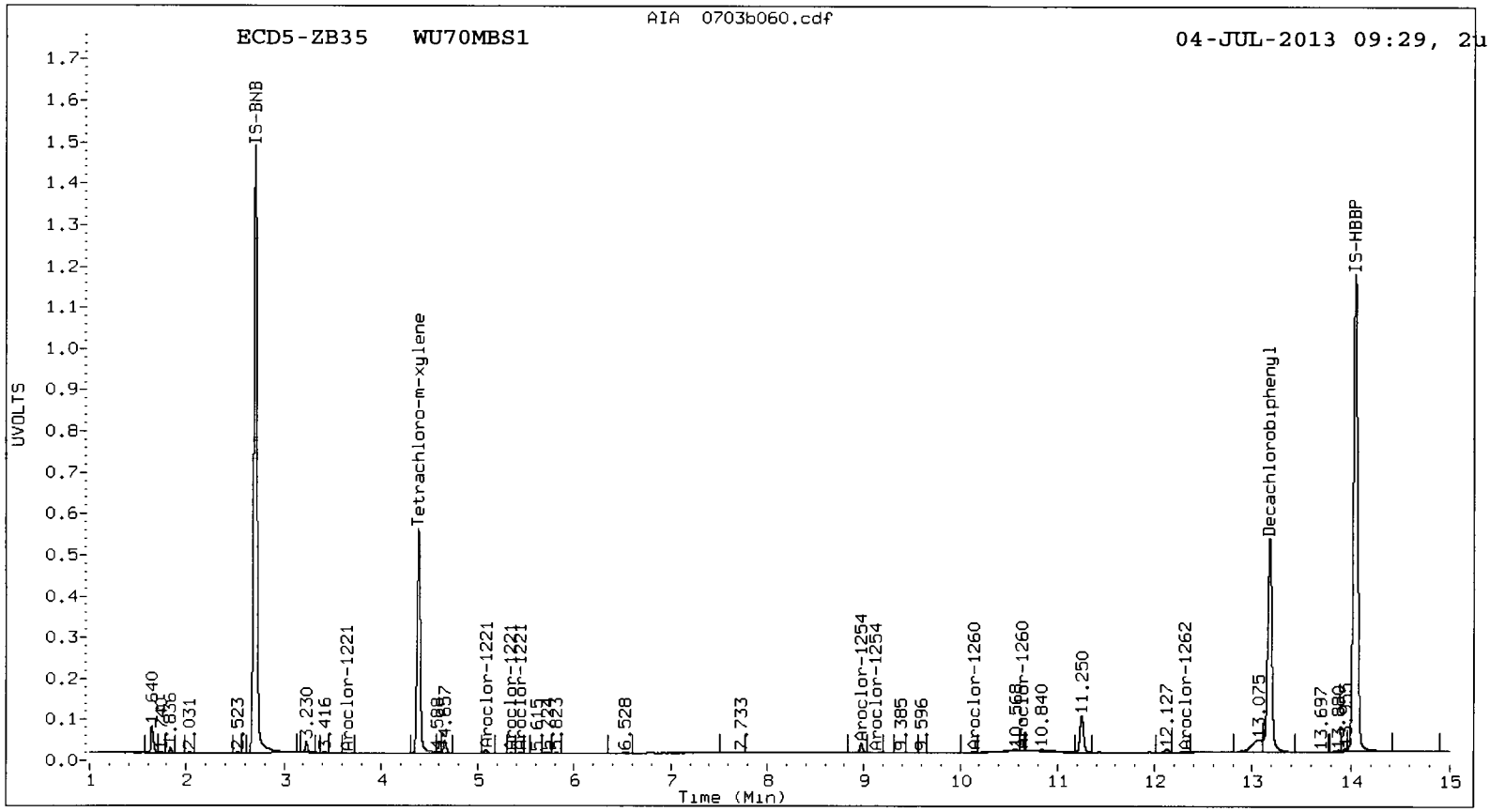
Total PCB Area Col1 (4.487 - 12.714) = 31505410 Col1 Total PCB = 0.0 ppm*

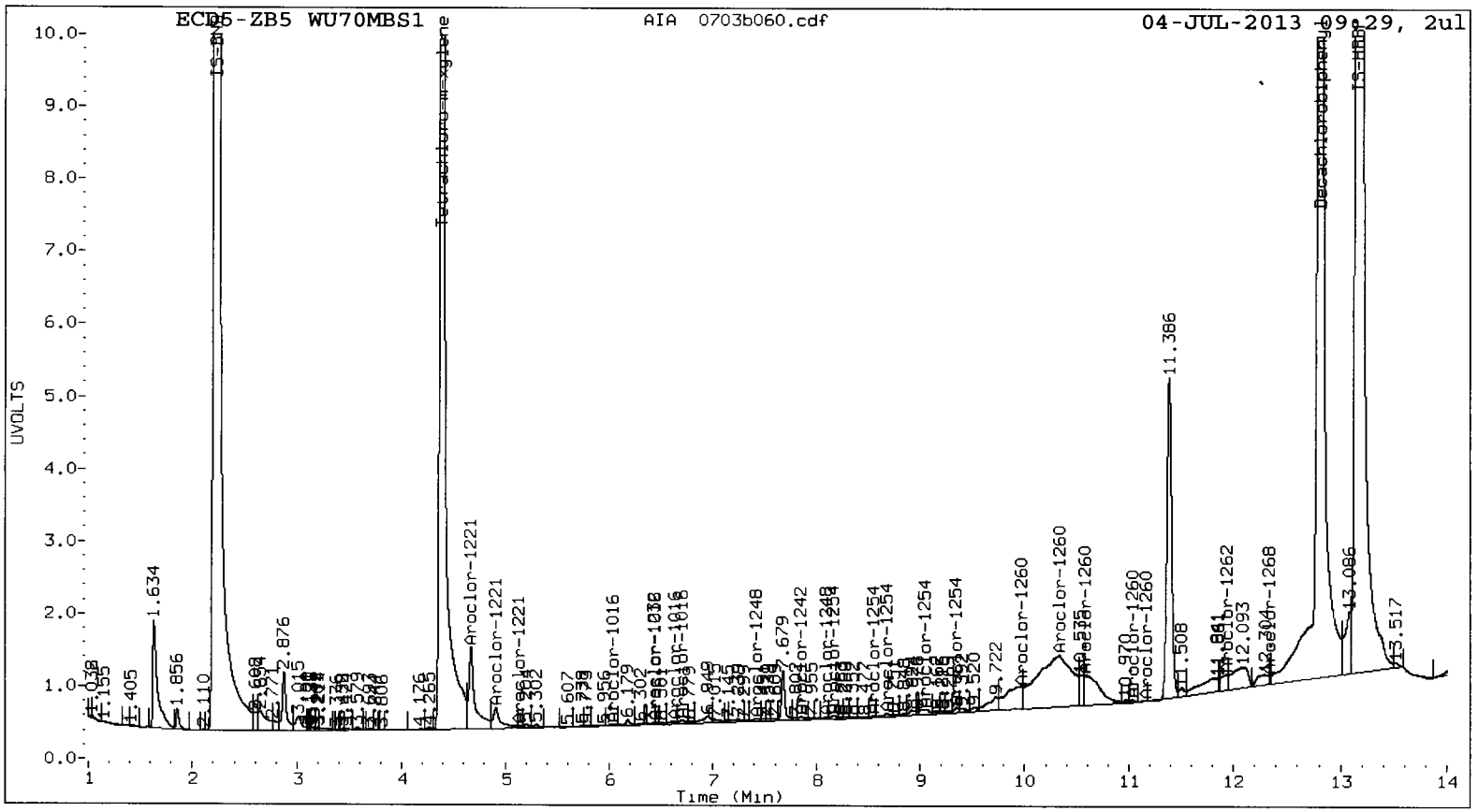
Total PCB Area Col2 (4.486 - 13.078) = 3536899 Col2 Total PCB = 0.0 ppm*

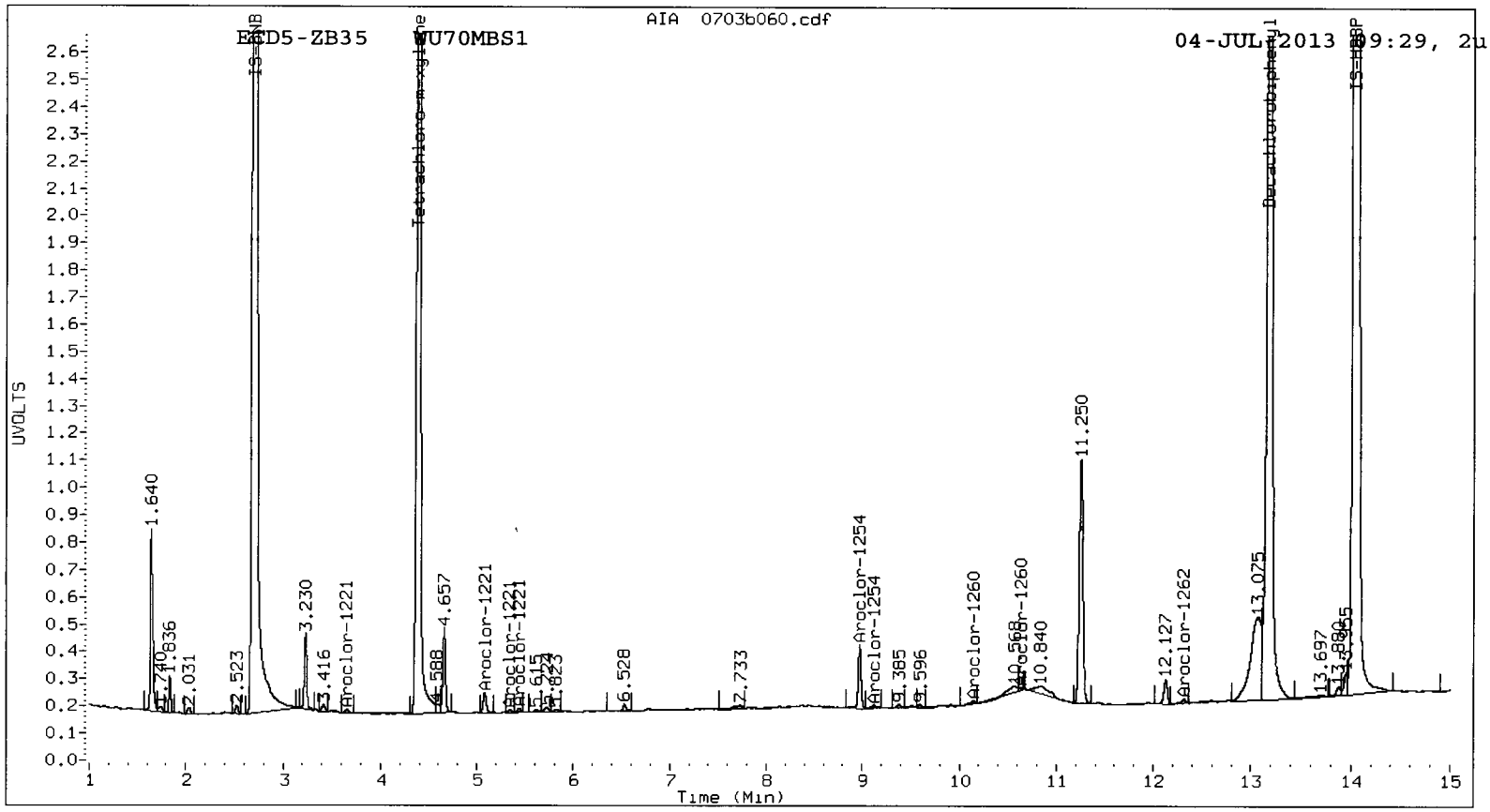
* Quantitated against AR1660 0.25ppm in Ical

PCB-Form 10 Mod.


ECD5-ZB5 WU70MBS1
AIA 0703b060.cdf
04-JUL-2013 09:29, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1221
Aroclor-1221
Aroclor-1260
Aroclor-1260
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


AIA 0703b060.cdf
ECD5-ZB35 WU70MBS1
04-JUL-2013 09:29, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1221
Aroclor-1221
Aroclor-1254
Aroclor-1254
Aroclor-1260
Aroclor-1260
Aroclor-1262
Aroclor-1262
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 WU70MBS1
AIA 0703b060.cdf
04-JUL-2013 09:29, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1260
Aroclor-1262
Aroclor-1268
Aroclor-1254
Aroclor-1248
Aroclor-1242
Aroclor-1016


ECD5-ZB35 WU70MBS1
AIA 0703b060.cdf
04-JUL-2013 09:29, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1254
Aroclor-1260
Aroclor-1262

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130703.b/0703-1.b/0703b061.d
Data file 2: 20130703.b/0703-2.b/0703b061.d
Method: /chem2/ecd5.i/20130703.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WU70LCSS1
Client ID: WU70LCSS1
Injection Date: 04-JUL-2013 09:50
Ical Date: 07-MAY-2013
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.384	-0.002	24934472	4.384	-0.002	5824703	25.9	26.2	1.2	Tetrachloro-m-xylen
12.812	-0.002	48294508	13.177	-0.001	6723256	33.1	29.7	11.0	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	64.7	65.5
Decachlorobiphenyl	82.8	74.2

7/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	54036699	60774367	12.5
Hexabromobiphenyl	94298658	103045425	9.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	16218104	17017145	4.9
Hexabromobiphenyl	17872840	17719356	-0.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	Shift	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount
Aroclor-1016	1	6.037	-0.002	8462086	300.5	1	6.141	-0.002	2936775	307.9
Aroclor-1016	2	6.444	-0.003	27021313	309.4	2	6.777	-0.001	6593956	320.5
Aroclor-1016	3	6.594	-0.002	11810243	306.7	3	7.161	-0.003	1795004	335.8
Aroclor-1016	4	6.705	-0.002	9048189	317.4	4	7.334	-0.002	1609803	329.7
Total Col1Ave (4 peaks):					308.5	Total Col2Ave (4 peaks):				323.5 RPD = 5
Corrected Ave (3 peaks):					305.5	Corrected Ave (3 peaks):				319.4 RPD = 4
Aroclor-1221	1	4.751	-0.001	1449260	107.6	1	3.664	-0.010	19388	11.2
Aroclor-1221	2	4.929	0.000	1352882	145.2	2	5.069	0.000	305868	103.4
Aroclor-1221	3	5.036	-0.001	5509204	206.7	3	5.320	-0.001	282751	170.5
Aroclor-1221	NS	---			----	4	5.434	-0.002	1212821	235.2
Total Col1Ave (3 peaks):					153.2	Total Col2Ave (4 peaks):				130.1 RPD = 16
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				95.0
Aroclor-1232	1	4.751	-0.001	1449260	162.6	1	5.069	0.000	305868	168.3
Aroclor-1232	2	4.929	0.002	1352882	203.7	2	5.320	-0.001	282751	272.5
Aroclor-1232	3	6.037	0.001	8462086	732.4	3	5.434	-0.001	1212821	331.8
Aroclor-1232	4	6.444	0.001	27021313	756.2	4	6.141	0.000	2936775	678.0
Total Col1Ave (4 peaks):					463.7	Total Col2Ave (4 peaks):				362.6 RPD = 24
Corrected Ave (3 peaks):					366.2	Corrected Ave (3 peaks):				257.5 RPD = 35
Aroclor-1242	1	6.037	-0.001	8462086	373.7	1	6.141	-0.001	2936775	381.6
Aroclor-1242	2	6.444	-0.002	27021313	387.9	2	6.777	-0.002	6593956	394.7
Aroclor-1242	3	6.594	-0.002	11810243	383.4	3	6.986	-0.002	2784815	401.6
Aroclor-1242	4	7.858	0.004	9555038	254.7	4	8.213	-0.002	282861	48.4
Total Col1Ave (4 peaks):					349.9	Total Col2Ave (4 peaks):				306.6 RPD = 13
Corrected Ave (3 peaks):					337.3	Corrected Ave (3 peaks):				274.9 RPD = 20
Aroclor-1248	1	6.444	0.002	27021313	606.3	1	6.777	0.003	6593956	626.3
Aroclor-1248	2	7.420	-0.001	11355616	231.2	2	7.682	0.000	2254303	260.5
Aroclor-1248	3	7.858	0.004	9555038	152.7	3	8.213	-0.001	282861	31.5
Aroclor-1248	4	8.093	0.003	1683850	37.6	4	8.558	-0.002	178502	15.2
Total Col1Ave (4 peaks):					257.0	Total Col2Ave (4 peaks):				233.4 RPD = 10
Corrected Ave (3 peaks):					140.5	Corrected Ave (3 peaks):				102.4 RPD = 31
Aroclor-1254	1	8.174	0.001	9389488	156.9	1	8.275	0.000	1543409	190.8
Aroclor-1254	2	8.544	-0.001	1722466	43.8	2	8.451	0.000	1762610	174.5
Aroclor-1254	3	8.679	-0.003	6146948	75.5	3	8.973	0.000	717243	91.6
Aroclor-1254	4	9.012	-0.024	23460953	267.1	4	9.126	0.003	826870	49.0
Aroclor-1254	5	9.342	-0.002	34183716	976.5	5	9.915	0.005	1846719	185.6
Total Col1Ave (5 peaks):					303.9	Total Col2Ave (5 peaks):				138.3 RPD = 75*
Corrected Ave (4 peaks):					135.8	Corrected Ave (4 peaks):				125.2 RPD = 8
Aroclor-1260	1	9.949	-0.002	17932700	302.3	1	10.236	-0.001	3328491	337.1
Aroclor-1260	2	10.266	-0.001	18041035	302.5	2	10.686	-0.001	4051474	338.5
Aroclor-1260	3	10.641	-0.002	46332174	309.0	3	10.961	-0.001	8368248	350.0
Aroclor-1260	4	11.041	-0.002	23676209	297.5	4	11.481	-0.001	2457627	332.0
Aroclor-1260	5	11.232	-0.001	12791548	293.5	NS	---			----
Total Col1Ave (5 peaks):					300.9	Total Col2Ave (4 peaks):				339.4 RPD = 12
Corrected Ave (4 peaks):					298.9	Corrected Ave (3 peaks):				335.9 RPD = 12
Aroclor-1262	1	10.266	0.001	18041035	249.6	1	10.236	-0.001	3328491	211.4
Aroclor-1262	2	10.641	0.000	46332174	268.4	2	10.686	-0.001	4051474	272.3
Aroclor-1262	3	11.041	0.000	23676209	388.3	3	10.961	-0.001	8368248	283.3
Aroclor-1262	4	11.232	0.001	12791548	156.6	4	11.540	-0.003	6009405	287.4
Aroclor-1262	5	11.901	0.000	11446112	156.6	5	12.281	-0.001	2144729	183.3
Total Col1Ave (5 peaks):					243.9	Total Col2Ave (5 peaks):				247.5 RPD = 1
Corrected Ave (4 peaks):					207.8	Corrected Ave (4 peaks):				237.6 RPD = 13
Aroclor-1268	1	11.157	0.000	10294537	59.1	1	11.481	0.000	2457627	78.0

Aroclor-1268	2	11.232	0.003	12791548	70.4	2	11.540	-0.008	6009405	197.3
Aroclor-1268	3	11.630	0.016	5730051	38.2	3	11.942	-0.001	160280	6.4
Aroclor-1268	4	12.405	-0.001	4368242	10.2	4	12.765	0.000	641501	8.8

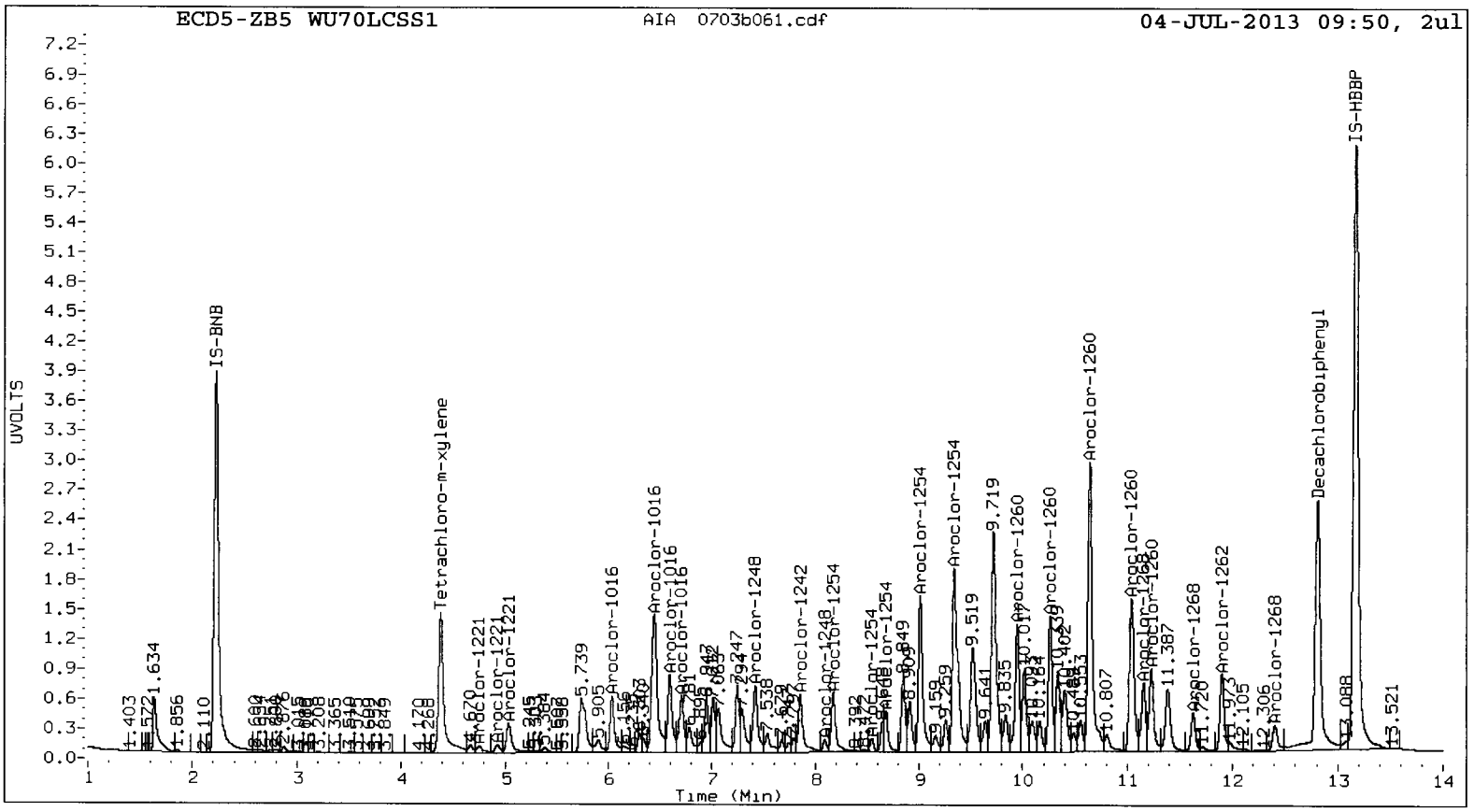
Total Col1Ave (4 peaks): 44.5 Total Col2Ave (4 peaks): 72.6 RPD = 48*

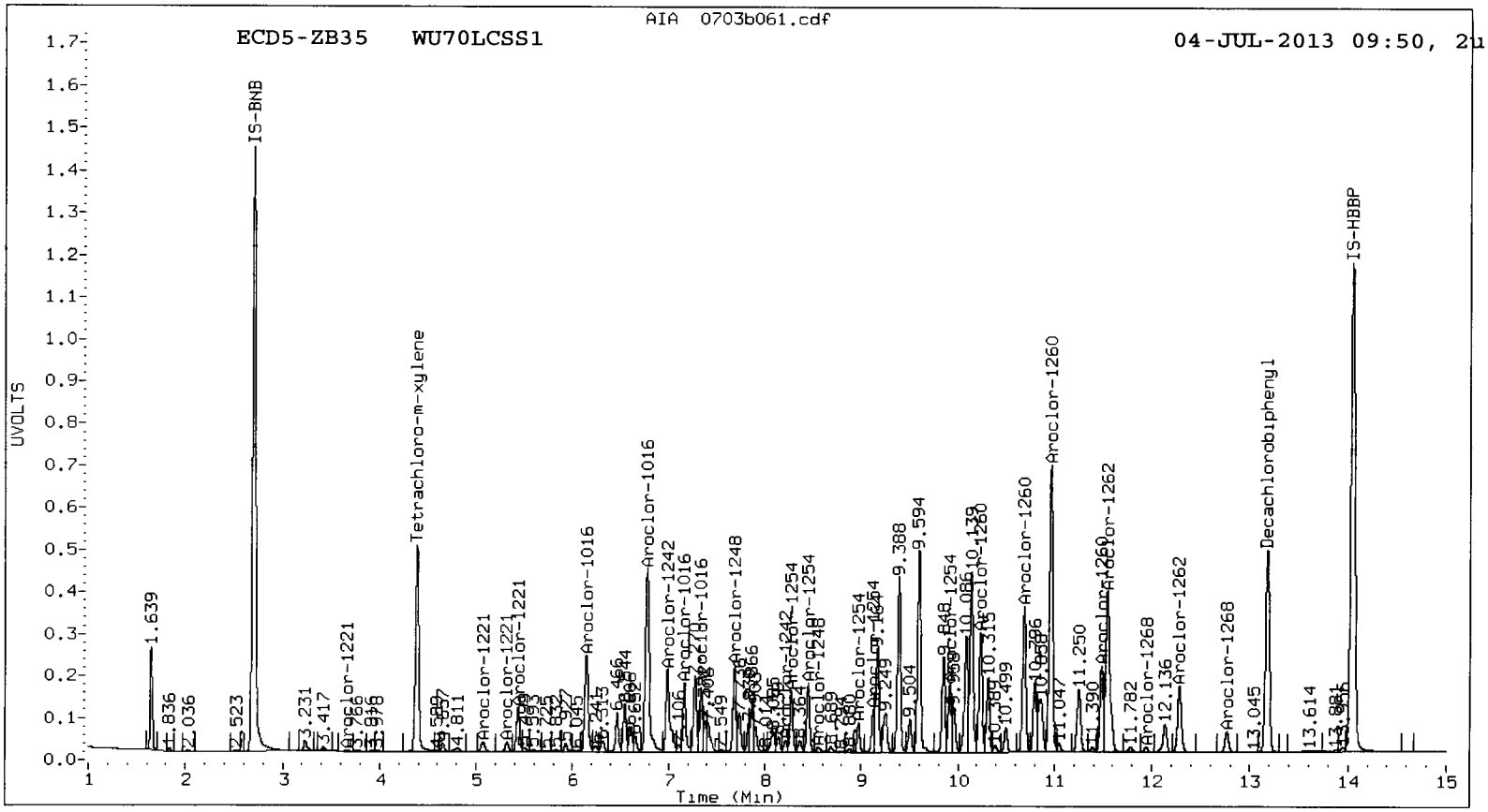
Corrected Ave (3 peaks): 35.8 Corrected Ave (3 peaks): 31.1 RPD = 14

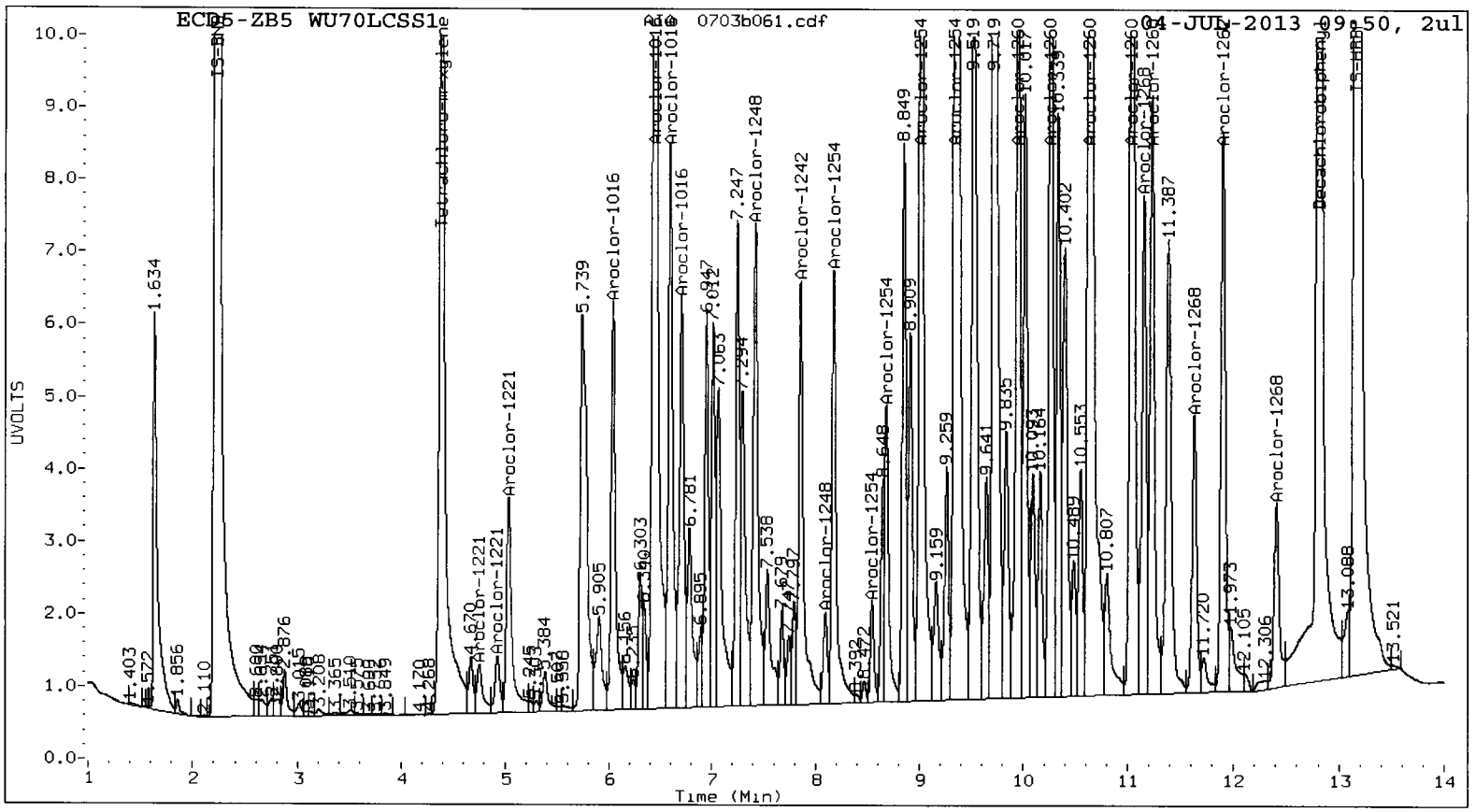
Total PCB Area Col1 (4.487 - 12.714) = 544592039 Col1 Total PCB = 0.8 ppm*

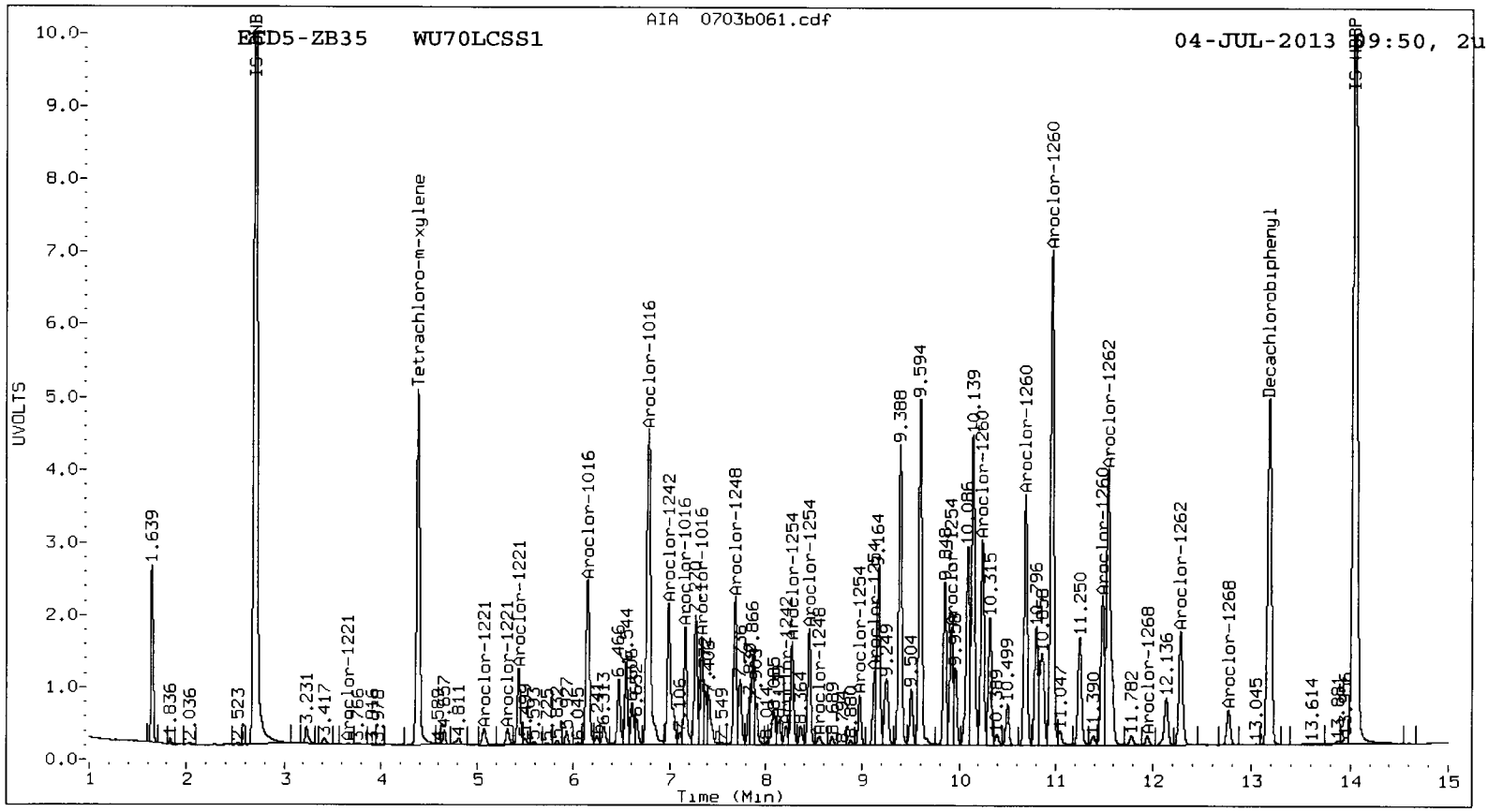
Total PCB Area Col2 (4.486 - 13.078) = 105976659 Col2 Total PCB = 0.8 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 WU70LCSS1
AIA 0703b061.cdf
04-JUL-2013 09:50, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


AIA 0703b061.cdf
ECD5-ZB35 WU70LCSS1
04-JUL-2013 09:50, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 WU70LCSS1
AIA 0703b061.cdf
04-JUL-2013 09:50, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl


ECD5-ZB35 WU70LCSS1
AIA 0703b061.cdf
04-JUL-2013 09:50, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130703.b/0703-1.b/0703b062.d
Data file 2: 20130703.b/0703-2.b/0703b062.d
Method: /chem2/ecd5.i/20130703.b/PCB1.m
Compound Sublist: AR1248
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1248
Client ID:
Injection Date: 04-JUL-2013 10:10
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.384	-0.002	34601157	4.384	-0.002	8314098	37.3	39.4	5.5	Tetrachloro-m-xylen
12.813	-0.001	52956198	13.177	-0.001	7700515	36.6	34.6	5.7	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	93.2	98.5
Decachlorobiphenyl	91.5	86.4

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	54036699	58519764	8.3
Hexabromobiphenyl	94298658	102307094	8.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	16218104	16148776	-0.4
Hexabromobiphenyl	17872840	17425419	-2.5

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1248	1	6.442	0.000	10469568	244.0	1	6.773	0.000	2513178	251.6
Aroclor-1248	2	7.421	0.000	11571660	244.7	2	7.682	0.000	2028240	247.0
Aroclor-1248	3	7.854	0.000	14780367	245.3	3	8.214	0.000	2121395	248.6
Aroclor-1248	4	8.090	0.000	10110826	234.5	4	8.560	0.000	2774641	248.8

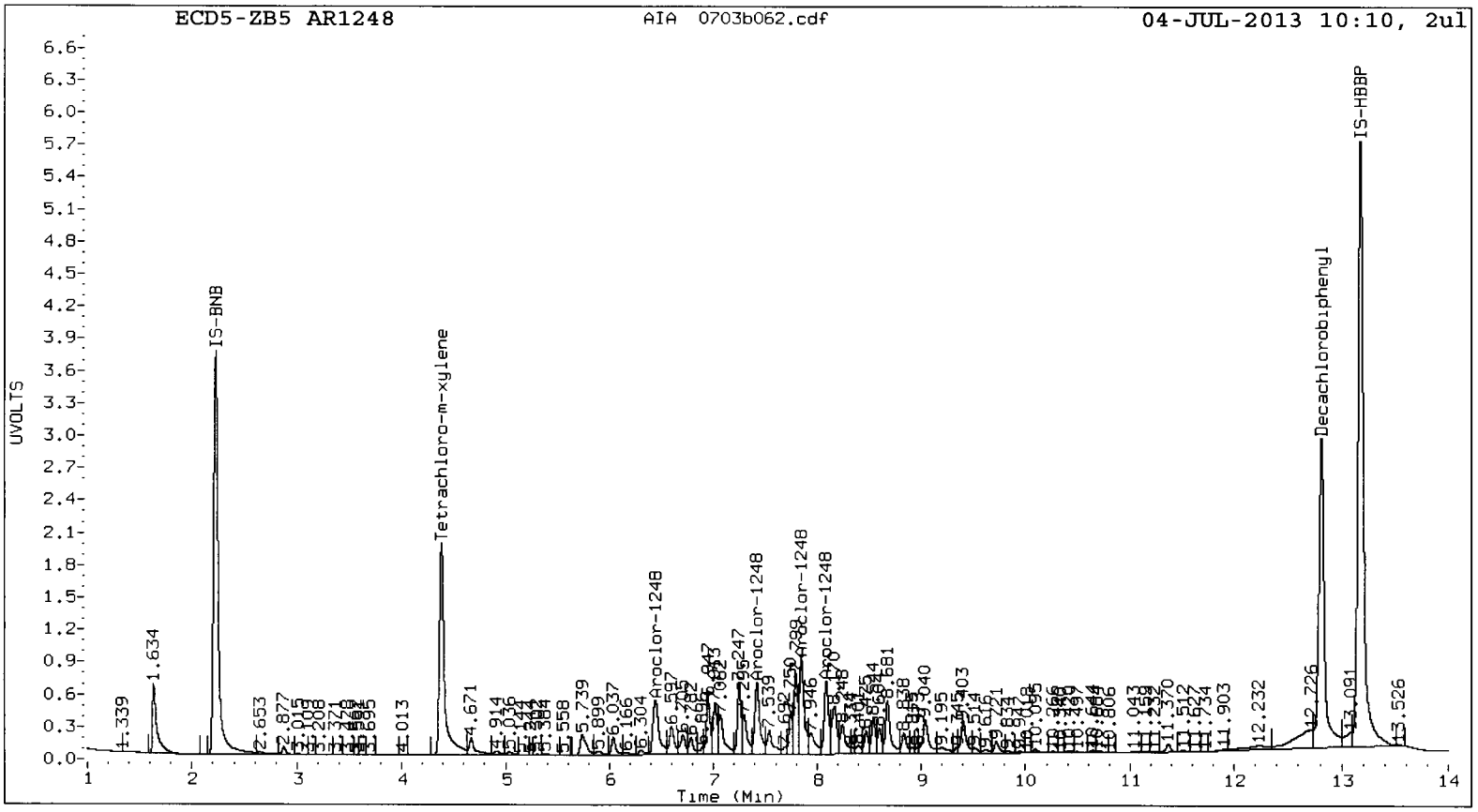
Total Col1Ave (4 peaks): 242.1 Total Col2Ave (4 peaks): 249.0 RPD = 3

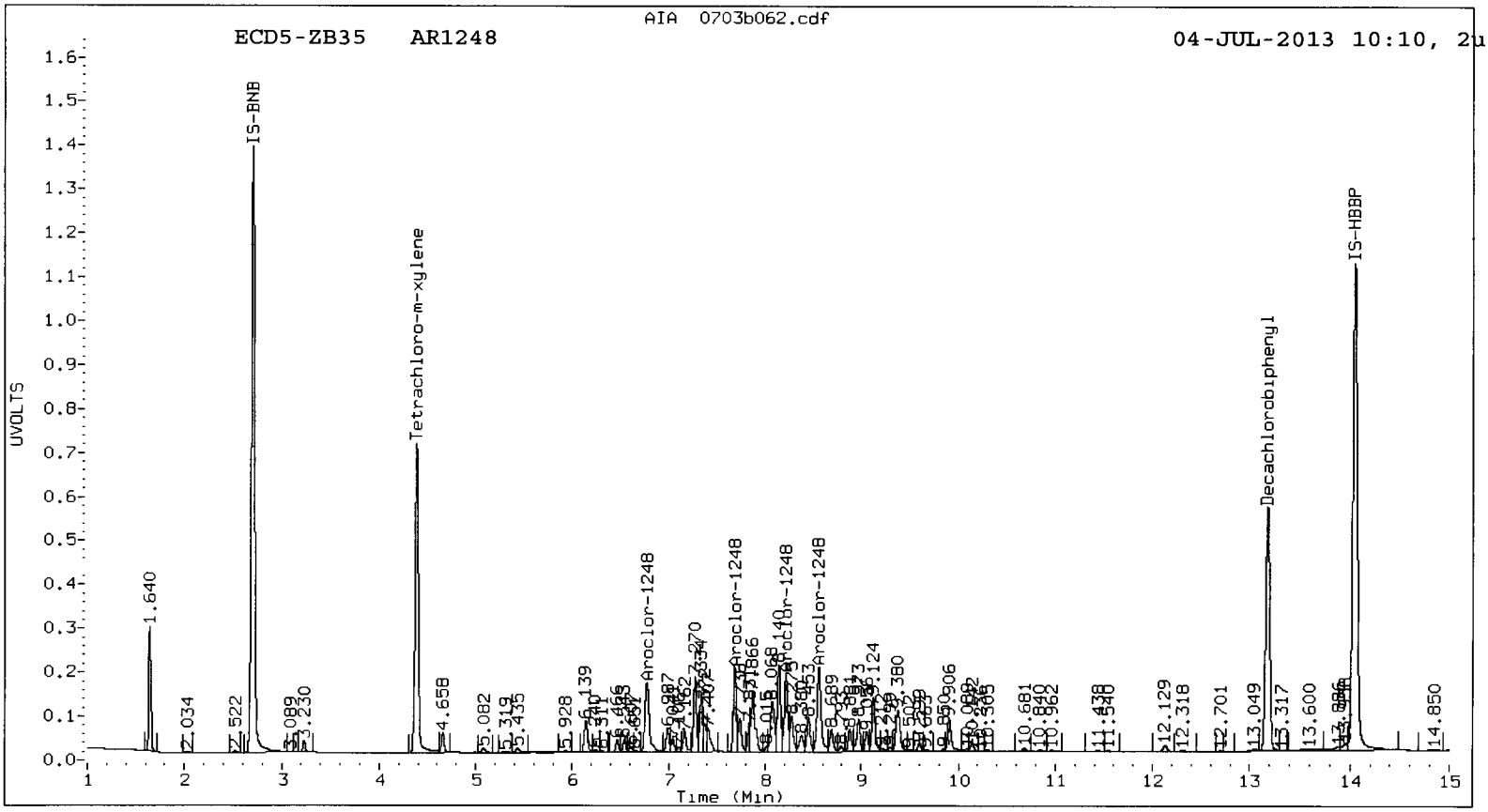
Corrected Ave (3 peaks): 241.1 Corrected Ave (3 peaks): 248.1 RPD = 3

Total PCB Area Col1 (4.487 - 12.714) = 189015058 Col1 Total PCB = 0.3 ppm*

Total PCB Area Col2 (4.486 - 13.078) = 36427185 Col2 Total PCB = 0.3 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR1248
AIA 0703b062.cdf
04-JUL-2013 10:10, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP


AIA 0703b062.cdf
ECD5-ZB35 AR1248
04-JUL-2013 10:10, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1248
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130703.b/0703-1.b/0703b063.d
Data file 2: 20130703.b/0703-2.b/0703b063.d
Method: /chem2/ecd5.i/20130703.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 04-JUL-2013 10:30
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.385	-0.002	34783199	4.385	-0.001	8374279	37.4	39.4	5.3	Tetrachloro-m-xylen
12.812	-0.002	49148484	13.178	0.000	7814917	35.2	35.1	0.1	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	93.4	98.5
Decachlorobiphenyl	87.9	87.9

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	54036699	58704751	8.6
Hexabromobiphenyl	94298658	98812668	4.8

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	16218104	16259974	0.3
Hexabromobiphenyl	17872840	17399472	-2.6

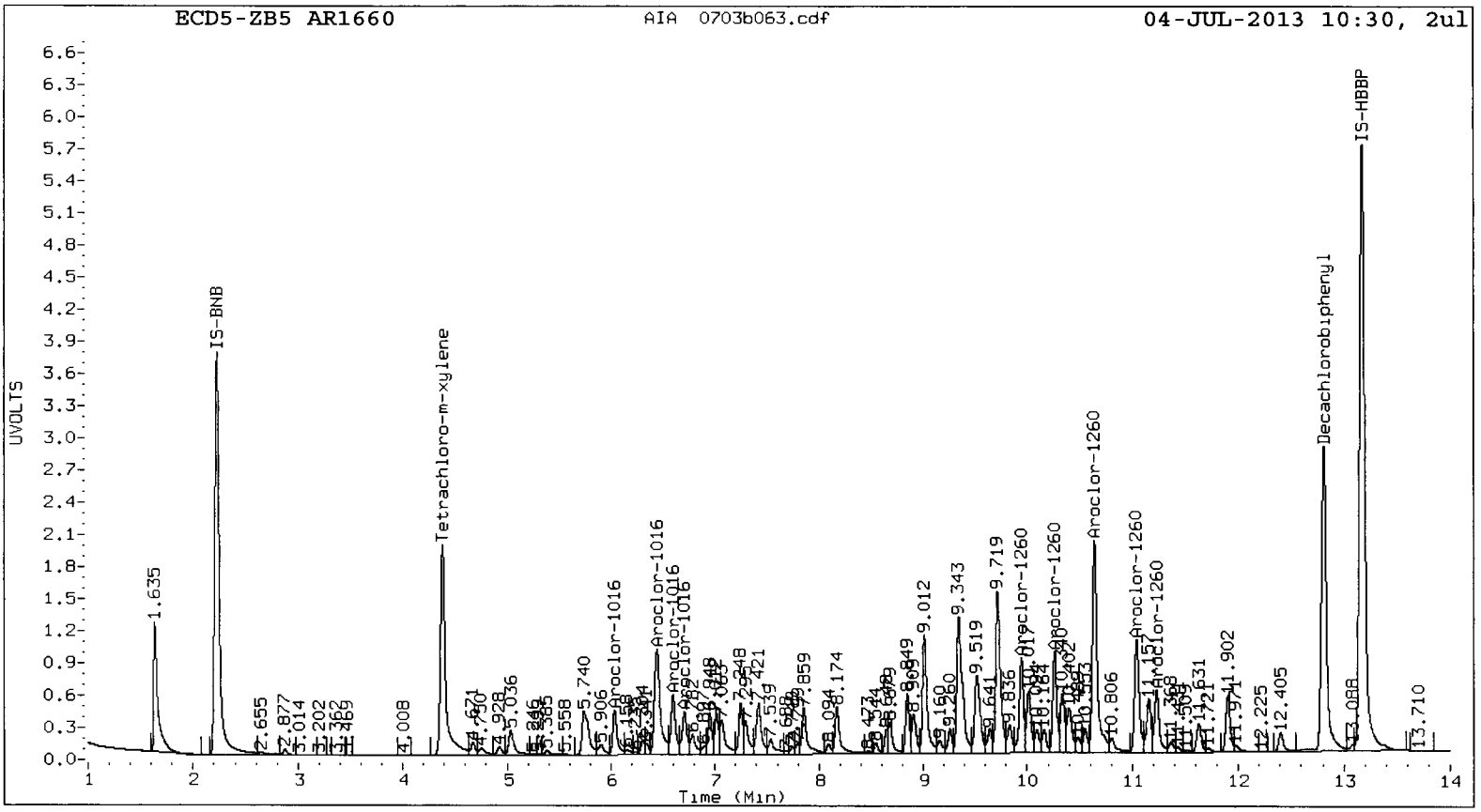
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

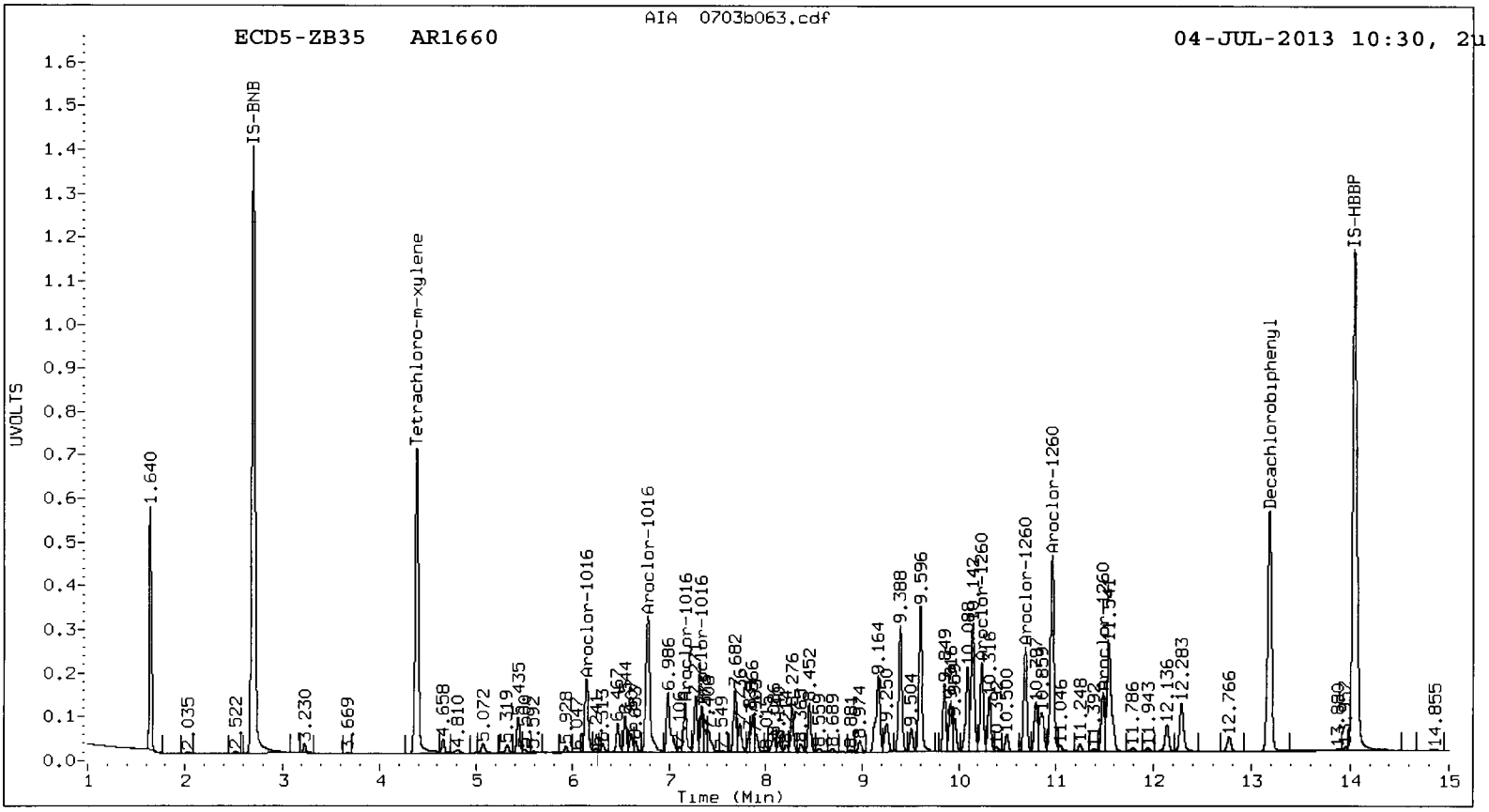
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.038	-0.001	6272411	230.6	1	6.141	-0.001	2190304	240.3
Aroclor-1016	2	6.445	-0.002	19693383	233.4	2	6.777	0.000	4825738	245.5
Aroclor-1016	3	6.595	-0.001	8626808	231.9	3	7.162	-0.001	1251243	245.0
Aroclor-1016	4	6.707	-0.001	6514675	236.6	4	7.335	-0.001	1130649	242.4
	Total Col1Ave (4 peaks):				233.1	Total Col2Ave (4 peaks):				243.3 RPD = 4
	Corrected Ave (3 peaks):				232.0	Corrected Ave (3 peaks):				242.6 RPD = 4
Aroclor-1260	1	9.949	-0.001	12624216	221.9	1	10.237	0.000	2390359	246.5
Aroclor-1260	2	10.266	-0.001	12659290	221.4	2	10.686	0.000	2852662	242.7
Aroclor-1260	3	10.642	-0.001	32436867	225.6	3	10.962	0.000	5601638	238.6
Aroclor-1260	4	11.041	-0.001	16679491	218.5	4	11.482	0.000	1560502	214.7
Aroclor-1260	5	11.231	-0.001	9308747	222.7	NS	---			----
	Total Col1Ave (5 peaks):				222.0	Total Col2Ave (4 peaks):				235.6 RPD = 6
	Corrected Ave (4 peaks):				221.1	Corrected Ave (3 peaks):				232.0 RPD = 5

Total PCB Area Col1 (4.487 - 12.714) = 388802302 Col1 Total PCB = 0.6 ppm*

Total PCB Area Col2 (4.486 - 13.078) = 72873959 Col2 Total PCB = 0.6 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR1660
AIA 0703b063.cdf
04-JUL-2013 10:30, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP


AIA 0703b063.cdf
ECD5-ZB35 AR1660
04-JUL-2013 10:30, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130703.b/0703-1.b/0703b064.d
Data file 2: 20130703.b/0703-2.b/0703b064.d
Method: /chem2/ecd5.i/20130703.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WU70B
Client ID: LF-TP-001-20130619-
Injection Date: 04-JUL-2013 10:50
Ical Date: 07-MAY-2013
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.386	-0.001	21352532	4.386	0.001	4998802	26.2	26.3	0.4	Tetrachloro-m-xylen
12.815	0.001	29503456	13.180	0.002	4949243	25.0	24.0	4.2	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	65.6	65.9
Decachlorobiphenyl	62.6	60.1

JK 07/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	54036699	51354391	-5.0
Hexabromobiphenyl	94298658	83281105	-11.7

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	16218104	14524968	-10.4
Hexabromobiphenyl	17872840	16121762	-9.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	ZB5 Col RT	Shift	Area	Amount	Peak#	ZB35 Col RT	Shift	Area	Amount
Aroclor-1016	1	6.015	-0.024	581744	24.4	1	6.145	0.003	101719	12.5
Aroclor-1016	2	6.446	-0.001	780878	10.6	2	6.779	0.002	170914	9.7
Aroclor-1016	3	6.599	0.003	156505	4.8	3	7.161	-0.002	38457	8.4
Aroclor-1016	4	6.708	0.000	334384	13.9	4	7.334	-0.002	85967	20.6
	Total Col1Ave (4 peaks):				13.4		Total Col2Ave (4 peaks):			12.8 RPD = 5
	Corrected Ave (3 peaks):				9.8		Corrected Ave (3 peaks):			10.2 RPD = 5
Aroclor-1221	1	4.673	-0.080	2253191	198.0	1	3.685	0.012	563132	379.5
Aroclor-1221	2	4.915	-0.014	326482	41.5	2	5.080	0.011	104890	41.6
Aroclor-1221	3	5.038	0.001	80618	3.6	3	5.343	0.022	502133	354.7
Aroclor-1221	NS	---			----	4	5.458	0.022	1611893	366.3
	Total Col1Ave (3 peaks):				81.0		Total Col2Ave (4 peaks):			285.5 RPD = 112*
	Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			254.2
Aroclor-1232	1	4.673	-0.079	2253191	299.2	1	5.080	0.011	104890	67.6
Aroclor-1232	2	4.915	-0.012	326482	58.2	2	5.343	0.023	502133	566.9
Aroclor-1232	3	6.015	-0.021	581744	59.6	3	5.458	0.024	1611893	516.7
Aroclor-1232	4	6.446	0.003	780878	25.9	4	6.145	0.004	101719	27.5
	Total Col1Ave (4 peaks):				110.7		Total Col2Ave (4 peaks):			294.7 RPD = 91*
	Corrected Ave (3 peaks):				47.9		Corrected Ave (3 peaks):			203.9 RPD = 124*
Aroclor-1242	1	6.015	-0.023	581744	30.4	1	6.145	0.003	101719	15.5
Aroclor-1242	2	6.446	-0.001	780878	13.3	2	6.779	0.001	170914	12.0
Aroclor-1242	3	6.599	0.004	156505	6.0	3	6.995	0.007	75786	12.8
Aroclor-1242	4	7.858	0.005	2185364	68.9	4	8.212	-0.004	142216	28.5
	Total Col1Ave (4 peaks):				29.7		Total Col2Ave (4 peaks):			17.2 RPD = 53*
	Corrected Ave (3 peaks):				16.6		Corrected Ave (3 peaks):			13.4 RPD = 21
Aroclor-1248	1	6.446	0.003	780878	20.7	1	6.779	0.006	170914	19.0
Aroclor-1248	2	7.421	0.000	483349	11.6	2	7.685	0.002	253569	34.3
Aroclor-1248	3	7.858	0.005	2185364	41.3	3	8.212	-0.002	142216	18.5
Aroclor-1248	4	8.084	-0.006	1149975	30.4	4	8.548	-0.012	426782	42.5
	Total Col1Ave (4 peaks):				26.0		Total Col2Ave (4 peaks):			28.6 RPD = 9
	Corrected Ave (3 peaks):				20.9		Corrected Ave (3 peaks):			24.0 RPD = 14
Aroclor-1254	1	8.171	-0.002	2608713	51.6	1	8.277	0.002	482349	69.9
Aroclor-1254	2	8.548	0.003	2719475	81.8	2	8.454	0.003	586845	68.1
Aroclor-1254	3	8.680	-0.002	4862410	70.7	3	8.973	0.000	886649	132.6
Aroclor-1254	4	9.020	-0.015	5129577	69.1	4	9.124	0.000	923051	64.1
Aroclor-1254	5	9.344	-0.001	2939846	99.4	5	9.911	0.002	675783	79.6
	Total Col1Ave (5 peaks):				74.5		Total Col2Ave (5 peaks):			82.8 RPD = 11
	Corrected Ave (4 peaks):				68.3		Corrected Ave (4 peaks):			70.4 RPD = 3
Aroclor-1260	1	9.950	-0.001	1621605	33.8	1	10.239	0.002	355188	39.5
Aroclor-1260	2	10.267	0.000	1381075	28.7	2	10.683	-0.003	726025	66.7
Aroclor-1260	3	10.676	0.033	10142774	63.7	3	10.962	0.001	925863	42.6
Aroclor-1260	4	11.041	-0.001	2546727	39.6	4	11.480	-0.002	220960	32.8
Aroclor-1260	5	11.231	-0.001	1358652	38.6	NS	---			----
	Total Col1Ave (5 peaks):				44.9		Total Col2Ave (4 peaks):			45.4 RPD = 1
	Corrected Ave (4 peaks):				35.2		Corrected Ave (3 peaks):			38.3 RPD = 9
Aroclor-1262	1	10.267	0.002	1381075	23.6	1	10.239	0.001	355188	24.8
Aroclor-1262	2	10.676	0.035	10142774	72.7	2	10.683	-0.003	726025	53.6
Aroclor-1262	3	11.041	0.000	2546727	51.7	3	10.962	0.001	925863	34.4
Aroclor-1262	4	11.231	0.001	1358652	20.6	4	11.542	-0.001	634641	33.4
Aroclor-1262	5	11.888	-0.012	3677603	62.2	5	12.283	0.001	259300	24.4
	Total Col1Ave (5 peaks):				46.2		Total Col2Ave (5 peaks):			34.1 RPD = 30
	Corrected Ave (4 peaks):				39.5		Corrected Ave (4 peaks):			29.2 RPD = 30
Aroclor-1268	1	11.160	0.003	1236288	8.8	1	11.480	0.000	220960	7.7

WU70:01454

Aroclor-1268 2	11.231	0.002	1358652	9.3	2	11.542	-0.006	634641	22.9
Aroclor-1268 3	11.629	0.016	832447	6.9	3	11.944	0.000	55899	2.5
Aroclor-1268 4	12.409	0.003	780913	2.2	4	12.769	0.003	122929	1.8

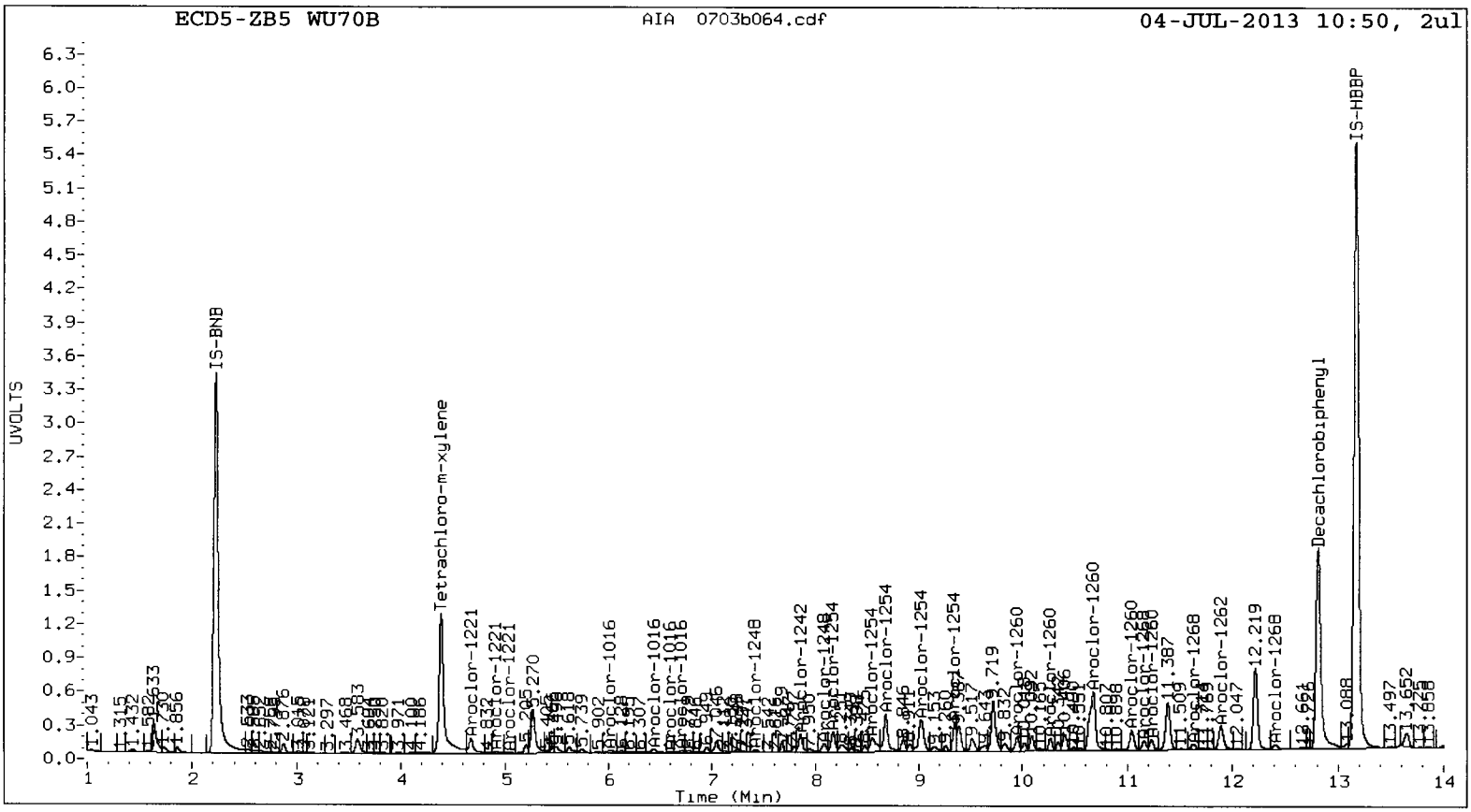
Total Col1Ave (4 peaks): 6.8 Total Col2Ave (4 peaks): 8.7 RPD = 25

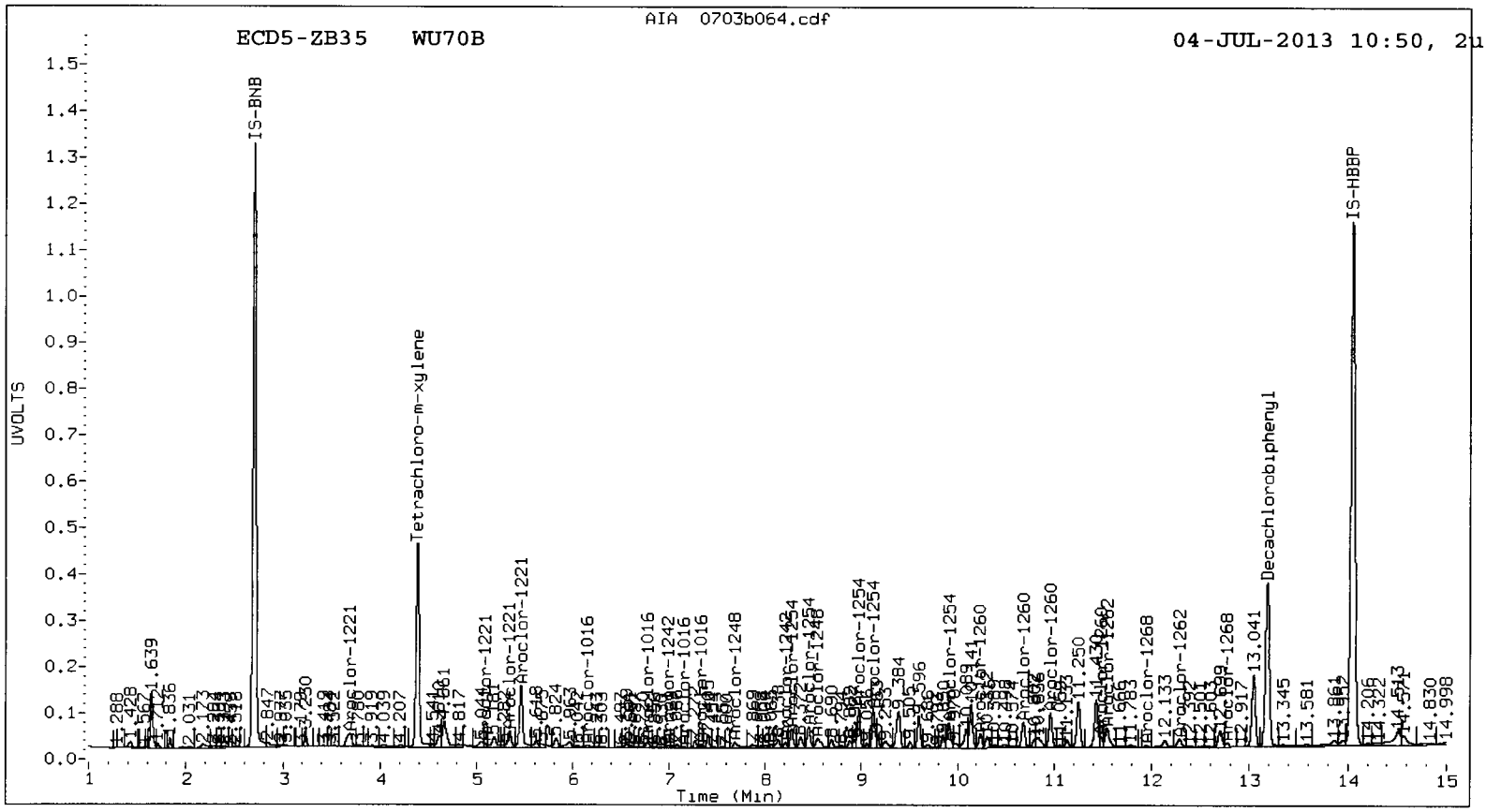
Corrected Ave (3 peaks): 6.0 Corrected Ave (3 peaks): 4.0 RPD = 39

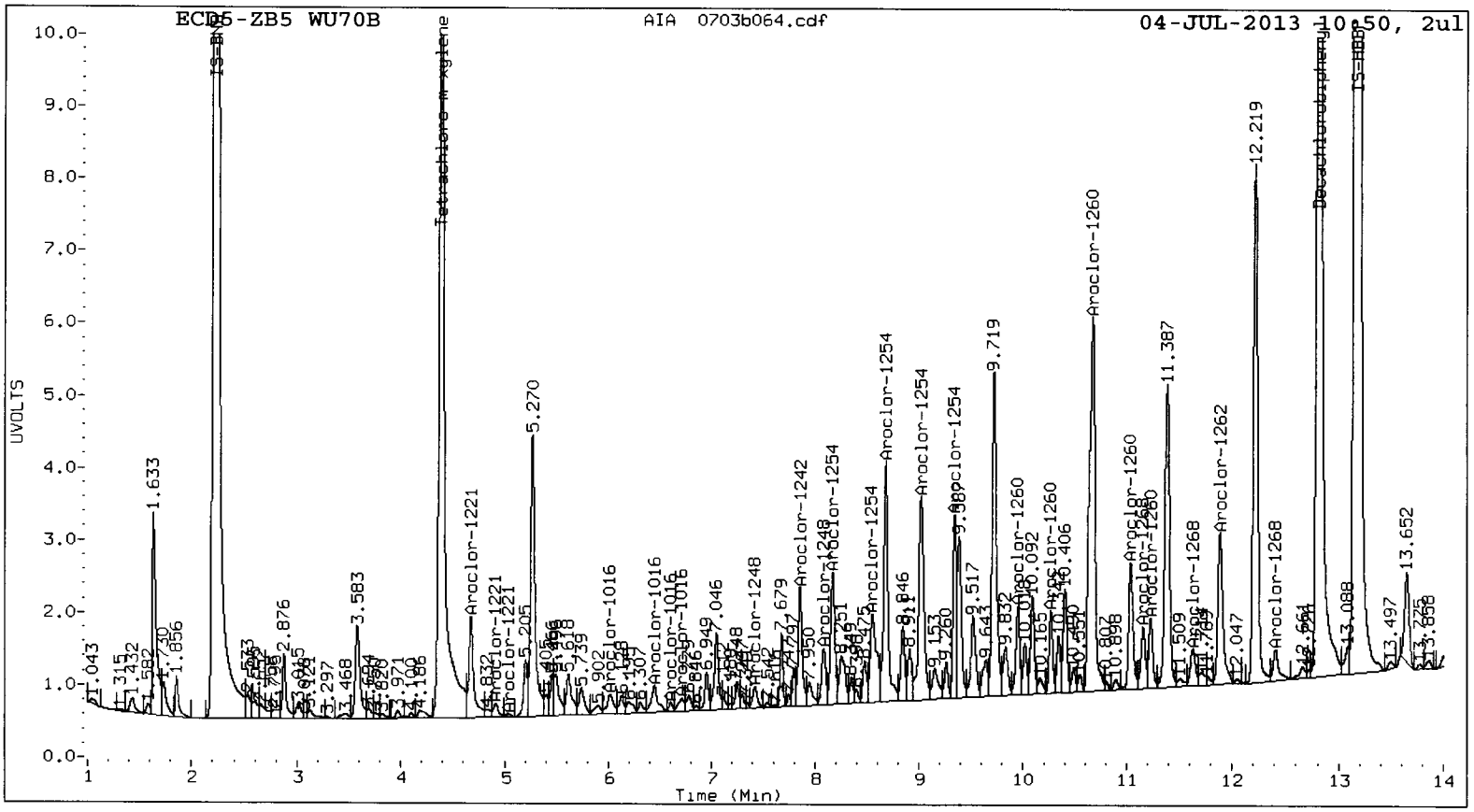
Total PCB Area Col1 (4.487 - 12.714) = 113180557 Col1 Total PCB = 0.2 ppm*

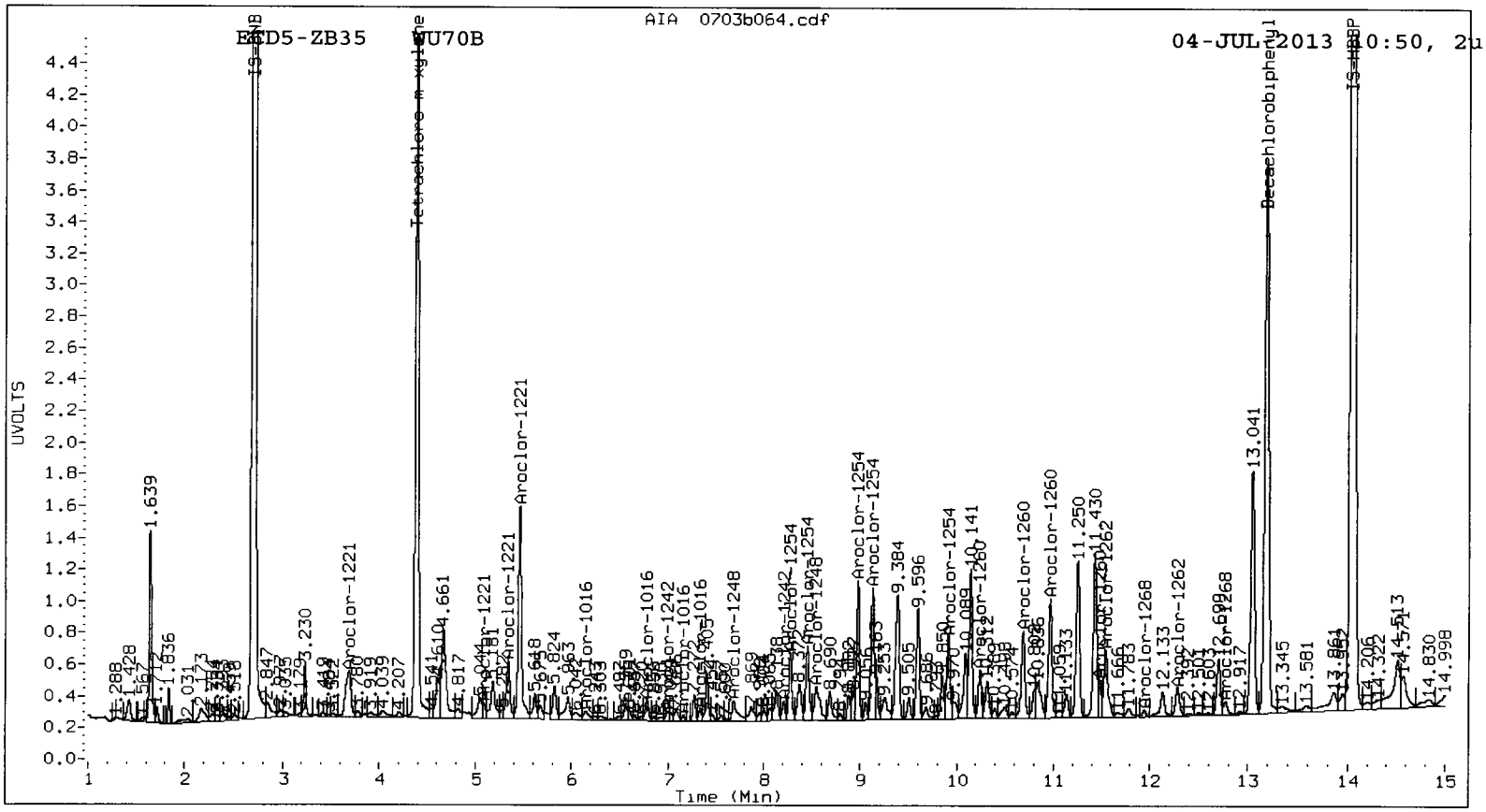
Total PCB Area Col2 (4.486 - 13.078) = 28291397 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 WU70B
AIA 0703b064.cdf
04-JUL-2013 10:50, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP


AIA 0703b064.cdf
ECD5-ZB35 WU70B
04-JUL-2013 10:50, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 WU70B
AIA 0703b064.cdf
04-JUL-2013 10:50, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268


ECD5-ZB35 WU70B
AIA 0703b064.cdf
04-JUL-2013 10:50, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130703.b/0703-1.b/0703b065.d
Data file 2: 20130703.b/0703-2.b/0703b065.d
Method: /chem2/ecd5.i/20130703.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WU70C
Client ID: LF-LS-004-20130619-
Injection Date: 04-JUL-2013 11:11
Ical Date: 07-MAY-2013
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.386	-0.001	22080167	4.385	0.000	5488503	25.7	28.6	10.5	Tetrachloro-m-xylen
12.814	0.000	35994804	13.178	0.000	6206080	30.0	25.7	15.6	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	64.3	71.4
Decachlorobiphenyl	74.9	64.1

JR 07/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	54036699	54184459	0.3
Hexabromobiphenyl	94298658	84897756	-10.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	16218104	14709195	-9.3
Hexabromobiphenyl	17872840	18929027	5.9

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

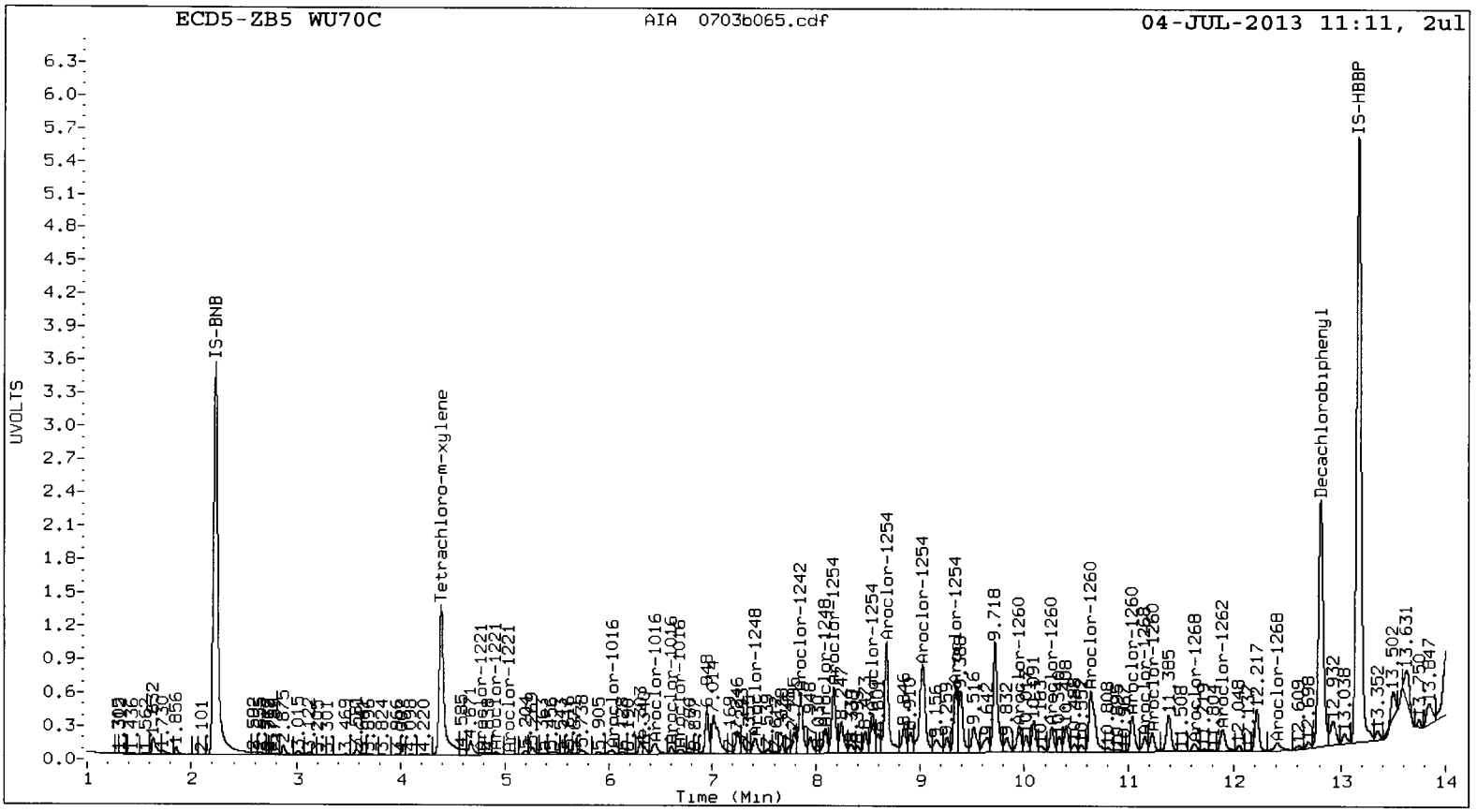
Aroclor	Peak#	RT	Shift	ZB5 Col Area	Amount	Peak#	RT	Shift	ZB35 Col Area	Amount
Aroclor-1016	1	6.030	-0.008	704569	28.1	1	6.143	0.000	219474	26.6
Aroclor-1016	2	6.443	-0.004	1953820	25.1	2	6.773	-0.004	561940	31.6
Aroclor-1016	3	6.602	0.006	877288	25.6	3	7.162	-0.001	88852	19.2
Aroclor-1016	4	6.686	-0.022	739530	29.1	4	7.334	-0.002	1029818	244.0
Total Col1Ave (4 peaks):					27.0	Total Col2Ave (4 peaks):				80.4 RPD = 100*
Corrected Ave (3 peaks):					26.2	Corrected Ave (3 peaks):				25.8 RPD = 2
Aroclor-1221	1	4.770	0.018	238268	19.8	1	3.658	-0.016	201757	134.3
Aroclor-1221	2	4.917	-0.012	386147	46.5	2	5.082	0.013	93175	36.5
Aroclor-1221	3	5.038	0.001	136999	5.8	3	5.340	0.019	269196	187.8
Aroclor-1221	NS	---			----	4	5.457	0.021	389186	87.3
Total Col1Ave (3 peaks):					24.0	Total Col2Ave (4 peaks):				111.5 RPD = 129*
Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):				86.0
Aroclor-1232	1	4.770	0.018	238268	30.0	1	5.082	0.013	93175	59.3
Aroclor-1232	2	4.917	-0.010	386147	65.2	2	5.340	0.020	269196	300.1
Aroclor-1232	3	6.030	-0.006	704569	68.4	3	5.457	0.022	389186	123.2
Aroclor-1232	4	6.443	0.000	1953820	61.3	4	6.143	0.002	219474	58.6
Total Col1Ave (4 peaks):					56.2	Total Col2Ave (4 peaks):				135.3 RPD = 83*
Corrected Ave (3 peaks):					52.2	Corrected Ave (3 peaks):				80.4 RPD = 43*
Aroclor-1242	1	6.030	-0.008	704569	34.9	1	6.143	0.001	219474	33.0
Aroclor-1242	2	6.443	-0.004	1953820	31.5	2	6.773	-0.005	561940	38.9
Aroclor-1242	3	6.602	0.006	877288	31.9	3	6.987	0.000	80041	13.4
Aroclor-1242	4	7.857	0.003	7411240	221.6	4	8.211	-0.004	543056	107.5
Total Col1Ave (4 peaks):					80.0	Total Col2Ave (4 peaks):				48.2 RPD = 50*
Corrected Ave (3 peaks):					32.8	Corrected Ave (3 peaks):				28.4 RPD = 14
Aroclor-1248	1	6.443	0.000	1953820	49.2	1	6.773	0.000	561940	61.8
Aroclor-1248	2	7.417	-0.004	2347188	53.6	2	7.682	0.000	694832	92.9
Aroclor-1248	3	7.857	0.004	7411240	132.8	3	8.211	-0.003	543056	69.9
Aroclor-1248	4	8.091	0.000	2928350	73.4	4	8.545	-0.015	1072737	105.6
Total Col1Ave (4 peaks):					77.2	Total Col2Ave (4 peaks):				82.5 RPD = 7
Corrected Ave (3 peaks):					58.7	Corrected Ave (3 peaks):				74.8 RPD = 24
Aroclor-1254	1	8.171	-0.002	8390661	157.3	1	8.277	0.001	1444188	206.6
Aroclor-1254	2	8.543	-0.001	5078986	144.8	2	8.452	0.001	1580452	181.0
Aroclor-1254	3	8.679	-0.002	14740975	203.0	3	8.972	-0.001	1526327	225.4
Aroclor-1254	4	9.024	-0.011	15035472	192.0	4	9.122	-0.001	3154879	216.4
Aroclor-1254	5	9.342	-0.002	7275458	233.1	5	9.908	-0.002	1590546	184.9
Total Col1Ave (5 peaks):					186.0	Total Col2Ave (5 peaks):				202.9 RPD = 9
Corrected Ave (4 peaks):					174.3	Corrected Ave (4 peaks):				197.2 RPD = 12
Aroclor-1260	1	9.948	-0.002	3396013	69.5	1	10.235	-0.002	710324	67.3
Aroclor-1260	2	10.266	-0.001	2985449	60.8	2	10.682	-0.005	1273505	99.6
Aroclor-1260	3	10.642	-0.001	11313371	91.6	3	10.960	-0.001	1549164	60.7
Aroclor-1260	4	11.041	-0.002	4868596	74.2	4	11.480	-0.002	429299	54.3
Aroclor-1260	5	11.231	-0.001	2461738	68.5	NS	---			----
Total Col1Ave (5 peaks):					72.9	Total Col2Ave (4 peaks):				70.5 RPD = 3
Corrected Ave (4 peaks):					68.3	Corrected Ave (3 peaks):				60.8 RPD = 12
Aroclor-1262	1	10.266	0.001	2985449	50.1	1	10.235	-0.002	710324	42.2
Aroclor-1262	2	10.642	0.001	11313371	79.5	2	10.682	-0.005	1273505	80.1
Aroclor-1262	3	11.041	0.000	4868596	96.9	3	10.960	-0.001	1549164	49.1
Aroclor-1262	4	11.231	0.001	2461738	36.6	4	11.540	-0.003	1083395	48.5
Aroclor-1262	5	11.895	-0.006	3584528	59.5	5	12.281	-0.001	423782	33.9
Total Col1Ave (5 peaks):					64.5	Total Col2Ave (5 peaks):				50.8 RPD = 24
Corrected Ave (4 peaks):					56.4	Corrected Ave (4 peaks):				43.4 RPD = 26
Aroclor-1268	1	11.158	0.001	2041607	14.2	1	11.480	-0.001	429299	12.8

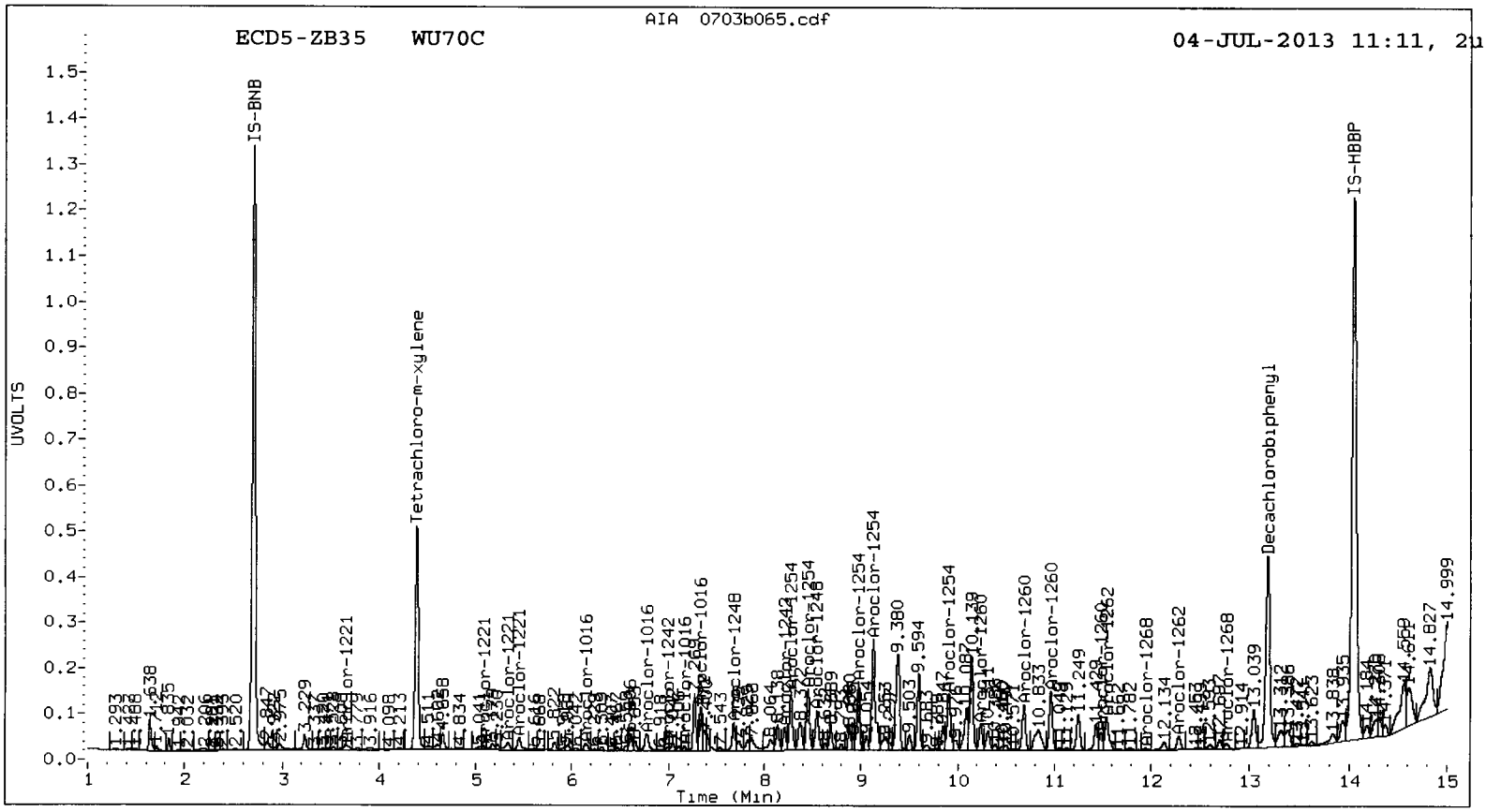
Aroclor-1268 2	11.231	0.002	2461738	16.5	2	11.540	-0.008	1083395	33.3
Aroclor-1268 3	11.630	0.016	1138819	9.2	3	11.945	0.001	51348	1.9
Aroclor-1268 4	12.406	0.000	1590916	4.5	4	12.765	-0.001	170727	2.2
Total Col1Ave (4 peaks):				11.1	Total Col2Ave (4 peaks):			12.5	RPD = 12
Corrected Ave (3 peaks):				9.3	Corrected Ave (3 peaks):			5.6	RPD = 49*

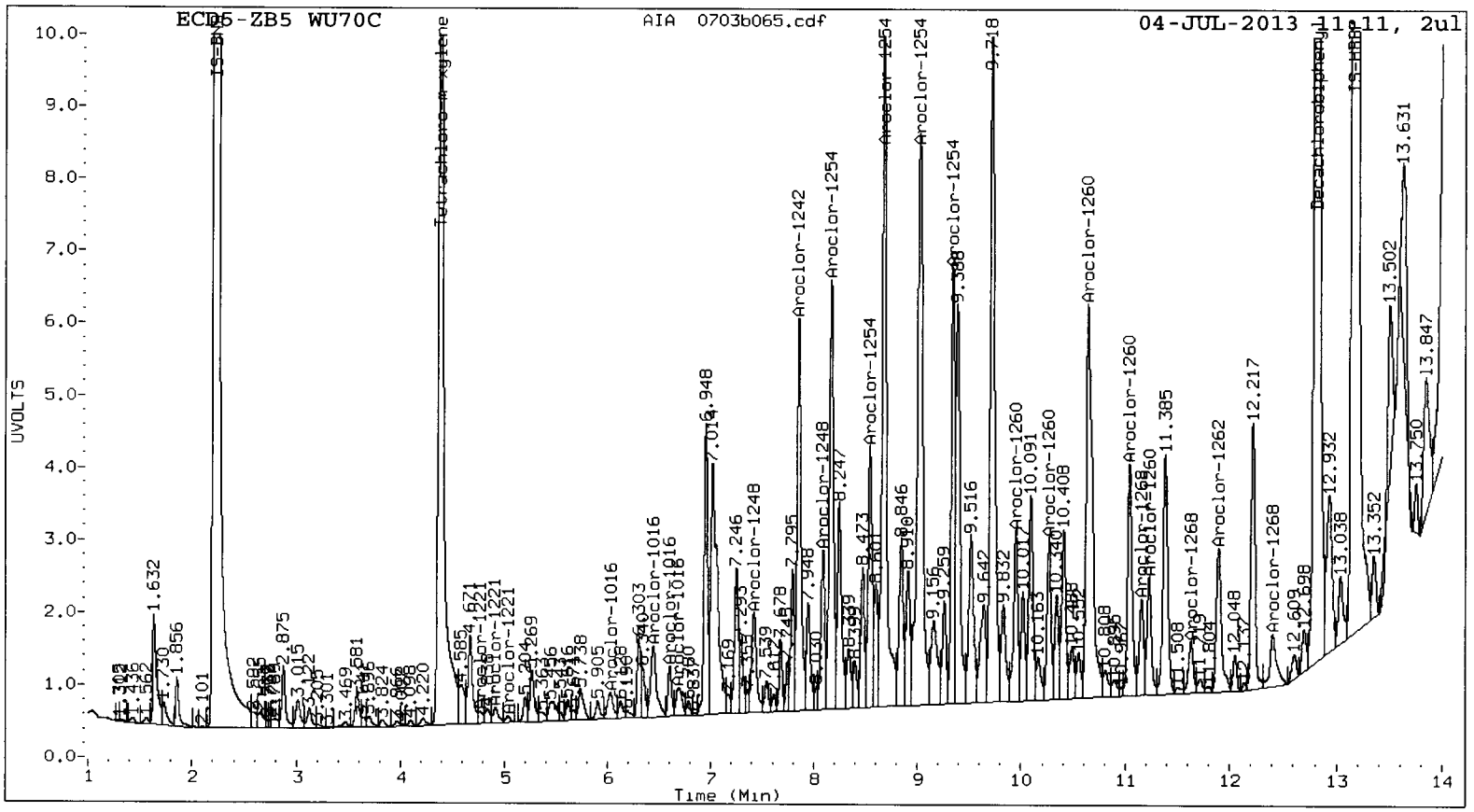
Total PCB Area Col1 (4.487 - 12.714) = 216518928 Col1 Total PCB = 0.4 ppm*

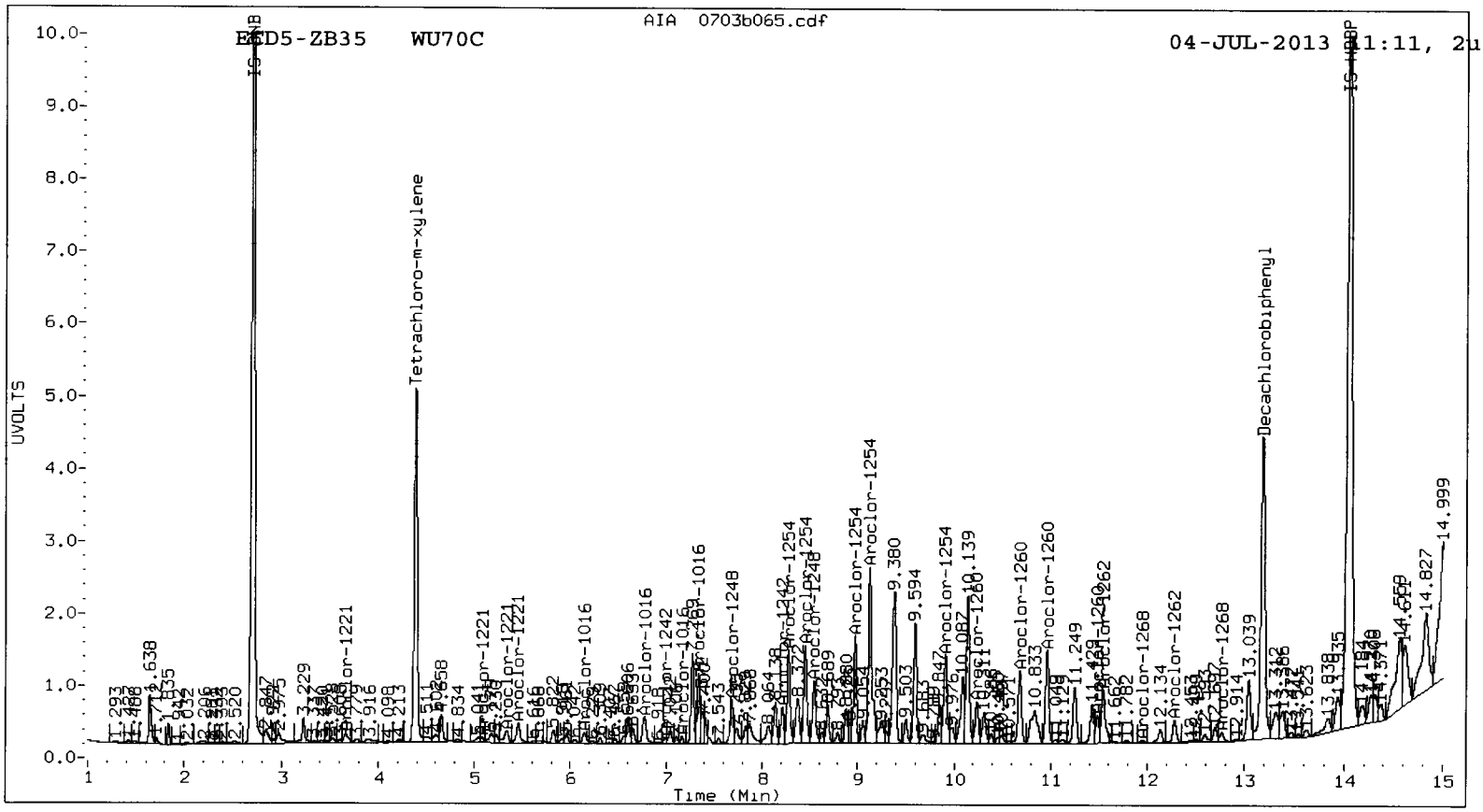
Total PCB Area Col2 (4.486 - 13.078) = 46858499 Col2 Total PCB = 0.4 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 WU70C
AIA 0703b065.cdf
04-JUL-2013 11:11, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP


ECD5-ZB35 WU70C
AIA 0703b065.cdf
04-JUL-2013 11:11, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 WU70C
AIA 0703b065.cdf
04-JUL-2013 11:11, 2ul
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1242
Aroclor-1254
Aroclor-1260
Aroclor-1248
Aroclor-1016
Aroclor-1221
Aroclor-1262
Aroclor-1268


ECD5-ZB35 WU70C
AIA 0703b065.cdf
04-JUL-2013 11:11, 2u
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Decachlorobiphenyl
Aroclor-1242
Aroclor-1254
Aroclor-1260
Aroclor-1248
Aroclor-1016
Aroclor-1221
Aroclor-1262
Aroclor-1268

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130703.b/0703-1.b/0703b066.d
Data file 2: 20130703.b/0703-2.b/0703b066.d
Method: /chem2/ecd5.i/20130703.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WU70CMS
Client ID: LF-LS-004-20130 MS
Injection Date: 04-JUL-2013 11:31
Ical Date: 07-MAY-2013
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.384	-0.002	22272048	4.385	-0.001	5295949	25.9	27.4	5.7	Tetrachloro-m-xylen
12.815	0.001	40615860	13.179	0.001	8365241	32.1	27.6	15.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	64.7	68.5
Decachlorobiphenyl	80.3	68.9

JK 07/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	54036699	54249883	0.4
Hexabromobiphenyl	94298658	89377780	-5.2

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	16218104	14784141	-8.8
Hexabromobiphenyl	17872840	23741179	32.8

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1016	1	6.037	-0.002	7298965	290.4	1	6.141	-0.001	2864372	345.7
Aroclor-1016	2	6.444	-0.003	25769510	330.6	2	6.775	-0.002	6613776	370.0
Aroclor-1016	3	6.594	-0.002	10131835	294.7	3	7.160	-0.003	1663091	358.1
Aroclor-1016	4	6.704	-0.004	7570268	297.5	4	7.334	-0.002	2434875	574.1
	Total Col1Ave (4 peaks):			303.3		Total Col2Ave (4 peaks):			412.0	RPD = 30
	Corrected Ave (3 peaks):			294.2		Corrected Ave (3 peaks):			357.9	RPD = 20
Aroclor-1221	1	4.751	-0.001	1247223	103.8	1	3.659	-0.015	229154	151.7
Aroclor-1221	2	4.930	0.001	1091129	131.2	2	5.068	-0.001	342191	133.2
Aroclor-1221	3	5.035	-0.001	4682843	196.9	3	5.322	0.001	380566	264.1
Aroclor-1221	NS	---			----	4	5.435	-0.001	1475249	329.3
	Total Col1Ave (3 peaks):			143.9		Total Col2Ave (4 peaks):			219.6	RPD = 42*
	Corrected Ave: < 3 Peaks					Corrected Ave (3 peaks):			183.0	
Aroclor-1232	1	4.751	-0.001	1247223	156.8	1	5.068	-0.001	342191	216.7
Aroclor-1232	2	4.930	0.003	1091129	184.0	2	5.322	0.002	380566	422.2
Aroclor-1232	3	6.037	0.001	7298965	707.7	3	5.435	0.000	1475249	464.6
Aroclor-1232	4	6.444	0.001	25769510	807.9	4	6.141	0.000	2864372	761.1
	Total Col1Ave (4 peaks):			464.1		Total Col2Ave (4 peaks):			466.1	RPD = 0
	Corrected Ave (3 peaks):			349.5		Corrected Ave (3 peaks):			367.8	RPD = 5
Aroclor-1242	1	6.037	-0.001	7298965	361.1	1	6.141	0.000	2864372	428.4
Aroclor-1242	2	6.444	-0.003	25769510	414.4	2	6.775	-0.003	6613776	455.7
Aroclor-1242	3	6.594	-0.002	10131835	368.5	3	6.985	-0.002	2208411	366.5
Aroclor-1242	4	7.857	0.004	13236916	395.2	4	8.211	-0.005	711943	140.2
	Total Col1Ave (4 peaks):			384.8		Total Col2Ave (4 peaks):			347.7	RPD = 10
	Corrected Ave (3 peaks):			375.0		Corrected Ave (3 peaks):			311.7	RPD = 18
Aroclor-1248	1	6.444	0.001	25769510	647.8	1	6.775	0.002	6613776	723.1
Aroclor-1248	2	7.420	-0.001	10121898	230.9	2	7.682	0.000	2653943	353.0
Aroclor-1248	3	7.857	0.004	13236916	236.9	3	8.211	-0.003	711943	91.1
Aroclor-1248	4	8.090	0.000	3820468	95.6	4	8.547	-0.013	1301173	127.4
	Total Col1Ave (4 peaks):			302.8		Total Col2Ave (4 peaks):			323.7	RPD = 7
	Corrected Ave (3 peaks):			187.8		Corrected Ave (3 peaks):			190.5	RPD = 1
Aroclor-1254	1	8.172	0.000	14601295	273.4	1	8.277	0.001	2522445	359.0
Aroclor-1254	2	8.543	-0.001	6256821	178.2	2	8.452	0.000	2995707	341.3
Aroclor-1254	3	8.679	-0.002	20052212	275.8	3	8.972	-0.001	1604883	235.8
Aroclor-1254	4	9.014	-0.021	32310593	412.1	4	9.122	-0.001	3507823	239.4
Aroclor-1254	5	9.341	-0.003	28633361	916.3	5	9.912	0.003	3262644	377.4
	Total Col1Ave (5 peaks):			411.1		Total Col2Ave (5 peaks):			310.6	RPD = 28
	Corrected Ave (4 peaks):			284.9		Corrected Ave (4 peaks):			293.9	RPD = 3
Aroclor-1260	1	9.949	-0.001	16959061	329.6	1	10.237	0.000	3763129	284.4
Aroclor-1260	2	10.266	0.000	15788723	305.3	2	10.685	-0.001	5491903	342.5
Aroclor-1260	3	10.641	-0.002	49800951	382.9	3	10.961	0.000	9148255	285.6
Aroclor-1260	4	11.041	-0.002	24889126	360.5	4	11.482	0.000	2413353	243.3
Aroclor-1260	5	11.232	-0.001	12985825	343.5	NS	---			----
	Total Col1Ave (5 peaks):			344.3		Total Col2Ave (4 peaks):			289.0	RPD = 17
	Corrected Ave (4 peaks):			334.7		Corrected Ave (3 peaks):			271.1	RPD = 21
Aroclor-1262	1	10.266	0.001	15788723	251.8	1	10.237	0.000	3763129	178.4
Aroclor-1262	2	10.641	0.000	49800951	332.6	2	10.685	-0.001	5491903	275.5
Aroclor-1262	3	11.041	0.000	24889126	470.6	3	10.961	0.000	9148255	231.1
Aroclor-1262	4	11.232	0.001	12985825	183.3	4	11.541	-0.002	5828096	208.0
Aroclor-1262	5	11.899	-0.001	12528586	197.6	5	12.281	-0.001	2206930	140.8
	Total Col1Ave (5 peaks):			287.2		Total Col2Ave (5 peaks):			206.8	RPD = 33
	Corrected Ave (4 peaks):			241.4		Corrected Ave (4 peaks):			189.6	RPD = 24
Aroclor-1268	1	11.159	0.002	10452510	69.2	1	11.482	0.001	2413353	57.2

Aroclor-1268	2	11.232	0.003	12985825	82.4	2	11.541	-0.007	5828096	142.8
Aroclor-1268	3	11.631	0.018	5273996	40.5	3	11.946	0.003	386017	11.5
Aroclor-1268	4	12.407	0.001	6518674	17.5	4	12.765	-0.001	748758	7.6

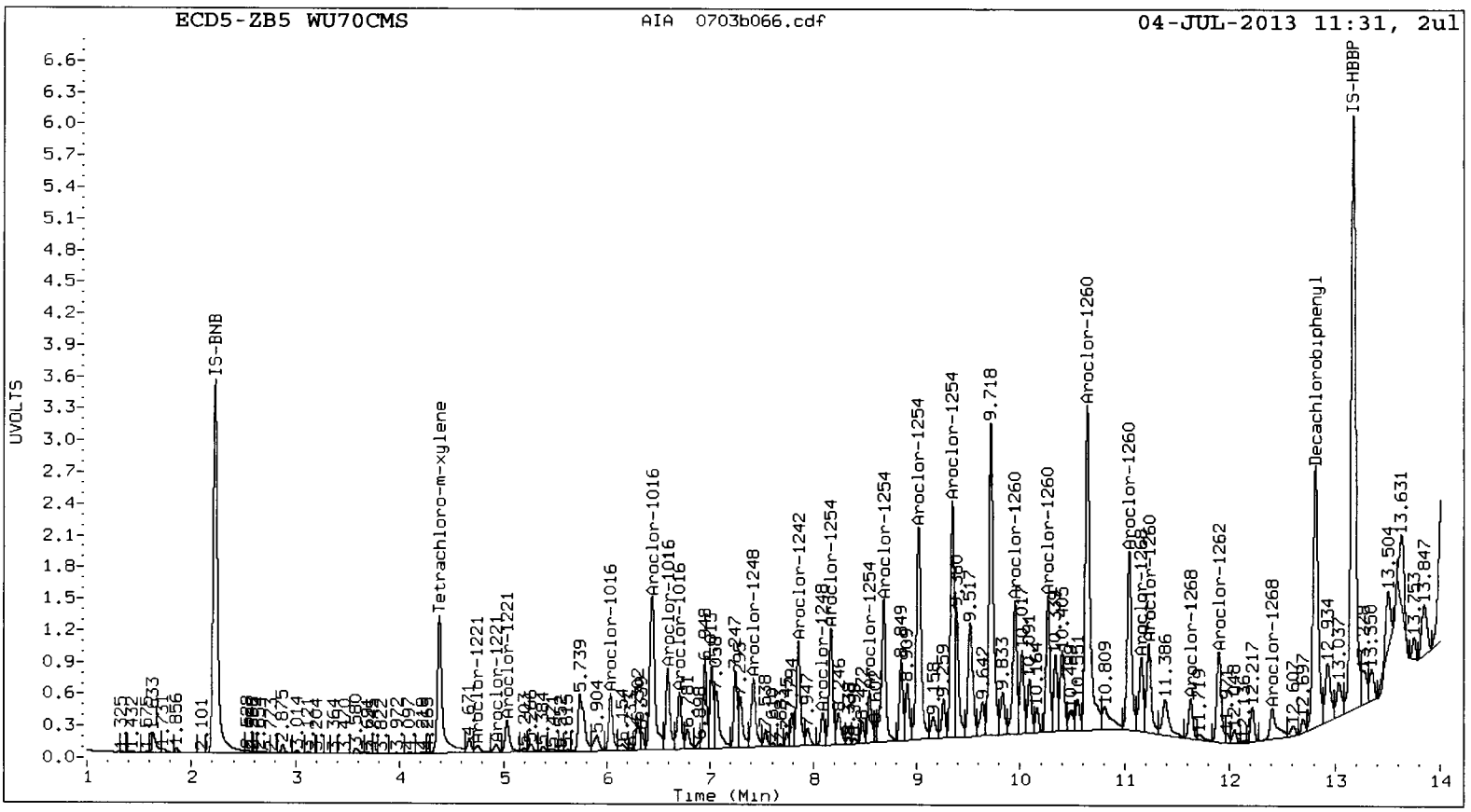
Total Col1Ave (4 peaks): 52.4 Total Col2Ave (4 peaks): 54.8 RPD = 4

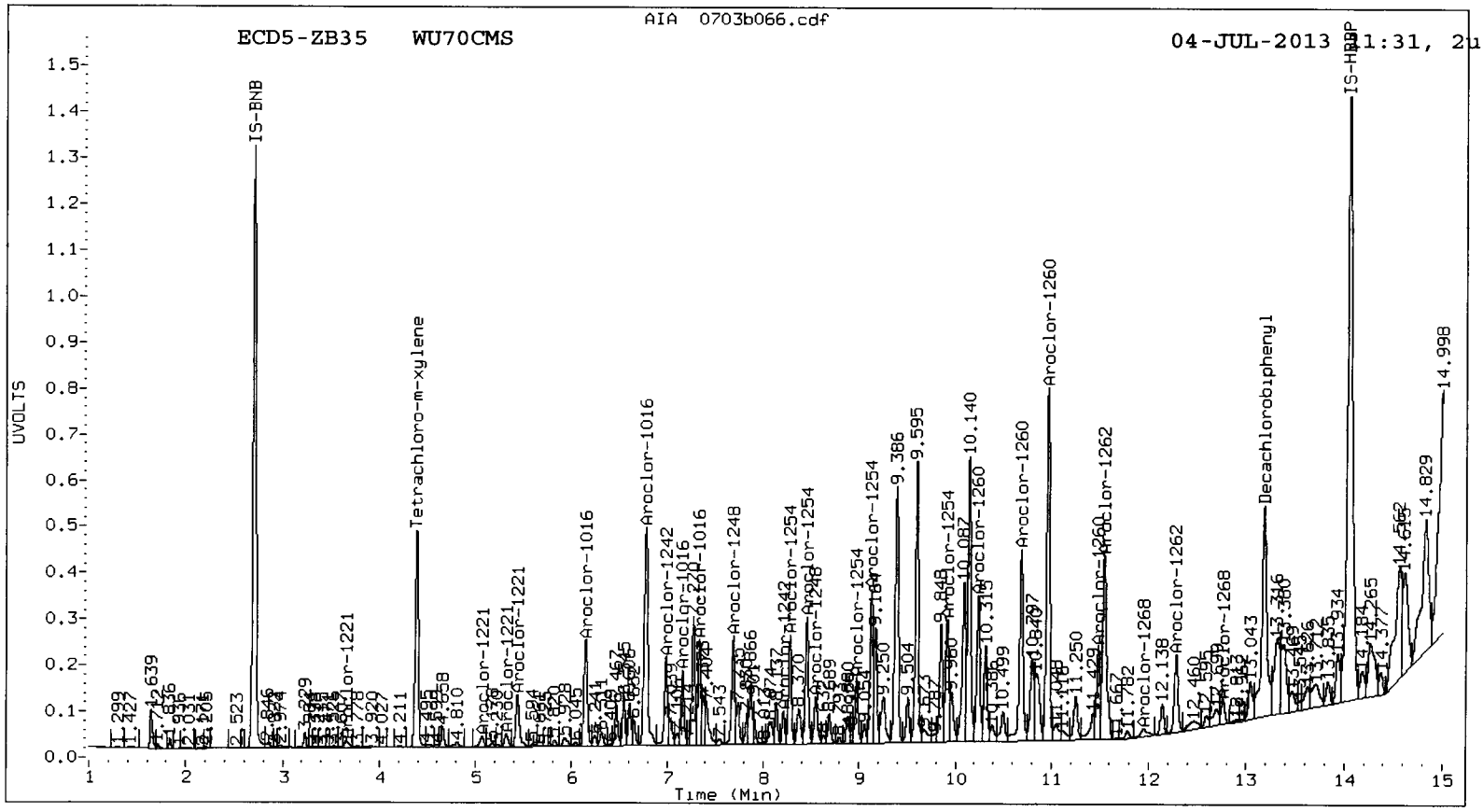
Corrected Ave (3 peaks): 42.4 Corrected Ave (3 peaks): 25.4 RPD = 50*

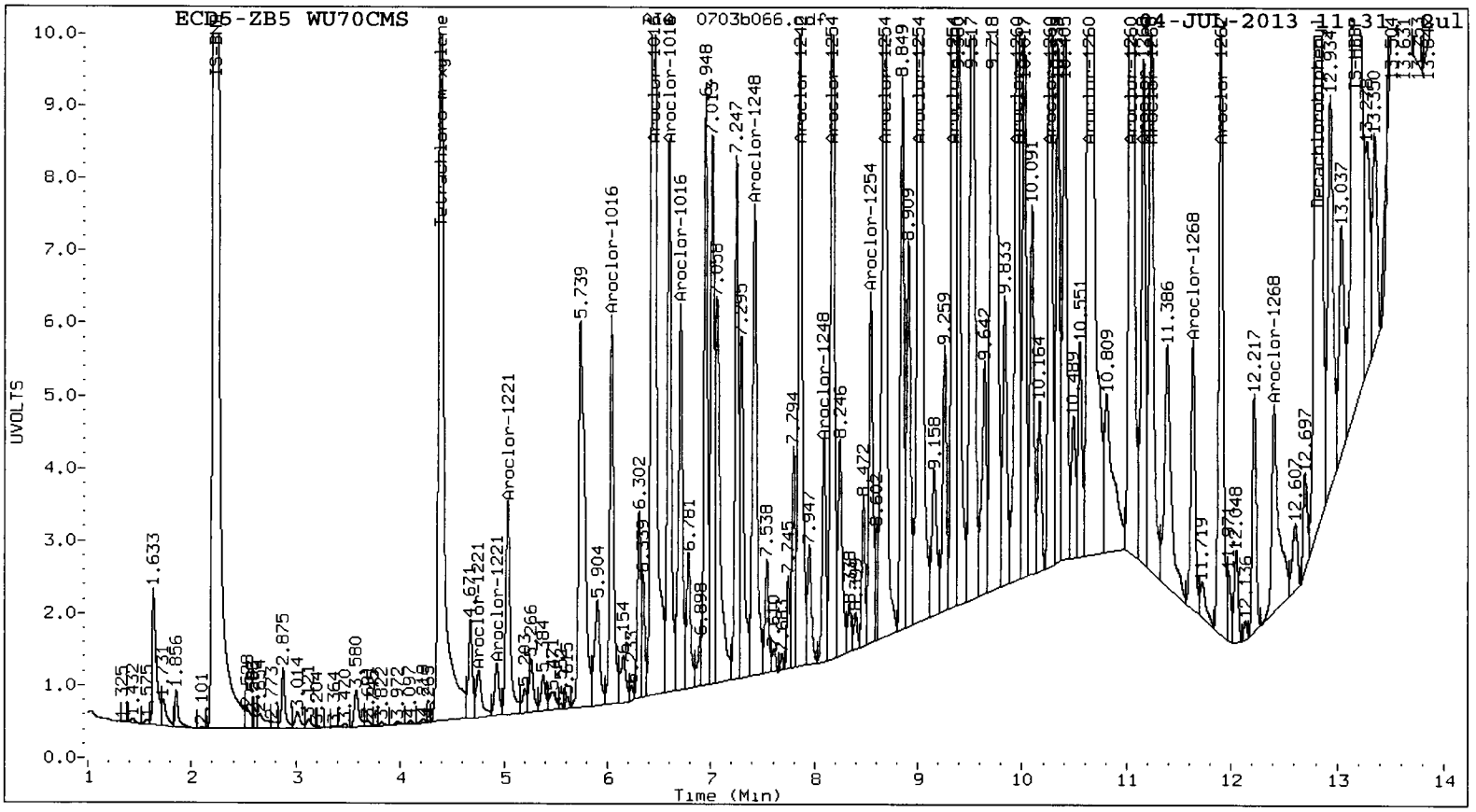
Total PCB Area Col1 (4.487 - 12.714) = 614344553 Col1 Total PCB = 1.0 ppm*

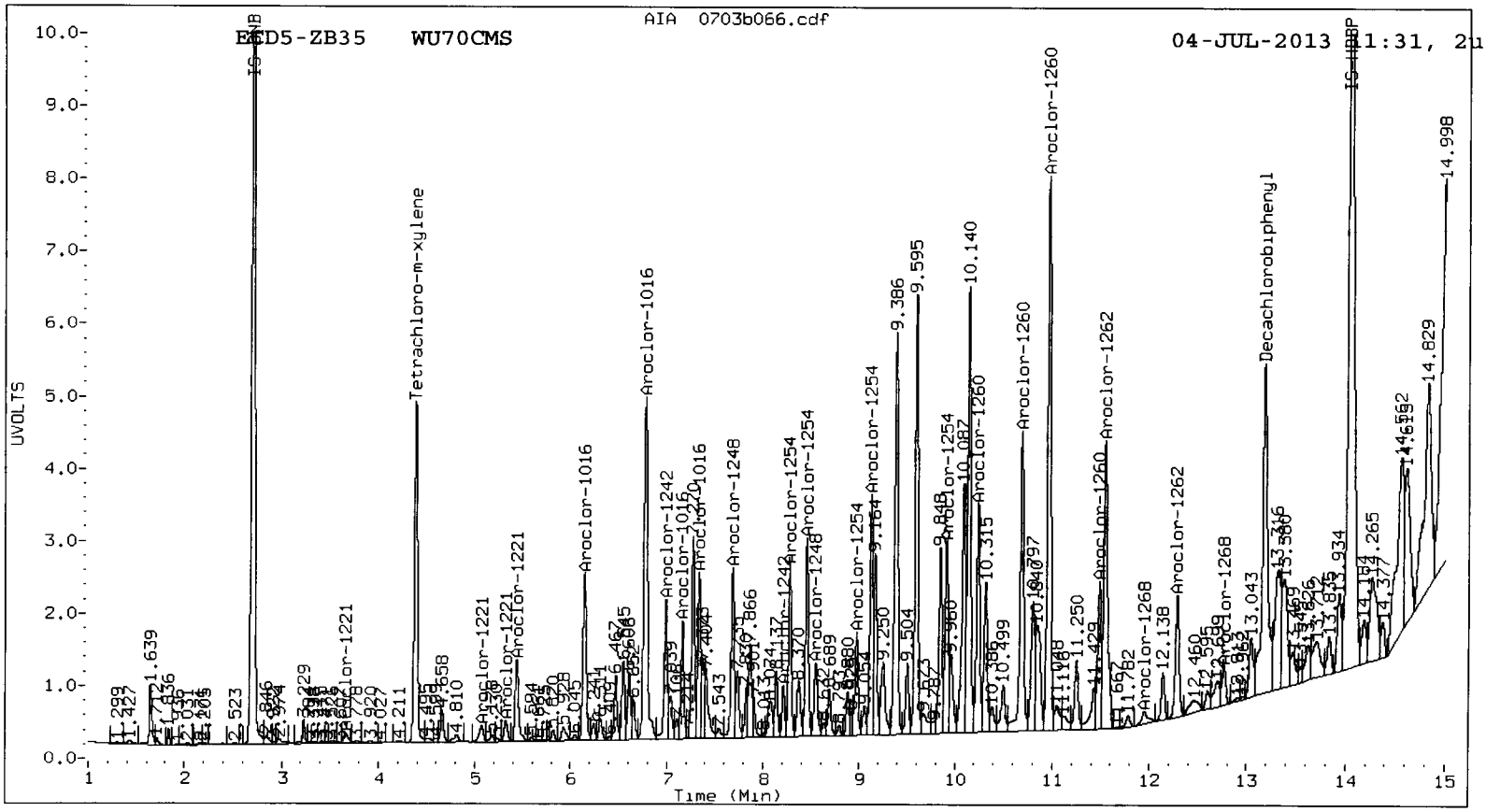
Total PCB Area Col2 (4.486 - 13.078) = 139823450 Col2 Total PCB = 1.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical

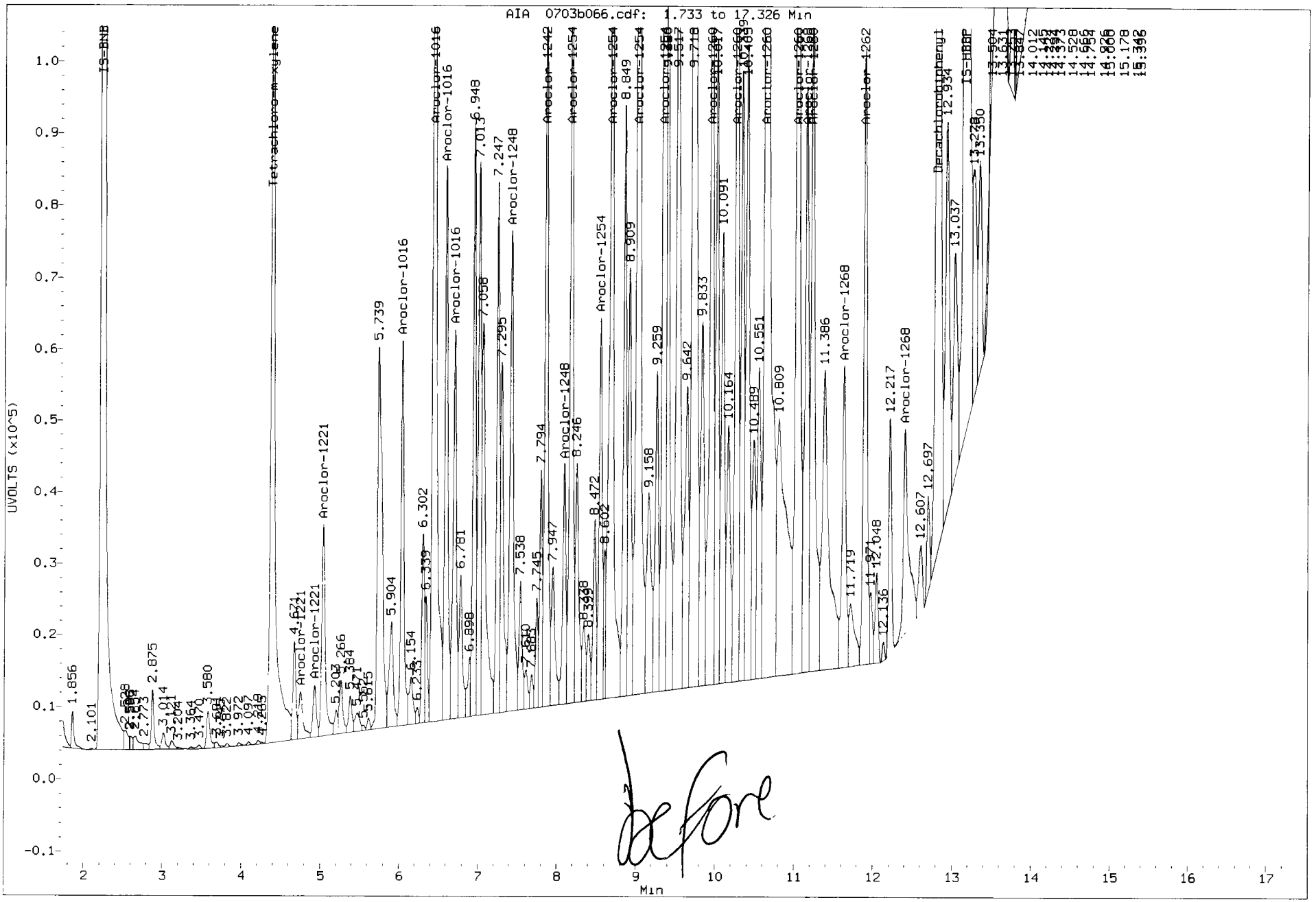

ECD5-ZB5 WU70CMS
AIA 0703b066.cdf
04-JUL-2013 11:31, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


AIA 0703b066.cdf
ECD5-ZB35 WU70CMS
04-JUL-2013 11:31, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1221
Aroclor-1016
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

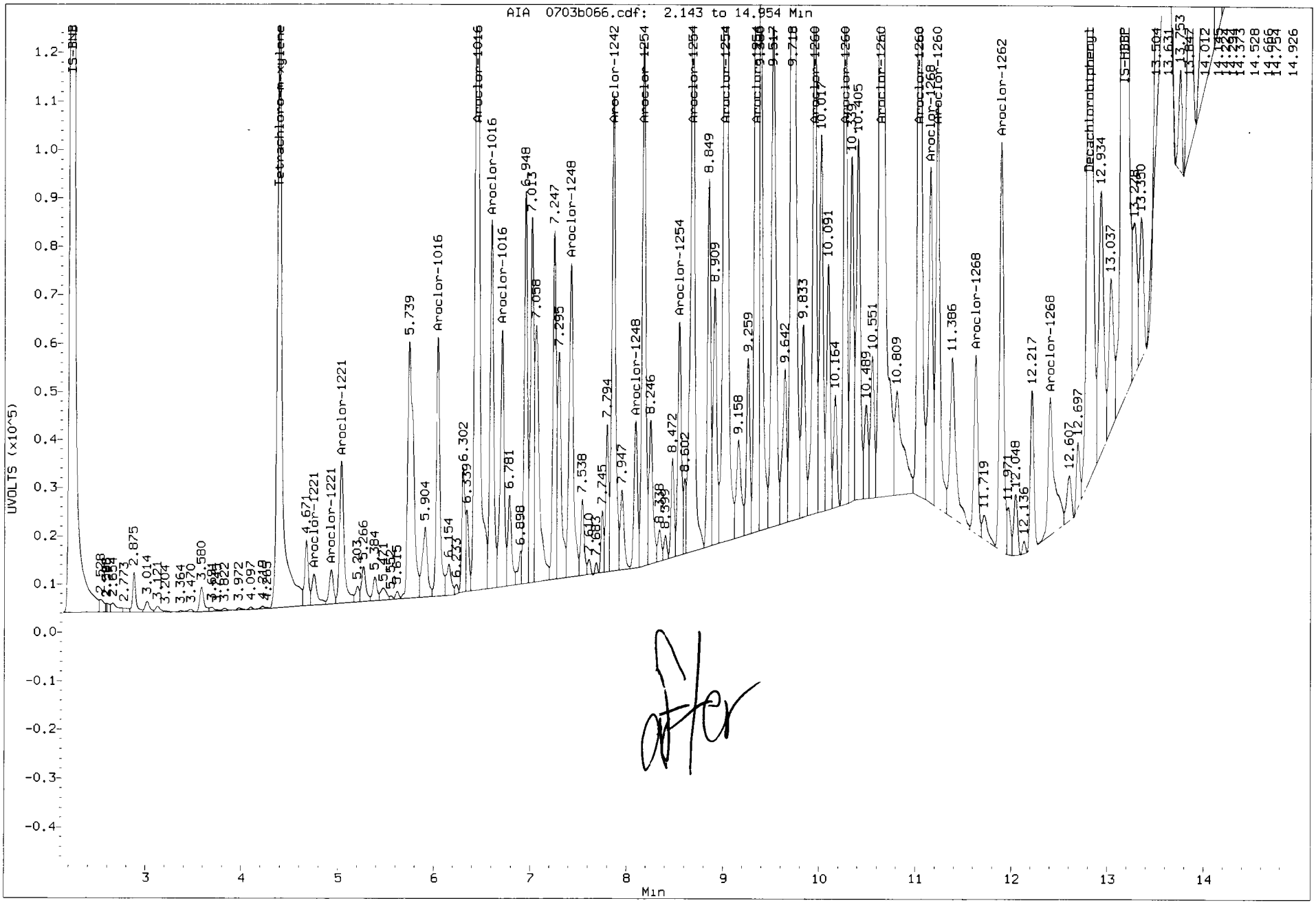

ECD5-ZB5 WU70CMS
AIA 0703b066.cdf
04-JUL-2013 11:31
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl


ECD5-ZB35 WU70CMS
AIA 0703b066.cdf
04-JUL-2013 11:31
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl

Data File: /chem2/ecd5.i/20130703.b/0703-1.b/0703b066.d/0703b066.cdf
Injection Date: 04-JUL-2013 11:31
Instrument: ecd5.i
Client Sample ID: LF-LS-004-20130 MS



Data File: /chem2/ecd5.i/20130703.b/0703-1.b/0703b066.d/0703b066.cdf
Injection Date: 04-JUL-2013 11:31
Instrument: ecd5.i
Client Sample ID: LF-LS-004-20130 MS



Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130703.b/0703-1.b/0703b067.d
Data file 2: 20130703.b/0703-2.b/0703b067.d
Method: /chem2/ecd5.i/20130703.b/PCB1.m
Compound Sublist: PCB
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: WU70CMSD
Client ID: LF-LS-004-20130 MSD
Injection Date: 04-JUL-2013 11:51
Ical Date: 07-MAY-2013
Matrix: SOIL
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.386	-0.001	24576937	4.386	0.000	6079619	28.4	31.2	9.6	Tetrachloro-m-xylen
12.814	0.000	32792607	13.180	0.001	14042306	27.3	51.5	61.4*	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	70.9	78.1
Decachlorobiphenyl	68.3	~~128.8~~ JM

JL 07/08/13

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	54036699	54633719	1.1
Hexabromobiphenyl	94298658	84859085	-10.0

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	16218104	14898246	-8.1
Hexabromobiphenyl	17872840	21329857	19.3

* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

Aroclor	Peak#	RT	ZB5 Col Shift	Area	Amount	Peak#	RT	ZB35 Col Shift	Area	Amount
Aroclor-1016	1	6.038	-0.001	7785825	307.6	1	6.142	-0.001	3146589	376.8
Aroclor-1016	2	6.443	-0.004	27374359	348.7	2	6.776	-0.001	7226553	401.2
Aroclor-1016	3	6.594	-0.002	10868429	314.0	3	7.161	-0.002	2016211	430.8
Aroclor-1016	4	6.704	-0.003	8083046	315.4	4	7.334	-0.002	2830782	662.3
	Total Col1Ave (4 peaks):				321.4		Total Col2Ave (4 peaks):			467.8 RPD = 37
	Corrected Ave (3 peaks):				312.3		Corrected Ave (3 peaks):			403.0 RPD = 25
Aroclor-1221	1	4.752	-0.001	1295221	107.0	1	3.659	-0.015	285726	187.7
Aroclor-1221	2	4.931	0.002	1157998	138.3	2	5.068	0.000	429042	165.7
Aroclor-1221	3	5.036	0.000	4985923	208.1	3	5.324	0.003	461773	318.0
Aroclor-1221	NS	---			----	4	5.436	0.000	1564138	346.5
	Total Col1Ave (3 peaks):				151.1		Total Col2Ave (4 peaks):			254.5 RPD = 51*
	Corrected Ave: < 3 Peaks						Corrected Ave (3 peaks):			223.8
Aroclor-1232	1	4.752	0.000	1295221	161.7	1	5.068	-0.001	429042	269.6
Aroclor-1232	2	4.931	0.004	1157998	193.9	2	5.324	0.004	461773	508.3
Aroclor-1232	3	6.038	0.002	7785825	749.6	3	5.436	0.001	1564138	488.8
Aroclor-1232	4	6.443	0.000	27374359	852.2	4	6.142	0.001	3146589	829.7
	Total Col1Ave (4 peaks):				489.3		Total Col2Ave (4 peaks):			524.1 RPD = 7
	Corrected Ave (3 peaks):				368.4		Corrected Ave (3 peaks):			422.2 RPD = 14
Aroclor-1242	1	6.038	0.000	7785825	382.5	1	6.142	0.000	3146589	467.0
Aroclor-1242	2	6.443	-0.004	27374359	437.1	2	6.776	-0.002	7226553	494.1
Aroclor-1242	3	6.594	-0.002	10868429	392.5	3	6.986	-0.001	2639727	434.8
Aroclor-1242	4	7.857	0.004	13602383	403.3	4	8.212	-0.004	642893	125.7
	Total Col1Ave (4 peaks):				403.9		Total Col2Ave (4 peaks):			380.4 RPD = 6
	Corrected Ave (3 peaks):				392.8		Corrected Ave (3 peaks):			342.5 RPD = 14
Aroclor-1248	1	6.443	0.001	27374359	683.3	1	6.776	0.003	7226553	784.0
Aroclor-1248	2	7.420	-0.001	10713292	242.7	2	7.682	0.000	2827531	373.2
Aroclor-1248	3	7.857	0.004	13602383	241.8	3	8.212	-0.002	642893	81.7
Aroclor-1248	4	8.090	0.000	3887693	96.6	4	8.546	-0.014	1381116	134.2
	Total Col1Ave (4 peaks):				416.1		Total Col2Ave (4 peaks):			343.3 RPD = 8
	Corrected Ave (3 peaks):				198.7		Corrected Ave (3 peaks):			196.4 RPD = 1
Aroclor-1254	1	8.172	0.000	15036884	279.6	1	8.277	0.001	2558515	361.3
Aroclor-1254	2	8.545	0.000	6889014	194.8	2	8.452	0.000	3100575	350.5
Aroclor-1254	3	8.679	-0.003	21754241	297.1	3	8.973	0.000	1861478	271.4
Aroclor-1254	4	9.015	-0.020	33650257	426.1	4	9.123	-0.001	3927582	266.0
Aroclor-1254	5	9.342	-0.002	43631923	1386.4	5	9.912	0.003	3616742	415.1
	Total Col1Ave (5 peaks):				516.8		Total Col2Ave (5 peaks):			332.9 RPD = 43*
	Corrected Ave (4 peaks):				299.2		Corrected Ave (4 peaks):			312.3 RPD = 4
Aroclor-1260	1	9.950	-0.001	17359638	355.4	1	10.237	0.000	4454231	374.7
Aroclor-1260	2	10.267	0.001	16817556	342.5	2	10.685	-0.002	6845385	475.1
Aroclor-1260	3	10.641	-0.002	58074231	470.3	3	10.961	-0.001	10057239	349.5
Aroclor-1260	4	11.040	-0.002	28310098	431.9	4	11.481	-0.001	2451800	275.2
Aroclor-1260	5	11.231	-0.001	14024661	390.7	NS	---			----
	Total Col1Ave (5 peaks):				398.1		Total Col2Ave (4 peaks):			368.6 RPD = 8
	Corrected Ave (4 peaks):				380.1		Corrected Ave (3 peaks):			333.1 RPD = 13
Aroclor-1262	1	10.267	0.002	16817556	282.5	1	10.237	-0.001	4454231	235.0
Aroclor-1262	2	10.641	0.000	58074231	408.5	2	10.685	-0.001	6845385	382.2
Aroclor-1262	3	11.040	-0.001	28310098	563.8	3	10.961	-0.001	10057239	282.8
Aroclor-1262	4	11.231	0.001	14024661	208.6	4	11.541	-0.003	5918473	235.1
Aroclor-1262	5	11.900	-0.001	13139226	218.3	5	12.281	-0.001	4148100	294.5
	Total Col1Ave (5 peaks):				336.3		Total Col2Ave (5 peaks):			285.9 RPD = 16
	Corrected Ave (4 peaks):				279.5		Corrected Ave (4 peaks):			261.9 RPD = 7
Aroclor-1268	1	11.158	0.001	12088557	84.3	1	11.481	0.000	2451800	64.7

Aroclor-1268 2	11.231	0.002	14024661	93.8	2	11.541	-0.007	5918473	161.4
Aroclor-1268 3	11.633	0.019	5217489	42.2	3	11.949	0.006	1083054	36.0
Aroclor-1268 4	12.407	0.001	15197735	43.0	4	12.763	-0.003	1956642	22.2

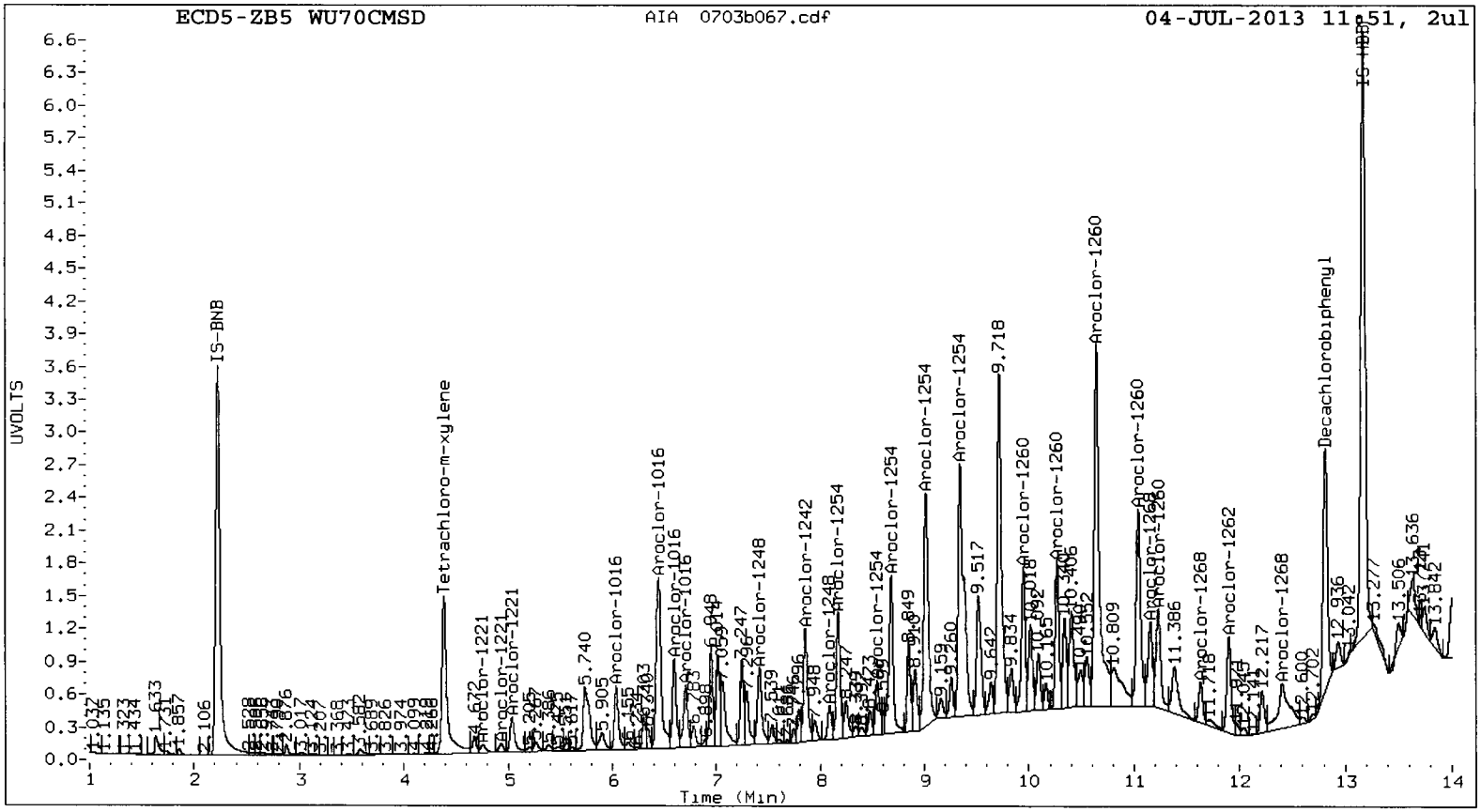
Total Col1Ave (4 peaks): 65.8 Total Col2Ave (4 peaks): 71.1 RPD = 8

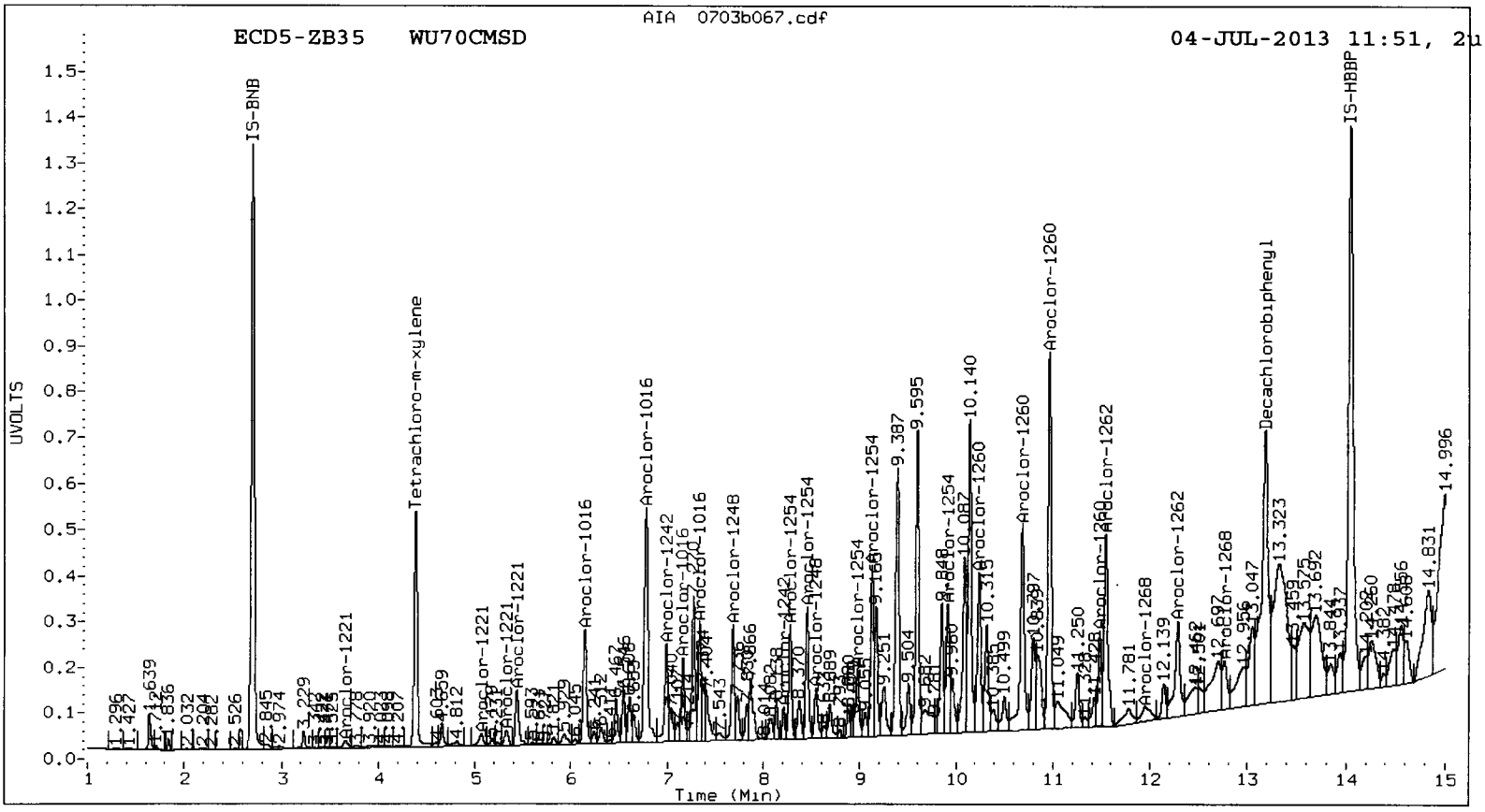
Corrected Ave (3 peaks): 56.5 Corrected Ave (3 peaks): 40.9 RPD = 32

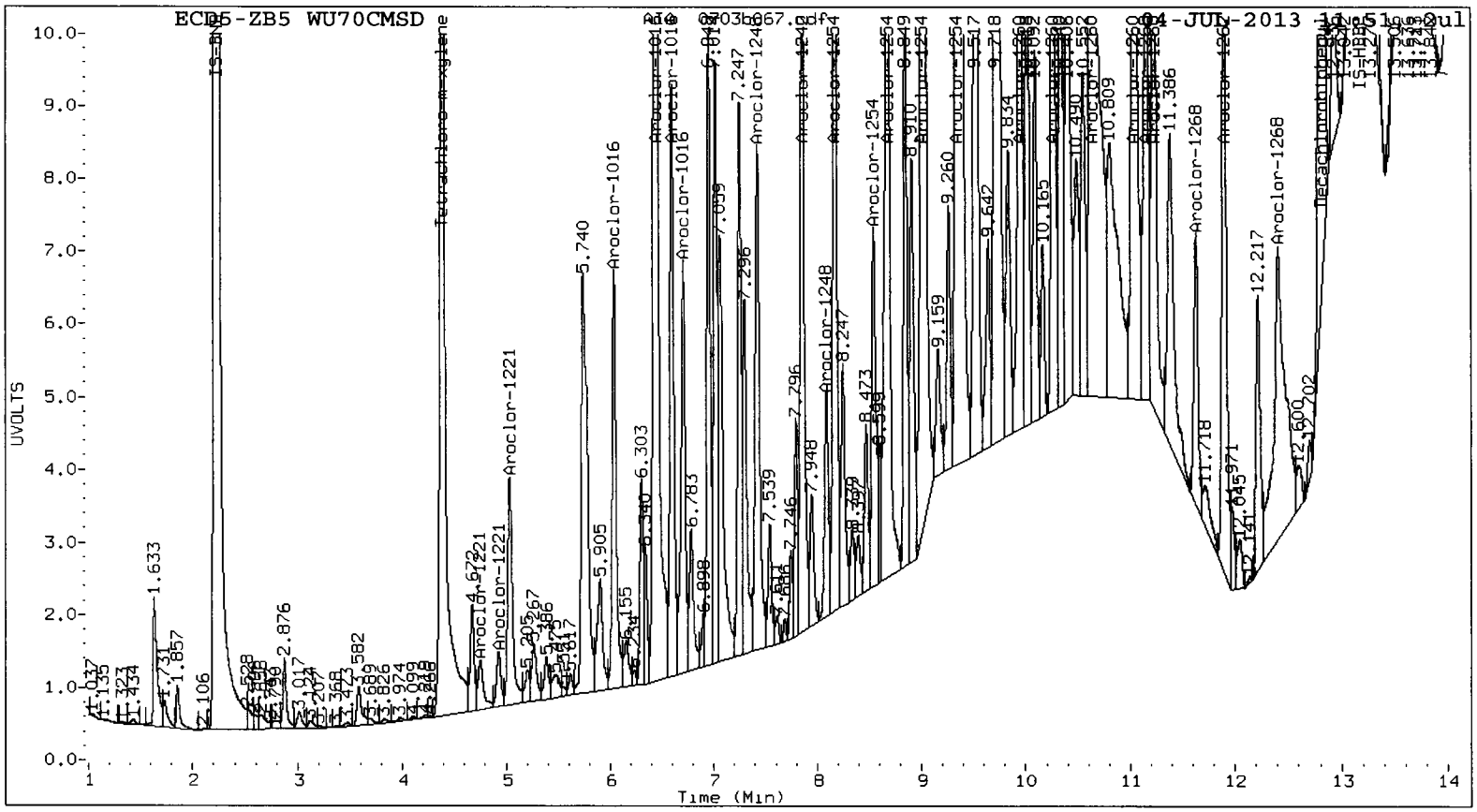
Total PCB Area Col1 (4.487 - 12.714) = 673203766 Col1 Total PCB = 1.1 ppm*

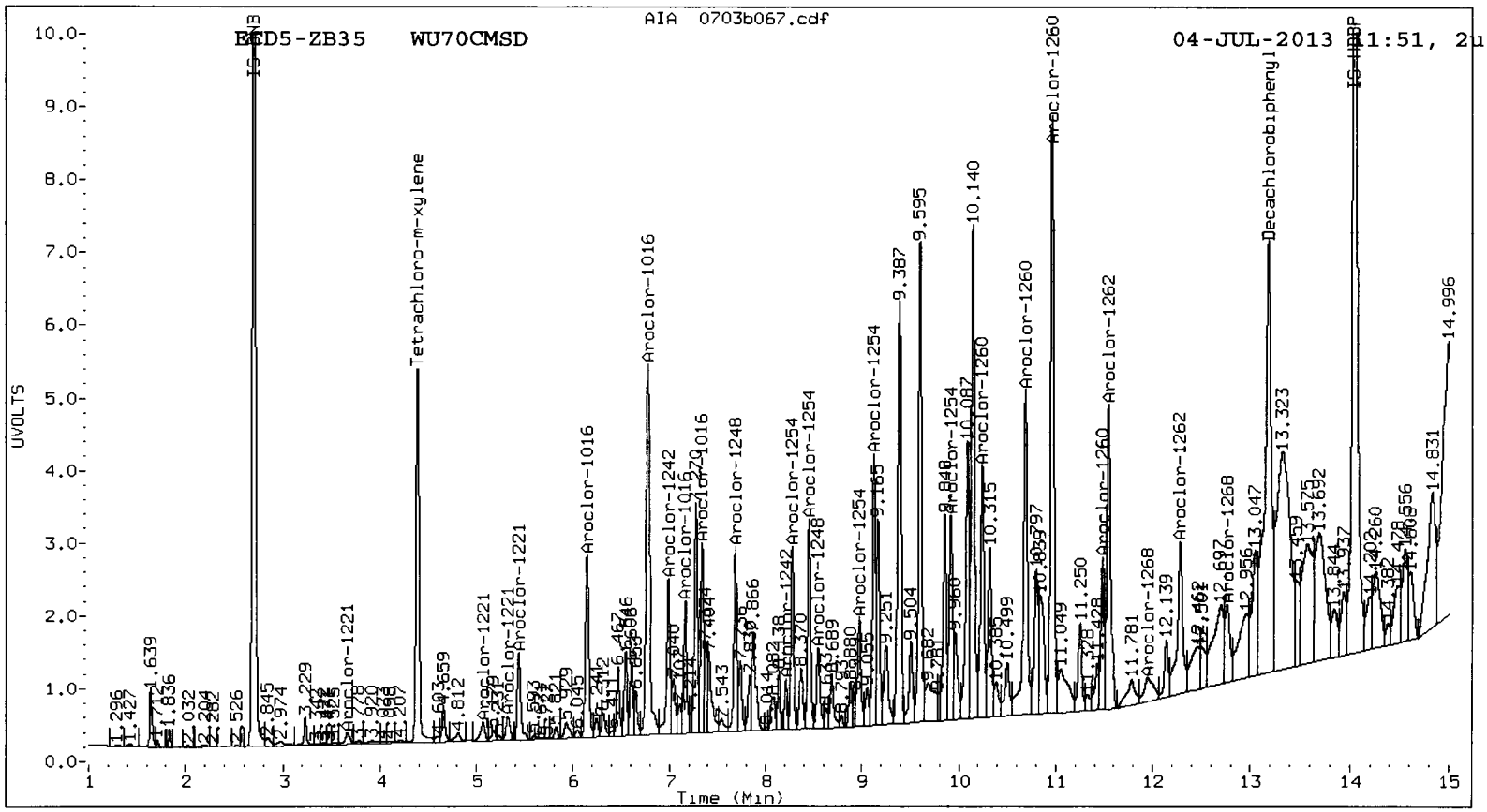
Total PCB Area Col2 (4.486 - 13.078) = 174847566 Col2 Total PCB = 1.5 ppm*

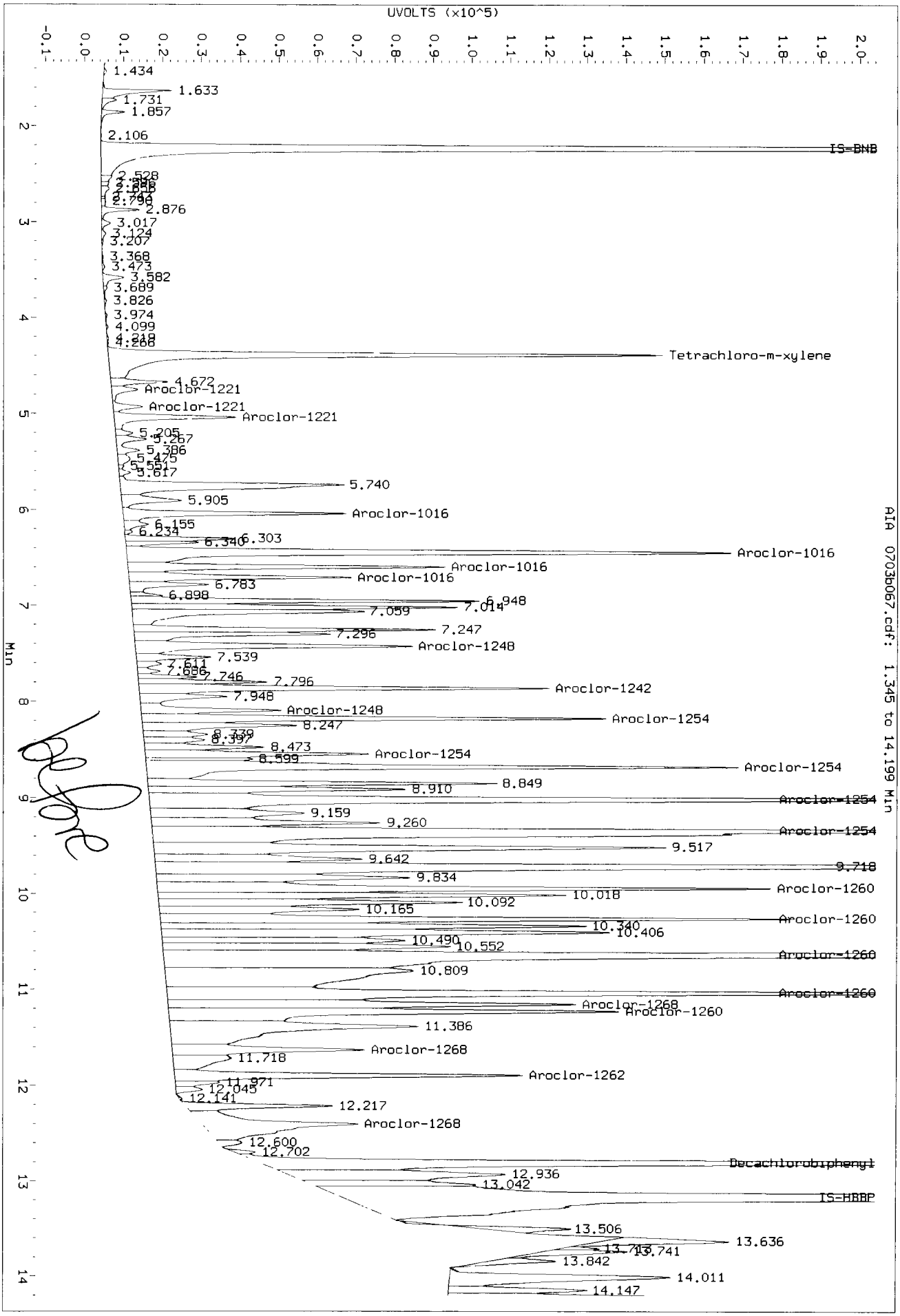
* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 WU70CMSD
AIA 0703b067.cdf
04-JUL-2013 11:51, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP

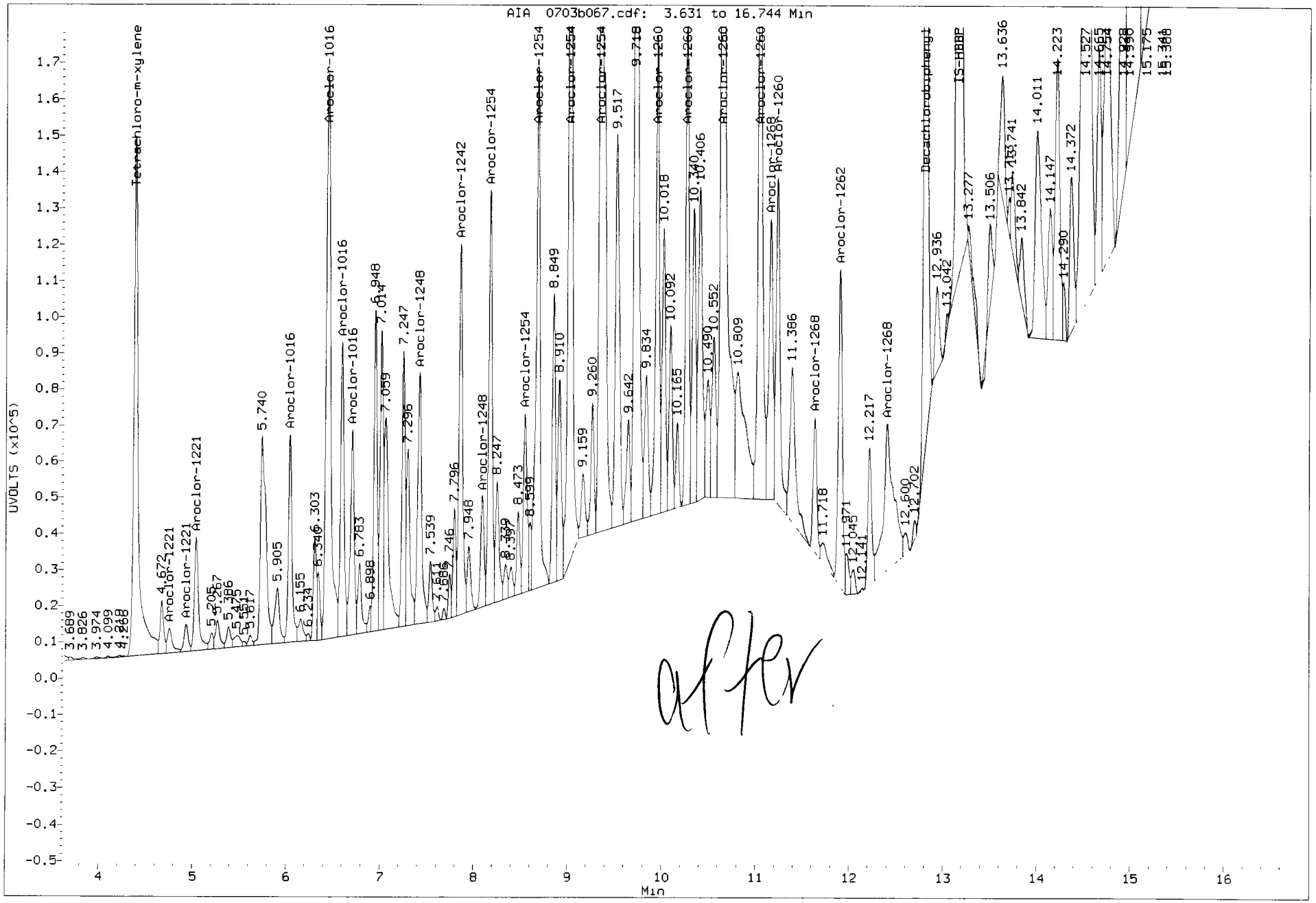

AIA 0703b067.cdf
ECD5-ZB35 WU70CMSD
04-JUL-2013 11:51, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl
IS-HBBP


ECD5-ZB5 WU70CMSD
04-JUL-2013
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl


AIA 0703b067.cdf
ECD5-ZB35 WU70CMSD
04-JUL-2013
UVOLTS
Time (Min)
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260
Aroclor-1262
Aroclor-1268
Decachlorobiphenyl


Data File: /chem2/ecd5.i/20130703.b/0703-1.b/0703b067.d/0703b067.cdf
Injection Date: 04-JUL-2013 11:51
Instrument: ecd5.i
Client Sample ID: LF-LS-004-20130 MSD
UVOLTS (x10^5)
Min
AIA 0703b067.cdf: 1.345 to 14.199 Min
1.434
1.633
1.731
1.857
2.106
IS=BNB
2.528
2.876
3.017
3.124
3.207
3.368
3.473
3.582
3.689
3.826
3.974
4.099
4.218
4.268
Tetrachloro-m-xylene
4.672
Aroclor-1221
Aroclor-1221
Aroclor-1221
5.205
5.267
5.386
5.475
5.551
5.617
5.740
5.905
Aroclor-1016
6.155
6.234
6.340
6.303
Aroclor-1016
Aroclor-1016
Aroclor-1016
6.783
6.898
6.948
7.014
7.059
7.247
7.296
Aroclor-1248
7.539
7.611
7.686
7.746
7.796
Aroclor-1242
7.948
Aroclor-1248
Aroclor-1254
8.247
8.397
8.473
Aroclor-1254
8.599
Aroclor-1254
8.849
8.910
Aroclor-1254
9.159
9.260
Aroclor-1254
9.517
9.642
9.718
9.834
Aroclor-1260
10.018
10.092
10.165
Aroclor-1260
10.340
10.406
10.490
10.552
Aroclor-1260
10.809
Aroclor-1260
Aroclor-1268
Aroclor-1260
11.386
Aroclor-1268
11.718
Aroclor-1262
11.971
12.045
12.141
12.217
Aroclor-1268
12.600
12.702
Decachlorobiphenyl
12.936
13.042
IS=HBBP
13.506
13.636
13.741
13.842
14.011
14.147

Data File: /chem2/ecd5.i/20130703.b/0703-1.b/0703b067.d/0703b067.cdf
Injection Date: 04-JUL-2013 11:51
Instrument: ecd5.i
Client Sample ID: LF-LS-004-20130 MSD



Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130703.b/0703-1.b/0703b069.d
Data file 2: 20130703.b/0703-2.b/0703b069.d
Method: /chem2/ecd5.i/20130703.b/PCB1.m
Compound Sublist: AR1242
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1242
Client ID:
Injection Date: 04-JUL-2013 12:32
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col RT	ZB5 Col Shift	ZB5 Col Response	ZB35 Col RT	ZB35 Col Shift	ZB35 Col Response	ZB5 on col	ZB35 on col	RPD	Compound/Flag
4.385	-0.001	35531688	4.385	-0.001	8455604	37.7	40.0	5.9	Tetrachloro-m-xylen
12.812	-0.002	45734128	13.178	0.000	8576751	34.8	42.7	20.3	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	94.2	100.0
Decachlorobiphenyl	87.0	106.7

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	54036699	59452890	10.0
Hexabromobiphenyl	94298658	92906552	-1.5

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	16218104	16181582	-0.2
Hexabromobiphenyl	17872840	15722336	-12.0

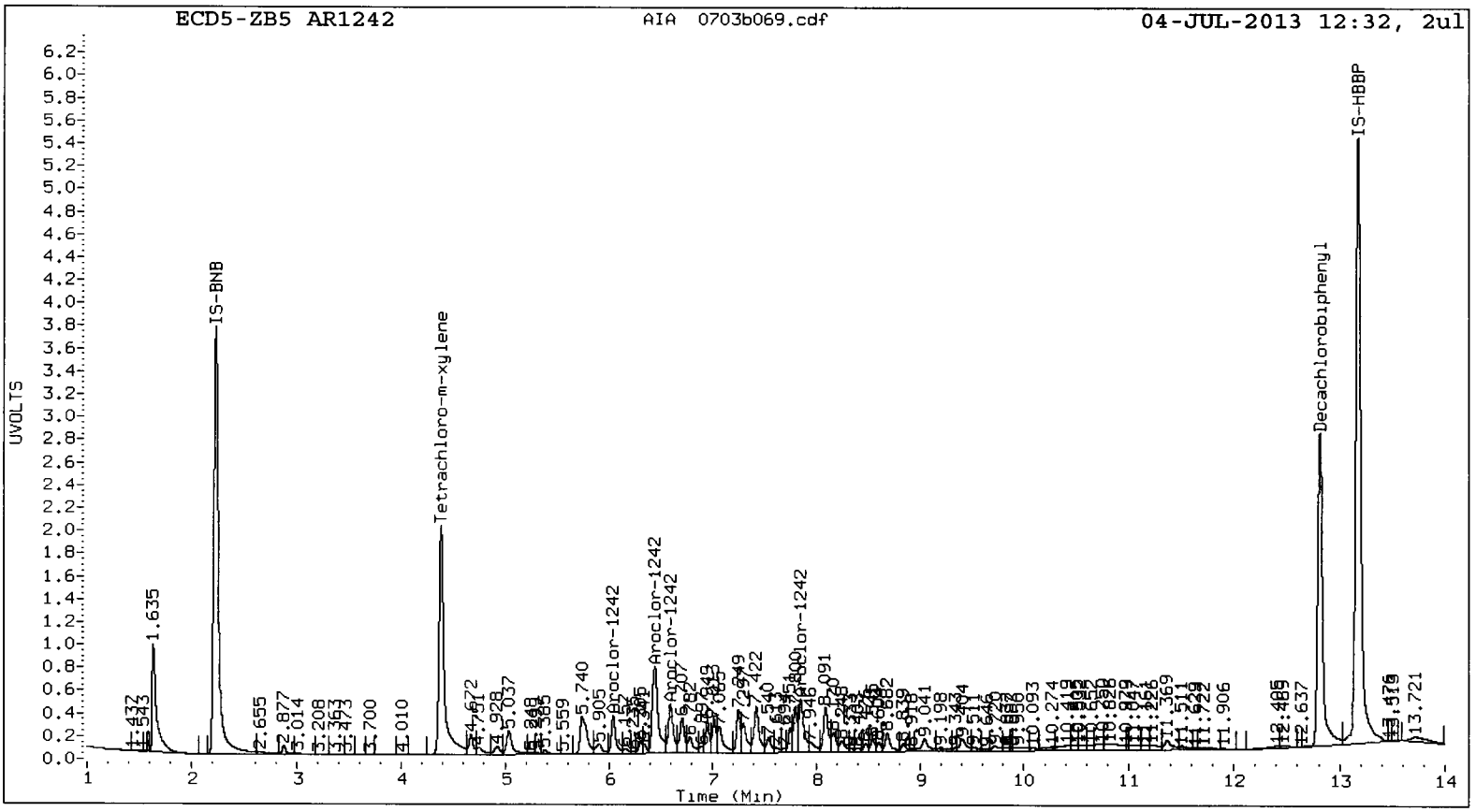
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

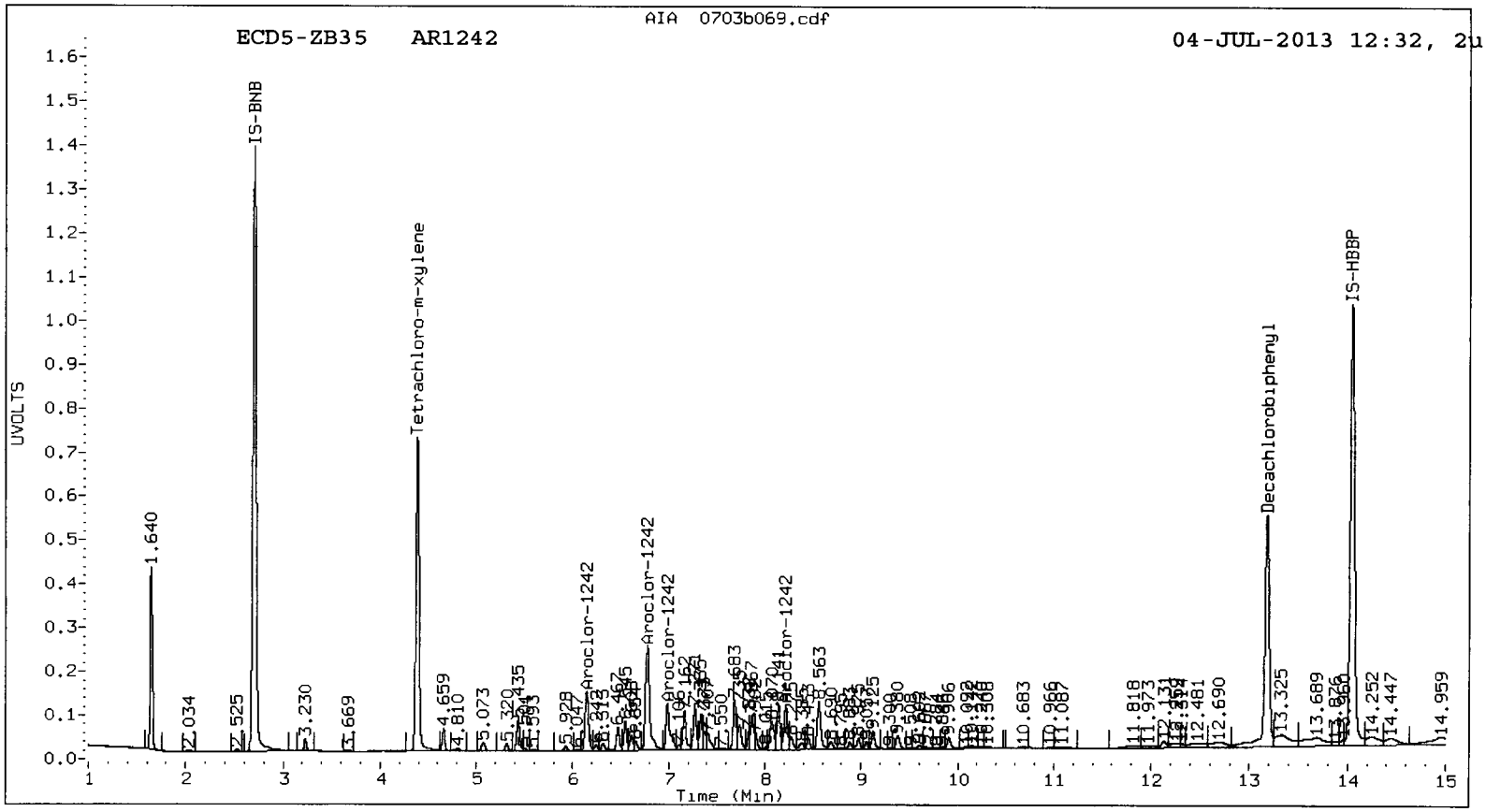
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1242	1	6.038	0.000	4919479	222.1	1	6.142	0.000	1751386	239.3
Aroclor-1242	2	6.447	0.000	15515348	227.7	2	6.779	0.000	3856752	242.8
Aroclor-1242	3	6.596	0.000	6656360	220.9	3	6.987	0.000	1617765	245.3
Aroclor-1242	4	7.854	0.000	7848787	213.8	4	8.216	0.000	1236238	222.5
Total Col1Ave (4 peaks):					221.1	Total Col2Ave (4 peaks):				237.5 RPD = 7
Corrected Ave (3 peaks):					219.0	Corrected Ave (3 peaks):				234.9 RPD = 7

Total PCB Area Col1 (4.487 - 12.714) = 155680108 Col1 Total PCB = 0.2 ppm*

Total PCB Area Col2 (4.486 - 13.078) = 30818279 Col2 Total PCB = 0.2 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR1242
AIA 0703b069.cdf
04-JUL-2013 12:32, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl
IS-HBBP
1.635
4.672
5.740
13.721


AIA 0703b069.cdf
ECD5-ZB35 AR1242
04-JUL-2013 12:32, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1242
Decachlorobiphenyl
IS-HBBP
1.640
4.659
5.563
13.325
14.252
14.447
14.959

Analytical Resources Inc.
Dual Column PCBs by SW8082

Data file 1: 20130703.b/0703-1.b/0703b070.d
Data file 2: 20130703.b/0703-2.b/0703b070.d
Method: /chem2/ecd5.i/20130703.b/PCB1.m
Compound Sublist: AR1660
Instrument, Inj. Vol.: ecd5.i, 2ul
Quant Method: Internal Std

ARI ID: AR1660
Client ID:
Injection Date: 04-JUL-2013 12:52
Ical Date: 07-MAY-2013
Matrix: NONE
Dilution Factor: 1.000

ZB5 Col			ZB35 Col			ZB5	ZB35		
RT	Shift	Response	RT	Shift	Response	on col	on col	RPD	Compound/Flag
4.387	0.000	35667768	4.386	0.000	8462570	37.5	40.2	6.8	Tetrachloro-m-xylen
12.814	0.000	44247982	13.178	0.000	7147891	33.6	34.8	3.5	Decachlorobiphenyl

* Indicates RPD > 40%
M Indicates Column 1 peak was manually integrated
N Indicates Column 2 peak was manually integrated

SURROGATE PERCENT RECOVERY

SURROGATE	Col1	Col2
Tetrachloro-m-xylene	93.9	100.4
Decachlorobiphenyl	84.0	87.1

INTERNAL STANDARD SUMMARY

Column 1

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	54036699	59920500	10.9
Hexabromobiphenyl	94298658	93072814	-1.3

Column 2

Standard Cpnd	Standard Area*	Sample Area	%D
Bromo-Nitrobenzene	16218104	16120168	-0.6
Hexabromobiphenyl	17872840	16060608	-10.1

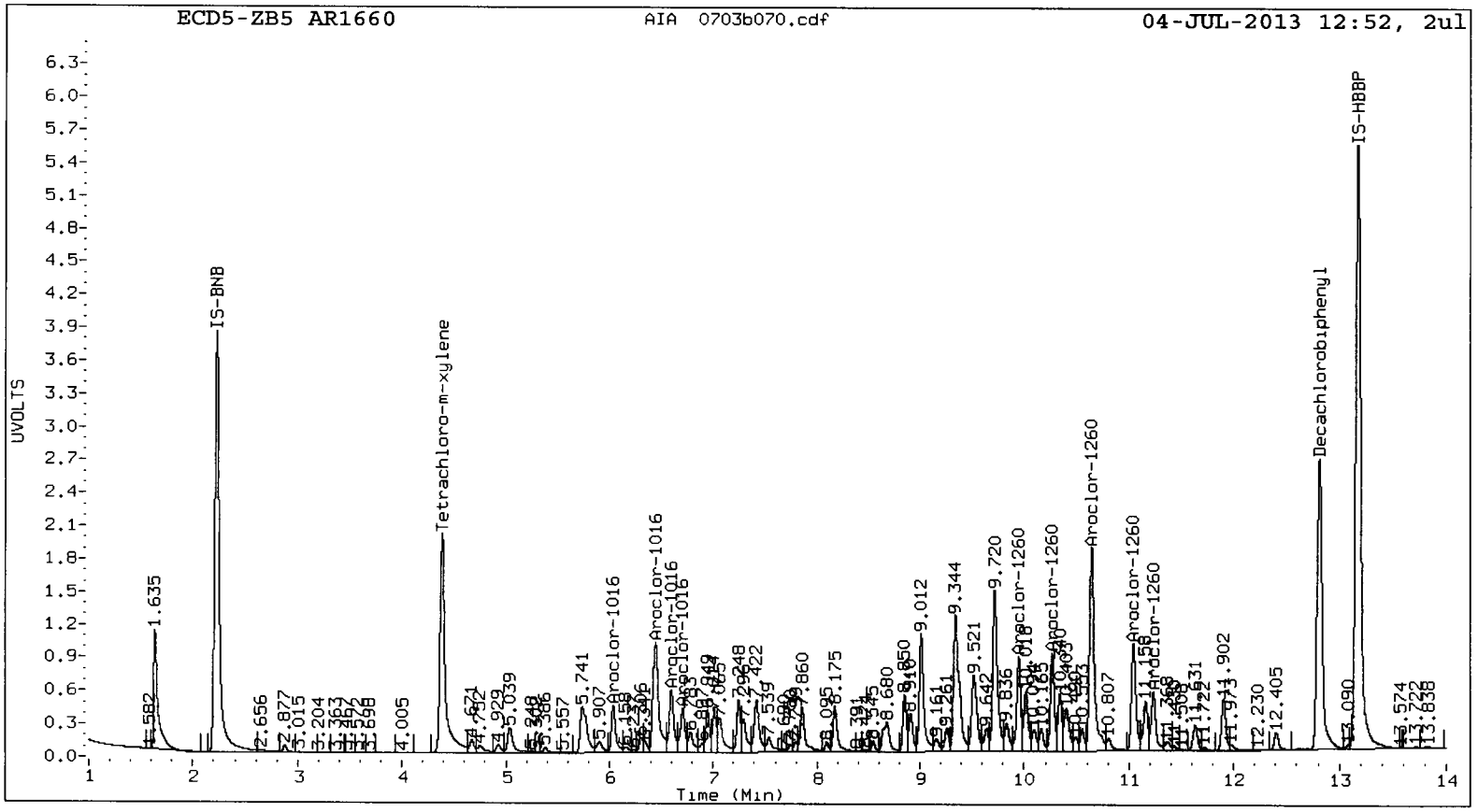
* Standard Areas taken from Initial Cal Level 3
Initial Calibration Date: 07-MAY-2013
<- Indicates standard response outside Limits (-50 to +100%)

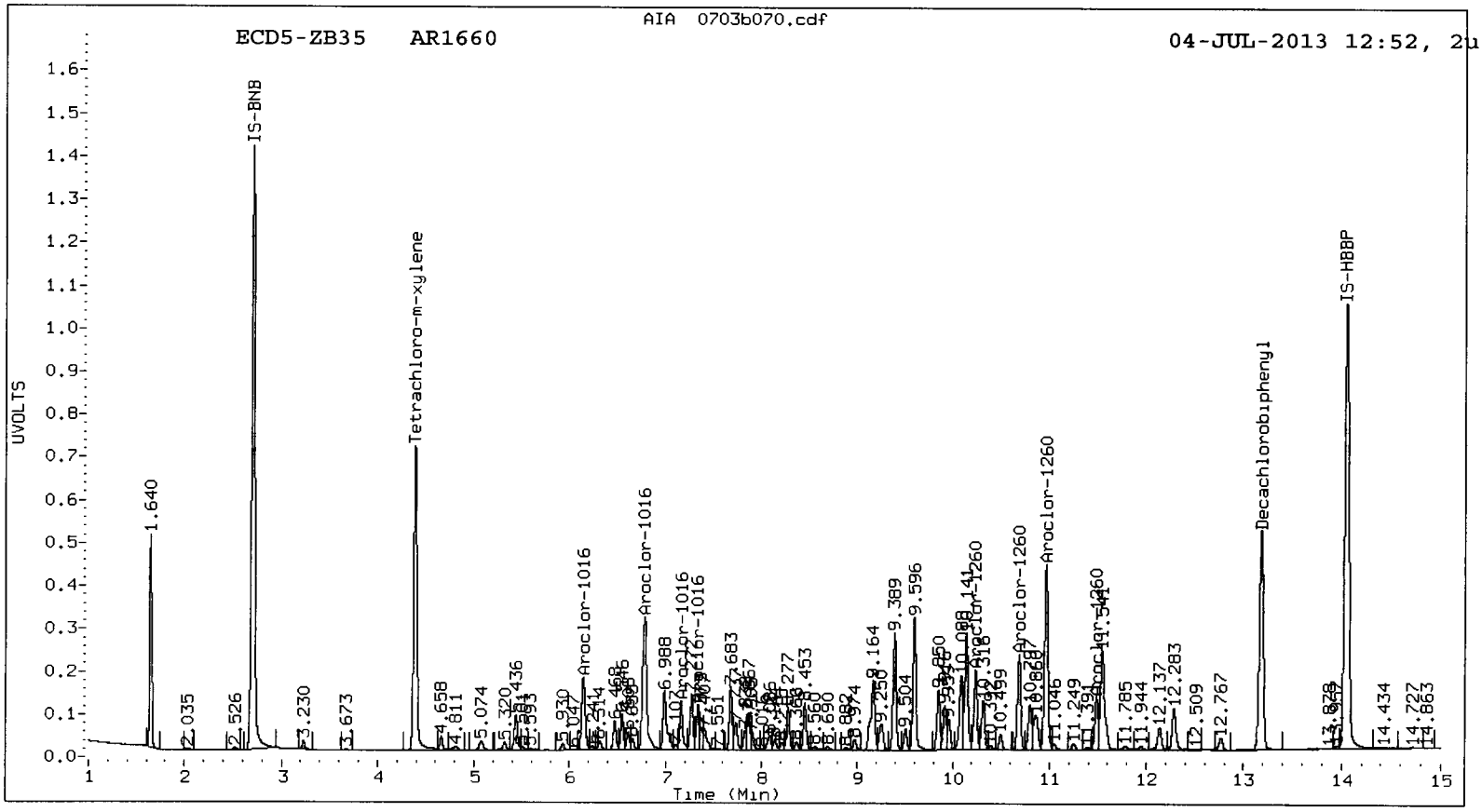
		ZB5 Col				ZB35 Col			
Aroclor	Peak#	RT	Shift	Area	Amount	Peak#	RT	Shift	Area	Amount
Aroclor-1016	1	6.039	0.000	6392989	230.3	1	6.143	0.000	2217131	245.4
Aroclor-1016	2	6.447	0.000	20012683	232.4	2	6.777	0.000	4859251	249.3
Aroclor-1016	3	6.596	0.000	8717778	229.6	3	7.163	0.000	1253195	247.5
Aroclor-1016	4	6.708	0.000	6569479	233.7	4	7.336	0.000	1125648	243.4
Total Col1Ave (4 peaks):					231.5	Total Col2Ave (4 peaks):				246.4 RPD = 6
Corrected Ave (3 peaks):					230.8	Corrected Ave (3 peaks):				245.4 RPD = 6
Aroclor-1260	1	9.950	0.000	11863219	221.4	1	10.237	0.000	2179139	243.5
Aroclor-1260	2	10.267	0.000	11710167	217.4	2	10.686	0.000	2636842	243.1
Aroclor-1260	3	10.643	0.000	29478249	217.6	3	10.961	0.000	5298954	244.5
Aroclor-1260	4	11.042	0.000	15034264	209.1	4	11.482	0.000	1457812	217.3
Aroclor-1260	5	11.232	0.000	8403429	213.4	NS	---			----
Total Col1Ave (5 peaks):					215.8	Total Col2Ave (4 peaks):				237.1 RPD = 9
Corrected Ave (4 peaks):					214.4	Corrected Ave (3 peaks):				234.6 RPD = 9

Total PCB Area Col1 (4.487 - 12.714) = 365079982 Col1 Total PCB = 0.5 ppm*

Total PCB Area Col2 (4.486 - 13.078) = 69580148 Col2 Total PCB = 0.5 ppm*

* Quantitated against AR1660 0.25ppm in Ical


ECD5-ZB5 AR1660
AIA 0703b070.cdf
04-JUL-2013 12:52, 2ul
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP


AIA 0703b070.cdf
ECD5-ZB35 AR1660
04-JUL-2013 12:52, 2u
UVOLTS
Time (Min)
IS-BNB
Tetrachloro-m-xylene
Aroclor-1016
Aroclor-1260
Decachlorobiphenyl
IS-HBBP

TPHD Raw Data
Extraction Bench Sheets and Notes

ARI Job ID: WU70

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Benchsheet

(8015C) NWTPHD-Soil/Sediment
Microwave (3546) (SOP # 3304S)

Preparation Test TPHD # 5 In-House (50 ppm)
ARI Job No(s) Wu7ϕ Page 1 of 1 Batch set up by: JH

Bottle #	Extraction Requirements	Weight Extracted (wet wt)	Acid Clean (1:5) (2mL) Y (N)	Silica Gel Clean (1:2) (1mL) Y (N)	Final Effective Volume	Volume to Lab	Comments	Verifty Client ID
	MBS Wu7ϕ	10.00g	(1:5) (2mL) Y (N)	(1:2) (1mL) Y (N)	10mL	1mL		YL ϕ6/24/13 Analyst/Date
	SBS ↓	10.00g	(1:5) (2mL) Y (N)	(1:2) (1mL) Y (N)	10mL	1mL		
	~~SBS Dup~~	~~10.00g~~	(1:5) (2mL) Y / N	(1:2) (1mL) Y / N	~~10mL~~	~~1mL~~		
	QLS Wu7ϕ	10.00g	(1 5) (2mL) Y (N)	(1:2) (1mL) Y (N)	10mL	1mL		Microwave 1 2 3
8	B	10.ϕϕ	(1:5) (2mL) Y (N)	(1:2) (1mL) Y (N)	10mL	1mL	see Analyst Notes	YL ϕ6/24/13 Analyst/Date
8	BMS	10.ϕ1	(1:5) (2mL) Y (N)	(1:2) (1mL) Y (N)	10mL	1mL	↓	
8	↓ BMSd	10.ϕ2	(1:5) (2mL) Y (N)	(1:2) (1mL) Y (N)	10mL	1mL		
		~~10.~~	(1.5) (2mL) Y / N	(1 2) (1mL) Y / N	10mL	1mL		TurboVap 1 2 3 ~~Pre-Acid/Silica Clean~~ SP 6/25/13
		10.	(1:5) (2mL) Y / N	(1 2) (1mL) Y / N	10mL	1mL		
		10.	(1:5) (2mL) Y / N	(1:2) (1mL) Y / N	10mL	1mL		
		10.	(1:5) (2mL) Y / N	(1:2) (1mL) Y / N	10mL	1mL		Analyst/Date
		10.	(1:5) (2mL) Y / N	(1:2) (1mL) Y / N	10mL	1mL	Reviewed SP 6/25/13 by SP	TurboVap 1 2 3 Post Acid/Silica Clean N/A
		10.	(1:5) (2mL) Y / N	(1:2) (1mL) Y / N	10mL	1mL		
Analyst/Date YL ϕ6/24/13					SP 6/25/13	SP 6/25/13	Reviewed by/Date SP 6/25/13	Analyst/Date

Standard	Standard ID	Concentration	Volume	Expiration Date	Analyst	Witness
Surrogate	P (Bϕϕ232)	2250µg/mL	**200**µL	11/19/13	YL	AC
Spike	11 (Bϕϕ176)	15000µg/mL	**1000**µL	5/ϕ1/14	YL	AC
QLS Spike	18(Bϕϕ179)	1000µg/mL	**500**µL	4/11/14	YL	AC
Extraction Time: 13:ϕ5				**Balance ID:** B14642614		

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. 12. Vial in DCM.

A. Need Total Solids Y (N) **B. Archive/Freeze Y (N)**

Wu7ϕ : 61464

Organic Extractions
Reagent and Solutions Identification

(8015C) NWTPHD-Soil/Sediment
Microwave (3546) (SOP # 3304S)

ARI Job No(s) WU70

(8015C) NWTPHD Soil/Sediment/Solid/Other:	Analyst/Date
Microwave Station:	Microwave
Methylene Chloride: (I# 8279)	YL
Anhydrous Sodium Sulfate: (I# 8130 + jar date 5/24/13)	6/24/13
Neutral Glasswool: (I# 7998 + jar date 5/7/13)	
Vialing Station:	Vialing
Methylene Chloride: (I# 8279)	SG
Concentrated Sulfuric Acid: (I# N/A)	6/25/13
Silica Gel (SPE) Darts: (I# N/A)	

WU70 : 01405

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Organic Extractions Laboratory Analyst Notes

ARI Job No.: WU79 Client ID: SAIC

Parameter: TPHD Client Project: NPDES Sampling Support

Screens: Soil/Sediment/Solid/Other:	Analyst/Date
☐ No Anomalies (standard soil/wet sediment/sand/gravel)= ~~A~~ B	AC 6-21-13
☐ Standing Water Decanted (Not shared)= ~~AC 6-21-13~~ C	
☐ Standing Water Homogenized (Shared samples)=	
☐ Clay/Clumps (Difficult to homogenize)=	
☐ Rocks (%+size)? <5% small	
☐ 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). Extracted	
(Centrifuge#1 used for all Centrifugations) Sample to a 1 mL final volume,	
based on sample pre-screen.	JH 6/24/13
- WU79 temperture log didn't print during Microwave.	AC 6/24/13

TPHD Raw Data
Initial Calibration

ARI Job ID: WU70

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): 4/13/13 Internal Standard ID N/A Expiration 11/27/13

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
Diesel/AK102	2091-2	3/15/14	Diesel/AK102	2043-1	10/20/13
Motor Oil	2041-4	11/27/13	Motor Oil	2043-2	10/19/13
RT	2043-4	10/20/13			
IB	2043-3	10/20/13			

Detail problems, corrective actions and/or other pertinent information below:

Analyst: JW **Date:** 4/16/13

Reviewer: [signature] **Date:** 4/16/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid4a.i/20130413.b/ftphfid4a.m
Batch File: /chem3/fid4a.i/20130413.b
Inst ID: fid4a.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0413a006	0413a007	0413a008	0413a009	0413a010	0413a011
INJ.DATE:	13-APR-2013	13-APR-2013	13-APR-2013	13-APR-2013	13-APR-2013	13-APR-2013
INJ.TIME:	11:53	12:13	12:34	12:54	13:15	13:35

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 Toluene	+++++	+++++	+++++	+++++	+++++	+++++	0.914	0.814-1.014	+++++	+++++
	40 Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.023	0.973-1.073	+++++	+++++
	39 Creosote	+++++	+++++	+++++	+++++	+++++	+++++	0.542	0.492-0.592	+++++	+++++
	36 JetA	+++++	+++++	+++++	+++++	+++++	+++++	0.794	0.744-0.844	+++++	+++++
	37 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.729	0.679-0.779	+++++	+++++
	38 Hydraulic Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.197	1.147-1.247	+++++	+++++
	2 C8	1.165	1.136	1.132	1.133	1.135	1.134	1.134	1.034-1.234	1.139	0.013
	3 C10	2.960	2.962	2.962	2.963	2.963	2.966	2.966	2.916-3.016	2.963	0.002
	4 C12	3.905	3.904	3.905	3.906	3.907	3.910	3.910	3.860-3.960	3.906	0.002
	5 C14	4.587	4.584	4.586	4.586	4.588	4.594	4.594	4.544-4.644	4.588	0.003
	6 C16	5.170	5.167	5.168	5.171	5.171	5.178	5.178	5.128-5.228	5.171	0.004
	7 C18	5.716	5.713	5.715	5.717	5.720	5.727	5.727	5.677-5.777	5.718	0.005
$	8 o-terph	5.859	5.858	5.865	5.874	5.884	5.903	5.903	5.853-5.953	5.874	0.017
	9 C20	6.268	6.263	6.265	6.266	6.268	6.274	6.274	6.224-6.324	6.267	0.004
	10 C22	6.810	6.805	6.806	6.806	6.807	6.808	6.808	6.758-6.858	6.807	0.002
	11 C24	7.324	7.320	7.319	7.321	7.318	7.319	7.319	7.269-7.369	7.320	0.002
	12 C25	7.573	7.567	7.564	7.566	7.567	7.566	7.566	7.516-7.616	7.567	0.003

Reviewer 1 _____ Date: 4/16/13
Reviewer 2 _____ Date: 4/16/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid4a.i/20130413.b/ftphfid4a.m
Batch File: /chem3/fid4a.i/20130413.b
Inst ID: fid4a.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
13 C26	7.811	7.808	7.806	7.827	7.833	7.827	7.827	7.777-7.877	7.819	0.012
14 C28	8.266	8.260	8.259	8.261	8.261	8.258	8.258	8.208-8.308	8.261	0.003
$ 15 Triacon Surr	8.706	8.710	8.706	8.711	8.712	8.700	8.700	8.650-8.750	8.707	0.004
16 C32	9.093	9.097	9.073	9.082	9.094	9.090	9.090	9.040-9.140	9.088	0.009
17 C34	9.462	9.465	9.462	9.469	9.468	9.458	9.458	9.408-9.508	9.464	0.004
18 Filter Peak	11.449	11.438	11.447	11.432	11.448	11.449	11.449	11.349-11.549	11.444	0.007
19 C36	9.835	9.834	9.819	9.827	9.827	9.824	9.824	9.774-9.874	9.828	0.006
20 C38	10.178	10.182	10.193	10.156	10.189	10.179	10.179	10.129-10.229	10.179	0.013
21 C40	10.533	10.531	10.533	10.538	10.535	10.541	10.541	10.491-10.591	10.535	0.004
31 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
32 OR Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.683	0.633-0.733	+++++	+++++
42 Cal(IT) Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.499	0.449-0.549	+++++	+++++
33 AK Dies 102	+++++	+++++	+++++	+++++	+++++	+++++	0.662	0.612-0.712	+++++	+++++
30 NW MOil	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 CRUDE	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
35 AK MOil 103	+++++	+++++	+++++	+++++	+++++	+++++	0.615	0.565-0.665	+++++	+++++
41 ABUNKERC	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid4a.i/20130413.b/ftphfid4a.m
Batch File: /chem3/fid4a.i/20130413.b
Inst ID: fid4a.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0413a013	0413a014	0413a015	0413a016	0413a017	0413a018
INJ.DATE:	13-APR-2013	13-APR-2013	13-APR-2013	13-APR-2013	13-APR-2013	13-APR-2013
INJ.TIME:	14:16	14:36	14:57	15:17	15:38	15:58

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1	Toluene	+++++	+++++	+++++	+++++	+++++	+++++	0.914	0.814-1.014	+++++	+++++
40	Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.023	0.973-1.073	+++++	+++++
39	Creosote	+++++	+++++	+++++	+++++	+++++	+++++	0.542	0.492-0.592	+++++	+++++
36	JetA	+++++	+++++	+++++	+++++	+++++	+++++	0.794	0.744-0.844	+++++	+++++
37	Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.729	0.679-0.779	+++++	+++++
38	Hydraulic Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.197	1.147-1.247	+++++	+++++
2	C8	1.180	1.166	1.100	1.178	1.128	1.143	1.143	1.044-1.244	1.149	0.032
3	C10	2.964	2.961	2.963	2.963	2.962	2.962	2.962	2.912-3.012	2.963	0.001
4	C12	3.904	3.903	3.904	3.904	3.903	3.905	3.905	3.854-3.954	3.904	0.001
5	C14	4.585	4.583	4.603	4.569	4.583	4.584	4.584	4.534-4.634	4.585	0.011
6	C16	5.184	5.188	5.164	5.167	5.183	5.166	5.166	5.116-5.216	5.175	0.011
7	C18	5.729	5.730	5.730	5.733	5.731	5.734	5.734	5.684-5.784	5.731	0.002
$ 8	o-terph	5.903	5.902	5.900	5.902	5.899	5.904	5.904	5.854-5.955	5.902	0.002
9	C20	6.285	6.273	6.281	6.283	6.280	6.287	6.287	6.237-6.336	6.281	0.005
10	C22	6.807	6.807	6.806	6.805	6.804	6.808	6.808	6.758-6.857	6.806	0.002
11	C24	7.321	7.329	7.314	7.320	7.321	7.311	7.311	7.261-7.361	7.319	0.006
12	C25	7.577	7.569	7.572	7.563	7.556	7.572	7.572	7.522-7.622	7.568	0.008

Reviewer 1 JW Date: 4/16/13
Reviewer 2 Date: 4/16/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid4a.i/20130413.b/ftphfid4a.m
Batch File: /chem3/fid4a.i/20130413.b
Inst ID: fid4a.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
13 C26	7.813	7.831	7.834	7.825	7.819	7.830	7.830	7.779-7.880	7.825	0.008
14 C28	8.258	8.257	8.247	8.256	8.257	8.258	8.258	8.209-8.309	8.255	0.004
$ 15 Triacon Surr	8.669	8.677	8.684	8.696	8.719	8.747	8.747	8.697-8.797	8.698	0.029
16 C32	9.082	9.091	9.091	9.090	9.084	9.095	9.095	9.045-9.145	9.089	0.005
17 C34	9.463	9.455	9.460	9.455	9.454	9.449	9.449	9.399-9.499	9.456	0.005
18 Filter Peak	11.443	11.451	11.444	11.452	11.438	11.443	11.443	11.343-11.543	11.445	0.005
19 C36	9.816	9.824	9.820	9.830	9.816	9.820	9.820	9.770-9.870	9.821	0.005
20 C38	10.173	10.184	10.178	10.178	10.168	10.185	10.185	10.136-10.236	10.178	0.007
21 C40	10.541	10.538	10.543	10.539	10.542	10.543	10.543	10.493-10.593	10.541	0.002
31 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
32 OR Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.683	0.633-0.733	+++++	+++++
42 Cal(IT) Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.499	0.449-0.549	+++++	+++++
33 AK Dies 102	+++++	+++++	+++++	+++++	+++++	+++++	0.662	0.612-0.712	+++++	+++++
30 NW MOil	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 CRUDE	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
35 AK MOil 103	+++++	+++++	+++++	+++++	+++++	+++++	0.615	0.565-0.665	+++++	+++++
41 ABUNKERC	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++

GC LOG SUMMARY FOR DATABATCH - /chem3/fid4a.i/20130413.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	13-APR-2013 09:47	0413a001.d	1	RINSE	
2	13-APR-2013 10:07	0413a002.d	1	RT0413	
3	13-APR-2013 10:27	0413a003.d	1	IB0413	
4	13-APR-2013 10:47	0413a004.d	1	DIESEL#1	
5	13-APR-2013 11:07	0413a005.d	1	MOIL#1	
6	13-APR-2013 11:53	0413a006.d	1	DIESEL50	
7	13-APR-2013 12:13	0413a007.d	1	DIESEL100	
8	13-APR-2013 12:34	0413a008.d	1	DIESEL250	
9	13-APR-2013 12:54	0413a009.d	1	DIESEL500	
10	13-APR-2013 13:15	0413a010.d	1	DIESEL1000	
11	13-APR-2013 13:35	0413a011.d	1	DIESEL2500	
12	13-APR-2013 13:56	0413a012.d	1	DIESELICV250	
13	13-APR-2013 14:16	0413a013.d	1	MOIL100	
14	13-APR-2013 14:36	0413a014.d	1	MOIL250	
15	13-APR-2013 14:57	0413a015.d	1	MOIL500	
16	13-APR-2013 15:17	0413a016.d	1	MOIL1000	
17	13-APR-2013 15:38	0413a017.d	1	MOIL2500	
18	13-APR-2013 15:58	0413a018.d	1	MOIL5000	
19	13-APR-2013 16:19	0413a019.d	1	MOILICV500	

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/fid4a.i/20130413.b

ARI Job No.: RINS Method: ftphfid4a.m Instrument: fid4a.i Date: 13-APR-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0947	0413a001.d	RINSE		1	NO MANUAL INTEGRATION
1007	0413a002.d	RT0413		1	Toluene,
1027	0413a003.d	IB0413		1	NO MANUAL INTEGRATION
1047	0413a004.d	DIESEL#1		1	o-terph,
1107	0413a005.d	MOIL#1		1	NO MANUAL INTEGRATION
1153	0413a006.d	DIESEL50		1	o-terph,
1213	0413a007.d	DIESEL100		1	o-terph,
1234	0413a008.d	DIESEL250		1	o-terph,
1254	0413a009.d	DIESEL500		1	o-terph,
1315	0413a010.d	DIESEL1000		1	o-terph,
1335	0413a011.d	DIESEL2500		1	o-terph,
1356	0413a012.d	DIESELICV250		1	o-terph,
1416	0413a013.d	MOIL100		1	Triacon Surr,
1436	0413a014.d	MOIL250		1	Triacon Surr,
1457	0413a015.d	MOIL500		1	Triacon Surr,
1517	0413a016.d	MOIL1000		1	Triacon Surr,
1538	0413a017.d	MOIL2500		1	Triacon Surr,
1558	0413a018.d	MOIL5000		1	Triacon Surr,
1619	0413a019.d	MOILICV500		1	Triacon Surr,

8

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client:

SDG No.: 20130413 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: 5.86 TRIAC: 8.70

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		RINSE	04/13/13	0947	5.87	8.70
02		RT0413	04/13/13	1007	5.86	8.70
03		IB0413	04/13/13	1027	5.86	8.69
04		DIESEL#1	04/13/13	1047	5.87	8.69
05		MOIL#1	04/13/13	1107	5.85	8.69
06		DIESEL50	04/13/13	1153	5.86	8.71
07		DIESEL100	04/13/13	1213	5.86	8.71
08		DIESEL250	04/13/13	1234	5.87	8.71
09		DIESEL500	04/13/13	1254	5.87	8.71
10		DIESEL1000	04/13/13	1315	5.88	8.71
11		DIESEL2500	04/13/13	1335	5.90	8.70
12		DIESELICV250	04/13/13	1356	5.86	8.70
13		MOIL100	04/13/13	1416	5.90	8.67
14		MOIL250	04/13/13	1436	5.90	8.68
15		MOIL500	04/13/13	1457	5.90	8.68
16		MOIL1000	04/13/13	1517	5.90	8.70
17		MOIL2500	04/13/13	1538	5.90	8.72
18		MOIL5000	04/13/13	1558	5.90	8.75
19		MOILICV500	04/13/13	1619	5.90	8.68

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

FORM VIII TPH

6a
DIESEL INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC. Client: 20130413

Instrument: FID4A.I Project:

Calibration Date: 13-APR-2013 SDG No.: 20130413

Diesel Range	RF1 50	RF2 100	RF3 250	RF4 500	RF5 1000	RF6 2500	Ave RF	%RSD
WA Diesel	15188	15021	14479	14279	14226	13910	14517	3.4
AK Diesel	17981	17836	17184	16948	16866	16485	17217	3.4
OR Diesel	18067	17904	17254	17021	16941	16562	17291	3.4
Cal Diesel	17937	17789	17145	16910	16821	16447	17175	3.4
o-Terph	20876	20737	19497	18356	18320	17911	19283	6.7

<- Indicates %RSD outside limits
Surrogate areas are not included in Diesel RF calculation.

Quant Ranges : WA Diesel C12-C24 (3.908-7.326)
AK Diesel C10-C25 (2.967-7.574)
OR Diesel C10-C28 (2.967-8.269)
Cal Diesel C10-C24 (2.967-7.326)

Calibration Files	Analysis Time
0413a006.d	13-APR-2013 11:53
0413a007.d	13-APR-2013 12:13
0413a008.d	13-APR-2013 12:34
0413a009.d	13-APR-2013 12:54
0413a010.d	13-APR-2013 13:15
0413a011.d	13-APR-2013 13:35

FORM VI-Diesel

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a002.d ARI ID: RT0413
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 10:07
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	0.914	0.000	523273	404181	WATPHG	(Tol-C12)	1601919	103.09
C8	1.147	0.000	383436	378901	WATPHD	(C12-C24)	2482020	171.00
C10	2.967	0.000	554691	384061	WATPHM	(C24-C38)	3731338	274.28
C12	3.908	0.000	599973	392136	AK102	(C10-C25)	3297127	191.53
C14	4.587	0.000	632883	391482	AK103	(C25-C36)	3275864	355.99
C16	5.171	0.000	554416	390514				
C18	5.717	0.000	457643	373684				
C20	6.268	0.000	500619	352912				
C22	6.810	0.000	449542	363990	MIN.OIL	(C24-C38)	3731338	218.73
C24	7.326	0.000	451103	374543				
C25	7.574	0.000	428467	368739				
C26	7.826	0.000	1071962	1140709				
C28	8.269	0.000	451113	396216				
C32	9.081	0.000	434660	405330				
C34	9.457	0.000	423148	399566				
Filter Peak	11.442	0.000	2220	3573	CREOSOT	(C12-C22)	2071520	949.41 M
C36	9.823	0.000	376532	406269				
C38	10.179	0.000	384689	395168				
C40	10.533	0.000	339686	388792				
o-terph	5.861	0.000	933117	821007				
Triacon Surr	8.698	0.000	991072	1035385				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	821007	42.6	94.6
Triacontane	1035385	56.9	126.4

M Indicates the peak was manually integrated

JW 4/16/13

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

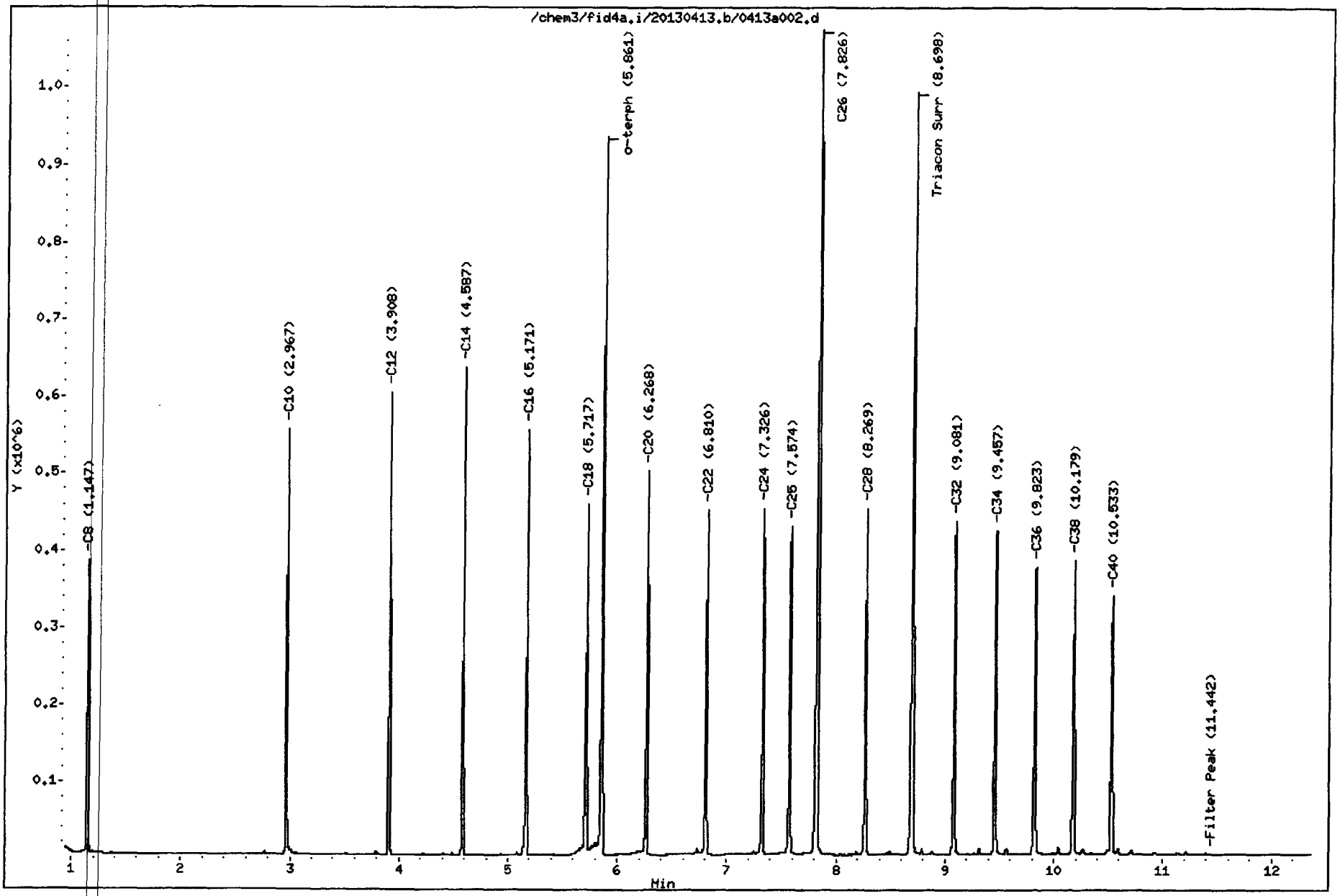
Data File: /chem3/fid4a.i/20130413.b/0413a002.d
Date : 13-APR-2013 10:07
Client ID:
Sample Info: RT0413

Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

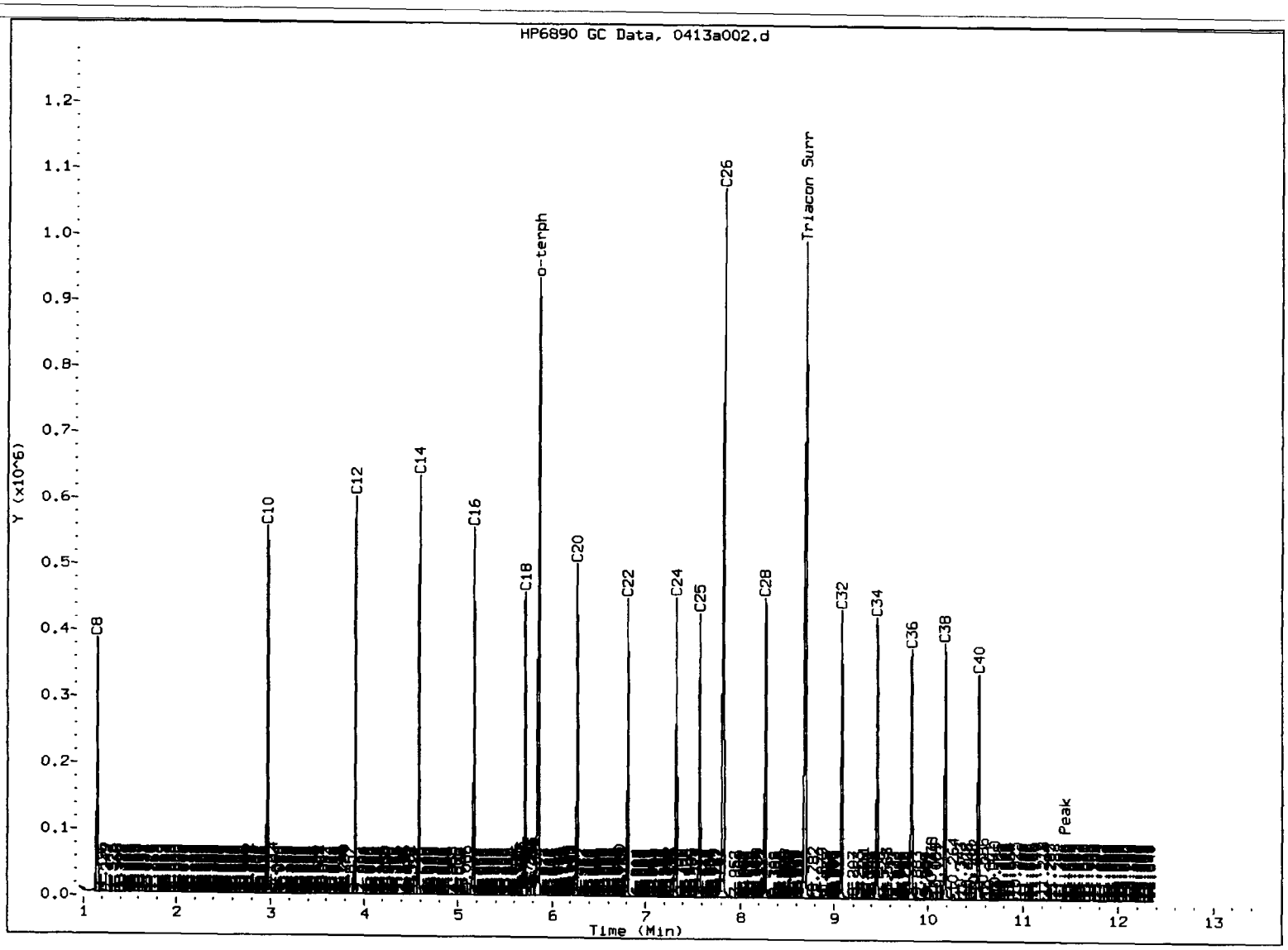
Column phase: RTX-1

JRV 4/14/13



FID:4A-2C/RTX-1 RT0413

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
2. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/16/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a003.d ARI ID: IB0413
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 10:27
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	17733	1.14
C8	1.102	-0.046	1135	2331	WATPHD	(C12-C24)	47239	3.25
C10	2.964	-0.004	232	237	WATPHM	(C24-C38)	117547	8.64
C12	3.905	-0.003	174	136	AK102	(C10-C25)	54060	3.14
C14	4.585	-0.003	110	101	AK103	(C25-C36)	90176	9.80
C16	5.167	-0.004	108	79				
C18	5.715	-0.002	160	177				
C20	6.261	-0.007	154	176				
C22	6.802	-0.008	133	182	MIN.OIL	(C24-C38)	117547	6.89
C24	7.321	-0.005	163	306				
C25	7.566	-0.008	139	147				
C26	7.807	-0.019	275	355				
C28	8.260	-0.009	813	902				
C32	9.055	-0.026	10958	9907				
C34	9.455	-0.002	490	696				
Filter Peak	11.440	-0.002	1869	927	CREOSOT	(C12-C22)	43412	19.90 M
C36	9.840	0.016	828	1744				
C38	10.165	-0.014	843	1177				
C40	10.527	-0.005	1196	569				
o-terph	5.863	0.002	1144381	871534				
Triacon Surr	8.687	-0.011	878761	820967				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	871534	45.2	100.4
Triacontane	820967	45.1	100.3

4/16/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130413.b/0413a003.d

Date : 13-APR-2013 10:27

Client ID:

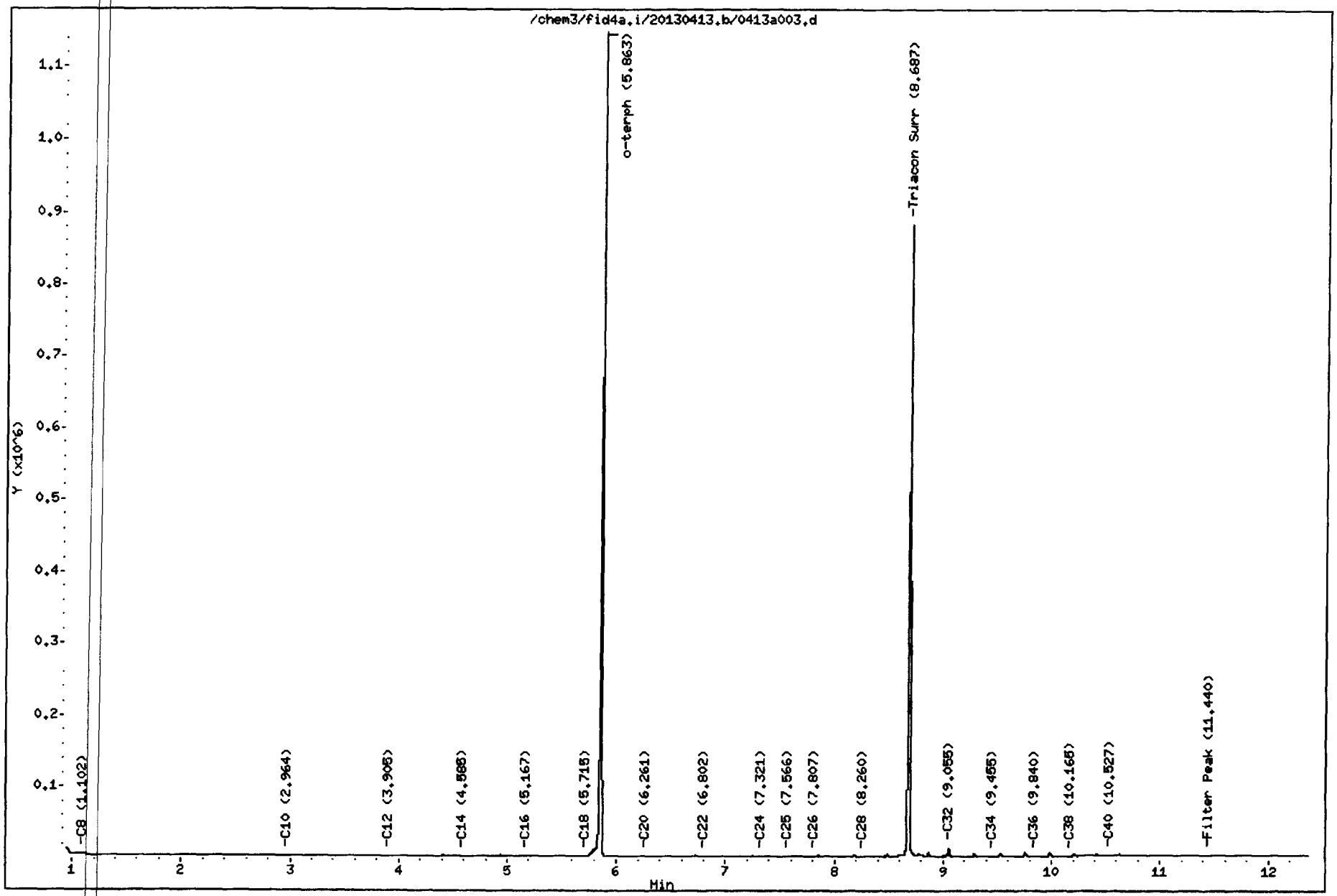
Sample Info: IB0413

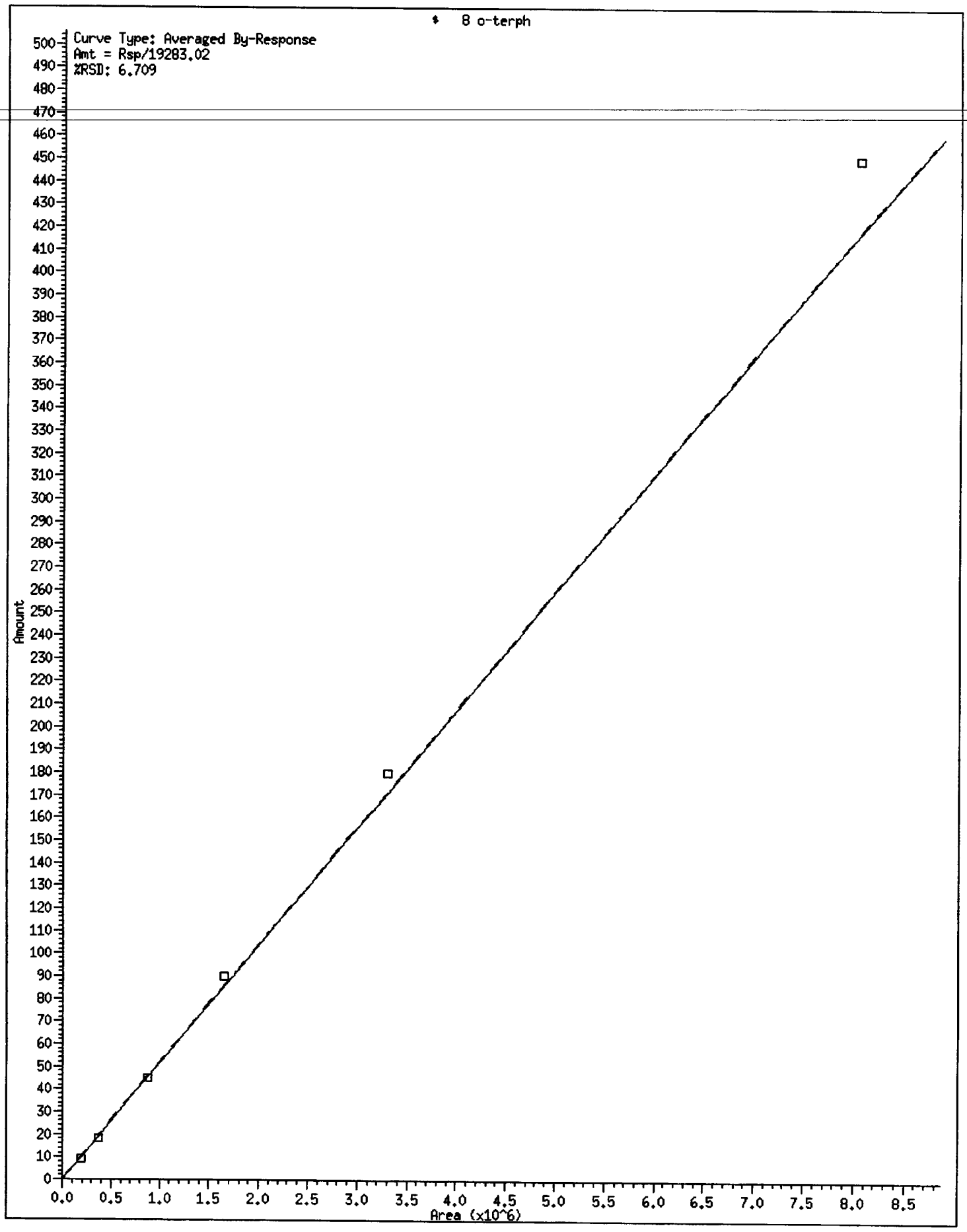
Column phase: RTX-1

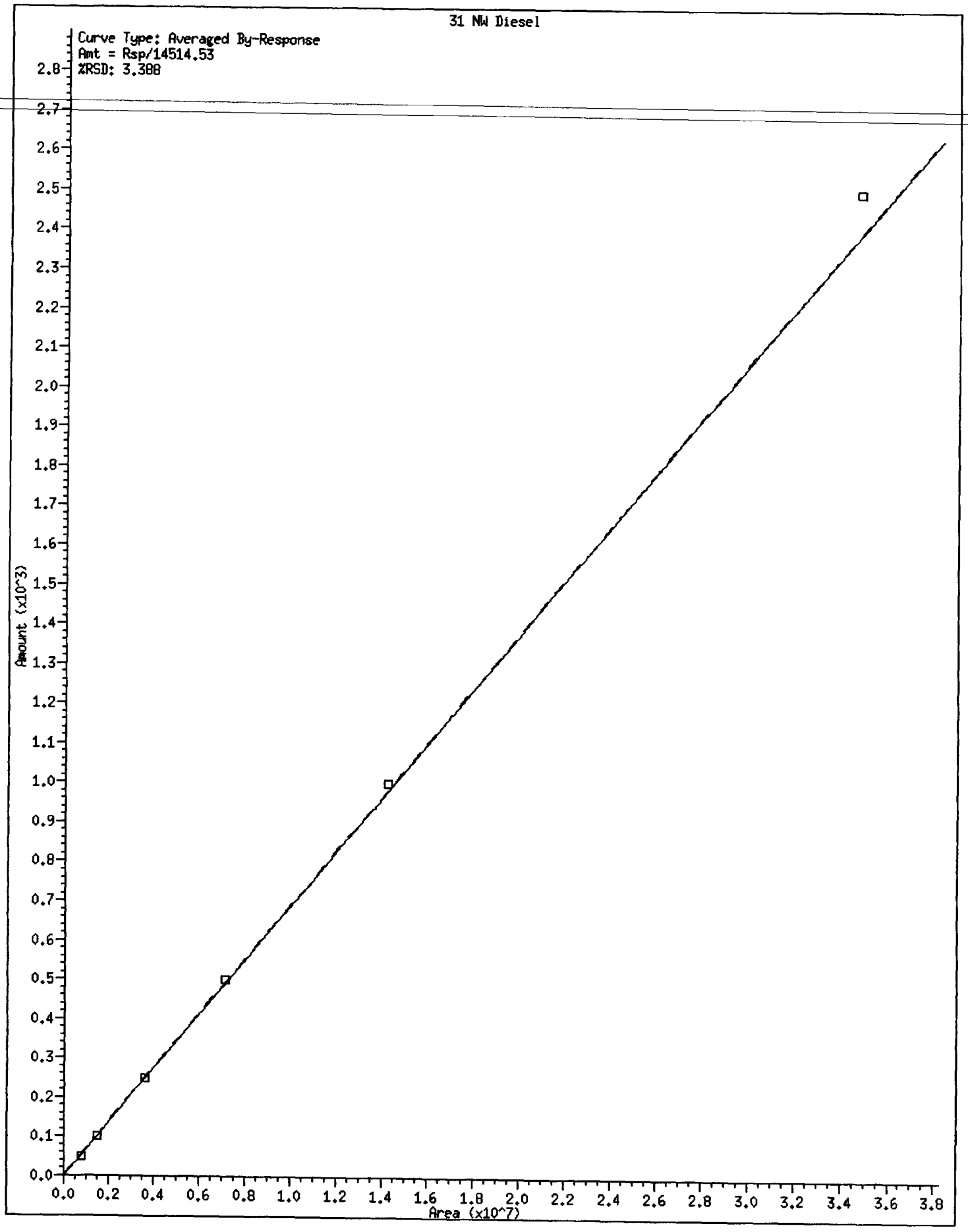
Instrument: fid4a.i

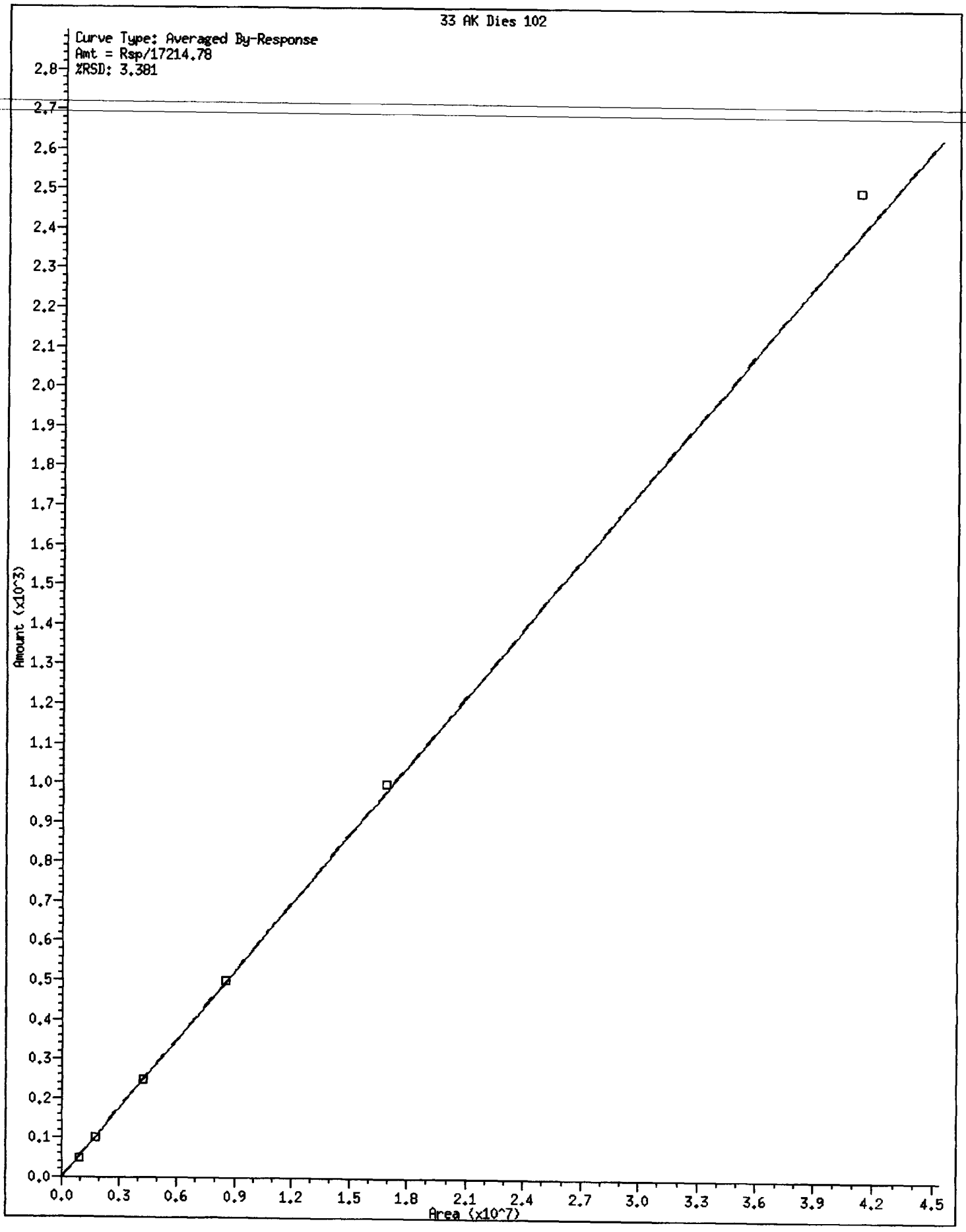
Operator: JR/VTS/JW

Column diameter: 0.25




$ 8 o-terph
Curve Type: Averaged By-Response
Amt = Rsp/19283.02
%RSD: 6.709
Amount
Area (x10^6)


31 NW Diesel
Curve Type: Averaged By-Response
Amt = Rsp/14514.53
%RSD: 3.388
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
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


33 AK Dies 102
Curve Type: Averaged By-Response
Amt = Rsp/17214.78
%RSD: 3.381
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
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

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a006.d ARI ID: DIESEL50
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 11:53
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	215268	13.85
C8	1.165	0.018	806	2277	WATPHD	(C12-C24)	759390	52.32
C10	2.960	-0.007	6459	4378	WATPHM	(C24-C38)	46996	3.45
C12	3.905	-0.003	11694	9658	AK102	(C10-C25)	899046	52.23
C14	4.587	0.000	16140	16680	AK103	(C25-C36)	27960	3.04
C16	5.170	-0.001	27596	20440				
C18	5.716	-0.001	21356	18380				
C20	6.268	0.000	14791	13160				
C22	6.810	0.000	6671	6517	MIN.OIL	(C24-C38)	46996	2.75
C24	7.324	-0.002	1715	1968				
C25	7.573	-0.001	706	926				
C26	7.811	-0.015	292	348				
C28	8.266	-0.003	63	56				
C32	9.093	0.012	127	99				
C34	9.462	0.005	225	183				
Filter Peak	11.449	0.007	1566	2590	CREOSOT	(C12-C22)	735404	337.05 M
C36	9.835	0.012	564	945				
C38	10.178	-0.001	736	362				
C40	10.533	0.000	1052	1464				
o-terph	5.859	-0.002	284403	187888				
Triacon Surr	8.706	0.008	114	152				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	187888	9.7	21.7 M
Triacontane	152	0.0	0.0

JW 4/16/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

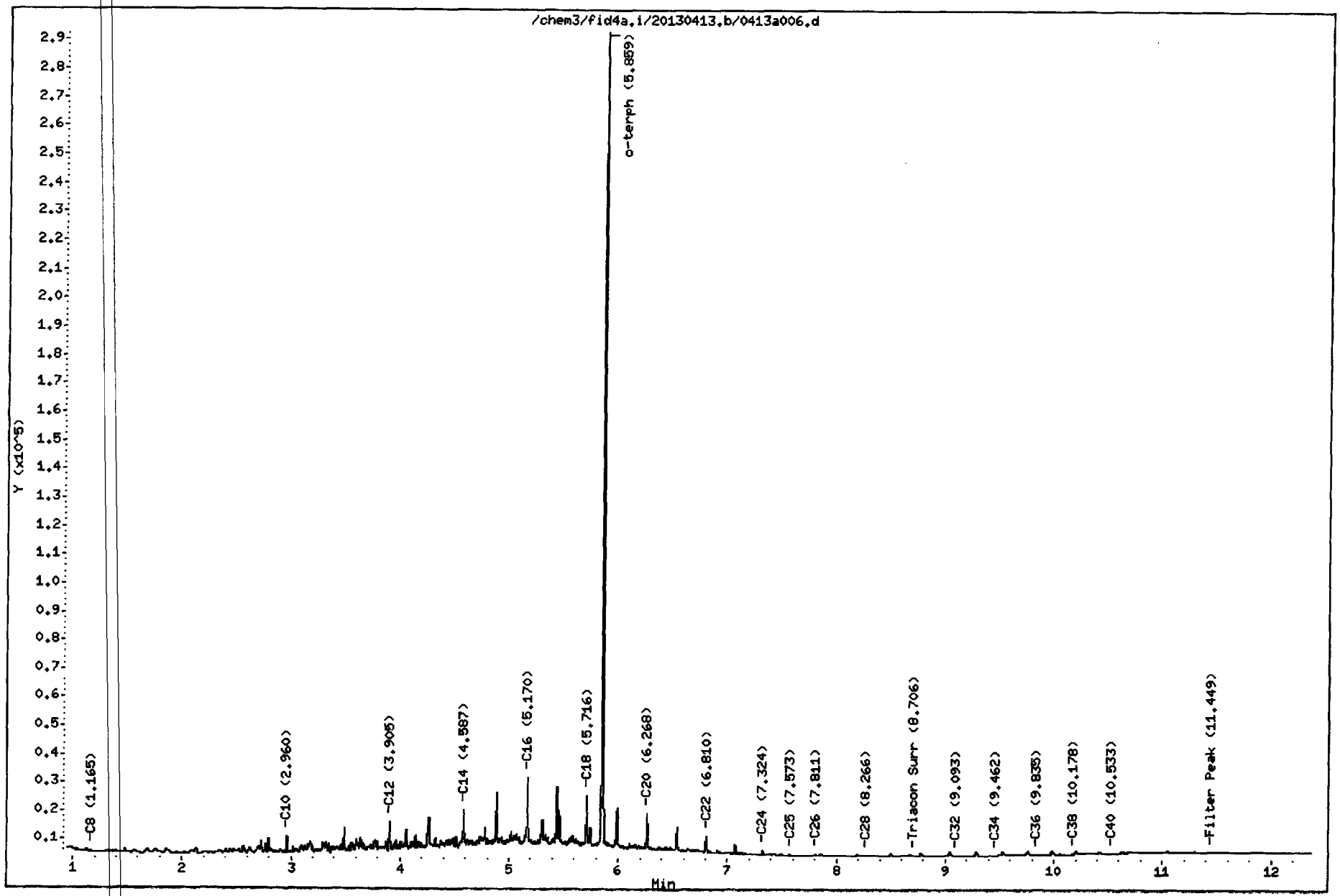
Data File: /chem3/fid4a.i/20130413.b/0413a006.d
Date : 13-APR-2013 11:53
Client ID:
Sample Info: DIESEL50

Column phase: RTX-1

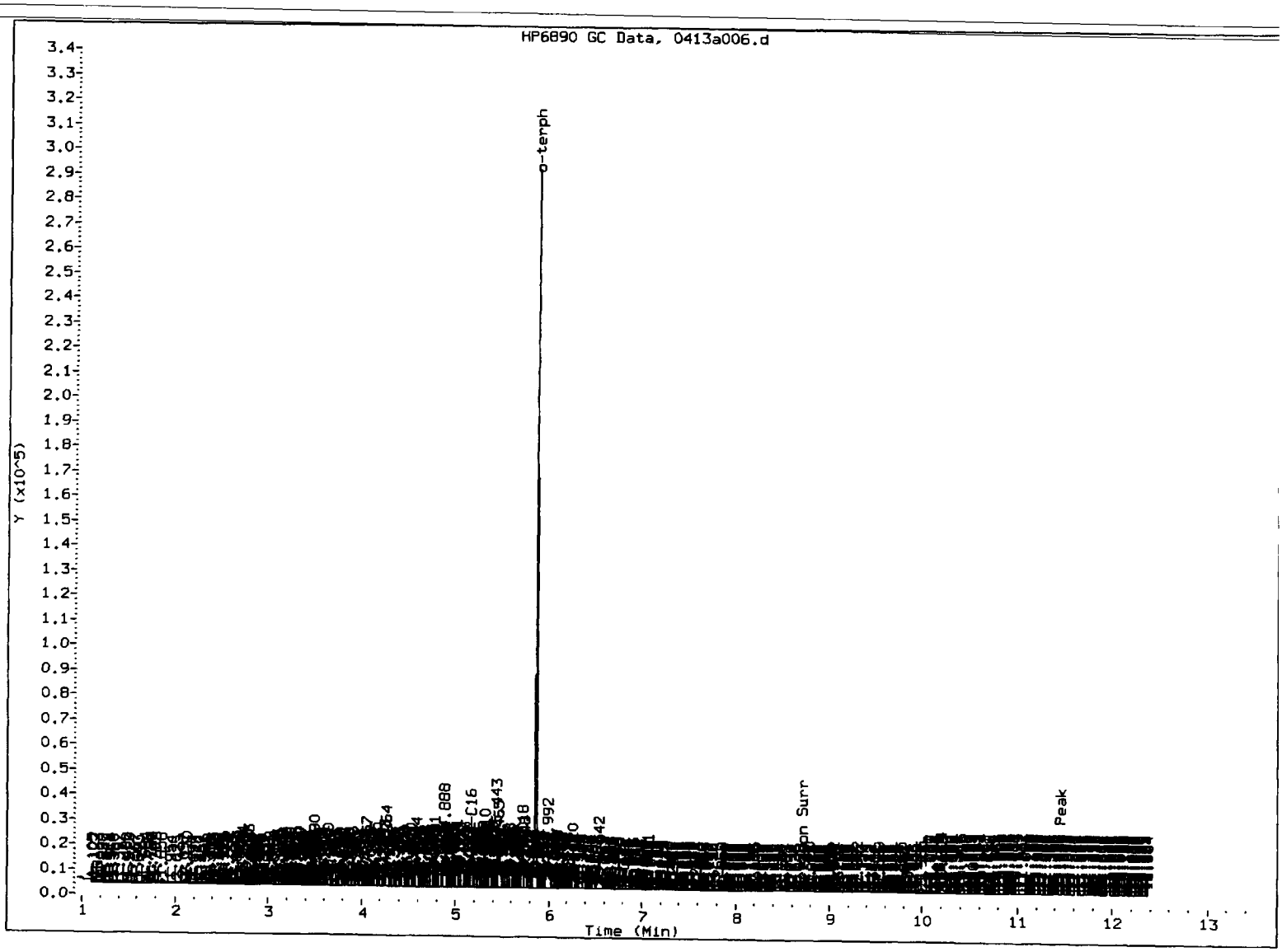
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

JW 4/11/13



FID:4A-2C/RTX-1 DIESEL50 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5). Skimmed surrogate

Analyst: JW Date: 4/16/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a007.d ARI ID: DIESEL100
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 12:13
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	417109	26.84
C8	1.136	-0.011	1941	3621	WATPHD	(C12-C24)	1502097	103.49
C10	2.962	-0.006	12519	8727	WATPHM	(C24-C38)	33140	2.44
C12	3.904	-0.005	20914	18536	AK102	(C10-C25)	1783636	103.61
C14	4.584	-0.003	33061	32735	AK103	(C25-C36)	20259	2.20
C16	5.167	-0.004	55285	41238				
C18	5.713	-0.004	42269	37534				
C20	6.263	-0.005	27729	25804				
C22	6.805	-0.005	12584	15117	MIN.OIL	(C24-C38)	33140	1.94
C24	7.320	-0.007	3636	4226				
C25	7.567	-0.007	1377	1724				
C26	7.808	-0.019	569	662				
C28	8.260	-0.009	83	67				
C32	9.097	0.016	105	158				
C34	9.465	0.008	182	122				
Filter Peak	11.438	-0.004	1449	1863	CREOSOT	(C12-C22)	1453523	666.17 M
C36	9.834	0.010	329	216				
C38	10.182	0.003	520	346				
C40	10.531	-0.002	816	1416				
o-terph	5.858	-0.003	557960	373271				
Triacon Surr	8.710	0.012	49	51				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	373271	19.4	43.0 M
Triacontane	51	0.0	0.0

JLi 4/16/17

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

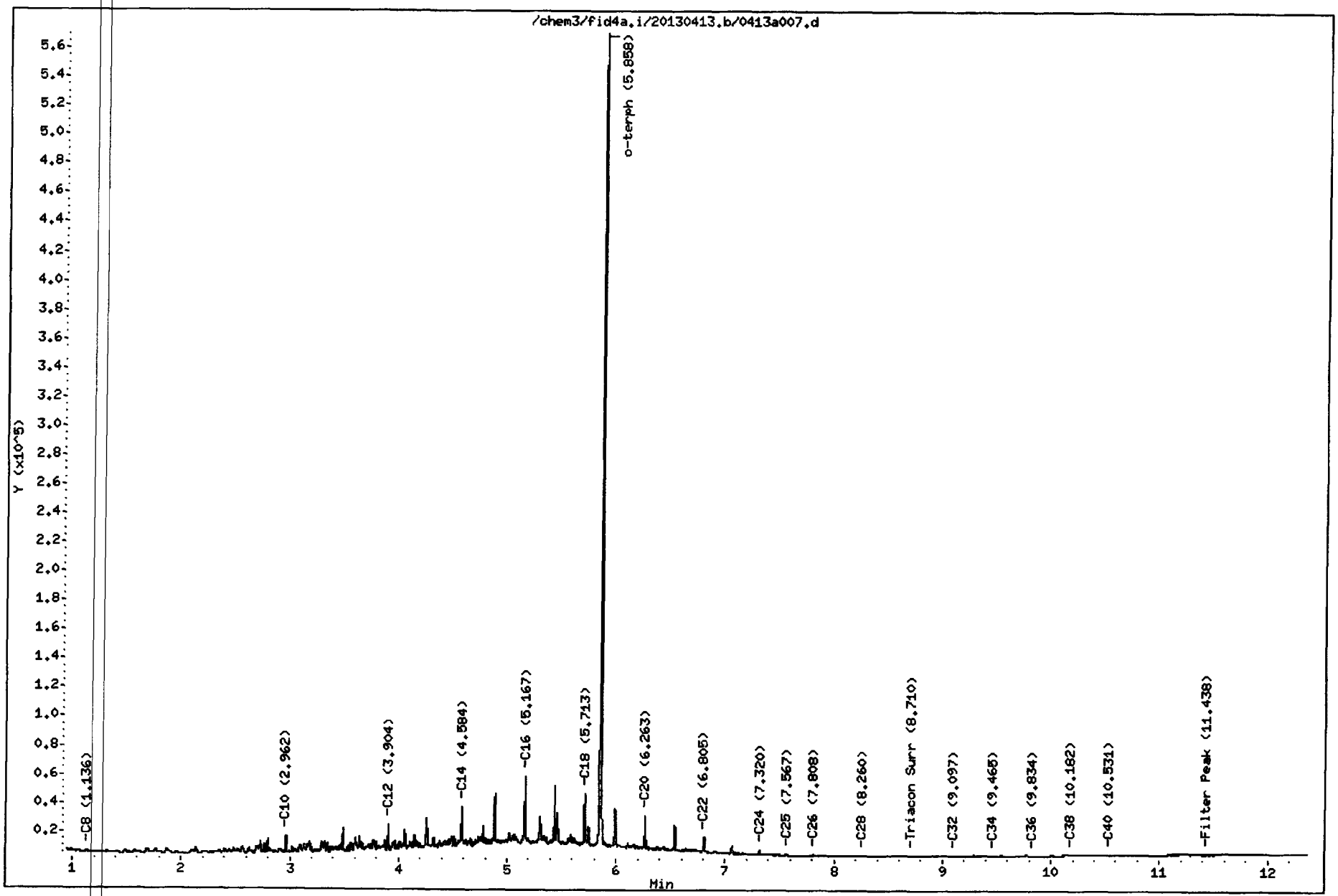
Data File: /chem3/fid4a.i/20130413.b/0413a007.d
Date : 13-APR-2013 12:13
Client ID:
Sample Info: DIESEL100

Column phase: RTX-1

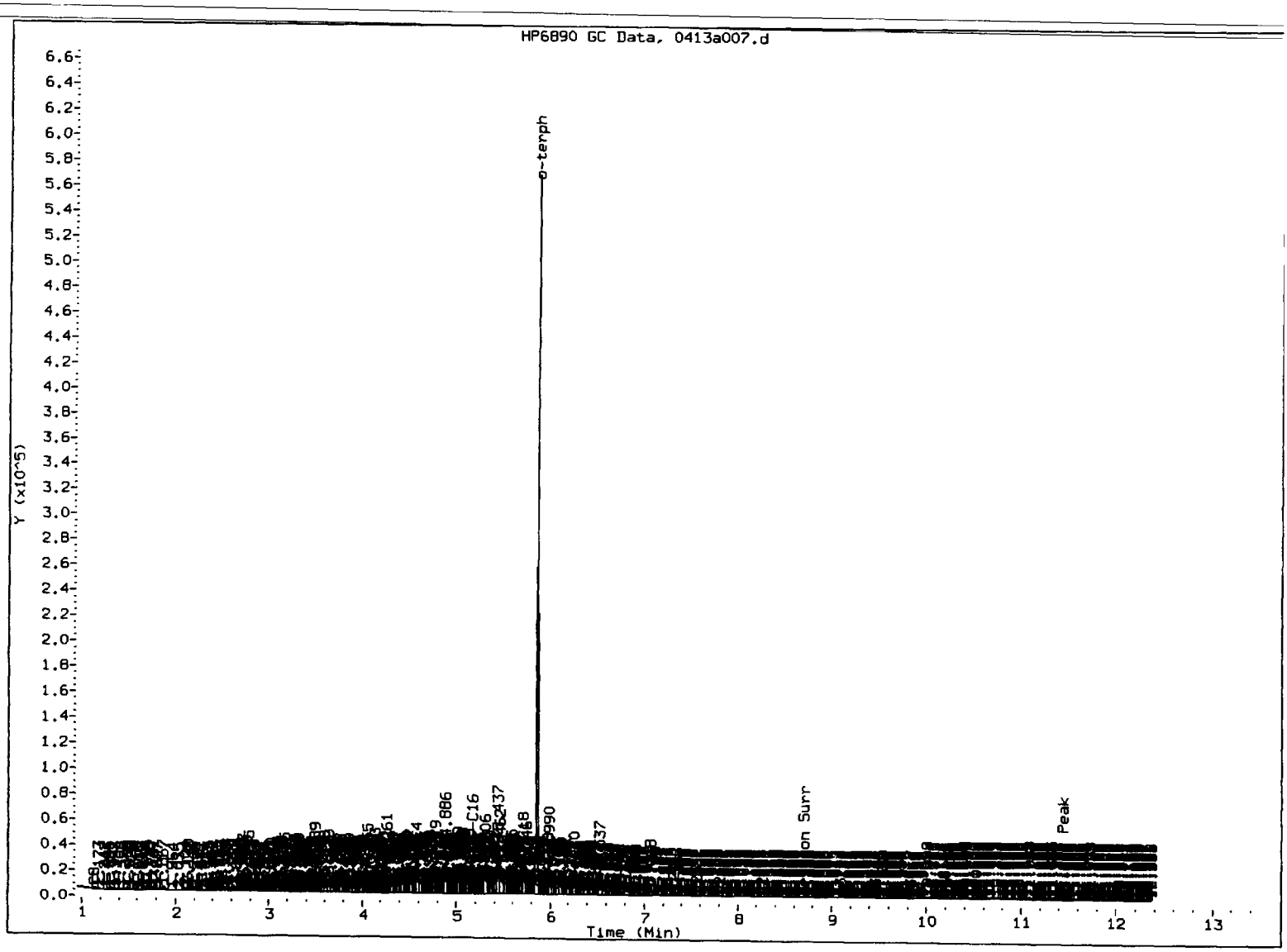
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

JW 4/16/13



FID:4A-2C/RTX-1 DIESEL100 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JH Date: 4/16/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a008.d ARI ID: DIESEL250
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 12:34
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	986529	63.49
C8	1.132	-0.015	3781	5720	WATPHD	(C12-C24)	3619636	249.38
C10	2.962	-0.005	30152	20850	WATPHM	(C24-C38)	50857	3.74
C12	3.905	-0.003	49975	43741	AK102	(C10-C25)	4295925	249.55
C14	4.586	-0.002	76514	63530	AK103	(C25-C36)	30121	3.27
C16	5.168	-0.003	117704	98659				
C18	5.715	-0.002	94445	95631				
C20	6.265	-0.002	60449	59524				
C22	6.806	-0.004	28706	35806	MIN.OIL	(C24-C38)	50857	2.98
C24	7.319	-0.007	8050	9800				
C25	7.564	-0.010	3537	4263				
C26	7.806	-0.020	1367	1552				
C28	8.259	-0.010	179	167				
C32	9.073	-0.007	82	95				
C34	9.462	0.005	187	107				
Filter Peak	11.447	0.006	1441	1346	CREOSOT	(C12-C22)	3511755	1609.49 M
C36	9.819	-0.004	351	301				
C38	10.193	0.014	656	259				
C40	10.533	0.000	894	615				
o-terph	5.865	0.004	1088756	877347				
Triacon Surr	8.706	0.008	36	15				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	877347	45.5	101.1 M
Triacontane	15	0.0	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

JW 4/16/13

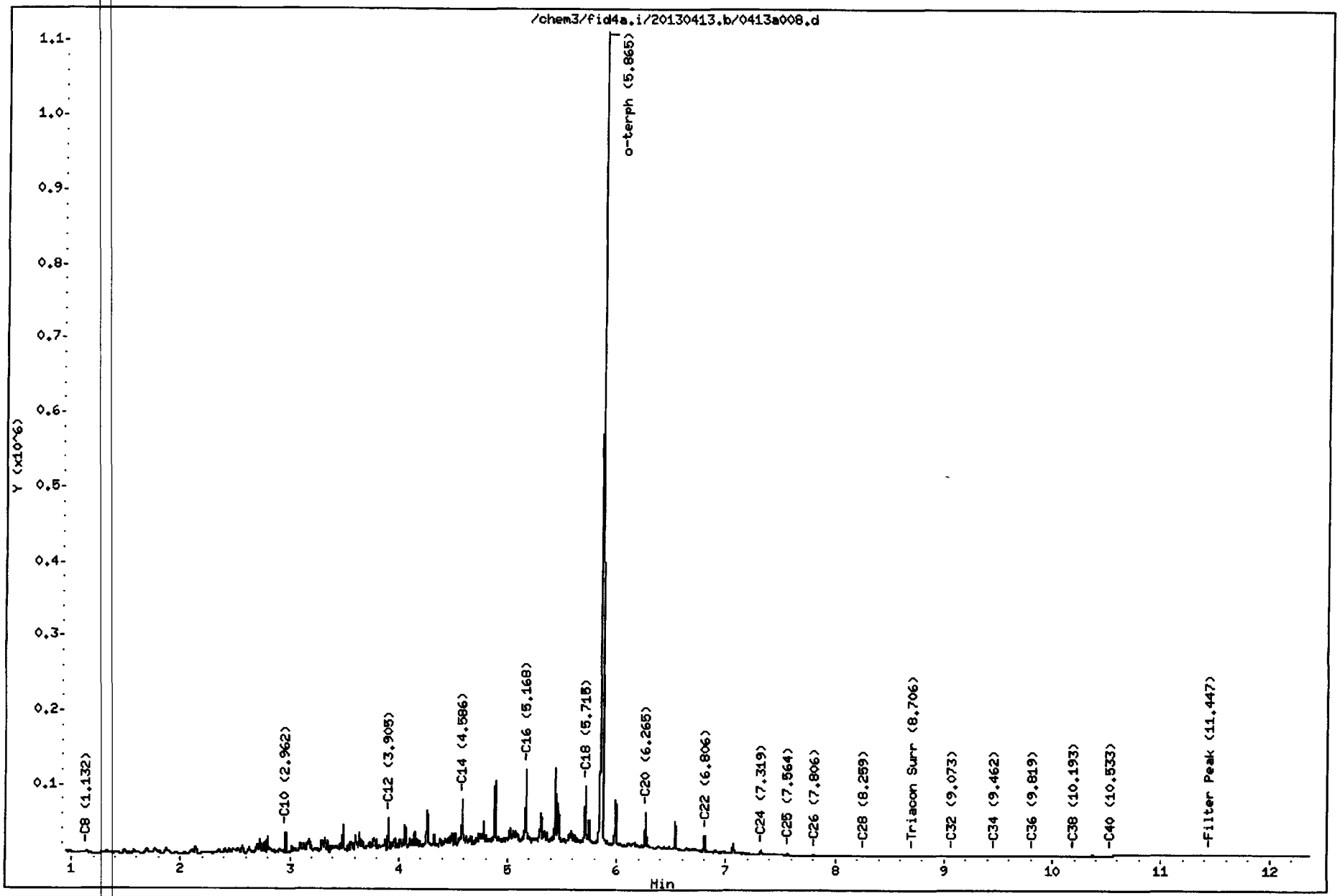
Data File: /chem3/fid4a.i/20130413.b/0413a008.d
Date : 13-APR-2013 12:34
Client ID:
Sample Info: DIESEL250

Instrument: fid4a.i

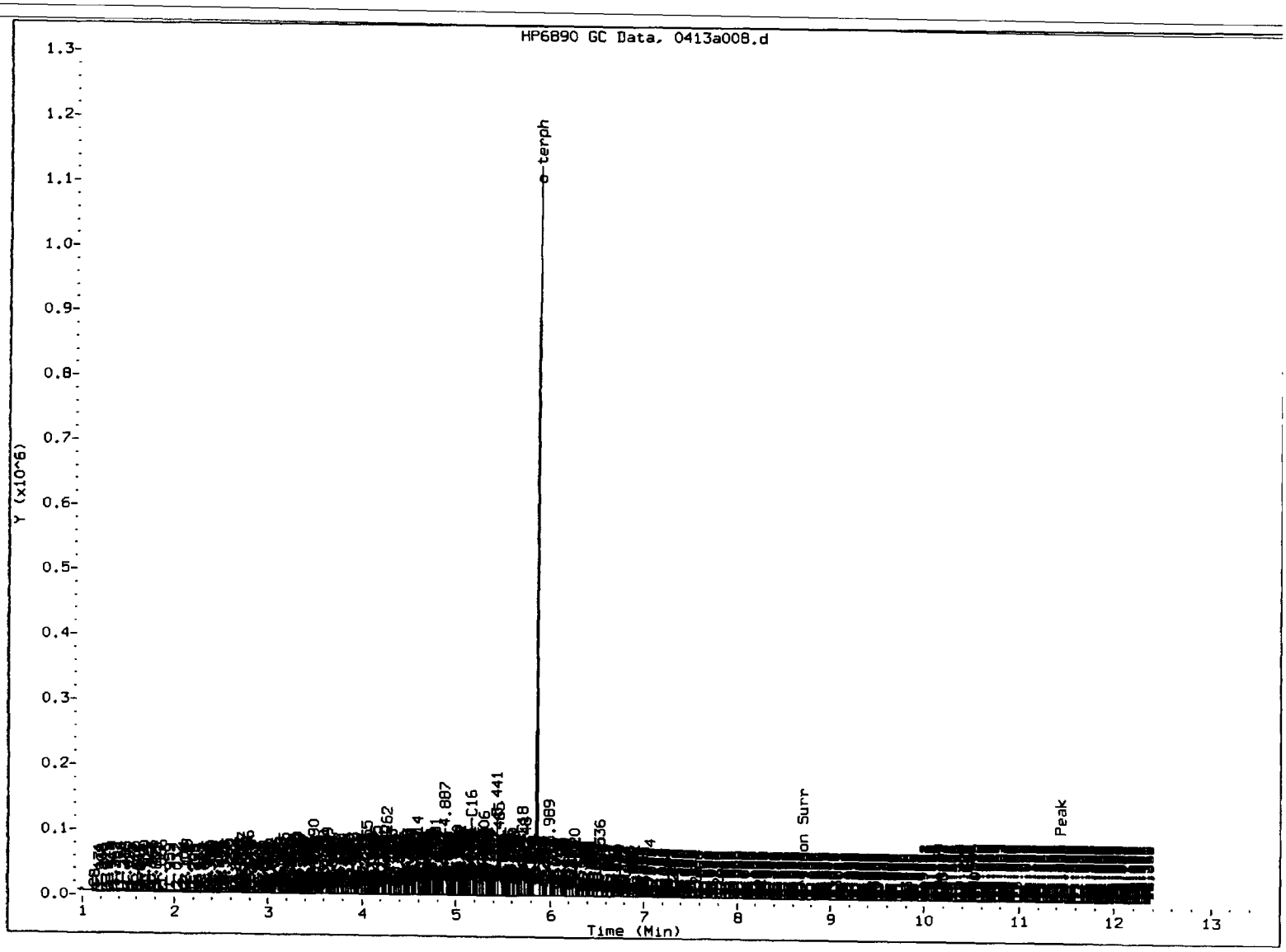
Operator: JR/VTS/JW
Column diameter: 0.25

Column phase: RTX-1

JW 4/16/13



FID:4A-2C/RTX-1 DIESEL250 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/16/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a009.d ARI ID: DIESEL500
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 12:54
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	1938503	124.75
C8	1.133	-0.014	6656	8984	WATPHD	(C12-C24)	7139483	491.89
C10	2.963	-0.005	60617	41059	WATPHM	(C24-C38)	73614	5.41
C12	3.906	-0.002	95786	86973	AK102	(C10-C25)	8473912	492.25
C14	4.586	-0.001	150874	130101	AK103	(C25-C36)	46507	5.05
C16	5.171	-0.001	221742	168860				
C18	5.717	0.000	183930	171594				
C20	6.266	-0.002	125277	138952				
C22	6.806	-0.004	61289	73010	MIN.OIL	(C24-C38)	73614	4.32
C24	7.321	-0.006	17056	16948				
C25	7.566	-0.008	7181	8056				
C26	7.827	0.001	795	590				
C28	8.261	-0.008	383	489				
C32	9.082	0.001	63	54				
C34	9.469	0.012	136	160				
Filter Peak	11.432	-0.010	1383	1663	CREOSOT	(C12-C22)	6912274	3168.01 M
C36	9.827	0.003	301	238				
C38	10.156	-0.023	477	399				
C40	10.538	0.005	798	1290				
o-terph	5.874	0.013	1524427	1652081				
Triacon Surr	8.711	0.013	30	9				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1652081	85.7	190.4 M
Triacontane	9	0.0	0.0

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

JW 4/16/13

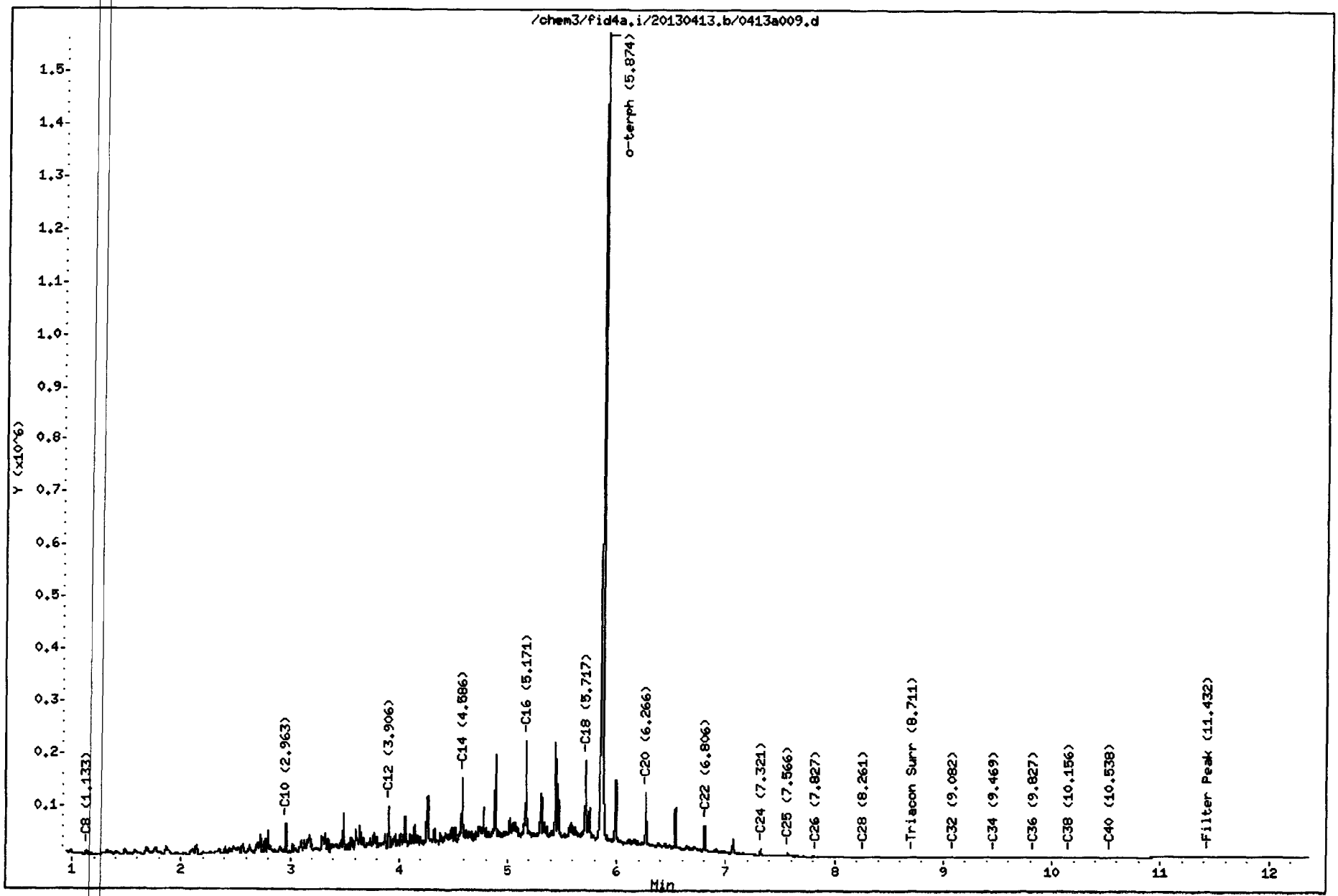
Data File: /chem3/fid4a.i/20130413.b/0413a009.d
Date : 13-APR-2013 12:54
Client ID:
Sample Info: DIESEL500

Column phase: RTX-1

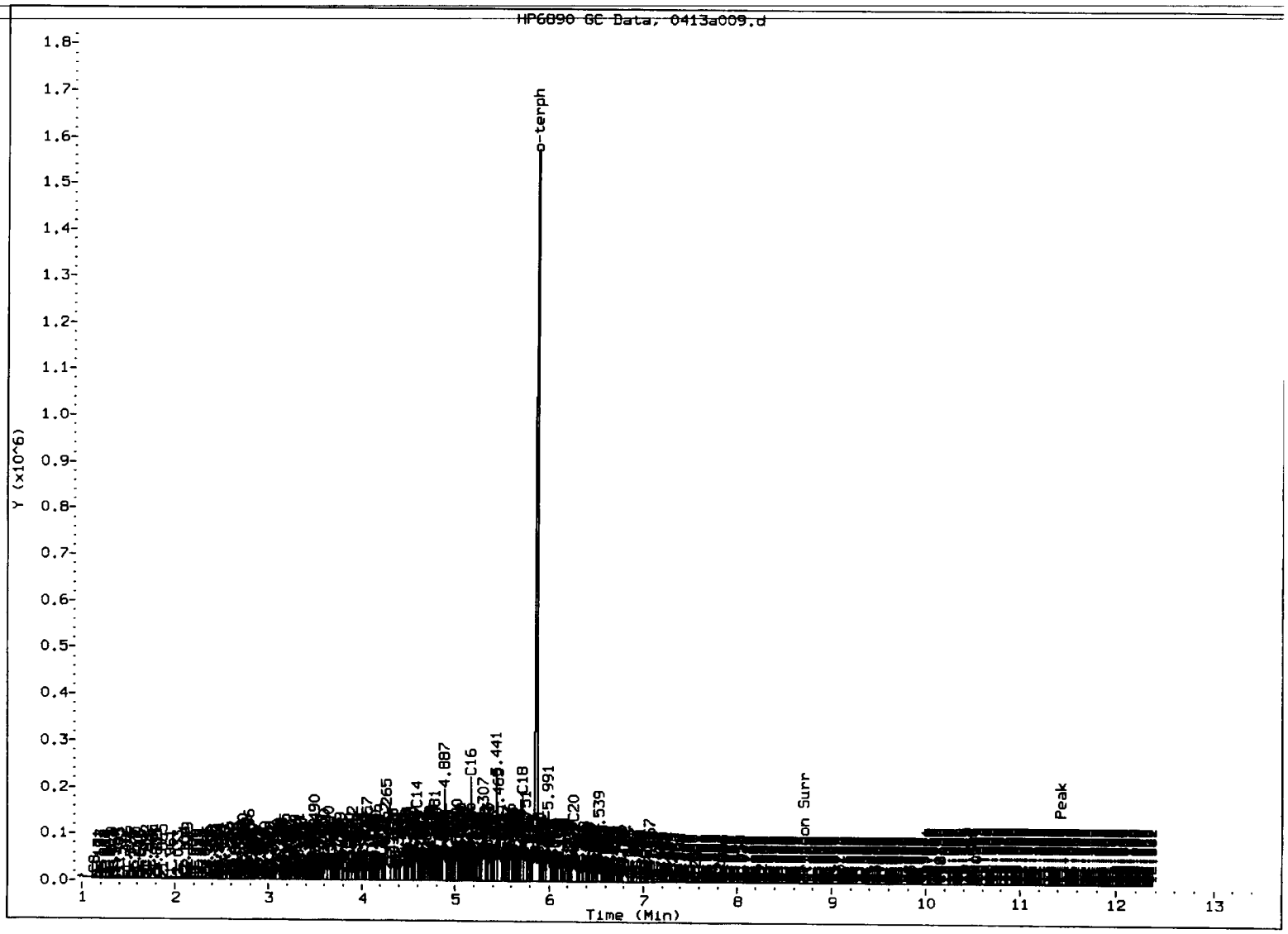
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

4/19/13 JLV



FID:4A-2C/RTX-1 DIESEL500 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: _____ Date: 4/16/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a010.d ARI ID: DIESEL1000
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 13:15
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	3811929	245.31
C8	1.135	-0.013	12353	15129	WATPHD	(C12-C24)	14226320	980.14
C10	2.963	-0.004	115392	81567	WATPHM	(C24-C38)	139793	10.28
C12	3.907	-0.001	182454	170588	AK102	(C10-C25)	16866110	979.75
C14	4.588	0.001	281773	291443	AK103	(C25-C36)	86469	9.40
C16	5.171	0.000	434741	342755				
C18	5.720	0.003	345674	355731				
C20	6.268	0.001	228816	234559				
C22	6.807	-0.003	107722	108430	MIN.OIL	(C24-C38)	139793	8.19
C24	7.318	-0.008	31969	37766				
C25	7.567	-0.007	13295	16308				
C26	7.833	0.007	1443	522				
C28	8.261	-0.008	722	1112				
C32	9.094	0.014	29	7				
C34	9.468	0.011	112	107				
Filter Peak	11.448	0.007	1248	2720	CREOSOT	(C12-C22)	13802524	6325.92 M
C36	9.827	0.004	263	425				
C38	10.189	0.010	1014	1935				
C40	10.535	0.002	722	341				
o-terph	5.884	0.023	2512098	3297656				
Triacon Surr	8.712	0.014	48	18				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	3297656	171.0	380.0 M
Triacontane	18	0.0	0.0

M Indicates the peak was manually integrated

TJC 11/16/13

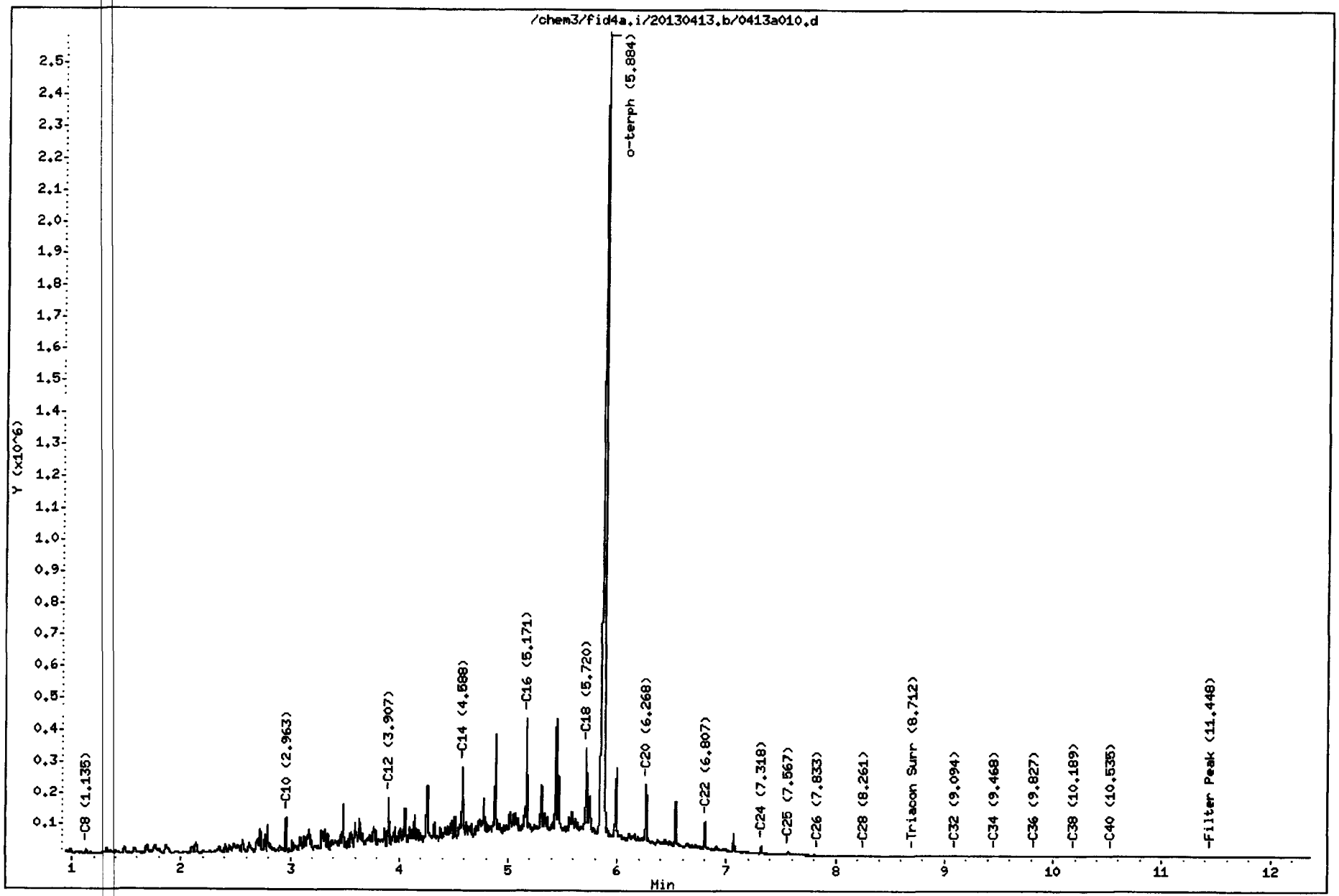
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130413.b/0413a010.d
Date : 13-APR-2013 13:15
Client ID:
Sample Info: DIESEL1000

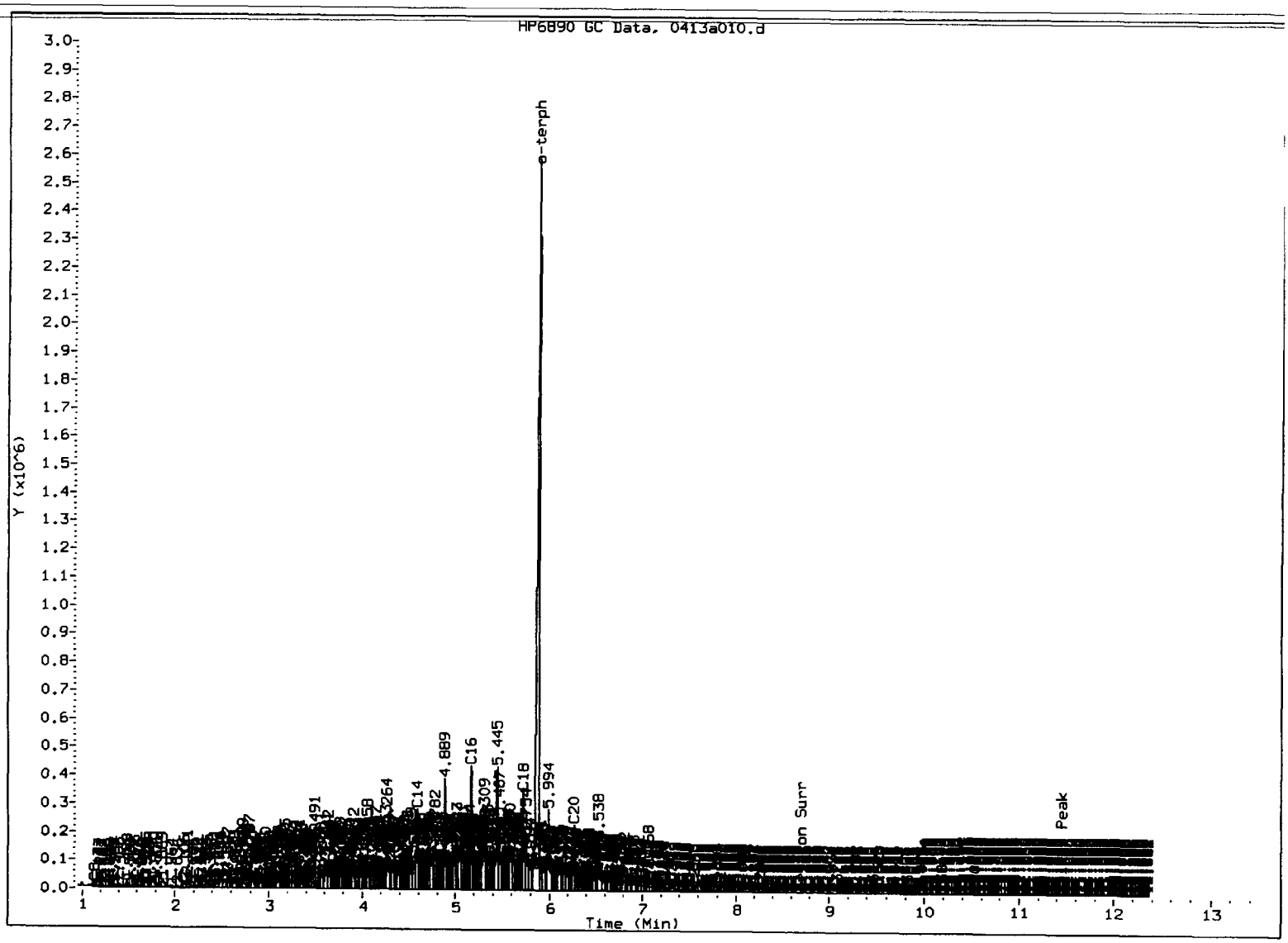
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25



FID:4A-2C/RTX-1 DIESEL1000 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/16/17

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a011.d ARI ID: DIESEL2500
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m Client ID:
Instrument: fid4a.i Injection: 13-APR-2013 13:35
Operator: JR/VTS/JW
Report Date: 04/15/2013 Dilution Factor: 1
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	9276455	596.96
C8	1.134	-0.014	24908	33472	WATPHD	(C12-C24)	34774294	2395.83
C10	2.966	-0.002	252738	198288	WATPHM	(C24-C38)	305862	22.48
C12	3.910	0.001	400759	415390	AK102	(C10-C25)	41212082	2393.99
C14	4.594	0.006	611687	862603	AK103	(C25-C36)	206426	22.43
C16	5.178	0.006	943821	808157				
C18	5.727	0.010	671328	895926				
C20	6.274	0.006	489579	628809				
C22	6.808	-0.002	247196	289857	MIN.OIL	(C24-C38)	305862	17.93
C24	7.319	-0.007	75373	82766				
C25	7.566	-0.008	34345	42458				
C26	7.827	0.000	4044	3418				
C28	8.258	-0.012	1977	3055				
C32	9.090	0.009	48	61				
C34	9.458	0.000	70	50				
Filter Peak	11.449	0.007	1134	1190	CREOSOT	(C12-C22)	33616551	15407.01 M
C36	9.824	0.000	185	139				
C38	10.179	0.000	554	1390				
C40	10.541	0.008	631	435				
o-terph	5.903	0.042	4136741	8059957				
Triacon Surr	8.700	0.002	141	189				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	8059957	418.0	928.8 M
Triacontane	189	0.0	0.0

M Indicates the peak was manually integrated

JW
4/16/13

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

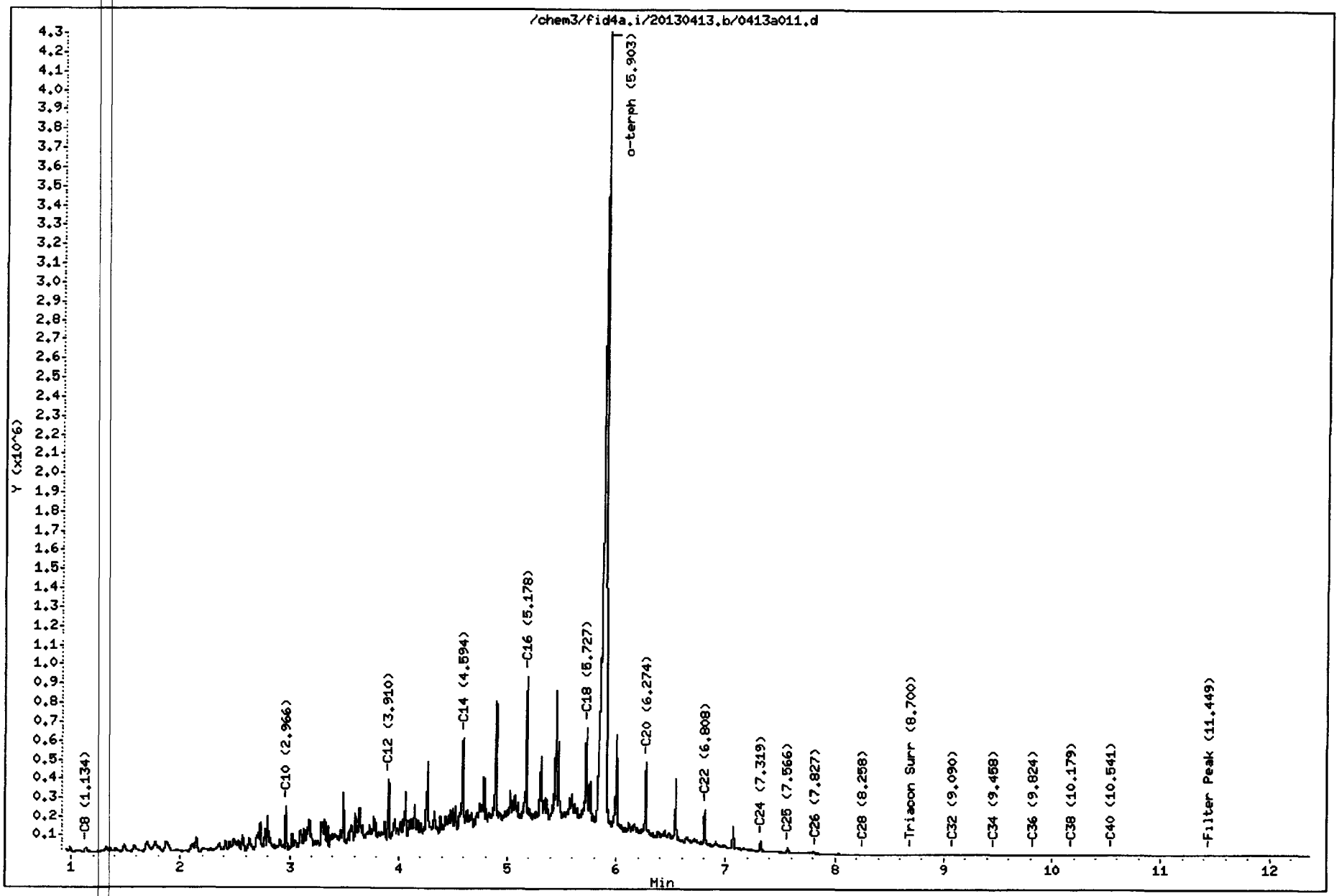
Data File: /chem3/fid4a.i/20130413.b/0413a011.d
Date : 13-APR-2013 13:35
Client ID:
Sample Info: DIESEL2500

Column phase: RTX-1

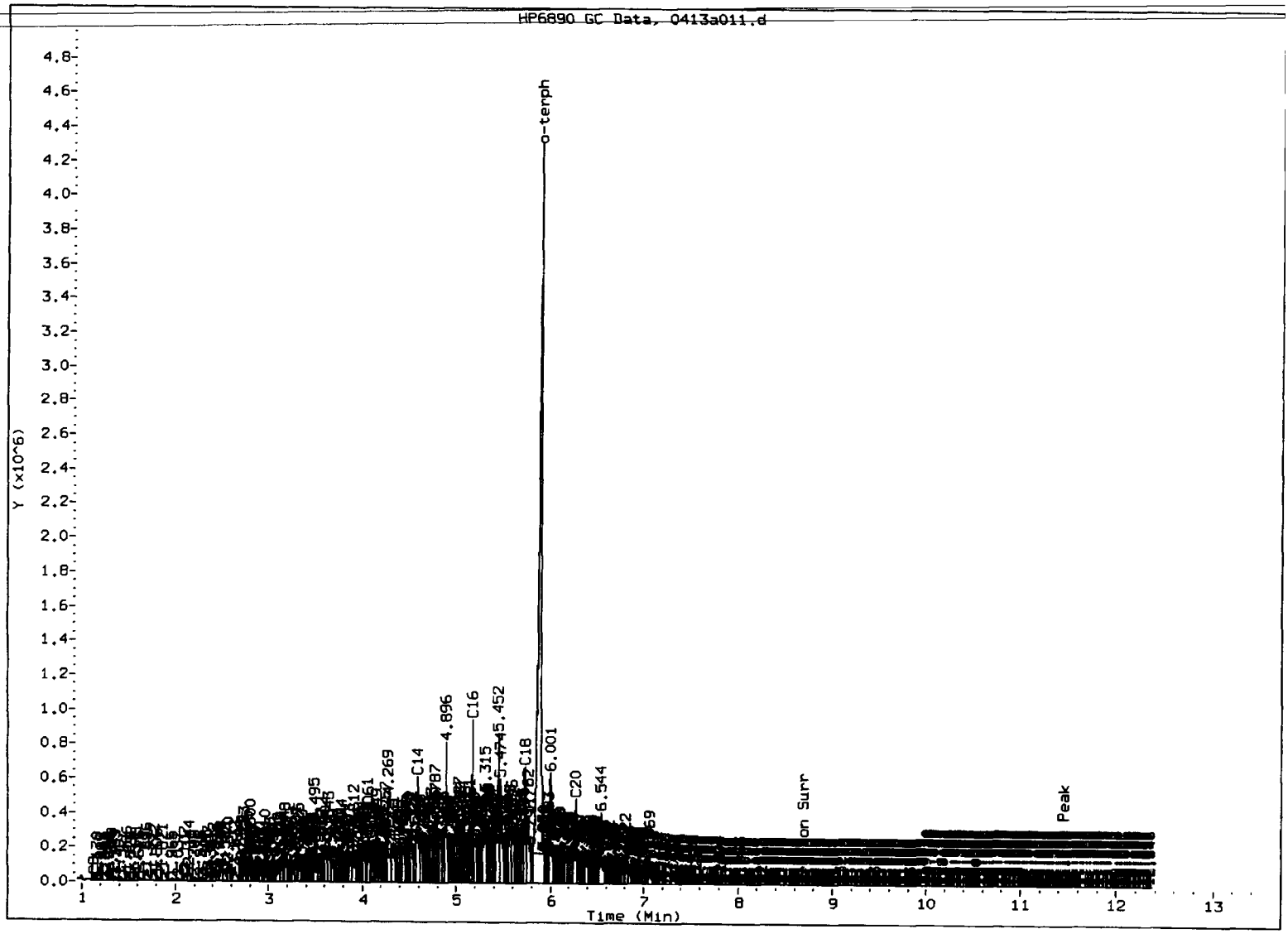
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

4/16/13



FID:4A-2C/RTX-1 DIESEL2500 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/16/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130413.b/0413a012.d
Method: /chem3/fid4a.i/20130413.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 04/15/2013
Macro: 11-APR-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:13-APR-2013

ARI ID: DIESELICV250
Client ID:
Injection: 13-APR-2013 13:56

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	1350128	86.88
C8	1.140	-0.007	5894	7549	WATPHD	(C12-C24)	3336568	229.88
C10	2.964	-0.004	74183	48425	WATPHM	(C24-C38)	48278	3.55
C12	3.904	-0.004	80279	63955	AK102	(C10-C25)	4352962	252.86
C14	4.584	-0.004	91502	86727	AK103	(C25-C36)	29685	3.23
C16	5.167	-0.004	92428	91538				
C18	5.712	-0.005	64635	71687				
C20	6.261	-0.007	38864	46617				
C22	6.800	-0.010	19895	20409	MIN.OIL	(C24-C38)	48278	2.83
C24	7.317	-0.010	6621	7048				
C25	7.563	-0.011	3543	3438				
C26	7.839	0.013	511	944				
C28	8.257	-0.012	249	388				
C32	9.086	0.005	66	27				
C34	9.457	0.000	126	85				
Filter Peak	11.447	0.005	1300	1415	CREOSOT	(C12-C22)	3246102	1487.74 M
C36	9.826	0.003	279	175				
C38	10.165	-0.014	702	1540				
C40	10.542	0.010	811	690				
o-terph	5.863	0.002	1066499	883180				
Triacon Surr	8.703	0.005	33	42				

Range Times: NW Diesel(3.908 - 7.326) AK102(2.97 - 7.57) Jet A(2.97 - 5.72)
NW M.Oil(7.33 - 10.18) AK103(7.57 - 9.82) OR Diesel(2.97 - 8.27)

Surrogate	Area	Amount	%Rec
o-Terphenyl	883180	45.8	101.8 M
Triacontane	42	0.0	0.0

M Indicates the peak was manually integrated

JW
4/16/13

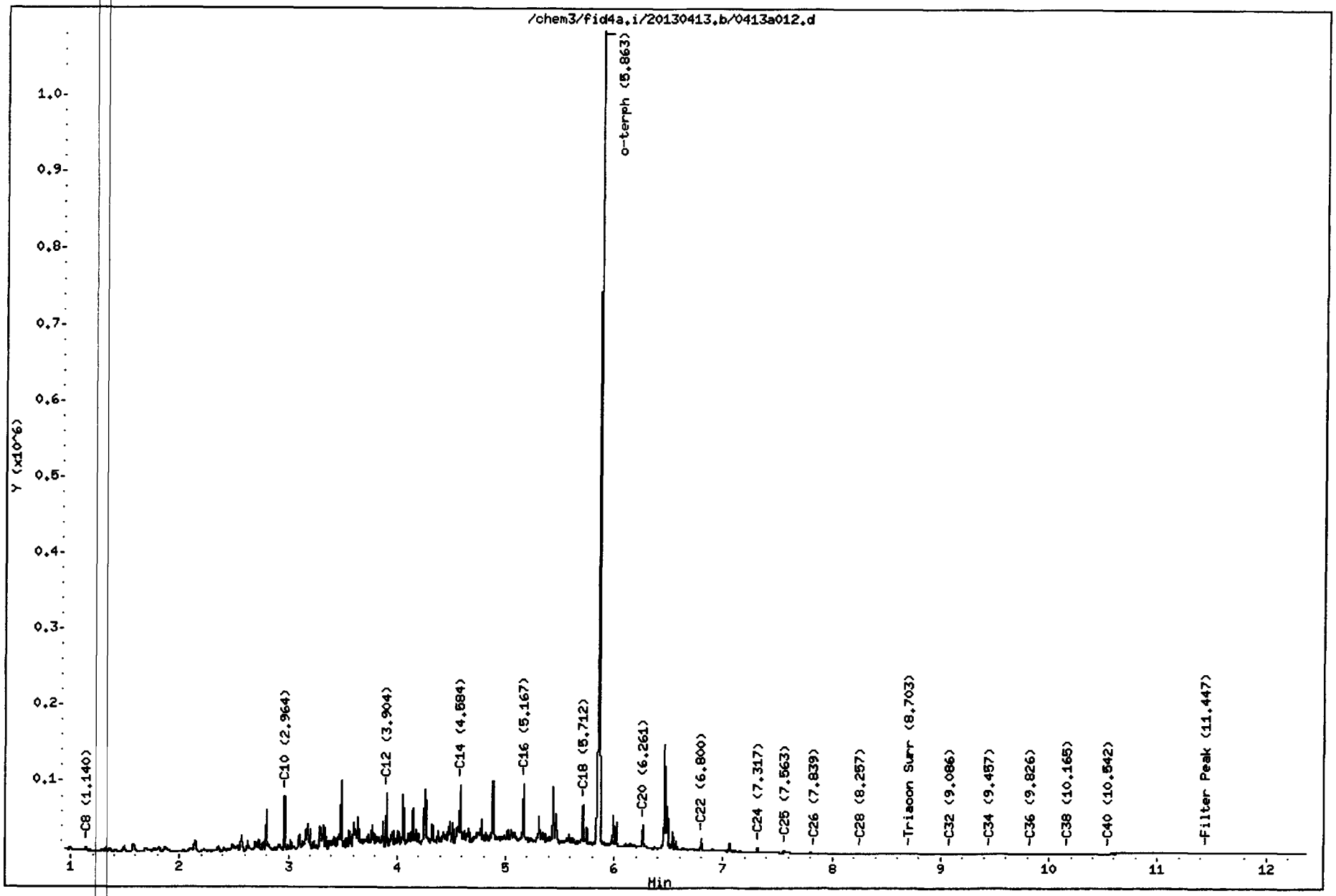
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	18196.2	13-APR-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	13604.0	13-APR-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Oil	17059.0	11-MAR-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130413.b/0413a012.d
Date : 13-APR-2013 13:56
Client ID:
Sample Info: DIESELICV250

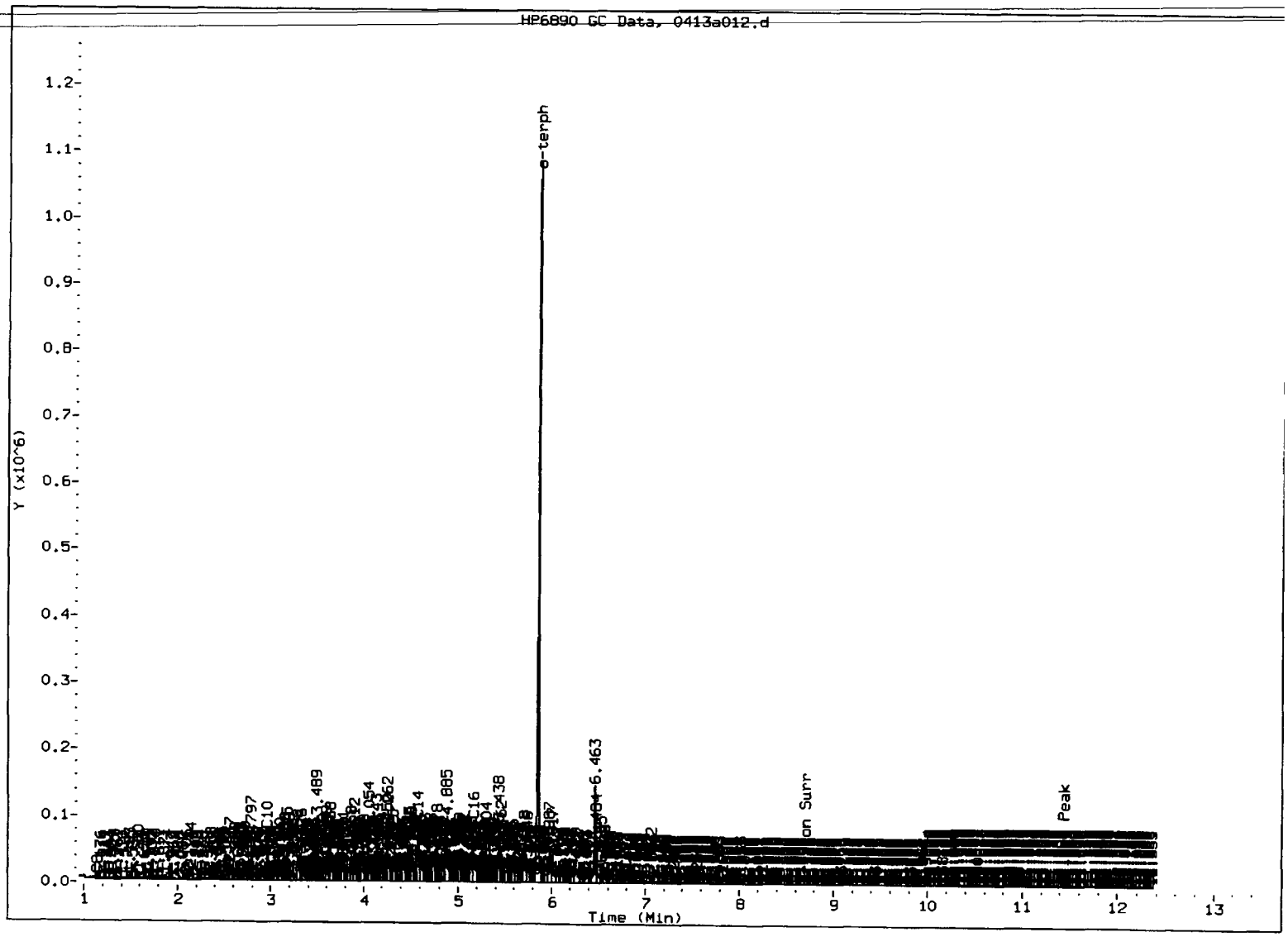
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25



FID:4A-2C/RTX-1 DIESELICV250 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 4/16/13

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): 5/20/13 Internal Standard ID N/A Expiration 11/27/13

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
Motor oil	2041-4	11/27/13	Motor oil	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:

High pt has triac surr outside QC shift allowance, but surr meets spk @ this level, no corrective action taken

Analyst: JW **Date:** 5/23/13

Reviewer: [signature] **Date:** 5/23/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid4a.i/20130520.b/ftphfid4a.m
Batch File: /chem3/fid4a.i/20130520.b
Inst ID: fid4a.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06
FILENAME:	0520a016	0520a017	0520a018	0520a019	0520a020	0520a021
INJ.DATE:	20-MAY-2013	20-MAY-2013	20-MAY-2013	20-MAY-2013	20-MAY-2013	20-MAY-2013
INJ.TIME:	17:53	18:13	18:34	18:55	19:15	19:36

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
1 Toluene	+++++	+++++	+++++	+++++	+++++	+++++	0.745	0.645-0.845	+++++	+++++
40 Mineral Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.023	0.973-1.073	+++++	+++++
39 Creosote	+++++	+++++	+++++	+++++	+++++	+++++	0.542	0.492-0.592	+++++	+++++
36 JetA	+++++	+++++	+++++	+++++	+++++	+++++	0.794	0.744-0.844	+++++	+++++
37 Bunker C	+++++	+++++	+++++	+++++	+++++	+++++	0.729	0.679-0.779	+++++	+++++
38 Hydraulic Oil	+++++	+++++	+++++	+++++	+++++	+++++	1.197	1.147-1.247	+++++	+++++
2 C8	+++++	+++++	+++++	+++++	+++++	+++++	0.944	0.844-1.044	+++++	+++++
3 C10	2.810	2.809	2.808	2.809	2.808	2.807	2.807	2.757-2.857	2.809	0.001
4 C12	3.785	3.785	3.783	3.784	3.785	3.784	3.784	3.734-3.834	3.784	0.001
5 C14	4.470	4.467	4.467	4.465	4.466	4.466	4.466	4.416-4.516	4.467	0.002
6 C16	5.042	5.046	5.048	5.047	5.048	5.047	5.047	4.997-5.097	5.046	0.002
7 C18	5.586	5.581	5.582	5.580	5.581	5.582	5.582	5.532-5.632	5.582	0.002
$ 8 o-terph	5.707	5.708	5.706	5.705	5.706	5.705	5.705	5.655-5.755	5.706	0.001
9 C20	6.137	6.124	6.124	6.122	6.121	6.122	6.122	6.072-6.172	6.125	0.006
10 C22	6.658	6.654	6.660	6.661	6.662	6.657	6.657	6.607-6.707	6.659	0.003
11 C24	7.173	7.171	7.171	7.163	7.166	7.182	7.182	7.132-7.232	7.171	0.007
12 C25	7.429	7.431	7.433	7.434	7.422	7.419	7.419	7.369-7.469	7.428	0.006

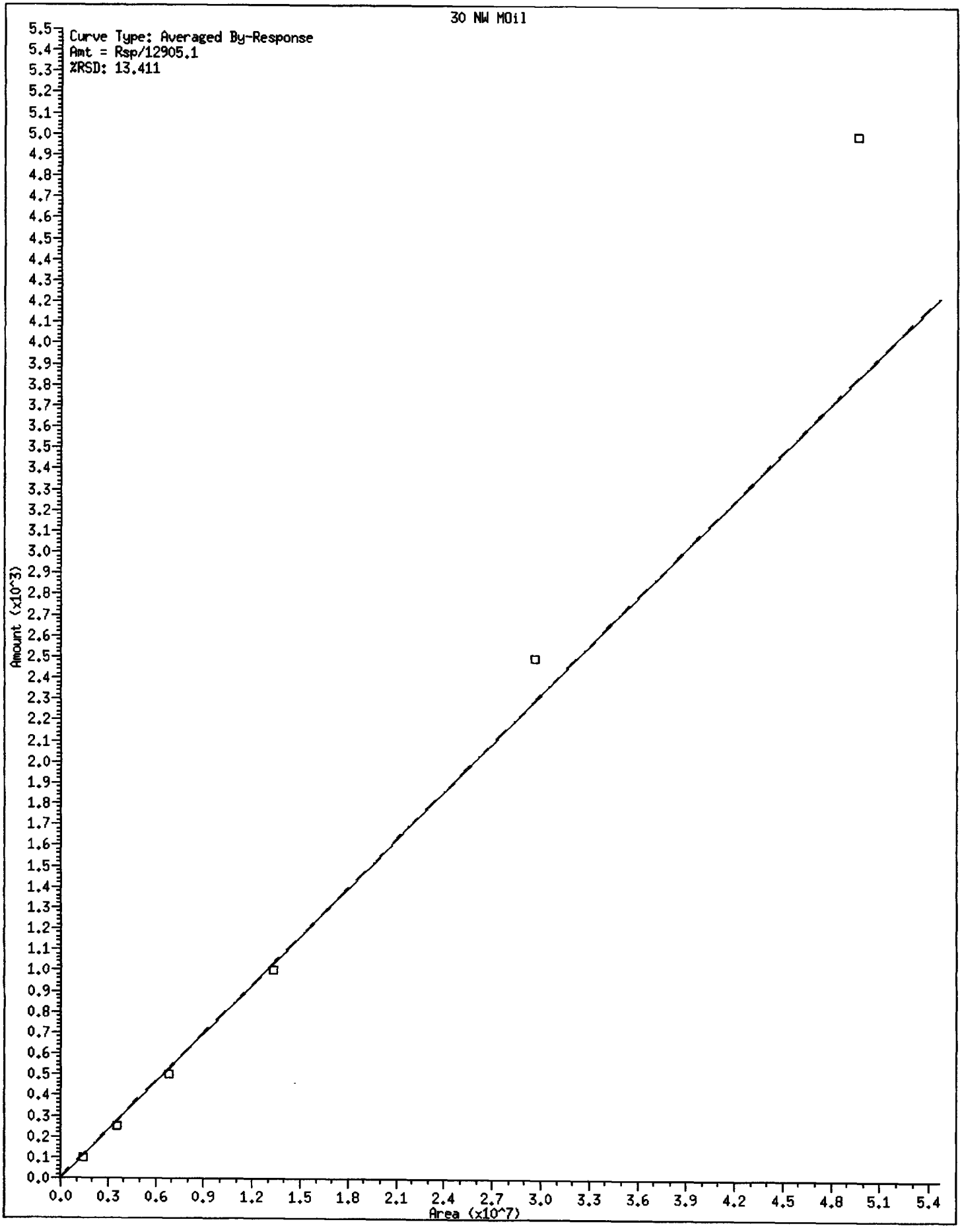
Reviewer 1 _____ Date: 5/23/13

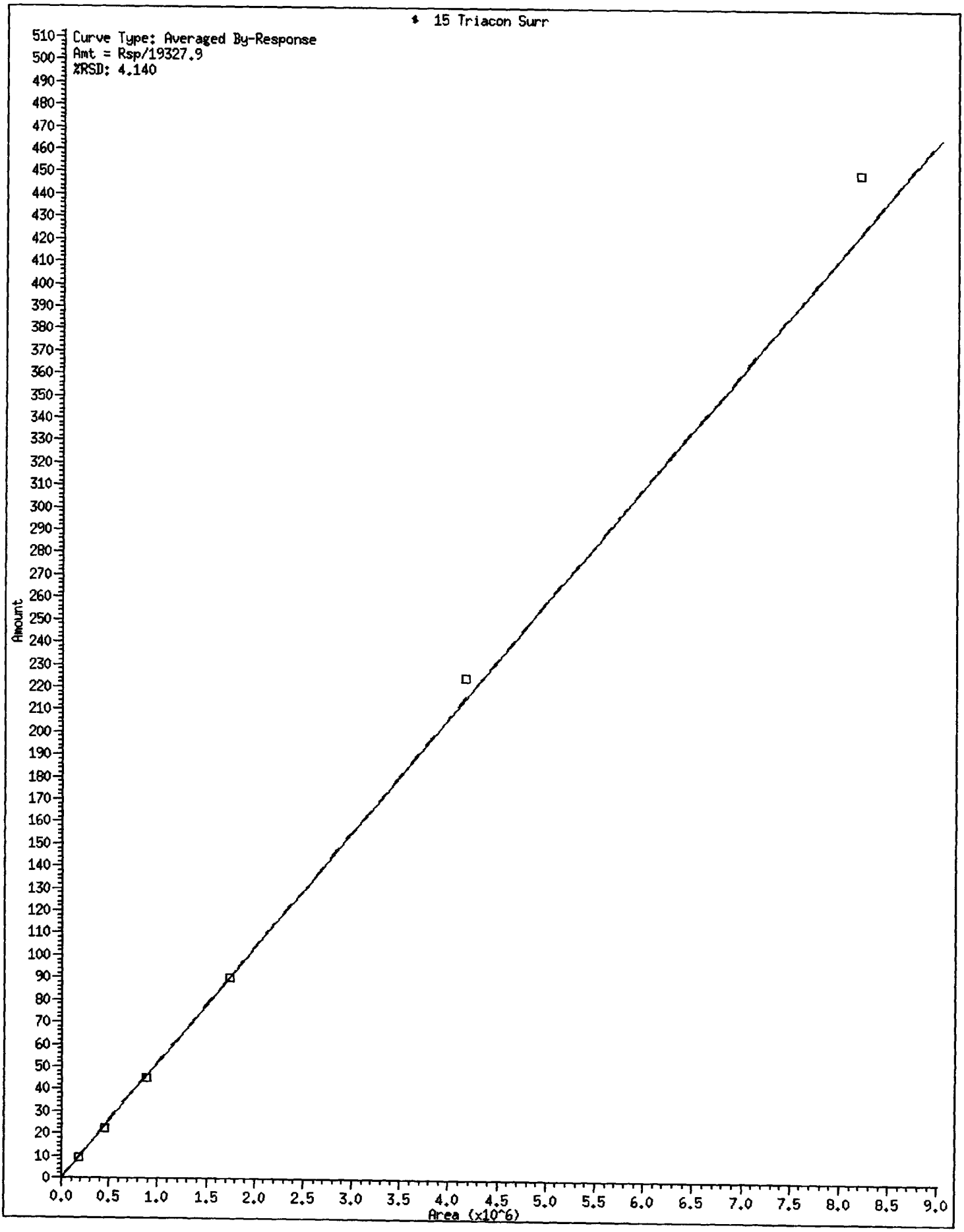
Reviewer 2 _____ Date: 5/23/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/fid4a.i/20130520.b/ftphfid4a.m
Batch File: /chem3/fid4a.i/20130520.b
Inst ID: fid4a.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	EXPEC RT	RT WINDOW	AVG RT	STD DEV
13 C26	7.671	7.673	7.671	7.671	7.666	7.676	7.676	7.626-7.726	7.672	0.003
14 C28	8.109	8.113	8.110	8.112	8.101	8.117	8.117	8.067-8.167	8.110	0.005
$ 15 Triacon Surr	8.527	8.535	8.542	8.555	8.581	8.607	8.607	8.557-8.657	8.558	0.031
16 C32	8.903	8.909	8.907	8.910	8.921	8.913	8.913	8.863-8.963	8.911	0.006
17 C34	9.266	9.264	9.264	9.270	9.259	9.278	9.278	9.228-9.328	9.267	0.007
18 Filter Peak	11.425	11.424	11.423	11.412	11.420	11.424	11.424	11.324-11.524	11.421	0.005
19 C36	9.624	9.610	9.627	9.618	9.619	9.599	9.599	9.549-9.649	9.616	0.010
20 C38	9.959	9.953	9.958	9.960	9.966	9.956	9.956	9.906-10.006	9.959	0.004
21 C40	10.287	10.288	10.286	10.282	10.292	10.282	10.282	10.232-10.332	10.286	0.004
31 NW Diesel	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
32 OR Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.683	0.633-0.733	+++++	+++++
42 Cal(IT) Diesel	+++++	+++++	+++++	+++++	+++++	+++++	0.499	0.449-0.549	+++++	+++++
33 AK Dies 102	+++++	+++++	+++++	+++++	+++++	+++++	0.662	0.612-0.712	+++++	+++++
30 NW MOil	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
34 CRUDE	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++
35 AK MOil 103	+++++	+++++	+++++	+++++	+++++	+++++	0.615	0.565-0.665	+++++	+++++
41 ABUNKERC	+++++	+++++	+++++	+++++	+++++	+++++	1.000	0.950-1.050	+++++	+++++


30 NW MOil
Curve Type: Averaged By-Response
Amt = Rsp/12905.1
%RSD: 13.411
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 5.4


$ 15 Triacon Surr
Curve Type: Averaged By-Response
Amt = Rsp/19327.9
%RSD: 4.140
Amount
Area (x10^6)
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 9.0
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

6a

NW MOTOR OIL RANGE INITIAL CALIBRATION

Lab Name: ANALYTICAL RESOURCES, INC.

Client: 20130520

Instrument: FID4A.I

Project:

Calibration Date: 20-MAY-2013

SDG No.: 20130520

Product Range	RF1 100	RF2 250	RF3 500	RF4 1000	RF5 2500	RF6 5000	Ave RF	%RSD
WA M.Oil C24-C38	14505	14238	13594	13326	11838	9930	12905	13.4
Triac Surr	19882	20137	19857	19391	18502	18199	19328	4.1

<- Indicates %RSD outside limits
Surrogate areas are not included in Motor Oil RF calculation.

Calibration Files	Analysis Time
0520a016.d	20-MAY-2013 17:53
0520a017.d	20-MAY-2013 18:13
0520a018.d	20-MAY-2013 18:34
0520a019.d	20-MAY-2013 18:55
0520a020.d	20-MAY-2013 19:15
0520a021.d	20-MAY-2013 19:36

FORM VI-M.Oil

8

TPH ANALYTICAL SEQUENCE

Lab Name: ANALYTICAL RESOURCES INC Client:

SDG No.: 20130520 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: 5.72 TRIAC: 8.54

	CLIENT SAMPLE NO.	LAB SAMPLE ID	DATE ANALYZED	TIME ANALYZED	TERPH RT #	TRIAC RT #
01		MOIL 100	05/20/13	1753	5.71	8.53
02		MOIL 250	05/20/13	1813	5.71	8.54
03		MOIL 500	05/20/13	1834	5.71	8.54
04		MOIL 1000	05/20/13	1855	5.71	8.56
05		MOIL 2500	05/20/13	1915	5.71	8.58
06		MOIL 5000	05/20/13	1936	5.71	8.61*
07		MOIL ICV 500	05/20/13	1956	5.71	8.54

QC LIMITS

TERPH = o-terph (+/- 0.05 MINUTES)
TRIAC = Triacon Surr (+/- 0.05 MINUTES)

* Values outside of QC limits.

FORM VIII TPH

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130520.b/0520a005.d
Method: /chem3/fid4a.i/20130520.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/21/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: RT0520
Client ID:
Injection: 20-MAY-2013 12:23

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	0.745	0.000	458429	349936	WATPHG	(Tol-C12)	1329385	85.55
C8	0.944	0.000	250830	222442	WATPHD	(C12-C24)	2498653	172.15
C10	2.812	0.000	400263	330597	WATPHM	(C24-C38)	3674499	284.73
C12	3.787	0.000	510504	364559	AK102	(C10-C25)	3259418	189.34
C14	4.468	0.000	574937	369237	AK103	(C25-C36)	3264297	354.73
C16	5.050	0.000	511037	372681				
C18	5.585	0.000	421748	368573				
C20	6.126	0.000	446977	354696				
C22	6.660	0.000	446724	377771				
C24	7.174	0.000	445628	382138	MSPIRIT	(Tol-C12)	1329385	68.64
C25	7.421	0.000	433616	373615				
C26	7.670	0.000	1018783	1111203				
C28	8.114	0.000	425575	381899				
C32	8.912	0.000	394760	372027				
C34	9.273	0.000	423272	372307				
Filter Peak	11.428	0.000	2599	3049	CREOSOT	(C12-C22)	2051345	940.16 M
C36	9.618	0.000	333678	362304				
C38	9.955	0.000	361786	347994				
C40	10.282	0.000	290487	301460				
o-terph	5.715	0.000	931297	818561				
Triacon Surr	8.540	0.000	816029	971316				

Range Times: NW Diesel(3.787 - 7.174) AK102(2.81 - 7.42) Jet A(2.81 - 5.59)
NW M.Oil(7.17 - 9.96) AK103(7.42 - 9.62) OR Diesel(2.81 - 8.11)

Surrogate	Area	Amount	%Rec
o-Terphenyl	818561	42.4	94.3
Triacontane	971316	50.3	111.7

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

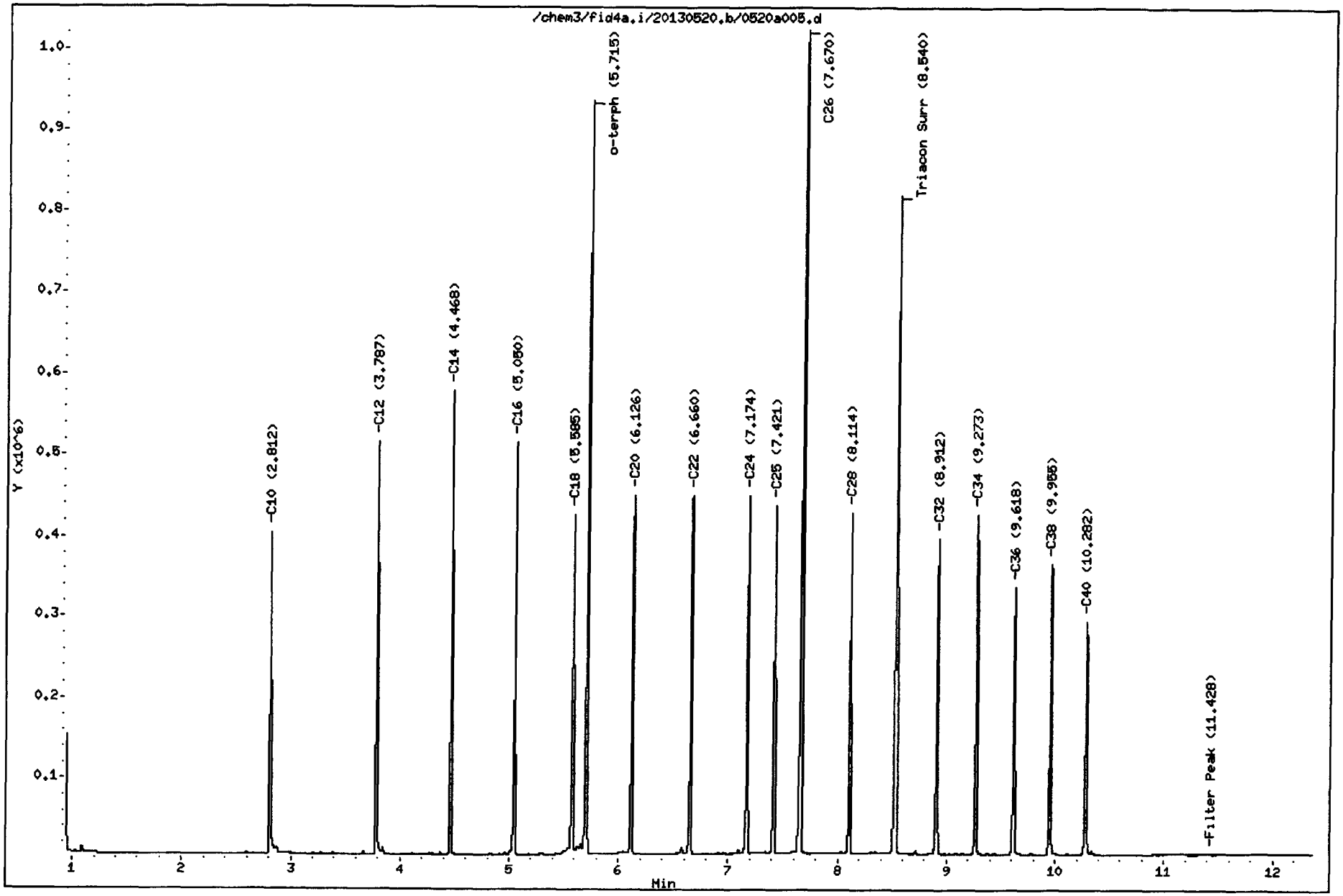
JV 5/23/13

Data File: /chem3/fid4a.i/20130520.b/0520a005.d
Date : 20-MAY-2013 12:23
Client ID:
Sample Info: RT0520

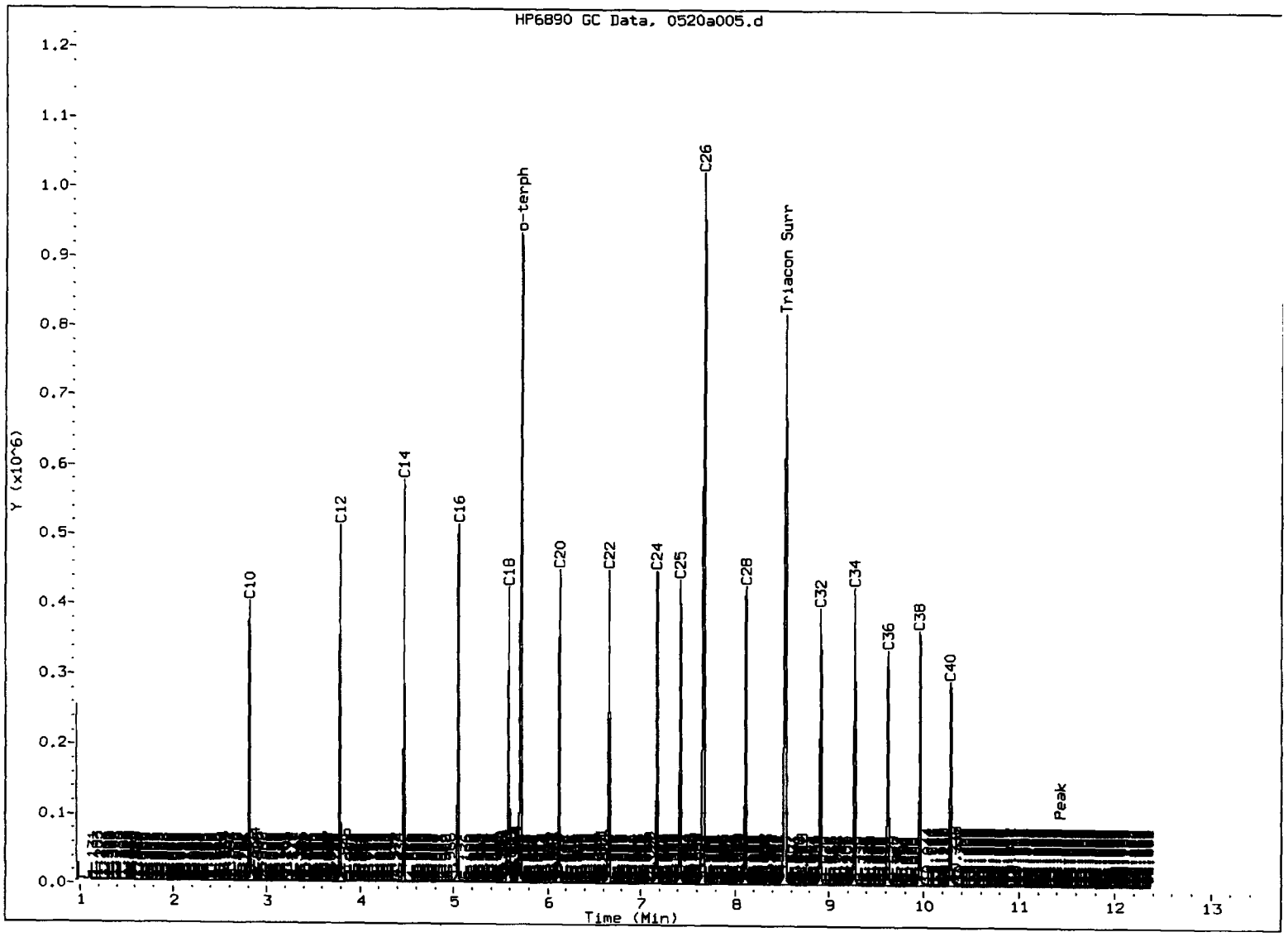
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25



FID:4A-2C/RTX-1 RT0520 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JLW Date: 5/23/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130520.b/0520a006.d
Method: /chem3/fid4a.i/20130520.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/21/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: IB0520
Client ID:
Injection: 20-MAY-2013 12:44

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	19455	1.25
C8	----				WATPHD	(C12-C24)	62411	4.30
C10	2.808	-0.004	644	685	WATPHM	(C24-C38)	111363	8.63
C12	3.784	-0.003	856	924	AK102	(C10-C25)	74545	4.33
C14	4.465	-0.003	1058	915	AK103	(C25-C36)	91693	9.96
C16	5.046	-0.004	1093	1041				
C18	5.579	-0.006	1118	1209				
C20	6.119	-0.007	1147	1356				
C22	6.653	-0.007	1104	1411				
C24	7.168	-0.006	1108	1417	MSPIRIT	(Tol-C12)	19455	1.00
C25	7.412	-0.009	1103	2120				
C26	7.652	-0.018	2660	3149				
C28	8.109	-0.005	1699	2863				
C32	8.909	-0.003	10617	11568				
C34	9.275	0.002	1445	2670				
Filter Peak	11.428	0.000	2375	3260	CREOSOT	(C12-C22)	52395	24.01 M
C36	9.628	0.010	1784	4636				
C38	9.946	-0.009	926	440				
C40	10.263	-0.019	1175	746				
o-terph	5.714	-0.001	971656	886821				
Triacon Surr	8.538	-0.002	788091	788120				

Range Times: NW Diesel(3.787 - 7.174) AK102(2.81 - 7.42) Jet A(2.81 - 5.59)
NW M.Oil(7.17 - 9.96) AK103(7.42 - 9.62) OR Diesel(2.81 - 8.11)

Surrogate	Area	Amount	%Rec
o-Terphenyl	886821	46.0	102.2
Triacontane	788120	40.8	90.6

M Indicates the peak was manually integrated

JW 5/23/13

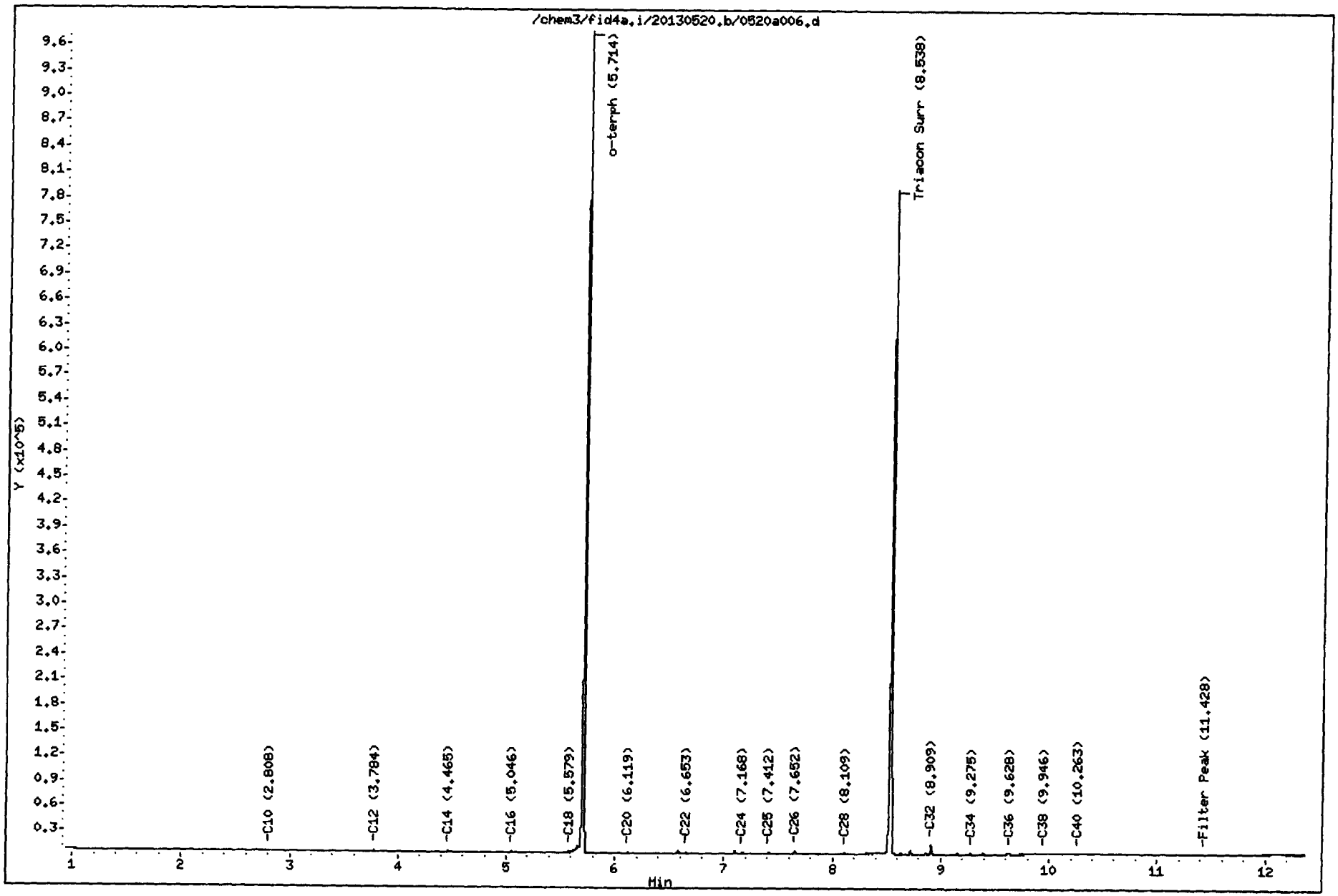
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130520.b/0520a006.d
Date : 20-MAY-2013 12:44
Client ID:
Sample Info: IB0520

Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130520.b/0520a016.d
Method: /chem3/fid4a.i/20130520.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/21/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: MOIL 100
Client ID:
Injection: 20-MAY-2013 17:53

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	24175	1.56
C8	----				WATPHD	(C12-C24)	154034	10.61
C10	2.810	0.003	839	810	WATPHM	(C24-C38)	1450456	112.39
C12	3.785	0.001	280	287	AK102	(C10-C25)	205374	11.93
C14	4.470	0.003	106	119	AK103	(C25-C36)	1225986	133.23
C16	5.042	-0.006	98	112				
C18	5.586	0.004	173	270				
C20	6.137	0.015	374	145				
C22	6.658	0.000	1324	1202				
C24	7.173	-0.009	4926	6400	MSPIRIT	(Tol-C12)	24175	1.25
C25	7.429	0.010	57591	54800				
C26	7.671	-0.005	7704	5552				
C28	8.109	-0.008	8377	3449				
C32	8.903	-0.011	12259	13445				
C34	9.266	-0.012	10827	10349				
Filter Peak	11.425	0.001	1630	2427	CREOSOT	(C12-C22)	45869	21.02 M
C36	9.624	0.024	10200	15651				
C38	9.959	0.003	8744	11586				
C40	10.287	0.005	6623	3488				
o-terph	5.707	0.001	3717	2762				
Triacon Surr	8.527	-0.080	224693	178935				

Range Times: NW Diesel(3.784 - 7.182) AK102(2.81 - 7.42) Jet A(2.81 - 5.58)
NW M.Oil(7.18 - 9.96) AK103(7.42 - 9.60) OR Diesel(2.81 - 8.12)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2762	0.1	0.3
Triacontane	178935	9.3	20.6 M

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

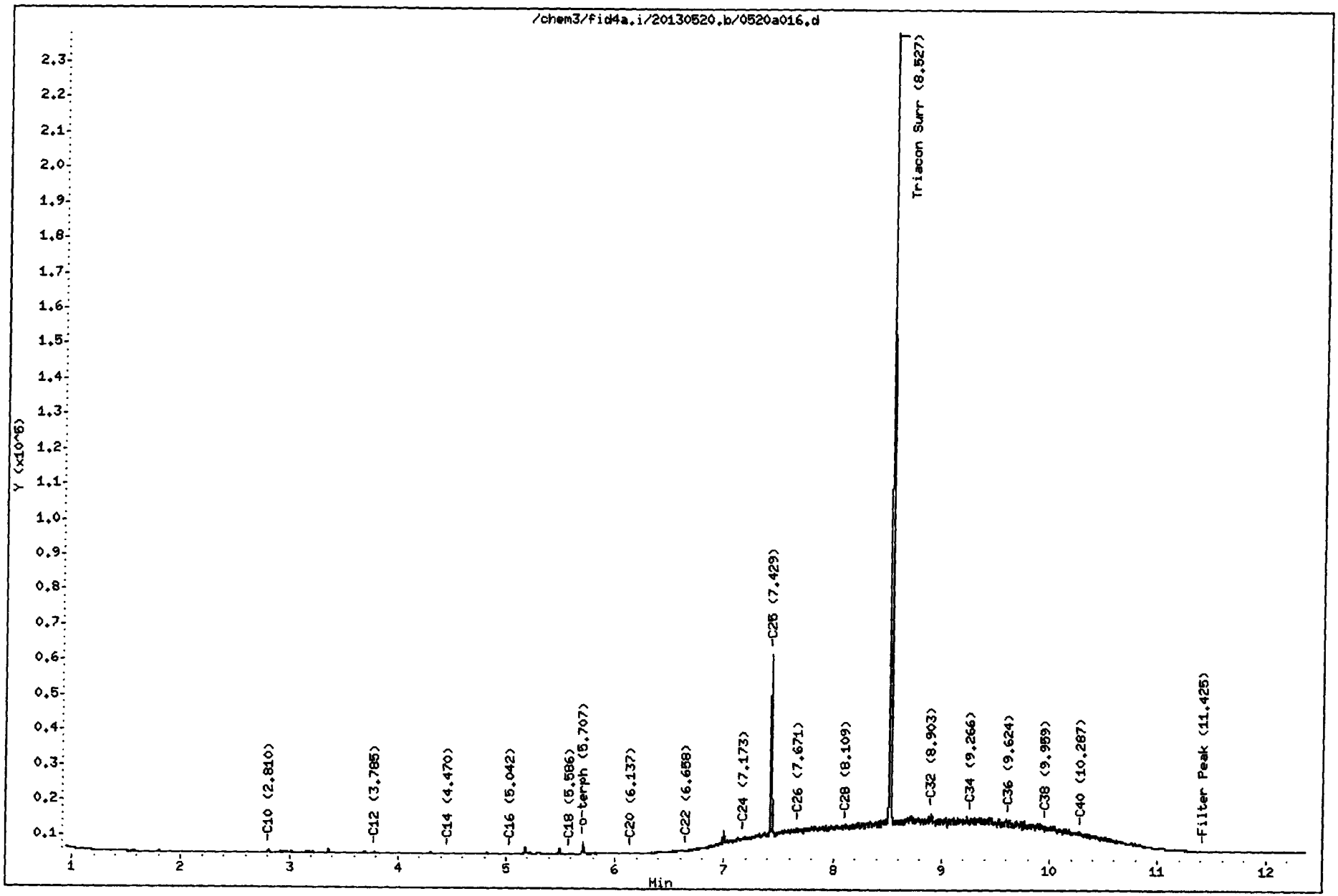
5/23/13

Data File: /chem3/fid4a.i/20130520.b/0520a016.d
Date : 20-MAY-2013 17:53
Client ID:
Sample Info: MOIL 100

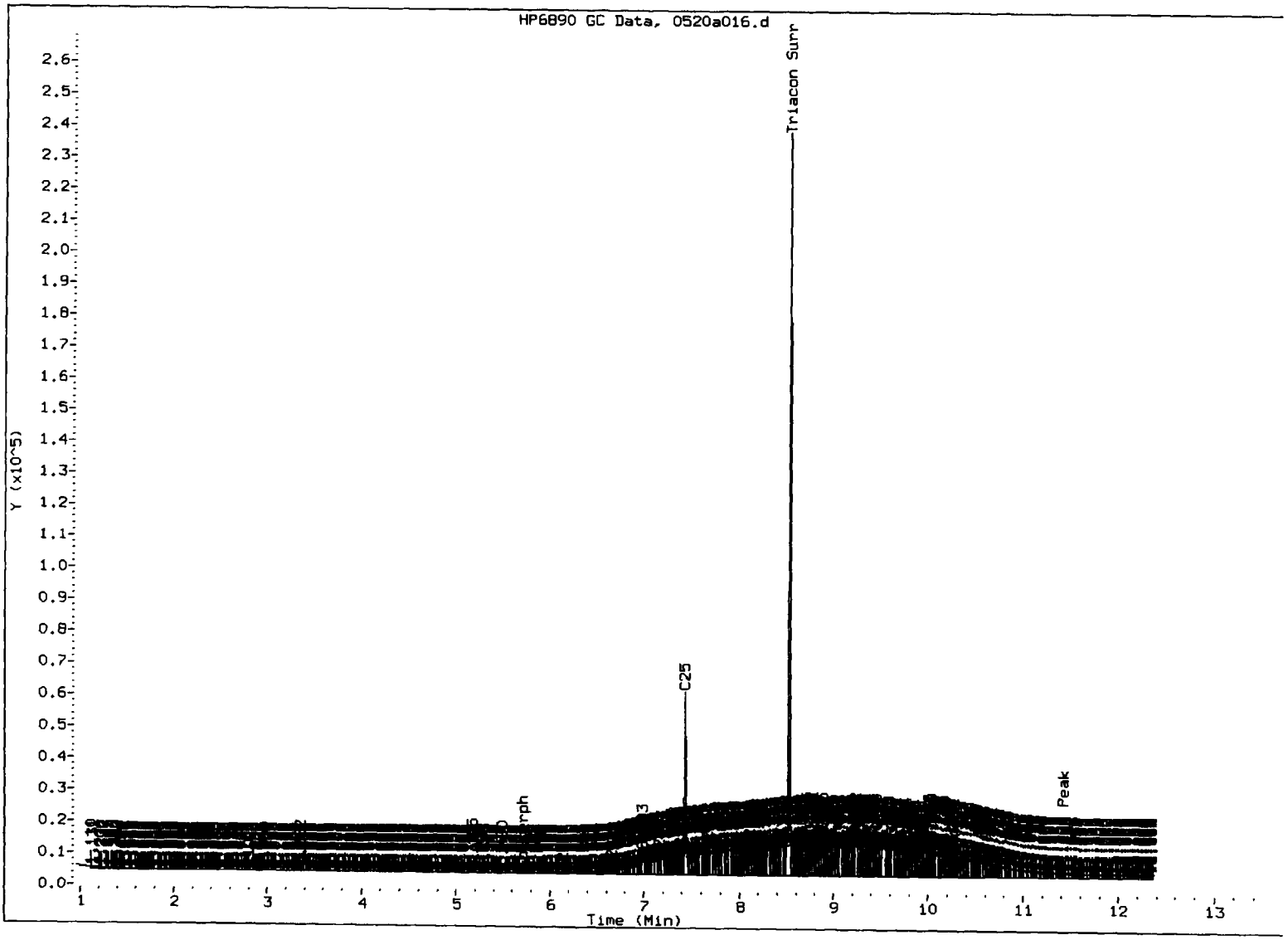
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

Column phase: RTX-1



FID:4A-2C/RTX-1 MOIL 100 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/20/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130520.b/0520a017.d
Method: /chem3/fid4a.i/20130520.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/21/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: MOIL 250
Client ID:
Injection: 20-MAY-2013 18:13

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	15929	1.03
C8	----				WATPHD	(C12-C24)	355546	24.50
C10	2.809	0.001	248	299	WATPHM	(C24-C38)	3559558	275.83
C12	3.785	0.000	144	202	AK102	(C10-C25)	466103	27.08
C14	4.467	0.001	123	173	AK103	(C25-C36)	3038440	330.19
C16	5.046	-0.001	150	206				
C18	5.581	-0.001	313	424				
C20	6.124	0.002	851	976				
C22	6.654	-0.004	3205	2443				
C24	7.171	-0.011	11736	7509	MSPIRIT	(Tol-C12)	15929	0.82
C25	7.431	0.012	48032	71633				
C26	7.673	-0.003	18408	11317				
C28	8.113	-0.005	21350	11785				
C32	8.909	-0.005	33359	52688				
C34	9.264	-0.014	27373	35026				
Filter Peak	11.424	-0.001	1989	4930	CREOSOT	(C12-C22)	92145	42.23 M
C36	9.610	0.010	24082	31276				
C38	9.953	-0.004	20049	7424				
C40	10.288	0.005	16492	11133				
o-terph	5.708	0.002	1347	2100				
Triacon Surr	8.535	-0.072	490945	453086				

Range Times: NW Diesel(3.784 - 7.182) AK102(2.81 - 7.42) Jet A(2.81 - 5.58)
NW M.Oil(7.18 - 9.96) AK103(7.42 - 9.60) OR Diesel(2.81 - 8.12)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2100	0.1	0.2
Triacontane	453086	23.4	52.1 M

JC 5/23/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130520.b/0520a017.d

Date : 20-MAY-2013 18:13

Client ID:

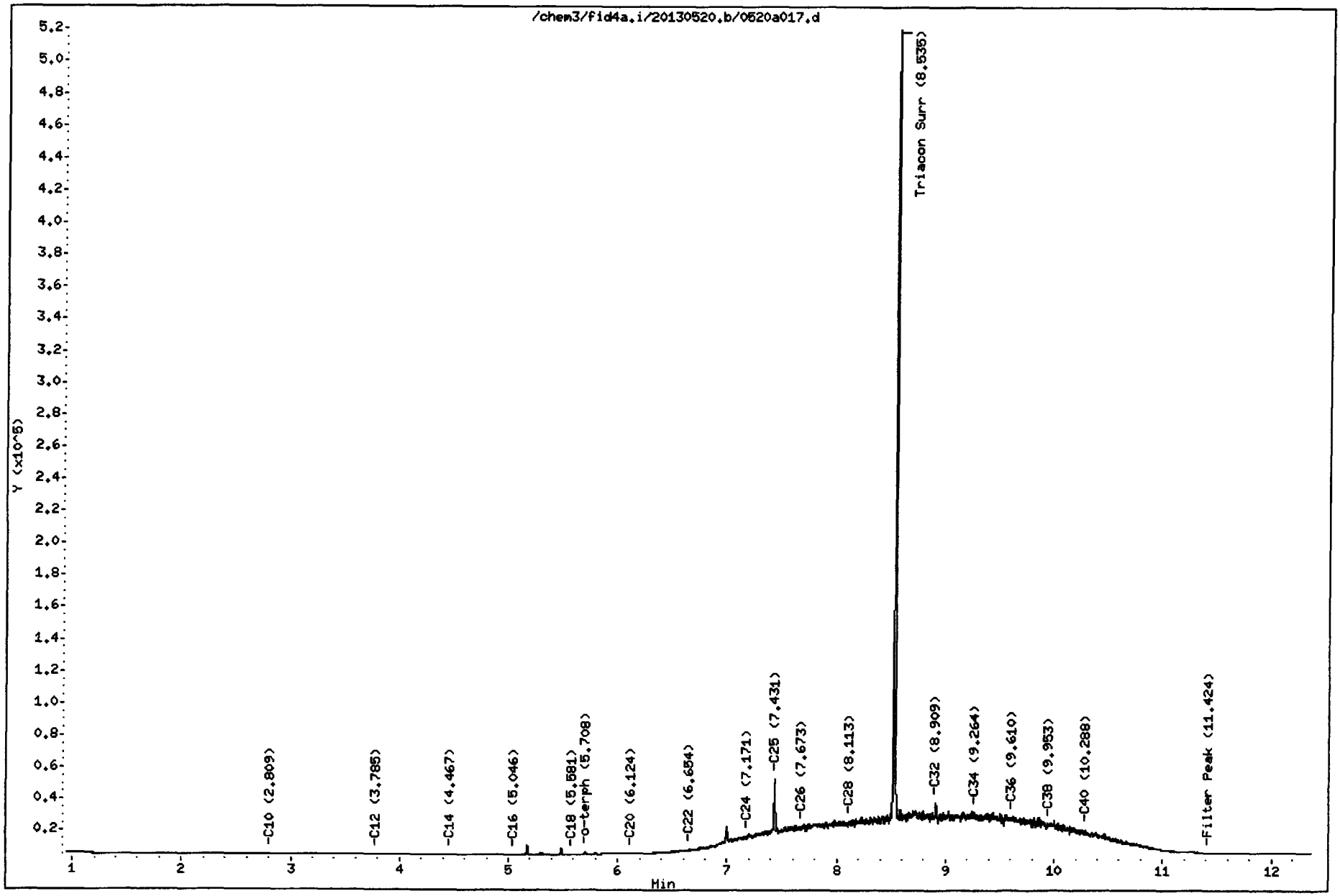
Sample Info: MOIL 250

Column phase: RTX-1

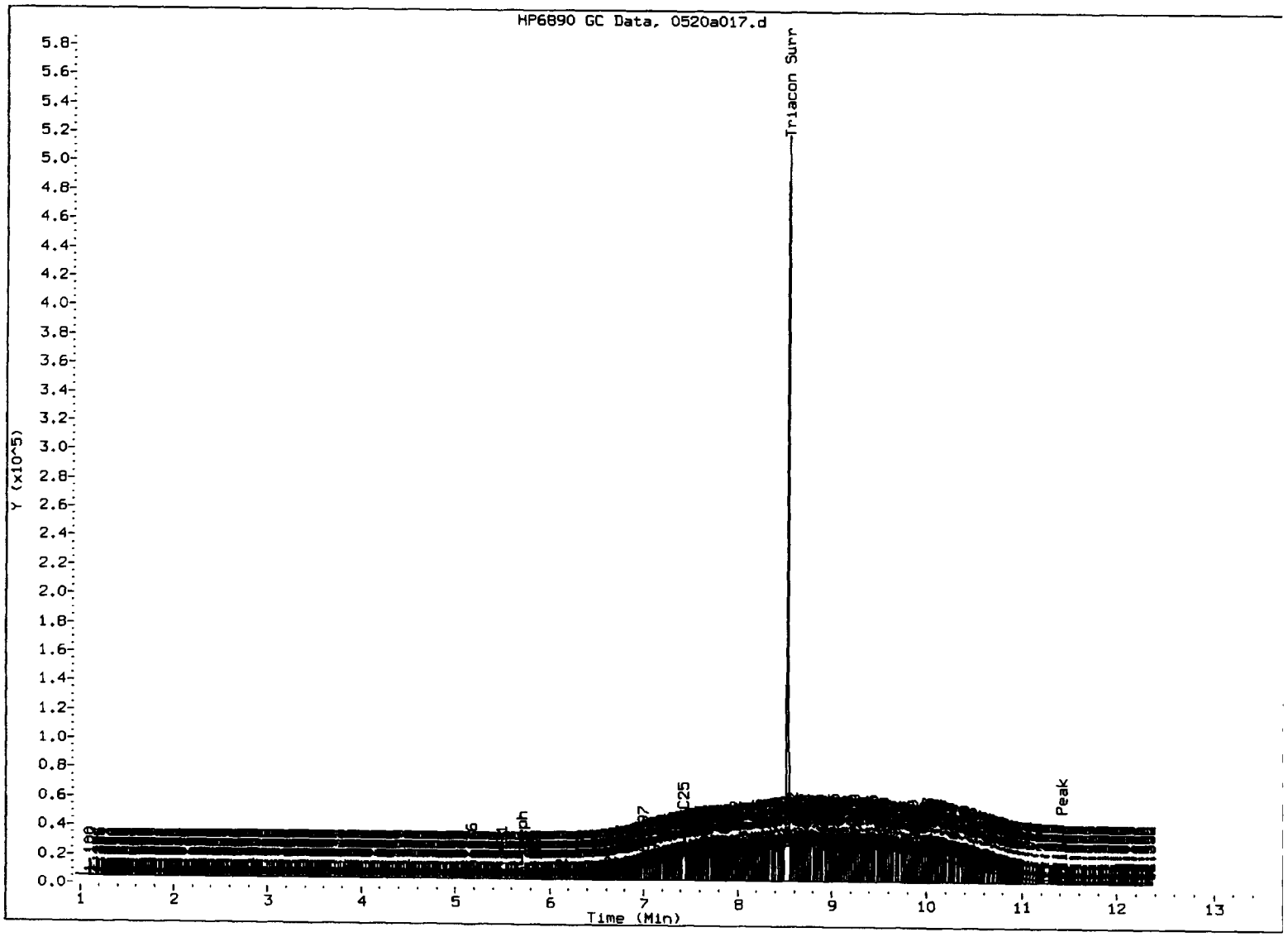
Instrument: fid4a.i

Operator: JR/VTS/JW

Column diameter: 0.25



FID:4A-2C/RTX-1 MOIL 250 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JD Date: 5/23/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130520.b/0520a018.d
Method: /chem3/fid4a.i/20130520.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/21/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: MOIL 500
Client ID:
Injection: 20-MAY-2013 18:34

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	15567	1.00
C8	----				WATPHD	(C12-C24)	659844	45.46
C10	2.808	0.001	213	325	WATPHM	(C24-C38)	6797046	526.69
C12	3.783	-0.001	159	221	AK102	(C10-C25)	879485	51.09
C14	4.467	0.001	146	157	AK103	(C25-C36)	5767745	626.79
C16	5.048	0.001	219	247				
C18	5.582	0.000	589	874				
C20	6.124	0.002	1619	3260				
C22	6.660	0.003	6277	5710				
C24	7.171	-0.011	21659	12421	MSPIRIT	(Tol-C12)	15567	0.80
C25	7.433	0.014	97462	128308				
C26	7.671	-0.005	36765	19602				
C28	8.110	-0.007	42734	29194				
C32	8.907	-0.006	65803	143228				
C34	9.264	-0.014	58749	78583				
Filter Peak	11.423	-0.001	1976	2833	CREOSOT	(C12-C22)	180967	82.94 M
C36	9.627	0.027	43817	17074				
C38	9.958	0.002	40488	64989				
C40	10.286	0.004	25874	17280				
o-terph	5.706	0.000	1267	2262				
Triacon Surr	8.542	-0.065	803149	893545				

Range Times: NW Diesel(3.784 - 7.182) AK102(2.81 - 7.42) Jet A(2.81 - 5.58)
NW M.Oil(7.18 - 9.96) AK103(7.42 - 9.60) OR Diesel(2.81 - 8.12)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2262	0.1	0.3
Triacontane	893545	46.2	102.7 M

JW 5/23/13

M Indicates the peak was manually integrated

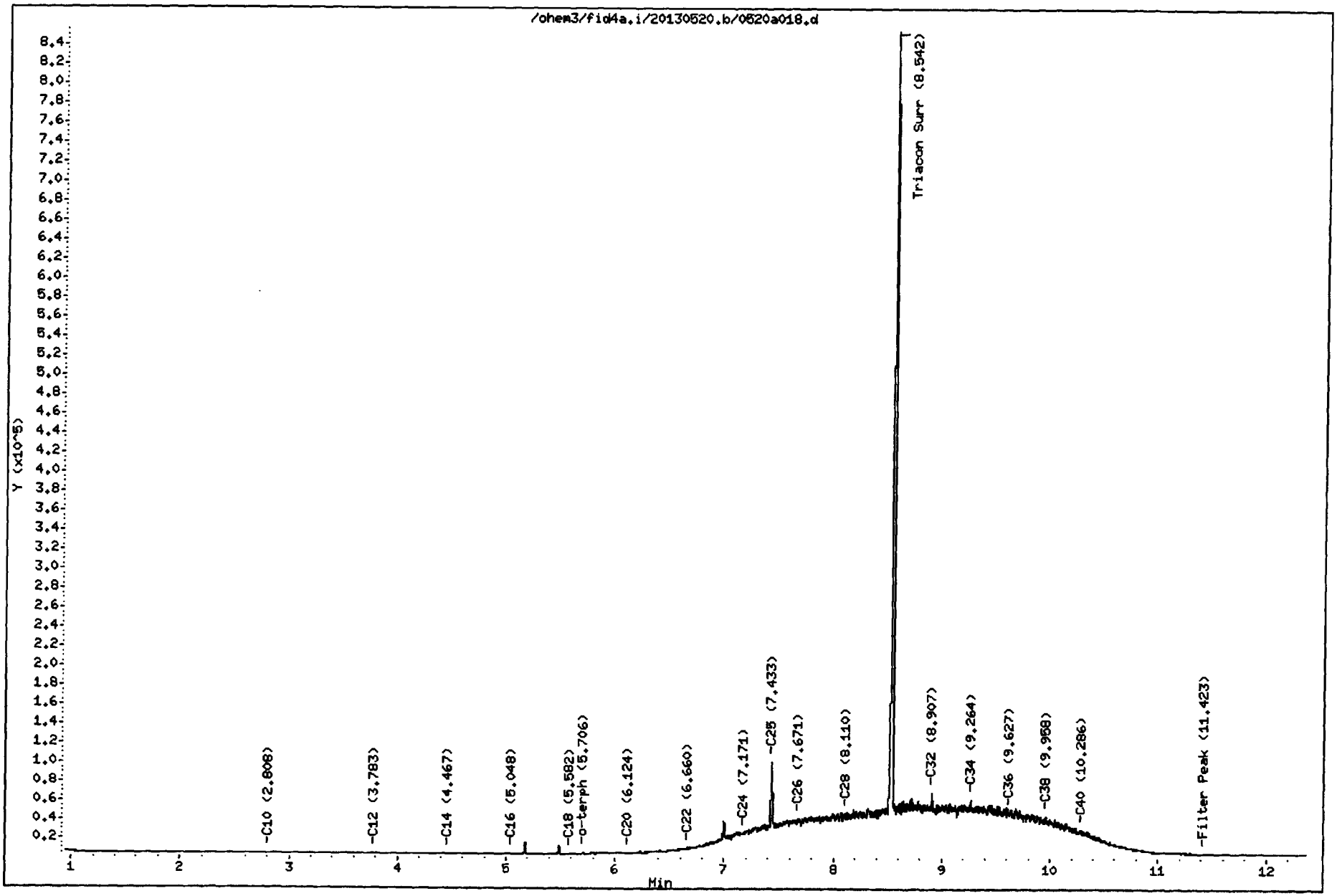
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130520.b/0520a018.d
Date : 20-MAY-2013 18:34
Client ID:
Sample Info: MOIL 500

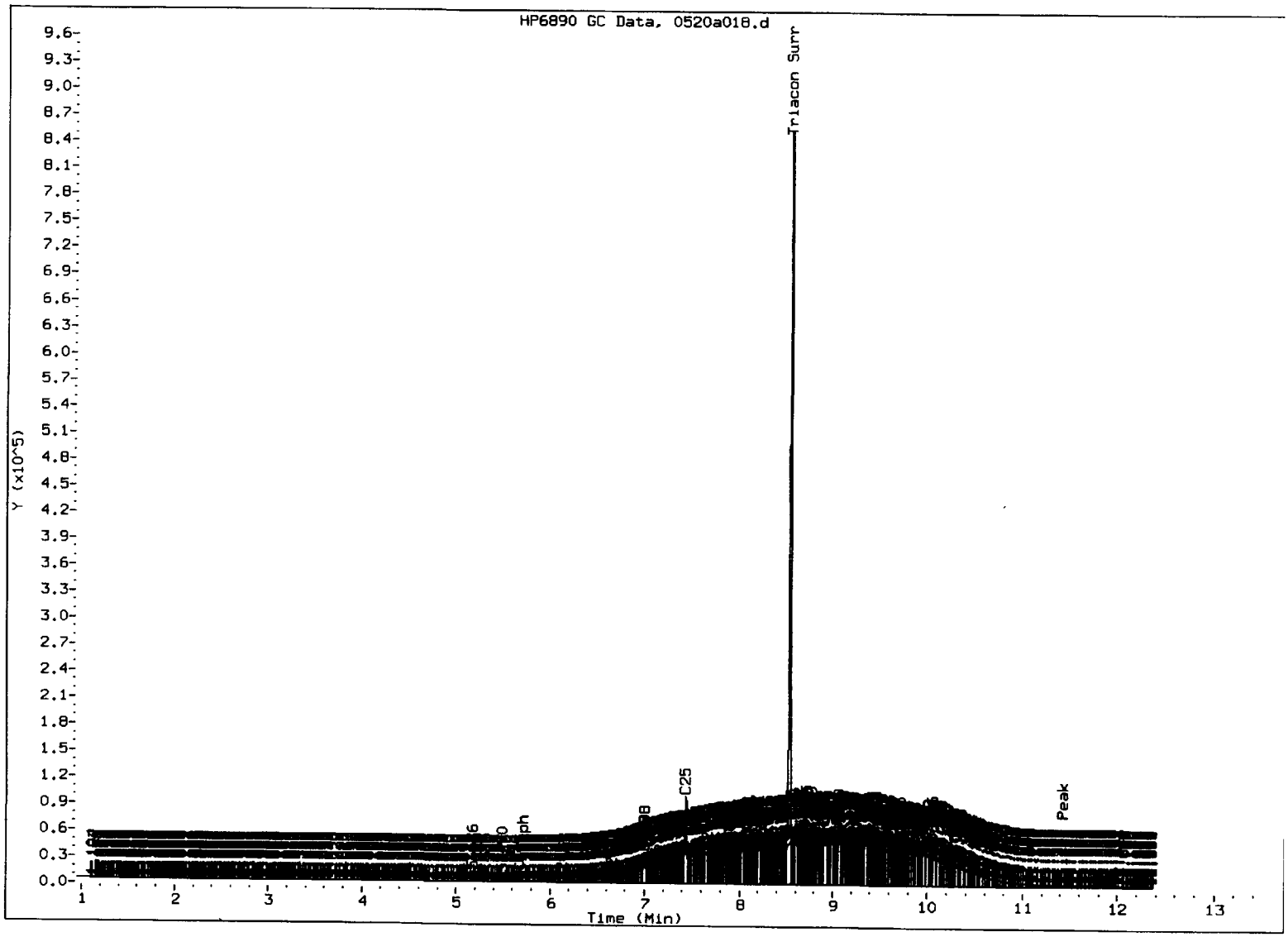
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25



FID:4A-2C/RTX-1 MOIL 500 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/23/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130520.b/0520a019.d
Method: /chem3/fid4a.i/20130520.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/21/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: MOIL 1000
Client ID:
Injection: 20-MAY-2013 18:55

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	17350	1.12
C8	----				WATPHD	(C12-C24)	1319892	90.94
C10	2.809	0.002	352	424	WATPHM	(C24-C38)	13325548	1032.58
C12	3.784	0.000	230	282	AK102	(C10-C25)	1790438	104.01
C14	4.465	-0.001	221	280	AK103	(C25-C36)	11532902	1253.29
C16	5.047	0.000	387	463				
C18	5.580	-0.002	989	1282				
C20	6.122	0.000	3397	7259				
C22	6.661	0.004	12270	7034				
C24	7.163	-0.019	46208	71041	MSPIRIT	(Tol-C12)	17350	0.90
C25	7.434	0.015	171873	249495				
C26	7.671	-0.005	67256	26289				
C28	8.112	-0.005	80777	37301				
C32	8.910	-0.003	124446	153622				
C34	9.270	-0.008	103096	131348				
Filter Peak	11.412	-0.012	2616	4789	CREOSOT	(C12-C22)	352836	161.71 M
C36	9.618	0.019	84748	39229				
C38	9.960	0.004	57815	59677				
C40	10.282	0.000	19968	29452				
o-terph	5.705	0.000	2163	3566				
Triacon Surr	8.555	-0.052	1341772	1745193				

Range Times: NW Diesel(3.784 - 7.182) AK102(2.81 - 7.42) Jet A(2.81 - 5.58)
NW M.Oil(7.18 - 9.96) AK103(7.42 - 9.60) OR Diesel(2.81 - 8.12)

Surrogate	Area	Amount	%Rec
o-Terphenyl	3566	0.2	0.4
Triacontane	1745193	90.3	200.7 M

JL 5/23/13

M Indicates the peak was manually integrated

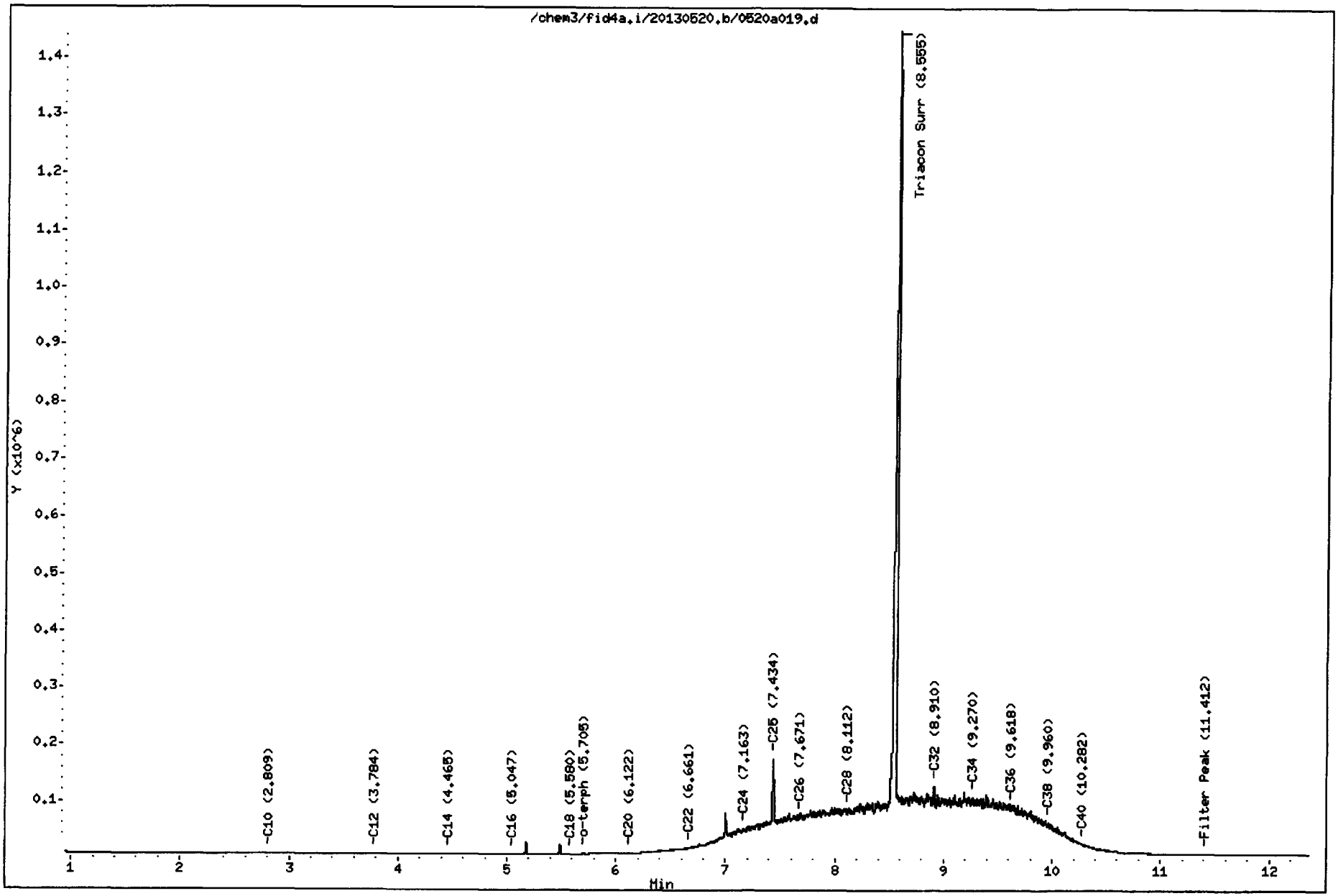
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130520.b/0520a019.d
Date : 20-MAY-2013 18:55
Client ID:
Sample Info: MOIL 1000

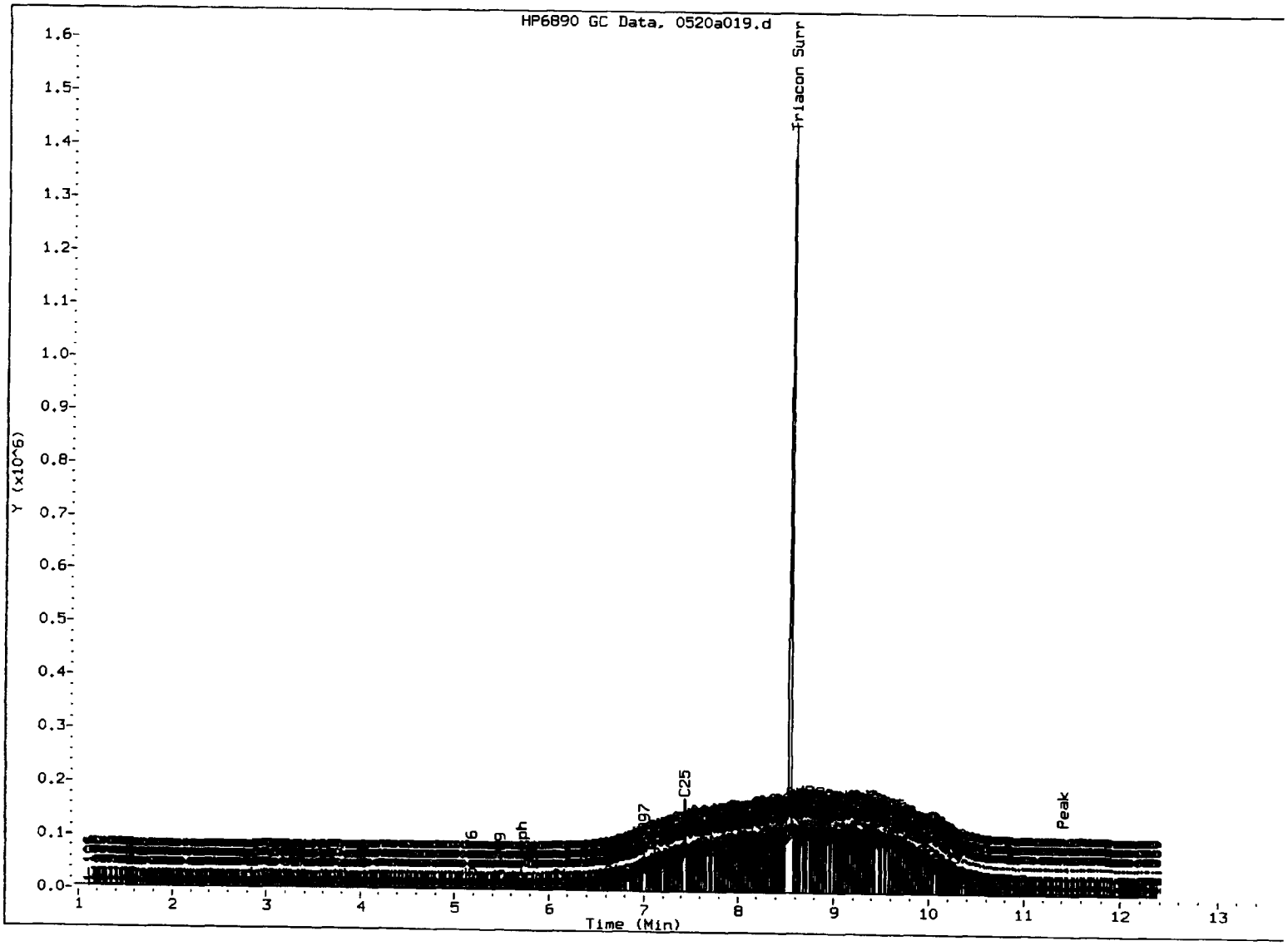
Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25



FID:4A-2C/RTX-1 MOIL 1000 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/23/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130520.b/0520a020.d
Method: /chem3/fid4a.i/20130520.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/21/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: MOIL 2500
Client ID:
Injection: 20-MAY-2013 19:15

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	22896	1.47
C8	----				WATPHD	(C12-C24)	3182500	219.26
C10	2.808	0.001	728	889	WATPHM	(C24-C38)	29595565	2293.32
C12	3.785	0.001	215	274	AK102	(C10-C25)	4325726	251.28
C14	4.466	0.000	391	603	AK103	(C25-C36)	27414450	2979.16
C16	5.048	0.001	740	817				
C18	5.581	-0.001	2484	3604				
C20	6.121	-0.001	7642	9147				
C22	6.662	0.005	30689	31483				
C24	7.166	-0.016	111904	258300	MSPIRIT	(Tol-C12)	22896	1.18
C25	7.422	0.003	147494	83678				
C26	7.666	-0.010	173085	95317				
C28	8.101	-0.016	211796	369604				
C32	8.921	0.008	300754	572969				
C34	9.259	-0.019	234207	255186				
Filter Peak	11.420	-0.004	4557	9083	CREOSOT	(C12-C22)	828825	379.86 M
C36	9.619	0.020	127280	203181				
C38	9.966	0.010	29143	46278				
C40	10.292	0.010	11624	9653				
o-terph	5.706	0.001	4905	9021				
Triacon Surr	8.581	-0.026	2329349	4162846				

Range Times: NW Diesel(3.784 - 7.182) AK102(2.81 - 7.42) Jet A(2.81 - 5.58)
NW M.Oil(7.18 - 9.96) AK103(7.42 - 9.60) OR Diesel(2.81 - 8.12)

Surrogate	Area	Amount	%Rec
o-Terphenyl	9021	0.5	1.0
Triacontane	4162846	215.4	478.6 M

JW 5/21/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

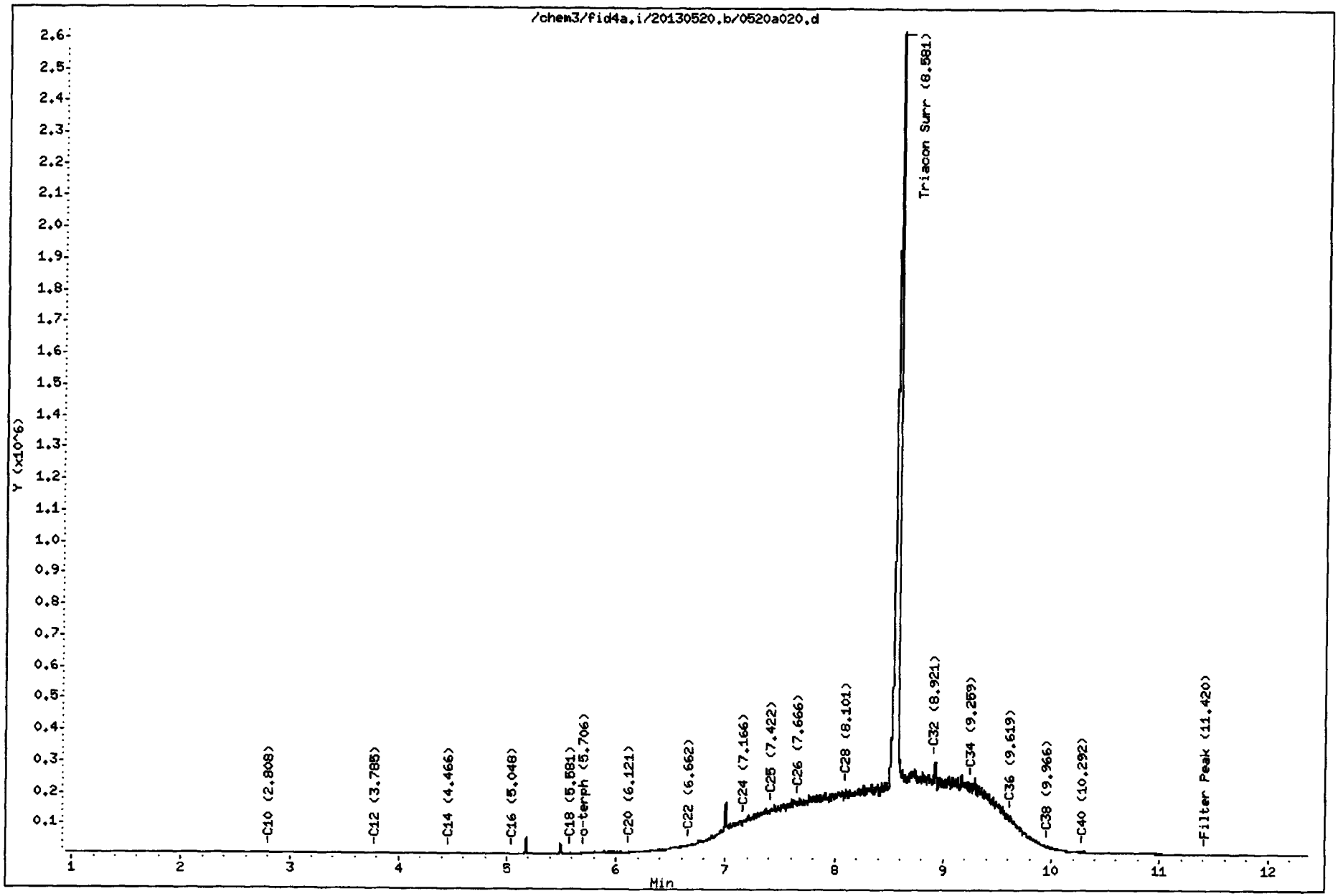
Data File: /chem3/fid4a.i/20130520.b/0520a020.d
Date : 20-MAY-2013 19:15
Client ID:
Sample Info: MOIL 2500

Column phase: RTX-1

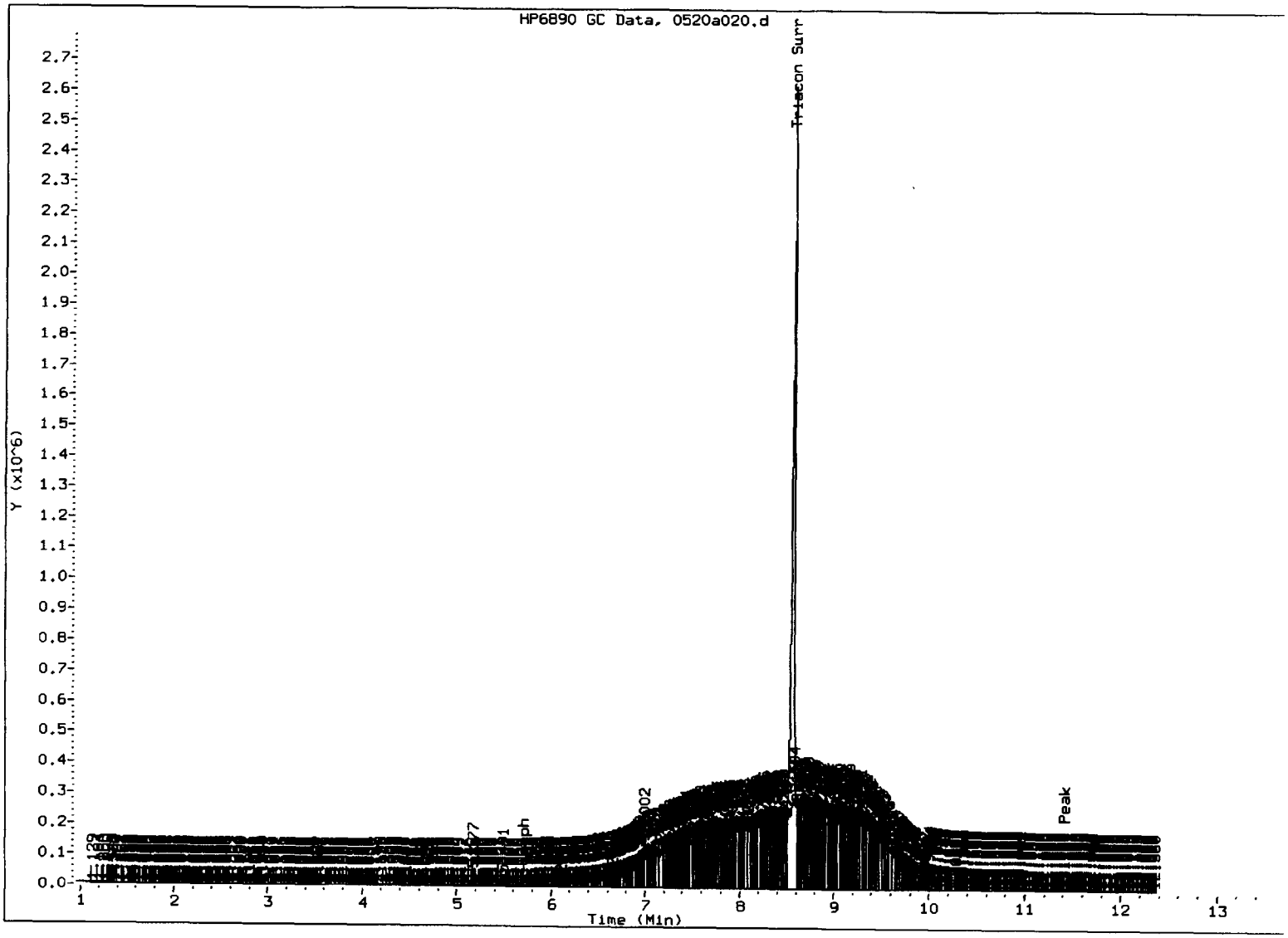
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

TJC 5/23/13



FID:4A-2C/RTX-1 MOIL 2500 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 5/23/0

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130520.b/0520a021.d
Method: /chem3/fid4a.i/20130520.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/21/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: MOIL 5000
Client ID:
Injection: 20-MAY-2013 19:36

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	36257	2.33
C8	----				WATPHD	(C12-C24)	6411801	441.75
C10	2.807	0.000	1267	1387	WATPHM	(C24-C38)	49649760	3847.30
C12	3.784	0.000	346	662	AK102	(C10-C25)	8386271	487.16
C14	4.466	0.000	721	1093	AK103	(C25-C36)	47071074	5115.27
C16	5.047	0.000	1442	1871				
C18	5.582	0.000	4780	4551				
C20	6.122	0.000	15200	15315				
C22	6.657	0.000	57089	32638				
C24	7.182	0.000	221919	252645	MSPIRIT	(Tol-C12)	36257	1.87
C25	7.419	0.000	298731	540419				
C26	7.676	0.000	348000	200434				
C28	8.117	0.000	402579	478996				
C32	8.913	0.000	462445	343691				
C34	9.278	0.000	233604	319943				
Filter Peak	11.424	0.000	8515	4748	CREOSOT	(C12-C22)	1658361	760.05 M
C36	9.599	0.000	58832	93060				
C38	9.956	0.000	23917	8060				
C40	10.282	0.000	18735	19357				
o-terph	5.705	0.000	9307	22785				
Triacon Surr	8.607	0.000	3266655	8189752				

Range Times: NW Diesel(3.784 - 7.182) AK102(2.81 - 7.42) Jet A(2.81 - 5.58)
NW M.Oil(7.18 - 9.96) AK103(7.42 - 9.60) OR Diesel(2.81 - 8.12)

Surrogate	Area	Amount	%Rec
o-Terphenyl	22785	1.2	2.6
Triacontane	8189752	423.7	941.6 M

JW 5/23/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

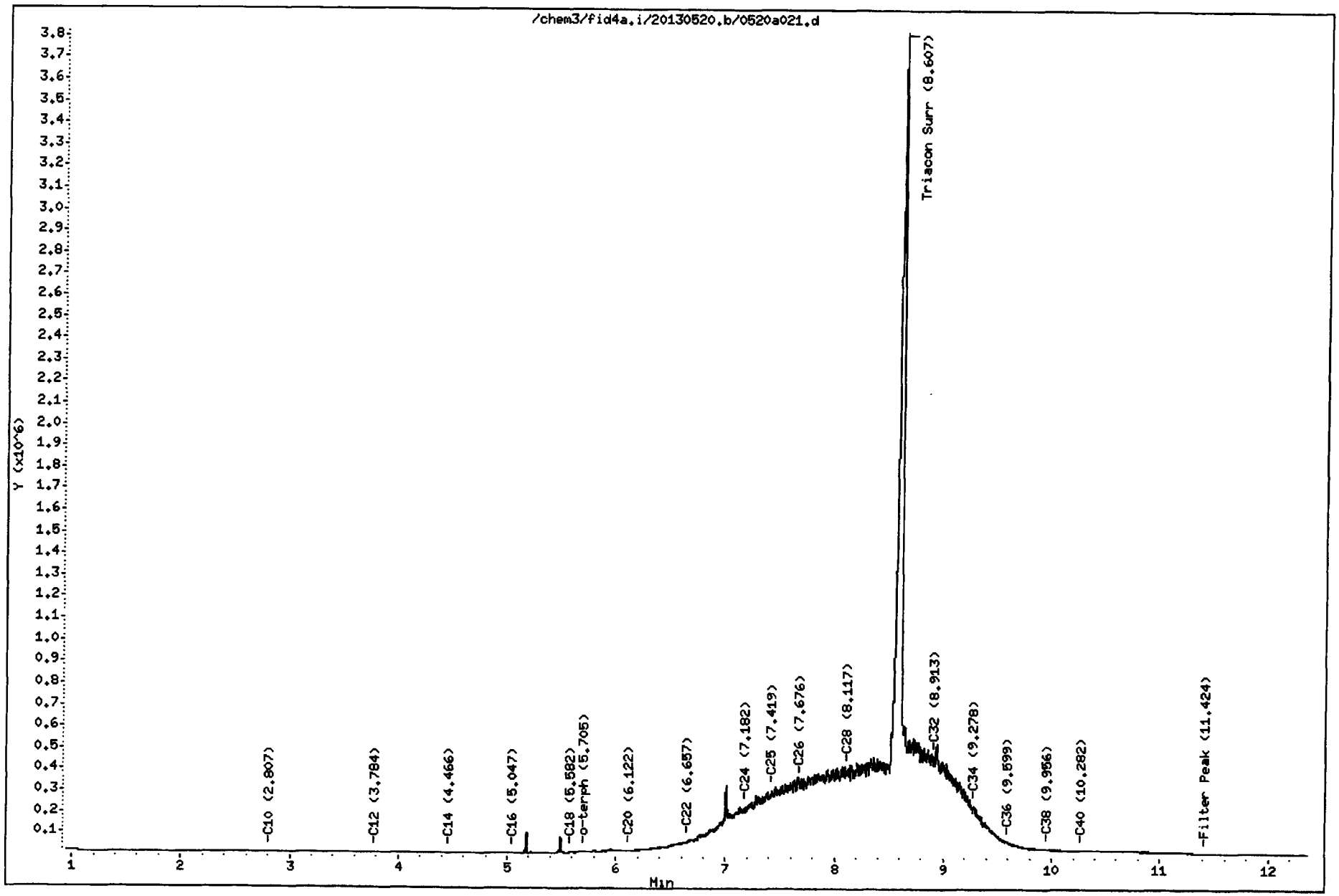
Data File: /chem3/fid4a.i/20130520.b/0520a021.d
Date : 20-MAY-2013 19:36
Client ID:
Sample Info: MOIL 5000

Column phase: RTX-1

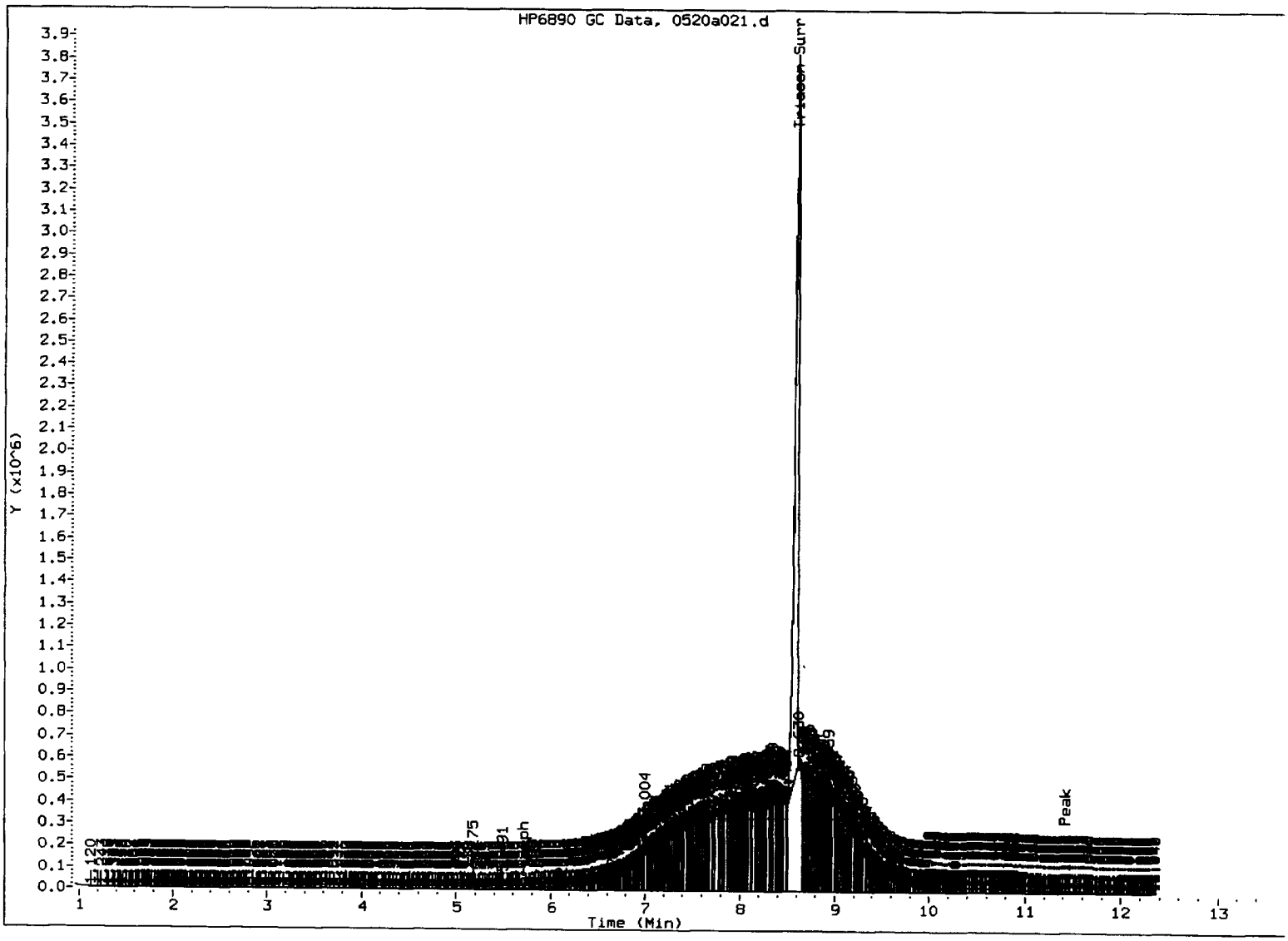
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

JW 5/21/13



FID:4A-2C/RTX-1 MOIL 5000 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: _____ Date: 5/23/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130520.b/0520a022.d
Method: /chem3/fid4a.i/20130520.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 05/21/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: MOIL ICV 500
Client ID:
Injection: 20-MAY-2013 19:56

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	----				WATPHG	(Tol-C12)	15771	1.01
C8	----				WATPHD	(C12-C24)	829880	57.18
C10	2.808	0.001	189	281	WATPHM	(C24-C38)	6674027	517.16
C12	3.784	-0.001	161	290	AK102	(C10-C25)	1068263	62.06
C14	4.465	-0.001	162	205	AK103	(C25-C36)	5572936	605.62
C16	5.046	-0.002	377	503				
C18	5.580	-0.002	835	1055				
C20	6.119	-0.003	1833	1822				
C22	6.651	-0.006	8261	5977				
C24	7.195	0.013	27115	53273	MSPIRIT	(Tol-C12)	15771	0.81
C25	7.413	-0.006	30803	22615				
C26	7.675	-0.002	34939	22778				
C28	8.113	-0.004	39970	57399				
C32	8.906	-0.008	57932	87155				
C34	9.282	0.003	48734	36271				
Filter Peak	11.414	-0.010	2959	5095	CREOSOT	(C12-C22)	248124	113.72 M
C36	9.597	-0.003	48854	35842				
C38	9.951	-0.005	36991	20913				
C40	10.279	-0.003	26781	24957				
o-terph	5.705	0.000	1096	1201				
Triacon Surr	8.541	-0.066	889882	879328				

Range Times: NW Diesel(3.784 - 7.182) AK102(2.81 - 7.42) Jet A(2.81 - 5.58)
NW M.Oil(7.18 - 9.96) AK103(7.42 - 9.60) OR Diesel(2.81 - 8.12)

Surrogate	Area	Amount	%Rec
o-Terphenyl	1201	0.1	0.1
Triacontane	879328	45.5	101.1 M

JW 5/23/13

M Indicates the peak was manually integrated

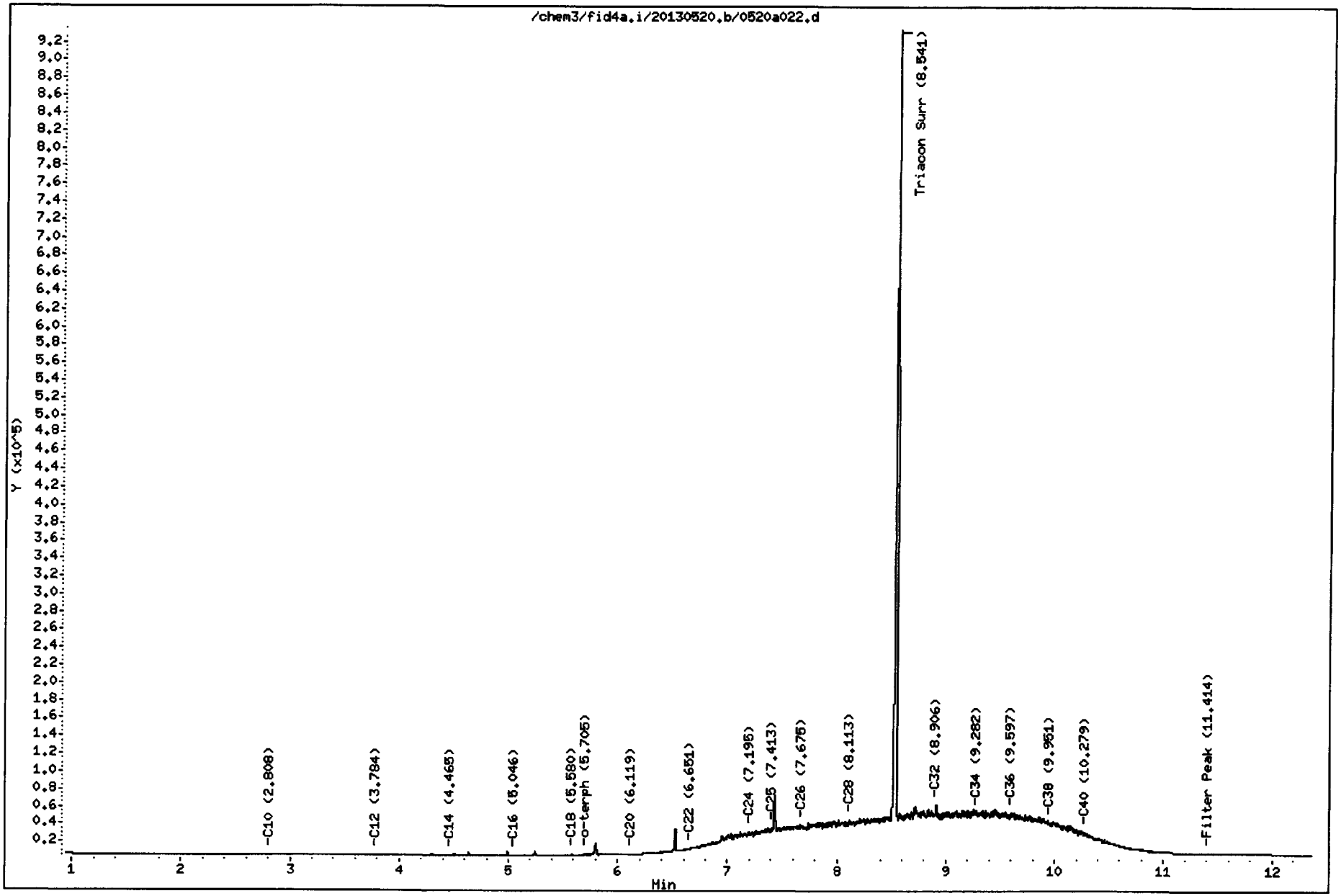
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130520.b/0520a022.d
Date : 20-MAY-2013 19:56
Client ID:
Sample Info: MOIL ICV 500

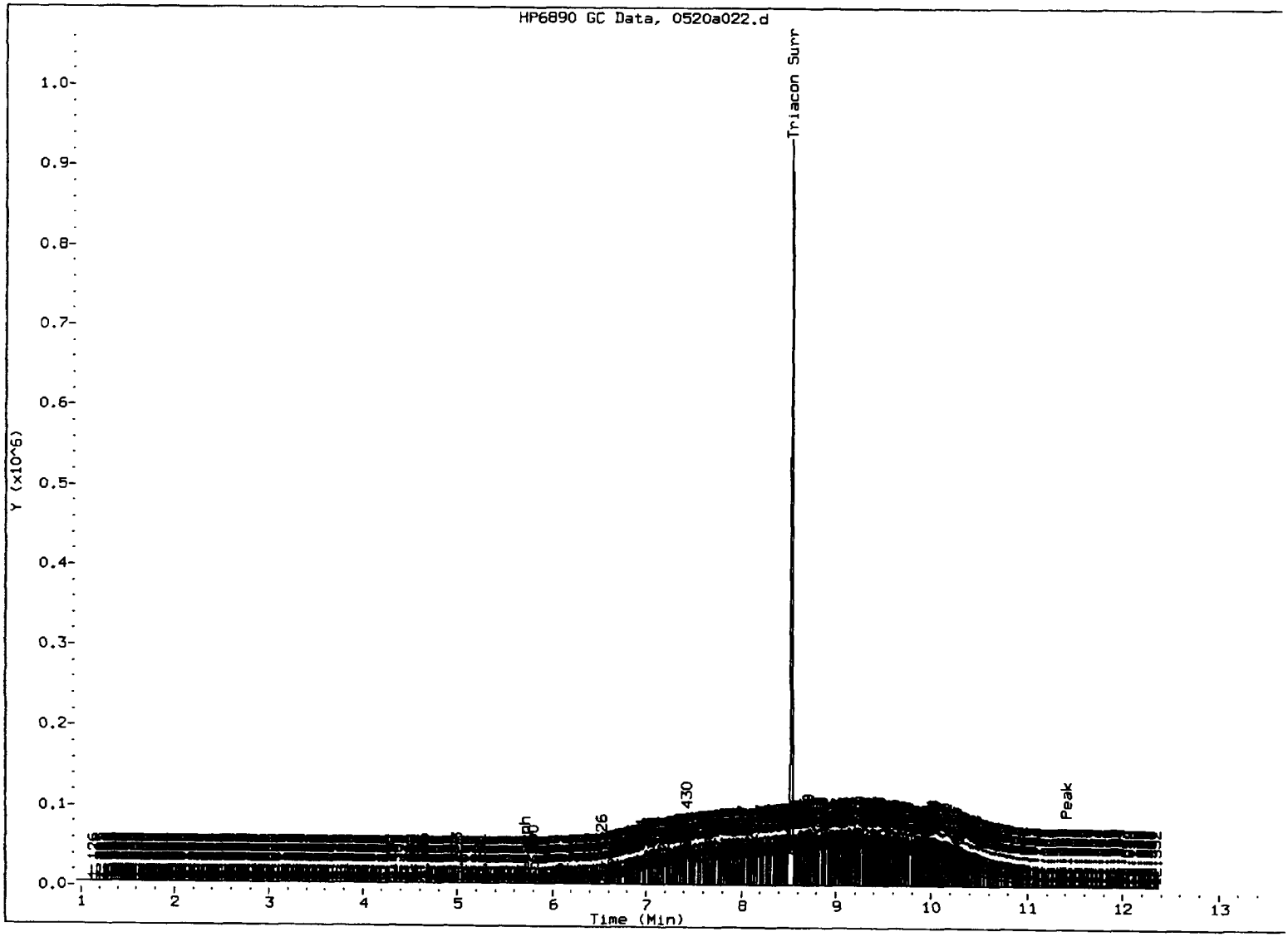
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

Column phase: RTX-1



FID:4A-2C/RTX-1 MOIL ICV 500 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JL Date: 5/23/11

TPHD Raw Data
Run Logs, Continuing Calibrations, and Raw Data

ARI Job ID: WU70

Analytical Resources, Incorporated
Analytical Chemists and
Consultants

GC Analyst Notes / Data Review Checklist

ARI WORK Order: WUT0 Client ID: SAIC

METHOD: **8082A**(PCB) **8151A**(Herb) **NW-TPH**(TPH-D) **NW-TPH**(HCID) **8041A**(PCP)
8081B(PEST) **8015B**(Dir Inj) **NW-EPH**(EPH) **8082A**(PBDE) **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: 4/13/13 & 5/20/13 Analysis Start Date: 6/25/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
Endrin/DDT B.D. ≤15%?	NA / Y / N / ✓	Method Blank in Control?	Y / N / ✓
Retention times within Windows?	Y / N / ✓	LCS / LCSD Recovery in Control?	Y / N / ✓
CCAL met %D Criteria?	Y / N / ✓	LCS / ~~LCSD RPD ≤30%?~~	NA / LCS ONLY
Surrogate Recovery in Control?	Y / N / ✓	MS / MSD Recovery in Control?	Y / N / ✓
Internal STD. within 50-200%?	NA / Y / N / ✓	MS / MSD RPD ≤30%?	NA / 10%
Manual Integrations?	Y / N / ✓	Samples Diluted?	Y / N / ✓
Integration Summary?	Y / N / ✓	Special Analysis Request?	Y / N / ✓

Detail problems, corrective actions and/or other pertinent information below

B - contain weathered diesel and motor oil. Some spikes missing but good pattern match.

B appeared darker than Bms/Bmsd (extracts), Motor oil is about ~25% higher in sample B than Bms/Bmsd. Sample homogeneity possible issue.

(Review 1) Analyst: JW **Date:** 6/26/13

(Review 2) Reviewer: [illegible] **Date:** 6/26/13

Analytical Resources Inc.: Organics Instrument Log

FID-4A Serial No.: US00003247

Date: 6/25/13 Analysis: TPHD Analyst: JW

Column 1 Serial No.: 1022005 Column Type: RTX-1

Column 2 Serial No.: ~~~~~ Column Type: ~~~~~

GC Method: TPH ICal Date: 4/13/13 & 5/20/13 Injection Volume: 1uL

IS	Ical/Ccal	ICV
	2043-3, 4	
	2091-2	
	2091-4	
	B000770	

Document All Maintenance Tasks In StarLIMS

GC LOG SUMMARY FOR DATABATCH - /chem3/fid4a.i/20130625.b

	Inject Date/Time	Filename	DF	LabID	ClientID
1	25-JUN-2013 09:04	0625a001.d	1	RINSE	
2	25-JUN-2013 09:24	0625a002.d	1	RT0625	
3	25-JUN-2013 09:45	0625a003.d	1	IB0625	
4	25-JUN-2013 10:05	0625a004.d	1	DIESEL#1	SPU LDW Source Trac
5	25-JUN-2013 10:26	0625a005.d	1	MOIL#1	SPU LDW Source Trac
6	25-JUN-2013 11:16	0625a006.d	1	WU00MBS1	WU00MBS1
7	25-JUN-2013 11:36	0625a007.d	1	WU00LCSS1	WU00LCSS1
8	25-JUN-2013 11:57	0625a008.d	1	WU00LCSDS1	WU00LCSDS1
9	25-JUN-2013 12:18	0625a009.d	1	WU00A	MH273-061313
10	25-JUN-2013 12:38	0625a010.d	1	WU00B	MH276-061313
11	25-JUN-2013 12:59	0625a011.d	1	WU00C	MH274-061313
12	25-JUN-2013 13:20	0625a012.d	1	WU00D	MH275-061313
13	25-JUN-2013 13:41	0625a013.d	1	WU00E	MH277-061313
14	25-JUN-2013 14:02	0625a014.d	1	WU00F	MH278-061313
15	25-JUN-2013 14:22	0625a015.d	1	DIESEL#2	SPU LDW Source Trac
16	25-JUN-2013 14:43	0625a016.d	1	MOIL#2	SPU LDW Source Trac
17	25-JUN-2013 15:04	0625a017.d	1	WU92MBW1	WU92MBW1
18	25-JUN-2013 15:25	0625a018.d	1	WU92LCSW1	WU92LCSW1
19	25-JUN-2013 15:46	0625a019.d	1	WU92QLS	
20	25-JUN-2013 16:06	0625a020.d	1	WU92A	A (SWP)
21	25-JUN-2013 16:27	0625a021.d	1	WU92B	B (194th)
22	25-JUN-2013 16:48	0625a022.d	1	WU70MBS1	WU70MBS1
23	25-JUN-2013 17:09	0625a023.d	1	WU70LCSS1	WU70LCSS1
24	25-JUN-2013 17:29	0625a024.d	1	WU70QLS	
25	25-JUN-2013 17:50	0625a025.d	1	WU70B	LF-TP-001-20130619-
26	25-JUN-2013 18:11	0625a026.d	1	WU70BMS	LF-TP-001-20130 MS
27	25-JUN-2013 18:32	0625a027.d	1	WU70BMSD	LF-TP-001-20130 MSD
28	25-JUN-2013 18:52	0625a028.d	1	DIESEL#3	
29	25-JUN-2013 19:13	0625a029.d	1	MOIL#3	
30	25-JUN-2013 19:33	0625a030.d	1	WV32MBS1	WV32MBS1
31	25-JUN-2013 19:54	0625a031.d	1	WV32LCSS1	WV32LCSS1
32	25-JUN-2013 20:15	0625a032.d	10	WV32A	B101-S-2.5-5
33	25-JUN-2013 20:35	0625a033.d	10	WV32B	B101-S-5.5
34	25-JUN-2013 20:56	0625a034.d	1	DIESEL#4	
35	25-JUN-2013 21:16	0625a035.d	1	MOIL#4	
36	25-JUN-2013 21:37	0625a036.d	1	B000770	

JW 6/26/13

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/fid4a.i/20130625.b

ARI Job No.: RT06 Method: ftphfid4a.m Instrument: fid4a.i Date: 25-JUN-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0924	0625a002.d	RT0625		1	NO MANUAL INTEGRATION
0945	0625a003.d	IB0625		1	NO MANUAL INTEGRATION
1422	0625a015.d	DIESEL#2	NPDES Samp	1	o-terph,
1443	0625a016.d	MOIL#2	NPDES Samp	1	Triacon Surr,
1648	0625a022.d	WU70MBS1	WU70MBS1	1	NO MANUAL INTEGRATION
1709	0625a023.d	WU70LCSS1	WU70LCSS1	1	o-terph,
1729	0625a024.d	WU70QLS		1	o-terph, Triacon Surr,
1750	0625a025.d	WU70B	LF-TP-001-	1	o-terph, Triacon Surr,
1811	0625a026.d	WU70BMS	LF-TP-001-	1	o-terph, Triacon Surr,
1832	0625a027.d	WU70BMSD	LF-TP-001-	1	o-terph, Triacon Surr,
1852	0625a028.d	DIESEL#3	NPDES Samp	1	o-terph,
1913	0625a029.d	MOIL#3	NPDES Samp	1	Triacon Surr,

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130625.b/0625a002.d
Method: /chem3/fid4a.i/20130625.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 06/26/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: RT0625
Client ID:
Injection: 25-JUN-2013 09:24

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.345	0.000	362719	332041	WATPHG	(Tol-C12)	1406580	90.52
C8	1.668	0.000	211655	274298	WATPHD	(C12-C24)	2509024	172.86
C10	3.342	0.000	641095	362986	WATPHM	(C24-C38)	3480154	269.67
C12	4.240	0.000	632323	372460	AK102	(C10-C25)	3282197	190.66
C14	4.920	0.000	596414	381647	AK103	(C25-C36)	3243541	352.48
C16	5.514	0.000	584516	384642				
C18	6.096	0.000	504081	389600				
C20	6.672	0.000	502814	371899				
C22	7.231	0.000	523805	391448				
C24	7.759	0.000	530115	397373	MSPIRIT	(Tol-C12)	1406580	72.63
C25	8.011	0.000	507392	387098				
C26	8.265	0.000	1198179	1165859				
C28	8.711	0.000	527947	403089				
C32	9.546	0.000	477560	394814				
C34	9.940	0.000	458613	386269				
Filter Peak	11.569	0.000	2775	2490	CREOSOT	(C12-C22)	2079613	953.12 M
C36	10.322	0.000	386261	326055				
C38	10.694	0.000	209305	189738				
C40	11.061	0.000	58728	61591				
o-terph	6.257	0.000	1020637	866142				
Triacon Surr	9.148	0.000	1070075	1043299				

Range Times: NW Diesel(4.240 - 7.759) AK102(3.34 - 8.01) Jet A(3.34 - 6.10)
NW M.Oil(7.76 - 10.69) AK103(8.01 - 10.32) OR Diesel(3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	866142	44.9	99.8
Triacontane	1043299	54.0	120.0

M Indicates the peak was manually integrated

JW 6/26/13

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130625.b/0625a002.d

Date : 25-JUN-2013 09:24

Client ID:

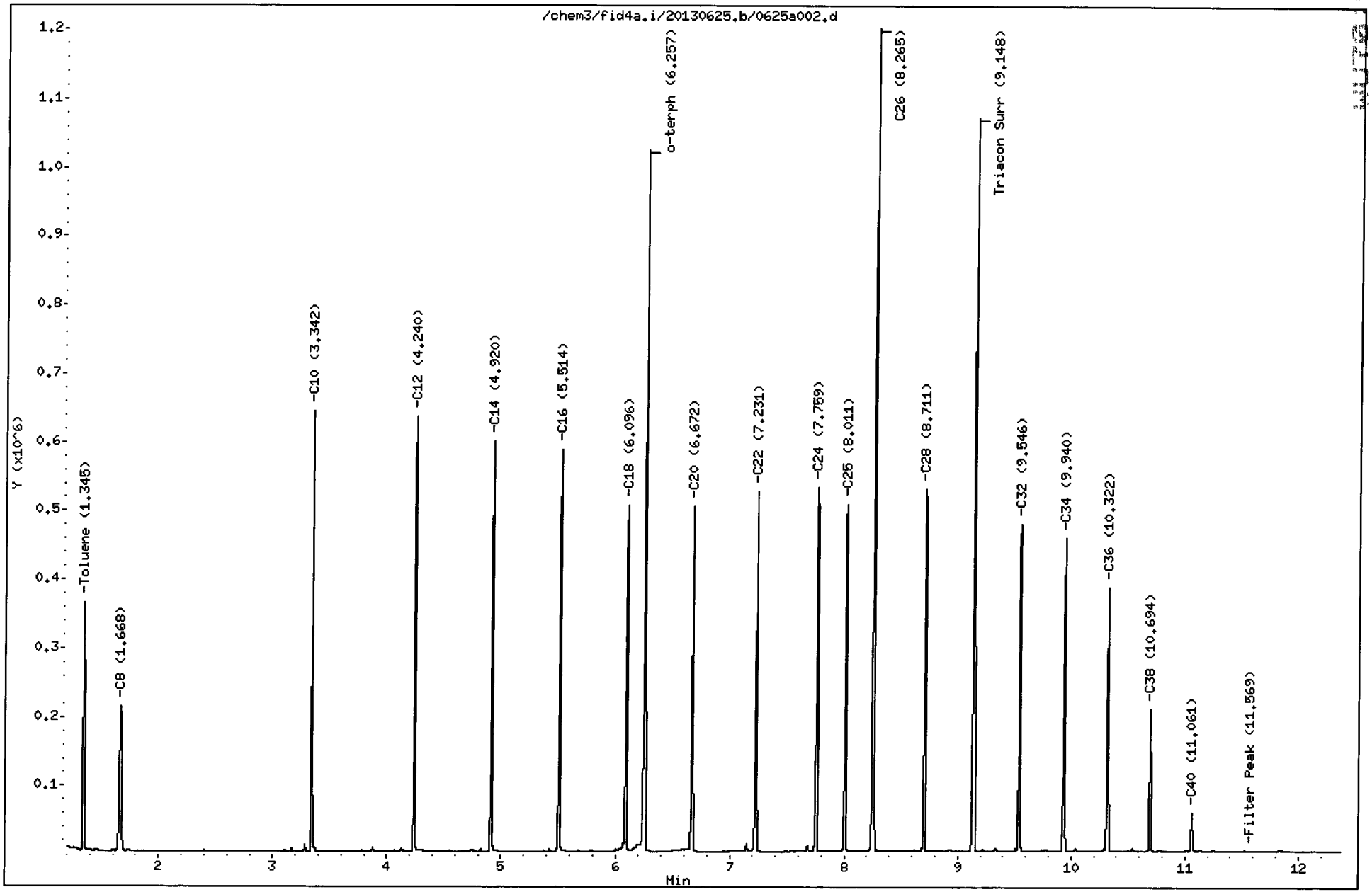
Sample Info: RT0625

Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JW

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130625.b/0625a003.d
Method: /chem3/fid4a.i/20130625.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 06/26/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: IB0625
Client ID:
Injection: 25-JUN-2013 09:45

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.346	0.001	1359	3010	WATPHG	(Tol-C12)	28538	1.84
C8	1.661	-0.006	216	466	WATPHD	(C12-C24)	91028	6.27
C10	3.338	-0.004	662	727	WATPHM	(C24-C38)	169938	13.17
C12	4.238	-0.002	593	862	AK102	(C10-C25)	109912	6.38
C14	4.917	-0.003	723	1625	AK103	(C25-C36)	127888	13.90
C16	5.511	-0.004	737	977				
C18	6.091	-0.005	739	1101				
C20	6.666	-0.005	773	1014				
C22	7.224	-0.007	745	1118				
C24	7.753	-0.007	795	1378	MSPIRIT	(Tol-C12)	28538	1.47
C25	8.004	-0.008	719	927				
C26	8.246	-0.020	1385	2005				
C28	8.701	-0.010	1513	2568				
C32	9.531	-0.015	11681	13105				
C34	9.956	0.016	1152	1212				
Filter Peak	11.562	-0.007	2765	2035	CREOSOT	(C12-C22)	73901	33.87 M
C36	10.338	0.016	1465	1634				
C38	10.677	-0.017	2030	6097				
C40	11.044	-0.017	2548	7681				
o-terph	6.258	0.001	1183897	950548				
Triacon Surr	9.142	-0.006	932387	859545				

Range Times: NW Diesel(4.240 - 7.759) AK102(3.34 - 8.01) Jet A(3.34 - 6.10)
NW M.Oil(7.76 - 10.69) AK103(8.01 - 10.32) OR Diesel(3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	950548	49.3	109.5
Triacontane	859545	44.5	98.8

JW 6/26/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

WU70:0196

Data File: /chem3/fid4a.i/20130625.b/0625a003.d

Date : 25-JUN-2013 09:45

Client ID:

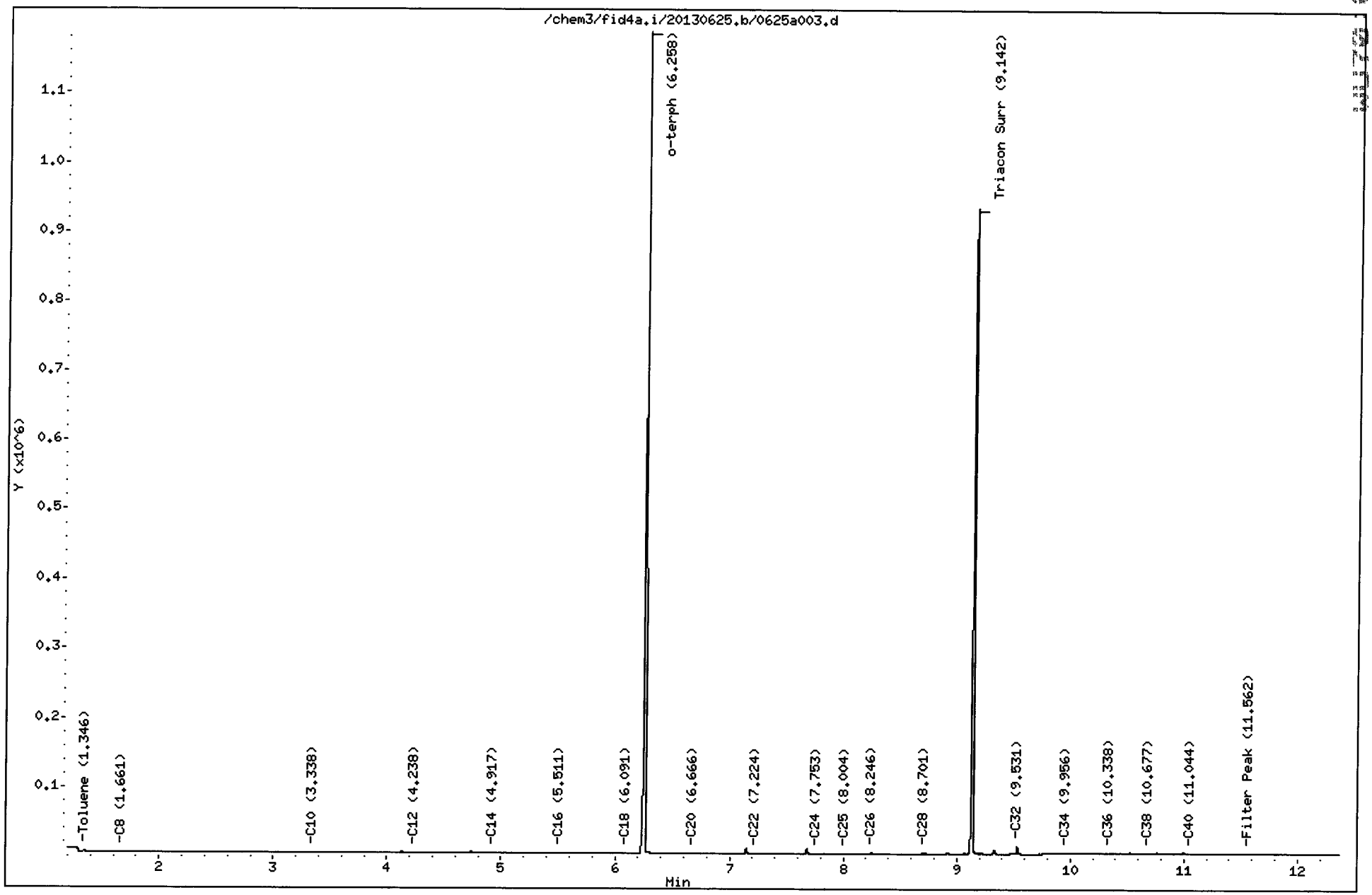
Sample Info: IB0625

Column phase: RTX-1

Instrument: fid4a.i

Operator: JR/VTS/JW

Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130625.b/0625a015.d
Method: /chem3/fid4a.i/20130625.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 06/26/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: DIESEL#2
Client ID: SPU LDW Source Trac
Injection: 25-JUN-2013 14:22

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.354	0.009	2041	3301	WATPHG	(Tol-C12)	901762	58.03
C8	1.669	0.001	1599	2861	WATPHD	(C12-C24)	3644697	251.11
C10	3.337	-0.004	25406	15859	WATPHM	(C24-C38)	180471	13.98
C12	4.238	-0.002	44273	40904	AK102	(C10-C25)	4287121	249.04
C14	4.918	-0.002	78647	71567	AK103	(C25-C36)	127815	13.89
C16	5.511	-0.003	119865	138319				
C18	6.092	-0.004	92956	104423				
C20	6.668	-0.004	67466	68503				
C22	7.224	-0.007	34831	34934				
C24	7.752	-0.007	9506	9478	MSPIRIT	(Tol-C12)	901762	46.56
C25	8.004	-0.008	4162	4459				
C26	8.248	-0.017	1945	2530				
C28	8.707	-0.004	741	936				
C32	9.554	0.008	800	1642				
C34	9.926	-0.014	957	1063				
Filter Peak	11.574	0.005	2814	5411	CREOSOT	(C12-C22)	3495244	1601.93 M
C36	10.323	0.001	4021	7716				
C38	10.697	0.003	1844	2045				
C40	11.056	-0.005	3806	12141				
o-terph	6.258	0.001	1126767	891537				
Triacon Surr	9.138	-0.010	4252	4471				

Range Times: NW Diesel(4.240 - 7.759) AK102(3.34 - 8.01) Jet A(3.34 - 6.10)
NW M.Oil(7.76 - 10.69) AK103(8.01 - 10.32) OR Diesel(3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	891537	46.2	102.7 M
Triacontane	4471	0.2	0.5

M Indicates the peak was manually integrated

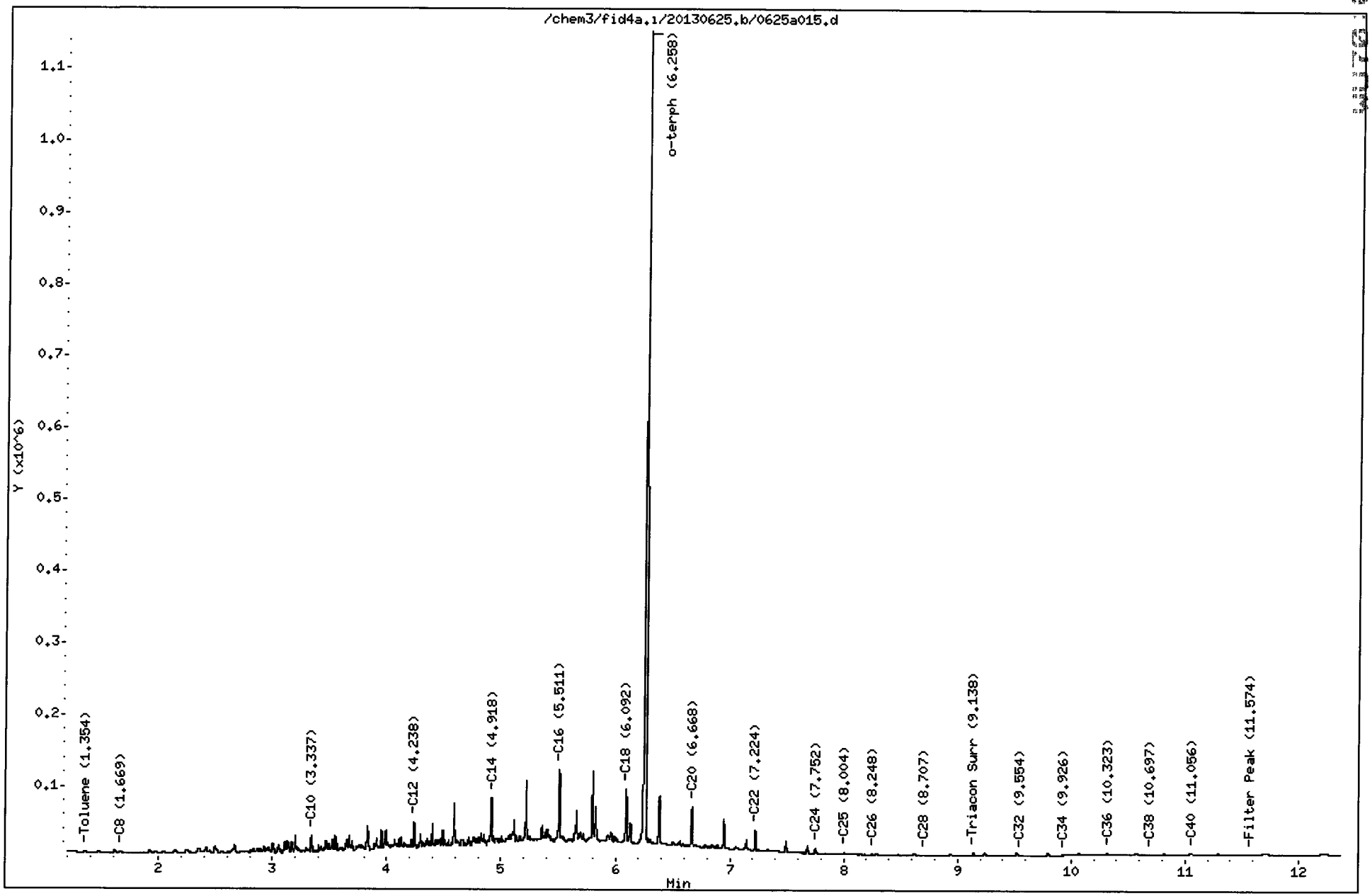
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130625.b/0625a015.d
Date : 25-JUN-2013 14:22
Client ID: SPU LDW Source Trac
Sample Info: DIESEL#2

Column phase: RTX-1

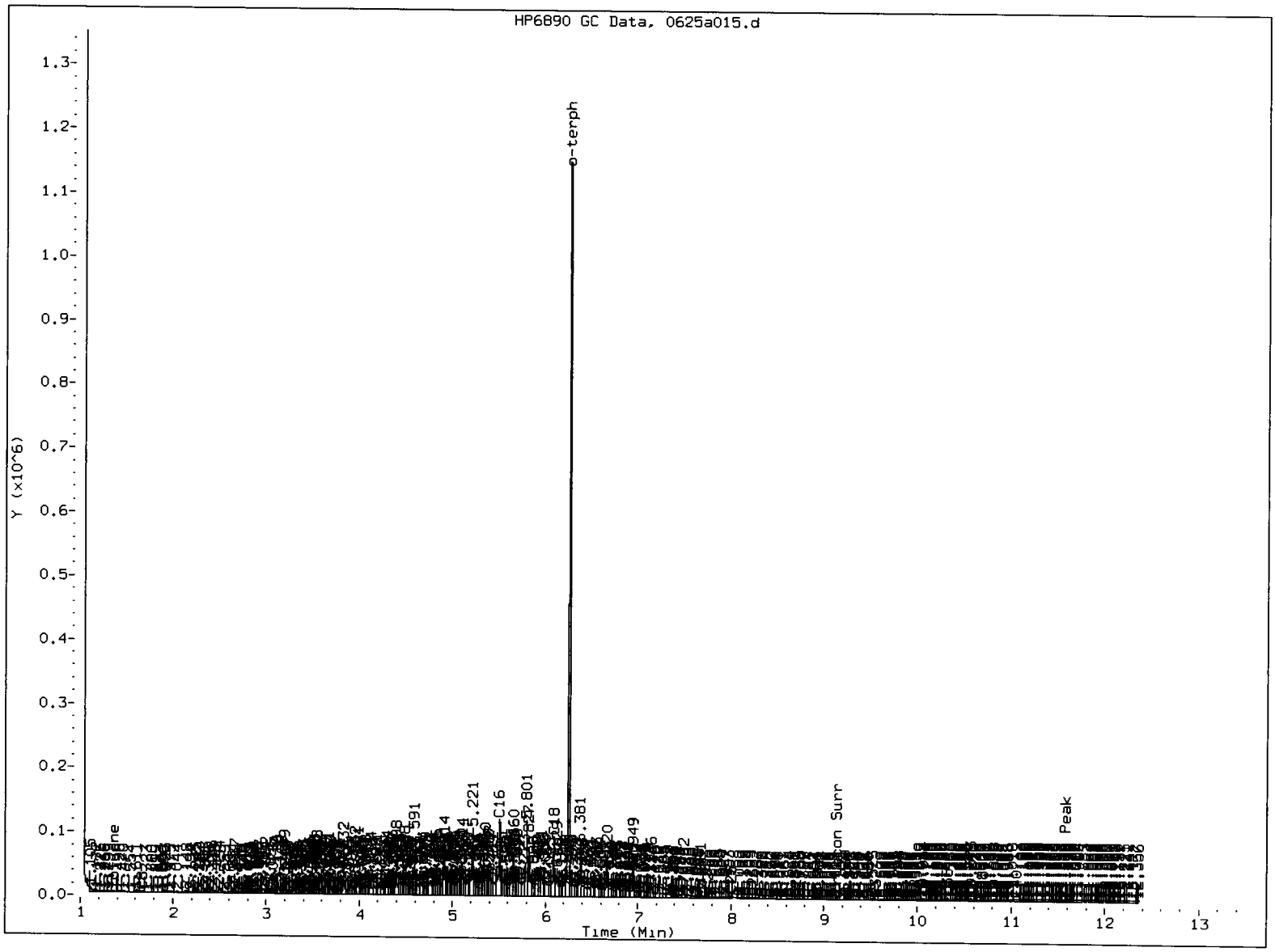
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25



FID:4A-2C/RTX-1 DIESEL#2

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: _____ Date: 6/26/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130625.b/0625a016.d
Method: /chem3/fid4a.i/20130625.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 06/26/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: MOIL#2
Client ID: SPU LDW Source Trac
Injection: 25-JUN-2013 14:43

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.340	-0.005	857	1647	WATPHG	(Tol-C12)	32047	2.06
C8	1.667	0.000	194	163	WATPHD	(C12-C24)	634751	43.73
C10	3.337	-0.005	514	646	WATPHM	(C24-C38)	5747449	445.36
C12	4.238	-0.002	381	636	AK102	(C10-C25)	879420	51.09
C14	4.918	-0.002	432	1179	AK103	(C25-C36)	5108613	555.16
C16	5.510	-0.004	457	789				
C18	6.090	-0.006	674	1219				
C20	6.667	-0.005	1697	2712				
C22	7.230	0.000	5427	5361				
C24	7.757	-0.003	20997	27705	MSPIRIT	(Tol-C12)	32047	1.65
C25	8.016	0.005	28703	26857				
C26	8.265	-0.001	34373	71933				
C28	8.717	0.006	38947	18543				
C32	9.540	-0.006	54812	103469				
C34	9.928	-0.012	43248	83238				
Filter Peak	11.567	-0.002	3079	4472	CREOSOT	(C12-C22)	189697	86.94 M
C36	10.330	0.007	31491	21083				
C38	10.691	-0.003	16567	21658				
C40	11.038	-0.024	6513	41846				
o-terph	6.246	-0.011	1712	2361				
Triacon Surr	9.147	-0.001	942232	860009				

Range Times: NW Diesel(4.240 - 7.759) AK102(3.34 - 8.01) Jet A(3.34 - 6.10)
NW M.Oil(7.76 - 10.69) AK103(8.01 - 10.32) OR Diesel(3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	2361	0.1	0.3
Triacontane	860009	44.5	98.9 M

JC 6/26/13

M Indicates the peak was manually integrated

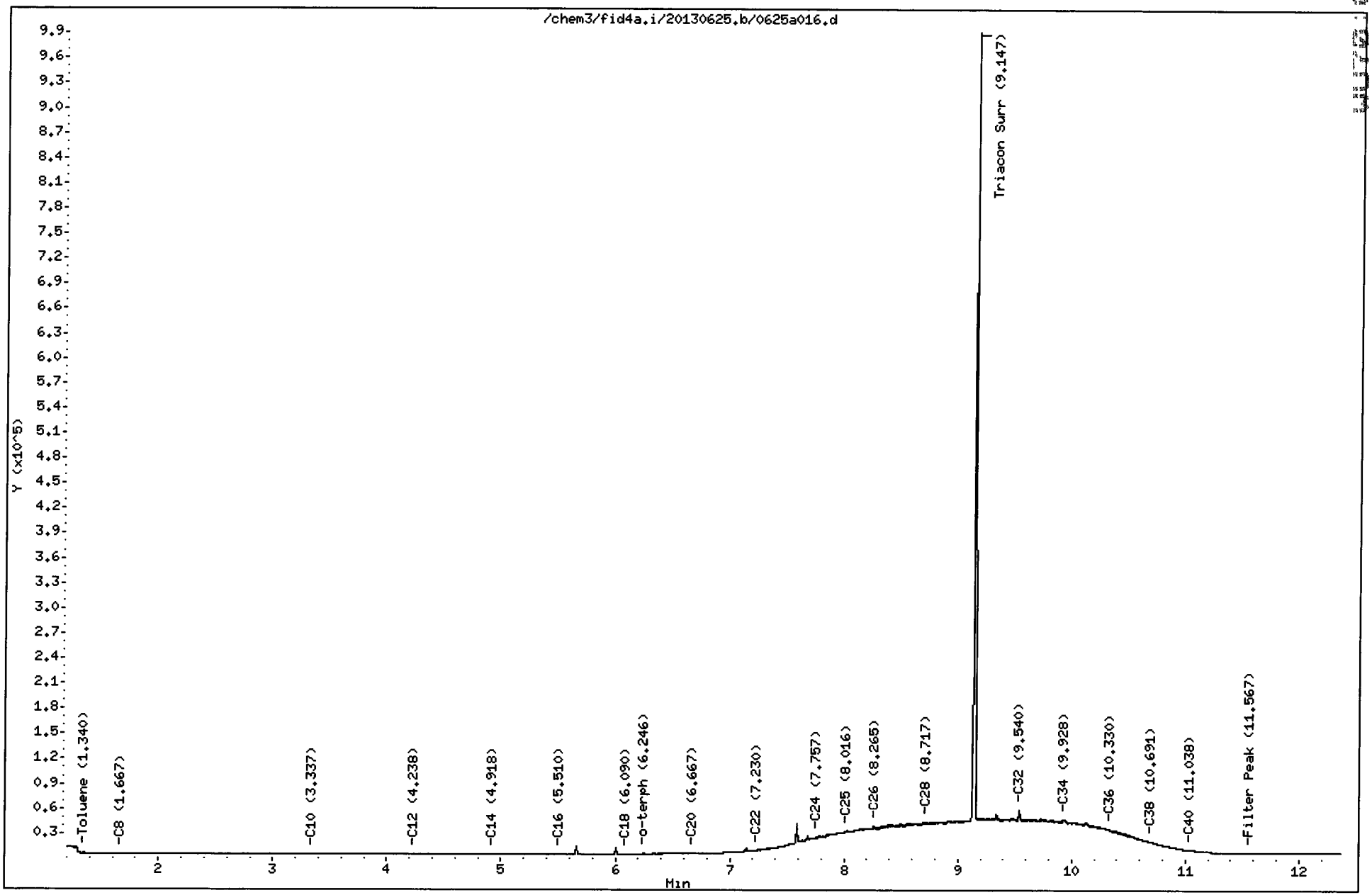
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130625.b/0625a016.d
Date : 25-JUN-2013 14:43
Client ID: SPU LDW Source Trac
Sample Info: MOIL#2

Instrument: fid4a.i

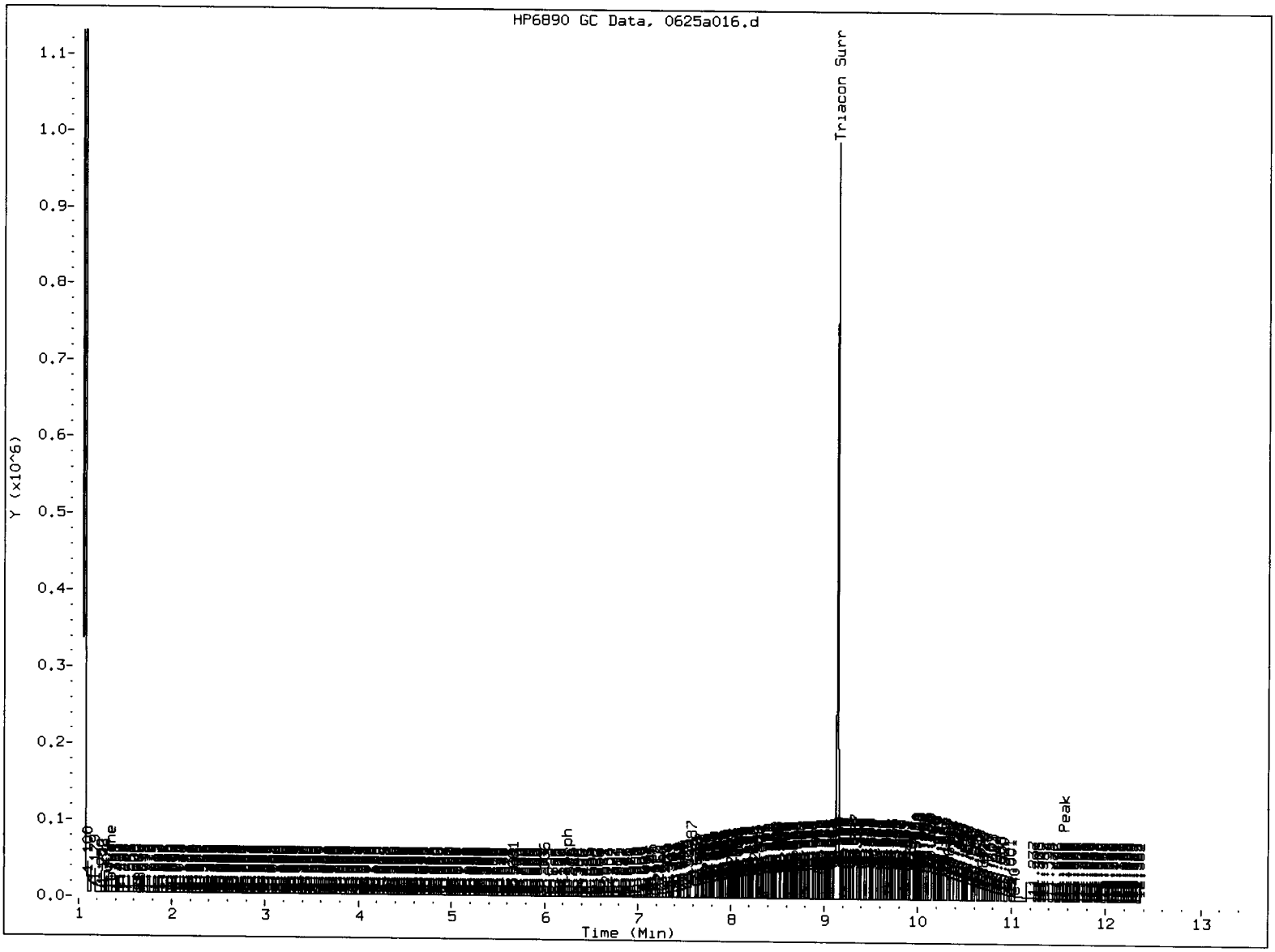
Operator: JR/VTS/JW
Column diameter: 0.25

Column phase: RTX-1



FID:4A-2C/RTX-1 MOIL#2

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JCJ Date: 6/26/13

WO#: 91553

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130625.b/0625a022.d
Method: /chem3/fid4a.i/20130625.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 06/26/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: WU70MBS1
Client ID: WU70MBS1
Injection: 25-JUN-2013 16:48

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.350	0.004	1528	1445	WATPHG	(Tol-C12)	24630	1.59
C8	1.652	-0.016	200	307	WATPHD	(C12-C24)	72348	4.98
C10	3.337	-0.005	294	394	WATPHM	(C24-C38)	184508	14.30
C12	4.239	-0.002	300	631	AK102	(C10-C25)	86877	5.05
C14	4.917	-0.003	458	634	AK103	(C25-C36)	138433	15.04
C16	5.511	-0.003	353	320				
C18	6.102	0.006	324	132				
C20	6.667	-0.004	405	575				
C22	7.226	-0.004	380	448				
C24	7.750	-0.009	478	519	MSPIRIT	(Tol-C12)	24630	1.27
C25	8.007	-0.005	459	616				
C26	8.264	-0.001	477	264				
C28	8.703	-0.008	1223	2206				
C32	9.536	-0.010	10859	11525				
C34	9.927	-0.013	1376	4337				
Filter Peak	11.562	-0.007	3116	2295	CREOSOT	(C12-C22)	60238	27.61 M
C36	10.323	0.001	1726	893				
C38	10.693	-0.001	2263	2869				
C40	11.067	0.006	3029	3306				
o-terph	6.258	0.001	1077091	852678				
Triacon Surr	9.144	-0.004	890065	797493				

Range Times: NW Diesel(4.240 - 7.759) AK102(3.34 - 8.01) Jet A(3.34 - 6.10)
NW M.Oil(7.76 - 10.69) AK103(8.01 - 10.32) OR Diesel(3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	852678	44.2	98.3
Triacontane	797493	41.3	91.7

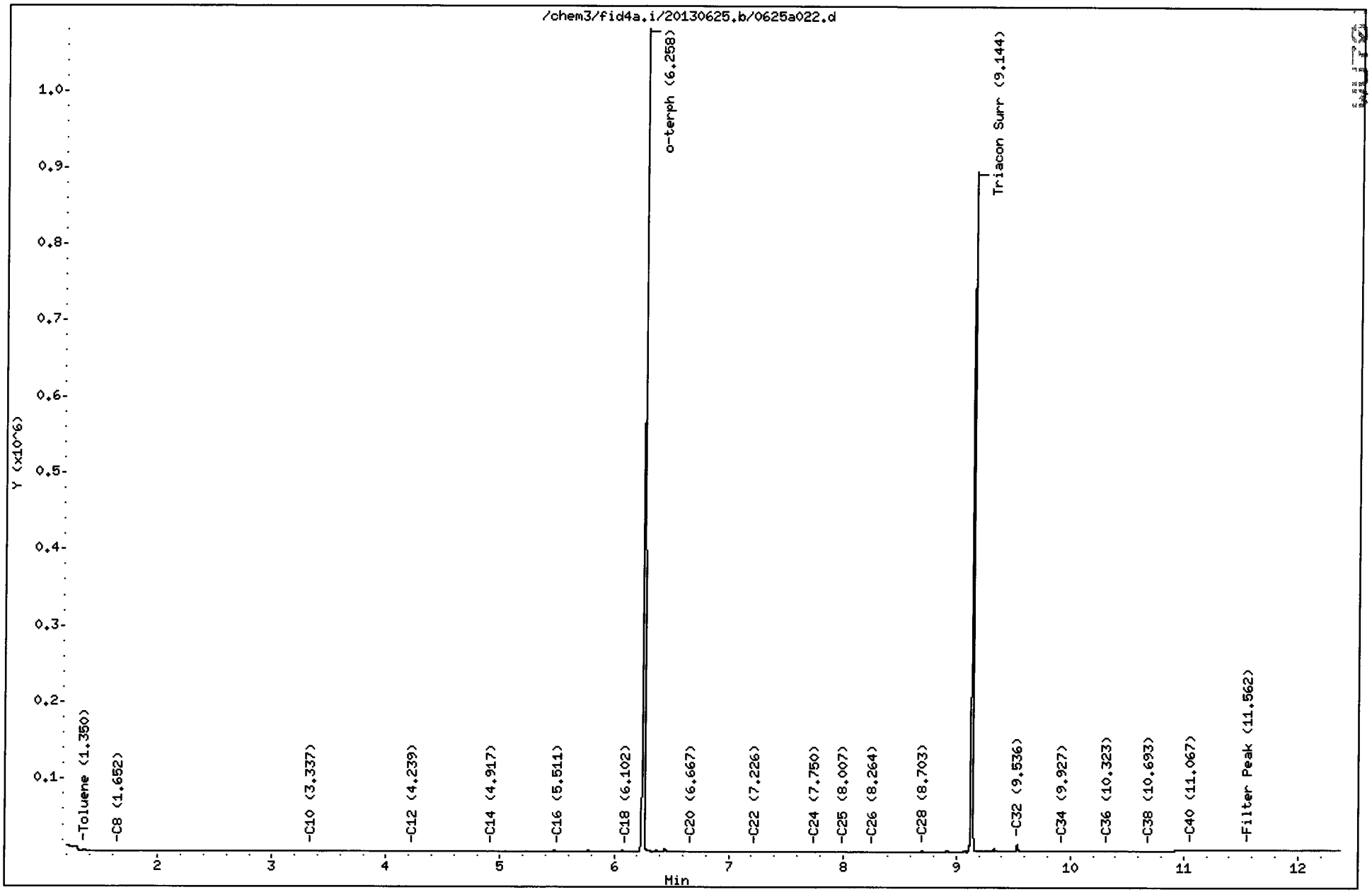
JW 6/26/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130625.b/0625a022.d
Date : 25-JUN-2013 16:48
Client ID: WU70MBS1
Sample Info: WU70MBS1

Instrument: fid4a.i
Operator: JR/VTS/JW
Column phase: RTX-1
Column diameter: 0.25



Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130625.b/0625a023.d
Method: /chem3/fid4a.i/20130625.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 06/26/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: WU70LCSS1
Client ID: WU70LCSS1
Injection: 25-JUN-2013 17:09

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.323	-0.022	2452	3218	WATPHG	(Tol-C12)	5150349	331.44
C8	1.689	0.021	13427	22596	WATPHD	(C12-C24)	21179209	1459.17
C10	3.341	0.000	119654	107718	WATPHM	(C24-C38)	390256	30.24
C12	4.241	0.001	213042	222974	AK102	(C10-C25)	24867012	1444.52
C14	4.922	0.002	372122	316848	AK103	(C25-C36)	277303	30.13
C16	5.517	0.003	536765	459888				
C18	6.099	0.003	499739	631003				
C20	6.672	0.000	302129	348020				
C22	7.227	-0.004	143751	151496				
C24	7.753	-0.006	51808	51938	MSPIRIT	(Tol-C12)	5150349	265.94
C25	8.004	-0.007	27633	34545				
C26	8.247	-0.018	13752	18428				
C28	8.702	-0.009	3376	6933				
C32	9.534	-0.012	11048	10350				
C34	9.949	0.009	814	226				
Filter Peak	11.578	0.009	2381	3883	CREOSOT	(C12-C22)	20521419	9405.30 M
C36	10.323	0.001	1128	1618				
C38	10.684	-0.010	1567	3176				
C40	11.059	-0.002	2275	1038				
o-terph	6.261	0.003	1061550	802132				
Triacon Surr	9.144	-0.004	922019	830437				

Range Times: NW Diesel(4.240 - 7.759) AK102(3.34 - 8.01) Jet A(3.34 - 6.10)
NW M.Oil(7.76 - 10.69) AK103(8.01 - 10.32) OR Diesel(3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	802132	41.6	92.4 M
Triacontane	830437	43.0	95.5

6/26/13

M Indicates the peak was manually integrated

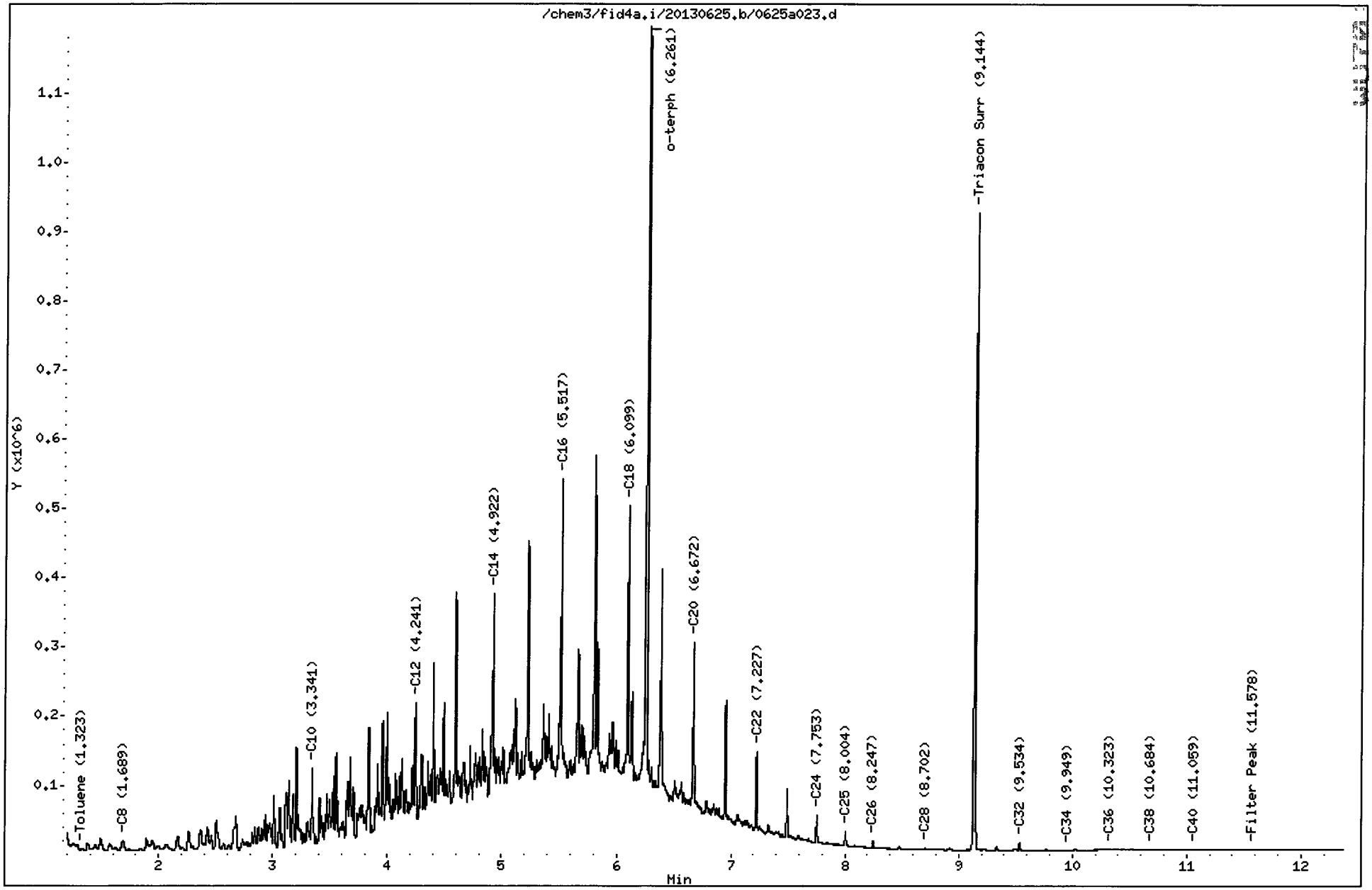
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130625.b/0625a023.d
Date : 25-JUN-2013 17:09
Client ID: WU70LCSS1
Sample Info: WU70LCSS1

Column phase: RTX-1

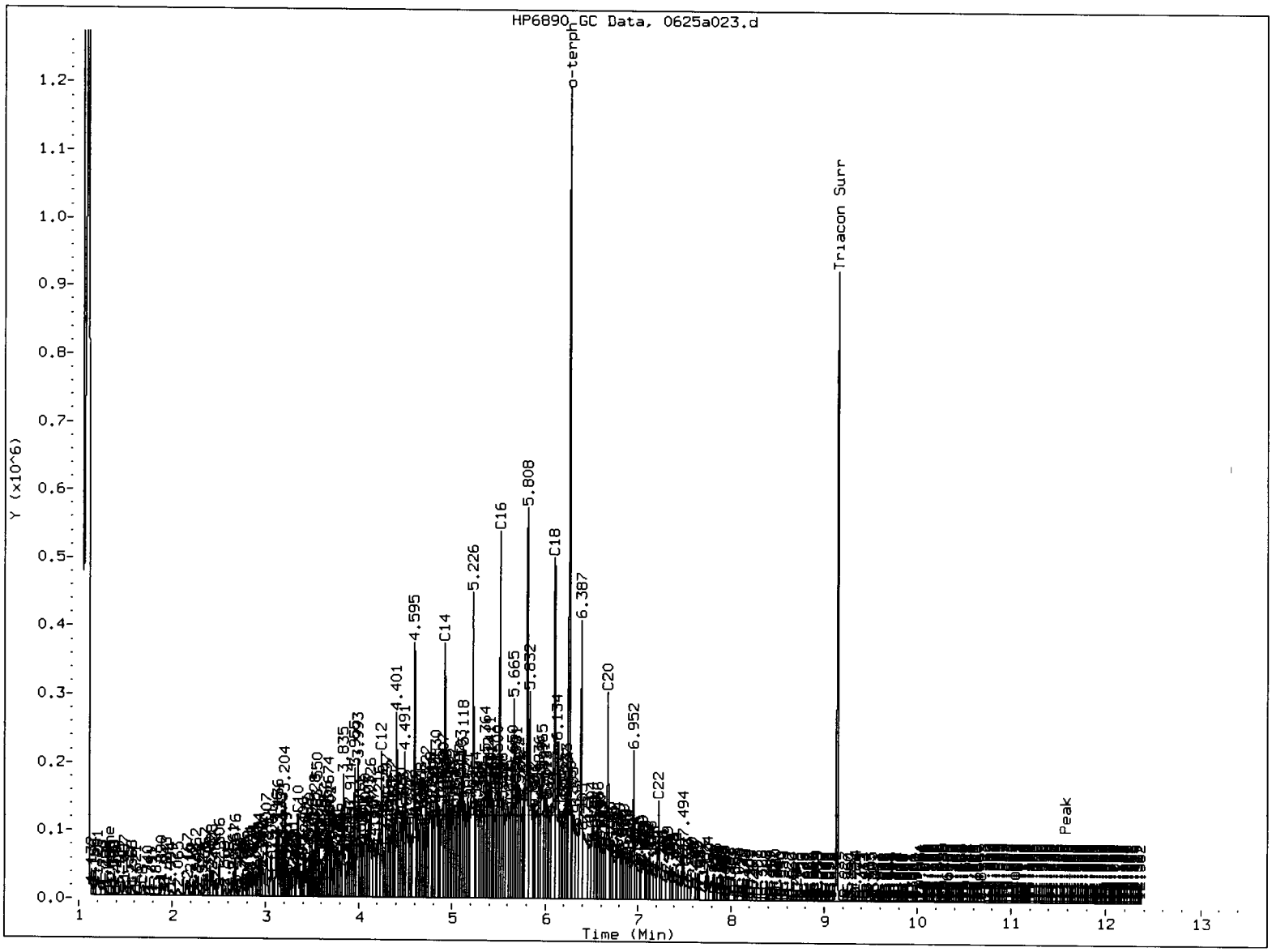
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25



FID:4A-2C/RTX-1 WU70LCSS1

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: _____ Date: 6/26/13

WU70:81556

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130625.b/0625a025.d
Method: /chem3/fid4a.i/20130625.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 06/26/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: WU70B
Client ID: LF-TP-001-20130619-
Injection: 25-JUN-2013 17:50

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.340	-0.005	1968	2121	WATPHG	(Tol-C12)	164007	10.55
C8	1.671	0.004	325	622	WATPHD	(C12-C24)	8588619	591.73
C10	3.337	-0.005	1612	1639	WATPHM	(C24-C38)	16754131	1298.26
C12	4.238	-0.002	4076	5826	AK102	(C10-C25)	9603165	557.84
C14	4.918	-0.002	10405	12157	AK103	(C25-C36)	15132214	1644.43
C16	5.511	-0.003	29590	24977				
C18	6.092	-0.004	52271	51030				
C20	6.671	-0.001	53446	96965				
C22	7.216	-0.015	69092	114494				
C24	7.756	-0.004	93641	104104	MSPIRIT	(Tol-C12)	164007	8.47
C25	8.009	-0.003	106488	69561				
C26	8.260	-0.006	122066	63146				
C28	8.705	-0.006	150884	296897				
C32	9.536	-0.010	114201	212373				
C34	9.955	0.015	79204	25200				
Filter Peak	11.576	0.007	4582	7211	CREOSOT	(C12-C22)	6089788	2791.05 M
C36	10.331	0.009	52112	60437				
C38	10.676	-0.018	24726	63007				
C40	11.060	-0.002	8330	22193				
o-terph	6.257	0.000	873787	698794				
Triacon Surr	9.145	-0.003	839821	721745				

Range Times: NW Diesel(4.240 - 7.759) AK102(3.34 - 8.01) Jet A(3.34 - 6.10)
NW M.Oil(7.76 - 10.69) AK103(8.01 - 10.32) OR Diesel(3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	698794	36.2	80.5 M
Triacontane	721745	37.3	83.0 M

JW 6/26/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

WU70:81509

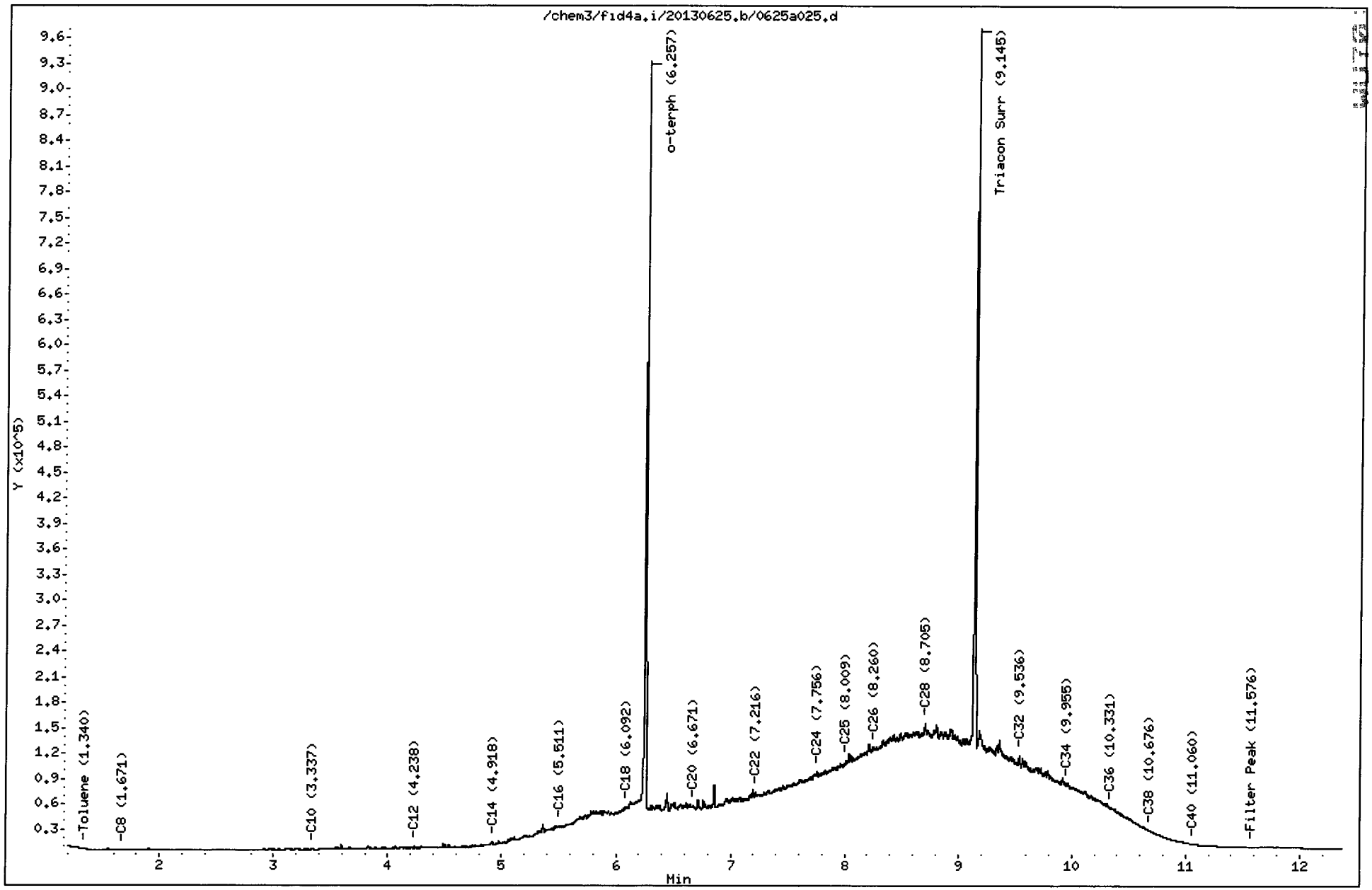
Data File: /chem3/fid4a.i/20130625.b/0625a025.d
Date : 25-JUN-2013 17:50
Client ID: LF-TP-001-20130619-
Sample Info: WU70B

Column phase: RTX-1

Instrument: fid4a.i

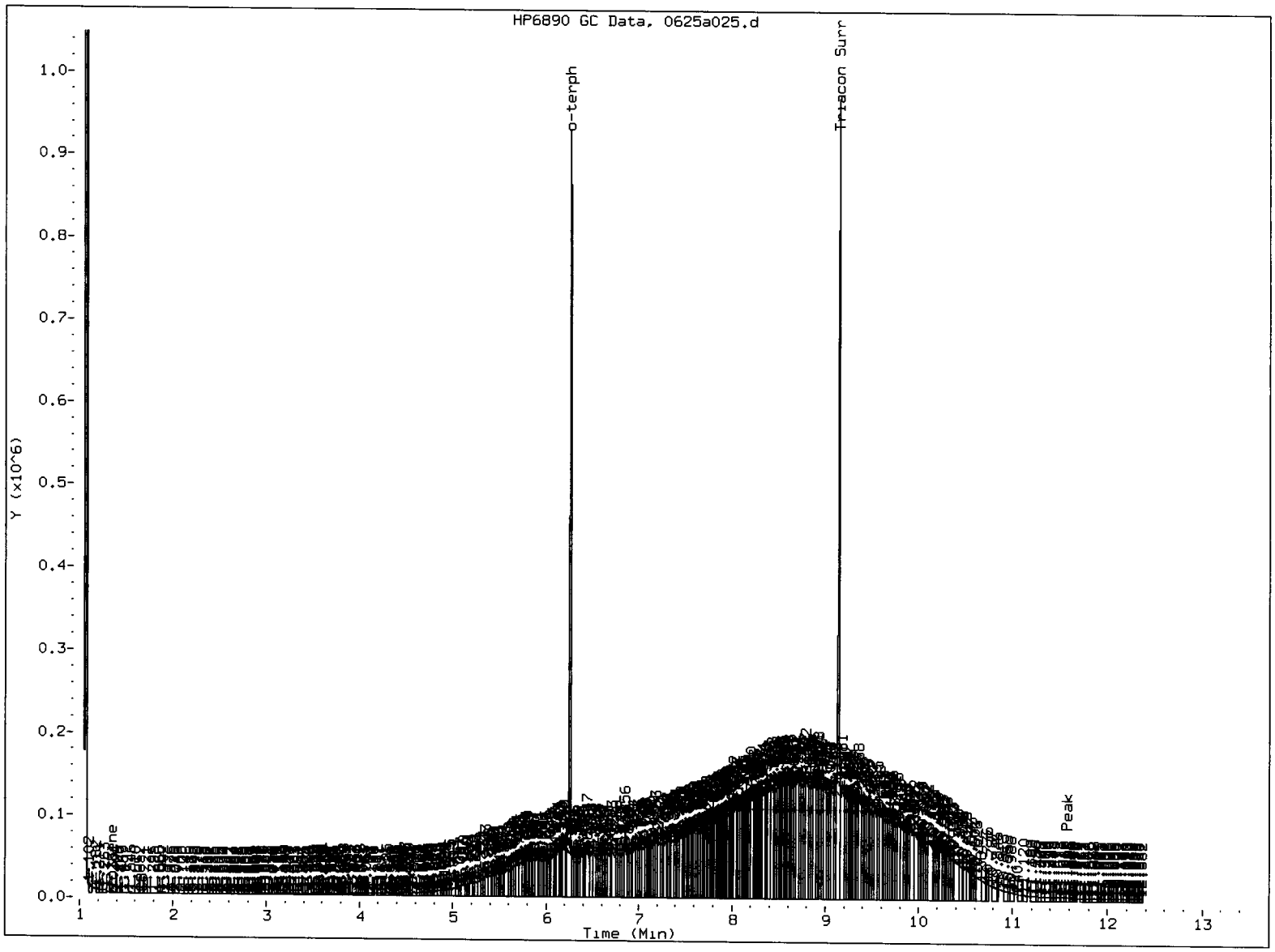
Operator: JR/VTS/JW
Column diameter: 0.25

6/26/13



FID:4A-2C/RTX-1 WU70B

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
(5) Skimmed surrogate

Analyst: SW Date: 6/26/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130625.b/0625a026.d
Method: /chem3/fid4a.i/20130625.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 06/26/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: WU70BMS
Client ID: LF-TP-001-20130 MS
Injection: 25-JUN-2013 18:11

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.359	0.013	10942	13554	WATPHG	(Tol-C12)	4518343	290.76
C8	1.673	0.006	10588	17703	WATPHD	(C12-C24)	22968675	1582.46 ✓
C10	3.341	-0.001	103586	68677	WATPHM	(C24-C38)	7017324	543.76 ✓
C12	4.241	0.001	187243	201752	AK102	(C10-C25)	26651489	1548.17
C14	4.922	0.002	326510	492656	AK103	(C25-C36)	6239103	678.01
C16	5.517	0.003	472723	579415				
C18	6.100	0.004	451072	490758				
C20	6.673	0.001	292056	355624				
C22	7.228	-0.002	160523	261234				
C24	7.755	-0.004	88824	108147	MSPIRIT	(Tol-C12)	4518343	233.31
C25	8.006	-0.005	68563	83426				
C26	8.276	0.011	50719	24137				
C28	8.698	-0.013	63674	127445				
C32	9.544	-0.002	46036	65752				
C34	9.937	-0.003	34179	38675				
Filter Peak	11.578	0.010	3798	3553	CREOSOT	(C12-C22)	21370520	9794.45 M
C36	10.324	0.002	22810	15388				
C38	10.705	0.011	12683	37066				
C40	11.030	-0.031	6411	29497				
o-terph	6.261	0.003	892764	706899				
Triacon Surr	9.132	-0.016	874125	740168				

Range Times: NW Diesel(4.240 - 7.759) AK102(3.34 - 8.01) Jet A(3.34 - 6.10)
NW M.Oil(7.76 - 10.69) AK103(8.01 - 10.32) OR Diesel(3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	706899	36.7	81.5 M ✓
Triacontane	740168	38.3	85.1 M

JW 6/26/13

M Indicates the peak was manually integrated

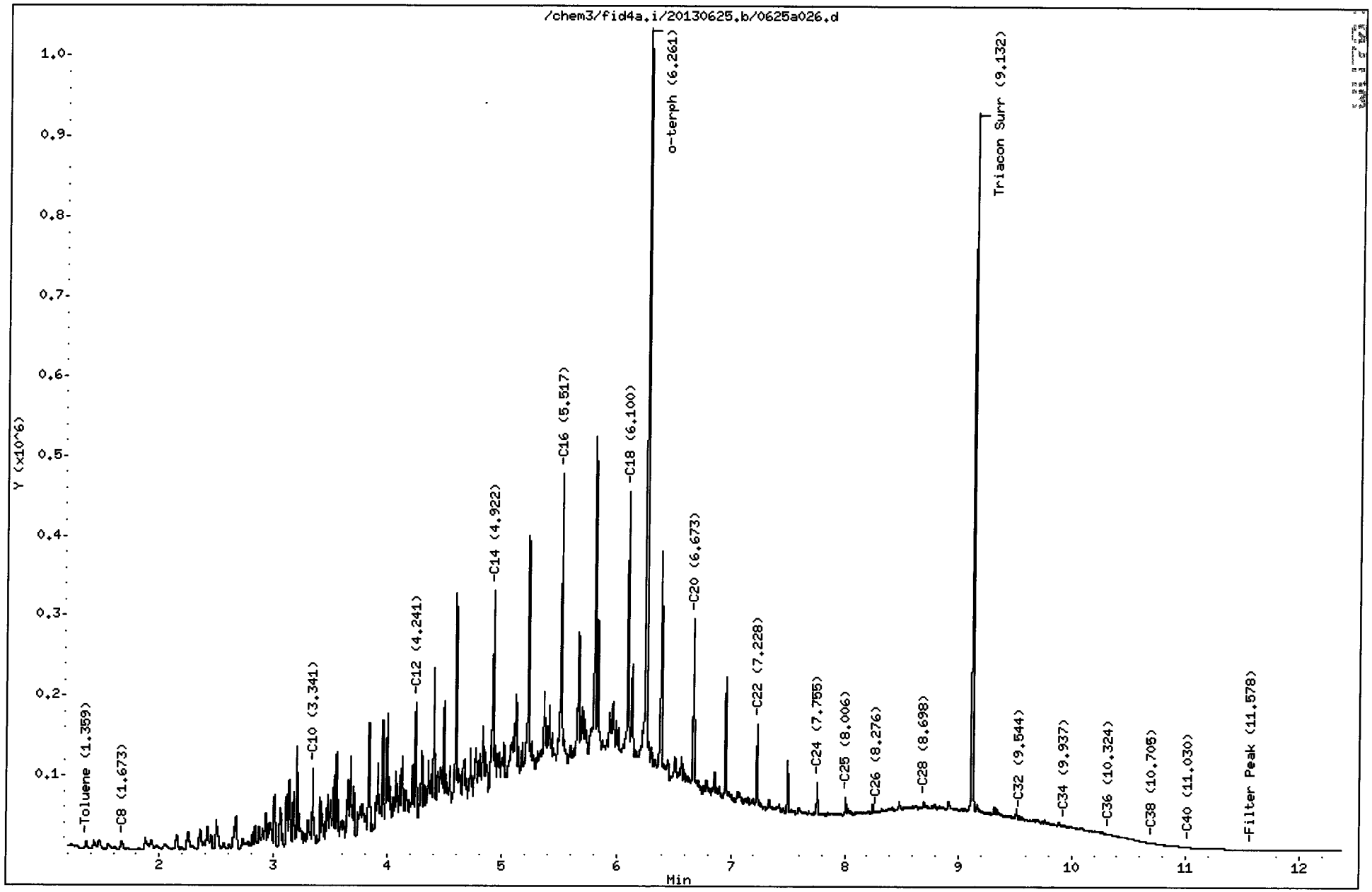
Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

Data File: /chem3/fid4a.i/20130625.b/0625a026.d
Date : 25-JUN-2013 18:11
Client ID: LF-TP-001-20130 MS
Sample Info: WU70BMS

Column phase: RTX-1

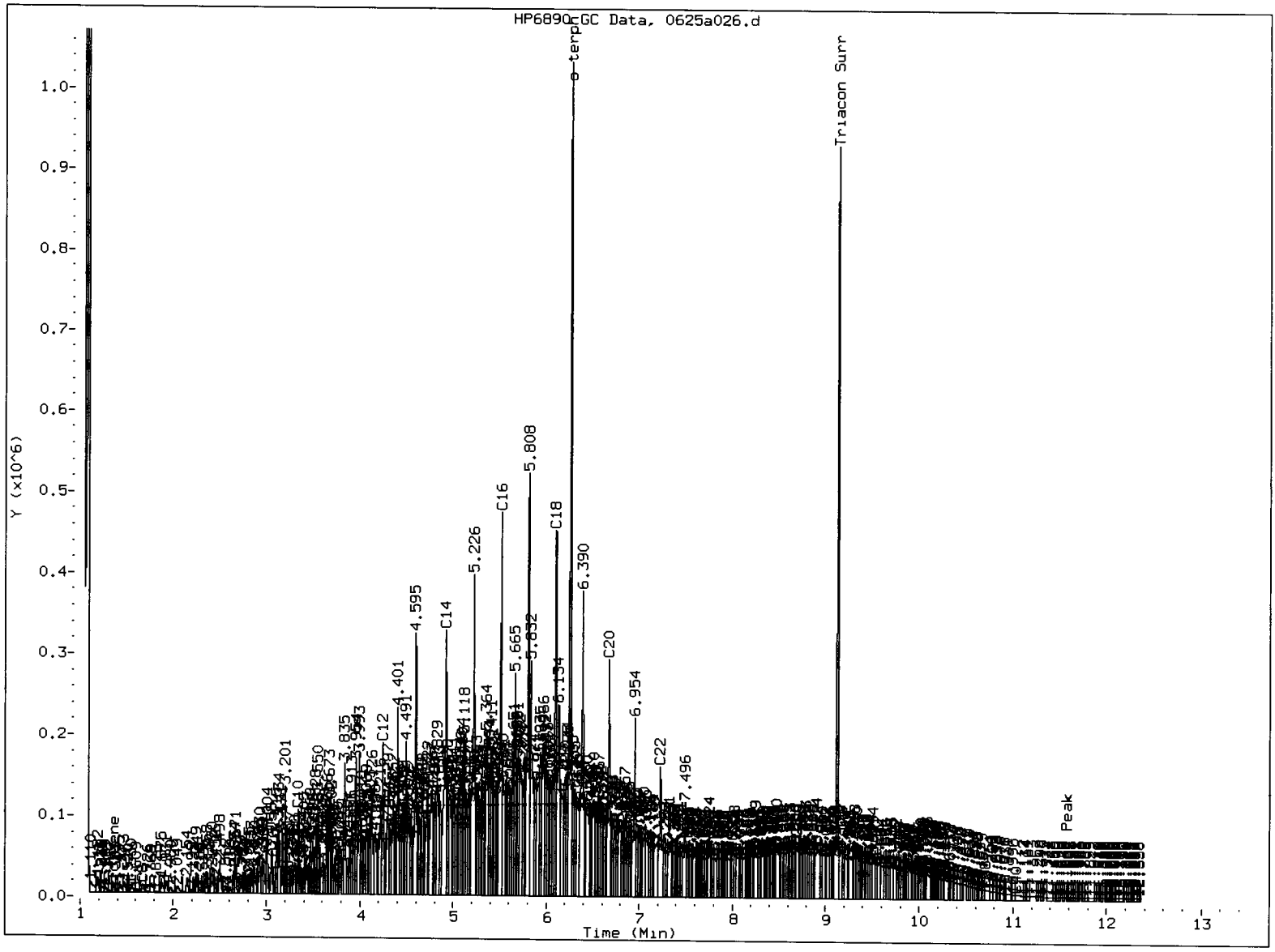
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25



FID:4A-2C/RTX-1 WU70BMS

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JC

Date: 6/26/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130625.b/0625a027.d
Method: /chem3/fid4a.i/20130625.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 06/26/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: WU70BMSD
Client ID: LF-TP-001-20130 MSD
Injection: 25-JUN-2013 18:32

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.363	0.018	10407	6537	WATPHG	(Tol-C12)	4744483	305.32
C8	1.682	0.014	10327	18364	WATPHD	(C12-C24)	24443262	1684.05
C10	3.342	0.000	106122	70945	WATPHM	(C24-C38)	7175461	556.02
C12	4.241	0.001	195098	194151	AK102	(C10-C25)	28253825	1641.25
C14	4.921	0.001	338940	524412	AK103	(C25-C36)	6390556	694.47
C16	5.518	0.003	499888	745770				
C18	6.100	0.004	482102	510220				
C20	6.673	0.001	310338	496779				
C22	7.229	-0.002	169795	190466				
C24	7.756	-0.004	93042	113108	MSPIRIT	(Tol-C12)	4744483	244.99
C25	8.005	-0.006	70448	86916				
C26	8.281	0.016	50341	47283				
C28	8.713	0.002	58923	101697				
C32	9.537	-0.009	47445	69230				
C34	9.928	-0.012	35820	80320				
Filter Peak	11.560	-0.009	3699	3237	CREOSOT	(C12-C22)	22721420	10413.59 M
C36	10.333	0.011	23751	11827				
C38	10.695	0.001	13128	29431				
C40	11.045	-0.017	6065	26430				
o-terph	6.261	0.004	959210	755001				
Triacon Surr	9.130	-0.019	914811	809155				

Range Times: NW Diesel(4.240 - 7.759) AK102(3.34 - 8.01) Jet A(3.34 - 6.10)
NW M.Oil(7.76 - 10.69) AK103(8.01 - 10.32) OR Diesel(3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	755001	39.2	87.0 M
Triacontane	809155	41.9	93.0 M

JW 6/26/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

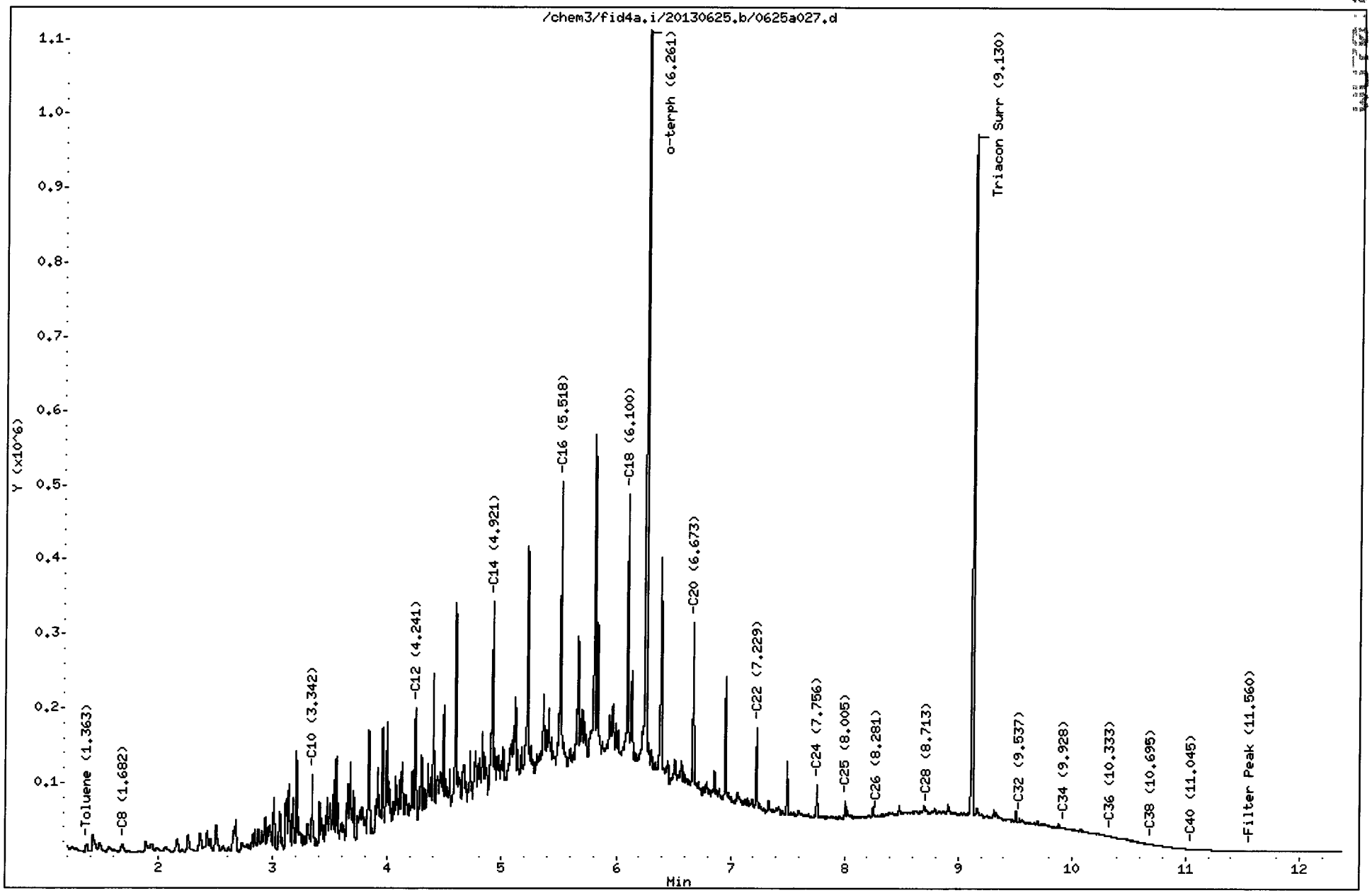
Data File: /chem3/fid4a.i/20130625.b/0625a027.d
Date : 25-JUN-2013 18:32
Client ID: LF-TP-001-20130 MSD
Sample Info: WU70BMSD

Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

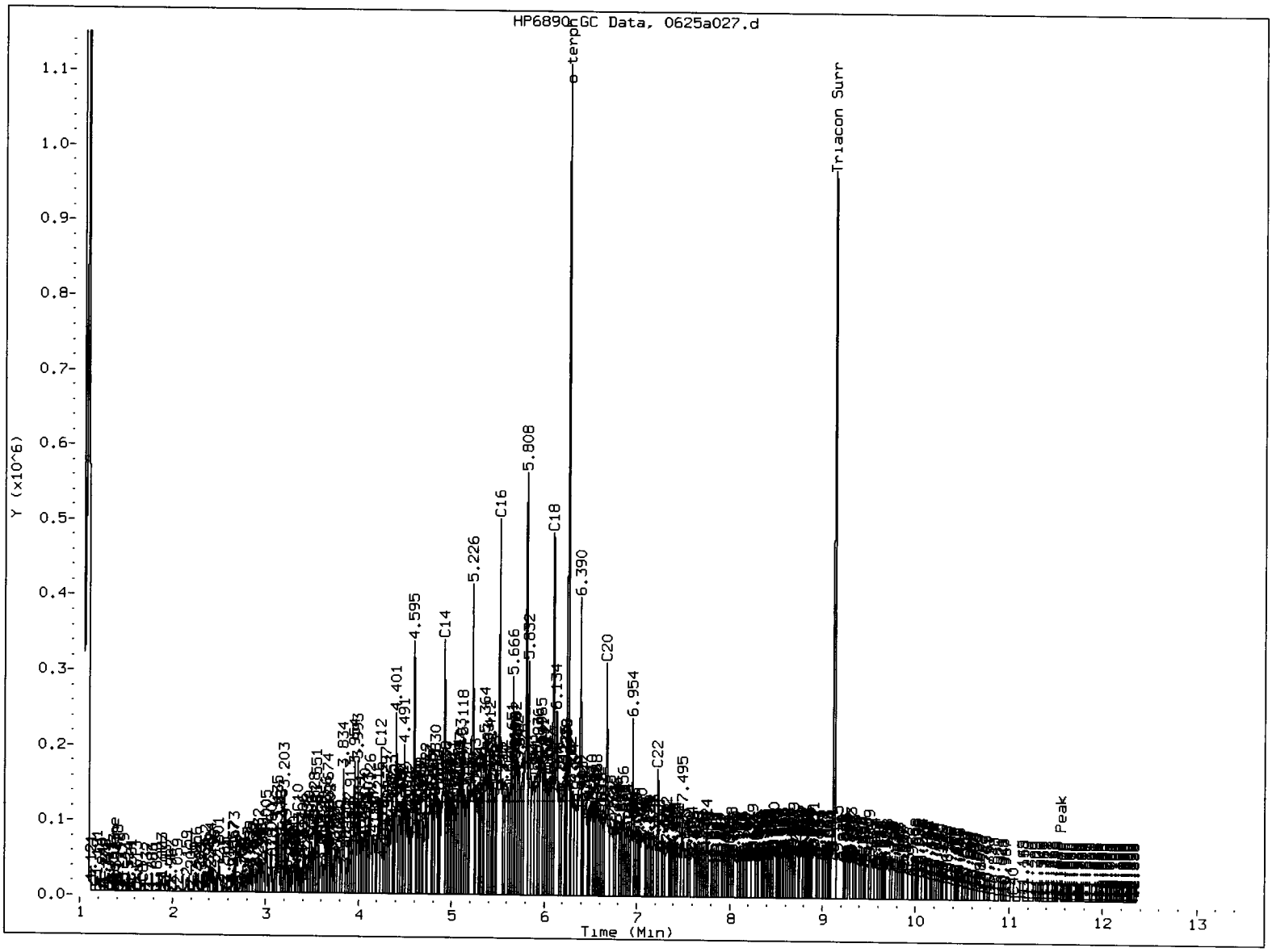
Column phase: RTX-1

JC 6/26/13



FID:4A-2C/RTX-1 WU70BMSD

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: SC Date: 6/26/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130625.b/0625a028.d
Method: /chem3/fid4a.i/20130625.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 06/26/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: DIESEL#3
Client ID:
Injection: 25-JUN-2013 18:52

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.355	0.010	2197	2838	WATPHG	(Tol-C12)	926976	59.65
C8	1.668	0.000	1669	2804	WATPHD	(C12-C24)	3815110	262.85
C10	3.338	-0.004	26153	16348	WATPHM	(C24-C38)	255140	19.77
C12	4.238	-0.002	44084	42600	AK102	(C10-C25)	4477392	260.09
C14	4.917	-0.003	76293	73299	AK103	(C25-C36)	183630	19.96
C16	5.511	-0.003	118729	116423				
C18	6.093	-0.003	95282	108181				
C20	6.667	-0.004	68394	69585				
C22	7.224	-0.007	35212	35756				
C24	7.752	-0.007	9890	10229	MSPIRIT	(Tol-C12)	926976	47.87
C25	8.003	-0.008	4467	7354				
C26	8.246	-0.020	2216	3169				
C28	8.720	0.009	934	1082				
C32	9.538	-0.008	1148	1500				
C34	9.941	0.001	1510	654				
Filter Peak	11.568	-0.001	3040	4178	CREOSOT	(C12-C22)	3662129	1678.41 M
C36	10.314	-0.009	1895	3711				
C38	10.691	-0.003	4357	8677				
C40	11.068	0.007	3002	2987				
o-terph	6.259	0.001	1104986	913094				
Triacon Surr	9.162	0.014	1121	2132				

Range Times: NW Diesel(4.240 - 7.759) AK102(3.34 - 8.01) Jet A(3.34 - 6.10)
NW M.Oil(7.76 - 10.69) AK103(8.01 - 10.32) OR Diesel(3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	913094	47.4	105.2 M
Triacontane	2132	0.1	0.2

JW 6/26/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

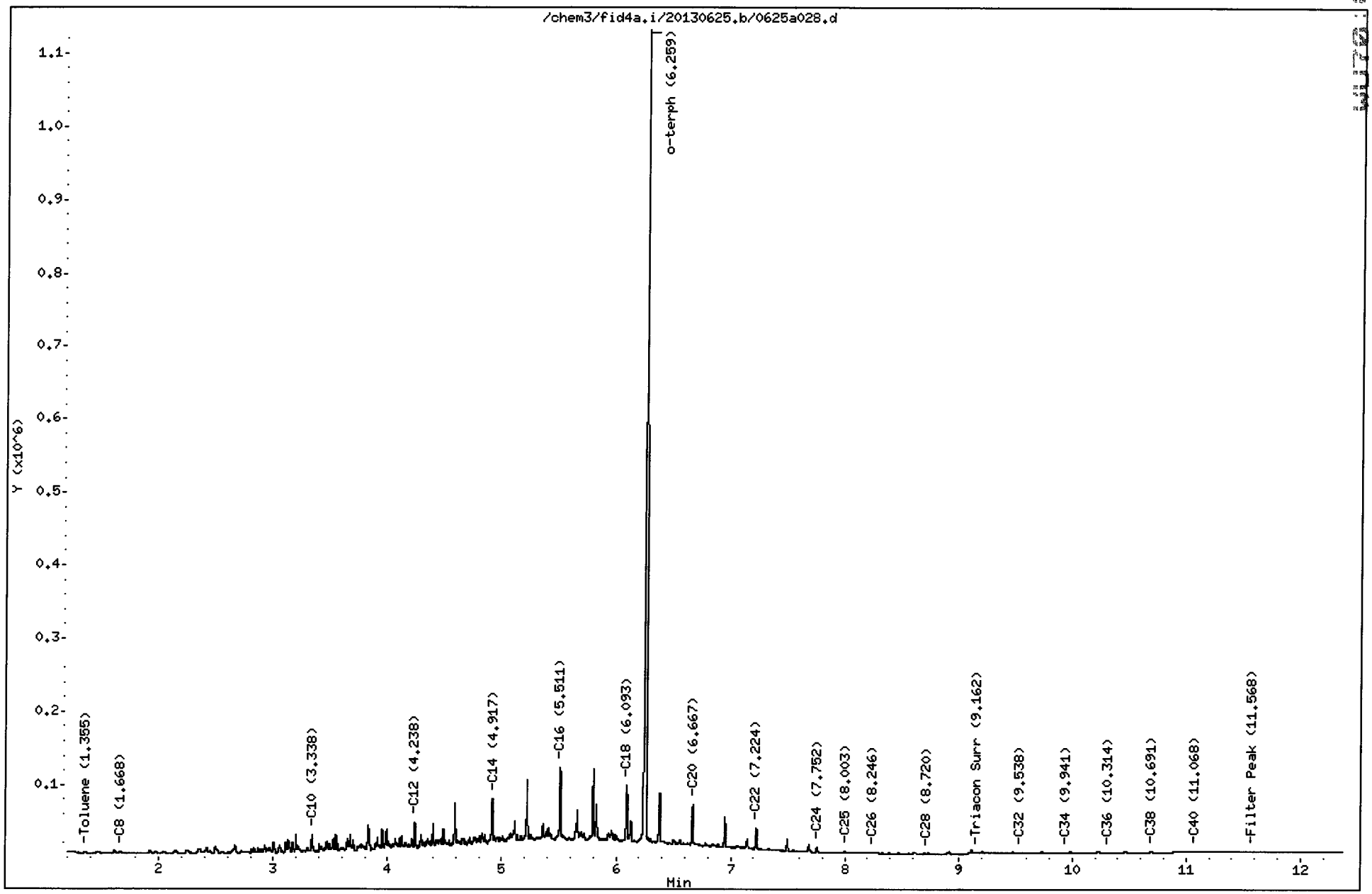
Data File: /chem3/fid4a.i/20130625.b/0625a028.d
Date : 25-JUN-2013 18:52
Client ID:
Sample Info: DIESEL#3

Column phase: RTX-1

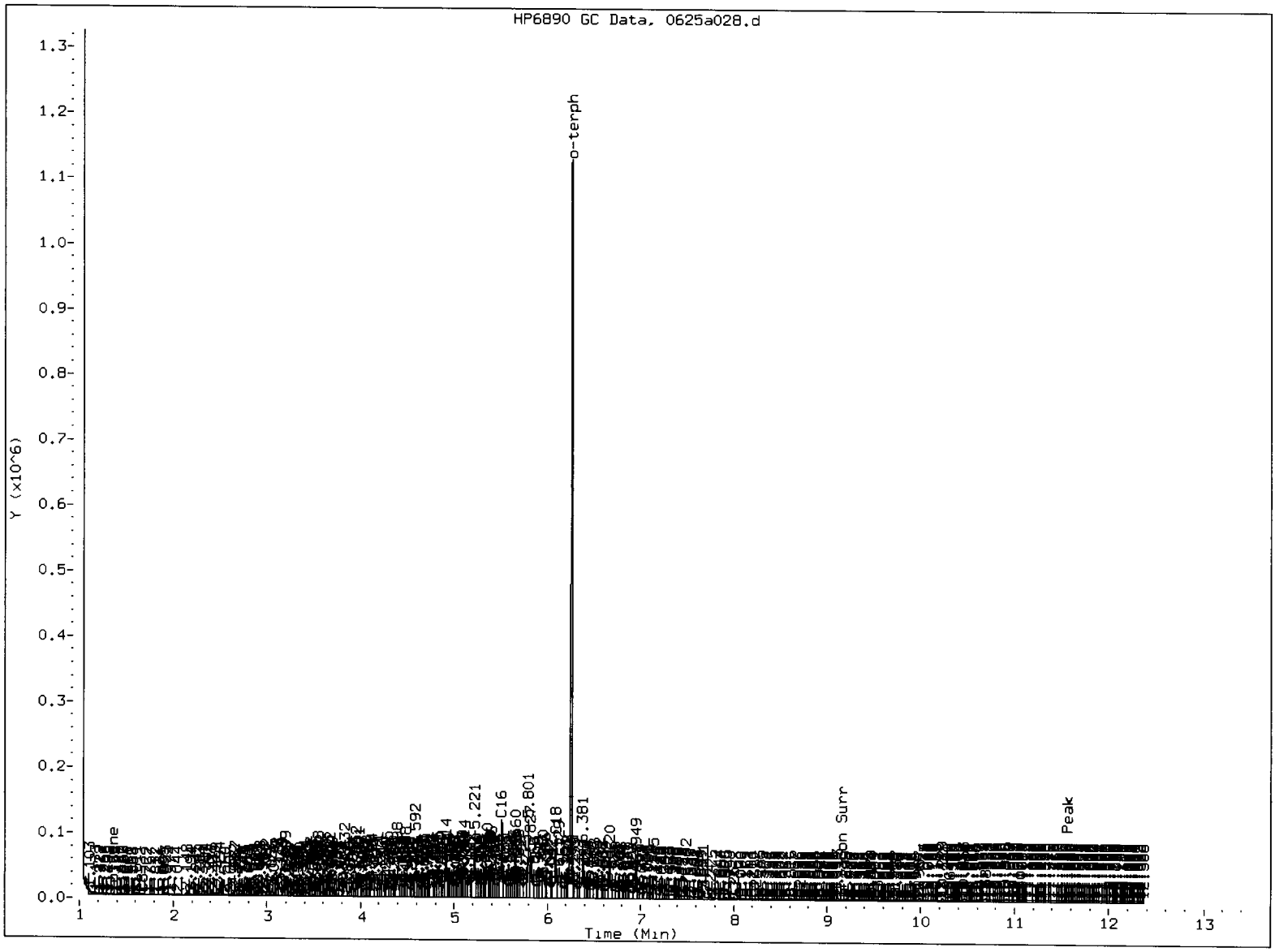
Instrument: fid4a.i

Operator: JR/VTS/JW
Column diameter: 0.25

JW 6/26/13



FID:4A-2C/RTX-1 DIESEL#3 FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: TCO Date: 6/26/13

Analytical Resources Inc.
TPH Quantitation Report

Data file: /chem3/fid4a.i/20130625.b/0625a029.d
Method: /chem3/fid4a.i/20130625.b/ftphfid4a.m
Instrument: fid4a.i
Operator: JR/VTS/JW
Report Date: 06/26/2013
Macro: 20-MAY-2013
Calibration Dates: Gas:21-MAR-2013 Diesel:13-APR-2013 M.Oil:20-MAY-2013

ARI ID: MOIL#3
Client ID:
Injection: 25-JUN-2013 19:13

Dilution Factor: 1

FID:4A RESULTS

Compound	RT	Shift	Height	Area	Method	Range	Total Area	Conc
Toluene	1.339	-0.006	1086	1049	WATPHG	(Tol-C12)	37391	2.41
C8	1.669	0.001	293	474	WATPHD	(C12-C24)	676481	46.61
C10	3.337	-0.005	506	555	WATPHM	(C24-C38)	6218743	481.88
C12	4.237	-0.003	408	597	AK102	(C10-C25)	949909	55.18
C14	4.917	-0.003	510	1177	AK103	(C25-C36)	5528072	600.74
C16	5.510	-0.004	615	846				
C18	6.091	-0.005	826	1584				
C20	6.666	-0.005	1840	3853				
C22	7.227	-0.004	5710	7526				
C24	7.757	-0.002	21593	28450	MSPIRIT	(Tol-C12)	37391	1.93
C25	8.010	-0.001	29138	33573				
C26	8.262	-0.003	35258	70654				
C28	8.712	0.001	41418	33613				
C32	9.559	0.014	45849	34520				
C34	9.938	-0.002	43546	57828				
Filter Peak	11.567	-0.002	3225	2624	CREOSOT	(C12-C22)	206277	94.54 M
C36	10.312	-0.010	32977	49977				
C38	10.683	-0.011	16260	32713				
C40	----							
o-terph	6.245	-0.012	3503	4570				
Triacon Surr	9.132	-0.016	997222	890621				

Range Times: NW Diesel(4.240 - 7.759) AK102(3.34 - 8.01) Jet A(3.34 - 6.10)
NW M.Oil(7.76 - 10.69) AK103(8.01 - 10.32) OR Diesel(3.34 - 8.71)

Surrogate	Area	Amount	%Rec
o-Terphenyl	4570	0.2	0.5
Triacontane	890621	46.1	102.4 M

JW 6/26/13

M Indicates the peak was manually integrated

Analyte	RF	Curve Date
o-Terph Surr	19283.0	13-APR-2013
Triacon Surr	19327.9	20-MAY-2013
Gas	15539.5	21-MAR-2013
Diesel	14514.5	13-APR-2013
Motor Oil	12905.1	20-MAY-2013
AK102	17214.8	11-APR-2013
AK103	9202.1	25-SEP-2012
Min Spirit	19366.4	06-FEB-2013
Creosote	2181.9	04-FEB-2013

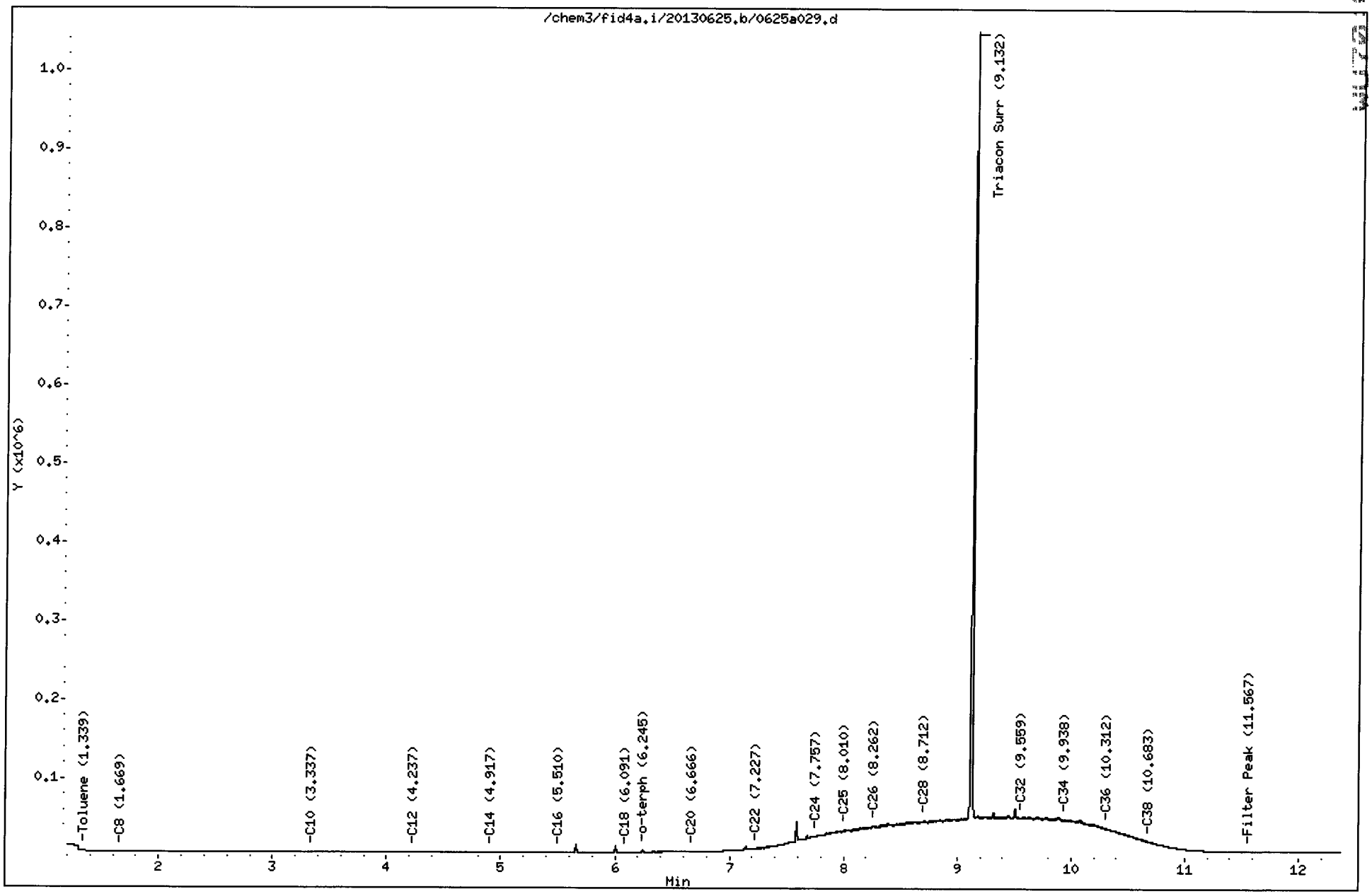
Data File: /chem3/fid4a.i/20130625.b/0625a029.d
Date : 25-JUN-2013 19:13
Client ID:
Sample Info: MOIL#3

Column phase: RTX-1

Instrument: fid4a.i

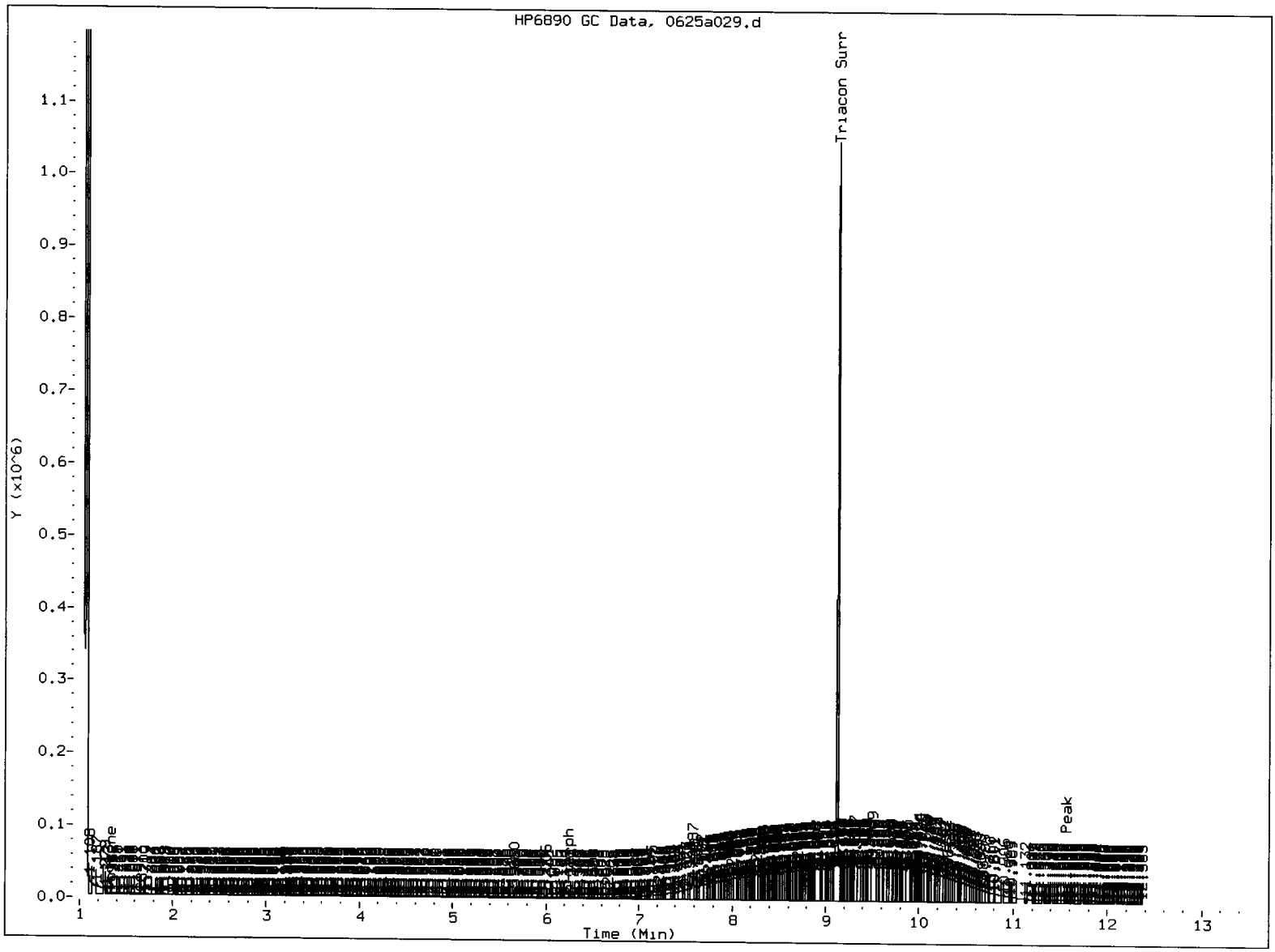
Operator: JR/VTS/JW
Column diameter: 0.25

JW 6/26/13



FID:4A-2C/RTX-1 MOIL#3

FID:4A SIGNAL



MANUAL INTEGRATION

1. Baseline correction
3. Peak not found
5. Skimmed surrogate

Analyst: JW Date: 6/26/12

WTA:0103

TPHG Raw Data
Preparation Log

ARI Job ID: WU70

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. WV04, WV67 | Client ID | Prep/Extraction Date 6/27/13 | MeOH Lot No. | Analyst PC

~~WW01~~ WW79 ~~WW80~~
PC 6/28/13 PC 6/28/13

	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 Split Volume (µL)	
1	WV67A	3		X	DE695	39,56	28,183	11,377	5	900	
2	B	3				36,10	28,146	7,594			
3	C	3				33,90	28,112	5,788			
4	WW 70B	1				38,52	28,137	10,383			
5	WV04 A	1				40,47	28,140	12,33			
6	B	1				40,96	28,183	12,777			
7	C	1				35,72	28,115	7,605			
8	D	1				39,15	28,164	10,986			
9	E	1				40,99	28,158	12,832			
10	F	1				39,06	28,141	10,919			
11											
12											
13											
14											
15											
16											
17											
18											
19											
20											
21											
22											
23											
					Balance ID:	4005006	PT120				

TPHG Raw Data
Initial Calibration Notes and Raw Data

ARI Job ID: WU70

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): 5/22/13 Surrogate ~~Internal~~ Standard ID VW795-2 Expiration 8/13/13
AH 5/22/13

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?	YES / (NO)	Calibration Points Dropped?	(YES) / ~~NO~~ AH 5/22
Minimum Response Factors Met	(YES) / NO	Purge Volume (mL)	5mL

0.25 level on FID side for o-xylene

Primary Source	Standard #	Expiration	Secondary Source	Standard #	Expiration
Restek	VW795-2	8/13/13	Vitra	B000435	11/22/13
Restek	B000332	11/13/13			

Detail problems, corrective actions and/or other pertinent information below:

Calibration for BTEX and surrogates. Surrogates calibrated with BTEX to avoid hydrocarbon interference.

Dropped 0.25 part for o-xylene on the FID side,

Analyst: AH **Date:** 5/22/13

Reviewer: [signature] **Date:** 5/23/13

Analytical Resources Inc.: Organics Instrument Log

PID-1 Serial No.: 2750A-17141

Date: 5/22/13 Analysis: BTEX/NWTPH-G Analyst: DMH

Column 1 Serial No.: 82/726 Column Type: RTX502.2

Column 2 Serial No.: Column Type:

GC Method: BETX ICal Date: 10/23/13, 5/22/13 Injection Volume: 5 mL

IS	Ical/Ccal	ICV
VW795-2, B000434	B000332	B000435 (ICV)
	B000432	B000332 (LCS)
	B000433	
DMH 5/23/13	DMH 5/23/13	DMH 5/23/13

Document All Maintenance Tasks In StarLIMS

INTERNAL STANDARD SUMMARY FOR DATABATCH - /chem3/pid1.i/20130522-1.b

	Time	Filename	LabID	ClientID	Vial#	pH	DF
1	0833	0522a001.d	RINSE				1
2	0902	0522a002.d	BCAL0.25	BCAL0.25			1
3	0930	0522a003.d	BCAL0.5	BCAL0.5			1
4	0958	0522a004.d	BCAL1	BCAL1			1
5	1027	0522a005.d	BCAL5	BCAL5			1
6	1056	0522a006.d	BCAL25	BCAL25			1
7	1125	0522a007.d	BCAL50	BCAL50			1
8	1155	0522a008.d	BCAL100	BCAL100			1
9	1224	0522a009.d	BCAL200	BCAL200			1
10	1253	0522a010.d	ICV25	ICV25			1
11	1339	0522a011.d	RT/BCAL 1				1
12	1408	0522a012.d	GCAL 1				1
13	1437	0522a013.d	LCS0522	LCS0522			1
14	1506	0522a014.d	LCSD0522	LCSD0522			1
15	1543	0522a015.d	MB0522				1
16	1612	0522a016.d	WQ46F	A2-F6-S-6	2	Soil	1
17	1641	0522a017.d	WQ46G	A2-F7-S-6	2		1
18	1711	0522a018.d	WQ46H	A2-F8-S-6	3		1
19	1740	0522a019.d	WQ46I	A2-F9-S-6	1		1
20	1809	0522a020.d	WQ46J	A2-F10-S-6	2		1
21	1838	0522a021.d	WQ46K	A2-F11-S-6	2		1
22	1907	0522a022.d	WQ46L	A2-F12-S-6	1		1
23	1937	0522a023.d	BCAL 2	OK			1
24	2006	0522a024.d	GCAL 2	OK			1
25	2035	0522a025.d	WQ46N	A2-F13-S-6	1	Soil	1
26	2104	0522a026.d	WQ46N	A2-F14-S-6	3		1
27	2133	0522a027.d	WQ46O	A2-F15-S-6	2		1
28	2203	0522a028.d	WQ46P	A2-F16-S-6	3		1
29	2232	0522a029.d	WQ46Q	A2-F17-S-6	2		1
30	2301	0522a030.d	WQ46R	A2-F18-S-6	3		1
31	2330	0522a031.d	WQ46S	A2-F19-S-6	1		1
32	2359	0522a032.d	WQ46T	A2-F20-S-6	1		1
33	0029	0522a033.d	WQ38A	MW-R1	1	≤2	1
34	0058	0522a034.d	WQ48F	GTEP-GW-Q2-TB	1		1
35	0127	0522a035.d	BCAL 3	OK			1
36	0156	0522a036.d	GCAL 3	OK			1
37	0225	0522a037.d	WQ48A	GTEP-S-GW-Q2-7-17	2	≤2	1 Rerun
38	0255	0522a038.d	WQ48B	GTEP-SS-GW-Q2-7-17	2		1
39	0324	0522a039.d	WQ49C	GTEP-GW-Q2-EB	1		1
40	0353	0522a040.d	GCAL 4	LOW			1

DMH 5/23/13

* File 40 (GCAL 4 failed low, but GCAL 1 file 3 on the following day) ran within 24 hours of the retention time standard and closed the bracket with a passing recovery.

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: /chem3/pid1.i/20130522-1.b/FID.m
Batch File: /chem3/pid1.i/20130522-1.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09
FILENAME:	0522a002	0522a003	0522a004	0522a005	0522a006	0522a007	0522a008	0522a009	0522a010
INJ.DATE:	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013
INJ.TIME:	09:02	09:30	09:58	10:27	10:56	11:25	11:55	12:24	12:53

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09	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	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.278	4.208-4.348	+++++	+++++
6	MTBE	4.530	4.540	4.538	4.539	4.537	4.537	4.539	4.538	4.539	4.530	4.460-4.600	4.537	0.003
7	nC6	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	4.777	4.707-4.847	+++++	+++++
8	nC7	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	6.820	6.750-6.890	+++++	+++++
9	BENZENE	7.007	7.015	7.010	7.012	7.012	7.012	7.014	7.014	7.013	7.007	6.937-7.077	7.012	0.002
$ 10	TFT(Surr)	7.849	7.848	7.848	7.848	7.848	7.848	7.849	7.848	7.849	7.849	7.779-7.919	7.848	0.001
11	nC8	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	9.481	9.411-9.551	+++++	+++++
12	Toluene	9.877	9.875	9.873	9.873	9.874	9.873	9.875	9.877	9.874	9.877	9.807-9.947	9.875	0.001
13	nC9	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	12.404	12.334-12.474	+++++	+++++
14	ETHYLBENZENE	12.763	12.766	12.766	12.764	12.765	12.765	12.767	12.770	12.766	12.763	12.693-12.833	12.766	0.002
15	M/P-XYLENE	12.927	12.929	12.924	12.925	12.926	12.927	12.930	12.935	12.927	12.927	12.857-12.997	12.928	0.003
16	O-XYLENE	13.863	13.873	13.873	13.874	13.874	13.873	13.876	13.879	13.875	13.863	13.793-13.933	13.873	0.004
17	nC10-Decane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	15.205	15.135-15.275	+++++	+++++

Reviewer 1 _____ Date: 5/22/13
Reviewer 2 _____ Date: 5/23/13

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20130522-1.b/FID.m
Batch File: /chem3/pid1.i/20130522-1.b
Inst ID: pid1.i

Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09	EXPEC RT	RT WINDOW	AVG RT	STD DEV
$ 18 BB(Surr)	15.383	15.382	15.383	15.382	15.382	15.382	15.382	15.383	15.383	15.383	15.313-15.453	15.383	0.001
$ 19 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.027	15.957-16.097	+++++	+++++
20 1,2,4-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	16.106	16.036-16.176	+++++	+++++
21 nc11	+++++	+++++	16.702	16.701	16.701	16.701	16.702	16.704	16.701	16.702	16.632-16.772	16.702	0.001
22 nC12-Dodecane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	17.798	17.728-17.868	+++++	+++++
23 nC13	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.602	18.532-18.672	+++++	+++++
24 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	18.800	18.730-18.870	+++++	+++++

Analytical Resources, Inc.
RETENTION TIME SUMMARY REPORT

Method File: /chem3/pid1.i/20130522-2.b/PIDB.m
Batch File: /chem3/pid1.i/20130522-2.b
Inst ID: pid1.i

ID:	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09
FILENAME:	0522a002	0522a003	0522a004	0522a005	0522a006	0522a007	0522a008	0522a009	0522a010
INJ.DATE:	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013	22-MAY-2013
INJ.TIME:	09:02	09:30	09:58	10:27	10:56	11:25	11:55	12:24	12:53

	Compound	RT01	RT02	RT03	RT04	RT05	RT06	RT07	RT08	RT09	EXPEC RT	RT WINDOW	AVG RT	STD DEV
	1 MTBE	4.550	4.550	4.543	4.547	4.545	4.545	4.547	4.545	4.546	4.550	4.500-4.600	4.546	0.002
	2 Benzene	7.017	7.020	7.020	7.020	7.020	7.020	7.022	7.021	7.021	7.017	6.967-7.067	7.020	0.001
$	3 TFT(Surr)	7.856	7.856	7.857	7.857	7.856	7.856	7.857	7.856	7.857	7.856	7.806-7.906	7.856	0.001
	4 Toluene	9.883	9.883	9.883	9.883	9.882	9.883	9.884	9.885	9.883	9.883	9.833-9.933	9.883	0.001
	5 Ethylbenzene	12.773	12.773	12.773	12.774	12.774	12.774	12.776	12.778	12.774	12.773	12.723-12.823	12.774	0.002
	6 M/P-Xylene	12.933	12.937	12.934	12.935	12.935	12.936	12.938	12.943	12.936	12.933	12.883-12.983	12.936	0.003
	7 O-Xylene	13.883	13.883	13.883	13.883	13.883	13.883	13.884	13.888	13.884	13.883	13.853-13.913	13.884	0.002
$	8 BB(Surr)	15.390	15.390	15.390	15.390	15.390	15.391	15.390	15.391	15.390	15.390	15.340-15.440	15.390	0.000

Reviewer 1 _____ Date: 5/22/13
Reviewer 2 _____ Date: 5/23/13

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid1.i/20130522-1.b

ARI Job No.: BCAL Method: FID.m Instrument: pid1.i Date: 22-MAY-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0902	0522a002.d	BCAL0.25	BCAL0.25	1	Toluene, MTBE, BENZENE, ETHYLBENZENE, M/P-XYLENE, O-XYLENE, BB(Surr),
0930	0522a003.d	BCAL0.5	BCAL0.5	1	O-XYLENE,
0958	0522a004.d	BCAL1	BCAL1	1	Toluene, BENZENE, O-XYLENE, BB(Surr),
1027	0522a005.d	BCAL5	BCAL5	1	NO MANUAL INTEGRATION
1056	0522a006.d	BCAL25	BCAL25	1	NO MANUAL INTEGRATION
1125	0522a007.d	BCAL50	BCAL50	1	NO MANUAL INTEGRATION
1155	0522a008.d	BCAL100	BCAL100	1	NO MANUAL INTEGRATION
1224	0522a009.d	BCAL200	BCAL200	1	NO MANUAL INTEGRATION
1253	0522a010.d	ICV25	ICV25	1	NO MANUAL INTEGRATION

MANUAL INTEGRATION SUMMARY FOR DATABATCH - /chem3/pid1.i/20130522-2.b

ARI Job No.: BCAL Method: PIDB.m Instrument: pid1.i Date: 22-MAY-2013

Time	Filename	LabID	ClientId	DF	Manually Integrated Compounds
0902	0522a002.d	BCAL0.25	BCAL0.25	1	Benzene, Toluene, Ethylbenzene, M/P-Xylene, O-Xylene, MTBE, BB(Surr),
0930	0522a003.d	BCAL0.5	BCAL0.5	1	Benzene, Toluene, Ethylbenzene, M/P-Xylene, O-Xylene, MTBE,
0958	0522a004.d	BCAL1	BCAL1	1	Benzene, Toluene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
1027	0522a005.d	BCAL5	BCAL5	1	Benzene, Toluene, O-Xylene, MTBE, TFT(Surr), BB(Surr),
1056	0522a006.d	BCAL25	BCAL25	1	Toluene,
1125	0522a007.d	BCAL50	BCAL50	1	Toluene, BB(Surr),
1155	0522a008.d	BCAL100	BCAL100	1	NO MANUAL INTEGRATION
1224	0522a009.d	BCAL200	BCAL200	1	NO MANUAL INTEGRATION
1253	0522a010.d	ICV25	ICV25	1	NO MANUAL INTEGRATION

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAY-2013 09:02
End Cal Date : 22-MAY-2013 13:39
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130522-1.b/FID.m
Cal Date : 22-May-2013 16:19 lanih
Curve Type : Average

Calibration File Names:
Level 1: /chem3/pid1.i/20130522-1.b/0522a011.d
Level 2: /chem3/pid1.i/20130522-1.b/0522a002.d
Level 3: /chem3/pid1.i/20130522-1.b/0522a003.d
Level 4: /chem3/pid1.i/20130522-1.b/0522a004.d
Level 5: /chem3/pid1.i/20130522-1.b/0522a005.d
Level 6: /chem3/pid1.i/20130522-1.b/0522a006.d
Level 7: /chem3/pid1.i/20130522-1.b/0522a007.d
Level 8: /chem3/pid1.i/20130522-1.b/0522a008.d
Level 9: /chem3/pid1.i/20130522-1.b/0522a009.d

Compound	0.000e+00 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	5.000 Level 5	25.000 Level 6	RRF	% RSD
	50.000 Level 7	100.000 Level 8	200.000 Level 9					
1 NWTPHG	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
2 WAGAS	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
3 AK101	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
4 8015GAS	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
5 2-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAY-2013 09:02
End Cal Date : 22-MAY-2013 13:39
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130522-1.b/FID.m
Cal Date : 22-May-2013 16:19 lanih
Curve Type : Average

Compound	0.000e+00 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	5.000 Level 5	25.000 Level 6	___ RRF	% RSD
	50.000 Level 7	100.000 Level 8	200.000 Level 9					
6 MTBE	+++++	856	1054	902	840	811		
	781	770	744				845	11.680
7 nC6	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
8 nC7	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
9 BENZENE	+++++	1540	1502	1560	1515	1464		
	1399	1370	1331				1460	5.764
11 nC8	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
12 Toluene	+++++	1480	1582	1694	1476	1414		
	1358	1315	1283				1450	9.565
13 nC9	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
14 ETHYLBENZENE	+++++	124	124	115	113	107		
	103	98.66000	96.17500				110	9.723
15 M/P-XYLENE	+++++	1384	1378	1288	1350	1266		
	1216	1168	1151				1275	7.170

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAY-2013 09:02
End Cal Date : 22-MAY-2013 13:39
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130522-1.b/FID.m
Cal Date : 22-May-2013 16:19 lanih
Curve Type : Average

Compound	0.000e+00 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	5.000 Level 5	25.000 Level 6	RRF	% RSD
	50.000 Level 7	100.000 Level 8	200.000 Level 9					
16 O-XYLENE	+++++	+++++	972	1265	1407	1326		
	1277	1226	1204				1239	10.946
17 nC10-Decane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
20 1,2,4-Trimethylbenzene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
21 nc11	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
22 nC12-Dodecane	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
23 nC13	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
24 Naphthalene	+++++	+++++	+++++	+++++	+++++	+++++		
	+++++	+++++	+++++				+++++	+++++
$ 10 TFT(Surr)	+++++	30.63636	30.95455	30.54545	29.88060	29.37000		
	28.75188	28.18539	28.40000				29.59053	3.634
$ 18 BB(Surr)	+++++	20.63636	20.13636	20.50000	19.88060	19.80000		
	19.51128	19.17978	19.32000				19.87055	2.668

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAY-2013 09:02
End Cal Date : 22-MAY-2013 13:39
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130522-1.b/FID.m
Cal Date : 22-May-2013 16:19 lanih
Curve Type : Average

Compound	0.000e+00 Level 1	0.25000 Level 2	0.50000 Level 3	1.000 Level 4	5.000 Level 5	25.000 Level 6	RRF	% RSD	
	50.000 Level 7	100.000 Level 8	200.000 Level 9						
$ 19 BFB(Surr)	+++++	+++++	+++++	+++++	+++++	+++++			
	+++++	+++++	+++++				+++++	+++++	<-

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAY-2013 09:02
End Cal Date : 22-MAY-2013 13:39
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130522-1.b/FID.m
Cal Date : 22-May-2013 16:19 lanih
Curve Type : Average

Average %RSD Results.
Calculated Average %RSD = 9.57176
Maximun Average %RSD = 20.00000
* Passed Average %RSD Test.

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAY-2013 09:02
End Cal Date : 22-MAY-2013 12:24
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130522-2.b/PIDB.m
Cal Date : 22-May-2013 15:25 lanih
Curve Type : Average

Calibration File Names:
Level 1: /chem3/pid1.i/20130522-2.b/0522a002.d
Level 2: /chem3/pid1.i/20130522-2.b/0522a003.d
Level 3: /chem3/pid1.i/20130522-2.b/0522a004.d
Level 4: /chem3/pid1.i/20130522-2.b/0522a005.d
Level 5: /chem3/pid1.i/20130522-2.b/0522a006.d
Level 6: /chem3/pid1.i/20130522-2.b/0522a007.d
Level 7: /chem3/pid1.i/20130522-2.b/0522a008.d
Level 8: /chem3/pid1.i/20130522-2.b/0522a009.d

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	RRF	% RSD
	100.000 Level 7	200.000 Level 8						
1 MTBE	96.00000	76.00000	73.00000	88.80000	92.28000	90.78000		
	91.10000	89.51500					87.18438	9.361
2 Benzene	184	228	222	232	236	233		
	233	231					225	7.569
4 Toluene	176	178	195	204	210	206		
	207	209					198	6.985
5 Ethylbenzene	132	130	163	173	179	177		
	176	176					163	12.557
6 M/P-Xylene	156	167	172	185	191	189		
	188	191					180	7.306
7 O-Xylene	96.00000	122	143	149	157	156		
	155	159					142	15.542

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAY-2013 09:02
End Cal Date : 22-MAY-2013 12:24
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130522-2.b/PIDB.m
Cal Date : 22-May-2013 15:25 lanih
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	RRF	% RSD
	100.000 Level 7	200.000 Level 8						
$ 3 TFT(Surr)	31.81818	32.40909	32.47727	32.23881	32.41000	32.24812		
	32.00562	32.27000					32.23464	0.691
$ 8 BB(Surr)	68.18182	69.86364	72.43182	71.70149	73.47000	73.45113		
	73.66854	75.61500					72.29793	3.258

Analytical Resources, Inc.

INITIAL CALIBRATION DATA

Start Cal Date : 22-MAY-2013 09:02
End Cal Date : 22-MAY-2013 12:24
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem3/pid1.i/20130522-2.b/PIDB.m
Cal Date : 22-May-2013 15:25 lanih
Curve Type : Average

Average %RSD Results.
Calculated Average %RSD = 7.90855
Maximun Average %RSD = 20.00000
* Passed Average %RSD Test.

Xan 5/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a002.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a002.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: BCAL0.25
Client ID: BCAL0.25
Injection Date: 22-MAY-2013 09:02
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.849	0.000	337	4257	11.4	TFT(Surr)
15.383	0.000	227	1854	11.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.78 to 17.90)	358114	1959	0.005 M
8015C 2MP-TMB	(4.18 to 16.21)	723723	2559	0.004 M
AK101 nC6-nC10	(4.68 to 15.11)	582885	2345	0.004 M
NWTPHG Tol-Nap	(9.78 to 18.90)	375093	1959	0.005 M

M Indicates manual integration within range

* Surrogate areas are subtracted from Total Area
Range marker RT's are set by daily RT standard

PID Surrogates

RT	Shift	Response	%Rec	Compound
7.856	0.000	350	10.9	TFT(Surr)
15.390	-0.001	750	10.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.017	-0.005	46	0.20N	Benzene
9.883	-0.001	44	0.22N	Toluene
12.773	-0.005	33	0.20N	Ethylbenzene
12.933	-0.010	78	0.43N	M/P-Xylene
13.883	-0.005	24	0.17N	O-Xylene
4.550	0.005	24	0.28N	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a002.d
Lab Smp Id: BCAL0.25 Client Smp ID: BCAL0.25
Inj Date : 22-MAY-2013 09:02
Operator : LH Inst ID: pid1.i
Smp Info : BCAL0.25
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 15:26 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 09:02 Cal File: 0522a002.d
Als bottle: 1 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
6	MTBE	4.530	4.538	-0.008	214	0.25000	0.253 (M)
9	BENZENE	7.007	7.014	-0.007	385	0.25000	0.264 (M)
$ 10	TFT(Surr)	7.849	7.848	0.001	337	11.0000	11.39
12	Toluene	9.877	9.877	0.000	370	0.25000	0.255 (M)
14	ETHYLBENZENE	12.763	12.770	-0.007	31	0.25000	0.282 (M)
15	M/P-XYLENE	12.927	12.935	-0.008	692	0.50000	0.543 (M)
16	O-XYLENE	13.863	13.879	-0.016	547	0.25000	0.403 (M)
$ 18	BB(Surr)	15.383	15.383	0.000	227	11.0000	11.42 (M)

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem3/pid1.i/20130522-1.b/0522a002.d

Date : 22-MAY-2013 09:02

Client ID: BCAL0.25

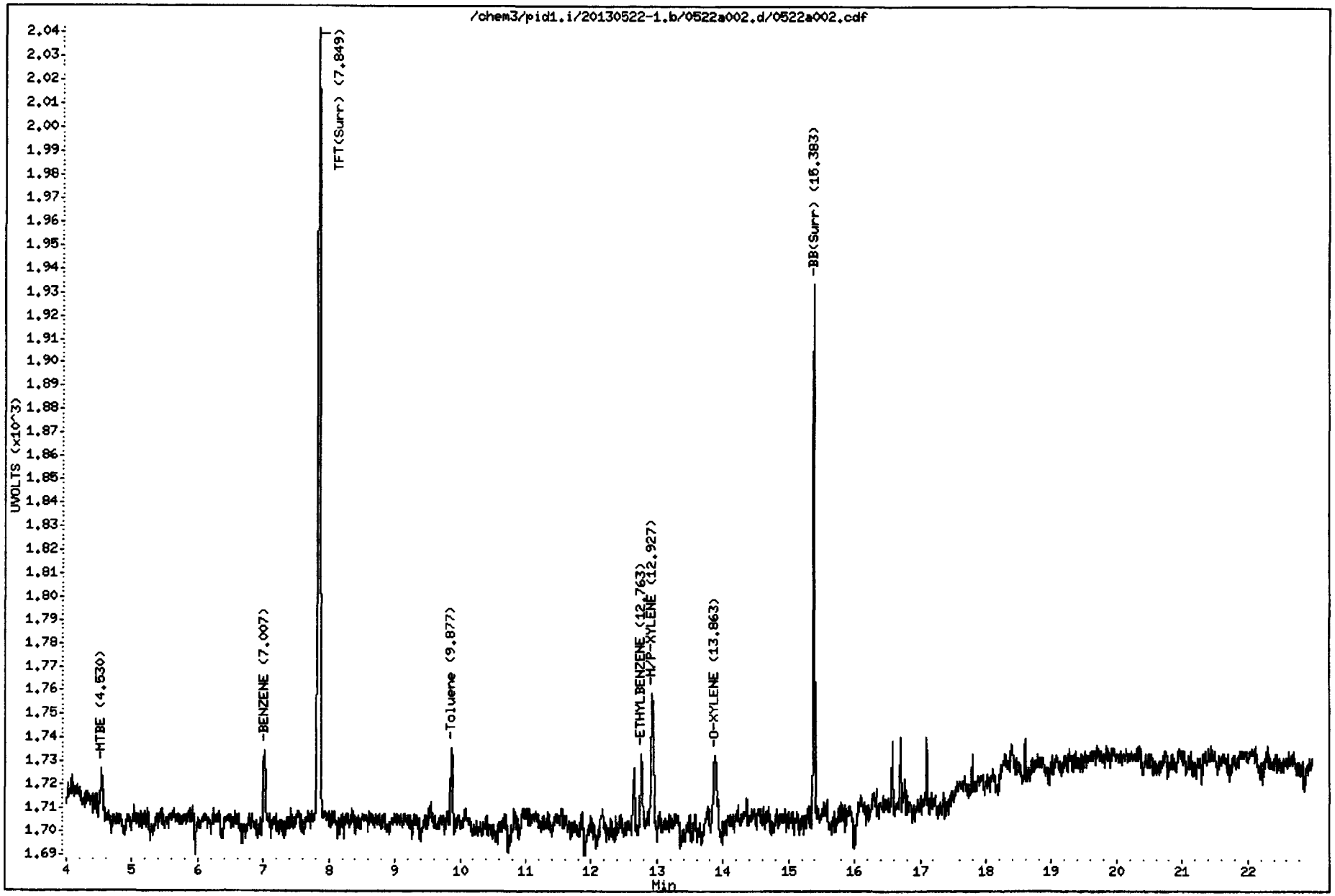
Sample Info: BCAL0.25

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a002.d

Date : 22-MAY-2013 09:02

Client ID: BCAL0.25

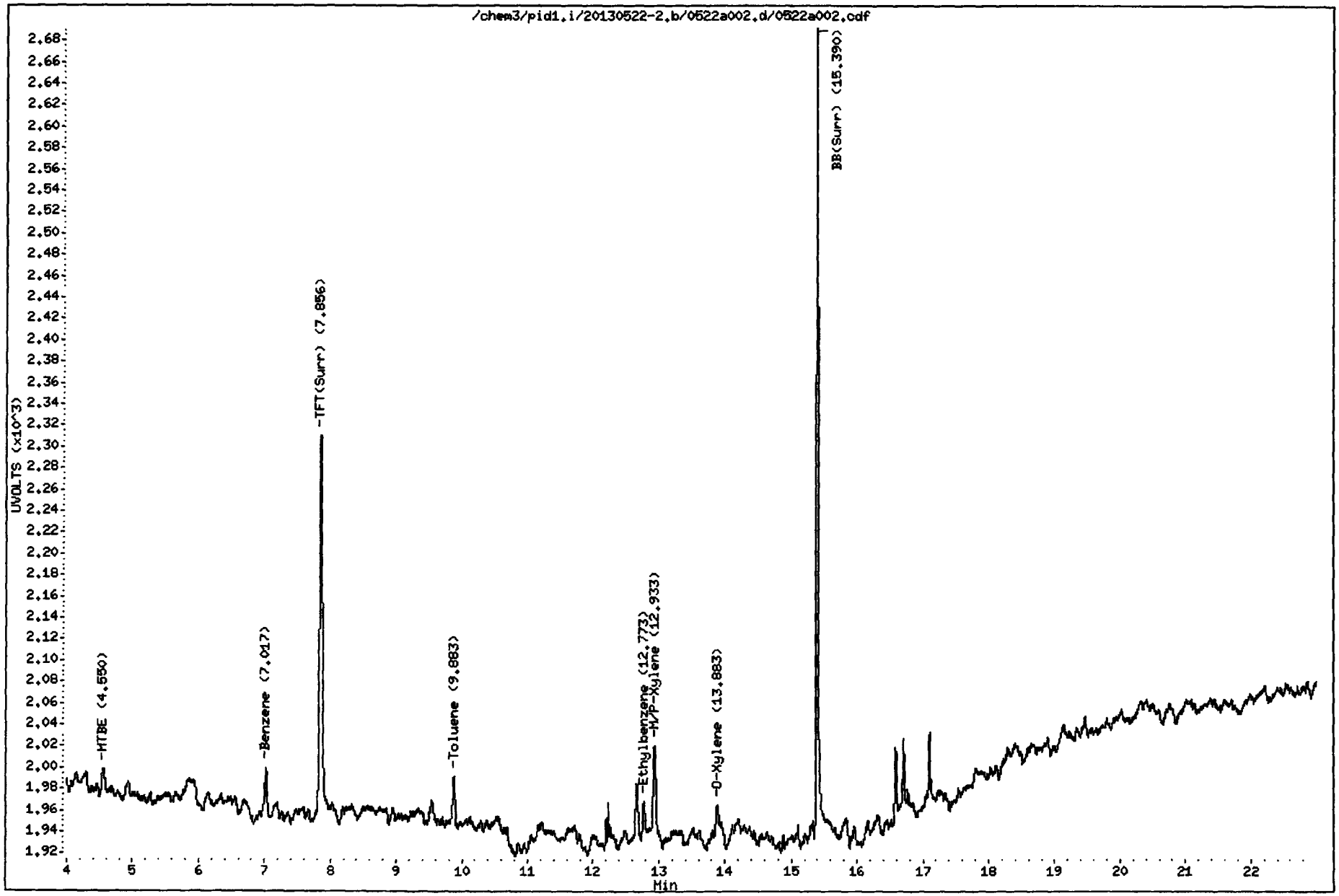
Sample Info: BCAL0.25

Column phase: RTX 502-2 PID

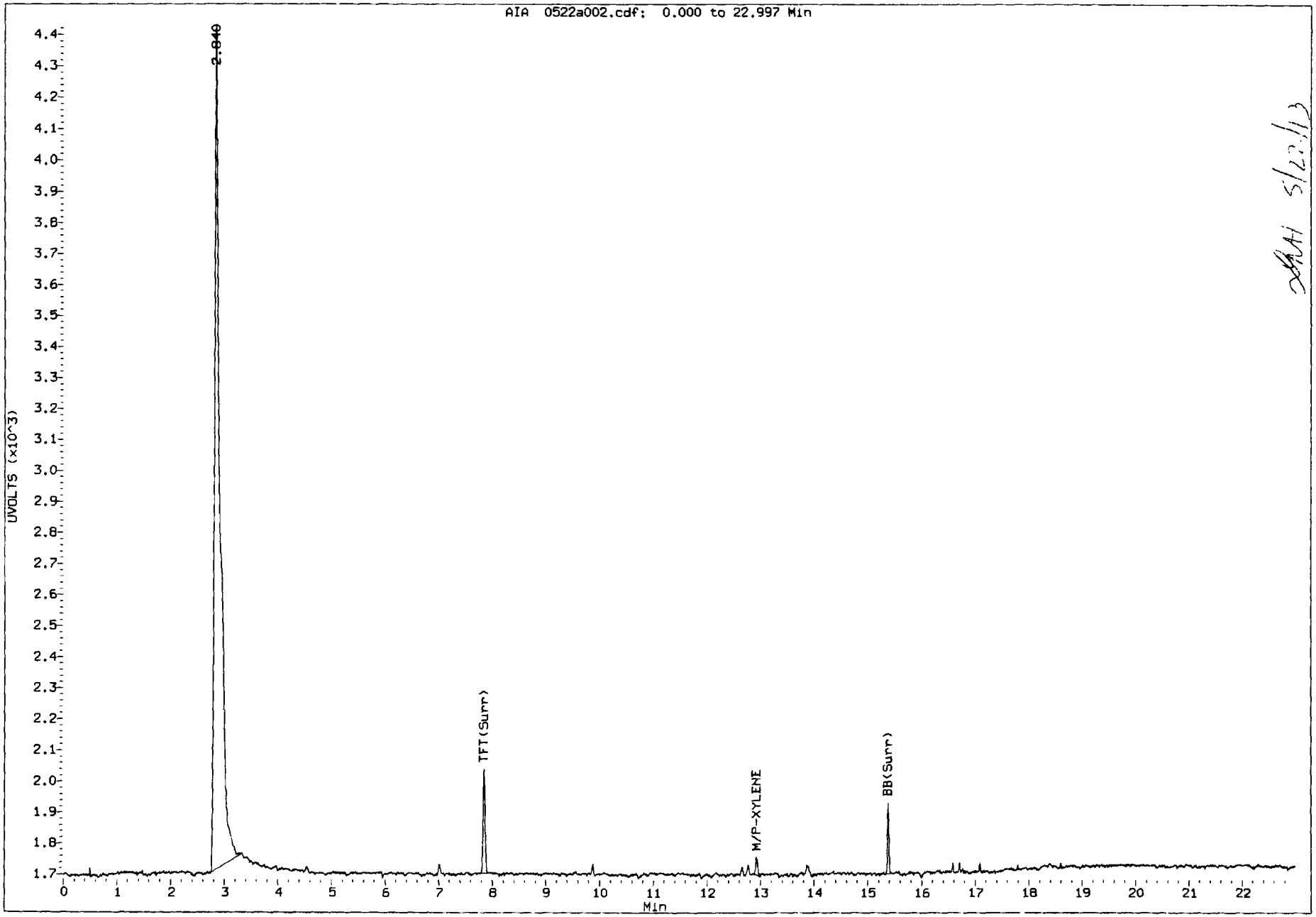
Instrument: pid1.i

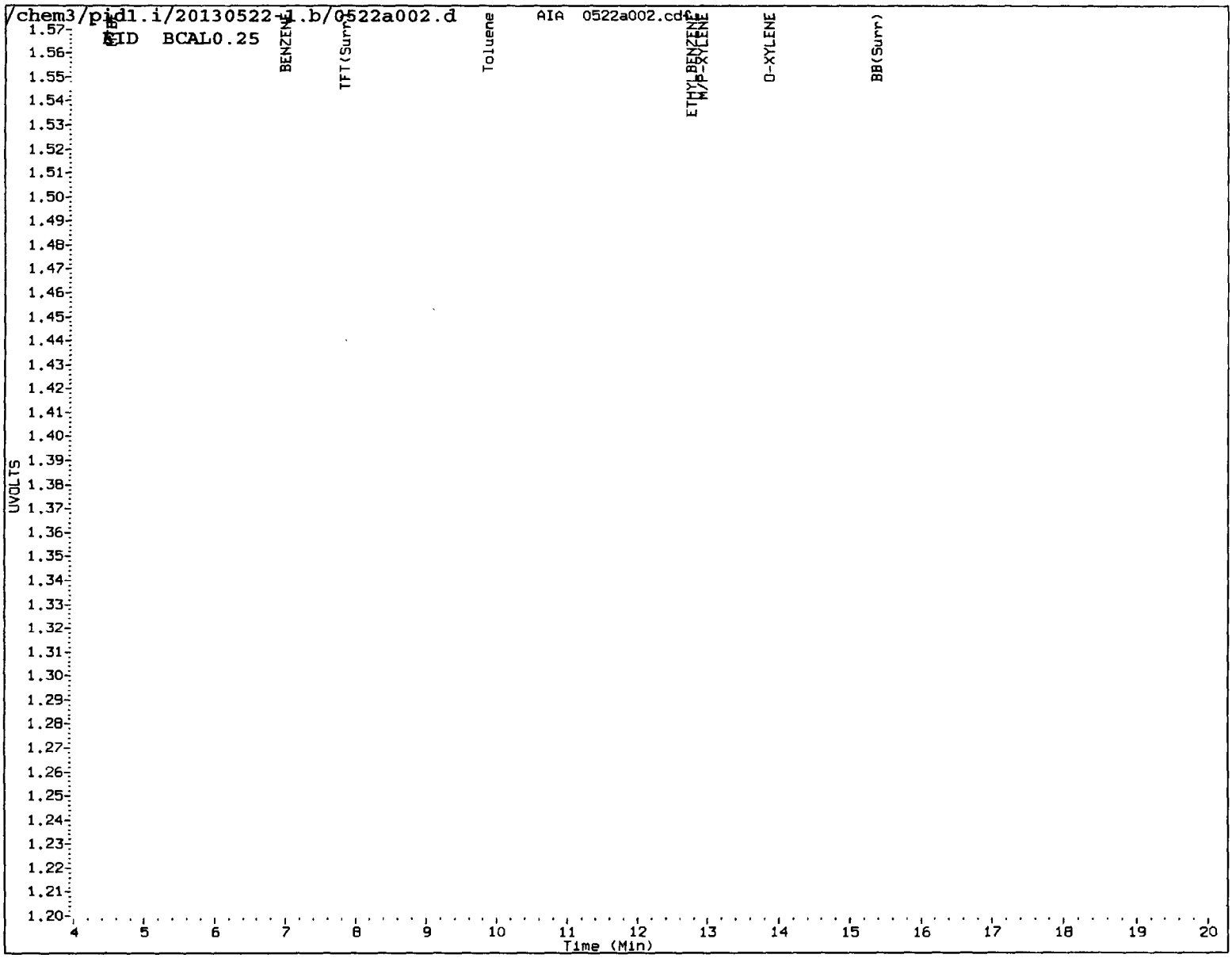
Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-1.b/0522a002.d/0522a002.cdf
Injection Date: 22-MAY-2013 09:02
Instrument: pid1.i
Client Sample ID: BCAL0.25





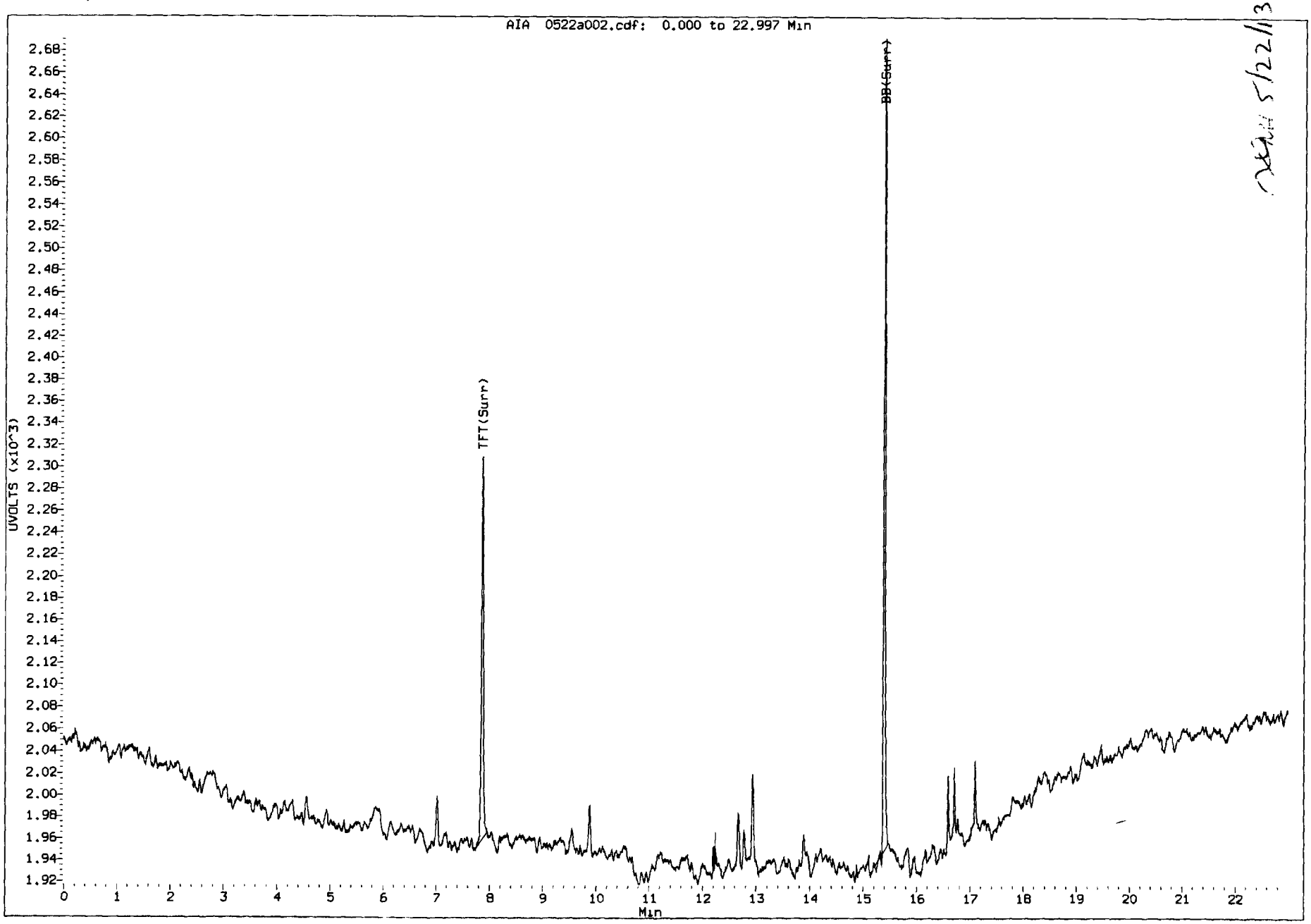
MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

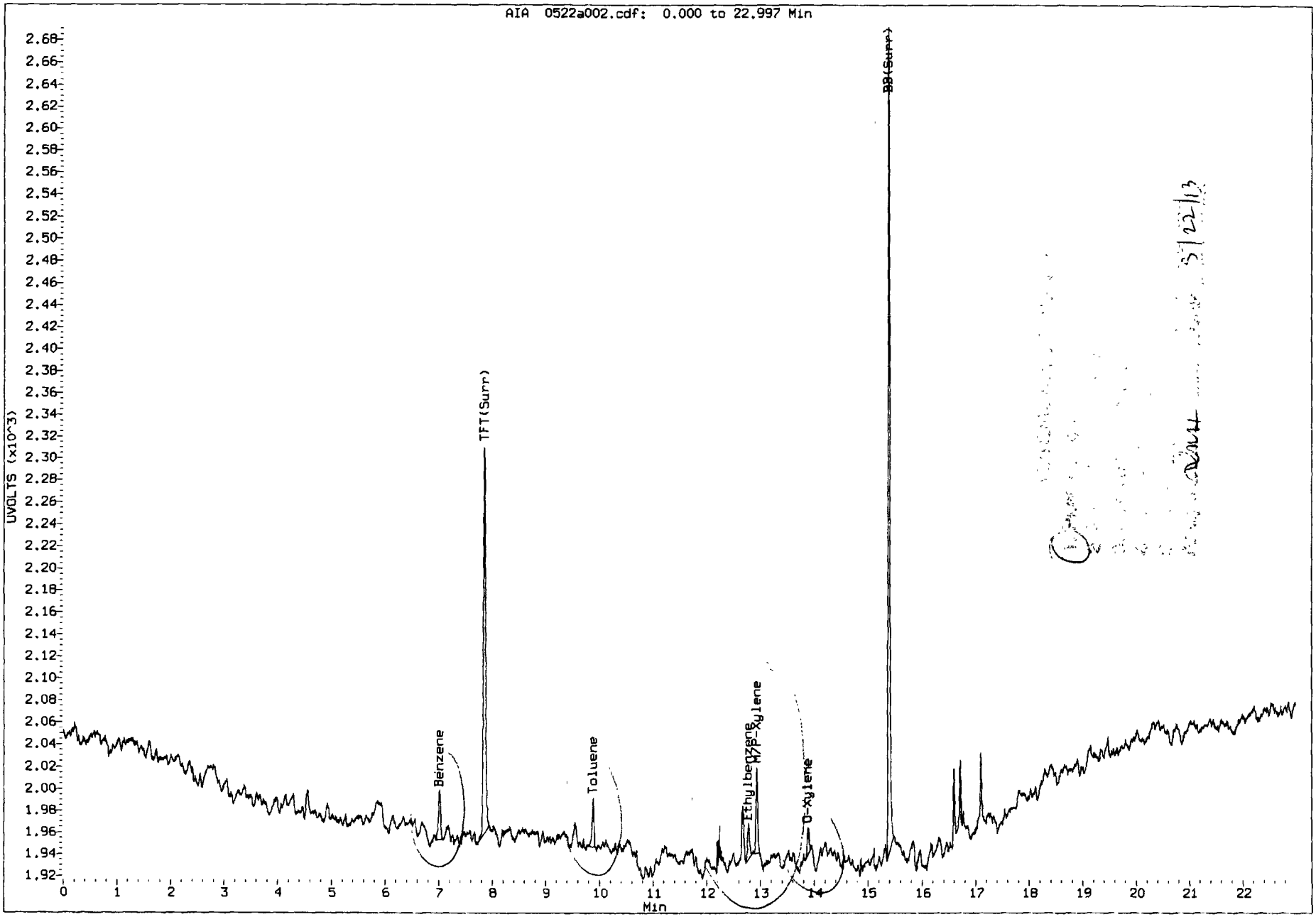
5. Other _____

Analyst: [signature] Date: 5/22/13

Data File: /chem3/pid1.i/20130522-2.b/0522a002.d/0522a002.cdf
Injection Date: 22-MAY-2013 09:02
Instrument: pid1.i
Client Sample ID: BCAL0.25



Data File: /chem3/pid1.i/20130522-2.b/0522a002.d/0522a002.cdf
Injection Date: 22-MAY-2013 09:02
Instrument: pid1.i
Client Sample ID: BCAL0.25



Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a003.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a003.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: BCAL0.5
Client ID: BCAL0.5
Injection Date: 22-MAY-2013 09:30
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.000	681	8701	23.0	TFT(Surr)
15.382	0.000	443	3756	22.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.78 to 17.90)	358114	4249	0.012 M
8015C 2MP-TMB	(4.18 to 16.21)	723723	5527	0.008 M
AK101 nC6-nC10	(4.68 to 15.11)	582885	4999	0.009 M
NWTPHG Tol-Nap	(9.78 to 18.90)	375093	4249	0.011 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
7.856	0.000	713	22.1	TFT(Surr)
15.390	-0.001	1537	21.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.020	-0.001	114	0.51N	Benzene
9.883	-0.001	89	0.45N	Toluene
12.773	-0.005	65	0.40N	Ethylbenzene
12.937	-0.007	167	0.93N	M/P-Xylene
13.883	-0.005	61	0.43N	O-Xylene
4.550	0.005	38	0.44N	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a003.d
Lab Smp Id: BCAL0.5 Client Smp ID: BCAL0.5
Inj Date : 22-MAY-2013 09:30
Operator : LH Inst ID: pid1.i
Smp Info : BCAL0.5
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 15:26 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 09:30 Cal File: 0522a003.d
Als bottle: 1 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	6 MTBE	4.540	4.540	0.000	527	0.50000	0.624
	9 BENZENE	7.015	7.015	0.000	751	0.50000	0.514
$	10 TFT(Surr)	7.848	7.848	0.000	681	22.0000	23.01
	12 Toluene	9.875	9.875	0.000	791	0.50000	0.545
	14 ETHYLBENZENE	12.766	12.766	0.000	62	0.50000	0.563
	15 M/P-XYLENE	12.929	12.929	0.000	1378	1.00000	1.08
	16 O-XYLENE	13.873	13.873	0.000	486	0.50000	0.358(M)
$	18 BB(Surr)	15.382	15.382	0.000	443	22.0000	22.29

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem3/pid1.i/20130522-1.b/0522a003.d

Date : 22-MAY-2013 09:30

Client ID: BCAL0.5

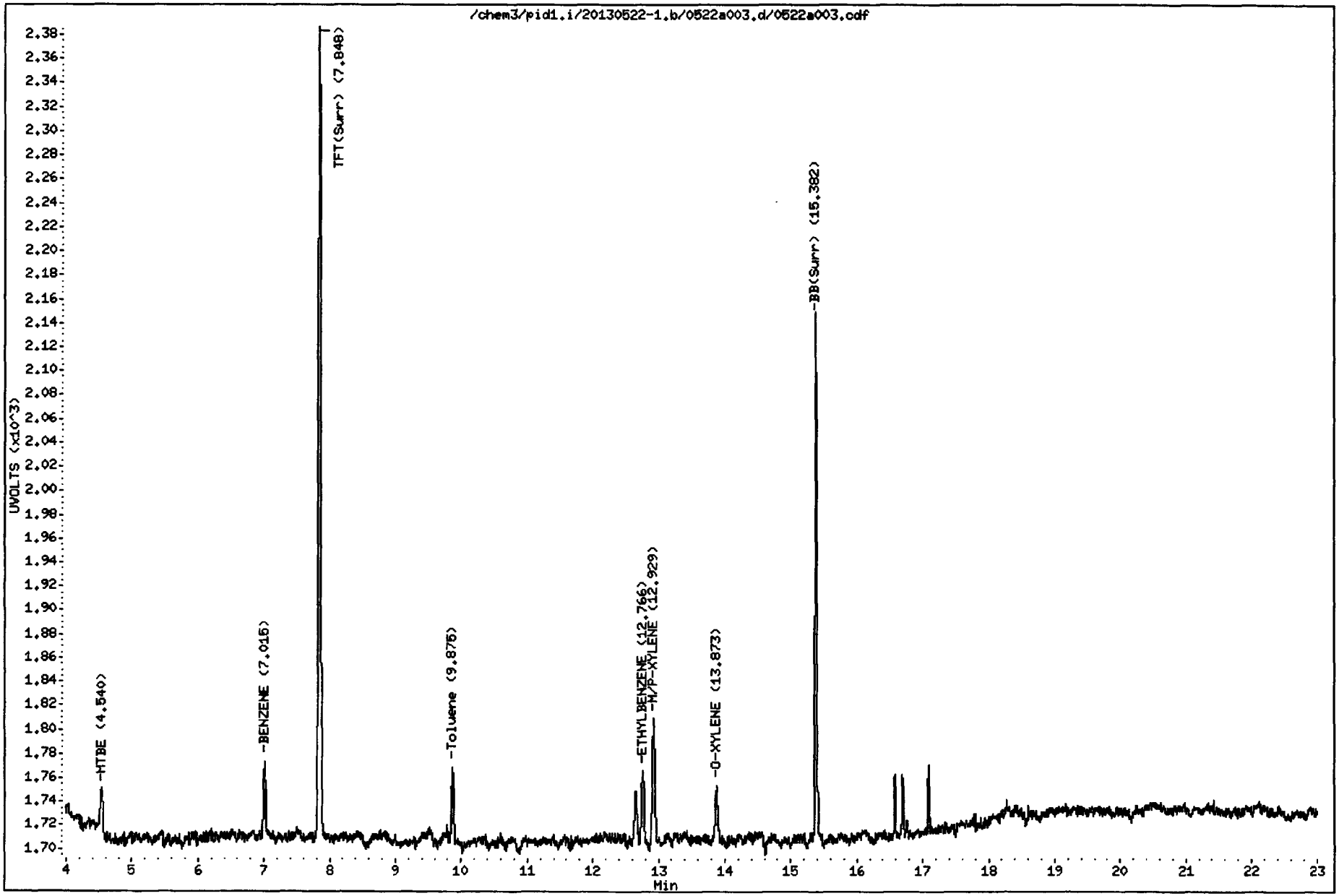
Sample Info: BCAL0.5

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a003.d

Date : 22-MAY-2013 09:30

Client ID: BCAL0.5

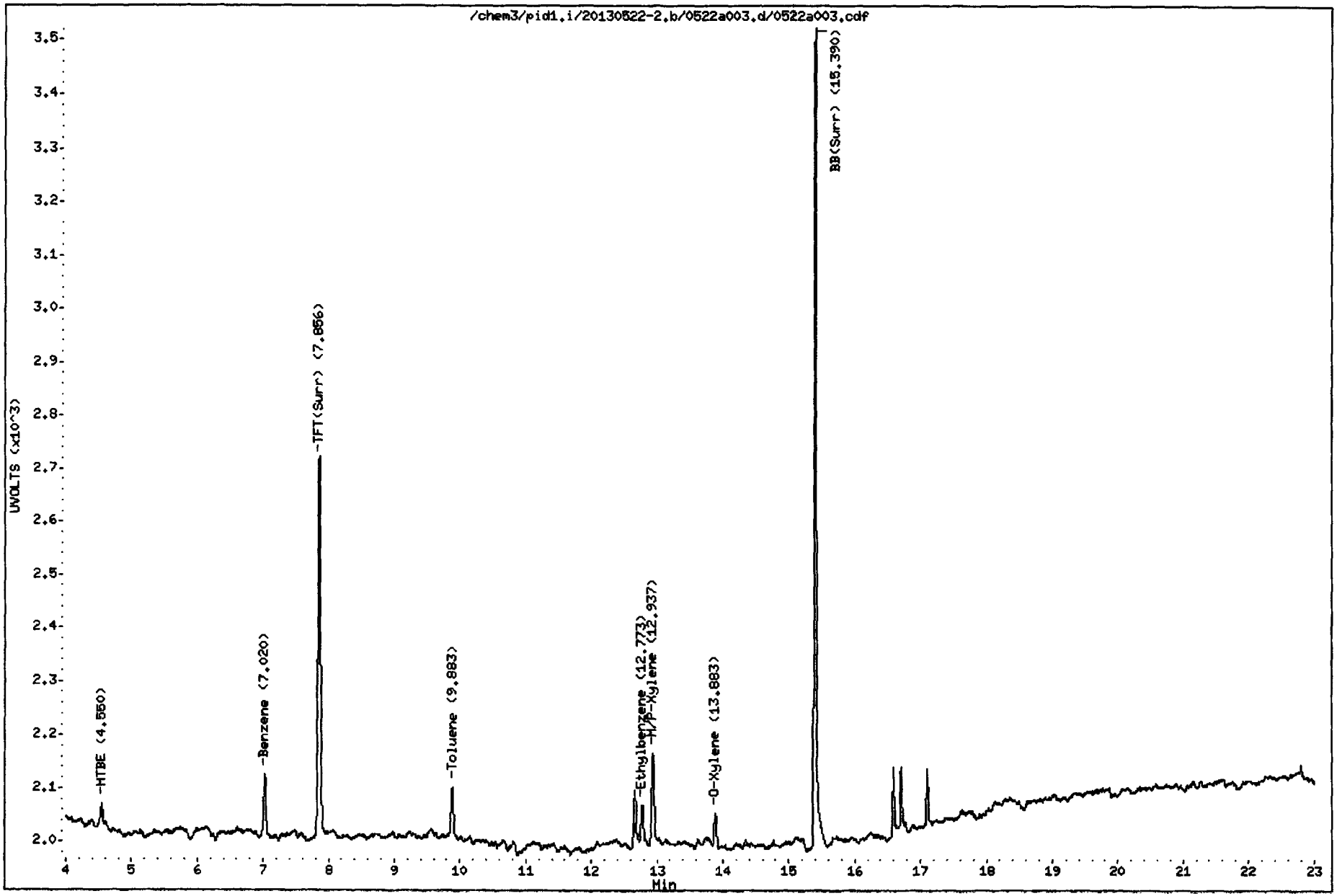
Sample Info: BCAL0.5

Column phase: RTX 502-2 PID

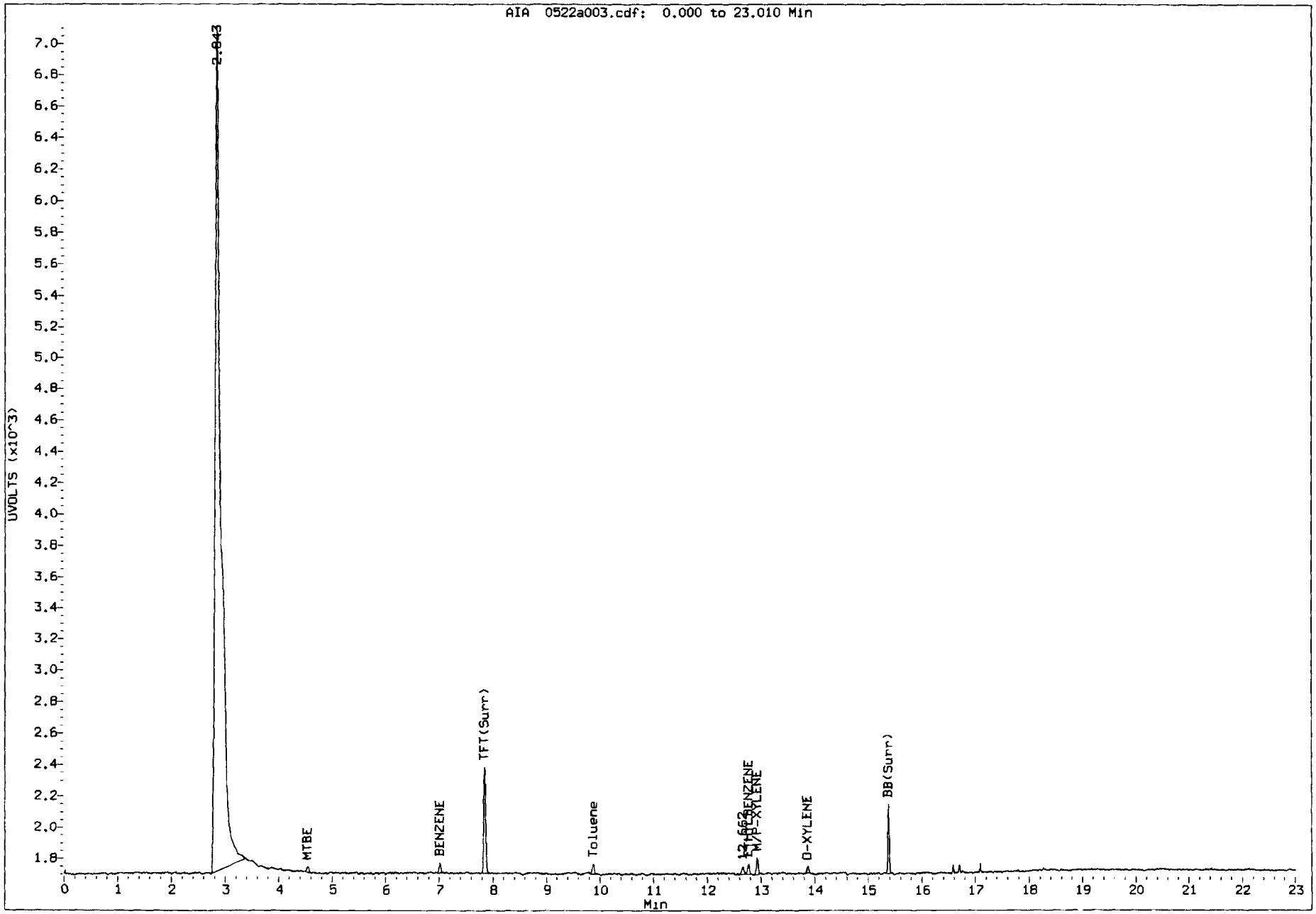
Instrument: pid1.i

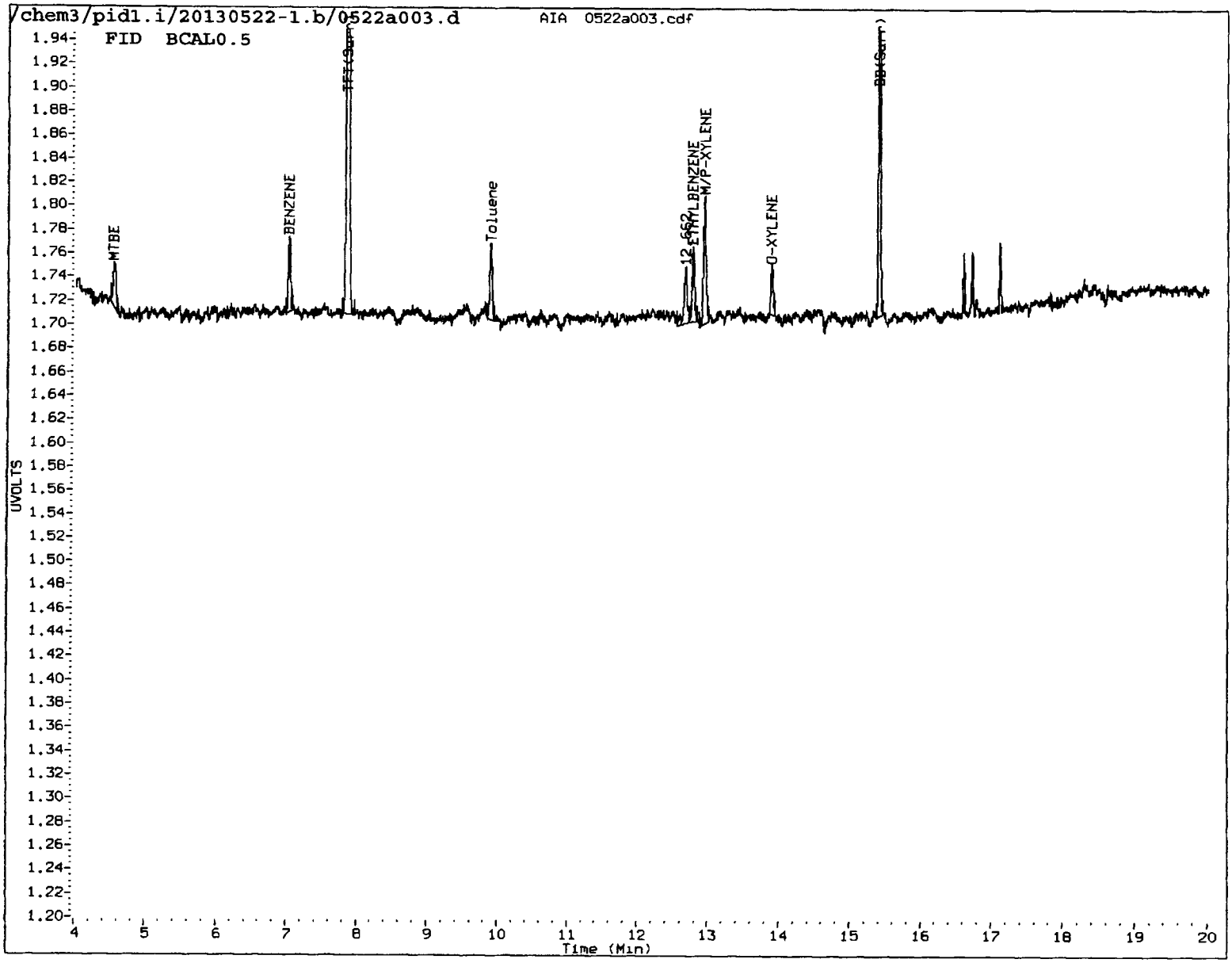
Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-1.b/0522a003.d/0522a003.cdf
Injection Date: 22-MAY-2013 09:30
Instrument: pid1.i
Client Sample ID: BCAL0.5





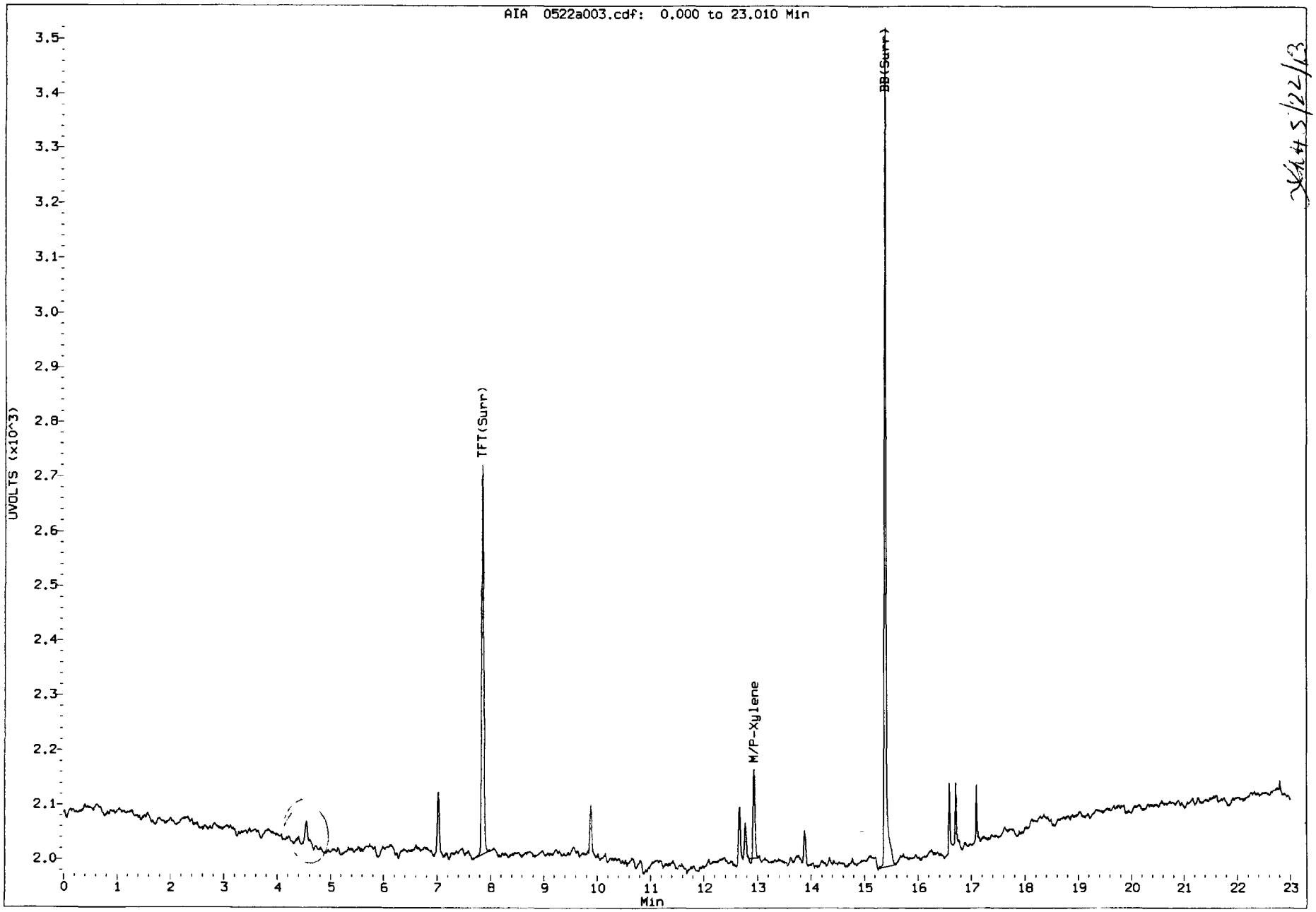
MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

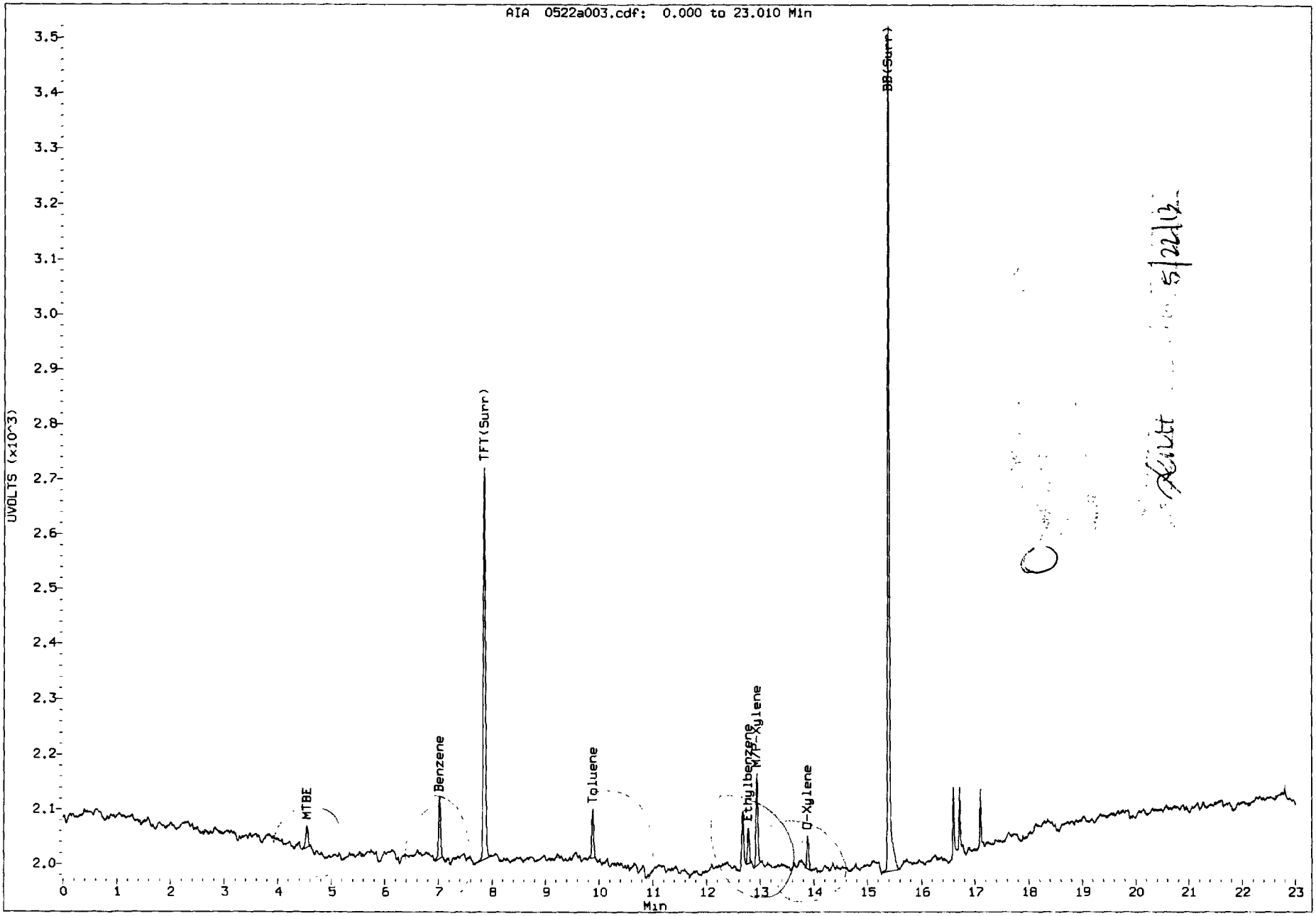
Analyst: _____ Date: 5/22/13

Data File: /chem3/pid1.i/20130522-2.b/0522a003.d/0522a003.cdf
Injection Date: 22-MAY-2013 09:30
Instrument: pid1.i
Client Sample ID: BCAL0.5



5/22/13

Data File: /chem3/pid1.i/20130522-2.b/0522a003.d/0522a003.cdf
Injection Date: 22-MAY-2013 09:30
Instrument: pid1.i
Client Sample ID: BCAL0.5



2nd 5/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a004.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a004.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: BCAL1
Client ID: BCAL1
Injection Date: 22-MAY-2013 09:58
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.000	1344	17101	45.4	TFT(Surr)
15.383	0.000	902	7548	45.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.90)	358114	10157	0.028 M
8015C 2MP-TMB	(4.18 to 16.21)	723723	10606	0.015 M
AK101 nC6-nC10	(4.68 to 15.11)	582885	9703	0.017 M
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	10157	0.027 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
7.857	0.001	1429	44.3	TFT(Surr)
15.390	-0.001	3187	44.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.020	-0.001	222	0.99N	Benzene
9.883	-0.001	195	0.98N	Toluene
12.773	-0.006	163	1.00	Ethylbenzene
12.934	-0.009	345	1.92	M/P-Xylene
13.883	-0.005	143	1.01N	O-Xylene
4.543	-0.002	73	0.84N	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a004.d
Lab Smp Id: BCAL1 Client Smp ID: BCAL1
Inj Date : 22-MAY-2013 09:58
Operator : LH Inst ID: pid1.i
Smp Info : BCAL1
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 15:26 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 09:58 Cal File: 0522a004.d
Als bottle: 1 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
6	MTBE	4.538	4.538	0.000	902	1.00000	1.07
9	BENZENE	7.010	7.010	0.000	1560	1.00000	1.07(M)
$ 10	TFT(Surr)	7.848	7.848	0.000	1344	44.0000	45.42
12	Toluene	9.873	9.873	0.000	1694	1.00000	1.17(M)
14	ETHYLBENZENE	12.766	12.766	0.000	115	1.00000	1.04
15	M/P-XYLENE	12.924	12.924	0.000	2576	2.00000	2.02
16	O-XYLENE	13.873	13.873	0.000	1265	1.00000	0.932(M)
$ 18	BB(Surr)	15.383	15.383	0.000	902	44.0000	45.39(M)
21	nc11	16.702	16.702	0.000	106	1.00000	

QC Flag Legend

M - Compound response manually integrated.

Data File: /chem3/pid1.i/20130522-1.b/0522a004.d

Date : 22-MAY-2013 09:58

Client ID: BCAL1

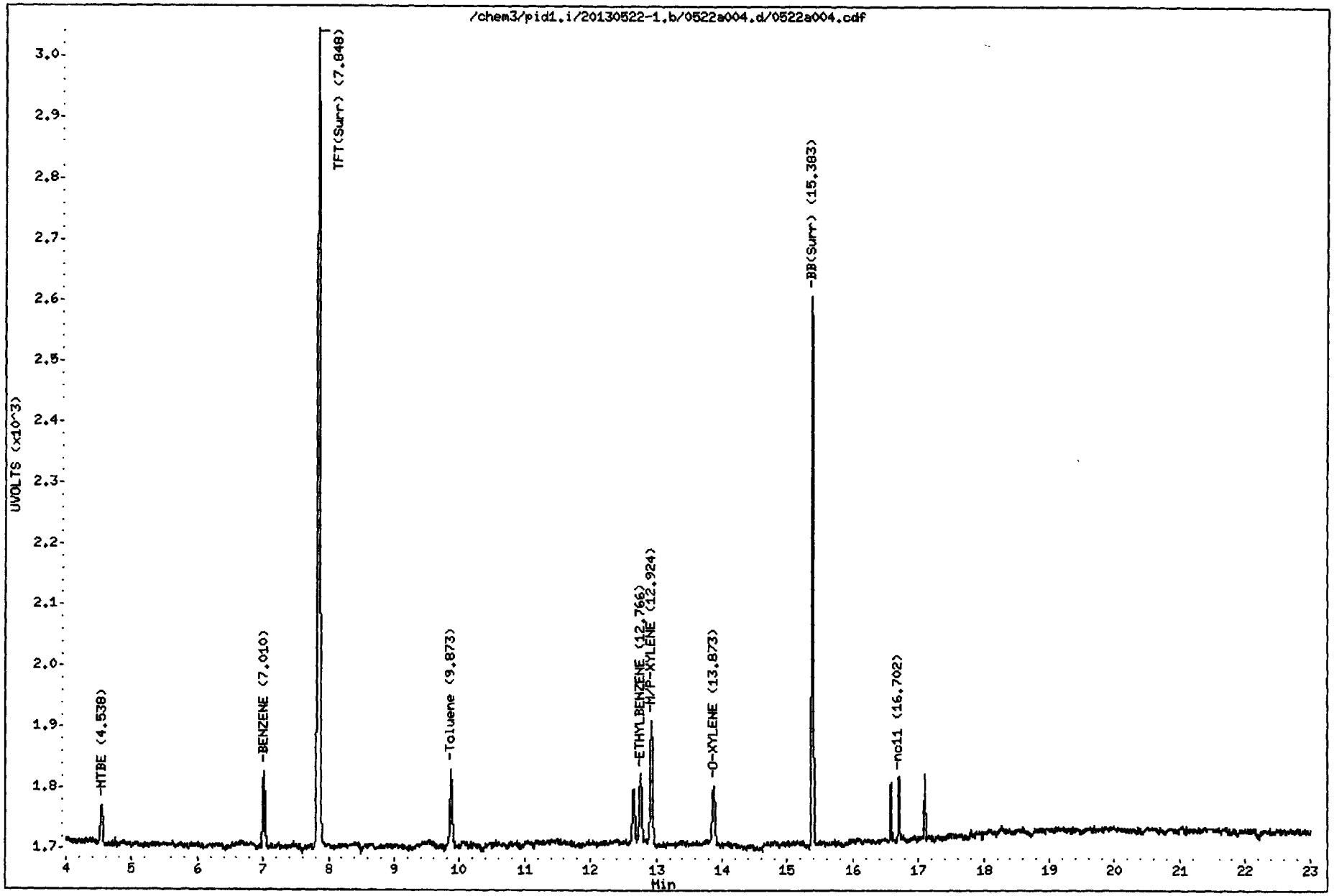
Sample Info: BCAL1

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a004.d

Page 1

Date : 22-MAY-2013 09:58

Client ID: BCAL1

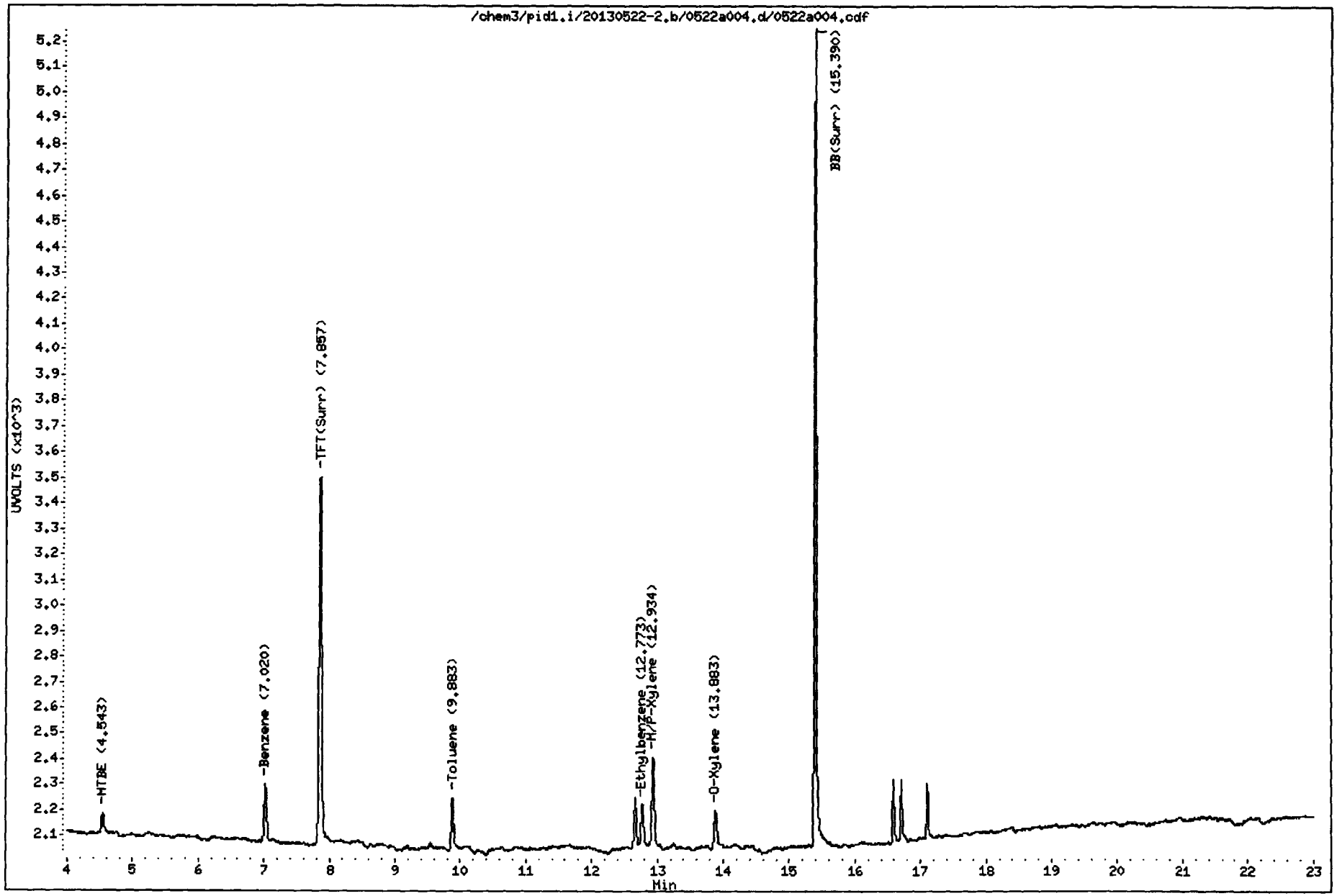
Instrument: pid1.i

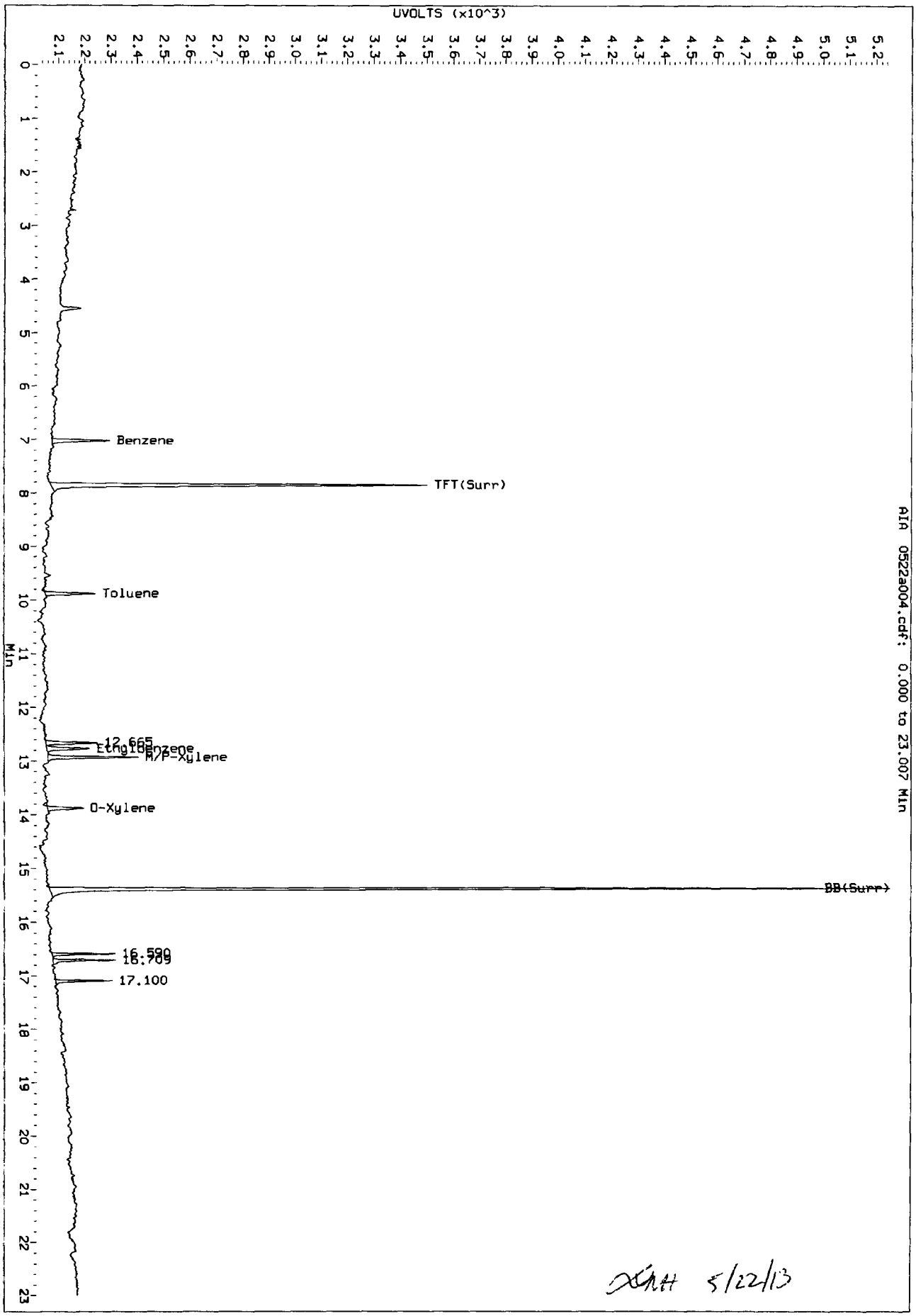
Sample Info: BCAL1

Operator: LH

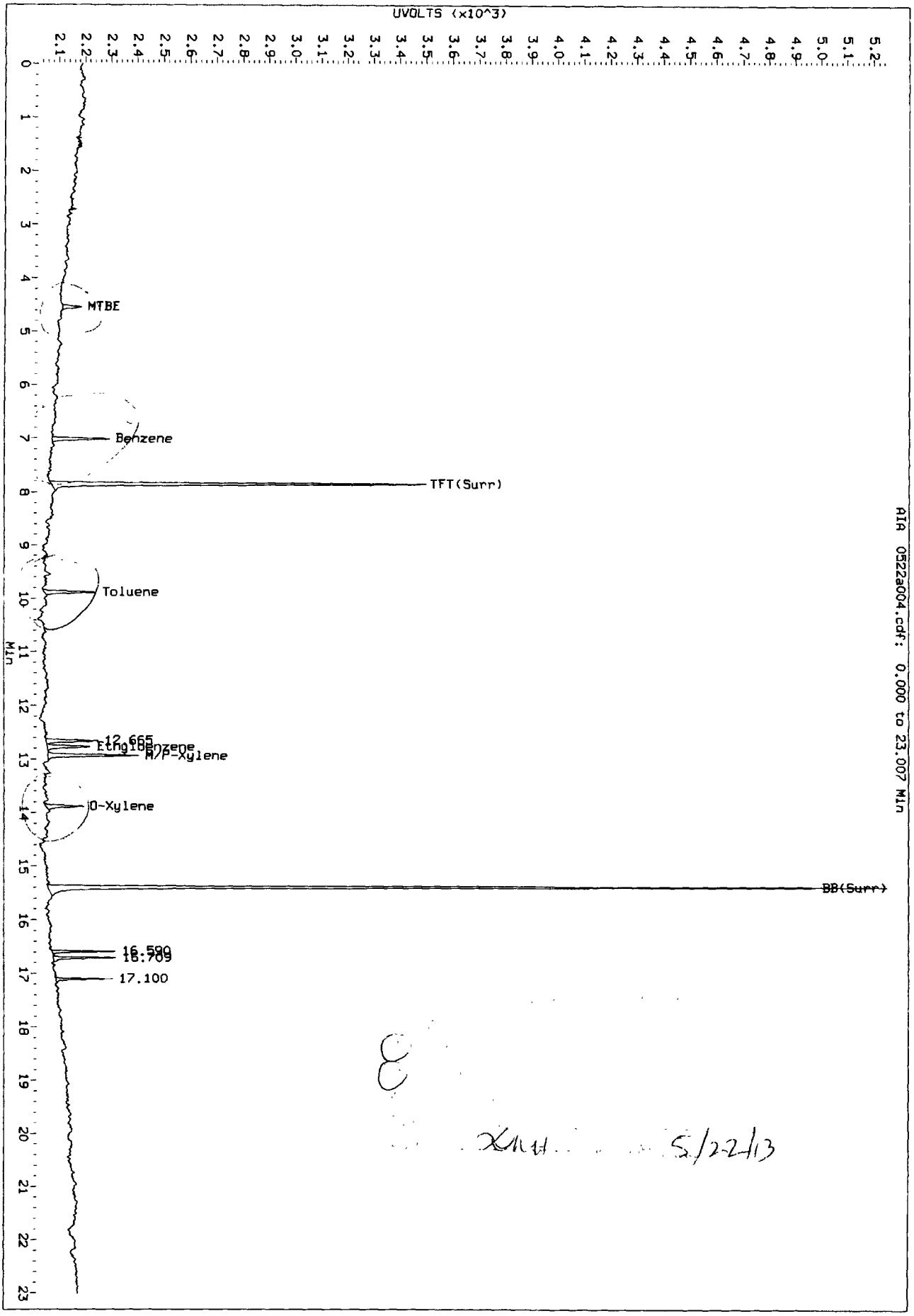
Column phase: RTX 502-2 PID

Column diameter: 0.18




Data File: /chem3/pid1.i/20130522-2.b/0522a004.d/0522a004.cdf
Injection Date: 22-MAY-2013 09:58
Instrument: pid1.i
Client Sample ID: BCAL1
UVOLTS (x10^3)
Min
Benzene
TFT(Surr)
Toluene
12.665
Ethylbenzene
M/P-Xylene
O-Xylene
BB(Surr)
16.590
16.709
17.100
AIA 0522a004.cdf: 0.000 to 23.007 Min

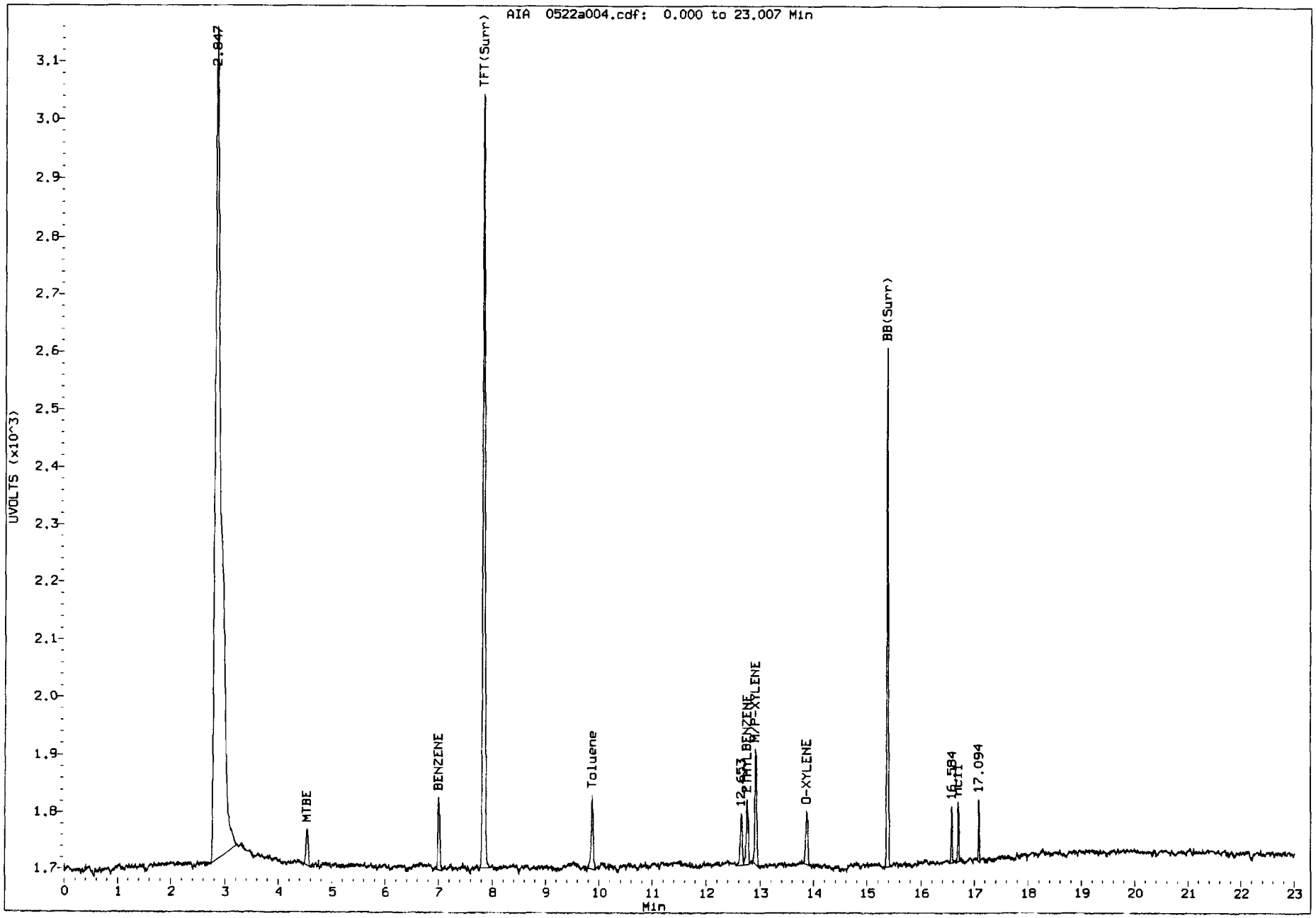
5/22/13

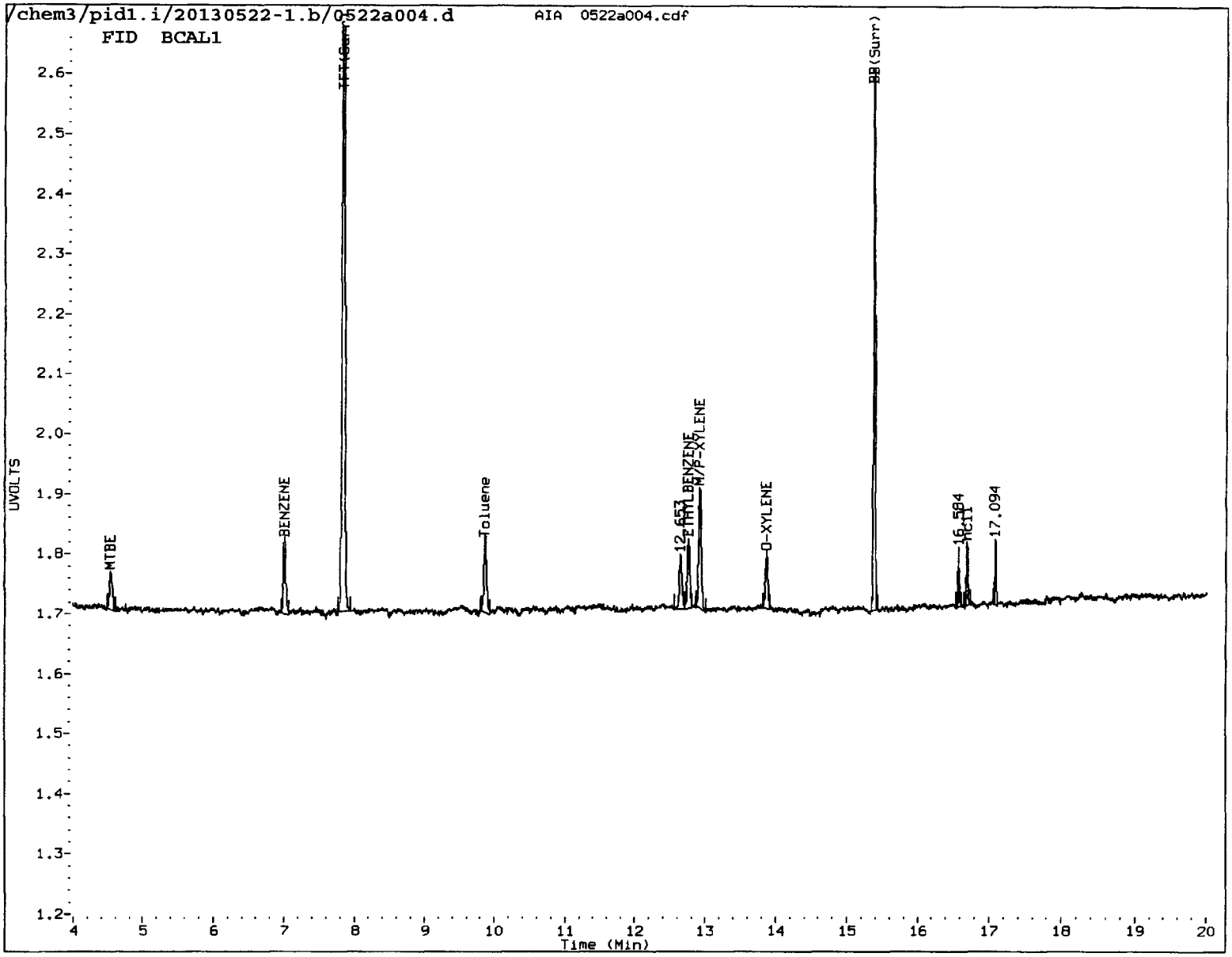

Data File: /chem3/pid1.i/20130522-2.b/0522a004.d/0522a004.cdf
Injection Date: 22-MAY-2013 09:58
Instrument: pid1.i
Client Sample ID: BCAL1
UVOLTS (x10^3)
MTBE
Benzene
TFT(Surr)
Toluene
12.665
Ethylbenzene
M/P-Xylene
O-Xylene
BB(Surr)
16.590
16.709
17.100
Min
AIA 0522a004.cdf: 0.000 to 23.007 Min

3

5/22/13

Data File: /chem3/pid1.i/20130522-1.b/0522a004.d/0522a004.cdf
Injection Date: 22-MAY-2013 09:58
Instrument: pid1.i
Client Sample ID: BCAL1





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: _____ Date: 5/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a005.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a005.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: BCAL5
Client ID: BCAL5
Injection Date: 22-MAY-2013 10:27
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.000	2002	25277	67.7	TFT(Surr)
15.382	0.000	1332	11311	67.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.90)	358114	49856	0.139
8015C 2MP-TMB	(4.18 to 16.21)	723723	51726	0.071
AK101 nC6-nC10	(4.68 to 15.11)	582885	47527	0.082
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	49856	0.133

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
7.857	0.001	2160	67.0	TFT(Surr)
15.390	-0.001	4804	66.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.020	-0.001	1158	5.15N	Benzene
9.883	-0.001	1018	5.14N	Toluene
12.774	-0.004	864	5.29	Ethylbenzene
12.935	-0.009	1851	10.29	M/P-Xylene
13.883	-0.005	747	5.26N	O-Xylene
4.547	0.002	444	5.09N	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a005.d
Lab Smp Id: BCAL5 Client Smp ID: BCAL5
Inj Date : 22-MAY-2013 10:27
Operator : LH Inst ID: pid1.i
Smp Info : BCAL5
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 15:26 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 10:27 Cal File: 0522a005.d
Als bottle: 1 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
6	MTBE	4.539	4.539	0.000	4199	5.00000	4.97
9	BENZENE	7.012	7.012	0.000	7573	5.00000	5.19
$ 10	TFT(Surr)	7.848	7.848	0.000	2002	67.0000	67.66
12	Toluene	9.873	9.873	0.000	7382	5.00000	5.09
14	ETHYLBENZENE	12.764	12.764	0.000	564	5.00000	5.12
15	M/P-XYLENE	12.925	12.925	0.000	13495	10.0000	10.58
16	O-XYLENE	13.874	13.874	0.000	7033	5.00000	5.18
$ 18	BB(Surr)	15.382	15.382	0.000	1332	67.0000	67.03
21	nc11	16.701	16.701	0.000	533	5.00000	

Data File: /chem3/pid1.i/20130522-1.b/0522a005.d

Date : 22-MAY-2013 10:27

Client ID: BCAL5

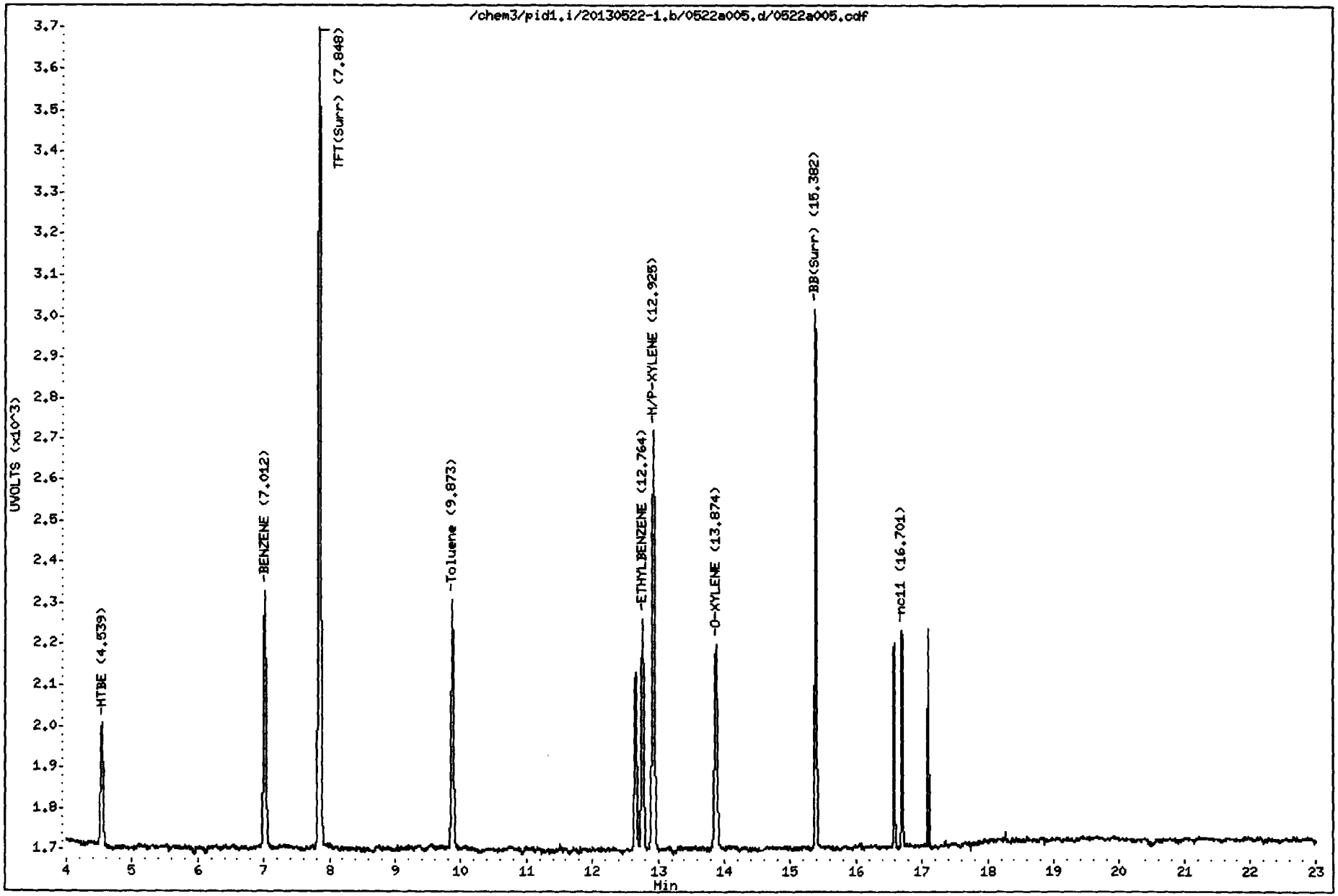
Sample Info: BCAL5

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a005.d

Date : 22-MAY-2013 10:27

Client ID: BCAL5

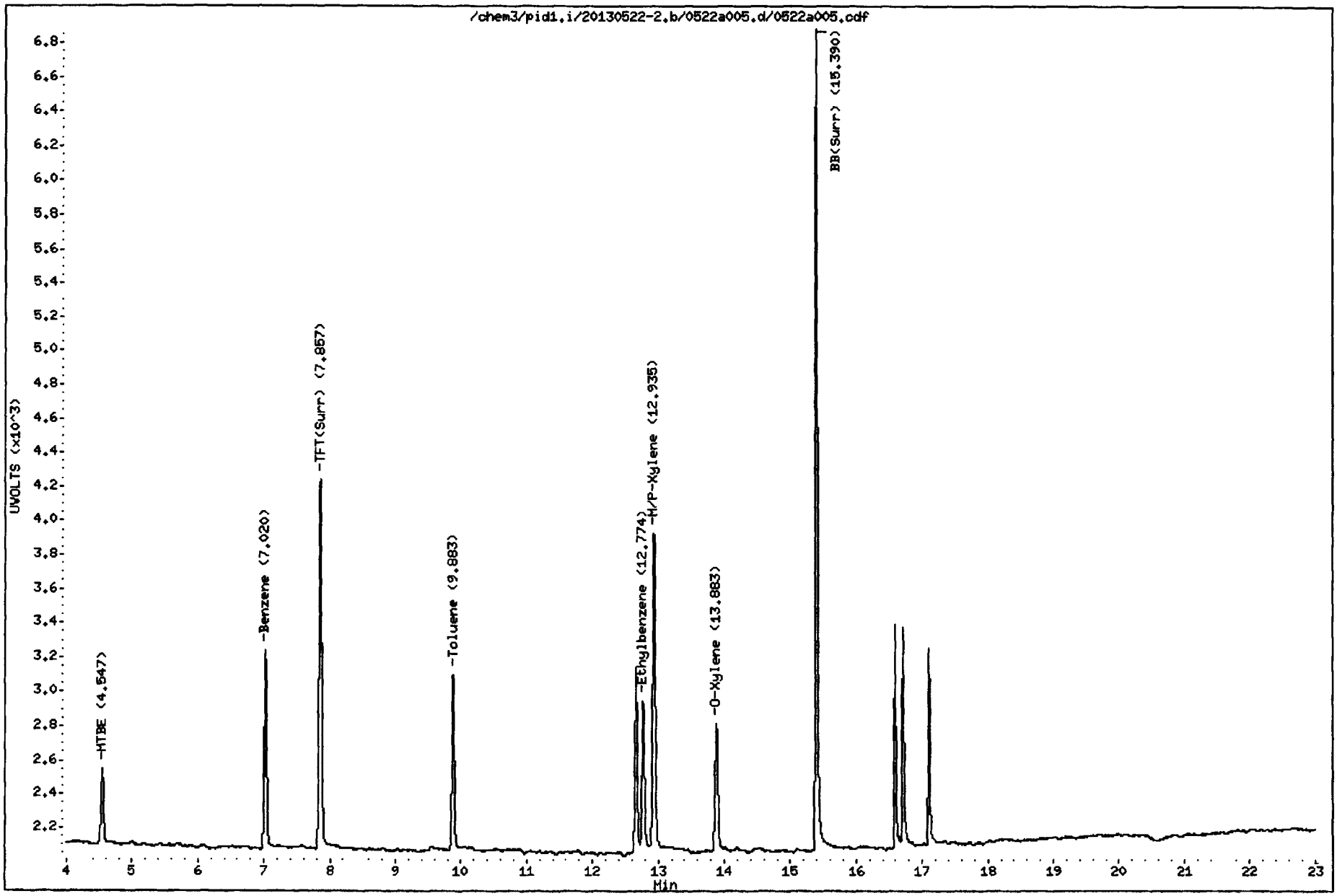
Sample Info: BCAL5

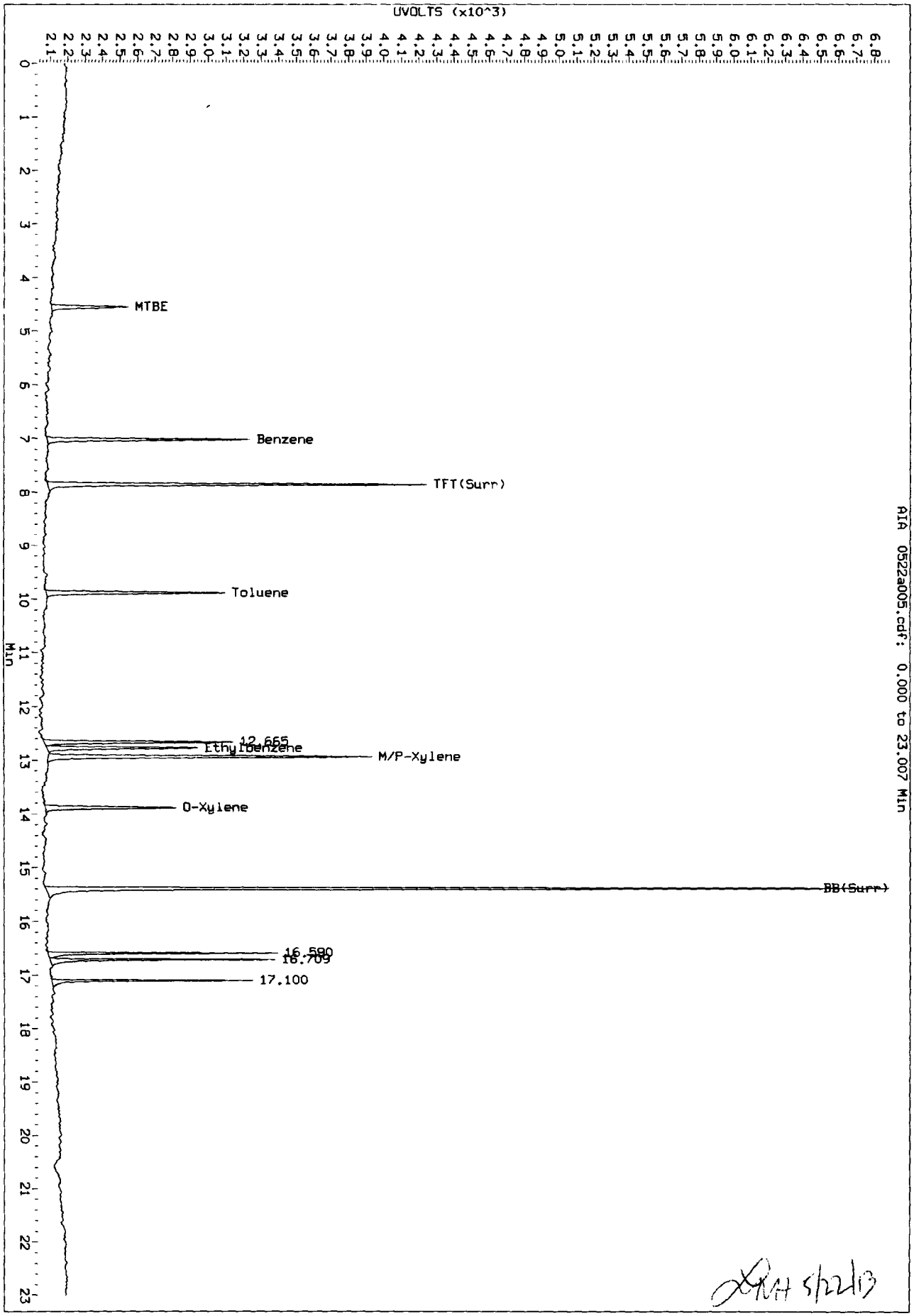
Column phase: RTX 502-2 PID

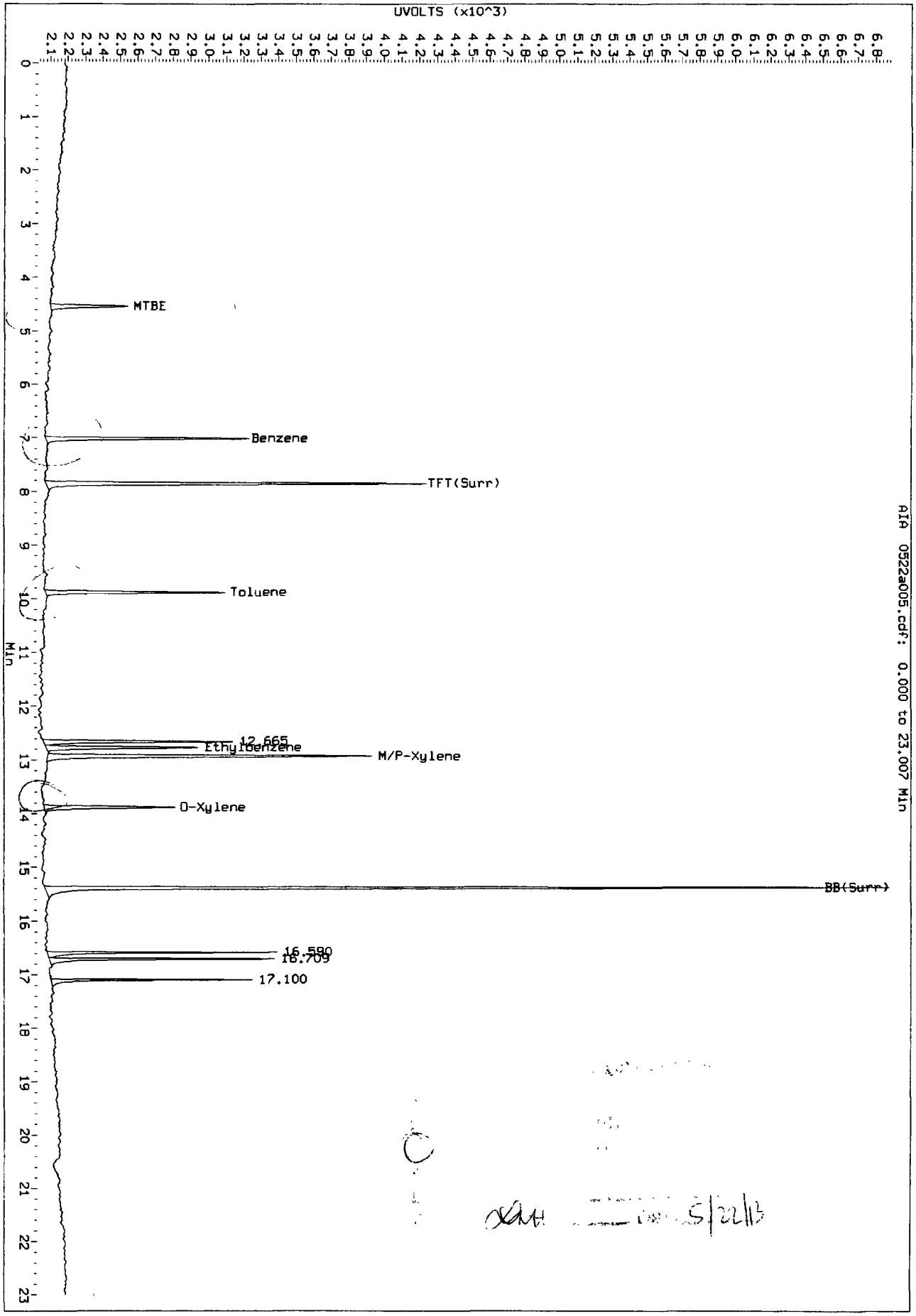
Instrument: pid1.i

Operator: LH

Column diameter: 0.18




Data File: /chem3/pid1.i/20130522-2.b/0522a005.d/0522a005.cdf
Injection Date: 22-MAY-2013 10:27
Instrument: pid1.i
Client Sample ID: BCAL5
UVOLTS (x10^3)
Min
AIA 0522a005.cdf: 0.000 to 23.007 Min
MTBE
Benzene
TFT(Surr)
Toluene
12.665
Ethylbenzene
M/P-Xylene
O-Xylene
BB(Surr)
16.580
16.709
17.100
5/22/13


Data File: /chem3/pid1.i/20130522-2.b/0522a005.d/0522a005.cdf
Injection Date: 22-MAY-2013 10:27
Instrument: pid1.i
Client Sample ID: BCAL5
UVOLTS (x10^3)
Min
MTBE
Benzene
TFT(Surr)
Toluene
12.665
Ethylbenzene
M/P-Xylene
O-Xylene
BB(Surr)
16.580
16.709
17.100
AIA 0522a005.cdf: 0.000 to 23.007 Min

Analytical Resources Inc.
BETX/Gas Quantitation Report

5/22/13

Data file 1: /chem3/pid1.i/20130522-1.b/0522a006.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a006.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: BCAL25
Client ID: BCAL25
Injection Date: 22-MAY-2013 10:56
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.000	2937	37310	99.3	TFT(Surr)
15.382	0.000	1980	16732	99.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.90)	358114	236762	0.661
8015C 2MP-TMB	(4.18 to 16.21)	723723	245764	0.340
AK101 nC6-nC10	(4.68 to 15.11)	582885	225487	0.387
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	236762	0.631

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
7.856	0.000	3241	100.5	TFT(Surr)
15.390	-0.001	7347	101.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.020	-0.002	5901	26.25	Benzene
9.883	-0.001	5241	26.45N	Toluene
12.774	-0.005	4467	27.36	Ethylbenzene
12.935	-0.008	9545	53.05	M/P-Xylene
13.883	-0.005	3914	27.56	O-Xylene
4.545	0.000	2307	26.46	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a006.d
Lab Smp Id: BCAL25 Client Smp ID: BCAL25
Inj Date : 22-MAY-2013 10:56
Operator : LH Inst ID: pid1.i
Smp Info : BCAL25
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 15:26 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 10:56 Cal File: 0522a006.d
Als bottle: 1 Calibration Sample, Level: 6
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	6 MTBE	4.537	4.537	0.000	20276	25.0000	24.00
	9 BENZENE	7.012	7.012	0.000	36593	25.0000	25.06
$	10 TFT(Surr)	7.848	7.848	0.000	2937	100.000	99.25
	12 Toluene	9.874	9.874	0.000	35345	25.0000	24.37
	14 ETHYLBENZENE	12.765	12.765	0.000	2679	25.0000	24.33
	15 M/P-XYLENE	12.926	12.926	0.000	63276	50.0000	49.63
	16 O-XYLENE	13.874	13.874	0.000	33141	25.0000	24.40
$	18 BB(Surr)	15.382	15.382	0.000	1980	100.000	99.64
	21 nc11	16.701	16.701	0.000	2617	25.0000	

Data File: /chem3/pid1.i/20130522-1.b/0522a006.d

Date : 22-MAY-2013 10:56

Client ID: BCAL25

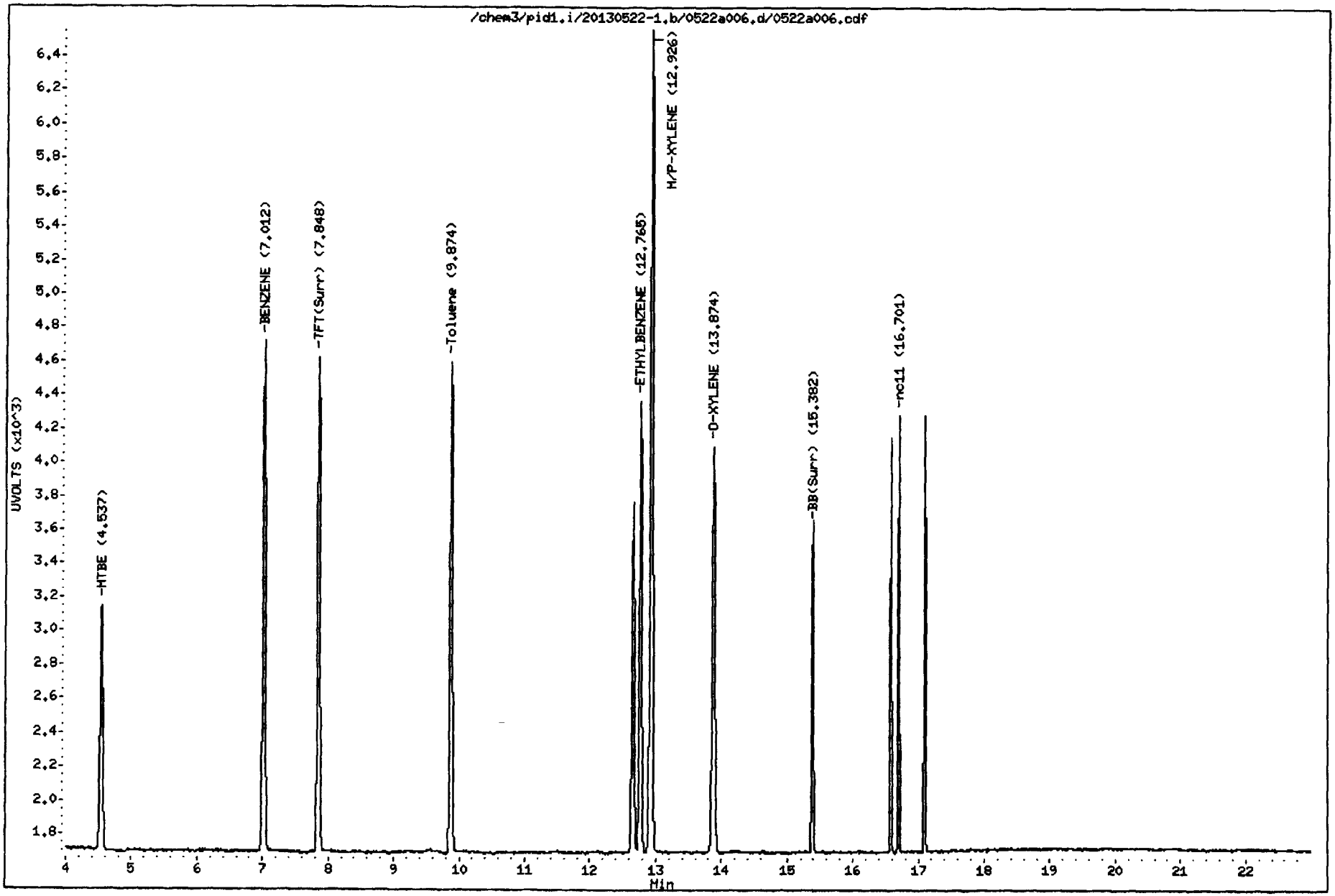
Sample Info: BCAL25

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a006.d

Date : 22-MAY-2013 10:56

Client ID: BCAL25

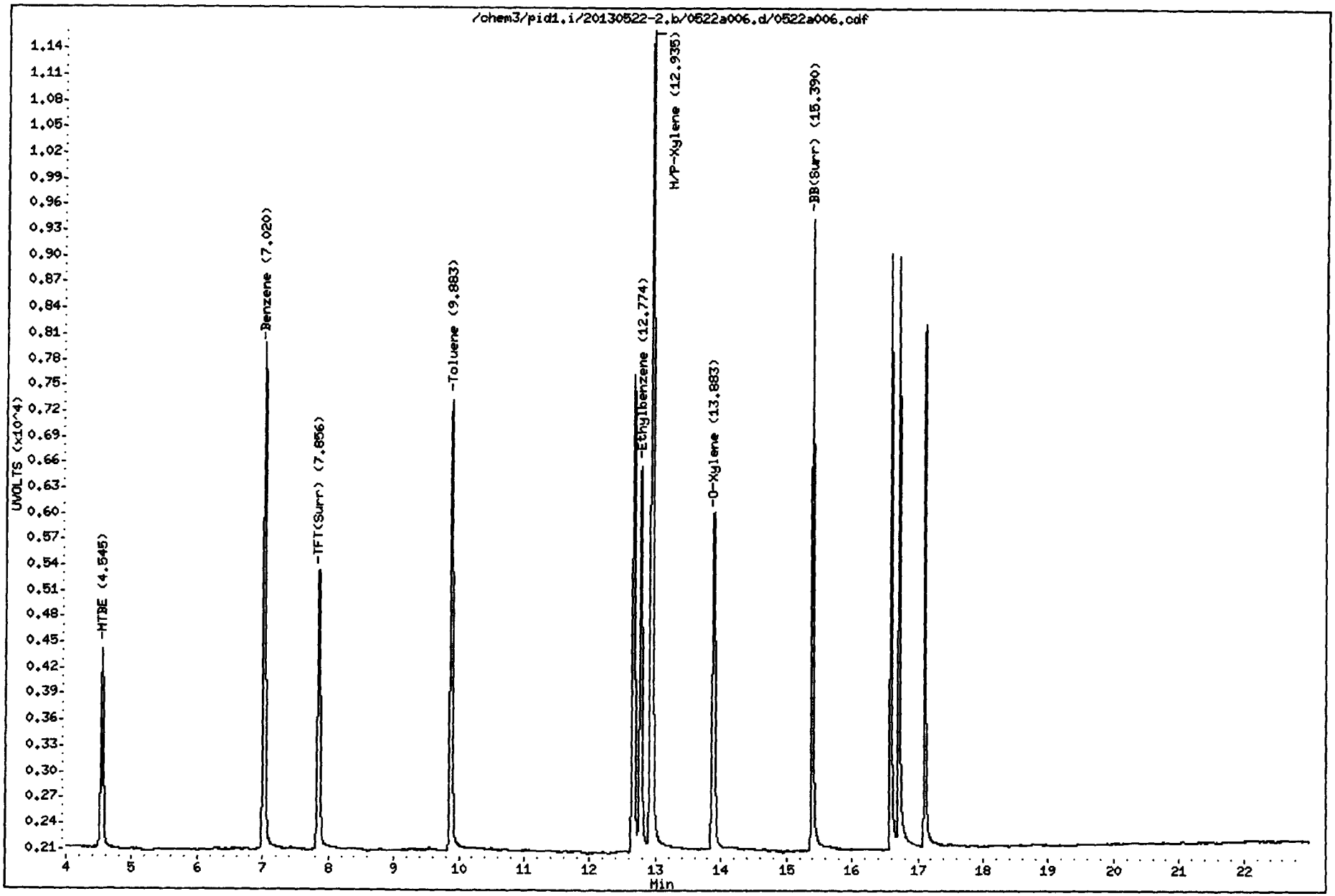
Sample Info: BCAL25

Column phase: RTX 502-2 PID

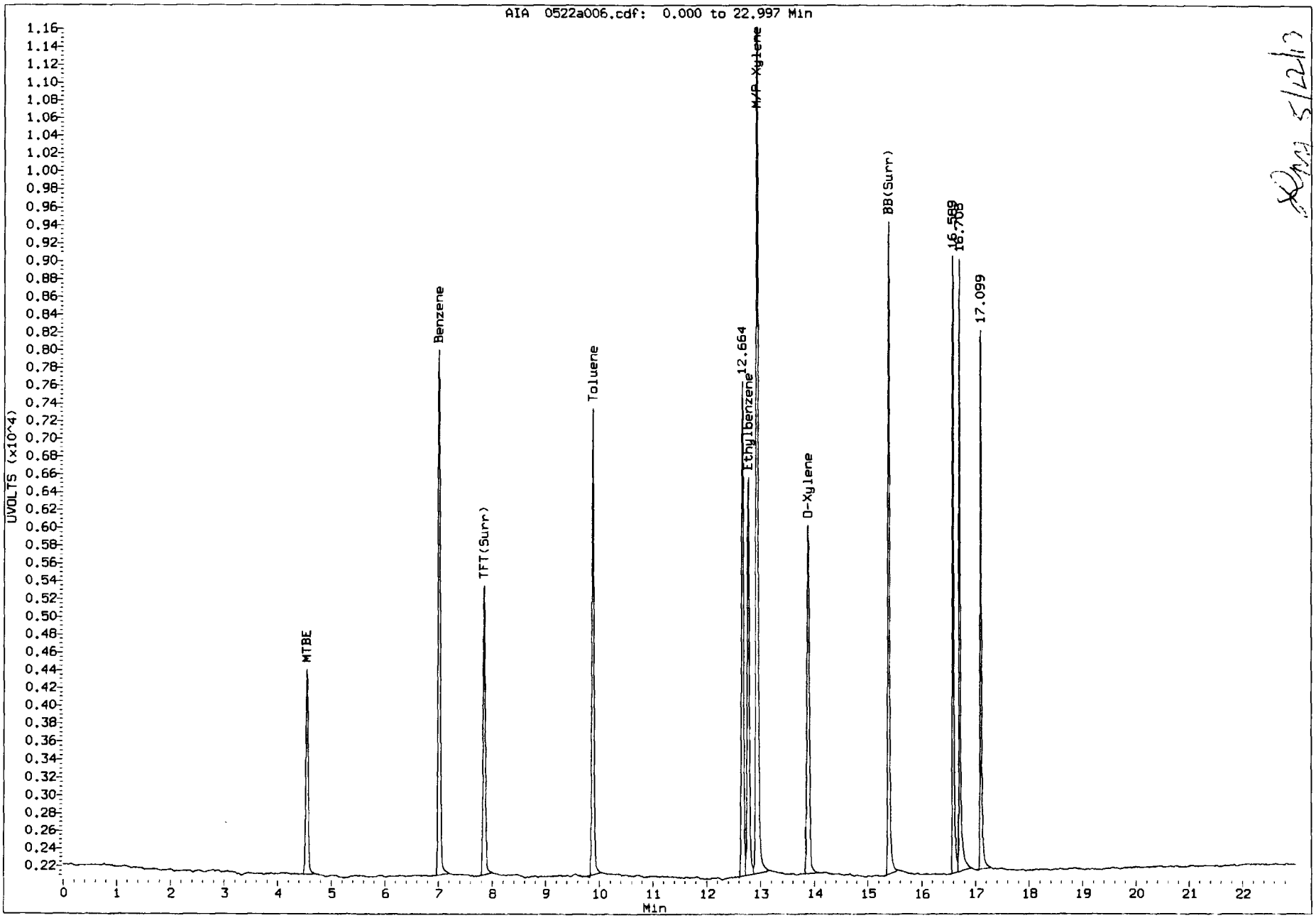
Instrument: pid1.i

Operator: LH

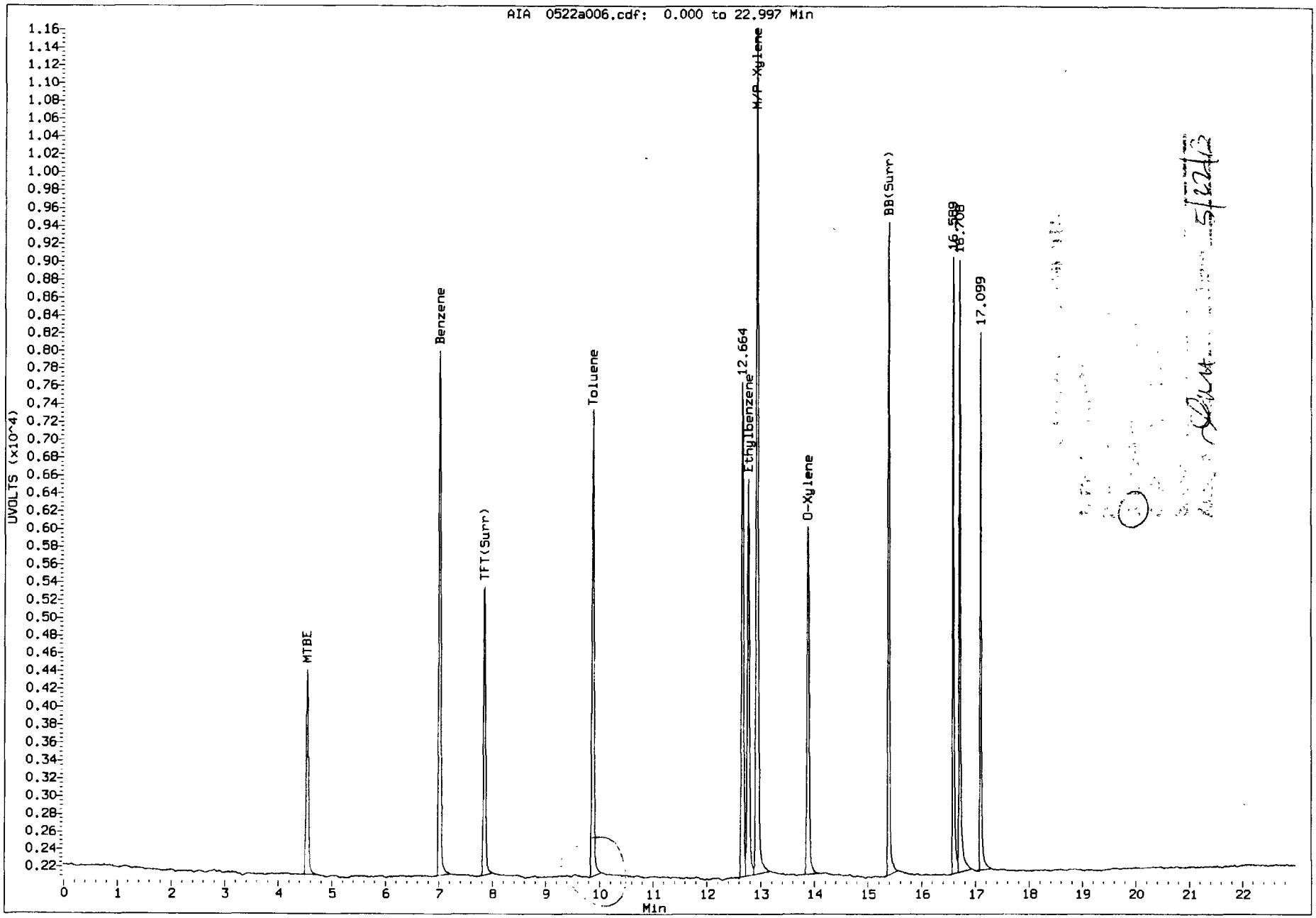
Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a006.d/0522a006.cdf
Injection Date: 22-MAY-2013 10:56
Instrument: pid1.i
Client Sample ID: BCAL25



Data File: /chem3/pid1.i/20130522-2.b/0522a006.d/0522a006.cdf
Injection Date: 22-MAY-2013 10:56
Instrument: pid1.i
Client Sample ID: BCAL25



Analytical Resources Inc.
BETX/Gas Quantitation Report

5/22/13

Data file 1: /chem3/pid1.i/20130522-1.b/0522a007.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a007.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: BCAL50
Client ID: BCAL50
Injection Date: 22-MAY-2013 11:25
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.000	3824	48740	129.2	TFT(Surr)
15.382	0.000	2595	21730	130.6	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.77 to 17.90)	358114	455449	1.272
8015C 2MP-TMB	(4.18 to 16.21)	723723	472875	0.653
AK101 nC6-nC10	(4.68 to 15.11)	582885	433822	0.744
NWTPHG Tol-Nap	(9.77 to 18.90)	375093	455449	1.214

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
7.856	0.000	4289	133.1	TFT(Surr)
15.390	-0.001	9769	135.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.020	-0.001	11655	51.84	Benzene
9.883	-0.001	10315	52.06N	Toluene
12.774	-0.004	8873	54.35	Ethylbenzene
12.936	-0.007	18906	105.07	M/P-Xylene
13.883	-0.005	7783	54.81	O-Xylene
4.545	0.000	4539	52.06	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a007.d
Lab Smp Id: BCAL50 Client Smp ID: BCAL50
Inj Date : 22-MAY-2013 11:25
Operator : LH Inst ID: pid1.i
Smp Info : BCAL50
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 15:26 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 11:25 Cal File: 0522a007.d
Als bottle: 1 Calibration Sample, Level: 7
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	6 MTBE	4.537	4.537	0.000	39052	50.0000	46.23
	9 BENZENE	7.012	7.012	0.000	69936	50.0000	47.90
$	10 TFT(Surr)	7.848	7.848	0.000	3824	133.000	129.2
	12 Toluene	9.873	9.873	0.000	67882	50.0000	46.81
	14 ETHYLBENZENE	12.765	12.765	0.000	5148	50.0000	46.76
	15 M/P-XYLENE	12.927	12.927	0.000	121551	100.000	95.33
	16 O-XYLENE	13.873	13.873	0.000	63859	50.0000	47.02
$	18 BB(Surr)	15.382	15.382	0.000	2595	133.000	130.6
	21 nc11	16.701	16.701	0.000	4942	50.0000	

Data File: /chem3/pid1.i/20130522-1.b/0522a007.d

Date : 22-MAY-2013 11:25

Client ID: BCAL50

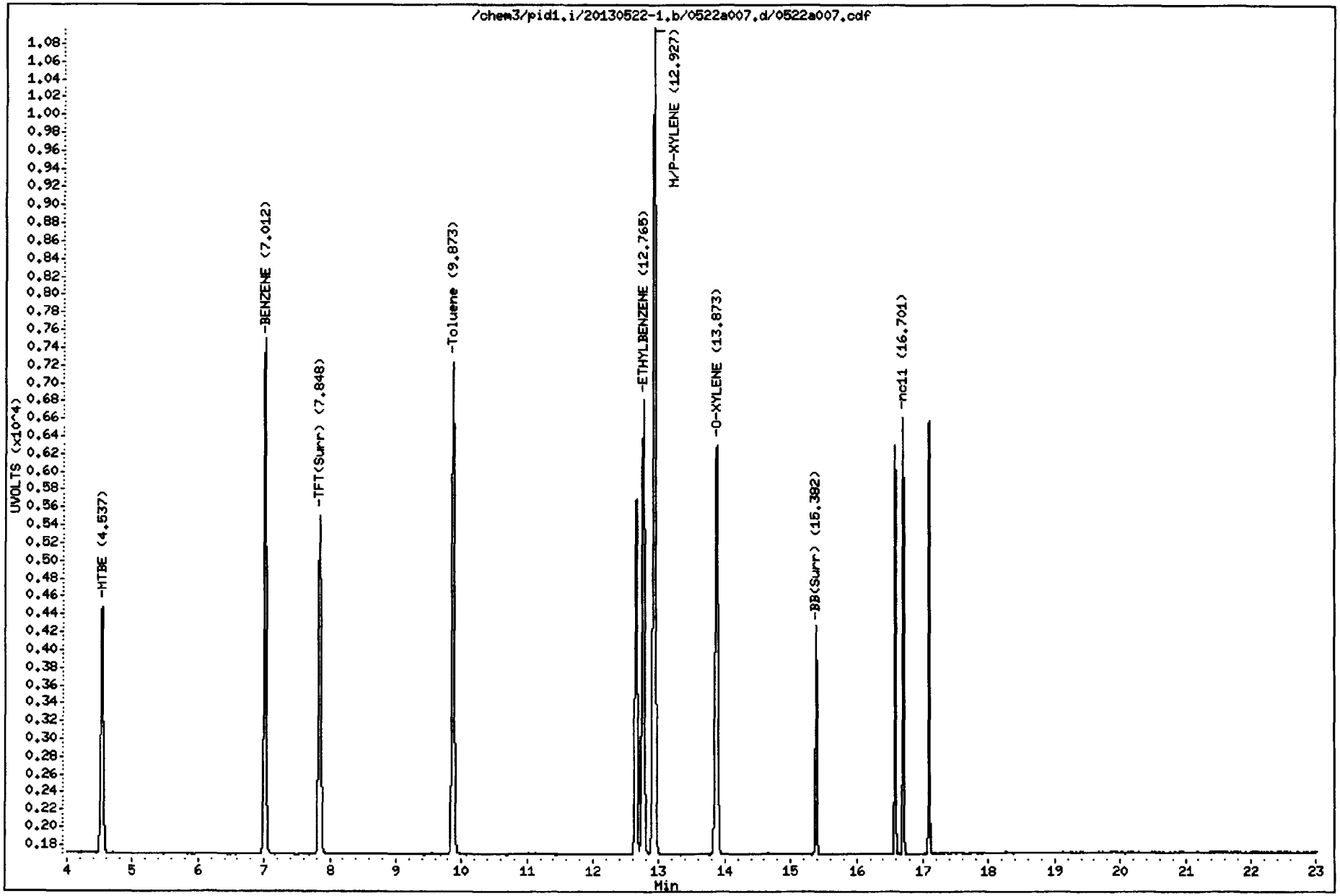
Sample Info: BCAL50

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a007.d

Page 1

Date : 22-MAY-2013 11:25

Client ID: BCAL50

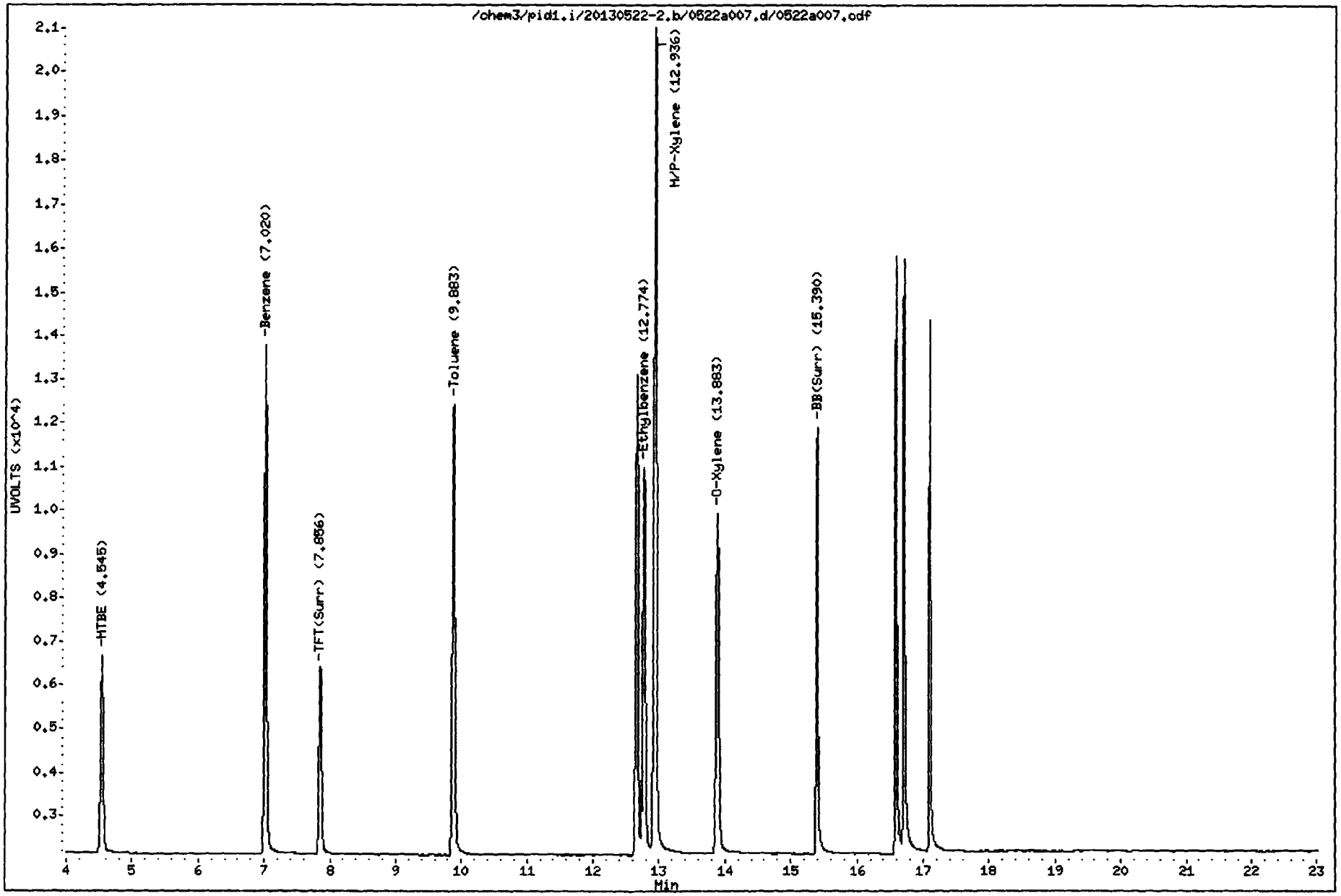
Instrument: pid1.i

Sample Info: BCAL50

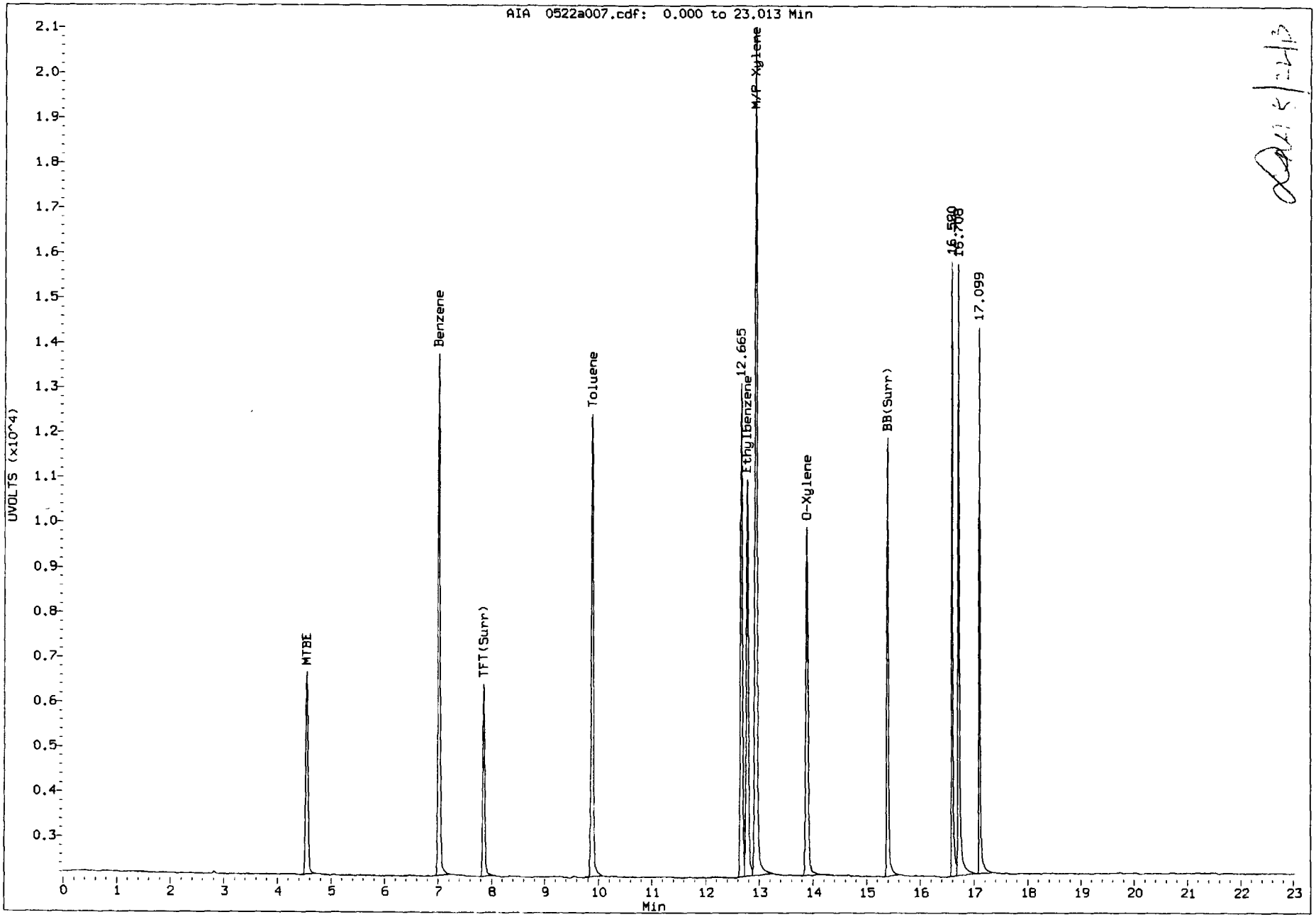
Operator: LH

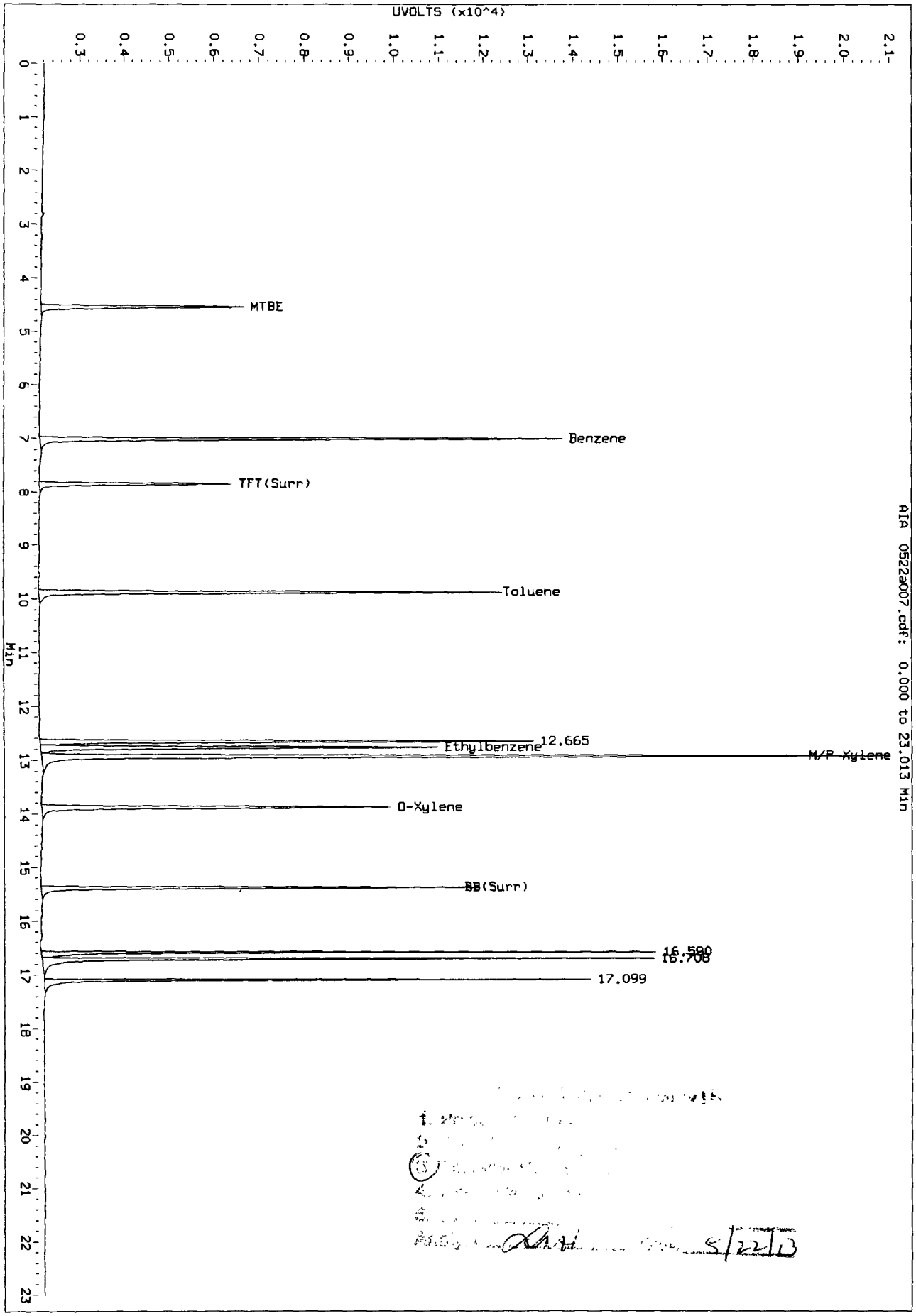
Column phase: RTX 502-2 PID

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a007.d/0522a007.cdf
Injection Date: 22-MAY-2013 11:25
Instrument: pid1.i
Client Sample ID: BCAL50




Data File: /chem3/pid1.i/20130522-2.b/0522a007.d/0522a007.cdf
Injection Date: 22-MAY-2013 11:25
Instrument: pid1.i
Client Sample ID: BCAL50
UVOLTS (x10^4)
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
Min
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
MTBE
Benzene
TFT(Surr)
Toluene
Ethylbenzene
12.665
M/P Xylene
O-Xylene
BB(Surr)
16.590
16.708
17.099
AIA 0522a007.cdf: 0.000 to 23.013 Min

5/22/13

XRH 5/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a008.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a008.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: BCAL100
Client ID: BCAL100
Injection Date: 22-MAY-2013 11:55
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.849	0.000	5017	64017	169.5	TFT(Surr)
15.382	0.000	3414	28686	171.8	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.78 to 17.90)	358114	875862	2.446
8015C 2MP-TMB	(4.18 to 16.21)	723723	914919	1.264
AK101 nC6-nC10	(4.68 to 15.11)	582885	837947	1.438
NWTPHG Tol-Nap	(9.78 to 18.90)	375093	875862	2.335

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
7.857	0.001	5697	176.7	TFT(Surr)
15.390	0.000	13113	181.4	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.022	0.000	23264	103.47	Benzene
9.884	-0.001	20740	104.68	Toluene
12.776	-0.003	17573	107.64	Ethylbenzene
12.938	-0.005	37670	209.35	M/P-Xylene
13.884	-0.004	15483	109.03	O-Xylene
4.547	0.001	9110	104.49	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a008.d
Lab Smp Id: BCAL100 Client Smp ID: BCAL100
Inj Date : 22-MAY-2013 11:55
Operator : LH Inst ID: pid1.i
Smp Info : BCAL100
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 15:26 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 11:55 Cal File: 0522a008.d
Als bottle: 1 Calibration Sample, Level: 8
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
		**					
6	MTBE	4.539	4.539	0.000	76970	100.000	91.12
9	BENZENE	7.014	7.014	0.000	137016	100.000	93.84
$ 10	TFT(Surr)	7.849	7.849	0.000	5017	178.000	169.5
12	Toluene	9.875	9.875	0.000	131470	100.000	90.66
14	ETHYLBENZENE	12.767	12.767	0.000	9866	100.000	89.61
15	M/P-XYLENE	12.930	12.930	0.000	233700	200.000	183.3
16	O-XYLENE	13.876	13.876	0.000	122598	100.000	90.28
$ 18	BB(Surr)	15.382	15.382	0.000	3414	178.000	171.8
21	nc11	16.702	16.702	0.000	9535	100.000	

Data File: /chem3/pid1.i/20130522-1.b/0522a008.d

Date : 22-MAY-2013 11:55

Client ID: BCAL100

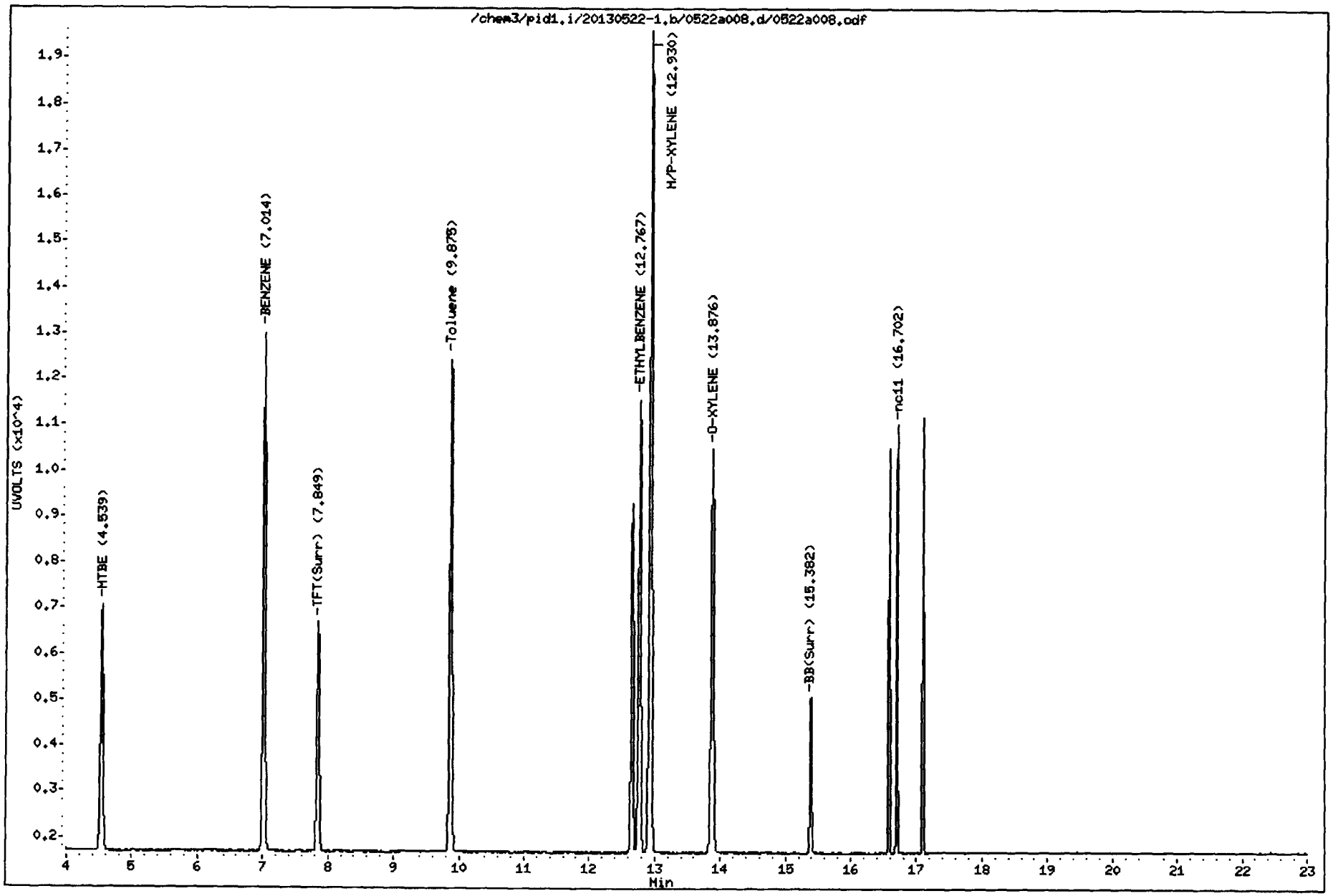
Sample Info: BCAL100

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a008.d

Date : 22-MAY-2013 11:55

Client ID: BCAL100

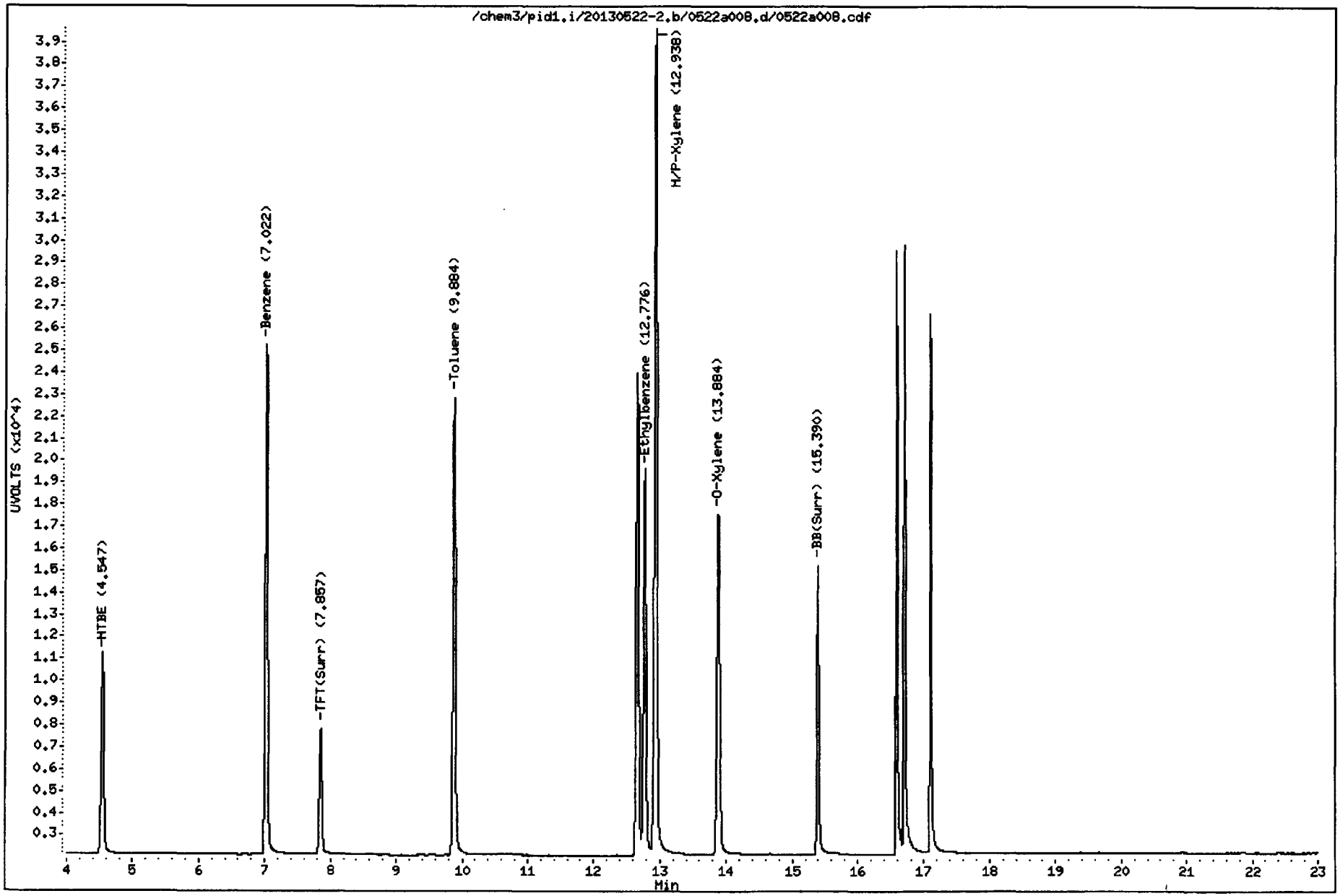
Sample Info: BCAL100

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



JKH 5/22/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130522-1.b/0522a009.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a009.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: BCAL200
Client ID: BCAL200
Injection Date: 22-MAY-2013 12:24
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.848	0.000	5680	72811	192.0	TFT(Surr)
15.383	0.000	3864	32720	194.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.78 to 17.90)	358114	1723795	4.814
8015C 2MP-TMB	(4.18 to 16.21)	723723	1791026	2.475
AK101 nC6-nC10	(4.68 to 15.11)	582885	1642170	2.817
NWTPHG Tol-Nap	(9.78 to 18.90)	375093	1723795	4.596

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
7.856	0.000	6454	200.2	TFT(Surr)
15.391	0.000	15123	209.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.021	0.000	46248	205.70	Benzene
9.885	0.000	41824	211.09	Toluene
12.778	0.000	35277	216.08	Ethylbenzene
12.943	0.000	76231	423.66	M/P-Xylene
13.888	0.000	31715	223.34	O-Xylene
4.545	0.000	17903	205.35	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a009.d
Lab Smp Id: BCAL200 Client Smp ID: BCAL200
Inj Date : 22-MAY-2013 12:24
Operator : LH Inst ID: pid1.i
Smp Info : BCAL200
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 15:26 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 12:24 Cal File: 0522a009.d
Als bottle: 1 Calibration Sample, Level: 9
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ng/mL)	AMOUNTS ON-COL (ng/mL)
	6 MTBE	4.538	4.538	0.000	148855	200.000	176.2
	9 BENZENE	7.014	7.014	0.000	266241	200.000	182.4
$	10 TFT(Surr)	7.848	7.848	0.000	5680	200.000	192.0
	12 Toluene	9.877	9.877	0.000	256545	200.000	176.9
	14 ETHYLBENZENE	12.770	12.770	0.000	19235	200.000	174.7
	15 M/P-XYLENE	12.935	12.935	0.000	460498	400.000	361.2
	16 O-XYLENE	13.879	13.879	0.000	240735	200.000	177.3
$	18 BB(Surr)	15.383	15.383	0.000	3864	200.000	194.4
	21 nc11	16.704	16.704	0.000	18792	200.000	

Data File: /chem3/pid1.i/20130522-1.b/0522a009.d

Date : 22-MAY-2013 12:24

Client ID: BCAL200

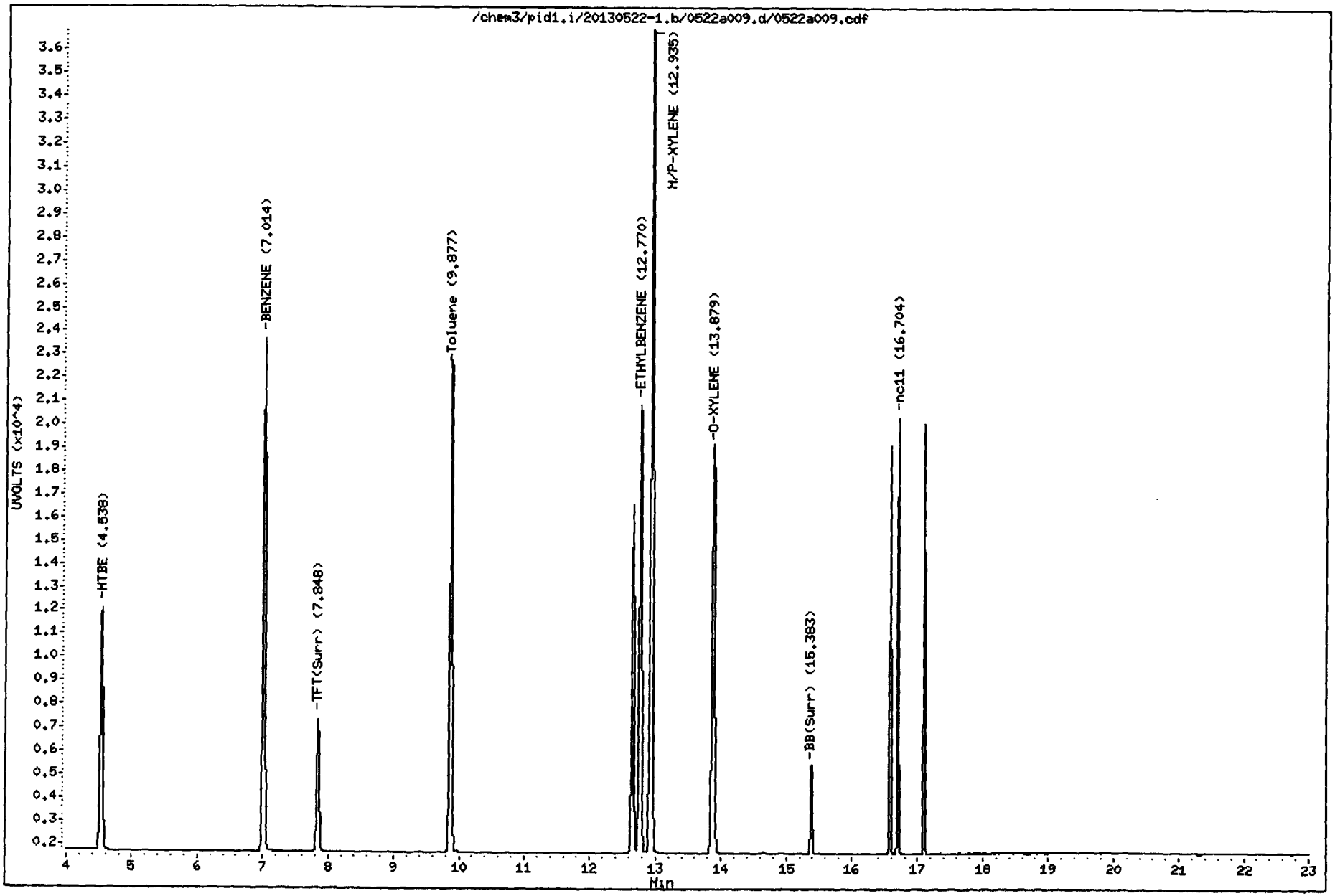
Sample Info: BCAL200

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a009.d

Date : 22-MAY-2013 12:24

Client ID: BCAL200

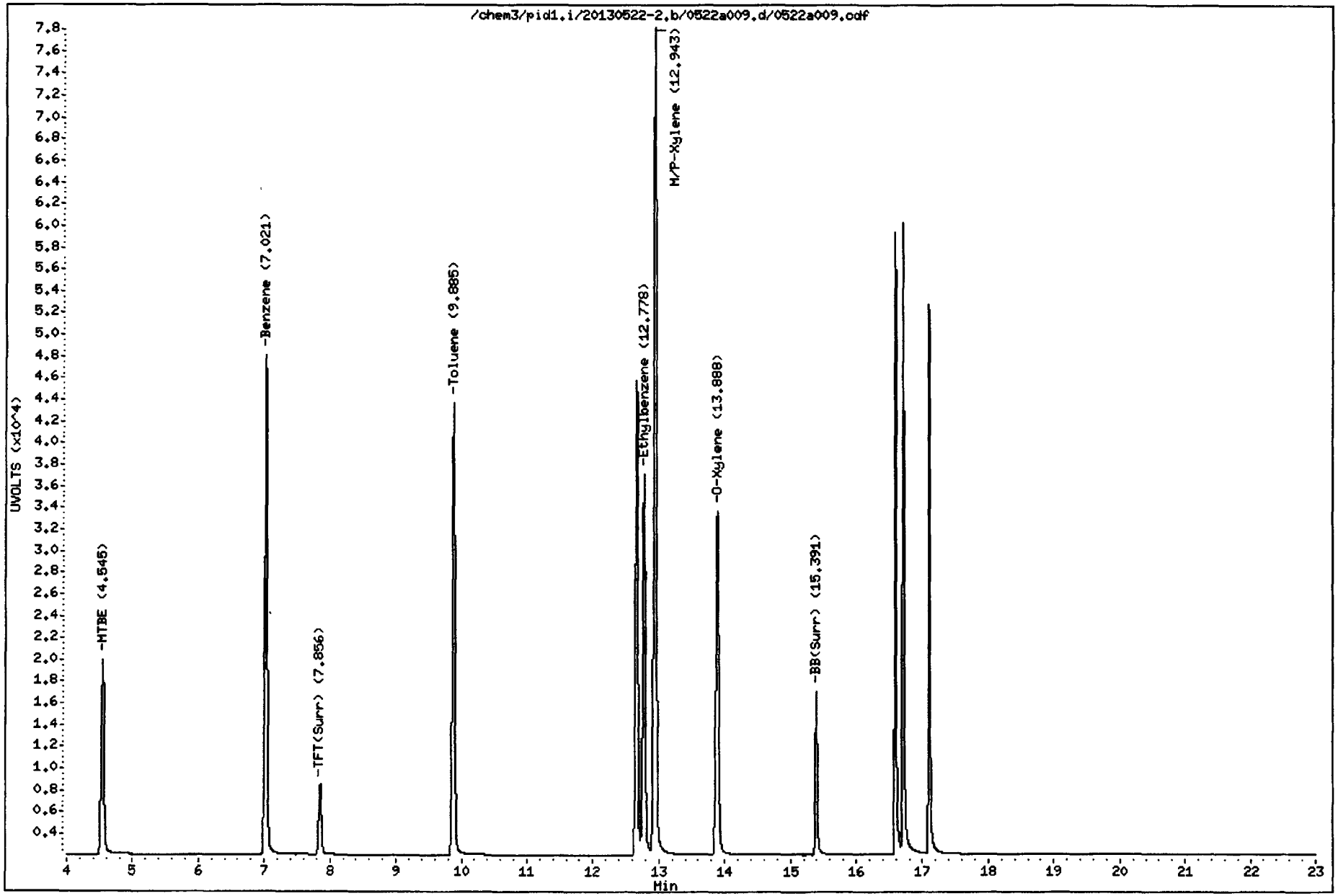
Sample Info: BCAL200

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Analytical Resources Inc.
BETX/Gas Quantitation Report

5/22/13

Data file 1: /chem3/pid1.i/20130522-1.b/0522a010.d
Data file 2: /chem3/pid1.i/20130522-2.b/0522a010.d
Method: /chem3/pid1.i/20130522-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: ICV25
Client ID: ICV25
Injection Date: 22-MAY-2013 12:53
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.849	0.001	2850	36275	96.3	TFT(Surr)
15.383	0.000	1968	16393	99.0	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.78 to 17.90)	358114	224528	0.627
8015C 2MP-TMB	(4.18 to 16.21)	723723	231562	0.320
AK101 nC6-nC10	(4.68 to 15.11)	582885	212642	0.365
NWTPHG Tol-Nap	(9.78 to 18.90)	375093	224528	0.599

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
7.857	0.001	3153	97.8	TFT(Surr)
15.390	-0.001	7281	100.7	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.021	-0.001	5554	24.70	Benzene
9.883	-0.002	4945	24.96	Toluene
12.774	-0.004	4229	25.90	Ethylbenzene
12.936	-0.008	9045	50.27	M/P-Xylene
13.884	-0.004	3733	26.29	O-Xylene
4.546	0.001	2105	24.14	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Analytical Resources, Inc.

Data file : /chem3/pid1.i/20130522-1.b/0522a010.d
Lab Smp Id: ICV25 Client Smp ID: ICV25
Inj Date : 22-MAY-2013 12:53
Operator : LH Inst ID: pid1.i
Smp Info : ICV25
Misc Info : 13-
Comment :
Method : /chem3/pid1.i/20130522-1.b/FID.m
Meth Date : 22-May-2013 16:19 lanih Quant Type: ESTD
Cal Date : 22-MAY-2013 12:24 Cal File: 0522a009.d
Als bottle: 1 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: standard.sub
Target Version: 3.50
Processing Host: cserv3

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ng/mL)	CONCENTRATIONS FINAL (ug/L)
	6 MTBE	4.539	4.538	0.001	18919	22.3965	22.40
	9 BENZENE	7.013	7.014	-0.001	34225	23.4410	23.44
$	10 TFT(Surr)	7.849	7.848	0.001	2850	96.3146	96.31
	12 Toluene	9.874	9.877	-0.003	33117	22.8368	22.84
	14 ETHYLBENZENE	12.766	12.770	-0.004	2520	22.8895	22.89
	15 M/P-XYLENE	12.927	12.935	-0.008	59723	46.8403	46.84
	16 O-XYLENE	13.875	13.879	-0.004	31159	25.1396	25.14
$	18 BB(Surr)	15.383	15.383	0.000	1968	99.0411	99.04
	21 nc11	16.701	16.704	-0.003	2482		

Data File: /chem3/pid1.i/20130522-1.b/0522a010.d

Date : 22-MAY-2013 12:53

Client ID: ICV25

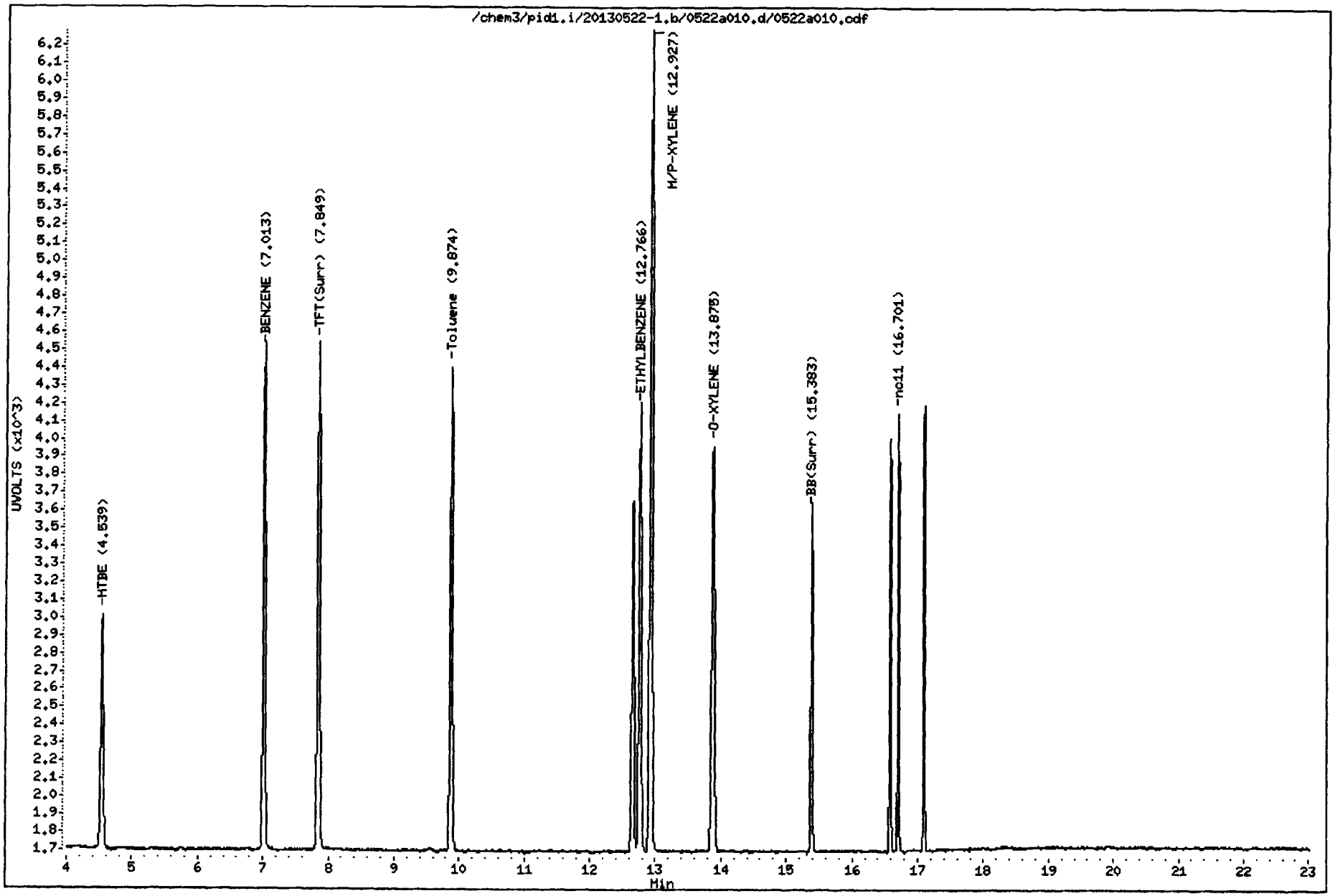
Sample Info: ICV25

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



Data File: /chem3/pid1.i/20130522-2.b/0522a010.d

Date : 22-MAY-2013 12:53

Client ID: ICV25

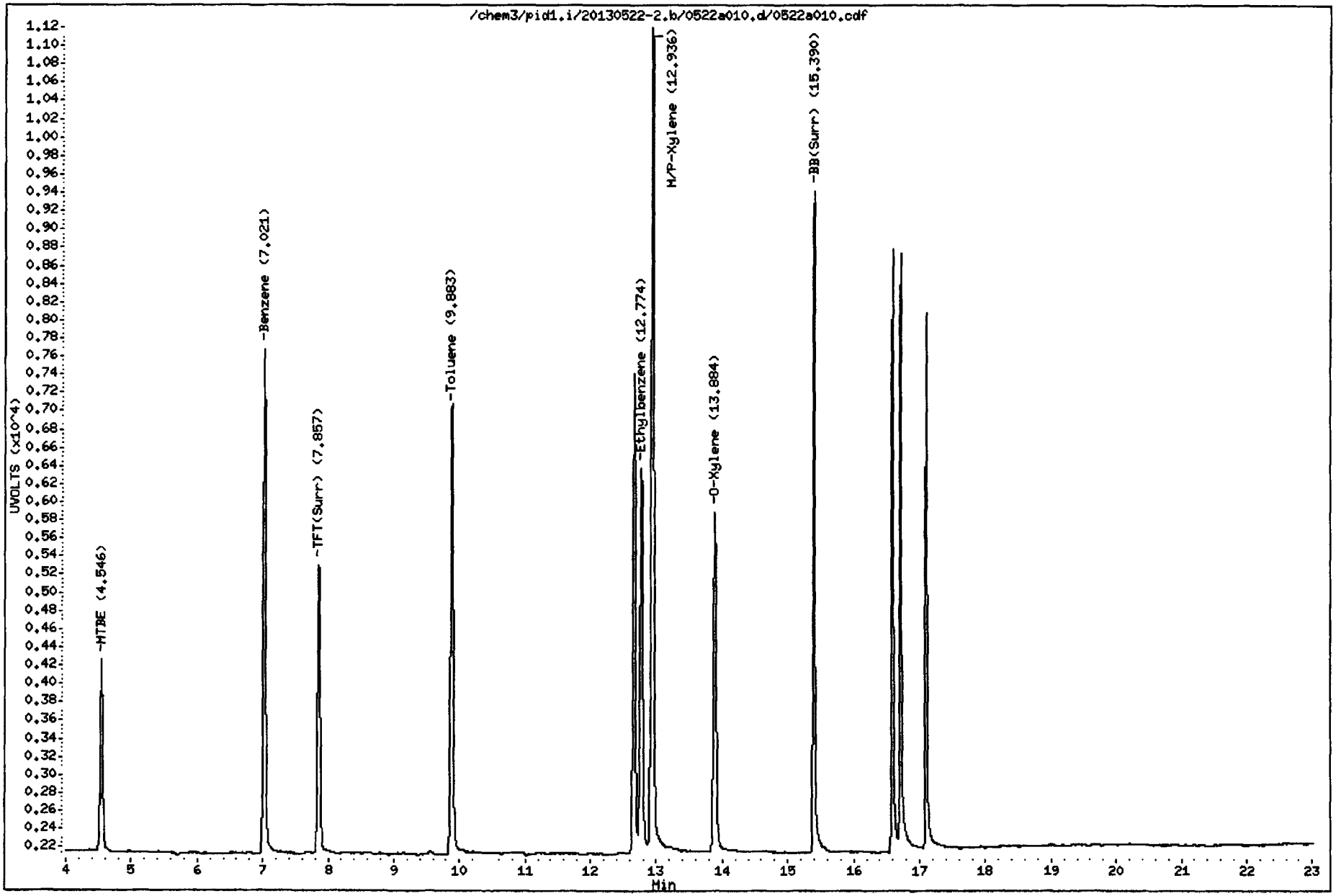
Sample Info: ICV25

Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: LH

Column diameter: 0.18



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	VWX65-1	3/13/12
SPEX	VW254-1	2/2/13	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 FIDconfirmation dropped as well for MTBE

Analyst: JW **Date:** 10/25/12

Reviewer: [signature] **Date:** 10/26/12

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	0.50000 Level 2	1.000 Level 3	5.000 Level 4	25.000 Level 5	50.000 Level 6	RRF	% RSD
	100.000 Level 7	200.000 Level 8						
1 MTBE	+++++	+++++	72.00000	75.40000	71.84000	72.14000		
	72.39000	68.24000					72.00167	3.161
2 Benzene	228	254	260	255	246	248		
	247	246					248	3.847
4 Toluene	256	234	210	224	220	219		
	220	216					225	6.342
5 Ethylbenzene	192	200	198	201	196	198		
	199	193					197	1.663
6 M/P-Xylene	216	208	212	220	215	217		
	218	215					215	1.653
7 O-Xylene	160	158	168	171	172	171		
	173	170					168	3.365

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	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	
1 NWTPHG	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
2 WAGAS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
3 AK101	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
4 8015GAS	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
5 2-Methylpentane	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-
6 MTBE	+++++	472	600	610	595	575	561	509	560	9.173	

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	

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)	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	+++++	<-

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

Page 1

Date : 23-OCT-2012 17:50

Client ID:

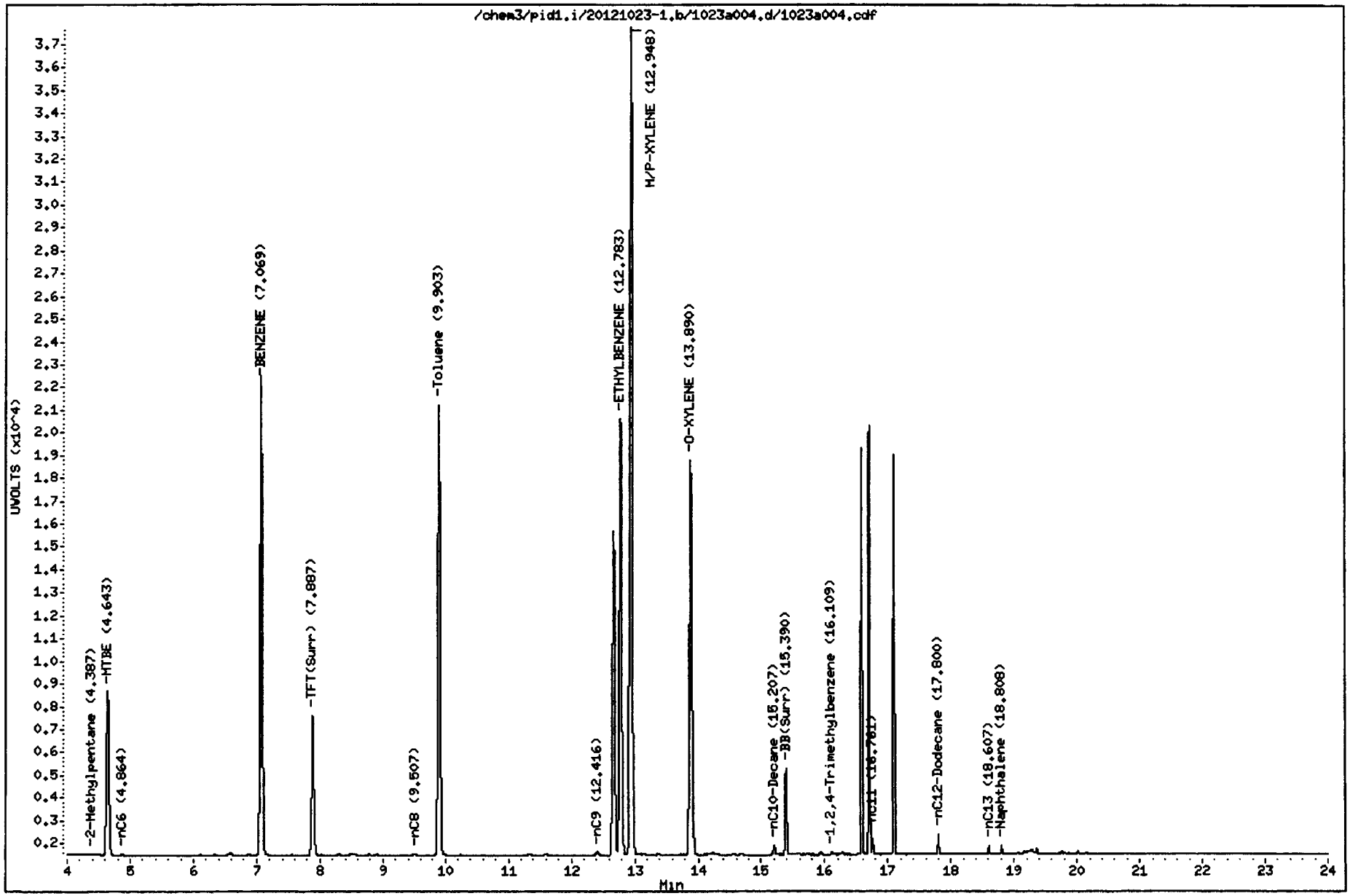
Instrument: pid1.i

Sample Info: B 200

Operator: PC/JW

Column phase: RTX 502-2 FID

Column diameter: 0.18



Data File: /ohem3/pid1.i/20121023-2.b/1023a004.d

Date : 23-OCT-2012 17:50

Client ID:

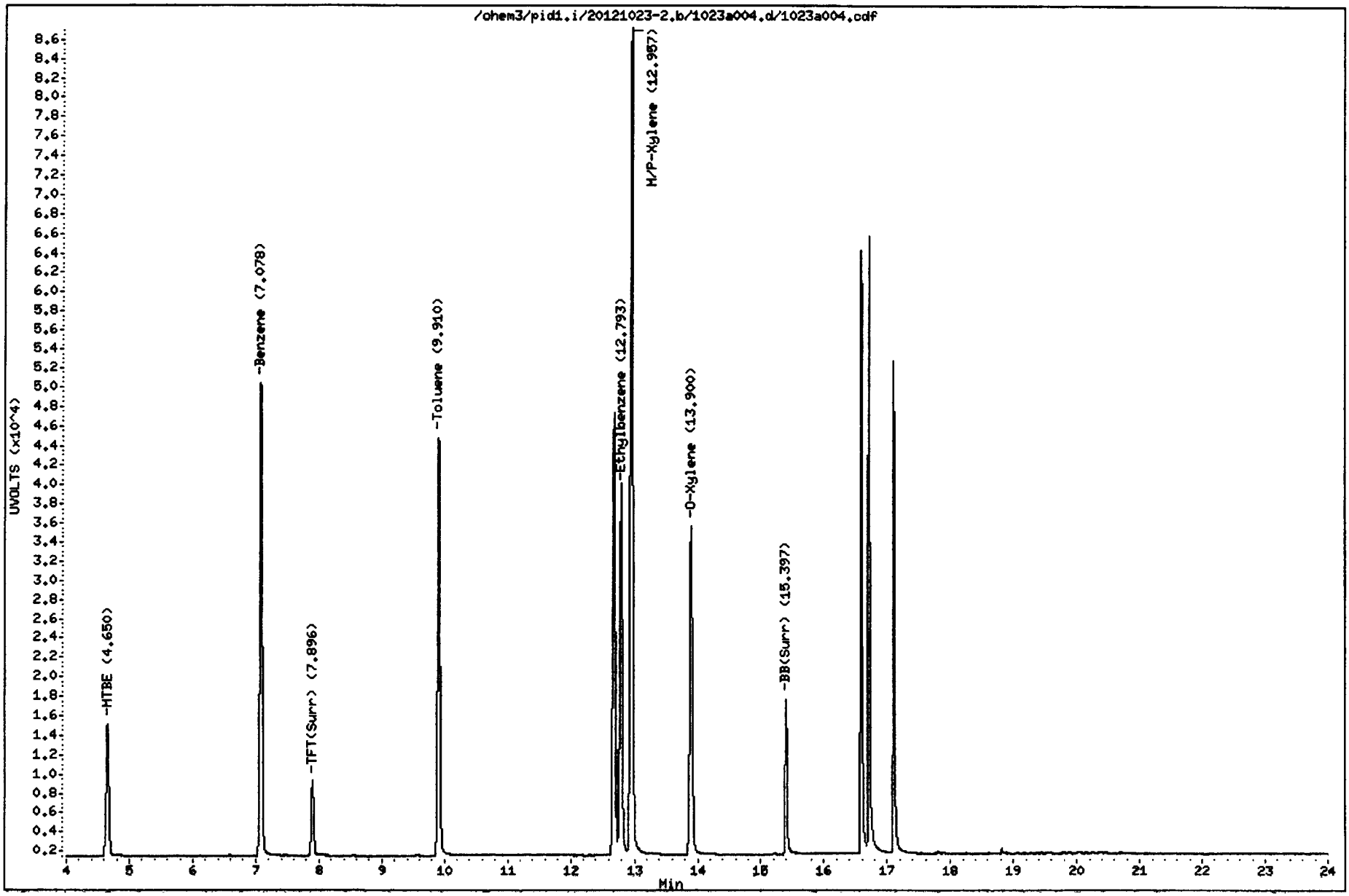
Sample Info: B 200

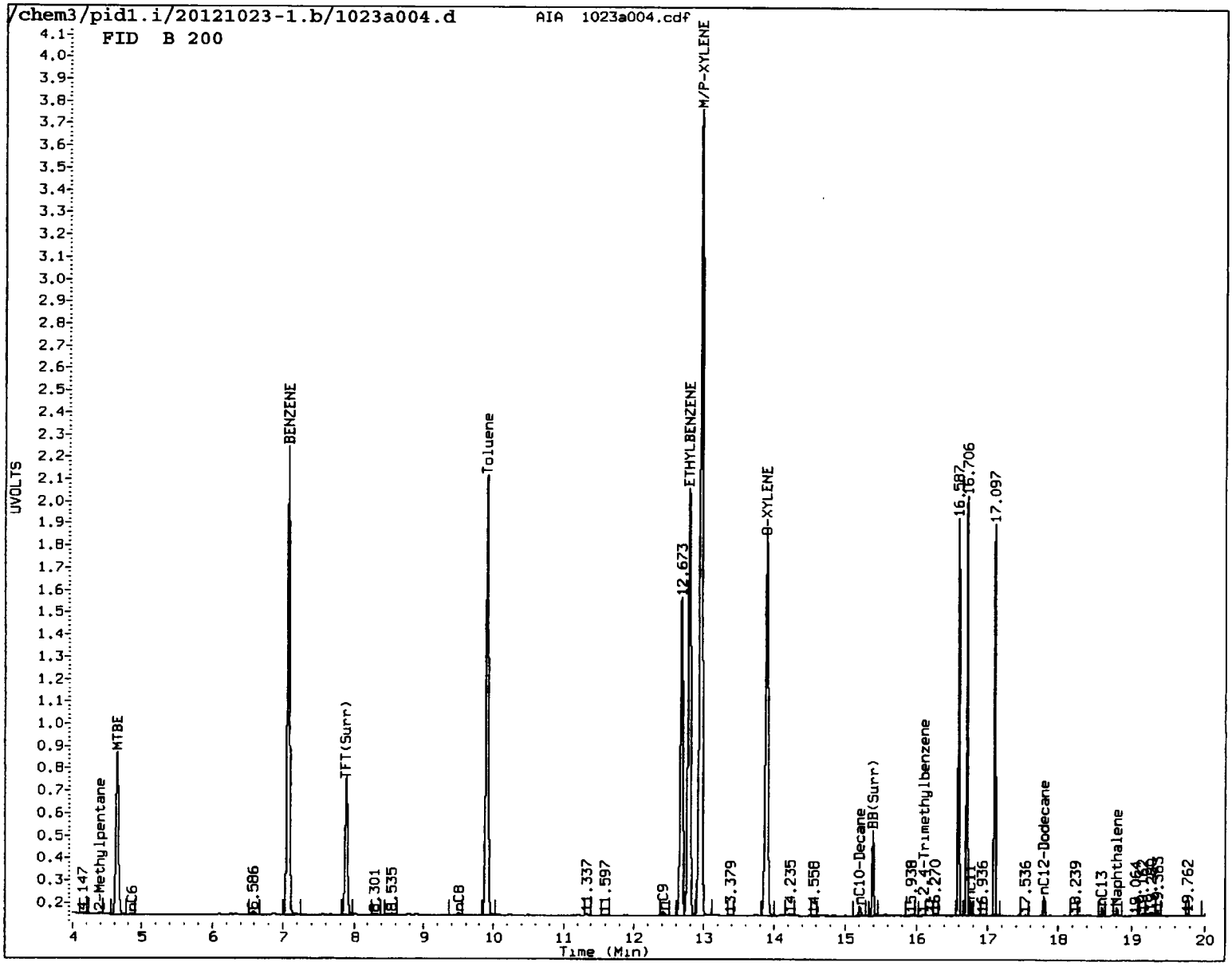
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

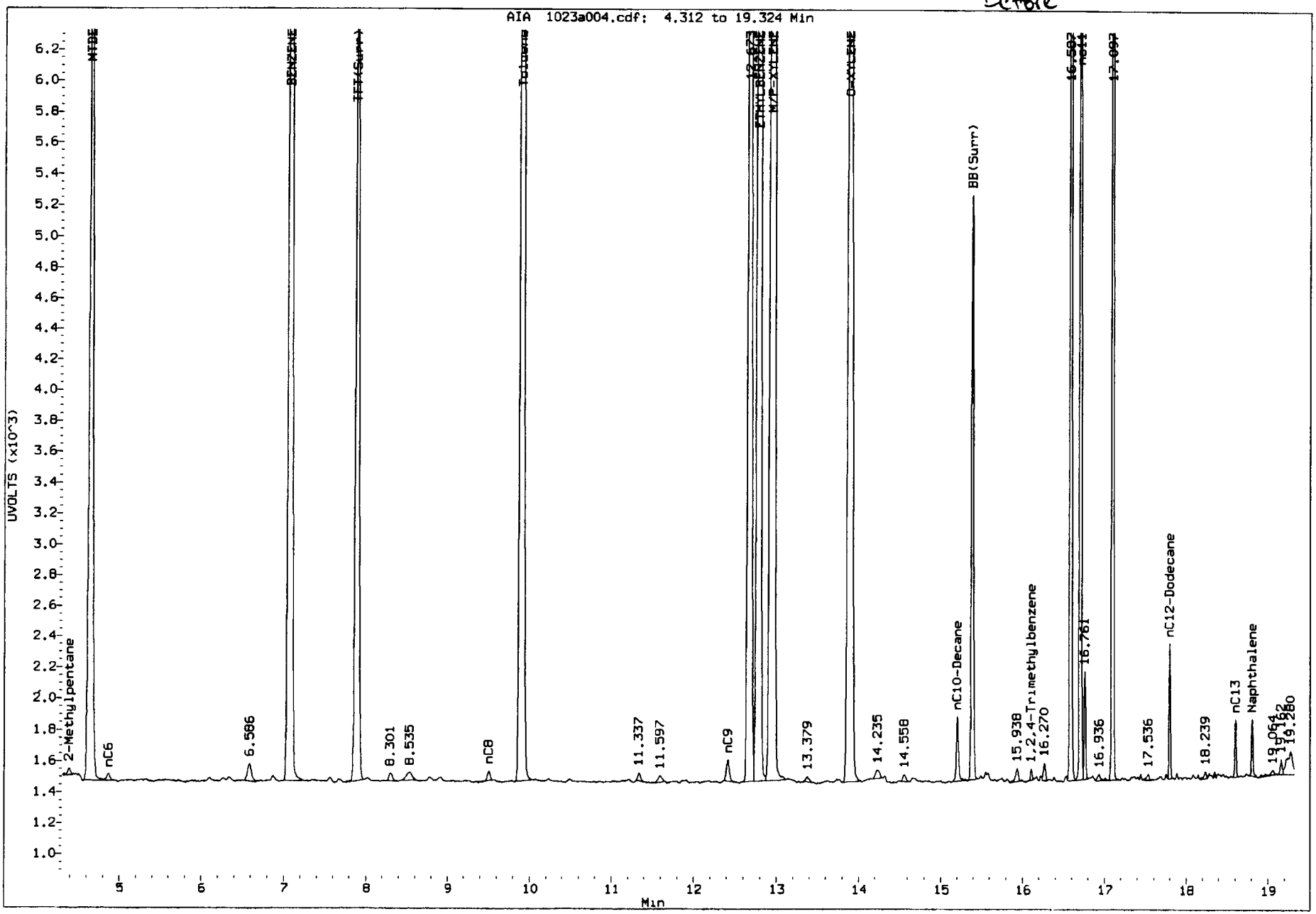
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

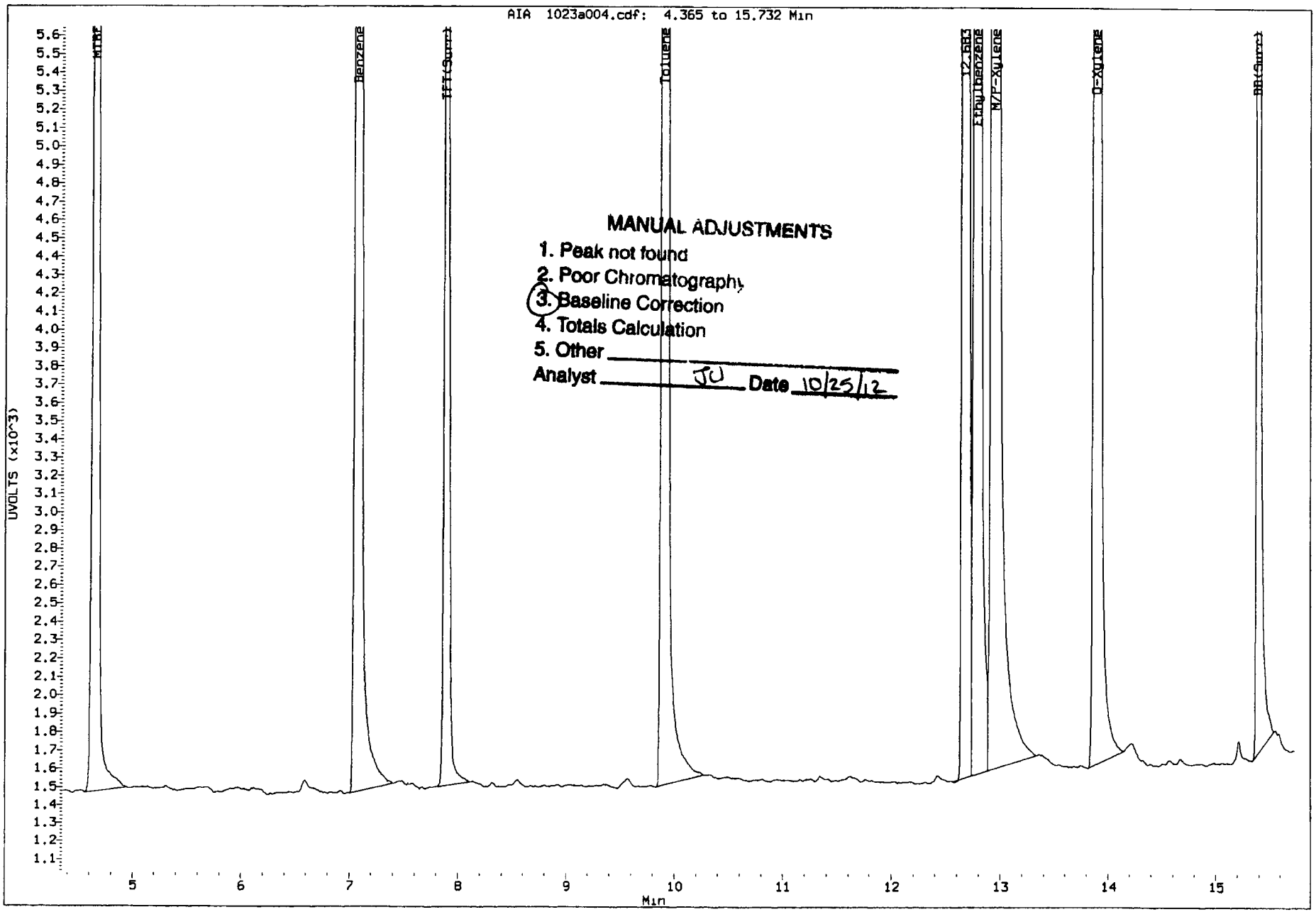
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a004.d/1023a004.cdf
Injection Date: 23-OCT-2012 17:50
Instrument: pid1.i
Client Sample ID:

Before

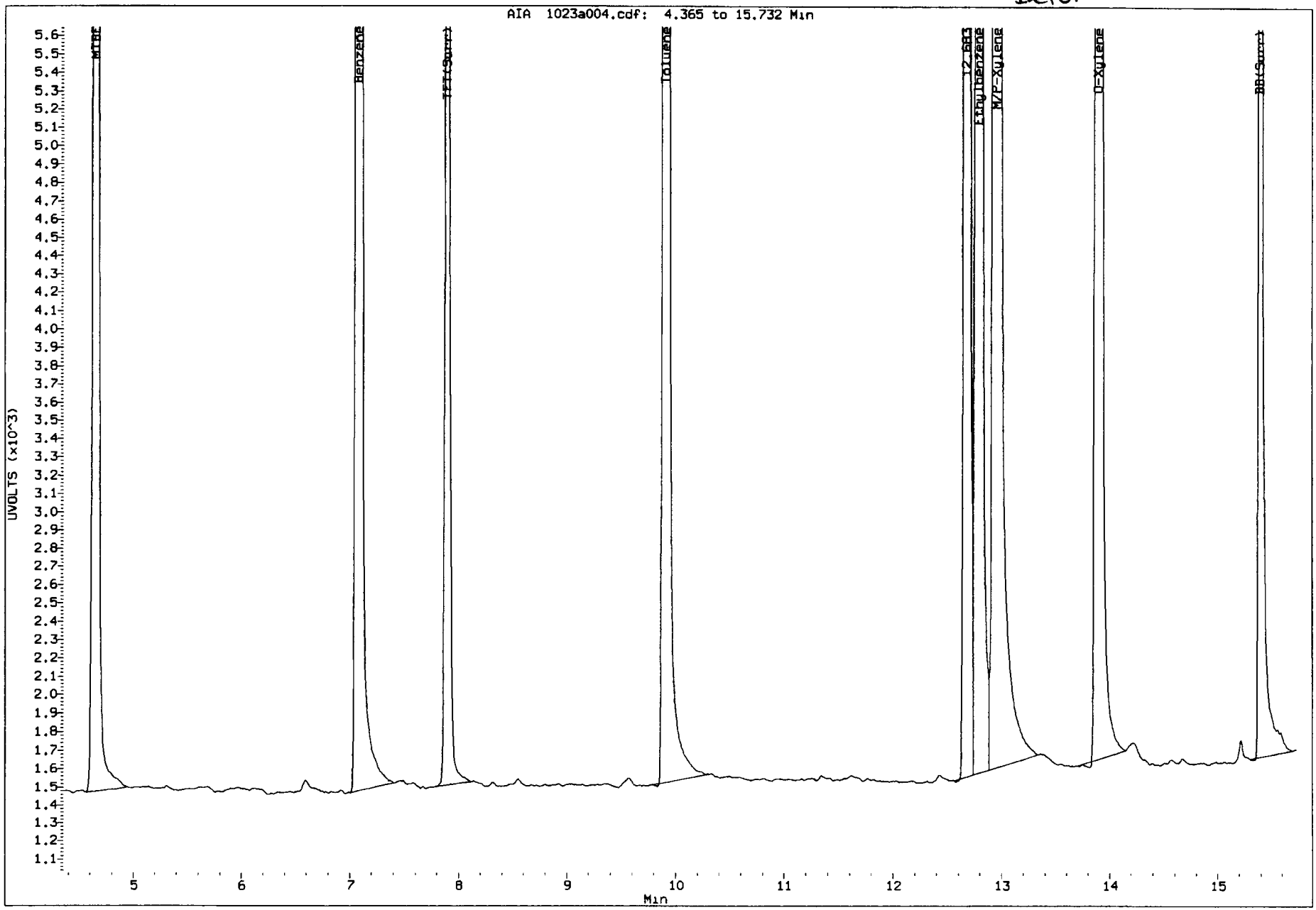


Data File: /chem3/pid1.i/20121023-2.b/1023a004.d/1023a004.cdf
Injection Date: 23-OCT-2012 17:50
Instrument: pid1.i
Client Sample ID:



Data File: /chem3/pid1.1/20121023-2.b/1023a004.d/1023a004.cdf
Injection Date: 23-OCT-2012 17:50
Instrument: pid1.1
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

Page 1

Date : 23-OCT-2012 18:20

Client ID:

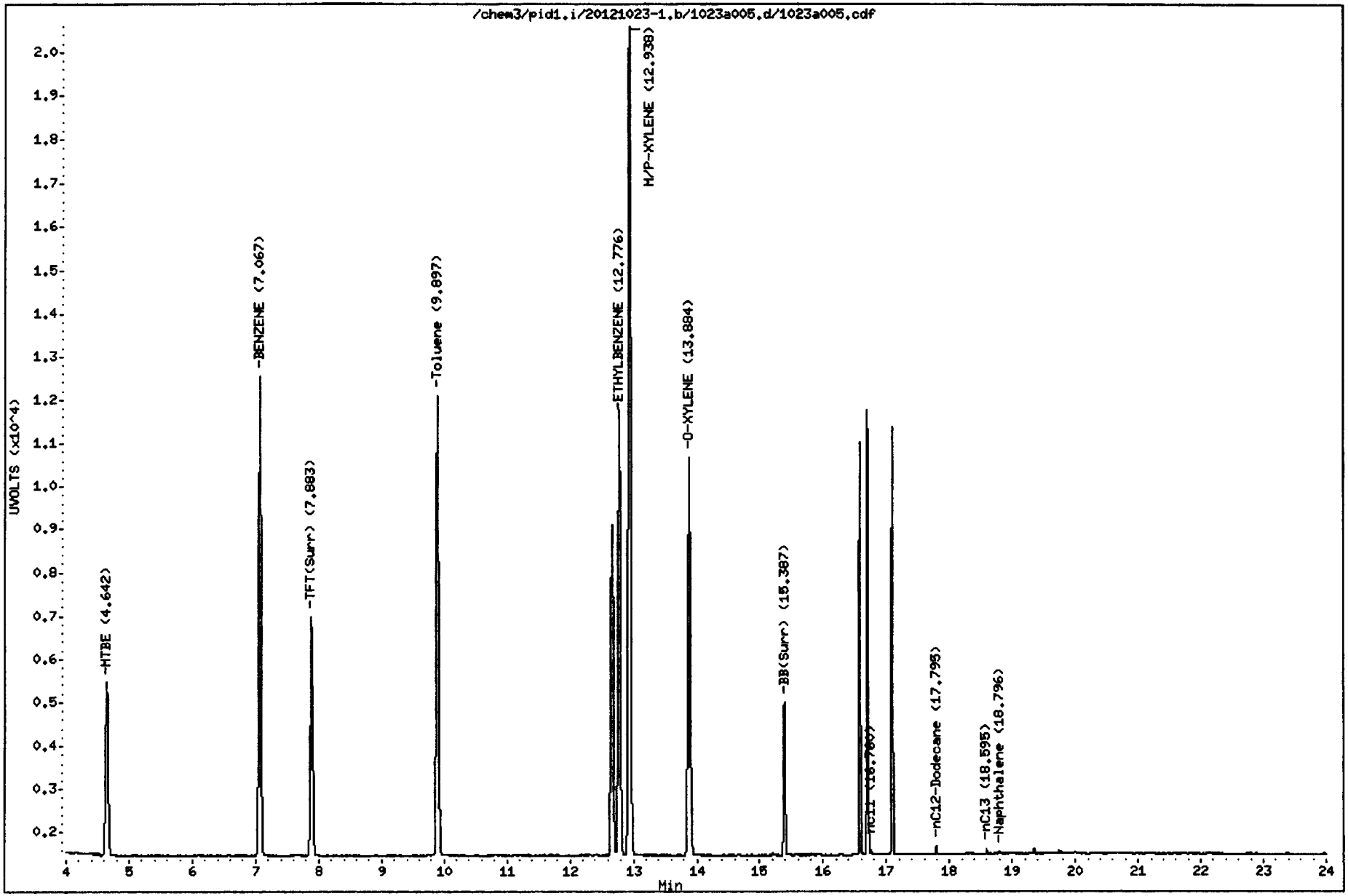
Instrument: pid1.i

Sample Info: B 100

Operator: PC/JW

Column phase: RTX 502-2 FID

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a005.d

Date : 23-OCT-2012 18:20

Client ID:

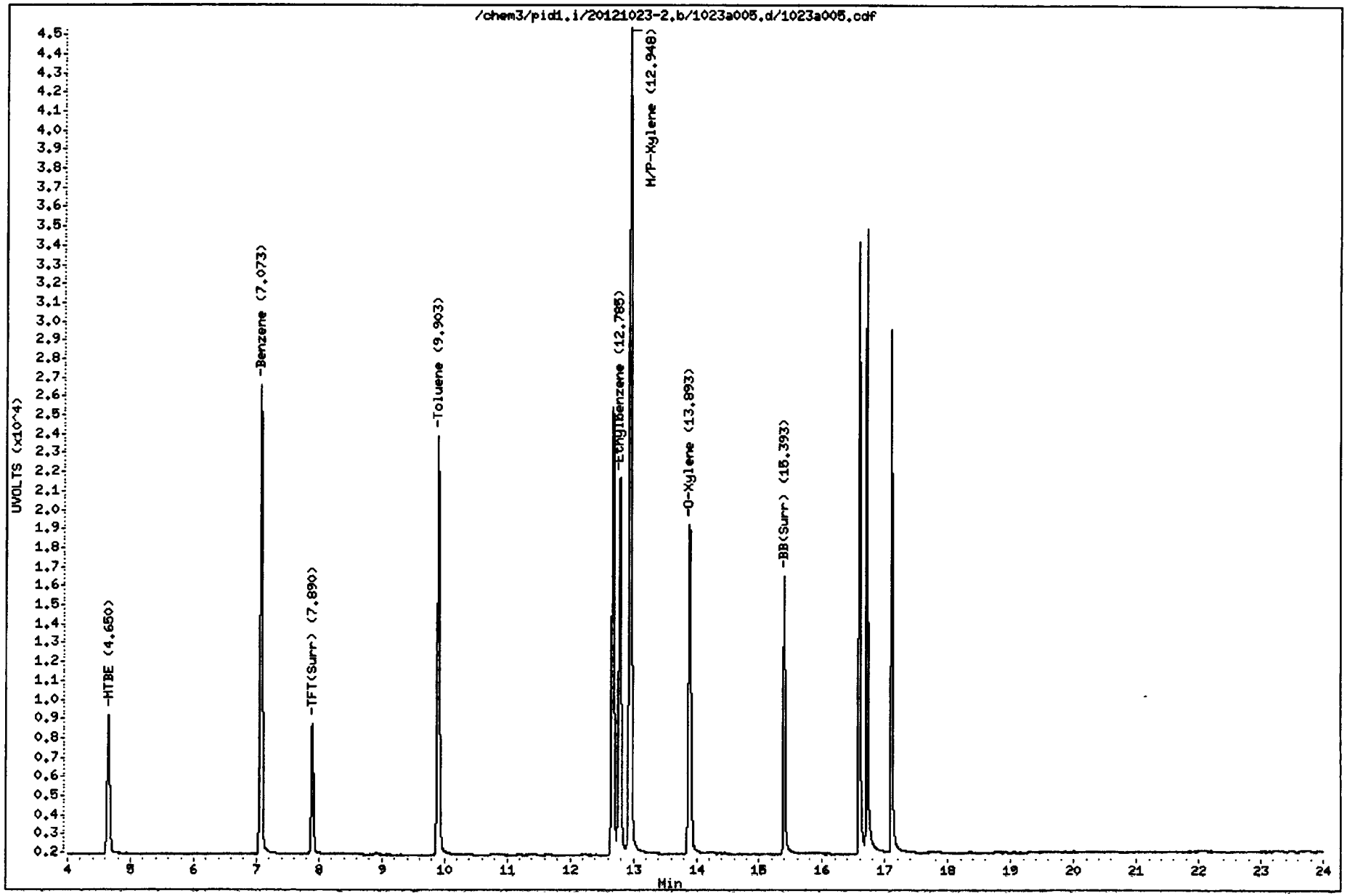
Sample Info: B 100

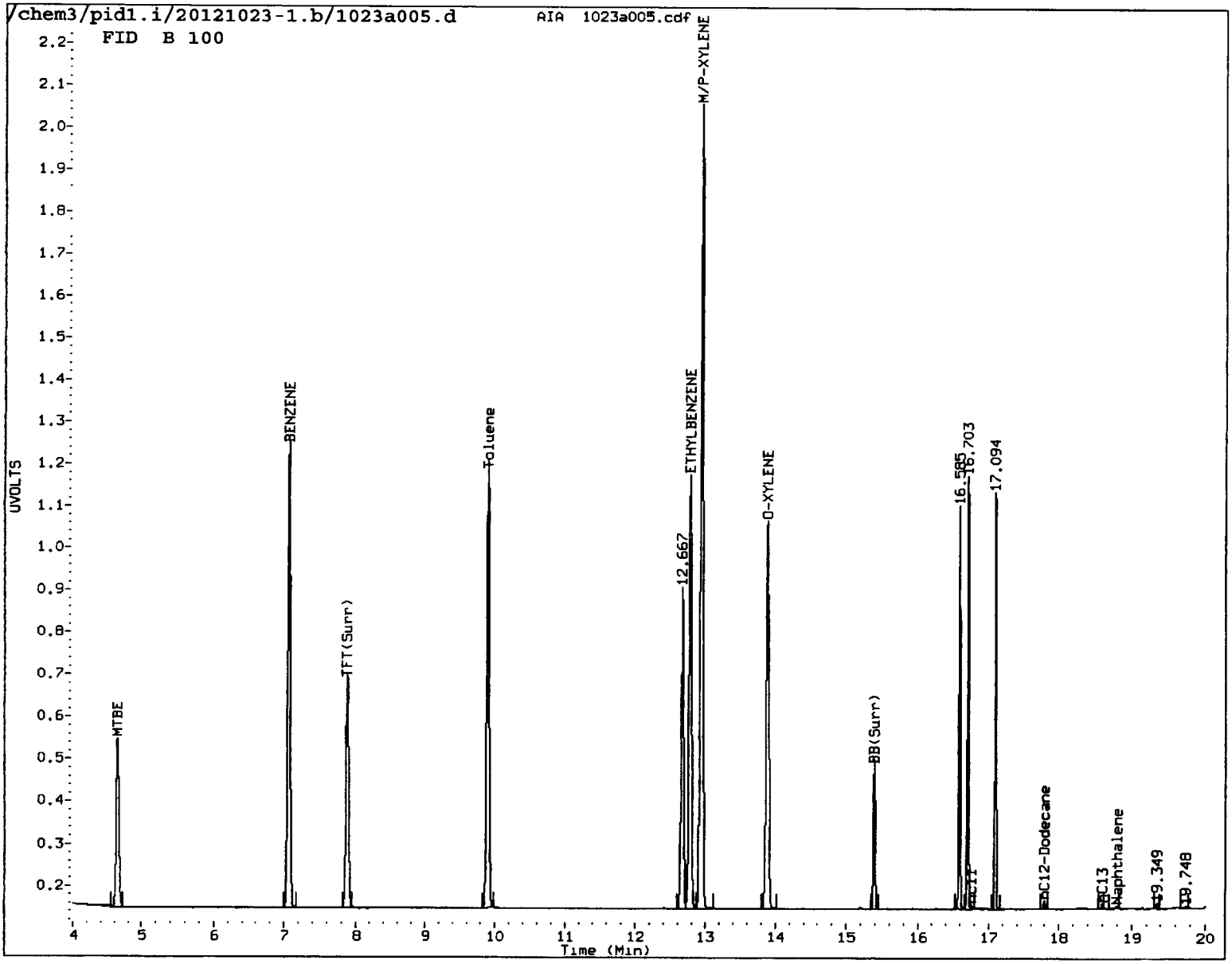
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

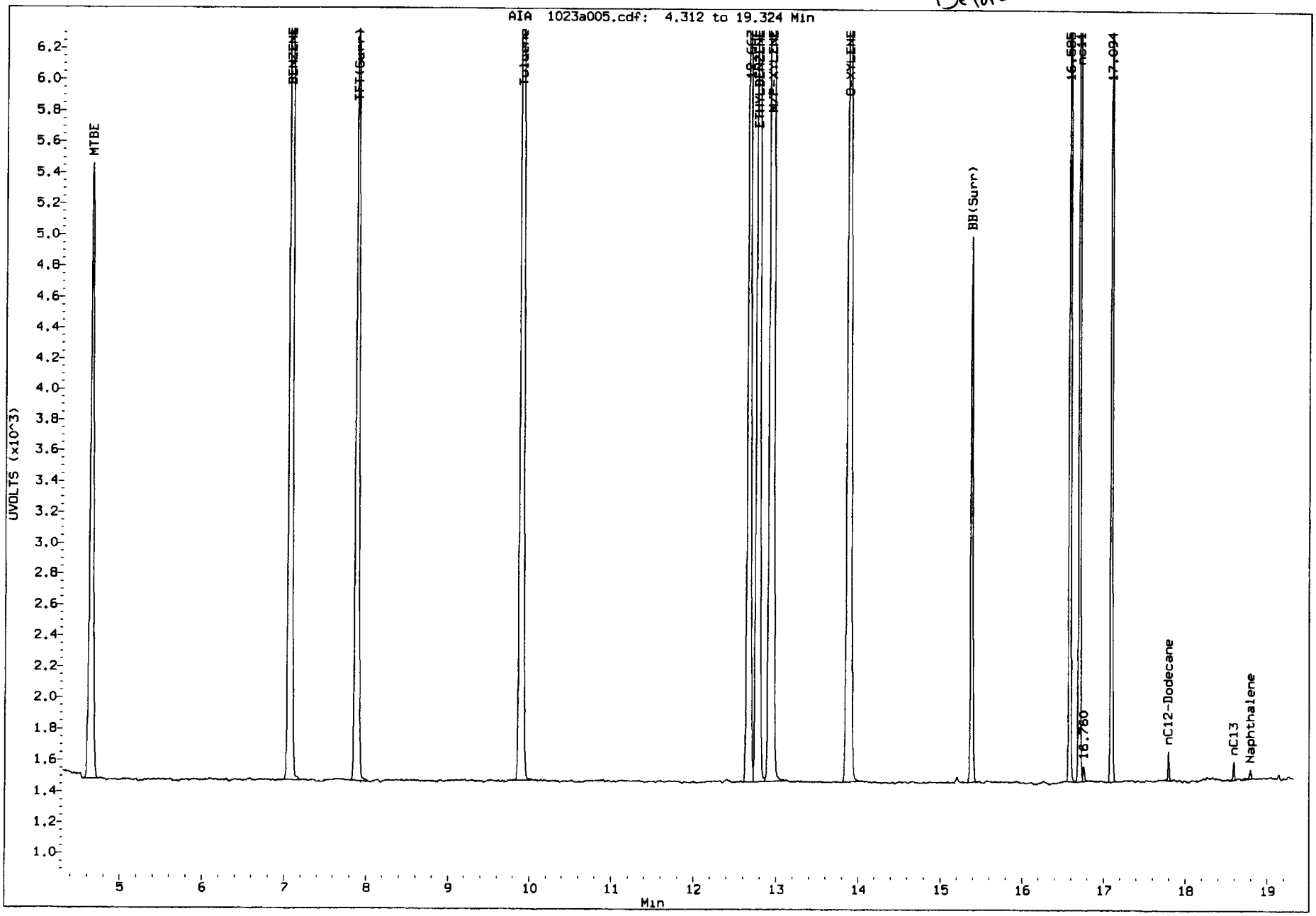
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

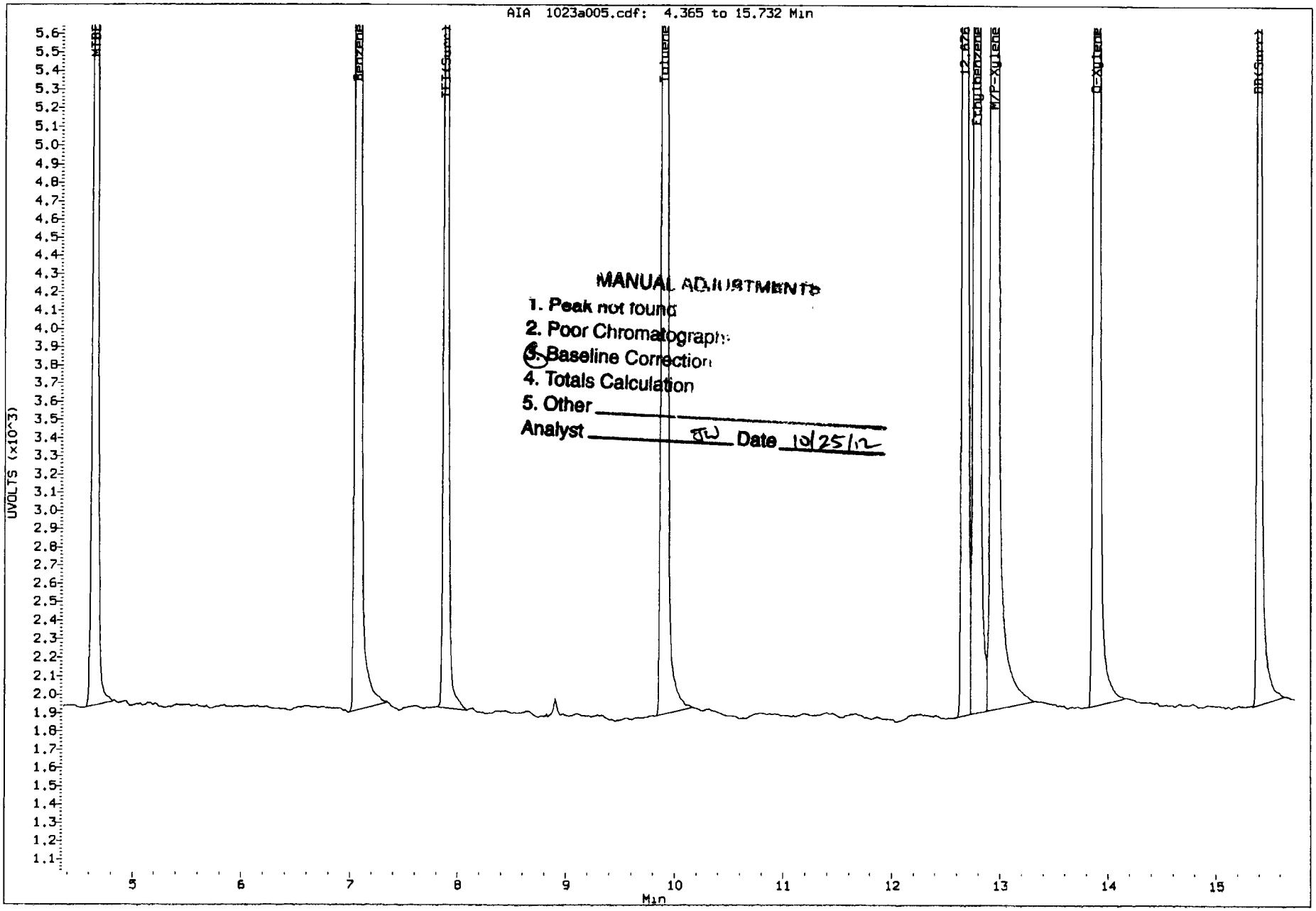
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/1023a005.d/1023a005.cdf
Injection Date: 23-OCT-2012 18:20
Instrument: pid1.i
Client Sample ID:

Before

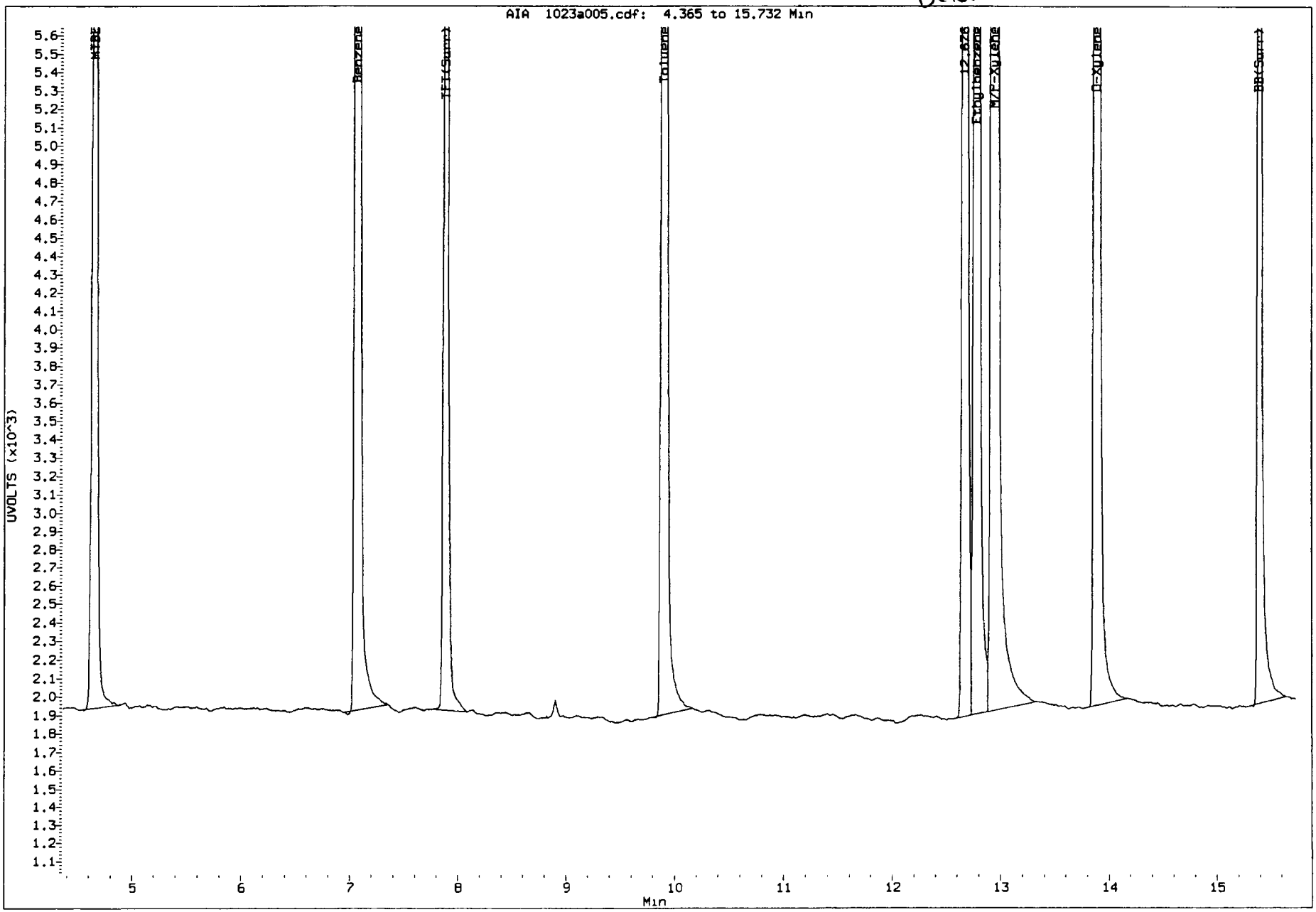


Data File: /chem3/pid1.i/20121023-2.b/1023a005.d/1023a005.cdf
Injection Date: 23-OCT-2012 18:20
Instrument: pid1.i
Client Sample ID:



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



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)

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

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/1023a006.d

Date : 23-OCT-2012 18:49

Client ID:

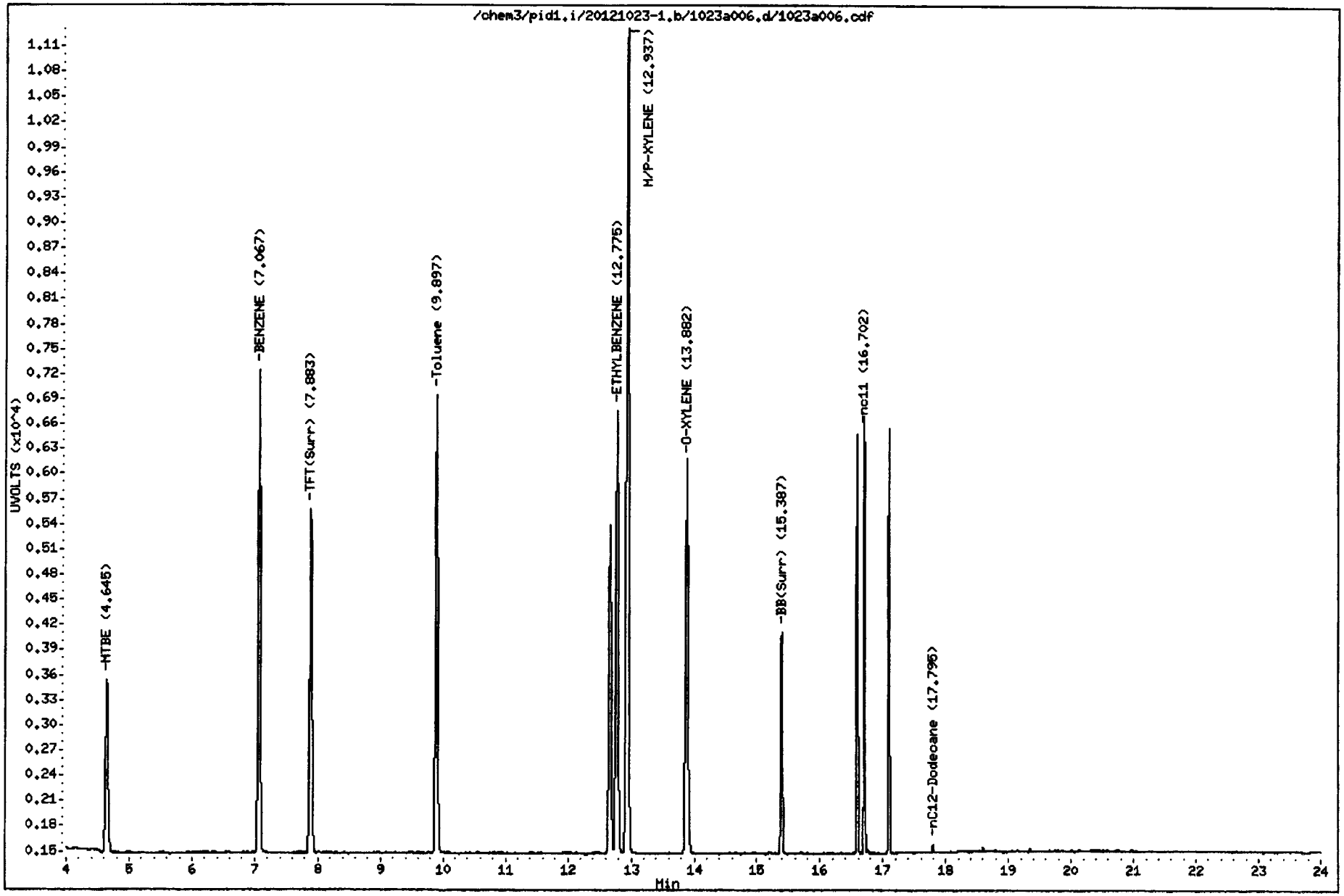
Sample Info: B 50

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a006.d

Date : 23-OCT-2012 18:49

Client ID:

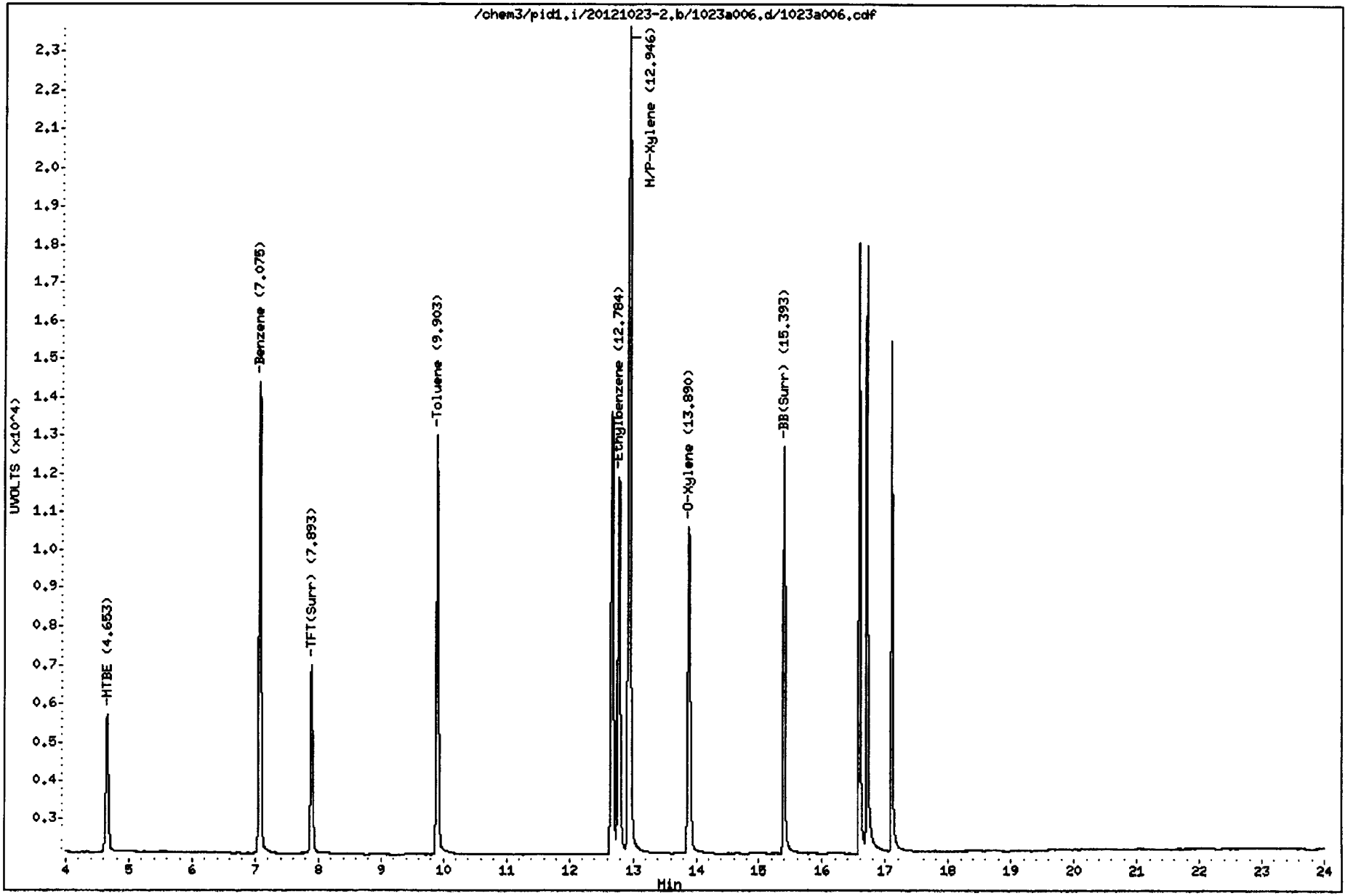
Sample Info: B 50

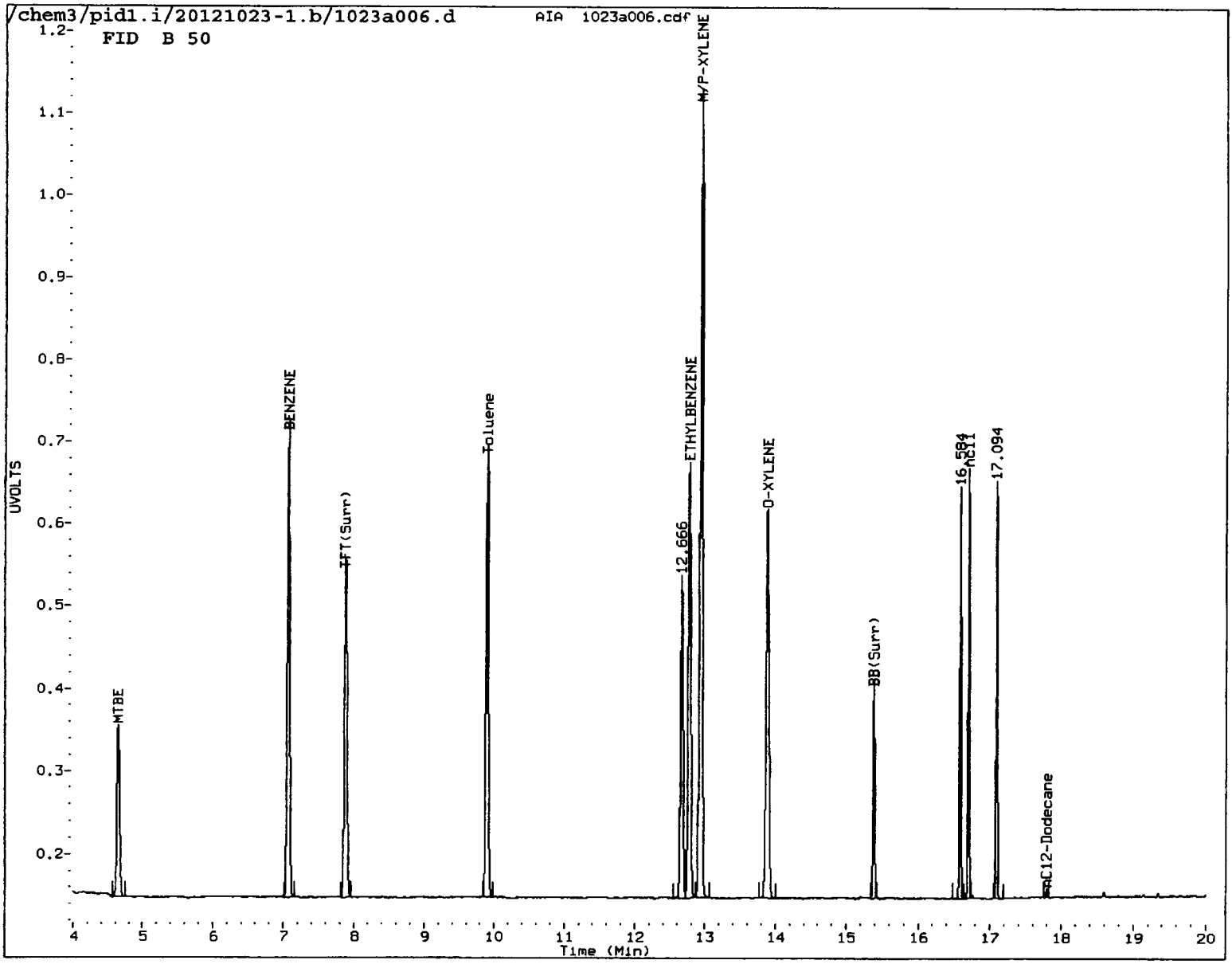
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

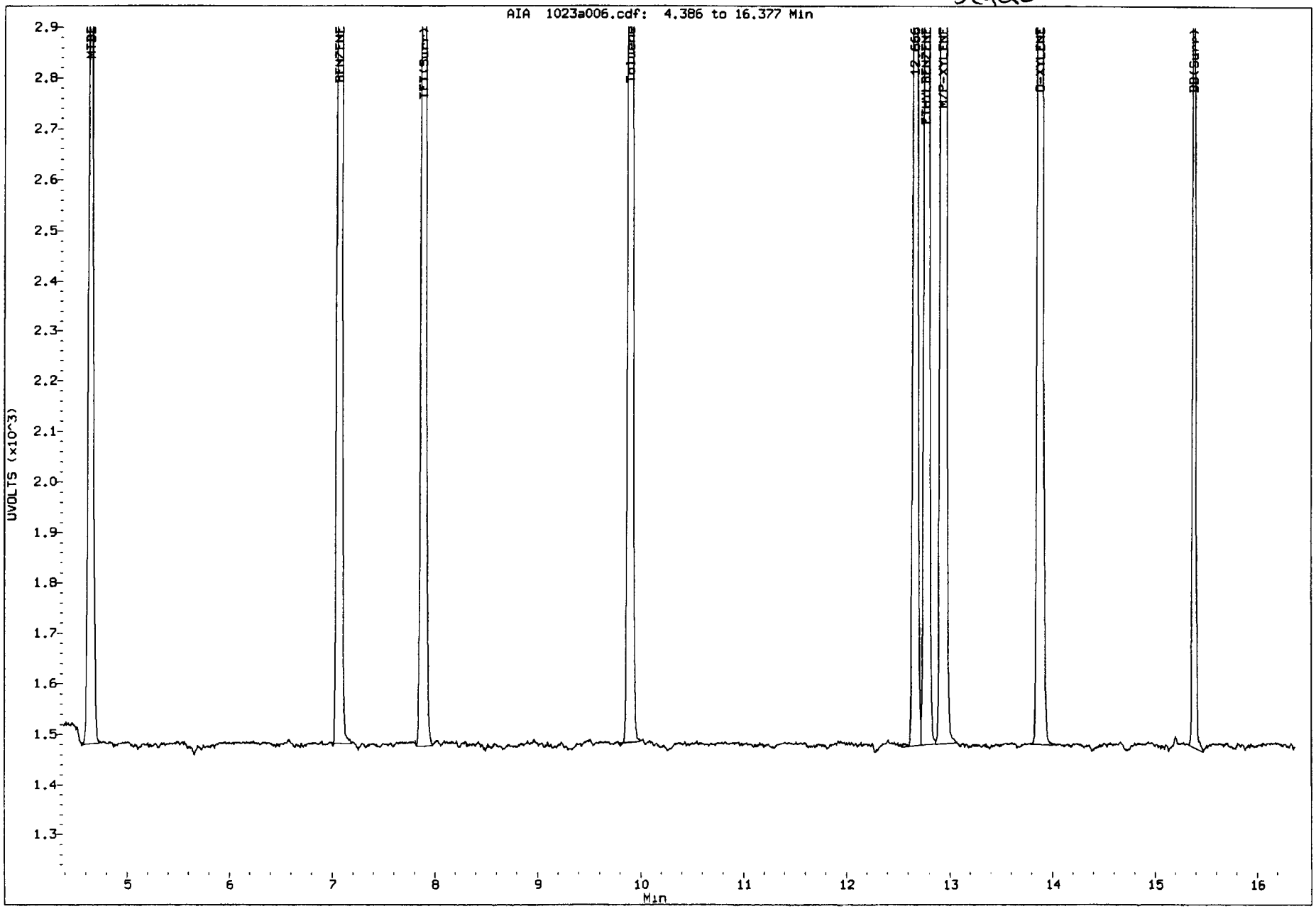
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

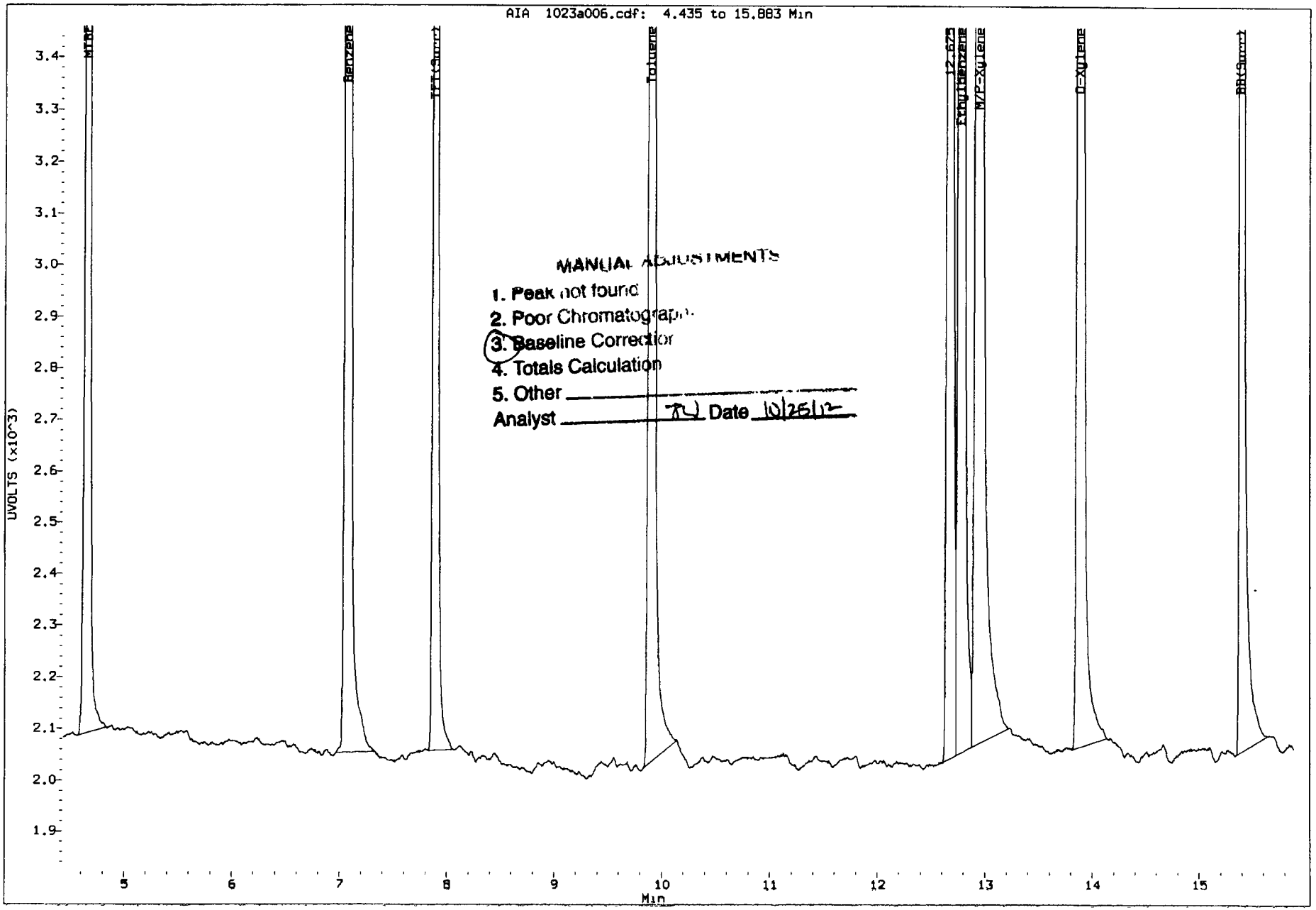
Analyst: JW Date: 10/25/12

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

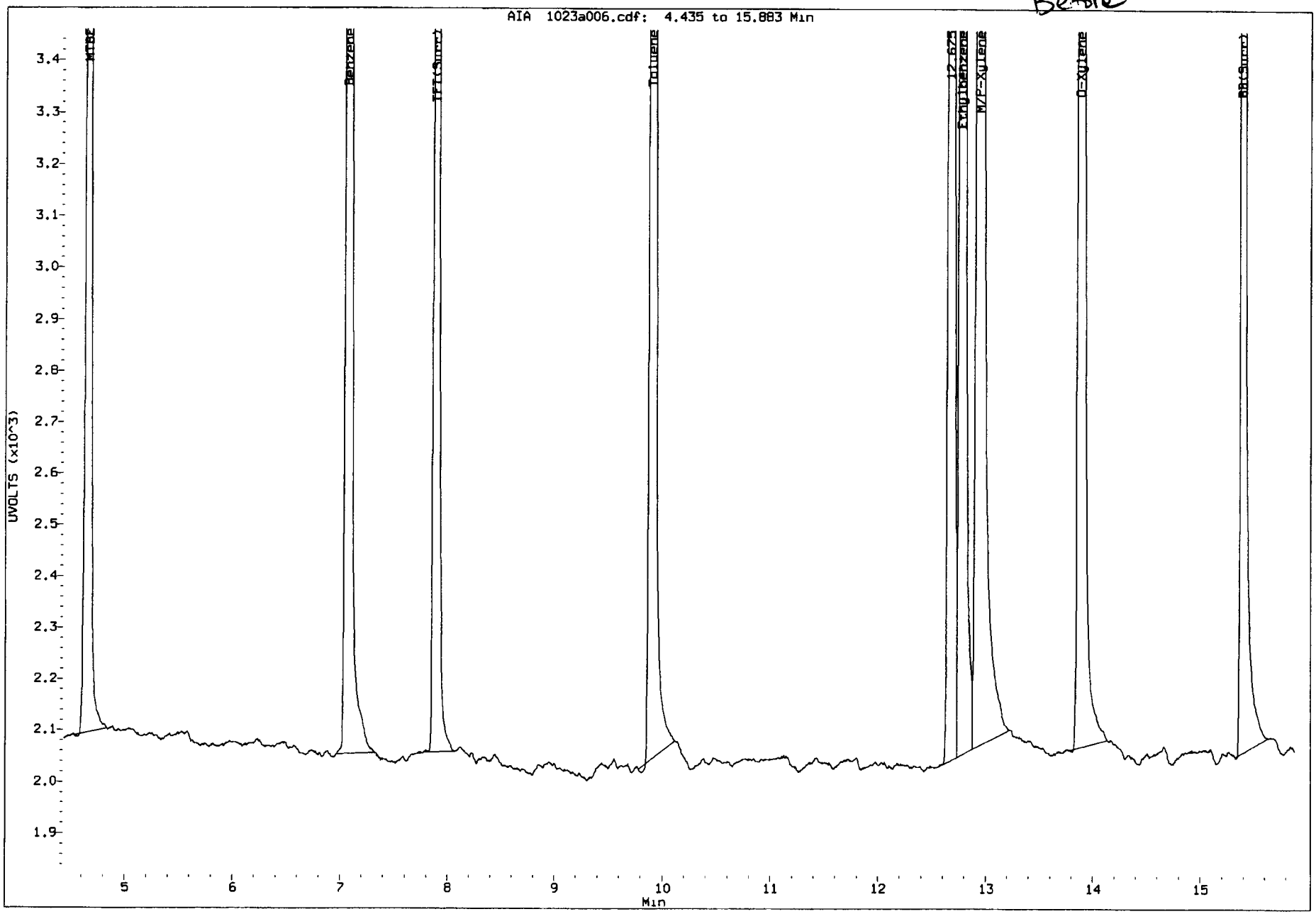


Data File: /chem3/pid1.i/20121023-2.b/1023a006.d/1023a006.cdf
Injection Date: 23-OCT-2012 18:49
Instrument: pid1.i
Client Sample ID:



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

/chem3/pid1.i/20121023-1.b/1023a007.d/1023a007.cdf

UVOLTS (x10^3)

-MTBE (4.644)
-BENZENE (7.067)
-TFT(Surr) (7.887)
-Toluene (9.897)
-ETHYLBENZENE (12.778)
M/P-XYLENE (12.936)
-O-XYLENE (13.883)
-BB(Surr) (15.387)
-nC11 (16.703)
-nC12-Dodecane (17.795)

Min

Data File: /chem3/pid1.i/20121023-2.b/1023a007.d

Date : 23-OCT-2012 19:18

Client ID:

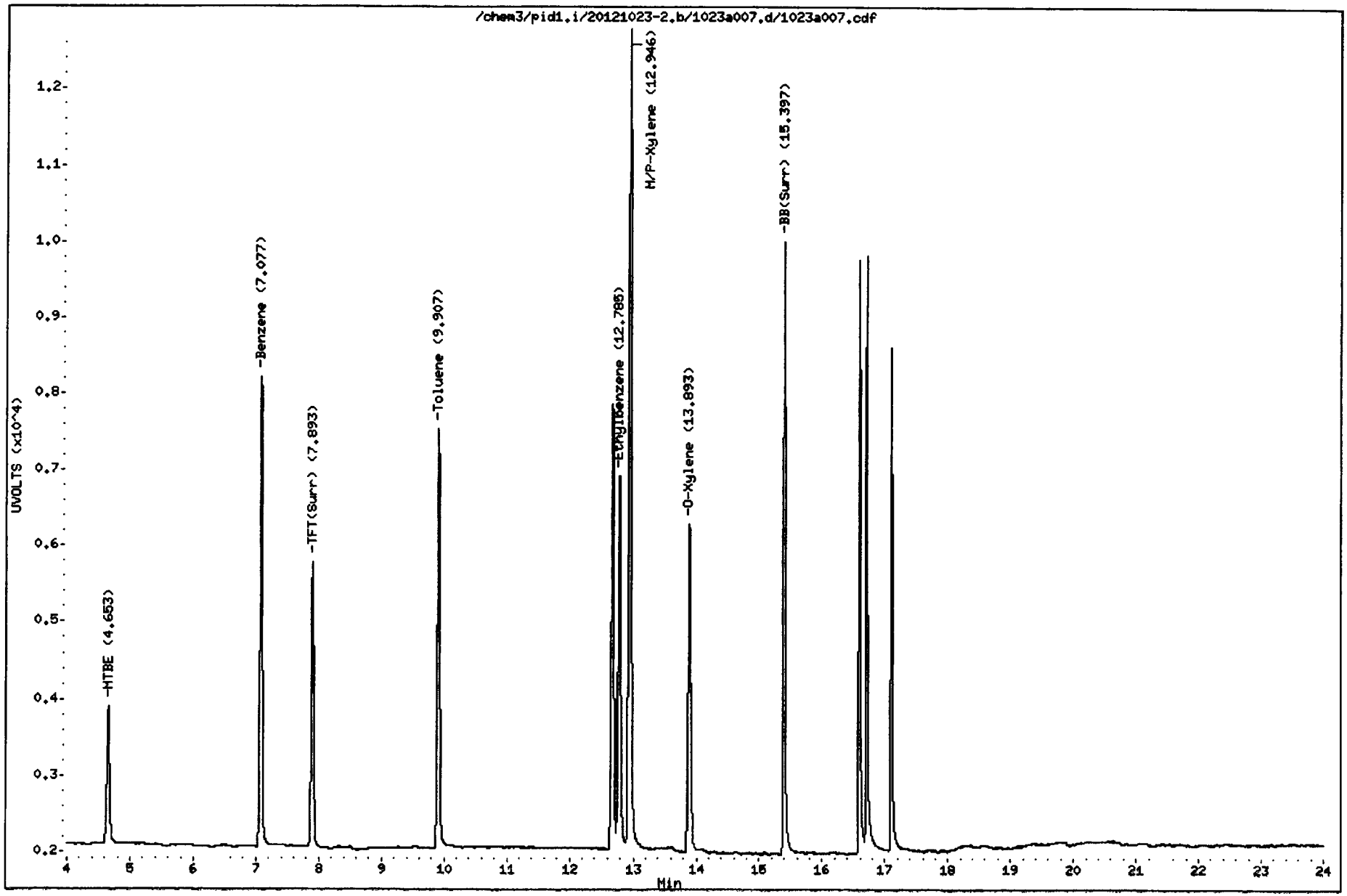
Sample Info: B 25

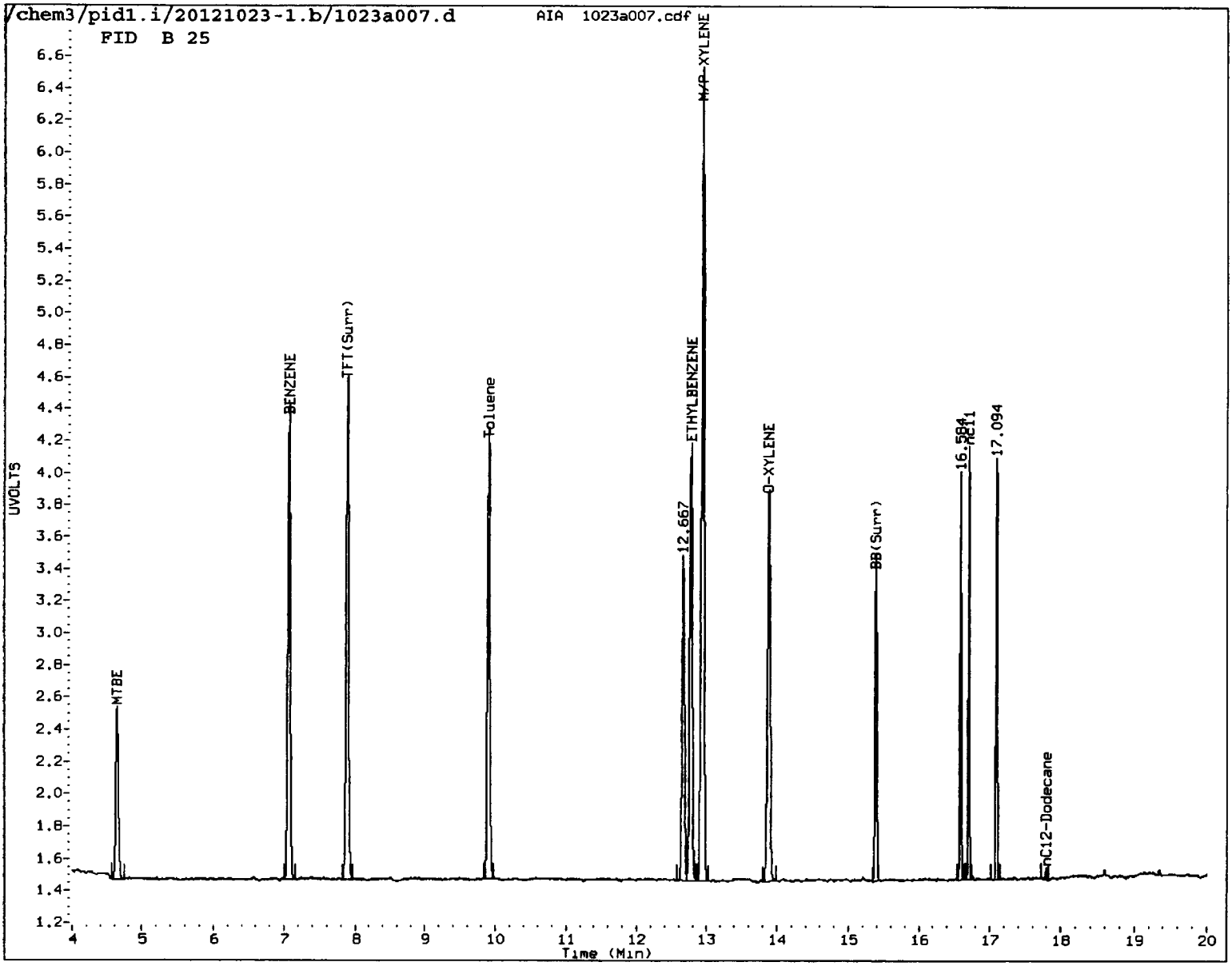
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

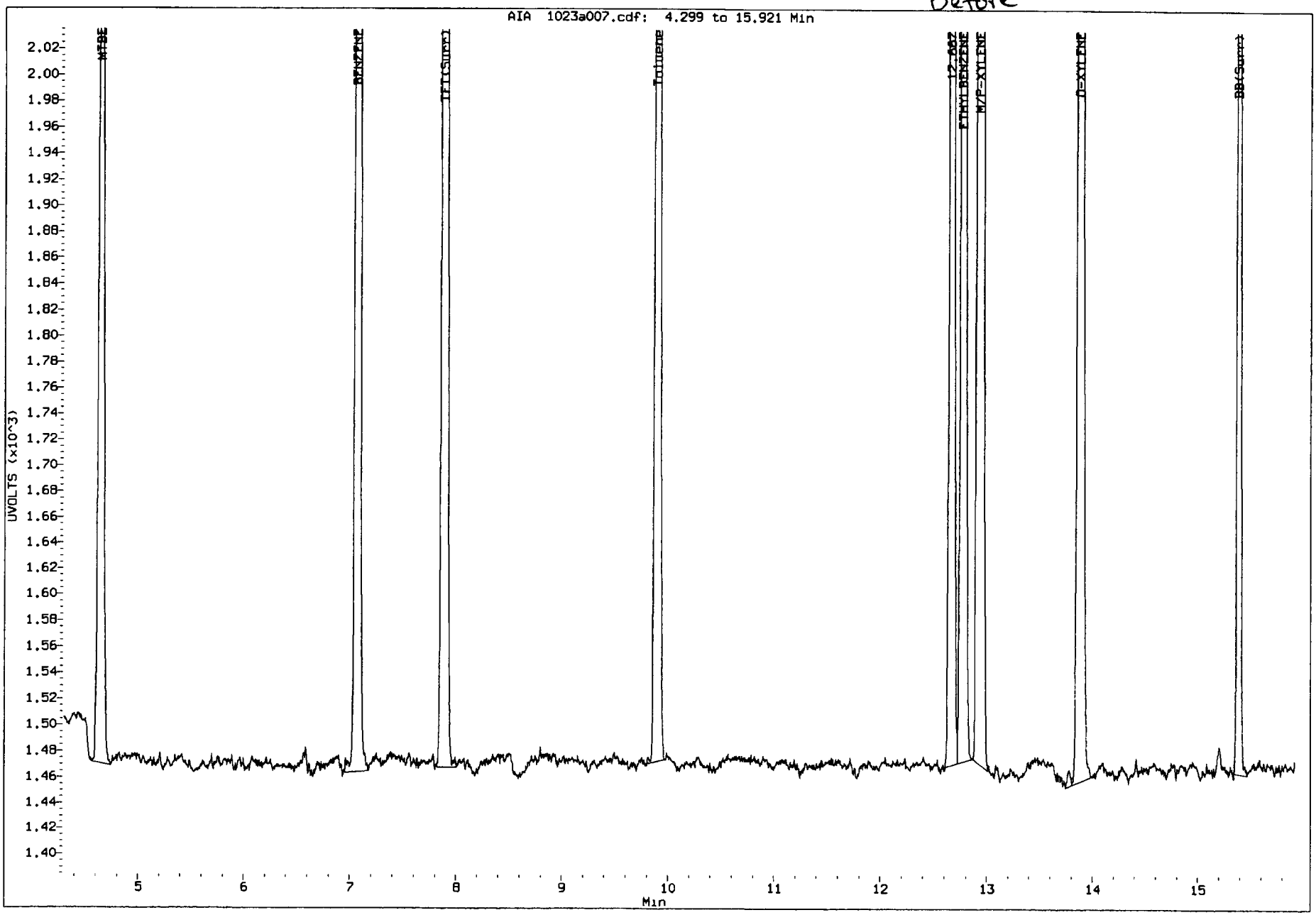
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

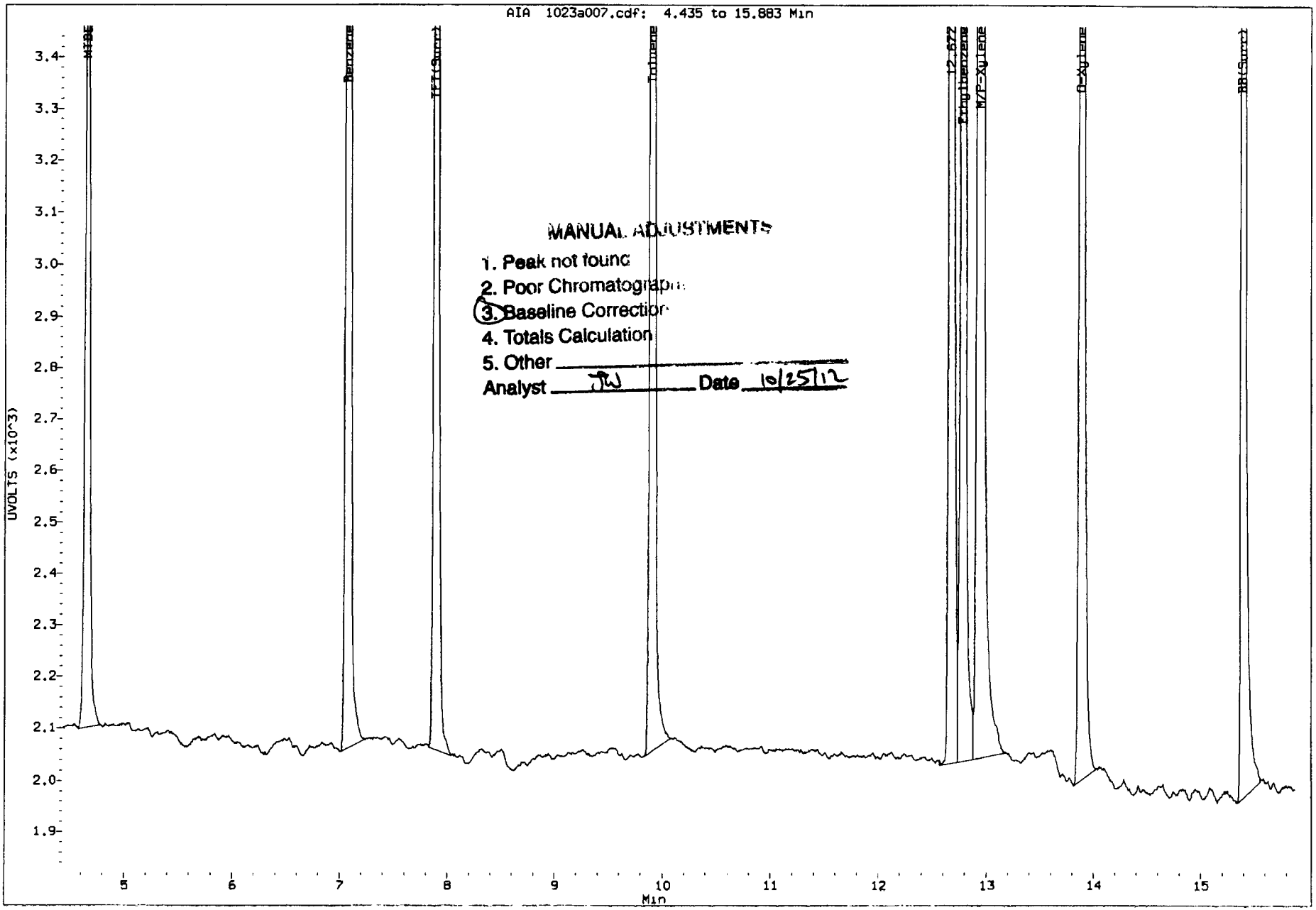
Analyst: JU Date: 10/25/12

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



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:



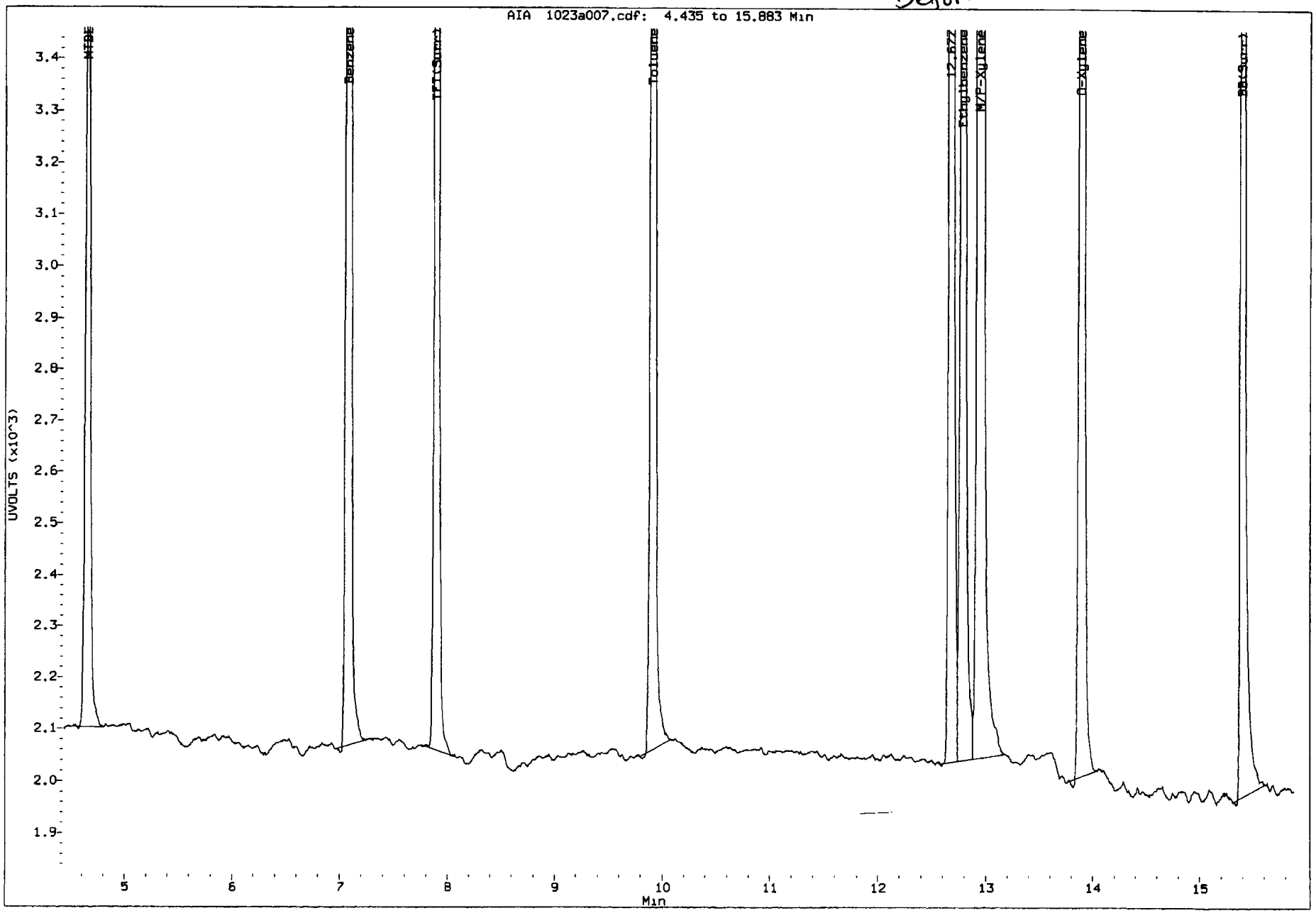
MANUAL ADJUSTMENTS

1. Peak not found
2. Poor Chromatography
3. Baseline Correction
4. Totals Calculation
5. Other

Analyst JW Date 10/25/12

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



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:

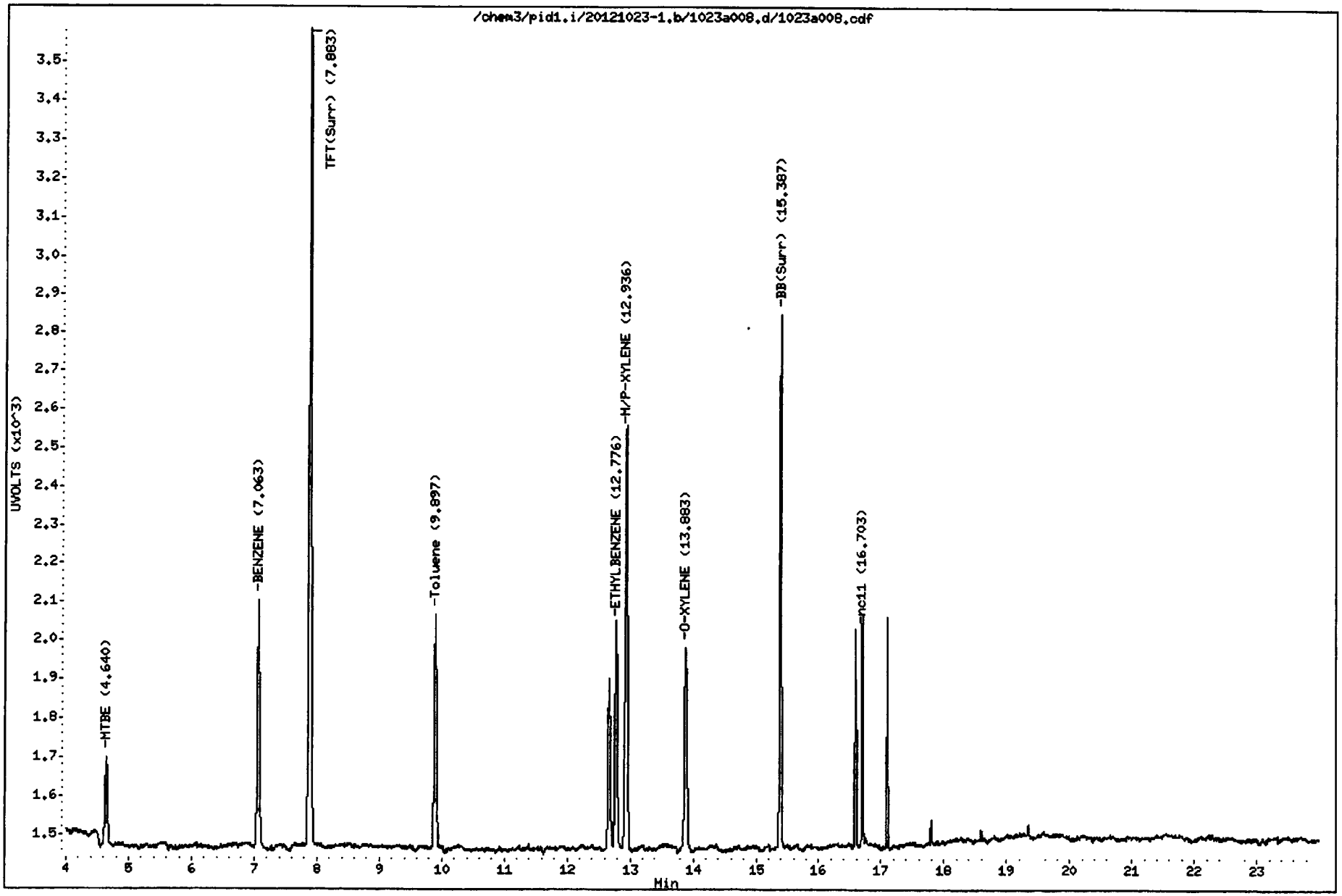
Sample Info: B 5

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:

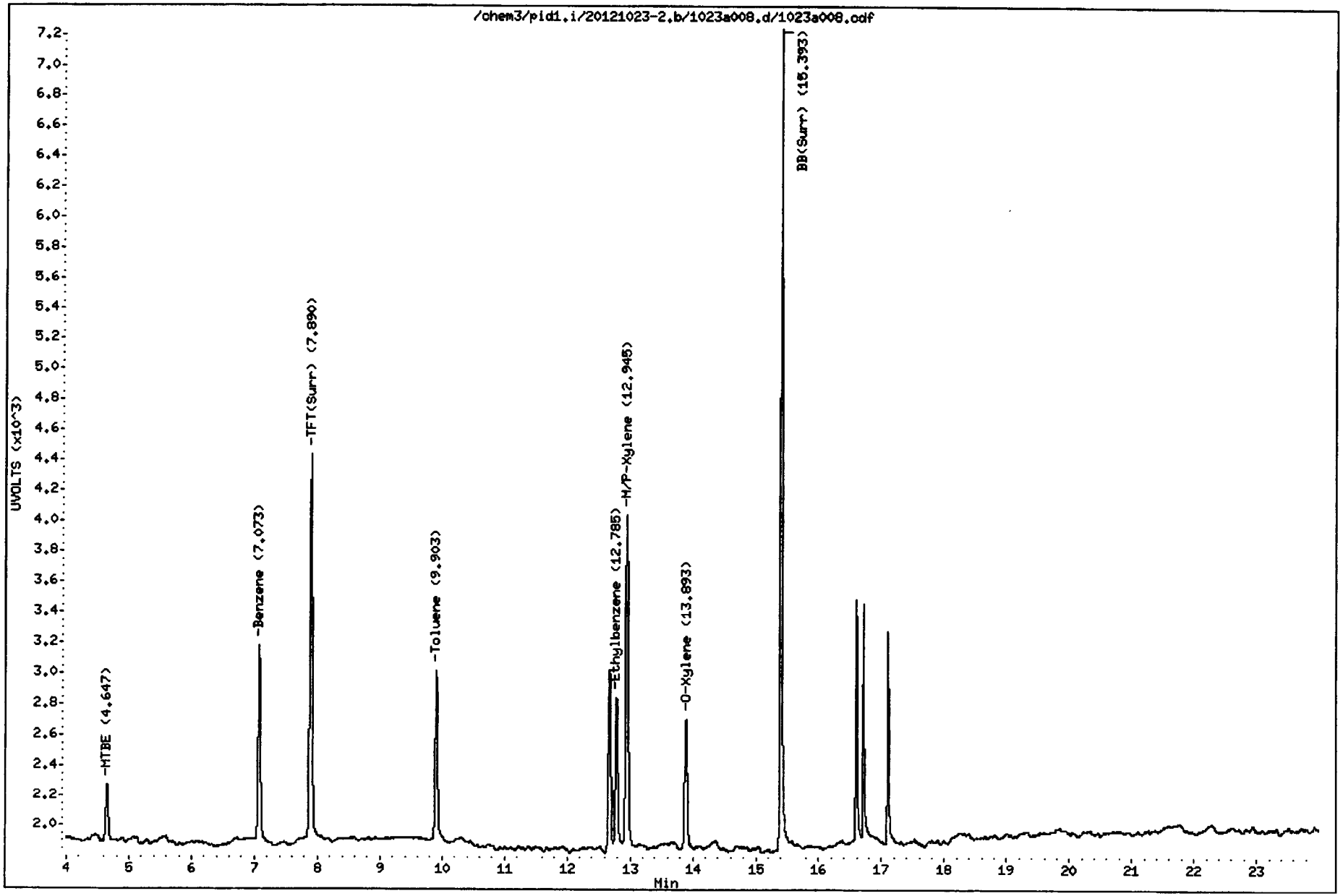
Sample Info: B 5

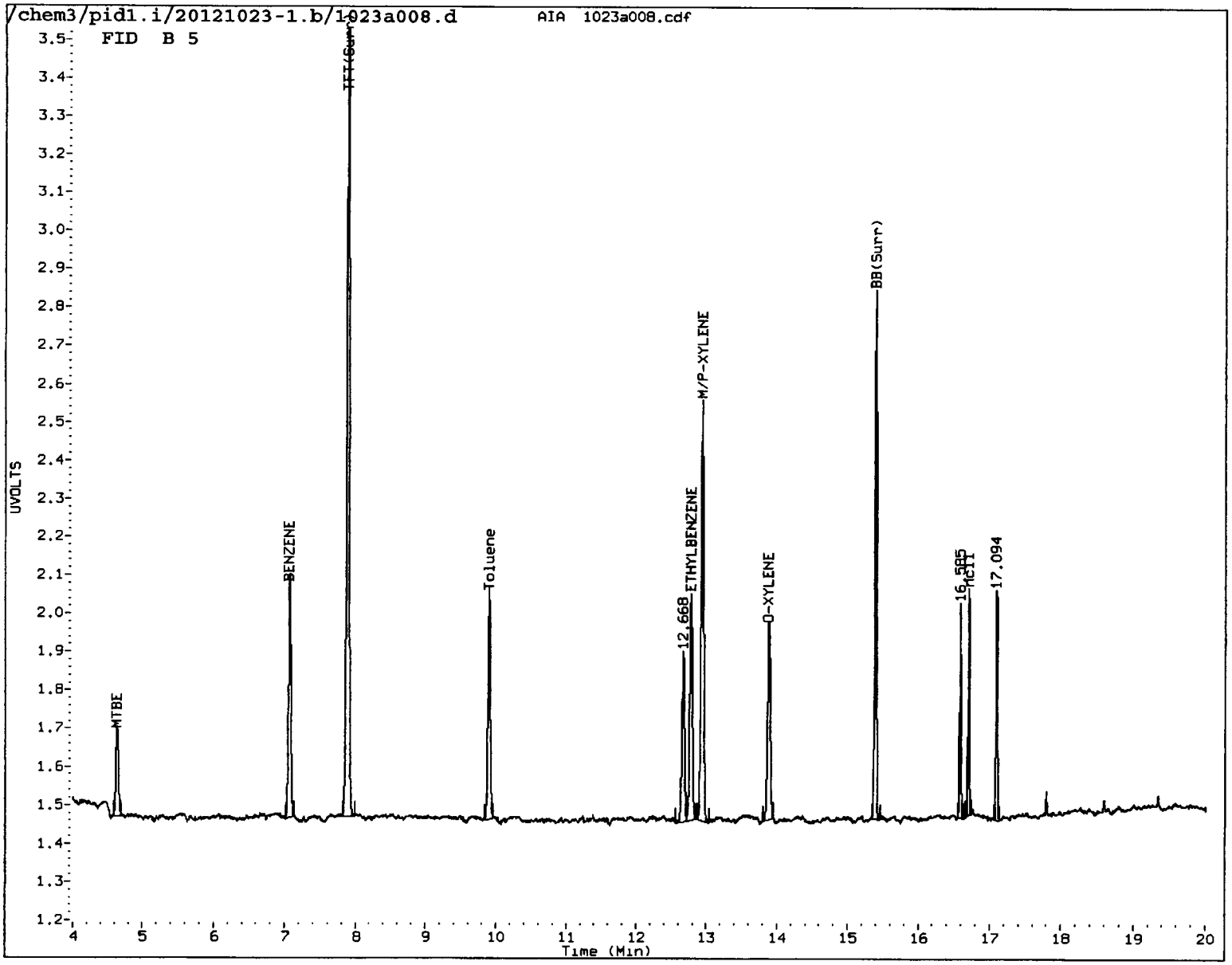
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

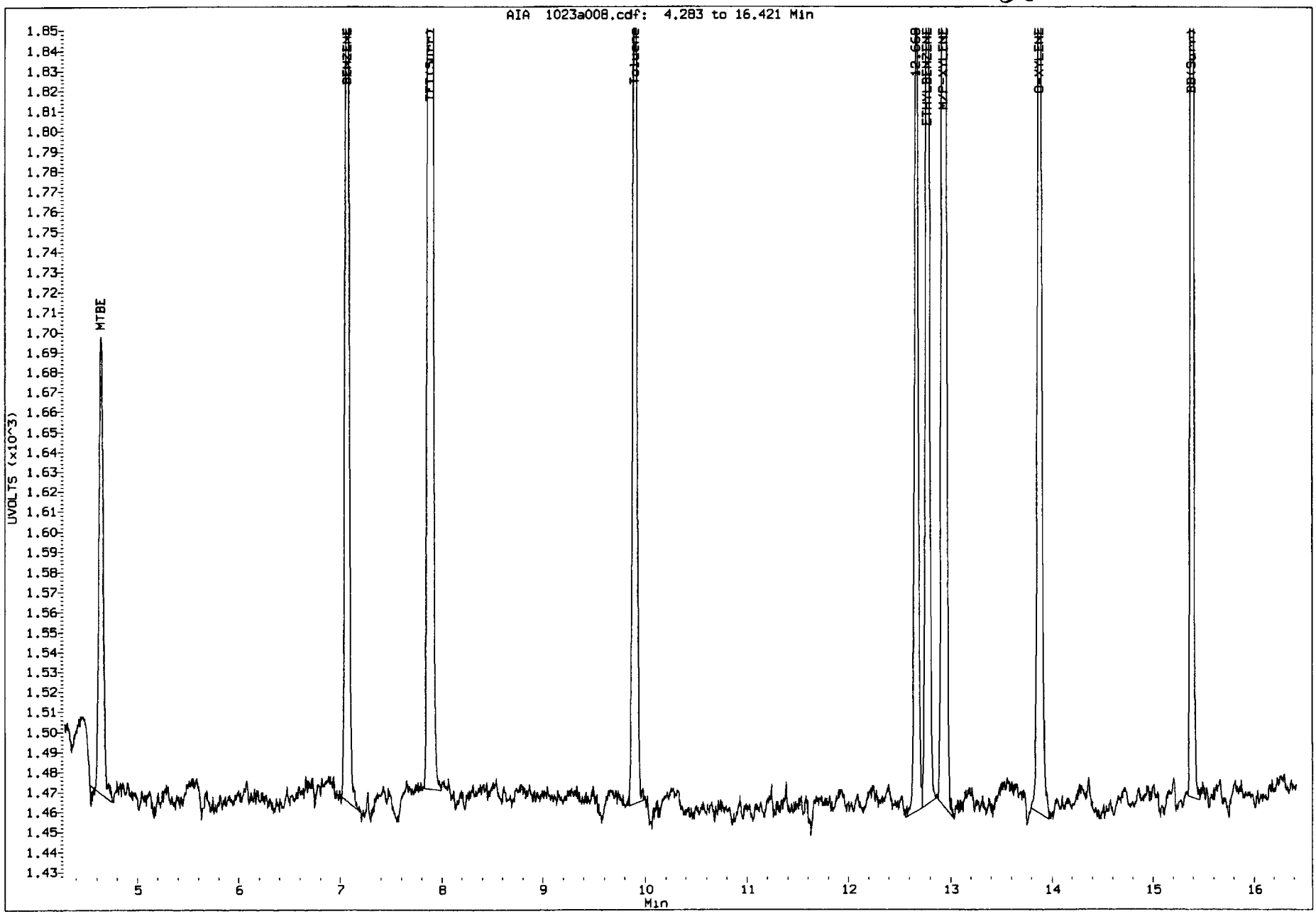
5. Other _____

Analyst: JW Date: 10/25/12

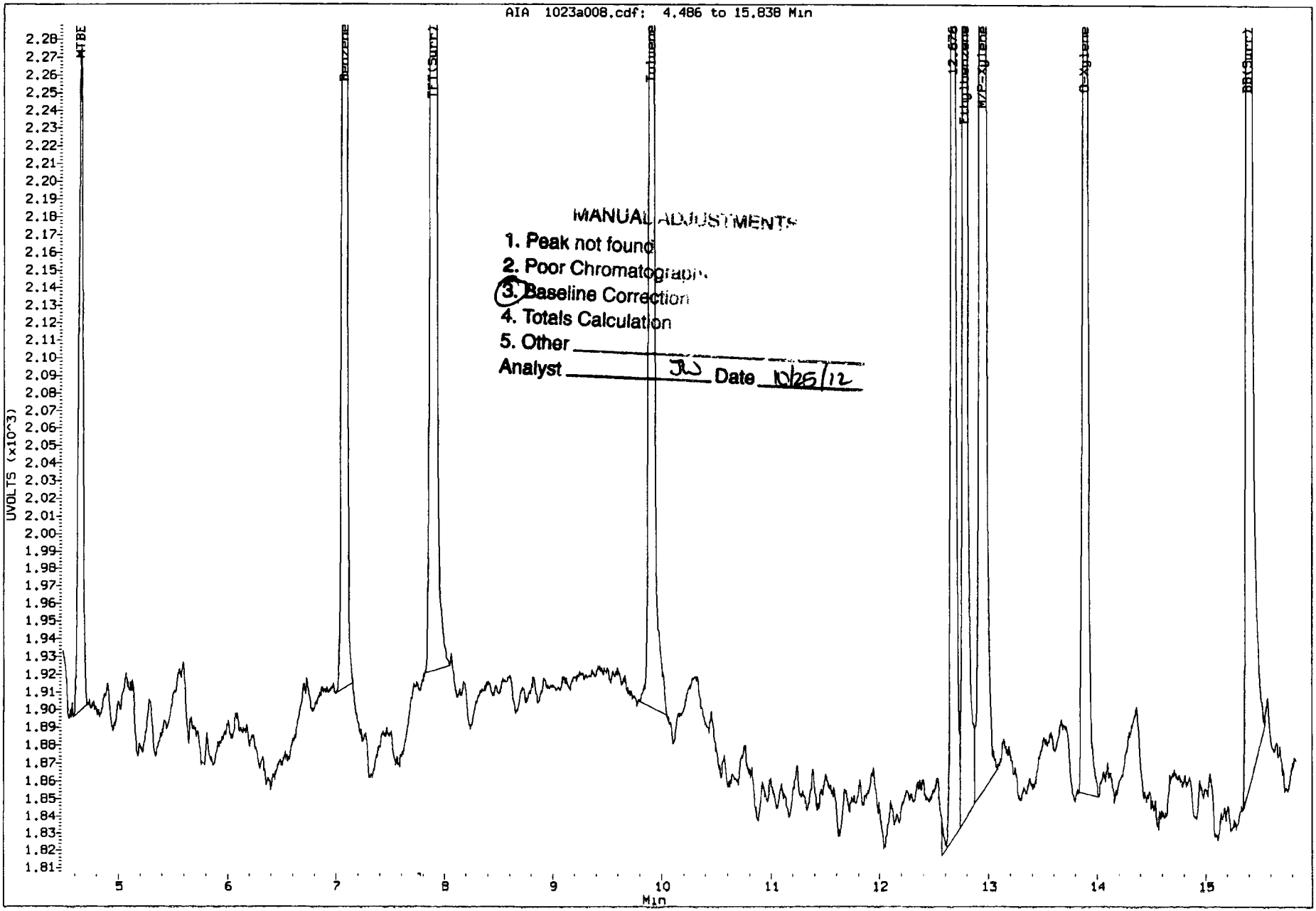
WDS: 8186

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

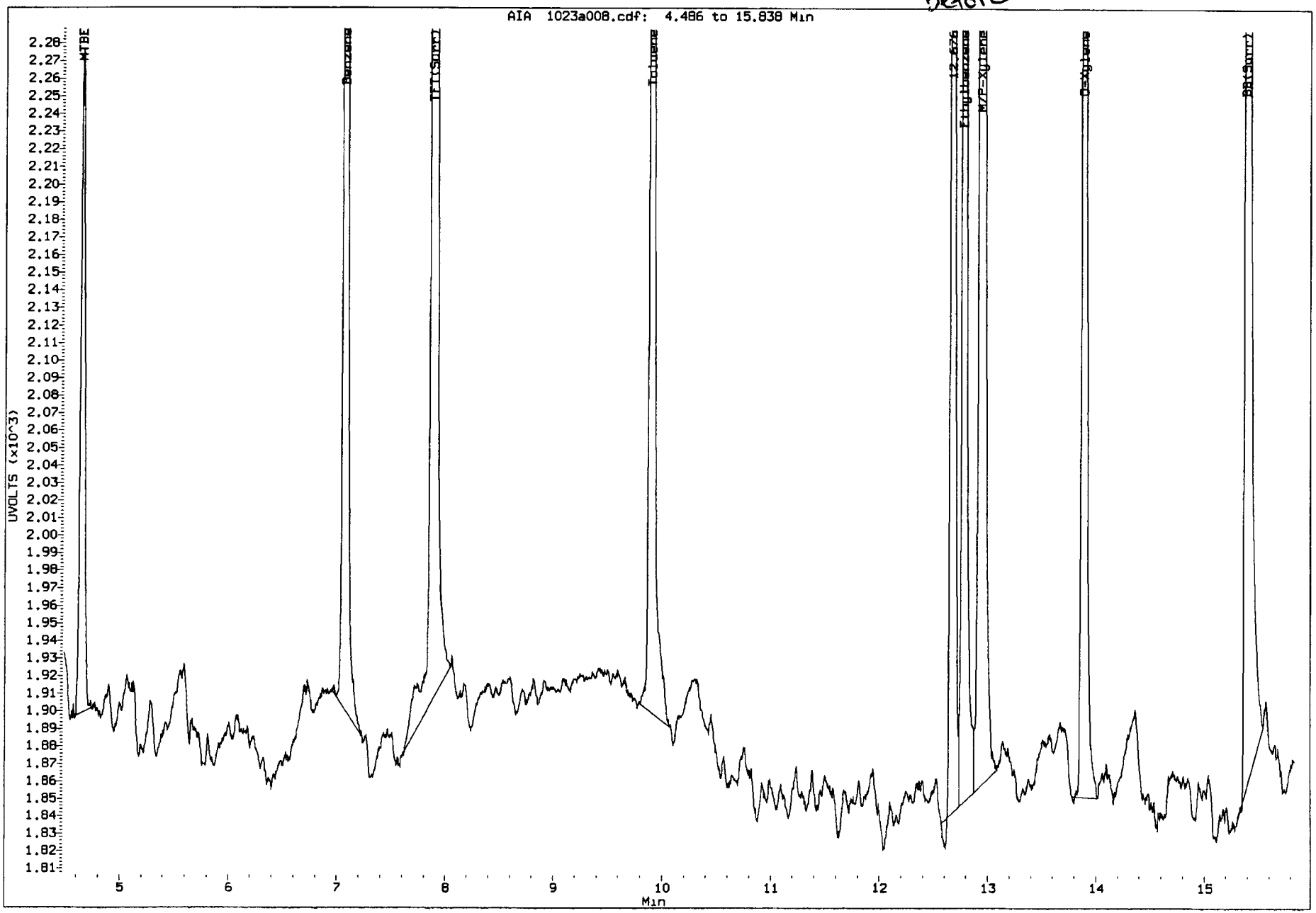


Data File: /chem3/pid1.i/20121023-2.b/1023a008.d/1023a008.cdf
Injection Date: 23-OCT-2012 19:47
Instrument: pid1.i
Client Sample ID:



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:

Before



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:

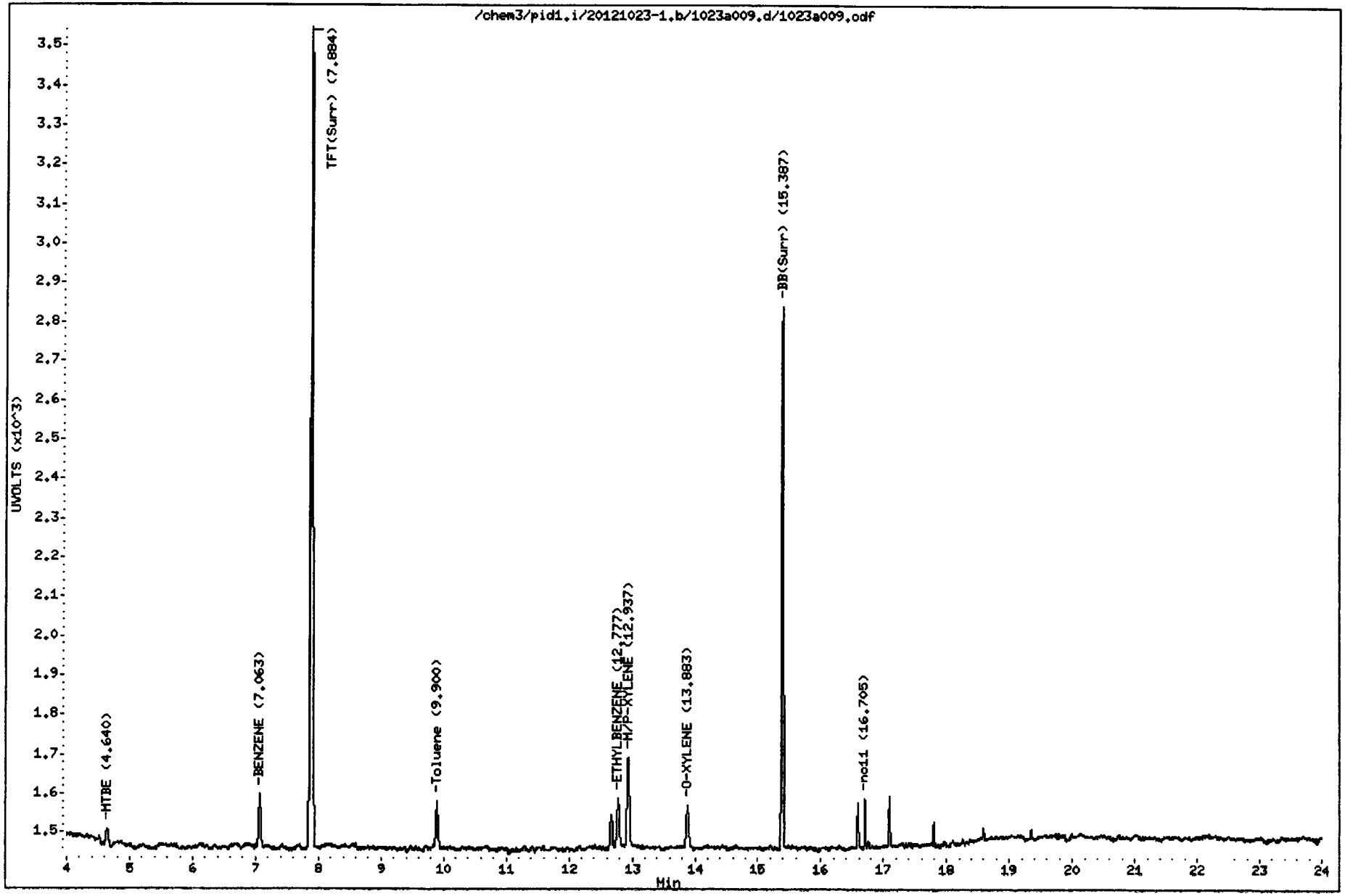
Sample Info: B 1

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a009.d

Date : 23-OCT-2012 20:16

Client ID:

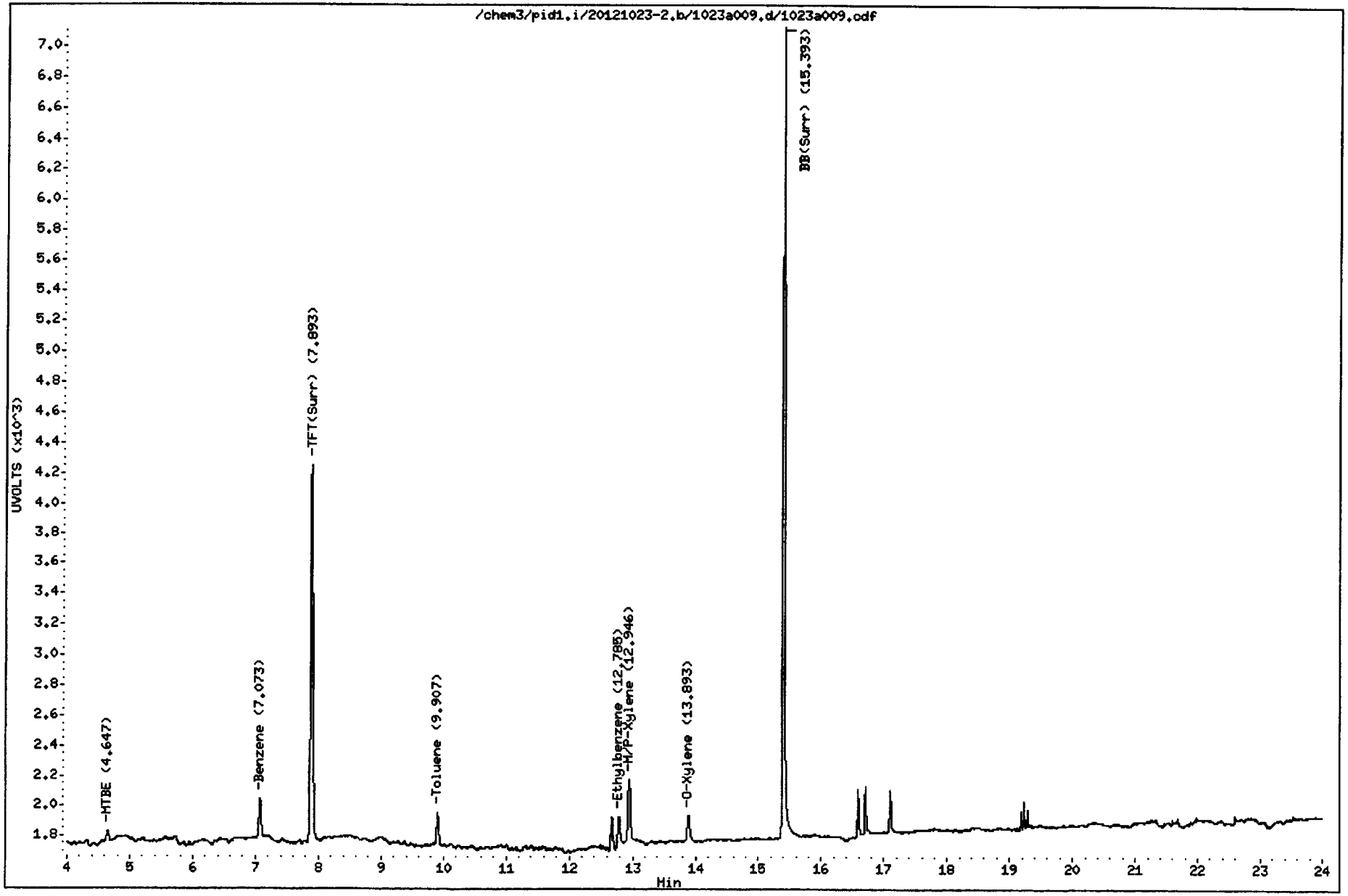
Sample Info: B 1

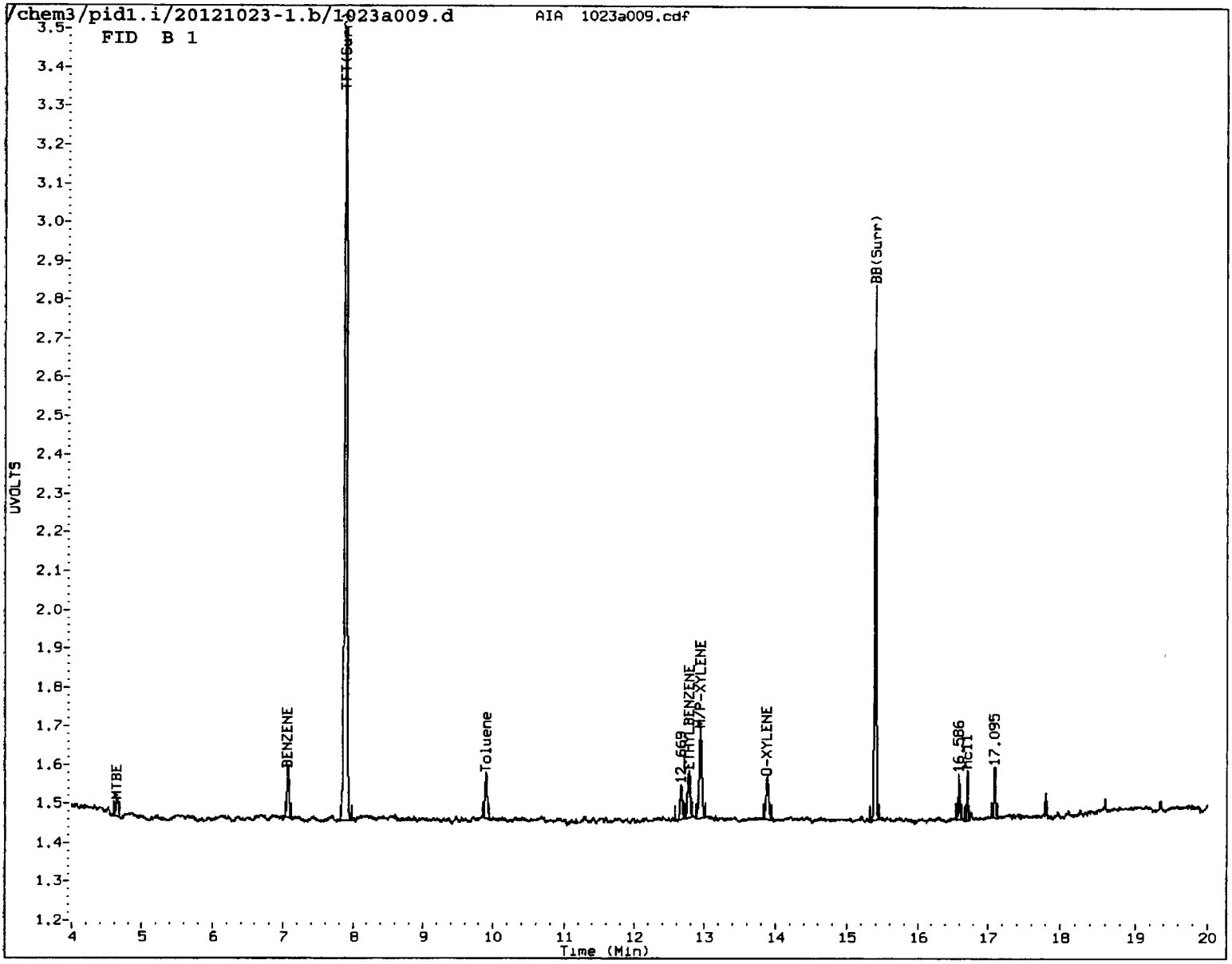
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

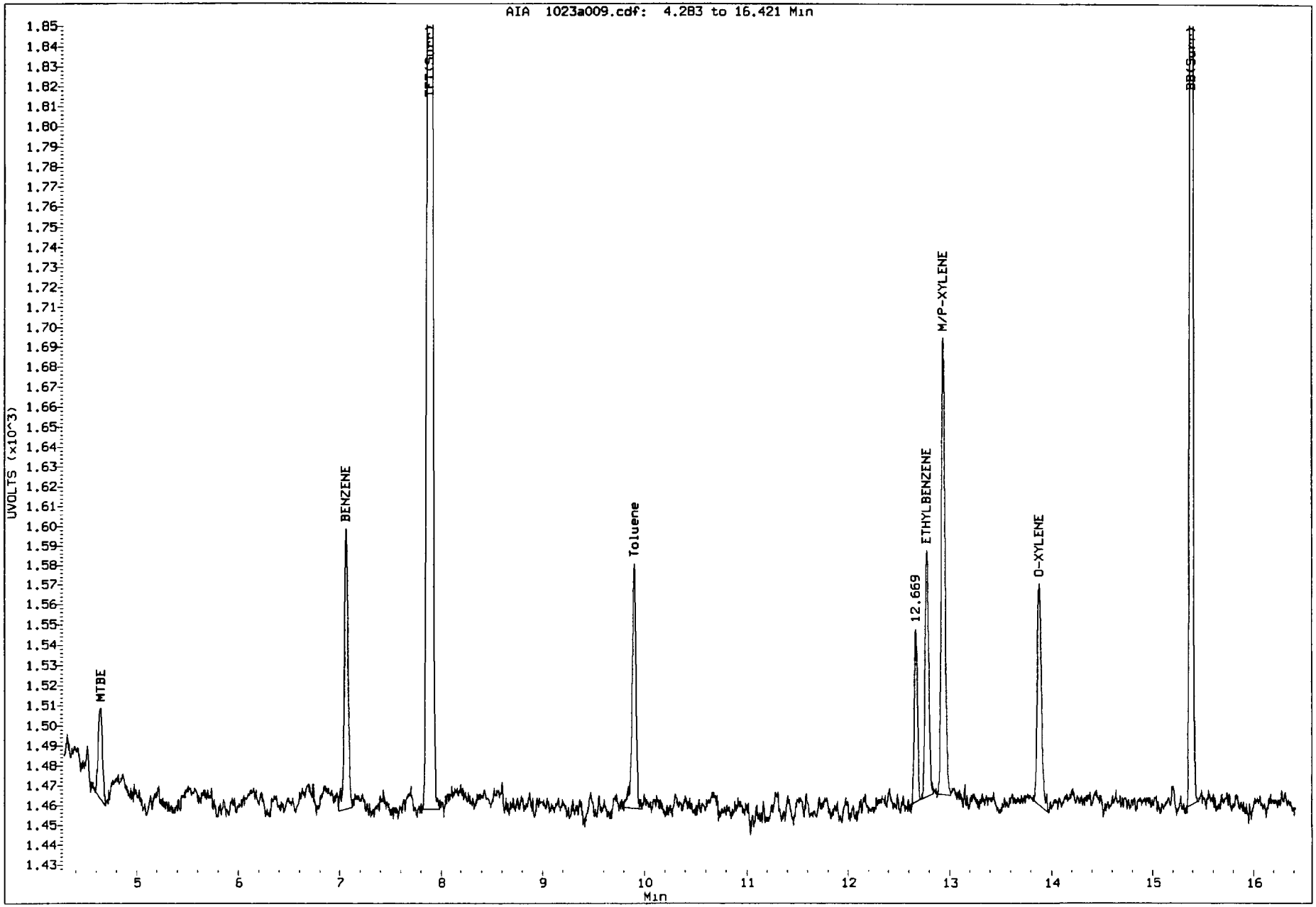
(1) Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

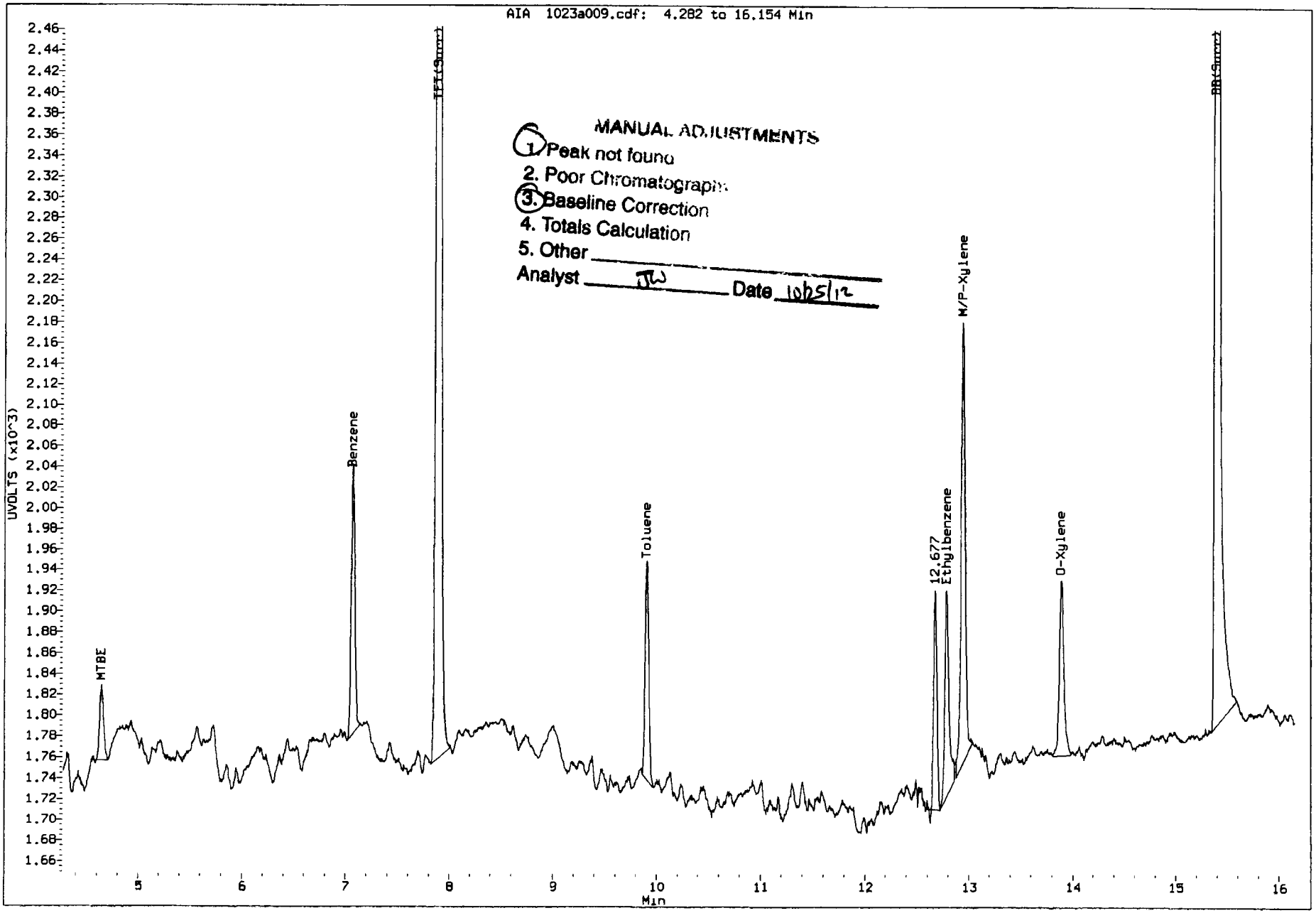
Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.1/20121023-1.b/1023a009.d/1023a009.cdf
Injection Date: 23-OCT-2012 20:16
Instrument: pid1.1
Client Sample ID:

Before

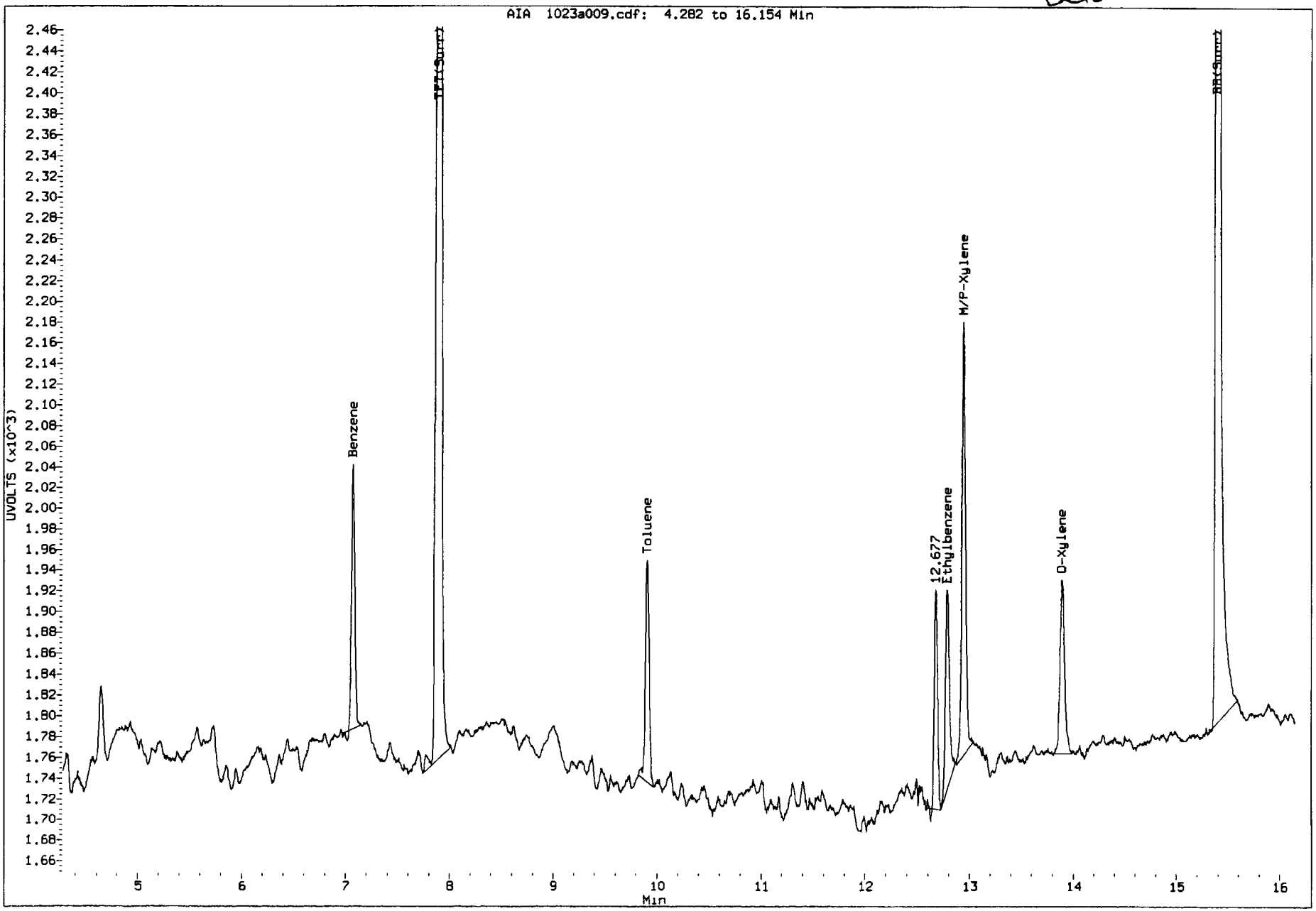


Data File: /chem3/pid1.i/20121023-2.b/1023a009.d/1023a009.cdf
Injection Date: 23-OCT-2012 20:16
Instrument: pid1.i
Client Sample ID:



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:

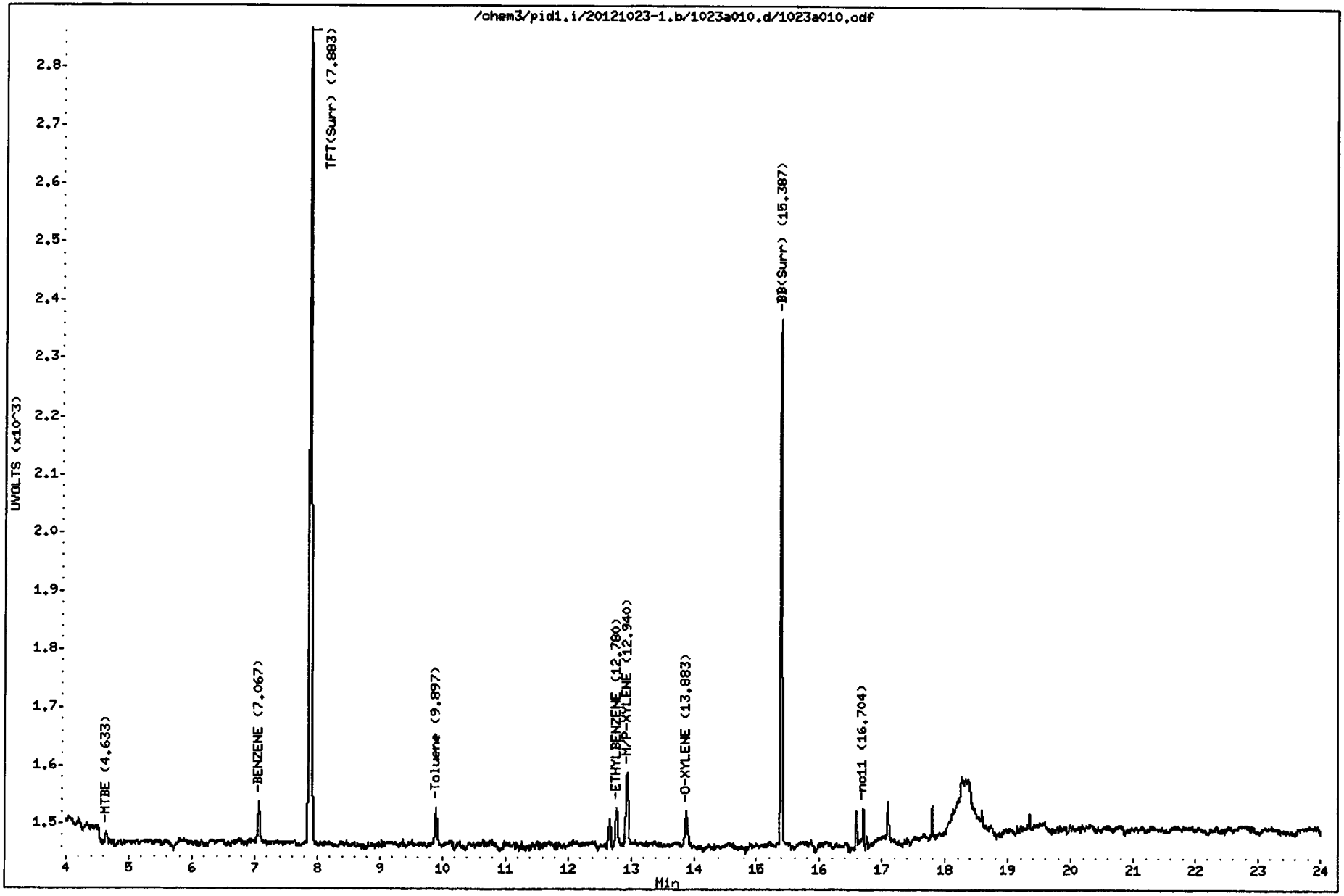
Sample Info: B 0.5

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a010.d

Date : 23-OCT-2012 20:46

Client ID:

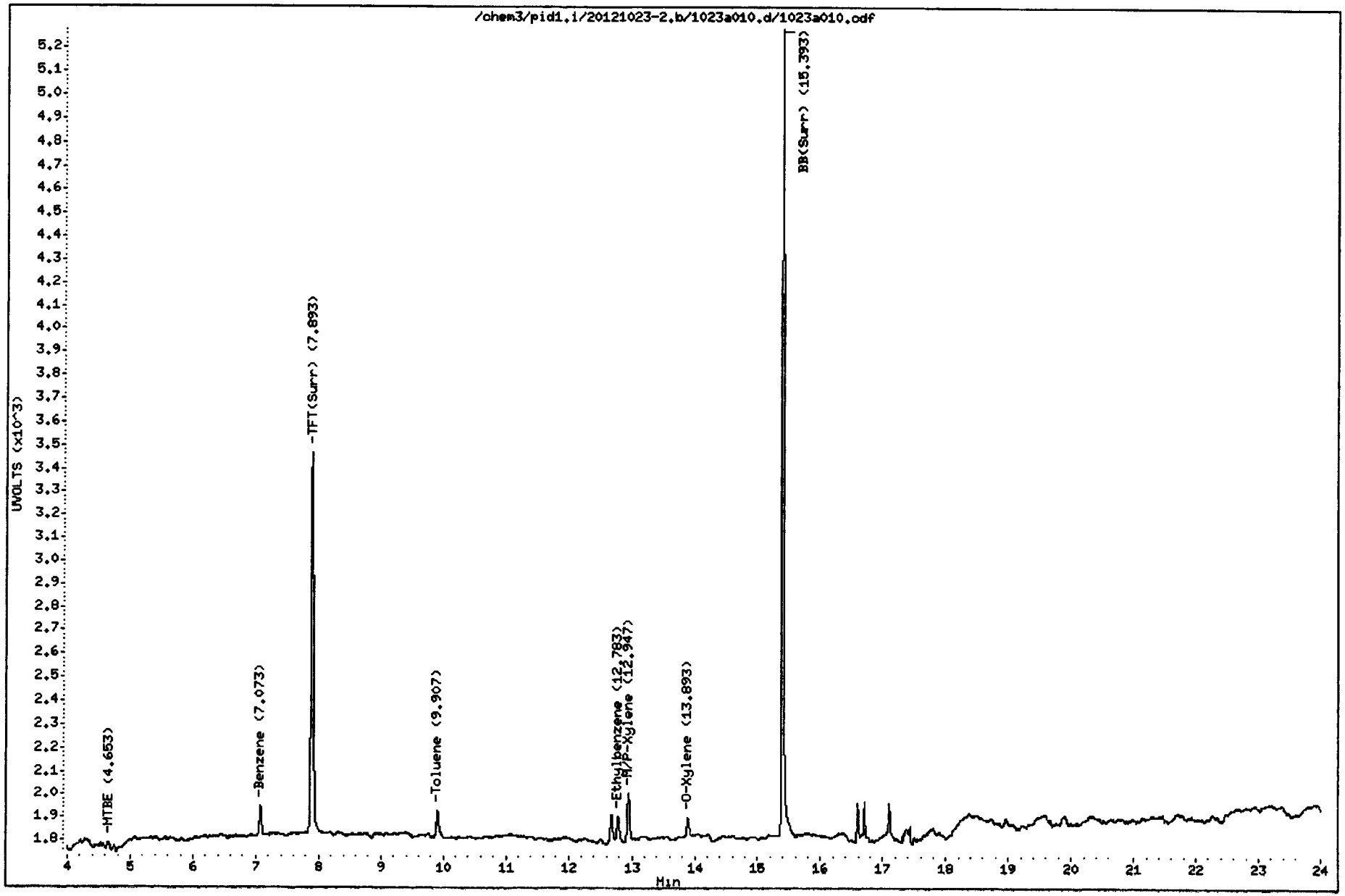
Sample Info: B 0.5

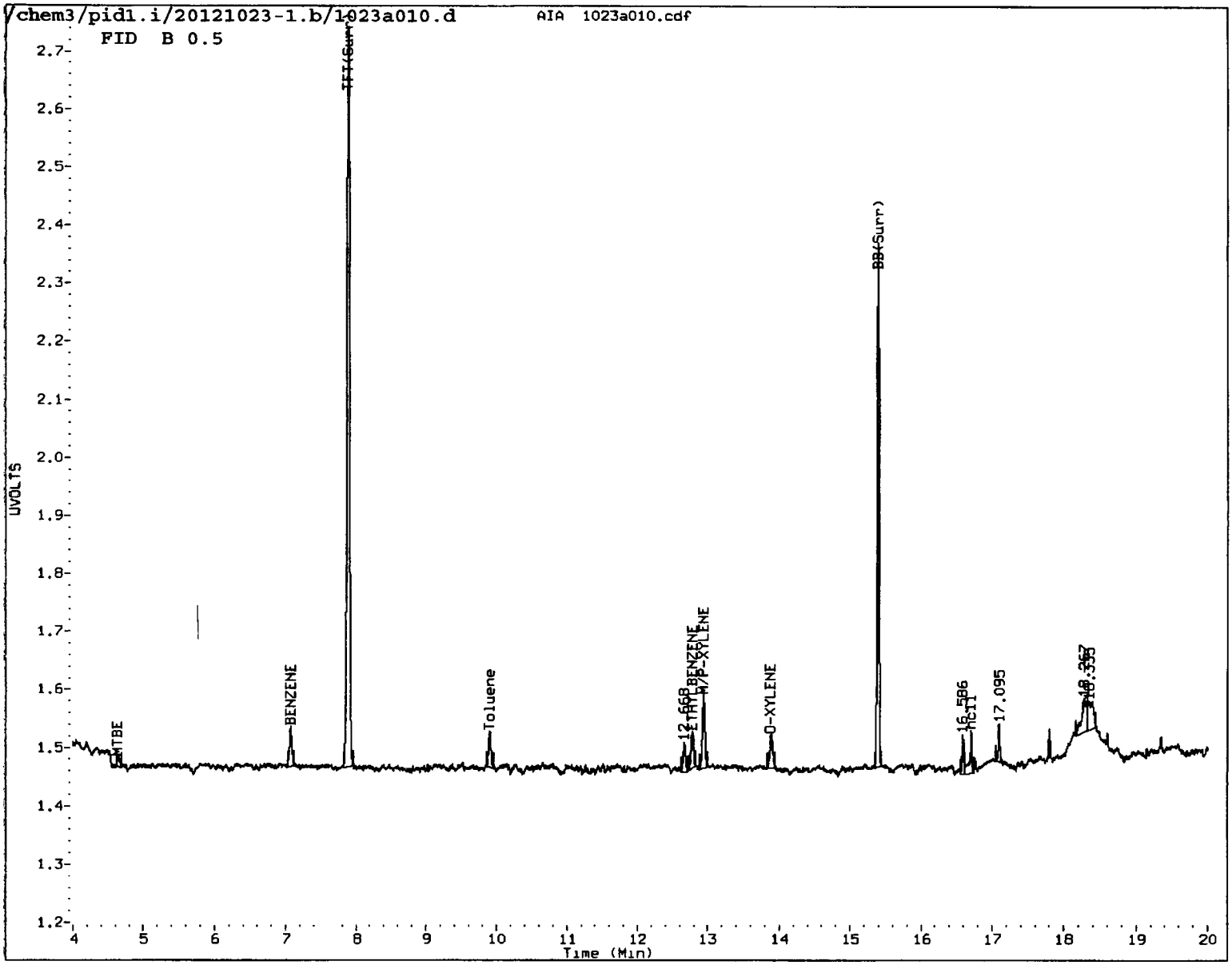
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

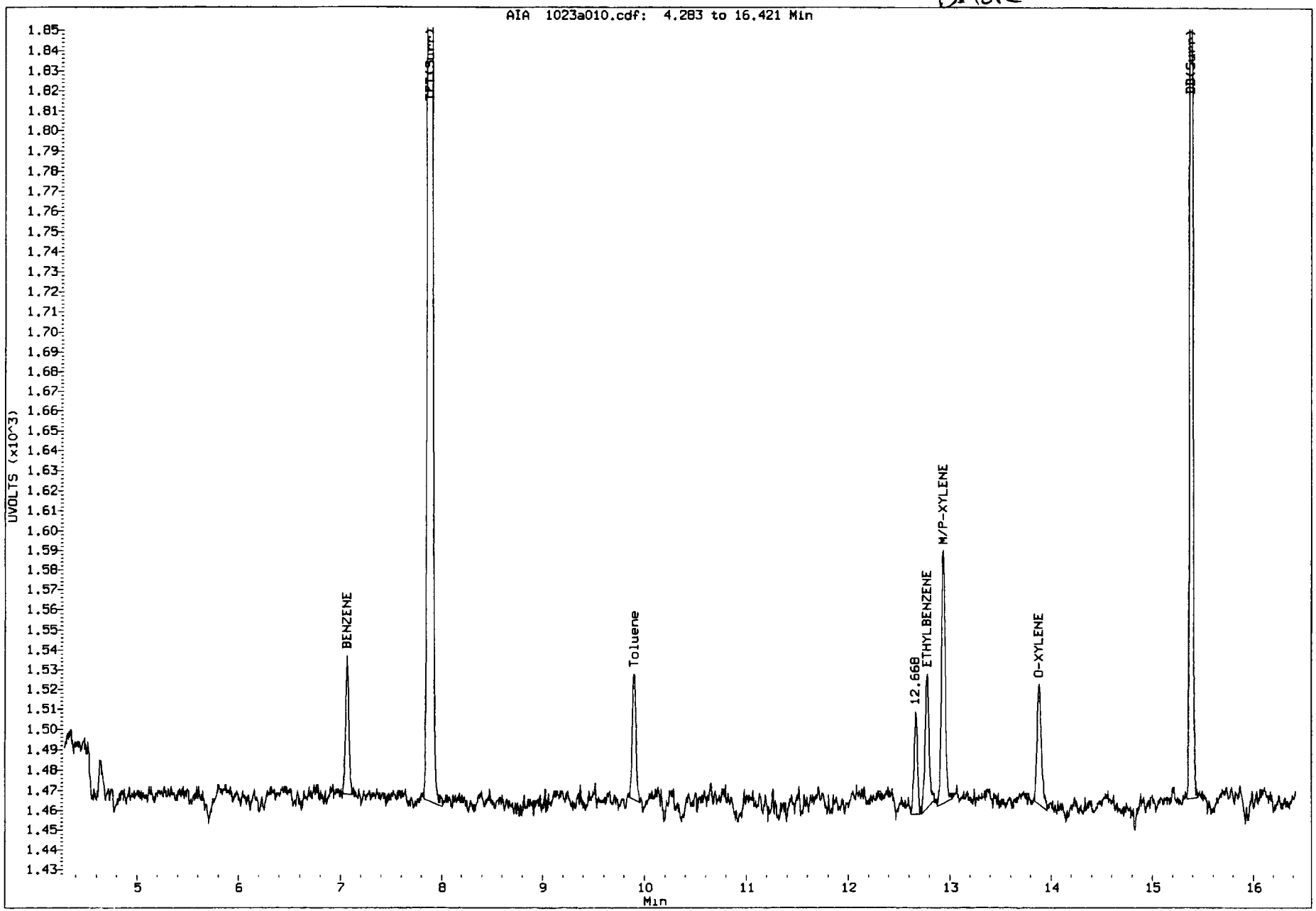
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

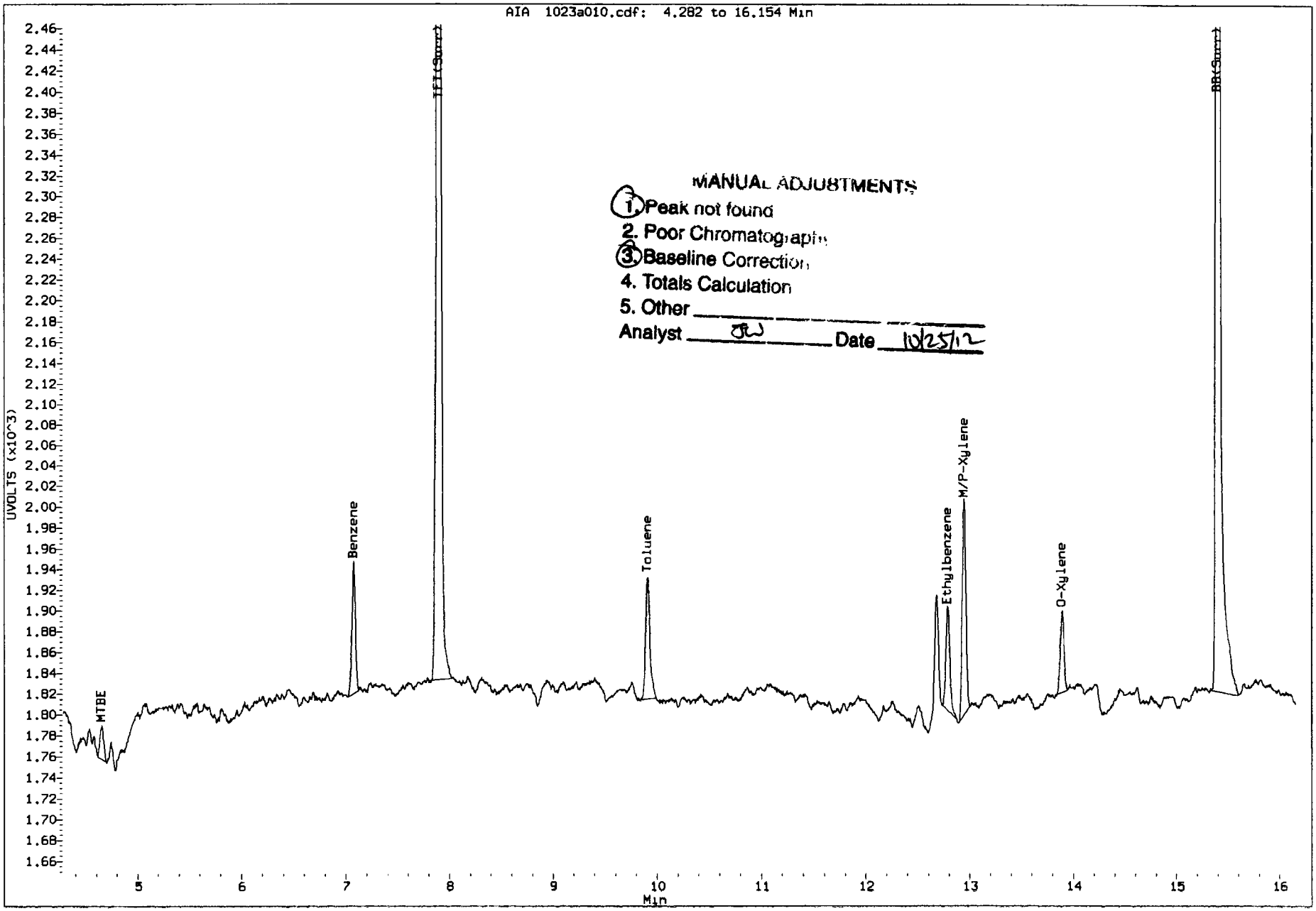
Analyst: JW Date: 10/25/12

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:

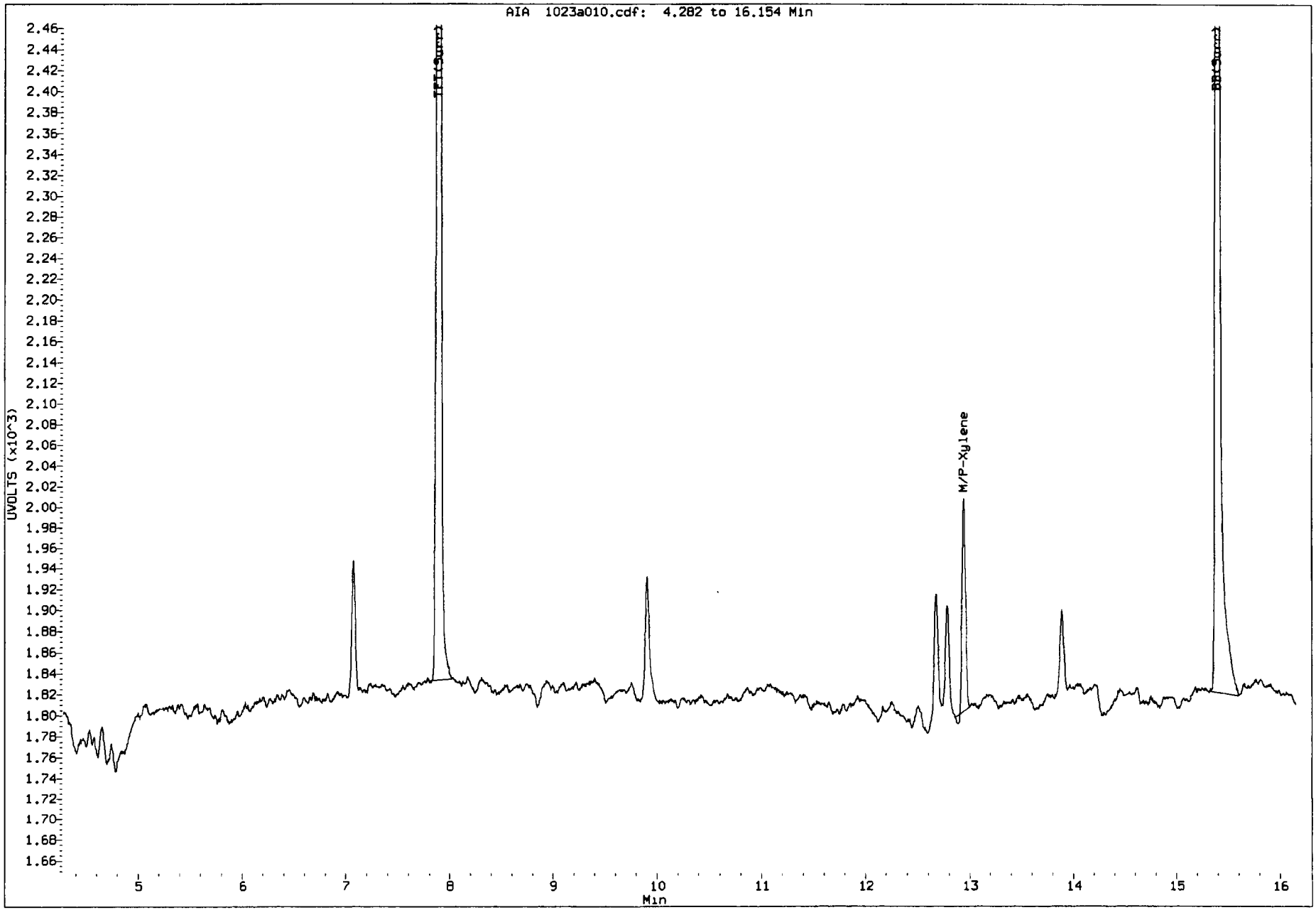
Before



Data File: /chem3/pid1.1/20121023-2.b/1023a010.d/1023a010.cdf
Injection Date: 23-OCT-2012 20:45
Instrument: pid1.1
Client Sample ID:



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:

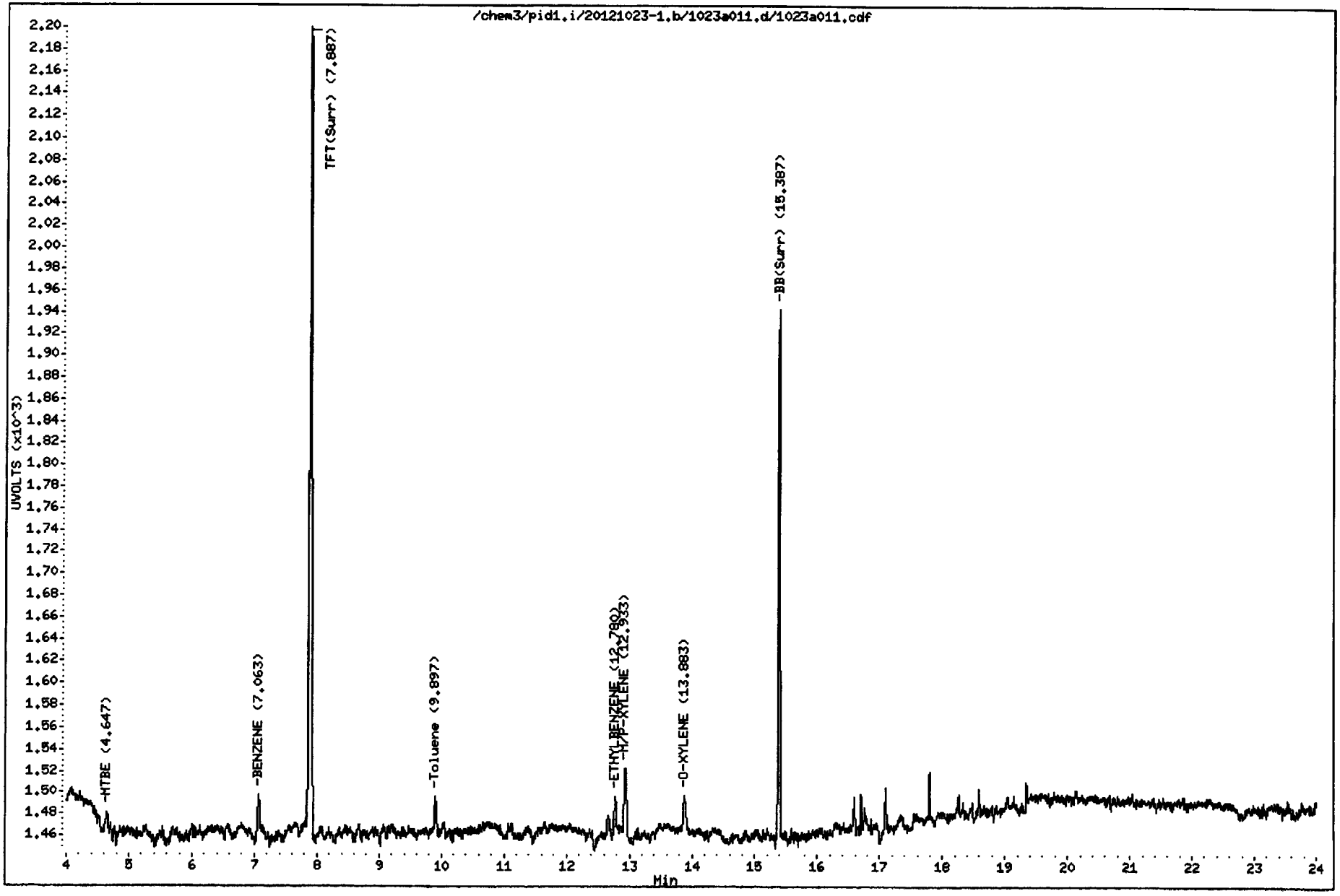
Sample Info: B 0.25

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a011.d

Date : 23-OCT-2012 21:15

Client ID:

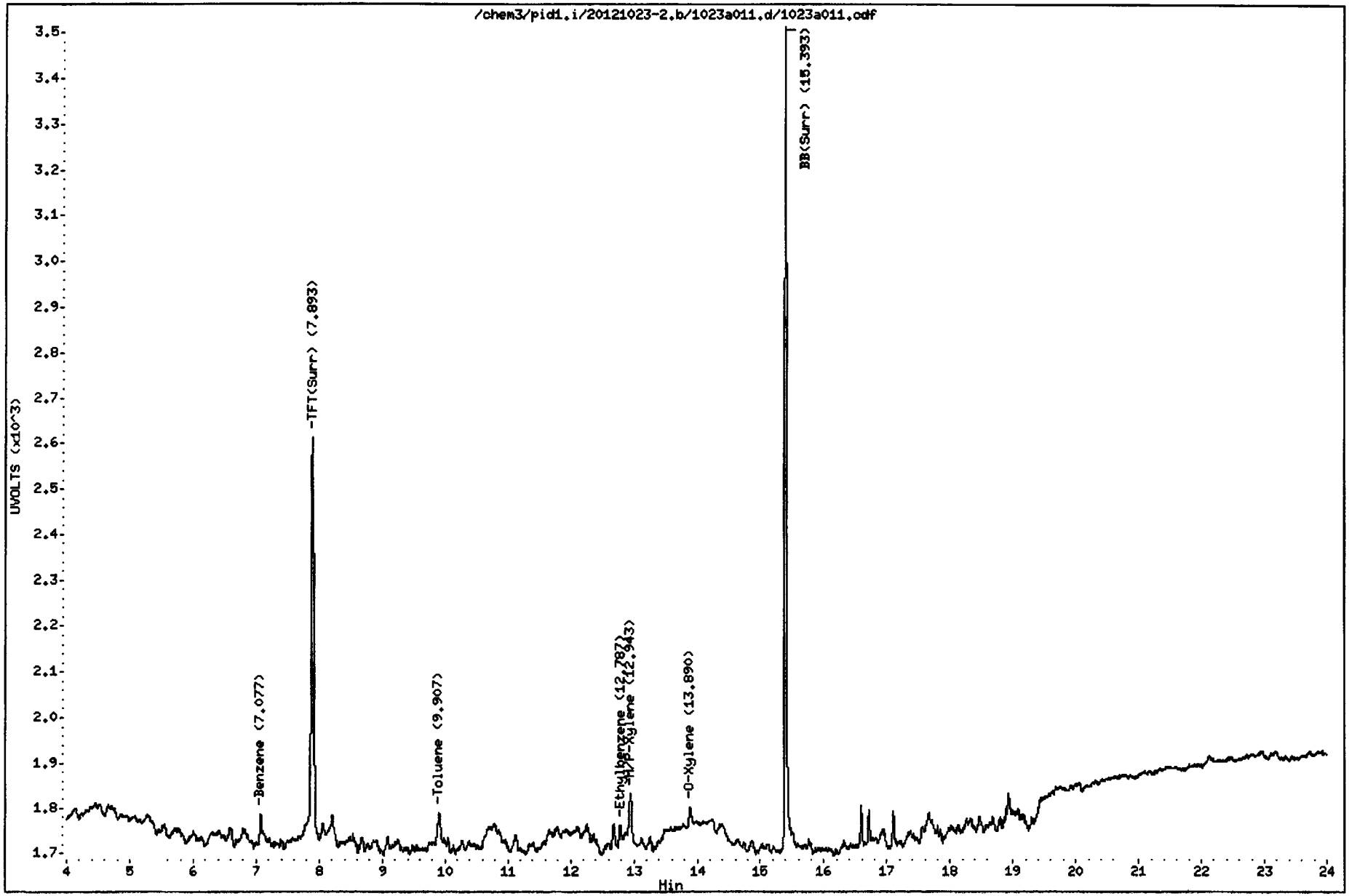
Sample Info: B 0.25

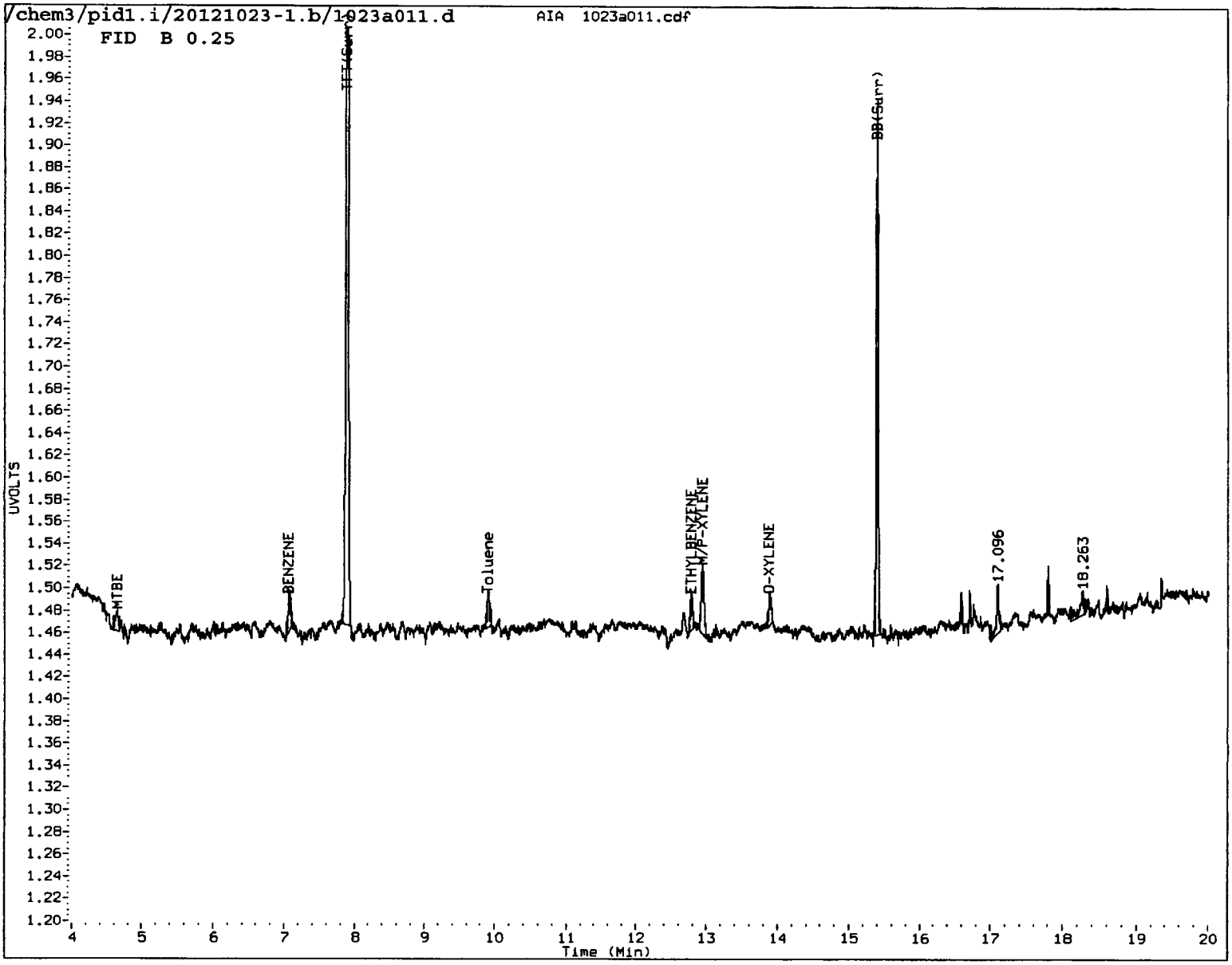
Column phase: RTX 502-2 PID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

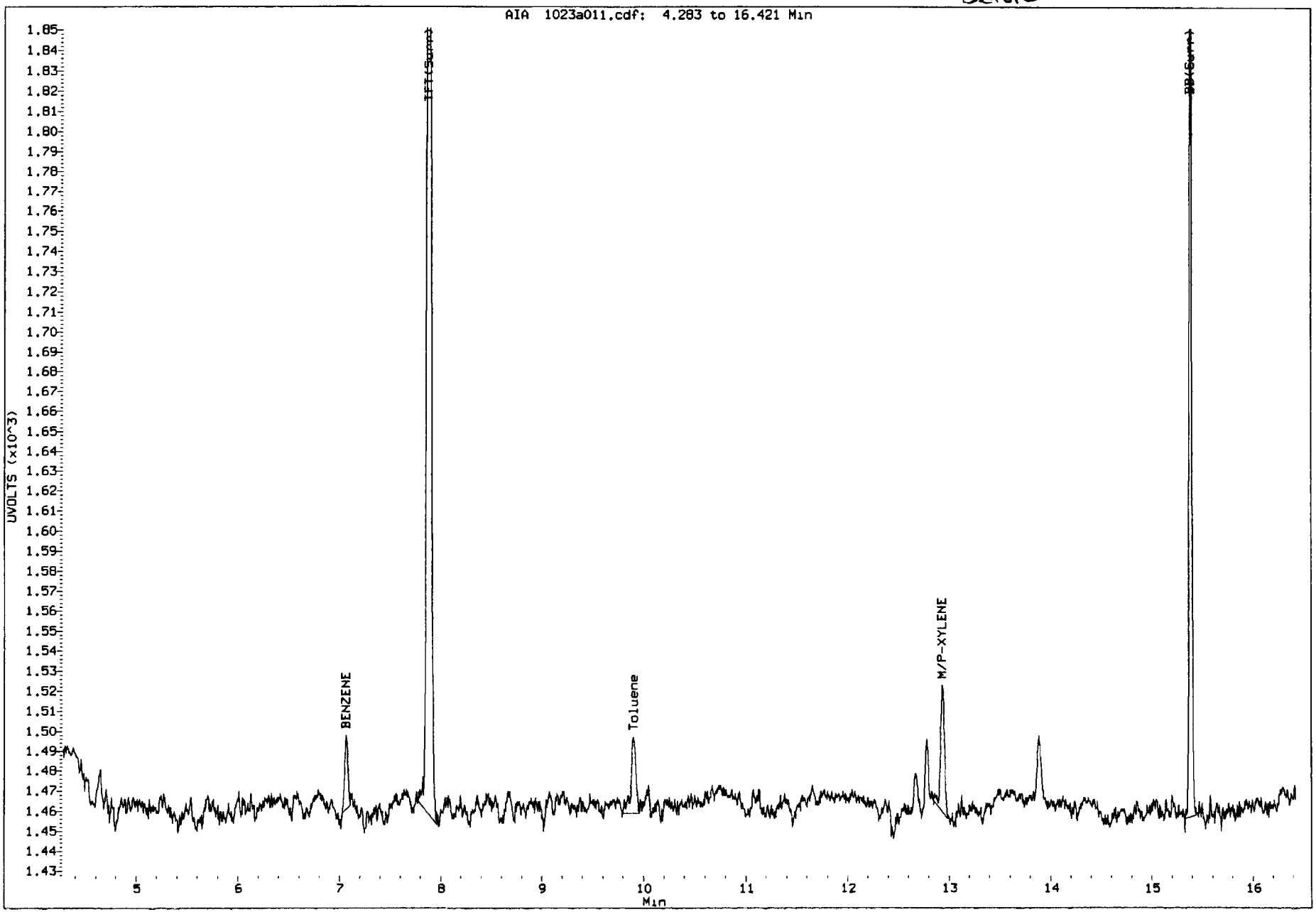
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

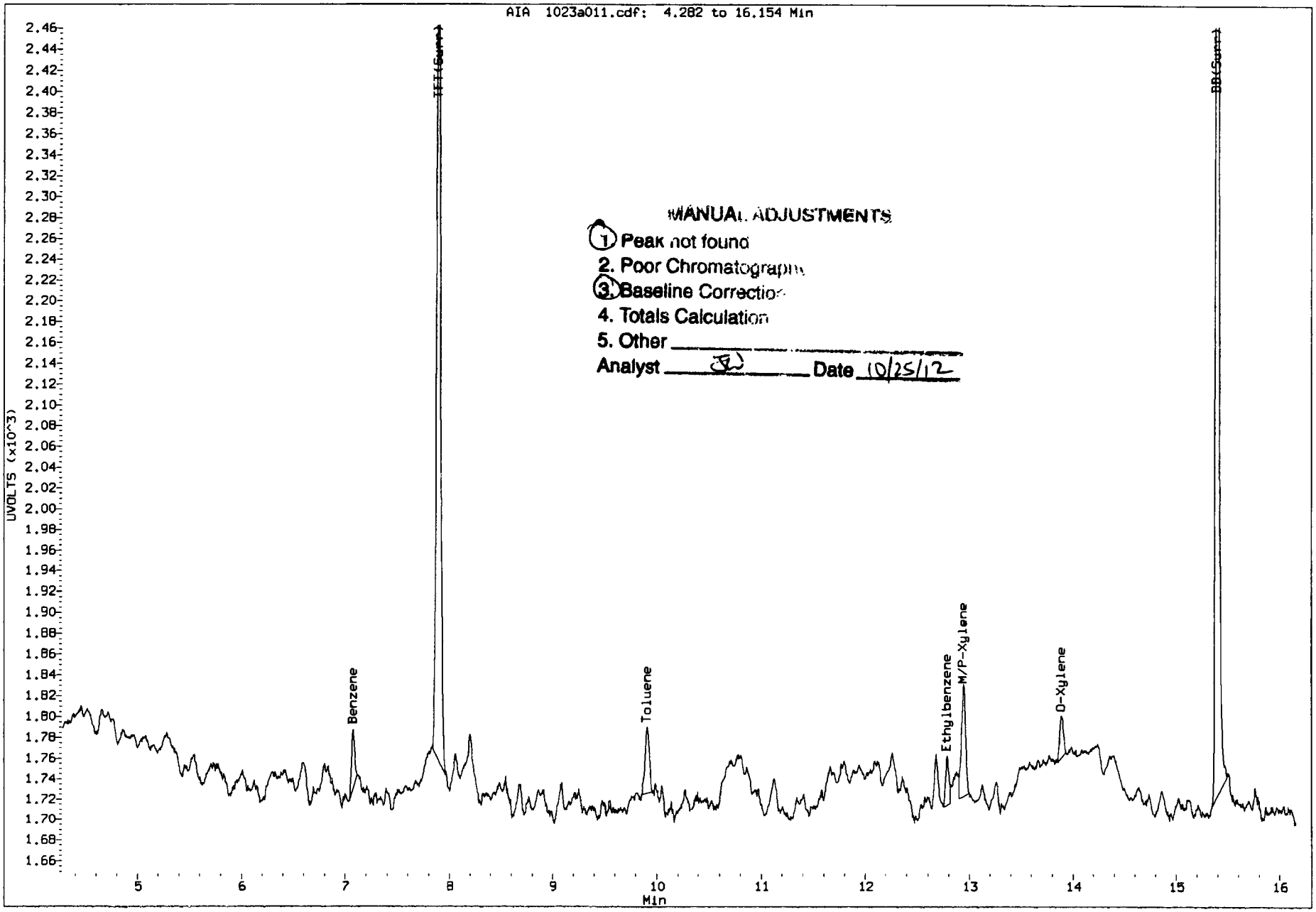
Analyst: JW Date: 10/25/12

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

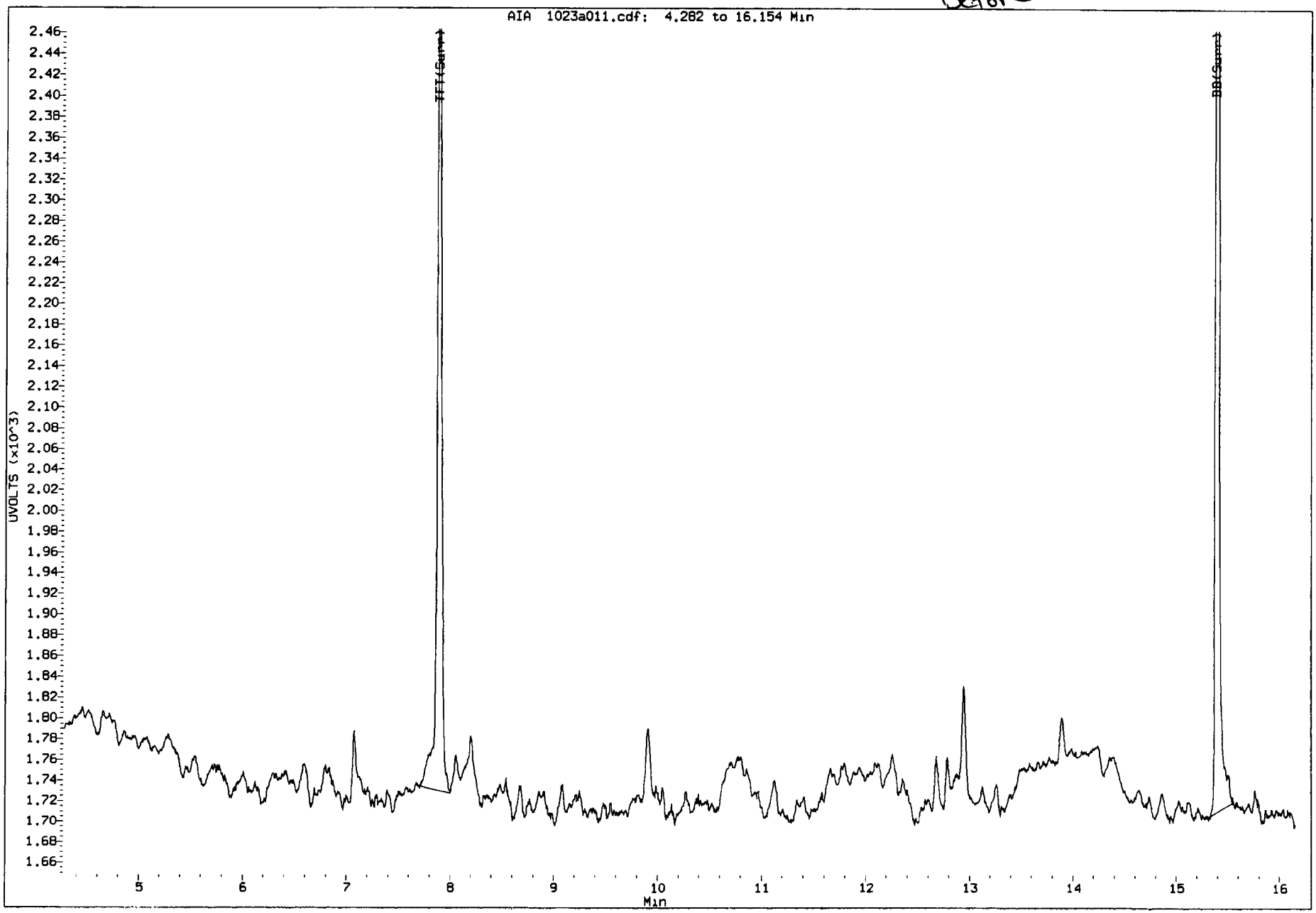


Data File: /chem3/pid1.i/20121023-2.b/1023a011.d/1023a011.cdf
Injection Date: 23-OCT-2012 21:15
Instrument: pid1.i
Client Sample ID:



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



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:

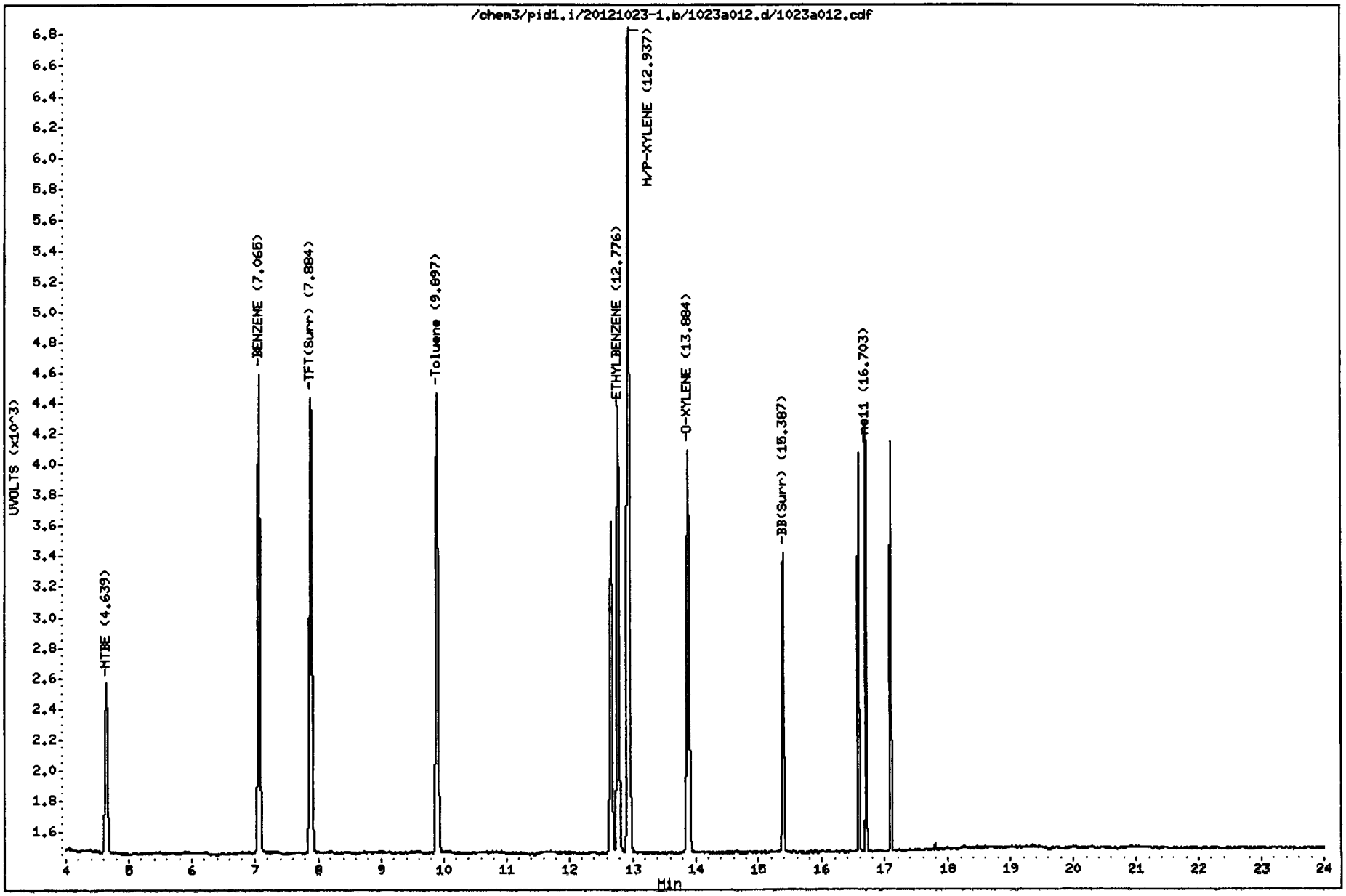
Instrument: pid1.i

Sample Info: BICV

Operator: PC/JW

Column phase: RTX 502-2 FID

Column diameter: 0.18



Data File: /chem3/pid1.i/20121023-2.b/1023a012.d

Date : 23-OCT-2012 21:44

Client ID:

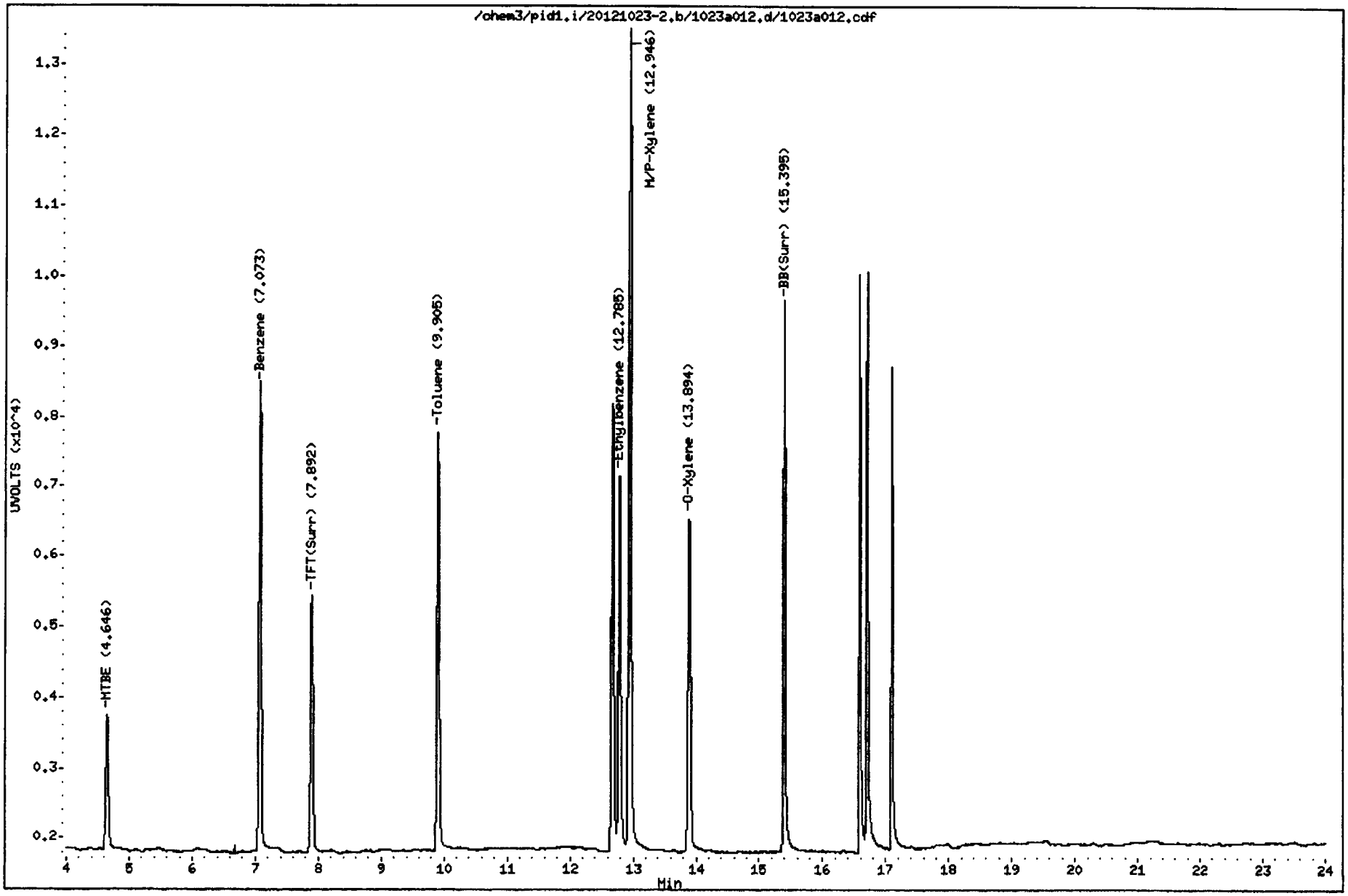
Sample Info: BICV

Instrument: pid1.i

Operator: PC/JW

Column phase: RTX 502-2 PID

Column diameter: 0.18



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

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

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

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)

JW 10/25/12

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:

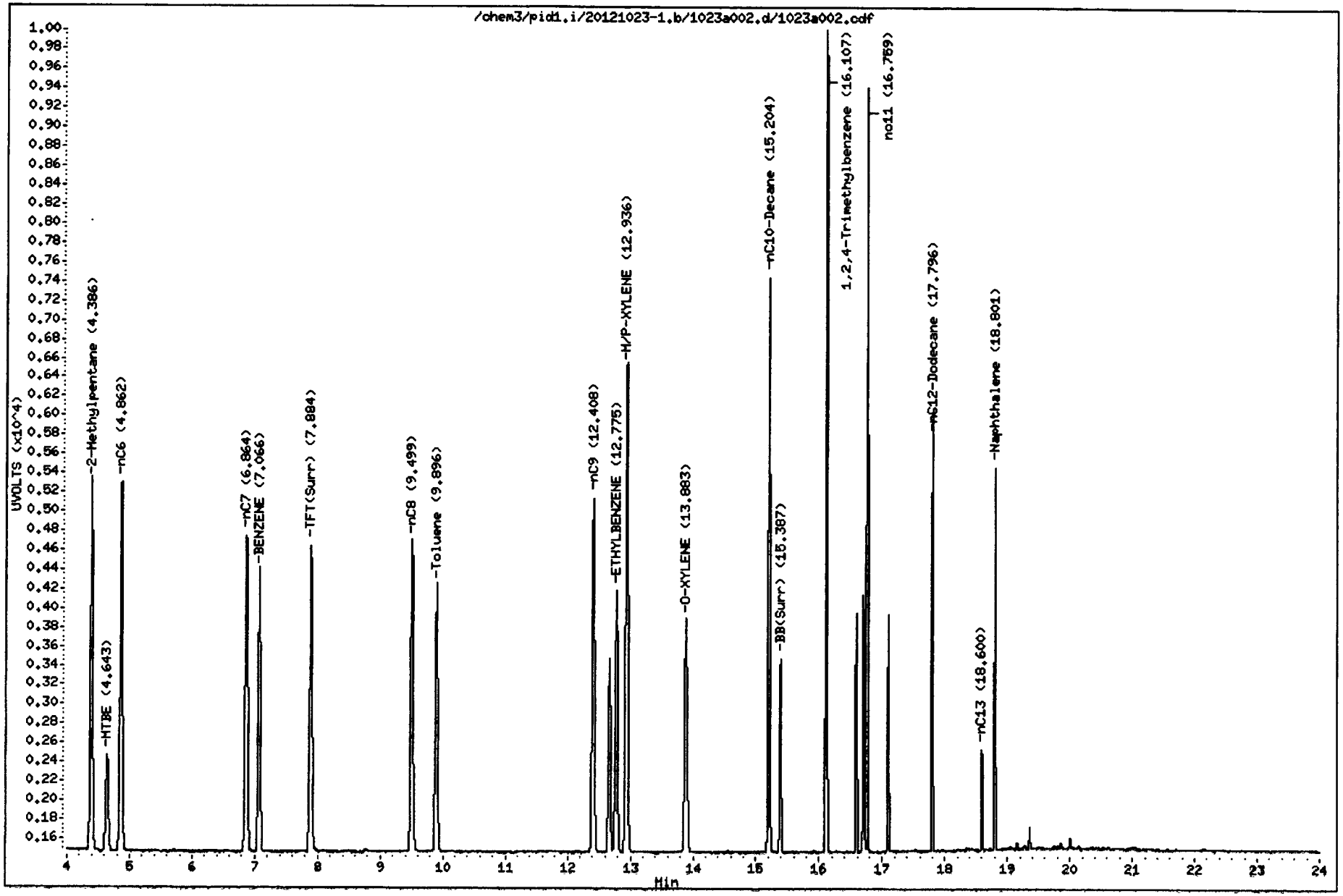
Sample Info: RT1023+BCAL1

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18

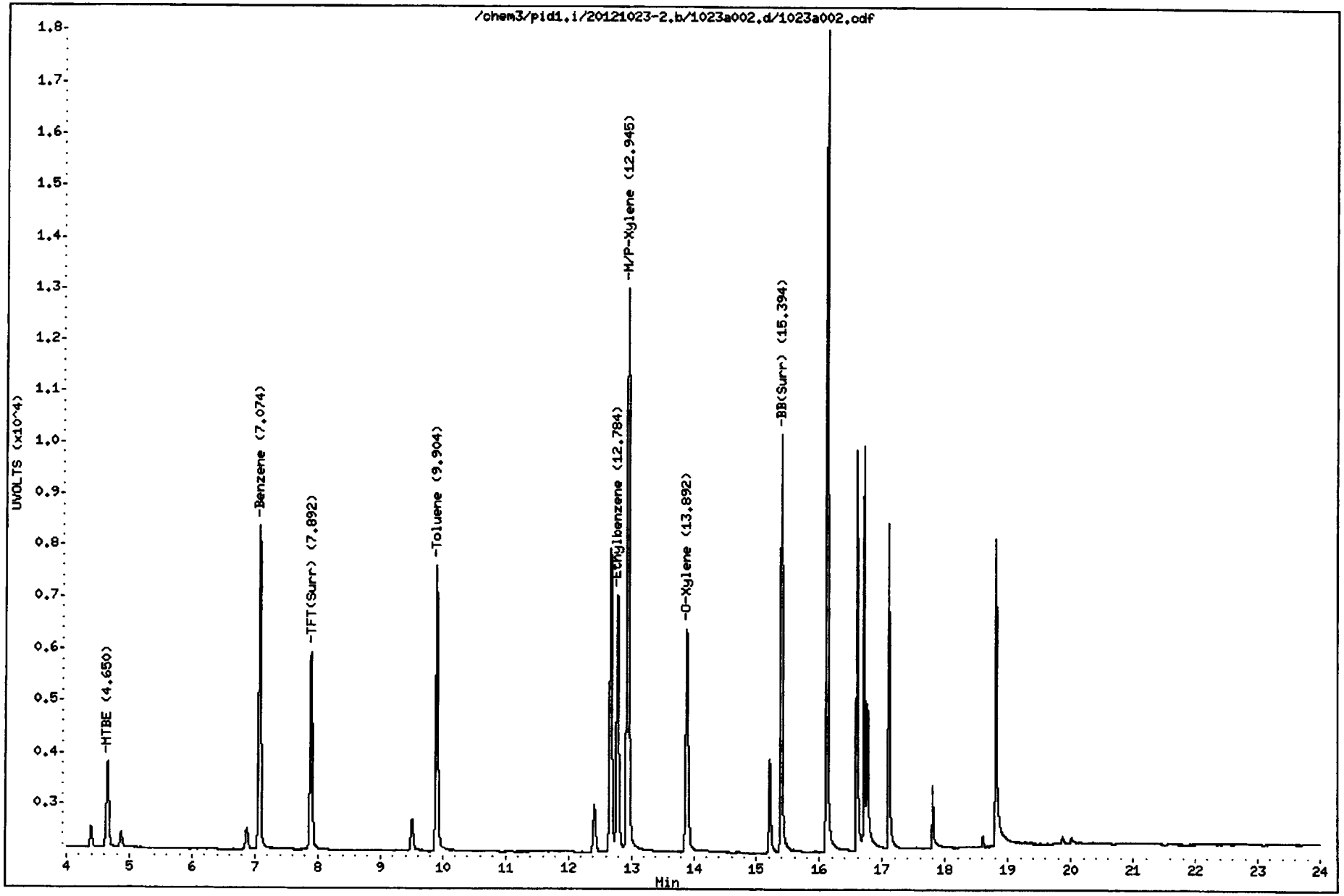


Data File: /chem3/pid1.i/20121023-2.b/1023a002.d
Date : 23-OCT-2012 10:10
Client ID:
Sample Info: RT1023+BCAL1

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:

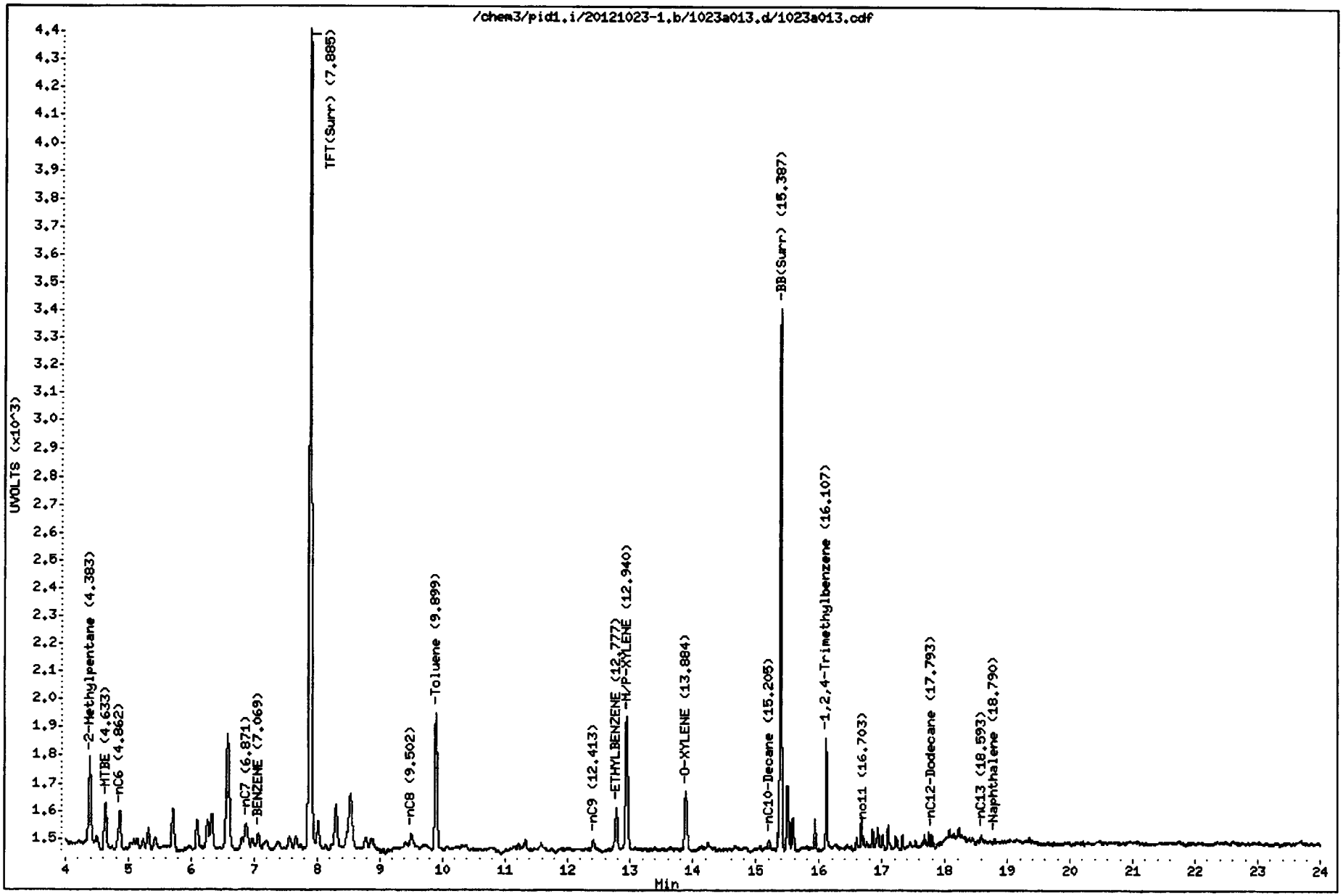
Sample Info: G 0.10

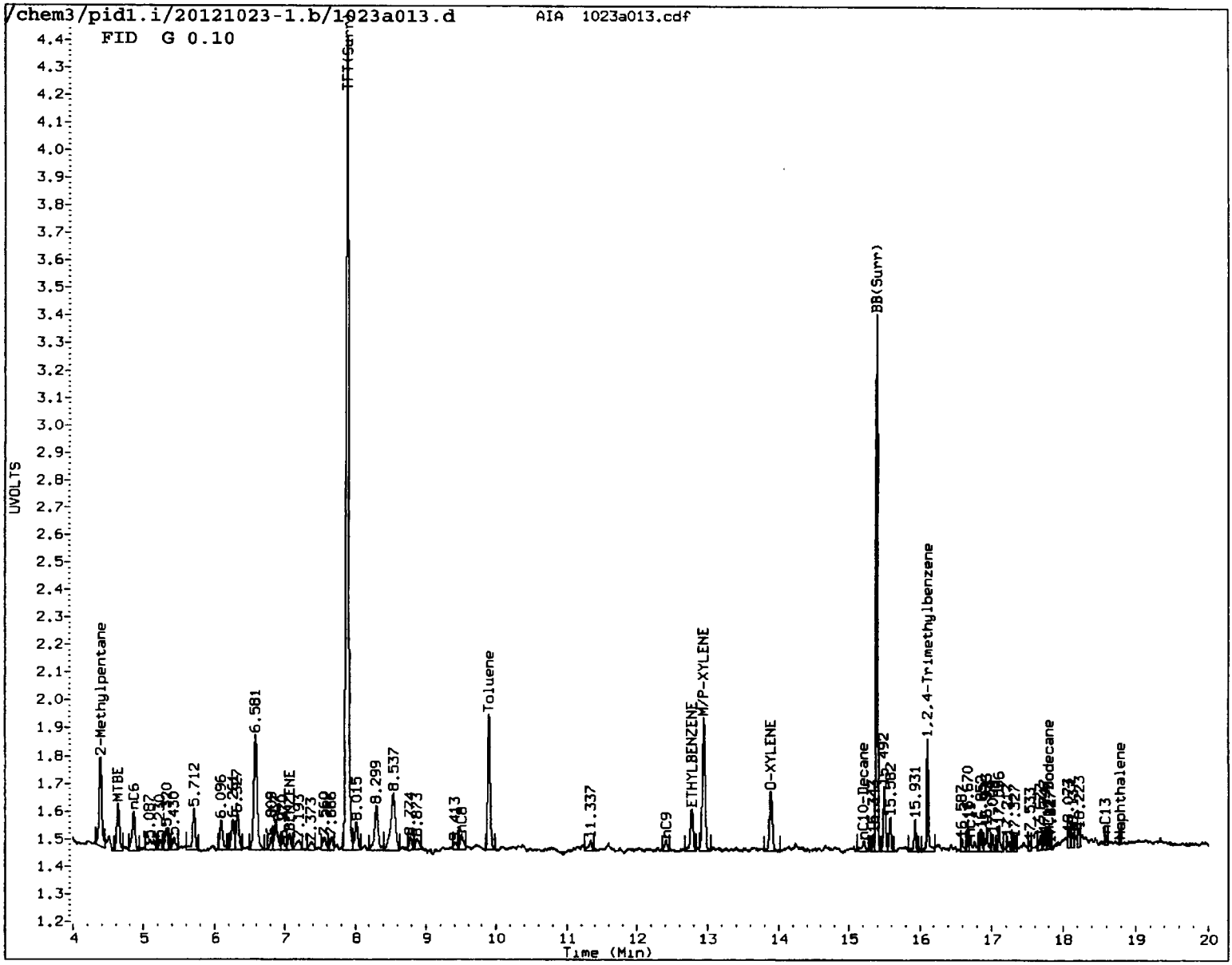
Column phase: RTX 502-2 FID

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

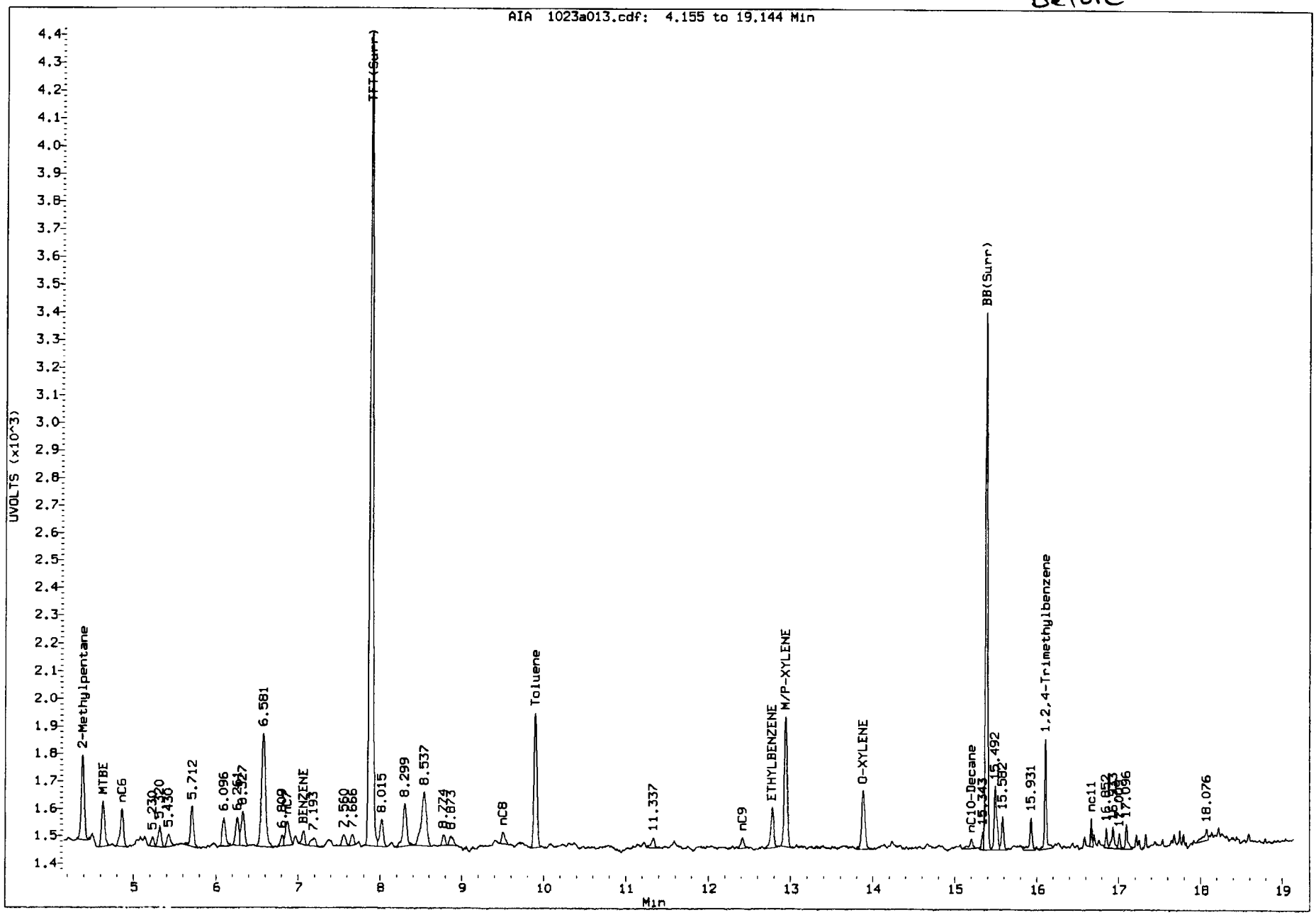
5. Other _____

Analyst: JW Date: 10/25/12

SUB: 01122

Data File: /chem3/pid1.1/20121023-1.b/1023a013.d/1023a013.cdf
Injection Date: 23-OCT-2012 22:13
Instrument: pid1.1
Client Sample ID:

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

JW 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:

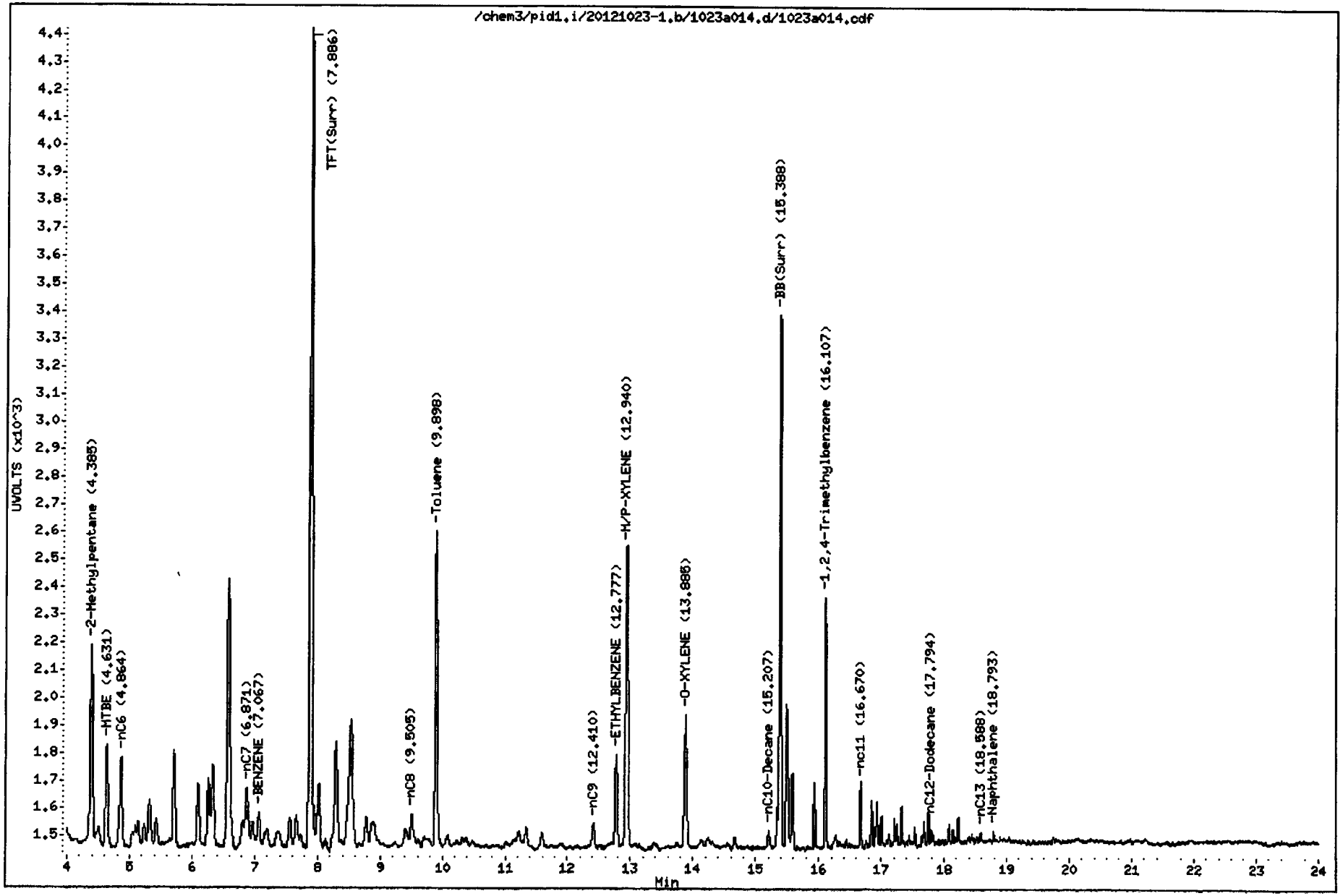
Sample Info: G 0.25

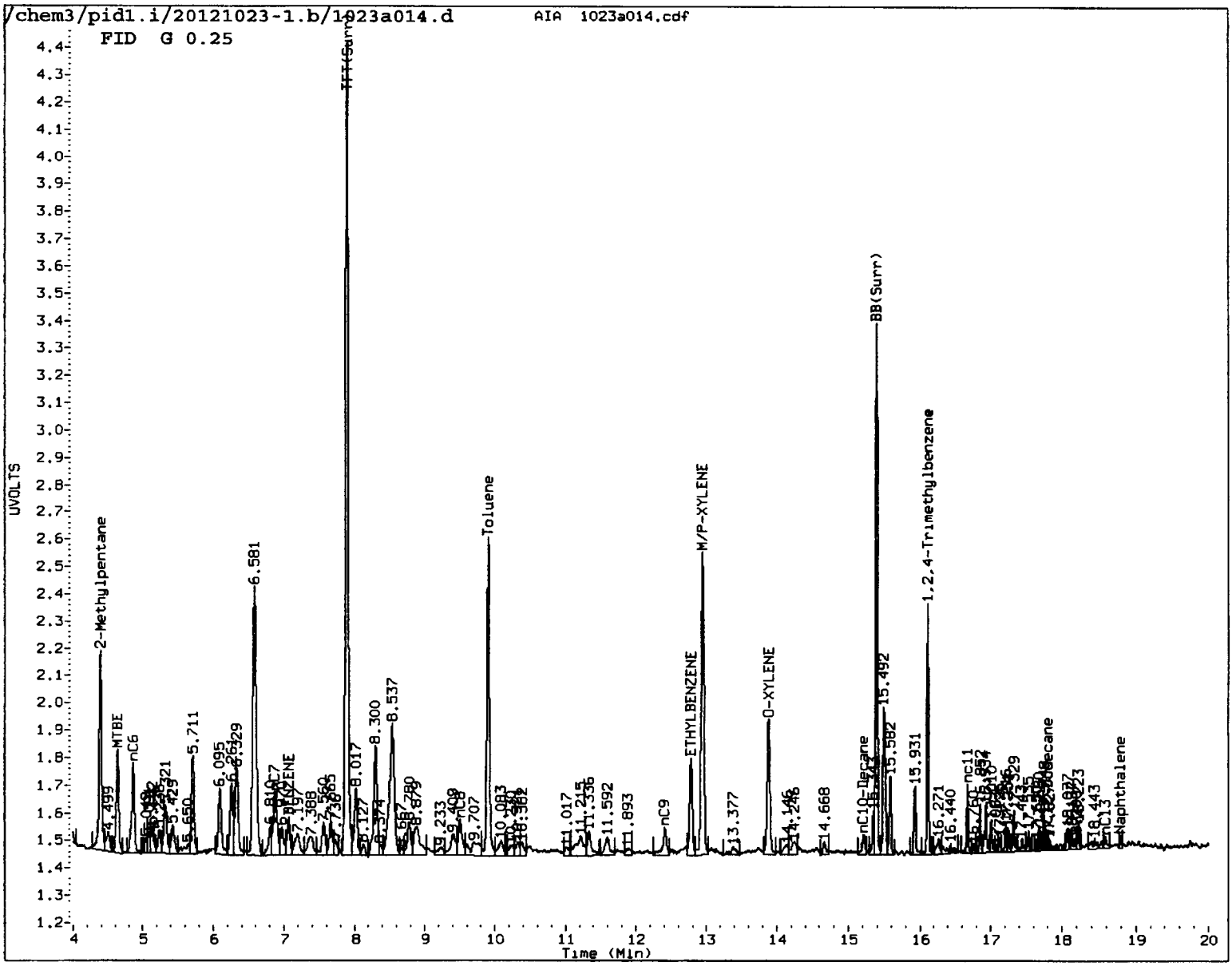
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18





MANUAL INTEGRATION

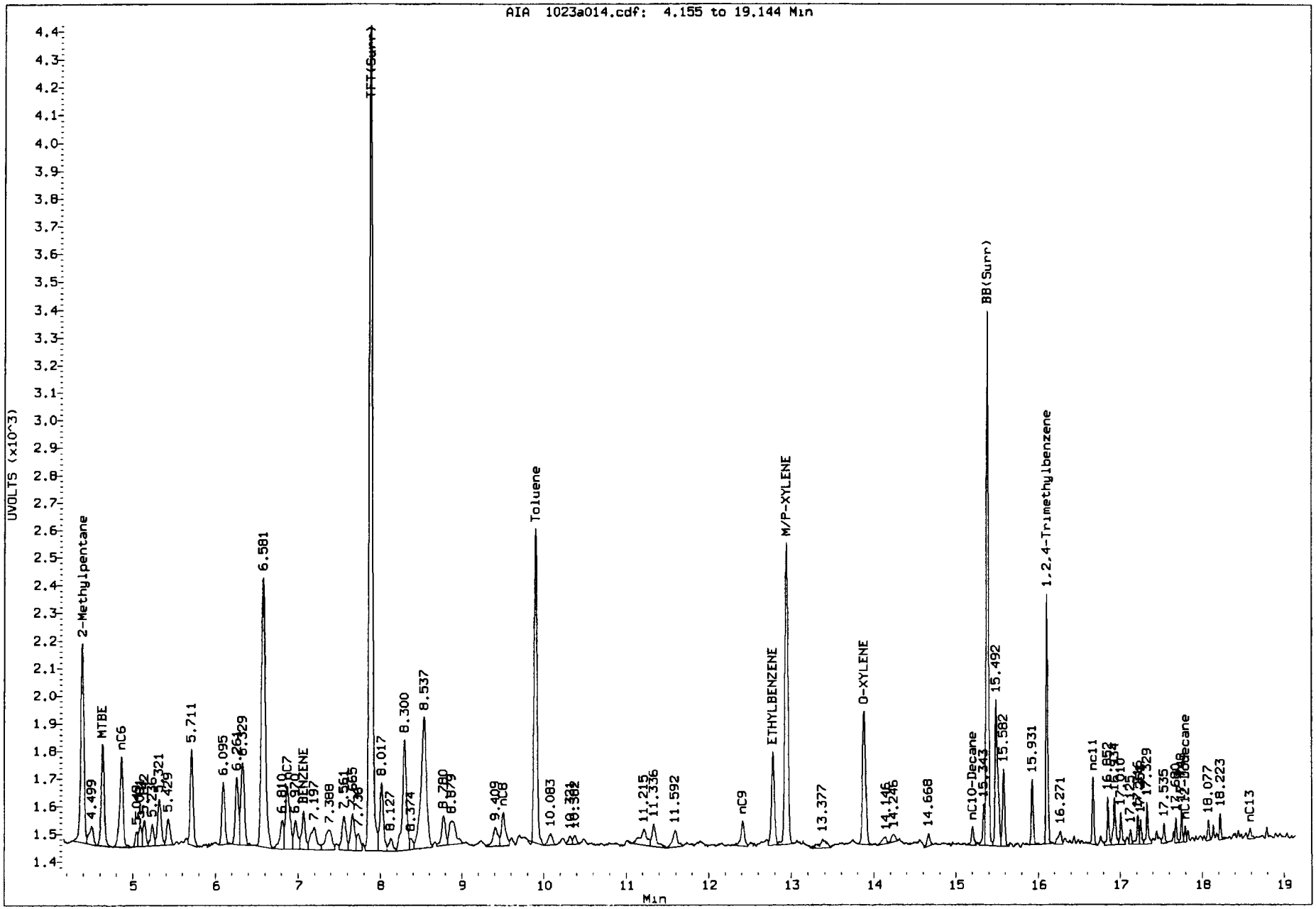
1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JW Date: 10/25/12

Data File: /chem3/pid1.i/20121023-1.b/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:

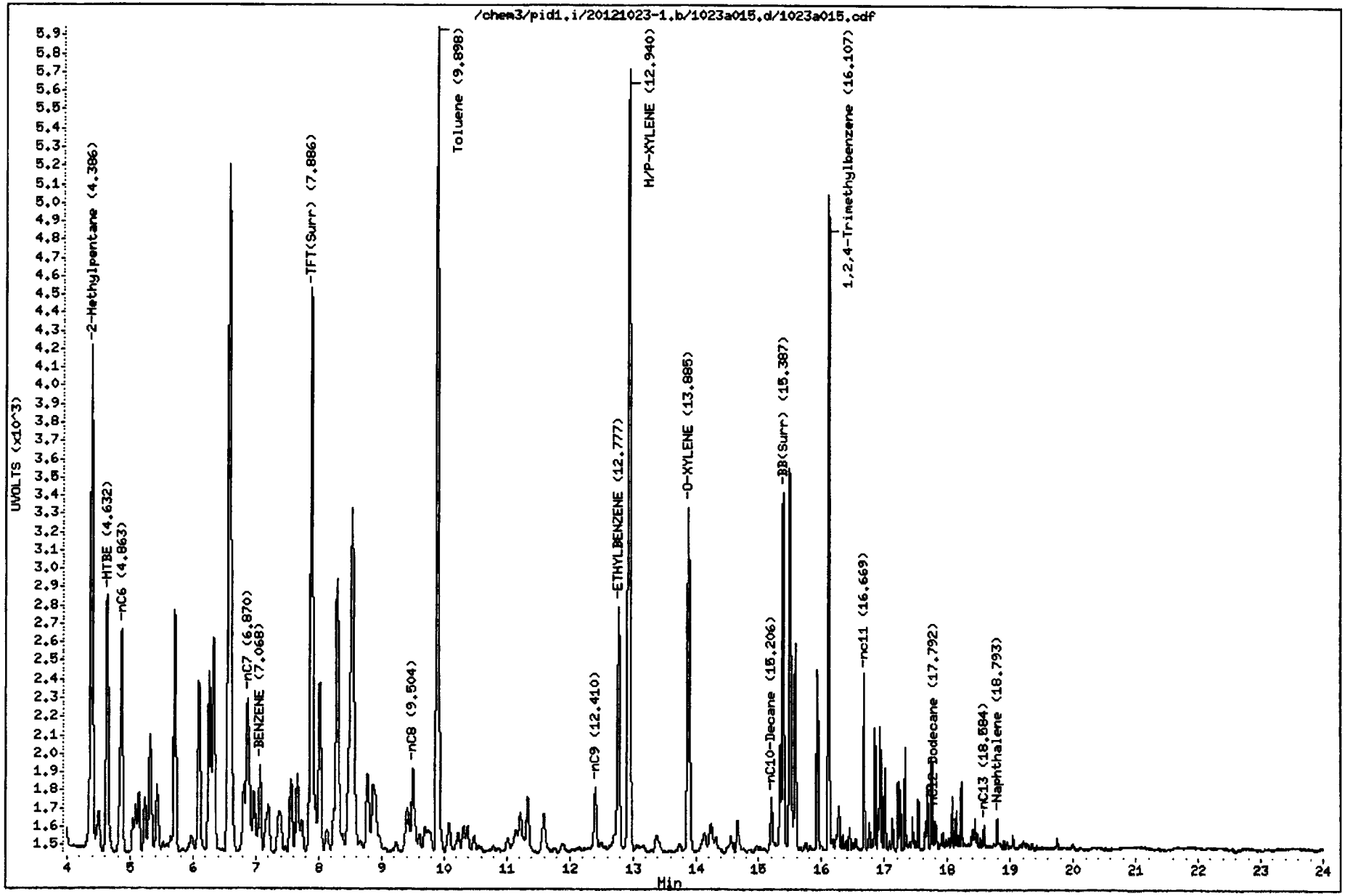
Sample Info: G 1.0

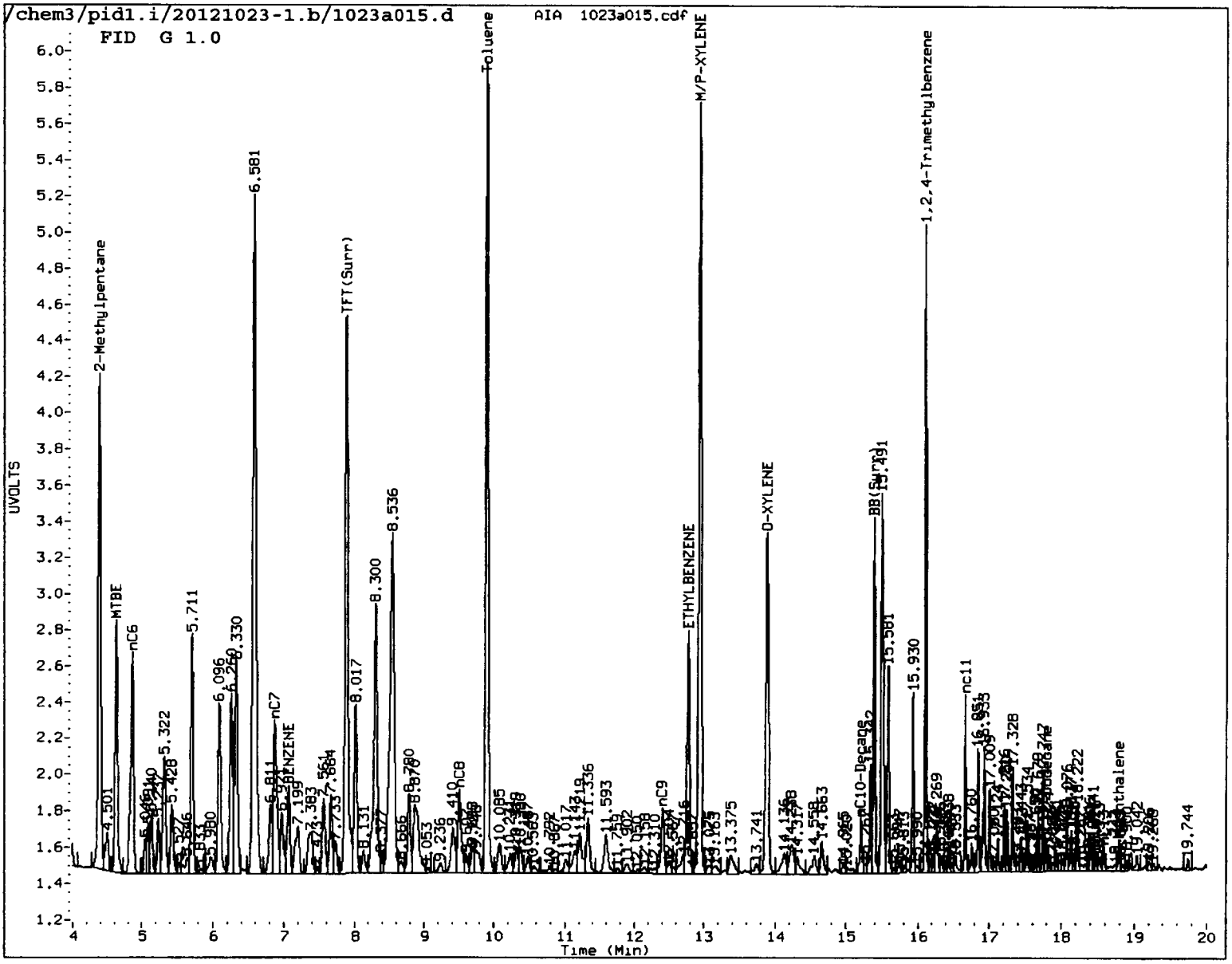
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



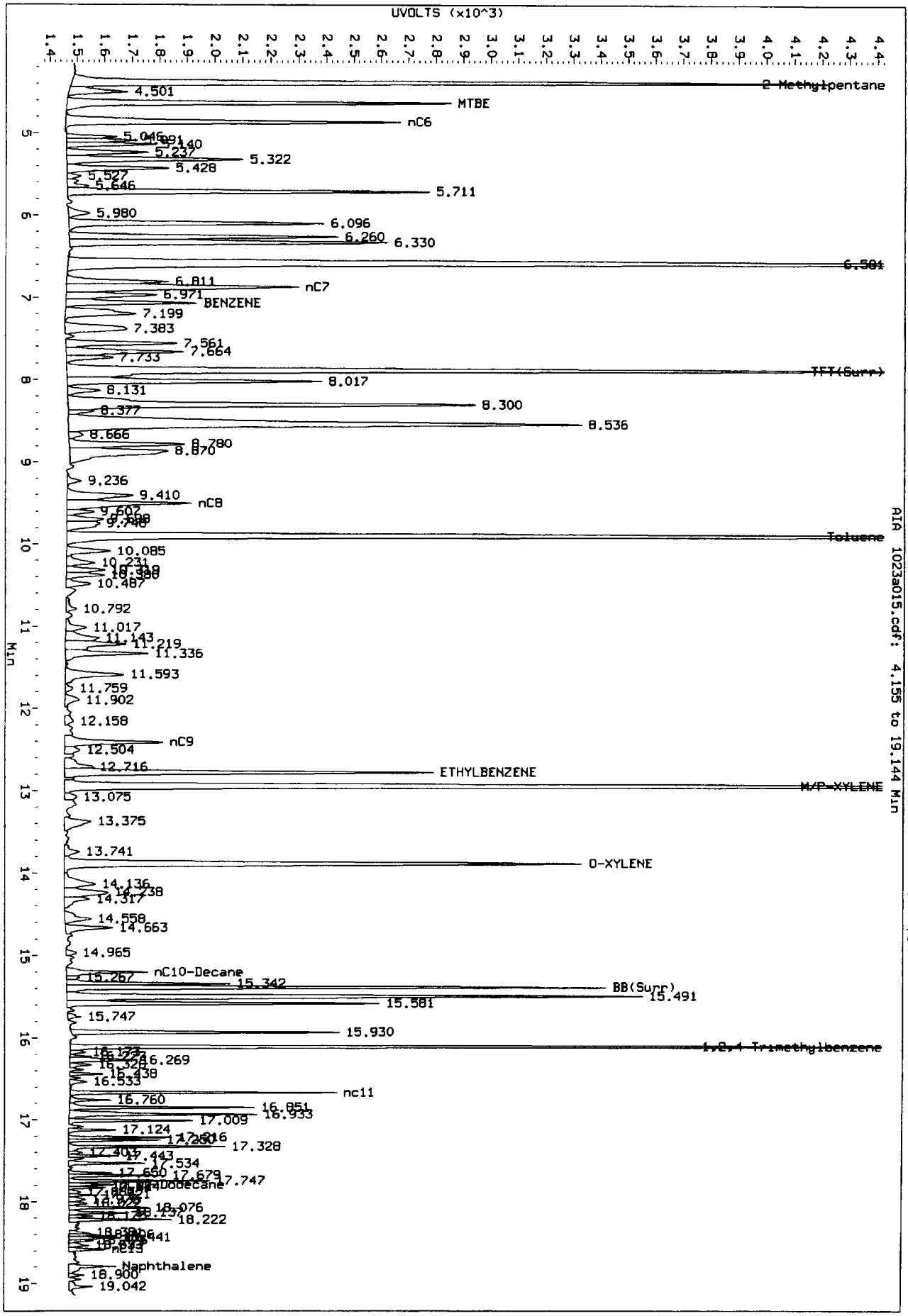


MANUAL INTEGRATION

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:
UVOLTS (x10^3)
Min
AIA 1023a015.cdf: 4.155 to 19.144 Min
2-Methylpentane
4.501
MTBE
nC6
5.322
5.428
5.711
5.980
6.096
6.330
6.501
nC7
BENZENE
7.199
7.383
7.733
TFT(Surr)
8.017
8.300
8.536
nC8
Toluene
10.085
10.792
11.017
11.336
11.593
11.759
11.902
12.158
nC9
12.504
ETHYLBENZENE
M/P-XYLENE
13.075
13.375
13.741
O-XYLENE
14.136
14.317
14.558
14.663
14.965
nC10-Decane
15.267
15.342
BB(Surr)
15.491
15.581
15.747
15.930
16.269
16.533
nc11
16.760
16.851
16.933
17.009
17.124
17.328
17.534
17.650
17.679
17.747
18.076
18.222
Naphthalene
18.900
19.042
Before

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:

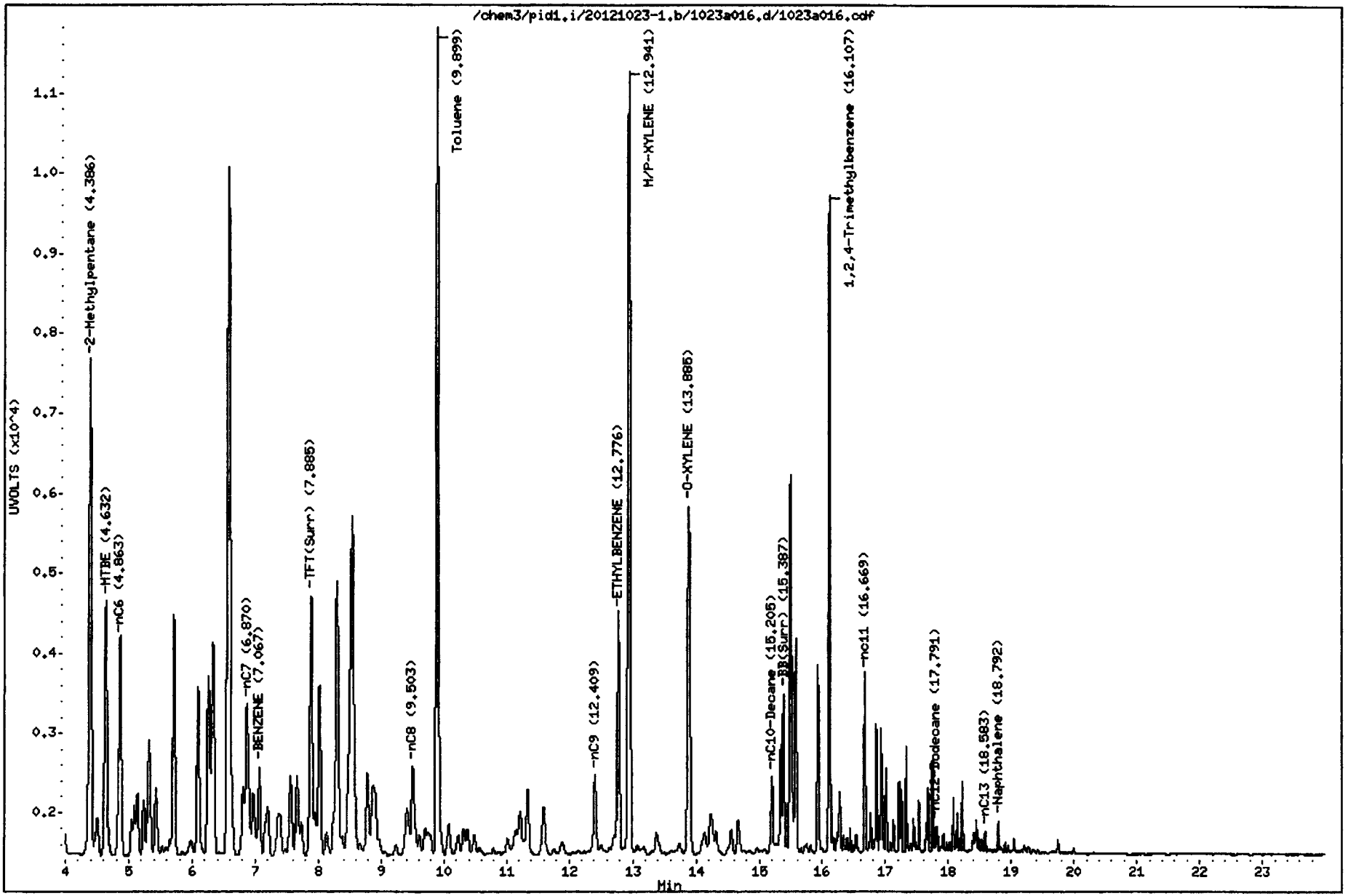
Sample Info: G 2.5

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



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:

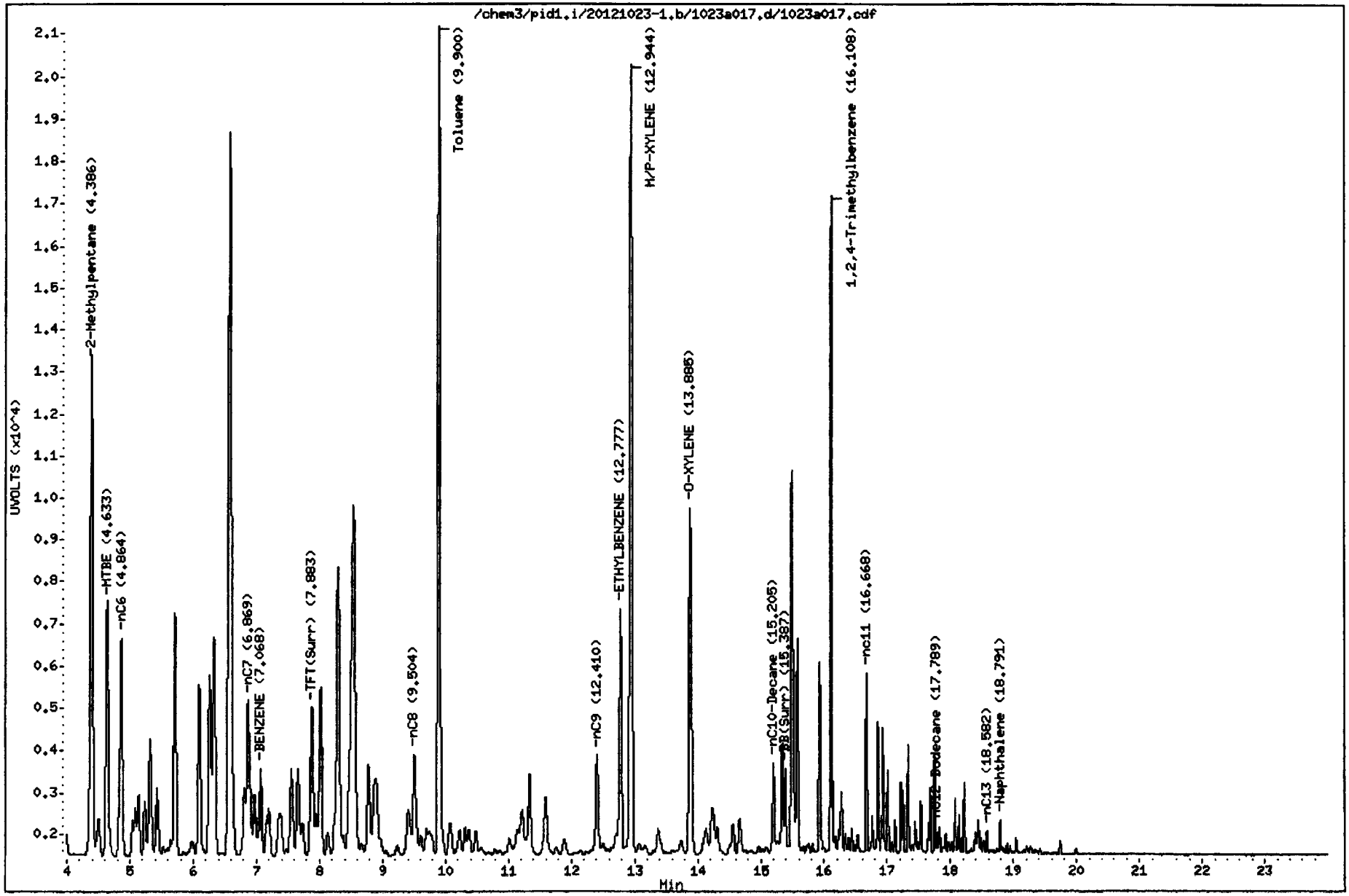
Sample Info: G 5.0

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC/JW

Column diameter: 0.18



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:

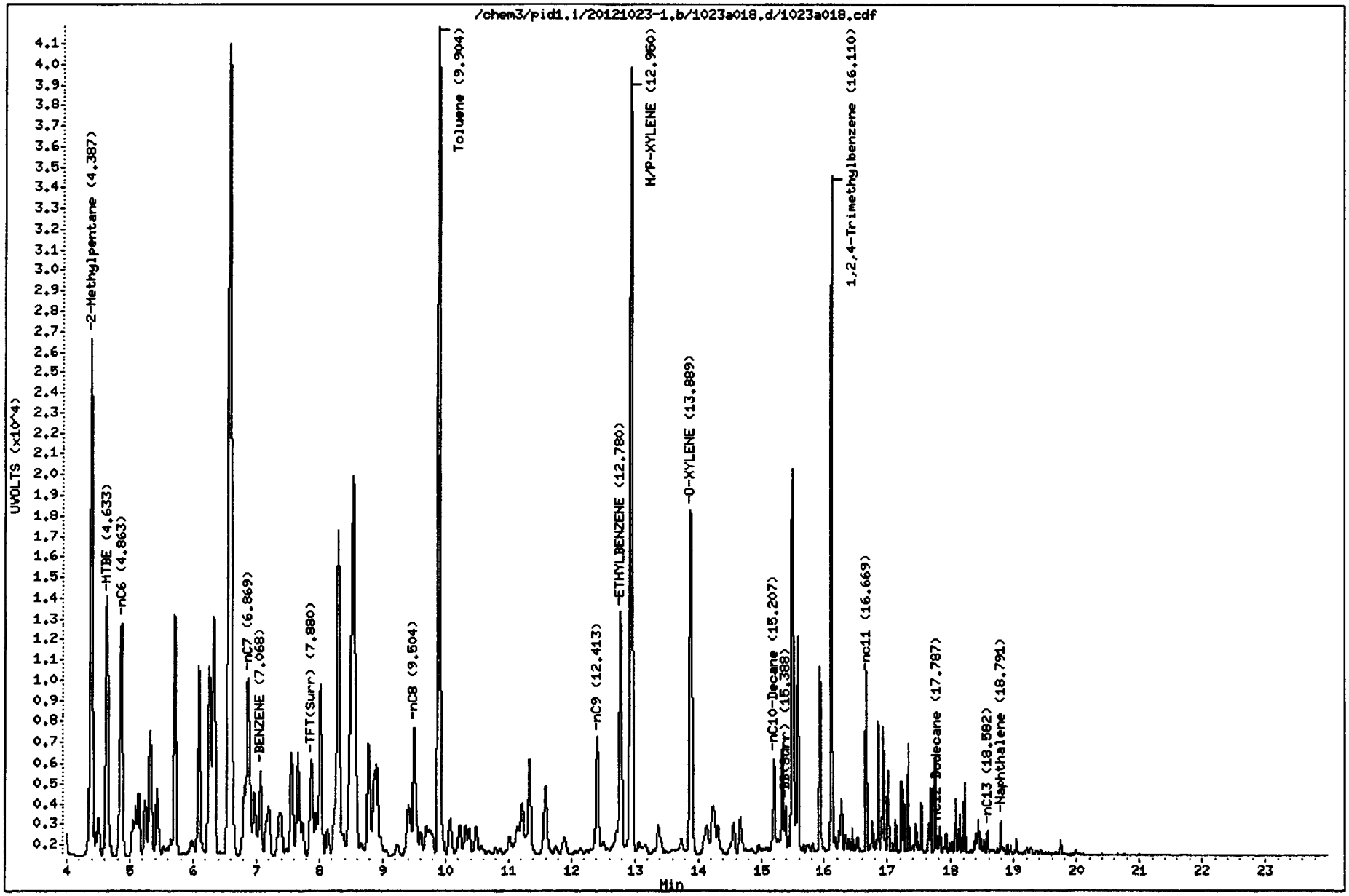
Sample Info: C 10

Column phase: RTX 502-2 FID

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/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

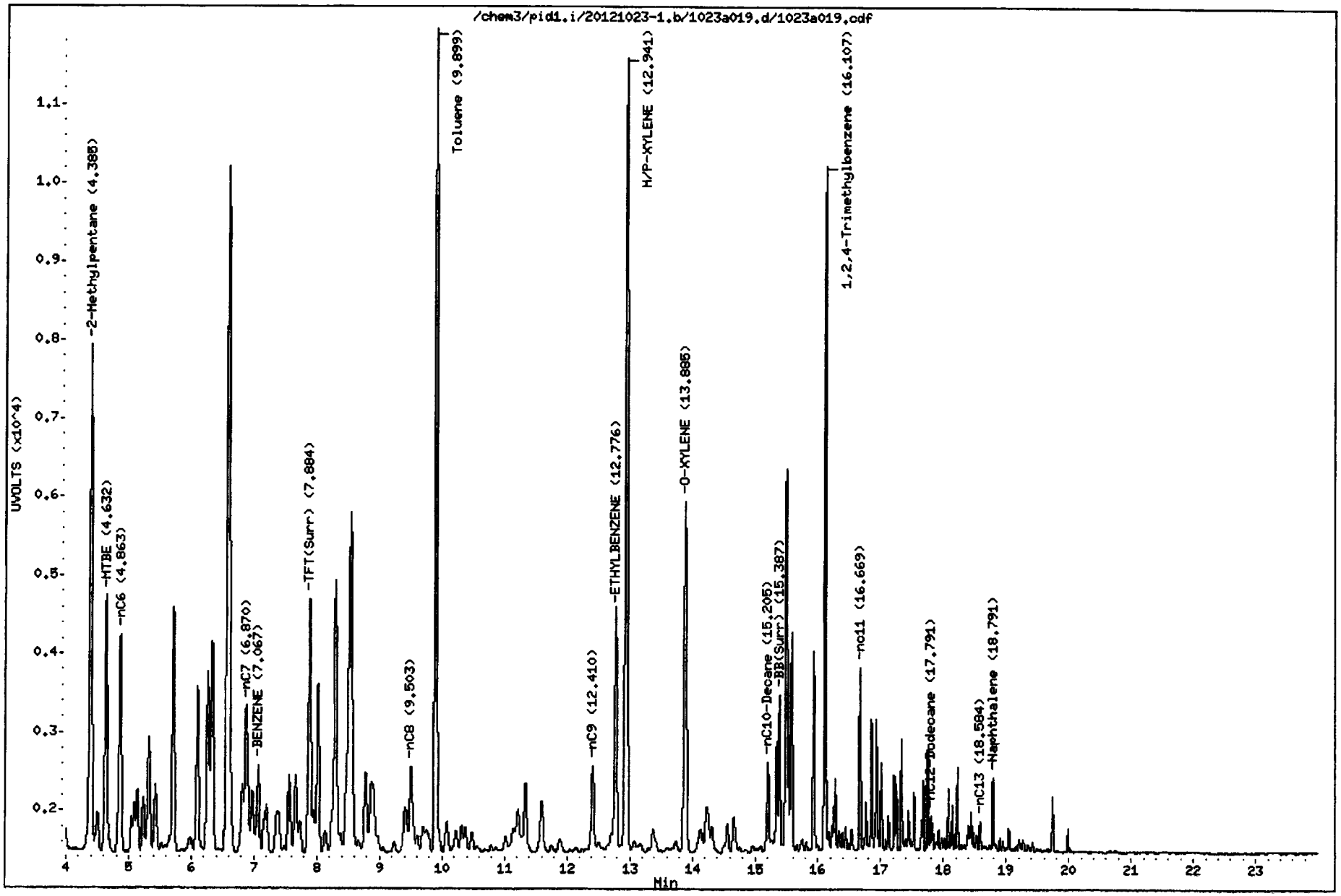
A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20121023-1.b/1023a019.d
Date : 24-OCT-2012 01:08
Client ID:
Sample Info: GICV

Instrument: pid1.i

Operator: PC/JW
Column diameter: 0.18

Column phase: RTX 502-2 FID



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 _____ Date: 10/25/12
Reviewer 2 _____ Date: 10/26/12

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

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: WU70

Analytical Resources, Incorporated
Analytical Chemists and Consultants

VOA Analyst Notes / Data Review Checklist

ARI WORK Order: WW70 Client ID: SAIC

METHOD: (NW-TPH(Gas)) **8021B**(BTEX) **NW-VPH**(VPH) **8260C**(VOA) **8260C**(SIM VOA) **524.3**(VOA) **RSK-175**(MEE)

Instrument: NT-2 NT-3 NT-5 NT-7 NT-9 (PID-1) PID-2 PID-3 FID-6

Purge Volume (mL) 5 Curve Date: 10/23/12 5/22/13 Analysis Start Date: 6/27/13

	REVIEW 1/REVIEW 2		REVIEW 1/REVIEW 2
PH ≤ 2.0 / 5035 Preserved?	NA/(Y)/N/___	Method Blank In Control?	Y/N/✓
BFB Tune Meets Criteria?	NA/Y/N/___	Surrogate Recovery in Control?	Y/N/✓
Internal STD within 50-200%?	NA/Y/N/___	LCS / LCSD Recovery Met?	Y/N/___
CCAL Meets %D	Y/N/___	LCS / LCSD RPD ≤30%?	NA/26%
ICAL Q flag applied?	NA/(Y)/N/___	MS / MSD Recovery Met?	NA/Y/N/NA
CCAL Q Flag applied	NA/Y/(N)/___	MS / MSD RPD ≤30%?	NA/NA
Manual Integrations?	Y/N/___	Samples Diluted?	Y/(N)/✓
Integration Summary?	Y/N/___	Special Analysis Request?	Y/(N)/✓

Bubbles/Headspace: (None) SM (≤ 2mm •) PB (2-4mm ●) LG (> 4mm) Head Space

Detail problems, corrective actions and/or other pertinent information below:

QC volume not provided

(Review 1)Analyst: BC **Date:** 6/28/13

(Review 2)Reviewer: [signature] **Date:** 6/28/13

WU70:0176

Analytical Resources Inc.: Organics Instrument Log

PID-1 Serial No.: 2750A-17141

Date: 6/27/13 Analysis: NWTPH-G/BTEX Analyst: PC

Column 1 Serial No.: 821726 Column Type: RTX502.2

Column 2 Serial No.: — Column Type: —

GC Method: BTX ICal Date: 10/23/12, 5/20/13 Injection Volume: ~~2.5~~ 5 PC 6/28/13

IS	Ical/Ccal	ICV
B000856	WW791-2	B000246
	B000332	
	B000206	

Document All Maintenance Tasks In StarLIMS

	Time	Filename	LabID	ClientID	Vial#	pH	DF
1	0857	0627a001.d	RINSE				1
2	0926	0627a002.d	RT0626+BCAL				1
3	0955	0627a003.d	GCAL 1				1
4	1100	0627a004.d	LCS0627				1
5	1129	0627a005.d	LCSD0627				1
6	1158	0627a006.d	MB0627				1
7	1320	0627a007.d	WV67D	UP-TB-01-20130626-W	12		1
8	1349	0627a008.d	WU70A	LF-QC-TB-20130619-W	11		1
9	1418	0627a009.d	WV68C	Trip Blanks	10		1
10	1447	0627a010.d	WV67A	UP-CB-B8-20130626-S			1
11	1517	0627a011.d	WV67B	UP-MKF-165-20130626			1
12	1546	0627a012.d	WV67C	UP-CB-A6-20130626-S			1
13	1615	0627a013.d	BCAL 2				1
14	1644	0627a014.d	GCAL 2				1
15	1714	0627a015.d	WV68A	RC-3(GW)	3	62	1
16	1743	0627a016.d	WV68B	RC-6(GW)	4	1	1
17	1812	0627a017.d	WU70B	LF-TP-001-20130619-			1
18	1841	0627a018.d	WV04A	ARR-1			1
19	1910	0627a019.d	WV04B	ARR-2			1
20	1939	0627a020.d	WV04C	ARR-3			1
21	2009	0627a021.d	WV04D	ARR-4			1
22	2038	0627a022.d	WV04E	ARR-5			1
23	2107	0627a023.d	WV04F	ARR-6			1
24	2136	0627a024.d	BCAL 3				1
25	2205	0627a025.d	GCAL 3				1

PC 6/28/13

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

6/18/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130627-1.b/0627a002.d
Data file 2: /chem3/pid1.i/20130627-2.b/0627a002.d
Method: /chem3/pid1.i/20130627-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: RT0626+BCAL
Client ID:
Injection Date: 27-JUN-2013 09:26
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.839	0.000	3242	40194	109.6	TFT(Surr)
15.378	0.000	1872	16366	94.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	430636	1.203
8015C 2MP-TMB	(4.17 to 16.20)	723723	479196	0.662
AK101 nC6-nC10	(4.67 to 15.10)	582885	342296	0.587
NWTPHG Tol-Nap	(9.76 to 18.90)	375093	468782	1.250

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
7.846	0.000	3575	110.9	TFT(Surr)
15.385	0.000	7337	101.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.014	0.000	5627	25.03	Benzene
9.873	0.000	5167	26.08	Toluene
12.766	0.000	4360	26.71	Ethylbenzene
12.926	0.000	9342	51.92	M/P-Xylene
13.873	0.000	3844	27.07	O-Xylene
4.546	0.000	2060	23.63	MTBE

A Indicates Peak Area was used for quantitation instead of Height
I Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130627-1.b/0627a002.d

Date : 27-JUN-2013 09:26

Client ID:

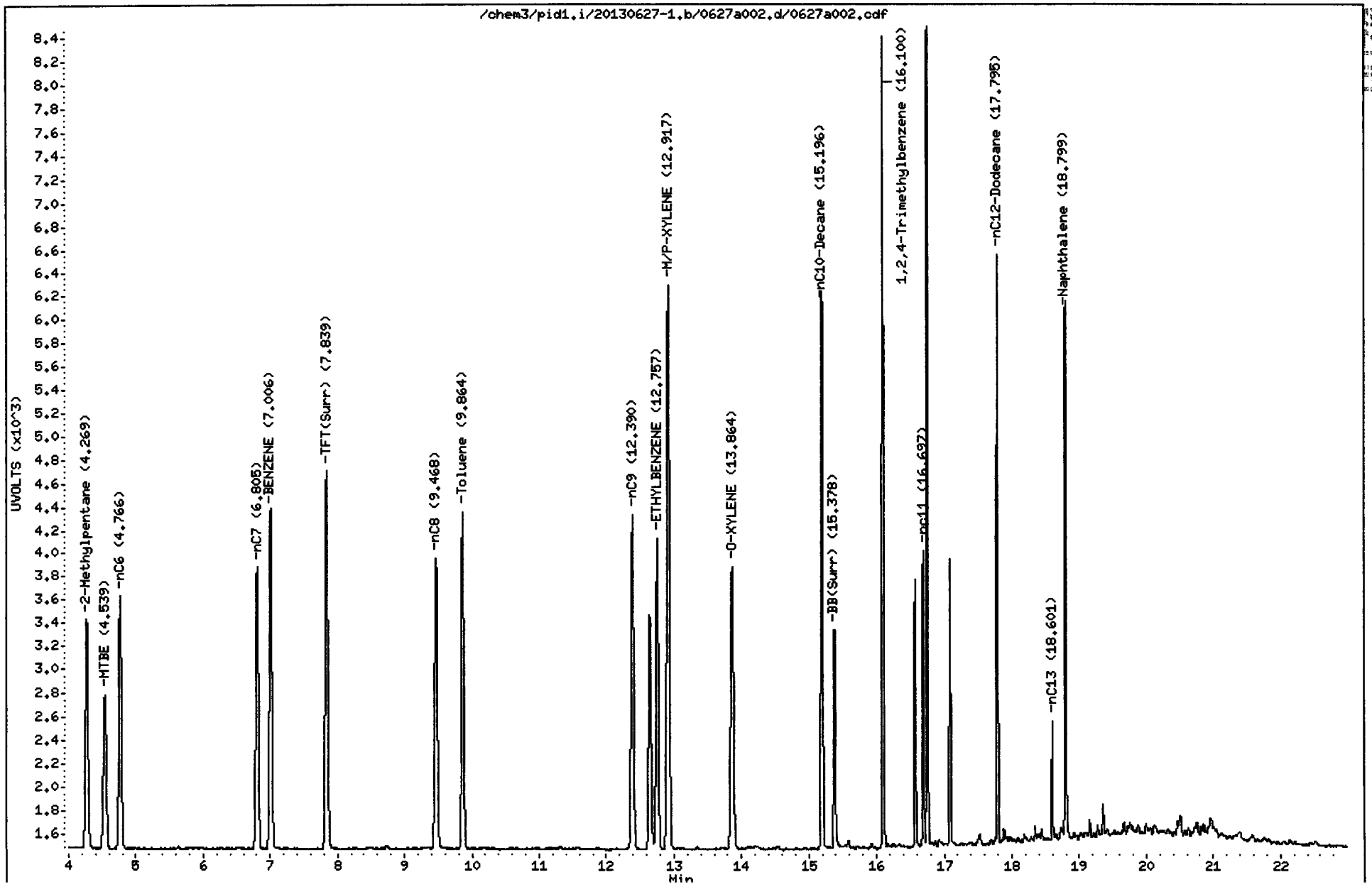
Sample Info: RT0626+BCAL

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18



PC 6/28/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130627-1.b/0627a003.d
Data file 2: /chem3/pid1.i/20130627-2.b/0627a003.d
Method: /chem3/pid1.i/20130627-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: GCAL 1
Client ID:
Injection Date: 27-JUN-2013 09:55
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.837	-0.001	3455	48018	116.8	TFT(Surr)
15.378	-0.001	1981	18654	99.7	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	812266	2.268 M
8015C 2MP-TMB	(4.17 to 16.20)	723723	1535314	2.121 M
AK101 nC6-nC10	(4.67 to 15.10)	582885	1249470	2.144 M
NWTPHG Tol-Nap	(9.76 to 18.90)	375093	872234	2.325 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
7.846	0.000	3665	113.7	TFT(Surr)
15.385	0.001	7493	103.6	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.014	0.000	1898	8.44	Benzene
9.874	0.001	19138	96.59	Toluene
12.766	0.000	4572	28.00	Ethylbenzene
12.930	0.004	18433	102.44	M/P-Xylene
13.875	0.002	6626	46.66	O-Xylene
4.530	-0.017	279	3.20	MTBE

\ Indicates Peak Area was used for quantitation instead of Height
I Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130627-1.b/0627a003.d

Date : 27-JUN-2013 09:55

Client ID:

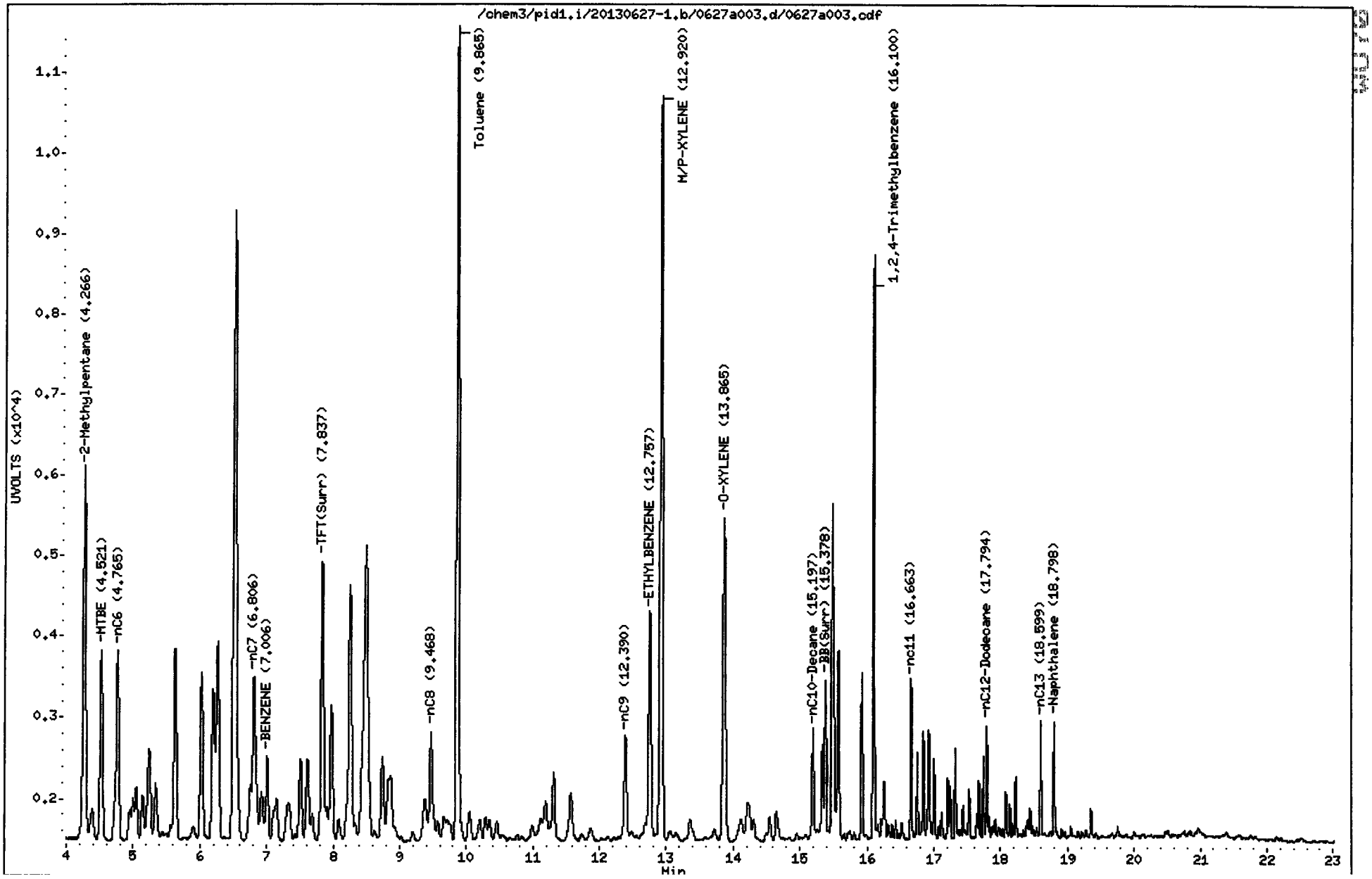
Sample Info: GCAL 1

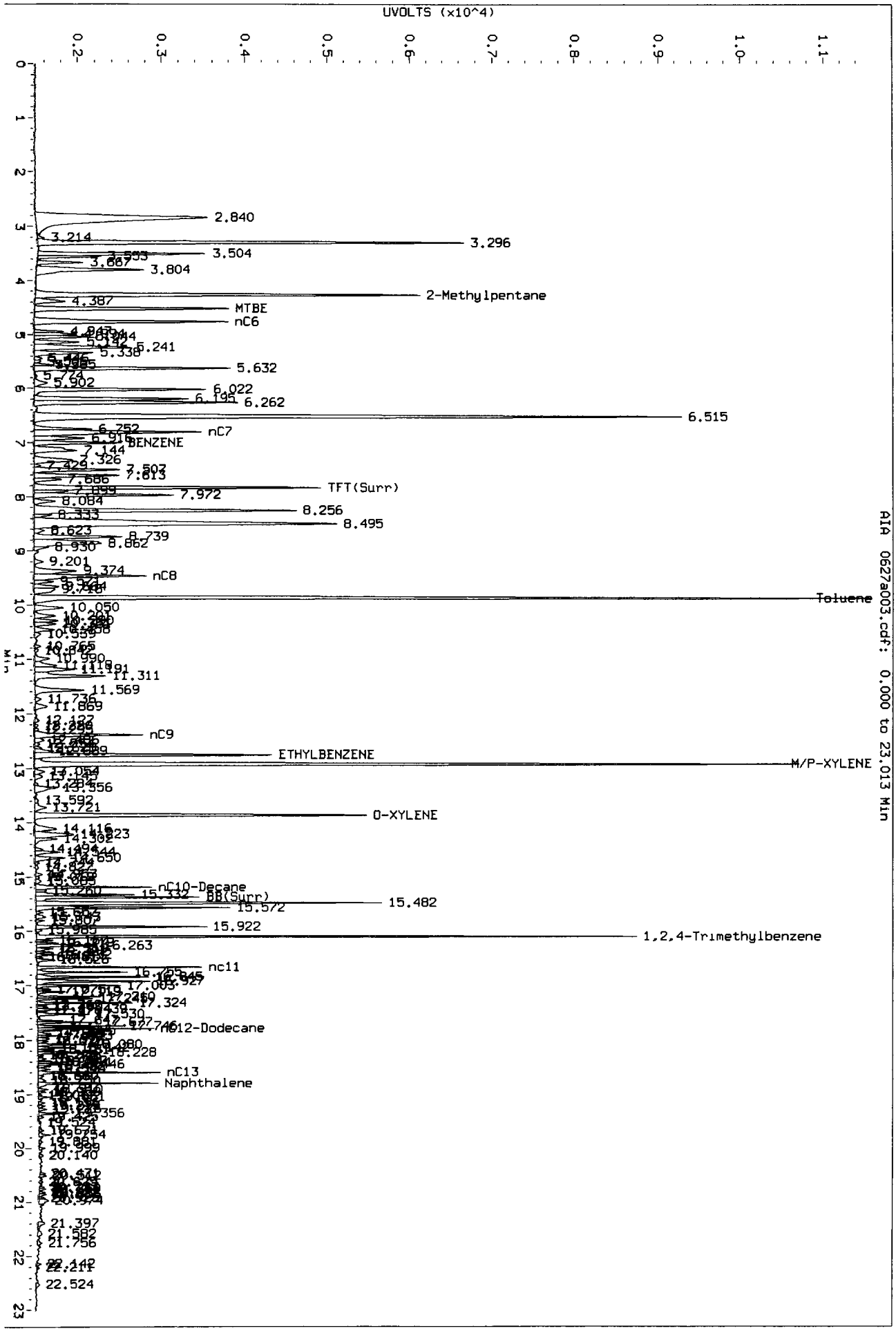
Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

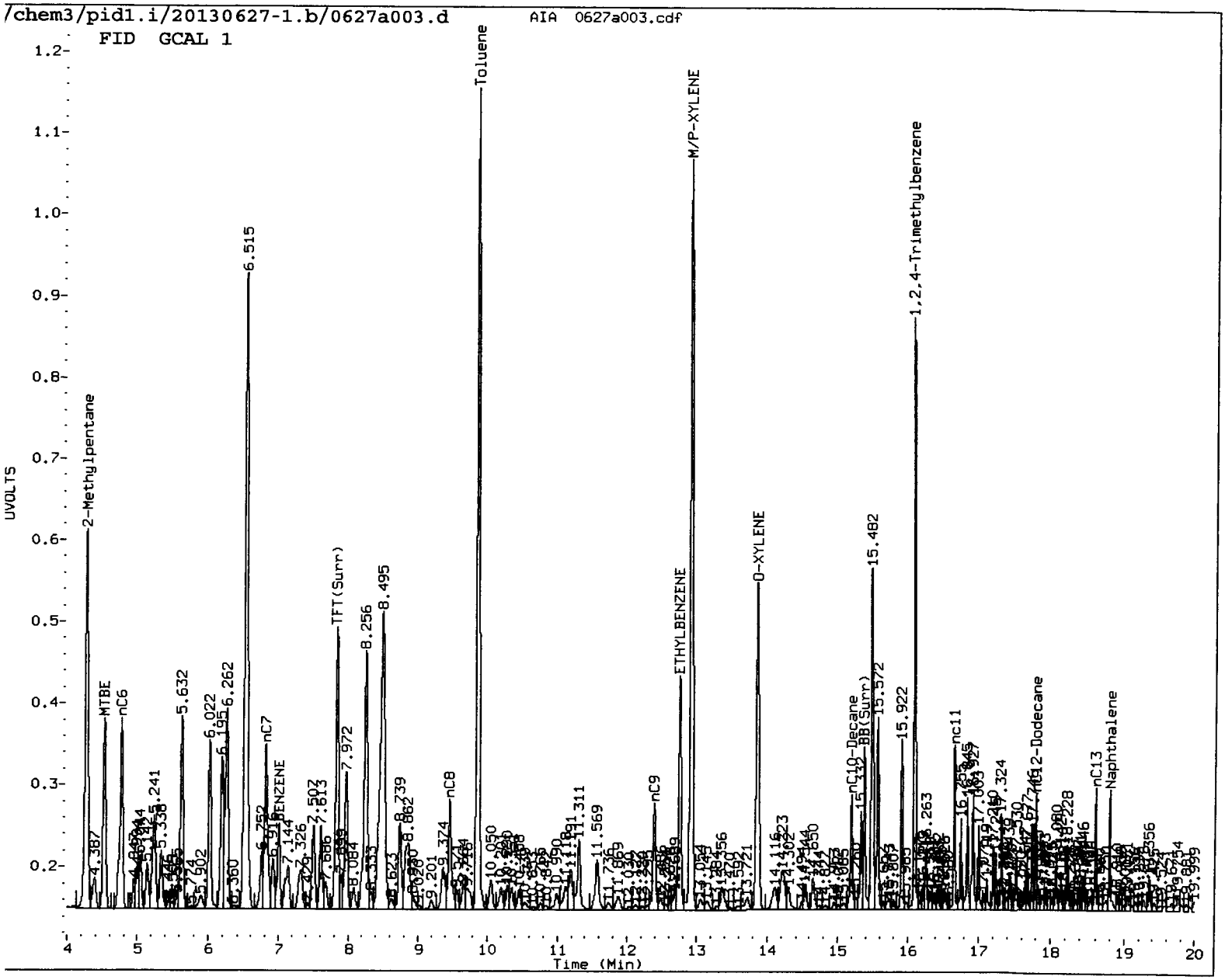
Column diameter: 0.18





Data File: /chem3/pid1.i/20130627-1.b/0627a003.d/0627a003.cdf
Injection Date: 27-JUN-2013 09:55
Instrument: pid1.i
Client Sample ID:

AIA 0627a003.cdf: 0.000 to 23.013 Min



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: KC Date: 6/28/13

RC
6/28/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130627-1.b/0627a004.d
Data file 2: /chem3/pid1.i/20130627-2.b/0627a004.d
Method: /chem3/pid1.i/20130627-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: LCS0627
Client ID:
Injection Date: 27-JUN-2013 11:00
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.840	0.002	3475	48362	117.4	TFT(Surr)
15.379	0.001	1997	18572	100.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	403512	1.127 M
8015C 2MP-TMB	(4.17 to 16.20)	723723	802396	1.109 M
AK101 nC6-nC10	(4.67 to 15.10)	582885	650328	1.116 M
NWTPHG Tol-Nap	(9.76 to 18.90)	375093	437302	1.166 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
7.848	0.002	3854	119.6	TFT(Surr)
15.387	0.002	7751	107.2	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.016	0.002	907	4.03	Benzene
9.876	0.003	8986	45.35	Toluene
12.768	0.002	2127	13.03	Ethylbenzene
12.931	0.005	8540	47.46	M/P-Xylene
13.877	0.004	3089	21.75	O-Xylene
4.530	-0.017	172	1.97	MTBE

\ Indicates Peak Area was used for quantitation instead of Height
J Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130627-1.b/0627a004.d

Date : 27-JUN-2013 11:00

Client ID:

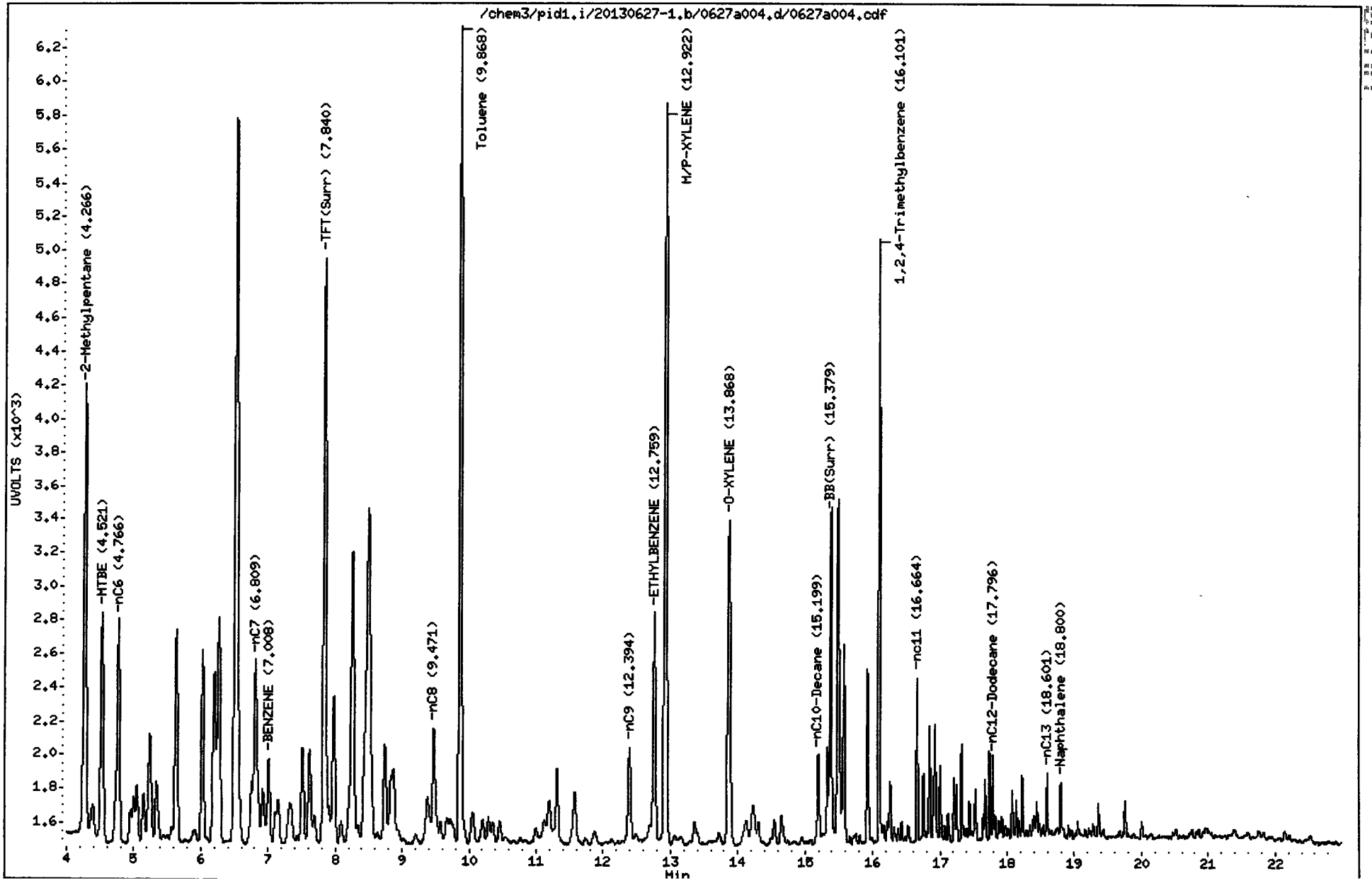
Sample Info: LCS0627

Column phase: RTX 502-2 FID

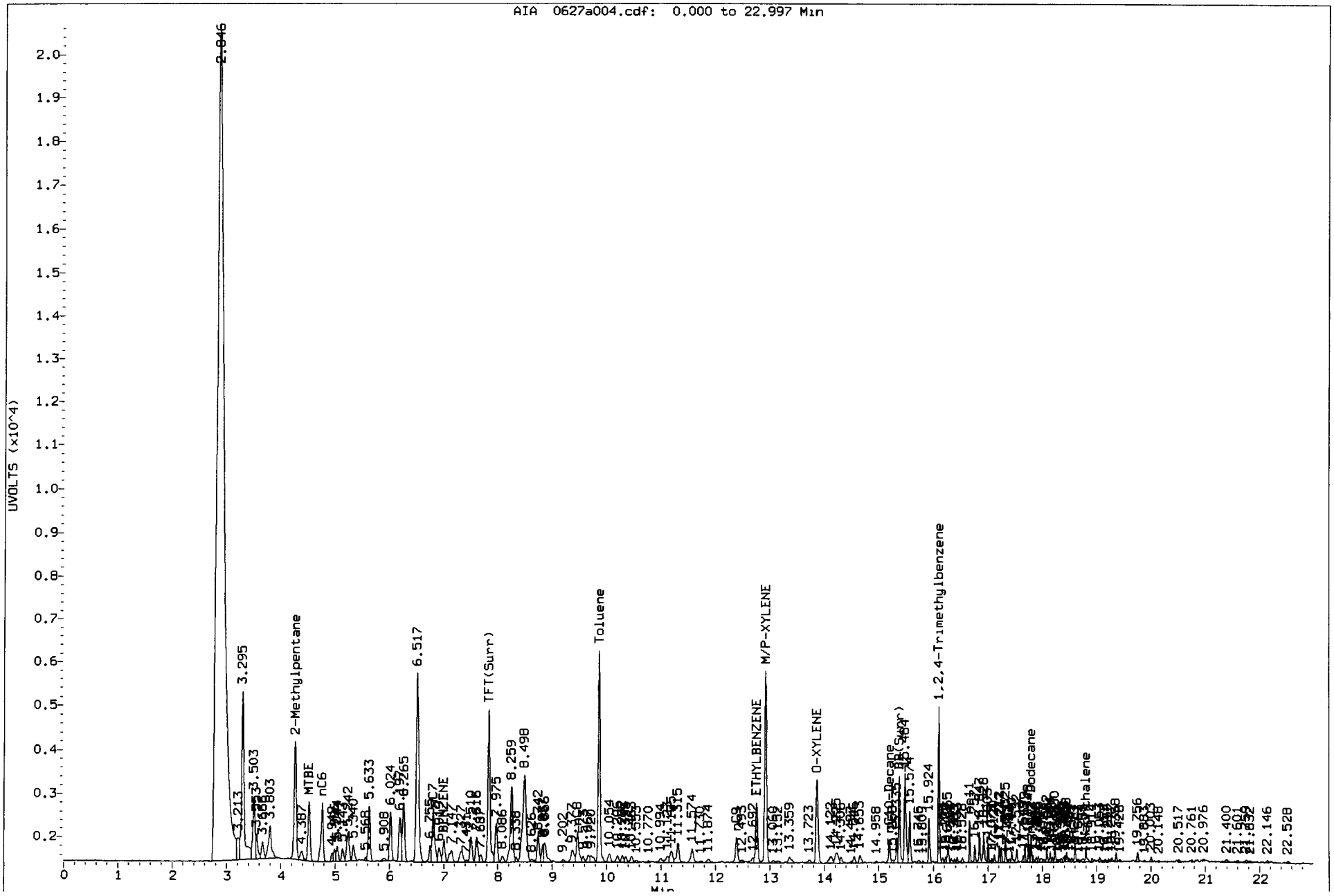
Instrument: pid1.i

Operator: PC

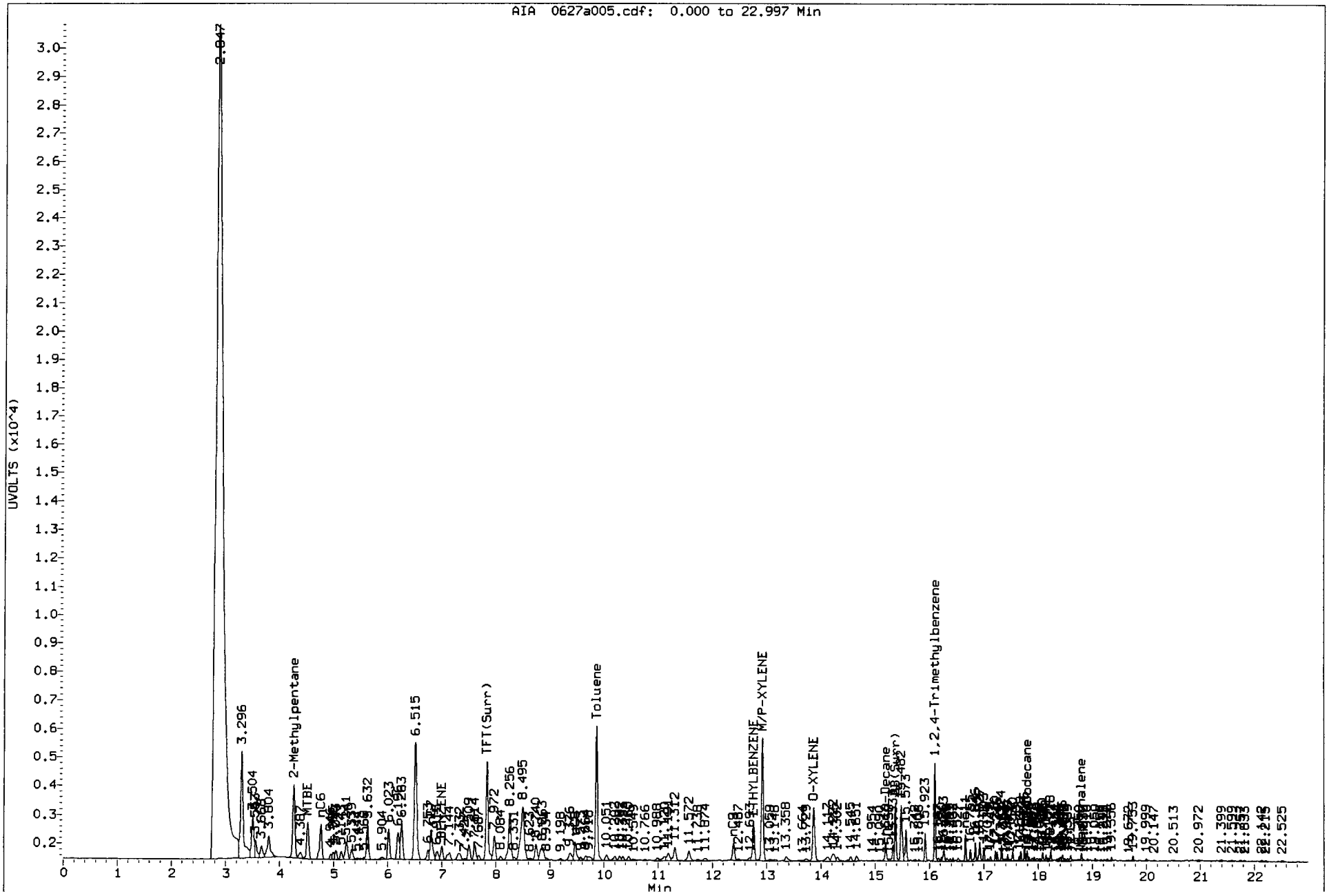
Column diameter: 0.18

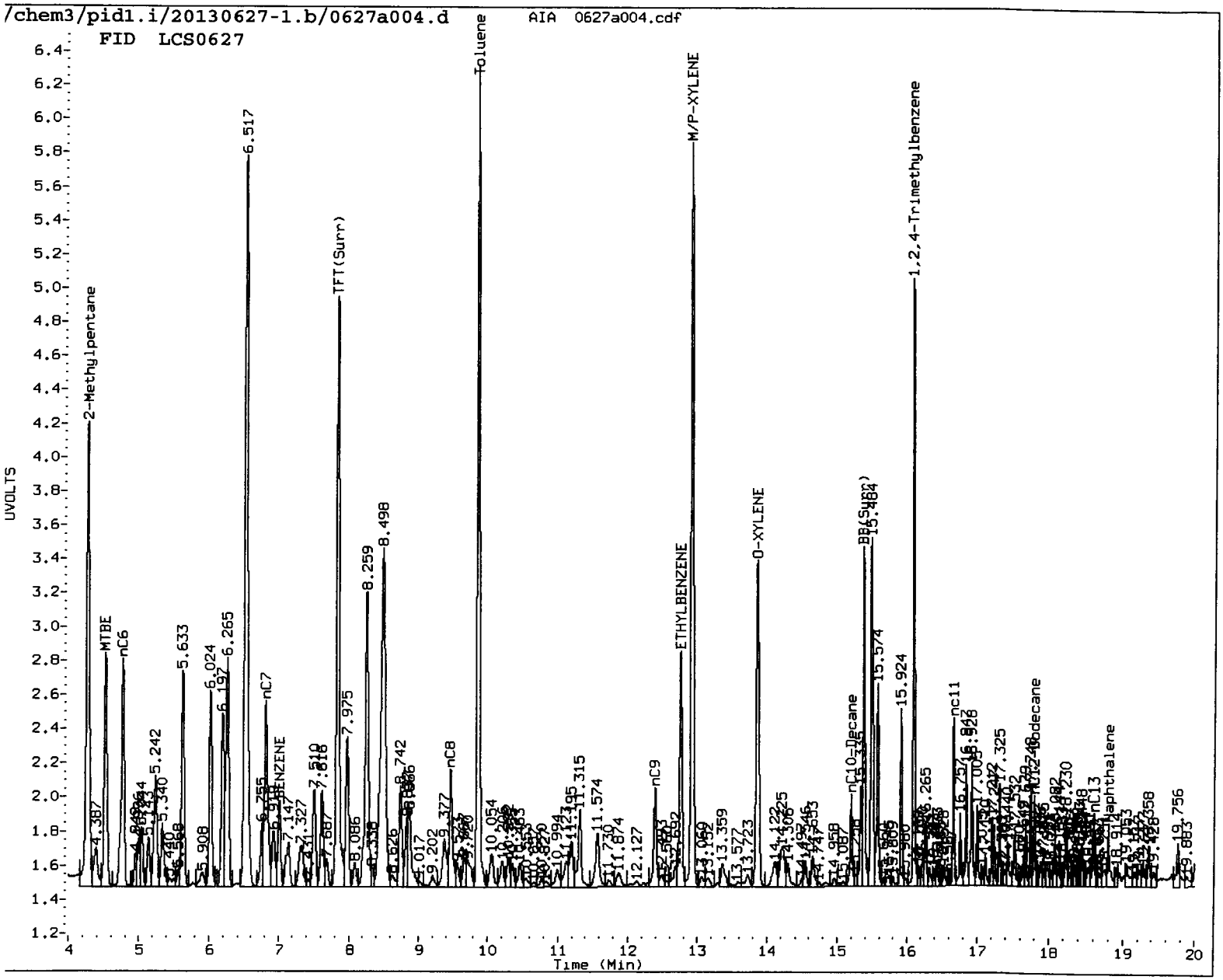


Data File: /chem3/pid1.i/20130627-1.b/0627a004.d/0627a004.cdf
Injection Date: 27-JUN-2013 11:00
Instrument: pid1.i
Client Sample ID:



Data File: /chem3/pid1.i/20130627-1.b/0627a005.d/0627a005.cdf
Injection Date: 27-JUN-2013 11:29
Instrument: pid1.i
Client Sample ID:





MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: KL Date: 6/28/13

MC 6/28/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130627-1.b/0627a005.d
Data file 2: /chem3/pid1.i/20130627-2.b/0627a005.d
Method: /chem3/pid1.i/20130627-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: LCSD0627
Client ID:
Injection Date: 27-JUN-2013 11:29
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.838	-0.001	3433	47656	116.0	TFT(Surr)
15.378	0.000	2034	18278	102.4	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	389910	1.089 M
8015C 2MP-TMB	(4.17 to 16.20)	723723	776329	1.073 M
AK101 nC6-nC10	(4.67 to 15.10)	582885	628996	1.079 M
NWTPHG Tol-Nap	(9.76 to 18.90)	375093	413732	1.103 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
7.846	0.000	3736	115.9	TFT(Surr)
15.385	0.000	7670	106.1	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.013	0.000	879	3.91	Benzene
9.873	0.000	8619	43.50	Toluene
12.766	0.000	2059	12.61	Ethylbenzene
12.929	0.003	8259	45.90	M/P-Xylene
13.874	0.001	2954	20.80	O-Xylene
ND	---	---	---	MTBE

, Indicates Peak Area was used for quantitation instead of Height
I Indicates peak was manually integrated

WUTO:01759

Data File: /chem3/pid1.i/20130627-1.b/0627a005.d

Date : 27-JUN-2013 11:29

Client ID:

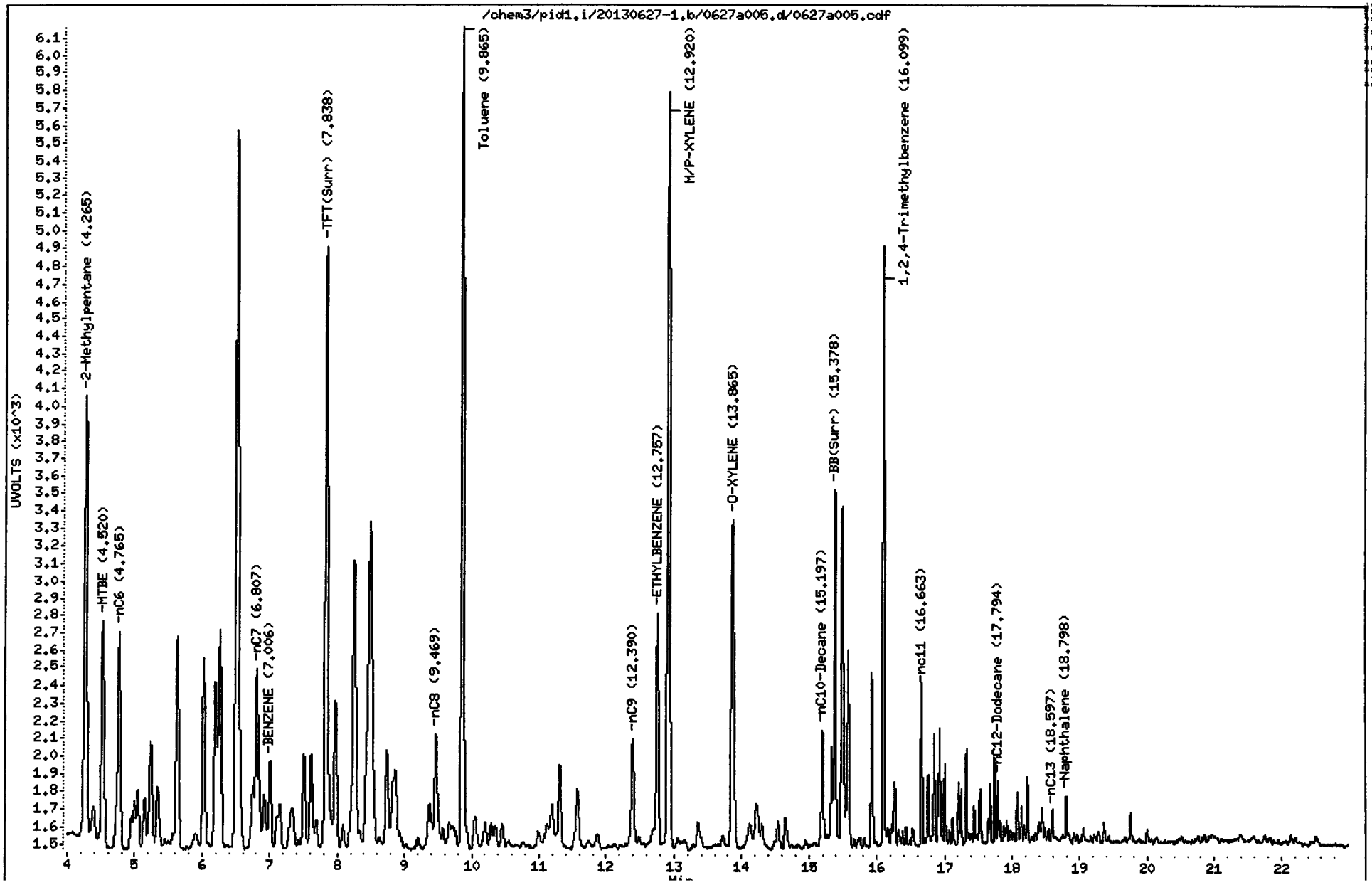
Sample Info: LCSD0627

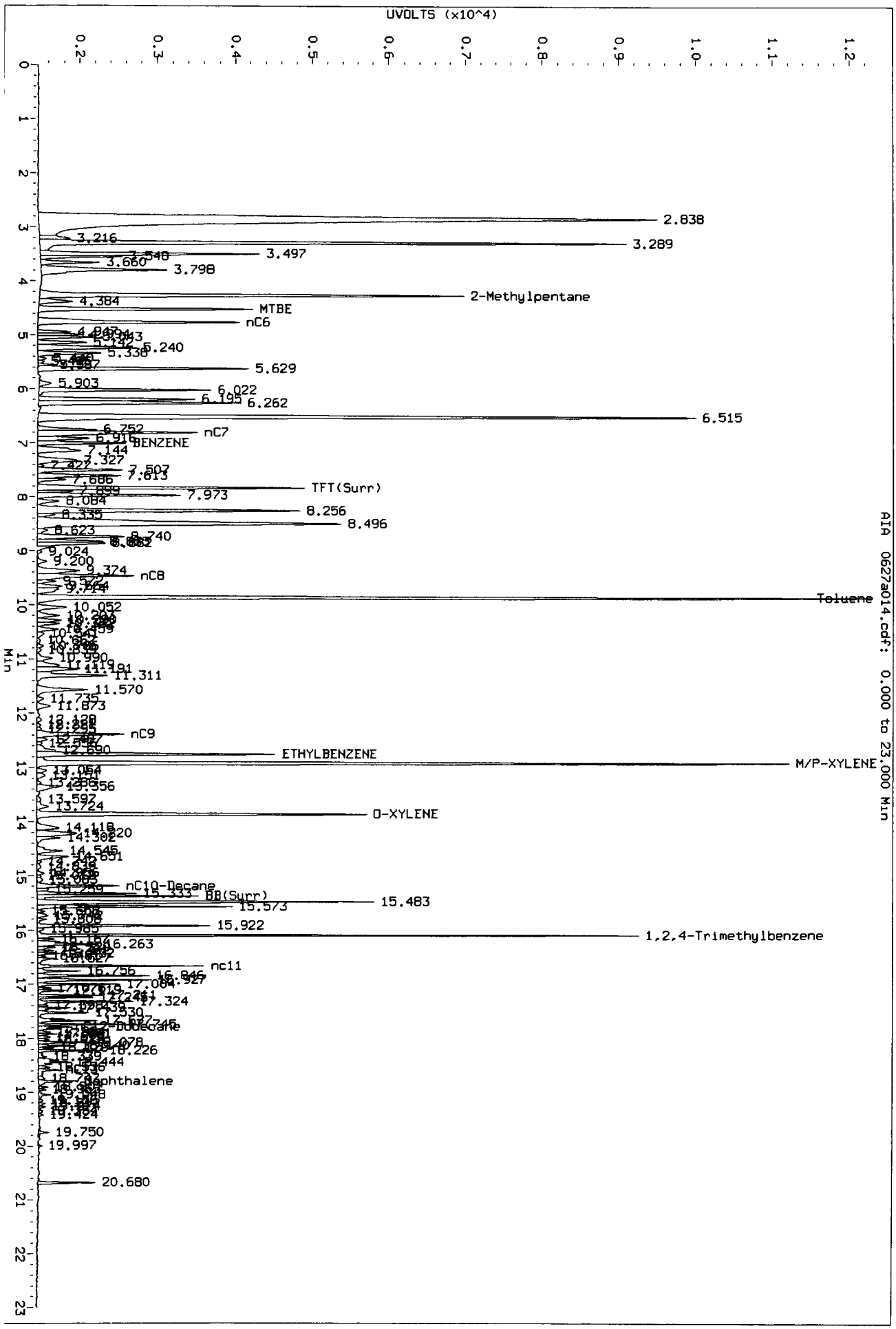
Instrument: pid1.i

Operator: PC

Column phase: RTX 502-2 FID

Column diameter: 0.18

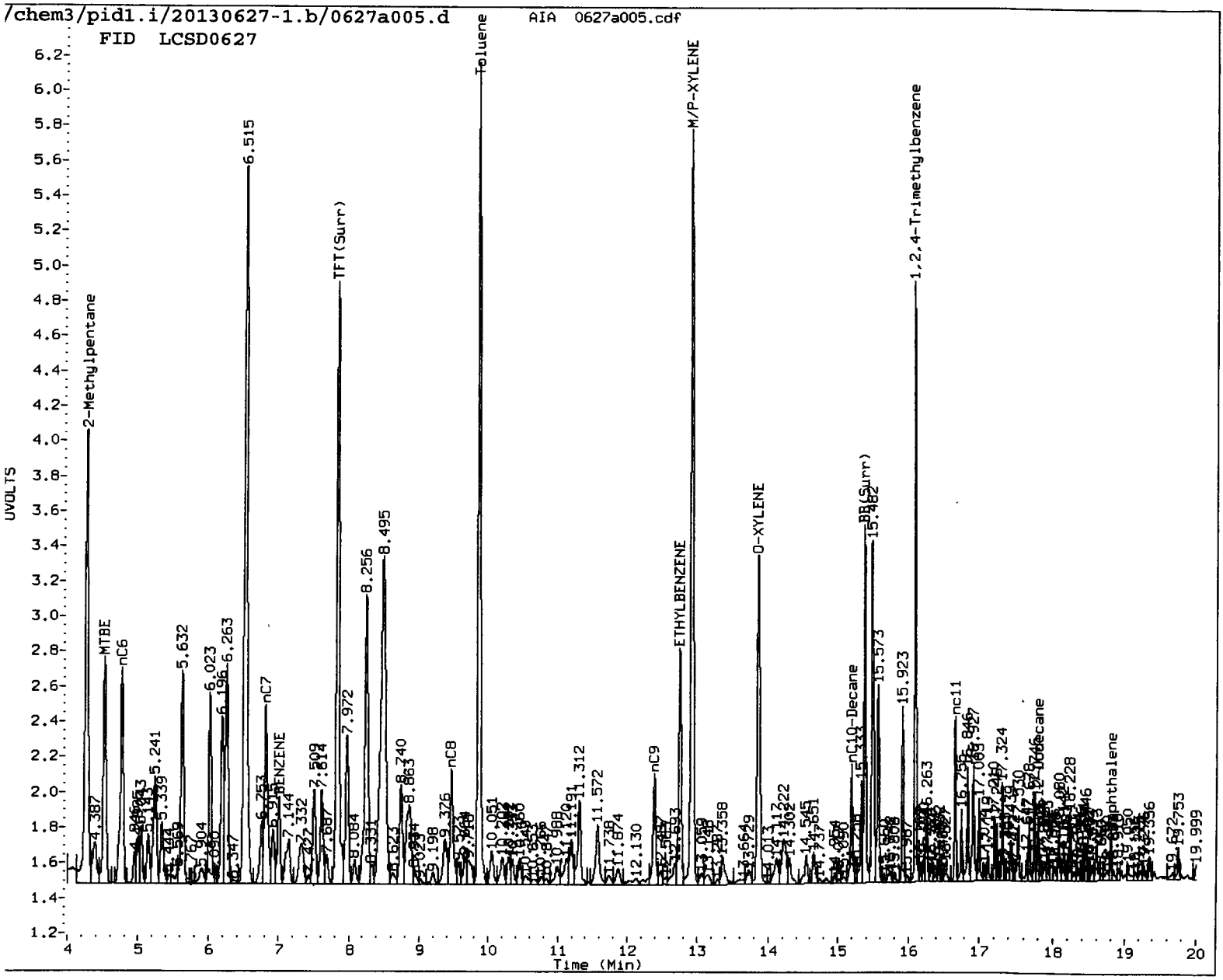




Data File: /chem3/pid1.i/20130627-1.b/0627a014.d/0627a014.cdf
Injection Date: 27-JUN-2013 16:44
Instrument: pid1.i
Client Sample ID:

AIA 0627a014.cdf: 0.000 to 23.000 Min

PC 07/8/13



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: JL Date: 6/28/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

nc 6/28/13

Data file 1: /chem3/pid1.i/20130627-1.b/0627a006.d
Data file 2: /chem3/pid1.i/20130627-2.b/0627a006.d
Method: /chem3/pid1.i/20130627-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: MB0627
Client ID:
Injection Date: 27-JUN-2013 11:58
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.840	0.001	3179	39513	107.4	TFT(Surr)
15.377	-0.001	1993	16415	100.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	10786	0.030
8015C 2MP-TMB	(4.17 to 16.20)	723723	12984	0.018
AK101 nC6-nC10	(4.67 to 15.10)	582885	10130	0.017
NWTPHG Tol-Nap	(9.76 to 18.90)	375093	12269	0.033

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
7.847	0.001	3464	107.5	TFT(Surr)
15.385	0.000	7335	101.5	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
ND	---	---	---	Benzene
ND	---	---	---	Toluene
ND	---	---	---	Ethylbenzene
ND	---	---	---	M/P-Xylene
ND	---	---	---	O-Xylene
ND	---	---	---	MTBE

\ Indicates Peak Area was used for quantitation instead of Height
I Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130627-1.b/0627a006.d

Date : 27-JUN-2013 11:58

Client ID:

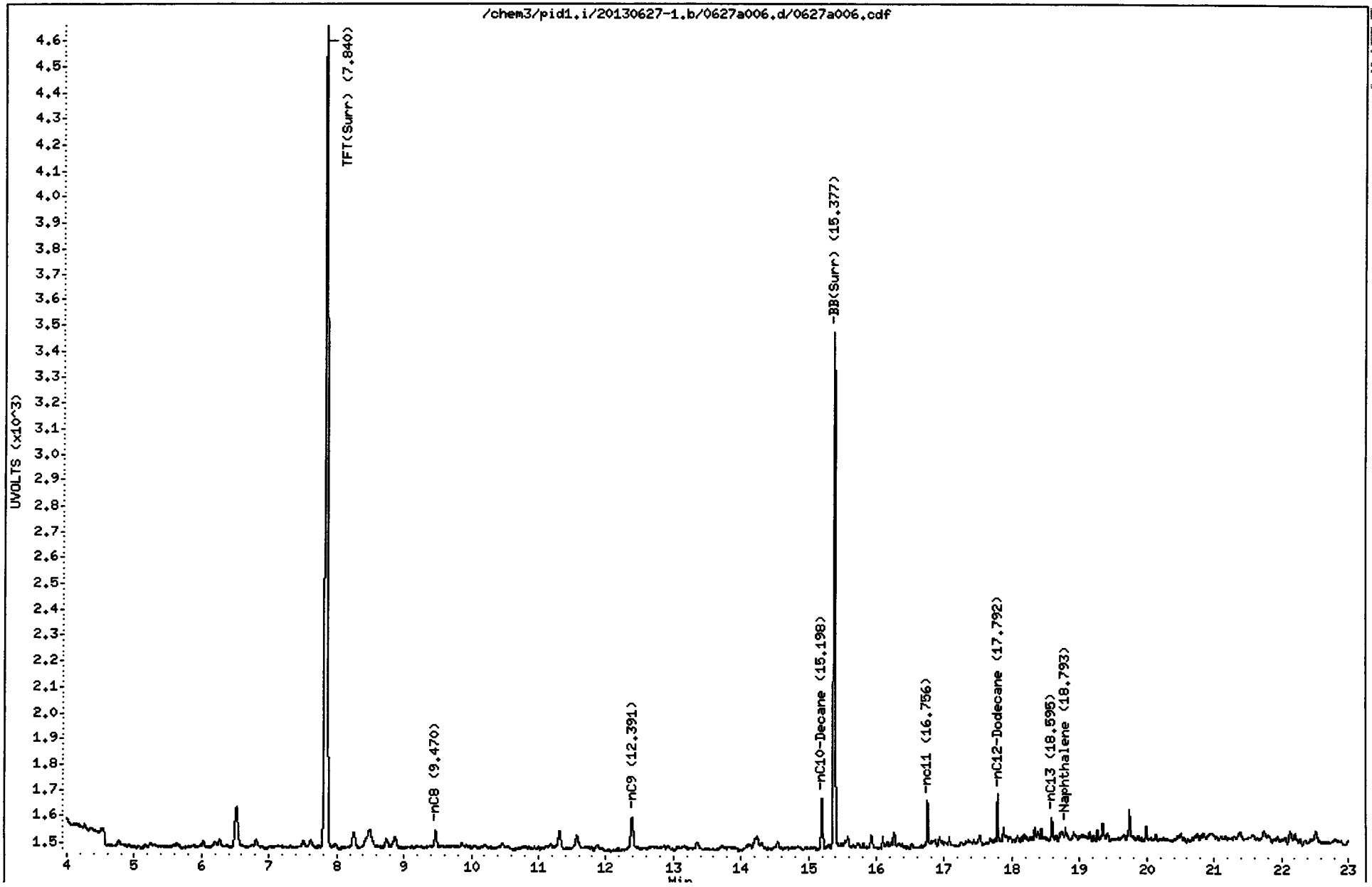
Sample Info: MB0627

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18



KC
6/28/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130627-1.b/0627a008.d
Data file 2: /chem3/pid1.i/20130627-2.b/0627a008.d
Method: /chem3/pid1.i/20130627-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: WU70A
Client ID: LF-QC-TB-20130619-W
Injection Date: 27-JUN-2013 13:49
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.838	-0.001	3147	39322	106.4	TFT(Surr)
15.378	-0.001	1910	15963	96.1	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	1893	0.005
8015C 2MP-TMB	(4.17 to 16.20)	723723	509	0.001
AK101 nC6-nC10	(4.67 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap	(9.76 to 18.90)	375093	1893	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
7.846	0.000	3448	107.0	TFT(Surr)
15.385	0.000	7114	98.4	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/20130627-1.b/0627a008.d

Date : 27-JUN-2013 13:49

Client ID: LF-QC-TB-20130619-W

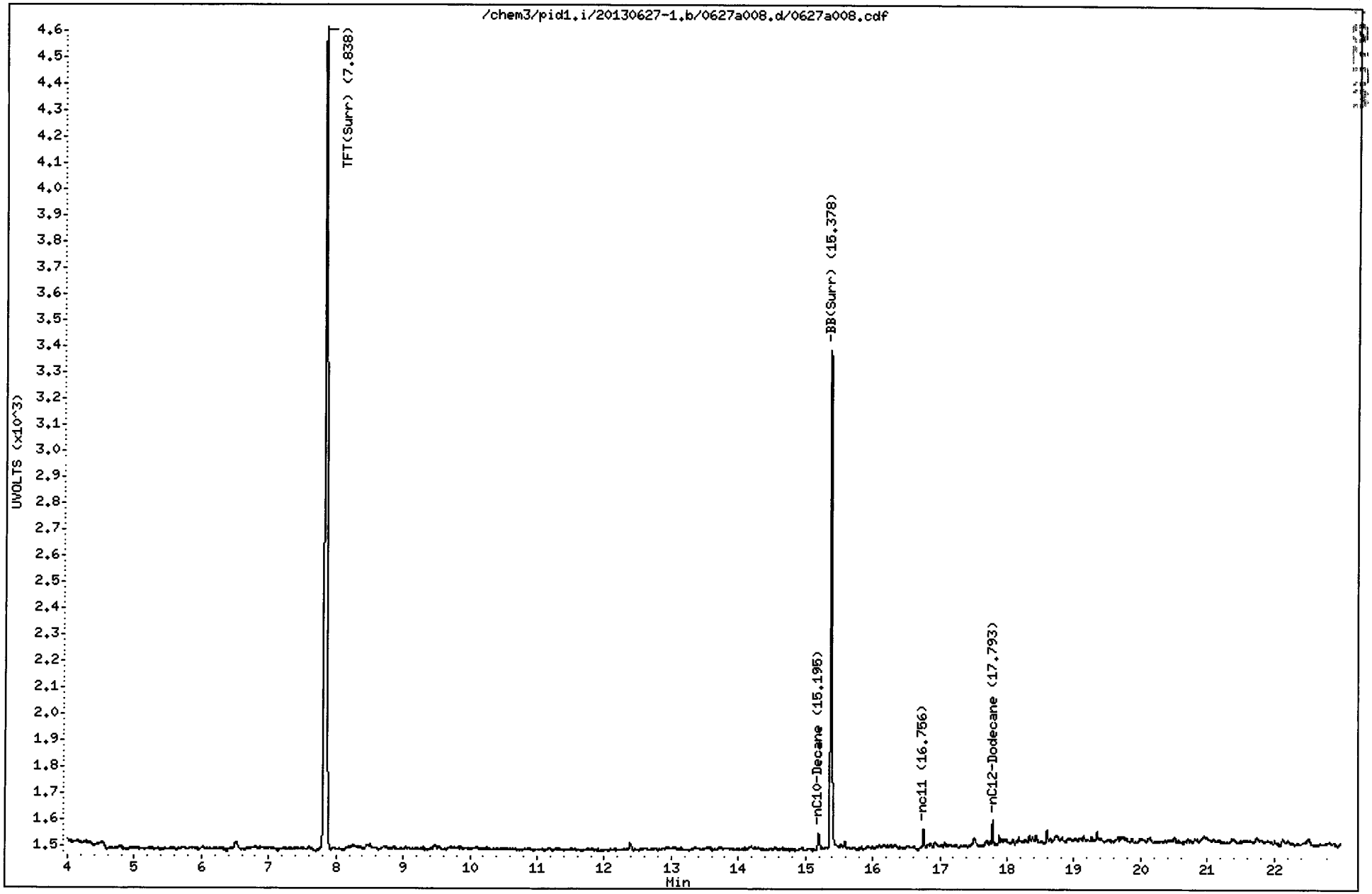
Sample Info: WU70A

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18



MC 6/28/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130627-1.b/0627a014.d
Data file 2: /chem3/pid1.i/20130627-2.b/0627a014.d
Method: /chem3/pid1.i/20130627-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: GCAL 2
Client ID:
Injection Date: 27-JUN-2013 16:44
Matrix: WATER
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.837	-0.001	3439	48060	116.2	TFT(Surr)
15.378	-0.001	2076	19084	104.5	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	841220	2.349 M
8015C 2MP-TMB	(4.17 to 16.20)	723723	1647674	2.277 M
AK101 nC6-nC10	(4.67 to 15.10)	582885	1336304	2.293 M
NWTPHG Tol-Nap	(9.76 to 18.90)	375093	884486	2.358 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
7.846	0.000	3664	113.7	TFT(Surr)
15.385	0.000	7611	105.3	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.013	-0.001	2100	9.34	Benzene
9.874	0.001	20505	103.49	Toluene
12.766	0.000	4998	30.61	Ethylbenzene
12.930	0.004	19776	109.91	M/P-Xylene
13.874	0.001	7110	50.07	O-Xylene
4.527	-0.020	331	3.80	MTBE

\ Indicates Peak Area was used for quantitation instead of Height
I Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130627-1.b/0627a014.d

Date : 27-JUN-2013 16:44

Client ID:

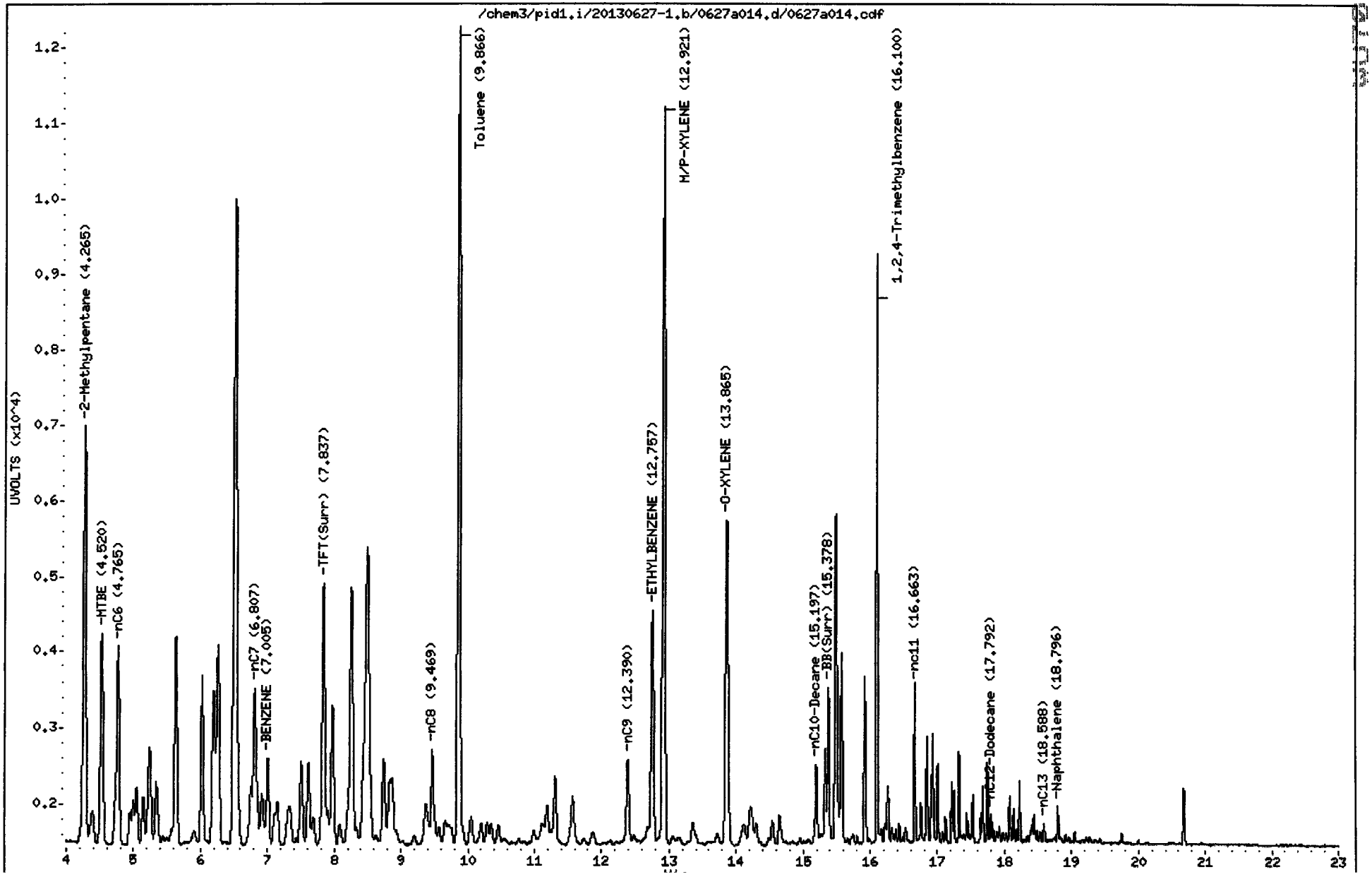
Sample Info: GCAL 2

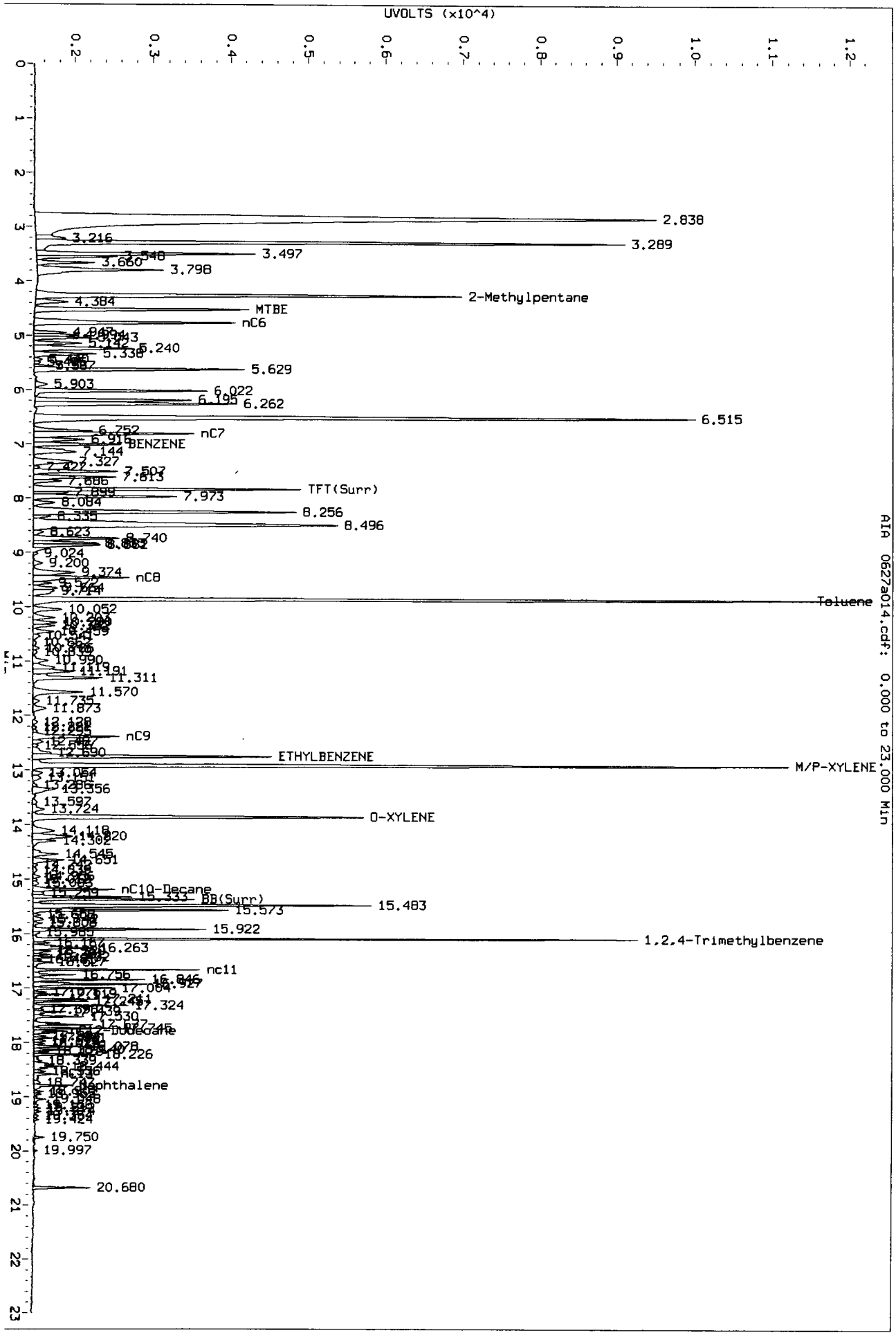
Instrument: pid1.i

Operator: PC

Column phase: RTX 502-2 FID

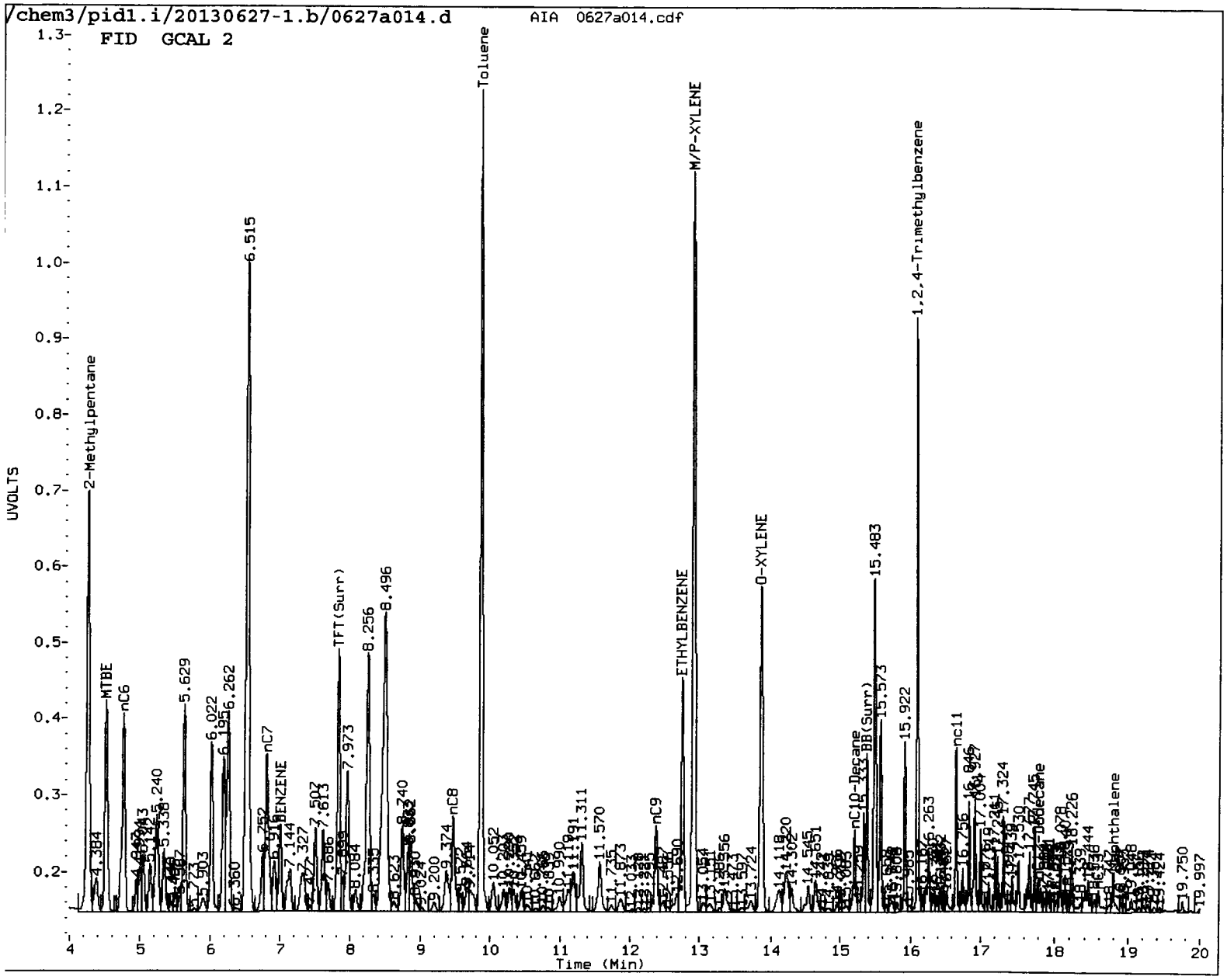
Column diameter: 0.18





Data File: /chem3/pid1.i/20130627-1.b/0627a014.d/0627a014.cdf
Injection Date: 27-JUN-2013 16:44
Instrument: pid1.i
Client Sample ID:

M 6/28/13



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YC Date: 8/28/13

PC 6/28/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130627-1.b/0627a017.d
Data file 2: /chem3/pid1.i/20130627-2.b/0627a017.d
Method: /chem3/pid1.i/20130627-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: WU70B
Client ID: LF-TP-001-20130619-
Injection Date: 27-JUN-2013 18:12
Matrix: SOIL
Dilution Factor: 1.000

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.838	0.000	2971	36562	100.4	TFT(Surr)
15.376	-0.002	1934	15997	97.3	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	2034	0.006
8015C 2MP-TMB	(4.17 to 16.20)	723723	1	0.000
AK101 nC6-nC10	(4.67 to 15.10)	582885	0	0.000
NWTPHG Tol-Nap	(9.76 to 18.90)	375093	2034	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
7.846	0.000	3184	98.8	TFT(Surr)
15.384	-0.001	6948	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/20130627-1.b/0627a017.d

Date : 27-JUN-2013 18:12

Client ID: LF-TP-001-20130619-

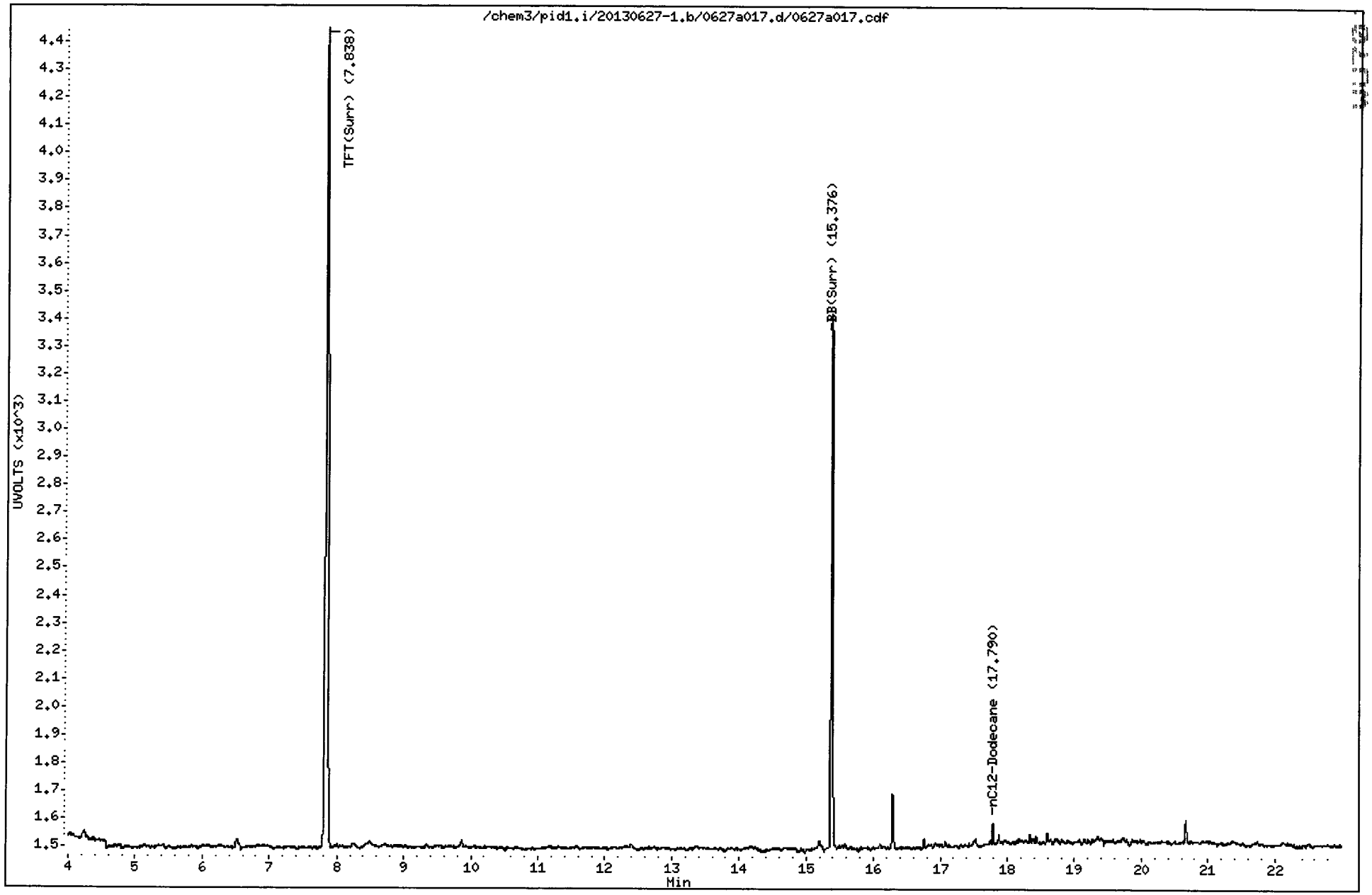
Sample Info: WU70B

Column phase: RTX 502-2 FID

Instrument: pid1.i

Operator: PC

Column diameter: 0.18



6/28/13

Analytical Resources Inc.
BETX/Gas Quantitation Report

Data file 1: /chem3/pid1.i/20130627-1.b/0627a025.d
Data file 2: /chem3/pid1.i/20130627-2.b/0627a025.d
Method: /chem3/pid1.i/20130627-2.b/PIDB.m
Instrument: pid1.i
Gas Ical Date: 23-OCT-2012
BETX Ical Date: 22-MAY-2013

ARI ID: GCAL 3
Client ID:
Injection Date: 27-JUN-2013 22:05
Matrix: WATER
Dilution Factor: 1.000

==========

FID Surrogates

RT	Shift	Height	Area	%Rec	Compound
7.837	-0.001	3312	46068	111.9	TFT(Surr)
15.377	-0.001	2030	18608	102.2	BB(Surr)

PETROLEUM HYDROCARBONS (FID)

Range		RF	Total Area*	Amount
WAGas Tol-C12	(9.76 to 17.89)	358114	803834	2.245 M
8015C 2MP-TMB	(4.17 to 16.20)	723723	1552830	2.146 M
AK101 nC6-nC10	(4.67 to 15.10)	582885	1253056	2.150 M
NWTPHG Tol-Nap	(9.76 to 18.90)	375093	844526	2.252 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
7.846	0.000	3473	107.7	TFT(Surr)
15.385	0.000	7435	102.8	BB(Surr)

SW8021 (PID)

RT	Shift	Response	Amount	Compound
7.013	-0.001	2062	9.17	Benzene
9.874	0.001	20077	101.33	Toluene
12.766	0.000	4821	29.53	Ethylbenzene
12.930	0.004	19265	107.07	M/P-Xylene
13.874	0.001	7043	49.60	O-Xylene
4.524	-0.023	312	3.58	MTBE

A Indicates Peak Area was used for quantitation instead of Height
N Indicates peak was manually integrated

Data File: /chem3/pid1.i/20130627-1.b/0627a025.d

Date : 27-JUN-2013 22:05

Client ID:

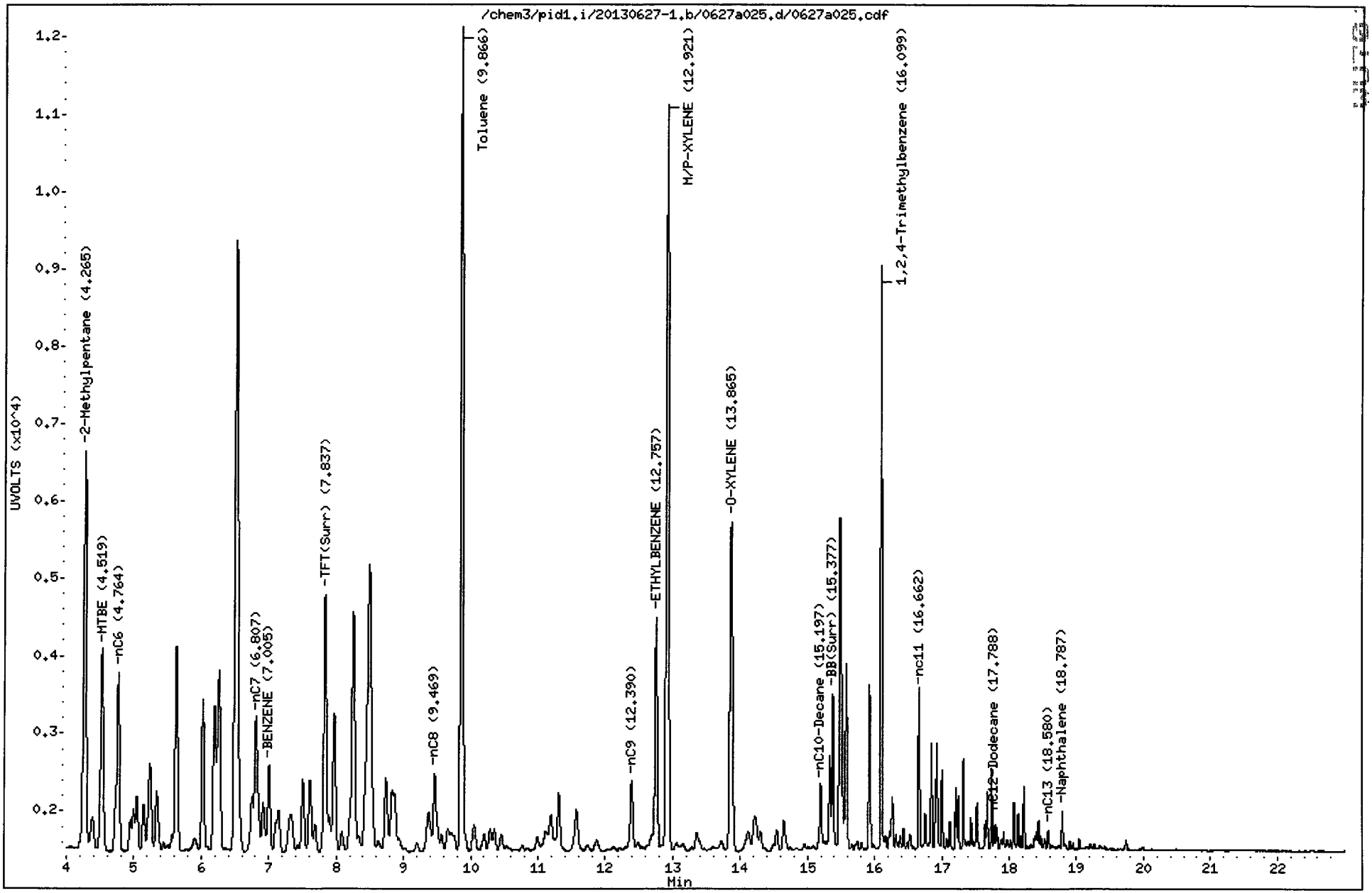
Sample Info: GCAL 3

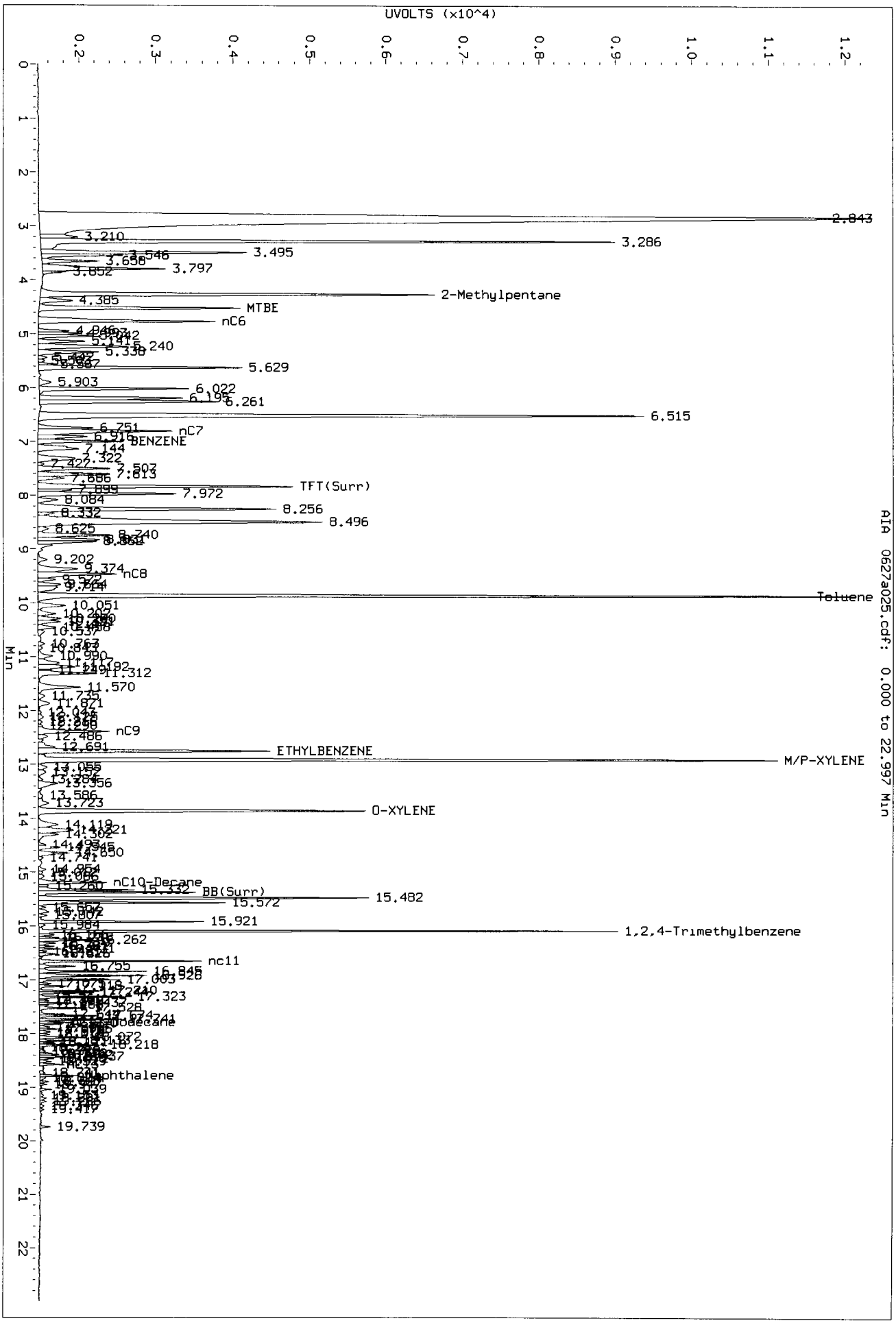
Column phase: RTX 502-2 FID

Instrument: pid1.i

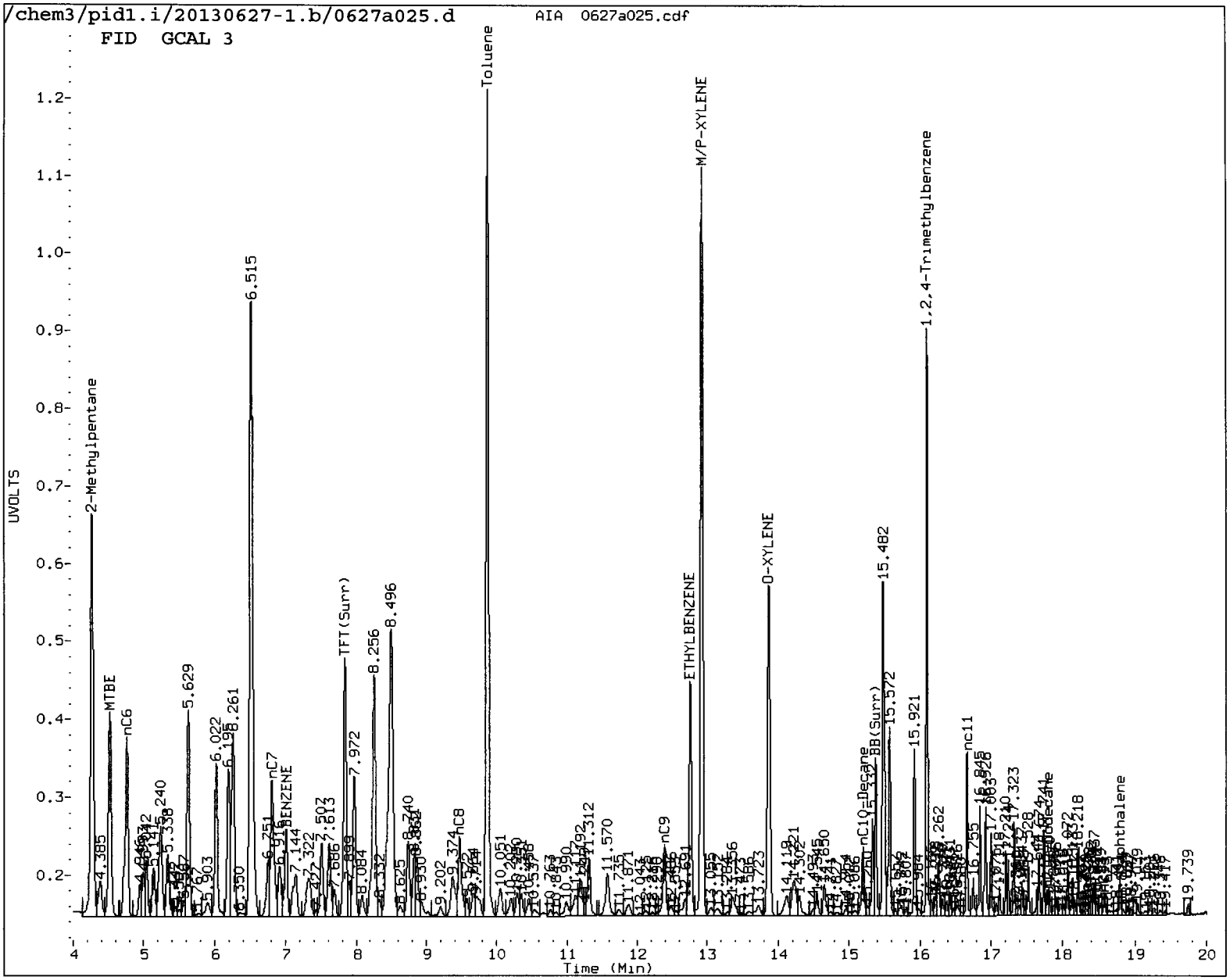
Operator: PC

Column diameter: 0.18





PC 6/28/13



MANUAL INTEGRATION

1. Baseline correction
2. Poor chromatography
3. Peak not found
4. Totals calculation

5. Other _____

Analyst: YC Date: 6/28/13

Metals Raw Data
Preparation Bench Sheets and Notes

ARI Job ID: WU70

Analytical Resources,Incorporated
Analytical Chemists and Consultants

SPIKING LOG

Analyst: CD **Final Volume** 50.0 **Sample ID** MW20 BSAK, MBSPK

Date: 6-26-13 **Final Volume (Hg):** 50.0

Prepcode:		SWC		
Spike Solution:		ICP Routine	ICP No GFA	GFA
Standard No.:		BS07		
Vol Added (mL):		1.0		
STOCK CONCENTRATION	Ag	50		2.0
	Al	200	200	
	As	200		10
	Ba	200	200	
	Be	50 ✓	50	
	Ca	1000	1000	
	Cd	50		2.0
	Co	50	50	
	Cr	50	50	
	Cu	50 ✓	50	
	Fe	200	200	
	K	1000	1000	
	Mg	1000	1000	
	Mn	50	50	
	Na	1000	1000	
	Ni	50	50	
	Pb	200		10
	Se	200		10
	Sr	50	50	
	Tl	200		10
	V	50	50	
	Zn	50 ✓	50	

	SWN	SWN	
	ICP-MS #1	ICP-MS #2	ICP-MS Minerals
	BS10	BS11	
	1.0	1.0	
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	SHM	CVA	1.0	0.05	3007-13
Hg MBSPK	↓	CVA	1.0	0.10	↓
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: CB **Date:** 6-26-13 **Time:** 1040

Matrix: Soil **Block ID:** #5 **Block Temp:** 95°C **Thermometer:** mp60

ARI Sample ID	Btl #	pH<2	Prep Code: SWL Initial Wt (g) Vol (mL)	Prep Code: SWL Final Vol (mL)	Prep Code: SWN Initial Wt (g) Vol (mL)	Prep Code: SWN Final Vol (mL)	Comments
WU70 B	7	-	1.007	50.0	1.075	50.0	
" BDup	7	-	1.012		1.073		
" BSpk	7	-	1.005		1.070		
" C	1	-	1.034		1.089		
" MBl	-	-	-		-		
" MBlSpk	-	-	-		-	50.0	
WV04 A	2	-	1.022				
" B	2	-	1.037				
" C	2	-	1.045				
" D	2	-	1.006				
" E	2	-	1.074				
" F	2	-	1.069				
" MB	-	-	-				
" MBSpk	-	-	-				
WV34 A	8	-	1.013				
" B	8	-	1.042			CB 6/26/13	
" C	8	-	1.027				
" D	8	-	1.031				
" E	8	-	1.011				
" F	8	-	1.080				
" G	8	-	1.007				
" H	8	-	1.035				
" I	8	-	1.083				
" MBl	-	-	-				
" MBlSpk	-	-	-	50.0			

Chemical/Reagent ID: HNO_3: mp2208 H_2O_2: I8315 HCl: I8213 Tube lot #: MH21KK06
I8272

5061F

Version 005
1/10/12

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: 5mm
Analyst: CB
Bath Temp: 95°C
Start Time: 1105
Matrix: Soil
Date: 6-26-12
End Time: 1135

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) ~~Volume (mL)~~	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
WU70 B	7	-	0.212	50.0	7/06 1	Y	
" B2LD	7	-	0.209		1		
" BSDIS	7	-	0.210		1		
" C	1	-	0.223		1		
" MBI	-	-	-		1	↓	
" MBISPK	-	-	-		1	Y	
WU04 A	2	-	0.208		7/02 1	N	
" B	2	-	0.214		1		
" C	2	-	0.261		1		
" D	2	-	0.265		1		
" E	2	-	0.240		1		
" F	2	-	0.250		1		
" MB	-	-	-		1		
" MBSPK	-	-	-		1		
WU34 A	8	-	0.269		7/05 1		
" B	8	-	0.221		1		
" C	8	-	0.258		1		
" D	8	-	0.280		1		
" E	8	-	0.254		1		
" F	8	-	0.268		1		
" G	8	-	0.216		1		
" H	8	-	0.250		1		
" I	8	-	0.276		1		
" MBI	-	-	-	↓	1	↓	
" MBISPK	-	-	-	50.0	1	N	

Chemical/Reagent ID:

HNO_3: I816°1 H_2SO_4: I8014 HCl: -

5% $K_2S_2O_8$: MP2H91 5% $KMnO_4$: MP2502 Digest Tube Lot: ML27KK03

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Corrective Actions
Inorganic Analyses

Criteria Flagged:		ARI Job No.:	IWH70
Unacceptable Blank:	☐	Date of Event:	6-28-13
Unacceptable Duplicate:	☑	Client ID:	
Unacceptable Spike:	☑	Method/Element:	ICP
Unacceptable Reference:	☐	Prep Code:	SWC

Details of Problem/Recommended Corrective Action:

See attached
See also A.N.

28% RPD for Cu in B, BDup

49%R for Zn in BSpk
BPost ok

Samples Affected:

Corrective Action Taken:

Analyst Initials: JA **Supervisor:** Sgnd

Date: 6-28-13 **Date:** 7-1-13

5049F

Revision 007
6/11/10

MATRIX DUPLICATE AND MATRIX SPIKE WORKSHEET (FOR SAMPLES >5 IDL)								
DUPLICATION:				SPIKE RECOVERY:				
	DUP	BKGD			SPIKE	BKGD		
VOLUME	100	100		VOLUME	100	100		
SAMP WT	1.012	1.007		SAMP WT	1.005	1.0070		
ELEMENT	DUP	BKGD	% RPD	ELEMENT	SPIKE	BKGD	SPK'D CONC	% RECOV
	mg/L				mg/L	mg/L	mg/L	
Ag			#DIV/0!	Ag			0.5	0.0
Al			#DIV/0!	Al			2	0.0
As			#DIV/0!	As			2	0.0
B			#DIV/0!	B			0.5	0.0
Ba			#DIV/0!	Ba			2	0.0
Be	0.00247	0.00236	4.06	Be	0.4489	0.00236	0.5	89.3
Ca			#DIV/0!	Ca			10	0.0
Cd			#DIV/0!	Cd			0.5	0.0
Co			#DIV/0!	Co			0.5	0.0
Cr			#DIV/0!	Cr			0.5	0.0
Cu	0.7899	1.041	27.91	Cu	1.442	1.041	0.50	80.6
Fe			#DIV/0!	Fe			2	0.0
K			#DIV/0!	K			10	0.0
Mg			#DIV/0!	Mg			10	0.0
Mn			#DIV/0!	Mn			0.5	0.0
Mo			#DIV/0!	Mo			0.5	0.0
Na			#DIV/0!	Na			10	0.0
Ni			#DIV/0!	Ni			0.5	0.0
Pb			#DIV/0!	Pb			2	0.0
Sb			#DIV/0!	Sb			2	0.0
Se			#DIV/0!	Se			2	0.0
Si			#DIV/0!	Si			10	0.0
Sn			#DIV/0!	Sn			0.5	0.0
Sr			#DIV/0!	Sr			0.5	0.0
Ti			#DIV/0!	Ti			2	0.0
Tl			#DIV/0!	Tl			2	0.0
V			#DIV/0!	V			0.5	0.0
Zn	1.166	1.352	15.27	Zn	1.595	1.352	0.5	49.1

TABLE 6

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Metals Laboratory Analyst Notes

ARI Job No.: WU70 Client ID:

Parameter: ICP Client Project:

List problems, concerns, corrective actions and any other pertinent information
Samples 3 + 8 Post were accepted with Ca SI over linear range at 501.7 + 503 ppm respectively. Ca Linear range is 500 ppm

Analyst Initials:	AY	Date:	6-28-13

5048F

Revision 005
6/11/10

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Corrective Actions
Inorganic Analyses

Criteria Flagged:		ARI Job No.:	WL70
Unacceptable Blank:	☐	Date of Event:	7-1-13
Unacceptable Duplicate:	☐	Client ID:	SAIC
Unacceptable Spike:	☑	Method/Element:	ICPMS
Unacceptable Reference:	☐	Prep Code:	SWN

Details of Problem/Recommended Corrective Action:

BSPK (B - Sb ↓ (Numbers attached)

BPOST in control

Sb - 24.242 ng/L => ~97%

Samples Affected:

Corrective Action Taken:

Send

Analyst Initials: BA **Supervisor:**

Date: 7-1-13 **Date:** 7-2-13

5049F

Revision 007
6/11/10

WL70:BLTOH

WU70

MATRIX DUPLICATE AND MATRIX SPIKE WORKSHEET (FOR SAMPLES >5 IDL)									
		icpms							
DUPLICATION:					SPIKE RECOVERY:				
	DUP	BKGD				SPIKE	BKGD		
VOLUME	100	100			VOLUME	100	100		
SAMP WT	1.073	1.075			SAMP WT	1.07	1.0730		
ELEMENT	DUP	BKGD	% RPD		ELEMENT	SPIKE	BKGD	SPK'D CONC	% RECOV
	ug/l	ug/l				ug/l	ug/l	mg/L	#VALUE!
Be			#DIV/0!		Be			25	0
Na			#DIV/0!		Na			5000	0
Mg			#DIV/0!		Mg			5000	0
Al			#DIV/0!		Al			5000	0
K			#DIV/0!		K			5000	0
Ca			#DIV/0!		Ca			5000	0
V			#DIV/0!		V			25	0
Cr	20.389	21.028	2.90		Cr	46.266	21.028	25	101.18717
Fe			#DIV/0!		Fe			5000	0
Mn			#DIV/0!		Mn			25	0
Co			#DIV/0!		Co			25	0
Ni	17.639	18.186	2.87		Ni	43.623	18.186	25	101.95138
Cu			#DIV/0!		Cu			25	0
Zn			#DIV/0!		Zn			80	0
As	6.659	7.343	9.58		As	31.252	7.343	25	95.718121
Se	0.240	0.234	2.72		Se	76.504	0.234	80	95.338318
Mo			#DIV/0!		Mo			25	0
Ag	0.342	0.440	24.88	<IRL	Ag	22.434	0.440	25	87.980921
Cd	0.643	0.579	10.66		Cd	24.872	0.579	25	97.178475
Sb	0.026	0.030	14.10		Sb	0.184	0.030	25	0.6163355
Ba			#DIV/0!		Ba			25	0
Tl	0.124	0.119	4.30		Tl	22.586	0.119	25	89.869331
Pb	10.198	11.039	7.73		Pb	35.143	11.039	25	96.539456

TABLE 6

Metals Raw Data
Run Logs, Calibrations, and Raw Data

ARI Job ID: WU70

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: (ICP)/ICP-MS GFA CVA **Analysis Date:** 6-28-13

IZ	Analyst AM 6-28	Peer GA 7-1-13	Comment
Logbook:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration:			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration Verification:			
ICV/CCV	✓	✓	
ICB/CCB	✓	✓	
Samples:			
RSD's & SD's	✓	✓	
Internal Standards	✓	✓	
Carry-over	✓	✓	
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	
Post Spikes/Serial Dilutions	✓	✓	WNTD
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	WNTD
Matrix Duplicates	✓	✓	↓
Method Blanks	✓	✓	
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysts Notes and CAF's	✓	✓	A.D CAF WNTD

WJTD: 01707

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: 61013 Analysis Date: 6-28-13 Analyst: [illegible]

LR Date: 61013 Page: 1 of 4

All corrections made by analyst unless otherwise noted.

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		STD 0			B773
		2			B735
		3			B736
		4			B737
		5			B738
		ICV			B323
		ICB			
		CRI			
		ICSA			
		ICSAB			
		CCV1			
		CCB1			
		WU70 MB1	SWC	2	
		WV53 A			
		B			
		C			
	✓	WU70 C			RE 1,5 (Fe,Ca)
		BDup			Cu high RPD
		B			A.N. (Ca) CAF
		Bspk			Zn low %R
		Bpost			0.08mL ICP spk Zn
		MB1spk		✓	
		CCV2			
		CCB2			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

SAMPLE RUN LOG-ICP-OES-02
Perkin Elmer OPTIMA 7500
Serial No. – 077C8121202

IEC Date: — Analysis Date: 6-28-13 Analyst: M

LR Date: — Page: 2 of 4

All corrections made by analyst unless otherwise noted. M 6-28-13

Edit Label	Delete Data	ARI Sample ID	Prep. Code	Dilution	Comments
		WV53 MB	SWC	2	
		WV68 MB1	DMN		
		A			
		B			
	✓	H			RR 1/2 (Na)
	✓	I			RR 1/2 Na Mg, ~~SrAl~~
✓		WU70 C	SWC	5	
		WV53 B		2	
		WV68MB1spk	DMN		0.08mL ICPspk
		WV53MBspk	SWC	2	✓
		CCV3			
		CCB3			end pkg
		WV64 MB1	SWC	2	
		B			
		C			
		D			
		E			
		F			
		G			
		H			
		I			
		MB1spk			✓
		CCV4			
		CCB4			

M 6-28-13

WU70:61783

Nebulizer Parameters: Hg_ReAlign

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

6/28/2013 8:05:53 AM Hg ReAlign... Actual peak offset (nm): 0.003
Drift (nm): 0.000 Slit adjustment: 0

Analysis Begun

Start Time: 6/28/2013 8:08:05 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 6/28/2013 7:20:02 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\BLKS.sif
Batch ID:
Results Data Set: I2130628
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Method Loaded
Method Name: 7300bcESI2FAST
IEC File: IEC061013.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: 6/28/2013 8:08:11 AM
Data Type: Original

Dilution: 1.000000X

Nebulizer Parameters: B1

Analyte	Back Pressure	Flow
All	228.0 kPa	0.75 L/min

6-28-13

Analysis Begun

Start Time: 6/28/2013 8:30:24 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 6/28/2013 7:20:02 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISET.sif
Batch ID:
Results Data Set: I2130628
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: 6/28/2013 8:30:25 AM
Data Type: Original

Nebulizer Parameters: Calib Blank 1

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: Calib Blank 1

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	3192086.5	3481.55	0.11%	100.0	%
ScR 361.383	333942.8	1127.52	0.34%	100.0	%
Ag 328.068†	-140.4	47.95	34.15%	[0.00]	mg/L
Al 308.215†	174.3	4.31	2.47%	[0.00]	mg/L
As 188.979†	-11.1	1.78	16.02%	[0.00]	mg/L
B 249.677†	23.9	4.91	20.52%	[0.00]	mg/L
Ba 233.527†	23.0	1.51	6.55%	[0.00]	mg/L
Be 313.042†	652.1	5.43	0.83%	[0.00]	mg/L
Ca 317.933†	136.7	13.36	9.78%	[0.00]	mg/L
Cd 228.802†	331.3	7.02	2.12%	[0.00]	mg/L
Co 228.616†	-75.6	1.65	2.19%	[0.00]	mg/L
Cr 267.716†	-136.0	1.76	1.30%	[0.00]	mg/L
Cu 324.752†	2981.6	13.31	0.45%	[0.00]	mg/L
Fe 273.955†	20.7	0.72	3.48%	[0.00]	mg/L
K 766.490†	544.0	15.72	2.89%	[0.00]	mg/L
Mg 279.077†	75.5	4.77	6.32%	[0.00]	mg/L
Mn 257.610†	172.2	0.50	0.29%	[0.00]	mg/L
Mo 202.031†	61.1	1.10	1.81%	[0.00]	mg/L
Na 589.592†	-551.0	24.77	4.49%	[0.00]	mg/L
Na 330.237†	-206.5	9.27	4.49%	[0.00]	mg/L
Ni 231.604†	-9.8	2.71	27.81%	[0.00]	mg/L
Pb 220.353†	44.9	6.31	14.05%	[0.00]	mg/L
Sb 206.836†	60.9	6.38	10.48%	[0.00]	mg/L
Se 196.026†	-32.5	4.63	14.22%	[0.00]	mg/L
Si 288.158†	58.1	8.53	14.70%	[0.00]	mg/L
Sn 189.927†	-3.4	1.16	34.31%	[0.00]	mg/L
Sr 421.552†	275.4	12.27	4.46%	[0.00]	mg/L
Ti 334.903†	-72.1	14.64	20.32%	[0.00]	mg/L
Tl 190.801†	-36.3	2.46	6.78%	[0.00]	mg/L
V 292.402†	174.3	14.79	8.48%	[0.00]	mg/L
Zn 206.200†	8.1	1.53	18.84%	[0.00]	mg/L

Sequence No.: 2
Sample ID: STD2

Autosampler Location: 2
Date Collected: 6/28/2013 8:34:40 AM
Data Type: Original

Nebulizer Parameters: STD2

Analyte	Back Pressure	Flow
All	229.0 kPa	0.75 L/min

Mean Data: STD2

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	3223363.4	39214.32	1.22%	101.0	%
ScR 361.383	339575.0	95.65	0.03%	101.7	%
Ba 233.527†	47175.0	227.66	0.48%	[10]	mg/L
Cd 228.802†	326168.3	2756.10	0.84%	[10]	mg/L
Co 228.616†	435212.6	4254.57	0.98%	[10]	mg/L
Cr 267.716†	60788.9	100.50	0.17%	[10]	mg/L
Cu 324.752†	2976059.6	28519.59	0.96%	[10]	mg/L
Mn 257.610†	370677.1	2024.58	0.55%	[10]	mg/L
V 292.402†	1479248.4	13786.09	0.93%	[10]	mg/L

Sequence No.: 3
Sample ID: STD3

Autosampler Location: 3
Date Collected: 6/28/2013 8:36:27 AM
Data Type: Original

Nebulizer Parameters: STD3

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: STD3

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	3152852.9	3898.24	0.12%	98.77	%
ScR 361.383	329247.4	2850.93	0.87%	98.59	%
Ag 328.068†	217039.2	936.46	0.43%	[1.0]	mg/L
As 188.979†	18111.8	78.68	0.43%	[10]	mg/L
B 249.677†	75232.6	591.53	0.79%	[10]	mg/L
Be 313.042†	2983247.5	24597.99	0.82%	[5.0]	mg/L
Na 589.592†	699223.8	5204.68	0.74%	[50]	mg/L
Ni 231.604†	43647.7	329.04	0.75%	[10]	mg/L
Pb 220.353†	91080.2	73.37	0.08%	[10]	mg/L
Se 196.026†	14390.0	56.63	0.39%	[10]	mg/L
Sr 421.552†	5078107.0	80460.77	1.58%	[5]	mg/L
Tl 190.801†	24252.2	187.10	0.77%	[10]	mg/L
Zn 206.200†	41562.4	287.12	0.69%	[10]	mg/L

Sequence No.: 4
Sample ID: STD4

Autosampler Location: 4
Date Collected: 6/28/2013 8:39:01 AM
Data Type: Original

Nebulizer Parameters: STD4

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: STD4

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	3199320.4	6889.84	0.22%	100.2	%
ScR 361.383	333261.5	1847.79	0.55%	99.80	%
Mo 202.031†	207164.6	552.18	0.27%	[10]	mg/L
Sb 206.836†	34368.5	83.87	0.24%	[10]	mg/L
Si 288.158†	20723.0	159.69	0.77%	[10]	mg/L
Sn 189.927†	38622.6	184.12	0.48%	[10]	mg/L
Ti 334.903†	213020.5	1165.00	0.55%	[10]	mg/L

Sequence No.: 5
Sample ID: STD5

Autosampler Location: 5
Date Collected: 6/28/2013 8:41:15 AM
Data Type: Original

Nebulizer Parameters: STD5

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: STD5

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
ScA 357.253	3018490.2	13857.20	0.46%	94.56	%
ScR 361.383	333611.3	1657.27	0.50%	99.90	%
Al 308.215†	47557.1	266.91	0.56%	[30]	mg/L
Ca 317.933†	390340.3	2766.05	0.71%	[30]	mg/L
Fe 273.955†	135409.4	1453.09	1.07%	[100]	mg/L
K 766.490†	223585.1	1068.00	0.48%	[100]	mg/L
Mg 279.077†	38737.5	220.19	0.57%	[30]	mg/L
Na 330.237†	2799.8	13.97	0.50%	[100]	mg/L

Calibration Summary

Analyte	Stds.	Equation	Intercept	Slope	Curvature	Corr. Coef.	Reslope
Ag 328.068	1	Lin Thru 0	0.0	217000	0.00000	1.000000	
Al 308.215	1	Lin Thru 0	0.0	1585	0.00000	1.000000	
As 188.979	1	Lin Thru 0	0.0	1811	0.00000	1.000000	
B 249.677	1	Lin Thru 0	0.0	7523	0.00000	1.000000	
Ba 233.527	1	Lin Thru 0	0.0	4717	0.00000	1.000000	
Be 313.042	1	Lin Thru 0	0.0	596600	0.00000	1.000000	
Ca 317.933	1	Lin Thru 0	0.0	13010	0.00000	1.000000	
Cd 228.802	1	Lin Thru 0	0.0	32620	0.00000	1.000000	
Co 228.616	1	Lin Thru 0	0.0	43520	0.00000	1.000000	
Cr 267.716	1	Lin Thru 0	0.0	6079	0.00000	1.000000	
Cu 324.752	1	Lin Thru 0	0.0	297600	0.00000	1.000000	
Fe 273.955	1	Lin Thru 0	0.0	1354	0.00000	1.000000	
K 766.490	1	Lin Thru 0	0.0	2236	0.00000	1.000000	
Mg 279.077	1	Lin Thru 0	0.0	1291	0.00000	1.000000	
Mn 257.610	1	Lin Thru 0	0.0	37070	0.00000	1.000000	
Mo 202.031	1	Lin Thru 0	0.0	20720	0.00000	1.000000	
Na 589.592	1	Lin Thru 0	0.0	13980	0.00000	1.000000	
Na 330.237	1	Lin Thru 0	0.0	28.00	0.00000	1.000000	
Ni 231.604	1	Lin Thru 0	0.0	4365	0.00000	1.000000	
Pb 220.353	1	Lin Thru 0	0.0	9108	0.00000	1.000000	
Sb 206.836	1	Lin Thru 0	0.0	3437	0.00000	1.000000	
Se 196.026	1	Lin Thru 0	0.0	1439	0.00000	1.000000	
Si 288.158	1	Lin Thru 0	0.0	2072	0.00000	1.000000	
Sn 189.927	1	Lin Thru 0	0.0	3862	0.00000	1.000000	
Sr 421.552	1	Lin Thru 0	0.0	1016000	0.00000	1.000000	
Ti 334.903	1	Lin Thru 0	0.0	21300	0.00000	1.000000	
Tl 190.801	1	Lin Thru 0	0.0	2425	0.00000	1.000000	
V 292.402	1	Lin Thru 0	0.0	147900	0.00000	1.000000	
Zn 206.200	1	Lin Thru 0	0.0	4156	0.00000	1.000000	

Analysis Begun

Start Time: 6/28/2013 8:50:06 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 6/28/2013 7:20:02 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\CRISET.sif
Batch ID:
Results Data Set: I2130628
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: ICV
Analyst: ALA
Dilution: 1.000000X
Autosampler Location: 7
Date Collected: 6/28/2013 8:50:07 AM
Data Type: Original

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	231.0 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	3185547.3	99.80	%	0.356				0.36%
ScR 361.383	330332.4	98.92	%	0.647				0.65%
Ag 328.068†	224604.3	1.035	mg/L	0.0064	1.035	mg/L	0.0064	0.62%
Al 308.215†	3255.5	2.020	mg/L	0.0131	2.020	mg/L	0.0131	0.65%
As 188.979†	3592.5	2.011	mg/L	0.0064	2.011	mg/L	0.0064	0.32%
B 249.677†	7535.2	1.001	mg/L	0.0051	1.001	mg/L	0.0051	0.51%
Ba 233.527†	4884.9	1.035	mg/L	0.0066	1.035	mg/L	0.0066	0.64%
Be 313.042†	596771.4	0.9999	mg/L	0.00670	0.9999	mg/L	0.00670	0.67%
Ca 317.933†	25257.2	1.941	mg/L	0.0029	1.941	mg/L	0.0029	0.15%
Cd 228.802†	34037.8	1.033	mg/L	0.0090	1.033	mg/L	0.0090	0.87%
Co 228.616†	43666.2	1.001	mg/L	0.0064	1.001	mg/L	0.0064	0.64%
Cr 267.716†	6401.5	1.053	mg/L	0.0083	1.053	mg/L	0.0083	0.79%
Cu 324.752†	301434.3	1.013	mg/L	0.0007	1.013	mg/L	0.0007	0.07%
Fe 273.955†	2789.7	2.054	mg/L	0.0165	2.054	mg/L	0.0165	0.80%
K 766.490†	44334.8	19.83	mg/L	0.052	19.83	mg/L	0.052	0.26%
Mg 279.077†	2536.9	1.971	mg/L	0.0178	1.971	mg/L	0.0178	0.90%
Mn 257.610†	36859.6	0.9947	mg/L	0.00707	0.9947	mg/L	0.00707	0.71%
Mo 202.031†	20235.8	0.9767	mg/L	0.00236	0.9767	mg/L	0.00236	0.24%
Na 589.592†	697966.0	49.91	mg/L	0.101	49.91	mg/L	0.101	0.20%
Na 330.237†	1433.9	51.18	mg/L	0.247	51.18	mg/L	0.247	0.48%
Ni 231.604†	4377.6	1.003	mg/L	0.0076	1.003	mg/L	0.0076	0.76%
Pb 220.353†	18121.5	1.991	mg/L	0.0091	1.991	mg/L	0.0091	0.46%
Sb 206.836†	7066.2	2.055	mg/L	0.0042	2.055	mg/L	0.0042	0.20%
Se 196.026†	2885.7	2.004	mg/L	0.0064	2.004	mg/L	0.0064	0.32%
Si 288.158†	4145.4	2.005	mg/L	0.0124	2.005	mg/L	0.0124	0.62%
Sn 189.927†	3820.7	0.9908	mg/L	0.00298	0.9908	mg/L	0.00298	0.30%
Sr 421.552†	1013897.1	0.9983	mg/L	0.00192	0.9983	mg/L	0.00192	0.19%
Ti 334.903†	21150.7	0.9916	mg/L	0.00226	0.9916	mg/L	0.00226	0.23%
Tl 190.801†	4981.2	2.046	mg/L	0.0137	2.046	mg/L	0.0137	0.67%
V 292.402†	151527.7	1.029	mg/L	0.0049	1.029	mg/L	0.0049	0.48%
Zn 206.200†	4132.6	0.9946	mg/L	0.00540	0.9946	mg/L	0.00540	0.54%

Sequence No.: 2
Sample ID: CB
Analyst: ALA
Dilution: 1.000000X

Autosampler Location: 1
Date Collected: 6/28/2013 8:54:11 AM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	230.0 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	3185795.3	99.80	%	0.627				0.63%
ScR 361.383	334459.2	100.2	%	0.46				0.46%
Ag 328.068†	29.8	0.00014	mg/L	0.000160	0.00014	mg/L	0.000160	116.74%
Al 308.215†	-2.0	-0.00125	mg/L	0.003133	-0.00125	mg/L	0.003133	249.75%
As 188.979†	2.2	0.00119	mg/L	0.002132	0.00119	mg/L	0.002132	179.14%
B 249.677†	17.7	0.00235	mg/L	0.000710	0.00235	mg/L	0.000710	30.24%
Ba 233.527†	-2.2	-0.00047	mg/L	0.000569	-0.00047	mg/L	0.000569	120.84%
Be 313.042†	12.3	0.00002	mg/L	0.000047	0.00002	mg/L	0.000047	226.78%
Ca 317.933†	-14.9	-0.00114	mg/L	0.000745	-0.00114	mg/L	0.000745	65.22%
Cd 228.802†	3.7	0.00011	mg/L	0.000034	0.00011	mg/L	0.000034	31.38%
Co 228.616†	-1.1	-0.00002	mg/L	0.000072	-0.00002	mg/L	0.000072	307.77%
Cr 267.716†	5.4	0.00088	mg/L	0.001074	0.00088	mg/L	0.001074	121.73%
Cu 324.752†	40.8	0.00014	mg/L	0.000033	0.00014	mg/L	0.000033	24.38%
Fe 273.955†	-1.4	-0.00107	mg/L	0.002442	-0.00107	mg/L	0.002442	228.58%
K 766.490†	-44.7	-0.01999	mg/L	0.022960	-0.01999	mg/L	0.022960	114.83%
Mg 279.077†	-3.7	-0.00283	mg/L	0.009671	-0.00283	mg/L	0.009671	342.31%
Mn 257.610†	-0.3	-0.00001	mg/L	0.000032	-0.00001	mg/L	0.000032	351.32%
Mo 202.031†	26.9	0.00130	mg/L	0.000293	0.00130	mg/L	0.000293	22.60%
Na 589.592†	52.3	0.00374	mg/L	0.002083	0.00374	mg/L	0.002083	55.69%
Na 330.237†	5.0	0.1776	mg/L	0.43180	0.1776	mg/L	0.43180	243.19%
Ni 231.604†	-0.3	-0.00007	mg/L	0.001250	-0.00007	mg/L	0.001250	>999.9%
Pb 220.353†	4.0	0.00044	mg/L	0.000902	0.00044	mg/L	0.000902	207.26%
Sb 206.836†	11.7	0.00341	mg/L	0.003115	0.00341	mg/L	0.003115	91.32%
Se 196.026†	-1.5	-0.00106	mg/L	0.001418	-0.00106	mg/L	0.001418	133.88%
Si 288.158†	-3.8	-0.00184	mg/L	0.004404	-0.00184	mg/L	0.004404	239.49%
Sn 189.927†	5.5	0.00144	mg/L	0.000718	0.00144	mg/L	0.000718	49.97%
Sr 421.552†	22.9	0.00002	mg/L	0.000029	0.00002	mg/L	0.000029	129.06%
Ti 334.903†	-15.3	-0.00072	mg/L	0.000181	-0.00072	mg/L	0.000181	25.23%
Tl 190.801†	3.3	0.00137	mg/L	0.001657	0.00137	mg/L	0.001657	121.28%
V 292.402†	2.7	0.00002	mg/L	0.000063	0.00002	mg/L	0.000063	273.45%
Zn 206.200†	3.8	0.00091	mg/L	0.000734	0.00091	mg/L	0.000734	80.63%

Sequence No.: 3
Sample ID: CRI
Analyst: ALA
Dilution: 1.000000X

Autosampler Location: 301
Date Collected: 6/28/2013 8:58:26 AM
Data Type: Original

Nebulizer Parameters: CRI

Analyte	Back Pressure	Flow
A11	231.0 kPa	0.75 L/min

Mean Data: CRI

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3192501.7	100.0	%	0.35				0.35%
ScR 361.383	334431.0	100.1	%	0.27				0.27%
Ag 328.068†	713.5	0.00329	mg/L	0.000137	0.00329	mg/L	0.000137	4.16%
Al 308.215†	75.6	0.04758	mg/L	0.001623	0.04758	mg/L	0.001623	3.41%
As 188.979†	90.3	0.05001	mg/L	0.000876	0.05001	mg/L	0.000876	1.75%
B 249.677†	159.8	0.02124	mg/L	0.001050	0.02124	mg/L	0.001050	4.94%
Ba 233.527†	15.4	0.00326	mg/L	0.000769	0.00326	mg/L	0.000769	23.61%
Be 313.042†	580.0	0.00097	mg/L	0.000030	0.00097	mg/L	0.000030	3.11%
Ca 317.933†	623.5	0.04792	mg/L	0.000904	0.04792	mg/L	0.000904	1.89%
Cd 228.802†	79.1	0.00216	mg/L	0.000156	0.00216	mg/L	0.000156	7.22%
Co 228.616†	137.8	0.00316	mg/L	0.000118	0.00316	mg/L	0.000118	3.73%
Cr 267.716†	37.3	0.00614	mg/L	0.000960	0.00614	mg/L	0.000960	15.65%
Cu 324.752†	594.2	0.00200	mg/L	0.000038	0.00200	mg/L	0.000038	1.90%
Fe 273.955†	70.1	0.05172	mg/L	0.002130	0.05172	mg/L	0.002130	4.12%
K 766.490†	1099.1	0.4916	mg/L	0.00705	0.4916	mg/L	0.00705	1.43%
Mg 279.077†	60.7	0.04700	mg/L	0.002896	0.04700	mg/L	0.002896	6.16%
Mn 257.610†	36.7	0.00099	mg/L	0.000119	0.00099	mg/L	0.000119	11.95%
Mo 202.031†	107.6	0.00519	mg/L	0.000083	0.00519	mg/L	0.000083	1.59%
Na 589.592†	6906.9	0.4939	mg/L	0.00312	0.4939	mg/L	0.00312	0.63%
Na 330.237†	13.2	0.4694	mg/L	0.45563	0.4694	mg/L	0.45563	97.06%
Ni 231.604†	45.0	0.01032	mg/L	0.000749	0.01032	mg/L	0.000749	7.26%
Pb 220.353†	187.8	0.02064	mg/L	0.001145	0.02064	mg/L	0.001145	5.55%
Sb 206.836†	177.1	0.05155	mg/L	0.000554	0.05155	mg/L	0.000554	1.07%
Se 196.026†	69.3	0.04817	mg/L	0.004225	0.04817	mg/L	0.004225	8.77%
Si 288.158†	120.7	0.05828	mg/L	0.001373	0.05828	mg/L	0.001373	2.36%
Sn 189.927†	41.7	0.01083	mg/L	0.000772	0.01083	mg/L	0.000772	7.13%
Sr 421.552†	1000.1	0.00098	mg/L	0.000050	0.00098	mg/L	0.000050	5.09%
Ti 334.903†	104.4	0.00489	mg/L	0.000466	0.00489	mg/L	0.000466	9.52%
Tl 190.801†	119.8	0.04937	mg/L	0.001717	0.04937	mg/L	0.001717	3.48%
V 292.402†	438.7	0.00299	mg/L	0.000188	0.00299	mg/L	0.000188	6.28%
Zn 206.200†	40.4	0.00973	mg/L	0.000158	0.00973	mg/L	0.000158	1.62%

Sequence No.: 4
Sample ID: ICSA
Analyst: ALA
Dilution: 1.000000X

Autosampler Location: 302
Date Collected: 6/28/2013 9:02:42 AM
Data Type: Original

Nebulizer Parameters: ICSA

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: ICSA

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	3065901.0	96.05	%	0.314				0.33%
ScR 361.383	322290.4	96.51	%	0.397				0.41%
Ag 328.068†	-230.3	-0.00106	mg/L	0.000170	-0.00106	mg/L	0.000170	16.06%
Al 308.215†	318046.8	200.6	mg/L	0.61	200.6	mg/L	0.61	0.30%
As 188.979†	52.6	0.02205	mg/L	0.000738	0.02205	mg/L	0.000738	3.35%
B 249.677†	-32.7	-0.00435	mg/L	0.002337	-0.00435	mg/L	0.002337	53.77%
Ba 233.527†	141.6	-0.00362	mg/L	0.000552	-0.00362	mg/L	0.000552	15.24%
Be 313.042†	71.5	0.00012	mg/L	0.000003	0.00012	mg/L	0.000003	2.92%
Ca 317.933†	1288208.9	99.01	mg/L	0.642	99.01	mg/L	0.642	0.65%
Cd 228.802†	17.1	0.00037	mg/L	0.000133	0.00037	mg/L	0.000133	36.41%
Co 228.616†	99.4	-0.00013	mg/L	0.000126	-0.00013	mg/L	0.000126	97.50%
Cr 267.716†	18.5	0.00154	mg/L	0.001398	0.00154	mg/L	0.001398	90.61%
Cu 324.752†	-2512.4	-0.00018	mg/L	0.000083	-0.00018	mg/L	0.000083	47.06%
Fe 273.955†	270386.8	199.7	mg/L	2.03	199.7	mg/L	2.03	1.02%
K 766.490†	-8.0	-0.00360	mg/L	0.004774	-0.00360	mg/L	0.004774	132.73%
Mg 279.077†	133355.0	103.1	mg/L	0.40	103.1	mg/L	0.40	0.39%
Mn 257.610†	47.5	0.00060	mg/L	0.000062	0.00060	mg/L	0.000062	10.28%
Mo 202.031†	74.3	0.00233	mg/L	0.000169	0.00233	mg/L	0.000169	7.26%
Na 589.592†	138.9	0.00993	mg/L	0.001445	0.00993	mg/L	0.001445	14.55%
Na 330.237†	-4.5	-0.5876	mg/L	0.20612	-0.5876	mg/L	0.20612	35.08%
Ni 231.604†	1.7	0.00040	mg/L	0.001318	0.00040	mg/L	0.001318	332.46%
Pb 220.353†	-407.5	-0.00815	mg/L	0.001661	-0.00815	mg/L	0.001661	20.37%
Sb 206.836†	43.7	0.01251	mg/L	0.001931	0.01251	mg/L	0.001931	15.44%
Se 196.026†	49.2	0.01220	mg/L	0.004095	0.01220	mg/L	0.004095	33.56%
Si 288.158†	-29.4	-0.00249	mg/L	0.003119	-0.00249	mg/L	0.003119	125.02%
Sn 189.927†	-88.0	-0.01007	mg/L	0.001104	-0.01007	mg/L	0.001104	10.97%
Sr 421.552†	5514.1	0.00543	mg/L	0.000046	0.00543	mg/L	0.000046	0.84%
Ti 334.903†	192.1	0.00285	mg/L	0.000608	0.00285	mg/L	0.000608	21.32%
Tl 190.801†	-65.1	0.00053	mg/L	0.001386	0.00053	mg/L	0.001386	262.46%
V 292.402†	1441.0	-0.00083	mg/L	0.000237	-0.00083	mg/L	0.000237	28.51%
Zn 206.200†	16.7	0.00278	mg/L	0.000490	0.00278	mg/L	0.000490	17.60%

Sequence No.: 5
Sample ID: ICSAB
Analyst: ALA
Dilution: 1.000000X

Autosampler Location: 303
Date Collected: 6/28/2013 9:06:43 AM
Data Type: Original

Nebulizer Parameters: ICSAB

Analyte	Back Pressure	Flow
All	231.0 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	3056601.3	95.76	%	0.428				0.45%
ScR 361.383	321718.5	96.34	%	0.339				0.35%
Ag 328.068†	232106.4	1.070	mg/L	0.0018	1.070	mg/L	0.0018	0.17%
Al 308.215†	320511.3	202.2	mg/L	0.62	202.2	mg/L	0.62	0.31%
As 188.979†	1886.8	1.034	mg/L	0.0076	1.034	mg/L	0.0076	0.73%
B 249.677†	-41.6	-0.00756	mg/L	0.000217	-0.00756	mg/L	0.000217	2.87%
Ba 233.527†	5033.0	1.033	mg/L	0.0079	1.033	mg/L	0.0079	0.77%
Be 313.042†	591286.9	0.9908	mg/L	0.00521	0.9908	mg/L	0.00521	0.53%
Ca 317.933†	1297526.9	99.72	mg/L	0.281	99.72	mg/L	0.281	0.28%
Cd 228.802†	34183.5	1.043	mg/L	0.0054	1.043	mg/L	0.0054	0.52%
Co 228.616†	41979.4	0.9619	mg/L	0.00109	0.9619	mg/L	0.00109	0.11%
Cr 267.716†	6358.9	1.045	mg/L	0.0061	1.045	mg/L	0.0061	0.58%
Cu 324.752†	313928.9	1.063	mg/L	0.0027	1.063	mg/L	0.0027	0.25%
Fe 273.955†	272000.1	200.9	mg/L	1.76	200.9	mg/L	1.76	0.88%
K 766.490†	-56.2	-0.02514	mg/L	0.023272	-0.02514	mg/L	0.023272	92.56%
Mg 279.077†	128820.3	99.63	mg/L	0.583	99.63	mg/L	0.583	0.58%
Mn 257.610†	36790.4	0.9920	mg/L	0.00601	0.9920	mg/L	0.00601	0.61%
Mo 202.031†	76.0	0.00235	mg/L	0.000329	0.00235	mg/L	0.000329	14.02%
Na 589.592†	35.5	0.00254	mg/L	0.002485	0.00254	mg/L	0.002485	98.00%
Na 330.237†	5.7	-0.5209	mg/L	0.03179	-0.5209	mg/L	0.03179	6.10%
Ni 231.604†	4194.7	0.9612	mg/L	0.00563	0.9612	mg/L	0.00563	0.59%
Pb 220.353†	8640.2	0.9860	mg/L	0.00509	0.9860	mg/L	0.00509	0.52%
Sb 206.836†	3579.1	1.031	mg/L	0.0090	1.031	mg/L	0.0090	0.87%
Se 196.026†	1499.5	1.019	mg/L	0.0030	1.019	mg/L	0.0030	0.30%
Si 288.158†	-37.0	-0.00196	mg/L	0.002151	-0.00196	mg/L	0.002151	109.80%
Sn 189.927†	-86.4	-0.00903	mg/L	0.000470	-0.00903	mg/L	0.000470	5.21%
Sr 421.552†	5552.4	0.00547	mg/L	0.000011	0.00547	mg/L	0.000011	0.21%
Ti 334.903†	184.2	0.00224	mg/L	0.000245	0.00224	mg/L	0.000245	10.91%
Tl 190.801†	2268.8	0.9532	mg/L	0.00389	0.9532	mg/L	0.00389	0.41%
V 292.402†	150605.3	1.012	mg/L	0.0030	1.012	mg/L	0.0030	0.29%
Zn 206.200†	4009.1	0.9635	mg/L	0.00495	0.9635	mg/L	0.00495	0.51%

Sequence No.: 6
Sample ID: CV
Analyst: ALA
Dilution: 1.000000X

Autosampler Location: 7
Date Collected: 6/28/2013 9:11:49 AM
Data Type: Original

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	230.0 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	3213315.2	100.7	%	0.36				0.36%
ScR 361.383	333648.2	99.91	%	0.675				0.68%
Ag 328.068†	222491.5	1.025	mg/L	0.0038	1.025	mg/L	0.0038	0.37%
Al 308.215†	3227.5	2.003	mg/L	0.0147	2.003	mg/L	0.0147	0.74%
As 188.979†	3566.0	1.996	mg/L	0.0070	1.996	mg/L	0.0070	0.35%
B 249.677†	7442.0	0.9881	mg/L	0.00735	0.9881	mg/L	0.00735	0.74%
Ba 233.527†	4843.1	1.026	mg/L	0.0061	1.026	mg/L	0.0061	0.59%
Be 313.042†	583086.6	0.9770	mg/L	0.01251	0.9770	mg/L	0.01251	1.28%
Ca 317.933†	24932.9	1.916	mg/L	0.0125	1.916	mg/L	0.0125	0.65%
Cd 228.802†	33631.1	1.021	mg/L	0.0046	1.021	mg/L	0.0046	0.45%
Co 228.616†	43278.5	0.9926	mg/L	0.00362	0.9926	mg/L	0.00362	0.36%
Cr 267.716†	6347.9	1.044	mg/L	0.0053	1.044	mg/L	0.0053	0.51%
Cu 324.752†	297837.8	1.001	mg/L	0.0016	1.001	mg/L	0.0016	0.16%
Fe 273.955†	2763.6	2.035	mg/L	0.0078	2.035	mg/L	0.0078	0.38%
K 766.490†	43792.3	19.59	mg/L	0.115	19.59	mg/L	0.115	0.58%
Mg 279.077†	2521.5	1.959	mg/L	0.0168	1.959	mg/L	0.0168	0.86%
Mn 257.610†	36280.5	0.9791	mg/L	0.00838	0.9791	mg/L	0.00838	0.86%
Mo 202.031†	19931.2	0.9620	mg/L	0.00757	0.9620	mg/L	0.00757	0.79%
Na 589.592†	687094.6	49.13	mg/L	0.253	49.13	mg/L	0.253	0.52%
Na 330.237†	1413.9	50.47	mg/L	0.405	50.47	mg/L	0.405	0.80%
Ni 231.604†	4345.6	0.9959	mg/L	0.00302	0.9959	mg/L	0.00302	0.30%
Pb 220.353†	17914.8	1.968	mg/L	0.0151	1.968	mg/L	0.0151	0.77%
Sb 206.836†	7036.5	2.047	mg/L	0.0089	2.047	mg/L	0.0089	0.44%
Se 196.026†	2855.1	1.983	mg/L	0.0173	1.983	mg/L	0.0173	0.87%
Si 288.158†	4104.6	1.985	mg/L	0.0224	1.985	mg/L	0.0224	1.13%
Sn 189.927†	3787.3	0.9821	mg/L	0.00634	0.9821	mg/L	0.00634	0.65%
Sr 421.552†	998603.6	0.9832	mg/L	0.00516	0.9832	mg/L	0.00516	0.52%
Ti 334.903†	20839.7	0.9771	mg/L	0.00435	0.9771	mg/L	0.00435	0.45%
Tl 190.801†	4966.7	2.040	mg/L	0.0114	2.040	mg/L	0.0114	0.56%
V 292.402†	149931.0	1.018	mg/L	0.0054	1.018	mg/L	0.0054	0.53%
Zn 206.200†	4099.2	0.9865	mg/L	0.00264	0.9865	mg/L	0.00264	0.27%

Sequence No.: 7
Sample ID: CB
Analyst: ALA
Dilution: 1.000000X

Autosampler Location: 1
Date Collected: 6/28/2013 9:15:54 AM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	231.0 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	3274955.7	102.6	%	0.47				0.46%
ScR 361.383	342154.3	102.5	%	0.47				0.45%
Ag 328.068†	48.2	0.00022	mg/L	0.000140	0.00022	mg/L	0.000140	63.19%
Al 308.215†	3.9	0.00246	mg/L	0.006450	0.00246	mg/L	0.006450	262.68%
As 188.979†	1.4	0.00073	mg/L	0.000334	0.00073	mg/L	0.000334	45.59%
B 249.677†	11.2	0.00149	mg/L	0.000612	0.00149	mg/L	0.000612	41.13%
Ba 233.527†	0.8	0.00018	mg/L	0.000596	0.00018	mg/L	0.000596	331.44%
Be 313.042†	2.5	0.00000	mg/L	0.000014	0.00000	mg/L	0.000014	332.25%
Ca 317.933†	6.0	0.00046	mg/L	0.000652	0.00046	mg/L	0.000652	142.39%
Cd 228.802†	0.6	0.00001	mg/L	0.000123	0.00001	mg/L	0.000123	978.43%
Co 228.616†	5.8	0.00013	mg/L	0.000049	0.00013	mg/L	0.000049	35.98%
Cr 267.716†	3.3	0.00054	mg/L	0.000772	0.00054	mg/L	0.000772	142.40%
Cu 324.752†	3.5	0.00001	mg/L	0.000065	0.00001	mg/L	0.000065	556.19%
Fe 273.955†	2.8	0.00208	mg/L	0.001627	0.00208	mg/L	0.001627	78.38%
K 766.490†	-21.8	-0.00974	mg/L	0.005233	-0.00974	mg/L	0.005233	53.74%
Mg 279.077†	-1.2	-0.00093	mg/L	0.002154	-0.00093	mg/L	0.002154	230.61%
Mn 257.610†	-3.4	-0.00009	mg/L	0.000029	-0.00009	mg/L	0.000029	32.38%
Mo 202.031†	17.4	0.00084	mg/L	0.000197	0.00084	mg/L	0.000197	23.40%
Na 589.592†	78.8	0.00564	mg/L	0.004071	0.00564	mg/L	0.004071	72.21%
Na 330.237†	0.1	0.00437	mg/L	0.229759	0.00437	mg/L	0.229759	>999.9%
Ni 231.604†	-0.9	-0.00021	mg/L	0.001694	-0.00021	mg/L	0.001694	800.21%
Pb 220.353†	1.3	0.00014	mg/L	0.001068	0.00014	mg/L	0.001068	745.52%
Sb 206.836†	19.9	0.00578	mg/L	0.000660	0.00578	mg/L	0.000660	11.40%
Se 196.026†	-6.1	-0.00426	mg/L	0.002423	-0.00426	mg/L	0.002423	56.93%
Si 288.158†	-7.5	-0.00360	mg/L	0.003953	-0.00360	mg/L	0.003953	109.70%
Sn 189.927†	3.9	0.00101	mg/L	0.000372	0.00101	mg/L	0.000372	36.87%
Sr 421.552†	12.0	0.00001	mg/L	0.000027	0.00001	mg/L	0.000027	229.72%
Ti 334.903†	-14.2	-0.00067	mg/L	0.000560	-0.00067	mg/L	0.000560	83.80%
Tl 190.801†	3.5	0.00144	mg/L	0.000631	0.00144	mg/L	0.000631	43.91%
V 292.402†	2.4	0.00002	mg/L	0.000066	0.00002	mg/L	0.000066	348.74%
Zn 206.200†	3.4	0.00081	mg/L	0.000168	0.00081	mg/L	0.000168	20.70%

Sequence No.: 8
Sample ID: WU70 MB1 SWC
Analyst: ALA
Dilution: 2.000000X

Autosampler Location: 304
Date Collected: 6/28/2013 9:20:09 AM
Data Type: Original

Nebulizer Parameters: WU70 MB1 SWC

Analyte	Back Pressure	Flow
All	231.0 kPa	0.75 L/min

Mean Data: WU70 MB1 SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3274843.2	102.6	%	0.53				0.52%
ScR 361.383	344782.9	103.2	%	0.43				0.42%
Ag 328.068†	39.8	0.00018	mg/L	0.000235	0.00037	mg/L	0.000471	128.56%
Al 308.215†	2.0	0.00128	mg/L	0.001086	0.00256	mg/L	0.002172	84.94%
As 188.979†	0.7	0.00037	mg/L	0.000131	0.00075	mg/L	0.000262	34.97%
B 249.677†	8.1	0.00108	mg/L	0.001062	0.00216	mg/L	0.002123	98.09%
Ba 233.527†	-2.0	-0.00042	mg/L	0.000503	-0.00083	mg/L	0.001006	120.53%
Be 313.042†	-16.4	-0.00003	mg/L	0.000032	-0.00005	mg/L	0.000063	115.33%
Ca 317.933†	226.3	0.01739	mg/L	0.000161	0.03479	mg/L	0.000322	0.93%
Cd 228.802†	1.2	0.00004	mg/L	0.000152	0.00007	mg/L	0.000304	429.48%
Co 228.616†	3.7	0.00009	mg/L	0.000177	0.00017	mg/L	0.000354	204.75%
Cr 267.716†	1.0	0.00017	mg/L	0.000680	0.00034	mg/L	0.001360	399.30%
Cu 324.752†	31.0	0.00010	mg/L	0.000031	0.00021	mg/L	0.000061	29.27%
Fe 273.955†	9.4	0.00691	mg/L	0.000357	0.01381	mg/L	0.000714	5.17%
K 766.490†	-30.8	-0.01378	mg/L	0.021782	-0.02756	mg/L	0.043564	158.10%
Mg 279.077†	0.4	0.00033	mg/L	0.003033	0.00066	mg/L	0.006065	914.87%
Mn 257.610†	1.4	0.00004	mg/L	0.000078	0.00008	mg/L	0.000157	202.37%
Mo 202.031†	2.5	0.00012	mg/L	0.000174	0.00024	mg/L	0.000347	145.51%
Na 589.592†	154.5	0.01105	mg/L	0.001022	0.02209	mg/L	0.002045	9.26%
Na 330.237†	11.4	0.4058	mg/L	0.48248	0.8115	mg/L	0.96497	118.91%
Ni 231.604†	3.8	0.00087	mg/L	0.000827	0.00174	mg/L	0.001654	95.03%
Pb 220.353†	3.2	0.00035	mg/L	0.000491	0.00070	mg/L	0.000983	140.15%
Sb 206.836†	0.3	0.00007	mg/L	0.001157	0.00015	mg/L	0.002314	>999.9%
Se 196.026†	-0.2	-0.00011	mg/L	0.003067	-0.00022	mg/L	0.006134	>999.9%
Si 288.158†	31.8	0.01533	mg/L	0.004500	0.03067	mg/L	0.009000	29.35%
Sn 189.927†	1.3	0.00034	mg/L	0.000532	0.00069	mg/L	0.001064	154.98%
Sr 421.552†	40.0	0.00004	mg/L	0.000025	0.00008	mg/L	0.000050	63.89%
Ti 334.903†	-9.7	-0.00046	mg/L	0.001088	-0.00091	mg/L	0.002175	238.19%
Tl 190.801†	3.6	0.00150	mg/L	0.000620	0.00300	mg/L	0.001240	41.34%
V 292.402†	-9.2	-0.00006	mg/L	0.000081	-0.00012	mg/L	0.000162	132.01%
Zn 206.200†	2.5	0.00059	mg/L	0.000528	0.00119	mg/L	0.001056	89.03%

Sequence No.: 9
Sample ID: WV53 A SWC
Analyst: ALA
Dilution: 2.000000X

Autosampler Location: 305
Date Collected: 6/28/2013 9:24:26 AM
Data Type: Original

Nebulizer Parameters: WV53 A SWC

Analyte	Back Pressure	Flow
All	231.0 kPa	0.75 L/min

Mean Data: WV53 A SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	3274710.0	102.6	%	0.33				0.32%
ScR 361.383	346132.9	103.7	%	0.34				0.33%
Ag 328.068†	-237.4	-0.00102	mg/L	0.000085	-0.00203	mg/L	0.000169	8.33%
Al 308.215†	85890.9	54.17	mg/L	0.190	108.3	mg/L	0.38	0.35%
As 188.979†	-264.4	0.00848	mg/L	0.002224	0.01696	mg/L	0.004449	26.24%
B 249.677†	46.7	0.00613	mg/L	0.000171	0.01227	mg/L	0.000342	2.79%
Ba 233.527†	676.7	0.1297	mg/L	0.00042	0.2593	mg/L	0.00083	0.32%
Be 313.042†	405.8	0.00057	mg/L	0.000010	0.00113	mg/L	0.000019	1.71%
Ca 317.933†	391979.9	30.13	mg/L	0.147	60.25	mg/L	0.294	0.49%
Cd 228.802†	2.9	0.00092	mg/L	0.000078	0.00184	mg/L	0.000155	8.42%
Co 228.616†	1642.9	0.02834	mg/L	0.000076	0.05668	mg/L	0.000153	0.27%
Cr 267.716†	439.1	0.07396	mg/L	0.000941	0.1479	mg/L	0.00188	1.27%
Cu 324.752†	18373.2	0.06435	mg/L	0.000498	0.1287	mg/L	0.00100	0.77%
Fe 273.955†	110350.2	81.49	mg/L	0.850	163.0	mg/L	1.70	1.04%
K 766.490†	8128.1	3.635	mg/L	0.0259	7.271	mg/L	0.0517	0.71%
Mg 279.077†	19519.5	15.06	mg/L	0.059	30.13	mg/L	0.118	0.39%
Mn 257.610†	26290.0	0.7092	mg/L	0.00683	1.418	mg/L	0.0137	0.96%
Mo 202.031†	80.9	0.00352	mg/L	0.000332	0.00704	mg/L	0.000664	9.44%
Na 589.592†	63531.9	4.543	mg/L	0.0302	9.086	mg/L	0.0604	0.67%
Na 330.237†	99.8	4.788	mg/L	0.2723	9.577	mg/L	0.5445	5.69%
Ni 231.604†	244.6	0.05605	mg/L	0.000722	0.1121	mg/L	0.00144	1.29%
Pb 220.353†	-6.8	0.00777	mg/L	0.000747	0.01554	mg/L	0.001495	9.62%
Sb 206.836†	4.7	0.00538	mg/L	0.001393	0.01075	mg/L	0.002787	25.91%
Se 196.026†	11.5	0.00186	mg/L	0.003796	0.00371	mg/L	0.007592	204.46%
Si 288.158†	1483.9	0.7178	mg/L	0.00675	1.436	mg/L	0.0135	0.94%
Sn 189.927†	-37.2	-0.00475	mg/L	0.000504	-0.00950	mg/L	0.001008	10.61%
Sr 421.552†	275121.5	0.2709	mg/L	0.00113	0.5418	mg/L	0.00227	0.42%
Ti 334.903†	103835.9	4.873	mg/L	0.0272	9.745	mg/L	0.0544	0.56%
Tl 190.801†	-10.3	0.00570	mg/L	0.003682	0.01141	mg/L	0.007364	64.56%
V 292.402†	39910.9	0.2632	mg/L	0.00107	0.5264	mg/L	0.00214	0.41%
Zn 206.200†	633.9	0.1523	mg/L	0.00010	0.3045	mg/L	0.00020	0.06%

Sequence No.: 10
Sample ID: WV53 B SWC
Analyst: ALA
Dilution: 2.000000X

Autosampler Location: 306
Date Collected: 6/28/2013 9:28:26 AM
Data Type: Original

Nebulizer Parameters: WV53 B SWC

Analyte	Back Pressure	Flow
All	231.0 kPa	0.75 L/min

Mean Data: WV53 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3255655.3	102.0	%	0.57				0.56%
ScR 361.383	344266.1	103.1	%	0.96				0.94%
Ag 328.068†	-277.2	-0.00116	mg/L	0.000126	-0.00233	mg/L	0.000253	10.85%
Al 308.215†	108050.1	68.14	mg/L	0.338	136.3	mg/L	0.68	0.50%
As 188.979†	-306.6	0.02675	mg/L	0.004949	0.05350	mg/L	0.009898	18.50%
B 249.677†	76.1	0.01001	mg/L	0.001251	0.02002	mg/L	0.002501	12.50%
Ba 233.527†	1992.5	0.4032	mg/L	0.00275	0.8065	mg/L	0.00550	0.68%
Be 313.042†	678.5	0.00098	mg/L	0.000029	0.00196	mg/L	0.000059	2.99%
Ca 317.933†	475902.4	36.58	mg/L	0.165	73.15	mg/L	0.330	0.45%
Cd 228.802†	40.2	0.00221	mg/L	0.000191	0.00441	mg/L	0.000382	8.65%
Co 228.616†	2255.5	0.03975	mg/L	0.000611	0.07951	mg/L	0.001222	1.54%
Cr 267.716†	683.7	0.1149	mg/L	0.00150	0.2299	mg/L	0.00301	1.31%
Cu 324.752†	40848.6	0.1410	mg/L	0.00060	0.2820	mg/L	0.00120	0.43%
Fe 273.955†	153022.2	113.0	mg/L	0.59	226.0	mg/L	1.17	0.52%
K 766.490†	11804.7	5.280	mg/L	0.0281	10.56	mg/L	0.056	0.53%
Mg 279.077†	26896.2	20.76	mg/L	0.087	41.51	mg/L	0.174	0.42%
Mn 257.610†	39973.0	1.079	mg/L	0.0040	2.158	mg/L	0.0080	0.37%
Mo 202.031†	84.8	0.00362	mg/L	0.000244	0.00725	mg/L	0.000489	6.74%
Na 589.592†	74280.5	5.312	mg/L	0.0293	10.62	mg/L	0.059	0.55%
Na 330.237†	119.9	5.742	mg/L	0.1246	11.48	mg/L	0.249	2.17%
Ni 231.604†	341.9	0.07833	mg/L	0.000067	0.1567	mg/L	0.00013	0.09%
Pb 220.353†	24590.5	2.710	mg/L	0.0227	5.420	mg/L	0.0453	0.84%
Sb 206.836†	-1.6	0.01360	mg/L	0.001862	0.02721	mg/L	0.003723	13.68%
Se 196.026†	22.5	0.00793	mg/L	0.001815	0.01585	mg/L	0.003631	22.90%
Si 288.158†	1810.8	0.8762	mg/L	0.01059	1.752	mg/L	0.0212	1.21%
Sn 189.927†	3895.7	1.015	mg/L	0.0079	2.030	mg/L	0.0159	0.78%
Sr 421.552†	444832.3	0.4380	mg/L	0.00203	0.8760	mg/L	0.00406	0.46%
Ti 334.903†	131723.9	6.181	mg/L	0.0247	12.36	mg/L	0.049	0.40%
Tl 190.801†	-22.3	0.00456	mg/L	0.001307	0.00912	mg/L	0.002614	28.65%
V 292.402†	58010.2	0.3834	mg/L	0.00093	0.7667	mg/L	0.00187	0.24%
Zn 206.200†	2146.3	0.5163	mg/L	0.00653	1.033	mg/L	0.0131	1.26%

Sequence No.: 11
Sample ID: WV53 C SWC
Analyst: ALA
Dilution: 2.000000X

Autosampler Location: 307
Date Collected: 6/28/2013 9:32:27 AM
Data Type: Original

Nebulizer Parameters: WV53 C SWC

Analyte	Back Pressure	Flow
All	231.0 kPa	0.75 L/min

Mean Data: WV53 C SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3134613.0	98.20	%	0.349				0.36%
ScR 361.383	341227.1	102.2	%	0.68				0.66%
Ag 328.068†	-308.7	-0.00131	mg/L	0.000128	-0.00262	mg/L	0.000257	9.78%
Al 308.215†	160208.2	101.0	mg/L	0.17	202.1	mg/L	0.35	0.17%
As 188.979†	550.5	0.4583	mg/L	0.00243	0.9166	mg/L	0.00486	0.53%
B 249.677†	197.3	0.02605	mg/L	0.000330	0.05210	mg/L	0.000660	1.27%
Ba 233.527†	4347.2	0.8919	mg/L	0.00533	1.784	mg/L	0.0107	0.60%
Be 313.042†	1008.9	0.00154	mg/L	0.000013	0.00308	mg/L	0.000026	0.84%
Ca 317.933†	4561224.9	350.6	mg/L	2.66	701.1	mg/L	5.32	0.76%
Cd 228.802†	167.2	0.00352	mg/L	0.000263	0.00704	mg/L	0.000526	7.47%
Co 228.616†	3854.4	0.07670	mg/L	0.000227	0.1534	mg/L	0.00045	0.30%
Cr 267.716†	890.9	0.1477	mg/L	0.00079	0.2955	mg/L	0.00157	0.53%
Cu 324.752†	457012.5	1.542	mg/L	0.0072	3.084	mg/L	0.0143	0.46%
Fe 273.955†	237171.9	175.1	mg/L	0.49	350.3	mg/L	0.99	0.28%
K 766.490†	12545.0	5.611	mg/L	0.0114	11.22	mg/L	0.023	0.20%
Mg 279.077†	39314.0	30.30	mg/L	0.113	60.60	mg/L	0.225	0.37%
Mn 257.610†	115911.8	3.126	mg/L	0.0034	6.252	mg/L	0.0068	0.11%
Mo 202.031†	258.2	0.00800	mg/L	0.000640	0.01600	mg/L	0.001280	8.00%
Na 589.592†	145121.6	10.38	mg/L	0.023	20.75	mg/L	0.046	0.22%
Na 330.237†	296.9	10.41	mg/L	0.162	20.82	mg/L	0.323	1.55%
Ni 231.604†	451.6	0.1035	mg/L	0.00060	0.2070	mg/L	0.00121	0.58%
Pb 220.353†	7626.8	0.8501	mg/L	0.00501	1.700	mg/L	0.0100	0.59%
Sb 206.836†	33.3	0.01447	mg/L	0.001669	0.02894	mg/L	0.003337	11.53%
Se 196.026†	38.9	0.01565	mg/L	0.002881	0.03131	mg/L	0.005761	18.40%
Si 288.158†	2808.6	1.359	mg/L	0.0156	2.718	mg/L	0.0312	1.15%
Sn 189.927†	279.6	0.1186	mg/L	0.00177	0.2372	mg/L	0.00354	1.49%
Sr 421.552†	1864111.3	1.835	mg/L	0.0145	3.671	mg/L	0.0291	0.79%
Ti 334.903†	119375.7	5.582	mg/L	0.0070	11.16	mg/L	0.014	0.13%
Tl 190.801†	-29.7	0.00985	mg/L	0.002291	0.01970	mg/L	0.004583	23.26%
V 292.402†	57010.6	0.3741	mg/L	0.00183	0.7482	mg/L	0.00365	0.49%
Zn 206.200†	3836.8	0.9191	mg/L	0.00911	1.838	mg/L	0.0182	0.99%

Sequence No.: 12
Sample ID: WU70 C SWC
Analyst: ALA
Dilution: 2.000000X

D.L

Autosampler Location: 308
Date Collected: 6/28/2013 9:36:44 AM
Data Type: Original

Nebulizer Parameters: WU70 C SWC

Analyte	Back Pressure	Flow
All	231.0 kPa	0.75 L/min

Mean Data: WU70 C SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3110216.9	97.44	%	0.342				0.35%
ScR 361.383	337235.6	101.0	%	0.35				0.35%
Ag 328.068†	400.3	0.00205	mg/L	0.000344	0.00411	mg/L	0.000687	16.74%
Al 308.215†	228619.8	144.2	mg/L	0.48	288.4	mg/L	0.96	0.33%
As 188.979†	-43.7	0.1236	mg/L	0.00040	0.2473	mg/L	0.00080	0.32%
B 249.677†	1267.8	0.1684	mg/L	0.00128	0.3367	mg/L	0.00256	0.76%
Ba 233.527†	15188.5	3.173	mg/L	0.0179	6.345	mg/L	0.0358	0.56%
Be 313.042†	6250.7	0.01024	mg/L	0.000045	0.02048	mg/L	0.000089	0.43%
Ca 317.933†	7965635.2	612.2	mg/L	0.94	1224	mg/L	1.89	0.15%
Cd 228.802†	79.7	0.00287	mg/L	0.000130	0.00574	mg/L	0.000259	4.52%
Co 228.616†	4916.8	0.09893	mg/L	0.000332	0.1979	mg/L	0.00066	0.34%
Cr 267.716†	1864.1	0.3072	mg/L	0.00105	0.6144	mg/L	0.00211	0.34%
Cu 324.752†	616090.6	2.081	mg/L	0.0063	4.162	mg/L	0.0126	0.30%
Fe 273.955†	376716.4	278.2	mg/L	1.86	556.4	mg/L	3.73	0.67%
K 766.490†	19396.9	8.675	mg/L	0.0443	17.35	mg/L	0.089	0.51%
Mg 279.077†	73924.7	57.01	mg/L	0.259	114.0	mg/L	0.52	0.45%
Mn 257.610†	255527.6	6.891	mg/L	0.0369	13.78	mg/L	0.074	0.54%
Mo 202.031†	1331.6	0.05648	mg/L	0.000253	0.1130	mg/L	0.00051	0.45%
Na 589.592†	126456.9	9.043	mg/L	0.0217	18.09	mg/L	0.043	0.24%
Na 330.237†	297.1	8.362	mg/L	0.0884	16.72	mg/L	0.177	1.06%
Ni 231.604†	1628.6	0.3732	mg/L	0.00041	0.7463	mg/L	0.00083	0.11%
Pb 220.353†	1349.6	0.1652	mg/L	0.00148	0.3304	mg/L	0.00296	0.89%
Sb 206.836†	172.5	0.05486	mg/L	0.003865	0.1097	mg/L	0.00773	7.05%
Se 196.026†	63.1	0.02759	mg/L	0.003137	0.05517	mg/L	0.006273	11.37%
Si 288.158†	1484.0	0.7228	mg/L	0.00947	1.446	mg/L	0.0189	1.31%
Sn 189.927†	466.7	0.2007	mg/L	0.00064	0.4014	mg/L	0.00128	0.32%
Sr 421.552†	1896568.3	1.867	mg/L	0.0027	3.735	mg/L	0.0053	0.14%
Ti 334.903†	128001.9	5.971	mg/L	0.0242	11.94	mg/L	0.048	0.41%
Tl 190.801†	-64.9	0.00812	mg/L	0.000839	0.01624	mg/L	0.001678	10.33%
V 292.402†	106689.6	0.7055	mg/L	0.00175	1.411	mg/L	0.0035	0.25%
Zn 206.200†	17851.9	4.288	mg/L	0.0051	8.576	mg/L	0.0101	0.12%

Sequence No.: 13
Sample ID: WU70 BDUP SWC
Analyst: ALA
Dilution: 2.000000X

Autosampler Location: 309
Date Collected: 6/28/2013 9:41:03 AM
Data Type: Original

Nebulizer Parameters: WU70 BDUP SWC

Analyte	Back Pressure	Flow
All	232.0 kPa	0.75 L/min

Mean Data: WU70 BDUP SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	3113710.0	97.54	%	0.346				0.36%
ScR 361.383	333591.9	99.89	%	0.442				0.44%
Ag 328.068†	117.6	0.00061	mg/L	0.000105	0.00122	mg/L	0.000210	17.27%
Al 308.215†	175809.4	110.9	mg/L	0.16	221.8	mg/L	0.32	0.15%
As 188.979†	155.6	0.08859	mg/L	0.002625	0.1772	mg/L	0.00525	2.96%
B 249.677†	236.0	0.03130	mg/L	0.001037	0.06259	mg/L	0.002073	3.31%
Ba 233.527†	6613.0	1.376	mg/L	0.0047	2.752	mg/L	0.0094	0.34%
Be 313.042†	1515.8	0.00247	mg/L	0.000017	0.00495	mg/L	0.000033	0.67%
Ca 317.933†	5997964.3	461.0	mg/L	2.57	922.0	mg/L	5.14	0.56%
Cd 228.802†	188.4	0.00544	mg/L	0.000148	0.01087	mg/L	0.000296	2.72%
Co 228.616†	2548.7	0.05460	mg/L	0.000228	0.1092	mg/L	0.00046	0.42%
Cr 267.716†	1269.7	0.2077	mg/L	0.00096	0.4154	mg/L	0.00193	0.46%
Cu 324.752†	233195.4	0.7899	mg/L	0.00088	1.580	mg/L	0.0018	0.11%
Fe 273.955†	207612.2	153.3	mg/L	0.82	306.6	mg/L	1.65	0.54%
K 766.490†	16517.5	7.388	mg/L	0.0410	14.78	mg/L	0.082	0.55%
Mg 279.077†	45176.5	34.84	mg/L	0.064	69.68	mg/L	0.128	0.18%
Mn 257.610†	234809.8	6.333	mg/L	0.0209	12.67	mg/L	0.042	0.33%
Mo 202.031†	858.8	0.03558	mg/L	0.000456	0.07116	mg/L	0.000912	1.28%
Na 589.592†	121270.9	8.672	mg/L	0.0306	17.34	mg/L	0.061	0.35%
Na 330.237†	286.2	8.191	mg/L	0.2445	16.38	mg/L	0.489	2.98%
Ni 231.604†	707.5	0.1621	mg/L	0.00108	0.3242	mg/L	0.00216	0.67%
Pb 220.353†	707.1	0.09492	mg/L	0.000773	0.1898	mg/L	0.00155	0.81%
Sb 206.836†	67.1	0.01840	mg/L	0.000817	0.03680	mg/L	0.001635	4.44%
Se 196.026†	46.4	0.01992	mg/L	0.002875	0.03983	mg/L	0.005749	14.43%
Si 288.158†	3694.2	1.787	mg/L	0.0086	3.573	mg/L	0.0171	0.48%
Sn 189.927†	-61.3	0.04357	mg/L	0.001639	0.08714	mg/L	0.003279	3.76%
Sr 421.552†	1304507.2	1.284	mg/L	0.0011	2.569	mg/L	0.0021	0.08%
Ti 334.903†	24465.8	1.120	mg/L	0.0027	2.240	mg/L	0.0054	0.24%
Tl 190.801†	-27.2	0.00862	mg/L	0.003458	0.01724	mg/L	0.006917	40.12%
V 292.402†	34124.4	0.2237	mg/L	0.00018	0.4475	mg/L	0.00035	0.08%
Zn 206.200†	4868.8	1.166	mg/L	0.0014	2.332	mg/L	0.0028	0.12%

Sequence No.: 14
Sample ID: WU70 B SWC
Analyst: ALA
Dilution: 2.000000X

Autosampler Location: 310
Date Collected: 6/28/2013 9:45:24 AM
Data Type: Original

Nebulizer Parameters: WU70 B SWC

Analyte	Back Pressure	Flow
All	231.0 kPa	0.75 L/min

Mean Data: WU70 B SWC

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3107978.4	97.37	%	0.198				0.20%
ScR 361.383	332857.2	99.67	%	0.286				0.29%
Ag 328.068†	428.0	0.00204	mg/L	0.000130	0.00407	mg/L	0.000259	6.36%
Al 308.215†	168294.5	106.2	mg/L	0.34	212.3	mg/L	0.68	0.32%
As 188.979†	202.5	0.1098	mg/L	0.00167	0.2195	mg/L	0.00334	1.52%
B 249.677†	221.7	0.02940	mg/L	0.000702	0.05880	mg/L	0.001405	2.39%
Ba 233.527†	5936.6	1.232	mg/L	0.0069	2.465	mg/L	0.0137	0.56%
Be 313.042†	1447.2	0.00236	mg/L	0.000007	0.00472	mg/L	0.000014	0.30%
Ca 317.933†	6528276.9	501.7	mg/L	1.55	1003	mg/L	3.10	0.31%
Cd 228.802†	199.3	0.00568	mg/L	0.000055	0.01135	mg/L	0.000111	0.98%
Co 228.616†	2757.7	0.05948	mg/L	0.000089	0.1190	mg/L	0.00018	0.15%
Cr 267.716†	1845.7	0.3022	mg/L	0.00239	0.6044	mg/L	0.00478	0.79%
Cu 324.752†	308028.9	1.041	mg/L	0.0023	2.083	mg/L	0.0047	0.22%
Fe 273.955†	209314.3	154.6	mg/L	1.60	309.2	mg/L	3.20	1.03%
K 766.490†	16456.1	7.360	mg/L	0.0556	14.72	mg/L	0.111	0.76%
Mg 279.077†	44036.3	33.95	mg/L	0.093	67.90	mg/L	0.186	0.27%
Mn 257.610†	232934.0	6.282	mg/L	0.0501	12.56	mg/L	0.100	0.80%
Mo 202.031†	1171.5	0.05015	mg/L	0.000512	0.1003	mg/L	0.00102	1.02%
Na 589.592†	118010.4	8.439	mg/L	0.0356	16.88	mg/L	0.071	0.42%
Na 330.237†	276.4	7.596	mg/L	0.2711	15.19	mg/L	0.542	3.57%
Ni 231.604†	942.1	0.2159	mg/L	0.00081	0.4317	mg/L	0.00162	0.38%
Pb 220.353†	1312.0	0.1600	mg/L	0.00174	0.3200	mg/L	0.00349	1.09%
Sb 206.836†	103.8	0.02786	mg/L	0.002717	0.05572	mg/L	0.005435	9.75%
Se 196.026†	53.3	0.02525	mg/L	0.001754	0.05051	mg/L	0.003508	6.95%
Si 288.158†	3564.3	1.724	mg/L	0.0148	3.448	mg/L	0.0297	0.86%
Sn 189.927†	-9.9	0.06211	mg/L	0.000341	0.1242	mg/L	0.00068	0.55%
Sr 421.552†	1434229.6	1.412	mg/L	0.0031	2.824	mg/L	0.0061	0.22%
Ti 334.903†	23427.3	1.068	mg/L	0.0010	2.137	mg/L	0.0019	0.09%
Tl 190.801†	-26.4	0.00911	mg/L	0.001336	0.01823	mg/L	0.002672	14.66%
V 292.402†	33211.4	0.2179	mg/L	0.00025	0.4358	mg/L	0.00049	0.11%
Zn 206.200†	5645.7	1.352	mg/L	0.0066	2.705	mg/L	0.0132	0.49%

Sequence No.: 15
Sample ID: WU70 BSPK SWC
Analyst: ALA
Dilution: 2.000000X

Autosampler Location: 311
Date Collected: 6/28/2013 9:49:45 AM
Data Type: Original

Nebulizer Parameters: WU70 BSPK SWC

Analyte	Back Pressure	Flow
All	230.0 kPa	0.75 L/min

Mean Data: WU70 BSPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3113966.1	97.55	%	0.266				0.27%
ScR 361.383	333625.3	99.90	%	0.403				0.40%
Ag 328.068†	105819.5	0.4878	mg/L	0.00146	0.9755	mg/L	0.00292	0.30%
Al 308.215†	181356.9	114.4	mg/L	0.44	228.8	mg/L	0.87	0.38%
As 188.979†	3522.8	1.945	mg/L	0.0059	3.890	mg/L	0.0118	0.30%
B 249.677†	249.2	0.03209	mg/L	0.002486	0.06418	mg/L	0.004973	7.75%
Ba 233.527†	15091.3	3.173	mg/L	0.0148	6.346	mg/L	0.0297	0.47%
Be 313.042†	267937.9	0.4489	mg/L	0.00242	0.8978	mg/L	0.00484	0.54%
Ca 317.933†	6082419.1	467.5	mg/L	1.98	934.9	mg/L	3.97	0.42%
Cd 228.802†	16812.6	0.5052	mg/L	0.00172	1.010	mg/L	0.0034	0.34%
Co 228.616†	22307.6	0.5085	mg/L	0.00153	1.017	mg/L	0.0031	0.30%
Cr 267.716†	4247.4	0.6964	mg/L	0.00562	1.393	mg/L	0.0112	0.81%
Cu 324.752†	427357.7	1.442	mg/L	0.0042	2.885	mg/L	0.0084	0.29%
Fe 273.955†	207520.5	153.3	mg/L	0.69	306.5	mg/L	1.39	0.45%
K 766.490†	37314.9	16.69	mg/L	0.045	33.38	mg/L	0.090	0.27%
Mg 279.077†	59282.4	45.76	mg/L	0.226	91.53	mg/L	0.452	0.49%
Mn 257.610†	251929.8	6.795	mg/L	0.0269	13.59	mg/L	0.054	0.40%
Mo 202.031†	969.8	0.04084	mg/L	0.000227	0.08167	mg/L	0.000454	0.56%
Na 589.592†	258170.9	18.46	mg/L	0.066	36.92	mg/L	0.132	0.36%
Na 330.237†	569.8	18.15	mg/L	0.559	36.29	mg/L	1.117	3.08%
Ni 231.604†	2583.7	0.5912	mg/L	0.00427	1.182	mg/L	0.0085	0.72%
Pb 220.353†	17366.9	1.925	mg/L	0.0090	3.850	mg/L	0.0179	0.47%
Sb 206.836†	75.8	0.01588	mg/L	0.001251	0.03175	mg/L	0.002501	7.88%
Se 196.026†	2746.5	1.895	mg/L	0.0085	3.791	mg/L	0.0171	0.45%
Si 288.158†	4125.5	1.998	mg/L	0.0165	3.997	mg/L	0.0330	0.82%
Sn 189.927†	-76.0	0.04065	mg/L	0.001883	0.08129	mg/L	0.003767	4.63%
Sr 421.552†	1769150.2	1.742	mg/L	0.0052	3.484	mg/L	0.0105	0.30%
Ti 334.903†	23186.9	1.059	mg/L	0.0023	2.118	mg/L	0.0046	0.22%
Tl 190.801†	4178.0	1.738	mg/L	0.0060	3.476	mg/L	0.0120	0.34%
V 292.402†	98086.5	0.6582	mg/L	0.00187	1.316	mg/L	0.0037	0.28%
Zn 206.200†	6651.6	1.595	mg/L	0.0060	3.190	mg/L	0.0120	0.38%

Sequence No.: 16
Sample ID: WU70 BPOST SWC
Analyst: ALA
Dilution: 2.000000X

Autosampler Location: 312
Date Collected: 6/28/2013 9:53:21 AM
Data Type: Original

Nebulizer Parameters: WU70 BPOST SWC

Analyte	Back Pressure	Flow
All	231.0 kPa	0.75 L/min

Mean Data: WU70 BPOST SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3107593.8	97.35	%	0.245				0.25%
ScR 361.383	332941.5	99.70	%	0.349				0.35%
Ag 328.068†	110800.2	0.5107	mg/L	0.00107	1.021	mg/L	0.0021	0.21%
Al 308.215†	168949.5	106.6	mg/L	0.15	213.1	mg/L	0.30	0.14%
As 188.979†	3793.5	2.092	mg/L	0.0125	4.183	mg/L	0.0250	0.60%
B 249.677†	218.8	0.02801	mg/L	0.002460	0.05602	mg/L	0.004920	8.78%
Ba 233.527†	15271.5	3.211	mg/L	0.0371	6.422	mg/L	0.0743	1.16%
Be 313.042†	276032.1	0.4625	mg/L	0.00316	0.9249	mg/L	0.00633	0.68%
Ca 317.933†	6544565.4	503.0	mg/L	2.28	1006	mg/L	4.56	0.45%
Cd 228.802†	17474.1	0.5247	mg/L	0.00319	1.049	mg/L	0.0064	0.61%
Co 228.616†	23329.5	0.5320	mg/L	0.00201	1.064	mg/L	0.0040	0.38%
Cr 267.716†	4837.2	0.7932	mg/L	0.00704	1.586	mg/L	0.0141	0.89%
Cu 324.752†	459573.3	1.551	mg/L	0.0036	3.101	mg/L	0.0073	0.23%
Fe 273.955†	208404.9	153.9	mg/L	0.45	307.8	mg/L	0.90	0.29%
K 766.490†	38966.3	17.43	mg/L	0.062	34.86	mg/L	0.124	0.35%
Mg 279.077†	57938.8	44.72	mg/L	0.360	89.44	mg/L	0.720	0.80%
Mn 257.610†	246114.2	6.638	mg/L	0.0040	13.28	mg/L	0.008	0.06%
Mo 202.031†	1142.1	0.04869	mg/L	0.000533	0.09739	mg/L	0.001065	1.09%
Na 589.592†	257669.8	18.43	mg/L	0.049	36.85	mg/L	0.098	0.26%
Na 330.237†	573.4	18.06	mg/L	0.613	36.12	mg/L	1.225	3.39%
Ni 231.604†	2882.9	0.6597	mg/L	0.00741	1.319	mg/L	0.0148	1.12%
Pb 220.353†	18598.9	2.058	mg/L	0.0107	4.117	mg/L	0.0214	0.52%
Sb 206.836†	120.0	0.02777	mg/L	0.001644	0.05554	mg/L	0.003288	5.92%
Se 196.026†	2950.3	2.038	mg/L	0.0157	4.076	mg/L	0.0314	0.77%
Si 288.158†	3406.5	1.651	mg/L	0.0200	3.303	mg/L	0.0400	1.21%
Sn 189.927†	-13.3	0.06147	mg/L	0.001746	0.1229	mg/L	0.00349	2.84%
Sr 421.552†	1895191.2	1.866	mg/L	0.0012	3.732	mg/L	0.0024	0.06%
Ti 334.903†	23163.6	1.056	mg/L	0.0017	2.112	mg/L	0.0034	0.16%
Tl 190.801†	4362.2	1.814	mg/L	0.0061	3.628	mg/L	0.0123	0.34%
V 292.402†	105388.3	0.7078	mg/L	0.00228	1.416	mg/L	0.0046	0.32%
Zn 206.200†	7433.5	1.783	mg/L	0.0157	3.565	mg/L	0.0314	0.88%

Sequence No.: 17
Sample ID: WU70 MB1SPK SWC
Analyst: ALA
Dilution: 2.000000X

Autosampler Location: 313
Date Collected: 6/28/2013 9:56:57 AM
Data Type: Original

Nebulizer Parameters: WU70 MB1SPK SWC

Analyte	Back Pressure	Flow
All	231.0 kPa	0.75 L/min

Mean Data: WU70 MB1SPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	3278277.0	102.7	%	0.40				0.39%
ScR 361.383	343073.3	102.7	%	0.21				0.20%
Ag 328.068†	108332.8	0.4993	mg/L	0.00411	0.9986	mg/L	0.00822	0.82%
Al 308.215†	3356.0	2.109	mg/L	0.0093	4.219	mg/L	0.0187	0.44%
As 188.979†	3552.2	1.960	mg/L	0.0082	3.921	mg/L	0.0164	0.42%
B 249.677†	8.9	0.00015	mg/L	0.000884	0.00031	mg/L	0.001768	573.26%
Ba 233.527†	9520.9	2.018	mg/L	0.0078	4.036	mg/L	0.0156	0.39%
Be 313.042†	272275.9	0.4562	mg/L	0.00520	0.9124	mg/L	0.01041	1.14%
Ca 317.933†	130290.6	10.01	mg/L	0.031	20.03	mg/L	0.062	0.31%
Cd 228.802†	16640.6	0.4998	mg/L	0.00361	0.9995	mg/L	0.00723	0.72%
Co 228.616†	21220.1	0.4873	mg/L	0.00312	0.9746	mg/L	0.00624	0.64%
Cr 267.716†	3112.4	0.5110	mg/L	0.00065	1.022	mg/L	0.0013	0.13%
Cu 324.752†	146226.6	0.4915	mg/L	0.00391	0.9829	mg/L	0.00782	0.80%
Fe 273.955†	3023.1	2.230	mg/L	0.0093	4.459	mg/L	0.0185	0.42%
K 766.490†	21187.6	9.476	mg/L	0.0556	18.95	mg/L	0.111	0.59%
Mg 279.077†	12665.1	9.807	mg/L	0.0103	19.61	mg/L	0.021	0.10%
Mn 257.610†	18804.6	0.5076	mg/L	0.00107	1.015	mg/L	0.0021	0.21%
Mo 202.031†	30.3	0.00131	mg/L	0.000075	0.00262	mg/L	0.000150	5.72%
Na 589.592†	134085.2	9.588	mg/L	0.0200	19.18	mg/L	0.040	0.21%
Na 330.237†	278.9	9.771	mg/L	0.1161	19.54	mg/L	0.232	1.19%
Ni 231.604†	2050.8	0.4690	mg/L	0.00018	0.9381	mg/L	0.00036	0.04%
Pb 220.353†	17726.3	1.947	mg/L	0.0084	3.894	mg/L	0.0167	0.43%
Sb 206.836†	16.5	-0.00024	mg/L	0.001342	-0.00047	mg/L	0.002685	570.40%
Se 196.026†	2840.7	1.973	mg/L	0.0036	3.947	mg/L	0.0072	0.18%
Si 288.158†	26.3	0.01604	mg/L	0.003023	0.03208	mg/L	0.006047	18.85%
Sn 189.927†	-16.3	-0.00287	mg/L	0.000993	-0.00573	mg/L	0.001985	34.63%
Sr 421.552†	482466.3	0.4750	mg/L	0.00215	0.9501	mg/L	0.00431	0.45%
Ti 334.903†	72.6	0.00269	mg/L	0.000256	0.00538	mg/L	0.000512	9.52%
Tl 190.801†	4719.5	1.941	mg/L	0.0014	3.883	mg/L	0.0028	0.07%
V 292.402†	73377.7	0.4980	mg/L	0.00336	0.9960	mg/L	0.00673	0.68%
Zn 206.200†	1987.2	0.4782	mg/L	0.00139	0.9563	mg/L	0.00278	0.29%

Sequence No.: 18
Sample ID: CV 2
Analyst: ALA
Dilution: 1.000000X

Autosampler Location: 7
Date Collected: 6/28/2013 10:00:58 AM
Data Type: Original

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	231.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	3245529.2	101.7	%	0.35				0.34%
ScR 361.383	339773.7	101.7	%	0.40				0.39%
Ag 328.068†	221467.4	1.021	mg/L	0.0056	1.021	mg/L	0.0056	0.55%
Al 308.215†	3202.9	1.987	mg/L	0.0092	1.987	mg/L	0.0092	0.46%
As 188.979†	3528.2	1.975	mg/L	0.0049	1.975	mg/L	0.0049	0.25%
B 249.677†	7418.6	0.9850	mg/L	0.00488	0.9850	mg/L	0.00488	0.50%
Ba 233.527†	4822.8	1.022	mg/L	0.0038	1.022	mg/L	0.0038	0.37%
Be 313.042†	581940.8	0.9751	mg/L	0.00597	0.9751	mg/L	0.00597	0.61%
Ca 317.933†	24982.7	1.920	mg/L	0.0021	1.920	mg/L	0.0021	0.11%
Cd 228.802†	33326.9	1.012	mg/L	0.0101	1.012	mg/L	0.0101	0.99%
Co 228.616†	43340.1	0.9940	mg/L	0.00330	0.9940	mg/L	0.00330	0.33%
Cr 267.716†	6318.4	1.039	mg/L	0.0040	1.039	mg/L	0.0040	0.39%
Cu 324.752†	306225.3	1.029	mg/L	0.0043	1.029	mg/L	0.0043	0.42%
Fe 273.955†	2750.3	2.025	mg/L	0.0073	2.025	mg/L	0.0073	0.36%
K 766.490†	43740.8	19.56	mg/L	0.119	19.56	mg/L	0.119	0.61%
Mg 279.077†	2505.2	1.947	mg/L	0.0117	1.947	mg/L	0.0117	0.60%
Mn 257.610†	36134.9	0.9752	mg/L	0.00157	0.9752	mg/L	0.00157	0.16%
Mo 202.031†	20221.0	0.9760	mg/L	0.00204	0.9760	mg/L	0.00204	0.21%
Na 589.592†	688468.5	49.23	mg/L	0.267	49.23	mg/L	0.267	0.54%
Na 330.237†	1410.4	50.34	mg/L	0.187	50.34	mg/L	0.187	0.37%
Ni 231.604†	4338.4	0.9942	mg/L	0.00373	0.9942	mg/L	0.00373	0.38%
Pb 220.353†	18307.4	2.011	mg/L	0.0055	2.011	mg/L	0.0055	0.28%
Sb 206.836†	6893.2	2.005	mg/L	0.0027	2.005	mg/L	0.0027	0.13%
Se 196.026†	2829.3	1.965	mg/L	0.0039	1.965	mg/L	0.0039	0.20%
Si 288.158†	4073.7	1.971	mg/L	0.0167	1.971	mg/L	0.0167	0.85%
Sn 189.927†	3733.2	0.9681	mg/L	0.00238	0.9681	mg/L	0.00238	0.25%
Sr 421.552†	996725.2	0.9814	mg/L	0.00423	0.9814	mg/L	0.00423	0.43%
Ti 334.903†	20816.6	0.9760	mg/L	0.00416	0.9760	mg/L	0.00416	0.43%
Tl 190.801†	4918.4	2.020	mg/L	0.0067	2.020	mg/L	0.0067	0.33%
V 292.402†	149450.5	1.014	mg/L	0.0058	1.014	mg/L	0.0058	0.58%
Zn 206.200†	4101.1	0.9870	mg/L	0.00447	0.9870	mg/L	0.00447	0.45%

Sequence No.: 19
Sample ID: CB
Analyst: ALA
Dilution: 1.000000X

Autosampler Location: 1
Date Collected: 6/28/2013 10:05:02 AM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	231.0 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	3306900.2	103.6	%	0.27				0.26%
ScR 361.383	343677.0	102.9	%	0.70				0.68%
Ag 328.068†	91.7	0.00042	mg/L	0.000166	0.00042	mg/L	0.000166	39.21%
Al 308.215†	-7.8	-0.00496	mg/L	0.002699	-0.00496	mg/L	0.002699	54.41%
As 188.979†	2.3	0.00126	mg/L	0.000551	0.00126	mg/L	0.000551	43.83%
B 249.677†	5.7	0.00076	mg/L	0.000755	0.00076	mg/L	0.000755	99.64%
Ba 233.527†	-1.4	-0.00030	mg/L	0.000942	-0.00030	mg/L	0.000942	310.82%
Be 313.042†	77.9	0.00013	mg/L	0.000006	0.00013	mg/L	0.000006	4.77%
Ca 317.933†	24.3	0.00187	mg/L	0.000610	0.00187	mg/L	0.000610	32.63%
Cd 228.802†	5.1	0.00015	mg/L	0.000208	0.00015	mg/L	0.000208	139.72%
Co 228.616†	21.7	0.00050	mg/L	0.000101	0.00050	mg/L	0.000101	20.20%
Cr 267.716†	1.4	0.00022	mg/L	0.000720	0.00022	mg/L	0.000720	324.59%
Cu 324.752†	51.2	0.00017	mg/L	0.000129	0.00017	mg/L	0.000129	74.89%
Fe 273.955†	3.8	0.00278	mg/L	0.000734	0.00278	mg/L	0.000734	26.44%
K 766.490†	-13.8	-0.00617	mg/L	0.015512	-0.00617	mg/L	0.015512	251.37%
Mg 279.077†	7.0	0.00541	mg/L	0.004228	0.00541	mg/L	0.004228	78.12%
Mn 257.610†	6.1	0.00017	mg/L	0.000133	0.00017	mg/L	0.000133	80.22%
Mo 202.031†	24.2	0.00117	mg/L	0.000434	0.00117	mg/L	0.000434	37.12%
Na 589.592†	144.1	0.01031	mg/L	0.000713	0.01031	mg/L	0.000713	6.91%
Na 330.237†	5.7	0.2026	mg/L	0.12216	0.2026	mg/L	0.12216	60.28%
Ni 231.604†	0.0	0.00000	mg/L	0.001105	0.00000	mg/L	0.001105	>999.9%
Pb 220.353†	12.4	0.00136	mg/L	0.000564	0.00136	mg/L	0.000564	41.53%
Sb 206.836†	10.4	0.00304	mg/L	0.000588	0.00304	mg/L	0.000588	19.34%
Se 196.026†	3.9	0.00270	mg/L	0.003325	0.00270	mg/L	0.003325	123.12%
Si 288.158†	-5.7	-0.00277	mg/L	0.007780	-0.00277	mg/L	0.007780	281.15%
Sn 189.927†	5.6	0.00144	mg/L	0.000462	0.00144	mg/L	0.000462	32.09%
Sr 421.552†	138.7	0.00014	mg/L	0.000033	0.00014	mg/L	0.000033	23.97%
Ti 334.903†	-1.3	-0.00006	mg/L	0.000213	-0.00006	mg/L	0.000213	338.35%
Tl 190.801†	2.6	0.00106	mg/L	0.001108	0.00106	mg/L	0.001108	104.29%
V 292.402†	12.4	0.00009	mg/L	0.000156	0.00009	mg/L	0.000156	182.95%
Zn 206.200†	2.1	0.00051	mg/L	0.000406	0.00051	mg/L	0.000406	80.01%

Analysis Begun

Start Time: 6/28/2013 10:15:30 AM
Logged In Analyst: Metals
Spectrometer: Optima 7300 DV, S/N 077C8121202
Plasma On Time: 6/28/2013 7:20:02 AM
Technique: ICP Continuous
Autosampler: ESI

Sample Information File: C:\pe\metals\Sample Information\0528.sif
Batch ID:
Results Data Set: I2130628
Results Library: C:\Documents and Settings\All Users\PerkinElmer\ICP\Data\Results\Results.mdb

Sequence No.: 1
Sample ID: WV53 MB SWC
Analyst: ALA
Dilution: 2.000000X
Autosampler Location: 314
Date Collected: 6/28/2013 10:15:31 AM
Data Type: Original

Nebulizer Parameters: WV53 MB SWC

Analyte	Back Pressure	Flow
All	231.0 kPa	0.75 L/min

Mean Data: WV53 MB SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	3292204.7	103.1	%	0.22				0.22%
ScR 361.383	347137.4	104.0	%	0.64				0.62%
Ag 328.068†	32.3	0.00015	mg/L	0.000218	0.00030	mg/L	0.000437	146.55%
Al 308.215†	-3.2	-0.00203	mg/L	0.004510	-0.00405	mg/L	0.009020	222.48%
As 188.979†	-2.5	-0.00141	mg/L	0.002441	-0.00281	mg/L	0.004882	173.43%
B 249.677†	-1.5	-0.00020	mg/L	0.000528	-0.00040	mg/L	0.001056	265.54%
Ba 233.527†	0.4	0.00008	mg/L	0.000866	0.00017	mg/L	0.001731	>999.9%
Be 313.042†	-11.0	-0.00002	mg/L	0.000025	-0.00004	mg/L	0.000050	135.82%
Ca 317.933†	66.0	0.00507	mg/L	0.000432	0.01015	mg/L	0.000864	8.51%
Cd 228.802†	-3.1	-0.00009	mg/L	0.000083	-0.00018	mg/L	0.000165	93.43%
Co 228.616†	5.7	0.00013	mg/L	0.000024	0.00026	mg/L	0.000047	17.93%
Cr 267.716†	-0.8	-0.00013	mg/L	0.000731	-0.00026	mg/L	0.001462	573.37%
Cu 324.752†	78.6	0.00026	mg/L	0.000026	0.00053	mg/L	0.000052	9.82%
Fe 273.955†	1.8	0.00130	mg/L	0.000270	0.00259	mg/L	0.000540	20.85%
K 766.490†	-39.7	-0.01776	mg/L	0.020836	-0.03551	mg/L	0.041672	117.35%
Mg 279.077†	-4.2	-0.00329	mg/L	0.002298	-0.00658	mg/L	0.004596	69.87%
Mn 257.610†	-3.7	-0.00010	mg/L	0.000107	-0.00020	mg/L	0.000214	107.75%
Mo 202.031†	2.3	0.00011	mg/L	0.000068	0.00022	mg/L	0.000137	61.75%
Na 589.592†	69.3	0.00496	mg/L	0.001260	0.00991	mg/L	0.002519	25.41%
Na 330.237†	6.8	0.2411	mg/L	0.56025	0.4822	mg/L	1.12049	232.35%
Ni 231.604†	1.2	0.00028	mg/L	0.000703	0.00057	mg/L	0.001406	248.75%
Pb 220.353†	-1.0	-0.00012	mg/L	0.000230	-0.00023	mg/L	0.000460	198.34%
Sb 206.836†	-2.3	-0.00065	mg/L	0.001766	-0.00130	mg/L	0.003532	271.44%
Se 196.026†	-0.5	-0.00036	mg/L	0.002150	-0.00073	mg/L	0.004300	591.11%
Si 288.158†	28.9	0.01392	mg/L	0.002478	0.02784	mg/L	0.004955	17.80%
Sn 189.927†	3.5	0.00091	mg/L	0.000699	0.00182	mg/L	0.001398	76.91%
Sr 421.552†	-48.0	-0.00005	mg/L	0.000014	-0.00009	mg/L	0.000028	29.58%
Ti 334.903†	-12.0	-0.00056	mg/L	0.000666	-0.00112	mg/L	0.001331	118.35%
Tl 190.801†	0.4	0.00018	mg/L	0.000699	0.00036	mg/L	0.001397	390.07%
V 292.402†	-21.1	-0.00014	mg/L	0.000080	-0.00029	mg/L	0.000160	55.88%
Zn 206.200†	29.1	0.00700	mg/L	0.000751	0.01401	mg/L	0.001502	10.72%

Sequence No.: 2
Sample ID: WV68 MB1 DMN
Analyst: ALA
Dilution: 1.000000X

Autosampler Location: 315
Date Collected: 6/28/2013 10:19:48 AM
Data Type: Original

Nebulizer Parameters: WV68 MB1 DMN

Analyte	Back Pressure	Flow
All	231.0 kPa	0.75 L/min

Mean Data: WV68 MB1 DMN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3360195.2	105.3	%	0.03				0.03%
ScR 361.383	353114.8	105.7	%	0.71				0.67%
Ag 328.068†	38.4	0.00018	mg/L	0.000097	0.00018	mg/L	0.000097	55.08%
Al 308.215†	-3.6	-0.00224	mg/L	0.004136	-0.00224	mg/L	0.004136	184.71%
As 188.979†	4.9	0.00271	mg/L	0.000297	0.00271	mg/L	0.000297	10.94%
B 249.677†	5.6	0.00074	mg/L	0.001488	0.00074	mg/L	0.001488	201.06%
Ba 233.527†	-2.7	-0.00057	mg/L	0.000360	-0.00057	mg/L	0.000360	63.34%
Be 313.042†	-7.5	-0.00001	mg/L	0.000020	-0.00001	mg/L	0.000020	163.03%
Ca 317.933†	58.6	0.00450	mg/L	0.000580	0.00450	mg/L	0.000580	12.89%
Cd 228.802†	-0.3	-0.00002	mg/L	0.000114	-0.00002	mg/L	0.000114	483.43%
Co 228.616†	8.3	0.00019	mg/L	0.000067	0.00019	mg/L	0.000067	35.19%
Cr 267.716†	0.4	0.00006	mg/L	0.000626	0.00006	mg/L	0.000626	>999.9%
Cu 324.752†	-20.1	-0.00007	mg/L	0.000118	-0.00007	mg/L	0.000118	175.24%
Fe 273.955†	1.5	0.00109	mg/L	0.000765	0.00109	mg/L	0.000765	70.00%
K 766.490†	-7.1	-0.00318	mg/L	0.012032	-0.00318	mg/L	0.012032	378.10%
Mg 279.077†	-3.1	-0.00241	mg/L	0.008359	-0.00241	mg/L	0.008359	346.51%
Mn 257.610†	-9.2	-0.00025	mg/L	0.000108	-0.00025	mg/L	0.000108	43.79%
Mo 202.031†	-4.3	-0.00021	mg/L	0.000130	-0.00021	mg/L	0.000130	62.69%
Na 589.592†	60.6	0.00433	mg/L	0.001996	0.00433	mg/L	0.001996	46.06%
Na 330.237†	11.8	0.4229	mg/L	0.69342	0.4229	mg/L	0.69342	163.98%
Ni 231.604†	1.6	0.00037	mg/L	0.001616	0.00037	mg/L	0.001616	435.28%
Pb 220.353†	-1.3	-0.00015	mg/L	0.000889	-0.00015	mg/L	0.000889	610.46%
Sb 206.836†	-14.0	-0.00408	mg/L	0.000480	-0.00408	mg/L	0.000480	11.76%
Se 196.026†	4.7	0.00328	mg/L	0.002500	0.00328	mg/L	0.002500	76.28%
Si 288.158†	-19.0	-0.00918	mg/L	0.001666	-0.00918	mg/L	0.001666	18.15%
Sn 189.927†	-2.4	-0.00061	mg/L	0.000726	-0.00061	mg/L	0.000726	118.39%
Sr 421.552†	7.0	0.00001	mg/L	0.000032	0.00001	mg/L	0.000032	461.32%
Ti 334.903†	-3.0	-0.00014	mg/L	0.000441	-0.00014	mg/L	0.000441	313.79%
Tl 190.801†	9.4	0.00388	mg/L	0.001254	0.00388	mg/L	0.001254	32.28%
V 292.402†	-32.8	-0.00022	mg/L	0.000034	-0.00022	mg/L	0.000034	15.56%
Zn 206.200†	-0.6	-0.00016	mg/L	0.000703	-0.00016	mg/L	0.000703	448.56%

Sequence No.: 3
Sample ID: WV68 A DMN
Analyst: ALA
Dilution: 1.000000X

Autosampler Location: 316
Date Collected: 6/28/2013 10:24:03 AM
Data Type: Original

Nebulizer Parameters: WV68 A DMN

Analyte	Back Pressure	Flow
All	231.0 kPa	0.75 L/min

Mean Data: WV68 A DMN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3341207.5	104.7	%	0.11				0.11%
ScR 361.383	352433.2	105.5	%	0.64				0.61%
Ag 328.068†	19.5	0.00009	mg/L	0.000140	0.00009	mg/L	0.000140	155.41%
Al 308.215†	36.1	0.02255	mg/L	0.004751	0.02255	mg/L	0.004751	21.07%
As 188.979†	50.3	0.02579	mg/L	0.000838	0.02579	mg/L	0.000838	3.25%
B 249.677†	364.6	0.04847	mg/L	0.000078	0.04847	mg/L	0.000078	0.16%
Ba 233.527†	40.8	0.00854	mg/L	0.001020	0.00854	mg/L	0.001020	11.94%
Be 313.042†	9.9	0.00002	mg/L	0.000040	0.00002	mg/L	0.000040	246.45%
Ca 317.933†	359983.2	27.67	mg/L	0.034	27.67	mg/L	0.034	0.12%
Cd 228.802†	-13.4	-0.00056	mg/L	0.000152	-0.00056	mg/L	0.000152	27.04%
Co 228.616†	33.2	0.00075	mg/L	0.000096	0.00075	mg/L	0.000096	12.74%
Cr 267.716†	18.1	0.00208	mg/L	0.001047	0.00208	mg/L	0.001047	50.26%
Cu 324.752†	-10.0	-0.00005	mg/L	0.000058	-0.00005	mg/L	0.000058	114.61%
Fe 273.955†	815.0	0.6018	mg/L	0.00671	0.6018	mg/L	0.00671	1.11%
K 766.490†	5771.9	2.582	mg/L	0.0047	2.582	mg/L	0.0047	0.18%
Mg 279.077†	9795.4	7.582	mg/L	0.0605	7.582	mg/L	0.0605	0.80%
Mn 257.610†	23370.0	0.6304	mg/L	0.00929	0.6304	mg/L	0.00929	1.47%
Mo 202.031†	228.2	0.01066	mg/L	0.000115	0.01066	mg/L	0.000115	1.08%
Na 589.592†	166556.0	11.91	mg/L	0.048	11.91	mg/L	0.048	0.40%
Na 330.237†	344.7	12.19	mg/L	0.443	12.19	mg/L	0.443	3.63%
Ni 231.604†	3.4	0.00078	mg/L	0.000268	0.00078	mg/L	0.000268	34.53%
Pb 220.353†	-10.4	-0.00116	mg/L	0.000667	-0.00116	mg/L	0.000667	57.35%
Sb 206.836†	-6.5	-0.00200	mg/L	0.001052	-0.00200	mg/L	0.001052	52.57%
Se 196.026†	9.4	0.00653	mg/L	0.005017	0.00653	mg/L	0.005017	76.81%
Si 288.158†	19983.9	9.644	mg/L	0.0934	9.644	mg/L	0.0934	0.97%
Sn 189.927†	-33.2	-0.00504	mg/L	0.001875	-0.00504	mg/L	0.001875	37.24%
Sr 421.552†	140910.7	0.1387	mg/L	0.00014	0.1387	mg/L	0.00014	0.10%
Ti 334.903†	68.7	0.00149	mg/L	0.000782	0.00149	mg/L	0.000782	52.31%
Tl 190.801†	7.0	0.00296	mg/L	0.000265	0.00296	mg/L	0.000265	8.92%
V 292.402†	272.1	0.00192	mg/L	0.000213	0.00192	mg/L	0.000213	11.10%
Zn 206.200†	-2.4	0.00072	mg/L	0.000639	0.00072	mg/L	0.000639	89.33%

Sequence No.: 4 **Autosampler Location: 317**
Sample ID: WV68 B DMN **Date Collected: 6/28/2013 10:28:18 AM**
Analyst: ALA **Data Type: Original**
Dilution: 1.000000X

Nebulizer Parameters: WV68 B DMN

Analyte	Back Pressure	Flow
All	231.0 kPa	0.75 L/min

Mean Data: WV68 B DMN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3396741.3	106.4	%	0.35				0.33%
ScR 361.383	359520.6	107.7	%	0.11				0.10%
Ag 328.068†	-8.4	-0.00004	mg/L	0.000148	-0.00004	mg/L	0.000148	385.29%
Al 308.215†	-0.1	-0.00011	mg/L	0.002169	-0.00011	mg/L	0.002169	>999.9%
As 188.979†	21.0	0.01009	mg/L	0.000857	0.01009	mg/L	0.000857	8.49%
B 249.677†	92.5	0.01229	mg/L	0.000623	0.01229	mg/L	0.000623	5.07%
Ba 233.527†	183.2	0.03884	mg/L	0.000163	0.03884	mg/L	0.000163	0.42%
Be 313.042†	-15.9	-0.00003	mg/L	0.000019	-0.00003	mg/L	0.000019	72.00%
Ca 317.933†	271883.4	20.90	mg/L	0.067	20.90	mg/L	0.067	0.32%
Cd 228.802†	-13.2	-0.00046	mg/L	0.000184	-0.00046	mg/L	0.000184	39.84%
Co 228.616†	118.9	0.00272	mg/L	0.000043	0.00272	mg/L	0.000043	1.57%
Cr 267.716†	13.9	0.00152	mg/L	0.000662	0.00152	mg/L	0.000662	43.66%
Cu 324.752†	113.8	0.00035	mg/L	0.000096	0.00035	mg/L	0.000096	27.71%
Fe 273.955†	5.3	0.00389	mg/L	0.001420	0.00389	mg/L	0.001420	36.52%
K 766.490†	10565.7	4.726	mg/L	0.0192	4.726	mg/L	0.0192	0.41%
Mg 279.077†	8521.6	6.597	mg/L	0.0106	6.597	mg/L	0.0106	0.16%
Mn 257.610†	11001.8	0.2967	mg/L	0.00015	0.2967	mg/L	0.00015	0.05%
Mo 202.031†	66.4	0.00294	mg/L	0.000459	0.00294	mg/L	0.000459	15.61%
Na 589.592†	120493.6	8.616	mg/L	0.0323	8.616	mg/L	0.0323	0.38%
Na 330.237†	245.2	8.666	mg/L	0.1230	8.666	mg/L	0.1230	1.42%
Ni 231.604†	27.4	0.00627	mg/L	0.000240	0.00627	mg/L	0.000240	3.82%
Pb 220.353†	-8.4	-0.00091	mg/L	0.000258	-0.00091	mg/L	0.000258	28.25%
Sb 206.836†	-7.7	-0.00232	mg/L	0.001217	-0.00232	mg/L	0.001217	52.44%
Se 196.026†	9.3	0.00648	mg/L	0.002856	0.00648	mg/L	0.002856	44.10%
Si 288.158†	21991.4	10.61	mg/L	0.014	10.61	mg/L	0.014	0.13%
Sn 189.927†	-26.3	-0.00413	mg/L	0.000106	-0.00413	mg/L	0.000106	2.56%
Sr 421.552†	158638.9	0.1562	mg/L	0.00031	0.1562	mg/L	0.00031	0.20%
Ti 334.903†	38.3	0.00049	mg/L	0.000632	0.00049	mg/L	0.000632	128.14%
Tl 190.801†	7.4	0.00305	mg/L	0.000476	0.00305	mg/L	0.000476	15.64%
V 292.402†	53.4	0.00042	mg/L	0.000074	0.00042	mg/L	0.000074	17.69%
Zn 206.200†	32.8	0.00945	mg/L	0.000243	0.00945	mg/L	0.000243	2.57%

Sequence No.: 5
Sample ID: WV68 H DMN
Analyst: ALA
Dilution: 1.000000X

Autosampler Location: 318
Date Collected: 6/28/2013 10:32:33 AM
Data Type: Original

Nebulizer Parameters: WV68 H DMN

Analyte	Back Pressure	Flow
All	232.0 kPa	0.75 L/min

Mean Data: WV68 H DMN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	2496242.2	78.20	%	0.380				0.49%
ScR 361.383	301827.2	90.38	%	1.125				1.24%
Ag 328.068†	-321.1	-0.00148	mg/L	0.000256	-0.00148	mg/L	0.000256	17.27%
Al 308.215†	132.8	0.08350	mg/L	0.003963	0.08350	mg/L	0.003963	4.75%
As 188.979†	100.8	0.03537	mg/L	0.001922	0.03537	mg/L	0.001922	5.43%
B 249.677†	21727.2	2.888	mg/L	0.0324	2.888	mg/L	0.0324	1.12%
Ba 233.527†	122.6	0.02598	mg/L	0.001703	0.02598	mg/L	0.001703	6.56%
Be 313.042†	126.8	0.00021	mg/L	0.000023	0.00021	mg/L	0.000023	10.89%
Ca 317.933†	3698153.9	284.2	mg/L	1.39	284.2	mg/L	1.39	0.49%
Cd 228.802†	24.7	0.00045	mg/L	0.000258	0.00045	mg/L	0.000258	56.93%
Co 228.616†	103.0	0.00233	mg/L	0.000191	0.00233	mg/L	0.000191	8.18%
Cr 267.716†	487.1	0.00331	mg/L	0.001223	0.00331	mg/L	0.001223	36.94%
Cu 324.752†	2352.1	0.00343	mg/L	0.000100	0.00343	mg/L	0.000100	2.91%
Fe 273.955†	34.0	0.02516	mg/L	0.002480	0.02516	mg/L	0.002480	9.85%
K 766.490†	674033.5	301.5	mg/L	1.58	301.5	mg/L	1.58	0.53%
Mg 279.077†	1110587.1	860.1	mg/L	3.98	860.1	mg/L	3.98	0.46%
Mn 257.610†	50747.5	1.368	mg/L	0.0190	1.368	mg/L	0.0190	1.39%
Mo 202.031†	310.3	0.01136	mg/L	0.000109	0.01136	mg/L	0.000109	0.96%
Na 589.592†	Saturated3							
Na 330.237†	203303.0	7260	mg/L	27.88	7260	mg/L	27.88	0.38%
Ni 231.604†	8.9	0.00205	mg/L	0.000723	0.00205	mg/L	0.000723	35.35%
Pb 220.353†	-14.4	-0.00144	mg/L	0.001174	-0.00144	mg/L	0.001174	81.74%
Sb 206.836†	3.0	-0.00050	mg/L	0.003230	-0.00050	mg/L	0.003230	639.78%
Se 196.026†	47.0	0.03267	mg/L	0.008569	0.03267	mg/L	0.008569	26.23%
Si 288.158†	7463.7	3.699	mg/L	0.0507	3.699	mg/L	0.0507	1.37%
Sn 189.927†	-133.2	0.00201	mg/L	0.002651	0.00201	mg/L	0.002651	131.78%
Sr 421.552†	5191523.6	5.112	mg/L	0.0409	5.112	mg/L	0.0409	0.80%
Ti 334.903†	494.9	0.00552	mg/L	0.000153	0.00552	mg/L	0.000153	2.78%
Tl 190.801†	13.5	0.00554	mg/L	0.002170	0.00554	mg/L	0.002170	39.19%
V 292.402†	57.6	0.00091	mg/L	0.000047	0.00091	mg/L	0.000047	5.19%
Zn 206.200†	27.8	0.00379	mg/L	0.000649	0.00379	mg/L	0.000649	17.15%

Sequence No.: 6
Sample ID: WV68 I DMN
Analyst: ALA
Dilution: 1.000000X

Autosampler Location: 319
Date Collected: 6/28/2013 10:37:06 AM
Data Type: Original

Nebulizer Parameters: WV68 I DMN

Analyte	Back Pressure	Flow
All	232.0 kPa	0.75 L/min

Mean Data: WV68 I DMN

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
ScA 357.253	2452229.1	76.82	%	0.730				0.95%
ScR 361.383	296326.8	88.74	%	0.357				0.40%
Ag 328.068†	-346.7	-0.00160	mg/L	0.000581	-0.00160	mg/L	0.000581	36.36%
Al 308.215†	3.6	0.00196	mg/L	0.002288	0.00196	mg/L	0.002288	116.78%
As 188.979†	99.1	0.03324	mg/L	0.004666	0.03324	mg/L	0.004666	14.03%
B 249.677†	23580.1	3.134	mg/L	0.0159	3.134	mg/L	0.0159	0.51%
Ba 233.527†	165.7	0.03512	mg/L	0.000681	0.03512	mg/L	0.000681	1.94%
Be 313.042†	149.8	0.00025	mg/L	0.000025	0.00025	mg/L	0.000025	10.07%
Ca 317.933†	3908613.2	300.4	mg/L	2.25	300.4	mg/L	2.25	0.75%
Cd 228.802†	26.3	0.00051	mg/L	0.000117	0.00051	mg/L	0.000117	23.06%
Co 228.616†	64.7	0.00145	mg/L	0.000189	0.00145	mg/L	0.000189	13.07%
Cr 267.716†	547.6	0.00396	mg/L	0.001099	0.00396	mg/L	0.001099	27.76%
Cu 324.752†	3630.9	0.00717	mg/L	0.000309	0.00717	mg/L	0.000309	4.31%
Fe 273.955†	2.6	0.00201	mg/L	0.002141	0.00201	mg/L	0.002141	106.42%
K 766.490†	757401.2	338.8	mg/L	2.09	338.8	mg/L	2.09	0.62%
Mg 279.077†	1247898.5	966.4	mg/L	3.71	966.4	mg/L	3.71	0.38%
Mn 257.610†	717.8	0.01815	mg/L	0.000337	0.01815	mg/L	0.000337	1.85%
Mo 202.031†	344.7	0.01282	mg/L	0.000060	0.01282	mg/L	0.000060	0.47%
Na 589.592†	Saturated3							
Na 330.237†	227297.9	8117	mg/L	20.84	8117	mg/L	20.84	0.26%
Ni 231.604†	7.9	0.00180	mg/L	0.001714	0.00180	mg/L	0.001714	95.13%
Pb 220.353†	-14.9	-0.00149	mg/L	0.001540	-0.00149	mg/L	0.001540	103.14%
Sb 206.836†	3.3	-0.00056	mg/L	0.001414	-0.00056	mg/L	0.001414	251.49%
Se 196.026†	38.0	0.02639	mg/L	0.001698	0.02639	mg/L	0.001698	6.43%
Si 288.158†	5398.1	2.714	mg/L	0.0217	2.714	mg/L	0.0217	0.80%
Sn 189.927†	-140.1	0.00230	mg/L	0.000548	0.00230	mg/L	0.000548	23.89%
Sr 421.552†	5712682.5	5.625	mg/L	0.0485	5.625	mg/L	0.0485	0.86%
Ti 334.903†	507.1	0.00508	mg/L	0.000574	0.00508	mg/L	0.000574	11.29%
Tl 190.801†	7.6	0.00312	mg/L	0.003495	0.00312	mg/L	0.003495	112.11%
V 292.402†	127.9	0.00122	mg/L	0.000097	0.00122	mg/L	0.000097	7.94%
Zn 206.200†	18.2	0.00111	mg/L	0.000581	0.00111	mg/L	0.000581	52.53%

Sequence No.: 7 [illegible] 7-1-2013
Sample ID: WU70 B SWC
Analyst: ALA
Dilution: 5.000000X

Autosampler Location: 320
Date Collected: 6/28/2013 10:41:39 AM
Data Type: Original

Nebulizer Parameters: WU70 B SWC

Analyte	Back Pressure	Flow
All	232.0 kPa	0.75 L/min

Mean Data: WU70 B SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3207548.4	100.5	%	0.42				0.42%
ScR 361.383	346509.5	103.8	%	0.17				0.16%
Ag 328.068†	152.2	0.00079	mg/L	0.000070	0.00394	mg/L	0.000348	8.83%
Al 308.215†	90769.1	57.25	mg/L	0.303	286.2	mg/L	1.52	0.53%
As 188.979†	4.9	0.06279	mg/L	0.000796	0.3139	mg/L	0.00398	1.27%
B 249.677†	530.5	0.07044	mg/L	0.001062	0.3522	mg/L	0.00531	1.51%
Ba 233.527†	6308.0	1.317	mg/L	0.0027	6.586	mg/L	0.0135	0.21%
Be 313.042†	2594.1	0.00425	mg/L	0.000034	0.02125	mg/L	0.000170	0.80%
Ca 317.933†	3342709.5	256.9	mg/L	1.11	1285	mg/L	5.54	0.43%
Cd 228.802†	7.7	0.00035	mg/L	0.000033	0.00173	mg/L	0.000163	9.46%
Co 228.616†	2100.1	0.04246	mg/L	0.000223	0.2123	mg/L	0.00111	0.52%
Cr 267.716†	786.5	0.1296	mg/L	0.00114	0.6480	mg/L	0.00568	0.88%
Cu 324.752†	254028.7	0.8582	mg/L	0.00434	4.291	mg/L	0.0217	0.51%
Fe 273.955†	159254.0	117.6	mg/L	0.20	588.0	mg/L	1.02	0.17%
K 766.490†	8183.9	3.660	mg/L	0.0367	18.30	mg/L	0.184	1.00%
Mg 279.077†	31855.9	24.57	mg/L	0.061	122.8	mg/L	0.31	0.25%
Mn 257.610†	106190.5	2.864	mg/L	0.0068	14.32	mg/L	0.034	0.24%
Mo 202.031†	601.6	0.02577	mg/L	0.000187	0.1288	mg/L	0.00094	0.73%
Na 589.592†	72556.6	5.188	mg/L	0.2526	25.94	mg/L	1.263	4.87%
Na 330.237†	160.1	4.752	mg/L	0.1489	23.76	mg/L	0.745	3.13%
Ni 231.604†	687.3	0.1575	mg/L	0.00159	0.7874	mg/L	0.00796	1.01%
Pb 220.353†	555.9	0.06740	mg/L	0.001180	0.3370	mg/L	0.00590	1.75%
Sb 206.836†	72.2	0.02283	mg/L	0.001112	0.1142	mg/L	0.00556	4.87%
Se 196.026†	40.8	0.02187	mg/L	0.008404	0.1093	mg/L	0.04202	38.44%
Si 288.158†	598.0	0.2915	mg/L	0.00590	1.457	mg/L	0.0295	2.02%
Sn 189.927†	166.9	0.07672	mg/L	0.000467	0.3836	mg/L	0.00233	0.61%
Sr 421.552†	784213.4	0.7722	mg/L	0.00402	3.861	mg/L	0.0201	0.52%
Ti 334.903†	52451.2	2.446	mg/L	0.0110	12.23	mg/L	0.055	0.45%
Tl 190.801†	-18.0	0.00735	mg/L	0.000965	0.03674	mg/L	0.004823	13.13%
V 292.402†	44130.4	0.2917	mg/L	0.00073	1.458	mg/L	0.0037	0.25%
Zn 206.200†	7560.1	1.816	mg/L	0.0028	9.079	mg/L	0.0139	0.15%

Sequence No.: 8
Sample ID: WV53 D SWC
Analyst: ALA
Dilution: 2.000000X

Autosampler Location: 321
Date Collected: 6/28/2013 10:45:56 AM
Data Type: Original

Nebulizer Parameters: WV53 D SWC

Analyte	Back Pressure	Flow
A11	232.0 kPa	0.75 L/min

Mean Data: WV53 D SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3302489.2	103.5	%	0.15				0.14%
ScR 361.383	352709.1	105.6	%	0.97				0.92%
Ag 328.068†	-233.1	-0.00099	mg/L	0.000095	-0.00198	mg/L	0.000191	9.62%
Al 308.215†	80064.7	50.49	mg/L	0.364	101.0	mg/L	0.73	0.72%
As 188.979†	-244.1	0.01296	mg/L	0.002104	0.02592	mg/L	0.004209	16.23%
B 249.677†	63.3	0.00833	mg/L	0.001024	0.01666	mg/L	0.002048	12.29%
Ba 233.527†	569.2	0.1060	mg/L	0.00061	0.2120	mg/L	0.00122	0.58%
Be 313.042†	602.8	0.00089	mg/L	0.000027	0.00179	mg/L	0.000054	3.01%
Ca 317.933†	370857.0	28.50	mg/L	0.215	57.01	mg/L	0.431	0.76%
Cd 228.802†	13.1	0.00117	mg/L	0.000132	0.00234	mg/L	0.000264	11.27%
Co 228.616†	1748.1	0.03107	mg/L	0.000323	0.06214	mg/L	0.000645	1.04%
Cr 267.716†	428.2	0.07249	mg/L	0.001453	0.1450	mg/L	0.00291	2.00%
Cu 324.752†	17273.8	0.06093	mg/L	0.000235	0.1219	mg/L	0.00047	0.39%
Fe 273.955†	117169.1	86.53	mg/L	1.290	173.1	mg/L	2.58	1.49%
K 766.490†	7303.3	3.266	mg/L	0.0243	6.533	mg/L	0.0485	0.74%
Mg 279.077†	18102.0	13.96	mg/L	0.084	27.93	mg/L	0.169	0.60%
Mn 257.610†	27133.6	0.7320	mg/L	0.00965	1.464	mg/L	0.0193	1.32%
Mo 202.031†	66.3	0.00284	mg/L	0.000050	0.00567	mg/L	0.000101	1.78%
Na 589.592†	70490.9	5.041	mg/L	0.0132	10.08	mg/L	0.026	0.26%
Na 330.237†	116.1	5.278	mg/L	0.0685	10.56	mg/L	0.137	1.30%
Ni 231.604†	231.6	0.05306	mg/L	0.000941	0.1061	mg/L	0.00188	1.77%
Pb 220.353†	-5.2	0.00683	mg/L	0.000123	0.01365	mg/L	0.000246	1.80%
Sb 206.836†	2.4	0.00460	mg/L	0.001227	0.00919	mg/L	0.002454	26.69%
Se 196.026†	21.5	0.00919	mg/L	0.004164	0.01839	mg/L	0.008328	45.29%
Si 288.158†	1386.7	0.6708	mg/L	0.00608	1.342	mg/L	0.0122	0.91%
Sn 189.927†	-37.7	-0.00513	mg/L	0.000377	-0.01027	mg/L	0.000754	7.34%
Sr 421.552†	252398.1	0.2485	mg/L	0.00205	0.4970	mg/L	0.00410	0.83%
Ti 334.903†	99286.0	4.659	mg/L	0.0445	9.318	mg/L	0.0890	0.96%
Tl 190.801†	-10.3	0.00635	mg/L	0.001424	0.01269	mg/L	0.002849	22.44%
V 292.402†	41829.4	0.2760	mg/L	0.00209	0.5520	mg/L	0.00417	0.76%
Zn 206.200†	1146.4	0.2756	mg/L	0.00395	0.5512	mg/L	0.00790	1.43%

Sequence No.: 9
Sample ID: WV68 MB1SPK DMN
Analyst: ALA
Dilution: 1.000000X

Autosampler Location: 322
Date Collected: 6/28/2013 10:49:56 AM
Data Type: Original

Nebulizer Parameters: WV68 MB1SPK DMN

Analyte	Back Pressure	Flow
All	231.0 kPa	0.75 L/min

Mean Data: WV68 MB1SPK DMN

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	3395615.1	106.4	%	0.60				0.57%
ScR 361.383	358237.8	107.3	%	1.05				0.98%
Ag 328.068†	110267.5	0.5082	mg/L	0.00269	0.5082	mg/L	0.00269	0.53%
Al 308.215†	3047.2	1.915	mg/L	0.0205	1.915	mg/L	0.0205	1.07%
As 188.979†	3598.7	1.986	mg/L	0.0101	1.986	mg/L	0.0101	0.51%
B 249.677†	13.9	0.00081	mg/L	0.001175	0.00081	mg/L	0.001175	145.35%
Ba 233.527†	9531.8	2.020	mg/L	0.0149	2.020	mg/L	0.0149	0.74%
Be 313.042†	275594.3	0.4618	mg/L	0.00443	0.4618	mg/L	0.00443	0.96%
Ca 317.933†	122666.5	9.428	mg/L	0.0289	9.428	mg/L	0.0289	0.31%
Cd 228.802†	17182.2	0.5162	mg/L	0.00373	0.5162	mg/L	0.00373	0.72%
Co 228.616†	21501.6	0.4938	mg/L	0.00184	0.4938	mg/L	0.00184	0.37%
Cr 267.716†	3095.8	0.5082	mg/L	0.00322	0.5082	mg/L	0.00322	0.63%
Cu 324.752†	143931.2	0.4837	mg/L	0.00285	0.4837	mg/L	0.00285	0.59%
Fe 273.955†	2636.7	1.944	mg/L	0.0225	1.944	mg/L	0.0225	1.16%
K 766.490†	21779.8	9.741	mg/L	0.0297	9.741	mg/L	0.0297	0.30%
Mg 279.077†	12692.3	9.829	mg/L	0.0778	9.829	mg/L	0.0778	0.79%
Mn 257.610†	18355.9	0.4955	mg/L	0.00417	0.4955	mg/L	0.00417	0.84%
Mo 202.031†	22.3	0.00093	mg/L	0.000117	0.00093	mg/L	0.000117	12.52%
Na 589.592†	138921.5	9.934	mg/L	0.0314	9.934	mg/L	0.0314	0.32%
Na 330.237†	288.0	10.09	mg/L	0.322	10.09	mg/L	0.322	3.19%
Ni 231.604†	2056.1	0.4703	mg/L	0.00410	0.4703	mg/L	0.00410	0.87%
Pb 220.353†	17966.3	1.973	mg/L	0.0099	1.973	mg/L	0.0099	0.50%
Sb 206.836†	7.8	-0.00275	mg/L	0.001242	-0.00275	mg/L	0.001242	45.15%
Se 196.026†	3048.7	2.118	mg/L	0.0071	2.118	mg/L	0.0071	0.34%
Si 288.158†	-22.2	-0.00731	mg/L	0.000424	-0.00731	mg/L	0.000424	5.80%
Sn 189.927†	-17.6	-0.00326	mg/L	0.000308	-0.00326	mg/L	0.000308	9.44%
Sr 421.552†	479977.0	0.4726	mg/L	0.00158	0.4726	mg/L	0.00158	0.34%
Ti 334.903†	34.6	0.00094	mg/L	0.000213	0.00094	mg/L	0.000213	22.63%
Tl 190.801†	4729.5	1.945	mg/L	0.0085	1.945	mg/L	0.0085	0.44%
V 292.402†	73570.3	0.4993	mg/L	0.00247	0.4993	mg/L	0.00247	0.50%
Zn 206.200†	2033.3	0.4892	mg/L	0.00366	0.4892	mg/L	0.00366	0.75%

Sequence No.: 10
Sample ID: WV53 MBSPK SWC
Analyst: ALA
Dilution: 2.000000X

Autosampler Location: 323
Date Collected: 6/28/2013 10:53:57 AM
Data Type: Original

Nebulizer Parameters: WV53 MBSPK SWC

Analyte	Back Pressure	Flow
All	232.0 kPa	0.75 L/min

Mean Data: WV53 MBSPK SWC

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
ScA 357.253	3309366.8	103.7	%	0.36				0.35%
ScR 361.383	349727.6	104.7	%	0.20				0.19%
Ag 328.068†	107143.5	0.4938	mg/L	0.00335	0.9876	mg/L	0.00670	0.68%
Al 308.215†	2994.8	1.882	mg/L	0.0167	3.763	mg/L	0.0333	0.89%
As 188.979†	3463.0	1.911	mg/L	0.0069	3.822	mg/L	0.0137	0.36%
B 249.677†	18.7	0.00147	mg/L	0.000785	0.00294	mg/L	0.001569	53.37%
Ba 233.527†	9358.8	1.983	mg/L	0.0092	3.967	mg/L	0.0185	0.47%
Be 313.042†	271521.2	0.4550	mg/L	0.00109	0.9099	mg/L	0.00219	0.24%
Ca 317.933†	120041.1	9.226	mg/L	0.0058	18.45	mg/L	0.012	0.06%
Cd 228.802†	16385.0	0.4922	mg/L	0.00563	0.9844	mg/L	0.01125	1.14%
Co 228.616†	21008.1	0.4824	mg/L	0.00316	0.9649	mg/L	0.00631	0.65%
Cr 267.716†	3065.6	0.5033	mg/L	0.00427	1.007	mg/L	0.0085	0.85%
Cu 324.752†	144666.6	0.4862	mg/L	0.00313	0.9724	mg/L	0.00625	0.64%
Fe 273.955†	2628.0	1.938	mg/L	0.0142	3.876	mg/L	0.0284	0.73%
K 766.490†	21242.7	9.501	mg/L	0.0353	19.00	mg/L	0.071	0.37%
Mg 279.077†	12433.9	9.628	mg/L	0.0675	19.26	mg/L	0.135	0.70%
Mn 257.610†	18185.5	0.4909	mg/L	0.00363	0.9818	mg/L	0.00725	0.74%
Mo 202.031†	22.8	0.00096	mg/L	0.000218	0.00192	mg/L	0.000435	22.68%
Na 589.592†	135238.8	9.671	mg/L	0.0114	19.34	mg/L	0.023	0.12%
Na 330.237†	284.2	9.965	mg/L	0.1225	19.93	mg/L	0.245	1.23%
Ni 231.604†	2015.3	0.4609	mg/L	0.00366	0.9218	mg/L	0.00731	0.79%
Pb 220.353†	17405.9	1.912	mg/L	0.0168	3.823	mg/L	0.0337	0.88%
Sb 206.836†	11.2	-0.00170	mg/L	0.000892	-0.00339	mg/L	0.001784	52.59%
Se 196.026†	2754.9	1.914	mg/L	0.0104	3.827	mg/L	0.0207	0.54%
Si 288.158†	26.5	0.01610	mg/L	0.000937	0.03221	mg/L	0.001874	5.82%
Sn 189.927†	-18.3	-0.00347	mg/L	0.000467	-0.00695	mg/L	0.000933	13.43%
Sr 421.552†	475929.8	0.4686	mg/L	0.00107	0.9372	mg/L	0.00214	0.23%
Ti 334.903†	23.5	0.00043	mg/L	0.000805	0.00086	mg/L	0.001610	186.48%
Tl 190.801†	4596.5	1.891	mg/L	0.0051	3.781	mg/L	0.0103	0.27%
V 292.402†	72711.5	0.4935	mg/L	0.00350	0.9870	mg/L	0.00700	0.71%
Zn 206.200†	1954.1	0.4702	mg/L	0.00242	0.9404	mg/L	0.00484	0.52%

Sequence No.: 11
Sample ID: CV3
Analyst: ALA
Dilution: 1.000000X

Autosampler Location: 7
Date Collected: 6/28/2013 10:57:58 AM
Data Type: Original

Nebulizer Parameters: CV

Analyte	Back Pressure	Flow
All	232.0 kPa	0.75 L/min

Mean Data: CV

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Calib. Std.Dev.	Sample Conc.	Sample Units	Sample Std.Dev.	RSD
ScA 357.253	3289866.2	103.1	%	0.30				0.29%
ScR 361.383	344253.1	103.1	%	0.24				0.23%
Ag 328.068†	221637.8	1.021	mg/L	0.0038	1.021	mg/L	0.0038	0.37%
Al 308.215†	3169.0	1.967	mg/L	0.0061	1.967	mg/L	0.0061	0.31%
As 188.979†	3499.0	1.959	mg/L	0.0059	1.959	mg/L	0.0059	0.30%
B 249.677†	7363.3	0.9777	mg/L	0.00367	0.9777	mg/L	0.00367	0.38%
Ba 233.527†	4796.3	1.016	mg/L	0.0031	1.016	mg/L	0.0031	0.31%
Be 313.042†	575887.8	0.9649	mg/L	0.00265	0.9649	mg/L	0.00265	0.27%
Ca 317.933†	24755.7	1.903	mg/L	0.0023	1.903	mg/L	0.0023	0.12%
Cd 228.802†	33206.7	1.008	mg/L	0.0023	1.008	mg/L	0.0023	0.23%
Co 228.616†	43083.9	0.9882	mg/L	0.00478	0.9882	mg/L	0.00478	0.48%
Cr 267.716†	6311.8	1.038	mg/L	0.0012	1.038	mg/L	0.0012	0.11%
Cu 324.752†	293711.3	0.9867	mg/L	0.00074	0.9867	mg/L	0.00074	0.07%
Fe 273.955†	2754.8	2.028	mg/L	0.0056	2.028	mg/L	0.0056	0.28%
K 766.490†	43907.4	19.64	mg/L	0.087	19.64	mg/L	0.087	0.44%
Mg 279.077†	2502.8	1.945	mg/L	0.0051	1.945	mg/L	0.0051	0.26%
Mn 257.610†	36030.5	0.9724	mg/L	0.00557	0.9724	mg/L	0.00557	0.57%
Mo 202.031†	19259.7	0.9296	mg/L	0.00172	0.9296	mg/L	0.00172	0.19%
Na 589.592†	686094.3	49.06	mg/L	0.032	49.06	mg/L	0.032	0.07%
Na 330.237†	1403.4	50.09	mg/L	0.089	50.09	mg/L	0.089	0.18%
Ni 231.604†	4331.7	0.9927	mg/L	0.00147	0.9927	mg/L	0.00147	0.15%
Pb 220.353†	17663.3	1.940	mg/L	0.0057	1.940	mg/L	0.0057	0.30%
Sb 206.836†	6764.5	1.967	mg/L	0.0041	1.967	mg/L	0.0041	0.21%
Se 196.026†	2785.9	1.935	mg/L	0.0027	1.935	mg/L	0.0027	0.14%
Si 288.158†	4050.9	1.959	mg/L	0.0182	1.959	mg/L	0.0182	0.93%
Sn 189.927†	3703.7	0.9604	mg/L	0.00198	0.9604	mg/L	0.00198	0.21%
Sr 421.552†	986880.8	0.9717	mg/L	0.00330	0.9717	mg/L	0.00330	0.34%
Ti 334.903†	20626.1	0.9671	mg/L	0.00345	0.9671	mg/L	0.00345	0.36%
Tl 190.801†	4822.2	1.980	mg/L	0.0029	1.980	mg/L	0.0029	0.15%
V 292.402†	150106.7	1.019	mg/L	0.0022	1.019	mg/L	0.0022	0.22%
Zn 206.200†	4103.1	0.9875	mg/L	0.00379	0.9875	mg/L	0.00379	0.38%

Sequence No.: 12
Sample ID: CB 3
Analyst: ALA
Dilution: 1.000000X

Autosampler Location: 1
Date Collected: 6/28/2013 11:02:02 AM
Data Type: Original

Nebulizer Parameters: CB

Analyte	Back Pressure	Flow
All	232.0 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	3331794.4	104.4	%	0.60				0.58%
ScR 361.383	347995.2	104.2	%	0.14				0.13%
Ag 328.068†	64.5	0.00030	mg/L	0.000285	0.00030	mg/L	0.000285	96.05%
Al 308.215†	-4.4	-0.00277	mg/L	0.006385	-0.00277	mg/L	0.006385	230.60%
As 188.979†	1.0	0.00054	mg/L	0.000749	0.00054	mg/L	0.000749	138.36%
B 249.677†	23.8	0.00317	mg/L	0.000352	0.00317	mg/L	0.000352	11.10%
Ba 233.527†	-1.2	-0.00026	mg/L	0.000707	-0.00026	mg/L	0.000707	267.67%
Be 313.042†	65.8	0.00011	mg/L	0.000038	0.00011	mg/L	0.000038	34.07%
Ca 317.933†	9.3	0.00071	mg/L	0.000356	0.00071	mg/L	0.000356	49.98%
Cd 228.802†	-2.4	-0.00008	mg/L	0.000184	-0.00008	mg/L	0.000184	239.95%
Co 228.616†	12.7	0.00029	mg/L	0.000033	0.00029	mg/L	0.000033	11.27%
Cr 267.716†	7.3	0.00119	mg/L	0.000768	0.00119	mg/L	0.000768	64.36%
Cu 324.752†	22.2	0.00007	mg/L	0.000038	0.00007	mg/L	0.000038	51.17%
Fe 273.955†	3.0	0.00221	mg/L	0.002307	0.00221	mg/L	0.002307	104.40%
K 766.490†	19.7	0.00881	mg/L	0.013533	0.00881	mg/L	0.013533	153.60%
Mg 279.077†	-1.2	-0.00093	mg/L	0.006475	-0.00093	mg/L	0.006475	693.32%
Mn 257.610†	1.6	0.00004	mg/L	0.000150	0.00004	mg/L	0.000150	358.13%
Mo 202.031†	21.5	0.00104	mg/L	0.000128	0.00104	mg/L	0.000128	12.34%
Na 589.592†	2266.0	0.1620	mg/L	0.00219	0.1620	mg/L	0.00219	1.35%
Na 330.237†	6.9	0.2452	mg/L	0.31663	0.2452	mg/L	0.31663	129.13%
Ni 231.604†	0.9	0.00022	mg/L	0.000858	0.00022	mg/L	0.000858	395.21%
Pb 220.353†	-4.3	-0.00047	mg/L	0.000283	-0.00047	mg/L	0.000283	60.78%
Sb 206.836†	8.8	0.00255	mg/L	0.001432	0.00255	mg/L	0.001432	56.11%
Se 196.026†	2.9	0.00203	mg/L	0.000862	0.00203	mg/L	0.000862	42.34%
Si 288.158†	-4.0	-0.00195	mg/L	0.003750	-0.00195	mg/L	0.003750	191.97%
Sn 189.927†	3.1	0.00080	mg/L	0.001160	0.00080	mg/L	0.001160	145.29%
Sr 421.552†	119.3	0.00012	mg/L	0.000031	0.00012	mg/L	0.000031	26.51%
Ti 334.903†	-3.9	-0.00018	mg/L	0.000586	-0.00018	mg/L	0.000586	320.67%
Tl 190.801†	4.9	0.00203	mg/L	0.002282	0.00203	mg/L	0.002282	112.39%
V 292.402†	3.4	0.00003	mg/L	0.000014	0.00003	mg/L	0.000014	49.05%
Zn 206.200†	1.6	0.00037	mg/L	0.000513	0.00037	mg/L	0.000513	137.10%

2nd Pg

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP (ICP-MS) GFA CVA **Analysis Date:** 7-1-13

MS2	Analyst BA 7-2-13	Peer [illegible] 7-2-13	Comment
Logbook:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration:			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration Verification:			
ICV/CCV	✓	✓	See log ↓
ICB/CCB	✓	✓	
Samples:			
RSD's & SD's	✓	✓	
Internal Standards	✓	✓	
Carry-over	✓	✓	
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	✓	
Post Spikes/Serial Dilutions	✓	✓	
Analytic Spikes	—	—	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	WV19, WV70
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysts Notes and CAF's	✓	✓	CAF - WV19, WV70

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 1-1-13 Analyst: BA Page: 1 of 4

All corrections made by analyst unless otherwise noted

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		STD 0			B7xx
		1			B542
		2			B727
		3			B728
		4			B794
		5			B730
		Rinse Sample			
		ICV			B523
		ICB			
		CCV1			
		CCB1			
		Low Check			
		ICSA			
		ICSAB			
		LR200			
		LR300			
		B1			
		CCV2			
		CCB2			
		DI Check			
		ERA P197		10	
		WW63 I	REN	10	As, Se
		R	↓	5	↓
		T	↓	5	↓

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 7-1-13 Analyst: BA Page: 2 of 4

All corrections made by analyst unless otherwise noted BA 7-1-13

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		WW63 ×4	REN	10	As, Se
		BI			
		CCV3			62 Ni ↑
		CCB3			62 Ni ↑
		WV19 MBI	SWN	20	
		ADUP			✓
		A			
		ASPK			✓ Sb↓ (CAF)
		B			
		MBISPK			✓
		MBISPD			✓
		CCV4			Th↓
		CCB4			62 Ni ↑ End WV19
		WV09 MBI	SWN	20	
		B			
		C			
		A-L		100	✓
		A		20	
		ADUP			✓
		ASPK			✓
zzz		zzzzzz APOST			
		REF1		50	✓
		MBISPK		20	✓
		CCV5			

Analytical Resources, Incorporated
Analytical Chemists and Consultants

ICP/MS SAMPLE RUN LOG

PE Nexion ICP-MS Serial No. 81DN1050201

Analysis Date: 7-1-13 Analyst: BA Page: 3 of 4

All corrections made by analyst unless otherwise noted

Edit Label	Delete Data	ARI Sample ID	Prep Code	Dilution	Comments
		CCB5			CL2 N: ↑ End WV0[illegible]
		WV40 MB1	SHN	20	
		C			
		BDUP			
		B			
		BSPK			Sb ↓ CAF
		BPOST			Sb OK
		MB1SPK			
		CCV6			
		CCB6			CL2 N: ↑ End Pkg (WV37)
		WV37 MB	BEN	2	
		WV38 MB			
		WV39 MB			
		A			
		WV38 A			
		WV37 A			
		MBSPK			
		WV38 MBSPK			
		WV39 MBSPK			
		CCV7			
		CCB7			
		WV40 MB	BEN	2	
		WV41 MB			
		A			

BA 7/2/13

Daily Performance Report

Sample ID: Daily Performance Check
Sample Date/Time. Monday, July 01, 2013 08:30 02
Sample Description
Method File C \NexIONData\Method\Daily Performancenew mth
Dataset File C \NexIONData\Dataset\Default\Daily Performance Check 2237
MassCal File C \NexIONData\MassCal\Default tun
Conditions File C \NexIONData\Conditions\Default dac
Dual Detector Mode Pulse
Acq Dead Time (ns) 60
Current Dead Time (ns) 60
Torch Z position (mm) 0 00

Summary

Analyte	Mass	Meas	Intens. Mean	Net Intens Mean	Net Intens SD	Net Intens RSD	Mode
Be	9 0		4792.8	4792.778	116.304	2 4	Standard
Mg	24 0		34222.0	34221 952	752 980	2 2	Standard
In	114 9		64252.4	64252 415	1162.928	1 8	Standard
Pb	208 0		29659.3	29659.288	163.059	0 5	Standard
U	238 1		51199 8	51199.818	544.799	1 1	Standard
CeO	155.9		813.2	0.012	0 000	3.1	Standard
Ce	139.9		66705.2	66705.186	416 203	0 6	Standard
Ce++	70 0		980.4	0.015	0.000	1 5	Standard
Bkgd	220 0		0.0	0 000	0.000		Standard

Current Conditions File Data

Current Value	Description
1 07	Nebulizer Gas Flow STD/KED [NEB]
1 20	Auxiliary Gas Flow
18.00	Plasma Gas Flow
-12 00	Deflector Voltage
1600.00	ICP RF Power
-1675.00	Analog Stage Voltage
950 00	Pulse Stage Voltage
0.00	Quadrupole Rod Offset STD [QRO]
-15 00	Cell Rod Offset STD [CRO]
7.00	Discriminator Threshold
-4 00	Cell Entrance/Exit Voltage STD
0.00	RPa
0.25	RPq
1 08	DRC Mode NEB
-8 00	DRC Mode QRO
-2.50	DRC Mode CRO
-4.00	DRC Mode Cell Entrance/Exit Voltage
0 60	Cell Gas A
0.00	Cell Gas B
250.00	Axial Field Voltage
-15 00	KED Mode CRO
-12.00	KED Mode QRO
-2.00	KED Mode Cell Entrance Voltage
-24.00	KED Mode Cell Exit Voltage
0.00	KED Cell Gas A
4 00	KED Cell Gas B
0.00	KED RPa

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

Start Time: 7/1/2013 8:35:04 AM
End Time: 7/1/2013 8:37:54 AM

Nebulizer Gas Flow STD/KED [NEB] - [Passed] Optimum value(s): 1.08
Obtained Intensity (In 114.904): 77303.90
Obtained Formula (CeO 155.9 / Ce 139.905): 0.019 (=1454.13 / 75199.78)

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

Start Time: 7/1/2013 8:38:13 AM
End Time: 7/1/2013 8:38:55 AM

Torch Alignment - [Passed]

Vertical	Horizontal	Intensity
0.63 mm	-0.78 mm	89484.89

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

Start Time: 7/1/2013 8:39:02 AM
End Time: 7/1/2013 8:41:14 AM

Mass Calibration and Resolution - [Passed] Optimum value(s): N/A
Target/Obtained mass (7.016/7.025), Target/Obtained resolution (0.7/0.687)
Target/Obtained mass (23.985/24.025), Target/Obtained resolution (0.7/0.712)
Target/Obtained mass (114.904/114.875), Target/Obtained resolution (0.7/0.698)
Target/Obtained mass (238.05/238.025), Target/Obtained resolution (0.7/0.709)

SmartTune Wizard - Summary

ptimization Summary

martTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 7/1/2013 8:41:36 AM
nd Time: 7/1/2013 8:45:47 AM

utotune STD/DRC - [Failed]
Minimum Correlation Coefficient of 0.985 not obtained. (0.985)
Intercept = -10.97

SmartTune Wizard - Summary

Optimization Summary

SmartTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

Start Time: 7/1/2013 8:46:31 AM
End Time: 7/1/2013 8:50:42 AM

Ions STD, DRC - [Passed] Optimum value(s): Correlation Coefficient = 0.999; Intercept = -10.72

SmartTune Wizard - Summary

ptimization Summary

martTune file: C:\NexIONData\Wizard\SmartTune\ariSTDaily+torch.swz

tart Time: 7/1/2013 8:51:15 AM
nd Time: 7/1/2013 8:53:50 AM

aily Performance Check - [Passed] Optimum value(s): N/A
Obtained Intensity (Be 9.0122): 5730.77
Obtained Intensity (Mg 23.985): 46360.70
Obtained Intensity (In 114.904): 68394.78
Obtained Intensity (Pb 207.977): 32127.63
Obtained Intensity (U 238.05): 56229.27
Obtained Intensity (Bkgd 220): 0.07
Obtained Formula (CeO 155.9 / Ce 139.905): 0.025 (=1737.85 / 69854.20)
Obtained Formula (Ce++ 69.9527 / Ce 139.905): 0.022 (=1536.75 / 69854.20)

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Blank
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 01, 2013 09:22:46
Number of Replicates: 3
Method File. C:\NexIONData\Method\200.8nomin mth
Tuning File C:\NexIONData\MassCal\Default tun
Optimization File: C \NexIONData\Conditions\Default dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L				1457530	3
	Be	9		ug/L				11	13
	C	13		ug/L				79519	1
	Cl	37		ug/L				4431846	2
>	Sc	45		ug/L				1043756	2
	V	51		ug/L				8047	2
	V-1	51		ug/L				213	7
	Cr	52		ug/L				23917	2
	Cr	53		ug/L				197	6
	Mn	55		ug/L				1056	3
	Co	59		ug/L				201	16
>	Ge	72		ug/L				618657	2
	Ni	60		ug/L				277	9
	Ni	62		ug/L				574	3
	Cu	63		ug/L				1520	0
	Cu	65		ug/L				546	1
	Zn	66		ug/L				4845	0
	Zn	67		ug/L				734	4
	Zn	68		ug/L				3805	1
	As	75		ug/L				-1	769
	As-1	75		ug/L				11751	0
	Se	82		ug/L				0	931
	Se	78		ug/L				11952	0
	Mo	98		ug/L				10	11
	Y	89		ug/L				410552	3
	Kr	83		ug/L				301	8
>	In	115		ug/L				840443	3
	Ag	107		ug/L				32	12
	Cd	111		ug/L				62	17
	Cd	114		ug/L				33	21
	Sb	121		ug/L				45	27
	Sb	123		ug/L				35	30
	Ba	135		ug/L				166	8
	Ba	137		ug/L				292	7
>	Tb	159		ug/L				1072767	2
	Tl	205		ug/L				46	11
	Pb	208		ug/L				846	5
	Bi	209		ug/L				2602515	1
	Th	232		ug/L				52	24
	U	238		ug/L				11	33

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 01, 2013 09:26:53
Number of Replicates: 3
Method File C:\NexION Data\Method\200 8nomin mth
Tuning File C:\NexION Data\MassCal\Default.tun
Optimization File C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc. RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1495545	0
	Be	9	0.200	ug/L	0 003	1	11	954	1
	C	13		ug/L			79519	81397	4
	Cl	37		ug/L			4431846	4438278	2
>	Sc	45		ug/L			1043756	1041046	0
	V	51	0.200	ug/L	0 007	3	8047	12963	0
	V-1	51	0.500	ug/L	0 012	2	213	4697	1
	Cr	52	0.500	ug/L	0 019	3	23917	34771	0
	Cr	53	0.500	ug/L	0 020	4	197	1285	2
	Mn	55	0.500	ug/L	0 005	0	1056	14719	0
	Co	59	0.200	ug/L	0.003	1	201	4256	1
>	Ge	72		ug/L			618657	628478	2
	Ni	60	0.500	ug/L	0.017	3	277	2232	1
	Ni	62	0.500	ug/L	0.059	11	574	781	0
	Cu	63	0.500	ug/L	0 005	1	1520	5531	2
	Cu	65	0.500	ug/L	0.012	2	546	2362	0
	Zn	66	4.000	ug/L	0 277	6	4845	11934	2
	Zn	67	4.000	ug/L	0 390	9	734	1808	4
	Zn	68	4.000	ug/L	0.254	6	3805	8603	1
	As	75	0.200	ug/L	0 016	7	-1	400	5
	As-1	75	0.200	ug/L	0 656	327	11751	12053	0
	Se	82	0.500	ug/L	0.030	5	0	123	7
	Se	78	0.500	ug/L	14 334	2866	11952	12149	0
	Mo	98	0.200	ug/L	0 008	3	10	1017	2
	Y	89		ug/L			410552	422552	0
	Kr	83		ug/L			301	281	5
>	In	115		ug/L			840443	850320	0
	Ag	107	0.200	ug/L	0 003	1	32	1889	1
	Cd	111	0.100	ug/L	0 004	3	62	486	3
	Cd	114	0.100	ug/L	0 001	1	33	1111	1
	Sb	121	0.200	ug/L	0.002	1	45	2459	0
	Sb	123	0.200	ug/L	0 002	0	35	1818	0
	Ba	135	0.500	ug/L	0.005	1	166	2198	0
	Ba	137	0.500	ug/L	0 012	2	292	3820	1
>	Tb	159		ug/L			1072767	1086858	1
	Tl	205	0.200	ug/L	0.005	2	46	7463	1
	Pb	208	0.100	ug/L	0 005	4	846	5521	2
	Bi	209		ug/L			2602515	2653966	1
	Th	232	0.200	ug/L	0 006	2	52	7689	3
	U	238	0.200	ug/L	0 001	0	11	9122	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 2
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 01, 2013 09:31:03
Number of Replicates: 3
Method File C:\NexION Data\Method\200 8nomin.mth
Tuning File C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1456898	4
	Be	9	10.000	ug/L	0.468	4	11	45662	0
	C	13		ug/L			79519	77540	1
	Cl	37		ug/L			4431846	4433933	1
>	Sc	45		ug/L			1043756	1026966	5
	V	51	10.000	ug/L	0.526	5	8047	229872	0
	V-1	51	10.015	ug/L	0.472	4	213	223401	0
	Cr	52	9.997	ug/L	0.577	5	23917	214767	0
	Cr	53	10.001	ug/L	0.401	4	197	22199	1
	Mn	55	10.000	ug/L	0.529	5	1056	266046	1
	Co	59	10.000	ug/L	0.363	3	201	197613	1
>	Ge	72		ug/L			618657	607833	3
	Ni	60	10.002	ug/L	0.381	3	277	41758	1
	Ni	62	10.008	ug/L	0.398	3	574	6279	3
	Cu	63	10.004	ug/L	0.266	2	1520	94755	0
	Cu	65	10.005	ug/L	0.358	3	546	43239	0
	Zn	66	10.345	ug/L	0.386	3	4845	27135	0
	Zn	67	10.472	ug/L	0.077	0	734	4541	3
	Zn	68	10.436	ug/L	0.260	2	3805	20183	3
	As	75	10.000	ug/L	0.388	3	-1	21800	0
	As-1	75	10.003	ug/L	0.510	5	11751	33776	0
	Se	82	10.001	ug/L	0.319	3	0	2450	1
	Se	78	10.024	ug/L	0.753	7	11952	18401	0
	Mo	98	10.000	ug/L	0.379	3	10	48463	0
	Y	89		ug/L			410552	412761	4
	Kr	83		ug/L			301	307	4
>	In	115		ug/L			840443	837852	4
	Ag	107	10.000	ug/L	0.285	2	32	87416	2
	Cd	111	10.000	ug/L	0.352	3	62	41716	1
	Cd	114	10.000	ug/L	0.495	4	33	106970	0
	Sb	121	10.000	ug/L	0.444	4	45	119390	0
	Sb	123	10.000	ug/L	0.432	4	35	89299	0
	Ba	135	10.000	ug/L	0.383	3	166	39573	1
	Ba	137	9.999	ug/L	0.478	4	292	68212	0
>	Tb	159		ug/L			1072767	1081985	4
	Tl	205	10.000	ug/L	0.458	4	46	358401	0
	Pb	208	10.000	ug/L	0.416	4	846	477207	0
	Bi	209		ug/L			2602515	2589729	3
	Th	232	10.000	ug/L	0.509	5	52	425693	0
	U	238	10.000	ug/L	0.472	4	11	451906	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 3
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 01, 2013 09:35:25
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default dac
Calibration File

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1489353	2
	Be	9	20.005	ug/L	0 458	2	11	93582	1
	C	13		ug/L			79519	79438	3
	Cl	37		ug/L			4431846	4676130	1
>	Sc	45		ug/L			1043756	1036422	1
	V	51	19.996	ug/L	0 580	2	8047	456288	2
	V-1	51	19.988	ug/L	0 509	2	213	449297	2
	Cr	52	19.996	ug/L	0 580	2	23917	410151	1
	Cr	53	19.950	ug/L	0 267	1	197	44111	0
	Mn	55	20.034	ug/L	0.355	1	1056	541432	0
	Co	59	19.984	ug/L	0 364	1	201	397507	1
>	Ge	72		ug/L			618657	616463	1
	Ni	60	20.012	ug/L	0 093	0	277	84728	1
	Ni	62	20.022	ug/L	0 130	0	574	12224	1
	Cu	63	19.979	ug/L	0.139	0	1520	189720	1
	Cu	65	19.998	ug/L	0.535	2	546	87153	3
	Zn	66	20.577	ug/L	0 090	0	4845	54988	1
	Zn	67	20.521	ug/L	0 330	1	734	9075	3
	Zn	68	20.562	ug/L	0 447	2	3805	40172	0
	As	75	20.003	ug/L	0 313	1	-1	44287	0
	As-1	75	19.999	ug/L	0 513	2	11751	56816	0
	Se	82	20.012	ug/L	0 120	0	0	4986	1
	Se	78	19.996	ug/L	0 751	3	11952	25385	0
	Mo	98	20.035	ug/L	0 215	1	10	99250	2
	Y	89		ug/L			410552	409097	2
	Kr	83		ug/L			301	296	7
>	In	115		ug/L			840443	841359	1
	Ag	107	20.137	ug/L	0 327	1	32	181880	2
	Cd	111	20.118	ug/L	0 298	1	62	86355	2
	Cd	114	20.035	ug/L	0 065	0	33	217048	1
	Sb	121	19.987	ug/L	0 243	1	45	239318	2
	Sb	123	20.042	ug/L	0 209	1	35	181432	0
	Ba	135	20.058	ug/L	0 035	0	166	80571	1
	Ba	137	20.065	ug/L	0 268	1	292	139152	1
>	Tb	159		ug/L			1072767	1089351	1
	Tl	205	20.002	ug/L	0.455	2	46	722915	2
	Pb	208	20.030	ug/L	0 193	0	846	968438	1
	Bi	209		ug/L			2602515	2553168	1
	Th	232	20.052	ug/L	0 310	1	52	869550	1
	U	238	20.063	ug/L	0.033	0	11	925728	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 4
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 01, 2013 09:39:58
Number of Replicates. 3
Method File C:\NexION Data\Method\200 8nomin mth
Tuning File C:\NexION Data\MassCal\Default.tun
Optimization File C:\NexION Data\Conditions\Default dac
Calibration File

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1515054	1
	Be	9	49.673	ug/L	0 894	1	11	228890	0
	C	13		ug/L			79519	76802	1
	Cl	37		ug/L			4431846	4924377	2
>	Sc	45		ug/L			1043756	1060587	0
	V	51	49.739	ug/L	0 774	1	8047	1120445	0
	V-1	51	49.743	ug/L	0 918	1	213	1115354	1
	Cr	52	49.827	ug/L	0 856	1	23917	993108	1
	Cr	53	49.831	ug/L	1 366	2	197	110593	2
	Mn	55	49.745	ug/L	1 053	2	1056	1340095	1
	Co	59	49.765	ug/L	0 889	1	201	989527	1
>	Ge	72		ug/L			618657	629811	1
	Ni	60	49.725	ug/L	1.083	2	277	208898	0
	Ni	62	50.125	ug/L	0 132	0	574	30766	1
	Cu	63	49.881	ug/L	1 751	3	1520	475831	2
	Cu	65	49.708	ug/L	0 492	0	546	214226	0
	Zn	66	50.073	ug/L	0 681	1	4845	130522	1
	Zn	67	50.106	ug/L	1 408	2	734	21769	1
	Zn	68	50.104	ug/L	1.203	2	3805	95373	1
	As	75	49.636	ug/L	1 227	2	-1	108328	1
	As-1	75	49.649	ug/L	1 255	2	11751	122500	0
	Se	82	49.604	ug/L	0 743	1	0	12145	0
	Se	78	49.654	ug/L	0 888	1	11952	45219	0
	Mo	98	49.637	ug/L	1 098	2	10	242338	0
	Y	89		ug/L			410552	416918	1
	Kr	83		ug/L			301	316	3
>	In	115		ug/L			840443	858882	1
	Ag	107	49.834	ug/L	1 313	2	32	451741	0
	Cd	111	49.715	ug/L	1 890	3	62	211605	1
	Cd	114	49.787	ug/L	1 523	3	33	538804	1
	Sb	121	49.763	ug/L	1 734	3	45	593793	1
	Sb	123	49.725	ug/L	1 183	2	35	447095	0
	Ba	135	49.743	ug/L	1.818	3	166	198517	1
	Ba	137	49.809	ug/L	1 687	3	292	345455	1
>	Tb	159		ug/L			1072767	1113552	2
	Tl	205	49.729	ug/L	1.759	3	46	1787801	1
	Pb	208	49.668	ug/L	1 408	2	846	2373796	0
	Bi	209		ug/L			2602515	2565890	1
	Th	232	50.857	ug/L	1 406	2	52	2464678	0
	U	238	50.680	ug/L	1.076	2	11	2563955	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Standard 5
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 01, 2013 09:45:10
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default tun
Optimization File. C:\NexION Data\Conditions\Default.dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens.	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1533415	2
	Be	9	98.590	ug/L	1 900	1	11	439113	0
	C	13		ug/L			79519	79384	0
	Cl	37		ug/L			4431846	4818237	3
>	Sc	45		ug/L			1043756	1037630	4
	V	51	101.299	ug/L	3 342	3	8047	2322642	0
	V-1	51	101.318	ug/L	3 581	3	213	2322464	0
	Cr	52	99.368	ug/L	4 824	4	23917	1872670	0
	Cr	53	99.450	ug/L	5 646	5	197	211554	1
	Mn	55	100.765	ug/L	5 015	4	1056	2720675	0
	Co	59	99.247	ug/L	3 807	3	201	1881431	0
>	Ge	72		ug/L			618657	617567	1
	Ni	60	98.852	ug/L	1 898	1	277	391970	0
	Ni	62	100.129	ug/L	3.675	3	574	59929	2
	Cu	63	99.222	ug/L	1 831	1	1520	903382	1
	Cu	65	98.828	ug/L	1.721	1	546	401425	0
	Zn	66	99.682	ug/L	2 853	2	4845	247405	1
	Zn	67	99.800	ug/L	1 248	1	734	41528	0
	Zn	68	99.676	ug/L	2 070	2	3805	180386	1
	As	75	99.626	ug/L	1 109	1	-1	210604	0
	As-1	75	99.653	ug/L	1.526	1	11751	226812	0
	Se	82	99.161	ug/L	1.240	1	0	23160	0
	Se	78	99.297	ug/L	2 588	2	11952	75255	0
	Mo	98	99.819	ug/L	0 926	0	10	475055	0
	Y	89		ug/L			410552	420338	1
	Kr	83		ug/L			301	357	5
>	In	115		ug/L			840443	845208	1
	Ag	107	98.607	ug/L	2 243	2	32	840756	1
	Cd	111	99.068	ug/L	1 389	1	62	402565	0
	Cd	114	99.383	ug/L	1 147	1	33	1037383	0
	Sb	121	99.450	ug/L	2.168	2	45	1147096	1
	Sb	123	99.500	ug/L	0 997	1	35	866140	0
	Ba	135	99.725	ug/L	1 831	1	166	388080	1
	Ba	137	99.669	ug/L	1 237	1	292	672786	0
>	Tb	159		ug/L			1072767	1108034	2
	Tl	205	101.354	ug/L	3.194	3	46	3797188	0
	Pb	208	100.387	ug/L	2 912	2	846	4835281	0
	Bi	209		ug/L			2602515	2485122	2
	Th	232	99.747	ug/L	3.015	3	52	4769465	0
	U	238	99.687	ug/L	3 095	3	11	4965557	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: Rinse sample
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 01, 2013 09:51:45
Number of Replicates: 3
Method File: C:\NexION Data\Method\200 8nomin.mth
Tuning File C:\NexION Data\MassCal\Default.tun
Optimization File. C:\NexION Data\Conditions\Default dac
Calibration File:

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1514359	2
	Be	9	0.007	ug/L	0 005	80	11	40	54
	C	13		ug/L			79519	73531	2
	Cl	37		ug/L			4431846	4655275	3
>	Sc	45		ug/L			1043756	1039048	3
	V	51	0.006	ug/L	0 012	199	8047	8141	1
	V-1	51	0.004	ug/L	0 004	112	213	292	28
	Cr	52	0.019	ug/L	0.048	259	23917	24137	0
	Cr	53	0.010	ug/L	0 025	243	197	217	21
	Mn	55	0.026	ug/L	0 044	170	1056	1726	64
	Co	59	0.028	ug/L	0.048	169	201	716	120
>	Ge	72		ug/L			618657	623772	2
	Ni	60	0.013	ug/L	0 056	437	277	327	65
	Ni	62	0.121	ug/L	0 095	78	574	650	6
	Cu	63	0.040	ug/L	0 079	198	1520	1887	35
	Cu	65	0.028	ug/L	0.050	179	546	663	28
	Zn	66	-0.020	ug/L	0 112	551	4845	4831	3
	Zn	67	-0.064	ug/L	0.059	92	734	713	2
	Zn	68	0.002	ug/L	0.129	6356	3805	3838	4
	As	75	0.015	ug/L	0 028	186	-1	30	196
	As-1	75	-0.166	ug/L	0.096	57	11751	11483	0
	Se	82	0.032	ug/L	0 032	99	0	8	89
	Se	78	-0.615	ug/L	0 296	48	11952	11652	0
	Mo	98	0.029	ug/L	0.009	30	10	146	26
	Y	89		ug/L			410552	418281	1
	Kr	83		ug/L			301	276	6
>	In	115		ug/L			840443	857932	2
	Ag	107	0.008	ug/L	0 008	97	32	101	63
	Cd	111	0.014	ug/L	0 009	65	62	119	28
	Cd	114	0.008	ug/L	0 009	107	33	116	74
	Sb	121	0.294	ug/L	0.018	6	45	3496	8
	Sb	123	0.291	ug/L	0 024	8	35	2609	9
	Ba	135	0.007	ug/L	0 011	171	166	194	20
	Ba	137	0.007	ug/L	0.009	131	292	342	14
>	Tb	159		ug/L			1072767	1094706	2
	Tl	205	0.011	ug/L	0 005	44	46	454	37
	Pb	208	0.006	ug/L	0 006	104	846	1123	21
	Bi	209		ug/L			2602515	2682830	1
	Th	232	0.121	ug/L	0.007	5	52	5788	2
	U	238	0.015	ug/L	0 001	8	11	767	6

Sample Information

Sample Date/Time: Monday, July 01, 2013 09:45:10
Method File: C:\NexION Data\Method\200.8nomin.mth
Mass Calibration File: C:\NexION Data\MassCal\Default.tun
Conditions File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\070113.cal

Calibration

Analyte	Mass	r Corr Coef	Slope	Std 1 Conc	Std 2 Conc	Std 3 Conc	Std 4 Conc	Std 5 Conc
Li	6							
Be	9	**0.9996**	0.003	0.20	10	20	50	100
C	13							
Cl	37							
Sc	45							
V	51	**0.9997**	0 022	0.20	10	20	50	100
V-1	51	**0.9997**	0 022	0.50	10	20	50	100
Cr	52	**0.9999**	0.018	0.50	10	20	50	100
Cr	53	**0.9999**	0.002	0.50	10	20	50	100
Mn	55	**0.9999**	0 026	0.50	10	20	50	100
Co	59	**0.9999**	0.018	0.20	10	20	50	100
Ge	72							
Ni	60	**0.9998**	0 006	0.50	10	20	50	100
Ni	62	**1.0000**	0 001	0.50	10	20	50	100
Cu	63	**0.9999**	0.015	0 50	10	20	50	100
Cu	65	**0.9997**	0.007	0.50	10	20	50	100
Zn	66	**0.9999**	0 004	4.00	10	20	50	100
Zn	67	**0.9999**	0.001	4.00	10	20	50	100
Zn	68	**0.9999**	0.003	4 00	10	20	50	100
As	75	**0.9999**	0 003	0 20	10	20	50	100
As-1	75	**0.9999**	0 003	0 20	10	20	50	100
Se	82	**0.9998**	0.000	0.50	10	20	50	100
Se	78	**0.9999**	0.001	0.50	10	20	50	100
Mo	98	**1.0000**	0.008	0 20	10	20	50	100
Y	89							
Kr	83							
In	115							
Ag	107	**0.9997**	0.010	0.20	10	20	50	100
Cd	111	**0.9998**	0.005	0.10	10	20	50	100
Cd	114	**0.9999**	0 012	0.10	10	20	50	100
Sb	121	**0.9999**	0.014	0.20	10	20	50	100
Sb	123	**0.9999**	0.010	0.20	10	20	50	100
Ba	135	**1.0000**	0.005	0.50	10	20	50	100
Ba	137	**1.0000**	0.008	0.50	10	20	50	100
Tb	159							
Tl	205	**0.9997**	0.034	0.20	10	20	50	100
Pb	208	**1.0000**	0.043	0 10	10	20	50	100
Bi	209							
Th	232	**0.9998**	0.043	0.20	10	20	50	100
U	238	**0.9999**	0.045	0.20	10	20	50	100

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICV
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 01, 2013 09:58:37
Number of Replicates: 3
Method File. C.\NexIONData\Method\200.8nomin mth
Tuning File· C \NexIONData\MassCal\Default tun
Optimization File. C:\NexIONData\Conditions\Default.dac
Calibration File. C:\NexIONData\System\070113.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1464852	2
	Be	9	53.627	ug/L	0 629	1	11	228203	1
	C	13		ug/L			79519	79659	2
	Cl	37		ug/L			4431846	4800142	1
>	Sc	45		ug/L			1043756	1009914	3
	V	51	49.157	ug/L	1 545	3	8047	1101080	0
	V-1	51	49.282	ug/L	1.753	3	213	1099641	0
	Cr	52	51.245	ug/L	1 138	2	23917	951879	2
	Cr	53	51.652	ug/L	1 939	3	197	107102	1
	Mn	55	49.926	ug/L	1 292	2	1056	1313415	1
	Co	59	52.491	ug/L	1 787	3	201	968741	0
>	Ge	72		ug/L			618657	599119	2
	Ni	60	52.574	ug/L	1 343	2	277	202351	2
	Ni	62	50.210	ug/L	1 586	3	574	29429	1
	Cu	63	52.439	ug/L	0 190	0	1520	463908	1
	Cu	65	52.882	ug/L	1 300	2	546	208580	0
	Zn	66	51.463	ug/L	1 773	3	4845	126145	1
	Zn	67	53.071	ug/L	0 702	1	734	21754	1
	Zn	68	51.683	ug/L	0 891	1	3805	92502	0
	As	75	51.631	ug/L	1.033	2	-1	105864	0
	As-1	75	52.661	ug/L	1.285	2	11751	121616	0
	Se	82	79.496	ug/L	0.951	1	0	17864	1
	Se	78	80.430	ug/L	2 056	2	11952	61321	0
	Mo	98	51.963	ug/L	1 895	3	10	239801	1
	Y	89		ug/L			410552	408686	1
	Kr	83		ug/L			301	321	0
>	In	115		ug/L			840443	835194	1
	Ag	107	52.317	ug/L	0 353	0	32	440827	1
	Cd	111	49.498	ug/L	1 068	2	62	198751	0
	Cd	114	49.228	ug/L	0 625	1	33	507753	0
	Sb	121	52.166	ug/L	0 850	1	45	594569	0
	Sb	123	51.945	ug/L	0 430	0	35	446817	0
	Ba	135	51.262	ug/L	1 263	2	166	197170	0
	Ba	137	51.157	ug/L	1.644	3	292	341269	1
>	Tb	159		ug/L			1072767	1072197	3
	Tl	205	48.709	ug/L	1.619	3	46	1765393	0
	Pb	208	51.278	ug/L	1 839	3	846	2389522	0
	Bi	209		ug/L			2602515	2491423	4
	Th	232	52.961	ug/L	1.470	2	52	2450183	1
	U	238	52.406	ug/L	1 660	3	11	2525562	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICB
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 01, 2013 10:05:29
Number of Replicates 3
Method File C \NexION Data\Method\200 8nomin mth
Tuning File. C \NexION Data\MassCal\Default tun
Optimization File: C:\NexION Data\Conditions\Default dac
Calibration File: C:\NexION Data\System\070113.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1514498	1
	Be	9	0.003	ug/L	0 001	31	11	24	16
	C	13		ug/L			79519	77157	3
	Cl	37		ug/L			4431846	4570175	0
>	Sc	45		ug/L			1043756	1026086	1
	V	51	0.006	ug/L	0 003	39	8047	8056	1
	V-1	51	-0.000	ug/L	0 000	6352	213	210	4
	Cr	52	0.022	ug/L	0 005	22	23917	23923	1
	Cr	53	0.000	ug/L	0.009	11630	197	194	8
	Mn	55	-0.001	ug/L	0 001	185	1056	1022	4
	Co	59	-0.001	ug/L	0.000	44	201	180	4
>	Ge	72		ug/L			618657	615387	2
	Ni	60	-0.021	ug/L	0 005	23	277	190	9
	Ni	62	-0.096	ug/L	0 028	29	574	514	4
	Cu	63	-0.006	ug/L	0 001	8	1520	1456	2
	Cu	65	-0.004	ug/L	0 003	78	546	527	3
	Zn	66	-0.021	ug/L	0 021	101	4845	4769	1
	Zn	67	-0.069	ug/L	0.080	116	734	701	3
	Zn	68	-0.024	ug/L	0 055	233	3805	3742	0
	As	75	-0.003	ug/L	0 011	417	-1	-7	313
	As-1	75	-0.140	ug/L	0 149	106	11751	11384	0
	Se	82	-0.010	ug/L	0.031	316	0	-1	488
	Se	78	-0.471	ug/L	0.466	98	11952	11586	0
	Mo	98	0.010	ug/L	0.001	12	10	59	8
	Y	89		ug/L			410552	415947	1
	Kr	83		ug/L			301	299	5
>	In	115		ug/L			840443	845094	2
	Ag	107	0.002	ug/L	0 000	9	32	51	6
	Cd	111	0.006	ug/L	0 002	39	62	87	11
	Cd	114	0.001	ug/L	0 000	28	33	49	10
	Sb	121	0.074	ug/L	0 020	26	45	896	23
	Sb	123	0.071	ug/L	0.017	23	35	652	20
	Ba	135	0.001	ug/L	0 002	275	166	169	1
	Ba	137	-0.003	ug/L	0.001	45	292	275	1
>	Tb	159		ug/L			1072767	1078110	2
	Tl	205	0.003	ug/L	0 001	17	46	154	9
	Pb	208	0.001	ug/L	0.001	182	846	885	4
	Bi	209		ug/L			2602515	2639309	2
	Th	232	0.058	ug/L	0.004	6	52	2749	5
	U	238	0.005	ug/L	0.001	22	11	259	19

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 01, 2013 10:09:38
Number of Replicates 3
Method File: C:\NexION Data\Method\200 8nomin mth
Tuning File. C \NexION Data\MassCal\Default.tun
Optimization File C:\NexION Data\Conditions\Default dac
Calibration File C:\NexION Data\System\070113.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1501808	1
	Be	9	52.104	ug/L	1 672	3	11	227306	2
	C	13		ug/L			79519	76815	2
	Cl	37		ug/L			4431846	4856276	5
>	Sc	45		ug/L			1043756	1013802	1
	V	51	48.186	ug/L	1 255	2	8047	1084321	1
	V-1	51	48.198	ug/L	1 175	2	213	1080399	1
	Cr	52	50.064	ug/L	1.007	2	23917	934438	1
	Cr	53	50.083	ug/L	0 878	1	197	104337	1
	Mn	55	49.544	ug/L	1 570	3	1056	1308968	2
	Co	59	51.644	ug/L	1 285	2	201	957457	1
>	Ge	72		ug/L			618657	602563	1
	Ni	60	51.952	ug/L	1 634	3	277	201093	1
	Ni	62	50.705	ug/L	1 870	3	574	29892	3
	Cu	63	51.142	ug/L	1.909	3	1520	454917	2
	Cu	65	51.971	ug/L	2 181	4	546	206169	2
	Zn	66	51.586	ug/L	1 464	2	4845	127190	1
	Zn	67	51.985	ug/L	2 120	4	734	21441	2
	Zn	68	51.803	ug/L	1 432	2	3805	93243	1
	As	75	51.559	ug/L	0 805	1	-1	106338	0
	As-1	75	51.536	ug/L	0 806	1	11751	119972	0
	Se	82	52.581	ug/L	1.450	2	0	11882	1
	Se	78	52.027	ug/L	1 374	2	11952	44009	0
	Mo	98	51.533	ug/L	1 161	2	10	239271	1
	Y	89		ug/L			410552	403892	1
	Kr	83		ug/L			301	307	8
>	In	115		ug/L			840443	833923	1
	Ag	107	51.726	ug/L	1 936	3	32	435042	2
	Cd	111	50.710	ug/L	0 936	1	62	203317	0
	Cd	114	50.789	ug/L	1 121	2	33	523030	1
	Sb	121	50.544	ug/L	1 679	3	45	575111	1
	Sb	123	50.825	ug/L	0.885	1	35	436480	0
	Ba	135	50.686	ug/L	1 273	2	166	194659	0
	Ba	137	51.255	ug/L	0 969	1	292	341473	1
>	Tb	159		ug/L			1072767	1089384	1
	Tl	205	48.060	ug/L	1.064	2	46	1770811	0
	Pb	208	49.495	ug/L	1.028	2	846	2344966	0
	Bi	209		ug/L			2602515	2525361	2
	Th	232	51.878	ug/L	1 092	2	52	2439585	1
	U	238	51.649	ug/L	1 476	2	11	2530063	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 01, 2013 10:16:10
Number of Replicates: 3
Method File: C:\NexION Data\Method\200 8nomin mth
Tuning File. C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File C.\NexION Data\System\070113.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1496484	0
	Be	9	0.005	ug/L	0 004	65	11	35	42
	C	13		ug/L			79519	74856	2
	Cl	37		ug/L			4431846	4625543	1
>	Sc	45		ug/L			1043756	1014928	0
	V	51	0.013	ug/L	0 024	184	8047	8113	6
	V-1	51	0.007	ug/L	0 008	111	213	362	47
	Cr	52	0.022	ug/L	0 072	324	23917	23658	5
	Cr	53	0.001	ug/L	0 012	874	197	194	12
	Mn	55	0.005	ug/L	0.007	148	1056	1147	15
	Co	59	0.006	ug/L	0 008	128	201	313	48
>	Ge	72		ug/L			618657	626236	1
	Ni	60	-0.016	ug/L	0 009	56	277	217	15
	Ni	62	-0.075	ug/L	0 052	68	574	536	7
	Cu	63	-0.006	ug/L	0 003	48	1520	1485	0
	Cu	65	-0.004	ug/L	0 000	10	546	536	0
	Zn	66	-0.037	ug/L	0 030	82	4845	4813	2
	Zn	67	-0.092	ug/L	0 045	49	734	704	2
	Zn	68	-0.053	ug/L	0 026	49	3805	3757	1
	As	75	0.007	ug/L	0.014	200	-1	13	227
	As-1	75	-0.218	ug/L	0.072	33	11751	11416	0
	Se	82	-0.010	ug/L	0 010	94	0	-1	138
	Se	78	-0.770	ug/L	0 213	27	11952	11599	0
	Mo	98	0.014	ug/L	0 004	29	10	76	26
	Y	89		ug/L			410552	410546	0
	Kr	83		ug/L			301	304	3
>	In	115		ug/L			840443	841376	2
	Ag	107	0.004	ug/L	0 002	35	32	70	18
	Cd	111	0.008	ug/L	0 003	34	62	93	9
	Cd	114	0.003	ug/L	0 001	36	33	69	17
	Sb	121	0.141	ug/L	0 029	20	45	1662	20
	Sb	123	0.137	ug/L	0 032	23	35	1223	22
	Ba	135	0.003	ug/L	0 003	97	166	177	4
	Ba	137	0.002	ug/L	0 002	74	292	307	4
>	Tb	159		ug/L			1072767	1078884	0
	Tl	205	0.005	ug/L	0 000	8	46	247	7
	Pb	208	0.002	ug/L	0 000	12	846	967	1
	Bi	209		ug/L			2602515	2679582	0
	Th	232	0.087	ug/L	0 003	3	52	4124	3
	U	238	0.007	ug/L	0 001	18	11	328	17

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LOW CHECK
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 01, 2013 10:20:18
Number of Replicates 3
Method File: C:\NexION Data\Method\200 8nomin.mth
Tuning File C:\NexION Data\MassCal\Default tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\070113 cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1524783	3
	Be	9	0.210	ug/L	0 013	6	11	943	3
	C	13		ug/L			79519	78780	1
	Cl	37		ug/L			4431846	4526944	1
>	Sc	45		ug/L			1043756	1007267	0
	V	51	0.203	ug/L	0 009	4	8047	12270	1
	V-1	51	0.188	ug/L	0 006	3	213	4395	2
	Cr	52	0.522	ug/L	0 016	3	23917	32525	0
	Cr	53	0.468	ug/L	0 013	2	197	1157	1
	Mn	55	0.471	ug/L	0 008	1	1056	13377	0
	Co	59	0.210	ug/L	0 007	3	201	4057	2
>	Ge	72		ug/L			618657	614885	1
	Ni	60	0.436	ug/L	0 006	1	277	1997	2
	Ni	62	0.263	ug/L	0.028	10	574	726	2
	Cu	63	0.387	ug/L	0 008	1	1520	5012	0
	Cu	65	0.396	ug/L	0 016	3	546	2140	1
	Zn	66	2.422	ug/L	0.084	3	4845	10683	0
	Zn	67	2.224	ug/L	0.230	10	734	1633	4
	Zn	68	2.286	ug/L	0 142	6	3805	7813	2
	As	75	0.200	ug/L	0 010	5	-1	418	6
	As-1	75	0.092	ug/L	0 084	90	11751	11875	0
	Se	82	0.557	ug/L	0 020	3	0	129	5
	Se	78	0.116	ug/L	0 298	256	11952	11951	0
	Mo	98	0.208	ug/L	0 015	7	10	997	6
	Y	89		ug/L			410552	413273	1
	Kr	83		ug/L			301	260	1
>	In	115		ug/L			840443	850656	0
	Ag	107	0.204	ug/L	0 003	1	32	1786	1
	Cd	111	0.104	ug/L	0 006	5	62	489	5
	Cd	114	0.102	ug/L	0 002	1	33	1105	1
	Sb	121	0.235	ug/L	0 016	6	45	2775	6
	Sb	123	0.234	ug/L	0 020	8	35	2087	8
	Ba	135	0.456	ug/L	0 010	2	166	1952	1
	Ba	137	0.450	ug/L	0 004	0	292	3353	0
>	Tb	159		ug/L			1072767	1098640	1
	Tl	205	0.190	ug/L	0 002	0	46	7124	0
	Pb	208	0.084	ug/L	0 002	1	846	4900	0
	Bi	209		ug/L			2602515	2667589	1
	Th	232	0.180	ug/L	0 003	1	52	8580	0
	U	238	0.182	ug/L	0 002	0	11	9020	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSA
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 01, 2013 10:24:25
Number of Replicates 3
Method File: C \NexION Data\Method\200.8nomin mth
Tuning File: C \NexION Data\MassCal\Default.tun
Optimization File C:\NexION Data\Conditions\Default dac
Calibration File: C:\NexION Data\System\070113 cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1453803	1
	Be	9	0.001	ug/L	0 000	19	11	17	6
	C	13		ug/L			79519	152715	1
	Cl	37		ug/L			4431846	12331648	1
>	Sc	45		ug/L			1043756	987543	1
	V	51	0.137	ug/L	0 018	13	8047	10599	4
	V-1	51	1.168	ug/L	0 028	2	213	25697	1
	Cr	52	0.680	ug/L	0 052	7	23917	34682	2
	Cr	53	4.228	ug/L	0 138	3	197	8747	1
	Mn	55	0.064	ug/L	0 003	3	1056	2642	1
	Co	59	0.020	ug/L	0 003	14	201	553	7
>	Ge	72		ug/L			618657	578601	2
	Ni	60	0.280	ug/L	0 026	9	277	1299	6
	Ni	62	14.400	ug/L	2 554	17	574	8543	17
	Cu	63	1.642	ug/L	0 208	12	1520	15407	12
	Cu	65	0.277	ug/L	0 005	1	546	1562	1
	Zn	66	-0.740	ug/L	0 085	11	4845	2840	4
	Zn	67	3.558	ug/L	0 208	5	734	2048	4
	Zn	68	-1.225	ug/L	0 014	1	3805	1525	3
	As	75	0.035	ug/L	0 044	125	-1	69	128
	As-1	75	0.863	ug/L	0 123	14	11751	12731	0
	Se	82	-0.198	ug/L	0 035	17	0	-42	16
	Se	78	2.938	ug/L	0 518	17	11952	12929	0
	Mo	98	417.868	ug/L	6 495	1	10	1862871	0
	Y	89		ug/L			410552	386480	2
	Kr	83		ug/L			301	528	2
>	In	115		ug/L			840443	781168	2
	Ag	107	0.016	ug/L	0 002	10	32	158	6
	Cd	111	0.206	ug/L	0 018	8	62	831	6
	Cd	114	0.306	ug/L	0 011	3	33	2985	2
	Sb	121	0.090	ug/L	0.009	10	45	1001	10
	Sb	123	0.088	ug/L	0 012	13	35	738	12
	Ba	135	0.013	ug/L	0 003	25	166	201	5
	Ba	137	0.003	ug/L	0 004	125	292	291	6
>	Tb	159		ug/L			1072767	1040369	2
	Tl	205	0.024	ug/L	0 001	4	46	883	2
	Pb	208	0.020	ug/L	0.001	3	846	1746	3
	Bi	209		ug/L			2602515	2193139	8
	Th	232	0.062	ug/L	0.017	27	52	2809	25
	U	238	0.003	ug/L	0.000	14	11	139	13

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ICSAB
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 01, 2013 10:30:57
Number of Replicates: 3
Method File: C:\NexION Data\Method\200 8nomin mth
Tuning File: C:\NexION Data\MassCal\Default tun
Optimization File: C:\NexION Data\Conditions\Default dac
Calibration File: C:\NexION Data\System\070113 cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1467873	1
	Be	9	0.001	ug/L	0.002	153	11	16	40
	C	13		ug/L			79519	156915	1
	Cl	37		ug/L			4431846	12551550	4
>	Sc	45		ug/L			1043756	1018878	2
	V	51	0.014	ug/L	0 086	633	8047	8145	22
	V-1	51	1.176	ug/L	0 044	3	213	26693	1
	Cr	52	20.162	ug/L	0 896	4	23917	391927	1
	Cr	53	23.951	ug/L	0 922	3	197	50219	1
	Mn	55	18.857	ug/L	0 758	4	1056	501126	1
	Co	59	19.378	ug/L	0 551	2	201	361085	1
>	Ge	72		ug/L			618657	585335	2
	Ni	60	20.323	ug/L	0 691	3	277	76562	1
	Ni	62	31.364	ug/L	2.544	8	574	18147	5
	Cu	63	20.729	ug/L	0 873	4	1520	179927	2
	Cu	65	19.759	ug/L	0 775	3	546	76446	1
	Zn	66	19.130	ug/L	0.576	3	4845	48693	0
	Zn	67	21.142	ug/L	0.290	1	734	8884	1
	Zn	68	17.352	ug/L	0.679	3	3805	32724	1
	As	75	19.854	ug/L	0 676	3	-1	39760	1
	As-1	75	20.056	ug/L	0.821	4	11751	52124	1
	Se	82	-0.187	ug/L	0 054	29	0	-40	27
	Se	78	2.210	ug/L	0 546	24	11952	12639	0
	Mo	98	410.546	ug/L	14 256	3	10	1851000	1
	Y	89		ug/L			410552	397420	3
	Kr	83		ug/L			301	531	6
>	In	115		ug/L			840443	809646	2
	Ag	107	18.948	ug/L	0 739	3	32	154684	1
	Cd	111	19.237	ug/L	0 910	4	62	74869	2
	Cd	114	19.378	ug/L	0 755	3	33	193664	1
	Sb	121	0.080	ug/L	0 008	10	45	929	6
	Sb	123	0.079	ug/L	0 007	9	35	689	6
	Ba	135	0.014	ug/L	0 001	4	166	213	3
	Ba	137	0.007	ug/L	0 002	26	292	324	0
>	Tb	159		ug/L			1072767	1052039	3
	Tl	205	0.024	ug/L	0 001	5	46	902	1
	Pb	208	0.027	ug/L	0 001	4	846	2056	1
	Bi	209		ug/L			2602515	2306269	2
	Th	232	0.021	ug/L	0 001	4	52	1002	2
	U	238	0.001	ug/L	0 000	22	11	46	16

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR200
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 01, 2013 10:37:49
Number of Replicates. 3
Method File. C:\NexION Data\Method\200 8nomin mth
Tuning File: C \NexION Data\MassCal\Default tun
Optimization File: C:\NexION Data\Conditions\Default dac
Calibration File: C:\NexION Data\System\070113.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1484078	0
	Be	9	200.526	ug/L	1 195	0	11	864640	0
	C	13		ug/L			79519	80025	1
	Cl	37		ug/L			4431846	5000271	3
>	Sc	45		ug/L			1043756	1045370	0
	V	51	201.046	ug/L	0 708	0	8047	4640184	0
	V-1	51	197.195	ug/L	1 172	0	213	4558060	1
	Cr	52	207.665	ug/L	4 634	2	23917	3921370	1
	Cr	53	194.311	ug/L	2 824	1	197	416852	0
	Mn	55	200.342	ug/L	2 128	1	1056	5455579	0
	Co	59	209.133	ug/L	2 563	1	201	3998147	1
>	Ge	72		ug/L			618657	597416	1
	Ni	60	199.443	ug/L	2 229	1	277	764783	0
	Ni	62	197.655	ug/L	2 882	1	574	113951	3
	Cu	63	196.163	ug/L	4 679	2	1520	1726113	1
	Cu	65	194.804	ug/L	1 530	0	546	764985	1
	Zn	66	195.333	ug/L	2 907	1	4845	464513	0
	Zn	67	198.829	ug/L	1 943	0	734	79334	1
	Zn	68	192.360	ug/L	1 759	0	3805	333361	0
	As	75	196.244	ug/L	2.275	1	-1	401305	0
	As-1	75	197.146	ug/L	2 321	1	11751	422968	0
	Se	82	194.315	ug/L	1 845	0	0	43544	0
	Se	78	196.159	ug/L	2 084	1	11952	132555	0
	Mo	98	203.689	ug/L	1 602	0	10	937803	1
	Y	89		ug/L			410552	402811	2
	Kr	83		ug/L			301	476	9
>	In	115		ug/L			840443	834948	1
	Ag	107	195.738	ug/L	5 121	2	32	1649126	3
	Cd	111	193.923	ug/L	2 029	1	62	778374	0
	Cd	114	192.137	ug/L	1 616	0	33	1981231	0
	Sb	121	218.570	ug/L	4 271	1	45	2490385	0
	Sb	123	199.288	ug/L	2 205	1	35	1713670	0
	Ba	135	201.658	ug/L	4 078	2	166	775041	1
	Ba	137	201.908	ug/L	4 518	2	292	1345914	0
>	Tb	159		ug/L			1072767	1089943	1
	Tl	205	198.107	ug/L	1 086	0	46	7304080	0
	Pb	208	201.268	ug/L	1.709	0	846	9538897	0
	Bi	209		ug/L			2602515	2343364	1
	Th	232	198.723	ug/L	3.218	1	52	9350243	0
	U	238	198.599	ug/L	2.282	1	11	9734970	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: LR300
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 01, 2013 10:44:40
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin mth
Tuning File: C.\NexIONData\MassCal\Default.tun
Optimization File: C.\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\070113.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1497346	0
	Be	9	287.712	ug/L	1 894	0	11	1251705	1
	C	13		ug/L			79519	81496	1
	Cl	37		ug/L			4431846	5092055	1
>	Sc	45		ug/L			1043756	1024659	1
	V	51	301.414	ug/L	6.336	2	8047	6813962	1
	V-1	51	297.095	ug/L	6 723	2	213	6729862	1
	Cr	52	303.555	ug/L	4 065	1	23917	5607713	0
	Cr	53	288.631	ug/L	6 349	2	197	606776	1
	Mn	55	291.991	ug/L	6.683	2	1056	7792844	1
	Co	59	307.551	ug/L	3 372	1	201	5762513	0
>	Ge	72		ug/L			618657	589402	1
	Ni	60	288.249	ug/L	1 692	0	277	1090548	1
	Ni	62	287.340	ug/L	4 665	1	574	163182	2
	Cu	63	309.291	ug/L	1 520	0	1520	2684737	0
	Cu	65	280.116	ug/L	3 055	1	546	1085051	1
	Zn	66	278.488	ug/L	4 905	1	4845	651442	0
	Zn	67	282.764	ug/L	4 982	1	734	111008	0
	Zn	68	277.564	ug/L	2 064	0	3805	472995	0
	As	75	285.052	ug/L	2.561	0	-1	575123	0
	As-1	75	287.510	ug/L	2 532	0	11751	603467	0
	Se	82	275.743	ug/L	2 411	0	0	60965	0
	Se	78	282.916	ug/L	3 016	1	11952	183589	0
	Mo	98	300.464	ug/L	4 225	1	10	1364678	0
	Y	89		ug/L			410552	395972	0
	Kr	83		ug/L			301	643	5
>	In	115		ug/L			840443	828547	1
	Ag	107	312.658	ug/L	2 021	0	32	2613620	1
	Cd	111	279.544	ug/L	3 567	1	62	1113434	0
	Cd	114	303.663	ug/L	5 163	1	33	3107061	0
	Sb	121	316.608	ug/L	4 268	1	45	3580009	0
	Sb	123	319.712	ug/L	2 106	0	35	2728228	0
	Ba	135	299.513	ug/L	1 406	0	166	1142344	0
	Ba	137	297.723	ug/L	5 015	1	292	1969447	0
>	Tb	159		ug/L			1072767	1084980	0
	Tl	205	288.925	ug/L	4 302	1	46	10604090	1
	Pb	208	296.817	ug/L	2 263	0	846	14003296	0
	Bi	209		ug/L			2602515	2258246	1
	Th	232	290.951	ug/L	3 139	1	52	13628432	0
	U	238	293.891	ug/L	3.855	1	11	14340734	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 01, 2013 10:51:32
Number of Replicates 3
Method File. C \NexIONData\Method\200.8nomin.mth
Tuning File: C:\NexIONData\MassCal\Default tun
Optimization File C:\NexIONData\Conditions\Default dac
Calibration File. C:\NexIONData\System\070113.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1578018	0
	Be	9	0.016	ug/L	0.005	31	11	84	27
	C	13		ug/L			79519	116236	2
	Cl	37		ug/L			4431846	4940808	3
>	Sc	45		ug/L			1043756	1058960	1
	V	51	0.051	ug/L	0 007	14	8047	9352	2
	V-1	51	0.014	ug/L	0 003	20	213	556	13
	Cr	52	0.161	ug/L	0 025	15	23917	27332	1
	Cr	53	0.035	ug/L	0 012	34	197	275	9
	Mn	55	-0.002	ug/L	0 003	174	1056	1021	9
	Co	59	0.003	ug/L	0 002	86	201	260	20
>	Ge	72		ug/L			618657	631058	2
	Ni	60	-0.037	ug/L	0 005	13	277	132	16
	Ni	62	1.764	ug/L	0 741	41	574	1656	28
	Cu	63	0.014	ug/L	0 048	355	1520	1679	28
	Cu	65	-0.089	ug/L	0.007	8	546	187	18
	Zn	66	-1.560	ug/L	0 009	0	4845	1061	2
	Zn	67	-1.405	ug/L	0 050	3	734	161	13
	Zn	68	-1.481	ug/L	0.045	3	3805	1202	8
	As	75	0.001	ug/L	0 006	1023	-1	0	6728
	As-1	75	-0.227	ug/L	0 110	48	11751	11483	0
	Se	82	0.031	ug/L	0 029	92	0	7	82
	Se	78	-0.757	ug/L	0 421	55	11952	11695	0
	Mo	98	0.046	ug/L	0 003	5	10	232	3
	Y	89		ug/L			410552	417016	1
	Kr	83		ug/L			301	292	0
>	In	115		ug/L			840443	884304	0
	Ag	107	0.008	ug/L	0 003	37	32	103	26
	Cd	111	0.015	ug/L	0 006	37	62	128	18
	Cd	114	0.006	ug/L	0 001	22	33	98	15
	Sb	121	0.622	ug/L	0 127	20	45	7551	19
	Sb	123	0.610	ug/L	0 140	22	35	5585	22
	Ba	135	-0.023	ug/L	0 004	19	166	83	21
	Ba	137	-0.021	ug/L	0 006	26	292	156	25
>	Tb	159		ug/L			1072767	1100449	1
	Tl	205	0.028	ug/L	0 009	33	46	1086	33
	Pb	208	0.007	ug/L	0 007	98	846	1208	28
	Bi	209		ug/L			2602515	2719157	0
	Th	232	0.164	ug/L	0 013	8	52	7860	8
	U	238	0.026	ug/L	0 006	23	11	1294	24

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV2
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 01, 2013 10:57:35
Number of Replicates 3
Method File C \NexION Data\Method\200.8nomin mth
Tuning File: C:\NexIONData\MassCal\Default tun
Optimization File. C \NexIONData\Conditions\Default.dac
Calibration File. C:\NexIONData\System\070113.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1566423	1
	Be	9	51.304	ug/L	1 103	2	11	233487	2
	C	13		ug/L			79519	75858	1
	Cl	37		ug/L			4431846	4932725	0
>	Sc	45		ug/L			1043756	1025250	3
	V	51	48.211	ug/L	1 539	3	8047	1096597	1
	V-1	51	48.281	ug/L	1.625	3	213	1093830	1
	Cr	52	50.439	ug/L	1 807	3	23917	951357	2
	Cr	53	50.654	ug/L	2.153	4	197	106618	0
	Mn	55	48.789	ug/L	1 626	3	1056	1303009	2
	Co	59	50.923	ug/L	2 110	4	201	953989	1
>	Ge	72		ug/L			618657	611470	2
	Ni	60	51.601	ug/L	1.971	3	277	202646	2
	Ni	62	48.928	ug/L	1.943	3	574	29274	1
	Cu	63	50.764	ug/L	2 121	4	1520	458137	2
	Cu	65	51.116	ug/L	1 545	3	546	205757	0
	Zn	66	51.460	ug/L	2 038	3	4845	128729	2
	Zn	67	51.947	ug/L	2 486	4	734	21737	2
	Zn	68	52.263	ug/L	2 653	5	3805	95375	2
	As	75	50.632	ug/L	1 972	3	-1	105918	1
	As-1	75	50.700	ug/L	2 178	4	11751	119899	1
	Se	82	51.557	ug/L	1.395	2	0	11821	0
	Se	78	51.337	ug/L	2 145	4	11952	44210	0
	Mo	98	50.479	ug/L	1 606	3	10	237765	0
	Y	89		ug/L			410552	404492	2
	Kr	83		ug/L			301	321	4
>	In	115		ug/L			840443	840208	2
	Ag	107	51.392	ug/L	1 288	2	32	435475	0
	Cd	111	52.242	ug/L	2 208	4	62	210918	1
	Cd	114	51.334	ug/L	1 664	3	33	532419	0
	Sb	121	51.146	ug/L	1 830	3	45	586192	1
	Sb	123	51.284	ug/L	1 464	2	35	443608	0
	Ba	135	50.919	ug/L	1.709	3	166	196963	0
	Ba	137	51.302	ug/L	1 200	2	292	344296	1
>	Tb	159		ug/L			1072767	1096633	2
	Tl	205	47.854	ug/L	1 128	2	46	1774601	1
	Pb	208	49.045	ug/L	1.405	2	846	2338243	0
	Bi	209		ug/L			2602515	2529859	2
	Th	232	51.389	ug/L	1.867	3	52	2431435	0
	U	238	51.875	ug/L	1 851	3	11	2556929	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB2
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 01, 2013 11:04:27
Number of Replicates 3
Method File: C \NexION Data\Method\200.8nomin.mth
Tuning File: C.\NexION Data\MassCal\Default.tun
Optimization File: C \NexION Data\Conditions\Default dac
Calibration File: C \NexION Data\System\070113.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1523263	3
	Be	9	0.010	ug/L	0 010	104	11	54	78
	C	13		ug/L			79519	74311	2
	Cl	37		ug/L			4431846	4675972	4
>	Sc	45		ug/L			1043756	1018869	1
	V	51	0.009	ug/L	0 014	148	8047	8061	3
	V-1	51	0.008	ug/L	0 009	106	213	394	49
	Cr	52	0.017	ug/L	0 028	164	23917	23662	2
	Cr	53	0.014	ug/L	0 012	87	197	222	11
	Mn	55	0.006	ug/L	0 010	173	1056	1187	22
	Co	59	0.005	ug/L	0 009	195	201	285	60
>	Ge	72		ug/L			618657	612989	2
	Ni	60	-0.025	ug/L	0 004	13	277	175	8
	Ni	62	0.499	ug/L	0 079	15	574	862	3
	Cu	63	-0.024	ug/L	0 006	24	1520	1294	6
	Cu	65	-0.041	ug/L	0 016	38	546	377	19
	Zn	66	-0.809	ug/L	0 026	3	4845	2845	4
	Zn	67	-0.755	ug/L	0 011	1	734	421	1
	Zn	68	-0.781	ug/L	0.039	4	3805	2397	2
	As	75	0.016	ug/L	0 009	52	-1	32	57
	As-1	75	-0.105	ug/L	0 094	89	11751	11415	0
	Se	82	0.023	ug/L	0 054	232	0	6	199
	Se	78	-0.395	ug/L	0 325	82	11952	11589	0
	Mo	98	0.023	ug/L	0 010	43	10	120	39
	Y	89		ug/L			410552	410062	2
	Kr	83		ug/L			301	291	4
>	In	115		ug/L			840443	855083	0
	Ag	107	0.008	ug/L	0 007	81	32	106	56
	Cd	111	0.016	ug/L	0.011	70	62	129	35
	Cd	114	0.008	ug/L	0.008	103	33	119	74
	Sb	121	0.192	ug/L	0 046	23	45	2293	23
	Sb	123	0.187	ug/L	0 049	26	35	1683	26
	Ba	135	-0.010	ug/L	0.012	117	166	129	36
	Ba	137	-0.011	ug/L	0 009	82	292	220	28
>	Tb	159		ug/L			1072767	1076052	1
	Tl	205	0.011	ug/L	0 009	78	46	462	71
	Pb	208	0.001	ug/L	0 008	965	846	889	43
	Bi	209		ug/L			2602515	2664502	1
	Th	232	0.102	ug/L	0.003	3	52	4788	3
	U	238	0.011	ug/L	0.010	84	11	560	83

ICP-MS Quantitative Analysis - Summary Report

Sample ID: DI Check
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 01, 2013 11:11:20
Number of Replicates: 3
Method File. C:\NexION Data\Method\200.8nomin.mth
Tuning File. C.\NexION Data\MassCal\Default tun
Optimization File: C \NexION Data\Conditions\Default dac
Calibration File C:\NexION Data\System\070113 cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1571518	2
	Be	9	0.004	ug/L	0 002	55	11	31	35
	C	13		ug/L			79519	75165	0
	Cl	37		ug/L			4431846	4654522	1
>	Sc	45		ug/L			1043756	1024064	1
	V	51	0.009	ug/L	0 009	94	8047	8101	0
	V-1	51	0.002	ug/L	0 002	107	213	260	21
	Cr	52	0.021	ug/L	0 033	157	23917	23847	0
	Cr	53	-0.003	ug/L	0 006	179	197	187	5
	Mn	55	-0.009	ug/L	0 000	4	1056	791	1
	Co	59	-0.003	ug/L	0 002	83	201	143	33
>	Ge	72		ug/L			618657	610281	0
	Ni	60	-0.057	ug/L	0 004	6	277	50	27
	Ni	62	0.243	ug/L	0 007	2	574	709	0
	Cu	63	-0.102	ug/L	0 005	5	1520	587	7
	Cu	65	-0.116	ug/L	0 003	2	546	75	14
	Zn	66	-1.320	ug/L	0 005	0	4845	1604	1
	Zn	67	-1.193	ug/L	0 046	3	734	242	8
	Zn	68	-1.211	ug/L	0 043	3	3805	1632	4
	As	75	0.003	ug/L	0 006	178	-1	5	227
	As-1	75	-0.059	ug/L	0 096	162	11751	11466	1
	Se	82	0.037	ug/L	0.031	83	0	9	76
	Se	78	-0.199	ug/L	0 335	168	11952	11665	1
	Mo	98	0.013	ug/L	0 008	66	10	69	56
	Y	89		ug/L			410552	408985	0
	Kr	83		ug/L			301	279	9
>	In	115		ug/L			840443	856901	1
	Ag	107	0.005	ug/L	0 008	164	32	77	95
	Cd	111	0.008	ug/L	0.002	29	62	96	11
	Cd	114	0.003	ug/L	0.006	188	33	65	91
	Sb	121	0.075	ug/L	0.022	29	45	921	28
	Sb	123	0.074	ug/L	0.026	34	35	687	33
	Ba	135	-0.038	ug/L	0.004	10	166	20	80
	Ba	137	-0.038	ug/L	0 004	9	292	40	64
>	Tb	159		ug/L			1072767	1075071	1
	Tl	205	0.005	ug/L	0 004	87	46	212	70
	Pb	208	-0.010	ug/L	0 003	35	846	393	42
	Bi	209		ug/L			2602515	2650482	0
	Th	232	0.030	ug/L	0 004	11	52	1425	12
	U	238	0.003	ug/L	0 003	108	11	167	102

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ERA P197
Sample Dil Factor: 10
Comments:
Sample Date/Time: Monday, July 01, 2013 11:15:28
Number of Replicates. 3
Method File: C:\NexION Data\Method\200.8nomin mth
Tuning File: C \NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C.\NexION Data\System\070113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1522777	0
	Be	9	6.343	ug/L	0 143	2	11	28076	2
	C	13		ug/L			79519	77243	3
	Cl	37		ug/L			4431846	4719730	1
>	Sc	45		ug/L			1043756	1030092	1
	V	51	48.559	ug/L	1.167	2	8047	1110269	1
	V-1	51	48.363	ug/L	1.318	2	213	1101514	1
	Cr	52	55.858	ug/L	1.344	2	23917	1056621	1
	Cr	53	55.101	ug/L	1 935	3	197	116598	2
	Mn	55	45.133	ug/L	0.711	1	1056	1211990	2
	Co	59	91.815	ug/L	4 238	4	201	1729077	3
>	Ge	72		ug/L			618657	611114	2
	Ni	60	72.395	ug/L	1 098	1	277	284139	1
	Ni	62	67.884	ug/L	2 366	3	574	40382	1
	Cu	63	30.671	ug/L	1 176	3	1520	277245	1
	Cu	65	31.062	ug/L	0.673	2	546	125206	1
	Zn	66	49.677	ug/L	1 710	3	4845	124377	1
	Zn	67	48.127	ug/L	1 683	3	734	20184	1
	Zn	68	50.140	ug/L	2 088	4	3805	91627	2
	As	75	21.737	ug/L	0 420	1	-1	45460	0
	As-1	75	21.782	ug/L	0.824	3	11751	58109	0
	Se	82	32.607	ug/L	0.321	0	0	7475	1
	Se	78	31.727	ug/L	1 673	5	11952	31814	1
	Mo	98	55.045	ug/L	2 063	3	10	259116	1
	Y	89		ug/L			410552	410168	2
	Kr	83		ug/L			301	284	2
>	In	115		ug/L			840443	865955	2
	Ag	107	40.368	ug/L	0 768	1	32	352609	1
	Cd	111	14.675	ug/L	0 609	4	62	61116	2
	Cd	114	14.575	ug/L	0 498	3	33	155831	1
	Sb	121	30.845	ug/L	1 139	3	45	364395	1
	Sb	123	30.962	ug/L	1 027	3	35	276027	1
	Ba	135	44.198	ug/L	1 944	4	166	176209	2
	Ba	137	44.222	ug/L	1 342	3	292	305891	1
>	Tb	159		ug/L			1072767	1087536	1
	Tl	205	17.289	ug/L	0.391	2	46	636010	1
	Pb	208	227.645	ug/L	4 151	1	846	10764795	1
	Bi	209		ug/L			2602515	2676257	1
	Th	232	0.014	ug/L	0 002	16	52	695	13
	U	238	0.001	ug/L	0.000	30	11	75	26

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WU63 I REN
Sample Dil Factor: 10
Comments:
Sample Date/Time: Monday, July 01, 2013 11:19:35
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File. C:\NexION Data\Conditions\Default dac
Calibration File: C:\NexION Data\System\070113.cal

As, Se

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1421948	1
	Be	9	0.007	ug/L	0 002	26	11	39	17
	C	13		ug/L			79519	87542	2
	Cl	37		ug/L			4431846	10854885	2
>	Sc	45		ug/L			1043756	958133	4
	V	51	0.676	ug/L	0 036	5	8047	21640	2
	V-1	51	1.294	ug/L	0 121	9	213	27538	5
	Cr	52	0.253	ug/L	0 025	9	23917	26295	2
	Cr	53	2.388	ug/L	0.368	15	197	4857	11
	Mn	55	3447.922	ug/L	154.785	4	1056	85943536	0
	Co	59	1.177	ug/L	0 073	6	201	20773	2
>	Ge	72		ug/L			618657	522725	3
	Ni	60	11.100	ug/L	0.592	5	277	37417	1
	Ni	62	221.444	ug/L	47.172	21	574	111025	17
	Cu	63	22.234	ug/L	3 946	17	1520	171589	14
	Cu	65	0.657	ug/L	0 097	14	546	2709	8
	Zn	66	-0.696	ug/L	0 085	12	4845	2656	2
	Zn	67	-0.133	ug/L	0 105	78	734	574	7
	Zn	68	-0.348	ug/L	0 110	31	3805	2689	2
	As	75	1.190	ug/L	0 070	5	-1	2126	3
	As-1	75	2.027	ug/L	0.486	23	11751	13609	2
	Se	82	1.616	ug/L	0 025	1	0	317	3
	Se	78	4.964	ug/L	1 607	32	11952	12756	2
	Mo	98	1.457	ug/L	0.101	6	10	5867	3
	Y	89		ug/L			410552	373077	5
	Kr	83		ug/L			301	640	11
>	In	115		ug/L			840443	730701	5
	Ag	107	0.007	ug/L	0 001	16	32	79	5
	Cd	111	0.013	ug/L	0 006	46	62	100	24
	Cd	114	0.005	ug/L	0 001	16	33	76	9
	Sb	121	0.128	ug/L	0 036	28	45	1300	21
	Sb	123	0.125	ug/L	0 035	27	35	965	21
	Ba	135	17.020	ug/L	1 194	7	166	57239	1
	Ba	137	17.093	ug/L	1 208	7	292	99707	1
>	Tb	159		ug/L			1072767	1007784	5
	Tl	205	0.009	ug/L	0 001	14	46	356	10
	Pb	208	0.016	ug/L	0 011	72	846	1498	36
	Bi	209		ug/L			2602515	1767388	4
	Th	232	0.040	ug/L	0 008	20	52	1803	22
	U	238	4.816	ug/L	0 348	7	11	217753	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WU63 R REN
Sample Dil Factor: 5
Comments:
Sample Date/Time: Monday, July 01, 2013 11:23:43
Number of Replicates. 3
Method File: C.\NexION Data\Method\200 8nomin mth
Tuning File C \NexION Data\MassCal\Default tun
Optimization File C:\NexION Data\Conditions\Default dac
Calibration File C \NexION Data\System\070113.cal

As, Se

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens. RSD
>	Li	6		ug/L			1457530	1444859	0
	Be	9	0.003	ug/L	0 001	27	11	25	14
	C	13		ug/L			79519	91225	2
	Cl	37		ug/L			4431846	13448066	1
>	Sc	45		ug/L			1043756	988671	1
	V	51	8.742	ug/L	0 178	2	8047	198083	0
	V-1	51	9.697	ug/L	0 267	2	213	212130	1
	Cr	52	0.140	ug/L	0 046	32	23917	25126	2
	Cr	53	3.525	ug/L	0 431	12	197	7331	11
	Mn	55	1.071	ug/L	0 152	14	1056	28606	14
	Co	59	0.448	ug/L	0 008	1	201	8280	0
>	Ge	72		ug/L			618657	535352	0
	Ni	60	7.362	ug/L	0 111	1	277	25533	1
	Ni	62	10.147	ug/L	1 120	11	574	5714	10
	Cu	63	1.184	ug/L	0 061	5	1520	10644	4
	Cu	65	0.877	ug/L	0 005	0	546	3558	0
	Zn	66	-1.017	ug/L	0 019	1	4845	2046	1
	Zn	67	0.605	ug/L	0 061	10	734	849	2
	Zn	68	0.326	ug/L	0 036	11	3805	3793	0
	As	75	0.908	ug/L	0 053	5	-1	1661	5
	As-1	75	1.080	ug/L	0 094	8	11751	12189	0
	Se	82	1.373	ug/L	0 096	6	0	276	7
	Se	78	1.989	ug/L	0 153	7	11952	11443	0
	Mo	98	0.256	ug/L	0 006	2	10	1066	2
	Y	89		ug/L			410552	383815	0
	Kr	83		ug/L			301	315	8
>	In	115		ug/L			840443	758526	2
	Ag	107	0.001	ug/L	0 000	31	32	37	8
	Cd	111	0.012	ug/L	0 003	21	62	101	7
	Cd	114	0.002	ug/L	0 000	1	33	48	3
	Sb	121	0.049	ug/L	0 015	31	45	543	28
	Sb	123	0.049	ug/L	0 014	27	35	416	24
	Ba	135	23.216	ug/L	0 974	4	166	81150	2
	Ba	137	23.241	ug/L	0 645	2	292	140943	0
>	Tb	159		ug/L			1072767	1018948	2
	Tl	205	0.006	ug/L	0 000	3	46	263	2
	Pb	208	0.008	ug/L	0 001	6	846	1166	2
	Bi	209		ug/L			2602515	1882626	2
	Th	232	0.008	ug/L	0 001	9	52	403	8
	U	238	5.079	ug/L	0 165	3	11	232663	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WU63 T REN
Sample Dil Factor: 5
Comments:
Sample Date/Time: Monday, July 01, 2013 11:27:51
Number of Replicates 3
Method File C:\NexION Data\Method\200 8nomin mth
Tuning File C \NexIONData\MassCal\Default.tun
Optimization File C \NexIONData\Conditions\Default.dac
Calibration File. C:\NexIONData\System\070113.cal

As, Se

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1365254	0
	Be	9	0.007	ug/L	0 001	14	11	37	9
	C	13		ug/L			79519	97856	1
	Cl	37		ug/L			4431846	15689738	3
>	Sc	45		ug/L			1043756	955316	1
	V	51	0.743	ug/L	0 023	3	8047	22998	0
	V-1	51	2.012	ug/L	0 078	3	213	42667	2
	Cr	52	0.350	ug/L	0 032	9	23917	27887	1
	Cr	53	4.728	ug/L	0 217	4	197	9441	2
	Mn	55	4579.670	ug/L	139 710	3	1056	113909769	1
	Co	59	3.531	ug/L	0 112	3	201	61844	1
>	Ge	72		ug/L			618657	484532	1
	Ni	60	22.099	ug/L	0 085	0	277	68928	1
	Ni	62	261.902	ug/L	38 731	14	574	122455	15
	Cu	63	28.114	ug/L	3 306	11	1520	201917	12
	Cu	65	0.942	ug/L	0 055	5	546	3427	6
	Zn	66	-0.328	ug/L	0 036	10	4845	3167	2
	Zn	67	0.717	ug/L	0 074	10	734	804	2
	Zn	68	0.364	ug/L	0 062	16	3805	3486	2
	As	75	1.368	ug/L	0 036	2	-1	2266	1
	As-1	75	1.914	ug/L	0 114	5	11751	12447	2
	Se	82	2.757	ug/L	0 164	5	0	501	4
	Se	78	5.670	ug/L	0 467	8	11952	12200	3
	Mo	98	3.117	ug/L	0 054	1	10	11646	1
	Y	89		ug/L			410552	361048	3
	Kr	83		ug/L			301	987	10
>	In	115		ug/L			840443	692139	0
	Ag	107	0.002	ug/L	0 002	69	32	44	27
	Cd	111	0.008	ug/L	0 004	43	62	78	14
	Cd	114	0.004	ug/L	0 002	45	33	64	25
	Sb	121	0.075	ug/L	0 010	13	45	743	13
	Sb	123	0.076	ug/L	0 010	13	35	572	12
	Ba	135	30.205	ug/L	0.465	1	166	96357	1
	Ba	137	30.321	ug/L	0 550	1	292	167774	1
>	Tb	159		ug/L			1072767	978370	2
	Tl	205	0.003	ug/L	0 001	22	46	141	17
	Pb	208	0.004	ug/L	0 002	45	846	921	9
	Bi	209		ug/L			2602515	1577010	1
	Th	232	0.013	ug/L	0 000	1	52	617	3
	U	238	11.983	ug/L	0 388	3	11	527069	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WU63 U REN
Sample Dil Factor: 10
Comments:
Sample Date/Time: Monday, July 01, 2013 11:31:58
Number of Replicates 3
Method File: C \NexIONData\Method\200 8nomin.mth
Tuning File. C:\NexIONData\MassCal\Default tun
Optimization File. C.\NexIONData\Conditions\Default dac
Calibration File. C.\NexIONData\System\070113 cal

As, Sc

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1387268	1
	Be	9	0.004	ug/L	0 001	34	11	25	19
	C	13		ug/L			79519	89235	2
	Cl	37		ug/L			4431846	10505200	2
>	Sc	45		ug/L			1043756	939490	5
	V	51	0.716	ug/L	0.069	9	8047	22021	1
	V-1	51	1.563	ug/L	0 118	7	213	32576	2
	Cr	52	0.267	ug/L	0 092	34	23917	25984	1
	Cr	53	3.192	ug/L	0 260	8	197	6311	3
	Mn	55	3719.515	ug/L	269 054	7	1056	90793773	2
	Co	59	1.270	ug/L	0 088	6	201	21941	2
>	Ge	72		ug/L			618657	503741	3
	Ni	60	11.810	ug/L	0 696	5	277	38350	2
	Ni	62	244.206	ug/L	6 376	2	574	118534	2
	Cu	63	23.751	ug/L	0 751	3	1520	177243	2
	Cu	65	0.634	ug/L	0.045	7	546	2540	2
	Zn	66	-0.795	ug/L	0 040	5	4845	2365	1
	Zn	67	-0.001	ug/L	0.126	11448	734	596	3
	Zn	68	-0.473	ug/L	0 053	11	3805	2413	1
	As	75	1.195	ug/L	0 073	6	-1	2056	2
	As-1	75	2.478	ug/L	0 224	9	11751	13922	0
	Se	82	1.523	ug/L	0 114	7	0	288	5
	Se	78	6.453	ug/L	0 610	9	11952	13082	1
	Mo	98	1.558	ug/L	0 092	5	10	6047	3
	Y	89		ug/L			410552	371953	3
	Kr	83		ug/L			301	664	3
>	In	115		ug/L			840443	704342	3
	Ag	107	0.001	ug/L	0 000	69	32	31	7
	Cd	111	0.012	ug/L	0 004	29	62	94	10
	Cd	114	0.000	ug/L	0 001	334	33	30	30
	Sb	121	0.054	ug/L	0 005	9	45	556	11
	Sb	123	0.052	ug/L	0 004	7	35	408	9
	Ba	135	18.684	ug/L	0 826	4	166	60654	1
	Ba	137	18.743	ug/L	0 927	4	292	105530	1
>	Tb	159		ug/L			1072767	985264	3
	Tl	205	0.004	ug/L	0.001	14	46	185	9
	Pb	208	-0.002	ug/L	0 002	78	846	673	8
	Bi	209		ug/L			2602515	1713268	3
	Th	232	0.007	ug/L	0 001	13	52	339	15
	U	238	5.170	ug/L	0 231	4	11	228857	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: B1
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 01, 2013 11:36:06
Number of Replicates: 3
Method File. C:\NexIONData\Method\200 8nomin mth
Tuning File· C \NexIONData\MassCal\Default tun
Optimization File· C:\NexIONData\Conditions\Default dac
Calibration File: C \NexIONData\System\070113 cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1574830	2
	Be	9	0.001	ug/L	0 001	91	11	17	23
	C	13		ug/L			79519	78331	2
	Cl	37		ug/L			4431846	4872218	1
>	Sc	45		ug/L			1043756	967989	1
	V	51	0.034	ug/L	0 010	28	8047	8189	1
	V-1	51	0.111	ug/L	0 027	23	213	2576	20
	Cr	52	0.116	ug/L	0 036	30	23917	24191	1
	Cr	53	0.381	ug/L	0 100	26	197	938	19
	Mn	55	0.226	ug/L	0 141	62	1056	6649	52
	Co	59	0.002	ug/L	0 002	95	201	216	11
>	Ge	72		ug/L			618657	583151	4
	Ni	60	-0.053	ug/L	0 001	2	277	62	7
	Ni	62	15.474	ug/L	4.359	28	574	9137	22
	Cu	63	0.676	ug/L	0 239	35	1520	7177	24
	Cu	65	-0.085	ug/L	0 009	10	546	188	13
	Zn	66	-1.569	ug/L	0 027	1	4845	959	2
	Zn	67	-1.361	ug/L	0 065	4	734	166	12
	Zn	68	-1.489	ug/L	0 035	2	3805	1094	3
	As	75	0.002	ug/L	0 023	1136	-1	2	2252
	As-1	75	0.288	ug/L	0.308	106	11751	11646	1
	Se	82	0.029	ug/L	0.022	74	0	6	63
	Se	78	1.011	ug/L	1 066	105	11952	11857	1
	Mo	98	0.004	ug/L	0 001	25	10	26	12
	Y	89		ug/L			410552	394667	2
	Kr	83		ug/L			301	297	8
>	In	115		ug/L			840443	820423	5
	Ag	107	-0.001	ug/L	0 000	38	32	22	20
	Cd	111	0.004	ug/L	0 002	51	62	78	9
	Cd	114	-0.001	ug/L	0.000	47	33	25	15
	Sb	121	0.020	ug/L	0.006	27	45	273	27
	Sb	123	0.021	ug/L	0 006	29	35	212	29
	Ba	135	-0.036	ug/L	0 003	7	166	25	41
	Ba	137	-0.036	ug/L	0 004	12	292	50	58
>	Tb	159		ug/L			1072767	1043240	2
	Tl	205	0.034	ug/L	0 009	26	46	1239	23
	Pb	208	-0.008	ug/L	0 002	28	846	472	18
	Bi	209		ug/L			2602515	2543534	4
	Th	232	0.004	ug/L	0 001	15	52	227	14
	U	238	0.005	ug/L	0 001	18	11	248	19

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV3
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 01, 2013 11:40:15
Number of Replicates. 3
Method File C:\NexION Data\Method\200.8nomin mth
Tuning File: C:\NexION Data\MassCal\Default tun
Optimization File. C:\NexION Data\Conditions\Default dac
Calibration File: C:\NexION Data\System\070113.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1515535	2
	Be	9	49.758	ug/L	0 603	1	11	219069	1
	C	13		ug/L			79519	73200	0
	Cl	37		ug/L			4431846	4817127	3
>	Sc	45		ug/L			1043756	980542	3
	V	51	46.361	ug/L	1 881	4	8047	1008479	1
	V-1	51	46.429	ug/L	1 788	3	213	1005799	0
	Cr	52	48.613	ug/L	1 950	4	23917	877555	1
	Cr	53	48.823	ug/L	1 606	3	197	98306	0
	Mn	55	46.607	ug/L	1 243	2	1056	1190476	1
	Co	59	49.422	ug/L	0 815	1	201	886094	2
>	Ge	72		ug/L			618657	595118	2
	Ni	60	48.550	ug/L	0 886	1	277	185643	1
	Ni	62	56.674	ug/L	1 245	2	574	32926	0
	Cu	63	48.844	ug/L	1 219	2	1520	429180	0
	Cu	65	48.364	ug/L	0 371	0	546	189623	2
	Zn	66	49.193	ug/L	1 061	2	4845	120006	0
	Zn	67	49.494	ug/L	1 050	2	734	20198	0
	Zn	68	49.063	ug/L	1.095	2	3805	87417	1
	As	75	48.591	ug/L	0.569	1	-1	98979	1
	As-1	75	48.743	ug/L	0 800	1	11751	112673	0
	Se	82	50.147	ug/L	0 565	1	0	11194	1
	Se	78	50.185	ug/L	1 587	3	11952	42328	0
	Mo	98	48.980	ug/L	0 847	1	10	224608	1
	Y	89		ug/L			410552	406798	3
	Kr	83		ug/L			301	318	5
>	In	115		ug/L			840443	827698	2
	Ag	107	48.011	ug/L	0 812	1	32	400841	0
	Cd	111	48.556	ug/L	0 737	1	62	193229	1
	Cd	114	48.219	ug/L	0 870	1	33	492839	1
	Sb	121	49.150	ug/L	0 913	1	45	555124	0
	Sb	123	48.244	ug/L	0 790	1	35	411200	0
	Ba	135	48.760	ug/L	1 160	2	166	185860	0
	Ba	137	49.095	ug/L	0 806	1	292	324628	0
>	Tb	159		ug/L			1072767	1082837	1
	Tl	205	46.264	ug/L	0 047	0	46	1694717	1
	Pb	208	47.563	ug/L	0 206	0	846	2240222	0
	Bi	209		ug/L			2602515	2552379	2
	Th	232	49.529	ug/L	0 549	1	52	2315397	1
	U	238	50.232	ug/L	0 465	0	11	2446234	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB3
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 01, 2013 11:47:08
Number of Replicates. 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default tun
Optimization File C:\NexION Data\Conditions\Default dac
Calibration File: C:\NexION Data\System\070113.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1442003	2
	Be	9	0.003	ug/L	0 002	48	11	24	28
	C	13		ug/L			79519	70066	3
	Cl	37		ug/L			4431846	4440444	2
>	Sc	45		ug/L			1043756	943452	1
	V	51	0.000	ug/L	0 011	6231	8047	7276	2
	V-1	51	0.030	ug/L	0 002	7	213	813	7
	Cr	52	-0.004	ug/L	0 034	788	23917	21540	1
	Cr	53	0.098	ug/L	0.005	4	197	367	4
	Mn	55	0.031	ug/L	0 017	55	1056	1716	24
	Co	59	-0.001	ug/L	0 001	92	201	170	6
>	Ge	72		ug/L			618657	566728	2
	Ni	60	-0.038	ug/L	0 005	11	277	116	11
	Ni	62	6.543	ug/L	0 340	5	574	4084	3
	Cu	63	0.231	ug/L	0 009	4	1520	3317	2
	Cu	65	-0.051	ug/L	0 005	9	546	312	8
	Zn	66	-0.871	ug/L	0 039	4	4845	2491	1
	Zn	67	-0.693	ug/L	0 093	13	734	412	6
	Zn	68	-0.747	ug/L	0 032	4	3805	2270	0
	As	75	0.010	ug/L	0 025	253	-1	16	284
	As-1	75	0.256	ug/L	0 165	64	11751	11267	0
	Se	82	0.006	ug/L	0.020	337	0	1	224
	Se	78	0.868	ug/L	0 505	58	11952	11452	0
	Mo	98	0.016	ug/L	0.008	48	10	77	39
	Y	89		ug/L			410552	390916	1
	Kr	83		ug/L			301	297	3
>	In	115		ug/L			840443	806821	2
	Ag	107	0.004	ug/L	0 005	115	32	64	58
	Cd	111	0.008	ug/L	0 007	83	62	90	25
	Cd	114	0.003	ug/L	0.005	159	33	60	73
	Sb	121	0.132	ug/L	0.032	24	45	1486	21
	Sb	123	0.127	ug/L	0 031	24	35	1088	21
	Ba	135	-0.014	ug/L	0 001	8	166	105	3
	Ba	137	-0.018	ug/L	0 005	25	292	163	16
>	Tb	159		ug/L			1072767	1026569	2
	Tl	205	0.009	ug/L	0 002	24	46	343	19
	Pb	208	-0.004	ug/L	0 002	67	846	648	15
	Bi	209		ug/L			2602515	2572975	2
	Th	232	0.075	ug/L	0 003	4	52	3386	6
	U	238	0.006	ug/L	0 002	43	11	272	39

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WV19 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, July 01, 2013 11:52:14
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default dac
Calibration File C:\NexION Data\System\070113 cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1465532	4
	Be	9	U 0.001	ug/L	0 001	60	11	16	19
	C	13		ug/L			79519	74873	2
	Cl	37		ug/L			4431846	4554378	2
>	Sc	45		ug/L			1043756	937728	1
	V	51	U 0.021	ug/L	0 014	69	8047	7654	3
	V-1	51	0.025	ug/L	0 001	4	213	703	5
	Cr	52	U 0.064	ug/L	0 053	82	23917	22565	2
	Cr	53	0.078	ug/L	0 006	8	197	327	2
	Mn	55	0.028	ug/L	0 018	65	1056	1627	29
	Co	59	-0.003	ug/L	0 000	3	201	128	1
>	Ge	72		ug/L			618657	572665	2
	Ni	60	U -0.055	ug/L	0 000	0	277	53	2
	Ni	62	5.184	ug/L	0 136	2	574	3380	0
	Cu	63	U 0.107	ug/L	0 005	4	1520	2307	4
	Cu	65	-0.106	ug/L	0 000	0	546	106	3
	Zn	66	U -1.595	ug/L	0 020	1	4845	885	2
	Zn	67	-1.394	ug/L	0 031	2	734	151	5
	Zn	68	-1.518	ug/L	0 012	0	3805	1029	3
	As	75	U 0.008	ug/L	0 009	124	-1	12	137
	As-1	75	0.232	ug/L	0 131	56	11751	11338	0
	Se	82	U 0.007	ug/L	0 030	417	0	2	299
	Se	78	0.779	ug/L	0 427	54	11952	11520	0
	Mo	98	0.005	ug/L	0 000	5	10	33	4
	Y	89		ug/L			410552	389167	2
	Kr	83		ug/L			301	289	5
>	In	115		ug/L			840443	790051	2
	Ag	107	U -0.000	ug/L	0 001	232	32	27	32
	Cd	111	U 0.005	ug/L	0 006	125	62	78	32
	Cd	114	0.000	ug/L	0 001	206	33	33	16
	Sb	121	U 0.039	ug/L	0 009	22	45	464	19
	Sb	123	0.039	ug/L	0 011	27	35	348	23
	Ba	135	U -0.032	ug/L	0.002	6	166	40	21
	Ba	137	-0.032	ug/L	0 002	4	292	71	16
>	Tb	159		ug/L			1072767	1022028	3
	Tl	205	U 0.003	ug/L	0.001	29	46	132	22
	Pb	208	U -0.004	ug/L	0 001	34	846	620	9
	Bi	209		ug/L			2602515	2507831	1
	Th	232	0.034	ug/L	0.008	21	52	1564	24
	U	238	0.001	ug/L	0.000	26	11	71	21

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WV19 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, July 01, 2013 11:56:21
Number of Replicates 3
Method File: C.\NexION Data\Method\200 8nomin.mth
Tuning File: C \NexION Data\MassCal\Default tun
Optimization File: C:\NexION Data\Conditions\Default dac
Calibration File C.\NexION Data\System\070113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1448811	5
	Be	9	0.217	ug/L	0 015	6	11	923	4
	C	13		ug/L			79519	91710	2
	Cl	37		ug/L			4431846	4617420	4
>	Sc	45		ug/L			1043756	1002660	5
	V	51	29.883	ug/L	1 486	4	8047	667009	1
	V-1	51	29.855	ug/L	1 550	5	213	660905	1
	Cr	52	12.783	ug/L	0 660	5	23917	252711	1
	Cr	53	12.873	ug/L	0 888	6	197	26604	2
	Mn	55	333.915	ug/L	12 568	3	1056	8711699	3
	Co	59	5.107	ug/L	0 294	5	201	93639	1
>	Ge	72		ug/L			618657	566458	5
	Ni	60	12.538	ug/L	0 729	5	277	45735	1
	Ni	62	16.178	ug/L	0 866	5	574	9314	4
	Cu	63	12.833	ug/L	0.578	4	1520	108226	1
	Cu	65	13.011	ug/L	0 414	3	546	48865	2
	Zn	66	36.896	ug/L	2 068	5	4845	86649	2
	Zn	67	40.705	ug/L	1.527	3	734	15916	2
	Zn	68	37.756	ug/L	2 161	5	3805	64726	1
	As	75	3.708	ug/L	0.136	3	-1	7180	2
	As-1	75	3.792	ug/L	0 408	10	11751	18237	0
	Se	82	U 0.101	ug/L	0 081	79	0	22	82
	Se	78	0.834	ug/L	0.973	116	11952	11411	1
	Mo	98	0.124	ug/L	0.007	5	10	548	0
	Y	89		ug/L			410552	507672	4
	Kr	83		ug/L			301	423	4
>	In	115		ug/L			840443	774710	4
	Ag	107	U 0.046	ug/L	0 002	5	32	390	8
	Cd	111	0.160	ug/L	0 014	8	62	651	3
	Cd	114	0.061	ug/L	0 002	2	33	618	5
	Sb	121	U 0.025	ug/L	0 008	31	45	309	23
	Sb	123	0.026	ug/L	0 011	40	35	235	31
	Ba	135	57.539	ug/L	2 037	3	166	205106	1
	Ba	137	58.143	ug/L	2.547	4	292	359387	0
>	Tb	159		ug/L			1072767	1021419	4
	Tl	205	U 0.038	ug/L	0 002	3	46	1360	5
	Pb	208	3.441	ug/L	0.157	4	846	153412	0
	Bi	209		ug/L			2602515	2400547	4
	Th	232	0.867	ug/L	0 045	5	52	38218	1
	U	238	0.229	ug/L	0 015	6	11	10496	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WV19 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, July 01, 2013 12:00:29
Number of Replicates 3
Method File. C.\NexION Data\Method\200.8nomin mth
Tuning File C:\NexION Data\MassCal\Default tun
Optimization File: C:\NexION Data\Conditions\Default dac
Calibration File: C:\NexION Data\System\070113.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1449479	2
	Be	9	0.224	ug/L	0 013	6	11	954	5
	C	13		ug/L			79519	94863	1
	Cl	37		ug/L			4431846	4534077	2
>	Sc	45		ug/L			1043756	1003548	2
	V	51	31.562	ug/L	0 826	2	8047	705583	1
	V-1	51	31.470	ug/L	0 807	2	213	698224	1
	Cr	52	13.109	ug/L	0 432	3	23917	259076	1
	Cr	53	12.991	ug/L	0 366	2	197	26922	1
	Mn	55	325.639	ug/L	13 339	4	1056	8507442	2
	Co	59	5.073	ug/L	0 104	2	201	93274	1
>	Ge	72		ug/L			618657	565201	2
	Ni	60	12.668	ug/L	0 253	1	277	46186	0
	Ni	62	16.036	ug/L	0.149	0	574	9226	1
	Cu	63	12.776	ug/L	0 453	3	1520	107622	1
	Cu	65	13.101	ug/L	0 120	0	546	49138	1
	Zn	66	36.977	ug/L	0 884	2	4845	86764	0
	Zn	67	39.476	ug/L	0 812	2	734	15439	2
	Zn	68	37.641	ug/L	0 901	2	3805	64496	0
	As	75	3.758	ug/L	0 117	3	-1	7267	2
	As-1	75	3.860	ug/L	0 216	5	11751	18356	1
	Se	82	U 0.112	ug/L	0 049	44	0	24	41
	Se	78	0.902	ug/L	0 398	44	11952	11443	0
	Mo	98	0.128	ug/L	0 003	2	10	566	4
	Y	89		ug/L			410552	520798	2
	Kr	83		ug/L			301	417	5
>	In	115		ug/L			840443	781896	2
	Ag	107	U 0.042	ug/L	0 002	5	32	358	6
	Cd	111	0.155	ug/L	0 013	8	62	639	6
	Cd	114	0.059	ug/L	0 001	2	33	602	0
	Sb	121	U 0.020	ug/L	0 006	32	45	254	29
	Sb	123	0.019	ug/L	0 006	31	35	187	27
	Ba	135	58.160	ug/L	0.857	1	166	209411	1
	Ba	137	58.487	ug/L	1 363	2	292	365232	0
>	Tb	159		ug/L			1072767	1039689	1
	Tl	205	U 0.038	ug/L	0 001	3	46	1375	2
	Pb	208	3.405	ug/L	0 063	1	846	154710	0
	Bi	209		ug/L			2602515	2467648	2
	Th	232	0.913	ug/L	0 012	1	52	41027	0
	U	238	0.271	ug/L	0 006	2	11	12662	2

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WV19 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, July 01, 2013 12:04:36
Number of Replicates: 3
Method File: C \NexIONData\Method\200.8nomin.mth
Tuning File. C \NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default dac
Calibration File: C:\NexIONData\System\070113.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1427411	1
	Be	9	25.132	ug/L	0 411	1	11	104214	0
	C	13		ug/L			79519	83895	1
	Cl	37		ug/L			4431846	4353059	0
>	Sc	45		ug/L			1043756	1002478	1
	V	51	53.027	ug/L	0 682	1	8047	1179181	0
	V-1	51	53.045	ug/L	0 639	1	213	1175766	0
	Cr	52	35.877	ug/L	0 884	2	23917	668583	1
	Cr	53	36.122	ug/L	0 599	1	197	74457	0
	Mn	55	339.052	ug/L	4.896	1	1056	8852201	0
	Co	59	28.444	ug/L	0 432	1	201	521526	0
>	Ge	72		ug/L			618657	568248	0
	Ni	60	36.674	ug/L	0.351	0	277	133981	0
	Ni	62	38.873	ug/L	0 416	1	574	21736	0
	Cu	63	36.283	ug/L	0 270	0	1520	304871	0
	Cu	65	37.261	ug/L	0.559	1	546	139585	1
	Zn	66	115.569	ug/L	0 230	0	4845	263275	1
	Zn	67	111.661	ug/L	2 514	2	734	42670	1
	Zn	68	115.034	ug/L	0 473	0	3805	191045	0
	As	75	26.799	ug/L	0.366	1	-1	52128	0
	As-1	75	27.807	ug/L	0 617	2	11751	66018	1
	Se	82	76.812	ug/L	0 744	0	0	16373	0
	Se	78	76.362	ug/L	1 655	2	11952	55787	1
	Mo	98	19.723	ug/L	0 478	2	10	86369	1
	Y	89		ug/L			410552	509943	1
	Kr	83		ug/L			301	455	4
>	In	115		ug/L			840443	767374	0
	Ag	107	23.252	ug/L	0.344	1	32	180050	2
	Cd	111	24.798	ug/L	0 159	0	62	91537	0
	Cd	114	24.841	ug/L	0 428	1	33	235452	1
	Sb	121	0.899	ug/L	0 017	1	45	9459	2
	Sb	123	0.905	ug/L	0.010	1	35	7181	1
	Ba	135	85.979	ug/L	0 913	1	166	303829	1
	Ba	137	84.594	ug/L	0.283	0	292	518517	0
>	Tb	159		ug/L			1072767	1030320	1
	Tl	205	22.676	ug/L	0.135	0	46	790333	0
	Pb	208	27.641	ug/L	0 201	0	846	1239059	0
	Bi	209		ug/L			2602515	2418185	0
	Th	232	23.455	ug/L	0 292	1	52	1043294	0
	U	238	23.150	ug/L	0 252	1	11	1072722	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WV19 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, July 01, 2013 12:08:44
Number of Replicates 3
Method File C \NexION Data\Method\200 8nomin mth
Tuning File: C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default dac
Calibration File. C.\NexIONData\System\070113 cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1383911	3
	Be	9	J 0.164	ug/L	0 003	1	11	668	3
	C	13		ug/L			79519	88858	2
	Cl	37		ug/L			4431846	4303951	2
>	Sc	45		ug/L			1043756	965348	1
	V	51	20.449	ug/L	0 191	0	8047	442496	1
	V-1	51	20.420	ug/L	0.149	0	213	436026	1
	Cr	52	8.810	ug/L	0 166	1	23917	174788	0
	Cr	53	8.838	ug/L	0 127	1	197	17682	1
	Mn	55	276.614	ug/L	6 857	2	1056	6954462	1
	Co	59	3.224	ug/L	0.023	0	201	57100	1
>	Ge	72		ug/L			618657	552079	0
	Ni	60	7.841	ug/L	0 073	0	277	28025	0
	Ni	62	10.549	ug/L	0 159	1	574	6103	0
	Cu	63	10.686	ug/L	0 060	0	1520	88199	1
	Cu	65	11.192	ug/L	0 153	1	546	41076	1
	Zn	66	25.138	ug/L	0 476	1	4845	59015	1
	Zn	67	26.485	ug/L	0 555	2	734	10334	2
	Zn	68	25.673	ug/L	0 370	1	3805	44061	1
	As	75	3.445	ug/L	0 040	1	-1	6508	0
	As-1	75	3.678	ug/L	0 085	2	11751	17583	0
	Se	82	J 0.126	ug/L	0 043	34	0	26	32
	Se	78	1.333	ug/L	0.191	14	11952	11425	0
	Mo	98	0.138	ug/L	0 002	1	10	594	2
	Y	89		ug/L			410552	476889	0
	Kr	83		ug/L			301	405	5
>	In	115		ug/L			840443	759398	0
	Ag	107	J 0.038	ug/L	0 001	3	32	318	3
	Cd	111	0.134	ug/L	0 019	13	62	544	11
	Cd	114	0.072	ug/L	0 002	2	33	701	2
	Sb	121	J 0.018	ug/L	0 004	24	45	223	19
	Sb	123	0.016	ug/L	0.007	43	35	159	34
	Ba	135	36.903	ug/L	0 452	1	166	129133	1
	Ba	137	37.137	ug/L	0.378	1	292	225400	0
>	Tb	159		ug/L			1072767	1001468	0
	Tl	205	J 0.033	ug/L	0.001	4	46	1160	3
	Pb	208	3.499	ug/L	0.032	0	846	153173	0
	Bi	209		ug/L			2602515	2417055	0
	Th	232	0.720	ug/L	0.018	2	52	31159	2
	U	238	0.196	ug/L	0 001	0	11	8826	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WV19 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, July 01, 2013 12:12:51
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin mth
Tuning File: C:\NexION Data\MassCal\Default tun
Optimization File. C:\NexION Data\Conditions\Default dac
Calibration File C:\NexION Data\System\070113 cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1387029	4
	Be	9	25.335	ug/L	1 220	4	11	101957	1
	C	13		ug/L			79519	73035	1
	Cl	37		ug/L			4431846	4187297	1
>	Sc	45		ug/L			1043756	898624	5
	V	51	24.447	ug/L	1.434	5	8047	490144	0
	V-1	51	24.352	ug/L	1 330	5	213	483110	0
	Cr	52	26.023	ug/L	1 278	4	23917	439747	0
	Cr	53	25.676	ug/L	0 915	3	197	47442	1
	Mn	55	25.129	ug/L	0 884	3	1056	588352	1
	Co	59	26.540	ug/L	1 329	5	201	435545	0
>	Ge	72		ug/L			618657	556053	3
	Ni	60	26.032	ug/L	0 916	3	277	93051	0
	Ni	62	27.244	ug/L	1 369	5	574	15042	1
	Cu	63	26.083	ug/L	1 059	4	1520	214627	0
	Cu	65	26.208	ug/L	1 260	4	546	96104	1
	Zn	66	84.558	ug/L	3 273	3	4845	189574	3
	Zn	67	76.286	ug/L	3 066	4	734	28710	0
	Zn	68	80.777	ug/L	2 653	3	3805	132180	0
	As	75	24.750	ug/L	0 963	3	-1	47066	1
	As-1	75	25.974	ug/L	0 878	3	11751	61001	1
	Se	82	82.205	ug/L	2 865	3	0	17134	1
	Se	78	81.749	ug/L	2 356	2	11952	57656	2
	Mo	98	25.709	ug/L	0 869	3	10	110081	0
	Y	89		ug/L			410552	375803	3
	Kr	83		ug/L			301	318	3
>	In	115		ug/L			840443	763474	4
	Ag	107	25.782	ug/L	1 256	4	32	198318	0
	Cd	111	25.413	ug/L	1 341	5	62	93186	1
	Cd	114	25.423	ug/L	0 972	3	33	239470	1
	Sb	121	25.507	ug/L	1 409	5	45	265376	1
	Sb	123	25.719	ug/L	1.041	4	35	202015	0
	Ba	135	25.981	ug/L	1 181	4	166	91324	0
	Ba	137	26.237	ug/L	1 440	5	292	159914	1
>	Tb	159		ug/L			1072767	992377	4
	Tl	205	25.015	ug/L	1 022	4	46	838876	0
	Pb	208	26.098	ug/L	1 092	4	846	1125655	0
	Bi	209		ug/L			2602515	2507814	3
	Th	232	23.366	ug/L	1 164	4	52	999770	0
	U	238	23.822	ug/L	1 211	5	11	1061829	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WV19 MB1SPD SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, July 01, 2013 12:16:59
Number of Replicates 3
Method File. C:\NexION Data\Method\200.8nomin mth
Tuning File C.\NexION Data\MassCal\Default tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C \NexION Data\System\070113 cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1404115	0
	Be	9	26.228	ug/L	0 447	1	11	106999	0
	C	13		ug/L			79519	73630	4
	Cl	37		ug/L			4431846	4334541	4
>	Sc	45		ug/L			1043756	902967	0
	V	51	24.862	ug/L	0 513	2	8047	501740	1
	V-1	51	24.704	ug/L	0 511	2	213	493370	1
	Cr	52	26.708	ug/L	0 496	1	23917	453707	1
	Cr	53	26.142	ug/L	0 459	1	197	48591	1
	Mn	55	25.465	ug/L	0 505	1	1056	599786	1
	Co	59	27.103	ug/L	0.281	1	201	447697	0
>	Ge	72		ug/L			618657	553592	1
	Ni	60	26.493	ug/L	0 213	0	277	94358	0
	Ni	62	27.752	ug/L	1.002	3	574	15260	2
	Cu	63	26.136	ug/L	0 237	0	1520	214334	1
	Cu	65	27.351	ug/L	0.947	3	546	99920	2
	Zn	66	86.222	ug/L	1 960	2	4845	192414	0
	Zn	67	78.762	ug/L	1 808	2	734	29514	1
	Zn	68	82.685	ug/L	0 378	0	3805	134731	0
	As	75	25.280	ug/L	0 531	2	-1	47903	1
	As-1	75	26.976	ug/L	0 241	0	11751	62709	0
	Se	82	83.159	ug/L	2 373	2	0	17267	2
	Se	78	84.238	ug/L	1 676	1	11952	58848	0
	Mo	98	26.526	ug/L	0 549	2	10	113160	1
	Y	89		ug/L			410552	371146	1
	Kr	83		ug/L			301	303	2
>	In	115		ug/L			840443	759003	0
	Ag	107	27.319	ug/L	0 476	1	32	209206	1
	Cd	111	26.183	ug/L	0 405	1	62	95584	0
	Cd	114	26.245	ug/L	0 752	2	33	246040	2
	Sb	121	26.563	ug/L	0 221	0	45	275196	0
	Sb	123	26.545	ug/L	0 462	1	35	207525	1
	Ba	135	26.556	ug/L	0 638	2	166	92913	1
	Ba	137	26.502	ug/L	0 322	1	292	160845	0
>	Tb	159		ug/L			1072767	994104	0
	Tl	205	25.408	ug/L	0 259	1	46	854436	0
	Pb	208	26.473	ug/L	0 498	1	846	1144998	1
	Bi	209		ug/L			2602515	2460968	1
	Th	232	23.878	ug/L	0 209	0	52	1024853	1
	U	238	24.211	ug/L	0 183	0	11	1082470	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV4
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 01, 2013 12:22:12
Number of Replicates 3
Method File: C \NexION Data\Method\200 8nomin mth
Tuning File C \NexION Data\MassCal\Default.tun
Optimization File C:\NexION Data\Conditions\Default dac
Calibration File: C \NexION Data\System\070113.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1380807	2
	Be	9	49.775	ug/L	1 460	2	11	199613	0
	C	13		ug/L			79519	69194	2
	Cl	37		ug/L			4431846	4514080	1
>	Sc	45		ug/L			1043756	902018	1
	V	51	46.234	ug/L	0.717	1	8047	926015	1
	V-1	51	46.406	ug/L	0 739	1	213	925553	0
	Cr	52	48.687	ug/L	0 142	0	23917	809191	1
	Cr	53	49.252	ug/L	1 277	2	197	91290	2
	Mn	55	47.540	ug/L	0.585	1	1056	1117745	1
	Co	59	49.308	ug/L	0 321	0	201	813474	1
>	Ge	72		ug/L			618657	557606	1
	Ni	60	48.056	ug/L	1 008	2	277	172173	0
	Ni	62	47.931	ug/L	1 010	2	574	26174	0
	Cu	63	47.727	ug/L	0 880	1	1520	393041	0
	Cu	65	48.260	ug/L	0.558	1	546	177251	0
	Zn	66	49.170	ug/L	1 493	3	4845	112392	1
	Zn	67	49.375	ug/L	0 883	1	734	18884	1
	Zn	68	49.507	ug/L	1.445	2	3805	82620	2
	As	75	49.551	ug/L	0 458	0	-1	94577	0
	As-1	75	49.747	ug/L	0 376	0	11751	107542	0
	Se	82	50.699	ug/L	0 683	1	0	10604	0
	Se	78	50.926	ug/L	0.722	1	11952	40097	1
	Mo	98	49.700	ug/L	0 746	1	10	213553	0
	Y	89		ug/L			410552	383501	1
	Kr	83		ug/L			301	310	2
>	In	115		ug/L			840443	772986	2
	Ag	107	48.199	ug/L	1 485	3	32	375696	0
	Cd	111	48.204	ug/L	1 336	2	62	179091	0
	Cd	114	48.062	ug/L	1 147	2	33	458707	1
	Sb	121	48.544	ug/L	1 376	2	45	511935	1
	Sb	123	48.514	ug/L	1 413	2	35	386051	0
	Ba	135	48.670	ug/L	0 774	1	166	173261	1
	Ba	137	49.095	ug/L	1 246	2	292	303103	0
>	Tb	159		ug/L			1072767	1027225	1
	Tl	205	46.128	ug/L	0 584	1	46	1602769	0
	Pb	208	47.519	ug/L	0 658	1	846	2123009	0
	Bi	209		ug/L			2602515	2446979	1
	Th	232	44.927	ug/L	0.629	1	52	1992241	0
	U	238	50.096	ug/L	0 579	1	11	2314246	0

WUTB : 0107

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB4
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 01, 2013 12:29:04
Number of Replicates: 3
Method File C:\NexION Data\Method\200 8nomin.mth
Tuning File C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default dac
Calibration File C:\NexION Data\System\070113.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1379909	1
	Be	9	0.002	ug/L	0 002	100	11	18	39
	C	13		ug/L			79519	66939	0
	Cl	37		ug/L			4431846	4311903	4
>	Sc	45		ug/L			1043756	882126	2
	V	51	0.013	ug/L	0 010	72	8047	7058	0
	V-1	51	0.006	ug/L	0 001	17	213	306	5
	Cr	52	0.042	ug/L	0 033	77	23917	20877	0
	Cr	53	0.018	ug/L	0 003	18	197	199	1
	Mn	55	0.001	ug/L	0 001	154	1056	914	1
	Co	59	-0.002	ug/L	0 001	60	201	145	10
>	Ge	72		ug/L			618657	544627	2
	Ni	60	-0.040	ug/L	0 001	1	277	103	3
	Ni	62	2.226	ug/L	0 166	7	574	1668	3
	Cu	63	0.030	ug/L	0 010	33	1520	1579	3
	Cu	65	-0.058	ug/L	0 006	10	546	273	5
	Zn	66	-0.836	ug/L	0 009	1	4845	2471	2
	Zn	67	-0.750	ug/L	0 061	8	734	376	8
	Zn	68	-0.753	ug/L	0 010	1	3805	2172	1
	As	75	0.019	ug/L	0 023	121	-1	33	128
	As-1	75	0.394	ug/L	0 101	25	11751	11093	0
	Se	82	-0.027	ug/L	0 025	90	0	-4	102
	Se	78	1.293	ug/L	0 392	30	11952	11246	0
	Mo	98	0.013	ug/L	0 002	16	10	62	12
	Y	89		ug/L			410552	370984	2
	Kr	83		ug/L			301	300	10
>	In	115		ug/L			840443	758128	2
	Ag	107	0.001	ug/L	0 001	85	32	36	15
	Cd	111	0.006	ug/L	0 001	13	62	77	2
	Cd	114	0.001	ug/L	0 001	58	33	42	16
	Sb	121	0.143	ug/L	0 029	20	45	1518	20
	Sb	123	0.138	ug/L	0 030	21	35	1107	21
	Ba	135	-0.015	ug/L	0 005	34	166	97	20
	Ba	137	-0.019	ug/L	0 001	4	292	151	3
>	Tb	159		ug/L			1072767	986692	2
	Tl	205	0.005	ug/L	0 000	7	46	202	7
	Pb	208	-0.005	ug/L	0 001	13	846	581	3
	Bi	209		ug/L			2602515	2469179	1
	Th	232	0.081	ug/L	0.005	5	52	3516	5
	U	238	0.006	ug/L	0 001	13	11	298	15

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WV09 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, July 01, 2013 12:33:30
Number of Replicates: 3
Method File C:\NexION Data\Method\200 8nomin mth
Tuning File: C \NexION Data\MassCal\Default.tun
Optimization File. C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\070113.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1412403	3
	Be	9	0.003	ug/L	0 002	56	11	23	27
	C	13		ug/L			79519	76772	3
	Cl	37		ug/L			4431846	4268989	2
>	Sc	45		ug/L			1043756	890365	2
	V	51	0.023	ug/L	0 013	56	8047	7313	1
	V-1	51	0.008	ug/L	0.004	44	213	338	20
	Cr	52	0.085	ug/L	0 037	43	23917	21757	0
	Cr	53	0.033	ug/L	0 021	63	197	228	17
	Mn	55	0.057	ug/L	0 098	171	1056	2228	102
	Co	59	-0.000	ug/L	0 004	2060	201	168	36
>	Ge	72		ug/L			618657	553351	2
	Ni	60	-0.051	ug/L	0 009	17	277	65	48
	Ni	62	1.967	ug/L	0 056	2	574	1558	2
	Cu	63	-0.031	ug/L	0 007	22	1520	1108	3
	Cu	65	-0.105	ug/L	0 002	2	546	107	9
	Zn	66	-1.561	ug/L	0 026	1	4845	928	5
	Zn	67	-1.404	ug/L	0 035	2	734	142	9
	Zn	68	-1.456	ug/L	0 031	2	3805	1091	2
	As	75	J 0.009	ug/L	0 013	139	-1	16	149
	As-1	75	0.310	ug/L	0.098	31	11751	11108	0
	Se	82	-0.001	ug/L	0 012	1056	0	0	532
	Se	78	1.052	ug/L	0 353	33	11952	11289	0
	Mo	98	0.006	ug/L	0.001	20	10	33	13
	Y	89		ug/L			410552	374899	2
	Kr	83		ug/L			301	296	4
>	In	115		ug/L			840443	761492	2
	Ag	107	0.000	ug/L	0 001	716	32	30	17
	Cd	111	0.003	ug/L	0 000	8	62	67	3
	Cd	114	0.000	ug/L	0.001	592	33	32	36
	Sb	121	0.043	ug/L	0 012	28	45	487	24
	Sb	123	0.042	ug/L	0 014	32	35	362	27
	Ba	135	-0.032	ug/L	0 001	3	166	37	11
	Ba	137	-0.031	ug/L	0 001	2	292	74	6
>	Tb	159		ug/L			1072767	991121	3
	Tl	205	0.003	ug/L	0 000	12	46	126	10
	Pb	208	-0.002	ug/L	0 001	48	846	680	5
	Bi	209		ug/L			2602515	2502385	2
	Th	232	0.051	ug/L	0 007	13	52	2220	14
	U	238	0.002	ug/L	0 001	29	11	115	25

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WV09 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, July 01, 2013 12:37:37
Number of Replicates. 3
Method File: C \NexIONData\Method\200 8nomin mth
Tuning File C \NexIONData\MassCal\Default tun
Optimization File C \NexIONData\Conditions\Default dac
Calibration File: C:\NexIONData\System\070113 cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1391671	3
	Be	9	0.117	ug/L	0 007	5	11	483	3
	C	13		ug/L			79519	88441	0
	Cl	37		ug/L			4431846	4456703	1
>	Sc	45		ug/L			1043756	894520	1
	V	51	27.283	ug/L	0 703	2	8047	544743	2
	V-1	51	27.437	ug/L	0 696	2	213	542744	2
	Cr	52	89.055	ug/L	2 445	2	23917	1450620	2
	Cr	53	88.910	ug/L	2 492	2	197	163280	2
	Mn	55	275.985	ug/L	10 780	3	1056	6429400	3
	Co	59	3.781	ug/L	0 067	1	201	62013	0
>	Ge	72		ug/L			618657	532952	2
	Ni	60	10.486	ug/L	0.455	4	277	36074	2
	Ni	62	12.391	ug/L	0 545	4	574	6830	1
	Cu	63	30.577	ug/L	1 128	3	1520	241022	1
	Cu	65	31.476	ug/L	1 262	4	546	110595	1
	Zn	66	202.302	ug/L	4 389	2	4845	428973	2
	Zn	67	187.117	ug/L	5 563	2	734	66612	1
	Zn	68	194.645	ug/L	6 477	3	3805	300744	1
	As	75	7.337	ug/L	0 189	2	-1	13379	0
	As-1	75	7.375	ug/L	0 351	4	11751	23850	0
	Se	82	0.045	ug/L	0 037	83	0	9	78
	Se	78	0.840	ug/L	0.580	69	11952	10753	0
	Mo	98	0.729	ug/L	0 045	6	10	3000	3
	Y	89		ug/L			410552	417289	3
	Kr	83		ug/L			301	372	3
>	In	115		ug/L			840443	722966	3
	Ag	107	0.241	ug/L	0 012	4	32	1787	2
	Cd	111	0.521	ug/L	0 045	8	62	1861	5
	Cd	114	0.430	ug/L	0 014	3	33	3863	0
	Sb	121	10.218	ug/L	0 527	5	45	100740	1
	Sb	123	10.222	ug/L	0 431	4	35	76073	1
	Ba	135	72.565	ug/L	3 458	4	166	241351	1
	Ba	137	72.892	ug/L	3 302	4	292	420561	1
>	Tb	159		ug/L			1072767	930908	3
	Tl	205	0.071	ug/L	0 002	2	46	2277	3
	Pb	208	26988.482	ug/L	1118.957	4	846	1091369097	1
	Bi	209		ug/L			2602515	2475010	2
	Th	232	0.657	ug/L	0.029	4	52	26407	1
	U	238	0.576	ug/L	0 032	5	11	24106	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WV09 C SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, July 01, 2013 12:41:44
Number of Replicates 3
Method File: C \NexION Data\Method\200.8nomin.mth
Tuning File C \NexION Data\MassCal\Default tun
Optimization File. C:\NexION Data\Conditions\Default dac
Calibration File: C \NexION Data\System\070113 cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1468072	4
	Be	9	0.118	ug/L	0 004	3	11	514	2
	C	13		ug/L			79519	93019	0
	Cl	37		ug/L			4431846	4555897	1
>	Sc	45		ug/L			1043756	946540	3
	V	51	29.356	ug/L	0 918	3	8047	619471	3
	V-1	51	29.437	ug/L	0.978	3	213	615872	2
	Cr	52	78.370	ug/L	2 495	3	23917	1352782	2
	Cr	53	78.112	ug/L	3 009	3	197	151713	1
	Mn	55	156.587	ug/L	6 595	4	1056	3858224	2
	Co	59	3.839	ug/L	0.091	2	201	66601	1
>	Ge	72		ug/L			618657	552688	3
	Ni	60	11.306	ug/L	0 548	4	277	40304	2
	Ni	62	13.385	ug/L	0 301	2	574	7613	1
	Cu	63	19.027	ug/L	0 797	4	1520	156110	4
	Cu	65	19.384	ug/L	0.634	3	546	70815	0
	Zn	66	158.450	ug/L	7 475	4	4845	349158	2
	Zn	67	145.043	ug/L	6 037	4	734	53675	1
	Zn	68	151.638	ug/L	7 685	5	3805	243647	3
	As	75	4.062	ug/L	0 137	3	-1	7677	0
	As-1	75	4.239	ug/L	0 338	7	11751	18673	0
	Se	82	0.054	ug/L	0 044	80	0	12	77
	Se	78	1.099	ug/L	0 689	62	11952	11297	0
	Mo	98	0.454	ug/L	0 008	1	10	1943	2
	Y	89		ug/L			410552	462400	3
	Kr	83		ug/L			301	391	4
>	In	115		ug/L			840443	751316	4
	Ag	107	0.156	ug/L	0 015	9	32	1210	5
	Cd	111	0.525	ug/L	0 006	1	62	1950	3
	Cd	114	0.453	ug/L	0 027	5	33	4226	1
	Sb	121	0.367	ug/L	0 025	6	45	3796	2
	Sb	123	0.375	ug/L	0 025	6	35	2930	2
	Ba	135	45.531	ug/L	2.275	4	166	157373	1
	Ba	137	45.791	ug/L	2 455	5	292	274521	1
>	Tb	159		ug/L			1072767	990923	3
	Tl	205	0.023	ug/L	0 002	8	46	825	5
	Pb	208	432.896	ug/L	19.348	4	846	18635932	1
	Bi	209		ug/L			2602515	2369122	2
	Th	232	0.636	ug/L	0 032	4	52	27246	2
	U	238	0.443	ug/L	0 022	4	11	19749	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WV09 A-L SWN
Sample Dil Factor: 100
Comments:
Sample Date/Time: Monday, July 01, 2013 12:45:52
Number of Replicates: 3
Method File C:\NexION Data\Method\200 8nomin mth
Tuning File C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default dac
Calibration File C:\NexION Data\System\070113.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1386485	3
	Be	9	0.021	ug/L	0 005	23	11	95	21
	C	13		ug/L			79519	71750	1
	Cl	37		ug/L			4431846	4218693	4
>	Sc	45		ug/L			1043756	875691	4
	V	51	4.183	ug/L	0 221	5	8047	87353	0
	V-1	51	4.183	ug/L	0 192	4	213	81060	0
	Cr	52	1.372	ug/L	0 132	9	23917	41579	0
	Cr	53	1.404	ug/L	0 045	3	197	2685	3
	Mn	55	12.593	ug/L	0 653	5	1056	287687	1
	Co	59	0.456	ug/L	0 010	2	201	7461	3
>	Ge	72		ug/L			618657	547539	4
	Ni	60	1.020	ug/L	0 035	3	277	3823	1
	Ni	62	2.315	ug/L	0 195	8	574	1722	1
	Cu	63	1.036	ug/L	0 075	7	1520	9675	3
	Cu	65	1.017	ug/L	0 041	4	546	4136	1
	Zn	66	4.497	ug/L	0 398	8	4845	13970	3
	Zn	67	4.513	ug/L	0 285	6	734	2282	1
	Zn	68	4.442	ug/L	0 397	8	3805	10329	2
	As	75	0.255	ug/L	0 029	11	-1	475	6
	As-1	75	0.521	ug/L	0 326	62	11751	11379	0
	Se	82	0.005	ug/L	0.035	726	0	1	483
	Se	78	0.983	ug/L	1 036	105	11952	11116	0
	Mo	98	0.021	ug/L	0 003	12	10	96	7
	Y	89		ug/L			410552	392158	4
	Kr	83		ug/L			301	311	4
>	In	115		ug/L			840443	742888	4
	Ag	107	0.006	ug/L	0 001	11	32	76	5
	Cd	111	0.022	ug/L	0 003	11	62	133	8
	Cd	114	0.011	ug/L	0 003	31	33	128	24
	Sb	121	0.029	ug/L	0 015	50	45	336	46
	Sb	123	0.028	ug/L	0 015	54	35	243	49
	Ba	135	2.549	ug/L	0 120	4	166	8849	1
	Ba	137	2.566	ug/L	0 143	5	292	15448	0
>	Tb	159		ug/L			1072767	973493	3
	Tl	205	0.006	ug/L	0 005	75	46	248	64
	Pb	208	3.401	ug/L	5 045	148	846	146724	148
	Bi	209		ug/L			2602515	2441601	3
	Th	232	0.131	ug/L	0 007	5	52	5546	2
	U	238	0.041	ug/L	0 003	8	11	1811	7

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WV09 A SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, July 01, 2013 12:49:59
Number of Replicates 3
Method File. C:\NexIONData\Method\200.8nomin mth
Tuning File: C:\NexIONData\MassCal\Default tun
Optimization File. C \NexIONData\Conditions\Default dac
Calibration File C:\NexIONData\System\070113.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1337540	3
	Be	9	0.093	ug/L	0 006	6	11	373	7
	C	13		ug/L			79519	77774	3
	Cl	37		ug/L			4431846	4268263	5
>	Sc	45		ug/L			1043756	887055	2
	V	51	20.604	ug/L	0 683	3	8047	409522	2
	V-1	51	20.555	ug/L	0 699	3	213	403191	2
	Cr	52	6.771	ug/L	0 189	2	23917	128143	2
	Cr	53	6.755	ug/L	0 249	3	197	12455	2
	Mn	55	62.753	ug/L	0 605	0	1056	1450617	2
	Co	59	2.243	ug/L	0 069	3	201	36560	3
>	Ge	72		ug/L			618657	541119	1
	Ni	60	5.273	ug/L	0 208	3	277	18549	3
	Ni	62	6.934	ug/L	0 225	3	574	4105	3
	Cu	63	5.451	ug/L	0 117	2	1520	44749	2
	Cu	65	5.541	ug/L	0 194	3	546	20173	3
	Zn	66	28.066	ug/L	1 084	3	4845	64081	3
	Zn	67	27.454	ug/L	0 813	2	734	10474	2
	Zn	68	27.186	ug/L	0 708	2	3805	45529	2
	As	75	1.210	ug/L	0 032	2	-1	2239	1
	As-1	75	1.475	ug/L	0.172	11	11751	13065	0
	Se	82	0.084	ug/L	0 035	41	0	17	39
	Se	78	1.200	ug/L	0 511	42	11952	11122	0
	Mo	98	0.098	ug/L	0 003	3	10	417	4
	Y	89		ug/L			410552	462962	1
	Kr	83		ug/L			301	364	0
>	In	115		ug/L			840443	739270	2
	Ag	107	0.037	ug/L	0 003	8	32	302	7
	Cd	111	0.096	ug/L	0 003	3	62	397	3
	Cd	114	0.045	ug/L	0.001	2	33	440	0
	Sb	121	0.042	ug/L	0 006	13	45	461	12
	Sb	123	0.040	ug/L	0 004	9	35	336	10
	Ba	135	13.045	ug/L	0 542	4	166	44506	2
	Ba	137	12.921	ug/L	0 545	4	292	76464	2
>	Tb	159		ug/L			1072767	977012	1
	Tl	205	0.018	ug/L	0.001	3	46	622	4
	Pb	208	1.186	ug/L	0.052	4	846	51118	2
	Bi	209		ug/L			2602515	2370640	1
	Th	232	0.647	ug/L	0 021	3	52	27316	1
	U	238	0.200	ug/L	0 002	0	11	8802	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WV09 ADUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, July 01, 2013 12:54:07
Number of Replicates 3
Method File: C:\NexION Data\Method\200 8nomin mth
Tuning File C.\NexIONData\MassCal\Default tun
Optimization File. C.\NexIONData\Conditions\Default dac
Calibration File: C:\NexIONData\System\070113.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1324348	0
	Be	9	0.094	ug/L	0.004	4	11	371	4
	C	13		ug/L			79519	79056	2
	Cl	37		ug/L			4431846	4241199	4
>	Sc	45		ug/L			1043756	871328	1
	V	51	21.793	ug/L	0 424	1	8047	425176	1
	V-1	51	21.724	ug/L	0 469	2	213	418635	1
	Cr	52	7.745	ug/L	0 162	2	23917	141125	1
	Cr	53	7.662	ug/L	0 299	3	197	13855	2
	Mn	55	61.113	ug/L	2 213	3	1056	1387450	2
	Co	59	2.355	ug/L	0 055	2	201	37681	1
>	Ge	72		ug/L			618657	530690	1
	Ni	60	5.280	ug/L	0 218	4	277	18211	2
	Ni	62	6.971	ug/L	0 466	6	574	4041	4
	Cu	63	5.971	ug/L	0 235	3	1520	47927	2
	Cu	65	6.064	ug/L	0 267	4	546	21598	2
	Zn	66	26.834	ug/L	0 706	2	4845	60263	0
	Zn	67	26.727	ug/L	1 022	3	734	10014	1
	Zn	68	26.349	ug/L	0 809	3	3805	43368	0
	As	75	1.269	ug/L	0 043	3	-1	2303	2
	As-1	75	1.687	ug/L	0 164	9	11751	13206	0
	Se	82	0.075	ug/L	0 023	30	0	15	29
	Se	78	1.691	ug/L	0 463	27	11952	11176	0
	Mo	98	0.100	ug/L	0 006	5	10	416	5
	Y	89		ug/L			410552	447597	0
	Kr	83		ug/L			301	343	5
>	In	115		ug/L			840443	717852	2
	Ag	107	0.038	ug/L	0 004	10	32	300	6
	Cd	111	0.091	ug/L	0 004	3	62	368	3
	Cd	114	0.044	ug/L	0 005	10	33	416	7
	Sb	121	0.037	ug/L	0 006	16	45	405	14
	Sb	123	0.038	ug/L	0 003	7	35	313	6
	Ba	135	14.436	ug/L	0 614	4	166	47809	2
	Ba	137	14.541	ug/L	0 618	4	292	83531	1
>	Tb	159		ug/L			1072767	963841	1
	Tl	205	0.019	ug/L	0 001	7	46	650	7
	Pb	208	1.138	ug/L	0 078	6	846	48435	5
	Bi	209		ug/L			2602515	2361908	2
	Th	232	0.636	ug/L	0 017	2	52	26506	1
	U	238	0.198	ug/L	0 008	4	11	8600	3

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WV09 ASPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, July 01, 2013 12:58:14
Number of Replicates: 3
Method File C:\NexION Data\Method\200.8nomin.mth
Tuning File C:\NexION Data\MassCal\Default tun
Optimization File: C:\NexION Data\Conditions\Default dac
Calibration File C:\NexION Data\System\070113.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1339644	4
	Be	9	26.182	ug/L	0 557	2	11	101848	2
	C	13		ug/L			79519	75021	3
	Cl	37		ug/L			4431846	4223184	1
>	Sc	45		ug/L			1043756	884092	4
	V	51	46.055	ug/L	1 932	4	8047	903142	0
	V-1	51	46.215	ug/L	1.894	4	213	902497	0
	Cr	52	32.804	ug/L	1.627	4	23917	540238	0
	Cr	53	33.498	ug/L	1 460	4	197	60840	0
	Mn	55	85.444	ug/L	4 539	5	1056	1965393	1
	Co	59	27.704	ug/L	0 928	3	201	447621	1
>	Ge	72		ug/L			618657	537700	4
	Ni	60	30.471	ug/L	1 355	4	277	105231	0
	Ni	62	30.374	ug/L	1 322	4	574	16158	0
	Cu	63	30.793	ug/L	1 605	5	1520	244643	1
	Cu	65	31.618	ug/L	1 592	5	546	111981	1
	Zn	66	110.366	ug/L	3 939	3	4845	237824	1
	Zn	67	102.314	ug/L	5 047	4	734	36996	0
	Zn	68	106.621	ug/L	3 968	3	3805	167600	1
	As	75	25.679	ug/L	1 029	4	-1	47205	0
	As-1	75	27.294	ug/L	1 404	5	11751	61426	0
	Se	82	81.333	ug/L	3 152	3	0	16385	0
	Se	78	82.425	ug/L	4 248	5	11952	56084	0
	Mo	98	0.107	ug/L	0 005	4	10	453	4
	Y	89		ug/L			410552	450456	3
	Kr	83		ug/L			301	375	8
>	In	115		ug/L			840443	734754	4
	Ag	107	24.971	ug/L	1.013	4	32	184885	0
	Cd	111	25.125	ug/L	1.122	4	62	88671	0
	Cd	114	25.504	ug/L	0.954	3	33	231187	1
	Sb	121	0.040	ug/L	0 005	12	45	439	9
	Sb	123	0.041	ug/L	0 007	17	35	337	11
	Ba	135	39.397	ug/L	1 691	4	166	133211	1
	Ba	137	39.596	ug/L	2 014	5	292	232137	0
>	Tb	159		ug/L			1072767	982574	5
	Tl	205	24.127	ug/L	1 199	4	46	800579	0
	Pb	208	27.331	ug/L	1 425	5	846	1166323	0
	Bi	209		ug/L			2602515	2386847	4
	Th	232	24.462	ug/L	1 401	5	52	1035676	0
	U	238	24.094	ug/L	1 273	5	11	1062789	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: ~~WW09-APOST SWN~~ 222222
Sample Dil Factor: 20 3A 7/1/13
Comments:
Sample Date/Time: Monday, July 01, 2013 13:02:22
Number of Replicates 3
Method File. C \NexION Data\Method\200 8nomin mth
Tuning File C:\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default dac
Calibration File: C:\NexIONData\System\070113.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1324910	2
	Be	9	25.837	ug/L	1 007	3	11	99405	1
	C	13		ug/L			79519	74410	1
	Cl	37		ug/L			4431846	4331028	2
>	Sc	45		ug/L			1043756	861355	3
	V	51	45.434	ug/L	2 249	4	8047	868228	1
	V-1	51	45.473	ug/L	2 035	4	213	865317	1
	Cr	52	32.744	ug/L	1 775	5	23917	525519	1
	Cr	53	33.014	ug/L	1 155	3	197	58452	1
	Mn	55	93.629	ug/L	7.942	8	1056	2097424	5
	Co	59	28.631	ug/L	1 210	4	201	450727	1
>	Ge	72		ug/L			618657	529719	3
	Ni	60	31.631	ug/L	1 404	4	277	107649	1
	Ni	62	31.193	ug/L	1 239	3	574	16343	0
	Cu	63	30.979	ug/L	1 622	5	1520	242567	2
	Cu	65	31.491	ug/L	1 627	5	546	109921	1
	Zn	66	114.375	ug/L	5 804	5	4845	242654	1
	Zn	67	106.387	ug/L	4 911	4	734	37894	1
	Zn	68	111.243	ug/L	5 917	5	3805	172126	1
	As	75	26.406	ug/L	1 381	5	-1	47829	2
	As-1	75	28.111	ug/L	1 735	6	11751	62040	2
	Se	82	84.630	ug/L	3 617	4	0	16801	0
	Se	78	85.794	ug/L	4 663	5	11952	57111	1
	Mo	98	0.110	ug/L	0 007	6	10	459	3
	Y	89		ug/L			410552	451615	2
	Kr	83		ug/L			301	352	6
>	In	115		ug/L			840443	724365	3
	Ag	107	26.373	ug/L	1 160	4	32	192573	1
	Cd	111	25.563	ug/L	0 866	3	62	89003	0
	Cd	114	26.074	ug/L	1 338	5	33	233033	2
	Sb	121	0.036	ug/L	0 007	19	45	393	13
	Sb	123	0.039	ug/L	0 004	10	35	322	6
	Ba	135	39.560	ug/L	1 733	4	166	131914	1
	Ba	137	39.634	ug/L	1 430	3	292	229269	0
>	Tb	159		ug/L			1072767	972601	3
	Tl	205	24.682	ug/L	1 250	5	46	811082	1
	Pb	208	26.763	ug/L	1 272	4	846	1131211	1
	Bi	209		ug/L			2602515	2368364	3
	Th	232	24.855	ug/L	1 163	4	52	1042499	0
	U	238	24.253	ug/L	1 129	4	11	1059761	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WV09 REF1 SWN
Sample Dil Factor: 50
Comments:
Sample Date/Time: Monday, July 01, 2013 13:06:29
Number of Replicates. 3
Method File C \NexION Data\Method\200 8nomin mth
Tuning File. C.\NexIONData\MassCal\Default tun
Optimization File: C:\NexIONData\Conditions\Default.dac
Calibration File: C:\NexIONData\System\070113 cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1299492	1
	Be	9	37.135	ug/L	0 692	1	11	140196	0
	C	13		ug/L			79519	74928	1
	Cl	37		ug/L			4431846	4205326	2
>	Sc	45		ug/L			1043756	869186	2
	V	51	29.192	ug/L	1 078	3	8047	565530	0
	V-1	51	29.225	ug/L	1 207	4	213	561369	1
	Cr	52	27.728	ug/L	1 320	4	23917	452254	1
	Cr	53	27.856	ug/L	1.682	6	197	49773	3
	Mn	55	186.687	ug/L	9 910	5	1056	4222879	2
	Co	59	30.081	ug/L	1 870	6	201	477719	3
>	Ge	72		ug/L			618657	528738	1
	Ni	60	22.542	ug/L	0 636	2	277	76704	1
	Ni	62	22.293	ug/L	0 556	2	574	11806	1
	Cu	63	26.899	ug/L	1.273	4	1520	210581	3
	Cu	65	27.384	ug/L	1 005	3	546	95554	2
	Zn	66	75.572	ug/L	3 285	4	4845	161579	3
	Zn	67	77.600	ug/L	2 673	3	734	27780	2
	Zn	68	79.032	ug/L	2 161	2	3805	123120	1
	As	75	51.587	ug/L	1 448	2	-1	93354	1
	As-1	75	52.374	ug/L	1 297	2	11751	106816	1
	Se	82	68.251	ug/L	2 358	3	0	13534	2
	Se	78	69.368	ug/L	1 743	2	11952	48087	0
	Mo	98	15.432	ug/L	0 482	3	10	62876	1
	Y	89		ug/L			410552	478959	1
	Kr	83		ug/L			301	375	3
>	In	115		ug/L			840443	723422	2
	Ag	107	38.817	ug/L	1 428	3	32	283174	1
	Cd	111	27.550	ug/L	1 190	4	62	95803	2
	Cd	114	27.399	ug/L	0 944	3	33	244721	1
	Sb	121	1.488	ug/L	0 058	3	45	14724	2
	Sb	123	1.466	ug/L	0 061	4	35	10946	2
	Ba	135	134.044	ug/L	3 996	2	166	446264	0
	Ba	137	134.403	ug/L	3.733	2	292	776189	1
>	Tb	159		ug/L			1072767	990816	3
	Tl	205	50.581	ug/L	2 038	4	46	1693981	0
	Pb	208	52.120	ug/L	2.448	4	846	2244094	1
	Bi	209		ug/L			2602515	2384798	1
	Th	232	4.989	ug/L	0 197	3	52	213269	0
	U	238	0.609	ug/L	0 031	5	11	27130	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WV09 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, July 01, 2013 13:10:36
Number of Replicates: 3
Method File: C \NexION Data\Method\200 8nomin mth
Tuning File: C \NexION Data\MassCal\Default tun
Optimization File: C:\NexION Data\Conditions\Default dac
Calibration File: C:\NexION Data\System\070113.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc. RSD	Blank Intens.	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1283811	2
	Be	9	26.509	ug/L	1 079	4	11	98827	1
	C	13		ug/L			79519	73359	1
	Cl	37		ug/L			4431846	4099555	2
>	Sc	45		ug/L			1043756	825591	2
	V	51	25.093	ug/L	1 063	4	8047	462703	2
	V-1	51	25.153	ug/L	0 993	3	213	459061	1
	Cr	52	26.806	ug/L	1 124	4	23917	416044	1
	Cr	53	26.992	ug/L	0 880	3	197	45848	1
	Mn	55	25.967	ug/L	0 684	2	1056	559008	0
	Co	59	28.148	ug/L	0 820	2	201	424942	1
>	Ge	72		ug/L			618657	523516	1
	Ni	60	26.461	ug/L	0 524	1	277	89109	0
	Ni	62	25.930	ug/L	0.936	3	574	13515	2
	Cu	63	26.221	ug/L	0 649	2	1520	203288	0
	Cu	65	26.889	ug/L	0 509	1	546	92920	1
	Zn	66	86.518	ug/L	2 561	2	4845	182543	1
	Zn	67	78.617	ug/L	2.283	2	734	27857	1
	Zn	68	84.083	ug/L	1 665	1	3805	129491	1
	As	75	25.116	ug/L	1 042	4	-1	44988	2
	As-1	75	26.977	ug/L	0.951	3	11751	59286	1
	Se	82	83.834	ug/L	3 070	3	0	16457	2
	Se	78	85.448	ug/L	2 372	2	11952	56297	0
	Mo	98	0.024	ug/L	0 011	45	10	104	40
	Y	89		ug/L			410552	356103	2
	Kr	83		ug/L			301	316	4
>	In	115		ug/L			840443	714331	3
	Ag	107	26.502	ug/L	1 418	5	32	190826	2
	Cd	111	26.074	ug/L	0 609	2	62	89553	1
	Cd	114	26.336	ug/L	0 870	3	33	232219	0
	Sb	121	0.012	ug/L	0.002	12	45	160	11
	Sb	123	0.012	ug/L	0 001	11	35	120	9
	Ba	135	26.594	ug/L	1 184	4	166	87497	1
	Ba	137	27.055	ug/L	1.207	4	292	154400	1
>	Tb	159		ug/L			1072767	944547	2
	Tl	205	25.520	ug/L	0.757	2	46	815067	0
	Pb	208	26.748	ug/L	0.842	3	846	1098749	0
	Bi	209		ug/L			2602515	2366212	1
	Th	232	24.248	ug/L	0 774	3	52	988346	1
	U	238	24.607	ug/L	0 921	3	11	1044750	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV5
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 01, 2013 13:15:49
Number of Replicates: 3
Method File C:\NexION Data\Method\200 8nomin mth
Tuning File C:\NexION Data\MassCal\Default.tun
Optimization File C:\NexION Data\Conditions\Default dac
Calibration File: C:\NexION Data\System\070113.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens.	Intens RSD
>	Li	6		ug/L			1457530	1318157	0
	Be	9	51.822	ug/L	0 367	0	11	198474	0
	C	13		ug/L			79519	66981	2
	Cl	37		ug/L			4431846	4265159	1
>	Sc	45		ug/L			1043756	850860	1
	V	51	48.267	ug/L	1 034	2	8047	911591	1
	V-1	51	48.234	ug/L	1 210	2	213	907432	1
	Cr	52	50.846	ug/L	0.445	0	23917	796305	1
	Cr	53	50.704	ug/L	0.649	1	197	88652	0
	Mn	55	48.531	ug/L	0 636	1	1056	1076454	2
	Co	59	51.444	ug/L	1.232	2	201	800464	1
>	Ge	72		ug/L			618657	529328	1
	Ni	60	49.786	ug/L	0.887	1	277	169335	1
	Ni	62	48.699	ug/L	1 030	2	574	25238	0
	Cu	63	49.625	ug/L	1 212	2	1520	387887	1
	Cu	65	50.900	ug/L	1 018	2	546	177456	2
	Zn	66	51.493	ug/L	1.085	2	4845	111548	0
	Zn	67	51.597	ug/L	1 065	2	734	18704	0
	Zn	68	51.004	ug/L	0 593	1	3805	80710	0
	As	75	50.840	ug/L	1 154	2	-1	92107	1
	As-1	75	51.408	ug/L	1.158	2	11751	105150	0
	Se	82	51.701	ug/L	0.967	1	0	10265	0
	Se	78	53.215	ug/L	1 036	1	11952	39313	0
	Mo	98	52.177	ug/L	0 840	1	10	212828	0
	Y	89		ug/L			410552	369269	1
	Kr	83		ug/L			301	308	4
>	In	115		ug/L			840443	730004	1
	Ag	107	51.125	ug/L	1 681	3	32	376392	1
	Cd	111	50.107	ug/L	1 325	2	62	175838	0
	Cd	114	49.935	ug/L	1 313	2	33	450080	0
	Sb	121	50.779	ug/L	1.073	2	45	505823	0
	Sb	123	50.400	ug/L	1 500	2	35	378814	1
	Ba	135	51.556	ug/L	1 097	2	166	173324	0
	Ba	137	52.057	ug/L	1.669	3	292	303519	1
>	Tb	159		ug/L			1072767	978973	1
	Tl	205	48.123	ug/L	0 972	2	46	1593328	0
	Pb	208	50.374	ug/L	0 519	1	846	2145064	2
	Bi	209		ug/L			2602515	2367592	1
	Th	232	49.454	ug/L	4 449	8	52	2088917	8
	U	238	52.677	ug/L	1 188	2	11	2318815	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB5
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 01, 2013 13:22:42
Number of Replicates 3
Method File: C:\NexION Data\Method\200.8nomin mth
Tuning File: C \NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default dac
Calibration File: C:\NexION Data\System\070113.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc. RSD	Blank Intens.	Meas Intens.	Intens RSD
>	Li	6		ug/L			1457530	1324386	0
	Be	9	0.002	ug/L	0 002	101	11	17	38
	C	13		ug/L			79519	64774	1
	Cl	37		ug/L			4431846	4028905	1
>	Sc	45		ug/L			1043756	843553	0
	V	51	-0.002	ug/L	0 014	687	8047	6463	3
	V-1	51	0.002	ug/L	0 000	4	213	210	1
	Cr	52	-0.010	ug/L	0 056	588	23917	19180	3
	Cr	53	0.005	ug/L	0 006	132	197	167	5
	Mn	55	-0.002	ug/L	0 002	69	1056	803	3
	Co	59	-0.000	ug/L	0 001	246	201	157	8
>	Ge	72		ug/L			618657	537375	1
	Ni	60	-0.042	ug/L	0 003	8	277	97	13
	Ni	62	1.122	ug/L	0 038	3	574	1077	0
	Cu	63	-0.019	ug/L	0 004	21	1520	1168	1
	Cu	65	-0.056	ug/L	0 005	9	546	276	5
	Zn	66	-0.871	ug/L	0 027	3	4845	2363	1
	Zn	67	-0.784	ug/L	0.033	4	734	358	4
	Zn	68	-0.754	ug/L	0.050	6	3805	2143	2
	As	75	0.034	ug/L	0 013	37	-1	61	39
	As-1	75	0.392	ug/L	0 076	19	11751	10942	0
	Se	82	0.016	ug/L	0 037	230	0	3	189
	Se	78	1.263	ug/L	0.270	21	11952	11082	0
	Mo	98	0.010	ug/L	0 003	26	10	50	22
	Y	89		ug/L			410552	369338	1
	Kr	83		ug/L			301	289	5
>	In	115		ug/L			840443	743788	0
	Ag	107	0.001	ug/L	0 001	126	32	32	15
	Cd	111	0.008	ug/L	0 006	84	62	82	28
	Cd	114	0.005	ug/L	0.008	158	33	76	98
	Sb	121	0.134	ug/L	0.025	18	45	1403	18
	Sb	123	0.130	ug/L	0 021	16	35	1024	16
	Ba	135	-0.019	ug/L	0 003	16	166	82	12
	Ba	137	-0.017	ug/L	0 001	7	292	157	5
>	Tb	159		ug/L			1072767	969444	1
	Tl	205	0.004	ug/L	0 001	18	46	186	13
	Pb	208	0.010	ug/L	0.001	11	846	1196	3
	Bi	209		ug/L			2602515	2471059	0
	Th	232	0.077	ug/L	0 002	2	52	3262	3
	U	238	0.006	ug/L	0 001	22	11	267	22

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WU70 MB1 SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, July 01, 2013 13:27:11
Number of Replicates. 3
Method File. C.\NexION Data\Method\200.8nomin mth
Tuning File· C:\NexIONData\MassCal\Default tun
Optimization File C \NexIONData\Conditions\Default dac
Calibration File C:\NexIONData\System\070113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1346972	2
	Be	9	0.003	ug/L	0 001	56	11	20	29
	C	13		ug/L			79519	74849	1
	Cl	37		ug/L			4431846	4124770	1
>	Sc	45		ug/L			1043756	839393	3
	V	51	0.033	ug/L	0 015	44	8047	7071	0
	V-1	51	0.002	ug/L	0.000	19	213	207	4
	Cr	52	0.124	ug/L	0 053	42	23917	21087	0
	Cr	53	0.017	ug/L	0 008	43	197	188	6
	Mn	55	0.005	ug/L	0 002	44	1056	953	3
	Co	59	-0.002	ug/L	0 001	55	201	123	15
>	Ge	72		ug/L			618657	539443	3
	Ni	60	-0.056	ug/L	0 003	5	277	48	21
	Ni	62	0.933	ug/L	0 274	29	574	980	10
	Cu	63	-0.070	ug/L	0 010	14	1520	767	7
	Cu	65	-0.108	ug/L	0 001	1	546	92	2
	Zn	66	-1.652	ug/L	0 022	1	4845	711	4
	Zn	67	-1.493	ug/L	0 021	1	734	107	7
	Zn	68	-1.536	ug/L	0.010	0	3805	942	4
	As	75	0.011	ug/L	0 016	142	-1	20	154
	As-1	75	0.382	ug/L	0 213	55	11751	10958	0
	Se	82	0.027	ug/L	0 042	157	0	6	139
	Se	78	1.308	ug/L	0 738	56	11952	11142	0
	Mo	98	0.005	ug/L	0 001	22	10	28	13
	Y	89		ug/L			410552	360457	2
	Kr	83		ug/L			301	285	11
>	In	115		ug/L			840443	732821	3
	Ag	107	0.000	ug/L	0 000	78	32	30	3
	Cd	111	0.004	ug/L	0 001	28	62	70	6
	Cd	114	-0.000	ug/L	0 001	427	33	27	30
	Sb	121	0.034	ug/L	0 010	30	45	387	30
	Sb	123	0.036	ug/L	0 012	32	35	302	31
	Ba	135	-0.033	ug/L	0 001	2	166	32	6
	Ba	137	-0.035	ug/L	0 000	1	292	50	3
>	Tb	159		ug/L			1072767	951453	3
	Tl	205	0.003	ug/L	0 001	19	46	128	9
	Pb	208	0.005	ug/L	0 002	48	846	947	7
	Bi	209		ug/L			2602515	2426366	3
	Th	232	0.041	ug/L	0.007	17	52	1742	14
	U	238	0.002	ug/L	0 000	16	11	113	11

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WU70 C SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, July 01, 2013 13:31:18
Number of Replicates 3
Method File C:\NexION Data\Method\200.8nomin mth
Tuning File C \NexION Data\MassCal\Default tun
Optimization File. C \NexION Data\Conditions\Default dac
Calibration File: C \NexION Data\System\070113 cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens. RSD
>	Li	6		ug/L			1457530	1324556	1
	Be	9	1.582	ug/L	0 024	1	11	6098	0
	C	13		ug/L			79519	88361	0
	Cl	37		ug/L			4431846	4396144	2
>	Sc	45		ug/L			1043756	964327	1
	V	51	47.190	ug/L	0 629	1	8047	1010277	0
	V-1	51	47.113	ug/L	0 672	1	213	1004562	0
	Cr	52	26.930	ug/L	0 353	1	23917	488315	0
	Cr	53	26.883	ug/L	0 474	1	197	53351	0
	Mn	55	793.686	ug/L	2 854	0	1056	19935309	1
	Co	59	10.858	ug/L	0 134	1	201	191628	0
>	Ge	72		ug/L			618657	514839	2
	Ni	60	32.606	ug/L	0 662	2	277	107920	0
	Ni	62	32.838	ug/L	0 888	2	574	16704	0
	Cu	63	222.740	ug/L	4 066	1	1520	1688750	0
	Cu	65	229.392	ug/L	4 666	2	546	776050	1
	Zn	66	618.206	ug/L	17.637	2	4845	1257804	0
	Zn	67	576.807	ug/L	12.601	2	734	197119	0
	Zn	68	604.602	ug/L	10 115	1	3805	896008	1
	As	75	23.766	ug/L	0 609	2	-1	41867	0
	As-1	75	23.735	ug/L	0 744	3	11751	52468	0
	Se	82	0.799	ug/L	0 057	7	0	154	5
	Se	78	2.929	ug/L	0 530	18	11952	11499	0
	Mo	98	5.729	ug/L	0 144	2	10	22730	0
	Y	89		ug/L			410552	698762	1
	Kr	83		ug/L			301	684	6
>	In	115		ug/L			840443	762754	2
	Ag	107	1.009	ug/L	0 018	1	32	7788	0
	Cd	111	0.579	ug/L	0 043	7	62	2178	4
	Cd	114	0.122	ug/L	0 013	10	33	1175	10
	Sb	121	0.449	ug/L	0 011	2	45	4711	0
	Sb	123	0.454	ug/L	0.010	2	35	3600	1
	Ba	135	431.380	ug/L	11 603	2	166	1513913	0
	Ba	137	484.891	ug/L	12 973	2	292	2951633	0
>	Tb	159		ug/L			1072767	969620	2
	Tl	205	0.083	ug/L	0 001	1	46	2760	1
	Pb	208	16.735	ug/L	0 473	2	846	705963	0
	Bi	209		ug/L			2602515	1953189	2
	Th	232	2.384	ug/L	0.076	3	52	99802	0
	U	238	2.002	ug/L	0 062	3	11	87280	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WU70 BDUP SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, July 01, 2013 13:35:26
Number of Replicates: 3
Method File C:\NexION Data\Method\200 8nomin mth
Tuning File: C:\NexION Data\MassCal\Default tun
Optimization File C:\NexION Data\Conditions\Default dac
Calibration File: C:\NexION Data\System\070113 cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1281897	2
	Be	9	0.299	ug/L	0 020	6	11	1121	4
	C	13		ug/L			79519	87246	0
	Cl	37		ug/L			4431846	4328069	1
>	Sc	45		ug/L			1043756	906769	2
	V	51	20.163	ug/L	0 809	4	8047	409725	1
	V-1	51	20.178	ug/L	0 827	4	213	404505	2
	Cr	52	20.389	ug/L	0 671	3	23917	352600	1
	Cr	53	20.440	ug/L	0 774	3	197	38174	2
	Mn	55	680.599	ug/L	21 869	3	1056	16067927	1
	Co	59	5.654	ug/L	0 213	3	201	93885	1
>	Ge	72		ug/L			618657	520933	2
	Ni	60	17.639	ug/L	0 454	2	277	59182	2
	Ni	62	17.201	ug/L	1 005	5	574	9077	2
	Cu	63	55.112	ug/L	1 524	2	1520	423670	1
	Cu	65	56.260	ug/L	2 499	4	546	192831	2
	Zn	66	126.567	ug/L	4 715	3	4845	263739	0
	Zn	67	125.507	ug/L	6.045	4	734	43861	2
	Zn	68	127.284	ug/L	5 742	4	3805	193291	2
	As	75	6.659	ug/L	0 308	4	-1	11864	1
	As-1	75	6.967	ug/L	0 484	6	11751	22564	0
	Se	82	0.240	ug/L	0 036	14	0	47	13
	Se	78	2.072	ug/L	0.677	32	11952	11172	0
	Mo	98	2.271	ug/L	0 087	3	10	9122	2
	Y	89		ug/L			410552	499901	0
	Kr	83		ug/L			301	491	1
>	In	115		ug/L			840443	705944	3
	Ag	107	0.342	ug/L	0 006	1	32	2465	1
	Cd	111	0.747	ug/L	0 031	4	62	2584	0
	Cd	114	0.643	ug/L	0 034	5	33	5624	1
	Sb	121	0.026	ug/L	0 004	14	45	293	15
	Sb	123	0.025	ug/L	0 004	14	35	209	15
	Ba	135	142.958	ug/L	6 969	4	166	464109	1
	Ba	137	145.652	ug/L	5 481	3	292	820399	0
>	Tb	159		ug/L			1072767	960360	2
	Tl	205	0.124	ug/L	0 005	4	46	4073	1
	Pb	208	10.198	ug/L	0 420	4	846	426271	1
	Bi	209		ug/L			2602515	2170706	8
	Th	232	1.237	ug/L	0 055	4	52	51287	1
	U	238	0.562	ug/L	0 026	4	11	24258	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WU70 B SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, July 01, 2013 13:39:33
Number of Replicates 3
Method File C \NexION Data\Method\200.8nomin mth
Tuning File C \NexION Data\MassCal\Default tun
Optimization File: C \NexION Data\Conditions\Default dac
Calibration File C \NexION Data\System\070113 cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1323354	0
	Be	9	0.292	ug/L	0 018	6	11	1134	6
	C	13		ug/L			79519	88467	3
	Cl	37		ug/L			4431846	4321452	0
>	Sc	45		ug/L			1043756	940364	1
	V	51	20.793	ug/L	0 778	3	8047	438053	2
	V-1	51	20.789	ug/L	0 782	3	213	432278	2
	Cr	52	21.028	ug/L	0 767	3	23917	376462	1
	Cr	53	21.011	ug/L	0.775	3	197	40693	2
	Mn	55	673.620	ug/L	11 711	1	1056	16496834	0
	Co	59	5.604	ug/L	0.255	4	201	96511	3
>	Ge	72		ug/L			618657	537217	1
	Ni	60	18.186	ug/L	0 534	2	277	62923	2
	Ni	62	17.652	ug/L	0 633	3	574	9600	1
	Cu	63	73.534	ug/L	2 250	3	1520	582669	2
	Cu	65	74.781	ug/L	2 576	3	546	264306	2
	Zn	66	126.623	ug/L	2 982	2	4845	272233	0
	Zn	67	125.539	ug/L	5 076	4	734	45262	2
	Zn	68	126.855	ug/L	3 653	2	3805	198777	1
	As	75	7.343	ug/L	0 184	2	-1	13500	1
	As-1	75	7.506	ug/L	0 240	3	11751	24294	0
	Se	82	U 0.234	ug/L	0 018	7	0	47	6
	Se	78	1.594	ug/L	0 306	19	11952	11262	0
	Mo	98	2.305	ug/L	0 051	2	10	9548	0
	Y	89		ug/L			410552	513226	0
	Kr	83		ug/L			301	485	4
>	In	115		ug/L			840443	749219	0
	Ag	107	0.440	ug/L	0 024	5	32	3350	4
	Cd	111	0.670	ug/L	0 034	5	62	2466	4
	Cd	114	0.579	ug/L	0 022	3	33	5385	2
	Sb	121	U 0.030	ug/L	0 003	9	45	351	7
	Sb	123	0.035	ug/L	0.005	13	35	304	11
	Ba	135	140.319	ug/L	2 639	1	166	483973	0
	Ba	137	141.829	ug/L	3 263	2	292	848474	1
>	Tb	159		ug/L			1072767	1005443	2
	Tl	205	U 0.119	ug/L	0 017	14	46	4100	12
	Pb	208	11.039	ug/L	0 813	7	846	482940	5
	Bi	209		ug/L			2602515	2320733	0
	Th	232	1.154	ug/L	0 047	4	52	50100	1
	U	238	0.522	ug/L	0 025	4	11	23590	2

WU70 : 61691

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WU70 BSPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, July 01, 2013 13:43:41
Number of Replicates: 3
Method File C \NexION Data\Method\200.8nomin mth
Tuning File. C \NexION Data\MassCal\Default tun
Optimization File C.\NexION Data\Conditions\Default dac
Calibration File. C \NexION Data\System\070113 cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1262192	2
	Be	9	25.329	ug/L	0 773	3	11	92855	1
	C	13		ug/L			79519	85344	1
	Cl	37		ug/L			4431846	4323790	2
>	Sc	45		ug/L			1043756	897488	1
	V	51	45.010	ug/L	1 261	2	8047	896941	0
	V-1	51	44.969	ug/L	1 187	2	213	892229	0
	Cr	52	46.266	ug/L	1 244	2	23917	765856	0
	Cr	53	46.109	ug/L	0 999	2	197	85034	0
	Mn	55	714.893	ug/L	18 526	2	1056	16706530	0
	Co	59	29.457	ug/L	0 698	2	201	483469	0
>	Ge	72		ug/L			618657	508369	1
	Ni	60	43.623	ug/L	0 795	1	277	142513	0
	Ni	62	41.582	ug/L	0 935	2	574	20764	0
	Cu	63	87.364	ug/L	1 547	1	1520	654883	0
	Cu	65	89.822	ug/L	2.747	3	546	300311	1
	Zn	66	208.219	ug/L	3 322	1	4845	421086	0
	Zn	67	203.256	ug/L	7.014	3	734	68976	1
	Zn	68	207.025	ug/L	4 008	1	3805	305026	0
	As	75	31.252	ug/L	0 882	2	-1	54370	1
	As-1	75	32.739	ug/L	1 026	3	11751	67810	1
	Se	82	76.504	ug/L	1 706	2	0	14587	0
	Se	78	78.152	ug/L	2 182	2	11952	50841	0
	Mo	98	15.592	ug/L	0 382	2	10	61079	1
	Y	89		ug/L			410552	488467	1
	Kr	83		ug/L			301	506	5
>	In	115		ug/L			840443	692673	3
	Ag	107	22.434	ug/L	0 600	2	32	156704	0
	Cd	111	24.880	ug/L	1 087	4	62	82817	1
	Cd	114	24.872	ug/L	1 011	4	33	212616	1
	Sb	121	0.184	ug/L	0 006	3	45	1779	3
	Sb	123	0.182	ug/L	0 008	4	35	1328	2
	Ba	135	178.746	ug/L	5 317	2	166	569625	0
	Ba	137	178.273	ug/L	8 044	4	292	985083	1
>	Tb	159		ug/L			1072767	941470	3
	Tl	205	22.586	ug/L	0 840	3	46	718691	0
	Pb	208	35.143	ug/L	1 591	4	846	1437702	0
	Bi	209		ug/L			2602515	2037851	10
	Th	232	24.440	ug/L	1 069	4	52	992324	0
	U	238	24.042	ug/L	0 989	4	11	1016978	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WU70 BPOST SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, July 01, 2013 13:47:48
Number of Replicates. 3
Method File C.\NexION Data\Method\200.8nomin mth
Tuning File: C \NexION Data\MassCal\Default tun
Optimization File C.\NexION Data\Conditions\Default dac
Calibration File: C.\NexION Data\System\070113.cal

Sb

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1310449	1
	Be	9	24.816	ug/L	0 602	2	11	94466	0
	C	13		ug/L			79519	87887	1
	Cl	37		ug/L			4431846	4274933	2
>	Sc	45		ug/L			1043756	917926	2
	V	51	42.512	ug/L	1 030	2	8047	866822	0
	V-1	51	42.612	ug/L	0 901	2	213	864734	0
	Cr	52	44.351	ug/L	1 610	3	23917	751591	1
	Cr	53	44.675	ug/L	1 116	2	197	84262	0
	Mn	55	692.590	ug/L	25 084	3	1056	16550111	1
	Co	59	29.346	ug/L	0 843	2	201	492559	0
>	Ge	72		ug/L			618657	522113	1
	Ni	60	42.780	ug/L	1 036	2	277	143545	1
	Ni	62	40.626	ug/L	0 722	1	574	20848	0
	Cu	63	98.002	ug/L	1 878	1	1520	754408	1
	Cu	65	101.274	ug/L	1 650	1	546	347774	0
	Zn	66	211.084	ug/L	2 406	1	4845	438416	1
	Zn	67	203.402	ug/L	4.807	2	734	70904	1
	Zn	68	209.799	ug/L	2 733	1	3805	317476	1
	As	75	32.080	ug/L	0 868	2	-1	57324	1
	As-1	75	33.325	ug/L	0 795	2	11751	70721	0
	Se	82	80.284	ug/L	1 935	2	0	15722	1
	Se	78	80.826	ug/L	1 541	1	11952	53663	0
	Mo	98	28.729	ug/L	0 534	1	10	115590	0
	Y	89		ug/L			410552	507531	1
	Kr	83		ug/L			301	483	2
>	In	115		ug/L			840443	729641	2
	Ag	107	24.728	ug/L	0 688	2	32	182005	2
	Cd	111	24.446	ug/L	0.394	1	62	85780	0
	Cd	114	24.374	ug/L	0 745	3	33	219564	0
	Sb	121	24.242	ug/L	0 773	3	45	241324	0
	Sb	123	24.447	ug/L	0 655	2	35	183672	1
	Ba	135	169.550	ug/L	5.703	3	166	569233	0
	Ba	137	169.431	ug/L	4 470	2	292	986789	0
>	Tb	159		ug/L			1072767	993756	1
	Tl	205	23.519	ug/L	0.499	2	46	790519	0
	Pb	208	34.613	ug/L	0 946	2	846	1496052	1
	Bi	209		ug/L			2602515	2114890	9
	Th	232	24.094	ug/L	0 369	1	52	1033612	0
	U	238	23.403	ug/L	0 449	1	11	1045830	0

ICP-MS Quantitative Analysis - Summary Report

Sample ID: WU70 MB1SPK SWN
Sample Dil Factor: 20
Comments:
Sample Date/Time: Monday, July 01, 2013 13:51:55
Number of Replicates: 3
Method File: C:\NexION Data\Method\200 8nomin mth
Tuning File. C:\NexION Data\MassCal\Default tun
Optimization File: C \NexION Data\Conditions\Default dac
Calibration File. C.\NexION Data\System\070113.cal

	Analyte	Mass	Conc. Mean	Units	Conc. SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1315435	2
	Be	9	24.922	ug/L	1 300	5	11	95184	3
	C	13		ug/L			79519	69928	1
	Cl	37		ug/L			4431846	4298364	1
>	Sc	45		ug/L			1043756	843187	0
	V	51	23.740	ug/L	0 800	3	8047	447601	2
	V-1	51	23.663	ug/L	0 674	2	213	441239	1
	Cr	52	25.390	ug/L	0 834	3	23917	403647	2
	Cr	53	25.105	ug/L	0 496	1	197	43577	1
	Mn	55	24.581	ug/L	0 671	2	1056	540600	1
	Co	59	26.030	ug/L	0 619	2	201	401476	1
>	Ge	72		ug/L			618657	538064	1
	Ni	60	24.758	ug/L	0 913	3	277	85688	1
	Ni	62	24.091	ug/L	0 837	3	574	12940	1
	Cu	63	24.629	ug/L	0 975	3	1520	196296	2
	Cu	65	25.131	ug/L	0 703	2	546	89275	1
	Zn	66	80.581	ug/L	2 758	3	4845	175028	1
	Zn	67	73.166	ug/L	1.783	2	734	26690	0
	Zn	68	77.707	ug/L	2 363	3	3805	123232	1
	As	75	23.631	ug/L	0 573	2	-1	43513	0
	As-1	75	25.373	ug/L	0 533	2	11751	57928	0
	Se	82	79.075	ug/L	2 488	3	0	15955	1
	Se	78	80.530	ug/L	2 239	2	11952	55131	0
	Mo	98	25.459	ug/L	0 713	2	10	105543	0
	Y	89		ug/L			410552	370680	2
	Kr	83		ug/L			301	308	6
>	In	115		ug/L			840443	741124	0
	Ag	107	25.247	ug/L	0 482	1	32	188797	1
	Cd	111	24.443	ug/L	0.811	3	62	87134	3
	Cd	114	24.289	ug/L	0.152	0	33	222347	0
	Sb	121	25.303	ug/L	0 693	2	45	255959	2
	Sb	123	25.334	ug/L	0 649	2	35	193397	2
	Ba	135	25.367	ug/L	0 637	2	166	86670	2
	Ba	137	25.557	ug/L	0 469	1	292	151467	1
>	Tb	159		ug/L			1072767	980573	1
	Tl	205	24.300	ug/L	0 660	2	46	805936	1
	Pb	208	25.135	ug/L	0.751	2	846	1072214	1
	Bi	209		ug/L			2602515	2484583	2
	Th	232	22.810	ug/L	0.780	3	52	965469	2
	U	238	22.905	ug/L	0 550	2	11	1009986	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCV6
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 01, 2013 13:57:09
Number of Replicates: 3
Method File: C:\NexION Data\Method\200.8nomin.mth
Tuning File: C:\NexION Data\MassCal\Default.tun
Optimization File: C:\NexION Data\Conditions\Default.dac
Calibration File: C:\NexION Data\System\070113.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1332945	1
	Be	9	50.763	ug/L	1.120	2	11	196648	3
	C	13		ug/L			79519	67935	0
	Cl	37		ug/L			4431846	4462251	1
>	Sc	45		ug/L			1043756	867143	0
	V	51	46.873	ug/L	1.248	2	8047	902513	2
	V-1	51	46.934	ug/L	1.363	2	213	900011	2
	Cr	52	49.431	ug/L	1.009	2	23917	789489	2
	Cr	53	49.610	ug/L	1.500	3	197	88412	3
	Mn	55	47.373	ug/L	1.495	3	1056	1070813	3
	Co	59	50.033	ug/L	0.785	1	201	793528	1
>	Ge	72		ug/L			618657	544739	1
	Ni	60	48.251	ug/L	1.055	2	277	168906	2
	Ni	62	46.262	ug/L	1.473	3	574	24698	2
	Cu	63	47.314	ug/L	1.038	2	1520	380714	2
	Cu	65	48.677	ug/L	1.517	3	546	174688	3
	Zn	66	48.835	ug/L	0.826	1	4845	109100	1
	Zn	67	50.027	ug/L	0.592	1	734	18685	1
	Zn	68	48.897	ug/L	0.435	0	3805	79778	1
	As	75	49.230	ug/L	0.878	1	-1	91798	1
	As-1	75	49.504	ug/L	0.962	1	11751	104598	1
	Se	82	50.267	ug/L	0.834	1	0	10272	1
	Se	78	50.784	ug/L	1.148	2	11952	39093	1
	Mo	98	50.791	ug/L	0.735	1	10	213212	0
	Y	89		ug/L			410552	372677	2
	Kr	83		ug/L			301	315	4
>	In	115		ug/L			840443	740896	1
	Ag	107	50.243	ug/L	1.674	3	32	375495	2
	Cd	111	48.987	ug/L	1.365	2	62	174499	2
	Cd	114	48.889	ug/L	1.324	2	33	447331	2
	Sb	121	50.044	ug/L	1.187	2	45	505992	1
	Sb	123	50.095	ug/L	0.788	1	35	382254	1
	Ba	135	51.037	ug/L	1.012	1	166	174182	2
	Ba	137	51.363	ug/L	1.222	2	292	304018	1
>	Tb	159		ug/L			1072767	1009323	1
	Tl	205	46.780	ug/L	1.385	2	46	1596784	1
	Pb	208	48.354	ug/L	0.947	1	846	2122670	1
	Bi	209		ug/L			2602515	2434896	0
	Th	232	47.856	ug/L	3.978	8	52	2085382	8
	U	238	51.724	ug/L	1.116	2	11	2347566	1

ICP-MS Quantitative Analysis - Summary Report

Sample ID: CCB6
Sample Dil Factor:
Comments:
Sample Date/Time: Monday, July 01, 2013 14:04:01
Number of Replicates. 3
Method File C \NexION Data\Method\200 8nomin mth
Tuning File C.\NexIONData\MassCal\Default.tun
Optimization File: C:\NexIONData\Conditions\Default dac
Calibration File: C:\NexIONData\System\070113.cal

	Analyte	Mass	Conc. Mean	Units	Conc SD	Conc. RSD	Blank Intens	Meas Intens	Intens RSD
>	Li	6		ug/L			1457530	1309757	2
	Be	9	0.004	ug/L	0 001	29	11	24	19
	C	13		ug/L			79519	66988	4
	Cl	37		ug/L			4431846	4098644	0
>	Sc	45		ug/L			1043756	836630	5
	V	51	0.001	ug/L	0 021	2494	8047	6453	2
	V-1	51	0.001	ug/L	0 002	258	213	188	24
	Cr	52	-0.000	ug/L	0.088	23351	23917	19121	2
	Cr	53	-0.000	ug/L	0.012	4673	197	157	7
	Mn	55	0.002	ug/L	0 001	34	1056	898	7
	Co	59	-0.001	ug/L	0 000	37	201	145	2
>	Ge	72		ug/L			618657	535590	5
	Ni	60	-0.039	ug/L	0 004	8	277	105	10
	Ni	62	0.729	ug/L	0 095	12	574	872	8
	Cu	63	-0.030	ug/L	0 007	23	1520	1077	1
	Cu	65	-0.063	ug/L	0 010	15	546	252	14
	Zn	66	-0.884	ug/L	0.022	2	4845	2326	4
	Zn	67	-0.795	ug/L	0 035	4	734	353	3
	Zn	68	-0.778	ug/L	0 095	12	3805	2093	1
	As	75	0.036	ug/L	0 011	29	-1	65	32
	As-1	75	0.411	ug/L	0 357	86	11751	10918	0
	Se	82	0.013	ug/L	0 009	68	0	3	58
	Se	78	1.343	ug/L	1 239	92	11952	11064	0
	Mo	98	0.013	ug/L	0 002	14	10	61	14
	Y	89		ug/L			410552	366050	3
	Kr	83		ug/L			301	304	6
>	In	115		ug/L			840443	727649	4
	Ag	107	0.003	ug/L	0 002	74	32	49	33
	Cd	111	0.007	ug/L	0 005	61	62	80	17
	Cd	114	0.001	ug/L	0.002	271	33	34	48
	Sb	121	0.148	ug/L	0 020	13	45	1520	17
	Sb	123	0.147	ug/L	0 028	18	35	1139	22
	Ba	135	-0.015	ug/L	0 001	7	166	94	8
	Ba	137	-0.015	ug/L	0 003	22	292	165	13
>	Tb	159		ug/L			1072767	982213	4
	Tl	205	0.005	ug/L	0 001	10	46	224	12
	Pb	208	0.004	ug/L	0 001	26	846	952	4
	Bi	209		ug/L			2602515	2477821	4
	Th	232	0.077	ug/L	0 001	1	52	3304	6
	U	238	0.007	ug/L	0 001	20	11	299	22

ANALYTICAL RESOURCES INCORPORATED

Metals Data Review Checklist

Method: ICP ICP-MS GFA CVA

Analysis Date: 7-03-13

	Analyst LB 7-03-13	Peer [illegible] 7-5-13	Comment
Logbook:			
Analyst, Date, Method info	✓	✓	
Sample ID's	✓	✓	
Standard/QC solution ID's recorded	✓	✓	
Prep codes	✓	✓	
Dilution factors	✓	✓	
Crossouts/Corrections/Deletions	✓	✓	
Calibration:			
Blank & Standard intensities	✓	✓	
Standard deviations	✓	✓	
Curve fit	✓	✓	
Calibration Verification:			
ICV/CCV	✓	✓	
ICB/CCB	✓	✓	
Samples:			
RSD's & SD's	✓	✓	
Internal Standards	✓	—	
Carry-over	✓	—	
Method QC:			
CRI/CRA	✓	✓	
ICSA/ICSAB	✓	—	
Post Spikes/Serial Dilutions	✓	—	
Analytic Spikes	✓	✓	
Matrix QC:			
SRM/LCS	✓	✓	
Matrix Spikes	✓	✓	
Matrix Duplicates	✓	✓	
Method Blanks	✓	✓	
Data Distribution:			
Requested elements/isotope identified	✓	✓	
Correct samples identified for distribution	✓	✓	
Raw data match distributed data	✓	✓	
Data filename correct	✓	✓	
Necessary Analysts Notes and CAF's	✓	✓	

Mercury Analysis Log

Analyst: CS

Instrument: CETAC

Date: 2-03-15

Page: 1 of 5

ARI Sample ID	Prep Code	Dilution	QC Data (ppb)	Comments
STD C.C	5mm	1X		
" C.E				
" C 5				
" 1.C				
" 2.C				
" 5.C				
" 10.C				
ICV			9.67	Begin CRA 5.22=108 ✓
ICB			-0.03	✓
CCV1			4.17	%R=104 ✓
CCB1			-0.02	✓
ERA			0.09	✓
WU83 MB1			-0.01	✓
" MBSPK		↓	2.33	%R=112 ✓
" REF1		5X	6.42	0.61 mg/kg ✓
" B		1X	0.01	
" BDUP			0.03	ND 200 undetected ✓
" BSPK			1.14	%R=114 ✓
WU9 MB1			-0.06	✓
" MBSPK			1.94	%R=92 ✓
" MBSPK			1.97	%R=99 ✓
CCV2			4.24	%R=106 ✓
CCB2			-0.01	✓
WU19 A			0.14	
" ADUP			0.18	✓
" ASPK			1.31	%R=117 ✓
" B				
WU70 MB1			-0.01	✓
" MBSPK			2.01	%R=101 ✓
" B	✓	✓	0.13	

Chemical/Reagent ID:

10% $SnCl_2$: MA3518

14% $NH_2OH/NaCl$: MP 2477

Standard ID:

Standard: 3x38-1

ICV/CCV: 59-16

Mercury Analysis Log

Analyst: CB

Instrument: CETAC

Date: 7-02-13

Page: 2 of 5

ARI Sample ID		Prep Code	Dilution	QC Data (ppb)	Comments
WW70	BLNK	5mm	1X	0.13	CB 7/02/13
"	BSAK			1.30	%R=117
"	C				
CCV3				4.32	%R=108
CCB3				-0.01	End CCV
WW53	MB			-0.02	
"	MBSAK			2.03	%R=102
"	A				
"	B				
"	C				
"	D				
WW54	MB			-0.21	
"	MBSAK			1.93	%R=97
	A				
	B				
CCV				4.32	%R=108
CCB					
WW04	C				
"	D				
"	E				
"	F				
CCV				4.37	%R=109
CCB				-0.01	
WW34	MB			-0.02	
"	MBSAK			2.10	%R=105
"	A				
"	B				
"	C				
"	D				
"	E				

Chemical/Reagent ID:

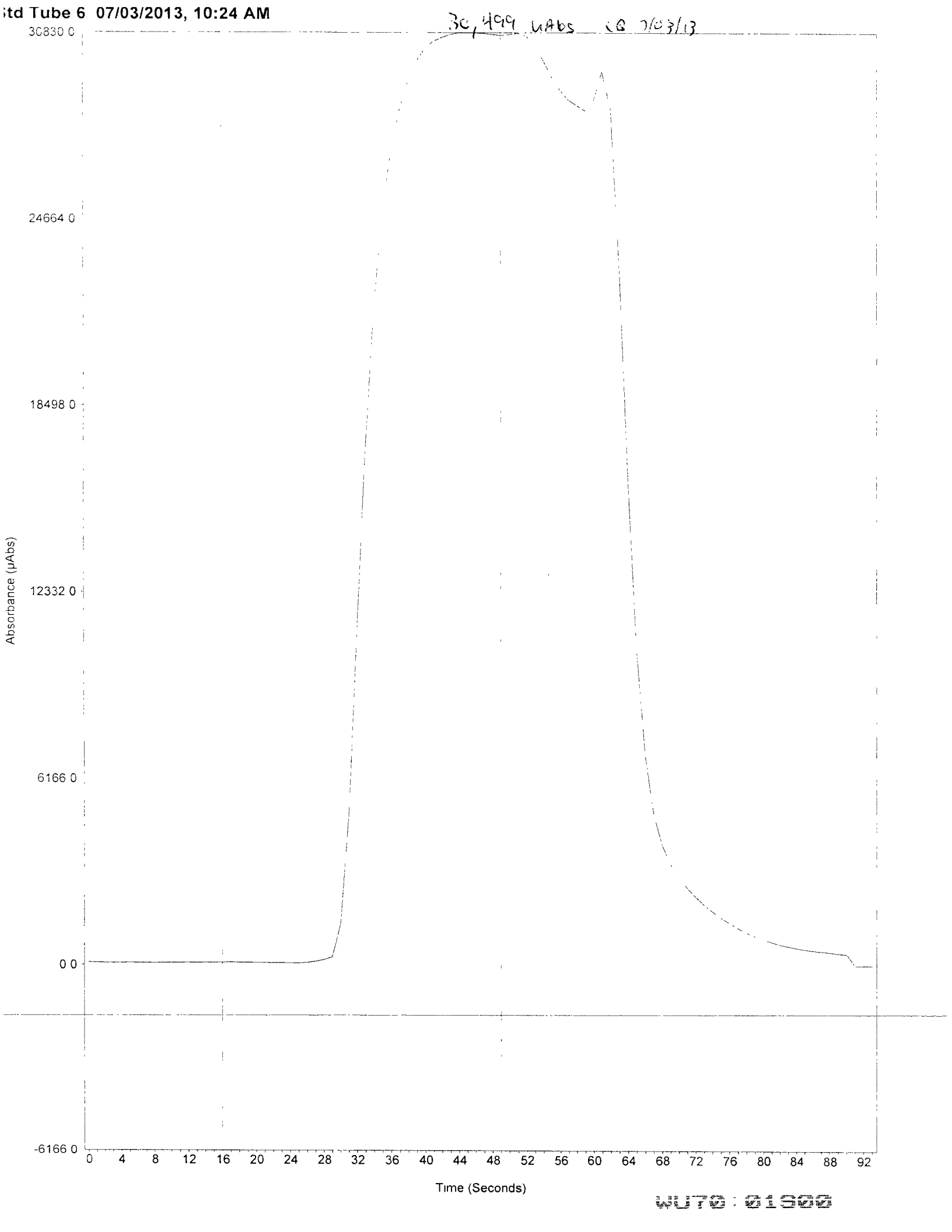
10% $SnCl_2$: MD2518

14% $NH_2OH/NaCl$: [illegible]

Standard ID:

Standard: 3035-1

ICV/CCV: 35-6


Std Tube 6 07/03/2013, 10:24 AM
30,499 uAbs CB 7/03/13
30830 0
24664 0
18498 0
12332 0
6166 0
0 0
-6166 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)
WITG:01909

CETAC Hg Analysis Report - 13070300.DB - Wednesday, July 03, 2013, 2:23:14 PM

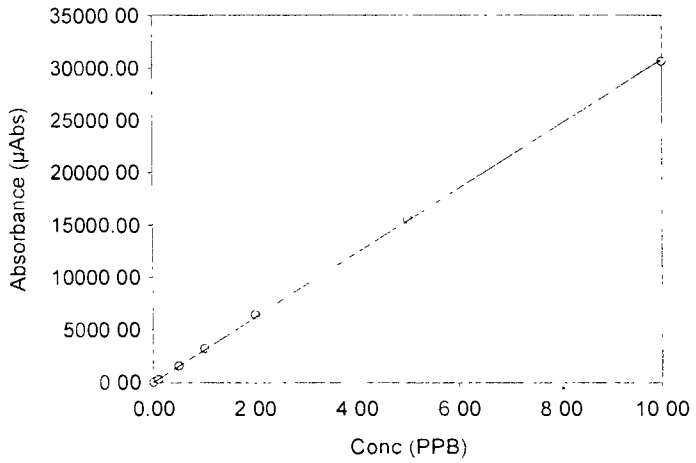
Analyst
Date Started Wednesday July 03 2013 10 22 22
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
Std Tube 6	03-Jul-2013, 10 22	10 00	1 13	30500 00	1 00	

Information about this calibration could not be retrieved from the Master File.

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
Calibration Zero	03-Jul-2013, 10 26	0 00	170 00	3.28	1 00	
Standard #1	03-Jul-2013, 10 27	0 10	1.99	277 00	1 00	
Standard #2	03-Jul-2013, 10:29	0.50	1 49	1580 00	1.00	
Standard #3	03-Jul-2013, 10 30	1 00	1 71	3220 00	1 00	
Standard #4	03-Jul-2013, 10 32	2 00	1 86	6450 00	1 00	
Standard #5	03-Jul-2013, 10.34	5 00	1 15	15500 00	1 00	
Standard #6	03-Jul-2013, 10 35	10 00	1 36	30700 00	1 00	

Calibration Data



Int	0 000
Slope	3081 578
Correlation	0 99991

Smm

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
ICV	03-Jul-2013, 10:46	8 67	1 13	26700.00	1 00	
ICB	03-Jul-2013, 10 47	-0 02	4.97	-76 90	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	03-Jul-2013, 10:49	4 17	2 05	12900.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	03-Jul-2013, 10 50	-0.02	6.93	-56.40	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
CRA	03-Jul-2013, 10.52	0.09	2 24	284 00	1 00	
WV85 MB1 SMM	03-Jul-2013, 10.54	-0 01	5.17	-38.40	1.00	
WV85 MB1SPK SMM	03-Jul-2013, 10.55	2.23	1.21	6880.00	1 00	
WV85 REF1 SMM	03-Jul-2013, 10:57	6.92	1.90	21300 00	5 00	
WV85 B SMM	03-Jul-2013, 10.58	0 01	17 00	31 10	1 00	
WV85 BDUP SMM	03-Jul-2013, 11.00	0 03	1.63	88.00	1.00	
WV85 BSPK SMM	03-Jul-2013, 11:02	1.14	1 44	3520.00	1.00	
WV19 MB1 SMM	03-Jul-2013, 11:03	-0 00	31.00	-7.44	1.00	
WV19 MB1SPK SMM	03-Jul-2013, 11:05	1.94	1.74	5980.00	1.00	
WV19 MB1SPD SMM	03-Jul-2013, 11:07	1 97	1.14	6070.00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	03-Jul-2013, 11.08	4.24	1.65	13100.00	1.00	

Analyst
Date Started Wednesday, July 03, 2013, 11.10:21
Worksheet ARI 10ppb CALIB
Comment

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	03-Jul-2013, 11 10	-0 01	6 07	-33 80	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WV19 A SMM	03-Jul-2013, 11 11	0.14	2.96	443 00	1 00	
WV19 ADUP SMM	03-Jul-2013, 11 13	0 18	2 57	545 00	1 00	
WV19 ASPK SMM	03-Jul-2013, 11:15	1 31	1 49	4040 00	1 00	
WV19 B SMM	03-Jul-2013, 11.16	0.29	1 74	886 00	1 00	
WU70 MB1 SMM	03-Jul-2013, 11:18	-0.01	12.00	-18 60	1 00	
WU70 MB1SPK SMM	03-Jul-2013, 11 19	2 01	1 03	6180 00	1 00	
WU70 B SMM	03-Jul-2013, 11 21	0 13	1.05	402 00	1 00	
WU70 BDUP SMM	03-Jul-2013, 11 23	0.13	1 29	414 00	1 00	
WU70 BSPK SMM	03-Jul-2013, 11 24	1 30	1 78	4010 00	1 00	
WU70 C SMM	03-Jul-2013, 11 26	0 06	2 25	187 00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	03-Jul-2013, 11:28	4.32	1 91	13300 00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	03-Jul-2013, 11:29	-0.01	8.08	-37.30	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WV53 MB SMM	03-Jul-2013, 11.31	-0.00	170 00	-0.91	1.00	
WV53 MBSPK SMM	03-Jul-2013, 11:33	2.03	2 07	6250 00	1.00	
WV53 A SMM	03-Jul-2013, 11.34	0 11	1.23	333.00	1.00	
WV53 B SMM	03-Jul-2013, 11 36	0 06	3 41	189 00	1 00	
WV53 C SMM	03-Jul-2013 11 37	0 40	1.53	1250 00	1 00	
WV53 D SMM	03-Jul-2013, 11 39	0 02	9 85	67 10	1 00	
WV04 MB SMM	03-Jul-2013, 11:41	-0.01	10 70	-17 90	1 00	
WV04 MBSPK SMM	03-Jul-2013, 11.42	1 98	2.61	6090 00	1 00	
WV04 A SMM	03-Jul-2013, 11 44	0 21	1 89	644.00	1 00	
WV04 B SMM	03-Jul-2013, 11 45	0 10	1 70	323 00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	03-Jul-2013, 11.47	4.32	2.16	13300.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	03-Jul-2013, 11:49	-0 01	11 30	-32 20	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WV04 C SMM	03-Jul-2013, 11 50	0 13	3.35	414 00	1.00	
WV04 D SMM	03-Jul-2013, 11:52	0.18	2.19	542.00	1.00	
WV04 E SMM	03-Jul-2013, 11:54	0.07	1.42	216.00	1 00	
WV04 F SMM	03-Jul-2013, 11:55	0.06	1 63	184.00	1.00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Standard	03-Jul-2013, 11:57	4.37	2 17	13500.00	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
QC Blank	03-Jul-2013, 11.59	-0.01	6.52	-42 40	1 00	

Sample ID	Analysis Time	Conc (PPB)	%RSD	Avg. µAbs	Dilution	Flags
WV34 MB1 SMM	03-Jul-2013, 12 01	-0 00	42.40	-7.54	1 00	
WV34 MB1SPK SMM	03-Jul-2013, 12:02	2.10	1 90	6480 00	1 00	
WV34 A SMM	03-Jul-2013, 12:04	0.03	2.09	88 10	1.00	
WV34 B SMM	03-Jul-2013, 12:05	0.08	1 74	256.00	1.00	
WV34 C SMM	03-Jul-2013, 12.07	0.19	1 33	590.00	1.00	
WV34 D SMM	03-Jul-2013, 12:09	0.19	2.03	599 00	1.00	
WV34 E SMM	03-Jul-2013, 12:10	0.16	2.56	478 00	1.00	
WV34 F SMM	03-Jul-2013, 12 12	0.05	1.94	163.00	1.00	

CETAC Hg Analysis Report - 13070300.DB - Wednesday, July 03, 2013, 2:23:17 PM

Analyst	
Date Created:	Thursday, July 13, 2000
Worksheet	ARI 10ppb CALIB
Comment	
Sip Duration (Sec.):	30
Rinse Duration (Sec.):	60
Read Delay:	49
Integration Time/Replicate:	1.40
# of Replicates:	4
# of Repeats:	1
Baseline Correction Enabled:	True
Baseline Point 1 Start Time:	10
Baseline Point 1 End Time:	16
2-Point Baseline Corr. Enabled:	False
Baseline Point 2 Start Time:	
Baseline Point 2 End Time:	
Gas Flow (ml/min):	180
Calibration Algorithm:	Linear, Zero Intercept
Recalibration Frequency:	0
Reslope Frequency:	0
Reslope Standard:	5
Calibration Standard #1 Conc.:	0.10 PPB
Calibration Standard #2 Conc.:	0 50 PPB
Calibration Standard #3 Conc.:	1.00 PPB
Calibration Standard #4 Conc.:	2 00 PPB
Calibration Standard #5 Conc.:	5 00 PPB
Calibration Standard #6 Conc.:	10 00 PPB
QC Enabled:	True
QC-RSD Enabled:	True
Limit Condition & Error Action:	If %RSD > 5 0%, if µAbs > 1500, Flag and Continue
QC-Std Enabled:	True
Limit Condition & Error Action:	If outside 80% . 120%,Stop
QC-Blank Enabled:	True
Limit Condition & Error Action:	If outside -100 100,Stop

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Standard Prep Log

Prep Code: TLM Instrument: CVAA

Analyst: [illegible] Date: 6-26-12

Bath Temp: 95°C Start Time: 0735 End Time: 0930

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0	—	0.00	100.0	0.0	1
STD1	3C37-10	0.02		0.2	1
STD2		0.05		0.5	
STD3		0.10		1.0	
STD4		0.20		2.0	
STD5		0.50 0.4		4.0	1
STD6		1.00		10.0	
CRA		0.02		0.2	
ICB/CCB	—	0.00		0.0	1
ICV/LCS	3C37-10	1.0		6.5	
CCV		1.0	100.0	6.5	1

Chemical/Reagent ID:

HNO_3: IB164 H_2SO_4: IB044 HCl: —

5% $K_2S_2O_8$: MA2491 5% $KMnO_4$: MA2502

Prep Code: SMB Instrument: CETAC

Analyst: DM Date: 7-02-12

Bath Temp: 95°C Start Time: 0815 End Time: 0945

Standard ID	Stock ID	Volume Added (mL)	Final Volume (mL)	Standard Conc. (µg/L)	Number Made
STD0	—	0.00	50.0	0.0	3
STD1	3C37-1	0.01		0.1	2
STD2		0.05		0.5	2
STD3		0.10		1.0	2
STD4		0.20		2.0	2
STD5		0.50		5.0	2
STD6		1.00		10.0	2
CRA		0.01		0.1	1
ICB/CCB	—	0.00		0.0	3
ICV/LCS	99-6	0.06		3.0	2
CCV		0.04	50.0	4.0	3

Chemical/Reagent ID:

HNO_3: IB169 H_2SO_4: IB044 HCl: —

5% $K_2S_2O_8$: MA2491 5% $KMnO_4$: MA2502

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Mercury Digestion Log

Prep Code: 5mm **Matrix:** Soil

Analyst: CB **Date:** 6-26-12

Bath Temp: 95°C **Start Time:** 1105 **End Time:** 1135

ARI Sample ID	Sample Bottle #	pH<2	Initial Weight (g) ~~Volume (mL)~~	Final Volume (mL)	# $KMnO_4$ Aliquots	CLP	Comments
WU70 B	7	-	0.212	50.0	7/05 1	Y	
" B2m	7	-	0.209		1		
" B2m5	7	-	0.210		1		
" C	1	-	0.223		1		
" mBi	-	-	-		1	↓	
" mBISpk	-	-	-		1	Y	
WU84 A	3	-	0.205		7/02 1	N	
" B	2	-	0.214		1		
" C	2	-	0.261		1		
" D	2	-	0.265		1		
" E	2	-	0.240		1		
" F	2	-	0.250		1		
" mB	-	-	-		1		
" mB2pk	-	-	-		1		
WU34 A	8	-	0.269		7/05 1		
" B	9	-	0.321		1		
" C	9	-	0.258		1		
" D	9	-	0.280		1		
" E	9	-	0.254		1		
" F	9	-	0.265		1		
" G	8	-	0.216		1		
" H	9	-	0.250		1		
" I	9	-	0.276		1		
" mBi	-	-	-	↓	1	↓	
" mBISpk	-	-	-	50.0	1	N	

Chemical/Reagent ID:

HNO_3: I81691 **H_2SO_4:** I80114 **HCl:** -

5% $K_2S_2O_8$: MP24911 **5% $KMnO_4$:** MP25012 **Digest Tube Lot:** ML27KK03

General Chemistry Raw Data
Analyst Notes and Raw Data

ARI Job ID: WU70

6-26-13

TOTAL SOLIDS/VOLATILE SOLIDS (TS / TVS) BENCHSHEET DATE: 6/25/13 (B)

SOLIDS *(dry at 104 (12-24 hr) then combust at 550 (30 min))* ANALYST: KE 8:22

Instrumentation ***Drying Ovens:*** 12 ***Analytical Balance:*** 1123230597

Muffle Furnace: N / A

Batch drying time

record times as mm/dd/yy hh:mm

6/25/2013 8:22 date/time in oven KE

6/26/2013 6:34 date/time out KE

elapsed hrs = 22.2

TS (%) calculated as:
Final dry wt (g) = (Dry Wt - Tare Wt)
TS = (Final Dry Wt)/ (grams Sample-Tare)

TVS (mg/kg dry wt) calculated as:
Final ash wt (g) = (min ash wt - tare wt)
*TVS (mg/kg) = [(Dry wt-Ash wt)/ (dry weight)] *1,000,000*
if ash wt > dry wt, "Chk for Err"
*if dry wt-ash wt < 0.001 g, "< (1/dry wt)*1,000,000*

	Cal Weight ID	CV-02	CV-02	CV-02	CV-02				CV-02	CV-02				
	Date & Time	6/25/13 6:58 KE	6/25/13 6:52 KE	6/26/13 6:51 KE										
Cal Wt (g)	10.0000	10.0000	10.0000	10.0000										
	record weights to 4 places	*Cal OK!*	*Cal OK!*	*Cal OK!*										

SAMPLE ID	DISH #	SAMPLE (grams)	TARE WT (grams)	DRY WT 104C (grams) 1			dry Wt (g)	TS (%)	ASH WT 550C (grams) 1	2		Ash Wt (g)	TVS (mg/kg)	TVS (%)
Blank			1.0801	1.0801			0.00							
WU38 A2		5.6411	1.0863	4.5240			3.44	75.47%						
WU38 B2		5.5086	1.0940	4.0013			2.91	65.86%						
WU70 B6		7.4022	1.0735	4.5923			3.52	56.60%						
WU70 B6 dup		7.0618	1.0709	4.3995			3.33	55.56%						
							RPD =	0.07%				RPD =	NA	
WU70 B6 trp		7.2089	1.0680	4.4603			3.39	55.24%						
							RSD =	0.36%				RSD =	NA	
WU70 C1		6.9564	1.0799	5.2244			4.14	70.53%						

Analytical Resources, Incorporated
Analytical Chemists and Consultants

TOTAL / VOLATILE SOLIDS (TS/TVS) BENCHSHEET

(B) ① 6-25-13 ② ② 1.0709 6-25-13 ①

Analyst: ②	Date: 6-25-13 8:22	Oven ID: 012	Balance ID: 1123230597
Time in Oven: 8:22	Time Out of Oven: 6:34	Elapsed Time (> 12 Hrs):	

Dry at 104 °C (12-24 hrs) then combust at 550 °C for 30 min. Record Weights to 4 places

TS (%) calculated as:
Final Dry Weight (g) = (Dry Weight – Tare Weight)
TS = (Final Dry Weight) / (Grams Sample – Tare Weight)

TVS (mg/kg dry weight) calculated as:
Final Ash Weight (g) = (Minimum Ash Weight – Tare Weight)
TVS (mg/kg) = [(Dry Weight – Ash Weight) / (Dry Weight) * 1,000,000
If Ash Weight > Dry Weight then "Check for Error"
If Dry Weight – Ash Weight < 0.001 < (1/Dry Weight) * 1,000,000

Cal Weight ID		CV-02	CV-02	CV-02	CV-02	CV-02	[redacted]	CV-02	CV-02	CV-02
Date & Time:		6-25-13 6:58	6-25-13 6:52	6-26-13 6:51						
Cal Weight (10.0000):		10.0000 ②	10.0000 ②	10.0000 ②						
Sample ID	Dish #	Sample	Tare	Dry Weight 104°C			Dry Weight	Ash Weight 550°C		
				1	2	3	grams	1	2	3
BLANK	11	~~10~~	1.0801	1.0801						
WW38 A2	12	5.6411	1.0863	4.5240						
✓ B2	13	5.5086	1.0940	~~3.99~~ ①	4.0013					
WW70 A6	14	7.4022	1.0735	~~4.58~~ ①	4.5923					
DUP A6	15	7.0618	~~1.06~~ ②	4.3995						
MS B6	16	7.2089	1.0680	4.4603						
✓ ~~DUP~~ C1	17	6.9564	1.0799	5.2244						

6-25-13 ②

W
7-9-13

TOC, Solids Data Analysis

DATE: 7/9/2013
ANALYST: KE 9:18

Instrument: Apollo 1
Mode: NPOC *Inlet:* Boat
Spike Std = 2,500 *ppm C*
Balance ID:

Calibration Data

Cal Curve ID: 6/18/2013 *Conc:* 5,000 *ppm*
Calibration Curve Standard: 00136-09 *Curve Date:* 05/16/13
CalFact: 1.384E+05 *intercept:* -1324 *r2 :* 0.99907
Curve Range (ppm) 200 *to* 2,500
Curve Range (µgC): 8 *to* 100 *40 µL injections of designated standard*

Verification Standard

Source: *ERA# 0409-12-01* *Conc:* 5,000 *ppm*
dilution : 10 *mL to* 50 1,000 *ppm*

Standard Reference Material

Source: *NIST 8704* *Conc:* 33,510 *ppm*
Source: *NIST 1941B* *Conc:* 29,900 *ppm*

Silica Blanks

Replicate determinations						Mean	RSD	condition

Sample Data

*"C corr" (with dilution) = ("C obs" - (Mean silica Blank * %Silica)) * Dilution Factor*

Sample ID	Dilution Data				Spike	Combustion Data			
	Sample wt. (mg)	Final wt. (mg)	Silica (%)	Dilution Factor	(µL Std)	Burn wt. (mg)	C obs (ppm C)	C corr (ppm C)	comments
ICV				1.00		40.0	1014	1,014	*101.40%*
Blank				1.00		40.0	0.87	1	*Blank OK*
NIST 1941B				1.00		0.9	27258	27,258	*91.16%*
WU70 B6				1.00		1.3	10012	10,012	*Range OK!*
WU70 B6 dup				1.00		1.3	9071	9,071	*RPD=9.9%*
WU70 B6 trp				1.00		1.4	8424	8,424	*RSD=8.7%*
WU70 B6 ms				1.00	10	1.5	25620	25,620	*Range OK!*
Spike =	*0.025*	*mg C to*	*1.5*	*mg samp=*	*16,667*	*ppm*		*94%*	
WU70 C1				1.00		2.4	16423	16,423	*Range OK!*
~~NIST 1941B~~			-	~~1.00~~		~~1.0~~	~~22197~~	~~22,197~~	~~74.24%~~
~~NIST 1941B~~			-	~~1.00~~		~~1.0~~	~~23709~~	~~23,709~~	~~79.29%~~
NIST 1941B				1.00		0.9	25673	25,673	*85.86%*
CCV				1.00		40.0	978	978	*97.80%*
Blank				1.00		40.0	1.86	2	*Blank OK*

WU70 : 91585

Analytical Resources, Incorporated
Analytical Chemists and Consultants

(1) 7-9-13 (W)

TOC Solids Sample Run Log
Apollo 9000

Page 1 of 1

Set-Up Parameters MODE: NPOC			INLET: Boat Sampler		
Standards:	Source (1)	Conc (ppm)	Analyst:	(W)	
Calibration:	ARI – ~~B409~~ 00136-09	5000	Date:	7-9-13	
Verification:	ERA – 0409-12 #01	5000 to 1000 for CVS	Time:	9:18	
SRM:	NBS (1941b) or 8704	Method: PSEP 1986-MOD	Balance ID	B146454145	
Sample Sequence:					

Sample ID	Dilution Data (mg)		Burn Wt	Matrix Spike Data		Comments
	Sample	+ Silica Gel	mg	mg/L	µL added	
ICV			40			
ICB			40			
WBS 1941 B			0.9			
W470 B6			1.3			
↓ DUP B6			1.3			
MP B6			1.4			
MS B6			1.5	2500	10	
CV			2.4			
WBS 1941 B			*1.0/1.0/0.9			*Late inlet Boat stuck
CCV			40			
CCB			40			

9-9-13 (W)

7/9/13 D

Detailed Analysis Report Print Date/Time: 2013/07/09 11:38:09

Sample ID: ICV/CCV BOAT Mode: TOC
Method: Boat Sampler Filename: 07090659
Cal. Curve: 061813 BOAT CAL Timestamp: 2013/07/09 07:09
Operator ID: CDE APD Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1013.5056	40.5402	5607824	32.012	33.010	152

Sample ID: ICB/CCB BOAT Mode: TOC
Method: Boat Sampler Filename: 07090741
Cal. Curve: 061813 BOAT CAL Timestamp: 2013/07/09 07:45
Operator ID: CDE APD Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	0.8721	0.0349	3503	31.948	31.812	120

Last Message: Low Sample Detected

Sample ID: NBS 1941B Mode: TOC
Method: Boat Sampler Filename: 07090751
Cal. Curve: 061813 BOAT CAL Timestamp: 2013/07/09 07:55
Operator ID: CDE APD Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	27257.6035	24.5318	3392903	31.919	32.918	190

Sample ID: WU70 B6 Mode: TOC
Method: Boat Sampler Filename: 07090956
Cal. Curve: 061813 BOAT CAL Timestamp: 2013/07/09 10:00
Operator ID: CDE APD Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	10011.5430	13.0150	1800757	36.509	37.507	120

Sample ID: WU70 B6 DUP Mode: TOC
Method: Boat Sampler Filename: 07091005
Cal. Curve: 061813 BOAT CAL Timestamp: 2013/07/09 10:08
Operator ID: CDE APD Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	9071.4346	11.7929	1631661	36.537	37.533	120

Sample ID: WU70 B6 TRIP Mode: TOC
Method: Boat Sampler Filename: 07091018
Cal. Curve: 061813 BOAT CAL Timestamp: 2013/07/09 10:21
Operator ID: CDE APD Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	8424.2783	11.7940	1631817	36.227	37.227	110

Sample ID: WU70 B6 MS Mode: TOC
Method: Boat Sampler Filename: 07091024
Cal. Curve: 061813 BOAT CAL Timestamp: 2013/07/09 10:28
Operator ID: CDE APD Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time

1	25619.5859	38.4294	5317091	36.128	37.123	136

Sample ID: WU70 C1 Mode: TOC
Method: Boat Sampler Filename: 07091032
Cal. Curve: 061813 BOAT CAL Timestamp: 2013/07/09 10:44
Operator ID: CDE APD Sample Type: Sample

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	16422.8535	39.4148	5453440	35.716	36.715	221

Sample ID: NBS 1941B Mode: TOC
Method: Boat Sampler Filename: 07091051
Cal. Curve: 061813 BOAT CAL Timestamp: 2013/07/09 11:02
Operator ID: CDE APD Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	22197.0195	22.1970	3069857	35.163	36.162	198

Last Message: Out of Calibration

Sample ID: NBS 1941B Mode: TOC
Method: Boat Sampler Filename: 07091111
Cal. Curve: 061813 BOAT CAL Timestamp: 2013/07/09 11:18
Operator ID: CDE APD Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	23709.0820	23.7091	3279066	34.888	35.888	231

Last Message: Out of Calibration

Sample ID: NBS 1941B Mode: TOC
Method: Boat Sampler Filename: 07091123
Cal. Curve: 061813 BOAT CAL Timestamp: 2013/07/09 11:27
Operator ID: CDE APD Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	25672.9785	23.1057	3195579	34.697	35.695	195

Sample ID: ICV/CCV BOAT Mode: TOC
Method: Boat Sampler Filename: 07091128
Cal. Curve: 061813 BOAT CAL Timestamp: 2013/07/09 11:33
Operator ID: CDE APD Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	978.2955	39.1318	5412956	34.601	35.599	131

Sample ID: ICB/CCB BOAT Mode: TOC
Method: Boat Sampler Filename: 07091134
Cal. Curve: 061813 BOAT CAL Timestamp: 2013/07/09 11:37
Operator ID: CDE APD Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1.8560	0.0742	8948	34.639	34.510	120

Last Message: Low Sample Detected

WU70:81812

Calibration Report Print Date/Time: 2013/06/18 15:54:45

Cal. Curve ID: 061813 BOAT CAL
Created: 2013/06/18 15:54
Calibration Factor (m): 1.384e+05
Y Intercept (b): -1324
r-squared: 0.99907

Standard ID	Y Raw Data	X Expected ug C	Measured ug C	Message	Date & Time
DI Water	29217	0.000	0.221	Low Sample De	2013/06/18 08:38
200 ppm	1009602	8.000	7.306		2013/06/18 09:18
500 ppm	2627379	20.000	18.999		2013/06/18 09:59
1000 ppm	5813974	40.000	42.030	Max Integrati	2013/06/18 10:48
2500 ppm	13757697	100.000	99.444		2013/06/18 15:51

Detailed Analysis Report Print Date/Time: 2013/06/18 16:29:10

Sample ID: DI Water
Method: Boat Sampler
Cal. Curve: 061813 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06180822
Timestamp: 2013/06/18 08:38
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			37339	28.074	28.043	120
2			31175	28.007	28.004	120
3			19136	28.044	27.973	120

Last Message: Low Sample Detected
<<<Statistics>>> Mean: 29217 Std Dev: 9258 RSD: 31.69

Sample ID: 200 ppm
Method: Boat Sampler
Cal. Curve: 061813 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06180843
Timestamp: 2013/06/18 09:18
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			945900	28.051	29.048	85
2			1029190	28.091	29.087	103
3			1053715	28.052	29.048	97

<<<Statistics>>> Mean: 1009602 Std Dev: 56514 RSD: 5.60

Sample ID: 500 ppm
Method: Boat Sampler
Cal. Curve: 061813 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06180935
Timestamp: 2013/06/18 09:59
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			2389295	28.085	29.085	136
2			2724105	28.126	29.123	171
3			2768736	28.126	29.123	222

<<<Statistics>>> Mean: 2627379 Std Dev: 207391 RSD: 7.89

Sample ID: 1000 ppm
Method: Boat Sampler
Cal. Curve: 061813 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06181006
Timestamp: 2013/06/18 10:10
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			2323107	62.057	62.990	69

Sample ID: 1000 ppm
Method: Boat Sampler
Cal. Curve: 061813 BOAT CAL
Operator ID: TRINA
Mode: TOC
Filename: 06181013
Timestamp: 2013/06/18 10:48
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			5616615	28.126	29.126	215
2			5893458	28.047	29.191	300
3			5931846	28.428	29.695	301

Last Message: Max Integration Time Reached
<<<Statistics>>> Mean: 5813974 Std Dev: 171991 RSD: 2.96

Sample ID: 2500 ppm
Method: Boat Sampler
Mode: TOC
Filename: 06181522

Cal. Curve: 061813 BOAT CAL
Operator ID: TRINA

Timestamp: 2013/06/18 15:51
Sample Type: TOC Standard

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1			14807623	35.544	36.544	267
2			13072873	35.114	36.489	300
3			13392597	34.765	35.763	287

Last Message: Max Integration Time Reached
<<<Statistics>>> Mean: 13757697 Std Dev: 923208 RSD: 6.71

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 061813 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 06181555
Timestamp: 2013/06/18 16:06
Sample Type: Cal. Verification

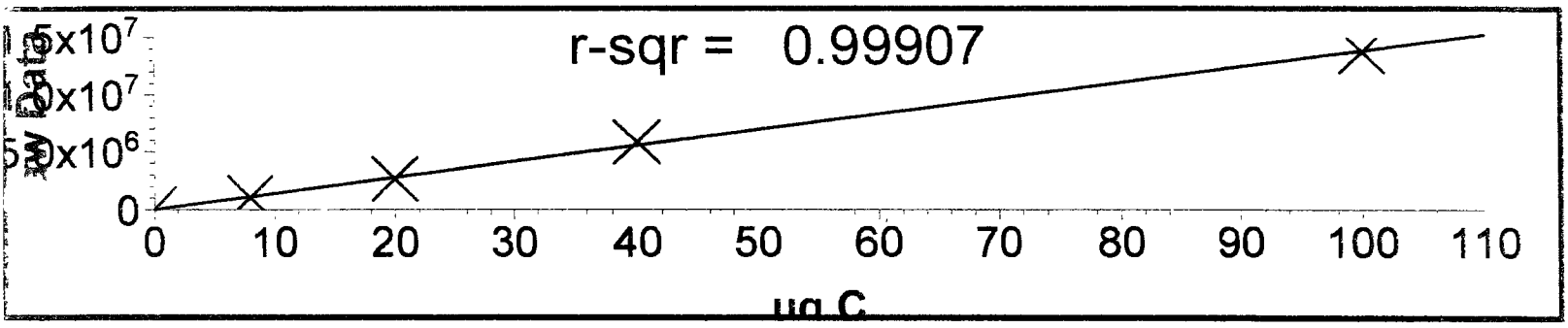
Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1165.1791	46.6072	6447246	33.971	35.062	301

Last Message: Out of Calibration

Sample ID: ICV/CCV BOAT
Method: Boat Sampler
Cal. Curve: 061813 BOAT CAL
Operator ID: TRINA

Mode: TOC
Filename: 06181622
Timestamp: 2013/06/18 16:27
Sample Type: Cal. Verification

Rep #	ppm C	ug C	Raw Data	Beginning Baseline	Ending Baseline	Integration Time
1	1024.3831	40.9753	5668023	33.285	34.285	166


r-sqr = 0.99907
5x10^7
0x10^7
0x10^6
0
0
10
20
30
40
50
60
70
80
90
100
110
ug C

7-8-13

TOC Solids Prep Log

acid purging to remove IC and drying at 70°C for TOC analysis

General notes regarding prep method and samples (identify the acid used)

DATE: 6/25/2013 (B)

ANALYST: KE / CDE 8:46

HCL 10% ID: _____

Balance ID: Mettler Toledo (XS205 DU) SN 123230597

HCL ID: _____

make no entry to shaded cells, they are calculated

Sample ID		IC Test	Gravimetric Data (grams)			%	*Sample description & notes*
ARI #	Client	+ / -	Tare Wt.	Wet wt.	70°C dry wt	Solids	*(homogeneity and exclusions)*
Blank			13.1584		13.1583	-0.1 mg	
WU38 A2		++-	13.1944	17.0062	16.4287	84.85%	
WU38 B2		+-	13.3050	17.1695	16.1912	74.68%	
WU70 B6			13.2121	18.7212	16.9455	67.77%	
WU70 B6 dup			13.1164	18.9783	17.0238	66.66%	RPD = 1.65%
WU70 B6 trip			12.9902	19.0332	17.0159	66.62%	RSD = 0.97%
WU70 C1		++++-	13.0984	19.0778	18.3405	87.67%	

Analytical Resources, Incorporated
Analytical Chemists and Consultants

TOC Solids Preparation Log

Acid purge to remove IC and drying 70 °C for TOC analysis
Add general notes regarding samples and preparation and identify the acid used

Analyst (D)/(CH) (B) Date 6-25-13 8:46

Sample Idenification		IC	Gravimetric Data			% Solids	Sample description & notes
ARI #	Client ID	Test	Tare	Wet	70 °C		
Blank			13.4584	Ø	13.1583		
WU38 A2		+/-	13.1944	17.0062	16.4287		Soil + Rebar needles etc.
" B2		+-	13.3050	17.1695	16.1912		√
WU70 B6		+++/+-	13.2121	18.7212	16.9455		Soil +
" B6		++++-	13.1164	18.9783	17.0238		√
" B6		++++-	12.9902	19.0332	17.0159		√
√ C1		++++-	13.0984	19.0778	18.3405		Water - Sand - Rocks

6-25-13 HCl

WU70:01516

Geotechnical Raw Data
Analyst Notes and Raw Data

ARI Job ID: WU70

ANALYTICAL RESOURCES, INC.
SEDIGRAPH GRAIN SIZE ANALYSIS

Job No. WU70 ARI Sample No. B1 Client Sample No. LF-TP-001-20130619-S

Set-up Date: 06-26-2013 Sample Description: SILTY CLAY, SAND

Sieve Set # 1 Date Sieved: 6/27/13

SOLIDS CONTENT

Moisture Content	Initials JG
Container No.	196
Tare Weight	1.6002
Wet Weight + Tare	42.5285
Dry Weight + Tare	24.6190

Test Sample	Initials JG
Container No.	196
Tare Weight	51.3428
Wet Weight + Tare	91.4986
Washed Sample Dry Weight + Tare	65.3972

SIEVE ANALYSIS
Initials JG

Sieve Size	Weight Retained
Tare	51,3528/1905
4	51 3519
10	51.4642
18	51.7379
35	52.8485
60	54.5925 JG
120	56.5901
230	59.6504 JG
PAN	5.7350

SEDIGRAPH ANALYSIS
Initials JG
Date Sedigraphed 7-2-13

Centrifuged ☐ Oven Dried ☐
Suspension Liquid DI WATER

Beaker ID	WU70 B-1 (YELLOW)

Sample: LF-TP-001-20130619-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WU70\WU70B-1E.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 7/2/2013 8:16:28AM
Reported: 7/2/2013 8:26:35AM
Liquid Visc: 0.7225 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 108 / 65 kCnts/s
Reynolds Number: 0.42

Report by Size Class

Low Diameter (µm)	Particle Size (Phi)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Settling Velocity (cm/s)
971.6	0.042	98.2	0.2	117.80410
917.3	0.125	98.0	0.2	104.99302
866.0	0.208	97.7	0.3	93.57513
817.5	0.291	97.4	0.3	83.39892
771.8	0.374	97.1	0.3	74.32937
728.6	0.457	96.7	0.4	66.24612
687.9	0.540	96.3	0.4	59.04191
649.4	0.623	95.8	0.5	52.62116
613.1	0.706	95.3	0.5	46.89866
578.8	0.789	94.8	0.5	41.79847
546.4	0.872	94.3	0.5	37.25293
515.8	0.955	93.7	0.6	33.20171
487.0	1.038	93.1	0.6	29.59105
459.7	1.121	92.5	0.6	26.37305
434.0	1.204	91.9	0.6	23.50501
409.7	1.287	91.3	0.6	20.94886
386.8	1.370	90.7	0.6	18.67069
365.2	1.453	90.1	0.6	16.64027
344.7	1.536	89.4	0.6	14.83066
325.5	1.619	88.8	0.7	13.21784
307.3	1.702	88.1	0.7	11.78041
290.1	1.786	87.4	0.7	10.49930
273.8	1.869	86.8	0.7	9.35751
258.5	1.952	86.1	0.7	8.33989
244.1	2.035	85.4	0.7	7.43294
230.4	2.118	84.7	0.7	6.62461
217.5	2.201	84.0	0.7	5.90419
205.4	2.284	83.3	0.7	5.26212
193.9	2.367	82.6	0.7	4.68987
183.0	2.450	81.8	0.7	4.17985
172.8	2.533	81.1	0.7	3.72529
163.1	2.616	80.3	0.8	3.32017
154.0	2.699	79.6	0.8	2.95911
145.4	2.782	78.8	0.8	2.63731
137.2	2.865	78.1	0.8	2.35050
129.6	2.948	77.3	0.8	2.09489
122.3	3.031	76.5	0.8	1.86707
115.5	3.114	75.5	1.0	1.66403
109.0	3.197	74.3	1.2	1.48307
102.9	3.280	73.0	1.3	1.32178

Sample: LF-TP-001-20130619-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WU70\WU70B-1E.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 7/2/2013 8:16:28AM
Reported: 7/2/2013 8:26:35AM
Liquid Visc: 0.7225 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 108 / 65 kCnts/s
Reynolds Number: 0.42

Report by Size Class

Low Diameter (µm)	Particle Size (Phi)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Settling Velocity (cm/s)
97.16	3.363	71.6	1.4	1.17804
91.73	3.447	70.2	1.4	1.04993
86.60	3.530	68.7	1.4	0.93575
81.75	3.613	67.3	1.4	0.83399
77.18	3.696	66.1	1.3	0.74329
72.86	3.779	65.0	1.1	0.66246
68.79	3.862	64.1	0.9	0.59042
64.94	3.945	63.5	0.6	0.52621
61.31	4.028	63.2	0.3	0.46899
57.88	4.111	63.1	0.2	0.41798
54.64	4.194	62.9	0.2	0.37253
51.58	4.277	62.7	0.2	0.33202
48.70	4.360	62.4	0.3	0.29591
45.97	4.443	62.1	0.3	0.26373
43.40	4.526	61.7	0.4	0.23505
40.97	4.609	61.2	0.5	0.20949
38.68	4.692	60.7	0.5	0.18671
36.52	4.775	60.1	0.6	0.16640
34.47	4.858	59.4	0.7	0.14831
32.55	4.941	58.6	0.8	0.13218
30.73	5.024	57.7	0.9	0.11780
29.01	5.107	56.8	1.0	0.10499
27.38	5.191	55.6	1.1	0.09358
25.85	5.274	54.4	1.2	0.08340
24.41	5.357	53.0	1.4	0.07433
23.04	5.440	51.6	1.5	0.06625
21.75	5.523	50.0	1.5	0.05904
20.54	5.606	48.4	1.6	0.05262
19.39	5.689	46.7	1.7	0.04690
18.30	5.772	44.8	1.9	0.04180
17.28	5.855	42.8	2.0	0.03725
16.31	5.938	40.6	2.2	0.03320
15.40	6.021	38.1	2.5	0.02959
14.54	6.104	35.4	2.8	0.02637
13.72	6.187	32.3	3.1	0.02351
12.96	6.270	28.9	3.4	0.02095
12.23	6.353	25.3	3.6	0.01867
11.55	6.436	21.7	3.6	0.01664
10.90	6.519	18.4	3.3	0.01483
10.29	6.602	15.5	2.9	0.01322

Sample: LF-TP-001-20130619-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WU70\WU70B-1E.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 7/2/2013 8:16:28AM
Reported: 7/2/2013 8:26:35AM
Liquid Visc: 0.7225 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 108 / 65 kCnts/s
Reynolds Number: 0.42

Report by Size Class

Low Diameter (µm)	Particle Size (Phi)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Settling Velocity (cm/s)
9.716	6.685	13.2	2.3	0.01178
9.173	6.768	11.4	1.8	0.01050
8.660	6.851	10.1	1.3	0.00936
8.175	6.935	9.2	0.9	0.00834
7.718	7.018	8.6	0.6	0.00743
7.286	7.101	8.1	0.5	0.00662
6.879	7.184	7.7	0.4	0.00590
6.494	7.267	7.4	0.3	0.00526
6.131	7.350	7.1	0.3	0.00469
5.788	7.433	6.9	0.2	0.00418
5.464	7.516	6.7	0.2	0.00373
5.158	7.599	6.5	0.1	0.00332
4.870	7.682	6.4	0.1	0.00296
4.597	7.765	6.4	0.1	0.00264
4.340	7.848	6.3	0.1	0.00235
4.097	7.931	6.2	0.1	0.00209
3.868	8.014	6.1	0.1	0.00187
3.652	8.097	6.0	0.1	0.00166
3.447	8.180	5.9	0.1	0.00148
3.255	8.263	5.7	0.1	0.00132
3.073	8.346	5.6	0.2	0.00118
2.901	8.429	5.4	0.2	0.00105
2.738	8.512	5.2	0.2	0.00094
2.585	8.595	5.0	0.2	0.00083
2.441	8.679	4.8	0.2	0.00074
2.304	8.762	4.7	0.2	0.00066
2.175	8.845	4.6	0.1	0.00059
2.054	8.928	4.5	0.1	0.00053
1.939	9.011	4.4	0.1	0.00047
1.830	9.094	4.3	0.1	0.00042
1.728	9.177	4.2	0.1	0.00037
1.631	9.260	4.1	0.1	0.00033
1.540	9.343	4.0	0.1	0.00030
1.454	9.426	3.9	0.1	0.00026
1.372	9.509	3.8	0.1	0.00024
1.296	9.592	3.8	0.1	0.00021
1.223	9.675	3.7	0.1	0.00019
1.155	9.758	3.6	0.1	0.00017
1.090	9.841	3.6	0.0	0.00015
1.029	9.924	3.6	0.0	0.00013

Sample: LF-TP-001-20130619-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WU70\WU70B-1E.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 7/2/2013 8:16:28AM
Reported: 7/2/2013 8:26:35AM
Liquid Visc: 0.7225 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 108 / 65 kCnts/s
Reynolds Number: 0.42

Report by Size Table

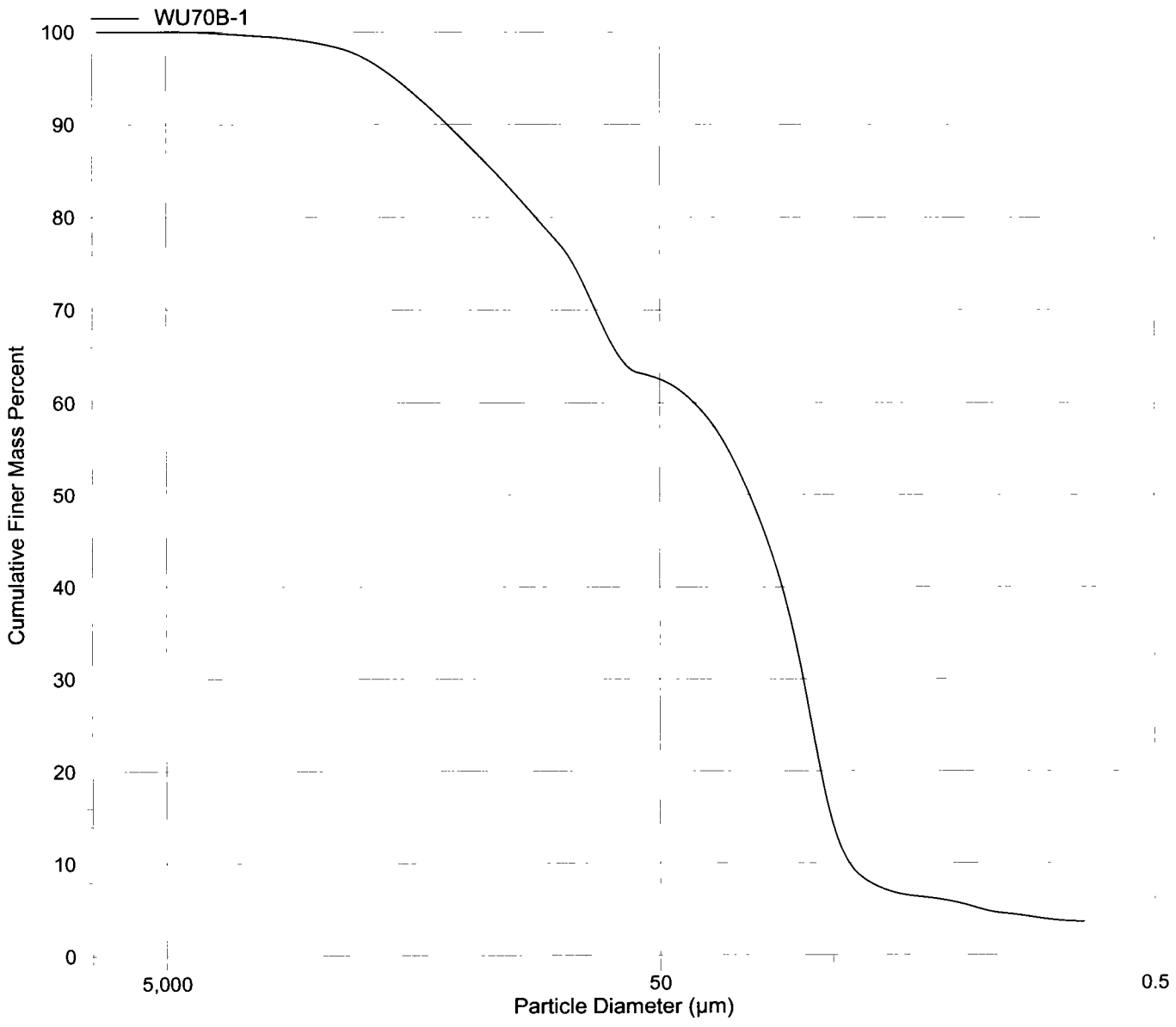
Low Diameter (µm)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)	Low Diameter (µm)	Cumulative Mass Finer (Percent)	Mass Frequency (Percent)
9500	100.0	0.0	63.00	63.3	13.5
4750	100.0	0.0	31.00	57.9	5.5
2000	99.5	0.5	15.60	38.7	19.2
1000	98.3	1.2	7.800	8.7	30.1
500.0	93.4	4.9	3.900	6.1	2.5
250.0	85.7	7.7	2.000	4.4	1.7
125.0	76.8	8.9	1.000	3.6	0.9

Sample: LF-TP-001-20130619-S
Operator: eg
Submitter: SAIC
File: C:\5120\DATA\WU70\WU70B-1E.SMP
Material/Liquid: AriSamp / Water
Measurement Principle: X-Ray monitored gravity sedimentation
Calculation Method: Stokes sedimentation and Beer's law of extinction

Test Number: 1
Analyzed: 7/2/2013 8:16:28AM
Reported: 7/2/2013 8:26:35AM
Liquid Visc: 0.7225 mPa·s
Analysis Temp: 35.0 °C

Analysis Type: High Speed(Adj)
Run Time: 0:05 hrs:min
Sample Density: 2.650 g/cm³
Liquid Density: 0.9941 g/cm³
Base/Full Scale: 108 / 65 kCnts/s
Reynolds Number: 0.42

Cumulative Finer Mass Percent vs. Diameter



Sample ID: LF-TP-001-20130619-W

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SAIC	Matrix:	Aqueous	Project No.:	A5781	Date Received:	31-Jul-2013
Project ID:	209977	Weight/Volume:	1.05 L	Sample ID:	A5781_11231_PCB_012	Date Extracted:	14-Aug-2013
Date Collected:	19-Jun-2013	pH	6	QC Batch No.:	11231	Date Analyzed:	21-Aug-2013

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/L	pg/L	pg/L			%
PCB-77 33'44'-TeCB	19.3				ES PCB-1	68.3
PCB-81 344'5-TeCB	ND	1.73			ES PCB-3	73.4
PCB-105 233'44'-PeCB	85.4				ES PCB-4	81.9
PCB-114 2344'5-PeCB	EMPC		2.45	J	ES PCB-15	97.2
PCB-118 23'44'5-PeCB	161				ES PCB-19	97.1
PCB-123 23'44'5'-PeCB	2.9			J	ES PCB-37	94.4
PCB-126 33'44'5-PeCB	3.94			J	ES PCB-54	101
PCB-156/157 233'44'5/233'44'5'-HxCB	37.2			C	ES PCB-77	103
PCB-167 23'44'55'-HxCB	14.9				ES PCB-81	103
PCB-169 33'44'55'-HxCB	ND	0.973			ES PCB-104	107
PCB-189 233'44'55'-HpCB	2.71			J	ES PCB-105	105
					ES PCB-114	103
TEQs (WHO M/H)					ES PCB-118	99.9
					ES PCB-123	99.5
ND = 0	0.405		0.405		ES PCB-126	113
ND = 0.5 x DL	0.42		0.42		ES PCB-153	93.8
ND = DL	0.435		0.435		ES PCB-155	82.3
					ES PCB-156/157	93.5
Totals					ES PCB-167	92.2
Mono-CBs	3.82				ES PCB-169	98.9
Di-CBs	51.4				ES PCB-170	86.7
Tri-CBs	101		113		ES PCB-180	89
Tetra-CBs	430				ES PCB-188	95.3
Penta-CBs	1,980		2,000		ES PCB-189	93.5
Hexa-CBs	1,900		1,910		ES PCB-202	102
Hepta-CBs	715		727		ES PCB-205	87.7
Octa-CBs	155				ES PCB-206	97.6
Nona-CBs	12.3				ES PCB-208	92.3
Deca-CB	2.11			J B	ES PCB-209	91
					CS PCB-28	94.7
Total PCB (Mono-Deca)	5,360		5,410		CS PCB-111	106
					CS PCB-178	108

Checkcode: 513-966-CPF

SGS AP PCB 2013 Rev. 2.0

Report Created: 21-Aug-2013 13:36 Analyst: LB

SGS ANALYTICAL PERSPECTIVES

2714 Exchange Drive
Wilmington
North Carolina 28405
USA

T: 910 794-1613
F: 910 794-3919
www.us.sgs.com

Sample ID: LF-TP-001-20130619-W

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SAIC	Matrix:	Aqueous	Project No.:	A5781	Date Received:	31-Jul-2013
Project ID:	209977	Weight/Volume:	1.05 L	Sample ID:	A5781_11231_PCB_012	Date Extracted:	14-Aug-2013
Date Collected:	19-Jun-2013	pH	6	QC Batch No.:	11231	Date Analyzed:	21-Aug-2013
		Units	pg/L	Checkcode:	513-966-CPF	Time Analyzed:	00:35:20

Mono	Conc.	Qualifiers
PCB-1	(1.22)	
PCB-2	(1.4)	
PCB-3	3.82	J B
Conc.	3.82	
EMPC	3.82	
Di	**Conc.**	**Qualifiers**
PCB-4	(5.35)	
PCB-10	(3.69)	
PCB-9	(3.79)	
PCB-7	(3.26)	
PCB-6	(3.49)	
PCB-5	(3.47)	
PCB-8	6.31	J B
PCB-14	(2.87)	
PCB-11	31.5	B
PCB-13/12	(3.25)	C
PCB-15	13.6	
Conc.	51.4	
EMPC	51.4	

Tri	Conc.	Qualifiers
PCB-19	6.75	J
PCB-30/18	9.27	J B C
PCB-17	3.73	J
PCB-27	5.79	J
PCB-24	(1.9)	
PCB-16	4.59	J
PCB-32	8.17	J
PCB-34	(1.88)	
PCB-23	(1.83)	
PCB-26/29	4.99	J C
PCB-25	[2.26]	J EMPC
PCB-31	15.7	
PCB-28/20	22.9	C
PCB-21/33	[9.3]	J B EMPC C
PCB-22	7.93	J
PCB-36	(1.8)	
PCB-39	(1.71)	
PCB-38	(1.88)	
PCB-35	(1.93)	
PCB-37	11.6	
Conc.	101	
EMPC	113	

Tetra	Conc.	Qualifiers
PCB-54	(1.13)	
PCB-50/53	18.9	J C
PCB-45	9.63	
PCB-51	5.5	J B
PCB-46	6.36	J
PCB-52	138	
PCB-73	(1.36)	
PCB-43	(1.98)	
PCB-69/49	19.9	C
PCB-48	3.07	J
PCB-44/47/65	41.1	C
PCB-59/62/75	6.1	J C
PCB-42	7.21	J
PCB-41	(2)	
PCB-71/40	23.1	C
PCB-64	24.4	

Tetra	Conc.	Qualifiers
PCB-72	(1.75)	
PCB-68	(1.61)	
PCB-57	(1.78)	
PCB-58	(1.73)	
PCB-67	(1.7)	
PCB-63	(1.59)	
PCB-61/70/74/76	62.9	C
PCB-66	22.5	
PCB-55	(1.75)	
PCB-56	15.1	
PCB-60	5.04	J
PCB-80	(1.54)	
PCB-79	2.08	J
PCB-78	(1.8)	
PCB-81	(1.73)	
PCB-77	19.3	
Conc.	430	
EMPC	430	

SGS ANALYTICAL PERSPECTIVES

2714 Exchange Drive
Wilmington, NC 28405, USA

Tel: +1 910 794-1613
Fax: +1 910 794-3919
www.us.sgs.com

Totals	Conc.	EMPC
Mono-Tri	157	168
Tetra-Hexa	4,320	4,340
Hepta-Deca	884	896
Mono-Deca	5,360	5,410

Sample ID: LF-TP-001-20130619-W

Method 1668C

Penta	Conc.	Qualifiers	Penta	Conc.	Qualifiers	Hexa	Conc.	Qualifiers	Hexa	Conc.	Qualifiers
PCB-104	(0.564)		PCB-109/119/86/97/125/87	172	C	PCB-155	(0.596)		PCB-165	(0.706)	
PCB-96	[1.71]	J EMPC	PCB-117	6.63	J	PCB-152	(0.63)		PCB-146	57.6	
PCB-103	1.95	J	PCB-116/85	31.9	C	PCB-150	(0.623)		PCB-161	(0.632)	
PCB-94	(1.68)		PCB-110	536		PCB-136	53.7		PCB-153/168	309	C
PCB-95	329		PCB-115	[5.34]	J EMPC	PCB-145	(0.657)		PCB-141	76.6	
PCB-100/93	[2]	J EMPC C	PCB-82	50.4		PCB-148	(0.822)		PCB-130	32.4	
PCB-102	7.35	J	PCB-111	(1.16)		PCB-151/135	124	C	PCB-137	21.4	
PCB-98	(1.91)		PCB-120	(1.15)		PCB-154	[3.76]	J EMPC	PCB-164	30.9	
PCB-88	(1.82)		PCB-108/124	[7.05]	J EMPC C	PCB-144	17.7		PCB-163/138/129	470	C
PCB-91	34.7		PCB-107	15.1		PCB-147/149	323	C	PCB-160	(0.652)	
PCB-84	121		PCB-123	2.9	J	PCB-134	25.5		PCB-158	43.7	
PCB-89	[2.59]	J EMPC	PCB-106	(1.25)		PCB-143	2.16	J	PCB-128/166	77.8	C
PCB-121	(1.16)		PCB-118	161		PCB-139/140	6.59	J C	PCB-159	3.6	J
PCB-92	58.5		PCB-122	4.49	J	PCB-131	7.04	J	PCB-162	1.19	J
PCB-113/90/101	264	C	PCB-114	[2.45]	J EMPC	PCB-142	(0.875)		PCB-167	14.9	
PCB-83	21.7		PCB-105	85.4		PCB-132	163		PCB-156/157	37.2	C
PCB-99	73.9		PCB-127	(1.16)		PCB-133	6.12	J	PCB-169	(0.973)	
PCB-112	(1.19)		PCB-126	[3.94]	J						
			Conc.	1,980					**Conc.**	1,900	
			EMPC	2,000					**EMPC**	1,910	

Hepta	Conc.	Qualifiers	Hepta	Conc.	Qualifiers	Octa	Conc.	Qualifiers	Nona	Conc.	Qualifiers
PCB-188	(0.631)		PCB-174	100		PCB-202	8	J	PCB-208	2.08	J
PCB-179	38.6		PCB-177	57.7		PCB-201	4.31	J	PCB-207	1.13	J
PCB-184	(0.705)		PCB-181	(1.16)		PCB-204	(0.775)		PCB-206	9.05	J
PCB-176	[9.5]	J EMPC	PCB-171/173	26.2	C	PCB-197	1.84	J			
PCB-186	(0.662)		PCB-172	15.6		PCB-200	5.24	J	**Conc.**	12.3	
PCB-178	19.3		PCB-192	(1.01)		PCB-198/199	41.4	C	**EMPC**	12.3	
PCB-175	[2.79]	J EMPC	PCB-180/193	180	C	PCB-196	18.4				
PCB-187	103		PCB-191	4.18	J	PCB-203	22.6		**Deca**	**Conc.**	**Qualifiers**
PCB-182	(1.1)		PCB-170	95.6		PCB-195	15.2		PCB-209	2.11	J B
PCB-183	42		PCB-190	19.4		PCB-194	36				
PCB-185	10.1		PCB-189	2.71	J	PCB-205	1.55	J			
			Conc.	715		**Conc.**	155				
			EMPC	727		**EMPC**	155				

Sample ID: LF-FD-001-20130619-W

Method 1668C

Client Data		Sample Data		Laboratory Data			
Name:	SAIC	Matrix:	Aqueous	Project No.:	A5781	Date Received:	31-Jul-2013
Project ID:	209977	Weight/Volume:	1.05 L	Sample ID:	A5781_11231_PCB_013	Date Extracted:	14-Aug-2013
Date Collected:	19-Jun-2013	pH	6	QC Batch No.:	11231	Date Analyzed:	21-Aug-2013

Analyte	Conc.	DL	EMPC	Qualifier	Standard	Recovery
	pg/L	pg/L	pg/L			%
PCB-77 33'44'-TeCB	13.2				ES PCB-1	77.9
PCB-81 344'5-TeCB	ND	1.51			ES PCB-3	84.6
PCB-105 233'44'-PeCB	63.9				ES PCB-4	94.9
PCB-114 2344'5-PeCB	2.14			J	ES PCB-15	117
PCB-118 23'44'5-PeCB	114				ES PCB-19	113
PCB-123 23'44'5'-PeCB	2.48			J	ES PCB-37	111
PCB-126 33'44'5-PeCB	EMPC		3.04	J	ES PCB-54	109
PCB-156/157 233'44'5/233'44'5'-HxCB	31.6			C	ES PCB-77	123
PCB-167 23'44'55'-HxCB	11.8				ES PCB-81	120
PCB-169 33'44'55'-HxCB	ND	0.789			ES PCB-104	116
PCB-189 233'44'55'-HpCB	2.38			J	ES PCB-105	118
					ES PCB-114	117
TEQs (WHO M/H)					ES PCB-118	113
					ES PCB-123	113
ND = 0	0.00816		0.312		ES PCB-126	127
ND = 0.5 x DL	0.0656		0.324		ES PCB-153	110
ND = DL	0.123		0.336		ES PCB-155	98.9
					ES PCB-156/157	112
Totals					ES PCB-167	110
Mono-CBs	2.48		9.31		ES PCB-169	116
Di-CBs	44.6				ES PCB-170	104
Tri-CBs	55.3		61.8		ES PCB-180	105
Tetra-CBs	280		288		ES PCB-188	113
Penta-CBs	1,580		1,590		ES PCB-189	114
Hexa-CBs	1,610		1,620		ES PCB-202	122
Hepta-CBs	642		644		ES PCB-205	107
Octa-CBs	130		133		ES PCB-206	119
Nona-CBs	9.03				ES PCB-208	113
Deca-CB	2.11			J B	ES PCB-209	111
					CS PCB-28	104
Total PCB (Mono-Deca)	4,360		4,400		CS PCB-111	115
					CS PCB-178	124

Checkcode: 642-375-XPN

SGS AP PCB 2013 Rev. 2.0

Report Created: 21-Aug-2013 13:37 Analyst: LB

SGS ANALYTICAL PERSPECTIVES

2714 Exchange Drive
Wilmington
North Carolina 28405
USA

T: 910 794-1613
F: 910 794-3919
www.us.sgs.com

Sample ID: LF-FD-001-20130619-W — Method 1668C

Client Data		**Sample Data**		**Laboratory Data**			
Name:	SAIC	Matrix:	Aqueous	Project No.:	A5781	Date Received:	31-Jul-2013
Project ID:	209977	Weight/Volume:	1.05 L	Sample ID:	A5781_11231_PCB_013	Date Extracted:	14-Aug-2013
Date Collected:	19-Jun-2013	pH	6	QC Batch No.:	11231	Date Analyzed:	21-Aug-2013
		Units	pg/L	Checkcode:	642-375-XPN	Time Analyzed:	01:30:20

Mono	Conc.	Qualifiers	Tri	Conc.	Qualifiers	Tetra	Conc.	Qualifiers	Tetra	Conc.	Qualifiers
PCB-1	[2.61]	J EMPC	PCB-19	6.07	J	PCB-54	(1.08)		PCB-72	(1.52)	
PCB-2	2.48	J	PCB-30/18	5.97	J B C	PCB-50/53	15.9	J C	PCB-68	(1.4)	
PCB-3	[4.22]	J B EMPC	PCB-17	2.41	J	PCB-45	7.87	J	PCB-57	(1.54)	
			PCB-27	5.64	J	PCB-51	3.93	J B	PCB-58	(1.5)	
Conc.	2.48		PCB-24	(1.35)		PCB-46	[4.92]	J EMPC	PCB-67	(1.48)	
EMPC	9.31		PCB-16	(2.07)		PCB-52	99.2		PCB-63	(1.38)	
			PCB-32	6.14	J	PCB-73	(1.05)		PCB-61/70/74/76	34.5	J C
Di	**Conc.**	**Qualifiers**	PCB-34	(1.67)		PCB-43	(1.53)		PCB-66	14.9	
PCB-4	(5.23)		PCB-23	(1.63)		PCB-69/49	11.4	J C	PCB-55	(1.52)	
PCB-10	(3.61)		PCB-26/29	3.01	J C	PCB-48	(1.33)		PCB-56	10.6	
PCB-9	(3.2)		PCB-25	(1.63)		PCB-44/47/65	23.5	J B C	PCB-60	[2.93]	J EMPC
PCB-7	(2.75)		PCB-31	[6.48]	J B EMPC	PCB-59/62/75	5.8	J C	PCB-80	(1.34)	
PCB-6	(2.94)		PCB-28/20	10.6	J B C	PCB-42	4.31	J	PCB-79	1.57	J
PCB-5	(2.92)		PCB-21/33	4.81	J B C	PCB-41	(1.54)		PCB-78	(1.57)	
PCB-8	4.41	J B	PCB-22	3.75	J B	PCB-71/40	16.8	J C	PCB-81	(1.51)	
PCB-14	(2.42)		PCB-36	(1.6)		PCB-64	16.3		PCB-77	13.2	
PCB-11	31.8	B	PCB-39	(1.52)							
PCB-13/12	(2.74)	C	PCB-38	(1.67)							
PCB-15	8.31	J	PCB-35	(1.72)							
			PCB-37	6.88	J						
Conc.	44.6		**Conc.**	55.3					**Conc.**	280	
EMPC	44.6		**EMPC**	61.8					**EMPC**	288	

2714 Exchange Drive
Wilmington, NC 28405, USA

Tel: +1 910 794-1613
Fax: +1 910 794-3919
www.us.sgs.com

Totals	Conc.	EMPC
Mono-Tri	102	116
Tetra-Hexa	3,480	3,500
Hepta-Deca	782	788
Mono-Deca	4,360	4,400

Sample ID: LF-FD-001-20130619-W

Method 1668C

Penta	Conc.	Qualifiers	Penta	Conc.	Qualifiers	Hexa	Conc.	Qualifiers	Hexa	Conc.	Qualifiers
PCB-104	(0.567)		PCB-109/119/86/97/125/87	128	C	PCB-155	(0.506)		PCB-165	(0.613)	
PCB-96	1.77	J	PCB-117	5.9	J	PCB-152	(0.535)		PCB-146	49.3	
PCB-103	1.8	J	PCB-116/85	22.7	C	PCB-150	(0.529)		PCB-161	(0.55)	
PCB-94	(1.46)		PCB-110	432		PCB-136	45		PCB-153/168	260	C
PCB-95	275		PCB-115	6.19	J	PCB-145	(0.558)		PCB-141	62.8	
PCB-100/93	[1.66]	J EMPC C	PCB-82	38.1		PCB-148	(0.715)		PCB-130	26.5	
PCB-102	6.05	J	PCB-111	(1.01)		PCB-151/135	109	C	PCB-137	16.7	
PCB-98	(1.66)		PCB-120	(1)		PCB-154	3.38	J	PCB-164	27.1	
PCB-88	(1.58)		PCB-108/124	5.26	J C	PCB-144	15		PCB-163/138/129	402	C
PCB-91	29.6		PCB-107	11.3		PCB-147/149	280	C	PCB-160	(0.567)	
PCB-84	99		PCB-123	2.48	J	PCB-134	21.4		PCB-158	38.5	
PCB-89	2.72	J	PCB-106	(1.09)		PCB-143	[1.46]	J EMPC	PCB-128/166	65.1	C
PCB-121	(1.01)		PCB-118	114		PCB-139/140	[4.99]	J EMPC C	PCB-159	[2.48]	J EMPC
PCB-92	49.2		PCB-122	[2.85]	J EMPC	PCB-131	5.59	J	PCB-162	[0.971]	J EMPC
PCB-113/90/101	209	C	PCB-114	2.14	J	PCB-142	(0.761)		PCB-167	11.8	
PCB-83	18.9		PCB-105	63.9		PCB-132	140		PCB-156/157	31.6	C
PCB-99	56		PCB-127	(1.02)		PCB-133	4.67	J	PCB-169	(0.789)	
PCB-112	(1.03)		PCB-126	[3.04]	J EMPC						
			Conc.	1,580					**Conc.**	1,610	
			EMPC	1,590					**EMPC**	1,620	

Hepta	Conc.	Qualifiers	Hepta	Conc.	Qualifiers	Octa	Conc.	Qualifiers	Nona	Conc.	Qualifiers
PCB-188	(0.663)		PCB-174	89.8		PCB-202	6.72	J	PCB-208	1.81	J
PCB-179	33.1		PCB-177	51		PCB-201	3.89	J	PCB-207	(0.939)	
PCB-184	(0.741)		PCB-181	(0.936)		PCB-204	(0.548)		PCB-206	7.22	J
PCB-176	9.78		PCB-171/173	24.8	C	PCB-197	1.43	J			
PCB-186	(0.696)		PCB-172	13.7		PCB-200	[3.6]	J EMPC	**Conc.**	9.03	
PCB-178	17.6		PCB-192	(0.81)		PCB-198/199	35.5	C	**EMPC**	9.03	
PCB-175	[2.4]	J EMPC	PCB-180/193	162	C	PCB-196	16.1				
PCB-187	92.7		PCB-191	3.39	J	PCB-203	20.8		**Deca**	**Conc.**	**Qualifiers**
PCB-182	(0.884)		PCB-170	78.3		PCB-195	12.4		PCB-209	2.11	J B
PCB-183	39.4		PCB-190	15.6		PCB-194	31.3				
PCB-185	7.99	J	PCB-189	2.38	J	PCB-205	1.56	J			
			Conc.	642		**Conc.**	130				
			EMPC	644		**EMPC**	133				